element

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

SAR EVALUATION REPORT

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

Date of Testing:
11/08/2023-01/08/2024
Test Site/Location:
Element, Columbia, MD, USA
Document Serial No.:
1M2311010111-17.A3L(R1)

FCC ID: **A3LSMA356U**

APPLICANT: **SAMSUNG ELECTRONICS CO., LTD.**

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): SM-A356U, SM-A356U1, SM-S356V

Equipment Class	Band & Mode	Tx Frequency	SAR			
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.20	0.24	0.33	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	<0.1	0.14	0.38	N/A
PCE	UMTS 850	826.40 - 846.60 MHz	0.16	0.20	0.49	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.14	0.29	0.36	N/A
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.21	0.32	0.38	N/A
PCE	LTE Band 71	665.5 - 695.5 MHz	0.18	**0.39**	0.41	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.20	0.17	0.36	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.26	0.38	0.46	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.25	0.18	0.49	N/A
PCE	LTE Band 26	814.7 - 848.3 MHz	0.19	0.12	0.51	N/A
PCE	LTE Band 5	824.7 - 848.3 MHz	0.23	0.15	0.57	N/A
PCE	LTE Band 66	1710.7 - 1779.3 MHz	0.71	0.28	0.36	N/A
PCE	LTE Band 4	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 25	1850.7 - 1914.3 MHz	0.57	0.32	0.37	N/A
PCE	LTE Band 2	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	0.53	0.19	0.26	N/A
PCE	LTE Band 7	2502.5 - 2567.5 MHz	0.28	0.19	0.24	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.38	0.24	0.42	N/A
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
CBE	LTE Band 48	3552.5 - 3697.5 MHz	**0.80**	0.17	**0.63**	N/A
PCE	NR Band n71	665.5 - 695.5 MHz	0.19	0.34	0.49	N/A
PCE	NR Band n5	826.5 - 846.5 MHz	0.20	0.24	0.59	N/A
PCE	NR Band n70	1697.5 - 1707.5 MHz	0.24	0.24	0.33	N/A
PCE	NR Band n66	1712.5 - 1777.5 MHz	**0.76**	0.21	0.45	1.66
PCE	NR Band n25	1852.5 - 1912.5 MHz	0.62	0.26	0.39	N/A
PCE	NR Band n2	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n30	2307.5 - 2312.5 MHz	0.58	0.14	0.24	N/A
PCE	NR Band n41	2501.01 - 2685 MHz	0.35	0.20	0.19	2.33
CBE	NR Band n48	3555 - 3694.98 MHz	0.39	**0.18**	0.58	**2.74**
PCE	NR Band n78	3455.01 - 3544.98 MHz 3705 - 3795 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n77	3455.01 - 3544.98 MHz 3705 - 3975 MHz	0.35	0.28	**0.79**	**2.70**
DTS	2.4 GHz WIFI	2412 - 2472 MHz	**0.61**	**0.16**	**0.43**	N/A
NII	5 GHz WIFI	U-NII-1: 5180 - 5240 MHz U-NII-2A: 5260 - 5320 MHz U-NII-2C: 5500 - 5720 MHz U-NII-3: 5745 - 5825 MHz	**0.52**	**0.76**	**0.97**	**1.21**
DSS	2.4 GHz Bluetooth	2402 - 2480 MHz	**0.10**	<0.1	<0.1	N/A
DXX	NFC	13.56 MHz	N/A	N/A	N/A	<0.1
Simultaneous SAR per KDB 690783 D01v01r03:			1.42	1.16	**1.59**	**3.95**

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

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

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

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.

TABLE OF CONTENTS

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 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 n41	Voice/Data	2501.01 - 2685 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
2.4 GHz WIFI	Voice/Data	2412 - 2472 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
2.4 GHz Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz

1.2 Time-Averaging Algorithm for RF Exposure Compliance

The purpose of this report is to show SAR Characterization of WWAN sub-6 (Part0) and to demonstrate that the EUT meets FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels (Part1).

This Device is enabled with S.LSI TAS feature for 2G/3G/4G/5G modes. 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 S.LSI TAS feature (report SN could be found in Section 1.11 – Bibliography).

Note that WLAN, Bluetooth and NFC operations are not enabled with TAS.

The TAS algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit (i.e., Plimit for sub-6 radio), for each characterized technology and band. Characterization is achieved by determining Plimit for WWAN sub-6 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, Section 11 of this report, and Part 0 SAR Test Results for Plimit Calculations Appendix).

TAS allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Final Plimit settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Radio State Index RSI for S.LSI). Note that the device uncertainty for sub-6GHz is 1.0dB for this EUT.

Exposure Scenario			Maximum Tune-Up Output Power*	Body-Worn or Phablet	Hotspot	Head
Averaging Volume				1g/10g	1g	1g
Spacing				15mm, 0mm	10mm	0mm
RSI				0	3	4
Technology/Band	Antenna	Antenna Group	Pmax			
GSM 850	A	AG1	24.3	28.0	28.0	31.4
GSM 1900	B	AG1	22.6	19.0	19.0	31.3
UMTS 850	A	AG1	24.0	27.5	27.5	32.9
UMTS 1750	B	AG1	23.0	21.0	19.5	32.4
UMTS 1900	B	AG1	23.0	20.5	19.5	30.7
LTE Band 71	A	AG1	24.5	28.4	28.4	32.5
LTE Band 12	A	AG1	24.5	29.1	29.1	32.4
LTE Band 13	A	AG1	24.5	29.2	28.8	31.1
LTE Band 14	A	AG1	24.5	27.9	27.9	31.4
LTE Band 26	A	AG1	24.5	27.0	27.0	32.1
LTE Band 5	A	AG1	24.5	27.4	27.4	31.8
LTE Band 66/4	B	AG1	23.5	21.0	18.5	30.6
LTE Band 66/4	F	AG2	22.2	20.0	18.5	18.5
LTE Band 25/2	B	AG1	23.0	21.0	18.5	30.5
LTE Band 25/2	F	AG2	22.2	21.0	18.5	18.5
LTE Band 30	B	AG1	22.0	20.0	18.5	31.5
LTE Band 30	F	AG2	21.2	19.0	18.5	18.5
LTE Band 7	B	AG1	23.3	20.0	18.5	39.1
LTE Band 7	F	AG2	22.0	21.0	18.5	18.5
LTE Band 41 PC2	B	AG1	22.4	20.0	18.5	29.6
LTE Band 41 PC2	F	AG2	20.7	19.0	17.5	17.5
LTE Band 38	B	AG1	22.0	20.0	18.5	29.6
LTE Band 38	F	AG2	20.0	19.0	17.5	17.5
LTE Band 48	G	AG2	19.5	18.5	18.5	17.5
NR Band n71	A	AG1	24.5	29.0	28.6	32.6
NR Band n5	A	AG1	24.5	26.5	26.5	32.5
NR Band n70	B	AG1	23.0	20.0	18.5	30.2
NR Band n66	B	AG1	23.5	21.0	18.5	30.9
NR Band n66	F	AG2	22.2	20.0	18.5	18.5
NR Band n25/n2	B	AG1	23.0	21.0	18.5	29.9
NR Band n25/n2	F	AG2	22.2	21.0	18.5	18.5
NR Band n30	B	AG1	22.0	20.0	18.5	31.8
NR Band n30	F	AG2	21.2	19.0	18.5	18.5
NR Band n41 PC3	B	AG1	24.0	20.0	16.5	24.0
NR Band n41 PC3	F	AG2	22.0	19.0	17.5	17.5
NR Band n41 PC2	B	AG1	26.0	20.0	16.5	24.0
NR Band n41 PC2	F	AG2	24.0	19.0	17.5	17.5
NR Band n48	G	AG2	21.5	17.5	17.5	17.5
NR Band n48	B	AG1	17.5	13.0	13.0	13.0
NR Band n48	K	AG2	19.0	14.5	14.5	14.5
NR Band n48	L	AG2	17.0	12.0	12.0	12.0
NR Band n78 PC2	G	AG2	26.0	17.5	17.5	16.5
NR Band n78 PC2	B	AG1	22.5	12.5	12.5	12.5
NR Band n78 PC2	K	AG2	24.0	15.0	15.0	15.0
NR Band n78 PC2	L	AG2	21.5	13.0	13.0	13.0
NR Band n77 PC2	G	AG2	26.0	17.5	17.5	16.5
NR Band n77 PC2	B	AG1	22.5	12.5	12.5	12.5
NR Band n77 PC2	K	AG2	24.0	15.0	15.0	15.0
NR Band n77 PC2	L	AG2	21.5	13.0	13.0	13.0

"*Note all Final Plimit and maximum tune up output power Pmax levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (e.g. GSM and LTE TDD).

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

The maximum time-averaged output power (dBm) for any Sub6 WWAN technology, band, and RSI = minimum of "final Plimit " and "Maximum tune up output power Pmax " + 1dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB Publication 447498 D01v06.

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

Measurement Condition: All conducted power and SAR measurements in this report (Part 1 test) were performed by setting Reserve_power_margin (FastConnect BDF entry) when applicable to 0dB."

1.3 Power Reduction for SAR

This device uses an independent fixed level power reduction mechanism for WLAN operations during voice or VoIP held to ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR positions described in IEEE 1528-2013. Detailed descriptions of the power reduction mechanism are included in the operational description.

1.4 Nominal and Maximum Output Power Specifications

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

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

1.4.1 WWAN Output Power

GSM/GPRS/EDGE 850										
Antenna A										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax	Max Allowed Power	33.5	33.5	31.5	29.5	28.5	27.0	25.0	23.5	22.5
	Nominal	32.5	32.5	30.5	28.5	27.5	26.0	24.0	22.5	21.5
0 (Body-Worn or Phablet)	Max Allowed Power	33.5	33.5	31.5	29.5	28.5	27.0	25.0	23.5	22.5
	Nominal	32.5	32.5	30.5	28.5	27.5	26.0	24.0	22.5	21.5
3 (Hotspot)	Max Allowed Power	N/A	33.5	31.5	29.5	28.5	27.0	25.0	23.5	22.5
	Nominal	N/A	32.5	30.5	28.5	27.5	26.0	24.0	22.5	21.5
4 (Head)	Max Allowed Power	33.5	33.5	31.5	29.5	28.5	27.0	25.0	23.5	22.5
	Nominal	32.5	32.5	30.5	28.5	27.5	26.0	24.0	22.5	21.5

GSM/GPRS/EDGE 1900										
Antenna B										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax	Max Allowed Power	30.0	30.0	29.0	28.0	26.5	27.0	25.0	23.5	22.5
	Nominal	29.0	29.0	28.0	27.0	25.5	26.0	24.0	22.5	21.5
0 (Body-Worn or Phablet)	Max Allowed Power	29.2	29.2	26.2	24.4	23.2	27.0	25.0	23.5	22.5
	Nominal	28.2	28.2	25.2	23.4	22.2	26.0	24.0	22.5	21.5
3 (Hotspot)	Max Allowed Power	N/A	29.2	26.2	24.4	23.2	27.0	25.0	23.5	22.5
	Nominal	N/A	28.2	25.2	23.4	22.2	26.0	24.0	22.5	21.5
4 (Head)	Max Allowed Power	30.0	30.0	29.0	28.0	26.5	27.0	25.0	23.5	22.5
	Nominal	29.0	29.0	28.0	27.0	25.5	26.0	24.0	22.5	21.5

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

UMTS Band 5 (850 MHz)					
Antenna A					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
0 (Body-Worn or Phablet)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
3 (Hotspot)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
4 (Head)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0

UMTS Band 4 (1750 MHz)					
Antenna B					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
0 (Body-Worn or Phablet)	Max Allowed Power	22.0	21.0	21.0	21.0
	Nominal	21.0	20.0	20.0	20.0
3 (Hotspot)	Max Allowed Power	20.5	19.5	19.5	19.5
	Nominal	19.5	18.5	18.5	18.5
4 (Head)	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0

UMTS Band 2 (1900 MHz)					
Antenna B					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0
0 (Body-Worn or Phablet)	Max Allowed Power	21.5	20.5	20.5	20.5
	Nominal	20.5	19.5	19.5	19.5
3 (Hotspot)	Max Allowed Power	20.5	19.5	19.5	19.5
	Nominal	19.5	18.5	18.5	18.5
4 (Head)	Max Allowed Power	24.0	23.0	23.0	23.0
	Nominal	23.0	22.0	22.0	22.0

Mode / Band	Antenna		Modulated Average Output Power (in dBm)			
			Pmax	0 (Body-Worn or Phablet)	3 (Hotspot)	4 (Head)
LTE Band 71	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 12	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 13	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 14	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 26	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 5	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
LTE Band 66/4	B	Max Allowed Power	24.5	22.0	19.5	24.5
		Nominal	23.5	21.0	18.5	23.5
LTE Band 66/4	F	Max Allowed Power	23.2	21.0	19.5	19.5
		Nominal	22.2	20.0	18.5	18.5
LTE Band 25/2	B	Max Allowed Power	24.0	22.0	19.5	24.0
		Nominal	23.0	21.0	18.5	23.0
LTE Band 25/2	F	Max Allowed Power	23.2	22.0	19.5	19.5
		Nominal	22.2	21.0	18.5	18.5
LTE Band 30	B	Max Allowed Power	23.0	21.0	19.5	23.0
		Nominal	22.0	20.0	18.5	22.0
LTE Band 30	F	Max Allowed Power	22.2	20.0	19.5	19.5
		Nominal	21.2	19.0	18.5	18.5
LTE Band 7	B	Max Allowed Power	24.3	21.0	19.5	24.3
		Nominal	23.3	20.0	18.5	23.3
LTE Band 7	F	Max Allowed Power	23.0	22.0	19.5	19.5
		Nominal	22.0	21.0	18.5	18.5
LTE Band 41 PC2	B	Max Allowed Power	27.0	24.6	23.1	27.0
		Nominal	26.0	23.6	22.1	26.0
LTE Band 41 PC2	F	Max Allowed Power	25.3	23.6	22.1	22.1
		Nominal	24.3	22.6	21.1	21.1
LTE Band 38	B	Max Allowed Power	25.0	23.0	21.5	25.0
		Nominal	24.0	22.0	20.5	24.0
LTE Band 38	F	Max Allowed Power	23.0	22.0	20.5	20.5
		Nominal	22.0	21.0	19.5	19.5
LTE Band 48	G	Max Allowed Power	22.5	21.5	21.5	20.5
		Nominal	21.5	20.5	20.5	19.5

Mode / Band	Antenna		Modulated Average Output Power (in dBm)			
			Pmax	0 (Body-Worn or Phablet)	3 (Hotspot)	4 (Head)
NR Band n71	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
NR Band n5	A	Max Allowed Power	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5
NR Band n70	B	Max Allowed Power	24.0	21.0	19.5	24.0
		Nominal	23.0	20.0	18.5	23.0
NR Band n66	B	Max Allowed Power	24.5	22.0	19.5	24.5
		Nominal	23.5	21.0	18.5	23.5
NR Band n66	F	Max Allowed Power	23.2	21.0	19.5	19.5
		Nominal	22.2	20.0	18.5	18.5
NR Band n25/n2	B	Max Allowed Power	24.0	22.0	19.5	24.0
		Nominal	23.0	21.0	18.5	23.0
NR Band n25/n2	F	Max Allowed Power	23.2	22.0	19.5	19.5
		Nominal	22.2	21.0	18.5	18.5
NR Band n30	B	Max Allowed Power	23.0	21.0	19.5	23.0
		Nominal	22.0	20.0	18.5	22.0
NR Band n30	F	Max Allowed Power	22.2	20.0	19.5	19.5
		Nominal	21.2	19.0	18.5	18.5
NR Band n41 PC3	B	Max Allowed Power	25.0	21.0	17.5	25.0
		Nominal	24.0	20.0	16.5	24.0
NR Band n41 PC3	F	Max Allowed Power	23.0	20.0	18.5	18.5
		Nominal	22.0	19.0	17.5	17.5
NR Band n41 PC2	B	Max Allowed Power	27.0	21.0	17.5	25.0
		Nominal	26.0	20.0	16.5	24.0
NR Band n41 PC2	F	Max Allowed Power	25.0	20.0	18.5	18.5
		Nominal	24.0	19.0	17.5	17.5
NR Band n48	G	Max Allowed Power	22.5	18.5	18.5	18.5
		Nominal	21.5	17.5	17.5	17.5
NR Band n48	B	Max Allowed Power	18.5	14.0	14.0	14.0
		Nominal	17.5	13.0	13.0	13.0
NR Band n48	K	Max Allowed Power	20.0	15.5	15.5	15.5
		Nominal	19.0	14.5	14.5	14.5
NR Band n48	L	Max Allowed Power	18.0	13.0	13.0	13.0
		Nominal	17.0	12.0	12.0	12.0
NR Band n78 PC2	G	Max Allowed Power	27.0	18.5	18.5	17.5
		Nominal	26.0	17.5	17.5	16.5
NR Band n78 PC2	B	Max Allowed Power	23.5	13.5	13.5	13.5
		Nominal	22.5	12.5	12.5	12.5
NR Band n78 PC2	K	Max Allowed Power	25.0	16.0	16.0	16.0
		Nominal	24.0	15.0	15.0	15.0
NR Band n78 PC2	L	Max Allowed Power	22.5	14.0	14.0	14.0
		Nominal	21.5	13.0	13.0	13.0
NR Band n77 PC2	G	Max Allowed Power	27.0	18.5	18.5	17.5
		Nominal	26.0	17.5	17.5	16.5
NR Band n77 PC2	B	Max Allowed Power	23.5	13.5	13.5	13.5
		Nominal	22.5	12.5	12.5	12.5
NR Band n77 PC2	K	Max Allowed Power	25.0	16.0	16.0	16.0
		Nominal	24.0	15.0	15.0	15.0
NR Band n77 PC2	L	Max Allowed Power	22.5	14.0	14.0	14.0
		Nominal	21.5	13.0	13.0	13.0

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

1.4.2 2.4 GHz WLAN Output Power

The below table is applicable in the following conditions:

- Maximum Power

Band	Power Level	IEEE 802.11 Modulated Output Power (in dBm)																							
		Antenna I								Antenna M								MIMO							
		b		g		n		ax (SU)		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WLAN	2.45 GHz	18.0	17.0	18.0 ch. 1: 14.0 ch. 12: 9.0 ch. 13: -1.0	17.0 13.0 8.0 -2.0	18.0 ch. 1: 14.0 ch. 12: 9.0 ch. 13: -1.0	17.0 13.0 8.0 -2.0	18.0 ch. 1: 14.0 ch. 12: 9.0 ch. 13: -1.0	17.0 13.0 8.0 -2.0	18.0	17.0	18.0 ch. 1: 14.0 ch. 12: 9.0 ch. 13: -1.0	17.0 13.0 8.0 -2.0	18.0 ch. 1: 14.0 ch. 12: 9.0 ch. 13: -1.0	17.0 13.0 8.0 -2.0	18.0 ch. 1: 14.0 ch. 12: 9.0 ch. 13: -1.0	17.0 13.0 8.0 -2.0	21.0	20.0	21.0 ch. 1: 17.0 ch. 12: 12.0 ch. 13: 2.0	20.0 16.0 11.0 1.0	21.0 ch. 1: 17.0 ch. 12: 12.0 ch. 13: 2.0	20.0 16.0 11.0 1.0	21.0 ch. 1: 17.0 ch. 12: 12.0 ch. 13: 2.0	20.0 16.0 11.0 1.0

The below table is applicable in the following conditions:

- RCV Active

Band	Power Level	IEEE 802.11 Modulated Output Power (in dBm)																							
		Antenna I								Antenna M								MIMO							
		b		g		n		ax (SU)		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WLAN	2.45 GHz	11.0	10.0	11.0 ch. 12: 9.0 ch. 13: -1.0	10.0 8.0 -2.0	11.0 ch. 12: 9.0 ch. 13: -1.0	10.0 8.0 -2.0	11.0 ch. 12: 9.0 ch. 13: -1.0	10.0 8.0 -2.0	11.0	10.0	11.0 ch. 12: 9.0 ch. 13: -1.0	10.0 8.0 -2.0	11.0 ch. 12: 9.0 ch. 13: -1.0	10.0 8.0 -2.0	11.0 ch. 12: 9.0 ch. 13: -1.0	10.0 8.0 -2.0	14.0	13.0	14.0 ch. 12: 12.0 ch. 13: 2.0	13.0 11.0 1.0	14.0 ch. 12: 12.0 ch. 13: 2.0	13.0 11.0 1.0	14.0 ch. 12: 12.0 ch. 13: 2.0	13.0 11.0 1.0

1.4.3 5 GHz WLAN Output Power

The below table is applicable in the following conditions:

- Maximum Power

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																							
		Antenna G								Antenna M								MIMO							
		a		n		ac		ax (SU)		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	UNII-1	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0	19.0
	UNII-2A	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0	19.0
	UNII-2C	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0	19.0
	UNII-3	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	20.0	19.0	20.0	19.0	20.0	19.0	20.0	19.0
5 GHz WIFI (40MHz BW)	UNII-1			16.0 ch. 38: 14.5	15.0 13.5	16.0 ch. 38: 14.5	15.0 13.5	16.0 ch. 38: 14.0	15.0 13.0			16.0 ch. 38: 14.5	15.0 13.5	16.0 ch. 38: 14.5	15.0 13.5	16.0 ch. 38: 14.0	15.0 13.0			19.0 ch. 38: 17.5	18.0 16.5	19.0 ch. 38: 17.5	18.0 16.5	19.0 ch. 38: 17.0	18.0 16.0
	UNII-2A			16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0			19.0	18.0	19.0	18.0	19.0	18.0
	UNII-2C			16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0			19.0	18.0	19.0	18.0	19.0	18.0
	UNII-3			16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0			19.0	18.0	19.0	18.0	19.0	18.0
5 GHz WIFI (80MHz BW)	UNII-1					14.0	13.0	14.0	13.0					14.0	13.0	14.0	13.0					17.0	16.0	17.0	16.0
	UNII-2A					14.0	13.0	14.0	13.0					14.0	13.0	14.0	13.0					17.0	16.0	17.0	16.0
	UNII-2C					14.0	13.0	14.0	13.0					14.0	13.0	14.0	13.0					17.0	16.0	17.0	16.0
	UNII-3					14.0	13.0	14.0	13.0					14.0	13.0	14.0	13.0					17.0	16.0	17.0	16.0

The below table is applicable in the following conditions:

- RCV Active

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																							
		Antenna G								Antenna M								MIMO							
		a		n		ac		ax (SU)		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	UNII-1	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0
	UNII-2A	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0
	UNII-2C	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0
	UNII-3	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0
5 GHz WIFI (40MHz BW)	UNII-1			14.0	13.0	14.0	13.0	14.0	13.0			14.0	13.0	14.0	13.0	14.0	13.0			17.0	16.0	17.0	16.0	17.0	16.0
	UNII-2A			14.0	13.0	14.0	13.0	14.0	13.0			14.0	13.0	14.0	13.0	14.0	13.0			17.0	16.0	17.0	16.0	17.0	16.0
	UNII-2C			14.0	13.0	14.0	13.0	14.0	13.0			14.0	13.0	14.0	13.0	14.0	13.0			17.0	16.0	17.0	16.0	17.0	16.0
	UNII-3			14.0	13.0	14.0	13.0	14.0	13.0			14.0	13.0	14.0	13.0	14.0	13.0			17.0	16.0	17.0	16.0	17.0	16.0
5 GHz WIFI (80MHz BW)	UNII-1					14.0	13.0	14.0	13.0					14.0	13.0	14.0	13.0					17.0	16.0	17.0	16.0
	UNII-2A					14.0	13.0	14.0	13.0					14.0	13.0	14.0	13.0					17.0	16.0	17.0	16.0
	UNII-2C					14.0	13.0	14.0	13.0					14.0	13.0	14.0	13.0					17.0	16.0	17.0	16.0
	UNII-3					14.0	13.0	14.0	13.0					14.0	13.0	14.0	13.0					17.0	16.0	17.0	16.0

1.4.4 2.4 GHz Bluetooth Maximum Output Power

Mode	Data Rate	Modulated Output Power (in dBm)	
		Single Antenna	
		Antenna I	
Maximum / Nominal Power		Max	Nom.
Bluetooth	1Mbps	16.0	15.0
Bluetooth EDR	2Mbps	11.0	10.0
Bluetooth EDR	3Mbps	11.0	10.0
Bluetooth LE	1Mbps	10.5	9.5
Bluetooth LE	2Mbps	10.5	9.5
Bluetooth LE	125kbps	10.5	9.5
Bluetooth LE	500kbps	10.5	9.5

1.5 DUT Antenna Locations

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

Table 1-1
Device Edges/Sides for SAR Testing

Antenna	Back	Front	Top	Bottom	Right	Left
A	Yes	Yes	No	Yes	Yes	Yes
B	Yes	Yes	No	Yes	No	Yes
F	Yes	Yes	Yes	No	No	Yes
G	Yes	Yes	Yes	No	No	Yes
I	Yes	Yes	Yes	No	No	Yes
K	Yes	Yes	No	No	No	Yes
L	Yes	Yes	Yes	No	Yes	No
M	Yes	Yes	Yes	No	No	No

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

1.6 Near Field Communications (NFC) Antenna

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

1.7 Simultaneous Transmission Capabilities

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

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

Table 1-2
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Notes
1	GSM voice + 2.4 GHz WLAN Ant I	Yes	Yes	N/A	Yes	
2	GSM voice + 2.4 GHz WLAN Ant F	Yes	Yes	N/A	Yes	
3	GSM voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
4	GSM voice + 5 GHz WLAN Ant G	Yes	Yes	N/A	Yes	
5	GSM voice + 5 GHz WLAN Ant M	Yes	Yes	N/A	Yes	
6	GSM voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
7	GSM voice + 2.4 GHz Bluetooth	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
8	GSM voice + 2.4 GHz Bluetooth + 5 GHz WLAN Ant G	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
9	GSM voice + 2.4 GHz Bluetooth + 5 GHz WLAN Ant M	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
10	GSM voice + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
11	UMTS/LTE/NR + 2.4 GHz WLAN Ant I	Yes	Yes	Yes	Yes	
12	UMTS/LTE/NR + 2.4 GHz WLAN Ant F	Yes	Yes	Yes	Yes	
13	UMTS/LTE/NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
14	UMTS/LTE/NR + 5 GHz WLAN Ant G	Yes	Yes	Yes	Yes	
15	UMTS/LTE/NR + 5 GHz WLAN Ant M	Yes	Yes	Yes	Yes	
16	UMTS/LTE/NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
17	UMTS/LTE/NR + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
18	UMTS/LTE/NR + 2.4 GHz Bluetooth + 5 GHz WLAN Ant G	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
19	UMTS/LTE/NR + 2.4 GHz Bluetooth + 5 GHz WLAN Ant M	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
20	UMTS/LTE/NR + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
21	LTE + NR	Yes	Yes	N/A	Yes	
22	LTE + NR + 2.4 GHz WLAN Ant I	Yes	Yes	Yes	Yes	
23	LTE + NR + 2.4 GHz WLAN Ant F	Yes	Yes	Yes	Yes	
24	LTE + NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
25	LTE + NR + 5 GHz WLAN Ant G	Yes	Yes	Yes	Yes	
26	LTE + NR + 5 GHz WLAN Ant M	Yes	Yes	Yes	Yes	
27	LTE + NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
28	LTE + NR + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
29	LTE + NR + 2.4 GHz Bluetooth + 5 GHz WLAN Ant G	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
30	LTE + NR + 2.4 GHz Bluetooth + 5 GHz WLAN Ant M	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
31	LTE + NR + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
32	GPRS/EDGE + 2.4 GHz WLAN Ant I	N/A	N/A	Yes	Yes	
33	GPRS/EDGE + 2.4 GHz WLAN Ant F	N/A	N/A	Yes	Yes	
34	GPRS/EDGE + 2.4 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
35	GPRS/EDGE + 5 GHz WLAN Ant G	N/A	N/A	Yes	Yes	
36	GPRS/EDGE + 5 GHz WLAN Ant M	N/A	N/A	Yes	Yes	
37	GPRS/EDGE + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
38	GPRS/EDGE + 2.4 GHz Bluetooth	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
39	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WLAN Ant G	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
40	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WLAN Ant M	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
41	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered

1. No other simultaneous scenarios besides described above is supported for this model.
2. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
3. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
4. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, and U-NII-2C were not evaluated for wireless router conditions.
5. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax. 802.11a/b/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM.
6. This device supports VoWIFI.
7. This device supports Bluetooth Tethering.

8. This device supports VoLTE.
9. This device supports VoNR.
10. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
11. NFC were evaluated for phablet based on expected usage conditions.

1.8 Miscellaneous SAR Test Considerations

(A) WIFI/BT

This device supports channel 1-13 for 2.4 GHz WLAN. However, because channel 12/13 targets are not higher than that of channels 1-11, channels 1, 6, and 11 were considered for SAR testing per FCC KDB 248227 D01V02r02.

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, and U-NII-2C WIFI, only 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.

This device supports IEEE 802.11ax with the following features:

a) Up to 80 MHz Bandwidth only for 5 GHz
b) Up to 20 MHz Bandwidth only for 2.4 GHz
c) 2 Tx antenna output
d) Up to 1024 QAM is supported
e) TDWR and Band gap channels are supported for 5 GHz
f) MU-MIMO UL Operations are not supported

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the display diagonal dimension is greater than 150mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A, and U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WLAN, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

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

(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. The downlink carrier aggregation exclusion analysis can be found in Downlink LTE CA RF Conducted Powers Appendix.

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the display diagonal dimension is greater than 150mm and less than 200mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.

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

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

This device supports only Power Class 2 (PC2) LTE Band 41. Full SAR testing was done with LTE Band 41 Power Class 2.

This device can transmit with antenna F for LTE B2/4/25/66/30/7/41 and NR n66/25/2/30/41. SAR tests for antenna F were additionally performed for these LTE and NR bands to ensure compliance.

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

SRS was tested with CW signal per S.LSI guidance..

1.9 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 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D04v01r03 (Phablet Procedures)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO)
- November 2017, April 2018, October 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (IEEE 802.11ax)

1.10 Device Serial Numbers

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

1.11 Bibliography

Report Type	Report Serial Number
RF Exposure Part 2 Test Report	1M2311010111-23.A3L
RF Exposure Compliance Summary Report	1M2311010111-18.A3L
RF Exposure Part 0 Test Report	1M2311010111-22.A3L

2 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 Cat: 18, DL Cat: 18				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (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 14. It supports carrier aggregation, downlink MIMO features as shown in the RF Conducted Powers section of this report and the Downlink LTE CA RF Conducted Powers Appendix. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 14 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, eMBMS, Wifi Offloading, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

NR Information								
Form Factor	Portable Handset							
Frequency Range of each NR transmission band	NR Band n71: 665.5 - 695.5 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 n41: 2501.01 - 2685 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 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, 40 MHz NR Band n25: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz NR Band n2: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz NR Band n30: 5 MHz, 10 MHz NR Band n41: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 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 (133600)		680.5 (136100)			693 (138600)		
NR Band n71: 15 MHz	670.5 (134100)		680.5 (136100)			690.5 (138100)		
NR Band n71: 20 MHz	673 (134600)		680.5 (136100)			688 (137600)		
NR Band 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 (355500)		
NR Band n66: 10 MHz	1715 (343000)		1745 (349000)			1775 (355000)		
NR Band n66: 15 MHz	1717.5 (343500)		1745 (349000)			1772.5 (354500)		
NR Band n66: 20 MHz	1720 (344000)		1745 (349000)			1770 (354000)		
NR Band n66: 25 MHz	1722.5 (344500)		1745 (349000)			1767.5 (353500)		
NR Band n66: 30 MHz	1725 (345000)		1745 (349000)			1765 (353000)		
NR Band n66: 40 MHz	1730 (346000)		1745 (349000)			1760 (352000)		
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: 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	(N/A)		1880 (376000)			(N/A)		
NR Band n2: 30 MHz	(N/A)		1880 (376000)			(N/A)		
NR Band n2: 40 MHz	(N/A)		1880 (376000)			(N/A)		
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 n41: 10 MHz	2501.01 (500202)	2547 (509400)	2592.99 (518598)			2639.01 (527802)	2685 (537000)	
NR Band n41: 15 MHz	2503.5 (500700)	2548.26 (509652)	2592.99 (518598)			2637.75 (527550)	2682.51 (536502)	
NR Band n41: 20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)			2636.49 (527298)	2679.99 (535998)	
NR Band n41: 30 MHz	2511 (502200)	2552.01 (510402)	2592.99 (518598)			2634 (526800)	2674.98 (534996)	
NR Band n41: 40 MHz	2616.01 (523202)	2567.34 (513468)	(N/A)			2618.67 (523734)	2670 (534000)	
NR Band n41: 50 MHz	2521.02 (504204)		2592.99 (518598)			2664.99 (532998)		
NR Band n41: 60 MHz	2526 (505200)		2592.99 (518598)			2659.98 (531996)		
NR Band n41: 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 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 (637666)	3605.01 (640334)	(N/A)			3645 (643000)	3684.99 (645666)	
NR Band n48: 40 MHz	3570 (638000)	(N/A)	3624.99 (641666)			(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: 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)	3866.49 (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)	3782.49 (652166)	(N/A)	3840 (656000)	(N/A)	3897.51 (659834)	3954.99 (663666)	
NR Band n77: 60 MHz	3730.02 (648668)	3803.34 (653556)	(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, n5, n70, n66, n25, n2, n30	15 kHz							
SCS for NR Band n41, 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	2/48/66							
LTE Anchor Bands for NR Band n5	2/30/48/66							
LTE Anchor Bands for NR Band n70	N/A							
LTE Anchor Bands for NR Band n66	2/5/12/13/14/30/48/71							
LTE Anchor Bands for NR Band n25	12/48/66							
LTE Anchor Bands for NR Band n2	5/12/13/14/30/48/66/71							
LTE Anchor Bands for NR Band n30	N/A							
LTE Anchor Bands for NR Band n41	2/4/12/25/66/71							
LTE Anchor Bands for NR Band n48	2/66							
LTE Anchor Bands for NR Band n78	N/A							
LTE Anchor Bands for NR Band n77	2/5/12/13/14/30/66							

3 INTRODUCTION

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

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

3.1 SAR Definition

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

Equation 3-1
SAR Mathematical Equation

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

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

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

where:

σ = conductivity of the tissue-simulating material (S/m)
ρ = mass density of the tissue-simulating material (kg/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]

4 DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

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

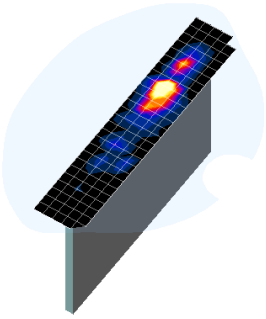


Figure 4-1
Sample SAR Area Scan

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 4-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):

   a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 4-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).

   b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.

   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

Table 4-1
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*Δz_{zoom}(n-1)	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5*Δz_{zoom}(n-1)	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5*Δz_{zoom}(n-1)	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5*Δz_{zoom}(n-1)	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5*Δz_{zoom}(n-1)	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

5 DEFINITION OF REFERENCE POINTS

5.1 EAR REFERENCE POINT

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

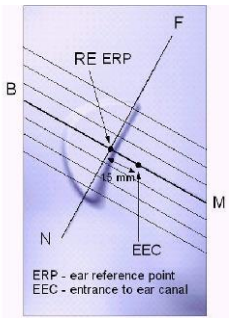


Figure 5-1
Close-Up Side view of ERP

5.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device was placed in a normal operating position with the acoustic output located along the "vertical centerline" on the front of the device aligned to the "ear reference point" (See Figure 5-3). The acoustic output was 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 5-2
Front, back and side view of SAM Twin Phantom

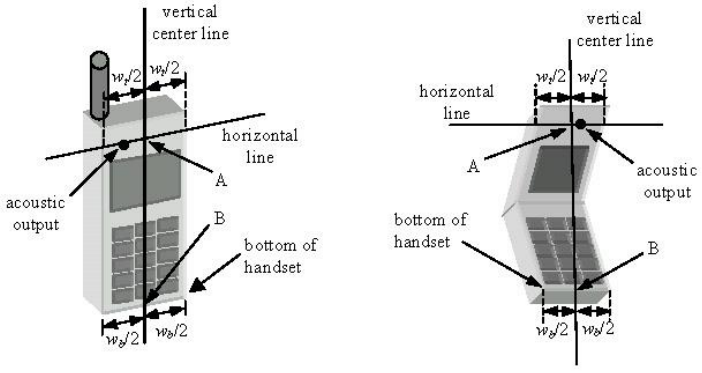


Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

6 TEST CONFIGURATION POSITIONS

6.1 Device Holder

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

6.2 Positioning for Cheek

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

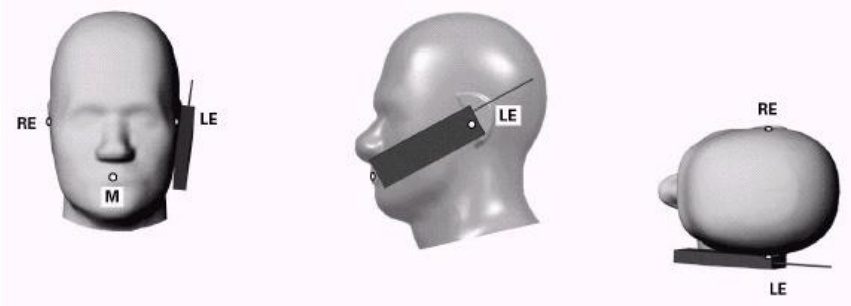


Figure 6-1 Front, Side and Top View of Cheek Position

2. The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the pinna.
3. While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the reference plane.
4. The phone was then rotated around the vertical centerline until the phone (horizontal line) was symmetrical 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 6-2).

6.3 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 6-2).

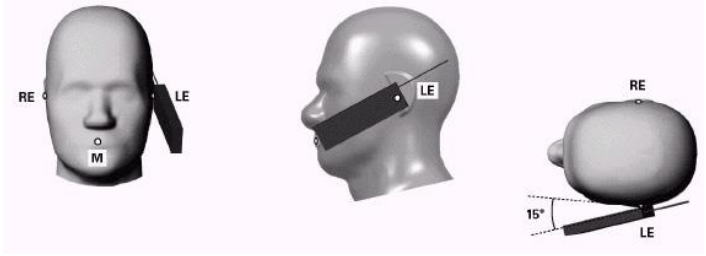


Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

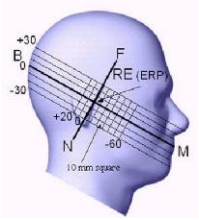


Figure 6-3
Side view w/ relevant markings

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

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

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

6.5 Body-Worn Accessory Configurations

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

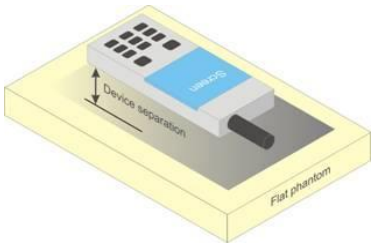


Figure 6-4
Sample Body-Worn Diagram

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

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

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented.
Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

6.6 Extremity Exposure Configurations

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

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

6.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L 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 D01v06 procedures. The "Portable Hotspot" feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

6.8 Phablet Configurations

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

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

7 RF EXPOSURE LIMITS

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

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

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *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.

8 FCC MEASUREMENT PROCEDURES

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

8.1 Measured and Reported SAR

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

8.2 3G SAR Test Reduction Procedure

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

8.3 Procedures Used to Establish RF Signal for SAR

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

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

8.4 SAR Measurement Conditions for UMTS

8.4.1 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.

8.4.2 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.

8.4.3 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.

8.4.4 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.

8.4.5 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.

8.4.6 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.

8.5 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).

8.5.1 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.

8.5.2 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.

8.5.3 A-MPR

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

8.5.4 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.

8.5.5 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.

8.5.6 Downlink Only Carrier Aggregation

Conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink

carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for downlink only carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

8.6 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.

8.6.1 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.

8.6.2 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.

8.6.3 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.

8.6.4 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.

8.6.5 2.4 GHz SAR Test Requirements

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

1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

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

8.6.6 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 guidance, 802.11ax 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.

8.6.7 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 8.6.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.8 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.

