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SAR EVALUATION REPORT

Applicant Name:
Samsung Electronics Co., Ltd.
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Gyeonggi-do, 16677, Korea

Date of Testing:
05/23/20 - 07/27/20
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M2004230075-01-R3.A3L

FCC ID: **A3LSMT978U**

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

DUT Type: Portable Tablet
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model: SM-T978U

Equipment Class	Band & Mode	Tx Frequency	SAR
			1g Body (W/kg)
PCB	UMTS 850	826.40 - 846.60 MHz	0.79
PCB	UMTS 1750	1712.4 - 1752.6 MHz	0.76
PCB	UMTS 1900	1852.4 - 1907.6 MHz	0.69
PCB	LTE Band 71	665.5 - 695.5 MHz	0.34
PCB	LTE Band 12	699.7 - 715.3 MHz	0.51
PCB	LTE Band 13	779.5 - 784.5 MHz	0.62
PCB	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.54
PCB	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.46
PCB	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.81
PCB	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A
PCB	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	0.84
PCB	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A
PCB	LTE Band 7	2502.5 - 2567.5 MHz	0.79
PCB	LTE Band 41	2498.5 - 2687.5 MHz	0.55
PCB	NR Band n71	665.5 - 695.5 MHz	0.30
PCB	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.57
PCB	NR Band n66 (AWS)	1712.5 - 1777.5 MHz	0.60
PCB	NR Band n25 (PCS)	1852.5 - 1912.5 MHz	0.76
PCB	NR Band n2 (PCS)	1852.5 - 1907.5 MHz	N/A
PCB	NR Band n41	2506 - 2680 MHz	0.19
DTS	2.4 GHz WLAN	2412 - 2462 MHz	0.88
NII	U-NII-1	5180 - 5240 MHz	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.63
NII	U-NII-2C	5500 - 5720 MHz	0.60
NII	U-NII-3	5745 - 5825 MHz	0.71
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.55
Simultaneous SAR per KDB 690783 D01v01r03:			1.59

Note: This revised test report (S/N: 1M2004230075-01-R3.A3L) 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 1.8 of this report; for North American frequency bands only.

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

Randy Ortanez
President

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

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1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
UMTS 850	Data	826.40 - 846.60 MHz
UMTS 1750	Data	1712.4 - 1752.6 MHz
UMTS 1900	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 26 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
NR Band n71	Data	665.5 - 695.5 MHz
NR Band n5 (Cell)	Data	826.5 - 846.5 MHz
NR Band n66 (AWS)	Data	1712.5 - 1777.5 MHz
NR Band n25 (PCS)	Data	1852.5 - 1912.5 MHz
NR Band n2 (PCS)	Data	1852.5 - 1907.5 MHz
NR Band n41	Data	2506 - 2680 MHz
2.4 GHz WLAN	Data	2412 - 2462 MHz
U-NII-1	Data	5180 - 5240 MHz
U-NII-2A	Data	5260 - 5320 MHz
U-NII-2C	Data	5500 - 5720 MHz
U-NII-3	Data	5745 - 5825 MHz
Bluetooth	Data	2402 - 2480 MHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 MHz

1.2 Time-Averaging Algorithm for RF Exposure Compliance

The equipment under test (EUT) contains:

a. Qualcomm® SDX55M modem supporting 2G/3G/4G/5G NR WWAN Technologies

Qualcomm® SDX55M modems are enabled with Qualcomm® Smart Transmit feature. This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time. Refer to Compliance Summary document for detailed description of Qualcomm® Smart Transmit feature (report SN can be found in Section 1.10 – Bibliography).

Note that WLAN operations are not enabled with Smart Transmit.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of *SAR_design_target* or *PD_design_target*, below the predefined time-averaged power limit (i.e., P_{limit} for sub-6 radio, and *input.power.limit* for 5G mmW NR), for each characterized technology and band (see RF Exposure Part 0 Test Report, report SN can be found in Section 1.10 - Bibliography).

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

Exposure Scenario:		Tablet Max	Grip 2+3	Grip 3	Grip 2	Maximum Tune-up Output Power*
Averaging Volume:		1g	1g	1g	1g	
Spacing:		19mm, 18 mm, 23mm, 7mm	0 mm	0 mm	0 mm	
DSI:		0	1	2	3	
Technology/Band	Antenna	**Plimit corresponding to 1mW/g (SAR_design_target)**				Pmax
UMTS B5	Main 1	29.4	17.5	29.4	17.5	24.0
UMTS B4	Main 1	26.7	13.5	21.0	13.5	24.0
UMTS B2	Main 1	27.3	12.0	21.0	12.0	24.0
LTE FDD B71	Main 1	30.7	14.0	30.7	14.0	24.0
LTE FDD B12	Main 1	30.0	16.0	30.0	16.0	24.0
LTE FDD B13	Main 1	28.2	16.0	28.2	16.0	24.0
LTE FDD B26	Main 1	28.8	16.0	28.8	16.0	24.0
LTE FDD B5	Main 1	28.8	16.0	28.8	16.0	24.0
LTE FDD B66	Main 1	26.1	12.5	26.1	12.5	24.0
LTE FDD B4	Main 1	26.1	12.5	26.1	12.5	24.0
LTE FDD B25	Main 1	26.9	12.5	21.0	12.5	24.0
LTE FDD B2	Main 1	26.9	12.5	21.0	12.5	24.0
LTE FDD B7	Main 1	30.1	12.5	12.5	12.5	24.0
LTE TDD B41 PC3	Main 1	29.4	12.0	12.0	12.0	22.0
LTE TDD B41 PC2	Main 1	29.4	12.0	12.0	12.0	23.4
NR FDD n71	Main 1	30.2	14.0	30.2	14.0	24.0
NR FDD n5	Main 1	29.0	16.0	29.0	16.0	24.0
NR FDD n66	Main 1	27.3	12.5	27.3	12.5	24.0
NR FDD n25	Main 1	27.5	12.5	27.5	12.5	24.0
NR FDD n2	Main 1	27.5	12.5	27.5	12.5	24.0
NR TDD n41	WIFI 1	28.1	8.0	8.0	28.1	18.0

*Note all P_{limit} EFS and maximum tune up output power P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (for e.g., GSM & LTE TDD).
*Maximum tune up output power P_{max} is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1dB device design uncertainty.

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

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

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

1.3 Power Reduction for SAR

This device uses a power reduction mechanism for SAR compliance. The power reduction mechanism is activated when the device is used in close proximity to the user's body. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device. Detailed descriptions of the power reduction mechanism are included in the operational description.

This device uses an independent fixed level power reduction mechanism for WLAN/BT operations when 5G NR is active. 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.

1.4.1 3G/4G/5G Output Power

UMTS Band 5 (850 MHz)					
Power Level		Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
DSI = 0 (Tablet Max)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Grip Sensor 2 and 3 Active)	Max allowed power	18.5	18.5	18.5	18.5
	Nominal	17.5	17.5	17.5	17.5
DSI = 2 (Grip Sensor 3 Active)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 3 (Grip Sensor 2 Active)	Max allowed power	18.5	18.5	18.5	18.5
	Nominal	17.5	17.5	17.5	17.5
UMTS Band 4 (1750 MHz)					
Power Level		Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
DSI = 0 (Tablet Max)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Grip Sensor 2 and 3 Active)	Max allowed power	14.5	14.5	14.5	14.5
	Nominal	13.5	13.5	13.5	13.5
DSI = 2 (Grip Sensor 3 Active)	Max allowed power	22.0	22.0	22.0	22.0
	Nominal	21.0	21.0	21.0	21.0
DSI = 3 (Grip Sensor 2 Active)	Max allowed power	14.5	14.5	14.5	14.5
	Nominal	13.5	13.5	13.5	13.5
UMTS Band 2 (1900 MHz)					
Power Level		Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
DSI = 0 (Tablet Max)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Grip Sensor 2 and 3 Active)	Max allowed power	13.0	13.0	13.0	13.0
	Nominal	12.0	12.0	12.0	12.0
DSI = 2 (Grip Sensor 3 Active)	Max allowed power	22.0	22.0	22.0	22.0
	Nominal	21.0	21.0	21.0	21.0
DSI = 3 (Grip Sensor 2 Active)	Max allowed power	13.0	13.0	13.0	13.0
	Nominal	12.0	12.0	12.0	12.0

Mode / Band		Modulated Average Output Power (in dBm)			
		DSI = 0 (Tablet Max)	DSI = 1 (Grip Sensor 2 and 3 Active)	DSI = 2 (Grip Sensor 3 Active)	DSI = 3 (Grip Sensor 2 Active)
LTE FDD Band 71	Max allowed	25.0	15.0	25.0	15.0
	Nominal	24.0	14.0	24.0	14.0
LTE FDD Band 12	Max allowed	25.0	17.0	25.0	17.0
	Nominal	24.0	16.0	24.0	16.0
LTE FDD Band 13	Max allowed	25.0	17.0	25.0	17.0
	Nominal	24.0	16.0	24.0	16.0
LTE FDD Band 26	Max allowed	25.0	17.0	25.0	17.0
	Nominal	24.0	16.0	24.0	16.0
LTE FDD Band 5	Max allowed	25.0	17.0	25.0	17.0
	Nominal	24.0	16.0	24.0	16.0
LTE FDD Band 66	Max allowed	25.0	13.5	25.0	13.5
	Nominal	24.0	12.5	24.0	12.5
LTE FDD Band 4	Max allowed	25.0	13.5	25.0	13.5
	Nominal	24.0	12.5	24.0	12.5
LTE FDD Band 25	Max allowed	25.0	13.5	22.0	13.5
	Nominal	24.0	12.5	21.0	12.5
LTE FDD Band 2	Max allowed	25.0	13.5	22.0	13.5
	Nominal	24.0	12.5	21.0	12.5
LTE FDD Band 7	Max allowed	25.0	13.5	13.5	13.5
	Nominal	24.0	12.5	12.5	12.5
LTE TDD Band 41 (PC3)	Max allowed	25.0	15.0	15.0	15.0
	Nominal	24.0	14.0	14.0	14.0
LTE TDD Band 41 (PC2)	Max allowed	28.0	16.6	16.6	16.6
	Nominal	27.0	15.6	15.6	15.6

Mode / Band		Modulated Average Output Power (in dBm)			
		DSI = 0 (Tablet Max)	DSI = 1 (Grip Sensor 2 and 3 Active)	DSI = 2 (Grip Sensor 3 Active)	DSI = 3 (Grip Sensor 2 Active)
NR FDD Band 71	Max allowed	25.0	15.0	25.0	15.0
	Nominal	24.0	14.0	24.0	14.0
NR FDD Band 5	Max allowed	25.0	17.0	25.0	17.0
	Nominal	24.0	16.0	24.0	16.0
NR FDD Band 66	Max allowed	25.0	13.5	25.0	13.5
	Nominal	24.0	12.5	24.0	12.5
NR FDD Band 25	Max allowed	25.0	13.5	25.0	13.5
	Nominal	24.0	12.5	24.0	12.5
NR FDD Band 2	Max allowed	25.0	13.5	25.0	13.5
	Nominal	24.0	12.5	24.0	12.5
NR TDD Band 41	Max allowed	25.0	15.0	15.0	25.0
	Nominal	24.0	14.0	14.0	24.0

1.4.2 2.4 GHz Maximum SISO/MIMO WLAN Output Power

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

Mode	Band	IEEE 802.11 (in dBm)																											
		SISO Antenna 1/2										SISO Antenna 2										MIMO							
		b		g		n		ac		ax (SU)		b		g		n		ac		ax (SU)		b		g (CDD + STBC)		n		ac		ax (SU)	
Maximum/Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
2.4 GHz WIFI	2.45 GHz	18.0 ch. 11: 15.5	19.0 16.5	18.0 ch. 11: 15.5	19.0 16.5	17.0 ch. 1: 15.5 ch. 11: 14.5	18.0 16.5 15.5	17.0 ch. 1: 15.5 ch. 11: 14.5	18.0 16.5 15.5	14.0	15.0	18.0	19.0	18.0	19.0	17.0 ch. 1: 15.5 ch. 11: 14.5	18.0 16.5 15.5	17.0 ch. 1: 15.5 ch. 11: 14.5	18.0 16.5 15.5	14.0	15.0	21.0 ch. 11: 19.8	22.0 20.8	21.0 ch. 11: 19.8	22.0 20.8	20.0 ch. 1: 18.5 ch. 11: 17.5	21.0 19.5 18.5	20.0 ch. 1: 18.5 ch. 11: 17.5	21.0 19.5 18.5	17.0	18.0

1.4.3 2.4 GHz Reduced WLAN Output Powers

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

The below table is applicable in the following conditions:

- Proximity sensor active
- Simultaneous conditions with 5 GHz WLAN
- Proximity sensor active during simultaneous conditions with 5 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)																			
		SISO Antenna 1/2										MIMO									
		b		g		n		ac		ax (SU)		b		g (CDD + STBC)		n		ac		ax (SU)	
Maximum/Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
2.4 GHz WIFI	2.45 GHz	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0

The below table is applicable in the following conditions:

- Proximity sensor active during simultaneous conditions with 5G NR mmWave
- Proximity sensor active during simultaneous conditions with 5G NR mmWave and 5 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)																			
		SISO Antenna 1/2										MIMO									
		b		g		n		ac		ax (SU)		b		g (CDD + STBC)		n		ac		ax (SU)	
Maximum/Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
2.4 GHz WIFI	2.45 GHz	8.0	9.0	8.0	9.0	8.0	9.0	8.0	9.0	8.0	9.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0

1.4.4 5 GHz Maximum SISO/MIMO WLAN Output Power

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

Mode	Band	IEEE 802.11 (in dBm)															
		SISO								MIMO							
		Antenna 1/2															
		a		n		ac		ax (SU)		a (CDD + STBC)		n		ac		ax (SU)	
Maximum/Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
5 GHz WIFI (20MHz BW)	5200 MHz	17.0	18.0	16.0	17.0	16.0	17.0	13.0	14.0	20.0	21.0	19.0	20.0	19.0	20.0	16.0	17.0
	5300 MHz	17.0	18.0	16.0	17.0	16.0	17.0	13.0	14.0	20.0	21.0	19.0	20.0	19.0	20.0	16.0	17.0
	5500 MHz	14.0	15.0	14.0	15.0	14.0	15.0	13.0	14.0	17.0	18.0	17.0	18.0	17.0	18.0	16.0	17.0
	5800 MHz	14.0	15.0	14.0	15.0	14.0	15.0	13.0	14.0	17.0	18.0	17.0	18.0	17.0	18.0	16.0	17.0
5 GHz WIFI (40MHz BW)	5200 MHz			13.5	14.5	13.5	14.5	11.0	12.0			16.5	17.5	17.0	18.0	14.0	15.0
	5300 MHz			13.0	14.0	13.5	14.5	11.0	12.0			16.0	17.0	17.0	18.0	14.0	15.0
	5500 MHz			13.5	14.5	13.5	14.5	11.0	12.0			16.5	17.5	17.0	18.0	14.0	15.0
	5800 MHz			13.5	14.5	13.5	14.5	11.0	12.0			16.5	17.5	17.0	18.0	14.0	15.0
5 GHz WIFI (80MHz BW)	5200 MHz					13.0	14.0	10.0	11.0					16.0	17.0	13.0	14.0
	5300 MHz					13.0	14.0	10.0	11.0					16.0	17.0	13.0	14.0
	5500 MHz					13.0	14.0	10.0	11.0					16.0	17.0	13.0	14.0
	5800 MHz					13.0	14.0	10.0	11.0					16.0	17.0	13.0	14.0

1.4.5 5 GHz Reduced WLAN Output Powers

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

The below table is applicable in the following conditions:

- Proximity sensor active
- Simultaneous conditions with 2.4 GHz WLAN
- Proximity sensor active during simultaneous conditions with 2.4 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1/2								MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n		ac		ax (SU)	
Maximum/Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
5 GHz WIFI (20MHz BW)	5200 MHz	8.0	9.0	8.0	9.0	8.0	9.0	8.0	9.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0
	5300 MHz	8.0	9.0	8.0	9.0	8.0	9.0	8.0	9.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0
	5500 MHz	7.0	8.0	7.0	8.0	7.0	8.0	7.0	8.0	10.0	11.0	10.0	11.0	10.0	11.0	10.0	11.0
	5800 MHz	8.0	9.0	8.0	9.0	8.0	9.0	8.0	9.0	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0
5 GHz WIFI (40MHz BW)	5200 MHz			8.0	9.0	8.0	9.0	8.0	9.0			11.0	12.0	11.0	12.0	11.0	12.0
	5300 MHz			8.0	9.0	8.0	9.0	8.0	9.0			11.0	12.0	11.0	12.0	11.0	12.0
	5500 MHz			7.0	8.0	7.0	8.0	7.0	8.0			10.0	11.0	10.0	11.0	10.0	11.0
	5800 MHz			8.0	9.0	8.0	9.0	8.0	9.0			11.0	12.0	11.0	12.0	11.0	12.0
5 GHz WIFI (80MHz BW)	5200 MHz					8.0	9.0	8.0	9.0					11.0	12.0	11.0	12.0
	5300 MHz					8.0	9.0	8.0	9.0					11.0	12.0	11.0	12.0
	5500 MHz					7.0	8.0	7.0	8.0					10.0	11.0	10.0	11.0
	5800 MHz					8.0	9.0	8.0	9.0					11.0	12.0	11.0	12.0

The below table is applicable in the following conditions:

- Proximity sensor active during simultaneous conditions with 5G NR mmWave
- Proximity sensor active during simultaneous conditions with 5G NR mmWave and 2.4 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1/2								MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n		ac		ax (SU)	
Maximum/Nominal Power		Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max	Nominal	Max
5 GHz WIFI (20MHz BW)	5200 MHz	6.0	7.0	6.0	7.0	6.0	7.0	6.0	7.0	9.0	10.0	9.0	10.0	9.0	10.0	9.0	10.0
	5300 MHz	6.0	7.0	6.0	7.0	6.0	7.0	6.0	7.0	9.0	10.0	9.0	10.0	9.0	10.0	9.0	10.0
	5500 MHz	6.0	7.0	6.0	7.0	6.0	7.0	6.0	7.0	9.0	10.0	9.0	10.0	9.0	10.0	9.0	10.0
	5800 MHz	6.0	7.0	6.0	7.0	6.0	7.0	6.0	7.0	9.0	10.0	9.0	10.0	9.0	10.0	9.0	10.0
5 GHz WIFI (40MHz BW)	5200 MHz			6.0	7.0	6.0	7.0	6.0	7.0			9.0	10.0	9.0	10.0	9.0	10.0
	5300 MHz			6.0	7.0	6.0	7.0	6.0	7.0			9.0	10.0	9.0	10.0	9.0	10.0
	5500 MHz			6.0	7.0	6.0	7.0	6.0	7.0			9.0	10.0	9.0	10.0	9.0	10.0
	5800 MHz			6.0	7.0	6.0	7.0	6.0	7.0			9.0	10.0	9.0	10.0	9.0	10.0
5 GHz WIFI (80MHz BW)	5200 MHz					6.0	7.0	6.0	7.0					9.0	10.0	9.0	10.0
	5300 MHz					6.0	7.0	6.0	7.0					9.0	10.0	9.0	10.0
	5500 MHz					6.0	7.0	6.0	7.0					9.0	10.0	9.0	10.0
	5800 MHz					6.0	7.0	6.0	7.0					9.0	10.0	9.0	10.0

1.4.6 2.4 GHz Bluetooth Maximum Output Power

Bluetooth (in dBm)						
	Antenna 1			Antenna 2		
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Max Allowed Power	15.0	16.0	14.0	13.5	16.0	14.0
Nominal Power	14.0	15.0	13.0	12.5	15.0	13.0

Bluetooth LE 2Mbps (in dBm)			
	Antenna 1/2		
Frequency (MHz)	2402	2441	2480
Max Allowed Power	6.5	8.0	6.5
Nominal Power	5.5	7.0	5.5

1.4.7 2.4 GHz Bluetooth Reduced Output Power

The below table is applicable in the following conditions:

- Proximity sensor active

Bluetooth (in dBm)						
	Antenna 1			Antenna 2		
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Max Allowed Power	11.0	12.0	10.0	9.5	12.0	10.0
Nominal Power	10.0	11.0	9.0	8.5	11.0	9.0

The below table is applicable in the following conditions:

- Proximity sensor active during simultaneous conditions with 5G NR mmWave

Bluetooth (in dBm)						
	Antenna 1			Antenna 2		
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Max Allowed Power	6.5	8.0	6.0	5.0	8.0	6.0
Nominal Power	5.5	7.0	5.0	4.0	7.0	5.0

1.5 DUT Antenna Locations

The overall diagonal dimension of the device is > 200 mm. A diagram showing the location of the device antennas can be found in Appendix E

Table 1-1
Device Edges/Sides for SAR Testing

Mode	Back	Top	Bottom	Right	Left
UMTS 850	Yes	Yes	No	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes
LTE Band 71	Yes	Yes	No	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes
LTE Band 13	Yes	Yes	No	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes
LTE Band 7	Yes	Yes	No	Yes	Yes
LTE Band 41	Yes	Yes	No	Yes	Yes
NR Band n71	Yes	Yes	No	Yes	Yes
NR Band n5 (Cell)	Yes	Yes	No	Yes	Yes
NR Band n66 (AWS)	Yes	Yes	No	Yes	Yes
NR Band n25 (PCS)	Yes	Yes	No	Yes	Yes
NR Band n41	Yes	Yes	No	Yes	No
2.4 GHz WLAN Ant 1	Yes	Yes	No	Yes	No
2.4 GHz WLAN Ant 2	Yes	Yes	No	No	Yes
2.4 GHz WLAN MIMO	Yes	Yes	No	Yes	Yes
5 GHz WLAN Ant 1	Yes	Yes	No	Yes	No
5 GHz WLAN Ant 2	Yes	Yes	No	No	Yes
5 GHz WLAN MIMO	Yes	Yes	No	Yes	Yes
Bluetooth Ant 1	Yes	Yes	No	Yes	No
Bluetooth Ant 2	Yes	Yes	No	No	Yes

Note: Per FCC KDB Publication 616217 D04v01r01, particular edges were not required to be evaluated for SAR based on the SAR exclusion threshold in KDB 447498 D01V06. Additional edges may have been evaluated for simultaneous transmission analysis.

1.6 Simultaneous Transmission Capabilities

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

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

Table 1-2
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Body
1	UMTS + 5 GHz WI-FI Ant 1	Yes
2	UMTS + 5 GHz WI-FI Ant 2	Yes
3	UMTS + 2.4 GHz WI-FI Ant 2 + 5 GHz WI-FI Ant 1	Yes
4	UMTS + 2.4 GHz Bluetooth Ant 1 + 5 GHz WI-FI Ant 1	Yes
5	UMTS + 2.4 GHz Bluetooth Ant 2 + 5 GHz WI-FI Ant 1	Yes
6	UMTS + 2.4 GHz WI-FI MIMO	Yes
7	UMTS + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2	Yes
8	UMTS + 2.4 GHz Bluetooth Ant 1	Yes
9	UMTS + 2.4 GHz Bluetooth Ant 2	Yes
10	UMTS + 5 GHz WI-FI MIMO	Yes
11	UMTS + 2.4 GHz Bluetooth Ant 1 + 5 GHz WI-FI MIMO	Yes
12	UMTS + 2.4 GHz Bluetooth Ant 2 + 5 GHz WI-FI MIMO	Yes
13	UMTS + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes
14	UMTS + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2 + 5 GHz WI-FI MIMO	Yes
15	LTE + 5G NR	Yes
16	LTE + 5 GHz WI-FI Ant 1	Yes
17	LTE + 5 GHz WI-FI Ant 2	Yes
18	LTE + 5 GHz WI-FI Ant 1 + 5G NR	Yes
19	LTE + 5 GHz WI-FI Ant 2 + 5G NR	Yes
20	LTE + 2.4 GHz WI-FI Ant 2 + 5 GHz WI-FI Ant 1	Yes
21	LTE + 2.4 GHz WI-FI Ant 2 + 5 GHz WI-FI Ant 1 + 5G NR	Yes
22	LTE + 2.4 GHz Bluetooth Ant 1 + 5 GHz WI-FI Ant 1	Yes
23	LTE + 2.4 GHz Bluetooth Ant 1 + 5 GHz WI-FI Ant 1 + 5G NR	Yes
24	LTE + 2.4 GHz Bluetooth Ant 2 + 5 GHz WI-FI Ant 1	Yes
25	LTE + 2.4 GHz Bluetooth Ant 2 + 5 GHz WI-FI Ant 1 + 5G NR	Yes
26	LTE + 2.4 GHz WI-FI MIMO	Yes
27	LTE + 2.4 GHz WI-FI MIMO + 5G NR	Yes
28	LTE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2	Yes
29	LTE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2 + 5G NR	Yes
30	LTE + 2.4 GHz Bluetooth Ant 1	Yes
31	LTE + 2.4 GHz Bluetooth Ant 1 + 5G NR	Yes
32	LTE + 2.4 GHz Bluetooth Ant 2	Yes
33	LTE + 2.4 GHz Bluetooth Ant 2 + 5G NR	Yes
34	LTE + 5 GHz WI-FI MIMO	Yes
35	LTE + 5 GHz WI-FI MIMO + 5G NR	Yes
36	LTE + 2.4 GHz Bluetooth Ant 1 + 5 GHz WI-FI MIMO	Yes
37	LTE + 2.4 GHz Bluetooth Ant 1 + 5 GHz WI-FI MIMO + 5G NR	Yes
38	LTE + 2.4 GHz Bluetooth Ant 2 + 5 GHz WI-FI MIMO	Yes
39	LTE + 2.4 GHz Bluetooth Ant 2 + 5 GHz WI-FI MIMO + 5G NR	Yes
40	LTE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO	Yes
41	LTE + 2.4 GHz WI-FI MIMO + 5 GHz WI-FI MIMO + 5G NR	Yes
42	LTE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2 + 5 GHz WI-FI MIMO	Yes
43	LTE + 2.4 GHz Bluetooth Ant 1 + 2.4 GHz WI-FI Ant 2 + 5 GHz WI-FI MIMO + 5G NR	Yes

1. 2.4 GHz WLAN Antenna 1 and 2.4 GHz Bluetooth Antenna 1 share the same antenna path and cannot transmit simultaneously.
2. All licensed modes share the same antenna path and cannot transmit simultaneously.
3. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. Each WLAN antenna can transmit independently or together when operating with MIMO.
4. This device supports VOLTE.
5. This device supports Bluetooth Tethering.
6. LTE + 5G NR FR1 Scenarios are limited to LTE Anchor Bands, LTE B12/13/5/66/2.
7. 5G NR FR2 n260 and n261 cannot transmit simultaneously.
8. LTE + 5G NR FR2 n260 and n261 operations are possible only with LTE B12/13/5/66/2 under EN-DC mode.

1.7 Miscellaneous SAR Test Considerations

(A) WIFI/BT

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

This device supports IEEE 802.11ax with the following features:

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

Per 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)

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 Appendix G.

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

This device supports both Power Class 2 (PC2) and Power Class 3 (PC3) for LTE Band 41. Per May 2017 TCB Workshop Notes, SAR tests were performed with Power Class 3 (given the specific UL/DL limitations for Power Class 2). Additionally, SAR testing for the power class condition was evaluated for the highest configuration in Power Class 3 for each test configuration to confirm the results were scalable linearly (See Section 12.2).

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

This device supports 5G NR for Bands n260, and n261. RF Exposure assessment and simultaneous transmission analysis for these bands can be found in the Near Field PD Report (report SN can be found in Section 1.10 – Bibliography).

NR implementation of n71, n5, n66, n2, n25, and n41 is limited to EN-DC operations only, with LTE Band 12/13/5/66/2 acting as the anchor band. Per FCC Guidance, SAR tests were performed separately for NR Bands and LTE Anchor Bands. Please see Section 11 for more details.

1.8 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01, D05v02r04, D05Av01r02 (2G/3G/4G)
- 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 616217 D04v01r02 (Proximity Sensor)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO, LTE Band 41 Power Class 2/3)
- April 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (IEEE 802.11ax, Dynamic Antenna Tuning)

1.9 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 10.

1.10 Bibliography

Report Type	Report Serial Number
Near Field PD Report (Part 1)	1M2004230075-24-R2.A3L
SAR RF Exposure Part 0 Test Report	1M2004230075-27-R1.A3L
RF Exposure Part 2 Test Report	1M2004230075-25-R1.A3L
RF Exposure Compliance Summary Report	1M2004230075-26-R1.A3L
Near Field PD Report (Part 0)	1M2004230075-23-R1.A3L

2 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Tablet				
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 26 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 41 (2498.5 - 2687.5 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 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 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 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
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)
UE Category	DL UE Cat 20, UL UE Cat 18				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (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 16. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 16 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

NR Information					
Form Factor	Portable Tablet				
Frequency Range of each NR transmission band	NR Band n71 (665.5 - 695.5 MHz)				
	NR Band n5 (Cell) (826.5 - 846.5 MHz)				
	NR Band n66 (AWS) (1712.5 - 1777.5 MHz)				
	NR Band n25 (PCS) (1852.5 - 1912.5 MHz)				
	NR Band n2 (PCS) (1852.5 - 1907.5 MHz)				
	NR Band n41 (2506.02 - 2679.99 MHz)				
Channel Bandwidths	NR Band n71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n5 (Cell): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n66 (AWS): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n25 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n2 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	NR Band n41: 20 MHz, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
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 (Cell): 5 MHz	826.5 (165300)		836.5 (167300)	846.5 (169300)	
NR Band n5 (Cell): 10 MHz	829 (165800)		836.5 (167300)	844 (168800)	
NR Band n5 (Cell): 15 MHz	831.5 (166300)		836.5 (167300)	841.5 (168300)	
NR Band n5 (Cell): 20 MHz	834 (166800)		836.5 (167300)	839 (167800)	
NR Band n66 (AWS): 5 MHz	1712.5 (342500)		1745 (349000)	1777.5 (355500)	
NR Band n66 (AWS): 10 MHz	1715 (343000)		1745 (349000)	1775 (355000)	
NR Band n66 (AWS): 15 MHz	1717.5 (343500)		1745 (349000)	1772.5 (354500)	
NR Band n66 (AWS): 20 MHz	1720 (344000)		1745 (349000)	1770 (354000)	
NR Band n25 (PCS): 5 MHz	1852.5 (370500)		1882.5 (376500)	1912.5 (382500)	
NR Band n25 (PCS): 10 MHz	1855 (371000)		1882.5 (376500)	1910 (382000)	
NR Band n25 (PCS): 15 MHz	1857.5 (371500)		1882.5 (376500)	1907.5 (381500)	
NR Band n25 (PCS): 20 MHz	1860 (372000)		1882.5 (376500)	1905 (381000)	
NR Band n2 (PCS): 5 MHz	1852.5 (370500)		1880 (376000)	1907.5 (381500)	
NR Band n2 (PCS): 10 MHz	1855 (371000)		1880 (376000)	1905 (381000)	
NR Band n2 (PCS): 15 MHz	1857.5 (371500)		1880 (376000)	1902.5 (380500)	
NR Band n2 (PCS): 20 MHz	1860 (372000)		1880 (376000)	1900 (380000)	
NR Band n41: 20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)	2636.49 (527298)	2679.99 (535998)
NR Band n41: 40 MHz	2516.01 (503202)	2567.34 (513468)	N/A	2618.67 (523734)	2670 (534000)
NR Band n41: 50 MHz	2521.02 (504204)		2592.99 (518598)	2664.99 (532998)	
NR Band n41: 60 MHz	2526 (505200)		2592.99 (518598)	2659.98 (531996)	
NR Band n41: 80 MHz	2536.02 (507204)		N/A	2649.99 (529998)	
NR Band n41: 90 MHz	2541 (508200)		N/A	2644.98 (528996)	
NR Band n41: 100 MHz	2546.01 (509202)		2592.99 (518598)	2640 (528000)	
SCS for NR Band n71/n5/n66/n25/n2	15 kHz				
SCS for NR Band n41	30 kHz				
Modulations Supported in UL	DFT-s-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM				
NR MPR Permanently implemented per 3GPP TS 38.101	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Anchor Bands for NR Band n71	LTE Band 2/66				
LTE Anchor Bands for NR Band n5 (Cell)	LTE Band 2/66				
LTE Anchor Bands for NR Band n66 (AWS)	LTE Band 5/12/13				
LTE Anchor Bands for NR Band n25 (PCS)	LTE Band 12				
LTE Anchor Bands for NR Band n2 (PCS)	LTE Band 5/12/13				
LTE Anchor Bands for NR Band n41	LTE Band 2/66				

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:

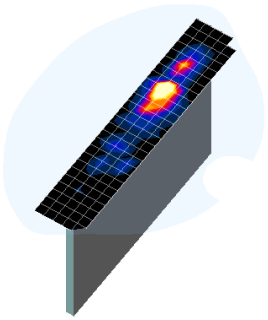


Figure 4-1
Sample SAR Area Scan

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

*Also compliant to IEEE 1528-2013 Table 6

5 TEST CONFIGURATION POSITIONS

5.1 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.

5.2 SAR Testing for Tablet per KDB Publication 616217 D04v01r02

Per FCC KDB Publication 616217 D04v01r02, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Exclusion Threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

5.3 Proximity Sensor Considerations

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

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

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

6 RF EXPOSURE LIMITS

6.1 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.

6.2 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 6-1
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.

7 FCC MEASUREMENT PROCEDURES

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

7.1 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.

7.2 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.

7.3 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.

7.4 SAR Measurement Conditions for UMTS

7.4.1 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.

7.4.2 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.

7.4.3 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.

7.4.4 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.

7.4.5 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.

7.5 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).

7.5.1 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.

7.5.2 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.

7.5.3 A-MPR

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

7.5.4 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.

7.5.5 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.

7.5.6 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.

7.6 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.

7.6.1 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.

7.6.2 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.

7.6.3 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.

7.6.4 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.

7.6.5 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.

7.6.6 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 7.6.5). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

7.6.7 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.

7.6.8 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.

8 RF CONDUCTED POWERS

All conducted power measurements for 2G/3G/4G/5G Sub6 WWAN technologies and bands in this section were performed by setting *Reserve_power_margin* (Qualcomm® Smart Transmit EFS entry) to 0dB, so that the EUT transmits continuously at minimum (P_{limit}, maximum tune up output power P_{max}).

8.1 UMTS Conducted Powers

Table 8-1
Measured P_{Max}

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	23.85	23.97	24.36	24.29	24.32	24.48	23.92	23.77	23.91	-
6	HSDPA	Subtest 1	22.77	22.96	23.28	23.45	23.30	23.02	23.48	23.47	23.22	0
6		Subtest 2	22.77	22.97	23.29	23.48	23.29	23.01	23.50	23.49	23.20	0
6		Subtest 3	22.28	22.48	22.81	23.11	22.79	22.50	23.03	23.00	22.66	0.5
6		Subtest 4	22.29	22.47	22.77	23.11	22.79	22.50	23.02	22.99	22.71	0.5
6	HSUPA	Subtest 1	22.81	22.97	23.30	23.49	23.33	23.00	23.01	23.49	23.21	0
6		Subtest 2	20.80	20.89	21.16	21.56	21.27	21.36	20.83	20.90	21.06	2
6		Subtest 3	21.78	21.87	22.16	22.54	22.28	22.37	21.79	21.88	21.89	1
6		Subtest 4	20.79	20.90	21.18	21.56	21.30	21.37	20.82	20.91	21.03	2
6		Subtest 5	22.83	22.98	23.29	23.48	23.25	23.00	23.47	23.46	23.19	0
8	DC-HSDPA	Subtest 1	22.80	22.95	23.28	23.50	23.26	22.96	23.41	23.39	23.09	0
8		Subtest 2	22.79	22.94	23.30	23.49	23.26	22.97	23.43	23.39	23.10	0
8		Subtest 3	22.30	22.47	22.80	23.11	22.75	22.50	22.88	22.90	22.59	0.5
8		Subtest 4	22.31	22.46	22.77	23.10	22.74	22.44	22.92	22.88	22.60	0.5

Table 8-2
Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active) or DSI = 3 (Back and/or Top Proximity Sensor Active)

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	17.84	17.94	18.32	14.31	14.17	14.40	12.11	12.30	12.43	-
6	HSDPA	Subtest 1	16.78	16.89	17.26	13.60	13.25	12.93	12.08	12.20	12.31	0
6		Subtest 2	16.75	16.95	17.25	13.56	13.22	12.97	12.10	12.21	12.29	0
6		Subtest 3	16.29	16.43	16.77	13.05	12.71	12.43	11.52	11.81	11.85	0.5
6		Subtest 4	16.29	16.42	16.79	13.07	12.71	12.41	11.50	11.81	11.84	0.5
6	HSUPA	Subtest 1	16.81	16.91	17.26	13.51	13.23	13.33	12.10	12.16	12.35	0
6		Subtest 2	14.78	14.85	15.11	11.44	11.19	11.29	10.35	10.48	10.59	2
6		Subtest 3	15.76	15.82	16.11	12.48	12.22	12.30	11.25	11.35	11.39	1
6		Subtest 4	14.75	14.84	15.14	11.50	11.22	11.32	10.40	10.45	10.60	2
6		Subtest 5	16.82	16.94	17.29	13.61	13.28	12.98	12.11	12.20	12.40	0
8	DC-HSDPA	Subtest 1	16.78	16.94	17.23	13.60	13.26	12.96	12.10	12.18	12.29	0
8		Subtest 2	16.79	16.93	17.29	13.58	13.24	12.99	12.10	12.16	12.25	0
8		Subtest 3	16.28	16.43	16.79	13.08	12.75	12.48	11.55	11.60	11.85	0.5
8		Subtest 4	16.27	16.46	16.77	13.09	12.76	12.48	11.49	11.62	11.80	0.5

Table 8-3
Measured P_{Limit} for DSI = 2 (Right Edge Proximity Sensor Active)

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	22.00	21.89	21.92	21.18	21.20	21.35	-
6	HSDPA	Subtest 1	21.03	20.84	21.04	20.16	20.21	20.36	0
6		Subtest 2	21.10	20.90	21.02	20.20	20.29	20.44	0
6		Subtest 3	20.50	20.31	20.37	19.70	19.71	19.93	0.5
6		Subtest 4	20.58	20.34	20.51	19.71	19.72	19.94	0.5
6	HSUPA	Subtest 1	21.10	20.89	21.04	20.22	20.27	20.43	0
6		Subtest 2	19.11	18.92	19.05	18.20	18.27	18.44	2
6		Subtest 3	20.11	19.92	20.05	19.21	19.29	19.42	1
6		Subtest 4	19.13	18.91	19.04	18.22	18.26	18.42	2
6		Subtest 5	21.15	20.92	21.07	20.22	20.28	20.44	0
8	DC-HSDPA	Subtest 1	21.08	20.90	21.00	20.20	20.25	20.40	0
8		Subtest 2	21.10	20.86	21.01	20.19	20.22	20.37	0
8		Subtest 3	20.55	20.34	20.55	19.68	19.70	19.95	0.5
8		Subtest 4	20.55	20.31	20.50	19.70	19.73	19.94	0.5

DC-HSDPA considerations

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

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

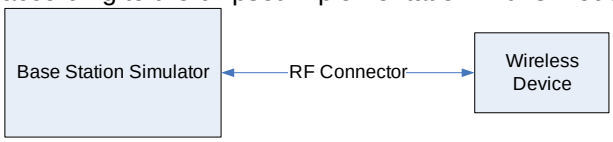


Figure 8-1
Power Measurement Setup

8.2 LTE Conducted Powers

8.2.1 LTE Band 71

Table 8-4
LTE Band 71 Measured P_{Max} - 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	**24.13**	0	0
	1	50	24.00		0
	1	99	23.95		0
	50	0	**23.12**	0-1	1
	50	25	23.08		1
	50	50	23.11		1
	100	0	22.96		1
16QAM	1	0	23.73	0-1	1
	1	50	23.72		1
	1	99	23.49		1
	50	0	22.13	0-2	2
	50	25	22.10		2
	50	50	21.95		2
	100	0	21.94		2
64QAM	1	0	22.26	0-2	2
	1	50	22.28		2
	1	99	21.96		2
	50	0	21.05	0-3	3
	50	25	21.11		3
	50	50	20.98		3
	100	0	20.97		3
256QAM	1	0	18.97	0-5	5
	1	50	19.17		5
	1	99	19.00		5
	50	0	19.03		5
	50	25	19.05		5
	50	50	18.95		5
	100	0	18.97		5

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

Table 8-5
LTE Band 71 Measured P_{Max} - 15 MHz Bandwidth

LTE Band 71 15 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	24.10	0	0
	1	36	24.03		0
	1	74	24.07		0
	36	0	23.16	0-1	1
	36	18	23.20		1
	36	37	23.17		1
	75	0	23.12		1
16QAM	1	0	23.64	0-1	1
	1	36	23.26		1
	1	74	23.37		1
	36	0	22.18	0-2	2
	36	18	22.19		2
	36	37	21.99		2
	75	0	21.96		2
64QAM	1	0	22.42	0-2	2
	1	36	22.21		2
	1	74	22.09		2
	36	0	21.18	0-3	3
	36	18	21.12		3
	36	37	21.01		3
	75	0	21.05		3
256QAM	1	0	19.41	0-5	5
	1	36	19.57		5
	1	74	19.43		5
	36	0	18.95		5
	36	18	19.13		5
	36	37	19.01		5
	75	0	19.17		5

Note: LTE Band 71 at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-6
LTE Band 71 Measured P_{Max} - 10 MHz Bandwidth

LTE Band 71 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 133172 (668.0 MHz)	Mid Channel 133297 (680.5 MHz)	High Channel 133422 (693.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.25	24.09	23.77	0	0
	1	25	24.08	24.08	23.64		0
	1	49	24.02	23.95	23.48		0
	25	0	23.30	23.10	22.77	0-1	1
	25	12	23.24	23.15	22.81		1
	25	25	23.18	22.98	22.68		1
	50	0	23.19	23.01	22.67		1
16QAM	1	0	23.74	23.54	23.10	0-1	1
	1	25	23.51	23.32	22.99		1
	1	49	23.47	23.24	23.01		1
	25	0	22.30	22.06	21.77	0-2	2
	25	12	22.22	21.98	21.74		2
	25	25	22.17	21.90	21.66		2
	50	0	22.13	21.93	21.73		2
64QAM	1	0	21.86	22.26	22.04	0-2	2
	1	25	22.37	22.18	21.84		2
	1	49	22.01	22.04	21.81		2
	25	0	21.23	21.00	20.84	0-3	3
	25	12	21.26	21.03	20.77		3
	25	25	20.85	20.92	20.74		3
	50	0	20.92	20.97	20.68		3
256QAM	1	0	19.13	19.41	19.13	0-5	5
	1	25	19.27	19.56	19.43		5
	1	49	19.03	19.44	19.25		5
	25	0	19.28	19.04	19.09		5
	25	12	19.37	19.17	19.14		5
	25	25	19.28	19.08	19.14		5
	50	0	19.29	19.05	19.01		5

Table 8-7
LTE Band 71 Measured P_{Max} - 5 MHz Bandwidth

LTE Band 71 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 133147 (665.5 MHz)	Mid Channel 133297 (680.5 MHz)	High Channel 133447 (695.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.26	23.84	23.56	0	0
	1	12	24.22	23.96	23.71		0
	1	24	24.17	23.87	23.52		0
	12	0	23.27	22.96	22.65	0-1	1
	12	6	23.29	23.03	22.69		1
	12	13	23.30	22.98	22.69		1
	25	0	23.28	23.00	22.67		1
16QAM	1	0	23.59	23.25	22.94	0-1	1
	1	12	23.54	23.39	22.96		1
	1	24	23.55	23.17	22.87		1
	12	0	22.32	22.08	21.76	0-2	2
	12	6	22.40	22.12	21.82		2
	12	13	22.33	22.05	21.73		2
	25	0	22.29	22.04	21.66		2
64QAM	1	0	22.07	22.14	21.74	0-2	2
	1	12	22.48	22.27	21.86		2
	1	24	22.36	22.09	21.86		2
	12	0	21.20	21.00	20.71	0-3	3
	12	6	21.32	21.07	20.78		3
	12	13	21.31	21.01	20.75		3
	25	0	21.24	21.04	20.66		3
256QAM	1	0	19.70	19.02	19.40	0-5	5
	1	12	19.69	19.15	19.39		5
	1	24	19.67	19.18	19.25		5
	12	0	19.29	19.03	19.19		5
	12	6	19.32	19.14	19.37		5
	12	13	19.33	19.14	19.30		5
	25	0	19.26	19.06	19.02		5

Table 8-8
LTE Band 71 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 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	**14.00**	0	0
	1	50	13.85		0
	1	99	13.65		0
	50	0	**14.03**	0-1	0
	50	25	13.95		0
	50	50	13.87		0
	100	0	13.83		0
16QAM	1	0	14.49	0-1	0
	1	50	14.42		0
	1	99	14.25		0
	50	0	14.08	0-2	0
	50	25	14.00		0
	50	50	13.92		0
	100	0	13.88		0
64QAM	1	0	14.30	0-2	0
	1	50	14.18		0
	1	99	13.93		0
	50	0	14.12	0-3	0
	50	25	13.98		0
	50	50	13.86		0
	100	0	13.84		0
256QAM	1	0	14.01	0-5	0
	1	50	14.02		0
	1	99	14.12		0
	50	0	14.00		0
	50	25	14.11		0
	50	50	14.07		0
	100	0	14.10		0

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

Table 8-9
LTE Band 71 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

LTE Band 71 15 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	14.01	0	0
	1	36	14.06		0
	1	74	14.01		0
	36	0	14.31	0-1	0
	36	18	14.32		0
	36	37	14.22		0
	75	0	14.17		0
16QAM	1	0	14.09	0-1	0
	1	36	14.26		0
	1	74	14.25		0
	36	0	14.25	0-2	0
	36	18	14.26		0
	36	37	14.38		0
	75	0	14.29		0
64QAM	1	0	14.30	0-2	0
	1	36	14.34		0
	1	74	14.47		0
	36	0	14.09	0-3	0
	36	18	14.07		0
	36	37	14.18		0
	75	0	14.20		0
256QAM	1	0	14.16	0-5	0
	1	36	14.50		0
	1	74	13.74		0
	36	0	14.03		0
	36	18	14.02		0
	36	37	14.04		0
	75	0	14.02		0

Note: LTE Band 71 at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-10
LTE Band 71 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

LTE Band 71 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 133172 (668.0 MHz)	Mid Channel 133297 (680.5 MHz)	High Channel 133422 (693.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	14.22	14.24	14.08	0	0
	1	25	14.13	14.06	14.18		0
	1	49	14.23	14.00	14.11		0
	25	0	14.20	14.15	14.18	0-1	0
	25	12	14.24	14.15	14.18		0
	25	25	14.18	14.16	14.17		0
	50	0	14.17	14.08	14.18		0
16QAM	1	0	14.31	14.29	14.53	0-1	0
	1	25	14.21	14.17	14.17		0
	1	49	14.43	14.39	14.48		0
	25	0	14.24	14.17	14.26	0-2	0
	25	12	14.27	14.24	14.19		0
	25	25	14.23	14.18	14.01		0
	50	0	14.14	14.14	14.19		0
64QAM	1	0	14.53	14.16	14.61	0-2	0
	1	25	14.20	14.05	14.32		0
	1	49	14.26	14.42	14.18		0
	25	0	14.25	14.12	14.20	0-3	0
	25	12	14.21	14.06	14.16		0
	25	25	14.16	14.12	14.15		0
	50	0	14.16	14.12	14.09		0
256QAM	1	0	14.20	14.53	14.03	0-5	0
	1	25	14.29	14.32	14.20		0
	1	49	14.12	14.15	14.31		0
	25	0	14.18	14.00	14.00		0
	25	12	14.22	14.18	14.05		0
	25	25	14.13	14.05	14.02		0
	50	0	14.22	14.07	14.01		0

Table 8-11
LTE Band 71 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 71 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 133147 (665.5 MHz)	Mid Channel 133297 (680.5 MHz)	High Channel 133447 (695.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	13.92	13.92	14.06	0	0
	1	12	14.16	14.07	14.13		0
	1	24	14.14	14.02	14.23		0
	12	0	14.05	14.13	14.13	0-1	0
	12	6	14.21	14.18	14.23		0
	12	13	14.21	14.17	14.22		0
	25	0	14.09	14.13	14.22		0
16QAM	1	0	14.03	14.43	14.31	0-1	0
	1	12	13.92	14.34	14.36		0
	1	24	14.37	14.21	14.51		0
	12	0	14.12	14.12	14.22	0-2	0
	12	6	14.20	14.20	14.32		0
	12	13	14.14	14.16	14.36		0
	25	0	14.23	14.22	14.22		0
64QAM	1	0	14.28	14.22	14.00	0-2	0
	1	12	14.30	14.23	14.33		0
	1	24	14.29	14.03	14.23		0
	12	0	14.10	14.10	14.21	0-3	0
	12	6	14.17	14.06	14.22		0
	12	13	14.18	14.12	14.10		0
	25	0	14.19	14.13	14.16		0
256QAM	1	0	14.10	14.18	14.05	0-5	0
	1	12	14.06	14.20	14.21		0
	1	24	14.06	14.11	14.21		0
	12	0	14.08	14.22	14.09		0
	12	6	14.15	14.20	14.11		0
	12	13	14.16	14.04	14.20		0
	25	0	14.12	14.12	14.11		0

8.2.2 LTE Band 12

Table 8-12
LTE Band 12 Measured P_{Max} - 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	23.80	0	0
	1	25	23.73		0
	1	49	**23.89**		0
	25	0	22.81	0-1	1
	25	12	**22.95**		1
	25	25	22.84		1
	50	0	22.90		1
16QAM	1	0	23.15	0-1	1
	1	25	23.28		1
	1	49	23.32		1
	25	0	21.90	0-2	2
	25	12	22.00		2
	25	25	21.93		2
	50	0	21.95		2
64QAM	1	0	21.92	0-2	2
	1	25	22.01		2
	1	49	22.02		2
	25	0	20.91	0-3	3
	25	12	21.10		3
	25	25	21.04		3
	50	0	20.98		3
256QAM	1	0	18.55	0-5	5
	1	25	18.81		5
	1	49	18.57		5
	25	0	18.88		5
	25	12	19.04		5
	25	25	18.91		5
	50	0	18.98		5

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

Table 8-13
LTE Band 12 Measured P_{Max} - 5 MHz Bandwidth

LTE Band 12 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23035 (701.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23155 (713.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.58	23.71	23.85	0	0
	1	12	23.66	23.93	24.01		0
	1	24	23.73	23.82	23.97		0
	12	0	22.77	22.86	22.97	0-1	1
	12	6	22.84	22.98	23.01		1
	12	13	22.83	22.97	23.04		1
	25	0	22.85	22.95	22.99		1
16QAM	1	0	22.95	23.15	23.23	0-1	1
	1	12	23.07	23.25	23.35		1
	1	24	23.04	23.27	23.32		1
	12	0	21.78	21.94	22.04	0-2	2
	12	6	21.90	22.02	22.07		2
	12	13	21.86	21.96	22.12		2
	25	0	21.81	21.98	21.96		2
64QAM	1	0	21.89	21.91	22.14	0-2	2
	1	12	21.94	22.16	22.20		2
	1	24	21.89	22.11	22.27		2
	12	0	20.80	20.90	21.05	0-3	3
	12	6	20.88	21.00	21.08		3
	12	13	20.92	20.96	21.09		3
	25	0	20.81	20.95	20.97		3
256QAM	1	0	19.33	18.85	19.15	0-5	5
	1	12	19.30	18.82	18.98		5
	1	24	19.31	18.79	19.06		5
	12	0	18.91	18.76	18.70		5
	12	6	18.91	18.80	18.69		5
	12	13	18.86	18.77	18.70		5
	25	0	18.78	18.74	18.66		5

Table 8-14
LTE Band 12 Measured P_{Max} - 3 MHz Bandwidth

LTE Band 12 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23025 (700.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23165 (714.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.60	23.77	23.94	0	0
	1	7	23.62	23.92	23.88		0
	1	14	23.67	23.86	23.92		0
	8	0	22.68	22.90	23.00	0-1	1
	8	4	22.76	22.99	23.03		1
	8	7	22.73	22.96	23.55		1
	15	0	22.75	22.94	23.04		1
16QAM	1	0	22.98	23.12	23.34	0-1	1
	1	7	23.10	23.24	23.27		1
	1	14	23.01	23.17	23.26		1
	8	0	21.80	21.99	22.08	0-2	2
	8	4	21.87	22.03	22.06		2
	8	7	21.83	22.01	22.17		2
	15	0	21.79	21.97	22.03		2
64QAM	1	0	21.86	21.93	22.11	0-2	2
	1	7	21.92	22.08	22.16		2
	1	14	21.94	22.06	22.21		2
	8	0	20.71	20.95	21.05	0-3	3
	8	4	20.82	21.00	21.07		3
	8	7	20.83	21.02	21.09		3
	15	0	20.81	21.01	21.07		3
256QAM	1	0	18.83	19.12	19.16	0-5	5
	1	7	18.79	19.03	19.03		5
	1	14	18.85	19.11	19.03		5
	8	0	18.91	18.86	18.82		5
	8	4	18.88	18.83	18.89		5
	8	7	18.83	18.79	18.90		5
	15	0	18.83	18.84	18.74		5

Table 8-15
LTE Band 12 Measured P_{Max} - 1.4 MHz Bandwidth

LTE Band 12 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23017 (699.7 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23173 (715.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.50	23.63	23.80	0	0
	1	2	23.58	23.72	23.87		0
	1	5	23.51	23.74	23.86		0
	3	0	23.49	23.62	23.77		0
	3	2	23.56	23.73	23.88		0
	3	3	23.54	23.76	23.85		0
	6	0	22.64	22.88	22.92	0-1	1
16QAM	1	0	22.91	23.09	23.19	0-1	1
	1	2	22.98	23.12	23.23		1
	1	5	22.97	23.13	23.14		1
	3	0	22.68	22.85	23.05		1
	3	2	22.76	23.03	23.11		1
	3	3	22.71	22.96	23.04		1
	6	0	21.72	21.94	21.98	0-2	2
64QAM	1	0	21.70	21.96	22.06	0-2	2
	1	2	21.85	22.01	22.12		2
	1	5	21.77	21.99	22.15		2
	3	0	21.66	21.87	21.99		2
	3	2	21.82	21.97	22.11		2
	3	3	21.74	21.90	22.03		2
	6	0	20.67	20.94	20.96	0-3	3
256QAM	1	0	18.72	19.07	18.63	0-5	5
	1	2	18.79	19.07	18.65		5
	1	5	18.74	19.00	18.59		5
	3	0	18.59	18.62	18.41		5
	3	2	18.63	18.67	18.47		5
	3	3	18.58	18.60	18.42		5
	6	0	18.75	18.66	18.61		5

Table 8-16
LTE Band 12 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 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	15.55	0	0
	1	25	15.62		0
	1	49	**15.70**		0
	25	0	15.74	0-1	0
	25	12	**15.87**		0
	25	25	15.79		0
	50	0	15.67		0
16QAM	1	0	15.76	0-1	0
	1	25	15.81		0
	1	49	15.89		0
	25	0	15.84	0-2	0
	25	12	16.00		0
	25	25	15.97		0
	50	0	15.88		0
64QAM	1	0	15.87	0-2	0
	1	25	16.04		0
	1	49	16.05		0
	25	0	15.80	0-3	0
	25	12	15.99		0
	25	25	15.81		0
	50	0	15.78		0
256QAM	1	0	16.12	0-5	0
	1	25	16.15		0
	1	49	16.17		0
	25	0	15.83		0
	25	12	15.96		0
	25	25	15.80		0
	50	0	15.85		0

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

Table 8-17
LTE Band 12 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 12 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23035 (701.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23155 (713.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	15.58	15.56	15.47	0	0
	1	12	15.58	15.53	15.34		0
	1	24	15.53	15.48	15.43		0
	12	0	15.74	15.70	15.65	0-1	0
	12	6	15.81	15.78	15.68		0
	12	13	15.71	15.70	15.63		0
	25	0	15.78	15.74	15.64		0
16QAM	1	0	16.09	15.99	16.09	0-1	0
	1	12	16.06	15.96	16.00		0
	1	24	16.08	15.95	15.97		0
	12	0	15.76	15.80	15.68	0-2	0
	12	6	15.84	15.84	15.65		0
	12	13	15.73	15.74	15.58		0
	25	0	15.80	15.69	15.60		0
64QAM	1	0	16.00	16.05	16.02	0-2	0
	1	12	15.99	15.94	15.84		0
	1	24	15.98	15.95	16.03		0
	12	0	15.81	15.77	15.57	0-3	0
	12	6	15.85	15.77	15.56		0
	12	13	15.81	15.74	15.49		0
	25	0	15.83	15.70	15.58		0
256QAM	1	0	16.19	16.01	15.72	0-5	0
	1	12	16.13	15.98	15.67		0
	1	24	16.14	15.90	15.63		0
	12	0	15.71	15.87	15.65		0
	12	6	15.82	15.88	15.65		0
	12	13	15.75	15.82	15.59		0
	25	0	15.78	15.72	15.61		0

Table 8-18
LTE Band 12 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 3 MHz Bandwidth

LTE Band 12 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23025 (700.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23165 (714.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	15.64	15.62	15.45	0	0
	1	7	15.70	15.57	15.41		0
	1	14	15.63	15.57	15.47		0
	8	0	15.81	15.71	15.52	0-1	0
	8	4	15.78	15.72	15.59		0
	8	7	15.76	15.66	15.47		0
	15	0	15.78	15.75	15.56		0
16QAM	1	0	16.00	15.85	15.89	0-1	0
	1	7	16.20	16.19	15.71		0
	1	14	16.02	15.75	15.72		0
	8	0	15.89	15.74	15.64	0-2	0
	8	4	15.95	15.71	15.66		0
	8	7	15.88	15.73	15.60		0
	15	0	15.91	15.81	15.45		0
64QAM	1	0	16.10	16.06	16.05	0-2	0
	1	7	16.08	16.03	16.01		0
	1	14	16.07	16.02	16.09		0
	8	0	15.94	15.93	15.53	0-3	0
	8	4	15.89	15.98	15.59		0
	8	7	15.89	15.93	15.57		0
	15	0	15.90	15.72	15.67		0
256QAM	1	0	16.04	15.79	15.72	0-5	0
	1	7	16.00	15.72	15.64		0
	1	14	15.96	15.82	16.20		0
	8	0	16.00	15.83	15.73		0
	8	4	15.99	15.81	15.83		0
	8	7	15.96	15.79	15.82		0
	15	0	15.89	15.73	15.67		0

Table 8-19
LTE Band 12 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 1.4 MHz Bandwidth

LTE Band 12 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23017 (699.7 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23173 (715.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	15.80	15.63	15.38	0	0
	1	2	15.74	15.62	15.49		0
	1	5	15.66	15.60	15.40		0
	3	0	15.77	15.66	15.45		0
	3	2	15.74	15.66	15.49		0
	3	3	15.72	15.68	15.47		0
	6	0	15.74	15.68	15.50	0-1	0
16QAM	1	0	15.96	15.90	15.99	0-1	0
	1	2	16.16	15.93	16.00		0
	1	5	15.98	15.86	15.94		0
	3	0	15.85	15.56	15.64		0
	3	2	15.91	15.60	15.71		0
	3	3	15.84	15.59	15.63		0
	6	0	15.87	15.57	15.44	0-2	0
64QAM	1	0	16.06	15.62	15.81	0-2	0
	1	2	16.04	15.79	15.79		0
	1	5	16.03	16.20	15.70		0
	3	0	15.91	15.96	15.64		0
	3	2	15.75	16.01	15.68		0
	3	3	15.85	15.94	15.67		0
	6	0	15.77	15.95	15.71	0-3	0
256QAM	1	0	16.00	16.04	15.61	0-5	0
	1	2	15.58	16.03	15.67		0
	1	5	15.54	16.01	15.60		0
	3	0	15.65	15.62	15.44		0
	3	2	15.77	15.65	15.49		0
	3	3	15.76	15.64	15.43		0
	6	0	15.55	15.69	15.65		0

8.2.3 LTE Band 13

Table 8-20
LTE Band 13 Measured P_{Max} - 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	23.55	0	0
	1	25	23.55		0
	1	49	**23.74**		0
	25	0	22.80	0-1	1
	25	12	**22.85**		1
	25	25	22.80		1
	50	0	22.70		1
16QAM	1	0	22.76	0-1	1
	1	25	22.75		1
	1	49	22.89		1
	25	0	21.89	0-2	2
	25	12	21.90		2
	25	25	21.82		2
	50	0	21.79		2
64QAM	1	0	22.00	0-2	2
	1	25	21.99		2
	1	49	22.04		2
	25	0	20.85	0-3	3
	25	12	20.90		3
	25	25	20.85		3
	50	0	20.77		3
256QAM	1	0	18.44	0-5	5
	1	25	18.66		5
	1	49	18.56		5
	25	0	18.87		5
	25	12	18.89		5
	25	25	18.80		5
	50	0	18.79		5

Table 8-21
LTE Band 13 Measured P_{Max} - 5 MHz Bandwidth

LTE Band 13 5 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	23.59	0	0
	1	12	23.61		0
	1	24	23.67		0
	12	0	22.68	0-1	1
	12	6	22.79		1
	12	13	22.77		1
	25	0	22.74		1
16QAM	1	0	22.98	0-1	1
	1	12	22.99		1
	1	24	23.04		1
	12	0	21.77	0-2	2
	12	6	21.85		2
	12	13	21.89		2
	25	0	21.78		2
64QAM	1	0	21.98	0-2	2
	1	12	21.96		2
	1	24	22.04		2
	12	0	20.72	0-3	3
	12	6	20.86		3
	12	13	20.83		3
	25	0	20.78		3
256QAM	1	0	18.51	0-5	5
	1	12	18.65		5
	1	24	18.49		5
	12	0	18.75		5
	12	6	18.77		5
	12	13	18.79		5
	25	0	18.65		5

LTE Band 13 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-22
LTE Band 13 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 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	15.50	0	0
	1	25	15.42		0
	1	49	**15.58**		0
	25	0	15.54	0-1	0
	25	12	**15.65**		0
	25	25	15.63		0
	50	0	15.55		0
16QAM	1	0	15.99	0-1	0
	1	25	15.93		0
	1	49	16.01		0
	25	0	15.62	0-2	0
	25	12	15.71		0
	25	25	15.70		0
	50	0	15.64		0
64QAM	1	0	15.60	0-2	0
	1	25	15.70		0
	1	49	15.67		0
	25	0	15.65	0-3	0
	25	12	15.72		0
	25	25	15.81		0
	50	0	15.57		0
256QAM	1	0	15.49	0-5	0
	1	25	15.58		0
	1	49	15.57		0
	25	0	15.71		0
	25	12	15.83		0
	25	25	15.90		0
	50	0	15.86		0

Table 8-23
LTE Band 13 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 13 5 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	15.48	0	0
	1	12	15.38		0
	1	24	15.37		0
	12	0	15.56	0-1	0
	12	6	15.40		0
	12	13	15.34		0
	25	0	15.31		0
16QAM	1	0	15.88	0-1	0
	1	12	15.90		0
	1	24	16.02		0
	12	0	15.87	0-2	0
	12	6	15.75		0
	12	13	15.59		0
	25	0	15.65		0
64QAM	1	0	15.64	0-2	0
	1	12	15.71		0
	1	24	15.69		0
	12	0	15.59	0-3	0
	12	6	15.82		0
	12	13	15.85		0
	25	0	15.77		0
256QAM	1	0	15.66	0-5	0
	1	12	15.71		0
	1	24	15.62		0
	12	0	15.69		0
	12	6	15.69		0
	12	13	15.70		0
	25	0	15.55		0

LTE Band 13 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

8.2.4 LTE Band 26

Table 8-24
LTE Band 26 (Cell) Measured P_{Max} - 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	24.11	0	0
	1	36	23.97		0
	1	74	**24.21**		0
	36	0	23.06	0-1	1
	36	18	23.09		1
	36	37	**23.12**		1
	75	0	23.04		1
16QAM	1	0	23.19	0-1	1
	1	36	23.08		1
	1	74	23.22		1
	36	0	22.08	0-2	2
	36	18	22.18		2
	36	37	22.12		2
	75	0	22.05		2
64QAM	1	0	22.51	0-2	2
	1	36	22.20		2
	1	74	21.80		2
	36	0	21.13	0-3	3
	36	18	21.16		3
	36	37	20.89		3
	75	0	21.00		3
256QAM	1	0	19.53	0-5	5
	1	36	19.54		5
	1	74	19.68		5
	36	0	19.11		5
	36	18	19.18		5
	36	37	19.20		5
	75	0	19.10		5

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

Table 8-25
LTE Band 26 (Cell) Measured P_{Max} - 10 MHz Bandwidth

LTE Band 26 (Cell) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26740 (819.0 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 26990 (844.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.89	24.00	24.17	0	0
	1	25	23.82	23.87	24.11		0
	1	49	23.84	23.87	24.38		0
	25	0	22.76	22.84	23.04	0-1	1
	25	12	22.96	22.99	23.34		1
	25	25	22.87	22.94	23.26		1
	50	0	22.87	22.86	23.22		1
16QAM	1	0	23.33	23.12	23.75	0-1	1
	1	25	23.24	23.25	23.52		1
	1	49	23.19	23.45	23.51		1
	25	0	21.77	21.86	22.13	0-2	2
	25	12	21.96	22.00	22.28		2
	25	25	21.91	21.96	22.37		2
	50	0	21.95	21.90	22.22		2
64QAM	1	0	22.07	22.13	22.21	0-2	2
	1	25	21.96	22.07	22.42		2
	1	49	22.05	22.15	22.42		2
	25	0	20.76	20.84	21.06	0-3	3
	25	12	21.08	21.10	21.36		3
	25	25	20.95	20.99	21.18		3
	50	0	20.91	20.92	21.22		3
256QAM	1	0	18.77	19.13	19.02	0-5	5
	1	25	19.06	19.05	19.42		5
	1	49	18.71	18.94	19.19		5
	25	0	18.61	18.88	19.36		5
	25	12	18.97	18.99	19.22		5
	25	25	18.93	18.93	19.35		5
	50	0	18.88	18.84	19.25		5

Table 8-26
LTE Band 26 (Cell) Measured P_{Max} - 5 MHz Bandwidth

LTE Band 26 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26715 (816.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27015 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.79	23.85	24.21	0	0
	1	12	23.86	23.87	24.33		0
	1	24	24.00	23.97	24.36		0
	12	0	22.80	22.93	23.35	0-1	1
	12	6	23.02	23.06	23.38		1
	12	13	22.95	22.98	23.34		1
	25	0	23.77	22.95	23.27		1
16QAM	1	0	23.07	23.04	23.53	0-1	1
	1	12	23.07	23.15	23.33		1
	1	24	22.95	23.30	23.60		1
	12	0	22.04	21.95	22.45	0-2	2
	12	6	21.94	22.06	22.49		2
	12	13	22.06	22.06	22.43		2
	25	0	21.94	22.03	22.41		2
64QAM	1	0	22.28	22.14	22.51	0-2	2
	1	12	22.09	22.36	22.61		2
	1	24	21.79	22.25	22.10		2
	12	0	21.00	20.95	21.39	0-3	3
	12	6	21.05	21.09	21.47		3
	12	13	20.84	21.06	21.45		3
	25	0	20.99	20.97	21.34		3
256QAM	1	0	18.89	18.90	19.42	0-5	5
	1	12	18.98	19.11	19.54		5
	1	24	19.21	19.16	19.42		5
	12	0	18.89	19.00	19.47		5
	12	6	19.05	18.91	19.41		5
	12	13	18.97	18.97	19.44		5
	25	0	18.95	19.00	19.37		5

Table 8-27
LTE Band 26 (Cell) Measured P_{Max} - 3 MHz Bandwidth

LTE Band 26 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26705 (815.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27025 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.91	23.86	24.33	0	0
	1	7	23.87	23.84	24.15		0
	1	14	23.82	23.95	24.26		0
	8	0	22.85	22.96	23.34	0-1	1
	8	4	22.98	23.05	23.36		1
	8	7	22.98	23.00	23.33		1
	15	0	22.94	23.02	23.35		1
16QAM	1	0	23.02	23.59	23.98	0-1	1
	1	7	23.21	23.14	23.68		1
	1	14	23.32	23.32	23.62		1
	8	0	22.02	22.01	22.41	0-2	2
	8	4	22.08	22.20	22.43		2
	8	7	22.09	22.07	22.54		2
	15	0	21.98	22.05	22.41		2
64QAM	1	0	22.17	21.85	22.63	0-2	2
	1	7	21.72	22.12	22.56		2
	1	14	22.08	22.24	22.51		2
	8	0	21.08	20.96	21.40	0-3	3
	8	4	21.04	21.19	21.39		3
	8	7	20.95	21.05	21.43		3
	15	0	21.00	21.09	21.42		3
256QAM	1	0	19.17	18.93	19.46	0-5	5
	1	7	18.80	19.16	19.53		5
	1	14	19.00	19.14	19.29		5
	8	0	18.98	18.98	19.48		5
	8	4	19.10	19.07	19.35		5
	8	7	19.03	19.14	19.42		5
	15	0	19.04	18.94	19.44		5

Table 8-28
LTE Band 26 (Cell) Measured P_{Max} - 1.4 MHz Bandwidth

LTE Band 26 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26697 (814.7 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27033 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.70	23.73	24.15	0	0
	1	2	23.78	23.80	24.23		0
	1	5	23.77	23.79	24.16		0
	3	0	23.76	23.78	24.19		0
	3	2	23.81	23.88	24.24		0
	3	3	23.79	23.85	24.12		0
	6	0	22.89	22.88	23.20	0-1	1
16QAM	1	0	22.98	23.00	23.53	0-1	1
	1	2	23.27	23.35	23.61		1
	1	5	23.32	23.20	23.57		1
	3	0	23.15	22.94	23.37		1
	3	2	23.01	23.06	23.40		1
	3	3	23.03	23.02	23.38		1
	6	0	21.94	21.98	22.40	0-2	2
64QAM	1	0	22.01	22.02	22.45	0-2	2
	1	2	22.10	22.20	22.50		2
	1	5	22.35	22.09	22.38		2
	3	0	22.04	21.96	22.42		2
	3	2	22.09	22.05	22.44		2
	3	3	21.96	21.92	22.26		2
	6	0	20.94	20.99	21.31	0-3	3
256QAM	1	0	18.98	18.94	19.45	0-5	5
	1	2	19.11	19.10	19.47		5
	1	5	19.02	19.02	19.33		5
	3	0	19.24	18.96	19.42		5
	3	2	19.26	19.09	19.45		5
	3	3	19.03	19.00	19.50		5
	6	0	18.90	18.97	19.36		5

Table 8-29
LTE Band 26 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 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	16.08	0	0
	1	36	15.95		0
	1	74	**16.14**		0
	36	0	16.07	0-1	0
	36	18	16.10		0
	36	37	**16.12**		0
	75	0	16.04		0
16QAM	1	0	16.09	0-1	0
	1	36	15.96		0
	1	74	16.22		0
	36	0	15.97	0-2	0
	36	18	16.12		0
	36	37	16.07		0
	75	0	15.99		0
64QAM	1	0	16.39	0-2	0
	1	36	16.32		0
	1	74	16.52		0
	36	0	16.05	0-3	0
	36	18	16.15		0
	36	37	16.18		0
	75	0	16.03		0
256QAM	1	0	16.03	0-5	0
	1	36	16.61		0
	1	74	16.52		0
	36	0	16.14		0
	36	18	16.16		0
	36	37	16.26		0
	75	0	16.14		0

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

Table 8-30
LTE Band 26 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

LTE Band 26 (Cell) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26740 (819.0 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 26990 (844.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.22	16.18	16.28	0	0
	1	25	16.12	16.17	16.32		0
	1	49	16.10	16.18	16.15		0
	25	0	16.18	16.03	16.23	0-1	0
	25	12	16.33	16.11	16.41		0
	25	25	16.21	16.15	16.40		0
	50	0	16.22	16.13	16.38		0
16QAM	1	0	16.34	16.29	16.30	0-1	0
	1	25	16.37	16.30	16.28		0
	1	49	16.34	16.20	16.41		0
	25	0	16.38	16.10	16.32	0-2	0
	25	12	16.47	16.21	16.39		0
	25	25	16.28	16.24	16.39		0
	50	0	16.17	16.12	16.43		0
64QAM	1	0	16.32	16.12	16.17	0-2	0
	1	25	16.29	16.13	16.43		0
	1	49	16.38	16.20	16.40		0
	25	0	16.12	16.14	16.27	0-3	0
	25	12	16.30	16.20	16.34		0
	25	25	16.08	16.22	16.31		0
	50	0	16.26	16.15	16.23		0
256QAM	1	0	16.42	16.02	16.29	0-5	0
	1	25	16.49	16.01	16.40		0
	1	49	16.20	16.17	16.38		0
	25	0	16.09	16.09	16.23		0
	25	12	16.24	16.19	16.44		0
	25	25	16.30	16.28	16.27		0
	50	0	16.18	16.15	16.30		0

Table 8-31
LTE Band 26 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 26 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26715 (816.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27015 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.13	16.10	16.21	0	0
	1	12	16.28	16.13	16.30		0
	1	24	16.04	16.26	16.29		0
	12	0	16.28	16.12	16.35	0-1	0
	12	6	16.26	16.15	16.47		0
	12	13	16.32	16.25	16.47		0
	25	0	16.26	16.12	16.36		0
16QAM	1	0	16.24	16.23	16.13	0-1	0
	1	12	16.27	16.11	16.25		0
	1	24	16.15	16.18	16.30		0
	12	0	16.33	16.12	16.37	0-2	0
	12	6	16.28	16.19	16.43		0
	12	13	16.35	16.31	16.39		0
	25	0	16.35	16.12	16.36		0
64QAM	1	0	16.02	16.22	16.49	0-2	0
	1	12	16.12	16.33	16.53		0
	1	24	16.18	16.31	16.47		0
	12	0	16.20	16.09	16.53	0-3	0
	12	6	16.27	16.24	16.53		0
	12	13	16.26	16.19	16.44		0
	25	0	16.24	16.17	16.45		0
256QAM	1	0	16.19	16.06	16.40	0-5	0
	1	12	16.16	16.04	16.22		0
	1	24	16.31	16.03	16.40		0
	12	0	16.13	16.18	16.39		0
	12	6	16.31	16.18	16.46		0
	12	13	16.18	16.29	16.46		0
	25	0	16.28	16.11	16.38		0

Table 8-32
LTE Band 26 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 3 MHz Bandwidth

LTE Band 26 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26705 (815.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27025 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.12	16.05	16.38	0	0
	1	7	16.14	16.08	16.39		0
	1	14	16.12	16.18	16.36		0
	8	0	16.24	16.10	16.46	0-1	0
	8	4	16.28	16.19	16.49		0
	8	7	16.32	16.14	16.51		0
	15	0	16.29	16.15	16.45		0
16QAM	1	0	16.28	16.25	16.24	0-1	0
	1	7	16.14	16.04	16.14		0
	1	14	16.10	16.23	16.22		0
	8	0	16.28	16.17	16.49	0-2	0
	8	4	16.39	16.11	16.41		0
	8	7	16.33	16.15	16.47		0
	15	0	16.29	16.20	16.44		0
64QAM	1	0	16.25	16.10	16.46	0-2	0
	1	7	16.33	16.17	16.39		0
	1	14	16.40	16.14	16.26		0
	8	0	16.34	16.23	16.45	0-3	0
	8	4	16.41	16.19	16.57		0
	8	7	16.35	16.22	16.46		0
	15	0	16.27	16.13	16.40		0
256QAM	1	0	16.25	16.33	16.25	0-5	0
	1	7	16.10	16.08	16.30		0
	1	14	16.21	16.15	16.25		0
	8	0	16.28	16.19	16.42		0
	8	4	16.13	16.24	16.53		0
	8	7	16.39	16.12	16.46		0
	15	0	16.18	16.13	16.56		0

Table 8-33
LTE Band 26 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 1.4 MHz Bandwidth

LTE Band 26 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26697 (814.7 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27033 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.05	16.01	16.20	0	0
	1	2	16.14	16.11	16.22		0
	1	5	16.05	16.00	16.22		0
	3	0	16.08	16.03	16.18		0
	3	2	16.25	16.06	16.19		0
	3	3	16.22	16.06	16.15		0
	6	0	16.29	16.08	16.02	0-1	0
16QAM	1	0	16.15	16.22	16.05	0-1	0
	1	2	16.16	16.18	16.11		0
	1	5	16.27	16.06	16.12		0
	3	0	16.29	16.03	16.21		0
	3	2	16.28	16.27	16.33		0
	3	3	16.19	16.29	16.28		0
	6	0	16.12	16.18	16.25	0-2	0
64QAM	1	0	16.15	16.21	16.30	0-2	0
	1	2	16.21	16.18	16.35		0
	1	5	16.18	16.11	16.44		0
	3	0	16.15	16.19	16.28		0
	3	2	16.22	16.28	16.22		0
	3	3	16.27	16.24	16.26		0
	6	0	16.20	16.19	16.11	0-3	0
256QAM	1	0	16.15	16.18	16.15	0-5	0
	1	2	16.12	16.14	16.25		0
	1	5	16.13	16.16	16.21		0
	3	0	16.13	16.23	16.20		0
	3	2	16.22	16.07	16.20		0
	3	3	16.18	16.26	16.19		0
	6	0	16.19	16.13	16.17		0

8.2.5 LTE Band 5

Table 8-34
LTE Band 5 (Cell) Measured P_{Max} - 10 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	24.16		0
	1	49	**24.34**		0
	25	0	23.24	0-1	1
	25	12	23.38		1
	25	25	**23.40**		1
	50	0	23.32		1
16QAM	1	0	23.59	0-1	1
	1	25	23.66		1
	1	49	23.71		1
	25	0	22.31	0-2	2
	25	12	22.36		2
	25	25	22.39		2
	50	0	22.32		2
64QAM	1	0	22.46	0-2	2
	1	25	22.53		2
	1	49	22.55		2
	25	0	21.32	0-3	3
	25	12	21.38		3
	25	25	21.46		3
	50	0	21.35		3
256QAM	1	0	19.07	0-5	5
	1	25	19.39		5
	1	49	19.45		5
	25	0	19.23		5
	25	12	19.35		5
	25	25	19.33		5
	50	0	19.29		5

