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SAR EVALUATION REPORT

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

Date of Testing:
06/08/21-07/23/21
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M2106280073-04.A3L

FCC ID: **A3LSMF926U**

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

DUT Type:	Portable Handset
Application Type:	Class II Permissive Change
FCC Rule Part(s):	CFR §2.1093
Model:	SM-F926U
Additional Models:	SM-F926U1
Permissive Change(s):	See FCC Change Document
Date of Original Certification:	06/23/2021

Equipment Class	Band & Mode	Tx Frequency	SAR				
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	1g UMPC Body (W/kg)	10g UMPC Extremity (W/kg)
PCE	CDMA/EVDO BC10 (§90S)	817.90 - 823.10 MHz	0.20	0.19	0.44	0.65	1.37
PCE	CDMA/EVDO BC0 (§22H)	824.70 - 848.31 MHz	0.25	0.26	0.52	0.77	1.59
PCE	UMTS 850	826.40 - 846.60 MHz	0.24	0.20	0.44	0.65	1.49
PCE	LTE Band 71	665.5 - 695.5 MHz	0.14	0.25	0.56	0.46	1.31
PCE	LTE Band 12	699.7 - 715.3 MHz	0.21	0.22	0.48	0.56	1.67
PCE	LTE Band 13	779.5 - 784.5 MHz	0.16	0.22	0.44	0.69	1.52
PCE	LTE Band 14	790.5 - 795.5 MHz	0.16	0.26	0.46	0.70	1.49
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.17	0.17	0.39	0.58	1.42
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	0.20	0.25	0.47	0.69	1.54
PCE	NR Band n71	665.5 - 695.5 MHz	0.11	0.31	0.61	0.58	1.48
PCE	NR Band n12	701.5 - 713.5 MHz	0.14	0.25	0.50	0.64	1.91
PCE	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.13	0.15	0.34	0.50	0.98
Simultaneous SAR per KDB 690783 D01v01r03:			1.01	0.38	1.35	1.41	3.97

Note: The following test data was evaluated for the current test report. Please refer to RF Exposure Technical Report S/N 1M2104020031-01.A3L (Rev 1) for original compliance evaluation.
This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.9 of this report; for North American frequency bands only.

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

Randy Ortanez
President

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
CDMA/EVDO BC10 (§90S)	Voice/Data	817.90 - 823.10 MHz
CDMA/EVDO BC0 (§22H)	Voice/Data	824.70 - 848.31 MHz
PCS CDMA/EVDO	Voice/Data	1851.25 - 1908.75 MHz
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
NR Band n71	Data	665.5 - 695.5 MHz
NR Band n12	Data	701.5 - 713.5 MHz
NR Band n5 (Cell)	Data	826.5 - 846.5 MHz
NR Band n66 (AWS)	Data	1712.5 - 1777.5 MHz
NR Band n25 (PCS)	Data	1852.5 - 1912.5 MHz
NR Band n2 (PCS)	Data	1852.5 - 1907.5 MHz
NR Band n30	Data	2307.5 - 2312.5 MHz
NR Band n41	Data	2506.02 - 2679.99 MHz
NR Band n77 DoD	Data	3460.02 - 3540 MHz
NR Band n77	Data	3710.01 - 3969.99 MHz
2.4 GHz WLAN	Voice/Data	2412 - 2472 MHz
U-NII-1	Voice/Data	5180 - 5240 MHz
U-NII-2A	Voice/Data	5260 - 5320 MHz
U-NII-2C	Voice/Data	5500 - 5720 MHz
U-NII-3	Voice/Data	5745 - 5825 MHz
U-NII-5	Voice/Data	5935 - 6415 MHz
U-NII-6	Voice/Data	6435 - 6525 MHz
U-NII-7	Voice/Data	6535 - 6875 MHz
U-NII-8	Voice/Data	6895 - 7115 MHz
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
NR Band n260	Data	37000 - 40000 MHz
NR Band n261	Data	27500 - 28350 MHz
UWB	Data	6489.6 - 7987.2 MHz

1.2 Time-Averaging Algorithm for RF Exposure Compliance

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

Note that WLAN operations are not enabled with Smart Transmit.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of *SAR_design_target* 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 1.11 - Bibliography).

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

Exposure Scenario:		Body-Worn	Phablet	Body	Extremity	Grip Sensor Active		Head		Hotspot		Earjack	Earjack	Maximum Tune-up Output Power*
Averaging Volume:		1g	10g	1g	10g	10g	1g, 10g	1g	1g	1g	1g	10g	10g	
Spacing:		15 mm	10, 12 mm	12, 16, 10 mm	12, 9, 16 mm	0 mm	10, 0 mm	0 mm	0 mm	10 mm	10 mm	0 mm	0 mm	
DSI:		11	11	0	0	2	1	4	3	6	5	8	7	
Configuration		Folder Closed		Folder Open		Folder Closed	Folder Open	Folder Closed	Folder Open	Folder Closed	Folder Open	Folder Closed	Folder Open	
Technology/Band	Antenna													Pmax
CDMA/EVDO BC10	A, A+B	26.7		28.4		26.7	27.9	33.1	33.1	29.6	29.6	26.7	27.9	25.0
CDMA/EVDO BC0	A, A+B	26.7		26.7		26.7	26.9	32.1	32.1	26.9	26.9	26.7	26.9	25.0
UMTS B5	A, A+B	28.3		28.0		28.0	27.7	32.0	32.0	28.3	28.5	28.0	27.7	24.8
LTE FDD B71	A, A+B	27.8		28.8		28.2	27.8	34.4	34.4	28.2	27.8	27.8	27.8	24.8
LTE FDD B12	A, A+B	27.4		27.4		27.4	27.4	32.6	32.6	27.6	28.0	27.4	27.4	24.8
LTE FDD B17	A, A+B	27.4		27.4		27.4	27.4	32.6	32.6	27.6	28.0	27.4	27.4	24.8
LTE FDD B13	A, A+B	27.8		27.9		27.8	27.4	33.3	33.3	27.9	28.2	27.8	27.4	24.8
LTE FDD B14	A, A+B	27.9		28.4		27.9	27.2	33.3	33.3	27.9	28.1	27.9	27.2	24.8
LTE FDD B26	A, A+B	26.9		28.6		26.9	27.9	33.5	33.5	27.0	28.3	26.9	27.9	24.8
LTE FDD B5	A, A+B	26.5		27.4		26.5	27.3	32.7	32.7	26.6	28.0	26.5	27.3	24.8
NR FDD n71	A, A+B	27.9		28.2		27.6	27.4	34.9	34.9	27.4	27.4	27.6	27.4	24.5
NR FDD n12	A, A+B	27.4		26.7		27.4	26.7	33.7	33.7	27.5	27.2	27.4	26.7	24.5
NR FDD n5	A, A+B	26.8		29.1		26.8	27.8	33.5	33.5	27.0	27.8	26.8	27.8	24.5

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

1.4 Nominal and Maximum Output Power Specifications

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

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

CDMA BC10 (835 MHz)				
Power Level		Modulated Average Output Power		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Pmax, DSI = 0-8, 11	Max allowed power	26.0	26.0	26.0
	Nominal	25.0	25.0	25.0
CDMA BC0 (835 MHz)				
Power Level		Modulated Average Output Power		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Pmax, DSI = 0-8, 11	Max allowed power	26.0	26.0	26.0
	Nominal	25.0	25.0	25.0
CDMA BC1 (1900 MHz)				
Power Level		Modulated Average Output Power		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Pmax	Max allowed power	25.0	25.0	25.0
	Nominal	24.0	24.0	24.0
DSI = 0 (Folder Open - Max) DSI = 11 (Folder Closed - Max)	Max allowed power	24.0	24.0	24.0
	Nominal	23.0	23.0	23.0
DSI = 1 (Folder Open - Grip Sensor) DSI = 2 (Folder Closed - Grip Sensor)	Max allowed power	19.0	19.0	19.0
	Nominal	18.0	18.0	18.0
DSI = 3 (Folder Open - Head) DSI = 4 (Folder Closed- Head)	Max allowed power	24.0	24.0	24.0
	Nominal	23.0	23.0	23.0
DSI = 5 (Folder Open - Hotspot) DSI = 6 (Folder Closed - Hotspot)	Max allowed power	19.0	19.0	19.0
	Nominal	18.0	18.0	18.0
DSI = 7 (Folder Open - Earjack) DSI = 8 (Folder Closed - Earjack)	Max allowed power	19.0	19.0	19.0
	Nominal	18.0	18.0	18.0

GSM/GPRS/EDGE 850										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax, DSI = 0-8, 11	Max allowed power	33.5	33.5	32.5	30.5	28.5	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	31.5	29.5	27.5	27.0	25.0	23.0	22.0
GSM/GPRS/EDGE 1900										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax	Max allowed power	30.2	30.2	29.0	27.5	25.5	27.0	24.0	22.0	21.0
	Nominal	29.2	29.2	28.0	26.5	24.5	26.0	23.0	21.0	20.0
DSI = 0 (Folder Open - Max) DSI = 11 (Folder Closed - Max)	Max allowed power	30.2	30.2	29.0	27.5	25.5	27.0	24.0	22.0	21.0
	Nominal	29.2	29.2	28.0	26.5	24.5	26.0	23.0	21.0	20.0
DSI = 1 (Folder Open - Grip Sensor) DSI = 2 (Folder Closed - Grip Sensor)	Max allowed power	27.3	27.3	24.3	22.5	21.3	27.0	24.0	22.0	21.0
	Nominal	26.3	26.3	23.3	21.5	20.3	26.0	23.0	21.0	20.0
DSI = 3 (Folder Open - Head) DSI = 4 (Folder Closed- Head)	Max allowed power	30.2	30.2	29.0	27.5	25.5	27.0	24.0	22.0	21.0
	Nominal	29.2	29.2	28.0	26.5	24.5	26.0	23.0	21.0	20.0
DSI = 5 (Folder Open - Hotspot) DSI = 6 (Folder Closed - Hotspot)	Max allowed power	N/A	27.3	24.3	22.5	21.3	27.0	24.0	22.0	21.0
	Nominal	N/A	26.3	23.3	21.5	20.3	26.0	23.0	21.0	20.0
DSI = 7 (Folder Open - Earjack) DSI = 8 (Folder Closed - Earjack)	Max allowed power	27.3	27.3	24.3	22.5	21.3	27.0	24.0	22.0	21.0
	Nominal	26.3	26.3	23.3	21.5	20.3	26.0	23.0	21.0	20.0

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

UMTS Band 5 (850 MHz)					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax, DSI = 0-8, 11	Max allowed power	25.8	24.8	24.8	24.8
	Nominal	24.8	23.8	23.8	23.8
UMTS Band 4 (1750 MHz)					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 0 (Folder Open - Max) DSI = 11 (Folder Closed - Max)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Folder Open - Grip Sensor) DSI = 2 (Folder Closed - Grip Sensor)	Max allowed power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 3 (Folder Open - Head) DSI = 4 (Folder Closed- Head)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 5 (Folder Open - Hotspot) DSI = 6 (Folder Closed - Hotspot)	Max allowed power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 7 (Folder Open - Earjack) DSI = 8 (Folder Closed - Earjack)	Max allowed power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
UMTS Band 2 (1900 MHz)					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 0 (Folder Open - Max) DSI = 11 (Folder Closed - Max)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Folder Open - Grip Sensor) DSI = 2 (Folder Closed - Grip Sensor)	Max allowed power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 3 (Folder Open - Head) DSI = 4 (Folder Closed- Head)	Max allowed power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 5 (Folder Open - Hotspot) DSI = 6 (Folder Closed - Hotspot)	Max allowed power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 7 (Folder Open - Earjack) DSI = 8 (Folder Closed - Earjack)	Max allowed power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0

