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RF EXPOSURE PART 1 TEST REPORT

Applicant Name:

Samsung Electronics Co., Ltd.
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Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:

09/29/2025 – 11/24/2025

Test Site/Locations:

Element, Columbia, MD, USA
Element, Suwon, Korea

Document Serial No.:

1M2508270082-23.A3L

FCC ID:

A3LSMS948JPN

APPLICANT:

SAMSUNG ELECTRONICS CO., LTD.

DUT Type:

Portable Handset

Application Type:

Certification

FCC Rule Part(s):

CFR §2.1093

Model(s):

SC-53G

Additional Model(s):

SCG37

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	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.86	1.11	1.11	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	<0.1	1.00	1.00	N/A
PCE	UMTS 850	826.40 - 846.60 MHz	0.86	0.87	0.87	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.81	0.71	0.71	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.82	0.70	0.70	N/A
PCE	LTE Band 5	824.7 - 848.3 MHz	0.96	0.73	0.73	N/A
PCE	LTE Band 66	1710.7 - 1779.3 MHz	0.21	1.01	1.01	N/A
PCE	LTE Band 4	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 2	1850.7 - 1909.3 MHz	0.16	0.98	0.98	N/A
PCE	LTE Band 41	2496.5 - 2687.5 MHz	0.71	0.85	0.85	N/A
PCE	NR Band n5	825.5 - 846.5 MHz	1.64	0.87	0.87	N/A
PCE	NR Band n66	1712.5 - 1777.5 MHz	0.87	0.91	0.93	N/A
PCE	NR Band n41	2501.01 - 2685 MHz	0.71	0.76	0.76	N/A
DSS	2.4 GHz WiFi	2412 - 2462 MHz	0.85	1.07	1.07	N/A
NII	5 GHz WiFi	U-NII-1: 5180 - 5240 MHz U-NII-2A: 5260 - 5320 MHz U-NII-2C: 5500 - 5720 MHz U-NII-3: 5745 - 5825 MHz U-NII-4: 5845 - 5885 MHz	1.06	0.86	0.60	1.78
6CD/DV-L	6 GHz WiFi	U-NII-5: 5935 - 6415 MHz U-NII-6: 6435 - 6515 MHz U-NII-7: 6535 - 6675 MHz U-NII-8: 6895 - 7115 MHz	0.56	0.46	0.46	0.62
DSS	2.4 GHz Bluetooth	2402 - 2480 MHz	0.84	0.39	0.39	0.63
DXD	NFC	13.56 MHz	N/A	N/A	N/A	<0.1
UWB	UWB	6499.6 - 7987.2 MHz	<0.1	<0.1	N/A	<0.1
Simultaneous SAR per KDB 690783 D01v01r03:			1.59	1.28	1.53	2.35
Equipment Class	Band & Mode	Tx Frequency	APD (W/m²)			
			Head	Body-Worn	Hotspot	Phablet
6CD/DV-L	6 GHz WiFi	U-NII-5: 5935 - 6415 MHz U-NII-6: 6435 - 6515 MHz U-NII-7: 6535 - 6675 MHz U-NII-8: 6895 - 7115 MHz	3.45	2.75	2.75	14.64
UWB	UWB	6499.6 - 7987.2 MHz	<0.1	<0.1	N/A	<0.1
Overall SAR Summary:			1.11	1.11	1.11	1.11
RF Exposure Position			Head	Body-Worn	Product Specific (Wireless Router)	Simultaneous Transmission
SAR (W/kg)			1.06	0.86	0.60	1.78
Reported PD (W/m²)			1.06	0.86	0.60	1.78

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 2.9 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.


RJ Ortanez
Executive Vice President



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Rev. No	Report S/N	Description	Issue Date
	1M2508270082-23.A3L	Initial Release	

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1 TEST LABORATORY INFORMATION

1.1 Introduction

This test report for device subject to testing at an accredited testing laboratory has been generated by the testing laboratory that tested the device. Measurements were performed at various locations within Element Materials Technology. Detailed location and accredited information regarding the testing laboratories are provided below.

1.2 Test Laboratories Information

1.2.1 Testing Laboratory 1

Test Firm Name	ELEMENT MATERIALS TECHNOLOGY WASHINGTON DC LLC
Test Lab Location	7185 Oakland Mills Road, Columbia, MD 21046, United States Tel. +1.410.290.6652 / Fax +1.410.290.6654
Accreditation Info.	Lab Code. (ISED): 2451B
	CAB Identifier (NIST): US0110
	ISO/IEC 17025 (A2LA): CERT #2041.01
	
Measurement system No.	G, J, L, M, N, O, Q, R, S

1.2.2 Testing Laboratory 2

Test Firm Name	ELEMENT MATERIALS TECHNOLOGY SUWON, LTD.
Test Lab Location	Suwon: P136, Tower A, 13, Heungdeok 1-ro, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea
	Unhak2: 5, Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea Tel. +82.31.660.7391 / Fax +82)31-660-7318
Accreditation Info.	Lab Code. (ISED): 26168
	CAB Identifier (NIST): KR0169
	ISO/IEC 17025 (A2LA): CERT #2041.04
	
Measurement system No.	S1, S2, S3, S4, S5

Note: For each test performed, the test site can be verified with the probe serial numbers specified in the table of Test System Verification and Equipment List.

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2 DEVICE UNDER TEST

2.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
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
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 5	Voice/Data	824.7 - 848.3 MHz
LTE Band 66	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 2	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
NR Band n5	Voice/Data	826.5 - 846.5 MHz
NR Band n66	Voice/Data	1712.5 - 1777.5 MHz
NR Band n41	Voice/Data	2501.01 - 2685 MHz
2.4 GHz WIFI	Voice/Data	2412 - 2462 MHz
5 GHz WIFI	Voice/Data	U-NII-1: 5180 - 5240 MHz U-NII-2A: 5260 - 5320 MHz U-NII-2C: 5500 - 5720 MHz U-NII-3: 5745 - 5825 MHz U-NII-4: 5845 - 5885 MHz
6 GHz WIFI	Voice/Data	U-NII-5: 5935 - 6415 MHz U-NII-6: 6435 - 6515 MHz U-NII-7: 6535 - 6875 MHz U-NII-8: 6895 - 7115 MHz
2.4 GHz Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
UWB	Data	6489.6 - 7987.2 MHz
WPT	N/A	110 kHz - 148 kHz

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2.2 Data Referencing

Reference Device	Variant Device	Equipment Class	Mode	Comments
FCC: A3LSMS948U	FCC: A3LSMS948JPN	DTS	2.4 GHz WIFI	See Section 13 for spot-check data
		NII	5 GHz WIFI	See Section 12 for fully tested data and Section 13 for spot-check data
		6CD	6 GHz WIFI	See Section 12 for fully tested data and Section 13 for spot-check data
		DSS	2.4 GHz Bluetooth	See Section 12 for fully tested data and Section 13 for spot-check data
		DXX	NFC	Section 12 for fully tested data
		UWB	UWB	Section 13 for spot-check data

Per manufacturer declaration, there are two portable handset devices FCC ID: A3LSMS948U and FCC ID: A3LSMS948JPN, with high degree of similarity, reference model FCC ID: A3LSMS948U and variant model FCC ID: A3LSMS948JPN. Both models share the same material, form factor, circuit design, and components, including antennas and their locations. The reference and variant models have the same tune-up tolerances at WIFI/BT.

Based on the Data Referencing Test Plan, testing was done fully on the reference model FCC ID: A3LSMS948U, while spot-check verification has been performed on variant model FCC ID: A3LSMS948JPN. The spot check verification has been performed in the worst case for each exposure condition and if the spot check SAR value was higher, it was applied to the simultaneous transmission results and SAR CHAR on variant model FCC ID: A3LSMS948JPN. The reference and variant model comparison data summary is included in section 12. Please see unlicensed SAR reference test data in Appendix K: for complete compliance evaluation for the reference model.

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2.3 Time-Averaging Algorithm for RF Exposure Compliance

2.3.1 Time-Averaged Algorithm

This Device is enabled with the Qualcomm® Smart Transmit Plus, EFS v24 feature with antenna grouping and a *multi_tx_factor* of 1.27. 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 2.11– Bibliography).

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 WWAN sub-6/WLAN/BT radio), for each characterized technology and band. Characterization is achieved by determining P_{limit} for WWAN sub-6/WLAN/BT that corresponds to the exposure design targets after accounting for all device design related uncertainties, i.e., *SAR_design_target* (<FCC SAR Limit) for sub-6 radio. The SAR characterization is denoted as SAR char in this report (see SAR Summary Section and Part 0 SAR Test Results for P_{limit} Calculations Appendix).

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 WWAN sub-6/WLAN/BT is 1.0dB for this EUT.

Based on Qualcomm guidance, for *multi_tx_factor* > 1.0, the reported SAR for each tech/band/ant/DSI is scaled using $\min\{P_{limit} * multi_tx_factor * 10^{(sub6 \text{ device uncertainty}/10)}, P_{max}\}$ in simultaneous transmission evaluations. For this device, the manufacturer declared a *multi_tx_factor* of 1.27.

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Exposure Scenario Averaging Volume Spacing DSI			Maximum Tune-Up Output Power*	Body-Worn, Hotspot, or Phablet	Head
				1g/10g	1g
				5mm, 10mm, 0mm	0mm
				0	1
Technology/Band	Antenna	Antenna Group	P _{max}	P _{limit}	P _{limit}
GSM 850	A	AG0	25.3	25.6	29.0
GSM 850	E	AG1	25.3	20.8	20.3
GSM 1900	A	AG0	22.1	17.8	26.3
UMTS 850	A	AG0	24.0	26.3	28.4
UMTS 850	E	AG1	24.0	21.0	20.0
LTE Band 12	A	AG0	23.0	26.5	27.4
LTE Band 12	E	AG1	23.0	22.0	21.0
LTE Band 13	A	AG0	23.0	25.7	28.4
LTE Band 13	E	AG1	23.0	21.0	21.0
LTE Band 5	A	AG0	24.0	26.2	28.5
LTE Band 5	E	AG1	24.0	21.0	21.0
LTE Band 66/4	A	AG0	23.0	17.0	24.7
LTE Band 2	A	AG0	23.0	17.0	25.5
LTE Band 41	B	AG0	22.0	17.0	31.8
LTE Band 41	F	AG1	22.0	18.5	16.0
NR Band n5	A	AG0	24.0	25.4	28.8
NR Band n5	E	AG1	24.0	21.0	21.0
NR Band n66	A	AG0	23.0	17.0	25.9
NR Band n66	F	AG1	23.0	20.0	18.0
NR Band n41 PC2	B	AG0	25.0	17.0	21.0
NR Band n41 PC2	F	AG1	25.0	18.5	16.0
2.4 GHz WIFI	G	AG1	19.0	19.7	15.0
2.4 GHz WIFI	I	AG1	19.0	19.9	15.0
2.4 GHz WIFI	MIMO	AG1	17.0	17.9	15.0
5 GHz WIFI	G	AG1	17.0	13.0	15.0
5 GHz WIFI	E	AG1	17.0	13.0	15.0
5 GHz WIFI	MIMO	AG1	17.0	13.0	15.0
6 GHz WIFI	G	AG1	16.0	11.0	14.0
6 GHz WIFI	E	AG1	16.0	11.0	14.0
6 GHz WIFI	MIMO	AG1	16.0	11.0	14.0
2.4 GHz Bluetooth	G	AG1	16.4	20.4	18.5
2.4 GHz Bluetooth	I	AG1	16.5	21.8	18.2
2.4 GHz Bluetooth MIMO	G	AG1	13.0	20.1	19.8
2.4 GHz Bluetooth MIMO	I	AG1	12.0	18.2	18.0

Notes:

1. When $P_{max} < P_{limit}$ EFS, the DUT will operate at a power level up to P_{max}
2. 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 GMSK, TDD, or OFDM modulation schemes (e.g. GSM, LTE TDD, WLAN, BT).
3. 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.
4. WLAN MIMO P_{max} and P_{limit} are defined per antenna chain.

The maximum time-averaged output power (dBm) for any WWAN sub-6/WLAN/BT technology, band, and DSI is the 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 D04v01.

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2.4 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 D04v01.

Note: Targets for 802.11ax/be RU operations can be found in 802.11ax/be RU SAR Exclusion Appendix.

2.4.1 Licensed Output Power

GSM/GPRS/EDGE 850										
Antenna A										
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
P _{max}	Max Allowed Power	33.5	33.5	32.5	30.5	28.5	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	31.5	29.5	27.5	27.0	25.0	23.0	22.0
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	33.5	33.5	32.5	30.5	28.5	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	31.5	29.5	27.5	27.0	25.0	23.0	22.0
DSI = 1 (Head)	Max Allowed Power	33.5	33.5	32.5	30.5	28.5	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	31.5	29.5	27.5	27.0	25.0	23.0	22.0

GSM/GPRS/EDGE 850										
Antenna E										
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
P _{max}	Max Allowed Power	33.5	33.5	32.5	30.5	28.5	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	31.5	29.5	27.5	27.0	25.0	23.0	22.0
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	31.0	31.0	28.0	26.2	25.0	28.0	26.0	24.0	23.0
	Nominal	30.0	30.0	27.0	25.2	24.0	27.0	25.0	23.0	22.0
DSI = 1 (Head)	Max Allowed Power	30.5	30.5	27.5	25.7	24.5	28.0	26.0	24.0	23.0
	Nominal	29.5	29.5	26.5	24.7	23.5	27.0	25.0	23.0	22.0

GSM/GPRS/EDGE 1900										
Antenna A										
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
P _{max}	Max Allowed Power	30.5	30.5	29.0	27.5	25.5	27.0	25.0	23.0	22.0
	Nominal	29.5	29.5	28.0	26.5	24.5	26.0	24.0	22.0	21.0
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	28.0	28.0	25.0	23.2	22.0	27.0	25.0	23.0	22.0
	Nominal	27.0	27.0	24.0	22.2	21.0	26.0	24.0	22.0	21.0
DSI = 1 (Head)	Max Allowed Power	30.5	30.5	29.0	27.5	25.5	27.0	25.0	23.0	22.0
	Nominal	29.5	29.5	28.0	26.5	24.5	26.0	24.0	22.0	21.0

For GSM, the above powers listed are GSM burst average values.

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UMTS Band 5 (850 MHz)					
Antenna A					
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
Pmax	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Head)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
UMTS Band 5 (850 MHz)					
Antenna E					
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
Pmax	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	22.0	21.0	21.0	21.0
	Nominal	21.0	20.0	20.0	20.0
DSI = 1 (Head)	Max Allowed Power	21.0	20.0	20.0	20.0
	Nominal	20.0	19.0	19.0	19.0

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Mode / Band	Antenna		Modulated Average Output Power (in dBm)		
			Pmax	DSI = 0 (Body-Worn, Hotspot, or Phablet)	DSI = 1 (Head)
LTE Band 12	E	Max Allowed Power	24.0	23.0	22.0
		Nominal	23.0	22.0	21.0
LTE Band 12	A	Max Allowed Power	24.0	24.0	24.0
		Nominal	23.0	23.0	23.0
LTE Band 13	E	Max Allowed Power	24.0	22.0	22.0
		Nominal	23.0	21.0	21.0
LTE Band 13	A	Max Allowed Power	24.0	24.0	24.0
		Nominal	23.0	23.0	23.0
LTE Band 5	E	Max Allowed Power	25.0	22.0	22.0
		Nominal	24.0	21.0	21.0
LTE Band 5	A	Max Allowed Power	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0
LTE Band 66/4	A	Max Allowed Power	24.0	18.0	24.0
		Nominal	23.0	17.0	23.0
LTE Band 2	A	Max Allowed Power	24.0	18.0	24.0
		Nominal	23.0	17.0	23.0
LTE Band 41	B	Max Allowed Power	25.0	20.0	25.0
		Nominal	24.0	19.0	24.0
LTE Band 41	F	Max Allowed Power	25.0	21.5	19.0
		Nominal	24.0	20.5	18.0

For LTE TDD, the above powers listed are TDD burst average values.

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Mode / Band	Antenna		Modulated Average Output Power (in dBm)		
			Pmax	DSI = 0 (Body-Worn, Hotspot, or Phablet)	DSI = 1 (Head)
NR Band n5	E	Max Allowed Power	25.0	22.0	22.0
		Nominal	24.0	21.0	21.0
NR Band n5	A	Max Allowed Power	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0
NR Band n66	A	Max Allowed Power	24.0	18.0	24.0
		Nominal	23.0	17.0	23.0
NR Band n66	F	Max Allowed Power	24.0	21.0	19.0
		Nominal	23.0	20.0	18.0
NR Band n41 PC2	F	Max Allowed Power	26.0	19.5	17.0
		Nominal	25.0	18.5	16.0
NR Band n41 PC2	B	Max Allowed Power	26.0	18.0	22.0
		Nominal	25.0	17.0	21.0

For NR TDD, the above powers listed are TDD burst average and framed average values

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2.4.2 2.4 GHz WLAN Output Power

The below table is applicable in the following conditions:

- Pmax
- DSI=0 (Body-worn, Hotspot or Phablet)

[illegible]

The below table is applicable in the following conditions:

- $DSI=1$ (RCV)

[illegible]

2.4.3 5 GHz WLAN Output Power

The below table is applicable in the following conditions:

- P_{max}

[illegible]

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The below table is applicable in the following conditions:

- DSI=1 (Head)

Model		Band		IEEE 802.11 Multi-Link Output Power (mW)																																															
				SSID G																SSID B																SSID G + SSID B															
				Antenna G																Antenna B																Antenna G															
				a		c		m		m (20)		a		c		m		m (20)		m (24)		a		c		m		m (20)		m (24)		a		c		m		m (20)		m (24)											
Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm	Max	Norm														
5 GHz (50W) (50W)	UNI-1	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-2A	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-2C	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-3	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-4	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
5 GHz (50W) (50W)	UNI-1			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-2A			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-2C			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-3			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-4			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
5 GHz (50W) (50W)	UNI-1			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-2A			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-2C			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-3			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-4			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
5 GHz (50W) (50W)	UNI-1			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-2A			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-2C			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-3			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												
	UNI-4			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0												

The below table is applicable in the following conditions:

- DSI=0 (Body-worn, Hotspot or Phablet)

[illegible]

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2.4.4 6 GHz WLAN Output Power

The below table is applicable in the following conditions:

- P_{max}

		IEEE 802.11 Modulated/Frame Output Power (in dBm)																	
Mode	Band	SISO						SISO						SISO in MIMO					
		Antenna G						Antenna E						MIMO					
		a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
6 GHz WiFi (20MHz BW) - LPI	UNII-5	9.0 ch. 2: 7.5	8.0 6.5	9.5 ch. 2: 7.5	8.5 6.5	9.5 ch. 2: 7.5	8.5 6.5	9.0 ch. 2: 7.5	8.0 6.5	9.5 ch. 2: 7.5	8.5 6.5	9.5 ch. 2: 7.5	8.5 6.5	9.0 ch. 2: 7.5	8.0 6.5	9.5 ch. 2: 7.5	8.5 6.5	9.5 ch. 2: 7.5	8.5 6.5
	UNII-6	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
	UNII-7	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
	UNII-8	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
6 GHz WiFi (40MHz BW) - LPI	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0			13.0	12.0		
	UNII-7			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0			13.0	12.0		
	UNII-8			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0			13.0	12.0		
6 GHz WiFi (80MHz BW) - LPI	UNII-5			15.5	14.5	15.5	14.5			15.5	14.5	15.5	14.5			15.5	14.5	15.5	14.5
	UNII-6			16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0			16.0	15.0		
	UNII-7			16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0			16.0	15.0		
	UNII-8			15.5	14.5	15.5	14.5			15.5	14.5	15.5	14.5			15.5	14.5		
6 GHz WiFi (160MHz BW) - LPI	UNII-5			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0
	UNII-6			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0		
	UNII-7			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0		
	UNII-8			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0		
6 GHz WiFi (320MHz BW) - LPI	UNII-5					17.0	16.0					17.0	16.0					17.0	16.0
	UNII-6					17.0	16.0					17.0	16.0					17.0	16.0
	UNII-7					17.0	16.0					17.0	16.0					17.0	16.0
	UNII-8					17.0	16.0					17.0	16.0					17.0	16.0
Mode	Band	IEEE 802.11 Modulated/Frame Output Power (in dBm)																	
		SISO						SISO						SISO in MIMO					
		Antenna G						Antenna E						MIMO					
		a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
6 GHz WiFi (20MHz BW) - SP	UNII-5	17.0 ch. 2: 7.5	16.0 6.5	17.0 ch. 2: 7.5	16.0 6.5	17.0 ch. 2: 7.5	16.0 6.5	17.0 ch. 2: 7.5	16.0 6.5	17.0 ch. 2: 7.5	16.0 6.5	17.0 ch. 2: 7.5	16.0 6.5	17.0 ch. 2: 7.5	16.0 6.5	17.0 ch. 2: 7.5	16.0 6.5	17.0 ch. 2: 7.5	16.0 6.5
	UNII-7	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0
6 GHz WiFi (40MHz BW) - SP	UNII-5			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0
	UNII-7			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0		
6 GHz WiFi (80MHz BW) - SP	UNII-5			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0
	UNII-7			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0		
6 GHz WiFi (160MHz BW) - SP	UNII-5			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0
	UNII-7			17.0	16.0	17.0	16.0			17.0	16.0	17.0	16.0			17.0	16.0		
6 GHz WiFi (320MHz BW) - SP	UNII-5					17.0	16.0					17.0	16.0					17.0	16.0
	UNII-7					17.0	16.0					17.0	16.0					17.0	16.0
Mode	Band	IEEE 802.11 Modulated/Frame Output Power (in dBm)																	
		SISO						SISO						SISO in MIMO					
		Antenna G						Antenna E						MIMO					
		a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
6 GHz WiFi (20MHz BW) - VLP	UNII-5	4.0	3.0	5.0	4.0	5.0	4.0	4.0	3.0	5.0	4.0	5.0	4.0	4.0	3.0	5.0	4.0	5.0	4.0
	UNII-6/7/8	5.0	4.0	6.0	5.0	6.0	5.0	5.0	4.0	6.0	5.0	6.0	5.0	5.0	4.0	6.0	5.0	6.0	5.0
6 GHz WiFi (40MHz BW) - VLP	UNII-5			8.0	7.0	8.0	7.0			8.0	7.0	8.0	7.0			8.0	7.0	8.0	7.0
	UNII-6/7/8			9.0	8.0	9.0	8.0			9.0	8.0	9.0	8.0			9.0	8.0		
6 GHz WiFi (80MHz BW) - VLP	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6/7/8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0		
6 GHz WiFi (160MHz BW) - VLP	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6/7/8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0		
6 GHz WiFi (320MHz BW) - VLP	UNII-5					12.0	11.0					12.0	11.0					12.0	11.0
	UNII-6/7/8					12.0	11.0					12.0	11.0					12.0	11.0

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The below table is applicable in the following conditions:

- DSI=0 (Body-worn or Phablet)

Mode	Band	IEEE 802.11 Modulated/Frame Output Power (in dBm)																	
		SISO						SISO						SISO in MIMO					
		Antenna G						Antenna E						MIMO					
		a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
6 GHz WiFi (20MHz BW) - LPI	UNII-5	9.0	8.0	9.5	8.5	9.5	8.5	9.0	8.0	9.5	8.5	9.5	8.5	9.0	8.0	9.5	8.5	9.5	8.5
		ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5
	UNII-6	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
	UNII-7	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
6 GHz WiFi (40MHz BW) - LPI	UNII-8	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
6 GHz WiFi (80MHz BW) - LPI	UNII-8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
6 GHz WiFi (160MHz BW) - LPI	UNII-8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
6 GHz WiFi (320MHz BW) - LPI	UNII-8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
6 GHz WiFi (20MHz BW) - SP	UNII-8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
6 GHz WiFi (40MHz BW) - SP	UNII-8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
6 GHz WiFi (80MHz BW) - SP	UNII-8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
6 GHz WiFi (160MHz BW) - SP	UNII-8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
6 GHz WiFi (320MHz BW) - SP	UNII-8			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-7			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0

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The below table is applicable in the following conditions:

- DSI=1 (Head)

		IEEE 802.11 Modulated Output Power (in dBm)																	
Mode	Band	SISO						SISO						SISO in MIMO					
		Antenna G						Antenna E						MIMO					
		a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
6 GHz WiFi (20MHz BW) - LPI	UNII-5	9.0	8.0	9.5	8.5	9.5	8.5	9.0	8.0	9.5	8.5	9.5	8.5	9.0	8.0	9.5	8.5	9.5	8.5
		ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5	ch. 2: 7.5	6.5
	UNII-6	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
	UNII-7	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
6 GHz WiFi (40MHz BW) - LPI	UNII-8	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0	9.0	8.0	10.0	9.0	10.0	9.0
	UNII-5			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0			12.0	11.0	12.0	11.0
	UNII-6			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0
	UNII-7			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0
6 GHz WiFi (80MHz BW) - LPI	UNII-8			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0			13.0	12.0	13.0	12.0
	UNII-5			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0
	UNII-6			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0
	UNII-7			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0
6 GHz WiFi (160MHz BW) - LPI	UNII-8			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0
	UNII-5			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0
	UNII-6			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0
	UNII-7			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0
6 GHz WiFi (320MHz BW) - LPI	UNII-8			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0			15.0	14.0	15.0	14.0
	UNII-5					15.0	14.0					15.0	14.0					15.0	14.0
	UNII-6					15.0	14.0					15.0	14.0					15.0	14.0
	UNII-7					15.0	14.0					15.0	14.0					15.0	14.0
6 GHz WiFi (320MHz BW) - SP	UNII-8					15.0	14.0					15.0	14.0					15.0	14.0
	UNII-5					15.0	14.0					15.0	14.0					15.0	14.0
	UNII-6					15.0	14.0					15.0	14.0					15.0	14.0
	UNII-7					15.0	14.0					15.0	14.0					15.0	14.0

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2.4.5 2.4 GHz Maximum Bluetooth Output Power

The below table is applicable in the following conditions:

- Pmax, DSI=0 (Body-worn, Hotspot or Phablet), DSI=1 (Head)

Mode	Data Rate	Modulated Output Power (in dBm)							
		Single Antenna				Each Chain in Dual Mode		Each Chain in Dual Mode	
		Antenna G		Antenna I		Antenna G		Antenna I	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
Bluetooth	1Mbps	18.5	17.5	18.5	17.5	15.0	14.0	14.0	13.0
Bluetooth EDR	2Mbps	16.0	15.0	15.0	14.0	12.5	11.5	10.5	9.5
Bluetooth EDR	3Mbps	16.0	15.0	15.0	14.0	12.5	11.5	10.5	9.5
Bluetooth LE	1Mbps	11.5	10.5	11.0	10.0	N/A	N/A	N/A	N/A
Bluetooth LE	2Mbps	11.5	10.5	11.0	10.0	N/A	N/A	N/A	N/A
Bluetooth LE	125kbps	11.5	10.5	11.0	10.0	N/A	N/A	N/A	N/A
Bluetooth LE	500kbps	11.5	10.5	11.0	10.0	N/A	N/A	N/A	N/A

2.5 DUT Antenna Locations

The overall dimensions of this device are > 9 x 5 cm. A diagram showing the location of the device antennas can be found in DUT Antenna Diagram & SAR Test Setup Photographs Appendix. Since the display diagonal dimension of this device is > 150 mm and <200 mm, it is considered a “phablet.” Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC filing.

Table 2-1
Device Edges/Sides for SAR Testing

Antenna	Back	Front	Top	Bottom	Right	Left
A	Yes	Yes	No	Yes	Yes	Yes
B	Yes	Yes	No	Yes	Yes	No
E	Yes	Yes	Yes	No	Yes	No
F	Yes	Yes	Yes	No	No	Yes
G	Yes	Yes	Yes	No	No	Yes
I	Yes	Yes	Yes	No	Yes	No
MIMO	Yes	Yes	Yes	No	Yes	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 648474 D04. The distances between the transmit antennas and the edges of the device are included in the filing. When wireless router mode is enabled, UNII- 2A, U-NII-2C, U-NII-4, and WIFI6E SP/LPI operations are disabled.

2.6 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 DUT Antenna Diagram & SAR Test Setup Photographs Appendix.

2.7 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D04v01, 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 D04v01 procedures.

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Table 2-2
Simultaneous Transmission Scenarios

[illegible]

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1. SISO represents 2.4 GHz WLAN/BT transmission on Ant G or Ant I, and 5/6 GHz transmission on Ant G or Ant E.
2. 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.
3. 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.
4. 5 GHz Wireless Router is only supported for U-NII-1 and U-NII-3 by S/W, therefore U-NII-2A, U-NII-2C, and U-NII-4 were not evaluated for wireless router conditions.
5. 6 GHz Wireless Router is only supported for VLP mode, therefore SP and LPI were not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax/be. 802.11a/g/n/ac/ax/be supports CDD and STBC and 802.11n/ac/ax/be additionally supports SDM.
7. This device supports VoWIFI.
8. This device supports Bluetooth Tethering on Ant G only.
9. This device supports VoLTE.
10. This device supports VoNR.
11. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
12. UWB was evaluated for Head, Body-worn, and Phablet based on expected usage conditions.
13. WPT and NFC was evaluated for phablet based on expected usage conditions.

2.8 Miscellaneous SAR Test Considerations

(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, head and body-worn 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-2A, U-NII-2C, U-NII-4 WIFI and 6 GHz SP/LPI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth Ant G, U-NII-1 and U-NII-3 WIFI, and 6 GHz VLP 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/be with the following features:

- a) Up to 320 MHz Bandwidth only for 6GHz
- b) Up to 160 MHz Bandwidth only for 5 GHz
- c) Up to 20 MHz Bandwidth only for 2.4 GHz
- d) 2 Tx antenna output
- e) Up to 4KQAM is supported
- f) TDWR and Band gap channels are supported for 5/6 GHz
- g) MU-MIMO UL Operations are not supported

Per FCC KDB Publication 648474 D04, this device is considered a "phablet" since the display diagonal dimension is greater than 150mm 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 2.4 GHz Bluetooth Antenna I, 2.4 GHz Bluetooth MIMO, U-NII-2A, U-NII-2C, U-NII-4 WIFI and 6 GHz SP and LPI, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WLAN, 2.4 GHz Bluetooth Antenna G, U-NII-1 and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

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Per April 2019 TCB Workshop Notes and FCC guidance, SAR testing for 802.11ax/be follows initial test configuration procedures of KDB 248227, with 802.11ax/be considered a higher order 802.11 mode.

Per FCC guidance, SAR was performed using 6.5 GHz SAR probe calibration factors for WIFI 6GHz/UWB and 8GHz SAR probe calibration factors for UWB. FCC KDB 648474, FCC KDB 941225 D07 and FCC KDB 248227 were followed for test positions, distances, and modes. Absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements. Incident power density is evaluated at 2mm ensuring that the resolution is sufficient such that integrated power density (iPD) between d=2mm and d=λ/5mm is ≥ -1dB per equipment manufacturer guidance. Power density results are scaled up for uncertainty above 30%. Per TCB workshop October 2020 notes, 5 channels were tested for WIFI 6 GHz.

(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.

This device supports downlink LTE Carrier Aggregation (CA), downlink 4x4 MIMO operations for some LTE Bands, and 4x4 MIMO downlink carrier aggregation. Per October 2024 TCB Workshop notes, additional analysis is not required for downlink carrier aggregation.

Per FCC KDB Publication 648474 D04, this device is considered a "phablet" since the display diagonal dimension is greater than 150mm 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 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 LTE Carrier Aggregation (CA) for LTE Band 41 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per 2017 Fall TCB Workshop Notes.

This device can transmit with antenna switching for bands/modes on antenna A, B, E, and F. SAR tests were performed for each antenna where switching is used per band/mode to ensure compliance. Antennas and indicated band/modes are included in section 2.4.1 of this report.

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.

SRS was tested with CW signal per Qualcomm guidance in 80-w2112-4.

Per Qualcomm guidance in 80-W2112-4, when hotspot mode applies, 10-g extremity SAR is required for the surfaces and edges with hotspot mode 1g reported SAR > 1.2 W/kg. For surfaces and edges with hotspot

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mode 1g SAR < 1.2 W/kg, the 10-g extremity can be excluded when the normalized *SAR_design_target* for extremity DSI is less than or equal to that of hotspot DSI.

$$SAR_design_target_extremity \leq \frac{SAR_design_target_hotspot}{1g\ SAR\ limit} * 10g\ SAR\ limit$$

2.9 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01, D05v02r05, D05Av01r02, D06v02r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D04v01 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D04 (Phablet Procedures)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO)
- November 2017, April 2018, October 2018, October 2024 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2025 TCB Workshop Notes (Dynamic Antenna Tuning)
- October 2019 TCB Workshop Notes (IEEE 802.11ax)
- November 2017, October 2018, April 2019, November 2019, October 2020 TCBC Workshop Notes (6-8 GHz)
- SPEAG DASY6 Application Note (Interim Procedures for Devices Operating at 6-10 GHz) (Nov 2021)
- IEC/IEEE 63195-1:2022
- IEC 62479:2010

2.10 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 12, 13, and 14.

2.11 Bibliography

Report Type	Report Serial Number
RF Exposure Part 2 Test Report	1M2508270082-22.A3L
RF Exposure Compliance Summary Report	1M2508270082-25.A3L
RF Exposure Part 0 Test Report	1M2508270082-24.A3L

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3 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 12: 699.7 - 715.3 MHz				
	LTE Band 13: 779.5 - 784.5 MHz				
	LTE Band 5: 824.7 - 848.3 MHz				
	LTE Band 66: 1710.7 - 1779.3 MHz				
	LTE Band 4: 1710.7 - 1754.3 MHz				
	LTE Band 2: 1850.7 - 1909.3 MHz				
Channel Bandwidths	LTE Band 41: 2498.5 - 2687.5 MHz				
	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 5: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	LTE Band 2: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	Low	Low-Mid	Mid	Mid-High	High
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 5: 1.4 MHz	824.7 (20407)		836.5 (20525)		848.3 (20643)
LTE Band 5: 3 MHz	825.5 (20415)		836.5 (20525)		847.5 (20635)
LTE Band 5: 5 MHz	826.5 (20425)		836.5 (20525)		846.5 (20625)
LTE Band 5: 10 MHz	829 (20450)		836.5 (20525)		844 (20600)
LTE Band 66: 1.4 MHz	1710.7 (131979)		1745 (132322)		1779.3 (132865)
LTE Band 66: 3 MHz	1711.5 (131987)		1745 (132322)		1778.5 (132857)
LTE Band 66: 5 MHz	1712.5 (131997)		1745 (132322)		1777.5 (132847)
LTE Band 66: 10 MHz	1715 (132022)		1745 (132322)		1775 (132822)
LTE Band 66: 15 MHz	1717.5 (132047)		1745 (132322)		1772.5 (132597)
LTE Band 66: 20 MHz	1720 (132072)		1745 (132322)		1770 (132572)
LTE Band 4: 1.4 MHz	1710.7 (19957)		1732.5 (20175)		1754.3 (20393)
LTE Band 4: 3 MHz	1711.5 (19965)		1732.5 (20175)		1753.5 (20385)
LTE Band 4: 5 MHz	1712.5 (19975)		1732.5 (20175)		1752.5 (20375)
LTE Band 4: 10 MHz	1715 (20000)		1732.5 (20175)		1750 (20350)
LTE Band 4: 15 MHz	1717.5 (20025)		1732.5 (20175)		1747.5 (20325)
LTE Band 4: 20 MHz	1720 (20050)		1732.5 (20175)		1745 (20300)
LTE Band 2: 1.4 MHz	1850.7 (18607)		1880 (18900)		1909.3 (19193)
LTE Band 2: 3 MHz	1851.5 (18615)		1880 (18900)		1908.5 (19185)
LTE Band 2: 5 MHz	1852.5 (18625)		1880 (18900)		1907.5 (19175)
LTE Band 2: 10 MHz	1855 (18650)		1880 (18900)		1905 (19150)
LTE Band 2: 15 MHz	1857.5 (18675)		1880 (18900)		1902.5 (19125)
LTE Band 2: 20 MHz	1860 (18700)		1880 (18900)		1900 (19100)
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (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)
UE Category	UL UE Cat 13, DL UE Cat 20				
Modulations Supported in UL	QPSK, 16QAM, 64QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3-6.2.5? (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 17. It supports carrier aggregation, downlink MIMO features. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 17 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, eMBMS, Wifi Offloading, 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 n5: 826.5 - 846.5 MHz				
	NR Band n66: 1712.5 - 1777.5 MHz				
	NR Band n41: 2501.01 - 2685 MHz				
Channel Bandwidths	NR Band n5: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n66: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz, 45 MHz				
	NR Band n41: 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz, 45 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz				
Channel Numbers and Frequencies (MHz)					
NR Band n5: 5 MHz	826.5 (165300)		836.5 (167300)		846.5 (169300)
NR Band n5: 10 MHz	829 (165800)		836.5 (167300)		844 (168800)
NR Band n5: 15 MHz	831.5 (166300)		836.5 (167300)		841.5 (168300)
NR Band n5: 20 MHz	834 (166800)		836.5 (167300)		839 (167800)
NR Band n66: 5 MHz	1712.5 (342500)		1745 (349000)		1777.5 (355500)
NR Band n66: 10 MHz	1715 (343000)		1745 (349000)		1775 (355000)
NR Band n66: 15 MHz	1717.5 (343500)		1745 (349000)		1772.5 (354500)
NR Band n66: 20 MHz	1720 (344000)		1745 (349000)		1770 (354000)
NR Band n66: 25 MHz	1722.5 (344500)		1745 (349000)		1767.5 (353500)
NR Band n66: 30 MHz	1725 (345000)		1745 (349000)		1765 (353000)
NR Band n66: 35 MHz	1727.5 (345500)		1745 (349000)		1762.5 (352500)
NR Band n66: 40 MHz	1730 (346000)		1745 (349000)		1760 (352000)
NR Band n66: 45 MHz	1732.5 (346500)		1745 (349000)		1757.5 (351500)
NR Band n41: 10 MHz	2501.01 (500202)	2547 (509400)	2592.99 (518598)		2639.01 (527802) 2685 (537000)
NR Band n41: 15 MHz	2503.5 (500700)	2548.26 (509652)	2592.99 (518598)		2637.75 (527550) 2682.51 (536502)
NR Band n41: 20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)		2636.49 (527298) 2679.99 (535998)
NR Band n41: 25 MHz	2508.51 (501702)	2550.75 (510150)	2592.99 (518598)		2635.26 (527052) 2677.5 (535500)
NR Band n41: 30 MHz	2511 (502200)	2552.01 (510402)	2592.99 (518598)		2634 (526800) 2674.98 (534996)
NR Band n41: 35 MHz	2513.52 (502704)	2553.24 (510648)	2592.99 (518598)		2632.74 (526548) 2672.49 (534498)
NR Band n41: 40 MHz	2616.01 (523202)	2567.34 (513468)	(N/A)		2618.67 (523734) 2670 (534000)
NR Band n41: 45 MHz	2518.5 (503700)	2568.18 (513636)	(N/A)		2617.83 (523566) 2667.48 (533496)
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: 70 MHz	2531.01 (506202)		(N/A)		2655 (531000)
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)
SCS for NR Band n5, n66	15 kHz				
SCS for NR Band n41	30 kHz				
Modulations Supported in UL	DFT-s-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
EN-DC and NR Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Anchor Bands for NR Band n5	2/66				
LTE Anchor Bands for NR Band n66	2/13				
LTE Anchor Bands for NR Band n41	66				

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4 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.

