ELEMENT MATERIALS TECHNOLOGY
(formerly PCTEST)
7185 Oakland Mills Road, Columbia, MD 21046 USA
Tel. +1.410.290.6652 / Fax +1.410.290.6654
http://www.element.com

RF EXPOSURE PART 0 TEST REPORT

Applicant Name:
Samsung Electronics Co., Ltd.
129, Samsung-ro, Maetan dong,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:
05/05/2025 – 06/02/2025
Test Site/Location:
Element, Columbia, MD, USA
Document Serial No.:
1M2504220043-05.A3L

FCC ID:	**A3LSMF966U**
APPLICANT:	**SAMSUNG ELECTRONICS CO., LTD**

Report Type:	Part 0 SAR Characterization
DUT Type:	Portable Handset
Model(s):	SM-F966U
Additional Model:	SM-F966U1

Only operations relevant to this permissive change were evaluated for compliance. Please see the original compliance evaluation in RF Exposure Technical Report S/N 1M2502210015-02.A3L for complete evaluation of all other operating modes. The operational description includes a description of all changed items.

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

ACCREDITED
CERT #2041.01

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1 DEVICE UNDER TEST

1.1 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
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26	Voice/Data	814.7 - 848.3 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 25	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
NR Band n71	Voice/Data	665.5 - 695.5 MHz
NR Band n12	Voice/Data	701.5 - 713.5 MHz
NR Band n14	Voice/Data	790.5 - 795.5 MHz
NR Band n26	Voice/Data	816.5 - 846.5 MHz
NR Band n5	Voice/Data	826.5 - 846.5 MHz
NR Band n70	Voice/Data	1697.5 - 1707.5 MHz
NR Band n66	Voice/Data	1712.5 - 1777.5 MHz
NR Band n25	Voice/Data	1852.5 - 1912.5 MHz
NR Band n2	Voice/Data	1852.5 - 1907.5 MHz
NR Band n30	Voice/Data	2307.5 - 2312.5 MHz
NR Band n7	Voice/Data	2502.5 - 2567.5 MHz
NR Band n41	Voice/Data	2501.01 - 2685 MHz
NR Band n38	Voice/Data	2575 - 2615 MHz
NR Band n48	Voice/Data	3555 - 3694.98 MHz
NR Band n78	Voice/Data	3455.01 - 3544.98 MHz; 3705 - 3795 MHz
NR Band n77	Voice/Data	3455.01 - 3544.98 MHz; 3705 - 3975 MHz
NTN Band 255	Data	1629 - 1658 MHz
NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 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

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1.2 Time-Averaging for SAR and Power Density

This device is enabled with Qualcomm® Gen2 Smart Transmit algorithm to control and manage transmitting power in real time and to ensure that the time-averaged RF exposure from 2G/3G/4G/5G Sub-6 NR WWAN and WLAN/BT is in compliance with FCC requirements. This Part 0 report shows SAR characterization of WWAN radios for 2G/3G/4G/5G Sub-6 NR and WLAN/BT radios. Characterization is achieved by determining P_{Limit} for 2G/3G/4G/5G Sub-6 NR/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. Section 1.3 includes a nomenclature of the specific terms used in this report.

The compliance test under the static transmission scenario and simultaneous transmission analysis are reported in Part 1 report. The validation of the time-averaging algorithm and compliance under the dynamic (time- varying) transmission scenario for WWAN/WLAN/BT technologies are reported in Part 2 report (report SN could be found in Section 1.4 – Bibliography).

1.3 Nomenclature for Part 0 Report

Technology	Term	Description
2G/3G/4G/5G Sub-6 NR/WLAN/BT	P_{limit}	Power level that corresponds to the exposure design target (*SAR_design_target)* after accounting for all device design related uncertainties
	P_{max}	Maximum tune up output power
	SAR_design_target	Target SAR level < FCC SAR limit after accounting for all device design related uncertainties
	SAR Char	Table containing *Plimit* for all technologies and bands

1.4 Bibliography

Report Type	Report Serial Number
RF Exposure Part 1 Test Original Report	1M2502210015-01.A3L
RF Exposure Part 2 Test Original Report	1M2502210015-03.A3L
PD Part 1 Test Original Report	1M2502210015-04.A3L
PD Part 0 Test Original Report	
RF Exposure Original Compliance Summary	1M2502210015-05.A3L
RF Exposure Part 1 Report	1M2504220043-04.A3L

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2 SAR AND POWER DENSITY MEASUREMENTS

2.1 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 2-1).

Equation 2-1
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/m^3)
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]

2.2 SAR 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 2-1) 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.

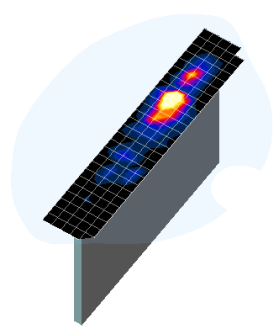

Figure 2-1
Sample SAR Area Scan

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 2-1) and IEEE 1528-2013. On the

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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 2-1. 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.

Table 2-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

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

*Also compliant to IEEE 1528-2013 Table 6

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3 SAR CHARACTERIZATION

3.1 DSI and SAR Determination

This device uses different Device State Index (DSI) to configure different time averaged power levels based on certain exposure scenarios. Depending on the detection scheme implemented in the smartphone, the worst-case SAR was determined by measurements for the relevant exposure conditions for that DSI. Detailed descriptions of the detection mechanisms are included in the operational description.

When 1g SAR and 10g SAR exposure comparison is needed, the worst-case was determined from SAR normalized to 1g or 10g SAR limit.

The device state index (DSI) conditions used in Table 3-1 represent different exposure scenarios.

Table 3-1
DSI and Corresponding Exposure Scenarios

Scenario	Description	SAR Test Cases
Body– Folder Open (DSI = 0)	▪ Device is held with hand and grip sensor is not triggered ▪ Distance grip sensor not triggered ▪ Folder Open	*Tablet SAR per KDB* 616217 D04v01r02
Body Grip – Folder Open (DSI = 4)	▪ Device is held with hand and grip sensor is triggered ▪ Grip sensor active ▪ Folder Open	*Tablet SAR per KDB* 616217 D04v01r02
Head – Folder Closed (DSI = 3)	▪ Device positioned next to head ▪ Receiver Active ▪ Folder Closed	*Head SAR per KDB Publication 648474 D04*
Body-worn – Folder Closed (DSI = 1)	▪ Device being used with a body-worn accessory ▪ Folder Closed	*Body-worn SAR per KDB Publication 648474 D04*
Hotspot mode – Folder Closed (DSI = 1)	▪ Device transmits in hotspot mode near body ▪ Hotspot Mode Active ▪ Folder Closed	*Hotspot SAR per KDB Publication 941225 D06*
Phablet Grip – Folder Closed (DSI=5)	▪ Device is held with hand and grip sensor is triggered ▪ Grip sensor is active ▪ Folder Closed	*Phablet SAR per KDB Publication 648474 D04 & KDB Publication 616217 D04*

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3.2 SAR Design Target

SAR_design_target is determined by ensuring that it is less than FCC SAR limit after accounting for total device designed related uncertainties specified by the manufacturer (see Table 3-2).

Table 3-2
***SAR_design_target* Calculations**

SAR_design_target			
$SAR_design_target < SAR_regulatory_limit \times 10^{\frac{-Total\ Uncertainty}{10}}$			
1g SAR (W/kg)		**10g SAR (W/kg)**	
Total Uncertainty	1.0 dB	*Total Uncertainty*	1.0 dB
SAR_regulatory_limit	1.6 W/kg	*SAR_regulatory_limit*	4.0 W/kg
SAR_design_target	1.0 W/kg	*SAR_design_target*	2.5 W/kg

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3.3 SAR Char

SAR test results corresponding to *Pmax* for each antenna/technology/band/DSI can be found in Appendix A.

Plimit is calculated by linearly scaling with the measured SAR at the Ppart0 to correspond to the *SAR_design_target*. When *Plimit* < *Pmax*, *Ppart0* was used as Plimit in the Smart Transmit EFS. When *Plimit* > *Pmax* and *Ppart0*=Pmax, calculated *Plimit* was used in the Smart Transmit EFS. All reported SAR obtained from the Ppart0 SAR tests was less than *SAR_Design_targe*t+ 1 dB Uncertainty. The final *Plimit* determination for each exposure scenario corresponding to *SAR_design_target* are shown in Table 3-3.

Table 3-3
***PLimit* Determination**

Device State Index (DSI)	***PLimit* Determination Scenarios**
0	The worst-case SAR exposure is determined as maximum SAR normalized to the limit (i.e. lowest plimit) among: 1. For bands on antenna G, body SAR measured at 10 mm for back, 13 mm for top, and 0 mm for bottom, right, and left. 2. For all other bands, body SAR measured at 0 mm for all surfaces.
1	The worst-case SAR exposure is determined as maximum SAR normalized to the limit (i.e. lowest plimit) among: 1. Body-worn SAR 2. Hotspot SAR at 10mm 3. Extremity SAR measured at 0 mm spacing for back, front, top, bottom, right, and left
3	P_{limit} is calculated based on 1g Head SAR
4	P_{limit} is calculated based on 1g Body SAR at 0 mm
5	P_{limit} is calculated based on 10g Extremity SAR at 0 mm for all surfaces

Notes:

- When P_{max} < P_{limit} EFS, the DUT will operate at a power level up to P_{max}

- All P_{limit} EFS and maximum tune up output power P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD, GMSK, or OFDM modulation schemes (e.g. GSM, LTE TDD and WLAN/BT).

- 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.

- As part of this permissive change, the EFS Plimit for LTE 30 and NR N66 of DSI 3 with Antenna B were reduced (while remaining above Pmax) to ensure continued compliance with simultaneous transmission SAR requirements. Conducted power levels and SAR test data remain unchanged.

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Table 3-4
SAR Characterizations

Exposure Scenario			Maximum Tune-Up Output Power*	F/O Body	F/C Body	F/C Head	F/O Grip	F/C Grip
Averaging Volume				1g	1g/10g	1g	1g	10g
Spacing				13mm, 10mm, 0mm	10mm, 5mm, 0mm	0mm	0mm	0mm
DSI				0	1	3	4	5
Technology/Band	Antenna	Antenna Group	P_{max}	P_{limit}	P_{limit}	P_{limit}	P_{limit}	P_{limit}
LTE Band 66/4	G	AG1	24.5	21.0	17.0	19.5	11.0	17.0
LTE Band 25/2	G	AG1	24.0	21.0	17.0	19.5	10.5	17.0
LTE Band 30	B	AG0	24.0	11.0	19.0	30.9	11.0	19.0
LTE Band 30	G	AG1	23.5	21.0	18.0	18.5	9.5	18.0
LTE Band 7	G	AG1	24.0	17.5	16.5	17.0	9.0	16.5
LTE Band 41/38	G	AG1	22.0	19.0	16.5	16.0	9.0	16.5
NR Band n70	G	AG1	23.5	21.0	17.0	19.0	11.0	17.0
NR Band n66	B	AG0	24.0	12.0	18.0	30.8	12.0	18.0
NR Band n66	G	AG1	24.0	21.0	17.0	19.5	11.0	17.0
NR Band n25/n2	G	AG1	24.0	21.0	17.0	19.5	10.5	17.0
NR Band n30	G	AG1	23.0	21.0	18.0	18.5	9.5	18.0
NR Band n7	G	AG1	23.0	17.5	16.5	17.0	9.0	16.5
NR Band n41 PC3 (Path 1)	G	AG1	24.0	19.0	16.5	16.0	9.0	16.5
NR Band n41 PC3 (Path 1)	B	AG0	20.0	11.0	17.5	20.0	11.0	17.5
NR Band n41 PC3 (Path 1)	H	AG1	20.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC3 (Path 1)	D	AG0	18.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC2 (Path 1)	G	AG1	26.0	19.0	16.5	16.0	9.0	16.5
NR Band n41 PC2 (Path 1)	B	AG0	20.0	11.0	17.5	20.0	11.0	17.5
NR Band n41 PC2 (Path 1)	H	AG1	20.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC2 (Path 1)	D	AG0	18.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC1.5 UL-MIMO	G	AG1	26.0	19.0	16.5	16.0	9.0	16.5
NR Band n38 (Path 1)	G	AG1	24.0	19.0	16.5	16.0	9.0	16.5

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4 EQUIPMENT LIST

For SAR measurements

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	E4404B	Spectrum Analyzer	N/A	N/A	N/A	MY45113242
Agilent	E4438C	ESG Vector Signal Generator	10/23/2024	Annual	10/23/2025	MY45093852
Agilent	E4438C	ESG Vector Signal Generator	11/15/2024	Annual	11/15/2025	MY45092078
Agilent	N5182A	MXG Vector Signal Generator	7/9/2024	Annual	7/9/2025	MY48180366
Agilent	8753ES	S-Parameter Vector Network Analyzer	1/6/2025	Annual	1/6/2026	MY40001472
Agilent	8753ES	S-Parameter Vector Network Analyzer	9/25/2024	Annual	9/25/2025	MY40003841
Agilent	E5515C	Wireless Communications Test Set	CBT	N/A	CBT	GB46310798
Agilent	E5515C	Wireless Communications Test Set	CBT	N/A	CBT	GB41450275
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433973
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433974
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Anritsu	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	ML2496A	Power Meter	7/15/2024	Annual	7/15/2025	1138001
Anritsu	ML2496A	Power Meter	6/24/2024	Annual	6/24/2025	1840005
Anritsu	MA2411B	Pulse Power Sensor	9/5/2024	Annual	9/5/2025	1726262
Anritsu	MA2411B	Pulse Power Sensor	10/21/2024	Annual	10/21/2025	1027293
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	CBT	N/A	CBT	6200901190
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	CBT	N/A	CBT	6201144419
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	3/14/2025	Annual	3/14/2026	6262044715
Anritsu	MT8000A	Radio Communication Test Station	CBT	N/A	CBT	626196-7072
Anritsu	MT8000A	Radio Communication Test Station	CBT	N/A	CBT	6272337408
Anritsu	MT8000A	Radio Communication Test Station	CBT	N/A	CBT	6262036828
Anritsu	MT8000A	Radio Communication Test Station	4/11/2025	Annual	4/11/2026	6261987983
Anritsu	MT8000A	Radio Communication Test Station	3/11/2025	Annual	3/11/2026	6272337439
Anritsu	MT8000A	Radio Communication Test Station	11/12/2024	Annual	11/12/2025	6272337405
Anritsu	MA24106A	USB Power Sensor	7/10/2024	Annual	7/10/2025	1827530
Anritsu	MA24106A	USB Power Sensor	10/29/2024	Annual	10/29/2025	1248508
Mini-Circuits	PWR-4GHS	USB Power Sensor	6/12/2024	Annual	6/12/2025	12001070013
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	240310280
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Control Company	S66279	Therm./ Clock/ Humidity Monitor	2/16/2024	Biennial	2/16/2026	240140051
Keysight Technologies	N9020A	MXA Signal Analyzer	7/8/2024	Annual	7/8/2025	MY48010233
Agilent	N9020A	MXA Signal Analyzer	6/14/2024	Annual	6/14/2025	MY56470202
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	7/10/2024	Annual	7/10/2025	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-2950+	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-S+	Directional Coupler	CBT	N/A	CBT	2050
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Seekonk	NC-100	Torque Wrench	CBT	N/A	CBT	22217
Seekonk	NC-100	Torque Wrench	4/2/2024	Biennial	4/2/2026	1262
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	120504
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	109366
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	155128
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	102060
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	167112
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	168544
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/10/2025	Annual	1/10/2026	131453
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	7/8/2024	Annual	7/8/2025	166818
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/8/2025	Annual	4/8/2026	151849
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	8/12/2024	Annual	8/12/2025	171008
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/23/2024	Annual	10/23/2025	170999
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	8/27/2024	Biennial	8/27/2026	167085
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/11/2024	Annual	10/11/2025	169729
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	7/19/2024	Annual	7/19/2025	171001
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	6/11/2024	Annual	6/11/2025	166869
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	6/10/2024	Annual	6/10/2025	168543
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/7/2025	Annual	4/7/2026	167284
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/28/2025	Annual	1/28/2026	135400
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/25/2025	Annual	1/25/2026	122206
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	4/9/2025	Annual	4/9/2026	145663
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	9/26/2024	Biennial	9/26/2026	110553
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/2/2024	Annual	10/2/2025	171000
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/3/2025	Annual	4/3/2026	167285
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
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	12/10/2024	Annual	12/10/2025	161616
SPEAG	DAK-3.5	Dielectric Assessment Kit	11/5/2024	Annual	11/5/2025	1277
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	8/7/2024	Annual	8/7/2025	1041
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	1331
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1390
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	3/10/2025	Annual	3/10/2026	1102

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Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
SPEAG	D1640V2	1640 MHz SAR Dipole	12/13/2022	Triennial	10/6/2025	321
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	5d148
SPEAG	D1900V2	1900 MHz SAR Dipole	8/8/2022	Triennial	8/8/2025	5d080
SPEAG	D2300V2	2300 MHz SAR Dipole	8/25/202	Triennial	8/25/2025	1073
SPEAG	D2300V2	2300 MHz SAR Dipole	6/14/2024	Annual	6/14/2025	1116
SPEAG	D2450V2	2450 MHz SAR Dipole	11/7/2024	Annual	11/7/2025	981
SPEAG	D2450V2	2450 MHz SAR Dipole	8/7/2024	Annual	8/7/2025	719
SPEAG	D2600V2	2600 MHz SAR Dipole	11/15/2022	Triennial	11/15/2025	1071
SPEAG	D2600V2	2600 MHz SAR Dipole	6/13/2022	Triennial	6/13/2025	1064
SPEAG	D2600V2	2600 MHz SAR Dipole	4/8/2024	Annual	4/8/2025	1004
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/4/2024	Annual	12/4/2025	1213
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/10/2025	Annual	4/10/2026	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/8/2024	Annual	7/8/2025	1677
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/7/2025	Annual	4/7/2026	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/11/2025	Annual	3/11/2026	1415
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/8/2024	Annual	7/8/2025	1583
SPEAG	EX3DV4	SAR Probe	3/7/2025	Annual	3/7/2026	7488
SPEAG	EX3DV4	SAR Probe	6/28/2024	Annual	6/28/2025	7803
SPEAG	EX3DV4	SAR Probe	11/11/2024	Annual	11/11/2025	7539
SPEAG	EX3DV4	SAR Probe	7/5/2024	Annual	7/5/2025	7406
SPEAG	EX3DV4	SAR Probe	4/8/2025	Annual	4/8/2026	7718
SPEAG	EX3DV4	SAR Probe	4/7/2025	Annual	4/7/2026	7659
SPEAG	EX3DV4	SAR Probe	12/5/2024	Annual	12/5/2025	7410

Note:

1. CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.
2. Each equipment item was used solely within its respective calibration period.

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5 MEASUREMENT UNCERTAINTIES

For SAR Measurements

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System									
Probe Calibration	E.2.1	7	N	1	1	1	7.0	7.0	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	2	R	1.732	1	1	1.2	1.2	∞
Linearity	E.2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E.2.4	0.25	R	1.732	1	1	0.1	0.1	∞
Modulation Response	E.2.5	4.8	R	1.732	1	1	2.8	2.8	∞
Readout Electronics	E.2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	R	1.732	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.732	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.732	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.732	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.8	R	1.732	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E.6.3	6.7	R	1.732	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	4	R	1.732	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E.4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E.4.1	1.67	N	1	1	1	1.7	1.7	5
Output Power Variation - SAR drift measurement	E.2.9	5	R	1.732	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.732	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	E.3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E.3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E.3.4	3.4	R	1.732	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	E.3.4	0.6	R	1.732	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)			RSS				12.2	12.0	191
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				24.4	24.0	

The above measurement uncertainties are according to IEEE Std. 1528-2013

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ELEMENT MATERIALS TECHNOLOGY
(formerly PCTEST)
7185 Oakland Mills Road, Columbia, MD 21046 USA
Tel. +1.410.290.6652 / Fax +1.410.290.6654
http://www.element.com

RF EXPOSURE PART 1 TEST REPORT

Applicant Name:
Samsung Electronics Co., Ltd.
129, Samsung-ro, Maetan dong,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:
05/05/2025 – 06/02/2025
Test Site/Locations:
Element, Columbia, MD, USA
Document Serial No.:
1M2504220043-04.A3L

FCC ID: A3LSMF966U

APPLICANT: SAMSUNG ELECTRONICS CO., LTD.

DUT Type: Portable Handset
Application Type: Class II Permissive Change
FCC Rule Part(s): CFR §2.1093
Permissive Change(s): SEE FCC Change Document
Model(s): SM-F966U
Additional Model(s): SM-F966U1
Date of Original Certification: 06/05/2025

Equipment Class	Band & Mode	Tx Frequency	SAR				
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)	1g Body (W/kg)
PCE	LTE Band 66	1710.7 - 1779.3 MHz	0.99	0.76	0.76	N/A	0.96
PCE	LTE Band 4	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 25	1850.7 - 1914.3 MHz	0.77	0.64	0.64	N/A	**1.20**
PCE	LTE Band 2	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	0.90	1.09	1.09	N/A	1.13
PCE	LTE Band 7	2502.5 - 2567.5 MHz	1.18	1.18	1.18	N/A	1.06
PCE	LTE Band 41	2498.5 - 2687.5 MHz	**1.25**	1.19	1.19	N/A	1.13
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A	N/A
PCE	NR Band n70	1697.5 - 1707.5 MHz	1.23	1.11	1.11	N/A	1.05
PCE	NR Band n66	1712.5 - 1777.5 MHz	0.98	1.01	1.01	N/A	0.76
PCE	NR Band n25	1852.5 - 1912.5 MHz	0.74	0.65	0.65	N/A	0.90
PCE	NR Band n2	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A	N/A
PCE	NR Band n30	2307.5 - 2312.5 MHz	1.07	0.99	0.99	N/A	0.92
PCE	NR Band n7	2502.5 - 2567.5 MHz	1.15	**1.20**	**1.20**	N/A	1.18
PCE	NR Band n41	2501.01 - 2685 MHz	1.22	1.10	1.10	N/A	1.12
PCE	NR Band n38	2575 - 2615 MHz	N/A	N/A	N/A	N/A	N/A
TNE	NTN Band 255	1629 - 1658 MHz	N/A	**1.39**	N/A	**1.50**	**0.90**
Simultaneous SAR per KDB 690783 D01v01r03:			**1.59**	1.50	1.50	N/A	1.52

Overall SAR Summary					
RF Exposure Position	Head	Body-worn	Product Specific (Wireless Router)	Folder Open - Body	Simultaneous Transmission
SAR (W/kg)	1.25	1.39	1.2	1.2	1.59
Distance (mm)	0	5	5, 10	10, 13, 0	N/A

Only operations relevant to this permissive change were evaluated for compliance. Please see the original compliance evaluation in RF Exposure Technical Report S/N 1M2502210015-01.A3L for complete evaluation of all other operating modes. The operational description includes a description of all changed items.

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

The SAR Tick is an initiative of the Mobile & Wireless Forum (MWF). While a product may be considered eligible, use of the SAR Tick logo requires an agreement with the MWF. Further details can be obtained by emailing: sartick@mwfai.info.

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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
	ilac-MRA A2LA ACCREDITED CERT #2041.01
Measurement system No.	G, J, N, L, O, S

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
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26	Voice/Data	814.7 - 848.3 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 25	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
NR Band n71	Voice/Data	665.5 - 695.5 MHz
NR Band n12	Voice/Data	701.5 - 713.5 MHz
NR Band n14	Voice/Data	790.5 - 795.5 MHz
NR Band n26	Voice/Data	816.5 - 846.5 MHz
NR Band n5	Voice/Data	826.5 - 846.5 MHz
NR Band n70	Voice/Data	1697.5 - 1707.5 MHz
NR Band n66	Voice/Data	1712.5 - 1777.5 MHz
NR Band n25	Voice/Data	1852.5 - 1912.5 MHz
NR Band n2	Voice/Data	1852.5 - 1907.5 MHz
NR Band n30	Voice/Data	2307.5 - 2312.5 MHz
NR Band n7	Voice/Data	2502.5 - 2567.5 MHz
NR Band n41	Voice/Data	2501.01 - 2685 MHz
NR Band n38	Voice/Data	2575 - 2615 MHz
NR Band n48	Voice/Data	3555 - 3694.98 MHz
NR Band n78	Voice/Data	3455.01 - 3544.98 MHz; 3705 - 3795 MHz
NR Band n77	Voice/Data	3455.01 - 3544.98 MHz; 3705 - 3975 MHz
NTN Band 255	Data	1629 - 1658 MHz
NR Band n258	Data	24250 - 24450 MHz; 24750 - 25250 MHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 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

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2.2 Time-Averaging Algorithm for RF Exposure Compliance

2.2.1 Time-Averaged Algorithm

This Device is enabled with the Qualcomm® Smart Transmit Gen2 feature with antenna grouping and a *multi_tx_factor* of 1.1. 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).

Note that NFC/UWB/NTN operations are not enabled with Smart Transmit.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of *SAR_design_target* or *PD_design_target*, below the predefined time-averaged power limit (i.e., P_{limit} for WWAN sub-6/WLAN/BT radio, and *input.power.limit* for 5G mmW NR), 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 device uncertainty/10), P_{max}} in simultaneous transmission evaluations.

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Exposure Scenario			Maximum Tune-Up Output Power*	F/O Body	F/C Body	F/C Head	F/O Grip	F/C Grip
Averaging Volume				1g	1g/10g	1g	1g	10g
Spacing				13mm, 10mm, 0mm	10mm, 5mm, 0mm	0mm	0mm	0mm
DSI				0	1	3	4	5
Technology/Band	Antenna	Antenna Group	P_{max}	P_{limit}	P_{limit}	P_{limit}	P_{limit}	P_{limit}
LTE Band 66/4	G	AG1	24.5	21.0	17.0	19.5	11.0	17.0
LTE Band 25/2	G	AG1	24.0	21.0	17.0	19.5	10.5	17.0
LTE Band 30	B	AG0	24.0	11.0	19.0	30.9	11.0	19.0
LTE Band 30	G	AG1	23.5	21.0	18.0	18.5	9.5	18.0
LTE Band 7	G	AG1	24.0	17.5	16.5	17.0	9.0	16.5
LTE Band 41/38	G	AG1	22.0	19.0	16.5	16.0	9.0	16.5
NR Band n70	G	AG1	23.5	21.0	17.0	19.0	11.0	17.0
NR Band n66	B	AG0	24.0	12.0	18.0	30.8	12.0	18.0
NR Band n66	G	AG1	24.0	21.0	17.0	19.5	11.0	17.0
NR Band n25/n2	G	AG1	24.0	21.0	17.0	19.5	10.5	17.0
NR Band n30	G	AG1	23.0	21.0	18.0	18.5	9.5	18.0
NR Band n7	G	AG1	23.0	17.5	16.5	17.0	9.0	16.5
NR Band n41 PC3 (Path 1)	G	AG1	24.0	19.0	16.5	16.0	9.0	16.5
NR Band n41 PC3 (Path 1)	B	AG0	20.0	11.0	17.5	20.0	11.0	17.5
NR Band n41 PC3 (Path 1)	H	AG1	20.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC3 (Path 1)	D	AG0	18.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC2 (Path 1)	G	AG1	26.0	19.0	16.5	16.0	9.0	16.5
NR Band n41 PC2 (Path 1)	B	AG0	20.0	11.0	17.5	20.0	11.0	17.5
NR Band n41 PC2 (Path 1)	H	AG1	20.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC2 (Path 1)	D	AG0	18.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC1.5 UL-MIMO	G	AG1	26.0	19.0	16.5	16.0	9.0	16.5
NR Band n41 PC1.5	H	AG1	20.5	7.0	14.0	14.0	7.0	14.0
NR Band n38 (Path 1)	G	AG1	24.0	19.0	16.5	16.0	9.0	16.5

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. As part of this permissive change, the EFS Plimit for LTE 30 and NR N66 of DSI 3 with Antenna B were reduced (while remaining above Pmax) to ensure continued compliance with simultaneous transmission SAR requirements. Conducted power levels and SAR test data remain unchanged.

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.

2.3 Power Reduction for SAR

This device utilizes a power reduction mechanism for the satellite NTN band for SAR compliance under some conditions when the device is being used in close proximity to the user's hand. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device when being

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used in both the folder closed and folder open use conditions. Detailed descriptions of the power reduction mechanism are included in the operational description.

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.
Only operations relevant to this permissive change were evaluated for compliance. No other target changes have been made. Targets for all other bands/exposure conditions can be found in the original filing.

Note: Targets for 802.11ax/be RU operations can be found in original filing.

2.4.1 Licensed Output Power

Mode / Band	Antenna		Modulated Average Output Power (in dBm)					
			Pmax	DSI = 0 (F/O Body)	DSI = 1 (F/C Body)	DSI = 3 (F/C Head)	DSI = 4 (F/O Grip)	DSI = 5 (F/C Grip)
LTE Band 66/4	G	Max Allowed Power	25.5	22.0	18.0	20.5	12.0	18.0
		Nominal	24.5	21.0	17.0	19.5	11.0	17.0
LTE Band 25/2	G	Max Allowed Power	25.0	22.0	18.0	20.5	11.5	18.0
		Nominal	24.0	21.0	17.0	19.5	10.5	17.0
LTE Band 30	G	Max Allowed Power	24.5	22.0	19.0	19.5	10.5	19.0
		Nominal	23.5	21.0	18.0	18.5	9.5	18.0
LTE Band 7	G	Max Allowed Power	25.0	18.5	17.5	18.0	10.0	17.5
		Nominal	24.0	17.5	16.5	17.0	9.0	16.5
LTE Band 41/38	G	Max Allowed Power	25.0	22.0	19.5	19.0	12.0	19.5
		Nominal	24.0	21.0	18.5	18.0	11.0	18.5

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 (F/O Body)	DSI = 1 (F/C Body)	DSI = 3 (F/C Head)	DSI = 4 (F/O Grip)	DSI = 5 (F/C Grip)
NR Band n70	G	Max Allowed Power	24.5	22.0	18.0	20.0	12.0	18.0
		Nominal	23.5	21.0	17.0	19.0	11.0	17.0
NR Band n66	G	Max Allowed Power	25.0	22.0	18.0	20.5	12.0	18.0
		Nominal	24.0	21.0	17.0	19.5	11.0	17.0
NR Band n25/n2	G	Max Allowed Power	25.0	22.0	18.0	20.5	11.5	18.0
		Nominal	24.0	21.0	17.0	19.5	10.5	17.0
NR Band n30	G	Max Allowed Power	24.0	22.0	19.0	19.5	10.5	19.0
		Nominal	23.0	21.0	18.0	18.5	9.5	18.0
NR Band n7	G	Max Allowed Power	24.0	18.5	17.5	18.0	10.0	17.5
		Nominal	23.0	17.5	16.5	17.0	9.0	16.5
NR Band n41 PC3 (Path 1)	G	Max Allowed Power	25.0	20.0	17.5	17.0	10.0	17.5
		Nominal	24.0	19.0	16.5	16.0	9.0	16.5
NR Band n41 PC3 (Path 1)	B	Max Allowed Power	21.0	12.0	18.5	21.0	12.0	18.5
		Nominal	20.0	11.0	17.5	20.0	11.0	17.5
NR Band n41 PC3 (Path 1)	H	Max Allowed Power	21.5	8.0	15.0	15.0	8.0	15.0
		Nominal	20.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC3 (Path 1)	D	Max Allowed Power	19.5	8.0	15.0	15.0	8.0	15.0
		Nominal	18.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC2 (Path 1)	G	Max Allowed Power	27.0	20.0	17.5	17.0	10.0	17.5
		Nominal	26.0	19.0	16.5	16.0	9.0	16.5
NR Band n41 PC2 (Path 1)	B	Max Allowed Power	21.0	12.0	18.5	21.0	12.0	18.5
		Nominal	20.0	11.0	17.5	20.0	11.0	17.5
NR Band n41 PC2 (Path 1)	H	Max Allowed Power	21.5	8.0	15.0	15.0	8.0	15.0
		Nominal	20.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC2 (Path 1)	D	Max Allowed Power	19.5	8.0	15.0	15.0	8.0	15.0
		Nominal	18.5	7.0	14.0	14.0	7.0	14.0
NR Band n41 PC1.5 UL-MIMO	G	Max Allowed Power	27.0	20.0	17.5	17.0	10.0	17.5
		Nominal	26.0	19.0	16.5	16.0	9.0	16.5
NR Band n41 PC1.5	H	Max Allowed Power	21.5	8.0	15.0	15.0	8.0	15.0
		Nominal	20.5	7.0	14.0	14.0	7.0	14.0
NR Band n38 (Path 1)	G	Max Allowed Power	25.0	20.0	17.5	17.0	10.0	17.5
		Nominal	24.0	19.0	16.5	16.0	9.0	16.5

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

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2.4.2 NTN Satellite Output Power

Mode / Band	Antenna		Modulated Average Output Power (in dBm)		
			Maximum Power	Folder Open - Grip Sensor Active	Folder Close - Grip Sensor Active
NTN Band 255	G	Max Allowed Power	25.0	14.0	21.0
		Nominal	24.0	13.0	20.0

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 the original filing. In the closed configuration, since the display diagonal dimension of this device is > 150 mm and <200 mm, it is considered a "phablet." In the open configuration, since the display diagonal dimension of this device is >200mm, it is considered a tablet. 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 – Folder Closed

Antenna	Back	Front	Top	Bottom	Right	Left
A	Yes	Yes	No	Yes	Yes	No
B	Yes	Yes	No	Yes	No	Yes
C	Yes	Yes	No	Yes	Yes	Yes
A+C	Yes	Yes	No	Yes	Yes	Yes
D	Yes	Yes	No	No	Yes	No
E	Yes	Yes	Yes	No	Yes	No
F	Yes	Yes	Yes	No	No	Yes
G	Yes	Yes	Yes	No	Yes	No
H	Yes	Yes	No	No	Yes	No
J	Yes	No	Yes	No	Yes	No
MIMO	Yes	Yes	No	No	Yes	Yes

Note: Particular DUT edges were not required to be evaluated for wireless router SAR or phablet SAR if edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III and FCC KDB Publication 648474 D01v06r03. The distances between the transmit antennas and the edges of the device are included in the filing. When wireless router mode is enabled, NTN, 2.4 GHz Bluetooth Antenna F and MIMO, U-NII-1, U-NII-2A, U-NII-2C, U-NII-4, and WIFI6E operations are disabled.