8.6.9 MIMO SAR considerations

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

9 RF CONDUCTED POWERS

9.1 GSM Conducted Powers

Table 9-1
Measured P_{max} for Free, RCV Active, or Hotspot Mode for GSM 850

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	32.20	32.27	30.56	29.01	**27.73**	26.42	24.82	23.31	22.02
	190	32.49	32.53	30.62	29.11	**27.55**	26.38	24.56	23.26	21.77
	251	32.54	32.55	30.46	29.07	**27.67**	26.32	24.43	23.23	21.76

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	23.00	23.07	24.37	24.58	**24.55**	17.22	18.63	18.88	18.84
	190	23.29	23.33	24.43	24.68	**24.37**	17.18	18.37	18.83	18.59
	251	23.34	23.35	24.27	24.64	**24.49**	17.12	18.24	18.80	18.58
GSM 850	**Frame Avg.Targets:**	23.30	23.30	24.31	24.07	**24.32**	16.80	17.81	18.07	18.32

Table 9-2
Measured P_{max} for RCV Active for GSM 1900

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	29.94	29.91	28.60	**27.80**	26.20	25.55	23.73	22.35	21.11
	661	29.93	29.94	28.41	**27.57**	25.96	25.51	23.71	22.51	21.01
	810	29.78	29.72	28.25	**27.34**	25.75	25.16	23.41	22.48	21.05

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	20.74	20.71	22.41	**23.37**	23.02	16.35	17.54	17.92	17.93
	661	20.73	20.74	22.22	**23.14**	22.78	16.31	17.52	18.08	17.83
	810	20.58	20.52	22.06	**22.91**	22.57	15.96	17.22	18.05	17.87
GSM 1900	**Frame Avg.Targets:**	19.80	19.80	21.81	**22.57**	22.32	16.80	17.81	18.07	18.32

Table 9-3
Measured P_{limit} for Free, or Hotspot Mode for GSM 1900

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	28.50	28.77	25.04	23.08	**22.21**	25.55	23.73	22.35	21.11
	661	28.19	28.44	25.05	23.07	**21.74**	25.51	23.71	22.51	21.01
	810	28.09	28.31	24.98	23.00	**21.91**	25.16	23.41	22.48	21.05

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	19.30	19.57	18.85	18.65	**19.03**	16.35	17.54	17.92	17.93
	661	18.99	19.24	18.86	18.64	**18.56**	16.31	17.52	18.08	17.83
	810	18.89	19.11	18.79	18.57	**18.73**	15.96	17.22	18.05	17.87
GSM 1900	**Frame Avg.Targets:**	19.00	19.00	19.01	18.97	**19.02**	16.80	17.81	18.07	18.32

Note:

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

GSM Class: B
GPRS Multislot class: 12 (Max 4 Tx uplink slots)
EDGE Multislot class: 12 (Max 4 Tx uplink slots)
DTM Multislot Class: N/A

Figure 9-1
Power Measurement Setup

9.2 UMTS Conducted Powers

Table 9-4
Measured P_{max} for Free, RCV Active, or Hotspot Mode Active for UMTS 850

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]		
			4132	4183	4233
99	WCDMA	12.2 kbps RMC	**24.48**	24.39	24.20
99		12.2 kbps AMR	24.51	24.41	24.18
6	HSDPA	Subtest 1	22.93	22.99	22.87
6		Subtest 2	22.98	22.96	22.87
6		Subtest 3	22.04	22.03	21.94
6		Subtest 4	22.47	22.50	22.33
6	HSUPA	Subtest 1	22.92	22.98	22.74
6		Subtest 2	20.83	20.95	20.74
6		Subtest 3	21.92	21.98	21.81
6		Subtest 4	20.86	20.95	20.75
6		Subtest 5	23.95	23.98	23.88
8	DC-HSDPA	Subtest 1	22.72	22.76	22.77
8		Subtest 2	22.78	22.72	22.79
8		Subtest 3	22.03	22.16	22.08
8		Subtest 4	22.84	22.87	22.94

Table 9-5
Measured P_{max} for RCV Active for UMTS 1750 & UMTS 1900

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]		
			1312	1412	1513	9262	9400	9538
99	WCDMA	12.2 kbps RMC	**23.14**	23.13	22.98	**23.42**	23.17	23.02
99		12.2 kbps AMR	23.32	23.17	22.96	23.36	23.19	23.04
6	HSDPA	Subtest 1	21.86	21.67	21.47	21.86	21.57	21.37
6		Subtest 2	21.82	21.72	21.49	21.83	21.58	21.38
6		Subtest 3	21.87	21.71	21.50	21.85	21.58	21.33
6		Subtest 4	21.42	21.30	21.06	21.32	21.07	20.87
6	HSUPA	Subtest 1	21.85	21.73	21.05	21.78	21.52	21.44
6		Subtest 2	19.79	19.64	19.42	19.80	19.48	19.31
6		Subtest 3	21.85	21.70	21.48	21.86	21.54	21.34
6		Subtest 4	19.77	19.63	19.42	19.78	19.46	19.28
6		Subtest 5	21.96	21.76	21.56	21.86	21.60	21.40
8	DC-HSDPA	Subtest 1	21.75	21.69	21.47	21.65	21.59	21.34
8		Subtest 2	21.78	21.75	21.69	22.08	21.90	21.57
8		Subtest 3	21.29	21.11	20.95	21.30	21.16	20.72
8		Subtest 4	21.33	21.30	21.11	21.28	21.19	20.91

Table 9-6
Measured P_{limit} for Free for UMTS 1750 & UMTS 1900

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]		
			1312	1412	1513	9262	9400	9538
99	WCDMA	12.2 kbps RMC	**20.63**	20.46	20.59	**20.12**	19.86	19.64
99		12.2 kbps AMR	20.58	20.49	20.35	20.09	20.06	19.65
6	HSDPA	Subtest 1	18.73	18.58	18.33	18.15	17.92	17.68
6		Subtest 2	19.74	19.60	19.35	19.18	18.90	18.71
6		Subtest 3	20.95	20.78	20.58	20.42	20.15	19.96
6		Subtest 4	20.33	20.21	19.99	19.77	19.46	19.28
6	HSUPA	Subtest 1	18.69	18.55	18.06	18.11	17.83	17.63
6		Subtest 2	18.68	18.52	18.29	18.13	17.82	17.64
6		Subtest 3	19.70	19.54	19.36	19.15	18.84	18.65
6		Subtest 4	18.60	18.55	18.30	18.08	17.81	17.60
6		Subtest 5	18.66	18.56	18.33	18.12	17.87	17.66
8	DC-HSDPA	Subtest 1	18.63	18.62	18.36	18.05	18.02	17.71
8		Subtest 2	20.03	19.71	19.88	19.36	19.51	18.95
8		Subtest 3	20.45	19.40	19.50	19.26	18.50	18.24
8		Subtest 4	20.17	20.12	19.85	19.68	19.56	19.26

Table 9-7
Measured P_{limit} for Hotspot Mode for UMTS 1750 & UMTS 1900

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]		
			1312	1412	1513	9262	9400	9538
99	WCDMA	12.2 kbps RMC	**19.97**	19.93	19.89	**19.94**	19.64	19.58
99		12.2 kbps AMR	19.93	19.95	19.79	19.89	19.84	19.56
6	HSDPA	Subtest 1	17.17	17.03	16.78	17.10	16.85	16.66
6		Subtest 2	18.20	18.09	17.86	18.11	17.81	17.62
6		Subtest 3	19.24	19.10	18.87	19.15	18.85	18.67
6		Subtest 4	18.65	18.52	18.32	18.64	18.36	18.17
6	HSUPA	Subtest 1	17.15	17.04	16.55	17.08	16.84	16.63
6		Subtest 2	17.14	17.01	16.77	17.08	16.85	16.64
6		Subtest 3	18.18	18.04	17.82	18.09	17.80	17.60
6		Subtest 4	17.15	17.03	16.80	17.10	16.84	16.62
6		Subtest 5	17.14	17.04	16.80	17.12	16.86	16.64
8	DC-HSDPA	Subtest 1	17.08	17.06	16.84	17.12	16.78	16.67
8		Subtest 2	18.42	18.77	18.23	18.35	18.05	18.15
8		Subtest 3	18.16	18.34	17.64	17.61	17.53	17.66
8		Subtest 4	18.59	18.57	18.35	18.64	18.49	18.19

DC-HSDPA considerations

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

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

Figure 9-2
Power Measurement Setup

9.3 LTE Conducted Powers

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

Note: Some bands do not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

9.3.1 LTE Band 71

Table 9-8
LTE Band 71 Measured P_{Max} for Free, RCV Active, or Hotspot Mode - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 133297 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.17**	0	0
	1	50	23.98		0
	1	99	23.81		0
	50	0	**23.52**	0-1	1
	50	25	23.47		1
	50	50	23.38		1
	100	0	23.43		1
16QAM	1	0	23.45	0-1	1
	1	50	23.44		1
	1	99	23.21		1
	50	0	22.44	0-2	2
	50	25	22.40		2
	50	50	22.32		2
	100	0	22.44		2
64QAM	1	0	22.47	0-2	2
	1	50	22.49		2
	1	99	22.28		2
	50	0	21.49	0-3	3
	50	25	21.42		3
	50	50	21.34		3
	100	0	21.41		3
256QAM	1	0	19.51	0-5	5
	1	50	19.34		5
	1	99	19.25		5
	50	0	19.42		5
	50	25	19.35		5
	50	50	19.24		5
	100	0	19.38		5

9.3.1 LTE Band 12

Table 9-9
LTE Band 12 Measured P_{Max} for Free, RCV Active, or Hotspot Mode - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23095 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.64**	0	0
	1	25	24.50		0
	1	49	24.48		0
	25	0	**23.53**	0-1	1
	25	12	23.51		1
	25	25	23.49		1
	50	0	23.51		1
16QAM	1	0	23.85	0-1	1
	1	25	23.77		1
	1	49	23.77		1
	25	0	22.46	0-2	2
	25	12	22.46		2
	25	25	22.42		2
	50	0	22.46		2
64QAM	1	0	22.62	0-2	2
	1	25	22.50		2
	1	49	22.52		2
	25	0	21.37	0-3	3
	25	12	21.37		3
	25	25	21.34		3
	50	0	21.40		3
256QAM	1	0	19.70	0-5	5
	1	25	19.46		5
	1	49	19.65		5
	25	0	19.43		5
	25	12	19.44		5
	25	25	19.40		5
	50	0	19.36		5

9.3.2 LTE Band 13

Table 9-10
LTE Band 13 Measured P_{Max} for Free, RCV Active, or Hotspot Mode - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.06**	0	0
	1	25	23.96		0
	1	49	23.99		0
	25	0	**23.63**	0-1	1
	25	12	23.57		1
	25	25	23.57		1
	50	0	23.61		1
16QAM	1	0	23.74	0-1	1
	1	25	23.64		1
	1	49	23.78		1
	25	0	22.59	0-2	2
	25	12	22.54		2
	25	25	22.53		2
	50	0	22.56		2
64QAM	1	0	22.81	0-2	2
	1	25	22.67		2
	1	49	22.90		2
	25	0	21.62	0-3	3
	25	12	21.58		3
	25	25	21.60		3
	50	0	21.56		3
256QAM	1	0	19.88	0-5	5
	1	25	19.70		5
	1	49	19.79		5
	25	0	19.69		5
	25	12	19.64		5
	25	25	19.60		5
	50	0	19.56		5

9.3.1 LTE Band 14

Table 9-11
LTE Band 14 Measured P_{Max} for Free, RCV Active, or Hotspot Mode - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.21**	0	0
	1	25	24.17		0
	1	49	24.12		0
	25	0	**23.77**	0-1	1
	25	12	23.69		1
	25	25	23.60		1
	50	0	23.70		1
16QAM	1	0	23.89	0-1	1
	1	25	23.75		1
	1	49	23.86		1
	25	0	22.71	0-2	2
	25	12	22.61		2
	25	25	22.61		2
	50	0	22.66		2
64QAM	1	0	22.80	0-2	2
	1	25	22.60		2
	1	49	22.74		2
	25	0	21.76	0-3	3
	25	12	21.65		3
	25	25	21.62		3
	50	0	21.71		3
256QAM	1	0	19.90	0-5	5
	1	25	19.96		5
	1	49	19.96		5
	25	0	19.85		5
	25	12	19.77		5
	25	25	19.72		5
	50	0	19.76		5

9.3.2 LTE Band 26

Table 9-12
LTE Band 26 (Cell) Measured P_{Max} for Free, RCV Active, or Hotspot Mode – 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.53**	0	0
	1	36	24.47		0
	1	74	24.50		0
	36	0	**23.66**	0-1	1
	36	18	23.64		1
	36	37	23.63		1
	75	0	23.65		1
16QAM	1	0	23.93	0-1	1
	1	36	23.73		1
	1	74	23.78		1
	36	0	22.61	0-2	2
	36	18	22.58		2
	36	37	22.56		2
	75	0	22.60		2
64QAM	1	0	22.64	0-2	2
	1	36	22.45		2
	1	74	22.51		2
	36	0	21.57	0-3	3
	36	18	21.55		3
	36	37	21.54		3
	75	0	21.53		3
256QAM	1	0	19.57	0-5	5
	1	36	19.50		5
	1	74	19.50		5
	36	0	19.57		5
	36	18	19.55		5
	36	37	19.52		5
	75	0	19.55		5

9.3.1 LTE Band 5

Table 9-13
LTE Band 5 (Cell) Measured P_{Max} for Free, RCV Active, or Hotspot Mode – 15 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20525 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.20**	0	0
	1	25	24.13		0
	1	49	24.15		0
	25	0	**23.66**	0-1	1
	25	12	23.65		1
	25	25	23.62		1
	50	0	23.65		1
16QAM	1	0	23.86	0-1	1
	1	25	23.77		1
	1	49	23.91		1
	25	0	22.72	0-2	2
	25	12	22.71		2
	25	25	22.70		2
	50	0	22.60		2
64QAM	1	0	22.70	0-2	2
	1	25	22.77		2
	1	49	22.76		2
	25	0	21.71	0-3	3
	25	12	21.68		3
	25	25	21.66		3
	50	0	21.66		3
256QAM	1	0	19.81	0-5	5
	1	25	19.79		5
	1	49	19.76		5
	25	0	19.77		5
	25	12	19.73		5
	25	25	19.70		5
	50	0	19.65		5

9.3.2 LTE Band 66 Antenna B

Table 9-14
LTE Band 66 (AWS) Measured P_{limit} for RCV Active – 20 MHz Bandwidth

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	**23.36**	23.21	23.09	0	0
	1	50	23.30	23.13	23.07		0
	1	99	23.31	23.23	23.05		0
	50	0	22.49	22.33	22.16	0-1	0.5
	50	25	**22.51**	22.31	22.17		0.5
	50	50	22.47	22.30	22.15		0.5
	100	0	22.48	22.32	22.16		0.5
16QAM	1	0	22.81	22.64	22.53	0-1	0.5
	1	50	22.69	22.59	22.43		0.5
	1	99	22.67	22.54	22.49		0.5
	50	0	21.52	21.32	21.20	0-2	1.5
	50	25	21.48	21.29	21.15		1.5
	50	50	21.45	21.27	21.15		1.5
	100	0	21.45	21.34	21.19		1.5
64QAM	1	0	21.49	21.42	21.06	0-2	1.5
	1	50	21.24	21.32	20.93		1.5
	1	99	21.36	21.29	21.04		1.5
	50	0	20.49	20.31	20.17	0-3	2.5
	50	25	20.46	20.29	20.16		2.5
	50	50	20.42	20.25	20.12		2.5
	100	0	20.40	20.29	20.11		2.5
256QAM	1	0	18.59	18.26	18.16	0-5	4.5
	1	50	18.39	18.02	18.04		4.5
	1	99	18.47	18.09	18.07		4.5
	50	0	18.33	18.20	18.02		4.5
	50	25	18.31	18.16	17.99		4.5
	50	50	18.27	18.12	17.97		4.5
	100	0	18.29	18.16	17.98		4.5

Table 9-15
LTE Band 66 (AWS) Measured P_{Limit} for Hotspot Mode– 20 MHz Bandwidth

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	**18.49**	18.37	18.14	0	0
	1	50	18.33	18.20	18.28		0
	1	99	18.39	18.24	18.09		0
	50	0	18.48	18.35	18.11	0-1	0
	50	25	**18.49**	18.30	18.13		0
	50	50	18.46	18.28	18.14		0
	100	0	18.46	18.31	18.12		0
16QAM	1	0	18.91	18.44	18.39	0-1	0
	1	50	18.70	18.44	18.29		0
	1	99	18.75	18.42	18.26		0
	50	0	18.53	18.36	18.15	0-2	0
	50	25	18.51	18.32	18.16		0
	50	50	18.53	18.29	18.13		0
	100	0	18.47	18.32	18.14		0
64QAM	1	0	18.66	18.65	18.39	0-2	0
	1	50	18.54	18.39	18.33		0
	1	99	18.63	18.44	18.28		0
	50	0	18.50	18.33	18.17	0-3	0
	50	25	18.51	18.31	18.18		0
	50	50	18.51	18.33	18.16		0
	100	0	18.49	18.32	18.19		0
256QAM	1	0	18.17	18.06	17.88	0-5	0.5
	1	50	18.05	18.04	17.81		0.5
	1	99	18.06	17.99	17.84		0.5
	50	0	18.09	17.92	17.77		0.5
	50	25	18.10	17.91	17.74		0.5
	50	50	18.06	17.91	17.71		0.5
	100	0	18.11	17.93	17.75		0.5

Table 9-16
LTE Band 66 (AWS) Measured P_{Limit} for Free Mode– 20 MHz Bandwidth

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	21.11	20.61	20.43	0	0
	1	50	20.91	20.72	20.52		0
	1	99	**21.12**	20.87	20.70		0
	50	0	21.12	20.93	20.81	0-1	0
	50	25	**21.13**	20.96	20.78		0
	50	50	21.10	20.96	20.81		0
	100	0	21.11	21.00	20.83		0
16QAM	1	0	21.31	21.16	21.05	0-1	0
	1	50	21.27	21.16	20.96		0
	1	99	21.23	21.35	20.95		0
	50	0	21.18	21.05	20.85	0-2	0
	50	25	21.14	21.07	20.91		0
	50	50	21.15	21.04	20.85		0
	100	0	21.16	21.04	20.88		0
64QAM	1	0	21.32	21.19	21.00	0-2	0
	1	50	21.22	21.20	20.81		0
	1	99	21.28	21.21	20.92		0
	50	0	20.20	20.04	19.86	0-3	1
	50	25	20.15	20.02	19.88		1
	50	50	20.13	20.02	19.87		1
	100	0	20.12	20.05	19.84		1
256QAM	1	0	18.20	18.10	17.97	0-5	3
	1	50	18.08	17.88	17.84		3
	1	99	18.14	18.04	17.90		3
	50	0	18.03	17.95	17.73		3
	50	25	17.99	17.90	17.74		3
	50	50	17.95	17.91	17.72		3
	100	0	18.06	17.92	17.73		3

9.3.3 LTE Band 66 Antenna F

Table 9-17
LTE Band 66 Antenna F (AWS) Measured P_{Limit} for RCV Active, Hotspot Mode – 20 MHz Bandwidth

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	18.32	18.35	18.13	0	0
	1	50	**18.53**	18.43	18.20		0
	1	99	18.30	18.40	18.05		0
	50	0	18.53	18.46	18.15	0-1	0
	50	25	**18.57**	18.46	18.16		0
	50	50	18.56	18.44	18.14		0
	100	0	18.52	18.43	18.11		0
16QAM	1	0	18.39	18.67	18.32	0-1	0
	1	50	18.50	18.72	18.31		0
	1	99	18.32	18.70	18.32		0
	50	0	18.54	18.41	18.15	0-2	0
	50	25	18.58	18.42	18.16		0
	50	50	18.57	18.39	18.16		0
	100	0	18.53	18.43	18.15		0
64QAM	1	0	18.71	18.51	18.17	0-2	0
	1	50	18.78	18.58	18.07		0
	1	99	18.66	18.42	18.15		0
	50	0	18.53	18.44	18.16	0-3	0
	50	25	18.57	18.46	18.19		0
	50	50	18.56	18.46	18.15		0
	100	0	18.50	18.42	18.15		0
256QAM	1	0	17.53	17.63	17.45	0-5	1.3
	1	50	17.61	17.57	17.37		1.3
	1	99	17.50	17.65	17.40		1.3
	50	0	17.64	17.54	17.24		1.3
	50	25	17.71	17.54	17.25		1.3
	50	50	17.68	17.54	17.24		1.3
	100	0	17.64	17.53	17.27		1.3

Table 9-18
LTE Band 66 Antenna F (AWS) Measured P_{Limit} for Free – 20 MHz Bandwidth

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	19.85	19.93	19.84	0	0
	1	50	19.71	19.91	19.60		0
	1	99	19.98	**20.08**	19.74		0
	50	0	20.04	20.15	19.90	0-1	0
	50	25	20.08	20.16	19.91		0
	50	50	20.07	**20.21**	19.95		0
	100	0	20.02	20.04	19.87		0
16QAM	1	0	20.10	20.21	20.05	0-1	0
	1	50	19.99	20.12	19.89		0
	1	99	20.17	20.30	19.97		0
	50	0	20.03	20.21	19.94	0-2	0
	50	25	20.08	20.20	19.99		0
	50	50	20.10	20.21	19.96		0
	100	0	19.96	20.13	19.90		0
64QAM	1	0	20.03	20.10	20.02	0-2	0
	1	50	20.04	20.11	19.81		0
	1	99	20.19	20.30	20.06		0
	50	0	19.52	19.67	19.43	0-3	0.8
	50	25	19.51	19.69	19.46		0.8
	50	50	19.55	19.69	19.45		0.8
	100	0	19.45	19.65	19.36		0.8
256QAM	1	0	17.38	17.65	17.26	0-5	2.8
	1	50	17.43	17.60	17.27		2.8
	1	99	17.45	17.69	17.42		2.8
	50	0	17.45	17.62	17.35		2.8
	50	25	17.45	17.63	17.37		2.8
	50	50	17.47	17.64	17.38		2.8
	100	0	17.41	17.57	17.33		2.8

9.3.4 LTE Band 25 Antenna B

Table 9-19
LTE Band 25 (PCS) Antenna B Measured P_{Max} for RCV Active – 20 MHz Bandwidth

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	23.28	23.12	22.89	0	0
	1	50	23.29	23.06	22.92		0
	1	99	**23.34**	23.19	22.93		0
	50	0	**22.47**	22.24	22.02	0-1	1
	50	25	22.46	22.21	22.00		1
	50	50	22.45	22.21	21.98		1
	100	0	22.46	22.20	22.00		1
16QAM	1	0	22.78	22.49	22.29	0-1	1
	1	50	22.72	22.40	22.19		1
	1	99	22.77	22.39	22.27		1
	50	0	21.46	21.20	21.06	0-2	2
	50	25	21.45	21.19	20.99		2
	50	50	21.44	21.13	20.97		2
	100	0	21.43	21.19	20.96		2
64QAM	1	0	21.47	21.21	21.03	0-2	2
	1	50	21.29	21.08	20.92		2
	1	99	21.42	21.10	21.01		2
	50	0	20.41	20.16	20.01	0-3	3
	50	25	20.41	20.12	19.97		3
	50	50	20.44	20.12	19.92		3
	100	0	20.34	20.11	19.92		3
256QAM	1	0	18.44	18.10	18.00	0-5	5
	1	50	18.30	17.88	17.93		5
	1	99	18.41	18.01	17.92		5
	50	0	18.26	18.09	17.85		5
	50	25	18.26	18.05	17.82		5
	50	50	18.28	18.06	17.79		5
	100	0	18.25	18.04	17.80		5

Table 9-20
LTE Band 25 (PCS) Antenna B Measured P_{Limit} for Hotspot Mode– 20 MHz Bandwidth

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	18.51	18.56	18.46	0	0
	1	50	18.44	**18.62**	18.45		0
	1	99	18.47	18.59	18.47		0
	50	0	18.55	18.60	18.48	0-1	0
	50	25	18.55	18.60	18.49		0
	50	50	18.50	**18.61**	18.48		0
	100	0	18.52	18.58	18.53		0
16QAM	1	0	18.67	18.62	18.53	0-1	0
	1	50	18.63	18.61	18.48		0
	1	99	18.55	18.61	18.47		0
	50	0	18.53	18.63	18.50	0-2	0
	50	25	18.53	18.64	18.48		0
	50	50	18.52	18.64	18.49		0
	100	0	18.58	18.64	18.49		0
64QAM	1	0	18.77	18.61	18.47	0-2	0
	1	50	18.78	18.62	18.50		0
	1	99	18.70	18.64	18.51		0
	50	0	18.55	18.63	18.46	0-3	0
	50	25	18.55	18.63	18.46		0
	50	50	18.55	18.61	18.48		0
	100	0	18.57	18.61	18.46		0
256QAM	1	0	18.18	17.82	17.84	0-5	0.5
	1	50	18.18	17.77	17.77		0.5
	1	99	18.14	17.75	17.78		0.5
	50	0	18.13	17.91	17.79		0.5
	50	25	18.18	17.89	17.75		0.5
	50	50	18.14	17.85	17.72		0.5
	100	0	18.11	17.84	17.75		0.5

Table 9-21
LTE Band 25 (PCS) Antenna B Measured P_{Limit} for Free – 20 MHz Bandwidth

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	**20.88**	20.64	20.51	0	0
	1	50	20.63	20.52	20.41		0
	1	99	20.87	20.61	20.52		0
	50	0	**20.90**	20.74	20.65	0-1	0
	50	25	20.88	20.73	20.61		0
	50	50	20.89	20.70	20.65		0
	100	0	20.85	20.77	20.67		0
16QAM	1	0	21.18	21.05	21.03	0-1	0
	1	50	21.02	20.88	20.84		0
	1	99	21.05	20.96	20.90		0
	50	0	20.91	20.81	20.72	0-2	0
	50	25	20.91	20.79	20.71		0
	50	50	20.92	20.79	20.65		0
	100	0	20.93	20.78	20.67		0
64QAM	1	0	21.10	20.99	21.00	0-2	0
	1	50	20.98	20.87	20.78		0
	1	99	21.07	20.99	20.91		0
	50	0	19.94	19.80	19.73	0-3	1
	50	25	19.89	19.77	19.66		1
	50	50	19.89	19.78	19.62		1
	100	0	19.83	19.71	19.64		1
256QAM	1	0	17.90	17.79	17.83	0-5	3
	1	50	17.84	17.70	17.65		3
	1	99	17.95	17.74	17.63		3
	50	0	17.82	17.67	17.57		3
	50	25	17.78	17.68	17.56		3
	50	50	17.74	17.66	17.50		3
	100	0	17.79	17.67	17.57		3

9.3.5 LTE Band 25 Antenna F

Table 9-22
LTE Band 25 (PCS) Antenna F Measured P_{Limit} for RCV Active, or Hotspot Mode– 20 MHz Bandwidth

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	18.33	**18.54**	18.24	0	0
	1	50	18.33	18.47	18.30		0
	1	99	18.29	18.47	18.27		0
	50	0	18.50	**18.55**	18.28	0-1	0
	50	25	18.54	18.53	18.31		0
	50	50	18.48	18.50	18.28		0
	100	0	18.52	18.49	18.30		0
16QAM	1	0	18.57	18.70	18.44	0-1	0
	1	50	18.63	18.63	18.41		0
	1	99	18.47	18.55	18.52		0
	50	0	18.52	18.54	18.28	0-2	0
	50	25	18.53	18.51	18.33		0
	50	50	18.51	18.44	18.26		0
	100	0	18.48	18.48	18.29		0
64QAM	1	0	18.93	18.69	18.16	0-2	0
	1	50	18.84	18.55	18.08		0
	1	99	18.87	18.55	18.22		0
	50	0	18.51	18.57	18.31	0-3	0
	50	25	18.56	18.55	18.34		0
	50	50	18.52	18.54	18.25		0
	100	0	18.47	18.60	18.29		0
256QAM	1	0	17.79	17.84	17.27	0-5	1.3
	1	50	17.72	17.66	17.34		1.3
	1	99	17.75	17.72	17.24		1.3
	50	0	17.57	17.58	17.38		1.3
	50	25	17.59	17.56	17.40		1.3
	50	50	17.55	17.49	17.31		1.3
	100	0	17.55	17.55	17.31		1.3

Table 9-23
LTE Band 25 (PCS) Antenna F Measured P_{Limit} for Free – 20 MHz Bandwidth

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	20.84	**20.99**	20.98	0	0
	1	50	20.73	20.74	20.69		0
	1	99	20.88	20.89	20.65		0
	50	0	21.04	21.06	20.89	0-1	0
	50	25	21.03	**21.08**	20.89		0
	50	50	21.03	21.05	20.93		0
	100	0	20.98	20.96	20.88		0
16QAM	1	0	21.03	21.23	21.07	0-1	0
	1	50	21.18	20.99	21.05		0
	1	99	21.18	21.17	20.79		0
	50	0	20.58	20.61	20.47	0-2	0.8
	50	25	20.56	20.59	20.45		0.8
	50	50	20.51	20.55	20.43		0.8
	100	0	20.48	20.53	20.36		0.8
64QAM	1	0	20.47	20.67	20.43	0-2	0.8
	1	50	20.48	20.37	20.41		0.8
	1	99	20.59	20.46	20.25		0.8
	50	0	19.59	19.58	19.49	0-3	1.8
	50	25	19.55	19.59	19.42		1.8
	50	50	19.54	19.55	19.38		1.8
	100	0	19.44	19.49	19.37		1.8
256QAM	1	0	17.43	17.56	17.53	0-5	3.8
	1	50	17.42	17.30	17.31		3.8
	1	99	17.49	17.47	17.17		3.8
	50	0	17.50	17.51	17.38		3.8
	50	25	17.48	17.51	17.35		3.8
	50	50	17.44	17.45	17.33		3.8
	100	0	17.41	17.46	17.32		3.8

9.3.1 LTE Band 30 Antenna B

Table 9-24
LTE Band 30 Antenna B Measured P_{Limit} for Hotspot Mode– 10 MHz Bandwidth

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	**18.16**	0	0
	1	25	18.01		0
	1	49	18.03		0
	25	0	**18.15**	0-1	0
	25	12	18.13		0
	25	25	18.12		0
	50	0	18.10		0
16QAM	1	0	18.46	0-1	0
	1	25	18.16		0
	1	49	18.36		0
	25	0	18.26	0-2	0
	25	12	18.20		0
	25	25	18.19		0
	50	0	18.15		0
64QAM	1	0	18.44	0-2	0
	1	25	18.22		0
	1	49	18.34		0
	25	0	18.26	0-3	0
	25	12	18.20		0
	25	25	18.20		0
	50	0	18.15		0
256QAM	1	0	16.70	0-5	1.5
	1	25	16.58		1.5
	1	49	16.66		1.5
	25	0	16.07		1.5
	25	12	16.03		1.5
	25	25	16.02		1.5
	50	0	16.00		1.5

Table 9-25
LTE Band 30 Antenna B Measured P_{max} for RCV Active – 10 MHz Bandwidth

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	**22.02**	0	0
	1	25	21.92		0
	1	49	21.96		0
	25	0	**21.08**	0-1	1
	25	12	21.04		1
	25	25	21.04		1
	50	0	21.06		1
16QAM	1	0	21.31	0-1	1
	1	25	21.18		1
	1	49	21.22		1
	25	0	20.04	0-2	2
	25	12	19.99		2
	25	25	20.03		2
	50	0	20.04		2
64QAM	1	0	20.13	0-2	2
	1	25	19.94		2
	1	49	20.04		2
	25	0	18.94	0-3	3
	25	12	18.95		3
	25	25	18.91		3
	50	0	18.93		3
256QAM	1	0	17.04	0-5	5
	1	25	16.78		5
	1	49	16.80		5
	25	0	16.83		5
	25	12	16.82		5
	25	25	16.77		5
	50	0	16.84		5

Table 9-26
LTE Band 30 Antenna B Measured P_{Limit} for Free – 10 MHz Bandwidth

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	**19.37**	0	0
	1	25	19.23		0
	1	49	19.30		0
	25	0	**19.40**	0-1	0
	25	12	19.38		0
	25	25	19.34		0
	50	0	19.36		0
16QAM	1	0	19.56	0-1	0
	1	25	19.35		0
	1	49	19.61		0
	25	0	19.41	0-2	0
	25	12	19.41		0
	25	25	19.35		0
	50	0	19.40		0
64QAM	1	0	19.52	0-2	0
	1	25	19.47		0
	1	49	19.49		0
	25	0	18.37	0-3	1
	25	12	18.33		1
	25	25	18.32		1
	50	0	18.42		1
256QAM	1	0	16.42	0-5	3
	1	25	16.21		3
	1	49	16.34		3
	25	0	16.31		3
	25	12	16.28		3
	25	25	16.22		3
	50	0	16.21		3

9.3.1 LTE Band 30 Antenna F

Table 9-27
LTE Band 30 Antenna F Measured P_{Limit} for Free – 10 MHz Bandwidth

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	**18.66**	0	0
	1	25	18.47		0
	1	49	18.56		0
	25	0	18.66	0-1	0
	25	12	**18.68**		0
	25	25	18.66		0
	50	0	18.65		0
16QAM	1	0	18.76	0-1	0
	1	25	18.56		0
	1	49	18.69		0
	25	0	18.61	0-2	0
	25	12	18.59		0
	25	25	18.65		0
	50	0	18.65		0
64QAM	1	0	18.72	0-2	0
	1	25	18.64		0
	1	49	18.71		0
	25	0	18.02	0-3	0.8
	25	12	18.04		0.8
	25	25	18.06		0.8
	50	0	18.09		0.8
256QAM	1	0	16.05	0-5	2.8
	1	25	15.73		2.8
	1	49	15.89		2.8
	25	0	16.03		2.8
	25	12	15.97		2.8
	25	25	16.04		2.8
	50	0	16.02		2.8

Table 9-28
LTE Band 30 Antenna F Measured P_{Limit} for RCV Active, and Hotspot Mode – 10 MHz Bandwidth

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	18.10	0	0
	1	25	18.15		0
	1	49	**18.20**		0
	25	0	**18.23**	0-1	0
	25	12	18.21		0
	25	25	18.20		0
	50	0	18.19		0
16QAM	1	0	18.27	0-1	0
	1	25	18.38		0
	1	49	18.37		0
	25	0	18.19	0-2	0
	25	12	18.21		0
	25	25	18.14		0
	50	0	18.16		0
64QAM	1	0	18.16	0-2	0
	1	25	18.20		0
	1	49	18.07		0
	25	0	18.26	0-3	0.3
	25	12	18.20		0.3
	25	25	18.16		0.3
	50	0	18.14		0.3
256QAM	1	0	16.52	0-5	2.3
	1	25	16.42		2.3
	1	49	16.38		2.3
	25	0	16.30		2.3
	25	12	16.25		2.3
	25	25	16.23		2.3
	50	0	16.22		2.3

9.3.1 LTE Band 7 Antenna B

Table 9-29
LTE Band 7 Antenna B Measured P_{max} for RCV Active - 20 MHz Bandwidth

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	22.35	22.47	22.81	0	0
	1	50	22.31	22.44	22.81		0
	1	99	22.38	22.58	**22.83**		0
	50	0	21.51	21.59	**21.92**	0-1	1
	50	25	21.50	21.57	21.89		1
	50	50	21.50	21.60	21.89		1
	100	0	21.46	21.59	21.90		1
16QAM	1	0	21.72	21.91	22.29	0-1	1
	1	50	21.62	21.88	22.24		1
	1	99	21.65	21.89	22.30		1
	50	0	20.46	20.59	20.90	0-2	2
	50	25	20.45	20.56	20.90		2
	50	50	20.43	20.57	20.88		2
	100	0	20.46	20.63	20.91		2
64QAM	1	0	20.59	20.80	21.21	0-2	2
	1	50	20.40	20.73	21.04		2
	1	99	20.52	20.75	21.20		2
	50	0	19.44	19.60	19.90	0-3	3
	50	25	19.42	19.58	19.89		3
	50	50	19.41	19.57	19.88		3
	100	0	19.39	19.56	19.88		3
256QAM	1	0	17.45	17.41	17.91	0-5	5
	1	50	17.29	17.23	17.81		5
	1	99	17.36	17.31	17.82		5
	50	0	17.33	17.44	17.77		5
	50	25	17.28	17.42	17.72		5
	50	50	17.27	17.43	17.72		5
	100	0	17.29	17.43	17.71		5

Table 9-30
LTE Band 7 Antenna B Measured P_{limit} for Hotspot Mode - 20 MHz Bandwidth

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	18.10	**18.59**	18.43	0	0
	1	50	18.03	18.56	18.43		0
	1	99	18.00	18.55	18.41		0
	50	0	18.24	18.59	18.42	0-1	0
	50	25	18.22	**18.60**	18.43		0
	50	50	18.16	18.58	18.43		0
	100	0	18.19	18.53	18.43		0
16QAM	1	0	18.31	18.60	18.41	0-1	0
	1	50	18.23	18.55	18.40		0
	1	99	18.12	18.60	18.41		0
	50	0	18.24	18.60	18.41	0-2	0
	50	25	18.25	18.60	18.44		0
	50	50	18.18	18.61	18.43		0
	100	0	18.19	18.60	18.45		0
64QAM	1	0	18.68	18.61	18.46	0-2	0
	1	50	18.50	18.63	18.41		0
	1	99	18.51	18.63	18.41		0
	50	0	18.24	18.63	18.43	0-3	0
	50	25	18.21	18.65	18.44		0
	50	50	18.18	18.57	18.43		0
	100	0	18.17	18.59	18.43		0
256QAM	1	0	17.88	18.19	17.72	0-5	0.2
	1	50	17.83	18.11	17.66		0.2
	1	99	17.82	18.13	17.62		0.2
	50	0	17.85	17.85	17.76		0.2
	50	25	17.84	17.84	17.78		0.2
	50	50	17.79	17.78	17.73		0.2
	100	0	17.82	17.83	17.73		0.2

Table 9-31
LTE Band 7 Antenna B Measured P_{limit} for Free Mode - 20 MHz Bandwidth

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	**19.75**	19.34	19.74	0	0
	1	50	19.49	19.46	19.46		0
	1	99	19.61	19.56	19.56		0
	50	0	**19.74**	19.71	19.72	0-1	0
	50	25	19.72	19.71	19.69		0
	50	50	19.70	19.68	19.71		0
	100	0	19.72	19.72	19.73		0
16QAM	1	0	20.10	20.03	20.08	0-1	0
	1	50	19.96	19.96	20.01		0
	1	99	19.89	19.99	19.94		0
	50	0	19.79	19.84	19.81	0-2	0
	50	25	19.72	19.77	19.75		0
	50	50	19.71	19.74	19.73		0
	100	0	19.72	19.76	19.76		0
64QAM	1	0	20.15	20.10	20.11	0-2	0
	1	50	19.88	19.85	19.86		0
	1	99	19.97	19.96	19.99		0
	50	0	19.82	19.86	19.87	0-3	0
	50	25	19.78	19.80	19.80		0
	50	50	19.72	19.77	19.74		0
	100	0	19.75	19.78	19.79		0
256QAM	1	0	17.94	17.89	17.91	0-5	1.7
	1	50	17.85	17.64	17.66		1.7
	1	99	17.77	17.76	17.79		1.7
	50	0	17.71	17.71	17.73		1.7
	50	25	17.67	17.65	17.69		1.7
	50	50	17.58	17.61	17.66		1.7
	100	0	17.68	17.65	17.67		1.7

9.3.1 LTE Band 7 Antenna F

Table 9-32
LTE Band 7 Antenna F Measured P_{limit} for RCV Active, or Hotspot Mode - 20 MHz Bandwidth

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	18.10	17.98	**18.31**	0	0
	1	50	17.81	17.76	18.08		0
	1	99	17.78	17.82	18.14		0
	50	0	18.14	18.08	**18.42**	0-1	0
	50	25	18.06	18.00	18.39		0
	50	50	18.01	17.98	18.34		0
	100	0	18.05	18.00	18.30		0
16QAM	1	0	18.24	18.07	18.46	0-1	0
	1	50	18.11	17.96	18.24		0
	1	99	17.97	17.95	18.35		0
	50	0	18.12	18.07	18.38	0-2	0
	50	25	18.06	17.98	18.35		0
	50	50	17.98	17.96	18.30		0
	100	0	18.00	17.96	18.29		0
64QAM	1	0	18.20	18.13	18.41	0-2	0
	1	50	17.96	17.97	18.27		0
	1	99	18.03	18.04	18.39		0
	50	0	18.11	18.01	18.37	0-3	0
	50	25	18.05	18.01	18.34		0
	50	50	17.97	17.93	18.35		0
	100	0	17.96	17.97	18.29		0
256QAM	1	0	17.15	17.15	17.48	0-5	1.5
	1	50	17.00	16.96	17.31		1.5
	1	99	17.00	17.02	17.38		1.5
	50	0	17.19	17.11	17.43		1.5
	50	25	17.09	17.05	17.38		1.5
	50	50	17.03	17.02	17.38		1.5
	100	0	17.07	17.02	17.38		1.5

Table 9-33
LTE Band 7 Antenna F Measured P_{limit} for Free Mode - 20 MHz Bandwidth

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	20.63	20.53	**20.80**	0	0
	1	50	20.38	20.38	20.70		0
	1	99	20.33	20.37	20.73		0
	50	0	20.70	20.64	**21.00**	0-1	0
	50	25	20.64	20.58	20.93		0
	50	50	20.58	20.56	20.91		0
	100	0	20.60	20.55	20.79		0
16QAM	1	0	20.80	20.67	20.91	0-1	0
	1	50	20.57	20.66	20.81		0
	1	99	20.57	20.61	20.99		0
	50	0	20.18	20.15	20.48	0-2	1
	50	25	20.07	20.06	20.40		1
	50	50	20.03	20.04	20.44		1
	100	0	20.08	20.03	20.39		1
64QAM	1	0	20.29	20.17	20.43	0-2	1
	1	50	20.10	20.02	20.31		1
	1	99	20.10	19.97	20.32		1
	50	0	19.17	19.08	19.46	0-3	2
	50	25	19.06	19.04	19.38		2
	50	50	19.03	18.97	19.37		2
	100	0	19.01	18.98	19.31		2
256QAM	1	0	17.12	17.11	17.33	0-5	4
	1	50	17.04	16.84	17.23		4
	1	99	16.99	16.93	17.22		4
	50	0	17.05	16.98	17.35		4
	50	25	16.99	16.98	17.29		4
	50	50	16.90	16.89	17.26		4
	100	0	16.98	16.93	17.30		4

9.3.2 LTE Band 41 PC2 Antenna B

Table 9-34
LTE Band 41 PC2 Measured P_{Max} for RCV Active - 20 MHz Bandwidth

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	25.06	25.05	26.17	**26.21**	25.88	0	0
	1	50	25.03	25.01	26.10	26.16	25.82		0
	1	99	25.01	25.04	26.05	26.16	25.84		0
	50	0	24.17	24.12	25.27	**25.33**	25.02	0-1	1
	50	25	24.16	24.10	25.22	25.31	25.00		1
	50	50	24.12	24.07	25.18	25.28	24.96		1
	100	0	24.14	24.08	25.21	25.30	25.06		1
16QAM	1	0	24.43	24.66	25.58	25.66	25.45	0-1	1
	1	50	24.44	24.51	25.53	25.52	25.35		1
	1	99	24.36	24.50	25.41	25.51	25.29		1
	50	0	23.13	23.12	24.28	24.33	24.08	0-2	2
	50	25	23.10	23.07	24.22	24.28	24.02		2
	50	50	23.07	23.03	24.18	24.24	23.97		2
	100	0	23.13	23.09	24.23	24.35	24.00		2
64QAM	1	0	23.41	23.15	24.49	24.48	24.27	0-2	2
	1	50	23.29	23.05	24.33	24.36	24.13		2
	1	99	23.29	23.01	24.29	24.35	24.08		2
	50	0	22.18	22.11	23.23	23.31	23.01	0-3	3
	50	25	22.15	22.08	23.21	23.30	22.95		3
	50	50	22.11	22.04	23.16	23.26	22.90		3
	100	0	22.08	22.04	23.17	23.22	22.93		3
256QAM	1	0	20.02	20.01	21.05	21.34	20.91	0-5	5
	1	50	20.06	20.04	20.92	21.24	20.70		5
	1	99	20.05	20.01	20.84	21.15	20.72		5
	50	0	20.07	20.09	21.22	21.29	20.99		5
	50	25	20.06	20.07	21.18	21.27	20.95		5
	50	50	20.04	20.03	21.14	21.23	20.92		5
	100	0	20.08	20.06	21.09	21.16	20.89		5

Table 9-35
LTE Band 41 PC2 Uplink Carrier Aggregation Measured P_{Max} for RCV Active - 20 MHz Bandwidth

		PCC							SCC							Power	
	Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
SCC lower	CA_41C	LTE B41 PC2	20	41055	2636.5	QPSK	1	0	LTE B41 PC2	20	40857	2616.7	QPSK	1	99	26.27	26.21

Table 9-36
LTE Band 41 PC2 Measured P_{Limit} for Free - 20 MHz Bandwidth

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	22.95	22.74	23.90	**24.12**	23.75	0	0
	1	50	22.90	22.71	23.87	24.03	23.66		0
	1	99	22.83	22.69	23.76	23.99	23.47		0
	50	0	22.89	22.74	23.89	**24.05**	23.70	0-1	0
	50	25	22.87	22.71	23.86	24.01	23.67		0
	50	50	22.84	22.68	23.82	24.02	23.60		0
	100	0	22.86	22.71	23.85	24.01	23.70		0
16QAM	1	0	23.12	23.21	24.18	24.31	23.88	0-1	0
	1	50	23.09	23.17	24.13	24.14	23.81		0
	1	99	23.06	23.09	24.08	24.20	23.73		0
	50	0	22.90	22.74	23.90	24.05	23.72	0-2	0
	50	25	22.88	22.71	23.89	24.02	23.69		0
	50	50	22.85	22.68	23.85	23.98	23.63		0
	100	0	22.89	22.75	23.90	24.05	23.70		0
64QAM	1	0	23.26	22.98	24.01	24.22	23.96	0-2	0
	1	50	23.21	22.93	23.95	24.19	23.88		0
	1	99	23.19	22.86	23.90	24.12	23.82		0
	50	0	22.07	22.03	22.98	23.05	22.73	0-3	0.6
	50	25	22.08	22.05	22.92	23.03	22.69		0.6
	50	50	22.06	22.03	22.88	22.99	22.63		0.6
	100	0	22.04	22.06	22.91	23.00	22.70		0.6
256QAM	1	0	20.08	20.01	21.10	21.13	20.81	0-5	2.6
	1	50	20.05	20.07	21.07	21.05	20.73		2.6
	1	99	20.00	20.02	20.97	20.99	20.65		2.6
	50	0	20.10	20.07	20.90	20.98	20.68		2.6
	50	25	20.04	20.08	20.82	20.96	20.63		2.6
	50	50	20.02	20.03	20.79	20.94	20.59		2.6
	100	0	20.01	20.01	20.83	20.93	20.52		2.6