4.1 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 4-1).

Equation 4-1
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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5 DOSIMETRIC ASSESSMENT

5.1 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 5-1) 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 5-1) 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 5-1. 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.

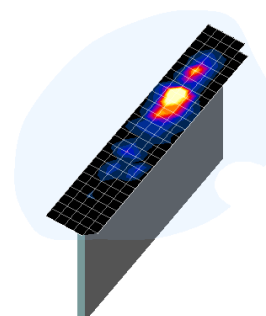


Figure 5-1
Sample SAR Area Scan

Table 5-1
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		
				$\Delta z_{\text{zoom}}(n)$	$\Delta z_{\text{zoom}}(1)^*$	
≤ 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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6 DEFINITION OF REFERENCE POINTS

6.1 EAR REFERENCE POINT

Figure 6-2 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 6-1. 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 6-1). 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].

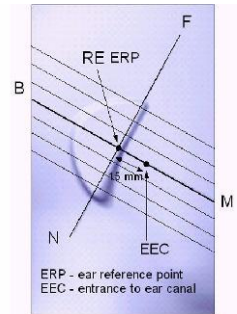


Figure 6-1
Close-Up Side view
of ERP

6.2 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 6-3). 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 6-2
Front, back and side view of SAM Twin Phantom

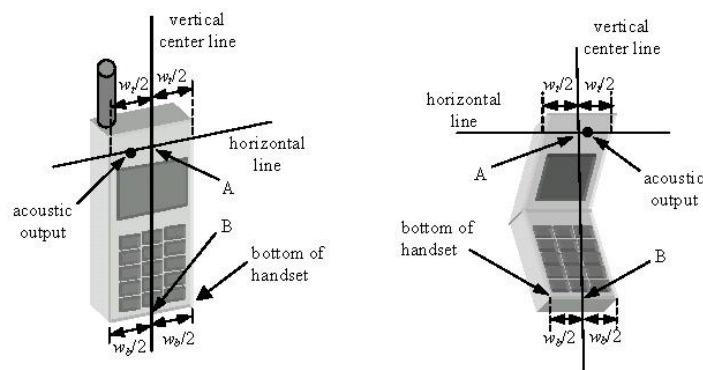


Figure 6-3
Handset Vertical Center & Horizontal Line Reference Points

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7 TEST CONFIGURATION POSITIONS

7.1 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 $\delta = 0.02$.

7.2 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 7-1), 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.

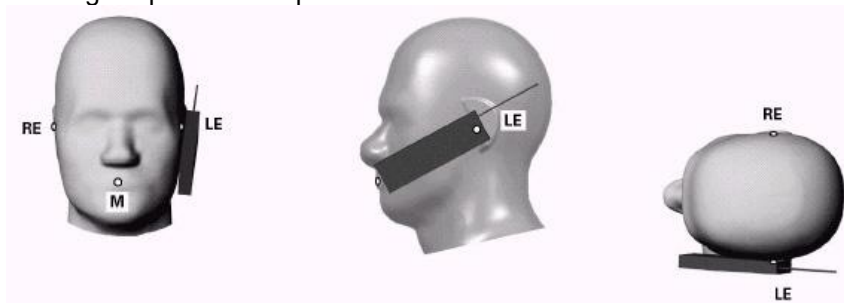


Figure 7-1 Front, Side and Top View of Cheek Position

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 7-2).

7.3 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 7-2).

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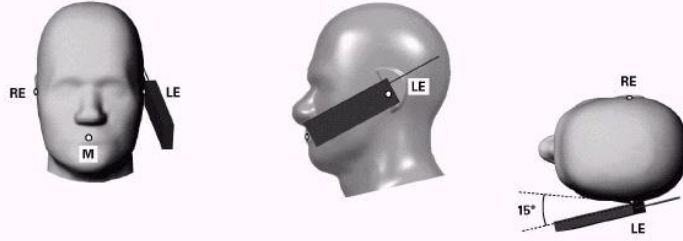


Figure 7-2 Front, Side and Top View of Ear/15° Tilt Position

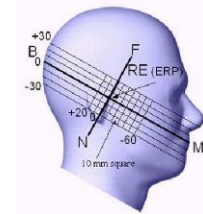


Figure 7-3 Side view w/ relevant markings

7.4 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 D04. 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.

7.5 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 7-4). Per FCC KDB Publication 648474 D04, 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 D04v01 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.

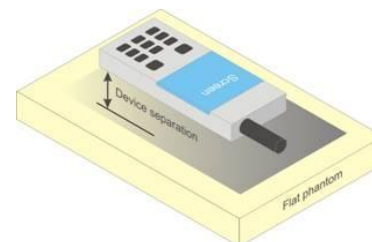


Figure 7-4 Sample Body-Worn Diagram

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.

7.6 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 D04v01 should be applied to determine SAR test requirements.

Per KDB Publication 447498 D04v01, 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.

7.7 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 D04v01 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.

7.8 Phablet Configurations

For smart phones with a display diagonal dimension $> 150 \text{ mm}$ or an overall diagonal dimension $> 160 \text{ mm}$ that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that

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support voice calls next to the ear, the phablets procedures outlined in KDB Publication 648474 D04 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.

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8 RF EXPOSURE LIMITS

8.1 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.

8.2 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 8-1
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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8.3 RF Exposure Limits for Frequencies above 6 GHz

Per §1.1310 (d)(3), the MPE limits are applied for frequencies above 6 GHz. Power Density is expressed in units of W/m² or mW/cm².

Peak Spatially Averaged Power Density was evaluated over a circular area of 4 cm² per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes.

Table 8-2
Human Exposure Limits Specified in FCC 47 CFR §1.1310

Human Exposure to Radiofrequency (RF) Radiation Limits		
Frequency Range [MHz]	Power Density [mW/cm ²]	Average Time [Minutes]
(A) Limits For Occupational / Controlled Environments		
1,500 – 100,000	5.0	6
(B) Limits For General Population / Uncontrolled Environments		
1,500 – 100,000	1.0	30

Note: 1.0 mW/cm² is 10 W/m²

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9 FCC MEASUREMENT PROCEDURES

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

9.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D04v01, 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.

9.2 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.

9.3 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.

9.4 SAR Measurement Conditions for UMTS

9.4.1 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.

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9.4.2 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 “1’s”. 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.

9.4.3 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.

9.4.4 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.

9.4.5 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.

9.4.6 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.

9.5 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).

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9.5.1 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.

9.5.2 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.

9.5.3 A-MPR

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

9.5.4 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.

9.5.5 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.

9.5.6 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

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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.

9.6 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.

9.6.1 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.

9.6.2 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.

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

9.6.4 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

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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.

9.6.5 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/ax 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.

9.6.6 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. Per April 2019 TCB Workshop and FCC guidance, 802.11ax/be was considered the highest order 802.11 mode. 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.

9.6.7 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. 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

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802.11 mode is considered for SAR measurements (See Section 9.6.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9.6.8 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.

9.6.9 MIMO SAR considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D04v01 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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10 RF CONDUCTED POWERS

All conducted power measurements for Sub6 WWAN technologies and bands in this section were performed with Smart Transmit Peak exposure mode enabled such that the EUT transmitted continuously at the maximum time-averaged transmit power limit (P_{limit}) or the maximum tune-up power (P_{max}), whichever is lower.

10.1 GSM Conducted Powers

Table 10-1
Measured P_{max} for all DSI for GSM 850 Ant A
Measured P_{limit} for DSI = 0 (Body-worn, Hotspot or Phablet) for GSM 1900 Ant A

Maximum Burst-Averaged Output Power										
Band	Channel	Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
		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	32.09	31.77	30.94	29.14	27.56	26.55	25.25	22.68	21.72
	190	32.45	32.11	31.21	29.39	27.56	26.15	24.85	22.66	21.73
	251	32.00	31.74	31.16	29.01	27.32	26.54	24.90	22.56	21.55
GSM 1900	512	26.33	26.33	23.11	21.27	20.02	25.20	23.53	21.52	20.10
	661	26.31	26.41	23.37	21.30	20.02	25.15	23.40	21.36	20.50
	810	26.03	26.10	23.24	21.27	20.00	25.26	23.11	21.41	20.50

Calculated Maximum Frame-Averaged Output Power										
Band	Channel	Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
		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	22.89	22.57	24.75	24.71	24.38	17.35	19.06	18.25	18.54
	190	23.25	22.91	25.02	24.96	24.38	16.95	18.66	18.23	18.55
	251	22.80	22.54	24.97	24.58	24.14	17.34	18.71	18.13	18.37
GSM 1900	512	17.13	17.13	16.92	16.84	16.84	16.00	17.34	17.09	16.92
	661	17.11	17.21	17.18	16.87	16.84	15.95	17.21	16.93	17.32
	810	16.83	16.90	17.05	16.84	16.82	16.06	16.92	16.98	17.32

GSM 850	Frame	23.30	23.30	25.31	25.07	24.32	17.80	18.81	18.57	18.82
GSM 1900	Avg.Targets:	17.80	17.80	17.81	17.77	17.82	16.80	17.81	17.57	17.82

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Table 10-2
Measured P_{max} for DSI = 1 (Head) for GSM 1900 Ant A

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	28.87	28.88	27.42	26.10	23.60	25.20	23.53	21.52	20.10
	661	28.60	28.58	27.40	25.71	23.88	25.15	23.40	21.36	20.50
	810	28.88	28.88	27.57	25.84	23.66	25.26	23.11	21.41	20.50

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	19.67	19.68	21.23	21.67	20.42	16.00	17.34	17.09	16.92
	661	19.40	19.38	21.21	21.28	20.70	15.95	17.21	16.93	17.32
	810	19.68	19.68	21.38	21.41	20.48	16.06	16.92	16.98	17.32

GSM 1900	Frame Avg.Targets:	20.30	20.30	21.81	22.07	21.32	16.80	17.81	17.57	17.82
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Table 10-3
Measured P_{limit} for DSI = 0 (Body-worn, Hotspot or Phablet) for GSM 850 Ant E

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	29.47	29.59	26.77	24.93	23.86	26.35	24.66	22.55	21.83
	190	29.90	29.95	26.99	25.23	23.68	26.65	24.70	22.64	21.88
	251	29.48	29.51	26.57	24.92	23.55	26.20	24.25	22.29	21.55

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	20.27	20.39	20.58	20.50	20.68	17.15	18.47	18.12	18.65
	190	20.70	20.75	20.80	20.80	20.50	17.45	18.51	18.21	18.70
	251	20.28	20.31	20.38	20.49	20.37	17.00	18.06	17.86	18.37

GSM 850	Frame Avg.Targets:	20.80	20.80	20.81	20.77	20.82	17.80	18.81	18.57	18.82
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Table 10-4
Measured P_{limit} for DSI = 1 (Head) for GSM 850 Ant E

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	28.98	29.09	26.31	24.60	22.80	26.35	24.66	22.55	21.83
	190	29.03	29.03	26.17	24.57	23.29	26.65	24.70	22.64	21.88
	251	28.96	28.85	26.28	24.46	22.82	26.20	24.25	22.29	21.55

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	19.78	19.89	20.12	20.17	19.62	17.15	18.47	18.12	18.65
	190	19.83	19.83	19.98	20.14	20.11	17.45	18.51	18.21	18.70
	251	19.76	19.65	20.09	20.03	19.64	17.00	18.06	17.86	18.37

GSM 850	Frame Avg. Targets:	20.30	20.30	20.31	20.27	20.32	17.80	18.81	18.57	18.82
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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 10-1
Power Measurement Setup

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10.2 UMTS Conducted Powers

Table 10-5
Measured P_{max} for all DSI for UMTS 850 Ant A

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	
99	WCDMA	12.2 kbps RMC	23.68	23.69	23.66	-
99		12.2 kbps AMR	23.68	23.65	23.52	-
6	HSDPA	Subtest 1	22.62	22.67	22.52	0
6		Subtest 2	22.63	22.65	22.56	0
6		Subtest 3	22.14	22.19	22.02	0.5
6		Subtest 4	22.15	22.17	22.08	0.5
6	HSUPA	Subtest 1	22.67	22.71	22.62	0
6		Subtest 2	20.65	20.69	20.60	2
6		Subtest 3	21.63	21.66	21.54	1
6		Subtest 4	20.61	20.65	20.56	2
6		Subtest 5	22.64	22.68	22.60	0
8	DC-HSDPA	Subtest 1	22.10	22.15	22.05	0
8		Subtest 2	22.12	22.16	22.00	0
8		Subtest 3	21.65	21.63	21.55	0.5
8		Subtest 4	21.66	21.60	21.51	0.5

Table 10-6
Measured P_{limit} for DSI = 0 (Body-worn, Hotspot or Phablet) for UMTS 850 Ant E

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	
99	WCDMA	12.2 kbps RMC	21.35	21.34	21.24	-
99		12.2 kbps AMR	21.35	21.34	21.26	-
6	HSDPA	Subtest 1	20.03	20.06	19.99	0
6		Subtest 2	20.04	20.10	19.93	0
6		Subtest 3	19.52	19.53	19.42	0.5
6		Subtest 4	19.53	19.55	19.45	0.5
6	HSUPA	Subtest 1	20.03	20.05	19.97	0
6		Subtest 2	18.04	18.02	18.02	2
6		Subtest 3	19.02	19.03	18.94	1
6		Subtest 4	18.06	18.03	17.94	2
6		Subtest 5	20.02	20.06	19.97	0
8	DC-HSDPA	Subtest 1	19.76	19.66	19.59	0
8		Subtest 2	19.72	19.72	19.63	0
8		Subtest 3	19.23	19.23	19.10	0.5
8		Subtest 4	19.24	19.10	19.08	0.5

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Table 10-7
Measured P_{limit} for DSI = 1 (Head) for UMTS 850 Ant E

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	
99	WCDMA	12.2 kbps RMC	20.43	20.39	20.32	-
99		12.2 kbps AMR	20.47	20.41	20.32	-
6	HSDPA	Subtest 1	19.12	19.10	19.05	0
6		Subtest 2	19.12	19.16	19.03	0
6		Subtest 3	18.59	18.65	18.49	0.5
6		Subtest 4	18.64	18.67	18.52	0.5
6	HSUPA	Subtest 1	19.14	19.16	19.03	0
6		Subtest 2	17.12	17.13	17.07	2
6		Subtest 3	18.13	18.09	18.04	1
6		Subtest 4	17.09	17.12	17.03	2
6		Subtest 5	19.16	19.17	19.02	0
8	DC-HSDPA	Subtest 1	18.80	18.77	18.70	0
8		Subtest 2	18.84	18.83	18.69	0
8		Subtest 3	18.33	18.08	18.32	0.5
8		Subtest 4	18.31	18.31	18.16	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.

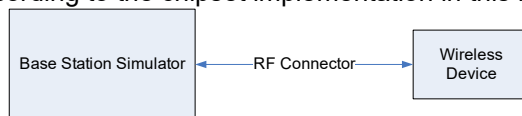


Figure 10-2
Power Measurement Setup

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10.3 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 LTE and NR Lower Bandwidth RF Conducted Powers Appendix.

Note: Some bands do 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.

LTE Carrier Aggregation Notes:

1. This device supports uplink carrier aggregation for LTE CA_41C, with a maximum of two component carriers. For intraband contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when non-contiguous RB allocation is implemented. The conducted powers and MPR settings in this device are permanently implemented per the above 3GPP requirements.
2. Per FCC Guidance, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

10.3.1 LTE Band 12

Table 10-8
LTE Band 12 Ant A Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23095.0 (707.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.43	0	0
	1	25	22.37		0
	1	49	22.32		0
	25	0	21.32	0-1	1
	25	12	21.34		1
	25	25	21.37		1
	50	0	21.29		1
16QAM	1	0	21.76	0-1	1
	1	25	21.64		1
	1	49	21.56		1
	25	0	20.35	0-2	2
	25	12	20.36		2
	25	25	20.29		2
	50	0	20.29		2
64QAM	1	0	20.71	0-2	2
	1	25	20.45		2
	1	49	20.56		2
	25	0	19.37	0-3	3
	25	12	19.30		3
	25	25	19.26		3
	50	0	19.33		3

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Table 10-9
LTE Band 12 Ant E Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23095.0 (707.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.68	0	0
	1	25	22.55		0
	1	49	22.50		0
	25	0	22.35	0-1	0
	25	12	22.32		0
	25	25	22.33		0
	50	0	22.30		0
16QAM	1	0	22.76	0-1	0
	1	25	22.66		0
	1	49	22.72		0
	25	0	21.59	0-2	1
	25	12	21.61		1
	25	25	21.56		1
	50	0	21.55		1
64QAM	1	0	21.88	0-2	1
	1	25	21.76		1
	1	49	21.73		1
	25	0	20.54	0-3	2
	25	12	20.53		2
	25	25	20.50		2
	50	0	20.53		2

Table 10-10
LTE Band 12 Ant E Measured P_{Limit} for DSI = 1 (Head) - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23095.0 (707.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	20.63	0	0
	1	25	20.59		0
	1	49	20.31		0
	25	0	20.54	0-1	0
	25	12	20.38		0
	25	25	20.39		0
	50	0	20.45		0
16QAM	1	0	20.96	0-1	0
	1	25	20.48		0
	1	49	20.21		0
	25	0	20.48	0-2	0
	25	12	20.40		0
	25	25	20.52		0
	50	0	20.46		0
64QAM	1	0	20.46	0-2	0
	1	25	20.61		0
	1	49	20.81		0
	25	0	19.72	0-3	1
	25	12	19.71		1
	25	25	19.66		1
	50	0	19.61		1

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10.3.2 LTE Band 13

Table 10-11
LTE Band 13 Ant A Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23230.0 (782.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.87	0	0
	1	25	22.53		0
	1	49	22.51		0
	25	0	21.67	0-1	1
	25	12	21.59		1
	25	25	21.42		1
	50	0	21.58		1
16QAM	1	0	21.98	0-1	1
	1	25	21.97		1
	1	49	21.76		1
	25	0	20.64	0-2	2
	25	12	20.61		2
	25	25	20.60		2
	50	0	20.64		2
64QAM	1	0	20.91	0-2	2
	1	25	20.83		2
	1	49	20.63		2
	25	0	19.71	0-3	3
	25	12	19.56		3
	25	25	19.47		3
	50	0	19.69		3

Table 10-12
LTE Band 13 Ant E Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet), DSI = 1 (Head) - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23230.0 (782.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	20.75	0	0
	1	25	20.53		0
	1	49	20.42		0
	25	0	20.66	0-1	0
	25	12	20.45		0
	25	25	20.44		0
	50	0	20.59		0
16QAM	1	0	20.97	0-1	0
	1	25	20.65		0
	1	49	20.39		0
	25	0	20.63	0-2	0
	25	12	20.58		0
	25	25	20.56		0
	50	0	20.51		0
64QAM	1	0	20.89	0-2	0
	1	25	20.52		0
	1	49	20.63		0
	25	0	19.85	0-3	1
	25	12	19.76		1
	25	25	19.69		1
	50	0	19.73		1

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10.3.3 LTE Band 5

Table 10-13
LTE Band 5 Ant A Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 5 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20525.0 (836.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	23.60	0	0
	1	25	23.65		0
	1	49	23.52		0
	25	0	22.43	0-1	1
	25	12	22.51		1
	25	25	22.48		1
	50	0	22.47		1
16QAM	1	0	22.71	0-1	1
	1	25	22.88		1
	1	49	22.78		1
	25	0	21.50	0-2	2
	25	12	21.58		2
	25	25	21.43		2
	50	0	21.58		2
64QAM	1	0	21.77	0-2	2
	1	25	21.63		2
	1	49	21.67		2
	25	0	20.57	0-3	3
	25	12	20.54		3
	25	25	20.49		3
	50	0	20.56		3

Table 10-14
LTE Band 5 Ant E Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet), DSI = 1 (Head) - 10 MHz Bandwidth

LTE Band 5 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20525.0 (836.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	21.58	0	0
	1	25	21.50		0
	1	49	21.53		0
	25	0	21.50	0-1	0
	25	12	21.63		0
	25	25	21.55		0
	50	0	21.51		0
16QAM	1	0	21.86	0-1	0
	1	25	21.77		0
	1	49	21.70		0
	25	0	21.53	0-2	0
	25	12	21.65		0
	25	25	21.57		0
	50	0	21.64		0
64QAM	1	0	21.74	0-2	0
	1	25	21.75		0
	1	49	21.63		0
	25	0	21.50	0-3	0
	25	12	21.67		0
	25	25	21.52		0
	50	0	21.60		0

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10.3.4 LTE Band 66

Table 10-15
LTE Band 66 (AWS) Ant A Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet)
- 20 MHz Bandwidth

LTE Band 66 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132072.0 (1720.0 MHz)	132322.0 (1745.0 MHz)	132572.0 (1770.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	16.66	16.95	16.78	0	0
	1	50	16.71	16.97	16.73		0
	1	99	16.82	16.93	16.66		0
	50	0	16.81	17.01	16.79	0-1	0
	50	25	16.85	17.05	16.78		0
	50	50	16.86	16.99	16.65		0
	100	0	16.83	16.96	16.75		0
16QAM	1	0	17.17	17.05	17.18	0-1	0
	1	50	17.25	17.18	17.20		0
	1	99	17.22	17.32	17.11		0
	50	0	16.86	17.03	16.83	0-2	0
	50	25	16.87	17.04	16.81		0
	50	50	16.85	17.03	16.70		0
	100	0	16.84	17.00	16.75		0
64QAM	1	0	16.69	16.84	17.00	0-2	0
	1	50	16.86	17.08	16.81		0
	1	99	16.81	17.00	16.52		0
	50	0	16.58	16.83	16.65	0-3	0
	50	25	16.67	16.82	16.60		0
	50	50	16.65	16.81	16.45		0
	100	0	16.60	16.78	16.57		0

Table 10-16
LTE Band 66 (AWS) Ant A Measured P_{Max} for DSI = 1 (Head) - 20 MHz Bandwidth

LTE Band 66 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132072.0 (1720.0 MHz)	132322.0 (1745.0 MHz)	132572.0 (1770.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	22.91	23.14	23.14	0	0
	1	50	22.88	23.17	23.16		0
	1	99	22.99	23.11	22.91		0
	50	0	21.72	21.98	21.84	0-1	1
	50	25	21.88	22.00	21.81		1
	50	50	21.90	21.96	21.68		1
16QAM	100	0	21.76	21.95	21.76	1	
	1	0	21.97	22.23	22.11	0-1	1
	1	50	21.88	22.37	22.13		1
	1	99	21.87	22.11	21.93		1
	50	0	20.78	20.93	20.87	0-2	2
	50	25	20.83	20.99	20.81		2
	50	50	20.84	20.98	20.65		2
100	0	20.77	20.98	20.80	2		
64QAM	1	0	20.76	21.12	20.99	0-2	2
	1	50	20.99	21.27	21.18		2
	1	99	20.96	21.11	20.82		2
	50	0	19.79	20.06	19.85	0-3	3
	50	25	19.87	20.04	19.71		3
	50	50	19.78	19.99	19.61		3
	100	0	19.78	19.97	19.81		3

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10.3.5 LTE Band 2

Table 10-17

LTE Band 2 Ant A Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 20 MHz Bandwidth

LTE Band 2 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18900.0 (1880.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	16.41	0	0
	1	50	16.51		0
	1	99	16.38		0
	50	0	16.32	0-1	0
	50	25	16.31		0
	50	50	16.31		0
	100	0	16.25		0
16QAM	1	0	16.65	0-1	0
	1	50	16.53		0
	1	99	16.54		0
	50	0	16.35	0-2	0
	50	25	16.43		0
	50	50	16.34		0
	100	0	16.33		0
64QAM	1	0	16.69	0-2	0
	1	50	16.81		0
	1	99	16.57		0
	50	0	16.42	0-3	0
	50	25	16.37		0
	50	50	16.36		0
	100	0	16.32		0

Table 10-18

LTE Band 2 Ant A Measured P_{Max} for DSI = 1 (Head) - 20 MHz Bandwidth

LTE Band 2 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18900.0 (1880.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.81	0	0
	1	50	22.71		0
	1	99	22.60		0
	50	0	21.39	0-1	1
	50	25	21.38		1
	50	50	21.33		1
	100	0	21.29		1
16QAM	1	0	21.79	0-1	1
	1	50	21.65		1
	1	99	21.65		1
	50	0	20.38	0-2	2
	50	25	20.39		2
	50	50	20.42		2
	100	0	20.31		2
64QAM	1	0	20.82	0-2	2
	1	50	20.54		2
	1	99	20.58		2
	50	0	19.44	0-3	3
	50	25	19.42		3
	50	50	19.45		3
	100	0	19.38		3

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10.3.6 LTE Band 41

Table 10-19

LTE Band 41 Ant B Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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]
			39750.0 (2506.0 MHz)	40185.0 (2549.5 MHz)	40620.0 (2593.0 MHz)	41055.0 (2636.5 MHz)	41490.0 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	19.21	19.14	19.63	19.76	19.25	0	0
	1	50	19.42	19.62	19.76	19.87	19.33		0
	1	99	19.35	19.13	19.82	19.76	19.23		0
	50	0	19.44	19.31	19.70	19.91	19.37	0-1	0
	50	25	19.42	19.33	19.84	19.93	19.41		0
	50	50	19.39	19.40	19.81	19.82	19.31		0
	100	0	19.37	19.28	19.79	19.86	19.39		0
16QAM	1	0	19.28	19.22	19.87	19.98	19.45	0-1	0
	1	50	19.29	19.28	20.00	20.00	19.40		0
	1	99	19.28	19.23	19.99	19.98	19.34		0
	50	0	19.45	19.33	19.70	19.86	19.39	0-2	0
	50	25	19.46	19.35	19.81	19.92	19.42		0
	50	50	19.41	19.42	19.82	19.80	19.33		0
	100	0	19.41	19.31	19.78	19.90	19.40		0
64QAM	1	0	19.38	19.47	19.81	19.88	19.50	0-2	0
	1	50	19.43	19.57	19.97	19.99	19.53		0
	1	99	19.37	19.52	19.92	19.82	19.59		0
	50	0	19.45	19.31	19.74	19.91	19.43	0-3	0
	50	25	19.42	19.31	19.86	19.94	19.48		0
	50	50	19.38	19.41	19.83	19.86	19.37		0
	100	0	19.40	19.30	19.81	19.93	19.42		0

Table 10-20

LTE Band 41 Ant B Uplink Carrier Aggregation Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 20 MHz Bandwidth

	PCC									SCC									Power	
bination	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_41C	LTE Band 41	20	41055	2636.5	41055	2636.5	QPSK	1	0	LTE Band 41	20	40857	2616.7	40857	2616.7	QPSK	1	99	19.55	19.76

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Table 10-21
LTE Band 41 Ant B Measured P_{Max} for DSI = 1 (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]
			39750.0 (2506.0 MHz)	40185.0 (2549.5 MHz)	40620.0 (2593.0 MHz)	41055.0 (2636.5 MHz)	41490.0 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	24.28	24.00	24.27	24.50	24.22	0	0
	1	50	24.21	24.45	24.47	24.61	23.90		0
	1	99	24.14	24.01	24.43	24.48	23.88		0
	50	0	23.27	23.14	23.33	23.63	23.10	0-1	1
	50	25	23.26	23.17	23.49	23.65	23.16		1
	50	50	23.24	23.25	23.48	23.56	23.07		1
	100	0	23.21	23.11	23.41	23.59	23.13	1	
16QAM	1	0	23.08	22.96	23.18	23.46	22.88	0-1	1
	1	50	23.26	23.07	23.39	23.64	22.98		1
	1	99	23.18	23.03	23.31	23.37	22.96		1
	50	0	22.27	22.14	22.31	22.63	22.13	0-2	2
	50	25	22.27	22.16	22.46	22.66	22.18		2
	50	50	22.22	22.23	22.49	22.54	22.06		2
	100	0	22.22	22.13	22.43	22.62	22.11	2	
64QAM	1	0	22.23	22.24	22.35	22.51	22.13	0-2	2
	1	50	22.25	22.33	22.48	22.67	22.24		2
	1	99	22.14	22.39	22.51	22.47	22.11		2
	50	0	21.26	21.10	21.32	21.62	21.13	0-3	3
	50	25	21.25	21.17	21.46	21.65	21.16		3
	50	50	21.21	21.26	21.48	21.57	21.04		3
	100	0	21.21	21.12	21.44	21.61	21.12	3	

Table 10-22
LTE Band 41 Ant B Uplink Carrier Aggregation Measured P_{Max} for DSI = 1 (Head) - 20 MHz Bandwidth

	PCC									SCC									Power	
nbination	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_41C	LTE Band 41	20	41055	2636.5	41055	2636.5	QPSK	1	0	LTE Band 41	20	40857	2616.7	40857	2616.7	QPSK	1	99	24.7	24.5

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Table 10-23
LTE Band 41 Ant F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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]
			39750.0 (2506.0 MHz)	40185.0 (2549.5 MHz)	40620.0 (2593.0 MHz)	41055.0 (2636.5 MHz)	41490.0 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	21.16	20.73	20.22	20.53	20.62	0	0
	1	50	21.22	20.78	20.39	20.78	20.82		0
	1	99	21.05	20.37	20.59	20.70	20.69		0
	50	0	21.22	20.80	20.70	20.77	20.81	0-1	0
	50	25	21.28	20.83	20.78	20.88	20.92		0
	50	50	21.15	20.70	20.75	20.79	20.82		0
16QAM	100	0	21.12	20.76	20.71	20.81	20.85	0	
	1	0	21.18	20.64	20.31	20.66	20.57	0-1	0
	1	50	21.29	20.68	20.56	20.86	20.92		0
	1	99	21.11	20.52	20.52	20.81	20.72		0
	50	0	21.20	20.78	20.69	20.75	20.82	0-2	0
	50	25	21.27	20.83	20.76	20.88	20.91		0
64QAM	50	50	21.15	20.67	20.74	20.78	20.82		0
	100	0	21.12	20.76	20.72	20.81	20.84	0	
	1	0	21.10	20.76	20.53	20.66	20.67	0-2	0
	1	50	21.23	20.88	20.83	20.82	20.97		0
	1	99	21.01	20.72	20.73	20.74	20.74		0-3
	50	0	21.24	20.80	20.71	20.78	20.82	0	
50	25	21.29	20.82	20.83	20.89	20.95	0		
50	50	21.16	20.63	20.78	20.79	20.84	0		
100	0	21.15	20.76	20.75	20.83	20.90	0		

Table 10-24
LTE Band 41 Ant F Uplink Carrier Aggregation Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 20 MHz Bandwidth

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 41C	LTE Band 41	20	41055	2636.5	41055	2636.5	QPSK	50	50	LTE Band 41	20	41253	2656.3	41253	2656.3	QPSK	50	0	20.85	20.79

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Table 10-25
LTE Band 41 Ant F Measured P_{Limit} for DSI = 1 (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]
			39750.0 (2506.0 MHz)	40185.0 (2549.5 MHz)	40620.0 (2593.0 MHz)	41055.0 (2636.5 MHz)	41490.0 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	18.59	18.11	17.91	18.06	18.06	0	0
	1	50	18.68	18.17	18.09	18.26	18.23		0
	1	99	18.53	18.04	17.93	18.21	18.17		0
	50	0	18.71	18.32	18.03	18.27	18.25	0-1	0
	50	25	18.73	18.31	18.18	18.33	18.32		0
	50	50	18.62	18.20	18.17	18.25	18.24		0
	100	0	18.57	18.25	18.13	18.29	18.27	0	
16QAM	1	0	18.68	18.24	17.82	18.09	18.09	0-1	0
	1	50	18.73	18.43	18.02	18.23	18.29		0
	1	99	18.56	18.18	18.06	18.17	18.18		0
	50	0	18.71	18.39	18.04	18.27	18.28	0-2	0
	50	25	18.74	18.38	18.18	18.32	18.33		0
	50	50	18.64	18.28	18.19	18.26	18.25		0
	100	0	18.59	18.31	18.15	18.27	18.28	0	
64QAM	1	0	18.57	18.34	17.96	18.27	18.13	0-2	0
	1	50	18.77	18.35	18.18	18.43	18.26		0
	1	99	18.62	18.23	18.08	18.29	18.19		0
	50	0	18.72	18.37	18.04	18.30	18.25	0-3	0
	50	25	18.75	18.40	18.18	18.36	18.32		0
	50	50	18.65	18.28	18.21	18.28	18.25		0
	100	0	18.60	18.31	18.14	18.35	18.28	0	

Table 10-26
LTE Band 41 Ant F Uplink Carrier Aggregation Measured P_{Limit} for DSI = 1 (Head) - 20 MHz Bandwidth

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 41C	LTE Band 41	20	41055	2636.5	41055	2636.5	QPSK	1	99	LTE Band 41	20	41253	2656.3	41253	2656.3	QPSK	1	0	18.18	18.21

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10.4 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 LTE and NR Lower Bandwidth RF Conducted Powers Appendix.

Note: Some bands do 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.

