



SAR EVALUATION REPORT

Applicant Name:
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Date of Testing:
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PCTEST, Columbia, MD, USA
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1M2107290086-21.A3L (Rev1)

FCC ID: A3LSMF711U1

APPLICANT: SAMSUNG ELECTRONICS CO., LTD.

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): SM-F711U1, SM-F711U

Equipment Class	Band & Mode	Tx Frequency	SAR			
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)
PCE	Cell CDMA/EVDO	824.70 - 848.31 MHz	0.29	0.35	0.82	N/A
PCE	PCS CDMA/EVDO	1851.25 - 1908.75 MHz	0.10	0.77	0.85	3.03
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.17	0.30	0.48	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.28	0.95	2.10
PCE	UMTS 850	826.40 - 846.60 MHz	0.19	0.37	0.93	N/A
PCE	UMTS 1755	1712.4 - 1752.6 MHz	< 0.1	0.59	0.93	2.65
PCE	UMTS 1900	1852.4 - 1907.6 MHz	< 0.1	0.55	0.96	2.56
PCE	LTE Band 71	665.5 - 695.5 MHz	0.22	0.35	0.72	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.21	0.30	0.64	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.22	0.30	0.51	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.22	0.29	0.69	N/A
PCE	LTE Band 28 (Cell)	814.7 - 848.3 MHz	0.26	0.37	0.73	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.26	0.31	0.64	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	< 0.1	1.12	0.92	2.92
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	0.10	0.79	0.95	3.12
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	< 0.1	0.40	0.96	1.11
PCE	LTE Band 7	2502.5 - 2567.5 MHz	0.11	0.57	0.96	2.71
CBE	LTE Band 48	3552.5 - 3569.2 MHz	0.04	0.23	0.50	N/A
PCE	LTE Band 41	2496.5 - 2587.5 MHz	0.19	0.34	0.49	1.42
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n71	665.5 - 695.5 MHz	0.21	0.29	0.56	N/A
PCE	NR Band n12	701.5 - 713.5 MHz	0.21	0.25	0.59	N/A
PCE	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.25	0.33	0.60	N/A
PCE	NR Band n66 (AWS)	1712.5 - 1777.5 MHz	0.35	0.69	0.89	3.03
PCE	NR Band n25 (PCS)	1852.5 - 1912.5 MHz	0.98	0.61	0.72	3.03
PCE	NR Band n2 (PCS)	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n30	2307.5 - 2312.5 MHz	< 0.1	0.27	1.01	0.98
PCE	NR Band n41	2506.02 - 2679.99 MHz	1.12	0.28	1.04	2.71
PCE	NR Band n77 DoD	3450.02 - 3540 MHz	0.73	0.22	0.76	2.45
PCE	NR Band n77	3710.01 - 3969.99 MHz	0.86	0.25	1.07	3.13
DTTS	2.4 GHz WLAN	2412 - 2482 MHz	0.42	< 0.1	0.44	N/A
NI	U-NB-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A
NI	U-NB-2A	5260 - 5320 MHz	< 0.1	< 0.1	N/A	0.44
NI	U-NB-2C	5500 - 5720 MHz	< 0.1	< 0.1	N/A	0.38
NI	U-NB-3	5740 - 5825 MHz	0.10	< 0.1	0.28	N/A
DSS/DTTS	Bluetooth	2402 - 2480 MHz	0.24	< 0.1	0.31	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.58	1.33	1.59	3.93

Note: This revised Test Report supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.9 of this report; for North American frequency bands only.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them. Test results reported herein relate only to the item(s) tested.


Randy Ortanez
President



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1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
Cell. CDMA/EVDO	Voice/Data	824.70 - 848.31 MHz
PCS CDMA/EVDO	Voice/Data	1851.25 - 1908.75 MHz
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
NR Band n71	Data	665.5 - 695.5 MHz
NR Band n12	Data	701.5 - 713.5 MHz
NR Band n5 (Cell)	Data	826.5 - 846.5 MHz
NR Band n66 (AWS)	Data	1712.5 - 1777.5 MHz
NR Band n25 (PCS)	Data	1852.5 - 1912.5 MHz
NR Band n2 (PCS)	Data	1852.5 - 1907.5 MHz
NR Band n30	Data	2307.5 - 2312.5 MHz
NR Band n41	Data	2506.02 - 2679.99 MHz
NR Band n77 DoD	Data	3460.02 - 3540 MHz
NR Band n77	Data	3710.01 - 3969.99 MHz
2.4 GHz WLAN	Voice/Data	2412 - 2462 MHz
U-NII-1	Voice/Data	5180 - 5240 MHz
U-NII-2A	Voice/Data	5260 - 5320 MHz
U-NII-2C	Voice/Data	5500 - 5720 MHz
U-NII-3	Voice/Data	5745 - 5825 MHz
Bluetooth	Data	2402 - 2480 MHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 MHz
NFC	Data	13.56 MHz

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1.2 Time-Averaging Algorithm for RF Exposure Compliance

This Device is enabled with the Qualcomm® Smart Transmit feature. This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time. Refer to Compliance Summary document for detailed description of Qualcomm® Smart Transmit feature (report SN could be found in Section 1.11 – Bibliography).

Note that WLAN operations are not enabled with Smart Transmit.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_{design_target} , below the predefined time-averaged power limit (i.e., P_{limit} for sub-6 radio), for each characterized technology and band (see RF Exposure Part 0 Test Report, report SN could be found in Section 1.11 - Bibliography).

Smart Transmit allows the device to transmit at higher power instantaneously, as high as P_{max} , when needed, but enforces power limiting to maintain time-averaged transmit power to P_{limit} . Below table shows P_{limit} EFS settings and maximum tune up output power P_{max} configured for this EUT for various transmit conditions (Device State Index DSI). Note that the device uncertainty for sub-6GHz WWAN is 1.0dB for this EUT.

Exposure Scenario:		Body-Worn	Phablet Max	Phablet	Head	Hotspot	Earjack	Maximum Tune-Up Output Power*
Averaging Volume:		1g	10g	10g	1g	1g	10g	
Spacing:		15 mm	8, 6, 11 mm	0 mm	0 mm	10, 5 mm	0 mm	
DSI:		0	0	1	2	3	4	
Technology/Band	Antenna							Pmax
CDMA BC0	A	29.5		28.1	29.9	23.0	28.1	24.0
EVDO BC0	A	29.5		28.1	29.9	23.0	28.1	23.5
CDMA/EVDO BC1	A	25.1		21.0	34.1	18.0	21.0	23.0
GSM/GPRS/EDGE 850 MHz	A	29.1		29.2	31.5	21.8	29.2	24.3
GSM/GPRS/EDGE 1900 MHz	A	26.3		18.8	33.9	18.8	18.8	21.3
UMTS B5	A	29.3		29.0	32.2	23.0	29.0	24.0
UMTS B4	A	26.3		20.0	34.9	18.0	20.0	23.0
UMTS B2	A	26.6		21.0	34.5	18.0	21.0	23.0
LTE FDD B71	A	30.0		29.7	32.0	23.0	29.7	24.5
LTE FDD B12	A	29.5		28.9	32.3	23.0	28.9	24.5
LTE FDD B13	A	30.8		29.0	32.0	23.0	29.0	24.5
LTE FDD B14	A	30.8		28.0	31.6	23.0	28.0	24.5
LTE FDD B26	A	29.5		28.8	30.9	23.0	28.8	24.3
LTE FDD B5	A	30.1		28.5	31.1	23.0	28.5	24.3
LTE FDD B66/4	A	24.5		20.4	35.5	18.0	20.4	24.0
LTE FDD B25/2	A	26.0		21.0	35.1	18.0	21.0	24.0
LTE FDD B30	A	28.0		21.0	35.5	17.5	21.0	23.0
LTE FDD B7	B	27.4		21.0	34.6	17.5	21.0	24.0
LTE TDD B48	F	19.5		19.5	15.0	15.0	19.5	21.5
LTE TDD B41/38	B	26.4		21.0	31.6	17.5	21.0	22.5
LTE TDD B41 (PC2)	B	26.4		21.0	31.6	17.5	21.0	23.4
NR FDD n71	A	27.4		28.5	32.2	23.0	28.5	24.5
NR FDD n12	A	27.4		27.4	32.2	23.0	27.4	24.5
NR FDD n5	A	29.2		29.2	31.0	23.0	29.2	24.3
NR FDD n66 Ant A	A	26.0		19.5	35.7	17.5	19.5	23.5
NR FDD n66 Ant I	I	21.0		21.0	17.0	18.0	21.0	23.5
NR FDD n25/2 Ant A	A	26.4		21.0	34.4	17.5	21.0	23.5
NR FDD n25/2 Ant I	I	23.7		23.7	18.0	18.0	23.7	23.5
NR FDD n30	A	29.2		21.0	40.4	17.5	21.0	22.5
NR TDD n41	I	21.0		21.0	15.0	19.0	21.0	24.3
NR TDD n41 (PC2)	I	21.0		21.0	15.0	19.0	21.0	26.8
NR TDD n77 Ant F	F	18.5		18.5	15.0	17.5	18.5	24.0
NR TDD n77 (PC2) Ant F	F	18.5		18.5	15.0	17.5	18.5	25.5
NR TDD n77 Ant I	I	16.5		16.5	13.0	15.5	16.5	20.0
NR TDD n77 (PC2) Ant I	I	16.5		16.5	13.0	15.5	16.5	21.5
NR TDD n77 Ant E	E	16.5		16.5	13.0	15.5	16.5	20.0
NR TDD n77 (PC2) Ant E	E	16.5		16.5	13.0	15.5	16.5	21.5
NR TDD n77 Ant C	C	12.5		12.5	9.0	11.0	12.5	16.0
NR TDD n77 (PC2) Ant C	C	12.5		12.5	9.0	11.0	12.5	17.5

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Notes:

*Note all P_{limit} EFS and maximum tune up output power P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (e.g. GSM and LTE TDD).

*Maximum tune up output power P_{max} is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1dB device design uncertainty.

The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G Sub6 WWAN technology, band, and DSI = minimum of " P_{limit} EFS" and "Maximum tune up output power P_{max} " + 1dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB Publication 447498 D01v06.

The purpose of this report (Part 1 test) is to demonstrate that the EUT meets FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels.

Measurement Condition: All conducted power and SAR measurements in this report (Part 1 test) were performed by setting *Reserve_power_margin* (Smart Transmit EFS entry) to 0dB.

1.3 Power Reduction for SAR

This device used an independent fixed level power reduction mechanism for WLAN when 5G NR is active and also for WLAN/BT during all voice or VoIP held to ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR positions described in IEEE 1528-2013. Detailed descriptions of the power reduction mechanism are included in the operational description.

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1.4 Nominal and Maximum Output Power Specifications

This device operates using the following maximum and nominal output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 447498 D01v06.

1.4.1 2G/3G/4G/5G Output Power

CDMA BC0 (835 MHz)					
Power Level		Modulated Average Output Power (in dBm)			
		1x-RTT	EVDO Rev 0	EVDO Rev A	
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	25.0	24.5	24.5	
	Nominal	24.0	23.5	23.5	
DSI = 1 (Phablet Reduced)	Max allowed power	25.0	24.5	24.5	
	Nominal	24.0	23.5	23.5	
DSI = 2 (Head)	Max allowed power	25.0	24.5	24.5	
	Nominal	24.0	23.5	23.5	
DSI = 3 (Hotspot)	Max allowed power	24.0	24.0	24.0	
	Nominal	23.0	23.0	23.0	
DSI = 4 (Earjack)	Max allowed power	25.0	24.5	24.5	
	Nominal	24.0	23.5	23.5	
CDMA BC1 (1900 MHz)					
Power Level		Modulated Average Output Power (in dBm)			
		1x-RTT	EVDO Rev 0	EVDO Rev A	
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	24.0	24.0	24.0	
	Nominal	23.0	23.0	23.0	
DSI = 1 (Phablet Reduced)	Max allowed power	22.0	22.0	22.0	
	Nominal	21.0	21.0	21.0	
DSI = 2 (Head)	Max allowed power	24.0	24.0	24.0	
	Nominal	23.0	23.0	23.0	
DSI = 3 (Hotspot)	Max allowed power	19.0	19.0	19.0	
	Nominal	18.0	18.0	18.0	
DSI = 4 (Earjack)	Max allowed power	22.0	22.0	22.0	
	Nominal	21.0	21.0	21.0	

GSM/GPRS/EDGE 850										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	33.0	33.0	31.5	29.5	27.5	27.0	25.0	23.0	22.0
	Nominal	32.0	32.0	30.5	28.5	26.5	26.0	24.0	22.0	21.0
DSI = 1 (Phablet Reduced)	Max allowed power	33.0	33.0	31.5	29.5	27.5	27.0	25.0	23.0	22.0
	Nominal	32.0	32.0	30.5	28.5	26.5	26.0	24.0	22.0	21.0
DSI = 2 (Head)	Max allowed power	33.0	33.0	31.5	29.5	27.5	27.0	25.0	23.0	22.0
	Nominal	32.0	32.0	30.5	28.5	26.5	26.0	24.0	22.0	21.0
DSI = 3 (Hotspot)	Max allowed power	N/A	32.0	29.0	27.2	26.0	27.0	25.0	23.0	22.0
	Nominal	N/A	31.0	28.0	26.2	25.0	26.0	24.0	22.0	21.0
DSI = 4 (Earjack)	Max allowed power	33.0	33.0	31.5	29.5	27.5	27.0	25.0	23.0	22.0
	Nominal	32.0	32.0	30.5	28.5	26.5	26.0	24.0	22.0	21.0

GSM/GPRS/EDGE 1900										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	30.0	30.0	28.5	26.5	24.5	26.5	24.0	22.0	21.0
	Nominal	29.0	29.0	27.5	25.5	23.5	25.5	23.0	21.0	20.0
DSI = 1 (Phablet Reduced)	Max allowed power	29.0	29.0	26.0	24.2	23.0	26.5	24.0	22.0	21.0
	Nominal	28.0	28.0	25.0	23.2	22.0	25.5	23.0	21.0	20.0
DSI = 2 (Head)	Max allowed power	30.0	30.0	28.5	26.5	24.5	26.5	24.0	22.0	21.0
	Nominal	29.0	29.0	27.5	25.5	23.5	25.5	23.0	21.0	20.0
DSI = 3 (Hotspot)	Max allowed power	N/A	29.0	26.0	24.2	23.0	26.5	24.0	22.0	21.0
	Nominal	N/A	28.0	25.0	23.2	22.0	25.5	23.0	21.0	20.0
DSI = 4 (Earjack)	Max allowed power	29.0	29.0	26.0	24.2	23.0	26.5	24.0	22.0	21.0
	Nominal	28.0	28.0	25.0	23.2	22.0	25.5	23.0	21.0	20.0

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UMTS Band 5 (850 MHz)					
Power Level		Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Phablet Reduced)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 2 (Head)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 3 (Hotspot)	Max allowed power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 4 (Earjack)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
UMTS Band 4 (1750 MHz)					
Power Level		Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 1 (Phablet Reduced)	Max allowed power	21.0	20.0	20.0	20.0
	Nominal	20.0	19.0	19.0	19.0
DSI = 2 (Head)	Max allowed power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 3 (Hotspot)	Max allowed power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 4 (Earjack)	Max allowed power	21.0	20.0	20.0	20.0
	Nominal	20.0	19.0	19.0	19.0
UMTS Band 2 (1900 MHz)					
Power Level		Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
DSI = 0 (Body-Worn or Phablet Max)	Max allowed power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 1 (Phablet Reduced)	Max allowed power	22.0	21.0	21.0	21.0
	Nominal	21.0	20.0	20.0	20.0
DSI = 2 (Head)	Max allowed power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
DSI = 3 (Hotspot)	Max allowed power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 4 (Earjack)	Max allowed power	22.0	21.0	21.0	21.0
	Nominal	21.0	20.0	20.0	20.0

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Mode / Band		Modulated Average Output Power (in dBm)				
		DSI = 0 (Body-Worn or Phablet Max)	DSI = 1 (Phablet Reduced)	DSI = 2 (Head)	DSI = 3 (Hotspot)	DSI = 4 (Earjack)
LTE FDD Band 71	Max allowed	25.5	25.5	25.5	24.0	25.5
	Nominal	24.5	24.5	24.5	23.0	24.5
LTE FDD Band 12	Max allowed	25.5	25.5	25.5	24.0	25.5
	Nominal	24.5	24.5	24.5	23.0	24.5
LTE FDD Band 13	Max allowed	25.5	25.5	25.5	24.0	25.5
	Nominal	24.5	24.5	24.5	23.0	24.5
LTE FDD Band 14	Max allowed	25.5	25.5	25.5	24.0	25.5
	Nominal	24.5	24.5	24.5	23.0	24.5
LTE FDD Band 26	Max allowed	25.3	25.3	25.3	24.0	25.3
	Nominal	24.3	24.3	24.3	23.0	24.3
LTE FDD Band 5	Max allowed	25.3	25.3	25.3	24.0	25.3
	Nominal	24.3	24.3	24.3	23.0	24.3
LTE FDD Band 66	Max allowed	25.0	21.4	25.0	19.0	21.4
	Nominal	24.0	20.4	24.0	18.0	20.4
LTE FDD Band 4	Max allowed	25.0	21.4	25.0	19.0	21.4
	Nominal	24.0	20.4	24.0	18.0	20.4
LTE FDD Band 25	Max allowed	25.0	22.0	25.0	19.0	22.0
	Nominal	24.0	21.0	24.0	18.0	21.0
LTE FDD Band 2	Max allowed	25.0	22.0	25.0	19.0	22.0
	Nominal	24.0	21.0	24.0	18.0	21.0
LTE FDD Band 30	Max allowed	24.0	22.0	24.0	18.5	22.0
	Nominal	23.0	21.0	23.0	17.5	21.0
LTE FDD Band 7	Max allowed	25.0	22.0	25.0	18.5	22.0
	Nominal	24.0	21.0	24.0	17.5	21.0
LTE TDD Band 48	Max allowed	22.5	22.5	18.0	18.0	22.5
	Nominal	21.5	21.5	17.0	17.0	21.5
LTE TDD Band 41	Max allowed	25.5	24.0	25.5	20.5	24.0
	Nominal	24.5	23.0	24.5	19.5	23.0
LTE TDD Band 41 (PC2)	Max allowed	28.0	25.6	28.0	22.1	25.6
	Nominal	27.0	24.6	27.0	21.1	24.6
LTE TDD Band 38	Max allowed	25.5	24.0	25.5	20.5	24.0
	Nominal	24.5	23.0	24.5	19.5	23.0

Mode / Band		Modulated Average Output Power (in dBm)				
		DSI = 0 (Body-Worn or Phablet Max)	DSI = 1 (Phablet Reduced)	DSI = 2 (Head)	DSI = 3 (Hotspot)	DSI = 4 (Earjack)
NR FDD Band 71	Max allowed	25.5	25.5	25.5	24.0	25.5
	Nominal	24.5	24.5	24.5	23.0	24.5
NR FDD Band 12	Max allowed	25.5	25.5	25.5	24.0	25.5
	Nominal	24.5	24.5	24.5	23.0	24.5
NR FDD Band 5	Max allowed	25.3	25.3	25.3	24.0	25.3
	Nominal	24.3	24.3	24.3	23.0	24.3
NR FDD Band 66 Ant A	Max allowed	24.5	20.5	24.5	18.5	20.5
	Nominal	23.5	19.5	23.5	17.5	19.5
NR FDD Band 66 Ant I	Max allowed	22.0	22.0	18.0	19.0	22.0
	Nominal	21.0	21.0	17.0	18.0	21.0
NR FDD Band 25 Ant A	Max allowed	24.5	22.0	24.5	18.5	22.0
	Nominal	23.5	21.0	23.5	17.5	21.0
NR FDD Band 25 Ant I	Max allowed	24.5	24.5	19.0	19.0	24.5
	Nominal	23.5	23.5	18.0	18.0	23.5
NR FDD Band 2 Ant A	Max allowed	24.5	22.0	24.5	18.5	22.0
	Nominal	23.5	21.0	23.5	17.5	21.0
NR FDD Band 2 Ant I	Max allowed	24.5	24.5	19.0	19.0	24.5
	Nominal	23.5	23.5	18.0	18.0	23.5
NR FDD Band 30	Max allowed	23.5	22.0	23.5	18.5	22.0
	Nominal	22.5	21.0	22.5	17.5	21.0
NR TDD Band 41 (PC3)	Max allowed	22.0	22.0	16.0	20.0	22.0
	Nominal	21.0	21.0	15.0	19.0	21.0
NR TDD Band 41 (PC2)	Max allowed	22.0	22.0	16.0	20.0	22.0
	Nominal	21.0	21.0	15.0	19.0	21.0

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Mode / Band		Modulated Average Output Power (in dBm)				
		DSI = 0 (Body-Worn or Phablet Max)	DSI = 1 (Phablet Reduced)	DSI = 2 (Head)	DSI = 3 (Hotspot)	DSI = 4 (Earjack)
NR TDD Band 77 Ant F	Max allowed	19.5	19.5	16.0	18.5	19.5
	Nominal	18.5	18.5	15.0	17.5	18.5
NR TDD Band 77 (PC2) Ant F	Max allowed	19.5	19.5	16.0	18.5	19.5
	Nominal	18.5	18.5	15.0	17.5	18.5
NR TDD Band 77 Ant I	Max allowed	17.5	17.5	14.0	16.5	17.5
	Nominal	16.5	16.5	13.0	15.5	16.5
NR TDD Band 77 (PC2) Ant I	Max allowed	17.5	17.5	14.0	16.5	17.5
	Nominal	16.5	16.5	13.0	15.5	16.5
NR TDD Band 77 Ant E	Max allowed	17.5	17.5	14.0	16.5	17.5
	Nominal	16.5	16.5	13.0	15.5	16.5
NR TDD Band 77 (PC2) Ant E	Max allowed	17.5	17.5	14.0	16.5	17.5
	Nominal	16.5	16.5	13.0	15.5	16.5
NR TDD Band 77 Ant C	Max allowed	13.5	13.5	10.0	12.0	13.5
	Nominal	12.5	12.5	9.0	11.0	12.5
NR TDD Band 77 (PC2) Ant C	Max allowed	13.5	13.5	10.0	12.0	13.5
	Nominal	12.5	12.5	9.0	11.0	12.5

1.4.2 2.4 GHz Maximum Bluetooth and SISO/MIMO WLAN Output Power

Note: Targets for 802.11ax RU operations can be found in Appendix I

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 1/2															
		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	19.0	18.0	18.0	17.0	18.0	17.0	18.0	17.0	22.0	21.0	21.0	20.0	21.0	20.0	21.0	20.0

(Upper tolerance: Target + 1.0 dB)

Mode		Single Antenna	
		Antenna 1	Antenna 2
Bluetooth (in dBm)	Maximun	16.0	17.0
	Nominal	15.0	16.0
Bluetooth EDR (in dBm)	Maximun	13.5	14.0
	Nominal	12.5	13.5
Bluetooth LE 2Mbps (in dBm)	Maximun	6.0	
	Nominal	5.0	
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	Maximun	6.0	
	Nominal	5.0	

(Upper tolerance: Target + 1.0 dB)

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1.4.3 2.4 GHz Reduced Bluetooth and WLAN Output Power

Note: Targets for 802.11ax RU operations can be found in Appendix I

The below table is applicable in the following conditions:

- Simultaneous conditions with 5 GHz WLAN
- Simultaneous conditions with 5G NR

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 1/2															
		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	15.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0

(Upper tolerance: Target + 1.0 dB)

The below table is applicable in the following conditions:

- RCV Active
- RCV active during simultaneous conditions with 5G NR (FR1) and/or 5 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 1/2															
		b		g		n		ax (SU)		^b (CDD + STBC)		^g (CDD + STBC)		ⁿ (CDD+STBC, SDM)		^{ax} (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	13.0	12.0	13.0	12.0	13.0	12.0	13.0	12.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0

(Upper tolerance: Target + 1.0 dB)

The below table is applicable in the following conditions:

- RCV active during simultaneous conditions with 5G NR (FR2) and/or 5 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 1/2															
		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	11.0	10.0	11.0	10.0	11.0	10.0	11.0	10.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0

(Upper tolerance: Target + 1.0 dB)

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The below table is applicable to the following conditions:

- Simultaneous conditions with 5G NR

Mode		Single Antenna	
		Antenna 1	Antenna 2
Bluetooth (in dBm)	Maximun	14	
	Nominal	13.0	
Bluetooth EDR (in dBm)	Maximun	13.5	14.0
	Nominal	12.5	13.0
Bluetooth LE 2Mbps (in dBm)	Maximun	5.0	
	Nominal	5.0	
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	Maximun	6.0	
	Nominal	5.0	

(Upper tolerance: Target + 1.0 dB)

The below table is applicable I the following conditions:

- RCV Active

Mode		Single Antenna	
		Antenna 1	Antenna 2
Bluetooth (in dBm)	Maximun	10.0	
	Nominal	9.0	
Bluetooth EDR (in dBm)	Maximun	10.0	
	Nominal	9.0	
Bluetooth LE 2Mbps (in dBm)	Maximun	6.0	
	Nominal	5.0	
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	Maximun	6.0	
	Nominal	5.0	

(Upper tolerance: Target + 1.0 dB)

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1.4.4 5 GHz Maximum SISO/MIMO WLAN Output Power

Note: Targets for 802.11ax RU operations can be found in Appendix I

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 1/2															
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	5200 MHz	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0
		ch. 36: 16.5	15.5	ch. 36: 15.5	14.5	ch. 36: 15.5	14.5	ch. 36: 15.5	14.5	ch. 36: 19.5	18.5	ch. 36: 18.5	17.5	ch. 36: 18.5	17.5	ch. 36: 18.5	17.5
	5300 MHz	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0
				ch. 64: 17.0	16.0	ch. 64: 17.0	16.0	ch. 64: 17.0	16.0			ch. 64: 20.0	19.0	ch. 64: 20.0	19.0	ch. 64: 20.0	19.0
5 GHz WIFI (40MHz BW)	5500 MHz	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0
				ch. 100: 17.0	16.0	ch. 100: 17.0	16.0	ch. 100: 17.0	16.0			ch. 100: 20.0	19.0	ch. 100: 20.0	19.0	ch. 100: 20.0	19.0
	5800 MHz	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0
5 GHz WIFI (80MHz BW)	5200 MHz			17.0	16.0	17.0	16.0	17.0	16.0			20.0	19.0	20.0	19.0	20.0	19.0
				ch. 38: 14.0	13.0	ch. 38: 14.0	13.0	ch. 38: 14.0	13.0			ch. 38: 17.0	16.0	ch. 38: 17.0	16.0	ch. 38: 17.0	16.0
	5300 MHz			17.0	16.0	17.0	16.0	17.0	16.0			20.0	19.0	20.0	19.0	20.0	19.0
				ch. 62: 15.0	14.0	ch. 62: 15.0	14.0	ch. 62: 15.0	14.0			ch. 62: 18.0	17.0	ch. 62: 18.0	17.0	ch. 62: 18.0	17.0
5 GHz WIFI (80MHz BW)	5500 MHz			17.0	16.0	17.0	16.0	17.0	16.0			20.0	19.0	20.0	19.0	20.0	19.0
				ch. 102: 15.5	14.5	ch. 102: 15.5	14.5	ch. 102: 15.5	14.5			ch. 102: 18.5	17.5	ch. 102: 18.5	17.5	ch. 102: 18.5	17.5
	5800 MHz			17.0	16.0	17.0	16.0	17.0	16.0			20.0	19.0	20.0	19.0	20.0	19.0
5 GHz WIFI (80MHz BW)	5200 MHz					12.5	11.5	12.5	11.5					15.5	14.5	15.5	14.5
	5300 MHz					13.0	12.0	13.0	12.0					16.0	15.0	16.0	15.0
	5500 MHz					16.0	15.0	16.0	15.0					19.0	18.0	19.0	18.0
						ch. 106: 15.0	14.0	ch. 106: 15.0	14.0					ch. 106: 18.0	17.0	ch. 106: 18.0	17.0
5 GHz WIFI (80MHz BW)	5800 MHz					16.0	15.0	16.0	15.0					19.0	18.0	19.0	18.0

(Upper tolerance: Target + 1.0 dB)

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1.4.5 5 GHz Reduced SISO/MIMO WLAN Output Power

Note: Targets for 802.11ax RU operations can be found in Appendix I

The below table is applicable in the following conditions:

- Simultaneous conditions with 2.4 GHz WLAN
- Simultaneous conditions with 5G NR

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 1/2															
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	5200 MHz	15.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0
	5300 MHz	15.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0
	5500 MHz	15.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0
	5800 MHz	15.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0
5 GHz WIFI (40MHz BW)	5200 MHz			15.0	14.0	15.0	14.0	15.0	14.0			18.0	17.0	18.0	17.0	18.0	17.0
				ch. 38: 14.0	13.0	ch. 38: 14.0	13.0	ch. 38: 14.0	13.0			ch. 38: 17.0	16.0	ch. 38: 17.0	16.0	ch. 38: 17.0	16.0
	5300 MHz			15.0	14.0	15.0	14.0	15.0	14.0			18.0	17.0	18.0	17.0	18.0	17.0
	5500 MHz			15.0	14.0	15.0	14.0	15.0	14.0			18.0	17.0	18.0	17.0	18.0	17.0
5 GHz WIFI (80MHz BW)	5800 MHz			15.0	14.0	15.0	14.0	15.0	14.0			18.0	17.0	18.0	17.0	18.0	17.0
	5200 MHz					12.5	11.5	12.5	11.5					15.5	14.5	15.5	14.5
	5300 MHz					13.0	12.0	13.0	12.0					16.0	15.0	16.0	15.0
	5500 MHz					15.0	14.0	15.0	14.0					18.0	17.0	18.0	17.0
5 GHz WIFI (80MHz BW)	5800 MHz					15.0	14.0	15.0	14.0					18.0	17.0	18.0	17.0

(Upper tolerance: Target + 1.0 dB)

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The below table is applicable in the following conditions:

- RCV Active
- RCV active during simultaneous conditions with 2.4 GHz WLAN
- RCV active during simultaneous conditions with 5G NR

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 1/2															
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD+STBC, SDM)		ac (CDD+STBC, SDM)		ax (SU) (CDD+STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	5200 MHz	11.0	10.0	11.0	10.0	11.0	10.0	11.0	10.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
	5300 MHz	11.0	10.0	11.0	10.0	11.0	10.0	11.0	10.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
	5500 MHz	11.0	10.0	11.0	10.0	11.0	10.0	11.0	10.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
	5800 MHz	11.0	10.0	11.0	10.0	11.0	10.0	11.0	10.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
5 GHz WIFI (40MHz BW)	5200 MHz			11.0	10.0	11.0	10.0	11.0	10.0			14.0	13.0	14.0	13.0	14.0	13.0
	5300 MHz			11.0	10.0	11.0	10.0	11.0	10.0			14.0	13.0	14.0	13.0	14.0	13.0
	5500 MHz			11.0	10.0	11.0	10.0	11.0	10.0			14.0	13.0	14.0	13.0	14.0	13.0
	5800 MHz			11.0	10.0	11.0	10.0	11.0	10.0			14.0	13.0	14.0	13.0	14.0	13.0
5 GHz WIFI (80MHz BW)	5200 MHz					11.0	10.0	11.0	10.0					14.0	13.0	14.0	13.0
	5300 MHz					11.0	10.0	11.0	10.0					14.0	13.0	14.0	13.0
	5500 MHz					11.0	10.0	11.0	10.0					14.0	13.0	14.0	13.0
	5800 MHz					11.0	10.0	11.0	10.0					14.0	13.0	14.0	13.0

(Upper tolerance: Target + 1.0 dB)

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1.5 DUT Antenna Locations

A diagram showing the location of the device antennas for both open and closed configurations can be found in Appendix E. When the device is open, the overall dimensions of this device are > 9 x 5 cm. Since the diagonal dimension of this device when open is > 160 mm and <200 mm, it is considered a “phablet.” and operates similar to a traditional portable handset. In the closed configuration, only a simple display/interaction of notifications occurs and overall dimensions are < 9 x5 cm. Therefore, when the device is closed, the only testing considered is for body-worn and hotspot.

Table 1-1
Device Edges/Sides for SAR Testing Open

Mode	Back	Front	Top	Bottom	Right	Left
Cell. EVDO	Yes	Yes	No	Yes	Yes	Yes
PCS EVDO	Yes	Yes	No	Yes	Yes	Yes
GPRS 850	Yes	Yes	No	Yes	Yes	Yes
GPRS 1900	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	Yes	Yes	No	Yes	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes	Yes
LTE Band 71	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes	Yes
LTE Band 13	Yes	Yes	No	Yes	Yes	Yes
LTE Band 14	Yes	Yes	No	Yes	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 30	Yes	Yes	No	Yes	Yes	Yes
LTE Band 7	Yes	Yes	No	Yes	No	Yes
LTE Band 48	Yes	Yes	Yes	No	No	Yes
LTE Band 41	Yes	Yes	No	Yes	No	Yes
NR Band n71	Yes	Yes	No	Yes	Yes	Yes
NR Band n12	Yes	Yes	No	Yes	Yes	Yes
NR Band n5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS) Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS) Antenna I	Yes	Yes	Yes	No	Yes	No
NR Band n25 (PCS) Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n25 (PCS) Antenna I	Yes	Yes	Yes	No	Yes	No
NR Band n30	Yes	Yes	No	Yes	Yes	Yes
NR Band n41	Yes	Yes	Yes	No	Yes	No
NR Band n77 Antenna F	Yes	Yes	Yes	No	No	Yes
NR Band n77 Antenna I	Yes	Yes	Yes	No	Yes	No
NR Band n77 Antenna E	Yes	Yes	Yes	No	No	Yes
NR Band n77 Antenna C	Yes	Yes	No	Yes	No	Yes
2.4 GHz WLAN Ant 2	Yes	Yes	Yes	No	No	Yes
2.4 GHz WLAN MIMO	Yes	Yes	Yes	No	Yes	Yes
5 GHz WLAN Ant 1	Yes	Yes	Yes	No	Yes	No
5 GHz WLAN MIMO	Yes	Yes	Yes	No	Yes	Yes
Bluetooth Ant 1	Yes	Yes	Yes	No	Yes	No
Bluetooth Ant 2	Yes	Yes	Yes	No	No	Yes

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Table 1-2
Device Edges/Sides for SAR Testing Closed

Mode	Back	Front	Top	Bottom	Right	Left
Cell. EVDO	Yes	Yes	No	Yes	Yes	Yes
PCS EVDO	Yes	Yes	No	Yes	Yes	Yes
GPRS 850	Yes	Yes	No	Yes	Yes	Yes
GPRS 1900	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	Yes	Yes	No	Yes	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes	Yes
LTE Band 71	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes	Yes
LTE Band 13	Yes	Yes	No	Yes	Yes	Yes
LTE Band 14	Yes	Yes	No	Yes	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 30	Yes	Yes	No	Yes	Yes	Yes
LTE Band 7	Yes	Yes	No	Yes	No	Yes
LTE Band 48	Yes	Yes	No	Yes	No	Yes
LTE Band 41	Yes	Yes	No	Yes	No	Yes
NR Band n71	Yes	Yes	No	Yes	Yes	Yes
NR Band n12	Yes	Yes	No	Yes	Yes	Yes
NR Band n5 (Cell)	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS) Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS) Antenna I	Yes	Yes	Yes	Yes	Yes	No
NR Band n25 (PCS) Antenna A	Yes	Yes	No	Yes	Yes	Yes
NR Band n25 (PCS) Antenna I	Yes	Yes	Yes	Yes	Yes	No
NR Band n30	Yes	Yes	No	Yes	Yes	Yes
NR Band n41	Yes	Yes	Yes	Yes	Yes	No
NR Band n77 Antenna F	Yes	Yes	No	Yes	No	Yes
NR Band n77 Antenna I	Yes	Yes	Yes	Yes	Yes	No
NR Band n77 Antenna E	Yes	Yes	Yes	Yes	No	Yes
NR Band n77 Antenna C	Yes	Yes	Yes	Yes	No	Yes
2.4 GHz WLAN Ant 2	Yes	Yes	No	Yes	No	Yes
2.4 GHz WLAN MIMO	Yes	Yes	No	Yes	Yes	Yes
5 GHz WLAN Ant 1	Yes	Yes	No	Yes	Yes	No
5 GHz WLAN MIMO	Yes	Yes	No	Yes	Yes	Yes
Bluetooth Ant 1	Yes	Yes	No	Yes	Yes	No
Bluetooth Ant 2	Yes	Yes	No	Yes	No	Yes

Note: Particular DUT edges were not required to be evaluated for wireless router SAR or phablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III and FCC KDB Publication 648474 D04v01r03. The distances between the transmit antennas and the edges of the device are included in the filing. When wireless router mode is enabled, U-NII-1, U-NII-2A, U-NII-2C operations are disabled.

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1.6 Near Field Communications (NFC) Antenna

This DUT has NFC operations. The NFC antenna is integrated into the device for this model. Therefore, all SAR tests were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the NFC antenna can be found in Appendix E.

1.7 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06 4.3.2 procedures.

**Table 1-3
Simultaneous Transmission Scenarios**

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Notes
1	1x CDMA voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
2	1x CDMA voice + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
3	1x CDMA voice + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
4	1x CDMA voice + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
5	1x CDMA voice + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
6	1x CDMA voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
7	1x CDMA voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
8	1x CDMA voice + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
9	1x CDMA voice + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
10	1x CDMA voice + 5 GHz WLAN Ant 1	Yes	Yes	N/A	Yes	
11	1x CDMA voice + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
12	1x CDMA voice + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
13	1x CDMA voice + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
14	GSM voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
15	GSM voice + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
16	GSM voice + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
17	GSM voice + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
18	GSM voice + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
19	GSM voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
20	GSM voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
21	GSM voice + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
22	GSM voice + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
23	GSM voice + 5 GHz WLAN Ant 1	Yes	Yes	N/A	Yes	
24	GSM voice + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
25	GSM voice + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
26	GSM voice + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
27	UMTS + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
28	UMTS + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
29	UMTS + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
30	UMTS + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
31	UMTS + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
32	UMTS + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
33	UMTS + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
34	UMTS + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
35	UMTS + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
36	UMTS + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	
37	UMTS + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
38	UMTS + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
39	UMTS + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
40	LTE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
41	LTE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
42	LTE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
43	LTE + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
44	LTE + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
45	LTE + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
46	LTE + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
47	LTE + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
48	LTE + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
49	LTE + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	
50	LTE + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
51	LTE + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
52	LTE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered

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No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Notes
53	LTE + NR	Yes	Yes	N/A	Yes	
54	LTE + NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
55	LTE + NR + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
56	LTE + NR + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
57	LTE + NR + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
58	LTE + NR + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
59	LTE + NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
60	LTE + NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
61	LTE + NR + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
62	LTE + NR + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
63	LTE + NR + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	
64	LTE + NR + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
65	LTE + NR + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
66	LTE + NR + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
67	NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered.
68	NR + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
69	NR + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
70	NR + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN MIMO	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
71	NR + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN MIMO	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
72	NR + 5 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered.
73	NR + 2.4 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered.
74	NR + 2.4 GHz Bluetooth Ant 1	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
75	NR + 2.4 GHz Bluetooth Ant 2	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
76	NR + 5 GHz WLAN Ant 1	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered.
77	NR + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN Ant 1	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
78	NR + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN Ant 1	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
79	NR + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered.
80	CDMA/EVDO data + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered.
81	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
82	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
83	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN MIMO	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
84	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN MIMO	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
85	CDMA/EVDO data + 5 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered.
86	CDMA/EVDO data + 2.4 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered.
87	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 1	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
88	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 2	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
89	CDMA/EVDO data + 5 GHz WLAN Ant 1	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered.
90	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN Ant 1	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
91	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN Ant 1	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
92	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	Yes^*	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
93	GPRS/EDGE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
94	GPRS/EDGE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
95	GPRS/EDGE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
96	GPRS/EDGE + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
97	GPRS/EDGE + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
98	GPRS/EDGE + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
99	GPRS/EDGE + 2.4 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
100	GPRS/EDGE + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
101	GPRS/EDGE + 2.4 GHz Bluetooth Ant 2	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
102	GPRS/EDGE + 5 GHz WLAN Ant 1	N/A	N/A	Yes	Yes	
103	GPRS/EDGE + 2.4 GHz Bluetooth Ant 1 + 5 GHz WLAN Ant 1	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
104	GPRS/EDGE + 2.4 GHz Bluetooth Ant 2 + 5 GHz WLAN Ant 1	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
105	GPRS/EDGE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN Ant 1	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered

- 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
- All licensed modes share the same antenna path and cannot transmit simultaneously.
- When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.

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4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
5. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII2A, and U-NII2C were not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. 2.4 GHz WLAN antenna can transmit independently or together when operating with MIMO.
7. This device supports VoWIFI.
8. This device supports Bluetooth Tethering.
9. This device supports VoLTE.
10. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
11. 5G NR FR2 n260 and n261 cannot transmit simultaneously.
12. LTE + 5G NR FR2 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR2 checklist.

1.8 Miscellaneous SAR Test Considerations

When on the device dimensions when closed, hotspot SAR in the closed configuration was performed at 5mm per KDB Publication 941225 D06v02r01.

(A) WIFI/BT

Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.

Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A & U-NII-2C WIFI, only 2.4 GHz WLAN, 2.4 GHz Bluetooth and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.

This device supports IEEE 802.11ax with the following features:

- a) Up to 80 MHz Bandwidth only for 5 GHz
- b) Up to 20 MHz Bandwidth only for 2.4 GHz
- c) No aggregate channel configurations
- d) 2 Tx antenna output
- e) Up to 1024 QAM is supported
- f) TDWR and Band gap channels are supported for 5 GHz
- g) MU-MIMO UL Operations are not supported

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WLAN, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

Per April 2019 TCB Workshop Notes, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

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(B) Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

LTE SAR for the higher modulations and lower bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth; and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r04.

CDMA 1X Advanced technology was not required for SAR since the maximum allowed output powers for 1x Advanced was not more than 0.25 dB higher than the maximum powers for 1x and the measured SAR in any 1x mode exposure conditions was not greater than 1.2 W/kg per FCC KDB Publication 941225 D01v03r01.

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB Publication 941225 D05A v01r02, SAR for LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive. The downlink carrier aggregation exclusion analysis can be found in Appendix F.

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.

This device supports downlink 4x4 MIMO operations for some LTE Bands. Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

This device supports LTE/NR capabilities with overlapping transmission frequency ranges. When the supported frequency range of an LTE/NR Band falls completely within an LTE/NR band with a larger transmission frequency range, both LTE/NR bands have the same target power (or the band with the larger transmission frequency range has a higher target power), and both LTE/NR bands share the same transmission path and signal characteristics, SAR was only assessed for the band with the larger transmission frequency range.

This device supports both Power Class 2 (PC2) and Power Class 3 (PC3) for LTE Band 41. Per May 2017 TCB Workshop Notes, SAR tests were performed with Power Class 3 (given the specific UL/DL limitations for Power Class 2). Additionally, SAR testing for the power class 2 condition was evaluated for the highest configuration in Power Class 3 for each test configuration to confirm the results were scalable linearly (See Section 14)

This device supports 5G NR for Bands n260, and n261. RF Exposure assessment and simultaneous transmission analysis for these bands can be found in the Near Field PD Report (report SN can be found in Section 1.11 – Bibliography).

NR implementation supports SA and NSA mode. In EN-DC mode, NR operates with the LTE Bands shown in the NR FR1 checklist acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.

This device supports LTE Carrier Aggregation (CA) for LTE Band 41, LTE Band 5, LTE Band 66, and LTE Band 48 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per 2017 Fall TCB Workshop Notes

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1.9 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01, D05v02r04, D05Av01r02, D06v02r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D04v01r03 (Phablet Procedures)
- FCC KDB Publication 616217 D04v01r02 (Proximity Sensor)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO, LTE Band 41 Power Class 2/3)
- April 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (IEEE 802.11ax, Dynamic Antenna Tuning)

1.10 Device Serial Numbers

Several samples with identical hardware were used to support SAR testing. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units. The serial numbers used for each test are indicated alongside the results in Section 11.

1.11 Bibliography

Report Type	Report Serial Number
FCC Part 0 PD Characterization Report	
Near Field PD Report (Part 1)	1M2107290086-22.A3L
RF Exposure Part 0 Test Report	1M2107290086-25.A3L
RF Exposure Part 2 Test Report	1M2107290086-23.A3L
RF Exposure Compliance Summary Report	1M2107290086-24.A3L

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LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 71 (665.5 - 695.5 MHz)				
	LTE Band 12 (699.7 - 715.3 MHz)				
	LTE Band 13 (779.5 - 784.5 MHz)				
	LTE Band 14 (790.5 - 795.5 MHz)				
	LTE Band 26 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 30 (2307.5 - 2312.5 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 48 (3552.5 - 3697.5 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
	LTE Band 38 (2572.5 - 2617.5 MHz)				
	LTE Band 71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 14: 5 MHz, 10 MHz				
	LTE Band 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
Channel Bandwidths	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 30: 5 MHz, 10 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 48: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 38: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (131147)		690.5 (133297)		695.5 (133447)
LTE Band 71: 10 MHz	668 (131172)		690.5 (133297)		693 (133422)
LTE Band 71: 15 MHz	670.5 (131197)		690.5 (133297)		690.5 (133397)
LTE Band 71: 20 MHz	673 (131222)		690.5 (133297)		688 (133372)
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)		715.3 (23173)
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)		714.5 (23165)
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)		713.5 (23155)
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)		711 (23130)
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)		784.5 (23255)
LTE Band 13: 10 MHz	N/A		782 (23230)		N/A
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)		795.5 (23355)
LTE Band 14: 10 MHz	N/A		793 (23330)		N/A
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)		848.3 (27033)
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)		847.5 (27025)
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)		846.5 (27015)
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)		844 (26990)
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)		841.5 (26965)
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)		848.3 (20643)
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)		847.5 (20635)
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)		846.5 (20625)
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)		844 (20600)
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)		1779.3 (132665)
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)		1778.5 (132657)
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)		1777.5 (132647)
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)		1775 (132622)
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)		1772.5 (132597)
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)		1770 (132572)
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)		1754.3 (20393)
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)		1753.5 (20385)
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)		1752.5 (20375)
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)		1750 (20350)
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)		1747.5 (20325)
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)		1745 (20300)
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)		1914.3 (26683)
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)		1913.5 (26675)
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)		1912.5 (26665)
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)		1910 (26640)
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)		1907.5 (26615)
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)		1905 (26590)
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18807)		1880 (18900)		1909.3 (19153)
LTE Band 2 (PCS): 3 MHz	1851.5 (18815)		1880 (18900)		1908.5 (19145)
LTE Band 2 (PCS): 5 MHz	1852.5 (18825)		1880 (18900)		1907.5 (19135)
LTE Band 2 (PCS): 10 MHz	1855 (18850)		1880 (18900)		1905 (19110)
LTE Band 2 (PCS): 15 MHz	1857.5 (18875)		1880 (18900)		1902.5 (19125)
LTE Band 2 (PCS): 20 MHz	1860 (18900)		1880 (18900)		1900 (19100)
LTE Band 30: 5 MHz	2307.5 (27685)		2310 (27710)		2312.5 (27735)
LTE Band 30: 10 MHz	N/A		2310 (27710)		N/A
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)		2567.5 (21425)
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)		2565 (21400)
LTE Band 7: 15 MHz	2507.5 (20825)		2535 (21100)		2562.5 (21375)
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)		2560 (21350)
LTE Band 48: 5 MHz	3552.5 (55265)	3600.8 (55748)	N/A	3649.2 (56232)	3697.5 (56715)
LTE Band 48: 10 MHz	3555 (55290)	3601.7 (55757)	N/A	3648.3 (56223)	3695 (56690)
LTE Band 48: 15 MHz	3557.5 (55315)	3602.5 (55765)	N/A	3647.5 (56215)	3692.5 (56665)
LTE Band 48: 20 MHz	3560 (55340)	3603.3 (55773)	N/A	3646.7 (56207)	3690 (56640)
LTE Band 41: 5 MHz	2506 (39750)	2548.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2508 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)		2617.5 (38225)
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)		2615 (38200)
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)		2612.5 (38175)
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)		2610 (38150)
UE Category	DL UE Cat 20, UL UE Cat 18				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3-6.2.57 (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 16. It supports carrier aggregation, downlink MIMO, LAA features as shown in Section 9 and Appendix F. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 16 Features are not supported: Relay, HetNet, Enhanced MIMO, eCIC, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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NR Information					
Form Factor	Portable Handset				
Frequency Range of each NR transmission band	NR Band n71 (665.5 - 695.5 MHz)				
	NR Band n12 (701.5 - 713.5 MHz)				
	NR Band n5 (Cell) (826.5 - 846.5 MHz)				
	NR Band n66 (AWS) (1712.5 - 1777.5 MHz)				
	NR Band n25 (PCS) (1852.5 - 1912.5 MHz)				
	NR Band n2 (PCS) (1852.5 - 1907.5 MHz)				
	NR Band n30 (2307.5 - 2312.5 MHz)				
	NR Band n41 (2506.02 - 2679.99 MHz)				
	NR Band n77 DoD (3460.02 - 3540 MHz)				
	NR Band n77 (3710.01 - 3969.99 MHz)				
Channel Bandwidths	NR Band n71 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n12: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n5 (Cell): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n66 (AWS): 5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz				
	NR Band n25 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz				
	NR Band n2 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n30: 5 MHz, 10 MHz				
	NR Band n41: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz				
	NR Band n77 DoD: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz				
	NR Band n77: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz				
Channel Numbers and Frequencies (MHz)					
NR Band n71: 5 MHz	665.5 (133147)		680.5 (136100)		695.5 (133447)
NR Band n71: 10 MHz	668 (133600)		680.5 (136100)		693 (138600)
NR Band n71: 15 MHz	670.5 (134100)		680.5 (136100)		690.5 (138100)
NR Band n71: 20 MHz	673 (134600)		680.5 (136100)		688 (137600)
NR Band n12: 5 MHz	701.5 (140300)		707.5 (141500)		713.5 (142700)
NR Band n12: 10 MHz	704 (140800)		707.5 (141500)		711 (142200)
NR Band n12: 15 MHz	706.5 (141300)		707.5 (141500)		708.5 (141700)
NR Band n5 (Cell): 5 MHz	826.5 (165300)		836.5 (167300)		846.5 (169300)
NR Band n5 (Cell): 10 MHz	829 (165800)		836.5 (167300)		844 (168800)
NR Band n5 (Cell): 15 MHz	831.5 (166300)		836.5 (167300)		841.5 (168300)
NR Band n5 (Cell): 20 MHz	834 (166800)		836.5 (167300)		839 (167800)
NR Band n66 (AWS): 5 MHz	1712.5 (342500)		1745 (349000)		1777.5 (355500)
NR Band n66 (AWS): 10 MHz	1715 (343000)		1745 (349000)		1775 (355000)
NR Band n66 (AWS): 15 MHz	1717.5 (343500)		1745 (349000)		1772.5 (354500)
NR Band n66 (AWS): 20 MHz	1720 (344000)		1745 (349000)		1770 (354000)
NR Band n66 (AWS): 30 MHz	1725 (345000)		1745 (349000)		1765 (353000)
NR Band n66 (AWS): 40 MHz	1730 (346000)		1745 (349000)		1760 (352000)
NR Band n25 (PCS): 5 MHz	1852.5 (370500)		1882.5 (376500)		1912.5 (382500)
NR Band n25 (PCS): 10 MHz	1855 (371000)		1882.5 (376500)		1910 (382000)
NR Band n25 (PCS): 15 MHz	1857.5 (371500)		1882.5 (376500)		1907.5 (381500)
NR Band n25 (PCS): 20 MHz	1860 (372000)		1882.5 (376500)		1905 (381000)
NR Band n25 (PCS): 25 MHz	1862.5 (372500)		1882.5 (376500)		1902.5 (380500)
NR Band n25 (PCS): 30 MHz	1865 (373000)		1882.5 (376500)		1900 (380000)
NR Band n25 (PCS): 40 MHz	1870 (374000)		1882.5 (376500)		1895 (379000)
NR Band n2 (PCS): 5 MHz	1852.5 (370500)		1880 (376000)		1907.5 (381500)
NR Band n2 (PCS): 10 MHz	1855 (371000)		1880 (376000)		1905 (381000)
NR Band n2 (PCS): 15 MHz	1857.5 (371500)		1880 (376000)		1902.5 (380500)
NR Band n2 (PCS): 20 MHz	1860 (372000)		1880 (376000)		1900 (380000)
NR Band n30: 5 MHz	2307.5 (461500)		2310 (462000)		2312.5 (462500)
NR Band n30: 10 MHz	N/A		2310 (462000)		N/A
NR Band n41: 20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)	2636.49 (527298)	2679.99 (535998)
NR Band n41: 30 MHz	2511 (502200)	2552.01 (510402)	2592.99 (518598)	2634 (526800)	2674.98 (534996)
NR Band n41: 40 MHz	2516.01 (503202)	2567.34 (513468)	N/A	2618.67 (523734)	2670 (534000)
NR Band n41: 50 MHz	2521.02 (504204)		2592.99 (518598)		2664.99 (532998)
NR Band n41: 60 MHz	2526 (505200)		2592.99 (518598)		2659.98 (531996)
NR Band n41: 80 MHz	2536.02 (507204)		N/A		2649.99 (529998)
NR Band n41: 90 MHz	2541 (508200)		N/A		2644.98 (528996)
NR Band n41: 100 MHz	2546.01 (509202)		2592.99 (518598)		2640 (528000)
NR Band n77 DoD: 20 MHz	3460.02 (630668)		3500.01 (633334)		3540 (636000)
NR Band n77 DoD: 30 MHz	3465 (631000)		3500.01 (633334)		3534.99 (635666)
NR Band n77 DoD: 40 MHz	3470.01 (631334)		N/A		3529.98 (635332)
NR Band n77 DoD: 50 MHz	3475.02 (631668)		N/A		3525 (635000)
NR Band n77 DoD: 60 MHz	N/A		3500.01 (633334)		N/A
NR Band n77 DoD: 70 MHz	N/A		3500.01 (633334)		N/A
NR Band n77 DoD: 80 MHz	N/A		3500.01 (633334)		N/A
NR Band n77 DoD: 90 MHz	N/A		3500.01 (633334)		N/A
NR Band n77 DoD: 100 MHz	N/A		3500.01 (633334)		N/A
NR Band n77: 20 MHz	3710.01 (647334)	3762 (650800)	3813.99 (654266)	3866.01 (657734)	3918 (661200)
NR Band n77: 30 MHz	3715.02 (647668)	3765 (651000)	3815.01 (654334)	3864.99 (657666)	3915 (661000)
NR Band n77: 40 MHz	3720 (648000)	3768 (651200)	3816 (654400)	3864 (657600)	3912 (660800)
NR Band n77: 50 MHz	3725.01 (648334)	3782.49 (652166)	3840 (656000)	3897.51 (659834)	3954.99 (663666)
NR Band n77: 60 MHz	3730.02 (648668)	3803.34 (653556)	N/A	3876.66 (658444)	3949.98 (663332)
NR Band n77: 70 MHz	3735 (649000)	3804.99 (653666)	N/A	3875.01 (658334)	3945 (663000)
NR Band n77: 80 MHz	3740.01 (649334)	N/A	3840 (656000)	N/A	3939.99 (662666)
NR Band n77: 90 MHz	3745.02 (649668)	N/A	3840 (656000)	N/A	3934.98 (662332)
NR Band n77: 100 MHz	3750 (650000)	N/A	N/A	N/A	3930 (662000)
SCS for NR Band n71/n12/n5/n66/n25/n2/n30	15 kHz				
SCS for NR Band n41/n77	30 kHz				
Modulations Supported in UL	DFT-s-OFDM: $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM				
	CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Anchor Bands for NR Band n71	LTE Band 66/2				
LTE Anchor Bands for NR Band n12	LTE Band 66/2				
LTE Anchor Bands for NR Band n5 (Cell)	LTE Band 66/2/30/48				
LTE Anchor Bands for NR Band n66 (AWS)	LTE Band 2/5/12/13/14/30/48				
LTE Anchor Bands for NR Band n25 (PCS)	LTE Band 12/66				
LTE Anchor Bands for NR Band n2 (PCS)	LTE Band 5/12/13/14/30/48/66				
LTE Anchor Bands for NR Band n30	LTE Band 12/14/5				
LTE Anchor Bands for NR Band n41	LTE Band 12/66/25/241				
LTE Anchor Bands for NR Band n77 DoD/n77	LTE Band 2/5/12/13/14/30/66				

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3 INTRODUCTION

The FCC and Innovation, Science, and Economic Development Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices. [1]

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz [3] and Health Canada RF Exposure Guidelines Safety Code 6 [22]. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave [4] is used for guidance in measuring the Specific Absorption Rate (SAR) due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” Report No. Vol 74. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

3.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 3-1).

Equation 3-1
SAR Mathematical Equation

$$SAR = \frac{d}{dt} \left(\frac{dU}{dm} \right) = \frac{d}{dt} \left(\frac{dU}{\rho dv} \right)$$

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

- σ = conductivity of the tissue-simulating material (S/m)
- ρ = mass density of the tissue-simulating material (kg/m³)
- E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relation to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.[6]

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4 DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):
 - a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 4-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).
 - b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.
 - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

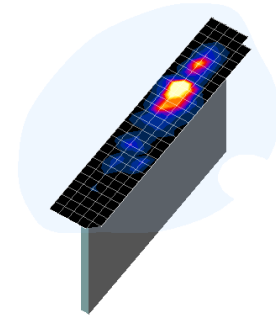


Figure 4-1
Sample SAR Area
Scan

Table 4-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

Frequency	Maximum Area Scan Resolution (mm) ($\Delta x_{\text{area}}, \Delta y_{\text{area}}$)	Maximum Zoom Scan Resolution (mm) ($\Delta x_{\text{zoom}}, \Delta y_{\text{zoom}}$)	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
			$\Delta z_{\text{zoom}}(n)$	$\Delta z_{\text{zoom}}(1)^*$	$\Delta z_{\text{zoom}}(n>1)^*$	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5* $\Delta z_{\text{zoom}}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

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5

DEFINITION OF REFERENCE POINTS

5.1 EAR REFERENCE POINT

Figure 5-2 shows the front, back and side views of the SAM Twin Phantom. The point “M” is the reference point for the center of the mouth, “LE” is the left ear reference point (ERP), and “RE” is the right ERP. The ERP is 15mm posterior to the entrance to the ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 5-1. The plane passing through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (see Figure 5-1). Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning [5].

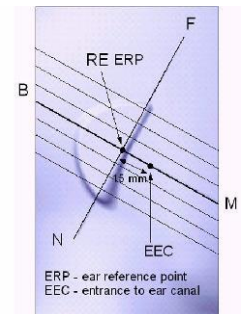


Figure 5-1
Close-Up Side view
of ERP

5.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device was placed in a normal operating position with the acoustic output located along the “vertical centerline” on the front of the device aligned to the “ear reference point” (See Figure 5-3). The acoustic output was then located at the same level as the center of the ear reference point. The test device was positioned so that the “vertical centerline” was bisecting the front surface of the handset at its top and bottom edges, positioning the “ear reference point” on the outer surface of the both the left and right head phantoms on the ear reference point.



Figure 5-2
Front, back and side view of SAM Twin Phantom

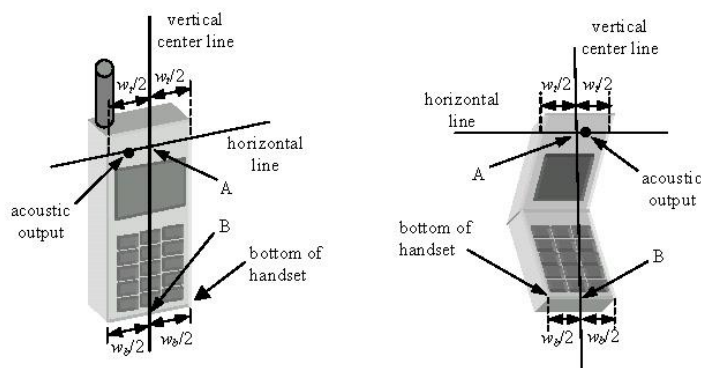


Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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6 TEST CONFIGURATION POSITIONS

6.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon = 3$ and loss tangent $\delta = 0.02$.

6.2 Positioning for Cheek

1. The test device was positioned with the device close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 6-1), such that the plane defined by the vertical center line and the horizontal line of the phone is approximately parallel to the sagittal plane of the phantom.

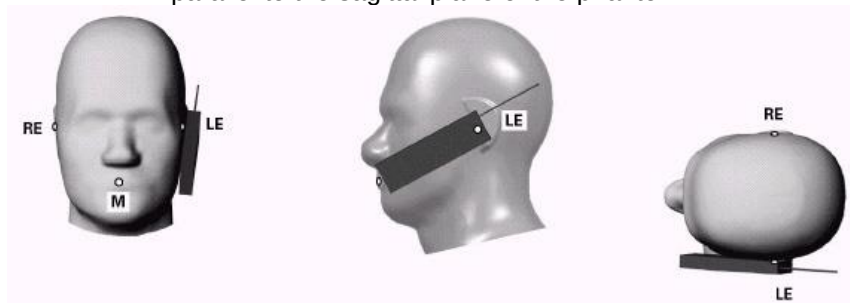


Figure 6-1 Front, Side and Top View of Cheek Position

2. The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the pinna.
3. While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the reference plane.
4. The phone was then rotated around the vertical centerline until the phone (horizontal line) was symmetrical with respect to the line NF.
5. While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the device contact with the ear, the device was rotated about the NF line until any point on the handset made contact with a phantom point below the ear (cheek) (See Figure 6-2).

6.3 Positioning for Ear / 15° Tilt

With the test device aligned in the “Cheek Position”:

1. While maintaining the orientation of the phone, the phone was retracted parallel to the reference plane far enough to enable a rotation of the phone by 15 degrees.
2. The phone was then rotated around the horizontal line by 15 degrees.
3. While maintaining the orientation of the phone, the phone was moved parallel to the reference plane until any part of the handset touched the head. (In this position, point A was located on the line RE-LE). The tilted position is obtained when the contact is on the pinna. If the contact was at any location other than the pinna, the angle of the phone would then be reduced. In this situation, the tilted position was obtained when any part of the phone was in contact of the ear as well as a second part of the phone was in contact with the head (see Figure 6-2).

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Figure 6-2 Front, Side and Top View of Ear/15° Tilt Position

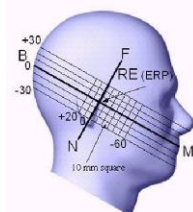


Figure 6-3 Side view w/ relevant markings

6.4 SAR Evaluations near the Mouth/Jaw Regions of the SAM Phantom

Antennas located near the bottom of a phone may require SAR measurements around the mouth and jaw regions of the SAM head phantom. This typically applies to clam-shell style phones that are generally longer in the unfolded normal use positions or to certain older style long rectangular phones. Per IEEE 1528-2013, a rotated SAM phantom is necessary to allow probe access to such regions. Both SAM heads of the TwinSAM-Chin20 are rotated 20 degrees around the NF line. Each head can be removed from the table for emptying and cleaning.

Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document FCC KDB Publication 648474 D04v01r03. The SAR required in these regions of SAM should be measured using a flat phantom. The phone should be positioned with a separation distance of 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell. While maintaining this distance at the ERP location, the low (bottom) edge of the phone should be lowered from the phantom to establish the same separation distance between the peak SAR location identified by the truncated partial SAR distribution measured with the SAM phantom. The distance from the peak SAR location to the phone is determined by the straight line passing perpendicularly through the phantom surface. When it is not feasible to maintain 4 mm separation at the ERP while also establishing the required separation at the peak SAR location, the top edge of the phone will be allowed to touch the phantom with a separation < 4 mm at the ERP. The phone should not be tilted to the left or right while placed in this inclined position to the flat phantom.

6.5 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6-4). Per FCC KDB Publication 648474 D04v01r03, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

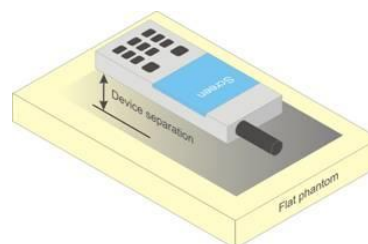


Figure 6-4 Sample Body-Worn Diagram

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not

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contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented.

Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

6.6 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions; i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1g body and 10g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

Per KDB Publication 447498 D01v06, Cell phones (handsets) are not normally designed to be used on extremities or operated in extremity only exposure conditions. The maximum output power levels of handsets generally do not require extremity SAR testing to show compliance. Therefore, extremity SAR was not evaluated for this device.

6.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) are based on a composite test separation distance of 10 mm from the front, back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 procedures. The "Portable Hotspot" feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

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6.8 Phablet Configurations

For smart phones with a display diagonal dimension > 150 mm or an overall diagonal dimension > 160 mm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the phablets procedures outlined in KDB Publication 648474 D04v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worn accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna ≤ 25 mm from that surface or edge, in direct contact with the phantom, for 10g SAR. The UMPC mini-tablet 1g SAR at 5 mm is not required. When hotspot mode applies, 10g SAR is required only for the surfaces and edges with hotspot mode 1g SAR > 1.2 W/kg.

6.9 Proximity Sensor Considerations

This device uses a power reduction mechanism to reduce output powers in certain use conditions when the device is used close the user's body.

When the device's antenna is within a certain distance of the user, the sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, additional evaluation is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a nonreduced output power level. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional test positions. Sensor triggering distance summary data is included in Appendix G.

The sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the sensor entirely covers the antennas.

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7 RF EXPOSURE LIMITS

7.1 Uncontrolled Environment

UNCONTROLLED ENVIRONMENTS are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

7.2 Controlled Environment

CONTROLLED ENVIRONMENTS are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Table 7-1
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT <i>General Population</i> (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT <i>Occupational</i> (W/kg) or (mW/g)
Peak Spatial Average SAR Head	1.6	8.0
Whole Body SAR	0.08	0.4
Peak Spatial Average SAR Hands, Feet, Ankle, Wrists, etc.	4.0	20

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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8 FCC MEASUREMENT PROCEDURES

Power measurements for licensed transmitters are performed using a base station simulator under digital average power.

8.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as *reported* SAR. The highest *reported* SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

8.2 3G SAR Test Reduction Procedure

In FCC KDB Publication 941225 D01v03r01, certain transmission modes within a frequency band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is ≤ 0.25 dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is ≤ 1.2 W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

8.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.”

The device is placed into a simulated call using a base station simulator in a RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test are evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device is tested throughout the SAR test at maximum output power, the SAR measurement system measures a “point SAR” at an arbitrary reference point at the start and end of the 1 gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviates by more than 5%, the SAR test and drift measurements are repeated.

8.4 SAR Measurement Conditions for CDMA2000

The following procedures were performed according to FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.”

8.4.1 Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.” Maximum output power is verified on the High, Middle and Low channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. SO55 tests were measured with power control bits in the “All Up” condition.

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1. If the mobile station (MS) supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9600 bps data rate only.
2. Under RC1, C.S0011 Table 4.4.5.2-1, Table 8-1 parameters were applied.
3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH₀ and demodulation of RC 3,4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9600 bps Fundamental Channel and 9600 bps SCH₀ data rate.
4. Under RC3, C.S0011 Table 4.4.5.2-2, Table 8-2 was applied.

Table 8-1
Parameters for Max. Power for RC1

Parameter	Units	Value
$\bar{I}_{or}$	dBm/1.23 MHz	-104
$\frac{Pilot E_c}{I_{or}}$	dB	-7
$\frac{Traffic E_c}{I_{or}}$	dB	-7.4

Table 8-2
Parameters for Max. Power for RC3

Parameter	Units	Value
$\bar{I}_{or}$	dBm/1.23 MHz	-86
$\frac{Pilot E_c}{I_{or}}$	dB	-7
$\frac{Traffic E_c}{I_{or}}$	dB	-7.4

5. FCHs were configured at full rate for maximum SAR with “All Up” power control bits.

8.4.2 Head SAR Measurements

SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55. The 3G SAR test reduction procedure is applied to RC1 with RC3 as the primary mode; otherwise, SAR is required for the channel with maximum measured output in RC1 using the head exposure configuration that results in the highest reported SAR in RC3.

Head SAR is additionally evaluated using EVDO Rev. A to support compliance for VoIP operations. See Section 8.4.5 for EVDO Rev. A configuration parameters.

8.4.3 Body-worn SAR Measurements

SAR for body-worn exposure configurations is measured in RC3 with the DUT configured to transmit at full rate on FCH with all other code channels disabled using TDSO / SO32. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH_n), with FCH only as the primary mode. Otherwise, SAR is required for multiple code channel configuration (FCH + SCH_n), with FCH at full rate and SCH₀ enabled at 9600 bps, using the highest reported SAR configuration for FCH only. When multiple code channels are enabled, the transmitter output can shift by more than 0.5 dB and may lead to higher SAR drifts and SCH dropouts.

The 3G SAR test reduction procedure is applied to body-worn accessory SAR in RC1 with RC3 as the primary mode. Otherwise, SAR is required for RC1, with SO55 and full rate, using the highest reported SAR configuration for body-worn accessory exposure in RC3.

8.4.4 Body-worn SAR Measurements for EVDO Devices

For handsets with EVDO capabilities, the 3G SAR test reduction procedure is applied to EVDO Rev. 0 with 1x RTT RC3 as the primary mode to determine body-worn accessory test requirements. Otherwise, body-worn accessory SAR is required for Rev. 0, at 153.6 kbps, using the highest reported SAR configuration for body-worn accessory exposure in RC3.

The 3G SAR test reduction procedure is applied to Rev. A, with Rev. 0 as the primary mode to determine body-worn accessory SAR test requirements. When SAR is not required for Rev. 0, the 3G SAR test reduction is applied with 1x RTT RC3 as the primary mode.

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When SAR is required for EVDO Rev. A, SAR is measured with a Reverse Data Channel payload size of 4096 bits and a Termination Target of 16 slots defined for Subtype 2 Physical Layer configurations, using the highest reported SAR configuration for body-worn accessory exposure in Rev. 0 or 1x RTT RC3, as appropriate.

8.4.5 Body SAR Measurements for EVDO Hotspot

Hotspot Body SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0. The 3G SAR test reduction procedure is applied to Rev. A, Subtype 2 Physical layer configuration, with Rev. 0 as the primary mode; otherwise, SAR is measured for Rev. A using the highest reported SAR configuration for body-worn accessory exposure in Rev. 0. The AT is tested with a Reverse Data Channel rate of 153.6 kbps in Subtype 0/1 Physical Layer configurations; and a Reverse Data Channel payload size of 4096 bits and Termination Target of 16 slots in Subtype 2 Physical Layer configurations.

For EVDO data devices that also support 1x RTT voice and/or data operations, the 3G SAR test reduction procedure is applied to 1x RTT RC3 and RC1 with EVDO Rev. 0 and Rev. A as the respective primary modes. Otherwise, the 'Body-Worn Accessory SAR' procedures in the '3GPP2 CDMA 2000 1x Handsets' section are applied.

8.4.6 CDMA2000 1x Advanced

This device additionally supports 1x Advanced. Conducted powers are measured using SO75 with RC8 on the uplink and RC11 on the downlink per FCC KDB Publication 941225 D01v03r01. Smart blanking is disabled for all measurements. The EUT is configured with forward power control Mode 000 and reverse power control at 400 bps. Conducted powers are measured on an Agilent 8960 Series 10 Wireless Communications Test Set, Model E5515C using the CDMA2000 1x Advanced application, Option E1962B-410.

The 3G SAR test reduction procedure is applied to the 1x-Advanced transmission mode with 1x RTT RC3 as the primary mode. When SAR measurement is required, the 1x-Advanced power measurement configurations are used. The 1x Advanced SAR procedures are applied separately to head, body-worn accessory and other exposure conditions.

8.5 SAR Measurement Conditions for UMTS

8.5.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all "1s" or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

8.5.2 Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1s". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

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8.5.3 Body SAR Measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all “1s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCH_n configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCH_n, for the highest reported SAR configuration in 12.2 kbps RMC.

8.5.4 SAR Measurements with Rel 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

8.5.5 SAR Measurements with Rel 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

8.5.6 SAR Measurement Conditions for DC-HSDPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

8.6 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r04 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

8.6.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

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8.6.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

8.6.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

8.6.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r04:

- a. Per Section 5.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
 - i. The required channel and offset combination with the highest maximum output power is required for SAR.
 - ii. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
 - iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
- b. Per Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
- c. Per Section 5.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 0.8 W/kg.
- d. Per Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to $\frac{1}{2}$ dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/kg.

8.6.5 TDD

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05v02r04. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05v02r04. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4.

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8.6.6 Downlink Only Carrier Aggregation

Conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for downlink only carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

8.7 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

8.7.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR systems to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

8.7.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is > 1.2 W/kg. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification. Unless band gap channels are permanently disabled, SAR must be considered for these channels. Each band is

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tested independently according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

8.7.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.5 2.4 GHz SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- 2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.6 OFDM Transmission Mode and SAR Test Channel Selection

When the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

8.7.7 Initial Test Configuration Procedure

For OFDM, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order IEEE 802.11 mode.

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The channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements (See Section 8.7.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg, no additional SAR tests for the subsequent test configurations are required. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.9 MIMO SAR considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is <1.6 W/kg, no additional SAR measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

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9 RF CONDUCTED POWERS

9.1 CDMA Conducted Powers

Table 9-1
Measured P_{Max}

Band	Channel	Rule Part	Frequency	SO55 [dBm]	SO55 [dBm]	SO75 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	RC11	FCH+SCH	FCH	(RTAP)	(RETAP)
Cellular	1013	22H	824.7	24.46	24.39	24.01	24.38	24.08	23.54	23.05
	384	22H	836.52	24.59	24.59	24.02	24.55	24.09	23.61	23.07
	777	22H	848.31	24.60	24.60	24.03	24.58	24.10	23.56	23.08
PCS	25	24E	1851.25	23.74	23.70	23.11	23.30	23.29	23.34	23.16
	600	24E	1880	23.64	23.71	22.86	23.24	23.25	23.13	23.26
	1175	24E	1908.75	23.21	23.26	22.53	23.03	23.08	23.17	23.08

Table 9-2
Measured P_{limit} for DSI = 3 (Hotspot Mode)

Band	Channel	Rule Part	Frequency	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	FCH+SCH	FCH	(RTAP)	(RETAP)
Cellular	1013	22H	824.7	22.91	22.95	23.01	23.00
	384	22H	836.52	22.97	23.01	22.96	22.98
	777	22H	848.31	22.86	22.88	22.95	22.97
PCS	25	24E	1851.25	18.06	18.08	18.28	18.30
	600	24E	1880	18.00	18.01	18.29	18.15
	1175	24E	1908.75	18.11	18.13	18.15	18.08

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Table 9-3
Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active)

Band	Channel	Rule Part	Frequency	SO55 [dBm]	SO55 [dBm]	SO75 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	RC11	FCH+SCH	FCH	(RTAP)	(RETAP)
PCS	25	24E	1851.25	20.99	21.00	21.08	21.14	21.26	21.04	21.06
	600	24E	1880	21.00	21.02	20.91	21.18	21.35	21.10	21.08
	1175	24E	1908.75	20.97	20.95	20.99	21.10	21.22	21.12	21.00

Note: RC1 is only applicable for IS-95 compatibility.



Figure 9-1
Power Measurement Setup

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9.2 GSM Conducted Powers

Table 9-4
Measured P_{max}

Maximum Burst-Averaged Output Power										
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GSM [dBm] CS (1 Slot)	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 850	128	32.00	31.98	30.47	28.54	26.54	26.22	23.90	22.10	21.05
	190	31.90	32.11	30.25	28.32	26.44	26.49	23.73	21.62	20.50
	251	31.74	32.15	30.22	28.29	26.31	25.99	23.65	21.85	20.66
GSM 1900	512	29.25	29.08	27.48	25.36	23.24	25.46	23.05	20.72	19.36
	661	29.01	28.88	27.31	25.19	23.11	24.45	22.85	20.79	19.47
	810	29.04	28.95	27.40	25.34	23.10	25.16	22.85	20.81	19.65
Calculated Maximum Frame-Averaged Output Power										
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GSM [dBm] CS (1 Slot)	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 850	128	22.80	22.78	24.28	24.11	23.36	17.02	17.71	17.67	17.87
	190	22.70	22.91	24.06	23.89	23.26	17.29	17.54	17.19	17.32
	251	22.54	22.95	24.03	23.86	23.13	16.79	17.46	17.42	17.48
GSM 1900	512	20.05	19.88	21.29	20.93	20.06	16.26	16.86	16.29	16.18
	661	19.81	19.28	21.12	20.76	19.93	15.68	16.66	16.36	16.29
	810	19.84	19.75	21.21	20.91	19.92	15.96	16.66	16.38	16.47
GSM 850	Frame Avg.Targets:	22.80	22.80	24.31	24.07	23.32	16.80	17.81	17.57	17.82
GSM 1900		19.80	19.80	21.31	21.07	20.32	16.30	16.81	16.57	16.82

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Table 9-5
Measured P_{limit} for DSI = 3 (Hotspot Mode) for GSM 850

Maximum Burst-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 850	128	30.77	28.10	25.67	24.12	26.02	23.85	21.69	21.13
	190	30.67	27.84	25.75	24.24	25.88	23.70	21.55	20.85
	251	30.68	28.39	25.66	24.05	25.90	23.72	21.57	20.98
Calculated Maximum Frame-Averaged Output Power									
		GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 850	128	21.57	21.91	21.24	20.94	16.82	17.66	17.26	17.95
	190	21.47	21.65	21.32	21.06	16.68	17.51	17.12	17.67
	251	21.48	22.20	21.23	20.87	16.70	17.53	17.14	17.80
GSM 850	Frame Avg. Targets:	21.80	21.81	21.77	21.82	16.80	17.81	17.57	17.82

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Table 9-6
Measured P_{limit} for DSI = 3 (Hotspot Mode), or
DSI = 1 (Phablet with grip sensor inactive), and/or DSI = 4 (Earjack active) for GSM 1900

Maximum Burst-Averaged Output Power										
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GSM [dBm] CS (1 Slot)	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 1900	512	28.55	28.68	24.80	23.89	22.31	25.29	23.00	21.47	19.69
	661	28.14	28.28	25.19	23.13	22.00	24.69	22.79	20.11	19.25
	810	28.13	28.17	24.99	23.87	22.34	24.80	22.78	20.67	19.67

Calculated Maximum Frame-Averaged Output Power										
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GSM [dBm] CS (1 Slot)	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 1900	512	19.35	19.48	18.61	19.46	19.13	16.09	16.81	17.04	16.51
	661	18.94	19.08	19.00	18.70	18.82	15.49	16.60	15.68	16.07
	810	18.93	18.97	18.80	19.44	19.16	15.60	16.59	16.24	16.49
GSM 1900	Frame Avg. Targets:	18.80	18.80	18.81	18.77	18.82	16.30	16.81	16.57	16.82

Note:

- Both burst-averaged and calculated frame-averaged powers are included. Frame-averaged power was calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- GPRS/EDGE (GMSK) output powers were measured with coding scheme setting of 1 (CS1) on the base station simulator. CS1 was configured to measure GPRS output power measurements and SAR to ensure GMSK modulation in the signal. Our Investigation has shown that CS1 - CS4 settings do not have any impact on the output levels or modulation in the GPRS modes.
- EDGE (8-PSK) output powers were measured with MCS7 on the base station simulator. MCS7 coding scheme was used to measure the output powers for EDGE since investigation has shown that choosing MCS7 coding scheme will ensure 8-PSK modulation. It has been shown that MCS levels that produce 8-PSK modulation do not have an impact on output power.

GSM Class: B
GPRS Multislot class: 33 (Max 4 Tx uplink slots)
EDGE Multislot class: 33 (Max 4 Tx uplink slots)
DTM Multislot Class: N/A



Figure 9-2
Power Measurement Setup

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9.3 UMTS Conducted Powers

Table 9-7
Measured P_{max}

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	24.46	24.49	24.43	23.66	23.70	23.68	23.80	23.82	23.74	-
99		12.2 kbps AMR	24.54	24.53	24.47	23.83	23.78	23.64	23.99	23.95	23.92	-
6	HSDPA	Subtest 1	22.93	22.82	22.82	22.00	22.02	22.00	22.13	22.07	22.01	0
6		Subtest 2	22.90	22.86	22.78	22.05	22.01	22.01	22.04	22.06	22.05	0
6		Subtest 3	22.33	22.37	22.28	21.51	21.50	21.50	21.58	21.51	21.52	0.5
6		Subtest 4	22.33	22.37	22.29	21.50	21.52	21.52	21.58	21.57	21.53	0.5
6	HSUPA	Subtest 1	23.11	23.07	23.00	22.05	22.01	22.03	22.21	22.24	22.15	0
6		Subtest 2	21.00	20.98	20.95	20.04	20.02	20.01	20.17	20.18	20.02	2
6		Subtest 3	21.92	21.92	21.88	21.05	21.03	21.00	21.13	21.15	21.10	1
6		Subtest 4	21.04	20.88	20.73	20.01	20.00	20.00	20.08	20.00	20.03	2
6		Subtest 5	23.14	23.12	22.97	22.30	22.17	22.14	22.21	22.20	22.15	0
8	DC-HSDPA	Subtest 1	23.06	23.00	22.97	22.08	22.01	22.02	22.33	22.22	22.23	0
8		Subtest 2	23.00	23.01	22.98	22.04	22.00	22.03	22.30	22.24	22.17	0
8		Subtest 3	22.56	22.53	22.45	21.57	21.52	21.55	21.79	21.75	21.72	0.5
8		Subtest 4	22.55	22.56	22.43	21.55	21.52	21.54	21.77	21.76	21.66	0.5

Table 9-8
Measured P_{limit} for DSI = 3 (Hotspot Mode)

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	23.00	22.99	22.92	18.40	18.45	18.38	18.01	17.95	18.00	-
99		12.2 kbps AMR	23.06	23.03	22.99	18.11	18.24	18.24	18.08	18.00	18.05	-
6	HSDPA	Subtest 1	21.82	21.81	21.76	16.50	16.58	16.48	16.73	16.73	16.64	0
6		Subtest 2	21.76	21.83	21.76	16.53	16.63	16.56	16.72	16.71	16.66	0
6		Subtest 3	21.30	21.31	21.23	16.03	16.02	16.04	16.24	16.21	16.17	0.5
6		Subtest 4	21.34	21.26	21.23	16.07	16.08	16.07	16.21	16.25	16.19	0.5
6	HSUPA	Subtest 1	21.53	21.72	21.69	16.55	16.57	16.47	16.72	16.75	16.68	0
6		Subtest 2	19.79	19.75	19.78	14.70	14.71	14.65	14.84	14.80	14.77	2
6		Subtest 3	20.78	20.77	20.70	15.54	15.55	15.49	15.71	15.70	15.65	1
6		Subtest 4	19.80	19.77	19.72	14.51	14.56	14.49	14.73	14.75	14.66	2
6		Subtest 5	21.78	21.77	21.78	16.65	16.60	16.52	16.65	16.71	16.69	0
8	DC-HSDPA	Subtest 1	21.74	21.78	21.70	16.67	16.70	16.60	16.99	16.97	16.82	0
8		Subtest 2	21.79	21.79	21.71	16.66	16.66	16.59	16.77	16.71	16.79	0
8		Subtest 3	21.29	21.26	21.21	16.05	16.06	15.98	16.25	16.30	16.59	0.5
8		Subtest 4	21.28	21.25	21.20	16.00	16.08	16.03	16.25	16.11	16.17	0.5

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Table 9-9
Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active)

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	20.03	20.00	19.87	21.38	21.42	21.40	-
99		12.2 kbps AMR	20.12	19.99	19.96	21.45	21.43	21.31	-
6	HSDPA	Subtest 1	19.01	19.03	19.01	20.10	20.16	20.16	0
6		Subtest 2	19.02	19.01	19.02	20.06	20.17	20.11	0
6		Subtest 3	18.53	18.50	18.53	19.57	19.60	19.61	0.5
6		Subtest 4	18.52	18.52	18.50	19.57	19.63	19.60	0.5
6	HSUPA	Subtest 1	19.04	19.02	19.01	20.20	20.19	20.15	0
6		Subtest 2	17.00	17.03	17.00	18.14	18.17	18.08	2
6		Subtest 3	18.02	18.03	18.02	19.12	19.04	19.05	1
6		Subtest 4	17.02	17.01	17.02	18.16	18.17	18.14	2
6		Subtest 5	19.96	19.96	19.91	21.00	20.98	20.99	0
8	DC-HSDPA	Subtest 1	19.23	19.18	19.09	20.51	20.53	20.39	0
8		Subtest 2	19.24	19.17	19.11	20.44	20.42	20.41	0
8		Subtest 3	18.75	18.77	18.65	19.98	19.95	19.94	0.5
8		Subtest 4	18.74	18.69	18.60	19.99	19.96	19.90	0.5

DC-HSDPA considerations

- 3GPP Specification 34.121-1 Release 8 Ver 8.10.0 was used for DC-HSDPA guidance
- H-Set 12 (QPSK) was confirmed to be used during DC-HSDPA measurements
- The DUT supports UE category 24 for HSDPA

It is expected by the manufacturer that MPR for some HSPA subtests may be up to 2 dB more than specified by 3GPP, but also as low as 0 dB according to the chipset implementation in this model.