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Table 2-2
Device Edges/Sides for SAR Testing – Folder Open

Antenna	Back	Front	Top	Bottom	Right	Left
A+C	Yes	No	Yes	Yes	Yes	Yes
B	Yes	No	Yes	Yes	Yes	Yes
C	Yes	No	Yes	Yes	Yes	Yes
D	Yes	No	Yes	Yes	Yes	Yes
E	Yes	No	Yes	Yes	Yes	Yes
F	Yes	No	Yes	Yes	Yes	Yes
G	Yes	No	Yes	Yes	Yes	Yes
H	Yes	No	Yes	Yes	Yes	Yes
J	Yes	Yes	Yes	No	Yes	No
MIMO	Yes	No	Yes	Yes	Yes	Yes

Note: Per FCC KDB Publication 616217 D04v01r01, particular edges were not required to be evaluated for SAR based on the SAR exclusion threshold in KDB 447498 D04v01. Additional edges may have been evaluated for simultaneous transmission analysis.

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 the original filing.

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 2-3
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Body	Notes
1	GSM voice + 2.4 GHz Bluetooth SISO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
2	GSM voice + 2.4 GHz Bluetooth MIMO	Yes	Yes	N/A	Yes	Yes	
3	GSM voice + 2.4 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
4	GSM voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
5	GSM voice + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
6	GSM voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
7	GSM voice + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
8	GSM voice + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
9	GSM voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
10	GSM voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
11	GSM voice + 2.4 GHz WLAN MIMO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
12	GSM voice + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
13	GSM voice + 2.4 GHz WLAN SISO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
14	GSM voice + 2.4 GHz WLAN SISO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
15	GSM voice + 2.4 GHz WLAN SISO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
16	GSM voice + 2.4 GHz WLAN SISO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
17	GSM voice + 2.4 GHz Bluetooth SISO + 5 GHz WLAN SISO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
18	GSM voice + 2.4 GHz Bluetooth SISO + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
19	GSM voice + 2.4 GHz Bluetooth SISO + 6 GHz WLAN SISO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
20	GSM voice + 2.4 GHz Bluetooth SISO + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
21	GSM voice + 2.4 GHz Bluetooth MIMO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
22	GSM voice + 2.4 GHz Bluetooth MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
23	GSM voice + 2.4 GHz Bluetooth MIMO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
24	GSM voice + 2.4 GHz Bluetooth MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
25	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 5 GHz WLAN SISO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
26	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
27	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 6 GHz WLAN SISO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
28	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	Yes	^ Bluetooth Tethering is considered
29	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
30	UMTS/LTE/NR + 2.4 GHz Bluetooth MIMO	Yes	Yes	N/A	Yes	Yes	
31	UMTS/LTE/NR + 2.4 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
32	UMTS/LTE/NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
33	UMTS/LTE/NR + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
34	UMTS/LTE/NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
35	UMTS/LTE/NR + 6 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
36	UMTS/LTE/NR + 6 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
37	UMTS/LTE/NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
38	UMTS/LTE/NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
39	UMTS/LTE/NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
40	UMTS/LTE/NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
41	UMTS/LTE/NR + 2.4 GHz WLAN SISO + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
42	UMTS/LTE/NR + 2.4 GHz WLAN SISO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
43	UMTS/LTE/NR + 2.4 GHz WLAN SISO + 6 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
44	UMTS/LTE/NR + 2.4 GHz WLAN SISO + 6 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
45	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO + 5 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
46	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
47	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO + 6 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
48	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO + 6 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
49	UMTS/LTE/NR + 2.4 GHz Bluetooth MIMO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
50	UMTS/LTE/NR + 2.4 GHz Bluetooth MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
51	UMTS/LTE/NR + 2.4 GHz Bluetooth MIMO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
52	UMTS/LTE/NR + 2.4 GHz Bluetooth MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
53	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 5 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
54	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
55	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 6 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
56	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 6 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
57	LTE + NR	Yes	Yes	N/A	Yes	Yes	
58	LTE + NR + 2.4 GHz Bluetooth SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
59	LTE + NR + 2.4 GHz Bluetooth MIMO	Yes	Yes	N/A	Yes	Yes	
60	LTE + NR + 2.4 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
61	LTE + NR + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
62	LTE + NR + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
63	LTE + NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
64	LTE + NR + 6 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
65	LTE + NR + 6 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
66	LTE + NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
67	LTE + NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
68	LTE + NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
69	LTE + NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
70	LTE + NR + 2.4 GHz WLAN SISO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
71	LTE + NR + 2.4 GHz WLAN SISO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
72	LTE + NR + 2.4 GHz WLAN SISO + 6 GHz WLAN SISO	Yes	Yes	Yes	Yes	Yes	
73	LTE + NR + 2.4 GHz WLAN SISO + 6 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	
74	LTE + NR + 2.4 GHz Bluetooth SISO + 5 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
75	LTE + NR + 2.4 GHz Bluetooth SISO + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
76	LTE + NR + 2.4 GHz Bluetooth SISO + 6 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
77	LTE + NR + 2.4 GHz Bluetooth SISO + 6 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
78	LTE + NR + 2.4 GHz Bluetooth MIMO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
79	LTE + NR + 2.4 GHz Bluetooth MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
80	LTE + NR + 2.4 GHz Bluetooth MIMO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	Yes	
81	LTE + NR + 2.4 GHz Bluetooth MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	
82	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 5 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
83	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
84	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 6 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
85	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 6 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
86	GPRS/EDGE + 2.4 GHz Bluetooth SISO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
87	GPRS/EDGE + 2.4 GHz Bluetooth MIMO	N/A	N/A	N/A	Yes	Yes	
88	GPRS/EDGE + 2.4 GHz WLAN SISO	N/A	N/A	Yes	Yes	Yes	
89	GPRS/EDGE + 2.4 GHz WLAN MIMO	N/A	N/A	N/A	Yes	Yes	
90	GPRS/EDGE + 5 GHz WLAN SISO	N/A	N/A	Yes	Yes	Yes	
91	GPRS/EDGE + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	
92	GPRS/EDGE + 6 GHz WLAN SISO	N/A	N/A	Yes	Yes	Yes	
93	GPRS/EDGE + 6 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	
94	GPRS/EDGE + 2.4 GHz WLAN MIMO + 5 GHz WLAN SISO	N/A	N/A	N/A	Yes	Yes	
95	GPRS/EDGE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	N/A	N/A	N/A	Yes	Yes	
96	GPRS/EDGE + 2.4 GHz WLAN MIMO + 6 GHz WLAN SISO	N/A	N/A	Yes	Yes	Yes	
97	GPRS/EDGE + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	
98	GPRS/EDGE + 2.4 GHz WLAN SISO + 5 GHz WLAN SISO	N/A	N/A	Yes	Yes	Yes	
99	GPRS/EDGE + 2.4 GHz WLAN SISO + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	
100	GPRS/EDGE + 2.4 GHz WLAN SISO + 6 GHz WLAN SISO	N/A	N/A	Yes	Yes	Yes	
101	GPRS/EDGE + 2.4 GHz WLAN SISO + 6 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	
102	GPRS/EDGE + 2.4 GHz Bluetooth SISO + 5 GHz WLAN SISO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
103	GPRS/EDGE + 2.4 GHz Bluetooth SISO + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
104	GPRS/EDGE + 2.4 GHz Bluetooth SISO + 6 GHz WLAN SISO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
105	GPRS/EDGE + 2.4 GHz Bluetooth SISO + 6 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered for Antenna H
106	GPRS/EDGE + 2.4 GHz Bluetooth MIMO + 5 GHz WLAN SISO	N/A	N/A	N/A	Yes	Yes	
107	GPRS/EDGE + 2.4 GHz Bluetooth MIMO + 5 GHz WLAN MIMO	N/A	N/A	N/A	Yes	Yes	
108	GPRS/EDGE + 2.4 GHz Bluetooth MIMO + 6 GHz WLAN SISO	N/A	N/A	N/A	Yes	Yes	
109	GPRS/EDGE + 2.4 GHz Bluetooth MIMO + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	Yes	
110	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 5 GHz WLAN SISO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
111	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
112	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 6 GHz WLAN SISO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered
113	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant F + 6 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	Yes	^ Bluetooth Tethering is considered

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1. SISO represents 2.4 GHz WLAN/BT transmission on Ant H or Ant F, and 5/6 GHz transmission on Ant F or Ant E.
2. 2.4 GHz WLAN Ant H and 2.4 GHz Bluetooth Ant H share the same antenna path and cannot transmit simultaneously.
3. 5 GHz WLAN and 6 GHz WLAN share the same antenna path and cannot transmit simultaneously.
4. 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.
5. 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.
6. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 were not evaluated for wireless router conditions.
7. 6 GHz Wireless Router is not supported, therefore it was not evaluated for wireless router conditions.
8. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax/be. 802.11a/b/g/n/ac/ax/be supports CDD and STBC and 802.11n/ac/ax/be additionally supports SDM.
9. This device supports VoWIFI.
10. This device supports Bluetooth Tethering on Ant H only.
11. This device supports VoLTE.
12. This device supports VoNR.
13. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
14. 5G NR FR2 n258, n260, and n261 cannot transmit simultaneously.
15. LTE + 5G NR FR2 and 5G NR1 + 5G NR FR2 scenarios are limited to combinations with anchor bands as shown in the NR FR2 checklist.
16. UWB and NFC were evaluated for phablet based on expected usage conditions.
17. NB NTN-IoT only transmits only when the device is set to satellite mode and does not transmit with any other radios simultaneously.

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, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.

Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A, U-NII-2C, U-NII-4, and 6 GHz WIFI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth Antenna H, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.

This device supports IEEE 802.11ax/be with the following features:

a) Up to 320 MHz Bandwidth only for 6 GHz
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 D01v06r03, this device is considered a "phablet" when it is in a closed configuration since the display diagonal dimension is greater than 150mm and less than 200mm. Phablet

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SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A, U-NII-2C, U-NII-4 WIFI and 6 GHz, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WLAN, 2.4 GHz Bluetooth Antenna H, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

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. Therefore, SAR tests were not required for 802.11ax/be RU/MRU based on the maximum allowed output powers of OFDM modes and the reported SAR values. Per FCC Guidance, maximum conducted powers were performed for each RU/MRU size to demonstrate that the output powers would not be higher than the other OFDM 802.11 modes. Please see the original EMC test reports 1M2502210015-19.A3L, 1M2502210015-21.A3L, 1M2502210015-23.A3L, and1M2502210015-25.A3L for 802.11ax/be RU/MRU output powers.

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 4cm^2 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 LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB Publication 941225 D05A v01r02, SAR for LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

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

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

Per FCC KDB Publication 648474 D01v06r03, this device is considered a "phablet" when it is in the closed configuration 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.

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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 can transmit with antenna switching for bands/modes on antennas A, B, C, E, F, and G. 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.

Per FCC Guidance, C-Band for NR n77 (3705 – 3975 MHz) was fully tested according to FCC procedures. For each exposure condition and antenna, the worst-case position was additionally evaluated for the NR n77 DoD (3455.01 – 3544.98 MHz).

This device uses two transmit pathways for n38, n41, n48, n78, and n77 operations (Path 1 and Path 2). For each exposure condition, the pathway with the highest target power was fully evaluated. Conducted powers for the other path were additionally evaluated to ensure they are not more than 0.5dB higher than the tested path.

This device supports 5G NR for Bands n258, n260, and n261. RF Exposure assessment and simultaneous transmission analysis for these bands can be found in the Near Field PD Report (report SN can be found in Section 2.11 – Bibliography).

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

For licensed bands operating < 1 GHz, this device can transmit with Ant A or with Ant A+ Ant C. The RF path for both conditions is identical, therefore separate conducted powers are not required for these conditions. For closed test configurations, both Ant A and Ant A + Ant C conditions were fully evaluated for all exposure conditions. For open configurations, only Ant A + Ant C conditions were evaluated since in the open configuration, only Ant A + Ant C is supported as described in the operational description.

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 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 D01v06r03 (Phablet Procedures)

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- FCC KDB Publication 616217 D04v01r02 (Tablet, Proximity Sensor)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO)
- November 2017, April 2018, October 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (IEEE 802.11ax)
- April 2019 and October 2024 TCB Workshop Notes (Dynamic Antenna Tuning)
- 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 and Section 13.

2.11 Bibliography

Report Type	Report Serial Number
PD Part 1 Test Report Original Filing	1M2502210015-04.A3L
PD Part 0 Test Report Original Filing	
RF Exposure Part 2 Test Report Original Filing	1M2502210015-03.A3L
RF Exposure Compliance Summary Report Original Filing	1M2502210015-05.A3L
RF Exposure Part 0 Test Report Original Filing	1M2502210015-02.A3L
RF Exposure Part 0 Test Report	1M2504220043-05.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 71: 665.5 - 695.5 MHz				
	LTE Band 12: 699.7 - 715.3 MHz				
	LTE Band 13: 779.5 - 784.5 MHz				
	LTE Band 14: 790.5 - 795.5 MHz				
	LTE Band 26: 814.7 - 848.3 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 25: 1850.7 - 1914.3 MHz				
	LTE Band 2: 1850.7 - 1909.3 MHz				
	LTE Band 30: 2307.5 - 2312.5 MHz				
	LTE Band 7: 2502.5 - 2567.5 MHz				
	LTE Band 41: 2498.5 - 2687.5 MHz				
	LTE Band 38: 2572.5 - 2617.5 MHz				
	LTE Band 48: 3552.5 - 3697.5 MHz				
Channel Bandwidths	LTE Band 71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 14: 5 MHz, 10 MHz				
	LTE Band 26: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 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				
	LTE Band 25: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 30: 5 MHz, 10 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 38: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 48: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (133147)		680.5 (133297)	695.5 (133447)	
LTE Band 71: 10 MHz	668 (133172)		680.5 (133297)	693 (133422)	
LTE Band 71: 15 MHz	670.5 (133197)		680.5 (133297)	690.5 (133397)	
LTE Band 71: 20 MHz	673 (133222)		680.5 (133297)	688 (133372)	
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	(N/A)		782 (23230)	(N/A)	
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)	795.5 (23355)	
LTE Band 14: 10 MHz	(N/A)		793 (23330)	(N/A)	
LTE Band 26: 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26: 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26: 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26: 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26: 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
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 (132665)	
LTE Band 66: 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66: 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66: 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
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 25: 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25: 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25: 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25: 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25: 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25: 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
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 30: 5 MHz	2307.5 (27685)		2310 (27710)	2312.5 (27735)	
LTE Band 30: 10 MHz	(N/A)		2310 (27710)	(N/A)	
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)	2567.5 (21425)	
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)	2565 (21400)	
LTE Band 7: 15 MHz	2507.5 (20825)		2535 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
LTE Band 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)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
LTE Band 48: 5 MHz	3552.5 (55265)	3600.8 (55748)	(N/A)	3649.2 (56232)	3697.5 (56715)
LTE Band 48: 10 MHz	3555 (55290)	3601.7 (55757)	(N/A)	3648.3 (56223)	3695 (56690)
LTE Band 48: 15 MHz	3557.5 (55315)	3602.5 (55765)	(N/A)	3647.5 (56215)	3692.5 (56665)
LTE Band 48: 20 MHz	3560 (55340)	3603.3 (55773)	(N/A)	3646.7 (56207)	3690 (56640)
UE Category	UL UE Cat 18, DL UE Cat 20				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM				
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 and 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, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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NR Information							
Form Factor	Portable Handset						
Frequency Range of each NR transmission band	NR Band n71: 665.5 - 695.5 MHz						
	NR Band n12: 701.5 - 713.5 MHz						
	NR Band n14: 790.5 - 795.5 MHz						
	NR Band n26: 816.5 - 846.5 MHz						
	NR Band n5: 826.5 - 846.5 MHz						
	NR Band n70: 1697.5 - 1707.5 MHz						
	NR Band n66: 1712.5 - 1777.5 MHz						
	NR Band n25: 1852.5 - 1912.5 MHz						
	NR Band n2: 1852.5 - 1907.5 MHz						
	NR Band n30: 2307.5 - 2312.5 MHz						
	NR Band n7: 2502.5 - 2567.5 MHz						
	NR Band n41: 2501.01 - 2685 MHz						
	NR Band n38: 2575 - 2615 MHz						
	NR Band n48: 3555 - 3694.98 MHz						
	NR Band n78: 3455.01 - 3544.98 MHz; 3705 - 3795 MHz						
	NR Band n77: 3455.01 - 3544.98 MHz; 3705 - 3975 MHz						
Channel Bandwidths	NR Band n71: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz						
	NR Band n12: 5 MHz, 10 MHz, 15 MHz						
	NR Band n14: 5 MHz, 10 MHz						
	NR Band n26: 5 MHz, 10 MHz, 15 MHz, 20 MHz						
	NR Band n5: 5 MHz, 10 MHz, 15 MHz, 20 MHz						
	NR Band n70: 5 MHz, 10 MHz, 15 MHz						
	NR Band n66: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz, 45 MHz						
	NR Band n25: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz						
	NR Band n2: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz						
	NR Band n30: 5 MHz, 10 MHz						
	NR Band n7: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz, 50 MHz						
	NR Band n41: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 35 MHz, 40 MHz, 45 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz						
	NR Band n38: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz						
	NR Band n48: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz						
	NR Band n78: 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz						
	NR Band n77: 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz						
Channel Numbers and Frequencies (MHz)							
NR Band n71: 5 MHz	665.5 (133100)	680.5 (136100)	695.5 (139100)				
NR Band n71: 10 MHz	668 (133500)	680.5 (136100)	693 (139500)				
NR Band n71: 15 MHz	670.5 (134000)	680.5 (136100)	690.5 (139000)				
NR Band n71: 20 MHz	673 (134500)	680.5 (136100)	688 (138500)				
NR Band n71: 25 MHz	675.5 (135000)	680.5 (136100)	685.5 (137100)				
NR Band n71: 30 MHz	678 (135500)	680.5 (136100)	683 (136500)				
NR Band n71: 35 MHz	(N/A)	680.5 (136100)	(N/A)				
NR Band n12: 5 MHz	701.5 (140500)	707.5 (141500)	713.5 (142700)				
NR Band n12: 10 MHz	704 (140800)	707.5 (141500)	711 (142200)				
NR Band n12: 15 MHz	706.5 (141300)	707.5 (141500)	708.5 (141700)				
NR Band n14: 5 MHz	790.5 (158100)	793 (158600)	795.5 (159100)				
NR Band n14: 10 MHz	793 (158600)	793 (158600)	793 (158600)				
NR Band n26: 5 MHz	816.5 (163300)	831.5 (166300)	846.5 (169300)				
NR Band n26: 10 MHz	819 (163800)	831.5 (166300)	844 (168800)				
NR Band n26: 15 MHz	821.5 (164300)	831.5 (166300)	841.5 (168300)				
NR Band n26: 20 MHz	824 (164800)	831.5 (166300)	839 (167800)				
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 n70: 5 MHz	1697.5 (339500)	1702.5 (340500)	1707.5 (341500)				
NR Band n70: 10 MHz	1700 (340000)	1702.5 (340500)	1705 (341000)				
NR Band n70: 15 MHz	1702.5 (340500)	1702.5 (340500)	1702.5 (340500)				
NR Band n66: 5 MHz	1712.5 (342500)	1745 (349000)	1777.5 (355000)				
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 n25: 5 MHz	1852.5 (370500)	1882.5 (376500)	1912.5 (382500)				
NR Band n25: 10 MHz	1855 (371000)	1882.5 (376500)	1910 (382000)				
NR Band n25: 15 MHz	1857.5 (371500)	1882.5 (376500)	1907.5 (381500)				
NR Band n25: 20 MHz	1860 (372000)	1882.5 (376500)	1905 (381000)				
NR Band n25: 25 MHz	1862.5 (372500)	1882.5 (376500)	1902.5 (380500)				
NR Band n25: 30 MHz	1865 (373000)	1882.5 (376500)	1900 (380000)				
NR Band n25: 35 MHz	1867.5 (373500)	1882.5 (376500)	1897.5 (379500)				
NR Band n25: 40 MHz	1870 (374000)	1882.5 (376500)	1895 (379000)				
NR Band n2: 5 MHz	1852.5 (370500)	1880 (376000)	1907.5 (381500)				
NR Band n2: 10 MHz	1855 (371000)	1880 (376000)	1905 (381000)				
NR Band n2: 15 MHz	1857.5 (371500)	1880 (376000)	1902.5 (380500)				
NR Band n2: 20 MHz	1860 (372000)	1880 (376000)	1900 (380000)				
NR Band n2: 25 MHz	1862.5 (372500)	1880 (376000)	1897.5 (379500)				
NR Band n2: 30 MHz	1865 (373000)	1880 (376000)	1895 (379000)				
NR Band n2: 35 MHz	1867.5 (373500)	1880 (376000)	1892.5 (378500)				
NR Band n2: 40 MHz	1870 (374000)	1880 (376000)	1890 (378000)				
NR Band n30: 5 MHz	2307.5 (461500)	2310 (462000)	2312.5 (462500)				
NR Band n30: 10 MHz	2310 (462000)	2310 (462000)	2310 (462000)				
NR Band n7: 5 MHz	2502.5 (500500)	2535 (507000)	2567.5 (513500)				
NR Band n7: 10 MHz	2505 (501000)	2535 (507000)	2565 (513000)				
NR Band n7: 15 MHz	2507.5 (501500)	2535 (507000)	2562.5 (512500)				
NR Band n7: 20 MHz	2510 (502000)	2535 (507000)	2560 (512000)				
NR Band n7: 25 MHz	2512.5 (502500)	2535 (507000)	2557.5 (511500)				
NR Band n7: 30 MHz	2515 (503000)	2535 (507000)	2555 (511000)				
NR Band n7: 35 MHz	2517.5 (503500)	2535 (507000)	2552.5 (511500)				
NR Band n7: 40 MHz	2520 (504000)	2535 (507000)	2550 (510000)				
NR Band n7: 50 MHz	2525 (505000)	2535 (507000)	2545 (509000)				
NR Band n41: 10 MHz	2501.01 (500222)	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	2516.01 (503202)	2567.84 (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)				
NR Band n38: 10 MHz	2575 (515000)	2595 (519000)	2615 (523000)				
NR Band n38: 15 MHz	2577.5 (515500)	2595 (519000)	2612.5 (522500)				
NR Band n38: 20 MHz	2580 (516000)	2595 (519000)	2610 (522000)				
NR Band n38: 25 MHz	2582.5 (516500)	2595 (519000)	2607.5 (521500)				
NR Band n38: 30 MHz	2585 (517000)	2595 (519000)	2605 (521000)				
NR Band n38: 40 MHz	2590 (518000)	2595 (519000)	2600 (520000)				
NR Band n48: 10 MHz	3555 (637000)	3601.68 (640112)	(N/A)	3648.33 (643222)	3694.98 (646332)		
NR Band n48: 15 MHz	3557.52 (637168)	3602.49 (640166)	(N/A)	3647.49 (643166)	3692.49 (646166)		
NR Band n48: 20 MHz	3560.01 (637334)	3603.33 (640222)	(N/A)	3646.68 (643112)	3690 (646000)		
NR Band n48: 30 MHz	3565.02 (637668)	3605.01 (640334)	(N/A)	3645 (643000)	3684.99 (645666)		
NR Band n48: 40 MHz	3570 (638000)	(N/A)	3624.99 (644666)	(N/A)	3679.98 (645332)		
NR Band n78: 10 MHz	3705 (647000)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	3795 (653000)
NR Band n78: 15 MHz	3707.52 (647168)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	3792.48 (652832)
NR Band n78: 20 MHz	3710.01 (647334)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	3789.99 (652666)
NR Band n78: 25 MHz	3712.5 (647500)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	3787.5 (652500)
NR Band n78: 30 MHz	3715.02 (647668)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	3784.98 (652332)
NR Band n78: 40 MHz	3720 (648000)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	3780 (652000)
NR Band n78: 50 MHz	3725.01 (648334)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	3774.99 (651666)
NR Band n78: 60 MHz	(N/A)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	(N/A)
NR Band n78: 70 MHz	(N/A)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	(N/A)
NR Band n78: 80 MHz	(N/A)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	(N/A)
NR Band n78: 90 MHz	(N/A)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	(N/A)
NR Band n78: 100 MHz	(N/A)	(N/A)	(N/A)	3750 (650000)	(N/A)	(N/A)	(N/A)
NR Band n77 DoD: 10 MHz	3455.01 (633334)	3500.01 (633334)	3544.98 (633332)				
NR Band n77 DoD: 15 MHz	3457.5 (633500)	3500.01 (633334)	3542.49 (633166)				
NR Band n77 DoD: 20 MHz	3460.02 (633668)	3500.01 (633334)	3540 (633000)				
NR Band n77 DoD: 25 MHz	3462.51 (633834)	3500.01 (633334)	3537.48 (632832)				
NR Band n77 DoD: 30 MHz	3465 (634000)	3500.01 (633334)	3534.99 (632666)				
NR Band n77 DoD: 40 MHz	3470.01 (633334)	(N/A)	3529.98 (633332)				
NR Band n77 DoD: 50 MHz	3475.02 (633668)	(N/A)	3525 (633000)				
NR Band n77 DoD: 60 MHz	(N/A)	3500.01 (633334)	(N/A)				
NR Band n77 DoD: 70 MHz	(N/A)	3500.01 (633334)	(N/A)				
NR Band n77 DoD: 80 MHz	(N/A)	3500.01 (633334)	(N/A)				
NR Band n77 DoD: 90 MHz	(N/A)	3500.01 (633334)	(N/A)				
NR Band n77 DoD: 100 MHz	(N/A)	3500.01 (633334)	(N/A)				
NR Band n77: 10 MHz	3705 (647000)	3759 (650600)	3813 (654200)	(N/A)	3867 (657800)	3921 (661400)	3975 (665000)
NR Band n77: 15 MHz	3707.52 (647168)	3760.5 (650700)	3813.51 (654234)	(N/A)	3868.49 (657766)	3919.5 (661300)	3972.48 (664832)
NR Band n77: 20 MHz	3710.01 (647334)	3762 (650800)	3813.99 (654266)	(N/A)	3866.01 (657734)	3918 (661200)	3969.99 (664666)
NR Band n77: 25 MHz	3712.5 (647500)	3763.5 (650900)	3814.5 (654300)	(N/A)	3865.5 (657700)	3916.5 (661100)	3967.5 (664500)
NR Band n77: 30 MHz	3715.02 (647668)	3765 (651000)	3815.01 (654334)	(N/A)	3864.99 (657666)	3915 (661000)	3964.98 (664332)
NR Band n77: 40 MHz	3720 (648000)	3768 (651200)	3816 (654400)	(N/A)	3864 (657600)	3912 (660800)	3960 (664000)
NR Band n77: 50 MHz	3725.01 (648334)	3772.49 (652165)	(N/A)	3840 (656000)	(N/A)	3907.51 (658834)	3954.99 (663666)
NR Band n77: 60 MHz	3730.02 (648668)	3803.34 (653356)	(N/A)	(N/A)	(N/A)	3876.66 (658444)	3949.98 (663332)
NR Band n77: 70 MHz	3735 (649000)	3804.99 (653666)	(N/A)	(N/A)	(N/A)	3875.01 (658334)	3945 (663000)
NR Band n77: 80 MHz	3740.01 (649334)	(N/A)	3840 (656000)	(N/A)	3939.99 (662666)		
NR Band n77: 90 MHz	3745.02 (649668)	(N/A)	3840 (656000)	(N/A)	3934.98 (662332)		
NR Band n77: 100 MHz	3750 (650000)	(N/A)	(N/A)	(N/A)	3930 (662000)		
SCS for NR Band n71, n12, n14, n26, n5, n70, n66, n25, n2, n30, n7	15 kHz						
SCS for NR Band n41, n38, n48, n78, n77	30 kHz						
Modulations Supported in UL	DFT-s-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: 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 n71	2/4/66						
LTE Anchor Bands for NR Band n12	N/A						
LTE Anchor Bands for NR Band n14	N/A						
LTE Anchor Bands for NR Band n26	N/A						
LTE Anchor Bands for NR Band n5	2/4/30/48/66						
LTE Anchor Bands for NR Band n70	N/A						
LTE Anchor Bands for NR Band n66	2/5/12/13/14/30/48						
LTE Anchor Bands for NR Band n25	12						
LTE Anchor Bands for NR Band n2	4/5/12/13/14/30/48/66						
LTE Anchor Bands for NR Band n30	N/A						
LTE Anchor Bands for NR Band n7	N/A						
LTE Anchor Bands for NR Band n41	2/4/5/12/66						
LTE Anchor Bands for NR Band n38	N/A						
LTE Anchor Bands for NR Band n48	N/A						
LTE Anchor Bands for NR Band n78	N/A						
LTE Anchor Bands for NR Band n77	2/5/12/13/14/30/66						

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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/m^3)
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:

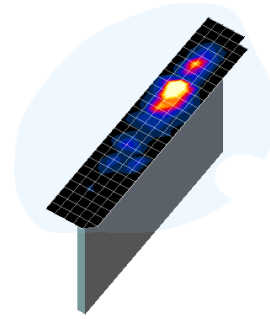

Figure 5-1
Sample SAR Area Scan

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.

Table 5-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

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

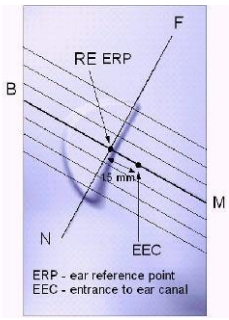

Figure 6-1
Close-Up Side view of ERP

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 than 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

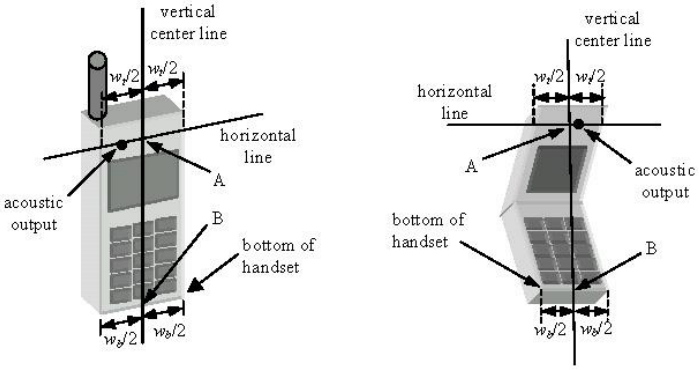

Figure 6-3
Handset Vertical Center & Horizontal Line Reference Points

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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 ε = 3 and loss tangent δ = 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 was 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 / 15º 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 15degrees.
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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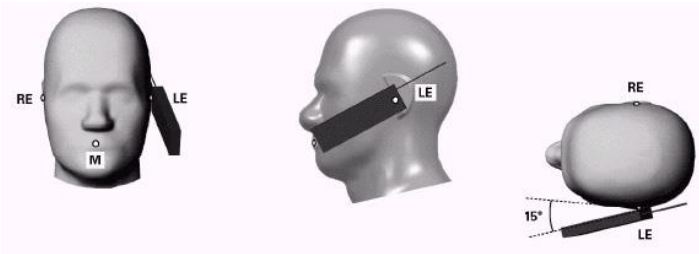

Figure 7-2 Front, Side and Top View of Ear/15º Tilt Position

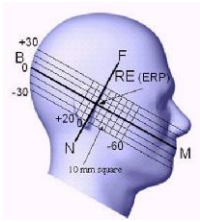

Figure 7-3
Side view w/ relevant markings

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 D01v06r03. 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 D01v06r03, 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.