10.4.1 NR Band n5

Table 10-27
NR Band n5 Ant A Measured P_{Max} for all DSI - 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 QPSK	1	1	23.94	0	0.0
	1	53	23.95		0.0
	1	104	24.03		0.0
	50	0	23.10	0-1	1.0
	50	28	24.07	0	0.0
	50	56	22.98	0-1	1.0
	100	0	23.02		1.0
DFT-s-OFDM 16QAM	1	1	22.50	0-1	1.0
CP-OFDM QPSK	1	1	22.32	0-1.5	1.5

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Table 10-28
NR Band n5 Ant E Measured P_{Limit} for all DSI - 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 QPSK	1	1	20.53	0	0.0
	1	53	20.58		0.0
	1	104	20.47		0.0
	50	0	20.67	0-1	0.0
	50	28	20.70	0	0.0
	50	56	20.64	0-1	0.0
	100	0	20.51		0.0
DFT-s-OFDM 16QAM	1	1	20.31	0-1	0.0
CP-OFDM QPSK	1	1	20.45	0-1.5	0.0

10.4.2 NR Band n66

Table 10-29
NR Band n66 Ant A Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 45 MHz Bandwidth

NR Band n66 45 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	17.05	0	0.0
	1	121	17.31		0.0
	1	240	17.10		0.0
	120	0	17.26	0-1	0.0
	120	61	17.10	0	0.0
	120	122	17.17	0-1	0.0
	240	0	17.18		0.0
DFT-s-OFDM 16QAM	1	1	16.99	0-1	0.0
CP-OFDM QPSK	1	1	17.25	0-1.5	0.0

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Table 10-30
NR Band n66 Ant A Measured P_{Max} for DSI = 1 (Head) - 45 MHz Bandwidth

NR Band n66 45 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	23.31	0	0.0
	1	121	23.13		0.0
	1	240	23.06		0.0
	120	0	22.19	0-1	1.0
	120	61	23.22	0	0.0
	120	122	22.15	0-1	1.0
	240	0	22.29		1.0
DFT-s-OFDM 16QAM	1	1	21.96	0-1	1.0
CP-OFDM QPSK	1	1	21.75	0-1.5	1.5

Table 10-31
NR Band n66 Ant F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 45 MHz Bandwidth

NR Band n66 45 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	19.18	0	0.0
	1	121	19.35		0.0
	1	240	19.28		0.0
	120	0	19.25	0-1	0.0
	120	61	19.24	0	0.0
	120	122	19.38	0-1	0.0
	240	0	19.32		0.0
DFT-s-OFDM 16QAM	1	1	18.95	0-1	0.0
CP-OFDM QPSK	1	1	19.29	0-1.5	0.0

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Table 10-32
NR Band n66 Ant F Measured P_{Limit} for DSI = 1 (Head) - 45 MHz Bandwidth

NR Band n66 45 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			349000 (1745 MHz)		
			Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	17.17	0	0.0
	1	121	17.27		0.0
	1	240	17.12		0.0
	120	0	17.18	0-1	0.0
	120	61	17.07	0	0.0
	120	122	17.17	0-1	0.0
	240	0	17.10		0.0
DFT-s-OFDM 16QAM	1	1	16.81	0-1	0.0
CP-OFDM QPSK	1	1	17.14	0-1.5	0.0

10.4.3 NR Band n41

Table 10-33
NR Band n41 PC2 Antenna F Path 1 Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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 QPSK	1	1	18.40	0	0.0
	1	137	18.66		0.0
	1	271	18.76		0.0
	135	0	18.48	0-1	0.0
	135	69	18.64	0	0.0
	135	138	18.77	0-1	0.0
	270	0	18.67		0.0
DFT-s-OFDM 16QAM	1	1	18.46	0-1	0.0
CP-OFDM QPSK	1	1	18.36	0-1.5	0.0

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Table 10-34
NR Band n41 PC2 Antenna F Path 1 Measured P_{Limit} for DSI = 1 (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 QPSK	1	1	16.18	0	0.0
	1	137	16.50		0.0
	1	271	16.58		0.0
	135	0	16.36	0-1	0.0
	135	69	16.53	0	0.0
	135	138	16.63	0-1	0.0
	270	0	16.47		0.0
DFT-s-OFDM 16QAM	1	1	16.07	0-1	0.0
CP-OFDM QPSK	1	1	16.17	0-1.5	0.0

Table 10-35
NR Band n41 PC2 Antenna B Path 2 Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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 QPSK	1	1	17.27	0	0.0
	1	137	17.55		0.0
	1	271	17.71		0.0
	135	0	17.45	0-1	0.0
	135	69	17.46	0	0.0
	135	138	17.78	0-1	0.0
	270	0	17.57		0.0
DFT-s-OFDM 16QAM	1	1	17.22	0-1	0.0
CP-OFDM QPSK	1	1	17.21	0-1.5	0.0

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Table 10-36
NR Band n41 PC2 Antenna B Path 2 Measured P_{Limit} for DSI = 1 (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 QPSK	1	1	21.37	0	0.0
	1	137	21.60		0.0
	1	271	21.83		0.0
	135	0	21.44	0-1	0.0
	135	69	21.57	0	0.0
	135	138	21.83	0-1	0.0
	270	0	21.63		0.0
DFT-s-OFDM 16QAM	1	1	21.27	0-1	0.0
CP-OFDM QPSK	1	1	21.40	0-1.5	0.0



Figure 10-3
Power Measurement Setup – NR FDD

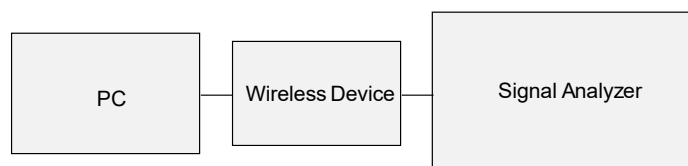


Figure 10-4
Power Measurement Setup – NR TDD

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10.5 WLAN Conducted Powers

Table 10-37

2.4 GHz WLAN Measured P_{limit} Average RF Power for DSI = 1 (Head) – MIMO

2.4GHz WIFI (20MHz 802.11g MIMO)					
Freq [MHz]	Channel	Detector	Conducted Power [dBm]		
			ANT1	ANT2	MIMO
2412	1	Average	15.54	15.88	18.72
2437	6		15.41	15.96	18.70
2462	11		15.32	15.60	18.47

Table 10-38

5 GHz WLAN Measured P_{limit} Average RF Power for DSI = 1 (Head) – Ant G

5GHz WIFI (80MHz 802.11ac SISO ANTG)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5210	42	14.86
UNII-2A	5290	58	15.36
UNII-2C	5530	106	14.90
	5610	122	14.51
	5690	138	14.60
UNII-3	5775	155	14.67
UNII-4	5855	171	14.55

Table 10-39

5 GHz WLAN Measured P_{limit} Average RF Power for DSI = 1 (Head) – MIMO

5GHz WIFI (80MHz 802.11ac MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5210	42	15.16	15.10	18.14
UNII-2A	5290	58	15.13	15.50	18.33
UNII-2C	5530	106	14.82	15.50	18.18
	5610	122	14.56	15.68	18.17
	5690	138	14.68	15.57	18.16
UNII-3	5775	155	15.34	15.98	18.68
UNII-4	5855	171	15.62	15.80	18.72

Table 10-40

5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – Ant G

5GHz WIFI (80MHz 802.11ac SISO ANTG)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5210	42	13.80
UNII-2A	5290	58	13.75
UNII-2C	5530	106	13.30
	5610	122	13.35
	5690	138	13.21
UNII-3	5775	155	13.54
UNII-4	5855	171	13.57

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Table 10-41
5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – MIMO

5GHz WIFI (80MHz 802.11ac MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5210	42	13.64	13.78	16.72
UNII-2A	5290	58	13.65	13.64	16.66
UNII-2C	5530	106	13.46	13.98	16.74
	5610	122	13.43	13.99	16.73
	5690	138	13.09	13.80	16.47
UNII-3	5775	155	13.40	13.13	16.28
UNII-4	5855	171	12.82	13.78	16.34

Table 10-42
6 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn, Hotspot, or Phablet) – Ant G

6GHz WIFI (160MHz 802.11ax SISO ANT G)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-5	6025	15	11.85
	6345	79	11.23
UNII-6	6505	111	10.72
UNII-7	6665	143	10.66
UNII-8	6985	207	11.33

Table 10-43
6 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn, Hotspot, or Phablet) – Ant E

6GHz WIFI (160MHz 802.11ax SISO ANTE)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-5	6025	15	11.25
	6345	79	10.10
UNII-6	6505	111	11.34
UNII-7	6665	143	10.90
UNII-8	6985	207	11.36

Table 10-44
6 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant G

6GHz WIFI (160MHz 802.11ax SISO ANT G)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-5	6025	15	14.60
	6345	79	13.33
UNII-6	6505	111	13.25
UNII-7	6665	143	13.33
UNII-8	6985	207	13.96

Table 10-45
6 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant E

6GHz WIFI (160MHz 802.11ax SISO ANTE)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-5	6025	15	13.99
	6345	79	13.43
UNII-6	6505	111	14.62
UNII-7	6665	143	13.69
UNII-8	6985	207	14.70

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Table 10-46
6 GHz WLAN Measured P_{limit} Average RF Power for DSI = 1 (Head) – MIMO

6GHz WIFI (160MHz 802.11ax MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-5	6025	15	14.17	14.34	17.27
	6345	79	13.40	13.44	16.43
UNII-6	6505	111	13.68	14.84	17.31
UNII-7	6665	143	13.40	13.50	16.46
UNII-8	6985	207	14.03	14.61	17.34

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.

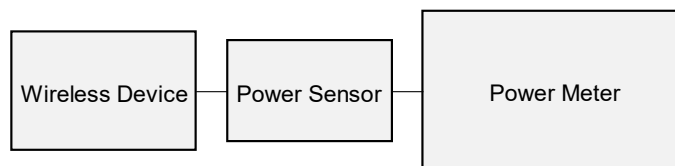


Figure 10-5
Power Measurement Setup

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10.6 Bluetooth Conducted Powers

Table 10-47
Bluetooth Measured P_{max} Average RF Power for all DSI – Ant G

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	17.73	59.281
2441	1.0	39	17.53	56.595
2480	1.0	78	17.28	53.447
2402	2.0	0	14.94	31.179
2441	2.0	39	14.56	28.598
2480	2.0	78	14.37	27.349
2402	3.0	0	15.06	32.049
2441	3.0	39	14.65	29.206
2480	3.0	78	14.67	29.332

Table 10-48
Bluetooth Measured P_{max} Average RF Power for all DSI – Ant I

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	18.37	68.707
2441	1.0	39	18.39	68.952
2480	1.0	78	18.15	65.351
2402	2.0	0	14.98	31.477
2441	2.0	39	14.85	30.549
2480	2.0	78	14.47	28.010
2402	3.0	0	14.89	30.832
2441	3.0	39	14.87	30.660
2480	3.0	78	14.55	28.498

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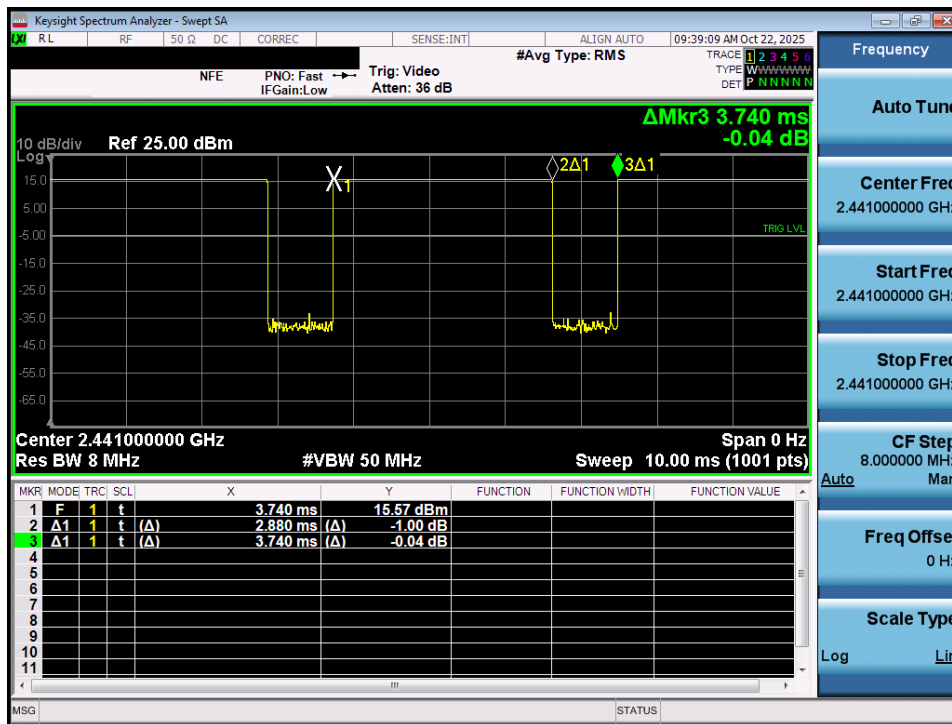


Figure 10-6
Bluetooth Antenna G Transmission Plot

Equation 10-1
Bluetooth Antenna G Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.88ms}{3.74ms} * 100\% = 77.0\%$$

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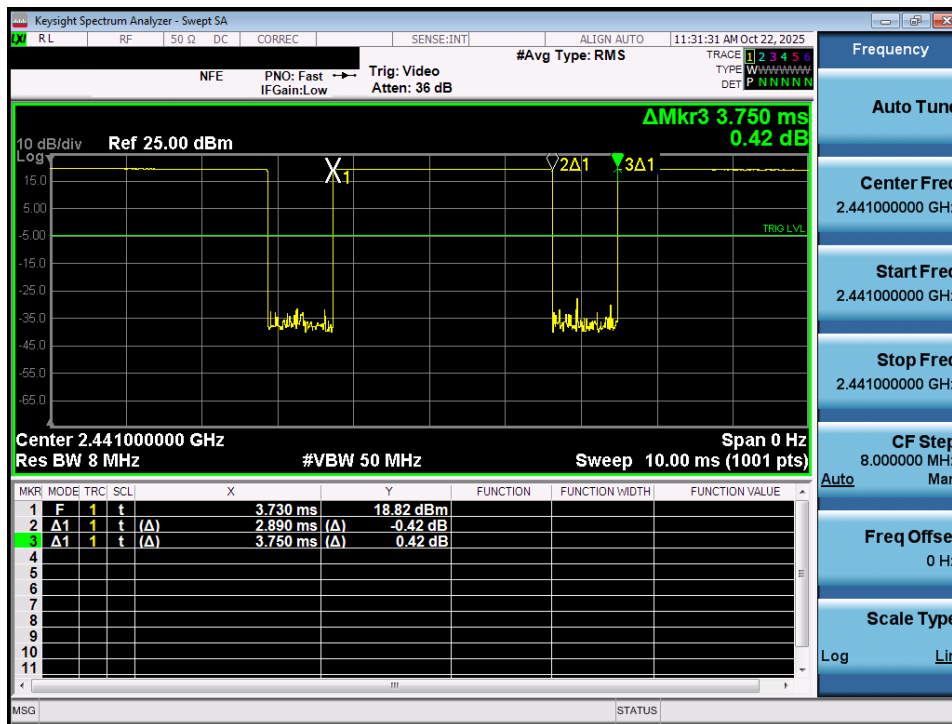


Figure 10-7
Bluetooth Antenna I Transmission Plot

Equation 10-2
Bluetooth Antenna I Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.89ms}{3.75ms} * 100\% = 77.1\%$$

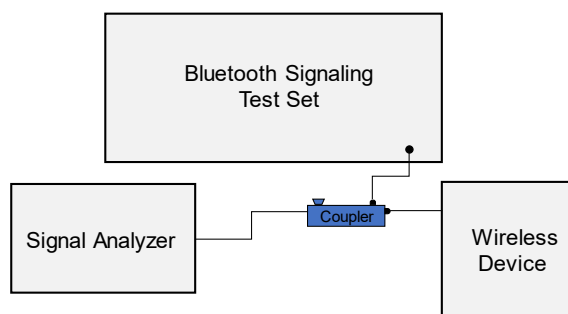


Figure 10-8
Power Measurement Setup

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11 SYSTEM VERIFICATION

11.1 Tissue Verification

Table 11-1
Measured Head Tissue Properties

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
10/13/2025	30 Head	20.0	12	0.716	52.609	0.750	55.000	-4.53%	-4.35%
			13	0.716	52.799	0.750	55.000	-4.53%	-4.00%
			14	0.717	52.935	0.750	55.000	-4.40%	-3.75%
			880	0.847	40.550	0.888	42.305	-4.62%	-4.15%
10/16/2025	750 Head	21.9	695	0.851	40.533	0.889	42.227	-4.27%	-4.01%
			710	0.856	40.489	0.890	42.149	-3.82%	-3.94%
			725	0.860	40.432	0.891	42.071	-3.48%	-3.90%
			750	0.867	40.355	0.894	41.942	-3.02%	-3.78%
			770	0.874	40.279	0.895	41.838	-2.35%	-3.73%
			785	0.880	40.230	0.896	41.760	-1.79%	-3.66%
			800	0.884	40.185	0.897	41.682	-1.45%	-3.59%
			680	0.861	40.556	0.888	42.305	-3.04%	-4.13%
			695	0.865	40.526	0.889	42.227	-2.70%	-4.03%
			710	0.869	40.493	0.890	42.149	-2.36%	-3.93%
10/20/2025	750 Head	21.9	725	0.874	40.465	0.891	42.071	-1.91%	-3.82%
			750	0.882	40.374	0.894	41.942	-1.34%	-3.74%
			770	0.889	40.312	0.895	41.838	-0.67%	-3.65%
			785	0.895	40.270	0.896	41.760	-0.11%	-3.57%
			800	0.899	40.231	0.897	41.682	0.22%	-3.48%
			815	0.899	40.136	0.898	41.594	-1.00%	-3.51%
			820	0.890	40.122	0.899	41.578	-1.00%	-3.50%
			835	0.896	40.090	0.900	41.500	-0.44%	-3.40%
			850	0.902	40.072	0.916	41.500	-1.53%	-3.44%
			815	0.903	40.192	0.898	41.594	0.56%	-3.37%
10/20/2025	835 Head	21.9	820	0.905	40.184	0.899	41.578	0.67%	-3.35%
			835	0.910	40.133	0.900	41.500	1.11%	-3.29%
			850	0.916	40.091	0.916	41.500	0.00%	-3.40%
			815	0.892	42.665	0.898	41.594	-0.67%	2.57%
10/22/2025	835 Head	20.7	820	0.894	42.649	0.899	41.578	-0.56%	2.58%
			835	0.899	42.608	0.900	41.500	-0.11%	2.67%
			850	0.905	42.575	0.916	41.500	-1.20%	2.59%
			815	0.890	43.281	0.898	41.594	-4.34%	4.08%
10/22/2025	835 Head	20.4	820	0.881	43.265	0.899	41.578	-4.23%	4.06%
			835	0.867	43.228	0.900	41.500	-3.67%	4.16%
			850	0.874	43.196	0.916	41.500	-4.59%	4.09%
			815	0.901	39.793	0.898	41.594	0.33%	-4.33%
10/23/2025	835 Head	22.6	820	0.902	39.785	0.899	41.578	0.33%	-4.31%
			835	0.907	39.748	0.900	41.500	0.78%	-4.22%
			850	0.912	39.718	0.916	41.500	-0.44%	-4.29%
			1700	1.306	40.274	1.343	40.145	-2.76%	0.32%
09/29/2025	1750 Head	19.0	1705	1.309	40.270	1.345	40.141	-2.68%	0.32%
			1710	1.311	40.265	1.348	40.136	-2.74%	0.32%
			1720	1.316	40.245	1.354	40.126	-2.81%	0.30%
			1745	1.330	40.189	1.368	40.087	-2.78%	0.25%
			1750	1.333	40.178	1.371	40.079	-2.77%	0.25%
			1770	1.347	40.147	1.383	40.047	-2.60%	0.25%
			1790	1.360	40.141	1.394	40.016	-2.44%	0.31%
			1700	1.282	39.794	1.343	40.145	-4.54%	-0.87%
			1705	1.285	39.786	1.345	40.141	-4.46%	-0.86%
			1710	1.288	39.777	1.348	40.136	-4.45%	-0.89%
10/06/2025	1750 Head	19.0	1720	1.294	39.758	1.354	40.126	-4.43%	-0.92%
			1745	1.310	39.727	1.368	40.087	-4.24%	-0.90%
			1750	1.313	39.721	1.371	40.079	-4.23%	-0.89%
			1770	1.325	39.700	1.383	40.047	-4.19%	-0.87%
			1790	1.336	39.673	1.394	40.016	-4.16%	-0.86%
			1700	1.304	39.275	1.343	40.145	-2.90%	-2.17%
			1705	1.307	39.265	1.345	40.141	-2.83%	-2.18%
			1710	1.310	39.256	1.348	40.136	-2.82%	-2.19%
			1720	1.316	39.233	1.354	40.126	-2.81%	-2.23%
			1745	1.333	39.201	1.368	40.087	-2.56%	-2.21%
10/09/2025	1750 Head	19.8	1750	1.336	39.194	1.371	40.079	-2.55%	-2.21%
			1770	1.350	39.172	1.383	40.047	-2.39%	-2.18%
			1790	1.361	39.134	1.394	40.016	-2.37%	-2.20%
			1700	1.286	38.355	1.343	40.145	-4.24%	-4.46%
			1705	1.289	38.350	1.345	40.141	-4.16%	-4.46%
			1710	1.292	38.343	1.348	40.136	-4.15%	-4.47%
			1720	1.298	38.326	1.354	40.126	-4.14%	-4.49%
			1745	1.313	38.291	1.368	40.087	-4.02%	-4.48%
			1750	1.316	38.285	1.371	40.079	-4.01%	-4.48%
			1770	1.326	38.257	1.383	40.047	-4.12%	-4.47%
10/13/2025	1750 Head	19.6	1790	1.335	38.226	1.394	40.016	-4.23%	-4.47%
			1700	1.276	39.053	1.343	40.145	-4.99%	-2.72%
			1705	1.279	39.040	1.345	40.141	-4.91%	-2.74%
			1710	1.282	39.029	1.348	40.136	-4.90%	-2.76%
			1720	1.289	39.007	1.354	40.126	-4.80%	-2.79%
			1745	1.304	38.971	1.368	40.087	-4.68%	-2.78%
			1750	1.307	38.964	1.371	40.079	-4.67%	-2.78%
			1770	1.319	38.936	1.383	40.047	-4.63%	-2.77%
			1790	1.330	38.910	1.394	40.016	-4.59%	-2.76%
			1700	1.286	38.355	1.343	40.145	-4.24%	-4.46%
10/16/2025	1750 Head	19.3	1705	1.289	38.350	1.345	40.141	-4.16%	-4.46%
			1710	1.292	38.343	1.348	40.136	-4.15%	-4.47%
			1720	1.298	38.326	1.354	40.126	-4.14%	-4.49%
			1745	1.313	38.291	1.368	40.087	-4.02%	-4.48%
			1750	1.316	38.285	1.371	40.079	-4.01%	-4.48%
			1770	1.326	38.257	1.383	40.047	-4.12%	-4.47%
			1790	1.335	38.226	1.394	40.016	-4.23%	-4.47%
			1700	1.276	39.053	1.343	40.145	-4.99%	-2.72%
			1705	1.279	39.040	1.345	40.141	-4.91%	-2.74%
			1710	1.282	39.029	1.348	40.136	-4.90%	-2.76%

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Table 11-2
Measured Head Tissue Properties

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 Frequency (MHz)	TARGET Dielectric Constant, ϵ	% dev σ	% dev ϵ
10/06/2025	1900 Head	19.0	1850	1.375	38.582	1.400	40.000	-1.75%	-1.50%
			1900	1.382	38.598	1.400	40.000	-1.38%	-1.50%
			1950	1.390	38.619	1.400	40.000	-0.36%	-1.50%
			2000	1.400	38.691	1.400	40.000	0.43%	-1.27%
			1925	1.400	38.684	1.400	40.000	0.64%	-1.27%
			1910	1.411	38.672	1.400	40.000	0.79%	-1.27%
			1930	1.411	38.652	1.400	40.000	1.21%	-1.27%
			1955	1.390	38.594	1.400	40.000	-0.36%	-1.50%
			1960	1.400	38.625	1.400	40.000	0.34%	-1.27%
			1980	1.415	38.690	1.400	40.000	1.07%	-1.27%
10/08/2025	1900 Head	19.8	1900	1.427	38.625	1.400	40.000	1.63%	-2.78%
			1955	1.420	38.617	1.400	40.000	2.07%	-2.77%
			1910	1.432	38.610	1.400	40.000	2.22%	-2.73%
			1920	1.431	38.598	1.400	40.000	2.64%	-2.71%
			1960	1.397	38.118	1.400	40.000	-2.36%	-4.74%
			1980	1.373	38.125	1.400	40.000	-1.07%	-4.74%
			1990	1.385	38.625	1.400	40.000	-1.07%	-4.61%
			1900	1.390	38.608	1.400	40.000	-0.36%	-4.68%
			1905	1.395	38.600	1.400	40.000	-0.14%	-4.60%
			1910	1.401	38.598	1.400	40.000	0.07%	-4.62%
10/13/2025	1900 Head	20.0	1920	1.400	38.617	1.400	40.000	0.43%	-4.98%
			1950	1.382	38.724	1.400	40.000	-2.71%	-3.07%
			1980	1.397	38.758	1.400	40.000	-2.36%	-3.10%
			1990	1.378	38.752	1.400	40.000	-1.51%	-3.19%
			1900	1.385	38.736	1.400	40.000	-0.79%	-3.23%
			1905	1.392	38.701	1.400	40.000	-0.67%	-3.25%
			1910	1.395	38.698	1.400	40.000	-0.34%	-3.25%
			1920	1.401	38.690	1.400	40.000	0.07%	-3.28%
			2300	1.440	41.236	1.670	39.500	-1.80%	4.62%
			2310	1.440	41.222	1.670	39.480	-1.79%	4.64%
10/16/2025	1900 Head	19.7	2320	1.655	41.259	1.987	39.460	-1.72%	4.53%
			2400	1.721	41.241	1.756	39.289	-1.09%	4.73%
			2400	1.758	41.084	1.800	39.200	-2.33%	4.61%
			2480	1.781	41.024	1.833	39.162	-2.84%	4.78%
			2500	1.771	41.009	1.855	39.138	-3.17%	4.76%
			2510	1.806	40.989	1.868	39.123	-3.22%	4.77%
			2535	1.827	40.944	1.899	39.090	-3.45%	4.74%
			2550	1.841	40.919	1.908	39.073	-3.56%	4.72%
			2560	1.850	40.889	1.920	39.060	-3.65%	4.71%
			2600	1.883	40.869	1.964	39.000	-4.12%	4.69%
10/20/2025	2450 Head	19.0	2650	1.920	40.758	2.018	38.945	-4.41%	4.65%
			2680	1.955	40.682	2.051	38.907	-4.68%	4.59%
			2700	1.972	40.654	2.073	38.882	-4.67%	4.58%
			2800	1.870	40.589	1.870	38.820	0.00%	2.78%
			2310	1.677	40.621	1.670	39.480	-0.23%	2.76%
			2320	1.685	40.640	1.687	39.460	-0.12%	2.79%
			2400	1.748	40.488	1.756	39.289	-0.48%	3.02%
			2480	1.765	40.346	1.800	39.200	-0.91%	3.25%
			2480	1.812	40.511	1.833	39.162	-1.15%	2.83%
			2500	1.826	40.486	1.855	39.138	-1.40%	2.80%
10/20/2025	2450 Head	19.3	2510	1.830	40.249	1.868	39.123	-1.61%	2.67%
			2535	1.854	40.132	1.893	39.090	-2.04%	2.61%
			2550	1.865	40.106	1.909	39.073	-2.30%	2.79%
			2560	1.872	40.137	1.920	39.060	-2.60%	2.76%
			2600	1.907	40.100	1.964	39.000	-2.85%	2.82%
			2650	1.948	39.983	2.018	38.945	-3.47%	2.67%
			2680	1.972	39.921	2.051	38.907	-3.65%	2.61%
			2700	1.989	39.899	2.073	38.882	-4.00%	2.62%
			2800	1.886	39.886	1.870	38.820	0.00%	-2.13%
			2310	1.686	39.855	1.670	39.480	-0.07%	-2.16%
10/23/2025	2450 Head	20.0	2320	1.702	39.591	1.687	39.460	1.29%	-2.20%
			2400	1.750	39.507	1.756	39.289	2.68%	-2.50%
			2480	1.846	39.311	1.800	39.200	2.58%	-2.78%
			2480	1.870	37.684	1.833	39.162	2.61%	-2.87%
			2500	1.900	37.634	1.855	39.138	2.47%	-3.07%
			2510	1.911	37.608	1.868	39.123	2.41%	-3.15%
			2535	1.838	37.603	1.893	39.090	2.38%	-3.31%
			2550	1.855	37.578	1.903	39.073	2.48%	-3.41%
			2560	1.867	37.606	1.920	39.060	2.43%	-3.46%
			2600	2.011	37.559	1.964	39.000	2.35%	-3.72%
10/27/2025	2450 Head	20.1	2650	2.055	37.569	2.018	38.945	-2.07%	-4.07%
			2680	2.089	37.238	2.051	38.907	-2.34%	-4.20%
			2700	2.121	37.148	2.073	38.882	-2.25%	-4.31%
			2800	1.718	36.107	1.670	39.500	2.67%	-5.84%
			2310	1.720	35.125	1.670	39.480	3.04%	-6.80%
			2320	1.741	35.000	1.687	39.460	3.05%	-6.84%
			2400	1.827	35.191	1.756	39.289	4.04%	-1.27%
			2480	1.907	35.315	1.800	39.200	4.00%	-1.44%
			2480	1.925	35.515	1.833	39.162	4.09%	-1.65%
			2500	1.920	35.444	1.855	39.138	3.99%	-1.77%
10/27/2025	2450 Head	20.7	2535	1.940	35.413	1.888	39.123	-2.34%	-1.61%
			2535	1.968	35.338	1.893	39.090	-2.60%	-1.85%
			2550	1.985	35.279	1.909	39.073	-2.67%	-2.03%
			2560	1.998	35.262	1.920	39.060	-2.67%	-2.09%
			2600	2.041	35.090	1.964	39.000	-3.92%	-2.36%
			2650	2.086	35.011	2.018	38.945	-4.46%	-2.05%
			2680	2.131	35.001	2.051	38.907	-4.73%	-2.05%
			2700	2.164	35.140	2.073	38.882	-4.97%	-2.05%
			2800	1.670	38.772	1.670	39.500	0.00%	-1.84%
			2310	1.677	38.736	1.670	39.480	-0.12%	-1.65%
11/03/2025	2450 Head	20.6	2320	1.684	38.752	1.687	39.460	-0.10%	-1.64%
			2400	1.743	38.587	1.756	39.289	-0.74%	-1.79%
			2480	1.770	38.517	1.800	39.200	-1.17%	-1.74%
			2480	1.800	38.444	1.833	39.162	-1.69%	-1.67%
			2500	1.819	38.408	1.855	39.138	-1.84%	-1.61%
			2510	1.827	38.420	1.868	39.123	-2.09%	-1.60%
			2535	1.845	38.363	1.893	39.090	-2.84%	-1.61%
			2550	1.856	38.337	1.909	39.073	-2.63%	-1.68%
			2560	1.868	38.328	1.920	39.060	-2.67%	-1.69%
			2600	1.897	38.259	1.964	39.000	-3.41%	-1.93%
11/10/2025	2450 Head	19.0	2650	1.924	38.145	2.018	38.945	-4.16%	-2.05%
			2680	1.960	38.130	2.051	38.907	-4.44%	-2.07%
			2700	1.969	38.089	2.073	38.882	-4.69%	-2.07%
			2800	1.658	38.589	1.670	39.500	-1.02%	2.05%
			2310	1.658	38.578	1.670	39.480	-0.06%	2.05%
			2320	1.665	38.586	1.687	39.460	-1.30%	0.27%
			2400	1.727	38.446	1.756	39.289	-1.63%	0.40%
			2480	1.786	38.360	1.800	39.200	-2.14%	0.33%
			2480	1.790	38.353	1.833	39.162	-2.38%	0.38%
			2500	1.807	38.335	1.855	39.138	-2.45%	0.33%
11/20/2025	2450 Head	19.3	2510	1.818	38.290	1.866	39.123	-2.73%	0.44%
			2535	1.834	38.211	1.887	39.090	-3.12%	0.37%
			2550	1.849	38.166	1.909	39.073	-3.47%	0.33%
			2560	1.863	38.150	1.920	39.060	-3.49%	0.36%
			2600	1.894	38.084	1.964	39.000	-3.91%	0.31%
			2650	1.929	38.010	2.018	38.945	-4.41%	0.37%
			2680	1.956	38.017	2.051	38.907	-4.69%	0.41%
			2700	1.979	38.028	2.073	38.882	-4.84%	0.44%
			2800	1.676	37.722	1.687	39.480	-0.66%	0.44%
			2320	1.738	37.619	1.756	39.289	-1.07%	0.27%
11/24/2025	2450 Head	20.1	2400	1.776	37.650	1.800	39.200	-1.20%	0.25%
			2480	1.802	37.471	1.833	39.162	-1.66%	0.32%
			2480	1.817	37.425	1.866	39.123	-2.03%	0.34%
			2500	1.825	37.406	1.888	39.090	-2.44%	0.31%
			2535	1.845	37.378	1.893	39.090	-2.64%	0.39%
			2550	1.858	37.348	1.909	39.073	-2.69%	0.42%
			2560	1.867	37.323	1.920	39.060	-2.78%	0.44%
			2600	1.900	37.260	1.964	39.000	-3.20%	0.46%
			2650	1.934	37.185	2.018	38.945	-3.81%	0.42%
			2680	1.963	37.152	2.051	38.907	-4.04%	0.45%

Table 11-3
Measured Head Tissue Properties

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
10/27/2025	S200-5800 Head	19.5	5150	4.442	35.576	4.608	35.050	-3.60%	-1.31%
			5160	4.453	35.553	4.618	35.040	-3.57%	-1.35%
			5170	4.460	35.538	4.629	35.030	-3.60%	-1.37%
			5180	4.472	35.523	4.635	35.009	-3.52%	-1.35%
			5190	4.486	35.509	4.645	35.988	-3.42%	-1.36%
			5200	4.499	35.484	4.655	35.988	-3.35%	-1.39%
			5210	4.510	35.467	4.669	35.975	-3.34%	-1.41%
			5220	4.521	35.446	4.676	35.963	-3.37%	-1.44%
			5240	4.550	35.404	4.699	35.940	-3.17%	-1.49%
			5250	4.564	35.382	4.706	35.929	-3.02%	-1.52%
			5260	4.573	35.370	4.717	35.917	-3.05%	-1.52%
			5270	4.581	35.369	4.727	35.906	-3.09%	-1.50%
			5280	4.588	35.353	4.737	35.894	-3.15%	-1.51%
			5290	4.598	35.319	4.748	35.883	-3.16%	-1.57%
			5300	4.611	35.282	4.758	35.871	-3.09%	-1.64%
			5310	4.624	35.272	4.768	35.860	-3.02%	-1.64%
			5320	4.637	35.263	4.778	35.849	-2.95%	-1.67%
			5500	4.836	34.945	4.983	35.643	-2.96%	-1.86%
			5510	4.846	34.932	4.973	35.632	-2.95%	-1.99%
			5520	4.857	34.907	4.983	35.620	-2.53%	-2.00%
			5530	4.868	34.877	4.984	35.609	-2.56%	-2.06%
			5540	4.878	34.858	5.004	35.597	-2.50%	-2.08%
			5550	4.891	34.842	5.014	35.588	-2.45%	-2.09%
			5560	4.903	34.828	5.024	35.574	-2.47%	-2.10%
			5580	4.929	34.804	5.045	35.551	-2.30%	-2.10%
			5600	4.955	34.780	5.065	35.529	-2.17%	-2.14%
			5610	4.965	34.752	5.076	35.518	-2.18%	-2.16%
			5620	4.978	34.730	5.086	35.506	-2.12%	-2.19%
			5640	4.988	34.684	5.106	35.483	-2.12%	-2.25%
			5660	5.028	34.639	5.127	35.460	-2.07%	-2.32%
			5670	5.035	34.623	5.137	35.449	-1.99%	-2.33%
			5680	5.048	34.603	5.147	35.437	-1.96%	-2.35%
			5690	5.058	34.588	5.158	35.426	-1.94%	-2.37%
			5700	5.069	34.567	5.168	35.414	-1.92%	-2.38%
			5710	5.082	34.557	5.178	35.403	-1.85%	-2.39%
			5720	5.095	34.541	5.188	35.391	-1.79%	-2.40%
			5745	5.120	34.480	5.214	35.363	-1.60%	-2.50%
			5750	5.126	34.472	5.219	35.357	-1.78%	-2.50%
			5765	5.132	34.467	5.224	35.351	-1.78%	-2.50%
			5785	5.149	34.457	5.234	35.340	-1.62%	-2.50%
			5775	5.163	34.438	5.245	35.329	-1.56%	-2.52%
			5785	5.174	34.414	5.255	35.317	-1.54%	-2.56%
			5795	5.181	34.390	5.265	35.305	-1.60%	-2.59%
			5800	5.186	34.388	5.270	35.300	-1.59%	-2.58%
			5805	5.191	34.385	5.275	35.294	-1.59%	-2.58%
			5805	5.213	34.370	5.280	35.271	-1.57%	-2.55%
			5835	5.223	34.345	5.305	35.230	-1.55%	-2.51%
			5845	5.238	34.326	5.315	35.210	-1.45%	-2.51%
			5850	5.245	34.315	5.320	35.200	-1.41%	-2.51%
			5855	5.252	34.305	5.325	35.197	-1.37%	-2.53%
5865	5.262	34.287	5.338	35.190	-1.39%	-2.57%			
5865	5.262	34.287	5.338	35.190	-1.39%	-2.57%			
5865	5.262	34.287	5.338	35.190	-1.39%	-2.57%			
5875	5.270	34.263	5.347	35.183	-1.44%	-2.61%			
5885	5.280	34.247	5.357	35.177	-1.44%	-2.64%			
5905	5.305	34.207	5.379	35.163	-1.38%	-2.72%			
5150	4.450	35.188	4.608	35.050	-3.43%	-2.39%			
5160	4.477	35.214	4.618	35.040	-3.05%	-2.39%			
5170	4.488	35.213	4.629	35.030	-3.05%	-2.37%			
5180	4.514	35.215	4.635	35.009	-2.61%	-2.21%			
5190	4.525	35.176	4.645	35.998	-2.58%	-2.28%			
5200	4.526	35.205	4.655	35.988	-2.77%	-2.16%			
5210	4.523	35.199	4.666	35.975	-3.06%	-1.65%			
5220	4.527	35.151	4.676	35.963	-3.19%	-2.28%			
5240	4.559	35.128	4.699	35.940	-2.70%	-2.25%			
5250	4.583	35.074	4.706	35.929	-2.67%	-2.38%			
5260	4.600	35.074	4.717	35.917	-2.49%	-2.35%			
5270	4.612	35.080	4.727	35.906	-2.43%	-2.30%			
5280	4.611	35.070	4.737	35.894	-2.66%	-2.30%			
5290	4.613	35.062	4.748	35.883	-2.84%	-2.29%			
5300	4.624	35.030	4.758	35.871	-2.82%	-2.34%			
5310	4.637	35.028	4.768	35.860	-2.78%	-2.33%			
5320	4.644	34.993	4.778	35.849	-2.80%	-2.39%			
5500	4.850	34.642	4.983	35.643	-2.28%	-2.81%			
5510	4.869	34.614	4.973	35.632	-2.09%	-2.86%			
5520	4.888	34.617	4.983	35.620	-1.91%	-2.82%			
5530	4.897	34.632	4.984	35.609	-1.94%	-2.74%			
5540	4.930	34.614	5.004	35.597	-2.06%	-2.76%			
5550	4.919	34.583	5.014	35.596	-2.07%	-2.82%			
5560	4.918	34.559	5.024	35.574	-2.17%	-2.85%			
5580	4.941	34.516	5.045	35.551	-2.06%	-2.91%			
5600	4.971	34.483	5.065	35.529	-1.86%	-2.92%			
5610	4.980	34.453	5.076	35.518	-1.89%	-2.89%			
5620	4.991	34.459	5.086	35.506	-1.87%	-2.95%			
5640	5.002	34.444	5.106	35.483	-2.04%	-2.93%			
5660	5.032	34.396	5.127	35.460	-1.85%	-3.00%			
5670	5.058	34.376	5.137	35.449	-1.54%	-3.03%			
5680	5.062	34.380	5.147	35.437	-1.65%	-2.88%			
5690	5.076	34.386	5.158	35.426	-1.99%	-2.84%			
5700	5.091	34.355	5.168	35.414	-1.49%	-2.99%			
5710	5.097	34.309	5.178	35.403	-1.56%	-3.09%			
5720	5.098	34.250	5.188	35.391	-1.73%	-3.22%			
5745	5.133	34.241	5.214	35.363	-1.17%	-3.17%			
5750	5.159	34.261	5.219	35.357	-1.23%	-3.10%			
5765	5.154	34.271	5.224	35.351	-1.34%	-3.06%			
5786	5.168	34.265	5.234	35.340	-1.26%	-3.04%			
5775	5.182	34.221	5.245	35.329	-1.20%	-3.14%			
5785	5.182	34.160	5.255	35.317	-1.39%	-3.28%			
5795	5.179	34.112	5.265	35.305	-1.63%	-3.38%			
5800	5.188	34.105	5.270	35.300	-1.56%	-3.39%			
5805	5.189	34.102	5.275	35.294	-1.48%	-3.38%			
5805	5.241	34.121	5.280	35.271	-1.04%	-3.26%			
5835	5.256	34.117	5.305	35.230	-0.92%	-3.16%			
5845	5.265	34.086	5.315	35.210	-0.94%	-3.19%			
5850	5.268	34.096	5.320	35.200	-1.00%	-3.16%			
5855	5.268	34.069	5.325	35.197	-1.17%	-3.20%			
5865	5.257	34.052	5.338	35.190	-1.48%	-3.23%			
5865	5.257	34.052	5.338	35.190	-1.48%	-3.23%			
5865	5.257	34.052	5.338	35.190	-1.48%	-3.23%			
5875	5.260	33.995	5.347	35.183	-1.63%	-3.38%			
5885	5.291	33.950	5.357	35.177	-1.23%	-3.54%			
5905	5.352	33.913	5.379	35.163	-0.50%	-3.55%			
10/27/2025	S200-5800 Head	20.5	5150	4.442	35.576	4.608	35.050	-3.60%	-1.31%
			5160	4.453	35.553	4.618	35.040	-3.57%	-1.35%
			5170	4.460	35.538	4.629	35.030	-3.60%	-1.37%
			5180	4.472	35.523	4.635	35.009	-3.52%	-1.35%
			5190	4.486	35.509	4.645	35.988	-3.42%	-1.36%
			5200	4.499	35.484	4.655	35.988	-3.35%	-1.39%
			5210	4.510	35.467	4.669	35.975	-3.34%	-1.41%
			5220	4.521	35.446	4.676	35.963	-3.37%	-1.44%
			5240	4.550	35.404	4.699	35.940	-3.17%	-1.49%
			5250	4.5					