Table 9-37
LTE Band 41 PC2 Uplink Carier Aggregation Measured P_{Limit} for Free - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	41055	2636.5	QPSK	1	0	LTE B41 PC2	20	40857	2616.7	QPSK	1	99	24.26	24.12

Table 9-38
LTE Band 41 PC2 Measured P_{Limit} for Hotspot Mode - 20 MHz Bandwidth

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	21.55	21.46	22.64	**22.76**	22.47	0	0
	1	50	21.51	21.35	22.57	22.66	22.34		0
	1	99	21.53	21.33	22.54	22.55	22.32		0
	50	0	21.52	21.39	22.59	**22.67**	22.41	0-1	0
	50	25	21.49	21.37	22.57	22.58	22.36		0
	50	50	21.47	21.31	22.54	22.60	22.32		0
	100	0	21.48	21.35	22.56	22.64	22.38		0
16QAM	1	0	21.53	21.92	22.69	22.97	22.68	0-1	0
	1	50	21.43	21.73	22.65	22.86	22.52		0
	1	99	21.43	21.70	22.70	22.80	22.50		0
	50	0	21.51	21.43	22.62	22.77	22.42		0
	50	25	21.48	21.38	22.60	22.72	22.37		0
	50	50	21.47	21.35	22.57	22.69	22.33		0
	100	0	21.54	21.39	22.63	22.78	22.39		0
64QAM	1	0	21.86	21.34	22.83	23.01	22.54		0
	1	50	21.77	21.32	22.67	22.87	22.38		0
	1	99	21.76	21.15	22.67	22.82	22.35		0
	50	0	21.58	21.45	22.65	22.83	22.44		0
	50	25	21.56	21.41	22.63	22.79	22.40		0
	50	50	21.52	21.37	22.60	22.74	22.35		0
	100	0	21.52	21.39	22.59	22.77	22.40		0
256QAM	1	0	20.15	20.06	21.35	21.28	20.87		1.1
	1	50	20.09	20.02	21.02	21.22	20.81		1.1
	1	99	20.03	20.04	20.96	21.17	20.70		1.1
	50	0	20.08	20.06	21.00	21.18	20.97		1.1
	50	25	20.04	20.03	20.96	21.16	20.90		1.1
	50	50	20.03	20.01	20.94	21.14	20.89		1.1
	100	0	20.01	20.01	20.92	21.08	20.82		1.1

Table 9-39
LTE Band 41 PC2 Uplink Carrier Aggregation Measured P_{Limit} for Hotspot Mode - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	41055	2636.5	QPSK	50	0	LTE B41 PC2	20	40857	2616.7	QPSK	50	50	22.93	22.67

9.3.1 LTE Band 41 PC2 Antenna F

Table 9-40
LTE Band 41 PC2 Measured P_{Limit} for Free - 20 MHz Bandwidth

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	22.46	22.37	22.82	22.86	**22.99**	0	0
	1	50	22.75	22.23	22.65	22.72	22.97		0
	1	99	22.72	22.17	22.55	22.68	22.97		0
	50	0	22.97	22.33	22.81	22.79	23.12	0-1	0
	50	25	22.93	22.30	22.74	22.73	**23.13**		0
	50	50	22.89	22.25	22.66	22.69	23.10		0
	100	0	22.95	22.27	22.74	22.73	22.98		0
16QAM	1	0	22.95	22.71	23.03	23.00	23.30	0-1	0
	1	50	22.73	22.57	22.85	23.17	23.25		0
	1	99	22.67	22.48	22.74	23.11	23.22		0
	50	0	22.27	21.61	22.11	22.10	22.47	0-2	0.3
	50	25	22.21	21.55	22.02	22.05	22.44		0.3
	50	50	22.16	21.52	21.95	22.00	22.42		0.3
	100	0	22.24	21.57	22.05	22.05	22.46		0.3
64QAM	1	0	22.60	21.92	22.46	22.38	22.41	0-2	0.3
	1	50	22.49	21.76	22.27	22.22	22.35		0.3
	1	99	22.40	21.69	22.14	22.17	22.31		0.3
	50	0	21.29	20.64	21.15	21.12	21.51	0-3	1.3
	50	25	21.24	20.59	21.06	21.07	21.50		1.3
	50	50	21.19	20.54	20.99	21.03	21.45		1.3
	100	0	21.19	20.56	21.01	21.03	21.45		1.3
256QAM	1	0	19.43	18.79	19.14	19.10	19.50	0-5	3.3
	1	50	19.23	18.58	18.90	18.92	19.38		3.3
	1	99	19.18	18.55	18.80	18.91	19.38		3.3
	50	0	19.32	18.67	19.16	19.13	19.53		3.3
	50	25	19.27	18.61	19.08	19.07	19.50		3.3
	50	50	19.22	18.58	19.01	19.04	19.47		3.3
	100	0	19.17	18.51	18.99	18.98	19.39		3.3

Table 9-41
LTE Band 41 PC2 Uplink Carrier Aggregation Measured P_{Limit} for Free - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	41490	2680.0	QPSK	50	0	LTE B41 PC2	20	41292	2660.2	QPSK	50	50	23.05	23.12

Table 9-42
LTE Band 41 PC2 Measured P_{Limit} for Hotspot Mode or RCV Active - 20 MHz Bandwidth

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	21.50	20.90	21.35	21.37	**21.60**	0	0
	1	50	21.40	20.75	21.16	21.22	21.55		0
	1	99	21.35	20.69	21.05	21.20	21.52		0
	50	0	21.50	20.81	21.28	21.27	**21.60**	0-1	0
	50	25	21.43	20.76	21.21	21.21	21.58		0
	50	50	21.40	20.72	21.14	21.17	21.56		0
	100	0	21.44	20.75	21.19	21.20	21.59		0
16QAM	1	0	21.74	21.33	21.56	21.50	21.77	0-1	0
	1	50	21.61	20.85	21.37	21.36	21.71		0
	1	99	21.53	20.79	21.25	21.30	21.66		0
	50	0	21.52	20.84	21.30	21.27	21.64	0-2	0
	50	25	21.46	20.80	21.22	21.22	21.63		0
	50	50	21.42	20.76	21.14	21.18	21.59		0
	100	0	21.46	20.80	21.25	21.26	21.67		0
64QAM	1	0	21.74	20.89	21.60	21.39	21.88	0-2	0
	1	50	21.56	20.68	21.61	21.34	21.82		0
	1	99	21.53	20.66	21.48	21.30	21.77		0
	50	0	21.29	20.62	21.14	21.10	21.51	0-3	0
	50	25	21.26	20.60	21.06	21.05	21.50		0
	50	50	21.21	20.55	20.99	21.01	21.46		0
	100	0	21.20	20.55	21.02	21.02	21.42		0
256QAM	1	0	19.37	18.80	19.15	19.06	19.51	0-5	1.8
	1	50	19.14	18.63	18.91	18.76	19.42		1.8
	1	99	19.13	18.55	18.81	18.75	19.39		1.8
	50	0	19.35	18.86	19.18	19.13	19.53		1.8
	50	25	19.30	18.80	19.09	19.08	19.50		1.8
	50	50	19.25	18.77	19.02	19.04	19.47		1.8
	100	0	19.20	18.73	19.00	19.00	19.39		1.8

Table 9-43
LTE Band 41 PC2 Uplink Carrier Aggregation Measured P_{Limit} for Hotspot Mode or RCV Active - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	41490	2680.0	QPSK	50	0	LTE B41 PC2	20	41292	2660.2	QPSK	50	50	21.65	21.60

9.3.1 LTE Band 48

Table 9-44
LTE Band 48 Measured P_{Limit} for Free, or Hotspot Mode - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	20.82	19.52	19.76	20.23	0	0
	1	50	20.64	19.50	19.72	20.26		0
	1	99	**20.86**	19.62	19.90	20.44		0
	50	0	20.59	19.74	20.08	20.22	0-1	0
	50	25	20.58	19.74	20.13	20.21		0
	50	50	**20.86**	19.81	20.38	20.58		0
	100	0	20.75	19.58	20.13	20.33		0
16QAM	1	0	20.38	19.33	19.61	20.24	0-1	0
	1	50	20.28	19.29	19.55	20.19		0
	1	99	20.50	19.37	19.75	20.39		0
	50	0	19.60	18.57	19.10	19.33	0-2	1
	50	25	19.62	18.63	19.17	19.32		1
	50	50	19.63	18.56	19.19	19.29		1
	100	0	19.59	18.41	19.12	19.17		1
64QAM	1	0	18.97	18.38	19.00	18.95	0-2	1
	1	50	19.00	18.42	19.04	18.65		1
	1	99	19.05	18.55	19.14	18.58		1
	50	0	18.52	17.51	18.09	18.23	0-3	2
	50	25	18.52	17.58	18.13	18.32		2
	50	50	18.61	17.60	18.17	18.30		2
	100	0	18.67	17.46	18.16	18.26		2
256QAM	1	0	16.66	15.09	16.32	15.71	0-5	4
	1	50	16.81	15.10	16.31	15.74		4
	1	99	16.55	15.23	16.44	15.82		4
	50	0	16.58	15.41	15.98	16.14		4
	50	25	16.58	15.48	16.12	16.13		4
	50	50	16.63	15.46	16.13	16.13		4
	100	0	16.52	15.44	16.02	16.12		4

Table 9-45
LTE Band 48 Uplink Carrier Aggregation Measured P_{Limit} for Free, or Hotspot Mode - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	55340	3560.0	QPSK	50	50	LTE B48	20	55538	3579.8	QPSK	50	0	20.36	20.86

Table 9-46
LTE Band 48 Measured P_{Limit} for RCV Active - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	19.96	19.04	19.37	19.43	0	0
	1	50	19.95	18.96	19.41	19.44		0
	1	99	**20.21**	19.04	19.52	19.58		0
	50	0	20.11	19.14	19.54	19.59	0-1	0
	50	25	20.14	19.15	19.57	19.62		0
	50	50	**20.17**	19.13	19.61	19.65		0
	100	0	20.09	19.13	19.57	19.63		0
16QAM	1	0	20.02	19.17	19.31	19.51	0-1	0
	1	50	20.01	19.01	19.29	19.43		0
	1	99	20.13	19.04	19.44	19.56		0
	50	0	19.97	19.00	19.52	19.49	0-2	0
	50	25	20.02	19.01	19.45	19.51		0
	50	50	20.03	19.03	19.48	19.55		0
	100	0	20.05	19.07	19.52	19.57		0
64QAM	1	0	20.05	19.14	19.51	19.42	0-2	0
	1	50	19.93	19.02	19.47	19.37		0
	1	99	20.05	19.10	19.56	19.54		0
	50	0	19.00	18.11	18.47	18.55	0-3	1
	50	25	19.04	18.03	18.51	18.56		1
	50	50	19.06	18.06	18.52	18.58		1
	100	0	19.00	18.02	18.46	18.53		1
256QAM	1	0	16.76	15.93	16.23	16.34	0-5	3
	1	50	16.62	15.79	16.12	16.32		3
	1	99	16.77	15.87	16.31	16.45		3
	50	0	17.00	16.07	16.44	16.50		3
	50	25	17.04	16.06	16.50	16.56		3
	50	50	17.06	16.07	16.53	16.60		3
	100	0	16.97	16.02	16.44	16.52		3

Table 9-47
LTE Band 48 Uplink Carrier Aggregation Measured P_{Limit} for RCV Active - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	55340	3560.0	QPSK	50	50	LTE B48	20	55538	3579.8	QPSK	50	0	19.75	20.17

Figure 9-3
Power Measurement Setup

9.4 NR Conducted Powers

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

Note: Some bands do not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

9.4.1 NR Band n71

Table 9-48
NR Band n71 Measured P_{Max} for Free, RCV Active, or Hotspot Mode - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	24.38	0	0.0
	1	53	**24.56**		0.0
	1	104	24.55		0.0
	50	0	23.45	0-1	1.0
	50	28	**24.48**	0	0.0
	50	56	23.54	0-1	1.0
	100	0	23.42		1.0
DFT-s-OFDM 16QAM	1	1	23.25	0-1	1.0
CP-OFDM QPSK	1	1	22.81	0-1.5	1.5

9.4.2 NR Band n5

Table 9-49
NR Band n5 Measured P_{Max} for Free, RCV Active, or Hotspot Mode - 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	24.60	0	0.0
	1	53	**24.93**		0.0
	1	104	24.44		0.0
	50	0	23.71	0-1	1.0
	50	28	**24.97**	0	0.0
	50	56	23.49	0-1	1.0
	100	0	23.92		1.0
DFT-s-OFDM 16QAM	1	1	23.65	0-1	1.0
CP-OFDM QPSK	1	1	23.39	0-1.5	1.5

9.4.1 NR Band n70

Table 9-50
NR Band n70 Measured P_{Max} for RCV Active - 15 MHz Bandwidth

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	**22.98**	0	0.0
	1	40	22.85		0.0
	1	77	22.87		0.0
	36	0	22.01	0-1	1.0
	36	22	**22.97**	0	0.0
	36	43	21.99	0-1	1.0
	75	0	21.97		1.0
DFT-s-OFDM 16QAM	1	1	21.97	0-1	1.0
CP-OFDM QPSK	1	1	21.42	0-1.5	1.5

Table 9-51
NR Band n70 Measured P_{limit} for Free - 15 MHz Bandwidth

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	20.52	0	0.0
	1	40	20.48		0.0
	1	77	**20.56**		0.0
	36	0	20.59	0-1	0.0
	36	22	**20.61**	0	0.0
	36	43	20.57	0-1	0.0
	75	0	20.54		0.0
DFT-s-OFDM 16QAM	1	1	20.50	0-1	0.0
CP-OFDM QPSK	1	1	20.55	0-1.5	0.0

Table 9-52
NR Band n70 Measured P_{limit} for Hotspot Mode - 15 MHz Bandwidth

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	18.94	0	0.0
	1	40	18.95		0.0
	1	77	**18.99**		0.0
	36	0	19.03	0-1	0.0
	36	22	**19.06**	0	0.0
	36	43	19.04	0-1	0.0
	75	0	18.90		0.0
DFT-s-OFDM 16QAM	1	1	19.03	0-1	0.0
CP-OFDM QPSK	1	1	19.05	0-1.5	0.0

9.4.2 NR Band n66 Antenna B

Table 9-53
NR Band n66 Antenna B Measured P_{limit} for RCV Active - 40 MHz Bandwidth

NR Band n66 40 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	23.39	0	0.0
	1	108	**23.55**		0.0
	1	214	23.34		0.0
	108	0	22.53	0-1	0.5
	108	54	**23.51**	0	0.0
	108	108	22.52	0-1	0.5
	216	0	22.45		0.5
DFT-s-OFDM 16QAM	1	1	22.35	0-1	0.5
CP-OFDM QPSK	1	1	21.90	0-1.5	1.0

Table 9-54
NR Band n66 Antenna B Measured P_{limit} for Hotspot Mode - 40 MHz Bandwidth

NR Band n66 40 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	18.70	0	0.0
	1	108	**18.95**		0.0
	1	214	18.75		0.0
	108	0	18.96	0-1	0.0
	108	54	**19.05**	0	0.0
	108	108	18.90	0-1	0.0
	216	0	18.90		0.0
DFT-s-OFDM 16QAM	1	1	18.98	0-1	0.0
CP-OFDM QPSK	1	1	18.87	0-1.5	0.0

Table 9-55
NR Band n66 Antenna B Measured P_{Limit} for Free - 40 MHz Bandwidth

NR Band n66 40 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	21.25	0	0.0
	1	108	**21.46**		0.0
	1	214	21.23		0.0
	108	0	**21.55**	0-1	0.0
	108	54	21.52	0	0.0
	108	108	21.42	0-1	0.0
	216	0	21.45		0.0
DFT-s-OFDM 16QAM	1	1	21.51	0-1	0.0
CP-OFDM QPSK	1	1	21.46	0-1.5	0.0

9.4.3 NR Band n66 Antenna F

Table 9-56
NR Band n66 Antenna F Measured P_{Limit} for RCV Active, or Hotspot Mode – 40 MHz Bandwidth

NR Band n66 40 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	18.87	0	0.0
	1	108	**19.02**		0.0
	1	214	18.78		0.0
	108	0	18.94	0-1	0.0
	108	54	**19.00**	0	0.0
	108	108	18.94	0-1	0.0
	216	0	18.96		0.0
DFT-s-OFDM 16QAM	1	1	18.96	0-1	0.0
CP-OFDM QPSK	1	1	18.96	0-1.5	0.0

Table 9-57
NR Band n66 Antenna F Measured P_{Limit} for Free– 40 MHz Bandwidth

NR Band n66 40 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	20.16	0	0.0
	1	108	**20.21**		0.0
	1	214	20.11		0.0
	108	0	20.17	0-1	0.0
	108	54	**20.27**	0	0.0
	108	108	20.24	0-1	0.0
	216	0	20.20		0.0
DFT-s-OFDM 16QAM	1	1	20.15	0-1	0.0
CP-OFDM QPSK	1	1	20.22	0-1.5	0.0

9.4.1 NR Band n25 Antenna B

Table 9-58
NR Band n25 Antenna B Measured P_{Max} for RCV Active - 40 MHz Bandwidth

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	23.44	0	0.0
	1	108	**23.48**		0.0
	1	214	23.20		0.0
	108	0	22.52	0-1	1.0
	108	54	**23.45**	0	0.0
	108	108	22.43	0-1	1.0
	216	0	22.44		1.0
DFT-s-OFDM 16QAM	1	1	22.59	0-1	1.0
CP-OFDM QPSK	1	1	21.92	0-1.5	1.5

Table 9-59
NR Band n25 Antenna B Measured P_{limit} for Hotspot Mode - 40 MHz Bandwidth

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	**18.43**	0	0.0
	1	108	18.41		0.0
	1	214	18.22		0.0
	108	0	**18.41**	0-1	0.0
	108	54	18.35	0	0.0
	108	108	18.25	0-1	0.0
	216	0	18.30		0.0
DFT-s-OFDM 16QAM	1	1	18.42	0-1	0.0
CP-OFDM QPSK	1	1	18.50	0-1.5	0.0

Table 9-60
NR Band n25 Antenna B Measured P_{Limit} for Free - 40 MHz Bandwidth

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	21.33	0	0.0
	1	108	**21.44**		0.0
	1	214	21.08		0.0
	108	0	**21.38**	0-1	0.0
	108	54	21.34	0	0.0
	108	108	21.32	0-1	0.0
	216	0	21.33		0.0
DFT-s-OFDM 16QAM	1	1	21.39	0-1	0.0
CP-OFDM QPSK	1	1	21.39	0-1.5	0.0

9.4.2 NR Band n25 Antenna F

Table 9-61
NR Band n25 Antenna F Measured P_{Limit} for RCV Active, or Hotspot Mode – 40 MHz Bandwidth

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	18.52	0	0.0
	1	108	**18.67**		0.0
	1	214	18.23		0.0
	108	0	18.60	0-1	0.0
	108	54	**18.62**	0	0.0
	108	108	18.40	0-1	0.0
	216	0	18.59		0.0
DFT-s-OFDM 16QAM	1	1	18.54	0-1	0.0
CP-OFDM QPSK	1	1	18.59	0-1.5	0.0

Table 9-62
NR Band n25 Antenna F Measured P_{Limit} for Free– 40 MHz Bandwidth

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	21.06	0	0.0
	1	108	**21.28**		0.0
	1	214	21.17		0.0
	108	0	21.16	0-1	0.0
	108	54	**21.28**	0	0.0
	108	108	21.25	0-1	0.0
	216	0	21.23		0.0
DFT-s-OFDM 16QAM	1	1	21.25	0-1	0.0
CP-OFDM QPSK	1	1	21.07	0-1.5	0.3

9.4.3 NR Band n30 Antenna B

Table 9-63
NR Band n30 Antenna B Measured P_{Max} for RCV Active - 10 MHz Bandwidth

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	22.44	0	0.0
	1	26	**22.56**		0.0
	1	50	22.44		0.0
	25	0	21.50	0-1	1.0
	25	14	**22.47**	0	0.0
	25	27	21.48	0-1	1.0
	50	0	21.48		1.0
DFT-s-OFDM 16QAM	1	1	21.50	0-1	1.0
CP-OFDM QPSK	1	1	20.93	0-1.5	1.5

Table 9-64
NR Band n30 Antenna B Measured P_{limit} for Hotspot Mode - 10 MHz Bandwidth

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	18.17	0	0.0
	1	26	**18.24**		0.0
	1	50	18.17		0.0
	25	0	**18.26**	0-1	0.0
	25	14	18.22	0	0.0
	25	27	18.21	0-1	0.0
	50	0	18.20		0.0
DFT-s-OFDM 16QAM	1	1	18.21	0-1	0.0
CP-OFDM QPSK	1	1	18.22	0-1.5	0.0

Table 9-65
NR Band n30 Antenna B Measured P_{Limit} for Free - 10 MHz Bandwidth

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	**20.34**	0	0.0
	1	26	20.31		0.0
	1	50	20.32		0.0
	25	0	**20.34**	0-1	0.0
	25	14	20.33	0	0.0
	25	27	20.33	0-1	0.0
	50	0	20.32		0.0
DFT-s-OFDM 16QAM	1	1	20.45	0-1	0.0
CP-OFDM QPSK	1	1	20.34	0-1.5	0.0

9.4.4 NR Band n30 Antenna F

Table 9-66
NR Band n30 Antenna F Measured P_{Limit} for RCV Active, or Hotspot Mode – 10 MHz Bandwidth

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	18.41	0	0.0
	1	26	**18.59**		0.0
	1	50	18.58		0.0
	25	0	18.45	0-1	0.0
	25	14	18.53	0	0.0
	25	27	**18.57**	0-1	0.0
	50	0	18.55		0.0
DFT-s-OFDM 16QAM	1	1	18.45	0-1	0.0
CP-OFDM QPSK	1	1	18.51	0-1.5	0.0

Table 9-67
NR Band n30 Antenna F Measured P_{Limit} for Free– 10 MHz Bandwidth

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	19.50	0	0.0
	1	26	**19.64**		0.0
	1	50	19.56		0.0
	25	0	19.53	0-1	0.0
	25	14	19.57	0	0.0
	25	27	**19.60**	0-1	0.0
	50	0	19.54		0.0
DFT-s-OFDM 16QAM	1	1	19.38	0-1	0.0
CP-OFDM QPSK	1	1	19.52	0-1.5	0.0

9.4.5 NR Band n41 Antenna B

Table 9-68
NR Band n41 Antenna B Measured P_{Limit} for RCV Active – 100 MHz Bandwidth

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	23.79	0	0.0
	1	137	**24.70**		0.0
	1	271	24.45		0.0
	135	0	24.42	0-1	0.0
	135	69	**24.68**	0	0.0
	135	138	24.58	0-1	0.0
	270	0	24.53		0.0
DFT-s-OFDM 16QAM	1	1	24.14	0-1	0.0
CP-OFDM QPSK	1	1	24.06	0-1.5	0.0

Table 9-69
NR Band n41 Antenna B Measured P_{Limit} for Hotspot Mode – 100 MHz Bandwidth

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	16.86	0	0.0
	1	137	**17.32**		0.0
	1	271	17.17		0.0
	135	0	17.21	0-1	0.0
	135	69	**17.28**	0	0.0
	135	138	17.17	0-1	0.0
	270	0	17.25		0.0
DFT-s-OFDM 16QAM	1	1	16.85	0-1	0.0
CP-OFDM QPSK	1	1	16.82	0-1.5	0.0

Table 9-70
NR Band n41 Antenna B Measured P_{Limit} for Free – 100 MHz Bandwidth

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	19.62	0	0.0
	1	137	**20.40**		0.0
	1	271	20.01		0.0
	135	0	20.09	0-1	0.0
	135	69	**20.38**	0	0.0
	135	138	20.25	0-1	0.0
	270	0	20.28		0.0
DFT-s-OFDM 16QAM	1	1	19.90	0-1	0.0
CP-OFDM QPSK	1	1	19.85	0-1.5	0.0

9.4.1 NR Band n41 Antenna F

Table 9-71
NR Band n41 Antenna F Measured P_{Limit} for Free – 100 MHz Bandwidth

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	18.53	0	0.0
	1	137	18.74		0.0
	1	271	**19.17**		0.0
	135	0	18.91	0-1	0.0
	135	69	**19.02**	0	0.0
	135	138	19.01	0-1	0.0
	270	0	18.99		0.0
DFT-s-OFDM 16QAM	1	1	18.93	0-1	0.0
CP-OFDM QPSK	1	1	18.80	0-1.5	0.0

Table 9-72
NR Band n41 Antenna F Measured P_{Limit} for RCV Active, or Hotspot Mode – 100 MHz Bandwidth

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	17.50	0	0.0
	1	137	17.84		0.0
	1	271	**18.05**		0.0
	135	0	17.79	0-1	0.0
	135	69	**17.80**	0	0.0
	135	138	17.77	0-1	0.0
	270	0	17.76		0.0
DFT-s-OFDM 16QAM	1	1	17.81	0-1	0.0
CP-OFDM QPSK	1	1	17.71	0-1.5	0.0

9.4.1 NR Band n48 Antenna G

Table 9-73
NR Band n48 Antenna G Measured P_{Limit} for Free, RCV Active, Hotspot Mode– 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM QPSK	1	1	16.32	16.73	17.14	0	0.0
	1	53	16.48	16.74	17.33		0.0
	1	104	16.70	17.02	**17.40**		0.0
	50	0	16.41	16.77	17.17	0-1	0.0
	50	28	16.51	16.84	17.26	0	0.0
	50	56	16.46	16.98	**17.37**	0-1	0.0
	100	0	16.48	16.82	17.20		0.0
DFT-s-OFDM 16QAM	1	1	16.34	16.52	17.01	0-1	0.0
CP-OFDM QPSK	1	1	16.37	16.45	17.06	0-1.5	0.0

9.4.1 NR Band n48 Antenna B, K, L

Table 9-74
NR Band n48 Antenna B, K, L Measured P_{Limit} for Free, RCV Active, Hotspot Mode – 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth			
	Channel		
Antenna	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)
	Conducted Power [dBm]		
SRS #2 Ant B	12.80	13.15	13.36
SRS #3 Ant K	14.05	14.40	14.28
SRS #4 Ant L	11.40	11.74	12.05

9.4.2 NR Band n77 DoD Antenna G

Table 9-75
NR Band n77 DoD Antenna G Measured P_{Limit} for Free, or Hotspot Mode – 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	17.14	0	0.0
	1	137	**17.29**		0.0
	1	271	16.89		0.0
	135	0	17.20	0-1	0.0
	135	69	**17.21**	0	0.0
	135	138	17.17	0-1	0.0
	270	0	17.17		0.0
DFT-s-OFDM 16QAM	1	1	17.06	0-1	0.0
CP-OFDM QPSK	1	1	17.12	0-1.5	0.0

Table 9-76
NR Band n77 DoD Antenna G Measured P_{Limit} for RCV Active – 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	16.04	0	0.0
	1	137	**16.06**		0.0
	1	271	15.64		0.0
	135	0	16.03	0-1	0.0
	135	69	**16.05**	0	0.0
	135	138	15.98	0-1	0.0
	270	0	15.86		0.0
DFT-s-OFDM 16QAM	1	1	15.99	0-1	0.0
CP-OFDM QPSK	1	1	15.90	0-1.5	0.0

9.4.3 NR Band n77 DoD Antenna B, K, L

Table 9-77
NR Band n77 DoD Antenna B, K, L Measured P_{Limit} for Free, RCV Active, or Hotspot Mode – 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth	
	Channel
Antenna	633334 (3500.01 MHz)
	Conducted Power [dBm]
SRS #2 Ant B	**11.81**
SRS #3 Ant K	**14.31**
SRS #4 Ant L	**12.70**

9.4.4 NR Band n77 C-Band Antenna G

Table 9-78
NR Band n77 C-Band Antenna G Measured P_{Limit} for Free, or Hotspot Mode– 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM QPSK	1	1	17.36	17.53	0	0.0
	1	137	**17.54**	17.39		0.0
	1	271	17.37	16.65		0.0
	135	0	17.50	17.47	0-1	0.0
	135	69	**17.57**	17.29	0	0.0
	135	138	17.49	16.94	0-1	0.0
	270	0	17.52	17.26		0.0
DFT-s-OFDM 16QAM	1	1	17.55	17.50	0-1	0.0
CP-OFDM QPSK	1	1	17.46	17.53	0-1.5	0.0

Table 9-79
NR Band n77 C-Band Antenna G Measured P_{Limit} for RCV Active – 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM QPSK	1	1	16.29	16.41	0	0.0
	1	137	**16.42**	16.12		0.0
	1	271	16.06	15.57		0.0
	135	0	16.31	16.32	0-1	0.0
	135	69	**16.43**	16.10	0	0.0
	135	138	16.23	15.74	0-1	0.0
	270	0	16.28	16.10		0.0
DFT-s-OFDM 16QAM	1	1	16.32	16.40	0-1	0.0
CP-OFDM QPSK	1	1	16.36	16.34	0-1.5	0.0

9.4.5 NR Band n77 C-Band Antenna B, K, L

Table 9-80
NR Band n77 C-Band Antenna B, K, L Measured P_{Limit} for Free, RCV Active, or Hotspot Mode – 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
Antenna	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
SRS #2 Ant B	**12.71**	12.19
SRS #3 Ant K	14.65	**15.30**
SRS #4 Ant L	**13.71**	12.65

Figure 9-4
Power Measurement Setup – NR FDD

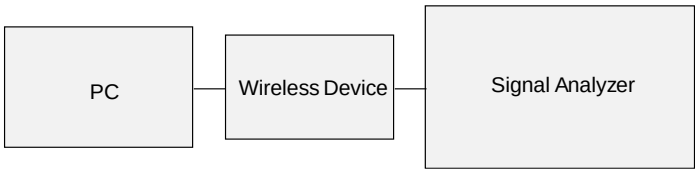


Figure 9-5
Power Measurement Setup – NR TDD

9.5 WLAN Conducted Powers

Table 9-81

2.4 GHz WLAN P_{Max} RF Power – Ant I

2.4GHz WIFI (20MHz 802.11b SISO ANT I)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.95
2437	6		17.87
2462	11		17.94
2.4GHz WIFI (20MHz 802.11g SISO ANT I)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.21
2437	6		17.44
2462	11		17.34
2.4GHz WIFI (20MHz 802.11n SISO ANT I)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.14
2437	6		17.64
2462	11		17.25
2.4GHz WIFI (20MHz 802.11ax SISO ANT I)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.62
2437	6		17.93
2462	11		17.79

Table 9-82

2.4 GHz WLAN P_{Max} RF Power – Ant 2

2.4GHz WIFI (20MHz 802.11b SISO ANT F)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.99
2437	6		17.66
2462	11		17.98
2.4GHz WIFI (20MHz 802.11g SISO ANT F)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.83
2437	6		17.13
2462	11		17.85
2.4GHz WIFI (20MHz 802.11n SISO ANT F)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.84
2437	6		17.16
2462	11		17.96
2.4GHz WIFI (20MHz 802.11ax SISO ANT F)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	17.89
2437	6		17.64
2462	11		17.85

Table 9-83
2.4 GHz WLAN P_{Max} Average RF Power – MIMO

2.4GHz WIFI (20MHz 802.11b MIMO)					
Freq [MHz]	Channel	Detector	Conducted Power [dBm]		
			ANT1	ANT2	MIMO
2412	1	Average	17.95	17.94	20.96
2437	6		17.91	17.58	20.76
2462	11		17.56	17.81	20.70
2.4GHz WIFI (20MHz 802.11g MIMO)					
Freq [MHz]	Channel	Detector	Conducted Power [dBm]		
			ANT1	ANT2	MIMO
2412	1	Average	16.29	16.29	19.30
2417	2		17.47	17.26	20.38
2437	6		17.52	17.31	20.43
2462	11		17.29	17.71	20.52
2.4GHz WIFI (20MHz 802.11n MIMO)					
Freq [MHz]	Channel	Detector	Conducted Power [dBm]		
			ANT1	ANT2	MIMO
2412	1	Average	14.17	14.32	17.26
2417	2		17.32	17.18	20.26
2437	6		17.29	17.11	20.21
2462	11		17.22	17.86	20.56
2.4GHz WIFI (20MHz 802.11ax MIMO)					
Freq [MHz]	Channel	Detector	Conducted Power [dBm]		
			ANT1	ANT2	MIMO
2412	1	Average	13.19	13.35	16.28
2417	2		17.42	17.21	20.33
2437	6		17.34	17.15	20.26
2462	11		17.01	17.16	20.10

Table 9-84
2.4 GHz WLAN Reduced Average RF Power for RCV Active – Ant I

2.4GHz WIFI (20MHz 802.11b SISO ANT I)			
Freq. [MHz]	Channel	Detector	Conducted Power [dBm]
2412	1	Average	10.64
2437	6		10.55
2462	11		10.63
2.4GHz WIFI (20MHz 802.11g SISO ANT I)			
Freq. [MHz]	Channel	Detector	Conducted Power [dBm]
2412	1	Average	10.27
2437	6		10.76
2462	11		10.87
2.4GHz WIFI (20MHz 802.11n SISO ANT I)			
Freq. [MHz]	Channel	Detector	Conducted Power [dBm]
2412	1	Average	10.28
2437	6		10.82
2462	11		10.86
2.4GHz WIFI (20MHz 802.11ax SISO ANT I)			
Freq. [MHz]	Channel	Detector	Conducted Power [dBm]
2412	1	Average	10.31
2437	6		10.82
2462	11		10.89

Table 9-85
2.4 GHz WLAN Reduced Average RF Power for RCV Active – Ant F

2.4GHz WIFI (20MHz 802.11b SISO ANT F)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	10.88
2437	6		10.71
2462	11		10.76
2.4GHz WIFI (20MHz 802.11g SISO ANT F)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	10.53
2437	6		10.23
2462	11		10.77
2.4GHz WIFI (20MHz 802.11n SISO ANT F)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	10.51
2437	6		10.23
2462	11		10.73
2.4GHz WIFI (20MHz 802.11ax SISO ANT F)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	10.56
2437	6		10.31
2462	11		10.76

Table 9-86
2.4 GHz WLAN Reduced Average RF Power for RCV Active – MIMO

2.4GHz WIFI (20MHz 802.11b MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
2412	1	Average	10.73	10.80	13.78
2437	6		10.81	10.55	13.69
2462	11		10.51	10.74	13.64
2.4GHz WIFI (20MHz 802.11g MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
2412	1	Average	10.23	10.46	13.36
2437	6		10.47	10.24	13.37
2462	11		10.25	10.91	13.60
2.4GHz WIFI (20MHz 802.11n MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
2412	1	Average	10.26	10.52	13.40
2437	6		10.46	10.53	13.51
2462	11		10.10	10.55	13.34
2.4GHz WIFI (20MHz 802.11ax MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
2412	1	Average	10.26	10.48	13.38
2437	6		10.39	10.54	13.48
2462	11		10.98	10.52	13.77

Table 9-87
5 GHz WLAN Maximum Average RF Power – Ant G

5GHz WIFI (20MHz 802.11a SISO ANT G)				5GHz WIFI (20MHz 802.11n SISO ANT G)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]	Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5180	36	16.84	UNII-1	5180	36	16.89
	5200	40	16.92		5200	40	16.82
	5220	44	16.61		5220	44	16.64
	5240	48	16.92		5240	48	16.95
UNII-2A	5260	52	16.91	UNII-2A	5260	52	16.82
	5280	56	16.95		5280	56	16.94
	5300	60	16.92		5300	60	16.93
	5320	64	16.78		5320	64	16.74
UNII-2C	5500	100	16.98	UNII-2C	5500	100	16.97
	5600	120	16.94		5600	120	16.77
	5620	124	16.71		5620	124	16.64
	5720	144	16.94		5720	144	16.74
UNII-3	5745	149	16.74	UNII-3	5745	149	16.56
	5785	157	16.91		5785	157	16.72
	5825	165	16.97		5825	165	16.96
5GHz WIFI (20MHz 802.11ac SISO ANT G)				5GHz WIFI (20MHz 802.11ax SISO ANT G)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]	Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5180	36	16.81	UNII-1	5180	36	16.51
	5200	40	16.89		5200	40	16.85
	5220	44	16.54		5220	44	16.65
	5240	48	16.95		5240	48	16.96
UNII-2A	5260	52	16.88	UNII-2A	5260	52	16.81
	5280	56	16.93		5280	56	16.94
	5300	60	16.73		5300	60	16.72
	5320	64	16.76		5320	64	16.68
UNII-2C	5500	100	16.98	UNII-2C	5500	100	16.92
	5600	120	16.78		5620	124	16.56
	5620	124	16.68		5640	128	16.72
	5720	144	16.73		5720	144	16.76
UNII-3	5745	149	16.64	UNII-3	5745	149	16.68
	5785	157	16.82		5785	157	16.79
	5825	165	16.97		5825	165	16.95

Table 9-88
5 GHz WLAN Maximum Average RF Power – Ant M

5GHz WIFI (20MHz 802.11a SISO ANT M)				5GHz WIFI (20MHz 802.11n SISO ANT M)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]	Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5180	36	16.78	UNII-1	5180	36	16.78
	5200	40	16.81		5200	40	16.85
	5220	44	16.85		5220	44	16.91
	5240	48	16.97		5240	48	16.96
UNII-2A	5260	52	16.95	UNII-2A	5260	52	16.78
	5280	56	16.98		5280	56	16.95
	5300	60	16.97		5300	60	16.81
	5320	64	16.85		5320	64	16.64
UNII-2C	5500	100	16.95	UNII-2C	5500	100	16.94
	5600	120	16.96		5600	120	16.81
	5620	124	16.89		5620	124	16.88
	5720	144	16.96		5720	144	16.94
UNII-3	5745	149	16.98	UNII-3	5745	149	16.94
	5785	157	16.97		5785	157	16.97
	5825	165	16.28		5825	165	16.21

5GHz WIFI (20MHz 802.11ac SISO ANT M)				5GHz WIFI (20MHz 802.11ax SISO ANT M)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]	Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5180	36	16.82	UNII-1	5180	36	16.78
	5200	40	16.85		5200	40	16.86
	5220	44	16.89		5220	44	16.82
	5240	48	16.95		5240	48	16.96
UNII-2A	5260	52	16.77	UNII-2A	5260	52	16.80
	5280	56	16.91		5280	56	16.93
	5300	60	16.78		5300	60	16.75
	5320	64	16.59		5320	64	16.48
UNII-2C	5500	100	16.92	UNII-2C	5500	100	16.88
	5600	120	16.79		5600	120	16.71
	5620	124	16.89		5620	124	16.83
	5720	144	16.54		5720	144	16.52
UNII-3	5745	149	16.92	UNII-3	5745	149	16.89
	5785	157	16.92		5785	157	16.86
	5825	165	16.24		5825	165	16.15

Table 9-89
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz WIFI (20MHz 802.11a MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5180	36	15.96	16.11	19.05
	5200	40	16.11	16.23	19.18
	5220	44	16.18	15.92	19.06
	5240	48	16.49	15.51	19.04
UNII-2A	5260	52	16.34	15.63	19.01
	5280	56	16.73	15.62	19.22
	5300	60	16.43	15.67	19.08
	5320	64	16.28	15.71	19.02
UNII-2C	5500	100	16.84	16.49	19.68
	5600	120	16.32	16.21	19.28
	5620	124	16.12	15.93	19.04
	5720	144	16.45	15.54	19.03
UNII-3	5745	149	16.25	16.02	19.15
	5785	157	16.81	15.41	19.18
	5825	165	16.91	15.50	19.27

Table 9-90
5 GHz WLAN Reduced Average RF Power for RCV Active – Ant G

5GHz WIFI (80MHz 802.11ac SISO ANT1)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5210	42	13.68
UNII-2A	5290	58	13.82
UNII-2C	5530	106	13.85
	5610	122	13.41
	5690	138	13.33
UNII-3	5775	155	13.51

Table 9-91
5 GHz WLAN Reduced Average RF Power for RCV Active – Ant M

5GHz WIFI (80MHz 802.11ac SISO ANT2)			
Band	**Freq. [MHz]**	**Channel**	**Avg. Conducted Power [dBm]**
UNII-1	5210	42	13.90
UNII-2A	5290	58	13.58
UNII-2C	5530	106	13.46
	5610	122	13.44
	5690	138	13.76
UNII-3	5775	155	13.46

Table 9-92
5 GHz WLAN Reduced Average RF Power for RCV Active – MIMO

5GHz WIFI (80MHz 802.11ac MIMO)					
Band	**Freq [MHz]**	**Channel**	**Avg. Conducted Powers [dBm]**		
			ANT1	**ANT2**	**MIMO**
UNII-1	5210	42	13.71	13.54	16.64
UNII-2A	5290	58	13.98	13.49	16.75
UNII-2C	5530	106	13.97	13.29	16.65
	5610	122	13.74	13.75	16.76
	5690	138	13.41	13.72	16.58
UNII-3	5775	155	13.56	13.71	16.65