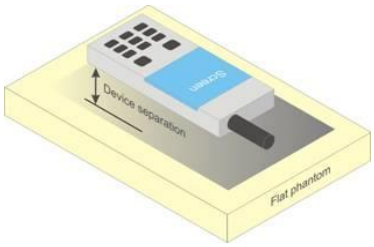

Figure 7-4
Sample Body-Worn Diagram

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 contain metallic components are supplied with the device, the device is tested with only the accessory that

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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 x W ≥ 9 cm x 5 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 mm or an overall diagonal dimension > 160 mm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the phablets procedures outlined in KDB Publication 648474 D01v06r03 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

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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.

7.9 Proximity Sensor Considerations

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

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

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

7.10 SAR Testing for Tablet per KDB Publication 616217 D04v01r02

Per FCC KDB Publication 616217 D04v01r02, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Exclusion Threshold in KDB 447498 D04v01 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

7.11 Head SAR Evaluation for Foldable Device

In accordance with FCC KDB 616217 D04 and the April 2025 Interim Simplified RF Exposure Guidance, it is determined that 1g SAR measurements performed at 0 mm separation using a flat phantom are sufficient to evaluate 1g Head SAR for devices supporting next to the ear voice operations. For foldable phone form factors, where the earpiece may be located on the opposite side of the screen when unfolded, 1g SAR tested at 0 mm on the earpiece surface using the flat phantom fulfills the Head SAR evaluation requirement.

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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 *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (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/m^2 or mW/cm^2.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4 cm^2 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/cm^2 is 10 W/m^2

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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).

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.

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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 ½ 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

Per FCC guidance in KDB Publication 941225 D05A and as clarified during the April 2024 TCB Workshop, no SAR measurement or additional conducted power measurement is required for downlink-only carrier aggregation (DLCA) configurations, provided there is no uplink carrier aggregation and sufficient design justification exists that enabling DLCA does not increase uplink transmit power. In DLCA configurations, uplink signaling remains confined to the Primary Component Carrier (PCC), and Secondary Component Carriers (SCCs) are added for downlink throughput enhancement only. Based on engineering design review and consistency with prior product implementations, enabling DLCA does not affect uplink power on the PCC for this device. Therefore, SAR testing and additional conducted power measurements under DLCA-active conditions were not required.

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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 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:

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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 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.

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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 by setting the EUT transmits continuously at minimum (Plimit, maximum tune up output power Pmax.

10.1.1 LTE Band 66

Table 10-1
LTE Band 66 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**19.88**	19.68	19.65	0	0
	1	50	19.81	19.71	19.76		0
	1	99	19.77	19.66	19.85		0
	50	0	**19.79**	19.75	19.74	0-1	0
	50	25	19.78	19.71	19.78		0
	50	50	19.77	19.69	19.68		0
	100	0	19.75	19.66	19.74		0
16QAM	1	0	19.97	19.87	20.05	0-1	0
	1	50	20.04	20.12	19.87		0
	1	99	20.00	19.88	20.10		0
	50	0	19.89	19.75	19.83	0-2	0
	50	25	19.85	19.70	19.75		0
	50	50	19.76	19.73	19.76		0
	100	0	19.74	19.67	19.80		0
64QAM	1	0	19.91	19.73	19.70	0-2	0
	1	50	20.01	19.86	19.99		0
	1	99	19.99	19.77	19.96		0
	50	0	19.86	19.78	19.75	0-3	0
	50	25	19.79	19.72	19.77		0
	50	50	19.76	19.77	19.72		0
	100	0	19.79	19.64	19.82		0
256QAM	1	0	19.82	19.65	19.85	0-5	0
	1	50	20.08	19.83	19.80		0
	1	99	19.81	19.61	19.77		0
	50	0	19.95	19.73	19.70		0
	50	25	19.73	19.67	19.76		0
	50	50	19.86	19.65	19.67		0
	100	0	19.74	19.67	19.72		0

Table 10-2
LTE Band 66 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.27	17.50	17.09	0	0
	1	50	**17.55**	17.20	17.24		0
	1	99	17.29	17.07	17.41		0
	50	0	**17.31**	17.23	17.21	0-1	0
	50	25	17.23	17.20	17.30		0
	50	50	17.21	17.21	17.25		0
	100	0	17.30	17.18	17.29		0
16QAM	1	0	17.34	17.38	17.46	0-1	0
	1	50	17.66	17.51	17.58		0
	1	99	17.47	17.37	17.44		0
	50	0	17.35	17.26	17.30	0-2	0
	50	25	17.30	17.19	17.28		0
	50	50	17.26	17.20	17.26		0
	100	0	17.25	17.21	17.27		0
64QAM	1	0	17.26	17.37	17.52	0-2	0
	1	50	17.55	17.54	17.44		0
	1	99	17.32	17.46	17.49		0
	50	0	17.33	17.30	17.22	0-3	0
	50	25	17.35	17.21	17.32		0
	50	50	17.24	17.22	17.24		0
	100	0	17.32	17.17	17.30		0
256QAM	1	0	17.42	17.30	17.32	0-5	0
	1	50	17.52	17.37	17.55		0
	1	99	17.39	17.37	17.25		0
	50	0	17.43	17.32	17.32		0
	50	25	17.41	17.33	17.38		0
	50	50	17.34	17.33	17.29		0
	100	0	17.26	17.23	17.36		0

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Table 10-3
LTE Band 66 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	21.29	21.13	21.31	0	0
	1	50	**21.46**	21.14	21.41		0
	1	99	21.20	21.14	21.23		0
	50	0	21.23	21.18	21.23	0-1	0
	50	25	**21.33**	21.17	21.28		0
	50	50	21.23	21.19	21.27		0
	100	0	21.25	21.14	21.25		0
16QAM	1	0	21.49	21.38	21.32	0-1	0
	1	50	21.45	21.58	21.37		0
	1	99	21.45	21.34	21.55		0
	50	0	21.37	21.32	21.20	0-2	0
	50	25	21.29	21.19	21.34		0
	50	50	21.26	21.21	21.31		0
	100	0	21.21	21.27	21.31		0
64QAM	1	0	21.36	21.26	21.19	0-2	0
	1	50	21.53	21.39	21.44		0
	1	99	21.37	21.35	21.57		0
	50	0	21.43	21.31	21.28	0-3	0
	50	25	21.34	21.16	21.33		0
	50	50	21.27	21.30	21.26		0
	100	0	21.29	21.21	21.39		0
256QAM	1	0	19.90	19.75	19.77	0-5	1.5
	1	50	19.84	19.84	19.77		1.5
	1	99	19.81	19.57	19.74		1.5
	50	0	19.86	19.72	19.65		1.5
	50	25	19.85	19.49	19.75		1.5
	50	50	19.79	19.57	19.66		1.5
	100	0	19.84	19.51	19.74		1.5

Table 10-4
LTE Band 66 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	11.03	11.14	11.02	0	0
	1	50	**11.30**	11.06	10.80		0
	1	99	11.20	11.10	10.63		0
	50	0	**11.17**	11.05	10.81	0-1	0
	50	25	11.06	11.04	10.81		0
	50	50	11.09	11.03	10.80		0
	100	0	11.15	11.02	10.83		0
16QAM	1	0	11.46	11.19	11.13	0-1	0
	1	50	11.36	11.37	11.17		0
	1	99	11.25	10.87	11.12		0
	50	0	11.16	10.78	10.97	0-2	0
	50	25	11.01	10.87	11.01		0
	50	50	11.03	10.56	11.02		0
	100	0	11.12	10.65	10.99		0
64QAM	1	0	11.23	10.91	11.10	0-2	0
	1	50	11.39	11.04	11.10		0
	1	99	11.30	11.02	10.88		0
	50	0	11.05	10.77	10.75	0-3	0
	50	25	11.03	10.83	10.74		0
	50	50	10.99	10.77	10.72		0
	100	0	11.03	10.84	10.78		0
256QAM	1	0	11.06	10.72	10.77	0-5	0
	1	50	11.33	11.07	10.89		0
	1	99	11.06	11.04	10.77		0
	50	0	11.10	11.03	10.74		0
	50	25	11.03	10.84	10.79		0
	50	50	11.04	10.95	10.71		0
	100	0	11.07	10.79	10.70		0

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10.1.2 LTE Band 25

Table 10-5
LTE Band 25 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**19.28**	18.93	18.77	0	0
	1	50	19.15	18.88	18.70		0
	1	99	19.14	18.76	18.64		0
	50	0	**19.26**	18.91	18.76	0-1	0
	50	25	19.20	18.89	18.78		0
	50	50	19.17	18.83	18.76		0
	100	0	19.17	18.87	18.71		0
16QAM	1	0	19.34	19.12	18.93	0-1	0
	1	50	19.26	19.05	18.94		0
	1	99	19.48	19.20	18.74		0
	50	0	19.14	18.93	18.81	0-2	0
	50	25	19.11	18.92	18.78		0
	50	50	19.09	18.82	18.73		0
	100	0	19.09	18.88	18.81		0
64QAM	1	0	19.20	19.12	18.95	0-2	0
	1	50	19.29	19.12	18.98		0
	1	99	19.30	19.03	18.80		0
	50	0	19.17	18.94	18.81	0-3	0
	50	25	19.10	18.97	18.84		0
	50	50	19.10	18.88	18.81		0
	100	0	19.07	18.96	18.79		0
256QAM	1	0	18.83	18.43	18.46	0-5	0.5
	1	50	18.74	18.49	18.47		0.5
	1	99	18.71	18.23	18.35		0.5
	50	0	18.77	18.38	18.39		0.5
	50	25	18.74	18.35	18.42		0.5
	50	50	18.67	18.25	18.37		0.5
	100	0	18.72	18.33	18.34		0.5

Table 10-6
LTE Band 25 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**16.54**	16.41	16.32	0	0
	1	50	16.49	16.35	16.10		0
	1	99	16.45	16.24	16.24		0
	50	0	**16.59**	16.33	16.21	0-1	0
	50	25	16.56	16.40	16.19		0
	50	50	16.52	16.34	16.22		0
	100	0	16.48	16.33	16.19		0
16QAM	1	0	16.76	16.59	16.37	0-1	0
	1	50	16.76	16.55	16.43		0
	1	99	16.66	16.56	16.28		0
	50	0	16.64	16.38	16.27	0-2	0
	50	25	16.53	16.36	16.26		0
	50	50	16.50	16.36	16.24		0
	100	0	16.51	16.34	16.24		0
64QAM	1	0	16.75	16.55	16.31	0-2	0
	1	50	16.71	16.54	16.40		0
	1	99	16.65	16.49	16.28		0
	50	0	16.65	16.46	16.21	0-3	0
	50	25	16.55	16.45	16.27		0
	50	50	16.57	16.37	16.25		0
	100	0	16.50	16.37	16.24		0
256QAM	1	0	16.67	16.48	16.34	0-5	0
	1	50	16.62	16.43	16.36		0
	1	99	16.54	16.38	16.06		0
	50	0	16.62	16.39	16.27		0
	50	25	16.55	16.42	16.26		0
	50	50	16.52	16.31	16.17		0
	100	0	16.51	16.38	16.24		0

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Table 10-7
LTE Band 25 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**20.68**	20.40	20.18	0	0
	1	50	20.63	20.46	20.11		0
	1	99	20.61	20.26	20.15		0
	50	0	**20.68**	20.43	20.20	0-1	0
	50	25	20.61	20.38	20.17		0
	50	50	20.55	20.30	20.15		0
	100	0	20.56	20.38	20.15		0
16QAM	1	0	20.83	20.56	20.44	0-1	0
	1	50	20.82	20.54	20.31		0
	1	99	20.74	20.47	20.44		0
	50	0	20.65	20.43	20.17	0-2	0
	50	25	20.61	20.46	20.18		0
	50	50	20.61	20.37	20.07		0
	100	0	20.56	20.46	20.11		0
64QAM	1	0	20.75	20.45	20.34	0-2	0
	1	50	20.69	20.53	20.28		0
	1	99	20.68	20.51	20.26		0
	50	0	20.59	20.13	20.22	0-3	0
	50	25	20.47	20.15	20.20		0
	50	50	20.49	20.07	20.18		0
	100	0	20.57	20.15	20.14		0
256QAM	1	0	18.57	18.21	18.44	0-5	2
	1	50	18.66	18.24	18.34		2
	1	99	18.51	18.05	18.26		2
	50	0	18.66	18.15	18.30		2
	50	25	18.50	18.14	18.26		2
	50	50	18.46	18.05	18.28		2
	100	0	18.50	18.15	18.29		2

Table 10-8
LTE Band 25 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	9.95	9.85	9.87	0	0
	1	50	**10.10**	9.85	9.82		0
	1	99	9.96	9.90	9.61		0
	50	0	**10.08**	9.87	9.80	0-1	0
	50	25	10.03	9.95	9.79		0
	50	50	9.98	9.82	9.69		0
	100	0	10.00	9.92	9.80		0
16QAM	1	0	10.18	10.05	9.76	0-1	0
	1	50	10.24	9.99	9.85		0
	1	99	10.19	9.97	9.79		0
	50	0	10.07	9.87	9.76	0-2	0
	50	25	10.07	10.01	9.76		0
	50	50	9.98	9.85	9.69		0
	100	0	10.01	9.86	9.75		0
64QAM	1	0	10.16	10.03	9.87	0-2	0
	1	50	10.23	10.01	9.92		0
	1	99	10.14	10.04	9.81		0
	50	0	10.07	9.90	9.78	0-3	0
	50	25	9.99	9.94	9.80		0
	50	50	10.06	9.85	9.68		0
	100	0	9.95	9.87	9.77		0
256QAM	1	0	10.12	10.08	9.81	0-5	0
	1	50	10.15	10.09	9.86		0
	1	99	10.06	9.86	9.69		0
	50	0	10.04	9.93	9.78		0
	50	25	10.07	9.94	9.77		0
	50	50	10.04	9.83	9.67		0
	100	0	10.01	9.92	9.81		0

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10.1.3 LTE Band 30

Table 10-9
LTE Band 30 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**18.04**	0	0
	1	25	17.96		0
	1	49	17.92		0
	25	0	**18.05**	0-1	0
	25	12	18.02		0
	25	25	17.96		0
	50	0	18.03		0
16QAM	1	0	18.19	0-1	0
	1	25	18.33		0
	1	49	18.10		0
	25	0	18.08	0-2	0
	25	12	18.08		0
	25	25	17.96		0
	50	0	18.02		0
64QAM	1	0	18.16	0-2	0
	1	25	18.21		0
	1	49	18.15		0
	25	0	18.01	0-3	0
	25	12	18.02		0
	25	25	17.95		0
	50	0	18.07		0
256QAM	1	0	18.10	0-5	0
	1	25	18.27		0
	1	49	17.93		0
	25	0	18.04		0
	25	12	18.03		0
	25	25	17.94		0
	50	0	18.00		0

Table 10-10
LTE Band 30 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**17.66**	0	0
	1	25	17.65		0
	1	49	17.49		0
	25	0	**17.65**	0-1	0
	25	12	17.64		0
	25	25	17.52		0
	50	0	17.58		0
16QAM	1	0	17.81	0-1	0
	1	25	18.02		0
	1	49	17.78		0
	25	0	17.60	0-2	0
	25	12	17.63		0
	25	25	17.59		0
	50	0	17.57		0
64QAM	1	0	17.75	0-2	0
	1	25	17.85		0
	1	49	17.67		0
	25	0	17.54	0-3	0
	25	12	17.64		0
	25	25	17.52		0
	50	0	17.58		0
256QAM	1	0	17.77	0-5	0
	1	25	17.84		0
	1	49	17.47		0
	25	0	17.66		0
	25	12	17.64		0
	25	25	17.59		0
	50	0	17.63		0

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Table 10-11
LTE Band 30 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	20.61	0	0
	1	25	**20.70**		0
	1	49	20.65		0
	25	0	**20.72**	0-1	0
	25	12	20.69		0
	25	25	20.65		0
	50	0	20.64		0
16QAM	1	0	20.63	0-1	0
	1	25	20.72		0
	1	49	20.51		0
	25	0	20.54	0-2	0
	25	12	20.48		0
	25	25	20.49		0
	50	0	20.52		0
64QAM	1	0	20.79	0-2	0
	1	25	20.68		0
	1	49	20.51		0
	25	0	20.18	0-3	0.5
	25	12	20.15		0.5
	25	25	20.09		0.5
	50	0	20.09		0.5
256QAM	1	0	18.22	0-5	2.5
	1	25	18.33		2.5
	1	49	18.05		2.5
	25	0	18.14		2.5
	25	12	18.15		2.5
	25	25	18.12		2.5
	50	0	18.14		2.5

Table 10-12
LTE Band 30 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**8.97**	0	0
	1	25	8.94		0
	1	49	8.74		0
	25	0	**8.98**	0-1	0
	25	12	8.97		0
	25	25	8.93		0
	50	0	8.96		0
16QAM	1	0	9.05	0-1	0
	1	25	9.12		0
	1	49	9.04		0
	25	0	8.97	0-2	0
	25	12	8.94		0
	25	25	8.99		0
	50	0	8.96		0
64QAM	1	0	8.99	0-2	0
	1	25	9.19		0
	1	49	8.96		0
	25	0	8.96	0-3	0
	25	12	8.92		0
	25	25	8.97		0
	50	0	9.00		0
256QAM	1	0	9.03	0-5	0
	1	25	9.17		0
	1	49	8.92		0
	25	0	9.00		0
	25	12	8.98		0
	25	25	8.93		0
	50	0	8.94		0

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10.1.4 LTE Band 7

Table 10-13
LTE Band 7 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.89	17.04	**17.08**	0	0
	1	50	16.78	16.85	16.86		0
	1	99	16.63	16.80	16.84		0
	50	0	16.66	16.80	16.85	0-1	0
	50	25	16.91	16.93	16.85		0
	50	50	16.80	16.94	**17.10**		0
	100	0	16.73	16.79	17.00		0
16QAM	1	0	16.76	17.01	17.17	0-1	0
	1	50	16.86	17.01	16.98		0
	1	99	16.87	17.00	17.00		0
	50	0	16.65	16.83	16.86	0-2	0
	50	25	16.78	16.86	16.93		0
	50	50	16.83	16.89	16.93		0
	100	0	16.82	16.82	16.83		0
64QAM	1	0	16.79	16.99	16.94	0-2	0
	1	50	16.88	16.94	16.98		0
	1	99	16.99	17.01	17.04		0
	50	0	16.73	16.84	16.87	0-3	0
	50	25	16.81	16.87	16.91		0
	50	50	16.78	16.92	16.97		0
	100	0	16.70	16.89	16.92		0
256QAM	1	0	16.73	16.74	16.88	0-5	0
	1	50	16.85	16.99	17.04		0
	1	99	16.74	16.91	17.00		0
	50	0	16.69	16.86	16.82		0
	50	25	16.79	16.89	16.91		0
	50	50	16.83	16.92	16.99		0
	100	0	16.84	16.79	16.87		0

Table 10-14
LTE Band 7 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	15.86	16.06	**16.15**	0	0
	1	50	15.76	15.84	15.91		0
	1	99	15.74	15.92	15.97		0
	50	0	15.80	15.92	15.96	0-1	0
	50	25	15.98	15.90	15.96		0
	50	50	15.87	16.11	**16.13**		0
	100	0	15.85	15.91	16.06		0
16QAM	1	0	15.89	16.07	16.17	0-1	0
	1	50	15.95	16.24	16.14		0
	1	99	16.06	16.15	16.11		0
	50	0	15.79	15.96	15.98	0-2	0
	50	25	15.87	15.95	16.02		0
	50	50	15.91	15.98	16.06		0
	100	0	15.86	15.89	15.94		0
64QAM	1	0	15.92	16.03	16.12	0-2	0
	1	50	15.99	16.23	16.17		0
	1	99	15.97	16.09	16.09		0
	50	0	15.83	15.97	15.99	0-3	0
	50	25	15.91	15.94	16.01		0
	50	50	15.97	16.02	16.06		0
	100	0	15.87	15.93	15.98		0
256QAM	1	0	15.73	15.98	15.98	0-5	0
	1	50	15.99	15.96	16.10		0
	1	99	15.98	15.99	16.11		0
	50	0	15.80	15.94	15.97		0
	50	25	15.95	15.99	16.00		0
	50	50	15.96	16.02	16.11		0
	100	0	15.89	15.93	16.01		0

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Table 10-15
LTE Band 7 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.81	16.90	16.91	0	0
	1	50	16.77	16.91	16.94		0
	1	99	16.74	16.91	**17.02**		0
	50	0	16.78	16.90	16.97	0-1	0
	50	25	16.93	16.95	16.97		0
	50	50	16.83	17.00	**17.06**		0
	100	0	16.85	16.94	16.96		0
16QAM	1	0	17.04	17.02	17.13	0-1	0
	1	50	16.97	17.05	17.14		0
	1	99	16.99	17.07	17.15		0
	50	0	16.81	16.94	17.02	0-2	0
	50	25	16.92	16.92	16.96		0
	50	50	16.88	16.97	17.02		0
	100	0	16.89	16.92	16.98		0
64QAM	1	0	17.07	17.03	17.03	0-2	0
	1	50	17.03	17.11	17.14		0
	1	99	17.00	17.05	17.17		0
	50	0	16.78	16.96	16.97	0-3	0
	50	25	16.91	16.96	16.99		0
	50	50	16.94	17.00	17.09		0
	100	0	16.90	16.93	16.96		0
256QAM	1	0	16.77	16.94	16.98	0-5	0
	1	50	16.91	17.11	17.25		0
	1	99	16.98	16.99	17.07		0
	50	0	16.79	16.89	17.00		0
	50	25	16.81	16.96	17.00		0
	50	50	16.88	17.00	17.09		0
	100	0	16.92	16.98	16.97		0

Table 10-16
LTE Band 7 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	8.16	8.31	**8.69**	0	0
	1	50	8.32	8.49	8.58		0
	1	99	8.26	8.45	8.48		0
	50	0	8.26	8.45	8.54	0-1	0
	50	25	8.30	8.46	8.55		0
	50	50	8.34	8.55	**8.57**		0
	100	0	8.33	8.50	8.53		0
16QAM	1	0	8.31	8.66	8.71	0-1	0
	1	50	8.38	8.67	8.78		0
	1	99	8.47	8.69	8.71		0
	50	0	8.17	8.48	8.55	0-2	0
	50	25	8.30	8.52	8.59		0
	50	50	8.34	8.56	8.57		0
	100	0	8.34	8.48	8.56		0
64QAM	1	0	8.37	8.58	8.60	0-2	0
	1	50	8.36	8.55	8.73		0
	1	99	8.33	8.63	8.59		0
	50	0	8.23	8.46	8.54	0-3	0
	50	25	8.35	8.47	8.58		0
	50	50	8.37	8.50	8.55		0
	100	0	8.38	8.43	8.55		0
256QAM	1	0	8.28	8.48	8.58	0-5	0
	1	50	8.42	8.67	8.70		0
	1	99	8.45	8.50	8.57		0
	50	0	8.26	8.48	8.53		0
	50	25	8.34	8.50	8.60		0
	50	50	8.35	8.53	8.55		0
	100	0	8.31	8.47	8.53		0

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10.1.5 LTE Band 41

Table 10-17
LTE Band 41 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	17.73	**17.87**	17.82	17.56	17.62	0	0
	1	50	17.65	17.79	17.68	17.47	17.47		0
	1	99	17.75	17.82	17.54	17.40	17.35		0
	50	0	17.69	17.87	17.88	17.64	17.63	0-1	0
	50	25	17.77	17.93	17.82	17.61	17.59		0
	50	50	17.78	**17.95**	17.62	17.48	17.46		0
	100	0	17.73	17.86	17.82	17.58	17.57		0
16QAM	1	0	17.66	17.79	17.89	17.57	17.63	0-1	0
	1	50	17.73	17.81	17.72	17.54	17.52		0
	1	99	17.65	17.87	17.52	17.35	17.30		0
	50	0	17.70	17.83	17.89	17.64	17.65	0-2	0
	50	25	17.78	17.94	17.83	17.60	17.63		0
	50	50	17.78	17.91	17.64	17.45	17.46		0
	100	0	17.74	17.89	17.82	17.58	17.61		0
64QAM	1	0	17.79	17.91	17.95	17.66	17.73	0-2	0
	1	50	17.83	17.93	17.89	17.63	17.65		0
	1	99	17.81	17.91	17.65	17.47	17.40		0
	50	0	17.73	17.84	17.89	17.61	17.63	0-3	0
	50	25	17.80	17.93	17.82	17.59	17.59		0
	50	50	17.83	17.95	17.63	17.44	17.43		0
	100	0	17.75	17.89	17.81	17.58	17.57		0
256QAM	1	0	17.48	17.66	17.89	17.60	17.65	0-5	0
	1	50	17.70	17.82	17.75	17.52	17.48		0
	1	99	17.59	17.78	17.45	17.29	17.28		0
	50	0	17.64	17.80	17.90	17.64	17.65		0
	50	25	17.79	17.91	17.82	17.61	17.62		0
	50	50	17.73	17.88	17.63	17.48	17.45		0
	100	0	17.75	17.88	17.82	17.58	17.61		0

Table 10-18
LTE Band 41 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	17.89	**18.18**	18.11	17.92	17.82	0	0
	1	50	17.93	18.09	17.99	17.78	17.68		0
	1	99	17.95	18.12	17.77	17.63	17.53		0
	50	0	17.94	18.09	18.17	17.94	17.84	0-1	0
	50	25	18.05	18.19	18.11	17.89	17.79		0
	50	50	18.03	**18.20**	17.90	17.75	17.65		0
	100	0	18.01	18.16	18.10	17.86	17.76		0
16QAM	1	0	17.98	18.06	18.15	17.89	17.79	0-1	0
	1	50	17.93	18.17	17.97	17.88	17.78		0
	1	99	17.92	18.09	17.80	17.63	17.53		0
	50	0	17.91	18.06	18.16	17.94	17.84	0-2	0
	50	25	18.01	18.18	18.11	17.90	17.80		0
	50	50	18.02	18.18	17.92	17.76	17.66		0
	100	0	17.99	18.16	18.10	17.87	17.77		0
64QAM	1	0	17.99	18.11	18.24	18.05	17.95	0-2	0
	1	50	18.11	18.23	18.13	17.93	17.83		0
	1	99	18.07	18.19	17.83	17.78	17.68		0
	50	0	17.95	18.07	18.18	17.95	17.85	0-3	0
	50	25	18.05	18.19	18.14	17.93	17.83		0
	50	50	18.03	18.18	17.94	17.76	17.66		0
	100	0	18.03	18.16	18.11	17.91	17.81		0
256QAM	1	0	17.76	17.96	18.16	17.84	17.74	0-5	0
	1	50	18.04	18.16	18.04	17.79	17.69		0
	1	99	17.89	18.09	17.77	17.52	17.42		0
	50	0	17.94	18.08	18.18	17.95	17.85		0
	50	25	18.07	18.21	18.11	17.91	17.81		0
	50	50	18.00	18.17	17.94	17.72	17.62		0
	100	0	18.01	18.19	18.09	17.90	17.80		0

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Table 10-19
LTE Band 41 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	21.31	21.63	21.71	21.51	21.71	0	0
	1	50	21.40	21.76	21.19	21.49	21.68		0
	1	99	21.41	**21.78**	21.38	21.45	21.52		0
	50	0	21.43	21.68	21.71	21.60	21.71	0-1	0
	50	25	21.47	21.76	21.59	21.55	21.67		0
	50	50	21.48	**21.77**	21.49	21.54	21.68		0
	100	0	21.46	21.75	21.56	21.59	21.67		0
16QAM	1	0	21.42	21.37	21.73	21.53	21.70	0-1	0
	1	50	21.43	21.54	21.56	20.81	21.69		0
	1	99	21.46	21.18	21.39	21.49	21.48		0
	50	0	21.48	21.58	21.13	21.56	21.73	0-2	0
	50	25	21.53	21.68	21.62	21.65	21.72		0
	50	50	21.53	21.68	21.51	21.57	21.70		0
	100	0	21.48	21.65	21.60	21.61	21.67		0
64QAM	1	0	21.43	21.71	21.79	21.57	21.82	0-2	0
	1	50	21.49	21.78	21.77	21.67	21.80		0
	1	99	21.57	21.75	21.51	21.50	21.61		0
	50	0	21.54	21.45	21.75	21.59	21.76	0-3	0
	50	25	21.53	21.65	21.59	21.66	21.71		0
	50	50	21.57	21.68	21.54	21.60	21.70		0
	100	0	21.54	21.67	21.60	21.62	21.71		0
256QAM	1	0	19.24	19.64	18.98	19.52	19.70	0-5	2
	1	50	19.44	19.91	19.75	19.59	19.75		2
	1	99	19.43	19.90	19.68	19.46	19.49		2
	50	0	19.14	19.85	19.96	19.58	19.76		2
	50	25	19.39	19.81	19.92	19.65	19.73		2
	50	50	19.36	19.78	19.78	19.54	19.73		2
	100	0	19.38	19.91	19.79	19.63	19.71		2

Table 10-20
LTE Band 41 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	10.29	**10.57**	10.56	10.25	10.32	0	0
	1	50	10.20	10.51	10.36	10.12	10.19		0
	1	99	10.05	10.54	10.18	10.04	10.01		0
	50	0	10.38	**10.60**	10.58	10.30	10.36	0-1	0
	50	25	10.31	10.59	10.49	10.28	10.29		0
	50	50	10.16	10.59	10.31	10.13	10.15		0
	100	0	10.30	10.56	10.48	10.25	10.29		0
16QAM	1	0	10.31	10.49	10.62	10.24	10.27	0-1	0
	1	50	10.20	10.53	10.44	10.22	10.22		0
	1	99	10.00	10.53	10.21	10.04	9.98		0
	50	0	10.33	10.61	10.57	10.29	10.33	0-2	0
	50	25	10.29	10.65	10.52	10.27	10.27		0
	50	50	10.18	10.61	10.33	10.14	10.16		0
	100	0	10.28	10.61	10.50	10.26	10.28		0
64QAM	1	0	10.47	10.64	10.64	10.34	10.43	0-2	0
	1	50	10.34	10.66	10.55	10.28	10.33		0
	1	99	10.13	10.66	10.26	10.15	10.09		0
	50	0	10.38	10.63	10.61	10.32	10.34	0-3	0
	50	25	10.32	10.63	10.54	10.28	10.31		0
	50	50	10.16	10.64	10.33	10.16	10.15		0
	100	0	10.32	10.60	10.50	10.26	10.28		0
256QAM	1	0	10.36	10.45	10.61	10.33	10.37	0-5	0
	1	50	10.30	10.61	10.50	10.26	10.37		0
	1	99	10.01	10.53	10.18	10.10	10.00		0
	50	0	10.44	10.60	10.67	10.39	10.40		0
	50	25	10.38	10.70	10.56	10.36	10.37		0
	50	50	10.22	10.70	10.40	10.23	10.20		0
	100	0	10.37	10.68	10.57	10.34	10.35		0

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10.2 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. Only operations relevant to this permissive change were evaluated for compliance. No other target changes have been made. Powers for all other bands/exposure conditions can be found in the original filing. 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.