Table 11-4
Measured Head Tissue Properties

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
11/03/2025	500-800 Head	10.8	5160	4.945	38.993	4.938	38.993	-1.37%	-1.30%
			5165	4.955	38.993	4.918	38.040	-1.30%	-1.33%
			5170	4.966	38.925	4.929	38.030	-1.32%	-1.33%
			5180	4.978	38.928	4.932	38.000	-1.22%	-1.31%
			5190	4.988	38.918	4.945	38.968	-1.23%	-1.33%
			5200	4.996	38.902	4.958	38.968	-1.24%	-1.33%
			5210	4.972	38.902	4.968	38.972	-1.70%	-1.37%
			5220	4.922	38.929	4.978	38.983	-1.00%	-1.40%
			5240	4.922	38.911	4.986	38.940	-0.90%	-1.50%
			5250	4.889	38.980	4.788	38.920	-0.85%	-1.81%
			5260	4.927	38.991	4.717	38.817	-0.86%	-1.92%
			5270	4.885	38.987	4.727	38.908	-0.89%	-1.90%
			5280	4.893	38.924	4.727	38.884	-0.89%	-1.90%
			5290	4.790	38.929	4.740	38.883	-0.84%	-1.90%
			5300	4.718	38.928	4.758	38.871	-0.84%	-1.80%
			5310	4.726	38.928	4.768	38.860	-0.84%	-1.87%
			5320	4.747	38.993	4.778	38.840	-0.77%	-1.84%
			5330	4.944	38.925	4.983	38.843	-0.28%	-2.01%
			5340	4.958	38.909	4.973	38.820	-0.30%	-2.04%
			5350	4.860	38.920	4.983	38.820	-0.30%	-2.00%
			5360	4.910	38.991	4.984	38.820	-0.30%	-2.03%
			5380	4.984	38.848	5.004	38.987	-0.20%	-2.17%
			5390	5.007	38.814	5.014	38.989	-0.14%	-2.17%
			5400	5.003	38.792	5.044	38.974	-0.09%	-2.20%
			5410	5.041	38.780	5.045	38.951	-0.08%	-2.01%
			5420	5.046	38.780	5.046	38.951	-0.08%	-2.01%
			5430	5.075	38.710	5.076	38.918	-0.06%	-2.02%
			5440	5.089	38.685	5.086	38.929	0.00%	-2.08%
			5450	5.115	38.633	5.108	38.483	0.10%	-2.40%
			5460	5.150	38.600	5.127	38.480	0.22%	-2.40%
			5470	5.192	38.598	5.137	38.440	0.22%	-2.44%
			5480	5.164	38.671	5.147	38.437	0.33%	-2.44%
			5490	5.176	38.649	5.158	38.428	0.35%	-2.48%
			5500	5.188	38.628	5.168	38.414	0.38%	-2.48%
			5510	5.199	38.621	5.178	38.400	0.38%	-2.49%
			5520	5.210	38.613	5.188	38.387	0.42%	-2.49%
			5540	5.244	38.447	5.214	38.363	0.58%	-2.89%
			5550	5.250	38.424	5.219	38.357	0.60%	-2.91%
			5560	5.264	38.402	5.244	38.351	0.61%	-2.93%
			5580	5.287	38.403	5.234	38.340	0.63%	-2.83%
			5590	5.270	38.398	5.245	38.329	0.62%	-2.88%
			5595	5.287	38.372	5.222	38.317	0.61%	-2.88%
			5598	5.288	38.353	5.260	38.326	0.63%	-2.70%
			5600	5.307	38.349	5.270	38.300	0.70%	-2.69%
			5605	5.310	38.337	5.275	38.284	0.72%	-2.71%
			5610	5.302	38.326	5.286	38.271	0.72%	-2.70%
			5615	5.341	38.277	5.305	38.250	0.76%	-2.77%
			5640	5.355	38.264	5.315	38.210	0.77%	-2.89%
			5650	5.381	38.261	5.320	38.200	0.77%	-2.87%
			5660	5.389	38.253	5.325	38.197	0.81%	-2.88%
			5670	5.392	38.224	5.336	38.190	0.80%	-2.70%
			5680	5.383	38.224	5.338	38.180	0.88%	-2.70%
			5690	5.383	38.224	5.338	38.180	0.88%	-2.70%
			5695	5.389	38.224	5.338	38.180	0.88%	-2.70%
			5698	5.407	38.209	5.347	38.183	1.01%	-2.77%
			5700	5.420	38.198	5.357	38.177	0.80%	-2.81%
			5705	5.437	38.149	5.379	38.163	0.97%	-2.88%
			5710	4.416	38.081	4.608	38.050	-4.12%	-3.30%
			5715	4.427	38.067	4.618	38.040	-4.10%	-3.37%
			5716	4.430	38.057	4.620	38.030	-4.11%	-3.31%
			5720	4.441	38.040	4.635	38.000	-4.20%	-3.30%
			5730	4.455	38.041	4.645	38.008	-4.56%	-3.33%
			5740	4.463	38.180	4.655	38.086	-4.12%	-3.33%
			5750	4.477	38.172	4.666	38.075	-4.14%	-3.34%
			5760	4.482	38.151	4.676	38.063	-4.15%	-3.37%
			5770	4.500	38.081	4.686	38.040	-4.05%	-3.48%
			5780	4.501	38.079	4.708	38.020	-3.93%	-3.48%
			5790	4.524	38.080	4.717	38.017	-3.88%	-3.48%
			5800	4.544	38.049	4.727	38.008	-3.71%	-3.50%
			5810	4.557	38.033	4.737	38.004	-3.80%	-3.52%
			5820	4.566	38.008	4.748	38.003	-3.83%	-3.50%
			5830	4.576	38.003	4.758	38.001	-3.83%	-3.58%
			5840	4.586	38.000	4.768	38.000	-3.82%	-3.57%
			5850	4.599	38.012	4.778	38.000	-3.85%	-3.56%
			5860	4.791	38.215	4.983	38.843	-3.47%	-4.01%
			5870	4.803	38.207	4.973	38.830	-3.45%	-4.03%
			5880	4.813	38.190	4.983	38.820	-3.41%	-4.01%
			5890	4.816	38.177	4.994	38.809	-3.80%	-4.02%
			5900	4.834	38.161	5.004	38.800	-3.47%	-4.04%
			5910	4.840	38.145	5.014	38.800	-3.37%	-4.06%
			5920	4.850	38.126	5.024	38.828	-3.38%	-4.06%
			5930	4.878	38.085	5.045	38.821	-3.31%	-4.11%
			5940	4.905	38.044	5.065	38.829	-3.16%	-4.18%
			5950	4.933	38.014	5.078	38.818	-3.09%	-4.18%
			5960	4.958	38.017	5.088	38.808	-3.17%	-4.19%
			5970	4.940	38.021	5.100	38.803	-3.07%	-4.28%
			5980	4.972	38.008	5.127	38.480	-3.02%	-4.20%
			5990	4.985	38.000	5.137	38.440	-3.08%	-4.17%
			6000	4.999	38.006	5.147	38.437	-2.89%	-4.30%
			6005	5.005	38.078	5.158	38.428	-2.97%	-4.38%
			6010	5.017	38.080	5.168	38.414	-3.00%	-4.38%
			6020	5.027	38.048	5.178	38.400	-2.82%	-4.38%
			6030	5.037	38.027	5.188	38.381	-2.91%	-4.42%
			6040	5.088	38.011	5.214	38.363	-2.82%	-4.47%
			6050	5.087	38.078	5.219	38.357	-2.91%	-4.49%
			6060	5.094	38.026	5.234	38.351	-2.87%	-4.51%
			6070	5.088	38.046	5.234	38.340	-2.79%	-4.54%
			6075	5.102	38.070	5.245	38.329	-2.72%	-4.58%
			6080	5.113	38.065	5.265	38.317	-2.68%	-4.57%
			6090	5.124	38.078	5.285	38.305	-2.68%	-4.61%
			6100	5.131	38.070	5.290	38.300	-2.64%	-4.61%
			6105	5.136	38.084	5.272	38.284	-2.64%	-4.61%
			6110	5.145	38.040	5.286	38.271	-2.64%	-4.60%
			6120	5.150	38.044	5.305	38.250	-2.62%	-4.57%
			6140	5.178	38.018	5.315	38.210	-2.62%	-4.52%
			6150	5.183	38.011	5.330	38.200	-2.68%	-4.51%
			6160	5.189	38.007	5.325	38.197	-2.68%	-4.52%
			6170	5.200	38.000	5.336	38.190	-2.60%	-4.58%
			6180	5.200	38.000	5.336	38.190	-2.60%	-4.58%
			6190	5.200	38.000	5.336	38.190	-2.60%	-4.58%
			6200	5.200	38.000	5.336	38.190	-2.60%	-4.58%
			6210	5.211	38.084	5.347	38.183	-2.54%	-4.60%
			6220	5.221	38.060	5.357	38.177	-2.64%	-4.62%
			6230	5.225	38.036	5.378	38.163	-2.60%	-4.71%
			6240	5.381	38.410	5.411	38.143	-0.37%	0.76%
			6250	5.414	38.378	5.448	38.130	-0.62%	0.74%
			6260	5.420	38.351	5.464	38.110	-0.79%	0.63%
			6270	5.427	38.340	5.480	38.100	-0.76%	0.62%
			6280	5.471	38.344	5.510	38.075	-0.80%	0.60%
			6290	5.509	38.175	5.597	38.052	-0.80%	0.44%
			6300	5.528	38.100	5.680	38.030	-0.85%	0.41%
			6310	5.540	38.137	5.580	38.068	-0.61%	0.40%
6320	5.550	38.150	5.590	38.080	-0.55%	0.40%			
6330	5.560	38.160	5.600	38.090	-0.50%	0.40%			
6340	5.570	38.170	5.610	38.100	-0.45%	0.40%			
6350	5.580	38.180	5.620	38.110	-0.40%	0.40%			
6360	5.590	38.190	5.630	38.120	-0.35%	0.40%			
6370	5.600	38.200	5.640	38.130	-0.30%	0.40%			
6380	5.610	38.210	5.650	38.140	-0.25%	0.40%			
6390	5.620	38.220	5.660	38.150	-0.20%	0.40%			
6400	5.630	38.230	5.670	38.160	-0.15%	0.40%			
6410	5.640	38.240	5.680	38.170	-0.10%	0.40%			
6420	5.650	38.250	5.690	38.180	-0.05%	0.40%			
6430	5.660	38.260	5.700	38.190	0.00%	0.40%			
6440	5.670	38.270	5.710	38.200	0.05%	0.40%			
6450	5.680	38.280	5.720	38.210	0.10%	0.40%			
6460	5.690	38.290	5.730	38.220	0.15%	0.40%			
6470	5.700	38.300	5.740	38.230	0.20%	0.40%			
6480	5.710	38.310	5.750	38.240	0.25%	0.40%			
6490	5.720	38.320	5.760	38.250	0.30%	0.40%			
6500	5.730	38.330	5.770	38.260	0.35%	0.40%			
6510	5.740	38.340	5.780	38.270	0.40%	0.40%			
6520	5.750	38.350	5.790	38.280	0.45%	0.40%			
6530	5.760	38.360	5.800	38.290	0.50%	0.40%			
6540	5.770	38.370	5.810	38.300	0.55%	0.40%			
6550	5.780	38.380	5.820	38.310	0.60%	0.40%			
6560	5.790	38.390	5.830	38.320	0.65%	0.40%			
6570	5.800	38.400	5.840	38.330	0.70%	0.40%			
6580	5.810	38.410	5.850	38.340	0.75%	0.40%			
6590	5.820	38.420	5.860	38.350	0.80%	0.40%			
6600	5.830	38.430	5.870	38.360	0.85%	0.40%			
6610	5.840	38.440	5.880	38.370	0.90%	0.40%			
6620	5.850	38.450	5.890	38.380	0.95%	0.40%			
6630	5.860	38.460	5.900	38.390	1.00%	0.40%			
6640	5.870	38.470	5.910	38.400	1.05%	0.40%			
6650	5.880	38.480	5.920	38.410	1.10%	0.40%			
6660	5.890	38.490	5.930	38.420	1.15%	0.40%			
6670	5.900	38.500	5.940	38.430	1.20%	0.40%			
6680	5.910	38.510	5.950	38.440	1.25%	0.40%			
6690	5.920	38.520	5.960	38.450	1.30%	0.40%			
6700	5.930	38.530	5.970	38.460	1.35%	0.40%			
6710	5.940	38.540	5.980	38.470	1.40%	0.40%			
6720	5.950	38.550	5.990	38.480	1.45%	0.40%			
6730	5.960	38.560	6.000	38.490	1.50%	0.40%			
6740	5.970	38.570	6.010	38.500	1.55%	0.40%			
6750	5.980	38.580	6.020	38.510	1.60%	0.40%			
6760	5.990	38.590	6.030	38.520	1.65%	0.40%			
6770	6.000	38.600							

Table 11-5
Measured Head Tissue Properties

Measured Head Tissue Properties									
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
10/27/2025	6000 Head	19.7	5935	5.538	35.157	5.411	35.143	2.35%	0.04%
			5970	5.580	35.108	5.448	35.120	2.42%	-0.03%
			5985	5.602	35.082	5.464	35.110	2.53%	-0.08%
			6000	5.621	35.046	5.480	35.100	2.57%	-0.15%
			6025	5.656	35.022	5.510	35.070	2.65%	-0.14%
			6065	5.694	34.932	5.557	35.022	2.47%	-0.26%
			6075	5.705	34.908	5.569	35.010	2.44%	-0.29%
			6085	5.721	34.890	5.580	34.998	2.53%	-0.31%
			6185	5.867	34.692	5.698	34.878	2.97%	-0.53%
			6275	5.982	34.538	5.805	34.770	3.05%	-0.67%
			6285	5.994	34.533	5.816	34.758	3.06%	-0.65%
			6305	6.010	34.528	5.840	34.734	2.91%	-0.59%
			6345	6.060	34.416	5.887	34.686	2.94%	-0.78%
			6475	6.232	34.173	6.041	34.530	3.16%	-1.03%
			6485	6.242	34.172	6.052	34.518	3.14%	-1.00%
			6500	6.257	34.187	6.070	34.500	3.08%	-0.91%
			6505	6.261	34.187	6.076	34.494	3.04%	-0.89%
			6545	6.311	34.099	6.122	34.446	3.09%	-1.01%
			6665	6.450	33.826	6.265	34.302	2.95%	-1.39%
			6675	6.457	33.784	6.273	34.290	2.93%	-1.48%
			6685	6.465	33.761	6.285	34.278	2.86%	-1.51%
			6715	6.505	33.714	6.319	34.242	2.94%	-1.54%
			6785	6.594	33.567	6.400	34.158	3.03%	-1.73%
			6825	6.650	33.505	6.447	34.110	3.15%	-1.77%
			6985	6.839	33.298	6.633	33.918	3.11%	-1.83%
			6995	6.843	33.288	6.644	33.906	3.00%	-1.82%
			7000	6.846	33.280	6.650	33.900	2.95%	-1.83%
			7005	6.849	33.267	6.656	33.894	2.90%	-1.85%
			7025	6.875	33.192	6.680	33.870	2.92%	-2.00%
			7500	7.464	32.236	7.240	33.300	3.09%	-3.20%
			7980	8.053	31.434	7.816	32.724	3.03%	-3.94%
			8000	8.085	31.453	7.840	32.700	3.13%	-3.81%
11/03/2025	6000 Head	20.5	5935	5.497	34.298	5.411	35.143	1.99%	-2.40%
			5970	5.538	34.245	5.448	35.120	1.65%	-2.49%
			5985	5.554	34.218	5.464	35.110	1.65%	-2.54%
			6000	5.559	34.173	5.480	35.100	1.44%	-2.64%
			6025	5.587	34.100	5.510	35.070	1.40%	-2.77%
			6065	5.649	34.013	5.557	35.022	1.66%	-2.88%
			6075	5.660	33.971	5.569	35.010	1.63%	-2.97%
			6085	5.666	33.962	5.580	34.998	1.54%	-2.96%
			6185	5.804	33.791	5.698	34.878	1.86%	-3.12%
			6275	5.928	33.605	5.805	34.770	2.12%	-3.35%
			6285	5.932	33.615	5.816	34.758	1.99%	-3.29%
			6305	5.955	33.634	5.840	34.734	1.97%	-3.17%
			6345	6.014	33.500	5.887	34.686	2.16%	-3.42%
			6475	6.176	33.184	6.041	34.530	2.23%	-3.90%
			6485	6.195	33.202	6.052	34.518	2.36%	-3.81%
			6500	6.218	33.225	6.070	34.500	2.44%	-3.70%
			6505	6.219	33.231	6.076	34.494	2.35%	-3.66%
			6545	6.245	33.144	6.122	34.446	2.01%	-3.78%
			6665	6.364	32.858	6.265	34.302	1.58%	-4.21%
			6675	6.384	32.839	6.273	34.290	1.77%	-4.23%
			6685	6.411	32.785	6.285	34.278	2.00%	-4.36%
			6715	6.440	32.767	6.319	34.242	1.91%	-4.31%
			6785	6.525	32.607	6.400	34.158	1.95%	-4.54%
			6825	6.589	32.549	6.447	34.110	2.20%	-4.58%
			6985	6.760	32.321	6.633	33.918	1.91%	-4.71%
			6995	6.744	32.338	6.644	33.906	1.51%	-4.62%
			7000	6.746	32.337	6.650	33.900	1.44%	-4.61%
			7005	6.755	32.329	6.656	33.894	1.49%	-4.62%
			7025	6.803	32.188	6.680	33.870	1.84%	-4.97%
			5935	5.505	34.974	5.411	35.143	1.74%	-0.48%
			5970	5.530	34.915	5.448	35.120	1.67%	-0.58%
			5985	5.560	34.892	5.464	35.110	1.76%	-0.65%
6000	5.583	34.851	5.480	35.100	1.88%	-0.71%			
6025	5.621	34.820	5.510	35.070	2.01%	-0.71%			
6065	5.671	34.766	5.557	35.022	2.05%	-0.73%			
6075	5.682	34.748	5.569	35.010	2.03%	-0.75%			
6085	5.695	34.726	5.580	34.998	2.06%	-0.78%			
6185	5.833	34.536	5.698	34.878	2.37%	-0.98%			
6275	5.948	34.365	5.805	34.770	2.46%	-1.16%			
6285	5.959	34.350	5.816	34.758	2.46%	-1.17%			
6305	5.979	34.325	5.840	34.734	2.38%	-1.18%			
6345	6.039	34.242	5.887	34.686	2.58%	-1.28%			
6475	6.204	33.989	6.041	34.530	2.70%	-1.54%			
6485	6.219	33.991	6.052	34.518	2.76%	-1.53%			
6500	6.236	34.008	6.070	34.500	2.73%	-1.43%			
6505	6.241	34.016	6.076	34.494	2.72%	-1.39%			
6545	6.281	33.953	6.122	34.446	2.60%	-1.43%			
6665	6.417	33.656	6.265	34.302	2.43%	-1.88%			
6675	6.424	33.622	6.273	34.290	2.41%	-1.95%			
6685	6.432	33.607	6.285	34.278	2.34%	-1.96%			
6715	6.485	33.565	6.319	34.242	2.63%	-1.98%			
6785	6.568	33.403	6.400	34.158	2.62%	-2.21%			
6825	6.626	33.337	6.447	34.110	2.78%	-2.27%			
6985	6.823	33.139	6.633	33.918	2.86%	-2.30%			
6995	6.830	33.133	6.644	33.906	2.80%	-2.28%			
7000	6.834	33.127	6.650	33.900	2.77%	-2.28%			
7005	6.838	33.114	6.656	33.894	2.73%	-2.30%			
7025	6.859	33.044	6.680	33.870	2.68%	-2.44%			
7500	7.443	32.073	7.240	33.300	2.80%	-3.68%			
7980	8.025	31.260	7.816	32.724	2.67%	-4.47%			
8000	8.060	31.279	7.840	32.700	2.81%	-4.35%			

11.2 SAR 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 SAR System Validation Appendix.

Table 11-6
System Verification Results – Head

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	DAE	Measured SAR 1g (W/kg)	1W Target SAR 1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation 1g (%)	Measured SAR 10g (W/kg)	1W Target SAR 10g (W/kg)	1W Normalized SAR 10g (W/kg)	Deviation 10g (%)	Measured 4cm2 APD (W/m2)	1W Target 4cm2 APD (W/m2)	1W Normalized 4cm2 APD (W/m2)	Deviation 4cm2 APD (%)
G	13	HEAD	10/13/2025	20.8	19.5	1.00	1002	7539	1415	0.522	0.50	0.522	3.78%	0.326	0.32	0.326	3.16%	N/A	N/A	N/A	N/A
J	750	HEAD	10/16/2025	22.9	20.7	0.20	1054	7660	1678	1.72	8.68	8.60	-0.92%	1.14	5.61	1.14	1.60%	N/A	N/A	N/A	N/A
J	750	HEAD	10/20/2025	22.3	21.0	0.20	1054	7660	1678	1.68	8.68	8.40	-3.23%	1.11	5.61	1.11	-1.07%	N/A	N/A	N/A	N/A
J	835	HEAD	10/16/2025	22.9	20.7	0.20	4047	7660	1678	2.02	9.44	10.10	6.99%	1.33	6.09	1.33	9.20%	N/A	N/A	N/A	N/A
J	835	HEAD	10/20/2025	22.3	21.0	0.20	40132	7660	1678	2.10	9.84	10.50	6.71%	1.38	6.40	1.38	7.81%	N/A	N/A	N/A	N/A
O	835	HEAD	10/22/2025	21.5	20.7	0.20	40133	7718	1407	1.98	9.94	9.90	-0.40%	1.30	6.49	1.30	0.15%	N/A	N/A	N/A	N/A
G	835	HEAD	10/22/2025	21.4	20.4	0.20	40132	7488	1415	1.91	9.84	9.55	-2.95%	1.28	6.40	1.28	0.00%	N/A	N/A	N/A	N/A
J	835	HEAD	10/23/2025	22.9	21.6	0.20	4047	7660	1678	2.02	9.44	10.10	6.99%	1.33	6.09	1.33	9.20%	N/A	N/A	N/A	N/A
M	1750	HEAD	09/29/2025	19.1	19.2	0.10	1148	7713	1530	3.90	36.90	39.00	5.69%	2.11	19.60	2.11	7.65%	N/A	N/A	N/A	N/A
O	1750	HEAD	10/06/2025	19.7	19.0	0.10	1150	7718	1407	3.32	36.40	33.20	-8.79%	1.81	19.40	1.81	-6.70%	N/A	N/A	N/A	N/A
O	1750	HEAD	10/09/2025	20.9	19.8	0.10	1150	7718	1407	3.63	36.40	36.30	-0.27%	1.95	19.40	1.95	0.52%	N/A	N/A	N/A	N/A
M	1750	HEAD	10/13/2025	20.2	19.6	0.10	1150	7713	1530	3.69	36.40	36.90	1.37%	1.98	19.40	1.98	2.06%	N/A	N/A	N/A	N/A
M	1750	HEAD	10/16/2025	19.8	19.3	0.10	1150	7713	1530	3.72	36.40	37.20	2.20%	2.01	19.40	2.01	3.61%	N/A	N/A	N/A	N/A
O	1900	HEAD	10/06/2025	19.7	19.0	0.10	50148	7718	1407	4.20	39.60	42.00	6.06%	2.20	20.90	2.20	5.26%	N/A	N/A	N/A	N/A
O	1900	HEAD	10/09/2025	20.9	19.8	0.10	50148	7718	1407	4.33	39.60	43.30	9.34%	2.26	20.90	2.26	8.13%	N/A	N/A	N/A	N/A
O	1900	HEAD	10/13/2025	20.5	20.0	0.10	50148	7718	1407	4.26	39.60	42.60	7.58%	2.22	20.90	2.22	6.22%	N/A	N/A	N/A	N/A
O	1900	HEAD	10/16/2025	21.5	19.5	0.10	50148	7718	1407	4.34	39.60	43.40	9.60%	2.27	20.90	2.27	8.61%	N/A	N/A	N/A	N/A
G	2450	HEAD	10/20/2025	20.3	19.0	0.10	981	7488	1415	5.15	51.80	51.50	-0.58%	2.41	24.30	2.41	-0.82%	N/A	N/A	N/A	N/A
L	2450	HEAD	10/23/2025	20.1	20.0	0.10	981	7659	1272	5.46	51.80	54.60	5.41%	2.50	24.30	2.50	2.88%	N/A	N/A	N/A	N/A
L	2450	HEAD	10/27/2025	20.5	20.0	0.10	797	7659	1272	5.40	52.60	54.00	2.66%	2.45	24.80	2.45	-1.21%	N/A	N/A	N/A	N/A
S4	2450	HEAD	11/03/2025	20.0	20.6	0.10	945	7491	1466	5.73	52.90	57.30	8.32%	2.69	25.00	2.69	7.60%	N/A	N/A	N/A	N/A
J	2450	HEAD	11/10/2025	22.3	19.0	0.10	797	7660	1678	5.35	52.60	53.50	1.71%	2.52	24.80	2.52	1.61%	N/A	N/A	N/A	N/A
O	2450	HEAD	11/24/2025	21.7	20.1	0.10	797	7718	1407	5.04	52.60	50.40	-4.18%	2.36	24.80	2.36	-4.84%	N/A	N/A	N/A	N/A
S2	2600	HEAD	10/20/2025	20.3	19.3	0.10	1009	7402	1502	5.80	56.50	58.00	2.65%	2.65	25.40	2.65	4.33%	N/A	N/A	N/A	N/A
S4	2600	HEAD	10/27/2025	21.4	20.7	0.10	1126	7491	1466	5.36	55.30	53.60	-3.07%	2.44	24.80	2.44	-1.61%	N/A	N/A	N/A	N/A
S4	2600	HEAD	11/03/2025	20.0	20.6	0.10	1126	7491	1466	5.92	55.30	59.20	7.05%	2.69	24.80	2.69	8.47%	N/A	N/A	N/A	N/A
J	2600	HEAD	11/10/2025	22.3	19.0	0.10	1054	7660	1678	5.56	56.10	55.60	-0.88%	2.56	25.20	2.56	1.59%	N/A	N/A	N/A	N/A
S1	5250	HEAD	10/27/2025	20.3	20.5	0.05	1237	7637	1652	3.98	79.50	79.60	0.13%	1.14	22.60	1.14	0.88%	N/A	N/A	N/A	N/A
S	5250	HEAD	10/27/2025	20.0	19.5	0.05	1057	7661	1558	3.78	79.40	75.60	-4.79%	1.09	22.70	1.09	-3.96%	N/A	N/A	N/A	N/A
S	5250	HEAD	11/03/2025	20.7	19.8	0.05	1057	7661	1558	3.71	79.40	74.20	-6.55%	1.07	22.70	1.07	-5.73%	N/A	N/A	N/A	N/A
S	5250	HEAD	11/24/2025	21.5	20.0	0.05	1191	7661	1558	3.72	79.80	74.40	-5.70%	1.07	22.70	1.07	-5.73%	N/A	N/A	N/A	N/A
S1	5600	HEAD	10/27/2025	20.3	20.5	0.05	1237	7637	1652	4.38	82.20	87.60	6.57%	1.24	23.60	1.24	5.08%	N/A	N/A	N/A	N/A
S	5600	HEAD	10/27/2025	20.0	19.5	0.05	1057	7661	1558	3.92	82.80	78.40	-5.31%	1.13	23.60	1.13	-4.24%	N/A	N/A	N/A	N/A
S	5600	HEAD	11/03/2025	20.7	19.8	0.05	1057	7661	1558	3.82	82.80	76.40	-7.73%	1.09	23.60	1.09	-7.63%	N/A	N/A	N/A	N/A
S	5600	HEAD	11/24/2025	21.5	20.0	0.05	1191	7661	1558	3.78	83.00	75.60	-8.92%	1.08	23.90	1.08	-9.62%	N/A	N/A	N/A	N/A
S1	5750	HEAD	10/27/2025	20.3	20.5	0.05	1237	7637	1652	4.01	79.00	80.20	1.52%	1.14	22.40	1.14	1.79%	N/A	N/A	N/A	N/A
S	5750	HEAD	10/27/2025	20.0	19.5	0.05	1057	7661	1558	3.76	79.80	75.20	-5.76%	1.08	22.70	1.08	-4.85%	N/A	N/A	N/A	N/A
S	5750	HEAD	11/03/2025	20.7	19.8	0.05	1057	7661	1558	3.72	79.80	74.40	-6.77%	1.06	22.70	1.06	-6.61%	N/A	N/A	N/A	N/A
S	5750	HEAD	11/24/2025	21.5	20.0	0.05	1191	7661	1558	3.65	78.90	73.00	-7.48%	1.05	22.40	1.05	-6.25%	N/A	N/A	N/A	N/A
S1	5850	HEAD	10/27/2025	20.3	20.5	0.05	1237	7637	1652	4.22	82.00	84.40	2.93%	1.19	23.40	1.19	1.71%	N/A	N/A	N/A	N/A
S	5850	HEAD	10/27/2025	20.0	19.5	0.05	1057	7661	1558	3.96	81.50	79.20	-2.82%	1.13	23.00	1.13	-1.74%	N/A	N/A	N/A	N/A
S	5850	HEAD	11/03/2025	20.7	19.8	0.05	1057	7661	1558	4.06	81.50	81.20	-0.37%	1.16	23.00	1.16	0.87%	N/A	N/A	N/A	N/A
S	5850	HEAD	11/24/2025	21.5	20.0	0.05	1191	7661	1558	3.87	78.80	77.40	-1.78%	1.10	22.50	1.10	-2.22%	N/A	N/A	N/A	N/A
R	6500	HEAD	10/27/2025	21.2	19.7	0.03	1111	7570	1638	7.22	298.00	288.80	-3.09%	1.32	55.20	1.32	-4.35%	31.90	1350.00	1276.00	-5.48%
R	6500	HEAD	11/03/2025	20.9	20.5	0.03	1111	7570	1638	7.37	298.00	294.80	-1.07%	1.37	55.20	1.37	5.50%	33.00	1350.00	1320.00	-2.22%
R	8000	HEAD	10/06/2025	23.7	21.7	0.03	1007	7570	1638	7.17	262.00	286.80	9.47%	1.20	44.70	1.20	7.38%	29.10	1090.00	1164.00	6.79%
R	8000	HEAD	11/10/2025	20.7	19.6	0.03	1007	7570	1638	7.16	262.00	286.40	9.31%	1.19	44.70	1.19	6.49%	28.90	1090.00	1156.00	6.06%

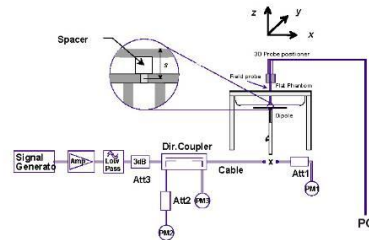


Figure 11-1
System Verification Setup Diagram



Figure 11-2
System Verification Setup Photo

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11.1 Power Density Test System Verification

The system was verified to be within ± 0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check.

The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes.

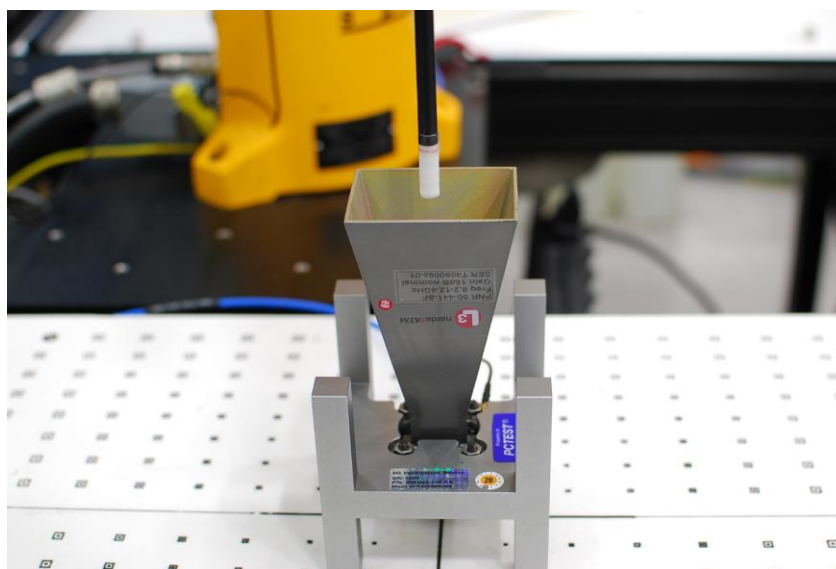


Figure 11-3
System Verification Setup Photo

Table 11-7
10 GHz Verifications

System Verification											
System	Frequency (GHz)	Date	Source S/N	Probe S/N	Prad (mW)	Normal psPD (W/m ² over 4 cm ²)		Deviation (dB)	Total psPD (W/m ² over 4 cm ²)		Deviation (dB)
						Measured	Target		Measured	Target	
N	10	09/30/2025	1002	9421	93.3	56.70	53.80	0.23	56.90	54.00	0.23
Q	10	10/19/2025	1002	9389	93.3	52.80	53.80	-0.08	53.20	54.00	-0.06

Note: A **10 mm distance spacing** was used from the reference horn antenna aperture to the probe element.