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

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

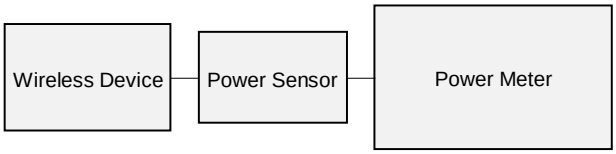


Figure 9-6
Power Measurement Setup

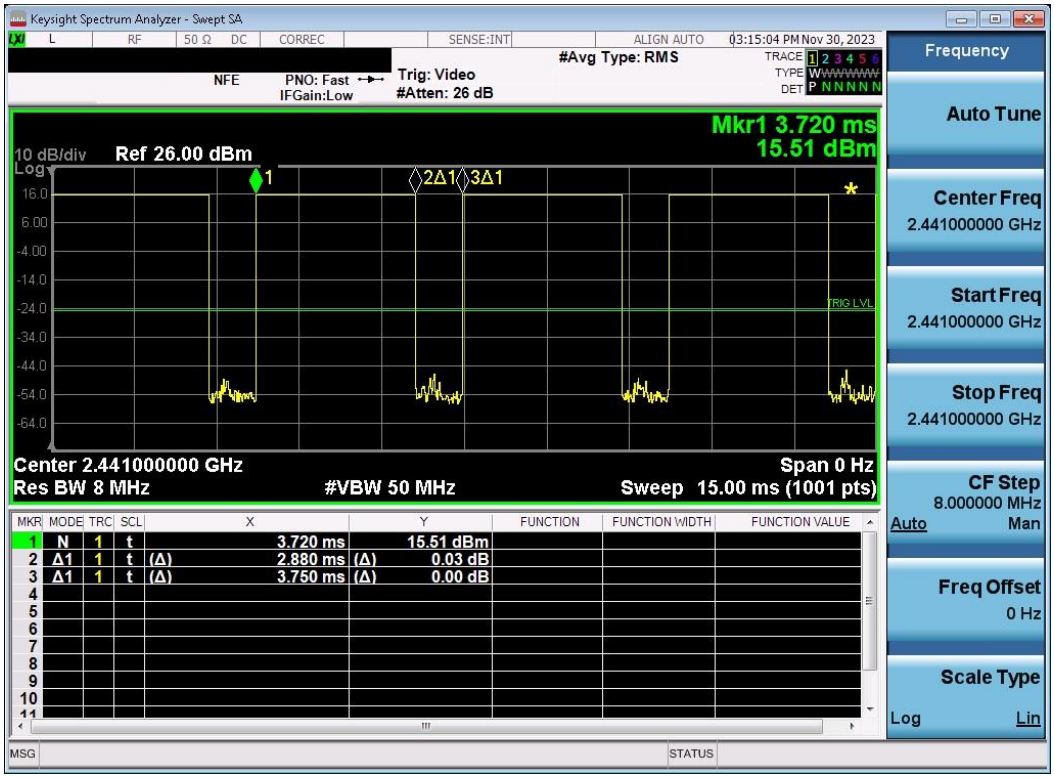
9.6

9.7 Bluetooth Conducted Powers

Table 9-93
Bluetooth Maximum Average RF Power– Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Power Scheme	Channel No.	Avg Conducted Power	
				[dBm]	[mW]
2402	1.0	ePA	0	15.16	32.832
2441	1.0	ePA	39	15.58	36.158
2480	1.0	ePA	78	14.47	27.990
2402	2.0	ePA	0	10.35	10.837
2441	2.0	ePA	39	10.87	12.225
2480	2.0	ePA	78	9.36	8.621
2402	3.0	ePA	0	10.43	11.051
2441	3.0	ePA	39	10.93	12.399
2480	3.0	ePA	78	9.42	8.747

Figure 9-7
Bluetooth Antenna 1 Transmission Plot



Equation 9-1
Bluetooth Antenna 1 Duty Cycle Calculation

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

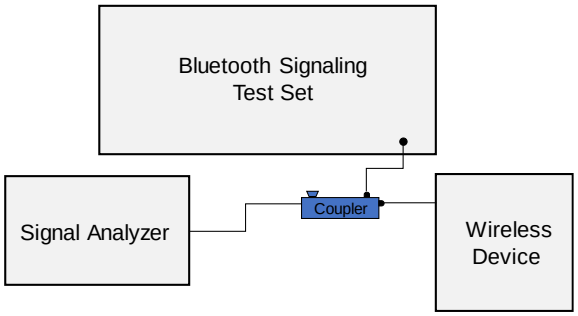


Figure 9-8
Power Measurement Setup

10 SYSTEM VERIFICATION

10.1 Tissue Verification

Table 10-1
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
12/22/2023	30 Head	20.5	12	0.748	52.459	0.750	55.000	-0.27%	-4.62%
			13	0.748	52.891	0.750	55.000	-0.27%	-3.83%
			14	0.748	53.277	0.750	55.000	-0.27%	-3.13%
11/09/2023	750 Head	22.1	680	0.865	41.836	0.888	42.305	-2.59%	-1.11%
			695	0.870	41.788	0.889	42.227	-2.14%	-1.04%
			700	0.872	41.773	0.889	42.201	-1.91%	-1.01%
			710	0.876	41.738	0.890	42.149	-1.57%	-0.98%
			725	0.881	41.684	0.891	42.071	-1.12%	-0.92%
			750	0.889	41.613	0.894	41.942	-0.56%	-0.78%
			770	0.896	41.550	0.895	41.838	0.11%	-0.69%
			785	0.902	41.509	0.896	41.760	0.67%	-0.60%
			800	0.908	41.465	0.897	41.682	1.23%	-0.52%
11/13/2023	750 Head	22.8	680	0.863	40.361	0.888	42.305	-2.82%	-4.60%
			695	0.868	40.315	0.889	42.227	-2.36%	-4.53%
			700	0.870	40.300	0.889	42.201	-2.14%	-4.50%
			710	0.873	40.268	0.890	42.149	-1.91%	-4.46%
			725	0.878	40.220	0.891	42.071	-1.46%	-4.40%
			750	0.887	40.164	0.894	41.942	-0.78%	-4.24%
			770	0.894	40.111	0.895	41.838	-0.11%	-4.13%
			785	0.900	40.066	0.896	41.760	0.45%	-4.06%
			800	0.905	40.014	0.897	41.682	0.89%	-4.00%
11/13/2023	750 Head	20.9	680	0.869	41.648	0.888	42.305	-2.14%	-1.55%
			695	0.874	41.604	0.889	42.227	-1.69%	-1.48%
			700	0.875	41.589	0.889	42.201	-1.57%	-1.45%
			710	0.879	41.557	0.890	42.149	-1.24%	-1.40%
			725	0.884	41.503	0.891	42.071	-0.79%	-1.35%
			750	0.893	41.439	0.894	41.942	-0.11%	-1.20%
			770	0.901	41.386	0.895	41.838	0.67%	-1.08%
			785	0.907	41.341	0.896	41.760	1.23%	-1.00%
			800	0.912	41.288	0.897	41.682	1.67%	-0.95%
11/24/2023	750 Head	20.6	680	0.860	41.638	0.888	42.305	-3.15%	-1.58%
			695	0.865	41.590	0.889	42.227	-2.70%	-1.51%
			710	0.871	41.545	0.890	42.149	-2.13%	-1.43%
			725	0.876	41.498	0.891	42.071	-1.68%	-1.36%
			750	0.884	41.433	0.894	41.942	-1.12%	-1.21%
			770	0.892	41.377	0.895	41.838	-0.34%	-1.10%
			785	0.897	41.334	0.896	41.760	0.11%	-1.02%
			800	0.903	41.282	0.897	41.682	0.67%	-0.96%
11/27/2023	750 Head	20.9	680	0.850	41.445	0.888	42.305	-4.28%	-2.03%
			695	0.856	41.399	0.889	42.227	-3.71%	-1.96%
			700	0.858	41.386	0.889	42.201	-3.49%	-1.93%
			710	0.861	41.362	0.890	42.149	-3.26%	-1.87%
			725	0.866	41.320	0.891	42.071	-2.81%	-1.79%
			750	0.874	41.215	0.894	41.942	-2.24%	-1.73%
			770	0.882	41.157	0.895	41.838	-1.45%	-1.63%
			785	0.888	41.126	0.896	41.760	-0.89%	-1.52%
			800	0.893	41.096	0.897	41.682	-0.45%	-1.41%
12/06/2023	750 Head	19.2	680	0.874	41.659	0.888	42.305	-1.58%	-1.53%
			695	0.879	41.612	0.889	42.227	-1.12%	-1.46%
			700	0.880	41.595	0.889	42.201	-1.01%	-1.44%
			710	0.884	41.561	0.890	42.149	-0.67%	-1.40%
			725	0.888	41.518	0.891	42.071	-0.34%	-1.31%
			750	0.899	41.447	0.894	41.942	0.56%	-1.18%
			770	0.908	41.360	0.895	41.838	1.45%	-1.14%
			785	0.914	41.299	0.896	41.760	2.01%	-1.10%
			800	0.919	41.241	0.897	41.682	2.45%	-1.06%
12/13/2023	750 Head	22.0	680	0.862	43.206	0.888	42.305	-2.93%	2.13%
			695	0.867	43.159	0.889	42.227	-2.47%	2.21%
			710	0.871	43.111	0.890	42.149	-2.13%	2.28%
			725	0.876	43.057	0.891	42.071	-1.68%	2.34%
			750	0.885	42.997	0.894	41.942	-1.01%	2.52%
			770	0.893	42.965	0.895	41.838	-0.22%	2.69%
			785	0.898	42.927	0.896	41.760	0.22%	2.79%
			800	0.903	42.872	0.897	41.682	0.67%	2.85%

Table 10-2
Measured Head Tissue Properties (Cont.)

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
11/08/2023	835 Head	21.4	815	0.925	41.068	0.898	41.594	3.01%	-1.26%
			820	0.927	41.052	0.899	41.578	3.11%	-1.27%
			835	0.932	40.988	0.900	41.500	3.56%	-1.23%
			850	0.937	40.925	0.916	41.500	2.29%	-1.39%
11/15/2023	835 Head	21.5	815	0.918	40.794	0.898	41.594	2.23%	-1.92%
			820	0.920	40.776	0.899	41.578	2.34%	-1.93%
			835	0.925	40.727	0.900	41.500	2.78%	-1.86%
			850	0.931	40.684	0.916	41.500	1.64%	-1.97%
11/20/2023	835 Head	20.0	815	0.882	40.197	0.898	41.594	-1.78%	-3.36%
			820	0.884	40.180	0.899	41.578	-1.67%	-3.36%
			835	0.889	40.129	0.900	41.500	-1.22%	-3.30%
			850	0.894	40.092	0.916	41.500	-2.40%	-3.39%
11/20/2023	835 Head	23.3	815	0.923	40.616	0.898	41.594	2.78%	-2.35%
			820	0.924	40.600	0.899	41.578	2.78%	-2.35%
			835	0.928	40.551	0.900	41.500	3.11%	-2.29%
			850	0.933	40.515	0.916	41.500	1.86%	-2.37%
11/22/2023	835 Head	21.1	815	0.907	39.978	0.898	41.594	1.00%	-3.89%
			820	0.909	39.962	0.899	41.578	1.11%	-3.89%
			835	0.915	39.912	0.900	41.500	1.67%	-3.83%
			850	0.920	39.866	0.916	41.500	0.44%	-3.94%
12/06/2023	835 Head	19.2	815	0.924	41.191	0.898	41.594	2.90%	-0.97%
			820	0.925	41.178	0.899	41.578	2.89%	-0.96%
			835	0.931	41.138	0.900	41.500	3.44%	-0.87%
			850	0.938	41.088	0.916	41.500	2.40%	-0.99%
12/13/2023	835 Head	22.0	815	0.908	42.810	0.898	41.594	1.11%	2.92%
			820	0.910	42.786	0.899	41.578	1.22%	2.91%
			835	0.915	42.729	0.900	41.500	1.67%	2.96%
			850	0.920	42.692	0.916	41.500	0.44%	2.87%
11/15/2023	1750 Head	21.8	1700	1.345	39.764	1.343	40.145	0.15%	-0.95%
			1705	1.347	39.755	1.345	40.141	0.15%	-0.96%
			1710	1.350	39.745	1.348	40.136	0.15%	-0.97%
			1720	1.355	39.723	1.354	40.126	0.07%	-1.00%
			1745	1.368	39.673	1.368	40.087	0.00%	-1.03%
			1750	1.370	39.663	1.371	40.079	-0.07%	-1.04%
			1770	1.380	39.620	1.383	40.047	-0.22%	-1.07%
			1790	1.391	39.579	1.394	40.016	-0.22%	-1.09%
11/21/2023	1750 Head	21.1	1700	1.301	38.240	1.343	40.145	-3.13%	-4.75%
			1705	1.304	38.237	1.345	40.141	-3.05%	-4.74%
			1710	1.307	38.233	1.348	40.136	-3.04%	-4.74%
			1720	1.312	38.225	1.354	40.126	-3.10%	-4.74%
			1745	1.327	38.208	1.368	40.087	-3.00%	-4.69%
			1750	1.330	38.203	1.371	40.079	-2.99%	-4.68%
			1770	1.343	38.180	1.383	40.047	-2.89%	-4.66%
			1790	1.357	38.153	1.394	40.016	-2.65%	-4.66%
11/30/2023	1750 Head	21.3	1700	1.347	41.038	1.343	40.145	0.30%	2.22%
			1705	1.349	41.031	1.345	40.141	0.30%	2.22%
			1710	1.352	41.022	1.348	40.136	0.30%	2.21%
			1720	1.357	41.004	1.354	40.126	0.22%	2.19%
			1745	1.371	40.969	1.368	40.087	0.22%	2.20%
			1750	1.373	40.962	1.371	40.079	0.15%	2.20%
			1770	1.384	40.941	1.383	40.047	0.07%	2.23%
			1790	1.394	40.917	1.394	40.016	0.00%	2.25%
12/04/2023	1750 Head	21.1	1700	1.345	38.986	1.343	40.145	0.15%	-2.89%
			1705	1.349	38.965	1.345	40.141	0.30%	-2.93%
			1710	1.354	38.945	1.348	40.136	0.45%	-2.97%
			1720	1.364	38.903	1.354	40.126	0.74%	-3.05%
			1745	1.387	38.788	1.368	40.087	1.39%	-3.24%
			1750	1.392	38.764	1.371	40.079	1.53%	-3.28%
			1770	1.411	38.674	1.383	40.047	2.02%	-3.43%
			1790	1.432	38.593	1.394	40.016	2.73%	-3.56%

Table 10-3
Measured Head Tissue Properties (Cont.)

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
12/11/2023	1750 Head	20.0	1700	1.378	38.627	1.343	40.145	2.61%	-3.78%
			1705	1.383	38.603	1.345	40.141	2.83%	-3.83%
			1710	1.388	38.577	1.348	40.136	2.97%	-3.88%
			1720	1.398	38.525	1.354	40.126	3.25%	-3.99%
			1745	1.423	38.386	1.368	40.087	4.02%	-4.24%
			1750	1.428	38.357	1.371	40.079	4.16%	-4.30%
			1770	1.448	38.250	1.383	40.047	4.70%	-4.49%
12/11/2023	1750 Head	20.0	1700	1.281	39.688	1.343	40.145	-4.62%	-1.14%
			1705	1.283	39.677	1.345	40.141	-4.61%	-1.16%
			1710	1.285	39.667	1.348	40.136	-4.67%	-1.17%
			1720	1.290	39.644	1.354	40.126	-4.73%	-1.20%
			1745	1.303	39.588	1.368	40.087	-4.75%	-1.24%
			1750	1.306	39.579	1.371	40.079	-4.74%	-1.25%
			1770	1.318	39.551	1.383	40.047	-4.70%	-1.24%
			1790	1.330	39.535	1.394	40.016	-4.59%	-1.20%
12/13/2023	1750 Head	21.0	1700	1.365	41.469	1.343	40.145	1.64%	3.30%
			1705	1.370	41.447	1.345	40.141	1.86%	3.25%
			1710	1.375	41.424	1.348	40.136	2.00%	3.21%
			1720	1.385	41.377	1.354	40.126	2.29%	3.12%
			1745	1.412	41.266	1.368	40.087	3.22%	2.94%
			1750	1.417	41.246	1.371	40.079	3.36%	2.91%
			1770	1.437	41.161	1.383	40.047	3.90%	2.78%
			1790	1.457	41.070	1.394	40.016	4.52%	2.63%
11/15/2023	1900 Head	21.8	1850	1.422	39.507	1.400	40.000	1.57%	-1.23%
			1860	1.427	39.499	1.400	40.000	1.93%	-1.25%
			1880	1.440	39.476	1.400	40.000	2.86%	-1.31%
			1900	1.453	39.452	1.400	40.000	3.79%	-1.37%
			1905	1.456	39.447	1.400	40.000	4.00%	-1.38%
			1910	1.459	39.443	1.400	40.000	4.21%	-1.39%
			1920	1.466	39.435	1.400	40.000	4.71%	-1.41%
11/17/2023	1900 Head	21.5	1850	1.410	38.171	1.400	40.000	0.71%	-4.57%
			1860	1.416	38.159	1.400	40.000	1.14%	-4.60%
			1880	1.429	38.141	1.400	40.000	2.07%	-4.65%
			1900	1.442	38.116	1.400	40.000	3.00%	-4.71%
			1905	1.445	38.110	1.400	40.000	3.21%	-4.73%
			1910	1.449	38.103	1.400	40.000	3.50%	-4.74%
			1920	1.455	38.090	1.400	40.000	3.93%	-4.77%
11/20/2023	1900 Head	22.7	1850	1.403	38.780	1.400	40.000	0.21%	-3.05%
			1860	1.407	38.773	1.400	40.000	0.50%	-3.07%
			1880	1.417	38.748	1.400	40.000	1.21%	-3.13%
			1900	1.429	38.697	1.400	40.000	2.07%	-3.26%
			1905	1.433	38.683	1.400	40.000	2.36%	-3.29%
			1910	1.436	38.672	1.400	40.000	2.57%	-3.32%
			1920	1.442	38.653	1.400	40.000	3.00%	-3.37%
11/30/2023	1900 Head	19.9	1850	1.401	40.867	1.400	40.000	0.07%	2.17%
			1860	1.407	40.856	1.400	40.000	0.50%	2.14%
			1880	1.420	40.837	1.400	40.000	1.43%	2.09%
			1900	1.433	40.830	1.400	40.000	2.36%	2.08%
			1905	1.437	40.830	1.400	40.000	2.64%	2.08%
			1910	1.440	40.828	1.400	40.000	2.86%	2.07%
			1920	1.446	40.822	1.400	40.000	3.29%	2.06%
12/06/2023	1900 Head	19.3	1850	1.386	41.586	1.400	40.000	-1.00%	3.97%
			1860	1.392	41.580	1.400	40.000	-0.57%	3.95%
			1880	1.404	41.564	1.400	40.000	0.29%	3.91%
			1900	1.417	41.544	1.400	40.000	1.21%	3.86%
			1905	1.420	41.539	1.400	40.000	1.43%	3.85%
			1910	1.424	41.534	1.400	40.000	1.71%	3.84%
			1920	1.430	41.520	1.400	40.000	2.14%	3.80%
12/13/2023	1900 Head	19.1	1850	1.337	40.594	1.400	40.000	-4.50%	1.49%
			1860	1.344	40.580	1.400	40.000	-4.00%	1.45%
			1880	1.357	40.555	1.400	40.000	-3.07%	1.39%
			1900	1.370	40.541	1.400	40.000	-2.14%	1.35%
			1905	1.373	40.537	1.400	40.000	-1.93%	1.34%
			1910	1.377	40.533	1.400	40.000	-1.64%	1.33%

Table 10-4
Measured Head Tissue Properties (Cont.)

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
12/18/2023	1900 Head	19.5	1850	1.373	39.053	1.400	40.000	-1.93%	-2.37%
			1860	1.379	39.032	1.400	40.000	-1.50%	-2.42%
			1880	1.394	38.996	1.400	40.000	-0.43%	-2.51%
			1900	1.408	38.978	1.400	40.000	0.57%	-2.56%
			1905	1.412	38.975	1.400	40.000	0.86%	-2.56%
			1910	1.415	38.973	1.400	40.000	1.07%	-2.57%
			1920	1.421	38.966	1.400	40.000	1.50%	-2.59%
11/20/2023	2450 Head	20.0	2300	1.732	38.142	1.670	39.500	3.71%	-3.44%
			2310	1.742	38.136	1.679	39.480	3.75%	-3.40%
			2320	1.751	38.127	1.687	39.460	3.79%	-3.38%
			2400	1.808	37.988	1.756	39.289	2.96%	-3.31%
			2450	1.841	37.916	1.800	39.200	2.28%	-3.28%
			2480	1.867	37.866	1.833	39.162	1.85%	-3.31%
			2500	1.889	37.836	1.855	39.136	1.83%	-3.32%
			2510	1.898	37.822	1.866	39.123	1.71%	-3.33%
			2535	1.911	37.790	1.893	39.092	0.95%	-3.33%
			2550	1.919	37.772	1.909	39.073	0.52%	-3.33%
			2560	1.928	37.759	1.920	39.060	0.42%	-3.33%
			2600	1.971	37.677	1.964	39.009	0.36%	-3.41%
			2650	1.998	37.596	2.018	38.945	-0.99%	-3.46%
			2680	2.033	37.534	2.051	38.907	-0.88%	-3.53%
			2700	2.050	37.484	2.073	38.882	-1.11%	-3.60%
11/22/2023	2450 Head	20.5	2300	1.743	38.087	1.670	39.500	4.37%	-3.58%
			2310	1.751	38.070	1.679	39.480	4.29%	-3.57%
			2320	1.759	38.052	1.687	39.460	4.27%	-3.57%
			2400	1.820	37.925	1.756	39.289	3.64%	-3.47%
			2450	1.860	37.832	1.800	39.200	3.33%	-3.49%
			2480	1.882	37.793	1.833	39.162	2.67%	-3.50%
			2500	1.897	37.750	1.855	39.136	2.26%	-3.54%
			2510	1.905	37.728	1.866	39.123	2.09%	-3.57%
			2535	1.927	37.682	1.893	39.092	1.80%	-3.61%
			2550	1.940	37.663	1.909	39.073	1.62%	-3.61%
			2560	1.948	37.651	1.920	39.060	1.46%	-3.61%
			2600	1.979	37.578	1.964	39.009	0.76%	-3.67%
			2650	2.022	37.480	2.018	38.945	0.20%	-3.76%
			2680	2.046	37.432	2.051	38.907	-0.24%	-3.79%
			2700	2.062	37.391	2.073	38.882	-0.53%	-3.83%
11/28/2023	2450 Head	19.5	2300	1.659	39.480	1.670	39.500	-0.66%	-0.05%
			2310	1.667	39.467	1.679	39.480	-0.71%	-0.03%
			2320	1.675	39.454	1.687	39.460	-0.71%	-0.02%
			2400	1.736	39.341	1.756	39.289	-1.14%	0.13%
			2450	1.778	39.264	1.800	39.200	-1.22%	0.16%
			2480	1.802	39.218	1.833	39.162	-1.69%	0.14%
			2500	1.818	39.191	1.855	39.136	-1.99%	0.14%
			2510	1.826	39.180	1.866	39.123	-2.14%	0.15%
			2535	1.848	39.143	1.893	39.092	-2.38%	0.13%
			2550	1.861	39.114	1.909	39.073	-2.51%	0.10%
			2560	1.870	39.094	1.920	39.060	-2.60%	0.09%
			2600	1.904	39.032	1.964	39.009	-3.05%	0.06%
			2650	1.946	38.934	2.018	38.945	-3.57%	-0.03%
			2680	1.973	38.877	2.051	38.907	-3.80%	-0.08%
			2700	1.989	38.851	2.073	38.882	-4.05%	-0.08%
11/29/2023	2450 Head	19.4	2300	1.735	39.089	1.670	39.500	3.89%	-1.04%
			2310	1.744	39.072	1.679	39.480	3.87%	-1.03%
			2320	1.752	39.055	1.687	39.460	3.85%	-1.03%
			2400	1.816	38.919	1.756	39.289	3.42%	-0.94%
			2450	1.856	38.825	1.800	39.200	3.11%	-0.96%
			2480	1.880	38.778	1.833	39.162	2.56%	-0.98%
			2500	1.896	38.741	1.855	39.136	2.21%	-1.01%
			2510	1.905	38.721	1.866	39.123	2.09%	-1.03%
			2535	1.926	38.670	1.893	39.092	1.74%	-1.08%
			2550	1.939	38.644	1.909	39.073	1.57%	-1.10%
			2560	1.948	38.629	1.920	39.060	1.46%	-1.10%
			2600	1.981	38.559	1.964	39.009	0.87%	-1.15%
			2650	2.024	38.447	2.018	38.945	0.30%	-1.28%
			2680	2.050	38.400	2.051	38.907	-0.05%	-1.30%
			2700	2.065	38.360	2.073	38.882	-0.39%	-1.34%
11/30/2023	2450 Head	19.1	2300	1.649	40.082	1.670	39.500	-1.26%	1.47%
			2310	1.657	40.072	1.679	39.480	-1.31%	1.50%
			2320	1.666	40.065	1.687	39.460	-1.24%	1.53%
			2400	1.725	39.946	1.756	39.289	-1.77%	1.67%
			2450	1.769	39.873	1.800	39.200	-1.72%	1.72%
			2480	1.791	39.837	1.833	39.162	-2.29%	1.72%
			2500	1.805	39.794	1.855	39.136	-2.70%	1.68%
			2510	1.814	39.767	1.866	39.123	-2.79%	1.65%
			2535	1.837	39.702	1.893	39.092	-2.96%	1.56%
			2550	1.852	39.676	1.909	39.073	-2.99%	1.54%
			2560	1.861	39.664	1.920	39.060	-3.07%	1.55%
			2600	1.889	39.628	1.964	39.009	-3.82%	1.59%
			2650	1.931	39.490	2.018	38.945	-4.31%	1.40%
			2680	1.960	39.445	2.051	38.907	-4.44%	1.38%
			2700	1.975	39.441	2.073	38.882	-4.73%	1.44%
12/08/2023	2450 Head	19.9	2300	1.676	38.807	1.670	39.500	0.36%	-1.75%
			2310	1.684	38.796	1.679	39.480	0.30%	-1.73%
			2320	1.691	38.784	1.687	39.460	0.24%	-1.71%
			2400	1.752	38.669	1.756	39.289	-0.23%	-1.58%
			2450	1.793	38.592	1.800	39.200	-0.39%	-1.55%
			2480	1.817	38.544	1.833	39.162	-0.87%	-1.58%
			2500	1.832	38.515	1.855	39.136	-1.24%	-1.59%
			2510	1.841	38.500	1.866	39.123	-1.34%	-1.59%
			2535	1.862	38.457	1.893	39.092	-1.64%	-1.62%
			2550	1.875	38.432	1.909	39.073	-1.78%	-1.64%
			2560	1.884	38.416	1.920	39.060	-1.88%	-1.65%
			2600	1.917	38.350	1.964	39.009	-2.39%	-1.69%
			2650	1.959	38.239	2.018	38.945	-2.92%	-1.81%
			2680	1.985	38.187	2.051	38.907	-3.22%	-1.85%
			2700	2.001	38.161	2.073	38.882	-3.47%	-1.85%

Table 10-5
Measured Head Tissue Properties (Cont.)

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
12/11/2023	2450 Head	22.0	2300	1.713	37.906	1.670	39.500	2.57%	-4.04%
			2310	1.720	37.889	1.679	39.480	2.44%	-4.03%
			2320	1.727	37.868	1.687	39.460	2.37%	-4.03%
			2400	1.787	37.739	1.756	39.289	1.77%	-3.95%
			2450	1.822	37.638	1.800	39.200	1.22%	-3.98%
			2480	1.846	37.592	1.833	39.162	0.71%	-4.01%
			2500	1.863	37.572	1.855	39.136	0.43%	-4.00%
			2510	1.871	37.561	1.866	39.123	0.27%	-3.99%
			2535	1.889	37.509	1.893	39.092	-0.21%	-4.05%
			2550	1.899	37.475	1.909	39.073	-0.52%	-4.09%
			2560	1.907	37.456	1.920	39.060	-0.68%	-4.11%
			2600	1.941	37.403	1.964	39.009	-1.17%	-4.12%
			2650	1.978	37.311	2.018	38.945	-1.98%	-4.20%
			2680	2.001	37.260	2.051	38.907	-2.44%	-4.23%
			2700	2.018	37.232	2.073	38.882	-2.65%	-4.24%
12/13/2023	2450 Head	19.4	2300	1.688	38.709	1.670	39.500	1.08%	-2.00%
			2310	1.697	38.693	1.679	39.480	1.07%	-1.99%
			2320	1.704	38.680	1.687	39.460	1.01%	-1.98%
			2400	1.766	38.540	1.756	39.289	0.57%	-1.91%
			2450	1.807	38.448	1.800	39.200	0.39%	-1.92%
			2480	1.829	38.401	1.833	39.162	-0.22%	-1.94%
			2500	1.844	38.366	1.855	39.136	-0.59%	-1.97%
			2510	1.853	38.346	1.866	39.123	-0.70%	-1.99%
			2535	1.874	38.287	1.893	39.092	-1.00%	-2.06%
			2550	1.887	38.256	1.909	39.073	-1.15%	-2.09%
			2560	1.896	38.239	1.920	39.060	-1.25%	-2.10%
			2600	1.927	38.189	1.964	39.009	-1.88%	-2.10%
			2650	1.967	38.063	2.018	38.945	-2.53%	-2.26%
			2680	1.994	38.017	2.051	38.907	-2.78%	-2.29%
			2700	2.010	38.009	2.073	38.882	-3.04%	-2.25%
12/13/2023	2450 Head	21.7	2300	1.671	39.193	1.670	39.500	0.06%	-0.78%
			2310	1.679	39.186	1.679	39.480	0.00%	-0.74%
			2320	1.687	39.178	1.687	39.460	0.00%	-0.71%
			2400	1.744	39.091	1.756	39.289	-0.68%	-0.50%
			2450	1.788	39.038	1.800	39.200	-0.67%	-0.41%
			2480	1.810	39.007	1.833	39.162	-1.25%	-0.40%
			2500	1.822	38.956	1.855	39.136	-1.78%	-0.46%
			2510	1.829	38.933	1.866	39.123	-1.98%	-0.49%
			2535	1.852	38.897	1.893	39.092	-2.17%	-0.50%
			2550	1.866	38.885	1.909	39.073	-2.25%	-0.48%
			2560	1.875	38.879	1.920	39.060	-2.34%	-0.46%
			2600	1.899	38.824	1.964	39.009	-3.31%	-0.47%
			2650	1.943	38.731	2.018	38.945	-3.72%	-0.55%
			2680	1.968	38.700	2.051	38.907	-4.05%	-0.53%
			2700	1.978	38.662	2.073	38.882	-4.58%	-0.57%
12/20/2023	2450 Head	20.4	2300	1.664	38.292	1.670	39.500	-0.36%	-3.06%
			2310	1.671	38.283	1.679	39.480	-0.48%	-3.03%
			2320	1.679	38.272	1.687	39.460	-0.47%	-3.01%
			2400	1.740	38.144	1.756	39.289	-0.91%	-2.91%
			2450	1.780	38.062	1.800	39.200	-1.11%	-2.90%
			2480	1.804	38.006	1.833	39.162	-1.58%	-2.95%
			2500	1.819	37.974	1.855	39.136	-1.94%	-2.97%
			2510	1.827	37.959	1.866	39.123	-2.09%	-2.98%
			2535	1.847	37.921	1.893	39.092	-2.43%	-3.00%
			2550	1.861	37.893	1.909	39.073	-2.51%	-3.02%
			2560	1.869	37.873	1.920	39.060	-2.66%	-3.04%
			2600	1.899	37.802	1.964	39.009	-3.31%	-3.09%
			2650	1.940	37.704	2.018	38.945	-3.87%	-3.19%
			2680	1.964	37.661	2.051	38.907	-4.24%	-3.20%
			2700	1.980	37.644	2.073	38.882	-4.49%	-3.18%
12/26/2023	2450 Head	19.5	2300	1.646	38.732	1.670	39.500	-1.44%	-1.94%
			2310	1.654	38.716	1.679	39.480	-1.49%	-1.94%
			2320	1.663	38.698	1.687	39.460	-1.42%	-1.93%
			2400	1.722	38.599	1.756	39.289	-1.94%	-1.76%
			2450	1.763	38.509	1.800	39.200	-2.06%	-1.76%
			2480	1.787	38.459	1.833	39.162	-2.51%	-1.80%
			2500	1.802	38.444	1.855	39.136	-2.86%	-1.77%
			2510	1.810	38.436	1.866	39.123	-3.00%	-1.76%
			2535	1.830	38.393	1.893	39.092	-3.33%	-1.79%
			2550	1.843	38.357	1.909	39.073	-3.46%	-1.83%
			2560	1.853	38.329	1.920	39.060	-3.49%	-1.87%
			2600	1.887	38.259	1.964	39.009	-3.92%	-1.92%
			2650	1.924	38.177	2.018	38.945	-4.66%	-1.97%
			2680	1.953	38.109	2.051	38.907	-4.78%	-2.05%
			2700	1.970	38.078	2.073	38.882	-4.97%	-2.07%
01/02/2024	2450 Head	21.9	2300	1.696	38.289	1.670	39.500	1.56%	-3.07%
			2310	1.703	38.269	1.679	39.480	1.43%	-3.07%
			2320	1.710	38.244	1.687	39.460	1.36%	-3.08%
			2400	1.768	38.129	1.756	39.289	0.68%	-2.95%
			2450	1.807	38.033	1.800	39.200	0.39%	-2.98%
			2480	1.829	38.005	1.833	39.162	-0.22%	-2.95%
			2500	1.843	37.984	1.855	39.136	-0.65%	-2.94%
			2510	1.851	37.970	1.866	39.123	-0.80%	-2.95%
			2535	1.871	37.920	1.893	39.092	-1.16%	-3.00%
			2550	1.883	37.891	1.909	39.073	-1.36%	-3.03%
			2560	1.892	37.877	1.920	39.060	-1.46%	-3.03%
			2600	1.925	37.843	1.964	39.009	-1.99%	-2.99%
			2650	1.964	37.738	2.018	38.945	-2.68%	-3.10%
			2680	1.992	37.686	2.051	38.907	-2.88%	-3.14%
			2700	2.007	37.672	2.073	38.882	-3.18%	-3.11%
01/08/2024	2450 Head	19.0	2300	1.688	38.527	1.670	39.500	1.08%	-2.46%
			2310	1.696	38.516	1.679	39.480	1.01%	-2.44%
			2320	1.703	38.503	1.687	39.460	0.95%	-2.43%
			2400	1.763	38.361	1.756	39.289	0.40%	-2.36%
			2450	1.804	38.284	1.800	39.200	0.22%	-2.34%
			2480	1.826	38.229	1.833	39.162	-0.38%	-2.38%
			2500	1.842	38.194	1.855	39.136	-0.70%	-2.41%
			2510	1.850	38.174	1.866	39.123	-0.86%	-2.43%
			2535	1.872	38.128	1.893	39.092	-1.11%	-2.47%
			2550	1.886	38.100	1.909	39.073	-1.20%	-2.49%
			2560	1.894	38.082	1.920	39.060	-1.35%	-2.50%
			2600	1.925	38.014	1.964	39.009	-1.99%	-2.55%
			2650	1.968	37.914	2.018	38.945	-2.48%	-2.65%
			2680	1.995	37.864	2.051	38.907	-2.73%	-2.68%
			2700	2.010	37.841	2.073	38.882	-3.04%	-2.68%
12/04/2023	3600 Head	19.3	3300	2.599	38.013	2.708	38.157	-4.03%	-0.38%
			3350	2.643	37.920	2.759	38.100	-4.20%	-0.47%
			3450	2.739	37.729	2.861	37.986	-4.26%	-0.68%
			3500	2.781	37.625	2.913	37.929	-4.53%	-0.80%
			3550	2.831	37.548	2.964	37.871	-4.49%	-0.85%
			3560	2.837	37.529	2.974	37.860	-4.61%	-0.87%
			3600	2.874	37.448	3.015	37.814	-4.68%	-0.97%
			3650	2.923	37.350	3.066	37.757	-4.66%	-1.08%
			3690	2.960	37.291	3.107	37.711	-4.73%	-1.11%
			3700	2.968	37.273	3.117	37.700	-4.78%	-1.13%
			3750	3.022	37.153	3.169	37.643	-4.64%	-1.30%
			3900	3.171	36.955	3.323	37.471	-4.57%	-1.38%
			3930	3.200	36.872	3.353	37.437	-4.56%	-1.51%
			4100	3.378	36.604	3.528	37.243	-4.25%	-1.72%
			4150	3.429	36.520	3.579	37.186	-4.19%	-1.79%

Table 10-6
Measured Head Tissue Properties (Cont.)

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
12/06/2023	3600 Head	19.3	3300	2.591	38.568	2.708	38.157	-4.32%	1.08%
			3350	2.643	38.482	2.759	38.100	-4.20%	1.00%
			3450	2.741	38.272	2.861	37.986	-4.19%	0.75%
			3500	2.786	38.178	2.913	37.929	-4.36%	0.66%
			3550	2.839	38.054	2.964	37.871	-4.22%	0.48%
			3560	2.849	38.047	2.974	37.860	-4.20%	0.49%
			3600	2.888	37.975	3.015	37.814	-4.21%	0.43%
			3650	2.939	37.887	3.066	37.757	-4.14%	0.34%
			3690	2.973	37.800	3.107	37.711	-4.31%	0.24%
			3700	2.982	37.781	3.117	37.700	-4.33%	0.21%
			3750	3.040	37.713	3.169	37.643	-4.07%	0.19%
			3900	3.189	37.428	3.323	37.471	-4.03%	-0.11%
			3930	3.225	37.325	3.353	37.437	-3.82%	-0.30%
			4100	3.416	37.092	3.528	37.243	-3.17%	-0.41%
			4150	3.461	36.935	3.579	37.186	-3.30%	-0.67%
12/18/2023	3600 Head	19.1	3300	2.598	38.189	2.708	38.157	-4.06%	0.08%
			3350	2.641	38.086	2.759	38.100	-4.28%	-0.04%
			3450	2.735	37.881	2.861	37.986	-4.40%	-0.28%
			3500	2.780	37.783	2.913	37.929	-4.57%	-0.38%
			3550	2.829	37.694	2.964	37.871	-4.55%	-0.47%
			3560	2.836	37.670	2.974	37.860	-4.64%	-0.50%
			3600	2.877	37.585	3.015	37.814	-4.58%	-0.61%
			3650	2.924	37.508	3.066	37.757	-4.63%	-0.66%
			3690	2.962	37.420	3.107	37.711	-4.67%	-0.77%
			3700	2.972	37.404	3.117	37.700	-4.65%	-0.79%
			3750	3.020	37.290	3.169	37.643	-4.70%	-0.94%
			3900	3.173	37.023	3.323	37.471	-4.51%	-1.20%
			3930	3.208	36.977	3.353	37.437	-4.32%	-1.23%
			4100	3.384	36.672	3.528	37.243	-4.08%	-1.53%
			4150	3.443	36.564	3.579	37.186	-3.80%	-1.67%
12/26/2023	3600 Head	19.0	3300	2.635	39.705	2.708	38.157	-2.70%	4.06%
			3350	2.680	39.616	2.759	38.100	-2.86%	3.98%
			3450	2.778	39.402	2.861	37.986	-2.90%	3.73%
			3500	2.829	39.312	2.913	37.929	-2.88%	3.65%
			3550	2.879	39.202	2.964	37.871	-2.87%	3.51%
			3560	2.889	39.183	2.974	37.860	-2.86%	3.49%
			3600	2.927	39.124	3.015	37.814	-2.92%	3.46%
			3650	2.981	39.029	3.066	37.757	-2.77%	3.37%
			3690	3.020	38.951	3.107	37.711	-2.80%	3.29%
			3700	3.029	38.937	3.117	37.700	-2.82%	3.28%
			3750	3.084	38.849	3.169	37.643	-2.68%	3.20%
			3900	3.231	38.604	3.323	37.471	-2.77%	3.02%
			3930	3.265	38.517	3.353	37.437	-2.62%	2.88%
			4100	3.455	38.241	3.528	37.243	-2.07%	2.68%
			4150	3.501	38.098	3.579	37.186	-2.18%	2.45%
12/08/2023	5200-5800 Head	19.1	5180	4.716	35.936	4.635	36.009	1.75%	-0.20%
			5190	4.729	35.916	4.645	35.998	1.81%	-0.23%
			5200	4.741	35.898	4.655	35.986	1.85%	-0.24%
			5210	4.754	35.870	4.666	35.975	1.89%	-0.29%
			5220	4.765	35.846	4.676	35.963	1.90%	-0.33%
			5240	4.791	35.813	4.696	35.940	2.02%	-0.35%
			5250	4.803	35.798	4.706	35.929	2.06%	-0.36%
			5260	4.815	35.781	4.717	35.917	2.08%	-0.38%
			5270	4.828	35.769	4.727	35.906	2.14%	-0.38%
			5280	4.839	35.750	4.737	35.894	2.15%	-0.40%
			5290	4.852	35.727	4.748	35.883	2.19%	-0.43%
			5300	4.862	35.709	4.758	35.871	2.19%	-0.45%
			5310	4.873	35.690	4.768	35.860	2.20%	-0.47%
			5320	4.886	35.665	4.778	35.849	2.26%	-0.51%
			5500	5.099	35.327	4.963	35.643	2.74%	-0.89%
			5510	5.114	35.303	4.973	35.632	2.84%	-0.92%
			5520	5.125	35.278	4.983	35.620	2.85%	-0.96%
			5530	5.137	35.255	4.994	35.609	2.86%	-0.99%
			5540	5.146	35.228	5.004	35.597	2.84%	-1.04%
			5550	5.159	35.215	5.014	35.586	2.89%	-1.04%
			5560	5.171	35.201	5.024	35.574	2.93%	-1.05%
			5580	5.201	35.173	5.045	35.551	3.09%	-1.06%
			5600	5.223	35.117	5.065	35.529	3.12%	-1.16%
			5610	5.234	35.096	5.076	35.518	3.11%	-1.19%
			5620	5.242	35.073	5.086	35.506	3.07%	-1.22%
			5640	5.272	35.043	5.106	35.483	3.25%	-1.24%
			5660	5.299	34.990	5.127	35.460	3.35%	-1.33%
			5670	5.310	34.989	5.137	35.449	3.37%	-1.30%
			5680	5.324	34.978	5.147	35.437	3.44%	-1.30%
			5690	5.339	34.953	5.158	35.426	3.51%	-1.34%
			5700	5.348	34.930	5.168	35.414	3.48%	-1.37%
			5710	5.359	34.910	5.178	35.403	3.50%	-1.39%
			5720	5.374	34.889	5.188	35.391	3.59%	-1.42%
			5745	5.401	34.834	5.214	35.363	3.59%	-1.50%
			5750	5.406	34.825	5.219	35.357	3.58%	-1.50%
			5755	5.411	34.817	5.224	35.351	3.58%	-1.51%
			5765	5.424	34.793	5.234	35.340	3.63%	-1.55%
			5775	5.438	34.779	5.245	35.329	3.68%	-1.56%
			5785	5.452	34.764	5.255	35.317	3.75%	-1.57%
			5795	5.466	34.746	5.265	35.305	3.82%	-1.58%
			5800	5.473	34.737	5.270	35.300	3.85%	-1.59%
			5800	5.473	34.737	5.270	35.300	3.85%	-1.59%
			5805	5.479	34.729	5.275	35.294	3.87%	-1.60%
			5825	5.501	34.689	5.296	35.271	3.87%	-1.65%
			5835	5.510	34.675	5.305	35.230	3.86%	-1.58%
			5845	5.520	34.661	5.315	35.210	3.86%	-1.56%
			5855	5.533	34.642	5.325	35.197	3.91%	-1.58%
			5865	5.550	34.619	5.336	35.190	4.01%	-1.62%
			5865	5.550	34.619	5.336	35.190	4.01%	-1.62%
			5865	5.550	34.619	5.336	35.190	4.01%	-1.62%
			5865	5.550	34.619	5.336	35.190	4.01%	-1.62%
			5875	5.563	34.598	5.347	35.183	4.04%	-1.66%
			5885	5.573	34.584	5.357	35.177	4.03%	-1.69%
			5905	5.596	34.546	5.379	35.163	4.03%	-1.75%

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.