Mode / Band		Modulated Average Output Power (in dBm)										
		Pmax	DSI = 0 (Folder Open - Max)	DSI = 11 (Folder Closed - Max)	DSI = 1 (Folder Open - Grip Sensor Active)	DSI = 2 (Folder Closed - Grip Sensor Active)	DSI = 3 (Folder Open - Head)	DSI = 4 (Folder Closed - Head)	DSI = 5 (Folder Open - Hotspot)	DSI = 6 (Folder Closed - Hotspot)	DSI = 7 (Folder Open - Earjack)	DSI = 8 (Folder Closed - Earjack)
LTE FDD Band 71	Max allowed	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 12	Max allowed	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 13	Max allowed	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 14	Max allowed	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 26	Max allowed	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 5	Max allowed	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
	Nominal	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8
LTE FDD Band 66 Ant B	Max allowed	25.5	25.5	25.5	19.0	19.0	25.5	25.5	19.0	19.0	19.0	19.0
	Nominal	24.5	24.5	24.5	18.0	18.0	24.5	24.5	18.0	18.0	18.0	18.0
LTE FDD Band 4 Ant B	Max allowed	25.5	25.5	25.5	19.0	19.0	25.5	25.5	19.0	19.0	19.0	19.0
	Nominal	24.5	24.5	24.5	18.0	18.0	24.5	24.5	18.0	18.0	18.0	18.0
LTE FDD Band 66 Ant E	Max allowed	25.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
	Nominal	24.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE FDD Band 25	Max allowed	25.5	25.5	25.5	19.0	19.0	25.5	25.5	19.0	19.0	19.0	19.0
	Nominal	24.5	24.5	24.5	18.0	18.0	24.5	24.5	18.0	18.0	18.0	18.0
LTE FDD Band 2	Max allowed	25.5	25.5	25.5	19.0	19.0	25.5	25.5	19.0	19.0	19.0	19.0
	Nominal	24.5	24.5	24.5	18.0	18.0	24.5	24.5	18.0	18.0	18.0	18.0
LTE FDD Band 30	Max allowed	23.5	22.5	22.5	17.0	17.0	22.5	22.5	17.0	17.0	17.0	17.0
	Nominal	22.5	21.5	21.5	16.0	16.0	21.5	21.5	16.0	16.0	16.0	16.0
LTE FDD Band 7	Max allowed	25.0	22.5	22.5	18.0	18.0	22.5	22.5	18.0	18.0	18.0	18.0
	Nominal	24.0	21.5	21.5	17.0	17.0	21.5	21.5	17.0	17.0	17.0	17.0
LTE TDD Band 48	Max allowed	25.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
	Nominal	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE TDD Band 41	Max allowed	25.0	23.0	23.0	19.0	19.0	23.0	23.0	19.0	19.0	19.0	19.0
	Nominal	24.0	22.0	22.0	18.0	18.0	22.0	22.0	18.0	18.0	18.0	18.0
LTE TDD Band 41 (PC2)	Max allowed	27.5	24.6	24.6	20.6	20.6	24.6	24.6	20.6	20.6	20.6	20.6
	Nominal	26.5	23.6	23.6	19.6	19.6	23.6	23.6	19.6	19.6	19.6	19.6
LTE TDD Band 38	Max allowed	25.0	23.0	23.0	19.0	19.0	23.0	23.0	19.0	19.0	19.0	19.0
	Nominal	24.0	22.0	22.0	18.0	18.0	22.0	22.0	18.0	18.0	18.0	18.0

Mode / Band		Modulated Average Output Power (in dBm)										
		Pmax	DSI = 0 (Folder Open - Max)	DSI = 11 (Folder Closed - Max)	DSI = 1 (Folder Open - Grip Sensor Active)	DSI = 2 (Folder Closed - Grip Sensor Active)	DSI = 3 (Folder Open - Head)	DSI = 4 (Folder Closed - Head)	DSI = 5 (Folder Open - Hotspot)	DSI = 6 (Folder Closed - Hotspot)	DSI = 7 (Folder Open - Earjack)	DSI = 8 (Folder Closed - Earjack)
NR FDD Band 71	Max allowed	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
	Nominal	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
NR FDD Band 12	Max allowed	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
	Nominal	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
NR FDD Band 5	Max allowed	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
	Nominal	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
NR FDD Band 66 Ant B	Max allowed	25.0	25.0	25.0	19.0	19.0	25.0	25.0	19.0	19.0	19.0	19.0
	Nominal	24.0	24.0	24.0	18.0	18.0	24.0	24.0	18.0	18.0	18.0	18.0
NR FDD Band 66 Ant E	Max allowed	25.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
	Nominal	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
NR FDD Band 25 Ant B	Max allowed	25.0	25.0	25.0	19.0	19.0	25.0	25.0	19.0	19.0	19.0	19.0
	Nominal	24.0	24.0	24.0	18.0	18.0	24.0	24.0	18.0	18.0	18.0	18.0
NR FDD Band 2 Ant B	Max allowed	25.0	25.0	25.0	19.0	19.0	25.0	25.0	19.0	19.0	19.0	19.0
	Nominal	24.0	24.0	24.0	18.0	18.0	24.0	24.0	18.0	18.0	18.0	18.0
NR FDD Band 25 Ant E	Max allowed	25.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
	Nominal	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
NR FDD Band 2 Ant E	Max allowed	25.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
	Nominal	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
NR FDD Band 30	Max allowed	23.5	22.5	22.5	17.0	17.0	22.5	22.5	17.0	17.0	17.0	17.0
	Nominal	22.5	21.5	21.5	16.0	16.0	21.5	21.5	16.0	16.0	16.0	16.0
NR TDD Band 41 (PC3)	Max allowed	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
	Nominal	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
NR TDD Band 41 (PC2)	Max allowed	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
	Nominal	26.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
NR TDD Band 77 Ant E (PC3)	Max allowed	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
	Nominal	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
NR TDD Band 77 Ant E (PC2)	Max allowed	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
	Nominal	26.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
NR TDD Band 77 Ant G (PC3)	Max allowed	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
	Nominal	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
NR TDD Band 77 Ant G (PC2)	Max allowed	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
	Nominal	26.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
NR TDD Band 77 Ant F (PC3)	Max allowed	23.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
	Nominal	22.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
NR TDD Band 77 Ant F (PC2)	Max allowed	25.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
	Nominal	24.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
NR TDD Band 77 Ant B (PC3)	Max allowed	22.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
	Nominal	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
NR TDD Band 77 Ant B (PC2)	Max allowed	24.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
	Nominal	23.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0

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

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

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

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1 & Antenna 2								MIMO							
		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	18.0 Ch. 12: 5.0 Ch. 13: -1.0	19.0 Ch. 12: 6.0 Ch. 13: 0.0	17.0 Ch. 12: 5.0 Ch. 13: -1.0	18.0 Ch. 12: 6.0 Ch. 13: 0.0	17.0 Ch. 11: 15.5 Ch. 12: 5.0 Ch. 13: -1.0	18.0 Ch. 11: 16.5 Ch. 12: 6.0 Ch. 13: 0.0	17.0 Ch. 11: 15.5 Ch. 12: 5.0 Ch. 13: -1.0	18.0 Ch. 11: 16.5 Ch. 12: 6.0 Ch. 13: 0.0	21.0 Ch. 12: 8.0 Ch. 13: 2.0	22.0 Ch. 12: 9.0 Ch. 13: 3.0	20.0 Ch. 12: 8.0 Ch. 13: 2.0	21.0 Ch. 12: 9.0 Ch. 13: 3.0	20.0 Ch. 11: 18.5 Ch. 12: 8.0 Ch. 13: 2.0	21.0 Ch. 11: 19.5 Ch. 12: 9.0 Ch. 13: 3.0	20.0 Ch. 11: 18.5 Ch. 12: 8.0 Ch. 13: 2.0	21.0 Ch. 11: 19.5 Ch. 12: 9.0 Ch. 13: 3.0

(Upper tolerance: target + 1.0 dB)

Mode	Single Antenna	
	Antenna 1 & Antenna 2	
	Nominal	Maximum
Bluetooth (in dBm)	16.5	17.5
Bluetooth EDR (in dBm)	13.5	14.5
Bluetooth LE 2Mbps (in dBm)	6.0	7.0
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	6.0	7.0

(Upper tolerance: target + 1.0 dB)

1.4.3 2.4 GHz Reduced Bluetooth and SISO/MIMO WLAN Output Power

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

The below table is applicable in the following conditions:

- Simultaneous conditions with 5/6 GHz WLAN
- Simultaneous conditions with 5G NR

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1 & Antenna 2								MIMO							
		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	14.0 Ch. 12: 5.0 Ch. 13: -1.0	15.0 Ch. 12: 6.0 Ch. 13: 0.0	14.0 Ch. 12: 5.0 Ch. 13: -1.0	15.0 Ch. 12: 6.0 Ch. 13: 0.0	14.0 Ch. 12: 5.0 Ch. 13: -1.0	15.0 Ch. 12: 6.0 Ch. 13: 0.0	14.0 Ch. 12: 5.0 Ch. 13: -1.0	15.0 Ch. 12: 6.0 Ch. 13: 0.0	17.0 Ch. 12: 8.0 Ch. 13: 2.0	18.0 Ch. 12: 9.0 Ch. 13: 3.0	17.0 Ch. 12: 8.0 Ch. 13: 2.0	18.0 Ch. 12: 9.0 Ch. 13: 3.0	17.0 Ch. 12: 8.0 Ch. 13: 2.0	18.0 Ch. 12: 9.0 Ch. 13: 3.0	17.0 Ch. 12: 8.0 Ch. 13: 2.0	18.0 Ch. 12: 9.0 Ch. 13: 3.0

(Upper tolerance: target + 1.0 dB)

The below table is applicable in the following conditions:

- RCV Active
- RCV Active during simultaneous conditions with 5/6 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)								IEEE 802.11 (in dBm)							
		SISO Antenna 1 & Antenna 2								MIMO							
		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	12.0 Ch. 12: 5.0 Ch. 13: -1.0	13.0 Ch. 12: 6.0 Ch. 13: 0.0	12.0 Ch. 12: 5.0 Ch. 13: -1.0	13.0 Ch. 12: 6.0 Ch. 13: 0.0	12.0 Ch. 12: 5.0 Ch. 13: -1.0	13.0 Ch. 12: 6.0 Ch. 13: 0.0	12.0 Ch. 12: 5.0 Ch. 13: -1.0	13.0 Ch. 12: 6.0 Ch. 13: 0.0	15.0 Ch. 12: 8.0 Ch. 13: 2.0	16.0 Ch. 12: 9.0 Ch. 13: 3.0	15.0 Ch. 12: 8.0 Ch. 13: 2.0	16.0 Ch. 12: 9.0 Ch. 13: 3.0	15.0 Ch. 12: 8.0 Ch. 13: 2.0	16.0 Ch. 12: 9.0 Ch. 13: 3.0	15.0 Ch. 12: 8.0 Ch. 13: 2.0	16.0 Ch. 12: 9.0 Ch. 13: 3.0

(Upper tolerance: target + 1.0 dB)

The below table is applicable in the following conditions:

- RCV Active during simultaneous conditions with 5G NR

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1 & Antenna 2								MIMO							
		b		g		n		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	10.0 Ch. 12: 5.0 Ch. 13: -1.0	11.0 Ch. 12: 6.0 Ch. 13: 0.0	10.0 Ch. 12: 5.0 Ch. 13: -1.0	11.0 Ch. 12: 6.0 Ch. 13: 0.0	10.0 Ch. 12: 5.0 Ch. 13: -1.0	11.0 Ch. 12: 6.0 Ch. 13: 0.0	10.0 Ch. 12: 5.0 Ch. 13: -1.0	11.0 Ch. 12: 6.0 Ch. 13: 0.0	13.0 Ch. 12: 8.0 Ch. 13: 2.0	14.0 Ch. 12: 9.0 Ch. 13: 3.0	13.0 Ch. 12: 8.0 Ch. 13: 2.0	14.0 Ch. 12: 9.0 Ch. 13: 3.0	13.0 Ch. 12: 8.0 Ch. 13: 2.0	14.0 Ch. 12: 9.0 Ch. 13: 3.0	13.0 Ch. 12: 8.0 Ch. 13: 2.0	14.0 Ch. 12: 9.0 Ch. 13: 3.0