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12 SAR DATA SUMMARY

12.1 GSM 850 Standalone SAR

Table 12-1

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]
Head	GSM 850	GSM	A	0896M	1-8.3	0.05	836.60	190	33.5	32.45	Right Cheek	0	0.065	1.274	0.083	0.244	0.153		35.1		
Head	GSM 850	GSM	A	0896M	1-8.3	0.10	836.60	190	33.5	32.45	Right Tilt	0	0.041	1.274	0.052	0.154	0.096		37.1	34.6	29.0
Head	GSM 850	GSM	A	0896M	1-8.3	0.14	836.60	190	33.5	32.45	Left Cheek	0	0.072	1.274	0.092	0.271	0.169		34.6		
Head	GSM 850	GSM	A	0896M	1-8.3	-0.05	836.60	190	33.5	32.45	Left Tilt	0	0.041	1.274	0.052	0.154	0.096		37.1		
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 12-2 | Plot A1

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]
Head	GSM 850	GSM	E	0896M	1-8.3	-0.01	836.60	190	30.5	29.03	Right Cheek	0	0.451	1.403	0.633	0.804	0.503		23.2		
Head	GSM 850	GSM	E	0896M	1-8.3	-0.04	836.60	190	30.5	29.03	Right Tilt	0	0.403	1.403	0.565	0.718	0.448		23.7		
Head	GSM 850	GSM	E	0896M	1-8.3	0.06	824.20	128	30.5	28.98	Left Cheek	0	0.526	1.415	0.746	0.947	0.592		22.5	21.9	20.3
Head	GSM 850	GSM	E	0896M	1-8.3	0.06	836.60	190	30.5	29.03	Left Cheek	0	0.578	1.403	0.811	1.030	0.644		22.2		
Head	GSM 850	GSM	E	0896M	1-8.3	0.04	848.80	251	30.5	28.96	Left Cheek	0	0.602	1.426	0.858	1.090	0.681	Plot	21.9		
Head	GSM 850	GSM	E	0896M	1-8.3	0.00	836.60	190	30.5	29.03	Left Tilt	0	0.500	1.403	0.702	0.892	0.558		22.8		
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 12-3 | Plot A2

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]
Body-worn/Hotspot	GPS 850	GPS 3 Tx Slots	A	0896M	1-2.76	-0.15	824.20	128	30.5	29.14	Back	5	0.648	1.368	0.886	0.886	0.554		26.5		
Body-worn/Hotspot	GPS 850	GPS 3 Tx Slots	A	0896M	1-2.76	0.03	836.60	190	30.5	29.39	Back	5	0.687	1.291	0.887	0.887	0.554		26.5		
Body-worn/Hotspot	GPS 850	GPS 3 Tx Slots	A	0896M	1-2.76	0.02	848.80	251	30.5	29.01	Back	5	0.786	1.409	1.107	1.107	0.692	Plot	25.0		
Hotspot	GPS 850	GPS 3 Tx Slots	A	0896M	1-2.76	-0.14	836.60	190	30.5	29.39	Front	5	0.322	1.291	0.416	0.416	0.260		29.8	25.6	25.6
Hotspot	GPS 850	GPS 3 Tx Slots	A	0896M	1-2.76	-0.06	836.60	190	30.5	29.39	Bottom	10	0.049	1.291	0.063	0.063	0.039		38.0		
Hotspot	GPS 850	GPS 3 Tx Slots	A	0896M	1-2.76	-0.16	836.60	190	30.5	29.39	Right	10	0.101	1.291	0.130	0.130	0.081		34.9		
Hotspot	GPS 850	GPS 3 Tx Slots	A	0896M	1-2.76	-0.07	836.60	190	30.5	29.39	Left	10	0.112	1.291	0.145	0.145	0.091		34.4		
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 12-4

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]
Body-worn/Hotspot	GPS 850	GPS 4 Tx Slots	E	0896M	1-2.076	-0.03	824.20	128	25.0	23.86	Back	5	0.560	1.300	0.728	0.925	0.578		23.1		
Hotspot	GPS 850	GPS 4 Tx Slots	E	0896M	1-2.076	-0.06	824.20	128	25.0	23.86	Front	5	0.523	1.300	0.680	0.864	0.540		23.4	23.1	20.8
Hotspot	GPS 850	GPS 4 Tx Slots	E	0896M	1-2.076	-0.08	824.20	128	25.0	23.86	Top	10	0.221	1.300	0.287	0.364	0.227		27.2		
Hotspot	GPS 850	GPS 4 Tx Slots	E	0896M	1-2.076	0.03	824.20	128	25.0	23.86	Right	10	0.188	1.300	0.244	0.310	0.194		27.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT											Body										
											Spatial Peak										
											1.6 W/kg (mW/g)										
											averaged over 1 gram										
Uncontrolled Exposure/General Population																					

12.2 GSM 1900 Standalone SAR

Table 12-5 | Plot A3

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]
Head	GSM 1900	GSM	A	0890M	1-8.3	0.03	1909.80	810	30.5	28.88	Right Cheek	0	0.053	1.452	0.077	0.243	0.152	Plot	32.4	32.4	26.3
Head	GSM 1900	GSM	A	0890M	1-8.3	-0.13	1909.80	810	30.5	28.88	Right Tilt	0	0.022	1.452	0.032	0.101	0.063		36.2		
Head	GSM 1900	GSM	A	0890M	1-8.3	0.02	1909.80	810	30.5	28.88	Left Cheek	0	0.028	1.452	0.041	0.129	0.081		35.2		
Head	GSM 1900	GSM	A	0890M	1-8.3	-0.21	1909.80	810	30.5	28.88	Left Tilt	0	0.030	1.452	0.044	0.138	0.086		34.9		
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 12-6 | Plot A4

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]
Body-worn/Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	0.08	1850.20	512	22.0	20.02	Back	5	0.636	1.578	1.004	1.275	0.798	Plot	18.8	18.8	17.8
Body-worn/Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	0.03	1880.00	661	22.0	20.02	Back	5	0.594	1.578	0.937	1.190	0.744		19.1		
Body-worn/Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	-0.03	1909.80	810	22.0	20.00	Back	5	0.578	1.585	0.916	1.163	0.728		19.2		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	0.17	1850.20	512	22.0	20.02	Front	5	0.579	1.578	0.914	1.161	0.725		19.3		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	-0.13	1880.00	661	22.0	20.02	Front	5	0.530	1.578	0.836	1.062	0.664		19.5		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0856M	1:2.076	0.00	1909.80	810	22.0	20.00	Front	5	0.597	1.585	0.946	1.201	0.751		19.0		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	0.02	1850.20	512	22.0	20.02	Bottom	10	0.471	1.578	0.743	0.944	0.589		20.1		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	0.05	1880.00	661	22.0	20.02	Bottom	10	0.523	1.578	0.825	1.048	0.655		19.6		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	-0.04	1909.80	810	22.0	20.00	Bottom	10	0.520	1.585	0.824	1.046	0.654		19.6		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	0.06	1880.00	661	22.0	20.02	Right	10	0.041	1.578	0.065	0.083	0.052		30.7		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0890M	1:2.076	0.08	1880.00	661	22.0	20.02	Left	10	0.025	1.578	0.039	0.050	0.030		32.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.3 UMTS 850 Standalone SAR

Table 12-7

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]	
Head	UMTS 850	RMC	A	0834M	1:1	0.03	836.60	4183	25.0	23.69	Right Cheek	0	0	0.080	1.352	0.108	0.237	0.148		34.6	34.0	28.4	
Head	UMTS 850	RMC	A	0834M	1:1	0.06	836.60	4183	25.0	23.69	Right Tit	0	0	0.050	1.352	0.068	0.148	0.093		36.7			
Head	UMTS 850	RMC	A	0834M	1:1	0.16	836.60	4183	25.0	23.69	Left Cheek	0	0	0.091	1.352	0.123	0.269	0.168		34.0			
Head	UMTS 850	RMC	A	0834M	1:1	-0.20	836.60	4183	25.0	23.69	Left Tit	0	0	0.053	1.352	0.072	0.157	0.098		36.4			
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 12-8 | Plot A5

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]
Head	UMTS 850	RMC	E	0834M	1:1	0.05	826.40	4132	21.0	20.43	Right Cheek	0	0.487	1.140	0.555	0.705	0.441		23.5	22.7	20.0
Head	UMTS 850	RMC	E	0834M	1:1	0.02	826.40	4132	21.0	20.43	Right Tit	0	0.450	1.140	0.513	0.652	0.408		23.8		
Head	UMTS 850	RMC	E	0834M	1:1	-0.01	826.40	4132	21.0	20.43	Left Cheek	0	0.557	1.140	0.635	0.806	0.504		22.5		
Head	UMTS 850	RMC	E	0834M	1:1	0.04	826.40	4132	21.0	20.43	Left Tit	0	0.581	1.140	0.662	0.841	0.526	Plot	22.7		
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 12-9

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]	
Body-worn/Hotspot	UMTS 850	RMC	A	0834M	1:1	-0.18	836.60	4183	25.0	23.69	Back	5	0	0.539	1.352	0.729	0.983	0.614		26.3	26.3	26.3	
	Hotspot	UMTS 850	RMC	A	0834M	1:1	0.01	836.60	4183	25.0	23.69	Front	5	0	0.237	1.352	0.320	0.432	0.270				29.9
	Hotspot	UMTS 850	RMC	A	0834M	1:1	0.04	836.60	4183	25.0	23.69	Bottom	10	0	0.045	1.352	0.061	0.082	0.051				37.1
	Hotspot	UMTS 850	RMC	A	0834M	1:1	-0.01	836.60	4183	25.0	23.69	Right	10	0	0.088	1.352	0.119	0.161	0.101				34.2
	Hotspot	UMTS 850	RMC	A	0834M	1:1	0.05	836.60	4183	25.0	23.69	Left	10	0	0.093	1.352	0.126	0.170	0.106				34.0
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 12-10 | Plot A6

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EPS Plimit [dBm]
Body-worn/Hotspot	UMTS 850	RMC	E	0834M	1:1	-0.01	826.40	4132	22.0	21.35	Back	5	0.749	1.161	0.870	1.105	0.691	Plot	22.6	22.6	21.0
Body-worn/Hotspot	UMTS 850	RMC	E	0834M	1:1	0.01	836.60	4183	22.0	21.34	Back	5	0.695	1.164	0.809	1.027	0.643		22.9		
Body-worn/Hotspot	UMTS 850	RMC	E	0834M	1:1	-0.02	846.60	4233	22.0	21.24	Back	5	0.707	1.191	0.842	1.069	0.668		22.7		
Hotspot	UMTS 850	RMC	E	0834M	1:1	-0.05	826.40	4132	22.0	21.35	Front	5	0.570	1.161	0.662	0.841	0.526		23.7		
Hotspot	UMTS 850	RMC	E	0834M	1:1	-0.02	826.40	4132	22.0	21.35	Top	10	0.312	1.161	0.362	0.460	0.287		26.4		
Hotspot	UMTS 850	RMC	E	0834M	1:1	-0.01	826.40	4132	22.0	21.35	Right	10	0.203	1.161	0.236	0.300	0.188		28.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT											Body										
Uncontrolled Exposure/General Population											Spatial Peak 1.6 W/kg (mW/g) averaged over 1 gram										

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Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (SAR)	Plot #	Film (dnt)	Overall Film (dnt)	EPS Film (dnt)
Head	LTE Band 12	10	QPSK	A	0831M	1:1	0.11	707.50	23095	0.0	24.0	22.43	1	0	Right Check	0	63	0.066	1.435	0.095	0.207	0.129	34.2			
Head	LTE Band 12	10	QPSK	A	0831M	1:1	0.06	707.50	23095	1.0	23.0	21.37	25	25	Right TIR	0	63	0.046	1.435	0.068	0.188	0.241	34.0			
Head	LTE Band 12	10	QPSK	A	0831M	1:1	-0.04	707.50	23095	0.0	24.0	22.43	1	0	Right TIR	0	63	0.037	1.435	0.053	0.115	0.073	36.7			
Head	LTE Band 12	10	QPSK	A	0831M	1:1	0.02	707.50	23095	1.0	23.0	21.37	25	25	Right TIR	0	63	0.024	1.435	0.035	0.095	0.060	37.5			
Head	LTE Band 12	10	QPSK	A	0831M	1:1	0.1	707.50	23095	0.0	23.0	21.37	1	0	Left Check	0	63	0.043	1.435	0.119	0.261	0.163	33.2			
Head	LTE Band 12	10	QPSK	A	0831M	1:1	0.01	707.50	23095	1.0	23.0	21.37	25	25	Left Check	0	63	0.068	1.435	0.099	0.273	0.371	33.0			
Head	LTE Band 12	10	QPSK	A	0831M	1:1	-0.11	707.50	23095	0.0	24.0	22.43	1	0	Left TIR	0	63	0.040	1.435	0.057	0.126	0.079	38.4			
Head	LTE Band 12	10	QPSK	A	0831M	1:1	0.09	707.50	23095	1.0	23.0	21.37	25	25	Left TIR	0	63	0.034	1.435	0.035	0.095	0.080	37.5			
ANSI/IEEE C95.1-1992 - SAFETY LIMIT																			Head							
Spatial Peak																			1.6 W/kg (mW/g)							
Uncontrolled Exposure (General Population)																			0.08 W/kg (mW/g)							

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RIS Size	RIS Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Rate (1g SAR)	Plot #	Plot Limit [mm]	Overall Plot Limit [mm]	IF5 Plot Limit
Head	LTE Band 13	50	QPSK	E	0598M	1:1	0.05	707.50	239505	0.0	22.0	20.63	1	0	Right Chest	0	0.458	1.371	0.638	0.638	0.393		24.0		
Head	LTE Band 12	50	QPSK	E	0598M	1:1	0.05	707.50	239505	0.0	22.0	20.54	25	0	Right Chest	0	0.464	1.400	0.650	0.650	0.406		23.8		
Head	LTE Band 12	50	QPSK	E	0598M	1:1	0.04	707.50	239505	0.0	22.0	20.63	1	0	Right Thigh	0	0.385	1.371	0.522	0.522	0.326		24.0		
Head	LTE Band 12	50	QPSK	E	0598M	1:1	0.04	707.50	239505	0.0	22.0	20.54	25	0	Right Thigh	0	0.386	1.400	0.530	0.538	0.336		24.6		
Head	LTE Band 12	50	QPSK	E	0598M	1:1	0.02	707.50	239505	0.0	22.0	20.63	1	0	Left Chest	0	0.574	1.371	0.787	0.787	0.492		23.8		
Head	LTE Band 12	50	QPSK	E	0598M	1:1	0.03	707.50	239505	0.0	22.0	20.54	25	0	Left Chest	0	0.580	1.400	0.812	0.812	0.508	Plot1	22.9		
Head	LTE Band 12	50	QPSK	E	0598M	1:1	0.05	707.50	239505	0.0	22.0	20.43	25	0	Left Thigh	0	0.478	1.400	0.729	0.729	0.458		22.9		
Head	LTE Band 12	50	QPSK	E	0598M	1:1	0.03	707.50	239505	0.0	22.0	20.63	1	0	Left Thigh	0	0.534	1.371	0.732	0.732	0.458		23.9		
Head	LTE Band 12	50	QPSK	E	0598M	1:1	0.01	707.50	239505	0.0	22.0	20.54	25	0	Left Thigh	0	0.533	1.400	0.771	0.771	0.482		23.1		
Annoyed CFS 1.1902 - LOWEST LIMIT																									
Spatial Peak																	Head								
Uncorrelated CFS 1.1902 - LOWEST LIMIT																	1.6 W/kg (mW/g)								

Exposure	Band / Mode	Bandwidth [nm]	Service / Notification	Ant.	Serial Number	Duty Cycle	Power Drift [dBm]	Frequency [GHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RS Size	R# Offset	Test Position	Spacing [mm]	Tune state	Measured Sig Sat [W/kg]	Power Scaling Factor	Reported Sig Sat [W/kg]	Adjusted Sig Sat [W/kg]	Exposure Rate [G-Sat]	Plot #	Pilot [min]	Overall Pilot [min]	FPS [Hz]
Body worn/HotSpot	LTE Band 12	10	GFSK	A	BORGIM	1-1	0.03	707.50	23095	0.0	24.0	22.43	1	0	Back	5	63	0.895	1.435	0.515	0.987	0.573		26.8		
HtSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.03	707.50	23095	1.0	23.0	21.37	25	25	Back	5	63	0.902	1.435	0.438	0.981	0.631		26.5		
HotSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.00	707.50	23095	0.0	24.0	22.43	1	0	Back	5	63	0.902	1.435	0.515	0.987	0.573		26.8		
HotSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.00	707.50	23095	0.0	24.0	21.37	25	25	Front	5	63	0.904	1.435	0.224	0.502	0.314		27.6		
HotSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.12	707.50	23095	1.0	23.0	22.43	1	0	Bottom	0	63	0.892	1.435	0.043	0.987	0.048		32.4	26.5	
HotSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.20	707.50	23095	1.0	23.0	21.37	25	25	Bottom	0	63	0.901	1.435	0.033	0.981	0.043		31.1		
HotSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.03	707.50	23095	0.0	24.0	22.43	1	0	Right	10	63	0.905	1.435	0.108	0.195	0.119		33.6		
HotSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.03	707.50	23095	0.0	24.0	22.43	1	0	Left	10	63	0.903	1.435	0.106	0.195	0.116		33.7		
HotSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.07	707.50	23095	0.0	24.0	22.43	1	0	Left	10	63	0.901	1.435	0.145	0.258	0.161		32.3		
HotSpot	(LTE Band 12)	10	GFSK	A	BORGIM	1-1	0.01	707.50	23095	1.0	23.0	21.37	25	25	Left	10	63	0.884	1.435	0.122	0.274	0.171		32.1		
ANALYZER CHANNEL 1 LINE SWRITY LOSS																										
Spatial Peak Unmodulated & Modulated CW Radiation																										
																		Body								
																		1.6 W/kg [mW/g]								

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RIS Size	RIS Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Rate (1g SAR)	P10 #	PLimit [dBm]	Overall PLimit [dBm]	RFIS PLimit
Body-worn/Hotspot	LTE Band 12	50	CDMA	E	00868	1:1	0.00	707.50	23095	0.0	23.0	22.48	1	0	Back	5	0.461	1.076	0.625	0.794	0.497		23.0		
Body-worn/Hotspot	LTE Band 12	50	CDMA	E	00868	1:1	0.00	707.50	23095	0.0	23.0	22.75	25	0	Back	5	0.581	1.161	0.708	0.899	0.563	Foot	24.4		
Hotspot	LTE Band 12	50	CDMA	E	00868	1:1	0.01	707.50	23095	0.0	23.0	22.48	1	0	Front	5	0.486	1.076	0.491	0.624	0.390		26.0		
Hotspot	LTE Band 12	50	CDMA	E	00868	1:1	0.02	707.50	23095	0.0	23.0	22.35	25	0	Front	5	0.460	1.161	0.557	0.707	0.442		25.5		
Hotspot	LTE Band 12	50	CDMA	E	00868	1:1	0.03	707.50	23095	0.0	23.0	22.48	1	0	Top	10	0.738	1.076	0.245	0.311	0.194		29.1	24.4	
Hotspot	LTE Band 12	50	CDMA	E	00868	1:1	0.01	707.50	23095	0.0	23.0	22.35	25	0	Top	10	0.743	1.161	0.282	0.358	0.224		28.4		
Hotspot	LTE Band 12	50	CDMA	E	00868	1:1	0.14	707.50	23095	0.0	23.0	22.48	1	0	Right	10	0.595	1.076	0.210	0.267	0.166		29.7		
Hotspot	LTE Band 12	50	CDMA	E	00868	1:1	0.03	707.50	23095	0.0	23.0	22.75	25	0	Right	10	0.586	1.161	0.228	0.290	0.182		29.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure (General Population)																		Body 1.6 W/kg (mW/g) Averaging Time: 6 min							

12.5 LTE Band 13 Standalone SAR

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RS Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Flank [dBm]	Overall Flank [dBm]	4FS [dBm]
Head	LTE Band 13	10	CPSK	A	0811M	1:3	0.04	762.00	23230	0.0	24.0	22.87	1	0	Right Cheek	0	0	0.0095	1.297	0.071	0.197	0.123		10.4		
Head	LTE Band 13	10	CPSK	A	0811M	1:3	0.04	762.00	23230	0.0	24.0	22.87	1	0	Right Cheek	0	0	0.0095	1.297	0.071	0.197	0.123		10.4		
Head	LTE Band 13	10	CPSK	A	0811M	1:3	0.13	762.00	23230	0.0	24.0	22.87	1	0	Right Tilt	0	0	0.0097	1.307	0.051	0.193	0.088		10.9		
Head	LTE Band 13	10	CPSK	A	0811M	1:3	0.06	762.00	23230	0.0	23.0	21.67	25	0	Right Tilt	0	0	0.0098	1.308	0.038	0.173	0.078		10.1		
Head	LTE Band 13	10	CPSK	A	0811M	1:3	0.06	762.00	23230	0.0	24.0	21.67	1	0	Left Cheek	0	0	0.0095	1.297	0.098	0.186	0.105		11.1	14.0	
Head	LTE Band 13	10	CPSK	A	0811M	1:3	0.07	762.00	23230	0.0	23.0	21.67	25	0	Left Cheek	0	0	0.0098	1.308	0.079	0.232	0.088		10.1		
Head	LTE Band 13	10	CPSK	A	0811M	1:3	0.04	762.00	23230	0.0	24.0	22.87	1	0	Left Tilt	0	0	0.0095	1.297	0.047	0.149	0.067		10.3		
Head	LTE Band 13	10	CPSK	A	0811M	1:3	0.09	762.00	23230	0.0	23.0	21.67	25	0	Left Tilt	0	0	0.0098	1.308	0.038	0.132	0.085		10.1		
Antenna Cables 1g SAR - Safety Check																							Head			
Spatial Peak (Maximum of 1g SAR) - Safety Check																			1.6 W/kg (mW/g)							

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RR Size	RR Offset	Test Position	Spacing [mm]	Measured 1g SAE [dBm]	Power Scaling Factor	Reported 1g SAE [dBm]	Adjusted 1g SAE [dBm]	Exposure Rate 1g SAE	P10 #	P10 Limit [dBm]	Overall P10 Limit [dBm]	RFPS Limit [dBm]
Head	LTE Band13	50	QPSK	E	090804	1:1	0.01	782.00	23220	0.0	22.0	20.75	1	0	Right Chest	0	0.563	1.334	0.724	0.918	0.575	23.1	22.8	21.0	
Head	LTE Band13	50	QPSK	E	090804	1:1	0.00	782.00	23220	0.0	22.0	20.68	25	0	Right Chest	0	0.558	1.361	0.750	0.964	0.602	24.7	24.3	21.0	
Head	LTE Band13	50	QPSK	E	090804	1:1	0.00	782.00	23220	0.0	22.0	20.70	1	0	Right Thigh	0	0.442	1.334	0.576	0.732	0.457	24.3	24.3	21.0	
Head	LTE Band13	50	QPSK	E	090804	1:1	0.04	782.00	23220	0.0	22.0	21.66	25	0	Right Thigh	0	0.439	1.361	0.597	0.758	0.474	24.7	24.7	21.0	
Head	LTE Band13	50	QPSK	E	090804	1:1	0.03	782.00	23220	0.0	22.0	20.75	1	0	Left Chest	0	0.586	1.334	0.795	1.030	0.631	22.9	22.9	21.0	
Head	LTE Band13	50	QPSK	E	090804	1:1	0.04	782.00	23220	0.0	22.0	21.66	25	0	Left Chest	0	0.468	1.361	0.610	0.766	0.449	24.7	24.7	21.0	
Head	LTE Band13	50	QPSK	E	090804	1:1	0.01	782.00	23220	0.0	22.0	20.59	50	0	Left Chest	0	0.550	1.384	0.740	0.920	0.600	22.8	22.8	21.0	
Head	LTE Band13	50	QPSK	E	090804	1:1	0.04	782.00	23220	0.0	22.0	21.75	1	0	Left Thigh	0	0.522	1.334	0.763	0.969	0.606	23.1	23.1	21.0	
Head	LTE Band13	50	QPSK	E	090804	1:1	0.04	782.00	23220	0.0	22.0	20.68	25	0	Left Thigh	0	0.517	1.361	0.785	0.997	0.624	23.0	23.0	21.0	
ANSI/IEEE C63.19-2 - SAFETY LIMIT																		Head							
Spatial Peak																		L50 Wt Avg (mW/g)							
Unrestricted Exposure (General Population)																		averaged over 1 gram							

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03/30/2022

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Table 12-17

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimt [dBm]	Overall Plimt [dBm]	RF5 Plimt [dBm]	
Body worn/Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	-0.03	782.00	23230	0.0	24.0	22.87	1	0	Back	5	0	0.496	1.297	0.630	0.933	0.583		26.0			
Body worn/Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	0.01	782.00	23230	1.0	24.0	21.67	25	0	Back	5	0	0.293	1.338	0.534	0.994	0.621		25.7			
Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	0.00	782.00	23230	0.0	24.0	22.87	1	0	Front	5	0	0.293	1.297	0.538	0.486	0.304		28.1			
Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	-0.02	782.00	23230	1.0	23.0	21.67	25	0	Front	5	0	0.204	1.338	0.277	0.546	0.323		28.5			
Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	0.00	782.00	23230	0.0	24.0	22.87	1	0	Bottom	10	0	0.245	1.297	0.109	0.098	0.054		36.3			
Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	-0.02	782.00	23230	1.0	23.0	21.67	25	0	Bottom	10	0	0.037	1.338	0.050	0.094	0.059		35.9			
Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	0.03	782.00	23230	0.0	24.0	22.87	1	0	Right	10	0	0.053	1.297	0.069	0.100	0.064		35.6			
Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	0.03	782.00	23230	1.0	23.0	21.67	25	0	Right	10	0	0.037	1.338	0.050	0.094	0.050		35.5			
Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	0.13	782.00	23230	0.0	24.0	22.87	1	0	Left	10	0	0.134	1.297	0.148	0.219	0.137		32.3			
Hotspot	LTE Band 13	10	QPSK	A	0896M	1:1	-0.03	782.00	23230	1.0	23.0	21.67	25	0	Left	10	0	0.098	1.338	0.120	0.223	0.139		32.2			
ANSI/IEEE C63.1 UN2 - SAFETY LIMIT																		Body		1.6 W/kg (mW/g)				Spatial Peak		Uncontrolled Exposure/General Population	
																				averaged over 1 gram							

Table 12-18 | Plot A10

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimt [dBm]	Overall Plimt [dBm]	RF5 Plimt [dBm]
Body worn/Hotspot	LTE Band 13	10	QPSK	E	0896M	1:1	0.01	782.00	23230	0.0	22.0	20.75	1	0	Back	5	0.497	1.334	0.663	0.842	0.526		23.7		
Body worn/Hotspot	LTE Band 13	10	QPSK	E	0896M	1:1	-0.01	782.00	23230	0.0	22.0	20.66	25	0	Back	5	0.511	1.363	0.695	0.883	0.551	Plot	23.5		
Hotspot	LTE Band 13	10	QPSK	E	0896M	1:1	0.00	782.00	23230	0.0	22.0	20.75	1	0	Front	5	0.400	1.334	0.534	0.678	0.424		24.7		
Hotspot	LTE Band 13	10	QPSK	E	0896M	1:1	-0.04	782.00	23230	0.0	22.0	20.66	25	0	Front	5	0.446	1.363	0.566	0.719	0.450		24.4		
Hotspot	LTE Band 13	10	QPSK	E	0896M	1:1	0.02	782.00	23230	0.0	22.0	20.75	1	0	Top	10	0.181	1.334	0.255	0.324	0.202		27.9		
Hotspot	LTE Band 13	10	QPSK	E	0896M	1:1	-0.03	782.00	23230	0.0	22.0	20.66	25	0	Top	10	0.203	1.363	0.276	0.311	0.220		27.5		
Hotspot	LTE Band 13	10	QPSK	E	0896M	1:1	0.00	782.00	23230	0.0	22.0	20.75	1	0	Right	10	0.143	1.334	0.216	0.274	0.171		28.6		
Hotspot	LTE Band 13	10	QPSK	E	0896M	1:1	0.02	782.00	23230	0.0	22.0	20.66	25	0	Right	10	0.172	1.363	0.234	0.297	0.185		28.3		
ANSI/IEEE C63.1 UN2 - SAFETY LIMIT																Body		1.6 W/kg (mW/g)				Spatial Peak		Uncontrolled Exposure/General Population	
																		averaged over 1 gram							

12.6 LTE Band 5 Standalone SAR

Table 12-19

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimt [dBm]	Overall Plimt [dBm]	RF5 Plimt [dBm]	
Head	LTE Band 5	10	QPSK	A	0811M	1:1	-0.05	836.50	20525	0.0	25.0	23.65	1	25	Right Cheek	0	0	0.074	1.365	0.101	0.226	0.141		34.9			
Head	LTE Band 5	10	QPSK	A	0811M	1:1	0.17	836.50	20525	1.0	24.0	22.31	25	12	Right Cheek	0	0	0.057	1.409	0.080	0.226	0.141		34.9			
Head	LTE Band 5	10	QPSK	A	0811M	1:1	0.02	836.50	20525	0.0	25.0	23.65	1	25	Right Tit	0	0	0.046	1.365	0.066	0.147	0.093		36.8			
Head	LTE Band 5	10	QPSK	A	0811M	1:1	-0.13	836.50	20525	1.0	24.0	21.91	25	12	Right Tit	0	0	0.040	1.409	0.056	0.139	0.099		36.4			
Head	LTE Band 5	10	QPSK	A	0819M	1:1	-0.09	836.50	20525	0.0	25.0	23.65	1	25	Left Cheek	0	0	0.087	1.365	0.119	0.246	0.146		34.2			
Head	LTE Band 5	10	QPSK	A	0819M	1:1	0.01	836.50	20525	1.0	24.0	22.31	25	12	Left Cheek	0	0	0.088	1.409	0.097	0.214	0.171		34.1			
Head	LTE Band 5	10	QPSK	A	0819M	1:1	0.02	836.50	20525	0.0	25.0	23.65	1	25	Left Tit	0	0	0.047	1.365	0.064	0.144	0.090		36.9			
Head	LTE Band 5	10	QPSK	A	0819M	1:1	0.12	836.50	20525	1.0	24.0	22.31	25	12	Left Tit	0	0	0.058	1.409	0.054	0.151	0.094		36.7			
ANSI/IEEE C63.1 UN2 - SAFETY LIMIT																		Head		1.6 W/kg (mW/g)				Spatial Peak		Uncontrolled Exposure/General Population	
																				averaged over 1 gram							

Table 12-20 | Plot A11

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimt [dBm]	Overall Plimt [dBm]	RF5 Plimt [dBm]		
Head	LTE Band 5	10	QPSK	E	0896M	1:1	-0.03	836.50	20525	0.0	22.0	21.38	1	0	Right Cheek	0	0.629	1.102	0.693	0.880	0.530		23.5				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	-0.02	836.50	20525	0.0	22.0	21.63	25	12	Right Cheek	0	0.699	1.089	0.718	0.912	0.570		23.4				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	0.02	836.50	20525	0.0	22.0	21.38	1	0	Right Tit	0	0.492	1.102	0.542	0.688	0.431		24.6				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	-0.08	836.50	20525	0.0	22.0	21.63	25	12	Right Tit	0	0.520	1.089	0.566	0.719	0.450		24.4				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	0.07	836.50	20525	0.0	22.0	21.58	1	0	Left Cheek	0	0.627	1.102	0.911	1.157	0.723		22.4				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	0.02	836.50	20525	0.0	22.0	21.63	25	12	Left Cheek	0	0.853	1.089	0.929	1.180	0.738		22.3				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	0.03	836.50	20525	0.0	22.0	21.58	1	0	Left Cheek	0	0.961	1.119	0.968	1.223	0.765	Plot	22.1				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	0.01	836.50	20525	0.0	22.0	21.58	1	0	Left Tit	0	0.777	1.119	0.964	1.087	0.656		22.6				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	0.01	836.50	20525	0.0	22.0	21.58	1	0	Left Tit	0	0.684	1.102	0.732	0.930	0.582		23.3				
Head	LTE Band 5	10	QPSK	E	0896M	1:1	-0.05	836.50	20525	0.0	22.0	21.63	25	12	Left Tit	0	0.473	1.089	0.733	0.931	0.582		23.3				
ANSI/IEEE C63.1 UN2 - SAFETY LIMIT																		Head		1.6 W/kg (mW/g)				Spatial Peak		Uncontrolled Exposure/General Population	
																				averaged over 1 gram							

Note: Blue entry represents variability measurement

Table 12-21

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimt [dBm]	Overall Plimt [dBm]	RF5 Plimt [dBm]	
Body worn/Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	-0.02	836.50	20525	0.0	25.0	23.65	1	25	Back	5	0	0.130	1.365	0.226	0.937	0.598		26.3			
Body worn/Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	-0.02	836.50	20525	1.0	24.0	22.31	25	12	Back	5	0	0.226	1.409	0.405	0.956	0.623		26.2			
Body worn/Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	-0.02	836.50	20525	0.0	25.0	23.65	1	25	Front	5	0	0.130	1.365	0.226	0.937	0.598		26.3			
Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	-0.01	836.50	20525	1.0	24.0	22.31	25	12	Front	5	0	0.226	1.409	0.327	0.543	0.139		28.8			
Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	-0.06	836.50	20525	1.0	24.0	22.31	25	12	Bottom	5	0	0.226	1.409	0.405	0.956	0.623		26.2			
Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	-0.16	836.50	20525	1.0	24.0	22.31	25	12	Bottom	10	0	0.032	1.409	0.045	0.075	0.047		17.4			
Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	-0.02	836.50	20525	0.0	25.0	23.65	1	25	Right	10	0	0.083	1.365	0.113	0.149	0.093		14.4			
Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	-0.09	836.50	20525	1.0	24.0	22.31	25	12	Right	10	0	0.087	1.409	0.129	0.173	0.102		14.2			
Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	0.12	836.50	20525	0.0	25.0	23.65	1	25	Left	10	0	0.093	1.365	0.126	0.166	0.104		14.0			
Hotspot	LTE Band 5	10	QPSK	A	0896M	1:1	0.00	836.50	20525	1.0	24.0	22.31	25	12	Left	10	0	0.024	1.409	0.104	0.173	0.108		13.8			
AN/ELC CFS-1 1190 - SAFETY UNIT																											
Spatial Peak																		1.6 W/kg (mW/g)									
Unintended Exposure (General Population)																		averaged over 1 gram									



Table 12-22 | Plot A12

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	Pinnt [dBm]	Overall Pinnt [dBm]	RFSPinnt [dBm]
Body-worn/Hotspot	LTE Band 5	10	QPSK	E	0898M	1:1	-0.08	836.50	20525	0.0	22.0	21.58	1	0	Back	5	0.566	1.102	0.624	0.792	0.495		24.0		
Body-worn/Hotspot	LTE Band 5	10	QPSK	E	0898M	1:1	-0.01	836.50	20525	0.0	22.0	21.63	25	12	Back	5	0.620	1.089	0.675	0.857	0.536	Plot	23.7		
Hotspot	LTE Band 5	10	QPSK	E	0898M	1:1	-0.08	836.50	20525	0.0	22.0	21.58	1	0	Front	5	0.476	1.102	0.325	0.567	0.437		24.6		
Hotspot	LTE Band 5	10	QPSK	E	0898M	1:1	-0.01	836.50	20525	0.0	22.0	21.63	25	12	Front	5	0.506	1.089	0.551	0.700	0.437		24.5		
Hotspot	LTE Band 5	10	QPSK	E	0898M	1:1	0.09	836.50	20525	0.0	22.0	21.58	1	0	Top	10	0.212	1.102	0.234	0.297	0.185		28.3		
Hotspot	LTE Band 5	10	QPSK	E	0898M	1:1	-0.09	836.50	20525	0.0	22.0	21.63	25	12	Top	10	0.243	1.089	0.265	0.323	0.211		27.7		
Hotspot	LTE Band 5	10	QPSK	E	0898M	1:1	0.00	836.50	20525	0.0	22.0	21.58	1	0	Right	10	0.178	1.102	0.186	0.249	0.156		29.0		
Hotspot	LTE Band 5	10	QPSK	E	0898M	1:1	-0.04	836.50	20525	0.0	22.0	21.63	25	12	Right	10	0.186	1.089	0.203	0.258	0.161		28.9		
AND/IEEE CS1.1 1982 - SAFETY LIMIT																			Body 1.6 W/kg (mW/g) averaged over 1 gram						
Spatial Peak Uncontrolled Exposure/General Population																									

12.7 LTE Band 66 Standalone SAR

Table 12-23 | Plot A13

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	Pinnt [dBm]	Overall Pinnt [dBm]	RFSPinnt [dBm]
Head	LTE Band 66	20	QPSK	A	0831M	1:1	0.01	1745.00	132322	0.0	24.0	23.17	1	50	Right Cheek	0	109	0.174	1.211	0.211	0.247	0.154	Plot	30.7		
Head	LTE Band 66	20	QPSK	A	0831M	1:1	-0.03	1745.00	132322	1.0	23.0	22.00	50	25	Right Cheek	0	109	0.126	1.209	0.159	0.235	0.147		30.9		
Head	LTE Band 66	20	QPSK	A	0831M	1:1	0.04	1745.00	132322	0.0	24.0	23.17	1	50	Right TIR	0	109	0.075	1.211	0.091	0.167	0.097		34.4		
Head	LTE Band 66	20	QPSK	A	0831M	1:1	-0.01	1745.00	132322	1.0	23.0	22.00	50	25	Right TIR	0	109	0.053	1.209	0.067	0.099	0.062		34.7		
Head	LTE Band 66	20	QPSK	A	0831M	1:1	0.00	1745.00	132322	0.0	24.0	23.17	1	50	Left Cheek	0	109	0.061	1.211	0.074	0.087	0.054		35.3		
Head	LTE Band 66	20	QPSK	A	0831M	1:1	0.04	1745.00	132322	1.0	23.0	22.00	50	25	Left Cheek	0	109	0.047	1.209	0.059	0.088	0.055		35.2		
Head	LTE Band 66	20	QPSK	A	0831M	1:1	0.04	1745.00	132322	0.0	24.0	23.17	1	50	Left TIR	0	109	0.065	1.211	0.079	0.092	0.068		35.0		
Head	LTE Band 66	20	QPSK	A	0831M	1:1	-0.06	1745.00	132322	1.0	23.0	22.00	50	25	Left TIR	0	109	0.046	1.209	0.062	0.091	0.057		35.0		
AND/IEEE CS1.1 1982 - SAFETY LIMIT																		Head								
Spatial Peak																		1.6 W/kg (mW/g)								
Uncontrolled Exposure/General Population																		averaged over 1 gram								

Table 12-24 | Plot A14

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	Pinnt [dBm]	Overall Pinnt [dBm]	RFSPinnt [dBm]
Body-worn/Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.09	1720.00	132072	0.0	18.0	16.82	1	99	Back	5	99	0.732	1.312	0.960	1.219	0.762		18.1		
Body-worn/Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.06	1745.00	132322	0.0	18.0	16.97	1	50	Back	5	99	0.795	1.268	1.008	1.280	0.800	Plot	17.9		
Body-worn/Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.06	1720.00	132072	0.0	18.0	16.78	1	50	Back	5	99	0.728	1.312	0.953	1.218	0.753		18.2		
Body-worn/Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.01	1720.00	132072	0.0	18.0	16.86	50	50	Back	5	99	0.701	1.300	0.911	1.157	0.723		18.4		
Body-worn/Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.09	1745.00	132322	0.0	18.0	17.05	50	25	Back	5	99	0.759	1.245	0.934	1.186	0.742		18.2		
Body-worn/Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.01	1720.00	132072	0.0	18.0	16.78	1	50	Back	5	99	0.711	1.312	0.943	1.196	0.748		18.2		
Body-worn/Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.01	1745.00	132322	0.0	18.0	16.96	100	0	Back	5	99	0.743	1.271	0.944	1.199	0.749		18.2		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.03	1720.00	132072	0.0	18.0	16.82	1	99	Front	5	99	0.653	1.312	0.739	0.939	0.587		19.3		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.08	1745.00	132322	0.0	18.0	16.97	1	50	Front	5	99	0.697	1.268	0.884	1.123	0.702		18.5		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.01	1720.00	132072	0.0	18.0	16.78	1	0	Front	5	99	0.687	1.324	0.883	1.121	0.701		18.5		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.01	1720.00	132072	0.0	18.0	16.86	50	50	Front	5	99	0.631	1.300	0.820	1.041	0.652		18.8		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.01	1745.00	132322	0.0	18.0	17.05	50	25	Front	5	99	0.683	1.245	0.860	1.080	0.674		18.7		17.9
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.01	1720.00	132072	0.0	18.0	16.78	50	0	Front	5	99	0.644	1.321	0.851	1.081	0.676		18.7		17.0
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.02	1745.00	132322	0.0	18.0	16.96	100	0	Front	5	99	0.657	1.271	0.876	1.069	0.663		18.7		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.00	1720.00	132072	0.0	18.0	16.82	1	99	Bottom	10	99	0.584	1.312	0.746	0.973	0.608		19.1		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.00	1745.00	132322	0.0	18.0	16.97	1	50	Bottom	10	99	0.643	1.248	0.814	1.034	0.646		18.8		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.02	1720.00	132072	0.0	18.0	16.78	50	0	Bottom	10	99	0.616	1.324	0.820	1.041	0.653		18.8		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.01	1745.00	132322	0.0	18.0	17.05	50	25	Bottom	10	99	0.619	1.245	0.771	0.979	0.612		19.1		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.02	1745.00	132322	0.0	18.0	16.96	100	0	Bottom	10	99	0.616	1.271	0.783	0.994	0.621		19.0		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.01	1745.00	132322	0.0	18.0	16.97	1	50	Right	10	99	0.651	1.268	0.867	0.985	0.653		18.7		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.06	1745.00	132322	0.0	18.0	17.05	50	25	Right	10	99	0.650	1.245	0.862	0.979	0.650		19.0		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	0.03	1745.00	132322	0.0	18.0	16.97	1	50	Left	10	99	0.637	1.268	0.847	0.950	0.627		19.2		
Hotspot	LTE Band 66	20	QPSK	A	0831M	1:1	-0.17	1745.00	132322	0.0	18.0	17.05	50	25	Left	10	99	0.636	1.245	0.845	0.957	0.636		19.4		
Body																		1.6 W/kg (mW/g) averaged over 1 gram								
AND/IEEE CS1.1 1982 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																										