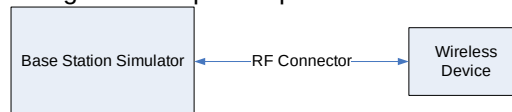


Figure 9-3
Power Measurement Setup

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9.4 LTE Conducted Powers

Note: Per FCC KDB Publication 941225 D05v02r05, LTE SAR for the lower bandwidths was not required for testing since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg. Lower bandwidth conducted powers for all LTE bands can be found in Appendix H.

9.4.1 LTE Band 71

Table 9-10

LTE Band 71 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	133297 (680.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
QPSK	1	0	24.08	0	0
	1	50	24.11		0
	1	99	24.07		0
	50	0	23.12	0-1	1
	50	25	23.26		1
	50	50	23.20		1
	100	0	23.19		1
16QAM	1	0	23.13	0-1	1
	1	50	23.14		1
	1	99	23.16		1
	50	0	22.19	0-2	2
	50	25	22.29		2
	50	50	22.23		2
	100	0	22.14		2
64QAM	1	0	22.63	0-2	2
	1	50	22.69		2
	1	99	22.66		2
	50	0	21.20	0-3	3
	50	25	21.31		3
	50	50	21.28		3
	100	0	21.20		3
256QAM	1	0	19.08	0-5	5
	1	50	19.47		5
	1	99	19.26		5
	50	0	19.14		5
	50	25	19.23		5
	50	50	19.18		5
	100	0	19.11		5

Note: LTE Band 71 at 20 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-11
LTE Band 71 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			133297 (680.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.67	0	0
	1	50	22.73		0
	1	99	22.65		0
	50	0	22.63	0-1	0
	50	25	22.78		0
	50	50	22.66		0
	100	0	22.70		0
16QAM	1	0	23.09	0-1	0
	1	50	23.13		0
	1	99	23.06		0
	50	0	22.16	0-2	0.5
	50	25	22.28		0.5
	50	50	22.25		0.5
	100	0	22.20		0.5
64QAM	1	0	21.91	0-2	0.5
	1	50	22.04		0.5
	1	99	21.92		0.5
	50	0	21.20	0-3	1.5
	50	25	21.32		1.5
	50	50	21.28		1.5
	100	0	21.25		1.5
256QAM	1	0	19.08	0-5	3.5
	1	50	19.52		3.5
	1	99	19.24		3.5
	50	0	19.17		3.5
	50	25	19.28		3.5
	50	50	19.25		3.5
	100	0	19.16		3.5

Note: LTE Band 71 at 20 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.4.2 LTE Band 12

Table 9-12

LTE Band 12 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23095 (707.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	24.13	0	0
	1	25	24.25		0
	1	49	24.17		0
	25	0	23.26	0-1	1
	25	12	23.40		1
	25	25	23.30		1
	50	0	23.28		1
16QAM	1	0	23.55	0-1	1
	1	25	23.59		1
	1	49	23.57		1
	25	0	22.25	0-2	2
	25	12	22.41		2
	25	25	22.33		2
	50	0	22.28		2
64QAM	1	0	22.53	0-2	2
	1	25	22.59		2
	1	49	22.61		2
	25	0	21.30	0-3	3
	25	12	21.49		3
	25	25	21.37		3
	50	0	21.20		3
256QAM	1	0	18.92	0-5	5
	1	25	19.29		5
	1	49	19.05		5
	25	0	19.27		5
	25	12	19.44		5
	25	25	19.37		5
	50	0	19.32		5

Note: LTE Band 12 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-13
LTE Band 12 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23095 (707.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.67	0	0
	1	25	22.78		0
	1	49	22.67		0
	25	0	22.78	0-1	0
	25	12	22.85		0
	25	25	22.81		0
	50	0	22.69		0
16QAM	1	0	23.02	0-1	0
	1	25	23.04		0
	1	49	23.01		0
	25	0	22.36	0-2	0.5
	25	12	22.47		0.5
	25	25	22.50		0.5
	50	0	22.28		0.5
64QAM	1	0	22.51	0-2	0.5
	1	25	22.78		0.5
	1	49	22.66		0.5
	25	0	21.35	0-3	1.5
	25	12	21.51		1.5
	25	25	21.43		1.5
	50	0	21.30		1.5
256QAM	1	0	19.22	0-5	3.5
	1	25	19.32		3.5
	1	49	19.35		3.5
	25	0	19.33		3.5
	25	12	19.46		3.5
	25	25	19.45		3.5
	50	0	19.34		3.5

Note: LTE Band 12 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.4.3 LTE Band 13

Table 9-14

LTE Band 13 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23230 (782.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	24.18	0	0
	1	25	24.23		0
	1	49	24.27		0
	25	0	23.33	0-1	1
	25	12	23.29		1
	25	25	23.32		1
	50	0	23.24		1
16QAM	1	0	23.63	0-1	1
	1	25	23.73		1
	1	49	23.79		1
	25	0	22.40	0-2	2
	25	12	22.32		2
	25	25	22.36		2
	50	0	22.37		2
64QAM	1	0	21.88	0-2	2
	1	25	22.48		2
	1	49	21.96		2
	25	0	21.03	0-3	3
	25	12	21.27		3
	25	25	21.30		3
	50	0	21.19		3
256QAM	1	0	18.91	0-5	5
	1	25	19.36		5
	1	49	19.26		5
	25	0	19.25		5
	25	12	19.33		5
	25	25	19.29		5
	50	0	19.26		5

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Table 9-15
LTE Band 13 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23230 (782.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.69	0	0
	1	25	22.70		0
	1	49	22.84		0
	25	0	22.88	0-1	0
	25	12	22.89		0
	25	25	22.83		0
	50	0	22.83		0
16QAM	1	0	22.79	0-1	0
	1	25	22.86		0
	1	49	22.91		0
	25	0	22.45	0-2	0.5
	25	12	22.48		0.5
	25	25	22.42		0.5
	50	0	22.36		0.5
64QAM	1	0	21.79	0-2	0.5
	1	25	22.33		0.5
	1	49	21.92		0.5
	25	0	21.37	0-3	1.5
	25	12	21.47		1.5
	25	25	21.54		1.5
	50	0	21.40		1.5
256QAM	1	0	19.39	0-5	3.5
	1	25	19.64		3.5
	1	49	19.69		3.5
	25	0	19.38		3.5
	25	12	19.49		3.5
	25	25	19.41		3.5
	50	0	19.32		3.5

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9.4.4 LTE Band 14

Table 9-16

LTE Band 14 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23330 (793.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	24.20	0	0
	1	25	24.12		0
	1	49	24.14		0
	25	0	23.26	0-1	1
	25	12	23.34		1
	25	25	23.32		1
	50	0	23.30		1
16QAM	1	0	23.03	0-1	1
	1	25	22.99		1
	1	49	23.04		1
	25	0	22.28	0-2	2
	25	12	22.37		2
	25	25	22.42		2
	50	0	22.32		2
64QAM	1	0	22.60	0-2	2
	1	25	22.69		2
	1	49	22.72		2
	25	0	21.27	0-3	3
	25	12	21.40		3
	25	25	21.42		3
	50	0	21.26		3
256QAM	1	0	18.89	0-5	5
	1	25	19.06		5
	1	49	18.82		5
	25	0	19.30		5
	25	12	19.36		5
	25	25	19.40		5
	50	0	19.27		5

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Table 9-17
LTE Band 14 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23330 (793.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.69	0	0
	1	25	22.84		0
	1	49	22.81		0
	25	0	22.76	0-1	0
	25	12	22.89		0
	25	25	22.88		0
	50	0	22.80		0
16QAM	1	0	23.36	0-1	0
	1	25	23.41		0
	1	49	23.46		0
	25	0	22.33	0-2	0.5
	25	12	22.49		0.5
	25	25	22.51		0.5
	50	0	22.33		0.5
64QAM	1	0	22.27	0-2	0.5
	1	25	22.40		0.5
	1	49	22.36		0.5
	25	0	21.39	0-3	1.5
	25	12	21.50		1.5
	25	25	21.44		1.5
	50	0	21.35		1.5
256QAM	1	0	19.61	0-5	3.5
	1	25	19.90		3.5
	1	49	19.72		3.5
	25	0	19.38		3.5
	25	12	19.49		3.5
	25	25	19.54		3.5
	50	0	19.35		3.5

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9.4.5 LTE Band 26

Table 9-18

LTE Band 26 (Cell) Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26865 (831.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	23.97	0	0
	1	36	23.94		0
	1	74	24.00		0
	36	0	22.97	0-1	1
	36	18	23.03		1
	36	37	23.05		1
	75	0	22.96		1
16QAM	1	0	23.43	0-1	1
	1	36	23.39		1
	1	74	23.44		1
	36	0	21.98	0-2	2
	36	18	22.03		2
	36	37	22.04		2
	75	0	21.99		2
64QAM	1	0	22.31	0-2	2
	1	36	22.45		2
	1	74	22.51		2
	36	0	20.97	0-3	3
	36	18	21.01		3
	36	37	21.05		3
	75	0	20.99		3
256QAM	1	0	19.23	0-5	5
	1	36	19.47		5
	1	74	19.46		5
	36	0	19.01		5
	36	18	19.05		5
	36	37	19.06		5
	75	0	19.04		5

Note: LTE Band 26 (Cell) at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-19
LTE Band 26 (Cell) Measured P_{limit} for DSI = 3 (Hotspot Mode) - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26865 (831.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	23.05	0	0
	1	36	22.97		0
	1	74	23.06		0
	36	0	22.99	0-1	0
	36	18	23.02		0
	36	37	23.04		0
	75	0	22.96		0
16QAM	1	0	23.04	0-1	0
	1	36	23.05		0
	1	74	22.95		0
	36	0	22.05	0-2	0.7
	36	18	22.02		0.7
	36	37	22.06		0.7
	75	0	21.98		0.7
64QAM	1	0	22.27	0-2	0.7
	1	36	22.25		0.7
	1	74	22.31		0.7
	36	0	21.03	0-3	1.7
	36	18	20.97		1.7
	36	37	21.01		1.7
	75	0	20.99		1.7
256QAM	1	0	19.35	0-5	3.7
	1	36	19.30		3.7
	1	74	19.50		3.7
	36	0	19.15		3.7
	36	18	18.97		3.7
	36	37	18.99		3.7
	75	0	18.93		3.7

Note: LTE Band 26 (Cell) at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.4.6 LTE Band 5

Table 9-20

LTE Band 5 (Cell) Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active) - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20525 (836.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	23.56	0	0
	1	25	23.53		0
	1	49	23.67		0
	25	0	22.55	0-1	1
	25	12	22.56		1
	25	25	22.62		1
	50	0	22.52		1
16QAM	1	0	22.62	0-1	1
	1	25	22.68		1
	1	49	22.65		1
	25	0	21.62	0-2	2
	25	12	21.61		2
	25	25	21.72		2
	50	0	21.51		2
64QAM	1	0	21.86	0-2	2
	1	25	21.98		2
	1	49	21.93		2
	25	0	20.77	0-3	3
	25	12	20.78		3
	25	25	20.87		3
	50	0	20.67		3
256QAM	1	0	18.23	0-5	5
	1	25	18.61		5
	1	49	18.39		5
	25	0	18.61		5
	25	12	18.72		5
	25	25	18.71		5
	50	0	18.59		5

Note: LTE Band 5 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-21
LTE Band 5 (Cell) Measured P_{limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20525 (836.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.68	0	0
	1	25	22.77		0
	1	49	22.82		0
	25	0	22.83	0-1	0
	25	12	22.89		0
	25	25	23.00		0
	50	0	22.80		0
16QAM	1	0	23.20	0-1	0
	1	25	23.26		0
	1	49	23.24		0
	25	0	21.85	0-2	0.7
	25	12	21.88		0.7
	25	25	21.96		0.7
	50	0	21.82		0.7
64QAM	1	0	21.88	0-2	0.7
	1	25	21.98		0.7
	1	49	21.96		0.7
	25	0	20.91	0-3	1.7
	25	12	20.99		1.7
	25	25	21.03		1.7
	50	0	20.79		1.7
256QAM	1	0	19.07	0-5	3.7
	1	25	19.44		3.7
	1	49	19.20		3.7
	25	0	18.86		3.7
	25	12	18.94		3.7
	25	25	19.01		3.7
	50	0	18.85		3.7

Note: LTE Band 5 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.4.7 LTE Band 66

Table 9-22

LTE Band 66 (AWS) Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132072 (1720.0 MHz)	132322 (1745.0 MHz)	132572 (1770.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.54	23.49	23.82	0	0
	1	50	23.69	23.73	23.79		0
	1	99	23.71	23.70	23.91		0
	50	0	22.77	22.82	22.86	0-1	1
	50	25	22.90	22.91	23.04		1
	50	50	22.86	22.89	22.97		1
	100	0	22.88	22.81	23.02		1
16QAM	1	0	22.83	22.86	23.18	0-1	1
	1	50	23.13	23.23	23.18		1
	1	99	22.90	23.04	23.24		1
	50	0	21.81	21.83	21.88	0-2	2
	50	25	21.97	21.90	22.01		2
	50	50	21.87	21.93	21.96		2
	100	0	21.92	21.88	21.94		2
64QAM	1	0	21.54	21.76	22.00	0-2	2
	1	50	22.03	21.41	22.14		2
	1	99	21.81	21.63	21.44		2
	50	0	20.84	20.58	20.88	0-3	3
	50	25	20.95	20.42	21.06		3
	50	50	20.88	20.40	20.92		3
	100	0	20.91	20.43	20.95		3
256QAM	1	0	18.65	18.71	18.70	0-5	5
	1	50	18.99	19.01	19.11		5
	1	99	18.83	18.85	18.91		5
	50	0	18.85	18.86	18.81		5
	50	25	19.00	18.96	19.02		5
	50	50	18.87	18.88	19.03		5
	100	0	18.91	18.86	18.95		5

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Table 9-23
LTE Band 66 (AWS) Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132022 (1715.0 MHz)	132322 (1745.0 MHz)	132622 (1775.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.54	23.63	23.61	0	0
	1	25	23.80	23.87	23.95		0
	1	49	23.68	23.72	23.72		0
	25	0	22.91	22.88	22.94	0-1	1
	25	12	22.96	22.94	23.05		1
	25	25	22.88	22.89	22.99		1
	50	0	22.89	22.87	22.83		1
16QAM	1	0	23.30	22.95	23.18	0-1	1
	1	25	23.40	23.15	23.50		1
	1	49	23.32	23.06	22.88		1
	25	0	22.30	22.25	22.20	0-2	2
	25	12	22.33	22.29	22.45		2
	25	25	22.30	22.28	22.33		2
	50	0	22.26	22.17	22.23		2
64QAM	1	0	21.73	21.66	22.20	0-2	2
	1	25	22.20	21.71	22.03		2
	1	49	22.25	21.78	21.65		2
	25	0	20.77	20.69	21.22	0-3	3
	25	12	21.00	20.67	20.96		3
	25	25	21.18	20.69	20.65		3
	50	0	21.02	20.71	20.97		3
256QAM	1	0	19.09	19.05	19.16	0-5	5
	1	25	19.37	19.51	19.48		5
	1	49	19.29	19.30	19.32		5
	25	0	19.29	19.19	19.27		5
	25	12	19.25	19.25	19.38		5
	25	25	19.22	19.28	19.23		5
	50	0	19.24	19.29	19.28		5

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Table 9-24
LTE Band 66 (AWS) Measured P_{limit} for DSI = 3 (Hotspot Mode)- 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132072 (1720.0 MHz)	132322 (1745.0 MHz)	132572 (1770.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	18.34	18.31	18.71	0	0
	1	50	18.73	18.55	18.56		0
	1	99	18.42	18.51	18.74		0
	50	0	18.69	18.66	18.77	0-1	0
	50	25	18.92	18.70	18.93		0
	50	50	18.82	18.73	18.76		0
	100	0	18.72	18.71	18.73		0
16QAM	1	0	18.65	18.55	18.89	0-1	0
	1	50	18.84	18.84	18.96		0
	1	99	18.69	18.83	18.88		0
	50	0	18.55	18.59	18.81	0-2	0
	50	25	18.69	18.65	18.85		0
	50	50	18.57	18.65	18.78		0
	100	0	18.62	18.62	18.80		0
64QAM	1	0	18.59	18.43	18.97	0-2	0
	1	50	18.65	18.79	18.91		0
	1	99	18.58	18.72	18.93		0
	50	0	18.65	18.60	18.82	0-3	0
	50	25	18.72	18.66	18.90		0
	50	50	18.57	18.57	18.88		0
	100	0	18.66	18.63	18.78		0
256QAM	1	0	18.60	18.56	18.66	0-5	0
	1	50	18.85	18.87	18.95		0
	1	99	18.55	18.65	18.89		0
	50	0	18.61	18.57	18.80		0
	50	25	18.68	18.69	18.86		0
	50	50	18.57	18.62	18.91		0
	100	0	18.65	18.85	18.83		0

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Table 9-25
LTE Band 66 (AWS) Measured P_{limit} for DSI = 3 (Hotspot Mode)- 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132022 (1715.0 MHz)	132322 (1745.0 MHz)	132622 (1775.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	18.69	18.63	18.64	0	0
	1	25	18.90	18.82	18.85		0
	1	49	18.72	18.65	18.67		0
	25	0	18.91	18.81	18.84	0-1	0
	25	12	18.94	18.87	18.89		0
	25	25	18.93	18.89	18.91		0
	50	0	18.95	18.85	18.87		0
16QAM	1	0	18.67	18.55	18.90	0-1	0
	1	25	18.81	18.85	18.96		0
	1	49	18.65	18.66	18.92		0
	25	0	18.53	18.36	18.63	0-2	0
	25	12	18.63	18.55	18.72		0
	25	25	18.50	18.45	18.75		0
	50	0	18.51	18.50	18.62		0
64QAM	1	0	18.55	18.50	18.64	0-2	0
	1	25	18.58	18.57	18.77		0
	1	49	18.51	18.79	18.78		0
	25	0	18.56	18.50	18.73	0-3	0
	25	12	18.72	18.60	18.84		0
	25	25	18.52	18.56	18.75		0
	50	0	18.59	18.55	18.76		0
256QAM	1	0	18.50	18.39	18.63	0-5	0
	1	25	18.56	18.64	18.91		0
	1	49	18.55	18.54	18.74		0
	25	0	18.74	18.52	18.67		0
	25	12	18.65	18.63	18.82		0
	25	25	18.53	18.60	18.79		0
	50	0	18.56	18.52	18.71		0

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Table 9-26
LTE Band 66 (AWS) Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132072 (1720.0 MHz)	132322 (1745.0 MHz)	132572 (1770.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	20.69	20.66	21.04	0	0
	1	50	20.77	21.01	21.01		0
	1	99	20.75	20.84	21.11		0
	50	0	20.94	20.72	21.06	0-1	0
	50	25	21.08	21.08	21.25		0
	50	50	21.00	21.16	21.16		0
	100	0	20.99	21.05	21.10		0
16QAM	1	0	21.13	21.01	21.39	0-1	0
	1	50	21.20	21.22	21.37		0
	1	99	21.06	21.20	21.39		0
	50	0	20.94	21.07	21.11	0-2	0
	50	25	21.16	21.16	21.26		0
	50	50	21.05	21.17	21.21		0
	100	0	21.04	21.03	21.22		0
64QAM	1	0	20.89	20.97	21.37	0-2	0
	1	50	21.20	21.24	21.39		0
	1	99	21.19	21.13	21.38		0
	50	0	21.02	21.01	21.09	0-3	0
	50	25	21.11	21.15	21.30		0
	50	50	21.04	21.16	21.22		0
	100	0	21.03	21.08	21.14		0
256QAM	1	0	18.82	18.86	19.00	0-5	1.4
	1	50	19.12	19.28	19.32		1.4
	1	99	19.03	19.16	19.20		1.4
	50	0	18.97	19.08	19.08		1.4
	50	25	19.10	19.12	19.29		1.4
	50	50	19.07	19.13	19.22		1.4
	100	0	19.11	19.06	19.23		1.4

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Table 9-27
LTE Band 66 (AWS) Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132022 (1715.0 MHz)	132322 (1745.0 MHz)	132622 (1775.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	20.50	20.60	20.61	0	0
	1	25	20.74	20.93	20.87		0
	1	49	20.56	20.77	20.78		0
	25	0	20.81	20.87	20.99	0-1	0
	25	12	20.92	20.90	21.04		0
	25	25	20.79	20.91	21.01		0
	50	0	20.83	20.86	20.84		0
16QAM	1	0	20.89	21.03	20.90	0-1	0
	1	25	21.15	21.21	20.97		0
	1	49	20.91	21.09	20.90		0
	25	0	20.89	20.99	20.70	0-2	0
	25	12	20.98	20.97	20.92		0
	25	25	21.03	20.95	20.78		0
	50	0	20.98	20.89	20.75		0
64QAM	1	0	20.75	20.77	20.87	0-2	0
	1	25	21.20	21.14	20.90		0
	1	49	20.98	20.89	21.07		0
	25	0	20.67	20.64	20.68	0-3	0
	25	12	20.68	20.66	20.93		0
	25	25	20.85	20.69	20.72		0
	50	0	20.68	20.60	20.82		0
256QAM	1	0	19.04	18.79	18.64	0-5	1.4
	1	25	18.93	18.88	18.83		1.4
	1	49	18.96	18.81	18.71		1.4
	25	0	18.97	18.95	18.73		1.4
	25	12	18.96	19.02	18.81		1.4
	25	25	18.98	19.06	18.77		1.4
	50	0	18.90	18.57	18.76		1.4

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9.4.8 LTE Band 25

Table 9-28

LTE Band 25 (PCS) Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26140 (1860.0 MHz)	26365 (1882.5 MHz)	26590 (1905.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	24.02	24.37	24.03	0	0
	1	50	24.04	24.10	23.92		0
	1	99	24.14	24.22	23.91		0
	50	0	23.24	23.35	23.08	0-1	1
	50	25	23.35	23.40	23.00		1
	50	50	23.36	23.04	22.90		1
	100	0	23.25	23.20	22.99		1
16QAM	1	0	23.71	23.88	23.52	0-1	1
	1	50	23.89	23.70	23.38		1
	1	99	23.81	23.64	23.33		1
	50	0	22.28	22.47	22.11	0-2	2
	50	25	22.37	22.45	22.10		2
	50	50	22.36	22.10	21.98		2
	100	0	22.37	22.24	21.97		2
64QAM	1	0	22.85	22.50	22.32	0-2	2
	1	50	22.43	22.00	22.38		2
	1	99	22.59	21.88	22.28		2
	50	0	21.26	21.53	21.18	0-3	3
	50	25	21.18	20.98	21.16		3
	50	50	21.38	20.99	21.00		3
	100	0	21.25	21.03	21.02		3
256QAM	1	0	19.02	19.11	18.88	0-5	5
	1	50	19.43	19.53	19.01		5
	1	99	19.31	19.22	18.70		5
	50	0	19.15	19.28	18.97		5
	50	25	19.39	19.45	19.11		5
	50	50	19.35	19.31	19.00		5
	100	0	19.34	19.27	18.99		5

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Table 9-29
LTE Band 25 (PCS) Measured P_{limit} for DSI = 3 (Hotspot Mode)- 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26140 (1860.0 MHz)	26365 (1882.5 MHz)	26590 (1905.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	18.50	18.78	18.72	0	0
	1	50	18.53	18.75	18.68		0
	1	99	18.61	18.86	18.67		0
	50	0	18.70	18.87	18.89	0-1	0
	50	25	18.83	18.90	18.85		0
	50	50	18.85	18.88	18.84		0
	100	0	18.73	18.74	18.70		0
16QAM	1	0	18.89	18.75	18.89	0-1	0
	1	50	18.70	18.59	18.92		0
	1	99	18.69	18.45	18.86		0
	50	0	18.50	18.58	18.88	0-2	0
	50	25	18.53	18.45	18.85		0
	50	50	18.43	18.40	18.87		0
	100	0	18.41	18.61	18.81		0
64QAM	1	0	18.78	18.62	18.97	0-2	0
	1	50	18.63	18.58	18.86		0
	1	99	18.73	18.46	18.93		0
	50	0	18.51	18.52	18.86	0-3	0
	50	25	18.54	18.56	18.92		0
	50	50	18.46	18.44	18.87		0
	100	0	18.49	18.47	18.82		0
256QAM	1	0	18.32	18.52	18.66	0-5	0
	1	50	18.36	18.59	18.96		0
	1	99	18.50	18.44	18.78		0
	50	0	18.32	18.62	18.75		0
	50	25	18.47	18.51	18.87		0
	50	50	18.44	18.55	18.91		0
	100	0	18.45	18.50	18.82		0

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Table 9-30
LTE Band 25 (PCS) Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26140 (1860.0 MHz)	26365 (1882.5 MHz)	26590 (1905.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	21.10	21.50	21.08	0	0
	1	50	21.07	21.40	21.00		0
	1	99	21.16	21.35	20.99		0
	50	0	21.24	21.46	21.09	0-1	0
	50	25	21.38	21.49	21.02		0
	50	50	21.36	21.34	21.01		0
	100	0	21.25	21.27	20.99		0
16QAM	1	0	21.71	21.88	21.45	0-1	0
	1	50	21.73	21.90	21.40		0
	1	99	21.90	21.88	21.32		0
	50	0	21.30	21.40	21.08	0-2	0
	50	25	21.41	21.46	21.10		0
	50	50	21.40	21.40	20.97		0
	100	0	21.33	21.36	21.01		0
64QAM	1	0	21.88	21.62	21.37	0-2	0
	1	50	21.89	21.65	21.22		0
	1	99	21.90	21.61	21.20		0
	50	0	21.16	21.54	21.13	0-3	0
	50	25	21.15	20.90	21.10		0
	50	50	21.40	20.92	21.00		0
	100	0	21.27	20.96	21.04		0
256QAM	1	0	19.25	19.14	18.90	0-5	2
	1	50	19.36	19.61	19.02		2
	1	99	19.34	19.29	18.79		2
	50	0	19.19	19.35	19.01		2
	50	25	19.41	19.47	19.18		2
	50	50	19.37	19.34	18.94		2
	100	0	19.31	19.31	19.02		2

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9.4.9 LTE Band 30

Table 9-31
LTE Band 30 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			27710 (2310.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	23.40	0	0
	1	25	23.30		0
	1	49	23.37		0
	25	0	22.45	0-1	1
	25	12	22.37		1
	25	25	22.20		1
	50	0	22.31		1
16QAM	1	0	22.68	0-1	1
	1	25	22.71		1
	1	49	22.57		1
	25	0	21.42	0-2	2
	25	12	21.36		2
	25	25	21.22		2
	50	0	21.26		2
64QAM	1	0	21.13	0-2	2
	1	25	21.64		2
	1	49	21.38		2
	25	0	19.86	0-3	3
	25	12	20.33		3
	25	25	20.25		3
	50	0	20.34		3
256QAM	1	0	18.35	0-5	5
	1	25	18.52		5
	1	49	18.26		5
	25	0	18.43		5
	25	12	18.40		5
	25	25	18.21		5
	50	0	18.31		5

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Table 9-32
LTE Band 30 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			27710 (2310.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	17.95	0	0
	1	25	17.80		0
	1	49	17.78		0
	25	0	17.85	0-1	0
	25	12	18.00		0
	25	25	17.71		0
	50	0	17.82		0
16QAM	1	0	18.36	0-1	0
	1	25	18.20		0
	1	49	18.07		0
	25	0	17.88	0-2	0
	25	12	17.84		0
	25	25	17.73		0
	50	0	17.80		0
64QAM	1	0	18.35	0-2	0
	1	25	18.07		0
	1	49	17.92		0
	25	0	17.94	0-3	0
	25	12	17.90		0
	25	25	17.75		0
	50	0	17.88		0
256QAM	1	0	17.95	0-5	0
	1	25	18.06		0
	1	49	17.74		0
	25	0	17.97		0
	25	12	17.91		0
	25	25	17.76		0
	50	0	17.79		0

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Table 9-33
LTE Band 30 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active) -
10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			27710 (2310.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	21.29	0	0
	1	25	21.22		0
	1	49	21.26		0
	25	0	21.28	0-1	0
	25	12	21.38		0
	25	25	21.27		0
	50	0	21.28		0
16QAM	1	0	21.27	0-1	0
	1	25	21.44		0
	1	49	21.32		0
	25	0	21.41	0-2	0
	25	12	21.48		0
	25	25	21.36		0
	50	0	21.31		0
64QAM	1	0	21.34	0-2	0
	1	25	21.48		0
	1	49	21.50		0
	25	0	20.11	0-3	1
	25	12	20.38		1
	25	25	20.34		1
	50	0	20.30		1
256QAM	1	0	18.09	0-5	3
	1	25	18.18		3
	1	49	18.14		3
	25	0	18.45		3
	25	12	18.44		3
	25	25	18.40		3
	50	0	18.34		3

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9.4.10 LTE Band 7

Table 9-34

LTE Band 7 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head)
- 20 MHz Bandwidth

LTE Band 7							
20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20850	21100	21350		
			(2510.0 MHz)	(2535.0 MHz)	(2560.0 MHz)		
Conducted Power [dBm]							
QPSK	1	0	23.83	24.02	24.01	0	0
	1	50	23.83	23.89	23.89		0
	1	99	23.88	23.88	23.82		0
	50	0	22.85	22.94	23.00	0-1	1
	50	25	23.04	23.08	22.99		1
	50	50	22.97	22.97	22.91		1
16QAM	100	0	22.94	23.00	22.91	1	
	1	0	23.13	23.18	23.23	0-1	1
	1	50	23.07	23.17	23.20		1
	1	99	23.05	23.20	23.17		1
	50	0	21.83	21.93	22.02	0-2	2
	50	25	22.00	22.10	22.02		2
50	50	21.95	21.96	21.97	2		
64QAM	100	0	21.97	22.00	22.00	2	
	1	0	22.10	22.11	22.23	0-2	2
	1	50	22.15	22.15	22.27		2
	1	99	22.14	22.15	22.11		2
	50	0	20.83	20.95	21.03	0-3	3
	50	25	21.00	21.06	21.03		3
50	50	21.00	20.98	20.96	3		
256QAM	100	0	20.97	21.01	21.00	3	
	1	0	18.66	18.92	18.97	0-5	5
	1	50	19.10	19.12	19.14		5
	1	99	18.86	18.97	18.66		5
	50	0	18.80	18.92	18.96		5
	50	25	19.00	19.07	19.01		5
50	50	18.92	18.96	18.92	5		
	100	0	18.91	19.04	18.89	5	

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Table 9-35
LTE Band 7 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20850 (2510.0 MHz)	21100 (2535.0 MHz)	21350 (2560.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	18.07	17.98	18.34	0	0
	1	50	18.10	17.95	18.06		0
	1	99	18.23	17.94	18.04		0
	50	0	18.02	17.97	18.10	0-1	0
	50	25	18.34	18.10	18.35		0
	50	50	18.14	18.00	18.07		0
	100	0	18.13	18.02	18.07		0
16QAM	1	0	18.47	18.35	18.50	0-1	0
	1	50	18.36	18.40	18.50		0
	1	99	18.33	18.45	18.49		0
	50	0	18.09	17.99	18.13	0-2	0
	50	25	18.27	18.14	18.18		0
	50	50	18.20	18.02	18.12		0
	100	0	18.17	18.10	18.09		0
64QAM	1	0	18.38	18.16	18.22	0-2	0
	1	50	18.42	18.16	18.19		0
	1	99	18.41	18.20	18.12		0
	50	0	18.12	18.20	18.21	0-3	0
	50	25	18.27	18.33	18.23		0
	50	50	18.23	18.23	18.17		0
	100	0	18.17	18.23	18.14		0
256QAM	1	0	17.98	18.14	18.04	0-5	0
	1	50	18.38	18.39	18.26		0
	1	99	18.13	18.20	17.92		0
	50	0	18.14	18.18	18.19		0
	50	25	18.33	18.34	18.21		0
	50	50	18.27	18.20	18.18		0
	100	0	18.25	18.19	18.15		0

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Table 9-36
LTE Band 7 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active) -
20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20850 (2510.0 MHz)	21100 (2535.0 MHz)	21350 (2560.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	20.78	21.01	20.93	0	0
	1	50	20.75	20.89	20.86		0
	1	99	20.73	20.91	20.79		0
	50	0	20.77	20.90	20.94	0-1	0
	50	25	20.95	21.05	20.95		0
	50	50	20.85	20.95	20.86		0
	100	0	20.86	21.00	20.89		0
16QAM	1	0	21.11	21.14	21.16	0-1	0
	1	50	21.00	21.10	21.16		0
	1	99	21.01	21.20	21.05		0
	50	0	20.74	20.87	20.97	0-2	0
	50	25	20.96	21.05	20.94		0
	50	50	20.85	20.96	20.86		0
	100	0	20.87	20.92	20.87		0
64QAM	1	0	21.05	21.11	21.21	0-2	0
	1	50	21.08	21.11	21.16		0
	1	99	21.12	21.16	21.13		0
	50	0	20.80	20.89	20.98	0-3	0
	50	25	20.97	21.04	20.96		0
	50	50	20.89	20.94	20.87		0
	100	0	20.85	20.97	20.86		0
256QAM	1	0	18.69	18.91	18.92	0-5	2
	1	50	19.00	19.09	19.10		2
	1	99	18.80	18.90	18.63		2
	50	0	18.77	18.87	18.93		2
	50	25	18.94	19.04	18.95		2
	50	50	18.87	18.89	18.84		2
	100	0	18.88	18.97	18.86		2

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9.4.11 LTE Band 48

Table 9-37

LTE Band 48 Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active) - 20 MHz Bandwidth

LTE Band 48								
20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55340 (3560.0 MHz)	55773 (3603.3 MHz)	56207 (3646.7 MHz)	56640 (3690.0 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	21.86	21.89	22.08	22.20	0	0
	1	50	21.98	21.97	22.30	22.00		0
	1	99	22.00	22.00	22.14	21.95		0
	50	0	21.92	21.93	22.04	22.07	0-1	0
	50	25	22.07	22.11	22.27	22.21		0
	50	50	21.97	21.97	22.04	22.00		0
	100	0	22.07	21.99	22.08	22.04		0
16QAM	1	0	21.51	21.94	22.19	21.70	0-1	0
	1	50	21.62	22.06	22.21	21.75		0
	1	99	21.59	22.01	22.14	21.63		0
	50	0	21.88	21.86	21.98	21.96	0-2	0
	50	25	22.02	22.01	22.14	22.04		0
	50	50	21.93	21.88	22.03	21.87		0
	100	0	21.87	21.96	22.03	21.97		0
64QAM	1	0	21.17	21.56	21.83	22.00	0-2	0
	1	50	21.23	21.72	21.90	22.02		0
	1	99	21.27	21.71	21.84	21.93		0
	50	0	20.85	20.77	20.92	20.95	0-3	1
	50	25	21.00	20.94	21.05	21.02		1
	50	50	20.90	20.80	20.95	20.86		1
	100	0	20.88	20.90	21.01	20.96		1
256QAM	1	0	18.42	18.51	18.52	18.71	0-5	3
	1	50	18.87	18.75	18.94	19.00		3
	1	99	18.63	18.41	18.56	18.56		3
	50	0	18.84	18.86	18.99	19.00		3
	50	25	18.97	19.01	19.12	19.08		3
	50	50	18.88	18.88	19.00	18.90		3
	100	0	18.83	18.90	19.02	18.88		3

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Table 9-38

LTE Band 48 Measured P_{limit} for DSI = 3 (Hotspot Mode), or DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			55340 (3560.0 MHz)	55773 (3603.3 MHz)	56207 (3646.7 MHz)	56640 (3690.0 MHz)		
			Conducted Power [dBm]					
QPSK	1	0	17.04	17.44	17.39	17.50	0	0
	1	50	17.14	17.59	17.75	17.35		0
	1	99	17.35	17.21	17.32	17.10		0
	50	0	17.39	17.60	17.73	17.48	0-1	0
	50	25	17.38	17.62	17.78	17.46		0
	50	50	17.41	17.64	17.87	17.45		0
	100	0	17.36	17.63	17.74	17.51		0
16QAM	1	0	17.30	17.49	17.61	17.41	0-1	0
	1	50	17.36	17.50	17.63	17.39		0
	1	99	17.32	17.51	17.60	17.43		0
	50	0	17.33	17.49	17.61	17.42	0-2	0
	50	25	17.33	17.49	17.60	17.42		0
	50	50	17.31	17.50	17.61	17.43		0
	100	0	17.32	17.47	17.61	17.42		0
64QAM	1	0	17.33	17.65	17.68	17.47	0-2	0
	1	50	17.32	17.68	17.68	17.44		0
	1	99	17.36	17.64	17.69	17.45		0
	50	0	17.34	17.63	17.68	17.46	0-3	0
	50	25	17.33	17.66	17.69	17.45		0
	50	50	17.35	17.65	17.67	17.46		0
	100	0	17.33	17.68	17.65	17.47		0
256QAM	1	0	16.86	17.66	17.48	17.35	0-5	0
	1	50	17.27	17.94	17.80	17.49		0
	1	99	17.22	17.62	17.45	17.12		0
	50	0	17.34	17.60	17.62	17.55		0
	50	25	17.46	17.76	17.78	17.55		0
	50	50	17.42	17.64	17.66	17.43		0
	100	0	17.37	17.68	17.63	17.49		0

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9.4.12 LTE Band 41

Table 9-39

LTE Band 41 PC3 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	24.33	24.26	24.04	24.32	24.12	0	0
	1	50	24.31	24.20	24.36	24.42	24.54		0
	1	99	24.29	24.25	24.11	24.13	24.40		0
	50	0	23.27	23.25	23.34	23.48	23.41	0-1	1
	50	25	23.45	23.41	23.48	23.53	23.54		1
	50	50	23.38	23.27	23.49	23.48	23.60		1
	100	0	23.38	23.31	23.37	23.45	23.47		1
16QAM	1	0	23.72	23.80	23.55	23.63	23.41	0-1	1
	1	50	23.67	23.77	23.89	23.85	23.78		1
	1	99	23.68	23.80	23.64	23.45	23.73		1
	50	0	22.22	22.25	22.37	22.46	22.33	0-2	2
	50	25	22.41	22.40	22.50	22.51	22.48		2
	50	50	22.35	22.29	22.52	22.45	22.54		2
	100	0	22.36	22.33	22.41	22.43	22.40		2
64QAM	1	0	22.58	21.97	22.34	22.46	22.28	0-2	2
	1	50	22.60	22.01	22.76	22.77	22.70		2
	1	99	22.62	22.03	22.48	22.35	22.61		2
	50	0	21.28	21.28	21.42	21.48	21.37	0-3	3
	50	25	21.46	21.40	21.51	21.54	21.49		3
	50	50	21.40	21.30	21.52	21.49	21.54		3
	100	0	21.40	21.35	21.44	21.42	21.43		3
256QAM	1	0	19.09	19.00	19.15	19.35	19.13	0-5	5
	1	50	19.43	19.33	19.55	19.61	19.52		5
	1	99	19.22	18.95	19.31	19.21	19.39		5
	50	0	19.29	19.28	19.43	19.48	19.37		5
	50	25	19.49	19.42	19.56	19.53	19.52		5
	50	50	19.42	19.28	19.55	19.48	19.56		5
	100	0	19.38	19.33	19.46	19.42	19.46		5

Table 9-40

LTE Band 41 PC2 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	26.84	26.88	26.69	26.70	26.51	0	0
	1	50	26.79	26.86	27.00	26.95	26.99		0
	1	99	26.80	26.90	26.80	26.52	26.81		0
	50	0	25.82	25.79	25.96	25.76	25.94	0-1	1
	50	25	25.58	25.95	25.87	25.99	25.99		1
	50	50	25.93	25.81	25.99	25.89	25.97		1
	100	0	25.91	25.85	25.99	25.99	25.87	1	

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Table 9-41
LTE Band 41 PC3 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	20.35	20.30	19.99	19.96	19.90	0	0
	1	50	20.40	20.25	20.25	20.15	19.80		0
	1	99	20.39	20.23	20.03	19.82	20.21		0
	50	0	20.32	20.24	20.30	20.18	20.13	0-1	0
	50	25	20.48	20.36	20.32	20.22	20.21		0
	50	50	20.46	20.28	20.36	20.20	20.24		0
	100	0	20.34	20.28	20.29	20.18	20.23		0
16QAM	1	0	20.32	20.31	19.85	20.02	19.70	0-1	0
	1	50	20.35	20.27	20.32	20.26	19.93		0
	1	99	20.34	20.25	20.07	19.86	20.11		0
	50	0	20.32	20.20	20.21	20.25	20.21	0-2	0
	50	25	20.31	20.29	20.21	20.32	20.26		0
	50	50	20.38	20.23	20.34	20.24	20.19		0
	100	0	20.40	20.26	20.26	20.24	20.24		0
64QAM	1	0	20.21	20.02	19.74	19.81	19.90	0-2	0
	1	50	20.15	20.00	20.02	19.75	19.82		0
	1	99	20.14	20.02	19.89	20.05	20.18		0
	50	0	20.32	20.12	20.24	20.26	20.25	0-3	0
	50	25	20.40	20.24	20.26	20.33	20.27		0
	50	50	20.38	20.28	20.37	20.28	20.35		0
	100	0	20.37	20.25	20.28	20.23	20.28		0
256QAM	1	0	19.58	19.50	19.50	19.62	19.38	0-5	0
	1	50	19.72	19.75	19.85	19.56	19.76		0
	1	99	19.71	19.44	19.65	19.42	19.77		0
	50	0	19.80	19.70	19.77	19.66	19.65		0
	50	25	19.80	19.82	19.88	19.80	19.60		0
	50	50	19.95	19.75	19.90	19.85	19.78		0
	100	0	19.92	19.77	19.83	19.77	19.69		0

Table 9-42
LTE Band 41 PC2 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	22.10	22.06	21.80	21.90	21.65	0	0
	1	50	22.05	22.07	21.99	22.01	21.91		0
	1	99	22.04	22.00	21.86	21.82	21.98		0
	50	0	22.09	22.04	22.00	22.00	21.95	0-1	0
	50	25	22.10	22.09	22.04	22.08	21.87		0
	50	50	22.09	22.04	22.10	22.04	22.02		0
	100	0	22.09	22.06	22.08	21.97	21.95		0

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Table 9-43

LTE Band 41 PC3 Measured P_{Limit} DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active)
- 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.31	23.37	23.18	23.08	22.93	0	0
	1	50	23.30	23.40	23.42	23.25	23.28		0
	1	99	23.27	23.38	23.16	22.95	23.24		0
	50	0	23.32	23.33	23.35	23.32	23.14	0-1	0
	50	25	23.44	23.34	23.45	23.39	23.26		0
	50	50	23.43	23.38	23.44	23.32	23.34		0
	100	0	23.39	23.35	23.34	23.26	23.22		0
16QAM	1	0	23.52	23.39	23.35	23.30	22.72	0-1	0
	1	50	23.54	23.35	23.68	23.40	23.11		0
	1	99	23.48	23.34	23.44	23.07	23.01		0
	50	0	22.92	22.77	22.69	22.74	22.65	0-2	0.5
	50	25	23.07	22.88	22.75	23.03	22.79		0.5
	50	50	23.01	22.77	22.76	23.10	22.81		0.5
	100	0	22.96	22.73	22.63	22.99	22.73		0.5
64QAM	1	0	22.70	22.66	22.25	22.73	22.37	0-2	0.5
	1	50	22.65	22.49	22.42	22.85	22.82		0.5
	1	99	22.65	22.49	22.22	22.69	22.73		0.5
	50	0	21.90	21.75	21.67	22.05	21.77	0-3	1.5
	50	25	21.89	21.95	21.82	22.09	21.79		1.5
	50	50	21.99	21.92	21.80	22.07	21.81		1.5
	100	0	21.93	21.95	21.66	21.89	21.72		1.5
256QAM	1	0	19.67	19.70	19.50	20.03	19.35	0-5	3.5
	1	50	19.90	20.01	19.78	20.18	19.79		3.5
	1	99	19.70	19.60	19.55	19.84	19.65		3.5
	50	0	19.83	19.84	19.66	20.06	19.51		3.5
	50	25	20.01	19.94	19.77	20.09	19.64		3.5
	50	50	19.95	19.85	19.78	20.03	19.62		3.5
	100	0	19.93	19.82	19.65	19.30	19.70		3.5

Table 9-44

LTE Band 41 PC2 Measured P_{Limit} DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active)
- 20 MHz Bandwidth

LTE Band 41									
20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	25.20	25.09	24.78	24.93	24.70	0	0
	1	50	25.18	25.04	25.13	25.12	25.00		0
	1	99	25.14	25.03	24.91	24.70	24.90		0
	50	0	25.09	25.00	25.08	25.06	24.99	0-1	0
	50	25	25.25	25.14	25.16	25.11	25.08		0
	50	50	25.21	25.02	25.18	25.10	25.10		0
	100	0	25.18	25.03	25.07	25.05	25.04		0

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9.4.13 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-45
LTE Band 5 Uplink Carrier Aggregation Measured P_{Max}

Combination	PCC									SCC									Power	
	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5B	LTE B5	10	20525	836.5	2525	881.5	QPSK	1	49	LTE B5	5	20597	843.7	2597	888.7	QPSK	1	0	23.90	23.67

Table 9-46
LTE Band 5 Uplink Carrier Aggregation Measured P_{limit} for DSI = 3 (Hotspot Mode)

PCC									SCC									Power	
PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
LTE B5	10	20525	836.5	2525	881.5	QPSK	1	49	LTE B5	5	20597	843.7	2597	888.7	QPSK	1	0	22.75	22.82

Table 9-47
LTE Band 66 Uplink Carrier Aggregation Measured P_{Max}

Combination	PCC									SCC									Power	
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	99	LTE B66	20	132520	1764.8	66984	2164.8	QPSK	1	0	23.65	23.70
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	1	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	1	99	24.31	23.82
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	1	49	LTE B66	10	132421	1754.9	66885	2154.9	QPSK	1	0	24.01	23.72
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	1	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	1	49	24.19	23.61

Table 9-48
LTE Band 66 Uplink Carrier Aggregation Measured P_{limit} for DSI = 3 (Hotspot Mode)

PCC																		SCC								Power	
PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)								
LTE B66	20	132572	1770.0	67036	2170.0	QPSK	50	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	50	50	18.87	18.77								
LTE B66	10	132622	1775.0	67086	2175.0	QPSK	25	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	25	25	18.96	18.84								

Table 9-49
LTE Band 66 Uplink Carrier Aggregation Measured P_{limit} for DSI = 1 (Phablet with grip sensor active)

Combination	PCC									SCC									Power	
	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132322	1745.0	66786	2145.0	QPSK	1	99	LTE B66	20	132520	1764.8	66984	2164.8	QPSK	1	0	20.97	20.84
CA_66B	LTE B66	10	132322	1745.0	66786	2145.0	QPSK	1	49	LTE B66	10	132421	1754.9	66885	2154.9	QPSK	1	0	21.09	20.77

Table 9-50
LTE Band 48 Uplink Carrier Aggregation Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active)

Combination	PCC							SCC							Power	
	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	56207	3646.7	QPSK	50	50	LTE B48	20	56405	3666.5	QPSK	50	0	22.00	22.04

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Table 9-51

LTE Band 48 Uplink Carrier Aggregation Measured P_{limit} for DSI = 3 (Hotspot Mode), or DSI = 2 (Head)

	PCC							SCC						Power		
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	56207	3646.7	QPSK	1	0	LTE B48	20	56009	3626.9	QPSK	1	99	17.45	17.39
CA_48C	LTE B48	20	56640	3690.0	QPSK	50	0	LTE B48	20	56442	3670.2	QPSK	50	50	17.65	17.48

Table 9-52

LTE Band 41 Uplink Carrier Aggregation Measured P_{Max}

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	41490	2680.0	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	24.85	24.12
	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	41490	2680.0	QPSK	1	0	LTE B41 PC2	20	41292	2660.2	QPSK	1	99	26.67	26.51

Table 9-53

LTE Uplink Carrier Aggregation P_{limit} for DSI = 3 (Hotspot Mode)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	50	50	LTE B41	20	39948	2525.8	QPSK	50	0	20.30	20.46

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	39750	2506.0	QPSK	50	50	LTE B41 PC2	20	39948	2525.8	QPSK	50	0	22.06	22.09

Table 9-54

LTE Band 41 Uplink Carrier Aggregation P_{limit} for DSI = 1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack Active)

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	40620	2593.0	QPSK	1	0	LTE B41	20	40422	2573.2	QPSK	1	99	23.20	23.18
	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	40620	2593.0	QPSK	1	0	LTE B41 PC2	20	40422	2573.2	QPSK	1	99	25.05	24.78

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9.5 NR Conducted Powers

Per October 2020 TCB Workshop Guidance, NR FR1 SAR evaluations are being generally based on adapting the existing LTE SAR procedures (FCC KDB Publication 941225 D05v02r05). Therefore, NR SAR for the lower bandwidths was not required for testing based on the measured output power and the reported NR SAR for the highest bandwidth. Lower bandwidth conducted powers for all NR bands can be found in appendix H

9.5.1 NR Band n71

Table 9-55

NR Band n71 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			136100 (680.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	24.33	0	0.0
	1	53	24.16		0.0
	1	104	24.06		0.0
	50	0	23.82	0-0.5	0.5
	50	28	24.20	0	0.0
	50	56	23.56	0-0.5	0.5
	100	0	23.74		0.5
DFT-s-OFDM QPSK	1	1	24.19	0	0.0
	1	53	24.03		0.0
	1	104	23.92		0.0
	50	0	23.35	0-1	1.0
	50	28	24.22	0	0.0
	50	56	23.03	0-1	1.0
	100	0	23.16		1.0
DFT-s-OFDM 16QAM	1	1	23.32	0-1	1.0
CP-OFDM QPSK	1	1	23.21	0-1.5	1.5

Note: NR Band n71 at 20 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-56
NR Band n71 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			136100 (680.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	22.92	0	0.0
	1	53	22.73		0.0
	1	104	22.58		0.0
	50	0	22.96	0-0.5	0.0
	50	28	22.78	0	0.0
	50	56	22.59		0.0
	100	0	22.78		0.0
DFT-s-OFDM QPSK	1	1	22.75	0	0.0
	1	53	22.64		0.0
	1	104	22.52		0.0
	50	0	22.91	0-1	0.0
	50	28	22.69	0	0.0
	50	56	22.59		0.0
	100	0	22.72		0.0
DFT-s-OFDM 16QAM	1	1	22.73	0-1	0.0
CP-OFDM QPSK	1	1	22.90	0-1.5	0.0

Note: NR Band n71 at 20 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.5.1 NR Band n12

Table 9-57

NR Band n12 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 15 MHz Bandwidth

NR Band n12 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			141500 (707.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	24.08	0	0.0
	1	40	24.11		0.0
	1	77	23.92		0.0
	36	0	23.58	0-0.5	0.5
	36	22	24.00	0	0.0
	36	43	23.46	0-0.5	0.5
	75	0	23.58		0.5
DFT-s-OFDM QPSK	1	1	23.95	0	0.0
	1	40	23.92		0.0
	1	77	23.80		0.0
	36	0	23.11	0-1	1.0
	36	22	24.03	0	0.0
	36	43	22.94	0-1	1.0
	75	0	23.11		1.0
DFT-s-OFDM 16QAM	1	1	23.10	0-1	1.0
CP-OFDM QPSK	1	1	23.12	0-1.5	1.5

Note: NR Band n12 at 15 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-58
NR Band n12 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 15 MHz Bandwidth
NR Band n12
15 MHz Bandwidth

			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	141500 (707.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	22.69	0	0.0
	1	40	22.63		0.0
	1	77	22.51		0.0
	36	0	22.64	0-0.5	0.0
	36	22	22.53	0	0.0
	36	43	22.50		0.0
	75	0	22.59		0.0
DFT-s-OFDM QPSK	1	1	22.54	0	0.0
	1	40	22.52		0.0
	1	77	22.34		0.0
	36	0	22.58	0-1	0.0
	36	22	22.53	0	0.0
	36	43	22.52		0.0
	75	0	22.53		0.0
DFT-s-OFDM 16QAM	1	1	22.61	0-1	0.0
CP-OFDM QPSK	1	1	23.14	0-1.5	0.0

Note: NR Band n12 at 15 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.5.2 NR Band n5

Table 9-59

NR Band n5 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			167300 (836.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	23.72	0	0.0
	1	53	23.76		0.0
	1	104	23.77		0.0
	50	0	23.31	0-0.5	0.5
	50	28	23.81	0	0.0
	50	56	23.36	0-0.5	0.5
	100	0	23.38		0.5
DFT-s-OFDM QPSK	1	1	23.68	0	0.0
	1	53	23.80		0.0
	1	104	23.61		0.0
	50	0	22.76	0-1	1.0
	50	28	23.84	0	0.0
	50	56	22.95	0-1	1.0
	100	0	22.83		1.0
DFT-s-OFDM 16QAM	1	1	22.75	0-1	1.0
CP-OFDM QPSK	1	1	22.62	0-1.5	1.5

Note: NR Band n5 at 20 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-60
NR Band n5 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			167300 (836.5 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	22.78	0	0.0
	1	53	22.89		0.0
	1	104	22.80		0.0
	50	0	22.77	0-0.5	0.0
	50	28	22.88	0	0.0
	50	56	22.88	0-0.5	0.0
	100	0	22.83		0.0
DFT-s-OFDM QPSK	1	1	22.68	0	0.0
	1	53	22.82		0.0
	1	104	22.66		0.0
	50	0	22.79	0-1	0.0
	50	28	22.92	0	0.0
	50	56	22.96	0-1	0.0
	100	0	22.79		0.0
DFT-s-OFDM 16QAM	1	1	22.73	0-1	0.0
CP-OFDM QPSK	1	1	22.55	0-1.5	0.2

Note: NR Band n5 at 20 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.5.3 NR Band n66

Table 9-61

NR Band n66 Ant A Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	23.66	0	0.0
	1	108	23.90		0.0
	1	214	23.95		0.0
	108	0	23.31	0-0.5	0.5
	108	54	23.91	0	0.0
	108	108	23.53	0-0.5	0.5
	216	0	23.38		0.5
DFT-s-OFDM QPSK	1	1	23.69	0	0.0
	1	108	23.62		0.0
	1	214	23.90		0.0
	108	0	22.85	0-1	1.0
	108	54	23.85	0	0.0
	108	108	22.80	0-1	1.0
	216	0	22.82		1.0
DFT-s-OFDM 16QAM	1	1	22.43	0-1	1.0
CP-OFDM QPSK	1	1	22.22	0-1.5	1.5

Note: NR Band n66 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-62
NR Band n66 Ant A Measured P_{limit} for DSI = 3 (Hotspot Mode) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	17.72	0	0.0
	1	108	17.84		0.0
	1	214	18.00		0.0
	108	0	17.90	0-0.5	0.0
	108	54	17.93	0	0.0
	108	108	18.07		0.0
	216	0	17.94		0.0
DFT-s-OFDM QPSK	1	1	17.81	0	0.0
	1	108	17.93		0.0
	1	214	18.08		0.0
	108	0	17.95	0-1	0.0
	108	54	17.99	0	0.0
	108	108	18.05		0.0
	216	0	17.99		0.0
DFT-s-OFDM 16QAM	1	1	17.96	0-1	0.0
CP-OFDM QPSK	1	1	17.91	0-1.5	0.0

Note: NR Band n66 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-63
NR Band n66 Ant A Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	19.74	0	0.0
	1	108	19.88		0.0
	1	214	19.94		0.0
	108	0	19.85	0-0.5	0.0
	108	54	19.91	0	0.0
	108	108	20.08	0-0.5	0.0
	216	0	19.93		0.0
DFT-s-OFDM QPSK	1	1	19.71	0	0.0
	1	108	19.90		0.0
	1	214	19.98		0.0
	108	0	19.91	0-1	0.0
	108	54	19.97	0	0.0
	108	108	20.02	0-1	0.0
	216	0	19.97		0.0
DFT-s-OFDM 16QAM	1	1	19.87	0-1	0.0
CP-OFDM QPSK	1	1	19.75	0-1.5	0.0

Note: NR Band n66 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-64

NR Band n66 Ant I Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	21.41	0	0.0
	1	108	21.37		0.0
	1	214	21.14		0.0
	108	0	21.56	0-0.5	0.0
	108	54	21.48	0	0.0
	108	108	21.45		0.0
	216	0	21.60		0.0
DFT-s-OFDM QPSK	1	1	21.63	0	0.0
	1	108	21.56		0.0
	1	214	21.28		0.0
	108	0	21.65	0-1	0.0
	108	54	21.66	0	0.0
	108	108	21.55		0.0
	216	0	21.52		0.0
DFT-s-OFDM 16QAM	1	1	21.45	0-1	0.0
CP-OFDM QPSK	1	1	21.62	0-1.5	0.0

Note: NR Band n66 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-65
NR Band n66 Ant I Measured P_{limit} DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	17.09	0	0.0
	1	108	16.99		0.0
	1	214	16.77		0.0
	108	0	17.02	0-0.5	0.0
	108	54	16.94	0	0.0
	108	108	16.92	0-0.5	0.0
	216	0	16.96		0.0
DFT-s-OFDM QPSK	1	1	16.99	0	0.0
	1	108	16.88		0.0
	1	214	16.73		0.0
	108	0	17.06	0-1	0.0
	108	54	16.97	0	0.0
	108	108	16.93	0-1	0.0
	216	0	16.98		0.0
DFT-s-OFDM 16QAM	1	1	16.70	0-1	0.0
CP-OFDM QPSK	1	1	17.02	0-1.5	0.0

Note: NR Band n66 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-66
NR Band n66 Ant I Measured P_{limit} for DSI = 3 (Hotspot Mode) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	18.76	0	0.0
	1	108	18.59		0.0
	1	214	18.49		0.0
	108	0	18.73	0-0.5	0.0
	108	54	18.67	0	0.0
	108	108	18.63		0.0
	216	0	18.71		0.0
DFT-s-OFDM QPSK	1	1	18.62	0	0.0
	1	108	18.58		0.0
	1	214	18.46		0.0
	108	0	18.67	0-1	0.0
	108	54	18.59	0	0.0
	108	108	18.60		0.0
	216	0	18.59		0.0
DFT-s-OFDM 16QAM	1	1	18.51	0-1	0.0
CP-OFDM QPSK	1	1	18.72	0-1.5	0.0

Note: NR Band n66 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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9.5.4 NR Band n25

Table 9-67

NR Band n25 Ant A Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	23.36	0	0.0
	1	108	23.13		0.0
	1	214	23.39		0.0
	108	0	22.81	0-0.5	0.5
	108	54	23.26	0	0.0
	108	108	22.89	0-0.5	0.5
	216	0	22.99		0.5
DFT-s-OFDM QPSK	1	1	23.59	0	0.0
	1	108	23.04		0.0
	1	214	23.73		0.0
	108	0	22.51	0-1	1.0
	108	54	23.50	0	0.0
	108	108	22.63	0-1	1.0
	216	0	22.50		1.0
DFT-s-OFDM 16QAM	1	1	22.74	0-1	1.0
CP-OFDM QPSK	1	1	22.16	0-1.5	1.5

Note: NR Band n25 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-68
NR Band n25 Ant A Measured P_{limit} for DSI = 3 (Hotspot Mode) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	17.34	0	0.0
	1	108	17.17		0.0
	1	214	17.28		0.0
	108	0	17.22	0-0.5	0.0
	108	54	17.14	0	0.0
	108	108	17.16		0.0
	216	0	17.19		0.0
DFT-s-OFDM QPSK	1	1	17.63	0	0.0
	1	108	17.30		0.0
	1	214	17.29		0.0
	108	0	17.55	0-1	0.0
	108	54	17.19	0	0.0
	108	108	17.22		0.0
	216	0	17.49		0.0
DFT-s-OFDM 16QAM	1	1	17.18	0-1	0.0
CP-OFDM QPSK	1	1	17.54	0-1.5	0.0

Note: NR Band n25 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-69
NR Band n25 Ant A Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	21.55	0	0.0
	1	108	21.36		0.0
	1	214	21.53		0.0
	108	0	21.34	0-0.5	0.0
	108	54	21.23	0	0.0
	108	108	21.29	0-0.5	0.0
	216	0	21.32		0.0
DFT-s-OFDM QPSK	1	1	21.59	0	0.0
	1	108	21.32		0.0
	1	214	21.48		0.0
	108	0	21.40	0-1	0.0
	108	54	21.29	0	0.0
	108	108	21.33	0-1	0.0
	216	0	21.39		0.0
DFT-s-OFDM 16QAM	1	1	21.27	0-1	0.0
CP-OFDM QPSK	1	1	21.49	0-1.5	0.0

Note: NR Band n25 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-70

NR Band n25 Ant I Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	24.22	0	0.0
	1	108	24.21		0.0
	1	214	24.43		0.0
	108	0	23.74	0-0.5	0.5
	108	54	24.25	0	0.0
	108	108	23.74	0-0.5	0.5
	216	0	23.83		0.5
DFT-s-OFDM QPSK	1	1	24.39	0	0.0
	1	108	24.27		0.0
	1	214	24.49		0.0
	108	0	23.38	0-1	1.0
	108	54	24.35	0	0.0
	108	108	23.37	0-1	1.0
	216	0	23.45		1.0
DFT-s-OFDM 16QAM	1	1	23.49	0-1	1.0
CP-OFDM QPSK	1	1	22.99	0-1.5	1.5

Note: NR Band n25 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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Table 9-71

NR Band n25 Ant I Measured P_{limit} for DSI = 3 (Hotspot Mode), and/or DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	18.87	0	0.0
	1	108	18.91		0.0
	1	214	19.00		0.0
	108	0	19.00	0-0.5	0.0
	108	54	18.98	0	0.0
	108	108	18.98		0.0
	216	0	19.00		0.0
DFT-s-OFDM QPSK	1	1	18.95	0	0.0
	1	108	18.85		0.0
	1	214	19.00		0.0
	108	0	18.90	0-1	0.0
	108	54	18.97	0	0.0
	108	108	18.95		0.0
	216	0	18.96		0.0
DFT-s-OFDM 16QAM	1	1	18.79	0-1	0.0
CP-OFDM QPSK	1	1	18.82	0-1.5	0.0

Note: NR Band n25 at 40 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing

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9.5.1 NR Band n30

Table 9-72

NR Band n30 Measured P_{Max} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI = 2 (Head) - 10MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	22.38	0	0.0
	1	26	22.62		0.0
	1	50	22.48		0.0
	25	0	22.00	0-0.5	0.5
	25	14	22.50	0	0.0
	25	27	22.08	0-0.5	0.5
	50	0	22.01		0.5
DFT-s-OFDM QPSK	1	1	22.65	0	0.0
	1	26	22.73		0.0
	1	50	22.49		0.0
	25	0	21.54	0-1	1.0
	25	14	22.46	0	0.0
	25	27	21.71	0-1	1.0
	50	0	21.58		1.0
DFT-s-OFDM 16QAM	1	1	21.54	0-1	1.0
CP-OFDM QPSK	1	1	21.15	0-1.5	1.5

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Table 9-73
NR Band n30 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			462000 (2310 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	17.90	0	0.0
	1	26	17.87		0.0
	1	50	17.81		0.0
	25	0	17.78	0-0.5	0.0
	25	14	17.79	0	0.0
	25	27	17.84	0-0.5	0.0
	50	0	17.78		0.0
DFT-s-OFDM QPSK	1	1	17.76	0	0.0
	1	26	18.00		0.0
	1	50	17.80		0.0
	25	0	17.78	0-1	0.0
	25	14	17.83	0	0.0
	25	27	18.00	0-1	0.0
	50	0	17.90		0.0
DFT-s-OFDM 16QAM	1	1	17.88	0-1	0.0
CP-OFDM QPSK	1	1	17.92	0-1.5	0.0

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Table 9-74
NR Band n30 Measured P_{limit} for DSI = 1 (Phablet with grip sensor active), and/or DSI = 4 (Earjack active) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			462000 (2310 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	21.17	0	0.0
	1	26	21.31		0.0
	1	50	21.18		0.0
	25	0	21.28	0-0.5	0.0
	25	14	21.38	0	0.0
	25	27	21.42	0-0.5	0.0
	50	0	21.40		0.0
DFT-s-OFDM QPSK	1	1	21.37	0	0.0
	1	26	21.46		0.0
	1	50	21.27		0.0
	25	0	21.34	0-1	0.0
	25	14	21.39	0	0.0
	25	27	21.37	0-1	0.0
	50	0	21.38		0.0
DFT-s-OFDM 16QAM	1	1	21.22	0-1	0.0
CP-OFDM QPSK	1	1	21.21	0-1.5	0.0

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9.5.1 NR Band n41

Table 9-75

NR Band n41 Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	21.40	0	0.0
	1	137	21.51		0.0
	1	271	21.01		0.0
	135	0	21.58	0-0.5	0.0
	135	69	21.54	0	0.0
	135	138	21.36	0-0.5	0.0
	270	0	21.48		0.0
DFT-s-OFDM QPSK	1	1	21.43	0	0.0
	1	137	21.55		0.0
	1	271	20.97		0.0
	135	0	21.61	0-1	0.0
	135	69	21.52	0	0.0
	135	138	20.68	0-1	0.0
	270	0	21.48		0.0
DFT-s-OFDM 16QAM	1	1	21.65	0-1	0.0
CP-OFDM QPSK	1	1	21.05	0-1.5	0.0

Note: NR Band n41 at 100 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-76
NR Band n41 Measured P_{limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	15.51	0	0.0
	1	137	15.45		0.0
	1	271	15.09		0.0
	135	0	15.58	0-0.5	0.0
	135	69	15.42	0	0.0
	135	138	15.34	0-0.5	0.0
	270	0	15.46		0.0
DFT-s-OFDM QPSK	1	1	15.52	0	0.0
	1	137	15.50		0.0
	1	271	15.14		0.0
	135	0	15.49	0-1	0.0
	135	69	15.48	0	0.0
	135	138	15.35	0-1	0.0
	270	0	15.48		0.0
DFT-s-OFDM 16QAM	1	1	15.55	0-1	0.0
CP-OFDM QPSK	1	1	15.51	0-1.5	0.0

Note: NR Band n41 at 100 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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Table 9-77
NR Band n41 Measured P_{limit} for DSI = 3 (Hotspot Mode) - 100 MHz Bandwidth
NR Band n41
100 MHz Bandwidth

Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			518598 (2592.99 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	19.43	0	0.0
	1	137	19.43		0.0
	1	271	19.04		0.0
	135	0	19.52	0-0.5	0.0
	135	69	19.46	0	0.0
	135	138	19.31	0-0.5	0.0
	270	0	19.45		0.0
DFT-s-OFDM QPSK	1	1	19.50	0	0.0
	1	137	19.65		0.0
	1	271	19.11		0.0
	135	0	19.64	0-1	0.0
	135	69	19.45	0	0.0
	135	138	19.35	0-1	0.0
	270	0	19.57		0.0
DFT-s-OFDM 16QAM	1	1	19.31	0-1	0.0
CP-OFDM QPSK	1	1	19.57	0-1.5	0.0

Note: NR Band n41 at 100 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

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9.5.1 NR Band n77 DoD

Table 9-78

NR Band n77 DoD Ant F Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	18.52	0	0.0
	1	137	18.65		0.0
	1	271	18.57		0.0
	135	0	18.61	0-0.5	0.0
	135	69	18.68	0	0.0
	135	138	18.58	0-0.5	0.0
	270	0	18.67		0.0
DFT-s-OFDM QPSK	1	1	18.67	0	0.0
	1	137	18.77		0.0
	1	271	18.72		0.0
	135	0	18.61	0-1	0.0
	135	69	18.67	0	0.0
	135	138	18.61	0-1	0.0
	270	0	18.66		0.0
DFT-s-OFDM 16QAM	1	1	18.70	0-1	0.0
CP-OFDM QPSK	1	1	18.66	0-1.5	0.0

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Table 9-79
NR Band n77 DoD Ant F Measured P_{limit} for DSI = 2 (Head) -100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	14.63	0	0.0
	1	137	14.77		0.0
	1	271	14.72		0.0
	135	0	14.74	0-0.5	0.0
	135	69	14.87	0	0.0
	135	138	14.82	0-0.5	0.0
	270	0	14.81		0.0
DFT-s-OFDM QPSK	1	1	14.65	0	0.0
	1	137	14.86		0.0
	1	271	14.74		0.0
	135	0	14.73	0-1	0.0
	135	69	14.82	0	0.0
	135	138	14.83	0-1	0.0
	270	0	14.82		0.0
DFT-s-OFDM 16QAM	1	1	14.86	0-1	0.0
CP-OFDM QPSK	1	1	14.73	0-1.5	0.0

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Table 9-80
NR Band n77 DoD Ant F Measured P_{limit} for DSI = 3 (Hotspot Mode) -100 MHz Bandwidth
NR Band n77
100 MHz Bandwidth

Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	17.40	0	0.0
	1	137	17.48		0.0
	1	271	17.31		0.0
	135	0	17.44	0-0.5	0.0
	135	69	17.46	0	0.0
	135	138	17.37	0-0.5	0.0
	270	0	17.39		0.0
DFT-s-OFDM QPSK	1	1	17.43	0	0.0
	1	137	17.44		0.0
	1	271	17.38		0.0
	135	0	17.38	0-1	0.0
	135	69	17.43	0	0.0
	135	138	17.33	0-1	0.0
	270	0	17.37		0.0
DFT-s-OFDM 16QAM	1	1	17.43	0-1	0.0
CP-OFDM QPSK	1	1	17.32	0-1.5	0.0

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Table 9-81

NR Band n77 DoD Ant I Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive) or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	16.35	0	0.0
	1	137	16.53		0.0
	1	271	16.45		0.0
	135	0	16.49	0-0.5	0.0
	135	69	16.60	0	0.0
	135	138	16.48	0-0.5	0.0
	270	0	16.54		0.0
DFT-s-OFDM QPSK	1	1	16.39	0	0.0
	1	137	16.58		0.0
	1	271	16.54		0.0
	135	0	16.47	0-1	0.0
	135	69	16.58	0	0.0
	135	138	16.49	0-1	0.0
	270	0	16.56		0.0
DFT-s-OFDM 16QAM	1	1	16.53	0-1	0.0
CP-OFDM QPSK	1	1	16.39	0-1.5	0.0

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Table 9-82
NR Band n77 DoD Ant I Measured P_{limit} for DSI = 2 (Head) -100 MHz Bandwidth
NR Band n77
100 MHz Bandwidth

			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	12.63	0	0.0
	1	137	12.92		0.0
	1	271	12.91		0.0
	135	0	12.77	0-0.5	0.0
	135	69	12.90	0	0.0
	135	138	12.93	0-0.5	0.0
	270	0	12.86		0.0
DFT-s-OFDM QPSK	1	1	12.55	0	0.0
	1	137	12.94		0.0
	1	271	12.89		0.0
	135	0	12.78	0-1	0.0
	135	69	12.98	0	0.0
	135	138	12.97	0-1	0.0
	270	0	12.90		0.0
DFT-s-OFDM 16QAM	1	1	12.88	0-1	0.0
CP-OFDM QPSK	1	1	12.51	0-1.5	0.0

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Table 9-83
NR Band n77 DoD Ant I Measured P_{limit} for DSI = 3 (Hotspot Mode) -100 MHz Bandwidth
NR Band n77
100 MHz Bandwidth

Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	15.36	0	0.0
	1	137	15.57		0.0
	1	271	15.53		0.0
	135	0	15.46	0-0.5	0.0
	135	69	15.58	0	0.0
	135	138	15.53	0-0.5	0.0
	270	0	15.51		0.0
DFT-s-OFDM QPSK	1	1	15.37	0	0.0
	1	137	15.57		0.0
	1	271	15.56		0.0
	135	0	15.48	0-1	0.0
	135	69	15.59	0	0.0
	135	138	15.53	0-1	0.0
	270	0	15.56		0.0
DFT-s-OFDM 16QAM	1	1	15.66	0-1	0.0
CP-OFDM QPSK	1	1	15.40	0-1.5	0.0

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Table 9-84

NR Band n77 DoD Ant E Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	15.93	0	0.0
	1	137	15.97		0.0
	1	271	15.84		0.0
	135	0	15.99	0-0.5	0.0
	135	69	16.05	0	0.0
	135	138	15.89	0-0.5	0.0
	270	0	16.01		0.0
DFT-s-OFDM QPSK	1	1	15.98	0	0.0
	1	137	16.02		0.0
	1	271	15.98		0.0
	135	0	16.02	0-1	0.0
	135	69	16.04	0	0.0
	135	138	15.90	0-1	0.0
	270	0	16.01		0.0
DFT-s-OFDM 16QAM	1	1	16.03	0-1	0.0
CP-OFDM QPSK	1	1	15.96	0-1.5	0.0

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Table 9-85
NR Band n77 DoD Ant E Measured P_{limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	12.31	0	0.0
	1	137	12.43		0.0
	1	271	12.34		0.0
	135	0	12.42	0-0.5	0.0
	135	69	12.47	0	0.0
	135	138	12.47	0-0.5	0.0
	270	0	12.37		0.0
DFT-s-OFDM QPSK	1	1	12.35	0	0.0
	1	137	12.46		0.0
	1	271	12.33		0.0
	135	0	12.38	0-1	0.0
	135	69	12.44	0	0.0
	135	138	12.41	0-1	0.0
	270	0	12.43		0.0
DFT-s-OFDM 16QAM	1	1	12.44	0-1	0.0
CP-OFDM QPSK	1	1	12.31	0-1.5	0.0

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Table 9-86
NR Band n77 DoD Ant E Measured P_{limit} for DSI = 3 (Hotspot Mode) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	14.98	0	0.0
	1	137	15.01		0.0
	1	271	14.86		0.0
	135	0	14.97	0-0.5	0.0
	135	69	15.00	0	0.0
	135	138	14.94	0-0.5	0.0
	270	0	15.00		0.0
DFT-s-OFDM QPSK	1	1	14.97	0	0.0
	1	137	15.05		0.0
	1	271	14.90		0.0
	135	0	14.98	0-1	0.0
	135	69	15.06	0	0.0
	135	138	14.90	0-1	0.0
	270	0	14.99		0.0
DFT-s-OFDM 16QAM	1	1	15.04	0-1	0.0
CP-OFDM QPSK	1	1	15.02	0-1.5	0.0

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Table 9-87

NR Band n77 DoD Ant C Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive) or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	12.96	0	0.0
	1	137	12.69		0.0
	1	271	12.21		0.0
	135	0	12.87	0-0.5	0.0
	135	69	12.76	0	0.0
	135	138	12.44	0-0.5	0.0
	270	0	12.74		0.0
DFT-s-OFDM QPSK	1	1	13.03	0	0.0
	1	137	12.74		0.0
	1	271	12.33		0.0
	135	0	12.87	0-1	0.0
	135	69	12.72	0	0.0
	135	138	12.45	0-1	0.0
	270	0	12.72		0.0
DFT-s-OFDM 16QAM	1	1	12.94	0-1	0.0
CP-OFDM QPSK	1	1	12.96	0-1.5	0.0

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Table 9-88
NR Band n77 DoD Ant C Measured P_{limit} for DSI = 2 (Head) -100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	8.97	0	0.0
	1	137	9.20		0.0
	1	271	9.11		0.0
	135	0	9.10	0-0.5	0.0
	135	69	9.18	0	0.0
	135	138	9.17		0.0
	270	0	9.15		0.0
DFT-s-OFDM QPSK	1	1	9.00	0	0.0
	1	137	9.23		0.0
	1	271	9.21		0.0
	135	0	9.15	0-1	0.0
	135	69	9.22	0	0.0
	135	138	9.21		0.0
	270	0	9.20		0.0
DFT-s-OFDM 16QAM	1	1	9.16	0-1	0.0
CP-OFDM QPSK	1	1	8.94	0-1.5	0.0

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Table 9-89
NR Band n77 DoD Ant C Measured P_{limit} for DSI = 3 (Hotspot Mode) - 100 MHz Bandwidth
NR Band n77
100 MHz Bandwidth

Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			633334 (3500.01 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM $\pi/2$ BPSK	1	1	11.73	0	0.0
	1	137	11.73		0.0
	1	271	11.71		0.0
	135	0	11.74	0-0.5	0.0
	135	69	11.79	0	0.0
	135	138	11.72		0.0
	270	0	11.81		0.0
DFT-s-OFDM QPSK	1	1	11.78	0	0.0
	1	137	11.82		0.0
	1	271	11.79		0.0
	135	0	11.74	0-1	0.0
	135	69	11.78	0	0.0
	135	138	11.68		0.0
	270	0	11.77		0.0
DFT-s-OFDM 16QAM	1	1	11.78	0-1	0.0
CP-OFDM QPSK	1	1	11.70	0-1.5	0.0

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9.5.1 NR Band n77

Table 9-90

NR Band n77 Ant F Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	18.62	18.99	0	0.0
	1	137	18.88	19.14		0.0
	1	271	18.55	18.76		0.0
	135	0	18.77	19.16	0-0.5	0.0
	135	69	18.82	19.17	0	0.0
	135	138	18.74	19.04	0-0.5	0.0
	270	0	18.74	19.12		0.0
DFT-s-OFDM QPSK	1	1	18.74	19.19	0	0.0
	1	137	18.93	19.28		0.0
	1	271	18.65	18.91		0.0
	135	0	18.76	19.19	0-1	0.0
	135	69	18.86	19.15	0	0.0
	135	138	18.78	19.04	0-1	0.0
	270	0	18.78	19.14		0.0
DFT-s-OFDM 16QAM	1	1	18.71	19.19	0-1	0.0
CP-OFDM QPSK	1	1	18.71	19.17	0-1.5	0.0

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Table 9-91
NR Band n77 Ant F Measured P_{limit} for DSI = 2 (Head) -100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	15.27	14.83	0	0.0
	1	137	15.88	14.96		0.0
	1	271	15.24	14.80		0.0
	135	0	15.69	14.76	0-0.5	0.0
	135	69	15.85	14.91	0	0.0
	135	138	15.67	14.85	0-0.5	0.0
	270	0	15.70	14.79		0.0
DFT-s-OFDM QPSK	1	1	15.55	15.07	0	0.0
	1	137	15.95	15.48		0.0
	1	271	15.61	14.92		0.0
	135	0	15.83	15.24	0-1	0.0
	135	69	15.98	15.36	0	0.0
	135	138	15.75	15.16	0-1	0.0
	270	0	15.84	15.21		0.0
DFT-s-OFDM 16QAM	1	1	15.30	14.64	0-1	0.0
CP-OFDM QPSK	1	1	15.66	15.09	0-1.5	0.0

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Table 9-92
NR Band n77 Ant F Measured P_{limit} for DSI = 3 (Hotspot Mode) -100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	17.84	17.99	0	0.0
	1	137	17.74	17.90		0.0
	1	271	17.69	17.99		0.0
	135	0	17.66	17.96	0-0.5	0.0
	135	69	17.75	17.90	0	0.0
	135	138	17.60	17.75	0-0.5	0.0
	270	0	17.67	17.86		0.0
DFT-s-OFDM QPSK	1	1	18.30	17.84	0	0.0
	1	137	18.48	18.50		0.0
	1	271	18.31	17.64		0.0
	135	0	18.20	17.90	0-1	0.0
	135	69	18.45	18.47	0	0.0
	135	138	18.10	17.85	0-1	0.0
	270	0	18.13	18.34		0.0
DFT-s-OFDM 16QAM	1	1	18.10	17.88	0-1	0.0
CP-OFDM QPSK	1	1	18.20	18.24	0-1.5	0.0

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Table 9-93

NR Band n77 Ant I Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	16.66	16.59	0	0.0
	1	137	16.68	16.63		0.0
	1	271	16.38	16.26		0.0
	135	0	16.67	16.73	0-0.5	0.0
	135	69	16.71	16.66	0	0.0
	135	138	16.55	16.53	0-0.5	0.0
	270	0	16.66	16.61		0.0
DFT-s-OFDM QPSK	1	1	16.75	16.71	0	0.0
	1	137	16.76	16.75		0.0
	1	271	16.49	16.34		0.0
	135	0	16.77	16.70	0-1	0.0
	135	69	16.75	16.71	0	0.0
	135	138	16.55	16.47	0-1	0.0
	270	0	16.67	16.62		0.0
DFT-s-OFDM 16QAM	1	1	16.73	16.72	0-1	0.0
CP-OFDM QPSK	1	1	16.74	16.68	0-1.5	0.0

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Table 9-94
NR Band n77 Ant I Measured P_{limit} for DSI = 2 (Head) -100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	12.75	12.83	0	0.0
	1	137	12.94	13.07		0.0
	1	271	12.67	12.61		0.0
	135	0	12.86	12.97	0-0.5	0.0
	135	69	12.98	13.06	0	0.0
	135	138	12.84	12.85	0-0.5	0.0
	270	0	12.88	12.91		0.0
DFT-s-OFDM QPSK	1	1	12.79	12.88	0	0.0
	1	137	13.04	13.12		0.0
	1	271	12.72	12.74		0.0
	135	0	12.85	12.97	0-1	0.0
	135	69	13.02	13.11	0	0.0
	135	138	12.89	12.84	0-1	0.0
	270	0	12.89	12.92		0.0
DFT-s-OFDM 16QAM	1	1	12.97	13.04	0-1	0.0
CP-OFDM QPSK	1	1	12.79	13.15	0-1.5	0.0

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Table 9-95
NR Band n77 Ant I Measured P_{limit} for DSI = 3 (Hotspot Mode) -100 MHz Bandwidth
NR Band n77
100 MHz Bandwidth

			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	15.54	15.53	0	0.0
	1	137	15.60	15.52		0.0
	1	271	15.30	15.20		0.0
	135	0	15.59	15.68	0-0.5	0.0
	135	69	15.62	15.63	0	0.0
	135	138	15.44	15.44	0-0.5	0.0
	270	0	15.55	15.57		0.0
DFT-s-OFDM QPSK	1	1	15.66	15.64	0	0.0
	1	137	15.60	15.63		0.0
	1	271	15.30	15.30		0.0
	135	0	15.68	15.65	0-1	0.0
	135	69	15.55	15.59	0	0.0
	135	138	15.42	15.44	0-1	0.0
	270	0	15.57	15.55		0.0
DFT-s-OFDM 16QAM	1	1	15.63	15.65	0-1	0.0
CP-OFDM QPSK	1	1	15.61	15.57	0-1.5	0.0

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Table 9-96

NR Band n77 Ant E Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	15.96	16.70	0	0.0
	1	137	16.17	16.85		0.0
	1	271	16.11	16.57		0.0
	135	0	16.08	16.96	0-0.5	0.0
	135	69	16.23	16.92	0	0.0
	135	138	16.16	16.74	0-0.5	0.0
	270	0	16.17	16.84		0.0
DFT-s-OFDM QPSK	1	1	16.10	16.88	0	0.0
	1	137	16.32	17.04		0.0
	1	271	16.16	16.62		0.0
	135	0	16.10	16.93	0-1	0.0
	135	69	16.25	16.89	0	0.0
	135	138	16.21	16.76	0-1	0.0
	270	0	16.22	16.84		0.0
DFT-s-OFDM 16QAM	1	1	16.23	16.89	0-1	0.0
CP-OFDM QPSK	1	1	16.14	16.89	0-1.5	0.0

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Table 9-97
NR Band n77 Ant E Measured P_{limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	12.26	13.15	0	0.0
	1	137	12.69	13.45		0.0
	1	271	12.62	13.01		0.0
	135	0	12.47	13.26	0-0.5	0.0
	135	69	12.72	13.43	0	0.0
	135	138	12.71	13.23	0-0.5	0.0
	270	0	12.64	13.27		0.0
DFT-s-OFDM QPSK	1	1	12.35	13.21	0	0.0
	1	137	12.76	13.43		0.0
	1	271	12.69	13.08		0.0
	135	0	12.45	13.35	0-1	0.0
	135	69	12.70	13.46	0	0.0
	135	138	12.70	13.27	0-1	0.0
	270	0	12.66	13.30		0.0
DFT-s-OFDM 16QAM	1	1	12.61	13.43	0-1	0.0
CP-OFDM QPSK	1	1	12.30	13.15	0-1.5	0.0

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Table 9-98
NR Band n77 Ant E Measured P_{limit} for DSI = 3 (Hotspot Mode) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	15.53	15.84	0	0.0
	1	137	15.34	15.78		0.0
	1	271	14.98	15.46		0.0
	135	0	14.99	15.82	0-0.5	0.0
	135	69	15.13	15.82	0	0.0
	135	138	15.32	15.64	0-0.5	0.0
	270	0	15.34	15.71		0.0
DFT-s-OFDM QPSK	1	1	15.55	15.74	0	0.0
	1	137	15.62	16.15		0.0
	1	271	15.55	15.49		0.0
	135	0	15.60	16.10	0-1	0.0
	135	69	15.59	15.75	0	0.0
	135	138	15.55	15.58	0-1	0.0
	270	0	15.61	15.82		0.0
DFT-s-OFDM 16QAM	1	1	15.06	15.75	0-1	0.0
CP-OFDM QPSK	1	1	14.89	15.90	0-1.5	0.0