10.2 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 10-7
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 (%)
G	13	HEAD	12/22/2023	20.2	20.2	1.00	1002	7417	665	0.521	0.523	0.521	-0.38%	0.323	0.327	0.323	-1.22%
K4	750	HEAD	11/09/2023	22.4	22.1	0.20	1046	7640	1645	1.650	8.690	8.250	-5.06%	1.090	5.700	5.450	-4.39%
K2	750	HEAD	11/13/2023	23.4	22.8	0.20	1003	7565	1466	1.720	8.480	8.600	1.42%	1.130	5.560	5.650	1.62%
K6	750	HEAD	11/13/2023	21.3	20.9	0.20	1046	7491	1532	1.780	8.690	8.900	2.42%	1.180	5.700	5.900	3.51%
K6	750	HEAD	11/24/2023	21.6	20.6	0.20	1046	7491	1532	1.810	8.690	9.050	4.14%	1.190	5.700	5.950	4.39%
K6	750	HEAD	11/27/2023	20.3	19.6	0.20	1046	7491	1532	1.750	8.690	8.750	0.69%	1.150	5.700	5.750	0.88%
K4	750	HEAD	12/06/2023	20.8	19.2	0.20	1046	7640	1645	1.620	8.690	8.100	-6.79%	1.080	5.700	5.400	-5.26%
O	750	HEAD	12/13/2023	21.0	22.0	0.20	1054	7570	1558	1.750	8.520	8.750	2.70%	1.160	5.600	5.800	3.57%
K3	835	HEAD	11/08/2023	22.6	21.4	0.20	4d180	7558	1364	2.050	9.630	10.250	6.44%	1.330	6.270	6.650	6.06%
K4	835	HEAD	11/15/2023	21.5	21.5	0.20	4d119	7640	1645	2.020	9.720	10.100	3.91%	1.310	6.380	6.550	2.66%
K4	835	HEAD	11/20/2023	20.7	20.0	0.20	4d119	7640	1645	2.020	9.720	10.100	3.91%	1.320	6.380	6.600	3.45%
K1	835	HEAD	11/20/2023	23.2	23.3	0.20	4d180	7402	1502	1.980	9.630	9.900	2.80%	1.300	6.270	6.500	3.67%
K6	835	HEAD	11/22/2023	21.0	21.1	0.20	4d119	7491	1532	2.000	9.720	10.000	2.88%	1.300	6.380	6.500	1.88%
K4	835	HEAD	12/06/2023	20.8	19.2	0.20	4d119	7640	1645	1.890	9.720	9.450	-2.78%	1.230	6.380	6.150	-3.61%
O	835	HEAD	12/13/2023	21.0	22.0	0.20	4d132	7570	1558	2.010	9.660	10.050	4.04%	1.320	6.270	6.600	5.26%
K6	1750	HEAD	11/15/2023	21.8	21.8	0.10	1051	7491	1532	3.710	36.100	37.100	2.77%	1.960	19.000	19.600	3.16%
K4	1750	HEAD	11/21/2023	22.2	21.1	0.10	1051	7640	1645	3.650	36.100	36.500	1.11%	1.940	19.000	19.400	2.11%
S	1750	HEAD	11/30/2023	21.6	21.3	0.10	1008	7713	1530	3.790	37.400	37.900	1.34%	2.040	19.600	20.400	4.08%
S	1750	HEAD	12/04/2023	22.6	21.1	0.10	1008	7713	1530	3.680	37.400	36.800	-1.60%	1.930	19.600	19.300	-1.53%
G	1750	HEAD	12/11/2023	19.1	20.0	0.10	1150	7417	665	3.870	36.900	38.700	4.88%	1.990	19.400	19.900	2.58%
L	1750	HEAD	12/11/2023	20.5	20.5	0.10	1148	7409	1334	3.830	37.200	38.300	2.96%	2.050	19.400	20.500	5.67%
G	1750	HEAD	12/13/2023	21.2	20.0	0.10	1148	7417	665	3.880	37.200	38.800	4.30%	2.010	19.400	20.100	3.61%
K6	1900	HEAD	11/15/2023	21.8	21.8	0.10	5d141	7491	1532	4.280	39.900	42.800	7.27%	2.190	20.800	21.900	5.29%
K6	1900	HEAD	11/17/2023	21.7	21.5	0.10	5d141	7491	1532	4.160	39.900	41.600	4.26%	2.140	20.800	21.400	2.88%
K2	1900	HEAD	11/20/2023	22.5	22.7	0.10	5d026	7565	1466	4.150	38.900	41.500	6.68%	2.150	20.500	21.500	4.88%
L	1900	HEAD	11/30/2023	21.7	19.9	0.10	5d148	7409	1334	4.220	40.100	42.200	5.24%	2.190	21.000	21.900	4.29%
O	1900	HEAD	12/06/2023	19.5	19.3	0.10	5d148	7570	1558	4.090	40.100	40.900	2.00%	2.120	21.000	21.200	0.95%
P	1900	HEAD	12/13/2023	20.1	20.1	0.10	5d148	7659	1407	4.170	40.100	41.700	3.99%	2.190	21.000	21.900	4.29%
L	1900	HEAD	12/18/2023	20.1	20.0	0.10	5d148	7409	1334	4.220	40.100	42.200	5.24%	2.210	21.000	22.100	5.24%
K3	2300	HEAD	11/20/2023	21.3	20.0	0.10	1117	7558	1364	4.790	49.900	47.900	-4.01%	2.280	24.300	22.800	-6.17%
K3	2300	HEAD	11/22/2023	21.5	20.5	0.10	1008	7558	1364	5.130	49.500	51.300	3.64%	2.450	23.700	24.500	3.38%
P	2300	HEAD	11/28/2023	19.0	19.5	0.10	1116	7659	1407	4.930	49.600	49.300	-0.60%	2.380	23.800	23.800	0.00%
P	2300	HEAD	11/30/2023	20.3	19.1	0.10	1116	7659	1407	4.690	49.600	46.900	-5.44%	2.270	23.800	22.700	-4.62%
S	2300	HEAD	12/13/2023	20.8	19.4	0.10	1116	7713	1530	4.640	49.600	46.400	-6.45%	2.230	23.800	22.300	-6.30%
K3	2450	HEAD	11/20/2023	21.3	20.0	0.10	945	7558	1364	5.360	51.900	53.600	3.28%	2.460	24.600	24.600	0.00%
S	2450	HEAD	12/08/2023	22.3	19.6	0.10	719	7713	1530	5.120	55.000	51.200	-6.91%	2.380	25.700	23.800	-7.39%
S	2450	HEAD	12/11/2023	21.1	19.6	0.10	719	7713	1530	5.260	55.000	52.600	-4.36%	2.450	25.700	24.500	-4.67%
S	2450	HEAD	12/13/2023	20.8	19.4	0.10	719	7713	1530	5.020	55.000	50.200	-8.73%	2.350	25.700	23.500	-8.56%
K2	2450	HEAD	12/13/2023	22.0	21.7	0.10	945	7565	1466	5.220	51.900	52.200	0.58%	2.440	24.600	24.400	-0.81%
L	2450	HEAD	12/26/2023	20.3	20.0	0.10	981	7409	1334	5.470	53.900	54.700	1.48%	2.580	25.400	25.800	1.57%
L	2450	HEAD	01/08/2024	20.0	20.0	0.10	981	7409	1334	5.360	53.900	53.600	-0.56%	2.490	25.400	24.900	-1.97%
K3	2600	HEAD	11/20/2023	21.3	20.0	0.10	1009	7558	1364	5.590	57.300	55.900	-2.44%	2.500	25.800	25.000	-3.10%
K4	2600	HEAD	11/29/2023	21.6	19.4	0.10	1009	7640	1645	5.750	57.300	57.500	0.35%	2.580	25.800	25.800	0.00%
K2	2600	HEAD	12/11/2023	22.7	22.0	0.10	1126	7565	1466	5.840	56.000	58.400	4.29%	2.640	25.300	26.400	4.35%
K2	2600	HEAD	12/13/2023	22.0	21.7	0.10	1126	7565	1466	5.530	56.000	55.300	-1.25%	2.500	25.300	25.000	-1.19%
L	2600	HEAD	12/20/2023	20.6	19.3	0.10	1004	7409	1334	5.680	57.800	56.800	-1.73%	2.560	25.700	25.600	-0.39%
L	2600	HEAD	12/26/2023	20.3	20.0	0.10	1004	7409	1334	5.810	57.800	58.100	0.52%	2.610	25.700	26.100	1.56%
K2	2600	HEAD	01/02/2024	22.7	21.9	0.10	1126	7565	1466	5.720	56.000	57.200	2.14%	2.590	25.300	25.900	2.37%
L	2600	HEAD	01/08/2024	20.0	20.0	0.10	1004	7409	1334	5.920	57.800	59.200	2.42%	2.650	25.700	26.500	3.11%
K4	3500	HEAD	12/04/2023	19.1	19.3	0.10	1127	7640	1645	6.340	64.900	63.400	-2.31%	2.400	24.400	24.000	-1.64%
P	3500	HEAD	12/06/2023	20.2	19.3	0.10	1059	7659	1407	6.030	63.700	60.300	-5.34%	2.350	23.900	23.500	-1.67%
P	3500	HEAD	12/26/2023	20.9	19.4	0.10	1059	7659	1407	6.230	63.700	62.300	-2.20%	2.440	23.900	24.400	2.09%
K4	3700	HEAD	12/04/2023	19.1	19.3	0.10	1096	7640	1645	6.300	66.900	63.000	-5.83%	2.320	24.400	23.200	-4.92%
P	3700	HEAD	12/06/2023	20.2	19.3	0.10	1067	7659	1407	6.400	66.900	64.000	-4.33%	2.420	24.300	24.200	-0.41%
P	3700	HEAD	12/18/2023	20.3	20.5	0.10	1067	7659	1407	6.460	66.900	64.600	-3.44%	2.440	24.300	24.400	0.41%
P	3700	HEAD	12/26/2023	20.9	19.4	0.10	1067	7659	1407	6.660	66.900	66.600	-0.45%	2.500	24.300	25.000	2.88%
K4	3900	HEAD	12/04/2023	19.1	19.3	0.10	1074	7640	1645	6.530	69.400	65.300	-5.91%	2.290	24.100	22.900	-4.98%
P	3900	HEAD	12/18/2023	20.3	20.5	0.10	1056	7659	1407	6.380	68.200	63.800	-6.45%	2.280	23.800	22.800	-4.20%
O	5250	HEAD	12/08/2023	20.0	19.1	0.05	1191	7570	1558	3.730	80.400	74.600	-7.21%	1.070	23.100	21.400	-7.36%
O	5600	HEAD	12/08/2023	20.0	19.1	0.05	1191	7570	1558	4.340	81.900	86.800	5.98%	1.250	23.300	25.000	7.30%
O	5750	HEAD	12/08/2023	20.0	19.1	0.05	1191	7570	1558	3.910	78.400	78.200	-0.26%	1.110	22.300	22.200	-0.45%

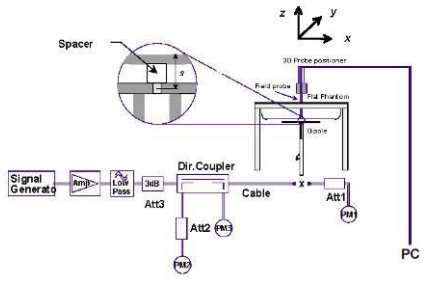


Figure 10-1
System Verification Setup Diagram

Figure 10-2
System Verification Setup Photo

11 SAR DATA SUMMARY

11.1 GSM 850 Standalone SAR

Table 11-1

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	GSM 850	GSM	A	3707M	1:8.3	0.00	848.80	251	33.5	32.54	Right Cheek	0	0.156	1.247	0.195	A1	31.4	31.4
Head	GSM 850	GSM	A	3707M	1:8.3	-0.06	848.80	251	33.5	32.54	Right Tilt	0	0.082	1.247	0.102		34.2	
Head	GSM 850	GSM	A	3707M	1:8.3	-0.01	848.80	251	33.5	32.54	Left Cheek	0	0.135	1.247	0.168		32.0	
Head	GSM 850	GSM	A	3707M	1:8.3	-0.03	848.80	251	33.5	32.54	Left Tilt	0	0.074	1.247	0.092		34.6	
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 11-2

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	GSM 850	GSM	A	3431M	1:8.3	-0.01	848.80	251	33.5	32.54	Back	15	0.195	1.247	0.243	A2	30.4	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 11-3

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	GPRS 850	GPRS 4 Tx Slots	A	3707M	1:2.076	-0.08	824.20	128	28.5	27.73	Back	10	0.275	1.194	0.328	A3	30.1	30.1
Hotspot	GPRS 850	GPRS 4 Tx Slots	A	3707M	1:2.076	0.00	824.20	128	28.5	27.73	Front	10	0.130	1.194	0.155		33.4	
Hotspot	GPRS 850	GPRS 4 Tx Slots	A	3707M	1:2.076	0.00	824.20	128	28.5	27.73	Bottom	10	0.189	1.194	0.226		31.7	
Hotspot	GPRS 850	GPRS 4 Tx Slots	A	3707M	1:2.076	0.00	824.20	128	28.5	27.73	Right	10	0.139	1.194	0.166		33.1	
Hotspot	GPRS 850	GPRS 4 Tx Slots	A	3707M	1:2.076	-0.02	824.20	128	28.5	27.73	Left	10	0.069	1.194	0.082		36.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.2 GSM 1900 Standalone SAR

Table 11-4

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	GSM 1900	GSM	B	3658M	1:8.3	-0.08	1850.20	512	30.0	29.94	Right Cheek	0	0.075	1.014	0.076		31.9	31.3
Head	GSM 1900	GSM	B	3658M	1:8.3	0.11	1850.20	512	30.0	29.94	Right Tilt	0	0.054	1.014	0.055		33.4	
Head	GSM 1900	GSM	B	3658M	1:8.3	0.03	1850.20	512	30.0	29.94	Left Cheek	0	0.087	1.014	0.088	A4	31.3	
Head	GSM 1900	GSM	B	3658M	1:8.3	0.01	1850.20	512	30.0	29.94	Left Tilt	0	0.057	1.014	0.058		33.1	
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 11-5

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	GSM 1900	GSM	B	3616M	1:8.3	-0.05	1850.20	512	29.2	28.50	Back	15	0.116	1.175	0.136	A5	28.6	28.6
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 11-6

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	GPRS 1900	GPRS 4 Tx Slots	B	3647M	1:2.076	-0.07	1850.20	512	23.2	22.21	Back	10	0.217	1.256	0.273		25.6	24.2
Hotspot	GPRS 1900	GPRS 4 Tx Slots	B	3647M	1:2.076	0.16	1850.20	512	23.2	22.21	Front	10	0.149	1.256	0.187		27.2	
Hotspot	GPRS 1900	GPRS 4 Tx Slots	B	3647M	1:2.076	-0.01	1850.20	512	23.2	22.21	Bottom	10	0.302	1.256	0.379	A6	24.2	
Hotspot	GPRS 1900	GPRS 4 Tx Slots	B	3647M	1:2.076	-0.09	1850.20	512	23.2	22.21	Left	10	0.117	1.256	0.147		28.3	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.3 UMTS 850 Standalone SAR

Table 11-7

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	UMTS 850	RMC	A	3707M	1:1	0.01	826.40	4132	25.0	24.48	Right Cheek	0	0.141	1.127	0.159	A7	32.9	32.9
Head	UMTS 850	RMC	A	3707M	1:1	0.03	826.40	4132	25.0	24.48	Right Tilt	0	0.072	1.127	0.081		35.9	
Head	UMTS 850	RMC	A	3707M	1:1	-0.03	826.40	4132	25.0	24.48	Left Cheek	0	0.130	1.127	0.147		33.3	
Head	UMTS 850	RMC	A	3707M	1:1	0.13	826.40	4132	25.0	24.48	Left Tilt	0	0.066	1.127	0.074		36.2	
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 11-8

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	UMTS 850	RMC	A	3431M	1:1	0.01	826.40	4132	25.0	24.48	Back	15	0.181	1.127	0.204	A8	31.9	31.9
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-9

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	UMTS 850	RMC	A	3707M	1:1	0.00	826.40	4132	25.0	24.48	Back	10	0.436	1.127	0.491	A9	28.0	28.0
Hotspot	UMTS 850	RMC	A	3707M	1:1	-0.02	826.40	4132	25.0	24.48	Front	10	0.159	1.127	0.179		32.4	
Hotspot	UMTS 850	RMC	A	3707M	1:1	0.00	826.40	4132	25.0	24.48	Bottom	10	0.264	1.127	0.298		30.2	
Hotspot	UMTS 850	RMC	A	3707M	1:1	0.01	826.40	4132	25.0	24.48	Right	10	0.148	1.127	0.167		32.7	
Hotspot	UMTS 850	RMC	A	3707M	1:1	0.01	826.40	4132	25.0	24.48	Left	10	0.081	1.127	0.091		35.3	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.4 UMTS 1750 Standalone SAR

Table 11-10

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	UMTS 1750	RMC	B	3706M	1:1	0.01	1712.40	1312	24.0	23.14	Right Cheek	0	0.118	1.219	0.144	A10	32.4	32.4
Head	UMTS 1750	RMC	B	3706M	1:1	-0.16	1712.40	1312	24.0	23.14	Right Tilt	0	0.093	1.219	0.113		33.4	
Head	UMTS 1750	RMC	B	3706M	1:1	-0.03	1712.40	1312	24.0	23.14	Left Cheek	0	0.103	1.219	0.126		33.0	
Head	UMTS 1750	RMC	B	3706M	1:1	0.00	1712.40	1312	24.0	23.14	Left Tilt	0	0.093	1.219	0.113		33.4	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-11

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	UMTS 1750	RMC	B	3706M	1:1	-0.02	1712.40	1312	22.0	20.63	Back	15	0.208	1.371	0.285	A11	27.4	27.4
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 11-12

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	UMTS 1750	RMC	B	3647M	1:1	-0.01	1712.40	1312	20.5	19.97	Back	10	0.214	1.130	0.242		26.6	24.9
Hotspot	UMTS 1750	RMC	B	3647M	1:1	-0.02	1712.40	1312	20.5	19.97	Front	10	0.170	1.130	0.192		27.6	
Hotspot	UMTS 1750	RMC	B	3647M	1:1	-0.01	1712.40	1312	20.5	19.97	Bottom	10	0.320	1.130	0.362	A12	24.9	
Hotspot	UMTS 1750	RMC	B	3647M	1:1	0.04	1712.40	1312	20.5	19.97	Left	10	0.113	1.130	0.128		29.4	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.5 UMTS 1900 Standalone SAR

Table 11-13

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	UMTS 1900	RMC	B	3658M	1:1	-0.07	1852.40	9262	24.0	23.42	Right Cheek	0	0.174	1.143	0.199		31.0	30.7
Head	UMTS 1900	RMC	B	3658M	1:1	0.00	1852.40	9262	24.0	23.42	Right Tilt	0	0.130	1.143	0.149		32.2	
Head	UMTS 1900	RMC	B	3658M	1:1	-0.08	1852.40	9262	24.0	23.42	Left Cheek	0	0.184	1.143	0.210	A13	30.7	
Head	UMTS 1900	RMC	B	3658M	1:1	-0.16	1852.40	9262	24.0	23.42	Left Tilt	0	0.131	1.143	0.150		32.2	
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 11-14

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	UMTS 1900	RMC	B	3616M	1:1	0.09	1852.40	9262	21.5	20.12	Back	15	0.229	1.374	0.315	A14	26.5	26.5
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 11-15

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	UMTS 1900	RMC	B	3654M	1:1	-0.14	1852.40	9262	20.5	19.94	Back	10	0.265	1.138	0.302		25.7	24.6
Hotspot	UMTS 1900	RMC	B	3654M	1:1	-0.05	1852.40	9262	20.5	19.94	Front	10	0.202	1.138	0.230		26.8	
Hotspot	UMTS 1900	RMC	B	3654M	1:1	0.00	1852.40	9262	20.5	19.94	Bottom	10	0.337	1.138	0.384	A15	24.6	
Hotspot	UMTS 1900	RMC	B	3654M	1:1	-0.12	1852.40	9262	20.5	19.94	Left	10	0.149	1.138	0.170		28.2	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.6 LTE Band 71 Standalone SAR

Table 11-16

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 71	20	QPSK	A	3490M	1:1	0.12	680.50	133297	0.0	25.5	24.17	1	0	Right Cheek	0	0.135	1.358	0.183	A16	32.8	32.5
Head	LTE Band 71	20	QPSK	A	3490M	1:1	-0.03	680.50	133297	1.0	24.5	23.52	50	0	Right Cheek	0	0.126	1.253	0.158		32.5	
Head	LTE Band 71	20	QPSK	A	3490M	1:1	-0.02	680.50	133297	0.0	25.5	24.17	1	0	Right Tilt	0	0.062	1.358	0.084		36.2	
Head	LTE Band 71	20	QPSK	A	3490M	1:1	0.01	680.50	133297	1.0	24.5	23.52	50	0	Right Tilt	0	0.053	1.253	0.066		36.2	
Head	LTE Band 71	20	QPSK	A	3490M	1:1	-0.02	680.50	133297	0.0	25.5	24.17	1	0	Left Cheek	0	0.107	1.358	0.145		33.8	
Head	LTE Band 71	20	QPSK	A	3490M	1:1	-0.01	680.50	133297	1.0	24.5	23.52	50	0	Left Cheek	0	0.097	1.253	0.122		33.6	
Head	LTE Band 71	20	QPSK	A	3490M	1:1	0.01	680.50	133297	0.0	25.5	24.17	1	0	Left Tilt	0	0.059	1.358	0.080		36.4	
Head	LTE Band 71	20	QPSK	A	3490M	1:1	0.01	680.50	133297	1.0	24.5	23.52	50	0	Left Tilt	0	0.051	1.253	0.064		36.4	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-17

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 71	20	QPSK	A	3490M	1:1	0.08	680.50	133297	0.0	25.5	24.17	1	0	Back	15	0.287	1.358	0.390	A17	29.5	29.5
Body-worn	LTE Band 71	20	QPSK	A	3490M	1:1	-0.02	680.50	133297	1.0	24.5	23.52	50	0	Back	15	0.225	1.253	0.282		29.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-18

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	-0.03	680.50	133297	0.0	25.5	24.17	1	0	Back	10	0.222	1.358	0.301		30.7	29.1
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	-0.01	680.50	133297	1.0	24.5	23.52	50	0	Back	10	0.210	1.253	0.263		30.2	
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	0.03	680.50	133297	0.0	25.5	24.17	1	0	Front	10	0.184	1.358	0.250		31.5	
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	0.01	680.50	133297	1.0	24.5	23.52	50	0	Front	10	0.168	1.253	0.211		31.2	
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	0.01	680.50	133297	0.0	25.5	24.17	1	0	Bottom	10	0.147	1.358	0.200		32.4	
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	0.02	680.50	133297	1.0	24.5	23.52	50	0	Bottom	10	0.142	1.253	0.178		31.9	
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	-0.01	680.50	133297	0.0	25.5	24.17	1	0	Right	10	0.303	1.358	0.411	A18	29.3	
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	-0.01	680.50	133297	1.0	24.5	23.52	50	0	Right	10	0.271	1.253	0.340		29.1	
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	0.01	680.50	133297	0.0	25.5	24.17	1	0	Left	10	0.144	1.358	0.196		32.5	
Hotspot	LTE Band 71	20	QPSK	A	3490M	1:1	-0.05	680.50	133297	1.0	24.5	23.52	50	0	Left	10	0.138	1.253	0.173		32.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.7 LTE Band 12 Standalone SAR

Table 11-19

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 12	10	QPSK	A	3707M	1:1	0.13	707.50	23095	0.0	25.5	24.64	1	0	Right Cheek	0	0.167	1.219	0.204	A19	32.4	32.4
Head	LTE Band 12	10	QPSK	A	3707M	1:1	-0.02	707.50	23095	1.0	24.5	23.53	25	0	Right Cheek	0	0.123	1.250	0.154		32.6	
Head	LTE Band 12	10	QPSK	A	3707M	1:1	-0.13	707.50	23095	0.0	25.5	24.64	1	0	Right Tilt	0	0.082	1.219	0.100		35.5	
Head	LTE Band 12	10	QPSK	A	3707M	1:1	-0.01	707.50	23095	1.0	24.5	23.53	25	0	Right Tilt	0	0.063	1.250	0.079		35.5	
Head	LTE Band 12	10	QPSK	A	3707M	1:1	0.16	707.50	23095	0.0	25.5	24.64	1	0	Left Cheek	0	0.140	1.219	0.171		33.1	
Head	LTE Band 12	10	QPSK	A	3707M	1:1	0.04	707.50	23095	1.0	24.5	23.53	25	0	Left Cheek	0	0.107	1.250	0.134		33.2	
Head	LTE Band 12	10	QPSK	A	3707M	1:1	-0.04	707.50	23095	0.0	25.5	24.64	1	0	Left Tilt	0	0.069	1.219	0.084		36.2	
Head	LTE Band 12	10	QPSK	A	3707M	1:1	0.11	707.50	23095	1.0	24.5	23.53	25	0	Left Tilt	0	0.051	1.250	0.064		36.4	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-20

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 12	10	QPSK	A	3490M	1:1	0.02	707.50	23095	0.0	25.5	24.64	1	0	Back	15	0.135	1.219	0.165	A20	33.3	33.1
Body-worn	LTE Band 12	10	QPSK	A	3490M	1:1	-0.01	707.50	23095	1.0	24.5	23.53	25	0	Back	15	0.109	1.250	0.136		33.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-21

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	0.00	707.50	23095	0.0	25.5	24.64	1	0	Back	10	0.274	1.219	0.334		30.2	29.7
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	0.04	707.50	23095	1.0	24.5	23.53	25	0	Back	10	0.217	1.250	0.271		30.1	
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	0.03	707.50	23095	0.0	25.5	24.64	1	0	Front	10	0.205	1.219	0.250		31.5	
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	-0.02	707.50	23095	1.0	24.5	23.53	25	0	Front	10	0.163	1.250	0.204		31.4	
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	-0.03	707.50	23095	0.0	25.5	24.64	1	0	Bottom	10	0.263	1.219	0.321		30.4	
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	-0.03	707.50	23095	1.0	24.5	23.53	25	0	Bottom	10	0.210	1.250	0.263		30.3	
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	-0.03	707.50	23095	0.0	25.5	24.64	1	0	Right	10	0.299	1.219	0.364	A21	29.8	
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	0.00	707.50	23095	1.0	24.5	23.53	25	0	Right	10	0.239	1.250	0.299		29.7	
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	0.02	707.50	23095	0.0	25.5	24.64	1	0	Left	10	0.198	1.219	0.241		31.6	
Hotspot	LTE Band 12	10	QPSK	A	3647M	1:1	0.09	707.50	23095	1.0	24.5	23.53	25	0	Left	10	0.153	1.250	0.191		31.6	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.8 LTE Band 13 Standalone SAR

Table 11-22

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 13	10	QPSK	A	3707M	1:1	-0.06	782.00	23230	0.0	25.5	24.06	1	0	Right Cheek	0	0.184	1.393	0.256	A22	31.4	31.1
Head	LTE Band 13	10	QPSK	A	3707M	1:1	0.01	782.00	23230	1.0	24.5	23.63	25	0	Right Cheek	0	0.176	1.222	0.215		31.1	
Head	LTE Band 13	10	QPSK	A	3707M	1:1	-0.03	782.00	23230	0.0	25.5	24.06	1	0	Right Tilt	0	0.093	1.393	0.130		34.3	
Head	LTE Band 13	10	QPSK	A	3707M	1:1	0.01	782.00	23230	1.0	24.5	23.63	25	0	Right Tilt	0	0.090	1.222	0.110		34.0	
Head	LTE Band 13	10	QPSK	A	3707M	1:1	-0.14	782.00	23230	0.0	25.5	24.06	1	0	Left Cheek	0	0.130	1.393	0.181		32.9	
Head	LTE Band 13	10	QPSK	A	3707M	1:1	-0.08	782.00	23230	1.0	24.5	23.63	25	0	Left Cheek	0	0.124	1.222	0.152		32.6	
Head	LTE Band 13	10	QPSK	A	3707M	1:1	-0.07	782.00	23230	0.0	25.5	24.06	1	0	Left Tilt	0	0.069	1.393	0.096		35.6	
Head	LTE Band 13	10	QPSK	A	3707M	1:1	-0.08	782.00	23230	1.0	24.5	23.63	25	0	Left Tilt	0	0.072	1.222	0.088		35.0	
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 11-23

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 13	10	QPSK	A	3431M	1:1	-0.16	782.00	23230	0.0	25.5	24.06	1	0	Back	15	0.276	1.393	0.384	A23	29.6	29.6
Body-worn	LTE Band 13	10	QPSK	A	3431M	1:1	-0.03	782.00	23230	1.0	24.5	23.63	25	0	Back	15	0.241	1.222	0.295		29.8	
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 11-24

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	-0.06	782.00	23230	0.0	25.5	24.06	1	0	Back	10	0.287	1.393	0.400		29.4	28.8
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	0.00	782.00	23230	1.0	24.5	23.63	25	0	Back	10	0.272	1.222	0.332		29.2	
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	-0.07	782.00	23230	0.0	25.5	24.06	1	0	Front	10	0.205	1.393	0.286		30.9	
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	0.00	782.00	23230	1.0	24.5	23.63	25	0	Front	10	0.185	1.222	0.226		30.9	
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	0.00	782.00	23230	0.0	25.5	24.06	1	0	Bottom	10	0.272	1.393	0.379		29.7	
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	-0.02	782.00	23230	1.0	24.5	23.63	25	0	Bottom	10	0.235	1.222	0.287		29.9	
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	0.01	782.00	23230	0.0	25.5	24.06	1	0	Right	10	0.329	1.393	0.458	A24	28.8	
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	0.01	782.00	23230	1.0	24.5	23.63	25	0	Right	10	0.291	1.222	0.356		28.9	
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	0.00	782.00	23230	0.0	25.5	24.06	1	0	Left	10	0.145	1.393	0.202		32.4	
Hotspot	LTE Band 13	10	QPSK	A	3647M	1:1	-0.03	782.00	23230	1.0	24.5	23.63	25	0	Left	10	0.129	1.222	0.158		32.5	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.9 LTE Band 14 Standalone SAR

Table 11-25

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 14	10	QPSK	A	3707M	1:1	0.00	793.00	23330	0.0	25.5	24.21	1	0	Right Cheek	0	0.189	1.346	0.254	A25	31.4	31.4
Head	LTE Band 14	10	QPSK	A	3707M	1:1	-0.02	793.00	23330	1.0	24.5	23.77	25	0	Right Cheek	0	0.151	1.183	0.179		31.9	
Head	LTE Band 14	10	QPSK	A	3707M	1:1	-0.03	793.00	23330	0.0	25.5	24.21	1	0	Right Tilt	0	0.102	1.346	0.137		34.1	
Head	LTE Band 14	10	QPSK	A	3707M	1:1	0.05	793.00	23330	1.0	24.5	23.77	25	0	Right Tilt	0	0.079	1.183	0.093		34.7	
Head	LTE Band 14	10	QPSK	A	3707M	1:1	-0.06	793.00	23330	0.0	25.5	24.21	1	0	Left Cheek	0	0.162	1.346	0.218		32.1	
Head	LTE Band 14	10	QPSK	A	3707M	1:1	-0.01	793.00	23330	1.0	24.5	23.77	25	0	Left Cheek	0	0.132	1.183	0.156		32.5	
Head	LTE Band 14	10	QPSK	A	3707M	1:1	0.03	793.00	23330	0.0	25.5	24.21	1	0	Left Tilt	0	0.092	1.346	0.124		34.5	
Head	LTE Band 14	10	QPSK	A	3707M	1:1	0.01	793.00	23330	1.0	24.5	23.77	25	0	Left Tilt	0	0.074	1.183	0.088		35.0	
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 11-26

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 14	10	QPSK	A	3490M	1:1	0.00	793.00	23330	0.0	25.5	24.21	1	0	Back	15	0.134	1.346	0.180	A26	32.9	32.9
Body-worn	LTE Band 14	10	QPSK	A	3490M	1:1	-0.05	793.00	23330	1.0	24.5	23.77	25	0	Back	15	0.106	1.183	0.125		33.5	
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 11-27

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	-0.03	793.00	23330	0.0	25.5	24.21	1	0	Back	10	0.360	1.346	0.485		28.6	28.6
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	0.01	793.00	23330	1.0	24.5	23.77	25	0	Back	10	0.281	1.183	0.332		29.2	
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	0.07	793.00	23330	0.0	25.5	24.21	1	0	Front	10	0.231	1.346	0.311		30.5	
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	0.02	793.00	23330	1.0	24.5	23.77	25	0	Front	10	0.177	1.183	0.209		31.2	
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	-0.01	793.00	23330	0.0	25.5	24.21	1	0	Bottom	10	0.322	1.346	0.433		29.1	
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	-0.03	793.00	23330	1.0	24.5	23.77	25	0	Bottom	10	0.266	1.183	0.315		29.5	
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	0.08	793.00	23330	0.0	25.5	24.21	1	0	Right	10	0.363	1.346	0.489	A27	28.6	
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	-0.03	793.00	23330	1.0	24.5	23.77	25	0	Right	10	0.281	1.183	0.332		29.2	
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	0.03	793.00	23330	0.0	25.5	24.21	1	0	Left	10	0.155	1.346	0.209		32.3	
Hotspot	LTE Band 14	10	QPSK	A	3647M	1:1	0.01	793.00	23330	1.0	24.5	23.77	25	0	Left	10	0.116	1.183	0.137		33.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.10 LTE Band 26 (Cell) Standalone SAR

Table 11-28

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 26	15	QPSK	A	3647M	1:1	0.07	831.50	26865	0.0	25.5	24.53	1	0	Right Cheek	0	0.153	1.250	0.191	A28	32.6	32.1
Head	LTE Band 26	15	QPSK	A	3647M	1:1	0.05	831.50	26865	1.0	24.5	23.66	36	0	Right Cheek	0	0.142	1.213	0.172		32.1	
Head	LTE Band 26	15	QPSK	A	3647M	1:1	0.10	831.50	26865	0.0	25.5	24.53	1	0	Right Tilt	0	0.087	1.250	0.109		35.1	
Head	LTE Band 26	15	QPSK	A	3647M	1:1	0.04	831.50	26865	1.0	24.5	23.66	36	0	Right Tilt	0	0.078	1.213	0.095		34.7	
Head	LTE Band 26	15	QPSK	A	3647M	1:1	0.05	831.50	26865	0.0	25.5	24.53	1	0	Left Cheek	0	0.139	1.250	0.174		33.0	
Head	LTE Band 26	15	QPSK	A	3647M	1:1	0.00	831.50	26865	1.0	24.5	23.66	36	0	Left Cheek	0	0.133	1.213	0.161		32.4	
Head	LTE Band 26	15	QPSK	A	3647M	1:1	0.06	831.50	26865	0.0	25.5	24.53	1	0	Left Tilt	0	0.084	1.250	0.105		35.2	
Head	LTE Band 26	15	QPSK	A	3647M	1:1	0.10	831.50	26865	1.0	24.5	23.66	36	0	Left Tilt	0	0.077	1.213	0.093		34.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-29

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 26	15	QPSK	A	3490M	1:1	-0.02	831.50	26865	0.0	25.5	24.53	1	0	Back	15	0.097	1.250	0.121	A29	34.6	34.3
Body-worn	LTE Band 26	15	QPSK	A	3490M	1:1	0.01	831.50	26865	1.0	24.5	23.66	36	0	Back	15	0.085	1.213	0.103		34.3	
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 11-30

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	0.01	831.50	26865	0.0	25.5	24.53	1	0	Back	10	0.410	1.250	0.513	A30	28.4	27.8
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	0.00	831.50	26865	1.0	24.5	23.66	36	0	Back	10	0.378	1.213	0.459		27.8	
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	0.00	831.50	26865	0.0	25.5	24.53	1	0	Front	10	0.173	1.250	0.216		32.1	
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	0.01	831.50	26865	1.0	24.5	23.66	36	0	Front	10	0.160	1.213	0.194		31.6	
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	0.00	831.50	26865	0.0	25.5	24.53	1	0	Bottom	10	0.265	1.250	0.331		30.2	
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	0.00	831.50	26865	1.0	24.5	23.66	36	0	Bottom	10	0.244	1.213	0.296		29.7	
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	0.02	831.50	26865	0.0	25.5	24.53	1	0	Right	10	0.217	1.250	0.271		31.1	
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	0.03	831.50	26865	1.0	24.5	23.66	36	0	Right	10	0.185	1.213	0.224		30.9	
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	-0.04	831.50	26865	0.0	25.5	24.53	1	0	Left	10	0.108	1.250	0.135		34.1	
Hotspot	LTE Band 26	15	QPSK	A	3647M	1:1	-0.02	831.50	26865	1.0	24.5	23.66	36	0	Left	10	0.092	1.213	0.112		34.0	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.1 LTE Band 5 (Cell) Standalone SAR

Table 11-31

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 5	10	QPSK	A	3707M	1:1	0.03	836.50	20525	0.0	25.5	24.20	1	0	Right Cheek	0	0.172	1.349	0.232	A31	31.8	31.8
Head	LTE Band 5	10	QPSK	A	3707M	1:1	-0.02	836.50	20525	1.0	24.5	23.66	25	0	Right Cheek	0	0.135	1.213	0.164		32.3	
Head	LTE Band 5	10	QPSK	A	3707M	1:1	-0.04	836.50	20525	0.0	25.5	24.20	1	0	Right Tilt	0	0.091	1.349	0.123		34.6	
Head	LTE Band 5	10	QPSK	A	3707M	1:1	0.07	836.50	20525	1.0	24.5	23.66	25	0	Right Tilt	0	0.070	1.213	0.085		35.2	
Head	LTE Band 5	10	QPSK	A	3707M	1:1	0.03	836.50	20525	0.0	25.5	24.20	1	0	Left Cheek	0	0.157	1.349	0.212		32.2	
Head	LTE Band 5	10	QPSK	A	3707M	1:1	0.00	836.50	20525	1.0	24.5	23.66	25	0	Left Cheek	0	0.112	1.213	0.136		33.1	
Head	LTE Band 5	10	QPSK	A	3707M	1:1	0.03	836.50	20525	0.0	25.5	24.20	1	0	Left Tilt	0	0.084	1.349	0.113		34.9	
Head	LTE Band 5	10	QPSK	A	3707M	1:1	0.00	836.50	20525	1.0	24.5	23.66	25	0	Left Tilt	0	0.062	1.213	0.075		35.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-32

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 5	10	QPSK	A	3490M	1:1	0.01	836.50	20525	0.0	25.5	24.20	1	0	Back	15	0.114	1.349	0.154	A32	33.6	33.6
Body-worn	LTE Band 5	10	QPSK	A	3490M	1:1	-0.02	836.50	20525	1.0	24.5	23.66	25	0	Back	15	0.091	1.213	0.110		34.0	
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 11-33

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	-0.02	836.50	20525	0.0	25.5	24.20	1	0	Back	10	0.421	1.349	0.568	A33	27.9	27.9
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	0.03	836.50	20525	1.0	24.5	23.66	25	0	Back	10	0.334	1.213	0.405		28.4	
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	-0.04	836.50	20525	0.0	25.5	24.20	1	0	Front	10	0.184	1.349	0.248		31.5	
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	-0.03	836.50	20525	1.0	24.5	23.66	25	0	Front	10	0.145	1.213	0.176		32.0	
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	-0.12	836.50	20525	0.0	25.5	24.20	1	0	Bottom	10	0.293	1.349	0.395		29.5	
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	-0.01	836.50	20525	1.0	24.5	23.66	25	0	Bottom	10	0.231	1.213	0.280		30.0	
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	0.00	836.50	20525	0.0	25.5	24.20	1	0	Right	10	0.182	1.349	0.246		31.5	
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	-0.03	836.50	20525	1.0	24.5	23.66	25	0	Right	10	0.140	1.213	0.170		32.1	
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	0.07	836.50	20525	0.0	25.5	24.20	1	0	Left	10	0.086	1.349	0.116		34.8	
Hotspot	LTE Band 5	10	QPSK	A	3707M	1:1	-0.03	836.50	20525	1.0	24.5	23.66	25	0	Left	10	0.065	1.213	0.079		35.5	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.2 LTE Band 66 (AWS) Standalone SAR

Table 11-34

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 66	20	QPSK	B	3706M	1:1	0.05	1720.00	132072	0.0	24.5	23.36	1	0	Right Cheek	0	0.163	1.300	0.212		31.2	30.6
Head	LTE Band 66	20	QPSK	B	3706M	1:1	-0.07	1720.00	132072	1.0	23.5	22.51	50	25	Right Cheek	0	0.139	1.256	0.175		31.0	
Head	LTE Band 66	20	QPSK	B	3706M	1:1	0.19	1720.00	132072	0.0	24.5	23.36	1	0	Right Tilt	0	0.131	1.300	0.170		32.1	
Head	LTE Band 66	20	QPSK	B	3706M	1:1	0.17	1720.00	132072	1.0	23.5	22.51	50	25	Right Tilt	0	0.097	1.256	0.122		32.6	
Head	LTE Band 66	20	QPSK	B	3706M	1:1	0.14	1720.00	132072	0.0	24.5	23.36	1	0	Left Cheek	0	0.146	1.300	0.190		31.7	
Head	LTE Band 66	20	QPSK	B	3706M	1:1	-0.13	1720.00	132072	1.0	23.5	22.51	50	25	Left Cheek	0	0.125	1.256	0.157		31.5	
Head	LTE Band 66	20	QPSK	B	3706M	1:1	0.03	1720.00	132072	0.0	24.5	23.36	1	0	Left Tilt	0	0.186	1.300	0.242		30.6	
Head	LTE Band 66	20	QPSK	B	3706M	1:1	0.07	1720.00	132072	1.0	23.5	22.51	50	25	Left Tilt	0	0.113	1.256	0.142		31.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-35

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 66	20	QPSK	B	3706M	1:1	-0.04	1720.00	132072	0.0	22.0	21.12	1	99	Back	15	0.219	1.225	0.268		27.7	27.5
Body-worn	LTE Band 66	20	QPSK	B	3706M	1:1	-0.02	1720.00	132072	0.0	22.0	21.13	50	25	Back	15	0.228	1.222	0.279	A35	27.5	
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 11-36