10.2.1 NR Band n70

Table 10-21
NR Band n70 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

NR Band n70 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	340500 (1702.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**18.35**	0	0.0
	1	40	18.31		0.0
	1	77	18.33		0.0
	36	0	18.22	0-1	0.0
	36	22	**18.32**	0	0.0
	36	43	18.16	0-1	0.0
	75	0	18.19		0.0
DFT-s-OFDM 16QAM	1	1	18.18	0-1	0.0
CP-OFDM QPSK	1	1	18.28	0-1.5	0.0

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Table 10-22
NR Band n70 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

NR Band n70 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	340500 (1702.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**16.93**	0	0.0
	1	40	16.86		0.0
	1	77	16.90		0.0
	36	0	16.87	0-1	0.0
	36	22	**16.89**	0	0.0
	36	43	16.85	0-1	0.0
	75	0	16.80		0.0
DFT-s-OFDM 16QAM	1	1	16.87	0-1	0.0
CP-OFDM QPSK	1	1	16.86	0-1.5	0.0

Table 10-23
NR Band n70 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

NR Band n70 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	340500 (1702.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	20.80	0	0.0
	1	40	20.75		0.0
	1	77	**20.85**		0.0
	36	0	20.76	0-1	0.0
	36	22	20.83	0	0.0
	36	43	**20.91**	0-1	0.0
	75	0	20.84		0.0
DFT-s-OFDM 16QAM	1	1	21.09	0-1	0.0
CP-OFDM QPSK	1	1	21.29	0-1.5	0.0

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Table 10-24
NR Band n70 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

NR Band n70 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	340500 (1702.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	10.41	0	0.0
	1	40	**10.52**		0.0
	1	77	10.27		0.0
	36	0	10.25	0-1	0.0
	36	22	**10.46**	0	0.0
	36	43	10.36	0-1	0.0
	75	0	10.35		0.0
DFT-s-OFDM 16QAM	1	1	10.87	0-1	0.0
CP-OFDM QPSK	1	1	10.42	0-1.5	0.0

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10.2.2 NR Band n66

Table 10-25
NR Band n66 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

NR Band n66 45 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**19.98**	0	0.0
	1	121	19.95		0.0
	1	240	19.95		0.0
	120	0	**20.02**	0-1	0.0
	120	61	19.84	0	0.0
	120	122	19.58	0-1	0.0
	240	0	19.92		0.0
DFT-s-OFDM 16QAM	1	1	19.93	0-1	0.0
CP-OFDM QPSK	1	1	19.98	0-1.5	0.0

Table 10-26
NR Band n66 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

NR Band n66 45 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**17.35**	0	0.0
	1	121	17.31		0.0
	1	240	17.28		0.0
	120	0	**17.36**	0-1	0.0
	120	61	17.35	0	0.0
	120	122	17.26	0-1	0.0
	240	0	17.34		0.0
DFT-s-OFDM 16QAM	1	1	17.78	0-1	0.0
CP-OFDM QPSK	1	1	17.28	0-1.5	0.0

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Table 10-27
NR Band n66 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

NR Band n66 45 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**21.38**	0	0.0
	1	121	21.33		0.0
	1	240	21.36		0.0
	120	0	21.27	0-1	0.0
	120	61	**21.44**	0	0.0
	120	122	21.25	0-1	0.0
	240	0	21.31		0.0
DFT-s-OFDM 16QAM	1	1	21.82	0-1	0.0
CP-OFDM QPSK	1	1	21.36	0-1.5	0.0

Table 10-28
NR Band n66 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

NR Band n66 45 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	11.47	0	0.0
	1	121	11.55		0.0
	1	240	**11.58**		0.0
	120	0	11.46	0-1	0.0
	120	61	11.53	0	0.0
	120	122	**11.54**	0-1	0.0
	240	0	11.51		0.0
DFT-s-OFDM 16QAM	1	1	11.48	0-1	0.0
CP-OFDM QPSK	1	1	11.44	0-1.5	0.0

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10.2.3 NR Band n25

Table 10-29
NR Band n25 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

NR Band n25 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel 376500 (1882.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM QPSK	1	1	19.91	0	0.0
	1	108	**19.92**		0.0
	1	214	19.83		0.0
	108	0	19.81	0-1	0.0
	108	54	19.70	0	0.0
	108	108	**19.84**	0-1	0.0
	216	0	19.75		0.0
DFT-s-OFDM 16QAM	1	1	20.33	0-1	0.0
CP-OFDM QPSK	1	1	19.90	0-1.5	0.0

Table 10-30
NR Band n25 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

NR Band n25 40 MHz Bandwidth					
Modulation	RB Size	RB Offset	Channel 376500 (1882.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM QPSK	1	1	**17.30**	0	0.0
	1	108	17.16		0.0
	1	214	17.16		0.0
	108	0	**17.25**	0-1	0.0
	108	54	17.15	0	0.0
	108	108	17.07	0-1	0.0
	216	0	17.24		0.0
DFT-s-OFDM 16QAM	1	1	17.77	0-1	0.0
CP-OFDM QPSK	1	1	17.37	0-1.5	0.0

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Table 10-31
NR Band n25 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**21.45**	0	0.0
	1	108	21.17		0.0
	1	214	21.22		0.0
	108	0	**21.33**	0-1	0.0
	108	54	21.30	0	0.0
	108	108	21.20	0-1	0.0
	216	0	21.31		0.0
DFT-s-OFDM 16QAM	1	1	21.83	0-1	0.0
CP-OFDM QPSK	1	1	21.40	0-1.5	0.0

Table 10-32
NR Band n25 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**10.84**	0	0.0
	1	108	10.70		0.0
	1	214	10.81		0.0
	108	0	**10.85**	0-1	0.0
	108	54	10.76	0	0.0
	108	108	10.73	0-1	0.0
	216	0	10.83		0.0
DFT-s-OFDM 16QAM	1	1	11.23	0-1	0.0
CP-OFDM QPSK	1	1	10.86	0-1.5	0.0

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10.2.4 NR Band n30

Table 10-33
NR Band n30 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	17.69	0	0.0
	1	26	**17.75**		0.0
	1	50	17.60		0.0
	25	0	17.72	0-1	0.0
	25	14	**17.84**	0	0.0
	25	27	17.70	0-1	0.0
	50	0	17.73		0.0
DFT-s-OFDM 16QAM	1	1	18.17	0-1	0.0
CP-OFDM QPSK	1	1	17.80	0-1.5	0.0

Table 10-34
NR Band n30 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**17.63**	0	0.0
	1	26	17.58		0.0
	1	50	17.51		0.0
	25	0	**17.70**	0-1	0.0
	25	14	17.63	0	0.0
	25	27	17.64	0-1	0.0
	50	0	17.56		0.0
DFT-s-OFDM 16QAM	1	1	18.00	0-1	0.0
CP-OFDM QPSK	1	1	17.69	0-1.5	0.0

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Table 10-35
NR Band n30 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**20.73**	0	0.0
	1	26	20.61		0.0
	1	50	20.61		0.0
	25	0	20.58	0-1	0.0
	25	14	**20.66**	0	0.0
	25	27	20.58	0-1	0.0
	50	0	20.61		0.0
DFT-s-OFDM 16QAM	1	1	21.01	0-1	0.0
CP-OFDM QPSK	1	1	20.76	0-1.5	0.0

Table 10-36
NR Band n30 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**8.75**	0	0.0
	1	26	8.70		0.0
	1	50	8.60		0.0
	25	0	8.70	0-1	0.0
	25	14	**8.82**	0	0.0
	25	27	8.62	0-1	0.0
	50	0	8.72		0.0
DFT-s-OFDM 16QAM	1	1	9.00	0-1	0.0
CP-OFDM QPSK	1	1	8.72	0-1.5	0.0

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10.2.5 NR Band n7

Table 10-37
NR Band n7 Ant G Measured P_{limit} for DSI = 3 (F/C Head)

NR Band n7 50 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507000 (2535 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	17.22	0	0.0
	1	135	17.44		0.0
	1	268	**17.66**		0.0
	135	0	17.35	0-1	0.0
	135	68	17.51	0	0.0
	135	135	**17.52**	0-1	0.0
	270	0	17.50		0.0
DFT-s-OFDM 16QAM	1	1	17.72	0-1	0.0
CP-OFDM QPSK	1	1	17.39	0-1.5	0.0

Table 10-38
NR Band n7 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

NR Band n7 50 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507000 (2535 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	16.26	0	0.0
	1	135	16.23		0.0
	1	268	**16.50**		0.0
	135	0	16.23	0-1	0.0
	135	68	16.25	0	0.0
	135	135	**16.38**	0-1	0.0
	270	0	16.31		0.0
DFT-s-OFDM 16QAM	1	1	16.39	0-1	0.0
CP-OFDM QPSK	1	1	16.46	0-1.5	0.0

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Table 10-39
NR Band n7 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

NR Band n7 50 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507000 (2535 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	17.00	0	0.0
	1	135	17.14		0.0
	1	268	**17.31**		0.0
	135	0	17.12	0-1	0.0
	135	68	**17.22**	0	0.0
	135	135	17.17	0-1	0.0
	270	0	17.21		0.0
DFT-s-OFDM 16QAM	1	1	17.49	0-1	0.0
CP-OFDM QPSK	1	1	17.05	0-1.5	0.0

Table 10-40
NR Band n7 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

NR Band n7 50 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507000 (2535 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	8.11	0	0.0
	1	135	8.32		0.0
	1	268	**8.39**		0.0
	135	0	8.28	0-1	0.0
	135	68	**8.41**	0	0.0
	135	135	8.37	0-1	0.0
	270	0	8.38		0.0
DFT-s-OFDM 16QAM	1	1	8.51	0-1	0.0
CP-OFDM QPSK	1	1	8.01	0-1.5	0.0

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10.2.6 NR Band n41 Path 1

Table 10-41
NR Band n41 PC2/PC1.5 Path 1 Ant G Measured P_{Limit} for DSI = 3 (F/C Head)

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**16.38**	0	0.0
	1	137	16.20		0.0
	1	271	16.12		0.0
	135	0	**16.35**	0-1	0.0
	135	69	16.22	0	0.0
	135	138	16.12	0-1	0.0
	270	0	16.34		0.0
DFT-s-OFDM 16QAM	1	1	16.36	0-1	0.0
CP-OFDM QPSK	1	1	16.37	0-1.5	0.0

Table 10-42
NR Band n41 PC2/PC1.5 Path 1 Ant G Measured P_{limit} for DSI = 1 (F/C Body) and/or DSI = 5 (F/C Grip)

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**16.88**	0	0.0
	1	137	16.73		0.0
	1	271	16.68		0.0
	135	0	**16.81**	0-1	0.0
	135	69	16.74	0	0.0
	135	138	16.73	0-1	0.0
	270	0	16.68		0.0
DFT-s-OFDM 16QAM	1	1	16.87	0-1	0.0
CP-OFDM QPSK	1	1	16.80	0-1.5	0.0

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Table 10-43
NR Band n41 PC2/PC1.5 Path 1 Ant G Measured P_{limit} for DSI = 0 (F/O Body)

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**19.41**	0	0.0
	1	137	19.29		0.0
	1	271	19.10		0.0
	135	0	**19.34**	0-1	0.0
	135	69	19.25	0	0.0
	135	138	19.27	0-1	0.0
	270	0	19.27		0.0
DFT-s-OFDM 16QAM	1	1	19.37	0-1	0.0
CP-OFDM QPSK	1	1	19.33	0-1.5	0.0

Table 10-44
NR Band n41 PC2/PC1.5 Path 1 Ant G Measured P_{limit} for DSI = 4 (F/O Grip)

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**9.25**	0	0.0
	1	137	9.20		0.0
	1	271	9.12		0.0
	135	0	**9.27**	0-1	0.0
	135	69	9.16	0	0.0
	135	138	9.05	0-1	0.0
	270	0	9.17		0.0
DFT-s-OFDM 16QAM	1	1	9.23	0-1	0.0
CP-OFDM QPSK	1	1	9.19	0-1.5	0.0

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Table 10-45
NR Band n41 PC2 Path 1 Ant B Measured P_{Max} for DSI = 3 (F/C Head)

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #2 Ant B	19.43

Table 10-46
NR Band n41 PC2 Path 1 Ants B Measured P_{Limit} for DSI = 1 (F/C Body), and/or DSI = 5 (F/C Grip)

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #2 Ant B	**18.18**

Table 10-47
NR Band n41 PC2/PC1.5 Path 1 Ant H, and PC2 Path 1 Ant D Measured P_{Limit} for DSI = 1 (F/C Body), DSI = 3 (F/C Head), and/or DSI = 5 (F/C Grip)

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #3 Ant H	**14.89**
SRS #4 Ant D	**14.43**

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Table 10-48
NR Band n41 PC2/PC1.5 Path 1 Ant H, and PC2 Path 1 Ants B, and D Measured P_{Limit} for DSI = 0 (F/O Body) and/or DSI = 4 (F/O Grip)

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #2 Ant B	11.61
SRS #3 Ant H	7.85
SRS #4 Ant D	7.48

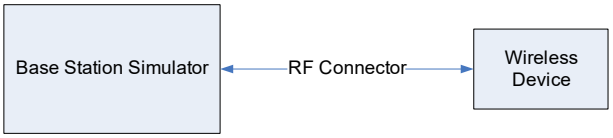

Figure 10-1
Power Measurement Setup – NR FDD

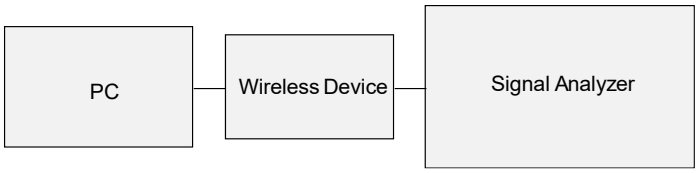

Figure 10-2
Power Measurement Setup – NR TDD

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10.3 NTN Band 255 Conducted Powers

Table 10-49
NTN Band b255 Antenna G Maximum Conducted Powers

SCS	SC Size	Channel	Frequency [MHz]	Conducted Power [dBm]	
				BPSK	QPSK
3.75kHz	1SC0	261505	1626.6	**23.51**	**23.41**
	1SC24	261505	1626.6	**24.08**	**24.02**
	1SC47	261505	1626.6	**23.53**	**23.56**
15kHz	1SC0	261505	1626.6	**23.94**	**23.74**
	1SC6	261505	1626.6	**24.15**	**24.51**
	1SC11	261505	1626.6	**23.93**	**24.18**
	3SC0	261505	1626.6	N/A	**23.11**
	3SC6	261505	1626.6	N/A	**23.04**
	3SC9	261505	1626.6	N/A	**22.94**
	6SC0	261505	1626.6	N/A	**23.01**
	6SC6	261505	1626.6	N/A	**23.15**
	12SC0	261505	1626.6	N/A	**23.09**
3.75kHz	1SC0	261674	1643.5	**23.48**	**23.63**
	1SC24	261674	1643.5	**23.97**	**23.86**
	1SC47	261674	1643.5	**23.48**	**23.55**
15kHz	1SC0	261674	1643.5	**23.72**	**23.63**
	1SC6	261674	1643.5	**24.27**	**24.42**
	1SC11	261674	1643.5	**23.69**	**23.93**
	3SC0	261674	1643.5	N/A	**22.94**
	3SC6	261674	1643.5	N/A	**23.08**
	3SC9	261674	1643.5	N/A	**22.84**
	6SC0	261674	1643.5	N/A	**22.91**
	6SC6	261674	1643.5	N/A	**23.12**
	12SC0	261674	1643.5	N/A	**22.97**
3.75kHz	1SC0	261843	1660.4	**24.15**	**24.13**
	1SC24	261843	1660.4	**24.62**	**24.66**
	1SC47	261843	1660.4	**24.18**	**24.19**
15kHz	1SC0	261843	1660.4	**24.39**	**24.28**
	1SC6	261843	1660.4	**24.75**	**24.99**
	1SC11	261843	1660.4	**24.48**	**24.43**
	3SC0	261843	1660.4	N/A	**24.62**
	3SC6	261843	1660.4	N/A	**24.57**
	3SC9	261843	1660.4	N/A	**24.52**
	6SC0	261843	1660.4	N/A	**24.55**
	6SC6	261843	1660.4	N/A	**24.83**
	12SC0	261843	1660.4	N/A	**24.70**

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Table 10-50
NTN Band b255 Antenna G Reduced Conducted Powers – Folder Closed Grip Sensor Active

SCS	SC Size	Channel	Frequency [MHz]	Conducted Power [dBm]	
				BPSK	QPSK
3.75kHz	1SC0	261505	1626.6	**19.94**	**20.05**
	1SC24	261505	1626.6	**20.45**	**20.60**
	1SC47	261505	1626.6	**19.93**	**19.94**
15kHz	1SC0	261505	1626.6	**20.22**	**20.16**
	1SC6	261505	1626.6	**20.56**	**20.95**
	1SC11	261505	1626.6	**20.36**	**20.24**
	3SC0	261505	1626.6	N/A	**20.43**
	3SC6	261505	1626.6	N/A	**20.41**
	3SC9	261505	1626.6	N/A	**20.48**
	6SC0	261505	1626.6	N/A	**20.44**
	6SC6	261505	1626.6	N/A	**20.45**
	12SC0	261505	1626.6	N/A	**20.46**
3.75kHz	1SC0	261674	1643.5	**19.97**	**19.91**
	1SC24	261674	1643.5	**20.45**	**20.49**
	1SC47	261674	1643.5	**19.96**	**20.15**
15kHz	1SC0	261674	1643.5	**20.09**	**20.11**
	1SC6	261674	1643.5	**20.52**	**20.82**
	1SC11	261674	1643.5	**20.24**	**20.19**
	3SC0	261674	1643.5	N/A	**20.26**
	3SC6	261674	1643.5	N/A	**20.35**
	3SC9	261674	1643.5	N/A	**20.44**
	6SC0	261674	1643.5	N/A	**20.63**
	6SC6	261674	1643.5	N/A	**20.60**
	12SC0	261674	1643.5	N/A	**20.45**
3.75kHz	1SC0	261843	1660.4	**19.98**	**20.08**
	1SC24	261843	1660.4	**20.69**	**20.66**
	1SC47	261843	1660.4	**20.12**	**19.87**
15kHz	1SC0	261843	1660.4	**20.36**	**20.42**
	1SC6	261843	1660.4	**20.54**	**20.93**
	1SC11	261843	1660.4	**20.42**	**20.25**
	3SC0	261843	1660.4	N/A	**20.57**
	3SC6	261843	1660.4	N/A	**20.38**
	3SC9	261843	1660.4	N/A	**20.41**
	6SC0	261843	1660.4	N/A	**20.58**
	6SC6	261843	1660.4	N/A	**20.60**
	12SC0	261843	1660.4	N/A	**20.58**

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Table 10-51
NTN Band b255 Antenna G Reduced Conducted Powers – Folder Open Grip Sensor Active

SCS	SC Size	Channel	Frequency [MHz]	Conducted Power [dBm]	
				BPSK	QPSK
3.75kHz	1SC0	261505	1626.6	**12.51**	**12.41**
	1SC24	261505	1626.6	**13.07**	**13.04**
	1SC47	261505	1626.6	**12.55**	**12.65**
15kHz	1SC0	261505	1626.6	**12.84**	**12.93**
	1SC6	261505	1626.6	**13.35**	**13.57**
	1SC11	261505	1626.6	**12.82**	**12.89**
	3SC0	261505	1626.6	N/A	**12.95**
	3SC6	261505	1626.6	N/A	**13.25**
	3SC9	261505	1626.6	N/A	**13.19**
	6SC0	261505	1626.6	N/A	**13.11**
	6SC6	261505	1626.6	N/A	**13.03**
	12SC0	261505	1626.6	N/A	**13.07**
3.75kHz	1SC0	261674	1643.5	**12.67**	**12.67**
	1SC24	261674	1643.5	**13.25**	**13.27**
	1SC47	261674	1643.5	**12.45**	**12.82**
15kHz	1SC0	261674	1643.5	**12.73**	**13.05**
	1SC6	261674	1643.5	**13.30**	**13.32**
	1SC11	261674	1643.5	**12.96**	**13.01**
	3SC0	261674	1643.5	N/A	**13.02**
	3SC6	261674	1643.5	N/A	**13.18**
	3SC9	261674	1643.5	N/A	**13.13**
	6SC0	261674	1643.5	N/A	**13.01**
	6SC6	261674	1643.5	N/A	**13.29**
	12SC0	261674	1643.5	N/A	**13.24**
3.75kHz	1SC0	261843	1660.4	**12.35**	**12.68**
	1SC24	261843	1660.4	**13.22**	**13.34**
	1SC47	261843	1660.4	**12.75**	**12.71**
15kHz	1SC0	261843	1660.4	**13.23**	**13.03**
	1SC6	261843	1660.4	**13.28**	**13.46**
	1SC11	261843	1660.4	**13.08**	**13.05**
	3SC0	261843	1660.4	N/A	**13.14**
	3SC6	261843	1660.4	N/A	**13.01**
	3SC9	261843	1660.4	N/A	**13.15**
	6SC0	261843	1660.4	N/A	**13.14**
	6SC6	261843	1660.4	N/A	**13.19**
	12SC0	261843	1660.4	N/A	**13.09**

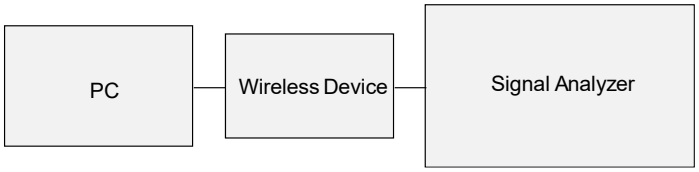

Figure 10-3
Power Measurement Setup – NTN

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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
05/13/2025	1640 Head	22.2	1610	1.233	39.058	1.290	40.300	-4.42%	-3.08%
			1620	1.237	39.041	1.296	40.284	-4.55%	-3.09%
			1640	1.246	39.015	1.307	40.253	-4.67%	-3.08%
			1650	1.251	39.002	1.313	40.237	-4.72%	-3.07%
05/05/2025	1750 Head	21.1	1700	1.333	38.362	1.343	40.145	-0.74%	-4.44%
			1705	1.335	38.357	1.345	40.141	-0.74%	-4.44%
			1710	1.338	38.350	1.348	40.136	-0.74%	-4.45%
			1720	1.343	38.336	1.354	40.126	-0.81%	-4.46%
			1745	1.359	38.293	1.368	40.087	-0.66%	-4.48%
			1750	1.362	38.287	1.371	40.079	-0.66%	-4.47%
			1770	1.375	38.264	1.383	40.047	-0.58%	-4.45%
			1790	1.385	38.240	1.394	40.016	-0.65%	-4.44%
05/07/2025	1750 Head	20.6	1700	1.314	39.400	1.343	40.145	-2.16%	-1.86%
			1705	1.317	39.392	1.345	40.141	-2.08%	-1.87%
			1710	1.319	39.383	1.348	40.136	-2.15%	-1.88%
			1720	1.325	39.364	1.354	40.126	-2.14%	-1.90%
			1745	1.341	39.319	1.368	40.087	-1.97%	-1.92%
			1750	1.345	39.311	1.371	40.079	-1.90%	-1.92%
			1770	1.356	39.285	1.383	40.047	-1.95%	-1.90%
			1790	1.366	39.254	1.394	40.016	-2.01%	-1.90%
05/07/2025	1750 Head	21.9	1700	1.331	40.197	1.343	40.145	-0.89%	0.13%
			1705	1.334	40.185	1.345	40.141	-0.82%	0.11%
			1710	1.337	40.173	1.348	40.136	-0.82%	0.09%
			1720	1.343	40.154	1.354	40.126	-0.81%	0.07%
			1745	1.358	40.106	1.368	40.087	-0.73%	0.05%
			1750	1.361	40.098	1.371	40.079	-0.73%	0.05%
			1770	1.373	40.062	1.383	40.047	-0.72%	0.04%
			1790	1.384	40.022	1.394	40.016	-0.72%	0.01%
05/12/2025	1750 Head	21.9	1700	1.295	40.888	1.343	40.145	-3.57%	1.85%
			1705	1.298	40.878	1.345	40.141	-3.49%	1.84%
			1710	1.301	40.868	1.348	40.136	-3.49%	1.82%
			1720	1.307	40.845	1.354	40.126	-3.47%	1.79%
			1745	1.321	40.787	1.368	40.087	-3.44%	1.75%
			1750	1.324	40.776	1.371	40.079	-3.43%	1.74%
			1770	1.334	40.736	1.383	40.047	-3.54%	1.72%
			1790	1.343	40.704	1.394	40.016	-3.66%	1.72%
05/14/2025	1750 Head	20.4	1700	1.310	38.604	1.343	40.145	-2.46%	-3.84%
			1705	1.313	38.595	1.345	40.141	-2.38%	-3.85%
			1710	1.315	38.584	1.348	40.136	-2.45%	-3.87%
			1720	1.321	38.569	1.354	40.126	-2.44%	-3.88%
			1745	1.335	38.526	1.368	40.087	-2.41%	-3.89%
			1750	1.338	38.519	1.371	40.079	-2.41%	-3.89%
			1770	1.350	38.485	1.383	40.047	-2.39%	-3.90%
			1790	1.361	38.451	1.394	40.016	-2.37%	-3.91%
05/16/2025	1750 Head	24.5	1700	1.289	41.164	1.343	40.145	-4.02%	2.54%
			1705	1.292	41.153	1.345	40.141	-3.94%	2.52%
			1710	1.295	41.140	1.348	40.136	-3.93%	2.50%
			1720	1.301	41.121	1.354	40.126	-3.91%	2.48%
			1745	1.319	41.089	1.368	40.087	-3.58%	2.50%
			1750	1.322	41.085	1.371	40.079	-3.57%	2.51%
			1770	1.332	41.074	1.383	40.047	-3.69%	2.56%
			1790	1.341	41.046	1.394	40.016	-3.80%	2.57%
05/05/2025	1900 Head	21.1	1850	1.419	38.113	1.400	40.000	1.36%	-4.72%
			1860	1.425	38.096	1.400	40.000	1.79%	-4.76%
			1880	1.436	38.070	1.400	40.000	2.57%	-4.83%
			1900	1.448	38.044	1.400	40.000	3.43%	-4.89%
			1905	1.451	38.035	1.400	40.000	3.64%	-4.91%
			1910	1.454	38.025	1.400	40.000	3.86%	-4.94%
			1920	1.460	38.006	1.400	40.000	4.29%	-4.99%
05/07/2025	1900 Head	21.9	1850	1.417	39.905	1.400	40.000	1.21%	-0.24%
			1860	1.423	39.893	1.400	40.000	1.64%	-0.27%
			1880	1.435	39.867	1.400	40.000	2.50%	-0.33%
			1900	1.446	39.836	1.400	40.000	3.29%	-0.41%
			1905	1.449	39.826	1.400	40.000	3.50%	-0.43%
			1910	1.452	39.819	1.400	40.000	3.71%	-0.45%
			1920	1.458	39.803	1.400	40.000	4.14%	-0.49%
05/12/2025	1900 Head	21.3	1850	1.386	39.914	1.400	40.000	-1.00%	-0.21%
			1860	1.392	39.907	1.400	40.000	-0.57%	-0.23%
			1880	1.404	39.892	1.400	40.000	0.29%	-0.27%
			1900	1.416	39.857	1.400	40.000	1.14%	-0.36%
			1905	1.419	39.847	1.400	40.000	1.36%	-0.38%
			1910	1.422	39.837	1.400	40.000	1.57%	-0.41%
			1920	1.427	39.817	1.400	40.000	1.93%	-0.46%
05/16/2025	1900 Head	24.5	1850	1.375	40.933	1.400	40.000	-1.79%	2.33%
			1860	1.381	40.927	1.400	40.000	-1.36%	2.32%
			1880	1.390	40.918	1.400	40.000	-0.71%	2.30%
			1900	1.398	40.897	1.400	40.000	-0.14%	2.24%
			1905	1.400	40.889	1.400	40.000	0.00%	2.22%
			1910	1.403	40.880	1.400	40.000	0.21%	2.20%
			1920	1.408	40.865	1.400	40.000	0.57%	2.16%
06/02/2025	1900 Head	21.0	1850	1.397	39.076	1.400	40.000	-0.21%	-2.31%
			1860	1.403	39.066	1.400	40.000	0.21%	-2.33%
			1880	1.415	39.048	1.400	40.000	1.07%	-2.38%
			1900	1.425	39.030	1.400	40.000	1.79%	-2.43%
			1905	1.427	39.024	1.400	40.000	1.93%	-2.44%
			1910	1.430	39.017	1.400	40.000	2.14%	-2.46%
			1920	1.436	39.006	1.400	40.000	2.57%	-2.49%

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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 Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
05/05/2025	2450 Head	19.0	2300	1.639	40.514	1.670	39.500	-1.86%	2.57%
			2310	1.648	40.496	1.679	39.480	-1.85%	2.57%
			2320	1.657	40.482	1.687	39.460	-1.78%	2.59%
			2400	1.713	40.377	1.756	39.289	-2.45%	2.77%
			2450	1.756	40.323	1.800	39.200	-2.44%	2.86%
			2480	1.775	40.281	1.833	39.162	-3.16%	2.86%
			2500	1.790	40.228	1.855	39.136	-3.50%	2.79%
			2510	1.800	40.205	1.866	39.123	-3.54%	2.77%
			2535	1.825	40.157	1.893	39.092	-3.59%	2.72%
			2550	1.839	40.143	1.909	39.073	-3.67%	2.74%
			2560	1.847	40.135	1.920	39.060	-3.80%	2.75%
			2600	1.878	40.060	1.964	39.009	-4.38%	2.69%
			2650	1.926	39.959	2.018	38.945	-4.56%	2.60%
			2680	1.950	39.929	2.051	38.907	-4.92%	2.63%
05/05/2025	2450 Head	19.5	2300	1.707	37.673	1.670	39.500	2.22%	-4.63%
			2310	1.716	37.655	1.679	39.480	2.20%	-4.62%
			2320	1.724	37.641	1.687	39.460	2.19%	-4.61%
			2400	1.780	37.528	1.756	39.289	1.37%	-4.48%
			2450	1.821	37.472	1.800	39.200	1.17%	-4.41%
			2480	1.841	37.421	1.833	39.162	0.44%	-4.45%
			2500	1.857	37.369	1.855	39.136	0.11%	-4.52%
			2510	1.866	37.347	1.866	39.123	0.00%	-4.54%
			2535	1.889	37.307	1.893	39.092	-0.21%	-4.57%
			2550	1.902	37.292	1.909	39.073	-0.37%	-4.56%
			2560	1.909	37.281	1.920	39.060	-0.57%	-4.55%
			2600	1.940	37.197	1.964	39.009	-1.22%	-4.65%
			2650	1.984	37.100	2.018	38.945	-1.68%	-4.74%
			2680	2.006	37.061	2.051	38.907	-2.19%	-4.74%
			2700	2.022	37.012	2.073	38.882	-2.46%	-4.81%
05/07/2025	2450 Head	19.2	2300	1.704	38.987	1.670	39.500	2.04%	-1.30%
			2310	1.711	38.969	1.679	39.480	1.91%	-1.29%
			2320	1.719	38.950	1.687	39.460	1.90%	-1.29%
			2400	1.779	38.830	1.756	39.289	1.31%	-1.17%
			2450	1.819	38.762	1.800	39.200	1.06%	-1.12%
			2480	1.841	38.717	1.833	39.162	0.44%	-1.14%
			2500	1.857	38.681	1.855	39.136	0.11%	-1.16%
			2510	1.865	38.665	1.866	39.123	-0.05%	-1.17%
			2535	1.887	38.626	1.893	39.092	-0.32%	-1.19%
			2550	1.900	38.601	1.909	39.073	-0.47%	-1.21%
			2560	1.908	38.587	1.920	39.060	-0.63%	-1.21%
			2600	1.942	38.506	1.964	39.009	-1.12%	-1.29%
			2650	1.986	38.425	2.018	38.945	-1.59%	-1.34%
			2680	2.010	38.374	2.051	38.907	-2.00%	-1.37%
			2700	2.026	38.329	2.073	38.882	-2.27%	-1.42%
05/09/2025	2450 Head	22.5	2300	1.683	38.699	1.670	39.500	0.78%	-2.03%
			2310	1.691	38.681	1.679	39.480	0.71%	-2.02%
			2320	1.698	38.665	1.687	39.460	0.65%	-2.01%
			2400	1.759	38.558	1.756	39.289	0.17%	-1.86%
			2450	1.797	38.479	1.800	39.200	-0.17%	-1.84%
			2480	1.820	38.428	1.833	39.162	-0.71%	-1.87%
			2500	1.835	38.387	1.855	39.136	-1.08%	-1.91%
			2510	1.842	38.370	1.866	39.123	-1.29%	-1.92%
			2535	1.861	38.330	1.893	39.092	-1.69%	-1.95%
			2550	1.873	38.311	1.909	39.073	-1.89%	-1.95%
			2560	1.881	38.298	1.920	39.060	-2.03%	-1.95%
			2600	1.911	38.230	1.964	39.009	-2.70%	-2.00%
			2650	1.950	38.164	2.018	38.945	-3.37%	-2.01%
			2680	1.972	38.116	2.051	38.907	-3.85%	-2.03%
			2700	1.987	38.085	2.073	38.882	-4.15%	-2.05%
05/12/2025	2450 Head	20.7	2300	1.714	39.879	1.670	39.500	2.63%	0.96%
			2310	1.722	39.865	1.679	39.480	2.56%	0.98%
			2320	1.730	39.851	1.687	39.460	2.55%	0.99%
			2400	1.791	39.725	1.756	39.289	1.99%	1.11%
			2450	1.829	39.658	1.800	39.200	1.61%	1.17%
			2480	1.853	39.612	1.833	39.162	1.09%	1.15%
			2500	1.868	39.581	1.855	39.136	0.70%	1.14%
			2510	1.877	39.565	1.866	39.123	0.59%	1.13%
			2535	1.896	39.518	1.893	39.092	0.16%	1.09%
			2550	1.909	39.494	1.909	39.073	0.00%	1.08%
			2560	1.917	39.480	1.920	39.060	-0.16%	1.08%
			2600	1.948	39.418	1.964	39.009	-0.81%	1.05%
			2650	1.990	39.334	2.018	38.945	-1.39%	1.00%
			2680	2.016	39.283	2.051	38.907	-1.71%	0.97%
			2700	2.033	39.254	2.073	38.882	-1.93%	0.96%