(Upper tolerance: target + 1.0 dB)

The below table is applicable in the following conditions:

- RCV active

Mode	Single Antenna	
	Antenna 1 & Antenna 2	
	Nominal	Maximum
Bluetooth (in dBm)	9.5	10.5
Bluetooth EDR (in dBm)	9.5	10.5
Bluetooth LE 2Mbps (in dBm)	6.0	7.0
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	6.0	7.0

(Upper tolerance: target + 1.0 dB)

The below table is applicable in the following conditions:

- Simultaneous conditions with 5/6 GHz WLAN

Mode	Single Antenna	
	Antenna 1 & Antenna 2	
	Nominal	Maximum
Bluetooth (in dBm)	11.0	12.0
Bluetooth EDR (in dBm)	11.0	12.0
Bluetooth LE 2Mbps (in dBm)	6.0	7.0
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	6.0	7.0

(Upper tolerance: target + 1.0 dB)

The below table is applicable in the following conditions:

- Simultaneous conditions with 5G NR

Mode	Single Antenna	
	Antenna 1 & Antenna 2	
	Nominal	Maximum
Bluetooth (in dBm)	14.5	15.5
Bluetooth EDR (in dBm)	13.5	14.5
Bluetooth LE 2Mbps (in dBm)	6.0	7.0
Bluetooth LE 1Mbps, 125/500 kbps (in dBm)	6.0	7.0

(Upper tolerance: target + 1.0 dB)

1.4.4 5 GHz Maximum SISO/MIMO WLAN Output Power

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

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1 & Antenna 2								MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	5200 MHz	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	5300 MHz	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	5500 MHz	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	5800 MHz	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
5 GHz WIFI (40MHz BW)	5200 MHz			16.0	17.0	16.0	17.0	16.0	17.0			19.0	20.0	19.0	20.0	19.0	20.0
	5300 MHz			16.0	17.0	16.0	17.0	16.0	17.0			19.0	20.0	19.0	20.0	19.0	20.0
	5500 MHz			16.0	17.0	16.0	17.0	16.0	17.0			19.0	20.0	19.0	20.0	19.0	20.0
	5800 MHz			16.0	17.0	16.0	17.0	16.0	17.0			19.0	20.0	19.0	20.0	19.0	20.0
5 GHz WIFI (80MHz BW)	5200 MHz					15.0	16.0	15.0	16.0					18.0	19.0	18.0	19.0
	5300 MHz					15.0	16.0	15.0	16.0					18.0	19.0	18.0	19.0
	5500 MHz					15.0	16.0	15.0	16.0					18.0	19.0	18.0	19.0
	5800 MHz					15.0	16.0	15.0	16.0					18.0	19.0	18.0	19.0
5 GHz WIFI (160MHz BW)	5250 MHz					14.0	15.0	14.0	15.0					17.0	18.0	17.0	18.0
	5570 MHz					14.0	15.0	14.0	15.0					17.0	18.0	17.0	18.0

(Upper tolerance: target + 1.0 dB)

1.4.5 5 GHz Reduced WLAN Output Power

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

The below table is applicable in the following conditions:

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

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1 & Antenna 2								MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	5200 MHz	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
	5300 MHz	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
	5500 MHz	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
	5800 MHz	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
5 GHz WIFI (40MHz BW)	5200 MHz			14.0	15.0	14.0	15.0	14.0	15.0			17.0	18.0	17.0	18.0	17.0	18.0
	5300 MHz			14.0	15.0	14.0	15.0	14.0	15.0			17.0	18.0	17.0	18.0	17.0	18.0
	5500 MHz			14.0	15.0	14.0	15.0	14.0	15.0			17.0	18.0	17.0	18.0	17.0	18.0
	5800 MHz			14.0	15.0	14.0	15.0	14.0	15.0			17.0	18.0	17.0	18.0	17.0	18.0
5 GHz WIFI (80MHz BW)	5200 MHz					14.0	15.0	14.0	15.0					17.0	18.0	17.0	18.0
	5300 MHz					14.0	15.0	14.0	15.0					17.0	18.0	17.0	18.0
	5500 MHz					14.0	15.0	14.0	15.0					17.0	18.0	17.0	18.0
	5800 MHz					14.0	15.0	14.0	15.0					17.0	18.0	17.0	18.0
5 GHz WIFI (160MHz BW)	5250 MHz					14.0	15.0	14.0	15.0					17.0	18.0	17.0	18.0
	5570 MHz					14.0	15.0	14.0	15.0					17.0	18.0	17.0	18.0

(Upper tolerance: target + 1.0 dB)

The below table is applicable in the following conditions:

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

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 1 & Antenna 2								MIMO							
		a		n		ac		ax (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	5200 MHz	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
	5300 MHz	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
	5500 MHz	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
	5800 MHz	11.0	12.0	11.0	12.0	11.0	12.0	11.0	12.0	14.0	15.0	14.0	15.0	14.0	15.0	14.0	15.0
5 GHz WIFI (40MHz BW)	5200 MHz			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
	5300 MHz			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
	5500 MHz			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
	5800 MHz			11.0	12.0	11.0	12.0	11.0	12.0			14.0	15.0	14.0	15.0	14.0	15.0
5 GHz WIFI (80MHz BW)	5200 MHz					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
	5300 MHz					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
	5500 MHz					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
	5800 MHz					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
5 GHz WIFI (160MHz BW)	5250 MHz					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0
	5570 MHz					11.0	12.0	11.0	12.0					14.0	15.0	14.0	15.0

(Upper tolerance: target + 1.0 dB)

1.5 DUT Antenna Locations

The overall dimensions of this device are > 9 x 5 cm. A diagram showing the location of the device antennas can be found in Appendix E. This device is considered a "phablet" when it is in closed configuration and a "UMPC mini-tablet" when it is in open configuration. Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC filing

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

Mode	Back	Front	Top	Bottom	Right	Left
EVDO BC10 (§90S) Ant A	Yes	Yes	No	Yes	Yes	No
EVDO BC10 (§90S) Ant A+B	Yes	Yes	No	Yes	Yes	Yes
EVDO BC0 (§22H) Ant A	Yes	Yes	No	Yes	Yes	No
EVDO BC0 (§22H) Ant A+B	Yes	Yes	No	Yes	Yes	Yes
UMTS 850 Ant A	Yes	Yes	No	Yes	Yes	No
UMTS 850 Ant A+B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 71 Ant A+B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 71 Ant A	Yes	Yes	No	Yes	Yes	No
LTE Band 12 Ant A+B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12 Ant A	Yes	Yes	No	Yes	Yes	No
LTE Band 13 Ant A+B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 13 Ant A	Yes	Yes	No	Yes	Yes	No
LTE Band 14 Ant A +B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 14 Ant A	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell) Ant A	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell) Ant A+B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 5 (Cell) Ant A	Yes	Yes	No	Yes	Yes	No
LTE Band 5 (Cell) Ant A+B	Yes	Yes	No	Yes	Yes	Yes
NR Band n71 Ant A+B	Yes	Yes	No	Yes	Yes	Yes
NR Band n71 Ant A	Yes	Yes	No	Yes	Yes	No
NR Band n12 Ant A+B	Yes	Yes	No	Yes	Yes	Yes
NR Band n12 Ant A	Yes	Yes	No	Yes	Yes	No
NR Band n5 (Cell) Ant A	Yes	Yes	No	Yes	Yes	No
NR Band n5 (Cell) Ant A+B	Yes	Yes	No	Yes	Yes	Yes

Table 1-2
Device Edges/Sides for Open Configuration SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
EVDO BC10 (§90S) Ant A+B	Yes	Yes	No	Yes	Yes	No
EVDO BC0 (§22H) Ant A+B	Yes	Yes	No	Yes	Yes	No
UMTS 850 Ant A+B	Yes	Yes	No	Yes	Yes	No
LTE Band 71 Ant A+B	Yes	Yes	No	Yes	Yes	No
LTE Band 12 Ant A+B	Yes	Yes	No	Yes	Yes	No
LTE Band 13 Ant A+B	Yes	Yes	No	Yes	Yes	No
LTE Band 14 Ant A +B	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell) Ant A+B	Yes	Yes	No	Yes	Yes	No
LTE Band 5 (Cell) Ant A+B	Yes	Yes	No	Yes	Yes	No
NR Band n71 Ant A+B	Yes	Yes	No	Yes	Yes	No
NR Band n12 Ant A+B	Yes	Yes	No	Yes	Yes	No
NR Band n5 (Cell) Ant A+B	Yes	Yes	No	Yes	Yes	No

Note: Particular DUT edges were not required to be evaluated for wireless router SAR, UMPC mini-tablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III, FCC KDB Publication 941225 D07v01r02 and FCC KDB Publication 648474 D04v01r03. The distances between the transmit antennas and the edges of the device are included in the filing.

1.6 Near Field Communications (NFC) Antenna

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

1.7 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.
This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06 4.3.2 procedures.

Table 1-3
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	UMPC Body	UMPC Extremity	Notes
1	1x CDMA voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
2	1x CDMA voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
3	1x CDMA voice + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
4	1x CDMA voice + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
5	1x CDMA voice + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
6	1x CDMA voice + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
7	1x CDMA voice + 5 GHz WLAN Ant 1	Yes	Yes	N/A	Yes	Yes	Yes	
8	1x CDMA voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
9	1x CDMA voice + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
10	1x CDMA voice + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
11	1x CDMA voice + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
12	1x CDMA voice + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
13	1x CDMA voice + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
14	1x CDMA voice + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
15	1x CDMA voice + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
16	GSM voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
17	GSM voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
18	GSM voice + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
19	GSM voice + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
20	GSM voice + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
21	GSM voice + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
22	GSM voice + 5 GHz WLAN Ant 1	Yes	Yes	N/A	Yes	Yes	Yes	
23	GSM voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
24	GSM voice + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
25	GSM voice + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
26	GSM voice + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
27	GSM voice + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
28	GSM voice + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
29	GSM voice + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
30	GSM voice + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
31	UMTS + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
32	UMTS + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
33	UMTS + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
34	UMTS + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
35	UMTS + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
36	UMTS + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
37	UMTS + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	Yes	Yes	
38	UMTS + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
39	UMTS + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
40	UMTS + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
41	UMTS + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
42	UMTS + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
43	UMTS + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
44	UMTS + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
45	UMTS + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
46	LTE + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
47	LTE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
48	LTE + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
49	LTE + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
50	LTE + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
51	LTE + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
52	LTE + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	Yes	Yes	
53	LTE + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
54	LTE + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
55	LTE + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
56	LTE + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
57	LTE + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
58	LTE + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
59	LTE + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
60	LTE + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
61	LTE + NR	Yes	Yes	N/A	Yes	Yes	Yes	
62	LTE + NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
63	LTE + NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
64	LTE + NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
65	LTE + NR + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
66	LTE + NR + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
67	LTE + NR + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
68	LTE + NR + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	Yes	Yes	
69	LTE + NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
70	LTE + NR + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
71	LTE + NR + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
72	LTE + NR + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
73	LTE + NR + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
74	LTE + NR + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
75	LTE + NR + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
76	LTE + NR + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered

Table 1-4
Simultaneous Transmission Scenarios Continued

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	UMPC Body	UMPC Extremity	Notes
77	NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
78	NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
79	NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
80	NR + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
81	NR + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
82	NR + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
83	NR + 5 GHz WLAN Ant 1	Yes	Yes	Yes	Yes	Yes	Yes	
84	NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
85	NR + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
86	NR + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
87	NR + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
88	NR + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
89	NR + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
90	NR + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
91	NR + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
92	CDMA/EVDO data + 2.4 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	Yes	Yes	* Pre-installed VOIP applications are considered.
93	CDMA/EVDO data + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	Yes	Yes	* Pre-installed VOIP applications are considered.
94	CDMA/EVDO data + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes*	Yes*	N/A	Yes	Yes	Yes	* Pre-installed VOIP applications are considered.
95	CDMA/EVDO data + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes*^	Yes*	Yes^	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
96	CDMA/EVDO data + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes*^	Yes*	Yes^	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
97	CDMA/EVDO data + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes*^	Yes*	N/A	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
98	CDMA/EVDO data + 5 GHz WLAN Ant 1	Yes*	Yes*	Yes	Yes	Yes	Yes	* Pre-installed VOIP applications are considered.
99	CDMA/EVDO data + 5 GHz WLAN MIMO	Yes*	Yes*	Yes	Yes	Yes	Yes	* Pre-installed VOIP applications are considered.
100	CDMA/EVDO data + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes*^	Yes*	Yes^	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
101	CDMA/EVDO data + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes*^	Yes*	Yes^	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
102	CDMA/EVDO data + 6 GHz WLAN MIMO	Yes*	Yes*	N/A	Yes	Yes	Yes	* Pre-installed VOIP applications are considered.
103	CDMA/EVDO data + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes*^	Yes*	N/A	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
104	CDMA/EVDO data + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes*^	Yes*	N/A	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
105	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 1	Yes*^	Yes*	Yes^	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
106	CDMA/EVDO data + 2.4 GHz Bluetooth Ant 2	Yes*^	Yes*	Yes^	Yes	Yes	Yes	* Pre-installed VOIP applications are considered. ^ Bluetooth Tethering is considered
107	GPRS/EDGE + 2.4 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	Yes	
108	GPRS/EDGE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	Yes	
109	GPRS/EDGE + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	Yes	Yes	
110	GPRS/EDGE + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
111	GPRS/EDGE + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
112	GPRS/EDGE + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	N/A	N/A	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
113	GPRS/EDGE + 5 GHz WLAN Ant 1	N/A	N/A	Yes	Yes	Yes	Yes	
114	GPRS/EDGE + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	Yes	
115	GPRS/EDGE + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
116	GPRS/EDGE + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
117	GPRS/EDGE + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	Yes	Yes	
118	GPRS/EDGE + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	N/A	N/A	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
119	GPRS/EDGE + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	N/A	N/A	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
120	GPRS/EDGE + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
121	GPRS/EDGE + 2.4 GHz Bluetooth Ant 2	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered

1. 2.4 GHz WLAN ant 1, and 2.4 GHz Bluetooth 1 share the same antenna path and cannot transmit simultaneously.
2. 5 GHz WLAN and 6 GHz WLAN share the same antenna path and cannot transmit simultaneously.
3. All licensed modes share the same antenna path and cannot transmit simultaneously.
4. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
5. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or body-worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
6. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, and U-NII-2C were not evaluated for wireless router conditions.
7. 6 GHz Wireless Router is not supported, therefore it was not evaluated for wireless router conditions.
8. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM.
9. This device supports VOLTE.
10. This device supports VOWIFI.
11. This device supports Bluetooth Tethering.

12. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
13. 5G NR FR2 n260 and n261 cannot transmit simultaneously.
14. LTE + 5G NR FR2 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR

1.8 Miscellaneous SAR Test Considerations

(A) WIFI/BT

There were no changes made to the WIFI and BT operations within this device. Please see original compliance evaluation in RF Technical Report S/N 1M2104020031-01.A3L (Rev 1) for complete evaluation of these operating modes.

(B) Licensed Transmitter(s)

Only operations relevant to this permissive change were evaluated for compliance. Please see original compliance evaluation in RF Exposure Technical Report S/N 1M2104020031-01.A3L (Rev 1) for complete evaluation of all other operating modes. The operational description includes a description of all changed items.

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

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

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

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

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

This device supports 64QAM and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is ≤ ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45W/kg, per Section 5.2.4 of FCC KDB Publication 941225 D05v02r05.

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

For 2G/3G/4G/5G bands operating < 1 GHz, this device can transmit with Ant A or with Ant A+ Ant B. The RF path for both conditions is identical, therefore separate conducted powers are not required for these conditions. For closed test conditions, both Ant A and Ant A + Ant B conditions were fully evaluated for all

exposure conditions. For open UMPC Body or UMPC Extremity conditions, only Ant A + Ant B conditions are supported as described in the operational description.

No additional Part 2 testing was required since the changes do not impact the essential test cases evaluated in the original evaluation. The original evaluation includes at least one band of evaluation with same output power characteristics, and therefore, any additional evaluation for Part 2 smart transmit algorithm verification was not necessary.

1.9 Guidance Applied

- IEC/IEEE 62209-1528:2020
- FCC KDB Publication 941225 D01v03r01, D05v02r04, D05Av01r02, D06v02r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- April 2019 TCB Workshop Notes (Dynamic Antenna Tuning)
- FCC KDB Publication 941225 D07v01r02 (UMPC Mini-Tablet Devices)

1.10 Device Serial Numbers

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

2 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 71 (665.5 - 695.5 MHz)				
	LTE Band 12 (699.7 - 715.3 MHz)				
	LTE Band 13 (779.5 - 784.5 MHz)				
	LTE Band 14 (790.5 - 795.5 MHz)				
	LTE Band 26 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 30 (2307.5 - 2312.5 MHz)				
	LTE Band 7 (2502.5 - 2567.5 MHz)				
	LTE Band 48 (3552.5 - 3697.5 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
	LTE Band 38 (2572.5 - 2617.5 MHz)				
Channel Bandwidths	LTE Band 71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 14: 5 MHz, 10 MHz				
	LTE Band 26 (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 30: 5 MHz, 10 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 48: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 38: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (133147)		680.5 (133297)	695.5 (133447)	
LTE Band 71: 10 MHz	668 (133172)		680.5 (133297)	693 (133422)	
LTE Band 71: 15 MHz	670.5 (133197)		680.5 (133297)	690.5 (133397)	
LTE Band 71: 20 MHz	673 (133222)		680.5 (133297)	688 (133372)	
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	N/A		782 (23230)	N/A	
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)	795.5 (23355)	
LTE Band 14: 10 MHz	N/A		793 (23330)	N/A	
LTE Band 26 (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 30: 5 MHz	2307.5 (27685)		2310 (27710)	2312.5 (27735)	
LTE Band 30: 10 MHz	N/A		2310 (27710)	N/A	
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)	2567.5 (21425)	
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)	2565 (21400)	
LTE Band 7: 15 MHz	2507.5 (20825)		2535 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
LTE Band 48: 5 MHz	3552.5 (55265)	3600.8 (55748)	N/A	3649.2 (56232)	3697.5 (56715)
LTE Band 48: 10 MHz	3555 (55290)	3601.7 (55757)	N/A	3648.3 (56223)	3695 (56690)
LTE Band 48: 15 MHz	3557.5 (55315)	3602.5 (55765)	N/A	3647.5 (56215)	3692.5 (56665)
LTE Band 48: 20 MHz	3560 (55340)	3603.3 (55773)	N/A	3646.7 (56207)	3690 (56640)
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
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. It supports carrier aggregation, downlink MIMO, LAA features as shown in Section 9 and Appendix F. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 16 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

NR Information						
Form Factor	Portable Handset					
Frequency Range of each NR transmission band	NR Band n71 (665.5 - 695.5 MHz) NR Band n12 (701.5 - 713.5 MHz) NR Band n5 (Cell) (826.5 - 846.5 MHz) NR Band n66 (AWS) (1712.5 - 1777.5 MHz) NR Band n25 (PCS) (1852.5 - 1912.5 MHz) NR Band n2 (PCS) (1852.5 - 1907.5 MHz) NR Band n30 (2307.5 - 2312.5 MHz) NR Band n41 (2506.02 - 2679.99 MHz) NR Band n77 DoD (3460.02 - 3540 MHz) NR Band n77 (3710.01 - 3969.99 MHz)					
Channel Bandwidths	NR Band n71: 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n12: 5 MHz, 10 MHz, 15 MHz NR Band n5 (Cell): 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n66 (AWS): 5 MHz, 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz NR Band n25 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz NR Band n2 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n30: 5 MHz, 10 MHz NR Band n41: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz NR Band n77 DoD: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz NR Band n77: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz					
Channel Numbers and Frequencies (MHz)						
NR Band n71: 5 MHz	665.5 (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 n12: 5 MHz	701.5 (140300)		707.5 (141500)		713.5 (142700)	
NR Band n12: 10 MHz	704 (140800)		707.5 (141500)		711 (142200)	
NR Band n12: 15 MHz	706.5 (141300)		707.5 (141500)		708.5 (141700)	
NR Band n5 (Cell): 5 MHz	826.5 (165300)		836.5 (167300)		846.5 (169300)	
NR Band n5 (Cell): 10 MHz	829 (165800)		836.5 (167300)		844 (168800)	
NR Band n5 (Cell): 15 MHz	831.5 (166300)		836.5 (167300)		841.5 (168300)	
NR Band n5 (Cell): 20 MHz	834 (166800)		836.5 (167300)		839 (167800)	
NR Band n66 (AWS): 5 MHz	1712.5 (342500)		1745 (349000)		1777.5 (355500)	
NR Band n66 (AWS): 10 MHz	1715 (343000)		1745 (349000)		1775 (355000)	
NR Band n66 (AWS): 15 MHz	1717.5 (343500)		1745 (349000)		1772.5 (354500)	
NR Band n66 (AWS): 20 MHz	1720 (344000)		1745 (349000)		1770 (354000)	
NR Band n66 (AWS): 30 MHz	1725 (345000)		1745 (349000)		1765 (353000)	
NR Band n66 (AWS): 40 MHz	1730 (346000)		1745 (349000)		1760 (352000)	
NR Band n25 (PCS): 5 MHz	1852.5 (370500)		1882.5 (376500)		1912.5 (382500)	
NR Band n25 (PCS): 10 MHz	1855 (371000)		1882.5 (376500)		1910 (382000)	
NR Band n25 (PCS): 15 MHz	1857.5 (371500)		1882.5 (376500)		1907.5 (381500)	
NR Band n25 (PCS): 20 MHz	1860 (372000)		1882.5 (376500)		1905 (381000)	
NR Band n25 (PCS): 25 MHz	1862.5 (372500)		1882.5 (376500)		1902.5 (380500)	
NR Band n25 (PCS): 30 MHz	1865 (373000)		1882.5 (376500)		1900 (380000)	
NR Band n25 (PCS): 40 MHz	1870 (374000)		1882.5 (376500)		1895 (379000)	
NR Band n2 (PCS): 5 MHz	1852.5 (370500)		1880 (376000)		1907.5 (381500)	
NR Band n2 (PCS): 10 MHz	1855 (371000)		1880 (376000)		1905 (381000)	
NR Band n2 (PCS): 15 MHz	1857.5 (371500)		1880 (376000)		1902.5 (380500)	
NR Band n2 (PCS): 20 MHz	1860 (372000)		1880 (376000)		1900 (380000)	
NR Band n30: 5 MHz	2307.5 (461500)		2310 (462000)		2312.5 (462500)	
NR Band n30: 10 MHz	N/A		2310 (462000)		N/A	
NR Band n41: 20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)		2636.49 (527298)	2679.99 (535998)
NR Band n41: 30 MHz	2511 (502200)	2552.01 (510402)	2592.99 (518598)		2634 (526800)	2674.98 (534996)
NR Band n41: 40 MHz	2516.01 (503202)	2567.34 (513468)	N/A		2618.67 (523734)	2670 (534000)
NR Band n41: 50 MHz	2521.02 (504204)		2592.99 (518598)		2664.99 (532998)	
NR Band n41: 60 MHz	2526 (505200)		2592.99 (518598)		2659.98 (531996)	
NR Band n41: 80 MHz	2536.02 (507204)		N/A		2649.99 (529998)	
NR Band n41: 90 MHz	2541 (508200)		N/A		2644.98 (528996)	
NR Band n41: 100 MHz	2546.01 (509202)		2592.99 (518598)		2640 (528000)	
NR Band n77 DoD: 20 MHz	3460.02 (630668)		3500.01 (633334)		3540 (636000)	
NR Band n77 DoD: 30 MHz	3465 (631000)		3500.01 (633334)		3534.99 (635666)	
NR Band n77 DoD: 40 MHz	3470.01 (631334)		N/A		3529.98 (635332)	
NR Band n77 DoD: 50 MHz	3475.02 (631668)		N/A		3525 (635000)	
NR Band n77 DoD: 60 MHz	N/A		3500.01 (633334)		N/A	
NR Band n77 DoD: 70 MHz	N/A		3500.01 (633334)		N/A	
NR Band n77 DoD: 80 MHz	N/A		3500.01 (633334)		N/A	
NR Band n77 DoD: 90 MHz	N/A		3500.01 (633334)		N/A	
NR Band n77 DoD: 100 MHz	N/A		3500.01 (633334)		N/A	
NR Band n77: 20 MHz	3710.01 (647334)	3762 (650800)	3813.99 (654266)	3866.01 (657734)	3918 (661200)	3969.99 (664666)
NR Band n77: 30 MHz	3715.02 (647668)	3765 (651000)	3815.01 (654334)	3864.99 (657666)	3915 (661000)	3964.98 (664332)
NR Band n77: 40 MHz	3720 (648000)	3768 (651200)	3816 (654400)	3864 (657600)	3912 (660800)	3960 (664000)
NR Band n77: 50 MHz	3725.01 (648334)	3782.49 (652166)	3840 (656000)		3897.51 (659834)	3954.99 (663666)
NR Band n77: 60 MHz	3730.02 (648668)	3803.34 (653556)	N/A		3876.66 (658444)	3949.98 (663332)
NR Band n77: 70 MHz	3735 (649000)	3804.99 (653666)	N/A		3875.01 (658334)	3945 (663000)
NR Band n77: 80 MHz	3740.01 (649334)	N/A	3840 (656000)		N/A	3939.99 (662666)
NR Band n77: 90 MHz	3745.02 (649668)	N/A	3840 (656000)		N/A	3934.98 (662332)
NR Band n77: 100 MHz	3750 (650000)	N/A	N/A		N/A	3930 (662000)
SCS for NR Band n71/n12/n5/n66/n25/n2/n30	15 kHz					
SCS for NR Band n41/n77 DoD/n77	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 66/2					
LTE Anchor Bands for NR Band n12	LTE Band 66/2					
LTE Anchor Bands for NR Band n5 (Cell)	LTE Band 66/2/30/48					
LTE Anchor Bands for NR Band n66 (AWS)	LTE Band 12/13/14/5/2/30/48					
LTE Anchor Bands for NR Band n25 (PCS)	LTE Band 12/66					
LTE Anchor Bands for NR Band n2 (PCS)	LTE Band 12/13/14/5/66/30/48					
LTE Anchor Bands for NR Band n30	LTE Band 12/14/5					
LTE Anchor Bands for NR Band n41	LTE Band 12/66/25/2/41					
LTE Anchor Bands for NR Band n77 DoD/n77	LTE Band 12/13/14/5/66/2/30					