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 66	20	QPSK	B	3647M	1:1	-0.04	1720.00	132072	0.0	19.5	18.49	1	0	Back	10	0.217	1.262	0.274		25.1	23.9
Hotspot	LTE Band 66	20	QPSK	B	3647M	1:1	0.04	1720.00	132072	0.0	19.5	18.49	50	25	Back	10	0.215	1.262	0.271		25.1	
Hotspot	LTE Band 66	20	QPSK	B	3647M	1:1	-0.06	1720.00	132072	0.0	19.5	18.49	1	0	Front	10	0.139	1.262	0.175		27.0	
Hotspot	LTE Band 66	20	QPSK	B	3647M	1:1	0.02	1720.00	132072	0.0	19.5	18.49	50	25	Front	10	0.134	1.262	0.169		27.2	
Hotspot	LTE Band 66	20	QPSK	B	3647M	1:1	-0.02	1720.00	132072	0.0	19.5	18.49	1	0	Bottom	10	0.269	1.262	0.339		24.1	
Hotspot	LTE Band 66	20	QPSK	B	3647M	1:1	0.00	1720.00	132072	0.0	19.5	18.49	50	25	Bottom	10	0.282	1.262	0.356	A36	23.9	
Hotspot	LTE Band 66	20	QPSK	B	3647M	1:1	0.03	1720.00	132072	0.0	19.5	18.49	1	0	Left	10	0.124	1.262	0.156		27.5	
Hotspot	LTE Band 66	20	QPSK	B	3647M	1:1	-0.03	1720.00	132072	0.0	19.5	18.49	50	25	Left	10	0.123	1.262	0.155		27.5	
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 11-37

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 66	20	QPSK	F	3707M	1:1	-0.01	1720.00	132072	0.0	19.5	18.53	1	50	Right Cheek	0	0.560	1.250	0.700		21.0	20.9
Head	LTE Band 66	20	QPSK	F	3707M	1:1	0.04	1720.00	132072	0.0	19.5	18.57	50	25	Right Cheek	0	0.567	1.239	0.703		21.0	
Head	LTE Band 66	20	QPSK	F	3707M	1:1	0.02	1720.00	132072	0.0	19.5	18.53	1	50	Right Tilt	0	0.569	1.250	0.711		20.9	
Head	LTE Band 66	20	QPSK	F	3707M	1:1	0.00	1720.00	132072	0.0	19.5	18.57	50	25	Right Tilt	0	0.572	1.239	0.709	A34	20.9	
Head	LTE Band 66	20	QPSK	F	3707M	1:1	-0.01	1720.00	132072	0.0	19.5	18.53	1	50	Left Cheek	0	0.322	1.250	0.403		23.4	
Head	LTE Band 66	20	QPSK	F	3707M	1:1	0.02	1720.00	132072	0.0	19.5	18.57	50	25	Left Cheek	0	0.323	1.239	0.400		23.4	
Head	LTE Band 66	20	QPSK	F	3707M	1:1	-0.02	1720.00	132072	0.0	19.5	18.53	1	50	Left Tilt	0	0.366	1.250	0.458		22.8	
Head	LTE Band 66	20	QPSK	F	3707M	1:1	0.01	1720.00	132072	0.0	19.5	18.57	50	25	Left Tilt	0	0.371	1.239	0.460		22.8	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-38

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 66	20	QPSK	F	3438M	1:1	0.00	1745.00	132322	0.0	21.0	20.08	1	99	Back	15	0.125	1.236	0.155		29.1	29.0
Body-worn	LTE Band 66	20	QPSK	F	3438M	1:1	0.00	1745.00	132322	0.0	21.0	20.21	50	50	Back	15	0.132	1.199	0.158		29.0	
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 11-39

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 66	20	QPSK	F	3654M	1:1	0.03	1720.00	132072	0.0	19.5	18.53	1	50	Back	10	0.266	1.250	0.333		24.2	24.1
Hotspot	LTE Band 66	20	QPSK	F	3654M	1:1	0.00	1720.00	132072	0.0	19.5	18.57	50	25	Back	10	0.270	1.239	0.335		24.2	
Hotspot	LTE Band 66	20	QPSK	F	3654M	1:1	-0.11	1720.00	132072	0.0	19.5	18.53	1	50	Front	10	0.127	1.250	0.159		27.4	
Hotspot	LTE Band 66	20	QPSK	F	3654M	1:1	0.00	1720.00	132072	0.0	19.5	18.57	50	25	Front	10	0.128	1.239	0.159		27.4	
Hotspot	LTE Band 66	20	QPSK	F	3654M	1:1	-0.03	1720.00	132072	0.0	19.5	18.53	1	50	Top	10	0.272	1.250	0.340		24.1	
Hotspot	LTE Band 66	20	QPSK	F	3654M	1:1	-0.06	1720.00	132072	0.0	19.5	18.57	50	25	Top	10	0.279	1.239	0.346		24.1	
Hotspot	LTE Band 66	20	QPSK	F	3654M	1:1	-0.19	1720.00	132072	0.0	19.5	18.53	1	50	Left	10	0.059	1.250	0.074		30.8	
Hotspot	LTE Band 66	20	QPSK	F	3654M	1:1	-0.08	1720.00	132072	0.0	19.5	18.57	50	25	Left	10	0.058	1.239	0.072		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							

11.3 LTE Band 25 (PCS) Standalone SAR

Table 11-40

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 25	20	QPSK	B	3658M	1:1	0.01	1860.00	26140	0.0	24.0	23.34	1	99	Right Cheek	0	0.179	1.164	0.208		30.8	30.5
Head	LTE Band 25	20	QPSK	B	3658M	1:1	-0.01	1860.00	26140	1.0	23.0	22.47	50	0	Right Cheek	0	0.135	1.130	0.153		31.1	
Head	LTE Band 25	20	QPSK	B	3658M	1:1	0.02	1860.00	26140	0.0	24.0	23.34	1	99	Right Tilt	0	0.138	1.164	0.161		31.9	
Head	LTE Band 25	20	QPSK	B	3658M	1:1	-0.02	1860.00	26140	1.0	23.0	22.47	50	0	Right Tilt	0	0.092	1.130	0.104		32.8	
Head	LTE Band 25	20	QPSK	B	3658M	1:1	0.05	1860.00	26140	0.0	24.0	23.34	1	99	Left Cheek	0	0.190	1.164	0.221		30.5	
Head	LTE Band 25	20	QPSK	B	3658M	1:1	-0.04	1860.00	26140	1.0	23.0	22.47	50	0	Left Cheek	0	0.149	1.130	0.168		30.7	
Head	LTE Band 25	20	QPSK	B	3658M	1:1	-0.01	1860.00	26140	0.0	24.0	23.34	1	99	Left Tilt	0	0.136	1.164	0.158		32.0	
Head	LTE Band 25	20	QPSK	B	3658M	1:1	-0.01	1860.00	26140	1.0	23.0	22.47	50	0	Left Tilt	0	0.109	1.130	0.123		32.0	
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 11-41

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 25	20	QPSK	B	3616M	1:1	-0.03	1860.00	26140	0.0	22.0	20.88	1	0	Back	15	0.249	1.294	0.322	A38	26.9	26.9
Body-worn	LTE Band 25	20	QPSK	B	3616M	1:1	-0.04	1860.00	26140	0.0	22.0	20.90	50	0	Back	15	0.242	1.288	0.312		27.0	
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 11-42

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 25	20	QPSK	B	3423M	1:1	0.00	1882.50	26365	0.0	19.5	18.62	1	50	Back	10	0.261	1.225	0.320		24.4	23.8
Hotspot	LTE Band 25	20	QPSK	B	3423M	1:1	0.01	1882.50	26365	0.0	19.5	18.61	50	50	Back	10	0.252	1.227	0.309		24.5	
Hotspot	LTE Band 25	20	QPSK	B	3423M	1:1	0.00	1882.50	26365	0.0	19.5	18.62	1	50	Front	10	0.184	1.225	0.225		25.9	
Hotspot	LTE Band 25	20	QPSK	B	3423M	1:1	-0.11	1882.50	26365	0.0	19.5	18.61	50	50	Front	10	0.177	1.227	0.217		26.1	
Hotspot	LTE Band 25	20	QPSK	B	3423M	1:1	0.01	1882.50	26365	0.0	19.5	18.62	1	50	Bottom	10	0.298	1.225	0.365		23.8	
Hotspot	LTE Band 25	20	QPSK	B	3423M	1:1	-0.05	1882.50	26365	0.0	19.5	18.61	50	50	Bottom	10	0.302	1.227	0.371	A39	23.8	
Hotspot	LTE Band 25	20	QPSK	B	3423M	1:1	0.02	1882.50	26365	0.0	19.5	18.62	1	50	Left	10	0.109	1.225	0.134		28.2	
Hotspot	LTE Band 25	20	QPSK	B	3423M	1:1	0.02	1882.50	26365	0.0	19.5	18.61	50	50	Left	10	0.106	1.227	0.130		28.3	
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 11-43

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 25	20	QPSK	F	3423M	1:1	0.01	1882.50	26365	0.0	19.5	18.54	1	0	Right Cheek	0	0.431	1.247	0.537		22.1	21.9
Head	LTE Band 25	20	QPSK	F	3423M	1:1	0.05	1882.50	26365	0.0	19.5	18.55	50	0	Right Cheek	0	0.431	1.245	0.537		22.2	
Head	LTE Band 25	20	QPSK	F	3423M	1:1	0.01	1882.50	26365	0.0	19.5	18.54	1	0	Right Tilt	0	0.453	1.247	0.565		21.9	
Head	LTE Band 25	20	QPSK	F	3423M	1:1	-0.01	1882.50	26365	0.0	19.5	18.55	50	0	Right Tilt	0	0.457	1.245	0.569	A37	21.9	
Head	LTE Band 25	20	QPSK	F	3423M	1:1	0.02	1882.50	26365	0.0	19.5	18.54	1	0	Left Cheek	0	0.260	1.247	0.324		24.3	
Head	LTE Band 25	20	QPSK	F	3423M	1:1	0.04	1882.50	26365	0.0	19.5	18.55	50	0	Left Cheek	0	0.259	1.245	0.322		24.4	
Head	LTE Band 25	20	QPSK	F	3423M	1:1	-0.01	1882.50	26365	0.0	19.5	18.54	1	0	Left Tilt	0	0.302	1.247	0.377		23.7	
Head	LTE Band 25	20	QPSK	F	3423M	1:1	0.00	1882.50	26365	0.0	19.5	18.55	50	0	Left Tilt	0	0.305	1.245	0.380		23.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-44

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 25	20	QPSK	F	3714M	1:1	0.02	1882.50	26365	0.0	22.0	20.99	1	0	Back	15	0.207	1.262	0.261		27.8	27.8
Body-worn	LTE Band 25	20	QPSK	F	3714M	1:1	0.00	1882.50	26365	0.0	22.0	21.08	50	25	Back	15	0.202	1.236	0.250		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 11-45

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 25	20	QPSK	F	3654M	1:1	-0.04	1882.50	26365	0.0	19.5	18.54	1	0	Back	10	0.212	1.247	0.264		25.2	24.2
Hotspot	LTE Band 25	20	QPSK	F	3654M	1:1	-0.01	1882.50	26365	0.0	19.5	18.55	50	0	Back	10	0.210	1.245	0.261		25.3	
Hotspot	LTE Band 25	20	QPSK	F	3654M	1:1	-0.03	1882.50	26365	0.0	19.5	18.54	1	0	Front	10	0.104	1.247	0.130		28.3	
Hotspot	LTE Band 25	20	QPSK	F	3654M	1:1	-0.04	1882.50	26365	0.0	19.5	18.55	50	0	Front	10	0.102	1.245	0.127		28.4	
Hotspot	LTE Band 25	20	QPSK	F	3654M	1:1	0.01	1882.50	26365	0.0	19.5	18.54	1	0	Top	10	0.269	1.247	0.335		24.2	
Hotspot	LTE Band 25	20	QPSK	F	3654M	1:1	-0.06	1882.50	26365	0.0	19.5	18.55	50	0	Top	10	0.268	1.245	0.334		24.2	
Hotspot	LTE Band 25	20	QPSK	F	3654M	1:1	-0.16	1882.50	26365	0.0	19.5	18.54	1	0	Left	10	0.030	1.247	0.037		33.7	
Hotspot	LTE Band 25	20	QPSK	F	3654M	1:1	0.07	1882.50	26365	0.0	19.5	18.55	50	0	Left	10	0.029	1.245	0.036		33.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.4 LTE Band 30 Standalone SAR

Table 11-46

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 30	10	QPSK	B	3616M	1:1	-0.12	2310.00	27710	0.0	23.0	22.02	1	0	Right Cheek	0	0.069	1.253	0.086		33.6	31.5
Head	LTE Band 30	10	QPSK	B	3616M	1:1	0.08	2310.00	27710	1.0	22.0	21.08	25	0	Right Cheek	0	0.048	1.236	0.059		34.2	
Head	LTE Band 30	10	QPSK	B	3616M	1:1	-0.15	2310.00	27710	0.0	23.0	22.02	1	0	Right Tilt	0	0.043	1.253	0.054		35.6	
Head	LTE Band 30	10	QPSK	B	3616M	1:1	0.13	2310.00	27710	1.0	22.0	21.08	25	0	Right Tilt	0	0.047	1.236	0.058		34.3	
Head	LTE Band 30	10	QPSK	B	3616M	1:1	-0.04	2310.00	27710	0.0	23.0	22.02	1	0	Left Cheek	0	0.098	1.253	0.123		32.1	
Head	LTE Band 30	10	QPSK	B	3616M	1:1	-0.01	2310.00	27710	1.0	22.0	21.08	25	0	Left Cheek	0	0.089	1.236	0.110		31.5	
Head	LTE Band 30	10	QPSK	B	3616M	1:1	0.06	2310.00	27710	0.0	23.0	22.02	1	0	Left Tilt	0	0.022	1.253	0.028		38.5	
Head	LTE Band 30	10	QPSK	B	3616M	1:1	-0.03	2310.00	27710	1.0	22.0	21.08	25	0	Left Tilt	0	0.024	1.236	0.030		37.2	
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 11-47

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 30	10	QPSK	B	3651M	1:1	-0.04	2310.00	27710	0.0	21.0	19.37	1	0	Back	15	0.124	1.455	0.180		28.4	28.3
Body-worn	LTE Band 30	10	QPSK	B	3651M	1:1	-0.01	2310.00	27710	0.0	21.0	19.40	25	0	Back	15	0.128	1.445	0.185	A41	28.3	
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 11-48

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 30	10	QPSK	B	3411M	1:1	0.03	2310.00	27710	0.0	19.5	18.16	1	0	Back	10	0.126	1.361	0.171		27.1	26.9
Hotspot	LTE Band 30	10	QPSK	B	3411M	1:1	0.04	2310.00	27710	0.0	19.5	18.15	25	0	Back	10	0.127	1.365	0.173		27.1	
Hotspot	LTE Band 30	10	QPSK	B	3411M	1:1	-0.02	2310.00	27710	0.0	19.5	18.16	1	0	Front	10	0.075	1.361	0.102		29.4	
Hotspot	LTE Band 30	10	QPSK	B	3411M	1:1	-0.03	2310.00	27710	0.0	19.5	18.15	25	0	Front	10	0.076	1.365	0.104		29.3	
Hotspot	LTE Band 30	10	QPSK	B	3411M	1:1	0.00	2310.00	27710	0.0	19.5	18.16	1	0	Bottom	10	0.133	1.361	0.181		26.9	
Hotspot	LTE Band 30	10	QPSK	B	3411M	1:1	-0.01	2310.00	27710	0.0	19.5	18.15	25	0	Bottom	10	0.132	1.365	0.180		26.9	
Hotspot	LTE Band 30	10	QPSK	B	3411M	1:1	0.11	2310.00	27710	0.0	19.5	18.16	1	0	Left	10	0.053	1.361	0.072		30.9	
Hotspot	LTE Band 30	10	QPSK	B	3411M	1:1	0.02	2310.00	27710	0.0	19.5	18.15	25	0	Left	10	0.053	1.365	0.072		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							

Table 11-49

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 30	10	QPSK	F	3411M	1:1	0.03	2310.00	27710	0.0	19.5	18.20	1	49	Right Cheek	0	0.390	1.349	0.526	A40	22.2	22.2
Head	LTE Band 30	10	QPSK	F	3411M	1:1	-0.01	2310.00	27710	0.0	19.5	18.23	25	0	Right Cheek	0	0.373	1.340	0.500		22.5	
Head	LTE Band 30	10	QPSK	F	3411M	1:1	0.03	2310.00	27710	0.0	19.5	18.20	1	49	Right Tilt	0	0.377	1.349	0.509		22.4	
Head	LTE Band 30	10	QPSK	F	3411M	1:1	-0.02	2310.00	27710	0.0	19.5	18.23	25	0	Right Tilt	0	0.365	1.340	0.489		22.6	
Head	LTE Band 30	10	QPSK	F	3411M	1:1	0.00	2310.00	27710	0.0	19.5	18.20	1	49	Left Cheek	0	0.224	1.349	0.302		24.6	
Head	LTE Band 30	10	QPSK	F	3411M	1:1	0.04	2310.00	27710	0.0	19.5	18.23	25	0	Left Cheek	0	0.223	1.340	0.299		24.7	
Head	LTE Band 30	10	QPSK	F	3411M	1:1	0.01	2310.00	27710	0.0	19.5	18.20	1	49	Left Tilt	0	0.279	1.349	0.376		23.7	
Head	LTE Band 30	10	QPSK	F	3411M	1:1	0.07	2310.00	27710	0.0	19.5	18.23	25	0	Left Tilt	0	0.273	1.340	0.366		23.8	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-50

Exposure	Band / Mode	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 30	QPSK	F	3422M	1:1	-0.13	2310.00	27710	0.0	20.0	18.66	1	0	Back	15	0.068	1.361	0.093		30.3	29.7
Body-worn	LTE Band 30	QPSK	F	3422M	1:1	-0.03	2310.00	27710	0.0	20.0	18.68	25	12	Back	15	0.078	1.355	0.106		29.7	
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 11-51

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 30	10	QPSK	F	3411M	1:1	0.04	2310.00	27710	0.0	19.5	18.20	1	49	Back	10	0.138	1.349	0.186		26.8	25.4
Hotspot	LTE Band 30	10	QPSK	F	3411M	1:1	0.01	2310.00	27710	0.0	19.5	18.23	25	0	Back	10	0.129	1.340	0.173		27.1	
Hotspot	LTE Band 30	10	QPSK	F	3411M	1:1	-0.01	2310.00	27710	0.0	19.5	18.20	1	49	Front	10	0.078	1.349	0.105		29.2	
Hotspot	LTE Band 30	10	QPSK	F	3411M	1:1	0.00	2310.00	27710	0.0	19.5	18.23	25	0	Front	10	0.073	1.340	0.098		29.5	
Hotspot	LTE Band 30	10	QPSK	F	3411M	1:1	0.02	2310.00	27710	0.0	19.5	18.20	1	49	Top	10	0.189	1.349	0.255	A42	25.4	
Hotspot	LTE Band 30	10	QPSK	F	3411M	1:1	0.00	2310.00	27710	0.0	19.5	18.23	25	0	Top	10	0.186	1.340	0.249		25.5	
Hotspot	LTE Band 30	10	QPSK	F	3411M	1:1	-0.02	2310.00	27710	0.0	19.5	18.20	1	49	Left	10	0.049	1.349	0.066		31.2	
Hotspot	LTE Band 30	10	QPSK	F	3411M	1:1	0.05	2310.00	27710	0.0	19.5	18.23	25	0	Left	10	0.042	1.340	0.056		31.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.5 LTE Band 7 Standalone SAR

Table 11-52

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 7	20	QPSK	B	3423M	1:1	-0.17	2560.00	21350	0.0	24.3	22.83	1	99	Right Cheek	0	0.023	1.403	0.032		39.2	39.1
Head	LTE Band 7	20	QPSK	B	3423M	1:1	0.04	2560.00	21350	1.0	23.3	21.92	50	0	Right Cheek	0	0.013	1.374	0.018		40.7	
Head	LTE Band 7	20	QPSK	B	3423M	1:1	0.02	2560.00	21350	0.0	24.3	22.83	1	99	Right Tilt	0	0.019	1.403	0.027		40.0	
Head	LTE Band 7	20	QPSK	B	3423M	1:1	-0.07	2560.00	21350	1.0	23.3	21.92	50	0	Right Tilt	0	0.007	1.374	0.010		43.4	
Head	LTE Band 7	20	QPSK	B	3423M	1:1	0.02	2560.00	21350	0.0	24.3	22.83	1	99	Left Cheek	0	0.017	1.403	0.024		40.5	
Head	LTE Band 7	20	QPSK	B	3423M	1:1	0.06	2560.00	21350	1.0	23.3	21.92	50	0	Left Cheek	0	0.019	1.374	0.026		39.1	
Head	LTE Band 7	20	QPSK	B	3423M	1:1	0.08	2560.00	21350	0.0	24.3	22.83	1	99	Left Tilt	0	0.002	1.403	0.003		49.8	
Head	LTE Band 7	20	QPSK	B	3423M	1:1	0.02	2560.00	21350	1.0	23.3	21.92	50	0	Left Tilt	0	0.003	1.374	0.004		47.1	
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 11-53

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 7	20	QPSK	B	3423M	1:1	-0.06	2510.00	20850	0.0	21.0	19.75	1	0	Back	15	0.136	1.334	0.181		28.4	28.1
Body-worn	LTE Band 7	20	QPSK	B	3423M	1:1	-0.02	2510.00	20850	0.0	21.0	19.74	50	0	Back	15	0.144	1.337	0.193	A44	28.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-54

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 7	20	QPSK	B	3423M	1:1	0.02	2535.00	21100	0.0	19.5	18.59	1	0	Back	10	0.186	1.233	0.229		25.8	25.7
Hotspot	LTE Band 7	20	QPSK	B	3423M	1:1	0.00	2535.00	21100	0.0	19.5	18.60	50	25	Back	10	0.183	1.230	0.225		25.9	
Hotspot	LTE Band 7	20	QPSK	B	3423M	1:1	0.00	2535.00	21100	0.0	19.5	18.59	1	0	Front	10	0.104	1.233	0.128		28.4	
Hotspot	LTE Band 7	20	QPSK	B	3423M	1:1	-0.01	2535.00	21100	0.0	19.5	18.60	50	25	Front	10	0.103	1.230	0.127		28.4	
Hotspot	LTE Band 7	20	QPSK	B	3423M	1:1	0.04	2535.00	21100	0.0	19.5	18.59	1	0	Bottom	10	0.194	1.233	0.239	A45	25.7	
Hotspot	LTE Band 7	20	QPSK	B	3423M	1:1	0.01	2535.00	21100	0.0	19.5	18.60	50	25	Bottom	10	0.186	1.230	0.229		25.9	
Hotspot	LTE Band 7	20	QPSK	B	3423M	1:1	0.02	2535.00	21100	0.0	19.5	18.59	1	0	Left	10	0.056	1.233	0.069		31.1	
Hotspot	LTE Band 7	20	QPSK	B	3423M	1:1	0.05	2535.00	21100	0.0	19.5	18.60	50	25	Left	10	0.056	1.230	0.069		31.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-55

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 7	20	QPSK	F	3411M	1:1	-0.01	2560.00	21350	0.0	19.5	18.31	1	0	Right Cheek	0	0.213	1.315	0.280		25.0	24.9
Head	LTE Band 7	20	QPSK	F	3411M	1:1	-0.01	2560.00	21350	0.0	19.5	18.42	50	0	Right Cheek	0	0.208	1.282	0.267		25.2	
Head	LTE Band 7	20	QPSK	F	3411M	1:1	0.00	2560.00	21350	0.0	19.5	18.31	1	0	Right Tilt	0	0.216	1.315	0.284	A43	24.9	
Head	LTE Band 7	20	QPSK	F	3411M	1:1	0.03	2560.00	21350	0.0	19.5	18.42	50	0	Right Tilt	0	0.211	1.282	0.271		25.1	
Head	LTE Band 7	20	QPSK	F	3411M	1:1	0.03	2560.00	21350	0.0	19.5	18.31	1	0	Left Cheek	0	0.124	1.315	0.163		27.3	
Head	LTE Band 7	20	QPSK	F	3411M	1:1	0.04	2560.00	21350	0.0	19.5	18.42	50	0	Left Cheek	0	0.122	1.282	0.156		27.5	
Head	LTE Band 7	20	QPSK	F	3411M	1:1	0.07	2560.00	21350	0.0	19.5	18.31	1	0	Left Tilt	0	0.156	1.315	0.205		26.3	
Head	LTE Band 7	20	QPSK	F	3411M	1:1	0.06	2560.00	21350	0.0	19.5	18.42	50	0	Left Tilt	0	0.154	1.282	0.197		26.5	
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 11-56

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 7	20	QPSK	F	3423M	1:1	0.06	2560.00	21350	0.0	22.0	20.80	1	0	Back	15	0.101	1.318	0.133		30.7	30.7
Body-worn	LTE Band 7	20	QPSK	F	3423M	1:1	0.05	2560.00	21350	0.0	22.0	21.00	50	0	Back	15	0.104	1.259	0.131		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 11-57

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 7	20	QPSK	F	3423M	1:1	0.01	2560.00	21350	0.0	19.5	18.31	1	0	Back	10	0.093	1.315	0.122		28.6	27.0
Hotspot	LTE Band 7	20	QPSK	F	3423M	1:1	0.02	2560.00	21350	0.0	19.5	18.42	50	0	Back	10	0.090	1.282	0.115		28.8	
Hotspot	LTE Band 7	20	QPSK	F	3423M	1:1	-0.07	2560.00	21350	0.0	19.5	18.31	1	0	Front	10	0.037	1.315	0.049		32.6	
Hotspot	LTE Band 7	20	QPSK	F	3423M	1:1	0.08	2560.00	21350	0.0	19.5	18.42	50	0	Front	10	0.037	1.282	0.047		32.7	
Hotspot	LTE Band 7	20	QPSK	F	3423M	1:1	0.01	2560.00	21350	0.0	19.5	18.31	1	0	Top	10	0.133	1.315	0.175		27.0	
Hotspot	LTE Band 7	20	QPSK	F	3423M	1:1	-0.01	2560.00	21350	0.0	19.5	18.42	50	0	Top	10	0.132	1.282	0.169		27.2	
Hotspot	LTE Band 7	20	QPSK	F	3423M	1:1	0.08	2560.00	21350	0.0	19.5	18.31	1	0	Left	10	0.034	1.315	0.045		32.9	
Hotspot	LTE Band 7	20	QPSK	F	3423M	1:1	0.00	2560.00	21350	0.0	19.5	18.42	50	0	Left	10	0.032	1.282	0.041		33.3	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.6 LTE Band 41 Standalone SAR

Table 11-58

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	0.08	2636.50	41055	0.0	27.0	26.21	1	0	Right Cheek	0	N/A	0.139	1.199	0.167		31.1	29.6
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.12	2636.50	41055	1.0	26.0	25.33	50	0	Right Cheek	0	N/A	0.110	1.167	0.128		31.2	
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	0.06	2636.50	41055	0.0	27.0	26.21	1	0	Right Tilt	0	N/A	0.115	1.199	0.138		31.9	
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.03	2636.50	41055	1.0	26.0	25.33	50	0	Right Tilt	0	N/A	0.087	1.167	0.102		32.3	
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.02	2636.50	41055	0.0	27.0	26.21	1	0	Left Cheek	0	N/A	0.196	1.199	0.235		29.6	
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.04	2636.50	41055	1.0	26.0	25.33	50	0	Left Cheek	0	N/A	0.149	1.167	0.174		29.9	
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	0.08	2636.50	41055	0.0	27.0	26.21	1	0	Left Tilt	0	N/A	0.045	1.199	0.054		36.0	
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.12	2636.50	41055	1.0	26.0	25.33	50	0	Left Tilt	0	N/A	0.041	1.167	0.048		35.5	
Head	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.09	2636.50	41055	0.0	27.0	26.27	1	0	Left Cheek	0	ULCA 41C	0.193	1.183	0.228		29.7	
		20						2616.70	40857				1	99									
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: Green entry represents HPUE measurement

Table 11-59

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.03	2636.50	41055	0.0	24.6	24.12	1	0	Back	15	N/A	0.210	1.117	0.235	A47	27.2	27.2
Body-worn	LTE Band 41	20	QPSK	B	0751M	1:2.31	0.06	2636.50	41055	0.0	24.6	24.05	50	0	Back	15	N/A	0.196	1.135	0.222		27.4	
Body-worn	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.01	2636.50	41055	0.0	24.6	24.26	1	0	Back	15	ULCA 41C	0.208	1.081	0.225		27.4	
		20						2616.70	40857				1	99									
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: Green entry represents HPUE measurement

Table 11-60

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.04	2636.50	41055	0.0	23.1	22.76	1	0	Back	10	N/A	0.295	1.081	0.319		24.4	23.2
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.01	2636.50	41055	0.0	23.1	22.67	50	0	Back	10	N/A	0.286	1.104	0.316		24.4	
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.05	2636.50	41055	0.0	23.1	22.76	1	0	Front	10	N/A	0.171	1.081	0.185		26.7	
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.02	2636.50	41055	0.0	23.1	22.67	50	0	Front	10	N/A	0.170	1.104	0.188		26.7	
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.02	2636.50	41055	0.0	23.1	22.76	1	0	Bottom	10	N/A	0.338	1.081	0.365		23.8	
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	0.03	2636.50	41055	0.0	23.1	22.67	50	0	Bottom	10	N/A	0.364	1.104	0.402		23.4	
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.07	2636.50	41055	0.0	23.1	22.76	1	0	Left	10	N/A	0.083	1.081	0.090		29.9	
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	-0.04	2636.50	41055	0.0	23.1	22.67	50	0	Left	10	N/A	0.081	1.104	0.089		29.9	
Hotspot	LTE Band 41	20	QPSK	B	0751M	1:2.31	0.04	2636.50	41055	0.0	23.1	22.93	50	0	Bottom	10	ULCA 41C	0.399	1.04	0.415	A48	23.2	
		20						2616.70	40857				50	50									
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: Green entry represents HPUE measurement

Table 11-61

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.04	2680.00	41490	0.0	22.1	21.60	1	0	Right Cheek	0	N/A	0.247	1.122	0.277		24.0	22.7
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.07	2680.00	41490	0.0	22.1	21.60	50	0	Right Cheek	0	N/A	0.293	1.122	0.329		23.2	
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.02	2680.00	41490	0.0	22.1	21.60	1	0	Right Tilt	0	N/A	0.285	1.122	0.320		23.4	
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.07	2680.00	41490	0.0	22.1	21.60	50	0	Right Tilt	0	N/A	0.336	1.122	0.377	A46	22.7	
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.00	2680.00	41490	0.0	22.1	21.60	1	0	Left Cheek	0	N/A	0.133	1.122	0.149		26.7	
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	-0.03	2680.00	41490	0.0	22.1	21.60	50	0	Left Cheek	0	N/A	0.158	1.122	0.177		25.9	
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.04	2680.00	41490	0.0	22.1	21.60	1	0	Left Tilt	0	N/A	0.190	1.122	0.213		25.1	
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.07	2680.00	41490	0.0	22.1	21.60	50	0	Left Tilt	0	N/A	0.221	1.122	0.248		24.5	
Head	LTE Band 41	20	QPSK	F	3434M	1:2.31	-0.07	2680.00	41490	0.0	22.1	21.65	50	0	Right Tilt	0	ULCA 41C	0.314	1.109	0.348		23.0	
		20						2660.20	41292				50	50									
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: Green entry represents HPUE measurement

Table 11-62

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.14	2680.00	41490	0.0	23.6	22.99	1	0	Back	15	N/A	0.065	1.151	0.075		31.2	30.6
Body-worn	LTE Band 41	20	QPSK	F	3434M	1:2.31	-0.10	2680.00	41490	0.0	23.6	23.13	50	25	Back	15	N/A	0.074	1.114	0.082		30.8	
Body-worn	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.05	2680.00	41490	0.0	23.6	23.12	50	0	Back	15	N/A	0.075	1.117	0.084		30.7	
Body-worn	LTE Band 41	20	QPSK	F	3434M	1:2.31	-0.02	2680.00	41490	0.0	23.6	23.05	50	0	Back	15	ULCA 41C	0.076	1.135	0.086		30.6	
		20						2660.20	41292				50	50									
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: Green entry represents HPUE measurement

Table 11-63

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	-0.01	2680.00	41490	0.0	22.1	21.60	1	0	Back	10	N/A	0.153	1.122	0.172		26.1	24.7
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	-0.05	2680.00	41490	0.0	22.1	21.60	50	0	Back	10	N/A	0.146	1.122	0.164		26.3	
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.00	2680.00	41490	0.0	22.1	21.60	1	0	Front	10	N/A	0.055	1.122	0.062		30.5	
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	-0.03	2680.00	41490	0.0	22.1	21.60	50	0	Front	10	N/A	0.054	1.122	0.061		30.6	
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.03	2680.00	41490	0.0	22.1	21.60	1	0	Top	10	N/A	0.189	1.122	0.212		25.2	
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.01	2680.00	41490	0.0	22.1	21.60	50	0	Top	10	N/A	0.210	1.122	0.236		24.7	
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.02	2680.00	41490	0.0	22.1	21.60	1	0	Left	10	N/A	0.026	1.122	0.029		33.8	
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.08	2680.00	41490	0.0	22.1	21.60	50	0	Left	10	N/A	0.021	1.122	0.024		34.7	
Hotspot	LTE Band 41	20	QPSK	F	3434M	1:2.31	0.03	2680.00	41490	0.0	22.1	21.65	50	0	Top	10	ULCA 41C	0.210	1.109	0.233		24.7	
		20						2660.20	41292				50	50									
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: Green entry represents HPUE measurement

11.7 LTE Band 48 Standalone SAR

Table 11-64

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.02	3560.00	55340	0.0	20.5	20.21	1	99	Right Cheek	0	N/A	0.750	1.069	0.802	A49	19.4	19.4
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.19	3603.30	55773	0.0	20.5	19.04	1	99	Right Cheek	0	N/A	0.455	1.400	0.637		20.4	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.07	3646.70	56207	0.0	20.5	19.52	1	99	Right Cheek	0	N/A	0.500	1.253	0.627		20.5	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.00	3690.00	56640	0.0	20.5	19.58	1	99	Right Cheek	0	N/A	0.522	1.236	0.645		20.4	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.05	3560.00	55340	0.0	20.5	20.17	50	50	Right Cheek	0	N/A	0.744	1.079	0.803		19.4	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.01	3603.30	55773	0.0	20.5	19.15	50	25	Right Cheek	0	N/A	0.427	1.365	0.583		20.8	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.03	3646.70	56207	0.0	20.5	19.61	50	50	Right Cheek	0	N/A	0.494	1.227	0.606		20.6	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.00	3690.00	56640	0.0	20.5	19.65	50	50	Right Cheek	0	N/A	0.513	1.216	0.624		20.5	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.01	3560.00	55340	0.0	20.5	20.09	100	0	Right Cheek	0	N/A	0.577	1.099	0.634		20.4	19.4
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.05	3560.00	55340	0.0	20.5	20.21	1	99	Right Tilt	0	N/A	0.425	1.069	0.454		21.9	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.06	3560.00	55340	0.0	20.5	20.17	50	50	Right Tilt	0	N/A	0.341	1.079	0.368		22.8	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.02	3560.00	55340	0.0	20.5	20.21	1	99	Left Cheek	0	N/A	0.197	1.069	0.211		25.2	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.03	3560.00	55340	0.0	20.5	20.17	50	50	Left Cheek	0	N/A	0.157	1.079	0.169		26.2	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.04	3560.00	55340	0.0	20.5	20.21	1	99	Left Tilt	0	N/A	0.153	1.069	0.164		26.3	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.08	3560.00	55340	0.0	20.5	20.17	50	50	Left Tilt	0	N/A	0.117	1.079	0.126		27.5	
Head	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.07	3560.00	55340	0.0	20.5	19.75	50	50	Right Cheek	0	ULCA	0.643	1.189	0.765		19.6	
		20						3579.80	55538				50	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 11-65

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.01	3560.00	55340	0.0	21.5	20.86	1	99	Back	15	N/A	0.133	1.159	0.154		27.6	27.3
Body-worn	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.03	3560.00	55340	0.0	21.5	20.86	50	50	Back	15	N/A	0.142	1.159	0.165	A50	27.3	
Body-worn	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.00	3560.00	55340	0.0	21.5	20.36	50	50	Back	15	ULCA	0.123	1.3	0.160		27.4	
		20						3579.80	55538				50	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 11-66

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]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.06	3560.00	55340	0.0	21.5	20.86	1	99	Back	10	N/A	0.220	1.159	0.255		25.4	21.5
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.08	3560.00	55340	0.0	21.5	20.86	50	50	Back	10	N/A	0.234	1.159	0.271		25.1	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.07	3560.00	55340	0.0	21.5	20.86	1	99	Front	10	N/A	0.164	1.159	0.190		26.7	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.02	3560.00	55340	0.0	21.5	20.86	50	50	Front	10	N/A	0.165	1.159	0.191		26.7	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.11	3560.00	55340	0.0	21.5	20.86	1	99	Top	10	N/A	0.129	1.159	0.150		27.7	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.02	3560.00	55340	0.0	21.5	20.86	50	50	Top	10	N/A	0.136	1.159	0.158		27.5	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.04	3560.00	55340	0.0	21.5	20.86	1	99	Left	10	N/A	0.439	1.159	0.509		22.4	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	0.02	3560.00	55340	0.0	21.5	20.86	50	50	Left	10	N/A	0.539	1.159	0.625	A51	21.5	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.08	3603.30	55773	0.0	21.5	19.81	50	50	Left	10	N/A	0.402	1.476	0.593		21.7	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.05	3646.70	56207	0.0	21.5	20.38	50	50	Left	10	N/A	0.482	1.294	0.624		21.5	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.03	3690.00	56640	0.0	21.5	20.58	50	50	Left	10	N/A	0.505	1.236	0.624		21.5	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.04	3560.00	55340	0.0	21.5	20.75	100	0	Left	10	N/A	0.525	1.189	0.624		21.5	
Hotspot	LTE Band 48	20	QPSK	G	3714M	1:1.58	-0.06	3560.00	55340	0.0	21.5	20.36	50	50	Left	10	ULCA	0.472	1.3	0.614		21.6	
		20						3579.80	55538				50	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								

11.8 NR Band n71 Standalone SAR

Table 11-67

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n71	20	QPSK	A	3654M	1:1	-0.06	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Right Cheek	0	0.156	1.242	0.194	A52	32.6	
Head	NR Band n71	20	QPSK	A	3654M	1:1	0.02	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Right Cheek	0	0.151	1.265	0.191		32.6	
Head	NR Band n71	20	QPSK	A	3654M	1:1	0.03	680.50	136100	CP-OFDM	1.5	24.0	22.81	1	1	Right Cheek	0	0.080	1.315	0.105		33.7	
Head	NR Band n71	20	QPSK	A	3654M	1:1	0.06	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Right Tilt	0	0.078	1.242	0.097		35.6	
Head	NR Band n71	20	QPSK	A	3654M	1:1	0.05	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Right Tilt	0	0.076	1.265	0.096		35.6	32.6
Head	NR Band n71	20	QPSK	A	3654M	1:1	0.05	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Left Cheek	0	0.120	1.242	0.149		33.7	
Head	NR Band n71	20	QPSK	A	3654M	1:1	-0.06	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Left Cheek	0	0.116	1.265	0.147		33.8	
Head	NR Band n71	20	QPSK	A	3654M	1:1	-0.02	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Left Tilt	0	0.062	1.242	0.077		36.6	
Head	NR Band n71	20	QPSK	A	3654M	1:1	0.01	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Left Tilt	0	0.065	1.265	0.082		36.3	
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 11-68

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n71	20	QPSK	A	3431M	1:1	0.01	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Back	15	0.269	1.242	0.334	A53	30.2	
Body-worn	NR Band n71	20	QPSK	A	3431M	1:1	-0.03	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Back	15	0.267	1.265	0.338		30.2	30.2
Body-worn	NR Band n71	20	QPSK	A	3431M	1:1	-0.06	680.50	136100	CP-OFDM	1.5	24.0	22.81	1	1	Back	15	0.162	1.315	0.213		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 11-69

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	0.00	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Back	10	0.289	1.242	0.359		29.9	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	-0.01	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Back	10	0.287	1.265	0.363		29.9	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	0.00	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Front	10	0.240	1.242	0.298		30.7	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	-0.03	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Front	10	0.233	1.265	0.295		30.8	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	0.09	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Bottom	10	0.186	1.242	0.231		31.8	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	0.00	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Bottom	10	0.186	1.265	0.235		31.7	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	0.00	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Right	10	0.391	1.242	0.486	A54	28.6	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	0.00	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Right	10	0.385	1.265	0.487		28.6	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	-0.01	680.50	136100	CP-OFDM	1.5	24.0	22.81	1	1	Right	10	0.234	1.315	0.308		29.1	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	0.01	680.50	136100	DFT-s-OFDM	0.0	25.5	24.56	1	53	Left	10	0.219	1.242	0.272		31.1	
Hotspot	NR Band n71	20	QPSK	A	3654M	1:1	-0.04	680.50	136100	DFT-s-OFDM	0.0	25.5	24.48	50	28	Left	10	0.215	1.265	0.272		31.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.9 NR Band n5 Standalone SAR

Table 11-70

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n5	20	QPSK	A	3647M	1:1	-0.09	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Right Cheek	0	0.171	1.140	0.195		32.6	
Head	NR Band n5	20	QPSK	A	3647M	1:1	0.01	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Right Cheek	0	0.176	1.130	0.199	A55	32.5	
Head	NR Band n5	20	QPSK	A	3647M	1:1	0.04	836.50	167300	CP-OFDM	1.5	24.0	23.39	1	1	Right Cheek	0	0.117	1.151	0.135		32.7	
Head	NR Band n5	20	QPSK	A	3647M	1:1	0.03	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Right Tilt	0	0.091	1.140	0.104		35.3	
Head	NR Band n5	20	QPSK	A	3647M	1:1	-0.10	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Right Tilt	0	0.091	1.130	0.103		35.3	32.5
Head	NR Band n5	20	QPSK	A	3647M	1:1	0.08	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Left Cheek	0	0.165	1.140	0.188		32.7	
Head	NR Band n5	20	QPSK	A	3647M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Left Cheek	0	0.167	1.130	0.189		32.7	
Head	NR Band n5	20	QPSK	A	3647M	1:1	0.06	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Left Tilt	0	0.080	1.140	0.091		35.8	
Head	NR Band n5	20	QPSK	A	3647M	1:1	0.04	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Left Tilt	0	0.084	1.130	0.095		35.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-71

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n5	20	QPSK	A	3431M	1:1	0.05	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Back	15	0.209	1.140	0.238	A56	31.7	
Body-worn	NR Band n5	20	QPSK	A	3431M	1:1	0.04	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Back	15	0.209	1.130	0.236		31.7	31.7
Body-worn	NR Band n5	20	QPSK	A	3431M	1:1	0.03	836.50	167300	CP-OFDM	1.5	24.0	23.39	1	1	Back	15	0.134	1.151	0.154		32.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-72

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.02	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Back	10	0.518	1.140	0.591	A57	27.7	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.05	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Back	10	0.503	1.130	0.568		27.9	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.05	836.50	167300	CP-OFDM	1.5	24.0	23.39	1	1	Back	10	0.233	1.151	0.268		29.7	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	-0.01	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Front	10	0.209	1.140	0.238		31.7	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Front	10	0.207	1.130	0.234		31.8	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.04	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Bottom	10	0.236	1.140	0.269		31.2	27.7
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.18	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Bottom	10	0.231	1.130	0.261		31.3	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.02	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Right	10	0.166	1.140	0.189		32.7	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.14	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Right	10	0.164	1.130	0.185		32.8	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.13	836.50	167300	DFT-s-OFDM	0.0	25.5	24.93	1	53	Left	10	0.091	1.140	0.104		35.3	
Hotspot	NR Band n5	20	QPSK	A	3490M	1:1	0.06	836.50	167300	DFT-s-OFDM	0.0	25.5	24.97	50	28	Left	10	0.092	1.130	0.104		35.3	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.10 NR Band n70 Standalone SAR