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

Table 8-35
LTE Band 5 (Cell) Measured P_{Max} - 5 MHz Bandwidth

LTE Band 5 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20425 (826.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20625 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.97	23.99	24.37	0	0
	1	12	24.13	24.18	24.62		0
	1	24	24.06	24.22	24.53		0
	12	0	23.04	23.18	23.59	0-1	1
	12	6	23.21	23.24	23.73		1
	12	13	23.15	23.33	23.66		1
	25	0	23.14	23.26	23.62		1
16QAM	1	0	23.31	23.31	23.75	0-1	1
	1	12	23.39	23.56	23.96		1
	1	24	23.45	23.58	23.95		1
	12	0	22.17	22.24	22.63	0-2	2
	12	6	22.22	22.33	22.71		2
	12	13	22.15	22.38	22.78		2
	25	0	22.10	22.27	22.62		2
64QAM	1	0	22.22	22.26	22.76	0-2	2
	1	12	22.36	22.43	22.84		2
	1	24	22.28	22.44	22.74		2
	12	0	21.17	21.25	21.62	0-3	3
	12	6	21.23	21.31	21.68		3
	12	13	21.21	21.38	21.73		3
	25	0	21.18	21.33	21.62		3
256QAM	1	0	19.17	19.21	19.58	0-5	5
	1	12	19.32	19.38	19.84		5
	1	24	19.25	19.45	19.85		5
	12	0	19.11	19.14	19.54		5
	12	6	19.18	19.25	19.63		5
	12	13	19.16	19.37	19.72		5
	25	0	19.16	19.29	19.59		5

Table 8-36
LTE Band 5 (Cell) Measured P_{Max} - 3 MHz Bandwidth

LTE Band 5 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20415 (825.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20635 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.93	24.02	24.18	0	0
	1	7	24.01	24.26	24.12		0
	1	14	24.29	24.22	24.29		0
	8	0	23.08	23.23	23.32	0-1	1
	8	4	23.14	23.32	23.34		1
	8	7	23.13	23.29	23.42		1
	15	0	23.12	23.18	22.99		1
16QAM	1	0	23.34	23.41	23.59	0-1	1
	1	7	23.47	23.46	23.54		1
	1	14	23.42	23.54	23.54		1
	8	0	22.18	22.26	22.41	0-2	2
	8	4	22.28	22.38	22.55		2
	8	7	22.22	22.37	22.48		2
	15	0	22.16	22.29	22.41		2
64QAM	1	0	22.21	22.31	22.48	0-2	2
	1	7	22.28	22.41	22.56		2
	1	14	22.31	22.48	22.58		2
	8	0	21.13	21.23	21.36	0-3	3
	8	4	21.23	21.36	21.44		3
	8	7	21.20	21.34	21.40		3
	15	0	21.17	21.27	21.42		3
256QAM	1	0	19.17	19.18	19.45	0-5	5
	1	7	19.24	19.39	19.40		5
	1	14	19.30	19.37	19.64		5
	8	0	19.12	19.27	19.39		5
	8	4	19.29	19.30	19.55		5
	8	7	19.21	19.35	19.44		5
	15	0	19.15	19.25	19.39		5

Table 8-37
LTE Band 5 (Cell) Measured P_{Max} - 1.4 MHz Bandwidth

LTE Band 5 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20407 (824.7 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20643 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.63	23.73	24.22	0	0
	1	2	23.80	24.04	24.31		0
	1	5	23.68	23.84	24.22		0
	3	0	23.76	23.82	24.16		0
	3	2	23.75	23.89	24.25		0
	3	3	23.71	23.85	24.26		0
	6	0	22.85	22.90	23.23	0-1	1
16QAM	1	0	22.97	23.14	23.54	0-1	1
	1	2	23.10	23.23	23.36		1
	1	5	23.06	23.33	23.60		1
	3	0	23.03	23.02	23.36		1
	3	2	22.95	23.14	23.37		1
	3	3	22.95	23.11	23.41		1
	6	0	22.04	21.97	22.35	0-2	2
64QAM	1	0	21.92	22.04	22.42	0-2	2
	1	2	22.07	22.16	22.58		2
	1	5	21.90	22.02	22.53		2
	3	0	21.96	22.04	22.39		2
	3	2	21.94	22.14	22.28		2
	3	3	21.99	22.10	22.50		2
	6	0	20.89	21.08	21.33	0-3	3
256QAM	1	0	18.86	19.02	19.41	0-5	5
	1	2	19.02	19.04	19.56		5
	1	5	18.95	19.00	19.46		5
	3	0	18.91	18.99	19.40		5
	3	2	18.99	19.07	19.55		5
	3	3	18.75	19.12	19.49		5
	6	0	18.81	18.96	19.31		5

Table 8-38
LTE Band 5 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 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	16.10	0	0
	1	25	16.12		0
	1	49	**16.37**		0
	25	0	16.21	0-1	0
	25	12	16.23		0
	25	25	**16.36**		0
	50	0	16.22		0
16QAM	1	0	16.62	0-1	0
	1	25	16.61		0
	1	49	16.81		0
	25	0	16.23	0-2	0
	25	12	16.32		0
	25	25	16.41		0
	50	0	16.30		0
64QAM	1	0	16.27	0-2	0
	1	25	16.47		0
	1	49	16.51		0
	25	0	16.29	0-3	0
	25	12	16.34		0
	25	25	16.50		0
	50	0	16.27		0
256QAM	1	0	16.08	0-5	0
	1	25	16.08		0
	1	49	16.21		0
	25	0	16.08		0
	25	12	16.22		0
	25	25	16.21		0
	50	0	16.14		0

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

Table 8-39
LTE Band 5 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 5 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20425 (826.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20625 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.05	16.11	16.19	0	0
	1	12	16.05	16.15	16.32		0
	1	24	16.08	16.05	16.34		0
	12	0	16.11	16.08	16.43	0-1	0
	12	6	16.12	16.00	16.49		0
	12	13	16.22	16.14	16.62		0
	25	0	16.20	16.14	16.48		0
16QAM	1	0	16.02	16.22	16.28	0-1	0
	1	12	16.03	16.18	16.10		0
	1	24	16.07	16.28	16.38		0
	12	0	16.11	16.32	16.44	0-2	0
	12	6	16.27	16.22	16.40		0
	12	13	16.30	16.22	16.53		0
	25	0	16.15	16.20	16.51		0
64QAM	1	0	16.01	16.08	16.23	0-2	0
	1	12	16.03	16.11	16.44		0
	1	24	16.03	16.14	16.48		0
	12	0	16.04	16.15	16.24	0-3	0
	12	6	16.11	16.14	16.37		0
	12	13	16.07	16.10	16.48		0
	25	0	16.22	16.08	16.46		0
256QAM	1	0	16.22	16.15	16.21	0-5	0
	1	12	16.11	16.18	16.26		0
	1	24	16.15	16.22	16.44		0
	12	0	16.18	16.27	16.45		0
	12	6	16.20	16.27	16.33		0
	12	13	16.04	16.01	16.50		0
	25	0	16.04	16.02	16.48		0

Table 8-40
LTE Band 5 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 3 MHz Bandwidth

LTE Band 5 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20415 (825.5 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20635 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.15	16.21	16.32	0	0
	1	7	16.11	16.18	16.35		0
	1	14	16.28	16.26	16.43		0
	8	0	16.33	16.33	16.44	0-1	0
	8	4	16.24	16.25	16.57		0
	8	7	16.23	16.27	16.61		0
	15	0	16.30	16.28	16.51		0
16QAM	1	0	16.21	16.19	16.46	0-1	0
	1	7	16.18	16.15	16.40		0
	1	14	16.18	16.14	16.51		0
	8	0	16.20	16.21	16.61	0-2	0
	8	4	16.21	16.25	16.62		0
	8	7	16.35	16.33	16.67		0
	15	0	16.44	16.47	16.52		0
64QAM	1	0	16.22	16.31	16.60	0-2	0
	1	7	16.26	16.39	16.22		0
	1	14	16.25	16.27	16.59		0
	8	0	16.31	16.28	16.55	0-3	0
	8	4	16.15	16.21	16.54		0
	8	7	16.14	16.18	16.63		0
	15	0	16.09	16.16	16.43		0
256QAM	1	0	16.07	16.16	16.44	0-5	0
	1	7	16.20	16.18	16.16		0
	1	14	16.21	16.25	16.42		0
	8	0	16.23	16.30	16.53		0
	8	4	16.27	16.37	16.44		0
	8	7	16.36	16.25	16.49		0
	15	0	16.34	16.25	16.52		0

Table 8-41
LTE Band 5 (Cell) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 1.4 MHz Bandwidth

LTE Band 5 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20407 (824.7 MHz)	Mid Channel 20525 (836.5 MHz)	High Channel 20643 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.22	16.18	16.27	0	0
	1	2	16.38	16.15	16.30		0
	1	5	16.35	16.23	16.38		0
	3	0	16.40	16.30	16.39		0
	3	2	16.31	16.22	16.52		0
	3	3	16.30	16.24	16.56		0
	6	0	16.37	16.25	16.46	0-1	0
16QAM	1	0	16.40	16.16	16.41	0-1	0
	1	2	16.31	16.12	16.35		0
	1	5	16.37	16.11	16.46		0
	3	0	16.28	16.18	16.56		0
	3	2	16.30	16.22	16.57		0
	3	3	16.42	16.30	16.62		0
	6	0	16.51	16.44	16.47	0-2	0
64QAM	1	0	16.29	16.28	16.55	0-2	0
	1	2	16.33	16.36	16.17		0
	1	5	16.32	16.24	16.54		0
	3	0	16.38	16.25	16.50		0
	3	2	16.22	16.18	16.49		0
	3	3	16.21	16.15	16.58		0
	6	0	16.16	16.13	16.38	0-3	0
256QAM	1	0	16.14	16.13	16.39	0-5	0
	1	2	16.27	16.15	16.11		0
	1	5	16.28	16.22	16.37		0
	3	0	16.30	16.27	16.48		0
	3	2	16.34	16.34	16.39		0
	3	3	16.43	16.22	16.44		0
	6	0	16.41	16.22	16.47		0

8.2.6 LTE Band 66

Table 8-42
LTE Band 66 (AWS) Measured P_{Max} - 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	24.15	24.25	24.20	0	0
	1	50	24.37	**24.50**	24.13		0
	1	99	24.17	24.17	24.02		0
	50	0	23.64	23.73	23.49	0-1	1
	50	25	23.70	**23.74**	23.52		1
	50	50	23.64	23.61	23.25		1
	100	0	23.69	23.70	23.40		1
16QAM	1	0	24.00	23.85	23.72	0-1	1
	1	50	23.98	24.00	23.99		1
	1	99	23.85	23.99	23.78		1
	50	0	22.64	22.76	22.47	0-2	2
	50	25	22.78	22.81	22.52		2
	50	50	22.65	22.66	22.31		2
	100	0	22.70	22.68	22.45		2
64QAM	1	0	22.53	22.15	22.11	0-2	2
	1	50	22.74	22.90	22.88		2
	1	99	22.19	22.51	22.83		2
	50	0	21.21	21.25	21.10	0-3	3
	50	25	21.19	21.55	21.05		3
	50	50	21.02	21.54	21.26		3
	100	0	21.04	21.32	21.00		3
256QAM	1	0	19.51	19.62	19.43	0-5	5
	1	50	19.87	19.90	19.56		5
	1	99	19.64	19.50	19.21		5
	50	0	19.67	19.78	19.58		5
	50	25	19.83	19.80	19.61		5
	50	50	19.74	19.67	19.35		5
	100	0	19.73	19.70	19.40		5

Table 8-43
LTE Band 66 (AWS) Measured P_{Max} - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.03	23.68	23.30	0	0
	1	36	24.13	23.70	23.24		0
	1	74	23.97	23.52	23.10		0
	36	0	23.30	22.93	22.44	0-1	1
	36	18	23.30	22.83	22.43		1
	36	37	23.14	22.71	22.18		1
	75	0	23.19	22.77	22.43		1
16QAM	1	0	23.37	23.00	22.57	0-1	1
	1	36	23.48	22.98	22.52		1
	1	74	23.34	22.90	22.65		1
	36	0	22.23	21.99	21.48	0-2	2
	36	18	22.28	21.80	21.38		2
	36	37	22.15	21.75	21.25		2
	75	0	22.28	21.78	21.40		2
64QAM	1	0	21.94	22.01	21.21	0-2	2
	1	36	22.01	22.02	21.48		2
	1	74	21.87	21.88	21.33		2
	36	0	21.10	20.97	20.50	0-3	3
	36	18	21.20	20.77	20.42		3
	36	37	21.08	20.72	20.30		3
	75	0	21.04	20.74	20.32		3
256QAM	1	0	19.37	19.01	18.28	0-5	5
	1	36	19.29	18.91	18.37		5
	1	74	19.13	18.68	18.05		5
	36	0	19.31	18.89	18.35		5
	36	18	19.32	18.84	18.42		5
	36	37	19.15	18.69	18.22		5
	75	0	19.21	18.79	18.36		5

Table 8-44
LTE Band 66 (AWS) Measured P_{Max} - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.31	24.27	23.69	0	0
	1	25	24.50	24.39	23.83		0
	1	49	24.42	24.16	23.61		0
	25	0	23.43	23.59	23.04	0-1	1
	25	12	23.45	23.66	23.10		1
	25	25	23.48	23.39	22.84		1
	50	0	23.59	23.36	23.00		1
16QAM	1	0	23.37	22.93	22.14	0-1	1
	1	25	23.35	22.96	22.76		1
	1	49	23.19	22.90	22.51		1
	25	0	22.28	21.75	21.30	0-2	2
	25	12	22.29	21.85	21.43		2
	25	25	22.06	21.67	21.10		2
	50	0	22.21	21.75	21.31		2
64QAM	1	0	21.66	21.76	21.12	0-2	2
	1	25	22.28	21.92	21.30		2
	1	49	21.63	21.66	21.12		2
	25	0	20.89	20.84	20.26	0-3	3
	25	12	21.10	20.86	20.41		3
	25	25	21.08	20.71	20.18		3
	50	0	21.02	20.71	20.30		3
256QAM	1	0	19.21	18.68	18.33	0-5	5
	1	25	19.39	18.70	18.28		5
	1	49	19.08	18.67	18.34		5
	25	0	19.27	18.75	18.26		5
	25	12	19.33	18.84	18.33		5
	25	25	19.13	18.71	18.17		5
	50	0	19.30	18.71	18.27		5

Table 8-45
LTE Band 66 (AWS) Measured P_{Max} - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.33	23.79	23.23	0	0
	1	12	24.26	23.85	23.25		0
	1	24	24.13	23.61	23.08		0
	12	0	23.35	22.92	22.38	0-1	1
	12	6	23.32	22.84	22.37		1
	12	13	23.28	22.75	22.20		1
	25	0	23.28	22.78	22.36		1
16QAM	1	0	23.64	23.25	22.51	0-1	1
	1	12	23.60	23.09	22.50		1
	1	24	23.36	22.88	22.35		1
	12	0	22.40	21.95	21.42	0-2	2
	12	6	22.39	21.91	21.41		2
	12	13	22.25	21.80	21.25		2
	25	0	22.30	21.80	21.33		2
64QAM	1	0	22.00	22.22	21.44	0-2	2
	1	12	22.08	21.98	21.33		2
	1	24	22.26	21.86	21.41		2
	12	0	21.01	20.90	20.40	0-3	3
	12	6	21.02	20.86	20.39		3
	12	13	21.03	20.78	20.26		3
	25	0	21.00	20.77	20.36		3
256QAM	1	0	19.51	18.97	18.29	0-5	5
	1	12	19.54	18.92	18.45		5
	1	24	19.90	18.82	18.13		5
	12	0	19.41	18.90	18.44		5
	12	6	19.40	18.82	18.38		5
	12	13	19.31	18.76	18.18		5
	25	0	19.30	18.78	18.28		5

Table 8-46
LTE Band 66 (AWS) Measured P_{Max} - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.32	23.83	23.32	0	0
	1	7	24.37	23.92	23.28		0
	1	14	24.23	23.60	23.13		0
	8	0	23.40	22.91	22.33	0-1	1
	8	4	23.39	22.84	22.32		1
	8	7	23.35	22.76	22.27		1
	15	0	23.36	22.82	22.30		1
16QAM	1	0	23.76	23.06	22.61	0-1	1
	1	7	23.68	23.01	22.55		1
	1	14	23.64	23.15	22.21		1
	8	0	22.50	22.04	21.56	0-2	2
	8	4	22.49	21.98	21.42		2
	8	7	22.64	21.85	21.41		2
	15	0	22.66	21.86	21.29		2
64QAM	1	0	21.91	22.11	21.45	0-2	2
	1	7	21.89	22.02	21.52		2
	1	14	22.15	21.81	21.41		2
	8	0	20.77	20.91	20.28	0-3	3
	8	4	20.80	20.85	20.36		3
	8	7	21.05	20.77	20.43		3
	15	0	20.88	20.85	20.34		3
256QAM	1	0	19.45	19.03	18.37	0-5	5
	1	7	19.53	18.99	18.40		5
	1	14	19.43	18.85	18.33		5
	8	0	19.37	18.96	18.31		5
	8	4	19.40	18.79	18.31		5
	8	7	19.33	18.77	18.30		5
	15	0	19.46	18.82	18.37		5

Table 8-47
LTE Band 66 (AWS) Measured P_{Max} - 1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.85	23.76	23.16	0	0
	1	2	23.96	23.73	23.14		0
	1	5	24.01	23.69	23.20		0
	3	0	24.23	23.70	23.11		0
	3	2	24.25	23.73	23.15		0
	3	3	24.09	23.71	23.07		0
	6	0	23.24	22.75	22.23	0-1	1
16QAM	1	0	23.45	23.46	22.32	0-1	1
	1	2	23.57	23.10	22.52		1
	1	5	23.37	23.05	22.43		1
	3	0	23.44	22.97	22.32		1
	3	2	23.38	22.88	22.35		1
	3	3	23.35	22.87	22.27		1
	6	0	22.30	21.80	21.30	0-2	2
64QAM	1	0	21.77	21.86	21.40	0-2	2
	1	2	21.93	22.03	21.43		2
	1	5	21.77	21.86	21.30		2
	3	0	21.70	21.92	21.49		2
	3	2	21.85	22.01	21.26		2
	3	3	21.76	21.86	21.22		2
	6	0	20.78	20.83	20.13	0-3	3
256QAM	1	0	19.41	19.01	18.36	0-5	5
	1	2	19.69	19.00	18.26		5
	1	5	19.22	18.82	18.22		5
	3	0	19.47	18.96	18.40		5
	3	2	19.47	18.76	18.43		5
	3	3	19.36	18.89	18.27		5
	6	0	19.31	18.74	18.21		5

Table 8-48
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor 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	12.86	12.68	12.62	0	0
	1	50	**13.20**	12.86	12.46		0
	1	99	12.76	12.47	12.39		0
	50	0	13.16	13.02	12.70	0-1	0
	50	25	**13.25**	13.01	12.67		0
	50	50	13.08	12.84	12.44		0
	100	0	13.15	12.97	12.61		0
16QAM	1	0	13.48	12.99	13.27	0-1	0
	1	50	13.43	13.17	13.12		0
	1	99	13.39	12.80	13.04		0
	50	0	13.15	13.05	12.71	0-2	0
	50	25	13.21	13.01	12.72		0
	50	50	13.07	12.86	12.44		0
	100	0	13.14	13.01	12.61		0
64QAM	1	0	13.45	13.12	13.31	0-2	0
	1	50	13.44	13.25	13.12		0
	1	99	13.38	13.09	13.02		0
	50	0	13.18	13.11	12.74	0-3	0
	50	25	13.21	13.08	12.72		0
	50	50	13.17	12.91	12.45		0
	100	0	13.16	13.05	12.59		0
256QAM	1	0	13.43	13.02	12.60	0-5	0
	1	50	13.42	13.01	12.62		0
	1	99	13.43	12.99	12.70		0
	50	0	13.42	12.77	12.60		0
	50	25	13.41	12.77	12.75		0
	50	50	13.40	12.78	12.68		0
	100	0	13.40	12.78	12.60		0

Table 8-49
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	13.04	12.82	12.64	0	0
	1	36	13.16	12.91	12.58		0
	1	74	12.94	12.59	12.61		0
	36	0	13.29	13.15	12.83	0-1	0
	36	18	13.40	13.16	12.78		0
	36	37	13.26	13.02	12.52		0
	75	0	13.27	13.08	12.70		0
16QAM	1	0	12.99	13.10	13.40	0-1	0
	1	36	13.10	13.21	13.34		0
	1	74	12.81	13.34	13.17		0
	36	0	13.35	13.21	12.90	0-2	0
	36	18	13.44	13.23	12.85		0
	36	37	13.32	13.09	12.64		0
	75	0	13.34	13.10	12.78		0
64QAM	1	0	13.47	13.44	13.22	0-2	0
	1	36	13.46	13.46	13.17		0
	1	74	13.31	13.19	12.91		0
	36	0	13.39	13.23	12.90	0-3	0
	36	18	13.47	13.21	12.86		0
	36	37	13.34	13.07	12.67		0
	75	0	13.33	13.10	12.80		0
256QAM	1	0	13.33	13.35	13.45	0-5	0
	1	36	13.21	13.37	13.41		0
	1	74	13.20	13.17	13.14		0
	36	0	13.24	13.20	12.90		0
	36	18	13.33	13.21	12.86		0
	36	37	13.25	13.08	12.64		0
	75	0	13.31	13.16	12.77		0

Table 8-50
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	12.90	12.88	12.58	0	0
	1	25	12.92	12.91	12.46		0
	1	49	12.65	12.69	12.54		0
	25	0	12.97	13.01	12.60	0-1	0
	25	12	12.90	12.96	12.63		0
	25	25	12.85	12.86	12.44		0
	50	0	12.98	12.90	12.57		0
16QAM	1	0	12.99	13.46	13.41	0-1	0
	1	25	13.10	13.37	13.35		0
	1	49	13.47	13.46	13.15		0
	25	0	13.29	13.14	12.74	0-2	0
	25	12	13.38	13.15	12.75		0
	25	25	13.31	13.08	12.61		0
	50	0	13.30	13.06	12.66		0
64QAM	1	0	13.28	13.37	13.15	0-2	0
	1	25	13.47	13.32	13.23		0
	1	49	13.23	13.24	12.84		0
	25	0	13.27	13.21	12.83	0-3	0
	25	12	13.41	13.20	12.82		0
	25	25	13.34	13.15	12.61		0
	50	0	13.27	13.15	12.70		0
256QAM	1	0	13.00	13.24	13.04	0-5	0
	1	25	13.40	13.48	13.27		0
	1	49	13.19	13.17	13.02		0
	25	0	13.40	13.12	12.73		0
	25	12	13.44	13.16	12.79		0
	25	25	13.34	13.05	12.58		0
	50	0	13.36	13.11	12.68		0

Table 8-51
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			131997 (1712.5 MHz)	132322 (1745.0 MHz)	132647 (1777.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.02	12.99	12.47	0	0
	1	12	13.06	13.01	12.42		0
	1	24	13.10	12.90	12.34		0
	12	0	13.29	13.16	12.62	0-1	0
	12	6	13.34	13.18	12.66		0
	12	13	13.35	13.19	12.60		0
	25	0	13.27	13.18	12.62		0
16QAM	1	0	13.34	13.44	13.10	0-1	0
	1	12	13.35	13.48	13.05		0
	1	24	13.27	13.39	12.97		0
	12	0	13.31	13.24	12.66	0-2	0
	12	6	13.32	13.26	12.70		0
	12	13	13.31	13.25	12.69		0
	25	0	13.34	13.20	12.58		0
64QAM	1	0	13.45	13.31	12.93	0-2	0
	1	12	13.50	13.36	12.89		0
	1	24	13.48	13.28	12.82		0
	12	0	13.34	13.19	12.54	0-3	0
	12	6	13.42	13.24	12.63		0
	12	13	13.36	13.23	12.58		0
	25	0	13.43	13.18	12.61		0
256QAM	1	0	13.45	13.13	12.80	0-5	0
	1	12	13.30	13.21	12.76		0
	1	24	13.38	13.15	12.62		0
	12	0	13.41	13.31	12.75		0
	12	6	13.42	13.32	12.71		0
	12	13	13.31	13.20	12.61		0
	25	0	13.34	13.11	12.66		0

Table 8-52
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	13.09	13.03	12.48	0	0
	1	7	13.13	13.03	12.51		0
	1	14	13.21	13.04	12.44		0
	8	0	13.29	13.24	12.61	0-1	0
	8	4	13.37	13.17	12.64		0
	8	7	13.29	13.19	12.63		0
	15	0	13.35	13.15	12.63		0
16QAM	1	0	13.36	13.22	12.94	0-1	0
	1	7	13.42	13.28	12.87		0
	1	14	13.45	13.25	12.90		0
	8	0	13.33	13.31	12.72	0-2	0
	8	4	13.42	13.24	12.74		0
	8	7	13.41	13.25	12.72		0
	15	0	13.39	13.21	12.60		0
64QAM	1	0	13.34	13.44	13.15	0-2	0
	1	7	13.38	13.46	13.08		0
	1	14	13.26	13.42	13.10		0
	8	0	13.40	13.29	12.61	0-3	0
	8	4	13.32	13.29	12.62		0
	8	7	13.31	13.25	12.63		0
	15	0	13.35	13.24	12.79		0
256QAM	1	0	13.06	13.47	12.81	0-5	0
	1	7	13.05	13.49	12.69		0
	1	14	13.00	13.44	12.62		0
	8	0	12.96	13.25	12.78		0
	8	4	12.93	13.18	12.72		0
	8	7	12.92	13.16	12.65		0
	15	0	12.87	13.25	12.67		0

Table 8-53
LTE Band 66 (AWS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	13.18	12.98	12.49	0	0
	1	2	13.27	13.06	12.56		0
	1	5	13.24	13.06	12.44		0
	3	0	13.17	13.04	12.41		0
	3	2	13.22	13.11	12.50		0
	3	3	13.21	13.08	12.49		0
	6	0	13.26	13.15	12.53	0-1	0
16QAM	1	0	13.22	13.35	12.92	0-1	0
	1	2	13.30	13.43	12.97		0
	1	5	13.35	13.42	12.89		0
	3	0	13.45	13.32	12.86		0
	3	2	13.39	13.39	12.89		0
	3	3	13.36	13.34	12.84		0
	6	0	13.37	13.14	12.66	0-2	0
64QAM	1	0	13.23	13.43	13.31	0-2	0
	1	2	13.19	13.31	13.39		0
	1	5	13.29	13.48	13.32		0
	3	0	13.33	13.22	12.58		0
	3	2	13.36	13.29	12.65		0
	3	3	13.34	13.27	12.63		0
	6	0	13.41	13.37	12.70	0-3	0
256QAM	1	0	13.24	13.23	12.98	0-5	0
	1	2	13.27	13.27	13.03		0
	1	5	13.17	13.18	12.85		0
	3	0	13.47	13.08	12.74		0
	3	2	13.50	13.05	12.71		0
	3	3	13.45	13.00	12.61		0
	6	0	13.39	13.18	12.65		0

8.2.7 LTE Band 25

Table 8-54
LTE Band 25 (PCS) Measured P_{Max} - 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	24.15	24.17	24.14	0	0
	1	50	24.09	24.09	**24.21**		0
	1	99	24.11	24.11	23.92		0
	50	0	23.18	23.18	23.25	0-1	1
	50	25	23.26	23.27	23.29		1
	50	50	23.22	23.24	**23.30**		1
	100	0	23.17	23.22	23.19		1
16QAM	1	0	23.55	23.40	23.52	0-1	1
	1	50	23.42	23.44	23.54		1
	1	99	23.49	23.52	23.12		1
	50	0	22.17	22.19	22.30	0-2	2
	50	25	22.28	22.28	22.25		2
	50	50	22.22	22.24	22.31		2
	100	0	22.19	22.22	22.13		2
64QAM	1	0	21.61	22.34	22.44	0-2	2
	1	50	21.89	22.44	22.21		2
	1	99	22.17	22.45	21.56		2
	50	0	20.75	21.21	21.25	0-3	3
	50	25	20.83	21.28	21.17		3
	50	50	20.79	21.26	20.67		3
	100	0	20.69	21.23	20.93		3
256QAM	1	0	19.01	19.01	19.05	0-5	5
	1	50	19.32	19.35	19.39		5
	1	99	19.05	19.10	19.20		5
	50	0	19.05	19.11	19.13		5
	50	25	19.22	19.27	19.29		5
	50	50	19.19	19.16	19.36		5
	100	0	19.15	19.21	19.15		5

Table 8-55
LTE Band 25 (PCS) Measured P_{Max} - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.19	24.41	24.06	0	0
	1	36	24.31	24.33	24.20		0
	1	74	24.25	24.27	23.97		0
	36	0	23.52	23.34	23.07	0-1	1
	36	18	23.36	23.43	23.16		1
	36	37	23.54	23.26	23.03		1
	75	0	23.50	23.17	23.14		1
16QAM	1	0	23.58	23.72	23.46	0-1	1
	1	36	23.75	23.81	23.43		1
	1	74	23.73	23.66	23.37		1
	36	0	22.53	22.34	22.15	0-2	2
	36	18	22.55	22.42	22.09		2
	36	37	22.59	22.37	22.07		2
	75	0	22.51	22.38	22.00		2
64QAM	1	0	22.15	22.61	22.30	0-2	2
	1	36	22.58	22.83	22.28		2
	1	74	22.53	22.51	22.17		2
	36	0	21.30	21.37	21.12	0-3	3
	36	18	21.30	21.52	21.22		3
	36	37	21.37	21.40	21.05		3
	75	0	21.41	21.42	21.09		3
256QAM	1	0	19.36	19.57	19.05	0-5	5
	1	36	19.94	19.47	19.30		5
	1	74	19.55	19.27	19.01		5
	36	0	19.51	19.41	19.08		5
	36	18	19.63	19.53	19.20		5
	36	37	19.46	19.34	19.10		5
	75	0	19.49	19.37	19.15		5

Table 8-56
LTE Band 25 (PCS) Measured P_{Max} - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.02	23.82	24.18	0	0
	1	25	24.17	24.10	24.14		0
	1	49	24.01	23.91	24.18		0
	25	0	23.13	23.11	23.19	0-1	1
	25	12	23.22	23.27	23.33		1
	25	25	23.17	23.25	23.00		1
	50	0	23.15	23.23	23.22		1
16QAM	1	0	23.33	23.51	23.57	0-1	1
	1	25	23.39	23.80	23.47		1
	1	49	23.37	23.59	23.08		1
	25	0	22.16	22.12	22.22	0-2	2
	25	12	22.28	22.36	22.40		2
	25	25	22.20	22.28	22.12		2
	50	0	22.19	22.19	22.24		2
64QAM	1	0	21.57	22.22	22.25	0-2	2
	1	25	21.56	22.58	21.84		2
	1	49	21.72	22.35	21.70		2
	25	0	20.84	21.18	20.68	0-3	3
	25	12	20.84	21.34	20.61		3
	25	25	20.78	21.32	20.65		3
	50	0	20.45	21.28	20.77		3
256QAM	1	0	19.04	19.23	19.21	0-5	5
	1	25	19.19	19.55	19.56		5
	1	49	19.03	19.38	19.43		5
	25	0	19.25	19.16	19.30		5
	25	12	19.35	19.38	19.49		5
	25	25	19.26	19.29	19.43		5
	50	0	19.25	19.23	19.42		5

Table 8-57
LTE Band 25 (PCS) Measured P_{Max} - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.94	23.98	24.08	0	0
	1	12	23.98	24.06	24.05		0
	1	24	24.01	24.12	24.17		0
	12	0	23.13	23.16	23.22	0-1	1
	12	6	23.19	23.25	23.06		1
	12	13	23.25	23.27	22.71		1
	25	0	23.19	23.23	22.86		1
16QAM	1	0	23.50	23.40	23.55	0-1	1
	1	12	23.52	23.51	23.24		1
	1	24	23.62	23.52	22.71		1
	12	0	22.27	22.26	22.28	0-2	2
	12	6	22.31	22.36	22.16		2
	12	13	22.32	22.37	21.85		2
	25	0	22.28	22.28	21.93		2
64QAM	1	0	21.98	22.62	21.87	0-2	2
	1	12	21.91	22.72	21.88		2
	1	24	22.01	22.73	21.65		2
	12	0	20.86	21.19	20.89	0-3	3
	12	6	20.99	21.30	20.82		3
	12	13	20.98	21.30	20.82		3
	25	0	20.83	21.26	20.93		3
256QAM	1	0	19.59	19.78	19.42	0-5	5
	1	12	19.61	19.79	19.48		5
	1	24	19.68	19.88	19.54		5
	12	0	19.21	19.31	19.35		5
	12	6	19.26	19.47	19.39		5
	12	13	19.26	19.44	19.46		5
	25	0	19.22	19.30	19.34		5

Table 8-58
LTE Band 25 (PCS) Measured P_{Max} - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.00	24.06	23.94	0	0
	1	7	23.97	24.11	23.90		0
	1	14	24.04	24.13	23.93		0
	8	0	23.22	23.14	22.88	0-1	1
	8	4	23.24	23.23	22.77		1
	8	7	23.17	23.26	22.80		1
	15	0	23.19	23.26	22.70		1
16QAM	1	0	23.56	23.74	23.57	0-1	1
	1	7	23.48	23.74	23.29		1
	1	14	23.60	23.87	22.93		1
	8	0	22.30	22.12	22.13	0-2	2
	8	4	22.29	22.20	22.01		2
	8	7	22.31	22.18	21.81		2
	15	0	22.26	22.36	21.92		2
64QAM	1	0	21.93	22.56	21.86	0-2	2
	1	7	21.92	22.59	21.84		2
	1	14	22.02	22.67	21.99		2
	8	0	20.98	21.30	20.73	0-3	3
	8	4	20.99	21.42	20.84		3
	8	7	20.91	21.41	20.95		3
	15	0	20.89	21.37	20.98		3
256QAM	1	0	19.32	19.55	19.05	0-5	5
	1	7	19.25	19.52	19.06		5
	1	14	19.35	19.69	19.13		5
	8	0	19.29	19.23	19.54		5
	8	4	19.36	19.32	19.58		5
	8	7	19.32	19.31	19.66		5
	15	0	19.25	19.33	19.47		5

Table 8-59
LTE Band 25 (PCS) Measured P_{Max} - 1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.93	23.99	24.07	0	0
	1	2	23.98	24.07	23.98		0
	1	5	23.94	24.07	23.91		0
	3	0	23.98	24.08	23.87		0
	3	2	24.00	24.16	23.77		0
	3	3	24.01	24.10	23.79		0
	6	0	23.11	23.17	22.45	0-1	1
16QAM	1	0	23.51	23.74	22.74	0-1	1
	1	2	23.58	23.82	22.69		1
	1	5	23.51	23.74	22.46		1
	3	0	23.06	23.18	22.62		1
	3	2	23.10	23.24	22.58		1
	3	3	23.10	23.22	22.42		1
	6	0	22.28	22.17	21.72	0-2	2
64QAM	1	0	21.74	22.59	21.89	0-2	2
	1	2	21.83	22.63	21.85		2
	1	5	21.82	22.60	21.77		2
	3	0	21.91	22.38	21.82		2
	3	2	21.95	22.40	21.93		2
	3	3	21.94	22.36	21.88		2
	6	0	20.79	21.24	20.85	0-3	3
256QAM	1	0	19.22	19.50	19.26	0-5	5
	1	2	19.28	19.58	19.31		5
	1	5	19.21	19.53	19.25		5
	3	0	18.98	19.11	19.22		5
	3	2	19.06	19.17	19.26		5
	3	3	18.99	19.13	19.24		5
	6	0	19.21	19.17	19.21		5

Table 8-60
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor 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	12.08	12.33	12.53	0	0
	1	50	12.15	12.33	12.49		0
	1	99	12.18	12.38	**12.62**		0
	50	0	12.30	12.43	12.58	0-1	0
	50	25	12.35	12.53	**12.64**		0
	50	50	12.37	12.57	12.63		0
	100	0	12.31	12.48	12.61		0
16QAM	1	0	12.48	12.89	13.01	0-1	0
	1	50	12.51	12.92	13.01		0
	1	99	12.49	13.01	13.02		0
	50	0	12.35	12.44	12.58	0-2	0
	50	25	12.39	12.55	12.67		0
	50	50	12.42	12.52	12.71		0
	100	0	12.37	12.39	12.58		0
64QAM	1	0	12.72	12.87	12.37	0-2	0
	1	50	12.79	12.89	12.47		0
	1	99	12.83	12.96	12.48		0
	50	0	12.38	12.40	12.59	0-3	0
	50	25	12.44	12.49	12.65		0
	50	50	12.47	12.97	12.69		0
	100	0	12.35	12.44	12.56		0
256QAM	1	0	12.35	12.45	12.36	0-5	0
	1	50	12.76	12.84	12.78		0
	1	99	12.70	12.64	12.53		0
	50	0	12.29	12.32	12.45		0
	50	25	12.51	12.54	12.56		0
	50	50	12.45	12.51	12.64		0
	100	0	12.42	12.45	12.55		0

Table 8-61
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	12.10	12.41	12.41	0	0
	1	36	12.33	12.49	12.48		0
	1	74	12.14	12.48	12.42		0
	36	0	12.38	12.52	12.66	0-1	0
	36	18	12.52	12.72	12.75		0
	36	37	12.45	12.62	12.77		0
	75	0	12.47	12.58	12.66		0
16QAM	1	0	12.80	12.73	12.84	0-1	0
	1	36	13.03	12.85	12.94		0
	1	74	12.87	12.81	12.88		0
	36	0	12.46	12.55	12.68	0-2	0
	36	18	12.59	12.67	12.79		0
	36	37	12.54	12.67	12.79		0
	75	0	12.52	12.62	12.64		0
64QAM	1	0	12.63	12.96	13.00	0-2	0
	1	36	12.90	13.11	13.12		0
	1	74	12.78	13.08	13.06		0
	36	0	12.48	12.59	12.70	0-3	0
	36	18	12.65	12.73	12.76		0
	36	37	12.55	12.67	12.77		0
	75	0	12.56	12.63	12.68		0
256QAM	1	0	12.93	12.90	12.88	0-5	0
	1	36	12.82	12.84	12.85		0
	1	74	12.72	12.78	12.79		0
	36	0	12.59	12.49	12.62		0
	36	18	12.73	12.65	12.74		0
	36	37	12.65	12.67	12.79		0
	75	0	12.61	12.60	12.79		0

Table 8-62
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	12.16	12.20	12.53	0	0
	1	25	12.36	12.45	12.54		0
	1	49	12.16	12.24	12.58		0
	25	0	12.44	12.43	12.56	0-1	0
	25	12	12.56	12.64	12.71		0
	25	25	12.52	12.55	12.66		0
	50	0	12.44	12.57	12.65		0
16QAM	1	0	12.75	12.91	12.91	0-1	0
	1	25	13.05	12.81	12.96		0
	1	49	12.71	12.89	12.92		0
	25	0	12.53	12.45	12.59	0-2	0
	25	12	12.58	12.61	12.75		0
	25	25	12.48	12.58	12.69		0
	50	0	12.46	12.52	12.65		0
64QAM	1	0	12.45	12.67	12.69	0-2	0
	1	25	12.63	12.97	12.76		0
	1	49	12.40	12.70	12.76		0
	25	0	12.49	12.51	12.68	0-3	0
	25	12	12.60	12.68	12.81		0
	25	25	12.54	12.63	12.70		0
	50	0	12.52	12.58	12.71		0
256QAM	1	0	12.41	12.55	13.00	0-5	0
	1	25	12.60	12.96	12.76		0
	1	49	12.47	12.75	13.04		0
	25	0	12.62	12.46	12.57		0
	25	12	12.73	12.58	12.78		0
	25	25	12.66	12.60	12.73		0
	50	0	12.62	12.51	12.70		0

Table 8-63
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	12.25	12.26	12.49	0	0
	1	12	12.38	12.39	12.48		0
	1	24	12.18	12.45	12.59		0
	12	0	12.45	12.47	12.59	0-1	0
	12	6	12.60	12.58	12.69		0
	12	13	12.62	12.59	12.74		0
	25	0	12.47	12.59	12.67		0
16QAM	1	0	12.80	12.71	12.75	0-1	0
	1	12	12.95	12.79	12.77		0
	1	24	12.81	12.79	12.60		0
	12	0	12.65	12.58	12.69	0-2	0
	12	6	12.67	12.71	12.75		0
	12	13	12.52	12.67	12.75		0
	25	0	12.51	12.59	12.61		0
64QAM	1	0	12.55	12.93	12.71	0-2	0
	1	12	12.65	13.02	12.75		0
	1	24	12.50	13.06	12.79		0
	12	0	12.62	12.52	12.67	0-3	0
	12	6	12.65	12.62	12.75		0
	12	13	12.54	12.58	12.81		0
	25	0	12.55	12.58	12.65		0
256QAM	1	0	12.61	13.11	12.69	0-5	0
	1	12	12.65	12.86	12.76		0
	1	24	12.41	12.86	12.82		0
	12	0	12.55	12.65	12.65		0
	12	6	12.53	12.75	12.67		0
	12	13	12.41	12.79	12.72		0
	25	0	12.55	12.55	12.58		0

Table 8-64
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	12.27	12.40	12.47	0	0
	1	7	12.47	12.41	12.58		0
	1	14	12.27	12.52	12.61		0
	8	0	12.55	12.48	12.62	0-1	0
	8	4	12.67	12.56	12.66		0
	8	7	12.63	12.55	12.70		0
	15	0	12.55	12.55	12.64		0
16QAM	1	0	12.86	13.03	12.77	0-1	0
	1	7	12.76	13.06	12.83		0
	1	14	12.62	12.88	13.02		0
	8	0	12.55	12.48	12.75	0-2	0
	8	4	12.67	12.56	12.80		0
	8	7	12.69	12.55	12.87		0
	15	0	12.57	12.71	12.78		0
64QAM	1	0	12.56	12.89	12.84	0-2	0
	1	7	12.74	12.96	12.88		0
	1	14	12.51	13.07	13.01		0
	8	0	12.60	12.63	12.74	0-3	0
	8	4	12.71	12.70	12.77		0
	8	7	12.65	12.72	12.86		0
	15	0	12.63	12.72	12.70		0
256QAM	1	0	12.52	12.91	12.83	0-5	0
	1	7	12.71	12.93	12.87		0
	1	14	12.58	13.09	12.95		0
	8	0	12.73	12.61	12.83		0
	8	4	12.84	12.69	12.88		0
	8	7	12.77	12.73	12.95		0
	15	0	12.73	12.67	12.80		0

Table 8-65
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	12.25	12.43	12.64	0	0
	1	2	12.48	12.46	12.70		0
	1	5	12.30	12.38	12.64		0
	3	0	12.55	12.43	12.57		0
	3	2	12.67	12.48	12.63		0
	3	3	12.60	12.45	12.61		0
	6	0	12.45	12.49	12.65	0-1	0
16QAM	1	0	12.75	13.04	12.88	0-1	0
	1	2	12.72	13.12	12.95		0
	1	5	12.68	13.08	12.87		0
	3	0	12.55	12.55	12.73		0
	3	2	12.62	12.61	12.77		0
	3	3	12.57	12.56	12.73		0
	6	0	12.58	12.53	12.78	0-2	0
64QAM	1	0	12.52	12.94	12.84	0-2	0
	1	2	12.70	12.99	12.89		0
	1	5	12.47	12.95	12.74		0
	3	0	12.56	12.73	12.98		0
	3	2	12.67	12.76	13.02		0
	3	3	12.61	12.74	12.98		0
	6	0	12.59	12.60	12.82	0-3	0
256QAM	1	0	12.48	12.81	13.05	0-5	0
	1	2	12.67	12.86	13.11		0
	1	5	12.54	12.81	13.07		0
	3	0	12.69	12.39	12.79		0
	3	2	12.80	12.51	12.84		0
	3	3	12.73	12.44	12.82		0
	6	0	12.69	12.51	12.79		0

Table 8-66
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 2 (Right Edge Proximity Sensor 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	21.02	21.03	**21.16**	0	0
	1	50	20.94	20.98	21.06		0
	1	99	20.95	20.97	21.04		0
	50	0	21.06	21.06	21.11	0-1	0
	50	25	21.18	21.18	21.08		0
	50	50	21.11	21.14	**21.21**		0
	100	0	21.04	21.05	21.04		0
16QAM	1	0	21.32	21.36	21.29	0-1	0
	1	50	21.37	21.30	21.46		0
	1	99	21.40	21.41	21.38		0
	50	0	21.03	21.03	21.09	0-2	0
	50	25	21.15	21.17	21.15		0
	50	50	21.11	21.10	21.14		0
	100	0	21.05	21.06	21.10		0
64QAM	1	0	21.30	21.23	21.30	0-2	0
	1	50	21.28	21.27	21.29		0
	1	99	21.31	21.35	21.46		0
	50	0	21.09	21.09	21.13	0-3	0
	50	25	21.23	21.15	21.18		0
	50	50	21.13	21.16	21.26		0
	100	0	21.10	21.07	21.08		0
256QAM	1	0	18.86	18.81	18.91	0-5	2
	1	50	19.21	19.19	19.25		2
	1	99	18.89	18.89	19.06		2
	50	0	18.98	18.94	19.01		2
	50	25	19.14	19.12	19.15		2
	50	50	19.08	19.08	19.16		2
	100	0	19.06	19.06	19.17		2

Table 8-67
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 2 (Right Edge Proximity Sensor Active) - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.97	20.94	20.98	0	0
	1	36	20.99	21.02	21.03		0
	1	74	20.82	20.98	20.98		0
	36	0	21.00	21.03	21.13	0-1	0
	36	18	21.13	21.15	21.25		0
	36	37	21.09	21.20	21.34		0
	75	0	21.06	21.03	21.27		0
16QAM	1	0	21.30	21.23	21.40	0-1	0
	1	36	21.64	21.33	21.35		0
	1	74	21.61	21.31	21.32		0
	36	0	21.09	21.06	21.17	0-2	0
	36	18	21.20	21.18	21.32		0
	36	37	21.19	21.25	21.34		0
	75	0	21.12	21.08	21.26		0
64QAM	1	0	21.19	21.50	21.54	0-2	0
	1	36	21.56	21.38	21.65		0
	1	74	21.45	21.66	21.65		0
	36	0	21.18	21.12	21.21	0-3	0
	36	18	21.29	21.27	21.33		0
	36	37	21.26	21.34	21.35		0
	75	0	21.20	21.14	21.28		0
256QAM	1	0	19.57	19.40	19.30	0-5	2
	1	36	19.70	19.83	19.67		2
	1	74	19.25	19.66	19.56		2
	36	0	19.17	18.97	19.13		2
	36	18	19.28	19.15	19.28		2
	36	37	19.24	19.16	19.33		2
	75	0	19.17	19.10	19.31		2

Table 8-68
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 2 (Right Edge Proximity Sensor Active) - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.67	20.74	21.03	0	0
	1	25	20.88	20.98	21.04		0
	1	49	20.69	20.78	21.09		0
	25	0	21.01	20.97	21.03	0-1	0
	25	12	21.11	21.06	21.22		0
	25	25	21.03	21.10	21.16		0
	50	0	21.01	21.09	21.17		0
16QAM	1	0	21.36	21.41	21.27	0-1	0
	1	25	21.54	21.66	21.25		0
	1	49	21.27	21.47	21.27		0
	25	0	21.04	20.97	21.05	0-2	0
	25	12	21.14	21.10	21.22		0
	25	25	21.07	21.14	21.16		0
	50	0	21.05	21.06	21.13		0
64QAM	1	0	20.95	21.11	21.62	0-2	0
	1	25	21.16	21.42	21.39		0
	1	49	20.96	21.27	21.43		0
	25	0	21.05	21.08	21.09	0-3	0
	25	12	21.18	21.14	21.31		0
	25	25	21.10	21.22	21.14		0
	50	0	21.06	21.14	21.21		0
256QAM	1	0	18.90	19.12	19.72	0-5	2
	1	25	19.12	19.44	19.91		2
	1	49	18.96	19.24	19.73		2
	25	0	19.09	19.00	19.10		2
	25	12	19.18	19.13	19.30		2
	25	25	19.14	19.14	19.21		2
	50	0	19.12	19.14	19.22		2

Table 8-69
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 2 (Right Edge Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.94	20.84	20.92	0	0
	1	12	20.85	20.94	21.01		0
	1	24	20.86	21.03	21.04		0
	12	0	20.98	20.99	21.12	0-1	0
	12	6	21.08	21.10	21.20		0
	12	13	21.00	21.16	21.25		0
	25	0	20.98	21.06	21.17		0
16QAM	1	0	21.33	21.25	21.59	0-1	0
	1	12	21.31	21.24	21.64		0
	1	24	21.24	21.31	21.45		0
	12	0	21.01	21.13	21.17	0-2	0
	12	6	21.11	21.18	21.21		0
	12	13	21.04	21.25	21.26		0
	25	0	21.02	21.05	21.09		0
64QAM	1	0	20.92	21.56	21.46	0-2	0
	1	12	21.15	21.59	21.50		0
	1	24	20.93	21.65	21.54		0
	12	0	21.12	20.99	21.17	0-3	0
	12	6	21.16	21.09	21.10		0
	12	13	21.04	21.13	20.85		0
	25	0	21.03	21.11	20.93		0
256QAM	1	0	18.87	19.65	19.21	0-5	2
	1	12	19.09	19.68	19.29		2
	1	24	18.93	19.76	19.36		2
	12	0	19.06	19.17	19.14		2
	12	6	19.15	19.25	19.20		2
	12	13	19.11	19.27	19.26		2
	25	0	19.09	19.03	19.15		2

Table 8-70
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 2 (Right Edge Proximity Sensor Active) - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	21.14	20.88	21.00	0	0
	1	7	21.19	20.95	21.06		0
	1	14	21.17	21.02	21.13		0
	8	0	21.19	21.03	21.14	0-1	0
	8	4	21.19	21.08	21.20		0
	8	7	21.18	21.08	21.21		0
	15	0	21.17	21.07	21.19		0
16QAM	1	0	21.16	21.61	21.28	0-1	0
	1	7	21.17	21.56	21.33		0
	1	14	21.19	21.41	21.32		0
	8	0	21.21	20.94	21.24	0-2	0
	8	4	21.16	21.07	21.26		0
	8	7	21.18	21.07	21.32		0
	15	0	21.21	21.18	21.30		0
64QAM	1	0	21.17	21.44	21.44	0-2	0
	1	7	21.19	21.51	21.43		0
	1	14	21.21	21.61	21.57		0
	8	0	21.17	21.18	21.04	0-3	0
	8	4	21.19	21.25	20.93		0
	8	7	21.18	21.24	20.75		0
	15	0	21.19	21.20	20.79		0
256QAM	1	0	19.14	19.42	19.56	0-5	2
	1	7	19.11	19.40	19.56		2
	1	14	19.24	19.55	19.66		2
	8	0	19.13	19.08	19.35		2
	8	4	19.15	19.21	19.41		2
	8	7	19.18	19.19	19.48		2
	15	0	19.10	19.13	19.34		2

Table 8-71
LTE Band 25 (PCS) Measured P_{Limit} for DSI = 2 (Right Edge Proximity Sensor Active) - 1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.92	20.92	21.08	0	0
	1	2	21.12	20.99	21.15		0
	1	5	21.10	20.95	21.14		0
	3	0	21.11	20.97	21.08		0
	3	2	21.11	21.00	21.12		0
	3	3	21.10	20.97	21.10		0
	6	0	21.10	21.03	21.18	0-1	0
16QAM	1	0	21.11	21.58	21.42	0-1	0
	1	2	21.20	21.66	21.50		0
	1	5	21.12	21.60	21.43		0
	3	0	21.08	21.08	21.21		0
	3	2	21.25	21.13	21.29		0
	3	3	21.22	21.09	21.24		0
	6	0	21.23	21.03	21.34	0-2	0
64QAM	1	0	21.10	21.49	21.48	0-2	0
	1	2	21.15	21.54	21.60		0
	1	5	21.26	21.52	21.58		0
	3	0	21.17	21.27	21.46		0
	3	2	21.11	21.31	21.50		0
	3	3	21.20	21.29	21.43		0
	6	0	21.20	21.14	20.63	0-3	0
256QAM	1	0	19.08	19.35	19.57	0-5	2
	1	2	19.12	19.43	19.63		2
	1	5	19.07	19.38	19.58		2
	3	0	18.86	18.95	19.33		2
	3	2	18.90	19.02	19.41		2
	3	3	18.88	18.97	19.34		2
	6	0	19.03	19.02	19.28		2

8.2.8 LTE Band 7

Table 8-72
LTE Band 7 Measured P_{Max} - 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	23.85	24.31	24.26	0	0
	1	50	**24.43**	24.17	24.08		0
	1	99	24.27	24.16	24.12		0
	50	0	23.10	23.34	23.18	0-1	1
	50	25	23.50	23.37	23.31		1
	50	50	**23.63**	23.32	23.24		1
	100	0	23.42	23.34	23.17		1
16QAM	1	0	23.27	23.70	23.55	0-1	1
	1	50	23.59	23.49	23.51		1
	1	99	23.58	23.50	23.53		1
	50	0	22.29	22.35	22.15	0-2	2
	50	25	22.52	22.40	22.30		2
	50	50	22.48	22.35	22.25		2
	100	0	22.44	22.29	22.17		2
64QAM	1	0	21.72	22.11	22.46	0-2	2
	1	50	22.10	22.15	22.23		2
	1	99	22.27	22.45	21.92		2
	50	0	20.96	20.83	21.19	0-3	3
	50	25	20.68	21.06	20.93		3
	50	50	21.16	21.23	20.84		3
	100	0	20.90	20.99	20.91		3
256QAM	1	0	19.35	19.25	19.17	0-5	5
	1	50	19.49	19.47	19.36		5
	1	99	19.44	19.37	19.80		5
	50	0	19.43	19.46	19.25		5
	50	25	19.53	19.45	19.26		5
	50	50	19.55	19.36	19.20		5
	100	0	19.46	19.38	19.21		5

Table 8-73
LTE Band 7 Measured P_{Max} - 15 MHz Bandwidth

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.52	24.14	23.92	0	0
	1	36	24.53	24.17	23.91		0
	1	74	24.36	24.04	23.81		0
	36	0	23.53	23.30	23.13	0-1	1
	36	18	23.53	23.32	23.12		1
	36	37	23.38	23.18	23.09		1
	75	0	23.36	23.25	23.06		1
16QAM	1	0	23.82	23.32	23.59	0-1	1
	1	36	23.85	23.34	23.62		1
	1	74	23.72	23.25	23.47		1
	36	0	22.56	22.27	22.12	0-2	2
	36	18	22.64	22.33	22.16		2
	36	37	22.49	22.15	22.07		2
	75	0	22.40	22.29	22.07		2
64QAM	1	0	22.10	22.25	22.16	0-2	2
	1	36	22.38	22.25	22.17		2
	1	74	22.46	22.02	21.97		2
	36	0	21.32	21.39	21.23	0-3	3
	36	18	21.53	21.43	21.24		3
	36	37	21.42	21.30	21.19		3
	75	0	21.48	21.30	21.03		3
256QAM	1	0	19.52	19.23	19.54	0-5	5
	1	36	19.78	19.36	19.65		5
	1	74	19.46	19.06	19.31		5
	36	0	19.54	19.30	19.16		5
	36	18	19.61	19.35	19.19		5
	36	37	19.47	19.15	19.11		5
	75	0	19.47	19.31	19.14		5

Table 8-74
LTE Band 7 Measured P_{Max} - 10 MHz Bandwidth

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.31	24.23	23.94	0	0
	1	25	24.26	24.06	23.89		0
	1	49	24.28	24.10	23.87		0
	25	0	23.54	23.35	23.06	0-1	1
	25	12	23.53	23.37	23.08		1
	25	25	23.47	23.20	23.05		1
	50	0	23.50	23.24	23.04		1
16QAM	1	0	23.76	23.34	23.57	0-1	1
	1	25	23.72	23.30	23.52		1
	1	49	23.70	23.27	23.49		1
	25	0	22.62	22.40	22.17	0-2	2
	25	12	22.65	22.44	22.22		2
	25	25	22.64	22.29	22.17		2
	50	0	22.45	22.27	22.05		2
64QAM	1	0	22.23	22.25	22.17	0-2	2
	1	25	22.36	22.22	22.07		2
	1	49	22.63	22.17	22.09		2
	25	0	21.28	21.47	21.13	0-3	3
	25	12	21.40	21.46	21.17		3
	25	25	21.53	21.36	21.14		3
	50	0	21.31	21.32	21.09		3
256QAM	1	0	19.13	19.12	19.43	0-5	5
	1	25	19.26	19.38	19.62		5
	1	49	19.05	18.94	19.27		5
	25	0	19.59	19.33	19.12		5
	25	12	19.63	19.38	19.17		5
	25	25	19.53	19.15	19.08		5
	50	0	19.49	19.28	19.08		5

Table 8-75
LTE Band 7 Measured P_{Max} - 5 MHz Bandwidth

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.50	24.23	23.85	0	0
	1	12	24.47	24.23	23.87		0
	1	24	24.47	24.25	23.85		0
	12	0	23.58	23.29	23.05	0-1	1
	12	6	23.59	23.36	23.12		1
	12	13	23.56	23.29	23.04		1
	25	0	23.55	23.35	23.06		1
16QAM	1	0	23.64	23.69	23.17	0-1	1
	1	12	23.62	23.64	23.10		1
	1	24	23.62	23.65	23.19		1
	12	0	22.57	22.53	22.08	0-2	2
	12	6	22.58	22.57	22.14		2
	12	13	22.58	22.47	22.07		2
	25	0	22.57	22.32	22.13		2
64QAM	1	0	22.42	22.90	22.24	0-2	2
	1	12	22.48	22.89	22.19		2
	1	24	22.55	22.90	22.21		2
	12	0	21.40	21.34	20.97	0-3	3
	12	6	21.39	21.40	21.03		3
	12	13	21.36	21.34	20.98		3
	25	0	21.23	21.45	21.10		3
256QAM	1	0	19.64	19.29	19.20	0-5	5
	1	12	19.70	19.36	19.22		5
	1	24	19.56	19.26	19.11		5
	12	0	19.58	19.30	19.15		5
	12	6	19.63	19.37	19.21		5
	12	13	19.56	19.34	19.10		5
	25	0	19.56	19.33	19.08		5

Table 8-76
LTE Band 7 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor 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	**12.78**	12.62	12.34	0	0
	1	50	12.68	12.49	12.24		0
	1	99	12.63	12.46	12.22		0
	50	0	**12.95**	12.67	12.50	0-1	0
	50	25	12.82	12.66	12.52		0
	50	50	12.75	12.59	12.47		0
	100	0	12.71	12.59	12.38		0
16QAM	1	0	13.13	13.09	12.63	0-1	0
	1	50	13.09	13.01	12.60		0
	1	99	13.23	12.94	12.49		0
	50	0	12.90	12.73	12.50	0-2	0
	50	25	12.80	12.75	12.55		0
	50	50	12.81	12.66	12.45		0
	100	0	12.67	12.62	12.40		0
64QAM	1	0	13.18	12.58	12.98	0-2	0
	1	50	13.10	12.46	12.90		0
	1	99	13.27	12.38	12.85		0
	50	0	12.90	12.75	12.53	0-3	0
	50	25	12.80	12.73	12.61		0
	50	50	12.80	12.60	12.57		0
	100	0	12.71	12.64	12.39		0
256QAM	1	0	12.85	12.58	12.57	0-5	0
	1	50	13.22	12.88	12.70		0
	1	99	12.69	12.46	12.36		0
	50	0	12.88	12.76	12.49		0
	50	25	12.92	12.66	12.64		0
	50	50	12.81	12.53	12.44		0
	100	0	12.85	12.57	12.54		0

Table 8-77
LTE Band 7 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

LTE Band 7 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20825 (2507.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21375 (2562.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	13.00	12.64	12.46	0	0
	1	36	12.95	12.71	12.49		0
	1	74	12.86	12.56	12.37		0
	36	0	12.99	12.88	12.64	0-1	0
	36	18	12.99	12.89	12.70		0
	36	37	12.91	12.76	12.68		0
	75	0	12.85	12.77	12.58		0
16QAM	1	0	13.24	12.79	13.10	0-1	0
	1	36	13.05	12.88	13.16		0
	1	74	13.00	12.76	13.05		0
	36	0	13.03	12.85	12.68	0-2	0
	36	18	13.07	12.86	12.71		0
	36	37	12.95	12.73	12.66		0
	75	0	12.82	12.79	12.62		0
64QAM	1	0	13.26	12.76	12.73	0-2	0
	1	36	13.07	12.78	12.75		0
	1	74	13.14	12.60	12.62		0
	36	0	13.05	12.95	12.78	0-3	0
	36	18	13.04	12.94	12.77		0
	36	37	12.95	12.86	12.73		0
	75	0	12.94	12.85	12.58		0
256QAM	1	0	13.00	12.68	13.01	0-5	0
	1	36	13.28	12.87	13.14		0
	1	74	12.95	12.54	12.85		0
	36	0	13.04	12.81	12.63		0
	36	18	13.13	12.85	12.65		0
	36	37	12.95	12.66	12.53		0
	75	0	12.97	12.80	12.65		0

Table 8-78
LTE Band 7 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

LTE Band 7 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20800 (2505.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21400 (2565.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	12.81	12.70	12.53	0	0
	1	25	12.76	12.71	12.50		0
	1	49	12.79	12.68	12.53		0
	25	0	13.00	12.82	12.62	0-1	0
	25	12	13.03	12.86	12.64		0
	25	25	13.01	12.75	12.60		0
	50	0	12.92	12.75	12.60		0
16QAM	1	0	13.25	12.85	13.15	0-1	0
	1	25	13.20	12.85	13.11		0
	1	49	13.23	12.79	13.06		0
	25	0	13.07	12.90	12.71	0-2	0
	25	12	13.10	12.85	12.72		0
	25	25	13.10	12.77	12.67		0
	50	0	12.88	12.74	12.54		0
64QAM	1	0	13.24	12.77	12.74	0-2	0
	1	25	13.22	12.73	12.68		0
	1	49	13.18	12.65	12.71		0
	25	0	13.12	12.94	12.73	0-3	0
	25	12	13.10	12.96	12.68		0
	25	25	13.09	12.89	12.66		0
	50	0	13.00	12.76	12.60		0
256QAM	1	0	13.15	12.43	12.40	0-5	0
	1	25	13.05	12.51	12.64		0
	1	49	13.26	12.32	12.29		0
	25	0	13.06	12.87	12.55		0
	25	12	13.11	12.89	12.67		0
	25	25	13.02	12.72	12.53		0
	50	0	13.01	12.79	12.54		0

Table 8-79
LTE Band 7 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 7 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20775 (2502.5 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21425 (2567.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	12.95	12.84	12.48	0	0
	1	12	12.92	12.78	12.45		0
	1	24	12.98	12.84	12.44		0
	12	0	13.00	12.81	12.57	0-1	0
	12	6	13.06	12.86	12.67		0
	12	13	13.02	12.79	12.61		0
	25	0	12.96	12.80	12.60		0
16QAM	1	0	13.06	13.22	12.81	0-1	0
	1	12	13.05	13.18	12.75		0
	1	24	13.09	13.19	12.79		0
	12	0	12.95	12.97	12.55	0-2	0
	12	6	13.01	12.99	12.69		0
	12	13	12.98	12.97	12.62		0
	25	0	13.00	12.77	12.69		0
64QAM	1	0	13.05	13.22	12.82	0-2	0
	1	12	13.09	13.16	12.84		0
	1	24	13.13	13.15	12.84		0
	12	0	13.03	12.79	12.52	0-3	0
	12	6	13.10	12.88	12.56		0
	12	13	13.04	12.81	12.55		0
	25	0	12.96	12.90	12.65		0
256QAM	1	0	13.08	12.78	12.68	0-5	0
	1	12	13.09	12.85	12.77		0
	1	24	13.06	12.73	12.62		0
	12	0	13.10	12.80	12.56		0
	12	6	13.12	12.83	12.63		0
	12	13	13.10	12.76	12.60		0
	25	0	13.02	12.80	12.56		0

8.2.9 LTE Band 41

Table 8-80
LTE Band 41 PC3 Measured P_{Max} - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	**24.50**	24.31	23.80	23.81	23.91	0	0
	1	50	24.43	24.22	24.04	24.05	24.31		0
	1	99	24.40	24.25	23.75	23.65	24.33		0
	50	0	**23.58**	23.30	23.06	23.06	23.22	0-1	1
	50	25	23.56	23.36	23.20	23.12	23.41		1
	50	50	23.54	23.32	23.13	23.09	23.47		1
	100	0	23.52	23.28	23.14	23.05	23.37		1
16QAM	1	0	23.57	23.15	22.82	22.88	22.76	0-1	1
	1	50	23.48	23.07	22.95	23.09	23.18		1
	1	99	23.50	23.08	22.69	22.74	23.08		1
	50	0	22.61	22.15	22.03	22.07	22.20	0-2	2
	50	25	22.55	22.32	22.22	22.12	22.47		2
	50	50	22.52	22.33	22.10	22.03	22.48		2
	100	0	22.49	22.26	22.14	22.09	22.41		2
64QAM	1	0	22.33	22.31	21.94	21.62	21.97	0-2	2
	1	50	22.24	22.43	22.19	21.85	22.42		2
	1	99	22.26	22.37	22.04	21.39	22.38		2
	50	0	21.64	21.31	21.13	21.16	21.28	0-3	3
	50	25	21.60	21.35	21.28	21.24	21.45		3
	50	50	21.57	21.31	21.18	21.12	21.50		3
	100	0	21.50	21.27	21.20	21.10	21.47		3
256QAM	1	0	19.30	19.01	18.95	18.93	18.96	0-5	5
	1	50	19.50	19.38	18.89	19.20	19.42		5
	1	99	19.20	18.96	18.90	18.76	19.39		5
	50	0	19.52	19.23	19.05	19.16	19.24		5
	50	25	19.57	19.39	19.24	19.22	19.45		5
	50	50	19.51	19.20	19.10	19.11	19.45		5
	100	0	19.55	19.33	19.16	19.15	19.36		5

Table 8-81
LTE Band 41 PC3 Measured P_{Max} - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	24.43	24.12	24.07	24.09	23.94	0	0
	1	36	24.39	24.33	24.32	24.20	24.27		0
	1	74	24.34	24.02	24.07	23.99	24.14		0
	36	0	23.46	23.21	23.23	23.21	23.21	0-1	1
	36	18	23.48	23.36	23.39	23.23	23.31		1
	36	37	23.42	23.26	23.34	23.21	23.38		1
	75	0	23.36	23.25	23.30	23.13	23.24		1
16QAM	1	0	23.08	23.16	22.75	23.27	22.68	0-1	1
	1	36	23.10	23.43	23.03	23.28	23.02		1
	1	74	22.96	23.12	22.82	23.04	22.87		1
	36	0	22.46	22.23	22.23	22.25	22.25	0-2	2
	36	18	22.50	22.39	22.44	22.28	22.33		2
	36	37	22.46	22.28	22.37	22.24	22.40		2
	75	0	22.40	22.23	22.32	22.15	22.24		2
64QAM	1	0	22.34	21.81	21.98	22.19	21.90	0-2	2
	1	36	22.33	22.08	22.27	22.37	22.24		2
	1	74	22.25	21.80	22.08	22.10	22.15		2
	36	0	21.48	21.23	21.32	21.13	21.26	0-3	3
	36	18	21.54	21.36	21.46	21.16	21.41		3
	36	37	21.52	21.27	21.41	21.16	21.45		3
	75	0	21.45	21.25	21.36	21.20	21.28		3
256QAM	1	0	19.73	18.72	19.10	19.19	19.18	0-5	5
	1	36	19.95	18.98	19.37	19.35	19.34		5
	1	74	19.77	18.68	19.12	19.06	19.19		5
	36	0	19.44	19.28	19.30	19.18	19.24		5
	36	18	19.51	19.40	19.44	19.26	19.34		5
	36	37	19.44	19.30	19.40	19.22	19.40		5
	75	0	19.40	19.35	19.40	19.15	19.24		5

Table 8-82
LTE Band 41 PC3 Measured P_{Max} - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	24.48	24.13	24.14	24.02	24.22	0	0
	1	25	24.46	24.34	24.41	24.25	24.35		0
	1	49	24.53	24.07	24.08	24.02	24.53		0
	25	0	23.41	23.23	23.31	23.22	23.22	0-1	1
	25	12	23.39	23.45	23.51	23.34	23.30		1
	25	25	23.38	23.30	23.35	23.27	23.26		1
	50	0	23.29	23.31	23.38	23.23	23.20		1
16QAM	1	0	23.29	23.21	23.34	23.16	23.23	0-1	1
	1	25	23.43	23.45	23.23	23.39	23.49		1
	1	49	23.42	23.20	23.21	23.11	23.00		1
	25	0	22.46	22.31	22.35	22.31	22.26	0-2	2
	25	12	22.48	22.44	22.53	22.37	22.37		2
	25	25	22.43	22.33	22.42	22.32	22.28		2
	50	0	22.36	22.34	22.44	22.22	22.22		2
64QAM	1	0	22.08	21.86	21.78	22.03	21.71	0-2	2
	1	25	22.04	22.18	22.07	22.39	22.02		2
	1	49	22.00	21.84	21.78	22.05	21.75		2
	25	0	21.45	21.23	21.36	21.23	21.24	0-3	3
	25	12	21.45	21.39	21.53	21.27	21.34		3
	25	25	21.37	21.31	21.40	21.25	21.36		3
	50	0	21.29	21.32	21.40	21.24	21.20		3
256QAM	1	0	19.09	18.72	19.01	19.15	18.84	0-5	5
	1	25	19.27	18.99	19.29	19.43	19.17		5
	1	49	19.04	18.75	19.03	19.14	18.96		5
	25	0	19.42	19.30	19.35	19.18	19.23		5
	25	12	19.45	19.46	19.50	19.24	19.37		5
	25	25	19.33	19.35	19.41	19.18	19.37		5
	50	0	19.39	19.42	19.47	19.20	19.30		5

Table 8-83
LTE Band 41 PC3 Measured P_{Max} - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	24.35	24.35	24.35	24.16	24.26	0	0
	1	12	24.37	24.35	24.36	24.26	24.27		0
	1	24	24.28	24.37	24.37	24.21	24.29		0
	12	0	23.34	23.42	23.47	23.32	23.30	0-1	1
	12	6	23.32	23.38	23.47	23.35	23.30		1
	12	13	23.31	23.38	23.47	23.37	23.36		1
	25	0	23.22	23.41	23.46	23.27	23.26		1
16QAM	1	0	23.22	23.52	23.36	23.50	23.27	0-1	1
	1	12	23.36	23.61	23.34	23.49	23.30		1
	1	24	23.35	23.54	23.37	23.47	23.31		1
	12	0	22.39	22.41	22.51	22.38	22.30	0-2	2
	12	6	22.41	22.44	22.51	22.40	22.34		2
	12	13	22.36	22.41	22.47	22.39	22.33		2
	25	0	22.29	22.32	22.45	22.32	22.25		2
64QAM	1	0	22.01	22.11	22.31	22.33	22.21	0-2	2
	1	12	21.97	22.15	22.39	22.42	22.28		2
	1	24	21.93	22.11	22.33	22.40	22.28		2
	12	0	21.15	21.48	21.50	21.32	21.32	0-3	3
	12	6	21.15	21.52	21.51	21.35	21.31		3
	12	13	21.20	21.46	21.50	21.34	21.39		3
	25	0	21.25	21.42	21.45	21.28	21.27		3
256QAM	1	0	19.86	18.98	19.76	19.36	19.67	0-5	5
	1	12	19.84	19.03	19.78	19.39	19.66		5
	1	24	19.80	18.99	19.82	19.35	19.71		5
	12	0	19.32	19.38	19.36	19.25	19.17		5
	12	6	19.36	19.43	19.38	19.26	19.22		5
	12	13	19.34	19.43	19.34	19.28	19.20		5
	25	0	19.38	19.43	19.35	19.31	19.23		5

Table 8-84
LTE Band 41 PC3 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor 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	**14.46**	14.21	13.84	13.74	13.82	0	0
	1	50	14.34	14.08	14.00	14.00	14.10		0
	1	99	14.40	14.05	13.51	13.75	13.76		0
	50	0	**14.52**	14.24	13.99	13.85	14.08	0-1	0
	50	25	14.40	14.25	14.05	13.94	14.15		0
	50	50	14.41	14.27	13.88	13.95	14.08		0
	100	0	14.35	14.19	13.98	13.87	14.03		0
16QAM	1	0	14.20	14.23	13.89	13.46	13.87	0-1	0
	1	50	14.13	14.10	14.06	13.52	14.23		0
	1	99	14.09	14.29	13.74	13.51	13.93		0
	50	0	14.40	14.25	13.95	13.85	14.10	0-2	0
	50	25	14.41	14.32	14.05	13.91	14.13		0
	50	50	14.38	14.24	13.91	13.93	14.11		0
	100	0	14.28	14.29	14.00	13.91	14.04		0
64QAM	1	0	14.61	14.18	13.64	13.88	13.69	0-2	0
	1	50	14.56	14.13	14.11	14.16	14.29		0
	1	99	14.56	14.11	13.76	13.72	14.13		0
	50	0	14.60	14.37	14.10	14.12	14.31	0-3	0
	50	25	14.54	14.37	14.28	14.14	14.51		0
	50	50	14.56	14.32	14.17	14.11	14.51		0
	100	0	14.49	14.29	14.19	14.10	14.45		0
256QAM	1	0	14.85	13.84	14.43	14.06	14.14	0-5	0
	1	50	14.62	14.15	14.45	14.16	14.25		0
	1	99	14.88	13.87	14.41	14.03	14.47		0
	50	0	14.59	14.43	14.49	14.03	14.21		0
	50	25	14.72	14.60	14.38	13.98	14.24		0
	50	50	14.62	14.51	14.17	13.95	14.26		0
	100	0	14.62	14.51	14.13	13.89	14.23		0

Table 8-85
LTE Band 41 PC3 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

LTE Band 41 15 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	14.18	14.08	14.14	13.97	13.96	0	0
	1	36	14.23	14.28	14.22	14.08	14.19		0
	1	74	14.12	14.08	13.88	13.93	13.92		0
	36	0	14.32	14.12	14.19	13.98	14.14	0-1	0
	36	18	14.32	14.27	14.33	14.13	14.29		0
	36	37	14.27	14.30	14.20	14.10	14.16		0
	75	0	14.20	14.22	14.22	14.03	14.15		0
16QAM	1	0	13.91	14.10	13.81	13.87	14.10	0-1	0
	1	36	13.94	14.31	13.95	14.05	13.84		0
	1	74	13.83	14.16	14.08	13.81	14.04		0
	36	0	14.31	14.12	14.22	14.04	14.10	0-2	0
	36	18	14.35	14.32	14.34	14.08	14.23		0
	36	37	14.32	14.30	14.16	14.01	14.10		0
	75	0	14.23	14.24	14.18	13.99	14.06		0
64QAM	1	0	14.21	13.61	13.88	14.06	13.81	0-2	0
	1	36	14.22	13.88	14.15	14.30	14.14		0
	1	74	14.14	13.59	13.97	13.91	14.04		0
	36	0	14.42	14.09	14.22	14.11	14.14	0-3	0
	36	18	14.46	14.26	14.41	14.12	14.29		0
	36	37	14.35	14.14	14.34	14.11	14.30		0
	75	0	14.32	14.17	14.27	14.14	14.15		0
256QAM	1	0	14.55	13.54	14.43	14.16	14.34	0-5	0
	1	36	14.72	13.85	14.75	14.36	14.69		0
	1	74	14.58	13.57	14.51	14.03	14.57		0
	36	0	14.29	14.13	14.19	14.13	14.11		0
	36	18	14.42	14.30	14.38	14.18	14.24		0
	36	37	14.32	14.21	14.27	14.15	14.26		0
	75	0	14.32	14.21	14.23	14.09	14.13		0

Table 8-86
LTE Band 41 PC3 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

LTE Band 41 10 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	14.36	14.05	14.21	13.90	14.03	0	0
	1	25	14.36	14.28	14.37	14.20	14.24		0
	1	49	14.30	14.01	14.01	13.85	14.29		0
	25	0	14.25	14.13	14.25	14.07	14.05	0-1	0
	25	12	14.42	14.30	14.27	14.25	14.29		0
	25	25	14.33	14.18	14.13	14.09	13.99		0
	50	0	14.19	14.20	14.22	14.11	14.17		0
16QAM	1	0	14.22	14.13	14.12	14.07	14.12	0-1	0
	1	25	14.14	14.33	14.14	14.28	14.01		0
	1	49	14.28	14.05	13.90	13.97	14.07		0
	25	0	14.34	14.17	14.27	14.09	14.10	0-2	0
	25	12	14.36	14.31	14.32	14.25	14.41		0
	25	25	14.34	14.20	14.20	14.08	14.10		0
	50	0	14.21	14.20	14.23	14.11	14.10		0
64QAM	1	0	14.08	13.68	13.63	13.91	13.61	0-2	0
	1	25	13.99	14.02	13.92	14.26	13.85		0
	1	49	14.00	13.72	13.70	13.97	13.60		0
	25	0	14.37	14.25	14.20	14.08	14.12	0-3	0
	25	12	14.39	14.35	14.39	14.16	14.21		0
	25	25	14.37	14.24	14.22	14.11	14.15		0
	50	0	14.21	14.25	14.23	14.10	14.08		0
256QAM	1	0	14.07	13.66	13.92	14.09	13.78	0-5	0
	1	25	14.25	13.87	14.18	14.34	14.10		0
	1	49	14.00	13.68	13.96	14.12	13.85		0
	25	0	14.30	14.20	14.17	14.11	14.12		0
	25	12	14.34	14.39	14.35	14.14	14.12		0
	25	25	14.23	14.24	14.23	14.10	14.10		0
	50	0	14.28	14.32	14.29	14.12	14.07		0