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:

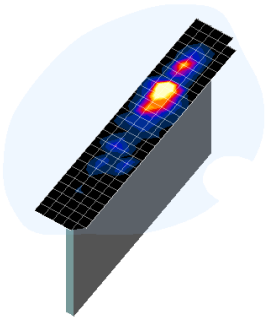

Figure 4-1
Sample SAR Area Scan

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 DEFINITION OF REFERENCE POINTS

5.1 EAR REFERENCE POINT

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

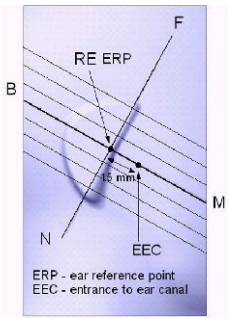

Figure 5-1
Close-Up Side view of ERP

5.2 HANDSET REFERENCE POINTS

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

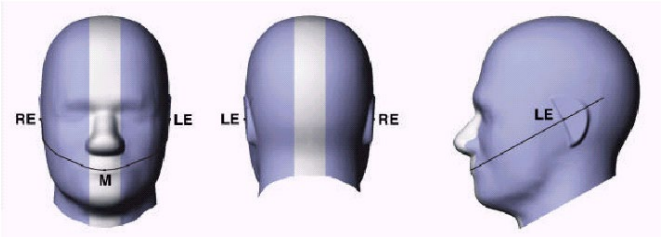

Figure 5-2
Front, back and side view of SAM Twin Phantom

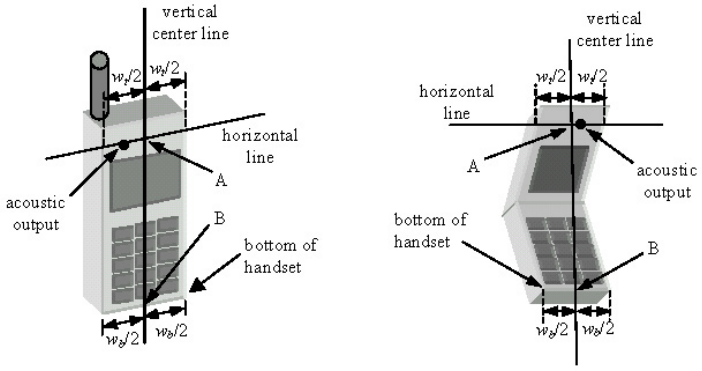

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

6 TEST CONFIGURATION POSITIONS

6.1 Device Holder

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

6.2 Positioning for Cheek

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

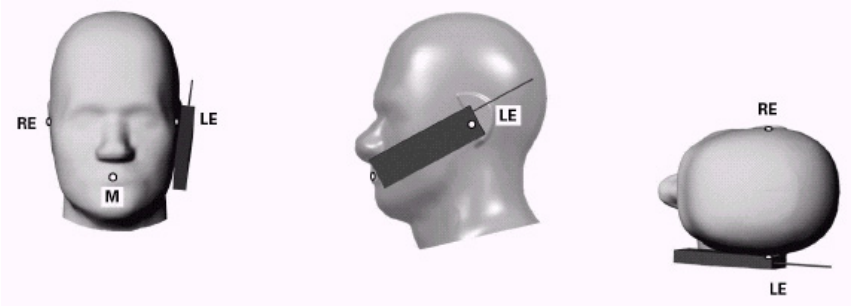

Figure 6-1 Front, Side and Top View of Cheek Position

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

6.3 Positioning for Ear / 15º Tilt

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

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

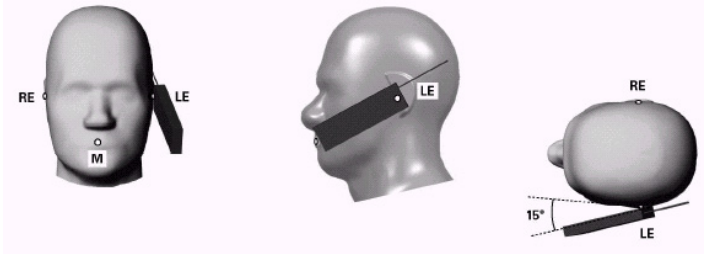

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

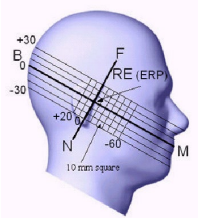

Figure 6-3
Side view w/ relevant markings

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

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

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

6.5 Body-Worn Accessory Configurations

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

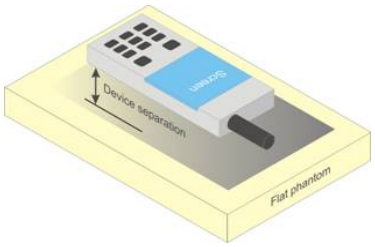

Figure 6-4
Sample Body-Worn Diagram

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

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

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

6.6 Extremity Exposure Configurations

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

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

6.7 Wireless Router Configurations

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

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

6.8 UMPC Mini-Tablet Configurations

Small hand-held tablets (and devices of similar form factors that are designed primarily for interactive hand-held use next to or near the body of users) require body SAR and extremity SAR evaluation. These types of mini-tablets are normally optimized for mobile web access and multimedia use. UMPC test procedures are applicable for devices with displays and overall diagonal dimension ≤ 20 cm. Devices are to be set up according to KDB publication 941225 D07v01r02 requirements and are configured with maximum output power during SAR assessment for a worst case SAR evaluation.

Per KDB Publication 941225 D07v01r02, UMPC mini-tablet devices must be tested for all surfaces and edges ≤ 25 mm from a transmitting antenna. A test separation distance of 10 mm may be considered for 1g SAR, with the addition of 10g SAR measurement at 0 mm test separation distance for all measured 1g SAR (at 10 mm) configurations to address hand exposure.

7 RF EXPOSURE LIMITS

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

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

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

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

8 FCC MEASUREMENT PROCEDURES

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

8.1 Measured and Reported SAR

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

8.2 3G SAR Test Reduction Procedure

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

8.3 Procedures Used to Establish RF Signal for SAR

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

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

8.4 SAR Measurement Conditions for CDMA2000

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

8.4.1 Output Power Verification

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

1. If the mobile station (MS) supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9600 bps data rate only.
2. Under RC1, C.S0011 Table 4.4.5.2-1, Table 8-1 parameters were applied.
3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH_0 and demodulation of RC 3,4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9600 bps Fundamental Channel and 9600 bps SCH0 data rate.
4. Under RC3, C.S0011 Table 4.4.5.2-2, Table 8-2 was applied.

Table 8-1
Parameters for Max. Power for RC1

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

Table 8-2
Parameters for Max. Power for RC3

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

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

8.4.2 Head SAR Measurements

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

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

8.4.3 Body-worn SAR Measurements

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

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

8.4.4 Body-worn SAR Measurements for EVDO Devices

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

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

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

8.4.5 Body SAR Measurements for EVDO Hotspot

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

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

8.4.6 CDMA2000 1x Advanced

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

The 3G SAR test reduction procedure is applied to the 1x-Advanced transmission mode with 1x RTT RC3 as the primary mode. When SAR measurement is required, the 1x-Advanced power measurement configurations are used. The1x Advanced SAR procedures are applied separately to head, body-worn accessory and other exposure conditions.

8.5 SAR Measurement Conditions for UMTS

8.5.1 Output Power Verification

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

8.5.2 Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the

primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

8.5.3 Body SAR Measurements

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

8.5.4 SAR Measurements with Rel 5 HSDPA

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

8.5.5 SAR Measurements with Rel 6 HSUPA

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

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

8.5.6 SAR Measurement Conditions for DC-HSDPA

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

8.6 SAR Measurement Conditions for LTE

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

8.6.1 Spectrum Plots for RB Configurations

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

8.6.2 MPR

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

8.6.3 A-MPR

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

8.6.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r04:

a. Per Section 5.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
    i. The required channel and offset combination with the highest maximum output power is required for SAR.
    ii. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
    iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
b. Per Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
c. Per Section 5.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is ≤ 0.8 W/kg.
d. Per Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to ½ dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is <1.45 W/kg.

8.6.5 TDD

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

9 RF CONDUCTED POWERS

9.1 CDMA Conducted Powers

Table 9-1
Measured P_{max} for all DSI for CDMA BC10 and CDMA BC0
Measured P_{Limit} for DSI = 0/11 (Body-worn, or Phablet/UMPC with grip sensor inactive)

Band	Channel	Rule Part	Frequency	SO55 [dBm]	SO55 [dBm]	SO75 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	RC11	FCH+SCH	FCH	(RTAP)	(RETAP)
Cellular	564	90S	820.1	24.24	24.27	24.20	24.26	24.26	24.10	24.09
Cellular	1013	22H	824.7	24.28	24.28	24.71	24.29	24.25	24.03	24.01
	384	22H	836.52	24.26	24.29	24.68	24.27	24.26	24.04	24.04
	777	22H	848.31	24.26	24.27	24.75	24.25	24.23	24.02	24.02

Note: RC1 is only applicable for IS-95 compatibility. For FCC Rule Part 90S, Per FCC KDB Publication 447498 D01v06 4.1.g), only one channel is required since the device operates within the transmission range of 817.90 – 823.10 MHz.