Table 11-73

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n70	15	QPSK	B	3598M	1:1	-0.02	1702.50	340500	DFT-s-OFDM	0.0	24.0	22.98	1	1	Right Cheek	0	0.127	1.265	0.161		31.9	
Head	NR Band n70	15	QPSK	B	3598M	1:1	0.01	1702.50	340500	DFT-s-OFDM	0.0	24.0	22.97	36	22	Right Cheek	0	0.160	1.268	0.203		30.9	
Head	NR Band n70	15	QPSK	B	3598M	1:1	-0.04	1702.50	340500	DFT-s-OFDM	0.0	24.0	22.98	1	1	Right Tilt	0	0.129	1.265	0.163		31.8	
Head	NR Band n70	15	QPSK	B	3598M	1:1	0.19	1702.50	340500	DFT-s-OFDM	0.0	24.0	22.97	36	22	Right Tilt	0	0.111	1.268	0.141		32.5	
Head	NR Band n70	15	QPSK	B	3598M	1:1	0.02	1702.50	340500	DFT-s-OFDM	0.0	24.0	22.98	1	1	Left Cheek	0	0.183	1.265	0.231		30.3	30.2
Head	NR Band n70	15	QPSK	B	3598M	1:1	0.09	1702.50	340500	DFT-s-OFDM	0.0	24.0	22.97	36	22	Left Cheek	0	0.189	1.268	0.240	A58	30.2	
Head	NR Band n70	15	QPSK	B	3598M	1:1	0.12	1702.50	340500	CP-OFDM	1.5	22.5	21.42	1	1	Left Cheek	0	0.126	1.282	0.162		30.4	
Head	NR Band n70	15	QPSK	B	3598M	1:1	0.06	1702.50	340500	DFT-s-OFDM	0.0	24.0	22.98	1	1	Left Tilt	0	0.122	1.265	0.154		32.1	
Head	NR Band n70	15	QPSK	B	3598M	1:1	0.06	1702.50	340500	DFT-s-OFDM	0.0	24.0	22.97	36	22	Left Tilt	0	0.101	1.268	0.128		32.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-74

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n70	15	QPSK	B	3658M	1:1	0.04	1702.50	340500	DFT-s-OFDM	0.0	21.0	20.56	1	77	Back	15	0.214	1.107	0.237	A59	27.2	
Body-worn	NR Band n70	15	QPSK	B	3658M	1:1	0.03	1702.50	340500	DFT-s-OFDM	0.0	21.0	20.61	36	22	Back	15	0.208	1.094	0.228		27.4	27.2
Body-worn	NR Band n70	15	QPSK	B	3658M	1:1	-0.03	1702.50	340500	CP-OFDM	0.0	21.0	20.55	1	1	Back	15	0.189	1.109	0.210		27.7	
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 11-75

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	-0.03	1702.50	340500	DFT-s-OFDM	0.0	19.5	18.99	1	77	Back	10	0.277	1.125	0.312		24.5	
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	-0.01	1702.50	340500	DFT-s-OFDM	0.0	19.5	19.06	36	22	Back	10	0.272	1.107	0.301		24.7	
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	-0.01	1702.50	340500	DFT-s-OFDM	0.0	19.5	18.99	1	77	Front	10	0.224	1.125	0.252		25.4	
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	0.03	1702.50	340500	DFT-s-OFDM	0.0	19.5	19.06	36	22	Front	10	0.222	1.107	0.246		25.5	
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	-0.03	1702.50	340500	DFT-s-OFDM	0.0	19.5	18.99	1	77	Bottom	10	0.286	1.125	0.322		24.4	24.3
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	-0.02	1702.50	340500	DFT-s-OFDM	0.0	19.5	19.06	36	22	Bottom	10	0.297	1.107	0.329	A60	24.3	
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	-0.09	1702.50	340500	CP-OFDM	0.0	19.5	19.05	1	1	Bottom	10	0.284	1.109	0.315		24.5	
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	-0.09	1702.50	340500	DFT-s-OFDM	0.0	19.5	18.99	1	77	Left	10	0.127	1.125	0.143		27.9	
Hotspot	NR Band n70	15	QPSK	B	3658M	1:1	-0.01	1702.50	340500	DFT-s-OFDM	0.0	19.5	19.06	36	22	Left	10	0.125	1.107	0.138		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							

11.11 NR Band n66 Standalone SAR

Table 11-76

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n66	40	QPSK	B	3598M	1:1	0.05	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.55	1	108	Right Cheek	0	0.125	1.245	0.156		32.5	
Head	NR Band n66	40	QPSK	B	3598M	1:1	0.06	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.51	108	54	Right Cheek	0	0.134	1.256	0.168		32.2	
Head	NR Band n66	40	QPSK	B	3598M	1:1	-0.08	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.55	1	108	Right Tilt	0	0.123	1.245	0.153		32.6	
Head	NR Band n66	40	QPSK	B	3598M	1:1	-0.07	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.51	108	54	Right Tilt	0	0.124	1.256	0.156		32.5	
Head	NR Band n66	40	QPSK	B	3598M	1:1	0.12	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.55	1	108	Left Cheek	0	0.177	1.245	0.220		31.0	30.9
Head	NR Band n66	40	QPSK	B	3598M	1:1	0.03	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.51	108	54	Left Cheek	0	0.176	1.256	0.221		31.0	
Head	NR Band n66	40	QPSK	B	3598M	1:1	-0.16	1745.00	349000	CP-OFDM	1.5	23.0	21.90	1	1	Left Cheek	0	0.125	1.288	0.161		30.9	
Head	NR Band n66	40	QPSK	B	3598M	1:1	0.09	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.55	1	108	Left Tilt	0	0.115	1.245	0.143		32.9	
Head	NR Band n66	40	QPSK	B	3598M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.51	108	54	Left Tilt	0	0.113	1.256	0.142		32.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-77

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n66	40	QPSK	B	3431M	1:1	0.07	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.46	1	108	Back	15	0.189	1.132	0.214	A62	28.6	
Body-worn	NR Band n66	40	QPSK	B	3431M	1:1	0.10	1745.00	349000	DFT-s-OFDM	0.0	22.0	21.55	108	0	Back	15	0.186	1.109	0.206		28.8	28.6
Body-worn	NR Band n66	40	QPSK	B	3431M	1:1	0.01	1745.00	349000	CP-OFDM	0.0	22.0	21.46	1	1	Back	15	0.187	1.132	0.212		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 11-78

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.95	1	108	Back	10	0.354	1.135	0.402		23.4	
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.05	108	54	Back	10	0.358	1.109	0.397		23.5	
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	-0.14	1745.00	349000	CP-OFDM	0.0	19.5	18.87	1	1	Back	10	0.350	1.156	0.405		23.4	
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.95	1	108	Front	10	0.237	1.135	0.269		25.2	
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.05	108	54	Front	10	0.232	1.109	0.257		25.3	23.4
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	0.06	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.95	1	108	Bottom	10	0.279	1.135	0.317		24.4	
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.05	108	54	Bottom	10	0.277	1.109	0.307		24.6	
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.95	1	108	Left	10	0.144	1.135	0.163		27.3	
Hotspot	NR Band n66	40	QPSK	B	3431M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.05	108	54	Left	10	0.141	1.109	0.156		27.5	
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 11-79

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Reported 10g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Phablet	NR Band n66	40	QPSK	B	3658M	1:1	-0.11	1745.00	349000	DFT-s-OFDM	0.0	21.46	1	108	Back	0	1.470	1.132	1.664		23.7	
Phablet	NR Band n66	40	QPSK	B	3658M	1:1	-0.19	1745.00	349000	DFT-s-OFDM	0.0	21.55	108	0	Back	0	1.490	1.109	1.652	A64	23.7	23.7
Phablet	NR Band n66	40	QPSK	B	3658M	1:1	0.03	1745.00	349000	CP-OFDM	0.0	21.46	1	1	Back	0	1.470	1.132	1.664		23.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams						

Table 11-80

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n66	40	QPSK	F	3431M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.02	1	108	Right Cheek	0	0.586	1.117	0.655		21.3	
Head	NR Band n66	40	QPSK	F	3431M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.00	108	54	Right Cheek	0	0.585	1.122	0.656		21.3	
Head	NR Band n66	40	QPSK	F	3431M	1:1	-0.08	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.02	1	108	Right Tilt	0	0.658	1.117	0.735		20.8	
Head	NR Band n66	40	QPSK	F	3431M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.00	108	54	Right Tilt	0	0.660	1.122	0.741		20.8	
Head	NR Band n66	40	QPSK	F	3431M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.96	216	0	Right Tilt	0	0.664	1.132	0.752		20.7	20.7
Head	NR Band n66	40	QPSK	F	3431M	1:1	0.04	1745.00	349000	CP-OFDM	0.0	19.5	18.96	1	1	Right Tilt	0	0.667	1.132	0.755	A61	20.7	
Head	NR Band n66	40	QPSK	F	3431M	1:1	0.08	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.02	1	108	Left Cheek	0	0.269	1.117	0.300		24.7	
Head	NR Band n66	40	QPSK	F	3431M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.00	108	54	Left Cheek	0	0.304	1.122	0.341		24.1	
Head	NR Band n66	40	QPSK	F	3431M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.02	1	108	Left Tilt	0	0.446	1.117	0.498		22.5	
Head	NR Band n66	40	QPSK	F	3431M	1:1	0.07	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.00	108	54	Left Tilt	0	0.450	1.122	0.505		22.4	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-81

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n66	40	QPSK	F	3431M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	21.0	20.21	1	108	Back	15	0.106	1.199	0.127		29.9	
Body-worn	NR Band n66	40	QPSK	F	3431M	1:1	-0.20	1745.00	349000	DFT-s-OFDM	0.0	21.0	20.27	108	54	Back	15	0.113	1.183	0.134		29.7	29.7
Body-worn	NR Band n66	40	QPSK	F	3431M	1:1	-0.10	1745.00	349000	CP-OFDM	0.0	21.0	20.22	1	1	Back	15	0.112	1.197	0.134		29.7	
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 11-82

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.02	1	108	Back	10	0.394	1.117	0.440		23.0	
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	0.00	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.00	108	54	Back	10	0.397	1.122	0.445		23.0	
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	-0.03	1745.00	349000	CP-OFDM	0.0	19.5	18.96	1	1	Back	10	0.401	1.132	0.454	A63	22.9	
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.02	1	108	Front	10	0.137	1.117	0.153		27.6	
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.00	108	54	Front	10	0.140	1.122	0.157		27.5	22.9
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.02	1	108	Top	10	0.375	1.117	0.419		23.2	
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.00	108	54	Top	10	0.385	1.122	0.432		23.1	
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.02	1	108	Left	10	0.070	1.117	0.078		30.5	
Hotspot	NR Band n66	40	QPSK	F	3431M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	19.5	19.00	108	54	Left	10	0.068	1.122	0.076		30.6	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.12 NR Band n25 Standalone SAR

Table 11-83

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n25	40	QPSK	B	3651M	1:1	0.08	1882.50	376500	DFT-s-OFDM	0.0	24.0	23.48	1	108	Right Cheek	0	0.142	1.127	0.160		31.9	
Head	NR Band n25	40	QPSK	B	3651M	1:1	-0.03	1882.50	376500	DFT-s-OFDM	0.0	24.0	23.45	108	54	Right Cheek	0	0.143	1.135	0.162		31.8	
Head	NR Band n25	40	QPSK	B	3651M	1:1	0.07	1882.50	376500	DFT-s-OFDM	0.0	24.0	23.48	1	108	Right Tilt	0	0.118	1.127	0.133		32.7	
Head	NR Band n25	40	QPSK	B	3651M	1:1	-0.02	1882.50	376500	DFT-s-OFDM	0.0	24.0	23.45	108	54	Right Tilt	0	0.101	1.135	0.115		33.4	
Head	NR Band n25	40	QPSK	B	3651M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	24.0	23.48	1	108	Left Cheek	0	0.223	1.127	0.251		29.9	29.9
Head	NR Band n25	40	QPSK	B	3651M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	24.0	23.45	108	54	Left Cheek	0	0.220	1.135	0.250		30.0	
Head	NR Band n25	40	QPSK	B	3651M	1:1	-0.10	1882.50	376500	CP-OFDM	1.5	22.5	21.92	1	1	Left Cheek	0	0.136	1.143	0.155		30.5	
Head	NR Band n25	40	QPSK	B	3651M	1:1	0.06	1882.50	376500	DFT-s-OFDM	0.0	24.0	23.48	1	108	Left Tilt	0	0.100	1.127	0.113		33.4	
Head	NR Band n25	40	QPSK	B	3651M	1:1	0.08	1882.50	376500	DFT-s-OFDM	0.0	24.0	23.45	108	54	Left Tilt	0	0.100	1.135	0.114		33.4	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-84

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n25	40	QPSK	B	3651M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.44	1	108	Back	15	0.221	1.138	0.251		27.9	
Body-worn	NR Band n25	40	QPSK	B	3651M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.38	108	0	Back	15	0.225	1.153	0.259	A66	27.8	27.8
Body-worn	NR Band n25	40	QPSK	B	3651M	1:1	0.00	1882.50	376500	CP-OFDM	0.0	22.0	21.39	1	1	Back	15	0.211	1.151	0.243		28.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-85

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.43	1	1	Back	10	0.297	1.279	0.380		23.7	
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	-0.03	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.41	108	0	Back	10	0.287	1.285	0.369		23.8	
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	0.07	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.43	1	1	Front	10	0.156	1.279	0.200		26.4	
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	0.06	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.41	108	0	Front	10	0.154	1.285	0.198		26.5	
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	-0.10	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.43	1	1	Bottom	10	0.265	1.279	0.339		24.1	23.5
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	-0.06	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.41	108	0	Bottom	10	0.303	1.285	0.389		23.5	
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	0.06	1882.50	376500	CP-OFDM	0.0	19.5	18.50	1	1	Bottom	10	0.275	1.259	0.346		24.1	
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.43	1	1	Left	10	0.106	1.279	0.136		28.1	
Hotspot	NR Band n25	40	QPSK	B	3598M	1:1	-0.12	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.41	108	0	Left	10	0.110	1.285	0.141		27.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-86

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n25	40	QPSK	F	3714M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.67	1	108	Right Cheek	0	0.482	1.211	0.584		21.8	
Head	NR Band n25	40	QPSK	F	3714M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.62	108	54	Right Cheek	0	0.483	1.225	0.592		21.7	
Head	NR Band n25	40	QPSK	F	3714M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.67	1	108	Right Tilt	0	0.507	1.211	0.614	A65	21.6	
Head	NR Band n25	40	QPSK	F	3714M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.62	108	54	Right Tilt	0	0.505	1.225	0.619		21.5	
Head	NR Band n25	40	QPSK	F	3714M	1:1	0.03	1882.50	376500	CP-OFDM	0.0	19.5	18.59	1	1	Right Tilt	0	0.490	1.233	0.604		21.6	21.5
Head	NR Band n25	40	QPSK	F	3714M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.67	1	108	Left Cheek	0	0.257	1.211	0.311		24.5	
Head	NR Band n25	40	QPSK	F	3714M	1:1	-0.04	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.62	108	54	Left Cheek	0	0.254	1.225	0.311		24.5	
Head	NR Band n25	40	QPSK	F	3714M	1:1	0.06	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.67	1	108	Left Tilt	0	0.288	1.211	0.349		24.0	
Head	NR Band n25	40	QPSK	F	3714M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.62	108	54	Left Tilt	0	0.289	1.225	0.354		24.0	
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 11-87

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n25	40	QPSK	F	3438M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.28	1	108	Back	15	0.163	1.180	0.192		29.1	
Body-worn	NR Band n25	40	QPSK	F	3438M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.28	108	54	Back	15	0.162	1.180	0.191		29.1	29.1
Body-worn	NR Band n25	40	QPSK	F	3438M	1:1	-0.02	1882.50	376500	CP-OFDM	0.3	21.7	21.07	1	1	Back	15	0.149	1.156	0.172		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 11-88

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	-0.03	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.67	1	108	Back	10	0.217	1.211	0.263		25.3	
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	-0.02	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.62	108	54	Back	10	0.214	1.225	0.262		25.3	
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	0.11	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.67	1	108	Front	10	0.109	1.211	0.132		28.2	
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	0.03	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.62	108	54	Front	10	0.106	1.225	0.130		28.3	
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	0.09	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.67	1	108	Top	10	0.319	1.211	0.386		23.6	23.5
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.62	108	54	Top	10	0.320	1.225	0.392	A67	23.5	
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	0.03	1882.50	376500	CP-OFDM	0.0	19.5	18.59	1	1	Top	10	0.300	1.233	0.370		23.8	
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	0.14	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.67	1	108	Left	10	0.038	1.211	0.046		32.8	
Hotspot	NR Band n25	40	QPSK	F	3714M	1:1	0.06	1882.50	376500	DFT-s-OFDM	0.0	19.5	18.62	108	54	Left	10	0.038	1.225	0.047		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							

11.1 NR Band n30 Standalone SAR

Table 11-89

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n30	10	QPSK	B	3658M	1:1	-0.13	2310.00	462000	DFT-s-OFDM	0.0	23.0	22.56	1	26	Right Cheek	0	0.093	1.107	0.103		32.8	
Head	NR Band n30	10	QPSK	B	3658M	1:1	0.05	2310.00	462000	DFT-s-OFDM	0.0	23.0	22.47	25	14	Right Cheek	0	0.092	1.130	0.104		32.8	
Head	NR Band n30	10	QPSK	B	3658M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	23.0	22.56	1	26	Right Tilt	0	0.069	1.107	0.076		34.1	
Head	NR Band n30	10	QPSK	B	3658M	1:1	-0.14	2310.00	462000	DFT-s-OFDM	0.0	23.0	22.47	25	14	Right Tilt	0	0.068	1.130	0.077		34.1	
Head	NR Band n30	10	QPSK	B	3658M	1:1	0.05	2310.00	462000	DFT-s-OFDM	0.0	23.0	22.56	1	26	Left Cheek	0	0.107	1.107	0.118		32.2	31.8
Head	NR Band n30	10	QPSK	B	3658M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	23.0	22.47	25	14	Left Cheek	0	0.113	1.130	0.128		31.9	
Head	NR Band n30	10	QPSK	B	3658M	1:1	0.03	2310.00	462000	CP-OFDM	1.5	21.5	20.93	1	1	Left Cheek	0	0.081	1.140	0.092		31.8	
Head	NR Band n30	10	QPSK	B	3658M	1:1	0.15	2310.00	462000	DFT-s-OFDM	0.0	23.0	22.56	1	26	Left Tilt	0	0.040	1.107	0.044		36.5	
Head	NR Band n30	10	QPSK	B	3658M	1:1	0.15	2310.00	462000	DFT-s-OFDM	0.0	23.0	22.47	25	14	Left Tilt	0	0.043	1.130	0.049		36.1	
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 11-90

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n30	10	QPSK	B	3651M	1:1	-0.20	2310.00	462000	DFT-s-OFDM	0.0	21.0	20.34	1	1	Back	15	0.108	1.164	0.126		30.0	
Body-worn	NR Band n30	10	QPSK	B	3651M	1:1	-0.03	2310.00	462000	DFT-s-OFDM	0.0	21.0	20.34	25	0	Back	15	0.118	1.164	0.137		29.6	29.5
Body-worn	NR Band n30	10	QPSK	B	3651M	1:1	-0.05	2310.00	462000	CP-OFDM	0.0	21.0	20.34	1	1	Back	15	0.120	1.164	0.140	A69	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 11-91

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	-0.08	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.24	1	26	Back	10	0.144	1.337	0.193		26.6	25.6
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.26	25	0	Back	10	0.149	1.330	0.198		26.5	
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	-0.08	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.24	1	26	Front	10	0.097	1.337	0.130		28.3	
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	-0.02	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.26	25	0	Front	10	0.098	1.330	0.130		28.3	
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.24	1	26	Bottom	10	0.166	1.337	0.222		26.0	
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	-0.03	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.26	25	0	Bottom	10	0.178	1.330	0.237		25.7	
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	0.02	2310.00	462000	CP-OFDM	0.0	19.5	18.22	1	1	Bottom	10	0.182	1.343	0.244	A70	25.6	
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	-0.07	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.24	1	26	Left	10	0.069	1.337	0.092		29.8	
Hotspot	NR Band n30	10	QPSK	B	3706M	1:1	-0.04	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.26	25	0	Left	10	0.069	1.330	0.092		29.8	
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 11-92

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n30	10	QPSK	F	3655M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.59	1	26	Right Cheek	0	0.401	1.233	0.494		22.5	21.8
Head	NR Band n30	10	QPSK	F	3655M	1:1	0.00	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.57	25	27	Right Cheek	0	0.402	1.239	0.498		22.5	
Head	NR Band n30	10	QPSK	F	3655M	1:1	0.05	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.59	1	26	Right Tilt	0	0.468	1.233	0.577	A68	21.8	
Head	NR Band n30	10	QPSK	F	3655M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.57	25	27	Right Tilt	0	0.467	1.239	0.579		21.8	
Head	NR Band n30	10	QPSK	F	3655M	1:1	-0.02	2310.00	462000	CP-OFDM	0.0	19.5	18.51	1	1	Right Tilt	0	0.445	1.256	0.559		22.0	
Head	NR Band n30	10	QPSK	F	3655M	1:1	0.00	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.59	1	26	Left Cheek	0	0.222	1.233	0.274		25.1	
Head	NR Band n30	10	QPSK	F	3655M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.57	25	27	Left Cheek	0	0.221	1.239	0.274		25.1	
Head	NR Band n30	10	QPSK	F	3655M	1:1	-0.06	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.59	1	26	Left Tilt	0	0.252	1.233	0.311		24.5	
Head	NR Band n30	10	QPSK	F	3655M	1:1	-0.01	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.57	25	27	Left Tilt	0	0.254	1.239	0.315		24.5	
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 11-93

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n30	10	QPSK	F	3422M	1:1	0.06	2310.00	462000	DFT-s-OFDM	0.0	20.0	19.64	1	26	Back	15	0.084	1.086	0.091		30.3	30.3
Body-worn	NR Band n30	10	QPSK	F	3422M	1:1	-0.06	2310.00	462000	DFT-s-OFDM	0.0	20.0	19.60	25	27	Back	15	0.085	1.096	0.093		30.3	
Body-worn	NR Band n30	10	QPSK	F	3422M	1:1	-0.15	2310.00	462000	CP-OFDM	0.0	20.0	19.52	1	1	Back	15	0.076	1.117	0.085		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 11-94

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	-0.11	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.59	1	26	Back	10	0.107	1.233	0.132		28.2	26.3
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	-0.10	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.57	25	27	Back	10	0.110	1.239	0.136		28.1	
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	-0.11	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.59	1	26	Front	10	0.068	1.233	0.084		30.2	
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	-0.09	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.57	25	27	Front	10	0.070	1.239	0.087		30.1	
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	-0.05	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.59	1	26	Top	10	0.158	1.233	0.195		26.6	
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	-0.03	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.57	25	27	Top	10	0.156	1.239	0.193		26.6	
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	0.01	2310.00	462000	CP-OFDM	0.0	19.5	18.51	1	1	Top	10	0.165	1.256	0.207		26.3	
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	-0.05	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.59	1	26	Left	10	0.050	1.233	0.062		31.6	
Hotspot	NR Band n30	10	QPSK	F	3655M	1:1	-0.11	2310.00	462000	DFT-s-OFDM	0.0	19.5	18.57	25	27	Left	10	0.051	1.239	0.063		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							

11.2 NR Band n41 Standalone SAR

Table 11-95

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n41	100	QPSK	B	3659M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	25.0	24.70	1	137	Right Cheek	0	0.019	1.072	0.020		41.9	38.3
Head	NR Band n41	100	QPSK	B	3659M	1:1	-0.21	2592.99	518598	DFT-s-OFDM	0.0	25.0	24.68	135	69	Right Cheek	0	0.023	1.076	0.025		41.0	
Head	NR Band n41	100	QPSK	B	3659M	1:1	-0.15	2592.99	518598	DFT-s-OFDM	0.0	25.0	24.70	1	137	Right Tilt	0	0.018	1.072	0.019		42.1	
Head	NR Band n41	100	QPSK	B	3659M	1:1	-0.02	2592.99	518598	DFT-s-OFDM	0.0	25.0	24.68	135	69	Right Tilt	0	0.023	1.076	0.025		41.0	
Head	NR Band n41	100	QPSK	B	3659M	1:1	0.12	2592.99	518598	DFT-s-OFDM	0.0	25.0	24.70	1	137	Left Cheek	0	0.030	1.072	0.032		39.9	
Head	NR Band n41	100	QPSK	B	3659M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	25.0	24.68	135	69	Left Cheek	0	0.043	1.076	0.046		38.3	
Head	NR Band n41	100	QPSK	B	3659M	1:1	0.19	2592.99	518598	CP-OFDM	0.0	25.0	24.06	1	1	Left Cheek	0	0.025	1.242	0.031		40.0	
Head	NR Band n41	100	QPSK	B	3659M	1:1	0.08	2592.99	518598	DFT-s-OFDM	0.0	25.0	24.70	1	137	Left Tilt	0	0.010	1.072	0.011		44.7	
Head	NR Band n41	100	QPSK	B	3659M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	25.0	24.68	135	69	Left Tilt	0	0.013	1.076	0.014		43.5	
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 11-96

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n41	100	QPSK	B	3659M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	21.0	20.40	1	137	Back	15	0.149	1.148	0.171		28.6	
Body-worn	NR Band n41	100	QPSK	B	3659M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	21.0	20.38	135	69	Back	15	0.154	1.153	0.178	A72	28.5	28.0
Body-worn	NR Band n41	100	QPSK	B	3659M	1:1	0.01	2592.99	518598	CP-OFDM	0.0	21.0	19.85	1	1	Back	15	0.151	1.303	0.197		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 11-97

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	17.5	17.32	1	137	Back	10	0.155	1.042	0.162		25.4	
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	17.5	17.28	135	69	Back	10	0.175	1.052	0.184		24.8	
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	-0.01	2592.99	518598	DFT-s-OFDM	0.0	17.5	17.32	1	137	Front	10	0.098	1.042	0.102		27.4	
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	17.5	17.28	135	69	Front	10	0.097	1.052	0.102		27.4	
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	17.5	17.32	1	137	Bottom	10	0.168	1.042	0.175		25.0	24.7
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	17.5	17.28	135	69	Bottom	10	0.177	1.052	0.186	A73	24.8	
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	-0.03	2592.99	518598	CP-OFDM	0.0	17.5	16.82	1	1	Bottom	10	0.162	1.169	0.189		24.7	
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	0.07	2592.99	518598	DFT-s-OFDM	0.0	17.5	17.32	1	137	Left	10	0.047	1.042	0.049		30.5	
Hotspot	NR Band n41	100	QPSK	B	3659M	1:1	0.07	2592.99	518598	DFT-s-OFDM	0.0	17.5	17.28	135	69	Left	10	0.047	1.052	0.049		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 11-98

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n41	100	QPSK	F	3659M	1:1	-0.08	2592.99	518598	DFT-s-OFDM	0.0	18.5	18.05	1	271	Right Cheek	0	0.244	1.109	0.271		24.1	
Head	NR Band n41	100	QPSK	F	3659M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	18.5	17.80	135	69	Right Cheek	0	0.229	1.175	0.269		24.2	
Head	NR Band n41	100	QPSK	F	3659M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	18.5	18.05	1	271	Right Tilt	0	0.314	1.109	0.348	A71	23.0	
Head	NR Band n41	100	QPSK	F	3659M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	18.5	17.80	135	69	Right Tilt	0	0.267	1.175	0.314		23.5	
Head	NR Band n41	100	QPSK	F	3659M	1:1	0.03	2592.99	518598	CP-OFDM	0.0	18.5	17.71	1	1	Right Tilt	0	0.225	1.199	0.270		24.1	23.0
Head	NR Band n41	100	QPSK	F	3659M	1:1	0.04	2592.99	518598	DFT-s-OFDM	0.0	18.5	18.05	1	271	Left Cheek	0	0.156	1.109	0.173		26.1	
Head	NR Band n41	100	QPSK	F	3659M	1:1	0.08	2592.99	518598	DFT-s-OFDM	0.0	18.5	17.80	135	69	Left Cheek	0	0.148	1.175	0.174		26.0	
Head	NR Band n41	100	QPSK	F	3659M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	18.5	18.05	1	271	Left Tilt	0	0.192	1.109	0.213		25.2	
Head	NR Band n41	100	QPSK	F	3659M	1:1	0.05	2592.99	518598	DFT-s-OFDM	0.0	18.5	17.80	135	69	Left Tilt	0	0.197	1.175	0.231		24.8	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-99

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n41	100	QPSK	F	3659M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.17	1	271	Back	15	0.068	1.211	0.082		30.8	
Body-worn	NR Band n41	100	QPSK	F	3659M	1:1	0.05	2592.99	518598	DFT-s-OFDM	0.0	20.0	19.02	135	69	Back	15	0.064	1.253	0.080		30.9	30.8
Body-worn	NR Band n41	100	QPSK	F	3659M	1:1	0.03	2592.99	518598	CP-OFDM	0.0	20.0	18.80	1	1	Back	15	0.060	1.318	0.079		31.0	
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 11-100

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	18.5	18.05	1	271	Back	10	0.087	1.109	0.096		28.6	
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	-0.01	2592.99	518598	DFT-s-OFDM	0.0	18.5	17.80	135	69	Back	10	0.099	1.175	0.116		27.8	
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	18.5	18.05	1	271	Front	10	0.048	1.109	0.053		31.2	
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	18.5	17.80	135	69	Front	10	0.044	1.175	0.052		31.3	
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	-0.08	2592.99	518598	DFT-s-OFDM	0.0	18.5	18.05	1	271	Top	10	0.134	1.109	0.149		26.7	26.7
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	0.10	2592.99	518598	DFT-s-OFDM	0.0	18.5	17.80	135	69	Top	10	0.121	1.175	0.142		26.9	
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	-0.04	2592.99	518598	CP-OFDM	0.0	18.5	17.71	1	1	Top	10	0.119	1.199	0.143		26.9	
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	18.5	18.05	1	271	Left	10	0.026	1.109	0.029		33.9	
Hotspot	NR Band n41	100	QPSK	F	3659M	1:1	-0.08	2592.99	518598	DFT-s-OFDM	0.0	18.5	17.80	135	69	Left	10	0.024	1.175	0.028		33.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-101

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 10g SAR [W/kg]	Power Scaling Factor	Reported 10g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Phablet	NR Band n41	100	QPSK	B	3659M	1:1	-0.01	2592.99	518598	DFT-s-OFDM	0.0	21.0	20.40	1	137	Back	0	1.930	1.148	2.216	A74	21.5	21.3
Phablet	NR Band n41	100	QPSK	B	3659M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	21.0	20.38	135	69	Back	0	1.920	1.153	2.214		21.5	
Phablet	NR Band n41	100	QPSK	B	3659M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	21.0	20.28	270	0	Back	0	1.900	1.180	2.242		21.4	
Phablet	NR Band n41	100	QPSK	B	3659M	1:1	0.01	2592.99	518598	CP-OFDM	0.0	21.0	19.85	1	1	Back	0	1.790	1.303	2.332		21.3	
Phablet	NR Band n41	100	QPSK	B	3659M	1:1	0.04	2592.99	518598	DFT-s-OFDM	0.0	21.0	20.40	1	137	Bottom	0	1.470	1.148	1.688		22.7	
Phablet	NR Band n41	100	QPSK	B	3659M	1:1	0.05	2592.99	518598	DFT-s-OFDM	0.0	21.0	20.38	135	69	Bottom	0	1.450	1.153	1.672		22.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams							

11.3 NR Band n48 Standalone SAR

Table 11-102

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n48	40	QPSK	G	2317M	1:1	0.02	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Right Cheek	0	0.282	1.288	0.363	A75	22.8	22.6
Head	NR Band n48	40	QPSK	G	2317M	1:1	0.02	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Right Cheek	0	0.265	1.297	0.344		23.1	
Head	NR Band n48	40	QPSK	G	2317M	1:1	0.03	3679.98	645332	CP-OFDM	0.0	18.5	17.06	1	1	Right Cheek	0	0.279	1.393	0.389		22.6	
Head	NR Band n48	40	QPSK	G	2317M	1:1	0.10	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Right Tilt	0	0.151	1.288	0.194		25.6	
Head	NR Band n48	40	QPSK	G	2317M	1:1	-0.05	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Right Tilt	0	0.129	1.297	0.167		26.2	
Head	NR Band n48	40	QPSK	G	2317M	1:1	0.05	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Left Cheek	0	0.076	1.288	0.098		28.5	
Head	NR Band n48	40	QPSK	G	2317M	1:1	0.02	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Left Cheek	0	0.064	1.297	0.083		29.3	
Head	NR Band n48	40	QPSK	G	2317M	1:1	0.07	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Left Tilt	0	0.058	1.288	0.075		29.7	
Head	NR Band n48	40	QPSK	G	2317M	1:1	0.11	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Left Tilt	0	0.049	1.297	0.064		30.4	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-103

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n48	40	QPSK	G	2783M	1:1	-0.04	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Back	15	0.143	1.288	0.184	A76	25.8	25.8
Body-worn	NR Band n48	40	QPSK	G	2783M	1:1	0.03	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Back	15	0.131	1.297	0.170		26.1	
Body-worn	NR Band n48	40	QPSK	G	2783M	1:1	-0.19	3679.98	645332	CP-OFDM	0.0	18.5	17.06	1	1	Back	15	0.121	1.393	0.169		26.2	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-104

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	0.00	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Back	10	0.228	1.288	0.294		23.8	20.8
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	0.07	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Back	10	0.219	1.297	0.284		23.9	
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	-0.01	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Front	10	0.198	1.288	0.255		24.4	
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	0.02	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Front	10	0.175	1.297	0.227		24.9	
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	-0.01	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Top	10	0.119	1.288	0.153		26.6	
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	-0.15	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Top	10	0.107	1.297	0.139		27.0	
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	-0.07	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Left	10	0.452	1.288	0.582	A77	20.8	
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	-0.04	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Left	10	0.448	1.297	0.581		20.8	
Hotspot	NR Band n48	40	QPSK	G	2783M	1:1	0.00	3679.98	645332	CP-OFDM	0.0	18.5	17.06	1	1	Left	10	0.402	1.393	0.560		21.0	
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 11-105

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 10g SAR [W/kg]	Power Scaling Factor	Reported 10g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	0.01	3570.00	638000	DFT-s-OFDM	0.0	18.5	16.70	1	104	Left	0	1.750	1.514	2.650		18.2	18.1
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	-0.01	3624.99	641666	DFT-s-OFDM	0.0	18.5	17.02	1	104	Left	0	1.890	1.406	2.657		18.2	
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	-0.02	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Left	0	2.100	1.288	2.705	A78	18.1	
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	-0.02	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.40	1	104	Left	0	2.080	1.288	2.679		18.1	
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	0.01	3570.00	638000	DFT-s-OFDM	0.0	18.5	16.51	50	28	Left	0	1.730	1.581	2.735		18.1	
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	0.01	3624.99	641666	DFT-s-OFDM	0.0	18.5	16.98	50	56	Left	0	1.860	1.419	2.639		18.2	
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	-0.04	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.37	50	56	Left	0	2.070	1.297	2.685		18.1	
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	0.02	3679.98	645332	DFT-s-OFDM	0.0	18.5	17.20	100	0	Left	0	1.980	1.349	2.671		18.2	
Phablet	NR Band n48	40	QPSK	G	2783M	1:1	-0.01	3679.98	645332	CP-OFDM	0.0	18.5	17.06	1	1	Left	0	1.960	1.393	2.730		18.1	
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 11-106

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n48	40	B	2783M	1:1	0.01	3679.98	645332	CW/SRS	14.0	13.36	Right Cheek	0	0.000	1.159	0.000		53.3	43.3
Head	NR Band n48	40	B	2783M	1:1	0.01	3679.98	645332	CW/SRS	14.0	13.36	Right Tilt	0	0.001	1.159	0.001		43.3	
Head	NR Band n48	40	B	2783M	1:1	0.09	3679.98	645332	CW/SRS	14.0	13.36	Left Cheek	0	0.000	1.159	0.000		53.3	
Head	NR Band n48	40	B	2783M	1:1	0.01	3679.98	645332	CW/SRS	14.0	13.36	Left Tilt	0	0.000	1.159	0.000		53.3	
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 11-107

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n48	40	B	2783M	1:1	-0.13	3679.98	645332	CW/SRS	14.0	13.36	Back	15	0.070	1.159	0.081		24.9	24.9
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-108

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n48	40	B	2783M	1:1	-0.03	3679.98	645332	CW/SRS	14.0	13.36	Back	10	0.145	1.159	0.168		21.7	20.2
Hotspot	NR Band n48	40	B	2783M	1:1	-0.09	3679.98	645332	CW/SRS	14.0	13.36	Front	10	0.070	1.159	0.081		24.9	
Hotspot	NR Band n48	40	B	2783M	1:1	0.00	3679.98	645332	CW/SRS	14.0	13.36	Bottom	10	0.207	1.159	0.240		20.2	
Hotspot	NR Band n48	40	B	2783M	1:1	0.20	3679.98	645332	CW/SRS	14.0	13.36	Left	10	0.028	1.159	0.032		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							

Table 11-109

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n48	40	K	2783M	1:1	0.02	3624.99	641666	CW/SRS	15.5	14.40	Right Cheek	0	0.000	1.288	0.000		54.3	54.3
Head	NR Band n48	40	K	2783M	1:1	0.02	3624.99	641666	CW/SRS	15.5	14.40	Right Tilt	0	0.000	1.288	0.000		54.3	
Head	NR Band n48	40	K	2783M	1:1	0.04	3624.99	641666	CW/SRS	15.5	14.40	Left Cheek	0	0.000	1.288	0.000		54.3	
Head	NR Band n48	40	K	2783M	1:1	0.08	3624.99	641666	CW/SRS	15.5	14.40	Left Tilt	0	0.000	1.288	0.000		54.3	
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 11-110

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n48	40	K	2783M	1:1	0.03	3624.99	641666	CW/SRS	15.5	14.40	Back	15	0.005	1.288	0.006		37.4	37.4
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 11-111

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n48	40	K	2783M	1:1	-0.15	3624.99	641666	CW/SRS	15.5	14.40	Back	10	0.029	1.288	0.037		29.7	29.7
Hotspot	NR Band n48	40	K	2783M	1:1	0.07	3624.99	641666	CW/SRS	15.5	14.40	Front	10	0.000	1.288	0.000		54.3	
Hotspot	NR Band n48	40	K	2783M	1:1	0.08	3624.99	641666	CW/SRS	15.5	14.40	Left	10	0.000	1.288	0.000		54.3	
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 11-112

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n48	40	L	2783M	1:1	0.08	3679.98	645332	CW/SRS	13.0	12.05	Right Cheek	0	0.000	1.245	0.000		52.0	52.0
Head	NR Band n48	40	L	2783M	1:1	0.06	3679.98	645332	CW/SRS	13.0	12.05	Right Tilt	0	0.000	1.245	0.000		52.0	
Head	NR Band n48	40	L	2783M	1:1	0.01	3679.98	645332	CW/SRS	13.0	12.05	Left Cheek	0	0.000	1.245	0.000		52.0	
Head	NR Band n48	40	L	2783M	1:1	0.05	3679.98	645332	CW/SRS	13.0	12.05	Left Tilt	0	0.000	1.245	0.000		52.0	
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 11-113

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n48	40	L	2783M	1:1	0.09	3679.98	645332	CW/SRS	13.0	12.05	Back	15	0.002	1.245	0.002		39.0	39.0
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 11-114

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n48	40	L	2783M	1:1	0.09	3679.98	645332	CW/SRS	13.0	12.05	Back	10	0.009	1.245	0.011		32.5	32.5
Hotspot	NR Band n48	40	L	2783M	1:1	0.01	3679.98	645332	CW/SRS	13.0	12.05	Front	10	0.000	1.245	0.000		52.0	
Hotspot	NR Band n48	40	L	2783M	1:1	0.08	3679.98	645332	CW/SRS	13.0	12.05	Top	10	0.003	1.245	0.004		37.2	
Hotspot	NR Band n48	40	L	2783M	1:1	0.01	3679.98	645332	CW/SRS	13.0	12.05	Right	10	0.000	1.245	0.000		52.0	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.4 NR Band n77 Standalone SAR

Table 11-115

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n77 DoD	100	QPSK	G	2317M	1:1	-0.02	3500.01	633334	DFT-s-OFDM	0.0	17.5	16.06	1	137	Right Cheek	0	0.239	1.393	0.333		22.2	22.1
Head	NR Band n77	100	QPSK	G	2317M	1:1	0.00	3750.00	650000	DFT-s-OFDM	0.0	17.5	16.42	1	137	Right Cheek	0	0.270	1.282	0.346	A79	22.1	
Head	NR Band n77	100	QPSK	G	2317M	1:1	0.01	3750.00	650000	DFT-s-OFDM	0.0	17.5	16.43	135	69	Right Cheek	0	0.258	1.279	0.330		22.3	
Head	NR Band n77	100	QPSK	G	2317M	1:1	0.00	3750.00	650000	CP-OFDM	0.0	17.5	16.36	1	1	Right Cheek	0	0.235	1.300	0.306		22.6	
Head	NR Band n77	100	QPSK	G	2317M	1:1	-0.02	3750.00	650000	DFT-s-OFDM	0.0	17.5	16.42	1	137	Right Tilt	0	0.145	1.282	0.186		24.8	
Head	NR Band n77	100	QPSK	G	2317M	1:1	0.03	3750.00	650000	DFT-s-OFDM	0.0	17.5	16.43	135	69	Right Tilt	0	0.139	1.279	0.178		24.9	
Head	NR Band n77	100	QPSK	G	2317M	1:1	0.11	3750.00	650000	DFT-s-OFDM	0.0	17.5	16.42	1	137	Left Cheek	0	0.069	1.282	0.088		28.0	
Head	NR Band n77	100	QPSK	G	2317M	1:1	0.03	3750.00	650000	DFT-s-OFDM	0.0	17.5	16.43	135	69	Left Cheek	0	0.064	1.279	0.082		28.3	
Head	NR Band n77	100	QPSK	G	2317M	1:1	0.05	3750.00	650000	DFT-s-OFDM	0.0	17.5	16.42	1	137	Left Tilt	0	0.046	1.282	0.059		29.7	
Head	NR Band n77	100	QPSK	G	2317M	1:1	-0.03	3750.00	650000	DFT-s-OFDM	0.0	17.5	16.43	135	69	Left Tilt	0	0.045	1.279	0.058		29.8	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-116