Table 8-87
LTE Band 41 PC3 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

LTE Band 41 5 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	14.09	14.18	14.20	14.02	14.10	0	0
	1	12	14.14	14.26	14.35	14.14	14.21		0
	1	24	14.03	14.19	14.22	14.01	14.12		0
	12	0	14.23	14.26	14.31	14.14	14.14	0-1	0
	12	6	14.23	14.30	14.34	14.22	14.23		0
	12	13	14.18	14.21	14.27	14.18	14.13		0
	25	0	14.11	14.28	14.27	14.19	14.20		0
16QAM	1	0	13.82	14.32	14.14	14.27	14.02	0-1	0
	1	12	13.85	14.47	14.22	14.42	14.17		0
	1	24	13.74	14.34	14.14	14.31	14.07		0
	12	0	14.22	14.28	14.27	14.14	14.09	0-2	0
	12	6	14.26	14.32	14.31	14.26	14.19		0
	12	13	14.23	14.27	14.24	14.18	14.14		0
	25	0	14.14	14.22	14.20	14.15	14.11		0
64QAM	1	0	14.12	13.92	14.20	14.26	14.16	0-2	0
	1	12	14.13	13.97	14.24	14.29	14.16		0
	1	24	14.05	13.91	14.21	14.25	14.17		0
	12	0	14.33	14.39	14.32	14.24	14.20	0-3	0
	12	6	14.37	14.39	14.33	14.21	14.24		0
	12	13	14.26	14.37	14.30	14.25	14.25		0
	25	0	14.23	14.31	14.28	14.18	14.20		0
256QAM	1	0	14.51	13.84	14.62	14.23	14.54	0-5	0
	1	12	14.42	13.94	14.63	14.23	14.55		0
	1	24	14.53	13.90	14.63	14.25	14.58		0
	12	0	14.24	14.30	14.16	14.13	14.03		0
	12	6	14.28	14.35	14.19	14.13	14.08		0
	12	13	14.23	14.30	14.17	14.14	14.07		0
	25	0	14.28	14.28	14.22	14.18	14.10		0

Table 8-88
LTE Band 41 PC2 Measured P_{Max} - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	26.82	27.24	26.82	27.14	27.00	0	0
	1	50	27.08	27.17	27.02	27.29	**27.45**		0
	1	99	26.77	27.17	26.79	26.93	27.24		0
	50	0	26.06	26.30	26.01	26.28	26.46	0-1	1
	50	25	26.20	26.34	26.20	26.36	**26.68**		1
	50	50	26.13	26.30	26.10	26.28	26.60		1
	100	0	26.12	26.25	26.12	26.25	26.65		1

Table 8-89
LTE Band 41 PC2 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	**15.50**	15.26	15.15	14.90	14.77	0	0
	1	50	15.14	15.28	15.40	14.88	14.87		0
	1	99	15.35	15.39	14.91	14.77	14.60		0
	50	0	15.35	15.30	15.35	15.03	14.66	0-1	0
	50	25	**15.48**	15.37	15.47	15.12	14.98		0
	50	50	15.26	15.46	15.22	15.05	14.81		0
	100	0	15.25	15.33	15.30	15.09	14.89		0

8.2.10 LTE Uplink Carrier Aggregation Conducted Powers

Table 8-90
LTE Uplink Carrier Aggregation Measured P_{Max} or DSI = 2 (Right Edge Proximity Sensor Active)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL) Channel	PCC (UL) Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL) Channel	SCC (UL) Frequency [MHz]	SCC (DL) Channel	SCC (DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_66C	LTE B66	20	132572	1770.0	67036	2170.0	QPSK	1	0	LTE B66	20	132374	1750.2	66838	2150.2	QPSK	1	99	24.25	24.20
CA_66B	LTE B66	10	132622	1775.0	67086	2175.0	QPSK	1	0	LTE B66	10	132523	1765.1	66987	2165.1	QPSK	1	49	23.79	23.69

Table 8-91
LTE Uplink Carrier Aggregation Measured P_{Limit} for LTE Band 5/41 DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active), LTE Band 41 DSI = 2 (Right Edge Proximity Sensor Active)

	PCC									SCC									Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC UL Channel	PCC UL Frequency [MHz]	PCC DL Channel	PCC DL Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC UL Channel	SCC UL Frequency [MHz]	SCC DL Channel	SCC DL Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5B	LTE B5	10	20525	836.5	2525	881.5	QPSK	25	25	LTE B5	5	20597	843.7	2597	888.7	QPSK	12	0	16.35	16.36

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	14.32	14.40

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	39750	2506.0	QPSK	1	99	LTE B41 PC2	20	39948	2525.8	QPSK	1	0	15.60	15.35

Notes:

1. This device supports uplink carrier aggregation for LTE CA_5B, CA_66B, CA_66C, CA_41C with a maximum of two 20 MHz component carriers. For intraband contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when non-contiguous RB allocation is implemented. The conducted powers and MPR settings in this device are permanently implemented per the above 3GPP requirements.
2. Per FCC Guidance, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

Figure 8-2
Power Measurement Setup

8.3 NR Conducted Powers

8.3.1 NR Band n71

Table 8-92
NR Band n71 Measured P_{Max} - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	24.71	0	0.0
	1	53	24.30		0.0
	1	104	24.38		0.0
	50	0	24.28	0-0.5	0.5
	50	28	24.50	0	0.0
	50	56	24.30	0-0.5	0.5
	100	0	24.21		0.5
DFT-s-OFDM QPSK	1	1	**24.77**	0	0.0
	1	53	23.98		0.0
	1	104	23.93		0.0
	50	0	23.17	0-1	1.0
	50	28	**24.27**	0	0.0
	50	56	23.88	0-1	1.0
	100	0	23.65		1.0
DFT-s-OFDM 16QAM	1	1	23.78	0-1	1.0
CP-OFDM QPSK	1	1	23.19	0-1.5	1.5

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

Table 8-93
NR Band n71 Measured P_{Max} - 15 MHz Bandwidth

NR Band n71 15 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	24.74	0	0.0
	1	40	24.76		0.0
	1	77	24.66		0.0
	36	0	24.46	0-0.5	0.5
	36	22	24.74	0	0.0
	36	43	24.18	0-0.5	0.5
	75	0	24.32		0.5
DFT-s-OFDM QPSK	1	1	24.79	0	0.0
	1	40	24.77		0.0
	1	77	24.72		0.0
	36	0	23.87	0-1	1.0
	36	22	24.76	0	0.0
	36	43	23.66	0-1	1.0
	75	0	23.71		1.0
DFT-s-OFDM 16QAM	1	1	23.74	0-1	1.0
CP-OFDM QPSK	1	1	23.33	0-1.5	1.5

Note: NR Band n71 at 15 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-94
NR Band n71 Measured P_{Max} - 10 MHz Bandwidth

NR Band n71 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	133600 (668 MHz)	136100 (680.5 MHz)	138600 (693 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.72	24.77	24.78	0	0.0
	1	26	24.78	24.81	24.81		0.0
	1	50	24.65	24.68	24.75		0.0
	25	0	24.42	24.37	24.45	0-0.5	0.5
	25	14	24.73	24.73	24.75	0	0.0
	25	27	24.16	24.23	24.27	0-0.5	0.5
	50	0	24.30	24.28	24.33		0.5
DFT-s-OFDM QPSK	1	1	24.49	24.75	24.84	0	0.0
	1	26	24.99	25.00	25.00		0.0
	1	50	24.62	24.72	24.75		0.0
	25	0	23.82	23.83	23.84	0-1	1.0
	25	14	24.75	24.75	24.75	0	0.0
	25	27	23.65	23.64	23.60	0-1	1.0
	50	0	23.70	23.69	23.70		1.0
DFT-s-OFDM 16QAM	1	1	23.67	23.85	23.73	0-1	1.0
CP-OFDM QPSK	1	1	23.14	23.35	23.39	0-1.5	1.5

Table 8-95
NR Band n71 Measured P_{Max} - 5 MHz Bandwidth

NR Band n71 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	133100 (665.5 MHz)	136100 (680.5 MHz)	139100 (695.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.84	24.77	24.87	0	0.0
	1	13	24.78	24.64	24.76		0.0
	1	23	24.61	24.73	24.59		0.0
	12	0	24.50	24.41	24.34	0-0.5	0.5
	12	7	24.84	24.73	24.71	0	0.0
	12	13	24.29	24.24	24.15	0-0.5	0.5
	25	0	24.31	24.26	24.24		0.5
DFT-s-OFDM QPSK	1	1	24.88	24.84	24.83	0	0.0
	1	13	24.79	24.77	24.82		0.0
	1	23	24.77	24.70	24.57		0.0
	12	0	23.81	23.86	23.78	0-1	1.0
	12	7	24.76	24.67	24.67	0	0.0
	12	13	23.65	23.66	23.62	0-1	1.0
	25	0	23.72	23.71	23.68		1.0
DFT-s-OFDM 16QAM	1	1	23.46	23.70	23.81	0-1	1.0
CP-OFDM QPSK	1	1	22.87	23.24	23.37	0-1.5	1.5

Table 8-96
NR Band n71 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	14.91	0	0.0
	1	53	14.77		0.0
	1	104	14.92		0.0
	50	0	14.77	0-0.5	0.0
	50	28	14.81	0	0.0
	50	56	14.73	0-0.5	0.0
	100	0	14.81		0.0
DFT-s-OFDM QPSK	1	1	14.62	0	0.0
	1	53	**14.79**		0.0
	1	104	14.66		0.0
	50	0	14.74	0-1	0.0
	50	28	14.74	0	0.0
	50	56	**14.80**	0-1	0.0
	100	0	14.78		0.0
DFT-s-OFDM 16QAM	1	1	14.63	0-1	0.0
CP-OFDM QPSK	1	1	14.81	0-1.5	0.0

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

Table 8-97
NR Band n71 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

NR Band n71 15 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	14.95	0	0.0
	1	40	14.85		0.0
	1	77	14.95		0.0
	36	0	14.98	0-0.5	0.0
	36	22	14.97	0	0.0
	36	43	14.81	0-0.5	0.0
	75	0	14.90		0.0
DFT-s-OFDM QPSK	1	1	14.95	0	0.0
	1	40	14.91		0.0
	1	77	14.93		0.0
	36	0	15.00	0-1	0.0
	36	22	14.93	0	0.0
	36	43	14.88	0-1	0.0
	75	0	14.93		0.0
DFT-s-OFDM 16QAM	1	1	14.90	0-1	0.0
CP-OFDM QPSK	1	1	14.92	0-1.5	0.0

Note: NR Band n71 at 15 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-98
NR Band n71 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

NR Band n71 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	133600 (668 MHz)	136100 (680.5 MHz)	138600 (693 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	14.87	14.86	14.98	0	0.0
	1	26	14.95	14.97	15.00		0.0
	1	50	14.84	14.79	14.82		0.0
	25	0	14.94	14.96	14.98	0-0.5	0.0
	25	14	14.91	14.92	14.92	0	0.0
	25	27	14.82	14.82	14.89	0-0.5	0.0
	50	0	14.85	14.91	14.96		0.0
DFT-s-OFDM QPSK	1	1	14.92	14.88	14.99	0	0.0
	1	26	14.93	14.95	15.00		0.0
	1	50	14.76	14.72	14.96		0.0
	25	0	14.93	14.95	14.97	0-1	0.0
	25	14	14.91	14.93	14.95	0	0.0
	25	27	14.81	14.85	14.85	0-1	0.0
	50	0	14.92	14.87	14.96		0.0
DFT-s-OFDM 16QAM	1	1	14.68	14.81	14.88	0-1	0.0
CP-OFDM QPSK	1	1	14.88	14.75	14.95	0-1.5	0.0

Table 8-99
NR Band n71 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

NR Band n71 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	133100 (665.5 MHz)	136100 (680.5 MHz)	139100 (695.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	14.99	14.98	14.95	0	0.0
	1	13	14.85	14.86	14.88		0.0
	1	23	14.78	14.75	14.74		0.0
	12	0	14.98	14.97	14.92	0-0.5	0.0
	12	7	15.00	14.95	14.89	0	0.0
	12	13	14.85	14.78	14.75	0-0.5	0.0
	25	0	14.92	14.84	14.86		0.0
DFT-s-OFDM QPSK	1	1	14.98	15.00	14.98	0	0.0
	1	13	14.96	14.86	14.85		0.0
	1	23	14.87	14.86	14.79		0.0
	12	0	14.99	14.96	14.91	0-1	0.0
	12	7	14.91	14.88	14.81	0	0.0
	12	13	14.83	14.84	14.81	0-1	0.0
	25	0	14.95	14.93	14.87		0.0
DFT-s-OFDM 16QAM	1	1	14.94	14.96	14.84	0-1	0.0
CP-OFDM QPSK	1	1	14.95	14.97	14.96	0-1.5	0.0

8.3.2 NR Band n5

Table 8-100
NR Band n5 Measured P_{Max} - 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	24.12	0	0.0
	1	53	24.22		0.0
	1	104	24.41		0.0
	50	0	23.77	0-0.5	0.5
	50	28	24.11	0	0.0
	50	56	23.60	0-0.5	0.5
	100	0	23.50		0.5
DFT-s-OFDM QPSK	1	1	24.06	0	0.0
	1	53	24.08		0.0
	1	104	**24.38**		0.0
	50	0	23.10	0-1	1.0
	50	28	**24.18**	0	0.0
	50	56	23.35	0-1	1.0
	100	0	23.22		1.0
DFT-s-OFDM 16QAM	1	1	22.92	0-1	1.0
CP-OFDM QPSK	1	1	22.73	0-1.5	1.5

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

Table 8-101
NR Band n5 Measured P_{Max} - 15 MHz Bandwidth

NR Band n5 15 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	24.05	0	0.0
	1	40	24.20		0.0
	1	77	24.37		0.0
	36	0	24.36	0-0.5	0.5
	36	22	24.22	0	0.0
	36	43	23.94	0-0.5	0.5
	75	0	23.82		0.5
DFT-s-OFDM QPSK	1	1	24.15	0	0.0
	1	40	24.26		0.0
	1	77	24.20		0.0
	36	0	23.12	0-1	1.0
	36	22	24.17	0	0.0
	36	43	23.34	0-1	1.0
	75	0	23.20		1.0
DFT-s-OFDM 16QAM	1	1	23.15	0-1	1.0
CP-OFDM QPSK	1	1	22.74	0-1.5	1.5

Note: NR Band n5 at 15 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-102
NR Band n5 Measured P_{Max} - 10 MHz Bandwidth

NR Band n5 10 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	24.02	0	0.0
	1	26	24.18		0.0
	1	50	24.37		0.0
	25	0	23.85	0-0.5	0.5
	25	14	24.18	0	0.0
	25	27	23.76	0-0.5	0.5
	50	0	23.80		0.5
DFT-s-OFDM QPSK	1	1	24.14	0	0.0
	1	26	23.75		0.0
	1	50	24.24		0.0
	25	0	23.27	0-1	1.0
	25	14	24.17	0	0.0
	25	27	23.21	0-1	1.0
	50	0	23.17		1.0
DFT-s-OFDM 16QAM	1	1	23.21	0-1	1.0
CP-OFDM QPSK	1	1	22.72	0-1.5	1.5

Note: NR Band n5 at 10 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-103
NR Band n5 Measured P_{Max} - 5 MHz Bandwidth

NR Band n5 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	165300 (826.5 MHz)	167300 (836.5 MHz)	169300 (846.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.20	24.35	24.48	0	0.0
	1	13	24.09	24.29	24.57		0.0
	1	23	24.05	24.17	24.54		0.0
	12	0	23.72	23.93	24.14	0-0.5	0.5
	12	7	24.04	24.22	24.58	0	0.0
	12	13	23.63	23.74	24.07	0-0.5	0.5
	25	0	23.67	23.76	24.14		0.5
DFT-s-OFDM QPSK	1	1	24.13	24.24	24.51	0	0.0
	1	13	24.16	24.21	24.48		0.0
	1	23	24.06	24.13	24.58		0.0
	12	0	23.12	23.23	23.63	0-1	1.0
	12	7	24.08	24.20	24.54	0	0.0
	12	13	23.02	23.13	23.46	0-1	1.0
	25	0	23.06	23.24	23.52		1.0
DFT-s-OFDM 16QAM	1	1	23.25	23.46	23.48	0-1	1.0
CP-OFDM QPSK	1	1	22.72	22.82	23.07	0-1.5	1.5

Table 8-104
NR Band n5 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	16.25	0	0.0
	1	53	16.41		0.0
	1	104	16.52		0.0
	50	0	16.23	0-0.5	0.0
	50	28	16.28	0	0.0
	50	56	16.32	0-0.5	0.0
	100	0	16.26		0.0
DFT-s-OFDM QPSK	1	1	16.11	0	0.0
	1	53	**16.64**		0.0
	1	104	16.49		0.0
	50	0	16.18	0-1	0.0
	50	28	16.19	0	0.0
	50	56	**16.36**	0-1	0.0
	100	0	16.29		0.0
DFT-s-OFDM 16QAM	1	1	16.20	0-1	0.0
CP-OFDM QPSK	1	1	16.31	0-1.5	0.0

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

Table 8-105
NR Band n5 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

NR Band n5 15 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	16.29	0	0.0
	1	40	16.27		0.0
	1	77	16.53		0.0
	36	0	16.28	0-0.5	0.0
	36	22	16.38	0	0.0
	36	43	16.44	0-0.5	0.0
	75	0	16.33		0.0
DFT-s-OFDM QPSK	1	1	16.25	0	0.0
	1	40	16.37		0.0
	1	77	16.51		0.0
	36	0	16.26	0-1	0.0
	36	22	16.30	0	0.0
	36	43	16.44	0-1	0.0
	75	0	16.31		0.0
DFT-s-OFDM 16QAM	1	1	16.23	0-1	0.0
CP-OFDM QPSK	1	1	16.21	0-1.5	0.0

Note: NR Band n5 at 15 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-106
NR Band n5 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

NR Band n5 10 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	16.24	0	0.0
	1	26	16.35		0.0
	1	50	16.47		0.0
	25	0	16.36	0-0.5	0.0
	25	14	16.29	0	0.0
	25	27	16.32	0-0.5	0.0
	50	0	16.24		0.0
DFT-s-OFDM QPSK	1	1	16.13	0	0.0
	1	26	16.34		0.0
	1	50	16.45		0.0
	25	0	16.33	0-1	0.0
	25	14	16.27	0	0.0
	25	27	16.30	0-1	0.0
	50	0	16.29		0.0
DFT-s-OFDM 16QAM	1	1	16.26	0-1	0.0
CP-OFDM QPSK	1	1	16.17	0-1.5	0.0

Note: NR Band n5 at 10 MHz bandwidth does not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-107
NR Band n5 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

NR Band n5 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	165300 (826.5 MHz)	167300 (836.5 MHz)	169300 (846.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	16.27	16.33	16.57		0.0
	1	13	16.07	16.22	16.56	0	0.0
	1	23	16.24	16.30	16.68		0.0
	12	0	16.21	16.43	16.63	0-0.5	0.0
	12	7	16.15	16.31	16.62	0	0.0
	12	13	16.20	16.25	16.58	0-0.5	0.0
	25	0	16.14	16.32	16.62		0.0
DFT-s-OFDM QPSK	1	1	16.31	16.47	16.71		0.0
	1	13	16.17	16.36	16.53	0	0.0
	1	23	16.21	16.45	16.62		0.0
	12	0	16.20	16.33	16.67	0-1	0.0
	12	7	16.20	16.31	16.64	0	0.0
	12	13	16.12	16.23	16.48	0-1	0.0
	25	0	16.19	16.29	16.63		0.0
DFT-s-OFDM 16QAM	1	1	16.38	16.56	16.71	0-1	0.0
CP-OFDM QPSK	1	1	16.24	16.33	16.54	0-1.5	0.0

8.3.3 NR Band n66

Table 8-108
NR Band n66 Measured P_{Max} - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.26	24.10	23.79	0	0.0
	1	53	24.35	24.25	23.94		0.0
	1	104	24.17	24.06	23.73		0.0
	50	0	23.76	23.69	23.37	0-0.5	0.5
	50	28	24.15	24.06	23.71	0	0.0
	50	56	23.67	23.62	23.29	0-0.5	0.5
	100	0	23.70	23.58	23.28		0.5
DFT-s-OFDM QPSK	1	1	24.03	24.08	23.89	0	0.0
	1	53	**24.18**	24.05	23.80		0.0
	1	104	24.12	24.02	23.63		0.0
	50	0	23.30	23.10	22.79	0-1	1.0
	50	28	**24.15**	24.01	23.72	0	0.0
	50	56	23.25	23.01	22.73	0-1	1.0
	100	0	23.30	23.04	22.75		1.0
DFT-s-OFDM 16QAM	1	1	23.31	23.09	22.91	0-1	1.0
CP-OFDM QPSK	1	1	22.72	22.55	22.27	0-1.5	1.5

Table 8-109
NR Band n66 Measured P_{Max} - 15 MHz Bandwidth

NR Band n66 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343500 (1717.5 MHz)	349000 (1745 MHz)	354500 (1772.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.97	23.86	23.43	0	0.0
	1	40	23.86	23.82	23.34		0.0
	1	77	23.94	23.80	23.43		0.0
	36	0	23.62	23.48	23.12	0-0.5	0.5
	36	22	23.99	23.79	23.41	0	0.0
	36	43	23.64	23.41	23.07	0-0.5	0.5
	75	0	23.62	23.47	23.11		0.5
DFT-s-OFDM QPSK	1	1	24.05	23.96	23.53	0	0.0
	1	40	24.02	23.92	23.45		0.0
	1	77	24.03	23.94	23.49		0.0
	36	0	23.20	22.96	22.56	0-1	1.0
	36	22	24.02	23.85	23.45	0	0.0
	36	43	23.12	22.88	22.48	0-1	1.0
	75	0	23.15	22.94	22.53		1.0
DFT-s-OFDM 16QAM	1	1	23.24	22.93	22.62	0-1	1.0
CP-OFDM QPSK	1	1	22.53	22.43	21.93	0-1.5	1.5

Table 8-110
NR Band n66 Measured P_{Max} - 10 MHz Bandwidth

NR Band n66 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343000 (1715 MHz)	349000 (1745 MHz)	355000 (1775 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.95	23.91	23.35	0	0.0
	1	26	24.24	24.15	23.57		0.0
	1	50	23.96	23.86	23.40		0.0
	25	0	23.59	23.48	23.03	0-0.5	0.5
	25	14	24.05	23.90	23.42	0	0.0
	25	27	23.63	23.47	23.00	0-0.5	0.5
	50	0	23.62	23.49	23.08		0.5
DFT-s-OFDM QPSK	1	1	24.15	24.00	23.53	0	0.0
	1	26	24.29	24.18	23.71		0.0
	1	50	23.95	23.91	23.46		0.0
	25	0	23.15	23.02	22.48	0-1	1.0
	25	14	24.00	23.91	23.44	0	0.0
	25	27	23.11	22.97	22.46	0-1	1.0
	50	0	23.14	23.02	22.49		1.0
DFT-s-OFDM 16QAM	1	1	23.16	23.02	22.46	0-1	1.0
CP-OFDM QPSK	1	1	22.63	22.52	21.96	0-1.5	1.5

Table 8-111
NR Band n66 Measured P_{Max} - 5 MHz Bandwidth

NR Band n66 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	342500 (1712.5 MHz)	349000 (1745 MHz)	355500 (1777.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.89	23.81	23.38	0	0.0
	1	13	23.96	23.86	23.33		0.0
	1	23	23.91	23.82	23.37		0.0
	12	0	23.60	23.45	22.98	0-0.5	0.5
	12	7	24.01	23.86	23.36	0	0.0
	12	13	23.57	23.43	23.01	0-0.5	0.5
	25	0	23.64	23.48	23.02		0.5
DFT-s-OFDM QPSK	1	1	24.04	23.92	23.51	0	0.0
	1	13	24.12	23.93	23.45		0.0
	1	23	24.07	23.91	23.44		0.0
	12	0	23.13	22.95	22.42	0-1	1.0
	12	7	24.02	23.93	23.44	0	0.0
	12	13	23.17	22.99	22.38	0-1	1.0
	25	0	23.15	22.97	22.41		1.0
DFT-s-OFDM 16QAM	1	1	23.16	23.00	22.51	0-1	1.0
CP-OFDM QPSK	1	1	22.56	22.38	21.81	0-1.5	1.5

Table 8-112
NR Band n66 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	13.29	12.95	12.76	0	0.0
	1	53	13.16	13.01	12.58		0.0
	1	104	13.12	12.95	12.57		0.0
	50	0	13.26	13.03	12.70	0-0.5	0.0
	50	28	13.15	12.91	12.67	0	0.0
	50	56	13.12	12.92	12.62	0-0.5	0.0
	100	0	13.21	12.99	12.63		0.0
DFT-s-OFDM QPSK	1	1	13.18	13.19	12.77	0	0.0
	1	53	**13.21**	13.17	12.84		0.0
	1	104	13.06	13.12	12.69		0.0
	50	0	**13.09**	13.05	12.69	0-1	0.0
	50	28	13.06	12.95	12.68	0	0.0
	50	56	12.98	12.98	12.61	0-1	0.0
	100	0	13.04	12.97	12.63		0.0
DFT-s-OFDM 16QAM	1	1	12.93	12.88	12.43	0-1	0.0
CP-OFDM QPSK	1	1	13.45	13.29	12.96	0-1.5	0.0

Table 8-113
NR Band n66 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

NR Band n66 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343500 (1717.5 MHz)	349000 (1745 MHz)	354500 (1772.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	13.09	13.01	12.48	0	0.0
	1	40	13.00	12.85	12.42		0.0
	1	77	13.06	12.93	12.48		0.0
	36	0	13.09	12.88	12.46	0-0.5	0.0
	36	22	12.94	12.86	12.38	0	0.0
	36	43	12.95	12.84	12.42	0-0.5	0.0
	75	0	12.99	12.91	12.45		0.0
DFT-s-OFDM QPSK	1	1	13.04	12.93	12.59	0	0.0
	1	40	13.01	12.82	12.40		0.0
	1	77	13.11	12.92	12.48		0.0
	36	0	13.00	12.89	12.45	0-1	0.0
	36	22	12.95	12.86	12.40	0	0.0
	36	43	12.92	12.84	12.45	0-1	0.0
	75	0	12.98	12.88	12.47		0.0
DFT-s-OFDM 16QAM	1	1	13.18	13.03	12.62	0-1	0.0
CP-OFDM QPSK	1	1	12.99	12.85	12.47	0-1.5	0.0

NR Band n66 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

NR Band n66 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	343000 (1715 MHz)	349000 (1745 MHz)	355000 (1775 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	13.02	12.89	12.46	0	0.0
	1	26	13.08	12.96	12.56		0.0
	1	50	13.04	12.92	12.47		0.0
	25	0	12.97	12.87	12.48	0-0.5	0.0
	25	14	13.01	12.90	12.43	0	0.0
	25	27	13.02	12.88	12.39	0-0.5	0.0
	50	0	12.94	12.89	12.40		0.0
DFT-s-OFDM QPSK	1	1	13.02	12.83	12.38	0	0.0
	1	26	13.06	13.03	12.57		0.0
	1	50	12.92	12.88	12.32		0.0
	25	0	13.03	12.95	12.49	0-1	0.0
	25	14	13.06	12.91	12.46	0	0.0
	25	27	12.98	12.87	12.41	0-1	0.0
	50	0	13.03	12.90	12.47		0.0
DFT-s-OFDM 16QAM	1	1	13.21	13.06	12.63	0-1	0.0
CP-OFDM QPSK	1	1	13.12	13.02	12.44	0-1.5	0.0

Table 8-115
NR Band n66 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

NR Band n66 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	342500 (1712.5 MHz)	349000 (1745 MHz)	355500 (1777.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	13.05	12.86	12.46	0	0.0
	1	13	13.01	12.93	12.47		0.0
	1	23	13.09	12.84	12.48		0.0
	12	0	13.02	12.88	12.44	0-0.5	0.0
	12	7	13.03	12.83	12.35	0	0.0
	12	13	13.05	12.88	12.35	0-0.5	0.0
	25	0	13.04	12.88	12.39		0.0
DFT-s-OFDM QPSK	1	1	13.02	12.81	12.32	0	0.0
	1	13	12.98	12.78	12.31		0.0
	1	23	12.94	12.79	12.46		0.0
	12	0	13.07	12.91	12.37	0-1	0.0
	12	7	13.01	12.77	12.39	0	0.0
	12	13	12.99	12.86	12.35	0-1	0.0
	25	0	13.04	12.87	12.41		0.0
DFT-s-OFDM 16QAM	1	1	13.16	13.00	12.62	0-1	0.0
CP-OFDM QPSK	1	1	13.24	13.02	12.59	0-1.5	0.0

8.3.4 NR Band n25

Table 8-116
NR Band n25 Measured P_{Max} - 20 MHz Bandwidth

NR Band n25 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376500 (1882.5 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.78	23.88	23.94	0	0.0
	1	53	23.81	23.91	24.01		0.0
	1	104	23.64	23.77	23.72		0.0
	50	0	23.13	23.29	23.36	0-0.5	0.5
	50	28	23.74	23.89	23.96	0	0.0
	50	56	23.10	23.27	23.31	0-0.5	0.5
	100	0	23.13	23.29	23.36		0.5
DFT-s-OFDM QPSK	1	1	23.19	23.95	23.75	0	0.0
	1	53	23.81	**24.46**	23.99		0.0
	1	104	23.49	23.88	23.13		0.0
	50	0	22.54	22.92	22.98	0-1	1.0
	50	28	23.78	**23.95**	23.91	0	0.0
	50	56	22.71	22.87	22.65	0-1	1.0
	100	0	22.53	22.88	22.66		1.0
DFT-s-OFDM 16QAM	1	1	22.53	22.79	22.51	0-1	1.0
CP-OFDM QPSK	1	1	22.22	22.50	22.18	0-1.5	1.5

Table 8-117
NR Band n25 Measured P_{Max} - 15 MHz Bandwidth

NR Band n25 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371500 (1857.5 MHz)	376500 (1882.5 MHz)	381500 (1907.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.82	23.79	23.99	0	0.0
	1	40	23.79	23.82	24.01		0.0
	1	77	23.75	23.83	24.02		0.0
	36	0	23.18	23.28	23.49	0-0.5	0.5
	36	22	23.72	23.86	24.06	0	0.0
	36	43	23.12	23.28	23.42	0-0.5	0.5
	75	0	23.11	23.24	23.45		0.5
DFT-s-OFDM QPSK	1	1	23.26	23.94	23.89	0	0.0
	1	40	23.83	23.92	23.81		0.0
	1	77	23.84	23.89	23.09		0.0
	36	0	22.67	22.87	23.09	0-1	1.0
	36	22	23.74	23.86	23.78	0	0.0
	36	43	22.68	22.86	22.60	0-1	1.0
	75	0	22.63	22.88	22.71		1.0
DFT-s-OFDM 16QAM	1	1	22.82	22.87	22.97	0-1	1.0
CP-OFDM QPSK	1	1	22.31	22.52	22.46	0-1.5	1.5

Table 8-118
NR Band n25 Measured P_{Max} - 10 MHz Bandwidth

NR Band n25 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371000 (1855 MHz)	376500 (1882.5 MHz)	382000 (1910 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.82	23.79	23.99	0	0.0
	1	26	23.79	23.83	24.02		0.0
	1	50	23.70	23.86	23.91		0.0
	25	0	23.05	23.24	23.34	0-0.5	0.5
	25	14	23.69	23.76	23.93	0	0.0
	25	27	23.11	23.27	23.39	0-0.5	0.5
	50	0	23.15	23.21	23.40		0.5
DFT-s-OFDM QPSK	1	1	23.23	23.83	23.61	0	0.0
	1	26	23.94	24.41	23.59		0.0
	1	50	23.67	23.79	23.10		0.0
	25	0	22.53	22.80	22.75	0-1	1.0
	25	14	23.75	23.92	23.62	0	0.0
	25	27	22.76	22.86	22.27	0-1	1.0
	50	0	22.71	22.79	22.58		1.0
DFT-s-OFDM 16QAM	1	1	22.50	22.53	22.59	0-1	1.0
CP-OFDM QPSK	1	1	22.08	22.26	22.52	0-1.5	1.5

Table 8-119
NR Band n25 Measured P_{Max} - 5 MHz Bandwidth

NR Band n25 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	370500 (1852.5 MHz)	376500 (1882.5 MHz)	382500 (1912.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.69	23.83	23.96	0	0.0
	1	13	23.76	24.12	24.06		0.0
	1	23	23.67	24.08	24.16		0.0
	12	0	23.05	23.20	23.39	0-0.5	0.5
	12	7	23.73	23.86	24.02	0	0.0
	12	13	23.14	23.30	23.36	0-0.5	0.5
	25	0	23.07	23.28	23.43		0.5
DFT-s-OFDM QPSK	1	1	23.35	23.91	23.59	0	0.0
	1	13	23.67	23.98	23.41		0.0
	1	23	23.79	24.05	23.22		0.0
	12	0	22.61	22.80	22.60	0-1	1.0
	12	7	23.76	23.89	23.32	0	0.0
	12	13	22.78	22.90	22.19	0-1	1.0
	25	0	22.54	22.84	22.16		1.0
DFT-s-OFDM 16QAM	1	1	22.25	22.67	22.37	0-1	1.0
CP-OFDM QPSK	1	1	21.73	22.39	21.75	0-1.5	1.5

Table 8-120
NR Band n25 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 20 MHz Bandwidth

NR Band n25 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376500 (1882.5 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	12.79	12.72	13.01		0.0
	1	53	13.11	13.15	13.46	0	0.0
	1	104	12.78	12.76	12.98		0.0
	50	0	12.83	12.83	13.06	0-0.5	0.0
	50	28	12.73	12.80	13.08	0	0.0
	50	56	12.69	12.81	13.00	0-0.5	0.0
	100	0	12.72	12.72	13.03		0.0
DFT-s-OFDM QPSK	1	1	12.93	12.72	13.12		0.0
	1	53	12.95	12.88	**13.28**	0	0.0
	1	104	12.84	12.87	13.04		0.0
	50	0	12.80	12.90	**13.13**	0-1	0.0
	50	28	12.77	12.85	13.05	0	0.0
	50	56	12.68	12.79	13.01	0-1	0.0
	100	0	12.76	12.84	13.09		0.0
DFT-s-OFDM 16QAM	1	1	13.18	13.21	13.37	0-1	0.0
CP-OFDM QPSK	1	1	12.81	12.86	13.12	0-1.5	0.0

Table 8-121
NR Band n25 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 15 MHz Bandwidth

NR Band n25 15 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371500 (1857.5 MHz)	376500 (1882.5 MHz)	381500 (1907.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	12.65	12.74	12.98	0	0.0
	1	40	12.51	12.72	12.96		0.0
	1	77	12.60	12.73	12.89		0.0
	36	0	12.56	12.76	12.98	0-0.5	0.0
	36	22	12.62	12.66	12.86	0	0.0
	36	43	12.58	12.65	12.86	0-0.5	0.0
	75	0	12.61	12.69	12.93		0.0
DFT-s-OFDM QPSK	1	1	12.67	12.84	12.99	0	0.0
	1	40	12.70	12.82	12.97		0.0
	1	77	12.55	12.73	12.89		0.0
	36	0	12.57	12.75	12.96	0-1	0.0
	36	22	12.56	12.73	12.89	0	0.0
	36	43	12.54	12.65	12.85	0-1	0.0
	75	0	12.59	12.74	12.88		0.0
DFT-s-OFDM 16QAM	1	1	12.68	12.72	12.76	0-1	0.0
CP-OFDM QPSK	1	1	12.61	12.85	13.03	0-1.5	0.0

Table 8-122
NR Band n25 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 10 MHz Bandwidth

NR Band n25 10 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	371000 (1855 MHz)	376500 (1882.5 MHz)	382000 (1910 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	12.47	12.69	12.75	0	0.0
	1	26	12.60	12.73	12.77		0.0
	1	50	12.56	12.59	12.74		0.0
	25	0	12.52	12.62	12.81	0-0.5	0.0
	25	14	12.52	12.64	12.76	0	0.0
	25	27	12.53	12.70	12.81	0-0.5	0.0
	50	0	12.53	12.68	12.83		0.0
DFT-s-OFDM QPSK	1	1	12.56	12.76	12.79	0	0.0
	1	26	13.17	12.74	13.42		0.0
	1	50	12.43	12.66	12.81		0.0
	25	0	12.59	12.63	12.86	0-1	0.0
	25	14	12.57	12.63	12.80	0	0.0
	25	27	12.51	12.65	12.77	0-1	0.0
	50	0	12.49	12.69	12.79		0.0
DFT-s-OFDM 16QAM	1	1	12.36	12.49	12.65	0-1	0.0
CP-OFDM QPSK	1	1	12.43	12.58	12.77	0-1.5	0.0

Table 8-123
NR Band n25 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 3 (Back and/or Top Proximity Sensor Active) - 5 MHz Bandwidth

NR Band n25 5 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	370500 (1852.5 MHz)	376500 (1882.5 MHz)	382500 (1912.5 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	12.53	12.72	12.87	0	0.0
	1	13	12.57	12.84	13.02		0.0
	1	23	12.61	12.88	12.97		0.0
	12	0	12.47	12.71	12.82	0-0.5	0.0
	12	7	12.53	12.71	12.91	0	0.0
	12	13	12.50	12.73	12.94	0-0.5	0.0
	25	0	12.49	12.69	12.87		0.0
DFT-s-OFDM QPSK	1	1	12.54	12.67	12.86	0	0.0
	1	13	12.57	12.74	12.95		0.0
	1	23	12.56	12.85	12.84		0.0
	12	0	12.45	12.65	12.78	0-1	0.0
	12	7	12.58	12.72	12.85	0	0.0
	12	13	12.59	12.80	12.83	0-1	0.0
	25	0	12.57	12.76	12.90		0.0
DFT-s-OFDM 16QAM	1	1	12.23	12.67	12.79	0-1	0.0
CP-OFDM QPSK	1	1	12.47	12.71	12.86	0-1.5	0.0

8.3.5 NR Band n41

Table 8-124
NR Band n41 Measured P_{Max} - 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 π/2 BPSK	1	1	24.37	0	0.0
	1	137	24.60		0.0
	1	271	24.71		0.0
	135	0	23.98	0-0.5	0.5
	135	69	24.41	0	0.0
	135	138	24.00	0-0.5	0.5
	270	0	23.99		0.5
DFT-s-OFDM QPSK	1	1	24.40	0	0.0
	1	137	**24.59**		0.0
	1	271	24.41		0.0
	135	0	23.49	0-1	1.0
	135	69	**24.44**	0	0.0
	135	138	23.46	0-1	1.0
	270	0	23.45		1.0
DFT-s-OFDM 16QAM	1	1	23.35	0-1	1.0
CP-OFDM QPSK	1	1	22.96	0-1.5	1.5

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

Table 8-125
NR Band n41 Measured P_{Max} - 90 MHz Bandwidth

NR Band n41 90 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	508200 (2541 MHz)	528996 (2644.98 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	24.36	24.34	0	0.0
	1	123	24.45	24.09		0.0
	1	243	24.12	24.18		0.0
	120	0	23.79	23.56	0-0.5	0.5
	120	63	24.22	24.09	0	0.0
	120	125	23.59	23.42	0-0.5	0.5
	243	0	23.77	23.38		0.5
DFT-s-OFDM QPSK	1	1	24.41	24.23	0	0.0
	1	123	24.38	24.10		0.0
	1	243	24.02	24.03		0.0
	120	0	23.31	23.11	0-1	1.0
	120	63	24.24	24.12	0	0.0
	120	125	23.13	23.15	0-1	1.0
	243	0	23.27	23.04		1.0
DFT-s-OFDM 16QAM	1	1	23.35	23.17	0-1	1.0
CP-OFDM QPSK	1	1	22.94	22.72	0-1.5	1.5

Table 8-126
NR Band n41 Measured P_{Max} - 80 MHz Bandwidth

NR Band n41 80 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507204 (2536.02 MHz)	529998 (2649.99 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	24.48	24.31	0	0.0
	1	109	24.44	24.05		0.0
	1	215	24.35	23.87		0.0
	108	0	23.87	23.56	0-0.5	0.5
	108	55	24.46	23.98	0	0.0
	108	109	23.72	23.47	0-0.5	0.5
	216	0	23.91	23.46		0.5
DFT-s-OFDM QPSK	1	1	24.55	24.26	0	0.0
	1	109	24.53	23.92		0.0
	1	215	24.30	23.98		0.0
	108	0	23.42	23.14	0-1	1.0
	108	55	24.45	24.00	0	0.0
	108	109	23.23	23.13	0-1	1.0
	216	0	23.42	23.02		1.0
DFT-s-OFDM 16QAM	1	1	23.54	23.09	0-1	1.0
CP-OFDM QPSK	1	1	22.83	22.61	0-1.5	1.5

Table 8-127
NR Band n41 Measured P_{Max} - 60 MHz Bandwidth

NR Band n41 60 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	505200 (2526 MHz)	518598 (2592.99 MHz)	531996 (2659.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.46	24.34	24.18	0	0.0
	1	81	24.53	24.29	24.21		0.0
	1	160	24.39	24.31	24.29		0.0
	81	0	23.87	23.63	23.57	0-0.5	0.5
	81	41	24.44	24.28	24.12	0	0.0
	81	81	23.73	23.79	23.53	0-0.5	0.5
	162	0	23.82	23.67	23.58		0.5
DFT-s-OFDM QPSK	1	1	24.32	24.35	24.02	0	0.0
	1	81	24.37	24.26	24.17		0.0
	1	160	24.13	24.38	24.09		0.0
	81	0	23.38	23.16	23.25	0-1	1.0
	81	41	24.42	24.20	24.13	0	0.0
	81	81	23.35	23.26	23.16	0-1	1.0
	162	0	23.37	23.23	23.11		1.0
DFT-s-OFDM 16QAM	1	1	23.29	23.33	23.03	0-1	1.0
CP-OFDM QPSK	1	1	22.87	22.62	22.58	0-1.5	1.5

Table 8-128
NR Band n41 Measured P_{Max} - 50 MHz Bandwidth

NR Band n41 50 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	504204 (2521.02 MHz)	518598 (2592.99 MHz)	532998 (2664.99 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.45	24.42	24.46	0	0.0
	1	67	24.28	24.29	24.27		0.0
	1	131	24.37	24.36	24.44		0.0
	64	0	23.89	23.72	23.73	0-0.5	0.5
	64	35	24.42	24.28	24.19	0	0.0
	64	69	23.80	23.82	23.65	0-0.5	0.5
	128	0	23.86	23.71	23.67		0.5
DFT-s-OFDM QPSK	1	1	24.52	24.24	24.38	0	0.0
	1	67	24.45	24.33	24.31		0.0
	1	131	24.35	24.42	24.42		0.0
	64	0	23.41	23.25	23.27	0-1	1.0
	64	35	24.37	24.34	24.16	0	0.0
	64	69	23.36	23.28	23.17	0-1	1.0
	128	0	23.43	23.33	23.23		1.0
DFT-s-OFDM 16QAM	1	1	23.61	23.51	23.34	0-1	1.0
CP-OFDM QPSK	1	1	22.72	23.08	22.91	0-1.5	1.5

Table 8-129
NR Band n41 Measured P_{Max} - 40 MHz Bandwidth

NR Band n41 40 MHz Bandwidth								
			Channel				MPR Allowed per 3GPP [dB]	MPR Allowed per 3GPP [dB]
Modulation	RB Size	RB Offset	503202 (2516.01 MHz)	513468 (2567.34 MHz)	523734 (2618.67 MHz)	534000 (2670 MHz)		
DFT-s-OFDM π/2 BPSK	1	1	24.73	24.62	24.47	24.38	0	0.0
	1	53	24.66	24.71	24.56	24.54		0.0
	1	104	24.58	24.68	24.38	24.57		0.0
	50	0	23.99	24.02	23.72	23.81	0-0.5	0.5
	50	28	24.69	24.47	24.39	24.41	0	0.0
	50	56	24.02	24.01	23.77	23.82	0-0.5	0.5
	100	0	23.40	23.97	23.81	23.64		0.5
DFT-s-OFDM QPSK	1	1	24.62	24.31	24.46	24.52	0	0.0
	1	53	24.68	24.65	24.41	24.48		0.0
	1	104	24.61	24.30	24.56	24.50		0.0
	50	0	23.71	23.54	23.48	23.42	0-1	1.0
	50	28	24.69	24.49	24.41	24.37	0	0.0
	50	56	23.59	23.58	23.44	23.40	0-1	1.0
	100	0	23.72	23.53	23.39	23.33		1.0
DFT-s-OFDM 16QAM	1	1	23.60	23.60	23.64	23.53	0-1	1.0
CP-OFDM QPSK	1	1	22.95	23.02	23.02	22.84	0-1.5	1.5

Table 8-130
NR Band n41 Measured P_{Max} - 20 MHz Bandwidth

NR Band n41 20 MHz Bandwidth									
			Channel					MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	501204 (2506.02 MHz)	509898 (2549.49 MHz)	518598 (2592.99 MHz)	527298 (2636.49 MHz)	535998 (2679.99 MHz)		
			Conducted Power [dBm]						
DFT-s-OFDM π/2 BPSK	1	1	24.66	24.41	24.39	24.38	24.32	0	0.0
	1	26	24.49	24.32	24.44	24.25	24.20		0.0
	1	49	24.52	24.28	24.40	24.30	24.28		0.0
	25	0	23.92	23.79	23.78	23.72	23.74	0-0.5	0.5
	25	13	24.55	24.24	24.27	24.25	24.26	0	0.0
	25	26	23.86	23.68	23.71	23.65	23.69	0-0.5	0.5
	50	0	23.78	23.73	23.64	23.63	23.72		0.5
DFT-s-OFDM QPSK	1	1	24.63	24.43	24.32	24.24	24.27	0	0.0
	1	26	24.56	24.39	24.36	24.29	24.31		0.0
	1	49	24.62	24.20	24.30	24.28	24.38		0.0
	25	0	23.49	23.38	23.32	23.19	23.25	0-1	1.0
	25	13	24.47	24.27	24.28	24.16	24.28	0	0.0
	25	26	23.36	23.32	23.46	23.27	23.34	0-1	1.0
	50	0	23.52	23.34	23.28	23.10	23.36		1.0
DFT-s-OFDM 16QAM	1	1	23.38	23.39	23.33	23.36	23.44	0-1	1.0
CP-OFDM QPSK	1	1	23.12	22.82	22.65	22.62	22.71	0-1.5	1.5

Table 8-131
NR Band n41 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor 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 π/2 BPSK	1	1	14.89	0	0.0
	1	137	14.87		0.0
	1	271	14.82		0.0
	135	0	14.47	0-0.5	0.0
	135	69	14.49	0	0.0
	135	138	14.55	0-0.5	0.0
	270	0	14.49		0.0
DFT-s-OFDM QPSK	1	1	**14.78**	0	0.0
	1	137	14.55		0.0
	1	271	14.51		0.0
	135	0	**14.63**	0-1	0.0
	135	69	14.55	0	0.0
	135	138	14.45	0-1	0.0
	270	0	14.54		0.0
DFT-s-OFDM 16QAM	1	1	14.80	0-1	0.0
CP-OFDM QPSK	1	1	14.83	0-1.5	0.0

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

Table 8-132
NR Band n41 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active) - 90 MHz Bandwidth

NR Band n41 90 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	508200 (2541 MHz)	528996 (2644.98 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	14.73	14.53	0	0.0
	1	123	14.53	14.41		0.0
	1	243	14.46	14.37		0.0
	120	0	14.69	14.49	0-0.5	0.0
	120	63	14.58	14.37	0	0.0
	120	125	14.56	14.33	0-0.5	0.0
	243	0	14.64	14.45		0.0
DFT-s-OFDM QPSK	1	1	14.75	14.67	0	0.0
	1	123	14.52	14.40		0.0
	1	243	14.47	14.42		0.0
	120	0	14.71	14.48	0-1	0.0
	120	63	14.62	14.39	0	0.0
	120	125	14.55	14.33	0-1	0.0
	243	0	14.64	14.32		0.0
DFT-s-OFDM 16QAM	1	1	14.89	14.72	0-1	0.0
CP-OFDM QPSK	1	1	14.71	14.63	0-1.5	0.0

Table 8-133
NR Band n41 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active) - 80 MHz Bandwidth

NR Band n41 80 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	507204 (2536.02 MHz)	529998 (2649.99 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM π/2 BPSK	1	1	14.81	14.70	0	0.0
	1	109	14.70	14.66		0.0
	1	215	14.67	14.62		0.0
	108	0	14.84	14.55	0-0.5	0.0
	108	55	14.76	14.53	0	0.0
	108	109	14.69	14.42	0-0.5	0.0
	216	0	14.71	14.46		0.0
DFT-s-OFDM QPSK	1	1	14.73	14.72	0	0.0
	1	109	14.65	14.57		0.0
	1	215	14.57	14.53		0.0
	108	0	14.68	14.48	0-1	0.0
	108	55	14.66	14.50	0	0.0
	108	109	14.64	14.38	0-1	0.0
	216	0	14.72	14.53		0.0
DFT-s-OFDM 16QAM	1	1	14.75	14.87	0-1	0.0
CP-OFDM QPSK	1	1	14.91	14.66	0-1.5	0.0

Table 8-134
NR Band n41 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active) - 60 MHz Bandwidth

NR Band n41 60 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	505200 (2526 MHz)	518598 (2592.99 MHz)	531996 (2659.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	14.67	14.59	14.56	0	0.0
	1	81	14.72	14.62	14.68		0.0
	1	160	14.68	14.54	14.60		0.0
	81	0	14.79	14.52	14.49	0-0.5	0.0
	81	41	14.71	14.58	14.53	0	0.0
	81	81	14.60	14.53	14.42	0-0.5	0.0
	162	0	14.69	14.51	14.47		0.0
DFT-s-OFDM QPSK	1	1	14.83	14.66	14.56	0	0.0
	1	81	14.78	14.72	14.66		0.0
	1	160	14.74	14.68	14.52		0.0
	81	0	14.75	14.54	14.50	0-1	0.0
	81	41	14.57	14.59	14.39	0	0.0
	81	81	14.53	14.56	14.41	0-1	0.0
	162	0	14.62	14.57	14.49		0.0
DFT-s-OFDM 16QAM	1	1	14.94	14.72	14.78	0-1	0.0
CP-OFDM QPSK	1	1	14.58	14.48	14.69	0-1.5	0.0

Table 8-135
NR Band n41 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active) - 50 MHz Bandwidth

NR Band n41 50 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	504204 (2521.02 MHz)	518598 (2592.99 MHz)	532998 (2664.99 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	14.73	14.77	14.52	0	0.0
	1	67	14.64	14.69	14.49		0.0
	1	131	14.69	14.65	14.46		0.0
	64	0	14.65	14.61	14.42	0-0.5	0.0
	64	35	14.58	14.58	14.49	0	0.0
	64	69	14.64	14.60	14.40	0-0.5	0.0
	128	0	14.66	14.62	14.44		0.0
DFT-s-OFDM QPSK	1	1	14.82	14.68	14.62	0	0.0
	1	67	14.72	14.56	14.45		0.0
	1	131	14.77	14.73	14.56		0.0
	64	0	14.61	14.55	14.48	0-1	0.0
	64	35	14.65	14.48	14.46	0	0.0
	64	69	14.56	14.60	14.41	0-1	0.0
	128	0	14.59	14.54	14.49		0.0
DFT-s-OFDM 16QAM	1	1	14.74	14.81	14.76	0-1	0.0
CP-OFDM QPSK	1	1	14.55	14.79	14.70	0-1.5	0.0

Table 8-136
NR Band n41 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active) - 40 MHz Bandwidth

NR Band n41 40 MHz Bandwidth								
			Channel				MPR Allowed per 3GPP [dB]	MPR Allowed per 3GPP [dB]
Modulation	RB Size	RB Offset	503202 (2516.01 MHz)	513468 (2567.34 MHz)	523734 (2618.67 MHz)	534000 (2670 MHz)		
			Conducted Power [dBm]					
DFT-s-OFDM π/2 BPSK	1	1	14.99	14.98	14.86	14.75	0	0.0
	1	53	14.87	15.00	14.77	14.72		0.0
	1	104	14.71	14.87	14.69	14.83		0.0
	50	0	14.88	14.90	14.88	14.85	0-0.5	0.0
	50	28	14.76	14.74	14.79	14.67	0	0.0
	50	56	14.80	14.95	14.73	14.71	0-0.5	0.0
	100	0	14.91	14.92	14.82	14.76		0.0
DFT-s-OFDM QPSK	1	1	14.89	14.76	14.86	14.81	0	0.0
	1	53	14.86	14.87	14.80	14.69		0.0
	1	104	14.78	14.93	14.71	14.77		0.0
	50	0	14.89	14.96	14.87	14.82	0-1	0.0
	50	28	14.90	14.79	14.72	14.73	0	0.0
	50	56	14.83	14.90	14.74	14.67	0-1	0.0
	100	0	14.94	14.91	14.85	14.82		0.0
DFT-s-OFDM 16QAM	1	1	14.62	14.84	14.66	14.94	0-1	0.0
CP-OFDM QPSK	1	1	14.77	14.81	14.78	14.59	0-1.5	0.0

Table 8-137
NR Band n41 Measured P_{Limit} for DSI = 1 (Right and Back and/or Top Proximity Sensor Active), DSI = 2 (Right Edge Proximity Sensor Active) - 20 MHz Bandwidth

NR Band n41 20 MHz Bandwidth									
			Channel					MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	501204 (2506.02 MHz)	509898 (2549.49 MHz)	518598 (2592.99 MHz)	527298 (2636.49 MHz)	535998 (2679.99 MHz)		
			Conducted Power [dBm]						
DFT-s-OFDM π/2 BPSK	1	1	14.54	14.86	14.72	14.83	14.57	0	0.0
	1	26	14.77	14.82	14.69	14.71	14.50		0.0
	1	49	14.66	14.63	14.54	14.64	14.55		0.0
	25	0	14.64	14.80	14.67	14.60	14.64	0-0.5	0.0
	25	13	14.70	14.67	14.61	14.58	14.59	0	0.0
	25	26	14.69	14.71	14.74	14.66	14.63	0-0.5	0.0
	50	0	14.81	14.85	14.65	14.54	14.49		0.0
DFT-s-OFDM QPSK	1	1	14.87	14.90	14.79	14.67	14.62	0	0.0
	1	26	14.75	14.82	14.73	14.74	14.66		0.0
	1	49	14.88	14.77	14.69	14.62	14.54		0.0
	25	0	14.82	14.88	14.74	14.53	14.58	0-1	0.0
	25	13	14.69	14.67	14.68	14.65	14.52	0	0.0
	25	26	14.78	14.73	14.73	14.59	14.47	0-1	0.0
	50	0	14.71	14.79	14.69	14.56	14.60		0.0
DFT-s-OFDM 16QAM	1	1	14.62	14.74	14.78	14.79	14.86	0-1	0.0
CP-OFDM QPSK	1	1	14.59	14.69	14.88	14.58	14.64	0-1.5	0.0

8.4 WLAN Conducted Powers

Table 8-138
2.4 GHz WLAN Maximum Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]						
Freq [MHz]	Channel	IEEE Transmission Mode				
		802.11b	802.11g	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average	Average
2412	1	18.91	18.25	16.46	16.43	14.88
2417	2			17.88	17.85	
2437	6	18.90	18.73	17.86	17.85	14.71
2457	10	18.70	18.54	17.59	17.60	
2462	11	16.16	16.31	14.99	14.94	14.98

Table 8-139
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]						
Freq [MHz]	Channel	IEEE Transmission Mode				
		802.11b	802.11g	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average	Average
2412	1	18.79	18.62	16.32	16.34	14.79
2417	2			17.68	17.71	
2437	6	18.61	18.90	17.60	17.56	14.98
2457	10			17.84	17.86	
2462	11	18.81	18.62	15.42	15.43	14.98

Table 8-140
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11b Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	18.91	18.79	21.86
2437	6	18.90	18.61	21.77
2457	10	18.70	18.82	21.77
2462	11	16.16	18.81	20.69

Table 8-141
5 GHz WLAN Maximum Average RF Power – Ant 1

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average
5180	36	17.78	16.97	16.97	13.97
5200	40	17.71	16.94	16.94	13.78
5220	44	17.67	16.95	16.99	13.64
5240	48	17.69	16.91	16.98	13.91
5260	52	17.88	16.74	16.79	13.98
5280	56	17.94	16.67	16.68	13.77
5300	60	17.61	16.94	16.95	13.73
5320	64	17.98	16.71	16.74	13.71
5500	100	14.67	14.78	14.75	13.98
5600	120	14.56	14.71	14.72	13.93
5620	124	14.66	14.75	14.72	13.63
5720	144	14.61	14.78	14.74	13.76
5745	149	14.92	14.56	14.57	13.97
5785	157	14.56	14.67	14.67	13.70
5825	165	14.70	14.78	14.78	13.81

Table 8-142
5 GHz WLAN Maximum Average RF Power – Ant 2

5GHz (20MHz) Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11a	802.11n	802.11ac	802.11ax
		Average	Average	Average	Average
5180	36	17.93	16.98	16.99	13.84
5200	40	17.90	16.99	16.98	13.80
5220	44	17.76	16.94	16.94	13.69
5240	48	17.86	16.98	16.98	13.68
5260	52	17.88	16.97	16.96	13.70
5280	56	17.67	16.95	16.93	13.96
5300	60	17.73	16.88	16.90	13.66
5320	64	17.97	16.91	16.97	13.98
5500	100	14.54	14.75	14.75	13.96
5600	120	14.61	14.76	14.70	13.81
5620	124	14.54	14.65	14.68	13.74
5720	144	14.55	14.69	14.67	13.65
5745	149	14.68	14.83	14.84	13.89
5785	157	14.78	14.94	14.98	13.96
5825	165	14.52	14.60	14.60	13.81

Table 8-143
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	16.97	16.98	19.99
5200	40	16.94	16.99	19.98
5220	44	16.95	16.94	19.96
5240	48	16.91	16.98	19.96
5260	52	16.74	16.97	19.87
5280	56	16.67	16.95	19.82
5300	60	16.94	16.88	19.92
5320	64	16.71	16.91	19.82
5500	100	14.78	14.75	17.78
5600	120	14.71	14.76	17.75
5620	124	14.75	14.65	17.71
5720	144	14.78	14.69	17.75
5745	149	14.56	14.83	17.71
5785	157	14.67	14.94	17.82
5825	165	14.78	14.60	17.70

Table 8-144
Maximum Output Powers During Conditions with 2.4 GHz and 5 GHz WLAN

2.4GHz 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
2412	1	10.08	10.43
2437	6	10.27	10.24
2462	11	10.44	10.22

5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5210	42	7.86	7.89
5290	58	8.01	7.98
5530	106	7.41	7.20
5610	122	7.42	7.58
5690	138	7.02	7.08
5775	155	8.14	8.12

Table 8-145
2.4 GHz WLAN Reduced Average RF Power – Proximity Sensor Active – Ant 1

2.4GHz Conducted Power [dBm]						
Freq [MHz]	Channel	IEEE Transmission Mode				
		802.11b	802.11g	802.11n	802.11ac	802.11ax (SU)
		Average	Average	Average	Average	Average
2412	1	11.13	11.49	11.00	11.73	11.00
2437	6	11.30	11.19	10.93	11.67	10.99
2462	11	11.06	11.54	11.20	11.75	11.02

Table 8-146
2.4 GHz WLAN Reduced Average RF Power – Proximity Sensor Active – Ant 2

2.4GHz Conducted Power [dBm]						
Freq [MHz]	Channel	IEEE Transmission Mode				
		802.11b	802.11g	802.11n	802.11ac	802.11ax (SU)
		Average	Average	Average	Average	Average
2412	1	11.18	11.49	11.05	11.67	11.03
2437	6	11.02	11.32	10.89	11.67	10.92
2462	11	11.28	11.20	11.23	11.80	11.10

Table 8-147
2.4 GHz WLAN Reduced Average RF Power – Proximity Sensor Active – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	10.08	10.43	13.27
2437	6	10.27	10.24	13.27
2462	11	10.44	10.22	13.34

Table 8-148
5 GHz WLAN Reduced Average RF Power – Proximity Sensor Active – Ant 1

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5210	42	7.86	8.53
5290	58	8.01	8.54
5530	106	7.41	7.18
5610	122	7.42	7.18
5690	138	7.02	7.20
5775	155	8.14	8.75

Table 8-149
5 GHz WLAN Reduced Average RF Power – Proximity Sensor Active – Ant 2

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax
		Average	Average
5210	42	7.89	8.43
5290	58	7.98	8.35
5530	106	7.20	7.01
5610	122	7.58	7.40
5690	138	7.08	7.33
5775	155	8.12	8.41

Table 8-150
5 GHz WLAN Reduced Average RF Power – Proximity Sensor Active – MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	7.86	7.89	10.89
5290	58	8.01	7.98	11.01
5530	106	7.41	7.20	10.32
5610	122	7.42	7.58	10.51
5690	138	7.02	7.08	10.06
5775	155	8.14	8.12	11.14

Table 8-151
Reduced Output Powers During Conditions with 2.4 GHz and 5 GHz WLAN – Proximity Sensor Active

2.4GHz 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
2412	1	10.08	10.43
2437	6	10.27	10.24
2462	11	10.44	10.22

5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5210	42	7.86	7.89
5290	58	8.01	7.98
5530	106	7.41	7.20
5610	122	7.42	7.58
5690	138	7.02	7.08
5775	155	8.14	8.12

Table 8-152
2.4 GHz WLAN Reduced Average RF Power – Proximity Sensor and 5G mmWave Active – Ant 1

2.4GHz Conducted Power [dBm]						
Freq [MHz]	Channel	IEEE Transmission Mode				
		802.11b	802.11g	802.11n	802.11ac	802.11ax (SU)
		Average	Average	Average	Average	Average
2412	1	8.26	8.10	8.17	8.73	8.86
2437	6	7.97	8.33	7.94	8.71	8.78
2462	11	8.32	8.10	7.80	8.79	8.91

Table 8-153
2.4 GHz WLAN Reduced Average RF Power – Proximity Sensor and 5G mmWave Active – Ant 2

2.4GHz Conducted Power [dBm]						
Freq [MHz]	Channel	IEEE Transmission Mode				
		802.11b	802.11g	802.11n	802.11ac	802.11ax (SU)
		Average	Average	Average	Average	Average
2412	1	8.16	8.04	8.16	8.71	8.77
2437	6	7.76	8.17	8.09	8.77	8.82
2462	11	7.95	8.21	7.95	8.80	8.87

Table 8-154
2.4 GHz WLAN Reduced Average RF Power – Proximity Sensor and 5G mmWave Active – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	8.17	8.16	11.18
2437	6	7.94	8.09	11.03
2462	11	7.80	7.95	10.89

Table 8-155
5 GHz WLAN Reduced Average RF Power – Proximity Sensor and 5G mmWave Active – Ant 1

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax (SU)
		Average	Average
5210	42	5.86	6.63
5290	58	5.95	6.55
5530	106	6.01	6.98
5610	122	6.11	6.68
5690	138	6.35	6.83
5775	155	6.18	6.61

Table 8-156
5 GHz WLAN Reduced Average RF Power – Proximity Sensor and 5G mmWave Active – Ant 2

5GHz (80MHz) Conducted Power [dBm]			
Freq [MHz]	Channel	IEEE Transmission Mode	
		802.11ac	802.11ax (SU)
		Average	Average
5210	42	5.81	6.53
5290	58	5.85	6.91
5530	106	6.10	6.68
5610	122	5.82	6.50
5690	138	5.97	6.74
5775	155	6.15	6.84

Table 8-157
5 GHz WLAN Reduced Average RF Power – Proximity Sensor and 5G mmWave Active – MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	5.86	5.81	8.85
5290	58	5.95	5.85	8.91
5530	106	6.01	6.10	9.07
5610	122	6.11	5.82	8.98
5690	138	6.35	5.97	9.17
5775	155	6.18	6.15	9.18

Table 8-158
Reduced Output Powers During Conditions with 2.4 GHz and 5 GHz WLAN – Proximity Sensor and 5G mmWave Active

2.4GHz 802.11n Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
2412	1	8.17	8.16
2437	6	7.94	8.09
2462	11	7.80	7.95

5GHz (80MHz) 802.11ac Conducted Power [dBm]			
Freq [MHz]	Channel	ANT1	ANT2
5210	42	5.86	5.81
5290	58	5.95	5.85
5530	106	6.01	6.10
5610	122	6.11	5.82
5690	138	6.35	5.97
5775	155	6.18	6.15

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.

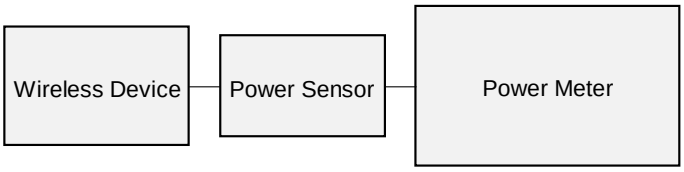


Figure 8-3
Power Measurement Setup

8.5 Bluetooth Conducted Powers

Table 8-159
Bluetooth Maximum Average RF Power – Ant 1

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	14.49	28.125
2441	1.0	39	15.50	35.514
2480	1.0	78	13.60	22.898
2402	2.0	0	13.53	22.537
2441	2.0	39	14.52	28.288
2480	2.0	78	12.64	18.361
2402	3.0	0	13.57	22.730
2441	3.0	39	14.56	28.543
2480	3.0	78	12.71	18.668

Table 8-160
Bluetooth Maximum Average RF Power – Ant 2

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	13.04	20.114
2441	1.0	39	15.59	36.258
2480	1.0	78	13.84	24.227
2402	2.0	0	12.05	16.025
2441	2.0	39	14.63	29.020
2480	2.0	78	12.90	19.503
2402	3.0	0	12.11	16.267
2441	3.0	39	14.74	29.792
2480	3.0	78	12.97	19.820

Table 8-161
Bluetooth Reduced Average RF Power – Proximity Sensor Active – Ant 1

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	9.22	8.352
2441	1.0	39	10.62	11.522
2480	1.0	78	8.81	7.597

Table 8-162
Bluetooth Reduced Average RF Power – Proximity Sensor Active – Ant 2

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	6.76	4.741
2441	1.0	39	10.24	10.578
2480	1.0	78	8.53	7.123

Table 8-163
Bluetooth Reduced Average RF Power – Proximity Sensor and 5G mmWave Active – Ant 1

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	6.33	4.291
2441	1.0	39	7.49	5.608
2480	1.0	78	5.67	3.686

Table 8-164
Bluetooth Reduced Average RF Power – Proximity Sensor and 5G mmWave Active – Ant 2

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	4.66	2.926
2441	1.0	39	7.52	5.652
2480	1.0	78	5.83	3.829

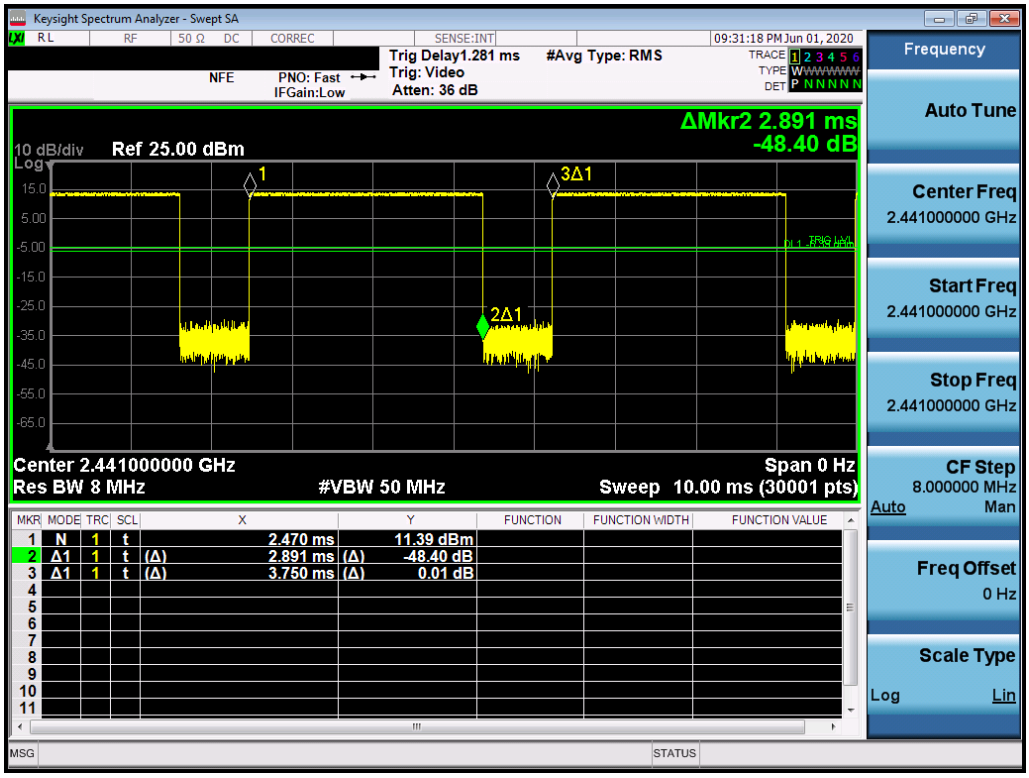


Figure 8-4
Bluetooth Transmission Plot

Equation 8-1
Bluetooth Duty Cycle Calculation

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

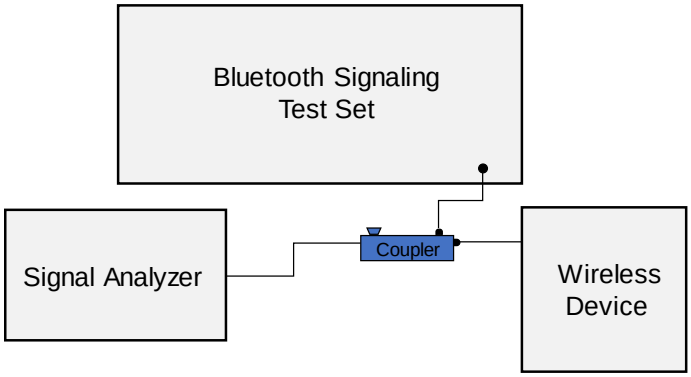


Figure 8-5
Power Measurement Setup

9.1 Tissue Verification

Table 9-1
Measured Tissue Properties (1 of 2)

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	%dev σ	%dev ε
05/25/2020	750 Body	21.7	680	0.949	53.446	0.958	55.804	-0.94%	-4.23%
			695	0.954	53.410	0.959	55.745	-0.52%	-4.19%
			700	0.956	53.398	0.959	55.726	-0.31%	-4.18%
			710	0.960	53.372	0.960	55.687	0.00%	-4.16%
			725	0.965	53.335	0.961	55.629	0.42%	-4.12%
			750	0.974	53.270	0.964	55.531	1.04%	-4.07%
			770	0.982	53.230	0.965	55.453	1.76%	-4.01%
			785	0.988	53.199	0.966	55.395	2.28%	-3.96%
06/01/2020	750 Body	21.4	680	0.922	54.516	0.958	55.804	-3.76%	-2.31%
			695	0.927	54.477	0.959	55.745	-3.34%	-2.27%
			700	0.929	54.464	0.959	55.726	-3.13%	-2.26%
			710	0.932	54.447	0.960	55.687	-2.92%	-2.23%
			725	0.938	54.422	0.961	55.629	-2.39%	-2.17%
			750	0.947	54.369	0.964	55.531	-1.76%	-2.09%
			770	0.955	54.320	0.965	55.453	-1.04%	-2.04%
			785	0.962	54.284	0.966	55.395	-0.41%	-2.01%
07/01/2020	835 Body	21.5	820	0.936	53.423	0.969	55.258	-3.41%	-3.32%
			835	0.952	53.263	0.970	55.200	-1.86%	-3.51%
			850	0.969	53.104	0.988	55.154	-1.92%	-3.72%
07/05/2020	835 Body	22.3	820	0.925	54.558	0.969	55.258	-4.54%	-1.27%
			835	0.939	54.408	0.970	55.200	-3.20%	-1.43%
			850	0.953	54.245	0.988	55.154	-3.54%	-1.65%
7/8/2020	835 Body	21.8	820	0.947	54.053	0.969	55.258	-2.27%	-2.18%
			835	0.963	53.903	0.970	55.200	-0.72%	-2.35%
			850	0.979	53.760	0.988	55.154	-0.91%	-2.53%
07/22/2020	835 Body	21.5	820	0.977	53.968	0.969	55.258	0.83%	-2.33%
			835	0.983	53.925	0.970	55.200	1.34%	-2.31%
			850	0.990	53.885	0.988	55.154	0.20%	-2.30%
06/01/2020	1750 Body	21.1	1710	1.499	53.159	1.463	53.537	2.46%	-0.71%
			1720	1.512	53.118	1.469	53.511	2.93%	-0.73%
			1745	1.541	53.029	1.485	53.445	3.77%	-0.78%
			1750	1.546	53.012	1.488	53.432	3.90%	-0.79%
			1770	1.565	52.938	1.501	53.379	4.26%	-0.83%
			1790	1.584	52.850	1.514	53.326	4.62%	-0.89%
06/23/2020	1750 Body	20.6	1710	1.499	52.002	1.463	53.537	2.46%	-2.87%
			1720	1.511	51.958	1.469	53.511	2.86%	-2.90%
			1745	1.538	51.850	1.485	53.445	3.57%	-2.98%
			1750	1.544	51.830	1.488	53.432	3.76%	-3.00%
			1770	1.565	51.749	1.501	53.379	4.26%	-3.05%
			1790	1.587	51.674	1.514	53.326	4.82%	-3.10%
7/14/2020	1750 Body	20.8	1710	1.500	53.165	1.463	53.537	2.53%	-0.69%
			1720	1.512	53.116	1.469	53.511	2.93%	-0.74%
			1745	1.540	53.012	1.485	53.445	3.70%	-0.81%
			1750	1.546	52.990	1.488	53.432	3.90%	-0.83%
			1770	1.568	52.898	1.501	53.379	4.46%	-0.90%
			1790	1.589	52.805	1.514	53.326	4.95%	-0.98%
06/23/2020	1900 Body	22.8	1850	1.468	52.139	1.520	53.300	-3.42%	-2.18%
			1860	1.479	52.109	1.520	53.300	-2.70%	-2.23%
			1880	1.499	52.051	1.520	53.300	-1.38%	-2.34%
			1900	1.520	51.989	1.520	53.300	0.00%	-2.46%
			1905	1.526	51.972	1.520	53.300	0.39%	-2.49%
			1910	1.531	51.953	1.520	53.300	0.72%	-2.53%
07/11/2020	1900 Body	23.6	1850	1.506	52.926	1.520	53.300	-0.92%	-0.70%
			1860	1.516	52.894	1.520	53.300	-0.26%	-0.76%
			1880	1.539	52.837	1.520	53.300	1.25%	-0.87%
			1900	1.562	52.779	1.520	53.300	2.76%	-0.98%
			1905	1.567	52.763	1.520	53.300	3.09%	-1.01%
			1910	1.573	52.746	1.520	53.300	3.49%	-1.04%
07/20/2020	1900 Body	23.7	1850	1.500	54.200	1.520	53.300	-1.32%	1.69%
			1860	1.510	54.163	1.520	53.300	-0.66%	1.62%
			1880	1.532	54.098	1.520	53.300	0.79%	1.50%
			1900	1.554	54.033	1.520	53.300	2.24%	1.38%
			1905	1.560	54.013	1.520	53.300	2.63%	1.34%
			1910	1.565	53.995	1.520	53.300	2.96%	1.30%

Table 9-2
Measured Tissue Properties (2 of 2)

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
07/04/2020	2450 Body	23.0	2400	1.966	51.677	1.902	52.767	3.36%	-2.07%
			2450	2.025	51.546	1.950	52.700	3.85%	-2.19%
			2480	2.058	51.457	1.993	52.662	3.26%	-2.29%
			2500	2.082	51.392	2.021	52.636	3.02%	-2.36%
07/06/2020	2450 Body	21.8	2400	1.961	51.669	1.902	52.767	3.10%	-2.08%
			2450	2.028	51.487	1.950	52.700	4.00%	-2.30%
			2480	2.069	51.368	1.993	52.662	3.81%	-2.46%
			2500	2.096	51.294	2.021	52.636	3.71%	-2.55%
			2510	2.110	51.260	2.035	52.623	3.69%	-2.59%
07/20/2020	2450 Body	23.6	2400	1.975	51.641	1.902	52.767	3.84%	-2.13%
			2450	2.034	51.503	1.950	52.700	4.31%	-2.27%
			2480	2.071	51.411	1.993	52.662	3.91%	-2.38%
			2500	2.095	51.350	2.021	52.636	3.66%	-2.44%
			2510	2.107	51.321	2.035	52.623	3.54%	-2.47%
7/21/2020	2450 Body	22.3	2400	1.905	50.945	1.902	52.767	0.16%	-3.45%
			2450	1.971	50.762	1.950	52.700	1.08%	-3.68%
			2480	2.012	50.648	1.993	52.662	0.95%	-3.82%
			2500	2.039	50.579	2.021	52.636	0.89%	-3.91%
			2510	2.053	50.543	2.035	52.623	0.88%	-3.95%
07/23/2020	2450 Body	22.6	2400	1.942	51.056	1.902	52.767	2.10%	-3.24%
			2450	2.008	50.859	1.950	52.700	2.97%	-3.49%
			2480	2.049	50.742	1.993	52.662	2.81%	-3.65%
			2500	2.076	50.644	2.021	52.636	2.72%	-3.78%
05/23/2020	2450 Body	23.5	2535	2.122	50.961	2.071	52.592	2.46%	-3.10%
			2550	2.141	50.916	2.092	52.573	2.34%	-3.15%
			2560	2.154	50.865	2.106	52.560	2.28%	-3.22%
			2600	2.201	50.748	2.163	52.509	1.76%	-3.35%
			2650	2.262	50.586	2.234	52.445	1.25%	-3.54%
			2680	2.296	50.491	2.277	52.407	0.83%	-3.66%
			2700	2.320	50.416	2.305	52.382	0.65%	-3.75%
07/06/2020	2450 Body	21.8	2510	2.110	51.260	2.035	52.623	3.69%	-2.59%
			2535	2.145	51.166	2.071	52.592	3.57%	-2.71%
			2550	2.166	51.104	2.092	52.573	3.54%	-2.79%
			2560	2.180	51.064	2.106	52.560	3.51%	-2.85%
			2600	2.236	50.911	2.163	52.509	3.37%	-3.04%
			2650	2.306	50.713	2.234	52.445	3.22%	-3.30%
			2680	2.348	50.592	2.277	52.407	3.12%	-3.46%
			2700	2.377	50.516	2.305	52.382	3.12%	-3.56%

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
07/05/2020	5200-5800 Body	21.7	5180	5.349	46.975	5.276	49.041	1.38%	-4.21%
			5190	5.358	46.968	5.288	49.028	1.32%	-4.20%
			5200	5.368	46.955	5.299	49.014	1.30%	-4.20%
			5210	5.379	46.939	5.311	49.001	1.28%	-4.21%
			5220	5.391	46.915	5.323	48.987	1.28%	-4.23%
			5240	5.420	46.855	5.346	48.960	1.38%	-4.30%
			5250	5.434	46.826	5.358	48.947	1.42%	-4.33%
			5260	5.449	46.811	5.369	48.933	1.49%	-4.34%
			5270	5.462	46.799	5.381	48.919	1.51%	-4.33%
			5280	5.476	46.794	5.393	48.906	1.54%	-4.32%
			5290	5.489	46.785	5.404	48.892	1.57%	-4.31%
			5300	5.499	46.776	5.416	48.879	1.53%	-4.30%
			5310	5.512	46.762	5.428	48.865	1.55%	-4.30%
			5320	5.521	46.738	5.439	48.851	1.51%	-4.33%
			5500	5.755	46.415	5.650	48.607	1.86%	-4.51%
			5510	5.771	46.401	5.661	48.594	1.94%	-4.51%
			5520	5.787	46.397	5.673	48.580	2.01%	-4.49%
			5530	5.797	46.386	5.685	48.566	1.97%	-4.49%
			5540	5.806	46.372	5.696	48.553	1.93%	-4.49%
			5550	5.817	46.353	5.708	48.539	1.91%	-4.50%
			5560	5.829	46.331	5.720	48.526	1.91%	-4.52%
			5580	5.855	46.296	5.743	48.499	1.95%	-4.54%
			5600	5.891	46.256	5.766	48.471	2.17%	-4.57%
			5610	5.908	46.233	5.778	48.458	2.25%	-4.59%
			5620	5.921	46.210	5.790	48.444	2.26%	-4.61%
			5640	5.945	46.190	5.813	48.417	2.27%	-4.60%
			5660	5.971	46.154	5.837	48.390	2.30%	-4.62%
			5670	5.982	46.141	5.848	48.376	2.29%	-4.62%
			5680	5.994	46.130	5.860	48.363	2.29%	-4.62%
			5690	6.008	46.109	5.872	48.349	2.32%	-4.63%
			5700	6.023	46.086	5.883	48.336	2.38%	-4.65%
			5710	6.035	46.060	5.895	48.322	2.37%	-4.68%
			5720	6.047	46.050	5.907	48.309	2.37%	-4.68%
			5745	6.089	46.027	5.936	48.275	2.58%	-4.66%
			5750	6.096	46.020	5.942	48.268	2.59%	-4.66%
			5755	6.103	46.011	5.947	48.261	2.62%	-4.66%
			5765	6.114	45.998	5.959	48.248	2.60%	-4.66%
			5775	6.125	45.988	5.971	48.234	2.58%	-4.66%
			5785	6.138	45.969	5.982	48.220	2.61%	-4.67%
			5795	6.150	45.943	5.994	48.207	2.60%	-4.70%
			5800	6.157	45.932	6.000	48.200	2.62%	-4.71%
			5805	6.164	45.924	6.006	48.193	2.63%	-4.71%
			5825	6.191	45.887	6.029	48.166	2.69%	-4.73%
07/19/2020	5750 Body	23.5	5670	6.029	46.326	5.848	48.376	3.10%	-4.24%
			5680	6.040	46.303	5.860	48.363	3.07%	-4.26%
			5690	6.053	46.286	5.872	48.349	3.08%	-4.27%
			5700	6.069	46.268	5.883	48.336	3.16%	-4.28%
			5710	6.086	46.258	5.895	48.322	3.24%	-4.27%
			5720	6.101	46.241	5.907	48.309	3.28%	-4.28%
			5745	6.136	46.202	5.936	48.275	3.37%	-4.29%
			5750	6.143	46.198	5.942	48.268	3.38%	-4.29%
			5755	6.149	46.194	5.947	48.261	3.40%	-4.28%
			5765	6.162	46.184	5.959	48.248	3.41%	-4.28%
			5775	6.175	46.171	5.971	48.234	3.42%	-4.28%
			5785	6.187	46.154	5.982	48.220	3.43%	-4.28%
			5795	6.199	46.129	5.994	48.207	3.42%	-4.31%
			5800	6.206	46.120	6.000	48.200	3.43%	-4.32%
			5805	6.214	46.113	6.006	48.193	3.46%	-4.32%
			5825	6.244	46.074	6.029	48.166	3.57%	-4.34%
07/27/2020	5750 Body	22.6	5670	6.026	46.240	5.848	48.376	3.04%	-4.42%
			5680	6.039	46.224	5.860	48.363	3.05%	-4.42%
			5690	6.059	46.206	5.872	48.349	3.18%	-4.43%
			5700	6.072	46.176	5.883	48.336	3.21%	-4.47%
			5710	6.078	46.155	5.895	48.322	3.10%	-4.48%
			5720	6.088	46.151	5.907	48.309	3.06%	-4.47%
			5745	6.133	46.129	5.936	48.275	3.32%	-4.45%
			5750	6.139	46.119	5.942	48.268	3.32%	-4.45%
			5755	6.146	46.108	5.947	48.261	3.35%	-4.46%
			5765	6.156	46.097	5.959	48.248	3.31%	-4.46%
			5775	6.170	46.080	5.971	48.234	3.33%	-4.47%
			5785	6.184	46.054	5.982	48.220	3.38%	-4.49%
			5795	6.197	46.043	5.994	48.207	3.39%	-4.49%
			5800	6.203	46.039	6.000	48.200	3.38%	-4.48%
			5805	6.210	46.037	6.006	48.193	3.40%	-4.47%
			5825	6.242	46.000	6.029	48.166	3.53%	-4.50%

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.