Figure 9-1
Power Measurement Setup

9.2 UMTS Conducted Powers

Table 9-2
Measured P_{max} for all DSI for UMTS 850
Measured P_{max} for DSI = 0/11 (Body-worn, or Phablet/UMPC with grip sensor inactive)

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	
99	WCDMA	12.2 kbps RMC	24.47	24.48	24.35	-
99		12.2 kbps AMR	24.55	24.42	24.35	-
6	HSDPA	Subtest 1	23.69	23.60	23.53	0
6		Subtest 2	23.71	23.56	23.48	0
6		Subtest 3	23.16	23.04	22.96	0.5
6		Subtest 4	23.16	23.04	22.96	0.5
6	HSUPA	Subtest 1	23.70	23.60	23.54	0
6		Subtest 2	21.71	21.60	21.49	2
6		Subtest 3	22.66	22.53	22.47	1
6		Subtest 4	21.63	21.55	21.45	2
6		Subtest 5	23.66	23.53	23.44	0
8	DC-HSDPA	Subtest 1	23.65	23.54	23.47	0
8		Subtest 2	23.64	23.54	23.46	0
8		Subtest 3	23.14	23.04	22.95	0.5
8		Subtest 4	23.17	23.03	22.97	0.5

DC-HSDPA considerations

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

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

Figure 9-2
Power Measurement Setup

9.3 LTE Conducted Powers

Note: Per FCC KDB Publication 941225 D05v02r05, LTE SAR for the lower bandwidths was not required for testing since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg. Lower bandwidth conducted powers for all LTE bands can be found in Appendix H in the original RF Exposure Technical Report S/N 1M2104020031-01.A3L (Rev 1).

9.3.1 LTE Band 71

Table 9-3
LTE Band 71 Measured P_{Max} for all DSI - 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	**25.31**	0	0
	1	50	25.19		0
	1	99	24.82		0
	50	0	24.28	0-1	1
	50	25	**24.31**		1
	50	50	24.00		1
	100	0	24.17		1
16QAM	1	0	24.68	0-1	1
	1	50	24.67		1
	1	99	24.15		1
	50	0	23.24	0-2	2
	50	25	23.27		2
	50	50	22.99		2
	100	0	23.15		2
64QAM	1	0	23.54	0-2	2
	1	50	23.54		2
	1	99	23.01		2
	50	0	22.28	0-3	3
	50	25	22.30		3
	50	50	22.00		3
	100	0	22.18		3
256QAM	1	0	20.14	0-5	5
	1	50	20.42		5
	1	99	19.75		5
	50	0	20.27		5
	50	25	20.24		5
	50	50	20.04		5
	100	0	20.16		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.

9.3.2 LTE Band 12

Table 9-4
LTE Band 12 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23095 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.45	0	0
	1	25	**24.48**		0
	1	49	24.44		0
	25	0	23.53	0-1	1
	25	12	**23.61**		1
	25	25	23.60		1
	50	0	23.53		1
16QAM	1	0	23.84	0-1	1
	1	25	24.00		1
	1	49	23.81		1
	25	0	22.54	0-2	2
	25	12	22.62		2
	25	25	22.55		2
	50	0	22.53		2
64QAM	1	0	22.66	0-2	2
	1	25	22.65		2
	1	49	22.50		2
	25	0	21.51	0-3	3
	25	12	21.65		3
	25	25	21.65		3
	50	0	21.53		3
256QAM	1	0	19.31	0-5	5
	1	25	19.70		5
	1	49	19.30		5
	25	0	19.53		5
	25	12	19.61		5
	25	25	19.58		5
	50	0	19.51		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.

9.3.3 LTE Band 13

Table 9-5
LTE Band 13 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.67	0	0
	1	25	24.71		0
	1	49	**24.75**		0
	25	0	23.74	0-1	1
	25	12	23.80		1
	25	25	**23.85**		1
	50	0	23.79		1
16QAM	1	0	24.06	0-1	1
	1	25	24.18		1
	1	49	24.19		1
	25	0	22.80	0-2	2
	25	12	22.77		2
	25	25	22.89		2
	50	0	22.78		2
64QAM	1	0	22.98	0-2	2
	1	25	23.01		2
	1	49	23.13		2
	25	0	21.82	0-3	3
	25	12	21.81		3
	25	25	21.88		3
	50	0	21.81		3
256QAM	1	0	19.44	0-5	5
	1	25	19.83		5
	1	49	19.66		5
	25	0	19.64		5
	25	12	19.78		5
	25	25	19.84		5
	50	0	19.71		5

9.3.4 LTE Band 14

Table 9-6
LTE Band 14 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.79**	0	0
	1	25	24.72		0
	1	49	24.62		0
	25	0	23.70	0-1	1
	25	12	23.75		1
	25	25	**23.77**		1
	50	0	23.67		1
16QAM	1	0	24.14	0-1	1
	1	25	24.13		1
	1	49	24.11		1
	25	0	22.71	0-2	2
	25	12	22.75		2
	25	25	22.74		2
	50	0	22.70		2
64QAM	1	0	22.96	0-2	2
	1	25	22.96		2
	1	49	22.88		2
	25	0	21.71	0-3	3
	25	12	21.79		3
	25	25	21.78		3
	50	0	21.71		3
256QAM	1	0	19.60	0-5	5
	1	25	19.85		5
	1	49	19.68		5
	25	0	19.69		5
	25	12	19.88		5
	25	25	19.75		5
	50	0	19.70		5

9.3.5 LTE Band 26

Table 9-7

LTE Band 26 (Cell) Measured P_{Max} for all DSI - 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	**24.60**	0	0
	1	36	24.58		0
	1	74	24.55		0
	36	0	23.61	0-1	1
	36	18	**23.66**		1
	36	37	23.64		1
	75	0	23.56		1
16QAM	1	0	24.30	0-1	1
	1	36	24.05		1
	1	74	23.95		1
	36	0	22.63	0-2	2
	36	18	22.65		2
	36	37	22.68		2
	75	0	22.57		2
64QAM	1	0	22.98	0-2	2
	1	36	22.84		2
	1	74	22.79		2
	36	0	21.69	0-3	3
	36	18	21.68		3
	36	37	21.67		3
	75	0	21.61		3
256QAM	1	0	19.64	0-5	5
	1	36	19.78		5
	1	74	19.55		5
	36	0	19.63		5
	36	18	19.64		5
	36	37	19.69		5
	75	0	19.62		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.

9.3.6 LTE Band 5

Table 9-8

LTE Band 5 (Cell) Measured P_{Max} for all DSI - 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	**24.09**	0	0
	1	25	23.96		0
	1	49	23.87		0
	25	0	**23.03**	0-1	1
	25	12	22.96		1
	25	25	22.99		1
	50	0	22.92		1
16QAM	1	0	23.42	0-1	1
	1	25	23.17		1
	1	49	23.34		1
	25	0	22.09	0-2	2
	25	12	21.99		2
	25	25	22.09		2
	50	0	21.87		2
64QAM	1	0	22.30	0-2	2
	1	25	22.14		2
	1	49	22.26		2
	25	0	21.02	0-3	3
	25	12	21.11		3
	25	25	21.02		3
	50	0	20.92		3
256QAM	1	0	18.90	0-5	5
	1	25	19.13		5
	1	49	18.97		5
	25	0	18.85		5
	25	12	18.96		5
	25	25	18.94		5
	50	0	18.87		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.

9.3.7 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-9
LTE Uplink Carrier Aggregation Measured P_{max}

	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	1	0	LTE B5	5	20453	829.3	2453	874.3	QPSK	1	24	23.90	24.09

Notes:

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

Figure 9-3
Power Measurement Setup

9.4 NR Conducted Powers

Note: Per October 2020 TCB Workshop Guidance, NR FR1 SAR evaluations are being generally based on adapting the existing LTE SAR procedures (FCC KDB Publication 941225 D05v02r05). Therefore, NR SAR for the lower bandwidths was not required for testing based on the measured output power and the reported NR SAR for the highest bandwidth. Lower bandwidth conducted powers for all NR bands can be found in appendix H in the original RF Exposure Technical Report S/N 1M2104020031-01.A3L (Rev 1).

9.4.1 NR Band n71

Table 9-10
NR Band n71 Measured P_{max} for all DSI - 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	24.40	0	0.0
	1	53	24.33		0.0
	1	104	24.32		0.0
	50	0	23.82	0-0.5	0.5
	50	28	24.31	0	0.0
	50	56	23.66	0-0.5	0.5
	100	0	23.82		0.5
DFT-s-OFDM QPSK	1	1	**24.48**	0	0.0
	1	53	24.28		0.0
	1	104	24.21		0.0
	50	0	23.32	0-1	1.0
	50	28	**24.34**	0	0.0
	50	56	23.11	0-1	1.0
	100	0	23.30		1.0
DFT-s-OFDM 16QAM	1	1	23.17	0-1	1.0
CP-OFDM QPSK	1	1	22.90	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.

9.4.1 NR Band n12

Table 9-11
NR Band n12 Measured P_{max} for all DSI - 15 MHz Bandwidth

NR Band n12 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	141500 (707.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	23.71	0	0.0
	1	40	23.95		0.0
	1	77	23.71		0.0
	36	0	23.29	0-0.5	0.5
	36	22	23.87	0	0.0
	36	43	23.37	0-0.5	0.5
	75	0	23.38		0.5
DFT-s-OFDM QPSK	1	1	23.92	0	0.0
	1	40	**24.02**		0.0
	1	77	23.98		0.0
	36	0	22.82	0-1	1.0
	36	22	**23.90**	0	0.0
	36	43	22.86	0-1	1.0
	75	0	22.94		1.0
DFT-s-OFDM 16QAM	1	1	22.59	0-1	1.0
CP-OFDM QPSK	1	1	22.18	0-1.5	1.5

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

9.4.2 NR Band n5

Table 9-12
NR Band n5 Measured P_{max} for all DSI - 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	25.07	0	0.0
	1	53	25.12		0.0
	1	104	24.92		0.0
	50	0	24.59	0-0.5	0.5
	50	28	25.18	0	0.0
	50	56	24.56	0-0.5	0.5
	100	0	24.63		0.5
DFT-s-OFDM QPSK	1	1	25.23	0	0.0
	1	53	**25.39**		0.0
	1	104	25.20		0.0
	50	0	24.12	0-1	1.0
	50	28	**25.15**	0	0.0
	50	56	24.11	0-1	1.0
	100	0	24.08		1.0
DFT-s-OFDM 16QAM	1	1	23.87	0-1	1.0
CP-OFDM QPSK	1	1	23.23	0-1.5	1.5

Note: NR Band n5 (Cell) 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.