12.8 LTE Band 2 Standalone SAR

Table 12-25 | Plot A15

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	Pinnt [dBm]	Overall Pinnt [dBm]	RFSPinnt [dBm]
Head	LTE Band 2	20	QPSK	A	0831M	1:1	0.07	1880.00	18900	0.0	24.0	22.81	1	0	Right Cheek	0	100	0.230	1.315	0.138	0.223	0.139	Plot	32.0		
Head	LTE Band 2	20	QPSK	A	0831M	1:1	-0.03	1880.00	18900	1.0	23.0	21.99	50	0	Right Cheek	0	100	0.096	1.449	0.109	0.247	0.154		31.5		
Head	LTE Band 2	20	QPSK	A	0831M	1:1	-0.07	1880.00	18900	0.0	24.0	22.81	1	0	Right TIR	0	100	0.079	1.315	0.104	0.147	0.092		33.8		
Head	LTE Band 2	20	QPSK	A	0831M	1:1	0.01	1880.00	18900	1.0	23.0	21.99	50	0	Right TIR	0	100	0.051	1.449	0.077	0.138	0.088		34.1		
Head	LTE Band 2	20	QPSK	A	0831M	1:1	0.02	1880.00	18900	0.0	24.0	22.81	1	0	Left Cheek	0	100	0.085	1.315	0.112	0.158	0.099		33.5		
Head	LTE Band 2	20	QPSK	A	0831M	1:1	0.09	1880.00	18900	1.0	23.0	21.99	50	0	Left Cheek	0	100	0.066	1.449	0.106	0.178	0.111		33.0		
Head	LTE Band 2	20	QPSK	A	0831M	1:1	-0.02	1880.00	18900	1.0	23.0	21.99	50	0	Left TIR	0	100	0.071	1.315	0.101	0.143	0.093		33.7		
Head	LTE Band 2	20	QPSK	A	0831M	1:1	0.05	1880.00	18900	1.0	23.0	21.99	50	0	Left TIR	0	100	0.062	1.449	0.090	0.160	0.100		33.4		
ANALYZER CHB 1 - 1880 - 1890 MHz																		Head								
Spatial Peak																		1.6 W/kg (mW/g)								
Uncorrelated Power / General Population																		Reported over 100 days								

12.9 LTE Band 41 Standalone SAR

Table 12-27

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	Pinch [dBm]	Overall Pinch [dBm]	RF Pinch [dBm]	
Head	LTE Band 41	20	QPSK	B	08213M	1:1.58	-0.50	2636.50	410505	0.0	25.0	24.61	1	50	Right Cheek	0	N/A	0.028	1.094	0.021	0.222	0.129		38.2			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.20	2636.50	410505	1.0	24.0	23.65	50	25	Right Cheek	0	N/A	0.009	1.084	0.021	0.088	0.118		39.0			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.07	2636.50	410505	0.0	25.0	24.61	1	50	Right T/R	0	N/A	0.007	1.094	0.019	0.135	0.084		40.5			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.06	2636.50	410505	1.0	24.0	23.65	50	25	Right T/R	0	N/A	0.003	1.094	0.014	0.129	0.081		40.7			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.17	2636.50	410505	0.0	25.0	24.61	1	50	Left Cheek	0	N/A	0.035	1.094	0.038	0.277	0.173		37.3			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.18	2636.50	410505	0.0	25.0	24.61	1	0	Left Cheek	0	N/A	0.038	1.122	0.029	0.211	0.132		38.5	37.3	31.8	
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.07	2636.50	410505	0.0	24.0	23.65	50	25	Left Cheek	0	N/A	0.007	1.094	0.021	0.247	0.154		37.7			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.10	2636.50	410505	0.0	25.0	24.61	1	50	Left T/R	0	N/A	0.008	1.094	0.018	0.077	0.079		40.7			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.14	2636.50	410505	1.0	24.0	23.65	50	25	Left T/R	0	N/A	0.001	1.084	0.012	0.109	0.068		41.4			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	-0.06	2636.50	410505	0.0	25.0	24.61	1	0	Left Cheek	0	N/A	0.009	1.094	0.012	0.247	0.154		37.7			
Head	LTE Band 41	20	QPSK	B	08313M	1:1.58	0.06	2616.70	408517	0.0	25.0	24.70	50	1	99	Left Cheek	0	ULCA 41C	0.009	1.072	0.031	0.225	0.141		38.2		
ANSI/IEEE C95.1-1992: SAFETY LIMIT																			Head								
Special Peak																			1.6 W/kg (mW/g)								
Uncontrolled Exposure/General Population																			averaged over 1 gram								

Table 12-28 | Plot A17

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power DfB [dB]	Frequency [MHz]	Channel #	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Add'l Info	Measured E1 SAR [W/kg]	Power Scaling Factor	Reported E1 SAR [W/kg]	Adjusted E1 SAR [W/kg]	Exposure Rate (1g SAR)	Plot #	Planck [dBm]	Overall Planck [dBm]	RF Power [dBm]
Head	LTE Band 41	20	QPSK	F	0831M	1:1.58	-0.04	2506.00	39750	0.0	19.0	18.68	1	50	Right Chck	0	N/A	0.462	1.076	0.497	0.611	0.395		20.0		
Head	LTE Band 41	20	QPSK	F	0831M	1:1.58	0.01	2506.00	39760	0.0	19.0	18.73	50	25	Right Chck	0	N/A	0.465	1.064	0.496	0.629	0.392		20.0		
Head	LTE Band 41	20	QPSK	F	0831M	1:1.58	0.07	2506.00	39750	0.0	19.0	18.68	1	50	Right Ttr	0	N/A	0.584	1.076	0.639	0.802	0.507		19.1		
Head	LTE Band 41	20	QPSK	F	0832M	1:1.58	-0.08	2549.50	40035	0.0	19.0	18.17	1	50	Right Ttr	0	N/A	0.413	1.211	0.522	0.663	0.414		19.8		
Head	LTE Band 41	20	QPSK	F	0833M	1:1.58	0.03	2593.00	40620	0.0	19.0	19.09	1	50	Right Ttr	0	N/A	0.698	1.233	0.654	0.780	0.488		19.1		
Head	LTE Band 41	20	QPSK	F	0835M	1:1.58	0.00	2656.00	41955	0.0	19.0	18.76	1	99	Right Ttr	0	N/A	0.585	1.189	0.608	0.768	0.488	Plot	18.2		
Head	LTE Band 41	20	QPSK	F	0835M	1:1.58	0.03	2656.00	41955	0.0	19.0	18.21	1	99	Right Ttr	0	N/A	0.585	1.199	0.605	0.883	0.551		18.5		
Head	LTE Band 41	20	QPSK	F	0835M	1:1.58	-0.10	2680.00	41490	0.0	19.0	18.73	1	50	Right Ttr	0	N/A	0.546	1.194	0.652	0.828	0.518		18.8		
Head	LTE Band 41	20	QPSK	F	0835M	1:1.58	0.00	2680.00	39750	0.0	19.0	18.73	50	25	Right Ttr	0	N/A	0.578	1.064	0.678	0.734	0.458		18.5		16.0
Head	LTE Band 41	20	QPSK	F	0835M	1:1.58	0.04	2680.00	39750	0.0	19.0	18.68	50	25	Left Chck	0	N/A	0.596	1.076	0.275	0.349	0.218		22.6		
Head	LTE Band 41	20	QPSK	F	0837M	1:1.58	0.02	2506.00	39750	0.0	19.0	18.73	50	25	Left Chck	0	N/A	0.255	1.064	0.271	0.344	0.215		22.6		
Head	LTE Band 41	20	QPSK	F	0837M	1:1.58	0.01	2506.00	39750	0.0	19.0	18.68	50	25	Left Ttr	0	N/A	0.253	1.076	0.271	0.345	0.216		22.6		
Head	LTE Band 41	20	QPSK	F	0837M	1:1.58	-0.02	2506.00	39750	0.0	19.0	18.73	50	25	Left Ttr	0	N/A	0.262	1.064	0.279	0.354	0.221		22.5		
Head	LTE Band 41	20	QPSK	F	0831M	1:1.58	0.01	2636.50	41205	0.0	19.0	18.18	1	99	Right Ttr	0	ULICA 4LC	0.542	1.208	0.655	0.832	0.519		18.8		
AVERAGE CH1.002 - SAFETY LIMIT																		Head								
Spatial Peak																		1.6 W/kg								
Uncontrolled Region: General Population																		averaged over 1 gram								

Table 12-29

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power DFB [dBm]	Frequency [MHz]	Channel B	MPK [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RIS Size	RIS Offset	Test Position	Spacing [mm]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Pinnt [dBm]	Overall Pinnt [dBm]	RF5 Pinnt [dBm]	
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.03	2506.00	39750	0.0	20.0	19.42	1	50	Back	5	N/A	0.485	1.143	0.566	0.739	0.449		20.4			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.03	2506.00	39750	0.0	20.0	19.62	1	90	Back	5	N/A	0.492	1.091	0.448	0.394	0.448		21.3			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	0.09	2593.00	40620	0.0	20.0	19.82	1	99	Back	5	N/A	0.414	1.042	0.431	0.548	0.343		21.6			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.05	2636.00	41055	0.0	20.0	19.87	1	50	Back	5	N/A	0.628	1.090	0.647	0.821	0.513		19.9			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.07	2636.00	41055	0.0	20.0	19.76	1	50	Back	5	N/A	0.607	1.055	0.663	0.842	0.526		19.8			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	0.09	2680.00	41490	0.0	20.0	19.33	1	50	Back	5	N/A	0.397	1.167	0.463	0.588	0.368		21.3			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.04	2656.00	39750	0.0	20.0	19.44	50	0	Back	5	N/A	0.484	1.138	0.440	0.384	0.365		21.3			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.03	2549.00	40285	0.0	20.0	19.49	50	0	Back	5	N/A	0.466	1.091	0.499	0.645	0.396		21.3			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	0.03	2593.00	40620	0.0	20.0	19.84	50	25	Back	5	N/A	0.433	1.038	0.440	0.571	0.357		21.7			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.07	2636.00	41055	0.0	20.0	19.83	50	25	Back	5	N/A	0.629	1.056	0.639	0.852	0.558		19.9			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.08	2680.00	41490	0.0	20.0	19.41	50	25	Back	5	N/A	0.396	1.048	0.449	0.571	0.357		21.7	19.6	17.0	
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08360M	11.58	0.00	2636.00	41055	0.0	20.0	19.86	100	0	Front	5	N/A	0.569	1.033	0.588	0.746	0.466		20.3			
Hotspot	LTE Band 41	20	QPSK	B	08321M	11.58	-0.03	2636.00	41055	0.0	20.0	19.87	1	50	Front	5	N/A	0.473	1.093	0.485	0.659	0.397		21.1			
Hotspot	LTE Band 41	20	QPSK	B	08321M	11.58	-0.02	2636.00	41055	0.0	20.0	19.88	50	25	Front	5	N/A	0.466	1.056	0.473	0.601	0.376		21.1			
Hotspot	LTE Band 41	20	QPSK	B	08371M	11.58	0.01	2636.00	41055	0.0	20.0	19.87	1	50	Bottom	10	N/A	0.293	1.030	0.302	0.383	0.239		23.2			
Hotspot	LTE Band 41	20	QPSK	B	08371M	11.58	0.01	2636.00	41055	0.0	20.0	19.87	1	50	Bottom	10	N/A	0.265	1.030	0.272	0.345	0.226		23.2			
Hotspot	LTE Band 41	20	QPSK	B	08371M	11.58	-0.02	2636.00	41055	0.0	20.0	19.87	1	50	Right	10	N/A	0.158	1.030	0.163	0.207	0.129		24.8			
Hotspot	LTE Band 41	20	QPSK	B	08371M	11.58	-0.03	2636.00	41055	0.0	20.0	19.90	1	50	Right	10	N/A	0.149	1.036	0.151	0.192	0.120		26.2			
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	08311M	11.58	-0.04	2636.00	41055	0.0	20.0	19.55	1	99	Back	5	ULICA 41C	0.617	1.109	0.684	0.869	0.543		19.6			
ANSI/IEEE C95.1 1992 - Safety Limit																		Body									
Uncontrolled Exposure - General Population																		1.6 W/kg [mW/kg]									
																		averaged over 1 gram									

Table 12-30 | Plot A18

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Dft [dB]	Frequency [MHz]	Channel #	MPK [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Pinnt [dBm]	Overall Pinnt [dBm]	RF5 Pinnt [dBm]	
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.11	2506.00	39750	0.0	21.5	21.22	1	50	Back	5	N/A	0.080	1.067	0.630	0.800	0.500	21.5	21.5			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0838M	1:1.58	-0.07	2491.50	41555	0.0	21.5	20.98	1	50	Back	5	N/A	0.080	1.067	0.630	0.875	0.547	21.5	21.5			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.02	2953.00	40620	0.0	21.5	20.98	1	99	Back	5	N/A	0.031	1.233	0.655	0.831	0.519	21.5	21.5			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.07	2636.50	41555	0.0	21.5	20.98	1	50	Back	5	N/A	0.049	1.180	0.746	0.973	0.608	20.6	20.6			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.07	2480.00	41490	0.0	21.5	20.82	1	50	Back	5	N/A	0.060	1.065	0.760	0.965	0.603	20.7	20.7			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0838M	1:1.58	0.01	2506.00	39750	0.0	21.5	21.28	50	25	Back	5	N/A	0.612	1.052	0.644	0.818	0.511	21.4	21.4			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.02	2499.50	40185	0.0	21.5	20.88	50	25	Back	5	N/A	0.118	1.167	0.605	0.768	0.480	21.7	21.7			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.02	2499.50	40185	0.0	21.5	20.98	50	25	Back	5	N/A	0.118	1.167	0.605	0.768	0.480	21.7	21.7			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0838M	1:1.58	0.04	2636.50	41055	0.0	21.5	20.88	50	25	Back	5	N/A	0.679	1.153	0.783	0.904	0.621	20.5	20.5			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0913M	1:1.58	-0.26	2636.50	41555	0.0	21.5	20.79	50	25	Back	5	N/A	0.609	1.178	0.811	1.032	0.645	20.4	20.4			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0838M	1:1.58	-0.02	2480.00	41555	0.0	21.5	20.82	50	25	Back	5	N/A	0.077	1.050	0.677	0.878	0.588	20.6	20.6	20.2		
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0813M	1:1.58	0.04	2506.00	39750	0.0	21.5	21.12	100	0	Front	5	N/A	0.562	1.091	0.613	0.739	0.487	21.6	21.6			
Hotspot	LTE Band 41	20	QPSK	F	0838M	1:1.58	-0.04	2506.00	39750	0.0	21.5	21.22	1	50	Front	5	N/A	0.411	1.067	0.439	0.577	0.348	23.0	23.0			
Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.07	2506.00	39750	0.0	21.5	21.28	1	50	Front	5	N/A	0.468	1.050	0.468	0.520	0.388	22.6	22.6			
Hotspot	LTE Band 41	20	QPSK	F	0838M	1:1.58	0.01	2506.00	39750	0.0	21.5	21.28	50	25	Top	10	N/A	0.281	1.067	0.300	0.381	0.238	24.7	24.7			
Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.08	2506.00	39750	0.0	21.5	21.28	50	25	Top	10	N/A	0.389	1.052	0.404	0.386	0.241	24.6	24.6			
Hotspot	LTE Band 41	20	QPSK	F	0818M	1:1.58	-0.02	2506.00	39750	0.0	21.5	21.22	1	50	Left	10	N/A	0.322	1.067	0.322	0.393	0.243	24.8	24.8			
Hotspot	LTE Band 41	20	QPSK	F	0838M	1:1.58	0.01	2506.00	39750	0.0	21.5	21.28	50	25	Left	10	N/A	0.404	1.052	0.025	0.012	0.020	35.4	35.4			
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0913M	1:1.58	0.03	2636.50	41555	0.0	21.5	20.85	50	25	Back	5	ULICA 4/C	0.729	1.161	0.846	1.075	0.672	Plot	20.2			
AND/USE CWS 1.1992 - SAFETY LIMIT																											
Spatial Peak																		Body									
Uncontrolled Exposure (General Population)																		1.6 W/kg (averaged over 1 gram)									

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12.10 NR Band n5 Standalone SAR

Table 12-31

[illegible]

Table 12-32 | Plot A19

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured I SAR [W/kg]	Power Scaling Factor	Reported I SAR [W/kg]	Adjusted I SAR [W/kg]	Exposure Ratio [I SAR]	Post #	PLink [dBm]	Overall PLink [dBm]	EPS PLink [dBm]
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	22.0	20.58	1	53	Right Cheek	0	0.526	1.387	0.780	0.927	0.579	23.3			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	22.0	20.70	50	28	Right TIR	0	0.527	1.390	0.771	0.903	0.564	23.4			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	22.0	20.58	1	53	Right TIR	0	0.473	1.387	0.656	0.833	0.521	23.8			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.09	836.50	167300	DFT-s-OFDM	0.0	22.0	20.70	50	28	Right TIR	0	0.472	1.349	0.637	0.809	0.506	23.9			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.05	836.50	167300	DFT-s-OFDM	0.0	22.0	20.70	50	53	Left Cheek	0	0.528	1.387	0.862	1.247	0.779	23.9			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.07	836.50	167300	DFT-s-OFDM	0.0	22.0	20.58	50	28	Left Cheek	0	0.742	1.449	1.001	1.279	0.824	Post	21.8	21.0	
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	22.0	20.51	500	0	Left Cheek	0	0.755	1.409	0.996	1.315	0.872	21.9			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.03	836.50	167300	CP-OFDM	0.0	22.0	20.58	1	53	Left Cheek	0	0.713	1.450	0.980	1.286	0.860	21.9			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	22.0	20.58	1	53	Left TIR	0	0.655	1.387	0.881	1.119	0.699	22.5			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	22.0	20.70	50	28	Left TIR	0	0.650	1.349	0.850	1.079	0.674	22.7			
Head	NB Band-rs	20	QPSK	E	0980M	1:1	-0.04	836.50	167300	DFT-s-OFDM	0.0	22.0	20.51	500	0	Left TIR	0	0.611	1.450	0.889	1.129	0.706	22.5			
ANSI/IEEE C63.1 D1992 - SAFETY LIMIT																		Head						Spatial Peak		
Unrestricted (General) Use																		1.6 W/kg (mW/g)								

Table 12-33 | Plot A20

Exposure	Band / Mode	Bandwidth [kHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power (dBm)	Frequency [MHz]	Channel B	Waveform	MPE [dB]	Max Allowed Power (dBm)	Conducted Power [dBm]	RIS Size	RIS Offset	Test Position	Spacing [mm]	Time state	Measured Ig SAR [W/kg]	Power Scaling Factor	Reported Ig SAR [W/kg]	Adjusted Ig SAR [W/kg]	Exposure Ratio [Ig SAR]	Plot #	Plmit [min]	Overall [min]	RFI [min]
Body wear/Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.08	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.03	1	104	Back	5	0	0.683	1.250	0.859	0.943	0.589		25.4	25.4	
Body wear/Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.04	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.07	50	28	Back	5	0	0.703	1.259	0.871	0.955	0.597	Hot			
Body wear/Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.06	836.50	167300	DTF-C-OFDM4	1.0	24.0	23.82	100	0	Back	5	0	0.844	1.263	0.882	0.941	0.588				
Body wear/Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.03	836.50	167300	DTF-C-OFDM4	1.5	23.5	23.33	1	1	Back	5	0	0.484	1.312	0.635	0.683	0.514				
Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.06	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.03	1	104	Front	5	0	0.840	1.250	0.425	0.466	0.201		28.7		
Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.00	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.07	50	28	Front	5	0	0.840	1.259	0.421	0.462	0.209				
Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.00	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.07	50	28	Bottom	10	0	0.840	1.259	0.421	0.462	0.209				
Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.04	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.07	50	28	Bottom	10	0	0.844	1.259	0.055	0.060	0.038		17.7		
Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.00	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.03	1	104	Right	10	0	0.099	1.250	0.074	0.081	0.051		36.3		
Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.00	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.03	1	104	Right	10	0	0.099	1.250	0.073	0.078	0.051		37.7		
Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.02	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.03	1	104	Left	10	0	0.099	1.250	0.118	0.129	0.081		34.2		
Hotspot	NR Band n15	30	QPSK	A	0595M	1:1	0.04	836.50	167300	DTF-C-OFDM4	0.0	25.0	24.07	50	28	Left	10	0	0.844	1.259	0.115	0.144	0.090		33.8		
ANSI/IEEE C95.1-1992 - SAFETY LIMIT																				Body							
Spatial Peak																				1.6 W/kg (mW/g)							
Uncontrolled Environment (General Population)																				0.08 W/kg (mW/g)							

Table 12-34

[illegible]

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12.11 NR Band n66 Standalone SAR

Table 12-35

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power DfB [dB]	Frequency [MHz]	Channel F	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Tune state	Measured EIS SAR [W/kg]	Power Scaling Factor	Reported EIS SAR [W/kg]	Adjusted EIS SAR [W/kg]	Exposure Ratio (EIS SAR)	Port #	PinT [dBm]	Overall PinT [dBm]	EIS PinT [dBm]	
Head	NR band n66	45	QPSK	A	0850M	1:1	0.21	1745.00	345000	DFT-s-OFDM	0.0	24.0	23.31	1	1	Right Cheek	0	45	0.125	1.172	0.147	0.227	0.142	32.3				
Head	NR band n66	45	QPSK	A	0850M	1:1	0.05	1745.00	345000	DFT-s-OFDM	0.0	24.0	23.22	120	61	Right Cheek	0	45	0.107	1.197	0.128	0.158	0.126	32.9				
Head	NR band n66	45	QPSK	A	0850M	1:1	0.06	1745.00	345000	CP-OFDM	1.5	22.5	21.76	1	1	Right Cheek	0	45	0.090	1.189	0.113	0.247	0.154	31.9				
Head	NR band n66	45	QPSK	A	0850M	1:1	0.05	1745.00	345000	DFT-s-OFDM	0.0	24.0	23.11	1	1	Right Tib	0	45	0.063	1.172	0.074	0.174	0.073	35.3				
Head	NR band n66	45	QPSK	A	0850M	1:1	0.09	1745.00	345000	DFT-s-OFDM	0.0	24.0	23.12	120	61	Right Tib	0	45	0.052	1.197	0.062	0.206	0.060	36.0	31.9	25.9		
Head	NR band n66	45	QPSK	A	0850M	1:1	0.06	1745.00	345000	DFT-s-OFDM	0.0	24.0	23.23	120	61	Right Tib	0	45	0.052	1.197	0.062	0.206	0.060	36.0				
Head	NR band n66	45	QPSK	A	0850M	1:1	0.06	1745.00	345000	DFT-s-OFDM	0.0	24.0	23.23	120	61	Left Tib	0	45	0.051	1.197	0.061	0.205	0.059	36.1				
Head	NR band n66	45	QPSK	A	0850M	1:1	0.01	1745.00	345000	DFT-s-OFDM	0.0	24.0	23.31	1	1	Left Tib	0	45	0.086	1.172	0.101	0.156	0.098	33.9				
Head	NR band n66	45	QPSK	A	0850M	1:1	0.11	1745.00	345000	DFT-s-OFDM	0.0	24.0	23.12	120	61	Left Tib	0	45	0.077	1.197	0.092	0.143	0.089	34.1				
ANNECY CR1.192 - SAFETY LIMIT																			Head					1.6 W/kg (EIS SAR) averaged over 1 g.cm				
Spatial Peak Uncontrolled Exposure: General Population																												

Table 12-36 | Plot A21

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power DfB [dB]	Frequency [MHz]	Channel #	Waveform	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RISize	RIS Offset	Test Position	Spacing [mm]	Measured Ig Sat [W/kg]	Power Scaling Factor	Reported Ig Sat [W/kg]	Adjusted Ig Sat [W/kg]	Exposure Rate [μSAR]	Pot #	FilmB [dBm]	Overall FilmB [dBm]	EFS P[lim] [dBm]
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.02	1745.00	349000	DFT+OFDM	0.0	19.0	17.27	1	121	Right Cheek	0	0.329	1.489	0.788	1.001	0.626		20.0		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.02	1745.00	349000	DFT+OFDM	0.0	19.0	17.27	120	0	Left Cheek	0	0.329	1.489	0.823	1.001	0.633		19.8		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.06	1745.00	349000	DFT+OFDM	0.0	19.0	17.40	240	0	Right Cheek	0	0.521	1.549	0.807	1.025	0.640		19.9		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.07	1745.00	349000	DFT+OFDM	0.0	19.0	17.27	1	121	Right Trt	0	0.329	1.489	0.803	1.020	0.638		19.8		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.07	1745.00	349000	DFT+OFDM	0.0	19.0	17.27	120	0	Right Trt	0	0.329	1.489	0.811	1.020	0.644		19.9		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.01	1745.00	349000	DFT+OFDM	0.0	19.0	17.40	240	0	Right Trt	0	0.560	1.549	0.832	1.002	0.677		19.8		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.02	1745.00	349000	CP-OFDM	0.0	19.0	17.44	1	0	Right Trt	0	0.568	1.535	0.872	1.107	0.692	Pos	19.9		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.06	1745.00	349000	DFT+OFDM	0.0	19.0	17.27	1	121	Left Cheek	0	0.295	1.521	0.449	0.570	0.350		22.8		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.06	1745.00	349000	DFT+OFDM	0.0	19.0	17.40	120	0	Left Cheek	0	0.295	1.521	0.449	0.570	0.357		22.8		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.06	1745.00	349000	DFT+OFDM	0.0	19.0	17.27	1	121	Left Trt	0	0.348	1.489	0.535	0.604	0.409		21.6		
Head	NR Band n6e	45	QPSK	F	0859M	L1	-0.03	1745.00	349000	DFT+OFDM	0.0	19.0	17.48	120	0	Left Trt	0	0.588	1.521	0.546	0.602	0.433		21.6		
ANSI/EUREC CEM 11092 - SAFETY LIM.												Head												1.5 W/kg (mW/g)		
Uncontrolled Exposure General Population												E-field (V/m) (mV/cm)												#E-field (V/m) (mV/cm)		

Table 12-37 | Plot A22, A23

[illegible]

Table 12-38

Exposure	Band / Mode	Bandwidth [kHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Dens [mW/m²]	Frequency [MHz]	Channel #	Waveform	MPE [(dB)]	Max Allowed Power [dBm]	Conducted Power [dBm]	RIS Size	RIS Offset	Test Position	Spacing [mm]	Measured Ig SAE [W/kg]	Power Scaling Factor	Reported Ig SAE [W/kg]	Adjusted Ig SAE [W/kg]	Exposure Rate [gSAR]	Pot #	FIMT [(min)]	Overall FIMT [(min)]	EFS FIMT [(min)]
Body-worn/Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	0.06	1745.00	349000	DFT-a-GFDM	0.0	21.0	19.38	1	121	Back	5	0.506	1.462	0.760	0.840	0.588		22.3		
Body-worn/Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	0.02	1745.00	349000	DFT-a-GFDM	0.0	21.0	19.38	120	122	Back	5	0.477	1.452	0.693	0.880	0.510		22.5		
Body-worn/Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	0.01	1745.00	349000	CP-OFFDM	0.0	21.0	19.39	1	1	Front	5	0.531	1.483	0.787	0.909	0.625		22.6		
Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	-0.11	1745.00	349000	DFT-a-GFDM	0.0	21.0	19.35	1	121	Front	5	0.388	1.462	0.567	0.720	0.450		23.4		
Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	0.01	1745.00	349000	DFT-a-GFDM	0.0	21.0	19.38	120	122	Front	5	0.536	1.452	0.546	0.693	0.433		23.0	22.0	20.0
Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	0.04	1745.00	349000	DFT-a-GFDM	0.0	21.0	19.35	1	121	Top	10	0.349	1.462	0.497	0.634	0.399		24.0		
Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	0.08	1745.00	349000	DFT-a-GFDM	0.0	21.0	19.35	120	122	Right	10	0.361	1.452	0.493	0.617	0.347		24.3		
Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	0.07	1745.00	349000	DFT-a-GFDM	0.0	21.0	19.35	1	121	Left	10	0.345	1.462	0.066	0.084	0.052		24.0		
Hotspot	NR Band n4e	45	QPSK	F	C058M-1	1:1	0.08	1745.00	349000	DFT-a-GFDM	0.0	21.0	19.38	120	122	Left	10	0.500	1.452	0.073	0.093	0.058		22.1		
AND/OR IEEE C158 - SAFETY LIMIT																										
Spatial Peak																		Body								
Unmodulated CW General Population																		1.6 W/kg (mW/g)								

12.12 NR Band n41 Standalone SAR

Table 12-39

Exposure	Band / Mode	Bandwidth [kHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power [dB]	Frequency [MHz]	Channel #	Waveform	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAE [W/kg]	Power Scaling Factor	Reported 1g SAE [W/kg]	Adjusted 1g SAE [W/kg]	Exposure Rate [g SAE]	Plot #	PLM1 [dBm]	Overall PLM1 [dBm]	PL5 PLM1 [dBm]
Head	NR Band n41	100	QPSK	B	0838M	1:1	0.03	2592.99	518598	DFT-a-OFDM	0.0	22.0	21.83	1	273	Right Cheek	0	0.001	1.040	0.032	0.028	0.018			38.6	
Head	NR Band n41	100	QPSK	B	0838M	1:1	0.04	2592.99	518598	DFT-a-OFDM	0.0	22.0	21.83	135	138	Right Cheek	0	0.001	1.040	0.031	0.027	0.017			36.8	
Head	NR Band n41	100	QPSK	B	0838M	1:1	0.04	2592.99	518598	CP-OFDM	0.0	22.0	21.40	1	1	Right Cheek	0	0.023	1.148	0.026	0.033	0.020			37.2	
Head	NR Band n41	100	QPSK	B	0838M	1:1	0.11	2592.99	518598	DFT-a-OFDM	0.0	22.0	21.0	1	273	Right TB	0	0.044	1.040	0.035	0.019	0.011			40.1	
Head	NR Band n41	100	QPSK	B	0838M	1:1	0.49	2592.99	518598	DFT-a-OFDM	0.0	22.0	21.83	135	138	Right TB	0	0.047	1.040	0.018	0.023	0.014			39.5	
Head	NR Band n41	100	QPSK	B	0817M	1:1	0.03	2592.99	518598	DFT-a-OFDM	0.0	22.0	21.83	1	273	Left Cheek	0	0.013	1.040	0.014	0.018	0.011			40.0	
Head	NR Band n41	100	QPSK	B	0817M	1:1	0.03	2592.99	518598	DFT-a-OFDM	0.0	22.0	21.83	135	138	Left Cheek	0	0.008	1.040	0.006	0.008	0.005			40.6	
Head	NR Band n41	100	QPSK	B	0838M	1:1	0.03	2592.99	518598	DFT-a-OFDM	0.0	22.0	21.83	1	273	Left TB	0	0.008	1.040	0.006	0.008	0.005			40.6	
Head	NR Band n41	100	QPSK	B	0838M	1:1	0.03	2592.99	518598	DFT-a-OFDM	0.0	22.0	21.83	135	138	Left TB	0	0.008	1.040	0.006	0.010	0.006			42.7	
Head																					Head					
Spatial Peak																					Spatial Peak					
Uncontrolled Exposure/General Population																					Uncontrolled Exposure/General Population					
ANSI/IEEE C95.1-1992 - SAFETY LIMIT																					ANSI/IEEE C95.1-1992 - SAFETY LIMIT					

Table 12-40 | Plot A24

Exposure	Band / Mode	Bandwidth (MHz)	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power DfB [dB]	Frequency [MHz]	Channel #	Waveform	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAE [mW/kg]	Power Scaling factor	Reported 1g Wt/kg	Adjusted 1g Wt/kg	Exposure Rate [g SAE]	Plot #	Pinnt [dBm]	Overall Pinnt [dBm]	FFS Pinnt [dBm]
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.06	2592.99	518598	DTT-C-OFDM	0.0	17.0	16.58	1	271	Right Cheek	0	0.178	1.102	0.637	0.809	0.505		18.9		
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.03	2592.99	518598	DTT-C-OFDM	0.0	17.0	16.63	135	138	Right Cheek	0	0.334	1.089	0.582	0.739	0.462		19.9		
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.05	2592.99	518598	DTT-C-OFDM	0.0	17.0	16.58	1	271	Right TR	0	0.443	1.102	0.709	0.900	0.563	Plot	18.4		
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.05	2592.99	518598	DTT-C-OFDM	0.0	17.0	16.63	135	138	Right TR	0	0.583	1.089	0.635	0.856	0.504		19.4	18.4	
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.03	2592.99	518598	CP-OFDM	0.0	17.0	16.17	1	1	Right TR	0	0.494	1.211	0.574	0.729	0.456		19.4		
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.05	2592.99	518598	DTT-C-OFDM	0.0	17.0	16.58	1	271	Left Cheek	0	0.220	1.102	0.240	0.307	0.192		23.1		
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.07	2592.99	518598	DTT-C-OFDM	0.0	17.0	16.63	135	138	Left Cheek	0	0.388	1.089	0.475	0.611	0.343		24.1	23.1	
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.06	2592.99	518598	DTT-C-OFDM	0.0	17.0	16.58	1	271	Left TR	0	0.362	1.102	0.289	0.367	0.230		23.1		
Head	NR Band n41	100	QPSK	F	0838M	L-1	-0.06	2592.99	518598	DTT-C-OFDM	0.0	17.0	16.63	135	138	Left TR	0	0.253	1.089	0.276	0.355	0.220		23.1		
AND/IEEE C610-1992 - SAFETY LIMIT																		Head								
Spatial Peak																		1.6 W/kg (mW/g)								
Uncorrelated Frequency General Exposure																		increased over 1.6 W/kg								

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Table 12-41 | Plot A25

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	P1mkt [dBm]	Overall P1mkt [dBm]	EF5 P1mkt [dBm]
Body worn/Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	-0.05	2592.99	518088	DFT-s-OFDM	0.0	18.0	17.71	1	273	Back	5	0.685	1.009	0.743	0.844	0.589		19.2		
Body worn/Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	-0.01	2592.99	518088	DFT-s-OFDM	0.0	18.0	17.78	135	138	Back	5	0.720	1.052	0.747	0.949	0.593	Plot	19.2		
Body worn/Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	-0.05	2592.99	518088	CP-OFDM	0.0	18.0	17.75	1	1	Back	5	0.695	1.199	0.761	0.966	0.605		19.1		
Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	0.01	2592.99	518088	DFT-s-OFDM	0.0	18.0	17.75	1	273	Front	5	0.594	1.069	0.421	0.535	0.334		21.2		
Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	0.20	2592.99	518088	DFT-s-OFDM	0.0	18.0	17.75	135	138	Front	5	0.652	1.069	0.562	0.636	0.355		23.5		
Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	-0.02	2592.99	518088	DFT-s-OFDM	0.0	18.0	17.75	1	273	Bottom	10	0.599	1.069	0.277	0.352	0.220		25.5		
Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	-0.02	2592.99	518088	DFT-s-OFDM	0.0	18.0	17.78	135	138	Bottom	10	0.240	1.052	0.254	0.323	0.202		23.8		
Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	0.01	2592.99	518088	DFT-s-OFDM	0.0	18.0	17.75	1	273	Right	10	0.585	1.069	0.371	0.517	0.316		25.6		
Hotspot	NR Band n41	100	QPSK	B	0837M	1:1	0.14	2592.99	518088	DFT-s-OFDM	0.0	18.0	17.78	135	138	Right	10	0.562	1.052	0.170	0.236	0.135		25.6		
ANSI/IEEE C63.1.1992 - SAFETY LIMIT																		Spatial Peak		Body						
Uncontrolled Exposure/General Population																				1.6 W/kg (mW/g)				averaged over 1 gram		

Table 12-42

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPE [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	P1mkt [dBm]	Overall P1mkt [dBm]	EF5 P1mkt [dBm]
Body worn/Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	0.08	2592.99	518088	DFT-s-OFDM	0.0	19.5	18.76	1	273	Back	5	0.621	1.185	0.737	0.936	0.585		20.8		
Body worn/Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	-0.13	2592.99	518088	DFT-s-OFDM	0.0	19.5	18.77	135	138	Back	5	0.574	1.185	0.679	0.862	0.538		21.1		
Body worn/Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	0.10	2592.99	518088	CP-OFDM	0.0	19.5	18.36	1	1	Back	5	0.484	1.300	0.642	0.835	0.509		21.4		
Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	-0.16	2592.99	518088	DFT-s-OFDM	0.0	19.5	18.76	1	273	Front	5	0.422	1.186	0.500	0.635	0.308		22.8		
Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	0.01	2592.99	518088	DFT-s-OFDM	0.0	19.5	18.77	135	138	Front	5	0.433	1.183	0.512	0.660	0.406		24.4		
Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	0.01	2592.99	518088	DFT-s-OFDM	0.0	19.5	18.76	1	273	Top	10	0.527	1.186	0.388	0.493	0.309		23.0		
Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	-0.04	2592.99	518088	DFT-s-OFDM	0.0	19.5	18.77	135	138	Top	10	0.514	1.186	0.371	0.473	0.295		23.8		
Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	0.08	2592.99	518088	DFT-s-OFDM	0.0	19.5	18.76	1	273	Left	10	0.504	1.186	0.028	0.036	0.033		34.0		
Hotspot	NR Band n41	100	QPSK	F	0837M	1:1	0.13	2592.99	518088	DFT-s-OFDM	0.0	19.5	18.77	135	138	Left	10	0.038	1.183	0.019	0.024	0.015		36.2		
ANSI/IEEE C63.1.1992 - SAFETY LIMIT																		Spatial Peak		Body						
Uncontrolled Exposure/General Population																				1.6 W/kg (mW/g)				averaged over 1 gram		