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Table 9-99

NR Band n77 Ant C Measured P_{limit} for DSI = 0 (Body-worn, or Phablet with grip sensor inactive), or DSI =1 (Phablet with grip sensor active) and/or DSI = 4 (Earjack active) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	12.70	12.82	0	0.0
	1	137	12.54	12.94		0.0
	1	271	12.03	12.11		0.0
	135	0	12.68	13.04	0-0.5	0.0
	135	69	12.54	12.96	0	0.0
	135	138	12.28	12.61	0-0.5	0.0
	270	0	12.53	12.82		0.0
DFT-s-OFDM QPSK	1	1	12.82	12.86	0	0.0
	1	137	12.63	13.01		0.0
	1	271	12.13	12.12		0.0
	135	0	12.78	13.00	0-1	0.0
	135	69	12.56	12.93	0	0.0
	135	138	12.28	12.55	0-1	0.0
	270	0	12.54	12.76		0.0
DFT-s-OFDM 16QAM	1	1	12.76	12.99	0-1	0.0
CP-OFDM QPSK	1	1	12.78	12.86	0-1.5	0.0

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Table 9-100
NR Band n77 Ant C Measured P_{limit} for DSI = 2 (Head) -100 MHz Bandwidth
NR Band n77
100 MHz Bandwidth

			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	8.89	9.52	0	0.0
	1	137	9.59	9.63		0.0
	1	271	9.43	8.75		0.0
	135	0	9.13	9.60	0-0.5	0.0
	135	69	9.48	9.62	0	0.0
	135	138	9.56	9.22	0-0.5	0.0
	270	0	9.36	9.47		0.0
DFT-s-OFDM QPSK	1	1	8.97	9.59	0	0.0
	1	137	9.56	9.75		0.0
	1	271	9.52	8.82		0.0
	135	0	9.16	9.64	0-1	0.0
	135	69	9.50	9.65	0	0.0
	135	138	9.59	9.24	0-1	0.0
	270	0	9.38	9.44		0.0
DFT-s-OFDM 16QAM	1	1	9.08	9.63	0-1	0.0
CP-OFDM QPSK	1	1	9.05	9.52	0-1.5	0.0

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Table 9-101
NR Band n77 Ant C Measured P_{limit} for DSI = 3 (Hotspot Mode) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM $\pi/2$ BPSK	1	1	11.51	11.57	0	0.0
	1	137	11.44	11.70		0.0
	1	271	11.35	10.78		0.0
	135	0	11.51	11.67	0-0.5	0.0
	135	69	11.41	11.63	0	0.0
	135	138	11.38	11.22	0-0.5	0.0
	270	0	11.44	11.46		0.0
DFT-s-OFDM QPSK	1	1	11.49	11.53	0	0.0
	1	137	11.50	11.74		0.0
	1	271	11.51	10.75		0.0
	135	0	11.51	11.66	0-1	0.0
	135	69	11.40	11.65	0	0.0
	135	138	11.52	11.19	0-1	0.0
	270	0	11.41	11.46		0.0
DFT-s-OFDM 16QAM	1	1	11.49	11.69	0-1	0.0
CP-OFDM QPSK	1	1	11.52	11.63	0-1.5	0.0

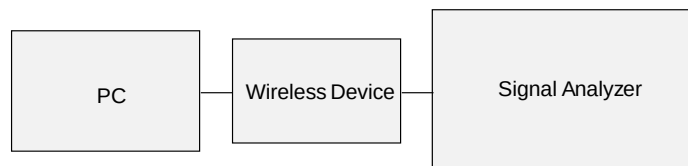


Figure 9-4
Power Measurement Setup

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9.6 WLAN Conducted Powers

Table 9-102
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	18.77	17.88	17.65	17.81
2437	6	18.85	17.96	17.65	17.75
2462	11	18.95	17.77	17.54	17.61

Table 9-103
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11b Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	18.63	18.77	21.71
2437	6	18.80	18.85	21.84
2462	11	18.96	18.95	21.97

Table 9-104
5 GHz WLAN Maximum Average RF Power – Ant 1

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average
5180	36	15.85	15.11	15.48	15.36
5200	40	17.59	17.62	17.72	17.64
5220	44	17.58	17.66	17.66	17.60
5240	48	17.52	17.48	17.52	17.42
5260	52	17.65	17.52	17.54	17.45
5280	56	17.65	17.50	17.54	17.50
5300	60	17.80	17.65	17.78	17.66
5320	64	17.54	16.62	16.95	16.94
5500	100	17.62	16.86	16.97	16.92
5600	120	17.80	17.69	17.52	17.57
5620	124	17.62	17.69	17.64	17.55
5720	144	17.72	17.59	17.60	17.57
5745	149	17.71	17.51	17.58	17.55
5785	157	17.84	17.67	17.80	17.63
5825	165	17.58	17.47	17.44	17.95

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Table 9-105
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	15.11	15.15	18.14
5200	40	17.62	17.91	20.78
5220	44	17.66	17.71	20.70
5240	48	17.48	17.64	20.57
5260	52	17.52	17.67	20.61
5280	56	17.50	17.84	20.68
5300	60	17.65	17.81	20.74
5320	64	16.62	16.92	19.78
5500	100	16.86	16.51	19.70
5520	104	17.64	17.62	20.64
5600	120	17.69	17.66	20.69
5620	124	17.69	17.56	20.64
5720	144	17.59	17.79	20.70
5745	149	17.51	17.98	20.76
5785	157	17.67	17.92	20.81
5825	165	17.47	17.54	20.52

Table 9-106
2.4 GHz WLAN Reduced Average RF Power for conditions with RCV active or RCV active During Conditions with 5 GHz WLAN and/or with 5G NR (FR1)– Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	12.81	12.77	12.97	12.92
2437	6	12.97	12.91	12.71	12.76
2462	11	12.91	12.77	12.61	12.70

Table 9-107
2.4 GHz WLAN Reduced Average RF Power during Conditions with 5GHz WLAN and/or with 5G NR - Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	14.80	14.65	14.99	14.65
2437	6	14.99	14.61	14.65	14.76
2462	11	14.85	14.73	14.92	14.76

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Table 9-108

2.4 GHz WLAN Reduced Average RF Power for Conditions with RCV active or RCV active During Conditions with 5 GHz WLAN and/or with 5G NR (FR2) – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	10.68	10.99	10.80	10.66
2437	6	10.86	10.69	10.65	10.79
2462	11	10.60	10.88	10.71	10.74

Table 9-109

2.4 GHz WLAN Reduced Average RF Power for conditions with RCV active or RCV active During Conditions with 5 GHz WLAN and/or with 5G NR (FR1) – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	12.90	12.97	15.95
2437	6	12.76	12.71	15.75
2462	11	12.76	12.71	15.75

Table 9-110

2.4 GHz WLAN Reduced Average RF Power for Conditions with RCV active or RCV active During Conditions with 5 GHz WLAN and/or with 5G NR (FR2) – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	10.57	10.02	13.31
2437	6	10.95	9.53	13.31
2462	11	10.94	10.67	13.82

Table 9-111

2.4 GHz WLAN Reduced Average RF Power during Conditions with 5GHz WLAN and/or with 5G NR – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	14.64	14.99	17.83
2437	6	14.75	14.92	17.85
2462	11	14.63	14.65	17.65

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Table 9-112
5 GHz WLAN Reduced Average RF Power for Conditions with RCV active or RCV active During
Conditions with 2.4 GHz WLAN and/or with 5G NR – Ant 1

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5210	42	10.98	10.44
5290	58	10.79	10.66
5530	106	10.81	10.98
5610	122	10.74	10.94
5690	138	10.87	10.97
5775	155	10.85	10.88

Table 9-113
5 GHz WLAN Reduced Average RF Power during Conditions with 2.4 GHz WLAN and/or with 5G NR –
Ant 1

5GHz (40MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11n	802.11ac	802.11ax
		Average	Average	Average
5190	38	13.52	13.41	13.45
5230	46	14.71	14.56	14.68
5270	54	14.74	14.65	14.75
5310	62	14.77	14.67	14.65

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5530	106	14.81	14.72
5610	122	14.68	14.75
5690	138	14.82	14.72
5775	155	14.55	14.59

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Table 9-114
5 GHz WLAN Reduced Average RF Power for Conditions with RCV active or RCV active During
Conditions with 2.4 GHz WLAN and/or 5G NR – MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	10.98	10.89	13.95
5290	58	10.79	10.70	13.76
5530	106	10.81	10.92	13.88
5610	122	10.74	10.61	13.69
5690	138	10.87	10.99	13.94
5775	155	10.85	10.50	13.69

Table 9-115
5 GHz WLAN Reduced Average RF Power during Conditions with 2.4 GHz WLAN and/or with 5G NR –
MIMO

5GHz (40MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5190	38	13.49	13.98	16.75
5230	46	14.18	14.74	17.48
5270	54	14.26	14.82	17.56
5310	62	14.70	14.76	17.74
5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5530	106	14.99	14.23	17.64
5610	122	14.86	14.84	17.86
5690	138	14.00	14.82	17.44
5775	155	14.01	14.73	17.40

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission modes with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

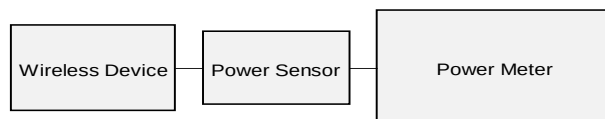


Figure 9-5
Power Measurement Setup

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9.7 Bluetooth Conducted Powers

Table 9-116
Bluetooth Antenna 1 Maximum Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	14.18	26.182
2441	1.0	GFSK	ePA	39	15.43	34.914
2480	1.0	GFSK	ePA	78	14.13	25.882
2402	2.0	$\pi/4$ -DQPSK	ePA	0	12.16	16.444
2441	2.0	$\pi/4$ -DQPSK	ePA	39	12.88	19.409
2480	2.0	$\pi/4$ -DQPSK	ePA	78	12.16	16.444
2402	3.0	8DPSK	ePA	0	11.88	15.417
2441	3.0	8DPSK	ePA	39	12.93	19.634
2480	3.0	8DPSK	ePA	78	11.92	15.560

Table 9-117
Bluetooth Antenna 2 Maximum Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	14.97	31.405
2441	1.0	GFSK	ePA	39	16.61	45.814
2480	1.0	GFSK	ePA	78	15.66	36.813
2402	2.0	$\pi/4$ -DQPSK	ePA	0	12.40	17.378
2441	2.0	$\pi/4$ -DQPSK	ePA	39	13.96	24.889
2480	2.0	$\pi/4$ -DQPSK	ePA	78	12.31	17.022
2402	3.0	8DPSK	ePA	0	12.40	17.378
2441	3.0	8DPSK	ePA	39	14.29	26.853
2480	3.0	8DPSK	ePA	78	13.33	21.528

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Table 9-118
Bluetooth Antenna 1 BT Reduced 5G NR Active

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	11.76	15.004
2441	1.0	GFSK	ePA	39	13.10	20.408
2480	1.0	GFSK	ePA	78	12.38	17.286

Table 9-119
Bluetooth Antenna 2 BT Reduced 5G NR Active

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	12.24	16.742
2441	1.0	GFSK	ePA	39	13.93	24.706
2480	1.0	GFSK	ePA	78	13.61	22.956

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Table 9-120
Bluetooth Antenna 1 BT Reduced RCV Active Conducted Power

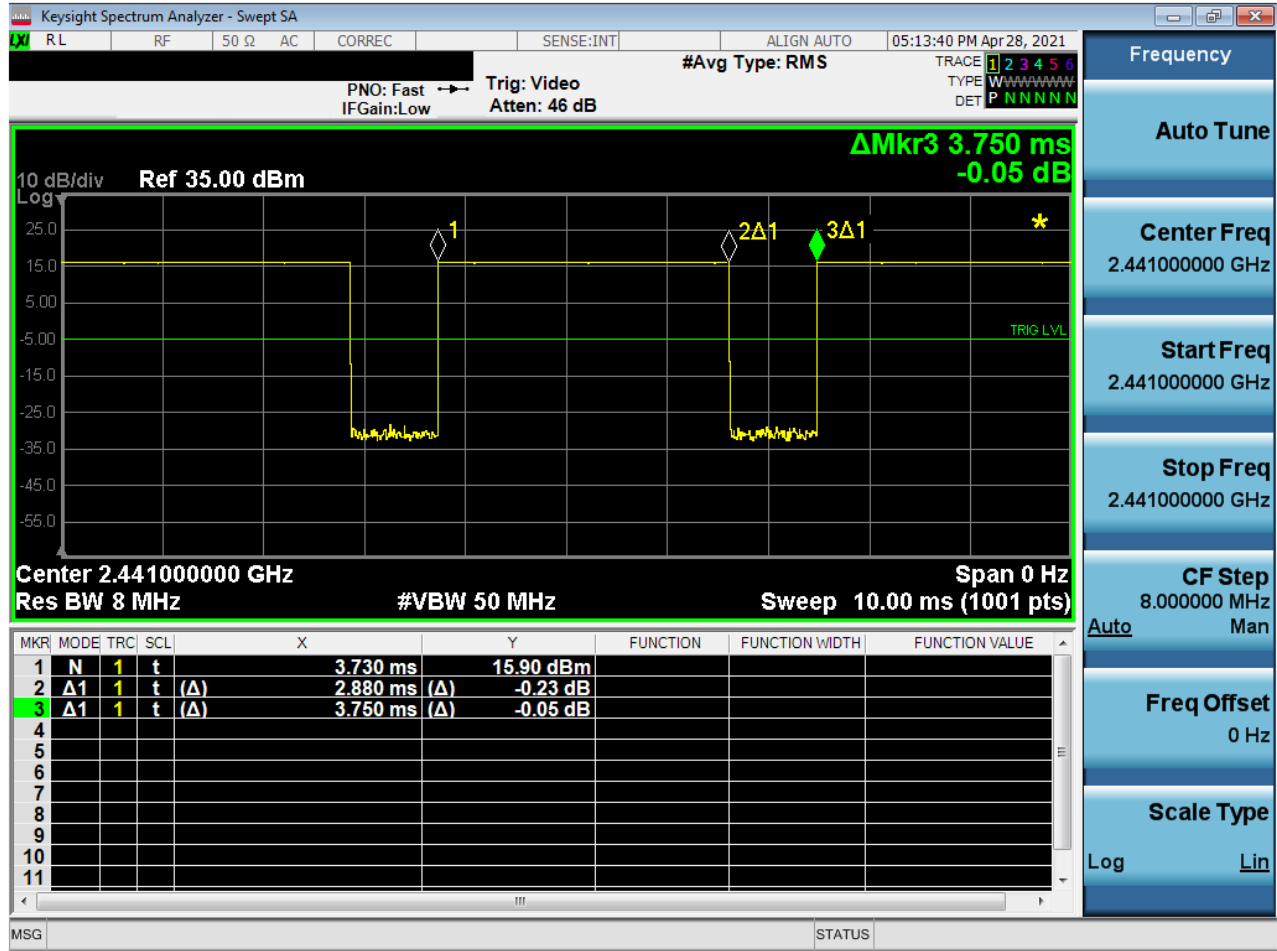
Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	7.80	6.026
2441	1.0	GFSK	ePA	39	8.62	7.278
2480	1.0	GFSK	ePA	78	7.74	5.938

Table 9-121
Bluetooth Antenna 2 BT Reduced RCV Active Conducted Power

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	7.79	6.008
2441	1.0	GFSK	ePA	39	9.29	8.492
2480	1.0	GFSK	ePA	78	8.94	7.828

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Figure 9-6
Bluetooth Antenna 1 Transmission Plot

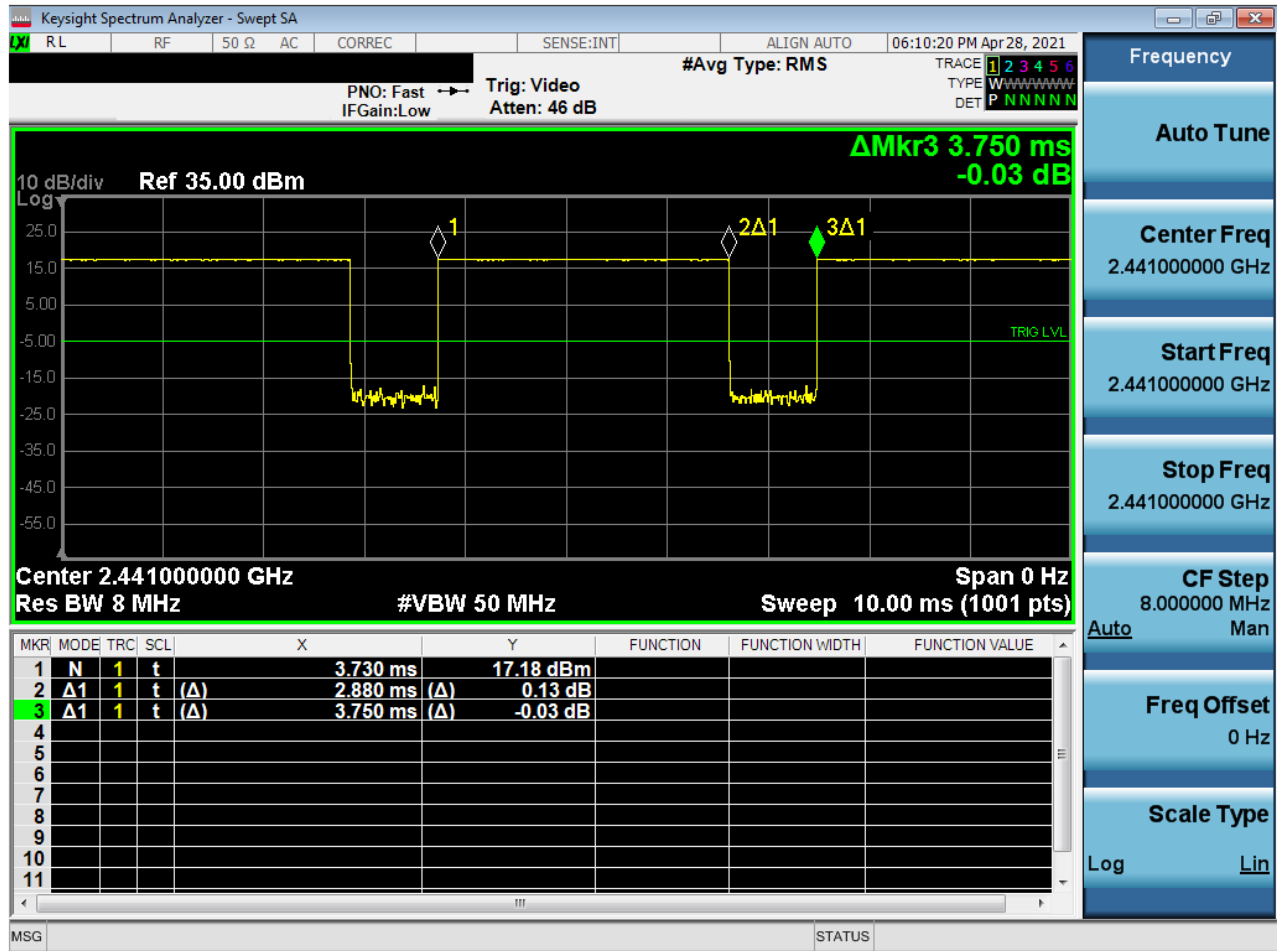


Equation 9-1
Bluetooth Antenna 1 Duty Cycle Calculation

$$Duty Cycle = \frac{Pulse Width}{Period} * 100\% = \frac{2.88ms}{3.75ms} * 100\% = 76.8\%$$

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Figure 9-7
Bluetooth Antenna 2 Transmission Plot



Equation 9-2
Bluetooth Antenna 2 Duty Cycle Calculation

$$\text{Duty Cycle} = \frac{\text{Pulse Width}}{\text{Period}} * 100\% = \frac{2.88\text{ms}}{3.75\text{ms}} * 100\% = 76.8\%$$

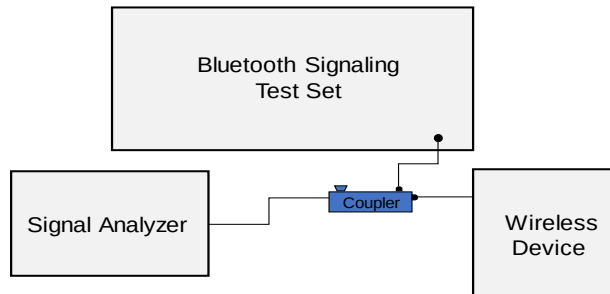


Figure 9-8
Power Measurement Setup

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10 SYSTEM VERIFICATION

10.1 Tissue Verification

Table 10-1
Measured Tissue Properties - Head

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ϵ	% dev σ	% dev ϵ
08/27/2021	750 Head	20.5	680	0.878	41.613	0.888	42.305	-1.13%	-1.64%
			695	0.883	41.561	0.889	42.227	-0.67%	-1.58%
			700	0.885	41.544	0.889	42.201	-0.45%	-1.56%
			710	0.889	41.509	0.890	42.149	-0.11%	-1.52%
			725	0.894	41.465	0.891	42.071	0.34%	-1.44%
			750	0.903	41.401	0.894	41.942	1.01%	-1.29%
			770	0.910	41.340	0.895	41.838	1.68%	-1.19%
			785	0.915	41.287	0.896	41.760	2.12%	-1.13%
			800	0.921	41.240	0.897	41.682	2.68%	-1.06%
08/29/2021	750 Head	21.2	680	0.881	40.653	0.888	42.305	-0.79%	-3.90%
			695	0.886	40.602	0.889	42.227	-0.34%	-3.85%
			700	0.888	40.585	0.889	42.201	-0.11%	-3.83%
			710	0.891	40.552	0.890	42.149	0.11%	-3.79%
			725	0.897	40.507	0.891	42.071	0.67%	-3.72%
			750	0.906	40.433	0.894	41.942	1.34%	-3.60%
			770	0.913	40.370	0.895	41.838	2.01%	-3.51%
			785	0.919	40.318	0.896	41.760	2.57%	-3.45%
			800	0.924	40.266	0.897	41.682	3.01%	-3.40%
08/17/2021	835 Head	20.3	815	0.923	41.172	0.898	41.594	2.78%	-1.01%
			820	0.925	41.160	0.899	41.578	2.89%	-1.01%
			835	0.930	41.121	0.900	41.500	3.33%	-0.91%
			850	0.936	41.082	0.916	41.500	2.18%	-1.01%
08/23/2021	835 Head	22.6	815	0.929	40.757	0.898	41.594	3.45%	-2.01%
			820	0.931	40.747	0.899	41.578	3.56%	-2.00%
			835	0.937	40.717	0.900	41.500	4.11%	-1.89%
			850	0.943	40.673	0.916	41.500	2.95%	-1.99%
08/25/2021	835 Head	20.6	815	0.920	40.409	0.898	41.594	2.45%	-2.85%
			820	0.922	40.398	0.899	41.578	2.56%	-2.84%
			835	0.928	40.371	0.900	41.500	3.11%	-2.72%
			850	0.933	40.342	0.916	41.500	1.86%	-2.79%
08/20/2021	1750 Head	20.7	1710	1.365	39.492	1.348	40.142	1.26%	-1.62%
			1720	1.372	39.476	1.354	40.126	1.33%	-1.62%
			1745	1.387	39.443	1.368	40.087	1.39%	-1.61%
			1750	1.391	39.437	1.371	40.079	1.46%	-1.60%
			1770	1.403	39.404	1.383	40.047	1.45%	-1.61%
			1790	1.416	39.370	1.394	40.016	1.58%	-1.61%
08/25/2021	1750 Head	20.6	1710	1.349	38.543	1.348	40.142	0.07%	-3.98%
			1720	1.355	38.529	1.354	40.126	0.07%	-3.98%
			1745	1.370	38.491	1.368	40.087	0.15%	-3.98%
			1750	1.373	38.484	1.371	40.079	0.15%	-3.98%
			1770	1.384	38.451	1.383	40.047	0.07%	-3.99%
			1790	1.395	38.419	1.394	40.016	0.07%	-3.99%
08/20/2021	1900 Head	22.3	1850	1.433	39.127	1.400	40.000	2.36%	-2.18%
			1860	1.439	39.109	1.400	40.000	2.79%	-2.23%
			1880	1.451	39.081	1.400	40.000	3.64%	-2.30%
			1900	1.463	39.056	1.400	40.000	4.50%	-2.36%
			1905	1.466	39.049	1.400	40.000	4.71%	-2.38%
			1910	1.469	39.040	1.400	40.000	4.93%	-2.40%
08/22/2021	1900 Head	22.1	1850	1.393	39.500	1.400	40.000	-0.50%	-1.25%
			1860	1.404	39.453	1.400	40.000	0.29%	-1.37%
			1880	1.425	39.367	1.400	40.000	1.79%	-1.58%
			1900	1.446	39.284	1.400	40.000	3.29%	-1.79%
			1905	1.452	39.263	1.400	40.000	3.71%	-1.84%
			1910	1.457	39.240	1.400	40.000	4.07%	-1.90%
08/24/2021	1900 Head	22.8	1850	1.386	38.986	1.400	40.000	-1.00%	-2.54%
			1860	1.396	38.941	1.400	40.000	-0.29%	-2.65%
			1880	1.417	38.852	1.400	40.000	1.21%	-2.87%
			1900	1.437	38.773	1.400	40.000	2.64%	-3.07%
			1905	1.442	38.752	1.400	40.000	3.00%	-3.12%
			1910	1.447	38.731	1.400	40.000	3.36%	-3.17%
08/31/2021	1900 Head	19.0	1850	1.426	38.634	1.400	40.000	1.86%	-2.91%
			1860	1.433	38.616	1.400	40.000	2.36%	-2.96%
			1880	1.446	38.796	1.400	40.000	3.29%	-3.04%
			1900	1.459	38.754	1.400	40.000	4.21%	-3.12%
			1905	1.462	38.745	1.400	40.000	4.43%	-3.14%
			1910	1.465	38.734	1.400	40.000	4.64%	-3.17%
09/08/2021	1900 Head	22.3	1850	1.428	38.258	1.400	40.000	2.00%	-4.35%
			1860	1.434	38.241	1.400	40.000	2.43%	-4.40%
			1880	1.446	38.215	1.400	40.000	3.29%	-4.46%
			1900	1.459	38.189	1.400	40.000	4.21%	-4.53%
			1905	1.462	38.180	1.400	40.000	4.43%	-4.55%
			1910	1.465	38.171	1.400	40.000	4.64%	-4.57%

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Table 10-2
Measured Tissue - Head Continued

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ϵ	% dev σ	% dev ϵ
08/03/2021	2450 Head	23.2	2300	1.697	39.096	1.670	39.500	1.62%	-1.02%
			2310	1.708	39.058	1.679	39.480	1.73%	-1.07%
			2320	1.719	39.021	1.687	39.460	1.90%	-1.11%
			2400	1.810	38.736	1.756	39.289	3.08%	-1.41%
			2450	1.865	38.542	1.800	39.200	3.61%	-1.68%
			2480	1.898	38.439	1.833	39.162	3.55%	-1.85%
			2500	1.920	38.367	1.855	39.136	3.50%	-1.96%
			2510	1.931	38.327	1.866	39.123	3.48%	-2.03%
			2535	1.959	38.230	1.893	39.092	3.49%	-2.21%
			2550	1.976	38.177	1.909	39.073	3.51%	-2.29%
			2560	1.988	38.142	1.920	39.060	3.54%	-2.35%
			2600	2.031	38.008	1.964	39.009	3.41%	-2.57%
			2650	2.085	37.819	2.018	38.945	3.32%	-2.89%
			2680	2.118	37.717	2.051	38.907	3.27%	-3.06%
			2700	2.139	37.649	2.073	38.882	3.18%	-3.17%
08/16/2021	2450 Head	23.9	2300	1.752	38.820	1.670	39.500	4.91%	-1.72%
			2310	1.760	38.807	1.679	39.480	4.82%	-1.70%
			2320	1.767	38.798	1.687	39.460	4.74%	-1.68%
			2400	1.827	38.690	1.756	39.289	4.04%	-1.52%
			2450	1.865	38.616	1.800	39.200	3.61%	-1.49%
			2480	1.886	38.578	1.833	39.162	2.89%	-1.49%
			2500	1.900	38.545	1.855	39.136	2.43%	-1.51%
			2510	1.907	38.527	1.866	39.123	2.20%	-1.52%
			2535	1.927	38.483	1.893	39.092	1.80%	-1.56%
			2550	1.939	38.464	1.909	39.073	1.57%	-1.56%
			2560	1.946	38.452	1.920	39.060	1.35%	-1.56%
			2600	1.975	38.399	1.964	39.009	0.56%	-1.56%
			2650	2.012	38.309	2.018	38.945	-0.30%	-1.63%
			2680	2.034	38.268	2.051	38.907	-0.83%	-1.64%
			2700	2.049	38.241	2.073	38.882	-1.16%	-1.65%
08/26/2021	2450 Head	21.9	2300	1.730	38.246	1.670	39.500	3.59%	-3.17%
			2310	1.738	38.220	1.679	39.480	3.51%	-3.19%
			2320	1.745	38.202	1.687	39.460	3.44%	-3.19%
			2400	1.804	38.140	1.756	39.289	2.73%	-2.92%
			2450	1.842	38.026	1.800	39.200	2.33%	-2.99%
			2480	1.867	38.020	1.833	39.162	1.85%	-2.92%
			2500	1.881	37.996	1.855	39.136	1.40%	-2.91%
			2510	1.887	37.972	1.866	39.123	1.13%	-2.94%
			2535	1.904	37.897	1.893	39.092	0.58%	-3.06%
			2550	1.917	37.864	1.909	39.073	0.42%	-3.09%
			2560	1.927	37.847	1.920	39.060	0.36%	-3.11%
			2600	1.961	37.824	1.964	39.009	-0.15%	-3.04%
			2650	1.993	37.694	2.018	38.945	-1.24%	-3.21%
			2680	2.021	37.642	2.051	38.907	-1.46%	-3.25%
			2700	2.037	37.636	2.073	38.882	-1.74%	-3.20%
09/07/2021	2450 Head	24.9	2300	1.607	40.883	1.670	39.500	-3.77%	3.50%
			2310	1.618	40.845	1.679	39.480	-3.63%	3.46%
			2320	1.630	40.807	1.687	39.460	-3.38%	3.41%
			2400	1.724	40.529	1.756	39.289	-1.82%	3.16%
			2450	1.782	40.338	1.800	39.200	-1.00%	2.90%
			2480	1.817	40.232	1.833	39.162	-0.87%	2.73%
			2500	1.840	40.160	1.855	39.136	-0.81%	2.62%
			2510	1.851	40.120	1.866	39.123	-0.80%	2.55%
			2535	1.882	40.021	1.893	39.092	-0.58%	2.38%
			2550	1.900	39.964	1.909	39.073	-0.47%	2.28%
			2560	1.913	39.929	1.920	39.060	-0.36%	2.22%
			2600	1.958	39.789	1.964	39.009	-0.31%	2.00%
			2650	2.015	39.591	2.018	38.945	-0.15%	1.66%
			2680	2.051	39.477	2.051	38.907	0.00%	1.47%
			2700	2.074	39.403	2.073	38.882	0.05%	1.34%
08/12/2021	3600 Head	19.0	3300	2.649	38.017	2.708	38.157	-2.18%	-0.37%
			3350	2.695	37.920	2.759	38.100	-2.32%	-0.47%
			3450	2.789	37.728	2.861	37.986	-2.52%	-0.68%
			3500	2.833	37.631	2.913	37.929	-2.75%	-0.79%
			3550	2.885	37.538	2.964	37.871	-2.67%	-0.88%
			3560	2.893	37.529	2.974	37.860	-2.72%	-0.87%
			3600	2.930	37.431	3.015	37.814	-2.82%	-1.01%
			3650	2.983	37.351	3.066	37.757	-2.71%	-1.08%
			3690	3.017	37.299	3.107	37.711	-2.90%	-1.09%
			3700	3.026	37.272	3.117	37.700	-2.92%	-1.14%
			3750	3.078	37.180	3.169	37.643	-2.87%	-1.23%
			3900	3.229	36.924	3.323	37.471	-2.83%	-1.46%
			3930	3.262	36.855	3.353	37.437	-2.71%	-1.55%
			4100	3.442	36.555	3.528	37.243	-2.44%	-1.85%
			4150	3.497	36.474	3.579	37.186	-2.29%	-1.91%

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Table 10-3
Measured Tissue Properties – Head Continued

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ϵ	% dev σ	% dev ϵ
08/25/2021	3600 Head	20.8	3300	2.593	38.684	2.708	38.157	-4.25%	1.38%
			3350	2.640	38.606	2.759	38.100	-4.31%	1.33%
			3450	2.728	38.432	2.861	37.986	-4.65%	1.17%
			3500	2.773	38.348	2.913	37.929	-4.81%	1.10%
			3550	2.824	38.252	2.964	37.871	-4.72%	1.01%
			3560	2.832	38.239	2.974	37.860	-4.77%	1.00%
			3600	2.865	38.184	3.015	37.814	-4.98%	0.98%
			3650	2.916	38.076	3.066	37.757	-4.89%	0.84%
			3690	2.955	38.032	3.107	37.711	-4.89%	0.85%
			3700	2.963	38.003	3.117	37.700	-4.94%	0.80%
			3750	3.016	37.911	3.169	37.643	-4.83%	0.71%
			3900	3.161	37.693	3.323	37.471	-4.88%	0.59%
			3930	3.192	37.644	3.353	37.437	-4.80%	0.55%
			4100	3.369	37.347	3.528	37.243	-4.51%	0.28%
			4150	3.421	37.275	3.579	37.186	-4.41%	0.24%
			3300	2.622	38.392	2.708	38.157	-3.18%	0.62%
			3350	2.666	38.306	2.759	38.100	-3.37%	0.54%
			3450	2.761	38.125	2.861	37.986	-3.50%	0.37%
			3500	2.804	38.021	2.913	37.929	-3.74%	0.24%
			3550	2.858	37.947	2.964	37.871	-3.58%	0.20%
09/07/2021	3600 Head	19.0	3560	2.867	37.934	2.974	37.860	-3.60%	0.20%
			3600	2.901	37.841	3.015	37.814	-3.78%	0.07%
			3650	2.954	37.762	3.066	37.757	-3.65%	0.01%
			3690	2.988	37.705	3.107	37.711	-3.83%	-0.02%
			3700	2.997	37.684	3.117	37.700	-3.85%	-0.04%
			3750	3.053	37.589	3.169	37.643	-3.66%	-0.14%
			3900	3.201	37.355	3.323	37.471	-3.67%	-0.31%
			3930	3.232	37.280	3.353	37.437	-3.61%	-0.42%
			4100	3.415	36.998	3.528	37.243	-3.20%	-0.66%
			4150	3.466	36.926	3.579	37.186	-3.16%	-0.70%
			3300	2.602	38.692	2.708	38.157	-3.91%	1.40%
			3350	2.644	38.608	2.759	38.100	-4.17%	1.33%
			3450	2.735	38.436	2.861	37.986	-4.37%	1.18%
			3500	2.776	38.340	2.913	37.929	-4.70%	1.08%
			3550	2.833	38.262	2.964	37.871	-4.42%	1.03%
			3560	2.840	38.248	2.974	37.860	-4.51%	1.02%
			3600	2.869	38.157	3.015	37.814	-4.84%	0.91%
			3650	2.924	38.079	3.066	37.757	-4.63%	0.85%
			3690	2.956	38.014	3.107	37.711	-4.86%	0.80%
09/13/2021	3600 Head	19.8	3700	2.964	37.999	3.117	37.700	-4.91%	0.79%
			3750	3.021	37.913	3.169	37.643	-4.67%	0.72%
			3900	3.164	37.696	3.323	37.471	-4.78%	0.60%
			3930	3.191	37.613	3.353	37.437	-4.83%	0.47%
			4100	3.374	37.374	3.528	37.243	-4.37%	0.35%
			4150	3.419	37.287	3.579	37.186	-4.47%	0.27%
			5180	4.478	34.731	4.635	36.009	-3.39%	-3.55%
			5190	4.489	34.718	4.645	35.998	-3.36%	-3.56%
			5200	4.497	34.699	4.655	35.986	-3.39%	-3.58%
			5210	4.505	34.680	4.666	35.975	-3.45%	-3.60%
			5220	4.515	34.664	4.676	35.963	-3.44%	-3.61%
			5240	4.539	34.619	4.696	35.940	-3.34%	-3.68%
			5250	4.550	34.589	4.706	35.929	-3.31%	-3.73%
			5260	4.561	34.564	4.717	35.917	-3.31%	-3.77%
			5270	4.574	34.552	4.727	35.906	-3.24%	-3.77%
			5280	4.586	34.545	4.737	35.894	-3.19%	-3.76%
			5290	4.597	34.535	4.748	35.883	-3.18%	-3.76%
			5300	4.607	34.533	4.758	35.871	-3.17%	-3.73%
			5310	4.618	34.523	4.768	35.860	-3.15%	-3.73%
08/24/2021	5200-5800 Head	21.4	5320	4.630	34.510	4.778	35.849	-3.10%	-3.74%
			5500	4.832	34.229	4.963	35.643	-2.64%	-3.97%
			5510	4.845	34.216	4.973	35.632	-2.57%	-3.97%
			5520	4.859	34.206	4.983	35.620	-2.49%	-3.97%
			5530	4.874	34.192	4.994	35.609	-2.40%	-3.98%
			5540	4.886	34.177	5.004	35.597	-2.36%	-3.99%
			5550	4.897	34.158	5.014	35.586	-2.33%	-4.01%
			5560	4.908	34.148	5.024	35.574	-2.31%	-4.01%
			5580	4.931	34.117	5.045	35.551	-2.26%	-4.03%
			5600	4.952	34.075	5.065	35.529	-2.23%	-4.09%
			5610	4.964	34.058	5.076	35.518	-2.21%	-4.11%
			5620	4.975	34.043	5.086	35.506	-2.18%	-4.12%
			5640	4.995	34.017	5.106	35.483	-2.17%	-4.13%
			5660	5.018	33.991	5.127	35.460	-2.13%	-4.14%
			5670	5.030	33.978	5.137	35.449	-2.08%	-4.15%
			5680	5.040	33.969	5.147	35.437	-2.08%	-4.14%
			5690	5.050	33.952	5.158	35.426	-2.09%	-4.16%
			5700	5.061	33.929	5.168	35.414	-2.07%	-4.19%
			5710	5.072	33.907	5.178	35.403	-2.05%	-4.23%
			5720	5.083	33.889	5.188	35.391	-2.02%	-4.24%
			5745	5.110	33.854	5.214	35.363	-1.99%	-4.27%
			5750	5.115	33.847	5.219	35.357	-1.99%	-4.27%
			5755	5.121	33.840	5.224	35.351	-1.97%	-4.27%
			5765	5.130	33.824	5.234	35.340	-1.99%	-4.29%
			5775	5.138	33.806	5.245	35.329	-2.04%	-4.31%
			5785	5.146	33.788	5.255	35.317	-2.07%	-4.33%
			5795	5.156	33.766	5.265	35.305	-2.07%	-4.36%
			5805	5.165	33.751	5.275	35.294	-2.09%	-4.37%
			5825	5.186	33.700	5.296	35.271	-2.08%	-4.45%

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Table 10-4
Measured Tissue Properties – Body

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ϵ	% dev σ	% dev ϵ
08/08/2021	750 Body	21.8	680	0.960	54.483	0.958	55.804	0.21%	-2.37%
			695	0.968	54.444	0.959	55.745	0.73%	-2.33%
			700	0.967	54.431	0.959	55.726	0.83%	-2.32%
			710	0.971	54.407	0.960	55.687	1.15%	-2.30%
			725	0.977	54.372	0.961	55.629	1.66%	-2.26%
			750	0.986	54.317	0.964	55.531	2.28%	-2.19%
			770	0.993	54.271	0.965	55.453	2.90%	-2.13%
			785	0.999	54.230	0.966	55.395	3.42%	-2.10%
			800	1.005	54.192	0.967	55.336	3.93%	-2.07%
			680	0.938	55.267	0.958	55.804	-2.09%	-0.96%
08/10/2021	750 Body	21.8	695	0.943	55.234	0.959	55.745	-1.67%	-0.92%
			700	0.945	55.223	0.959	55.726	-1.46%	-0.90%
			710	0.948	55.199	0.960	55.687	-1.25%	-0.88%
			725	0.953	55.177	0.961	55.629	-0.83%	-0.81%
			750	0.963	55.128	0.964	55.531	-0.10%	-0.73%
			770	0.970	55.075	0.965	55.453	0.52%	-0.68%
			785	0.976	55.031	0.966	55.395	1.04%	-0.66%
			800	0.982	54.983	0.967	55.336	1.55%	-0.64%
			680	0.936	54.273	0.958	55.804	-2.30%	-2.74%
			695	0.941	54.230	0.959	55.745	-1.88%	-2.72%
08/16/2021	750 Body	21.4	700	0.944	54.218	0.959	55.726	-1.56%	-2.71%
			710	0.948	54.196	0.960	55.687	-1.25%	-2.68%
			725	0.954	54.170	0.961	55.629	-0.73%	-2.62%
			750	0.964	54.108	0.964	55.531	0.00%	-2.56%
			770	0.972	54.046	0.965	55.453	0.73%	-2.54%
			785	0.977	54.001	0.966	55.395	1.14%	-2.52%
			800	0.982	53.961	0.967	55.336	1.55%	-2.48%
			680	0.970	53.938	0.958	55.804	1.25%	-3.34%
			695	0.975	53.898	0.959	55.745	1.67%	-3.31%
			700	0.977	53.883	0.959	55.726	1.88%	-3.31%
08/18/2021	750 Body	22.1	710	0.980	53.858	0.960	55.687	2.08%	-3.28%
			725	0.985	53.829	0.961	55.629	2.50%	-3.24%
			750	0.994	53.776	0.964	55.531	3.11%	-3.16%
			770	1.002	53.720	0.965	55.453	3.83%	-3.13%
			785	1.008	53.671	0.966	55.395	4.35%	-3.11%
			800	1.015	53.624	0.967	55.336	4.96%	-3.09%
			815	0.924	54.009	0.968	55.271	-4.55%	-2.29%
			820	0.929	53.963	0.969	55.258	-4.13%	-2.34%
			835	0.945	53.828	0.970	55.200	-2.58%	-2.49%
			850	0.960	53.687	0.988	55.154	-2.83%	-2.66%
08/12/2021	835 Body	22.7	815	0.921	54.031	0.968	55.271	-4.86%	-2.24%
			820	0.926	53.986	0.969	55.258	-4.44%	-2.30%
			835	0.942	53.858	0.970	55.200	-2.89%	-2.43%
			850	0.957	53.723	0.988	55.154	-3.14%	-2.59%
			815	0.928	54.449	0.968	55.271	-4.13%	-1.49%
08/17/2021	835 Body	23.2	820	0.933	54.404	0.969	55.258	-3.72%	-1.55%
			835	0.949	54.270	0.970	55.200	-2.16%	-1.68%
			850	0.964	54.131	0.988	55.154	-2.43%	-1.85%
			815	0.922	53.745	0.968	55.271	-4.75%	-2.70%
			820	0.927	53.700	0.969	55.258	-4.32%	-2.82%
08/27/2021	835 Body	21.9	835	0.943	53.569	0.970	55.200	-2.78%	-2.95%
			850	0.959	53.432	0.988	55.154	-2.94%	-3.12%
			815	0.925	53.474	0.968	55.271	-4.44%	-3.25%
			820	0.930	53.426	0.969	55.258	-4.02%	-3.32%
			835	0.946	53.276	0.970	55.200	-2.47%	-3.49%
08/29/2021	835 Body	22.0	850	0.962	53.122	0.988	55.154	-2.63%	-3.68%
			1710	1.433	51.527	1.463	53.537	-2.05%	-3.75%
			1720	1.444	51.486	1.469	53.511	-1.70%	-3.78%
			1745	1.470	51.388	1.485	53.445	-1.01%	-3.85%
			1750	1.475	51.366	1.488	53.432	-0.87%	-3.87%
08/05/2021	1750 Body	22.7	1770	1.495	51.288	1.501	53.379	-0.40%	-3.92%
			1790	1.515	51.215	1.514	53.326	0.07%	-3.96%
			1710	1.443	51.491	1.463	53.537	-1.37%	-3.82%
			1720	1.454	51.457	1.469	53.511	-1.02%	-3.84%
			1745	1.482	51.369	1.485	53.445	-0.20%	-3.88%
08/12/2021	1750 Body	22.5	1750	1.487	51.349	1.488	53.432	-0.07%	-3.90%
			1770	1.509	51.270	1.501	53.379	0.53%	-3.95%
			1790	1.532	51.193	1.514	53.326	1.19%	-4.00%
			1710	1.428	52.350	1.463	53.537	-2.39%	-2.22%
			1720	1.438	52.316	1.469	53.511	-2.11%	-2.23%
08/14/2021	1750 Body	22.5	1745	1.465	52.229	1.485	53.445	-1.35%	-2.28%
			1750	1.471	52.211	1.488	53.432	-1.14%	-2.29%
			1770	1.492	52.139	1.501	53.379	-0.60%	-2.32%
			1790	1.514	52.069	1.514	53.326	0.00%	-2.36%
			1710	1.481	51.268	1.463	53.537	1.23%	-4.24%
08/29/2021	1750 Body	20.9	1720	1.492	51.233	1.469	53.511	1.57%	-4.26%
			1745	1.520	51.143	1.485	53.445	2.36%	-4.31%
			1750	1.526	51.124	1.488	53.432	2.55%	-4.32%
			1770	1.548	51.046	1.501	53.379	3.13%	-4.37%
			1790	1.570	50.969	1.514	53.326	3.70%	-4.42%
08/31/2021	1750 Body	21.8	1710	1.474	51.186	1.463	53.537	0.75%	-4.39%
			1720	1.485	51.147	1.469	53.511	1.09%	-4.42%
			1745	1.513	51.046	1.485	53.445	1.89%	-4.49%
			1750	1.518	51.026	1.488	53.432	2.02%	-4.50%
			1770	1.540	50.944	1.501	53.379	2.60%	-4.56%
09/02/2021	1750 Body	22.3	1790	1.561	50.870	1.514	53.326	3.10%	-4.61%
			1710	1.451	52.392	1.463	53.537	-0.82%	-2.14%
			1720	1.462	52.360	1.469	53.511	-0.48%	-2.15%
			1745	1.491	52.276	1.485	53.445	0.40%	-2.19%
			1750	1.496	52.259	1.488	53.432	0.54%	-2.20%
08/10/2021	1900 Body	23.6	1770	1.519	52.188	1.501	53.379	1.20%	-2.23%
			1790	1.542	52.121	1.514	53.326	1.85%	-2.26%
			1850	1.507	52.891	1.520	53.300	-0.86%	-0.77%
			1860	1.518	52.860	1.520	53.300	-0.12%	-0.83%
			1880	1.541	52.795	1.520	53.300	1.38%	-0.95%
08/12/2021	1900 Body	23.1	1900	1.565	52.740	1.520	53.300	2.96%	-1.05%
			1905	1.571	52.730	1.520	53.300	3.36%	-1.07%
			1910	1.576	52.720	1.520	53.300	3.68%	-1.09%
			1850	1.516	52.990	1.520	53.300	-0.26%	-0.58%
			1860	1.528	52.958	1.520	53.300	0.53%	-0.64%
08/12/2021	1900 Body	23.1	1880	1.551	52.892	1.520	53.300	2.04%	-0.77%
			1900	1.574	52.815	1.520	53.300	3.55%	-0.91%
			1905	1.580	52.796	1.520	53.300	3.95%	-0.95%
			1910	1.586	52.779	1.520	53.300	4.34%	-0.98%

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Table 10-5
Measured Tissue Properties – Body Continued

Calculated for Tissue Parameters etc.	Thermal Type	Time Temp Being Calculated (°C)	Measured Frequency (MHz)	Measured Conductivity (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity (S/m)	TARGET Dielectric Constant, ε	% dev c	% dev ε
08/10/2021	1800 Body	23.4	1800	1.521	52.154	1.520	52.200	-1.28%	-0.93%
			1800	1.521	52.160	1.520	52.200	-0.66%	-0.73%
			1800	1.521	52.162	1.520	52.200	-0.40%	-0.28%
			1800	1.521	52.162	1.520	52.200	-0.40%	-0.28%
			1800	1.520	52.059	1.520	52.200	-2.37%	-0.42%
08/11/2021	1800 Body	23.2	1800	1.521	52.162	1.520	52.200	-0.66%	-0.73%
			1800	1.520	52.159	1.520	52.200	-0.19%	-0.67%
			1800	1.521	52.162	1.520	52.200	-0.66%	-0.73%
			1800	1.521	52.162	1.520	52.200	-0.66%	-0.73%
			1800	1.521	52.162	1.520	52.200	-0.66%	-0.73%
09/05/2021	1800 Body	26.0	1800	1.481	50.227	1.520	52.200	-5.86%	-1.63%
			1800	1.481	52.222	1.520	52.200	-2.67%	-1.98%
			1800	1.505	51.932	1.520	52.200	-1.68%	-0.60%
			1800	1.507	52.179	1.520	52.200	-0.80%	-0.11%
			1800	1.521	52.201	1.520	52.200	-0.53%	-0.24%
09/05/2021	1800 Body	22.1	1800	1.512	52.018	1.520	52.200	-0.53%	-0.60%
			1800	1.521	52.162	1.520	52.200	-0.13%	-0.67%
			1800	1.505	52.174	1.520	52.200	-1.63%	-0.60%
			1800	1.505	52.019	1.520	52.200	-2.68%	-1.27%
			1800	1.521	52.088	1.520	52.200	-0.72%	-1.08%
09/08/2021	1800 Body	23.0	1800	1.519	52.089	1.520	52.200	-0.62%	-1.05%
			1800	1.497	52.174	1.520	52.200	-3.03%	-0.90%
			1800	1.488	52.222	1.520	52.200	-2.22%	-0.22%
			1800	1.509	52.089	1.520	52.200	-0.60%	-0.23%
			1800	1.520	52.084	1.520	52.200	-0.33%	-0.54%
09/09/2021	2400 Body	22.0	2400	1.520	52.200	1.520	52.200	0.00%	0.00%
			2400	1.505	51.939	1.502	52.157	-2.63%	-0.58%
			2400	1.491	51.222	1.500	52.100	-2.41%	-0.52%
			2400	1.505	51.939	1.500	52.100	-2.63%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/09/2021	2400 Body	22.0	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/09/2021	2400 Body	24.5	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/11/2021	2400 Body	21.0	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/15/2021	2400 Body	23.7	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/15/2021	2400 Body	24.4	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/17/2021	2400 Body	23.7	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/22/2021	2400 Body	23.0	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/26/2021	2400 Body	21.0	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
09/13/2021	2400 Body	24.2	2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%
			2400	1.504	51.229	1.505	52.036	-0.64%	-0.58%

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of Samsung	SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset	Page 142 of 290	

Table 10-6
Measured Tissue Properties – Body Continued

Tests Performed on	Tissue Type	Time Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ'	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ϵ'	% dev σ	% dev ϵ'
08/11/2021	3600 Body	23.9	3300	3.157	49.041	3.080	51.593	2.50%	-3.20%
			3350	3.210	49.070	3.120	51.525	2.26%	-3.21%
			3400	3.310	49.126	3.250	51.389	1.66%	-3.22%
			3500	3.356	49.084	3.314	51.321	1.27%	-3.23%
			3550	3.487	49.034	3.372	51.254	1.04%	-3.46%
			3550	3.417	49.017	3.384	51.240	0.96%	-3.17%
			3600	3.456	49.073	3.431	51.186	0.72%	-3.23%
			3650	3.523	49.002	3.489	51.118	0.40%	-3.17%
			3650	3.540	49.034	3.530	51.063	0.38%	-3.18%
			3700	3.554	49.416	3.548	51.050	0.17%	-3.20%
			3750	3.700	49.085	3.626	50.982	-0.60%	-3.22%
			3800	3.762	49.002	3.783	50.779	-0.50%	-3.40%
08/19/2021	3600 Body	23.4	3900	3.799	48.978	3.816	50.738	-0.45%	-3.47%
			4100	3.904	48.868	4.025	50.507	-0.52%	-3.46%
			4150	4.058	48.614	4.073	50.439	-0.42%	-3.62%
			3300	3.226	49.727	3.080	51.593	4.74%	-3.62%
			3350	3.282	49.662	3.120	51.525	4.58%	-3.62%
			3400	3.382	49.488	3.250	51.389	3.87%	-3.68%
			3500	3.433	49.435	3.314	51.321	3.89%	-3.67%
			3550	3.487	49.361	3.372	51.254	3.41%	-3.71%
			3550	3.499	49.537	3.384	51.240	3.40%	-3.71%
			3600	3.541	49.295	3.431	51.186	3.21%	-3.69%
			3650	3.581	49.068	3.489	51.118	2.40%	-3.72%
			3650	3.634	49.168	3.536	51.063	2.77%	-3.71%
08/23/2021	3600 Body	22.0	3700	3.646	49.151	3.548	51.050	2.78%	-3.72%
			3750	3.700	49.085	3.626	50.982	2.41%	-3.75%
			3800	3.870	48.820	3.783	50.779	2.01%	-4.10%
			3900	3.907	48.777	3.816	50.738	2.38%	-3.86%
			4100	4.114	48.505	4.025	50.507	2.47%	-3.86%
			4150	4.178	48.418	4.073	50.439	2.53%	-4.01%
			3300	3.221	49.691	3.080	51.593	4.68%	-3.86%
			3350	3.275	49.611	3.120	51.525	4.13%	-3.87%
			3400	3.374	49.377	3.250	51.389	3.62%	-3.90%
			3500	3.423	49.330	3.314	51.321	3.23%	-3.90%
			3550	3.473	49.277	3.372	51.254	3.48%	-3.90%
			3550	3.490	49.711	3.384	51.240	3.13%	-3.95%
08/26/2021	3600 Body	22.5	3600	3.531	49.172	3.431	51.186	2.91%	-3.93%
			3650	3.581	49.068	3.489	51.118	2.40%	-3.96%
			3650	3.624	49.028	3.536	51.063	2.40%	-3.96%
			3700	3.635	49.022	3.548	51.050	2.45%	-3.97%
			3750	3.691	49.044	3.626	50.982	2.38%	-4.00%
			3800	3.857	48.695	3.783	50.779	2.01%	-4.10%
			3900	3.894	48.639	3.816	50.738	2.04%	-4.14%
			4100	4.101	48.382	4.025	50.507	2.41%	-4.21%
			4150	4.165	48.293	4.073	50.439	2.26%	-4.25%
			3300	3.224	49.580	3.080	51.593	4.68%	-3.90%
			3350	3.279	49.444	3.120	51.525	4.49%	-3.84%
			3400	3.377	49.388	3.250	51.389	3.72%	-3.90%
08/29/2021	3600 Body	22.4	3500	3.423	49.330	3.314	51.321	3.23%	-3.89%
			3550	3.474	49.241	3.372	51.254	3.02%	-3.91%
			3550	3.488	49.725	3.384	51.240	3.01%	-3.93%
			3600	3.523	49.185	3.431	51.186	2.68%	-3.91%
			3650	3.568	49.086	3.489	51.118	2.38%	-3.98%
			3650	3.609	49.020	3.536	51.063	2.06%	-4.00%
			3700	3.619	49.001	3.548	51.050	2.05%	-4.01%
			3750	3.670	49.087	3.626	50.982	1.77%	-4.11%
			3800	3.827	48.573	3.783	50.779	1.22%	-4.34%
			3900	3.865	48.507	3.816	50.738	1.31%	-4.40%
			4100	4.075	48.111	4.025	50.507	1.49%	-4.54%
			4150	4.138	48.153	4.073	50.439	1.60%	-4.53%
08/31/2021	3600 Body	22.4	3300	3.174	49.684	3.080	51.593	3.95%	-3.70%
			3350	3.229	49.622	3.120	51.525	2.67%	-3.69%
			3400	3.328	49.460	3.250	51.389	2.21%	-3.75%
			3500	3.376	49.400	3.314	51.321	1.87%	-3.74%
			3550	3.420	49.330	3.372	51.254	1.66%	-3.79%
			3550	3.439	49.295	3.384	51.240	1.63%	-3.80%
			3600	3.478	49.248	3.431	51.186	1.37%	-3.77%
			3650	3.524	49.184	3.489	51.118	1.05%	-3.82%
			3650	3.564	49.109	3.536	51.063	0.79%	-3.83%
			3700	3.574	49.084	3.548	51.050	0.72%	-3.83%
			3750	3.621	49.095	3.626	50.982	0.61%	-3.80%
			3800	3.783	48.738	3.783	50.779	0.00%	-4.02%
08/31/2021	3600 Body	20.5	3900	3.822	48.571	3.816	50.738	0.16%	-4.07%
			4100	4.020	48.301	4.025	50.507	0.12%	-4.20%
			4150	4.080	48.315	4.073	50.439	0.17%	-4.21%
			3300	3.211	50.261	3.080	51.593	4.28%	-2.60%
			3350	3.261	50.177	3.120	51.525	3.95%	-2.62%
			3400	3.360	50.030	3.250	51.389	3.44%	-2.68%
			3500	3.410	49.911	3.314	51.321	3.17%	-2.70%
			3550	3.475	49.848	3.372	51.254	1.88%	-2.74%
			3550	3.488	49.843	3.384	51.240	1.81%	-2.73%
			3600	3.524	49.769	3.431	51.186	2.71%	-2.80%
			3650	3.568	49.694	3.489	51.118	2.46%	-2.79%
			3650	3.605	49.637	3.536	51.063	2.52%	-2.79%
08/31/2021	3600 Body	20.5	3700	3.635	49.610	3.548	51.050	2.45%	-2.82%
			3750	3.699	49.542	3.626	50.982	2.68%	-2.82%
			3800	3.869	49.240	3.783	50.779	2.33%	-2.83%
			3900	3.905	49.207	3.816	50.738	2.33%	-2.80%
			4100	4.122	49.021	4.025	50.507	2.67%	-2.82%
			4150	4.178	48.944	4.073	50.439	2.58%	-2.86%
			5180	5.270	47.710	5.276	49.041	0.06%	-2.88%
			5190	5.262	47.712	5.288	49.038	0.08%	-2.88%
			5200	5.264	47.731	5.299	49.014	0.09%	-2.87%
			5210	5.316	47.711	5.311	49.001	0.09%	-2.83%
			5220	5.329	47.694	5.323	48.987	0.11%	-2.84%
			5240	5.360	47.658	5.348	48.960	0.20%	-2.66%
08/31/2021	3600 Body	20.5	5250	5.374	47.632	5.368	48.947	0.30%	-2.69%
			5260	5.389	47.602	5.369	48.933	0.38%	-2.72%
			5270	5.398	47.684	5.383	48.919	0.32%	-2.73%
			5280	5.414	47.563	5.393	48.906	0.39%	-2.70%
			5290	5.431	47.546	5.404	48.892	0.50%	-2.75%
			5300	5.447	47.531	5.418	48.879	0.57%	-2.70%
			5310	5.461	47.519	5.428	48.865	0.61%	-2.70%
			5320	5.474	47.504	5.439	48.851	0.66%	-2.70%
			5350	5.727	47.120	5.650	48.907	1.36%	-2.98%
			5310	5.743	47.138	5.661	48.894	1.43%	-2.99%
			5320	5.759	47.125	5.673	48.880	1.50%	-3.00%
			5330	5.775	47.100	5.685	48.866	1.58%	-3.02%
08/31/2021	3600 Body	20.5	5340	5.790	47.081	5.696	48.853	1.65%	-3.01%
			5350	5.806	47.073	5.708	48.839	1.72%	-3.02%
			5360	5.822	47.057	5.720	48.826	1.78%	-3.03%
			5380	5.862	47.024	5.743	48.799	1.90%	-3.04%
			5400	5.875	46.988	5.766	48.771	1.96%	-3.07%
			5410	5.892	46.965	5.778	48.758	1.97%	-3.08%
			5420	5.906	46.944	5.790	48.744	2.00%	-3.10%
			5440	5.932	46.909	5.813	48.717	2.05%	-3.11%
			5460	5.963	46.873	5.837	48.690	2.18%	-3.13%
			5470	5.978	46.861	5.846	48.676	2.22%	-3.13%
			5480	5.993	46.852	5.860	48.663	2.27%	-3.12%
			5490	6.008	46.8	5.873	48.650	2.32%	-3.11%

10.2 Test System Verification

Prior to SAR assessment, the system is verified to $\pm 10\%$ of the SAR measurement on the reference dipole at the time of calibration by the calibration facility. Full system validation status and result summary can be found in Appendix D.

Table 10-7
System Verification Results – 1g

System Verification TARGET & MEASURED												
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	Measured SAR1g (W/kg)	1W Target SAR1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation1g (%)
A	750	HEAD	08/27/2021	23.6	22.0	0.20	1161	7406	1.740	8.03	8.700	8.34%
A	750	HEAD	08/29/2021	23.5	21.2	0.20	1161	7406	1.690	8.03	8.450	5.23%
A	835	HEAD	08/17/2021	22.9	20.3	0.20	4d133	7406	1.970	9.43	9.850	4.45%
A	835	HEAD	08/23/2021	22.9	22.6	0.20	4d132	7406	1.970	9.66	9.850	1.97%
A	835	HEAD	08/25/2021	24.0	22.0	0.20	4d132	7406	1.870	9.66	9.350	-3.21%
A	1750	HEAD	08/20/2021	23.6	21.5	0.10	1150	7406	3.740	36.50	37.400	2.47%
A	1750	HEAD	08/25/2021	24.0	22.0	0.10	1150	7406	3.570	36.50	35.700	-2.19%
B	1900	HEAD	08/20/2021	24.2	22.3	0.10	5d148	7660	3.930	39.10	39.300	0.51%
B	1900	HEAD	08/22/2021	24.3	22.1	0.10	5d080	7660	4.110	39.80	41.100	3.27%
B	1900	HEAD	08/24/2021	24.5	22.8	0.10	5d149	7660	4.170	39.30	41.700	6.11%
A	1900	HEAD	08/31/2021	24.3	20.9	0.10	5d080	7406	4.190	39.80	41.900	5.28%
A	1900	HEAD	09/08/2021	23.5	22.3	0.10	5d149	7406	4.280	39.30	42.800	8.91%
E	2300	HEAD	08/03/2021	24.4	23.2	0.10	1073	7571	4.790	49.20	47.900	-2.64%
B	2300	HEAD	08/16/2021	24.0	22.5	0.10	1116	7660	4.600	49.60	46.000	-7.26%
E	2450	HEAD	08/03/2021	24.4	23.2	0.10	719	7571	5.410	51.40	54.100	5.25%
B	2450	HEAD	08/16/2021	24.0	22.5	0.10	981	7660	5.110	52.30	51.100	-2.29%
B	2450	HEAD	08/26/2021	24.0	21.9	0.10	797	7660	5.060	52.40	50.600	-3.44%
E	2600	HEAD	08/03/2021	24.4	23.2	0.10	1064	7571	6.050	58.10	60.500	4.13%
B	2600	HEAD	08/16/2021	24.0	22.5	0.10	1004	7660	5.790	57.80	57.900	0.17%
B	2600	HEAD	09/07/2021	24.0	23.6	0.10	1071	7660	5.600	56.10	56.000	-0.18%
L	3500	HEAD	08/12/2021	23.3	21.0	0.10	1097	7539	6.840	66.40	68.400	3.01%
L	3500	HEAD	09/13/2021	20.5	19.8	0.10	1097	7539	6.560	66.40	65.600	-1.20%
L	3700	HEAD	08/12/2021	23.3	21.0	0.10	1018	7539	6.910	67.00	69.100	3.13%
L	3700	HEAD	08/25/2021	21.5	21.0	0.10	1067	7539	6.830	67.20	68.300	1.64%
L	3700	HEAD	09/07/2021	22.9	20.1	0.10	1067	7539	6.970	67.20	69.700	3.72%
L	3900	HEAD	08/25/2021	21.5	21.0	0.10	1056	7539	7.370	68.90	73.700	6.97%
K	5250	HEAD	08/24/2021	22.4	21.4	0.05	1057	7538	3.920	79.70	78.400	-1.63%
K	5600	HEAD	08/24/2021	22.4	21.4	0.05	1057	7538	4.090	83.80	81.800	-2.39%
K	5750	HEAD	08/24/2021	22.4	21.4	0.05	1057	7538	4.190	80.10	83.800	4.62%
G	750	BODY	08/08/2021	23.8	21.8	0.20	1003	7357	1.850	8.61	9.250	7.43%
G	750	BODY	08/10/2021	24.0	21.8	0.20	1003	7357	1.800	8.61	9.000	4.53%
G	750	BODY	08/16/2021	21.9	21.4	0.20	1003	7357	1.830	8.61	9.150	6.27%
G	750	BODY	08/18/2021	22.2	22.1	0.20	1003	7357	1.770	8.61	8.850	2.79%
H	835	BODY	08/12/2021	23.4	22.6	0.20	4d133	7409	2.020	9.75	10.100	3.59%
H	835	BODY	08/15/2021	23.5	22.4	0.20	4d133	7409	2.040	9.75	10.200	4.62%
H	835	BODY	08/17/2021	23.5	23.2	0.20	4d133	7409	2.070	9.75	10.350	6.15%
H	835	BODY	08/27/2021	23.5	22.2	0.20	4d133	7409	1.950	9.75	9.750	0.00%
H	835	BODY	08/29/2021	22.8	22.5	0.20	4d133	7409	1.990	9.75	9.950	2.05%
D	1750	BODY	08/05/2021	23.7	22.5	0.10	1150	3589	3.610	36.60	36.100	-1.37%
D	1750	BODY	08/14/2021	22.9	22.5	0.10	1150	3589	3.680	36.60	36.800	0.55%
G	1750	BODY	08/29/2021	22.6	20.9	0.10	1150	7357	3.820	36.60	38.200	4.37%
G	1750	BODY	09/02/2021	23.8	22.3	0.10	1150	7357	3.900	36.60	39.000	6.56%
P	1900	BODY	08/10/2021	23.6	22.6	0.10	5d148	7410	3.870	39.10	38.700	-1.02%
P	1900	BODY	08/12/2021	23.3	23.1	0.10	5d148	7410	4.150	39.10	41.500	6.14%
P	1900	BODY	08/16/2021	22.0	21.4	0.10	5d148	7410	4.070	39.10	40.700	4.09%
H	1900	BODY	09/05/2021	22.6	25.0	0.10	5d149	7409	4.050	39.40	40.500	2.79%
P	1900	BODY	09/05/2021	22.1	23.2	0.10	5d148	7410	3.960	39.10	39.600	1.28%
P	1900	BODY	09/08/2021	24.3	23.0	0.10	5d148	7410	4.020	39.10	40.200	2.81%
J	2300	BODY	08/11/2021	22.5	21.8	0.10	1116	7526	4.730	49.20	47.300	-3.86%
L	2300	BODY	08/15/2021	21.5	23.1	0.10	1116	7539	4.920	49.20	49.200	0.00%
K	2300	BODY	08/15/2021	21.5	23.0	0.10	1116	7538	4.970	49.20	49.700	1.02%
K	2300	BODY	08/17/2021	22.6	22.0	0.10	1116	7538	5.160	49.20	51.600	4.88%
L	2450	BODY	08/06/2021	23.0	21.0	0.10	981	7539	4.950	50.10	49.500	-1.20%
L	2450	BODY	08/09/2021	23.0	24.5	0.10	981	7539	5.040	50.10	50.400	0.60%
L	2450	BODY	08/22/2021	22.7	23.3	0.10	797	7539	5.040	49.40	50.400	2.02%
J	2450	BODY	08/26/2021	21.7	21.9	0.10	981	7526	4.970	50.10	49.700	-0.80%
L	2450	BODY	09/13/2021	20.5	22.5	0.10	981	7539	4.860	50.10	48.600	-2.99%
L	2600	BODY	08/09/2021	23.0	24.5	0.10	1071	7539	5.390	54.30	53.900	-0.74%
K	2600	BODY	08/15/2021	21.5	23.0	0.10	1071	7538	5.590	54.30	55.900	2.95%
L	2600	BODY	08/15/2021	21.5	23.1	0.10	1004	7539	5.370	55.40	53.700	-3.07%
L	2600	BODY	08/22/2021	22.7	23.3	0.10	1071	7539	5.250	54.30	52.500	-3.31%
I	3500	BODY	08/11/2021	24.2	23.9	0.10	1059	7551	5.810	63.00	58.100	-7.78%
I	3500	BODY	08/18/2021	22.2	21.4	0.10	1059	7551	6.820	63.00	68.200	8.25%
I	3500	BODY	08/23/2021	22.6	22.0	0.10	1059	7551	6.800	63.00	68.000	7.94%
I	3700	BODY	08/11/2021	24.2	23.9	0.10	1018	7551	6.330	63.50	63.300	-0.31%
I	3700	BODY	08/26/2021	23.0	22.5	0.10	1018	7551	6.040	63.50	60.400	-4.88%
I	3700	BODY	08/30/2021	22.5	22.5	0.10	1018	7551	6.090	63.50	60.900	-4.09%
L	3700	BODY	08/31/2021	22.7	21.0	0.10	1067	7539	6.560	65.20	65.600	0.61%
I	3900	BODY	08/26/2021	23.0	22.5	0.10	1073	7551	6.930	64.30	69.300	7.78%
I	3900	BODY	08/30/2021	22.5	22.5	0.10	1073	7551	6.710	64.30	67.100	4.35%
J	5250	BODY	08/03/2021	21.7	22.2	0.05	1191	7526	3.560	74.60	71.200	-4.56%
J	5600	BODY	08/03/2021	21.7	22.2	0.05	1191	7526	3.880	78.10	77.600	-0.64%
J	5750	BODY	08/03/2021	21.7	22.2	0.05	1191	7526	3.650	74.90	73.000	-2.54%

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Table 10-8
System Verification Results – 10g

System Verification TARGET & MEASURED												
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	Measured SAR10g (W/kg)	1W Target SAR10g (W/kg)	1W Normalized SAR10g (W/kg)	Deviation10g (%)
D	1750	BODY	08/12/2021	23.1	22.5	0.10	1150	3589	2.010	19.40	20.100	3.61%
G	1750	BODY	08/31/2021	22.6	20.7	0.10	1150	7357	1.860	19.40	18.600	-4.12%
G	1750	BODY	09/02/2021	23.8	22.3	0.10	1150	7357	2.060	19.40	20.600	6.19%
P	1900	BODY	08/10/2021	23.6	22.6	0.10	5d148	7410	1.990	20.50	19.900	-2.93%
P	1900	BODY	08/12/2021	23.3	23.1	0.10	5d148	7410	2.140	20.50	21.400	4.39%
P	1900	BODY	08/16/2021	22.0	21.4	0.10	5d148	7410	2.090	20.50	20.900	1.95%
P	1900	BODY	08/27/2021	21.6	21.5	0.10	5d148	7410	2.140	20.50	21.400	4.39%
J	2300	BODY	08/11/2021	22.5	21.8	0.10	1116	7526	2.270	23.70	22.700	-4.22%
L	2300	BODY	08/27/2021	23.1	23.6	0.10	1116	7539	2.210	23.70	22.100	-6.75%
J	2450	BODY	08/11/2021	22.5	21.8	0.10	981	7526	2.200	23.70	22.000	-7.17%
L	2450	BODY	08/22/2021	22.7	23.3	0.10	797	7539	2.380	23.40	23.800	1.71%
J	2600	BODY	08/11/2021	22.5	21.8	0.10	1064	7526	2.430	25.00	24.300	-2.80%
L	2600	BODY	08/15/2021	21.5	23.1	0.10	1004	7539	2.410	24.80	24.100	-2.82%
L	2600	BODY	08/22/2021	22.7	23.3	0.10	1071	7539	2.350	24.10	23.500	-2.49%
I	3500	BODY	08/23/2021	22.6	22.0	0.10	1059	7551	2.510	23.30	25.100	7.73%
I	3700	BODY	08/30/2021	22.5	22.5	0.10	1018	7551	2.190	22.50	21.900	-2.67%
I	3900	BODY	08/30/2021	22.5	22.5	0.10	1073	7551	2.290	22.00	22.900	4.09%
J	5250	BODY	08/03/2021	21.7	22.2	0.05	1191	7526	1.010	21.00	20.200	-3.81%
J	5600	BODY	08/03/2021	21.7	22.2	0.05	1191	7526	1.090	21.70	21.800	0.46%
J	5750	BODY	08/03/2021	21.7	22.2	0.05	1191	7526	1.030	20.80	20.600	-0.96%

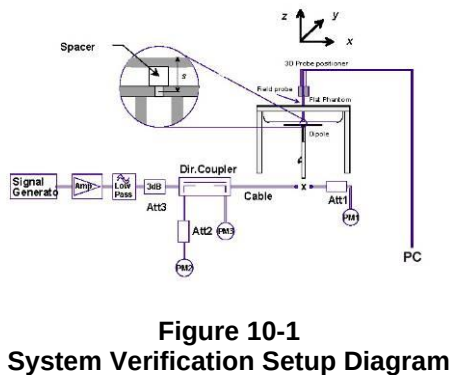


Figure 10-1

System Verification Setup Diagram



Figure 10-2

System Verification Setup Photo

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11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
CDMA BC0 (\$22H) Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Form Factor	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
848.31	777	Cell. CDMA	RC3 / SO55	25.0	24.60	1	-0.03	Right	Cheek	Open	1438M	1:1	0.228	1.096	0.250	A1
848.31	777	Cell. CDMA	RC3 / SO55	25.0	24.60	1	-0.01	Right	Tilt	Open	1438M	1:1	0.110	1.096	0.121	
848.31	777	Cell. CDMA	RC3 / SO55	25.0	24.60	1	0.10	Left	Cheek	Open	1438M	1:1	0.162	1.096	0.178	
848.31	777	Cell. CDMA	RC3 / SO55	25.0	24.60	1	-0.03	Left	Tilt	Open	1438M	1:1	0.093	1.096	0.102	
848.31	777	Cell. CDMA	EVDO Rev. A	24.5	23.08	1	0.00	Right	Cheek	Open	1438M	1:1	0.206	1.387	0.286	
848.31	777	Cell. CDMA	EVDO Rev. A	24.5	23.08	1	0.12	Right	Tilt	Open	1438M	1:1	0.104	1.387	0.144	
848.31	777	Cell. CDMA	EVDO Rev. A	24.5	23.08	1	-0.11	Left	Cheek	Open	1438M	1:1	0.149	1.387	0.207	
848.31	777	Cell. CDMA	EVDO Rev. A	24.5	23.08	1	0.05	Left	Tilt	Open	1438M	1:1	0.087	1.387	0.121	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-2
PCS CDMA Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Form Factor	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1880.00	600	PCS CDMA	RC3 / SO55	24.0	23.71	53	0.08	Right	Cheek	Open	0878M	1:1	0.078	1.069	0.083	
1880.00	600	PCS CDMA	RC3 / SO55	24.0	23.71	53	-0.19	Right	Tilt	Open	0878M	1:1	0.048	1.069	0.051	
1880.00	600	PCS CDMA	RC3 / SO55	24.0	23.71	53	0.14	Left	Cheek	Open	0878M	1:1	0.064	1.069	0.068	
1880.00	600	PCS CDMA	RC3 / SO55	24.0	23.71	53	0.11	Left	Tilt	Open	0878M	1:1	0.049	1.069	0.052	
1880.00	600	PCS CDMA	EVDO Rev. A	24.0	23.26	53	-0.03	Right	Cheek	Open	0878M	1:1	0.082	1.186	0.097	A2
1880.00	600	PCS CDMA	EVDO Rev. A	24.0	23.26	53	0.13	Right	Tilt	Open	0878M	1:1	0.044	1.186	0.052	
1880.00	600	PCS CDMA	EVDO Rev. A	24.0	23.26	53	-0.15	Left	Cheek	Open	0878M	1:1	0.078	1.186	0.093	
1880.00	600	PCS CDMA	EVDO Rev. A	24.0	23.26	53	-0.01	Left	Tilt	Open	0878M	1:1	0.071	1.186	0.084	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-3
GSM 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Form Factor	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
824.20	128	GSM 850	GSM	33.0	32.00	0.06	Right	Cheek	Open	1438M	1:8.3	0.135	1.259	0.170	A3
824.20	128	GSM 850	GSM	33.0	32.00	-0.02	Right	Tilt	Open	1438M	1:8.3	0.085	1.259	0.107	
824.20	128	GSM 850	GSM	33.0	32.00	0.17	Left	Cheek	Open	1438M	1:8.3	0.114	1.259	0.144	
824.20	128	GSM 850	GSM	33.0	32.00	-0.16	Left	Tilt	Open	1438M	1:8.3	0.062	1.259	0.078	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-4
GMS 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Form Factor	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1850.20	512	GSM 1900	GSM	30.0	29.25	-0.05	Right	Cheek	Open	0878M	1:8.3	0.033	1.189	0.039	
1850.20	512	GSM 1900	GSM	30.0	29.25	-0.16	Right	Tilt	Open	0878M	1:8.3	0.021	1.189	0.025	
1850.20	512	GSM 1900	GSM	30.0	29.25	-0.03	Left	Cheek	Open	0878M	1:8.3	0.041	1.189	0.049	A4
1850.20	512	GSM 1900	GSM	30.0	29.25	-0.16	Left	Tilt	Open	0878M	1:8.3	0.015	1.189	0.018	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-5
UMTS 850 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Form Factor	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	4183	UMTS 850	RMC	25.0	24.49	1	0.04	Right	Cheek	Open	1438M	1:1	0.170	1.125	0.191	A5
836.60	4183	UMTS 850	RMC	25.0	24.49	1	0.21	Right	Tilt	Open	1438M	1:1	0.101	1.125	0.114	
836.60	4183	UMTS 850	RMC	25.0	24.49	1	0.03	Left	Cheek	Open	1438M	1:1	0.154	1.125	0.173	
836.60	4183	UMTS 850	RMC	25.0	24.49	1	0.02	Left	Tilt	Open	1438M	1:1	0.097	1.125	0.109	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-6
UMTS 1750 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Form Factor	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1732.40	1412	UMTS 1750	RMC	24.0	23.70	13	0.18	Right	Cheek	Open	0737M	1:1	0.075	1.072	0.080	A6
1732.40	1412	UMTS 1750	RMC	24.0	23.70	13	-0.03	Right	Tilt	Open	0737M	1:1	0.051	1.072	0.055	
1732.40	1412	UMTS 1750	RMC	24.0	23.70	13	0.09	Left	Cheek	Open	0737M	1:1	0.042	1.072	0.045	
1732.40	1412	UMTS 1750	RMC	24.0	23.70	13	0.10	Left	Tilt	Open	0737M	1:1	0.036	1.072	0.039	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-7
UMTS 1900 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Form Factor	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	-0.09	Right	Cheek	Open	0878M	1:1	0.086	1.042	0.090	A7
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	0.05	Right	Tilt	Open	0878M	1:1	0.054	1.042	0.056	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	0.07	Left	Cheek	Open	0878M	1:1	0.076	1.042	0.079	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	0.08	Left	Tilt	Open	0878M	1:1	0.046	1.042	0.048	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-8
LTE Band 71 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																(W/kg)		(W/kg)		
680.50	133297	Mid	LTE Band 71	20	Open	25.5	24.11	104	-0.19	0	Right	Cheek	QPSK	1	50	0886M	1:1	0.154	1.377	0.212	
680.50	133297	Mid	LTE Band 71	20	Open	24.5	23.26	104	-0.07	1	Right	Cheek	QPSK	50	25	0886M	1:1	0.132	1.330	0.176	
680.50	133297	Mid	LTE Band 71	20	Open	25.5	24.11	104	0.09	0	Right	Tilt	QPSK	1	50	0886M	1:1	0.074	1.377	0.102	
680.50	133297	Mid	LTE Band 71	20	Open	24.5	23.26	104	0.14	1	Right	Tilt	QPSK	50	25	0886M	1:1	0.057	1.330	0.076	
680.50	133297	Mid	LTE Band 71	20	Open	25.5	24.11	104	0.19	0	Left	Cheek	QPSK	1	50	0886M	1:1	0.162	1.377	0.223	A8
680.50	133297	Mid	LTE Band 71	20	Open	24.5	23.26	104	0.01	1	Left	Cheek	QPSK	50	25	0886M	1:1	0.131	1.330	0.174	
680.50	133297	Mid	LTE Band 71	20	Open	25.5	24.11	104	0.08	0	Left	Tilt	QPSK	1	50	0886M	1:1	0.073	1.377	0.101	
680.50	133297	Mid	LTE Band 71	20	Open	24.5	23.26	104	0.03	1	Left	Tilt	QPSK	50	25	0886M	1:1	0.062	1.330	0.082	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram									

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Table 11-9
LTE Band 12 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	Open	25.5	24.25	0	0.13	0	Right	Cheek	QPSK	1	25	0886M	1:1	0.155	1.334	0.207	A9
707.50	23095	Mid	LTE Band 12	10	Open	24.5	23.40	0	-0.13	1	Right	Cheek	QPSK	25	12	0886M	1:1	0.125	1.288	0.161	
707.50	23095	Mid	LTE Band 12	10	Open	25.5	24.25	0	0.18	0	Right	Tilt	QPSK	1	25	0886M	1:1	0.089	1.334	0.119	
707.50	23095	Mid	LTE Band 12	10	Open	24.5	23.40	0	0.09	1	Right	Tilt	QPSK	25	12	0886M	1:1	0.073	1.288	0.094	
707.50	23095	Mid	LTE Band 12	10	Open	25.5	24.25	0	-0.02	0	Left	Cheek	QPSK	1	25	0886M	1:1	0.155	1.334	0.207	
707.50	23095	Mid	LTE Band 12	10	Open	24.5	23.40	0	0.02	1	Left	Cheek	QPSK	25	12	0886M	1:1	0.127	1.288	0.164	
707.50	23095	Mid	LTE Band 12	10	Open	25.5	24.25	0	-0.12	0	Left	Tilt	QPSK	1	25	0886M	1:1	0.081	1.334	0.108	
707.50	23095	Mid	LTE Band 12	10	Open	24.5	23.40	0	0.04	1	Left	Tilt	QPSK	25	12	0886M	1:1	0.072	1.288	0.093	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-10
LTE Band 13 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	Open	25.5	24.27	0	-0.18	0	Right	Cheek	QPSK	1	49	1441M	1:1	0.167	1.327	0.222	A10
782.00	23230	Mid	LTE Band 13	10	Open	24.5	23.33	0	0.01	1	Right	Cheek	QPSK	25	0	1441M	1:1	0.129	1.309	0.169	
782.00	23230	Mid	LTE Band 13	10	Open	25.5	24.27	0	-0.03	0	Right	Tilt	QPSK	1	49	1441M	1:1	0.076	1.327	0.101	
782.00	23230	Mid	LTE Band 13	10	Open	24.5	23.33	0	-0.04	1	Right	Tilt	QPSK	25	0	1441M	1:1	0.055	1.309	0.072	
782.00	23230	Mid	LTE Band 13	10	Open	25.5	24.27	0	-0.06	0	Left	Cheek	QPSK	1	49	1441M	1:1	0.125	1.327	0.166	
782.00	23230	Mid	LTE Band 13	10	Open	24.5	23.33	0	-0.04	1	Left	Cheek	QPSK	25	0	1441M	1:1	0.103	1.309	0.135	
782.00	23230	Mid	LTE Band 13	10	Open	25.5	24.27	0	-0.13	0	Left	Tilt	QPSK	1	49	1441M	1:1	0.072	1.327	0.096	
782.00	23230	Mid	LTE Band 13	10	Open	24.5	23.33	0	-0.10	1	Left	Tilt	QPSK	25	0	1441M	1:1	0.055	1.309	0.072	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-11
LTE Band 14 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	Open	25.5	24.20	0	-0.04	0	Right	Cheek	QPSK	1	0	1441M	1:1	0.166	1.349	0.224	A11
793.00	23330	Mid	LTE Band 14	10	Open	24.5	23.34	0	0.10	1	Right	Cheek	QPSK	25	12	1441M	1:1	0.151	1.306	0.197	
793.00	23330	Mid	LTE Band 14	10	Open	25.5	24.20	0	0.08	0	Right	Tilt	QPSK	1	0	1441M	1:1	0.076	1.349	0.103	
793.00	23330	Mid	LTE Band 14	10	Open	24.5	23.34	0	0.15	1	Right	Tilt	QPSK	25	12	1441M	1:1	0.064	1.306	0.084	
793.00	23330	Mid	LTE Band 14	10	Open	25.5	24.20	0	-0.01	0	Left	Cheek	QPSK	1	0	1441M	1:1	0.116	1.349	0.156	
793.00	23330	Mid	LTE Band 14	10	Open	24.5	23.34	0	-0.05	1	Left	Cheek	QPSK	25	12	1441M	1:1	0.087	1.306	0.114	
793.00	23330	Mid	LTE Band 14	10	Open	25.5	24.20	0	-0.02	0	Left	Tilt	QPSK	1	0	1441M	1:1	0.066	1.349	0.089	
793.00	23330	Mid	LTE Band 14	10	Open	24.5	23.34	0	-0.06	1	Left	Tilt	QPSK	25	12	1441M	1:1	0.050	1.306	0.065	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Head									
Spatial Peak												1.6 W/kg (mW/g)									
Uncontrolled Exposure/General Population												averaged over 1 gram									