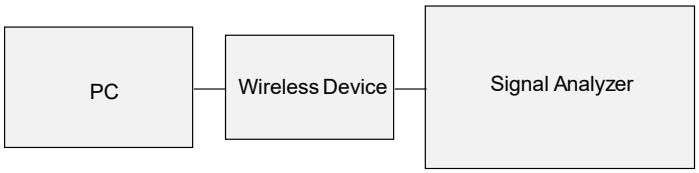

Figure 9-4
Power Measurement Setup

10 SYSTEM VERIFICATION

10.1 Tissue Verification

Table 10-1
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	%dev σ	%dev ε
06/08/2021	750 Head	22.8	680	0.889	41.496	0.888	42.305	0.11%	-1.91%
			695	0.894	41.439	0.889	42.227	0.56%	-1.87%
			700	0.896	41.421	0.889	42.201	0.79%	-1.85%
			710	0.900	41.393	0.890	42.149	1.12%	-1.79%
			725	0.905	41.361	0.891	42.071	1.57%	-1.69%
			750	0.914	41.304	0.894	41.942	2.24%	-1.52%
			770	0.921	41.249	0.895	41.838	2.91%	-1.41%
			785	0.926	41.200	0.896	41.760	3.35%	-1.34%
			800	0.932	41.151	0.897	41.682	3.90%	-1.27%
06/10/2021	750 Head	21.4	680	0.891	41.944	0.888	42.305	0.34%	-0.85%
			695	0.896	41.896	0.889	42.227	0.79%	-0.78%
			700	0.898	41.882	0.889	42.201	1.01%	-0.76%
			710	0.902	41.853	0.890	42.149	1.35%	-0.70%
			725	0.908	41.809	0.891	42.071	1.91%	-0.62%
			750	0.917	41.732	0.894	41.942	2.57%	-0.50%
			770	0.923	41.669	0.895	41.838	3.13%	-0.40%
			785	0.928	41.619	0.896	41.760	3.57%	-0.34%
			800	0.933	41.573	0.897	41.682	4.01%	-0.26%
07/05/2021	750 Head	20.9	680	0.867	41.498	0.888	42.305	-2.36%	-1.91%
			695	0.873	41.440	0.889	42.227	-1.80%	-1.86%
			700	0.875	41.418	0.889	42.201	-1.57%	-1.86%
			710	0.878	41.368	0.890	42.149	-1.35%	-1.85%
			725	0.883	41.301	0.891	42.071	-0.90%	-1.83%
			750	0.892	41.239	0.894	41.942	-0.22%	-1.68%
			770	0.900	41.227	0.895	41.838	0.56%	-1.46%
			785	0.906	41.188	0.896	41.760	1.12%	-1.37%
			800	0.912	41.122	0.897	41.682	1.67%	-1.34%
07/18/2021	750 Head	20.9	680	0.887	41.475	0.888	42.305	-0.11%	-1.96%
			695	0.892	41.426	0.889	42.227	0.34%	-1.90%
			700	0.893	41.411	0.889	42.201	0.45%	-1.87%
			710	0.897	41.384	0.890	42.149	0.79%	-1.81%
			725	0.903	41.348	0.891	42.071	1.35%	-1.72%
			750	0.912	41.284	0.894	41.942	2.01%	-1.57%
			770	0.919	41.220	0.895	41.838	2.68%	-1.48%
			785	0.924	41.168	0.896	41.760	3.13%	-1.42%
			800	0.930	41.116	0.897	41.682	3.68%	-1.36%
06/14/2021	835 Head	22.8	820	0.870	40.806	0.899	41.578	-3.23%	-1.86%
			835	0.885	40.617	0.900	41.500	-1.67%	-2.13%
			850	0.900	40.429	0.916	41.500	-1.75%	-2.58%
06/16/2021	835 Head	23.1	820	0.858	41.805	0.899	41.578	-4.56%	0.55%
			835	0.873	41.617	0.900	41.500	-3.00%	0.28%
			850	0.887	41.433	0.916	41.500	-3.17%	-0.16%
06/21/2021	835 Head	22.9	820	0.879	41.499	0.899	41.578	-2.22%	-0.19%
			835	0.894	41.310	0.900	41.500	-0.67%	-0.46%
			850	0.910	41.117	0.916	41.500	-0.66%	-0.92%
07/18/2021	835 Head	22.3	820	0.868	40.537	0.899	41.578	-3.45%	-2.50%
			835	0.883	40.346	0.900	41.500	-1.89%	-2.78%
			850	0.897	40.162	0.916	41.500	-2.07%	-3.22%

Table 10-2
Measured Body Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	%dev σ	%dev ε
06/13/2021	750 Body	21.6	680	0.921	55.160	0.958	55.804	-3.86%	-1.15%
			695	0.927	55.115	0.959	55.745	-3.34%	-1.13%
			700	0.929	55.100	0.959	55.726	-3.13%	-1.12%
			710	0.933	55.068	0.960	55.687	-2.81%	-1.11%
			725	0.938	55.024	0.961	55.629	-2.39%	-1.09%
			750	0.947	54.962	0.964	55.531	-1.76%	-1.02%
			770	0.954	54.924	0.965	55.453	-1.14%	-0.95%
			785	0.960	54.889	0.966	55.395	-0.62%	-0.91%
			800	0.966	54.853	0.967	55.336	-0.10%	-0.87%
06/15/2021	750 Body	21.6	680	0.939	55.106	0.958	55.804	-1.98%	-1.25%
			695	0.944	55.067	0.959	55.745	-1.56%	-1.22%
			700	0.945	55.055	0.959	55.726	-1.46%	-1.20%
			710	0.949	55.034	0.960	55.687	-1.15%	-1.17%
			725	0.955	55.008	0.961	55.629	-0.62%	-1.12%
			750	0.965	54.958	0.964	55.531	0.10%	-1.03%
			770	0.972	54.908	0.965	55.453	0.73%	-0.98%
			785	0.977	54.868	0.966	55.395	1.14%	-0.95%
			800	0.983	54.835	0.967	55.336	1.65%	-0.91%
06/17/2021	750 Body	21.9	680	0.945	54.176	0.958	55.804	-1.36%	-2.92%
			695	0.950	54.137	0.959	55.745	-0.94%	-2.88%
			700	0.952	54.126	0.959	55.726	-0.73%	-2.87%
			710	0.956	54.102	0.960	55.687	-0.42%	-2.85%
			725	0.961	54.073	0.961	55.629	0.00%	-2.80%
			750	0.970	54.025	0.964	55.531	0.62%	-2.71%
			770	0.978	53.971	0.965	55.453	1.35%	-2.67%
			785	0.983	53.932	0.966	55.395	1.76%	-2.64%
			800	0.989	53.901	0.967	55.336	2.28%	-2.59%
07/04/2021	750 Body	22.0	680	0.947	54.652	0.958	55.804	-1.15%	-2.06%
			695	0.952	54.607	0.959	55.745	-0.73%	-2.04%
			700	0.954	54.593	0.959	55.726	-0.52%	-2.03%
			710	0.957	54.568	0.960	55.687	-0.31%	-2.01%
			725	0.962	54.539	0.961	55.629	0.10%	-1.96%
			750	0.971	54.472	0.964	55.531	0.73%	-1.91%
			770	0.978	54.422	0.965	55.453	1.35%	-1.86%
			785	0.985	54.387	0.966	55.395	1.97%	-1.82%
			800	0.991	54.345	0.967	55.336	2.48%	-1.79%
06/23/2021	835 Body	22.7	820	0.934	54.132	0.969	55.258	-3.61%	-2.04%
			835	0.950	53.998	0.970	55.200	-2.06%	-2.18%
			850	0.966	53.852	0.988	55.154	-2.23%	-2.36%
06/27/2021	835 Body	22.3	820	0.938	53.690	0.969	55.258	-3.20%	-2.84%
			835	0.953	53.539	0.970	55.200	-1.75%	-3.01%
			850	0.969	53.398	0.988	55.154	-1.92%	-3.18%
07/13/2021	835 Body	22.3	820	0.926	53.655	0.969	55.258	-4.44%	-2.90%
			835	0.941	53.519	0.970	55.200	-2.99%	-3.05%
			850	0.957	53.373	0.988	55.154	-3.14%	-3.23%
07/15/2021	835 Body	22.4	820	0.931	53.057	0.969	55.258	-3.92%	-3.98%
			835	0.946	52.918	0.970	55.200	-2.47%	-4.13%
			850	0.962	52.778	0.988	55.154	-2.63%	-4.31%
07/19/2021	835 Body	22.3	820	0.928	52.809	0.969	55.258	-4.23%	-4.43%
			835	0.944	52.665	0.970	55.200	-2.68%	-4.59%
			850	0.960	52.522	0.988	55.154	-2.83%	-4.77%
07/21/2021	835 Body	23.2	815	0.926	54.400	0.968	55.271	-4.34%	-1.58%
			820	0.931	54.358	0.969	55.258	-3.92%	-1.63%
			835	0.946	54.235	0.970	55.200	-2.47%	-1.75%
			850	0.962	54.105	0.988	55.154	-2.63%	-1.90%
07/23/2021	835 Body	23.0	815	0.920	53.291	0.968	55.271	-4.96%	-3.58%
			820	0.925	53.245	0.969	55.258	-4.54%	-3.64%
			835	0.940	53.115	0.970	55.200	-3.09%	-3.78%
			850	0.955	52.980	0.988	55.154	-3.34%	-3.94%

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

10.2 Test System Verification

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

Table 10-3
System Verification Results – 1g

SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	Measured SAR1g (W/kg)	1W Target SAR1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation1g (%)
G	750	HEAD	06/08/2021	23.8	22.5	0.2	1003	7357	1.82	8.78	9.100	3.64%
G	750	HEAD	06/10/2021	22.8	21.4	0.2	1003	7357	1.80	8.78	9.000	2.51%
E	750	HEAD	07/05/2021	22.2	20.7	0.2	1161	7571	1.68	8.03	8.400	4.61%
P	750	HEAD	07/18/2021	20.5	20.9	0.2	1054	7308	1.60	8.62	8.000	-7.19%
D	835	HEAD	06/14/2021	23.7	22.8	0.2	4d133	3589	1.91	9.43	9.550	1.27%
D	835	HEAD	06/16/2021	23.7	23.1	0.2	4d133	3589	1.78	9.43	8.900	-5.62%
E	835	HEAD	06/21/2021	24.3	22.9	0.2	4d133	7571	1.95	9.43	9.750	3.39%
E	835	HEAD	06/30/2021	23.5	23.5	0.2	4d132	7571	1.83	9.66	9.150	-5.28%
D	835	HEAD	07/18/2021	23.9	22.3	0.2	4d133	3589	1.90	9.43	9.500	0.74%
G	750	BODY	06/13/2021	23.2	21.6	0.2	1003	7357	1.75	8.61	8.750	1.63%
G	750	BODY	06/15/2021	22.4	21.6	0.2	1003	7357	1.82	8.61	9.100	5.69%
G	750	BODY	06/17/2021	24.0	21.9	0.2	1003	7357	1.77	8.61	8.850	2.79%
G	750	BODY	07/04/2021	21.9	21.9	0.2	1003	7357	1.77	8.61	8.850	2.79%
D	835	BODY	06/23/2021	23.7	22.7	0.2	4d133	3589	2.06	9.75	10.300	5.64%
D	835	BODY	06/27/2021	24.7	22.3	0.2	4d132	3589	2.01	9.81	10.050	2.45%
H	835	BODY	07/11/2021	23.3	24.4	0.2	4d133	7409	1.99	9.75	9.950	2.05%
H	835	BODY	07/13/2021	23.5	23.0	0.2	4d133	7409	1.99	9.75	9.950	2.05%
H	835	BODY	07/15/2021	23.2	23.0	0.2	4d132	7409	2.07	9.81	10.350	5.50%
H	835	BODY	07/19/2021	21.9	22.5	0.2	4d133	7409	2.05	9.75	10.250	5.13%
H	835	BODY	07/21/2021	23.4	23.2	0.2	4d133	7409	1.96	9.75	9.800	0.51%
H	835	BODY	07/23/2021	24.0	23.1	0.2	4d133	7409	2.00	9.75	10.000	2.56%

Table 10-4
System Verification Results – 10g

SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	Measured SAR10g (W/kg)	1W Target SAR10g (W/kg)	1W Normalized SAR10g (W/kg)	Deviation10g (%)
G	750	BODY	06/15/2021	22.4	21.6	0.2	1003	7357	1.210	5.67	6.050	6.70%
G	750	BODY	06/17/2021	24.0	21.9	0.2	1003	7357	1.160	5.67	5.800	2.29%
G	750	BODY	07/04/2021	21.9	21.9	0.2	1003	7357	1.160	5.67	5.800	2.29%
D	835	BODY	06/23/2021	23.7	22.7	0.2	4d133	3589	1.350	6.40	6.750	5.47%
H	835	BODY	07/11/2021	23.3	24.4	0.2	4d133	7409	1.310	6.40	6.550	2.34%
H	835	BODY	07/13/2021	23.5	23.0	0.2	4d133	7409	1.310	6.40	6.550	2.34%
H	835	BODY	07/19/2021	21.9	22.5	0.2	4d133	7409	1.350	6.40	6.750	5.47%