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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
05/14/2025	2450 Head	20.7	2300	1.692	37.688	1.670	39.500	1.32%	-4.59%
			2310	1.700	37.673	1.679	39.480	1.25%	-4.58%
			2320	1.708	37.657	1.687	39.460	1.24%	-4.57%
			2400	1.768	37.535	1.756	39.289	0.68%	-4.46%
			2450	1.807	37.459	1.800	39.200	0.39%	-4.44%
			2480	1.829	37.415	1.833	39.162	-0.22%	-4.46%
			2500	1.844	37.377	1.855	39.136	-0.59%	-4.49%
			2510	1.852	37.361	1.866	39.123	-0.75%	-4.50%
			2535	1.873	37.322	1.893	39.092	-1.06%	-4.53%
			2550	1.884	37.303	1.909	39.073	-1.31%	-4.53%
			2560	1.892	37.286	1.920	39.060	-1.46%	-4.54%
			2600	1.923	37.207	1.964	39.009	-2.09%	-4.62%
			2650	1.963	37.123	2.018	38.945	-2.73%	-4.68%
			2680	1.986	37.064	2.051	38.907	-3.17%	-4.74%
			2700	2.001	37.024	2.073	38.882	-3.47%	-4.78%
05/16/2025	2450 Head	22.6	2300	1.686	40.252	1.670	39.500	0.96%	1.90%
			2310	1.694	40.236	1.679	39.480	0.89%	1.91%
			2320	1.702	40.219	1.687	39.460	0.89%	1.92%
			2400	1.760	40.107	1.756	39.289	0.23%	2.08%
			2450	1.796	40.031	1.800	39.200	-0.22%	2.12%
			2480	1.817	39.989	1.833	39.162	-0.87%	2.11%
			2500	1.832	39.957	1.855	39.136	-1.24%	2.10%
			2510	1.841	39.944	1.866	39.123	-1.34%	2.10%
			2535	1.860	39.916	1.893	39.092	-1.74%	2.11%
			2550	1.870	39.900	1.909	39.073	-2.04%	2.12%
			2560	1.877	39.884	1.920	39.060	-2.24%	2.11%
			2600	1.910	39.814	1.964	39.009	-2.75%	2.06%
			2650	1.953	39.739	2.018	38.945	-3.22%	2.04%
			2680	1.975	39.687	2.051	38.907	-3.71%	2.00%
			2700	1.993	39.646	2.073	38.882	-3.86%	1.96%
05/16/2025	2450 Head	22.8	2300	1.674	40.824	1.670	39.500	0.24%	3.35%
			2310	1.681	40.807	1.679	39.480	0.12%	3.36%
			2320	1.688	40.791	1.687	39.460	0.06%	3.37%
			2400	1.748	40.688	1.756	39.289	-0.46%	3.56%
			2450	1.784	40.612	1.800	39.200	-0.89%	3.60%
			2480	1.806	40.569	1.833	39.162	-1.47%	3.59%
			2500	1.821	40.533	1.855	39.136	-1.83%	3.57%
			2510	1.829	40.515	1.866	39.123	-1.98%	3.56%
			2535	1.847	40.480	1.893	39.092	-2.43%	3.55%
			2550	1.858	40.459	1.909	39.073	-2.67%	3.55%
			2560	1.865	40.445	1.920	39.060	-2.86%	3.55%
			2600	1.899	40.382	1.964	39.009	-3.31%	3.52%
			2650	1.937	40.306	2.018	38.945	-4.01%	3.49%
			2680	1.961	40.267	2.051	38.907	-4.39%	3.50%
			2700	1.979	40.233	2.073	38.882	-4.53%	3.47%
05/19/2025	2450 Head	20.2	2300	1.694	38.152	1.670	39.500	1.44%	-3.41%
			2310	1.701	38.130	1.679	39.480	1.31%	-3.42%
			2320	1.708	38.107	1.687	39.460	1.24%	-3.43%
			2400	1.770	37.984	1.756	39.289	0.80%	-3.32%
			2450	1.807	37.896	1.800	39.200	0.39%	-3.33%
			2480	1.829	37.855	1.833	39.162	-0.22%	-3.34%
			2500	1.845	37.819	1.855	39.136	-0.54%	-3.37%
			2510	1.853	37.801	1.866	39.123	-0.70%	-3.38%
			2535	1.872	37.763	1.893	39.092	-1.11%	-3.40%
			2550	1.883	37.743	1.909	39.073	-1.36%	-3.40%
			2560	1.891	37.730	1.920	39.060	-1.51%	-3.41%
			2600	1.924	37.661	1.964	39.009	-2.04%	-3.46%
			2650	1.964	37.570	2.018	38.945	-2.68%	-3.53%
			2680	1.989	37.524	2.051	38.907	-3.02%	-3.55%
			2700	2.006	37.486	2.073	38.882	-3.23%	-3.59%
05/20/2025	2450 Head	20.0	2300	1.655	38.631	1.670	39.500	-0.90%	-2.20%
			2310	1.661	38.604	1.679	39.480	-1.07%	-2.22%
			2320	1.668	38.573	1.687	39.460	-1.13%	-2.25%
			2400	1.730	38.460	1.756	39.289	-1.48%	-2.11%
			2450	1.771	38.353	1.800	39.200	-1.61%	-2.16%
			2480	1.794	38.330	1.833	39.162	-2.13%	-2.12%
			2500	1.806	38.290	1.855	39.136	-2.64%	-2.16%
			2510	1.813	38.267	1.866	39.123	-2.84%	-2.19%
			2535	1.835	38.202	1.893	39.092	-3.06%	-2.28%
			2550	1.849	38.178	1.909	39.073	-3.14%	-2.29%
			2560	1.859	38.171	1.920	39.060	-3.18%	-2.28%
			2600	1.885	38.119	1.964	39.009	-4.02%	-2.28%
			2650	1.929	38.016	2.018	38.945	-4.41%	-2.39%
			2680	1.952	37.985	2.051	38.907	-4.83%	-2.37%
05/22/2025	2450 Head	19.2	2300	1.665	40.257	1.670	39.500	-0.30%	1.92%
			2310	1.672	40.245	1.679	39.480	-0.42%	1.94%
			2320	1.679	40.230	1.687	39.460	-0.47%	1.95%
			2400	1.743	40.103	1.756	39.289	-0.74%	2.07%
			2450	1.781	40.032	1.800	39.200	-1.06%	2.12%
			2480	1.806	39.969	1.833	39.162	-1.47%	2.06%
			2500	1.824	39.934	1.855	39.136	-1.67%	2.04%
			2510	1.833	39.923	1.866	39.123	-1.77%	2.04%
			2535	1.853	39.897	1.893	39.092	-2.11%	2.06%
			2550	1.864	39.874	1.909	39.073	-2.36%	2.05%
			2560	1.872	39.854	1.920	39.060	-2.50%	2.03%
			2600	1.907	39.765	1.964	39.009	-2.90%	1.94%
			2650	1.949	39.700	2.018	38.945	-3.42%	1.94%
			2680	1.971	39.629	2.051	38.907	-3.90%	1.86%
			2700	1.988	39.583	2.073	38.882	-4.10%	1.80%

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies (per KDB Publication 865664 D01v01r04 and IEEE 1528-2013 6.6.1.2. The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

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11.2 SAR Test System Verification

Prior to SAR assessment, the system is verified to ±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 11-4
System Verification Results

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 4cm^2 APD (W/m^2)	1W Target 4cm^2 APD (W/m^2)	1W Normalized 4cm^2 APD (W/m^2)	Deviation 4cm^2 APD (%)
G	1640	HEAD	05/13/2025	22.9	22.4	0.10	321	7539	1415	3.38	34.50	33.80	-2.03%	1.85	18.50	18.50	0.00%	N/A	N/A	N/A	N/A
J	1750	HEAD	05/05/2025	21.9	21.1	0.10	1150	7406	1677	3.64	36.40	36.40	0.00%	1.93	19.40	19.30	-0.52%	N/A	N/A	N/A	N/A
N	1750	HEAD	05/07/2025	22.0	20.7	0.10	1148	7410	1213	3.76	36.90	37.60	1.90%	2.01	19.60	20.10	2.55%	N/A	N/A	N/A	N/A
J	1750	HEAD	05/07/2025	22.9	21.9	0.10	1150	7406	1677	3.73	36.40	37.30	2.47%	2.00	19.40	20.00	3.09%	N/A	N/A	N/A	N/A
G	1750	HEAD	05/12/2025	23.1	21.9	0.10	1148	7488	1415	3.63	36.90	36.30	-1.63%	1.95	19.60	19.50	-0.51%	N/A	N/A	N/A	N/A
J	1750	HEAD	05/14/2025	21.6	20.2	0.10	1148	7406	1677	3.80	36.90	38.00	2.98%	2.02	19.60	20.20	3.06%	N/A	N/A	N/A	N/A
G	1750	HEAD	05/16/2025	22.5	23.6	0.10	1148	7488	1415	3.58	36.90	35.80	-2.98%	1.92	19.60	19.20	-2.04%	N/A	N/A	N/A	N/A
J	1900	HEAD	05/05/2025	21.9	21.1	0.10	5d080	7406	1677	4.19	39.60	41.90	5.81%	2.17	20.70	21.70	4.83%	N/A	N/A	N/A	N/A
J	1900	HEAD	05/07/2025	22.9	21.9	0.10	5d148	7406	1677	4.19	39.60	41.90	5.81%	2.17	20.90	21.70	3.83%	N/A	N/A	N/A	N/A
J	1900	HEAD	05/12/2025	21.6	21.6	0.10	5d080	7406	1677	4.10	39.60	41.00	3.54%	2.13	20.70	21.30	2.90%	N/A	N/A	N/A	N/A
G	1900	HEAD	05/16/2025	22.5	23.6	0.10	5d080	7488	1415	4.24	39.60	42.40	7.07%	2.22	20.70	22.20	7.25%	N/A	N/A	N/A	N/A
L	1900	HEAD	06/02/2025	22.5	20.8	0.10	5d148	7659	1272	4.31	39.60	43.10	8.84%	2.25	20.90	22.50	7.66%	N/A	N/A	N/A	N/A
O	2300	HEAD	05/09/2025	21.1	22.5	0.10	1073	7718	1407	5.15	48.60	51.50	5.97%	2.48	23.70	24.80	4.64%	N/A	N/A	N/A	N/A
O	2300	HEAD	05/16/2025	21.3	21.0	0.10	1116	7718	1407	4.97	49.20	49.70	1.02%	2.39	23.90	23.90	0.00%	N/A	N/A	N/A	N/A
J	2300	HEAD	05/19/2025	21.5	22.1	0.10	1116	7406	1677	4.92	49.20	49.20	0.00%	2.36	23.90	23.60	-1.26%	N/A	N/A	N/A	N/A
O	2450	HEAD	05/05/2025	19.4	20.0	0.10	981	7718	1407	4.92	51.80	49.20	-5.02%	2.35	24.30	23.50	-3.29%	N/A	N/A	N/A	N/A
O	2450	HEAD	05/07/2025	19.5	19.7	0.10	719	7718	1407	5.12	52.20	51.20	-1.92%	2.40	24.60	24.00	-2.44%	N/A	N/A	N/A	N/A
O	2450	HEAD	05/09/2025	21.1	22.5	0.10	719	7718	1407	5.44	52.20	54.40	4.21%	2.56	24.60	25.60	4.07%	N/A	N/A	N/A	N/A
G	2450	HEAD	05/22/2025	22.7	21.1	0.10	719	7488	1415	5.33	52.20	53.30	2.11%	2.49	24.60	24.90	1.22%	N/A	N/A	N/A	N/A
O	2600	HEAD	05/05/2025	19.4	20.0	0.10	1004	7718	1407	5.27	56.30	52.70	-6.39%	2.44	25.20	24.40	-3.17%	N/A	N/A	N/A	N/A
L	2600	HEAD	05/05/2025	20.7	19.5	0.10	1071	7659	1272	5.97	56.50	59.70	5.66%	2.70	25.40	27.00	6.30%	N/A	N/A	N/A	N/A
O	2600	HEAD	05/07/2025	19.5	19.7	0.10	1071	7718	1407	5.62	56.50	56.20	-0.53%	2.55	25.40	25.50	0.39%	N/A	N/A	N/A	N/A
O	2600	HEAD	05/09/2025	21.1	22.5	0.10	1071	7718	1407	5.65	56.50	56.50	0.00%	2.56	25.40	25.60	0.79%	N/A	N/A	N/A	N/A
N	2600	HEAD	05/12/2025	21.1	20.1	0.10	1064	7410	1213	6.07	56.40	60.70	7.62%	2.73	25.20	27.30	8.33%	N/A	N/A	N/A	N/A
N	2600	HEAD	05/14/2025	21.1	20.7	0.10	1064	7410	1213	5.77	56.40	57.70	2.30%	2.59	25.20	25.90	2.78%	N/A	N/A	N/A	N/A
S	2600	HEAD	05/16/2025	23.0	22.8	0.10	1071	7803	1583	5.71	56.50	57.10	1.06%	2.61	25.40	26.10	2.76%	N/A	N/A	N/A	N/A
G	2600	HEAD	05/20/2025	22.9	21.6	0.10	1071	7488	1415	5.64	56.50	56.40	-0.18%	2.55	25.40	25.50	0.39%	N/A	N/A	N/A	N/A
G	2600	HEAD	05/22/2025	22.7	21.1	0.10	1071	7488	1415	5.73	56.50	57.30	1.42%	2.59	25.40	25.90	1.97%	N/A	N/A	N/A	N/A

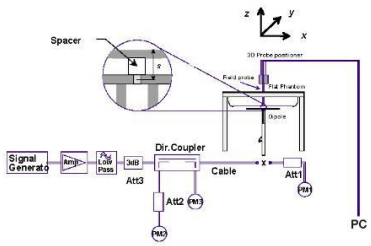

Figure 11-1
System Verification Setup Diagram

Figure 11-2
System Verification Setup Photo

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12 SAR DATA SUMMARY

12.1 LTE Band 66 (AWS) Standalone SAR

Table 12-1 | Plot A1

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.02	1720.00	132072	0.0	20.5	19.88	1	0	Right Cheek	0	0.540	1.153	0.623	0.685	0.428		22.5	20.5	19.5
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.00	1720.00	132072	0.0	20.5	19.79	50	0	Right Cheek	0	0.558	1.178	0.657	0.723	0.452		22.3		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.05	1720.00	132072	0.0	20.5	19.88	1	0	Right Tilt	0	0.766	1.153	0.883	0.971	0.607		21.0		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.03	1745.00	132322	0.0	20.5	19.71	1	50	Right Tilt	0	0.777	1.199	0.932	1.025	0.641		20.8		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.01	1770.00	132572	0.0	20.5	19.85	1	99	Right Tilt	0	0.766	1.161	0.889	0.978	0.612		21.0		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.01	1720.00	132072	0.0	20.5	19.79	50	0	Right Tilt	0	0.786	1.178	0.926	1.019	0.637		20.8		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.01	1745.00	132322	0.0	20.5	19.75	50	0	Right Tilt	0	0.784	1.189	0.932	1.025	0.641		20.8		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.04	1770.00	132572	0.0	20.5	19.78	50	25	Right Tilt	0	0.791	1.180	0.933	1.026	0.641		20.7		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.02	1720.00	132072	0.0	20.5	19.75	100	0	Right Tilt	0	0.778	1.189	0.925	1.018	0.636		20.8		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.01	1720.00	132072	0.0	20.5	19.88	1	0	Left Cheek	0	0.612	1.153	0.706	0.777	0.485		22.0		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.01	1745.00	132322	0.0	20.5	19.71	1	50	Left Cheek	0	0.627	1.199	0.752	0.827	0.517		21.7		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.06	1770.00	132572	0.0	20.5	19.85	1	99	Left Cheek	0	0.637	1.161	0.740	0.814	0.509		21.8		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.04	1720.00	132072	0.0	20.5	19.79	50	0	Left Cheek	0	0.631	1.178	0.743	0.817	0.510		21.7		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.00	1745.00	132322	0.0	20.5	19.75	50	0	Left Cheek	0	0.642	1.189	0.763	0.839	0.525		21.6		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.01	1770.00	132572	0.0	20.5	19.78	50	25	Left Cheek	0	0.646	1.180	0.762	0.838	0.524		21.6		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.00	1720.00	132072	0.0	20.5	19.75	100	0	Left Cheek	0	0.629	1.189	0.748	0.823	0.515		21.7		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.06	1720.00	132072	0.0	20.5	19.88	1	0	Left Tilt	0	0.797	1.153	0.919	1.011	0.631		20.8		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.04	1745.00	132322	0.0	20.5	19.71	1	50	Left Tilt	0	0.813	1.199	0.975	1.073	0.670		20.6		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.01	1770.00	132572	0.0	20.5	19.85	1	99	Left Tilt	0	0.756	1.161	0.878	0.966	0.604		21.0		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	-0.01	1720.00	132072	0.0	20.5	19.79	50	0	Left Tilt	0	0.817	1.178	0.962	1.058	0.661		20.6		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.00	1745.00	132322	0.0	20.5	19.75	50	0	Left Tilt	0	0.829	1.189	0.986	1.085	0.678	Plot	20.5		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.01	1770.00	132572	0.0	20.5	19.78	50	25	Left Tilt	0	0.785	1.180	0.926	1.019	0.637		20.8		
Head	LTE Band 66	20	QPSK	G	1724M	1:1	0.05	1720.00	132072	0.0	20.5	19.75	100	0	Left Tilt	0	0.814	1.189	0.968	1.065	0.666		20.6		
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 A2

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 66	20	QPSK	G	1746M	1:1	-0.06	1720.00	132072	0.0	18.0	17.55	1	50	Back	5	0.665	1.109	0.737	0.811	0.507	Plot	19.3	19.1	17.0
Body-worn/Hotspot	LTE Band 66	20	QPSK	G	1746M	1:1	0.05	1720.00	132072	0.0	18.0	17.31	50	0	Back	5	0.649	1.172	0.761	0.837	0.524		19.1		
Body-worn/Hotspot	LTE Band 66	20	QPSK	G	1746M	1:1	0.07	1720.00	132072	0.0	18.0	17.55	1	50	Front	5	0.188	1.109	0.208	0.229	0.143		24.8		
Body-worn/Hotspot	LTE Band 66	20	QPSK	G	1746M	1:1	-0.02	1720.00	132072	0.0	18.0	17.31	50	0	Front	5	0.184	1.172	0.216	0.238	0.149		24.6		
Hotspot	LTE Band 66	20	QPSK	G	1746M	1:1	-0.04	1720.00	132072	0.0	18.0	17.55	1	50	Top	10	0.356	1.109	0.395	0.435	0.272		22.0		
Hotspot	LTE Band 66	20	QPSK	G	1746M	1:1	-0.01	1720.00	132072	0.0	18.0	17.31	50	0	Top	10	0.342	1.172	0.401	0.441	0.276		21.9		
Hotspot	LTE Band 66	20	QPSK	G	1746M	1:1	-0.16	1720.00	132072	0.0	18.0	17.55	1	50	Right	10	0.040	1.109	0.044	0.048	0.031		31.5		
Hotspot	LTE Band 66	20	QPSK	G	1746M	1:1	-0.05	1720.00	132072	0.0	18.0	17.31	50	0	Right	10	0.039	1.172	0.046	0.051	0.032		31.3		
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 12-3

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.13	1720.00	132072	0.0	22.0	21.46	1	50	Back	10	0.575	1.132	0.651	0.716	0.448		23.8	23.8	21.0
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.00	1720.00	132072	0.0	22.0	21.33	50	25	Back	10	0.557	1.167	0.650	0.715	0.447		23.8		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.03	1720.00	132072	0.0	22.0	21.46	1	50	Top	13	0.391	1.132	0.443	0.487	0.305		25.5		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.02	1720.00	132072	0.0	22.0	21.33	50	25	Top	13	0.374	1.167	0.436	0.480	0.300		25.6		
Body	LTE Band 66	20	QPSK	G	1725M	1:1	0.01	1720.00	132072	0.0	22.0	21.46	1	50	Bottom	0	0.004	1.132	0.005	0.006	0.003		45.4		
Body	LTE Band 66	20	QPSK	G	1725M	1:1	0.04	1720.00	132072	0.0	22.0	21.33	50	25	Bottom	0	0.004	1.167	0.005	0.006	0.003		45.3		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.09	1720.00	132072	0.0	22.0	21.46	1	50	Right	0	0.335	1.132	0.379	0.417	0.261		26.2		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	-0.02	1720.00	132072	0.0	22.0	21.33	50	25	Right	0	0.335	1.167	0.391	0.430	0.268		26.0		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.06	1720.00	132072	0.0	22.0	21.46	1	50	Left	0	0.076	1.132	0.086	0.095	0.059		32.6		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	-0.03	1720.00	132072	0.0	22.0	21.33	50	25	Left	0	0.078	1.167	0.091	0.100	0.063		32.4		
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 | Plot A3

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.07	1720.00	132072	0.0	12.0	11.30	1	50	Back	0	0.541	1.175	0.636	0.700	0.438		13.9	12.1	11.0
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.01	1720.00	132072	0.0	12.0	11.17	50	0	Back	0	0.543	1.211	0.658	0.724	0.452		13.8		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	-0.01	1720.00	132072	0.0	12.0	11.30	1	50	Top	0	0.765	1.175	0.899	0.989	0.618		12.4		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	-0.07	1745.00	132322	0.0	12.0	11.14	1	0	Top	0	0.646	1.219	0.787	0.866	0.541		13.0		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.01	1770.00	132572	0.0	12.0	11.02	1	0	Top	0	0.711	1.253	0.891	0.980	0.613		12.5		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	-0.03	1720.00	132072	0.0	12.0	11.17	50	0	Top	0	0.768	1.211	0.930	1.023	0.639		12.3		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.03	1745.00	132322	0.0	12.0	11.05	50	0	Top	0	0.676	1.245	0.842	0.926	0.579		12.7		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	-0.01	1770.00	132572	0.0	12.0	10.81	50	0	Top	0	0.732	1.315	0.963	1.059	0.662		12.1		
Body	LTE Band 66	20	QPSK	G	1752M	1:1	0.07	1720.00	132072	0.0	12.0	11.15	100	0	Top	0	0.770	1.216	0.936	1.030	0.644	Plot	12.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.2 LTE Band 25 (PCS) Standalone SAR

Table 12-5 | Plot A4

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 25	20	QPSK	G	1724M	1:1	-0.03	1860.00	26140	0.0	20.5	19.28	1	0	Right Cheek	0	0.409	1.324	0.542	0.596	0.373		23.1	21.6	19.5
Head	LTE Band 25	20	QPSK	G	1724M	1:1	0.01	1860.00	26140	0.0	20.5	19.26	50	0	Right Cheek	0	0.427	1.330	0.568	0.625	0.391		22.9		
Head	LTE Band 25	20	QPSK	G	1724M	1:1	0.02	1860.00	26140	0.0	20.5	19.28	1	0	Right Tilt	0	0.501	1.324	0.663	0.729	0.455		22.2		
Head	LTE Band 25	20	QPSK	G	1724M	1:1	-0.01	1860.00	26140	0.0	20.5	19.26	50	0	Right Tilt	0	0.519	1.330	0.690	0.758	0.474		22.1		
Head	LTE Band 25	20	QPSK	G	1724M	1:1	-0.01	1860.00	26140	0.0	20.5	19.28	1	0	Left Cheek	0	0.417	1.324	0.552	0.607	0.380		23.0		
Head	LTE Band 25	20	QPSK	G	1724M	1:1	-0.02	1860.00	26140	0.0	20.5	19.26	50	0	Left Cheek	0	0.427	1.330	0.568	0.625	0.391		22.9		
Head	LTE Band 25	20	QPSK	G	1724M	1:1	-0.04	1860.00	26140	0.0	20.5	19.28	1	0	Left Tilt	0	0.581	1.324	0.769	0.846	0.529	Plot	21.6		
Head	LTE Band 25	20	QPSK	G	1724M	1:1	-0.04	1860.00	26140	0.0	20.5	19.26	50	0	Left Tilt	0	0.571	1.330	0.759	0.835	0.521		21.6		
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 A5

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 25	20	QPSK	G	1746M	1:1	-0.07	1860.00	26140	0.0	18.0	16.54	1	0	Back	5	0.445	1.400	0.623	0.685	0.428		20.0	19.9	17.0
Body-worn/Hotspot	LTE Band 25	20	QPSK	G	1746M	1:1	0.01	1860.00	26140	0.0	18.0	16.59	50	0	Back	5	0.461	1.384	0.638	0.702	0.439	Plot	19.9		
Body-worn/Hotspot	LTE Band 25	20	QPSK	G	1746M	1:1	-0.01	1860.00	26140	0.0	18.0	16.54	1	0	Front	5	0.130	1.400	0.182	0.200	0.125		25.4		
Body-worn/Hotspot	LTE Band 25	20	QPSK	G	1746M	1:1	0.00	1860.00	26140	0.0	18.0	16.59	50	0	Front	5	0.135	1.384	0.187	0.206	0.129		25.2		
Hotspot	LTE Band 25	20	QPSK	G	1746M	1:1	-0.04	1860.00	26140	0.0	18.0	16.54	1	0	Top	10	0.260	1.400	0.364	0.400	0.251		22.3		
Hotspot	LTE Band 25	20	QPSK	G	1746M	1:1	0.02	1860.00	26140	0.0	18.0	16.59	50	0	Top	10	0.268	1.384	0.371	0.408	0.255		22.3		
Hotspot	LTE Band 25	20	QPSK	G	1746M	1:1	-0.04	1860.00	26140	0.0	18.0	16.54	1	0	Right	10	0.040	1.400	0.056	0.062	0.039		30.5		
Hotspot	LTE Band 25	20	QPSK	G	1746M	1:1	0.03	1860.00	26140	0.0	18.0	16.59	50	0	Right	10	0.040	1.384	0.055	0.061	0.037		30.5		
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 12-7 | Plot A6

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.01	1860.00	26140	0.0	22.0	20.68	1	0	Back	10	0.846	1.355	1.146	1.261	0.788		21.4	21.2	21.0
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.01	1860.00	26140	0.0	22.0	20.68	1	0	Back	10	0.883	1.355	1.196	1.316	0.823	Plot	21.2		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.05	1882.50	26365	0.0	22.0	20.46	1	50	Back	10	0.807	1.426	1.151	1.266	0.791		21.3		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.05	1905.00	26590	0.0	22.0	20.18	1	0	Back	10	0.783	1.521	1.191	1.310	0.818		21.2		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.02	1860.00	26140	0.0	22.0	20.68	50	0	Back	10	0.843	1.355	1.142	1.256	0.785		21.4		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.04	1882.50	26365	0.0	22.0	20.43	50	0	Back	10	0.813	1.435	1.167	1.284	0.802		21.3		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.01	1905.00	26590	0.0	22.0	20.20	50	0	Back	10	0.763	1.514	1.155	1.271	0.794		21.3		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.02	1860.00	26140	0.0	22.0	20.56	100	0	Back	10	0.824	1.393	1.148	1.263	0.790		21.4		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.00	1860.00	26140	0.0	22.0	20.68	1	0	Top	13	0.598	1.355	0.810	0.891	0.557		22.9		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.10	1882.50	26365	0.0	22.0	20.46	1	50	Top	13	0.556	1.426	0.793	0.872	0.546		23.0		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.06	1905.00	26590	0.0	22.0	20.18	1	0	Top	13	0.529	1.521	0.805	0.886	0.553		22.9		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.00	1860.00	26140	0.0	22.0	20.68	50	0	Top	13	0.584	1.355	0.791	0.870	0.543		23.0		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.02	1882.50	26365	0.0	22.0	20.43	50	0	Top	13	0.557	1.435	0.799	0.879	0.549		22.9		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.02	1905.00	26590	0.0	22.0	20.20	50	0	Top	13	0.528	1.514	0.799	0.879	0.549		22.9		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.02	1860.00	26140	0.0	22.0	20.56	100	0	Top	13	0.573	1.393	0.798	0.878	0.549		22.9		
Body	LTE Band 25	20	QPSK	G	1725M	1:1	0.03	1860.00	26140	0.0	22.0	20.68	1	0	Bottom	0	0.015	1.355	0.020	0.022	0.014		38.9		
BodY	LTE Band 25	20	QPSK	G	1725M	1:1	0.05	1860.00	26140	0.0	22.0	20.68	50	0	Bottom	0	0.012	1.355	0.016	0.018	0.011		39.8		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.19	1860.00	26140	0.0	22.0	20.68	1	0	Right	0	0.590	1.355	0.799	0.879	0.549		22.9		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.01	1860.00	26140	0.0	22.0	20.68	50	0	Right	0	0.573	1.355	0.776	0.854	0.534		23.0		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.04	1860.00	26140	0.0	22.0	20.68	1	0	Left	0	0.149	1.355	0.202	0.222	0.139		28.9		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.01	1860.00	26140	0.0	22.0	20.68	50	0	Left	0	0.153	1.355	0.207	0.228	0.142		28.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram											

Note: Blue entry represents variability measurement

Table 12-8

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.03	1860.00	26140	0.0	11.5	10.10	1	50	Back	0	0.544	1.380	0.751	0.826	0.516		12.7	11.1	10.5
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.08	1860.00	26140	0.0	11.5	10.08	50	0	Back	0	0.548	1.387	0.760	0.836	0.523		12.6		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.00	1860.00	26140	0.0	11.5	10.10	1	50	Top	0	0.769	1.380	1.061	1.167	0.729		11.2		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.00	1882.50	26365	0.0	11.5	9.90	1	99	Top	0	0.748	1.445	1.081	1.189	0.744		11.1		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.01	1905.00	26590	0.0	11.5	9.87	1	0	Top	0	0.753	1.455	1.096	1.206	0.754		11.1		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.08	1860.00	26140	0.0	11.5	10.08	50	0	Top	0	0.774	1.387	1.074	1.181	0.738		11.1		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.08	1882.50	26365	0.0	11.5	9.95	50	25	Top	0	0.712	1.429	1.017	1.119	0.700		11.4		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	-0.03	1905.00	26590	0.0	11.5	9.80	50	0	Top	0	0.700	1.479	1.035	1.139	0.712		11.3		
Body	LTE Band 25	20	QPSK	G	1752M	1:1	0.05	1860.00	26140	0.0	11.5	10.00	100	0	Top	0	0.681	1.413	0.962	1.058	0.661		11.6		
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 LTE Band 30 Standalone SAR