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Table 11-12
LTE Band 26 (Cell) Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	25.3	24.00	4	-0.03	0	Right	Cheek	QPSK	1	74	0886M	1:1	0.204	1.349	0.275	A12
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.3	23.05	4	-0.04	1	Right	Cheek	QPSK	36	37	0886M	1:1	0.156	1.334	0.208	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	25.3	24.00	4	0.06	0	Right	Tilt	QPSK	1	74	0886M	1:1	0.090	1.349	0.121	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.3	23.05	4	0.06	1	Right	Tilt	QPSK	36	37	0886M	1:1	0.075	1.334	0.100	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	25.3	24.00	4	-0.13	0	Left	Cheek	QPSK	1	74	0886M	1:1	0.153	1.349	0.206	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.3	23.05	4	0.00	1	Left	Cheek	QPSK	36	37	0886M	1:1	0.130	1.334	0.173	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	25.3	24.00	4	-0.12	0	Left	Tilt	QPSK	1	74	0886M	1:1	0.085	1.349	0.115	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.3	23.05	4	-0.08	1	Left	Tilt	QPSK	36	37	0886M	1:1	0.071	1.334	0.095	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-13
LTE Band 5 (Cell) Head SAR

MEASUREMENT RESULTS																							
1 CC Uplink 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR [1g]	Scaling Factor	Reported SAR [1g]	Plot #	
		MHz	Ch.																(W/kg)		(W/kg)		
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	25.3	23.67	1	0.02	0	Right	Cheek	QPSK	1	49	0886M	1:1	0.176	1.455	0.256	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.3	22.62	1	0.06	1	Right	Cheek	QPSK	25	25	0886M	1:1	0.143	1.472	0.210	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	25.3	23.90	1	-0.10	0	Right	Cheek	QPSK	1	49	0886M	1:1	0.187	1.380	0.258	A13
	SCC	843.70	20597			1										0							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	25.3	23.67	4	-0.17	0	Right	Tilt	QPSK	1	49	0886M	1:1	0.075	1.455	0.109	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.3	22.62	4	0.10	1	Right	Tilt	QPSK	25	25	0886M	1:1	0.063	1.472	0.093	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	25.3	23.67	4	-0.05	0	Left	Cheek	QPSK	1	49	0886M	1:1	0.111	1.455	0.162	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.3	22.62	4	0.16	1	Left	Cheek	QPSK	25	25	0886M	1:1	0.098	1.472	0.144	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	25.3	23.67	4	0.02	0	Left	Tilt	QPSK	1	49	0886M	1:1	0.067	1.455	0.097	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.3	22.62	4	0.08	1	Left	Tilt	QPSK	25	25	0886M	1:1	0.052	1.472	0.077	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-14
LTE Band 66 (AWS) Head SAR

MEASUREMENT RESULTS																							
1 CC Uplink 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR	Plot #	
		MHz	Ch.																(W/kg)		(1g) (W/kg)		
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	13	-0.17	0	Right	Cheek	QPSK	1	99	1453M	1:1	0.063	1.285	0.081	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	13	-0.11	1	Right	Cheek	QPSK	50	25	1453M	1:1	0.057	1.247	0.071	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	13	0.14	0	Right	Tilt	QPSK	1	99	1453M	1:1	0.041	1.285	0.053	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	13	-0.03	1	Right	Tilt	QPSK	50	25	1453M	1:1	0.032	1.247	0.040	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.82	13	-0.09	0	Left	Cheek	QPSK	1	0	1453M	1:1	0.062	1.312	0.081	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	13	0.19	0	Left	Cheek	QPSK	1	99	1453M	1:1	0.068	1.285	0.087	A14
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	13	-0.17	1	Left	Cheek	QPSK	50	25	1453M	1:1	0.047	1.247	0.059	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	Open	25.0	23.61	52	-0.11	0	Left	Cheek	QPSK	1	0	1453M	1:1	0.047	1.377	0.065	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	24.31	13	-0.04	0	Left	Cheek	QPSK	1	0	1453M	1:1	0.062	1.172	0.073	
	SCC	1750.20	132374													1	99						
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	Open	25.0	24.19	52	0.03	0	Left	Cheek	QPSK	1	0	1453M	1:1	0.049	1.205	0.059	
	SCC	1765.10	132523													1	49						
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	13	-0.05	0	Left	Tilt	QPSK	1	99	1453M	1:1	0.028	1.285	0.036	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	13	0.07	1	Left	Tilt	QPSK	50	25	1453M	1:1	0.027	1.247	0.034	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT													Head										
Spatial Peak													1.6 W/kg (mW/g)										
Uncontrolled Exposure/General Population													averaged over 1 gram										

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Table 11-15
LTE Band 25 (PCS) Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	13	-0.14	0	Right	Cheek	QPSK	1	0	1453M	1:1	0.084	1.156	0.097	A15
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	13	0.07	1	Right	Cheek	QPSK	50	25	1453M	1:1	0.059	1.148	0.068	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	13	0.14	0	Right	Tilt	QPSK	1	0	1453M	1:1	0.033	1.156	0.038	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	13	0.08	1	Right	Tilt	QPSK	50	25	1453M	1:1	0.022	1.148	0.025	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	13	0.01	0	Left	Cheek	QPSK	1	0	1453M	1:1	0.067	1.156	0.077	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	13	0.04	1	Left	Cheek	QPSK	50	25	1453M	1:1	0.046	1.148	0.053	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	13	-0.03	0	Left	Tilt	QPSK	1	0	1453M	1:1	0.045	1.156	0.052	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	13	0.10	1	Left	Tilt	QPSK	50	25	1453M	1:1	0.029	1.148	0.033	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-16
LTE Band 30 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.15	0	Right	Cheek	QPSK	1	0	0546M	1:1	0.036	1.148	0.041	
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	0.15	1	Right	Cheek	QPSK	25	0	0546M	1:1	0.030	1.135	0.034	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.17	0	Right	Tilt	QPSK	1	0	0546M	1:1	0.032	1.148	0.037	
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	0.16	1	Right	Tilt	QPSK	25	0	0546M	1:1	0.023	1.135	0.026	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.15	0	Left	Cheek	QPSK	1	0	0546M	1:1	0.062	1.148	0.071	A16
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	0.13	1	Left	Cheek	QPSK	25	0	0546M	1:1	0.045	1.135	0.051	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.13	0	Left	Tilt	QPSK	1	0	0546M	1:1	0.020	1.148	0.023	
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	0.12	1	Left	Tilt	QPSK	25	0	0546M	1:1	0.013	1.135	0.015	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT											Head									
Spatial Peak											1.6 W/kg (mW/g)									
Uncontrolled Exposure/General Population											averaged over 1 gram									

Table 11-17
LTE Band 7 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	0.19	0	Right	Cheek	QPSK	1	0	0546M	1:1	0.087	1.253	0.109	A17
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	0.13	1	Right	Cheek	QPSK	50	25	0546M	1:1	0.067	1.236	0.083	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	-0.16	0	Right	Tilt	QPSK	1	0	0546M	1:1	0.059	1.253	0.074	
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	0.16	1	Right	Tilt	QPSK	50	25	0546M	1:1	0.051	1.236	0.063	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	0.13	0	Left	Cheek	QPSK	1	0	0546M	1:1	0.054	1.253	0.068	
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	0.17	1	Left	Cheek	QPSK	50	25	0546M	1:1	0.039	1.236	0.048	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	-0.15	0	Left	Tilt	QPSK	1	0	0546M	1:1	0.011	1.253	0.014	
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	0.16	1	Left	Tilt	QPSK	50	25	0546M	1:1	0.010	1.236	0.012	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram									

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Table 11-18
LTE Band 48 Head SAR

MEASUREMENT RESULTS																						
1 CC Uplink / 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
		MHz	Ch.															(W/kg)		(W/kg)		
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	Open	18.0	17.35	0.03	0	Right	Cheek	QPSK	1	99	0903M	1:1.58	0.598	1.161	0.694	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	Open	18.0	17.59	0.00	0	Right	Cheek	QPSK	1	50	0903M	1:1.58	0.662	1.099	0.728	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.75	-0.05	0	Right	Cheek	QPSK	1	50	0903M	1:1.58	0.719	1.059	0.761	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	Open	18.0	17.50	-0.04	0	Right	Cheek	QPSK	1	0	0903M	1:1.58	0.677	1.122	0.760	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	Open	18.0	17.41	0.06	0	Right	Cheek	QPSK	50	50	0903M	1:1.58	0.637	1.146	0.730	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	Open	18.0	17.64	0.06	0	Right	Cheek	QPSK	50	50	0903M	1:1.58	0.672	1.086	0.730	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.87	-0.05	0	Right	Cheek	QPSK	50	50	0903M	1:1.58	0.725	1.030	0.747	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	Open	18.0	17.48	-0.02	0	Right	Cheek	QPSK	50	0	0903M	1:1.58	0.731	1.127	0.824	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.74	-0.04	0	Right	Cheek	QPSK	100	0	0903M	1:1.58	0.701	1.062	0.744	
2 CC Uplink	PCC	3690.00	56640	High	LTE Band 48	20	Open	18.0	17.65	0.07	0	Right	Cheek	QPSK	50	0	0903M	1:1.58	0.775	1.084	0.840	A18
	SCC	3670.20	56442												50	50						
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	Open	18.0	17.35	-0.03	0	Right	Tilt	QPSK	1	99	0903M	1:1.58	0.505	1.161	0.586	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	Open	18.0	17.59	-0.01	0	Right	Tilt	QPSK	1	50	0903M	1:1.58	0.592	1.099	0.651	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.75	-0.02	0	Right	Tilt	QPSK	1	50	0903M	1:1.58	0.623	1.059	0.660	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	Open	18.0	17.50	0.05	0	Right	Tilt	QPSK	1	0	0903M	1:1.58	0.575	1.122	0.645	
1 CC Uplink	N/A	3560.00	55340	Low	LTE Band 48	20	Open	18.0	17.41	-0.05	0	Right	Tilt	QPSK	50	50	0903M	1:1.58	0.535	1.146	0.613	
1 CC Uplink	N/A	3603.30	55773	Low-Mid	LTE Band 48	20	Open	18.0	17.64	0.03	0	Right	Tilt	QPSK	50	50	0903M	1:1.58	0.584	1.086	0.634	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.87	0.01	0	Right	Tilt	QPSK	50	50	0903M	1:1.58	0.619	1.030	0.638	
1 CC Uplink	N/A	3690.00	56640	High	LTE Band 48	20	Open	18.0	17.48	0.03	0	Right	Tilt	QPSK	50	0	0903M	1:1.58	0.614	1.127	0.692	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.74	0.01	0	Right	Tilt	QPSK	100	0	0903M	1:1.58	0.615	1.062	0.653	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.75	-0.13	0	Left	Cheek	QPSK	1	50	0903M	1:1.58	0.158	1.059	0.167	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.87	0.01	0	Left	Cheek	QPSK	50	50	0903M	1:1.58	0.169	1.030	0.174	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.75	-0.11	0	Left	Tilt	QPSK	1	50	0903M	1:1.58	0.139	1.059	0.147	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.87	-0.17	0	Left	Tilt	QPSK	50	50	0903M	1:1.58	0.148	1.030	0.152	
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Table 11-19
LTE Band 41 Head SAR

MEASUREMENT RESULTS																						
1 CC Uplink 2 CC Uplink, Power Class	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
		MHz	Ch.															(W/kg)		(W/kg)		
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	0.12	0	Right	Cheek	QPSK	1	50	0903M	1:1.58	0.064	1.247	0.080	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	0.13	1	Right	Cheek	QPSK	50	50	0903M	1:1.58	0.050	1.230	0.062	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	0.16	0	Right	Tilt	QPSK	1	50	0903M	1:1.58	0.047	1.247	0.059	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	0.14	1	Right	Tilt	QPSK	50	50	0903M	1:1.58	0.046	1.230	0.057	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.12	-0.17	0	Left	Cheek	QPSK	1	0	0903M	1:1.58	0.112	1.374	0.154	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	-0.07	0	Left	Cheek	QPSK	1	50	0903M	1:1.58	0.117	1.247	0.146	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	-0.09	1	Left	Cheek	QPSK	50	50	0903M	1:1.58	0.085	1.230	0.105	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	Open	28.0	26.51	0.06	0	Left	Cheek	QPSK	1	0	0903M	1:2.31	0.135	1.409	0.190	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	Open	28.0	26.99	0.15	0	Left	Cheek	QPSK	1	50	0903M	1:2.31	0.138	1.262	0.174	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.85	0.14	0	Left	Cheek	QPSK	1	0	0903M	1:1.58	0.134	1.161	0.156	
	SCC	2660.20	41292												1	99						
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	LTE Band 41	20	Open	28.0	26.67	0.17	0	Left	Cheek	QPSK	1	0	0903M	1:2.31	0.143	1.358	0.194	A19
	SCC	2660.20	41292												1	99						
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	0.18	0	Left	Tilt	QPSK	1	50	0903M	1:1.58	0.043	1.247	0.054	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	0.18	1	Left	Tilt	QPSK	50	50	0903M	1:1.58	0.036	1.230	0.044	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram									

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Table 11-20
NR Band n71 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPRR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.19	0.06	0	Right	Cheek	104	DFT-S-OFDM	QPSK	1	1	1441M	1:1	0.133	1.352	0.180	
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.22	0.11	0	Right	Cheek	104	DFT-S-OFDM	QPSK	50	28	1441M	1:1	0.121	1.343	0.163	
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.19	-0.14	0	Right	Tilt	104	DFT-S-OFDM	QPSK	1	1	1441M	1:1	0.077	1.352	0.104	
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.22	0.10	0	Right	Tilt	104	DFT-S-OFDM	QPSK	50	28	1441M	1:1	0.067	1.343	0.090	
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.19	-0.10	0	Left	Cheek	104	DFT-S-OFDM	QPSK	1	1	1441M	1:1	0.148	1.352	0.200	
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.22	0.04	0	Left	Cheek	104	DFT-S-OFDM	QPSK	50	28	1441M	1:1	0.158	1.343	0.212	A20
680.50	136100	Mid	NR Band n71	20	Open	24.0	23.21	0.15	1.5	Left	Cheek	104	CP-OFDM	QPSK	1	1	1441M	1:1	0.107	1.199	0.128	
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.19	-0.13	0	Left	Tilt	104	DFT-S-OFDM	QPSK	1	1	1441M	1:1	0.070	1.352	0.095	
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.22	0.06	0	Left	Tilt	104	DFT-S-OFDM	QPSK	50	28	1441M	1:1	0.077	1.343	0.103	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-21
NR Band n12 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
707.50	141500	Mid	NR Band n12	15	Open	25.5	23.95	0.14	0	Right	Cheek	0	DFT-S-OFDM	QPSK	1	1	0886M	1:1	0.147	1.429	0.210	
707.50	141500	Mid	NR Band n12	15	Open	25.5	24.03	0.16	0	Right	Cheek	0	DFT-S-OFDM	QPSK	36	22	0886M	1:1	0.144	1.403	0.202	
707.50	141500	Mid	NR Band n12	15	Open	25.5	23.95	0.12	0	Right	Tilt	0	DFT-S-OFDM	QPSK	1	1	0886M	1:1	0.087	1.429	0.124	
707.50	141500	Mid	NR Band n12	15	Open	25.5	24.03	0.03	0	Right	Tilt	0	DFT-S-OFDM	QPSK	36	22	0886M	1:1	0.074	1.403	0.104	
707.50	141500	Mid	NR Band n12	15	Open	25.5	23.95	0.02	0	Left	Cheek	0	DFT-S-OFDM	QPSK	1	1	0886M	1:1	0.150	1.429	0.214	A21
707.50	141500	Mid	NR Band n12	15	Open	25.5	24.03	0.09	0	Left	Cheek	0	DFT-S-OFDM	QPSK	36	22	0886M	1:1	0.146	1.403	0.205	
707.50	141500	Mid	NR Band n12	15	Open	24.0	23.12	0.07	1.5	Left	Cheek	0	CP-OFDM	QPSK	1	1	0886M	1:1	0.101	1.225	0.124	
707.50	141500	Mid	NR Band n12	15	Open	25.5	23.95	0.16	0	Left	Tilt	0	DFT-S-OFDM	QPSK	1	1	0886M	1:1	0.090	1.429	0.129	
707.50	141500	Mid	NR Band n12	15	Open	25.5	24.03	0.00	0	Left	Tilt	0	DFT-S-OFDM	QPSK	36	22	0886M	1:1	0.090	1.403	0.126	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-22
NR Band n5 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR[dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	25.3	23.80	0.03	0	Right	Cheek	1	DFT-S-OFDM	QPSK	1	53	0886M	1:1	0.174	1.413	0.246	A22
836.50	167300	Mkd	NR Band n5 (Cell)	20	Open	25.3	23.84	-0.06	0	Right	Cheek	1	DFT-S-OFDM	QPSK	50	28	0886M	1:1	0.171	1.400	0.239	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	23.8	22.62	-0.09	1.5	Right	Cheek	1	CP-OFDM	QPSK	1	1	0886M	1:1	0.146	1.312	0.192	
836.50	167300	Mkd	NR Band n5 (Cell)	20	Open	25.3	23.80	-0.07	0	Right	Tilt	4	DFT-S-OFDM	QPSK	1	53	0886M	1:1	0.069	1.413	0.097	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	25.3	23.84	0.09	0	Right	Tilt	4	DFT-S-OFDM	QPSK	50	28	0886M	1:1	0.070	1.400	0.098	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	25.3	23.80	0.05	0	Left	Cheek	4	DFT-S-OFDM	QPSK	1	53	0886M	1:1	0.134	1.413	0.189	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	25.3	23.84	-0.08	0	Left	Cheek	4	DFT-S-OFDM	QPSK	50	28	0886M	1:1	0.120	1.400	0.168	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	25.3	23.80	0.13	0	Left	Tilt	4	DFT-S-OFDM	QPSK	1	53	0886M	1:1	0.075	1.413	0.106	
836.50	167300	Mkd	NR Band n5 (Cell)	20	Open	25.3	23.84	0.02	0	Left	Tilt	4	DFT-S-OFDM	QPSK	50	28	0886M	1:1	0.073	1.400	0.102	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Head												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

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Table 11-23
NR Band n66 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR [tq]	Scaling Factor	Reported SAR [tq]	Plot #	
MHz	Ch.																		(W/kg)		(W/kg)		
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	0.13	0	Right	Cheek	13	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.050	1.148	0.057	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	-0.01	0	Right	Cheek	13	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.058	1.161	0.067	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	23.0	22.22	A	0.00	1.5	Right	Cheek	13	CP-OFDM	QPSK	1	1	1453M	1:1	0.045	1.197	0.054	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	-0.10	0	Right	Tilt	13	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.023	1.148	0.026	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	-0.09	0	Right	Tilt	13	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.035	1.161	0.041	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	-0.17	0	Left	Cheek	13	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.029	1.148	0.033	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	-0.07	0	Left	Cheek	13	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.030	1.161	0.035	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	0.07	0	Left	Tilt	13	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.016	1.148	0.018	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	0.15	0	Left	Tilt	13	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.030	1.161	0.035	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	16.99	I	0.10	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	1	1	0767M	1:1	0.113	1.262	0.143	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	17.06	I	0.03	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	108	0	0767M	1:1	0.115	1.242	0.143	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	16.99	I	-0.13	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	1	1	0767M	1:1	0.023	1.262	0.029	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	17.06	I	0.20	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	108	0	0767M	1:1	0.022	1.242	0.027	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	16.99	I	0.11	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	1	1	0767M	1:1	0.255	1.262	0.322	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	17.06	I	0.08	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	108	0	0767M	1:1	0.269	1.242	0.334	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	17.02	I	0.08	0	Left	Cheek	N/A	CP-OFDM	QPSK	1	1	0767M	1:1	0.279	1.253	0.350	A23
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	16.99	I	0.12	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	1	1	0767M	1:1	0.059	1.262	0.074	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.0	17.06	I	0.15	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	0	0767M	1:1	0.061	1.242	0.076	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Head													
Spatial Peak										1.6 W/kg (mW/g)													
Uncontrolled Exposure/General Population										averaged over 1 gram													

Table 11-24
NR Band n25 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Tune State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR [1g]	Scaling Factor	Reported SAR [1g]	Plot #	
MHz	Ch.																		(W/kg)				
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	-0.12	0	Right	Cheek	13	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.053	1.194	0.063	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.02	0	Right	Cheek	13	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.060	1.259	0.076	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	0.14	0	Right	Tilt	13	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.029	1.194	0.035	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.08	0	Right	Tilt	13	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.033	1.259	0.042	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	0.03	0	Left	Cheek	13	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.049	1.194	0.059	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.08	0	Left	Cheek	13	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.064	1.259	0.081	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	23.0	22.16	A	0.11	1.5	Left	Cheek	13	CP-OFDM	QPSK	1	1	1453M	1:1	0.060	1.213	0.073	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	0.07	0	Left	Tilt	13	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.030	1.194	0.036	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.06	0	Left	Tilt	13	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.041	1.259	0.052	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	19.00	I	-0.01	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.196	1.000	0.196	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.97	I	0.07	0	Right	Cheek	N/A	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.232	1.007	0.234	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	19.00	I	0.04	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.104	1.000	0.104	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.97	I	0.01	0	Right	Tilt	N/A	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.136	1.007	0.137	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	19.00	I	0.03	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.756	1.000	0.756	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.97	I	0.09	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.835	1.007	0.841	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.96	I	0.06	0	Left	Cheek	N/A	DFT-S-OFDM	QPSK	216	0	1453M	1:1	0.854	1.009	0.862	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.82	I	0.19	0	Left	Cheek	N/A	CP-OFDM	QPSK	1	1	1453M	1:1	0.944	1.042	0.984	A24
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	19.00	I	0.11	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	1	214	1453M	1:1	0.152	1.000	0.152	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.97	I	-0.05	0	Left	Tilt	N/A	DFT-S-OFDM	QPSK	108	54	1453M	1:1	0.163	1.007	0.164	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19	18.82	I	0.07	0	Left	Cheek	N/A	CP-OFDM	QPSK	1	1	1453M	1:1	0.858	1.042	0.894	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Head 1.6 W/kg (mW/g) averaged over 1 gram													
Spatial Peak																							
Uncontrolled Exposure/General Population																							

Note: Blue Entry represents variability measurement.

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Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 154 of 290

Table 11-25
NR Band n30 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																(W/kg)		(W/kg)		
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	0.12	0	Right	Cheek	DFT-S-OFDM	QPSK	1	26	1453M	1:1	0.006	1.194	0.007	A25
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	-0.12	0	Right	Cheek	DFT-S-OFDM	QPSK	25	14	1453M	1:1	0.004	1.271	0.005	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	0.07	0	Right	Tilt	DFT-S-OFDM	QPSK	1	26	1453M	1:1	0.014	1.194	0.017	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	0.13	0	Right	Tilt	DFT-S-OFDM	QPSK	25	14	1453M	1:1	0.013	1.271	0.017	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	-0.12	0	Left	Cheek	DFT-S-OFDM	QPSK	1	26	1453M	1:1	0.013	1.194	0.016	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	25	14	1453M	1:1	0.016	1.271	0.020	
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.15	0.18	1.5	Left	Cheek	CP-OFDM	QPSK	1	1	1453M	1:1	0.009	1.216	0.011	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	-0.12	0	Left	Tilt	DFT-S-OFDM	QPSK	1	26	1453M	1:1	0.001	1.194	0.001	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	0.14	0	Left	Tilt	DFT-S-OFDM	QPSK	25	14	1453M	1:1	0.004	1.271	0.005	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-26
NR Band n41 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR [1g]	Scaling Factor	Reported SAR [1g]	Plot #	
MHz	Ch.																(W/kg)		(W/kg)		
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.52	0.14	0	Right	Cheek	DFT-S-OFDM	QPSK	1	1	0903M	1:1	0.238	1.117	0.266	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.49	-0.06	0	Right	Cheek	DFT-S-OFDM	QPSK	135	0	0903M	1:1	0.232	1.125	0.261	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.52	-0.06	0	Right	Tilt	DFT-S-OFDM	QPSK	1	1	0903M	1:1	0.061	1.117	0.068	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.49	0.09	0	Right	Tilt	DFT-S-OFDM	QPSK	135	0	0903M	1:1	0.057	1.125	0.064	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.52	0.17	0	Left	Cheek	DFT-S-OFDM	QPSK	1	1	0903M	1:1	0.865	1.117	0.966	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.49	0.05	0	Left	Cheek	DFT-S-OFDM	QPSK	135	0	0903M	1:1	0.867	1.125	0.975	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.48	0.02	0	Left	Cheek	DFT-S-OFDM	QPSK	270	0	0903M	1:1	0.953	1.127	1.074	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.51	0.11	0	Left	Cheek	CP-OFDM	QPSK	1	1	0903M	1:1	1.000	1.119	1.119	A26
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.52	0.04	0	Left	Tilt	DFT-S-OFDM	QPSK	1	1	0903M	1:1	0.207	1.117	0.231	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.49	0.09	0	Left	Tilt	DFT-S-OFDM	QPSK	135	0	0903M	1:1	0.197	1.125	0.222	
2592.99	518598	Mid	NR Band n41	100	Open	16.0	15.51	0.17	0	Left	Cheek	CP-OFDM	QPSK	1	1	0903M	1:1	1.000	1.119	1.119	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT											Head										
Spatial Peak											1.6 W/kg (mW/g)										
Uncontrolled Exposure/General Population											averaged over 1 gram										

Note: Blue Entry represents variability measurement.

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Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset
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Table 11-27
NR Band n77 DoD Head SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.86	F	-0.19	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.523	1.300	0.680	A27
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.83	F	-0.13	0	Right	Cheek	DFT-S-OFDM	QPSK	135	138	1456M	1:1	0.484	1.309	0.634	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.73	F	-0.04	0	Right	Cheek	CP-OFDM	QPSK	1	1	1456M	1:1	0.548	1.340	0.734	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.86	F	-0.14	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.480	1.300	0.624	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.83	F	-0.15	0	Right	Tilt	DFT-S-OFDM	QPSK	135	138	1456M	1:1	0.453	1.309	0.593	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.86	F	-0.17	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.176	1.300	0.229	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.83	F	-0.13	0	Left	Cheek	DFT-S-OFDM	QPSK	135	138	1456M	1:1	0.167	1.309	0.219	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.86	F	-0.13	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.176	1.300	0.229	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	16.0	14.83	F	-0.20	0	Left	Tilt	DFT-S-OFDM	QPSK	135	138	1456M	1:1	0.174	1.309	0.228	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.94	I	-0.14	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.235	1.276	0.300	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.98	I	-0.14	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.231	1.265	0.292	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.94	I	-0.18	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.037	1.276	0.047	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.98	I	-0.20	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.036	1.265	0.046	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.94	I	-0.12	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.413	1.276	0.527	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.98	I	-0.01	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.402	1.265	0.509	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.51	I	-0.06	0	Left	Cheek	CP-OFDM	QPSK	1	1	0979M	1:1	0.483	1.409	0.681	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.94	I	0.00	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.089	1.276	0.114	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.98	I	-0.11	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.088	1.265	0.111	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.46	E	-0.14	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.187	1.426	0.267	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.44	E	0.16	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.189	1.432	0.271	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.46	E	-0.19	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.022	1.426	0.031	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.44	E	-0.11	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.023	1.432	0.033	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.46	E	-0.07	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.274	1.426	0.391	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.44	E	-0.12	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.269	1.432	0.385	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.31	E	-0.16	0	Left	Cheek	CP-OFDM	QPSK	1	1	0979M	1:1	0.276	1.476	0.407	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.46	E	0.00	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.018	1.426	0.026	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	14.0	12.44	E	-0.17	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.021	1.432	0.030	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	9.23	C	-0.14	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.019	1.194	0.023	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	9.22	C	-0.13	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.014	1.197	0.017	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	9.23	C	-0.15	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.017	1.194	0.020	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	9.22	C	-0.12	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.015	1.197	0.018	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	9.23	C	-0.04	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.021	1.194	0.025	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	9.22	C	-0.13	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.022	1.197	0.026	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	8.94	C	-0.05	0	Left	Cheek	CP-OFDM	QPSK	1	1	0979M	1:1	0.030	1.276	0.038	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	9.23	C	0.21	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	0979M	1:1	0.002	1.194	0.002	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	10.0	9.22	C	-0.06	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	0979M	1:1	0.004	1.197	0.005	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak												Head 1.6 W/kg (mW/g) averaged over 1 gram										
Uncontrolled Exposure/General Population																						

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Table 11-28
NR Band n77 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)		Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																	(W/kg)	(W/kg)			
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.95	F	-0.04	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.819	1.012	0.829	A28
3930.00	662000	High	NR Band n77	100	Open	16.0	15.48	F	-0.20	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.610	1.127	0.687	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.98	F	-0.07	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.814	1.005	0.818	
3930.00	662000	High	NR Band n77	100	Open	16.0	15.36	F	-0.14	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.601	1.159	0.697	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.84	F	-0.13	0	Right	Cheek	DFT-S-OFDM	QPSK	270	0	1454M	1:1	0.817	1.038	0.848	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.66	F	-0.06	0	Right	Cheek	CP-OFDM	QPSK	1	1	1454M	1:1	0.794	1.081	0.858	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.95	F	-0.04	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.689	1.012	0.697	
3930.00	662000	High	NR Band n77	100	Open	16.0	15.48	F	-0.11	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.454	1.127	0.512	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.98	F	-0.02	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.673	1.005	0.676	
3930.00	662000	High	NR Band n77	100	Open	16.0	15.36	F	-0.20	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.440	1.159	0.510	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.84	F	-0.11	0	Right	Tilt	DFT-S-OFDM	QPSK	270	0	1454M	1:1	0.668	1.038	0.693	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.95	F	-0.19	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.190	1.012	0.192	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.98	F	-0.19	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.187	1.005	0.188	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.95	F	-0.17	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.196	1.012	0.198	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.98	F	0.09	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.187	1.005	0.188	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.12	I	-0.15	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.215	1.225	0.263	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.11	I	-0.17	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	1456M	1:1	0.211	1.227	0.259	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.12	I	-0.07	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.007	1.225	0.009	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.11	I	-0.15	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	1456M	1:1	0.006	1.227	0.007	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.12	I	-0.07	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.300	1.225	0.368	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.11	I	-0.06	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	1456M	1:1	0.297	1.227	0.364	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.15	I	-0.06	0	Left	Cheek	CP-OFDM	QPSK	1	1	1456M	1:1	0.309	1.216	0.376	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.12	I	-0.17	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.018	1.225	0.022	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.11	I	-0.18	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	1456M	1:1	0.019	1.227	0.023	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.43	E	-0.13	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.184	1.140	0.210	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.46	E	-0.15	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.188	1.132	0.213	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.15	E	0.00	0	Right	Cheek	CP-OFDM	QPSK	1	1	1454M	1:1	0.148	1.216	0.180	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.43	E	0.00	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.060	1.140	0.068	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.46	E	0.10	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.059	1.132	0.067	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.43	E	-0.18	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.163	1.140	0.186	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.46	E	-0.16	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.160	1.132	0.181	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.43	E	-0.15	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.031	1.140	0.035	
3930.00	662000	High	NR Band n77	100	Open	14.0	13.46	E	0.00	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	1454M	1:1	0.028	1.132	0.032	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.75	C	-0.08	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.017	1.059	0.018	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.65	C	-0.16	0	Right	Cheek	DFT-S-OFDM	QPSK	135	69	1456M	1:1	0.011	1.084	0.012	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.52	C	0.14	0	Right	Cheek	CP-OFDM	QPSK	1	1	1456M	1:1	0.008	1.117	0.009	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.75	C	-0.17	0	Right	Tilt	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.014	1.059	0.015	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.65	C	-0.11	0	Right	Tilt	DFT-S-OFDM	QPSK	135	69	1456M	1:1	0.013	1.084	0.014	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.75	C	-0.19	0	Left	Cheek	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.005	1.059	0.005	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.65	C	0.00	0	Left	Cheek	DFT-S-OFDM	QPSK	135	69	1456M	1:1	0.004	1.084	0.004	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.75	C	-0.18	0	Left	Tilt	DFT-S-OFDM	QPSK	1	137	1456M	1:1	0.005	1.059	0.005	
3930.00	662000	High	NR Band n77	100	Open	10.0	9.65	C	-0.15	0	Left	Tilt	DFT-S-OFDM	QPSK	135	69	1456M	1:1	0.004	1.084	0.004	
3750.00	650000	Low	NR Band n77	100	Open	16.0	15.95	F	-0.05	0	Right	Cheek	DFT-S-OFDM	QPSK	1	137	1454M	1:1	0.818	1.012	0.828	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT											Head											
Spatial Peak											1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population											averaged over 1 gram											

Note: Blue Entry represents variability measurement.

Table 11-29
DTS Head SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	13.0	12.97	0.11	Right	Cheek	2	Open	0906M	1	99.9	0.533	0.417	1.007	1.001	0.420	A29
2437	6	802.11b	DSSS	22	13.0	12.97	-0.14	Right	Tilt	2	Open	0906M	1	99.9	0.252	0.177	1.007	1.001	0.178	
2437	6	802.11b	DSSS	22	13.0	12.97	0.11	Left	Cheek	2	Open	0906M	1	99.9	0.223	0.156	1.007	1.001	0.157	
2437	6	802.11b	DSSS	22	13.0	12.97	-0.01	Left	Tilt	2	Open	0906M	1	99.9	0.198	-	1.007	1.001	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT								Head												
Spatial Peak								1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population								averaged over 1 gram												

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Table 11-30
DTS Head SAR for Conditions with 5G NR (FR2) and/or 5 GHz WLAN

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	11.0	10.86	0.17	Right	Cheek	2	Open	0906M	1	99.9	0.364	0.309	1.033	1.001	0.320	
2437	6	802.11b	DSSS	22	11.0	10.86	0.14	Right	Tilt	2	Open	0906M	1	99.9	0.249	-	1.033	1.001	-	
2437	6	802.11b	DSSS	22	11.0	10.86	-0.07	Left	Cheek	2	Open	0906M	1	99.9	0.155	-	1.033	1.001	-	
2437	6	802.11b	DSSS	22	11.0	10.86	0.16	Left	Tilt	2	Open	0906M	1	99.9	0.171	-	1.033	1.001	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram												

2.4 GHZ WLAN SISO was additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN and/or 5G NR active. 5 GHz WIFI and/or 5G NR were not transmitting during the above evaluations

Table 11-31
DTS MIMO Head SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [Ant 1] [dBm]	Conducted Power [Ant 1] [dBm]	Maximum Allowed Power [Ant 2] [dBm]	Conducted Power [Ant 2] [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Form Factor	Device Serial Number	Data Rate [Mbps]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																W/kg	(W/kg)	(W/kg)			
2412	1	802.11n	OFDM	20	13.0	12.90	13.0	12.97	-0.04	Right	Cheek	MIMO	Open	0906M	13	99.7	0.330	0.274	1.023	1.003	0.281	
2412	1	802.11n	OFDM	20	13.0	12.90	13.0	12.97	-0.01	Right	Tilt	MIMO	Open	0906M	13	99.7	0.214	-	1.023	1.003	-	
2412	1	802.11n	OFDM	20	13.0	12.90	13.0	12.97	-0.02	Left	Cheek	MIMO	Open	0906M	13	99.7	0.215	0.173	1.023	1.003	0.178	
2412	1	802.11n	OFDM	20	13.0	12.90	13.0	12.97	0.03	Left	Tilt	MIMO	Open	0906M	13	99.7	0.203	-	1.023	1.003	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT											Head											
Spatial Peak											1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population											averaged over 1 gram											

Note: To achieve the 16.0 dBm maximum allowed MIMO power shown in the documentation each antenna transmits at a maximum allowed power of 13.0 dBm.

Table 11-32
NII SISO Head SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														W/kg	(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	11.0	10.79	0.20	Right	Cheek	1	Open	1439M	29.3	99.7	0.075	0.030	1.050	1.003	0.032	
5290	58	802.11ac	OFDM	80	11.0	10.79	-0.02	Right	Tilt	1	Open	1439M	29.3	99.7	0.070	-	1.050	1.003	-	
5290	58	802.11ac	OFDM	80	11.0	10.79	-0.17	Left	Cheek	1	Open	1439M	29.3	99.7	0.111	0.049	1.050	1.003	0.052	
5290	58	802.11ac	OFDM	80	11.0	10.79	-0.06	Left	Tilt	1	Open	1439M	29.3	99.7	0.106	-	1.050	1.003	-	
5690	138	802.11ac	OFDM	80	11.0	10.87	0.17	Right	Cheek	1	Open	1439M	29.3	99.7	0.063	0.050	1.030	1.003	0.052	
5690	138	802.11ac	OFDM	80	11.0	10.87	-0.19	Right	Tilt	1	Open	1439M	29.3	99.7	0.067	-	1.030	1.003	-	
5690	138	802.11ac	OFDM	80	11.0	10.87	-0.17	Left	Cheek	1	Open	1439M	29.3	99.7	0.118	-	1.030	1.003	-	
5690	138	802.11ac	OFDM	80	11.0	10.87	-0.15	Left	Tilt	1	Open	1439M	29.3	99.7	0.141	0.073	1.030	1.003	0.075	
5775	155	802.11ac	OFDM	80	11.0	10.85	0.06	Right	Cheek	1	Open	1439M	29.3	99.7	0.099	0.048	1.035	1.003	0.050	
5775	155	802.11ac	OFDM	80	11.0	10.85	0.17	Right	Tilt	1	Open	1439M	29.3	99.7	0.098	-	1.035	1.003	-	
5775	155	802.11ac	OFDM	80	11.0	10.85	-0.11	Left	Cheek	1	Open	1439M	29.3	99.7	0.124	-	1.035	1.003	-	
5775	155	802.11ac	OFDM	80	11.0	10.85	0.01	Left	Tilt	1	Open	1439M	29.3	99.7	0.129	0.095	1.035	1.003	0.099	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram											

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Table 11-33
NII MIMO Head SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																W/kg	(W/kg)				
5290	58	802.11ac	OFDM	80	11.0	10.79	11.0	10.70	0.02	Right	Cheek	MIMO	Open	0906M	29.3	99.7	0.224	0.194	1.072	1.003	0.209	A30
5290	58	802.11ac	OFDM	80	11.0	10.79	11.0	10.70	-0.08	Right	Tilt	MIMO	Open	0906M	58.5	99.7	0.138	-	1.072	1.003	-	
5290	58	802.11ac	OFDM	80	11.0	10.79	11.0	10.70	0.03	Left	Cheek	MIMO	Open	0906M	58.5	99.7	0.176	0.116	1.072	1.003	0.125	
5290	58	802.11ac	OFDM	80	11.0	10.79	11.0	10.70	-0.08	Left	Tilt	MIMO	Open	0906M	58.5	99.7	0.164	-	1.072	1.003	-	
5690	138	802.11ac	OFDM	80	11.0	10.87	11.0	10.99	0.12	Right	Cheek	MIMO	Open	0906M	58.5	99.7	0.176	0.148	1.030	1.003	0.153	
5690	138	802.11ac	OFDM	80	11.0	10.87	11.0	10.99	0.05	Right	Tilt	MIMO	Open	0906M	58.5	99.7	0.113	-	1.030	1.003	-	
5690	138	802.11ac	OFDM	80	11.0	10.87	11.0	10.99	0.15	Left	Cheek	MIMO	Open	0906M	58.5	99.7	0.097	0.064	1.030	1.003	0.066	
5690	138	802.11ac	OFDM	80	11.0	10.87	11.0	10.99	0.13	Left	Tilt	MIMO	Open	0906M	58.5	99.7	0.087	-	1.030	1.003	-	
5775	155	802.11ac	OFDM	80	11.0	10.85	11.0	10.50	-0.10	Right	Cheek	MIMO	Open	0906M	58.5	99.7	0.189	0.159	1.122	1.003	0.179	
5775	155	802.11ac	OFDM	80	11.0	10.85	11.0	10.50	0.14	Right	Tilt	MIMO	Open	0906M	58.5	99.7	0.100	-	1.122	1.003	-	
5775	155	802.11ac	OFDM	80	11.0	10.85	11.0	10.50	0.10	Left	Cheek	MIMO	Open	0906M	58.5	99.7	0.100	0.061	1.122	1.003	0.069	
5775	155	802.11ac	OFDM	80	11.0	10.85	11.0	10.50	0.17	Left	Tilt	MIMO	Open	0906M	58.5	99.7	0.095	-	1.122	1.003	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT											Head											
Spatial Peak											1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population											averaged over 1 gram											

Note: To achieve the 14.0 dBm maximum allowed MIMO power shown in the documentation each antenna transmits at a maximum allowed power of 11.0 dBm.

Table 11-34
DSS Head SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.													(W/kg)				
2441.00	39	Bluetooth	FHSS	10.0	8.62	0.19	Right	Cheek	1	Open	2014M	1	76.80	0.054	1.374	1.302	0.097	
2441.00	39	Bluetooth	FHSS	10.0	8.62	0.15	Right	Tilt	1	Open	2014M	1	76.80	0.038	1.374	1.302	0.068	
2441.00	39	Bluetooth	FHSS	10.0	8.62	0.20	Left	Cheek	1	Open	2014M	1	76.80	0.051	1.374	1.302	0.091	
2441.00	39	Bluetooth	FHSS	10.0	8.62	0.10	Left	Tilt	1	Open	2014M	1	76.80	0.043	1.374	1.302	0.077	
2441.00	39	Bluetooth	FHSS	10.0	9.29	0.07	Right	Cheek	2	Open	2014M	1	76.80	0.159	1.178	1.302	0.244	A31
2441.00	39	Bluetooth	FHSS	10.0	9.29	0.17	Right	Tilt	2	Open	2014M	1	76.80	0.095	1.178	1.302	0.146	
2441.00	39	Bluetooth	FHSS	10.0	9.29	0.16	Left	Cheek	2	Open	2014M	1	76.80	0.061	1.178	1.302	0.094	
2441.00	39	Bluetooth	FHSS	10.0	9.29	0.19	Left	Tilt	2	Open	2014M	1	76.80	0.055	1.178	1.302	0.084	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Head								
Spatial Peak										1.6 W/kg (mW/g)								
Uncontrolled Exposure/General Population										averaged over 1 gram								

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11.2 Standalone Body-Worn SAR Data

Table 11-35
CDMA/GSM/UMTS Body-Worn SAR Data -

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Form Factor	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
848.31	777	Cell. CDMA	TDSO / SO32	25.0	24.10	1	0.01	15 mm	Open	1438M	1:1	back	0.168	1.230	0.207	
848.31	777	Cell. CDMA	TDSO / SO32	25.0	24.10	1	-0.05	15 mm	Closed	1438M	1:1	back	0.288	1.230	0.354	A32
1851.25	25	PCS CDMA	TDSO / SO32	24.0	23.29	52	0.00	15 mm	Open	0878M	1:1	back	0.651	1.178	0.767	A34
1880.00	600	PCS CDMA	TDSO / SO32	24.0	23.25	52	0.03	15 mm	Open	0878M	1:1	back	0.635	1.189	0.755	
1908.75	1175	PCS CDMA	TDSO / SO32	24.0	23.08	52	0.02	15 mm	Open	0878M	1:1	back	0.623	1.236	0.770	
1851.25	25	PCS CDMA	TDSO / SO32	24.0	23.29	52	-0.03	15 mm	Closed	0878M	1:1	back	0.225	1.178	0.265	
824.20	128	GSM 850	GSM	33.0	32.00	N/A	0.03	15 mm	Open	1438M	1:8.3	back	0.117	1.259	0.147	
824.20	128	GSM 850	GSM	33.0	32.00	N/A	-0.08	15 mm	Closed	0731M	1:8.3	back	0.234	1.259	0.295	A36
1850.20	512	GSM 1900	GSM	30.0	29.25	N/A	-0.14	15 mm	Open	0737M	1:8.3	back	0.238	1.189	0.283	A38
1850.20	512	GSM 1900	GSM	30.0	29.25	N/A	-0.10	15 mm	Closed	0878M	1:8.3	back	0.074	1.189	0.088	
836.60	4183	UMTS 850	RMC	25.0	24.49	1	-0.02	15 mm	Open	1438M	1:1	back	0.167	1.125	0.188	
836.60	4183	UMTS 850	RMC	25.0	24.49	1	-0.01	15 mm	Closed	1438M	1:1	back	0.331	1.125	0.372	A40
1732.40	1412	UMTS 1750	RMC	24.0	23.70	1	0.06	15 mm	Open	0483M	1:1	back	0.546	1.072	0.585	A42
1732.40	1412	UMTS 1750	RMC	24.0	23.70	1	0.06	15 mm	Closed	1852M	1:1	back	0.236	1.072	0.253	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	-0.04	15 mm	Open	0737M	1:1	back	0.530	1.042	0.552	A44
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	0.03	15 mm	Closed	0737M	1:1	back	0.156	1.042	0.163	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT								Body								
Spatial Peak								1.6 W/kg (mW/g)								
Uncontrolled Exposure/General Population								averaged over 1 gram								

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Table 11-36
LTE Body-Worn SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																(W/kg)		(W/kg)		
680.50	133297	Mid	LTE Band 71	20	Open	25.5	24.11	0	-0.14	0	1441M	QPSK	1	50	15 mm	back	1:1	0.203	1.377	0.280	
680.50	133297	Mid	LTE Band 71	20	Open	24.5	23.26	0	0.00	1	1441M	QPSK	50	25	15 mm	back	1:1	0.189	1.330	0.251	
680.50	133297	Mid	LTE Band 71	20	Closed	25.5	24.11	0	-0.04	0	0886M	QPSK	1	50	15 mm	back	1:1	0.253	1.377	0.348	A46
680.50	133297	Mid	LTE Band 71	20	Closed	24.5	23.26	0	-0.02	1	0886M	QPSK	50	25	15 mm	back	1:1	0.204	1.330	0.271	
707.50	23095	Mid	LTE Band 12	10	Open	25.5	24.25	0	0.03	0	1441M	QPSK	1	25	15 mm	back	1:1	0.172	1.334	0.229	
707.50	23095	Mid	LTE Band 12	10	Open	24.5	23.40	0	0.02	1	1441M	QPSK	25	12	15 mm	back	1:1	0.138	1.288	0.178	
707.50	23095	Mid	LTE Band 12	10	Closed	25.5	24.25	0	0.00	0	1441M	QPSK	1	25	15 mm	back	1:1	0.228	1.334	0.304	A48
707.50	23095	Mid	LTE Band 12	10	Closed	24.5	23.40	0	0.04	1	1441M	QPSK	25	12	15 mm	back	1:1	0.184	1.288	0.237	
782.00	23230	Mid	LTE Band 13	10	Open	25.5	24.27	0	0.05	0	1441M	QPSK	1	49	15 mm	back	1:1	0.223	1.327	0.296	A50
782.00	23230	Mid	LTE Band 13	10	Open	24.5	23.33	0	0.00	1	1441M	QPSK	25	0	15 mm	back	1:1	0.173	1.309	0.226	
782.00	23230	Mid	LTE Band 13	10	Closed	25.5	24.27	0	-0.06	0	1441M	QPSK	1	49	15 mm	back	1:1	0.198	1.327	0.263	
782.00	23230	Mid	LTE Band 13	10	Closed	24.5	23.33	0	0.02	1	1441M	QPSK	25	0	15 mm	back	1:1	0.156	1.309	0.204	
793.00	23330	Mid	LTE Band 14	10	Open	25.5	24.20	0	-0.02	0	1441M	QPSK	1	0	15 mm	back	1:1	0.214	1.349	0.289	A52
793.00	23330	Mid	LTE Band 14	10	Open	24.5	23.34	0	-0.01	1	1441M	QPSK	25	12	15 mm	back	1:1	0.178	1.306	0.232	
793.00	23330	Mid	LTE Band 14	10	Closed	25.5	24.20	0	-0.04	0	0886M	QPSK	1	0	15 mm	back	1:1	0.206	1.349	0.278	
793.00	23330	Mid	LTE Band 14	10	Closed	24.5	23.34	0	-0.02	1	0886M	QPSK	25	12	15 mm	back	1:1	0.161	1.306	0.210	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	25.3	24.00	1	0.04	0	0886M	QPSK	1	74	15 mm	back	1:1	0.191	1.349	0.258	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.3	23.05	1	0.01	1	0886M	QPSK	36	37	15 mm	back	1:1	0.167	1.334	0.223	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	25.3	24.00	1	-0.04	0	0886M	QPSK	1	74	15 mm	back	1:1	0.274	1.349	0.370	A54
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.3	23.05	1	-0.21	1	0886M	QPSK	36	37	15 mm	back	1:1	0.224	1.334	0.299	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Open	25.0	24.14	13	0.02	0	1453M	QPSK	1	99	15 mm	back	1:1	0.648	1.219	0.790	A60
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	14	-0.05	0	1453M	QPSK	1	0	15 mm	back	1:1	0.578	1.156	0.668	
1905.00	26590	High	LTE Band 25 (PCS)	20	Open	25.0	24.03	13	0.00	0	1453M	QPSK	1	0	15 mm	back	1:1	0.617	1.250	0.771	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	14	-0.04	1	1453M	QPSK	50	25	15 mm	back	1:1	0.493	1.148	0.566	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	25.0	24.37	19	-0.03	0	1453M	QPSK	1	0	15 mm	back	1:1	0.264	1.156	0.305	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	24.0	23.40	19	0.01	1	1453M	QPSK	50	25	15 mm	back	1:1	0.207	1.148	0.238	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	N/A	0.02	0	0979M	QPSK	1	0	15 mm	back	1:1	0.350	1.148	0.402	A62
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	N/A	0.04	1	0979M	QPSK	25	0	15 mm	back	1:1	0.280	1.135	0.318	
2310.00	27710	Mid	LTE Band 30	10	Closed	24.0	23.40	N/A	-0.07	0	1453M	QPSK	1	0	15 mm	back	1:1	0.276	1.148	0.317	
2310.00	27710	Mid	LTE Band 30	10	Closed	23.0	22.45	N/A	-0.15	1	1453M	QPSK	25	0	15 mm	back	1:1	0.221	1.135	0.251	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	N/A	-0.05	0	0903M	QPSK	1	0	15 mm	back	1:1	0.457	1.253	0.573	A64
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	N/A	-0.02	1	0903M	QPSK	50	25	15 mm	back	1:1	0.373	1.236	0.461	
2535.00	21100	Mid	LTE Band 7	20	Closed	25.0	24.02	N/A	-0.03	0	0903M	QPSK	1	0	15 mm	back	1:1	0.346	1.253	0.434	
2535.00	21100	Mid	LTE Band 7	20	Closed	24.0	23.08	N/A	0.03	1	0903M	QPSK	50	25	15 mm	back	1:1	0.281	1.236	0.347	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT											Body										
Spatial Peak											1.6 W/kg (mW/g)										
Uncontrolled Exposure/General Population											averaged over 1 gram										

Table 11-37
LTE Band 5 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink / 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (lg)	Scaling Factor	Reported SAR (lg)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	25.3	23.67	1	-0.07	0	0886M	QPSK	1	49	15 mm	back	1.1	1.455	0.189	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.3	22.62	1	-0.09	1	0886M	QPSK	25	25	15 mm	back	1.1	1.472	0.155	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	25.3	23.67	1	-0.01	0	0886M	QPSK	1	49	15 mm	back	1.1	1.455	0.308	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.3	22.62	1	0.00	1	0886M	QPSK	25	25	15 mm	back	1.1	1.472	0.261	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	25.3	23.90	1	-0.07	0	0886M	QPSK	1	49	15 mm	back	1.1	1.380	0.305	A56
	SCC	843.70	20597			5									1	0						
ANSI / IEEE C95.1 1992 - SAFETY LIMIT													Body									
Spatial Peak													1.6 W/kg (mW/g)									
Uncontrolled Exposure/General Population													averaged over 1 gram									

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Table 11-38
LTE Band 66 Body-Worn SAR

MEASUREMENT RESULTS																							
1 CC Uplink 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
		MHz	Ch.																				
																							(W/kg)
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	Open	25.0	23.71	22	0.01	0	0767M	QPSK	1	99	15 mm	back	1:1	0.736	1.346	0.991	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	25.0	23.73	22	0.03	0	0767M	QPSK	1	50	15 mm	back	1:1	0.833	1.340	1.116	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	25.0	23.70	22	0.03	0	0767M	QPSK	1	99	15 mm	back	1:1	0.797	1.349	1.075	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	22	0.02	0	0767M	QPSK	1	99	15 mm	back	1:1	0.668	1.285	0.858	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	22	0.05	1	0767M	QPSK	50	25	15 mm	back	1:1	0.569	1.247	0.710	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.02	22	0.03	1	0767M	QPSK	100	0	15 mm	back	1:1	0.576	1.253	0.722	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	Open	25.0	23.72	22	0.00	0	0767M	QPSK	1	49	15 mm	back	1:1	0.797	1.343	1.070	
2 CC Uplink CA_66C	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	25.0	23.65	22	-0.03	0	0767M	QPSK	1	99	15 mm	back	1:1	0.817	1.365	1.115	
	SCC	1764.80	132520												1	0							
2 CC Uplink CA_66B	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	Open	25.0	24.01	22	0.01	0	0767M	QPSK	1	49	15 mm	back	1:1	0.841	1.256	1.056	A58
	SCC	1754.90	132421												1	0							
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	25.0	23.91	4	0.09	0	0767M	QPSK	1	99	15 mm	back	1:1	0.249	1.285	0.320	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	24.0	23.04	4	0.06	1	0767M	QPSK	50	25	15 mm	back	1:1	0.213	1.247	0.266	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-39
LTE Band 48 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
		MHz	Ch.															(W/kg)		(W/kg)		
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	22.5	22.30	0.02	0	0903M	QPSK	1	50	15 mm	back	1.158	0.218	1.047	0.228	A66
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	22.5	22.27	-0.04	0	0903M	QPSK	50	25	15 mm	back	1.158	0.222	1.054	0.234	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	22.5	22.04	0.01	0	0903M	QPSK	50	50	15 mm	back	1.158	0.210	1.112	0.234	
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	Open	22.5	22.00	0.07	0	0903M	QPSK	50	50	15 mm	back	1.158	0.209	1.122	0.234	
	SCC	3666.50	56405											50	0							
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	22.5	22.30	-0.13	0	0903M	QPSK	1	50	15 mm	back	1.158	0.028	1.047	0.029	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	22.5	22.27	0.00	0	0903M	QPSK	50	25	15 mm	back	1.158	0.034	1.054	0.036	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-40
LTE Band 41 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink 2 CC Uplink, Power Class	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR [1g]	Scaling Factor	Reported SAR [1g]	Plot #	
		MHz	Ch.															(W/kg)		(W/kg)		
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.12	-0.06	0	0867M	QPSK	1	0	15 mm	back	1.158	0.199	1.374	0.273	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	-0.13	0	0867M	QPSK	1	50	15 mm	back	1.158	0.219	1.247	0.273	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	-0.01	1	0867M	QPSK	50	50	15 mm	back	1.158	0.176	1.230	0.216	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	Open	28.0	26.51	0.00	0	0867M	QPSK	1	0	15 mm	back	1.231	0.225	1.409	0.317	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	Open	28.0	26.99	-0.15	0	0867M	QPSK	1	50	15 mm	back	1.231	0.247	1.262	0.312	
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.85	-0.01	0	0867M	QPSK	1	0	15 mm	back	1.158	0.231	1.161	0.268	
	SCC	2660.20	41292											1	99							
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	LTE Band 41	20	Open	28.0	26.67	-0.05	0	0867M	QPSK	1	0	15 mm	back	1.231	0.247	1.358	0.335	A68
	SCC	2660.20	41292											1	99							
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Closed	25.5	24.54	0.16	0	0903M	QPSK	1	50	15 mm	back	1.158	0.160	1.247	0.200	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Closed	24.5	23.60	0.02	1	0903M	QPSK	50	50	15 mm	back	1.158	0.130	1.230	0.160	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram									

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**Table 11-41
NR Body-Worn SAR**

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																		(W/kg)		(W/kg)		
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.19	A	0.00	0	0	0886M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1.1	0.187	1.352	0.253	
680.50	136100	Mid	NR Band n71	20	Open	25.5	24.22	A	0.11	0	0	0886M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1.1	0.214	1.343	0.287	A70
680.50	136100	Mid	NR Band n71	20	Open	24.0	23.21	A	0.00	1.5	0	0886M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.142	1.199	0.170	
680.50	136100	Mid	NR Band n71	20	Closed	25.5	24.19	A	-0.11	0	0	0886M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1.1	0.131	1.352	0.177	
680.50	136100	Mid	NR Band n71	20	Closed	25.5	24.22	A	-0.08	0	0	0886M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1.1	0.159	1.343	0.214	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	23.21	A	-0.02	1.5	0	0886M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.094	1.199	0.113	
707.50	141500	Mid	NR Band n12	15	Open	25.5	23.95	A	-0.02	0	0	0886M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1.1	0.148	1.429	0.211	
707.50	141500	Mid	NR Band n12	15	Open	25.5	24.03	A	0.02	0	0	0886M	DFT-S-OFDM	QPSK	36	22	15 mm	back	1.1	0.147	1.403	0.206	
707.50	141500	Mid	NR Band n12	15	Open	24.0	23.12	A	0.05	1.5	0	0886M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.108	1.225	0.132	
707.50	141500	Mid	NR Band n12	15	Closed	25.5	23.95	A	0.05	0	0	0886M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1.1	0.174	1.429	0.249	A72
707.50	141500	Mid	NR Band n12	15	Closed	25.5	24.03	A	0.04	0	0	0886M	DFT-S-OFDM	QPSK	36	22	15 mm	back	1.1	0.167	1.403	0.234	
707.50	141500	Mid	NR Band n12	15	Closed	24.0	23.12	A	0.04	1.5	0	0886M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.128	1.225	0.157	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	25.3	23.80	A	0.09	0	1	0886M	DFT-S-OFDM	QPSK	1	53	15 mm	back	1.1	0.166	1.413	0.235	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	25.3	23.84	A	-0.05	0	1	0886M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1.1	0.165	1.400	0.231	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	23.8	22.62	A	0.04	1.5	1	0886M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.129	1.312	0.169	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	25.3	23.80	A	0.00	0	1	1441M	DFT-S-OFDM	QPSK	1	53	15 mm	back	1.1	0.235	1.413	0.332	A74
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	25.3	23.84	A	0.01	0	1	1441M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1.1	0.235	1.400	0.329	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	23.8	22.62	A	-0.02	1.5	1	1441M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.176	1.312	0.231	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	0.00	0	22	0979M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1.1	0.559	1.148	0.642	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	0.03	0	22	0979M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1.1	0.590	1.161	0.685	A76
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	23.0	22.22	A	0.03	1.5	22	0979M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.415	1.197	0.497	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	24.5	23.90	A	-0.11	0	4	0767M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1.1	0.163	1.148	0.187	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	24.5	23.85	A	0.01	0	4	0767M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1.1	0.188	1.161	0.218	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	23.0	22.22	A	0.03	1.5	4	0767M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.142	1.197	0.170	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	22.0	21.63	I	0.15	0	N/A	0979M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1.1	0.043	1.089	0.047	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	22.0	21.66	I	0.05	0	N/A	0979M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1.1	0.039	1.081	0.042	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	22.0	21.62	I	-0.01	0	N/A	0979M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.041	1.091	0.045	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	22.0	21.63	I	0.13	0	N/A	0979M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1.1	0.006	1.089	0.007	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	22.0	21.66	I	0.14	0	N/A	0979M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1.1	0.006	1.081	0.006	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	22.0	21.62	I	-0.17	0	N/A	0979M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.006	1.091	0.007	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	-0.01	0	14	1453M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1.1	0.510	1.194	0.609	A78
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.03	0	14	1453M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1.1	0.454	1.259	0.572	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	23.0	22.16	A	0.06	1.5	14	1453M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.374	1.213	0.454	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	24.5	23.73	A	0.06	0	19	1453M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1.1	0.226	1.194	0.270	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	24.5	23.50	A	0.00	0	19	1453M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1.1	0.208	1.259	0.262	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	23.0	22.16	A	-0.09	1.5	19	1453M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.153	1.213	0.186	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	24.49	I	-0.13	0	N/A	0737M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1.1	0.214	1.002	0.214	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	24.35	I	-0.07	0	N/A	0737M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1.1	0.327	1.035	0.338	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	23.0	22.99	I	-0.01	1.5	N/A	0737M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.257	1.002	0.258	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	24.5	24.49	I	-0.14	0	N/A	0979M	DFT-S-OFDM	QPSK	1	214	15 mm	back	1.1	0.030	1.002	0.030	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	24.5	24.35	I	-0.16	0	N/A	0979M	DFT-S-OFDM	QPSK	108	54	15 mm	back	1.1	0.029	1.035	0.030	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	23.0	22.99	I	-0.16	1.5	N/A	0979M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.028	1.002	0.028	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	A	-0.01	0	N/A	1453M	DFT-S-OFDM	QPSK	1	26	15 mm	back	1.1	0.215	1.194	0.257	A80
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	A	0.08	0	N/A	1453M	DFT-S-OFDM	QPSK	25	14	15 mm	back	1.1	0.213	1.271	0.271	
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.15	A	0.02	1.5	N/A	1453M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.158	1.216	0.192	
2310.00	462000	Mid	NR Band n30	10	Closed	23.5	22.73	A	-0.16	0	N/A	1453M	DFT-S-OFDM	QPSK	1	26	15 mm	back	1.1	0.197	1.194	0.235	
2310.00	462000	Mid	NR Band n30	10	Closed	23.5	22.46	A	-0.18	0	N/A	1453M	DFT-S-OFDM	QPSK	25	14	15 mm	back	1.1	0.197	1.271	0.250	
2310.00	462000	Mid	NR Band n30	10	Closed	22.0	21.15	A	-0.15	1.5	N/A	1453M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.137	1.216	0.167	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.55	I	0.04	0	N/A	0903M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.197	1.109	0.218	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.61	I	-0.03	0	N/A	0903M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.209	1.094	0.229	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.05	I	0.01	0	N/A	0903M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.225	1.245	0.280	A82
2592.99	518598	Mid	NR Band n41	100	Closed	22.0	21.55	I	-0.12	0	N/A	0903M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.075	1.109	0.083	
2592.99	518598	Mid	NR Band n41	100	Closed	22.0	21.61	I	-0.19	0	N/A	0903M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.076	1.094	0.083	
2592.99	518598	Mid	NR Band n41	100	Closed	22.0	21.05	I	-0.12	0	N/A	0903M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.072	1.245	0.090	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT											Body												
Spatial Peak											1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population											averaged over 1 gram												

FCC ID: A3LSMF711U1	PCTEST Proud to be part of  element SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset	Page 163 of 290

Table 11-42
NR Band n77 DoD Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) [W/kg]	Scaling Factor	Reported SAR (1g) [W/kg]	Plot #	
MHz	Ch.																					
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.77	F	0.01	0	1441M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.151	1.183	0.179	A84
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.67	F	-0.09	0	1441M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.150	1.211	0.182	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.66	F	-0.01	0	1441M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.181	1.213	0.220	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	17.5	16.58	I	-0.12	0	1441M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.048	1.236	0.059	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	17.5	16.58	I	-0.16	0	1441M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.049	1.236	0.061	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	17.5	16.39	I	-0.04	0	1441M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.046	1.291	0.059	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	17.5	16.02	E	-0.13	0	1441M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.026	1.406	0.037	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	17.5	16.04	E	0.18	0	1441M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.028	1.400	0.039	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	17.5	15.96	E	-0.15	0	1441M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.027	1.426	0.039	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	13.5	13.03	C	-0.14	0	1441M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.024	1.114	0.027	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	13.5	12.87	C	-0.13	0	1441M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1:1	0.027	1.156	0.031	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	13.5	12.96	C	0.14	0	1441M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.026	1.132	0.029	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	19.5	18.77	F	0.14	0	1432M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.020	1.183	0.024	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	19.5	18.67	F	-0.11	0	1432M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.018	1.211	0.022	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	19.5	18.66	F	0.14	0	1432M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.019	1.213	0.023	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	17.5	16.58	I	0.08	0	1432M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.008	1.236	0.010	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	17.5	16.58	I	0.13	0	1432M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.007	1.236	0.009	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	17.5	16.39	I	-0.16	0	1432M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.007	1.291	0.009	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	17.5	16.02	E	-0.07	0	1454M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1:1	0.007	1.406	0.010	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	17.5	16.04	E	-0.02	0	1454M	DFT-S-OFDM	QPSK	135	69	15 mm	back	1:1	0.007	1.400	0.010	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	17.5	15.96	E	-0.16	0	1454M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.007	1.426	0.010	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	13.5	13.03	C	-0.01	0	1432M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.027	1.114	0.030	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	13.5	12.87	C	-0.06	0	1432M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1:1	0.021	1.156	0.024	
3500.01	633334	Mid	NR Band n77 DoD	100	Closed	13.5	12.96	C	-0.08	0	1432M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.019	1.132	0.022	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak										Body 1.6 W/kg (mW/g) averaged over 1 gram												
Uncontrolled Exposure/General Population																						

Table 11-43
NR Band n77 Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Cover Type	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
3930.00	662000	High	NR Band n77	100	Open	19.5	19.28	F	-0.03	0	1456M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.231	1.052	0.243	A86
3930.00	662000	High	NR Band n77	100	Open	19.5	19.19	F	-0.02	0	1456M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.229	1.074	0.246	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.17	F	0.00	0	1456M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.227	1.079	0.245	
3750.00	650000	Low	NR Band n77	100	Open	17.5	16.76	I	-0.12	0	1432M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.019	1.186	0.023	
3750.00	650000	Low	NR Band n77	100	Open	17.5	16.77	I	0.09	0	1432M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.025	1.183	0.030	
3750.00	650000	Low	NR Band n77	100	Open	17.5	16.74	I	-0.16	0	1432M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.027	1.191	0.032	
3930.00	662000	High	NR Band n77	100	Open	17.5	17.04	E	-0.16	0	1456M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.040	1.112	0.044	
3930.00	662000	High	NR Band n77	100	Open	17.5	16.93	E	0.16	0	1456M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.045	1.140	0.051	
3930.00	662000	High	NR Band n77	100	Open	17.5	16.89	E	0.13	0	1456M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.047	1.151	0.054	
3930.00	662000	High	NR Band n77	100	Open	13.5	13.01	C	-0.18	0	1454M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.027	1.119	0.030	
3930.00	662000	High	NR Band n77	100	Open	13.5	13.00	C	-0.14	0	1454M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.029	1.122	0.033	
3930.00	662000	High	NR Band n77	100	Open	13.5	12.86	C	-0.16	0	1454M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.029	1.159	0.034	
3930.00	662000	High	NR Band n77	100	Closed	19.5	19.28	F	0.07	0	1456M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.084	1.052	0.088	
3930.00	662000	High	NR Band n77	100	Closed	19.5	19.19	F	0.13	0	1456M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.086	1.074	0.092	
3930.00	662000	High	NR Band n77	100	Closed	19.5	19.17	F	-0.19	0	1456M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.071	1.079	0.077	
3750.00	650000	Low	NR Band n77	100	Closed	17.5	16.76	I	-0.15	0	1432M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.001	1.186	0.001	
3750.00	650000	Low	NR Band n77	100	Closed	17.5	16.77	I	0.01	0	1432M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.000	1.183	0.000	
3750.00	650000	Low	NR Band n77	100	Closed	17.5	16.74	I	-0.04	0	1432M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.006	1.191	0.007	
3930.00	662000	High	NR Band n77	100	Closed	17.5	17.04	E	-0.12	0	1456M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.013	1.112	0.014	
3930.00	662000	High	NR Band n77	100	Closed	17.5	16.93	E	0.16	0	1456M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.011	1.140	0.013	
3930.00	662000	High	NR Band n77	100	Closed	17.5	16.89	E	0.11	0	1456M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.013	1.151	0.015	
3930.00	662000	High	NR Band n77	100	Closed	13.5	13.01	C	-0.17	0	1454M	DFT-S-OFDM	QPSK	1	137	15 mm	back	1.1	0.038	1.119	0.043	
3930.00	662000	High	NR Band n77	100	Closed	13.5	13.00	C	-0.13	0	1454M	DFT-S-OFDM	QPSK	135	0	15 mm	back	1.1	0.037	1.122	0.042	
3930.00	662000	High	NR Band n77	100	Closed	13.5	12.86	C	-0.19	0	1454M	CP-OFDM	QPSK	1	1	15 mm	back	1.1	0.040	1.159	0.046	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

FCC ID: A3LSMF711U1		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 164 of 290

Table 11-44
DTS Body-Worn SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														W/kg	(W/kg)			(W/kg)	
2462	11	802.11b	DSSS	22	19.0	18.95	-0.19	15 mm	2	Open	1437M	1	back	99.9	0.074	0.059	1.012	1.001	0.060	
2462	11	802.11b	DSSS	22	19.0	18.95	0.02	15 mm	2	Closed	1437M	1	back	99.9	0.022	0.015	1.012	1.001	0.015	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT									Body											
Spatial Peak									1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population									averaged over 1 gram											

Table 11-45
DTS MIMO Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan		Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	
MHz	Ch.																W/kg	(W/kg)			(W/kg)	(W/kg)
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	-0.13	15 mm	MIMO	Open	1437M	1	back	99.9	0.152	0.129	1.012	1.001	0.131	A88
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	-0.11	15 mm	MIMO	Closed	1437M	1	back	99.9	0.078	0.062	1.012	1.001	0.063	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

Note: To achieve the 22 dBm maximum allowed MIMO power shown in the documentation each antenna transmits at a maximum allowed power of 19.0 dBm.

Table 11-46
NII SISO Body-Worn SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														W/kg	(W/kg)			(W/kg)	
5300	60	802.11a	OFDM	20	18.0	17.80	0.15	15 mm	1	Open	1866M	6	back	98.9	0.022	0.006	1.047	1.011	0.006	
5300	60	802.11a	OFDM	20	18.0	17.80	-0.20	15 mm	1	Closed	1866M	6	back	98.9	0.001	0.000	1.047	1.011	0.000	
5600	120	802.11a	OFDM	20	18.0	17.80	-0.13	15 mm	1	Open	1866M	6	back	98.9	0.065	0.018	1.047	1.011	0.019	
5600	120	802.11a	OFDM	20	18.0	17.80	-0.13	15 mm	1	Closed	1866M	6	back	98.9	0.005	0.000	1.047	1.011	0.000	
5785	157	802.11a	OFDM	20	18.0	17.84	-0.21	15 mm	1	Open	1866M	6	back	98.9	0.066	0.024	1.038	1.011	0.025	
5785	157	802.11a	OFDM	20	18.0	17.84	-0.19	15 mm	1	Closed	1866M	6	back	98.9	0.005	0.000	1.038	1.011	0.000	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT								Body												
Spatial Peak								1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population								averaged over 1 gram												

Table 11-47
NII MIMO Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																W/kg	(W/kg)			(W/kg)	
5300	60	802.11n	OFDM	20	18.0	17.65	18.0	17.81	0.13	15 mm	MIMO	Open	1866M	13	back	99.7	0.128	0.079	1.084	1.003	0.086	A90
5300	60	802.11n	OFDM	20	18.0	17.65	18.0	17.81	-0.16	15 mm	MIMO	Closed	1866M	13	back	99.7	0.030	0.012	1.084	1.003	0.013	
5720	144	802.11n	OFDM	20	18.0	17.59	18.0	17.79	0.18	15 mm	MIMO	Open	1866M	13	back	99.7	0.119	0.071	1.099	1.003	0.078	
5720	144	802.11n	OFDM	20	18.0	17.59	18.0	17.79	0.15	15 mm	MIMO	Closed	1866M	13	back	99.7	0.018	0.004	1.099	1.003	0.004	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	0.15	15 mm	MIMO	Open	1866M	13	back	99.7	0.094	0.064	1.079	1.003	0.069	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	-0.11	15 mm	MIMO	Closed	1866M	13	back	99.7	0.017	0.000	1.079	1.003	0.000	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

Note: To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation each antenna transmits at a maximum allowed power of 18.0 dBm.

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of the element	SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 165 of 290

Table 11-48
DSS Body-Worn SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	16.0	15.43	0.14	15 mm	1	Open	1437M	1	back	76.8	0.041	1.140	1.302	0.061	A92
2441	39	Bluetooth	FHSS	17.0	16.61	0.00	15 mm	2	Open	1437M	1	back	76.80	0.036	1.094	1.302	0.051	
2441	39	Bluetooth	FHSS	16.0	15.43	-0.13	15 mm	1	Closed	1437M	1	back	76.80	0.009	1.140	1.302	0.013	
2441	39	Bluetooth	FHSS	17.0	16.61	-0.17	15 mm	2	Closed	1437M	1	back	76.80	0.010	1.094	1.302	0.014	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram											

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of Samsung	SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 166 of 290

11.3 Standalone Hotspot SAR Data

Table 11-49
CDMA/GPRS/UMTS Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY	Mode	Service	Maximum Allowed Power [dBm]	Combined Power [dBm]	Time State	Power Dens. [dB]	Spacing	Form Factor	Power Spectral Density [dBm/MHz]	of Time State	Day Cycle	Site	SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot #
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	-0.50	10 mm	Open	1438M	N/A	1.1	back	0.281	1.256	0.252	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	0.00	10 mm	Open	1438M	N/A	1.1	front	0.175	1.256	0.220	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	0.00	10 mm	Open	1438M	N/A	1.1	bottom	0.113	1.256	0.142	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	0.00	10 mm	Open	1438M	N/A	1.1	right	0.180	1.256	0.239	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	0.00	10 mm	Open	1438M	N/A	1.1	left	0.118	1.256	0.149	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	-0.13	5 mm	Closed	1438M	N/A	1.1	back	0.050	1.256	0.036	A33
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	-0.10	5 mm	Closed	1438M	N/A	1.1	front	0.034	1.271	0.086	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	-0.12	5 mm	Closed	1438M	N/A	1.1	back	0.040	1.274	0.034	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	0.04	5 mm	Closed	1438M	N/A	1.1	front	0.260	1.256	0.237	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	0.01	5 mm	Closed	1438M	N/A	1.1	bottom	0.100	1.256	0.242	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	-0.04	5 mm	Closed	1438M	N/A	1.1	right	0.080	1.256	0.207	
824.70 1013	CAR CDMA	EVDO Rev 0	24.0	23.0	1	0.10	5 mm	Closed	1438M	N/A	1.1	left	0.140	1.256	0.203	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.02	30 mm	Open	0737M	N/A	1.1	back	0.430	1.178	0.514	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.06	30 mm	Open	0737M	N/A	1.1	front	0.085	1.178	0.238	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.02	30 mm	Open	0737M	N/A	1.1	bottom	0.067	1.180	0.704	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.06	30 mm	Open	0737M	N/A	1.1	bottom	0.060	1.178	0.880	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.04	30 mm	Open	0737M	N/A	1.1	bottom	0.068	1.216	0.849	A35
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.11	30 mm	Open	0737M	N/A	1.1	right	0.035	1.178	0.041	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.14	30 mm	Open	0737M	N/A	1.1	left	0.038	1.178	0.033	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.09	5 mm	Closed	0737M	N/A	1.1	back	0.315	1.178	0.371	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.09	5 mm	Closed	0737M	N/A	1.1	front	0.101	1.178	0.225	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	0.02	5 mm	Closed	0737M	N/A	1.1	bottom	0.664	1.180	0.704	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.02	5 mm	Closed	0737M	N/A	1.1	bottom	0.620	1.178	0.741	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	0.02	5 mm	Closed	0737M	N/A	1.1	bottom	0.612	1.216	0.744	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	0.00	5 mm	Closed	0737M	N/A	1.1	right	0.045	1.178	0.053	
880.00 800	PCS CDMA	EVDO Rev 0	18.0	18.0	52	-0.01	5 mm	Closed	0737M	N/A	1.1	left	0.165	1.178	0.194	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	-0.13	10 mm	Open	1438M	4	1.0.078	back	0.300	1.000	0.450	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	0.00	10 mm	Open	1438M	4	1.0.078	front	0.137	1.000	0.206	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	0.19	10 mm	Open	1438M	4	1.0.078	bottom	0.113	1.000	0.170	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	0.01	10 mm	Open	1438M	4	1.0.078	right	0.130	1.000	0.209	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	-0.05	10 mm	Open	1438M	4	1.0.078	left	0.030	1.000	0.045	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	-0.13	5 mm	Closed	0737M	4	1.0.078	back	0.318	1.000	0.477	A37
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	0.11	5 mm	Closed	0737M	4	1.0.078	front	0.141	1.000	0.212	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	0.01	5 mm	Closed	0737M	4	1.0.078	bottom	0.105	1.000	0.156	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	0.08	5 mm	Closed	0737M	4	1.0.078	right	0.041	1.000	0.062	
824.70 1013	GSM R95	GPRS	26.0	24.24	N/A	0.05	5 mm	Closed	0737M	4	1.0.078	left	0.064	1.000	0.096	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	0.00	10 mm	Open	0737M	4	1.0.078	back	0.306	1.164	0.414	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.01	10 mm	Open	0737M	4	1.0.078	front	0.320	1.164	0.372	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.18	10 mm	Open	0737M	4	1.0.078	bottom	0.623	1.172	0.730	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.18	10 mm	Open	0737M	4	1.0.078	bottom	0.626	1.259	0.788	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.08	10 mm	Open	0737M	4	1.0.078	right	0.031	1.164	0.036	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.08	10 mm	Open	0737M	4	1.0.078	right	0.031	1.164	0.036	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.13	10 mm	Open	0737M	4	1.0.078	left	0.033	1.164	0.038	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.02	5 mm	Closed	0878M	4	1.0.078	back	0.315	1.164	0.387	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.04	5 mm	Closed	0878M	4	1.0.078	front	0.220	1.164	0.256	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.19	5 mm	Closed	0878M	4	1.0.078	bottom	0.718	1.172	0.841	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.09	5 mm	Closed	0878M	4	1.0.078	bottom	0.754	1.259	0.949	A38
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.05	5 mm	Closed	0878M	4	1.0.078	bottom	0.746	1.164	0.872	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	0.10	5 mm	Closed	0878M	4	1.0.078	right	0.038	1.164	0.042	
1900.00 810	GSM 1900	GPRS	23.0	22.34	N/A	-0.13	5 mm	Closed	0878M	4	1.0.078	left	0.082	1.164	0.072	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	-0.01	10 mm	Open	1438M	N/A	1.1	back	0.287	1.259	0.336	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	0.02	10 mm	Open	1438M	N/A	1.1	front	0.161	1.259	0.203	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	-0.04	10 mm	Open	1438M	N/A	1.1	bottom	0.125	1.259	0.157	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	-0.01	10 mm	Open	1438M	N/A	1.1	right	0.163	1.259	0.243	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	-0.09	10 mm	Open	1438M	N/A	1.1	left	0.048	1.259	0.080	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	-0.13	5 mm	Closed	1438M	N/A	1.1	back	0.737	1.259	0.828	A40
824.70 1013	UMTS 850	RMC	24.0	22.88	1	-0.18	5 mm	Closed	1438M	N/A	1.1	back	0.697	1.262	0.880	
824.70 1013	UMTS 850	RMC	24.0	22.88	1	-0.18	5 mm	Closed	1438M	N/A	1.1	back	0.580	1.262	0.756	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	0.00	5 mm	Closed	1438M	N/A	1.1	front	0.285	1.259	0.359	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	0.00	5 mm	Closed	1438M	N/A	1.1	bottom	0.261	1.259	0.253	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	-0.04	5 mm	Closed	1438M	N/A	1.1	right	0.080	1.259	0.113	
824.70 1013	UMTS 850	RMC	24.0	23.00	1	0.08	5 mm	Closed	1438M	N/A	1.1	left	0.137	1.259	0.172	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.07	10 mm	Open	0803M	N/A	1.1	back	0.261	1.126	0.444	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.00	10 mm	Open	0803M	N/A	1.1	front	0.287	1.126	0.326	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	-0.01	10 mm	Open	0803M	N/A	1.1	bottom	0.400	1.126	0.518	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.00	10 mm	Open	0803M	N/A	1.1	right	0.039	1.126	0.044	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.00	10 mm	Open	0803M	N/A	1.1	left	0.072	1.126	0.083	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.10	5 mm	Closed	0878M	N/A	1.1	back	0.502	1.126	0.604	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.00	5 mm	Closed	0878M	N/A	1.1	front	0.213	1.126	0.243	
1712.40 1302	UMTS 1700	RMC	19.0	18.40	1	0.10	5 mm	Closed	0878M	N/A	1.1	bottom	0.614	1.148	0.824	A43
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.00	5 mm	Closed	0878M	N/A	1.1	bottom	0.756	1.126	0.858	
1722.40 1302	UMTS 1700	RMC	19.0	18.38	1	-0.14	5 mm	Closed	0878M	N/A	1.1	bottom	0.680	1.153	0.800	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.10	5 mm	Closed	0878M	N/A	1.1	right	0.021	1.135	0.024	
1722.40 1412	UMTS 1700	RMC	19.0	18.40	1	0.04	5 mm	Closed	0878M	N/A	1.1	left	0.105	1.135	0.176	
1852.40 9202	UMTS 1900	RMC	19.0	18.00	13	-0.02	30 mm	Open	0737M	N/A	1.1	back	0.340	1.256	0.428	
1852.40 9202	UMTS 1900	RMC	19.0	18.00	13	-0.02	30 mm	Open	0737M	N/A	1.1	front	0.281	1.256	0.353	
1852.40 9202	UMTS 1900	RMC	19.0	18.00	13	0.01	30 mm	Open	0737M	N/A	1.1	bottom	0.555	1.256	0.697	
1880.00 9400	UMTS 1900	RMC	19.0	17.80	13	-0.04	30 mm	Open	0737M	N/A	1.1	bottom	0.578	1.274	0.736	
1907.80 9508	UMTS 1900	RMC	19.0	18.00	13	-0.05										

Table 11-50
LTE Band 71 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																(W/kg)		(W/kg)		
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.73	0	-0.01	0	1441M	QPSK	1	50	10 mm	back	1:1	0.218	1.340	0.292	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.78	0	-0.01	0	1441M	QPSK	50	25	10 mm	back	1:1	0.219	1.324	0.290	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.73	0	-0.02	0	1441M	QPSK	1	50	10 mm	front	1:1	0.174	1.340	0.233	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.78	0	-0.01	0	1441M	QPSK	50	25	10 mm	front	1:1	0.176	1.324	0.233	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.73	0	0.14	0	1441M	QPSK	1	50	10 mm	bottom	1:1	0.053	1.340	0.071	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.78	0	-0.13	0	1441M	QPSK	50	25	10 mm	bottom	1:1	0.041	1.324	0.054	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.73	0	-0.04	0	1441M	QPSK	1	50	10 mm	right	1:1	0.206	1.340	0.276	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.78	0	-0.01	0	1441M	QPSK	50	25	10 mm	right	1:1	0.214	1.324	0.283	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.73	0	0.13	0	1441M	QPSK	1	50	10 mm	left	1:1	0.151	1.340	0.202	
680.50	133297	Mid	LTE Band 71	20	Open	24.0	22.78	0	-0.01	0	1441M	QPSK	50	25	10 mm	left	1:1	0.152	1.324	0.201	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.73	0	-0.11	0	0886M	QPSK	1	50	5 mm	back	1:1	0.536	1.340	0.718	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.78	0	-0.16	0	0886M	QPSK	50	25	5 mm	back	1:1	0.546	1.324	0.723	A47
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.73	0	-0.01	0	0886M	QPSK	1	50	5 mm	front	1:1	0.236	1.340	0.316	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.78	0	0.06	0	0886M	QPSK	50	25	5 mm	front	1:1	0.239	1.324	0.316	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.73	0	-0.13	0	0886M	QPSK	1	50	5 mm	bottom	1:1	0.132	1.340	0.177	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.78	0	-0.11	0	0886M	QPSK	50	25	5 mm	bottom	1:1	0.131	1.324	0.173	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.73	0	0.00	0	0886M	QPSK	1	50	5 mm	right	1:1	0.055	1.340	0.074	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.78	0	0.08	0	0886M	QPSK	50	25	5 mm	right	1:1	0.056	1.324	0.074	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.73	0	0.17	0	0886M	QPSK	1	50	5 mm	left	1:1	0.146	1.340	0.196	
680.50	133297	Mid	LTE Band 71	20	Closed	24.0	22.78	0	0.13	0	0886M	QPSK	50	25	5 mm	left	1:1	0.149	1.324	0.197	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-51
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.78	0	-0.02	0	1441M	QPSK	1	25	10 mm	back	1:1	0.172	1.324	0.228	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.85	0	-0.01	0	1441M	QPSK	25	12	10 mm	back	1:1	0.171	1.303	0.223	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.78	0	0.04	0	1441M	QPSK	1	25	10 mm	front	1:1	0.130	1.324	0.172	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.85	0	-0.03	0	1441M	QPSK	25	12	10 mm	front	1:1	0.135	1.303	0.176	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.78	1	0.18	0	1441M	QPSK	1	25	10 mm	bottom	1:1	0.032	1.324	0.042	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.85	1	0.10	0	1441M	QPSK	25	12	10 mm	bottom	1:1	0.032	1.303	0.042	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.78	108	0.08	0	1441M	QPSK	1	25	10 mm	right	1:1	0.139	1.324	0.184	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.85	108	-0.04	0	1441M	QPSK	25	12	10 mm	right	1:1	0.140	1.303	0.182	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.78	0	0.02	0	1441M	QPSK	1	25	10 mm	left	1:1	0.084	1.324	0.111	
707.50	23095	Mid	LTE Band 12	10	Open	24.0	22.85	0	0.06	0	1441M	QPSK	25	12	10 mm	left	1:1	0.086	1.303	0.112	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.78	0	-0.04	0	1441M	QPSK	1	25	5 mm	back	1:1	0.476	1.324	0.630	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.85	0	0.09	0	1441M	QPSK	25	12	5 mm	back	1:1	0.487	1.303	0.635	A49
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.78	108	-0.01	0	1441M	QPSK	1	25	5 mm	front	1:1	0.162	1.324	0.214	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.85	108	-0.08	0	1441M	QPSK	25	12	5 mm	front	1:1	0.163	1.303	0.212	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.78	27	-0.02	0	1441M	QPSK	1	25	5 mm	bottom	1:1	0.055	1.324	0.073	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.85	27	0.03	0	1441M	QPSK	25	12	5 mm	bottom	1:1	0.056	1.303	0.073	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.78	0	0.04	0	1441M	QPSK	1	25	5 mm	right	1:1	0.068	1.324	0.090	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.85	0	0.20	0	1441M	QPSK	25	12	5 mm	right	1:1	0.069	1.303	0.090	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.78	108	0.06	0	1441M	QPSK	1	25	5 mm	left	1:1	0.162	1.324	0.214	
707.50	23095	Mid	LTE Band 12	10	Closed	24.0	22.85	108	0.06	0	1441M	QPSK	25	12	5 mm	left	1:1	0.163	1.303	0.212	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body											
Spatial Peak										1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population										averaged over 1 gram											