9.2 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 Appendix D.

Table 9-3
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	Measured SAR_{1g} (W/kg)	1 W Target SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	$Deviation_{1g}$ (%)
L	750	BODY	05/25/2020	22.7	21.7	0.200	1054	7410	1.680	8.530	8.400	-1.52%
L	750	BODY	06/01/2020	22.3	21.4	0.200	1054	7410	1.840	8.530	9.200	7.85%
P	835	BODY	07/01/2020	22.9	21.8	0.200	4d132	7551	1.990	9.960	9.950	-0.10%
D	835	BODY	07/05/2020	22.8	22.3	0.200	4d047	7488	1.870	9.470	9.350	-1.27%
P	835	BODY	07/08/2020	22.0	21.8	0.200	4d132	7551	2.010	9.960	10.050	0.90%
P	835	BODY	07/22/2020	22.7	21.5	0.200	4d047	7551	2.020	9.470	10.100	6.65%
I	1750	BODY	06/01/2020	21.4	21.2	0.100	1008	7527	4.010	37.400	40.100	7.22%
I	1750	BODY	06/23/2020	20.9	20.6	0.100	1008	7570	3.840	37.400	38.400	2.67%
I	1750	BODY	07/14/2020	20.5	20.8	0.100	1008	7570	3.930	37.400	39.300	5.08%
J	1900	BODY	06/23/2020	23.1	22.8	0.100	5d149	7571	4.160	39.400	41.600	5.58%
J	1900	BODY	07/11/2020	23.4	23.6	0.100	5d080	7571	4.230	39.200	42.300	7.91%
J	1900	BODY	07/20/2020	22.5	23.7	0.100	5d080	7571	4.130	39.200	41.300	5.36%
K	2450	BODY	07/04/2020	22.4	22.0	0.100	719	7547	5.080	50.800	50.800	0.00%
O	2450	BODY	07/06/2020	22.8	21.9	0.100	981	7552	4.900	50.900	49.000	-3.73%
K	2450	BODY	07/20/2020	23.6	23.6	0.100	719	7409	5.290	50.800	52.900	4.13%
O	2450	BODY	07/21/2020	24.5	22.8	0.100	981	7552	4.880	50.900	48.800	-4.13%
O	2450	BODY	07/23/2020	25.0	23.2	0.100	981	7552	4.840	50.900	48.400	-4.91%
K	2600	BODY	05/23/2020	22.4	22.0	0.100	1064	7547	5.560	55.600	55.600	0.00%
O	2600	BODY	07/06/2020	22.8	21.9	0.100	1004	7552	5.820	54.800	58.200	6.20%
G	5250	BODY	07/05/2020	24.0	22.0	0.050	1237	7538	3.810	75.600	76.200	0.79%
G	5600	BODY	07/05/2020	24.0	22.0	0.050	1237	7538	3.990	78.500	79.800	1.66%
G	5750	BODY	07/05/2020	24.0	22.0	0.050	1237	7538	3.660	75.900	73.200	-3.56%
G	5750	BODY	07/19/2020	21.1	22.7	0.050	1237	7538	3.670	75.900	73.400	-3.29%
G	5750	BODY	07/27/2020	21.9	22.4	0.050	1237	7538	3.800	75.900	76.000	0.13%

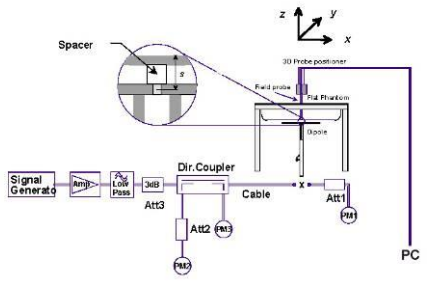


Figure 9-1
System Verification Setup Diagram

Figure 9-2
System Verification Setup Photo

REV 21.4 M
09/11/2019

10 SAR DATA SUMMARY

10.1 Standalone Body SAR Data

Table 10-1
UMTS 850 Body SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna State	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
846.60	4233	UMTS 850	RMC	25.0	24.36	-0.01	19 mm	118	37139	1:1	back	0.314	1.159	0.364	
846.60	4233	UMTS 850	RMC	25.0	24.36	-0.01	23 mm	2	37139	1:1	top	0.223	1.159	0.258	
846.60	4233	UMTS 850	RMC	25.0	24.36	-0.11	0 mm	118	37139	1:1	right	0.241	1.159	0.279	
846.60	4233	UMTS 850	RMC	25.0	24.36	0.04	0 mm	118	37139	1:1	left	0.091	1.159	0.105	
836.60	4183	UMTS 850	RMC	18.5	17.94	0.03	0 mm	79	37139	1:1	back	0.665	1.138	0.757	
826.40	4132	UMTS 850	RMC	18.5	17.84	-0.18	0 mm	79	37139	1:1	top	0.584	1.164	0.680	
836.60	4183	UMTS 850	RMC	18.5	17.94	0.00	0 mm	79	37139	1:1	top	0.693	1.138	0.789	A1
846.60	4233	UMTS 850	RMC	18.5	18.32	0.07	0 mm	79	37139	1:1	top	0.630	1.042	0.656	
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 10-2
UMTS 1750 Body SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna State	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1712.40	1312	UMTS 1750	RMC	25.0	24.29	-0.01	19 mm	113	03040	1:1	back	0.372	1.178	0.438	
1732.40	1412	UMTS 1750	RMC	25.0	24.32	0.01	19 mm	113	03040	1:1	back	0.574	1.169	0.671	
1752.60	1513	UMTS 1750	RMC	25.0	24.48	-0.03	19 mm	113	03040	1:1	back	0.434	1.127	0.489	
1732.40	1412	UMTS 1750	RMC	25.0	24.32	-0.01	23 mm	113	03040	1:1	top	0.549	1.169	0.642	
1732.40	1412	UMTS 1750	RMC	25.0	24.32	-0.01	7 mm	113	03040	1:1	right	0.115	1.169	0.134	
1732.40	1412	UMTS 1750	RMC	25.0	24.32	0.11	0 mm	113	03040	1:1	left	0.172	1.169	0.201	
1712.40	1312	UMTS 1750	RMC	14.5	14.31	-0.06	0 mm	113	03040	1:1	back	0.615	1.045	0.643	
1732.40	1412	UMTS 1750	RMC	14.5	14.17	-0.05	0 mm	113	03040	1:1	back	0.623	1.079	0.672	
1752.60	1513	UMTS 1750	RMC	14.5	14.40	-0.04	0 mm	113	03040	1:1	back	0.745	1.023	0.762	A2
1732.40	1412	UMTS 1750	RMC	14.5	14.17	-0.05	0 mm	7	03040	1:1	top	0.619	1.079	0.668	
1732.40	1412	UMTS 1750	RMC	22.0	21.89	0.02	0 mm	113	03040	1:1	right	0.196	1.026	0.201	
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 10-3
UMTS 1900 Body SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna State	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	9400	UMTS 1900	RMC	25.0	23.77	-0.03	19 mm	113	37139	1:1	back	0.386	1.327	0.512	
1880.00	9400	UMTS 1900	RMC	25.0	23.77	0.00	23 mm	113	37139	1:1	top	0.449	1.327	0.596	
1880.00	9400	UMTS 1900	RMC	25.0	23.77	-0.04	7 mm	113	37139	1:1	right	0.156	1.327	0.207	
1880.00	9400	UMTS 1900	RMC	25.0	23.77	0.02	0 mm	113	37139	1:1	left	0.250	1.327	0.332	
1880.00	9400	UMTS 1900	RMC	13.0	12.30	-0.06	0 mm	113	37139	1:1	back	0.550	1.175	0.646	
1852.40	9262	UMTS 1900	RMC	13.0	12.11	-0.05	0 mm	5	37139	1:1	top	0.559	1.227	0.686	
1880.00	9400	UMTS 1900	RMC	13.0	12.30	-0.03	0 mm	5	37139	1:1	top	0.554	1.175	0.651	
1907.60	9538	UMTS 1900	RMC	13.0	12.43	-0.04	0 mm	5	37139	1:1	top	0.602	1.140	0.686	A3
1880.00	9400	UMTS 1900	RMC	22.0	21.20	0.03	0 mm	113	37139	1:1	right	0.274	1.202	0.329	
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 10-4
LTE Band 71 Body SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	0	25.0	24.13	0.02	0	03719	QPSK	1	0	19 mm	back	1:1	0.202	1.222	0.247	
680.50	133297	Mid	LTE Band 71	20	0	24.0	23.12	-0.07	1	03719	QPSK	50	0	19 mm	back	1:1	0.176	1.225	0.216	
680.50	133297	Mid	LTE Band 71	20	4	25.0	24.13	-0.04	0	03719	QPSK	1	0	23 mm	top	1:1	0.187	1.222	0.229	
680.50	133297	Mid	LTE Band 71	20	4	24.0	23.12	-0.10	1	03719	QPSK	50	0	23 mm	top	1:1	0.169	1.225	0.207	
680.50	133297	Mid	LTE Band 71	20	26	25.0	24.13	0.18	0	03719	QPSK	1	0	0 mm	right	1:1	0.120	1.222	0.147	
680.50	133297	Mid	LTE Band 71	20	26	24.0	23.12	0.01	1	03719	QPSK	50	0	0 mm	right	1:1	0.105	1.225	0.129	
680.50	133297	Mid	LTE Band 71	20	26	25.0	24.13	-0.20	0	03719	QPSK	1	0	0 mm	left	1:1	0.058	1.222	0.071	
680.50	133297	Mid	LTE Band 71	20	26	24.0	23.12	0.05	1	03719	QPSK	50	0	0 mm	left	1:1	0.053	1.225	0.065	
680.50	133297	Mid	LTE Band 71	20	78	15.0	14.00	-0.20	0	03719	QPSK	1	0	0 mm	back	1:1	0.254	1.259	0.320	
680.50	133297	Mid	LTE Band 71	20	78	15.0	14.03	-0.14	0	03719	QPSK	50	0	0 mm	back	1:1	0.275	1.250	0.344	A4
680.50	133297	Mid	LTE Band 71	20	78	15.0	14.00	0.12	0	03719	QPSK	1	0	0 mm	top	1:1	0.215	1.259	0.271	
680.50	133297	Mid	LTE Band 71	20	78	15.0	14.03	0.16	0	03719	QPSK	50	0	0 mm	top	1:1	0.228	1.250	0.285	
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 10-5
LTE Band 12 Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	78	25.0	23.89	0.03	0	03719	QPSK	1	49	19 mm	back	1:1	0.223	1.291	0.288	
707.50	23095	Mid	LTE Band 12	10	78	24.0	22.95	0.01	1	03719	QPSK	25	12	19 mm	back	1:1	0.172	1.274	0.219	
707.50	23095	Mid	LTE Band 12	10	26	25.0	23.89	0.06	0	03719	QPSK	1	49	23 mm	top	1:1	0.221	1.291	0.285	
707.50	23095	Mid	LTE Band 12	10	26	24.0	22.95	-0.07	1	03719	QPSK	25	12	23 mm	top	1:1	0.196	1.274	0.250	
707.50	23095	Mid	LTE Band 12	10	26	25.0	23.89	-0.06	0	03719	QPSK	1	49	0 mm	right	1:1	0.114	1.291	0.147	
707.50	23095	Mid	LTE Band 12	10	26	24.0	22.95	-0.01	1	03719	QPSK	25	12	0 mm	right	1:1	0.099	1.274	0.126	
707.50	23095	Mid	LTE Band 12	10	52	25.0	23.89	0.04	0	03719	QPSK	1	49	0 mm	left	1:1	0.077	1.291	0.099	
707.50	23095	Mid	LTE Band 12	10	52	24.0	22.95	0.13	1	03719	QPSK	25	12	0 mm	left	1:1	0.060	1.274	0.076	
707.50	23095	Mid	LTE Band 12	10	78	17.0	15.70	-0.04	0	03719	QPSK	1	49	0 mm	back	1:1	0.349	1.349	0.471	
707.50	23095	Mid	LTE Band 12	10	78	17.0	15.87	-0.14	0	03719	QPSK	25	12	0 mm	back	1:1	0.392	1.297	0.508	A5
707.50	23095	Mid	LTE Band 12	10	78	17.0	15.70	-0.12	0	03719	QPSK	1	49	0 mm	top	1:1	0.326	1.349	0.440	
707.50	23095	Mid	LTE Band 12	10	78	17.0	15.87	0.16	0	03719	QPSK	25	12	0 mm	top	1:1	0.338	1.297	0.438	
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 10-6
LTE Band 13 Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	78	25.0	23.74	0.03	0	03719	QPSK	1	49	19 mm	back	1:1	0.339	1.337	0.453	
782.00	23230	Mid	LTE Band 13	10	78	24.0	22.85	0.08	1	03719	QPSK	25	12	19 mm	back	1:1	0.289	1.303	0.377	
782.00	23230	Mid	LTE Band 13	10	78	25.0	23.74	-0.10	0	03719	QPSK	1	49	23 mm	top	1:1	0.316	1.337	0.422	
782.00	23230	Mid	LTE Band 13	10	78	24.0	22.85	-0.10	1	03719	QPSK	25	12	23 mm	top	1:1	0.251	1.303	0.327	
782.00	23230	Mid	LTE Band 13	10	78	25.0	23.74	0.00	0	03719	QPSK	1	49	0 mm	right	1:1	0.154	1.337	0.206	
782.00	23230	Mid	LTE Band 13	10	78	24.0	22.85	0.16	1	03719	QPSK	25	12	0 mm	right	1:1	0.131	1.303	0.171	
782.00	23230	Mid	LTE Band 13	10	78	25.0	23.74	0.02	0	03719	QPSK	1	49	0 mm	left	1:1	0.089	1.337	0.119	
782.00	23230	Mid	LTE Band 13	10	78	24.0	22.85	-0.04	1	03719	QPSK	25	12	0 mm	left	1:1	0.078	1.303	0.102	
782.00	23230	Mid	LTE Band 13	10	78	17.0	15.58	0.15	0	03719	QPSK	1	49	0 mm	back	1:1	0.398	1.387	0.552	
782.00	23230	Mid	LTE Band 13	10	78	17.0	15.65	-0.16	0	03719	QPSK	25	12	0 mm	back	1:1	0.453	1.365	0.618	A6
782.00	23230	Mid	LTE Band 13	10	78	17.0	15.58	-0.13	0	03719	QPSK	1	49	0 mm	top	1:1	0.382	1.387	0.530	
782.00	23230	Mid	LTE Band 13	10	78	17.0	15.65	-0.17	0	03719	QPSK	25	12	0 mm	top	1:1	0.401	1.365	0.547	
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 10-7
LTE Band 26 (Cell) Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.																			
831.50	26865	Mid	LTE Band 26 (Cell)	15	79	25.0	24.21	-0.06	0	37139	QPSK	1	74	19 mm	back	1:1	0.338	1.199	0.405	
831.50	26865	Mid	LTE Band 26 (Cell)	15	79	24.0	23.12	-0.06	1	37139	QPSK	36	37	19 mm	back	1:1	0.272	1.225	0.333	
831.50	26865	Mid	LTE Band 26 (Cell)	15	79	25.0	24.21	0.06	0	37139	QPSK	1	74	23 mm	top	1:1	0.218	1.199	0.261	
831.50	26865	Mid	LTE Band 26 (Cell)	15	79	24.0	23.12	-0.01	1	37139	QPSK	36	37	23 mm	top	1:1	0.179	1.225	0.219	
831.50	26865	Mid	LTE Band 26 (Cell)	15	118	25.0	24.21	0.01	0	37139	QPSK	1	74	0 mm	right	1:1	0.249	1.199	0.299	
831.50	26865	Mid	LTE Band 26 (Cell)	15	118	24.0	23.12	0.00	1	37139	QPSK	36	37	0 mm	right	1:1	0.201	1.225	0.246	
831.50	26865	Mid	LTE Band 26 (Cell)	15	118	25.0	24.21	0.14	0	37139	QPSK	1	74	0 mm	left	1:1	0.084	1.199	0.101	
831.50	26865	Mid	LTE Band 26 (Cell)	15	118	24.0	23.12	-0.02	1	37139	QPSK	36	37	0 mm	left	1:1	0.073	1.225	0.089	
831.50	26865	Mid	LTE Band 26 (Cell)	15	79	17.0	16.14	-0.02	0	37139	QPSK	1	74	0 mm	back	1:1	0.425	1.219	0.518	
831.50	26865	Mid	LTE Band 26 (Cell)	15	79	17.0	16.12	-0.05	0	37139	QPSK	36	37	0 mm	back	1:1	0.440	1.225	0.539	A7
831.50	26865	Mid	LTE Band 26 (Cell)	15	79	17.0	16.14	-0.01	0	37139	QPSK	1	74	0 mm	top	1:1	0.411	1.219	0.501	
831.50	26865	Mid	LTE Band 26 (Cell)	15	79	17.0	16.12	-0.02	0	37139	QPSK	36	37	0 mm	top	1:1	0.425	1.225	0.521	
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 10-8
LTE Band 5 (Cell) Body SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g) (W/kg)	Scaling Factor	Reported SAR (1g) (W/kg)	Plot #
		MHz	Ch.																			
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	25.0	24.34	0.02	0	37139	QPSK	1	49	19 mm	back	1:1	0.343	1.164	0.399	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	24.0	23.40	-0.15	1	37139	QPSK	25	25	19 mm	back	1:1	0.289	1.148	0.332	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	25.0	24.34	-0.01	0	37139	QPSK	1	49	23 mm	top	1:1	0.315	1.164	0.367	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	24.0	23.40	-0.01	1	37139	QPSK	25	25	23 mm	top	1:1	0.245	1.148	0.281	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	118	25.0	24.34	-0.07	0	37139	QPSK	1	49	0 mm	right	1:1	0.223	1.164	0.260	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	118	24.0	23.40	-0.09	1	37139	QPSK	25	25	0 mm	right	1:1	0.189	1.148	0.217	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	118	25.0	24.34	0.20	0	37139	QPSK	1	49	0 mm	left	1:1	0.069	1.164	0.080	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	118	24.0	23.40	0.10	1	37139	QPSK	25	25	0 mm	left	1:1	0.065	1.148	0.075	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	17.0	16.37	0.04	0	38376	QPSK	1	49	0 mm	back	1:1	0.377	1.156	0.436	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	17.0	16.36	0.09	0	38376	QPSK	25	25	0 mm	back	1:1	0.393	1.159	0.455	A8
2CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	17.0	16.35	0.05	0	38376	QPSK	25	25	0 mm	back	1:1	0.375	1.161	0.435	
	SCC	843.70	20597	Mid	LTE Band 5 (Cell)	5								25	0							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	17.0	16.37	-0.08	0	38376	QPSK	1	49	0 mm	top	1:1	0.370	1.156	0.428	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	79	17.0	16.36	-0.09	0	38376	QPSK	25	25	0 mm	top	1:1	0.391	1.159	0.453	
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 10-9
LTE Band 66 (AWS) Body SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																(W/kg)		(W/kg)	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	25.0	24.50	0.01	0	38376	QPSK	1	50	19 mm	back	1:1	0.370	1.122	0.415	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	24.0	23.74	-0.15	1	38376	QPSK	50	25	19 mm	back	1:1	0.304	1.062	0.323	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	113	25.0	24.37	0.00	0	38376	QPSK	1	50	23 mm	top	1:1	0.559	1.156	0.646	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	25.0	24.50	0.00	0	38376	QPSK	1	50	23 mm	top	1:1	0.666	1.122	0.747	A9
1 CC Uplink	N/A	1770.00	132572	High	LTE Band 66 (AWS)	20	113	25.0	24.20	-0.04	0	38376	QPSK	1	0	23 mm	top	1:1	0.651	1.202	0.783	
1 CC Uplink	N/A	1775.00	132622	High	LTE Band 66 (AWS)	10	113	25.0	23.69	0.01	0	38376	QPSK	1	0	23 mm	top	1:1	0.601	1.352	0.813	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	24.0	23.74	0.02	1	38376	QPSK	50	25	23 mm	top	1:1	0.542	1.062	0.576	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	24.0	23.70	-0.03	1	38376	QPSK	100	0	23 mm	top	1:1	0.514	1.072	0.551	
2 CC Uplink CA_66C	PCC	1770.00	132572	High	LTE Band 66 (AWS)	20	113	25.0	24.25	-0.03	0	38376	QPSK	1	0	23 mm	top	1:1	0.655	1.189	0.779	
	SCC	1750.20	132374	High	LTE Band 66 (AWS)	20								1	99							
2CC Uplink CA_66B	PCC	1775.00	132622	High	LTE Band 66 (AWS)	10	113	25.0	23.79	-0.10	0	38376	QPSK	1	0	23 mm	top	1:1	0.613	1.321	0.810	
	SCC	1765.10	132523	High	LTE Band 66 (AWS)	10								1	49							
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	25.0	24.50	0.13	0	38376	QPSK	1	50	0 mm	right	1:1	0.433	1.122	0.486	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	24.0	23.74	0.00	1	38376	QPSK	50	25	0 mm	right	1:1	0.347	1.062	0.369	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	25.0	24.50	-0.06	0	38376	QPSK	1	50	0 mm	left	1:1	0.145	1.122	0.163	
1 CC Uplink	N/A	1745.00	132322	Mid	LTE Band 66 (AWS)	20	113	24.0	23.74	-0.11	1	38376	QPSK	50	25	0 mm	left	1:1	0.117	1.062	0.124	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	113	13.5	13.20	-0.04	0	38376	QPSK	1	50	0 mm	back	1:1	0.534	1.072	0.572	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	113	13.5	13.25	-0.04	0	38376	QPSK	50	25	0 mm	back	1:1	0.561	1.059	0.594	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	35	13.5	13.20	-0.01	0	38376	QPSK	1	50	0 mm	top	1:1	0.480	1.072	0.515	
1 CC Uplink	N/A	1720.00	132072	Low	LTE Band 66 (AWS)	20	35	13.5	13.25	0.02	0	38376	QPSK	50	25	0 mm	top	1:1	0.465	1.059	0.492	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 10-10
LTE Band 25 (PCS) Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	25.0	24.21	0.02	0	0410M	QPSK	1	50	19 mm	back	1:1	0.306	1.199	0.367	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	24.0	23.30	0.01	1	0410M	QPSK	50	50	19 mm	back	1:1	0.253	1.175	0.297	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	25.0	24.21	0.02	0	0410M	QPSK	1	50	23 mm	top	1:1	0.529	1.199	0.634	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	24.0	23.30	0.03	1	0410M	QPSK	50	50	23 mm	top	1:1	0.437	1.175	0.513	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	25.0	24.21	-0.13	0	0410M	QPSK	1	50	7 mm	right	1:1	0.155	1.199	0.186	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	24.0	23.30	0.01	1	0410M	QPSK	50	50	7 mm	right	1:1	0.131	1.175	0.154	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	25.0	24.21	0.11	0	0410M	QPSK	1	50	0 mm	left	1:1	0.216	1.199	0.259	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	24.0	23.30	0.06	1	0410M	QPSK	50	50	0 mm	left	1:1	0.193	1.175	0.227	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	13.5	12.62	-0.20	0	37139	QPSK	1	99	0 mm	back	1:1	0.526	1.225	0.644	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	13.5	12.64	-0.18	0	37139	QPSK	50	25	0 mm	back	1:1	0.542	1.219	0.661	
1905.00	26590	High	LTE Band 25 (PCS)	20	9	13.5	12.62	-0.04	0	37139	QPSK	1	99	0 mm	top	1:1	0.632	1.225	0.774	
1860.00	26140	Low	LTE Band 25 (PCS)	20	9	13.5	12.37	-0.05	0	37139	QPSK	50	50	0 mm	top	1:1	0.648	1.297	**0.840**	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	10	13.5	12.57	0.00	0	37139	QPSK	50	50	0 mm	top	1:1	0.671	1.239	0.831	A10
1905.00	26590	High	LTE Band 25 (PCS)	20	10	13.5	12.64	-0.11	0	37139	QPSK	50	25	0 mm	top	1:1	0.648	1.219	0.790	
1905.00	26590	High	LTE Band 25 (PCS)	20	10	13.5	12.61	0.00	0	37139	QPSK	100	0	0 mm	top	1:1	0.642	1.227	0.788	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	22.0	21.16	-0.06	0	37139	QPSK	1	0	0 mm	right	1:1	0.267	1.213	0.324	
1905.00	26590	High	LTE Band 25 (PCS)	20	13	22.0	21.21	-0.02	0	37139	QPSK	50	50	0 mm	right	1:1	0.264	1.199	0.317	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 10-11
LTE Band 7 Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2510.00	20850	Low	LTE Band 7	20	25.0	24.43	0.06	0	38376	QPSK	1	50	19 mm	back	1:1	0.159	1.140	0.181	
2510.00	20850	Low	LTE Band 7	20	24.0	23.63	0.01	1	38376	QPSK	50	50	19 mm	back	1:1	0.131	1.089	0.143	
2510.00	20850	Low	LTE Band 7	20	25.0	24.43	-0.01	0	38376	QPSK	1	50	23 mm	top	1:1	0.202	1.140	0.230	
2510.00	20850	Low	LTE Band 7	20	24.0	23.63	0.03	1	38376	QPSK	50	50	23 mm	top	1:1	0.161	1.089	0.175	
2510.00	20850	Low	LTE Band 7	20	25.0	24.43	-0.08	0	38376	QPSK	1	50	7 mm	right	1:1	0.256	1.140	0.292	
2510.00	20850	Low	LTE Band 7	20	24.0	23.63	0.00	1	38376	QPSK	50	50	7 mm	right	1:1	0.224	1.089	0.244	
2510.00	20850	Low	LTE Band 7	20	25.0	24.43	0.16	0	38376	QPSK	1	50	0 mm	left	1:1	0.141	1.140	0.161	
2510.00	20850	Low	LTE Band 7	20	24.0	23.63	-0.13	1	38376	QPSK	50	50	0 mm	left	1:1	0.121	1.089	0.132	
2510.00	20850	Low	LTE Band 7	20	13.5	12.78	-0.13	0	38376	QPSK	1	0	0 mm	back	1:1	0.406	1.180	0.479	
2510.00	20850	Low	LTE Band 7	20	13.5	12.95	-0.11	0	38376	QPSK	50	0	0 mm	back	1:1	0.420	1.135	0.477	
2510.00	20850	Low	LTE Band 7	20	13.5	12.78	-0.02	0	38376	QPSK	1	0	0 mm	top	1:1	0.601	1.180	0.709	
2535.00	21100	Mid	LTE Band 7	20	13.5	12.62	-0.02	0	38376	QPSK	1	0	0 mm	top	1:1	0.612	1.225	0.750	
2560.00	21350	High	LTE Band 7	20	13.5	12.34	0.03	0	38376	QPSK	1	0	0 mm	top	1:1	0.607	1.306	0.793	
2510.00	20850	Low	LTE Band 7	20	13.5	12.95	-0.01	0	38376	QPSK	50	0	0 mm	top	1:1	0.621	1.135	0.705	A11
2510.00	20850	Low	LTE Band 7	20	13.5	12.78	0.03	0	38376	QPSK	1	0	0 mm	right	1:1	0.051	1.180	0.060	
2510.00	20850	Low	LTE Band 7	20	13.5	12.95	0.01	0	38376	QPSK	50	0	0 mm	right	1:1	0.060	1.135	0.068	
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 10-12
LTE Band 41 Body SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.50	0.01	0	03172	QPSK	1	0	19 mm	back	1:1.58	0.120	1.122	0.135	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.58	0.02	1	03172	QPSK	50	0	19 mm	back	1:1.58	0.092	1.102	0.101	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.50	-0.05	0	03172	QPSK	1	0	23 mm	top	1:1.58	0.153	1.122	0.172	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.58	0.05	1	03172	QPSK	50	0	23 mm	top	1:1.58	0.120	1.102	0.132	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.50	-0.05	0	03172	QPSK	1	0	7 mm	right	1:1.58	0.102	1.122	0.114	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.58	0.07	1	03172	QPSK	50	0	7 mm	right	1:1.58	0.076	1.102	0.084	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	25.0	24.50	0.02	0	03172	QPSK	1	0	0 mm	left	1:1.58	0.193	1.122	0.217	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	24.0	23.58	0.03	1	03172	QPSK	50	0	0 mm	left	1:1.58	0.165	1.102	0.182	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	15.0	14.46	0.11	0	36958	QPSK	1	0	0 mm	back	1:1.58	0.265	1.132	0.300	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	15.0	14.52	0.10	0	36958	QPSK	50	0	0 mm	back	1:1.58	0.270	1.117	0.302	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	15.0	14.46	-0.17	0	36958	QPSK	1	0	0 mm	top	1:1.58	0.447	1.132	0.506	A12
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	15.0	14.40	-0.04	0	36958	QPSK	1	99	0 mm	top	1:1.58	0.413	1.148	0.474	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	15.0	14.52	-0.01	0	36958	QPSK	50	0	0 mm	top	1:1.58	0.437	1.117	0.488	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	16.6	15.50	-0.03	0	36958	QPSK	1	0	0 mm	top	1:2.31	0.425	1.288	0.547	
1 CC Uplink - Power Class 2	N/A	2506.00	39750	Low	LTE Band 41	20	16.6	15.35	-0.03	0	36958	QPSK	1	99	0 mm	top	1:2.31	0.396	1.334	0.528	
2 CC Uplink - Power Class 3	PCC	2506.00	39750	Low	LTE Band 41	20	15.0	14.32	0.00	0	36958	QPSK	1	99	0 mm	top	1:1.58	0.406	1.169	0.475	
	SCC	2525.80	39948	Low	LTE Band 41	20							1	0							
2 CC Uplink - Power Class 2	PCC	2506.00	39750	Low	LTE Band 41	20	16.6	15.60	-0.05	0	36958	QPSK	1	99	0 mm	top	1:2.31	0.407	1.259	0.512	
	SCC	2525.80	39948	Low	LTE Band 41	20							1	0							
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	15.0	14.46	-0.17	0	36958	QPSK	1	0	0 mm	right	1:1.58	0.037	1.132	0.042	
1 CC Uplink - Power Class 3	N/A	2506.00	39750	Low	LTE Band 41	20	15.0	14.52	-0.16	0	36958	QPSK	50	0	0 mm	right	1:1.58	0.035	1.117	0.039	
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 10-13
NR Band n71 Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	0	25.0	24.77	-0.14	0	03750	DFT-S-OFDM QPSK	1	1	19 mm	back	1:1	0.218	1.054	0.230	
680.50	136100	Mid	NR Band n71	20	0	25.0	24.27	-0.20	0	03750	DFT-S-OFDM QPSK	50	28	19 mm	back	1:1	0.255	1.183	0.302	
680.50	136100	Mid	NR Band n71	20	4	25.0	24.77	0.02	0	03750	DFT-S-OFDM QPSK	1	1	23 mm	top	1:1	0.202	1.054	0.213	
680.50	136100	Mid	NR Band n71	20	4	25.0	24.27	0.13	0	03750	DFT-S-OFDM QPSK	50	28	23 mm	top	1:1	0.212	1.183	0.251	
680.50	136100	Mid	NR Band n71	20	26	25.0	24.77	-0.05	0	03750	DFT-S-OFDM QPSK	1	1	0 mm	right	1:1	0.125	1.054	0.132	
680.50	136100	Mid	NR Band n71	20	26	25.0	24.27	-0.08	0	03750	DFT-S-OFDM QPSK	50	28	0 mm	right	1:1	0.139	1.183	0.164	
680.50	136100	Mid	NR Band n71	20	26	25.0	24.77	-0.20	0	03750	DFT-S-OFDM QPSK	1	1	0 mm	left	1:1	0.055	1.054	0.058	
680.50	136100	Mid	NR Band n71	20	26	25.0	24.27	-0.08	0	03750	DFT-S-OFDM QPSK	50	28	0 mm	left	1:1	0.085	1.183	0.101	
680.50	136100	Mid	NR Band n71	20	78	15.0	14.79	-0.05	0	03719	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	0.259	1.050	0.272	
680.50	136100	Mid	NR Band n71	20	78	15.0	14.80	-0.17	0	03719	DFT-S-OFDM QPSK	50	56	0 mm	back	1:1	0.266	1.047	0.279	
680.50	136100	Mid	NR Band n71	20	78	15.0	14.81	-0.03	0	03719	CP-OFDM QPSK	1	1	0 mm	back	1:1	0.289	1.045	0.302	A13
680.50	136100	Mid	NR Band n71	20	78	15.0	14.79	-0.15	0	03719	DFT-S-OFDM QPSK	1	53	0 mm	top	1:1	0.224	1.050	0.235	
680.50	136100	Mid	NR Band n71	20	78	15.0	14.80	-0.13	0	03719	DFT-S-OFDM QPSK	50	56	0 mm	top	1:1	0.214	1.047	0.224	
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 10-14
NR Band n5 (Cell) Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
836.50	167300	Mid	NR Band n5 (Cell)	20	79	25.0	24.38	-0.06	0	37139	DFT-S-OFDM QPSK	1	104	19 mm	back	1:1	0.316	1.153	0.364	
836.50	167300	Mid	NR Band n5 (Cell)	20	79	25.0	24.18	-0.19	0	37139	DFT-S-OFDM QPSK	50	28	19 mm	back	1:1	0.330	1.208	0.399	
836.50	167300	Mid	NR Band n5 (Cell)	20	79	25.0	24.38	-0.03	0	37139	DFT-S-OFDM QPSK	1	104	23 mm	top	1:1	0.225	1.153	0.259	
836.50	167300	Mid	NR Band n5 (Cell)	20	79	25.0	24.18	0.00	0	37139	DFT-S-OFDM QPSK	50	28	23 mm	top	1:1	0.223	1.208	0.269	
836.50	167300	Mid	NR Band n5 (Cell)	20	118	25.0	24.38	0.17	0	37139	DFT-S-OFDM QPSK	1	104	0 mm	right	1:1	0.236	1.153	0.272	
836.50	167300	Mid	NR Band n5 (Cell)	20	118	25.0	24.18	-0.14	0	37139	DFT-S-OFDM QPSK	50	28	0 mm	right	1:1	0.233	1.208	0.281	
836.50	167300	Mid	NR Band n5 (Cell)	20	118	25.0	24.38	0.10	0	37139	DFT-S-OFDM QPSK	1	104	0 mm	left	1:1	0.084	1.153	0.097	
836.50	167300	Mid	NR Band n5 (Cell)	20	118	25.0	24.18	-0.06	0	37139	DFT-S-OFDM QPSK	50	28	0 mm	left	1:1	0.082	1.208	0.099	
836.50	167300	Mid	NR Band n5 (Cell)	20	79	17.0	16.64	-0.03	0	37139	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	0.494	1.086	0.536	
836.50	167300	Mid	NR Band n5 (Cell)	20	79	17.0	16.36	-0.03	0	37139	DFT-S-OFDM QPSK	50	56	0 mm	back	1:1	0.437	1.159	0.506	
836.50	167300	Mid	NR Band n5 (Cell)	20	79	17.0	16.64	0.05	0	37139	DFT-S-OFDM QPSK	1	53	0 mm	top	1:1	0.527	1.086	0.572	A14
836.50	167300	Mid	NR Band n5 (Cell)	20	79	17.0	16.36	0.10	0	37139	DFT-S-OFDM QPSK	50	56	0 mm	top	1:1	0.459	1.159	0.532	
836.50	167300	Mid	NR Band n5 (Cell)	20	79	17.0	16.31	0.03	0	37139	CP-OFDM QPSK	1	1	0 mm	top	1:1	0.437	1.172	0.512	
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 10-15
NR Band n66 (AWS) Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	25.0	24.18	0.10	0	38376	DFT-S-OFDM QPSK	1	53	19 mm	back	1:1	0.390	1.208	0.471	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	25.0	24.15	-0.03	0	38376	DFT-S-OFDM QPSK	50	28	19 mm	back	1:1	0.355	1.216	0.432	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	25.0	24.18	-0.02	0	38376	DFT-S-OFDM QPSK	1	53	23 mm	top	1:1	0.490	1.208	0.592	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	25.0	24.15	-0.01	0	38376	DFT-S-OFDM QPSK	50	28	23 mm	top	1:1	0.460	1.216	0.559	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	25.0	24.18	0.00	0	38376	DFT-S-OFDM QPSK	1	53	0 mm	right	1:1	0.266	1.208	0.321	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	25.0	24.15	0.03	0	38376	DFT-S-OFDM QPSK	50	28	0 mm	right	1:1	0.252	1.216	0.306	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	25.0	24.18	-0.21	0	38376	DFT-S-OFDM QPSK	1	53	0 mm	left	1:1	0.092	1.208	0.111	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	25.0	24.15	0.13	0	38376	DFT-S-OFDM QPSK	50	28	0 mm	left	1:1	0.091	1.216	0.111	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	13.5	13.21	0.01	0	38376	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	0.515	1.069	0.551	
1720.00	344000	Low	NR Band n66 (AWS)	20	113	13.5	13.09	0.05	0	38376	DFT-S-OFDM QPSK	50	0	0 mm	back	1:1	0.529	1.099	0.581	
1720.00	344000	Low	NR Band n66 (AWS)	20	35	13.5	13.21	0.00	0	38376	DFT-S-OFDM QPSK	1	53	0 mm	top	1:1	0.540	1.069	0.577	
1720.00	344000	Low	NR Band n66 (AWS)	20	35	13.5	13.09	0.04	0	38376	DFT-S-OFDM QPSK	50	0	0 mm	top	1:1	0.544	1.099	0.598	A15
1720.00	344000	Low	NR Band n66 (AWS)	20	35	13.5	13.45	-0.02	0	38376	CP-OFDM QPSK	1	1	0 mm	top	1:1	0.509	1.012	0.515	
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 10-16
NR Band n25 (PCS) Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Antenna State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1882.50	376500	Mid	NR Band n25 (PCS)	20	13	25.0	24.46	0.00	0	37139	DFT-S-OFDM QPSK	1	53	19 mm	back	1:1	0.415	1.132	0.470	
1882.50	376500	Mid	NR Band n25 (PCS)	20	13	25.0	23.95	0.00	0	37139	DFT-S-OFDM QPSK	50	28	19 mm	back	1:1	0.398	1.274	0.507	
1882.50	376500	Mid	NR Band n25 (PCS)	20	13	25.0	24.46	-0.09	0	37139	DFT-S-OFDM QPSK	1	53	23 mm	top	1:1	0.416	1.132	0.471	
1882.50	376500	Mid	NR Band n25 (PCS)	20	13	25.0	23.95	-0.07	0	37139	DFT-S-OFDM QPSK	50	28	23 mm	top	1:1	0.406	1.274	0.517	
1882.50	376500	Mid	NR Band n25 (PCS)	20	13	25.0	24.46	-0.02	0	37139	DFT-S-OFDM QPSK	1	53	0 mm	right	1:1	0.484	1.132	0.548	
1882.50	376500	Mid	NR Band n25 (PCS)	20	13	25.0	23.95	0.00	0	37139	DFT-S-OFDM QPSK	50	28	0 mm	right	1:1	0.444	1.274	0.566	
1882.50	376500	Mid	NR Band n25 (PCS)	20	13	25.0	24.46	0.12	0	37139	DFT-S-OFDM QPSK	1	53	0 mm	left	1:1	0.188	1.132	0.213	
1882.50	376500	Mid	NR Band n25 (PCS)	20	13	25.0	23.95	-0.11	0	37139	DFT-S-OFDM QPSK	50	28	0 mm	left	1:1	0.171	1.274	0.218	
1905.00	381000	High	NR Band n25 (PCS)	20	13	13.5	13.28	0.13	0	38376	DFT-S-OFDM QPSK	1	53	0 mm	back	1:1	0.627	1.052	0.660	
1905.00	381000	High	NR Band n25 (PCS)	20	13	13.5	13.13	0.20	0	38376	DFT-S-OFDM QPSK	50	0	0 mm	back	1:1	0.604	1.089	0.658	
1860.00	372000	Low	NR Band n25 (PCS)	20	9	13.5	12.95	-0.15	0	38376	DFT-S-OFDM QPSK	1	53	0 mm	top	1:1	0.620	1.135	0.704	
1882.50	376500	Mid	NR Band n25 (PCS)	20	10	13.5	12.88	-0.17	0	38376	DFT-S-OFDM QPSK	1	53	0 mm	top	1:1	0.596	1.153	0.687	
1905.00	381000	High	NR Band n25 (PCS)	20	10	13.5	13.28	-0.15	0	38376	DFT-S-OFDM QPSK	1	53	0 mm	top	1:1	0.723	1.052	0.761	A16
1905.00	381000	High	NR Band n25 (PCS)	20	10	13.5	13.13	-0.19	0	38376	DFT-S-OFDM QPSK	50	0	0 mm	top	1:1	0.624	1.089	0.680	
1905.00	381000	High	NR Band n25 (PCS)	20	10	13.5	13.12	-0.20	0	38376	CP-OFDM QPSK	1	1	0 mm	top	1:1	0.652	1.091	0.711	
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 10-17
NR Band n41 Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
2592.99	518598	Mid	NR Band n41	100	25.0	24.59	0.11	0	03172	DFT-S-OFDM QPSK	1	137	18 mm	back	1:4	0.081	1.099	0.089	
2592.99	518598	Mid	NR Band n41	100	25.0	24.44	0.07	0	03172	DFT-S-OFDM QPSK	135	69	18 mm	back	1:4	0.079	1.138	0.090	
2592.99	518598	Mid	NR Band n41	100	25.0	24.59	0.15	0	03172	DFT-S-OFDM QPSK	1	137	19 mm	top	1:4	0.059	1.099	0.065	
2592.99	518598	Mid	NR Band n41	100	25.0	24.44	0.20	0	03172	DFT-S-OFDM QPSK	135	69	19 mm	top	1:4	0.060	1.138	0.068	
2592.99	518598	Mid	NR Band n41	100	25.0	24.59	-0.04	0	03172	DFT-S-OFDM QPSK	1	137	7 mm	right	1:4	0.111	1.099	0.122	
2592.99	518598	Mid	NR Band n41	100	25.0	24.44	0.06	0	03172	DFT-S-OFDM QPSK	135	69	7 mm	right	1:4	0.104	1.138	0.118	
2592.99	518598	Mid	NR Band n41	100	15.0	14.78	0.03	0	03172	DFT-S-OFDM QPSK	1	1	0 mm	back	1:4	0.167	1.052	0.176	
2592.99	518598	Mid	NR Band n41	100	15.0	14.63	0.21	0	03172	DFT-S-OFDM QPSK	135	0	0 mm	back	1:4	0.171	1.089	0.186	A17
2592.99	518598	Mid	NR Band n41	100	15.0	14.83	0.12	0	03172	CP-OFDM QPSK	1	1	0 mm	back	1:4	0.150	1.040	0.156	
2592.99	518598	Mid	NR Band n41	100	15.0	14.78	-0.01	0	03172	DFT-S-OFDM QPSK	1	1	0 mm	top	1:4	0.099	1.052	0.104	
2592.99	518598	Mid	NR Band n41	100	15.0	14.63	0.12	0	03172	DFT-S-OFDM QPSK	135	0	0 mm	top	1:4	0.102	1.089	0.111	
2592.99	518598	Mid	NR Band n41	100	15.0	14.78	0.09	0	03172	DFT-S-OFDM QPSK	1	1	0 mm	right	1:4	0.036	1.052	0.038	
2592.99	518598	Mid	NR Band n41	100	15.0	14.63	0.15	0	03172	DFT-S-OFDM QPSK	135	0	0 mm	right	1:4	0.035	1.089	0.038	
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 10-18
DTS SISO Body SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													(W/kg)			(W/kg)	
2412	1	802.11b	DSSS	22	19.0	18.91	-0.05	18 mm	1	35158	1	back	99.9	0.102	1.021	1.001	0.104	
2412	1	802.11b	DSSS	22	19.0	18.91	-0.05	19 mm	1	35158	1	top	99.9	0.130	1.021	1.001	0.133	
2412	1	802.11b	DSSS	22	19.0	18.91	-0.15	7 mm	1	35158	1	right	99.9	0.452	1.021	1.001	0.462	
2412	1	802.11b	DSSS	22	12.0	11.13	0.02	0 mm	1	35158	1	back	99.9	0.716	1.222	1.001	**0.876**	
2437	6	802.11b	DSSS	22	12.0	11.30	-0.04	0 mm	1	35158	1	back	99.9	0.669	1.175	1.001	0.787	
2462	11	802.11b	DSSS	22	12.0	11.06	-0.03	0 mm	1	35158	1	back	99.9	0.675	1.242	1.001	0.839	
2437	6	802.11b	DSSS	22	12.0	11.30	0.01	0 mm	1	35158	1	top	99.9	0.372	1.175	1.001	0.438	
2437	6	802.11b	DSSS	22	12.0	11.30	0.01	0 mm	1	35158	1	right	99.9	0.501	1.175	1.001	0.589	
2462	11	802.11b	DSSS	22	19.0	18.81	-0.03	10 mm	2	35158	1	back	99.9	0.296	1.045	1.001	0.310	
2462	11	802.11b	DSSS	22	19.0	18.81	0.18	14 mm	2	35158	1	top	99.9	0.027	1.045	1.001	0.028	
2462	11	802.11b	DSSS	22	19.0	18.81	0.18	0 mm	2	35158	1	right	99.9	0.002	1.045	1.001	0.002	
2412	1	802.11b	DSSS	22	19.0	18.79	-0.08	4 mm	2	35158	1	left	99.9	0.701	1.050	1.001	0.737	
2437	6	802.11b	DSSS	22	19.0	18.61	-0.09	4 mm	2	35158	1	left	99.9	0.669	1.094	1.001	0.733	
2462	11	802.11b	DSSS	22	19.0	18.81	0.05	4 mm	2	35158	1	left	99.9	0.691	1.045	1.001	0.723	
2462	11	802.11b	DSSS	22	12.0	11.28	-0.03	0 mm	2	35158	1	back	99.9	0.355	1.180	1.001	0.419	
2462	11	802.11b	DSSS	22	12.0	11.28	0.00	0 mm	2	35158	1	top	99.9	0.146	1.180	1.001	0.172	
2462	11	802.11b	DSSS	22	12.0	11.28	-0.11	0 mm	2	35158	1	left	99.9	0.415	1.180	1.001	0.490	
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 10-19
NII SISO Body SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													(W/kg)			(W/kg)	
5320	64	802.11a	OFDM	20	18.0	17.98	-0.08	18 mm	1	35158	6	back	99.1	0.031	1.005	1.009	0.031	
5320	64	802.11a	OFDM	20	18.0	17.98	-0.10	19 mm	1	35158	6	top	99.1	0.016	1.005	1.009	0.016	
5320	64	802.11a	OFDM	20	18.0	17.98	-0.05	7 mm	1	35158	6	right	99.1	0.403	1.005	1.009	0.409	
5290	58	802.11ac	OFDM	80	9.0	8.01	0.00	0 mm	1	40208	29.3	back	99.7	0.209	1.256	1.003	0.263	
5290	58	802.11ac	OFDM	80	9.0	8.01	-0.14	0 mm	1	40208	29.3	top	99.7	0.109	1.256	1.003	0.137	
5290	58	802.11ac	OFDM	80	9.0	8.01	-0.14	0 mm	1	40208	29.3	right	99.7	0.502	1.256	1.003	0.632	
5320	64	802.11a	OFDM	20	18.0	17.97	-0.16	10 mm	2	35158	6	back	99.0	0.104	1.007	1.010	0.106	
5320	64	802.11a	OFDM	20	18.0	17.97	0.19	14 mm	2	35158	6	top	99.0	0.017	1.007	1.010	0.017	
5320	64	802.11a	OFDM	20	18.0	17.97	-0.08	4 mm	2	35158	6	left	99.0	0.213	1.007	1.010	0.217	
5290	58	802.11ac	OFDM	80	9.0	7.98	-0.05	0 mm	2	40208	29.3	back	99.7	0.492	1.265	1.003	0.624	
5290	58	802.11ac	OFDM	80	9.0	7.98	-0.13	0 mm	2	40208	29.3	top	99.7	0.165	1.265	1.003	0.209	
5290	58	802.11ac	OFDM	80	9.0	7.98	0.00	0 mm	2	40208	29.3	left	99.7	0.281	1.265	1.003	0.357	
5500	100	802.11a	OFDM	20	15.0	14.67	0.15	18 mm	1	35158	6	back	99.1	0.022	1.079	1.009	0.024	
5500	100	802.11a	OFDM	20	15.0	14.67	-0.16	19 mm	1	35158	6	top	99.1	0.032	1.079	1.009	0.035	
5500	100	802.11a	OFDM	20	15.0	14.67	-0.18	7 mm	1	35158	6	right	99.1	0.250	1.079	1.009	0.272	
5610	122	802.11ac	OFDM	80	8.0	7.42	-0.01	0 mm	1	40208	29.3	back	99.7	0.170	1.143	1.003	0.195	
5610	122	802.11ac	OFDM	80	8.0	7.42	0.00	0 mm	1	40208	29.3	top	99.7	0.081	1.143	1.003	0.093	
5610	122	802.11ac	OFDM	80	8.0	7.42	-0.18	0 mm	1	40208	29.3	right	99.7	0.208	1.143	1.003	0.238	
5600	120	802.11a	OFDM	20	15.0	14.61	-0.20	10 mm	2	35158	6	back	99.0	0.184	1.094	1.010	0.203	
5600	120	802.11a	OFDM	20	15.0	14.61	0.18	14 mm	2	35158	6	top	99.0	0.032	1.094	1.010	0.035	
5600	120	802.11a	OFDM	20	15.0	14.61	-0.13	4 mm	2	35158	6	left	99.0	0.190	1.094	1.010	0.210	
5610	122	802.11ac	OFDM	80	8.0	7.58	0.00	0 mm	2	40208	29.3	back	99.7	0.539	1.102	1.003	0.596	
5610	122	802.11ac	OFDM	80	8.0	7.58	0.12	0 mm	2	40208	29.3	top	99.7	0.249	1.102	1.003	0.275	
5610	122	802.11ac	OFDM	80	8.0	7.58	-0.07	0 mm	2	40208	29.3	left	99.7	0.173	1.102	1.003	0.191	
5745	149	802.11a	OFDM	20	15.0	14.92	-0.14	18 mm	1	35158	6	back	99.1	0.054	1.019	1.009	0.056	
5745	149	802.11a	OFDM	20	15.0	14.92	-0.09	19 mm	1	35158	6	top	99.1	0.051	1.019	1.009	0.052	
5745	149	802.11a	OFDM	20	15.0	14.92	-0.12	7 mm	1	35158	6	right	99.1	0.371	1.019	1.009	0.381	
5775	155	802.11ac	OFDM	80	9.0	8.14	-0.12	0 mm	1	40208	29.3	back	99.7	0.376	1.219	1.003	0.460	
5775	155	802.11ac	OFDM	80	9.0	8.14	-0.16	0 mm	1	40208	29.3	top	99.7	0.152	1.219	1.003	0.186	
5775	155	802.11ac	OFDM	80	9.0	8.14	-0.19	0 mm	1	40208	29.3	right	99.7	0.333	1.219	1.003	0.407	
5785	157	802.11a	OFDM	20	15.0	14.78	-0.18	10 mm	2	35158	6	back	99.0	0.216	1.052	1.010	0.230	
5785	157	802.11a	OFDM	20	15.0	14.78	0.15	14 mm	2	35158	6	top	99.0	0.072	1.052	1.010	0.077	
5785	157	802.11a	OFDM	20	15.0	14.78	-0.05	4 mm	2	35158	6	left	99.0	0.078	1.052	1.010	0.083	
5775	155	802.11ac	OFDM	80	9.0	8.12	-0.02	0 mm	2	40208	29.3	back	99.7	0.580	1.225	1.003	**0.713**	
5775	155	802.11ac	OFDM	80	9.0	8.12	0.19	0 mm	2	40208	29.3	top	99.7	0.108	1.225	1.003	0.133	
5775	155	802.11ac	OFDM	80	9.0	8.12	-0.03	0 mm	2	40208	29.3	left	99.7	0.055	1.225	1.003	0.068	

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 10-20
NII SISO Body SAR for Conditions with 5G mmWave

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	7.0	5.95	-0.05	0 mm	1	40208	29.3	back	99.7	0.184	1.274	1.003	0.235	
5290	58	802.11ac	OFDM	80	7.0	5.95	-0.12	0 mm	1	40208	29.3	top	99.7	0.081	1.274	1.003	0.104	
5290	58	802.11ac	OFDM	80	7.0	5.95	-0.08	0 mm	1	40208	29.3	right	99.7	0.327	1.274	1.003	0.418	
5290	58	802.11ac	OFDM	80	7.0	5.85	-0.13	0 mm	2	40208	29.3	back	99.7	0.292	1.303	1.003	0.382	
5290	58	802.11ac	OFDM	80	7.0	5.85	-0.20	0 mm	2	40208	29.3	top	99.7	0.093	1.303	1.003	0.122	
5290	58	802.11ac	OFDM	80	7.0	5.85	0.15	0 mm	2	40208	29.3	left	99.7	0.197	1.303	1.003	0.257	
5690	138	802.11ac	OFDM	80	7.0	6.35	0.07	0 mm	1	40208	29.3	back	99.7	0.175	1.161	1.003	0.204	
5690	138	802.11ac	OFDM	80	7.0	6.35	-0.17	0 mm	1	40208	29.3	top	99.7	0.110	1.161	1.003	0.128	
5690	138	802.11ac	OFDM	80	7.0	6.35	-0.20	0 mm	1	40208	29.3	right	99.7	0.193	1.161	1.003	0.225	
5530	106	802.11ac	OFDM	80	7.0	6.10	-0.20	0 mm	2	40208	29.3	back	99.7	0.436	1.230	1.003	0.538	
5530	106	802.11ac	OFDM	80	7.0	6.10	0.05	0 mm	2	40208	29.3	top	99.7	0.150	1.230	1.003	0.185	
5530	106	802.11ac	OFDM	80	7.0	6.10	0.14	0 mm	2	40208	29.3	left	99.7	0.162	1.230	1.003	0.200	
5775	155	802.11ac	OFDM	80	7.0	6.18	-0.14	0 mm	1	40208	29.3	back	99.7	0.236	1.208	1.003	0.286	
5775	155	802.11ac	OFDM	80	7.0	6.18	-0.09	0 mm	1	40208	29.3	top	99.7	0.119	1.208	1.003	0.144	
5775	155	802.11ac	OFDM	80	7.0	6.18	-0.21	0 mm	1	40208	29.3	right	99.7	0.228	1.208	1.003	0.276	
5775	155	802.11ac	OFDM	80	7.0	6.15	-0.10	0 mm	2	40208	29.3	back	99.7	0.386	1.216	1.003	0.471	
5775	155	802.11ac	OFDM	80	7.0	6.15	-0.03	0 mm	2	40208	29.3	top	99.7	0.153	1.216	1.003	0.187	
5775	155	802.11ac	OFDM	80	7.0	6.15	0.19	0 mm	2	40208	29.3	left	99.7	0.034	1.216	1.003	0.041	
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 10-21
DTS MIMO Body SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Peak Number	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
2417	1	802.11b	DSSS	22	19.0	18.91	19.0	18.79	-0.03	10 mm	MIMO	-	38376	1	back	100.0	0.438	1.050	1.000	0.460	
2417	1	802.11b	DSSS	22	19.0	18.91	19.0	18.79	-0.01	14 mm	MIMO	-	38376	1	top	100.0	0.338	1.050	1.000	0.355	
2417	1	802.11b	DSSS	22	19.0	18.91	19.0	18.79	0.03	7 mm	MIMO	-	38376	1	right	100.0	0.453	1.050	1.000	0.476	
2417	1	802.11b	DSSS	22	19.0	18.91	19.0	18.79	0.01	4 mm	MIMO	-	38376	1	left	100.0	0.771	1.050	1.000	0.810	A18
2437	6	802.11b	DSSS	22	19.0	18.90	19.0	18.61	0.02	4 mm	MIMO	-	38376	1	left	100.0	0.738	1.094	1.000	0.807	
2457	10	802.11b	DSSS	22	19.0	18.70	19.0	18.82	0.01	4 mm	MIMO	-	38376	1	left	100.0	0.700	1.072	1.000	0.750	
2462	11	802.11n	OFDM	20	11.0	10.44	11.0	10.22	-0.15	0 mm	MIMO	1	38376	13	back	99.7	0.522	1.197	1.003	0.627	
2462	11	802.11n	OFDM	20	11.0	10.44	11.0	10.22	0.15	0 mm	MIMO	2	38376	13	back	99.7	0.270	1.197	1.003	0.324	
2462	11	802.11n	OFDM	20	11.0	10.44	11.0	10.22	0.02	0 mm	MIMO	-	38376	13	top	99.7	0.288	1.197	1.003	0.346	
2462	11	802.11n	OFDM	20	11.0	10.44	11.0	10.22	-0.15	0 mm	MIMO	-	38376	13	right	99.7	0.438	1.197	1.003	0.526	
2412	1	802.11n	OFDM	20	11.0	10.08	11.0	10.43	0.01	0 mm	MIMO	-	38376	13	left	99.7	0.532	1.236	1.003	0.660	
2437	6	802.11n	OFDM	20	11.0	10.27	11.0	10.24	-0.06	0 mm	MIMO	-	38376	13	left	99.7	0.543	1.191	1.003	0.649	
2462	11	802.11n	OFDM	20	11.0	10.44	11.0	10.22	-0.10	0 mm	MIMO	-	38376	13	left	99.7	0.563	1.197	1.003	0.676	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram											

Notes:

1. To achieve the 22 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 19 dBm.
2. To achieve the 14 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11 dBm.
3. For simultaneous analysis, back side SAR at the worst-case 2.4 GHz WLAN MIMO configuration was evaluated for both antennas; the highest SAR peak (Peak 1) corresponds to WIFI Antenna 1, and the secondary peak (Peak 2, shown in green) corresponds to WIFI Antenna 2.

Table 10-22
NII MIMO Body SAR

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Peak Number	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)			(W/kg)	
5300	60	802.11n	OFDM	20	17.0	16.94	17.0	16.88	0.21	10 mm	MIMO	-	40208	13	back	99.7	0.068	1.028	1.003	0.070	
5300	60	802.11n	OFDM	20	17.0	16.94	17.0	16.88	0.14	14 mm	MIMO	-	40208	13	top	99.7	0.019	1.028	1.003	0.020	
5300	60	802.11n	OFDM	20	17.0	16.94	17.0	16.88	0.02	7 mm	MIMO	-	40208	13	right	99.7	0.231	1.028	1.003	0.238	
5300	60	802.11n	OFDM	20	17.0	16.94	17.0	16.88	-0.01	4 mm	MIMO	-	40208	13	left	99.7	0.208	1.028	1.003	0.214	
5290	58	802.11ac	OFDM	80	9.0	8.01	9.0	7.98	-0.13	0 mm	MIMO	-	40208	58.5	back	99.7	0.188	1.265	1.003	0.239	
5290	58	802.11ac	OFDM	80	9.0	8.01	9.0	7.98	0.21	0 mm	MIMO	-	40208	58.5	top	99.7	0.097	1.265	1.003	0.123	
5290	58	802.11ac	OFDM	80	9.0	8.01	9.0	7.98	-0.19	0 mm	MIMO	-	40208	58.5	right	99.7	0.383	1.265	1.003	0.486	
5290	58	802.11ac	OFDM	80	9.0	8.01	9.0	7.98	-0.12	0 mm	MIMO	-	40208	58.5	left	99.7	0.246	1.265	1.003	0.312	
5500	100	802.11n	OFDM	20	15.0	14.78	15.0	14.75	-0.07	10 mm	MIMO	-	40208	13	back	99.7	0.046	1.059	1.003	0.049	
5500	100	802.11n	OFDM	20	15.0	14.78	15.0	14.75	0.17	14 mm	MIMO	-	40208	13	top	99.7	0.032	1.059	1.003	0.034	
5500	100	802.11n	OFDM	20	15.0	14.78	15.0	14.75	-0.08	7 mm	MIMO	-	40208	13	right	99.7	0.180	1.059	1.003	0.191	
5500	100	802.11n	OFDM	20	15.0	14.78	15.0	14.75	-0.10	4 mm	MIMO	-	40208	13	left	99.7	0.173	1.059	1.003	0.184	
5610	122	802.11ac	OFDM	80	8.0	7.42	8.0	7.58	0.00	0 mm	MIMO	-	40208	58.5	back	99.7	0.385	1.143	1.003	0.441	
5610	122	802.11ac	OFDM	80	8.0	7.42	8.0	7.58	-0.21	0 mm	MIMO	-	40208	58.5	top	99.7	0.202	1.143	1.003	0.232	
5610	122	802.11ac	OFDM	80	8.0	7.42	8.0	7.58	-0.12	0 mm	MIMO	-	40208	58.5	right	99.7	0.230	1.143	1.003	0.264	
5610	122	802.11ac	OFDM	80	8.0	7.42	8.0	7.58	0.06	0 mm	MIMO	-	40208	58.5	left	99.7	0.183	1.143	1.003	0.210	
5785	157	802.11n	OFDM	20	15.0	14.67	15.0	14.94	0.16	10 mm	MIMO	-	40208	13	back	99.7	0.158	1.079	1.003	0.171	
5785	157	802.11n	OFDM	20	15.0	14.67	15.0	14.94	-0.09	14 mm	MIMO	-	40208	13	top	99.7	0.073	1.079	1.003	0.079	
5785	157	802.11n	OFDM	20	15.0	14.67	15.0	14.94	-0.09	7 mm	MIMO	-	40208	13	right	99.7	0.279	1.079	1.003	0.302	
5785	157	802.11n	OFDM	20	15.0	14.67	15.0	14.94	-0.03	4 mm	MIMO	-	40208	13	left	99.7	0.103	1.079	1.003	0.111	
5775	155	802.11ac	OFDM	80	9.0	8.14	9.0	8.12	-0.16	0 mm	MIMO	1	40208	58.5	back	99.7	0.677	1.225	1.003	0.832	A19
5775	155	802.11ac	OFDM	80	9.0	8.14	9.0	8.12	-0.17	0 mm	MIMO	2	40208	58.5	back	99.7	0.261	1.225	1.003	0.321	
5775	155	802.11ac	OFDM	80	9.0	8.14	9.0	8.12	0.14	0 mm	MIMO	-	40208	58.5	top	99.7	0.187	1.225	1.003	0.230	
5775	155	802.11ac	OFDM	80	9.0	8.14	9.0	8.12	-0.12	0 mm	MIMO	-	40208	58.5	right	99.7	0.264	1.225	1.003	0.324	
5775	155	802.11ac	OFDM	80	9.0	8.14	9.0	8.12	0.16	0 mm	MIMO	-	40208	58.5	left	99.7	0.065	1.225	1.003	0.080	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Note:

1. For channel 60, to achieve the 20 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17 dBm.
2. For channels 58 and 155, to achieve the 12 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 9 dBm.
3. For channels 100 and 157, to achieve the 18 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 15 dBm.
4. For channel 122, to achieve the 11 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 8 dBm.
5. For simultaneous analysis, back side SAR at the worst-case 5 GHz WLAN MIMO configuration was evaluated for both antennas; the highest SAR peak (Peak 1) corresponds to WIFI Antenna 2, and the secondary peak (Peak 2, shown in green) corresponds to WIFI Antenna 1.

Table 10-23
DTS MIMO Body SAR for Conditions with 5G mmWave

MEASUREMENT RESULTS																					
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)			(W/kg)	
2412	1	802.11n	OFDM	20	9.0	8.17	9.0	8.16	-0.06	0 mm	MIMO	35158	13	back	99.7	0.343	1.213	1.003	0.417	
2412	1	802.11n	OFDM	20	9.0	8.17	9.0	8.16	-0.03	0 mm	MIMO	35158	13	top	99.7	0.248	1.213	1.003	0.302	
2412	1	802.11n	OFDM	20	9.0	8.17	9.0	8.16	-0.08	0 mm	MIMO	35158	13	right	99.7	0.337	1.213	1.003	0.410	
2412	1	802.11n	OFDM	20	9.0	8.17	9.0	8.16	-0.11	0 mm	MIMO	35158	13	left	99.7	0.504	1.213	1.003	0.613	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Note: To achieve the 12 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 9 dBm.

Table 10-24
NII MIMO Body SAR for Conditions with 5G mmWave

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)			(W/kg)	
5290	58	802.11ac	OFDM	80	7.0	5.95	7.0	5.85	0.17	0 mm	MIMO	40208	58.5	back	99.7	0.267	1.303	1.003	0.349	
5290	58	802.11ac	OFDM	80	7.0	5.95	7.0	5.85	-0.15	0 mm	MIMO	40208	58.5	top	99.7	0.102	1.303	1.003	0.133	
5290	58	802.11ac	OFDM	80	7.0	5.95	7.0	5.85	-0.15	0 mm	MIMO	40208	58.5	right	99.7	0.348	1.303	1.003	0.455	
5290	58	802.11ac	OFDM	80	7.0	5.95	7.0	5.85	0.07	0 mm	MIMO	40208	58.5	left	99.7	0.163	1.303	1.003	0.213	
5690	138	802.11ac	OFDM	80	7.0	6.35	7.0	5.97	-0.12	0 mm	MIMO	40208	58.5	back	99.7	0.341	1.268	1.003	0.434	
5690	138	802.11ac	OFDM	80	7.0	6.35	7.0	5.97	-0.21	0 mm	MIMO	40208	58.5	top	99.7	0.132	1.268	1.003	0.168	
5690	138	802.11ac	OFDM	80	7.0	6.35	7.0	5.97	-0.15	0 mm	MIMO	40208	58.5	right	99.7	0.173	1.268	1.003	0.220	
5690	138	802.11ac	OFDM	80	7.0	6.35	7.0	5.97	0.10	0 mm	MIMO	40208	58.5	left	99.7	0.094	1.268	1.003	0.120	
5775	155	802.11ac	OFDM	80	7.0	6.18	7.0	6.15	-0.19	0 mm	MIMO	40208	58.5	back	99.7	0.377	1.216	1.003	0.460	
5775	155	802.11ac	OFDM	80	7.0	6.18	7.0	6.15	-0.14	0 mm	MIMO	40208	58.5	top	99.7	0.244	1.216	1.003	0.298	
5775	155	802.11ac	OFDM	80	7.0	6.18	7.0	6.15	-0.10	0 mm	MIMO	40208	58.5	right	99.7	0.190	1.216	1.003	0.232	
5775	155	802.11ac	OFDM	80	7.0	6.18	7.0	6.15	0.13	0 mm	MIMO	40208	58.5	left	99.7	0.036	1.216	1.003	0.044	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Note: To achieve the 10 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 7 dBm

Table 10-25
DSS Body SAR

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	16.0	15.50	0.14	18 mm	1	35240	1	back	77.1	0.023	1.122	1.297	0.033	
2441	39	Bluetooth	FHSS	16.0	15.50	0.08	19 mm	1	35240	1	top	77.1	0.023	1.122	1.297	0.033	
2441	39	Bluetooth	FHSS	16.0	15.50	0.15	0 mm	1	35240	1	bottom	77.1	0.003	1.122	1.297	0.004	
2441	39	Bluetooth	FHSS	16.0	15.50	0.21	7 mm	1	35240	1	right	77.1	0.097	1.122	1.297	0.141	
2441	39	Bluetooth	FHSS	16.0	15.50	-0.18	0 mm	1	35240	1	left	77.1	0.000	1.122	1.297	0.000	
2441	39	Bluetooth	FHSS	12.0	10.62	-0.16	0 mm	1	35240	1	back	77.1	0.245	1.374	1.297	0.437	
2441	39	Bluetooth	FHSS	12.0	10.62	-0.17	0 mm	1	35240	1	top	77.1	0.123	1.374	1.297	0.219	
2441	39	Bluetooth	FHSS	12.0	10.62	0.00	0 mm	1	35240	1	right	77.1	0.203	1.374	1.297	0.362	
2441	39	Bluetooth	FHSS	16.0	15.59	0.12	10 mm	2	35240	1	back	77.1	0.055	1.099	1.297	0.078	
2441	39	Bluetooth	FHSS	16.0	15.59	0.13	14 mm	2	35240	1	top	77.1	0.009	1.099	1.297	0.013	
2441	39	Bluetooth	FHSS	16.0	15.59	0.19	0 mm	2	35240	1	right	77.1	0.000	1.099	1.297	0.000	
2441	39	Bluetooth	FHSS	16.0	15.59	-0.04	4 mm	2	35240	1	left	77.1	0.169	1.099	1.297	0.241	
2441	39	Bluetooth	FHSS	12.0	10.24	0.01	0 mm	2	35240	1	back	77.1	0.235	1.500	1.297	0.457	
2441	39	Bluetooth	FHSS	12.0	10.24	-0.08	0 mm	2	35240	1	top	77.1	0.062	1.500	1.297	0.121	
2441	39	Bluetooth	FHSS	12.0	10.24	-0.16	0 mm	2	35240	1	left	77.1	0.282	1.500	1.297	**0.549**	A20

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 10-26
DSS Body SAR for Conditions with 5G mmWave

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	8.0	7.49	0.19	0 mm	1	38376	1	back	77.1	0.000	1.125	1.297	0.000	
2441	39	Bluetooth	FHSS	8.0	7.49	0.17	0 mm	1	38376	1	top	77.1	0.000	1.125	1.297	0.000	
2441	39	Bluetooth	FHSS	8.0	7.49	0.19	0 mm	1	38376	1	right	77.1	0.000	1.125	1.297	0.000	
2441	39	Bluetooth	FHSS	8.0	7.52	0.19	0 mm	2	38376	1	back	77.1	0.039	1.117	1.297	0.057	
2441	39	Bluetooth	FHSS	8.0	7.52	0.20	0 mm	2	38376	1	top	77.1	0.016	1.117	1.297	0.023	
2441	39	Bluetooth	FHSS	8.0	7.52	0.05	0 mm	2	38376	1	left	77.1	0.078	1.117	1.297	0.113	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram				

10.2 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in FCC KDB Publication 616217 D04v01r02 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. 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. Per FCC KDB Publication 865664 D01v01r04, variability SAR tests were not required since measured SAR results for all frequency bands were less than 0.8 W/kg.
7. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 12.1 for supplemental data.
8. FCC KDB Publication 616217 D04v01r02 Section 4.3, SAR tests are required for the back surface and edges of the tablet with the tablet touching the phantom. The SAR Exclusion Threshold in FCC KDB 447498 D01v06 was applied to determine SAR test exclusion for adjacent edge configurations.
9. This device utilizes power reduction for some wireless modes and technologies, as outlined in Section 1.4. The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous transmission scenarios.
10. This device uses Qualcomm Smart Transmit for 2G/3G/4G/5G operations to control and manage transmitting power in real time to ensure RF Exposure compliance. Per FCC Guidance, compliance for was assessed at the minimum of the time averaged power and the maximum output power for each band/mode/exposure condition (DSI).

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 middle channel or 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). When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel was used.

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 7.5.4.
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 LTE Band 41 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.
7. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions. Please see Section 12.2 for linearity results.
8. For LTE Band 5, LTE Band 66, and LTE Band 41, per FCC guidance, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active. The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.

NR Notes:

1. NR implementation of n71, n5, n66, n25, n2, and n41 is limited to EN-DC operations only, with LTE Bands 12/13/5/66/2 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 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 Section 1.10 - Bibliography).
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. Per FCC Guidance, the device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency as the NR test results. Additional tuner states were evaluated per April 2019 TCBC Workshop Guidance. Please see Section 12.1 for supplemental data.

6. 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.
7. For final implementation, NR Band n41 slot configuration is synchronized using maximum duty cycle of 25%. SAR testing was performed using FTM mode with a 25% duty cycle applied to match final duty cycle.

WLAN Notes:

1. 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 7.6.4 for more information.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI single transmission chain 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 7.6.5 for more information.
3. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously. Please see Section 11 for complete analysis.
4. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
5. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 100% transmission duty factor to determine compliance. See Section 0 for the time domain plot and calculation for the duty factor of the device.

11 FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

11.1 Introduction

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

11.2 Simultaneous Transmission Procedures

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

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

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

When the antenna separation distance was > 50 mm, an estimated SAR of 0.4 W/kg was used to determine the simultaneous transmission SAR exclusion for test positions excluded per FCC KDB Publication 447498 D01v06.