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n77 DoD	100	QPSK	G	3659M	1:1	-0.04	3500.01	633334	DFT-s-OFDM	0.0	18.5	17.29	1	137	Back	15	0.144	1.321	0.190		25.7	24.1
Body-worn	NR Band n77	100	QPSK	G	3659M	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.54	1	137	Back	15	0.181	1.247	0.226		24.9	
Body-worn	NR Band n77	100	QPSK	G	3659M	1:1	-0.02	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.57	135	69	Back	15	0.183	1.239	0.227		24.9	
Body-worn	NR Band n77	100	QPSK	G	3659M	1:1	0.00	3930.00	662000	CP-OFDM	0.0	18.5	17.53	1	1	Back	15	0.220	1.250	0.275	A80	24.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-117

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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.54	1	137	Back	10	0.319	1.247	0.398		22.5	19.5
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.57	135	69	Back	10	0.315	1.239	0.390		22.5	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	0.02	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.54	1	137	Front	10	0.197	1.247	0.246		24.5	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.57	135	69	Front	10	0.215	1.239	0.266		24.2	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	-0.02	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.54	1	137	Top	10	0.106	1.247	0.132		27.2	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	-0.20	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.57	135	69	Top	10	0.106	1.239	0.131		27.3	
Hotspot	NR Band n77 DoD	100	QPSK	G	3659M	1:1	-0.04	3500.01	633334	DFT-s-OFDM	0.0	18.5	17.29	1	137	Left	10	0.401	1.321	0.530		21.2	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.54	1	137	Left	10	0.555	1.247	0.692		20.0	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	-0.03	3930.00	662000	DFT-s-OFDM	0.0	18.5	17.53	1	1	Left	10	0.634	1.250	0.793	A81	19.5	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	0.00	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.57	135	69	Left	10	0.553	1.239	0.685		20.1	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	-0.04	3930.00	662000	DFT-s-OFDM	0.0	18.5	17.47	135	0	Left	10	0.611	1.268	0.775		19.6	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	0.00	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.52	270	0	Left	10	0.526	1.253	0.659		20.3	
Hotspot	NR Band n77	100	QPSK	G	3659M	1:1	0.03	3930.00	662000	CP-OFDM	0.0	18.5	17.53	1	1	Left	10	0.598	1.250	0.748		19.7	
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 11-118

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 10g SAR [W/kg]	Power Scaling Factor	Reported 10g SAR [W/kg]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Phablet	NR Band n77	100	QPSK	G	32867	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.54	1	137	Back	0	0.744	1.247	0.928		22.8	18.1
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.57	135	69	Back	0	0.826	1.239	1.023		22.3	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.03	3930.00	662000	DFT-s-OFDM	0.0	18.5	17.47	135	0	Back	0	0.811	1.268	1.028		22.3	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.52	270	0	Back	0	0.691	1.253	0.866		23.1	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.00	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.54	1	137	Front	0	0.791	1.247	0.986		22.5	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.00	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.57	135	69	Front	0	0.784	1.239	0.971		22.6	
Phablet	NR Band n77 DoD	100	QPSK	G	32867	1:1	-0.01	3500.01	633334	DFT-s-OFDM	0.0	18.5	17.29	1	137	Left	0	1.640	1.321	2.166		19.1	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.05	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.54	1	137	Left	0	1.990	1.247	2.482		18.5	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.01	3930.00	662000	DFT-s-OFDM	0.0	18.5	17.53	1	1	Left	0	2.160	1.250	2.700	A82	18.1	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	-0.01	3930.00	662000	DFT-s-OFDM	0.0	18.5	17.53	1	1	Left	0	2.140	1.250	2.675		18.2	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.01	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.57	135	69	Left	0	1.950	1.239	2.416		18.6	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.01	3930.00	662000	DFT-s-OFDM	0.0	18.5	17.47	135	0	Left	0	2.000	1.268	2.536		18.4	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	0.02	3750.00	650000	DFT-s-OFDM	0.0	18.5	17.52	270	0	Left	0	1.960	1.253	2.456		18.5	
Phablet	NR Band n77	100	QPSK	G	32867	1:1	-0.02	3930.00	662000	CP-OFDM	0.0	18.5	17.53	1	1	Left	0	2.050	1.250	2.563		18.3	
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 11-119

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n77	100	B	3501M	1:1	0.01	3750.00	650000	CW/SRS	13.5	12.71	Right Cheek	0	0.000	1.199	0.000		52.7	35.7
Head	NR Band n77	100	B	3501M	1:1	0.04	3750.00	650000	CW/SRS	13.5	12.71	Right Tilt	0	0.000	1.199	0.000		52.7	
Head	NR Band n77 DoD	100	B	3501M	1:1	0.08	3500.01	633334	CW/SRS	13.5	11.81	Left Cheek	0	0.000	1.476	0.000		51.8	
Head	NR Band n77	100	B	3501M	1:1	0.08	3750.00	650000	CW/SRS	13.5	12.71	Left Cheek	0	0.005	1.199	0.006		35.7	
Head	NR Band n77	100	B	3501M	1:1	0.06	3750.00	650000	CW/SRS	13.5	12.71	Left Tilt	0	0.000	1.199	0.000		52.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-120

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n77 DoD	100	B	3501M	1:1	0.07	3500.01	633334	CW/SRS	13.5	11.81	Back	15	0.025	1.476	0.037		27.8	24.1
Body-worn	NR Band n77	100	B	3501M	1:1	-0.02	3750.00	650000	CW/SRS	13.5	12.71	Back	15	0.072	1.199	0.086		24.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-121

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n77	100	B	3501M	1:1	-0.01	3750.00	650000	CW/SRS	13.5	12.71	Back	10	0.170	1.199	0.204		20.4	19.1
Hotspot	NR Band n77	100	B	3501M	1:1	0.01	3750.00	650000	CW/SRS	13.5	12.71	Front	10	0.083	1.199	0.100		23.5	
Hotspot	NR Band n77 DoD	100	B	3501M	1:1	0.00	3500.01	633334	CW/SRS	13.5	11.81	Bottom	10	0.061	1.476	0.090		23.9	
Hotspot	NR Band n77	100	B	3501M	1:1	-0.08	3750.00	650000	CW/SRS	13.5	12.71	Bottom	10	0.228	1.199	0.273		19.1	
Hotspot	NR Band n77	100	B	3501M	1:1	-0.08	3750.00	650000	CW/SRS	13.5	12.71	Left	10	0.039	1.199	0.047		26.7	
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 11-122

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n77	100	K	3501M	1:1	-0.12	3930.00	662000	CW/SRS	16.0	15.30	Right Cheek	0	0.002	1.175	0.002		42.2	37.5
Head	NR Band n77	100	K	3501M	1:1	0.02	3930.00	662000	CW/SRS	16.0	15.30	Right Tilt	0	0.000	1.175	0.000		55.2	
Head	NR Band n77 DoD	100	K	3501M	1:1	0.08	3500.01	633334	CW/SRS	16.0	14.31	Left Cheek	0	0.003	1.476	0.004		39.5	
Head	NR Band n77	100	K	3501M	1:1	0.07	3930.00	662000	CW/SRS	16.0	15.30	Left Cheek	0	0.006	1.175	0.007		37.5	
Head	NR Band n77	100	K	3501M	1:1	0.01	3930.00	662000	CW/SRS	16.0	15.30	Left Tilt	0	0.001	1.175	0.001		45.2	
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 11-123

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n77 DoD	100	K	3501M	1:1	0.04	3500.01	633334	CW/SRS	16.0	14.31	Back	15	0.023	1.476	0.034		30.6	30.6
Body-worn	NR Band n77	100	K	3501M	1:1	0.04	3930.00	662000	CW/SRS	16.0	15.30	Back	15	0.012	1.175	0.014		34.5	
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 11-124

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n77 DoD	100	K	3501M	1:1	-0.02	3500.01	633334	CW/SRS	16.0	14.31	Back	10	0.079	1.476	0.117		25.3	25.3
Hotspot	NR Band n77	100	K	3501M	1:1	-0.13	3930.00	662000	CW/SRS	16.0	15.30	Back	10	0.038	1.175	0.045		29.5	
Hotspot	NR Band n77	100	K	3501M	1:1	0.01	3930.00	662000	CW/SRS	16.0	15.30	Front	10	0.001	1.175	0.001		45.2	
Hotspot	NR Band n77	100	K	3501M	1:1	-0.14	3930.00	662000	CW/SRS	16.0	15.30	Left	10	0.010	1.175	0.012		35.2	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-125

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	NR Band n77	100	L	3501M	1:1	0.06	3750.00	650000	CW/SRS	14.0	13.71	Right Cheek	0	0.000	1.069	0.000		53.7	31.9
Head	NR Band n77 DoD	100	L	3501M	1:1	0.06	3500.01	633334	CW/SRS	14.0	12.70	Right Tilt	0	0.012	1.349	0.016		31.9	
Head	NR Band n77	100	L	3501M	1:1	0.06	3750.00	650000	CW/SRS	14.0	13.71	Right Tilt	0	0.004	1.069	0.004		37.6	
Head	NR Band n77	100	L	3501M	1:1	0.04	3750.00	650000	CW/SRS	14.0	13.71	Left Cheek	0	0.003	1.069	0.003		38.9	
Head	NR Band n77	100	L	3501M	1:1	0.09	3750.00	650000	CW/SRS	14.0	13.71	Left Tilt	0	0.000	1.069	0.000		53.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-126

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	NR Band n77 DoD	100	L	3501M	1:1	0.06	3500.01	633334	CW/SRS	14.0	12.70	Back	15	0.014	1.349	0.019		31.2	31.2
Body-worn	NR Band n77	100	L	3501M	1:1	0.04	3750.00	650000	CW/SRS	14.0	13.71	Back	15	0.011	1.069	0.012		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							

Table 11-127

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	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]	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Hotspot	NR Band n77 DoD	100	L	3501M	1:1	0.06	3500.01	633334	CW/SRS	14.0	12.70	Back	10	0.031	1.349	0.042		27.7	
Hotspot	NR Band n77	100	L	3501M	1:1	-0.19	3750.00	650000	CW/SRS	14.0	13.71	Back	10	0.029	1.069	0.031		29.0	
Hotspot	NR Band n77	100	L	3501M	1:1	0.02	3750.00	650000	CW/SRS	14.0	13.71	Front	10	0.000	1.069	0.000		53.7	27.7
Hotspot	NR Band n77	100	L	3501M	1:1	0.04	3750.00	650000	CW/SRS	14.0	13.71	Top	10	0.003	1.069	0.003		38.9	
Hotspot	NR Band n77	100	L	3501M	1:1	0.01	3750.00	650000	CW/SRS	14.0	13.71	Right	10	0.000	1.069	0.000		53.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.5 DTS Standalone SAR

Table 11-128

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0626M	98.62	0.01	2412.00	1	1	11.5	10.64	Right Cheek	0	0.487	1.219	0.602	
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0626M	98.62	-0.03	2412.00	1	1	11.5	10.64	Right Tilt	0	0.134	1.219	0.166	
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0626M	98.62	-0.01	2412.00	1	1	11.5	10.64	Left Cheek	0	0.116	1.219	0.143	
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0626M	98.62	-0.13	2412.00	1	1	11.5	10.64	Left Tilt	0	0.062	1.219	0.077	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-129

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0626M	98.55	0.01	2412.00	1	1	11.5	10.88	Right Cheek	0	0.220	1.153	0.257	
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0626M	98.55	0.01	2412.00	1	1	11.5	10.88	Right Tilt	0	0.227	1.153	0.266	
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0626M	98.55	0.04	2412.00	1	1	11.5	10.88	Left Cheek	0	0.139	1.153	0.163	
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0626M	98.55	0.02	2412.00	1	1	11.5	10.88	Left Tilt	0	0.166	1.153	0.194	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram					

Table 11-130

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0626M	98.95	-0.04	2412.00	1	1	11.5	10.73	11.5	10.80	Right Cheek	0	0.504	1.194	1.011	0.608	A83
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0626M	98.95	-0.08	2412.00	1	1	11.5	10.73	11.5	10.80	Right Tilt	0	0.386	1.194	1.011	0.466	
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0626M	98.95	0.01	2412.00	1	1	11.5	10.73	11.5	10.80	Left Cheek	0	0.233	1.194	1.011	0.281	
Head	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0626M	98.95	-0.05	2412.00	1	1	11.5	10.73	11.5	10.80	Left Tilt	0	0.231	1.194	1.011	0.279	
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: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Table 11-131

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Body-worn	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0622M	98.62	-0.06	2412.00	1	1	18.0	17.95	Back	15	0.124	1.012	1.014	0.127	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-132

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Body-worn	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0622M	98.55	-0.10	2412.00	1	1	18.0	17.99	Back	15	0.119	1.002	1.015	0.121	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-133

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Body-worn	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0622M	98.95	-0.06	2412.00	1	1	18.0	17.95	18.0	17.94	Back	15	0.139	1.014	1.011	0.142	A84
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: To achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm.

Table 11-134

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0622M	98.62	-0.04	2412.00	1	1	18.0	17.95	Back	10	0.235	1.012	1.014	0.241	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0622M	98.62	-0.03	2412.00	1	1	18.0	17.95	Front	10	0.239	1.012	1.014	0.245	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0622M	98.62	0.00	2412.00	1	1	18.0	17.95	Top	10	0.053	1.012	1.014	0.054	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	I	0622M	98.62	-0.03	2412.00	1	1	18.0	17.95	Left	10	0.415	1.012	1.014	0.426	A85
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-135

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0622M	98.55	0.01	2412.00	1	1	18.0	17.99	Back	10	0.240	1.002	1.015	0.244	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0622M	98.55	-0.08	2412.00	1	1	18.0	17.99	Front	10	0.108	1.002	1.015	0.110	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0622M	98.55	0.01	2412.00	1	1	18.0	17.99	Top	10	0.303	1.002	1.015	0.308	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	F	0622M	98.55	-0.12	2412.00	1	1	18.0	17.99	Left	10	0.076	1.002	1.015	0.077	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-136

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0622M	98.95	-0.08	2412.00	1	1	18.0	17.95	18.0	17.94	Back	10	0.285	1.014	1.011	0.292	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0622M	98.95	-0.11	2412.00	1	1	18.0	17.95	18.0	17.94	Front	10	0.124	1.014	1.011	0.127	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0622M	98.95	0.14	2412.00	1	1	18.0	17.95	18.0	17.94	Top	10	0.343	1.014	1.011	0.352	
Hotspot	2.4 GHz WIFI/ IEEE 802.11b	20	DSSS	MIMO	0622M	98.95	-0.05	2412.00	1	1	18.0	17.95	18.0	17.94	Left	10	0.168	1.014	1.011	0.172	
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: To achieve the 21 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18 dBm.

11.6 NII Standalone SAR

Table 11-137

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.05	5290.00	58	U-NII-2A	29.3	14.0	13.82	Right Cheek	0	0.309	1.042	1.072	0.345	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.00	5530.00	106	U-NII-2A	29.3	14.0	13.85	Right Cheek	0	0.372	1.035	1.072	0.413	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	-0.06	5775.00	155	U-NII-3	29.3	14.0	13.51	Right Cheek	0	0.378	1.119	1.072	0.453	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.05	5290.00	58	U-NII-2A	29.3	14.0	13.82	Right Tilt	0	0.164	1.042	1.072	0.183	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	-0.10	5530.00	106	U-NII-2A	29.3	14.0	13.85	Right Tilt	0	0.185	1.035	1.072	0.205	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	-0.02	5775.00	155	U-NII-3	29.3	14.0	13.51	Right Tilt	0	0.246	1.119	1.072	0.295	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.03	5290.00	58	U-NII-2A	29.3	14.0	13.82	Left Cheek	0	0.079	1.042	1.072	0.088	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.14	5530.00	106	U-NII-2C	29.3	14.0	13.85	Left Cheek	0	0.099	1.035	1.072	0.110	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.04	5775.00	155	U-NII-3	29.3	14.0	13.51	Left Cheek	0	0.104	1.119	1.072	0.125	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.17	5290.00	58	U-NII-2A	29.3	14.0	13.82	Left Tilt	0	0.092	1.042	1.072	0.103	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.01	5530.00	106	U-NII-2A	29.3	14.0	13.85	Left Tilt	0	0.104	1.035	1.072	0.115	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	G	0638M	93.25	0.06	5775.00	155	U-NII-3	29.3	14.0	13.51	Left Tilt	0	0.111	1.119	1.072	0.133	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Head 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-138

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	0.13	5290.00	58	U-NII-2A	29.3	14.0	13.58	Right Cheek	0	0.100	1.102	1.089	0.120	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	0.07	5690.00	138	U-NII-2C	29.3	14.0	13.76	Right Cheek	0	0.116	1.057	1.089	0.134	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	-0.09	5775.00	155	U-NII-3	29.3	14.0	13.46	Right Cheek	0	0.094	1.132	1.089	0.116	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	-0.05	5290.00	58	U-NII-2A	29.3	14.0	13.58	Right Tilt	0	0.110	1.102	1.089	0.132	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	-0.06	5690.00	138	U-NII-2C	29.3	14.0	13.76	Right Tilt	0	0.131	1.057	1.089	0.151	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	0.17	5775.00	155	U-NII-3	29.3	14.0	13.46	Right Tilt	0	0.118	1.132	1.089	0.145	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	-0.09	5290.00	58	U-NII-2A	29.3	14.0	13.58	Left Cheek	0	0.124	1.102	1.089	0.149	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	0.03	5690.00	138	U-NII-2C	29.3	14.0	13.76	Left Cheek	0	0.148	1.057	1.089	0.170	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	-0.06	5775.00	155	U-NII-3	29.3	14.0	13.46	Left Cheek	0	0.072	1.132	1.089	0.089	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	-0.11	5290.00	58	U-NII-2A	29.3	14.0	13.58	Left Tilt	0	0.127	1.102	1.089	0.152	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	-0.07	5690.00	138	U-NII-2C	29.3	14.0	13.76	Left Tilt	0	0.161	1.057	1.089	0.185	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	M	0638M	91.80	0.04	5775.00	155	U-NII-3	29.3	14.0	13.46	Left Tilt	0	0.098	1.132	1.089	0.121	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Head 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-139

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	0.03	5290.00	58	U-NII-2A	58.5	14.0	13.98	14.0	13.49	Right Cheek	0	0.264	1.125	1.133	0.337	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.05	5610.00	122	U-NII-2C	58.5	14.0	13.74	14.0	13.75	Right Cheek	0	0.366	1.062	1.133	0.440	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.10	5775.00	155	U-NII-3	58.5	14.0	13.56	14.0	13.71	Right Cheek	0	0.417	1.107	1.133	0.523	A86
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.14	5290.00	58	U-NII-2A	58.5	14.0	13.98	14.0	13.49	Right Tilt	0	0.133	1.125	1.133	0.170	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.03	5610.00	122	U-NII-2C	58.5	14.0	13.74	14.0	13.75	Right Tilt	0	0.315	1.062	1.133	0.379	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	0.02	5775.00	155	U-NII-3	58.5	14.0	13.56	14.0	13.71	Right Tilt	0	0.271	1.107	1.133	0.340	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.12	5290.00	58	U-NII-2A	58.5	14.0	13.98	14.0	13.49	Left Cheek	0	0.091	1.125	1.133	0.116	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.08	5610.00	122	U-NII-2C	58.5	14.0	13.74	14.0	13.75	Left Cheek	0	0.270	1.062	1.133	0.325	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	0.17	5775.00	155	U-NII-3	58.5	14.0	13.56	14.0	13.71	Left Cheek	0	0.174	1.107	1.133	0.218	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.18	5290.00	58	U-NII-2A	58.5	14.0	13.98	14.0	13.49	Left Tilt	0	0.104	1.125	1.133	0.133	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.01	5610.00	122	U-NII-2C	58.5	14.0	13.74	14.0	13.75	Left Tilt	0	0.292	1.062	1.133	0.351	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0638M	88.28	-0.03	5775.00	155	U-NII-3	58.5	14.0	13.56	14.0	13.71	Left Tilt	0	0.215	1.107	1.133	0.270	
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: To achieve the 17 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14 dBm.

Table 11-140

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.12	5280.00	56	U-NII-2A	6	17.0	16.95	Back	15	0.119	1.012	1.036	0.125	
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.07	5500.00	100	U-NII-2C	6	17.0	16.98	Back	15	0.184	1.005	1.036	0.192	
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	0.01	5825.00	165	U-NII-3	6	17.0	16.97	Back	15	0.306	1.007	1.036	0.319	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-141

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	-0.04	5280.00	56	U-NII-2A	6	17.0	16.98	Back	15	0.063	1.005	1.041	0.066	
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	0.03	5720.00	144	U-NII-2C	6	17.0	16.96	Back	15	0.349	1.009	1.041	0.367	
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	-0.01	5745.00	149	U-NII-3	6	17.0	16.98	Back	15	0.399	1.005	1.041	0.417	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-142

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.11	5280.00	56	U-NII-2A	13	17.0	16.73	17.0	15.62	Back	15	0.163	1.373	0.231	
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.06	5500.00	100	U-NII-2C	13	17.0	16.84	17.0	16.49	Back	15	0.249	1.124	0.289	
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.06	5825.00	165	U-NII-3	13	17.0	16.91	17.0	15.50	Back	15	0.518	1.412	0.755	A87
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: To achieve the 20 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17 dBm.

Table 11-143

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.05	5825.00	165	U-NII-3	6	17.0	16.97	Back	10	0.411	1.007	1.036	0.429	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.07	5825.00	165	U-NII-3	6	17.0	16.97	Front	10	0.238	1.007	1.036	0.248	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	0.11	5825.00	165	U-NII-3	6	17.0	16.97	Top	10	0.221	1.007	1.036	0.231	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.05	5825.00	165	U-NII-3	6	17.0	16.97	Left	10	0.513	1.007	1.036	0.535	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-144

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	0.03	5745.00	149	U-NII-3	6	17.0	16.98	Back	10	0.567	1.005	1.041	0.593	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	0.13	5745.00	149	U-NII-3	6	17.0	16.98	Front	10	0.074	1.005	1.041	0.077	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	-0.07	5745.00	149	U-NII-3	6	17.0	16.98	Top	10	0.323	1.005	1.041	0.338	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-145

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.07	5745.00	149	U-NII-3	13	17.0	16.25	17.0	16.02	Back	10	0.660	1.253	0.853	A88
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	0.01	5785.00	157	U-NII-3	13	17.0	16.81	17.0	15.41	Back	10	0.649	1.441	0.965	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.04	5825.00	165	U-NII-3	13	17.0	16.91	17.0	15.50	Back	10	0.642	1.412	0.936	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.05	5825.00	165	U-NII-3	13	17.0	16.91	17.0	15.50	Front	10	0.296	1.412	0.431	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	0.00	5745.00	149	U-NII-3	13	17.0	16.25	17.0	16.02	Top	10	0.449	1.253	0.581	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.07	5785.00	157	U-NII-3	13	17.0	16.81	17.0	15.41	Top	10	0.496	1.441	0.738	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.01	5825.00	165	U-NII-3	13	17.0	16.91	17.0	15.50	Top	10	0.617	1.412	0.899	
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.07	5825.00	165	U-NII-3	13	17.0	16.91	17.0	15.50	Left	10	0.472	1.412	0.688	
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: To achieve the 20 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17 dBm.

Table 11-146

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Plot #
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.10	5280.00	56	U-NII-2A	6	17.0	16.95	Back	0	0.500	1.012	1.036	0.524	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	0.02	5500.00	100	U-NII-2C	6	17.0	16.98	Back	0	0.541	1.005	1.036	0.563	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	0.00	5280.00	56	U-NII-2A	6	17.0	16.95	Front	0	0.483	1.012	1.036	0.506	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.02	5500.00	100	U-NII-2C	6	17.0	16.98	Front	0	0.464	1.005	1.036	0.483	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.06	5280.00	56	U-NII-2A	6	17.0	16.95	Top	0	0.291	1.012	1.036	0.305	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	-0.02	5500.00	100	U-NII-2C	6	17.0	16.98	Top	0	0.292	1.005	1.036	0.304	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	0.09	5280.00	56	U-NII-2A	6	17.0	16.95	Left	0	0.766	1.012	1.036	0.803	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	G	0638M	96.55	0.03	5500.00	100	U-NII-2C	6	17.0	16.98	Left	0	0.988	1.005	1.036	1.029	A89
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Phablet 4.0 W/kg (mW/g) averaged over 10 grams						

Table 11-147

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Plot #
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	-0.04	5280.00	56	U-NII-2A	6	17.0	16.98	Back	0	0.345	1.005	1.041	0.361	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	0.01	5720.00	144	U-NII-2C	6	17.0	16.96	Back	0	0.993	1.009	1.041	1.043	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	-0.11	5280.00	56	U-NII-2A	6	17.0	16.98	Front	0	0.052	1.005	1.041	0.054	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	0.14	5720.00	144	U-NII-2C	6	17.0	16.96	Front	0	0.107	1.009	1.041	0.112	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	0.00	5280.00	56	U-NII-2A	6	17.0	16.98	Top	0	0.214	1.005	1.041	0.224	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	M	0638M	96.06	0.09	5720.00	144	U-NII-2C	6	17.0	16.96	Top	0	0.373	1.009	1.041	0.392	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Phablet 4.0 W/kg (mW/g) averaged over 10 grams						

Table 11-148

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Plot #
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.03	5280.00	56	U-NII-2A	13	17.0	16.73	17.0	15.62	Back	0	0.664	1.373	1.032	0.941	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.01	5500.00	100	U-NII-2C	13	17.0	16.84	17.0	16.49	Back	0	0.785	1.124	1.032	0.911	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.03	5260.00	52	U-NII-2A	13	17.0	16.34	17.0	15.63	Front	0	0.523	1.370	1.032	0.739	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	0.05	5500.00	100	U-NII-2C	13	17.0	16.84	17.0	16.49	Front	0	0.606	1.124	1.032	0.703	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	0.03	5280.00	56	U-NII-2A	13	17.0	16.73	17.0	15.62	Top	0	0.429	1.373	1.032	0.608	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	0.01	5500.00	100	U-NII-2C	13	17.0	16.84	17.0	16.49	Top	0	0.453	1.124	1.032	0.525	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	0.03	5280.00	56	U-NII-2A	13	17.0	16.73	17.0	15.62	Left	0	0.857	1.373	1.032	1.214	
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0638M	96.88	-0.12	5500.00	100	U-NII-2C	13	17.0	16.84	17.0	16.49	Left	0	0.931	1.124	1.032	1.080	
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: To achieve the 20 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17 dBm.

11.7 DSS Standalone SAR

Table 11-149

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Head	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	0.02	2441.00	39	1	16.0	15.58	Right Cheek	0	0.086	1.102	1.016	0.096	A90
Head	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	-0.14	2441.00	39	1	16.0	15.58	Right Tilt	0	0.022	1.102	1.016	0.025	
Head	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	0.04	2441.00	39	1	16.0	15.58	Left Cheek	0	0.019	1.102	1.016	0.021	
Head	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	0.01	2441.00	39	1	16.0	15.58	Left Tilt	0	0.009	1.102	1.016	0.010	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-150

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Body-worn	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	0.01	2441.00	39	1	16.0	15.58	Back	15	0.011	1.102	1.016	0.012	A91
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-151

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Plot #
Hotspot	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	0.01	2441.00	39	1	16.0	15.58	Back	10	0.034	1.102	1.016	0.038	A92
Hotspot	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	0.08	2441.00	39	1	16.0	15.58	Front	10	0.021	1.102	1.016	0.024	
Hotspot	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	0.03	2441.00	39	1	16.0	15.58	Top	10	0.008	1.102	1.016	0.009	
Hotspot	2.4 GHz Bluetooth	FHSS	I	0626M	76.80	-0.11	2441.00	39	1	16.0	15.58	Left	10	0.024	1.102	1.016	0.027	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram						

11.8 NFC Standalone SAR

Table 11-152

Exposure	Band / Mode	Signal Type	Ant.	Serial Number	Power Drift [dB]	Frequency [MHz]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Plot #
Phablet	NFC	B	NFC	3414M	-0.03	13.60	Back	0	0.028	A93
Phablet	NFC	B	NFC	3414M	0.01	13.60	Front	0	0.000	
Phablet	NFC	B	NFC	3414M	0.03	13.60	Top	0	0.000	
Phablet	NFC	B	NFC	3414M	0.05	13.60	Left	0	0.000	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

11.9 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see section 12 for variability analysis.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 6.7 for more details).
10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the 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. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).
12. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the 1g thresholds for the equivalent test cases.
13. This device uses S.LSI TAS for WWAN 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 (RSI).

GSM Test Notes:

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

UMTS Notes:

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

LTE Notes:

1. LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r04. The general test procedures used for testing can be found in Section 8.5.4.
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 D01v06, 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 or LTE B48, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. For LTE Band 48, 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. For LTE Band 41, testing was performed using UL-DL configuration 1 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 is 0.433.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

7. This device supports only Power Class 2 for LTE Band 41.

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 D01v06, when the reported NR Band n77 SAR measured at the highest output power channel in a given a test configuration was > 0.4 W/kg for 1g evaluations and > 1 W/kg for 10g evaluation, testing at the other channels was required for such test configurations.
7. Per FCC KDB Publication 447498 D01v06, 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.
8. SRS was tested with CW signal per S.LSI guidance.
9. For final implementation, NR Band n41 and n77 slot configuration is synchronized using maximum duty cycle of 100%. SAR testing was performed using FTM mode with a 100% duty cycle applied to match final duty cycle.
10. 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).

WLAN Notes:

1. For held-to-ear, hotspot, and phablet operations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g evaluations, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n/ax) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 8.6.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 8.6.6 for more information.
4. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously. Please see Multi-TX and Antenna SAR Considerations Appendix for complete analysis.
5. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.

6. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.
7. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 78% transmission duty factor to determine compliance. See RF Conducted Power Section for the time domain plot and calculation for the duty factor of the device.
2. Head and Hotspot Bluetooth SAR were evaluated for BT BDR tethering applications.

12 SAR MEASUREMENT VARIABILITY

12.1 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 12-1
Phablet SAR Measurement Variability Results

PHABLET 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)	
3700	3679.98	645332	NR Band 48, 40 MHz Bandwidth	DFT-S-OFDM, QPSK, 1 RB, 104 RB Offset	Left	0	G	2.100	2.080	1.01	N/A	N/A	N/A	N/A
3900	3930.00	662000	NR Band 77, 100 MHz Bandwidth	DFT-S-OFDM, QPSK, 1 RB, 1 RB Offset	Left	0	G	2.160	2.140	1.01	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 gram									

12.2 Measurement Uncertainty

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

13 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	10/10/2023	Annual	10/10/2024	MY42082659
Agilent	E4438C	ESG Vector Signal Generator	11/15/2023	Annual	11/15/2024	MY45092078
Agilent	N5182A	MXG Vector Signal Generator	11/14/2023	Annual	11/14/2024	US46240505
Agilent	N5182A	MXG Vector Signal Generator	7/4/2023	Annual	7/4/2024	MY48180366
Agilent	8753ES	S-Parameter Vector Network Analyzer	2/8/2023	Annual	2/8/2024	US39170122
Agilent	8753ES	S-Parameter Vector Network Analyzer	7/21/2023	Annual	7/21/2024	US39170118
Agilent	8753ES	S-Parameter Vector Network Analyzer	1/12/2023	Annual	1/12/2024	MY40001472
Agilent	E5515C	Wireless Communications Test Set	4/24/2019	Triennial	CBT	GB46310798
Agilent	E5515C	Wireless Communications Test Set	1/12/2023	Annual	1/12/2024	MY50262130
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Anritsu	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	ML2496A	Power Meter	6/15/2023	Annual	6/15/2024	1138001
Anritsu	MA2411B	Pulse Power Sensor	1/10/2023	Annual	1/10/2024	1315051
Anritsu	MA2411B	Pulse Power Sensor	6/15/2023	Annual	6/15/2024	1126066
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	7/5/2023	Annual	7/5/2024	6262150000
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	3/31/2023	Annual	3/31/2024	6201381794
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	1/10/2023	Annual	1/10/2024	6201524637
Anritsu	MT8000A	Radio Communication Test Station	9/4/2023	Annual	9/4/2024	6272337405
Anritsu	MT8000A	Radio Communication Test Station	10/17/2023	Annual	10/17/2024	6262036828
Anritsu	MT8000A	Radio Communication Test Station	3/20/2023	Annual	3/20/2024	6261987986
Anritsu	MA24106A	USB Power Sensor	4/21/2023	Annual	4/21/2024	1349503
Anritsu	MA24106A	USB Power Sensor	10/31/2023	Annual	10/31/2024	1248508
Anritsu	MA24106A	USB Power Sensor	7/4/2023	Annual	7/4/2024	1244512
Control Company	4040	Therm./ Clock/ Humidity Monitor	1/17/2023	Annual	1/17/2024	160574418
Mitutoyo	500-196-30	CD-6"ASX 6inch Digital Caliper	2/16/2022	Triennial	2/16/2025	A20238413
Keysight Technologies	N6705B	DC Power Analyzer	5/5/2021	Triennial	5/5/2024	MY53004059
Keysight Technologies	N9020A	MXA Signal Analyzer	3/15/2023	Annual	3/15/2024	US46470561
Keysight Technologies	N9020A	MXA Signal Analyzer	4/6/2023	Annual	4/6/2024	MY48010233
Agilent	N9020A	MXA Signal Analyzer	10/17/2023	Annual	10/17/2024	MY51240479
Mini-Circuits	VLF-2950+	Low Pass Filter DC to 2700 MHz	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	VLF-6000+	Low Pass Filter DC to 6000 MHz	7/5/2023	Annual	7/5/2024	31634
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	CBT	N/A	CBT	2050
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	7/5/2023	Annual	7/5/2024	2111
Seekonk	TSF-100	Torque Wrench	6/30/2023	Annual	6/30/2024	47639-29
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	8/14/2023	Annual	8/14/2024	161662
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	6/1/2023	Annual	6/1/2024	108843
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	7/4/2023	Annual	7/4/2024	166818
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	8/10/2023	Annual	8/10/2024	140144
SPEAG	DAK-3.5	Dielectric Assessment Kit	11/13/2023	Annual	11/13/2024	1277
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/9/2023	Annual	5/9/2024	1070
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	8/14/2023	Annual	8/14/2024	1041
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	3/13/2023	Annual	3/13/2024	1102
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1379
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1243
SPEAG	D750V3	750 MHz SAR Dipole	3/14/2022	Biennial	3/14/2024	1054
SPEAG	D750V3	750 MHz SAR Dipole	2/13/2023	Annual	2/13/2024	1046
SPEAG	D750V3	750 MHz SAR Dipole	5/11/2023	Annual	5/11/2024	1003
SPEAG	D835V2	835 MHz SAR Dipole	1/21/2021	Triennial	1/21/2024	4d132
SPEAG	D835V2	835 MHz SAR Dipole	4/13/2023	Annual	4/13/2024	4d119
SPEAG	D835V2	835 MHz SAR Dipole	5/11/2023	Annual	5/11/2024	4d180
SPEAG	D1750V2	1750 MHz SAR Dipole	10/20/2021	Triennial	10/20/2024	1150
SPEAG	D1750V2	1750 MHz SAR Dipole	1/18/2022	Biennial	1/18/2024	1148
SPEAG	D1765V2	1750 MHz SAR Dipole	5/14/2021	Triennial	5/14/2024	1008
SPEAG	D1750V2	1750 MHz SAR Dipole	4/19/2023	Annual	4/19/2024	1051
SPEAG	D1900V2	1900 MHz SAR Dipole	2/21/2022	Biennial	2/21/2024	5d148
SPEAG	D1900V2	1900 MHz SAR Dipole	4/18/2023	Annual	4/18/2024	5d141
SPEAG	D1900V2	1900 MHz SAR Dipole	5/12/2023	Annual	5/12/2024	5d026
SPEAG	D2300V2	2300 MHz SAR Dipole	6/3/2021	Triennial	6/3/2024	1116
SPEAG	D2300V2	2300 MHz SAR Dipole	6/12/2023	Annual	6/12/2024	1117
SPEAG	D2300V2	2300 MHz SAR Dipole	2/13/2023	Annual	2/13/2024	1008
SPEAG	D2450V2	2450 MHz SAR Dipole	11/25/2021	Triennial	11/25/2024	981
SPEAG	D2450V2	2450 MHz SAR Dipole	8/18/2021	Triennial	8/18/2024	719
SPEAG	D2450V2	2450 MHz SAR Dipole	5/11/2023	Annual	5/11/2024	945
SPEAG	D2600V2	2600 MHz SAR Dipole	4/14/2021	Triennial	4/14/2024	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	6/12/2023	Annual	6/12/2024	1009
SPEAG	D2600V2	2600 MHz SAR Dipole	8/10/2023	Annual	8/10/2024	1126
SPEAG	D3500V2	3500 MHz SAR Dipole	1/19/2021	Triennial	1/19/2024	1059
SPEAG	D3500V2	3500 MHz SAR Dipole	6/15/2023	Annual	6/15/2024	1127
SPEAG	D3700V2	3700 MHz SAR Dipole	1/13/2023	Annual	1/13/2024	1067
SPEAG	D3700V2	3700 MHz SAR Dipole	6/15/2023	Annual	6/15/2024	1096
SPEAG	D3900V2	3900 MHz SAR Dipole	10/19/2023	Annual	10/19/2024	1056
SPEAG	D3900V2	3900 MHz SAR Dipole	6/15/2023	Annual	6/15/2024	1074
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/18/2023	Annual	1/18/2024	1191
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/17/2023	Annual	1/17/2024	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/14/2023	Annual	4/14/2024	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/15/2023	Annual	6/15/2024	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2023	Annual	2/15/2024	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/18/2023	Annual	1/18/2024	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/16/2023	Annual	2/16/2024	1645
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/15/2023	Annual	6/15/2024	1532
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/20/2023	Annual	1/20/2024	1466
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/6/2023	Annual	9/6/2024	1364
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/27/2023	Annual	6/27/2024	1502
SPEAG	EX3DV4	SAR Probe	1/11/2023	Annual	1/11/2024	7570
SPEAG	EX3DV4	SAR Probe	4/14/2023	Annual	4/14/2024	7659
SPEAG	EX3DV4	SAR Probe	6/15/2023	Annual	6/15/2024	7409
SPEAG	EX3DV4	SAR Probe	2/8/2023	Annual	2/8/2024	7417
SPEAG	EX3DV4	SAR Probe	1/11/2023	Annual	1/11/2024	7713
SPEAG	EX3DV4	SAR Probe	2/10/2023	Annual	2/10/2024	7640
SPEAG	EX3DV4	SAR Probe	6/8/2023	Annual	6/8/2024	7491
SPEAG	EX3DV4	SAR Probe	1/12/2023	Annual	1/12/2024	7565
SPEAG	EX3DV4	SAR Probe	9/12/2023	Annual	9/12/2024	7558
SPEAG	EX3DV4	SAR Probe	5/10/2023	Annual	5/10/2024	7402

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.

14 MEASUREMENT UNCERTAINTIES

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System									
Probe Calibration	E.2.1	7	N	1	1	1	7.0	7.0	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	2	R	1.732	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

15 CONCLUSION

15.1 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]

16 REFERENCES

[1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, Aug. 1996.

[2] ANSI/IEEE C95.1-2005, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, 2006.

[3] ANSI/IEEE C95.1-1992, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, Sept. 1992.

[4] ANSI/IEEE C95.3-2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave, New York: IEEE, December 2002.

[5] IEEE Standards Coordinating Committee 39 –Standards Coordinating Committee 34 – IEEE Std. 1528-2013, IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

[6] NCRP, National Council on Radiation Protection and Measurements, Biological Effects and Exposure Criteria for RadioFrequency Electromagnetic Fields, NCRP Report No. 86, 1986. Reprinted Feb. 1995.

[7] T. Schmid, O. Egger, N. Kuster, Automated E-field scanning system for dosimetric assessments, IEEE Transaction on Microwave Theory and Techniques, vol. 44, Jan. 1996, pp. 105-113.

[8] K. Pokovic, T. Schmid, N. Kuster, Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies, ICECOM97, Oct. 1997, pp. 1 -124.

[9] K. Pokovic, T. Schmid, and N. Kuster, E-field Probe with improved isotropy in brain simulating liquids, Proceedings of the ELMAR, Zadar, Croatia, June 23-25, 1996, pp. 172-175.

[10] Schmid & Partner Engineering AG, Application Note: Data Storage and Evaluation, June 1998, p2.

[11] V. Hombach, K. Meier, M. Burkhardt, E. Kuhn, N. Kuster, The Dependence of EM Energy Absorption upon Human Modeling at 900 MHz, IEEE Transaction on Microwave Theory and Techniques, vol. 44 no. 10, Oct. 1996, pp. 1865-1873.

[12] N. Kuster and Q. Balzano, Energy absorption mechanism by biological bodies in the near field of dipole antennas above 300MHz, IEEE Transaction on Vehicular Technology, vol. 41, no. 1, Feb. 1992, pp. 17-23.

[13] G. Hartsgrove, A. Kraszewski, A. Surowiec, Simulated Biological Materials for Electromagnetic Radiation Absorption Studies, University of Ottawa, Bioelectromagnetics, Canada: 1987, pp. 29-36.

[14] Q. Balzano, O. Garay, T. Manning Jr., Electromagnetic Energy Exposure of Simulated Users of Portable Cellular Telephones, IEEE Transactions on Vehicular Technology, vol. 44, no.3, Aug. 1995.

[15] W. Gander, Computermathematick, Birkhaeuser, Basel, 1992.

[16] W.H. Press, S.A. Teukolsky, W.T. Vetterling, and B.P. Flannery, Numerical Recipes in C, The Art of Scientific Computing, Second edition, Cambridge University Press, 1992.

[17] N. Kuster, R. Kastle, T. Schmid, Dosimetric evaluation of mobile communications equipment with known precision, IEEE Transaction on Communications, vol. E80-B, no. 5, May 1997, pp. 645-652.

[18] CENELEC CLC/SC111B, European Prestandard (prENV 50166-2), Human Exposure to Electromagnetic Fields High-frequency: 10kHz-300GHz, Jan. 1995.

[19] Prof. Dr. Niels Kuster, ETH, Eidgenössische Technische Hoschschule Zürich, Dosimetric Evaluation of the Cellular Phone.

[20] IEC 62209-1, Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Part 1: Devices used next to the ear (Frequency range of 300 MHz to 6 GHz), July 2016.

[21] Innovation, Science, Economic Development Canada RSS-102 Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands) Issue 5, March 2015.

[22] Health Canada Safety Code 6 Limits of Human Exposure to Radio Frequency Electromagnetic Fields in the Frequency Range from 3 kHz – 300 GHz, 2015

[23] FCC SAR Test Procedures for 2G-3G Devices, Mobile Hotspot and UMPC Devices KDB Publications 941225, D01-D07

[24] SAR Measurement Guidance for IEEE 802.11 Transmitters, KDB Publication 248227 D01

[25] FCC SAR Considerations for Handsets with Multiple Transmitters and Antennas, KDB Publications 648474 D03-D04

[26] FCC SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers, FCC KDB Publication 616217 D04

[27] FCC SAR Measurement and Reporting Requirements for 100MHz – 6 GHz, KDB Publications 865664 D01-D02

[28] FCC General RF Exposure Guidance and SAR Procedures for Dongles, KDB Publication 447498, D01-D04

[29] Anexo à Resolução No. 533, de 10 de Septembro de 2009.

[30] IEC 62209-2, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz), Mar. 2010.