Table 12-9 | Plot A7

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 30	10	QPSK	G	1742M	1:1	0.11	2310.00	27710	0.0	19.5	18.04	1	0	Right Cheek	0	0.475	1.400	0.665	0.732	0.458		21.2	19.9	18.5
Head	LTE Band 30	10	QPSK	G	1742M	1:1	-0.03	2310.00	27710	0.0	19.5	18.05	25	0	Right Cheek	0	0.479	1.396	0.669	0.736	0.460		21.2		
Head	LTE Band 30	10	QPSK	G	1737M	1:1	0.09	2310.00	27710	0.0	19.5	18.04	1	0	Right Tilt	0	0.637	1.400	0.892	0.981	0.614		19.9		
Head	LTE Band 30	10	QPSK	G	1737M	1:1	0.01	2310.00	27710	0.0	19.5	18.05	25	0	Right Tilt	0	0.644	1.396	0.899	0.989	0.618	Plot	19.9		
Head	LTE Band 30	10	QPSK	G	1737M	1:1	0.00	2310.00	27710	0.0	19.5	18.03	50	0	Right Tilt	0	0.619	1.403	0.868	0.955	0.597		20.1		
Head	LTE Band 30	10	QPSK	G	1724M	1:1	0.07	2310.00	27710	0.0	19.5	18.04	1	0	Left Cheek	0	0.474	1.400	0.664	0.730	0.457		21.2		
Head	LTE Band 30	10	QPSK	G	1724M	1:1	-0.04	2310.00	27710	0.0	19.5	18.05	25	0	Left Cheek	0	0.468	1.396	0.653	0.718	0.449		21.3		
Head	LTE Band 30	10	QPSK	G	1724M	1:1	0.09	2310.00	27710	0.0	19.5	18.04	1	0	Left Tilt	0	0.554	1.400	0.776	0.854	0.534		20.6		
Head	LTE Band 30	10	QPSK	G	1724M	1:1	0.00	2310.00	27710	0.0	19.5	18.05	25	0	Left Tilt	0	0.558	1.396	0.779	0.857	0.536		20.5		
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 12-10 | Plot A8

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 30	10	QPSK	G	1724M	1:1	0.09	2310.00	27710	0.0	19.0	17.66	1	0	Back	5	0.774	1.361	1.053	1.158	0.724		18.7	18.6	18.0
Body-worn/Hotspot	LTE Band 30	10	QPSK	G	1724M	1:1	0.08	2310.00	27710	0.0	19.0	17.65	25	0	Back	5	0.789	1.365	1.077	1.185	0.740		18.6		
Body-worn/Hotspot	LTE Band 30	10	QPSK	G	1724M	1:1	0.01	2310.00	27710	0.0	19.0	17.58	50	0	Back	5	0.789	1.387	1.094	1.203	0.752	Plot	18.6		
Body-worn/Hotspot	LTE Band 30	10	QPSK	G	1746M	1:1	-0.05	2310.00	27710	0.0	19.0	17.66	1	0	Front	5	0.266	1.361	0.362	0.398	0.249		23.4		
Body-worn/Hotspot	LTE Band 30	10	QPSK	G	1746M	1:1	-0.02	2310.00	27710	0.0	19.0	17.65	25	0	Front	5	0.260	1.365	0.355	0.391	0.244		23.5		
Hotspot	LTE Band 30	10	QPSK	G	1746M	1:1	-0.01	2310.00	27710	0.0	19.0	17.66	1	0	Top	10	0.402	1.361	0.547	0.602	0.376		21.6		
Hotspot	LTE Band 30	10	QPSK	G	1746M	1:1	-0.01	2310.00	27710	0.0	19.0	17.65	25	0	Top	10	0.389	1.365	0.531	0.584	0.365		21.7		
Hotspot	LTE Band 30	10	QPSK	G	1764M	1:1	0.04	2310.00	27710	0.0	19.0	17.66	1	0	Right	10	0.030	1.361	0.041	0.045	0.029		32.8		
Hotspot	LTE Band 30	10	QPSK	G	1764M	1:1	-0.21	2310.00	27710	0.0	19.0	17.65	25	0	Right	10	0.030	1.365	0.041	0.045	0.029		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											

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Table 12-11

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 30	10	QPSK	G	1746M	1:1	0.09	2310.00	27710	0.0	22.0	20.70	1	25	Back	10	0.673	1.349	0.908	0.999	0.625		22.4	22.4	21.0
Body	LTE Band 30	10	QPSK	G	1746M	1:1	-0.06	2310.00	27710	0.0	22.0	20.72	25	0	Back	10	0.659	1.343	0.885	0.974	0.608		22.5		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	-0.04	2310.00	27710	0.0	22.0	20.64	50	0	Back	10	0.662	1.368	0.906	0.997	0.623		22.4		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	0.02	2310.00	27710	0.0	22.0	20.70	1	25	Top	13	0.364	1.349	0.491	0.540	0.338		25.0		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	0.01	2310.00	27710	0.0	22.0	20.72	25	0	Top	13	0.371	1.343	0.498	0.548	0.342		25.0		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	0.02	2310.00	27710	0.0	22.0	20.70	1	25	Bottom	0	0.005	1.349	0.007	0.008	0.004		43.7		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	0.03	2310.00	27710	0.0	22.0	20.72	25	0	Bottom	0	0.005	1.343	0.007	0.008	0.004		43.7		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	0.15	2310.00	27710	0.0	22.0	20.70	1	25	Right	0	0.637	1.349	0.859	0.945	0.591		22.6		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	-0.02	2310.00	27710	0.0	22.0	20.72	25	0	Right	0	0.604	1.343	0.811	0.892	0.558		22.9		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	-0.02	2310.00	27710	0.0	22.0	20.64	50	0	Right	0	0.626	1.368	0.856	0.942	0.589		22.6		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	-0.06	2310.00	27710	0.0	22.0	20.70	1	25	Left	0	0.100	1.349	0.135	0.149	0.092		30.7		
Body	LTE Band 30	10	QPSK	G	1746M	1:1	0.00	2310.00	27710	0.0	22.0	20.72	25	0	Left	0	0.097	1.343	0.130	0.143	0.089		30.8		
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 12-12 | Plot A9

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 30	10	QPSK	G	1764M	1:1	-0.06	2310.00	27710	0.0	10.5	8.97	1	0	Back	0	0.457	1.422	0.650	0.715	0.447		12.3	9.9	9.5
Body	LTE Band 30	10	QPSK	G	1764M	1:1	-0.06	2310.00	27710	0.0	10.5	8.98	25	0	Back	0	0.454	1.419	0.644	0.708	0.443		12.4		
Body	LTE Band 30	10	QPSK	G	1724M	1:1	0.02	2310.00	27710	0.0	10.5	8.97	1	0	Top	0	0.796	1.422	1.132	1.245	0.779		9.9		
Body	LTE Band 30	10	QPSK	G	1724M	1:1	-0.01	2310.00	27710	0.0	10.5	8.98	25	0	Top	0	0.799	1.419	1.134	1.247	0.780	Plot	9.9		
Body	LTE Band 30	10	QPSK	G	1724M	1:1	0.00	2310.00	27710	0.0	10.5	8.96	50	0	Top	0	0.794	1.426	1.132	1.245	0.779		9.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram											

12.4 LTE Band 7 Standalone SAR

Table 12-13 | 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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 7	20	QPSK	G	1737M	1:1	-0.05	2510.00	20850	0.0	18.0	16.89	1	0	Right Cheek	0	0.490	1.291	0.633	0.696	0.436		19.9	17.2	17.0
Head	LTE Band 7	20	QPSK	G	1737M	1:1	-0.11	2535.00	21100	0.0	18.0	17.04	1	0	Right Cheek	0	0.633	1.247	0.789	0.868	0.542		19.0		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	0.02	2560.00	21350	0.0	18.0	17.08	1	0	Right Cheek	0	0.695	1.236	0.859	0.945	0.591		18.6		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	0.02	2510.00	20850	0.0	18.0	16.91	50	25	Right Cheek	0	0.576	1.285	0.740	0.814	0.509		19.3		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	-0.04	2535.00	21100	0.0	18.0	16.94	50	50	Right Cheek	0	0.698	1.276	0.891	0.980	0.613		18.5		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	-0.02	2560.00	21350	0.0	18.0	17.10	50	50	Right Cheek	0	0.727	1.230	0.894	0.983	0.615		18.4		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	0.01	2560.00	21350	0.0	18.0	17.00	100	0	Right Cheek	0	0.709	1.259	0.893	0.982	0.614		18.4		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	-0.05	2510.00	20850	0.0	18.0	16.89	1	0	Right Tilt	0	0.533	1.291	0.688	0.757	0.473		19.6		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	-0.08	2535.00	21100	0.0	18.0	17.04	1	0	Right Tilt	0	0.680	1.247	0.848	0.933	0.583		18.7		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	0.03	2560.00	21350	0.0	18.0	17.08	1	0	Right Tilt	0	0.759	1.236	0.938	1.032	0.645		18.2		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	0.01	2510.00	20850	0.0	18.0	16.91	50	25	Right Tilt	0	0.596	1.285	0.766	0.843	0.527		19.1		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	0.00	2535.00	21100	0.0	18.0	16.94	50	50	Right Tilt	0	0.743	1.276	0.948	1.043	0.652		18.2		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	0.04	2560.00	21350	0.0	18.0	17.10	50	50	Right Tilt	0	0.804	1.230	0.989	1.088	0.680		18.0		
Head	LTE Band 7	20	QPSK	G	1737M	1:1	0.00	2560.00	21350	0.0	18.0	17.00	100	0	Right Tilt	0	0.774	1.259	0.974	1.071	0.670		18.1		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	0.08	2510.00	20850	0.0	18.0	16.89	1	0	Left Cheek	0	0.718	1.291	0.927	1.020	0.637		18.3		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	-0.02	2535.00	21100	0.0	18.0	17.04	1	0	Left Cheek	0	0.787	1.247	0.981	1.079	0.674		18.0		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	0.11	2560.00	21350	0.0	18.0	17.08	1	0	Left Cheek	0	0.891	1.236	1.101	1.211	0.757		17.5		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	-0.02	2510.00	20850	0.0	18.0	16.80	50	50	Left Cheek	0	0.727	1.318	0.958	1.054	0.659		18.1		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	-0.01	2535.00	21100	0.0	18.0	16.94	50	50	Left Cheek	0	0.819	1.276	1.045	1.150	0.718		17.8		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	-0.04	2560.00	21350	0.0	18.0	17.10	50	50	Left Cheek	0	0.886	1.230	1.090	1.199	0.749		17.6		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	-0.02	2560.00	21350	0.0	18.0	17.00	100	0	Left Cheek	0	0.862	1.259	1.085	1.194	0.746		17.6		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	-0.01	2510.00	20850	0.0	18.0	16.89	1	0	Left Tilt	0	0.728	1.291	0.940	1.034	0.647		18.2		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	0.03	2535.00	21100	0.0	18.0	17.04	1	0	Left Tilt	0	0.857	1.247	1.069	1.176	0.735		17.7		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	0.12	2560.00	21350	0.0	18.0	17.08	1	0	Left Tilt	0	0.952	1.236	1.177	1.295	0.810		17.2		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	0.01	2510.00	20850	0.0	18.0	16.91	50	25	Left Tilt	0	0.789	1.285	1.014	1.115	0.697		17.9		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	-0.02	2535.00	21100	0.0	18.0	16.94	50	50	Left Tilt	0	0.902	1.276	1.151	1.266	0.791		17.3		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	0.00	2560.00	21350	0.0	18.0	17.10	50	50	Left Tilt	0	0.959	1.230	1.180	1.298	0.812	Plot	17.2		
Head	LTE Band 7	20	QPSK	G	1724M	1:1	0.01	2560.00	21350	0.0	18.0	17.00	100	0	Left Tilt	0	0.939	1.259	1.182	1.300	0.813		17.2		
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 12-14 | 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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1724M	1:1	-0.08	2510.00	20850	0.0	17.5	15.86	1	0	Back	5	0.751	1.459	1.096	1.206	0.754		17.1	16.7	16.5
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1724M	1:1	0.08	2535.00	21100	0.0	17.5	16.06	1	0	Back	5	0.845	1.393	1.177	1.295	0.810		16.7		
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1724M	1:1	0.06	2560.00	21350	0.0	17.5	16.15	1	0	Back	5	0.862	1.365	1.177	1.295	0.810	Plot	16.7		
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1724M	1:1	0.09	2510.00	20850	0.0	17.5	15.98	50	25	Back	5	0.742	1.419	1.053	1.158	0.724		17.2		
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1724M	1:1	0.00	2535.00	21100	0.0	17.5	16.11	50	50	Back	5	0.847	1.377	1.166	1.283	0.802		16.8		
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1724M	1:1	0.01	2560.00	21350	0.0	17.5	16.13	50	50	Back	5	0.860	1.371	1.179	1.297	0.811		16.7		
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1724M	1:1	0.00	2560.00	21350	0.0	17.5	16.06	100	0	Back	5	0.850	1.393	1.184	1.302	0.814		16.7		
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1746M	1:1	0.05	2560.00	21350	0.0	17.5	16.15	1	0	Front	5	0.467	1.365	0.637	0.701	0.438		19.4		
Body-worn/Hotspot	LTE Band 7	20	QPSK	G	1746M	1:1	0.01	2560.00	21350	0.0	17.5	16.13	50	50	Front	5	0.485	1.371	0.665	0.732	0.458		19.2		
Hotspot	LTE Band 7	20	QPSK	G	1746M	1:1	0.09	2560.00	21350	0.0	17.5	16.15	1	0	Top	10	0.550	1.365	0.751	0.826	0.516		18.7		
Hotspot	LTE Band 7	20	QPSK	G	1746M	1:1	-0.02	2560.00	21350	0.0	17.5	16.13	50	50	Top	10	0.571	1.371	0.783	0.861	0.538		18.5		
Hotspot	LTE Band 7	20	QPSK	G	1764M	1:1	-0.20	2560.00	21350	0.0	17.5	16.15	1	0	Right	10	0.053	1.365	0.072	0.079	0.050		28.9		
Hotspot	LTE Band 7	20	QPSK	G	1764M	1:1	0.00	2560.00	21350	0.0	17.5	16.13	50	50	Right	10	0.055	1.371	0.075	0.083	0.052		28.7		
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 12-15

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.01	2560.00	21350	0.0	18.5	17.02	1	99	Back	10	0.361	1.406	0.508	0.559	0.350		21.4	20.5	17.5
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.01	2560.00	21350	0.0	18.5	17.06	50	50	Back	10	0.360	1.393	0.501	0.551	0.344		21.4		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.08	2560.00	21350	0.0	18.5	17.02	1	99	Top	13	0.270	1.406	0.380	0.418	0.262		22.7		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.01	2560.00	21350	0.0	18.5	17.06	50	50	Top	13	0.276	1.393	0.384	0.422	0.264		22.6		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.01	2560.00	21350	0.0	18.5	17.02	1	99	Bottom	0	0.017	1.406	0.024	0.026	0.017		34.2		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.11	2560.00	21350	0.0	18.5	17.06	50	50	Bottom	0	0.015	1.393	0.021	0.023	0.014		35.2		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.16	2560.00	21350	0.0	18.5	17.02	1	99	Right	0	0.409	1.406	0.575	0.633	0.395		20.9		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.01	2560.00	21350	0.0	18.5	17.06	50	50	Right	0	0.445	1.393	0.620	0.682	0.427		20.5		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.16	2560.00	21350	0.0	18.5	17.02	1	99	Left	0	0.043	1.406	0.060	0.066	0.042		30.6		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.04	2560.00	21350	0.0	18.5	17.06	50	50	Left	0	0.041	1.393	0.057	0.063	0.040		30.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram											

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Table 12-16 | Plot A12

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.11	2510.00	20850	0.0	10.0	8.32	1	50	Back	0	0.608	1.472	0.895	0.985	0.615		10.4		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.09	2535.00	21100	0.0	10.0	8.49	1	50	Back	0	0.682	1.416	0.966	1.063	0.664		10.1		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.16	2560.00	21350	0.0	10.0	8.69	1	0	Back	0	0.690	1.352	0.933	1.026	0.641		10.3		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.01	2510.00	20850	0.0	10.0	8.34	50	50	Back	0	0.619	1.466	0.907	0.998	0.624		10.4		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.00	2535.00	21100	0.0	10.0	8.55	50	50	Back	0	0.669	1.396	0.934	1.027	0.642		10.2		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.01	2560.00	21350	0.0	10.0	8.57	50	50	Back	0	0.696	1.390	0.967	1.064	0.664		10.1		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.00	2560.00	21350	0.0	10.0	8.53	100	0	Back	0	0.685	1.403	0.961	1.057	0.661		10.1	9.7	9.0
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.07	2510.00	20850	0.0	10.0	8.32	1	50	Top	0	0.671	1.472	0.988	1.087	0.680		10.0		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.03	2535.00	21100	0.0	10.0	8.49	1	50	Top	0	0.739	1.416	1.046	1.151	0.719		9.8		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.06	2560.00	21350	0.0	10.0	8.69	1	0	Top	0	0.751	1.352	1.015	1.117	0.697		9.9		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	-0.02	2510.00	20850	0.0	10.0	8.34	50	50	Top	0	0.682	1.466	1.000	1.100	0.688		10.0		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.00	2535.00	21100	0.0	10.0	8.55	50	50	Top	0	0.742	1.396	1.036	1.140	0.713		9.8		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.01	2560.00	21350	0.0	10.0	8.57	50	50	Top	0	0.758	1.390	1.054	1.159	0.725	Plot	9.7		
Body	LTE Band 7	20	QPSK	G	1724M	1:1	0.05	2560.00	21350	0.0	10.0	8.53	100	0	Top	0	0.752	1.403	1.055	1.161	0.725		9.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.5 LTE Band 41 Standalone SAR

Table 12-17 | Plot A13

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.05	2506.00	39750	0.0	19.0	17.75	1	99	Right Cheek	0	0.523	1.334	0.698	0.768	0.480		18.5		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2549.50	40185	0.0	19.0	17.87	1	0	Right Cheek	0	0.601	1.297	0.779	0.857	0.536		18.0		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2593.00	40620	0.0	19.0	17.82	1	0	Right Cheek	0	0.628	1.312	0.824	0.906	0.567		17.8		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2636.50	41055	0.0	19.0	17.56	1	0	Right Cheek	0	0.600	1.393	0.836	0.920	0.575		17.7		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2680.00	41490	0.0	19.0	17.62	1	0	Right Cheek	0	0.565	1.374	0.776	0.854	0.534		18.1		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.02	2506.00	39750	0.0	19.0	17.78	50	50	Right Cheek	0	0.514	1.324	0.681	0.749	0.469		18.6		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2549.50	40185	0.0	19.0	17.95	50	50	Right Cheek	0	0.628	1.274	0.800	0.880	0.550		17.9		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2593.00	40620	0.0	19.0	17.88	50	0	Right Cheek	0	0.642	1.294	0.831	0.914	0.571		17.8		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2636.50	41055	0.0	19.0	17.64	50	0	Right Cheek	0	0.600	1.368	0.821	0.903	0.564		17.8		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.02	2680.00	41490	0.0	19.0	17.63	50	0	Right Cheek	0	0.560	1.371	0.768	0.845	0.528		18.1		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.02	2549.50	40185	0.0	19.0	17.86	100	0	Right Cheek	0	0.607	1.300	0.789	0.868	0.542		18.0		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.03	2506.00	39750	0.0	19.0	17.75	1	99	Right Tilt	0	0.613	1.334	0.818	0.900	0.562		17.8		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2549.50	40185	0.0	19.0	17.87	1	0	Right Tilt	0	0.695	1.297	0.901	0.991	0.619		17.4		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2593.00	40620	0.0	19.0	17.82	1	0	Right Tilt	0	0.758	1.312	0.994	1.093	0.683		17.0		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.03	2636.50	41055	0.0	19.0	17.56	1	0	Right Tilt	0	0.726	1.393	1.011	1.112	0.695		16.9		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2680.00	41490	0.0	19.0	17.62	1	0	Right Tilt	0	0.699	1.374	0.960	1.056	0.660		17.1		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.06	2506.00	39750	0.0	19.0	17.78	50	50	Right Tilt	0	0.611	1.324	0.809	0.890	0.557		17.9		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2549.50	40185	0.0	19.0	17.95	50	50	Right Tilt	0	0.745	1.274	0.949	1.044	0.652		17.2		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2593.00	40620	0.0	19.0	17.88	50	0	Right Tilt	0	0.769	1.294	0.995	1.095	0.684		17.0		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.04	2636.50	41055	0.0	19.0	17.64	50	0	Right Tilt	0	0.733	1.368	1.003	1.103	0.690		17.0		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2680.00	41490	0.0	19.0	17.63	50	0	Right Tilt	0	0.694	1.371	0.951	1.046	0.653		17.2		
Head	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2549.50	40185	0.0	19.0	17.86	100	0	Right Tilt	0	0.756	1.300	0.983	1.081	0.675		17.0	16.0	16.0
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.04	2506.00	39750	0.0	19.0	17.75	1	99	Left Cheek	0	0.593	1.334	0.791	0.870	0.543		18.0		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.04	2549.50	40185	0.0	19.0	17.87	1	0	Left Cheek	0	0.707	1.297	0.917	1.009	0.630		17.3		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.02	2593.00	40620	0.0	19.0	17.82	1	0	Left Cheek	0	0.741	1.312	0.972	1.069	0.669		17.1		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.01	2636.50	41055	0.0	19.0	17.56	1	0	Left Cheek	0	0.667	1.393	0.929	1.022	0.639		17.3		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.01	2680.00	41490	0.0	19.0	17.62	1	0	Left Cheek	0	0.655	1.374	0.900	0.990	0.619		17.4		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.02	2506.00	39750	0.0	19.0	17.78	50	50	Left Cheek	0	0.578	1.324	0.765	0.842	0.526		18.1		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.06	2549.50	40185	0.0	19.0	17.95	50	50	Left Cheek	0	0.736	1.274	0.938	1.032	0.645		17.2		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.04	2593.00	40620	0.0	19.0	17.88	50	0	Left Cheek	0	0.746	1.294	0.965	1.062	0.663		17.1		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.02	2636.50	41055	0.0	19.0	17.64	50	0	Left Cheek	0	0.683	1.368	0.934	1.027	0.642		17.3		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.02	2680.00	41490	0.0	19.0	17.63	50	0	Left Cheek	0	0.651	1.371	0.893	0.982	0.614		17.5		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.04	2549.50	40185	0.0	19.0	17.86	100	0	Left Cheek	0	0.724	1.300	0.941	1.035	0.647		17.2		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.04	2506.00	39750	0.0	19.0	17.75	1	99	Left Tilt	0	0.747	1.334	0.996	1.096	0.685		17.0		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.01	2549.50	40185	0.0	19.0	17.87	1	0	Left Tilt	0	0.882	1.297	1.144	1.258	0.787		16.4		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.06	2593.00	40620	0.0	19.0	17.82	1	0	Left Tilt	0	0.937	1.312	1.229	1.352	0.845		16.1		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.01	2636.50	41055	0.0	19.0	17.56	1	0	Left Tilt	0	0.866	1.393	1.206	1.327	0.829		16.2		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.04	2680.00	41490	0.0	19.0	17.62	1	0	Left Tilt	0	0.869	1.374	1.194	1.313	0.821		16.2		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.01	2506.00	39750	0.0	19.0	17.78	50	50	Left Tilt	0	0.726	1.324	0.961	1.057	0.661		17.1		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.02	2549.50	40185	0.0	19.0	17.95	50	50	Left Tilt	0	0.938	1.274	1.195	1.315	0.822		16.2		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	0.02	2593.00	40620	0.0	19.0	17.88	50	0	Left Tilt	0	0.964	1.294	1.247	1.372	0.857	Plot	16.0		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.02	2636.50	41055	0.0	19.0	17.64	50	0	Left Tilt	0	0.877	1.368	1.200	1.320	0.825		16.2		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	0.02	2680.00	41490	0.0	19.0	17.63	50	0	Left Tilt	0	0.864	1.371	1.185	1.304	0.815		16.2		
Head	LTE Band 41	20	QPSK	G	1737M	1:1.58	-0.01	2549.50	40185	0.0	19.0	17.86	100	0	Left Tilt	0	0.906	1.300	1.178	1.296	0.810		16.3		
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 12-18 | Plot A14

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.03	2506.00	39750	0.0	19.5	17.95	1	99	Back	5	0.817	1.429	1.167	1.284	0.802		16.8		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2549.50	40185	0.0	19.5	18.18	1	0	Back	5	0.777	1.355	1.053	1.158	0.724		17.2		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.02	2593.00	40620	0.0	19.5	18.11	1	0	Back	5	0.761	1.377	1.048	1.153	0.721		17.3		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2636.50	41055	0.0	19.5	17.92	1	0	Back	5	0.723	1.439	1.040	1.144	0.715		17.3		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.02	2680.00	41490	0.0	19.5	17.82	1	0	Back	5	0.628	1.472	0.924	1.016	0.636		17.8		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2506.00	39750	0.0	19.5	18.05	50	25	Back	5	0.806	1.396	1.125	1.238	0.773		17.0		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2549.50	40185	0.0	19.5	18.20	50	50	Back	5	0.771	1.349	1.040	1.144	0.715		17.3		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2593.00	40620	0.0	19.5	18.17	50	0	Back	5	0.834	1.358	1.133	1.246	0.779		16.9		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2636.50	41055	0.0	19.5	17.94	50	0	Back	5	0.710	1.432	1.017	1.119	0.700		17.4	16.7	16.5
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.03	2680.00	41490	0.0	19.5	17.84	50	0	Back	5	0.612	1.466	0.897	0.987	0.617		17.9		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.03	2549.50	40185	0.0	19.5	18.16	100	0	Back	5	0.876	1.361	1.192	1.311	0.820	Plot	16.7		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2549.50	40185	0.0	19.5	18.18	1	0	Front	5	0.357	1.355	0.484	0.532	0.333		20.6		
Body-worn/Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.04	2549.50	40185	0.0	19.5	18.20	50	50	Front	5	0.373	1.349	0.503	0.553	0.345		20.4		
Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.08	2549.50	40185	0.0	19.5	18.18	1	0	Top	10	0.423	1.355	0.573	0.630	0.394		19.9		
Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.16	2549.50	40185	0.0	19.5	18.20	50	50	Top	10	0.444	1.349	0.599	0.659	0.411		19.7		
Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.04	2549.50	40185	0.0	19.5	18.18	1	0	Right	10	0.070	1.355	0.095	0.105	0.065		27.7		
Hotspot	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.14	2549.50	40185	0.0	19.5	18.20	50	50	Right	10	0.066	1.349	0.089	0.098	0.062		28.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 12-19 | Plot A15

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.06	2549.50	40185	0.0	22.0	21.78	1	99	Back	10	0.540	1.052	0.568	0.625	0.391		22.4	19.5	19.0
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.04	2549.50	40185	0.0	22.0	21.77	50	50	Back	10	0.530	1.054	0.559	0.615	0.384		22.5		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.05	2549.50	40185	0.0	22.0	21.78	1	99	Top	13	0.365	1.052	0.384	0.422	0.264		24.1		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	0.00	2549.50	40185	0.0	22.0	21.77	50	50	Top	13	0.367	1.054	0.387	0.426	0.266		24.1		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.20	2549.50	40185	0.0	22.0	21.78	1	99	Bottom	0	0.029	1.052	0.031	0.034	0.021		35.1		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.14	2549.50	40185	0.0	22.0	21.77	50	50	Bottom	0	0.025	1.054	0.026	0.029	0.018		35.8		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	0.00	2506.00	39750	0.0	22.0	21.41	1	99	Right	0	0.914	1.146	1.047	1.152	0.719		19.8		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	0.01	2549.50	40185	0.0	22.0	21.78	1	99	Right	0	0.732	1.052	0.770	0.847	0.529		21.1		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.02	2593.00	40620	0.0	22.0	21.71	1	0	Right	0	0.428	1.069	0.458	0.504	0.315		23.4		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.01	2636.50	41055	0.0	22.0	21.51	1	0	Right	0	0.252	1.119	0.282	0.310	0.194		25.5		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.12	2680.00	41490	0.0	22.0	21.71	1	0	Right	0	0.166	1.069	0.177	0.195	0.122		27.5		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	0.01	2506.00	39750	0.0	22.0	21.48	50	50	Right	0	0.900	1.127	1.082	1.190	0.744		19.6		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.02	2506.00	39750	0.0	22.0	21.48	50	50	Right	0	0.981	1.127	1.106	1.217	0.760	Plot	19.5		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.02	2549.50	40185	0.0	22.0	21.77	50	50	Right	0	0.787	1.054	0.829	0.912	0.570		20.8		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	0.06	2593.00	40620	0.0	22.0	21.71	50	0	Right	0	0.412	1.069	0.440	0.484	0.303		23.5		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.04	2636.50	41055	0.0	22.0	21.60	50	0	Right	0	0.229	1.096	0.251	0.276	0.173		26.0		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.08	2680.00	41490	0.0	22.0	21.71	50	0	Right	0	0.171	1.069	0.183	0.201	0.125		27.3		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.03	2549.50	40185	0.0	22.0	21.75	100	0	Right	0	0.648	1.059	0.686	0.755	0.472		21.6		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	-0.02	2549.50	40185	0.0	22.0	21.78	1	99	Left	0	0.049	1.052	0.052	0.057	0.036		32.8		
Body	LTE Band 41	20	QPSK	G	1724M	1:1.58	0.07	2549.50	40185	0.0	22.0	21.77	50	50	Left	0	0.048	1.054	0.051	0.056	0.035		32.9		
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Note: Blue entry represents variability measurement

Table 12-20

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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2506.00	39750	0.0	12.0	10.29	1	0	Back	0	0.469	1.483	0.696	0.766	0.479		11.5	9.4	9.0
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2549.50	40185	0.0	12.0	10.57	1	0	Back	0	0.590	1.390	0.820	0.902	0.564		10.8		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2593.00	40620	0.0	12.0	10.56	1	0	Back	0	0.615	1.393	0.857	0.943	0.590		10.6		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2636.50	41055	0.0	12.0	10.25	1	0	Back	0	0.562	1.496	0.841	0.925	0.579		10.7		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.02	2680.00	41490	0.0	12.0	10.32	1	0	Back	0	0.529	1.472	0.779	0.857	0.536		11.1		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.03	2506.00	39750	0.0	12.0	10.38	50	0	Back	0	0.519	1.452	0.754	0.829	0.518		11.2		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2549.50	40185	0.0	12.0	10.60	50	0	Back	0	0.581	1.380	0.802	0.882	0.551		10.9		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.01	2593.00	40620	0.0	12.0	10.58	50	0	Back	0	0.609	1.387	0.845	0.930	0.581		10.7		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2636.50	41055	0.0	12.0	10.30	50	0	Back	0	0.554	1.479	0.819	0.901	0.563		10.8		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.03	2680.00	41490	0.0	12.0	10.36	50	0	Back	0	0.524	1.459	0.765	0.842	0.526		11.1		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.03	2549.50	40185	0.0	12.0	10.56	100	0	Back	0	0.616	1.393	0.858	0.944	0.590		10.6		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.04	2506.00	39750	0.0	12.0	10.29	1	0	Top	0	0.664	1.483	0.985	1.084	0.678		10.0		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.03	2549.50	40185	0.0	12.0	10.57	1	0	Top	0	0.784	1.390	1.090	1.199	0.749		9.6		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.02	2593.00	40620	0.0	12.0	10.56	1	0	Top	0	0.790	1.393	1.100	1.210	0.757		9.6		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2636.50	41055	0.0	12.0	10.25	1	0	Top	0	0.758	1.496	1.134	1.247	0.780		9.4		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2680.00	41490	0.0	12.0	10.32	1	0	Top	0	0.754	1.472	1.110	1.221	0.763		9.5		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2506.00	39750	0.0	12.0	10.38	50	0	Top	0	0.682	1.452	0.990	1.089	0.681		10.0		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.12	2549.50	40185	0.0	12.0	10.60	50	0	Top	0	0.793	1.380	1.094	1.203	0.752		9.6		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.15	2593.00	40620	0.0	12.0	10.58	50	0	Top	0	0.788	1.387	1.093	1.202	0.751		9.6		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	0.00	2636.50	41055	0.0	12.0	10.30	50	0	Top	0	0.752	1.479	1.112	1.223	0.765		9.5		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2680.00	41490	0.0	12.0	10.36	50	0	Top	0	0.749	1.459	1.093	1.202	0.751		9.6		
Body	LTE Band 41	20	QPSK	G	1742M	1:1.58	-0.01	2549.50	40185	0.0	12.0	10.56	100	0	Top	0	0.792	1.393	1.103	1.213	0.758		9.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.6 NR Band n70 Standalone SAR