Table 11-1
Simultaneous Transmission Scenario with 5 GHz WLAN

Exposure Condition	Mode	3G/4G/5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Body SAR	UMTS 850	0.789	0.632	0.713	1.421	1.502
	UMTS 1750	0.762	0.632	0.713	1.394	1.475
	UMTS 1900	0.686	0.632	0.713	1.318	1.399
	LTE Band 71	0.400	0.632	0.713	1.032	1.113
	LTE Band 12	0.508	0.632	0.713	1.140	1.221
	LTE Band 13	0.618	0.632	0.713	1.250	1.331
	LTE Band 26 (Cell)	0.539	0.632	0.713	1.171	1.252
	LTE Band 5 (Cell)	0.455	0.632	0.713	1.087	1.168
	LTE Band 66 (AWS)	0.813	0.632	0.713	1.445	1.526
	LTE Band 25 (PCS)	0.840	0.632	0.713	1.472	**1.553**
	LTE Band 7	0.793	0.632	0.713	1.425	1.506
	LTE Band 41	0.547	0.632	0.713	1.179	1.260
	NR Band n71	0.400	0.632	0.713	1.032	1.113
	NR Band n5 (Cell)	0.572	0.632	0.713	1.204	1.285
	NR Band n66 (AWS)	0.598	0.632	0.713	1.230	1.311
	NR Band n25 (PCS)	0.761	0.632	0.713	1.393	1.474
	NR Band n41	0.400	0.632	0.713	1.032	1.113

Table 11-2
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2 and 5 GHz WLAN Antenna 1

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.757	0.419	0.460	See Note 1	0.02	0.02	0.01	Body SAR	Back	0.762	0.419	0.460	See Note 1	0.01	0.02	0.01
	Top	0.789	0.172	0.186	1.147	N/A	N/A	N/A		Top	0.668	0.172	0.186	1.026	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A		Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.279	0.002	0.632	0.913	N/A	N/A	N/A		Right	0.201	0.002	0.632	0.835	N/A	N/A	N/A
	Left	0.105	0.737	0.400	**1.242**	N/A	N/A	N/A		Left	0.201	0.737	0.400	**1.338**	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.419	0.460	**1.525**	Body SAR	Back	0.344	0.419	0.460	**1.223**
	Top	0.686	0.172	0.186	1.044		Top	0.285	0.172	0.186	0.643
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.329	0.002	0.632	0.963		Right	0.147	0.002	0.632	0.781
	Left	0.332	0.737	0.400	1.469		Left	0.071	0.737	0.400	1.208

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.419	0.460	**1.387**	Body SAR	Back	0.618	0.419	0.460	**1.497**
	Top	0.440	0.172	0.186	0.798		Top	0.547	0.172	0.186	0.905
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.147	0.002	0.632	0.781		Right	0.206	0.002	0.632	0.840
	Left	0.099	0.737	0.400	1.236		Left	0.119	0.737	0.400	1.256

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.419	0.460	**1.418**	Body SAR	Back	0.455	0.419	0.460	**1.334**
	Top	0.521	0.172	0.186	0.879		Top	0.453	0.172	0.186	0.811
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.299	0.002	0.632	0.933		Right	0.260	0.002	0.632	0.894
	Left	0.101	0.737	0.400	1.238		Left	0.080	0.737	0.400	1.217

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.419	0.460	**1.473**	Body SAR	Back	0.661	0.419	0.460	**1.540**
	Top	0.813	0.172	0.186	1.171		Top	0.840	0.172	0.186	1.198
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.486	0.002	0.632	1.120		Right	0.324	0.002	0.632	0.958
	Left	0.163	0.737	0.400	1.300		Left	0.259	0.737	0.400	1.396

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.419	0.460	**1.358**	Body SAR	Back	0.302	0.419	0.460	1.181
	Top	0.793	0.172	0.186	1.151		Top	0.547	0.172	0.186	0.905
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.292	0.002	0.632	0.926		Right	0.114	0.002	0.632	0.748
	Left	0.161	0.737	0.400	1.298		Left	0.217	0.737	0.400	**1.354**

Simult Tx	Configuration	NR Band n71 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.419	0.460	1.181	Body SAR	Back	0.536	0.419	0.460	**1.415**
	Top	0.251	0.172	0.186	0.609		Top	0.572	0.172	0.186	0.930
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.164	0.002	0.632	0.798		Right	0.281	0.002	0.632	0.915
	Left	0.101	0.737	0.400	**1.238**		Left	0.099	0.737	0.400	1.236

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.419	0.460	**1.460**	Body SAR	Back	0.660	0.419	0.460	**1.539**
	Top	0.598	0.172	0.186	0.956		Top	0.761	0.172	0.186	1.119
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.321	0.002	0.632	0.955		Right	0.566	0.002	0.632	1.200
	Left	0.111	0.737	0.400	1.248		Left	0.218	0.737	0.400	1.355

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.419	0.460	1.065
	Top	0.111	0.172	0.186	0.469
	Bottom	0.400	0.400	0.400	1.200
	Right	0.122	0.002	0.632	0.756
	Left	0.400	0.737	0.400	**1.537**

Table 11-3
Simultaneous Transmission Scenario with Bluetooth Antenna 1 and 5 GHz WLAN Antenna 1

Exposure Condition	Mode	3G/4G/5G SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	UMTS 850	0.789	0.437	0.632	See Table Below
	UMTS 1750	0.762	0.437	0.632	See Table Below
	UMTS 1900	0.686	0.437	0.632	See Table Below
	LTE Band 71	0.400	0.437	0.632	1.469
	LTE Band 12	0.508	0.437	0.632	**1.577**
	LTE Band 13	0.618	0.437	0.632	See Table Below
	LTE Band 26 (Cell)	0.539	0.437	0.632	See Table Below
	LTE Band 5 (Cell)	0.455	0.437	0.632	1.524
	LTE Band 66 (AWS)	0.813	0.437	0.632	See Table Below
	LTE Band 25 (PCS)	0.840	0.437	0.632	See Table Below
	LTE Band 7	0.793	0.437	0.632	See Table Below
	LTE Band 41	0.547	0.437	0.632	See Table Below
	NR Band n71	0.400	0.437	0.632	1.469
	NR Band n5 (Cell)	0.572	0.437	0.632	See Table Below
	NR Band n66 (AWS)	0.598	0.437	0.632	See Table Below
	NR Band n25 (PCS)	0.761	0.437	0.632	See Table Below
	NR Band n41	0.400	0.437	0.632	1.469

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.757	0.437	0.460	See Note 2	Body SAR	Back	0.762	0.437	0.460	See Note 2
	Top	0.789	0.219	0.186	1.194		Top	0.668	0.219	0.186	1.073
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.279	0.362	0.632	**1.273**		Right	0.201	0.362	0.632	**1.195**
	Left	0.105	0.000	0.400	0.505		Left	0.201	0.000	0.400	0.601

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.437	0.460	**1.543**	Body SAR	Back	0.618	0.437	0.460	**1.515**
	Top	0.686	0.219	0.186	1.091		Top	0.547	0.219	0.186	0.952
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.329	0.362	0.632	1.323		Right	0.206	0.362	0.632	1.200
	Left	0.332	0.000	0.400	0.732		Left	0.119	0.000	0.400	0.519

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.437	0.460	**1.436**	Body SAR	Back	0.594	0.437	0.460	**1.491**
	Top	0.521	0.219	0.186	0.926		Top	0.813	0.219	0.186	1.218
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.299	0.362	0.632	1.293		Right	0.486	0.362	0.632	1.480
	Left	0.101	0.000	0.400	0.501		Left	0.163	0.000	0.400	0.563

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.661	0.437	0.460	**1.558**	Body SAR	Back	0.479	0.437	0.460	**1.376**
	Top	0.840	0.219	0.186	1.245		Top	0.793	0.219	0.186	1.198
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.324	0.362	0.632	1.318		Right	0.292	0.362	0.632	1.286
	Left	0.259	0.000	0.400	0.659		Left	0.161	0.000	0.400	0.561

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.437	0.460	**1.199**	Body SAR	Back	0.581	0.437	0.460	**1.478**
	Top	0.547	0.219	0.186	0.952		Top	0.598	0.219	0.186	1.003
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.114	0.362	0.632	1.108		Right	0.321	0.362	0.632	1.315
	Left	0.217	0.000	0.400	0.617		Left	0.111	0.000	0.400	0.511

Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.660	0.437	0.460	1.557
	Top	0.761	0.219	0.186	1.166
	Bottom	0.400	0.004	0.400	0.804
	Right	0.566	0.362	0.632	**1.560**
	Left	0.218	0.000	0.400	0.618

Table 11-4
Simultaneous Transmission Scenario with Bluetooth Antenna 2 and 5 GHz WLAN Antenna 1

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.757	0.457	0.460	See Note 1	0.02	0.02	0.01	Body SAR	Back	0.762	0.457	0.460	See Note 1	0.01	0.02	0.01
	Top	0.789	0.121	0.186	1.096	N/A	N/A	N/A		Top	0.668	0.121	0.186	0.975	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	**1.200**	N/A	N/A	N/A		Bottom	0.400	0.400	0.400	**1.200**	N/A	N/A	N/A
	Right	0.279	0.000	0.632	0.911	N/A	N/A	N/A		Right	0.201	0.000	0.632	0.833	N/A	N/A	N/A
	Left	0.105	0.549	0.400	1.054	N/A	N/A	N/A		Left	0.201	0.549	0.400	1.150	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.457	0.460	**1.563**	Body SAR	Back	0.344	0.457	0.460	**1.261**
	Top	0.686	0.121	0.186	0.993		Top	0.285	0.121	0.186	0.592
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.329	0.000	0.632	0.961		Right	0.147	0.000	0.632	0.779
	Left	0.332	0.549	0.400	1.281		Left	0.071	0.549	0.400	1.020

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.457	0.460	**1.425**	Body SAR	Back	0.618	0.457	0.460	**1.535**
	Top	0.440	0.121	0.186	0.747		Top	0.547	0.121	0.186	0.854
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.147	0.000	0.632	0.779		Right	0.206	0.000	0.632	0.838
	Left	0.099	0.549	0.400	1.048		Left	0.119	0.549	0.400	1.068

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.457	0.460	**1.456**	Body SAR	Back	0.455	0.457	0.460	**1.372**
	Top	0.521	0.121	0.186	0.828		Top	0.453	0.121	0.186	0.760
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.299	0.000	0.632	0.931		Right	0.260	0.000	0.632	0.892
	Left	0.101	0.549	0.400	1.050		Left	0.080	0.549	0.400	1.029

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.457	0.460	**1.511**	Body SAR	Back	0.661	0.457	0.460	**1.578**
	Top	0.813	0.121	0.186	1.120		Top	0.840	0.121	0.186	1.147
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.486	0.000	0.632	1.118		Right	0.324	0.000	0.632	0.956
	Left	0.163	0.549	0.400	1.112		Left	0.259	0.549	0.400	1.208

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.457	0.460	**1.396**	Body SAR	Back	0.302	0.457	0.460	**1.219**
	Top	0.793	0.121	0.186	1.100		Top	0.547	0.121	0.186	0.854
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.292	0.000	0.632	0.924		Right	0.114	0.000	0.632	0.746
	Left	0.161	0.549	0.400	1.110		Left	0.217	0.549	0.400	1.166

Simult Tx	Configuration	NR Band n71 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.457	0.460	**1.219**	Body SAR	Back	0.536	0.457	0.460	**1.453**
	Top	0.251	0.121	0.186	0.558		Top	0.572	0.121	0.186	0.879
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.164	0.000	0.632	0.796		Right	0.281	0.000	0.632	0.913
	Left	0.101	0.549	0.400	1.050		Left	0.099	0.549	0.400	1.048

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.457	0.460	**1.498**	Body SAR	Back	0.660	0.457	0.460	**1.577**
	Top	0.598	0.121	0.186	0.905		Top	0.761	0.121	0.186	1.068
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.321	0.000	0.632	0.953		Right	0.566	0.000	0.632	1.198
	Left	0.111	0.549	0.400	1.060		Left	0.218	0.549	0.400	1.167

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.457	0.460	1.103
	Top	0.111	0.121	0.186	0.418
	Bottom	0.400	0.400	0.400	1.200
	Right	0.122	0.000	0.632	0.754
	Left	0.400	0.549	0.400	**1.349**

Table 11-5
Simultaneous Transmission Scenario with 2.4 GHz MIMO WLAN

Exposure Condition	Mode	3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	UMTS 850	0.789	0.810	See Table Below
	UMTS 1750	0.762	0.810	**1.572**
	UMTS 1900	0.686	0.810	1.496
	LTE Band 71	0.400	0.810	1.210
	LTE Band 12	0.508	0.810	1.318
	LTE Band 13	0.618	0.810	1.428
	LTE Band 26 (Cell)	0.539	0.810	1.349
	LTE Band 5 (Cell)	0.455	0.810	1.265
	LTE Band 66 (AWS)	0.813	0.810	See Table Below
	LTE Band 25 (PCS)	0.840	0.810	See Table Below
	LTE Band 7	0.793	0.810	See Table Below
	LTE Band 41	0.547	0.810	1.357
	NR Band n71	0.400	0.810	1.210
	NR Band n5 (Cell)	0.572	0.810	1.382
	NR Band n66 (AWS)	0.598	0.810	1.408
	NR Band n25 (PCS)	0.761	0.810	1.571
	NR Band n41	0.400	0.810	1.210

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	Back	0.757	0.627	**1.384**
	Top	0.789	0.355	1.144
	Bottom	0.400	0.400	0.800
	Right	0.279	0.526	0.805
	Left	0.105	0.810	0.915

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	Back	0.594	0.627	**1.221**
	Top	0.813	0.355	1.168
	Bottom	0.400	0.400	0.800
	Right	0.486	0.526	1.012
	Left	0.163	0.810	0.973

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	Back	0.661	0.627	**1.288**
	Top	0.840	0.355	1.195
	Bottom	0.400	0.400	0.800
	Right	0.324	0.526	0.850
	Left	0.259	0.810	1.069

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	Back	0.479	0.627	1.106
	Top	0.793	0.355	**1.148**
	Bottom	0.400	0.400	0.800
	Right	0.292	0.526	0.818
	Left	0.161	0.810	0.971

Table 11-6
Simultaneous Transmission Scenario with Bluetooth Antenna 1 and 2.4 GHz WLAN Antenna 2

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.757	0.437	0.419	See Note 1	0.01	0.02	0.00	Body SAR	Back	0.762	0.437	0.419	See Note 1	0.02	0.01	0.00
	Top	0.789	0.219	0.172	**1.180**	N/A	N/A	N/A		Top	0.668	0.219	0.172	**1.059**	N/A	N/A	N/A
	Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A		Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A
	Right	0.279	0.362	0.002	0.643	N/A	N/A	N/A		Right	0.201	0.362	0.002	0.565	N/A	N/A	N/A
	Left	0.105	0.000	0.737	0.842	N/A	N/A	N/A		Left	0.201	0.000	0.737	0.938	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.437	0.419	**1.502**	Body SAR	Back	0.344	0.437	0.419	**1.200**
	Top	0.686	0.219	0.172	1.077		Top	0.285	0.219	0.172	0.676
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.329	0.362	0.002	0.693		Right	0.147	0.362	0.002	0.511
	Left	0.332	0.000	0.737	1.069		Left	0.071	0.000	0.737	0.808

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.437	0.419	**1.364**	Body SAR	Back	0.618	0.437	0.419	**1.474**
	Top	0.440	0.219	0.172	0.831		Top	0.547	0.219	0.172	0.938
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.147	0.362	0.002	0.511		Right	0.206	0.362	0.002	0.570
	Left	0.099	0.000	0.737	0.836		Left	0.119	0.000	0.737	0.856

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.437	0.419	**1.395**	Body SAR	Back	0.455	0.437	0.419	**1.311**
	Top	0.521	0.219	0.172	0.912		Top	0.453	0.219	0.172	0.844
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.299	0.362	0.002	0.663		Right	0.260	0.362	0.002	0.624
	Left	0.101	0.000	0.737	0.838		Left	0.080	0.000	0.737	0.817

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.437	0.419	**1.450**	Body SAR	Back	0.661	0.437	0.419	**1.517**
	Top	0.813	0.219	0.172	1.204		Top	0.840	0.219	0.172	1.231
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.486	0.362	0.002	0.850		Right	0.324	0.362	0.002	0.688
	Left	0.163	0.000	0.737	0.900		Left	0.259	0.000	0.737	0.996

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.437	0.419	**1.335**	Body SAR	Back	0.302	0.437	0.419	**1.158**
	Top	0.793	0.219	0.172	1.184		Top	0.547	0.219	0.172	0.938
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.292	0.362	0.002	0.656		Right	0.114	0.362	0.002	0.478
	Left	0.161	0.000	0.737	0.898		Left	0.217	0.000	0.737	0.954

Simult Tx	Configuration	NR Band n71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.437	0.419	**1.158**	Body SAR	Back	0.536	0.437	0.419	**1.392**
	Top	0.251	0.219	0.172	0.642		Top	0.572	0.219	0.172	0.963
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.164	0.362	0.002	0.528		Right	0.281	0.362	0.002	0.645
	Left	0.101	0.000	0.737	0.838		Left	0.099	0.000	0.737	0.836

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.437	0.419	**1.437**	Body SAR	Back	0.660	0.437	0.419	**1.516**
	Top	0.598	0.219	0.172	0.989		Top	0.761	0.219	0.172	1.152
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804
	Right	0.321	0.362	0.002	0.685		Right	0.566	0.362	0.002	0.930
	Left	0.111	0.000	0.737	0.848		Left	0.218	0.000	0.737	0.955

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.437	0.419	1.042
	Top	0.111	0.219	0.172	0.502
	Bottom	0.400	0.004	0.400	0.804
	Right	0.122	0.362	0.002	0.486
	Left	0.400	0.000	0.737	**1.137**

Table 11-7
Simultaneous Transmission Scenario with Bluetooth

Exposure Condition	Mode	3G/4G/5G SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Body SAR	UMTS 850	0.789	0.437	0.549	1.226	1.338
	UMTS 1750	0.762	0.437	0.549	1.199	1.311
	UMTS 1900	0.686	0.437	0.549	1.123	1.235
	LTE Band 71	0.400	0.437	0.549	0.837	0.949
	LTE Band 12	0.508	0.437	0.549	0.945	1.057
	LTE Band 13	0.618	0.437	0.549	1.055	1.167
	LTE Band 26 (Cell)	0.539	0.437	0.549	0.976	1.088
	LTE Band 5 (Cell)	0.455	0.437	0.549	0.892	1.004
	LTE Band 66 (AWS)	0.813	0.437	0.549	1.250	1.362
	LTE Band 25 (PCS)	0.840	0.437	0.549	1.277	**1.389**
	LTE Band 7	0.793	0.437	0.549	1.230	1.342
	LTE Band 41	0.547	0.437	0.549	0.984	1.096
	NR Band n71	0.400	0.437	0.549	0.837	0.949
	NR Band n5 (Cell)	0.572	0.437	0.549	1.009	1.121
	NR Band n66 (AWS)	0.598	0.437	0.549	1.035	1.147
	NR Band n25 (PCS)	0.761	0.437	0.549	1.198	1.310
	NR Band n41	0.400	0.437	0.549	0.837	0.949

Table 11-8
Simultaneous Transmission Scenario with 5 GHz MIMO WLAN

Exposure Condition	Mode	3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	UMTS 850	0.789	0.832	See Table Below
	UMTS 1750	0.762	0.832	**1.594**
	UMTS 1900	0.686	0.832	1.518
	LTE Band 71	0.400	0.832	1.232
	LTE Band 12	0.508	0.832	1.340
	LTE Band 13	0.618	0.832	1.450
	LTE Band 26 (Cell)	0.539	0.832	1.371
	LTE Band 5 (Cell)	0.455	0.832	1.287
	LTE Band 66 (AWS)	0.813	0.832	See Table Below
	LTE Band 25 (PCS)	0.840	0.832	See Table Below
	LTE Band 7	0.793	0.832	See Table Below
	LTE Band 41	0.547	0.832	1.379
	NR Band n71	0.400	0.832	1.232
	NR Band n5 (Cell)	0.572	0.832	1.404
	NR Band n66 (AWS)	0.598	0.832	1.430
	NR Band n25 (PCS)	0.761	0.832	1.593
	NR Band n41	0.400	0.832	1.232

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	Back	0.757	0.832	**1.589**
	Top	0.789	0.232	1.021
	Bottom	0.400	0.400	0.800
	Right	0.279	0.486	0.765
	Left	0.105	0.312	0.417

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	Back	0.594	0.832	**1.426**
	Top	0.813	0.232	1.045
	Bottom	0.400	0.400	0.800
	Right	0.486	0.486	0.972
	Left	0.163	0.312	0.475

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	Back	0.661	0.832	**1.493**
	Top	0.840	0.232	1.072
	Bottom	0.400	0.400	0.800
	Right	0.324	0.486	0.810
	Left	0.259	0.312	0.571

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body SAR	Back	0.479	0.832	**1.311**
	Top	0.793	0.232	1.025
	Bottom	0.400	0.400	0.800
	Right	0.292	0.486	0.778
	Left	0.161	0.312	0.473

Table 11-9
Simultaneous Transmission Scenario with Bluetooth Antenna 1 and 5 GHz MIMO WLAN (Peak 1)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.757	0.437	0.832	See Note 1	0.01	0.02	0.01	Body SAR	Back	0.762	0.437	0.832	See Note 1	0.02	0.02	0.01
	Top	0.789	0.219	0.232	**1.240**	N/A	N/A	N/A		Top	0.668	0.219	0.232	**1.119**	N/A	N/A	N/A
	Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A		Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A
	Right	0.279	0.362	0.486	1.127	N/A	N/A	N/A		Right	0.201	0.362	0.486	1.049	N/A	N/A	N/A
	Left	0.105	0.000	0.312	0.417	N/A	N/A	N/A		Left	0.201	0.000	0.312	0.513	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.646	0.437	0.832	See Note 1	0.02	0.02	0.01	Body SAR	Back	0.344	0.437	0.832	See Note 1	0.01	0.01	0.01
	Top	0.686	0.219	0.232	1.137	N/A	N/A	N/A		Top	0.285	0.219	0.232	0.736	N/A	N/A	N/A
	Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A		Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A
	Right	0.329	0.362	0.486	**1.177**	N/A	N/A	N/A		Right	0.147	0.362	0.486	0.995	N/A	N/A	N/A
	Left	0.332	0.000	0.312	0.644	N/A	N/A	N/A		Left	0.071	0.000	0.312	0.383	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.508	0.437	0.832	See Note 1	0.01	0.02	0.01	Body SAR	Back	0.618	0.437	0.832	See Note 1	0.01	0.02	0.01
	Top	0.440	0.219	0.232	0.891	N/A	N/A	N/A		Top	0.547	0.219	0.232	0.998	N/A	N/A	N/A
	Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A		Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A
	Right	0.147	0.362	0.486	**0.995**	N/A	N/A	N/A		Right	0.206	0.362	0.486	1.054	N/A	N/A	N/A
	Left	0.099	0.000	0.312	0.411	N/A	N/A	N/A		Left	0.119	0.000	0.312	0.431	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.539	0.437	0.832	See Note 1	0.01	0.02	0.01	Body SAR	Back	0.455	0.437	0.832	See Note 1	0.01	0.02	0.01
	Top	0.521	0.219	0.232	0.972	N/A	N/A	N/A		Top	0.453	0.219	0.232	0.904	N/A	N/A	N/A
	Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A		Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A
	Right	0.299	0.362	0.486	**1.147**	N/A	N/A	N/A		Right	0.260	0.362	0.486	**1.108**	N/A	N/A	N/A
	Left	0.101	0.000	0.312	0.413	N/A	N/A	N/A		Left	0.080	0.000	0.312	0.392	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.594	0.437	0.832	See Note 1	0.02	0.02	0.01	Body SAR	Back	0.661	0.437	0.832	See Note 1	0.02	0.02	0.01
	Top	0.813	0.219	0.232	1.264	N/A	N/A	N/A		Top	0.840	0.219	0.232	**1.291**	N/A	N/A	N/A
	Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A		Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A
	Right	0.486	0.362	0.486	**1.334**	N/A	N/A	N/A		Right	0.324	0.362	0.486	1.172	N/A	N/A	N/A
	Left	0.163	0.000	0.312	0.475	N/A	N/A	N/A		Left	0.259	0.000	0.312	0.571	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.437	0.832	See Note 1	0.02	0.01	0.01	Body SAR	Back	0.302	0.437	0.832	**1.571**
	Top	0.793	0.219	0.232	**1.244**	N/A	N/A	N/A		Top	0.547	0.219	0.232	0.998
	Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A		Bottom	0.400	0.004	0.400	0.804
	Right	0.292	0.362	0.486	1.140	N/A	N/A	N/A		Right	0.114	0.362	0.486	0.962
	Left	0.161	0.000	0.312	0.473	N/A	N/A	N/A		Left	0.217	0.000	0.312	0.529

Simult Tx	Configuration	NR Band n71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.302	0.437	0.832	**1.571**	Body SAR	Back	0.536	0.437	0.832	See Note 1	0.01	0.02	0.01
	Top	0.251	0.219	0.232	0.702		Top	0.572	0.219	0.232	1.023	N/A	N/A	N/A
	Bottom	0.400	0.004	0.400	0.804		Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A
	Right	0.164	0.362	0.486	1.012		Right	0.281	0.362	0.486	**1.129**	N/A	N/A	N/A
	Left	0.101	0.000	0.312	0.413		Left	0.099	0.000	0.312	0.411	N/A	N/A	N/A

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR			Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3			1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.581	0.437	0.832	See Note 1	0.02	0.01	0.01	Body SAR	Back	0.660	0.437	0.832	See Note 1	0.02	0.01	0.01
	Top	0.598	0.219	0.232	1.049	N/A	N/A	N/A		Top	0.761	0.219	0.232	1.212	N/A	N/A	N/A
	Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A		Bottom	0.400	0.004	0.400	0.804	N/A	N/A	N/A
	Right	0.321	0.362	0.486	**1.169**	N/A	N/A	N/A		Right	0.566	0.362	0.486	**1.414**	N/A	N/A	N/A
	Left	0.111	0.000	0.312	0.423	N/A	N/A	N/A		Left	0.218	0.000	0.312	0.530	N/A	N/A	N/A

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.437	0.832	**1.455**
	Top	0.111	0.219	0.232	0.562
	Bottom	0.400	0.004	0.400	0.804
	Right	0.122	0.362	0.486	0.970
	Left	0.400	0.000	0.312	0.712

Table 11-10
Simultaneous Transmission Scenario with Bluetooth Antenna 1 and 5 GHz MIMO WLAN (Peak 2)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.757	0.437	0.321	**1.515**	Body SAR	Back	0.762	0.437	0.321	**1.520**
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.437	0.321	**1.404**	Body SAR	Back	0.344	0.437	0.321	**1.102**
Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.437	0.321	**1.266**	Body SAR	Back	0.618	0.437	0.321	**1.376**
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.437	0.321	**1.297**	Body SAR	Back	0.455	0.437	0.321	**1.213**
Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.437	0.321	**1.352**	Body SAR	Back	0.661	0.437	0.321	**1.419**
Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.437	0.321	**1.237**	Body SAR	Back	0.302	0.437	0.321	**1.060**
Simult Tx	Configuration	NR Band n71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.437	0.321	**1.060**	Body SAR	Back	0.536	0.437	0.321	**1.294**
Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.437	0.321	**1.339**	Body SAR	Back	0.660	0.437	0.321	**1.418**

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.437	0.321	**0.944**

Table 11-11
Simultaneous Transmission Scenario with Bluetooth Antenna 2 and 5 GHz MIMO WLAN (Peak 1)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.757	0.457	0.832	See Note 2	Body SAR	Back	0.762	0.457	0.832	See Note 2
	Top	0.789	0.121	0.232	1.142		Top	0.668	0.121	0.232	1.021
	Bottom	0.400	0.400	0.400	**1.200**		Bottom	0.400	0.400	0.400	**1.200**
	Right	0.279	0.000	0.486	0.765		Right	0.201	0.000	0.486	0.687
	Left	0.105	0.549	0.312	0.966		Left	0.201	0.549	0.312	1.062

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.457	0.832	See Note 2	Body SAR	Back	0.344	0.457	0.832	See Note 2
	Top	0.686	0.121	0.232	1.039		Top	0.285	0.121	0.232	0.638
	Bottom	0.400	0.400	0.400	**1.200**		Bottom	0.400	0.400	0.400	**1.200**
	Right	0.329	0.000	0.486	0.815		Right	0.147	0.000	0.486	0.633
	Left	0.332	0.549	0.312	1.193		Left	0.071	0.549	0.312	0.932

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.457	0.832	See Note 2	Body SAR	Back	0.618	0.457	0.832	See Note 2
	Top	0.440	0.121	0.232	0.793		Top	0.547	0.121	0.232	0.900
	Bottom	0.400	0.400	0.400	**1.200**		Bottom	0.400	0.400	0.400	**1.200**
	Right	0.147	0.000	0.486	0.633		Right	0.206	0.000	0.486	0.692
	Left	0.099	0.549	0.312	0.960		Left	0.119	0.549	0.312	0.980

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.457	0.832	See Note 2	Body SAR	Back	0.455	0.457	0.832	See Note 2
	Top	0.521	0.121	0.232	0.874		Top	0.453	0.121	0.232	0.806
	Bottom	0.400	0.400	0.400	**1.200**		Bottom	0.400	0.400	0.400	**1.200**
	Right	0.299	0.000	0.486	0.785		Right	0.260	0.000	0.486	0.746
	Left	0.101	0.549	0.312	0.962		Left	0.080	0.549	0.312	0.941

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.457	0.832	See Note 2	Body SAR	Back	0.661	0.457	0.832	See Note 2
	Top	0.813	0.121	0.232	1.166		Top	0.840	0.121	0.232	1.193
	Bottom	0.400	0.400	0.400	**1.200**		Bottom	0.400	0.400	0.400	**1.200**
	Right	0.486	0.000	0.486	0.972		Right	0.324	0.000	0.486	0.810
	Left	0.163	0.549	0.312	1.024		Left	0.259	0.549	0.312	1.120

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.457	0.832	See Note 2	Body SAR	Back	0.302	0.457	0.832	**1.591**
	Top	0.793	0.121	0.232	1.146		Top	0.547	0.121	0.232	0.900
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	1.200
	Right	0.292	0.000	0.486	0.778		Right	0.114	0.000	0.486	0.600
	Left	0.161	0.549	0.312	1.022		Left	0.217	0.549	0.312	1.078

Simult Tx	Configuration	NR Band n71 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.457	0.832	**1.591**	Body SAR	Back	0.536	0.457	0.832	See Note 2
	Top	0.251	0.121	0.232	0.604		Top	0.572	0.121	0.232	0.925
	Bottom	0.400	0.400	0.400	1.200		Bottom	0.400	0.400	0.400	**1.200**
	Right	0.164	0.000	0.486	0.650		Right	0.281	0.000	0.486	0.767
	Left	0.101	0.549	0.312	0.962		Left	0.099	0.549	0.312	0.960

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.457	0.832	See Note 2	Body SAR	Back	0.660	0.457	0.832	See Note 2
	Top	0.598	0.121	0.232	0.951		Top	0.761	0.121	0.232	1.114
	Bottom	0.400	0.400	0.400	**1.200**		Bottom	0.400	0.400	0.400	**1.200**
	Right	0.321	0.000	0.486	0.807		Right	0.566	0.000	0.486	1.052
	Left	0.111	0.549	0.312	0.972		Left	0.218	0.549	0.312	1.079

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.457	0.832	**1.475**
	Top	0.111	0.121	0.232	0.464
	Bottom	0.400	0.400	0.400	1.200
	Right	0.122	0.000	0.486	0.608
	Left	0.400	0.549	0.312	1.261

Table 11-12
Simultaneous Transmission Scenario with Bluetooth Antenna 2 and 5 GHz MIMO WLAN (Peak 2)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.757	0.457	0.321	**1.535**	Body SAR	Back	0.762	0.457	0.321	**1.540**
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.457	0.321	**1.424**	Body SAR	Back	0.344	0.457	0.321	**1.122**
Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.457	0.321	**1.286**	Body SAR	Back	0.618	0.457	0.321	**1.396**
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.457	0.321	**1.317**	Body SAR	Back	0.455	0.457	0.321	**1.233**
Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.457	0.321	**1.372**	Body SAR	Back	0.661	0.457	0.321	**1.439**
Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.457	0.321	**1.257**	Body SAR	Back	0.302	0.457	0.321	**1.080**
Simult Tx	Configuration	NR Band n71 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.457	0.321	**1.080**	Body SAR	Back	0.536	0.457	0.321	**1.314**
Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.457	0.321	**1.359**	Body SAR	Back	0.660	0.457	0.321	**1.438**

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	Bluetooth Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.457	0.321	**0.964**

Table 11-13
Simultaneous Transmission Scenario with 2.4 GHz MIMO WLAN (Peak 1) and 5 GHz MIMO WLAN (Peak 1)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.757	0.627	0.832	See Note 1	0.02	0.02	0.01
	Top	0.789	0.355	0.232	**1.376**	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.279	0.526	0.486	1.291	N/A	N/A	N/A
	Left	0.105	0.810	0.312	1.227	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.762	0.627	0.832	See Note 1	0.03	0.02	0.01
	Top	0.668	0.355	0.232	1.255	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.201	0.526	0.486	1.213	N/A	N/A	N/A
	Left	0.201	0.810	0.312	**1.323**	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.646	0.627	0.832	See Note 1	0.03	0.02	0.01
	Top	0.686	0.355	0.232	1.273	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.329	0.526	0.486	1.341	N/A	N/A	N/A
	Left	0.332	0.810	0.312	**1.454**	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.344	0.627	0.832	See Note 1	0.01	0.01	0.01
	Top	0.285	0.355	0.232	0.872	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	**1.200**	N/A	N/A	N/A
	Right	0.147	0.526	0.486	1.159	N/A	N/A	N/A
	Left	0.071	0.810	0.312	1.193	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.508	0.627	0.832	See Note 1	0.01	0.02	0.01
	Top	0.440	0.355	0.232	1.027	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.147	0.526	0.486	1.159	N/A	N/A	N/A
	Left	0.099	0.810	0.312	**1.221**	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.618	0.627	0.832	See Note 1	0.02	0.02	0.01
	Top	0.547	0.355	0.232	1.134	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.206	0.526	0.486	1.218	N/A	N/A	N/A
	Left	0.119	0.810	0.312	**1.241**	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.539	0.627	0.832	See Note 1	0.02	0.02	0.01
	Top	0.521	0.355	0.232	1.108	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.299	0.526	0.486	**1.311**	N/A	N/A	N/A
	Left	0.101	0.810	0.312	1.223	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.455	0.627	0.832	See Note 1	0.01	0.02	0.01
	Top	0.453	0.355	0.232	1.040	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.260	0.526	0.486	1.272	N/A	N/A	N/A
	Left	0.080	0.810	0.312	1.202	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.594	0.627	0.832	See Note 1	0.02	0.02	0.01
	Top	0.813	0.355	0.232	1.400	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.486	0.526	0.486	1.498	N/A	N/A	N/A
	Left	0.163	0.810	0.312	1.285	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.661	0.627	0.832	See Note 1	0.03	0.02	0.01
	Top	0.840	0.355	0.232	**1.427**	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.324	0.526	0.486	1.336	N/A	N/A	N/A
	Left	0.259	0.810	0.312	1.381	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.479	0.627	0.832	See Note 1	0.02	0.01	0.01
	Top	0.793	0.355	0.232	1.380	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.292	0.526	0.486	1.304	N/A	N/A	N/A
	Left	0.161	0.810	0.312	1.283	N/A	N/A	N/A

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.302	0.627	0.832	See Note 1	0.02	0.01	0.01
	Top	0.547	0.355	0.232	1.134	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.114	0.526	0.486	1.126	N/A	N/A	N/A
	Left	0.217	0.810	0.312	**1.339**	N/A	N/A	N/A

Simult Tx	Configuration	NR Band n71 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.302	0.627	0.832	See Note 1	0.01	0.01	0.01
	Top	0.251	0.355	0.232	0.838	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.164	0.526	0.486	1.176	N/A	N/A	N/A
	Left	0.101	0.810	0.312	**1.223**	N/A	N/A	N/A

Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.536	0.627	0.832	See Note 1	0.02	0.02	0.01
	Top	0.572	0.355	0.232	1.159	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.281	0.526	0.486	**1.293**	N/A	N/A	N/A
	Left	0.099	0.810	0.312	1.221	N/A	N/A	N/A

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.581	0.627	0.832	See Note 1	0.02	0.01	0.01
	Top	0.598	0.355	0.232	1.185	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.321	0.526	0.486	**1.333**	N/A	N/A	N/A
	Left	0.111	0.810	0.312	1.233	N/A	N/A	N/A

Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.660	0.627	0.832	See Note 1	0.03	0.01	0.01
	Top	0.761	0.355	0.232	1.348	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.566	0.526	0.486	**1.578**	N/A	N/A	N/A
	Left	0.218	0.810	0.312	1.340	N/A	N/A	N/A

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	SPLSR		
		1	2	3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.186	0.627	0.832	See Note 1	0.03	0.01	0.01
	Top	0.111	0.355	0.232	0.698	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	1.200	N/A	N/A	N/A
	Right	0.122	0.526	0.486	1.134	N/A	N/A	N/A
	Left	0.400	0.810	0.312	**1.522**	N/A	N/A	N/A

Table 11-14
Simultaneous Transmission Scenario with 2.4 GHz MIMO WLAN (Peak 1) and 5 GHz MIMO WLAN (Peak 2)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.757	0.627	0.321	See Note 2	Body SAR	Back	0.762	0.627	0.321	See Note 2
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.627	0.321	**1.594**	Body SAR	Back	0.344	0.627	0.321	**1.292**
Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.627	0.321	**1.456**	Body SAR	Back	0.618	0.627	0.321	**1.566**
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.627	0.321	**1.487**	Body SAR	Back	0.455	0.627	0.321	**1.403**
Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.627	0.321	**1.542**	Body SAR	Back	0.661	0.627	0.321	See Note 2
Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.627	0.321	**1.427**	Body SAR	Back	0.302	0.627	0.321	**1.250**
Simult Tx	Configuration	NR Band n71 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.627	0.321	**1.250**	Body SAR	Back	0.536	0.627	0.321	**1.484**
Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.627	0.321	**1.529**	Body SAR	Back	0.660	0.627	0.321	See Note 2

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.627	0.321	**1.134**

Table 11-15
Simultaneous Transmission Scenario with 2.4 GHz MIMO WLAN (Peak 2) and 5 GHz MIMO WLAN (Peak 1)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.757	0.324	0.832	See Note 2	Body SAR	Back	0.762	0.324	0.832	See Note 2
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.324	0.832	See Note 2	Body SAR	Back	0.344	0.324	0.832	**1.500**
Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.324	0.832	See Note 2	Body SAR	Back	0.618	0.324	0.832	See Note 2
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.324	0.832	See Note 2	Body SAR	Back	0.455	0.324	0.832	See Note 2
Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.324	0.832	See Note 2	Body SAR	Back	0.661	0.324	0.832	See Note 2
Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.324	0.832	See Note 2	Body SAR	Back	0.302	0.324	0.832	1.458
Simult Tx	Configuration	NR Band n71 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.324	0.832	**1.458**	Body SAR	Back	0.536	0.324	0.832	See Note 2
Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.324	0.832	See Note 2	Body SAR	Back	0.660	0.324	0.832	See Note 2

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.324	0.832	**1.342**

Table 11-16
Simultaneous Transmission Scenario with 2.4 GHz MIMO WLAN (Peak 2) and 5 GHz MIMO WLAN (Peak 2)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.757	0.324	0.321	**1.402**	Body SAR	Back	0.762	0.324	0.321	**1.407**
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.646	0.324	0.321	**1.291**	Body SAR	Back	0.344	0.324	0.321	**0.989**
Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.508	0.324	0.321	**1.153**	Body SAR	Back	0.618	0.324	0.321	**1.263**
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.539	0.324	0.321	**1.184**	Body SAR	Back	0.455	0.324	0.321	**1.100**
Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.594	0.324	0.321	**1.239**	Body SAR	Back	0.661	0.324	0.321	**1.306**
Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.479	0.324	0.321	**1.124**	Body SAR	Back	0.302	0.324	0.321	**0.947**
Simult Tx	Configuration	NR Band n71 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.302	0.324	0.321	**0.947**	Body SAR	Back	0.536	0.324	0.321	**1.181**
Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3			1	2	3	1+2+3
Body SAR	Back	0.581	0.324	0.321	**1.226**	Body SAR	Back	0.660	0.324	0.321	**1.305**

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	2.4 GHz WLAN MIMO (Peak 2) SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body SAR	Back	0.186	0.324	0.321	**0.831**

Table 11-17
Simultaneous Transmission Scenario with Bluetooth Antenna 1, 2.4 GHz Antenna 2 WLAN, and 5 GHz MIMO WLAN (Peak 1)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4			1	2	3	2	1+2+3+4
Body SAR	Back	0.757	0.437	0.419	0.832	See Note 2	Body SAR	Back	0.762	0.437	0.419	0.832	See Note 2
	Top	0.789	0.219	0.172	0.232	**1.412**		Top	0.668	0.219	0.172	0.232	**1.291**
	Bottom	0.400	0.004	0.400	0.400	1.204		Bottom	0.400	0.004	0.400	0.400	1.204
	Right	0.279	0.362	0.002	0.486	1.129		Right	0.201	0.362	0.002	0.486	1.051
	Left	0.105	0.000	0.737	0.312	1.154		Left	0.201	0.000	0.737	0.312	1.250

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4			1	2	3	2	1+2+3+4
Body SAR	Back	0.646	0.437	0.419	0.832	See Note 2	Body SAR	Back	0.344	0.437	0.419	0.832	See Note 2
	Top	0.686	0.219	0.172	0.232	1.309		Top	0.285	0.219	0.172	0.232	0.908
	Bottom	0.400	0.004	0.400	0.400	1.204		Bottom	0.400	0.004	0.400	0.400	1.204
	Right	0.329	0.362	0.002	0.486	1.179		Right	0.147	0.362	0.002	0.486	0.997
	Left	0.332	0.000	0.737	0.312	**1.381**		Left	0.071	0.000	0.737	0.312	1.120

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4			1	2	3	2	1+2+3+4
Body SAR	Back	0.508	0.437	0.419	0.832	See Note 2	Body SAR	Back	0.618	0.437	0.419	0.832	See Note 2
	Top	0.440	0.219	0.172	0.232	1.063		Top	0.547	0.219	0.172	0.232	1.170
	Bottom	0.400	0.004	0.400	0.400	**1.204**		Bottom	0.400	0.004	0.400	0.400	**1.204**
	Right	0.147	0.362	0.002	0.486	0.997		Right	0.206	0.362	0.002	0.486	1.056
	Left	0.099	0.000	0.737	0.312	1.148		Left	0.119	0.000	0.737	0.312	1.168

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4			1	2	3	2	1+2+3+4
Body SAR	Back	0.539	0.437	0.419	0.832	See Note 2	Body SAR	Back	0.455	0.437	0.419	0.832	See Note 2
	Top	0.521	0.219	0.172	0.232	1.144		Top	0.453	0.219	0.172	0.232	1.076
	Bottom	0.400	0.004	0.400	0.400	**1.204**		Bottom	0.400	0.004	0.400	0.400	**1.204**
	Right	0.299	0.362	0.002	0.486	1.149		Right	0.260	0.362	0.002	0.486	1.110
	Left	0.101	0.000	0.737	0.312	1.150		Left	0.080	0.000	0.737	0.312	1.129

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4			1	2	3	2	1+2+3+4
Body SAR	Back	0.594	0.437	0.419	0.832	See Note 2	Body SAR	Back	0.661	0.437	0.419	0.832	See Note 2
	Top	0.813	0.219	0.172	0.232	1.436		Top	0.840	0.219	0.172	0.232	**1.463**
	Bottom	0.400	0.004	0.400	0.400	**1.204**		Bottom	0.400	0.004	0.400	0.400	1.204
	Right	0.486	0.362	0.002	0.486	1.336		Right	0.324	0.362	0.002	0.486	1.174
	Left	0.163	0.000	0.737	0.312	1.212		Left	0.259	0.000	0.737	0.312	1.308

Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4			1	2	3	2	1+2+3+4
Body SAR	Back	0.479	0.437	0.419	0.832	See Note 2	Body SAR	Back	0.302	0.437	0.419	0.832	See Note 2
	Top	0.793	0.219	0.172	0.232	**1.416**		Top	0.547	0.219	0.172	0.232	1.170
	Bottom	0.400	0.004	0.400	0.400	1.204		Bottom	0.400	0.004	0.400	0.400	1.204
	Right	0.292	0.362	0.002	0.486	1.142		Right	0.114	0.362	0.002	0.486	0.964
	Left	0.161	0.000	0.737	0.312	1.210		Left	0.217	0.000	0.737	0.312	**1.266**

Simult Tx	Configuration	NR Band n71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4			1	2	3	2	1+2+3+4
Body SAR	Back	0.302	0.437	0.419	0.832	See Note 2	Body SAR	Back	0.536	0.437	0.419	0.832	See Note 2
	Top	0.251	0.219	0.172	0.232	0.874		Top	0.572	0.219	0.172	0.232	1.195
	Bottom	0.400	0.004	0.400	0.400	**1.204**		Bottom	0.400	0.004	0.400	0.400	**1.204**
	Right	0.164	0.362	0.002	0.486	1.014		Right	0.281	0.362	0.002	0.486	1.131
	Left	0.101	0.000	0.737	0.312	1.150		Left	0.099	0.000	0.737	0.312	1.148

Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4			1	2	3	2	1+2+3+4
Body SAR	Back	0.581	0.437	0.419	0.832	See Note 2	Body SAR	Back	0.660	0.437	0.419	0.832	See Note 2
	Top	0.598	0.219	0.172	0.232	**1.221**		Top	0.761	0.219	0.172	0.232	1.384
	Bottom	0.400	0.004	0.400	0.400	1.204		Bottom	0.400	0.004	0.400	0.400	1.204
	Right	0.321	0.362	0.002	0.486	1.171		Right	0.566	0.362	0.002	0.486	**1.416**
	Left	0.111	0.000	0.737	0.312	1.160		Left	0.218	0.000	0.737	0.312	1.267

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	2	1+2+3+4
Body SAR	Back	0.186	0.437	0.419	0.832	See Note 2
	Top	0.111	0.219	0.172	0.232	0.734
	Bottom	0.400	0.004	0.400	0.400	1.204
	Right	0.122	0.362	0.002	0.486	0.972
	Left	0.400	0.000	0.737	0.312	**1.449**

Table 11-18
Simultaneous Transmission Scenario with Bluetooth Antenna 1, 2.4 GHz Antenna 2 WLAN, and 5 GHz MIMO WLAN (Peak 2)

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.757	0.437	0.419	0.321	See Note 2	Body SAR	Back	0.762	0.437	0.419	0.321	See Note 2
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.646	0.437	0.419	0.321	See Note 2	Body SAR	Back	0.344	0.437	0.419	0.321	1.521
Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.508	0.437	0.419	0.321	See Note 2	Body SAR	Back	0.618	0.437	0.419	0.321	See Note 2
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.539	0.437	0.419	0.321	See Note 2	Body SAR	Back	0.455	0.437	0.419	0.321	See Note 2
Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.594	0.437	0.419	0.321	See Note 2	Body SAR	Back	0.661	0.437	0.419	0.321	See Note 2
Simult Tx	Configuration	LTE Band 7 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.479	0.437	0.419	0.321	See Note 2	Body SAR	Back	0.302	0.437	0.419	0.321	**1.479**
Simult Tx	Configuration	NR Band n71 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n5 (Cell) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.302	0.437	0.419	0.321	**1.479**	Body SAR	Back	0.536	0.437	0.419	0.321	See Note 2
Simult Tx	Configuration	NR Band n66 (AWS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)	Simult Tx	Configuration	NR Band n25 (PCS) SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4			1	2	3	4	1+2+3+4
Body SAR	Back	0.581	0.437	0.419	0.321	See Note 2	Body SAR	Back	0.660	0.437	0.419	0.321	See Note 2

Simult Tx	Configuration	NR Band n41 SAR (W/kg)	Bluetooth Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO (Peak 2) SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body SAR	Back	0.186	0.437	0.419	0.321	**1.363**

Notes:

1. No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the antenna pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 11.3 for detailed SPLS ratio analysis.
2. Please see section 11.4 for detailed simultaneous transmission analysis.

11.3 SPLSR Evaluation and Analysis

Per FCC KDB Publication 447498 D01v06, when the sum of the standalone transmitters is more than 1.6 W/kg for 1g, the SAR sum to peak locations can be analyzed to determine SAR distribution overlaps. When the SAR peak to location ratio (shown below) for each pair of antennas is ≤ 0.04 for 1g, simultaneous SAR evaluation is not required. The distance between the transmitters was calculated using the following formula.

$$\text{Distance}_{Tx1-Tx2} = R_i = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} \text{ (Body)}$$

$$\text{SPLS Ratio} = \frac{(SAR_1 + SAR_2)^{1.5}}{R_i}$$

11.3.1 Back Side SPLSR Evaluation and Analysis

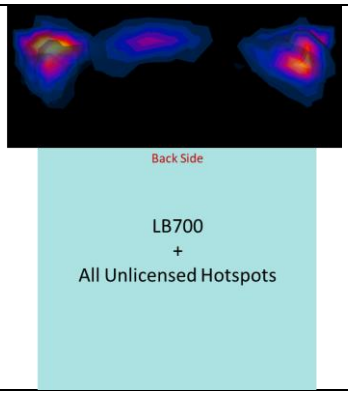
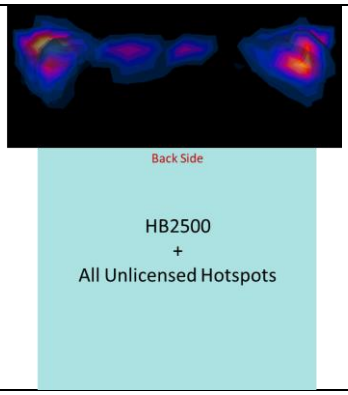
Table 11-19
Peak SAR Locations for Back Side

Mode/Band	x (mm)	y (mm)
Bluetooth Ant 1	-29.60	90.40
Bluetooth Ant 2	-25.20	-81.50
2.4 GHz WLAN Ant 2	-33.20	-80.00
5 GHz WLAN Ant 1	-32.00	81.50
2.4 GHz WLAN MIMO (Peak 1)	-27.60	87.60
2.4 GHz WLAN MIMO (Peak 2)	-35.40	-79.80
5 GHz WLAN MIMO (Peak 1)	-31.00	-82.00
5 GHz WLAN MIMO (Peak 2)	-38.00	83.00
UMTS 850	-27.00	3.00
UMTS 1750	-25.20	24.20
UMTS 1900	-33.00	32.00
LTE Band 71	-20.00	10.00
LTE Band 12	-18.50	7.50
LTE Band 13	-20.00	0.50
LTE Band 26 (Cell)	-22.20	15.00
LTE Band 5 (Cell)	-19.90	6.60
LTE Band 66 (AWS)	-28.00	31.00
LTE Band 25 (PCS)	-30.00	38.00
LTE Band 7	-28.60	35.10
LTE Band 41	-26.00	38.90
NR Band n71	-27.00	8.20
NR Band n5	-21.20	14.80
NR Band n66 (AWS)	-30.00	31.00
NR Band n25 (PCS)	-30.00	39.50
NR Band n41	-20.90	65.20

Table 11-20
Back Side SAR to Peak Location Separation Ratio Calculations

Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
UMTS 850	5 GHz WLAN MIMO (Peak 1)	0.757	0.832	1.589	85.09	0.02	2
2.4 GHz WLAN Ant 2	5 GHz WLAN Ant 1	0.419	0.460	0.879	161.50	0.01	1-6
UMTS 850	2.4 GHz WLAN Ant 2	0.757	0.419	1.176	83.23	0.02	2
UMTS 1750	2.4 GHz WLAN Ant 2	0.762	0.419	1.181	104.51	0.01	3
UMTS 850	5 GHz WLAN Ant 1	0.757	0.460	1.217	78.66	0.02	2
UMTS 1750	5 GHz WLAN Ant 1	0.762	0.460	1.222	57.70	0.02	3
Bluetooth Ant 2	5 GHz WLAN Ant 1	0.457	0.460	0.917	163.14	0.01	1-6
UMTS 850	Bluetooth Ant 2	0.757	0.457	1.214	84.52	0.02	2
UMTS 1750	Bluetooth Ant 2	0.762	0.457	1.219	105.70	0.01	3
Bluetooth Ant 1	2.4 GHz WLAN Ant 2	0.437	0.419	0.856	170.44	0.00	1-6
UMTS 850	Bluetooth Ant 1	0.757	0.437	1.194	87.44	0.01	2
UMTS 1750	Bluetooth Ant 1	0.762	0.437	1.199	66.35	0.02	3
UMTS 850	2.4 GHz WLAN Ant 2	0.757	0.419	1.176	83.23	0.02	2
UMTS 1750	2.4 GHz WLAN Ant 2	0.762	0.419	1.181	104.51	0.01	3
Bluetooth Ant 1	5 GHz WLAN MIMO (Peak 1)	0.437	0.832	1.269	172.41	0.01	1-6
UMTS 1900	Bluetooth Ant 1	0.646	0.437	1.083	58.50	0.02	4
LTE Band 71	Bluetooth Ant 1	0.344	0.437	0.781	80.97	0.01	1
LTE Band 12	Bluetooth Ant 1	0.508	0.437	0.945	83.64	0.01	1
LTE Band 13	Bluetooth Ant 1	0.618	0.437	1.055	90.41	0.01	1
LTE Band 26 (Cell)	Bluetooth Ant 1	0.539	0.437	0.976	75.76	0.01	2
LTE Band 5 (Cell)	Bluetooth Ant 1	0.455	0.437	0.892	84.36	0.01	2
LTE Band 66 (AWS)	Bluetooth Ant 1	0.594	0.437	1.031	59.42	0.02	3
LTE Band 25 (PCS)	Bluetooth Ant 1	0.661	0.437	1.098	52.40	0.02	4
LTE Band 7	Bluetooth Ant 1	0.479	0.437	0.916	55.31	0.02	5
LTE Band 41	Bluetooth Ant 1	0.302	0.437	0.739	51.63	0.01	5
NR Band n71	Bluetooth Ant 1	0.302	0.437	0.739	82.24	0.01	1
NR Band n5	Bluetooth Ant 1	0.536	0.437	0.973	76.07	0.01	2
NR Band n66 (AWS)	Bluetooth Ant 1	0.581	0.437	1.018	59.40	0.02	3
NR Band n25 (PCS)	Bluetooth Ant 1	0.660	0.437	1.097	50.90	0.02	4
UMTS 1750	5 GHz WLAN MIMO (Peak 1)	0.762	0.832	1.594	106.36	0.02	3
UMTS 1900	5 GHz WLAN MIMO (Peak 1)	0.646	0.832	1.478	114.02	0.02	4
LTE Band 71	5 GHz WLAN MIMO (Peak 1)	0.344	0.832	1.176	92.66	0.01	1
LTE Band 12	5 GHz WLAN MIMO (Peak 1)	0.508	0.832	1.34	90.37	0.02	1
LTE Band 13	5 GHz WLAN MIMO (Peak 1)	0.618	0.832	1.45	83.23	0.02	1
LTE Band 26 (Cell)	5 GHz WLAN MIMO (Peak 1)	0.539	0.832	1.371	97.40	0.02	2
LTE Band 5 (Cell)	5 GHz WLAN MIMO (Peak 1)	0.455	0.832	1.287	89.29	0.02	2
LTE Band 66 (AWS)	5 GHz WLAN MIMO (Peak 1)	0.594	0.832	1.426	113.04	0.02	3
LTE Band 25 (PCS)	5 GHz WLAN MIMO (Peak 1)	0.661	0.832	1.493	120.00	0.02	4
LTE Band 7	5 GHz WLAN MIMO (Peak 1)	0.479	0.832	1.311	117.12	0.01	5
LTE Band 41	5 GHz WLAN MIMO (Peak 1)	0.302	0.832	1.134	121.00	0.01	5
NR Band n71	5 GHz WLAN MIMO (Peak 1)	0.302	0.832	1.134	90.29	0.01	1
NR Band n5	5 GHz WLAN MIMO (Peak 1)	0.536	0.832	1.368	97.29	0.02	2
NR Band n66 (AWS)	5 GHz WLAN MIMO (Peak 1)	0.581	0.832	1.413	113.00	0.01	3
NR Band n25 (PCS)	5 GHz WLAN MIMO (Peak 1)	0.660	0.832	1.492	121.50	0.01	4
2.4 GHz WLAN MIMO (Peak 1)	5 GHz WLAN MIMO (Peak 1)	0.627	0.832	1.459	169.63	0.01	1-6
UMTS 850	2.4 GHz WLAN MIMO (Peak 1)	0.757	0.627	1.384	84.60	0.02	2
UMTS 1750	2.4 GHz WLAN MIMO (Peak 1)	0.762	0.627	1.389	63.45	0.03	3
UMTS 1900	2.4 GHz WLAN MIMO (Peak 1)	0.646	0.627	1.273	55.86	0.03	4
LTE Band 71	2.4 GHz WLAN MIMO (Peak 1)	0.344	0.627	0.971	77.97	0.01	1
LTE Band 12	2.4 GHz WLAN MIMO (Peak 1)	0.508	0.627	1.135	80.62	0.01	1
LTE Band 13	2.4 GHz WLAN MIMO (Peak 1)	0.618	0.627	1.245	87.43	0.02	1
LTE Band 26 (Cell)	2.4 GHz WLAN MIMO (Peak 1)	0.539	0.627	1.166	72.80	0.02	2
LTE Band 5 (Cell)	2.4 GHz WLAN MIMO (Peak 1)	0.455	0.627	1.082	81.37	0.01	2
LTE Band 66 (AWS)	2.4 GHz WLAN MIMO (Peak 1)	0.594	0.627	1.221	56.60	0.02	3
LTE Band 25 (PCS)	2.4 GHz WLAN MIMO (Peak 1)	0.661	0.627	1.288	49.66	0.03	4
LTE Band 7	2.4 GHz WLAN MIMO (Peak 1)	0.479	0.627	1.106	52.51	0.02	5
LTE Band 41	2.4 GHz WLAN MIMO (Peak 1)	0.302	0.627	0.929	48.73	0.02	5
NR Band n41	5 GHz WLAN MIMO (Peak 1)	0.186	0.832	1.018	147.55	0.01	6

Table 11-21
Back Side SAR to Peak Location Separation Ratio Plots

	
1	**2**
	
3	**4**
	
5	**6**

11.4 Additional Simultaneous SAR Evaluation and Analysis for Main Band, Bluetooth, 2.4GHz WLAN, and 5 GHz WLAN Operations

Per KDB Publication 865664, when the sum of the transmitters potentially operating simultaneously is greater than the 1.6 W/kg and the sum to peak SAR location separation ratio between any pair of transmitters is more than 0.04 for 1g, SAR tests are required for simultaneous transmission to determine the aggregate 1g SAR. When required, each transmitter is tested for simultaneous transmission in the configuration, channel and operating mode that resulted in the highest SAR during the stand-alone evaluation.

The Bluetooth, 2.4GHz WLAN, and 5 GHz WLAN transmitters are co-located antennas and spatially separated from 2G/3G/4G/5G antennas. Per November 2019 TCB Workshop Notes, enlarged volumetric scans on co-located antenna pairs were performed for Bluetooth, 2.4GHz WLAN, and 5 GHz WLAN. The SPLSR procedure for the spatially separated 2G/3G/4G/5G antenna and aggregated SAR distribution of the co-located Bluetooth/2.4GHz WLAN/5GHz WLAN antenna pair was applied according to KDB Publication 447498.

11.4.1 Back Side Volumetric SAR Evaluation and Analysis for Bluetooth, 2.4GHz WLAN, and 5GHz WLAN Simultaneous Transmission

Table 11-22
Simultaneous Transmission SAR Analysis

Band/ Mode	Configuration	Frequency [MHz]	Measured Standalone 1g SAR [W/kg]	Maximum Allowed Power [dBm]	Conducted Power (Ant 1) [dBm]	Conducted Power (Ant 2) [dBm]	Duty Cycle (%)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Volumetric 1g SAR [W/kg]	Scaled Volumetric 1g SAR [W/kg]	Volumetric SAR Plot Number
Bluetooth Ant 1	Back Side, Ch. 39, 1 Mbps	2441	0.245	12.0	10.62	N/A	77.1	1.374	1.297	0.239	0.426	A21
Bluetooth Ant 2	Back Side, Ch. 39, 1 Mbps	2441	0.235	12.0	N/A	10.24	77.1	1.5	1.297	0.127	0.247	A22
2.4 GHz WLAN Ant 2	Back Side, 802.11b, 22 MHz, Ch. 11, 1 Mbps	2462	0.355	12.0	N/A	11.28	99.9	1.18	1.001	0.338	0.399	A23
2.4 GHz WLAN MIMO (Peak 1)	Back Side, 802.11n, 20 MHz, Ch. 11, 13 Mbps	2462	0.522	11.0	10.44	10.22	99.7	1.197	1.003	0.491	0.589	A24
2.4 GHz WLAN MIMO (Peak 2)	Back Side, 802.11n, 20 MHz, Ch. 11, 13 Mbps	2462	0.270	11.0	10.44	10.22	99.7	1.197	1.003	0.244	0.293	A25
5 GHz WLAN Ant 1	Back Side, 802.11ac, 80 MHz, Ch. 155, 29.3 Mbps	5775	0.376	9.0	8.14	N/A	99.7	1.219	1.003	0.302	0.369	A26
5 GHz WLAN MIMO (Peak 2)	Back Side, 802.11ac, 80 MHz, Ch. 155, 58.5 Mbps	5775	0.267	9.0	8.14	8.12	99.7	1.225	1.003	0.243	0.299	A27
5 GHz WLAN MIMO (Peak 1)	Back Side, 802.11ac, 80 MHz, Ch. 155, 58.5 Mbps	5775	0.677	9.0	8.14	8.12	99.7	1.225	1.003	0.626	0.769	A28

Simultaneous Transmission Bands/Modes		Scaled Multi-Band SAR (W/kg)	Simultaneous SAR Plot Number
Bluetooth Ant 1	5 GHz WLAN Ant 1	0.606	A29
Bluetooth Ant 2	5 GHz WLAN MIMO (Peak 1)	1.040	A30
5 GHz WLAN MIMO (Peak 1)	2.4 GHz WLAN Ant 2	1.040	A31
2.4 GHz WLAN MIMO (Peak 1)	5 GHz WLAN MIMO (Peak 2)	0.745	A32
2.4 GHz WLAN MIMO (Peak 2)	5 GHz WLAN MIMO (Peak 1)	1.060	A33
Bluetooth Ant 1	5 GHz WLAN MIMO (Peak 2)	0.574	A34

Note:
1. All volumetric zoom scans were performed with DASY52 SAR system version 52.10. Post processor SEMCAD X Versions 14.6.14 (7483) multiband combiner requires enlarged zoom scans to overlap but does not require measurement point resolutions within the volumes to be identical for interpolation and superposition.
2. Each antenna was evaluated independently using the channel/configuration that produced the highest measured SAR when the standalone SAR was tested.
3. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v05. The simultaneous transmission SAR results of the individual transmitters were scaled using SEMCAD X during processing.
4. The Bluetooth, 2.4GHz WLAN, and 5 GHz WIFI SAR values above represent the aggregate distributions from the simultaneous transmission (volumetric) SAR evaluation.

11.4.2 Back Side SPLSR Evaluation and Analysis for Main Band, Bluetooth, 2.4GHz WLAN, and 5GHz WLAN Simultaneous Transmission

Table 11-23
Peak SAR Locations for Back Side

Mode/Band	x (mm)	y (mm)
Bluetooth Ant 1	-29.60	90.40
2.4 GHz WLAN Ant 2	-33.20	-80.00
Bluetooth Ant 1 and 5GHz WLAN Ant 1	-40.00	85.00
Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	-33.00	-82.00
5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	-35.00	-80.00
2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)	-40.00	85.00
2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	-33.00	-82.00
Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	-40.00	85.00
UMTS 850	-27.00	3.00
UMTS 1750	-25.20	24.20
UMTS 1900	-33.00	32.00
LTE Band 71	-20.00	10.00
LTE Band 12	-18.50	7.50
LTE Band 13	-20.00	0.50
LTE Band 26 (Cell)	-22.20	15.00
LTE Band 5 (Cell)	-19.90	6.60
LTE Band 66 (AWS)	-28.00	31.00
LTE Band 25 (PCS)	-30.00	38.00
LTE Band 7	-28.60	35.10
LTE Band 41	-26.00	38.90
NR Band n71	-27.00	8.20
NR Band n5	-21.20	14.80
NR Band n66 (AWS)	-30.00	31.00
NR Band n25 (PCS)	-30.00	39.50
NR Band n41	-20.90	65.20

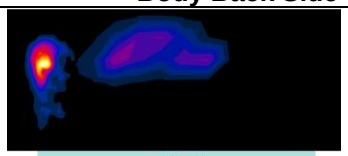
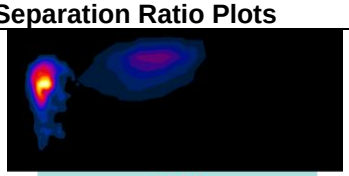
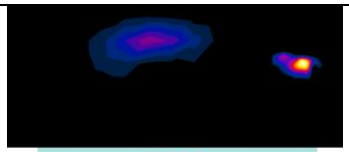
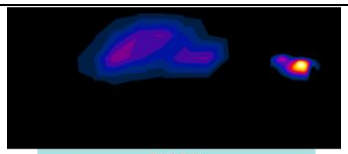
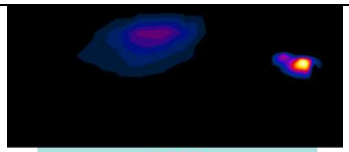
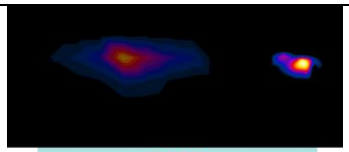
Table 11-24
Back Side SAR to Peak Location Separation Ratio Calculations (1 of 2)

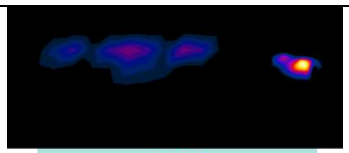
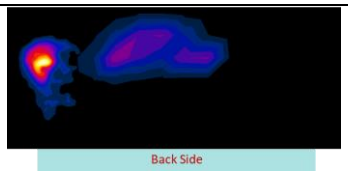
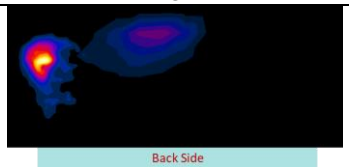
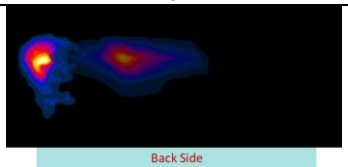
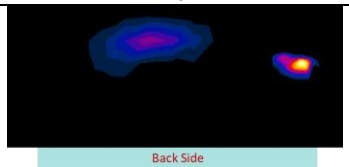
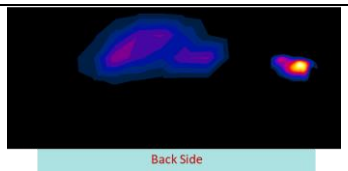
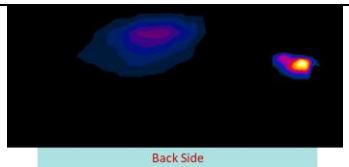
Antenna Pair		Standalone SAR (W/kg)		Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
UMTS 850	Bluetooth Ant 1 and 5GHz WLAN Ant 1	0.757	0.606	83.02	0.02	1
UMTS 1750	Bluetooth Ant 1 and 5GHz WLAN Ant 1	0.762	0.606	62.58	0.03	2
UMTS 850	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.757	1.040	85.21	0.03	4
UMTS 1750	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.762	1.040	106.49	0.02	5
UMTS 1900	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.646	1.040	114.00	0.02	6
LTE Band 71	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.344	1.040	92.91	0.02	3
LTE Band 12	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.508	1.040	90.67	0.02	3
LTE Band 13	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.618	1.040	83.52	0.03	3
LTE Band 26 (Cell)	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.539	1.040	97.60	0.02	4
LTE Band 5 (Cell)	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.455	1.040	89.56	0.02	4
LTE Band 66 (AWS)	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.594	1.040	113.11	0.02	5
LTE Band 25 (PCS)	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.661	1.040	120.04	0.02	6
LTE Band 7	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.479	1.040	117.18	0.02	7
NR Band n5	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.536	1.040	97.52	0.02	4
NR Band n66 (AWS)	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.581	1.040	113.04	0.02	5
NR Band n25 (PCS)	Bluetooth Ant 2 and 5GHz WLAN MIMO (Peak 1)	0.660	1.040	121.54	0.02	6
2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.745	1.060	167.15	0.01	8
UMTS 850	2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)	0.757	0.745	83.02	0.02	9
UMTS 1750	2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)	0.762	0.745	62.58	0.03	10
LTE Band 25 (PCS)	2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)	0.661	0.745	48.05	0.03	11
NR Band n25 (PCS)	2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)	0.660	0.745	46.59	0.04	11
UMTS 850	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.757	1.060	85.21	0.03	13
UMTS 1750	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.762	1.060	106.49	0.02	14
UMTS 1900	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.646	1.060	114.00	0.02	15
LTE Band 12	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.508	1.060	90.67	0.02	12
LTE Band 13	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.618	1.060	83.52	0.03	12
LTE Band 26 (Cell)	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.539	1.060	97.60	0.02	13
LTE Band 5 (Cell)	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.455	1.060	89.56	0.02	13
LTE Band 66 (AWS)	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.594	1.060	113.11	0.02	14
LTE Band 25 (PCS)	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.661	1.060	120.04	0.02	15
LTE Band 7	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.479	1.060	117.18	0.02	16
NR Band n5	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.536	1.060	97.52	0.02	13
NR Band n66 (AWS)	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.581	1.060	113.04	0.02	14
NR Band n25 (PCS)	2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	0.660	1.060	121.54	0.02	15

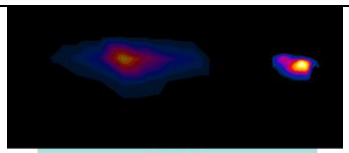
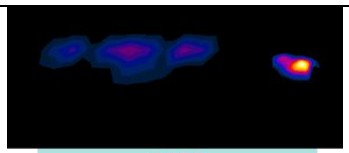
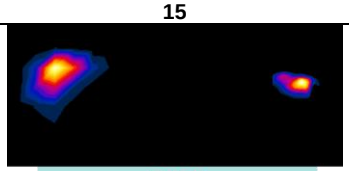
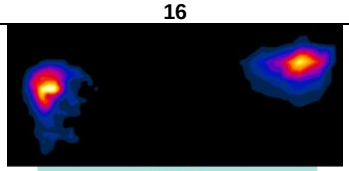
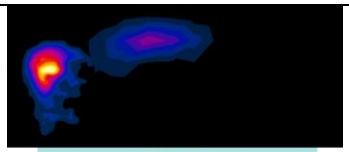
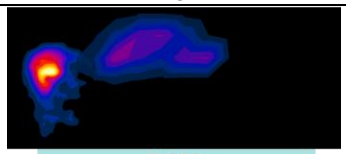
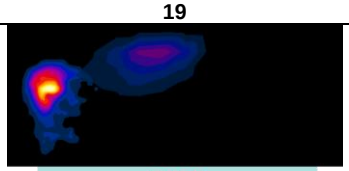
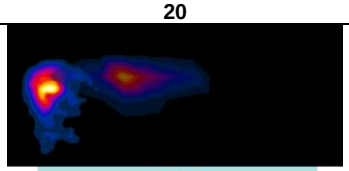
Table 11-25
Body Back Side SAR to Peak Location Separation Ratio Calculations (2 of 2)

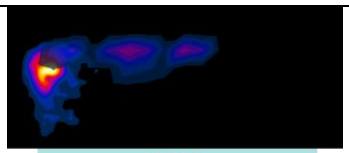
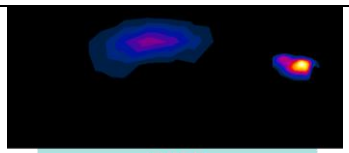
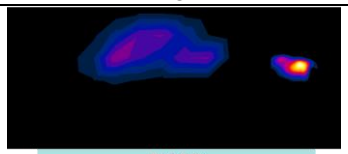
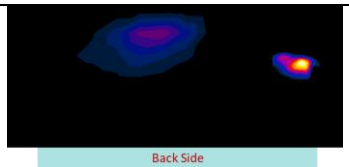
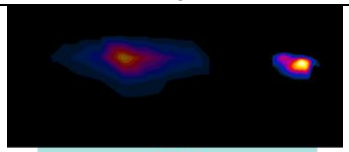
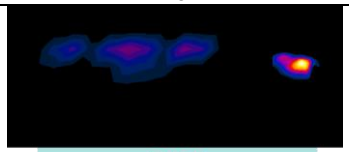
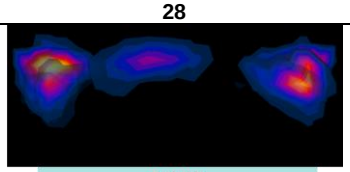
Antenna Pair		Standalone SAR (W/kg)		Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	D_{a-b}	$(a+b)^{1.5}/D_{a-b}$	
Bluetooth Ant 1	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.437	1.040	170.49	0.01	17
2.4 GHz WLAN Ant 2	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.419	0.574	165.14	0.01	18
UMTS 850	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.757	0.574	83.02	0.02	20
UMTS 1750	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.762	0.574	62.58	0.02	21
UMTS 1900	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.646	0.574	53.46	0.03	22
LTE Band 12	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.508	0.574	80.43	0.01	19
LTE Band 13	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.618	0.574	86.83	0.01	19
LTE Band 26 (Cell)	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.539	0.574	72.23	0.02	20
LTE Band 5 (Cell)	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.455	0.574	80.94	0.01	20
LTE Band 66 (AWS)	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.594	0.574	55.32	0.02	21
LTE Band 25 (PCS)	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.661	0.574	48.05	0.03	22
LTE Band 7	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.479	0.574	51.19	0.02	23
NR Band n5	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.536	0.574	72.67	0.02	20
NR Band n66 (AWS)	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.581	0.574	54.92	0.02	21
NR Band n25 (PCS)	Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	0.660	0.574	46.59	0.03	22
UMTS 850	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.757	1.040	83.38	0.03	25
UMTS 1750	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.762	1.040	104.66	0.02	26
UMTS 1900	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.646	1.040	112.02	0.02	27
LTE Band 71	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.344	1.040	91.24	0.02	24
LTE Band 12	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.508	1.040	89.04	0.02	24
LTE Band 13	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.618	1.040	81.89	0.03	24
LTE Band 26 (Cell)	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.539	1.040	95.86	0.02	25
LTE Band 5 (Cell)	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.455	1.040	87.91	0.02	25
LTE Band 66 (AWS)	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.594	1.040	111.22	0.02	26
LTE Band 25 (PCS)	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.661	1.040	118.11	0.02	27
LTE Band 7	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.479	1.040	115.28	0.02	28
LTE Band 41	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.302	1.040	119.24	0.01	28
NR Band n71	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.302	1.040	88.56	0.02	24
NR Band n5	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.536	1.040	95.80	0.02	25
NR Band n66 (AWS)	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.581	1.040	111.11	0.02	26
NR Band n25 (PCS)	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.660	1.040	119.60	0.02	27
NR Band n41	5GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	0.186	1.040	145.88	0.01	29
UMTS 850	Bluetooth Ant 1	0.757	0.437	87.44	0.01	31
UMTS 1750	Bluetooth Ant 1	0.762	0.437	66.35	0.02	32
UMTS 1900	Bluetooth Ant 1	0.646	0.437	58.50	0.02	33
LTE Band 71	Bluetooth Ant 1	0.344	0.437	80.97	0.01	30
LTE Band 12	Bluetooth Ant 1	0.508	0.437	83.64	0.01	30
LTE Band 13	Bluetooth Ant 1	0.618	0.437	90.41	0.01	30
LTE Band 26 (Cell)	Bluetooth Ant 1	0.539	0.437	75.76	0.01	31
LTE Band 5 (Cell)	Bluetooth Ant 1	0.455	0.437	84.36	0.01	31
LTE Band 66 (AWS)	Bluetooth Ant 1	0.594	0.437	59.42	0.02	32
LTE Band 25 (PCS)	Bluetooth Ant 1	0.661	0.437	52.40	0.02	33
LTE Band 7	Bluetooth Ant 1	0.479	0.437	55.31	0.02	34
LTE Band 41	Bluetooth Ant 1	0.302	0.437	51.63	0.01	34
NR Band n71	Bluetooth Ant 1	0.302	0.437	82.24	0.01	30
NR Band n5	Bluetooth Ant 1	0.536	0.437	76.07	0.01	31
NR Band n66 (AWS)	Bluetooth Ant 1	0.581	0.437	59.40	0.02	32
NR Band n25 (PCS)	Bluetooth Ant 1	0.660	0.437	50.90	0.02	33
NR Band n41	Bluetooth Ant 1	0.186	0.437	26.66	0.02	35
UMTS 850	2.4 GHz WLAN Ant 2	0.757	0.419	83.23	0.02	31
UMTS 1750	2.4 GHz WLAN Ant 2	0.762	0.419	104.51	0.01	32
UMTS 1900	2.4 GHz WLAN Ant 2	0.646	0.419	112.00	0.01	33
LTE Band 12	2.4 GHz WLAN Ant 2	0.508	0.419	88.73	0.01	30
LTE Band 13	2.4 GHz WLAN Ant 2	0.618	0.419	81.58	0.01	30
LTE Band 26 (Cell)	2.4 GHz WLAN Ant 2	0.539	0.419	95.63	0.01	31
LTE Band 5 (Cell)	2.4 GHz WLAN Ant 2	0.455	0.419	87.62	0.01	31
LTE Band 66 (AWS)	2.4 GHz WLAN Ant 2	0.594	0.419	111.12	0.01	32
LTE Band 25 (PCS)	2.4 GHz WLAN Ant 2	0.661	0.419	118.04	0.01	33
LTE Band 7	2.4 GHz WLAN Ant 2	0.479	0.419	115.19	0.01	34
NR Band n5	2.4 GHz WLAN Ant 2	0.536	0.419	95.56	0.01	31
NR Band n66 (AWS)	2.4 GHz WLAN Ant 2	0.581	0.419	111.05	0.01	32
NR Band n25 (PCS)	2.4 GHz WLAN Ant 2	0.660	0.419	119.54	0.01	33

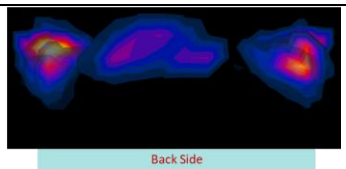
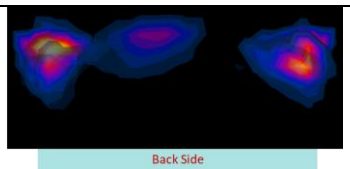
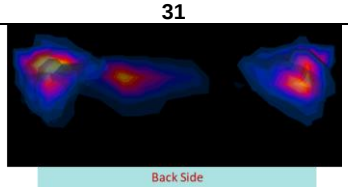
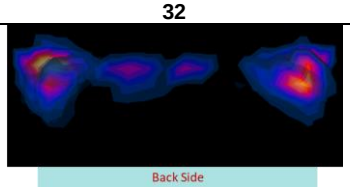
Table 11-26
Body Back Side SAR to Peak Location Separation Ratio Plots

 LB850 + Bluetooth Ant 1 and 5GHz WLAN Ant 1	 LB1750 + Bluetooth Ant 1 and 5GHz WLAN Ant 1
1	2
 LB700 + Bluetooth Ant 2 and 5 GHz WLAN MIMO (Peak 1)	 LB850 + Bluetooth Ant 2 and 5 GHz WLAN MIMO (Peak 1)
3	4
 MB1750 + Bluetooth Ant 2 and 5 GHz WLAN MIMO (Peak 1)	 MB1900 + Bluetooth Ant 2 and 5 GHz WLAN MIMO (Peak 1)
5	6