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of 	SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 168 of 290

Table 11-52
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.84	0	0.00	0	1441M	QPSK	1	49	10 mm	back	1:1	0.206	1.306	0.269	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.89	0	0.03	0	1441M	QPSK	25	12	10 mm	back	1:1	0.222	1.291	0.287	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.84	0	-0.06	0	1441M	QPSK	1	49	10 mm	front	1:1	0.152	1.306	0.199	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.89	0	-0.03	0	1441M	QPSK	25	12	10 mm	front	1:1	0.172	1.291	0.222	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.84	0	-0.17	0	1441M	QPSK	1	49	10 mm	bottom	1:1	0.094	1.306	0.123	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.89	0	-0.08	0	1441M	QPSK	25	12	10 mm	bottom	1:1	0.102	1.291	0.132	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.84	0	0.02	0	1441M	QPSK	1	49	10 mm	right	1:1	0.175	1.306	0.229	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.89	0	-0.08	0	1441M	QPSK	25	12	10 mm	right	1:1	0.193	1.291	0.249	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.84	0	0.05	0	1441M	QPSK	1	49	10 mm	left	1:1	0.106	1.306	0.138	
782.00	23230	Mid	LTE Band 13	10	Open	24.0	22.89	0	-0.03	0	1441M	QPSK	25	12	10 mm	left	1:1	0.108	1.291	0.139	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.84	0	-0.14	0	1441M	QPSK	1	49	5 mm	back	1:1	0.388	1.306	0.507	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.89	0	-0.15	0	1441M	QPSK	25	12	5 mm	back	1:1	0.361	1.291	0.466	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.84	0	0.07	0	1441M	QPSK	1	49	5 mm	front	1:1	0.069	1.306	0.090	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.89	0	0.07	0	1441M	QPSK	25	12	5 mm	front	1:1	0.075	1.291	0.097	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.84	0	0.00	0	1441M	QPSK	1	49	5 mm	bottom	1:1	0.192	1.306	0.251	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.89	0	-0.06	0	1441M	QPSK	25	12	5 mm	bottom	1:1	0.194	1.291	0.250	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.84	0	0.12	0	1441M	QPSK	1	49	5 mm	right	1:1	0.051	1.306	0.067	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.89	0	0.11	0	1441M	QPSK	25	12	5 mm	right	1:1	0.065	1.291	0.084	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.84	0	0.05	0	1441M	QPSK	1	49	5 mm	left	1:1	0.094	1.306	0.123	
782.00	23230	Mid	LTE Band 13	10	Closed	24.0	22.89	0	-0.10	0	1441M	QPSK	25	12	5 mm	left	1:1	0.104	1.291	0.134	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body											
Spatial Peak										1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population										averaged over 1 gram											

Table 11-53
LTE Band 14 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.84	0	0.07	0	1441M	QPSK	1	25	10 mm	back	1:1	0.200	1.306	0.261	A53
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.89	0	0.01	0	1441M	QPSK	25	12	10 mm	back	1:1	0.207	1.291	0.267	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.84	0	-0.04	0	1441M	QPSK	1	25	10 mm	front	1:1	0.157	1.306	0.205	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.89	0	-0.04	0	1441M	QPSK	25	12	10 mm	front	1:1	0.161	1.291	0.208	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.84	0	-0.07	0	1441M	QPSK	1	25	10 mm	bottom	1:1	0.107	1.306	0.140	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.89	0	-0.12	0	1441M	QPSK	25	12	10 mm	bottom	1:1	0.105	1.291	0.136	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.84	0	0.04	0	1441M	QPSK	1	25	10 mm	right	1:1	0.174	1.306	0.227	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.89	0	0.05	0	1441M	QPSK	25	12	10 mm	right	1:1	0.181	1.291	0.234	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.84	0	-0.05	0	1441M	QPSK	1	25	10 mm	left	1:1	0.100	1.306	0.131	
793.00	23330	Mid	LTE Band 14	10	Open	24.0	22.89	0	-0.21	0	1441M	QPSK	25	12	10 mm	left	1:1	0.102	1.291	0.132	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.84	0	-0.15	0	0886M	QPSK	1	25	5 mm	back	1:1	0.521	1.306	0.680	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.89	0	-0.16	0	0886M	QPSK	25	12	5 mm	back	1:1	0.532	1.291	0.687	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.84	0	0.02	0	0886M	QPSK	1	25	5 mm	front	1:1	0.079	1.306	0.103	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.89	0	0.06	0	0886M	QPSK	25	12	5 mm	front	1:1	0.084	1.291	0.108	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.84	0	-0.03	0	0886M	QPSK	1	25	5 mm	bottom	1:1	0.221	1.306	0.289	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.89	0	-0.02	0	0886M	QPSK	25	12	5 mm	bottom	1:1	0.226	1.291	0.292	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.84	0	0.11	0	0886M	QPSK	1	25	5 mm	right	1:1	0.072	1.306	0.094	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.89	0	0.05	0	0886M	QPSK	25	12	5 mm	right	1:1	0.075	1.291	0.097	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.84	0	0.01	0	0886M	QPSK	1	25	5 mm	left	1:1	0.088	1.306	0.115	
793.00	23330	Mid	LTE Band 14	10	Closed	24.0	22.89	0	0.09	0	0886M	QPSK	25	12	5 mm	left	1:1	0.095	1.291	0.123	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

FCC ID: A3LSMF711U1		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 169 of 290

Table 11-54
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz		Ch.																(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.06	1	-0.01	0	0886M	QPSK	1	74	10 mm	back	1.1	0.230	1.242	0.286	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.04	1	-0.21	0	0886M	QPSK	36	37	10 mm	back	1.1	0.242	1.247	0.302	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.06	1	0.14	0	0886M	QPSK	1	74	10 mm	front	1:1	0.148	1.242	0.184	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.04	1	0.05	0	0886M	QPSK	36	37	10 mm	front	1.1	0.159	1.247	0.198	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.06	1	0.01	0	0886M	QPSK	1	74	10 mm	bottom	1:1	0.097	1.242	0.120	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.04	1	0.03	0	0886M	QPSK	36	37	10 mm	bottom	1:1	0.101	1.247	0.126	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.06	1	0.10	0	0886M	QPSK	1	74	10 mm	right	1.1	0.180	1.242	0.224	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.04	1	-0.03	0	0886M	QPSK	36	37	10 mm	right	1.1	0.198	1.247	0.247	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.06	1	0.02	0	0886M	QPSK	1	74	10 mm	left	1:1	0.088	1.242	0.109	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Open	24.0	23.04	1	0.00	0	0886M	QPSK	36	37	10 mm	left	1.1	0.107	1.247	0.133	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.06	1	-0.20	0	0886M	QPSK	1	74	5 mm	back	1:1	0.567	1.242	0.704	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.04	1	-0.17	0	0886M	QPSK	36	37	5 mm	back	1:1	0.585	1.247	0.729	A55
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.06	1	0.04	0	0886M	QPSK	1	74	5 mm	front	1.1	0.101	1.242	0.125	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.04	1	0.11	0	0886M	QPSK	36	37	5 mm	front	1:1	0.107	1.247	0.133	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.06	1	0.02	0	0886M	QPSK	1	74	5 mm	bottom	1:1	0.178	1.242	0.221	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.04	1	0.00	0	0886M	QPSK	36	37	5 mm	bottom	1:1	0.184	1.247	0.229	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.06	1	0.04	0	0886M	QPSK	1	74	5 mm	right	1:1	0.087	1.242	0.108	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.04	1	0.02	0	0886M	QPSK	36	37	5 mm	right	1:1	0.089	1.247	0.111	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.06	1	-0.11	0	0886M	QPSK	1	74	5 mm	left	1:1	0.110	1.242	0.137	
831.50	26865	Mid	LTE Band 26 (Cell)	15	Closed	24.0	23.04	1	0.05	0	0886M	QPSK	36	37	5 mm	left	1:1	0.123	1.247	0.153	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-55
LTE Band 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink / 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR [1g]	Scaling Factor	Reported SAR [1g]	Plot #	
		MHz	Ch.																(W/kg)		(W/kg)		
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	22.82	104	-0.10	0	0886M	QPSK	1	49	10 mm	back	1:1	1.181	1.312	0.237	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	23.00	104	-0.07	0	0886M	QPSK	25	25	10 mm	back	1:1	1.187	1.259	0.235	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	22.82	1	0.08	0	0886M	QPSK	1	49	10 mm	front	1:1	1.137	1.312	0.180	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	23.00	1	0.02	0	0886M	QPSK	25	25	10 mm	front	1:1	1.142	1.259	0.179	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	22.82	1	0.04	0	0886M	QPSK	1	49	10 mm	bottom	1:1	1.088	1.312	0.115	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	23.00	1	0.07	0	0886M	QPSK	25	25	10 mm	bottom	1:1	1.091	1.259	0.115	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	22.82	0	0.03	0	0886M	QPSK	1	49	10 mm	right	1:1	1.143	1.312	0.188	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	23.00	0	-0.01	0	0886M	QPSK	25	25	10 mm	right	1:1	1.151	1.259	0.190	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	22.82	2	0.04	0	0886M	QPSK	1	49	10 mm	left	1:1	1.073	1.312	0.096	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Open	24.0	23.00	2	0.05	0	0886M	QPSK	25	25	10 mm	left	1:1	1.078	1.259	0.098	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	22.82	4	-0.11	0	0886M	QPSK	1	49	5 mm	back	1:1	1.489	1.312	0.642	A57
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	23.00	4	-0.10	0	0886M	QPSK	25	25	5 mm	back	1:1	1.463	1.259	0.583	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	22.75	4	-0.17	0	0886M	QPSK	1	49	5 mm	back	1:1	1.476	1.334	0.635	
	SCC	843.70	20597			5									0								
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	22.82	27	0.06	0	0886M	QPSK	1	0	5 mm	front	1:1	1.129	1.312	0.169	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	23.00	27	0.04	0	0886M	QPSK	25	25	5 mm	front	1:1	1.142	1.259	0.179	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	22.82	27	0.04	0	0886M	QPSK	1	49	5 mm	bottom	1:1	1.170	1.312	0.223	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	23.00	27	0.03	0	0886M	QPSK	25	25	5 mm	bottom	1:1	1.173	1.259	0.218	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	22.82	1	0.01	0	0886M	QPSK	1	49	5 mm	right	1:1	1.098	1.312	0.129	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	23.00	1	-0.01	0	0886M	QPSK	25	25	5 mm	right	1:1	1.094	1.259	0.118	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	22.82	1	0.07	0	0886M	QPSK	1	49	5 mm	left	1:1	1.096	1.312	0.126	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	Closed	24.0	23.00	1	0.04	0	0886M	QPSK	25	25	5 mm	left	1:1	1.106	1.259	0.133	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Body											
Spatial Peak												1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population												averaged over 1 gram											

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Table 11-56
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																							
1 CC Uplink / 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
		MHz	Ch.																(W/kg)		(W/kg)		
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.74	21	0.04	0	0767M	QPSK	1	99	10 mm	back	1:1	0.446	1.062	0.474	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.93	21	-0.06	0	0767M	QPSK	50	25	10 mm	back	1:1	0.460	1.016	0.467	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.74	4	0.00	0	0767M	QPSK	1	99	10 mm	front	1:1	0.329	1.062	0.349	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.93	4	0.06	0	0767M	QPSK	50	25	10 mm	front	1:1	0.354	1.016	0.360	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	Open	19.0	18.73	22	-0.07	0	0767M	QPSK	1	50	10 mm	bottom	1:1	0.501	1.064	0.533	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	19.0	18.55	17	-0.11	0	0767M	QPSK	1	50	10 mm	bottom	1:1	0.611	1.109	0.678	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.74	0	-0.09	0	0767M	QPSK	1	99	10 mm	bottom	1:1	0.571	1.062	0.606	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.93	22	-0.07	0	0767M	QPSK	50	25	10 mm	bottom	1:1	0.581	1.016	0.590	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.74	0	0.02	0	0767M	QPSK	1	99	10 mm	right	1:1	0.034	1.062	0.036	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.93	0	0.15	0	0767M	QPSK	50	25	10 mm	right	1:1	0.037	1.016	0.038	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.74	18	-0.01	0	0767M	QPSK	1	99	10 mm	left	1:1	0.036	1.062	0.038	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	19.0	18.93	18	-0.04	0	0767M	QPSK	50	25	10 mm	left	1:1	0.053	1.016	0.054	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.74	4	-0.01	0	0767M	QPSK	1	99	5 mm	back	1:1	0.674	1.062	0.716	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.93	4	-0.04	0	0767M	QPSK	50	25	5 mm	back	1:1	0.710	1.016	0.721	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.74	4	0.03	0	0767M	QPSK	1	99	5 mm	front	1:1	0.166	1.062	0.176	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.93	4	0.04	0	0767M	QPSK	50	25	5 mm	front	1:1	0.187	1.016	0.190	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	Closed	19.0	18.73	17	-0.09	0	0767M	QPSK	1	50	5 mm	bottom	1:1	0.797	1.064	0.848	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Closed	19.0	18.55	17	-0.04	0	0767M	QPSK	1	50	5 mm	bottom	1:1	0.831	1.109	0.922	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.74	8	-0.02	0	0767M	QPSK	1	99	5 mm	bottom	1:1	0.791	1.062	0.840	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	Closed	19.0	18.92	17	-0.05	0	0767M	QPSK	50	25	5 mm	bottom	1:1	0.820	1.019	0.836	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Closed	19.0	18.73	17	-0.03	0	0767M	QPSK	50	50	5 mm	bottom	1:1	0.842	1.064	0.896	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.77	8	-0.04	0	0767M	QPSK	50	0	5 mm	bottom	1:1	0.834	1.054	0.879	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.93	7	-0.03	0	0767M	QPSK	50	25	5 mm	bottom	1:1	0.907	1.016	0.922	A59
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.73	8	-0.01	0	0767M	QPSK	100	0	5 mm	bottom	1:1	0.865	1.064	0.920	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	Closed	19.0	18.84	9	-0.01	0	0767M	QPSK	25	0	5 mm	bottom	1:1	0.833	1.038	0.865	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.87	7	0.00	0	0767M	QPSK	50	0	5 mm	bottom	1:1	0.895	1.030	0.922	
	SCC	1750.20	132374												50	50							
2 CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	Closed	19.0	18.96	7	-0.02	0	0767M	QPSK	25	0	5 mm	bottom	1:1	0.897	1.009	0.905	
	SCC	1765.10	132523												25	25							
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.74	0	-0.14	0	0767M	QPSK	1	99	5 mm	right	1:1	0.032	1.062	0.034	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.93	0	-0.16	0	0767M	QPSK	50	25	5 mm	right	1:1	0.035	1.016	0.036	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.74	1	0.02	0	0767M	QPSK	1	99	5 mm	left	1:1	0.132	1.062	0.140	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.93	1	0.00	0	0767M	QPSK	50	25	5 mm	left	1:1	0.153	1.016	0.155	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Closed	19.0	18.93	7	-0.03	0	0767M	QPSK	50	25	5 mm	bottom	1:1	0.900	1.016	0.914	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Body											
Spatial Peak												1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population												averaged over 1 gram											

Note: Blue Entry represents variability measurement.

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Table 11-57
LTE Band 25 (PCS) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.86	13	0.01	0	1453M	QPSK	1	99	10 mm	back	1:1	0.394	1.033	0.407	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.90	13	0.04	0	1453M	QPSK	50	25	10 mm	back	1:1	0.387	1.023	0.396	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.86	13	-0.02	0	1453M	QPSK	1	99	10 mm	front	1:1	0.321	1.033	0.332	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.90	13	0.00	0	1453M	QPSK	50	25	10 mm	front	1:1	0.317	1.023	0.324	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Open	19.0	18.61	13	0.00	0	1453M	QPSK	1	99	10 mm	bottom	1:1	0.514	1.094	0.562	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.86	13	-0.04	0	1453M	QPSK	1	99	10 mm	bottom	1:1	0.581	1.033	0.600	
1905.00	26590	High	LTE Band 25 (PCS)	20	Open	19.0	18.72	13	-0.07	0	1453M	QPSK	1	0	10 mm	bottom	1:1	0.623	1.067	0.665	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.90	13	0.02	0	1453M	QPSK	50	25	10 mm	bottom	1:1	0.577	1.023	0.590	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.74	13	0.00	0	1453M	QPSK	100	0	10 mm	bottom	1:1	0.562	1.062	0.597	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.86	13	-0.01	0	1453M	QPSK	1	99	10 mm	right	1:1	0.029	1.033	0.030	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.90	13	0.03	0	1453M	QPSK	50	25	10 mm	right	1:1	0.030	1.023	0.031	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.86	13	-0.09	0	1453M	QPSK	1	99	10 mm	left	1:1	0.019	1.033	0.020	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	19.0	18.90	13	-0.05	0	1453M	QPSK	50	25	10 mm	left	1:1	0.018	1.023	0.018	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.86	13	-0.04	0	1453M	QPSK	1	99	5 mm	back	1:1	0.432	1.033	0.446	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.90	13	0.02	0	1453M	QPSK	50	25	5 mm	back	1:1	0.417	1.023	0.427	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.86	13	0.03	0	1453M	QPSK	1	99	5 mm	front	1:1	0.129	1.033	0.133	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.90	13	-0.04	0	1453M	QPSK	50	25	5 mm	front	1:1	0.122	1.023	0.125	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Closed	19.0	18.61	13	0.18	0	1453M	QPSK	1	99	5 mm	bottom	1:1	0.719	1.094	0.787	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.86	13	-0.01	0	1453M	QPSK	1	99	5 mm	bottom	1:1	0.825	1.033	0.852	
1905.00	26590	High	LTE Band 25 (PCS)	20	Closed	19.0	18.72	13	-0.02	0	1453M	QPSK	1	0	5 mm	bottom	1:1	0.895	1.067	0.955	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Closed	19.0	18.85	13	0.03	0	1453M	QPSK	50	50	5 mm	bottom	1:1	0.717	1.035	0.742	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.90	13	-0.03	0	1453M	QPSK	50	25	5 mm	bottom	1:1	0.810	1.023	0.829	
1905.00	26590	High	LTE Band 25 (PCS)	20	Closed	19.0	18.89	18	-0.10	0	1453M	QPSK	50	0	5 mm	bottom	1:1	0.939	1.026	0.963	A61
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.74	13	0.03	0	1453M	QPSK	100	0	5 mm	bottom	1:1	0.790	1.062	0.839	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.86	13	-0.13	0	1453M	QPSK	1	99	5 mm	right	1:1	0.025	1.033	0.026	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.90	13	-0.02	0	1453M	QPSK	50	25	5 mm	right	1:1	0.023	1.023	0.024	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.86	13	-0.05	0	1453M	QPSK	1	99	5 mm	left	1:1	0.038	1.033	0.039	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Closed	19.0	18.90	13	0.00	0	1453M	QPSK	50	25	5 mm	left	1:1	0.041	1.023	0.042	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

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Table 11-58
LTE Band 30 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	17.95	0.01	0	0979M	QPSK	1	0	10 mm	back	1:1	0.203	1.135	0.230	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	18.00	0.08	0	0979M	QPSK	25	12	10 mm	back	1:1	0.198	1.122	0.222	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	17.95	0.05	0	0979M	QPSK	1	0	10 mm	front	1:1	0.139	1.135	0.158	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	18.00	0.08	0	0979M	QPSK	25	12	10 mm	front	1:1	0.136	1.122	0.153	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	17.95	0.07	0	0979M	QPSK	1	0	10 mm	bottom	1:1	0.461	1.135	0.523	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	18.00	0.02	0	0979M	QPSK	25	12	10 mm	bottom	1:1	0.454	1.122	0.509	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	17.95	0.19	0	0979M	QPSK	1	0	10 mm	right	1:1	0.009	1.135	0.010	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	18.00	0.13	0	0979M	QPSK	25	12	10 mm	right	1:1	0.011	1.122	0.012	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	17.95	-0.16	0	0979M	QPSK	1	0	10 mm	left	1:1	0.017	1.135	0.019	
2310.00	27710	Mid	LTE Band 30	10	Open	18.5	18.00	0.16	0	0979M	QPSK	25	12	10 mm	left	1:1	0.017	1.122	0.019	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	17.95	-0.06	0	1453M	QPSK	1	0	5 mm	back	1:1	0.476	1.135	0.540	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	18.00	-0.02	0	1453M	QPSK	25	12	5 mm	back	1:1	0.484	1.122	0.543	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	17.95	-0.16	0	1453M	QPSK	1	0	5 mm	front	1:1	0.064	1.135	0.073	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	18.00	-0.19	0	1453M	QPSK	25	12	5 mm	front	1:1	0.061	1.122	0.068	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	17.95	0.02	0	1453M	QPSK	1	0	5 mm	bottom	1:1	0.831	1.135	0.943	A63
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	18.00	0.02	0	1453M	QPSK	25	12	5 mm	bottom	1:1	0.822	1.122	0.922	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	17.82	0.01	0	1453M	QPSK	50	0	5 mm	bottom	1:1	0.818	1.169	0.956	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	17.95	-0.13	0	1453M	QPSK	1	0	5 mm	right	1:1	0.023	1.135	0.026	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	18.00	-0.06	0	1453M	QPSK	25	12	5 mm	right	1:1	0.024	1.122	0.027	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	17.95	0.05	0	1453M	QPSK	1	0	5 mm	left	1:1	0.053	1.135	0.060	
2310.00	27710	Mid	LTE Band 30	10	Closed	18.5	18.00	0.00	0	1453M	QPSK	25	12	5 mm	left	1:1	0.055	1.122	0.062	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-59
LTE Band 7 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR[dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.	(W/kg)															(W/kg)			
2560.00	21350	High	LTE Band 7	20	Open	18.5	18.34	-0.05	0	0903M	QPSK	1	0	10 mm	back	1:1	0.142	1.038	0.147	
2560.00	21350	High	LTE Band 7	20	Open	18.5	18.35	-0.13	0	0903M	QPSK	50	25	10 mm	back	1:1	0.150	1.035	0.155	
2560.00	21350	High	LTE Band 7	20	Open	18.5	18.34	-0.08	0	0903M	QPSK	1	0	10 mm	front	1:1	0.117	1.038	0.121	
2560.00	21350	High	LTE Band 7	20	Open	18.5	18.35	-0.15	0	0903M	QPSK	50	25	10 mm	front	1:1	0.121	1.035	0.125	
2560.00	21350	High	LTE Band 7	20	Open	18.5	18.34	-0.04	0	0903M	QPSK	1	0	10 mm	bottom	1:1	0.326	1.038	0.338	
2560.00	21350	High	LTE Band 7	20	Open	18.5	18.35	-0.02	0	0903M	QPSK	50	25	10 mm	bottom	1:1	0.342	1.035	0.354	
2560.00	21350	High	LTE Band 7	20	Open	18.5	18.34	-0.21	0	0903M	QPSK	1	0	10 mm	left	1:1	0.051	1.038	0.053	
2560.00	21350	High	LTE Band 7	20	Open	18.5	18.35	-0.03	0	0903M	QPSK	50	25	10 mm	left	1:1	0.058	1.035	0.060	
2560.00	21350	High	LTE Band 7	20	Closed	18.5	18.34	-0.01	0	0867M	QPSK	1	0	5 mm	back	1:1	0.315	1.038	0.327	
2560.00	21350	High	LTE Band 7	20	Closed	18.5	18.35	0.00	0	0867M	QPSK	50	25	5 mm	back	1:1	0.329	1.035	0.341	
2560.00	21350	High	LTE Band 7	20	Closed	18.5	18.34	0.09	0	0867M	QPSK	1	0	5 mm	front	1:1	0.066	1.038	0.069	
2560.00	21350	High	LTE Band 7	20	Closed	18.5	18.35	0.02	0	0867M	QPSK	50	25	5 mm	front	1:1	0.072	1.035	0.075	
2560.00	21350	High	LTE Band 7	20	Closed	18.5	18.34	-0.01	0	0867M	QPSK	1	0	5 mm	bottom	1:1	0.714	1.038	0.741	
2510.00	20850	Low	LTE Band 7	20	Closed	18.5	18.34	-0.03	0	0867M	QPSK	50	25	5 mm	bottom	1:1	0.925	1.038	0.960	A65
2535.00	21100	Mid	LTE Band 7	20	Closed	18.5	18.10	0.00	0	0867M	QPSK	50	25	5 mm	bottom	1:1	0.877	1.096	0.961	
2560.00	21350	High	LTE Band 7	20	Closed	18.5	18.35	0.03	0	0867M	QPSK	50	25	5 mm	bottom	1:1	0.752	1.035	0.778	
2510.00	20850	Low	LTE Band 7	20	Closed	18.5	18.13	-0.01	0	0867M	QPSK	100	0	5 mm	bottom	1:1	0.875	1.089	0.953	
2560.00	21350	High	LTE Band 7	20	Closed	18.5	18.34	-0.13	0	0867M	QPSK	1	0	5 mm	left	1:1	0.176	1.038	0.183	
2560.00	21350	High	LTE Band 7	20	Closed	18.5	18.35	-0.05	0	0867M	QPSK	50	25	5 mm	left	1:1	0.175	1.035	0.181	
2510.00	20850	Low	LTE Band 7	20	Closed	18.5	18.34	-0.03	0	0867M	QPSK	50	25	5 mm	bottom	1:1	0.898	1.038	0.932	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram											

Note: Blue Entry represents variability measurement.

FCC ID: A3LSMF711U1		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 173 of 290

Table 11-60
LTE Band 48 Hotspot SAR

MEASUREMENT RESULTS																						
1 CC Uplink 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
		MHz	Ch.															(W/kg)		(W/kg)		
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.75	-0.07	0	0903M	QPSK	1	50	10 mm	back	1:1.58	0.144	1.059	0.152	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.87	-0.01	0	0903M	QPSK	50	50	10 mm	back	1:1.58	0.155	1.030	0.160	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.75	0.05	0	0903M	QPSK	1	50	10 mm	front	1:1.58	0.089	1.059	0.094	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.87	0.05	0	0903M	QPSK	50	50	10 mm	front	1:1.58	0.101	1.030	0.104	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.75	-0.01	0	0903M	QPSK	1	50	10 mm	top	1:1.58	0.091	1.059	0.096	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.87	0.05	0	0903M	QPSK	50	50	10 mm	top	1:1.58	0.097	1.030	0.100	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.75	-0.02	0	0903M	QPSK	1	50	10 mm	left	1:1.58	0.162	1.059	0.172	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Open	18.0	17.87	0.07	0	0903M	QPSK	50	50	10 mm	left	1:1.58	0.169	1.030	0.174	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.75	-0.18	0	0903M	QPSK	1	50	5 mm	back	1:1.58	0.020	1.059	0.021	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.87	0.19	0	0903M	QPSK	50	50	5 mm	back	1:1.58	0.022	1.030	0.023	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.75	0.07	0	0903M	QPSK	1	50	5 mm	front	1:1.58	0.376	1.059	0.398	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.87	-0.03	0	0903M	QPSK	50	50	5 mm	front	1:1.58	0.399	1.030	0.411	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.75	-0.16	0	0903M	QPSK	1	50	5 mm	bottom	1:1.58	0.207	1.059	0.219	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.87	-0.06	0	0903M	QPSK	50	50	5 mm	bottom	1:1.58	0.212	1.030	0.218	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.39	-0.12	0	0903M	QPSK	1	0	5 mm	left	1:1.58	0.418	1.151	0.481	
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.75	-0.18	0	0903M	QPSK	1	50	5 mm	left	1:1.58	0.453	1.059	0.480	A67
1 CC Uplink	N/A	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.87	-0.18	0	0903M	QPSK	50	50	5 mm	left	1:1.58	0.445	1.030	0.458	
2 CC Uplink	PCC	3646.70	56207	Mid-High	LTE Band 48	20	Closed	18.0	17.45	-0.14	0	0903M	QPSK	1	0	5 mm	left	1:1.58	0.441	1.135	0.501	
	SCC	3626.90	56009											1	99							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT																						
Spatial Peak											Body											
Uncontrolled Exposure/General Population											1.6 W/kg (mW/g)											
											averaged over 1 gram											

Table 11-61
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																						
1 CC Uplink 2 CC Uplink, Power Class	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR [1g]	Scaling Factor	Reported SAR [1g]	Plot #	
		MHz	Ch.															(W/kg)		(W/kg)		
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Open	20.5	20.40	-0.05	0	0867M	QPSK	1	50	10 mm	back	1:1.58	0.144	1.023	0.147	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Open	20.5	20.48	-0.09	0	0867M	QPSK	50	25	10 mm	back	1:1.58	0.143	1.005	0.144	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Open	20.5	20.40	-0.15	0	0867M	QPSK	1	50	10 mm	front	1:1.58	0.124	1.023	0.127	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Open	20.5	20.48	-0.12	0	0867M	QPSK	50	25	10 mm	front	1:1.58	0.125	1.005	0.126	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Open	20.5	20.40	0.00	0	0867M	QPSK	1	50	10 mm	bottom	1:1.58	0.319	1.023	0.326	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Open	20.5	20.48	-0.03	0	0867M	QPSK	50	25	10 mm	bottom	1:1.58	0.318	1.005	0.320	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Open	20.5	20.40	-0.14	0	0867M	QPSK	1	50	10 mm	left	1:1.58	0.049	1.023	0.050	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Open	20.5	20.48	-0.16	0	0867M	QPSK	50	25	10 mm	left	1:1.58	0.048	1.005	0.048	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.40	-0.19	0	0903M	QPSK	1	50	5 mm	back	1:1.58	0.237	1.023	0.242	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.48	0.06	0	0903M	QPSK	50	25	5 mm	back	1:1.58	0.247	1.005	0.248	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.40	-0.05	0	0903M	QPSK	1	50	5 mm	front	1:1.58	0.026	1.023	0.027	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.48	0.00	0	0903M	QPSK	50	25	5 mm	front	1:1.58	0.026	1.005	0.026	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.40	-0.03	0	0903M	QPSK	1	50	5 mm	bottom	1:1.58	0.446	1.023	0.456	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.48	0.14	0	0903M	QPSK	50	25	5 mm	bottom	1:1.58	0.455	1.005	0.457	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.46	-0.10	0	0903M	QPSK	50	50	5 mm	bottom	1:1.58	0.474	1.009	0.478	A69
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	22.1	22.10	-0.02	0	0903M	QPSK	50	25	5 mm	bottom	1:2.31	0.433	1.000	0.433	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	22.1	22.09	-0.10	0	0867M	QPSK	50	50	5 mm	bottom	1:2.31	0.469	1.002	0.470	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.30	-0.11	0	0867M	QPSK	50	50	5 mm	bottom	1:1.58	0.463	1.047	0.485	
	SCC	2525.80	39948											50	0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	Closed	22.1	22.06	-0.03	0	0867M	QPSK	50	50	5 mm	bottom	1:2.31	0.453	1.009	0.457	
	SCC	2525.80	39948											50	50							
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.40	-0.13	0	0903M	QPSK	1	50	5 mm	left	1:1.58	0.119	1.023	0.122	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	Closed	20.5	20.48	-0.10	0	0903M	QPSK	50	25	5 mm	left	1:1.58	0.116	1.005	0.117	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak											Body 1.6 W/kg (mW/g) averaged over 1 gram											
Uncontrolled Exposure/General Population																						

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of 	SAR EVALUATION REPORT	Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset	Page 174 of 290

Table 11-62
NR Band n71 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.75	-0.03	0	0	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.212	1.334	0.283	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.91	-0.07	0	0	0886M	DFT-S-OFDM	QPSK	50	0	10 mm	back	1:1	0.196	1.285	0.252	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.90	-0.10	0	0	0886M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.209	1.288	0.269	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.75	0.01	0	0	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.155	1.334	0.207	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.91	0.03	0	0	0886M	DFT-S-OFDM	QPSK	50	0	10 mm	front	1:1	0.150	1.285	0.193	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.75	-0.02	0	0	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.031	1.334	0.041	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.91	-0.06	0	0	0886M	DFT-S-OFDM	QPSK	50	0	10 mm	bottom	1:1	0.031	1.285	0.040	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.75	0.06	0	0	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.169	1.334	0.225	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.91	-0.04	0	0	0886M	DFT-S-OFDM	QPSK	50	0	10 mm	right	1:1	0.175	1.285	0.225	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.75	0.04	0	0	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.095	1.334	0.127	
680.50	136100	Mid	NR Band n71	20	Open	24.0	22.91	0.02	0	0	0886M	DFT-S-OFDM	QPSK	50	0	10 mm	left	1:1	0.115	1.285	0.148	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.75	-0.11	0	0	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	back	1:1	0.422	1.334	0.563	A71
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.91	-0.13	0	0	0886M	DFT-S-OFDM	QPSK	50	0	5 mm	back	1:1	0.415	1.285	0.533	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.90	-0.04	0	0	0886M	CP-OFDM	QPSK	1	1	5 mm	back	1:1	0.304	1.288	0.392	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.75	0.15	0	0	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	front	1:1	0.141	1.334	0.188	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.91	-0.12	0	0	0886M	DFT-S-OFDM	QPSK	50	0	5 mm	front	1:1	0.143	1.285	0.184	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.75	-0.15	0	0	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	bottom	1:1	0.087	1.334	0.116	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.91	-0.16	0	0	0886M	DFT-S-OFDM	QPSK	50	0	5 mm	bottom	1:1	0.081	1.285	0.104	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.75	0.05	0	0	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	right	1:1	0.050	1.334	0.067	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.91	-0.16	0	0	0886M	DFT-S-OFDM	QPSK	50	0	5 mm	right	1:1	0.052	1.285	0.067	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.75	-0.14	0	0	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	left	1:1	0.089	1.334	0.119	
680.50	136100	Mid	NR Band n71	20	Closed	24.0	22.91	-0.12	0	0	0886M	DFT-S-OFDM	QPSK	50	0	5 mm	left	1:1	0.076	1.285	0.098	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak										Body 1.6 W/kg (mW/g) averaged over 1 gram												
Uncontrolled Exposure/General Population																						

Table 11-63
NR Band n12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
707.50	141500	Md	NR Band n12	15	Open	24.0	22.54	0.01	0	0	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.143	1.400	0.200	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.58	-0.01	0.0	0	0886M	DFT-S-OFDM	QPSK	36	0	10 mm	back	1:1	0.152	1.387	0.211	
707.50	141500	Md	NR Band n12	15	Open	24.0	23.14	-0.07	0	0	0886M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.148	1.219	0.180	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.54	0.03	0	0	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.121	1.400	0.169	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.58	0.04	0	0	0886M	DFT-S-OFDM	QPSK	36	0	10 mm	front	1:1	0.116	1.387	0.161	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.54	0.10	0	1	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.028	1.400	0.039	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.58	0.08	0	1	0886M	DFT-S-OFDM	QPSK	36	0	10 mm	bottom	1:1	0.027	1.387	0.037	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.54	-0.03	0	108	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.133	1.400	0.186	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.58	-0.04	0	108	0886M	DFT-S-OFDM	QPSK	36	0	10 mm	right	1:1	0.127	1.387	0.176	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.54	-0.03	0	0	0886M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.069	1.400	0.097	
707.50	141500	Md	NR Band n12	15	Open	24.0	22.58	0.03	0	0	0886M	DFT-S-OFDM	QPSK	36	0	10 mm	left	1:1	0.067	1.387	0.093	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.54	-0.06	0	0	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	back	1:1	0.422	1.400	0.591	A73
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.58	-0.05	0	0	0886M	DFT-S-OFDM	QPSK	36	0	5 mm	back	1:1	0.416	1.387	0.577	
707.50	141500	Md	NR Band n12	15	Closed	24.0	23.14	-0.10	0	0	0886M	CP-OFDM	QPSK	1	1	5 mm	back	1:1	0.406	1.219	0.495	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.54	-0.19	0	108	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	front	1:1	0.145	1.400	0.203	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.58	-0.21	0	108	0886M	DFT-S-OFDM	QPSK	36	0	5 mm	front	1:1	0.126	1.387	0.175	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.54	-0.06	0	27	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	bottom	1:1	0.052	1.400	0.073	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.58	0.09	0	27	0886M	DFT-S-OFDM	QPSK	36	0	5 mm	bottom	1:1	0.051	1.387	0.071	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.54	0.13	0	0	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	right	1:1	0.049	1.400	0.069	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.58	0.09	0	0	0886M	DFT-S-OFDM	QPSK	36	0	5 mm	right	1:1	0.048	1.387	0.067	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.54	-0.08	0	108	0886M	DFT-S-OFDM	QPSK	1	1	5 mm	left	1:1	0.126	1.400	0.176	
707.50	141500	Md	NR Band n12	15	Closed	24.0	22.58	0.03	0	108	0886M	DFT-S-OFDM	QPSK	36	0	5 mm	left	1:1	0.120	1.387	0.166	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT									Body													
Spatial Peak									1.6 W/kg (mW/g)													
Uncontrolled Exposure/General Population									averaged over 1 gram													

FCC ID: A3LSMF711U1		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 175 of 290

Table 11-64
NR Band n5 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.82	-0.01	0	104	0886M	DFT-S-OFDM	QPSK	1	53	10 mm	back	1:1	0.190	1.312	0.249	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.96	-0.06	0	104	0886M	DFT-S-OFDM	QPSK	50	56	10 mm	back	1:1	0.187	1.271	0.238	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	23.8	22.55	-0.13	0.2	104	0886M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.175	1.334	0.233	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.82	0.03	0	1	0886M	DFT-S-OFDM	QPSK	1	53	10 mm	front	1:1	0.123	1.312	0.161	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.96	0.01	0	1	0886M	DFT-S-OFDM	QPSK	50	56	10 mm	front	1:1	0.118	1.271	0.150	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.82	-0.13	0	1	0886M	DFT-S-OFDM	QPSK	1	53	10 mm	bottom	1:1	0.093	1.312	0.122	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.96	0.13	0	1	0886M	DFT-S-OFDM	QPSK	50	56	10 mm	bottom	1:1	0.090	1.271	0.114	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.82	0.03	0	0	0886M	DFT-S-OFDM	QPSK	1	53	10 mm	right	1:1	0.130	1.312	0.171	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.96	0.01	0	0	0886M	DFT-S-OFDM	QPSK	50	56	10 mm	right	1:1	0.118	1.271	0.150	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.82	0.01	0	2	0886M	DFT-S-OFDM	QPSK	1	53	10 mm	left	1:1	0.073	1.312	0.096	
836.50	167300	Mid	NR Band n5 (Cell)	20	Open	24.0	22.96	-0.08	0	2	0886M	DFT-S-OFDM	QPSK	50	56	10 mm	left	1:1	0.061	1.271	0.078	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.82	-0.10	0	4	1441M	DFT-S-OFDM	QPSK	1	53	5 mm	back	1:1	0.438	1.312	0.575	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.96	-0.11	0	4	1441M	DFT-S-OFDM	QPSK	50	56	5 mm	back	1:1	0.420	1.271	0.534	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	23.8	22.55	-0.06	0.2	4	1441M	CP-OFDM	QPSK	1	1	5 mm	back	1:1	0.446	1.334	0.595	A75
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.82	-0.03	0	27	1441M	DFT-S-OFDM	QPSK	1	53	5 mm	front	1:1	0.077	1.312	0.101	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.96	-0.05	0	27	1441M	DFT-S-OFDM	QPSK	50	56	5 mm	front	1:1	0.076	1.271	0.097	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.82	-0.01	0	27	1441M	DFT-S-OFDM	QPSK	1	53	5 mm	bottom	1:1	0.154	1.312	0.202	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.96	-0.05	0	27	1441M	DFT-S-OFDM	QPSK	50	56	5 mm	bottom	1:1	0.146	1.271	0.186	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.82	0.08	0	1	1441M	DFT-S-OFDM	QPSK	1	53	5 mm	right	1:1	0.083	1.312	0.109	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.96	0.00	0	1	1441M	DFT-S-OFDM	QPSK	50	56	5 mm	right	1:1	0.081	1.271	0.103	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.82	-0.02	0	1	1441M	DFT-S-OFDM	QPSK	1	53	5 mm	left	1:1	0.107	1.312	0.140	
836.50	167300	Mid	NR Band n5 (Cell)	20	Closed	24.0	22.96	0.14	0	1	1441M	DFT-S-OFDM	QPSK	50	56	5 mm	left	1:1	0.102	1.271	0.130	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak									Body 1.6 W/kg (mW/g) averaged over 1 gram													
Uncontrolled Exposure/General Population																						

Table 11-65
NR Band n66 Ant A Hotspot SAR

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																		(W/kg)		(W/kg)		
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.08	A	0.09	0	21	0979M	DFT-S-OFDM	QPSK	1	214	10 mm	back	1:1	0.261	1.102	0.288	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.05	A	0.05	0	21	0979M	DFT-S-OFDM	QPSK	108	108	10 mm	back	1:1	0.292	1.109	0.324	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.08	A	0.06	0	4	0979M	DFT-S-OFDM	QPSK	1	214	10 mm	front	1:1	0.163	1.102	0.180	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.05	A	0.01	0	4	0979M	DFT-S-OFDM	QPSK	108	108	10 mm	front	1:1	0.168	1.109	0.186	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.08	A	-0.03	0	17	0979M	DFT-S-OFDM	QPSK	1	214	10 mm	bottom	1:1	0.558	1.102	0.615	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.05	A	0.02	0	22	0979M	DFT-S-OFDM	QPSK	108	108	10 mm	bottom	1:1	0.412	1.109	0.457	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	17.91	A	-0.06	0	17	0979M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.512	1.146	0.587	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.08	A	0.05	0	0	0979M	DFT-S-OFDM	QPSK	1	214	10 mm	right	1:1	0.026	1.102	0.029	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.05	A	-0.08	0	0	0979M	DFT-S-OFDM	QPSK	108	108	10 mm	right	1:1	0.026	1.109	0.029	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.08	A	-0.10	0	18	0979M	DFT-S-OFDM	QPSK	1	214	10 mm	left	1:1	0.030	1.102	0.033	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	18.5	18.05	A	0.00	0	18	0979M	DFT-S-OFDM	QPSK	108	108	10 mm	left	1:1	0.029	1.109	0.032	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.08	A	0.00	0	4	0767M	DFT-S-OFDM	QPSK	1	214	5 mm	back	1:1	0.603	1.102	0.665	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.05	A	0.01	0	4	0767M	DFT-S-OFDM	QPSK	108	108	5 mm	back	1:1	0.620	1.109	0.688	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.08	A	0.10	0	4	0767M	DFT-S-OFDM	QPSK	1	214	5 mm	front	1:1	0.134	1.102	0.148	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.05	A	0.12	0	4	0767M	DFT-S-OFDM	QPSK	108	108	5 mm	front	1:1	0.144	1.109	0.160	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.08	A	-0.02	0	17	0767M	DFT-S-OFDM	QPSK	1	214	5 mm	bottom	1:1	0.698	1.102	0.769	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.05	A	-0.06	0	17	0767M	DFT-S-OFDM	QPSK	108	108	5 mm	bottom	1:1	0.750	1.109	0.832	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	17.99	A	0.06	0	8	0767M	DFT-S-OFDM	QPSK	216	0	5 mm	bottom	1:1	0.777	1.125	0.874	A77
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	17.91	A	-0.01	0	17	0767M	CP-OFDM	QPSK	1	1	5 mm	bottom	1:1	0.776	1.146	0.889	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.08	A	0.13	0	0	0767M	DFT-S-OFDM	QPSK	1	214	5 mm	right	1:1	0.028	1.102	0.031	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.05	A	0.17	0	0	0767M	DFT-S-OFDM	QPSK	108	108	5 mm	right	1:1	0.028	1.109	0.031	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.08	A	0.04	0	1	0767M	DFT-S-OFDM	QPSK	1	214	5 mm	left	1:1	0.136	1.102	0.150	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	18.5	18.05	A	0.04	0	1	0767M	DFT-S-OFDM	QPSK	108	108	5 mm	left	1:1	0.156	1.109	0.173	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body													
Spatial Peak										1.6 W/kg (mW/g)													
Uncontrolled Exposure/General Population										averaged over 1 gram													

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Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 176 of 290

Table 11-66
NR Band n66 Ant I Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.62	I	0.13	0	0979M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.053	1.091	0.058	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.67	I	0.19	0	0979M	DFT-S-OFDM	QPSK	108	0	10 mm	back	1:1	0.049	1.079	0.053	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.62	I	0.15	0	0979M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.044	1.091	0.048	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.67	I	0.09	0	0979M	DFT-S-OFDM	QPSK	108	0	10 mm	front	1:1	0.039	1.079	0.042	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.62	I	0.19	0	0979M	DFT-S-OFDM	QPSK	1	1	10 mm	top	1:1	0.007	1.091	0.008	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.67	I	0.07	0	0979M	DFT-S-OFDM	QPSK	108	0	10 mm	top	1:1	0.007	1.079	0.008	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.62	I	0.10	0	0979M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.103	1.091	0.112	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.67	I	0.01	0	0979M	DFT-S-OFDM	QPSK	108	0	10 mm	right	1:1	0.098	1.079	0.106	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	19.0	18.72	I	0.06	0	0979M	CP-OFDM	QPSK	1	1	10 mm	right	1:1	0.098	1.067	0.105	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.62	I	0.00	0	0767M	DFT-S-OFDM	QPSK	1	1	5 mm	back	1:1	0.011	1.091	0.012	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.67	I	-0.11	0	0767M	DFT-S-OFDM	QPSK	108	0	5 mm	back	1:1	0.010	1.079	0.011	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.62	I	0.01	0	0767M	DFT-S-OFDM	QPSK	1	1	5 mm	front	1:1	0.213	1.091	0.232	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.67	I	0.03	0	0767M	DFT-S-OFDM	QPSK	108	0	5 mm	front	1:1	0.195	1.079	0.210	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.62	I	0.19	0	0767M	DFT-S-OFDM	QPSK	1	1	5 mm	bottom	1:1	0.009	1.091	0.010	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.67	I	-0.14	0	0767M	DFT-S-OFDM	QPSK	108	0	5 mm	bottom	1:1	0.008	1.079	0.009	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.62	I	0.06	0	0767M	DFT-S-OFDM	QPSK	1	1	5 mm	right	1:1	0.487	1.091	0.531	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.67	I	0.04	0	0767M	DFT-S-OFDM	QPSK	108	0	5 mm	right	1:1	0.516	1.079	0.557	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Closed	19.0	18.72	I	0.09	0	0767M	CP-OFDM	QPSK	1	1	5 mm	right	1:1	0.508	1.067	0.542	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

Table 11-67
NR Band n25 Ant A Hotspot SAR

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																		(W/kg)		(W/kg)		
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.63	A	0.05	0	13	1453M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.354	1.222	0.433	A79
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.55	A	-0.03	0	13	1453M	DFT-S-OFDM	QPSK	108	0	10 mm	back	1:1	0.317	1.245	0.395	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.63	A	0.00	0	13	1453M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.195	1.222	0.238	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.55	A	-0.05	0	13	1453M	DFT-S-OFDM	QPSK	108	0	10 mm	front	1:1	0.160	1.245	0.199	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.63	A	0.15	0	13	1453M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.400	1.222	0.489	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.55	A	0.01	0	13	1453M	DFT-S-OFDM	QPSK	108	0	10 mm	bottom	1:1	0.396	1.245	0.493	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.54	A	-0.02	0	13	1453M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.408	1.247	0.509	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.63	A	-0.03	0	13	1453M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.021	1.222	0.026	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.55	A	0.01	0	13	1453M	DFT-S-OFDM	QPSK	108	0	10 mm	right	1:1	0.023	1.245	0.029	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.63	A	0.02	0	13	1453M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.034	1.222	0.042	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	18.5	17.55	A	0.11	0	13	1453M	DFT-S-OFDM	QPSK	108	0	10 mm	left	1:1	0.028	1.245	0.035	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.63	A	-0.01	0	13	1453M	DFT-S-OFDM	QPSK	1	1	5 mm	back	1:1	0.210	1.222	0.257	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.55	A	0.06	0	13	1453M	DFT-S-OFDM	QPSK	108	0	5 mm	back	1:1	0.197	1.245	0.245	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.63	A	-0.09	0	13	1453M	DFT-S-OFDM	QPSK	1	1	5 mm	front	1:1	0.153	1.222	0.187	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.55	A	0.03	0	13	1453M	DFT-S-OFDM	QPSK	108	0	5 mm	front	1:1	0.155	1.245	0.193	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.63	A	0.04	0	13	1453M	DFT-S-OFDM	QPSK	1	1	5 mm	bottom	1:1	0.581	1.222	0.710	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.55	A	-0.04	0	13	1453M	DFT-S-OFDM	QPSK	108	0	5 mm	bottom	1:1	0.564	1.245	0.702	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.54	A	-0.02	0	13	1453M	CP-OFDM	QPSK	1	1	5 mm	bottom	1:1	0.574	1.247	0.716	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.63	A	-0.17	0	13	1453M	DFT-S-OFDM	QPSK	1	1	5 mm	right	1:1	0.035	1.222	0.043	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.55	A	-0.13	0	13	1453M	DFT-S-OFDM	QPSK	108	0	5 mm	right	1:1	0.032	1.245	0.040	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.63	A	0.00	0	13	1453M	DFT-S-OFDM	QPSK	1	1	5 mm	left	1:1	0.091	1.222	0.111	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	18.5	17.55	A	0.00	0	13	1453M	DFT-S-OFDM	QPSK	108	0	5 mm	left	1:1	0.088	1.245	0.110	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body													
Spatial Peak										1.6 W/kg (mW/g)													
Uncontrolled Exposure/General Population										averaged over 1 gram													

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Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 177 of 290

Table 11-68
NR Band n25 Ant I Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	19.00	I	-0.01	0	0737M	DFT-S-OFDM	QPSK	1	214	10 mm	back	1:1	0.209	1.000	0.209	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.97	I	0.01	0	0737M	DFT-S-OFDM	QPSK	108	54	10 mm	back	1:1	0.211	1.007	0.212	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	19.00	I	0.03	0	0737M	DFT-S-OFDM	QPSK	1	214	10 mm	front	1:1	0.162	1.000	0.162	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.97	I	0.02	0	0737M	DFT-S-OFDM	QPSK	108	54	10 mm	front	1:1	0.171	1.007	0.172	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	19.00	I	0.20	0	0737M	DFT-S-OFDM	QPSK	1	214	10 mm	top	1:1	0.087	1.000	0.087	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.97	I	0.02	0	0737M	DFT-S-OFDM	QPSK	108	54	10 mm	top	1:1	0.105	1.007	0.106	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	19.00	I	0.08	0	0737M	DFT-S-OFDM	QPSK	1	214	10 mm	right	1:1	0.391	1.000	0.391	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.97	I	0.05	0	0737M	DFT-S-OFDM	QPSK	108	54	10 mm	right	1:1	0.425	1.007	0.428	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	19.0	18.82	I	-0.06	0	0737M	CP-OFDM	QPSK	1	1	10 mm	right	1:1	0.452	1.042	0.471	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	19.00	I	-0.19	0	0979M	DFT-S-OFDM	QPSK	1	214	5 mm	back	1:1	0.033	1.000	0.033	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	18.97	I	-0.05	0	0979M	DFT-S-OFDM	QPSK	108	54	5 mm	back	1:1	0.026	1.007	0.026	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	19.00	I	0.09	0	0979M	DFT-S-OFDM	QPSK	1	214	5 mm	front	1:1	0.319	1.000	0.319	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	18.97	I	0.10	0	0979M	DFT-S-OFDM	QPSK	108	54	5 mm	front	1:1	0.286	1.007	0.288	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	19.00	I	-0.11	0	0979M	DFT-S-OFDM	QPSK	1	214	5 mm	bottom	1:1	0.047	1.000	0.047	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	18.97	I	-0.15	0	0979M	DFT-S-OFDM	QPSK	108	54	5 mm	bottom	1:1	0.041	1.007	0.041	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	19.00	I	0.01	0	0979M	DFT-S-OFDM	QPSK	1	214	5 mm	right	1:1	0.451	1.000	0.451	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	18.97	I	0.02	0	0979M	DFT-S-OFDM	QPSK	108	54	5 mm	right	1:1	0.443	1.007	0.446	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Closed	19.0	18.82	I	0.05	0	0979M	CP-OFDM	QPSK	1	1	5 mm	right	1:1	0.431	1.042	0.449	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-69
NR Band n30 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																(W/kg)		(W/kg)		
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	0.13	0	1453M	DFT-S-OFDM	QPSK	1	26	10 mm	back	1:1	0.207	1.122	0.232	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	0.04	0	1453M	DFT-S-OFDM	QPSK	25	27	10 mm	back	1:1	0.210	1.122	0.236	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	0.01	0	1453M	DFT-S-OFDM	QPSK	1	26	10 mm	front	1:1	0.150	1.122	0.168	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	0.03	0	1453M	DFT-S-OFDM	QPSK	25	27	10 mm	front	1:1	0.148	1.122	0.166	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	-0.04	0	1453M	DFT-S-OFDM	QPSK	1	26	10 mm	bottom	1:1	0.472	1.122	0.530	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	0.02	0	1453M	DFT-S-OFDM	QPSK	25	27	10 mm	bottom	1:1	0.479	1.122	0.537	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	17.92	0.02	0	1453M	CP-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.504	1.143	0.576	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	-0.12	0	1453M	DFT-S-OFDM	QPSK	1	26	10 mm	right	1:1	0.016	1.122	0.018	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	-0.01	0	1453M	DFT-S-OFDM	QPSK	25	27	10 mm	right	1:1	0.017	1.122	0.019	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	0.08	0	1453M	DFT-S-OFDM	QPSK	1	26	10 mm	left	1:1	0.036	1.122	0.040	
2310.00	462000	Mid	NR Band n30	10	Open	18.5	18.00	-0.02	0	1453M	DFT-S-OFDM	QPSK	25	27	10 mm	left	1:1	0.033	1.122	0.037	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	-0.06	0	1453M	DFT-S-OFDM	QPSK	1	26	5 mm	back	1:1	0.479	1.122	0.537	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	-0.02	0	1453M	DFT-S-OFDM	QPSK	25	27	5 mm	back	1:1	0.484	1.122	0.543	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	-0.15	0	1453M	DFT-S-OFDM	QPSK	1	26	5 mm	front	1:1	0.100	1.122	0.112	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	-0.08	0	1453M	DFT-S-OFDM	QPSK	25	27	5 mm	front	1:1	0.100	1.122	0.112	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	0.00	0	1453M	DFT-S-OFDM	QPSK	1	26	5 mm	bottom	1:1	0.868	1.122	0.974	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	0.00	0	1453M	DFT-S-OFDM	QPSK	25	27	5 mm	bottom	1:1	0.870	1.122	0.976	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	17.90	-0.05	0	1453M	DFT-S-OFDM	QPSK	50	0	5 mm	bottom	1:1	0.880	1.148	1.010	A61
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	17.92	-0.04	0	1453M	CP-OFDM	QPSK	1	1	5 mm	bottom	1:1	0.869	1.143	0.993	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	-0.20	0	1453M	DFT-S-OFDM	QPSK	1	26	5 mm	right	1:1	0.028	1.122	0.031	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	-0.07	0	1453M	DFT-S-OFDM	QPSK	25	27	5 mm	right	1:1	0.028	1.122	0.031	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	-0.17	0	1453M	DFT-S-OFDM	QPSK	1	26	5 mm	left	1:1	0.053	1.122	0.059	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	18.00	-0.18	0	1453M	DFT-S-OFDM	QPSK	25	27	5 mm	left	1:1	0.053	1.122	0.059	
2310.00	462000	Mid	NR Band n30	10	Closed	18.5	17.90	-0.05	0	1453M	DFT-S-OFDM	QPSK	50	0	5 mm	bottom	1:1	0.869	1.148	0.998	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

Note: Blue Entry represents variability measurement.

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of the element	SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 178 of 290

Table 11-70
NR Band n41 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR	Plot #	
MHz	Ch.																(W/kg)		(W/kg)		
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.65	-0.03	0	0903M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1:1	0.285	1.084	0.309	
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.64	0.16	0	0903M	DFT-S-OFDM	QPSK	135	0	10 mm	back	1:1	0.297	1.086	0.323	
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.65	-0.03	0	0903M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1:1	0.269	1.084	0.292	
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.64	0.05	0	0903M	DFT-S-OFDM	QPSK	135	0	10 mm	front	1:1	0.288	1.086	0.313	
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.65	-0.04	0	0903M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1:1	0.086	1.084	0.093	
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.64	-0.01	0	0903M	DFT-S-OFDM	QPSK	135	0	10 mm	top	1:1	0.093	1.086	0.101	
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.65	-0.11	0	0903M	DFT-S-OFDM	QPSK	1	137	10 mm	right	1:1	0.376	1.084	0.408	
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.64	0.16	0	0903M	DFT-S-OFDM	QPSK	135	0	10 mm	right	1:1	0.416	1.086	0.452	
2592.99	518598	Mid	NR Band n41	100	Open	20.0	19.57	-0.04	0	0903M	CP-OFDM	QPSK	1	1	10 mm	right	1:1	0.442	1.104	0.488	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.65	-0.06	0	0903M	DFT-S-OFDM	QPSK	1	137	5 mm	back	1:1	0.256	1.084	0.278	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.64	-0.10	0	0903M	DFT-S-OFDM	QPSK	135	0	5 mm	back	1:1	0.255	1.086	0.277	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.65	-0.07	0	0903M	DFT-S-OFDM	QPSK	1	137	5 mm	front	1:1	0.559	1.084	0.606	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.64	-0.15	0	0903M	DFT-S-OFDM	QPSK	135	0	5 mm	front	1:1	0.594	1.086	0.645	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.57	-0.07	0	0903M	DFT-S-OFDM	QPSK	270	0	5 mm	front	1:1	0.544	1.104	0.601	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.65	0.05	0	0903M	DFT-S-OFDM	QPSK	1	137	5 mm	top	1:1	0.059	1.084	0.064	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.64	-0.20	0	0903M	DFT-S-OFDM	QPSK	135	0	5 mm	top	1:1	0.058	1.086	0.063	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.65	-0.11	0	0903M	DFT-S-OFDM	QPSK	1	137	5 mm	bottom	1:1	0.157	1.084	0.170	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.64	-0.04	0	0903M	DFT-S-OFDM	QPSK	135	0	5 mm	bottom	1:1	0.162	1.086	0.176	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.65	-0.02	0	0903M	DFT-S-OFDM	QPSK	1	137	5 mm	right	1:1	0.860	1.084	0.932	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.64	0.03	0	0903M	DFT-S-OFDM	QPSK	135	0	5 mm	right	1:1	0.905	1.086	0.983	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.57	-0.07	0	0903M	DFT-S-OFDM	QPSK	270	0	5 mm	right	1:1	0.849	1.104	0.937	
2592.99	518598	Mid	NR Band n41	100	Closed	20.0	19.57	0.03	0	0903M	CP-OFDM	QPSK	1	1	5 mm	right	1:1	0.945	1.104	1.043	A83
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram												

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Table 11-71
NR Band n77 DoD Hotspot SAR

Frequency		Measurement Results																			
		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Out [dBm]	MPF [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPF [dB]	Duty Cycle	SAR [W/kg]	Scaling Factor	Reported SAR [W/kg]	Pass #
MHz	Ch																				
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.44	F	0.00	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1.1	0.270	1.276	0.345
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.43	F	-0.03	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	back	1.1	0.240	1.279	0.307
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.32	F	0.06	0	1441M	CP-OFDM	QPSK	1	1	10 mm	back	1.1	0.230	1.312	0.302
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.44	F	0.00	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1.1	0.188	1.276	0.240
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.43	F	0.01	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	front	1.1	0.187	1.279	0.239
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.44	F	-0.10	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1.1	0.160	1.276	0.204
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.43	F	-0.17	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	top	1.1	0.164	1.279	0.210
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.44	F	0.06	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1.1	0.261	1.276	0.320
3500.01	633334	Md	NR Band n77 DoD	100	Open	18.5	17.43	F	-0.04	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	left	1.1	0.263	1.279	0.324
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.57	I	0.06	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1.1	0.074	1.239	0.092
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.59	I	-0.20	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	back	1.1	0.075	1.233	0.092
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.57	I	-0.13	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1.1	0.071	1.239	0.088
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.59	I	0.07	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	front	1.1	0.069	1.233	0.085
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.57	I	-0.14	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1.1	0.020	1.239	0.025
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.59	I	0.18	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	top	1.1	0.030	1.233	0.025
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.57	I	-0.18	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	right	1.1	0.176	1.239	0.218
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.59	I	-0.03	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	right	1.1	0.173	1.233	0.213
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.40	I	-0.11	0	1441M	CP-OFDM	QPSK	1	1	10 mm	right	1.1	0.175	1.288	0.225
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.05	E	0.12	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1.1	0.094	1.396	0.075
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.06	E	-0.01	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	back	1.1	0.092	1.393	0.072
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.05	E	-0.08	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1.1	0.078	1.396	0.109
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.06	E	-0.05	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	front	1.1	0.074	1.393	0.103
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.05	E	0.06	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1.1	0.003	1.396	0.004
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.06	E	0.17	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	top	1.1	0.003	1.393	0.004
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.05	E	0.11	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1.1	0.003	1.396	0.130
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.06	E	-0.12	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	left	1.1	0.004	1.393	0.117
3500.01	633334	Md	NR Band n77 DoD	100	Open	16.5	15.02	E	0.04	0	1441M	CP-OFDM	QPSK	1	1	10 mm	left	1.1	0.080	1.406	0.112
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.82	C	0.09	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1.1	0.042	1.042	0.044
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.78	C	0.00	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	back	1.1	0.044	1.052	0.046
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.82	C	-0.02	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1.1	0.032	1.042	0.033
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.78	C	0.00	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	front	1.1	0.029	1.052	0.031
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.82	C	0.12	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	bottom	1.1	0.011	1.042	0.011
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.78	C	0.19	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	bottom	1.1	0.010	1.052	0.011
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.82	C	0.11	0	1441M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1.1	0.005	1.042	0.009
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.78	C	0.05	0	1441M	DFT-S-OFDM	QPSK	135	69	10 mm	left	1.1	0.079	1.052	0.083
3500.01	633334	Md	NR Band n77 DoD	100	Open	12.0	11.70	C	0.08	0	1441M	CP-OFDM	QPSK	1	1	10 mm	left	1.1	0.074	1.072	0.079
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.44	F	0.08	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	back	1.1	0.061	1.276	0.065
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.43	F	0.18	0	1432M	DFT-S-OFDM	QPSK	135	69	5 mm	back	1.1	0.063	1.279	0.081
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.44	F	0.04	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	front	1.1	0.029	1.276	0.075
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.43	F	0.09	0	1432M	DFT-S-OFDM	QPSK	135	69	5 mm	front	1.1	0.023	1.279	0.069
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.44	F	0.19	0	1432M	DFT-S-OFDM	QPSK	270	0	5 mm	front	1.1	0.445	1.297	0.577
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.37	F	0.09	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	bottom	1.1	0.003	1.276	0.387
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.43	F	0.05	0	1432M	DFT-S-OFDM	QPSK	135	69	5 mm	bottom	1.1	0.010	1.279	0.396
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.44	F	0.16	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	left	1.1	0.075	1.276	0.734
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.43	F	0.08	0	1432M	DFT-S-OFDM	QPSK	135	69	5 mm	left	1.1	0.004	1.279	0.760
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.37	F	0.18	0	1432M	DFT-S-OFDM	QPSK	270	0	5 mm	left	1.1	0.006	1.297	0.656
3500.01	633334	Md	NR Band n77 DoD	100	Closed	18.5	17.32	F	0.04	0	1432M	CP-OFDM	QPSK	1	1	5 mm	left	1.1	0.046	1.312	0.716
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.57	I	0.13	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	back	1.1	0.009	1.239	0.036
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.59	I	0.13	0	1432M	DFT-S-OFDM	QPSK	135	69	5 mm	back	1.1	0.026	1.233	0.032
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.57	I	-0.09	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	front	1.1	0.219	1.239	0.271
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.59	I	-0.03	0	1432M	DFT-S-OFDM	QPSK	135	69	5 mm	front	1.1	0.219	1.233	0.270
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.57	I	0.16	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	top	1.1	0.018	1.239	0.022
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.59	I	0.18	0	1432M	DFT-S-OFDM	QPSK	135	69	5 mm	top	1.1	0.016	1.233	0.020
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.57	I	-0.20	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	bottom	1.1	0.000	1.239	0.037
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.59	I	-0.10	0	1432M	DFT-S-OFDM	QPSK	135	69	5 mm	bottom	1.1	0.002	1.233	0.039
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.57	I	0.11	0	1432M	DFT-S-OFDM	QPSK	1	137	5 mm	right	1.1	0.495	1.239	0.564
3500.01	633334	Md	NR Band n77 DoD	100	Closed	16.5	15.59	I	-0.10	0	1432M	DFT-S-OFDM									

Table 11-72
NR Band n77 Hotspot SAR - Open

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth (MHz)	Cover Type	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Antenna Config	Power Drift (dB)	MPR (dB)	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR (dB)	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
3930.00	662000	High	NR Band n77	100	Open	18.5	18.50	F	0.13	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1:1	0.264	1.000	0.264	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.47	F	-0.01	0	1454M	DFT-S-OFDM	QPSK	135	69	10 mm	back	1:1	0.262	1.007	0.264	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.50	F	0.08	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1:1	0.246	1.000	0.246	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.47	F	-0.04	0	1454M	DFT-S-OFDM	QPSK	135	69	10 mm	front	1:1	0.243	1.007	0.245	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.50	F	0.04	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1:1	0.190	1.000	0.190	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.47	F	-0.03	0	1454M	DFT-S-OFDM	QPSK	135	69	10 mm	top	1:1	0.181	1.007	0.182	
3750.00	650000	Low	NR Band n77	100	Open	18.5	18.48	F	0.00	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.364	1.005	0.366	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.50	F	0.00	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.414	1.000	0.414	
3750.00	650000	Low	NR Band n77	100	Open	18.5	18.45	F	0.01	0	1454M	DFT-S-OFDM	QPSK	135	69	10 mm	left	1:1	0.363	1.012	0.367	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.47	F	0.07	0	1454M	DFT-S-OFDM	QPSK	135	69	10 mm	left	1:1	0.408	1.007	0.411	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.34	F	-0.07	0	1454M	DFT-S-OFDM	QPSK	270	0	10 mm	left	1:1	0.338	1.038	0.351	
3930.00	662000	High	NR Band n77	100	Open	18.5	18.24	F	-0.03	0	1454M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.419	1.062	0.445	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.66	I	0.13	0	1441M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.008	1.213	0.010	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.68	I	-0.12	0	1441M	DFT-S-OFDM	QPSK	135	0	10 mm	back	1:1	0.013	1.208	0.016	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.66	I	0.15	0	1441M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.015	1.213	0.018	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.68	I	-0.16	0	1441M	DFT-S-OFDM	QPSK	135	0	10 mm	front	1:1	0.018	1.208	0.022	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.66	I	0.18	0	1441M	DFT-S-OFDM	QPSK	1	1	10 mm	top	1:1	0.000	1.213	0.000	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.68	I	-0.12	0	1441M	DFT-S-OFDM	QPSK	135	0	10 mm	top	1:1	0.003	1.208	0.004	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.66	I	0.15	0	1441M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.093	1.213	0.113	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.68	I	0.14	0	1441M	DFT-S-OFDM	QPSK	135	0	10 mm	right	1:1	0.079	1.208	0.095	
3750.00	650000	Low	NR Band n77	100	Open	16.5	15.61	I	0.13	0	1441M	CP-OFDM	QPSK	1	1	10 mm	right	1:1	0.090	1.227	0.110	
3930.00	662000	High	NR Band n77	100	Open	16.5	16.15	E	-0.20	0	1456M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1:1	0.049	1.084	0.053	
3930.00	662000	High	NR Band n77	100	Open	16.5	16.10	E	-0.03	0	1456M	DFT-S-OFDM	QPSK	135	0	10 mm	back	1:1	0.047	1.096	0.052	
3930.00	662000	High	NR Band n77	100	Open	16.5	16.15	E	-0.19	0	1456M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1:1	0.030	1.084	0.033	
3930.00	662000	High	NR Band n77	100	Open	16.5	16.10	E	-0.16	0	1456M	DFT-S-OFDM	QPSK	135	0	10 mm	front	1:1	0.034	1.096	0.037	
3930.00	662000	High	NR Band n77	100	Open	16.5	16.15	E	0.06	0	1456M	DFT-S-OFDM	QPSK	1	137	10 mm	top	1:1	0.007	1.084	0.008	
3930.00	662000	High	NR Band n77	100	Open	16.5	16.10	E	0.00	0	1456M	DFT-S-OFDM	QPSK	135	0	10 mm	top	1:1	0.004	1.096	0.004	
3930.00	662000	High	NR Band n77	100	Open	16.5	16.15	E	-0.11	0	1456M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.070	1.084	0.076	
3930.00	662000	High	NR Band n77	100	Open	16.5	16.10	E	0.17	0	1456M	DFT-S-OFDM	QPSK	135	0	10 mm	left	1:1	0.067	1.096	0.073	
3930.00	662000	High	NR Band n77	100	Open	16.5	15.90	E	-0.02	0	1456M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.064	1.148	0.073	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.74	C	-0.19	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	back	1:1	0.041	1.062	0.044	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.66	C	-0.18	0	1454M	DFT-S-OFDM	QPSK	135	0	10 mm	back	1:1	0.053	1.081	0.057	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.74	C	-0.16	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	front	1:1	0.045	1.062	0.048	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.66	C	-0.18	0	1454M	DFT-S-OFDM	QPSK	135	0	10 mm	front	1:1	0.049	1.081	0.053	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.74	C	0.00	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	bottom	1:1	0.005	1.062	0.005	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.66	C	-0.13	0	1454M	DFT-S-OFDM	QPSK	135	0	10 mm	bottom	1:1	0.008	1.081	0.009	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.74	C	-0.15	0	1454M	DFT-S-OFDM	QPSK	1	137	10 mm	left	1:1	0.099	1.062	0.105	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.66	C	-0.15	0	1454M	DFT-S-OFDM	QPSK	135	0	10 mm	left	1:1	0.108	1.081	0.117	
3930.00	662000	High	NR Band n77	100	Open	12.0	11.63	C	-0.13	0	1454M	CP-OFDM	QPSK	1	1	10 mm	left	1:1	0.119	1.089	0.130	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

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Table 11-73
NR Band n77 Hotspot SAR - Closed

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth (MHz)	Form Factor	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Antenna Config	Power Drift (dB)	MPR (dB)	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR (dB)	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.																	(W/kg)		(W/kg)		
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.50	F	-0.15	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	back	1:1	0.286	1.000	0.286	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.47	F	0.07	0	1456M	DFT-S-OFDM	QPSK	135	69	5 mm	back	1:1	0.281	1.007	0.283	
3750.00	650000	Low	NR Band n77	100	Closed	18.5	18.48	F	-0.12	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	front	1:1	0.446	1.005	0.448	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.50	F	-0.19	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	front	1:1	0.496	1.000	0.496	
3750.00	650000	Low	NR Band n77	100	Closed	18.5	18.45	F	-0.08	0	1456M	DFT-S-OFDM	QPSK	135	69	5 mm	front	1:1	0.438	1.012	0.443	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.47	F	-0.14	0	1456M	DFT-S-OFDM	QPSK	135	69	5 mm	front	1:1	0.513	1.007	0.517	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.34	F	0.12	0	1456M	DFT-S-OFDM	QPSK	270	0	5 mm	front	1:1	0.501	1.038	0.520	
3750.00	650000	Low	NR Band n77	100	Closed	18.5	18.48	F	-0.17	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	bottom	1:1	0.462	1.005	0.464	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.50	F	0.03	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	bottom	1:1	0.609	1.000	0.609	
3750.00	650000	Low	NR Band n77	100	Closed	18.5	18.45	F	-0.09	0	1456M	DFT-S-OFDM	QPSK	135	69	5 mm	bottom	1:1	0.440	1.012	0.445	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.47	F	0.03	0	1456M	DFT-S-OFDM	QPSK	135	69	5 mm	bottom	1:1	0.562	1.007	0.566	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.34	F	0.14	0	1456M	DFT-S-OFDM	QPSK	270	0	5 mm	bottom	1:1	0.607	1.038	0.630	
3750.00	650000	Low	NR Band n77	100	Closed	18.5	18.48	F	0.15	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	left	1:1	0.700	1.005	0.704	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.50	F	0.10	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	left	1:1	0.809	1.000	0.809	
3750.00	650000	Low	NR Band n77	100	Closed	18.5	18.45	F	-0.03	0	1456M	DFT-S-OFDM	QPSK	135	69	5 mm	left	1:1	0.788	1.012	0.797	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.47	F	0.01	0	1456M	DFT-S-OFDM	QPSK	135	69	5 mm	left	1:1	0.892	1.007	0.898	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.34	F	0.00	0	1456M	DFT-S-OFDM	QPSK	270	0	5 mm	left	1:1	0.948	1.038	0.984	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.24	F	-0.06	0	1456M	CP-OFDM	QPSK	1	1	5 mm	left	1:1	1.010	1.062	1.073	A87
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.66	I	0.14	0	1432M	DFT-S-OFDM	QPSK	1	1	5 mm	back	1:1	0.023	1.213	0.028	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.68	I	-0.07	0	1432M	DFT-S-OFDM	QPSK	135	0	5 mm	back	1:1	0.018	1.208	0.022	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.66	I	-0.08	0	1432M	DFT-S-OFDM	QPSK	1	1	5 mm	front	1:1	0.187	1.213	0.227	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.68	I	0.03	0	1432M	DFT-S-OFDM	QPSK	135	0	5 mm	front	1:1	0.180	1.208	0.217	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.66	I	-0.18	0	1432M	DFT-S-OFDM	QPSK	1	1	5 mm	top	1:1	0.007	1.213	0.008	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.68	I	0.13	0	1432M	DFT-S-OFDM	QPSK	135	0	5 mm	top	1:1	0.009	1.208	0.011	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.66	I	-0.10	0	1432M	DFT-S-OFDM	QPSK	1	1	5 mm	bottom	1:1	0.009	1.213	0.011	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.68	I	-0.17	0	1432M	DFT-S-OFDM	QPSK	135	0	5 mm	bottom	1:1	0.009	1.208	0.011	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.66	I	-0.07	0	1432M	DFT-S-OFDM	QPSK	1	1	5 mm	right	1:1	0.281	1.213	0.341	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.68	I	-0.08	0	1432M	DFT-S-OFDM	QPSK	135	0	5 mm	right	1:1	0.286	1.208	0.345	
3750.00	650000	Low	NR Band n77	100	Closed	16.5	15.61	I	-0.10	0	1432M	CP-OFDM	QPSK	1	1	5 mm	right	1:1	0.281	1.227	0.345	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.15	E	0.04	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	back	1:1	0.032	1.084	0.035	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.10	E	0.14	0	1456M	DFT-S-OFDM	QPSK	135	0	5 mm	back	1:1	0.033	1.096	0.036	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.15	E	-0.20	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	front	1:1	0.156	1.084	0.169	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.10	E	0.18	0	1456M	DFT-S-OFDM	QPSK	135	0	5 mm	front	1:1	0.157	1.096	0.172	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.15	E	-0.12	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	top	1:1	0.000	1.084	0.000	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.10	E	-0.17	0	1456M	DFT-S-OFDM	QPSK	135	0	5 mm	top	1:1	0.002	1.096	0.002	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.15	E	-0.16	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	bottom	1:1	0.009	1.084	0.010	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.10	E	0.14	0	1456M	DFT-S-OFDM	QPSK	135	0	5 mm	bottom	1:1	0.013	1.096	0.014	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.15	E	0.08	0	1456M	DFT-S-OFDM	QPSK	1	137	5 mm	left	1:1	0.232	1.084	0.251	
3930.00	662000	High	NR Band n77	100	Closed	16.5	16.10	E	0.05	0	1456M	DFT-S-OFDM	QPSK	135	0	5 mm	left	1:1	0.236	1.096	0.259	
3930.00	662000	High	NR Band n77	100	Closed	16.5	15.90	E	0.07	0	1456M	CP-OFDM	QPSK	1	1	5 mm	left	1:1	0.248	1.148	0.285	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.74	C	-0.18	0	1454M	DFT-S-OFDM	QPSK	1	137	5 mm	back	1:1	0.166	1.062	0.176	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.66	C	-0.19	0	1454M	DFT-S-OFDM	QPSK	135	0	5 mm	back	1:1	0.168	1.081	0.182	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.74	C	-0.14	0	1454M	DFT-S-OFDM	QPSK	1	137	5 mm	front	1:1	0.032	1.062	0.034	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.66	C	-0.12	0	1454M	DFT-S-OFDM	QPSK	135	0	5 mm	front	1:1	0.031	1.081	0.034	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.74	C	-0.13	0	1454M	DFT-S-OFDM	QPSK	1	137	5 mm	top	1:1	0.011	1.062	0.012	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.66	C	-0.13	0	1454M	DFT-S-OFDM	QPSK	135	0	5 mm	top	1:1	0.008	1.081	0.009	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.74	C	0.00	0	1454M	DFT-S-OFDM	QPSK	1	137	5 mm	bottom	1:1	0.005	1.062	0.005	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.66	C	-0.14	0	1454M	DFT-S-OFDM	QPSK	135	0	5 mm	bottom	1:1	0.009	1.081	0.010	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.74	C	-0.15	0	1454M	DFT-S-OFDM	QPSK	1	137	5 mm	left	1:1	0.347	1.062	0.369	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.66	C	-0.03	0	1454M	DFT-S-OFDM	QPSK	135	0	5 mm	left	1:1	0.339	1.081	0.366	
3930.00	662000	High	NR Band n77	100	Closed	12.0	11.63	C	-0.12	0	1454M	CP-OFDM	QPSK	1	1	5 mm	left	1:1	0.321	1.089	0.350	
3930.00	662000	High	NR Band n77	100	Closed	18.5	18.24	F	0.08	0	1456M	CP-OFDM	QPSK	1	1	5 mm	left	1:1	0.951	1.062	1.010	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

Note: Blue Entry represents variability measurement.

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Table 11-74
WLAN SISO Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														W/kg	(W/kg)		(W/kg)		
2462	11	802.11b	DSSS	22	19.0	18.95	0.00	10 mm	2	Open	1437M	1	back	99.9	0.156	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.95	-0.10	10 mm	2	Open	1437M	1	front	99.9	0.189	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.95	0.02	10 mm	2	Open	1437M	1	top	99.9	0.202	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.95	-0.12	10 mm	2	Open	1437M	1	left	99.9	0.220	0.161	1.012	1.001	0.163	
2462	11	802.11b	DSSS	22	19.0	18.95	-0.06	5 mm	2	Closed	1437M	1	back	99.9	0.081	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.95	-0.16	5 mm	2	Closed	1437M	1	front	99.9	0.555	0.381	1.012	1.001	0.386	
2462	11	802.11b	DSSS	22	19.0	18.95	-0.16	5 mm	2	Closed	1437M	1	bottom	99.9	0.464	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.95	0.09	5 mm	2	Closed	1437M	1	left	99.9	0.593	0.432	1.012	1.001	0.438	
5785	157	802.11a	OFDM	20	18.0	17.84	-0.19	10 mm	1	Open	1866M	6	back	98.9	0.135	-	1.038	1.011	-	
5785	157	802.11a	OFDM	20	18.0	17.84	-0.12	10 mm	1	Open	1866M	6	front	98.9	0.090	-	1.038	1.011	-	
5785	157	802.11a	OFDM	20	18.0	17.84	-0.10	10 mm	1	Open	1866M	6	top	98.9	0.190	0.139	1.038	1.011	0.146	
5785	157	802.11a	OFDM	20	18.0	17.84	-0.17	10 mm	1	Open	1866M	6	right	98.9	0.041	-	1.038	1.011	-	
5785	157	802.11a	OFDM	20	18.0	17.84	0.03	5 mm	1	Closed	1866M	6	back	98.9	0.059	-	1.038	1.011	-	
5785	157	802.11a	OFDM	20	18.0	17.84	0.13	5 mm	1	Closed	1866M	6	front	98.9	0.346	-	1.038	1.011	-	
5785	157	802.11a	OFDM	20	18.0	17.84	0.20	5 mm	1	Closed	1866M	6	bottom	98.9	0.550	0.247	1.038	1.011	0.259	
5785	157	802.11a	OFDM	20	18.0	17.84	0.13	5 mm	1	Closed	1866M	6	right	98.9	0.068	-	1.038	1.011	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-75
WLAN SISO Hotspot SAR for Conditions with 2.4 GHz and 5 GHz WLAN SAR and/or with 5G NR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.														W/kg	(W/kg)		(W/kg)		
2437	6	802.11b	DSSS	22	15.0	14.99	0.14	10 mm	2	Open	1437M	1	back	99.9	0.095	-	1.002	1.001	-	
2437	6	802.11b	DSSS	22	15.0	14.99	0.00	10 mm	2	Open	1437M	1	front	99.9	0.110	0.076	1.002	1.001	0.076	
2437	6	802.11b	DSSS	22	15.0	14.99	0.16	10 mm	2	Open	1437M	1	top	99.9	0.128	0.100	1.002	1.001	0.100	
2437	6	802.11b	DSSS	22	15.0	14.99	0.04	10 mm	2	Open	1437M	1	left	99.9	0.112	-	1.002	1.001	-	
2437	6	802.11b	DSSS	22	15.0	14.99	0.14	5 mm	2	Closed	1437M	1	back	99.9	0.057	-	1.002	1.001	-	
2437	6	802.11b	DSSS	22	15.0	14.99	0.17	5 mm	2	Closed	1437M	1	front	99.9	0.285	0.181	1.002	1.001	0.182	
2437	6	802.11b	DSSS	22	15.0	14.99	0.00	5 mm	2	Closed	1437M	1	bottom	99.9	0.350	0.251	1.002	1.001	0.252	
2437	6	802.11b	DSSS	22	15.0	14.99	0.09	5 mm	2	Closed	1437M	1	left	99.9	0.266	-	1.002	1.001	-	
5775	155	802.11ac	OFDM	80	15.0	14.55	-0.14	10 mm	1	Open	0906M	29.3	back	99.7	0.054	0.021	1.109	1.003	0.023	
5775	155	802.11ac	OFDM	80	15.0	14.55	0.00	10 mm	1	Open	0906M	29.3	front	99.7	0.007	-	1.109	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.55	-0.14	10 mm	1	Open	0906M	29.3	top	99.7	0.047	-	1.109	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.55	0.00	10 mm	1	Open	0906M	29.3	right	99.7	0.000	-	1.109	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.55	0.19	5 mm	1	Closed	0906M	29.3	back	99.7	0.000	-	1.109	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.55	0.14	5 mm	1	Closed	0906M	29.3	front	99.7	0.087	0.050	1.109	1.003	0.056	
5775	155	802.11ac	OFDM	80	15.0	14.55	-0.03	5 mm	1	Closed	0906M	29.3	bottom	99.7	0.050	-	1.109	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.55	-0.12	5 mm	1	Closed	0906M	29.3	right	99.7	0.000	-	1.109	1.003	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Body 1.6 W/kg (mW/g) averaged over 1 gram												

Note: 2.4 GHZ WLAN and 5GHz WLAN SISO were additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN and/or 5G NR active. 5GHz WLAN and/or 5G NR were not transmitting during 2.4GHz WLAN evaluations and 2.4GHz WLAN and/or 5G NR were not transmitting during 5GHz WLAN evaluations

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Table 11-76
WLAN MIMO Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																W/kg	(W/kg)		(W/kg)		
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	0.12	10 mm	MIMO	Open	1437M	1	back	99.9	0.385	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	0.15	10 mm	MIMO	Open	1437M	1	front	99.9	0.418	0.349	1.012	1.001	0.354	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	0.17	10 mm	MIMO	Open	1437M	1	top	99.9	0.282	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	-0.12	10 mm	MIMO	Open	1437M	1	right	99.9	0.106	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	-0.05	10 mm	MIMO	Open	1437M	1	left	99.9	0.331	-	1.012	1.001	-	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	-0.12	5 mm	MIMO	Closed	1437M	1	back	99.9	0.282	0.222	1.012	1.001	0.225	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	0.01	5 mm	MIMO	Closed	1437M	1	front	99.9	0.906	0.661	1.012	1.001	0.670	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	0.10	5 mm	MIMO	Closed	1437M	1	bottom	99.9	0.491	0.438	1.012	1.001	0.444	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	-0.11	5 mm	MIMO	Closed	1437M	1	right	99.9	0.148	0.120	1.012	1.001	0.122	
2412	1	802.11b	DSSS	22	19.0	18.63	19.0	18.77	-0.05	5 mm	MIMO	Closed	1437M	1	left	99.9	1.090	0.844	1.089	1.001	0.920	A89
2437	6	802.11b	DSSS	22	19.0	18.80	19.0	18.85	0.04	5 mm	MIMO	Closed	1437M	1	left	99.9	1.070	0.829	1.047	1.001	0.869	
2462	11	802.11b	DSSS	22	19.0	18.96	19.0	18.95	0.09	5 mm	MIMO	Closed	1437M	1	left	99.9	0.888	0.674	1.012	1.001	0.683	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	0.16	10 mm	MIMO	Open	1866M	13	back	99.7	0.141	-	1.079	1.003	-	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	-0.14	10 mm	MIMO	Open	1866M	13	front	99.7	0.167	-	1.079	1.003	-	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	0.16	10 mm	MIMO	Open	1866M	13	top	99.7	0.134	-	1.079	1.003	-	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	0.15	10 mm	MIMO	Open	1866M	13	right	99.7	0.031	-	1.079	1.003	-	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	-0.02	10 mm	MIMO	Open	1866M	13	left	99.7	0.189	0.128	1.079	1.003	0.139	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	0.13	5 mm	MIMO	Closed	1866M	13	back	99.7	0.085	-	1.079	1.003	-	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	-0.09	5 mm	MIMO	Closed	1866M	13	front	99.7	0.387	-	1.079	1.003	-	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	0.01	5 mm	MIMO	Closed	1866M	13	bottom	99.7	0.337	0.235	1.079	1.003	0.254	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	0.14	5 mm	MIMO	Closed	1866M	13	right	99.7	0.058	-	1.079	1.003	-	
5785	157	802.11n	OFDM	20	18.0	17.67	18.0	17.92	0.13	5 mm	MIMO	Closed	1866M	13	left	99.7	0.406	0.332	1.079	1.003	0.359	A01
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

Note: For 2.4 GHz WLAN, to achieve the 22.0 dBm maximum allowed MIMO power shown in the documentation each antenna transmits at a maximum allowed power of 19.0 dBm. For 5 GHz WLAN, to achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation each antenna transmits at a maximum allowed power of 18.0 dBm.