12.1 2.4 GHz WIFI MIMO Standalone SAR

Table 12-43 | Plot A26

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	P1mkt [dBm]	Overall P1mkt [dBm]	EF5 P1mkt [dBm]
Head	2.4 GHz WIFI / IEEE 802.11ac	20	OFDM	MIMO	0837M	83.71	-0.07	2412.00	1	5.0	16.0	15.54	16.0	15.88	Right Cheek	0	0.440	1.112	1.115	0.546	0.693	0.433		18.6		
Head	2.4 GHz WIFI / IEEE 802.11ac	20	OFDM	MIMO	0837M	83.71	-0.07	2412.00	1	5.0	16.0	15.54	16.0	15.88	Right Titl	0	0.366	1.112	1.115	0.454	0.576	0.360		19.4		
Head	2.4 GHz WIFI / IEEE 802.11ac	20	OFDM	MIMO	0837M	83.71	-0.15	2412.00	1	5.0	16.0	15.54	16.0	15.88	Left Cheek	0	0.400	1.112	1.115	0.512	0.640	0.400	Plot	19.4		
Head	2.4 GHz WIFI / IEEE 802.11ac	20	OFDM	MIMO	0837M	83.71	-0.15	2412.00	1	5.0	16.0	15.54	16.0	15.88	Left Titl	0	0.308	1.112	1.115	0.334	0.370	0.205		24.7		
ANSI/IEEE C63.1.1992 - SAFETY LIMIT																		Spatial Peak		Head						
Uncontrolled Exposure/General Population																				1.6 W/kg (mW/g)				averaged over 1 gram		

12.2 5 GHz WIFI SISO Standalone SAR

Table 12-44

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NI Band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio [1g SAR]	Plot #	P1mkt [dBm]	Overall P1mkt [dBm]	EF5 P1mkt [dBm]
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.03	5290.00	58	U-NI-2A	29.3	16.0	15.36	Right Cheek	0	0.608	1.159	1.045	0.797	1.012	0.633		16.9		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.03	5290.00	106	U-NI-2C	29.3	16.0	14.96	Right Cheek	0	0.501	1.159	1.045	0.674	0.896	0.515		17.7		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.12	5275.00	155	U-NI-3	29.3	16.0	14.67	Right Cheek	0	0.737	1.159	1.045	1.018	1.292	0.808		15.9		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.07	5855.00	171	U-NI-4	29.3	16.0	14.15	Right Cheek	0	0.725	1.159	1.045	1.008	1.343	0.839		15.7		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.11	5290.00	58	U-NI-2A	29.3	16.0	14.36	Right Titl	0	0.429	1.159	1.045	0.520	0.660	0.416		18.9		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	-0.01	5530.00	106	U-NI-3	29.3	16.0	14.80	Right Titl	0	0.563	1.159	1.045	0.475	0.603	0.377		18.2		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	-0.17	5275.00	155	U-NI-3	29.3	16.0	14.67	Right Titl	0	0.397	1.159	1.045	0.563	0.716	0.448		18.4		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.10	5855.00	171	U-NI-4	29.3	16.0	14.15	Right Titl	0	0.405	1.159	1.045	0.642	0.815	0.509		17.9		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.21	5290.00	58	U-NI-2A	29.3	16.0	15.36	Left Cheek	0	0.524	1.159	1.045	0.187	0.237	0.146		23.4		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	-0.17	5530.00	106	U-NI-2C	29.3	16.0	14.90	Left Cheek	0	0.130	1.159	1.045	0.175	0.222	0.139		23.5		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.00	5275.00	155	U-NI-3	29.3	16.0	14.67	Left Cheek	0	0.160	1.159	1.045	0.227	0.268	0.180		22.4		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	-0.01	5855.00	171	U-NI-4	29.3	16.0	14.15	Left Cheek	0	0.179	1.159	1.045	0.261	0.332	0.206		21.8		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.07	5290.00	58	U-NI-2A	29.3	16.0	15.36	Left Titl	0	0.153	1.159	1.045	0.185	0.235	0.147		23.3		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.07	5530.00	106	U-NI-2C	29.3	16.0	14.90	Left Titl	0	0.145	1.159	1.045	0.190	0.241	0.151		23.2		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	-0.08	5275.00	155	U-NI-3	29.3	16.0	14.67	Left Titl	0	0.109	1.159	1.045	0.155	0.196	0.123		24.1		
Head	5 GHz WIFI / IEEE 802.11ac	80	OFDM	G	0907M	95.69	-0.02	5855.00	171	U-NI-4	29.3	16.0	14.15	Left Titl	0	0.178	1.159	1.045	0.260	0.330	0.206		21.8		
ANSI/IEEE C63.1.1992 - SAFETY LIMIT																Spatial Peak		Head							
Uncontrolled Exposure/General Population																		1.6 W/kg (mW/g)		averaged over 1 gram					

Table 12-45 | Plot A28



12.3 5 GHz WIFI MIMO Standalone SAR

Table 12-47 | Plot A27

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NI band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power [2nd ant] [dBm]	Conducted Power [2nd ant] [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimt [dBm]	Overall Plimt [dBm]	EFS Plimt [dBm]
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.03	5290.00	58	U-NI-2A	58.5	16.0	15.13	16.0	15.10	Right Cheek	0	0.603	1.222	1.083	0.864	1.098	0.886		16.6		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.10	5530.00	106	U-NI-2C	58.5	16.0	14.62	16.0	15.10	Right Cheek	0	0.547	1.312	1.083	0.777	0.987	0.827		17.0		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.14	5775.00	155	U-NI-3	58.5	16.0	15.21	16.0	15.10	Right Cheek	0	0.605	1.064	1.083	0.864	1.097	0.886		16.6		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.30	5855.00	171	U-NI-4	58.5	16.0	15.62	16.0	15.10	Right Cheek	0	0.806	1.061	1.083	0.952	1.209	0.756	Plot	16.2		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.08	5290.00	58	U-NI-2A	58.5	16.0	15.13	16.0	15.10	Right Tilt	0	0.474	1.222	1.083	0.637	0.797	0.468		18.0		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.07	5330.00	106	U-NI-2C	58.5	16.0	14.62	16.0	15.10	Right Tilt	0	0.492	1.312	1.083	0.699	0.888	0.515		17.5		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.17	5775.00	155	U-NI-3	58.5	16.0	15.21	16.0	15.10	Right Tilt	0	0.522	1.064	1.083	0.498	0.535	0.320		19.0		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.01	5855.00	171	U-NI-4	58.5	16.0	15.62	16.0	15.10	Right Tilt	0	0.267	1.091	1.083	0.315	0.401	0.251		21.0		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.00	5290.00	58	U-NI-2A	58.5	16.0	15.13	16.0	15.10	Left Cheek	0	0.122	1.222	1.083	0.709	0.960	0.603		17.0		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.13	5530.00	106	U-NI-2C	58.5	16.0	14.62	16.0	15.10	Left Cheek	0	0.633	1.312	1.083	0.869	1.103	0.689		16.6		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.15	5610.00	122	U-NI-2C	58.5	16.0	14.56	16.0	15.10	Left Cheek	0	0.637	1.183	1.083	0.931	1.182	0.719		16.1		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.06	5690.00	138	U-NI-2C	58.5	16.0	14.69	16.0	15.10	Left Cheek	0	0.195	1.035	1.083	0.778	0.988	0.619		17.0		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.17	5775.00	155	U-NI-3	58.5	16.0	15.34	16.0	15.10	Left Cheek	0	0.408	1.064	1.083	0.514	0.653	0.408		18.8		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.07	5615.00	121	U-NI-4	58.5	16.0	15.13	16.0	15.10	Left Cheek	0	0.427	1.086	1.083	0.540	0.688	0.429		18.6		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.05	5290.00	58	U-NI-2A	58.5	16.0	15.13	16.0	15.10	Left Tilt	0	0.485	1.222	1.083	0.642	0.815	0.509		17.9		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.00	5330.00	106	U-NI-2C	58.5	16.0	14.62	16.0	15.10	Left Tilt	0	0.083	1.312	1.083	0.839	1.109	0.746		16.2		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.00	5610.00	122	U-NI-2C	58.5	16.0	14.56	16.0	15.10	Left Tilt	0	0.064	1.033	1.083	0.911	1.157	0.723		16.4		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.05	5690.00	138	U-NI-2C	58.5	16.0	14.58	16.0	15.10	Left Tilt	0	0.144	1.055	1.083	0.754	0.958	0.599		17.2		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.01	5775.00	155	U-NI-3	58.5	16.0	15.26	16.0	15.10	Left Tilt	0	0.056	1.064	1.083	0.948	1.095	0.845		16.6		
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.08	5855.00	171	U-NI-4	58.5	16.0	15.62	16.0	15.10	Left Tilt	0	0.081	1.061	1.083	0.445	0.565	0.356		19.4		
ANS/IEEE C63.1.1982 - SAFETY LIMIT																		Head							1.6 W/kg (mW/g)		
Spatial Peak																		Uncontrolled Exposure/General Population							averaged over 1 gram		

Note: Blue entry represents variability measurement

Note: To achieve the 10 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 16 dBm.

Table 12-48

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NI band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power [2nd ant] [dBm]	Conducted Power [2nd ant] [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimt [dBm]	Overall Plimt [dBm]	EFS Plimt [dBm]
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.00	5290.00	58	U-NI-2A	58.5	14.0	13.65	14.0	13.64	Back	0	0.080	1.086	1.083	0.812	1.051	0.728		18.8		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.00	5330.00	106	U-NI-2C	58.5	14.0	13.49	14.0	13.38	Back	0	0.108	1.312	1.083	0.986	1.251	0.789		18.4		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.08	5855.00	171	U-NI-4	58.5	14.0	13.92	14.0	13.78	Back	0	0.331	1.312	1.083	0.754	0.958	0.740		19.2		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.06	5290.00	58	U-NI-2A	58.5	14.0	13.65	14.0	13.64	Front	0	0.101	1.086	1.083	0.749	0.988	0.739		23.2		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.05	5530.00	106	U-NI-2C	58.5	14.0	13.46	14.0	13.38	Front	0	0.033	1.312	1.083	0.433	0.550	0.338		21.6		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.08	5855.00	171	U-NI-4	58.5	14.0	13.62	14.0	13.78	Front	0	0.388	1.312	1.083	0.551	0.760	0.515		20.5		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.13	5290.00	58	U-NI-2A	58.5	14.0	13.65	14.0	13.64	Top	0	0.141	1.086	1.083	0.646	0.811	0.603		20.7		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.04	5330.00	106	U-NI-2C	58.5	14.0	13.46	14.0	13.38	Top	0	0.160	1.312	1.083	0.436	0.549	0.362		25.0		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.06	5610.00	122	U-NI-2C	58.5	14.0	13.49	14.0	13.34	Top	0	0.166	1.033	1.083	0.366	0.429	0.249		23.0		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.09	5290.00	58	U-NI-2A	58.5	14.0	13.65	14.0	13.64	Right	0	0.086	1.086	1.083	0.604	0.804	0.614		19.7		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.01	5330.00	106	U-NI-2C	58.5	14.0	13.46	14.0	13.38	Right	0	0.089	1.312	1.083	0.311	0.414	0.289		27.1		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.17	5775.00	155	U-NI-3	58.5	14.0	13.81	14.0	13.71	Right	0	0.145	1.064	1.083	0.445	0.584	0.448		26.1		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.03	5290.00	58	U-NI-2A	58.5	14.0	13.65	14.0	13.64	Left	0	0.068	1.086	1.083	0.774	0.983	0.746		19.0		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.00	5330.00	106	U-NI-2C	58.5	14.0	13.46	14.0	13.38	Left	0	0.064	1.312	1.083	0.995	1.262	0.848		17.5		
Publimt	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.08	5855.00	171	U-NI-4	58.5	14.0	13.92	14.0	13.78	Left	0	0.080	1.061	1.083	0.445	0.565	0.356		19.4		
ANS/IEEE C63.1.1982 - SAFETY LIMIT																		Head							1.6 W/kg (mW/g)		
Spatial Peak																		Publimt							4.0 W/kg (mW/g)		
Uncontrolled Exposure/General Population																		averaged over 10 grams									

Note: To achieve the 10 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14 dBm.

12.4 6 GHz WIFI SISO Standalone SAR and APD

Table 12-49 | Plot A30

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimt [dBm]	Overall Plimt [dBm]	EFS Plimt [dBm]
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	-0.21	6025.00	15	6B.1	15.0	14.60	Right Cheek	0	0.512	1.096	1.003	0.563	0.715	0.447	Plot	17.4		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.03	6345.00	79	6B.1	15.0	13.33	Right Cheek	0	0.376	1.469	1.003	0.554	0.704	0.440		17.5		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.09	6005.00	111	6B.1	15.0	13.25	Right Cheek	0	0.231	1.496	1.003	0.347	0.440	0.275		19.6		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.03	6665.00	143	6B.1	15.0	13.31	Right Cheek	0	0.188	1.469	1.003	0.292	0.375	0.212		20.3		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.07	6985.00	207	6B.1	15.0	13.36	Right Cheek	0	0.103	1.271	1.003	0.131	0.167	0.104		23.8		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.05	6025.00	15	6B.1	15.0	14.60	Right Tib	0	0.254	1.096	1.003	0.279	0.155	0.222		20.5		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.03	6025.00	15	6B.1	15.0	14.60	Left Tib	0	0.128	1.096	1.003	0.148	0.188	0.118		23.2		
ANSI/IEEE C95.3-2019 SAFETY LIMIT																								
Spatial Peak																								
Uncontrolled Exposure/General Population																								
															1.6 W/kg (mW/g)									
															averaged over 1 gram									
Exposure	Band/ Mode	Bandwidth [MHz]	Service/ Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured APO [W/m ² /4πr ²]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APO [W/m ² /4πr ²]	Adjusted APO [W/m ² /4πr ²]	APO Exposure Ratio	Plot #	Plimt [dBm]	Overall Plimt [dBm]	EFS Plimt [dBm]
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	-0.21	6025.00	15	6B.1	15.0	14.60	Right Cheek	0	0.370	1.096	1.003	1.375	4.286	0.214	Plot	20.7		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.03	6345.00	79	6B.1	15.0	13.33	Right Cheek	0	0.240	1.469	1.003	1.448	4.379	0.219		20.6		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.09	6005.00	111	6B.1	15.0	13.25	Right Cheek	0	0.160	1.496	1.003	2.041	2.592	0.130		22.9		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.03	6665.00	143	6B.1	15.0	13.33	Right Cheek	0	0.120	1.469	1.003	1.724	2.189	0.109		23.6		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.07	6985.00	207	6B.1	15.0	13.36	Right Cheek	0	0.068	1.271	1.003	0.790	0.953	0.048		27.2		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.05	6025.00	15	6B.1	15.0	14.60	Right Tib	0	0.800	1.096	1.003	1.079	2.513	0.126		23.0		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.03	6025.00	15	6B.1	15.0	14.60	Left Tib	0	0.400	1.096	1.003	1.033	1.312	0.060		25.8		
Head	6 GHz WiFi / IEEE 802.11ax	160	OFDM	G	0907M	99.69	0.08	6025.00	15	6B.1	15.0	14.60	Left Tib	0	0.987	1.096	1.003	1.085	1.378	0.069		25.8		

Table 12-51 | Plot A31

ANSI/IEEE C63.1-1992 - SAFETY LIMIT																								
Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EPS PLimit [dBm]
Body-worn/hotspot	6 GHz W/F/ IEEE 802.11aa	160	OFDM	G	0897M	99.69	0.07	6025.00	15	68.1	12.0	11.85	Back	5	0.258	1.035	1.003	0.268	0.340	0.213	Plot	17.7	17.7	11.0
Hotspot	6 GHz W/F/ IEEE 802.11aa	160	OFDM	G	0897M	99.69	0.05	6025.00	15	68.1	12.0	11.85	Front	5	0.161	1.035	1.003	0.165	0.133	0.083	0.17			
Hotspot	6 GHz W/F/ IEEE 802.11aa	160	OFDM	G	0907M	99.69	0.07	6025.00	15	68.1	12.0	11.85	Top	10	0.046	1.035	1.003	0.048	0.061	0.038	0.08	25.2		
Hotspot	6 GHz W/F/ IEEE 802.11aa	160	OFDM	G	0907M	99.69	0.02	6025.00	15	68.1	12.0	11.85	Left	40	0.109	1.035	1.003	0.125	0.223	0.139	0.17			
ANSI/IEEE C63.1-1992 - SAFETY LIMIT															Body									
Uncontrolled Exposure/General Population															1.6 W/kg (mW/g) averaged over 1 gram									
Exposure	Band/ Mode	Bandwidth [MHz]	Service/ Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured APO [W/m² (cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APO [W/m² (cm²)]	Adjusted APO [W/m² (cm²)]	APD Exposure Ratio	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EPS PLimit [dBm]
Body-worn/hotspot	6 GHz W/F/ IEEE 802.11aa	160	OFDM	G	0897M	99.69	0.07	6025.00	15	68.1	12.0	11.85	Back	5	1.850	1.035	1.003	1.931	2.452	0.123	Plot	20.1	20.1	11.0
Hotspot	6 GHz W/F/ IEEE 802.11aa	160	OFDM	G	0897M	99.69	0.05	6025.00	15	68.1	12.0	11.85	Front	5	0.694	1.035	1.003	0.720	0.914	0.046		26.5		
Hotspot	6 GHz W/F/ IEEE 802.11aa	160	OFDM	G	0907M	99.69	0.02	6025.00	15	68.1	12.0	11.85	Top	10	0.180	1.035	1.003	0.446	0.566	0.028	26.4			
Hotspot	6 GHz W/F/ IEEE 802.11aa	160	OFDM	G	0907M	99.69	0.02	6025.00	15	68.1	12.0	11.85	Left	40	0.109	1.035	1.003	0.125	0.223	0.092	21.4			

Table 12-52 | Plot A32

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	P1st #	P10th [dBm]	Overall P10th [dBm]	EPS P10th [dBm]	EPS P10th [dBm]
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.60	0.07	6985.00	207	68.1	12.0	11.36	Back	0	0.0089	1.159	1.004	0.080	0.102	0.026		26.9			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.60	0.07	6025.00	15	68.1	12.0	11.75	Front	0	0.015	1.189	1.004	0.117	0.174	0.048	P1st	24.1			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.60	0.04	6345.00	79	68.1	12.0	10.00	Front	0	0.079	1.549	1.004	0.123	0.156	0.039		25.0			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.60	0.03	6550.00	143	68.1	12.0	11.34	Front	0	0.084	1.164	1.004	0.088	0.124	0.031		26.0			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.60	0.03	6645.00	143	68.1	12.0	10.80	Front	0	0.088	1.284	1.004	0.122	0.154	0.033		25.1		24.6	
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.60	0.04	6985.00	207	68.1	12.0	11.36	Front	0	0.087	1.159	1.004	0.101	0.129	0.032		25.4			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.60	0.16	6985.00	207	68.1	12.0	11.36	Top	0	0.087	1.159	1.004	0.087	0.109	0.032		27.4			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.60	0.06	6985.00	207	68.1	12.0	11.36	Right	0	0.031	1.159	1.004	0.036	0.046	0.012		30.9			
ANSI/IEEE C63.1-1992 - SAFETY LIMIT																									
Spatial Peak												Phabnet													
Uncontrolled Exposure/General Population												4.0 W/kg [mW/g]													
												averaged over 10 grams													
Exposure	Band/ Mode	Bandwidth [MHz]	Service/ Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured APD W/(m² 4cm²)	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD W/(m² 4cm²)	Adjusted APD W/(m² 4cm²)	APD Exposure Ratio	P1st #	P10th [dBm]	Overall P10th [dBm]	EPS P10th [dBm]	EPS P10th [dBm]
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.6	0.07	6985.00	207	68.1	12.0	11.36	Back	0	1.600	1.159	1.004	1.862	2.365	0.093		20.3			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.6	0.02	6025.00	15	68.1	12.0	11.20	Front	0	2.830	1.189	1.004	1.988	1.517	0.137	P1st	18.0			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.6	0.04	6345.00	79	68.1	12.0	10.14	Front	0	2.840	1.549	1.004	2.862	1.835	0.107		19.0			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.6	0.03	6550.00	111	68.1	12.0	11.30	Front	0	1.930	1.164	1.004	2.246	2.865	0.113	P1st	18.4			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.6	0.03	6645.00	143	68.1	12.0	10.80	Front	0	1.970	1.268	1.004	2.504	3.040	0.140		18.5			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.6	0.04	6985.00	207	68.1	12.0	11.36	Front	0	1.878	1.159	1.004	2.292	2.911	0.115		19.4			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.6	0.16	6985.00	207	68.1	12.0	11.36	Top	0	2.170	1.159	1.004	1.904	2.024	0.080		20.9			
Phabnet	6 GHz W/F/ IEEE 802.11a	160	OFDM	E	0897M	99.6	0.06	6985.00	207	68.1	12.0	11.36	Right	0	1.078	1.159	1.004	1.843	2.016	0.081		19.7			

12.5 6 GHz WIFI MIMO Standalone SAR and APD

Table 12-53

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Dens [dBm]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1 Sd [W/m ²]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1 Sd [W/m ²]	Adjusted 1 Sd [W/m ²]	Exposure Rate [mS/kg]	Pict #	Pinnt [dBm]	Overall Pinnt [dBm]	IFS Pinnt [dBm]
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.10	6025.00	15	136.1	15.0	14.17	15.0	14.14	Right Chnks	0	0.433	1.211	1.004	0.551	0.699	0.437	17.5			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	0.00	6345.00	79	136.1	15.0	13.40	15.0	13.40	Right Chnks	0	0.396	1.445	1.004	0.575	0.730	0.456	17.4			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.10	6565.00	143	136.1	15.0	13.40	15.0	13.40	Right Chnks	0	0.433	1.211	1.004	0.551	0.699	0.437	17.5			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.10	6565.00	143	136.1	15.0	13.40	15.0	13.40	Right Chnks	0	0.213	1.445	1.004	0.367	0.468	0.291	20.3			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.11	6685.00	207	136.1	15.0	14.03	15.0	14.03	Right Chnks	0	0.223	1.250	1.004	0.280	0.335	0.222	20.5			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.12	6685.00	207	136.1	15.0	14.03	15.0	14.03	Right Chnks	0	0.211	1.211	1.004	0.271	0.326	0.219	20.3	17.4	14.0	
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.12	6625.00	15	136.1	15.0	14.17	15.0	14.14	Left Chnks	0	0.272	1.211	1.004	0.331	0.420	0.269	19.8			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.12	6625.00	15	136.1	15.0	14.17	15.0	14.14	Left Ttr	0	0.288	1.211	1.004	0.336	0.414	0.269	19.8			
UNCONTROLLED EXPOSURE / GENERAL POPULATION																										
Spatial Peak																										
1.6 W/m ² (100W/g) averaged over 1 gram																										
Note: To achieve the 18 dBm maximum allowed MMIMO power shown in the documentation, each antenna transmit at a maximum allowed power of 15 dBm.																										
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.10	6025.00	15	136.1	15.0	14.17	15.0	14.14	Right Chnks	0	2.600	1.211	1.004	1.404	1.320	0.235	20.6			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	0.00	6345.00	79	136.1	15.0	13.40	15.0	13.40	Right Chnks	0	2.500	1.445	1.004	1.405	1.463	0.233	20.6			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.14	6565.00	143	136.1	15.0	13.68	15.0	13.68	Right Chnks	0	1.850	1.355	1.004	2.476	3.145	0.157	22.0			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.14	6565.00	143	136.1	15.0	13.68	15.0	13.68	Right Chnks	0	1.850	1.445	1.004	2.476	3.145	0.157	22.0			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.11	6685.00	207	136.1	15.0	14.03	15.0	14.03	Right Chnks	0	1.900	1.250	1.004	2.744	2.215	0.111	23.5			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.12	6685.00	207	136.1	15.0	14.03	15.0	14.03	Right Chnks	0	1.890	1.250	1.004	2.734	2.205	0.111	23.5			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.12	6625.00	15	136.1	15.0	14.17	15.0	14.14	Left Chnks	0	2.590	1.211	1.004	2.237	2.841	0.142	22.5			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.12	6625.00	15	136.1	15.0	14.17	15.0	14.14	Left Ttr	0	2.580	1.211	1.004	2.227	2.831	0.142	22.5			
Head	6 GHz WFT/ IEEE 802.11aa	160	OFDM	MMMO	090774	99.63	-0.08	6025.00	15	136.1	15.0	14.17	15.0	14.14	Left Ttr	0	2.280	1.211	1.004	2.113	1.843	0.172	21.6			
Note: To achieve the 18 dBm maximum allowed MMIMO power shown in the documentation, each antenna transmit at a maximum allowed power of 15 dBm.																										

12.6 2.4 GHz Bluetooth SISO Standalone SAR

Table 12-54

[illegible]

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Table 12-55 | Plot A33

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Limit [dBm]	Overall Limit [dBm]	EPS Limit [dBm]
Head	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	-0.04	2441.00	39	1	18.5	18.39	Right Cheek	0	0.139	1.026	1.025	0.567	0.666	0.416		19.9		
Head	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	0.02	2441.00	39	1	18.5	18.39	Right T/E	0	0.067	1.026	1.025	0.070	0.083	0.052		28.9		
Head	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	0.06	2402.00	0	1	18.5	18.37	Left Cheek	0	0.750	1.030	1.025	0.792	0.931	0.582		18.4		
Head	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	-0.02	2441.00	39	1	18.5	18.39	Left Cheek	0	0.799	1.026	1.025	0.840	0.987	0.617	Plot	18.2		18.2
Head	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	0.07	2480.00	39	1	18.5	18.15	Left Cheek	0	0.340	1.064	1.025	0.827	0.966	0.604		15.3		
Head	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	0.07	2441.00	39	1	18.5	18.39	Left T/E	0	0.100	1.026	1.025	0.105	0.124	0.078		27.2		
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 12-56 | Plot A34

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Limit [dBm]	Overall Limit [dBm]	EPS Limit [dBm]
Body-worn/Hotspot	2.4 GHz Bluetooth	FHSS	G	0897M	77.00	-0.12	2402.00	0	1	18.5	17.73	Back	5	0.325	1.194	1.013	0.393	0.784	0.490	Plot	21.4		
Hotspot	2.4 GHz Bluetooth	FHSS	G	0897M	77.00	0.07	2402.00	0	1	18.5	17.73	Front	5	0.260	1.194	1.013	0.314	0.627	0.392		22.4		
Hotspot	2.4 GHz Bluetooth	FHSS	G	0897M	77.00	-0.04	2402.00	0	1	18.5	17.73	Top	10	0.076	1.194	1.013	0.092	0.183	0.114		27.7		20.4
Hotspot	2.4 GHz Bluetooth	FHSS	G	0897M	77.00	0.06	2402.00	0	1	18.5	17.73	Left	10	0.218	1.194	1.013	0.264	0.526	0.329		23.2		
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 12-57 | Plot A35

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Limit [dBm]	Overall Limit [dBm]	EPS Limit [dBm]
Body-worn	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	-0.21	2441.00	39	1	18.5	18.39	Back	5	0.144	1.026	1.025	0.362	0.974	0.609	Plot	21.8	21.8	21.8
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 12-58 | Plot A36

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Limit [dBm]	Overall Limit [dBm]	EPS Limit [dBm]
Phablet	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	0.01	2441.00	39	1	18.5	18.39	Back	0	0.207	1.026	1.025	0.218	0.586	0.147		28.0		
Phablet	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	0.05	2441.00	39	1	18.5	18.39	Front	0	0.305	1.026	1.025	0.305	1.684	0.421	Plot	21.4		
Phablet	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	0.06	2441.00	39	1	18.5	18.39	Top	0	0.006	1.026	1.025	0.006	0.017	0.004		43.4		21.8
Phablet	2.4 GHz Bluetooth	FHSS	I	0897M	77.10	-0.11	2441.00	39	1	18.5	18.39	Right	0	0.143	1.026	1.025	0.150	0.405	0.101		29.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Phablet 4.0 W/kg (mW/g) averaged over 10 grams											

12.7 NFC Standalone SAR

Table 12-59 | Plot A37

Exposure	Band / Mode	Signal Type	Ant.	Serial Number	Power Drift [dB]	Frequency [MHz]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #
Phablet	NFC	B	NFC	0859M	-0.05	13.60	Back	0	0.012	0.003	Plot
Phablet	NFC	B	NFC	0859M	0.07	13.60	Front	0	0.000	0.000	
Phablet	NFC	B	NFC	0859M	0.07	13.60	Top	0	0.000	0.000	
Phablet	NFC	B	NFC	0859M	0.04	13.60	Bottom	0	0.000	0.000	
Phablet	NFC	B	NFC	0859M	0.04	13.60	Right	0	0.000	0.000	
Phablet	NFC	B	NFC	0859M	0.03	13.60	Left	0	0.000	0.000	
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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13 SAR DATA REFERENCING

13.1 2.4 GHz WIFI SISO Standalone SAR

Table 13-1 | Plot A38

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Head	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	G	0897M	98.77	0.06	2412.00	1	1.0	16.0	15.95	Right Cheek	0	0.975	1.161	1.022	0.441	0.560	0.350	0.585	Plot	19.5	19.5	15.0
ANSI/IEEE C95.1 1992 - SAFETY LIMIT												Spatial Peak												1.6 W/kg (mW/g) averaged over 1 gram	
Uncontrolled Exposure/General Population																									

Table 13-2 | Plot A39

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Head	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	I	0897M	98.72	0.06	2417.00	6	1.0	16.0	15.16	Left Cheek	0	0.584	1.211	1.021	0.718	0.911	0.569	0.847	Plot	17.4	17.4	15.0
ANSI/IEEE C95.1 1992 - SAFETY LIMIT												Spatial Peak												1.6 W/kg (mW/g) averaged over 1 gram	
Uncontrolled Exposure/General Population																									

Table 13-3 | Plot A40

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body-worn/Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	G	0897M	98.77	0.08	2412.00	11	1.0	20.0	19.35	Back	5	0.685	1.161	1.022	0.805	0.805	0.503	1.046	Plot	20.9	20.9	19.7
ANSI/IEEE C95.1 1992 - SAFETY LIMIT												Spatial Peak												1.6 W/kg (mW/g) averaged over 1 gram	
Uncontrolled Exposure/General Population																									

Table 13-4 | Plot A41

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body-worn/Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	I	0897M	98.72	0.17	2417.00	6	1.0	20.0	19.23	Back	5	0.873	1.194	1.023	0.995	0.995	0.422	1.026	Plot	20.0	20.0	19.9
Body-worn/Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	I	0897M	98.72	0.01	2417.00	6	1.0	20.0	19.12	Back	5	0.938	1.184	1.023	0.977	0.977	0.611	1.026	Plot	20.0	20.0	19.9
ANSI/IEEE C95.1 1992 - SAFETY LIMIT												Spatial Peak												1.6 W/kg (mW/g) averaged over 1 gram	
Uncontrolled Exposure/General Population																									

Note: Blue entry represents variability measurement

13.2 2.4 GHz WIFI MIMO Standalone SAR

Table 13-5 | Plot A42

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body-worn/Hotspot	2.4 GHz WiFi / IEEE 802.11a	20	OFDM	MIMO	0897M	89.75	-0.08	2417.00	2	6.0	18.0	17.21	18.0	17.52	Back	5	0.525	1.109	1.115	0.688	0.688	0.430	0.825	Plot	19.6	19.6	17.9
ANSI/IEEE C95.1 1992 - SAFETY LIMIT												Spatial Peak												1.6 W/kg (mW/g) averaged over 1 gram			
Uncontrolled Exposure/General Population																											

Note: To achieve the 24.18m maximum allowed MIMO power shown in the documentation, each antenna requires at a minimum allowed power of 18.01dbm

Note: To achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm

13.3 5 GHz WIFI SISO Standalone SAR

Table 13-6 | Plot A43

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Head	5 GHz WiFi / IEEE 802.11ac	80	OFDM	E	0911M	95.69	0.09	5610.00	122	U-NII-2C	29.3	16.0	15.83	Right Ear	0	0.433	1.040	1.045	0.449	0.570	0.356	0.616	Plot	19.4	19.4	15.0
ANSI/IEEE C95.1 1992 - SAFETY LIMIT												Spatial Peak												Head		
Uncontrolled Exposure/General Population																								1.6 W/kg (mW/g) averaged over 1 gram		

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Table 13-7 | Plot A44

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power DfB [dB]	Frequency [MHz]	Channel #	U-NI band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	P1mk [dBm]	Overall P1mk [dBm]	EFS P1mk [dBm]
Hotspot	5 GHz WiFi / IEEE 802.11ac	80	OFDM	G	0907M	95.69	0.02	5775.00	155	U-NI-3	29.3	14.0	13.54	Back	5	0.434	1.112	1.006	0.481	0.611	0.382	0.515	Plot	17.6	17.1	13.0
ANSI/IEEE C95.3 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 13-8 | Plot A45

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power DfB [dB]	Frequency [MHz]	Channel #	U-NI band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	P1mk [dBm]	Overall P1mk [dBm]	EFS P1mk [dBm]
Body-worn	5 GHz WiFi / IEEE 802.11ac	80	OFDM	E	0912M	95.69	0.10	5530.00	126	U-NI-2C	29.3	14.0	13.59	Back	5	0.666	1.099	1.040	0.765	0.971	0.607	0.837	Plot	15.1	15.1	13.0
ANSI/IEEE C95.3 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 13-9 | Plot A46

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power DfB [dB]	Frequency [MHz]	Channel #	U-NI band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	P1mk [dBm]	Overall P1mk [dBm]	EFS P1mk [dBm]
Hotspot	5 GHz WiFi / IEEE 802.11ac	80	OFDM	E	0911M	95.69	0.03	5775.00	155	U-NI-3	29.3	14.0	13.60	Back	5	0.520	1.096	1.045	0.596	0.756	0.473	0.483	Plot	16.2	16.2	13.0
ANSI/IEEE C95.3 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 13-10 | Plot A47

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power DfB [dB]	Frequency [MHz]	Channel #	U-NI band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Reported 10g SAR for Reference Model [W/kg]	Plot #	P1mk [dBm]	Overall P1mk [dBm]	EFS P1mk [dBm]
Phubist	5 GHz WiFi / IEEE 802.11ac	80	OFDM	E	0907M	95.69	0.01	5530.00	156	U-NI-2C	29.3	14.0	13.99	Front	0	0.188	1.099	1.045	0.216	0.969	0.293	0.293	Plot	24.6	24.0	13.0
ANSI/IEEE C95.3 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phubist 4.0 W/kg (mW/g) averaged over 10 grams										

13.4 5 GHz WIFI MIMO Standalone SAR

Table 13-11 | Plot A48

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power DfB [dB]	Frequency [MHz]	Channel #	U-NI band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	P1mk [dBm]	Overall P1mk [dBm]	EFS P1mk [dBm]
Body-worn	5 GHz WiFi/ IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.04	5630.00	122	U-NI-2C	58.5	14.0	13.43	14.0	13.39	Back	5	0.684	1.140	1.083	0.844	1.072	0.670	0.737	Plot	14.7	14.7	13.0
ANSI/IEEE C95.3 1992 - SAFETY LIMIT																Body 1.6 W/kg (mW/g) averaged over 1 gram												
Spatial Peak Uncontrolled Exposure/General Population																												

Note: To achieve the 17 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14 dBm.

Table 13-12 | Plot A49

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power DfB [dB]	Frequency [MHz]	Channel #	U-NI band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	P1mk [dBm]	Overall P1mk [dBm]	EFS P1mk [dBm]
Hotspot	5 GHz WiFi / IEEE 802.11ac	80	OFDM	MIMO	0907M	92.33	0.06	5775.00	155	U-NI-3	58.5	14.0	13.40	14.0	13.33	Back	5	0.485	1.222	1.083	0.615	0.782	0.489	0.587	Plot	16.1	16.1	13.0
ANSI/IEEE C95.3 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram												

Note: To achieve the 17 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14 dBm.

13.5 6 GHz WIFI SISO Standalone SAR and APD

Table 13-13 | Plot A50

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	P1mk [dBm]	Overall P1mk [dBm]	EFS P1mk [dBm]
Body-worn/Hotspot	6 GHz WiFi / IEEE 802.11ax	160	OFDM	E	0897M	99.60	0.04	6025.00	15	68.1	12.0	11.25	Back	5	0.384	1.189	1.004	0.408	0.582	0.364	0.401	Plot	15.3	15.3	11.0
ANSI/IEEE C95.3 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram												
Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured APO SAR [W/m ² (4cm ²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APO SAR [W/m ² (4cm ²)]	Adjusted APO SAR [W/m ² (4cm ²)]	APD Exposure Ratio	Reported APO SAR for Reference Model [W/m ² (4cm ²)]	Plot #	P1mk [dBm]	Overall P1mk [dBm]	EFS P1mk [dBm]
Body-worn/Hotspot	6 GHz WiFi / IEEE 802.11ax	160	OFDM	E	0897M	99.6	0.04	6025.00	15	68.1	12.0	11.25	Back	5	2.300	1.189	1.004	2.246	3.487	0.174	2.357	Plot	18.6	18.6	11.0

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Table 13-14 | Plot A51

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Reported 10g SAR for Reference Model [W/kg]	Plot #	PinIt [dBm]	Overall PinIt [dBm]	FFS PinIt [dBm]
Phabnet	6 GHz WiFi / IEEE 802.11aa	160	OFDM	G	0897M	99.69	0.09	6025.00	15	68.1	12.0	11.85	Left	0	0.596	1.035	1.003	0.639	0.786	0.197	0.565	Plot	18.0	18.0	11.0
ANS/IEEE C63.1.1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																									
Phabnet 4.0 W/kg (mW/g) averaged over 10 grams																									
Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Reported APD for Reference Model [W/m² (4cm²)]	Plot #	PinIt [dBm]	Overall PinIt [dBm]	FFS PinIt [dBm]
Phabnet	6 GHz WiFi / IEEE 802.11aa	160	OFDM	G	0897M	99.69	0.09	6025.00	15	68.1	12.0	11.85	Left	0	14.100	1.035	1.003	14.637	18.589	0.929	13.326	Plot	11.3	11.3	11.0

13.6 6 GHz WIFI MIMO Standalone SAR and APD

Table 13-15 | Plot A52

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	PinIt [dBm]	Overall PinIt [dBm]	FFS PinIt [dBm]
Body-worn/Hotspot	6 GHz WiFi / IEEE 802.11aa	160	OFDM	MIMO	0897M	99.69	0.01	6025.00	15	136.1	12.0	11.67	Back	5	0.379	1.079	1.004	0.411	0.621	0.626	0.389	Plot	15.8	15.8	11.0
ANS/IEEE C63.1.1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																									
Body 1.6 W/kg (mW/g) averaged over 1 gram																									
Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Reported APD for Reference Model [W/m² (4cm²)]	Plot #	PinIt [dBm]	Overall PinIt [dBm]	FFS PinIt [dBm]
Body-worn/Hotspot	6 GHz WiFi / IEEE 802.11aa	160	OFDM	MIMO	0897M	99.69	0.01	6025.00	15	136.1	12.0	11.67	Back	5	2.350	1.079	1.004	2.502	3.178	0.159	1.365	Plot	19.0	19.0	11.0

Note: To achieve the 15 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12 dBm.