 HB2500 + Bluetooth Ant 2 and 5 GHz WLAN MIMO (Peak 1)	 2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2) + 2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)
7	**8**
 LB850 + 2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)	 MB1750 + 2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)
9	**10**
 MB1900 + 2.4 GHz WLAN MIMO (Peak 1) and 5 GHz WLAN MIMO (Peak 2)	 LB700 + 2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)
11	**12**
 LB850 + 2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	 MB1750 + 2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)
13	**14**

 MB1900 + 2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)	 HB2500 + 2.4 GHz WLAN MIMO (Peak 2) and 5 GHz WLAN MIMO (Peak 1)
15	**16**
 Bluetooth Ant 1 + 5 GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	 2.4 GHz WLAN Ant 2 + Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)
17	**18**
 LB700 + Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	 LB850 + Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)
19	**20**
 MB1750 + Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	 MB1900 + Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)
21	**22**

 Back Side HB2500 + Bluetooth Ant 1 and 5 GHz WLAN MIMO (Peak 2)	 Back Side LB700 + 5 GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2
23	**24**
 Back Side LB850 + 5 GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	 Back Side MB1750 + 5 GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2
25	**26**
 Back Side MB1900 + 5 GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	 Back Side HB2500 + 5 GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2
27	**28**
 Back Side n41 + 5 GHz WLAN MIMO (Peak 1) and 2.4 GHz WLAN Ant 2	 Back Side LB700 + All Unlicensed Hotspots
29	**30**

	
31	**32**
	
33	**34**
	
35	

11.5 Simultaneous Transmission Conclusion

The above numerical summed SAR results, SPLSR and Volumetric analysis are sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.2.a

12 ADDITIONAL TESTING PER FCC GUIDANCE

12.1 Tuner Testing

Per April 2019 TCB Workshop Notes, the following test procedures were followed to demonstrate that the SAR results in Section 11 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Per FCC Guidance, during NR testing the device was configured with the tuner state selected by he device in LTE mode with auto-tune active at the same frequency. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

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

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

Table 12-1
UMTS Supplemental Body SAR Data

Supplemental Body SAR Data					
UMTS B5		UMTS B4		UMTS B2	
RMC		RMC		RMC	
Test Position	Top	Test Position	Back	Test Position	Top
Spacing	0 mm	Spacing	0 mm	Spacing	0 mm
Frequency (MHz)	836.6	Frequency (MHz)	1752.6	Frequency (MHz)	1852.4
Channel	4183	Channel	1513	Channel	9262
Measured 1g SAR (W/kg)	0.693	Measured 1g SAR (W/kg)	0.745	Measured 1g SAR (W/kg)	0.559
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 79)	1.323	Auto-tune (State 113)	1.673	Auto-tune (State 5)	1.387
Default (State 78)	1.185	Default (State 13)	1.542	Default (State 13)	1.057
State 0	0.667	State 0	1.455	State 0	1.246
State 1	0.887	State 1	1.418	State 1	1.260
State 2	0.915	State 2	1.404	State 2	1.277
State 3	0.934	State 3	1.39	State 3	1.284
State 4	0.971	State 4	1.367	State 4	1.294
State 5	0.997	State 5	1.36	State 5	1.29
State 6	0.946	State 6	1.291	State 6	1.311
State 7	0.797	State 7	1.226	State 7	1.322
State 8	0.593	State 8	1.134	State 8	1.341
State 9	0.35	State 9	0.993	State 9	1.339
State 10	0.235	State 10	0.879	State 10	1.322
State 11	0.143	State 11	0.731	State 11	1.266
State 12	0.072	State 12	0.534	State 12	1.123
State 13	0.375	State 13	1.542	State 13	1.057
State 14	0.474	State 14	1.517	State 14	1.093
State 15	0.482	State 15	1.507	State 15	1.104
State 16	0.485	State 16	1.506	State 16	1.109
State 17	0.485	State 17	1.486	State 17	1.128
State 18	0.472	State 18	1.48	State 18	1.127
State 19	0.4	State 19	1.429	State 19	1.165
State 20	0.309	State 20	1.383	State 20	1.192
State 21	0.219	State 21	1.308	State 21	1.219
State 22	0.126	State 22	1.177	State 22	1.236
State 23	0.086	State 23	1.068	State 23	1.217
State 24	0.053	State 24	0.906	State 24	1.149
State 25	0.027	State 25	0.688	State 25	0.958
State 26	0.728	State 26	1.336	State 26	1.217
State 27	0.937	State 27	1.267	State 27	1.238
State 28	0.952	State 28	1.251	State 28	1.242
State 29	0.968	State 29	1.238	State 29	1.214
State 30	0.989	State 30	1.194	State 30	1.253
State 31	0.986	State 31	1.187	State 31	1.251
State 32	0.891	State 32	1.097	State 32	1.262
State 33	0.726	State 33	1.028	State 33	1.265
State 34	0.532	State 34	0.931	State 34	1.256
State 35	0.314	State 35	0.794	State 35	1.228
State 36	0.214	State 36	0.695	State 36	1.18
State 37	0.131	State 37	0.568	State 37	1.091
State 38	0.068	State 38	0.413	State 38	0.904
State 39	1.109	State 39	0.376	State 39	0.157
State 40	1.238	State 40	0.345	State 40	0.188
State 41	1.206	State 41	0.331	State 41	0.188
State 42	1.171	State 42	0.319	State 42	0.188
State 43	1.065	State 43	0.297	State 43	0.19
State 44	0.949	State 44	0.299	State 44	0.201
State 45	0.652	State 45	0.248	State 45	0.205
State 46	0.446	State 46	0.218	State 46	0.213
State 47	0.278	State 47	0.179	State 47	0.213
State 48	0.154	State 48	0.133	State 48	0.207
State 49	0.104	State 49	0.106	State 49	0.193
State 50	0.063	State 50	0.077	State 50	0.165
State 51	0.033	State 51	0.048	State 51	0.116
State 52	0.384	State 52	1.455	State 52	1.153
State 53	0.455	State 53	1.405	State 53	1.198
State 54	0.457	State 54	1.395	State 54	1.208
State 55	0.456	State 55	1.38	State 55	1.162
State 56	0.443	State 56	1.348	State 56	1.227
State 57	0.423	State 57	1.342	State 57	1.227
State 58	0.341	State 58	1.266	State 58	1.255
State 59	0.258	State 59	1.204	State 59	1.269
State 60	0.183	State 60	1.112	State 60	1.268
State 61	0.107	State 61	0.978	State 61	1.226
State 62	0.073	State 62	0.868	State 62	1.156
State 63	0.046	State 63	0.722	State 63	1.019
State 64	0.024	State 64	0.539	State 64	0.764
State 65	0.61	State 65	0.403	State 65	0.166
State 66	0.51	State 66	0.396	State 66	0.217
State 67	0.478	State 67	0.383	State 67	0.22
State 68	0.448	State 68	0.372	State 68	0.223
State 69	0.381	State 69	0.352	State 69	0.234
State 70	0.324	State 70	0.359	State 70	0.251
State 71	0.211	State 71	0.309	State 71	0.278
State 72	0.142	State 72	0.279	State 72	0.306
State 73	0.095	State 73	0.234	State 73	0.326
State 74	0.054	State 74	0.18	State 74	0.327
State 75	0.037	State 75	0.145	State 75	0.292
State 76	0.024	State 76	0.107	State 76	0.216
State 77	0.013	State 77	0.068	State 77	0.115
State 78	1.185	State 78	0.539	State 78	0.14
State 79	1.339	State 79	0.314	State 79	0.165
State 80	1.173	State 80	0.301	State 80	0.165
State 81	1.13	State 81	0.289	State 81	0.165
State 82	1.008	State 82	0.268	State 82	0.167
State 83	0.88	State 83	0.271	State 83	0.177
State 84	0.581	State 84	0.224	State 84	0.181
State 85	0.386	State 85	0.197	State 85	0.187
State 86	0.251	State 86	0.16	State 86	0.188
State 87	0.138	State 87	0.119	State 87	0.185
State 88	0.092	State 88	0.095	State 88	0.173
State 89	0.056	State 89	0.069	State 89	0.148
State 90	0.029	State 90	0.043	State 90	0.105
State 91	0.655	State 91	0.365	State 91	0.145
State 92	0.523	State 92	0.358	State 92	0.186
State 93	0.483	State 93	0.348	State 93	0.19
State 94	0.448	State 94	0.337	State 94	0.193
State 95	0.374	State 95	0.32	State 95	0.202
State 96	0.312	State 96	0.325	State 96	0.217
State 97	0.196	State 97	0.28	State 97	0.241
State 98	0.13	State 98	0.252	State 98	0.267
State 99	0.086	State 99	0.211	State 99	0.287
State 100	0.049	State 100	0.162	State 100	0.293
State 101	0.033	State 101	0.13	State 101	0.265
State 102	0.021	State 102	0.096	State 102	0.196
State 103	0.011	State 103	0.062	State 103	0.105
State 104	0.615	State 104	1.42	State 104	1.23
State 105	0.347	State 105	1.504	State 105	1.047
State 106	0.678	State 106	1.316	State 106	1.212
State 107	1.035	State 107	0.366	State 107	0.153
State 108	0.456	State 108	1.443	State 108	1.15
State 109	0.607	State 109	0.394	State 109	0.161
State 110	1.076	State 110	0.339	State 110	0.138
State 111	0.652	State 111	0.359	State 111	0.142
State 112	0.617	State 112	1.418	State 112	1.22
State 113	0.348	State 113	1.54	State 113	1.019
State 114	0.679	State 114	1.312	State 114	1.176
State 115	1.034	State 115	0.365	State 115	0.149
State 116	0.455	State 116	1.437	State 116	1.108
State 117	0.606	State 117	0.393	State 117	0.146
State 118	1.077	State 118	0.337	State 118	0.126
State 119	0.651	State 119	0.36	State 119	0.131

Table 12-2
LTE Supplemental Body SAR Data (1 of 2)

Supplemental Body SAR Data												
LTE B71		LTE B12		LTE B13		LTE B5		LTE B26		LTE B66/4	
QPSK, 20 MHz Bandwidth, 50 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 25 RB, 12 RB Offset		QPSK, 10 MHz Bandwidth, 25 RB, 12 RB Offset		QPSK, 10 MHz Bandwidth, 25 RB, 25 RB Offset		QPSK, 15 MHz Bandwidth, 36 RB, 37 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Top
Spacing	0 mm	Spacing	0 mm	Spacing	0 mm	Spacing	0 mm	Spacing	0 mm	Spacing	23 mm
Frequency (MHz)	680.5	Frequency (MHz)	707.5	Frequency (MHz)	782.0	Frequency (MHz)	836.5	Frequency (MHz)	831.5	Frequency (MHz)	1770.0
Channel	133297	Channel	23095	Channel	23230	Channel	20525	Channel	26865	Channel	132572
Measured 1g SAR (W/kg)	0.275	Measured 1g SAR (W/kg)	0.392	Measured 1g SAR (W/kg)	0.453	Measured 1g SAR (W/kg)	0.393	Measured 1g SAR (W/kg)	0.440	Measured 1g SAR (W/kg)	0.651
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 78)	0.622	Auto-tune (State 78)	0.826	Auto-tune (State 78)	0.949	Auto-tune (State 79)	0.564	Auto-tune (State 79)	0.801	Auto-tune (State 113)	0.935
Default (State 0)	0.569	Default (State 78)	0.759	Default (State 78)	0.899	Default (State 78)	0.506	Default (State 78)	0.748	Default (State 0)	0.963
State 3	0.563	State 32	0.376	State 18	0.467	State 2	0.445	State 46	0.270	State 35	0.358
State 4	0.540	State 37	0.051	State 20	0.293	State 7	0.358	State 49	0.073	State 63	0.399
State 10	0.071	State 42	0.483	State 24	0.051	State 13	0.203	State 53	0.352	State 76	0.049
State 26	0.593	State 47	0.119	State 28	0.749	State 17	0.255	State 58	0.257	State 80	0.102
State 78	0.646	State 52	0.478	State 30	0.737	State 22	0.067	State 64	0.02	State 86	0.056
State 79	0.467	State 57	0.373	State 33	0.479	State 25	0.015	State 68	0.334	State 87	0.043
State 85	0.145	State 62	0.054	State 36	0.146	State 32	0.406	State 72	0.112	State 90	0.017
State 89	0.03	State 67	0.379	State 39	0.861	State 35	0.146	State 77	0.012	State 93	0.121
State 94	0.329	State 71	0.17	State 44	0.532	State 38	0.033	State 78	0.748	State 98	0.092
State 101	0.034	State 73	0.083	State 49	0.086	State 42	0.513	State 79	0.741	State 102	0.044
State 105	0.449	State 74	0.051	State 72	0.149	State 68	0.255	State 82	0.63	State 106	0.673
State 109	0.527	State 78	0.759	State 76	0.032	State 78	0.506	State 84	0.368	State 111	0.127
State 114	0.573	State 83	0.335	State 78	0.899	State 79	0.561	State 88	0.067	State 113	0.962
State 119	0.535	State 108	0.479	State 100	0.059	State 118	0.561	State 116	0.296	State 118	0.672

Table 12-3
LTE Supplemental Body SAR Data (2 of 2)

Supplemental Body SAR Data	
LTE B25/2	
QPSK, 20 MHz Bandwidth, 50RB, 50RB Offset	
Test Position	Top
Spacing	0 mm
Frequency (MHz)	1860.0
Channel	26140
Measured 1g SAR (W/kg)	0.648
Average Value of Time Sweep (W/kg)	
Auto-tune (State 9)	1.889
Default (State 13)	1.440
State 0	1.650
State 1	1.695
State 2	1.699
State 3	1.705
State 4	1.711
State 5	1.711
State 6	1.747
State 7	1.795
State 8	1.818
State 9	1.841
State 10	1.876
State 11	1.787
State 12	1.603
State 13	1.44
State 14	1.462
State 15	1.473
State 16	1.483
State 17	1.506
State 18	1.502
State 19	1.568
State 20	1.597
State 21	1.654
State 22	1.666
State 23	1.651
State 24	1.569
State 25	1.309
State 26	1.57
State 27	1.622
State 28	1.629
State 29	1.63
State 30	1.637
State 31	1.638
State 32	1.667
State 33	1.687
State 34	1.697
State 35	1.694
State 36	1.656
State 37	1.554
State 38	1.322
State 39	0.17
State 40	0.207
State 41	0.207
State 42	0.208
State 43	0.212
State 44	0.225
State 45	0.234
State 46	0.246
State 47	0.254
State 48	0.259
State 49	0.253
State 50	0.228
State 51	0.17
State 52	1.535
State 53	1.605
State 54	1.626
State 55	1.769
State 56	1.78
State 57	1.784
State 58	1.86
State 59	1.882
State 60	1.928
State 61	1.878
State 62	1.784
State 63	1.579
State 64	1.167
State 65	0.186
State 66	0.251
State 67	0.256
State 68	0.26
State 69	0.275
State 70	0.299
State 71	0.34
State 72	0.388
State 73	0.442
State 74	0.493
State 75	0.474
State 76	0.361
State 77	0.361
State 78	0.143
State 79	0.172
State 80	0.174
State 81	0.175
State 82	0.179
State 83	0.191
State 84	0.199
State 85	0.213
State 86	0.224
State 87	0.236
State 88	0.236
State 89	0.219
State 90	0.167
State 91	0.149
State 92	0.197
State 93	0.201
State 94	0.204
State 95	0.216
State 96	0.233
State 97	0.268
State 98	0.307
State 99	0.352
State 100	0.404
State 101	0.391
State 102	0.303
State 103	0.154
State 104	1.649
State 105	1.383
State 106	1.575
State 107	0.161
State 108	1.51
State 109	0.167
State 110	0.145
State 111	0.149
State 112	1.651
State 113	1.383
State 114	1.577
State 115	0.163
State 116	1.508
State 117	0.169
State 118	0.147
State 119	0.152

Table 12-4
NR Supplemental Body SAR Data (1 of 2)

Supplemental Body SAR Data			
NR Band n71		NR Band n5	
CP-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 53 RB Offset	
Test Position	Back	Test Position	Top
Spacing	0 mm	Spacing	0 mm
Frequency (MHz)	680.5	Frequency (MHz)	836.5
Channel	136100	Channel	167300
Measured 1g SAR (W/kg)	0.289	Measured 1g SAR (W/kg)	0.527
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 78)	0.670	Auto-tune (State 79)	0.856
Default (State 0)	0.602	Default (State 78)	0.753
State 4	0.534	State 61	0.074
State 9	0.111	State 73	0.067
State 12	0.028	State 78	0.753
State 26	0.615	State 79	0.856
State 40	0.486	State 81	0.796
State 44	0.324	State 87	0.095
State 49	0.053	State 92	0.381
State 51	0.02	State 95	0.272
State 56	0.424	State 98	0.094
State 61	0.081	State 100	0.034
State 66	0.411	State 106	0.486
State 71	0.182	State 110	0.764
State 78	0.67	State 115	0.736
State 84	0.212	State 118	0.753

Table 12-5
NR Supplemental Body SAR Data (2 of 2)

Supplemental Body SAR Data			
NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 0 RB Offset		DFT-s-OFDM QPSK 20 MHz Bandwidth 1RB, 53 RB Offset	
Test Position	Top	Test Position	Top
Spacing	0 mm	Spacing	0 mm
Frequency (MHz)	1720.0	Frequency (MHz)	1905.0
Channel	344000	Channel	381000
Measured 1g SAR (W/kg)	0.544	Measured 1g SAR (W/kg)	0.723
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 35)	1.397	Auto-tune (State 10)	1.674
Default (State 13)	0.877	Default (State 13)	1.409
State 0	1.105	State 0	1.565
State 1	1.161	State 1	1.593
State 2	1.183	State 2	1.598
State 3	1.197	State 3	1.607
State 4	1.211	State 4	1.619
State 5	1.211	State 5	1.618
State 6	1.277	State 6	1.645
State 7	1.309	State 7	1.658
State 8	1.371	State 8	1.673
State 9	1.419	State 9	1.636
State 10	1.417	State 10	1.674
State 11	1.35	State 11	1.582
State 12	1.128	State 12	1.391
State 13	0.877	State 13	1.409
State 14	0.933	State 14	1.454
State 15	0.962	State 15	1.469
State 16	0.967	State 16	1.482
State 17	1.002	State 17	1.513
State 18	1.001	State 18	1.51
State 19	1.068	State 19	1.572
State 20	1.125	State 20	1.607
State 21	1.172	State 21	1.643
State 22	1.216	State 22	1.656
State 23	1.192	State 23	1.612
State 24	1.063	State 24	1.511
State 25	0.797	State 25	1.236
State 26	1.204	State 26	1.485
State 27	1.256	State 27	1.512
State 28	1.265	State 28	1.516
State 29	1.295	State 29	1.52
State 30	1.304	State 30	1.529
State 31	1.302	State 31	1.528
State 32	1.348	State 32	1.543
State 33	1.371	State 33	1.545
State 34	1.41	State 34	1.544
State 35	1.397	State 35	1.517
State 36	1.344	State 36	1.462
State 37	1.222	State 37	1.352
State 38	0.958	State 38	1.128
State 39	0.308	State 39	0.168
State 40	0.383	State 40	0.204
State 41	0.387	State 41	0.204
State 42	0.39	State 42	0.204
State 43	0.403	State 43	0.206
State 44	0.425	State 44	0.22
State 45	0.451	State 45	0.227
State 46	0.472	State 46	0.238
State 47	0.483	State 47	0.241
State 48	0.464	State 48	0.238
State 49	0.414	State 49	0.226
State 50	0.318	State 50	0.197
State 51	0.186	State 51	0.143
State 52	1.004	State 52	1.468
State 53	1.067	State 53	1.527
State 54	1.098	State 54	1.541
State 55	1.1	State 55	1.552
State 56	1.132	State 56	1.584
State 57	1.128	State 57	1.588
State 58	1.178	State 58	1.635
State 59	1.212	State 59	1.656
State 60	1.238	State 60	1.686
State 61	1.192	State 61	1.638
State 62	1.096	State 62	1.549
State 63	0.93	State 63	1.363
State 64	0.635	State 64	1.014
State 65	0.336	State 65	0.177
State 66	0.457	State 66	0.233
State 67	0.476	State 67	0.237
State 68	0.484	State 68	0.239
State 69	0.519	State 69	0.25
State 70	0.549	State 70	0.27
State 71	0.633	State 71	0.3
State 72	0.682	State 72	0.332
State 73	0.689	State 73	0.362
State 74	0.558	State 74	0.382
State 75	0.409	State 75	0.356
State 76	0.244	State 76	0.275
State 77	0.114	State 77	0.151
State 78	0.265	State 78	0.154
State 79	0.32	State 79	0.183
State 80	0.327	State 80	0.183
State 81	0.329	State 81	0.184
State 82	0.341	State 82	0.187
State 83	0.36	State 83	0.197
State 84	0.387	State 84	0.203
State 85	0.414	State 85	0.212
State 86	0.427	State 86	0.215
State 87	0.413	State 87	0.215
State 88	0.367	State 88	0.206
State 89	0.284	State 89	0.181
State 90	0.166	State 90	0.132
State 91	0.28	State 91	0.156
State 92	0.38	State 92	0.201
State 93	0.397	State 93	0.205
State 94	0.404	State 94	0.208
State 95	0.437	State 95	0.218
State 96	0.471	State 96	0.233
State 97	0.541	State 97	0.263
State 98	0.607	State 98	0.295
State 99	0.621	State 99	0.324
State 100	0.513	State 100	0.344
State 101	0.376	State 101	0.325
State 102	0.222	State 102	0.259
State 103	0.101	State 103	0.144
State 104	1.102	State 104	1.599
State 105	0.861	State 105	1.419
State 106	1.192	State 106	1.488
State 107	0.304	State 107	0.166
State 108	0.997	State 108	1.473
State 109	0.324	State 109	0.168
State 110	0.261	State 110	0.15
State 111	0.275	State 111	0.153
State 112	1.098	State 112	1.574
State 113	0.859	State 113	1.406
State 114	1.19	State 114	1.468
State 115	0.299	State 115	0.166
State 116	0.995	State 116	1.451
State 117	0.326	State 117	0.17
State 118	0.262	State 118	0.154
State 119	0.277	State 119	0.158

12.2 LTE Band 41 Power Class 2 and Power Class 3 Linearity

This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the highest power and available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR for each exposure condition. The linearity between the Power Class 2 and Power Class 3 SAR results and the respective frame averaged powers was calculated to determine that the results were linear. When ULCA is active, the linearity between the Power Class 2 with ULCA active and Power Class 3 with ULCA active SAR results and the respective frame averaged powers was calculated to determine that the results were linear. Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes was < 10% and all reported SAR values were < 1.4 W/kg for 1g.

Table 12-6
LTE Band 41 Body Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	15	16.6
Measured Output Power (dBm)	14.46	15.5
Measured SAR (W/kg)	0.447	0.425
Measured Power (mW)	27.93	35.48
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	17.68	15.36
% deviation from expected linearity		9.39%

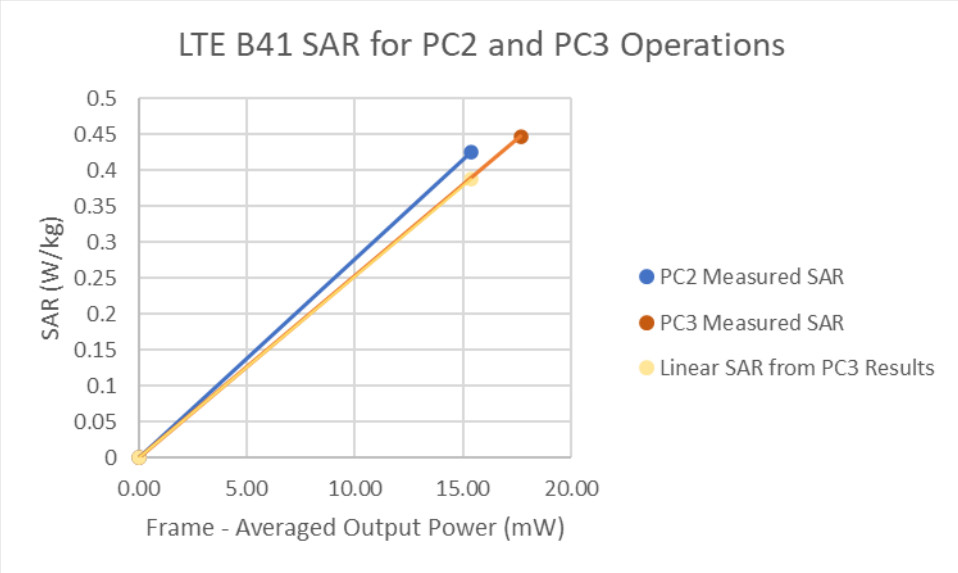


Figure 12-1
LTE Band 41 Body Linearity

Table 12-7
LTE Band 41 ULCA Body Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	15	16.6
Measured Output Power (dBm)	14.32	15.6
Measured SAR (W/kg)	0.406	0.407
Measured Power (mW)	27.04	36.31
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	17.12	15.72
% deviation from expected linearity		9.14%

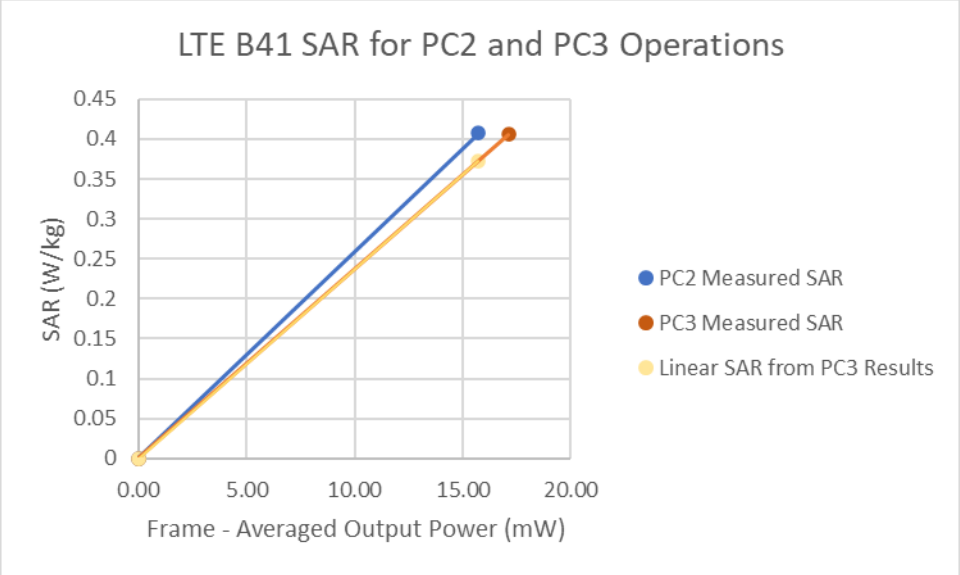


Figure 12-2
LTE Band 41 ULCA Body Linearity

13 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8594A	(9kHz-2.9GHz) Spectrum Analyzer	N/A	N/A	N/A	3051A00187
Agilent	E5515C	8960 Series 10 Wireless Communications Test Set	2/10/2020	Annual	2/10/2021	GB42230325
Agilent	E4438C	ESG Vector Signal Generator	3/8/2019	Biennial	3/8/2021	MY42082385
Agilent	E4432B	ESG-D Series Signal Generator	7/14/2019	Annual	7/14/2020	US40053896
Agilent	N5182A	MXG Vector Signal Generator	5/13/2020	Annual	5/13/2021	MY47420603
Agilent	N5182A	MXG Vector Signal Generator	7/10/2019	Annual	7/10/2020	MY47420800
Agilent	8753ES	S-Parameter Network Analyzer	8/26/2019	Annual	8/26/2020	MY40000670
Agilent	8753ES	S-Parameter Network Analyzer	12/31/2019	Annual	12/31/2020	US39170122
Agilent	E5515C	Wireless Communications Test Set	9/25/2019	Annual	9/25/2020	GB43304278
Agilent	E5515C	Wireless Communications Test Set	1/14/2020	Triennial	1/14/2023	GB43304447
Agilent	N4010A	Wireless Connectivity Test Set	CBT	N/A	CBT	GB44450273
Agilent	N4010A	Wireless Connectivity Test Set	CBT	N/A	CBT	GB46170464
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433976
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433978
Anritsu	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	ML2495A	Power Meter	12/17/2019	Annual	12/17/2020	941001
Anritsu	ML2496A	Power Meter	2/13/2020	Annual	2/13/2021	1306009
Anritsu	ML2496A	Power Meter	3/23/2020	Annual	3/23/2021	1351001
Anritsu	MA2411B	Pulse Power Sensor	12/4/2019	Annual	12/4/2020	1126066
Anritsu	MA2411B	Pulse Power Sensor	11/15/2019	Annual	11/15/2020	1027293
Anritsu	MT8821C	Radio Communication Analyzer	2/22/2020	Annual	2/22/2021	6261895213
Anritsu	MT8821C	Radio Communication Analyzer	11/22/2019	Annual	11/22/2020	6262044715
Anritsu	MA24106A	USB Power Sensor	6/8/2020	Annual	6/8/2021	1344555
Anritsu	MA24106A	USB Power Sensor	7/16/2019	Annual	7/16/2020	1349511
Anritsu	MA24106A	USB Power Sensor	2/27/2020	Annual	2/27/2021	1244524
Anritsu	MT8862A	Wireless Connectivity Test Set	8/8/2019	Annual	8/8/2020	6261782395
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M1SSA00-009
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	4352	Long Stem Thermometer	6/26/2019	Biennial	6/26/2021	192282739
Control Company	4352	Long Stem Thermometer	6/26/2019	Biennial	6/26/2021	192282744
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647812
Control Company	4040	Therm./ Clock/ Humidity Monitor	2/17/2020	Biennial	2/17/2022	200113269
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	N6705B	DC Power Analyzer	4/27/2019	Biennial	4/27/2021	MY53004059
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	7/2/2019	Annual	7/2/2020	MY53401181
Agilent	85033E	3.5mm Standard Calibration Kit	6/6/2020	Annual	6/6/2021	MY53402352
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	10/4/2019	Annual	10/4/2020	166462
Rohde & Schwarz	CMW500	Radio Communication Tester	4/23/2020	Annual	4/23/2021	167283
Rohde & Schwarz	ZNLE6	Vector Network Analyzer	10/11/2019	Annual	10/11/2020	101307
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/17/2019	Annual	9/17/2020	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/12/2020	Annual	3/12/2021	1368
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/5/2019	Annual	12/5/2020	1533
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/12/2019	Annual	9/12/2020	1449
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1323
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/20/2020	Annual	5/20/2021	728
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2020	Annual	6/18/2021	1334
SPEAG	D750V3	750 MHz Dipole	3/11/2020	Annual	3/11/2021	1054
SPEAG	D835V2	835 MHz SAR Dipole	1/13/2020	Annual	1/13/2021	4d132
SPEAG	D835V2	835 MHz SAR Dipole	3/13/2019	Biennial	3/13/2021	4d047
SPEAG	D1765V2	1765 MHz SAR Dipole	5/23/2018	Triennial	5/23/2021	1008
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Biennial	10/23/2020	5d149
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Biennial	10/23/2020	5d080
SPEAG	D2450V2	2450 MHz SAR Dipole	8/16/2018	Biennial	8/16/2020	981
SPEAG	D2450V2	2450 MHz SAR Dipole	8/14/2019	Annual	8/14/2020	719
SPEAG	D2600V2	2600 MHz SAR Dipole	6/14/2019	Biennial	6/14/2021	1064
SPEAG	D2600V2	2600 MHz SAR Dipole	4/11/2018	Triennial	4/11/2021	1004
SPEAG	D5GHzV2	5 GHz SAR Dipole	8/10/2018	Biennial	8/10/2020	1237
SPEAG	EX3DV4	SAR Probe	7/16/2019	Annual	7/16/2020	7410
SPEAG	EX3DV4	SAR Probe	9/19/2019	Annual	9/19/2020	7551
SPEAG	EX3DV4	SAR Probe	3/17/2020	Annual	3/17/2021	7527
SPEAG	EX3DV4	SAR Probe	12/11/2019	Annual	12/11/2020	7570
SPEAG	EX3DV4	SAR Probe	12/11/2019	Annual	12/11/2020	7571
SPEAG	EX3DV4	SAR Probe	9/19/2019	Annual	9/19/2020	7552
SPEAG	EX3DV4	SAR Probe	7/15/2019	Annual	7/15/2020	7547
SPEAG	EX3DV4	SAR Probe	5/18/2020	Annual	5/18/2021	7538
SPEAG	EX3DV4	SAR Probe	1/21/2020	Annual	1/21/2021	7488
SPEAG	EX3DV4	SAR Probe	6/23/2020	Annual	6/23/2021	7409
SPEAG	DAK-3.5	Dielectric Assessment Kit	10/22/2019	Annual	10/22/2020	1091

Note:

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

14 MEASUREMENT UNCERTAINTIES

a	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System								
Probe Calibration	6.55	N	1	1.0	1.0	6.6	6.6	∞
Axial Isotropy	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	2.0	R	1.73	1.0	1.0	1.2	1.2	∞
Linearity	0.3	N	1	1.0	1.0	0.3	0.3	∞
System Detection Limits	0.25	R	1.73	1.0	1.0	0.1	0.1	∞
Readout Electronics	0.3	N	1	1.0	1.0	0.3	0.3	∞
Response Time	0.8	R	1.73	1.0	1.0	0.5	0.5	∞
Integration Time	2.6	R	1.73	1.0	1.0	1.5	1.5	∞
RF Ambient Conditions - Noise	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
RF Ambient Conditions - Reflections	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	R	1.73	1.0	1.0	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	6.7	R	1.73	1.0	1.0	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	4.0	R	1.73	1.0	1.0	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	2.7	N	1	1.0	1.0	2.7	2.7	35
Device Holder Uncertainty	1.67	N	1	1.0	1.0	1.7	1.7	5
Output Power Variation - SAR drift measurement	5.0	R	1.73	1.0	1.0	2.9	2.9	∞
SAR Scaling	0.0	R	1.73	1.0	1.0	0.0	0.0	∞
Phantom & Tissue Parameters								
Phantom Uncertainty (Shape & Thickness tolerances)	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	4.2	N	1	0.78	0.71	3.3	3.0	10
Liquid Permittivity - measurement uncertainty	4.1	N	1	0.23	0.26	1.0	1.1	10
Liquid Conductivity - Temperature Uncertainty	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)		RSS				11.5	11.3	60
Expanded Uncertainty (95% CONFIDENCE LEVEL)		k=2				23.0	22.6	

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-D02

[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.

APPENDIX A: SAR TEST DATA

PCTEST

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 37139

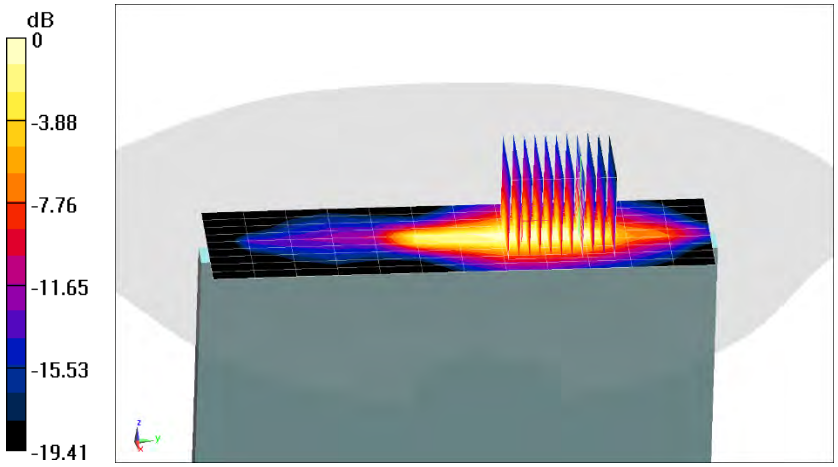
Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.984 S/m; ε_r = 53.921; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0 cm

Test Date: 07/22/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 836.6 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 850, Body SAR, Top Edge, Mid.ch

Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (9x11x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 26.58 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 2.72 W/kg
SAR(1 g) = 0.693 W/kg



0 dB = 1.32 W/kg = 1.21 dBW/kg

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 03040

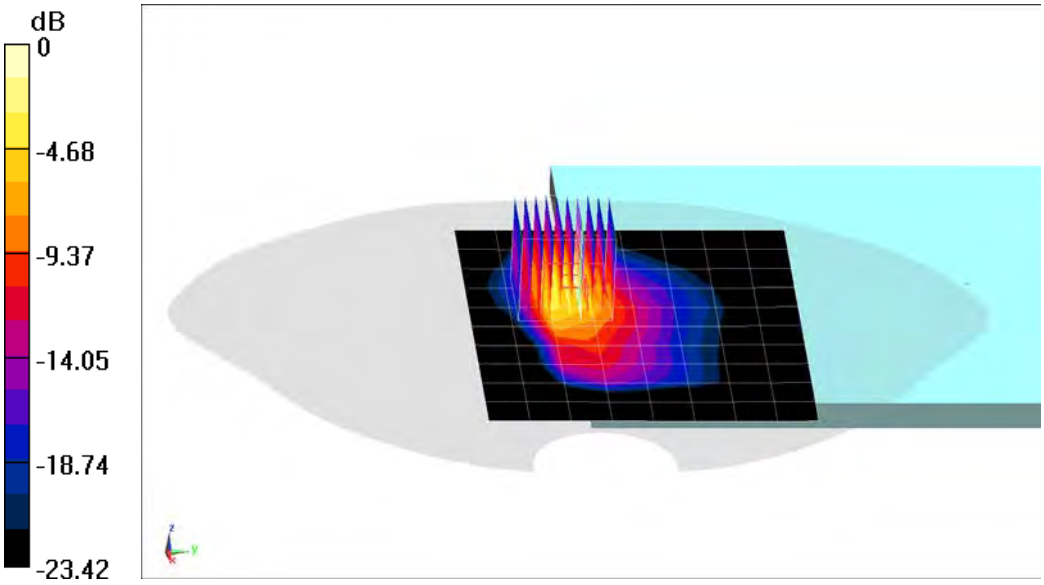
Communication System: UID 0, UMTS, Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.548 S/m; ε_r = 53.002; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0 cm

Test Date: 06/01/2020; Ambient Temp: 21.4°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1752.6 MHz; Calibrated: 3/17/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 1750, Body SAR, Back side, High.ch

Area Scan (11x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 22.57 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 2.31 W/kg
SAR(1 g) = 0.745 W/kg



0 dB = 1.44 W/kg = 1.58 dBW/kg

PCTEST

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 37139

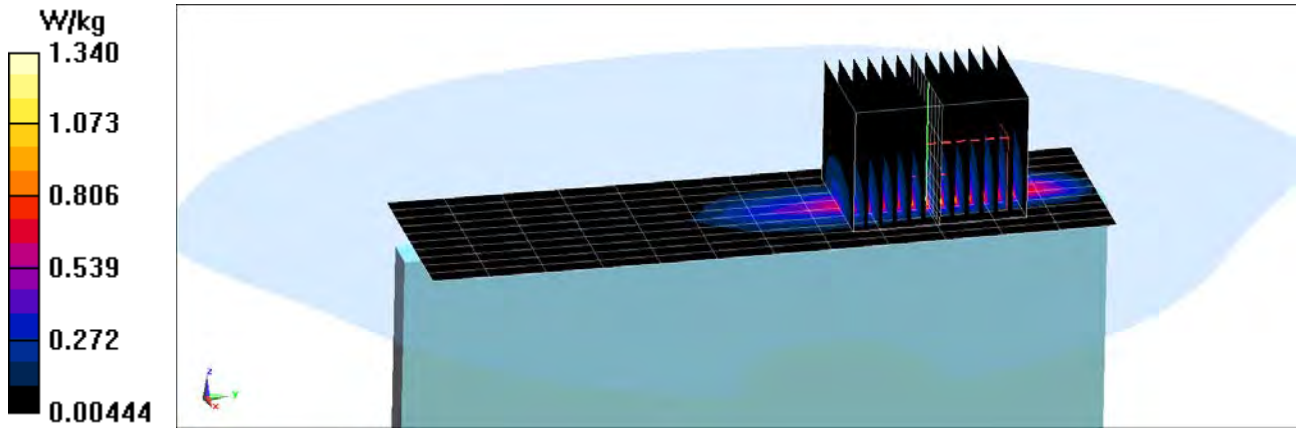
Communication System: UID 0, _UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.563 S/m; ε_r = 54.004; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/20/2020; Ambient Temp: 22.5°C; Tissue Temp: 23.7°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1907.6 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: UMTS 1900, Body SAR, Top Edge, High.ch

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x13x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 20.25 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 2.92 W/kg
SAR(1 g) = 0.602 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 03719

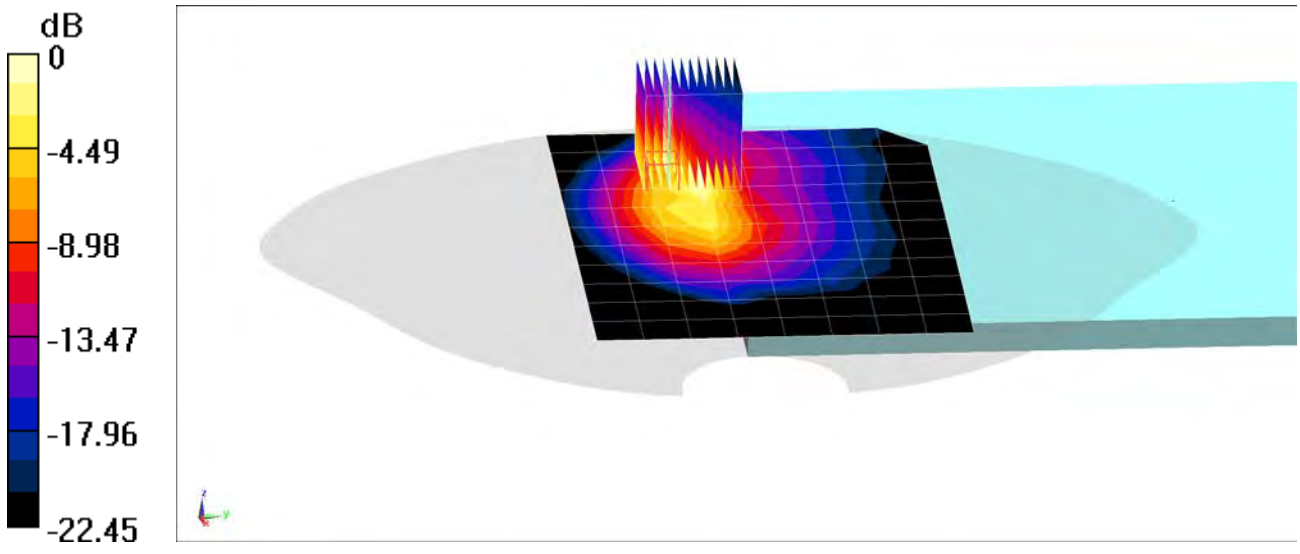
Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.949 S/m; ε_r = 53.445; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05/25/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 680.5 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 71, Body SAR, Back side, Mid.ch, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (12x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (12x12x8)/Cube 0: Measurement grid: dx=2.8mm, dy=2.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 15.77 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.992 W/kg
SAR(1 g) = 0.275 W/kg



0 dB = 0.555 W/kg = -2.56 dBW/kg

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 03719

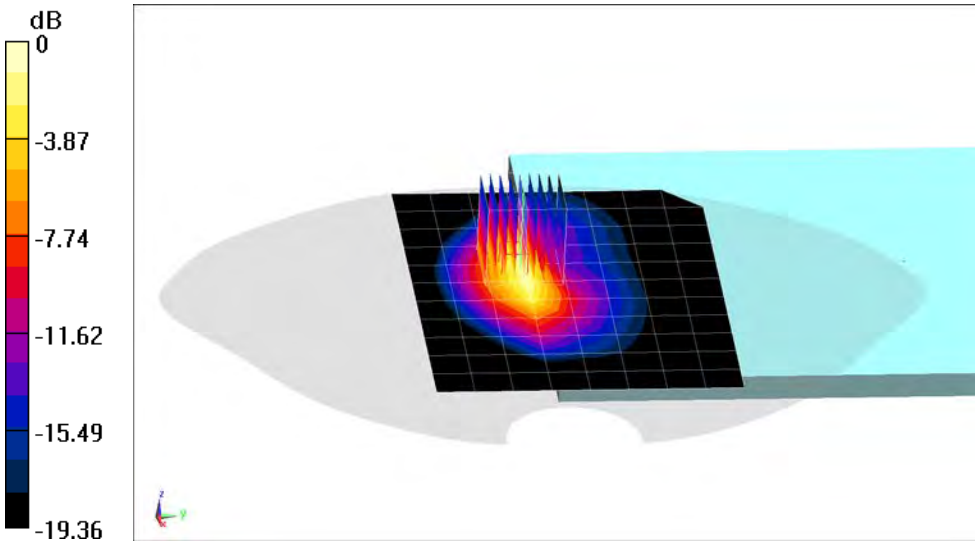
Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 707.5 MHz; σ = 0.959 S/m; ε_r = 53.379; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05/25/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 707.5 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 12, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 25 RB, 12 RB Offset

Area Scan (12x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 19.99 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 0.392 W/kg



0 dB = 0.807 W/kg = -0.93 dBW/kg

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 03719

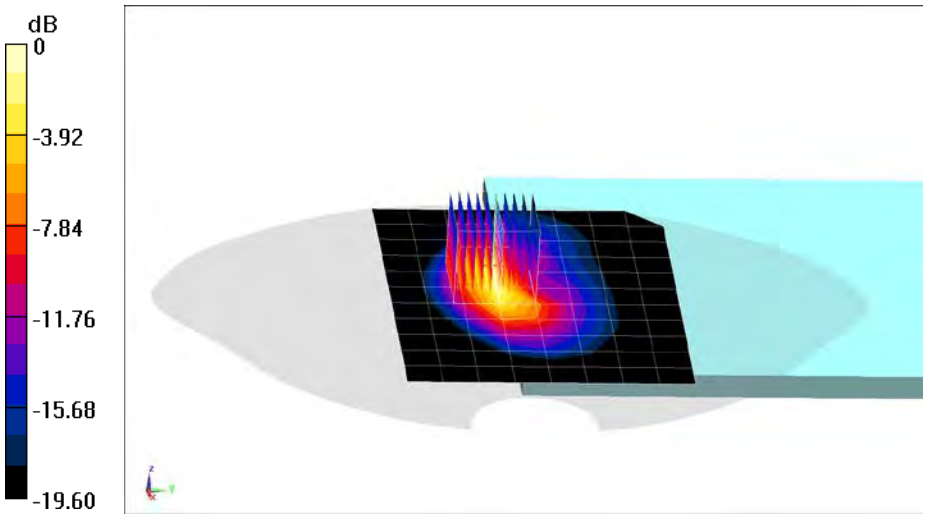
Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.987 S/m; ε_r = 53.205; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0 cm

Test Date: 05/25/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 782 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 13, Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 25 RB, 12 RB Offset

Area Scan (12x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (11x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 22.40 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.453 W/kg



0 dB = 0.904 W/kg = -0.44 dBW/kg

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 37139

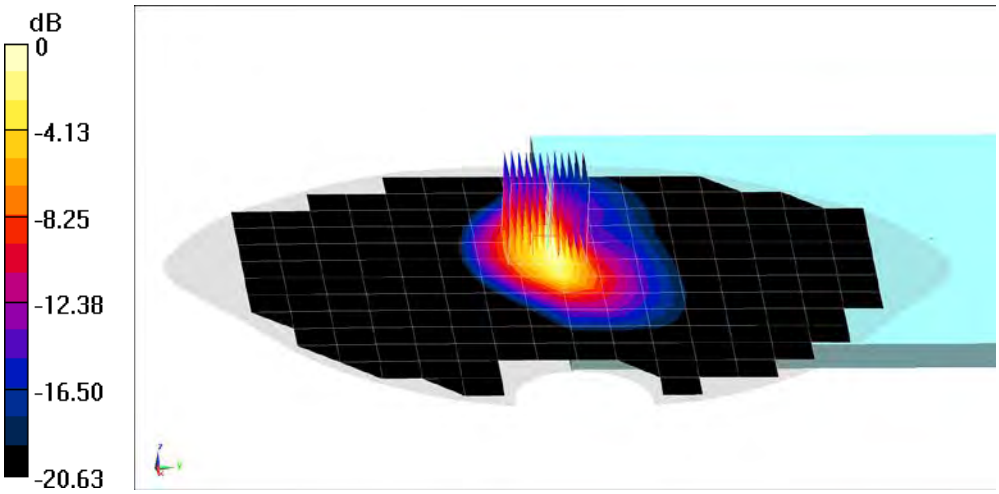
Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 831.5 MHz; σ = 0.948 S/m; ε_r = 53.3; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0 cm

Test Date: 07/01/2020; Ambient Temp: 22.9°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 831.5 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 26 (Cell.), Body SAR, Back side, Mid.ch, 15 MHz Bandwidth, QPSK, 36 RB, 37 RB Offset

Area Scan (15x17x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (12x12x8)/Cube 0: Measurement grid: dx=2.7mm, dy=2.7mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 22.21 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.440 W/kg



0 dB = 0.874 W/kg = -0.58 dBW/kg

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 38376

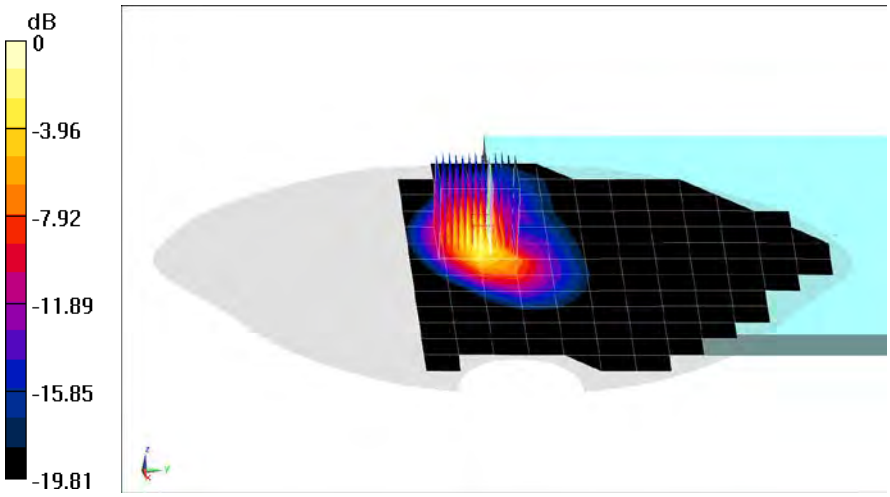
Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.94 S/m; ε_r = 54.392; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0 cm

Test Date: 07/05/2020; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.5 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 5 (Cell.), Body SAR, Back side, Mid.ch, 10 MHz Bandwidth, QPSK, 25 RB, 25 RB Offset

Area Scan (16x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (13x13x8)/Cube 0: Measurement grid: dx=2.8mm, dy=2.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 19.88 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.393 W/kg



0 dB = 0.771 W/kg = -1.13 dBW/kg

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 38376

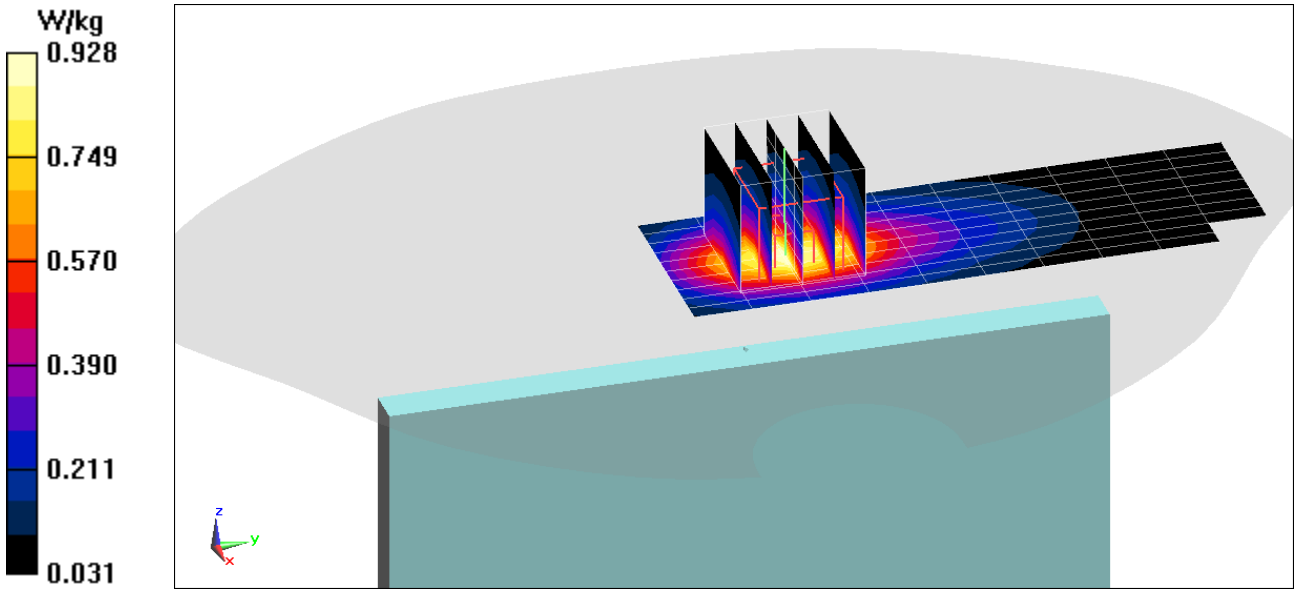
Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used:
f = 1745 MHz; σ = 1.538 S/m; ε_r = 51.85; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 2.3 cm

Test Date: 06/23/2020; Ambient Temp: 20.9°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1745 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 66 (AWS), Body SAR, Top Edge, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset

Area Scan (11x11x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.66 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.666 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 37139

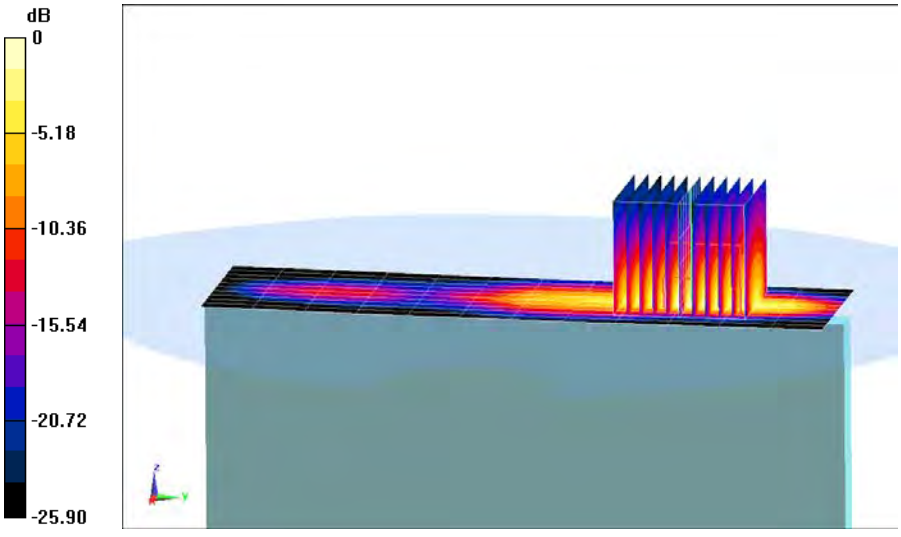
Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.502 S/m; ε_r = 52.043; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/23/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1882.5 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 25 (PCS), Body SAR, Top Edge, Mid.ch,
20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x11x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 22.83 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 2.99 W/kg
SAR(1 g) = 0.671 W/kg



0 dB = 1.48 W/kg = 1.70 dBW/kg

DUT: A3LSMT978U; Type: Portable Tablet; Serial: 38376

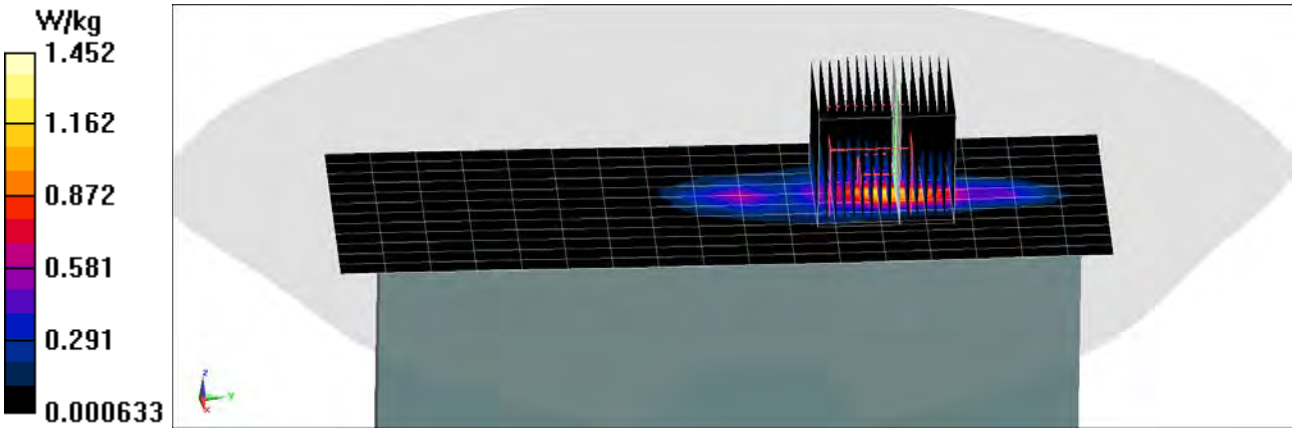
Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used:
f = 2510 MHz; σ = 2.11 S/m; ε_r = 51.26; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/06/2020; Ambient Temp: 22.8°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2510 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 7, Body SAR, Top Edge, Low.ch, 20 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset

Area Scan (13x18x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (14x16x8)/Cube 0: Measurement grid: dx=2.4mm, dy=2.4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 19.59 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.51 W/kg
SAR(1 g) = 0.621 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 39658

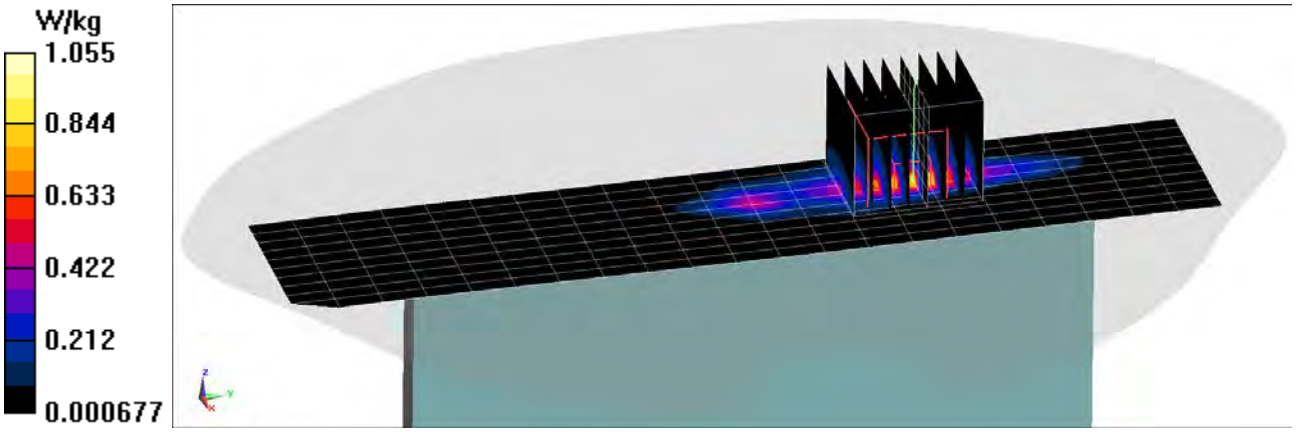
Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2506 MHz; σ = 2.089 S/m; ε_r = 51.373; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/04/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2506 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: LTE Band 41 PC3, Body SAR, Top Edge, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset

Area Scan (11x22x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.18 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.447 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 03719

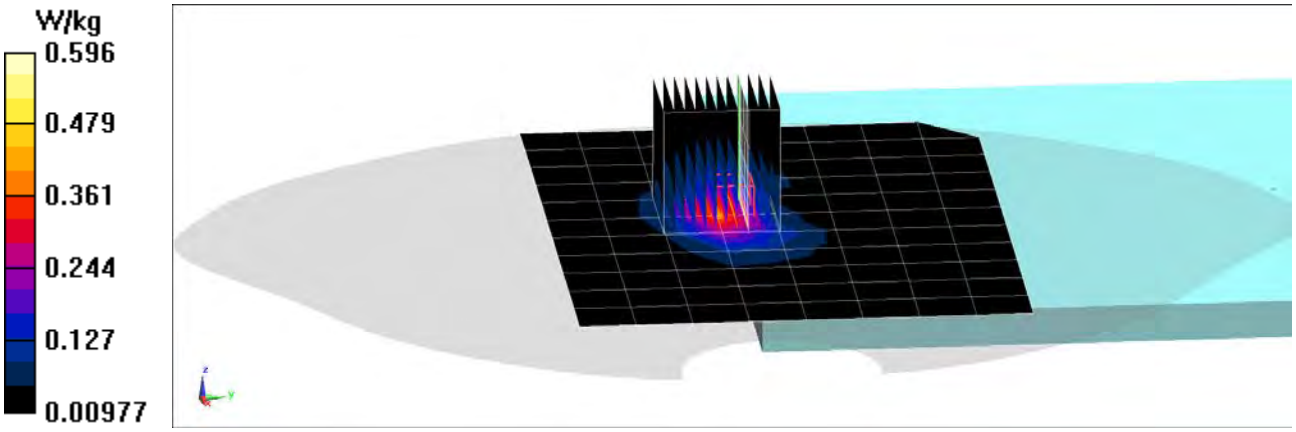
Communication System: UID 0, NR Band n71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body; Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.922 S/m; ε_r = 54.515; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/01/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 680.5 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n71, Body SAR, Back Side, 20 MHz Bandwidth, CP-OFDM QPSK, Ch. 136100, 1 RB, 1 RB Offset

Area Scan (12x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (12x12x8)/Cube 0: Measurement grid: dx=2.8mm, dy=2.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 16.52 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.289 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 37139

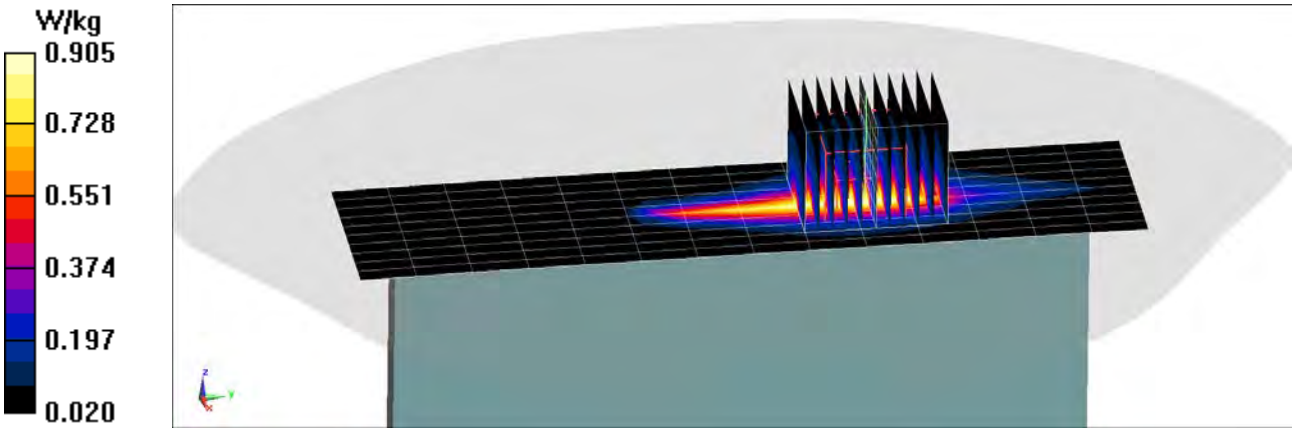
Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.965 S/m; ε_r = 53.889; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/08/2020; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 836.5 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n5, Body SAR, Top Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 167300, 1 RB, 53 RB Offset

Area Scan (11x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (9x11x7)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=5mm
Reference Value = 23.52 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.527 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 38376

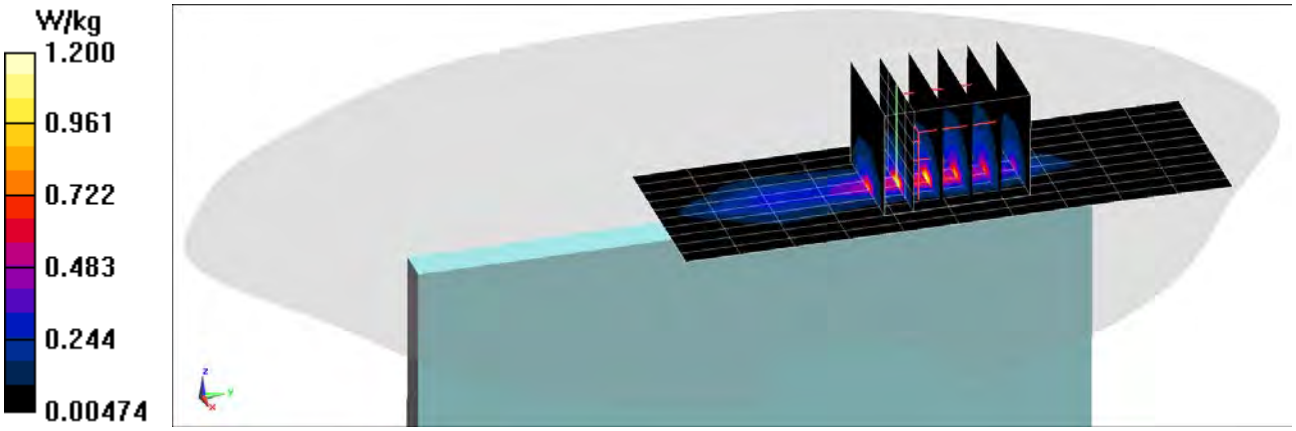
Communication System: UID 0, NR Band n66; Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: 1750 Body; Medium parameters used:
f = 1720 MHz; σ = 1.512 S/m; ε_r = 53.116; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/14/2020; Ambient Temp: 20.5°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1720 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n66, Body SAR, Top Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 344000, 50 RB, 0 RB Offset

Area Scan (11x11x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.71 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.544 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 38376

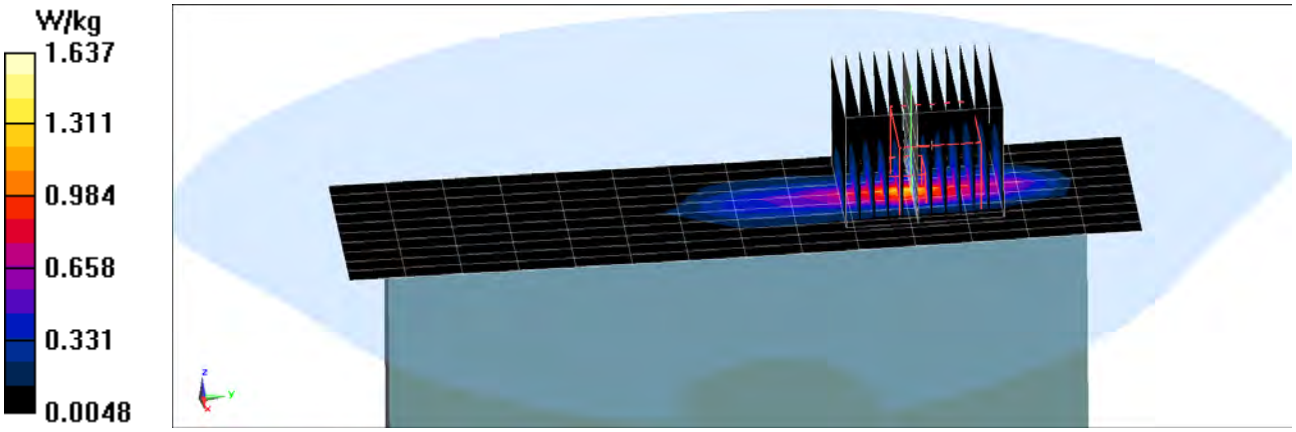
Communication System: UID 0, NR Band n25; Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body; Medium parameters used:
f = 1905 MHz; σ = 1.567 S/m; ε_r = 52.763; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/11/2020; Ambient Temp: 23.4°C; Tissue Temp: 23.6°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1905 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n25, Body SAR, Top Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 381000, 1 RB, 53 RB Offset

Area Scan (11x15x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x12x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 23.26 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 2.81 W/kg
SAR(1 g) = 0.723 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 03172

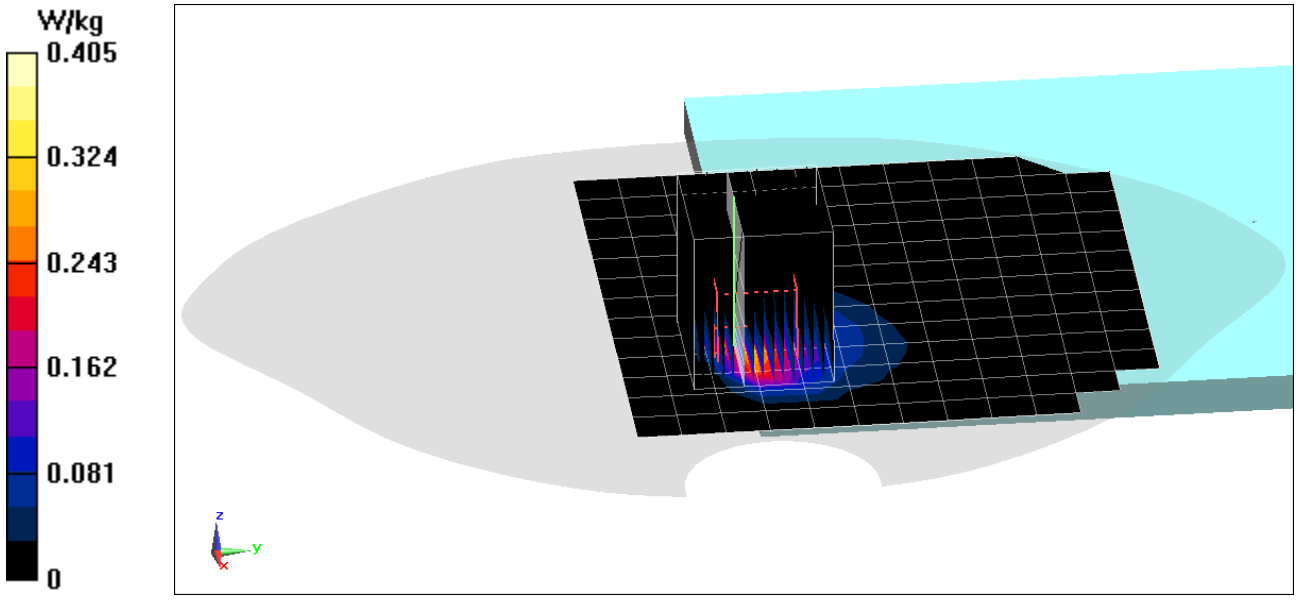
Communication System: UID 0, NR Band n41; Frequency: 2592.99 MHz; Duty Cycle: 1:4
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2592.99 MHz; σ = 2.193 S/m; ε_r = 50.769; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05/23/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.18, 7.18, 7.18) @ 2592.99 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: NR Band n41, Body SAR, Back Side, 100 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 518598, 135 RB, 0 RB Offset

Area Scan (14x13x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (16x15x8)/Cube 0: Measurement grid: dx=2.7mm, dy=2.7mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 7.188 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 0.741 W/kg
SAR(1 g) = 0.171 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 38376

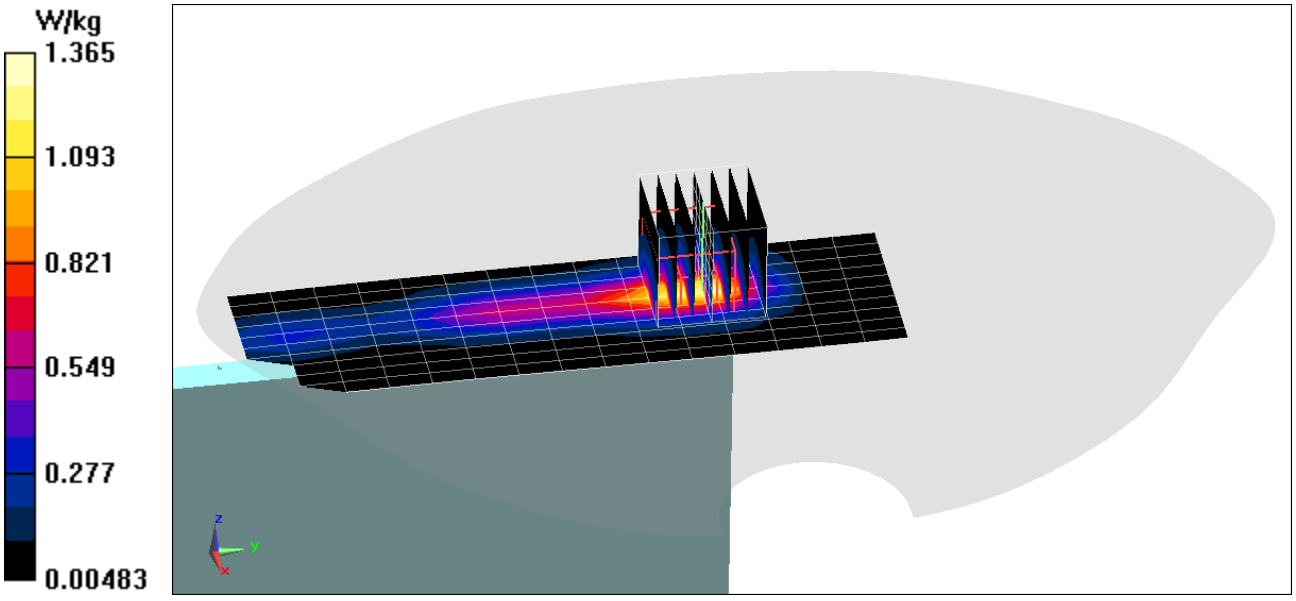
Communication System: UID 0, 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2412 MHz; σ = 1.989 S/m; ε_r = 51.608; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.4 cm

Test Date: 07/20/2020; Ambient Temp: 23.6°C; Tissue Temp: 23.6°C

Probe: EX3DV4 - SN7409; ConvF(7.24, 7.24, 7.24) @ 2412 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11b, MIMO, 22 MHz Bandwidth, Body SAR, Ch 1, 1 Mbps, Left Edge

Area Scan (11x16x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.89 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.76 W/kg
SAR(1 g) = 0.771 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 40208

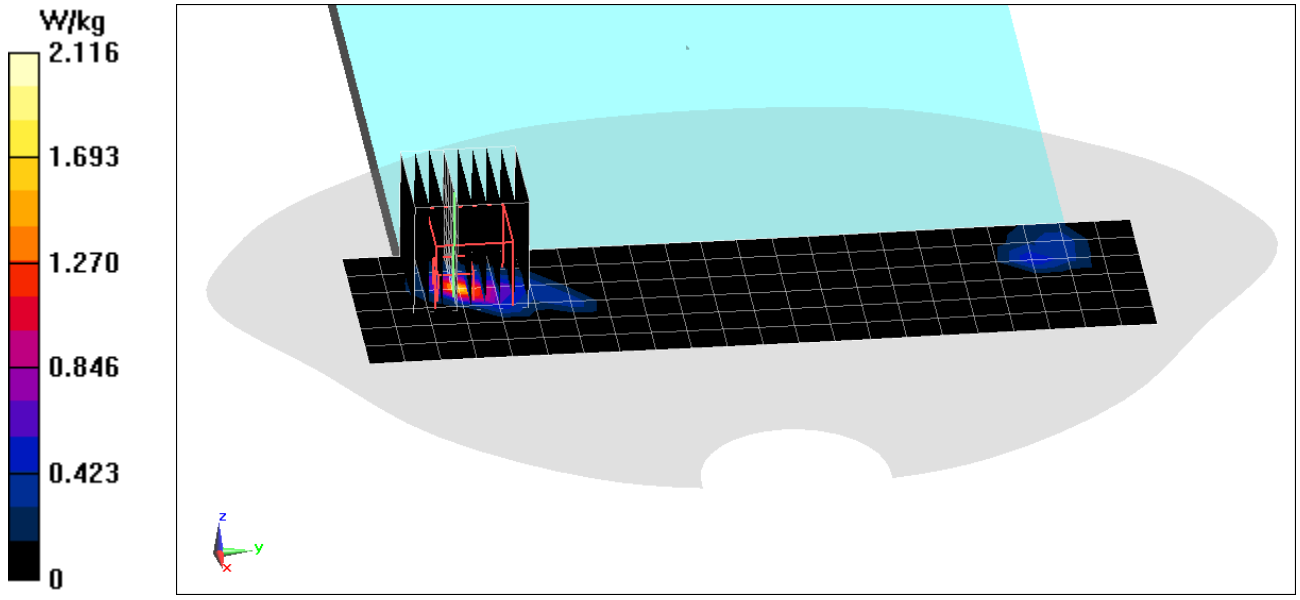
Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.125 S/m; ε_r = 45.988; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/05/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5775 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11ac, MIMO, U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 58.5 Mbps, Back Side

Area Scan (7x23x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 9.832 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 5.40 W/kg
SAR(1 g) = 0.677 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 35240