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Table 11-77
WLAN MIMO Hotspot SAR for Conditions with 2.4 GHz and 5 GHz WLAN SAR and/or with 5G NR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																W/kg	(W/kg)	(W/kg)			
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.18	10 mm	MIMO	Open	1437M	13	back	99.7	0.063	-	1.059	1.003	-	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.00	10 mm	MIMO	Open	1437M	13	front	99.7	0.067	-	1.059	1.003	-	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.18	10 mm	MIMO	Open	1437M	13	top	99.7	0.065	-	1.059	1.003	-	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.00	10 mm	MIMO	Open	1437M	13	right	99.7	0.009	-	1.059	1.003	-	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.15	10 mm	MIMO	Open	1437M	13	left	99.7	0.068	0.049	1.059	1.003	0.052	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.00	5 mm	MIMO	Closed	1437M	13	back	99.7	0.040	-	1.059	1.003	-	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.12	5 mm	MIMO	Closed	1437M	13	front	99.7	0.155	0.125	1.059	1.003	0.133	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.16	5 mm	MIMO	Closed	1437M	13	bottom	99.7	0.151	-	1.059	1.003	-	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.17	5 mm	MIMO	Closed	1437M	13	right	99.7	0.018	-	1.059	1.003	-	
2437	6	802.11n	OFDM	20	15.0	14.75	15.0	14.92	0.13	5 mm	MIMO	Closed	1437M	13	left	99.7	0.134	-	1.059	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	-0.03	10 mm	MIMO	Open	0906M	58.5	back	99.7	0.041	-	1.256	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	-0.14	10 mm	MIMO	Open	0906M	58.5	front	99.7	0.010	-	1.256	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	-0.07	10 mm	MIMO	Open	0906M	58.5	top	99.7	0.043	-	1.256	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	0.13	10 mm	MIMO	Open	0906M	58.5	right	99.7	0.001	-	1.256	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	-0.14	10 mm	MIMO	Open	0906M	58.5	left	99.7	0.062	0.013	1.256	1.003	0.016	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	-0.09	5 mm	MIMO	Closed	0906M	58.5	back	99.7	0.000	-	1.256	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	-0.19	5 mm	MIMO	Closed	0906M	58.5	front	99.7	0.084	0.043	1.256	1.003	0.054	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	0.06	5 mm	MIMO	Closed	0906M	58.5	bottom	99.7	0.116	0.065	1.256	1.003	0.082	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	0.18	5 mm	MIMO	Closed	0906M	58.5	right	99.7	0.002	-	1.256	1.003	-	
5775	155	802.11ac	OFDM	80	15.0	14.01	15.0	14.73	-0.13	5 mm	MIMO	Closed	0906M	58.5	left	99.7	0.076	-	1.256	1.003	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram												

Note: 2.4 GHZ WLAN and 5GHz WLAN MIMO were additionally evaluated at the maximum allowed output power during operations with Simultaneous 2.4 GHz WLAN and 5 GHz WLAN and/or 5G NR active. 5GHz WLAN and/or 5G NR were not transmitting during 2.4GHz WLAN evaluations and 2.4GHz WLAN and/or 5G NR were not transmitting during 5GHz WLAN evaluations. For 2.4 GHz WLAN and 5 GHz WLAN, to achieve the 18.0 dBm maximum allowed MIMO power shown in the documentation each antenna transmits at a maximum allowed power of 15.0 dBm.

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**Table 11-78
DSS Hotspot SAR**

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	16.0	15.43	-0.16	10 mm	1	Open	1437M	1	back	76.80	0.087	1.140	1.302	0.129	
2441	39	Bluetooth	FHSS	16.0	15.43	-0.21	10 mm	1	Open	1437M	1	front	76.80	0.063	1.140	1.302	0.094	
2441	39	Bluetooth	FHSS	16.0	15.43	-0.14	10 mm	1	Open	1437M	1	top	76.80	0.044	1.140	1.302	0.065	
2441	39	Bluetooth	FHSS	16.0	15.43	-0.18	10 mm	1	Open	1437M	1	right	76.80	0.011	1.140	1.302	0.016	
2441	39	Bluetooth	FHSS	17.0	16.61	0.12	10 mm	2	Open	1437M	1	back	76.80	0.079	1.094	1.302	0.113	
2441	39	Bluetooth	FHSS	17.0	16.61	0.13	10 mm	2	Open	1437M	1	front	76.80	0.084	1.094	1.302	0.120	
2441	39	Bluetooth	FHSS	17.0	16.61	0.13	10 mm	2	Open	1437M	1	top	76.80	0.110	1.094	1.302	0.157	
2441	39	Bluetooth	FHSS	17.0	16.61	0.16	10 mm	2	Open	1437M	1	left	76.80	0.099	1.094	1.302	0.141	
2441	39	Bluetooth	FHSS	16.0	15.43	-0.01	5 mm	1	Closed	1437M	1	back	76.80	0.040	1.140	1.302	0.059	
2441	39	Bluetooth	FHSS	16.0	15.43	-0.04	5 mm	1	Closed	1437M	1	front	76.80	0.193	1.140	1.302	0.286	
2441	39	Bluetooth	FHSS	16.0	15.43	-0.04	5 mm	1	Closed	1437M	1	bottom	76.80	0.130	1.140	1.302	0.193	
2441	39	Bluetooth	FHSS	16.0	15.43	0.13	5 mm	1	Closed	1437M	1	right	76.80	0.030	1.140	1.302	0.045	
2441	39	Bluetooth	FHSS	14.0	13.10	-0.19	5 mm	1	Closed	1437M	1	back	76.80	0.016	1.230	1.302	0.026	
2441	39	Bluetooth	FHSS	14.0	13.10	-0.16	5 mm	1	Closed	1437M	1	front	76.80	0.077	1.230	1.302	0.123	
2441	39	Bluetooth	FHSS	14.0	13.10	-0.21	5 mm	1	Closed	1437M	1	bottom	76.80	0.043	1.230	1.302	0.069	
2441	39	Bluetooth	FHSS	14.0	13.10	-0.17	5 mm	1	Closed	1437M	1	right	76.80	0.011	1.230	1.302	0.018	
2441	39	Bluetooth	FHSS	17.0	16.61	-0.12	5 mm	2	Closed	0906M	1	back	76.80	0.043	1.094	1.302	0.061	
2441	39	Bluetooth	FHSS	17.0	16.61	0.17	5 mm	2	Closed	0906M	1	front	76.80	0.165	1.094	1.302	0.235	
2441	39	Bluetooth	FHSS	17.0	16.61	0.01	5 mm	2	Closed	0906M	1	bottom	76.80	0.217	1.094	1.302	0.309	A93
2441	39	Bluetooth	FHSS	17.0	16.61	0.05	5 mm	2	Closed	0906M	1	left	76.80	0.189	1.094	1.302	0.269	
2441	39	Bluetooth	FHSS	14.0	13.93	-0.18	5 mm	2	Closed	1437M	1	back	76.80	0.016	1.016	1.302	0.021	
2441	39	Bluetooth	FHSS	14.0	13.93	0.00	5 mm	2	Closed	1437M	1	front	76.80	0.085	1.016	1.302	0.112	
2441	39	Bluetooth	FHSS	14.0	13.93	-0.12	5 mm	2	Closed	1437M	1	bottom	76.80	0.110	1.016	1.302	0.146	
2441	39	Bluetooth	FHSS	14.0	13.93	-0.21	5 mm	2	Closed	1437M	1	left	76.80	0.111	1.016	1.302	0.147	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT							Body											
Spatial Peak							1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population							averaged over 1 gram											

Note: BT was additionally evaluated at the maximum allowed output power of 14dBm during operations with Simultaneous 5G NR active. 5G NR was not transmitting during BT evaluations

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11.4 Standalone Phablet SAR Data

Table 11-79
CDMA/GPRS/UMTS Phablet SAR Data

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Tune State	Power Drift (dB)	Spacing	Form Factor	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.													(W/kg)		(W/kg)	
1851.25	25	PCS CDMA	EVDO Rev. 0	24.0	23.34	52	0.06	8 mm	Open	0878M	N/A	1:1	back	0.801	1.164	0.932	
1851.25	25	PCS CDMA	EVDO Rev. 0	24.0	23.34	52	-0.01	6 mm	Open	0878M	N/A	1:1	front	0.813	1.164	0.946	
1851.25	25	PCS CDMA	EVDO Rev. 0	24.0	23.34	52	-0.03	11 mm	Open	0878M	N/A	1:1	bottom	0.746	1.164	0.868	
1851.25	25	PCS CDMA	EVDO Rev. 0	24.0	23.34	52	-0.02	0 mm	Open	0878M	N/A	1:1	right	0.255	1.164	0.297	
1851.25	25	PCS CDMA	EVDO Rev. 0	24.0	23.34	52	0.02	0 mm	Open	0878M	N/A	1:1	left	0.480	1.164	0.559	
1851.25	25	PCS CDMA	EVDO Rev. 0	22.0	21.04	52	-0.11	0 mm	Open	0878M	N/A	1:1	back	2.430	1.247	3.030	A94
1880.00	600	PCS CDMA	EVDO Rev. 0	22.0	21.10	52	-0.02	0 mm	Open	0878M	N/A	1:1	back	2.340	1.230	2.878	
1908.75	1175	PCS CDMA	EVDO Rev. 0	22.0	21.12	52	0.00	0 mm	Open	0878M	N/A	1:1	back	2.350	1.225	2.879	
1851.25	25	PCS CDMA	EVDO Rev. 0	22.0	21.04	52	0.08	0 mm	Open	0878M	N/A	1:1	front	1.940	1.247	2.419	
1880.00	600	PCS CDMA	EVDO Rev. 0	22.0	21.10	52	0.04	0 mm	Open	0878M	N/A	1:1	front	1.810	1.230	2.226	
1908.75	1175	PCS CDMA	EVDO Rev. 0	22.0	21.12	52	0.05	0 mm	Open	0878M	N/A	1:1	front	1.760	1.225	2.156	
1851.25	25	PCS CDMA	EVDO Rev. 0	22.0	21.04	52	0.02	0 mm	Open	0878M	N/A	1:1	bottom	2.270	1.247	2.831	
1880.00	600	PCS CDMA	EVDO Rev. 0	22.0	21.10	52	0.00	0 mm	Open	0878M	N/A	1:1	bottom	2.040	1.230	2.509	
1908.75	1175	PCS CDMA	EVDO Rev. 0	22.0	21.12	52	-0.01	0 mm	Open	0878M	N/A	1:1	bottom	1.920	1.225	2.352	
1850.20	512	GSM 1900	GPRS	26.5	25.36	N/A	0.04	8 mm	Open	0878M	3	1:2.76	back	0.276	1.300	0.359	
1850.20	512	GSM 1900	GPRS	26.5	25.36	N/A	-0.03	6 mm	Open	0878M	3	1:2.76	front	0.292	1.300	0.380	
1850.20	512	GSM 1900	GPRS	26.5	25.36	N/A	-0.13	11 mm	Open	0878M	3	1:2.76	bottom	0.273	1.300	0.355	
1850.20	512	GSM 1900	GPRS	26.5	25.36	N/A	-0.18	0 mm	Open	0878M	3	1:2.76	right	0.128	1.300	0.166	
1850.20	512	GSM 1900	GPRS	26.5	25.36	N/A	0.14	0 mm	Open	0878M	3	1:2.76	left	0.237	1.300	0.308	
1909.80	810	GSM 1900	GPRS	23.0	22.34	N/A	0.01	0 mm	Open	0878M	4	1:2.076	back	1.200	1.164	1.397	
1850.20	512	GSM 1900	GPRS	23.0	22.31	N/A	0.14	0 mm	Open	0878M	4	1:2.076	front	1.390	1.172	1.629	
1880.00	661	GSM 1900	GPRS	23.0	22.00	N/A	0.07	0 mm	Open	0878M	4	1:2.076	front	1.670	1.259	2.103	A95
1909.80	810	GSM 1900	GPRS	23.0	22.34	N/A	0.21	0 mm	Open	0878M	4	1:2.076	front	1.380	1.164	1.606	
1909.80	810	GSM 1900	GPRS	23.0	22.34	N/A	-0.13	0 mm	Open	0878M	4	1:2.076	bottom	1.040	1.164	1.211	
1732.40	1412	UMTS 1750	RMC	24.0	23.70	1	0.11	8 mm	Open	0878M	N/A	1:1	back	0.419	1.072	0.449	
1732.40	1412	UMTS 1750	RMC	24.0	23.70	1	-0.04	6 mm	Open	0878M	N/A	1:1	front	0.471	1.072	0.505	
1732.40	1412	UMTS 1750	RMC	24.0	23.70	1	0.05	11 mm	Open	0878M	N/A	1:1	bottom	0.356	1.072	0.382	
1732.40	1412	UMTS 1750	RMC	24.0	23.70	1	-0.08	0 mm	Open	0878M	N/A	1:1	right	0.218	1.072	0.234	
1732.40	1412	UMTS 1750	RMC	24.0	23.70	1	-0.07	0 mm	Open	0878M	N/A	1:1	left	0.194	1.072	0.208	
1712.40	1312	UMTS 1750	RMC	21.0	20.03	1	0.11	0 mm	Open	0878M	N/A	1:1	back	2.120	1.250	2.650	A96
1732.40	1412	UMTS 1750	RMC	21.0	20.00	1	0.16	0 mm	Open	0878M	N/A	1:1	back	2.050	1.259	2.581	
1752.60	1513	UMTS 1750	RMC	21.0	19.87	1	0.13	0 mm	Open	0878M	N/A	1:1	back	1.740	1.297	2.257	
1712.40	1312	UMTS 1750	RMC	21.0	20.03	1	0.07	0 mm	Open	0878M	N/A	1:1	front	1.600	1.250	2.000	
1732.40	1412	UMTS 1750	RMC	21.0	20.00	1	0.10	0 mm	Open	0878M	N/A	1:1	front	1.530	1.259	1.926	
1752.60	1513	UMTS 1750	RMC	21.0	19.87	1	0.11	0 mm	Open	0878M	N/A	1:1	front	1.340	1.297	1.738	
1712.40	1312	UMTS 1750	RMC	21.0	20.03	1	-0.03	0 mm	Open	0878M	N/A	1:1	bottom	1.820	1.250	2.275	
1732.40	1412	UMTS 1750	RMC	21.0	20.00	1	-0.03	0 mm	Open	0878M	N/A	1:1	bottom	1.610	1.259	2.027	
1752.60	1513	UMTS 1750	RMC	21.0	19.87	1	0.00	0 mm	Open	0878M	N/A	1:1	bottom	1.580	1.297	2.049	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	0.00	8 mm	Open	0737M	N/A	1:1	back	0.736	1.042	0.767	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	-0.01	6 mm	Open	0737M	N/A	1:1	front	0.831	1.042	0.866	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	-0.01	11 mm	Open	0737M	N/A	1:1	bottom	0.848	1.042	0.884	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	-0.08	0 mm	Open	0737M	N/A	1:1	right	0.248	1.042	0.258	
1880.00	9400	UMTS 1900	RMC	24.0	23.82	13	-0.10	0 mm	Open	0737M	N/A	1:1	left	0.196	1.042	0.204	
1852.40	9262	UMTS 1900	RMC	22.0	21.38	13	0.02	0 mm	Open	0737M	N/A	1:1	back	2.140	1.153	2.467	
1880.00	9400	UMTS 1900	RMC	22.0	21.42	13	0.02	0 mm	Open	0737M	N/A	1:1	back	1.980	1.143	2.263	
1907.60	9538	UMTS 1900	RMC	22.0	21.40	13	0.06	0 mm	Open	0737M	N/A	1:1	back	2.230	1.148	2.560	A97
1852.40	9262	UMTS 1900	RMC	22.0	21.38	13	-0.08	0 mm	Open	0737M	N/A	1:1	front	2.030	1.153	2.341	
1880.00	9400	UMTS 1900	RMC	22.0	21.42	13	-0.15	0 mm	Open	0737M	N/A	1:1	front	1.890	1.143	2.160	
1907.60	9538	UMTS 1900	RMC	22.0	21.40	13	-0.12	0 mm	Open	0737M	N/A	1:1	front	1.870	1.148	2.147	
1852.40	9262	UMTS 1900	RMC	22.0	21.38	13	0.02	0 mm	Open	0737M	N/A	1:1	bottom	2.220	1.153	2.560	
1880.00	9400	UMTS 1900	RMC	22.0	21.42	13	0.00	0 mm	Open	0737M	N/A	1:1	bottom	1.920	1.143	2.195	
1907.60	9538	UMTS 1900	RMC	22.0	21.40	13	0.00	0 mm	Open	0737M	N/A	1:1	bottom	1.850	1.148	2.124	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak								Phablet 4.0 W/kg (mW/g) averaged over 10 grams									
Uncontrolled Exposure/General Population																	

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Table 11-80
LTE Band 66 Phablet SAR

MEASUREMENT RESULTS																							
1 CC Uplink / 2 CC Uplink	Component Carrier	FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #	
		MHz	Ch.																(W/kg)		(W/kg)		
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	4	0.06	0	0767M	QPSK	1	99	8 mm	back	1:1	1.120	1.285	1.439	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	4	0.09	1	0767M	QPSK	50	25	8 mm	back	1:1	0.968	1.247	1.207	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	0	0.12	0	0767M	QPSK	1	99	6 mm	front	1:1	1.320	1.285	1.696	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	0	0.11	1	0767M	QPSK	50	25	6 mm	front	1:1	1.130	1.247	1.409	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	4	0.07	0	0767M	QPSK	1	99	11 mm	bottom	1:1	1.060	1.285	1.362	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	4	0.06	1	0767M	QPSK	50	25	11 mm	bottom	1:1	0.918	1.247	1.145	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	6	-0.08	0	0767M	QPSK	1	99	0 mm	right	1:1	0.331	1.285	0.425	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	6	-0.17	1	0767M	QPSK	50	25	0 mm	right	1:1	0.292	1.247	0.364	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	25.0	23.91	18	-0.04	0	0767M	QPSK	1	99	0 mm	left	1:1	0.334	1.285	0.429	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	24.0	23.04	18	0.02	1	0767M	QPSK	50	25	0 mm	left	1:1	0.293	1.247	0.365	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	Open	21.4	20.77	0	-0.03	0	0767M	QPSK	1	50	0 mm	back	1:1	2.370	1.156	2.740	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	21.4	21.01	0	-0.17	0	0767M	QPSK	1	50	0 mm	back	1:1	2.670	1.094	2.921	A08
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	21.4	20.84	0	-0.03	0	0767M	QPSK	1	99	0 mm	back	1:1	2.210	1.138	2.515	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	21.4	21.11	18	0.01	0	0767M	QPSK	1	99	0 mm	back	1:1	2.240	1.069	2.395	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	Open	21.4	21.08	0	-0.16	0	0767M	QPSK	50	25	0 mm	back	1:1	2.550	1.076	2.744	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	21.4	21.16	0	0.07	0	0767M	QPSK	50	50	0 mm	back	1:1	2.570	1.057	2.716	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	21.4	21.25	7	0.01	0	0767M	QPSK	50	25	0 mm	back	1:1	2.460	1.035	2.546	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	21.4	21.10	7	0.03	0	0767M	QPSK	100	0	0 mm	back	1:1	2.370	1.072	2.541	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	10	Open	21.4	20.77	0	0.04	0	0767M	QPSK	1	49	0 mm	back	1:1	2.370	1.156	2.740	
2 CC Uplink CA_66C	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	21.4	20.97	0	0.11	0	0767M	QPSK	1	99	0 mm	back	1:1	2.370	1.104	2.616	
	SCC	1764.80	132520													0							
2 CC Uplink CA_66B	PCC	1745.00	132322	Mid	LTE Band 66 (AWS)	10	Open	21.4	21.09	0	0.02	0	0767M	QPSK	1	49	0 mm	back	1:1	2.670	1.074	2.868	
	SCC	1754.90	132421													0							
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	Open	21.4	20.77	0	0.21	0	0767M	QPSK	1	50	0 mm	front	1:1	1.920	1.156	2.220	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	21.4	21.01	0	0.10	0	0767M	QPSK	1	50	0 mm	front	1:1	2.080	1.094	2.276	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	21.4	21.11	6	0.12	0	0767M	QPSK	1	99	0 mm	front	1:1	1.980	1.069	2.117	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	Open	21.4	21.08	0	0.17	0	0767M	QPSK	50	25	0 mm	front	1:1	2.120	1.076	2.281	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	21.4	21.16	0	0.15	0	0767M	QPSK	50	50	0 mm	front	1:1	2.230	1.057	2.357	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	21.4	21.25	0	0.16	0	0767M	QPSK	50	25	0 mm	front	1:1	2.160	1.035	2.236	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	21.4	21.10	6	0.01	0	0767M	QPSK	100	0	0 mm	front	1:1	1.820	1.072	1.951	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	21.4	21.11	8	0.10	0	0767M	QPSK	1	99	0 mm	bottom	1:1	1.240	1.069	1.326	
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	Open	21.4	21.25	8	0.03	0	0767M	QPSK	50	25	0 mm	bottom	1:1	1.370	1.035	1.418	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	Open	21.4	21.01	0	-0.04	0	0767M	QPSK	1	50	0 mm	back	1:1	2.610	1.094	2.855	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT												Phablet											
Spatial Peak												4.0 W/kg (mW/g)											
Uncontrolled Exposure/General Population												averaged over 10 grams											

Note: Blue Entry represents variability measurement.

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Table 11-81
LTE Band 25 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.	(W/kg)																(W/kg)			
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	13	-0.07	0	1453M	QPSK	1	0	8 mm	back	1:1	1.140	1.156	1.318	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	13	-0.04	1	1453M	QPSK	50	25	8 mm	back	1:1	0.954	1.148	1.095	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	13	-0.11	0	1453M	QPSK	1	0	6 mm	front	1:1	1.100	1.156	1.272	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	13	-0.09	1	1453M	QPSK	50	25	6 mm	front	1:1	0.897	1.148	1.030	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	19	0.00	0	1453M	QPSK	1	0	11 mm	bottom	1:1	1.030	1.156	1.191	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	19	0.01	1	1453M	QPSK	50	25	11 mm	bottom	1:1	0.868	1.148	0.996	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	13	-0.06	0	1453M	QPSK	1	0	0 mm	right	1:1	0.321	1.156	0.371	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	13	-0.05	1	1453M	QPSK	50	25	0 mm	right	1:1	0.263	1.148	0.302	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	25.0	24.37	13	-0.16	0	1453M	QPSK	1	0	0 mm	left	1:1	0.214	1.156	0.247	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	24.0	23.40	13	-0.17	1	1453M	QPSK	50	25	0 mm	left	1:1	0.166	1.148	0.191	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Open	22.0	21.16	14	0.06	0	1453M	QPSK	1	99	0 mm	back	1:1	2.180	1.213	2.644	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.50	14	0.05	0	1453M	QPSK	1	0	0 mm	back	1:1	2.260	1.122	2.536	
1905.00	26590	High	LTE Band 25 (PCS)	20	Open	22.0	21.08	14	0.08	0	1453M	QPSK	1	0	0 mm	back	1:1	2.360	1.236	2.917	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Open	22.0	21.38	14	0.05	0	1453M	QPSK	50	25	0 mm	back	1:1	2.280	1.153	2.629	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.49	14	0.04	0	1453M	QPSK	50	25	0 mm	back	1:1	2.340	1.125	2.633	
1905.00	26590	High	LTE Band 25 (PCS)	20	Open	22.0	21.09	14	0.00	0	1453M	QPSK	50	0	0 mm	back	1:1	2.530	1.233	3.119	A99
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.27	14	0.04	0	1453M	QPSK	100	0	0 mm	back	1:1	2.290	1.183	2.709	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.50	14	-0.04	0	1453M	QPSK	1	0	0 mm	front	1:1	1.730	1.122	1.941	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Open	22.0	21.38	14	-0.04	0	1453M	QPSK	50	25	0 mm	front	1:1	1.770	1.153	2.041	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.49	14	-0.01	0	1453M	QPSK	50	25	0 mm	front	1:1	1.790	1.125	2.014	
1905.00	26590	High	LTE Band 25 (PCS)	20	Open	22.0	21.09	14	-0.12	0	1453M	QPSK	50	0	0 mm	front	1:1	1.990	1.233	2.454	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.27	14	-0.06	0	1453M	QPSK	100	0	0 mm	front	1:1	1.770	1.183	2.094	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Open	22.0	21.16	0	-0.07	0	1453M	QPSK	1	99	0 mm	bottom	1:1	2.090	1.213	2.535	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.50	0	-0.08	0	1453M	QPSK	1	0	0 mm	bottom	1:1	2.110	1.122	2.367	
1905.00	26590	High	LTE Band 25 (PCS)	20	Open	22.0	21.08	18	0.02	0	1453M	QPSK	1	0	0 mm	bottom	1:1	1.950	1.236	2.410	
1860.00	26140	Low	LTE Band 25 (PCS)	20	Open	22.0	21.38	0	-0.07	0	1453M	QPSK	50	25	0 mm	bottom	1:1	2.170	1.153	2.502	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.49	0	-0.03	0	1453M	QPSK	50	25	0 mm	bottom	1:1	2.230	1.125	2.509	
1905.00	26590	High	LTE Band 25 (PCS)	20	Open	22.0	21.09	18	-0.04	0	1453M	QPSK	50	0	0 mm	bottom	1:1	1.990	1.233	2.454	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	Open	22.0	21.27	0	0.00	0	1453M	QPSK	100	0	0 mm	bottom	1:1	2.210	1.183	2.614	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Phablet 4.0 W/kg (mW/g) averaged over 10 grams											

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Table 11-82
LTE Band 30 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.02	0	0979M	QPSK	1	0	8 mm	back	1:1	0.543	1.148	0.623	
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	0.05	1	0979M	QPSK	25	0	8 mm	back	1:1	0.427	1.135	0.485	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.04	0	0979M	QPSK	1	0	6 mm	front	1:1	0.432	1.148	0.496	
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	0.07	1	0979M	QPSK	25	0	6 mm	front	1:1	0.343	1.135	0.389	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.01	0	0979M	QPSK	1	0	11 mm	bottom	1:1	0.681	1.148	0.782	
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	0.02	1	0979M	QPSK	25	0	11 mm	bottom	1:1	0.534	1.135	0.606	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.00	0	0979M	QPSK	1	0	0 mm	right	1:1	0.170	1.148	0.195	
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	-0.02	1	0979M	QPSK	25	0	0 mm	right	1:1	0.135	1.135	0.153	
2310.00	27710	Mid	LTE Band 30	10	Open	24.0	23.40	0.03	0	0979M	QPSK	1	0	0 mm	left	1:1	0.375	1.148	0.431	
2310.00	27710	Mid	LTE Band 30	10	Open	23.0	22.45	-0.01	1	0979M	QPSK	25	0	0 mm	left	1:1	0.292	1.135	0.331	
2310.00	27710	Mid	LTE Band 30	10	Open	22.0	21.29	0.01	0	0979M	QPSK	1	0	0 mm	back	1:1	0.942	1.178	1.110	A100
2310.00	27710	Mid	LTE Band 30	10	Open	22.0	21.38	-0.02	0	0979M	QPSK	25	12	0 mm	back	1:1	0.941	1.153	1.085	
2310.00	27710	Mid	LTE Band 30	10	Open	22.0	21.29	0.05	0	0979M	QPSK	1	0	0 mm	front	1:1	0.742	1.178	0.874	
2310.00	27710	Mid	LTE Band 30	10	Open	22.0	21.38	0.06	0	0979M	QPSK	25	12	0 mm	front	1:1	0.738	1.153	0.851	
2310.00	27710	Mid	LTE Band 30	10	Open	22.0	21.29	0.00	0	0979M	QPSK	1	0	0 mm	bottom	1:1	0.729	1.178	0.859	
2310.00	27710	Mid	LTE Band 30	10	Open	22.0	21.38	0.00	0	0979M	QPSK	25	12	0 mm	bottom	1:1	0.720	1.153	0.830	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 4.0 W/kg (mW/g) averaged over 10 grams											

Table 11-83
LTE Band 7 Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	0.00	0	0867M	QPSK	1	0	8 mm	back	1:1	0.564	1.253	0.707	
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	-0.03	1	0867M	QPSK	50	25	8 mm	back	1:1	0.458	1.236	0.566	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	-0.03	0	0867M	QPSK	1	0	6 mm	front	1:1	0.609	1.253	0.763	
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	0.02	1	0867M	QPSK	50	25	6 mm	front	1:1	0.479	1.236	0.592	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	0.02	0	0867M	QPSK	1	0	11 mm	bottom	1:1	0.831	1.253	1.041	
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	0.02	1	0867M	QPSK	50	25	11 mm	bottom	1:1	0.682	1.236	0.843	
2535.00	21100	Mid	LTE Band 7	20	Open	25.0	24.02	0.01	0	0867M	QPSK	1	0	0 mm	left	1:1	0.707	1.253	0.886	
2535.00	21100	Mid	LTE Band 7	20	Open	24.0	23.08	0.02	1	0867M	QPSK	50	25	0 mm	left	1:1	0.572	1.236	0.707	
2510.00	20850	Low	LTE Band 7	20	Open	22.0	20.78	0.00	0	0867M	QPSK	1	0	0 mm	back	1:1	1.670	1.324	2.211	A101
2535.00	21100	Mid	LTE Band 7	20	Open	22.0	21.01	0.01	0	0867M	QPSK	1	0	0 mm	back	1:1	1.520	1.256	1.909	
2560.00	21350	High	LTE Band 7	20	Open	22.0	20.93	0.00	0	0867M	QPSK	1	0	0 mm	back	1:1	1.650	1.279	2.110	
2535.00	21100	Mid	LTE Band 7	20	Open	22.0	21.05	-0.02	0	0867M	QPSK	50	25	0 mm	back	1:1	1.530	1.245	1.905	
2535.00	21100	Mid	LTE Band 7	20	Open	22.0	21.00	0.00	0	0867M	QPSK	100	0	0 mm	back	1:1	1.650	1.259	2.077	
2535.00	21100	Mid	LTE Band 7	20	Open	22.0	21.01	0.02	0	0867M	QPSK	1	0	0 mm	front	1:1	0.893	1.256	1.122	
2535.00	21100	Mid	LTE Band 7	20	Open	22.0	21.05	-0.01	0	0867M	QPSK	50	25	0 mm	front	1:1	0.883	1.245	1.099	
2535.00	21100	Mid	LTE Band 7	20	Open	22.0	21.01	0.00	0	0867M	QPSK	1	0	0 mm	bottom	1:1	1.450	1.256	1.821	
2535.00	21100	Mid	LTE Band 7	20	Open	22.0	21.05	-0.04	0	0867M	QPSK	50	25	0 mm	bottom	1:1	1.450	1.245	1.805	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 4.0 W/kg (mW/g) averaged over 10 grams											

FCC ID: A3LSMF711U1		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 190 of 290

Table 11-84
LTE Band 41 Phablet SAR

MEASUREMENT RESULTS																						
1 CC Uplink / 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
		MHz		Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	-0.14	0	0867M	QPSK	1	50	8 mm	back	1:1.58	0.250	1.247	0.312	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	-0.15	1	0867M	QPSK	50	50	8 mm	back	1:1.58	0.203	1.230	0.250	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	-0.07	0	0867M	QPSK	1	50	6 mm	front	1:1.58	0.240	1.247	0.299	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	-0.01	1	0867M	QPSK	50	50	6 mm	front	1:1.58	0.193	1.230	0.237	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	-0.01	0	0867M	QPSK	1	50	11 mm	bottom	1:1.58	0.350	1.247	0.436	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	-0.01	1	0867M	QPSK	50	50	11 mm	bottom	1:1.58	0.283	1.230	0.348	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	25.5	24.54	0.02	0	0867M	QPSK	1	50	0 mm	left	1:1.58	1.030	1.247	1.284	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	Open	24.5	23.60	0.03	1	0867M	QPSK	50	50	0 mm	left	1:1.58	0.823	1.230	1.012	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	24.0	23.18	-0.19	0	0903M	QPSK	1	0	0 mm	back	1:1.58	1.160	1.208	1.401	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	24.0	23.42	-0.02	0	0903M	QPSK	1	50	0 mm	back	1:1.58	1.180	1.143	1.349	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	24.0	23.45	-0.19	0	0903M	QPSK	50	25	0 mm	back	1:1.58	1.180	1.135	1.339	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	25.6	24.78	0.01	0	0903M	QPSK	1	0	0 mm	back	1:2.31	1.160	1.208	1.401	
1 CC Uplink - Power Class 2	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	25.6	25.13	0.00	0	0903M	QPSK	1	50	0 mm	back	1:2.31	1.270	1.114	1.415	A102
2 CC Uplink - Power Class 3	PCC	2593.00	40620	Mid	LTE Band 41	20	Open	24.0	23.20	-0.16	0	0903M	QPSK	1	0	0 mm	back	1:1.58	1.180	1.202	1.418	
	SCC	2573.20	40422																			
2 CC Uplink - Power Class 2	PCC	2593.00	40620	Mid	LTE Band 41	20	Open	25.6	25.05	0.03	0	0903M	QPSK	1	0	0 mm	back	1:2.31	1.180	1.135	1.339	
	SCC	2573.20	40422																			
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	24.0	23.42	0.00	0	0903M	QPSK	1	50	0 mm	front	1:1.58	0.799	1.143	0.913	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	24.0	23.45	0.00	0	0903M	QPSK	50	25	0 mm	front	1:1.58	0.806	1.135	0.915	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	24.0	23.42	-0.03	0	0903M	QPSK	1	50	0 mm	bottom	1:1.58	1.060	1.143	1.212	
1 CC Uplink - Power Class 3	N/A	2593.00	40620	Mid	LTE Band 41	20	Open	24.0	23.45	-0.07	0	0903M	QPSK	50	25	0 mm	bottom	1:1.58	1.070	1.135	1.214	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT																						
Spatial Peak																						
Uncontrolled Exposure/General Population											4.0 W/kg (mW/g) averaged over 10 grams											

Table 11-85
NR Band n66 Phablet SAR

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maxum um Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR[dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #	
MHz	Ch.																		(W/kg)		(W/kg)		
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	0.05	0	4	0767M	DFT-S-OFDM	QPSK	1	214	8 mm	back	1:1	0.962	1.148	1.104	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	0.01	0	4	0767M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	0.919	1.161	1.067	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	0.00	0	0	0767M	DFT-S-OFDM	QPSK	1	214	6 mm	front	1:1	1.150	1.148	1.320	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	0.03	0	0	0767M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	1.120	1.161	1.300	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	0.16	0	4	0767M	DFT-S-OFDM	QPSK	1	214	11 mm	bottom	1:1	0.910	1.148	1.045	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	0.02	0	4	0767M	DFT-S-OFDM	QPSK	108	54	11 mm	bottom	1:1	0.922	1.161	1.070	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	0.12	0	6	0767M	DFT-S-OFDM	QPSK	1	214	0 mm	right	1:1	0.223	1.148	0.256	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	0.15	0	6	0767M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	0.228	1.161	0.265	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.90	A	0.10	0	18	0767M	DFT-S-OFDM	QPSK	1	214	0 mm	left	1:1	0.281	1.148	0.323	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	24.5	23.85	A	-0.03	0	18	0767M	DFT-S-OFDM	QPSK	108	54	0 mm	left	1:1	0.302	1.161	0.351	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	19.98	A	0.01	0	0	0767M	DFT-S-OFDM	QPSK	1	214	0 mm	back	1:1	2.420	1.127	2.727	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	20.02	A	-0.01	0	0	0767M	DFT-S-OFDM	QPSK	108	108	0 mm	back	1:1	2.460	1.117	2.748	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	19.97	A	0.08	0	7	0767M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	2.270	1.130	2.565	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	19.75	A	0.01	0	0	0767M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	2.550	1.189	3.032	A103
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	19.98	A	-0.02	0	0	0767M	DFT-S-OFDM	QPSK	1	214	0 mm	front	1:1	1.970	1.127	2.220	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	20.02	A	-0.02	0	0	0767M	DFT-S-OFDM	QPSK	108	108	0 mm	front	1:1	2.030	1.117	2.268	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	19.97	A	0.01	0	6	0767M	DFT-S-OFDM	QPSK	216	0	0 mm	front	1:1	1.790	1.130	2.023	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	19.98	A	0.06	0	8	0767M	DFT-S-OFDM	QPSK	1	214	0 mm	bottom	1:1	1.380	1.127	1.555	
1745.00	349000	Mid	NR Band n66 (AWS)	40	Open	20.5	20.02	A	-0.03	0	8	0767M	DFT-S-OFDM	QPSK	108	108	0 mm	bottom	1:1	1.520	1.117	1.698	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Extremity													
Spatial Peak										4.0 W/kg (mW/g)													
Uncontrolled Exposure/General Population										averaged over 10 grams													

FCC ID: A3LSMF711U1		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M2107290086-21.A3L (Rev1)	Test Dates: 08/03/21 – 09/13/21	DUT Type: Portable Handset		Page 191 of 290

Table 11-86
NR Band n25 Phablet SAR

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Tune State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #	
MHz	Ch.																						
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	-0.02	0	13	1453M	DFT-S-OFDM	QPSK	1	214	8 mm	back	1:1	0.727	1.194	0.868	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.01	0	13	1453M	DFT-S-OFDM	QPSK	108	54	8 mm	back	1:1	0.648	1.259	0.816	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	-0.03	0	13	1453M	DFT-S-OFDM	QPSK	1	214	6 mm	front	1:1	0.869	1.194	1.038	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.07	0	13	1453M	DFT-S-OFDM	QPSK	108	54	6 mm	front	1:1	0.755	1.259	0.951	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	0.01	0	19	1453M	DFT-S-OFDM	QPSK	1	214	11 mm	bottom	1:1	0.930	1.194	1.110	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	-0.05	0	19	1453M	DFT-S-OFDM	QPSK	108	54	11 mm	bottom	1:1	0.850	1.259	1.070	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	0.04	0	13	1453M	DFT-S-OFDM	QPSK	1	214	0 mm	right	1:1	0.266	1.194	0.318	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.02	0	13	1453M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	0.235	1.259	0.296	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.73	A	0.14	0	13	1453M	DFT-S-OFDM	QPSK	1	214	0 mm	left	1:1	0.200	1.194	0.239	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	23.50	A	0.10	0	13	1453M	DFT-S-OFDM	QPSK	108	54	0 mm	left	1:1	0.178	1.259	0.224	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	22.0	21.59	A	0.00	0	14	1453M	DFT-S-OFDM	QPSK	1	1	0 mm	back	1:1	1.940	1.099	2.132	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	22.0	21.40	A	0.01	0	14	1453M	DFT-S-OFDM	QPSK	108	0	0 mm	back	1:1	1.830	1.148	2.101	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	22.0	21.39	A	-0.01	0	14	1453M	DFT-S-OFDM	QPSK	216	0	0 mm	back	1:1	1.850	1.151	2.129	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	22.0	21.49	A	0.02	0	14	1453M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	1.840	1.125	2.070	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	22.0	21.59	A	0.00	0	14	1453M	DFT-S-OFDM	QPSK	1	1	0 mm	front	1:1	1.500	1.099	1.649	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	22.0	21.40	A	-0.02	0	14	1453M	DFT-S-OFDM	QPSK	108	0	0 mm	front	1:1	1.430	1.148	1.642	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	22.0	21.59	A	-0.04	0	0	1453M	DFT-S-OFDM	QPSK	1	1	0 mm	bottom	1:1	1.780	1.099	1.956	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	22.0	21.40	A	0.01	0	0	1453M	DFT-S-OFDM	QPSK	108	0	0 mm	bottom	1:1	1.700	1.148	1.952	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	24.49	I	-0.06	0	N/A	0979M	DFT-S-OFDM	QPSK	1	214	0 mm	right	1:1	2.390	1.002	2.395	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	24.35	I	-0.06	0	N/A	0979M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	2.930	1.035	3.033	A104
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	23.5	23.45	I	0.02	1	N/A	0979M	DFT-S-OFDM	QPSK	216	0	0 mm	right	1:1	2.130	1.012	2.156	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	23.0	22.99	I	0.02	1.5	N/A	0979M	CP-OFDM	QPSK	1	1	0 mm	right	1:1	1.580	1.002	1.583	
1882.50	376500	Mid	NR Band n25 (PCS)	40	Open	24.5	24.35	I	0.17	0	N/A	0979M	DFT-S-OFDM	QPSK	108	54	0 mm	right	1:1	2.840	1.035	2.939	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Extremity													
Spatial Peak										4.0 W/kg (mW/g)													
Uncontrolled Exposure/General Population										averaged over 10 grams													

Note: Blue Entry represents variability measurement.

Table 11-87
NR Band n30 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #	
MHz	Ch.																				
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	0.02	0	1453M	DFT-S-OFDM	QPSK	1	26	8 mm	back	1:1	0.209	1.194	0.250	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	0.02	0	1453M	DFT-S-OFDM	QPSK	25	14	8 mm	back	1:1	0.211	1.271	0.268	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	0.06	0	1453M	DFT-S-OFDM	QPSK	1	26	6 mm	front	1:1	0.313	1.194	0.374	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	0.10	0	1453M	DFT-S-OFDM	QPSK	25	14	6 mm	front	1:1	0.309	1.271	0.393	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	0.01	0	1453M	DFT-S-OFDM	QPSK	1	26	11 mm	bottom	1:1	0.438	1.194	0.523	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	0.01	0	1453M	DFT-S-OFDM	QPSK	25	14	11 mm	bottom	1:1	0.422	1.271	0.536	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	-0.01	0	1453M	DFT-S-OFDM	QPSK	1	26	0 mm	right	1:1	0.148	1.194	0.177	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	0.01	0	1453M	DFT-S-OFDM	QPSK	25	14	0 mm	right	1:1	0.148	1.271	0.188	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.73	-0.02	0	1453M	DFT-S-OFDM	QPSK	1	26	0 mm	left	1:1	0.216	1.194	0.258	
2310.00	462000	Mid	NR Band n30	10	Open	23.5	22.46	-0.08	0	1453M	DFT-S-OFDM	QPSK	25	14	0 mm	left	1:1	0.215	1.271	0.273	
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.46	-0.07	0	1453M	DFT-S-OFDM	QPSK	1	26	0 mm	back	1:1	0.786	1.132	0.890	
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.39	0.05	0	1453M	DFT-S-OFDM	QPSK	25	14	0 mm	back	1:1	0.778	1.151	0.895	
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.46	0.04	0	1453M	DFT-S-OFDM	QPSK	1	26	0 mm	front	1:1	0.540	1.132	0.611	
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.39	0.01	0	1453M	DFT-S-OFDM	QPSK	25	14	0 mm	front	1:1	0.528	1.151	0.608	
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.46	0.02	0	1453M	DFT-S-OFDM	QPSK	1	26	0 mm	bottom	1:1	0.861	1.132	0.975	A105
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.39	0.04	0	1453M	DFT-S-OFDM	QPSK	25	14	0 mm	bottom	1:1	0.849	1.151	0.977	
2310.00	462000	Mid	NR Band n30	10	Open	22.0	21.21	0.07	0	1453M	CP-OFDM	QPSK	1	1	0 mm	bottom	1:1	0.799	1.199	0.958	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Extremity 4.0 W/kg (mW/g) averaged over 10 grams												

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Table 11-88
NR Band n41 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #	
MHz	Ch.																				
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.55	0.19	0	0903M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.950	1.109	2.163	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.61	-0.06	0	0903M	DFT-S-OFDM	QPSK	135	0	0 mm	back	1:1	1.970	1.094	2.155	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.48	0.01	0	0903M	DFT-S-OFDM	QPSK	270	0	0 mm	back	1:1	1.940	1.127	2.186	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.55	-0.03	0	0903M	DFT-S-OFDM	QPSK	1	137	0 mm	front	1:1	1.760	1.109	1.952	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.61	-0.13	0	0903M	DFT-S-OFDM	QPSK	135	0	0 mm	front	1:1	1.770	1.094	1.936	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.55	0.12	0	0903M	DFT-S-OFDM	QPSK	1	137	0 mm	right	1:1	2.370	1.109	2.628	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.61	0.00	0	0903M	DFT-S-OFDM	QPSK	135	0	0 mm	right	1:1	2.480	1.094	2.713	A106
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.48	0.04	0	0903M	DFT-S-OFDM	QPSK	270	0	0 mm	right	1:1	2.340	1.127	2.637	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.05	0.01	0	0903M	CP-OFDM	QPSK	1	1	0 mm	right	1:1	1.940	1.245	2.415	
2592.99	518598	Mid	NR Band n41	100	Open	22.0	21.61	-0.15	0	0903M	DFT-S-OFDM	QPSK	135	0	0 mm	right	1:1	2.240	1.094	2.451	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Extremity 4.0 W/kg (mW/g) averaged over 10 grams												

Note: Blue Entry represents variability measurement.

Table 11-89
NR Band n77 DoD Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #	
MHz	Ch.																					
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.77	F	-0.09	0	1432M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	0.926	1.183	1.095	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.67	F	-0.02	0	1432M	DFT-S-OFDM	QPSK	135	69	0 mm	back	1:1	0.746	1.211	0.903	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.77	F	0.02	0	1432M	DFT-S-OFDM	QPSK	1	137	0 mm	front	1:1	0.850	1.183	1.006	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.67	F	-0.06	0	1432M	DFT-S-OFDM	QPSK	135	69	0 mm	front	1:1	0.847	1.211	1.026	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.77	F	-0.01	0	1432M	DFT-S-OFDM	QPSK	1	137	0 mm	top	1:1	0.392	1.183	0.464	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.67	F	-0.01	0	1432M	DFT-S-OFDM	QPSK	135	69	0 mm	top	1:1	0.387	1.211	0.469	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.77	F	0.05	0	1432M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.770	1.183	2.094	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.67	F	0.02	0	1432M	DFT-S-OFDM	QPSK	135	69	0 mm	left	1:1	1.770	1.211	2.143	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.66	F	0.11	0	1432M	DFT-S-OFDM	QPSK	270	0	0 mm	left	1:1	1.840	1.213	2.232	
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.66	F	-0.04	0	1432M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	2.030	1.213	2.462	A107
3500.01	633334	Mid	NR Band n77 DoD	100	Open	19.5	18.66	F	0.03	0	1432M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.880	1.213	2.280	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Extremity												
Spatial Peak										4.0 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 10 grams												

Note: Blue Entry represents variability measurement.

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Table 11-90
NR Band n77 Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY		Mode	Bandwidth [MHz]	Form Factor	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	Scaling Factor	SAR (10g)	Reported SAR (10g)	Plot #	
MHz	Ch.																		(W/kg)	(W/kg)		
3750.00	650000	Low	NR Band n77	100	Open	19.5	18.93	F	-0.16	0	1456M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.140	0.905	1.032	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.28	F	0.02	0	1456M	DFT-S-OFDM	QPSK	1	137	0 mm	back	1:1	1.052	1.160	1.220	
3750.00	650000	Low	NR Band n77	100	Open	19.5	18.86	F	-0.05	0	1456M	DFT-S-OFDM	QPSK	135	69	0 mm	back	1:1	1.159	0.900	1.043	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.19	F	-0.05	0	1456M	DFT-S-OFDM	QPSK	135	0	0 mm	back	1:1	1.074	1.180	1.267	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.14	F	0.03	0	1456M	DFT-S-OFDM	QPSK	270	0	0 mm	back	1:1	1.086	1.230	1.336	
3750.00	650000	Low	NR Band n77	100	Open	19.5	18.93	F	0.02	0	1456M	DFT-S-OFDM	QPSK	1	137	0 mm	front	1:1	1.140	0.970	1.106	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.28	F	-0.15	0	1456M	DFT-S-OFDM	QPSK	1	137	0 mm	front	1:1	1.052	1.090	1.147	
3750.00	650000	Low	NR Band n77	100	Open	19.5	18.86	F	-0.02	0	1456M	DFT-S-OFDM	QPSK	135	69	0 mm	front	1:1	1.159	0.920	1.066	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.19	F	-0.13	0	1456M	DFT-S-OFDM	QPSK	135	0	0 mm	front	1:1	1.074	1.150	1.235	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.14	F	0.05	0	1456M	DFT-S-OFDM	QPSK	270	0	0 mm	front	1:1	1.086	0.932	1.012	
3750.00	650000	Low	NR Band n77	100	Open	19.5	18.93	F	0.06	0	1456M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.140	2.310	2.633	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.28	F	-0.01	0	1456M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.052	2.840	2.988	
3750.00	650000	Low	NR Band n77	100	Open	19.5	18.86	F	0.08	0	1456M	DFT-S-OFDM	QPSK	135	69	0 mm	left	1:1	1.159	2.260	2.619	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.19	F	0.05	0	1456M	DFT-S-OFDM	QPSK	135	0	0 mm	left	1:1	1.074	2.830	3.039	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.14	F	0.01	0	1456M	DFT-S-OFDM	QPSK	270	0	0 mm	left	1:1	1.086	2.420	2.628	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.17	F	0.01	0	1456M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.079	2.900	3.129	A108
3750.00	650000	Low	NR Band n77	100	Open	19.5	18.93	F	-0.14	0	1456M	DFT-S-OFDM	QPSK	1	137	0 mm	left	1:1	1.140	2.210	2.519	
3930.00	662000	High	NR Band n77	100	Open	19.5	19.17	F	0.05	0	1456M	CP-OFDM	QPSK	1	1	0 mm	left	1:1	1.079	2.870	3.097	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Extremity												
Spatial Peak										1.6 W/kg (mW/g)												
Uncontrolled Exposure/General Population										averaged over 1 gram												

Note: Blue Entry represents variability measurement.

Table 11-91
WLAN SISO Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #	
MHz	Ch.														W/kg	(W/kg)		(W/kg)			
5300	60	802.11a	OFDM	20	18.0	17.80	0.15	0 mm	1	Open	1866M	6	back	98.9	1.530	-	1.047	1.011	-		
5300	60	802.11a	OFDM	20	18.0	17.80	0.13	0 mm	1	Open	1866M	6	front	98.9	1.750	-	1.047	1.011	-		
5300	60	802.11a	OFDM	20	18.0	17.80	-0.05	0 mm	1	Open	1866M	6	top	98.9	2.610	0.413	1.047	1.011	0.437		
5300	60	802.11a	OFDM	20	18.0	17.80	-0.07	0 mm	1	Open	1866M	6	right	98.9	0.401	-	1.047	1.011	-		
5600	120	802.11a	OFDM	20	18.0	17.80	0.02	0 mm	1	Open	1866M	6	back	98.9	1.170	-	1.047	1.011	-		
5600	120	802.11a	OFDM	20	18.0	17.80	-0.03	0 mm	1	Open	1866M	6	front	98.9	1.520	-	1.047	1.011	-		
5600	120	802.11a	OFDM	20	18.0	17.80	0.01	0 mm	1	Open	1866M	6	top	98.9	2.790	0.361	1.047	1.011	0.382		
5600	120	802.11a	OFDM	20	18.0	17.80	-0.14	0 mm	1	Open	1866M	6	right	98.9	0.418	-	1.047	1.011	-		
ANSI / IEEE C95.1 1992 - SAFETY LIMIT								Phablet													
Spatial Peak								4.0 W/kg (mW/g)													
Uncontrolled Exposure/General Population								averaged over 10 grams													

Table 11-92
WLAN MIMO Phablet SAR

MEASUREMENT RESULTS																							
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Form Factor	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #	
MHz	Ch.																W/kg	(W/kg)	(W/kg)				
5300	60	802.11n	OFDM	20	18.0	17.65	18.0	17.81	0.02	0 mm	MIMO	Open	1866M	13	back	99.7	2.090	-	1.084	1.003	-	-	
5300	60	802.11n	OFDM	20	18.0	17.65	18.0	17.81	-0.04	0 mm	MIMO	Open	1866M	13	front	99.7	2.500	-	1.084	1.003	-	-	
5300	60	802.11n	OFDM	20	18.0	17.65	18.0	17.81	0.07	0 mm	MIMO	Open	1866M	13	top	99.7	1.810	-	1.084	1.003	-	-	
5300	60	802.11n	OFDM	20	18.0	17.65	18.0	17.81	-0.08	0 mm	MIMO	Open	1866M	13	right	99.7	0.574	-	1.084	1.003	-	-	
5300	60	802.11n	OFDM	20	18.0	17.65	18.0	17.81	-0.02	0 mm	MIMO	Open	1866M	13	left	99.7	4.490	0.734	1.084	1.003	0.798	A109	
5720	144	802.11n	OFDM	20	18.0	17.59	18.0	17.79	0.06	0 mm	MIMO	Open	1866M	13	back	99.7	2.500	-	1.099	1.003	-	-	
5720	144	802.11n	OFDM	20	18.0	17.59	18.0	17.79	0.00	0 mm	MIMO	Open	1866M	13	front	99.7	2.560	-	1.099	1.003	-	-	
5720	144	802.11n	OFDM	20	18.0	17.59	18.0	17.79	0.00	0 mm	MIMO	Open	1866M	13	top	99.7	1.650	-	1.099	1.003	-	-	
5720	144	802.11n	OFDM	20	18.0	17.59	18.0	17.79	0.06	0 mm	MIMO	Open	1866M	13	right	99.7	0.433	-	1.099	1.003	-	-	
5720	144	802.11n	OFDM	20	18.0	17.59	18.0	17.79	-0.01	0 mm	MIMO	Open	1866M	13	left	99.7	3.810	0.671	1.099	1.003	0.740	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Phablet													
Spatial Peak										4.0 W/kg (mW/g)													
Uncontrolled Exposure/General Population										averaged over 10 grams													

Note: To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation each antenna transmits at a maximum allowed power of 18.0 dBm.

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11.5 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 13 for variability analysis.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 6.7 for more details).
10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is > 160 mm and < 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.
11. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds below.
12. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 14 for supplemental data.
13. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).
14. This device has an open and closed configuration. When closed, 1g SAR test are required for back side at a test separation distance of 15mm for body-worn, and on all surfaces and edges with an antenna ≤ 25 mm from that surface or edge at a test separation distance 5mm for hotspot.
15. This device uses Qualcomm Smart Transmit for 2G/3G/4G/5G operations to control and manage transmitting power in real time to ensure RF Exposure compliance. Per FCC Guidance, compliance for was assessed at the minimum of the time averaged power and the maximum output power for each band/mode/exposure condition (DSI).

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
3. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s).

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CDMA Notes:

1. Head SAR for CDMA2000 mode was tested under RC3/SO55 per FCC KDB Publication 941225 D01v03r01.
2. Body-Worn SAR was tested with 1x RTT with TDSO / SO32 FCH Only. EVDO Rev0 and RevA and TDSO / SO32 FCH+SCH SAR tests were not required per the 3G SAR Test Reduction Procedure in FCC KDB Publication 941225 D01v03r01.
3. CDMA Wireless Router SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0 according to KDB 941225 D01v03r01 procedures for data devices. Wireless Router SAR tests for Subtype 2 of Rev.A and 1x RTT configurations were not required per the 3G SAR Test Reduction Policy in KDB Publication 941225 D01v03r01.
4. Head SAR was additionally evaluated using EVDO Rev. A to determine compliance for VoIP operations.
5. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s).
6. CDMA 1X Advanced technology was not required for SAR since the maximum allowed output powers for 1X Advanced was not more than 0.25 dB higher than the maximum powers for 1X.

UMTS Notes:

1. UMTS mode was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
2. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s).

LTE Notes:

1. LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r04. The general test procedures used for testing can be found in Section 8.6.4.
2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
3. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
4. Per FCC KDB Publication 447498 D01v06, when the reported LTE Band 48 and 41 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.
7. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions. Please see Section 14 for linearity results.
8. For LTE Band 5, LTE Band 66, LTE Band 48, and LTE Band 41, per FCC guidance, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration

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with the highest SAR when carrier aggregation was not active. The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.

9. This device supports LTE Band 41 ULCA active with Power Class 2. Highest SAR test configuration for each exposure condition in Power Class 3 with ULCA active was repeated with Power Class 2 with ULCA active.

NR Notes:

1. NR implementation supports SA and NSA mode. In EN-DC mode, NR operates with the LTE Bands shown in the NR FR1 checklist acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
2. Simultaneous transmission analysis for EN-DC operations is addressed in the Part 2 Test Report (Serial Number can be found in the bibliography).
3. Due to test setup limitations, SAR testing for NR was performed using test mode software to establish the connection.
4. Per FCC Guidance, NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power were evaluated for SAR tests.
5. For final implementation, NR Band n41 and n77 slot configuration is synchronized using maximum duty cycle of 100%. SAR testing was performed using FTM mode with a 100% duty cycle applied to match final duty cycle.
6. Per FCC Guidance, the device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency as the NR test results. Additional tuner states were evaluated per April 2019 TCBC Workshop Guidance. Please see Section 14 for supplemental data.
7. Per FCC KDB Publication 447498 D01v06, when the reported NR Band n77 C-band SAR measured at the highest output power channel in a given a test configuration was > 0.4 W/kg for 1g evaluations and > 1 W/kg for 10g evaluation, testing at the other channels was required for such test configurations

WLAN Notes:

1. For held-to-ear, hotspot, and phablet operations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g evaluations, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 8.7.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 8.7.6 for more information.
4. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
5. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.
6. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously. Please see Section 12 for complete analysis.

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7. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 100% transmission duty factor to determine compliance. See Section 9.7 for the time domain plot and calculation for the duty factor of the device.
2. Head and Hotspot Bluetooth SAR were evaluated for BT BR tethering applications.

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12 FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

12.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D01v06 are applicable to devices with built-in unlicensed transmitters such as 802.11 and Bluetooth devices which may simultaneously transmit with the licensed transmitter.

12.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D01v06 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g SAR for all the simultaneous transmitting antennas in a specific physical test configuration is ≤ 1.6 W/kg. The different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1g or 10g SAR.

Per FCC KDB Publication 941225 D06v02r01, the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR (“-”).

(*) For test positions that were not required to be evaluated for WLAN SAR per FCC KDB publication 248227, the worst case WLAN SAR result for the applicable exposure conditions was used for simultaneous transmission analysis.

Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure from 4G and time-averaged RF exposure from 5G NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G NR to not exceed FCC limit. Therefore, simultaneous transmission compliance between 4G+5G operations is demonstrated in the Part 2 Report during algorithm validation.

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12.3 Head SAR Simultaneous Transmission Analysis

Table 12-1
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Cell. CDMA/EVDO	0.286	0.281	0.567
	PCS CDMA/EVDO	0.097	0.281	0.378
	GSM 850	0.170	0.281	0.451
	GSM 1900	0.049	0.281	0.330
	UMTS 850	0.191	0.281	0.472
	UMTS 1750	0.080	0.281	0.361
	UMTS 1900	0.090	0.281	0.371
	LTE Band 71	0.223	0.281	0.504
	LTE Band 12	0.207	0.281	0.488
	LTE Band 13	0.222	0.281	0.503
	LTE Band 14	0.224	0.281	0.505
	LTE Band 26 (Cell)	0.275	0.281	0.556
	LTE Band 5 (Cell)	0.258	0.281	0.539
	LTE Band 66 (AWS)	0.087	0.281	0.368
	LTE Band 25 (PCS)	0.097	0.281	0.378
	LTE Band 30	0.071	0.281	0.352
	LTE Band 7	0.109	0.281	0.390
	LTE Band 48	0.840	0.281	1.121
	LTE Band 41	0.194	0.281	0.475
	NR Band n71	0.212	0.281	0.493
	NR Band n12	0.214	0.281	0.495
	NR Band n5 (Cell)	0.246	0.281	0.527
	NR Band n66 (AWS) Antenna A	0.067	0.281	0.348
	NR Band n66 (AWS) Antenna I	0.350	0.281	0.631
	NR Band n25 (PCS) Antenna A	0.081	0.281	0.362
	NR Band n25 (PCS) Antenna I	0.984	0.281	1.265
	NR Band n30	0.020	0.281	0.301
	NR Band n41	1.119	0.281	1.400
	NR Band n77 DoD	0.734	0.281	1.015
	NR Band n77	0.858	0.281	1.139

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Table 12-2
Simultaneous Transmission Scenario with 5 GHz WLAN (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Cell. CDMA/EVDO	0.286	0.099	0.385
	PCS CDMA/EVDO	0.097	0.099	0.196
	GSM 850	0.170	0.099	0.269
	GSM 1900	0.049	0.099	0.148
	UMTS 850	0.191	0.099	0.290
	UMTS 1750	0.080	0.099	0.179
	UMTS 1900	0.090	0.099	0.189
	LTE Band 71	0.223	0.099	0.322
	LTE Band 12	0.207	0.099	0.306
	LTE Band 13	0.222	0.099	0.321
	LTE Band 14	0.224	0.099	0.323
	LTE Band 26 (Cell)	0.275	0.099	0.374
	LTE Band 5 (Cell)	0.258	0.099	0.357
	LTE Band 66 (AWS)	0.087	0.099	0.186
	LTE Band 25 (PCS)	0.097	0.099	0.196
	LTE Band 30	0.071	0.099	0.170
	LTE Band 7	0.109	0.099	0.208
	LTE Band 48	0.840	0.099	0.939
	LTE Band 41	0.194	0.099	0.293
	NR Band n71	0.212	0.099	0.311
	NR Band n12	0.214	0.099	0.313
	NR Band n5 (Cell)	0.246	0.099	0.345
	NR Band n66 (AWS) Antenna A	0.067	0.099	0.166
	NR Band n66 (AWS) Antenna I	0.350	0.099	0.449
	NR Band n25 (PCS) Antenna A	0.081	0.099	0.180
	NR Band n25 (PCS) Antenna I	0.984	0.099	1.083
	NR Band n30	0.020	0.099	0.119
	NR Band n41	1.119	0.099	1.218
	NR Band n77 DoD	0.734	0.099	0.833
	NR Band n77	0.858	0.099	0.957

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Table 12-3
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Cell. CDMA/EVDO	0.286	0.209	0.495
	PCS CDMA/EVDO	0.097	0.209	0.306
	GSM 850	0.170	0.209	0.379
	GSM 1900	0.049	0.209	0.258
	UMTS 850	0.191	0.209	0.400
	UMTS 1750	0.080	0.209	0.289
	UMTS 1900	0.090	0.209	0.299
	LTE Band 71	0.223	0.209	0.432
	LTE Band 12	0.207	0.209	0.416
	LTE Band 13	0.222	0.209	0.431
	LTE Band 14	0.224	0.209	0.433
	LTE Band 26 (Cell)	0.275	0.209	0.484
	LTE Band 5 (Cell)	0.258	0.209	0.467
	LTE Band 66 (AWS)	0.087	0.209	0.296
	LTE Band 25 (PCS)	0.097	0.209	0.306
	LTE Band 30	0.071	0.209	0.280
	LTE Band 7	0.109	0.209	0.318
	LTE Band 48	0.840	0.209	1.049
	LTE Band 41	0.194	0.209	0.403
	NR Band n71	0.212	0.209	0.421
	NR Band n12	0.214	0.209	0.423
	NR Band n5 (Cell)	0.246	0.209	0.455
	NR Band n66 (AWS) Antenna A	0.067	0.209	0.276
	NR Band n66 (AWS) Antenna I	0.350	0.209	0.559
	NR Band n25 (PCS) Antenna A	0.081	0.209	0.290
	NR Band n25 (PCS) Antenna I	0.984	0.209	1.193
	NR Band n30	0.020	0.209	0.229
	NR Band n41	1.119	0.209	1.328
	NR Band n77 DoD	0.734	0.209	0.943
	NR Band n77	0.858	0.209	1.067

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Table 12-4
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Cell. CDMA/EVDO	0.286	0.281	0.209	0.776
	PCS CDMA/EVDO	0.097	0.281	0.209	0.587
	GSM 850	0.170	0.281	0.209	0.660
	GSM 1900	0.049	0.281	0.209	0.539
	UMTS 850	0.191	0.281	0.209	0.681
	UMTS 1750	0.080	0.281	0.209	0.570
	UMTS 1900	0.090	0.281	0.209	0.580
	LTE Band 71	0.223	0.281	0.209	0.713
	LTE Band 12	0.207	0.281	0.209	0.697
	LTE Band 13	0.222	0.281	0.209	0.712
	LTE Band 14	0.224	0.281	0.209	0.714
	LTE Band 26 (Cell)	0.275	0.281	0.209	0.765
	LTE Band 5 (Cell)	0.258	0.281	0.209	0.748
	LTE Band 66 (AWS)	0.087	0.281	0.209	0.577
	LTE Band 25 (PCS)	0.097	0.281	0.209	0.587
	LTE Band 30	0.071	0.281	0.209	0.561
	LTE Band 7	0.109	0.281	0.209	0.599
	LTE Band 48	0.840	0.281	0.209	1.330
	LTE Band 41	0.194	0.281	0.209	0.684
	NR Band n71	0.212	0.281	0.209	0.702
	NR Band n12	0.214	0.281	0.209	0.704
	NR Band n5 (Cell)	0.246	0.281	0.209	0.736
	NR Band n66 (AWS) Antenna A	0.067	0.281	0.209	0.557
	NR Band n66 (AWS) Antenna I	0.350	0.281	0.209	0.840
	NR Band n25 (PCS) Antenna A	0.081	0.281	0.209	0.571
	NR Band n25 (PCS) Antenna I	0.984	0.281	0.209	1.474
	NR Band n30	0.020	0.281	0.209	0.510
	NR Band n41	1.119	0.281	0.209	See Table Below
	NR Band n77 DoD	0.734	0.281	0.209	1.224
	NR Band n77	0.858	0.281	0.209	1.348

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.266	0.281	0.209	0.756
	Right Tilt	0.068	0.281*	0.209*	0.558
	Left Cheek	1.119	0.178	0.125	1.422
	Left Tilt	0.231	0.281*	0.209*	0.721

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Table 12-5
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Cell. CDMA/EVDO	0.286	0.097	0.383
	PCS CDMA/EVDO	0.097	0.097	0.194
	GSM 850	0.170	0.097	0.267
	GSM 1900	0.049	0.097	0.146
	UMTS 850	0.191	0.097	0.288
	UMTS 1750	0.080	0.097	0.177
	UMTS 1900	0.090	0.097	0.187
	LTE Band 71	0.223	0.097	0.320
	LTE Band 12	0.207	0.097	0.304
	LTE Band 13	0.222	0.097	0.319
	LTE Band 14	0.224	0.097	0.321
	LTE Band 26 (Cell)	0.275	0.097	0.372
	LTE Band 5 (Cell)	0.258	0.097	0.355
	LTE Band 66 (AWS)	0.087	0.097	0.184
	LTE Band 25 (PCS)	0.097	0.097	0.194
	LTE Band 30	0.071	0.097	0.168
	LTE Band 7	0.109	0.097	0.206
	LTE Band 48	0.840	0.097	0.937
	LTE Band 41	0.194	0.097	0.291
	NR Band n71	0.212	0.097	0.309
	NR Band n12	0.214	0.097	0.311
	NR Band n5 (Cell)	0.246	0.097	0.343
	NR Band n66 (AWS) Antenna A	0.067	0.097	0.164
	NR Band n66 (AWS) Antenna I	0.350	0.097	0.447
	NR Band n25 (PCS) Antenna A	0.081	0.097	0.178
	NR Band n25 (PCS) Antenna I	0.984	0.097	1.081
	NR Band n30	0.020	0.097	0.117
	NR Band n41	1.119	0.097	1.216
	NR Band n77 DoD	0.734	0.097	0.831
	NR Band n77	0.858	0.097	0.955

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Table 12-6
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	Cell. CDMA/EVDO	0.286	0.244	0.530
	PCS CDMA/EVDO	0.097	0.244	0.341
	GSM 850	0.170	0.244	0.414
	GSM 1900	0.049	0.244	0.293
	UMTS 850	0.191	0.244	0.435
	UMTS 1750	0.080	0.244	0.324
	UMTS 1900	0.090	0.244	0.334
	LTE Band 71	0.223	0.244	0.467
	LTE Band 12	0.207	0.244	0.451
	LTE Band 13	0.222	0.244	0.466
	LTE Band 14	0.224	0.244	0.468
	LTE Band 26 (Cell)	0.275	0.244	0.519
	LTE Band 5 (Cell)	0.258	0.244	0.502
	LTE Band 66 (AWS)	0.087	0.244	0.331
	LTE Band 25 (PCS)	0.097	0.244	0.341
	LTE Band 30	0.071	0.244	0.315
	LTE Band 7	0.109	0.244	0.353
	LTE Band 48	0.840	0.244	1.084
	LTE Band 41	0.194	0.244	0.438
	NR Band n71	0.212	0.244	0.456
	NR Band n12	0.214	0.244	0.458
	NR Band n5 (Cell)	0.246	0.244	0.490
	NR Band n66 (AWS) Antenna A	0.067	0.244	0.311
	NR Band n66 (AWS) Antenna I	0.350	0.244	0.594
	NR Band n25 (PCS) Antenna A	0.081	0.244	0.325
	NR Band n25 (PCS) Antenna I	0.984	0.244	1.228
	NR Band n30	0.020	0.244	0.264
	NR Band n41	1.119	0.244	1.363
	NR Band n77 DoD	0.734	0.244	0.978
	NR Band n77	0.858	0.244	1.102

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Table 12-7
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
(Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Cell. CDMA/EVDO	0.286	0.097	0.420	0.803
	PCS CDMA/EVDO	0.097	0.097	0.420	0.614
	GSM 850	0.170	0.097	0.420	0.687
	GSM 1900	0.049	0.097	0.420	0.566
	UMTS 850	0.191	0.097	0.420	0.708
	UMTS 1750	0.080	0.097	0.420	0.597
	UMTS 1900	0.090	0.097	0.420	0.607
	LTE Band 71	0.223	0.097	0.420	0.740
	LTE Band 12	0.207	0.097	0.420	0.724
	LTE Band 13	0.222	0.097	0.420	0.739
	LTE Band 14	0.224	0.097	0.420	0.741
	LTE Band 26 (Cell)	0.275	0.097	0.420	0.792
	LTE Band 5 (Cell)	0.258	0.097	0.420	0.775
	LTE Band 66 (AWS)	0.087	0.097	0.420	0.604
	LTE Band 25 (PCS)	0.097	0.097	0.420	0.614
	LTE Band 30	0.071	0.097	0.420	0.588
	LTE Band 7	0.109	0.097	0.420	0.626
	LTE Band 48	0.840	0.097	0.420	1.357
	LTE Band 41	0.194	0.097	0.420	0.711
	NR Band n71	0.212	0.097	0.420	0.729
	NR Band n12	0.214	0.097	0.420	0.731
	NR Band n5 (Cell)	0.246	0.097	0.420	0.763
	NR Band n66 (AWS) Antenna A	0.067	0.097	0.420	0.584
	NR Band n66 (AWS) Antenna I	0.350	0.097	0.420	0.867
	NR Band n25 (PCS) Antenna A	0.081	0.097	0.420	0.598
	NR Band n25 (PCS) Antenna I	0.984	0.097	0.420	1.501
	NR Band n30	0.020	0.097	0.420	0.537
	NR Band n41	1.119	0.097	0.420	See Table Below
	NR Band n77 DoD	0.734	0.097	0.420	1.251
	NR Band n77	0.858	0.097	0.420	1.375

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.266	0.097	0.420	0.783
	Right Tilt	0.068	0.068	0.178	0.314
	Left Cheek	1.119	0.091	0.157	1.367
	Left Tilt	0.231	0.077	0.420*	0.728

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Table 12-8
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN Antenna 1
(Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Cell. CDMA/EVDO	0.286	0.097	0.099	0.482
	PCS CDMA/EVDO	0.097	0.097	0.099	0.293
	GSM 850	0.170	0.097	0.099	0.366
	GSM 1900	0.049	0.097	0.099	0.245
	UMTS 850	0.191	0.097	0.099	0.387
	UMTS 1750	0.080	0.097	0.099	0.276
	UMTS 1900	0.090	0.097	0.099	0.286
	LTE Band 71	0.223	0.097	0.099	0.419
	LTE Band 12	0.207	0.097	0.099	0.403
	LTE Band 13	0.222	0.097	0.099	0.418
	LTE Band 14	0.224	0.097	0.099	0.420
	LTE Band 26 (Cell)	0.275	0.097	0.099	0.471
	LTE Band 5 (Cell)	0.258	0.097	0.099	0.454
	LTE Band 66 (AWS)	0.087	0.097	0.099	0.283
	LTE Band 25 (PCS)	0.097	0.097	0.099	0.293
	LTE Band 30	0.071	0.097	0.099	0.267
	LTE Band 7	0.109	0.097	0.099	0.305
	LTE Band 48	0.840	0.097	0.099	1.036
	LTE Band 41	0.194	0.097	0.099	0.390
	NR Band n71	0.212	0.097	0.099	0.408
	NR Band n12	0.214	0.097	0.099	0.410
	NR Band n5 (Cell)	0.246	0.097	0.099	0.442
	NR Band n66 (AWS) Antenna A	0.067	0.097	0.099	0.263
	NR Band n66 (AWS) Antenna I	0.350	0.097	0.099	0.546
	NR Band n25 (PCS) Antenna A	0.081	0.097	0.099	0.277
	NR Band n25 (PCS) Antenna I	0.984	0.097	0.099	1.180
	NR Band n30	0.020	0.097	0.099	0.216
	NR Band n41	1.119	0.097	0.099	1.315
	NR Band n77 DoD	0.734	0.097	0.099	0.930
	NR Band n77	0.858	0.097	0.099	1.054

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Table 12-9
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN MIMO (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Cell. CDMA/EVDO	0.286	0.097	0.209	0.592
	PCS CDMA/EVDO	0.097	0.097	0.209	0.403
	GSM 850	0.170	0.097	0.209	0.476
	GSM 1900	0.049	0.097	0.209	0.355
	UMTS 850	0.191	0.097	0.209	0.497
	UMTS 1750	0.080	0.097	0.209	0.386
	UMTS 1900	0.090	0.097	0.209	0.396
	LTE Band 71	0.223	0.097	0.209	0.529
	LTE Band 12	0.207	0.097	0.209	0.513
	LTE Band 13	0.222	0.097	0.209	0.528
	LTE Band 14	0.224	0.097	0.209	0.530
	LTE Band 26 (Cell)	0.275	0.097	0.209	0.581
	LTE Band 5 (Cell)	0.258	0.097	0.209	0.564
	LTE Band 66 (AWS)	0.087	0.097	0.209	0.393
	LTE Band 25 (PCS)	0.097	0.097	0.209	0.403
	LTE Band 30	0.071	0.097	0.209	0.377
	LTE Band 7	0.109	0.097	0.209	0.415
	LTE Band 48	0.840	0.097	0.209	1.146
	LTE Band 41	0.194	0.097	0.209	0.500
	NR Band n71	0.212	0.097	0.209	0.518
	NR Band n12	0.214	0.097	0.209	0.520
	NR Band n5 (Cell)	0.246	0.097	0.209	0.552
	NR Band n66 (AWS) Antenna A	0.067	0.097	0.209	0.373
	NR Band n66 (AWS) Antenna I	0.350	0.097	0.209	0.656
	NR Band n25 (PCS) Antenna A	0.081	0.097	0.209	0.387
	NR Band n25 (PCS) Antenna I	0.984	0.097	0.209	1.290
	NR Band n30	0.020	0.097	0.209	0.326
	NR Band n41	1.119	0.097	0.209	1.425
	NR Band n77 DoD	0.734	0.097	0.209	1.040
	NR Band n77	0.858	0.097	0.209	1.164

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Table 12-10
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN Antenna 1
(Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Cell. CDMA/EVDO	0.286	0.244	0.099	0.629
	PCS CDMA/EVDO	0.097	0.244	0.099	0.440
	GSM 850	0.170	0.244	0.099	0.513
	GSM 1900	0.049	0.244	0.099	0.392
	UMTS 850	0.191	0.244	0.099	0.534
	UMTS 1750	0.080	0.244	0.099	0.423
	UMTS 1900	0.090	0.244	0.099	0.433
	LTE Band 71	0.223	0.244	0.099	0.566
	LTE Band 12	0.207	0.244	0.099	0.550
	LTE Band 13	0.222	0.244	0.099	0.565
	LTE Band 14	0.224	0.244	0.099	0.567
	LTE Band 26 (Cell)	0.275	0.244	0.099	0.618
	LTE Band 5 (Cell)	0.258	0.244	0.099	0.601
	LTE Band 66 (AWS)	0.087	0.244	0.099	0.430
	LTE Band 25 (PCS)	0.097	0.244	0.099	0.440
	LTE Band 30	0.071	0.244	0.099	0.414
	LTE Band 7	0.109	0.244	0.099	0.452
	LTE Band 48	0.840	0.244	0.099	1.183
	LTE Band 41	0.194	0.244	0.099	0.537
	NR Band n71	0.212	0.244	0.099	0.555
	NR Band n12	0.214	0.244	0.099	0.557
	NR Band n5 (Cell)	0.246	0.244	0.099	0.589
	NR Band n66 (AWS) Antenna A	0.067	0.244	0.099	0.410
	NR Band n66 (AWS) Antenna I	0.350	0.244	0.099	0.693
	NR Band n25 (PCS) Antenna A	0.081	0.244	0.099	0.424
	NR Band n25 (PCS) Antenna I	0.984	0.244	0.099	1.327
	NR Band n30	0.020	0.244	0.099	0.363
	NR Band n41	1.119	0.244	0.099	1.462
	NR Band n77 DoD	0.734	0.244	0.099	1.077
	NR Band n77	0.858	0.244	0.099	1.201

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Table 12-11
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN MIMO (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Cell. CDMA/EVDO	0.286	0.244	0.209	0.739
	PCS CDMA/EVDO	0.097	0.244	0.209	0.550
	GSM 850	0.170	0.244	0.209	0.623
	GSM 1900	0.049	0.244	0.209	0.502
	UMTS 850	0.191	0.244	0.209	0.644
	UMTS 1750	0.080	0.244	0.209	0.533
	UMTS 1900	0.090	0.244	0.209	0.543
	LTE Band 71	0.223	0.244	0.209	0.676
	LTE Band 12	0.207	0.244	0.209	0.660
	LTE Band 13	0.222	0.244	0.209	0.675
	LTE Band 14	0.224	0.244	0.209	0.677
	LTE Band 26 (Cell)	0.275	0.244	0.209	0.728
	LTE Band 5 (Cell)	0.258	0.244	0.209	0.711
	LTE Band 66 (AWS)	0.087	0.244	0.209	0.540
	LTE Band 25 (PCS)	0.097	0.244	0.209	0.550
	LTE Band 30	0.071	0.244	0.209	0.524
	LTE Band 7	0.109	0.244	0.209	0.562
	LTE Band 48	0.840	0.244	0.209	1.293
	LTE Band 41	0.194	0.244	0.209	0.647
	NR Band n71	0.212	0.244	0.209	0.665
	NR Band n12	0.214	0.244	0.209	0.667
	NR Band n5 (Cell)	0.246	0.244	0.209	0.699
	NR Band n66 (AWS) Antenna A	0.067	0.244	0.209	0.520
	NR Band n66 (AWS) Antenna I	0.350	0.244	0.209	0.803
	NR Band n25 (PCS) Antenna A	0.081	0.244	0.209	0.534
	NR Band n25 (PCS) Antenna I	0.984	0.244	0.209	1.437
	NR Band n30	0.020	0.244	0.209	0.473
	NR Band n41	1.119	0.244	0.209	1.572
	NR Band n77 DoD	0.734	0.244	0.209	1.187
	NR Band n77	0.858	0.244	0.209	1.311

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Table 12-12
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN Antenna 1 (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Cell. CDMA/EVDO	0.286	0.097	0.420	0.099	0.902
	PCS CDMA/EVDO	0.097	0.097	0.420	0.099	0.713
	GSM 850	0.170	0.097	0.420	0.099	0.786
	GSM 1900	0.049	0.097	0.420	0.099	0.665
	UMTS 850	0.191	0.097	0.420	0.099	0.807
	UMTS 1750	0.080	0.097	0.420	0.099	0.696
	UMTS 1900	0.090	0.097	0.420	0.099	0.706
	LTE Band 71	0.223	0.097	0.420	0.099	0.839
	LTE Band 12	0.207	0.097	0.420	0.099	0.823
	LTE Band 13	0.222	0.097	0.420	0.099	0.838
	LTE Band 14	0.224	0.097	0.420	0.099	0.840
	LTE Band 26 (Cell)	0.275	0.097	0.420	0.099	0.891
	LTE Band 5 (Cell)	0.258	0.097	0.420	0.099	0.874
	LTE Band 66 (AWS)	0.087	0.097	0.420	0.099	0.703
	LTE Band 25 (PCS)	0.097	0.097	0.420	0.099	0.713
	LTE Band 30	0.071	0.097	0.420	0.099	0.687
	LTE Band 7	0.109	0.097	0.420	0.099	0.725
	LTE Band 48	0.840	0.097	0.420	0.099	1.456
	LTE Band 41	0.194	0.097	0.420	0.099	0.810
	NR Band n71	0.212	0.097	0.420	0.099	0.828
	NR Band n12	0.214	0.097	0.420	0.099	0.830
	NR Band n5 (Cell)	0.246	0.097	0.420	0.099	0.862
	NR Band n66 (AWS) Antenna A	0.067	0.097	0.420	0.099	0.683
	NR Band n66 (AWS) Antenna I	0.350	0.097	0.420	0.099	0.966
	NR Band n25 (PCS) Antenna A	0.081	0.097	0.420	0.099	0.697
	NR Band n25 (PCS) Antenna I	0.984	0.097	0.420	0.099	See Table Below
	NR Band n30	0.020	0.097	0.420	0.099	0.636
	NR Band n41	1.119	0.097	0.420	0.099	See Table Below
	NR Band n77 DoD	0.734	0.097	0.420	0.099	1.350
	NR Band n77	0.858	0.097	0.420	0.099	1.474

Simult Tx	Configuration	NR Band n25 (PCS) Antenna I SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.234	0.097	0.420	0.052	0.803
	Right Tilt	0.137	0.068	0.178	0.099*	0.482
	Left Cheek	0.984	0.091	0.157	0.052	1.284
	Left Tilt	0.164	0.077	0.420*	0.099	0.760

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.266	0.097	0.420	0.052	0.835
	Right Tilt	0.068	0.068	0.178	0.099*	0.413
	Left Cheek	1.119	0.091	0.157	0.052	1.419
	Left Tilt	0.231	0.077	0.420*	0.099	0.827