Table 12-21 | Plot A16

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n70	15	QPSK	G	1752M	1:1	-0.05	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.35	1	1	Right Cheek	0	0.502	1.462	0.734	0.807	0.505		21.3	19.0	19.0
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.02	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.32	36	22	Right Cheek	0	0.514	1.472	0.757	0.833	0.520		21.2		
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.06	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.35	1	1	Right Tilt	0	0.653	1.462	0.955	1.051	0.657		20.2		
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.01	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.32	36	22	Right Tilt	0	0.691	1.472	1.017	1.119	0.700		19.9		
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.08	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.19	75	0	Right Tilt	0	0.700	1.517	1.062	1.168	0.730		19.7		
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.00	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.35	1	1	Left Cheek	0	0.581	1.462	0.849	0.934	0.584		20.7		
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.03	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.32	36	22	Left Cheek	0	0.600	1.472	0.883	0.971	0.607		20.5		
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.02	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.19	75	0	Left Cheek	0	0.582	1.517	0.883	0.971	0.607		20.5		
Head	NR Band n70	15	QPSK	G	1752M	1:1	-0.21	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.35	1	1	Left Tilt	0	0.776	1.462	1.135	1.249	0.780		19.4		
Head	NR Band n70	15	QPSK	G	1752M	1:1	-0.01	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.32	36	22	Left Tilt	0	0.819	1.472	1.206	1.327	0.829	Plot	19.1		
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.01	1702.50	340500	DFT-s-OFDM	0.0	20.0	18.19	75	0	Left Tilt	0	0.811	1.517	1.230	1.353	0.846		19.0		
Head	NR Band n70	15	QPSK	G	1752M	1:1	0.00	1702.50	340500	CP-OFDM	0.0	20.0	18.28	1	1	Left Tilt	0	0.793	1.486	1.178	1.296	0.810		19.2		
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 12-22 | Plot A17

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	-0.09	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.93	1	1	Back	5	0.809	1.279	1.035	1.139	0.712		17.8	17.5	17.0
Body-worn/Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	0.03	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.89	36	22	Back	5	0.830	1.291	1.072	1.179	0.737		17.6		
Body-worn/Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	-0.01	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.80	75	0	Back	5	0.821	1.318	1.082	1.190	0.744		17.6		
Body-worn/Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	0.00	1702.50	340500	CP-OFDM	0.0	18.0	16.86	1	1	Back	5	0.853	1.300	1.109	1.220	0.762	Plot	17.5		
Body-worn/Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	0.01	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.93	1	1	Front	5	0.233	1.279	0.298	0.328	0.205		23.2		
Body-worn/Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	-0.06	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.89	36	22	Front	5	0.241	1.291	0.311	0.342	0.213		23.0		
Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	0.10	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.93	1	1	Top	10	0.333	1.279	0.426	0.469	0.293		21.7		
Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	-0.03	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.89	36	22	Top	10	0.342	1.291	0.442	0.486	0.304		21.5		
Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	-0.15	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.93	1	1	Right	10	0.023	1.279	0.029	0.032	0.020		33.3		
Hotspot	NR Band n70	15	QPSK	G	1752M	1:1	0.06	1702.50	340500	DFT-s-OFDM	0.0	18.0	16.89	36	22	Right	10	0.023	1.291	0.030	0.033	0.021		33.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 12-23

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.08	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.85	1	77	Back	10	0.713	1.303	0.929	1.022	0.639		22.3	22.3	21.0
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.06	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.91	36	43	Back	10	0.712	1.285	0.915	1.007	0.629		22.3		
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.03	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.84	75	0	Back	10	0.681	1.306	0.889	0.978	0.612		22.3		
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.00	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.85	1	77	Top	13	0.465	1.303	0.606	0.667	0.417		24.1		
Body	NR Band n70	15	QPSK	G	1745M	1:1	-0.04	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.91	36	43	Top	13	0.438	1.285	0.563	0.619	0.387		24.4		
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.01	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.85	1	77	Bottom	0	0.009	1.303	0.012	0.013	0.009		41.3		
Body	NR Band n70	15	QPSK	G	1745M	1:1	-0.19	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.91	36	43	Bottom	0	0.012	1.285	0.015	0.017	0.010		40.1		
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.07	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.85	1	77	Right	0	0.362	1.303	0.472	0.519	0.325		25.2		
Body	NR Band n70	15	QPSK	G	1745M	1:1	-0.12	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.91	36	43	Right	0	0.354	1.285	0.455	0.501	0.312		25.4		
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.03	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.85	1	77	Left	0	0.110	1.303	0.143	0.157	0.098		30.4		
Body	NR Band n70	15	QPSK	G	1745M	1:1	-0.07	1702.50	340500	DFT-s-OFDM	0.0	22.0	20.91	36	43	Left	0	0.111	1.285	0.143	0.157	0.098		30.4		
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 12-24 | Plot A18

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.05	1702.50	340500	DFT-s-OFDM	0.0	12.0	10.52	1	40	Back	0	0.685	1.406	0.963	1.059	0.662		12.1	11.7	11.0
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.02	1702.50	340500	DFT-s-OFDM	0.0	12.0	10.46	36	22	Back	0	0.703	1.426	1.002	1.102	0.689		11.9		
Body	NR Band n70	15	QPSK	G	1745M	1:1	0.00	1702.50	340500	DFT-s-OFDM	0.0	12.0	10.35	75	0	Back	0	0.675	1.462	0.987	1.086	0.679		12.0		
Body	NR Band n70	15	QPSK	G	1752M	1:1	-0.03	1702.50	340500	DFT-s-OFDM	0.0	12.0	10.52	1	40	Top	0	0.739	1.406	1.039	1.143	0.714	Plot	11.8		
Body	NR Band n70	15	QPSK	G	1752M	1:1	-0.13	1702.50	340500	DFT-s-OFDM	0.0	12.0	10.46	36	22	Top	0	0.721	1.426	1.028	1.131	0.707		11.8		
Body	NR Band n70	15	QPSK	G	1752M	1:1	0.06	1702.50	340500	DFT-s-OFDM	0.0	12.0	10.35	75	0	Top	0	0.701	1.462	1.025	1.128	0.705		11.8		
Body	NR Band n70	15	QPSK	G	1752M	1:1	-0.18	1702.50	340500	CP-OFDM	0.0	12.0	10.42	1	1	Top	0	0.729	1.439	1.049	1.154	0.722		11.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.7 NR Band n66 Standalone SAR

Table 12-25 | 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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n66	45	QPSK	G	1752M	1:1	0.05	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.98	1	1	Right Cheek	0	0.539	1.127	0.607	0.668	0.417		22.6	20.5	19.5
Head	NR Band n66	45	QPSK	G	1752M	1:1	0.05	1745.00	349000	DFT-s-OFDM	0.0	20.5	20.02	120	0	Right Cheek	0	0.525	1.117	0.586	0.645	0.403		22.8		
Head	NR Band n66	45	QPSK	G	1752M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.98	1	1	Right Tilt	0	0.758	1.127	0.854	0.939	0.587		21.1		
Head	NR Band n66	45	QPSK	G	1752M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	20.5	20.02	120	0	Right Tilt	0	0.734	1.117	0.820	0.902	0.564		21.3		
Head	NR Band n66	45	QPSK	G	1752M	1:1	0.00	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.92	240	0	Right Tilt	0	0.743	1.143	0.849	0.934	0.584		21.2		
Head	NR Band n66	45	QPSK	G	1752M	1:1	0.04	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.98	1	1	Left Cheek	0	0.725	1.127	0.817	0.899	0.562		21.3		
Head	NR Band n66	45	QPSK	G	1752M	1:1	-0.07	1745.00	349000	DFT-s-OFDM	0.0	20.5	20.02	120	0	Left Cheek	0	0.691	1.117	0.772	0.849	0.531		21.6		
Head	NR Band n66	45	QPSK	G	1752M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.92	240	0	Left Cheek	0	0.614	1.143	0.702	0.772	0.483		22.0		
Head	NR Band n66	45	QPSK	G	1752M	1:1	0.06	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.98	1	1	Left Tilt	0	0.867	1.127	0.977	1.075	0.672	Plot	20.5		
Head	NR Band n66	45	QPSK	G	1752M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.98	1	1	Left Tilt	0	0.840	1.127	0.947	1.042	0.651		20.7		
Head	NR Band n66	45	QPSK	G	1752M	1:1	-0.09	1745.00	349000	DFT-s-OFDM	0.0	20.5	20.02	120	0	Left Tilt	0	0.820	1.117	0.916	1.008	0.630		20.8		
Head	NR Band n66	45	QPSK	G	1752M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.92	240	0	Left Tilt	0	0.814	1.143	0.930	1.023	0.639		20.8		
Head	NR Band n66	45	QPSK	G	1752M	1:1	-0.01	1745.00	349000	CP-OFDM	0.0	20.5	19.98	1	1	Left Tilt	0	0.851	1.127	0.959	1.055	0.659		20.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Blue entry represents variability measurement

Table 12-26 | Plot A20

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.35	1	1	Back	5	0.812	1.161	0.943	1.037	0.648		18.2	17.9	17.0
Body-worn/Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	-0.11	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.36	120	0	Back	5	0.834	1.159	0.967	1.064	0.664		18.1		
Body-worn/Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.34	240	0	Back	5	0.808	1.164	0.941	1.035	0.647		18.2		
Body-worn/Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	0.06	1745.00	349000	CP-OFDM	0.0	18.0	17.28	1	1	Back	5	0.859	1.180	1.014	1.115	0.697	Plot	17.9		
Body-worn/Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	0.04	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.35	1	1	Front	5	0.246	1.161	0.286	0.315	0.197		23.4		
Body-worn/Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	0.00	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.36	120	0	Front	5	0.216	1.159	0.250	0.275	0.172		24.0		
Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	-0.10	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.35	1	1	Top	10	0.039	1.161	0.045	0.050	0.031		31.4		
Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	-0.06	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.36	120	0	Top	10	0.046	1.159	0.053	0.058	0.036		30.7		
Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	0.03	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.35	1	1	Right	10	0.037	1.161	0.043	0.047	0.030		31.6		
Hotspot	NR Band n66	45	QPSK	G	1752M	1:1	-0.21	1745.00	349000	DFT-s-OFDM	0.0	18.0	17.36	120	0	Right	10	0.039	1.159	0.045	0.050	0.031		31.4		
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 12-27 | Plot A21

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.38	1	1	Back	10	0.600	1.153	0.692	0.761	0.476		23.5	23.2	21.0
Body	NR Band n66	45	QPSK	G	1745M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.44	120	61	Back	10	0.666	1.138	0.758	0.834	0.521	Plot	23.2		
Body	NR Band n66	45	QPSK	G	1745M	1:1	0.06	1745.00	349000	CP-OFDM	0.0	22.0	21.36	1	1	Back	10	0.612	1.159	0.709	0.780	0.487		23.4		
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.15	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.38	1	1	Top	13	0.365	1.153	0.421	0.463	0.289		25.7		
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.16	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.44	120	61	Top	13	0.420	1.138	0.478	0.526	0.329		25.2		
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.06	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.38	1	1	Bottom	0	0.014	1.153	0.016	0.018	0.011		39.9		
Body	NR Band n66	45	QPSK	G	1745M	1:1	0.09	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.44	120	61	Bottom	0	0.009	1.138	0.010	0.011	0.007		41.8		
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.15	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.38	1	1	Right	0	0.354	1.153	0.408	0.449	0.281		25.8		
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.44	120	61	Right	0	0.351	1.138	0.399	0.439	0.274		25.9		
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.38	1	1	Left	0	0.087	1.153	0.100	0.110	0.069		31.9		
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.12	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.44	120	61	Left	0	0.102	1.138	0.116	0.128	0.080		31.3		
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 12-28

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n66	45	QPSK	G	1745M	1:1	0.07	1745.00	349000	DFT-s-OFDM	0.0	12.0	11.58	1	240	Back	0	0.512	1.102	0.564	0.620	0.388		14.4	14.2	11.0
Body	NR Band n66	45	QPSK	G	1745M	1:1	-0.08	1745.00	349000	DFT-s-OFDM	0.0	12.0	11.54	120	122	Back	0	0.534	1.112	0.594	0.653	0.408		14.2		
Body	NR Band n66	45	QPSK	G	1752M	1:1	-0.11	1745.00	349000	DFT-s-OFDM	0.0	12.0	11.58	1	240	Top	0	0.521	1.102	0.574	0.631	0.395		14.4		
Body	NR Band n66	45	QPSK	G	1752M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	12.0	11.54	120	122	Top	0	0.539	1.112	0.599	0.659	0.411		14.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram								

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12.8 NR Band n25 Standalone SAR

Table 12-29 | Plot A22

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n25	40	QPSK	G	1752M	1:1	-0.06	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.92	1	108	Right Cheek	0	0.401	1.143	0.458	0.504	0.315		23.8	21.8	19.5
Head	NR Band n25	40	QPSK	G	1752M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.84	108	108	Right Cheek	0	0.406	1.164	0.473	0.520	0.326		23.7		
Head	NR Band n25	40	QPSK	G	1752M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.92	1	108	Right Tilt	0	0.480	1.143	0.549	0.604	0.377		23.1		
Head	NR Band n25	40	QPSK	G	1752M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.84	108	108	Right Tilt	0	0.492	1.164	0.573	0.630	0.394		22.9		
Head	NR Band n25	40	QPSK	G	1752M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.92	1	108	Left Cheek	0	0.456	1.143	0.521	0.573	0.359		23.3		
Head	NR Band n25	40	QPSK	G	1752M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.84	108	108	Left Cheek	0	0.463	1.164	0.539	0.593	0.371		23.1		
Head	NR Band n25	40	QPSK	G	1752M	1:1	0.04	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.92	1	108	Left Tilt	0	0.589	1.143	0.673	0.740	0.463		22.2		
Head	NR Band n25	40	QPSK	G	1752M	1:1	-0.04	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.84	108	108	Left Tilt	0	0.587	1.164	0.683	0.751	0.470		22.1		
Head	NR Band n25	40	QPSK	G	1752M	1:1	0.05	1882.50	376500	DFT-s-OFDM	0.0	20.5	19.75	216	0	Left Tilt	0	0.619	1.189	0.736	0.810	0.506	Plot	21.8		
Head	NR Band n25	40	QPSK	G	1752M	1:1	0.02	1882.50	376500	CP-OFDM	0.0	20.5	19.90	1	1	Left Tilt	0	0.606	1.148	0.696	0.766	0.479		22.0		
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 12-30 | Plot A23

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	-0.05	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.30	1	1	Back	5	0.541	1.175	0.636	0.700	0.438		19.9	19.8	17.0
Body-worn/Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	0.05	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.25	108	0	Back	5	0.537	1.189	0.638	0.702	0.439		19.9		
Body-worn/Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	-0.02	1882.50	376500	CP-OFDM	0.0	18.0	17.37	1	1	Back	5	0.560	1.156	0.647	0.712	0.444	Plot	19.8		
Body-worn/Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	-0.09	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.30	1	1	Front	5	0.153	1.175	0.180	0.198	0.124		25.4		
Body-worn/Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	-0.03	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.25	108	0	Front	5	0.153	1.189	0.182	0.200	0.125		25.4		
Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	-0.05	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.30	1	1	Top	10	0.255	1.175	0.300	0.330	0.207		23.2		
Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	-0.06	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.25	108	0	Top	10	0.252	1.189	0.300	0.330	0.207		23.2		
Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	-0.10	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.30	1	1	Right	10	0.037	1.175	0.043	0.047	0.030		31.6		
Hotspot	NR Band n25	40	QPSK	G	1752M	1:1	-0.11	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.25	108	0	Right	10	0.038	1.189	0.045	0.050	0.031		31.4		
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 12-31 | Plot A24

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n25	40	QPSK	G	1745M	1:1	0.03	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.45	1	1	Back	10	0.755	1.135	0.857	0.943	0.590		22.6	22.4	21.0
body	NR Band n25	40	QPSK	G	1745M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.33	108	0	Back	10	0.749	1.167	0.874	0.961	0.601		22.5		
body	NR Band n25	40	QPSK	G	1745M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.31	216	0	Back	10	0.751	1.172	0.880	0.968	0.605		22.5		
Body	NR Band n25	40	QPSK	G	1745M	1:1	-0.17	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.45	1	1	Top	13	0.596	1.135	0.676	0.744	0.465		23.6		
Body	NR Band n25	40	QPSK	G	1745M	1:1	-0.21	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.33	108	0	Top	13	0.604	1.167	0.705	0.776	0.485		23.5		
Body	NR Band n25	40	QPSK	G	1745M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.31	216	0	Top	13	0.619	1.172	0.725	0.798	0.498		23.3		
Body	NR Band n25	40	QPSK	G	1745M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.45	1	1	Bottom	0	0.005	1.135	0.006	0.007	0.004		44.4		
Body	NR Band n25	40	QPSK	G	1745M	1:1	0.07	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.33	108	0	Bottom	0	0.008	1.167	0.009	0.010	0.007		42.2		
Body	NR Band n25	40	QPSK	G	1745M	1:1	-0.02	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.45	1	1	Right	0	0.779	1.135	0.884	0.972	0.608		22.5		
Body	NR Band n25	40	QPSK	G	1745M	1:1	-0.11	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.33	108	0	Right	0	0.769	1.167	0.897	0.987	0.617		22.4		
Body	NR Band n25	40	QPSK	G	1745M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.31	216	0	Right	0	0.764	1.172	0.895	0.985	0.615		22.4		
Body	NR Band n25	40	QPSK	G	1745M	1:1	-0.03	1882.50	376500	CP-OFDM	0.0	22.0	21.40	1	1	Right	0	0.784	1.148	0.900	0.990	0.619	Plot	22.4		
Body	NR Band n25	40	QPSK	G	1745M	1:1	0.07	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.45	1	1	Left	0	0.138	1.135	0.157	0.173	0.108		30.0		
Body	NR Band n25	40	QPSK	G	1745M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.33	108	0	Left	0	0.134	1.167	0.156	0.172	0.108		30.0		
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 12-32

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n25	40	QPSK	G	1745M	1:1	0.09	1882.50	376500	DFT-s-OFDM	0.0	11.5	10.84	1	1	Back	0	0.639	1.164	0.744	0.818	0.512		12.7	12.4	10.5
Body	NR Band n25	40	QPSK	G	1745M	1:1	-0.12	1882.50	376500	DFT-s-OFDM	0.0	11.5	10.85	108	0	Back	0	0.613	1.161	0.712	0.783	0.490		12.9		
Body	NR Band n25	40	QPSK	G	1752M	1:1	0.07	1882.50	376500	DFT-s-OFDM	0.0	11.5	10.84	1	1	Top	0	0.686	1.164	0.799	0.879	0.549		12.4		
Body	NR Band n25	40	QPSK	G	1752M	1:1	-0.11	1882.50	376500	DFT-s-OFDM	0.0	11.5	10.85	108	0	Top	0	0.677	1.161	0.786	0.865	0.540		12.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.9 NR Band n30 Standalone SAR

Table 12-33 | Plot A25

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.75	1	26	Right Cheek	0	0.461	1.496	0.690	0.759	0.474		21.1	19.2	18.5
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.84	25	14	Right Cheek	0	0.506	1.466	0.742	0.816	0.510		20.7		
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.73	50	0	Right Cheek	0	0.498	1.503	0.748	0.823	0.515		20.7		
Head	NR Band n30	10	QPSK	G	1737M	1:1	-0.02	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.75	1	26	Right Tilt	0	0.582	1.496	0.871	0.958	0.598		20.1		
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.84	25	14	Right Tilt	0	0.601	1.466	0.881	0.969	0.606		20.0		
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.73	50	0	Right Tilt	0	0.598	1.503	0.899	0.989	0.618		19.9		
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.75	1	26	Left Cheek	0	0.578	1.496	0.865	0.952	0.595		20.1		
Head	NR Band n30	10	QPSK	G	1737M	1:1	-0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.84	25	14	Left Cheek	0	0.603	1.466	0.884	0.972	0.608		20.0		
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.73	50	0	Left Cheek	0	0.600	1.503	0.902	0.992	0.620		19.9		
Head	NR Band n30	10	QPSK	G	1737M	1:1	-0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.75	1	26	Left Tilt	0	0.670	1.496	1.002	1.102	0.689		19.4		
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.84	25	14	Left Tilt	0	0.697	1.466	1.022	1.124	0.703		19.4		
Head	NR Band n30	10	QPSK	G	1737M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	19.5	17.73	50	0	Left Tilt	0	0.701	1.503	1.054	1.159	0.725		19.2		
Head	NR Band n30	10	QPSK	G	1737M	1:1	-0.01	2310.00	462000	CP-OFDM	0.0	19.5	17.80	1	1	Left Tilt	0	0.720	1.479	1.065	1.172	0.733	Plot	19.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram								

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Table 12-34 | Plot A26

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body-worn/Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	-0.06	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.63	1	1	Back	5	0.716	1.371	0.982	1.080	0.675		19.0	19.0	18.0
Body-worn/Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	-0.02	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.70	25	0	Back	5	0.714	1.349	0.963	1.059	0.662		19.1		
Body-worn/Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	-0.02	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.56	50	0	Back	5	0.691	1.393	0.963	1.059	0.662		19.1		
Body-worn/Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	-0.01	2310.00	462000	CP-OFDM	0.0	19.0	17.69	1	1	Back	5	0.729	1.352	0.986	1.085	0.678	Plot	19.0		
Body-worn/Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	-0.04	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.63	1	1	Front	5	0.239	1.371	0.328	0.361	0.226		23.8		
Body-worn/Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	-0.11	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.70	25	0	Front	5	0.241	1.349	0.325	0.358	0.223		23.8		
Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.63	1	1	Top	10	0.367	1.371	0.503	0.553	0.345		21.9		
Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	-0.01	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.70	25	0	Top	10	0.366	1.349	0.494	0.543	0.340		22.0		
Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	-0.06	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.63	1	1	Right	10	0.065	1.371	0.089	0.098	0.062		29.5		
Hotspot	NR Band n30	10	QPSK	G	1737M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	19.0	17.70	25	0	Right	10	0.065	1.349	0.088	0.097	0.061		29.5		
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 12-35

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.08	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.73	1	1	Back	10	0.448	1.340	0.600	0.660	0.413		24.2	23.0	21.0
Body	NR Band n30	10	QPSK	G	1737M	1:1	-0.02	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.66	25	14	Back	10	0.419	1.361	0.570	0.627	0.392		24.4		
Body	NR Band n30	10	QPSK	G	1737M	1:1	-0.02	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.73	1	1	Top	13	0.368	1.340	0.493	0.542	0.339		25.0		
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.00	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.66	25	14	Top	13	0.353	1.361	0.480	0.528	0.330		25.1		
Body	NR Band n30	10	QPSK	G	1737M	1:1	-0.07	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.73	1	1	Bottom	0	0.008	1.340	0.011	0.012	0.008		41.6		
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.05	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.66	25	14	Bottom	0	0.007	1.361	0.010	0.011	0.007		42.2		
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.00	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.73	1	1	Right	0	0.589	1.340	0.789	0.868	0.542		23.0		
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.66	25	14	Right	0	0.569	1.361	0.774	0.851	0.532		23.1		
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.04	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.73	1	1	Left	0	0.100	1.340	0.134	0.147	0.092		30.7		
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	22.0	20.66	25	14	Left	0	0.099	1.361	0.135	0.149	0.092		30.7		
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 12-36 | Plot A27

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body	NR Band n30	10	QPSK	G	1737M	1:1	-0.04	2310.00	462000	DFT-s-OFDM	0.0	10.5	8.75	1	1	Back	0	0.593	1.496	0.887	0.976	0.609		11.0	10.8	9.5
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	10.5	8.82	25	14	Back	0	0.585	1.472	0.861	0.947	0.592		11.1		
Body	NR Band n30	10	QPSK	G	1737M	1:1	-0.09	2310.00	462000	DFT-s-OFDM	0.0	10.5	8.72	50	0	Back	0	0.563	1.507	0.848	0.933	0.583		11.2		
Body	NR Band n30	10	QPSK	G	1737M	1:1	-0.12	2310.00	462000	DFT-s-OFDM	0.0	10.5	8.75	1	1	Top	0	0.601	1.496	0.899	0.989	0.618		10.9		
Body	NR Band n30	10	QPSK	G	1737M	1:1	-0.03	2310.00	462000	DFT-s-OFDM	0.0	10.5	8.82	25	14	Top	0	0.605	1.472	0.891	0.980	0.613		11.0		
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	10.5	8.72	50	0	Top	0	0.595	1.507	0.897	0.987	0.617		10.9		
Body	NR Band n30	10	QPSK	G	1737M	1:1	0.07	2310.00	462000	CP-OFDM	0.0	10.5	8.72	1	1	Top	0	0.610	1.507	0.919	1.011	0.631	Plot	10.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram											

12.10 NR Band n7 Standalone SAR

Table 12-37 | Plot A28

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Head	NR Band n7	50	QPSK	G	1737M	1:1	0.15	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.66	1	268	Right Cheek	0	0.811	1.081	0.877	0.965	0.603		18.5	17.4	17.0
Head	NR Band n7	50	QPSK	G	1737M	1:1	-0.03	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.52	135	135	Right Cheek	0	0.860	1.117	0.961	1.057	0.661		18.1		
Head	NR Band n7	50	QPSK	G	1737M	1:1	0.02	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.50	270	0	Right Cheek	0	0.821	1.122	0.921	1.013	0.634		18.3		
Head	NR Band n7	50	QPSK	G	1737M	1:1	-0.06	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.66	1	268	Right Tilt	0	0.947	1.081	1.024	1.126	0.704		17.8		
Head	NR Band n7	50	QPSK	G	1737M	1:1	-0.01	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.52	135	135	Right Tilt	0	0.904	1.117	1.010	1.111	0.694		17.9		
Head	NR Band n7	50	QPSK	G	1737M	1:1	-0.02	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.50	270	0	Right Tilt	0	0.860	1.122	0.965	1.062	0.663		18.1		
Head	NR Band n7	50	QPSK	G	1737M	1:1	-0.05	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.66	1	268	Left Cheek	0	0.974	1.081	1.053	1.158	0.724		17.7		
Head	NR Band n7	50	QPSK	G	1737M	1:1	0.02	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.52	135	135	Left Cheek	0	1.010	1.117	1.128	1.241	0.776		17.4		
Head	NR Band n7	50	QPSK	G	1737M	1:1	-0.01	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.50	270	0	Left Cheek	0	0.974	1.122	1.093	1.202	0.751		17.6		
Head	NR Band n7	50	QPSK	G	1737M	1:1	0.04	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.66	1	268	Left Tilt	0	1.060	1.081	1.146	1.261	0.788	Plot	17.4		
Head	NR Band n7	50	QPSK	G	1737M	1:1	0.10	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.66	1	268	Left Tilt	0	1.060	1.081	1.146	1.261	0.788		17.5		
Head	NR Band n7	50	QPSK	G	1737M	1:1	0.00	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.52	135	135	Left Tilt	0	1.000	1.117	1.117	1.229	0.768		17.5		
Head	NR Band n7	50	QPSK	G	1737M	1:1	0.02	2535.00	507000	DFT-s-OFDM	0.0	18.0	17.50	270	0	Left Tilt	0	1.010	1.122	1.133	1.246	0.779		17.4		
Head	NR Band n7	50	QPSK	G	1737M	1:1	0.01	2535.00	507000	CP-OFDM	0.0	18.0	17.39	1	1	Left Tilt	0	0.925	1.151	1.065	1.172	0.733		17.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram											

Note: Blue entry represents variability measurement

Table 12-38 | Plot A29

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body-worn/Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	0.00	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.50	1	268	Back	5	0.926	1.259	1.166	1.283	0.802		16.8	16.7	16.5
Body-worn/Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	0.01	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.38	135	135	Back	5	0.918	1.294	1.188	1.307	0.817		16.7		
Body-worn/Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	0.01	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.31	270	0	Back	5	0.909	1.315	1.195	1.315	0.822		16.7		
Body-worn/Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	-0.03	2535.00	507000	CP-OFDM	0.0	17.5	16.46	1	1	Back	5	0.942	1.271	1.197	1.317	0.823	Plot	16.7		
Body-worn/Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	-0.03	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.50	1	268	Front	5	0.374	1.259	0.471	0.518	0.323		20.7		
Body-worn/Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	0.04	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.38	135	135	Front	5	0.362	1.294	0.468	0.515	0.322		20.7		
Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	0.00	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.50	1	268	Top	10	0.436	1.259	0.549	0.604	0.377		20.1		
Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	-0.03	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.38	135	135	Top	10	0.431	1.294	0.558	0.614	0.384		20.0		
Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	0.08	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.50	1	268	Right	10	0.053	1.259	0.067	0.074	0.046		29.2		
Hotspot	NR Band n7	50	QPSK	G	1724M	1:1	-0.09	2535.00	507000	DFT-s-OFDM	0.0	17.5	16.38	135	135	Right	10	0.053	1.294	0.069	0.076	0.047		29.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram											

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Table 12-39

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.04	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.31	1	268	Back	10	0.408	1.315	0.537	0.591	0.370		21.2	18.4	17.5
Body	NR Band n7	50	QPSK	G	1737M	1:1	-0.02	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.22	135	68	Back	10	0.409	1.343	0.549	0.604	0.377		21.1		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.15	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.31	1	268	Top	13	0.271	1.315	0.356	0.392	0.245		22.9		
Body	NR Band n7	50	QPSK	G	1737M	1:1	-0.02	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.22	135	68	Top	13	0.247	1.343	0.332	0.365	0.229		23.2		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.07	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.31	1	268	Bottom	0	0.009	1.315	0.012	0.013	0.009		37.7		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.05	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.22	135	68	Bottom	0	0.014	1.343	0.019	0.021	0.013		35.7		
Body	NR Band n7	50	QPSK	G	1737M	1:1	-0.07	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.31	1	268	Right	0	0.545	1.315	0.717	0.789	0.493		19.9		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.01	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.22	135	68	Right	0	0.689	1.343	0.925	1.018	0.636		18.8		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.00	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.21	270	0	Right	0	0.638	1.346	0.859	0.945	0.591		19.1		
Body	NR Band n7	50	QPSK	G	1737M	1:1	-0.14	2535.00	507000	CP-OFDM	0.0	18.5	17.05	1	1	Right	0	0.732	1.396	1.022	1.124	0.703		18.4		
Body	NR Band n7	50	QPSK	G	1737M	1:1	-0.09	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.31	1	268	Left	0	0.022	1.315	0.029	0.032	0.020		33.8		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.02	2535.00	507000	DFT-s-OFDM	0.0	18.5	17.22	135	68	Left	0	0.024	1.343	0.032	0.035	0.022		33.4		
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 12-40 | Plot A30

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.01	2535.00	507000	DFT-s-OFDM	0.0	10.0	8.39	1	268	Back	0	0.586	1.449	0.849	0.934	0.584		10.7	9.2	9.0
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.02	2535.00	507000	DFT-s-OFDM	0.0	10.0	8.41	135	68	Back	0	0.598	1.442	0.862	0.948	0.593		10.6		
Body	NR Band n7	50	QPSK	G	1737M	1:1	-0.01	2535.00	507000	DFT-s-OFDM	0.0	10.0	8.38	270	0	Back	0	0.588	1.452	0.854	0.939	0.587		10.6		
Body	NR Band n7	50	QPSK	G	1737M	1:1	-0.06	2535.00	507000	DFT-s-OFDM	0.0	10.0	8.39	1	268	Top	0	0.814	1.449	1.179	1.297	0.811	Plot	9.2		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.03	2535.00	507000	DFT-s-OFDM	0.0	10.0	8.41	135	68	Top	0	0.802	1.442	1.156	1.272	0.795		9.3		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.02	2535.00	507000	DFT-s-OFDM	0.0	10.0	8.38	270	0	Top	0	0.784	1.452	1.138	1.252	0.782		9.4		
Body	NR Band n7	50	QPSK	G	1737M	1:1	0.00	2535.00	507000	CP-OFDM	0.0	10.0	8.01	1	1	Top	0	0.732	1.581	1.157	1.273	0.795		9.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.11 NR Band n41 Standalone SAR

Table 12-41 | Plot A31

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Path	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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.38	1	1	Right Cheek	0	0.808	1.153	0.932	1.025	0.641		17.3	16.1	16.0
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	0.10	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.35	135	0	Right Cheek	0	0.781	1.161	0.907	0.998	0.624		17.4		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	0.11	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.34	270	0	Right Cheek	0	0.785	1.164	0.914	1.005	0.628		17.3		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.38	1	1	Right Tilt	0	0.917	1.153	1.057	1.163	0.727		16.7		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	0.07	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.35	135	0	Right Tilt	0	0.914	1.161	1.061	1.167	0.729		16.7		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	0.11	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.34	270	0	Right Tilt	0	0.954	1.164	1.110	1.221	0.763		16.5		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.38	1	1	Left Cheek	0	0.937	1.153	1.080	1.188	0.743		16.6		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	-0.02	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.35	135	0	Left Cheek	0	0.921	1.161	1.069	1.176	0.735		16.7		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.34	270	0	Left Cheek	0	0.788	1.164	0.917	1.009	0.630		17.3		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	0.09	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.38	1	1	Left Tilt	0	1.060	1.153	1.222	1.344	0.840	Plot	16.1		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	-0.01	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.35	135	0	Left Tilt	0	1.040	1.161	1.207	1.328	0.829		16.1		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	-0.02	2592.99	518598	DFT-s-OFDM	0.0	17.0	16.34	270	0	Left Tilt	0	1.030	1.164	1.199	1.319	0.824		16.2		
Head	NR Band n41	100	QPSK	G	1	1742M	1:1	-0.01	2592.99	518598	CP-OFDM	0.0	17.0	16.37	1	1	Left Tilt	0	1.020	1.156	1.179	1.297	0.811		16.2		
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 12-42