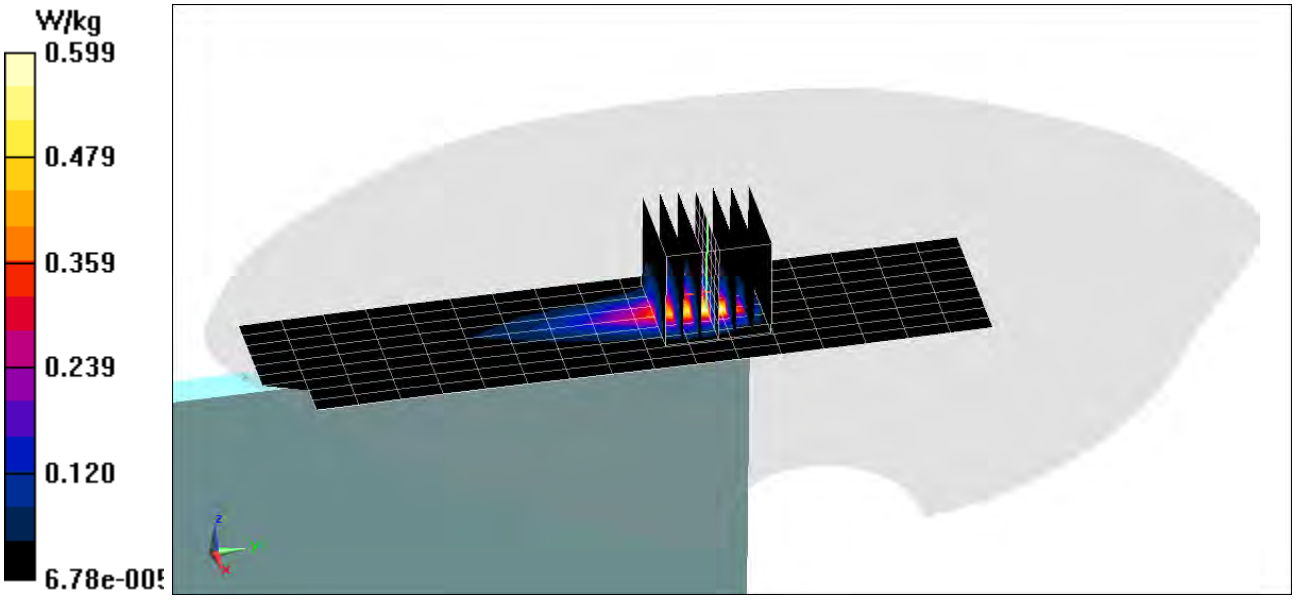
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 2.014 S/m; ε_r = 51.57; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/04/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2441 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Bluetooth, Antenna 2, Body SAR, Ch 39, 1 Mbps, Left Edge

Area Scan (10x21x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.09 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.883 W/kg
SAR(1 g) = 0.282 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 0731M

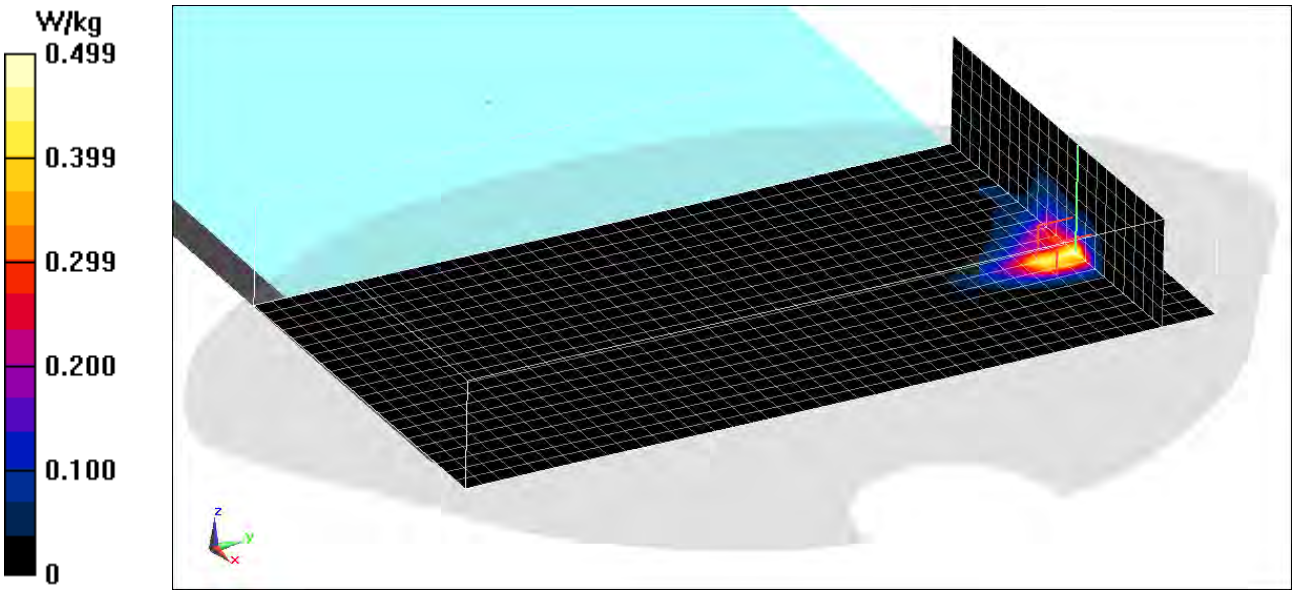
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 1.996 S/m; ε_r = 50.894; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/23/2020; Ambient Temp: 25.0°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2441 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Bluetooth, Antenna 1, Body SAR, Ch 39, 1 Mbps, Back Side

Zoom Scan (23x43x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.940 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.678 W/kg
SAR(1 g) = 0.239 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 0731M

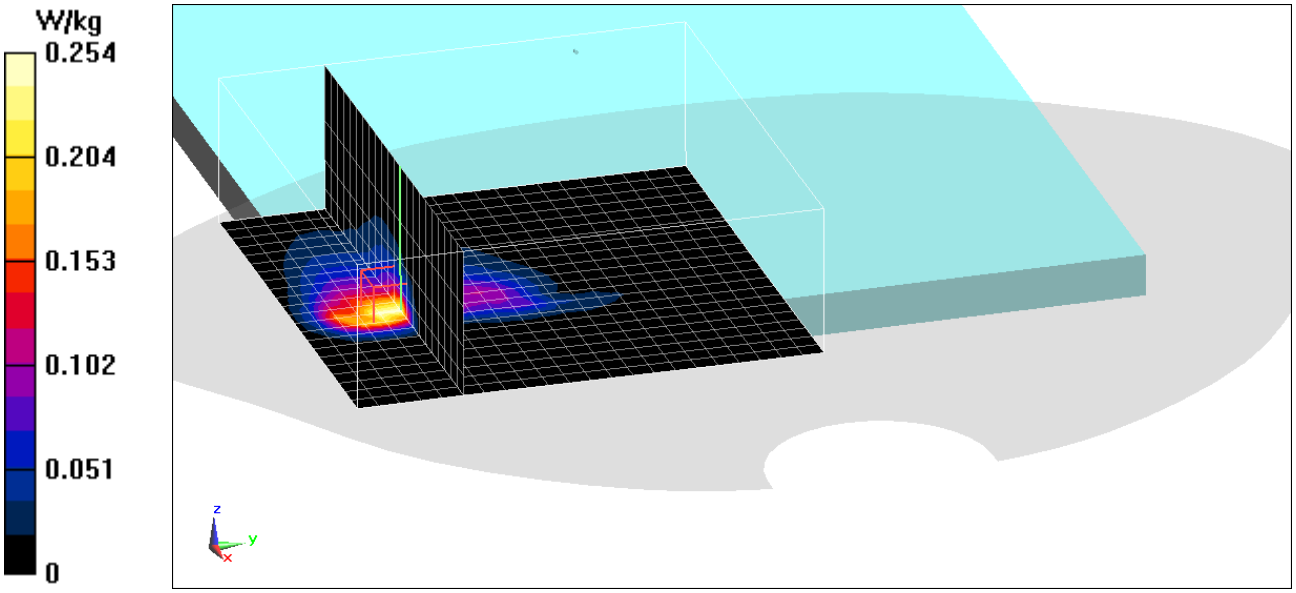
Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 1.996 S/m; ε_r = 50.894; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/23/2020; Ambient Temp: 25.0°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2441 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: Bluetooth, Antenna 2, Body SAR, Ch 39, 1 Mbps, Back Side

Zoom Scan (23x23x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.126 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.381 W/kg
SAR(1 g) = 0.127 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 35158

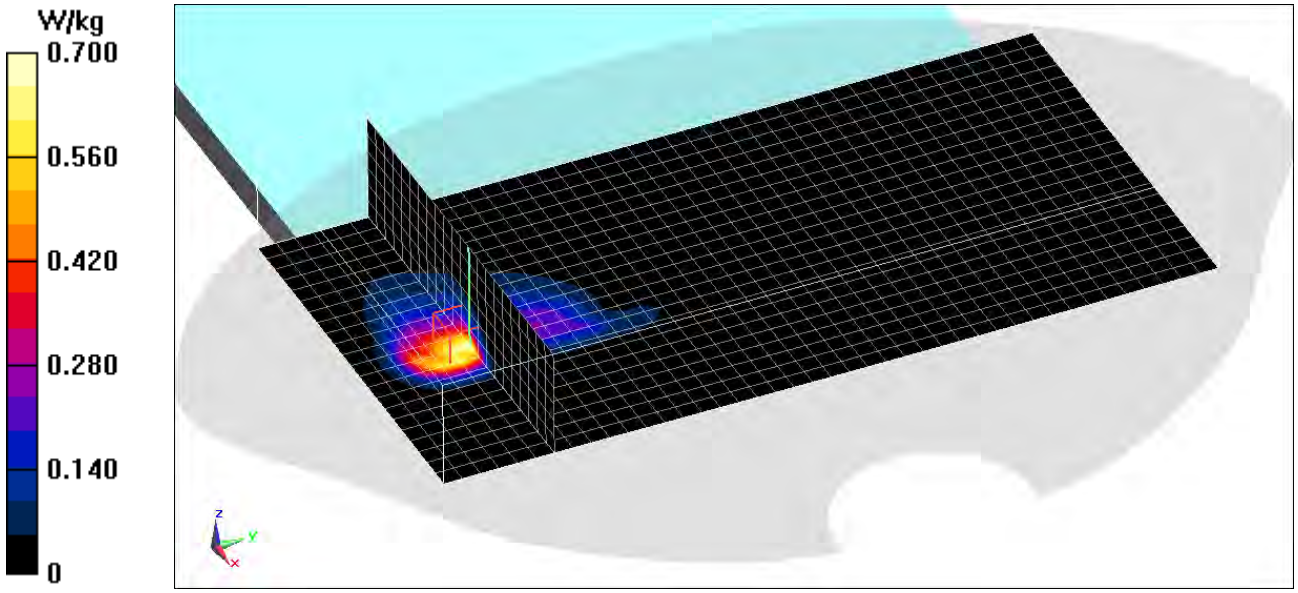
Communication System: UID 0, IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.987 S/m; ε_r = 50.716; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/21/2020; Ambient Temp: 24.5°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2462 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11b, Antenna 2, 22 MHz Bandwidth, Body SAR, Ch 11, 1 Mbps, Back Side

Zoom Scan (23x43x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.08300 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.988 W/kg
SAR(1 g) = 0.338 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 38376

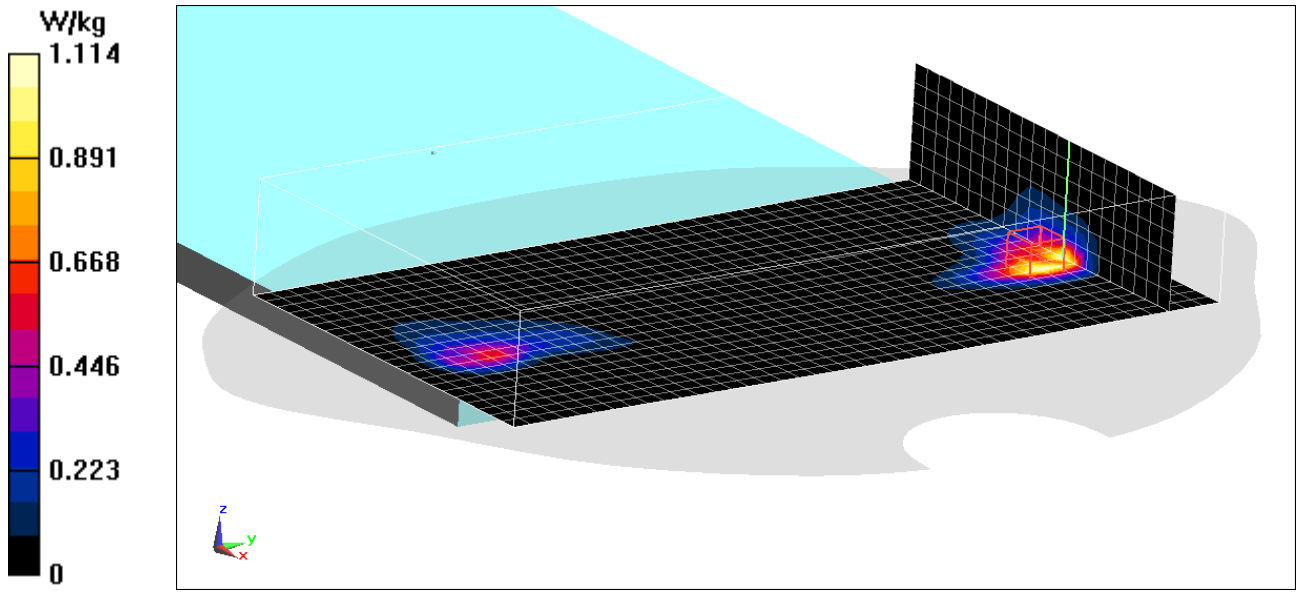
Communication System: UID 0, IEEE 802.11n; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 2.024 S/m; ε_r = 50.812; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/23/2020; Ambient Temp: 25.0°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2462 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11n, 20 MHz Bandwidth, Body SAR, Ch 11, 13 Mbps, Back Side, MIMO

Zoom Scan (23x43x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 1.52 W/kg
SAR(1 g) = 0.491 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 38376

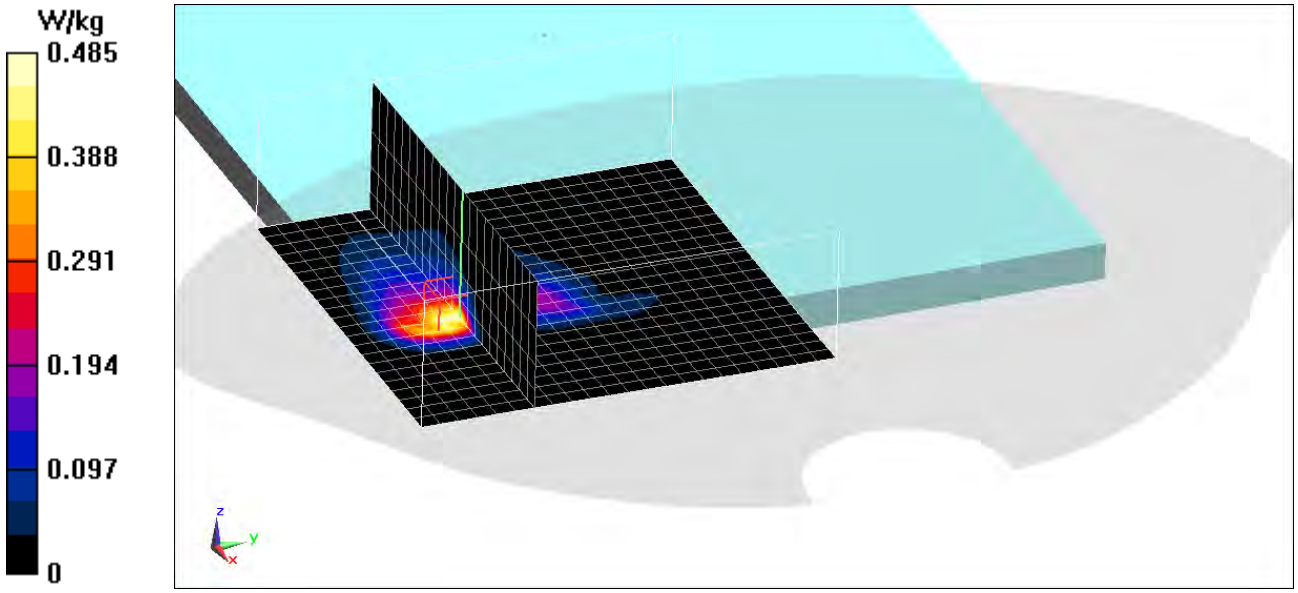
Communication System: UID 0, IEEE 802.11n; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 2.024 S/m; ε_r = 50.812; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/23/2020; Ambient Temp: 25.0°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2462 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11n, 20 MHz Bandwidth, Body SAR, Ch 11, 13 Mbps, Back Side, MIMO

Zoom Scan (23x23x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.4420 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.244 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 1230M

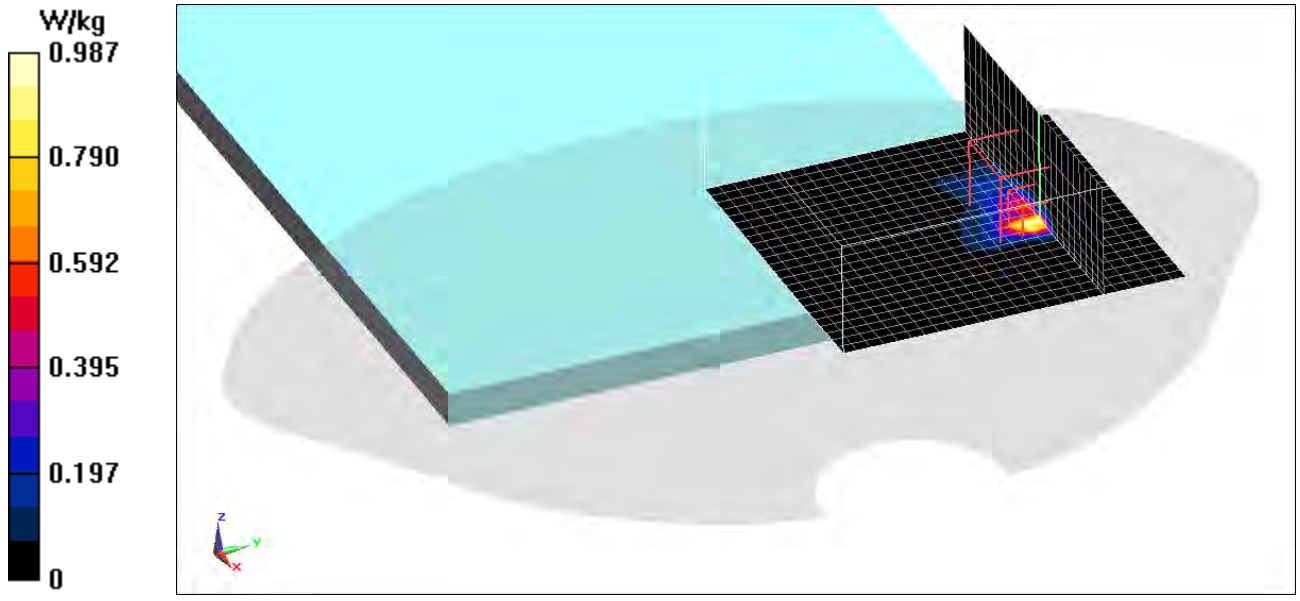
Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.17 S/m; ε_r = 46.08; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/27/2020; Ambient Temp: 21.9°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5775 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11ac, Antenna 1, U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 29.3 Mbps, Back Side

Zoom Scan (25x26x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 0.1750 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 1.80 W/kg
SAR(1 g) = 0.302 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 1230M

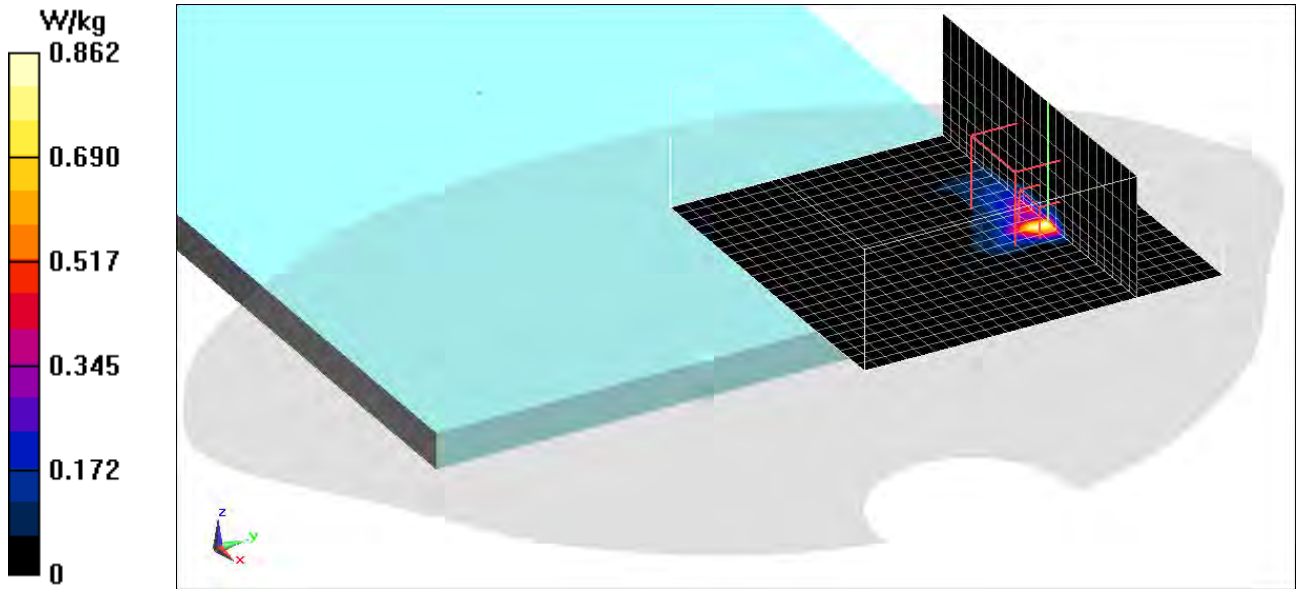
Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.175 S/m; ε_r = 46.171; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/19/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5775 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11ac, MIMO, U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 58.5 Mbps, Back Side

Zoom Scan (25x26x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 0.5020 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.243 W/kg



DUT: A3LSMT978U; Type: Portable Tablet; Serial: 1230M

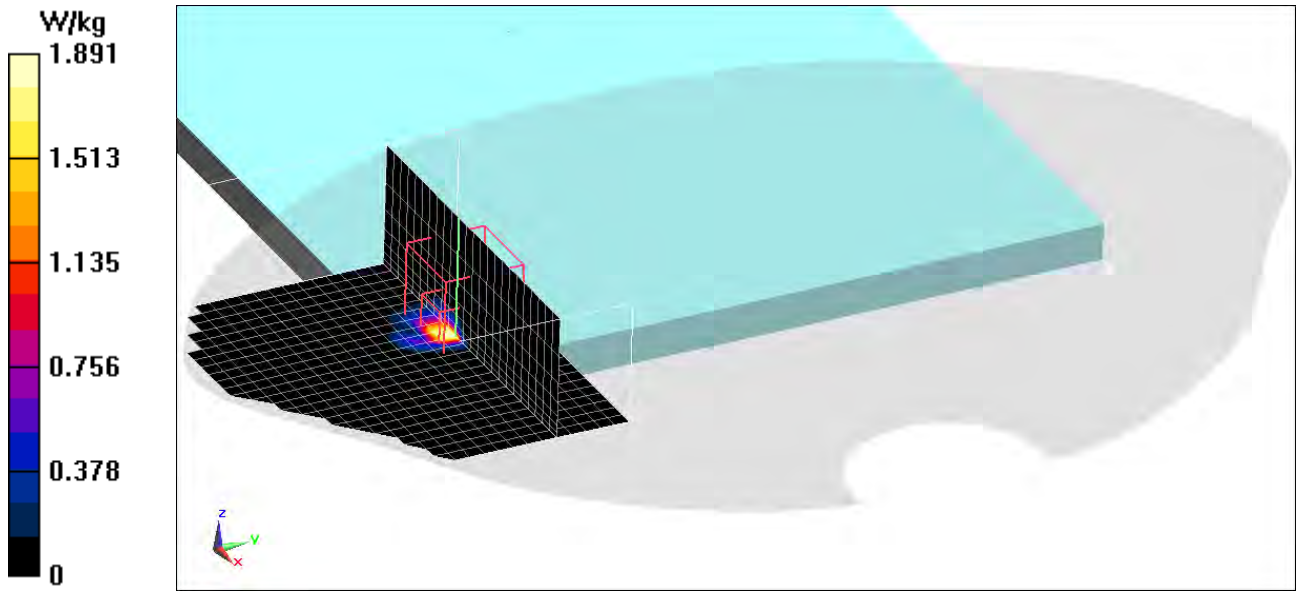
Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.175 S/m; ε_r = 46.171; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07/19/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5775 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11ac, MIMO, U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 58.5 Mbps, Back Side

Zoom Scan (25x33x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 0 V/m; Power Drift = 0.19 dB
SAR(1 g) = 0.626 W/kg



DUT: A3LSMT978U; Type: Portable Tablet

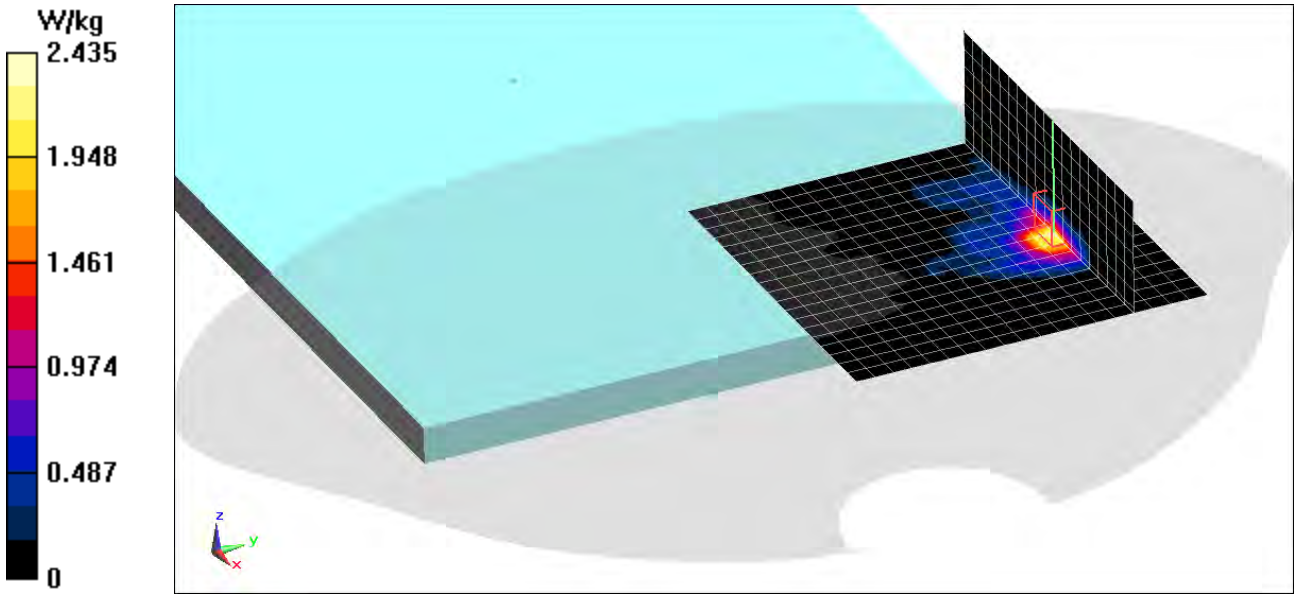
Mode: Bluetooth, Antenna 1, Body SAR, Ch 39, 1 Mbps, Back Side, Scaling Factor: 1.782

Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 1.996 S/m; ε_r = 50.894; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Mode: IEEE 802.11ac, Antenna 1, U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 29.3 Mbps, Back Side, Scaling Factor: 1.223

Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.17 S/m; ε_r = 46.08; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Multi Band Result:
SAR(1 g) = 0.606 W/kg



DUT: A3LSMT978U; Type: Portable Tablet

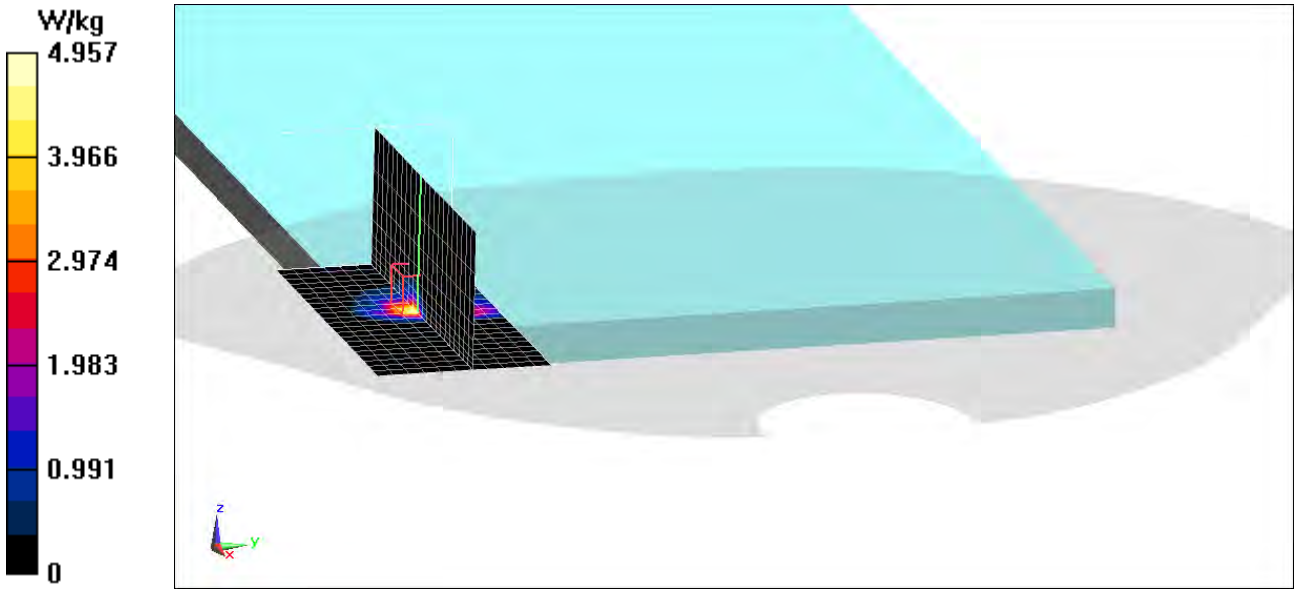
Mode: Bluetooth, Antenna 2, Body SAR, Ch 39, 1 Mbps, Back Side, Scaling Factor: 1.946

Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 1.996 S/m; ε_r = 50.894; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Mode: IEEE 802.11ac, MIMO (Peak 1), U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 58.5 Mbps, Back Side, Scaling Factor: 1.229

Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.175 S/m; ε_r = 46.171; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Multi Band Result:
SAR(1 g) = 1.04 W/kg



DUT: A3LSMT978U; Type: Portable Tablet

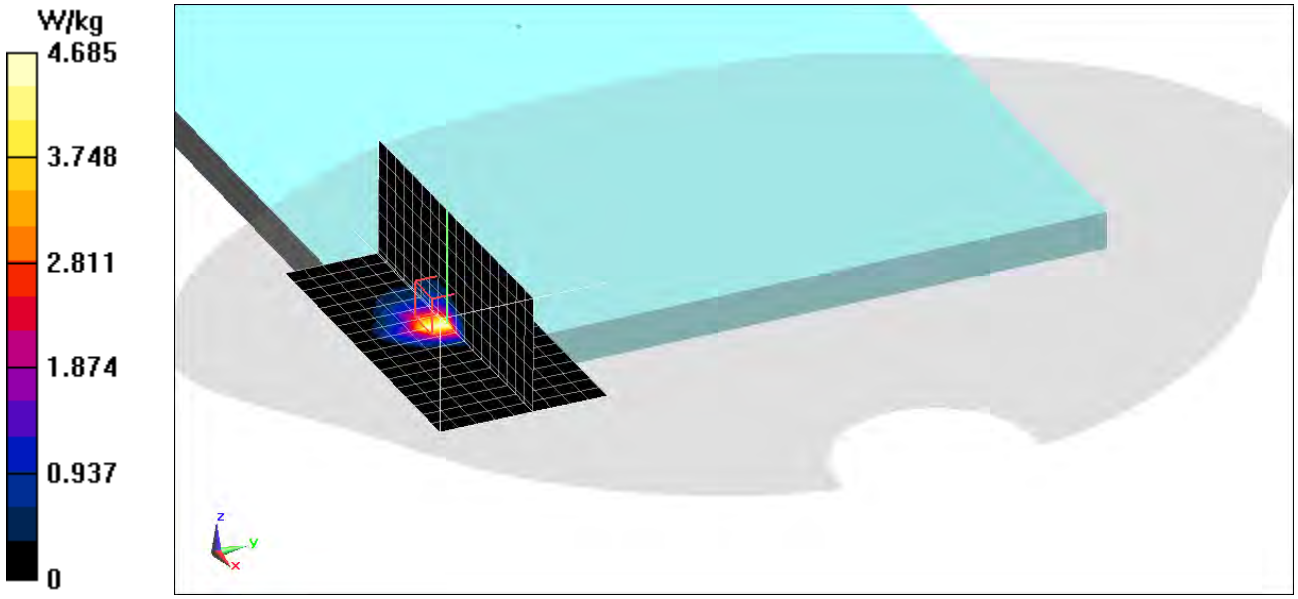
Mode: IEEE 802.11ac, MIMO (Peak 1), U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 58.5 Mbps, Back Side, Scaling Factor: 1.229

Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.175 S/m; ε_r = 46.171; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Mode: IEEE 802.11b, Antenna 2, 22 MHz Bandwidth, Body SAR, Ch 11, 1 Mbps, Back Side, Scaling Factor: 1.181

Communication System: UID 0, IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 1.987 S/m; ε_r = 50.716; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Multi Band Result:
SAR(1 g) = 1.04 W/kg



DUT: A3LSMT978U; Type: Portable Tablet

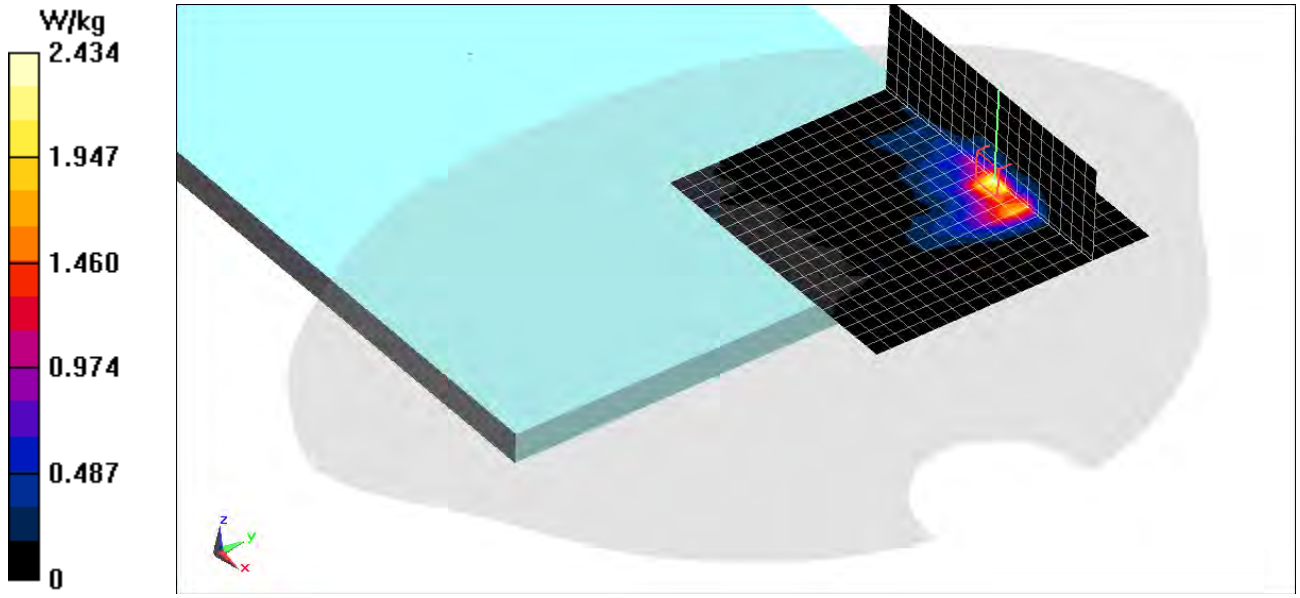
Mode: IEEE 802.11n, MIMO (Peak 1), 20 MHz Bandwidth, Body SAR, Ch 11, 13 Mbps, Back Side, MIMO, Scaling Factor: 1.201

Communication System: UID 0, IEEE 802.11n; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 2.024 S/m; ε_r = 50.812; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Mode: IEEE 802.11ac, MIMO (Peak 2), U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 58.5 Mbps, Back Side, Scaling Factor: 1.229

Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.175 S/m; ε_r = 46.171; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Multi Band Result:
SAR(1 g) = 0.745 W/kg



DUT: A3LSMT978U; Type: Portable Tablet

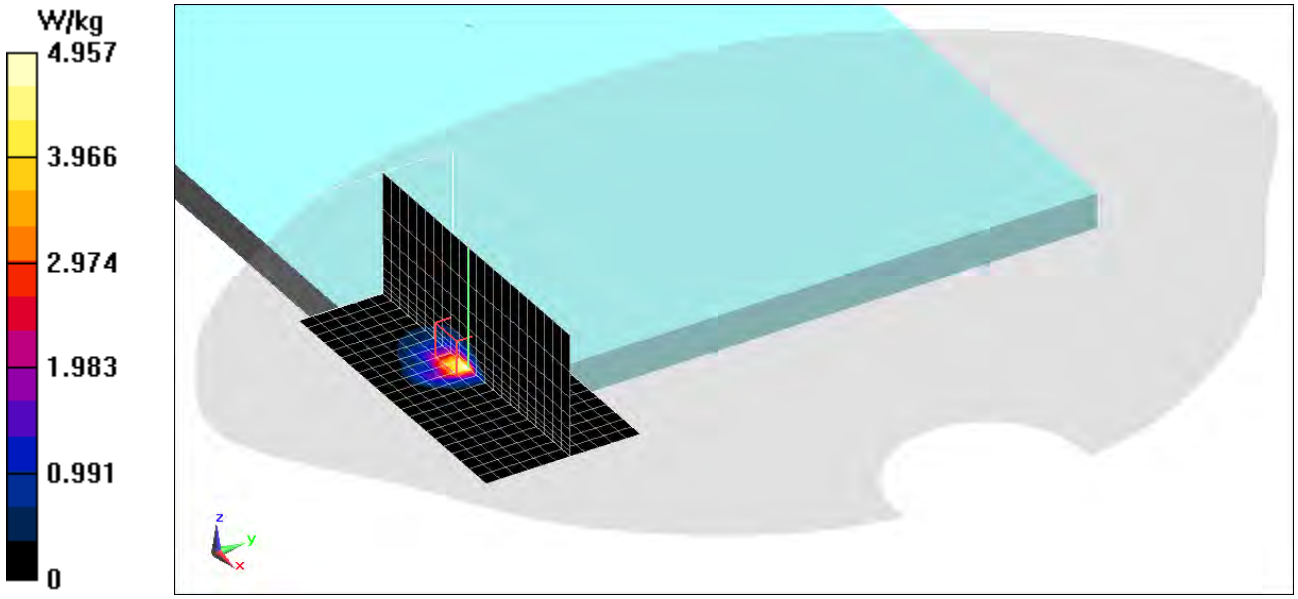
Mode: IEEE 802.11n, MIMO (Peak 2), 20 MHz Bandwidth, Body SAR, Ch 11, 13 Mbps, Back Side, Scaling Factor: 1.201

Communication System: UID 0, IEEE 802.11n; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2462 MHz; σ = 2.024 S/m; ε_r = 50.812; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Mode: IEEE 802.11ac, MIMO (Peak 1), U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 58.5 Mbps, Back Side, Scaling Factor: 1.229

Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.175 S/m; ε_r = 46.171; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Multi Band Result:
SAR(1 g) = 1.06 W/kg



DUT: A3LSMT978U; Type: Portable Tablet

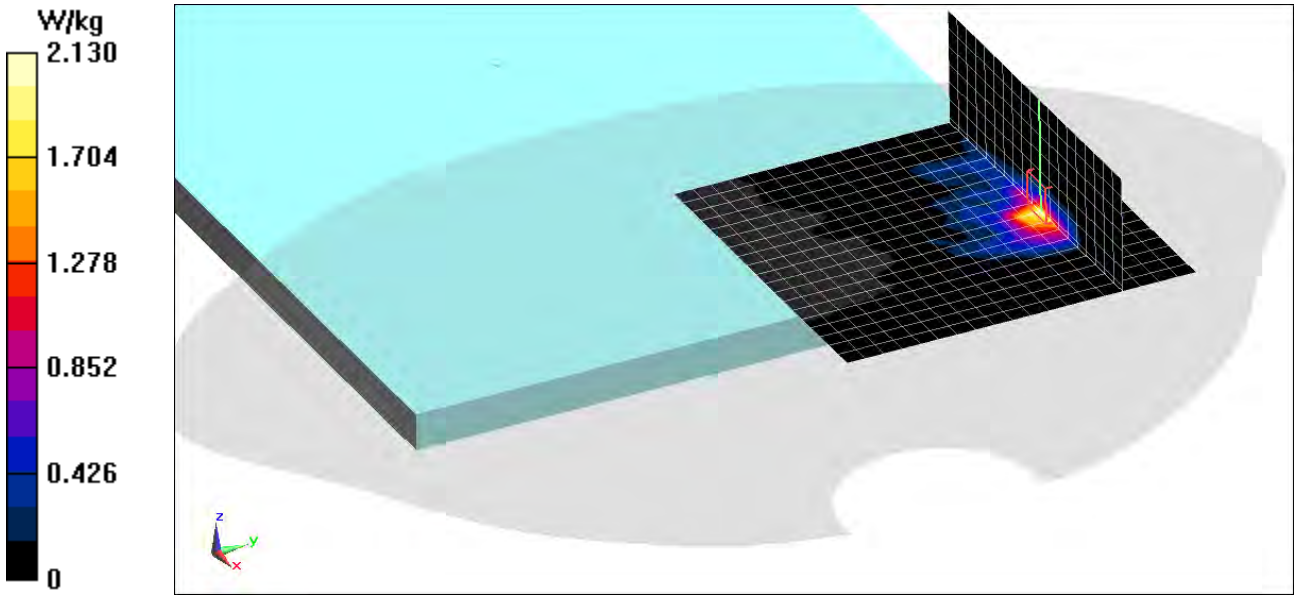
Mode: Bluetooth, Antenna 1, Body SAR, Ch 39, 1 Mbps, Back Side, Scaling Factor: 1.782

Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.297
Medium: 2450 Body; Medium parameters used (interpolated):
f = 2441 MHz; σ = 1.996 S/m; ε_r = 50.894; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Mode: IEEE 802.11ac, MIMO (Peak 2), U-NII-3, 80 MHz Bandwidth, Body SAR, Ch 155, 58.5 Mbps, Back Side, Scaling Factor: 1.229

Communication System: UID 0, 802.11ac 5.2-5.8 GHz Band; Frequency: 5775 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body; Medium parameters used:
f = 5775 MHz; σ = 6.175 S/m; ε_r = 46.171; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Multi Band Result:
SAR(1 g) = 0.574 W/kg



APPENDIX B: SYSTEM VERIFICATION

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

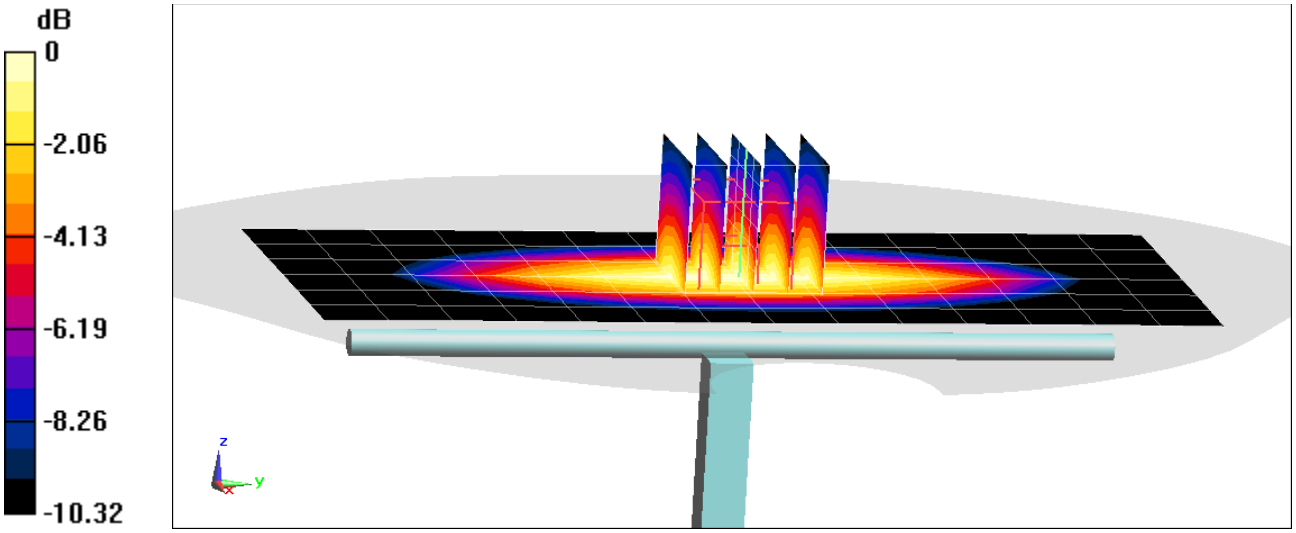
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used:
f = 750 MHz; σ = 0.974 S/m; ε_r = 53.27; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/25/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 750 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.50 W/kg
SAR(1 g) = 1.68 W/kg
Deviation(1 g) = -1.52%



0 dB = 2.23 W/kg = 3.48 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

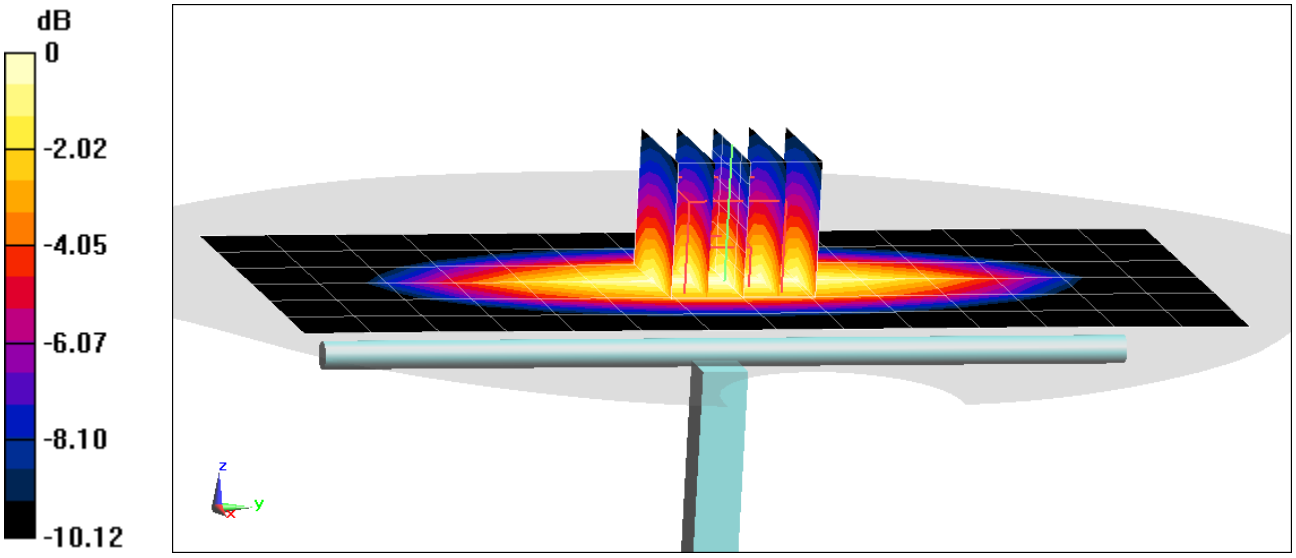
Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used:
f = 750 MHz; σ = 0.947 S/m; ε_r = 54.369; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/01/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 750 MHz; Calibrated: 7/16/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1322; Calibrated: 7/11/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.73 W/kg
SAR(1 g) = 1.84 W/kg
Deviation(1 g) = 7.85%



0 dB = 2.43 W/kg = 3.86 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

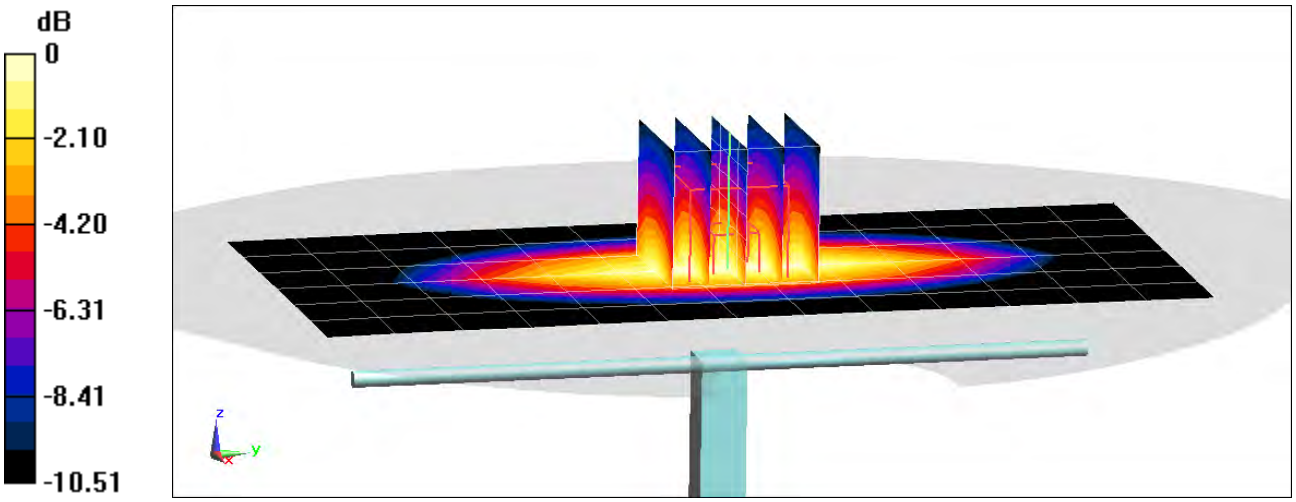
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used:
f = 835 MHz; σ = 0.952 S/m; ε_r = 53.263; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/01/2020; Ambient Temp: 22.9°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 835 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.04 W/kg
SAR(1 g) = 1.99 W/kg
Deviation(1 g) = -0.10%



0 dB = 2.66 W/kg = 4.25 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d047

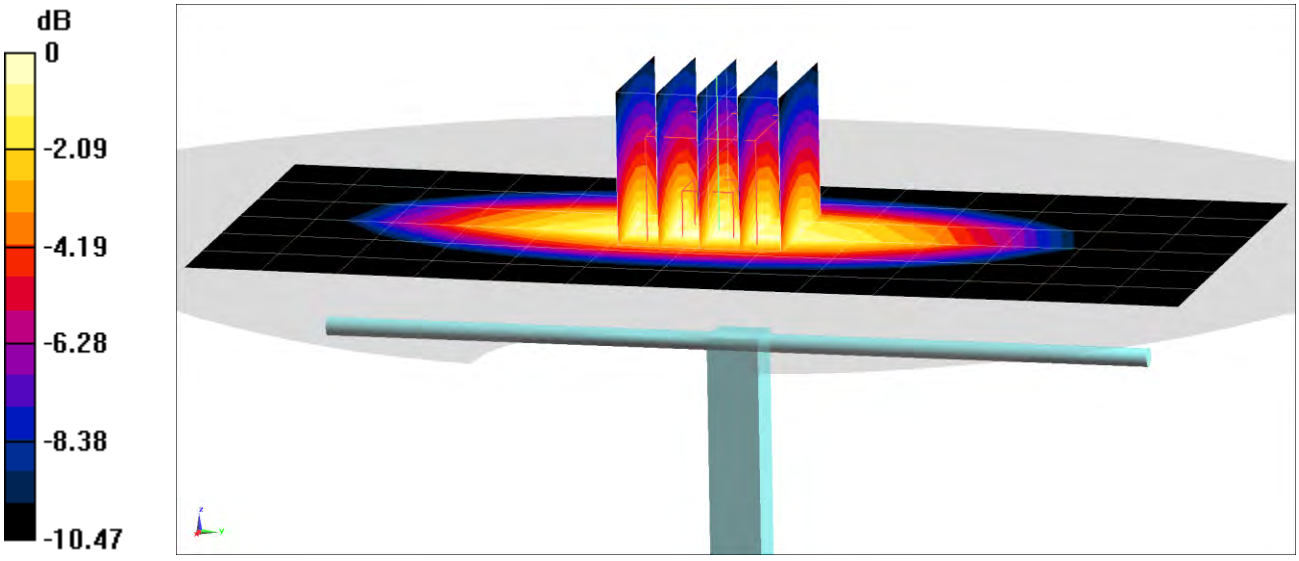
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used:
f = 835 MHz; σ = 0.939 S/m; ε_r = 54.408; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/05/2020; Ambient Temp: 22.8°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 835 MHz; Calibrated: 1/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1530; Calibrated: 1/13/2020
Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1646
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.82 W/kg
SAR(1 g) = 1.87 W/kg
Deviation(1 g) = -1.27%



0 dB = 2.50 W/kg = 3.98 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

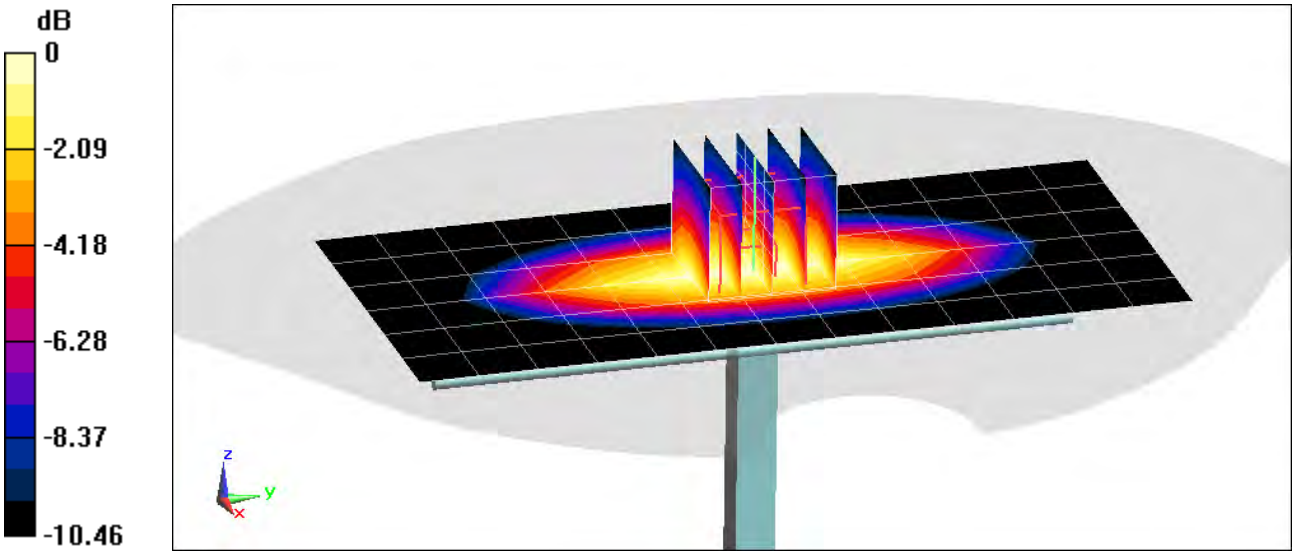
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used:
f = 835 MHz; σ = 0.963 S/m; ε_r = 53.903; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/08/2020; Ambient Temp: 22.0°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 835 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.11 W/kg
SAR(1 g) = 2.01 W/kg
Deviation(1 g) = 0.90%



0 dB = 2.72 W/kg = 4.35 dBW/kg

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d047

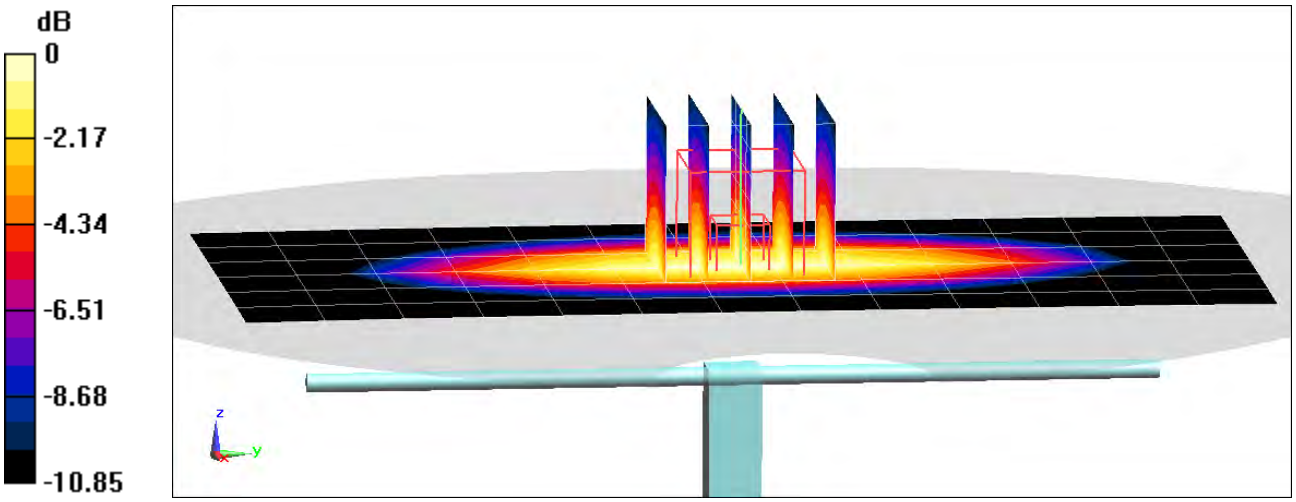
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Body; Medium parameters used:
f = 835 MHz; σ = 0.983 S/m; ε_r = 53.925; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/22/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 835 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1333; Calibrated: 9/17/2019
Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 3.12 W/kg
SAR(1 g) = 2.02 W/kg
Deviation(1 g) = 6.65%



0 dB = 2.73 W/kg = 4.36 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

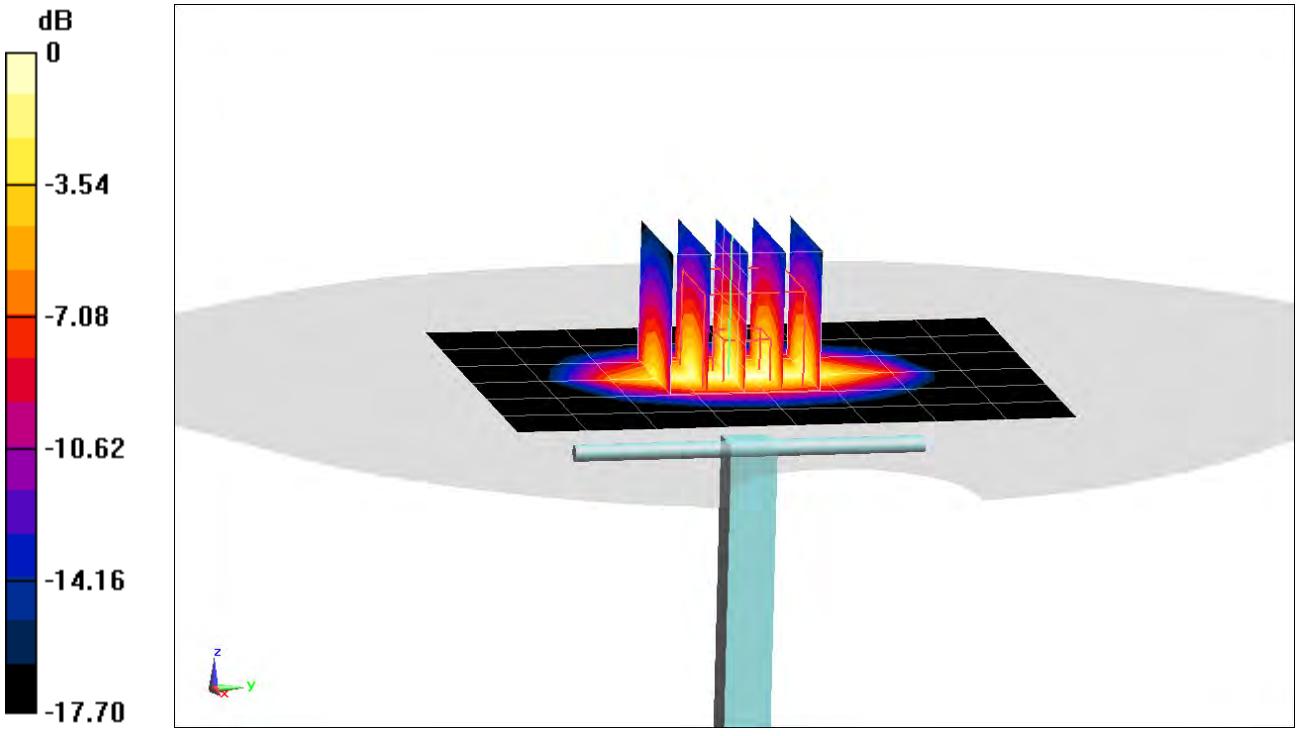
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.546 S/m; ε_r = 53.012; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/01/2020; Ambient Temp: 21.4°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1750 MHz; Calibrated: 3/17/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.17 W/kg
SAR(1 g) = 4.01 W/kg
Deviation(1 g) = 7.22%



0 dB = 6.07 W/kg = 7.83 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

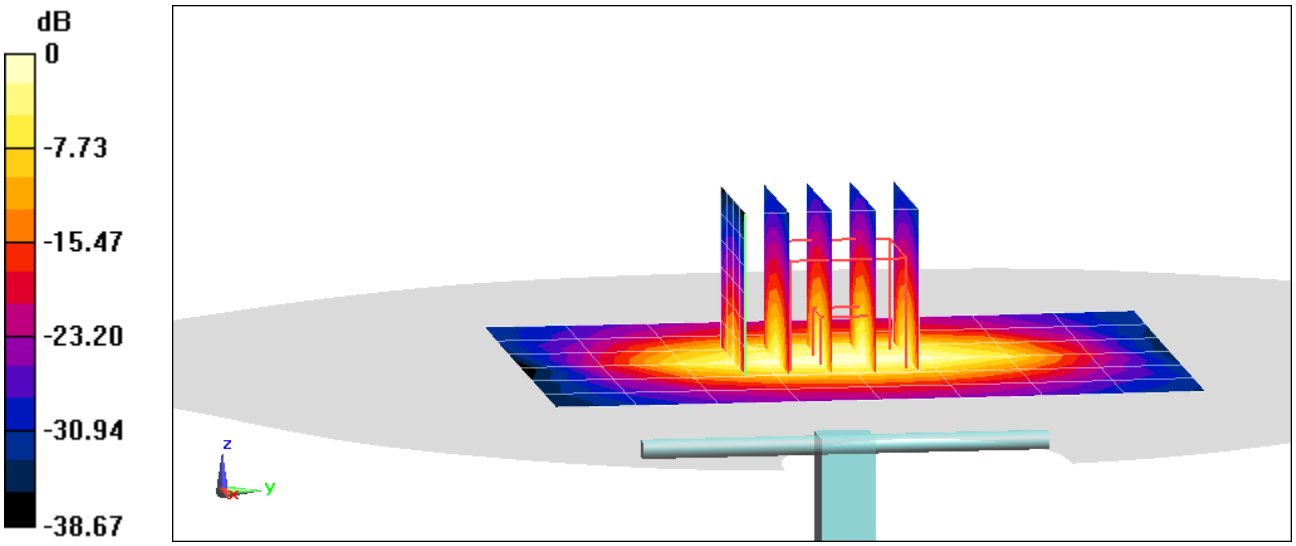
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.544 S/m; ε_r = 51.83; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/23/2020; Ambient Temp: 20.9°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.04 W/kg
SAR(1 g) = 3.84 W/kg
Deviation(1 g) = 2.67%



0 dB = 5.77 W/kg = 7.61 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

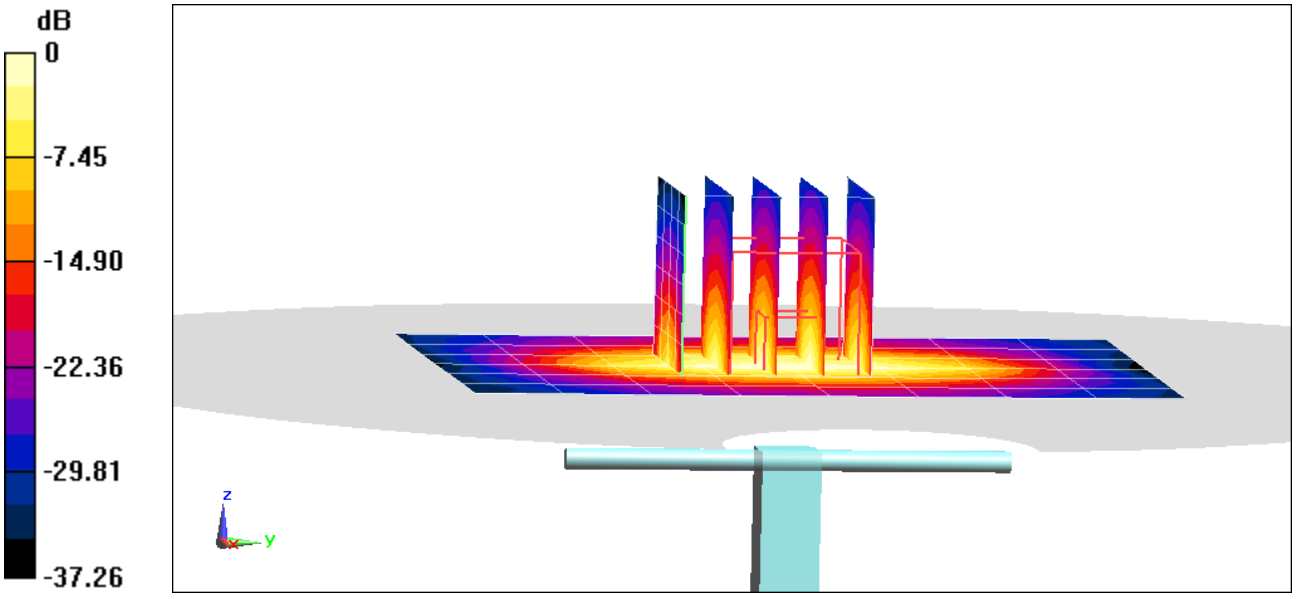
Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.546 S/m; ε_r = 52.99; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/14/2020; Ambient Temp: 20.5°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.20 W/kg
SAR(1 g) = 3.93 W/kg
Deviation(1 g) = 5.08%



0 dB = 5.95 W/kg = 7.74 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

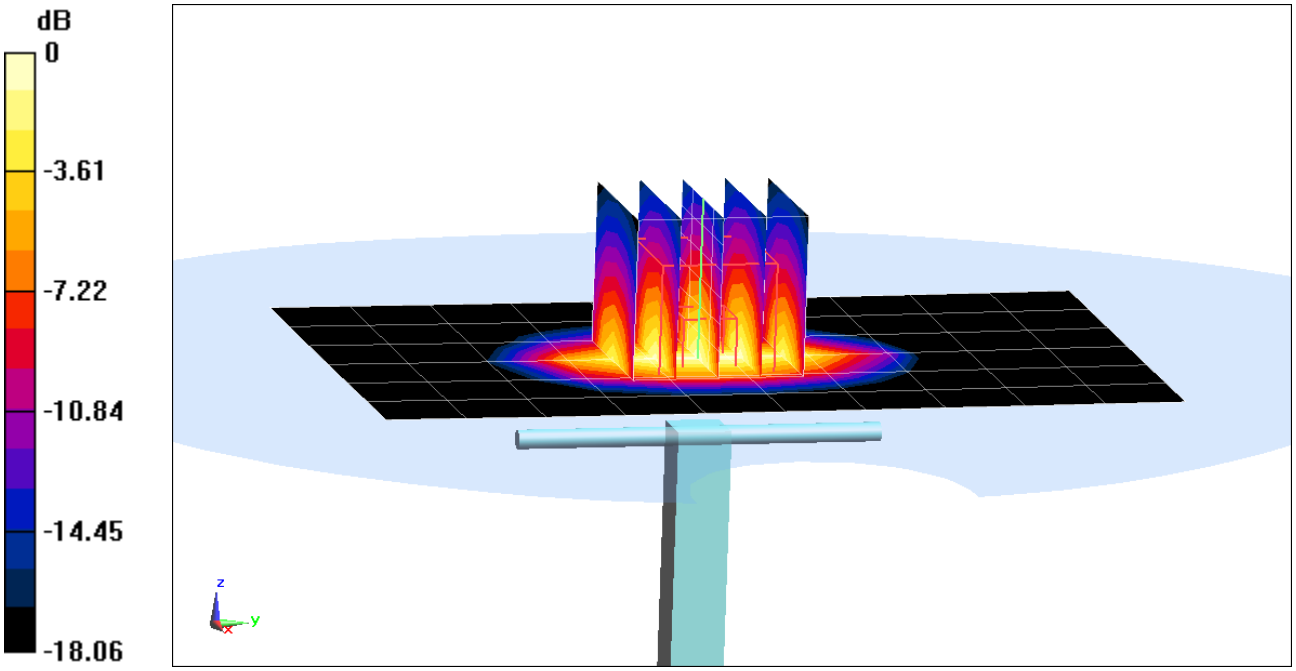
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.52 S/m; ε_r = 51.989; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/23/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.65 W/kg
SAR(1 g) = 4.16 W/kg
Deviation(1 g) = 5.58%



0 dB = 6.46 W/kg = 8.10 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

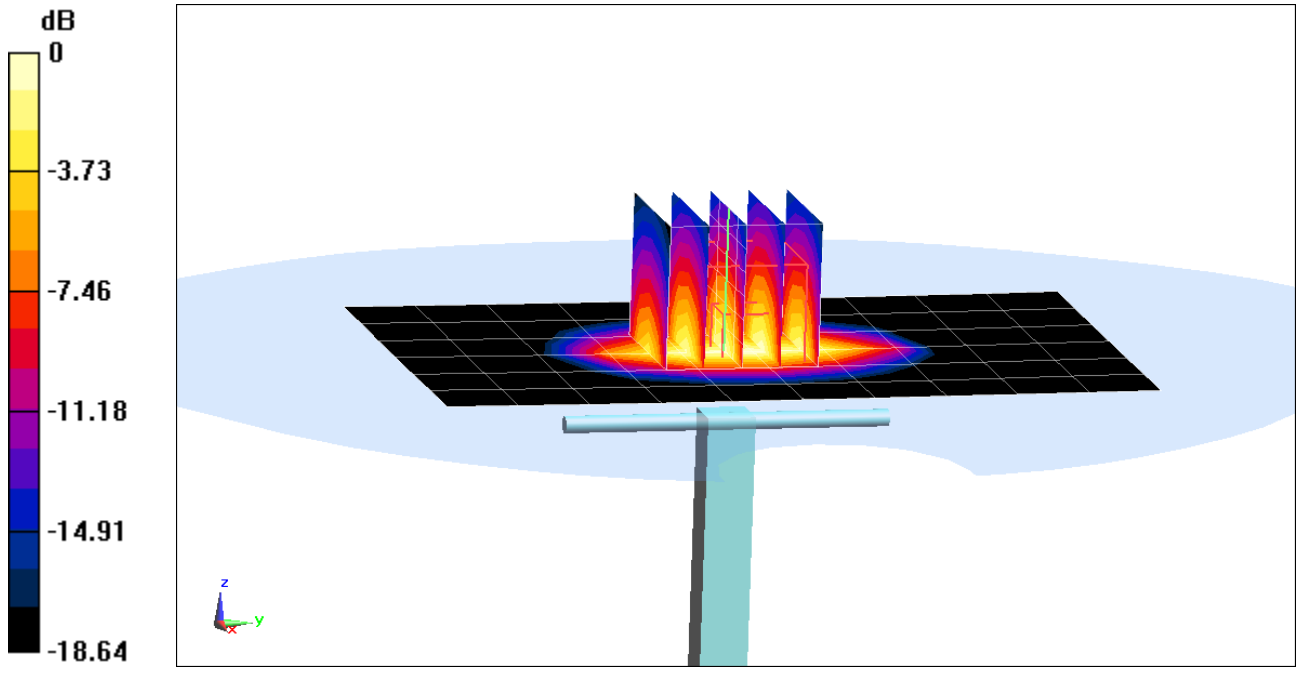
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.562 S/m; ε_r = 52.779; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/11/2020; Ambient Temp: 23.4°C; Tissue Temp: 23.6°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.90 W/kg
SAR(1 g) = 4.23 W/kg
Deviation(1 g) = 7.91%



0 dB = 6.47 W/kg = 8.11 dBW/kg

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

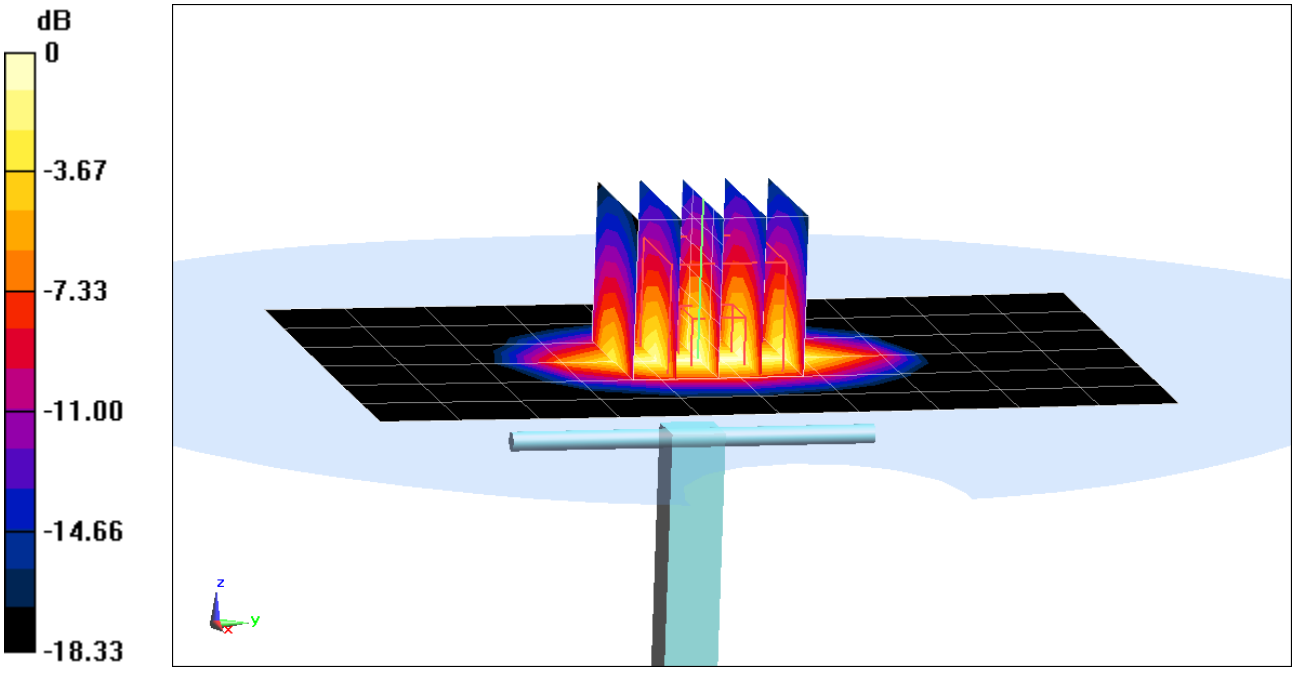
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.554 S/m; ε_r = 54.033; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space:

Test Date: 07/20/2020; Ambient Temp: 22.5°C; Tissue Temp: 23.7°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1533; Calibrated: 12/5/2019
Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.71 W/kg
SAR(1 g) = 4.13 W/kg
Deviation(1 g) = 5.36%



0 dB = 6.35 W/kg = 8.03 dBW/kg

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

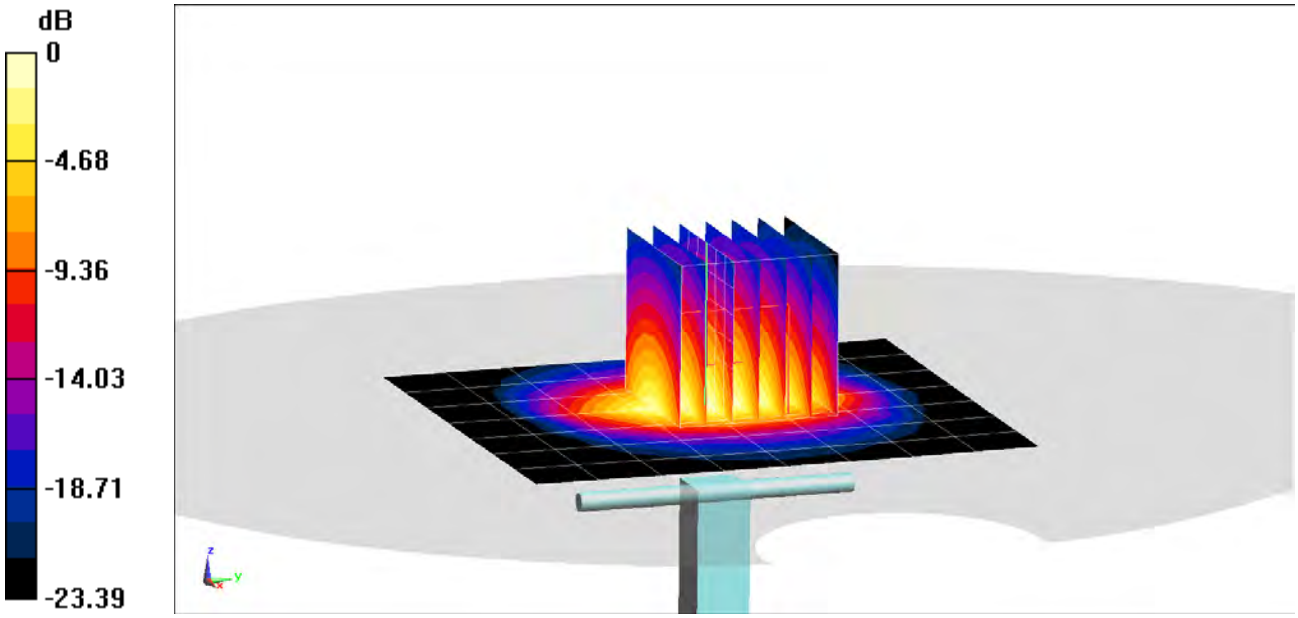
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.025 S/m; ε_r = 51.546; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/04/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2450 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.6 W/kg
SAR(1 g) = 5.08 W/kg
Deviation(1 g) = 0.00%