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Table 12-13
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN MIMO (Held to Ear)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Cell. CDMA/EVDO	0.286	0.097	0.420	0.209	1.012
	PCS CDMA/EVDO	0.097	0.097	0.420	0.209	0.823
	GSM 850	0.170	0.097	0.420	0.209	0.896
	GSM 1900	0.049	0.097	0.420	0.209	0.775
	UMTS 850	0.191	0.097	0.420	0.209	0.917
	UMTS 1750	0.080	0.097	0.420	0.209	0.806
	UMTS 1900	0.090	0.097	0.420	0.209	0.816
	LTE Band 71	0.223	0.097	0.420	0.209	0.949
	LTE Band 12	0.207	0.097	0.420	0.209	0.933
	LTE Band 13	0.222	0.097	0.420	0.209	0.948
	LTE Band 14	0.224	0.097	0.420	0.209	0.950
	LTE Band 26 (Cell)	0.275	0.097	0.420	0.209	1.001
	LTE Band 5 (Cell)	0.258	0.097	0.420	0.209	0.984
	LTE Band 66 (AWS)	0.087	0.097	0.420	0.209	0.813
	LTE Band 25 (PCS)	0.097	0.097	0.420	0.209	0.823
	LTE Band 30	0.071	0.097	0.420	0.209	0.797
	LTE Band 7	0.109	0.097	0.420	0.209	0.835
	LTE Band 48	0.840	0.097	0.420	0.209	1.566
	LTE Band 41	0.194	0.097	0.420	0.209	0.920
	NR Band n71	0.212	0.097	0.420	0.209	0.938
	NR Band n12	0.214	0.097	0.420	0.209	0.940
	NR Band n5 (Cell)	0.246	0.097	0.420	0.209	0.972
	NR Band n66 (AWS) Antenna A	0.067	0.097	0.420	0.209	0.793
	NR Band n66 (AWS) Antenna I	0.350	0.097	0.420	0.209	1.076
	NR Band n25 (PCS) Antenna A	0.081	0.097	0.420	0.209	0.807
	NR Band n25 (PCS) Antenna I	0.984	0.097	0.420	0.209	See Table Below
	NR Band n30	0.020	0.097	0.420	0.209	0.746
	NR Band n41	1.119	0.097	0.420	0.209	See Table Below
	NR Band n77 DoD	0.734	0.097	0.420	0.209	1.460
	NR Band n77	0.858	0.097	0.420	0.209	1.584

Simult Tx	Configuration	NR Band n25 (PCS) Antenna I SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.234	0.097	0.420	0.209	0.960
	Right Tilt	0.137	0.068	0.178	0.209*	0.592
	Left Cheek	0.984	0.091	0.157	0.125	1.357
	Left Tilt	0.164	0.077	0.420*	0.209*	0.870

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	Right Cheek	0.266	0.097	0.420	0.209	0.992
	Right Tilt	0.068	0.068	0.178	0.209*	0.523
	Left Cheek	1.119	0.091	0.157	0.125	1.492
	Left Tilt	0.231	0.077	0.420*	0.209*	0.937

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12.4 Body-Worn Simultaneous Transmission Analysis – Open

Table 12-14
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.207	0.131	0.338
	PCS CDMA	0.770	0.131	0.901
	GSM 850	0.147	0.131	0.278
	GSM 1900	0.283	0.131	0.414
	UMTS 850	0.188	0.131	0.319
	UMTS 1750	0.585	0.131	0.716
	UMTS 1900	0.552	0.131	0.683
	LTE Band 71	0.280	0.131	0.411
	LTE Band 12	0.229	0.131	0.360
	LTE Band 13	0.296	0.131	0.427
	LTE Band 14	0.289	0.131	0.420
	LTE Band 26 (Cell)	0.258	0.131	0.389
	LTE Band 5 (Cell)	0.189	0.131	0.320
	LTE Band 66 (AWS)	1.116	0.131	1.247
	LTE Band 25 (PCS)	0.790	0.131	0.921
	LTE Band 30	0.402	0.131	0.533
	LTE Band 7	0.573	0.131	0.704
	LTE Band 48	0.234	0.131	0.365
	LTE Band 41	0.335	0.131	0.466
	NR Band n71	0.287	0.131	0.418
	NR Band n12	0.211	0.131	0.342
	NR Band n5 (Cell)	0.235	0.131	0.366
	NR Band n66 (AWS) Antenna A	0.685	0.131	0.816
	NR Band n66 (AWS) Antenna I	0.047	0.131	0.178
	NR Band n25 (PCS) Antenna A	0.609	0.131	0.740
	NR Band n25 (PCS) Antenna I	0.338	0.131	0.469
	NR Band n30	0.271	0.131	0.402
	NR Band n41	0.280	0.131	0.411
	NR Band n77 DoD	0.220	0.131	0.351
	NR Band n77	0.246	0.131	0.377

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Table 12-15
Simultaneous Transmission Scenario with 5 GHz WLAN (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.207	0.025	0.232
	PCS CDMA	0.770	0.025	0.795
	GSM 850	0.147	0.025	0.172
	GSM 1900	0.283	0.025	0.308
	UMTS 850	0.188	0.025	0.213
	UMTS 1750	0.585	0.025	0.610
	UMTS 1900	0.552	0.025	0.577
	LTE Band 71	0.280	0.025	0.305
	LTE Band 12	0.229	0.025	0.254
	LTE Band 13	0.296	0.025	0.321
	LTE Band 14	0.289	0.025	0.314
	LTE Band 26 (Cell)	0.258	0.025	0.283
	LTE Band 5 (Cell)	0.189	0.025	0.214
	LTE Band 66 (AWS)	1.116	0.025	1.141
	LTE Band 25 (PCS)	0.790	0.025	0.815
	LTE Band 30	0.402	0.025	0.427
	LTE Band 7	0.573	0.025	0.598
	LTE Band 48	0.234	0.025	0.259
	LTE Band 41	0.335	0.025	0.360
	NR Band n71	0.287	0.025	0.312
	NR Band n12	0.211	0.025	0.236
	NR Band n5 (Cell)	0.235	0.025	0.260
	NR Band n66 (AWS) Antenna A	0.685	0.025	0.710
	NR Band n66 (AWS) Antenna I	0.047	0.025	0.072
	NR Band n25 (PCS) Antenna A	0.609	0.025	0.634
	NR Band n25 (PCS) Antenna I	0.338	0.025	0.363
	NR Band n30	0.271	0.025	0.296
	NR Band n41	0.280	0.025	0.305
	NR Band n77 DoD	0.220	0.025	0.245
	NR Band n77	0.246	0.025	0.271

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Table 12-16
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.207	0.086	0.293
	PCS CDMA	0.770	0.086	0.856
	GSM 850	0.147	0.086	0.233
	GSM 1900	0.283	0.086	0.369
	UMTS 850	0.188	0.086	0.274
	UMTS 1750	0.585	0.086	0.671
	UMTS 1900	0.552	0.086	0.638
	LTE Band 71	0.280	0.086	0.366
	LTE Band 12	0.229	0.086	0.315
	LTE Band 13	0.296	0.086	0.382
	LTE Band 14	0.289	0.086	0.375
	LTE Band 26 (Cell)	0.258	0.086	0.344
	LTE Band 5 (Cell)	0.189	0.086	0.275
	LTE Band 66 (AWS)	1.116	0.086	1.202
	LTE Band 25 (PCS)	0.790	0.086	0.876
	LTE Band 30	0.402	0.086	0.488
	LTE Band 7	0.573	0.086	0.659
	LTE Band 48	0.234	0.086	0.320
	LTE Band 41	0.335	0.086	0.421
	NR Band n71	0.287	0.086	0.373
	NR Band n12	0.211	0.086	0.297
	NR Band n5 (Cell)	0.235	0.086	0.321
	NR Band n66 (AWS) Antenna A	0.685	0.086	0.771
	NR Band n66 (AWS) Antenna I	0.047	0.086	0.133
	NR Band n25 (PCS) Antenna A	0.609	0.086	0.695
	NR Band n25 (PCS) Antenna I	0.338	0.086	0.424
	NR Band n30	0.271	0.086	0.357
	NR Band n41	0.280	0.086	0.366
	NR Band n77 DoD	0.220	0.086	0.306
	NR Band n77	0.246	0.086	0.332

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Table 12-17
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.207	0.131	0.086	0.424
	PCS CDMA	0.770	0.131	0.086	0.987
	GSM 850	0.147	0.131	0.086	0.364
	GSM 1900	0.283	0.131	0.086	0.500
	UMTS 850	0.188	0.131	0.086	0.405
	UMTS 1750	0.585	0.131	0.086	0.802
	UMTS 1900	0.552	0.131	0.086	0.769
	LTE Band 71	0.280	0.131	0.086	0.497
	LTE Band 12	0.229	0.131	0.086	0.446
	LTE Band 13	0.296	0.131	0.086	0.513
	LTE Band 14	0.289	0.131	0.086	0.506
	LTE Band 26 (Cell)	0.258	0.131	0.086	0.475
	LTE Band 5 (Cell)	0.189	0.131	0.086	0.406
	LTE Band 66 (AWS)	1.116	0.131	0.086	1.333
	LTE Band 25 (PCS)	0.790	0.131	0.086	1.007
	LTE Band 30	0.402	0.131	0.086	0.619
	LTE Band 7	0.573	0.131	0.086	0.790
	LTE Band 48	0.234	0.131	0.086	0.451
	LTE Band 41	0.335	0.131	0.086	0.552
	NR Band n71	0.287	0.131	0.086	0.504
	NR Band n12	0.211	0.131	0.086	0.428
	NR Band n5 (Cell)	0.235	0.131	0.086	0.452
	NR Band n66 (AWS) Antenna A	0.685	0.131	0.086	0.902
	NR Band n66 (AWS) Antenna I	0.047	0.131	0.086	0.264
	NR Band n25 (PCS) Antenna A	0.609	0.131	0.086	0.826
	NR Band n25 (PCS) Antenna I	0.338	0.131	0.086	0.555
	NR Band n30	0.271	0.131	0.086	0.488
	NR Band n41	0.280	0.131	0.086	0.497
	NR Band n77 DoD	0.220	0.131	0.086	0.437
	NR Band n77	0.246	0.131	0.086	0.463

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Table 12-18
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.207	0.061	0.268
	PCS CDMA	0.770	0.061	0.831
	GSM 850	0.147	0.061	0.208
	GSM 1900	0.283	0.061	0.344
	UMTS 850	0.188	0.061	0.249
	UMTS 1750	0.585	0.061	0.646
	UMTS 1900	0.552	0.061	0.613
	LTE Band 71	0.280	0.061	0.341
	LTE Band 12	0.229	0.061	0.290
	LTE Band 13	0.296	0.061	0.357
	LTE Band 14	0.289	0.061	0.350
	LTE Band 26 (Cell)	0.258	0.061	0.319
	LTE Band 5 (Cell)	0.189	0.061	0.250
	LTE Band 66 (AWS)	1.116	0.061	1.177
	LTE Band 25 (PCS)	0.790	0.061	0.851
	LTE Band 30	0.402	0.061	0.463
	LTE Band 7	0.573	0.061	0.634
	LTE Band 48	0.234	0.061	0.295
	LTE Band 41	0.335	0.061	0.396
	NR Band n71	0.287	0.061	0.348
	NR Band n12	0.211	0.061	0.272
	NR Band n5 (Cell)	0.235	0.061	0.296
	NR Band n66 (AWS) Antenna A	0.685	0.061	0.746
	NR Band n66 (AWS) Antenna I	0.047	0.061	0.108
	NR Band n25 (PCS) Antenna A	0.609	0.061	0.670
	NR Band n25 (PCS) Antenna I	0.338	0.061	0.399
	NR Band n30	0.271	0.061	0.332
	NR Band n41	0.280	0.061	0.341
	NR Band n77 DoD	0.220	0.061	0.281
	NR Band n77	0.246	0.061	0.307

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Table 12-19
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.207	0.051	0.258
	PCS CDMA	0.770	0.051	0.821
	GSM 850	0.147	0.051	0.198
	GSM 1900	0.283	0.051	0.334
	UMTS 850	0.188	0.051	0.239
	UMTS 1750	0.585	0.051	0.636
	UMTS 1900	0.552	0.051	0.603
	LTE Band 71	0.280	0.051	0.331
	LTE Band 12	0.229	0.051	0.280
	LTE Band 13	0.296	0.051	0.347
	LTE Band 14	0.289	0.051	0.340
	LTE Band 26 (Cell)	0.258	0.051	0.309
	LTE Band 5 (Cell)	0.189	0.051	0.240
	LTE Band 66 (AWS)	1.116	0.051	1.167
	LTE Band 25 (PCS)	0.790	0.051	0.841
	LTE Band 30	0.402	0.051	0.453
	LTE Band 7	0.573	0.051	0.624
	LTE Band 48	0.234	0.051	0.285
	LTE Band 41	0.335	0.051	0.386
	NR Band n71	0.287	0.051	0.338
	NR Band n12	0.211	0.051	0.262
	NR Band n5 (Cell)	0.235	0.051	0.286
	NR Band n66 (AWS) Antenna A	0.685	0.051	0.736
	NR Band n66 (AWS) Antenna I	0.047	0.051	0.098
	NR Band n25 (PCS) Antenna A	0.609	0.051	0.660
	NR Band n25 (PCS) Antenna I	0.338	0.051	0.389
	NR Band n30	0.271	0.051	0.322
	NR Band n41	0.280	0.051	0.331
	NR Band n77 DoD	0.220	0.051	0.271
	NR Band n77	0.246	0.051	0.297

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Table 12-20
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.207	0.061	0.060	0.328
	PCS CDMA	0.770	0.061	0.060	0.891
	GSM 850	0.147	0.061	0.060	0.268
	GSM 1900	0.283	0.061	0.060	0.404
	UMTS 850	0.188	0.061	0.060	0.309
	UMTS 1750	0.585	0.061	0.060	0.706
	UMTS 1900	0.552	0.061	0.060	0.673
	LTE Band 71	0.280	0.061	0.060	0.401
	LTE Band 12	0.229	0.061	0.060	0.350
	LTE Band 13	0.296	0.061	0.060	0.417
	LTE Band 14	0.289	0.061	0.060	0.410
	LTE Band 26 (Cell)	0.258	0.061	0.060	0.379
	LTE Band 5 (Cell)	0.189	0.061	0.060	0.310
	LTE Band 66 (AWS)	1.116	0.061	0.060	1.237
	LTE Band 25 (PCS)	0.790	0.061	0.060	0.911
	LTE Band 30	0.402	0.061	0.060	0.523
	LTE Band 7	0.573	0.061	0.060	0.694
	LTE Band 48	0.234	0.061	0.060	0.355
	LTE Band 41	0.335	0.061	0.060	0.456
	NR Band n71	0.287	0.061	0.060	0.408
	NR Band n12	0.211	0.061	0.060	0.332
	NR Band n5 (Cell)	0.235	0.061	0.060	0.356
	NR Band n66 (AWS) Antenna A	0.685	0.061	0.060	0.806
	NR Band n66 (AWS) Antenna I	0.047	0.061	0.060	0.168
	NR Band n25 (PCS) Antenna A	0.609	0.061	0.060	0.730
	NR Band n25 (PCS) Antenna I	0.338	0.061	0.060	0.459
	NR Band n30	0.271	0.061	0.060	0.392
	NR Band n41	0.280	0.061	0.060	0.401
	NR Band n77 DoD	0.220	0.061	0.060	0.341
	NR Band n77	0.246	0.061	0.060	0.367

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Table 12-21
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN Antenna 1 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.207	0.061	0.025	0.293
	PCS CDMA	0.770	0.061	0.025	0.856
	GSM 850	0.147	0.061	0.025	0.233
	GSM 1900	0.283	0.061	0.025	0.369
	UMTS 850	0.188	0.061	0.025	0.274
	UMTS 1750	0.585	0.061	0.025	0.671
	UMTS 1900	0.552	0.061	0.025	0.638
	LTE Band 71	0.280	0.061	0.025	0.366
	LTE Band 12	0.229	0.061	0.025	0.315
	LTE Band 13	0.296	0.061	0.025	0.382
	LTE Band 14	0.289	0.061	0.025	0.375
	LTE Band 26 (Cell)	0.258	0.061	0.025	0.344
	LTE Band 5 (Cell)	0.189	0.061	0.025	0.275
	LTE Band 66 (AWS)	1.116	0.061	0.025	1.202
	LTE Band 25 (PCS)	0.790	0.061	0.025	0.876
	LTE Band 30	0.402	0.061	0.025	0.488
	LTE Band 7	0.573	0.061	0.025	0.659
	LTE Band 48	0.234	0.061	0.025	0.320
	LTE Band 41	0.335	0.061	0.025	0.421
	NR Band n71	0.287	0.061	0.025	0.373
	NR Band n12	0.211	0.061	0.025	0.297
	NR Band n5 (Cell)	0.235	0.061	0.025	0.321
	NR Band n66 (AWS) Antenna A	0.685	0.061	0.025	0.771
	NR Band n66 (AWS) Antenna I	0.047	0.061	0.025	0.133
	NR Band n25 (PCS) Antenna A	0.609	0.061	0.025	0.695
	NR Band n25 (PCS) Antenna I	0.338	0.061	0.025	0.424
	NR Band n30	0.271	0.061	0.025	0.357
	NR Band n41	0.280	0.061	0.025	0.366
	NR Band n77 DoD	0.220	0.061	0.025	0.306
	NR Band n77	0.246	0.061	0.025	0.332

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Table 12-22
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.207	0.061	0.086	0.354
	PCS CDMA	0.770	0.061	0.086	0.917
	GSM 850	0.147	0.061	0.086	0.294
	GSM 1900	0.283	0.061	0.086	0.430
	UMTS 850	0.188	0.061	0.086	0.335
	UMTS 1750	0.585	0.061	0.086	0.732
	UMTS 1900	0.552	0.061	0.086	0.699
	LTE Band 71	0.280	0.061	0.086	0.427
	LTE Band 12	0.229	0.061	0.086	0.376
	LTE Band 13	0.296	0.061	0.086	0.443
	LTE Band 14	0.289	0.061	0.086	0.436
	LTE Band 26 (Cell)	0.258	0.061	0.086	0.405
	LTE Band 5 (Cell)	0.189	0.061	0.086	0.336
	LTE Band 66 (AWS)	1.116	0.061	0.086	1.263
	LTE Band 25 (PCS)	0.790	0.061	0.086	0.937
	LTE Band 30	0.402	0.061	0.086	0.549
	LTE Band 7	0.573	0.061	0.086	0.720
	LTE Band 48	0.234	0.061	0.086	0.381
	LTE Band 41	0.335	0.061	0.086	0.482
	NR Band n71	0.287	0.061	0.086	0.434
	NR Band n12	0.211	0.061	0.086	0.358
	NR Band n5 (Cell)	0.235	0.061	0.086	0.382
	NR Band n66 (AWS) Antenna A	0.685	0.061	0.086	0.832
	NR Band n66 (AWS) Antenna I	0.047	0.061	0.086	0.194
	NR Band n25 (PCS) Antenna A	0.609	0.061	0.086	0.756
	NR Band n25 (PCS) Antenna I	0.338	0.061	0.086	0.485
	NR Band n30	0.271	0.061	0.086	0.418
	NR Band n41	0.280	0.061	0.086	0.427
	NR Band n77 DoD	0.220	0.061	0.086	0.367
	NR Band n77	0.246	0.061	0.086	0.393

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Table 12-23
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN Antenna 1 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.207	0.051	0.025	0.283
	PCS CDMA	0.770	0.051	0.025	0.846
	GSM 850	0.147	0.051	0.025	0.223
	GSM 1900	0.283	0.051	0.025	0.359
	UMTS 850	0.188	0.051	0.025	0.264
	UMTS 1750	0.585	0.051	0.025	0.661
	UMTS 1900	0.552	0.051	0.025	0.628
	LTE Band 71	0.280	0.051	0.025	0.356
	LTE Band 12	0.229	0.051	0.025	0.305
	LTE Band 13	0.296	0.051	0.025	0.372
	LTE Band 14	0.289	0.051	0.025	0.365
	LTE Band 26 (Cell)	0.258	0.051	0.025	0.334
	LTE Band 5 (Cell)	0.189	0.051	0.025	0.265
	LTE Band 66 (AWS)	1.116	0.051	0.025	1.192
	LTE Band 25 (PCS)	0.790	0.051	0.025	0.866
	LTE Band 30	0.402	0.051	0.025	0.478
	LTE Band 7	0.573	0.051	0.025	0.649
	LTE Band 48	0.234	0.051	0.025	0.310
	LTE Band 41	0.335	0.051	0.025	0.411
	NR Band n71	0.287	0.051	0.025	0.363
	NR Band n12	0.211	0.051	0.025	0.287
	NR Band n5 (Cell)	0.235	0.051	0.025	0.311
	NR Band n66 (AWS) Antenna A	0.685	0.051	0.025	0.761
	NR Band n66 (AWS) Antenna I	0.047	0.051	0.025	0.123
	NR Band n25 (PCS) Antenna A	0.609	0.051	0.025	0.685
	NR Band n25 (PCS) Antenna I	0.338	0.051	0.025	0.414
	NR Band n30	0.271	0.051	0.025	0.347
	NR Band n41	0.280	0.051	0.025	0.356
	NR Band n77 DoD	0.220	0.051	0.025	0.296
	NR Band n77	0.246	0.051	0.025	0.322

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Table 12-24
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.207	0.051	0.086	0.344
	PCS CDMA	0.770	0.051	0.086	0.907
	GSM 850	0.147	0.051	0.086	0.284
	GSM 1900	0.283	0.051	0.086	0.420
	UMTS 850	0.188	0.051	0.086	0.325
	UMTS 1750	0.585	0.051	0.086	0.722
	UMTS 1900	0.552	0.051	0.086	0.689
	LTE Band 71	0.280	0.051	0.086	0.417
	LTE Band 12	0.229	0.051	0.086	0.366
	LTE Band 13	0.296	0.051	0.086	0.433
	LTE Band 14	0.289	0.051	0.086	0.426
	LTE Band 26 (Cell)	0.258	0.051	0.086	0.395
	LTE Band 5 (Cell)	0.189	0.051	0.086	0.326
	LTE Band 66 (AWS)	1.116	0.051	0.086	1.253
	LTE Band 25 (PCS)	0.790	0.051	0.086	0.927
	LTE Band 30	0.402	0.051	0.086	0.539
	LTE Band 7	0.573	0.051	0.086	0.710
	LTE Band 48	0.234	0.051	0.086	0.371
	LTE Band 41	0.335	0.051	0.086	0.472
	NR Band n71	0.287	0.051	0.086	0.424
	NR Band n12	0.211	0.051	0.086	0.348
	NR Band n5 (Cell)	0.235	0.051	0.086	0.372
	NR Band n66 (AWS) Antenna A	0.685	0.051	0.086	0.822
	NR Band n66 (AWS) Antenna I	0.047	0.051	0.086	0.184
	NR Band n25 (PCS) Antenna A	0.609	0.051	0.086	0.746
	NR Band n25 (PCS) Antenna I	0.338	0.051	0.086	0.475
	NR Band n30	0.271	0.051	0.086	0.408
	NR Band n41	0.280	0.051	0.086	0.417
	NR Band n77 DoD	0.220	0.051	0.086	0.357
	NR Band n77	0.246	0.051	0.086	0.383

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Table 12-25
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN Antenna 1 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body - Worn SAR	Cell. CDMA	0.207	0.061	0.060	0.025	0.353
	PCS CDMA	0.770	0.061	0.060	0.025	0.916
	GSM 850	0.147	0.061	0.060	0.025	0.293
	GSM 1900	0.283	0.061	0.060	0.025	0.429
	UMTS 850	0.188	0.061	0.060	0.025	0.334
	UMTS 1750	0.585	0.061	0.060	0.025	0.731
	UMTS 1900	0.552	0.061	0.060	0.025	0.698
	LTE Band 71	0.280	0.061	0.060	0.025	0.426
	LTE Band 12	0.229	0.061	0.060	0.025	0.375
	LTE Band 13	0.296	0.061	0.060	0.025	0.442
	LTE Band 14	0.289	0.061	0.060	0.025	0.435
	LTE Band 26 (Cell)	0.258	0.061	0.060	0.025	0.404
	LTE Band 5 (Cell)	0.189	0.061	0.060	0.025	0.335
	LTE Band 66 (AWS)	1.116	0.061	0.060	0.025	1.262
	LTE Band 25 (PCS)	0.790	0.061	0.060	0.025	0.936
	LTE Band 30	0.402	0.061	0.060	0.025	0.548
	LTE Band 7	0.573	0.061	0.060	0.025	0.719
	LTE Band 48	0.234	0.061	0.060	0.025	0.380
	LTE Band 41	0.335	0.061	0.060	0.025	0.481
	NR Band n71	0.287	0.061	0.060	0.025	0.433
	NR Band n12	0.211	0.061	0.060	0.025	0.357
	NR Band n5 (Cell)	0.235	0.061	0.060	0.025	0.381
	NR Band n66 (AWS) Antenna A	0.685	0.061	0.060	0.025	0.831
	NR Band n66 (AWS) Antenna I	0.047	0.061	0.060	0.025	0.193
	NR Band n25 (PCS) Antenna A	0.609	0.061	0.060	0.025	0.755
	NR Band n25 (PCS) Antenna I	0.338	0.061	0.060	0.025	0.484
	NR Band n30	0.271	0.061	0.060	0.025	0.417
	NR Band n41	0.280	0.061	0.060	0.025	0.426
	NR Band n77 DoD	0.220	0.061	0.060	0.025	0.366
	NR Band n77	0.246	0.061	0.060	0.025	0.392

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Table 12-26
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body - Worn SAR	Cell. CDMA	0.207	0.061	0.060	0.086	0.414
	PCS CDMA	0.770	0.061	0.060	0.086	0.977
	GSM 850	0.147	0.061	0.060	0.086	0.354
	GSM 1900	0.283	0.061	0.060	0.086	0.490
	UMTS 850	0.188	0.061	0.060	0.086	0.395
	UMTS 1750	0.585	0.061	0.060	0.086	0.792
	UMTS 1900	0.552	0.061	0.060	0.086	0.759
	LTE Band 71	0.280	0.061	0.060	0.086	0.487
	LTE Band 12	0.229	0.061	0.060	0.086	0.436
	LTE Band 13	0.296	0.061	0.060	0.086	0.503
	LTE Band 14	0.289	0.061	0.060	0.086	0.496
	LTE Band 26 (Cell)	0.258	0.061	0.060	0.086	0.465
	LTE Band 5 (Cell)	0.189	0.061	0.060	0.086	0.396
	LTE Band 66 (AWS)	1.116	0.061	0.060	0.086	1.323
	LTE Band 25 (PCS)	0.790	0.061	0.060	0.086	0.997
	LTE Band 30	0.402	0.061	0.060	0.086	0.609
	LTE Band 7	0.573	0.061	0.060	0.086	0.780
	LTE Band 48	0.234	0.061	0.060	0.086	0.441
	LTE Band 41	0.335	0.061	0.060	0.086	0.542
	NR Band n71	0.287	0.061	0.060	0.086	0.494
	NR Band n12	0.211	0.061	0.060	0.086	0.418
	NR Band n5 (Cell)	0.235	0.061	0.060	0.086	0.442
	NR Band n66 (AWS) Antenna A	0.685	0.061	0.060	0.086	0.892
	NR Band n66 (AWS) Antenna I	0.047	0.061	0.060	0.086	0.254
	NR Band n25 (PCS) Antenna A	0.609	0.061	0.060	0.086	0.816
	NR Band n25 (PCS) Antenna I	0.338	0.061	0.060	0.086	0.545
	NR Band n30	0.271	0.061	0.060	0.086	0.478
	NR Band n41	0.280	0.061	0.060	0.086	0.487
	NR Band n77 DoD	0.220	0.061	0.060	0.086	0.427
	NR Band n77	0.246	0.061	0.060	0.086	0.453

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12.5 Body-worn SAR Simultaneous Transmission Analysis - Closed

Table 12-27
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.354	0.063	0.417
	PCS CDMA	0.265	0.063	0.328
	GSM 850	0.295	0.063	0.358
	GSM 1900	0.088	0.063	0.151
	UMTS 850	0.372	0.063	0.435
	UMTS 1750	0.253	0.063	0.316
	UMTS 1900	0.163	0.063	0.226
	LTE Band 71	0.348	0.063	0.411
	LTE Band 12	0.304	0.063	0.367
	LTE Band 13	0.263	0.063	0.326
	LTE Band 14	0.278	0.063	0.341
	LTE Band 26 (Cell)	0.370	0.063	0.433
	LTE Band 5 (Cell)	0.308	0.063	0.371
	LTE Band 66 (AWS)	0.320	0.063	0.383
	LTE Band 25 (PCS)	0.305	0.063	0.368
	LTE Band 30	0.317	0.063	0.380
	LTE Band 7	0.434	0.063	0.497
	LTE Band 48	0.036	0.063	0.099
	LTE Band 41	0.200	0.063	0.263
	NR Band n71	0.214	0.063	0.277
	NR Band n12	0.249	0.063	0.312
	NR Band n5 (Cell)	0.332	0.063	0.395
	NR Band n66 (AWS) Antenna A	0.218	0.063	0.281
	NR Band n66 (AWS) Antenna I	0.007	0.063	0.070
	NR Band n25 (PCS) Antenna A	0.270	0.063	0.333
	NR Band n25 (PCS) Antenna I	0.030	0.063	0.093
	NR Band n30	0.250	0.063	0.313
	NR Band n41	0.090	0.063	0.153
	NR Band n77 DoD	0.030	0.063	0.093
	NR Band n77	0.092	0.063	0.155

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Table 12-28
Simultaneous Transmission Scenario with 5 GHz WLAN (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.354	0.000	0.354
	PCS CDMA	0.265	0.000	0.265
	GSM 850	0.295	0.000	0.295
	GSM 1900	0.088	0.000	0.088
	UMTS 850	0.372	0.000	0.372
	UMTS 1750	0.253	0.000	0.253
	UMTS 1900	0.163	0.000	0.163
	LTE Band 71	0.348	0.000	0.348
	LTE Band 12	0.304	0.000	0.304
	LTE Band 13	0.263	0.000	0.263
	LTE Band 14	0.278	0.000	0.278
	LTE Band 26 (Cell)	0.370	0.000	0.370
	LTE Band 5 (Cell)	0.308	0.000	0.308
	LTE Band 66 (AWS)	0.320	0.000	0.320
	LTE Band 25 (PCS)	0.305	0.000	0.305
	LTE Band 30	0.317	0.000	0.317
	LTE Band 7	0.434	0.000	0.434
	LTE Band 48	0.036	0.000	0.036
	LTE Band 41	0.200	0.000	0.200
	NR Band n71	0.214	0.000	0.214
	NR Band n12	0.249	0.000	0.249
	NR Band n5 (Cell)	0.332	0.000	0.332
	NR Band n66 (AWS) Antenna A	0.218	0.000	0.218
	NR Band n66 (AWS) Antenna I	0.007	0.000	0.007
	NR Band n25 (PCS) Antenna A	0.270	0.000	0.270
	NR Band n25 (PCS) Antenna I	0.030	0.000	0.030
	NR Band n30	0.250	0.000	0.250
	NR Band n41	0.090	0.000	0.090
	NR Band n77 DoD	0.030	0.000	0.030
	NR Band n77	0.092	0.000	0.092

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Table 12-29
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.354	0.013	0.367
	PCS CDMA	0.265	0.013	0.278
	GSM 850	0.295	0.013	0.308
	GSM 1900	0.088	0.013	0.101
	UMTS 850	0.372	0.013	0.385
	UMTS 1750	0.253	0.013	0.266
	UMTS 1900	0.163	0.013	0.176
	LTE Band 71	0.348	0.013	0.361
	LTE Band 12	0.304	0.013	0.317
	LTE Band 13	0.263	0.013	0.276
	LTE Band 14	0.278	0.013	0.291
	LTE Band 26 (Cell)	0.370	0.013	0.383
	LTE Band 5 (Cell)	0.308	0.013	0.321
	LTE Band 66 (AWS)	0.320	0.013	0.333
	LTE Band 25 (PCS)	0.305	0.013	0.318
	LTE Band 30	0.317	0.013	0.330
	LTE Band 7	0.434	0.013	0.447
	LTE Band 48	0.036	0.013	0.049
	LTE Band 41	0.200	0.013	0.213
	NR Band n71	0.214	0.013	0.227
	NR Band n12	0.249	0.013	0.262
	NR Band n5 (Cell)	0.332	0.013	0.345
	NR Band n66 (AWS) Antenna A	0.218	0.013	0.231
	NR Band n66 (AWS) Antenna I	0.007	0.013	0.020
	NR Band n25 (PCS) Antenna A	0.270	0.013	0.283
	NR Band n25 (PCS) Antenna I	0.030	0.013	0.043
	NR Band n30	0.250	0.013	0.263
	NR Band n41	0.090	0.013	0.103
	NR Band n77 DoD	0.030	0.013	0.043
	NR Band n77	0.092	0.013	0.105

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Table 12-30
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.354	0.063	0.013	0.430
	PCS CDMA	0.265	0.063	0.013	0.341
	GSM 850	0.295	0.063	0.013	0.371
	GSM 1900	0.088	0.063	0.013	0.164
	UMTS 850	0.372	0.063	0.013	0.448
	UMTS 1750	0.253	0.063	0.013	0.329
	UMTS 1900	0.163	0.063	0.013	0.239
	LTE Band 71	0.348	0.063	0.013	0.424
	LTE Band 12	0.304	0.063	0.013	0.380
	LTE Band 13	0.263	0.063	0.013	0.339
	LTE Band 14	0.278	0.063	0.013	0.354
	LTE Band 26 (Cell)	0.370	0.063	0.013	0.446
	LTE Band 5 (Cell)	0.308	0.063	0.013	0.384
	LTE Band 66 (AWS)	0.320	0.063	0.013	0.396
	LTE Band 25 (PCS)	0.305	0.063	0.013	0.381
	LTE Band 30	0.317	0.063	0.013	0.393
	LTE Band 7	0.434	0.063	0.013	0.510
	LTE Band 48	0.036	0.063	0.013	0.112
	LTE Band 41	0.200	0.063	0.013	0.276
	NR Band n71	0.214	0.063	0.013	0.290
	NR Band n12	0.249	0.063	0.013	0.325
	NR Band n5 (Cell)	0.332	0.063	0.013	0.408
	NR Band n66 (AWS) Antenna A	0.218	0.063	0.013	0.294
	NR Band n66 (AWS) Antenna I	0.007	0.063	0.013	0.083
	NR Band n25 (PCS) Antenna A	0.270	0.063	0.013	0.346
	NR Band n25 (PCS) Antenna I	0.030	0.063	0.013	0.106
	NR Band n30	0.250	0.063	0.013	0.326
	NR Band n41	0.090	0.063	0.013	0.166
	NR Band n77 DoD	0.030	0.063	0.013	0.106
	NR Band n77	0.092	0.063	0.013	0.168

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Table 12-31
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.354	0.013	0.367
	PCS CDMA	0.265	0.013	0.278
	GSM 850	0.295	0.013	0.308
	GSM 1900	0.088	0.013	0.101
	UMTS 850	0.372	0.013	0.385
	UMTS 1750	0.253	0.013	0.266
	UMTS 1900	0.163	0.013	0.176
	LTE Band 71	0.348	0.013	0.361
	LTE Band 12	0.304	0.013	0.317
	LTE Band 13	0.263	0.013	0.276
	LTE Band 14	0.278	0.013	0.291
	LTE Band 26 (Cell)	0.370	0.013	0.383
	LTE Band 5 (Cell)	0.308	0.013	0.321
	LTE Band 66 (AWS)	0.320	0.013	0.333
	LTE Band 25 (PCS)	0.305	0.013	0.318
	LTE Band 30	0.317	0.013	0.330
	LTE Band 7	0.434	0.013	0.447
	LTE Band 48	0.036	0.013	0.049
	LTE Band 41	0.200	0.013	0.213
	NR Band n71	0.214	0.013	0.227
	NR Band n12	0.249	0.013	0.262
	NR Band n5 (Cell)	0.332	0.013	0.345
	NR Band n66 (AWS) Antenna A	0.218	0.013	0.231
	NR Band n66 (AWS) Antenna I	0.007	0.013	0.020
	NR Band n25 (PCS) Antenna A	0.270	0.013	0.283
	NR Band n25 (PCS) Antenna I	0.030	0.013	0.043
	NR Band n30	0.250	0.013	0.263
	NR Band n41	0.090	0.013	0.103
	NR Band n77 DoD	0.030	0.013	0.043
	NR Band n77	0.092	0.013	0.105

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Table 12-32
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	Cell. CDMA	0.354	0.014	0.368
	PCS CDMA	0.265	0.014	0.279
	GSM 850	0.295	0.014	0.309
	GSM 1900	0.088	0.014	0.102
	UMTS 850	0.372	0.014	0.386
	UMTS 1750	0.253	0.014	0.267
	UMTS 1900	0.163	0.014	0.177
	LTE Band 71	0.348	0.014	0.362
	LTE Band 12	0.304	0.014	0.318
	LTE Band 13	0.263	0.014	0.277
	LTE Band 14	0.278	0.014	0.292
	LTE Band 26 (Cell)	0.370	0.014	0.384
	LTE Band 5 (Cell)	0.308	0.014	0.322
	LTE Band 66 (AWS)	0.320	0.014	0.334
	LTE Band 25 (PCS)	0.305	0.014	0.319
	LTE Band 30	0.317	0.014	0.331
	LTE Band 7	0.434	0.014	0.448
	LTE Band 48	0.036	0.014	0.050
	LTE Band 41	0.200	0.014	0.214
	NR Band n71	0.214	0.014	0.228
	NR Band n12	0.249	0.014	0.263
	NR Band n5 (Cell)	0.332	0.014	0.346
	NR Band n66 (AWS) Antenna A	0.218	0.014	0.232
	NR Band n66 (AWS) Antenna I	0.007	0.014	0.021
	NR Band n25 (PCS) Antenna A	0.270	0.014	0.284
	NR Band n25 (PCS) Antenna I	0.030	0.014	0.044
	NR Band n30	0.250	0.014	0.264
	NR Band n41	0.090	0.014	0.104
	NR Band n77 DoD	0.030	0.014	0.044
	NR Band n77	0.092	0.014	0.106

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Table 12-33
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.354	0.013	0.015	0.382
	PCS CDMA	0.265	0.013	0.015	0.293
	GSM 850	0.295	0.013	0.015	0.323
	GSM 1900	0.088	0.013	0.015	0.116
	UMTS 850	0.372	0.013	0.015	0.400
	UMTS 1750	0.253	0.013	0.015	0.281
	UMTS 1900	0.163	0.013	0.015	0.191
	LTE Band 71	0.348	0.013	0.015	0.376
	LTE Band 12	0.304	0.013	0.015	0.332
	LTE Band 13	0.263	0.013	0.015	0.291
	LTE Band 14	0.278	0.013	0.015	0.306
	LTE Band 26 (Cell)	0.370	0.013	0.015	0.398
	LTE Band 5 (Cell)	0.308	0.013	0.015	0.336
	LTE Band 66 (AWS)	0.320	0.013	0.015	0.348
	LTE Band 25 (PCS)	0.305	0.013	0.015	0.333
	LTE Band 30	0.317	0.013	0.015	0.345
	LTE Band 7	0.434	0.013	0.015	0.462
	LTE Band 48	0.036	0.013	0.015	0.064
	LTE Band 41	0.200	0.013	0.015	0.228
	NR Band n71	0.214	0.013	0.015	0.242
	NR Band n12	0.249	0.013	0.015	0.277
	NR Band n5 (Cell)	0.332	0.013	0.015	0.360
	NR Band n66 (AWS) Antenna A	0.218	0.013	0.015	0.246
	NR Band n66 (AWS) Antenna I	0.007	0.013	0.015	0.035
	NR Band n25 (PCS) Antenna A	0.270	0.013	0.015	0.298
	NR Band n25 (PCS) Antenna I	0.030	0.013	0.015	0.058
	NR Band n30	0.250	0.013	0.015	0.278
	NR Band n41	0.090	0.013	0.015	0.118
	NR Band n77 DoD	0.030	0.013	0.015	0.058
	NR Band n77	0.092	0.013	0.015	0.120

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Table 12-34
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN Antenna 1 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.354	0.013	0.000	0.367
	PCS CDMA	0.265	0.013	0.000	0.278
	GSM 850	0.295	0.013	0.000	0.308
	GSM 1900	0.088	0.013	0.000	0.101
	UMTS 850	0.372	0.013	0.000	0.385
	UMTS 1750	0.253	0.013	0.000	0.266
	UMTS 1900	0.163	0.013	0.000	0.176
	LTE Band 71	0.348	0.013	0.000	0.361
	LTE Band 12	0.304	0.013	0.000	0.317
	LTE Band 13	0.263	0.013	0.000	0.276
	LTE Band 14	0.278	0.013	0.000	0.291
	LTE Band 26 (Cell)	0.370	0.013	0.000	0.383
	LTE Band 5 (Cell)	0.308	0.013	0.000	0.321
	LTE Band 66 (AWS)	0.320	0.013	0.000	0.333
	LTE Band 25 (PCS)	0.305	0.013	0.000	0.318
	LTE Band 30	0.317	0.013	0.000	0.330
	LTE Band 7	0.434	0.013	0.000	0.447
	LTE Band 48	0.036	0.013	0.000	0.049
	LTE Band 41	0.200	0.013	0.000	0.213
	NR Band n71	0.214	0.013	0.000	0.227
	NR Band n12	0.249	0.013	0.000	0.262
	NR Band n5 (Cell)	0.332	0.013	0.000	0.345
	NR Band n66 (AWS) Antenna A	0.218	0.013	0.000	0.231
	NR Band n66 (AWS) Antenna I	0.007	0.013	0.000	0.020
	NR Band n25 (PCS) Antenna A	0.270	0.013	0.000	0.283
	NR Band n25 (PCS) Antenna I	0.030	0.013	0.000	0.043
	NR Band n30	0.250	0.013	0.000	0.263
	NR Band n41	0.090	0.013	0.000	0.103
	NR Band n77 DoD	0.030	0.013	0.000	0.043
	NR Band n77	0.092	0.013	0.000	0.105

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Table 12-35
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.354	0.013	0.013	0.380
	PCS CDMA	0.265	0.013	0.013	0.291
	GSM 850	0.295	0.013	0.013	0.321
	GSM 1900	0.088	0.013	0.013	0.114
	UMTS 850	0.372	0.013	0.013	0.398
	UMTS 1750	0.253	0.013	0.013	0.279
	UMTS 1900	0.163	0.013	0.013	0.189
	LTE Band 71	0.348	0.013	0.013	0.374
	LTE Band 12	0.304	0.013	0.013	0.330
	LTE Band 13	0.263	0.013	0.013	0.289
	LTE Band 14	0.278	0.013	0.013	0.304
	LTE Band 26 (Cell)	0.370	0.013	0.013	0.396
	LTE Band 5 (Cell)	0.308	0.013	0.013	0.334
	LTE Band 66 (AWS)	0.320	0.013	0.013	0.346
	LTE Band 25 (PCS)	0.305	0.013	0.013	0.331
	LTE Band 30	0.317	0.013	0.013	0.343
	LTE Band 7	0.434	0.013	0.013	0.460
	LTE Band 48	0.036	0.013	0.013	0.062
	LTE Band 41	0.200	0.013	0.013	0.226
	NR Band n71	0.214	0.013	0.013	0.240
	NR Band n12	0.249	0.013	0.013	0.275
	NR Band n5 (Cell)	0.332	0.013	0.013	0.358
	NR Band n66 (AWS) Antenna A	0.218	0.013	0.013	0.244
	NR Band n66 (AWS) Antenna I	0.007	0.013	0.013	0.033
	NR Band n25 (PCS) Antenna A	0.270	0.013	0.013	0.296
	NR Band n25 (PCS) Antenna I	0.030	0.013	0.013	0.056
	NR Band n30	0.250	0.013	0.013	0.276
	NR Band n41	0.090	0.013	0.013	0.116
	NR Band n77 DoD	0.030	0.013	0.013	0.056
	NR Band n77	0.092	0.013	0.013	0.118

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Table 12-36
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN Antenna 1 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.354	0.014	0.000	0.368
	PCS CDMA	0.265	0.014	0.000	0.279
	GSM 850	0.295	0.014	0.000	0.309
	GSM 1900	0.088	0.014	0.000	0.102
	UMTS 850	0.372	0.014	0.000	0.386
	UMTS 1750	0.253	0.014	0.000	0.267
	UMTS 1900	0.163	0.014	0.000	0.177
	LTE Band 71	0.348	0.014	0.000	0.362
	LTE Band 12	0.304	0.014	0.000	0.318
	LTE Band 13	0.263	0.014	0.000	0.277
	LTE Band 14	0.278	0.014	0.000	0.292
	LTE Band 26 (Cell)	0.370	0.014	0.000	0.384
	LTE Band 5 (Cell)	0.308	0.014	0.000	0.322
	LTE Band 66 (AWS)	0.320	0.014	0.000	0.334
	LTE Band 25 (PCS)	0.305	0.014	0.000	0.319
	LTE Band 30	0.317	0.014	0.000	0.331
	LTE Band 7	0.434	0.014	0.000	0.448
	LTE Band 48	0.036	0.014	0.000	0.050
	LTE Band 41	0.200	0.014	0.000	0.214
	NR Band n71	0.214	0.014	0.000	0.228
	NR Band n12	0.249	0.014	0.000	0.263
	NR Band n5 (Cell)	0.332	0.014	0.000	0.346
	NR Band n66 (AWS) Antenna A	0.218	0.014	0.000	0.232
	NR Band n66 (AWS) Antenna I	0.007	0.014	0.000	0.021
	NR Band n25 (PCS) Antenna A	0.270	0.014	0.000	0.284
	NR Band n25 (PCS) Antenna I	0.030	0.014	0.000	0.044
	NR Band n30	0.250	0.014	0.000	0.264
	NR Band n41	0.090	0.014	0.000	0.104
	NR Band n77 DoD	0.030	0.014	0.000	0.044
	NR Band n77	0.092	0.014	0.000	0.106

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Table 12-37
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	Cell. CDMA	0.354	0.014	0.013	0.381
	PCS CDMA	0.265	0.014	0.013	0.292
	GSM 850	0.295	0.014	0.013	0.322
	GSM 1900	0.088	0.014	0.013	0.115
	UMTS 850	0.372	0.014	0.013	0.399
	UMTS 1750	0.253	0.014	0.013	0.280
	UMTS 1900	0.163	0.014	0.013	0.190
	LTE Band 71	0.348	0.014	0.013	0.375
	LTE Band 12	0.304	0.014	0.013	0.331
	LTE Band 13	0.263	0.014	0.013	0.290
	LTE Band 14	0.278	0.014	0.013	0.305
	LTE Band 26 (Cell)	0.370	0.014	0.013	0.397
	LTE Band 5 (Cell)	0.308	0.014	0.013	0.335
	LTE Band 66 (AWS)	0.320	0.014	0.013	0.347
	LTE Band 25 (PCS)	0.305	0.014	0.013	0.332
	LTE Band 30	0.317	0.014	0.013	0.344
	LTE Band 7	0.434	0.014	0.013	0.461
	LTE Band 48	0.036	0.014	0.013	0.063
	LTE Band 41	0.200	0.014	0.013	0.227
	NR Band n71	0.214	0.014	0.013	0.241
	NR Band n12	0.249	0.014	0.013	0.276
	NR Band n5 (Cell)	0.332	0.014	0.013	0.359
	NR Band n66 (AWS) Antenna A	0.218	0.014	0.013	0.245
	NR Band n66 (AWS) Antenna I	0.007	0.014	0.013	0.034
	NR Band n25 (PCS) Antenna A	0.270	0.014	0.013	0.297
	NR Band n25 (PCS) Antenna I	0.030	0.014	0.013	0.057
	NR Band n30	0.250	0.014	0.013	0.277
	NR Band n41	0.090	0.014	0.013	0.117
	NR Band n77 DoD	0.030	0.014	0.013	0.057
	NR Band n77	0.092	0.014	0.013	0.119

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Table 12-38
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN Antenna 1 (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body - Worn SAR	Cell. CDMA	0.354	0.013	0.015	0.000	0.382
	PCS CDMA	0.265	0.013	0.015	0.000	0.293
	GSM 850	0.295	0.013	0.015	0.000	0.323
	GSM 1900	0.088	0.013	0.015	0.000	0.116
	UMTS 850	0.372	0.013	0.015	0.000	0.400
	UMTS 1750	0.253	0.013	0.015	0.000	0.281
	UMTS 1900	0.163	0.013	0.015	0.000	0.191
	LTE Band 71	0.348	0.013	0.015	0.000	0.376
	LTE Band 12	0.304	0.013	0.015	0.000	0.332
	LTE Band 13	0.263	0.013	0.015	0.000	0.291
	LTE Band 14	0.278	0.013	0.015	0.000	0.306
	LTE Band 26 (Cell)	0.370	0.013	0.015	0.000	0.398
	LTE Band 5 (Cell)	0.308	0.013	0.015	0.000	0.336
	LTE Band 66 (AWS)	0.320	0.013	0.015	0.000	0.348
	LTE Band 25 (PCS)	0.305	0.013	0.015	0.000	0.333
	LTE Band 30	0.317	0.013	0.015	0.000	0.345
	LTE Band 7	0.434	0.013	0.015	0.000	0.462
	LTE Band 48	0.036	0.013	0.015	0.000	0.064
	LTE Band 41	0.200	0.013	0.015	0.000	0.228
	NR Band n71	0.214	0.013	0.015	0.000	0.242
	NR Band n12	0.249	0.013	0.015	0.000	0.277
	NR Band n5 (Cell)	0.332	0.013	0.015	0.000	0.360
	NR Band n66 (AWS) Antenna A	0.218	0.013	0.015	0.000	0.246
	NR Band n66 (AWS) Antenna I	0.007	0.013	0.015	0.000	0.035
	NR Band n25 (PCS) Antenna A	0.270	0.013	0.015	0.000	0.298
	NR Band n25 (PCS) Antenna I	0.030	0.013	0.015	0.000	0.058
	NR Band n30	0.250	0.013	0.015	0.000	0.278
	NR Band n41	0.090	0.013	0.015	0.000	0.118
	NR Band n77 DoD	0.030	0.013	0.015	0.000	0.058
	NR Band n77	0.092	0.013	0.015	0.000	0.120

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Table 12-39
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN MIMO (at 1.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body - Worn SAR	Cell. CDMA	0.354	0.013	0.015	0.013	0.395
	PCS CDMA	0.265	0.013	0.015	0.013	0.306
	GSM 850	0.295	0.013	0.015	0.013	0.336
	GSM 1900	0.088	0.013	0.015	0.013	0.129
	UMTS 850	0.372	0.013	0.015	0.013	0.413
	UMTS 1750	0.253	0.013	0.015	0.013	0.294
	UMTS 1900	0.163	0.013	0.015	0.013	0.204
	LTE Band 71	0.348	0.013	0.015	0.013	0.389
	LTE Band 12	0.304	0.013	0.015	0.013	0.345
	LTE Band 13	0.263	0.013	0.015	0.013	0.304
	LTE Band 14	0.278	0.013	0.015	0.013	0.319
	LTE Band 26 (Cell)	0.370	0.013	0.015	0.013	0.411
	LTE Band 5 (Cell)	0.308	0.013	0.015	0.013	0.349
	LTE Band 66 (AWS)	0.320	0.013	0.015	0.013	0.361
	LTE Band 25 (PCS)	0.305	0.013	0.015	0.013	0.346
	LTE Band 30	0.317	0.013	0.015	0.013	0.358
	LTE Band 7	0.434	0.013	0.015	0.013	0.475
	LTE Band 48	0.036	0.013	0.015	0.013	0.077
	LTE Band 41	0.200	0.013	0.015	0.013	0.241
	NR Band n71	0.214	0.013	0.015	0.013	0.255
	NR Band n12	0.249	0.013	0.015	0.013	0.290
	NR Band n5 (Cell)	0.332	0.013	0.015	0.013	0.373
	NR Band n66 (AWS) Antenna A	0.218	0.013	0.015	0.013	0.259
	NR Band n66 (AWS) Antenna I	0.007	0.013	0.015	0.013	0.048
	NR Band n25 (PCS) Antenna A	0.270	0.013	0.015	0.013	0.311
	NR Band n25 (PCS) Antenna I	0.030	0.013	0.015	0.013	0.071
	NR Band n30	0.250	0.013	0.015	0.013	0.291
	NR Band n41	0.090	0.013	0.015	0.013	0.131
	NR Band n77 DoD	0.030	0.013	0.015	0.013	0.071
	NR Band n77	0.092	0.013	0.015	0.013	0.133

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12.6 Hotspot Simultaneous Transmission Analysis – Open

Table 12-40
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.353	0.354	0.707
	PCS EVDO	0.849	0.354	1.203
	GPRS 850	0.450	0.354	0.804
	GPRS 1900	0.788	0.354	1.142
	UMTS 850	0.336	0.354	0.690
	UMTS 1750	0.518	0.354	0.872
	UMTS 1900	0.812	0.354	1.166
	LTE Band 71	0.292	0.354	0.646
	LTE Band 12	0.228	0.354	0.582
	LTE Band 13	0.287	0.354	0.641
	LTE Band 14	0.267	0.354	0.621
	LTE Band 26 (Cell)	0.302	0.354	0.656
	LTE Band 5 (Cell)	0.237	0.354	0.591
	LTE Band 66 (AWS)	0.678	0.354	1.032
	LTE Band 25 (PCS)	0.665	0.354	1.019
	LTE Band 30	0.523	0.354	0.877
	LTE Band 7	0.354	0.354	0.708
	LTE Band 48	0.174	0.354	0.528
	LTE Band 41	0.326	0.354	0.680
	NR Band n71	0.283	0.354	0.637
	NR Band n12	0.211	0.354	0.565
	NR Band n5 (Cell)	0.249	0.354	0.603
	NR Band n66 (AWS) Antenna A	0.615	0.354	0.969
	NR Band n66 (AWS) Antenna I	0.112	0.354	0.466
	NR Band n25 (PCS) Antenna A	0.509	0.354	0.863
	NR Band n25 (PCS) Antenna I	0.471	0.354	0.825
	NR Band n30	0.576	0.354	0.930
	NR Band n41	0.488	0.354	0.842
	NR Band n77 DoD	0.345	0.354	0.699
	NR Band n77	0.445	0.354	0.799

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Table 12-41
Simultaneous Transmission Scenario with 5 GHz WLAN (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.353	0.146	0.499
	PCS EVDO	0.849	0.146	0.995
	GPRS 850	0.450	0.146	0.596
	GPRS 1900	0.788	0.146	0.934
	UMTS 850	0.336	0.146	0.482
	UMTS 1750	0.518	0.146	0.664
	UMTS 1900	0.812	0.146	0.958
	LTE Band 71	0.292	0.146	0.438
	LTE Band 12	0.228	0.146	0.374
	LTE Band 13	0.287	0.146	0.433
	LTE Band 14	0.267	0.146	0.413
	LTE Band 26 (Cell)	0.302	0.146	0.448
	LTE Band 5 (Cell)	0.237	0.146	0.383
	LTE Band 66 (AWS)	0.678	0.146	0.824
	LTE Band 25 (PCS)	0.665	0.146	0.811
	LTE Band 30	0.523	0.146	0.669
	LTE Band 7	0.354	0.146	0.500
	LTE Band 48	0.174	0.146	0.320
	LTE Band 41	0.326	0.146	0.472
	NR Band n71	0.283	0.146	0.429
	NR Band n12	0.211	0.146	0.357
	NR Band n5 (Cell)	0.249	0.146	0.395
	NR Band n66 (AWS) Antenna A	0.615	0.146	0.761
	NR Band n66 (AWS) Antenna I	0.112	0.146	0.258
	NR Band n25 (PCS) Antenna A	0.509	0.146	0.655
	NR Band n25 (PCS) Antenna I	0.471	0.146	0.617
	NR Band n30	0.576	0.146	0.722
	NR Band n41	0.488	0.146	0.634
	NR Band n77 DoD	0.345	0.146	0.491
	NR Band n77	0.445	0.146	0.591

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Table 12-42
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.353	0.139	0.492
	PCS EVDO	0.849	0.139	0.988
	GPRS 850	0.450	0.139	0.589
	GPRS 1900	0.788	0.139	0.927
	UMTS 850	0.336	0.139	0.475
	UMTS 1750	0.518	0.139	0.657
	UMTS 1900	0.812	0.139	0.951
	LTE Band 71	0.292	0.139	0.431
	LTE Band 12	0.228	0.139	0.367
	LTE Band 13	0.287	0.139	0.426
	LTE Band 14	0.267	0.139	0.406
	LTE Band 26 (Cell)	0.302	0.139	0.441
	LTE Band 5 (Cell)	0.237	0.139	0.376
	LTE Band 66 (AWS)	0.678	0.139	0.817
	LTE Band 25 (PCS)	0.665	0.139	0.804
	LTE Band 30	0.523	0.139	0.662
	LTE Band 7	0.354	0.139	0.493
	LTE Band 48	0.174	0.139	0.313
	LTE Band 41	0.326	0.139	0.465
	NR Band n71	0.283	0.139	0.422
	NR Band n12	0.211	0.139	0.350
	NR Band n5 (Cell)	0.249	0.139	0.388
	NR Band n66 (AWS) Antenna A	0.615	0.139	0.754
	NR Band n66 (AWS) Antenna I	0.112	0.139	0.251
	NR Band n25 (PCS) Antenna A	0.509	0.139	0.648
	NR Band n25 (PCS) Antenna I	0.471	0.139	0.610
	NR Band n30	0.576	0.139	0.715
	NR Band n41	0.488	0.139	0.627
	NR Band n77 DoD	0.345	0.139	0.484
	NR Band n77	0.445	0.139	0.584

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Table 12-43
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	2	1+2+3
Hotspot SAR	Cell. EVDO	0.353	0.354	0.139	0.846
	PCS EVDO	0.849	0.354	0.139	1.342
	GPRS 850	0.450	0.354	0.139	0.943
	GPRS 1900	0.788	0.354	0.139	1.281
	UMTS 850	0.336	0.354	0.139	0.829
	UMTS 1750	0.518	0.354	0.139	1.011
	UMTS 1900	0.812	0.354	0.139	1.305
	LTE Band 71	0.292	0.354	0.139	0.785
	LTE Band 12	0.228	0.354	0.139	0.721
	LTE Band 13	0.287	0.354	0.139	0.780
	LTE Band 14	0.267	0.354	0.139	0.760
	LTE Band 26 (Cell)	0.302	0.354	0.139	0.795
	LTE Band 5 (Cell)	0.237	0.354	0.139	0.730
	LTE Band 66 (AWS)	0.678	0.354	0.139	1.171
	LTE Band 25 (PCS)	0.665	0.354	0.139	1.158
	LTE Band 30	0.523	0.354	0.139	1.016
	LTE Band 7	0.354	0.354	0.139	0.847
	LTE Band 48	0.174	0.354	0.139	0.667
	LTE Band 41	0.326	0.354	0.139	0.819
	NR Band n71	0.283	0.354	0.139	0.776
	NR Band n12	0.211	0.354	0.139	0.704
	NR Band n5 (Cell)	0.249	0.354	0.139	0.742
	NR Band n66 (AWS) Antenna A	0.615	0.354	0.139	1.108
	NR Band n66 (AWS) Antenna I	0.112	0.354	0.139	0.605
	NR Band n25 (PCS) Antenna A	0.509	0.354	0.139	1.002
	NR Band n25 (PCS) Antenna I	0.471	0.354	0.139	0.964
	NR Band n30	0.576	0.354	0.139	1.069
	NR Band n41	0.488	0.354	0.139	0.981
	NR Band n77 DoD	0.345	0.354	0.139	0.838
	NR Band n77	0.445	0.354	0.139	0.938

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Table 12-44
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.353	0.129	0.482
	PCS EVDO	0.849	0.129	0.978
	GPRS 850	0.450	0.129	0.579
	GPRS 1900	0.788	0.129	0.917
	UMTS 850	0.336	0.129	0.465
	UMTS 1750	0.518	0.129	0.647
	UMTS 1900	0.812	0.129	0.941
	LTE Band 71	0.292	0.129	0.421
	LTE Band 12	0.228	0.129	0.357
	LTE Band 13	0.287	0.129	0.416
	LTE Band 14	0.267	0.129	0.396
	LTE Band 26 (Cell)	0.302	0.129	0.431
	LTE Band 5 (Cell)	0.237	0.129	0.366
	LTE Band 66 (AWS)	0.678	0.129	0.807
	LTE Band 25 (PCS)	0.665	0.129	0.794
	LTE Band 30	0.523	0.129	0.652
	LTE Band 7	0.354	0.129	0.483
	LTE Band 48	0.174	0.129	0.303
	LTE Band 41	0.326	0.129	0.455
	NR Band n71	0.283	0.129	0.412
	NR Band n12	0.211	0.129	0.340
	NR Band n5 (Cell)	0.249	0.129	0.378
	NR Band n66 (AWS) Antenna A	0.615	0.129	0.744
	NR Band n66 (AWS) Antenna I	0.112	0.129	0.241
	NR Band n25 (PCS) Antenna A	0.509	0.129	0.638
	NR Band n25 (PCS) Antenna I	0.471	0.129	0.600
	NR Band n30	0.576	0.129	0.705
	NR Band n41	0.488	0.129	0.617
	NR Band n77 DoD	0.345	0.129	0.474
	NR Band n77	0.445	0.129	0.574

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Table 12-45
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.353	0.157	0.510
	PCS EVDO	0.849	0.157	1.006
	GPRS 850	0.450	0.157	0.607
	GPRS 1900	0.788	0.157	0.945
	UMTS 850	0.336	0.157	0.493
	UMTS 1750	0.518	0.157	0.675
	UMTS 1900	0.812	0.157	0.969
	LTE Band 71	0.292	0.157	0.449
	LTE Band 12	0.228	0.157	0.385
	LTE Band 13	0.287	0.157	0.444
	LTE Band 14	0.267	0.157	0.424
	LTE Band 26 (Cell)	0.302	0.157	0.459
	LTE Band 5 (Cell)	0.237	0.157	0.394
	LTE Band 66 (AWS)	0.678	0.157	0.835
	LTE Band 25 (PCS)	0.665	0.157	0.822
	LTE Band 30	0.523	0.157	0.680
	LTE Band 7	0.354	0.157	0.511
	LTE Band 48	0.174	0.157	0.331
	LTE Band 41	0.326	0.157	0.483
	NR Band n71	0.283	0.157	0.440
	NR Band n12	0.211	0.157	0.368
	NR Band n5 (Cell)	0.249	0.157	0.406
	NR Band n66 (AWS) Antenna A	0.615	0.157	0.772
	NR Band n66 (AWS) Antenna I	0.112	0.157	0.269
	NR Band n25 (PCS) Antenna A	0.509	0.157	0.666
	NR Band n25 (PCS) Antenna I	0.471	0.157	0.628
	NR Band n30	0.576	0.157	0.733
	NR Band n41	0.488	0.157	0.645
	NR Band n77 DoD	0.345	0.157	0.502
	NR Band n77	0.445	0.157	0.602

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Table 12-46
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2 (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	2	1+2+3
Hotspot SAR	Cell. EVDO	0.353	0.129	0.163	0.645
	PCS EVDO	0.849	0.129	0.163	1.141
	GPRS 850	0.450	0.129	0.163	0.742
	GPRS 1900	0.788	0.129	0.163	1.080
	UMTS 850	0.336	0.129	0.163	0.628
	UMTS 1750	0.518	0.129	0.163	0.810
	UMTS 1900	0.812	0.129	0.163	1.104
	LTE Band 71	0.292	0.129	0.163	0.584
	LTE Band 12	0.228	0.129	0.163	0.520
	LTE Band 13	0.287	0.129	0.163	0.579
	LTE Band 14	0.267	0.129	0.163	0.559
	LTE Band 26 (Cell)	0.302	0.129	0.163	0.594
	LTE Band 5 (Cell)	0.237	0.129	0.163	0.529
	LTE Band 66 (AWS)	0.678	0.129	0.163	0.970
	LTE Band 25 (PCS)	0.665	0.129	0.163	0.957
	LTE Band 30	0.523	0.129	0.163	0.815
	LTE Band 7	0.354	0.129	0.163	0.646
	LTE Band 48	0.174	0.129	0.163	0.466
	LTE Band 41	0.326	0.129	0.163	0.618
	NR Band n71	0.283	0.129	0.163	0.575
	NR Band n12	0.211	0.129	0.163	0.503
	NR Band n5 (Cell)	0.249	0.129	0.163	0.541
	NR Band n66 (AWS) Antenna A	0.615	0.129	0.163	0.907
	NR Band n66 (AWS) Antenna I	0.112	0.129	0.163	0.404
	NR Band n25 (PCS) Antenna A	0.509	0.129	0.163	0.801
	NR Band n25 (PCS) Antenna I	0.471	0.129	0.163	0.763
	NR Band n30	0.576	0.129	0.163	0.868
	NR Band n41	0.488	0.129	0.163	0.780
	NR Band n77 DoD	0.345	0.129	0.163	0.637
	NR Band n77	0.445	0.129	0.163	0.737

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Table 12-47
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN Antenna 1 (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	2	1+2+3
Hotspot SAR	Cell. EVDO	0.353	0.129	0.146	0.628
	PCS EVDO	0.849	0.129	0.146	1.124
	GPRS 850	0.450	0.129	0.146	0.725
	GPRS 1900	0.788	0.129	0.146	1.063
	UMTS 850	0.336	0.129	0.146	0.611
	UMTS 1750	0.518	0.129	0.146	0.793
	UMTS 1900	0.812	0.129	0.146	1.087
	LTE Band 71	0.292	0.129	0.146	0.567
	LTE Band 12	0.228	0.129	0.146	0.503
	LTE Band 13	0.287	0.129	0.146	0.562
	LTE Band 14	0.267	0.129	0.146	0.542
	LTE Band 26 (Cell)	0.302	0.129	0.146	0.577
	LTE Band 5 (Cell)	0.237	0.129	0.146	0.512
	LTE Band 66 (AWS)	0.678	0.129	0.146	0.953
	LTE Band 25 (PCS)	0.665	0.129	0.146	0.940
	LTE Band 30	0.523	0.129	0.146	0.798
	LTE Band 7	0.354	0.129	0.146	0.629
	LTE Band 48	0.174	0.129	0.146	0.449
	LTE Band 41	0.326	0.129	0.146	0.601
	NR Band n71	0.283	0.129	0.146	0.558
	NR Band n12	0.211	0.129	0.146	0.486
	NR Band n5 (Cell)	0.249	0.129	0.146	0.524
	NR Band n66 (AWS) Antenna A	0.615	0.129	0.146	0.890
	NR Band n66 (AWS) Antenna I	0.112	0.129	0.146	0.387
	NR Band n25 (PCS) Antenna A	0.509	0.129	0.146	0.784
	NR Band n25 (PCS) Antenna I	0.471	0.129	0.146	0.746
	NR Band n30	0.576	0.129	0.146	0.851
	NR Band n41	0.488	0.129	0.146	0.763
	NR Band n77 DoD	0.345	0.129	0.146	0.620
	NR Band n77	0.445	0.129	0.146	0.720

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Table 12-48
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN MIMO (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.353	0.129	0.139	0.621
	PCS EVDO	0.849	0.129	0.139	1.117
	GPRS 850	0.450	0.129	0.139	0.718
	GPRS 1900	0.788	0.129	0.139	1.056
	UMTS 850	0.336	0.129	0.139	0.604
	UMTS 1750	0.518	0.129	0.139	0.786
	UMTS 1900	0.812	0.129	0.139	1.080
	LTE Band 71	0.292	0.129	0.139	0.560
	LTE Band 12	0.228	0.129	0.139	0.496
	LTE Band 13	0.287	0.129	0.139	0.555
	LTE Band 14	0.267	0.129	0.139	0.535
	LTE Band 26 (Cell)	0.302	0.129	0.139	0.570
	LTE Band 5 (Cell)	0.237	0.129	0.139	0.505
	LTE Band 66 (AWS)	0.678	0.129	0.139	0.946
	LTE Band 25 (PCS)	0.665	0.129	0.139	0.933
	LTE Band 30	0.523	0.129	0.139	0.791
	LTE Band 7	0.354	0.129	0.139	0.622
	LTE Band 48	0.174	0.129	0.139	0.442
	LTE Band 41	0.326	0.129	0.139	0.594
	NR Band n71	0.283	0.129	0.139	0.551
	NR Band n12	0.211	0.129	0.139	0.479
	NR Band n5 (Cell)	0.249	0.129	0.139	0.517
	NR Band n66 (AWS) Antenna A	0.615	0.129	0.139	0.883
	NR Band n66 (AWS) Antenna I	0.112	0.129	0.139	0.380
	NR Band n25 (PCS) Antenna A	0.509	0.129	0.139	0.777
	NR Band n25 (PCS) Antenna I	0.471	0.129	0.139	0.739
	NR Band n30	0.576	0.129	0.139	0.844
	NR Band n41	0.488	0.129	0.139	0.756
	NR Band n77 DoD	0.345	0.129	0.139	0.613
	NR Band n77	0.445	0.129	0.139	0.713

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Table 12-49
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN Antenna 1 (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.353	0.157	0.146	0.656
	PCS EVDO	0.849	0.157	0.146	1.152
	GPRS 850	0.450	0.157	0.146	0.753
	GPRS 1900	0.788	0.157	0.146	1.091
	UMTS 850	0.336	0.157	0.146	0.639
	UMTS 1750	0.518	0.157	0.146	0.821
	UMTS 1900	0.812	0.157	0.146	1.115
	LTE Band 71	0.292	0.157	0.146	0.595
	LTE Band 12	0.228	0.157	0.146	0.531
	LTE Band 13	0.287	0.157	0.146	0.590
	LTE Band 14	0.267	0.157	0.146	0.570
	LTE Band 26 (Cell)	0.302	0.157	0.146	0.605
	LTE Band 5 (Cell)	0.237	0.157	0.146	0.540
	LTE Band 66 (AWS)	0.678	0.157	0.146	0.981
	LTE Band 25 (PCS)	0.665	0.157	0.146	0.968
	LTE Band 30	0.523	0.157	0.146	0.826
	LTE Band 7	0.354	0.157	0.146	0.657
	LTE Band 48	0.174	0.157	0.146	0.477
	LTE Band 41	0.326	0.157	0.146	0.629
	NR Band n71	0.283	0.157	0.146	0.586
	NR Band n12	0.211	0.157	0.146	0.514
	NR Band n5 (Cell)	0.249	0.157	0.146	0.552
	NR Band n66 (AWS) Antenna A	0.615	0.157	0.146	0.918
	NR Band n66 (AWS) Antenna I	0.112	0.157	0.146	0.415
	NR Band n25 (PCS) Antenna A	0.509	0.157	0.146	0.812
	NR Band n25 (PCS) Antenna I	0.471	0.157	0.146	0.774
	NR Band n30	0.576	0.157	0.146	0.879
	NR Band n41	0.488	0.157	0.146	0.791
	NR Band n77 DoD	0.345	0.157	0.146	0.648
	NR Band n77	0.445	0.157	0.146	0.748

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Table 12-50
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN MIMO (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.353	0.157	0.139	0.649
	PCS EVDO	0.849	0.157	0.139	1.145
	GPRS 850	0.450	0.157	0.139	0.746
	GPRS 1900	0.788	0.157	0.139	1.084
	UMTS 850	0.336	0.157	0.139	0.632
	UMTS 1750	0.518	0.157	0.139	0.814
	UMTS 1900	0.812	0.157	0.139	1.108
	LTE Band 71	0.292	0.157	0.139	0.588
	LTE Band 12	0.228	0.157	0.139	0.524
	LTE Band 13	0.287	0.157	0.139	0.583
	LTE Band 14	0.267	0.157	0.139	0.563
	LTE Band 26 (Cell)	0.302	0.157	0.139	0.598
	LTE Band 5 (Cell)	0.237	0.157	0.139	0.533
	LTE Band 66 (AWS)	0.678	0.157	0.139	0.974
	LTE Band 25 (PCS)	0.665	0.157	0.139	0.961
	LTE Band 30	0.523	0.157	0.139	0.819
	LTE Band 7	0.354	0.157	0.139	0.650
	LTE Band 48	0.174	0.157	0.139	0.470
	LTE Band 41	0.326	0.157	0.139	0.622
	NR Band n71	0.283	0.157	0.139	0.579
	NR Band n12	0.211	0.157	0.139	0.507
	NR Band n5 (Cell)	0.249	0.157	0.139	0.545
	NR Band n66 (AWS) Antenna A	0.615	0.157	0.139	0.911
	NR Band n66 (AWS) Antenna I	0.112	0.157	0.139	0.408
	NR Band n25 (PCS) Antenna A	0.509	0.157	0.139	0.805
	NR Band n25 (PCS) Antenna I	0.471	0.157	0.139	0.767
	NR Band n30	0.576	0.157	0.139	0.872
	NR Band n41	0.488	0.157	0.139	0.784
	NR Band n77 DoD	0.345	0.157	0.139	0.641
	NR Band n77	0.445	0.157	0.139	0.741

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Table 12-51
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN Antenna 1 (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Hotspot SAR	Cell. EVDO	0.353	0.129	0.163	0.146	0.791
	PCS EVDO	0.849	0.129	0.163	0.146	1.287
	GPRS 850	0.450	0.129	0.163	0.146	0.888
	GPRS 1900	0.788	0.129	0.163	0.146	1.226
	UMTS 850	0.336	0.129	0.163	0.146	0.774
	UMTS 1750	0.518	0.129	0.163	0.146	0.956
	UMTS 1900	0.812	0.129	0.163	0.146	1.250
	LTE Band 71	0.292	0.129	0.163	0.146	0.730
	LTE Band 12	0.228	0.129	0.163	0.146	0.666
	LTE Band 13	0.287	0.129	0.163	0.146	0.725
	LTE Band 14	0.267	0.129	0.163	0.146	0.705
	LTE Band 26 (Cell)	0.302	0.129	0.163	0.146	0.740
	LTE Band 5 (Cell)	0.237	0.129	0.163	0.146	0.675
	LTE Band 66 (AWS)	0.678	0.129	0.163	0.146	1.116
	LTE Band 25 (PCS)	0.665	0.129	0.163	0.146	1.103
	LTE Band 30	0.523	0.129	0.163	0.146	0.961
	LTE Band 7	0.354	0.129	0.163	0.146	0.792
	LTE Band 48	0.174	0.129	0.163	0.146	0.612
	LTE Band 41	0.326	0.129	0.163	0.146	0.764
	NR Band n71	0.283	0.129	0.163	0.146	0.721
	NR Band n12	0.211	0.129	0.163	0.146	0.649
	NR Band n5 (Cell)	0.249	0.129	0.163	0.146	0.687
	NR Band n66 (AWS) Antenna A	0.615	0.129	0.163	0.146	1.053
	NR Band n66 (AWS) Antenna I	0.112	0.129	0.163	0.146	0.550
	NR Band n25 (PCS) Antenna A	0.509	0.129	0.163	0.146	0.947
	NR Band n25 (PCS) Antenna I	0.471	0.129	0.163	0.146	0.909
	NR Band n30	0.576	0.129	0.163	0.146	1.014
	NR Band n41	0.488	0.129	0.163	0.146	0.926
	NR Band n77 DoD	0.345	0.129	0.163	0.146	0.783
	NR Band n77	0.445	0.129	0.163	0.146	0.883

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Table 12-52
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN MIMO (at 1.0 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Hotspot SAR	Cell. EVDO	0.353	0.129	0.163	0.139	0.784
	PCS EVDO	0.849	0.129	0.163	0.139	1.280
	GPRS 850	0.450	0.129	0.163	0.139	0.881
	GPRS 1900	0.788	0.129	0.163	0.139	1.219
	UMTS 850	0.336	0.129	0.163	0.139	0.767
	UMTS 1750	0.518	0.129	0.163	0.139	0.949
	UMTS 1900	0.812	0.129	0.163	0.139	1.243
	LTE Band 71	0.292	0.129	0.163	0.139	0.723
	LTE Band 12	0.228	0.129	0.163	0.139	0.659
	LTE Band 13	0.287	0.129	0.163	0.139	0.718
	LTE Band 14	0.267	0.129	0.163	0.139	0.698
	LTE Band 26 (Cell)	0.302	0.129	0.163	0.139	0.733
	LTE Band 5 (Cell)	0.237	0.129	0.163	0.139	0.668
	LTE Band 66 (AWS)	0.678	0.129	0.163	0.139	1.109
	LTE Band 25 (PCS)	0.665	0.129	0.163	0.139	1.096
	LTE Band 30	0.523	0.129	0.163	0.139	0.954
	LTE Band 7	0.354	0.129	0.163	0.139	0.785
	LTE Band 48	0.174	0.129	0.163	0.139	0.605
	LTE Band 41	0.326	0.129	0.163	0.139	0.757
	NR Band n71	0.283	0.129	0.163	0.139	0.714
	NR Band n12	0.211	0.129	0.163	0.139	0.642
	NR Band n5 (Cell)	0.249	0.129	0.163	0.139	0.680
	NR Band n66 (AWS) Antenna A	0.615	0.129	0.163	0.139	1.046
	NR Band n66 (AWS) Antenna I	0.112	0.129	0.163	0.139	0.543
	NR Band n25 (PCS) Antenna A	0.509	0.129	0.163	0.139	0.940
	NR Band n25 (PCS) Antenna I	0.471	0.129	0.163	0.139	0.902
	NR Band n30	0.576	0.129	0.163	0.139	1.007
	NR Band n41	0.488	0.129	0.163	0.139	0.919
	NR Band n77 DoD	0.345	0.129	0.163	0.139	0.776
	NR Band n77	0.445	0.129	0.163	0.139	0.876

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12.7 Hotspot SAR Simultaneous Transmission Analysis - Closed

Table 12-53
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO (at 0.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.816	0.920	See Table Below
	PCS EVDO	0.784	0.920	See Table Below
	GPRS 850	0.477	0.920	1.397
	GPRS 1900	0.949	0.920	See Table Below
	UMTS 850	0.928	0.920	See Table Below
	UMTS 1750	0.934	0.920	See Table Below
	UMTS 1900	0.955	0.920	See Table Below
	LTE Band 71	0.723	0.920	See Table Below
	LTE Band 12	0.635	0.920	1.555
	LTE Band 13	0.507	0.920	1.427
	LTE Band 14	0.687	0.920	See Table Below
	LTE Band 26 (Cell)	0.729	0.920	See Table Below
	LTE Band 5 (Cell)	0.642	0.920	1.562
	LTE Band 66 (AWS)	0.922	0.920	See Table Below
	LTE Band 25 (PCS)	0.963	0.920	See Table Below
	LTE Band 30	0.956	0.920	See Table Below
	LTE Band 7	0.961	0.920	See Table Below
	LTE Band 48	0.501	0.920	1.421
	LTE Band 41	0.485	0.920	1.405

Simult Tx	Configuration	Cell. EVDO SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	PCS EVDO SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.816	0.225	1.041	Hotspot SAR	Back	0.371	0.225	0.596
	Front	0.337	0.670	1.007		Front	0.225	0.670	0.895
	Bottom	0.242	0.444	0.686		Bottom	0.784	0.444	1.228
	Right	0.107	0.122	0.229		Right	0.053	0.122	0.175
	Left	0.183	0.920	1.103		Left	0.194	0.920	1.114

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.367	0.225	0.592	Hotspot SAR	Back	0.928	0.225	1.153
	Front	0.256	0.670	0.926		Front	0.359	0.670	1.029
	Bottom	0.949	0.444	1.393		Bottom	0.253	0.444	0.697
	Right	0.042	0.122	0.164		Right	0.113	0.122	0.235
	Left	0.072	0.920	0.992		Left	0.172	0.920	1.092

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Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.604	0.225	0.829	Hotspot SAR	Back	0.368	0.225	0.593
	Front	0.242	0.670	0.912		Front	0.224	0.670	0.894
	Bottom	0.934	0.444	1.378		Bottom	0.955	0.444	1.399
	Right	0.024	0.122	0.146		Right	0.060	0.122	0.182
	Left	0.176	0.920	1.096		Left	0.178	0.920	1.098
Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 14 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.723	0.225	0.948	Hotspot SAR	Back	0.687	0.225	0.912
	Front	0.316	0.670	0.986		Front	0.108	0.670	0.778
	Bottom	0.177	0.444	0.621		Bottom	0.292	0.444	0.736
	Right	0.074	0.122	0.196		Right	0.097	0.122	0.219
	Left	0.197	0.920	1.117		Left	0.123	0.920	1.043
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.729	0.225	0.954	Hotspot SAR	Back	0.721	0.225	0.946
	Front	0.133	0.670	0.803		Front	0.190	0.670	0.860
	Bottom	0.229	0.444	0.673		Bottom	0.922	0.444	1.366
	Right	0.111	0.122	0.233		Right	0.036	0.122	0.158
	Left	0.153	0.920	1.073		Left	0.155	0.920	1.075
Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2			1	2	1+2
Hotspot SAR	Back	0.446	0.225	0.671	Hotspot SAR	Back	0.543	0.225	0.768
	Front	0.133	0.670	0.803		Front	0.073	0.670	0.743
	Bottom	0.963	0.444	1.407		Bottom	0.956	0.444	1.400
	Right	0.026	0.122	0.148		Right	0.027	0.122	0.149
	Left	0.042	0.920	0.962		Left	0.062	0.920	0.982

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.341	0.225	0.566
	Front	0.075	0.670	0.745
	Bottom	0.961	0.444	1.405
	Right	-	0.122	0.122
	Left	0.183	0.920	1.103

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Configuration	Mode	5G SAR (W/kg)	2.4 GHz WLAN MIMO at 17 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	NR Band n71	0.563	0.133	0.696
	NR Band n12	0.591	0.133	0.724
	NR Band n5 (Cell)	0.595	0.133	0.728
	NR Band n66 (AWS) Antenna A	0.889	0.133	1.022
	NR Band n66 (AWS) Antenna I	0.557	0.133	0.690
	NR Band n25 (PCS) Antenna A	0.716	0.133	0.849
	NR Band n25 (PCS) Antenna I	0.451	0.133	0.584
	NR Band n30	1.010	0.133	1.143
	NR Band n41	1.043	0.133	1.176
	NR Band n77 DoD	0.760	0.133	0.893
	NR Band n77	1.073	0.133	1.206

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Table 12-54
Simultaneous Transmission Scenario with 5 GHz WLAN (at 0.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.816	0.259	1.075
	PCS EVDO	0.784	0.259	1.043
	GPRS 850	0.477	0.259	0.736
	GPRS 1900	0.949	0.259	1.208
	UMTS 850	0.928	0.259	1.187
	UMTS 1750	0.934	0.259	1.193
	UMTS 1900	0.955	0.259	1.214
	LTE Band 71	0.723	0.259	0.982
	LTE Band 12	0.635	0.259	0.894
	LTE Band 13	0.507	0.259	0.766
	LTE Band 14	0.687	0.259	0.946
	LTE Band 26 (Cell)	0.729	0.259	0.988
	LTE Band 5 (Cell)	0.642	0.259	0.901
	LTE Band 66 (AWS)	0.922	0.259	1.181
	LTE Band 25 (PCS)	0.963	0.259	1.222
	LTE Band 30	0.956	0.259	1.215
	LTE Band 7	0.961	0.259	1.220
	LTE Band 48	0.501	0.259	0.760
	LTE Band 41	0.485	0.259	0.744
	NR Band n71	0.563	0.259	0.822
	NR Band n12	0.591	0.259	0.850
	NR Band n5 (Cell)	0.595	0.259	0.854
	NR Band n66 (AWS) Antenna A	0.889	0.259	1.148
	NR Band n66 (AWS) Antenna I	0.557	0.259	0.816
	NR Band n25 (PCS) Antenna A	0.716	0.259	0.975
	NR Band n25 (PCS) Antenna I	0.451	0.259	0.710
	NR Band n30	1.010	0.259	1.269
	NR Band n41	1.043	0.259	1.302
	NR Band n77 DoD	0.760	0.259	1.019
	NR Band n77	1.073	0.259	1.332

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Table 12-55
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO (at 0.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.816	0.359	1.175
	PCS EVDO	0.784	0.359	1.143
	GPRS 850	0.477	0.359	0.836
	GPRS 1900	0.949	0.359	1.308
	UMTS 850	0.928	0.359	1.287
	UMTS 1750	0.934	0.359	1.293
	UMTS 1900	0.955	0.359	1.314
	LTE Band 71	0.723	0.359	1.082
	LTE Band 12	0.635	0.359	0.994
	LTE Band 13	0.507	0.359	0.866
	LTE Band 14	0.687	0.359	1.046
	LTE Band 26 (Cell)	0.729	0.359	1.088
	LTE Band 5 (Cell)	0.642	0.359	1.001
	LTE Band 66 (AWS)	0.922	0.359	1.281
	LTE Band 25 (PCS)	0.963	0.359	1.322
	LTE Band 30	0.956	0.359	1.315
	LTE Band 7	0.961	0.359	1.320
	LTE Band 48	0.501	0.359	0.860
	LTE Band 41	0.485	0.359	0.844
	NR Band n71	0.563	0.359	0.922
	NR Band n12	0.591	0.359	0.950
	NR Band n5 (Cell)	0.595	0.359	0.954
	NR Band n66 (AWS) Antenna A	0.889	0.359	1.248
	NR Band n66 (AWS) Antenna I	0.557	0.359	0.916
	NR Band n25 (PCS) Antenna A	0.716	0.359	1.075
	NR Band n25 (PCS) Antenna I	0.451	0.359	0.810
	NR Band n30	1.010	0.359	1.369
	NR Band n41	1.043	0.359	1.402
	NR Band n77 DoD	0.760	0.359	1.119
	NR Band n77	1.073	0.359	1.432