Note: To achieve the 15 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12 dBm.

Table 13-16 | Plot A53

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Reported 10g SAR for Reference Model [W/kg]	Plot #	PinIt [dBm]	Overall PinIt [dBm]	FFS PinIt [dBm]
Phabnet	6 GHz WiFi / IEEE 802.11aa	160	OFDM	MIMO	0897M	99.63	0.03	6025.00	15	136.1	12.0	11.67	Left	0	0.547	1.079	1.004	0.583	0.753	0.168	0.541	Plot	18.2	18.2	11.0
ANS/IEEE C63.1.1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																									
Phabnet 4.0 W/kg (mW/g) averaged over 10 grams																									
Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Reported APD for Reference Model [W/m² (4cm²)]	Plot #	PinIt [dBm]	Overall PinIt [dBm]	FFS PinIt [dBm]
Phabnet	6 GHz WiFi / IEEE 802.11aa	160	OFDM	MIMO	0897M	99.63	0.03	6025.00	15	136.1	12.0	11.67	Left	0	12.800	1.079	1.004	13.975	17.748	0.887	12.816	Plot	11.5	11.5	11.0

Note: To achieve the 15 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12 dBm.

Note: To achieve the 15 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12 dBm.

13.7 2.4 GHz Bluetooth MIMO Standalone SAR

Table 13-17 | Plot A54

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	MIMO PinIt Ant G [dBm]	MIMO PinIt Ant I [dBm]	FFS MIMO PinIt Ant G [dBm]	FFS MIMO PinIt Ant I [dBm]
Head	2.4 GHz Bluetooth	FHSS	MIMO	0897M	77.10	-0.06	2441.00	39	1	15.0	14.73	14.0	12.68	Right Cheek	0	0.154	1.374	1.025	0.217	0.686	0.429	0.329	Plot	21.0	19.8	19.0	18.0
ANS/IEEE C63.1.1992 - SAFETY LIMIT														Head 1.6 W/kg (mW/g) averaged over 1 gram													
Spatial Peak Uncontrolled Exposure/General Population																											

Note: For Bluetooth BDR, to achieve the 17.5 dBm maximum allowed MIMO power shown in the documentation, Antenna G transmits at a maximum allowed power of 15.0 dBm and Antenna I transmits at a maximum power of 14.0 dBm.

Note: Reported 1g SAR [W/kg] and Adjusted 1g SAR [W/kg] are calculated from the highest power scaling factor between Antenna G and Antenna I.

Table 13-18 | Plot A55

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #	MIMO PinIt Ant G [dBm]	MIMO PinIt Ant I [dBm]	FFS MIMO PinIt Ant G [dBm]	FFS MIMO PinIt Ant I [dBm]
Body-worn	2.4 GHz Bluetooth	FHSS	MIMO	0897M	77.10	0.30	2441.00	39	1	15.0	14.75	14.0	12.68	Back	5	0.102	1.374	1.025	0.144	0.476	0.298	0.310	Plot	23.7	21.6	20.1	18.2
ANS/IEEE C63.1.1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram													

Note: For Bluetooth BDR, to achieve the 17.5 dBm maximum allowed MIMO power shown in the documentation, Antenna G transmits at a maximum allowed power of 15.0 dBm and Antenna I transmits at a maximum power of 14.0 dBm.

Note: Reported 1g SAR [W/kg] and Adjusted 1g SAR [W/kg] are calculated from the highest power scaling factor between Antenna G and Antenna I.

Table 13-19 | Plot A56

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Reported 10g SAR for Reference Model [W/kg]	Plot #	MIMO PinIt Ant G [dBm]	MIMO PinIt Ant I [dBm]	FFS MIMO PinIt Ant G [dBm]	FFS MIMO PinIt Ant I [dBm]
Phabnet	2.4 GHz Bluetooth	FHSS	MIMO	0897M	77.10	-0.09	2441.00	39	1	15.0	14.75	14.0	12.62	Left	0	0.322	1.374	1.025	0.453	1.502	0.376	0.609	Plot	22.7	20.6	20.1	18.2
ANS/IEEE C63.1.1992 - SAFETY LIMIT																											
Spatial Peak																											
Uncontrolled Exposure/General Population																											
																Phabnet											
																4.0 W/kg (mW/g)											
																averaged over 10 grams											

Note: For Bluetooth BDR, to achieve the 17.5 dBm maximum allowed MIMO power shown in the documentation, Antenna G transmits at a maximum allowed power of 15.0 dBm and Antenna I transmits at a maximum power of 14.0 dBm.

Note: Reported 1g SAR [W/kg] and Adjusted 1g SAR [W/kg] are calculated from the highest power scaling factor between Antenna G and Antenna I.

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13.8 UWB Standalone SAR and APD

Table 13-20 | Plot A57

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Measured 1g SAR for Reference Model [W/kg]	Plot #
Head	UWB	CW	H	0899M	1:1	0.02	7987.20	9	Right Tilt	0	0.001	0.001	0.003	Plot
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Head 1.6 W/kg (mW/g) averaged over 1 gram					
Exposure	Band/ Mode	Service/ Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Test Position	Spacing [mm]	Measured APD [W/m² {4cm²}]	APD Exposure Ratio	Measured 1g APD for Reference Model [W/m² {4cm²}]	Plot #
Head	UWB	CW	H	0899M	1:1	0.02	7987.20	9	Right Tilt	0	0.006	0.004	0.004	Plot

Table 13-21 | Plot A58

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Reported 1g SAR for Reference Model [W/kg]	Plot #
Body-worn	UWB	CW	H	0899M	1:1	0.07	7987.20	9	Back	0	0.002	0.001	0.001	Plot
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram				
Exposure	Band/ Mode	Service/ Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Test Position	Spacing [mm]	Measured APD [W/m² {4cm²}]	APD Exposure Ratio	Measured APD for Reference Model [W/m² {4cm²}]	Plot #
Body-worn	UWB	CW	H	0899M	1:1	0.07	7987.20	9	Back	0	0.019	0.012	0.021	Plot

Note: The 0 mm Body-worn 1 g SAR result was used instead of 5 mm, as it represents the more conservative case at the same power level.

Table 13-22 | Plot A59

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Reported 10g SAR for Reference Model [W/kg]	Plot #
Phablet	UWB	CW	H	0899M	1:1	0.02	7987.20	9	Right	0	0.002	0.001	0.002	Plot
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 4.0 W/kg (mW/g) averaged over 10 grams					
Exposure	Band/ Mode	Service/ Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Test Position	Spacing [mm]	Measured APD [W/m² (4cm²)]	APD Exposure Ratio	Reported 10g APD for Reference Model [W/m² (4cm²)]	Plot #
Phablet	UWB	CW	H	0899M	1:1	0.02	7987.20	9	Right	0	0.033	0.021	0.046	Plot

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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 D04v01.
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 D04v01.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 5 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 D04, 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 15 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 7.7 for more details).
10. Per FCC KDB Publication 648474 D04, this device is considered a "phablet" since the display diagonal dimension is > 150 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. 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 16 for supplemental data.
12. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the 1g thresholds for the equivalent test cases.
13. This device uses Qualcomm Smart Transmit for WWAN/WLAN/BT 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).
14. Per October 2020 TCB Workshop notes, absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements.
15. For 6 GHz WLAN Antenna E the device was tested with a top tilt (Configuration 1) and right tilt (Configuration 2) to ensure the most conservative SAR measurement was taken.
16. 6 GHz WLAN MIMO back side testing, the device was tested with a top tilt (Configuration 1), right tilt (Configuration 2), and flat positioning (Configuration 3) to ensure the most conservative SAR measurement was taken

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Per FCC guidance, since the frame average target of GPRS is higher than GSM, GPRS 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.

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- Per FCC KDB Publication 447498 D04v01, 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).

UMTS Notes:

- 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.
- Per FCC KDB Publication 447498 D04v01, 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:

- 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 9.5.4.
- 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.
- A-MPR was disabled for all SAR tests by setting NS=01 and MCC=001 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).
- Per FCC KDB Publication 447498 D04v01, when the reported 1g SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for LTE B41, testing at the other channels was required for such test configurations.
- 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.
- 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.
- For 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 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.

NR Notes:

- 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.
- Due to test setup limitations, SAR testing for NR TDD was performed using test mode software to establish the connection.
- Simultaneous transmission analysis for EN-DC operations is addressed in the Part 2 Test Report (Serial Number can be found in the bibliography).
- This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
- 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.
- Per FCC KDB Publication 447498 D04v01, when the reported NR Band n41 SAR measured at the

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highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations and > 1.5 W/kg for 10g evaluation, testing at the other channels was required for such test configurations.

7. SRS was tested with CW signal per Qualcomm guidance in 80-w2112-4.
8. For final implementation, NR Band n41 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.

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 single transmission chain 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/ax) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 9.6.5 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 9.6.6 for more information.
4. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D04v01 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 Multi-TX and Antenna SAR Considerations Appendix for complete analysis.
5. 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.
6. 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.
7. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.
8. Per FCC guidance, SAR was performed using 6.5 GHz SAR probe calibration factor for WIFI 6E. Per October 2020 TCB Workshop notes, 5 channels were tested for WIFI 6E.

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 79% transmission duty factor for Bluetooth. See RF Conducted Power Section for the time domain plot and calculation for the duty factor of the device.
2. Head and Hotspot Bluetooth SAR were evaluated for BT BDR tethering applications.
3. The highest frame average power configurations for both Bluetooth and Bluetooth LE were evaluated for SAR. The worst case configuration was used for the remaining test positions as the most conservative scenario.

UWB Notes:

1. UWB was evaluated for head, body-worn, and phablet based on expected usage conditions.
2. Per FCC guidance, SAR was performed using 6.5 GHz/8GHz probe calibration factor for UWB.

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14 POWER DENSITY DATA SUMMARY

14.1 6 GHz WIFI Power Density Results

Table 14-1 | Plot A60

MEASUREMENT RESULTS																									
Frequency (MHz)	Channel	Mode	Service	Bandwidth (MHz)	Maximum Allowed Power (Art 1) [dBm]	Conducted Power (Art 1) [dBm]	Maximum Allowed Power (Art 2) [dBm]	Conducted Power (Art 2) [dBm]	Power Drift [dB]	Spacing (mm)	Antenna Config.	DUT Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Grid Step (λ)	iPD (W/m²)	Scaling Factor for Measurement Uncertainty per IEC 62479	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Normal psPD (W/m²)	Scaled Normal psPD (W/m²)	Total psPD (W/m²)	Scaled Total psPD (W/m²)	Plot #
6025.00	15	802.11ax	OFDM	160	15.00	14.60	N/A	N/A	-0.15	2	G	0807M	68.1	Front	99.69	0.05	2.520	1.554	1.096	1.003	3.070	5.244	4.210	7.192	Plot
6025.00	15	802.11ax	OFDM	160	12.00	11.85	N/A	N/A	0.11	2	G	0807M	68.1	Back	99.69	0.05	1.690	1.554	1.035	1.003	2.020	3.259	2.110	3.404	
6025.00	15	802.11ax	OFDM	160	12.00	11.85	N/A	N/A	-0.18	2	G	0807M	68.1	Left	99.69	0.05	1.900	1.554	1.035	1.003	3.660	5.904	4.450	7.179	
6025.00	15	802.11ax	OFDM	160	15.00	14.60	N/A	N/A	0.14	9.95	G	0807M	68.1	Front	99.69	0.25	2.750	1.554	1.096	1.003	0.912	1.387	0.958	1.637	
6665.00	143	802.11ax	OFDM	160	N/A	N/A	15.00	13.69	0.18	2	E	0807M	68.1	Front	99.60	0.05	0.876	1.554	1.352	1.004	1.160	2.447	1.910	3.185	Plot
6025.00	15	802.11ax	OFDM	160	N/A	N/A	12.00	11.25	0.01	2	E	0807M	68.1	Back	99.60	0.05	1.160	1.554	1.189	1.004	1.670	3.469	1.980	3.673	
6025.00	15	802.11ax	OFDM	160	N/A	N/A	12.00	11.25	0.13	2	E	0807M	68.1	Front	99.60	0.05	0.381	1.554	1.189	1.004	0.452	0.839	0.550	1.020	
6665.00	143	802.11ax	OFDM	160	N/A	N/A	15.00	13.69	-0.14	9	E	0807M	68.1	Front	99.60	0.25	1.070	1.554	1.352	1.004	0.288	0.608	0.322	0.679	
6345.00	79	802.11ax	OFDM	160	15.00	13.40	15.00	13.44	0.16	2	MIMO	0807M	136.11	Front	99.63	0.05	2.790	1.554	1.445	1.004	2.610	5.884	3.110	7.012	Plot
6025.00	15	802.11ax	OFDM	160	12.00	11.67	12.00	11.74	-0.07	2	MIMO	0807M	136.11	Back	99.63	0.05	1.740	1.554	1.079	1.004	1.330	2.239	1.540	2.993	
6025.00	15	802.11ax	OFDM	160	12.00	11.67	12.00	11.74	-0.09	2	MIMO	0807M	136.11	Left	99.63	0.05	1.910	1.554	1.079	1.004	3.460	5.825	4.300	7.239	
6345.00	79	802.11ax	OFDM	160	15.00	13.40	15.00	13.44	-0.14	9.45	MIMO	0807M	136.11	Front	99.63	0.25	1.730	1.554	1.445	1.004	1.490	3.359	1.550	3.494	
47 CFR §1.1310 - SAFETY LIMIT Spatial Average Uncontrolled Exposure / General Population												Power Density 10 W/m² averaged over 4 cm²													

14.2 UWB Power Density Results

Table 14-2 | Plot A61

MEASUREMENT RESULTS															
Frequency (MHz)	Channel	Mode	Power Drift (dB)	Spacing (mm)	Antenna Config.	DUT Serial Number	Side	Grid Step (λ)	iPD (W/m²)	Scaling Factor for Measurement Uncertainty per IEC 62479	Normal psPD (W/m²)	Scaled Normal psPD (W/m²)	Total psPD (W/m²)	Scaled Total psPD (W/m²)	Plot #
7987.20	9	CW	-0.19	2	H	0899M	Front	0.067	-	1.554	0.147	0.228	0.152	0.236	
7987.20	9	CW	0.12	2	H	0899M	Right	0.067	-	1.554	0.118	0.183	0.128	0.199	
6489.60	5	CW	0.00	2	H	0899M	Left	0.067	0.544	1.554	0.197	0.306	0.207	0.322	Plot
7987.20	9	CW	0.13	2	H	0899M	Back	0.067	-	1.554	0.182	0.283	0.195	0.303	
6489.60	5	CW	-0.17	9.24	H	0899M	Left	0.125	0.221	1.554	0.107	0.166	0.113	0.176	
47 CFR §1.1310 - SAFETY LIMIT Spatial Average Uncontrolled Exposure / General Population								Power Density 10 W/m² averaged over 4 cm²							

Power Density General Notes

1. The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
2. Batteries are fully charged at the beginning of the measurements. The DUT was connected to a wall charger for some measurements due to the test duration. It was confirmed that the charger plugged into this DUT did not impact the near-field PD test results.
3. Power density was calculated by repeated E-field measurements on two measurement planes separated by λ/4.
4. 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.

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5. Per FCC guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor.
6. Per equipment manufacturer guidance, power density was measured at $d=2\text{mm}$ and $d=\lambda/5\text{mm}$ using the same grid size and grid step size for some frequencies and surfaces. The integrated Power Density (iPD) was calculated based on these measurements. Since iPD ratio between the two distances is $\geq -1\text{dB}$, the grid step was sufficient for determining compliance at $d=2\text{mm}$.
7. psPD for MIMO was evaluated by making a measurement with both antennas transmitting simultaneously.
8. PTP-PR algorithm was used during psPD measurement and calculations.
9. PD results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D04.

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15 SAR MEASUREMENT VARIABILITY

15.1 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 15-1
Head SAR Measurement Variability Results

HEAD VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Side	Test Position	Antenna Config	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)	
835	836.50	20525	LTE Band 5	QPSK, 50 RB, 0 RB Offset	Left	Cheek	E	0.861	0.772	1.12	N/A	N/A	N/A	N/A
5850	5855.00	171	5 GHz WiFi/ IEEE 802.11ac	OFDM	Right	Cheek	MIMO	0.806	0.804	1.00	N/A	N/A	N/A	N/A
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 15-2
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Side	Spacing (mm)	Antenna Config	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)	
2450	2437.00	6	2.4 GHz WIFI	DSSS	Back	5	I	0.823	0.808	1.02	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram							

15.2 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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16 ADDITIONAL TESTING PER FCC GUIDANCE

16.1 Tuner Testing

Per April 2025 TCB Workshop Notes, the following test procedures were followed to demonstrate that the SAR results in Section 12 represented the appropriate SAR test conditions. 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.

For each band, mode, and exposure condition that supports dynamic antenna tuning, the following procedure was followed to determine the validity of the algorithm.

1. Identify the worst-case position and configuration per band/mode per head or body exposure condition.
2. Run an area scan with the auto-tune feature enabled to determine the peak SAR location.
3. With auto-enabled and ensuring no fluctuation in auto-tune state, run a single point SAR measurement at the peak SAR location.
4. Remotely disable the auto-tune feature and run two subsequent single point SAR measurements on the adjacent tune states; i.e. one state above and one state below the auto-tune state used in step 3.
5. Compare the single point SAR measurements
 - a. If the single point SAR measurements for the adjacent states are lower than the auto-tune state single point SAR measurement, proceed to step 6.
 - b. If the adjacent state single point SAR measurement is higher than the auto-tune state, but within the allowable tolerance, proceed to the next state in the list and run another single point SAR measurement. Repeat until there is a single point SAR measurement less than auto-tune state. Then proceed to step 6
 - c. If any single point SAR measurement is more than 5% higher than the auto-tune single point SAR measurement, the DAT is considered inoperative.
6. Once all additional states are run, without moving the DUT, repeat step 3 for a variability measurement. The variability measurement should be within the allowable tolerance to consider the DAT is functioning properly.

Additional tuner testing notes:

- 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 is >1.4 W/kg or 1g SAR was > 1.2 W/kg for a particular band/mode/exposure condition, point SAR measurements were made for all possible tuner states.

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

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Table 16-1
UMTS Supplemental Head SAR Data

Supplemental Head SAR Data	
UMTS B5	
RMC	
Test Position	Left Cheek
Frequency (MHz)	836.60
Channel	4183
Measured 1g SAR (W/kg)	0.091
Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	
State 0	0.093
State 1	0.085
State 142	0.028
Auto-Tune Variability	0.091

Table 16-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data									
LTE B12		LTE B13		LTE B5		LTE B66		LTE B2	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1880.00
Channel	23095	Channel	23230	Channel	20525	Channel	132322	Channel	18900
Measured 1g SAR (W/kg)	0.083	Measured 1g SAR (W/kg)	0.074	Measured 1g SAR (W/kg)	0.087	Measured 1g SAR (W/kg)	0.174	Measured 1g SAR (W/kg)	0.120
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 63)		Auto-tune (State 0)		Auto-tune (State 0)		Auto-tune (State 109)		Auto-tune (State 100)	
State 62	0.013	State 0	0.078	State 0	0.099	State 108	0.133	State 99	0.093
State 63	0.082	State 1	0.064	State 1	0.096	State 109	0.137	State 100	0.138
State 64	0.078	State 142	0.032	State 142	0.027	State 110	0.137	State 101	0.091
Auto-Tune Variability	0.085	Auto-Tune Variability	0.075	Auto-Tune Variability	0.099	Auto-Tune Variability	0.138	Auto-Tune Variability	0.132

Table 16-3
NR Supplemental Head SAR Data

Supplemental Head SAR Data			
NR Band n5		NR Band n66	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 104 RB Offset		DFT-s-OFDM QPSK, 45 MHz Bandwidth, 1 RB, 1 RB Offset	
Test Position	Left Cheek	Test Position	Right Cheek
Frequency (MHz)	836.50	Frequency (MHz)	1745.00
Channel	167300	Channel	349000
Measured 1g SAR (W/kg)	0.085	Measured 1g SAR (W/kg)	0.125
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)		Auto-tune (State 45)	
State 0	0.090	State 44	0.005
State 1	0.082	State 45	0.115
State 142	0.040	State 46	0.092
Auto-Tune Variability	0.090	Auto-Tune Variability	0.112

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Table 16-4
UMTS Supplemental Body SAR Data

Supplemental Body SAR Data	
UMTS B5	
RMC	
Test Position	Back
Spacing	5 mm
Frequency (MHz)	836.60
Channel	4183
Measured 1g SAR (W/kg)	0.539
Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	
State 0	0.574
State 1	0.521
State 142	0.180
Auto-Tune Variability	0.563

Table 16-5
LTE Supplemental Body SAR Data

Supplemental Body SAR Data									
LTE B12		LTE B13		LTE B5		LTE B66		LTE B2	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 50 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)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1880.00
Channel	23095	Channel	23230	Channel	20525	Channel	132322	Channel	18900
Measured 1g SAR (W/kg)	0.359	Measured 1g SAR (W/kg)	0.486	Measured 1g SAR (W/kg)	0.532	Measured 1g SAR (W/kg)	0.795	Measured 1g SAR (W/kg)	0.697
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 63)		Auto-tune (State 0)		Auto-tune (State 0)		Auto-tune (State 99)		Auto-tune (State 100)	
State 62	0.070	State 0	0.491	State 0	0.526	State 98	0.083	State 99	0.584
State 63	0.382	State 1	0.392	State 1	0.488	State 99	0.860	State 100	0.706
State 64	0.377	State 142	0.184	State 142	0.164	State 100	0.760	State 101	0.529
Auto-Tune Variability	0.377	Auto-Tune Variability	0.499	Auto-Tune Variability	0.522	Auto-Tune Variability	0.797	Auto-Tune Variability	0.706

Table 16-6
NR Supplemental Body SAR Data

Supplemental Body SAR Data			
NR Band n5		NR Band n66	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		CP-OFDM QPSK, 45 MHz Bandwidth, 1 RB, 1 RB Offset	
Test Position	Back	Test Position	Front
Spacing	5 mm	Spacing	5 mm
Frequency (MHz)	836.50	Frequency (MHz)	1745.00
Channel	167300	Channel	349000
Measured 1g SAR (W/kg)	0.703	Measured 1g SAR (W/kg)	0.785
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)		Auto-tune (State 99)	
State 0	0.629	State 98	0.077
State 1	0.570	State 99	0.740
State 142	0.203	State 100	0.724
Auto-Tune Variability	0.628	Auto-Tune Variability	0.717

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17 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8594A	(9kHz - 2.9GHz) Spectrum Analyzer	CBT	N/A	CBT	3023400187
Agilent	N5182A	MWG Vector Signal Generator	5/30/2025	Annual	5/30/2026	MY48180366
Agilent	N5182A	MWG Vector Signal Generator	8/1/2025	Annual	8/1/2026	MY47420051
Agilent	8753ES	S-Parameter Vector Network Analyzer	1/6/2025	Annual	1/6/2026	MY40001472
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	SS358	Amplifier	CBT	N/A	CBT	438974
Anritsu	MN8110B	VIO Adaptor	CBT	N/A	CBT	6261247881
Rohde & Schwarz	NRP	Power Meter	5/23/2025	Annual	5/23/2026	103084
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	6/9/2025	Annual	6/9/2026	6201144418
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	3/14/2025	Annual	3/14/2026	6201381794
Anritsu	MT8800A	Radio Communication Test Station	6/4/2025	Annual	6/4/2026	6261914237
Anritsu	MT8800A	Radio Communication Test Station	11/12/2024	Annual	11/12/2025	6272314095
Anritsu	MA24106A	USB Power Sensor	5/29/2025	Annual	5/29/2026	1344554
Anritsu	MA24106A	USB Power Sensor	6/26/2025	Annual	6/26/2026	1827529
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240174346
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240171096
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240171059
Control Company	4040	Therm / Clock / Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310286
Control Company	4040	Therm / Clock / Humidity Monitor	10/15/2024	Biennial	10/15/2026	240763503
Testo	ALARM-HYGROMETER	ALARM-HYGROMETER	7/3/2025	Annual	7/3/2026	83316952
Testo	ALARM-HYGROMETER	ALARM-HYGROMETER	7/3/2025	Annual	7/3/2026	83316953
Testo	ALARM-HYGROMETER	ALARM-HYGROMETER	7/3/2025	Annual	7/3/2026	83316970
Keylight Technologies	NR020A	MXA Signal Analyzer	7/7/2025	Annual	7/7/2026	MY48030213
MCL	BW-N20W5+	3dB Attenuator	CBT	N/A	CBT	1129
MCL	BW-N3W5+	3dB Attenuator	CBT	N/A	CBT	2028
Mini-Circuits	VL6-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	VL6-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	31634
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2500+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	ZUDC10-83+	Directional Coupler	CBT	N/A	CBT	2050
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-53W2	Attenuator (3dB)	CBT	N/A	CBT	120
Seaborn	NC-100	Torque Wrench	4/2/2024	Biennial	4/2/2026	1262
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/10/2025	Annual	1/10/2026	131453
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	8/27/2024	Biennial	8/27/2026	167085
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	12/10/2024	Annual	12/10/2025	167286
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/6/2025	Annual	1/6/2026	131454
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	7/9/2025	Annual	7/9/2026	166462
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	2/22/2025	Annual	2/22/2026	168527
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/6/2025	Annual	1/6/2026	150117
SPEAG	DAK-3.5	Dielectric Assessment Kit	11/5/2024	Annual	11/5/2025	1277
SPEAG	DAK-3.5	Dielectric Assessment Kit	7/14/2025	Annual	7/14/2026	1039
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1237
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1290
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1580
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1384
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1515
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	3/10/2025	Annual	3/10/2026	1102
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	7/14/2025	Annual	7/14/2026	1039
SPEAG	CLA-13	Confined Loop Antenna	9/4/2025	Annual	9/4/2026	1002
SPEAG	D750V3	750 MHz SAR Dipole	3/4/2025	Annual	3/4/2026	1054
SPEAG	D835V2	835 MHz SAR Dipole	3/4/2025	Annual	3/4/2026	46047
SPEAG	D835V2	835 MHz SAR Dipole	1/18/2024	Biennial	1/18/2026	46132
SPEAG	D835V2	835 MHz SAR Dipole	3/11/2024	Biennial	3/11/2026	46113
SPEAG	D1750V2	1750 MHz SAR Dipole	11/7/2024	Annual	11/7/2025	1150
SPEAG	D1750V2	1750 MHz SAR Dipole	1/13/2025	Annual	1/13/2026	1148
SPEAG	D1900V2	1900 MHz SAR Dipole	2/7/2025	Annual	2/7/2026	56148
SPEAG	D2450V2	2450 MHz SAR Dipole	11/7/2024	Annual	11/7/2025	981
SPEAG	D2450V2	2450 MHz SAR Dipole	10/7/2025	Annual	10/7/2026	797
SPEAG	D2450V2	2450 MHz SAR Dipole	6/3/2025	Annual	6/3/2026	945
SPEAG	D2600V2	2600 MHz SAR Dipole	6/3/2025	Annual	6/3/2026	1009
SPEAG	D2600V2	2600 MHz SAR Dipole	8/11/2025	Annual	8/11/2026	1126
SPEAG	D2600V2	2600 MHz SAR Dipole	6/4/2025	Annual	6/4/2026	1064
SPEAG	D5GHV2	5 GHz SAR Dipole	1/17/2024	Biennial	1/17/2026	1191
SPEAG	D5GHV2	5 GHz SAR Dipole	6/2/2025	Annual	6/2/2026	1237
SPEAG	D5GHV2	5 GHz SAR Dipole	2/21/2024	Biennial	2/21/2026	1057
SPEAG	D6.5GHV2	6.5 GHz SAR Dipole	2/4/2025	Annual	2/4/2026	1111
SPEAG	D6GHV2	6GHz SAR Dipole	3/6/2025	Annual	3/6/2026	1097
SPEAG	5G Verification Source 10GHz	10GHz System Verification Antenna	3/4/2025	Annual	3/4/2026	1002
SPEAG	DAE4	Dasv Data Acquisition Electronics	3/11/2025	Annual	3/11/2026	1415
SPEAG	DAE4	Dasv Data Acquisition Electronics	5/9/2025	Annual	5/9/2026	1678
SPEAG	DAE4	Dasv Data Acquisition Electronics	4/7/2025	Annual	4/7/2026	1407
SPEAG	DAE4	Dasv Data Acquisition Electronics	1/13/2025	Annual	1/13/2026	1530
SPEAG	DAE4	Dasv Data Acquisition Electronics	4/10/2025	Annual	4/10/2026	1272
SPEAG	DAE4	Dasv Data Acquisition Electronics	1/14/2025	Annual	1/14/2026	1466
SPEAG	DAE4	Dasv Data Acquisition Electronics	6/4/2025	Annual	6/4/2026	1502
SPEAG	DAE4	Dasv Data Acquisition Electronics	6/4/2025	Annual	6/4/2026	1652
SPEAG	DAE4	Dasv Data Acquisition Electronics	6/5/2025	Annual	6/5/2026	1558
SPEAG	DAE4p	Dasv Data Acquisition Electronics	2/7/2025	Annual	2/7/2026	1638
SPEAG	DAE4	Dasv Data Acquisition Electronics	12/4/2024	Annual	12/4/2025	1213
SPEAG	DAE4p	Dasv Data Acquisition Electronics	2/5/2025	Annual	2/5/2026	1639
SPEAG	EX3DV4	SAR Probe	11/11/2024	Annual	11/11/2025	7539
SPEAG	EX3DV4	SAR Probe	5/9/2025	Annual	5/9/2026	7660
SPEAG	EX3DV4	SAR Probe	4/8/2025	Annual	4/8/2026	7718
SPEAG	EX3DV4	SAR Probe	3/7/2025	Annual	3/7/2026	7488
SPEAG	EX3DV4	SAR Probe	1/7/2025	Annual	1/7/2026	7713
SPEAG	EX3DV4	SAR Probe	4/7/2025	Annual	4/7/2026	7659
SPEAG	EX3DV4	SAR Probe	8/12/2025	Annual	8/12/2026	7491
SPEAG	EX3DV4	SAR Probe	6/12/2025	Annual	6/12/2026	7402
SPEAG	EX3DV4	SAR Probe	6/12/2025	Annual	6/12/2026	7637
SPEAG	EX3DV4	SAR Probe	6/11/2025	Annual	6/11/2026	7661
SPEAG	EX3DV4	SAR Probe	2/10/2025	Annual	2/10/2026	7570
SPEAG	ElumMWV3	ElumMWV3 Probe	1/12/2025	Annual	1/12/2026	9421
SPEAG	ElumMWV3	ElumMWV3 Probe	1/8/2025	Annual	1/8/2026	9389

Note: 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.

Note: All equipment was used solely within its respective calibration period.

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18 MEASUREMENT UNCERTAINTIES

Note: The tables below represent the worst-case uncertainty budget among the uncertainty budgets of all testing laboratories listed in Section 1.2

SAR Uncertainty Budget based on IEEE 1528-2013 (0.3 GHz to 10 GHz)

a	b	c	d	e f(d,k)	f	g	h cx/f/e	i cx/g/e	k
Uncertainty component	Reference	Tol. (± %)	Prob. dist.	Dvi.	ci (1g)	ci (10g)	1g ui (± %)	10g ui (± %)	vi
Measurement system									
Probe calibration	E.2.1	9.30	N	1	1	1	9.30	9.30	∞
Axial isotropy	E.2.2	0.25	N	1	0.707	0.707	0.18	0.18	∞
Hemispherical isotropy	E.2.2	1.30	N	1	0.707	0.707	0.92	0.92	∞
Boundary effect	E.2.3	2.00	R	1.73	1	1	1.15	1.15	∞
Linearity	E.2.4	0.30	R	1.73	1	1	0.17	0.17	∞
System detection limits	E.2.4	0.25	R	1.73	1	1	0.14	0.14	∞
Modulation response	E.2.5	4.80	R	1.73	1	1	2.77	2.77	∞
Readout electronics	E.2.6	0.30	N	1	1	1	0.30	0.30	∞
Response time	E.2.7	1.01	R	1.73	1	1	0.58	0.58	∞
Integration time	E.2.8	2.60	R	1.73	1	1	1.50	1.50	∞
RF ambient conditions - noise	E.6.1	3.00	R	1.73	1	1	1.73	1.73	∞
RF ambient conditions - reflections	E.6.1	3.00	R	1.73	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	E.6.2	0.04	R	1.73	1	1	0.02	0.02	∞
Probe positioning with respect to phantom shell	E.6.3	0.80	R	1.73	1	1	0.46	0.46	∞
Extrapolation, interpolation, and integration algorithms for max. SAR evaluation	E.5	4.00	R	1.73	1	1	2.31	2.31	∞
Test sample related									
Test sample positioning	E.4.2	3.12	N	1	1	1	3.12	3.12	35
Device holder uncertainty	E.4.1	1.67	N	1	1	1	1.67	1.67	5
Output power variation - SAR drift	E.2.9	5.00	R	1.73	1	1	2.89	2.89	∞
SAR scaling	E.6.5	0.00	R	1.73	1	1	0.00	0.00	∞
Phantom and tissue parameters									
Phantom shell uncertainty - shape, thickness and permittivity	E.3.1	7.60	R	1.73	1	1	4.39	4.39	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	0.00	N	1	1	1	0.00	0.00	∞
Liquid conductivity measurement	E.3.3	4.27	N	1	0.78	0.71	3.33	3.03	55
Liquid permittivity measurement	E.3.3	4.18	N	1	0.23	0.26	0.96	1.09	55
Liquid conductivity - temperature uncertainty	E.3.4	3.40	R	1.73	0.78	0.71	1.53	1.39	∞
Liquid permittivity - temperature uncertainty	E.3.4	0.60	R	1.73	0.23	0.26	0.08	0.09	∞
Liquid Conductivity - deviation from target values	E.3.2	5.00	R	1.73	0.64	0.43	1.85	1.24	∞
Liquid Permittivity - deviation from target values	E.3.2	5.00	R	1.73	0.60	0.49	1.73	1.41	∞
Combined standard uncertainty							13.1	12.9	150
Expanded uncertainty (95% confidence interval)							26.2	25.8	

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Applicable for Power Density Measurements:

a	b	c	d	e	f = c x f/e	g
Uncertainty Component	Unc. (± dB)	Prob. Dist.	Div.	c _i	u _i (± dB)	v _i
Measurement System						
Calibration	0.49	N	1	1	0.49	∞
Probe Correction	0.00	R	1.73	1	0.00	∞
Frequency Response	0.20	R	1.73	1	0.12	∞
Sensor Cross Coupling	0.00	R	1.73	1	0.00	∞
Isotropy	0.50	R	1.73	1	0.29	∞
Linearity	0.20	R	1.73	1	0.12	∞
Probe Scattering	0.00	R	1.73	1	0.00	∞
Probe Positioning offset	0.30	R	1.73	1	0.17	∞
Probe Positioning Repeatability	0.04	R	1.73	1	0.02	∞
Sensor Mechanical Offset	0.00	R	1.73	1	0.00	∞
Probe Spatial Resolution	0.00	R	1.73	1	0.00	∞
Field Impedance Dependence	0.00	R	1.73	1	0.00	∞
Amplitude and Phase Drift	0.00	R	1.73	1	0.00	∞
Amplitude and Phase Noise	0.04	R	1.73	1	0.02	∞
Measurement Area Truncation	0.00	R	1.73	1	0.00	∞
Data Acquisition	0.03	N	1	1	0.03	∞
Sampling	0.00	R	1.73	1	0.00	∞
Field Reconstruction	2.00	R	1.73	1	1.15	∞
Forward Transformation	0.00	R	1.73	1	0.00	∞
Power Density Scaling	0.00	R	1.73	1	0.00	∞
Spatial Averaging	0.10	R	1.73	1	0.06	∞
System Detection Limit	0.04	R	1.73	1	0.02	∞
Test Sample Related						
Probe Coupling with DUT	0.00	R	1.73	1	0.00	∞
Modulation Response	0.40	R	1.73	1	0.23	∞
Integration Time	0.00	R	1.73	1	0.00	∞
Response Time	0.00	R	1.73	1	0.00	∞
Device Holder Influence	0.10	R	1.73	1	0.06	∞
DUT alignment	0.00	R	1.73	1	0.00	∞
RF Ambient Conditions	0.04	R	1.73	1	0.02	∞
Ambient Reflections	0.04	R	1.73	1	0.02	∞
Immunity/Secondary Reception	0.00	R	1.73	1	0.00	∞
Drift of DUT	0.21	R	1.73	1	0.12	∞
Combined Standard Uncertainty (k=1)					RSS	1.34
Expanded Uncertainty (95% CONFIDENCE LEVEL)					k=2	2.68

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19 CONCLUSION

19.1 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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