0 dB = 8.48 W/kg = 9.28 dBW/kg

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

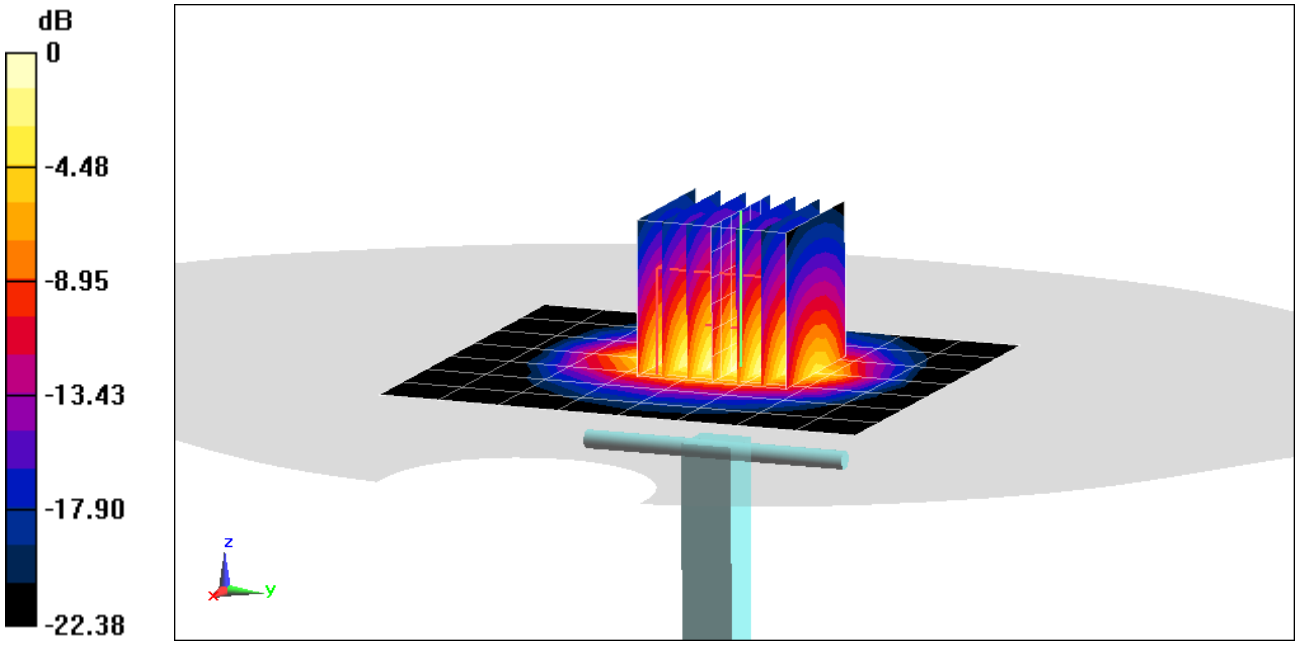
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.028 S/m; ε_r = 51.487; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/06/2020; Ambient Temp: 22.8°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2450 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.0 W/kg
SAR(1 g) = 4.9 W/kg
Deviation(1 g) = -3.73%



0 dB = 8.10 W/kg = 9.08 dBW/kg

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

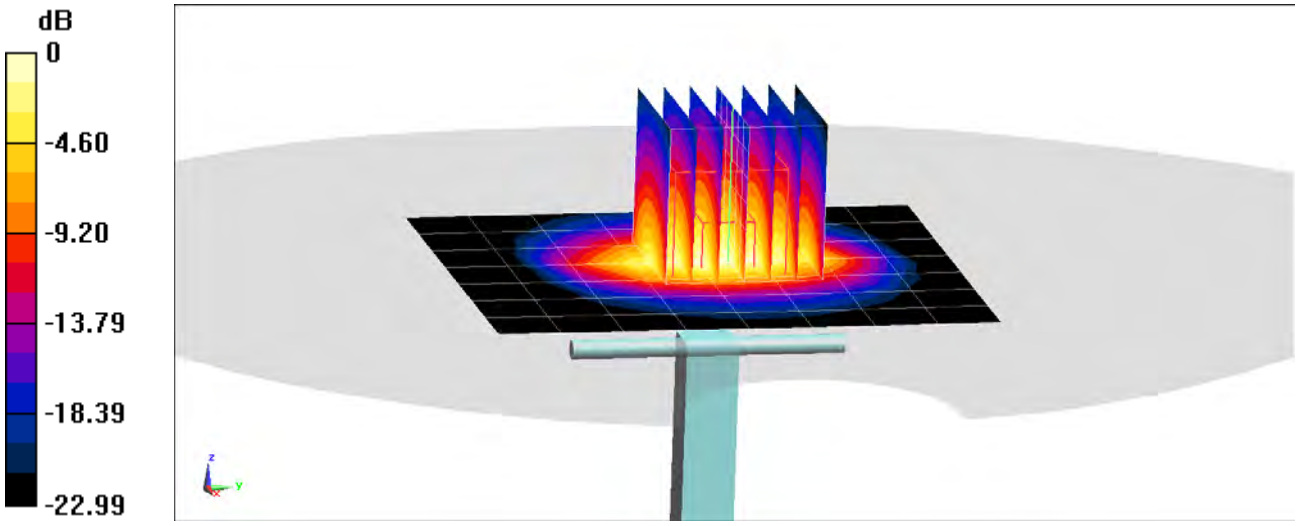
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.034 S/m; ε_r = 51.503; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/20/2020; Ambient Temp: 23.6°C; Tissue Temp: 23.6°C

Probe: EX3DV4 - SN7409; ConvF(7.24, 7.24, 7.24) @ 2450 MHz; Calibrated: 6/23/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/18/2020
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.3 W/kg
SAR(1 g) = 5.29 W/kg
Deviation(1 g) = 4.13%



0 dB = 8.98 W/kg = 9.53 dBW/kg

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

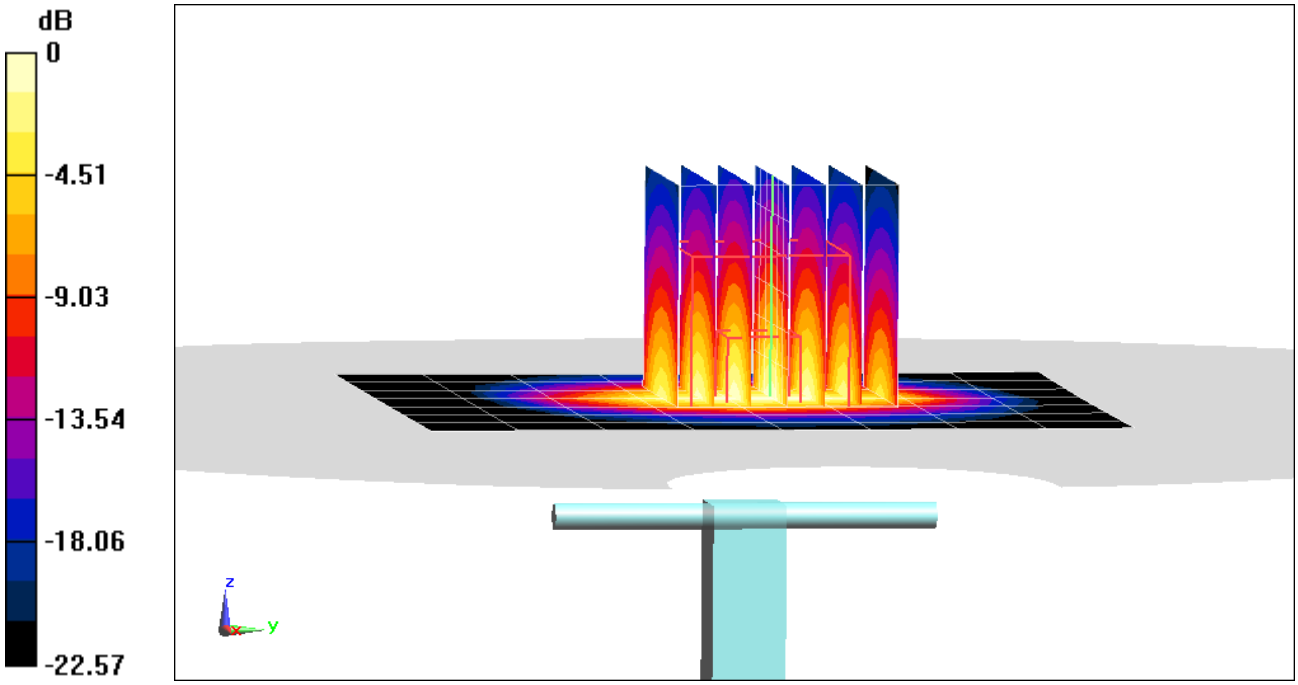
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 1.971 S/m; ε_r = 50.762; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/21/2020; Ambient Temp: 24.5°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2450 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.1 W/kg
SAR(1 g) = 4.88 W/kg
Deviation(1 g) = -4.13%



0 dB = 8.05 W/kg = 9.06 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

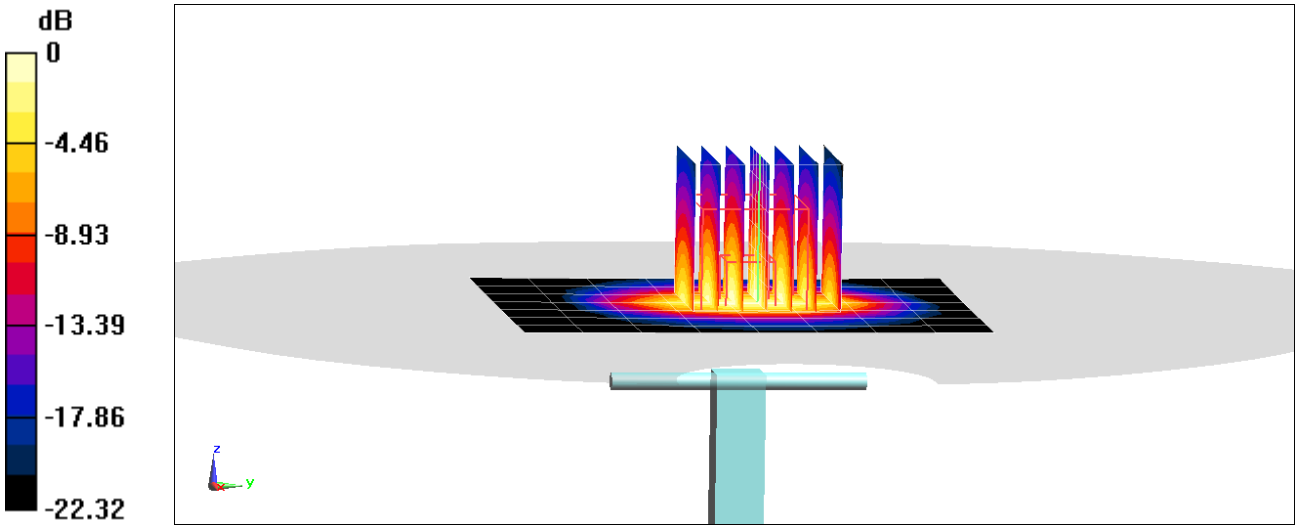
Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2450 MHz; σ = 2.008 S/m; ε_r = 50.859; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/23/2020; Ambient Temp: 25.0°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7552; ConvF(7.47, 7.47, 7.47) @ 2450 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 9.81 W/kg
SAR(1 g) = 4.84 W/kg
Deviation(1 g) = -4.91%



0 dB = 7.72 W/kg = 8.88 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

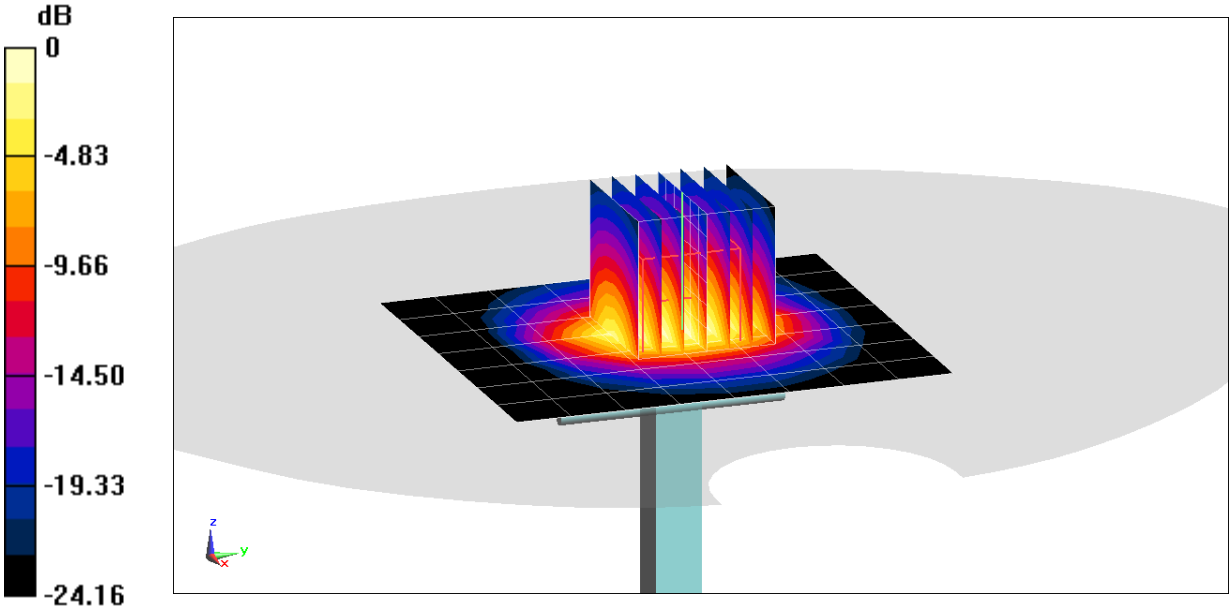
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2600 MHz; σ = 2.201 S/m; ε_r = 50.748; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/23/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.18, 7.18, 7.18) @ 2600 MHz; Calibrated: 7/15/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1323; Calibrated: 7/11/2019
Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.2 W/kg
SAR(1 g) = 5.56 W/kg
Deviation(1 g) = 0.00%



0 dB = 9.58 W/kg = 9.81 dBW/kg

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1004

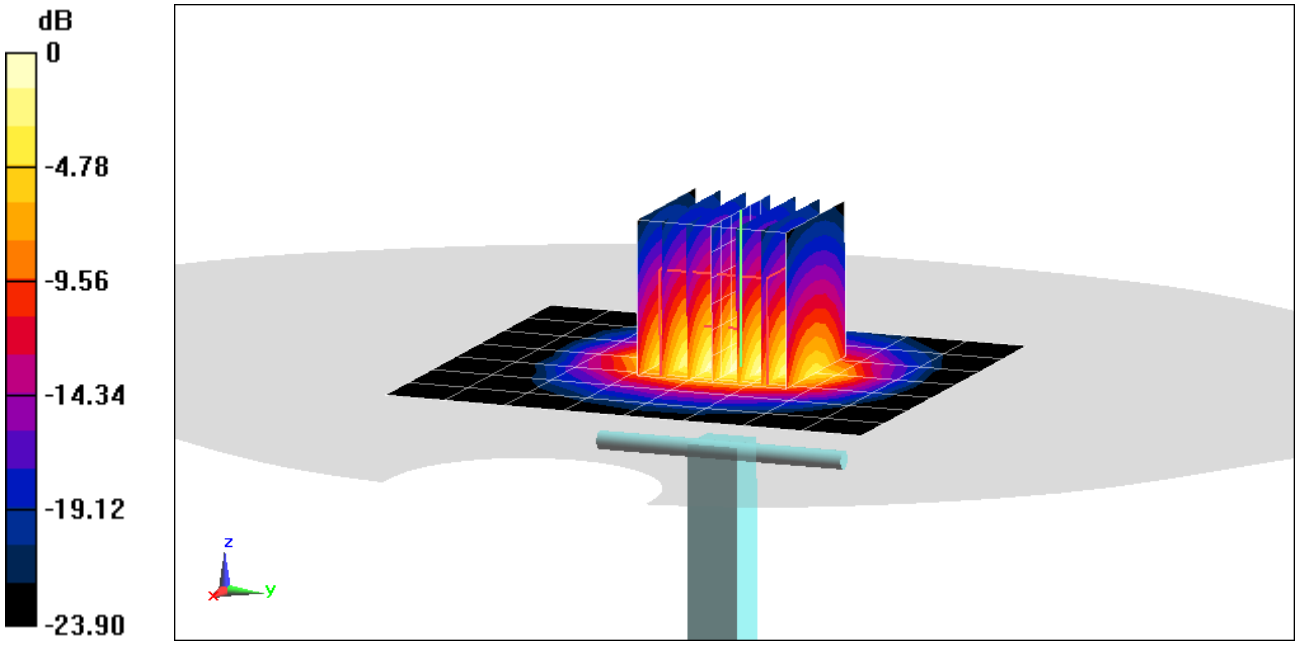
Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2600 MHz; σ = 2.236 S/m; ε_r = 50.911; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/06/2020; Ambient Temp: 22.8°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7552; ConvF(7.19, 7.19, 7.19) @ 2600 MHz; Calibrated: 9/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1449; Calibrated: 9/12/2019
Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 5.82 W/kg
Deviation(1 g) = 6.20%



0 dB = 10.1 W/kg = 10.04 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

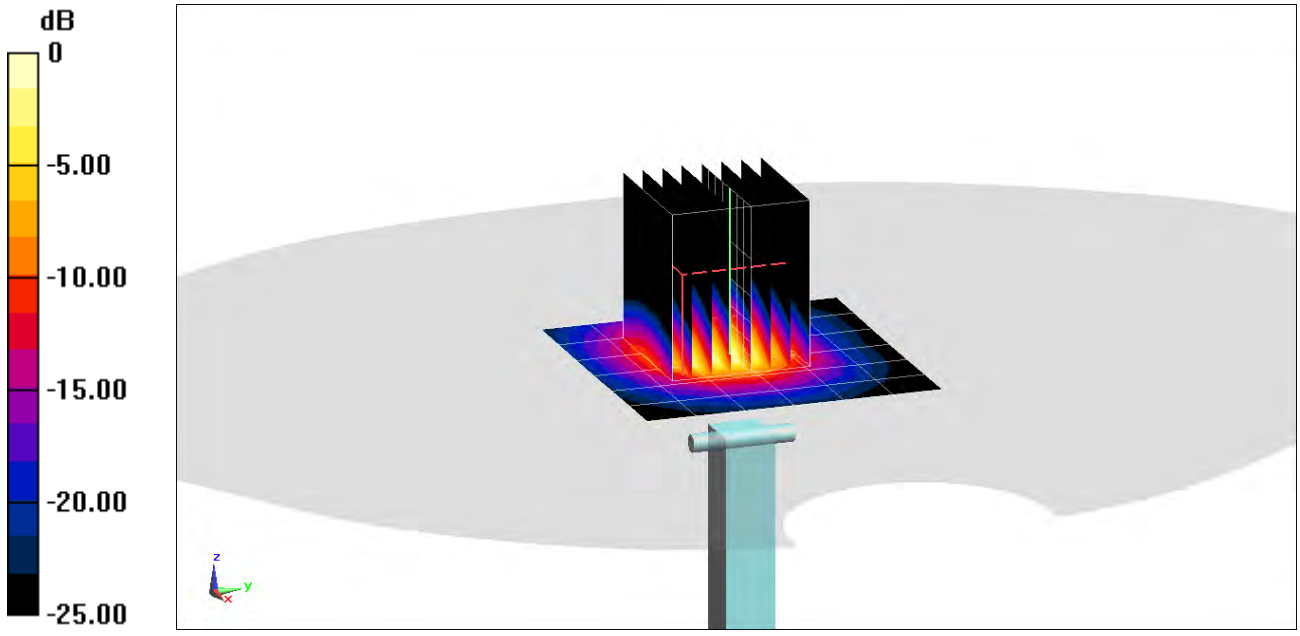
Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5250 MHz; σ = 5.434 S/m; ε_r = 46.826; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/05/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF(4.6, 4.6, 4.6) @ 5250 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.4 W/kg
SAR(1 g) = 3.81 W/kg
Deviation(1 g) = 0.79%



0 dB = 8.88 W/kg = 9.48 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

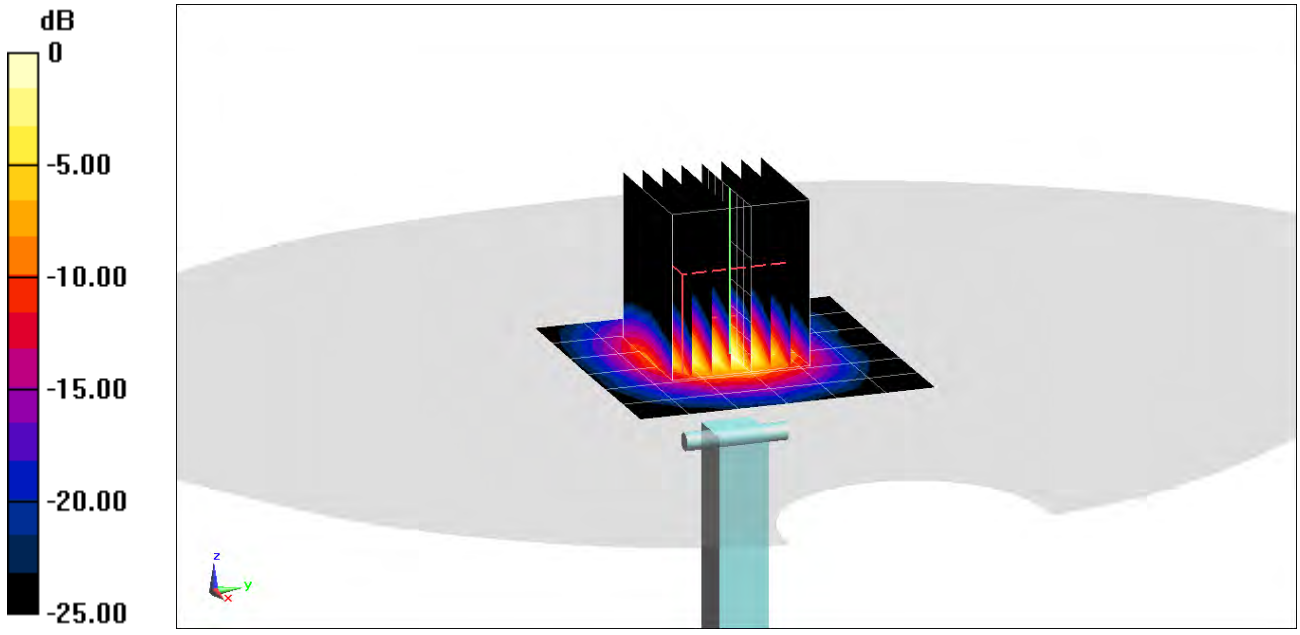
Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5600 MHz; σ = 5.891 S/m; ε_r = 46.256; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/05/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF(4.09, 4.09, 4.09) @ 5600 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.2 W/kg
SAR(1 g) = 3.99 W/kg
Deviation(1 g) = 1.66%



0 dB = 9.80 W/kg = 9.91 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

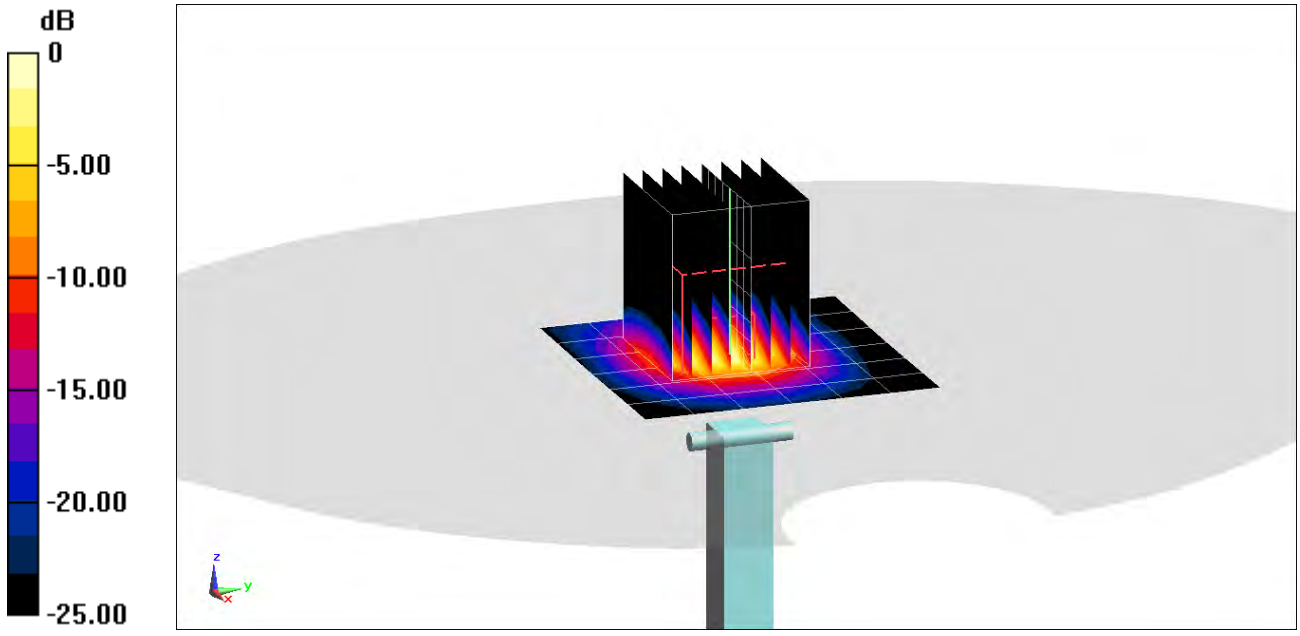
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5750 MHz; σ = 6.096 S/m; ε_r = 46.02; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/05/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5750 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 3.66 W/kg
Deviation(1 g) = -3.56%



0 dB = 9.17 W/kg = 9.62 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

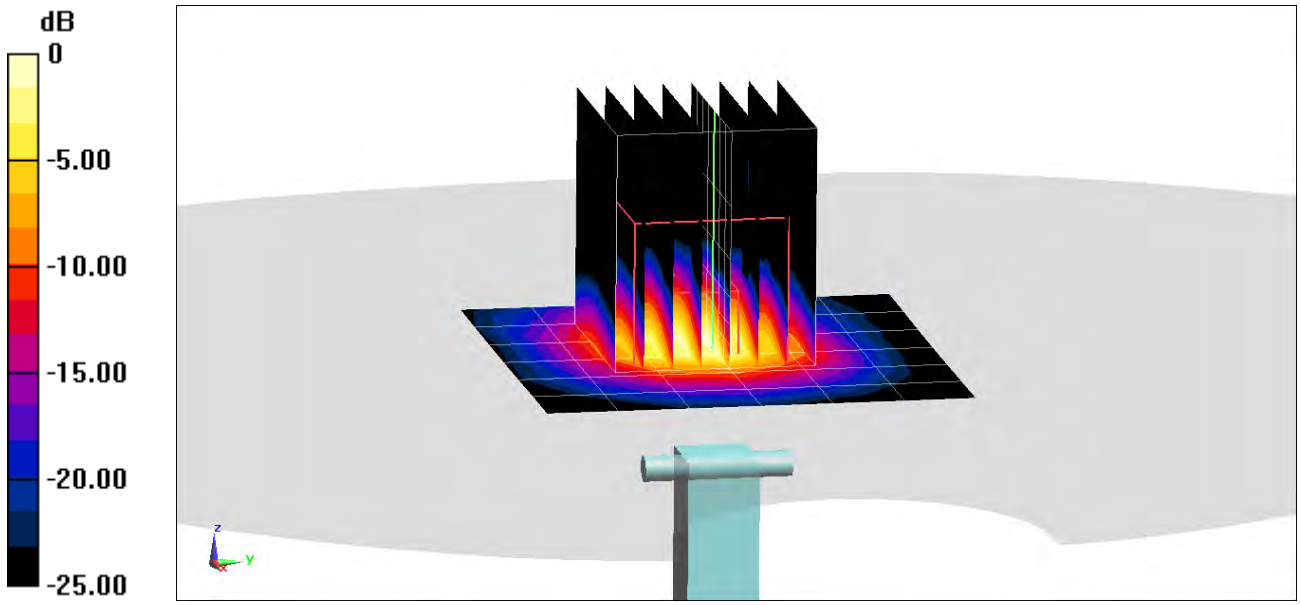
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5750 MHz; σ = 6.143 S/m; ε_r = 46.198; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/19/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5750 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 3.67 W/kg
Deviation(1 g) = -3.29%



0 dB = 8.97 W/kg = 9.53 dBW/kg

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

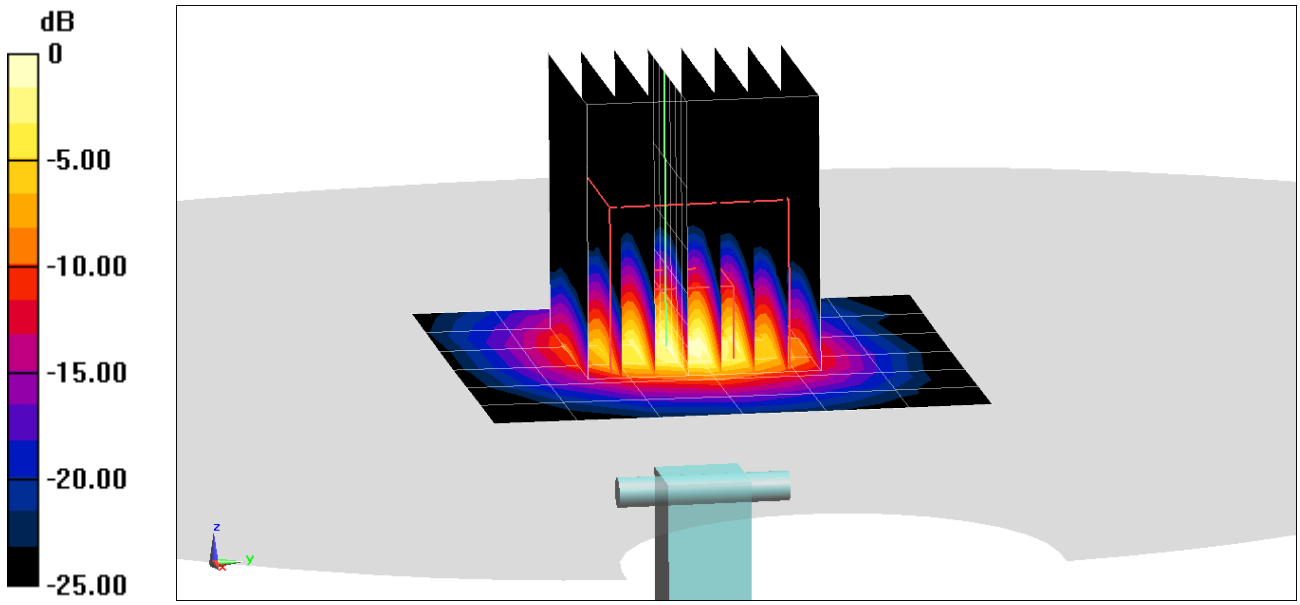
Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5750 MHz; σ = 6.139 S/m; ε_r = 46.119; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/27/2020; Ambient Temp: 21.9°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5750 MHz; Calibrated: 5/18/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn728; Calibrated: 5/20/2020
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 3.8 W/kg
Deviation(1 g) = 0.13%



0 dB = 9.40 W/kg = 9.73 dBW/kg

APPENDIX C: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

1) The network analyzer and probe system was configured and calibrated.
2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
3) The complex admittance with respect to the probe aperture was measured
4) The complex relative permittivity ε' can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\varepsilon_r\varepsilon_0}{\left[\ln(b/a)\right]^2}\int_a^b\int_a^b\int_0^\pi \cos\phi' \frac{\exp\left[-j\omega r(\mu_0\varepsilon_r'\varepsilon_0)^{1/2}\right]}{r} d\phi' d\rho' d\rho$$

where *Y* is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively, $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$, ω is the angular frequency, and $j = \sqrt{-1}$.

3 Composition / Information on ingredients

3.2 Mixtures
Description: Aqueous solution with surfactants and inhibitors
Declarable, or hazardous components:

CAS: 107-21-1 EINECS: 203-473-3 Reg.nr.: 01-2119456816-28-0000	**Ethanediol** STOT RE 2, H373; Acute Tox. 4, H302	>1.0-4.9%
CAS: 68608-26-4 EINECS: 271-781-5 Reg.nr.: 01-2119527859-22-0000	**Sodium petroleum sulfonate** Eye Irrit. 2, H319	< 2.9%
CAS: 107-41-5 EINECS: 203-489-0 Reg.nr.: 01-2119539582-35-0000	**Hexylene Glycol / 2-Methyl-pentane-2,4-diol** Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 2.9%
CAS: 68920-66-1 NLP: 500-236-9 Reg.nr.: 01-2119489407-26-0000	**Alkoxylated alcohol, > C_{16}** Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 2.0%

Additional information:
For the wording of the listed risk phrases refer to section 16.
Not mentioned CAS-, EINECS- or registration numbers are to be regarded as Proprietary/Confidential.
The specific chemical identity and/or exact percentage concentration of proprietary components is withheld as a trade secret.

Figure C-1

Note: Liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

Schmid & Partner Engineering AG

s p e a g

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info@speag.com, http://www.speag.com

Measurement Certificate / Material Test

Item Name	**Body Tissue Simulating Liquid (MBBL600-6000V6)**
Product No.	SL AAM U16 BC (Batch: 181029-1)
Manufacturer	SPEAG

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Target Parameters

Target parameters as defined in the KDB 865664 compliance standard.

Test Condition

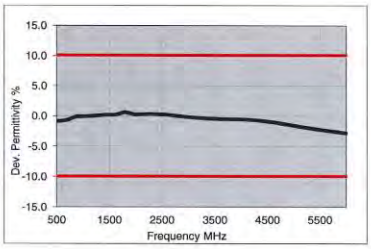
Ambient Condition	22°C ; 30% humidity
TSL Temperature	22°C
Test Date	30-Oct-18
Operator	CL

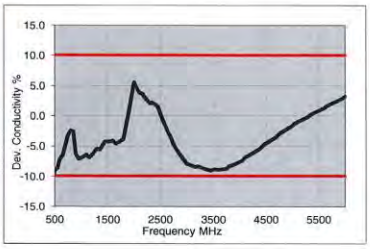
Additional Information

TSL Density
TSL Heat-capacity

Results

	Measured			Target		Diff.to Target [%]	
f [MHz]	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
800	55.1	21.3	0.95	55.3	0.97	-0.4	-2.1
825	55.1	20.8	0.96	55.2	0.98	-0.3	-2.0
835	55.1	20.6	0.96	55.1	0.99	0.0	-2.5
850	55.1	20.4	0.96	55.2	0.99	-0.1	-3.0
900	55.0	19.7	0.98	55.0	1.05	0.0	-6.7
1400	54.2	15.6	1.22	54.1	1.28	0.2	-4.7
1450	54.1	15.4	1.24	54.0	1.30	0.2	-4.6
1500	54.1	15.3	1.27	53.9	1.33	0.3	-4.5
1550	54.0	15.1	1.30	53.9	1.36	0.2	-4.4
1600	53.9	15.0	1.33	53.8	1.39	0.2	-4.3
1625	53.9	14.9	1.35	53.8	1.41	0.3	-4.3
1640	53.9	14.9	1.36	53.7	1.42	0.3	-4.2
1650	53.8	14.9	1.36	53.7	1.43	0.2	-4.9
1700	53.8	14.8	1.40	53.6	1.46	0.4	-4.1
1750	53.7	14.7	1.43	53.4	1.49	0.5	-4.0
1800	53.7	14.6	1.46	53.3	1.52	0.8	-3.9
1810	53.7	14.6	1.47	53.3	1.52	0.8	-3.3
1825	53.7	14.6	1.48	53.3	1.52	0.8	-2.6
1850	53.6	14.5	1.50	53.3	1.52	0.6	-1.3
1900	53.5	14.5	1.53	53.3	1.52	0.4	0.7
1950	53.5	14.5	1.57	53.3	1.52	0.4	3.3
2000	53.4	14.4	1.60	53.3	1.52	0.2	5.3
2050	53.4	14.4	1.64	53.2	1.57	0.3	4.5
2100	53.3	14.4	1.68	53.2	1.62	0.2	3.7
2150	53.3	14.4	1.72	53.1	1.66	0.4	3.6
2200	53.2	14.4	1.76	53.0	1.71	0.3	2.9
2250	53.1	14.4	1.81	53.0	1.76	0.2	2.8
2300	53.1	14.4	1.85	52.9	1.81	0.4	2.2
2350	53.0	14.5	1.89	52.8	1.85	0.3	2.2
2400	52.9	14.5	1.94	52.8	1.90	0.2	2.1
2450	52.9	14.5	1.98	52.7	1.95	0.4	1.5
2500	52.8	14.6	2.03	52.6	2.02	0.3	0.5
2550	52.7	14.6	2.07	52.6	2.09	0.2	-1.0
2600	52.6	14.7	2.12	52.5	2.16	0.2	-1.9





3500	51.1	15.5	3.02	51.3	3.31	-0.4	-8.8
3700	50.8	15.7	3.24	51.1	3.55	-0.5	-8.8
5200	48.1	18.2	5.27	49.0	5.30	-1.8	-0.6
5250	48.0	18.3	5.34	49.0	5.36	-1.9	-0.4
5300	47.9	18.4	5.41	48.9	5.42	-2.0	-0.2
5500	47.5	18.6	5.70	48.6	5.65	-2.2	0.8
5600	47.3	18.8	5.84	48.5	5.77	-2.3	1.3
5700	47.1	18.9	5.99	48.3	5.88	-2.5	1.8
5800	47.0	19.0	6.14	48.2	6.00	-2.6	2.3

Figure C-2
600 – 5800 MHz Body Tissue Equivalent Matter

APPENDIX D: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

Table D-1
SAR System Validation Summary

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (εr)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
L	750	8/20/2019	7410	750	Body	0.941	54.921	PASS	PASS	PASS	N/A	N/A	N/A
P	835	9/26/2019	7551	835	Body	0.991	54.104	PASS	PASS	PASS	GMSK	PASS	N/A
D	835	2/20/2020	7488	835	Body	1.001	53.450	PASS	PASS	PASS	GMSK	PASS	N/A
I	1750	4/7/2020	7527	1750	Body	1.506	54.990	PASS	PASS	PASS	N/A	N/A	N/A
I	1750	6/17/2020	7570	1750	Body	1.518	52.030	PASS	PASS	PASS	N/A	N/A	N/A
J	1900	1/1/2020	7571	1900	Body	1.579	51.919	PASS	PASS	PASS	GMSK	PASS	N/A
O	2450	5/27/2020	7552	2450	Body	2.038	55.028	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2450	9/6/2019	7547	2450	Body	1.996	51.898	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2450	7/7/2020	7409	2450	Body	2.018	51.180	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	9/5/2019	7547	2600	Body	2.176	52.040	PASS	PASS	PASS	TDD	PASS	N/A
O	2600	5/27/2020	7552	2600	Body	2.183	54.825	PASS	PASS	PASS	TDD	PASS	N/A
G	5250	6/8/2020	7538	5250	Body	5.400	47.530	PASS	PASS	PASS	OFDM	N/A	PASS
G	5600	6/8/2020	7538	5600	Body	5.857	46.970	PASS	PASS	PASS	OFDM	N/A	PASS
G	5750	6/8/2020	7538	5750	Body	6.061	46.723	PASS	PASS	PASS	OFDM	N/A	PASS

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

APPENDIX F: DOWNLINK LTE CA RF CONDUCTED POWERS

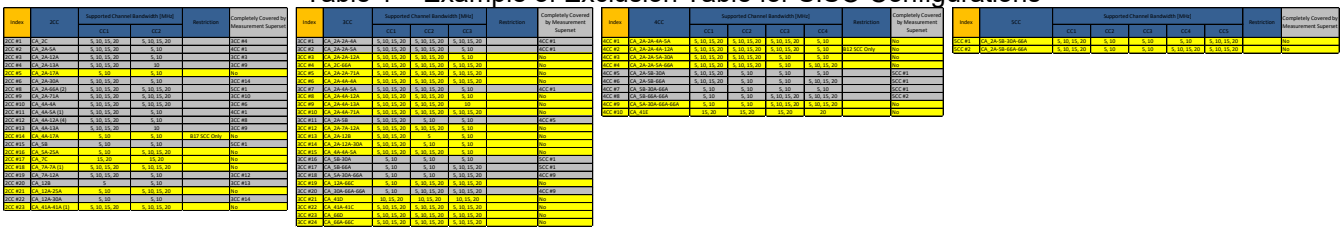
1.1 LTE Downlink Only Carrier Aggregation Test Reduction Methodology

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number of component carriers (CCs) supported by the product implementation. Per April 2018 TCBC Workshop Notes, the following test reduction methodology was applied to determine the combinations required for conducted power measurements.

LTE DLCA Test Reduction Methodology:

- The supported combinations were arranged by the number of component carriers in columns.
- Any limitations on the PCC or SCC for each combination were identified alongside the combination (e.g. CA_2A-2A-4A-12A, but B12 can only be configured as a SCC).
- Power measurements were performed for "supersets" (LTE CA combinations with multiple components carriers) and any "subsets" (LTE CA combinations with fewer component carriers) that were not completely covered by the supersets.
- Only subsets that have the exact same components as a superset were excluded for measurement.
- When there were certain restrictions on component carriers that existed in the superset that were not applied for the subset, the subset configuration was additionally evaluated.
- Both inter-band and intra-band downlink carrier aggregation scenarios were considered.
- Downlink CA combinations for SISO and 4x4 Downlink MIMO operations were measured independently, per May 2017 TCBC Workshop notes.

Table 1 – Example of Exclusion Table for SISO Configurations



Index	2CC	Supported Channel Bandwidth [MHz]		Restriction	Completely Covered by Measurement Superset
		CC1	CC2		
2CC #1	CA_2C	5, 10, 15, 20	5, 10, 15, 20		3CC #6
2CC #2	CA_2A-5A	5, 10, 15, 20	5, 10		4CC #1
2CC #3	CA_2A-12A	5, 10, 15, 20	5, 10		3CC #3
2CC #4	CA_2A-13A	5, 10, 15, 20	10		3CC #9
2CC #5	CA_2A-17A	5, 10	5, 10		No
2CC #6	CA_2A-30A	5, 10, 15, 20	5, 10		3CC #14
2CC #8	CA_2A-66A (2)	5, 10, 15, 20	5, 10, 15, 20		3CC #1
2CC #9	CA_2A-71A	5, 10, 15, 20	5, 10, 15, 20		3CC #10
2CC #10	CA_4A-4A	5, 10, 15, 20	5, 10, 15, 20		3CC #6
2CC #11	CA_4A-5A (1)	5, 10, 15, 20	5, 10		4CC #1
2CC #12	CA_4A-12A (4)	5, 10, 15, 20	5, 10		3CC #8
2CC #13	CA_4A-13A	5, 10, 15, 20	10		3CC #9
2CC #14	CA_4A-17A	5, 10	5, 10	B17 SCC Only	No
2CC #15	CA_5B	5, 10	5, 10		3CC #1
2CC #16	CA_5A-25A	5, 10	5, 10, 15, 20		No
2CC #17	CA_7C	15, 20	15, 20		No
2CC #18	CA_7A-7A (1)	5, 10, 15, 20	5, 10, 15, 20		No
2CC #19	CA_7A-12A	5, 10, 15, 20	5, 10		3CC #12
2CC #20	CA_12B	5	5, 10		3CC #13
2CC #21	CA_12A-25A	5, 10	5, 10, 15, 20		No
2CC #22	CA_12A-30A	5, 10	5, 10		3CC #16
2CC #23	CA_41A-41A (1)	5, 10, 15, 20	5, 10, 15, 20		No

Index	3CC	Supported Channel Bandwidth [MHz]			Restriction	Completely Covered by Measurement Superset
		CC1	CC2	CC3		
3CC #1	CA_2A-2A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		4CC #1
3CC #2	CA_2A-2A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10		4CC #1
3CC #3	CA_2A-2A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #4	CA_2C-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #5	CA_2A-2A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #6	CA_2A-4A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #7	CA_2A-66-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10		4CC #1
3CC #8	CA_4A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #9	CA_2A-4A-13A	5, 10, 15, 20	5, 10, 15, 20	10		No
3CC #10	CA_2A-4A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #11	CA_2A-5B	5, 10, 15, 20	5, 10	5, 10		4CC #2
3CC #12	CA_2A-7A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #13	CA_2A-12B	5	5	5, 10		No
3CC #14	CA_2A-12A-30A	5, 10, 15, 20	5, 10	5, 10		No
3CC #15	CA_4A-4A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #16	CA_5B-30A	5, 10	5, 10	5, 10		3CC #1
3CC #17	CA_5B-66A	5, 10	5, 10	5, 10, 15, 20		3CC #1
3CC #18	CA_5A-30A-66A	5, 10	5, 10	5, 10, 15, 20		4CC #2
3CC #19	CA_12A-66C	5, 10	5, 10, 15, 20	5, 10, 15, 20		No
3CC #20	CA_30A-66A-66A	5, 10	5, 10, 15, 20	5, 10, 15, 20		3CC #9
3CC #21	CA_41D	10, 15, 20	10, 15, 20	10, 15, 20		No
3CC #22	CA_41A-41C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #23	CA_66B	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #24	CA_66A-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No

Index	4CC	Supported Channel Bandwidth [MHz]				Restriction	Completely Covered by Measurement Superset
		CC1	CC2	CC3	CC4		
4CC #1	CA_2A-4A-5A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		No
4CC #2	CA_2A-4A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20	5, 10	B12 SCC Only	No
4CC #3	CA_2A-2A-5A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10		No
4CC #4	CA_2A-2A-5A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
4CC #5	CA_2A-5B-30A	5, 10, 15, 20	5, 10	5, 10	5, 10		3CC #1
4CC #6	CA_2A-5B-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		3CC #1
4CC #7	CA_5B-30A-66A	5, 10	5, 10	5, 10	5, 10		3CC #1
4CC #8	CA_5B-66A-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20		3CC #2
4CC #9	CA_5A-30A-66A-66A	5, 10	5, 10	5, 10, 15, 20	5, 10, 15, 20		No
4CC #10	CA_41E	15, 20	15, 20	15, 20	20		No

Index	SCC	Supported Channel Bandwidth [MHz]				Restriction	Completely Covered by Measurement Superset
		CC1	CC2	CC3	CC4		
SCC #1	CA_2A-5B-30A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		No
SCC #2	CA_2A-5B-66A-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		No

Table 2 – Example of Exclusion Table for 4x4 Downlink MIMO Configurations

Index	2CC	Supported Channel Bandwidth [MHz]		Restriction	Completely Covered by Measurement Superset
		CC1	CC2		
2CC #M1	CA_[2C]	5, 10, 15, 20	5, 10, 15, 20		3CC #M6
2CC #M2	CA_[2A]-2A	5, 10, 15, 20	5, 10, 15, 20		3CC #M1
2CC #M3	CA_[2A]-[2A]	5, 10, 15, 20	5, 10, 15, 20		No
2CC #M4	CA_[2A]-4A (2)	5, 10, 15, 20	5, 10, 15, 20		3CC #M1
2CC #M5	CA_[2A]-[4A] (2)	5, 10, 15, 20	5, 10, 15, 20		No
2CC #M6	CA_[2A]-5A	5, 10, 15, 20	5, 10		4CC #M3
2CC #M7	CA_[2A]-12A (1)	5, 10, 15, 20	3, 5, 10		No
2CC #M8	CA_[2A]-13A	5, 10, 15, 20	10		3CC #M4
2CC #M9	CA_[2A]-17A	5, 10	5, 10		No
2CC #M10	CA_[2A]-29A (2)	5, 10, 15, 20	5, 10	B29 SCC Only	3CC #M12
2CC #M11	CA_[2A]-30A	5, 10, 15, 20	5, 10		3CC #M5
2CC #M12	CA_[2A]-66A (2)	5, 10, 15, 20	5, 10, 15, 20		4CC #M1
2CC #M13	CA_[2A-[66A] (2)	5, 10, 15, 20	5, 10, 15, 20		4CC #M2
2CC #M14	CA_[2A]-[66A] (2)	5, 10, 15, 20	5, 10, 15, 20		No
2CC #M15	CA_[2A]-71A	5, 10, 15, 20	5, 10, 15, 20		3CC #M11
2CC #M16	CA_5A- [66A]	5, 10	5, 10, 15, 20		3CC #M16
2CC #M17	CA_12A-[66A] (4)	5, 10	5, 10, 15, 20		3CC #M17
2CC #M18	CA_13A-[66A]	5, 10	5, 10, 15, 20		3CC #M19
2CC #M19	CA_30A-[66A]	5, 10	5, 10, 15, 20		3CC #M20
2CC #M20	CA_[66B]	5, 10, 15	5, 10, 15		4CC #M4
2CC #M21	CA_[66C]	5, 10, 15, 20	5, 10, 15, 20		4CC #M6
2CC #M22	CA_[66A]-66A	5, 10, 15, 20	5, 10, 15, 20		3CC #M28
2CC #M23	CA_[66A]-[66A]	5, 10, 15, 20	5, 10, 15, 20		No

Index	3CC	Supported Channel Bandwidth [MHz]			Restriction	Completely Covered by Measurement Superset
		CC1	CC2	CC3		
3CC #M1	CA_[2A]-2A-4A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M2	CA_[2A]-2A-5A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #M3	CA_[2A]-2A-12A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #M4	CA_[2A]-2A-13A	5, 10, 15, 20	5, 10, 15, 20	10		No
3CC #M5	CA_[2A]-2A-30A	5, 10, 15, 20	5, 10, 15, 20	5, 10		No
3CC #M6	CA_[2C]-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M7	CA_2C-[66A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M8	CA_[2C]-[66A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M9	CA_[2A]-2A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M10	CA_2A-2A-[66A]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M11	CA_[2A]-2A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M12	CA_[2A]-4A-29A	5, 10, 15, 20	5, 10, 15, 20	5, 10	B29 SCC Only	No
3CC #M13	CA_[2A]-4A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M14	CA_[2A]-5B	5, 10, 15, 20	5, 10	5, 10		4CC #M1
3CC #M15	CA_[2A]-5A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M16	CA_2A-5A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M17	CA_2A-12A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M18	CA_[2A]-13A-66A	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M19	CA_2A-13A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M20	CA_2A-30A-[66A]	5, 10, 15, 20	5, 10	5, 10, 15, 20		No
3CC #M21	CA_[2A]-66B	5, 10, 15, 20	5, 10, 15	5, 10, 15		4CC #M3
3CC #M22	CA_2A-[66B]	5, 10, 15, 20	5, 10, 15	5, 10, 15		4CC #M4
3CC #M23	CA_[2A]-[66B]	5, 10, 15, 20	5, 10, 15	5, 10, 15		No
3CC #M24	CA_[2A]-66C	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		4CC #M5
3CC #M25	CA_2A-[66C]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		4CC #M6
3CC #M26	CA_[2A]-[66C]	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M27	CA_[2A]-66A-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M28	CA_2A-[66A]-66A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No
3CC #M29	CA_[2A]-66A-71A	5, 10, 15, 20	5, 10, 15, 20	5, 10, 15, 20		No

Index	4CC	Supported Channel Bandwidth [MHz]				Restriction	Completely Covered by Measurement Superset
		CC1	CC2	CC3	CC4		
4CC #M1	CA_[2A]-5B-66A	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		No
4CC #M2	CA_2A-5B-[66A]	5, 10, 15, 20	5, 10	5, 10	5, 10, 15, 20		No
4CC #M3	CA_[2A]-5A-66B	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15		No
4CC #M4	CA_2A-5A-[66B]	5, 10, 15, 20	5, 10	5, 10, 15	5, 10, 15		No
4CC #M5	CA_[2A]-5A-66C	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20		No
4CC #M6	CA_2A-5A-[66C]	5, 10, 15, 20	5, 10	5, 10, 15, 20	5, 10, 15, 20		No

Note: [CC] indicates component carrier with 4x4 DL MIMO antenna configuration

1.2 LTE Downlink Only Carrier Aggregation Test Selection and Setup

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the product implementation. For those configurations required by April 2018 TCBC Workshop Notes, 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.

This device supports LAA with downlink carrier aggregation only. It uses carrier aggregation in the downlink to combine LTE in the unlicensed spectrum (i.e. LTE Band 46) with LTE in the licensed band (served as PCC). All uplink communications and acknowledgements on the PCC remain identical to specifications when downlink carrier aggregation is inactive.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the maximum 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. All bands required for SAR testing per FCC KDB procedures were considered. Based on the measured maximum powers below, no additional SAR tests were required for DLCA SAR configurations.

General PCC and SCC configuration selection procedure

- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C)3)b)ii) of KDB 941225 D05 V01r02. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
- All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.

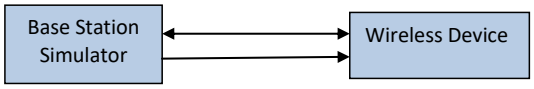


Figure 1
DL CA Power Measurement Setup

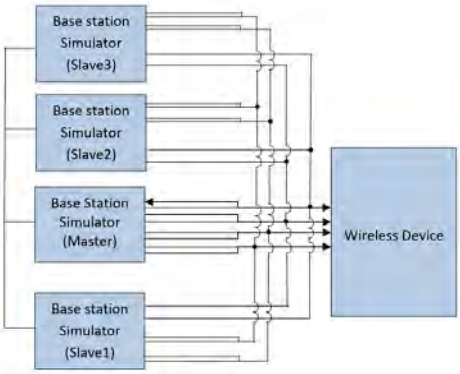


Figure 2
DL CA with DL 4x4 MIMO Power Measurement Setup

1.3 Downlink Carrier Aggregation RF Conducted Powers

1.3.1 LTE Band 71 as PCC

Table 1
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_4A-4A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	24.33	24.26
CA_2A-2A-4A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B4	20	2175	2132.5	24.18	24.26
CA_2A-2A-66A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	24.25	24.26
CA_2A-66A-66A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	67236	2190	23.64	24.26
CA_2A-66C-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	23.68	24.26

1.3.2 LTE Band 12 as PCC

Table 2
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-4A-12A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	23.95	24.01
CA_2A-2A-12A-66A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	24.06	24.01
CA_2A-12A-66A-66A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	67236	2190	24.08	24.01
CA_2A-12A-66C	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	24.06	24.01

1.3.3 LTE Band 13 as PCC

Table 3
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				SCC 5				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-4A-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	-	-	-	-	23.76	23.74
CA_4A-4A-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	-	-	-	-	-	-	-	-	23.78	23.74
CA_2A-13A-46A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	23.66	23.74
CA_13A-46A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B46	20	50665	5537.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	-	-	-	-	23.76	23.74
CA_2A-13A-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	-	-	-	-	23.73	23.74
CA_2A-13A-46C	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	23.70	23.74
CA_13A-46C-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	23.49	23.74
CA_2A-2A-13A-66A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	23.70	23.74
CA_2A-2A-13A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	23.69	23.74
CA_2A-13A-66A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	5	67168	2183.2	LTE B66	15	67261	2192.5	-	-	-	-	23.68	23.74
CA_2A-13A-46E	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	51061	5577.1	23.65	23.74
CA_2A-13A-46D-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	66786	2145	23.72	23.74
CA_13A-46E-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	51061	5577.1	LTE B66	20	66786	2145	23.64	23.74
CA_13A-46D-66A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	66786	2145	LTE B66	20	67236	2190	23.69	23.74

1.3.4 LTE Band 26 as PCC

Table 4
Maximum Output Powers

Combination	PCC									SCC 1				SCC 2				Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_25A-25A-26A	LTE B26	5	27015	846.5	QPSK	1	24	9015	891.5	LTE B25	20	8365	1962.5	LTE B25	20	8590	1985	24.32	24.36
CA_25A-26A-41A	LTE B26	10	26990	844	QPSK	1	49	8990	889	LTE B25	20	8365	1962.5	LTE B41	20	40620	2593	24.34	24.38
CA_26A-41C	LTE B26	10	26990	844	QPSK	1	49	8990	889	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	24.32	24.38

1.3.5 LTE Band 5 as PCC

Table 5
Maximum Output Powers

Combination	PCC									SCC 1				SCC 2				SCC 3				SCC 4				SCC 5				Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_5A-5A (1)	LTE B5	3	20415	825.5	QPSK	1	14	2415	870.5	LTE B5	5	2625	891.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.27	24.29
CA_5B (1)	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	3	2596	887.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.69	24.62
CA_5A-46A (1)	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.67	24.62
CA_2A-5A-46A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	24.56	24.62
CA_5B-46A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	10	2553	884.3	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	24.54	24.62
CA_5A-46C (1)	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	24.57	24.62
CA_5A-46A-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B46	20	50665	5537.5	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	-	-	-	-	24.70	24.62
CA_2A-2A-4A-5A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	24.68	24.62
CA_2A-4A-4A-5A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	-	-	-	-	24.66	24.62
CA_2A-4A-5B	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	10	2553	884.3	LTE B2	20	900	1960	LTE B4	20	2175	2132.5	-	-	-	-	-	-	-	-	24.71	24.62
CA_2A-5B-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	10	2553	884.3	LTE B2	20	900	1960	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	24.70	24.62
CA_4A-4A-5B	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	10	2553	884.3	LTE B4	20	2175	2132.5	LTE B4	10	2350	2150	-	-	-	-	-	-	-	-	24.68	24.62
CA_5A-5A-66A-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	5	2425	871.5	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	-	-	-	-	24.73	24.62
CA_5A-5A-66B	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	5	2425	871.5	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	-	-	-	-	24.65	24.62
CA_5A-5A-66C	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	5	2425	871.5	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	-	-	-	-	24.68	24.62
CA_5B-66A-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	10	2553	884.3	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	-	-	-	-	24.69	24.62
CA_2A-5A-46C	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	24.60	24.62
CA_5B-46C	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	5	2577	886.7	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	24.55	24.62
CA_5A-46D (1)	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	-	-	-	-	24.61	24.62
CA_5A-46C-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B66	20	66786	2145	-	-	-	-	-	-	-	-	24.63	24.62
CA_2A-2A-5A-66A-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	67236	2190	-	-	-	-	24.59	24.62
CA_2A-2A-5A-66B	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	24.71	24.62
CA_2A-2A-5A-66C	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	24.58	24.62
CA_2A-5B-66B	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	10	2553	884.3	LTE B2	20	900	1960	LTE B66	15	66786	2145	LTE B66	5	66879	2154.3	-	-	-	-	24.59	24.62
CA_2A-5B-66C	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	10	2553	884.3	LTE B2	20	900	1960	LTE B66	20	66786	2145	LTE B66	20	66984	2164.8	-	-	-	-	24.74	24.62
CA_5B-46D	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B5	10	2553	884.3	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	-	-	-	-	24.75	24.62
CA_5A-46E (1)	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B48	20	51061	5577.1	-	-	-	-	24.68	24.62
CA_5A-5A-46E	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	50249	5497.9	24.62	24.62
CA_2A-5A-46D-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	66786	2145	24.59	24.62
CA_5A-46E-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B66	20	50269	5497.9	LTE B66	20	66786	2145	24.60	24.62
CA_5A-46D-66A-66A	LTE B5	5	20625	846.5	QPSK	1	12	2625	891.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B48	20	50863	5557.3	LTE B66	20	66786	2145	LTE B66	20	67236	2190	24.52	24.62

1.3.6 LTE Band 66 as PCC

Table 6
Maximum Output Powers

Combination	PCC									SCC 1				SCC 2				SCC 3				SCC 4				SCC 5				SCC 6				Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_2A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B2	20	900	1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.54	24.50
CA_12A-66A (1)	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.55	24.50
CA_12A-66A (2)	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.57	24.50
CA_66A-66C	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67038	2170.2	LTE B66	20	67236	2190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.60	24.50
CA_66C-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	66588	2125.2	LTE B66	20	67236	2190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.56	24.50
CA_2A-46A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.61	24.50
CA_13A-46A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.43	24.50
CA_46A-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.53	24.50
CA_2A-2A-12A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.56	24.50
CA_2C-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B2	20	900	1960	LTE B2	20	702	1940.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.55	24.50
CA_2A-2A-66A-71A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B71	20	68761	634.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.56	24.50
CA_2A-5B-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B5	10	2525	881.5	LTE B2	20	900	1960	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.52	24.50
CA_2A-12A-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B2	20	900	1960	LTE B12	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.58	24.50
CA_2A-13A-66C	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	66588	2125.2	LTE B2	20	900	1960	LTE B13	10	5095	737.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.55	24.50
CA_2A-13A-66C	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	66588	2125.2	LTE B2	20	900	1960	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.59	24.50
CA_2A-66A-66A-71A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B2	20	900	1960	LTE B71	20	68761	634.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.63	24.50
CA_2A-66C-71A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	66588	2125.2	LTE B2	20	900	1960	LTE B71	20	68761	634.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.58	24.50
CA_5A-5A-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B5	10	2525	881.5	LTE B5	5	2425	871.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.54	24.50
CA_5A-5A-66B	LTE B66	10	132022	1715	QPSK	1	25	66486	2115	LTE B66	10	66585	2124.9	LTE B5	10	2525	881.5	LTE B5	5	2425	871.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.58	24.50
CA_5A-5A-66C	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	66588	2125.2	LTE B5	10	2525	881.5	LTE B5	5	2425	871.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.52	24.50
CA_5B-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.56	24.50
CA_2A-66A-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.41	24.50
CA_4A-66C-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.42	24.50
CA_13A-46C-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.43	24.50
CA_46C-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24.39	24.50
CA_2A-5A-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	24.59	24.50
CA_2A-2A-5A-66B	LTE B66	10	132022	1715	QPSK	1	25	66486	2115	LTE B66	10	66585	2124.9	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	24.43	24.50
CA_2A-5A-66C	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	66588	2125.2	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B5	10	2525	881.5	-	-	-	-	-	-	-	-	24.58	24.50
CA_2A-2A-12B-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B12	5	5095	737.5	LTE B12	5	5047	732.7	-	-	-	-	-	-	-	-	24.50	24.50
CA_2A-2A-13A-66B	LTE B66	10	132022	1735	QPSK	1	25	66486	2135	LTE B66	10	66585	2124.9	LTE B2	20	900	1960	LTE B2	20	700	1940	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	24.51	24.50
CA_2A-5B-66B	LTE B66	10	132022	1715	QPSK	1	25	66486	2115	LTE B66	10	66585	2124.9	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	-	-	-	-	-	-	-	-	24.37	24.50
CA_2A-5B-66C	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	66588	2125.2	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B5	5	2453	874.3	-	-	-	-	-	-	-	-	24.45	24.50
CA_2A-12B-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B2	20	900	1960	LTE B12	5	5095	737.5	LTE B12	5	5047	732.7	-	-	-	-	-	-	-	-	24.50	24.50
CA_2A-13A-66A-66B	LTE B66	10	132022	1745	QPSK	1	50	66786	2145	LTE B66	5	67038	2169.2	LTE B66	15	67261	2192.5	LTE B2	20	900	1960	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	24.44	24.50
CA_2A-13A-66B-66A	LTE B66	10	132022	1745	QPSK	1	25	66486	2115	LTE B66	10	66585	2124.9	LTE B66	20	67236	2190	LTE B2	20	900	1960	LTE B13	10	5230	751	-	-	-	-	-	-	-	-	24.41	24.50
CA_2A-66A-66C-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B2	20	900	1960	LTE B66	20	67236	2190	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	53540	5825.4	24.22	24.50
CA_46C-66D-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B46	20	50665	5537.5	LTE B66	15	67261	2192.5	LTE B46	20	53142	5805.2	LTE B46	20	53144	5785.4	-	-	-	-	-	-	-	-	24.49	24.50
CA_2A-5A-46D-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B2	20	900	1960	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	24.53	24.50
CA_2A-13A-46D-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B2	20	900	1960	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	24.42	24.50
CA_2A-46C-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	50269	5497.9	24.42	24.50
CA_5A-46D-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B5	10	2525	881.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	24.52	24.50
CA_13A-46D-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B13	10	5230	751	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5557.3	LTE B46	20	50863	5557.3	24.50	24.50
CA_2A-46E-66A-66A	LTE B66	20	132322	1745	QPSK	1	50	66786	2145	LTE B66	20	67236	2190	LTE B2	20	900	1960	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	51061	5577.1	24.59	24.50

1.3.7 LTE Band 25 as PCC

Table 7
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_25A-46A	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B46	20	50665	5537.5	-	-	-	-	-	-	-	-	-	-	-	-	24.45	24.41
CA_25A-25A-26A	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B25	20	8140	1940	LTE B26	5	8865	876.5	-	-	-	-	-	-	-	-	24.48	24.41
CA_25A-25A-41A	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B25	20	8140	1940	LTE B41	20	40620	2593	-	-	-	-	-	-	-	-	24.44	24.41
CA_25A-26A-41A	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B26	15	8865	876.5	LTE B41	20	40620	2593	-	-	-	-	-	-	-	-	24.47	24.41
CA_25A-41C	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	-	-	-	-	-	-	-	-	24.43	24.41
CA_25A-46C	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	-	-	-	-	-	-	-	-	24.39	24.41
CA_25A-25A-41C	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B25	20	8590	1985	LTE B41	20	40620	2593	LTE B41	20	40422	2573.2	-	-	-	-	24.46	24.41
CA_25A-46D	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B46	20	50665	5537.5	LTE B46	20	50467	5517.7	LTE B46	20	50863	5537.3	-	-	-	-	24.32	24.41
CA_25A-25A-41D	LTE B25	15	26365	1882.5	QPSK	1	0	8365	1962.5	LTE B25	20	8590	1985	LTE B41	20	40422	2573.2	LTE B41	20	40620	2593	LTE B41	20	40818	2612.8	24.41	24.41

1.3.8 LTE Band 41 as PCC

Table 8
Maximum Output Powers

	PCC									SCC 1				SCC 2				SCC 3				SCC 4				Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Channel	PCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	SCC Band	SCC BW [MHz]	SCC (DL) Channel	SCC (DL) Freq. [MHz]	LTE Tx.Power with DL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41A-41A (1)	LTE B41	10	39750	2506	QPSK	1	49	39750	2506	LTE B41	20	41490	2680	-	-	-	-	-	-	-	-	-	-	-	-	24.54	24.53
CA_41A-41C	LTE B41	10	39750	2506	QPSK	1	49	39750	2506	LTE B41	20	41292	2660.2	LTE B41	20	41490	2680	-	-	-	-	-	-	-	-	24.62	24.53
CA_41C-41A	LTE B41	10	39750	2506	QPSK	1	49	39750	2506	LTE B41	20	39894	2520.4	LTE B41	20	41490	2680	-	-	-	-	-	-	-	-	24.62	24.53
CA_41A-41D	LTE B41	10	39750	2506	QPSK	1	49	39750	2506	LTE B41	20	41094	2640.4	LTE B41	20	41292	2660.2	LTE B41	20	41490	2680	-	-	-	-	24.55	24.53
CA_41D-41A	LTE B41	10	39750	2506	QPSK	1	49	39750	2506	LTE B41	20	39894	2520.4	LTE B41	20	40092	2540.2	LTE B41	20	41490	2680	-	-	-	-	24.56	24.53
CA_41C-41C	LTE B41	10	39750	2506	QPSK	1	49	39750	2506	LTE B41	20	39894	2520.4	LTE B41	20	41292	2660.2	LTE B41	20	41490	2680	-	-	-	-	24.53	24.53
CA_41E	LTE B41	20	39750	2506	QPSK	1	0	39750	2506	LTE B41	20	39948	2525.8	LTE B41	20	40146	2545.6	LTE B41	20	40344	2565.4	-	-	-	-	24.53	24.50
CA_41C-41D	LTE B41	10	39750	2506	QPSK	1	49	39750	2506	LTE B41	20	39894	2520.4	LTE B41	20	41094	2640.4	LTE B41	20	41292	2660.2	LTE B41	20	41490	2680	24.55	24.53
CA_41D-41C	LTE B41	10	39750	2506	QPSK	1	49	39750	2506	LTE B41	20	39894	2520.4	LTE B41	20	40092	2540.2	LTE B41	20	41292	2660.2	LTE B41	20	41490	2680	24.57	24.53

1.4 DL CA with DL 4x4 MIMO RF Conduction Powers

This device supports downlink 4x4 MIMO operations for some LTE bands. Uplink transmission is limited to a single output stream. When carrier aggregation was applicable, the general test selection and setup procedures described in Section 1.2 were applied.

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.

1.4.1 LTE 4x4 MIMO DL Standalone Powers

Table 9
Maximum Output Powers

LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB Offset	4x4 DL MIMO Tx. Power [dBm]	Single Antenna Tx. Power [dBm]	Target Power [dBm]
66	20	132322	1745	QPSK	1	50	24.54	24.50	24.0
25	15	26365	1882.5	QPSK	1	0	24.39	24.41	24.0
41	10	39750	2506	QPSK	1	49	24.55	24.53	24.0

1.4.1 LTE Band 71 as PCC

Table 10
Maximum Output Powers

	PCC										SCC 1					SCC 2					SCC 3					Power	
Combination	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL# RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled	LTE Single Carrier Tx Power (dBm)
CA_[4A]-4A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	24.26	24.26
CA_[4A]-[4A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	24.26	24.26
CA_2A-2A-[4A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	24.24	24.26
CA_[2A]-2A-4A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	2x2	24.41	24.26
CA_[2A]-2A-[4A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B4	20	2175	2132.5	4x4	24.19	24.26
CA_[2A]-[2A]-4A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	2x2	24.23	24.26
CA_[2A]-[2A]-[4A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B4	20	2175	2132.5	4x4	24.30	24.26
CA_2A-2A-[66A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	24.29	24.26
CA_[2A]-2A-66A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	24.27	24.26
CA_[2A]-2A-[66A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	24.32	24.26
CA_[2A]-[2A]-66A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	24.28	24.26
CA_[2A]-[2A]-[66A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	24.22	24.26
CA_2A-[66A]-66A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.34	24.26
CA_[2A]-66A-66A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.34	24.26
CA_2A-[66A]-[66A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.29	24.26
CA_[2A]-[66A]-66A-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.31	24.26
CA_[2A]-[66A]-[66A]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.28	24.26
CA_2A-[66C]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.33	24.26
CA_[2A]-66C-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	24.39	24.26
CA_[2A]-[66C]-71A	LTE B71	5	133147	665.5	QPSK	1	0	68611	619.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.28	24.26

1.4.2 LTE Band 12 as PCC

Table 11
Maximum Output Powers

Combination	PCC										SCC 1					SCC 2					SCC 3					Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled	LTE Single Carrier Tx Power (dBm)
CA_[2A]-12A (1)	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	-	-	-	-	-	-	-	-	-	-	24.08	24.01
CA_[4A]-12A (1)	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	24.03	24.01
CA_[4A]-12A (2)	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	24.03	24.01
CA_12A-[66A] (1)	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	24.01	24.01
CA_12A-[66A] (2)	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	24.01	24.01
CA_[2A]-4A-12A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	2x2	-	-	-	-	-	24.14	24.01
CA_2A-[4A]-12A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	24.08	24.01
CA_[2A]-[4A]-12A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	24.13	24.01
CA_[4A]-4A-12A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	24.17	24.01
CA_[4A]-[4A]-12A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	24.13	24.01
CA_[2A]-2A-12A-66A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	2x2	24.10	24.01
CA_2A-2A-12A-[66A]	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	24.04	24.01
CA_[2A]-[2A]-12A-66A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	24.11	24.01
CA_[2A]-2A-12A-[66A]	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	24.08	24.01
CA_[2A]-[2A]-12A-[66A]	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	24.12	24.01
CA_[2A]-2A-12B	LTE B12	5	23058	703.8	QPSK	1	12	5058	733.8	2x2	LTE B12	10	5130	741	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	24.16	24.01
CA_[2A]-[2A]-12B	LTE B12	5	23058	703.8	QPSK	1	12	5058	733.8	2x2	LTE B12	10	5130	741	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	24.19	24.01
CA_[2A]-[4A]-[4A]-12A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	24.03	24.01
CA_[2A]-12A-66A-66A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	24.14	24.01
CA_2A-12A-[66A]-66A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.12	24.01
CA_[2A]-12A-[66A]-66A	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	24.16	24.01
CA_2A-12A-[66A]-[66A]	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.19	24.01
CA_[2A]-12A-[66A]-[66A]	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	24.12	24.01
CA_2A-12A-[66C]	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.14	24.01
CA_[2A]-12A-66C	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	24.13	24.01
CA_[2A]-12A-[66C]	LTE B12	5	23155	713.5	QPSK	1	12	5155	743.5	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	24.15	24.01

1.4.3 LTE Band 13 as PCC

Table 12
Maximum Output Powers

Combination	PCC										SCC 1					SCC 2					SCC 3					SCC 4					SCC 5					Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled	LTE Single Carrier Tx Power (dBm)
CA_2A-[4A]-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.80	23.74
CA_[2A]-4A-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.82	23.74
CA_[2A]-[4A]-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B4	20	2175	2132.5	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.81	23.74
CA_[4A]-4A-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.80	23.74
CA_[4A]-[4A]-13A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B4	20	2175	2132.5	4x4	LTE B4	10	2350	2150	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.83	23.74
CA_[2A]-13A-46A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	23.77	23.74
CA_13A-46A-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.79	23.74
CA_2A-13A-[66C]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	23.79	23.74
CA_[2A]-13A-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	66984	2164.8	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	23.82	23.74
CA_[2A]-13A-66C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	66984	2164.8	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	23.78	23.74
CA_[2A]-13A-46C	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	-	-	-	-	-	-	-	-	-	-	-	-	-	23.76	23.74
CA_13A-46C-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B66	20	66786	2145	4x4	-	-	-	-	-	-	-	-	-	-	-	-	-	23.72	23.74
CA_2A-2A-13A-[66A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	-	-	23.83	23.74
CA_[2A]-2A-13A-66A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	-	-	23.76	23.74
CA_2A-2A-13A-[66A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	-	-	23.76	23.74
CA_[2A]-2A-13A-[66A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	-	-	23.80	23.74
CA_[2A]-[2A]-13A-66A-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	2x2	LTE B66	20	67236	2190	2x2	-	-	-	-	-	-	-	23.79	23.74
CA_[2A]-2A-13A-[66A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	-	-	23.88	23.74
CA_[2A]-[2A]-13A-[66A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	-	-	-	-	-	-	-	23.84	23.74
CA_[2A]-[2A]-13A-[66A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	-	-	-	-	-	-	-	23.83	23.74
CA_2A-2A-13A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	15	66786	2145	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	-	-	23.80	23.74
CA_[2A]-2A-13A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	2x2	LTE B66	15	66786	2145	2x2	LTE B66	5	66879	2154.3	2x2	-	-	-	-	-	-	-	23.82	23.74
CA_[2A]-2A-13A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	-	-	23.82	23.74
CA_[2A]-[2A]-13A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	15	66786	2145	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	-	-	23.81	23.74
CA_[2A]-[2A]-13A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B2	20	700	1940	4x4	LTE B66	15	66786	2145	4x4	LTE B66	5	66879	2154.3	4x4	-	-	-	-	-	-	-	23.78	23.74
CA_2A-13A-66A-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	2x2	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	-	-	23.67	23.74
CA_2A-13A-[66A]-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	2x2	LTE B66	15	67261	2192.5	2x2	-	-	-	-	-	-	-	23.76	23.74
CA_[2A]-13A-66A-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	-	-	23.77	23.74
CA_2A-13A-[66A]-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	-	-	23.78	23.74
CA_[2A]-13A-[66A]-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	2x2	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	-	-	23.76	23.74
CA_[2A]-13A-[66A]-66B	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	2x2	LTE B66	15	67261	2192.5	2x2	-	-	-	-	-	-	-	23.81	23.74
CA_[2A]-13A-[66A]-[66B]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B66	20	66786	2145	4x4	LTE B66	5	67168	2183.2	4x4	LTE B66	15	67261	2192.5	4x4	-	-	-	-	-	-	-	23.94	23.74
CA_[2A]-13A-46E	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	23.72	23.74
CA_2A-13A-46D-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	23.77	23.74
CA_[2A]-13A-46D-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	23.70	23.74
CA_[2A]-13A-46D-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B2	20	900	1960	4x4	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	23.71	23.74
CA_13A-46E-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B46	20	51061	5577.1	2x2	LTE B66	20	66786	2145	4x4	23.74	23.74
CA_13A-46D-[66A]-66A	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	2x2	23.72	23.74
CA_13A-46D-[66A]-[66A]	LTE B13	10	23230	782	QPSK	1	49	5230	751	2x2	LTE B46	20	50665	5537.5	2x2	LTE B46	20	50467	5517.7	2x2	LTE B46	20	50863	5557.3	2x2	LTE B66	20	66786	2145	4x4	LTE B66	20	67236	2190	4x4	23.70	23.74

1.4.4 LTE Band 26 as PCC

Table 13
Maximum Output Powers

Combination	PCC										SCC 1					SCC 2					Power	
	PCC Band	PCC BW [MHz]	PCC (UL) Ch.	PCC (UL) Freq. [MHz]	Mod.	PCC UL# RB	PCC UL RB Offset	PCC (DL) Ch.	PCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	SCC Band	SCC BW [MHz]	SCC (DL) Ch.	SCC (DL) Freq. [MHz]	DL Ant. Config.	LTE Tx.Power with DL CA Enabled	LTE Single Carrier Tx Power (dBm)
CA_[25A]-25A-26A	LTE B26	5	27015	846.5	QPSK	1	24	9015	891.5	2x2	LTE B25	20	8365	1962.5	4x4	LTE B25	20	8590	1985	2x2	24.20	24.36
CA_[25A]-[25A]-26A	LTE B26	5	27015	846.5	QPSK	1	24	9015	891.5	2x2	LTE B25	20	8365	1962.5	4x4	LTE B25	20	8590	1985	4x4	24.18	24.36
CA_25A-26A-[41A]	LTE B26	10	26990	844	QPSK	1	49	8990	889	2x2	LTE B25	20	8365	1962.5	2x2	LTE B41	20	40620	2593	4x4	24.22	24.38
CA_[25A]-26A-41A	LTE B26	10	26990	844	QPSK	1	49	8990	889	2x2	LTE B25	20	8365	1962.5	4x4	LTE B41	20	40620	2593	2x2	24.18	24.38
CA_[25A]-26A-[41A]	LTE B26	10	26990	844	QPSK	1	49	8990	889	2x2	LTE B25	20	8365	1962.5	4x4	LTE B41	20	40620	2593	4x4	24.27	24.38
CA_26A-[41C]	LTE B26	10	26990	844	QPSK	1	49	8990	889	2x2	LTE B41	20	40620	2593	4x4	LTE B41	20	40422	2573.2	4x4	24.23	24.38