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Table 12-56
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (at 0.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz WLAN MIMO at 17 dBm SAR (W/kg)	5 GHz WLAN MIMO at 17 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.816	0.133	0.082	1.031
	PCS EVDO	0.784	0.133	0.082	0.999
	GPRS 850	0.477	0.133	0.082	0.692
	GPRS 1900	0.949	0.133	0.082	1.164
	UMTS 850	0.928	0.133	0.082	1.143
	UMTS 1750	0.934	0.133	0.082	1.149
	UMTS 1900	0.955	0.133	0.082	1.170
	LTE Band 71	0.723	0.133	0.082	0.938
	LTE Band 12	0.635	0.133	0.082	0.850
	LTE Band 13	0.507	0.133	0.082	0.722
	LTE Band 14	0.687	0.133	0.082	0.902
	LTE Band 26 (Cell)	0.729	0.133	0.082	0.944
	LTE Band 5 (Cell)	0.642	0.133	0.082	0.857
	LTE Band 66 (AWS)	0.922	0.133	0.082	1.137
	LTE Band 25 (PCS)	0.963	0.133	0.082	1.178
	LTE Band 30	0.956	0.133	0.082	1.171
	LTE Band 7	0.961	0.133	0.082	1.176
	LTE Band 48	0.501	0.133	0.082	0.716
	LTE Band 41	0.485	0.133	0.082	0.700
	NR Band n71	0.563	0.133	0.082	0.778
	NR Band n12	0.591	0.133	0.082	0.806
	NR Band n5 (Cell)	0.595	0.133	0.082	0.810
	NR Band n66 (AWS) Antenna A	0.889	0.133	0.082	1.104
	NR Band n66 (AWS) Antenna I	0.557	0.133	0.082	0.772
	NR Band n25 (PCS) Antenna A	0.716	0.133	0.082	0.931
	NR Band n25 (PCS) Antenna I	0.451	0.133	0.082	0.666
	NR Band n30	1.010	0.133	0.082	1.225
	NR Band n41	1.043	0.133	0.082	1.258
	NR Band n77 DoD	0.760	0.133	0.082	0.975
	NR Band n77	1.073	0.133	0.082	1.288

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Table 12-57
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 (at 0.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.816	0.286	1.102
	PCS EVDO	0.784	0.286	1.070
	GPRS 850	0.477	0.286	0.763
	GPRS 1900	0.949	0.286	1.235
	UMTS 850	0.928	0.286	1.214
	UMTS 1750	0.934	0.286	1.220
	UMTS 1900	0.955	0.286	1.241
	LTE Band 71	0.723	0.286	1.009
	LTE Band 12	0.635	0.286	0.921
	LTE Band 13	0.507	0.286	0.793
	LTE Band 14	0.687	0.286	0.973
	LTE Band 26 (Cell)	0.729	0.286	1.015
	LTE Band 5 (Cell)	0.642	0.286	0.928
	LTE Band 66 (AWS)	0.922	0.286	1.208
	LTE Band 25 (PCS)	0.963	0.286	1.249
	LTE Band 30	0.956	0.286	1.242
	LTE Band 7	0.961	0.286	1.247
	LTE Band 48	0.501	0.286	0.787
	LTE Band 41	0.485	0.286	0.771
	NR Band n71	0.563	0.286	0.849
	NR Band n12	0.591	0.286	0.877
	NR Band n5 (Cell)	0.595	0.286	0.881
	NR Band n66 (AWS) Antenna A	0.889	0.286	1.175
	NR Band n66 (AWS) Antenna I	0.557	0.286	0.843
	NR Band n25 (PCS) Antenna A	0.716	0.286	1.002
	NR Band n25 (PCS) Antenna I	0.451	0.286	0.737
	NR Band n30	1.010	0.286	1.296
	NR Band n41	1.043	0.286	1.329
	NR Band n77 DoD	0.760	0.286	1.046
	NR Band n77	1.073	0.286	1.359

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Table 12-58
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 (at 0.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Cell. EVDO	0.816	0.309	1.125
	PCS EVDO	0.784	0.309	1.093
	GPRS 850	0.477	0.309	0.786
	GPRS 1900	0.949	0.309	1.258
	UMTS 850	0.928	0.309	1.237
	UMTS 1750	0.934	0.309	1.243
	UMTS 1900	0.955	0.309	1.264
	LTE Band 71	0.723	0.309	1.032
	LTE Band 12	0.635	0.309	0.944
	LTE Band 13	0.507	0.309	0.816
	LTE Band 14	0.687	0.309	0.996
	LTE Band 26 (Cell)	0.729	0.309	1.038
	LTE Band 5 (Cell)	0.642	0.309	0.951
	LTE Band 66 (AWS)	0.922	0.309	1.231
	LTE Band 25 (PCS)	0.963	0.309	1.272
	LTE Band 30	0.956	0.309	1.265
	LTE Band 7	0.961	0.309	1.270
	LTE Band 48	0.501	0.309	0.810
	LTE Band 41	0.485	0.309	0.794
	NR Band n71	0.563	0.309	0.872
	NR Band n12	0.591	0.309	0.900
	NR Band n5 (Cell)	0.595	0.309	0.904
	NR Band n66 (AWS) Antenna A	0.889	0.309	1.198
	NR Band n66 (AWS) Antenna I	0.557	0.309	0.866
	NR Band n25 (PCS) Antenna A	0.716	0.309	1.025
	NR Band n25 (PCS) Antenna I	0.451	0.309	0.760
	NR Band n30	1.010	0.309	1.319
	NR Band n41	1.043	0.309	1.352
	NR Band n77 DoD	0.760	0.309	1.069
	NR Band n77	1.073	0.309	1.382

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Table 12-59

Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2 (at 0.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	2	1+2+3
Hotspot SAR	Cell. EVDO	0.816	0.286	0.438	1.540
	PCS EVDO	0.784	0.286	0.438	1.508
	GPRS 850	0.477	0.286	0.438	1.201
	GPRS 1900	0.949	0.286	0.438	See Table Below
	UMTS 850	0.928	0.286	0.438	See Table Below
	UMTS 1750	0.934	0.286	0.438	See Table Below
	UMTS 1900	0.955	0.286	0.438	See Table Below
	LTE Band 71	0.723	0.286	0.438	1.447
	LTE Band 12	0.635	0.286	0.438	1.359
	LTE Band 13	0.507	0.286	0.438	1.231
	LTE Band 14	0.687	0.286	0.438	1.411
	LTE Band 26 (Cell)	0.729	0.286	0.438	1.453
	LTE Band 5 (Cell)	0.642	0.286	0.438	1.366
	LTE Band 66 (AWS)	0.922	0.286	0.438	See Table Below
	LTE Band 25 (PCS)	0.963	0.286	0.438	See Table Below
	LTE Band 30	0.956	0.286	0.438	See Table Below
	LTE Band 7	0.961	0.286	0.438	See Table Below
	LTE Band 48	0.501	0.286	0.438	1.225
	LTE Band 41	0.485	0.286	0.438	1.209

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.367	0.059	0.438*	0.864	Body SAR	Back	0.928	0.059	0.438*	1.425
	Front	0.256	0.286	0.386	0.928		Front	0.359	0.286	0.386	1.031
	Bottom	0.949	0.193	0.438*	1.580		Bottom	0.253	0.193	0.438*	0.884
	Right	0.042	0.045	-	0.087		Right	0.113	0.045	-	0.158
	Left	0.072	-	0.438	0.510		Left	0.172	-	0.438	0.610
Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.604	0.059	0.438*	1.101	Body SAR	Back	0.368	0.059	0.438*	0.865
	Front	0.242	0.286	0.386	0.914		Front	0.224	0.286	0.386	0.896
	Bottom	0.934	0.193	0.438*	1.565		Bottom	0.955	0.193	0.438*	1.586
	Right	0.024	0.045	-	0.069		Right	0.060	0.045	-	0.105
	Left	0.176	-	0.438	0.614		Left	0.178	-	0.438	0.616

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Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.721	0.059	0.438*	1.218	Body SAR	Back	0.446	0.059	0.438*	0.943
	Front	0.190	0.286	0.386	0.862		Front	0.133	0.286	0.386	0.805
	Bottom	0.922	0.193	0.438*	1.553		Bottom	0.963	0.193	0.438*	1.594
	Right	0.036	0.045	-	0.081		Right	0.026	0.045	-	0.071
	Left	0.155	-	0.438	0.593		Left	0.042	-	0.438	0.480
Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.543	0.059	0.438*	1.040	Body SAR	Back	0.341	0.059	0.438*	0.838
	Front	0.073	0.286	0.386	0.745		Front	0.075	0.286	0.386	0.747
	Bottom	0.956	0.193	0.438*	1.587		Bottom	0.961	0.193	0.438*	1.592
	Right	0.027	0.045	-	0.072		Right	-	0.045	-	0.045
	Left	0.062	-	0.438	0.500		Left	0.183	-	0.438	0.621

Configuration	Mode	5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 at 13 dBm SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	NR Band n71	0.563	0.123	0.252	0.938
	NR Band n12	0.591	0.123	0.252	0.966
	NR Band n5 (Cell)	0.595	0.123	0.252	0.970
	NR Band n66 (AWS) Antenna A	0.889	0.123	0.252	1.264
	NR Band n66 (AWS) Antenna I	0.557	0.123	0.252	0.932
	NR Band n25 (PCS) Antenna A	0.716	0.123	0.252	1.091
	NR Band n25 (PCS) Antenna I	0.451	0.123	0.252	0.826
	NR Band n30	1.010	0.123	0.252	1.385
	NR Band n41	1.043	0.123	0.252	1.418
	NR Band n77 DoD	0.760	0.123	0.252	1.135
	NR Band n77	1.073	0.123	0.252	1.448

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Table 12-60
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN Antenna 1 (at 0.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	2	1+2+3
Hotspot SAR	Cell. EVDO	0.816	0.286	0.259	1.361
	PCS EVDO	0.784	0.286	0.259	1.329
	GPRS 850	0.477	0.286	0.259	1.022
	GPRS 1900	0.949	0.286	0.259	1.494
	UMTS 850	0.928	0.286	0.259	1.473
	UMTS 1750	0.934	0.286	0.259	1.479
	UMTS 1900	0.955	0.286	0.259	1.500
	LTE Band 71	0.723	0.286	0.259	1.268
	LTE Band 12	0.635	0.286	0.259	1.180
	LTE Band 13	0.507	0.286	0.259	1.052
	LTE Band 14	0.687	0.286	0.259	1.232
	LTE Band 26 (Cell)	0.729	0.286	0.259	1.274
	LTE Band 5 (Cell)	0.642	0.286	0.259	1.187
	LTE Band 66 (AWS)	0.922	0.286	0.259	1.467
	LTE Band 25 (PCS)	0.963	0.286	0.259	1.508
	LTE Band 30	0.956	0.286	0.259	1.501
	LTE Band 7	0.961	0.286	0.259	1.506
	LTE Band 48	0.501	0.286	0.259	1.046
	LTE Band 41	0.485	0.286	0.259	1.030
Configuration	Mode	5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 at 13 dBm SAR (W/kg)	5 GHz WLAN Ant 1 at 14 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	NR Band n71	0.563	0.123	0.056	0.742
	NR Band n12	0.591	0.123	0.056	0.770
	NR Band n5 (Cell)	0.595	0.123	0.056	0.774
	NR Band n66 (AWS) Antenna A	0.889	0.123	0.056	1.068
	NR Band n66 (AWS) Antenna I	0.557	0.123	0.056	0.736
	NR Band n25 (PCS) Antenna A	0.716	0.123	0.056	0.895
	NR Band n25 (PCS) Antenna I	0.451	0.123	0.056	0.630
	NR Band n30	1.010	0.123	0.056	1.189
	NR Band n41	1.043	0.123	0.056	1.222
	NR Band n77 DoD	0.760	0.123	0.056	0.939
	NR Band n77	1.073	0.123	0.056	1.252

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Table 12-61
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 5 GHz WLAN MIMO (at 0.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.816	0.286	0.359	1.461
	PCS EVDO	0.784	0.286	0.359	1.429
	GPRS 850	0.477	0.286	0.359	1.122
	GPRS 1900	0.949	0.286	0.359	1.594
	UMTS 850	0.928	0.286	0.359	1.573
	UMTS 1750	0.934	0.286	0.359	1.579
	UMTS 1900	0.955	0.286	0.359	See Table Below
	LTE Band 71	0.723	0.286	0.359	1.368
	LTE Band 12	0.635	0.286	0.359	1.280
	LTE Band 13	0.507	0.286	0.359	1.152
	LTE Band 14	0.687	0.286	0.359	1.332
	LTE Band 26 (Cell)	0.729	0.286	0.359	1.374
	LTE Band 5 (Cell)	0.642	0.286	0.359	1.287
	LTE Band 66 (AWS)	0.922	0.286	0.359	1.567
	LTE Band 25 (PCS)	0.963	0.286	0.359	See Table Below
	LTE Band 30	0.956	0.286	0.359	See Table Below
	LTE Band 7	0.961	0.286	0.359	See Table Below
	LTE Band 48	0.501	0.286	0.359	1.146
	LTE Band 41	0.485	0.286	0.359	1.130

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.368	0.059	0.359*	0.786	Body SAR	Back	0.446	0.059	0.359*	0.864
	Front	0.224	0.286	0.359*	0.869		Front	0.133	0.286	0.359*	0.778
	Bottom	0.955	0.193	0.254	1.402		Bottom	0.963	0.193	0.254	1.410
	Right	0.060	0.045	0.359*	0.464		Right	0.026	0.045	0.359*	0.430
	Left	0.178	-	0.359	0.537		Left	0.042	-	0.359	0.401
Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.543	0.059	0.359*	0.961	Body SAR	Back	0.341	0.059	0.359*	0.759
	Front	0.073	0.286	0.359*	0.718		Front	0.075	0.286	0.359*	0.720
	Bottom	0.956	0.193	0.254	1.403		Bottom	0.961	0.193	0.254	1.408
	Right	0.027	0.045	0.359*	0.431		Right	-	0.045	0.359*	0.404
	Left	0.062	-	0.359	0.421		Left	0.183	-	0.359	0.542

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Configuration	Mode	5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 at 13 dBm SAR (W/kg)	5 GHz WLAN MIMO at 17 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	NR Band n71	0.563	0.123	0.082	0.768
	NR Band n12	0.591	0.123	0.082	0.796
	NR Band n5 (Cell)	0.595	0.123	0.082	0.800
	NR Band n66 (AWS) Antenna A	0.889	0.123	0.082	1.094
	NR Band n66 (AWS) Antenna I	0.557	0.123	0.082	0.762
	NR Band n25 (PCS) Antenna A	0.716	0.123	0.082	0.921
	NR Band n25 (PCS) Antenna I	0.451	0.123	0.082	0.656
	NR Band n30	1.010	0.123	0.082	1.215
	NR Band n41	1.043	0.123	0.082	1.248
	NR Band n77 DoD	0.760	0.123	0.082	0.965
	NR Band n77	1.073	0.123	0.082	1.278

Table 12-62

Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN Antenna 1 (at 0.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.816	0.309	0.259	1.384
	PCS EVDO	0.784	0.309	0.259	1.352
	GPRS 850	0.477	0.309	0.259	1.045
	GPRS 1900	0.949	0.309	0.259	1.517
	UMTS 850	0.928	0.309	0.259	1.496
	UMTS 1750	0.934	0.309	0.259	1.502
	UMTS 1900	0.955	0.309	0.259	1.523
	LTE Band 71	0.723	0.309	0.259	1.291
	LTE Band 12	0.635	0.309	0.259	1.203
	LTE Band 13	0.507	0.309	0.259	1.075
	LTE Band 14	0.687	0.309	0.259	1.255
	LTE Band 26 (Cell)	0.729	0.309	0.259	1.297
	LTE Band 5 (Cell)	0.642	0.309	0.259	1.210
	LTE Band 66 (AWS)	0.922	0.309	0.259	1.490
	LTE Band 25 (PCS)	0.963	0.309	0.259	1.531
	LTE Band 30	0.956	0.309	0.259	1.524
	LTE Band 7	0.961	0.309	0.259	1.529
	LTE Band 48	0.501	0.309	0.259	1.069
	LTE Band 41	0.485	0.309	0.259	1.053

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Configuration	Mode	5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 at 13 dBm SAR (W/kg)	5 GHz WLAN Ant 1 at 14 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	NR Band n71	0.563	0.147	0.056	0.766
	NR Band n12	0.591	0.147	0.056	0.794
	NR Band n5 (Cell)	0.595	0.147	0.056	0.798
	NR Band n66 (AWS) Antenna A	0.889	0.147	0.056	1.092
	NR Band n66 (AWS) Antenna I	0.557	0.147	0.056	0.760
	NR Band n25 (PCS) Antenna A	0.716	0.147	0.056	0.919
	NR Band n25 (PCS) Antenna I	0.451	0.147	0.056	0.654
	NR Band n30	1.010	0.147	0.056	1.213
	NR Band n41	1.043	0.147	0.056	1.246
	NR Band n77 DoD	0.760	0.147	0.056	0.963
	NR Band n77	1.073	0.147	0.056	1.276

Table 12-63

Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 2 and 5 GHz WLAN MIMO (at 0.5 cm)

Configuration	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Cell. EVDO	0.816	0.309	0.359	1.484
	PCS EVDO	0.784	0.309	0.359	1.452
	GPRS 850	0.477	0.309	0.359	1.145
	GPRS 1900	0.949	0.309	0.359	See Table Below
	UMTS 850	0.928	0.309	0.359	See Table Below
	UMTS 1750	0.934	0.309	0.359	See Table Below
	UMTS 1900	0.955	0.309	0.359	See Table Below
	LTE Band 71	0.723	0.309	0.359	1.391
	LTE Band 12	0.635	0.309	0.359	1.303
	LTE Band 13	0.507	0.309	0.359	1.175
	LTE Band 14	0.687	0.309	0.359	1.355
	LTE Band 26 (Cell)	0.729	0.309	0.359	1.397
	LTE Band 5 (Cell)	0.642	0.309	0.359	1.310
	LTE Band 66 (AWS)	0.922	0.309	0.359	1.590
	LTE Band 25 (PCS)	0.963	0.309	0.359	See Table Below
	LTE Band 30	0.956	0.309	0.359	See Table Below
	LTE Band 7	0.961	0.309	0.359	See Table Below
	LTE Band 48	0.501	0.309	0.359	1.169
	LTE Band 41	0.485	0.309	0.359	1.153

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Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.367	0.061	0.359*	0.787
	Front	0.256	0.235	0.359*	0.850
	Bottom	0.949	0.309	0.254	1.512
	Right	0.042	-	0.359*	0.401
	Left	0.072	0.269	0.359	0.700

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.928	0.061	0.359*	1.348
	Front	0.359	0.235	0.359*	0.953
	Bottom	0.253	0.309	0.254	0.816
	Right	0.113	-	0.359*	0.472
	Left	0.172	0.269	0.359	0.800

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.604	0.061	0.359*	1.024
	Front	0.242	0.235	0.359*	0.836
	Bottom	0.934	0.309	0.254	1.497
	Right	0.024	-	0.359*	0.383
	Left	0.176	0.269	0.359	0.804

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.368	0.061	0.359*	0.788
	Front	0.224	0.235	0.359*	0.818
	Bottom	0.955	0.309	0.254	1.518
	Right	0.060	-	0.359*	0.419
	Left	0.178	0.269	0.359	0.806

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.446	0.061	0.359*	0.866
	Front	0.133	0.235	0.359*	0.727
	Bottom	0.963	0.309	0.254	1.526
	Right	0.026	-	0.359*	0.385
	Left	0.042	0.269	0.359	0.670

Simult Tx	Configuration	LTE Band 30 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.543	0.061	0.359*	0.963
	Front	0.073	0.235	0.359*	0.667
	Bottom	0.956	0.309	0.254	1.519
	Right	0.027	-	0.359*	0.386
	Left	0.062	0.269	0.359	0.690

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.341	0.061	0.359*	0.761
	Front	0.075	0.235	0.359*	0.669
	Bottom	0.961	0.309	0.254	1.524
	Right	-	-	0.359*	0.359
	Left	0.183	0.269	0.359	0.811

Configuration	Mode	5G SAR (W/kg)	2.4 GHz Bluetooth Ant 2 at 13 dBm SAR (W/kg)	5 GHz WLAN MIMO at 17 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	NR Band n71	0.563	0.147	0.082	0.792
	NR Band n12	0.591	0.147	0.082	0.820
	NR Band n5 (Cell)	0.595	0.147	0.082	0.824
	NR Band n66 (AWS) Antenna A	0.889	0.147	0.082	1.118
	NR Band n66 (AWS) Antenna I	0.557	0.147	0.082	0.786
	NR Band n25 (PCS) Antenna A	0.716	0.147	0.082	0.945
	NR Band n25 (PCS) Antenna I	0.451	0.147	0.082	0.680
	NR Band n30	1.010	0.147	0.082	1.239
	NR Band n41	1.043	0.147	0.082	1.272
	NR Band n77 DoD	0.760	0.147	0.082	0.989
	NR Band n77	1.073	0.147	0.082	1.302

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Table 12-64

Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2 and 5 GHz WLAN Antenna 1 (at 0.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	5 GHz WLAN Ant 1 at 14 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Hotspot SAR	Cell. EVDO	0.816	0.286	0.252	0.056	1.410
	PCS EVDO	0.784	0.286	0.252	0.056	1.378
	GPRS 850	0.477	0.286	0.252	0.056	1.071
	GPRS 1900	0.949	0.286	0.252	0.056	1.543
	UMTS 850	0.928	0.286	0.252	0.056	1.522
	UMTS 1750	0.934	0.286	0.252	0.056	1.528
	UMTS 1900	0.955	0.286	0.252	0.056	1.549
	LTE Band 71	0.723	0.286	0.252	0.056	1.317
	LTE Band 12	0.635	0.286	0.252	0.056	1.229
	LTE Band 13	0.507	0.286	0.252	0.056	1.101
	LTE Band 14	0.687	0.286	0.252	0.056	1.281
	LTE Band 26 (Cell)	0.729	0.286	0.252	0.056	1.323
	LTE Band 5 (Cell)	0.642	0.286	0.252	0.056	1.236
	LTE Band 66 (AWS)	0.922	0.286	0.252	0.056	1.516
	LTE Band 25 (PCS)	0.963	0.286	0.252	0.056	1.557
	LTE Band 30	0.956	0.286	0.252	0.056	1.550
	LTE Band 7	0.961	0.286	0.252	0.056	1.555
	LTE Band 48	0.501	0.286	0.252	0.056	1.095
	LTE Band 41	0.485	0.286	0.252	0.056	1.079
	NR Band n71	0.563	0.286	0.252	0.056	1.157
	NR Band n12	0.591	0.286	0.252	0.056	1.185
	NR Band n5 (Cell)	0.595	0.286	0.252	0.056	1.189
	NR Band n66 (AWS) Antenna A	0.889	0.286	0.252	0.056	1.483
	NR Band n66 (AWS) Antenna I	0.557	0.286	0.252	0.056	1.151
	NR Band n25 (PCS) Antenna A	0.716	0.286	0.252	0.056	1.310
	NR Band n25 (PCS) Antenna I	0.451	0.286	0.252	0.056	1.045
	NR Band n30	1.010	0.286	0.252	0.056	See Table Below
	NR Band n41	1.043	0.286	0.252	0.056	See Table Below
	NR Band n77 DoD	0.760	0.286	0.252	0.056	1.354
	NR Band n77	1.073	0.286	0.252	0.056	See Table Below

Simult Tx	Configuration	NR Band n30 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	5 GHz WLAN Ant 1 at 14 dBm SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	5 GHz WLAN Ant 1 at 14 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.543	0.059	0.252*	0.056*	0.910	Body SAR	Back	0.278	0.059	0.252*	0.056*	0.645
	Front	0.112	0.286	0.182	0.056	0.636		Front	0.645	0.286	0.182	0.056	1.169
	Top	-	-	-	-	-		Top	0.064	-	-	-	0.064
	Bottom	1.010	0.193	0.252	0.056*	1.511		Bottom	0.176	0.193	0.252	0.056*	0.677
	Right	0.031	0.045	-	0.056*	0.132		Right	1.043	0.045	-	0.056*	1.144
	Left	0.059	-	0.252*	-	0.311		Left	-	-	0.252*	-	0.252

Simult Tx	Configuration	NR Band n77 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	5 GHz WLAN Ant 1 at 14 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body SAR	Back	0.286	0.059	0.252*	0.056*	0.653
	Front	0.520	0.286	0.182	0.056	1.044
	Top	0.012	-	-	-	0.012
	Bottom	0.630	0.193	0.252	0.056*	1.131
	Right	0.345	0.045	-	0.056*	0.446
	Left	1.073	-	0.252*	-	1.325

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Table 12-65
Simultaneous Transmission Scenario with 2.4 GHz Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2
and 5 GHz WLAN MIMO (at 0.5 cm)

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	5 GHz WLAN MIMO at 17 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Hotspot SAR	Cell. EVDO	0.816	0.286	0.252	0.082	1.436
	PCS EVDO	0.784	0.286	0.252	0.082	1.404
	GPRS 850	0.477	0.286	0.252	0.082	1.097
	GPRS 1900	0.949	0.286	0.252	0.082	1.569
	UMTS 850	0.928	0.286	0.252	0.082	1.548
	UMTS 1750	0.934	0.286	0.252	0.082	1.554
	UMTS 1900	0.955	0.286	0.252	0.082	1.575
	LTE Band 71	0.723	0.286	0.252	0.082	1.343
	LTE Band 12	0.635	0.286	0.252	0.082	1.255
	LTE Band 13	0.507	0.286	0.252	0.082	1.127
	LTE Band 14	0.687	0.286	0.252	0.082	1.307
	LTE Band 26 (Cell)	0.729	0.286	0.252	0.082	1.349
	LTE Band 5 (Cell)	0.642	0.286	0.252	0.082	1.262
	LTE Band 66 (AWS)	0.922	0.286	0.252	0.082	1.542
	LTE Band 25 (PCS)	0.963	0.286	0.252	0.082	1.583
	LTE Band 30	0.956	0.286	0.252	0.082	1.576
	LTE Band 7	0.961	0.286	0.252	0.082	1.581
	LTE Band 48	0.501	0.286	0.252	0.082	1.121
	LTE Band 41	0.485	0.286	0.252	0.082	1.105
	NR Band n71	0.563	0.286	0.252	0.082	1.183
	NR Band n12	0.591	0.286	0.252	0.082	1.211
	NR Band n5 (Cell)	0.595	0.286	0.252	0.082	1.215
	NR Band n66 (AWS) Antenna A	0.889	0.286	0.252	0.082	1.509
	NR Band n66 (AWS) Antenna I	0.557	0.286	0.252	0.082	1.177
	NR Band n25 (PCS) Antenna A	0.716	0.286	0.252	0.082	1.336
	NR Band n25 (PCS) Antenna I	0.451	0.286	0.252	0.082	1.071
	NR Band n30	1.010	0.286	0.252	0.082	See Table Below
	NR Band n41	1.043	0.286	0.252	0.082	See Table Below
	NR Band n77 DoD	0.760	0.286	0.252	0.082	1.380
	NR Band n77	1.073	0.286	0.252	0.082	See Table Below

Simult Tx	Configuration	NR Band n30 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	5 GHz WLAN MIMO at 17 dBm SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	5 GHz WLAN MIMO at 17 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.543	0.059	0.252*	0.082*	0.936	Body SAR	Back	0.278	0.059	0.252*	0.082*	0.671
	Front	0.112	0.286	0.182	0.054	0.634		Front	0.645	0.286	0.182	0.054	1.167
	Top	-	-	-	-	-		Top	0.064	-	-	-	0.064
	Bottom	1.010	0.193	0.252	0.082	1.537		Bottom	0.176	0.193	0.252	0.082	0.703
	Right	0.031	0.045	-	0.082*	0.158		Right	1.043	0.045	-	0.082*	1.170
	Left	0.059	-	0.252*	0.082*	0.393		Left	-	-	0.252*	0.082*	0.334

Simult Tx	Configuration	NR Band n77 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 at 14 dBm SAR (W/kg)	5 GHz WLAN MIMO at 17 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body SAR	Back	0.286	0.059	0.252*	0.082*	0.679
	Front	0.520	0.286	0.182	0.054	1.042
	Top	0.012	-	-	-	0.012
	Bottom	0.630	0.193	0.252	0.082	1.157
	Right	0.345	0.045	-	0.082*	0.472
	Left	1.073	-	0.252*	0.082*	1.407

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12.8 Phablet Simultaneous Transmission Analysis

For SAR summation, the highest reported SAR across all test distances was used as the most conservative evaluation for simultaneous transmission analysis for each device edge.

Per FCC KDB Publication 648474 D04 Handset SAR, Phablet SAR tests were not required if wireless router 1g SAR (scaled to the maximum output power, including tolerance) < 1.2 W/kg. Therefore, no further analysis beyond the tables included in this section was required to determine that possible simultaneous transmission scenarios would not exceed the SAR limit.

Table 12-66
Simultaneous Transmission Scenario with 5 GHz WLAN

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	PCS EVDO	3.030	0.437	3.467
	GPRS 1900	2.103	0.437	2.540
	UMTS 1750	2.650	0.437	3.087
	UMTS 1900	2.560	0.437	2.997
	LTE Band 66 (AWS)	2.921	0.437	3.358
	LTE Band 25 (PCS)	3.119	0.437	3.556
	LTE Band 30	1.110	0.437	1.547
	LTE Band 7	2.211	0.437	2.648
	LTE Band 41	1.418	0.437	1.855
	NR Band n66 (AWS) Antenna A	3.032	0.437	3.469
	NR Band n25 (PCS) Antenna A	2.132	0.437	2.569
	NR Band n25 (PCS) Antenna I	3.033	0.437	3.470
	NR Band n30	0.977	0.437	1.414
	NR Band n41	2.713	0.437	3.150
	NR Band n77 DoD	2.462	0.437	2.899
	NR Band n77	3.129	0.437	3.566

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Table 12-67
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO

Configuration	Mode	2G/3G/4G /5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	PCS EVDO	3.030	0.798	3.828
	GPRS 1900	2.103	0.798	2.901
	UMTS 1750	2.650	0.798	3.448
	UMTS 1900	2.560	0.798	3.358
	LTE Band 66 (AWS)	2.921	0.798	3.719
	LTE Band 25 (PCS)	3.119	0.798	3.917
	LTE Band 30	1.110	0.798	1.908
	LTE Band 7	2.211	0.798	3.009
	LTE Band 41	1.418	0.798	2.216
	NR Band n66 (AWS) Antenna A	3.032	0.798	3.830
	NR Band n25 (PCS) Antenna A	2.132	0.798	2.930
	NR Band n25 (PCS) Antenna I	3.033	0.798	3.831
	NR Band n30	0.977	0.798	1.775
	NR Band n41	2.713	0.798	3.511
	NR Band n77 DoD	2.462	0.798	3.260
	NR Band n77	3.129	0.798	3.927

12.9 Simultaneous Transmission Conclusion

The above numerical summed SAR results are sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.

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13 SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01r04, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

- 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
- 2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1g SAR limit).
- 3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .
- 4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg
- 5) When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Table 13-1
Head SAR Measurement Variability Results

HEAD VARIABILITY RESULTS															
Band	FREQUENCY		Mode	Service	Side	Test Position	Antenna Config	Form Factor	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.							(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1900	1882.50	376500	NR Band n25 (PCS), 40 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	Left	Cheek	I	Open	0.944	0.858	1.10	N/A	N/A	N/A	N/A
2600	2592.99	518598	NR Band n41, 100 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	Left	Cheek	I	Open	1.000	1.000	1.00	N/A	N/A	N/A	N/A
3700	3750.00	650000	NR Band n77, 100 MHz Bandwidth	DFT-S-OFDM, QPSK, 1 RB, 137 RB Offset	Right	Cheek	F	Open	0.819	0.818	1.00	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 13-2
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS															
Band	FREQUENCY		Mode	Service	Antenna Config	Form Factor	Side	Spacing	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.							(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1770.00	132572	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 50 RB, 25 RB Offset	A	Closed	bottom	5 mm	0.907	0.900	1.01	N/A	N/A	N/A	N/A
2450	2510.00	20850	LTE Band 7, 20 MHz Bandwidth	QPSK, 50 RB, 25 RB Offset	A	Closed	bottom	5 mm	0.925	0.898	1.03	N/A	N/A	N/A	N/A
2300	2310.00	462000	NR Band n30, 10 MHz Bandwidth	DFT-S-OFDM, QPSK, 50 RB, 0 RB Offset	A	Closed	bottom	5 mm	0.880	0.869	1.01	N/A	N/A	N/A	N/A
3900	3930.00	620000	NR Band n77, 100 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	F	Closed	left	5 mm	1.010	0.951	1.06	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT									Body						
Spatial Peak									1.6 W/kg (mW/g)						
Uncontrolled Exposure/General Population									averaged over 1 gram						

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Table 13-3
Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS															
Band	FREQUENCY		Mode	Service	Side	Spacing	Antenna Config	Form Factor	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.							(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1745.00	132322	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 1 RB, 50 RB Offset	back	0 mm	A	Open	2.670	2.610	1.02	N/A	N/A	N/A	N/A
1900	1882.50	376500	NR Band n25 (PCS), 40 MHz Bandwidth	DFT-S-OFDM, QPSK, 108 RB, 54 RB Offset	right	0 mm	I	Open	2.930	2.840	1.03	N/A	N/A	N/A	N/A
2600	2592.99	518598	NR Band n41, 100 MHz Bandwidth	DFT-S-OFDM, QPSK, 135 RB, 0 RB Offset	right	0 mm	I	Open	2.480	2.240	1.11	N/A	N/A	N/A	N/A
3500	3500.01	633334	NR Band n77 DoD, 100 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	left	0 mm	F	Open	2.030	1.880	1.08	N/A	N/A	N/A	N/A
3700	3750.00	650000	NR Band n77, 100 MHz Bandwidth	DFT-S-OFDM, QPSK, 1 RB, 137 RB Offset	left	0 mm	F	Open	2.310	2.210	1.05	N/A	N/A	N/A	N/A
3900	3930.00	662000	NR Band n77, 100 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	left	0 mm	F	Open	2.900	2.870	1.01	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT)								Phablet							
Spatial Peak								4.0 W/kg (mW/g)							
Uncontrolled Exposure/General Population								averaged over 10 grams							

13.2 Measurement Uncertainty

The measured SAR was <1.5 W/kg for 1g and <3.75 W/kg for 10g for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE 1528-2013 was not required.

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14 ADDITIONAL TESTING PER FCC GUIDANCE

14.1 Tuner Testing

Per April 2019 TCB Workshop Notes, the following test procedures were followed to demonstrate that the SAR results in Section 11 represented the appropriate SAR test conditions. Per FCC Guidance, during NR testing the device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency.

For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 120 tuner states were divided among the aggregate band, mode and exposure combinations. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg for a particular band/mode/exposure condition, point SAR measurements were made for all 120 states.

The operational description contains more information about the design and implementation of the dynamic antenna tuning.

Table 14-1
UMTS/CDMA Supplemental Head SAR Data

Supplemental Head SAR Data									
UMTS B5		UMTS B4		UMTS B2		CDMA BC0		CDMA BC1	
RMC		RMC		RMC		EVDO		EVDO	
Test Position	RC	Test Position	RC	Test Position	RC	Test Position	RC	Test Position	RC
Frequency (MHz)	836.60	Frequency (MHz)	1732.40	Frequency (MHz)	1880.00	Frequency (MHz)	843.31	Frequency (MHz)	1880.00
Channel	4183	Channel	1412	Channel	9400	Channel	777	Channel	600
Measured 1g SAR (W/kg)	0.170	Measured 1g SAR (W/kg)	0.075	Measured 1g SAR (W/kg)	0.086	Measured 1g SAR (W/kg)	0.206	Measured 1g SAR (W/kg)	0.082
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 1)	0.182	Auto-tune (State 13)	0.074	Auto-tune (State 13)	0.093	Auto-tune (State 1)	0.199	Auto-tune (State 53)	0.086
Default (State 0)	0.208	Default (State 0)	0.062	Default (State 13)	0.092	Default (State 0)	0.222	Default (State 13)	0.098
State 1	0.223	State 13	0.079	State 13	0.092	State 1	0.219	State 14	0.096
State 8	0.106	State 42	0.015	State 21	0.078	State 39	0.194	State 38	0.000
State 43	0.195	State 60	0.073	State 41	0.024	State 48	0.076	State 42	0.022
State 81	0.120	State 80	0.008	State 79	0.014	State 77	0.000	State 53	0.093
State 100	0.019	State 97	0.036	State 106	0.090	State 92	0.164	State 76	0.076
State 119	0.083	State 118	0.049	State 117	0.025	State 115	0.103	State 114	0.080

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Table 14-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data							
LTE B71		LTE B12		LTE B13		LTE B14	
QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	LC	Test Position	LC	Test Position	RC	Test Position	RC
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	793.00
Channel	133297	Channel	23095	Channel	23230	Channel	23330
Measured 1g SAR (W/kg)	0.162	Measured 1g SAR (W/kg)	0.155	Measured 1g SAR (W/kg)	0.167	Measured 1g SAR (W/kg)	0.166
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 104)	0.171	Auto-tune (State 0)	0.165	Auto-tune (State 0)	0.172	Auto-tune (State 0)	0.172
Default (State 0)	0.165	Default (State 0)	0.158	Default (State 0)	0.175	Default (State 0)	0.174
State 22	0.027	State 0	0.158	State 0	0.175	State 0	0.174
State 37	0.002	State 6	0.047	State 25	0.013	State 34	0.031
State 75	0.000	State 36	0.003	State 35	0.018	State 72	0.040
State 104	0.168	State 74	0.006	State 73	0.024	State 78	0.140
State 113	0.157	State 112	0.158	State 111	0.136	State 110	0.133

Supplemental Head SAR Data							
LTE B5		LTE B26		LTE B66		LTE B25	
QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 74 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	RC	Test Position	RC	Test Position	LC	Test Position	RC
Frequency (MHz)	836.50	Frequency (MHz)	831.50	Frequency (MHz)	1770.00	Frequency (MHz)	1882.50
Channel	20525	Channel	26865	Channel	132572	Channel	26365
Measured 1g SAR (W/kg)	0.176	Measured 1g SAR (W/kg)	0.204	Measured 1g SAR (W/kg)	0.068	Measured 1g SAR (W/kg)	0.084
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 1)	0.180	Auto-tune (State 4)	0.211	Auto-tune (State 13)	0.081	Auto-tune (State 13)	0.083
Default (State 0)	0.155	Default (State 0)	0.207	Default (State 0)	0.072	Default (State 13)	0.095
State 1	0.177	State 4	0.212	State 13	0.074	State 13	0.095
State 33	0.079	State 32	0.122	State 31	0.020	State 30	0.010
State 38	0.005	State 70	0.147	State 44	0.033	State 68	0.087
State 71	0.071	State 108	0.204	State 69	0.056	State 73	0.088
State 109	0.145	State 118	0.064	State 107	0.023	State 106	0.096

Table 14-3
NR Supplemental Head SAR Data

Supplemental Head SAR Data									
NR Band n71		NR Band n12		NR Band n5		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 53 RB Offset		DFT-s-OFDM QPSK, 40 MHz Bandwidth, 108 RB, 54 RB Offset		DFT-s-OFDM QPSK, 40 MHz Bandwidth, 108 RB, 54 RB Offset	
Test Position	LC	Test Position	LC	Test Position	RC	Test Position	RC	Test Position	LC
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1882.50
Channel	136100	Channel	141500	Channel	167300	Channel	349000	Channel	376500
Measured 1g SAR (W/kg)	0.158	Measured 1g SAR (W/kg)	0.150	Measured 1g SAR (W/kg)	0.174	Measured 1g SAR (W/kg)	0.058	Measured 1g SAR (W/kg)	0.064
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 104)	0.165	Auto-tune (State 0)	0.161	Auto-tune (State 1)	0.169	Auto-tune (State 13)	0.063	Auto-tune (State 13)	0.062
Default (State 0)	0.164	Default (State 0)	0.161	Default (State 0)	0.143	Default (State 0)	0.052	Default (State 13)	0.062
State 29	0.087	State 0	0.161	State 1	0.169	State 1	0.049	State 13	0.062
State 67	0.086	State 28	0.109	State 27	0.141	State 13	0.063	State 25	0.002
State 86	0.009	State 66	0.075	State 65	0.050	State 26	0.004	State 41	0.020
State 104	0.165	State 76	0.000	State 84	0.043	State 64	0.032	State 63	0.015
State 105	0.134	State 104	0.161	State 103	0.000	State 102	0.012	State 101	0.009

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Table 14-4
UMTS/CDMA Supplemental Body SAR Data

UMTS B3		UMTS B4		UMTS B5		CDMA B/C0		CDMA B/C1	
RMC		RMC		RMC		EVDO Rev.0		EVDO Rev.0	
Test Position	Back	Test Position	Bottom	Test Position	Bottom	Test Position	Back	Test Position	Bottom
Spacing	5mm	Spacing	5mm	Spacing	5mm	Spacing	5 mm	Spacing	5mm
Frequency (MHz)	826.40	Frequency (MHz)	1712.40	Frequency (MHz)	1852.40	Frequency (MHz)	824.70	Frequency (MHz)	1908.75
Channel	4132	Channel	1212	Channel	3062	Channel	1013	Channel	1175
Measured 1g SAR (W/kg)	0.737	Measured 1g SAR (W/kg)	0.814	Measured 1g SAR (W/kg)	0.760	Measured 1g SAR (W/kg)	0.650	Measured 1g SAR (W/kg)	0.698
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 1)	1.161	Auto-tune (State 1)	1.458	Auto-tune (State 13)	1.118	Auto-tune (State 1)	1.047	Auto-tune (State 52)	1.177
Default (State 0)	1.040	Default (State 0)	1.369	Default (State 13)	1.185	Default (State 0)	0.984	Default (State 13)	1.152
State 1	1.122	State 0	1.369	State 2	1.125	State 1	1.039	State 14	1.157
State 24	0.178	State 1	1.303	State 13	1.185	State 20	0.580	State 19	1.127
State 36	0.224	State 2	1.395	State 22	1.003	State 31	0.826	State 33	0.077
State 62	0.224	State 3	1.397	State 60	1.034	State 58	0.398	State 52	1.149
State 100	0.081	State 4	1.394	State 87	0.179	State 72	0.209	State 97	1.166
State 114	0.390	State 5	1.352	State 98	0.548	State 96	0.642	State 95	0.437
		State 6	1.385						
		State 7	1.275						
		State 8	1.363						
		State 9	1.251						
		State 10	1.222						
		State 11	1.051						
		State 12	0.869						
		State 13	1.070						
		State 14	1.125						
		State 15	1.134						
		State 16	1.143						
		State 17	1.161						
		State 18	1.156						
		State 19	1.104						
		State 20	1.084						
		State 21	1.187						
		State 22	1.107						
		State 23	0.998						
		State 24	0.830						
		State 25	0.544						
		State 26	0.248						
		State 27	0.245						
		State 28	0.237						
		State 29	0.230						
		State 30	0.219						
		State 31	0.223						
		State 32	0.183						
		State 33	0.173						
		State 34	0.146						
		State 35	0.113						
		State 36	0.090						
		State 37	0.065						
		State 38	0.040						
		State 39	0.666						
		State 40	0.629						
		State 41	0.617						
		State 42	0.605						
		State 43	0.586						
		State 44	0.565						
		State 45	0.530						
		State 46	0.495						
		State 47	0.441						
		State 48	0.367						
		State 49	0.280						
		State 50	0.246						
		State 51	0.172						
		State 52	0.933						
		State 53	0.978						
		State 54	0.992						
		State 55	1.001						
		State 56	1.024						
		State 57	1.029						
		State 58	1.051						
		State 59	1.132						
		State 60	1.159						
		State 61	1.258						
		State 62	1.288						
		State 63	1.271						
		State 64	1.142						
		State 65	0.900						
		State 66	0.608						
		State 67	0.627						
		State 68	0.573						
		State 69	0.676						
		State 70	0.683						
		State 71	0.175						
		State 72	0.862						
		State 73	0.987						
		State 74	1.186						
		State 75	1.289						
		State 76	1.288						
		State 77	0.922						
		State 78	0.352						
		State 79	0.403						
		State 80	0.457						
		State 81	0.456						
		State 82	0.462						
		State 83	0.488						
		State 84	0.473						
		State 85	0.458						
		State 86	0.399						
		State 87	0.306						
		State 88	0.245						
		State 89	0.177						
		State 90	0.111						
		State 91	0.863						
		State 92	0.901						
		State 93	0.895						
		State 94	0.893						
		State 95	0.888						
		State 96	0.889						
		State 97	0.848						
		State 98	0.809						
		State 99	0.742						
		State 100	0.629						
		State 101	0.541						
		State 102	0.433						
		State 103	0.358						
		State 104	1.305						
		State 105	0.258						
		State 106	0.325						
		State 107	0.345						
		State 108	1.344						
		State 109	0.258						
		State 110	0.915						
		State 111	0.344						
		State 112	1.028						
		State 113	0.673						
		State 114	0.545						
		State 115	0.838						
		State 116	1.031						
		State 117	0.473						
		State 118	0.546						
		State 119	0.837						

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Table 14-5
LTE Supplemental Body SAR Data

[illegible]

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Table 14-6
NR Supplemental Body SAR Data

NR Band n12		NR Band n12		NR Band n12		NR Band n12		NR Band n12	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back
Spacing	5 mm	Spacing	5 mm	Spacing	5 mm	Spacing	5 mm	Spacing	5 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1885.50
Channel	136100	Channel	141500	Channel	167300	Channel	349000	Channel	376500
Measured 1g SAR (W/kg)	0.422	Measured 1g SAR (W/kg)	0.422	Measured 1g SAR (W/kg)	0.446	Measured 1g SAR (W/kg)	0.776	Measured 1g SAR (W/kg)	0.574
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.731	Auto-tune (State 0)	0.605	Auto-tune (State 0)	0.740	Auto-tune (State 0)	1.422	Auto-tune (State 0)	0.990
Default (State 0)	0.731	Default (State 0)	0.605	Default (State 0)	0.742	Default (State 0)	1.349	Default (State 0)	0.990
State 0	0.731	State 0	0.605	State 0	0.740	State 0	1.349	State 0	0.990
State 10	0.076	State 10	0.147	State 10	0.416	State 10	1.356	State 10	0.990
State 40	0.118	State 40	0.162	State 40	0.473	State 40	1.307	State 40	0.990
State 55	0.431	State 55	0.108	State 55	0.520	State 55	1.358	State 55	0.213
State 85	0.053	State 85	0.605	State 85	0.254	State 85	1.358	State 85	0.995
						State 1	1.353		
						State 2	1.356		
						State 3	1.358		
						State 4	1.358		
						State 5	1.353		
						State 6	1.356		
						State 7	1.354		
						State 8	1.296		
						State 9	1.221		
						State 10	1.123		
						State 11	0.997		
						State 12	0.760		
						State 13	1.110		
						State 14	1.146		
						State 15	1.166		
						State 16	1.170		
						State 17	1.422		
						State 18	1.177		
						State 19	1.207		
						State 20	1.222		
						State 21	1.194		
						State 22	1.107		
						State 23	0.986		
						State 24	0.750		
						State 25	0.512		
						State 26	0.247		
						State 27	0.246		
						State 28	0.253		
						State 29	0.227		
						State 30	0.212		
						State 31	0.217		
						State 32	0.187		
						State 33	0.166		
						State 34	0.139		
						State 35	0.103		
						State 36	0.081		
						State 37	0.058		
						State 38	0.023		
						State 39	0.644		
						State 40	0.613		
						State 41	0.603		
						State 42	0.589		
						State 43	0.560		
						State 44	0.563		
						State 45	0.505		
						State 46	0.469		
						State 47	0.418		
						State 48	0.338		
						State 49	0.286		
						State 50	0.224		
						State 51	0.149		
						State 52	0.973		
						State 53	1.006		
						State 54	1.022		
						State 55	1.034		
						State 56	1.062		
						State 57	1.062		
						State 58	1.106		
						State 59	1.160		
						State 60	1.207		
						State 61	1.272		
						State 62	1.290		
						State 63	1.253		
						State 64	1.104		
						State 65	0.578		
						State 66	0.634		
						State 67	0.651		
						State 68	0.667		
						State 69	0.699		
						State 70	0.707		
						State 71	0.804		
						State 72	0.873		
						State 73	0.992		
						State 74	1.177		
						State 75	1.271		
						State 76	1.242		
						State 77	0.892		
						State 78	0.327		
						State 79	0.421		
						State 80	0.430		
						State 81	0.429		
						State 82	0.429		
						State 83	0.454		
						State 84	0.446		
						State 85	0.433		
						State 86	0.388		
						State 87	0.306		
						State 88	0.243		
						State 89	0.178		
						State 90	0.110		
						State 91	0.807		
						State 92	0.861		
						State 93	0.864		
						State 94	0.853		
						State 95	0.863		
						State 96	0.847		
						State 97	0.820		
						State 98	0.787		
						State 99	0.728		
						State 100	0.628		
						State 101	0.545		
						State 102	0.439		
						State 103	0.301		
						State 104	1.340		
						State 105	0.246		
						State 106	0.937		
						State 107	0.316		
						State 108	1.333		
						State 109	0.246		
						State 110	0.934		
						State 111	0.316		
						State 112	1.066		
						State 113	0.642		
						State 114	0.570		
						State 115	0.789		
						State 116	1.064		
						State 117	0.637		
						State 118	0.571		
						State 119	0.788		

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14.2 LTE Band 41 Power Class 2 and Power Class 3 Linearity

This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the highest power and available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR for each exposure condition. The linearity between the Power Class 2 and Power Class 3 SAR results and the respective frame averaged powers was calculated to determine that the results were linear. When ULCA is active, the linearity between the Power Class 2 with ULCA active and Power Class 3 with ULCA active SAR results and the respective frame averaged powers was calculated to determine that the results were linear. Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes was < 10% and all reported SAR values were < 1.4 W/kg for 1g and < 3.5 W/kg for 10g.

Table 14-7
LTE Band 41 Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.5	28.0
Measured Output Power (dBm)	24.54	26.99
Measured SAR (W/kg)	0.117	0.138
Measured Power (mW)	284.45	500.03
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	180.05	216.51
% deviation from expected linearity		-1.91%

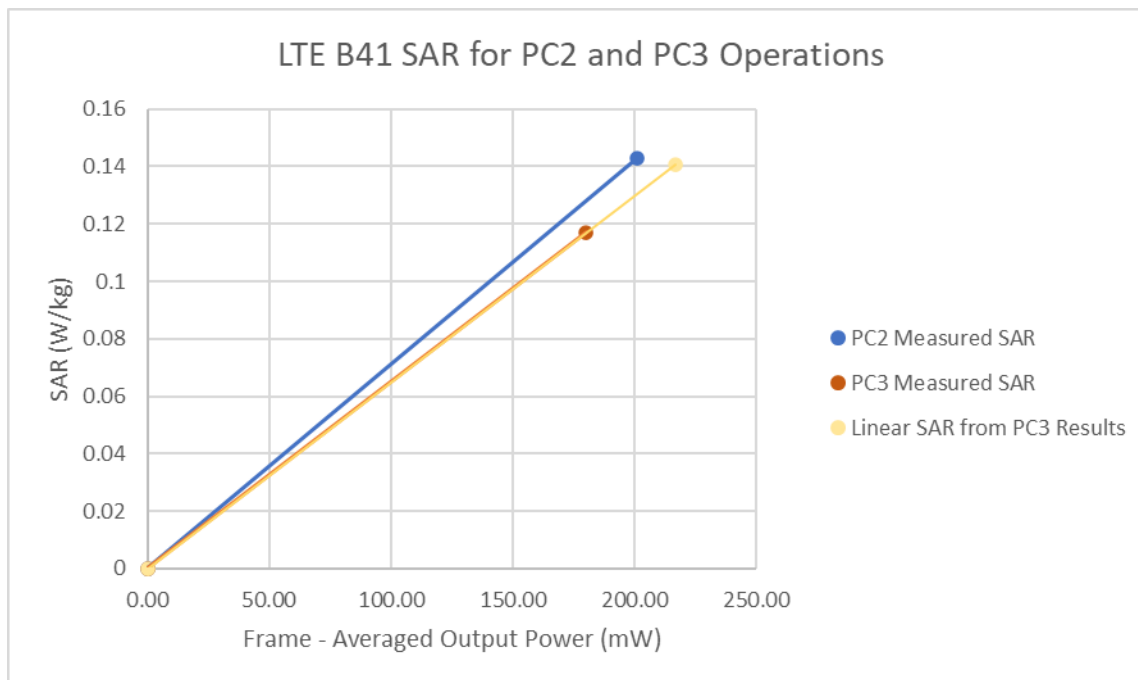


Figure 14-1
LTE Band 41 Head Linearity

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Table 14-8
LTE Band 41 ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.5	28.0
Measured Output Power (dBm)	24.85	26.67
Measured SAR (W/kg)	0.134	0.143
Measured Power (mW)	305.49	464.52
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	193.38	201.14
% deviation from expected linearity		2.60%

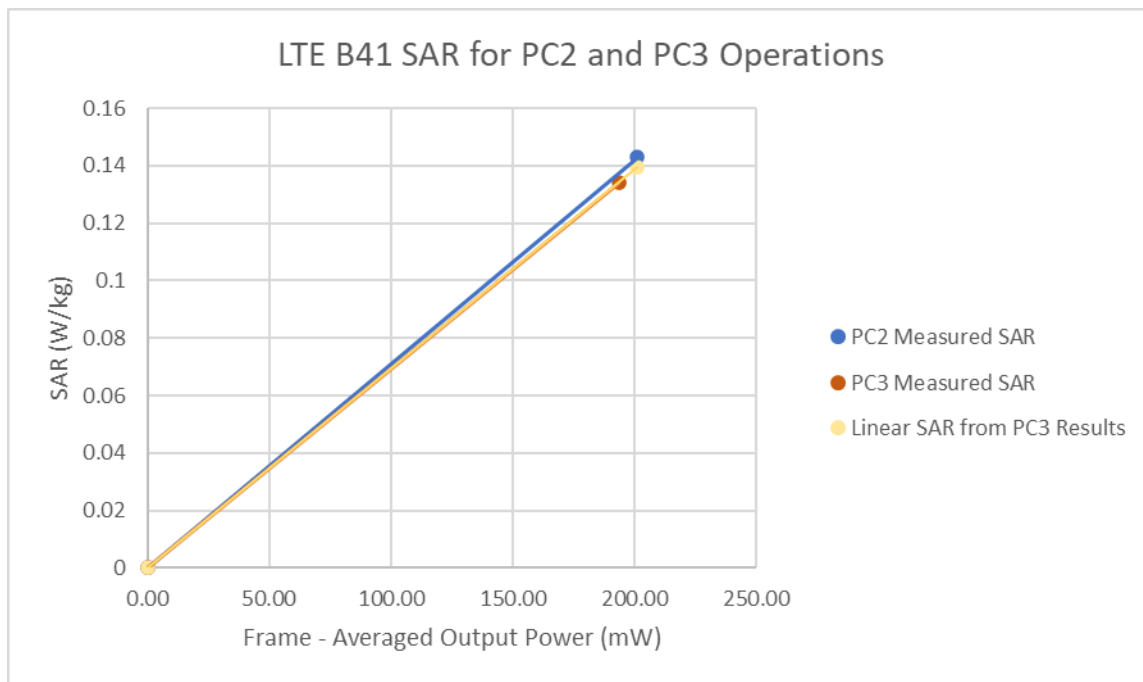


Figure 14-2
LTE Band 41 ULCA Head Linearity

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of Samsung	SAR EVALUATION REPORT		Approved by: Quality Manager
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Table 14-9
LTE Band 41 Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.5	28.0
Measured Output Power (dBm)	24.54	26.99
Measured SAR (W/kg)	0.219	0.247
Measured Power (mW)	284.45	500.03
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	180.05	216.51
% deviation from expected linearity		-6.21%

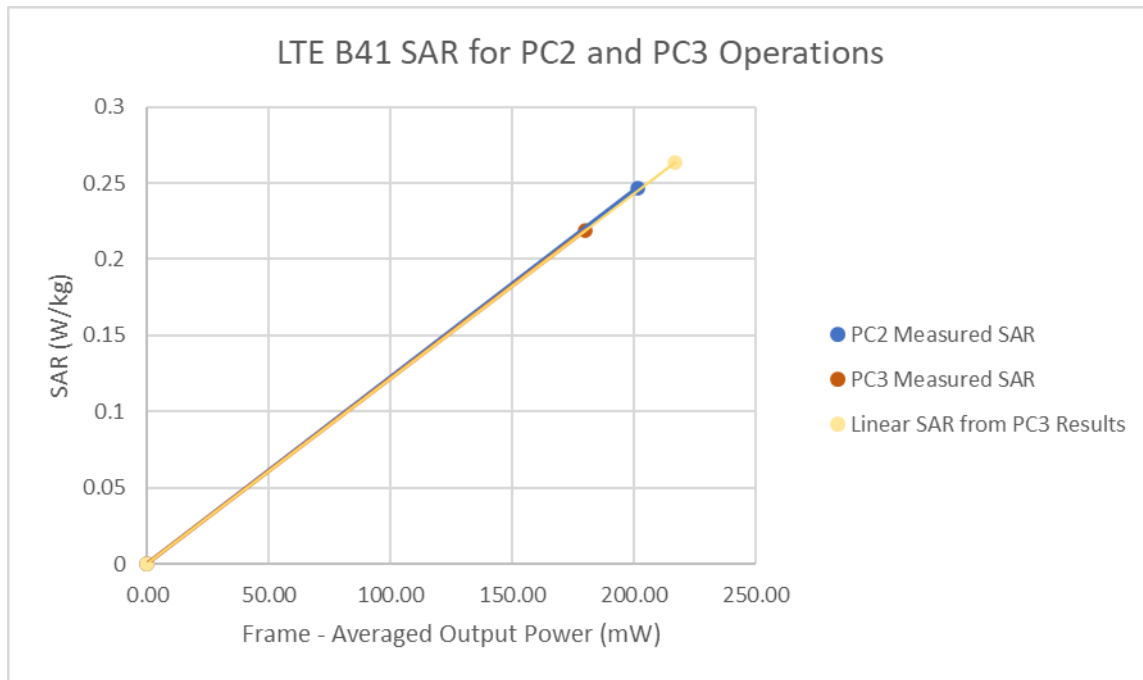


Figure 14-3
LTE Band 41 Body-Worn Linearity

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of Samsung	SAR EVALUATION REPORT		Approved by: Quality Manager
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Table 14-10
LTE Band 41 ULCA Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.5	28.0
Measured Output Power (dBm)	24.85	26.67
Measured SAR (W/kg)	0.231	0.247
Measured Power (mW)	305.49	464.52
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	193.38	201.14
% deviation from expected linearity		2.80%

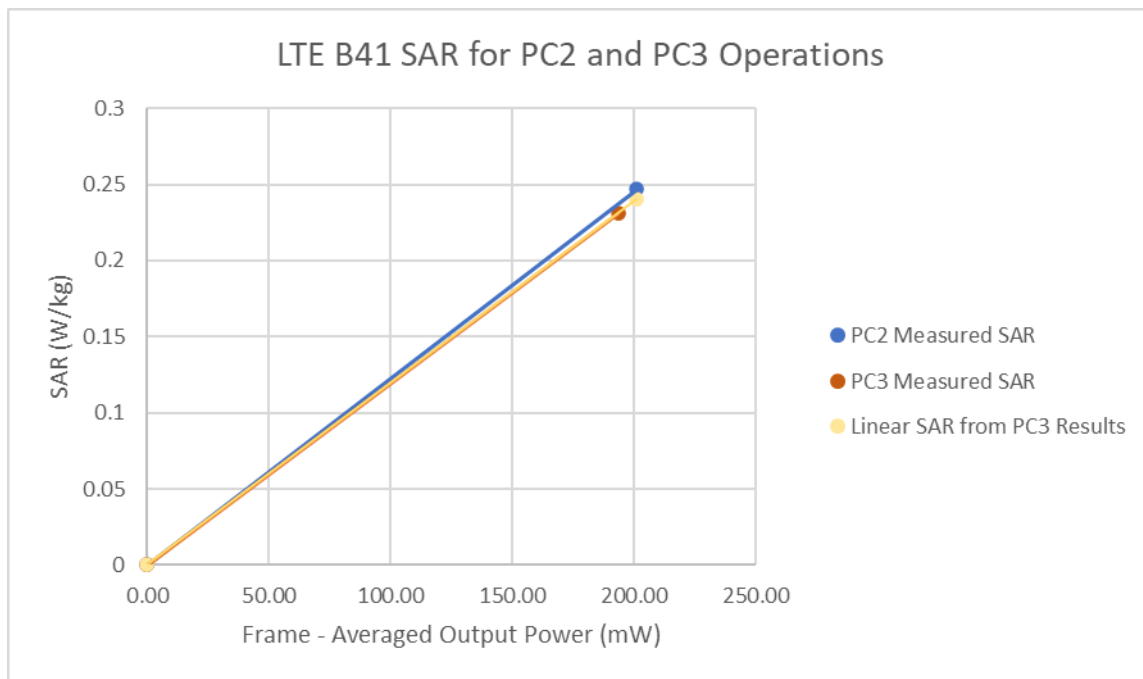


Figure 14-4
LTE Band 41 ULCA Body-Worn Linearity

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of Samsung	SAR EVALUATION REPORT		Approved by: Quality Manager
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Table 14-11
LTE Band 41 Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	20.5	22.1
Measured Output Power (dBm)	20.48	22.10
Measured SAR (W/kg)	0.455	0.433
Measured Power (mW)	111.69	162.18
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	70.70	70.22
% deviation from expected linearity		-4.19%

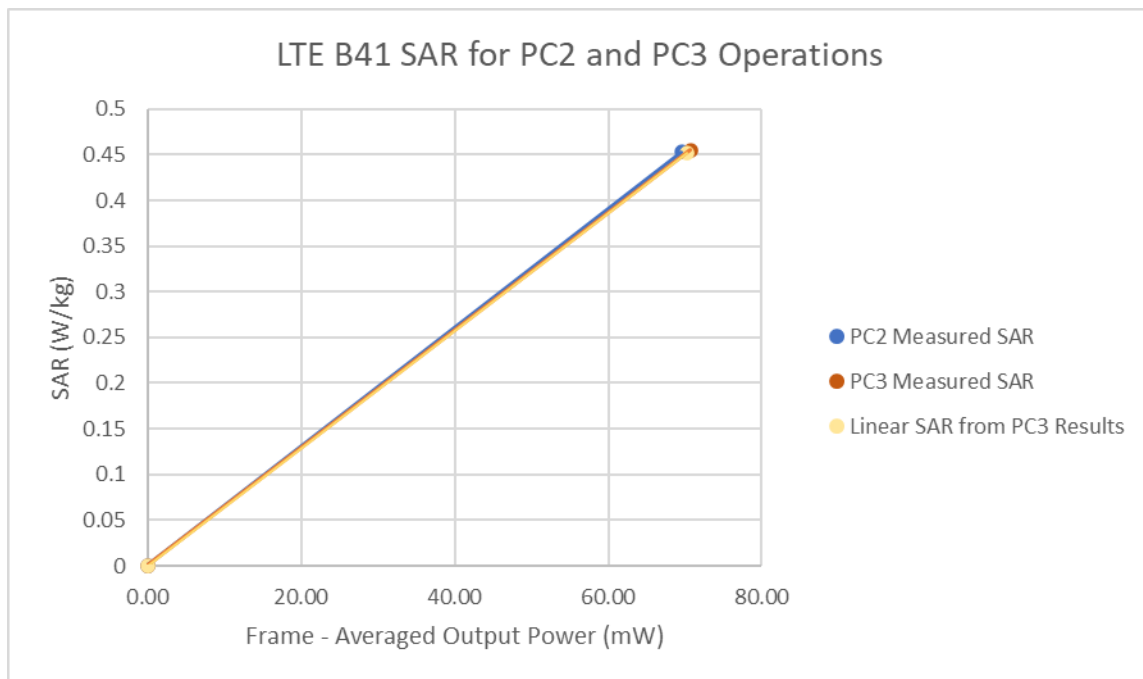


Figure 14-5
LTE Band 41 Hotspot Linearity

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of Samsung	SAR EVALUATION REPORT		Approved by: Quality Manager
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Table 14-12
LTE Band 41 ULCA Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	20.5	22.1
Measured Output Power (dBm)	20.30	22.06
Measured SAR (W/kg)	0.463	0.453
Measured Power (mW)	107.15	160.69
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	67.83	69.58
% deviation from expected linearity		-4.63%

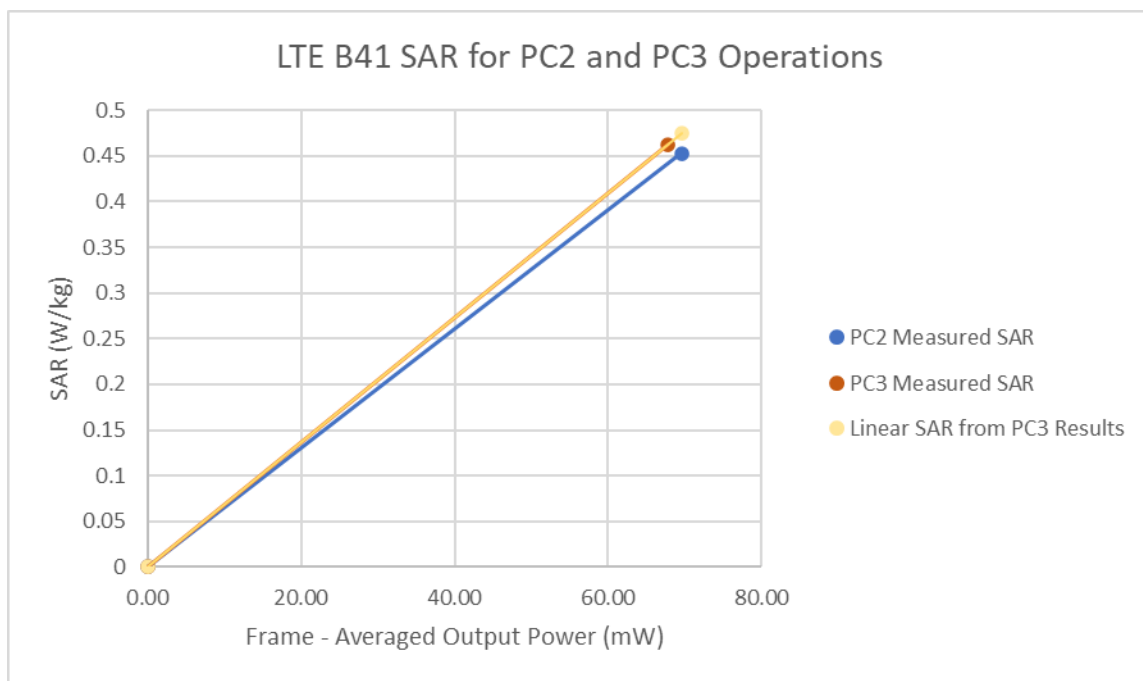


Figure 14-6
LTE Band 41 ULCA Hotspot Linearity

FCC ID: A3LSMF711U1	 SAR EVALUATION REPORT 	Approved by: Quality Manager
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Table 14-13
LTE Band 41 Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.0	25.6
Measured Output Power (dBm)	23.42	25.13
Measured SAR (W/kg)	1.180	1.270
Measured Power (mW)	219.79	325.84
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	139.12	141.09
% deviation from expected linearity		6.13%

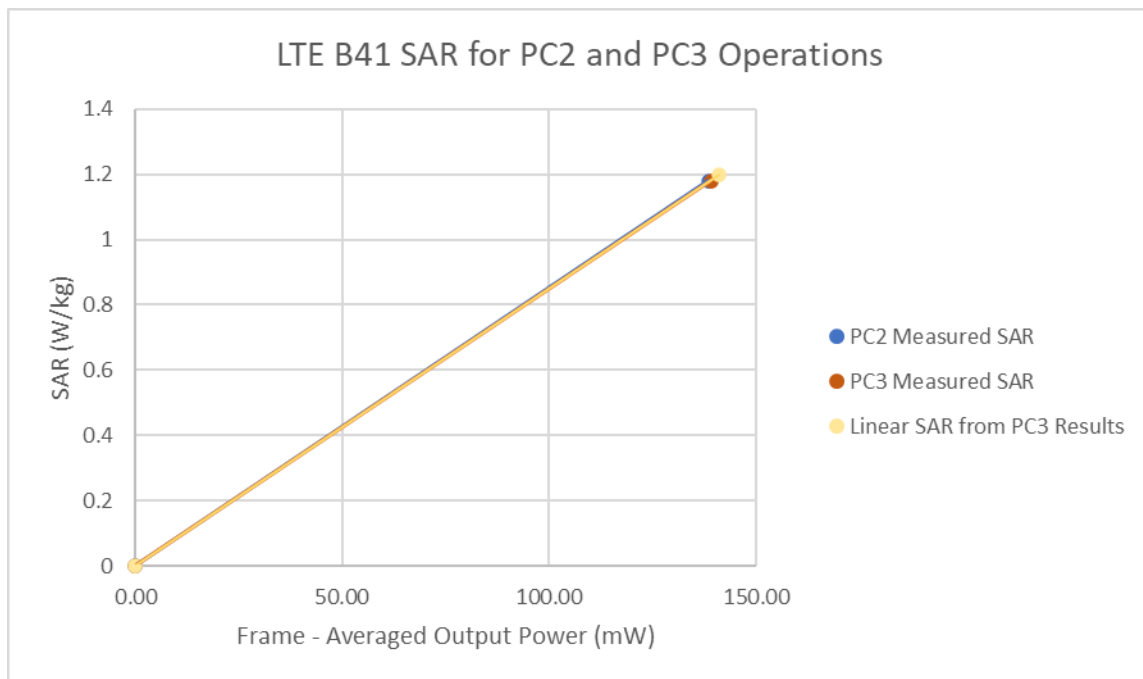


Figure 14-7
LTE Band 41 Phablet Linearity

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Table 14-14
LTE Band 41 ULCA Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.0	25.6
Measured Output Power (dBm)	23.20	25.05
Measured SAR (W/kg)	1.180	1.180
Measured Power (mW)	208.93	319.89
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	132.25	138.51
% deviation from expected linearity		-4.52%

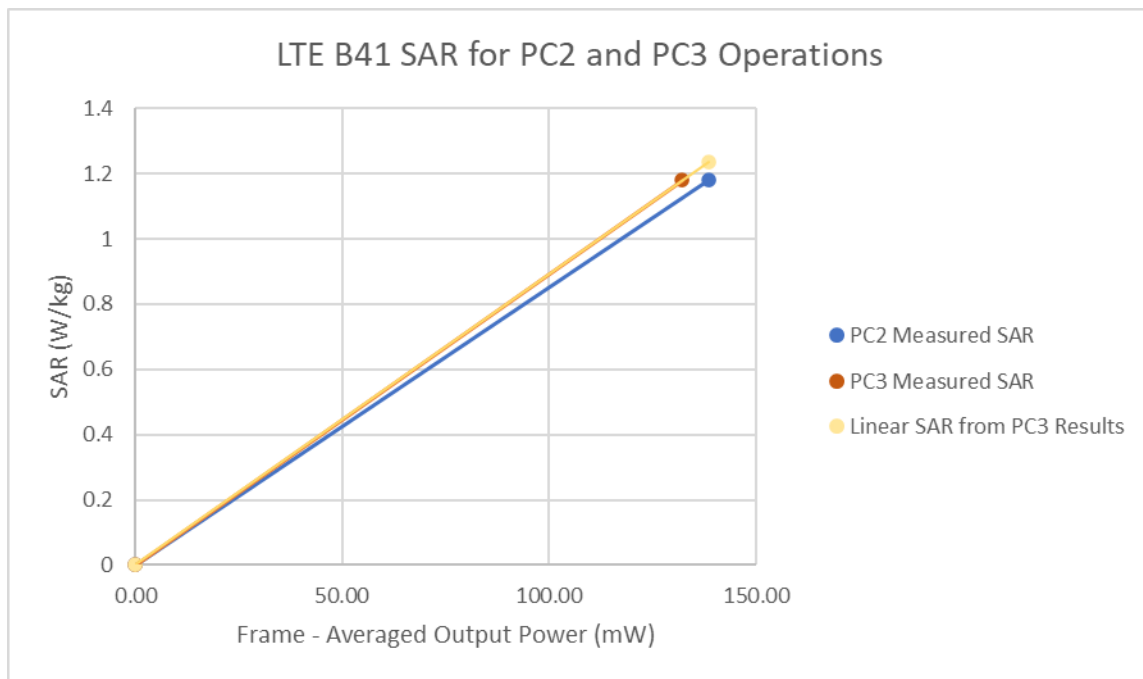


Figure 14-8
LTE Band 41 ULCA Phablet Linearity

FCC ID: A3LSMF711U1	 PCTEST Proud to be part of Samsung	SAR EVALUATION REPORT		Approved by: Quality Manager
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15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	85033E	3.5mm Standard Calibration Kit	7/7/2021	Annual	7/7/2022	MY53402352
Agilent	8594A	(9kHz-2.5GHz) Spectrum Analyzer	N/A	N/A	N/A	3051A00087
Agilent	8753ES	5-Parameter Vector Network Analyzer	12/15/2020	Annual	12/15/2021	MY4003841
Agilent	8752ES	5-Parameter Vector Network Analyzer	2/2/2021	Annual	2/2/2022	US39110222
Agilent	E4432B	ESG-D Series Signal Generator	3/24/2021	Annual	3/24/2022	US4002896
Agilent	E4438C	ESG Vector Signal Generator	9/29/2020	Annual	9/29/2021	MY4008982
Agilent	E4438C	ESG Vector Signal Generator	12/14/2020	Biennial	12/14/2022	MY40082365
Agilent	E4440A	PSA Series Spectrum Analyzer	1/29/2021	Annual	1/29/2022	MY46386272
Agilent	E5353E	Wireless Communications Test Set	12/15/2020	Annual	12/15/2021	GB43181079
Agilent	E5353E	Wireless Communications Test Set	2/4/2021	Annual	2/4/2022	GB43181063
Agilent	N400DA	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Agilent	N5182A	MMG Vector Signal Generator	6/15/2021	Annual	6/15/2022	MY47420800
Agilent	N5182A	MMG Vector Signal Generator	6/21/2021	Annual	6/21/2022	MY47420803
Agilent	N9020A	MMA Signal Analyzer	12/11/2020	Annual	12/11/2021	MY5020071
Amplifier Research	150A-100C	Amplifier	CBT	N/A	CBT	350132
Amplifier Research	1551G6	Amplifier	CBT	N/A	CBT	343971
Anritsu	MA24166A	USB Power Sensor	10/14/2020	Annual	10/14/2021	1827535
Anritsu	MA24166A	USB Power Sensor	10/14/2020	Annual	10/14/2021	1827538
Anritsu	MA2411B	Pulse Power Sensor	12/18/2020	Annual	12/18/2021	1126066
Anritsu	MA2411B	Pulse Power Sensor	3/8/2021	Annual	3/8/2022	1339007
Anritsu	MA2495A	Power Meter	11/3/2020	Annual	11/3/2021	1039808
Anritsu	MA2495A	Power Meter	1/18/2021	Annual	1/18/2022	94100
Anritsu	MT8821C	Radio Communication Analyzer	2/1/2021	Annual	2/1/2022	6201644756
Anritsu	MT8821C	Radio Communication Analyzer	3/2/2021	Annual	3/2/2022	6202044715
Anritsu	MT8821C	Radio Communication Analyzer	3/23/2021	Annual	3/23/2022	6201144418
Anritsu	MT8821C	Radio Communication Analyzer	4/14/2021	Annual	4/14/2022	6261892111
Anritsu	MT8821C	Radio Communication Analyzer	4/26/2021	Annual	4/16/2022	620001189
Anritsu	MT8821C	Radio Communication Analyzer	7/18/2021	Annual	7/18/2022	6262150047
Anritsu	MT8821C	Radio Communication Analyzer	5/21/2021	Annual	5/21/2022	6201144419
Control Company	4040	Therm / Clock / Humidity Monitor	2/17/2020	Biennial	2/17/2022	200111269
Control Company	4040	Therm / Clock / Humidity Monitor	2/17/2020	Biennial	2/17/2022	200113274
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043634
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043644
Control Company	4352	Ultra Long Stem Thermometer	3/2/2021	Annual	3/2/2022	160509849
Control Company	4352	Ultra Long Stem Thermometer	3/2/2021	Annual	3/2/2022	160509812
HEWLETT PACKARD	8753E	Network Analyzer	12/10/2020	Annual	12/10/2021	US38161081
Keysight	7720	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	A7AN1059B	DC Power Supply	CBT	N/A	CBT	MY53003131
Keysight Technologies	N6756B	DC Power Analyzer	5/5/2021	Triennial	5/5/2024	MY53004059
Keysight Technologies	N9020A	MMA Signal Analyzer	2/24/2021	Annual	2/24/2022	MY48020233
MiniCircuits	ML-60W+	6dB Attenuator	CBT	N/A	CBT	1119
MiniCircuits	SFL-340D+	Low Pass Filter	CBT	N/A	CBT	8807950003
MiniCircuits	VLF-600D+	Low Pass Filter	CBT	N/A	CBT	N/A
MiniCircuits	VLF-600D+	Low Pass Filter	CBT	N/A	CBT	N/A
MiniCircuits	FW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
MiniCircuits	BW-N20W5	DC to 18 GHz Precision Fixed 20dB Attenuator	CBT	N/A	CBT	N/A
MiniCircuits	NLP-120D+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
MiniCircuits	NLP-295D+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Narda	4034C-6	4 - 8 GHz SMA & dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	NC-100	Torque Wrench	12/1/2020	Annual	12/1/2021	N/A
Pasternack	NC-100	Torque Wrench	8/4/2020	Biennial	8/4/2022	N/A
Pasternack	PE208-6	CBT	N/A	N/A	N/A	N/A
Pasternack	PE2209-10	Bi-directional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CNV500	Radio Communication Tester	10/16/2020	Annual	10/16/2021	101069
Rohde & Schwarz	CNV500	Radio Communication Tester	10/16/2020	Annual	10/16/2021	100178
Rohde & Schwarz	CNV500	Radio Communication Tester	10/27/2020	Annual	10/27/2021	100843
Rohde & Schwarz	NRX	Power Meter	12/7/2020	Annual	12/7/2021	102583
Rohde & Schwarz	NRX	Power Meter	12/7/2020	Annual	12/7/2021	102582
Rohde & Schwarz	ZNL65	Vector Network Analyzer	9/29/2020	Annual	9/29/2021	101307
SPEAG	D1750V2	3750 MHz SAR Dipole	10/22/2018	Triennial	10/22/2021	1150
SPEAG	D1800V2	1800 MHz SAR Dipole	10/23/2018	Triennial	10/23/2021	56080
SPEAG	D1800V2	1800 MHz SAR Dipole	10/23/2018	Triennial	10/23/2021	56149
SPEAG	D1800V2	1800 MHz SAR Dipole	2/21/2019	Biennial	2/21/2022	56148
SPEAG	D2300V2	2300 MHz SAR Dipole	8/13/2018	Triennial	8/13/2021	1073
SPEAG	D2300V2	2300 MHz SAR Dipole	6/3/2021	Annual	6/3/2022	1116
SPEAG	D2450V2	2450 MHz SAR Dipole	9/8/2020	Annual	9/8/2021	997
SPEAG	D2450V2	2450 MHz SAR Dipole	8/14/2020	Annual	8/14/2021	999
SPEAG	D2450V2	2450 MHz SAR Dipole	1/18/2021	Annual	1/18/2022	981
SPEAG	D2600V2	2600 MHz SAR Dipole	11/12/2019	Biennial	11/12/2021	1071
SPEAG	D2600V2	2600 MHz SAR Dipole	4/14/2021	Annual	4/14/2022	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	6/14/2019	Triennial	6/14/2022	1004
SPEAG	D3500V2	3500 MHz SAR Dipole	1/19/2021	Annual	1/19/2022	1059
SPEAG	D3500V2	3500 MHz SAR Dipole	1/21/2020	Biennial	1/21/2022	1097
SPEAG	D3700V2	3700 MHz SAR Dipole	1/19/2021	Annual	1/19/2022	1018
SPEAG	D3900V2	3900 MHz SAR Dipole	1/21/2020	Biennial	1/21/2022	1067
SPEAG	D3900V2	3900 MHz SAR Dipole	10/9/2020	Annual	10/9/2021	1056
SPEAG	D3900V2	3900 MHz SAR Dipole	6/10/2021	Annual	6/10/2022	1073
SPEAG	D5GHV2	5 GHz SAR Dipole	9/10/2020	Annual	9/10/2021	1191
SPEAG	D5GHV2	5 GHz SAR Dipole	1/20/2021	Annual	1/20/2022	1057
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	1161
SPEAG	D750V3	750 MHz SAR Dipole	3/16/2020	Biennial	3/16/2022	1003
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	46133
SPEAG	D835V2	835 MHz SAR Dipole	1/22/2021	Annual	1/22/2022	46133
SPEAG	DAE4	Das Data Acquisition Electronics	6/21/2021	Annual	6/21/2022	1676
SPEAG	DAE4	Das Data Acquisition Electronics	6/22/2021	Annual	6/22/2022	1677
SPEAG	DAE4	Das Data Acquisition Electronics	9/10/2020	Annual	9/10/2021	1449
SPEAG	DAE4	Das Data Acquisition Electronics	7/13/2021	Annual	7/13/2022	1381
SPEAG	DAE4	Das Data Acquisition Electronics	10/16/2020	Annual	10/16/2021	1351
SPEAG	DAE4	Das Data Acquisition Electronics	1/13/2021	Annual	1/13/2022	1558
SPEAG	DAE4	Das Data Acquisition Electronics	3/10/2021	Annual	3/10/2022	1415
SPEAG	DAE4	Das Data Acquisition Electronics	3/18/2021	Annual	3/18/2022	1272
SPEAG	DAE4	Das Data Acquisition Electronics	4/7/2021	Annual	4/7/2022	1407
SPEAG	DAE4	Das Data Acquisition Electronics	6/15/2021	Annual	6/15/2022	1334
SPEAG	DAE4	Das Data Acquisition Electronics	12/7/2020	Annual	12/7/2021	1533
SPEAG	EX30V4	SAR Probe	10/20/2020	Annual	10/20/2021	7551
SPEAG	EX30V4	SAR Probe	10/20/2020	Annual	10/20/2021	7559
SPEAG	EX30V4	SAR Probe	11/23/2020	Annual	11/23/2021	7538
SPEAG	EX30V4	SAR Probe	12/11/2020	Annual	12/11/2021	7571
SPEAG	EX30V4	SAR Probe	1/20/2021	Annual	1/20/2022	3589
SPEAG	EX30V4	SAR Probe	3/16/2021	Annual	3/16/2022	7526
SPEAG	EX30V4	SAR Probe	4/19/2021	Annual	4/19/2022	7527
SPEAG	EX30V4	SAR Probe	6/21/2021	Annual	6/21/2022	7409
SPEAG	EX30V4	SAR Probe	7/20/2021	Annual	7/20/2022	7406
SPEAG	EX30V4	SAR Probe	6/28/2021	Annual	6/28/2022	7660
SPEAG	EX30V4	SAR Probe	7/20/2021	Annual	7/20/2022	7410

Note:

1. CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.
2. Each equipment item is used solely within its respective calibration period.

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16 MEASUREMENT UNCERTAINTIES

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c _i 1gm	c _i 10 gms	1gm u _i (± %)	10gms u _i (± %)	v _i
Measurement System									
Probe Calibration	E.2.1	7	N	1	1	1	7.0	7.0	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	2	R	1.73	1	1	1.2	1.2	∞
Linearity	E.2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E.2.4	0.25	R	1.73	1	1	0.1	0.1	∞
Modulation Response	E.2.5	4.8	R	1.73	1	1	2.8	2.8	∞
Readout Electronics	E.2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.8	R	1.73	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E.6.3	6.7	R	1.73	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	4	R	1.73	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E.4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E.4.1	1.67	N	1	1	1	1.7	1.7	5
Output Power Variation - SAR drift measurement	E.2.9	5	R	1.73	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.73	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	E.3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E.3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E.3.4	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Uncertainty	E.3.4	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)							RSS	12.2	12.0
Expanded Uncertainty							k=2	24.4	24.0
(95% CONFIDENCE LEVEL)									

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17 CONCLUSION

17.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Innovation, Science, and Economic Development Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables. [3]

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