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Head	NR Band n41	100	B	1	1724M	1:1	0.16	2592.99	518598	CW/SRS	21.0	19.43	Right Cheek	0	0.042	1.435	0.060	0.066	0.042		33.1	31.1	20.0
Head	NR Band n41	100	B	1	1724M	1:1	0.02	2592.99	518598	CW/SRS	21.0	19.43	Right Tilt	0	0.048	1.435	0.069	0.076	0.047		32.6		
Head	NR Band n41	100	B	1	1724M	1:1	-0.10	2592.99	518598	CW/SRS	21.0	19.43	Left Cheek	0	0.041	1.435	0.059	0.065	0.041		33.3		
Head	NR Band n41	100	B	1	1724M	1:1	0.02	2592.99	518598	CW/SRS	21.0	19.43	Left Tilt	0	0.068	1.435	0.098	0.108	0.067		31.1		
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 12-43

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Head	NR Band n41	100	H	1	1737M	1:1	0.06	2592.99	518598	CW/SRS	15.0	14.89	Right Cheek	0	0.024	1.026	0.025	0.028	0.018		31.0	30.5	14.0
Head	NR Band n41	100	H	1	1737M	1:1	0.05	2592.99	518598	CW/SRS	15.0	14.89	Right Tilt	0	0.006	1.026	0.006	0.007	0.004		37.1		
Head	NR Band n41	100	H	1	1737M	1:1	0.02	2592.99	518598	CW/SRS	15.0	14.89	Left Cheek	0	0.027	1.026	0.028	0.031	0.020		30.5		
Head	NR Band n41	100	H	1	1737M	1:1	0.08	2592.99	518598	CW/SRS	15.0	14.89	Left Tilt	0	0.019	1.026	0.019	0.021	0.013		32.1		
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 12-44

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	PLimit [dBm]	Overall PLimit [dBm]	EFS PLimit [dBm]
Head	NR Band n41	100	D	1	1742M	1:1	0.04	2592.99	518598	CW/SRS	15.0	14.43	Right Cheek	0	0.000	1.140	0.000	0.000	0.000		54.4	54.4	14.0
Head	NR Band n41	100	D	1	1742M	1:1	0.07	2592.99	518598	CW/SRS	15.0	14.43	Right Tilt	0	0.000	1.140	0.000	0.000	0.000		54.4		
Head	NR Band n41	100	D	1	1724M	1:1	0.08	2592.99	518598	CW/SRS	15.0	14.43	Left Cheek	0	0.000	1.140	0.000	0.000	0.000		54.4		
Head	NR Band n41	100	D	1	1724M	1:1	-0.10	2592.99	518598	CW/SRS	15.0	14.43	Left Tilt	0	0.000	1.140	0.000	0.000	0.000		54.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 12-45

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Plot	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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.04	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.88	1	1	Back	5	0.787	1.153	0.907	0.998	0.624		17.9	17.7	16.5
Body-worn/Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.08	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.81	135	0	Back	5	0.732	1.172	0.858	0.944	0.590		18.1		
Body-worn/Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.02	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.68	270	0	Back	5	0.693	1.208	0.837	0.921	0.575		18.2		
Body-worn/Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	0.03	2592.99	518598	CP-OFDM	0.0	17.5	16.80	1	1	Back	5	0.811	1.175	0.953	1.048	0.656		17.7		
Body-worn/Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.88	1	1	Front	5	0.366	1.153	0.422	0.464	0.290		21.2		
Body-worn/Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.81	135	0	Front	5	0.357	1.172	0.418	0.460	0.287		21.2		
Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.06	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.88	1	1	Top	10	0.436	1.153	0.503	0.553	0.345		20.4		
Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.81	135	0	Top	10	0.435	1.172	0.510	0.561	0.351		20.4		
Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.07	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.88	1	1	Right	10	0.062	1.153	0.071	0.078	0.048		28.9		
Hotspot	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.12	2592.99	518598	DFT-s-OFDM	0.0	17.5	16.81	135	0	Right	10	0.056	1.172	0.066	0.073	0.045		29.3		
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 12-46 | Plot A32

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n41	100	B	1	1724M	1:1	0.01	2592.99	518598	CW/SRS	18.5	18.18	Back	5	1.020	1.076	1.098	1.208	0.755	Plot	18.0	18.0	17.5
Body-worn/Hotspot	NR Band n41	100	B	1	1724M	1:1	0.18	2592.99	518598	CW/SRS	18.5	18.18	Front	5	0.218	1.076	0.235	0.259	0.162		24.7		
Hotspot	NR Band n41	100	B	1	1724M	1:1	-0.01	2592.99	518598	CW/SRS	18.5	18.18	Bottom	10	0.518	1.076	0.557	0.613	0.383		21.0		
Hotspot	NR Band n41	100	B	1	1724M	1:1	0.05	2592.99	518598	CW/SRS	18.5	18.18	Left	10	0.036	1.076	0.039	0.043	0.026		32.6		
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 12-47

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n41	100	H	1	1742M	1:1	0.10	2592.99	518598	CW/SRS	15.0	14.89	Back	5	0.222	1.026	0.228	0.251	0.157		21.4	21.4	14.0
Body-worn/Hotspot	NR Band n41	100	H	1	1742M	1:1	-0.11	2592.99	518598	CW/SRS	15.0	14.89	Front	5	0.022	1.026	0.023	0.025	0.015		31.4		
Hotspot	NR Band n41	100	H	1	1742M	1:1	0.01	2592.99	518598	CW/SRS	15.0	14.89	Right	10	0.048	1.026	0.049	0.054	0.034		28.0		
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 12-48

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n41	100	D	1	1742M	1:1	-0.07	2592.99	518598	CW/SRS	15.0	14.43	Back	5	0.147	1.140	0.168	0.185	0.116		22.7	22.7	14.0
Body-worn/Hotspot	NR Band n41	100	D	1	1742M	1:1	0.06	2592.99	518598	CW/SRS	15.0	14.43	Front	5	0.024	1.140	0.027	0.030	0.019		30.6		
Hotspot	NR Band n41	100	D	1	1742M	1:1	0.01	2592.99	518598	CW/SRS	15.0	14.43	Right	10	0.018	1.140	0.021	0.023	0.014		31.8		
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 12-49

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Path	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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.41	1	1	Back	10	0.899	1.146	1.030	1.133	0.708		19.8	19.5	19.0
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	-0.05	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.34	135	0	Back	10	0.858	1.164	0.999	1.099	0.686		20.0		
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.27	270	0	Back	10	0.832	1.183	0.984	1.082	0.677		20.0		
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	-0.06	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.41	1	1	Top	13	0.623	1.146	0.714	0.785	0.491		21.4		
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	-0.01	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.34	135	0	Top	13	0.597	1.164	0.695	0.765	0.477		21.5		
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	0.05	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.27	270	0	Top	13	0.562	1.183	0.665	0.732	0.458		21.7		
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	-0.08	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.41	1	1	Bottom	0	0.038	1.146	0.044	0.048	0.031		33.6		
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.34	135	0	Bottom	0	0.034	1.164	0.040	0.044	0.028		34.0		
Body	NR Band n41	100	QPSK	G	1	1737M	1:1	-0.15	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.41	1	1	Right	0	0.965	1.146	1.106	1.217	0.760		19.5		
Body	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.10	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.34	135	0	Right	0	0.661	1.164	0.769	0.846	0.529		21.1		
Body	NR Band n41	100	QPSK	G	1	1724M	1:1	0.07	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.27	270	0	Right	0	0.493	1.183	0.583	0.641	0.400		22.3		
Body	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.02	2592.99	518598	CP-OFDM	0.0	20.0	19.33	1	1	Right	0	0.764	1.167	0.892	0.981	0.614		20.4		
Body	NR Band n41	100	QPSK	G	1	1724M	1:1	0.04	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.41	1	1	Left	0	0.048	1.146	0.055	0.061	0.037		32.5		
Body	NR Band n41	100	QPSK	G	1	1724M	1:1	-0.12	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.34	135	0	Left	0	0.049	1.164	0.057	0.063	0.040		32.4		
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 12-50

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 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n41	100	QPSK	G	1724M	1:1	0.04	2592.99	518598	DFT-s-OFDM	0.0	10.0	9.25	1	1	Back	0	0.648	1.189	0.770	0.847	0.529		11.1	10.3	9.0
Body	NR Band n41	100	QPSK	G	1724M	1:1	-0.13	2592.99	518598	DFT-s-OFDM	0.0	10.0	9.27	135	0	Back	0	0.626	1.183	0.741	0.815	0.509		11.3		
Body	NR Band n41	100	QPSK	G	1724M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	10.0	9.17	270	0	Back	0	0.606	1.211	0.734	0.807	0.505		11.3		
Body	NR Band n41	100	QPSK	G	1724M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	10.0	9.25	1	1	Top	0	0.778	1.189	0.925	1.018	0.636		10.3		
Body	NR Band n41	100	QPSK	G	1724M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	10.0	9.27	135	0	Top	0	0.736	1.183	0.871	0.958	0.598		10.6		
Body	NR Band n41	100	QPSK	G	1724M	1:1	-0.06	2592.99	518598	DFT-s-OFDM	0.0	10.0	9.17	270	0	Top	0	0.725	1.211	0.878	0.966	0.604		10.5		
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 12-51 | Plot A33

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n41	100	B	1	1737M	1:1	0.08	2592.99	518598	CW/SRS	12.0	11.61	Back	0	1.020	1.094	1.116	1.228	0.768	Plot	11.5	11.5	11.0
Body	NR Band n41	100	B	1	1737M	1:1	0.04	2592.99	518598	CW/SRS	12.0	11.61	Top	0	0.069	1.094	0.075	0.083	0.052		23.2		
Body	NR Band n41	100	B	1	1737M	1:1	-0.05	2592.99	518598	CW/SRS	12.0	11.61	Bottom	0	0.891	1.094	0.975	1.073	0.670		12.1		
Body	NR Band n41	100	B	1	1737M	1:1	0.01	2592.99	518598	CW/SRS	12.0	11.61	Right	0	0.062	1.094	0.068	0.075	0.047		23.6		
Body	NR Band n41	100	B	1	1737M	1:1	0.06	2592.99	518598	CW/SRS	12.0	11.61	Left	0	0.014	1.094	0.015	0.017	0.010		30.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram										

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Table 12-52

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n41	100	D	1	1737M	1:1	-0.10	2592.99	518598	CW/SRS	8.0	7.48	Back	0	0.166	1.127	0.187	0.206	0.129		15.2	15.2	7.0
Body	NR Band n41	100	D	1	1737M	1:1	0.04	2592.99	518598	CW/SRS	8.0	7.48	Top	0	0.004	1.127	0.005	0.006	0.003		31.4		
Body	NR Band n41	100	D	1	1737M	1:1	-0.19	2592.99	518598	CW/SRS	8.0	7.48	Bottom	0	0.000	1.127	0.000	0.000	0.000		47.4		
Body	NR Band n41	100	D	1	1737M	1:1	0.01	2592.99	518598	CW/SRS	8.0	7.48	Right	0	0.048	1.127	0.054	0.059	0.037		20.6		
Body	NR Band n41	100	D	1	1737M	1:1	0.05	2592.99	518598	CW/SRS	8.0	7.48	Left	0	0.000	1.127	0.000	0.000	0.000		47.4		
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 12-53

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	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 with Multi Tx Factor [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body	NR Band n41	100	H	1	1737M	1:1	-0.10	2592.99	518598	CW/SRS	8.0	7.85	Back	0	0.232	1.035	0.240	0.264	0.165		14.1	14.1	7.0
Body	NR Band n41	100	H	1	1737M	1:1	-0.04	2592.99	518598	CW/SRS	8.0	7.85	Top	0	0.054	1.035	0.056	0.062	0.039		20.5		
Body	NR Band n41	100	H	1	1737M	1:1	0.05	2592.99	518598	CW/SRS	8.0	7.85	Bottom	0	0.000	1.035	0.000	0.000	0.000		47.8		
Body	NR Band n41	100	H	1	1737M	1:1	0.01	2592.99	518598	CW/SRS	8.0	7.85	Right	0	0.189	1.035	0.196	0.216	0.135		15.0		
Body	NR Band n41	100	H	1	1737M	1:1	0.04	2592.99	518598	CW/SRS	8.0	7.85	Left	0	0.000	1.035	0.000	0.000	0.000		47.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.12 NTN Band 255 Standalone SAR

Table 12-54 | Plot A34

Exposure	Band / Mode	Service / Modulation	Ant.	Accessory	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Tone	Tone Start	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #
Body-worn	NTN Band 255	QPSK	G	N/A	1746M	100.00	0.01	1626.60	261505	21.0	20.95	1	6	Back	5	1.820	1.012	0.710	1.308	0.818	
Body-worn	NTN Band 255	QPSK	G	N/A	1746M	100.00	-0.03	1643.50	261674	21.0	20.82	1	6	Back	5	1.810	1.042	0.710	1.339	0.837	
Body-worn	NTN Band 255	QPSK	G	N/A	1746M	100.00	0.01	1660.40	261843	21.0	20.93	1	6	Back	5	1.920	1.016	0.710	1.385	0.866	Plot
Body-worn	NTN Band 255	QPSK	G	Headphones	1746M	100.00	0.01	1660.40	261843	21.0	20.93	1	6	Back	5	1.720	1.016	0.710	1.241	0.776	
Body-worn	NTN Band 255	QPSK	G	N/A	1746M	100.00	0.01	1660.40	261843	21.0	20.93	1	6	Back	5	1.920	1.016	0.710	1.371	0.857	
Body-worn	NTN Band 255	QPSK	G	N/A	1746M	100.00	-0.01	1660.40	261843	21.0	20.93	1	6	Back	5	1.920	1.016	0.710	1.385	0.866	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Blue entries represent variability measurements

Table 12-55 | Plot A35

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Tone	Tone Start	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #
Phablet	NTN Band 255	QPSK	G	1746M	100.00	-0.13	1626.60	261505	21.0	20.95	1	6	Back	0	1.990	1.012	0.710	1.430	0.358	
Phablet	NTN Band 255	QPSK	G	1746M	100.00	0.02	1626.60	261505	21.0	20.95	1	6	Top	0	2.080	1.012	0.710	1.495	0.374	Plot
Phablet	NTN Band 255	QPSK	G	1746M	100.00	0.00	1626.60	261505	21.0	20.95	1	6	Top	0	2.080	1.012	0.710	1.495	0.374	
Phablet	NTN Band 255	QPSK	G	1746M	100.00	-0.21	1660.40	261843	25.0	24.99	1	6	Back	9	0.918	1.016	0.710	0.662	0.166	
Phablet	NTN Band 255	QPSK	G	1746M	100.00	0.05	1660.40	261843	25.0	24.99	1	6	Front	0	1.700	1.002	0.710	1.209	0.302	
Phablet	NTN Band 255	QPSK	G	1746M	100.00	0.09	1660.40	261843	25.0	24.99	1	6	Top	11	0.694	1.002	0.710	0.494	0.124	
Phablet	NTN Band 255	QPSK	G	1746M	100.00	0.01	1660.40	261843	25.0	24.99	1	6	Right	0	0.452	1.002	0.710	0.322	0.081	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams							

Note: Blue entry represents variability measurement

Table 12-56 | Plot A36

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	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #
Body	NTN Band 255	QPSK	G	1746M	100.00	-0.03	1626.60	261505	25.0	24.51	Back	10	0.971	1.119	0.710	0.771	0.482	
Body	NTN Band 255	QPSK	G	1746M	100.00	0.01	1643.50	261674	25.0	24.42	Back	10	0.980	1.143	0.710	0.795	0.497	
Body	NTN Band 255	QPSK	G	1746M	100.00	-0.08	1660.40	261843	25.0	24.99	Back	10	1.260	1.002	0.710	0.896	0.560	Plot
Body	NTN Band 255	QPSK	G	1746M	100.00	-0.05	1660.40	261843	25.0	24.99	Top	13	0.716	1.002	0.710	0.509	0.318	
Body	NTN Band 255	QPSK	G	1746M	100.00	0.07	1660.40	261843	25.0	24.99	Bottom	0	0.037	1.002	0.710	0.026	0.016	
Body	NTN Band 255	QPSK	G	1746M	100.00	0.01	1660.40	261843	25.0	24.99	Right	0	0.679	1.002	0.710	0.483	0.302	
Body	NTN Band 255	QPSK	G	1746M	100.00	0.12	1660.40	261843	25.0	24.99	Left	0	0.321	1.002	0.710	0.228	0.143	
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

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Tone	Tone Start	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #
Body	NTN Band 255	QPSK	G	1746M	100.00	0.05	1626.60	261505	14.0	13.57	1	6	Back	0	0.680	1.104	0.710	0.533	0.333	
Body	NTN Band 255	QPSK	G	1746M	100.00	-0.06	1626.60	261505	14.0	13.57	1	6	Top	0	0.975	1.104	0.710	0.764	0.478	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram								

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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 to ensure compliance with all body-worn accessories available in the marketplace.
7. Per FCC KDB Publication 648474 D01v06r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 13 for variability analysis.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 7.7 for more details).
10. Per FCC KDB Publication 648474 D01v06r03, this device is considered a "phablet" when it is in the closed configuration 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. 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.
12. 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).
13. Per FCC KDB Publication 616217 D04v01r02 Section 4.3, SAR tests are required for the back surface and edges of device with the device touching the phantom when the device is in the open configuration. The SAR Exclusion Threshold in FCC KDB 447498 D04v01 was applied to determine SAR test exclusion for adjacent edge configurations.
14. When testing Head/Body-worn/Hotspot/Phablet exposure conditions, the DUT is in closed configuration. When testing Body exposure conditions, the DUT is in an open configuration.

LTE Notes:

1. LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r04. The general test procedures used for testing can be found in Section 9.5.4.
2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
3. A-MPR was disabled for all SAR tests by setting NS=01 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).
4. 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.

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5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

NR Notes:

1. NR implementation supports SA and NSA mode. In EN-DC mode, NR operates with the LTE Bands shown in the NR FR1 checklist acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
2. Due to test setup limitations, SAR testing for NR TDD was performed using test mode software to establish the connection.
3. Simultaneous transmission analysis for EN-DC operations is addressed in the Part 2 Test Report (Serial Number can be found in the bibliography).
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. 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.
6. Per FCC KDB Publication 447498 D04v01, when the reported NR Band n41 SAR measured at the 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 n38, n41, n48, n78, and n77 slot configuration is synchronized using maximum duty cycle of 100%. SAR testing was performed using FTM mode with a 100% duty cycle applied to match final duty cycle.
9. This device uses two transmit pathways for n38, n41 operations (Path 1 and Path 2). For each exposure condition, the pathway with the highest target power was fully evaluated. Conducted powers for the other path.

NTN Notes:

1. Due to equipment limitations, NTN was tested using factory test mode software transmitting CW at 100% duty cycle. The results were scaled down to the maximum duty cycle of 71%, declared by the manufacturer.
2. NTN NB-IoT only supports data transmission, therefore only body-worn and phablet exposure conditions in the closed configuration and tablet exposure condition in the open configuration were evaluated.

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13 SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

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

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

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

Table 13-1
Closed 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)	
1750	1745.00	349000	NR Band n66, 45 MHz Bandiwdth	DFT-s-OFDM, 1 RB, 1 RB Offset	Left	Tilt	G	0.867	0.840	1.03	N/A	N/A	N/A	N/A
2600	2535.00	507000	NR Band n7, 50 MHz Bandwidth	DFT-s-OFDM, 1 RB, 268 RB Offset	Left	Tilt	G	1.060	1.030	1.03	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 13-2
Closed Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS															
Band	FREQUENCY		Mode	Service	Side	Spacing	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)	
1640	1660.40	261843	NTN Band 255	QPSK, 1 Tone, 6 Tone Start	Back	5	G	1.920	1.900	1.01	1.920	1.01	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									

Table 13-3
Closed Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS															
Band	FREQUENCY		Mode	Service	Side	Spacing	Antenna Config	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1640	1660.40	261843	NTN Band 255	QPSK, 1 Tone, 6 Tone Start	Top	0	G	2.080	2.080	1.00	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Phablet 4.0 W/kg (mW/g) averaged over 10 grams									

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Table 13-4
Open Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS															
Band	FREQUENCY		Mode	Service	Side	Spacing	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)	
1900	1860.00	26140	LTE Band 25, 20 MHz Bandwidth	QPSK, 1 RB, 0 RB Offset	Back	10	G	0.883	0.846	1.04	N/A	N/A	N/A	N/A
2450	2506.00	39750	LTE Band 41, 20 MHz Bandwidth	QPSK, 50 RB, 50 RB Offset	Right	0	G	0.981	0.960	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									

13.2 Measurement Uncertainty

A full SAR measurement uncertainty budget has been analyzed and calculated in accordance with IEEE Std 1528-2013, as required by FCC KDB 865664 D01 when the measured SAR exceeds 1.5 W/kg. All uncertainty components were reviewed and confirmed to be consistent with the measurement system, equipment configuration, and test setup used for this product. The expanded measurement uncertainty remains within acceptable limits (k = 2, 95% confidence level).

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14 ADDITIONAL TESTING PER FCC GUIDANCE

14.1 NTN Duty Cycle Linearity Verification

SAR measurements were performed using FTM continuous wave (CW) mode at 100% duty cycle to represent worst-case conditions, in accordance with FCC KDB 447498 D01.
A scaling factor of 71% was applied to reflect the operational duty cycle declared by the manufacturer. Linearity was verified across multiple power levels, with deviations within 10%, consistent with the FCC TCB Workshop guidance (May 2017).

Table 14-1
Body-worn Linearity verification

Exposure condition	Mode	Modulation	Antenna	SN	FRQ	CH	Tones	Tone Start	Spacing	Exposure condition
Bodyworn	NTN Band 255	CW	Ant G	1746M	1660.4	261843	1	6	5	Back

Power %	Max Allowed Power	Measured Output power	Power Scale Factor	Duty Cycle Scale Factor	Measured SAR	Calculated Measured SAR (Theoretical)	Reported SAR	Scaled SAR from 100% Duty Cycle	Measured SAR vs. Calculated Measured SAR Deviation (%)	Reported SAR vs. Calculated Reported SAR Deviation (%)
100%	21.00	20.93	1.016	1	1.920	1.920	1.951	1.951	0.00%	0.00%
71%	19.51	18.97	1.133	0.71	1.250	1.223	1.416	1.385	-2.19%	-2.19%
50%	17.99	17.17	1.208	0.5	0.753	0.808	0.909	0.976	7.28%	7.28%

Table 14-2
Phablet Linearity verification

Exposure condition	Mode	Modulation	Antenna	SN	FRQ	CH	Tones	Tone Start	Spacing	Exposure condition
Phablet	NTN Band 255	CW	Ant G	1746M	1626.6	261505	1	6	0	Top

Power %	Max Allowed Power	Measured Output power	Power Scale Factor	Duty Cycle Scale Factor	Measured SAR	Calculated Measured SAR (Theoretical)	Reported SAR	Scaled SAR from 100% Duty Cycle	Measured SAR vs. Calculated Measured SAR Deviation (%)	Reported SAR vs. Calculated Reported SAR Deviation (%)
100%	21.00	20.95	1.012	1	2.080	2.080	2.104	2.104	0.00%	0.00%
71%	19.51	18.96	1.136	0.71	1.310	1.315	1.488	1.494	0.41%	0.41%
50%	17.99	16.88	1.291	0.5	0.794	0.815	1.025	1.052	2.62%	2.62%

Table 14-3
F/O Body Linearity verification

Exposure condition	Mode	Modulation	Antenna	SN	FRQ	CH	Tones	Tone Start	Spacing	Exposure condition
Body	NTN Band 255	CW	Ant G	1746M	1660.4	261843	1	6	10	Back

Power %	Max Allowed Power	Measured Output power	Power Scale Factor	Duty Cycle Scale Factor	Measured SAR	Calculated Measured SAR (Theoretical)	Reported SAR	Scaled SAR from 100% Duty Cycle	Measured SAR vs. Calculated Measured SAR Deviation (%)	Reported SAR vs. Calculated Reported SAR Deviation (%)
100%	25.00	24.99	1.002	1	1.260	1.260	1.263	1.263	0.00%	0.00%
71%	23.51	22.89	1.154	0.71	0.752	0.777	0.868	0.897	3.31%	3.31%
50%	21.99	20.93	1.276	0.5	0.471	0.495	0.601	0.631	5.04%	5.04%

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15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	E4404B	Spectrum Analyzer	N/A	N/A	N/A	MY45113242
Agilent	E4438C	ESG Vector Signal Generator	10/23/2024	Annual	10/23/2025	MY45093852
Agilent	E4438C	ESG Vector Signal Generator	11/15/2024	Annual	11/15/2025	MY45092078
Agilent	N5182A	MXG Vector Signal Generator	7/9/2024	Annual	7/9/2025	MY48180366
Agilent	8753ES	S-Parameter Vector Network Analyzer	1/6/2025	Annual	1/6/2026	MY40001472
Agilent	8753ES	S-Parameter Vector Network Analyzer	9/25/2024	Annual	9/25/2025	MY40003841
Agilent	E5515C	Wireless Communications Test Set	CBT	N/A	CBT	GB46310798
Agilent	E5515C	Wireless Communications Test Set	CBT	N/A	CBT	GB41450275
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433973
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433974
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Anritsu	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	ML2496A	Power Meter	7/15/2024	Annual	7/15/2025	1138001
Anritsu	ML2496A	Power Meter	6/24/2024	Annual	6/24/2025	1840005
Anritsu	MA2411B	Pulse Power Sensor	9/5/2024	Annual	9/5/2025	1726262
Anritsu	MA2411B	Pulse Power Sensor	10/21/2024	Annual	10/21/2025	1027293
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	CBT	N/A	CBT	6200901190
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	CBT	N/A	CBT	6201144419
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	3/14/2025	Annual	3/14/2026	6262044715
Anritsu	MT8000A	Radio Communication Test Station	CBT	N/A	CBT	626196-7072
Anritsu	MT8000A	Radio Communication Test Station	CBT	N/A	CBT	6272337408
Anritsu	MT8000A	Radio Communication Test Station	CBT	N/A	CBT	6262036828
Anritsu	MT8000A	Radio Communication Test Station	4/11/2025	Annual	4/11/2026	6261987983
Anritsu	MT8000A	Radio Communication Test Station	3/11/2025	Annual	3/11/2026	6272337439
Anritsu	MT8000A	Radio Communication Test Station	11/12/2024	Annual	11/12/2025	6272337405
Anritsu	MA24106A	USB Power Sensor	7/10/2024	Annual	7/10/2025	1827530
Anritsu	MA24106A	USB Power Sensor	10/29/2024	Annual	10/29/2025	1248508
Mini-Circuits	PWR-4GHS	USB Power Sensor	6/12/2024	Annual	6/12/2025	12001070013
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	240310280
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Control Company	S66279	Therm./ Clock/ Humidity Monitor	2/16/2024	Biennial	2/16/2026	240140051
Keysight Technologies	N9020A	MXA Signal Analyzer	7/8/2024	Annual	7/8/2025	MY48010233
Agilent	N9020A	MXA Signal Analyzer	6/14/2024	Annual	6/14/2025	MY56470202
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	7/10/2024	Annual	7/10/2025	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-2950+	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-S+	Directional Coupler	CBT	N/A	CBT	2050
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Seekonk	NC-100	Torque Wrench	CBT	N/A	CBT	22217
Seekonk	NC-100	Torque Wrench	4/2/2024	Biennial	4/2/2026	1262
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	120504
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	109366
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	155128
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	102060
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	167112
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	168544
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/10/2025	Annual	1/10/2026	131453
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	7/8/2024	Annual	7/8/2025	166818
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/8/2025	Annual	4/8/2026	151849
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	8/12/2024	Annual	8/12/2025	171008
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/23/2024	Annual	10/23/2025	170999
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	8/27/2024	Biennial	8/27/2026	167085
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/11/2024	Annual	10/11/2025	169729
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	7/19/2024	Annual	7/19/2025	171001
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	6/11/2024	Annual	6/11/2025	166869
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	6/10/2024	Annual	6/10/2025	168543
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/7/2025	Annual	4/7/2026	167284
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/28/2025	Annual	1/28/2026	135400
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/25/2025	Annual	1/25/2026	122206
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	4/9/2025	Annual	4/9/2026	145663
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	9/26/2024	Biennial	9/26/2026	110553
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	10/2/2024	Annual	10/2/2025	171000
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/3/2025	Annual	4/3/2026	167285
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
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	12/10/2024	Annual	12/10/2025	161616
SPEAG	DAK-3.5	Dielectric Assessment Kit	11/5/2024	Annual	11/5/2025	1277
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	8/7/2024	Annual	8/7/2025	1041
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	1331
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1390
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	3/10/2025	Annual	3/10/2026	1102

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Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
SPEAG	D1640V2	1640 MHz SAR Dipole	12/13/2022	Triennial	10/6/2025	321
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	5d148
SPEAG	D1900V2	1900 MHz SAR Dipole	8/8/2022	Triennial	8/8/2025	5d080
SPEAG	D2300V2	2300 MHz SAR Dipole	8/25/202	Triennial	8/25/2025	1073
SPEAG	D2300V2	2300 MHz SAR Dipole	6/14/2024	Annual	6/14/2025	1116
SPEAG	D2450V2	2450 MHz SAR Dipole	11/7/2024	Annual	11/7/2025	981
SPEAG	D2450V2	2450 MHz SAR Dipole	8/7/2024	Annual	8/7/2025	719
SPEAG	D2600V2	2600 MHz SAR Dipole	11/15/2022	Triennial	11/15/2025	1071
SPEAG	D2600V2	2600 MHz SAR Dipole	6/13/2022	Triennial	6/13/2025	1064
SPEAG	D2600V2	2600 MHz SAR Dipole	4/8/2024	Annual	4/8/2025	1004
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/4/2024	Annual	12/4/2025	1213
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/10/2025	Annual	4/10/2026	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/8/2024	Annual	7/8/2025	1677
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/7/2025	Annual	4/7/2026	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/11/2025	Annual	3/11/2026	1415
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/8/2024	Annual	7/8/2025	1583
SPEAG	EX3DV4	SAR Probe	3/7/2025	Annual	3/7/2026	7488
SPEAG	EX3DV4	SAR Probe	6/28/2024	Annual	6/28/2025	7803
SPEAG	EX3DV4	SAR Probe	11/11/2024	Annual	11/11/2025	7539
SPEAG	EX3DV4	SAR Probe	7/5/2024	Annual	7/5/2025	7406
SPEAG	EX3DV4	SAR Probe	4/8/2025	Annual	4/8/2026	7718
SPEAG	EX3DV4	SAR Probe	4/7/2025	Annual	4/7/2026	7659
SPEAG	EX3DV4	SAR Probe	12/5/2024	Annual	12/5/2025	7410

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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16 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
Applicable for SAR measurements < 6GHz:

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System									
Probe Calibration	E.2.1	7	N	1	1	1	7.0	7.0	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	2	R	1.73	1	1	1.2	1.2	∞
Linearity	E.2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E.2.4	0.25	R	1.73	1	1	0.1	0.1	∞
Modulation Response	E.2.5	4.8	R	1.73	1	1	2.8	2.8	∞
Readout Electronics	E.2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.8	R	1.73	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E.6.3	6.7	R	1.73	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	4	R	1.73	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E.4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E.4.1	1.67	N	1	1	1	1.7	1.7	5
Output Power Variation - SAR drift measurement	E.2.9	5	R	1.73	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.73	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	E.3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E.3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E.3.4	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	E.3.4	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)			RSS				12.2	12.0	191
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				24.4	24.0	

The above measurement uncertainties are according to IEEE Std. 1528-2013

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17 CONCLUSION

17.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Innovation, Science, and Economic Development Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables. [3]

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