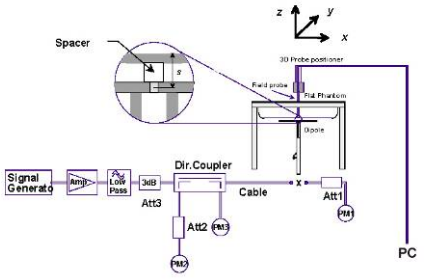

Figure 10-1
System Verification Setup Diagram

Figure 10-2
System Verification Setup Photo

REV 21.4 M
09/11/2019

11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
CDMA BC10 (§90S) Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	24.27	1	0.07	Right	Cheek	A	0356M	1:1	0.092	1.489	0.137	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	24.27	1	0.12	Right	Tilt	A	0356M	1:1	0.037	1.489	0.055	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	24.27	1	0.09	Left	Cheek	A	0356M	1:1	0.087	1.489	0.130	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	24.27	1	0.10	Left	Tilt	A	0356M	1:1	0.041	1.489	0.061	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	24.09	1	0.07	Right	Cheek	A	0356M	1:1	0.099	1.552	0.154	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	24.09	1	0.15	Right	Tilt	A	0356M	1:1	0.038	1.552	0.059	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	24.09	1	0.18	Left	Cheek	A	0356M	1:1	0.083	1.552	0.129	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	24.09	1	0.06	Left	Tilt	A	0356M	1:1	0.039	1.552	0.061	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	24.27	108	-0.01	Right	Cheek	A + B	1840M	1:1	0.131	1.489	0.195	A1
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	24.27	108	-0.13	Right	Tilt	A + B	1840M	1:1	0.052	1.489	0.077	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	24.27	108	0.11	Left	Cheek	A + B	1840M	1:1	0.090	1.489	0.134	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	26.0	24.27	108	0.07	Left	Tilt	A + B	1840M	1:1	0.043	1.489	0.064	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	24.09	108	0.05	Right	Cheek	A + B	1840M	1:1	0.112	1.552	0.174	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	24.09	108	0.07	Right	Tilt	A + B	1840M	1:1	0.035	1.552	0.054	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	24.09	108	0.18	Left	Cheek	A + B	1840M	1:1	0.091	1.552	0.141	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	26.0	24.09	108	0.04	Left	Tilt	A + B	1840M	1:1	0.051	1.552	0.079	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-2
CDMA BC0 (§22H) Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.29	0	-0.04	Right	Cheek	A	0356M	1:1	0.157	1.483	0.233	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.29	0	0.13	Right	Tilt	A	0356M	1:1	0.062	1.483	0.092	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.29	0	0.14	Left	Cheek	A	0356M	1:1	0.112	1.483	0.166	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.29	0	0.17	Left	Tilt	A	0356M	1:1	0.053	1.483	0.079	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.04	0	0.03	Right	Cheek	A	0356M	1:1	0.157	1.570	**0.246**	A2
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.04	0	0.15	Right	Tilt	A	0356M	1:1	0.056	1.570	0.088	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.04	0	0.17	Left	Cheek	A	0356M	1:1	0.092	1.570	0.144	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.04	0	0.20	Left	Tilt	A	0356M	1:1	0.046	1.570	0.072	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.29	108	0.03	Right	Cheek	A + B	1840M	1:1	0.136	1.483	0.202	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.29	108	0.15	Right	Tilt	A + B	1840M	1:1	0.054	1.483	0.080	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.29	108	0.05	Left	Cheek	A + B	1840M	1:1	0.080	1.483	0.119	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	26.0	24.29	108	0.15	Left	Tilt	A + B	1840M	1:1	0.042	1.483	0.062	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.04	108	-0.03	Right	Cheek	A + B	1840M	1:1	0.108	1.570	0.170	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.04	108	-0.17	Right	Tilt	A + B	1840M	1:1	0.041	1.570	0.064	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.04	108	0.20	Left	Cheek	A + B	1840M	1:1	0.075	1.570	0.118	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	26.0	24.04	108	0.19	Left	Tilt	A + B	1840M	1:1	0.038	1.570	0.060	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-3
UMTS 850 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Side	Test Position	Antenna Config.	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
836.60	4183	UMTS 850	RMC	25.8	24.48	0	0.08	Right	Cheek	A	0356M	1:1	0.178	1.355	0.241	A3
836.60	4183	UMTS 850	RMC	25.8	24.48	0	-0.04	Right	Tilt	A	0356M	1:1	0.071	1.355	0.096	
836.60	4183	UMTS 850	RMC	25.8	24.48	0	0.18	Left	Cheek	A	0356M	1:1	0.105	1.355	0.142	
836.60	4183	UMTS 850	RMC	25.8	24.48	0	0.04	Left	Tilt	A	0356M	1:1	0.049	1.355	0.066	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	-0.02	Right	Cheek	A + B	0412M	1:1	0.136	1.355	0.184	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	-0.02	Right	Tilt	A + B	0412M	1:1	0.053	1.355	0.072	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.15	Left	Cheek	A + B	0412M	1:1	0.102	1.355	0.138	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.01	Left	Tilt	A + B	0412M	1:1	0.051	1.355	0.069	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-4
LTE Band 71 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	-0.12	0	Right	Cheek	A + B	QPSK	1	0	0525M	1:1	0.123	1.119	0.138	A4
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	0.01	1	Right	Cheek	A + B	QPSK	50	25	0525M	1:1	0.097	1.119	0.109	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	-0.18	0	Right	Tilt	A + B	QPSK	1	0	0525M	1:1	0.045	1.119	0.050	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	-0.16	1	Right	Tilt	A + B	QPSK	50	25	0525M	1:1	0.037	1.119	0.041	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	-0.11	0	Left	Cheek	A + B	QPSK	1	0	0525M	1:1	0.112	1.119	0.125	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	0.18	1	Left	Cheek	A + B	QPSK	50	25	0525M	1:1	0.084	1.119	0.094	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	-0.13	0	Left	Tilt	A + B	QPSK	1	0	0525M	1:1	0.058	1.119	0.065	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	-0.05	1	Left	Tilt	A + B	QPSK	50	25	0525M	1:1	0.047	1.119	0.053	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	0.05	0	Right	Cheek	A	QPSK	1	0	0525M	1:1	0.056	1.119	0.063	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	0.16	1	Right	Cheek	A	QPSK	50	25	0525M	1:1	0.035	1.119	0.039	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	13	0.05	0	Right	Tilt	A	QPSK	1	0	0525M	1:1	0.028	1.119	0.031	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	13	0.15	1	Right	Tilt	A	QPSK	50	25	0525M	1:1	0.025	1.119	0.028	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	13	0.16	0	Left	Cheek	A	QPSK	1	0	0525M	1:1	0.054	1.119	0.060	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	13	0.08	1	Left	Cheek	A	QPSK	50	25	0525M	1:1	0.042	1.119	0.047	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	13	0.16	0	Left	Tilt	A	QPSK	1	0	0525M	1:1	0.025	1.119	0.028	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	13	0.14	1	Left	Tilt	A	QPSK	50	25	0525M	1:1	0.022	1.119	0.025	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-5
LTE Band 12 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	-0.02	0	Right	Cheek	A + B	QPSK	1	25	0525M	1:1	0.143	1.355	0.194	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.01	1	Right	Cheek	A + B	QPSK	25	12	0525M	1:1	0.123	1.315	0.162	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	0.06	0	Right	Tilt	A + B	QPSK	1	25	0525M	1:1	0.083	1.355	0.112	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	0.03	1	Right	Tilt	A + B	QPSK	25	12	0525M	1:1	0.069	1.315	0.091	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	0.03	0	Left	Cheek	A + B	QPSK	1	25	0525M	1:1	0.153	1.355	0.207	A5
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.09	1	Left	Cheek	A + B	QPSK	25	12	0525M	1:1	0.123	1.315	0.162	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	-0.15	0	Left	Tilt	A + B	QPSK	1	25	0525M	1:1	0.082	1.355	0.111	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.07	1	Left	Tilt	A + B	QPSK	25	12	0525M	1:1	0.073	1.315	0.096	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	10	0.03	0	Right	Cheek	A	QPSK	1	25	0525M	1:1	0.063	1.355	0.085	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	10	-0.13	1	Right	Cheek	A	QPSK	25	12	0525M	1:1	0.052	1.315	0.068	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	13	0.20	0	Right	Tilt	A	QPSK	1	25	0525M	1:1	0.031	1.355	0.042	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	13	0.20	1	Right	Tilt	A	QPSK	25	12	0525M	1:1	0.025	1.315	0.033	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	13	0.13	0	Left	Cheek	A	QPSK	1	25	0525M	1:1	0.067	1.355	0.091	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	13	0.15	1	Left	Cheek	A	QPSK	25	12	0525M	1:1	0.048	1.315	0.063	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	56	0.19	0	Left	Tilt	A	QPSK	1	25	0525M	1:1	0.034	1.355	0.046	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	56	0.18	1	Left	Tilt	A	QPSK	25	12	0525M	1:1	0.027	1.315	0.036	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-6
LTE Band 13 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	36	-0.14	0	Right	Cheek	A + B	QPSK	1	49	0525M	1:1	0.128	1.274	0.163	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	36	0.06	1	Right	Cheek	A + B	QPSK	25	25	0525M	1:1	0.114	1.245	0.142	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	36	0.13	0	Right	Tilt	A + B	QPSK	1	49	0525M	1:1	0.061	1.274	0.078	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	36	0.17	1	Right	Tilt	A + B	QPSK	25	25	0525M	1:1	0.053	1.245	0.066	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	36	0.10	0	Left	Cheek	A + B	QPSK	1	49	0525M	1:1	0.129	1.274	0.164	A6
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	36	0.04	1	Left	Cheek	A + B	QPSK	25	25	0525M	1:1	0.107	1.245	0.133	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	36	0.17	0	Left	Tilt	A + B	QPSK	1	49	0525M	1:1	0.061	1.274	0.078	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	36	0.04	1	Left	Tilt	A + B	QPSK	25	25	0525M	1:1	0.054	1.245	0.067	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	130	-0.12	0	Right	Cheek	A	QPSK	1	49	0525M	1:1	0.079	1.274	0.101	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	130	0.19	1	Right	Cheek	A	QPSK	25	25	0525M	1:1	0.063	1.245	0.078	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	130	0.17	0	Right	Tilt	A	QPSK	1	49	0525M	1:1	0.033	1.274	0.042	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	130	0.19	1	Right	Tilt	A	QPSK	25	25	0525M	1:1	0.024	1.245	0.030	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	130	0.11	0	Left	Cheek	A	QPSK	1	49	0525M	1:1	0.047	1.274	0.060	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	130	-0.16	1	Left	Cheek	A	QPSK	25	25	0525M	1:1	0.039	1.245	0.049	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	130	-0.08	0	Left	Tilt	A	QPSK	1	49	0525M	1:1	0.018	1.274	0.023	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	130	0.13	1	Left	Tilt	A	QPSK	25	25	0525M	1:1	0.017	1.245	0.021	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-7
LTE Band 14 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	36	0.04	0	Right	Cheek	A + B	QPSK	1	0	0525M	1:1	0.127	1.262	0.160	A7
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	36	0.18	1	Right	Cheek	A + B	QPSK	25	25	0525M	1:1	0.112	1.268	0.142	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	36	0.14	0	Right	Tilt	A + B	QPSK	1	0	0525M	1:1	0.061	1.262	0.077	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	36	0.17	1	Right	Tilt	A + B	QPSK	25	25	0525M	1:1	0.054	1.268	0.068	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	36	0.01	0	Left	Cheek	A + B	QPSK	1	0	0525M	1:1	0.112	1.262	0.141	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	36	0.07	1	Left	Cheek	A + B	QPSK	25	25	0525M	1:1	0.093	1.268	0.118	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	36	-0.17	0	Left	Tilt	A + B	QPSK	1	0	0525M	1:1	0.058	1.262	0.073	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	36	-0.13	1	Left	Tilt	A + B	QPSK	25	25	0525M	1:1	0.055	1.268	0.070	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	0	0.14	0	Right	Cheek	A	QPSK	1	0	2763M	1:1	0.113	1.262	0.143	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	0	0.09	1	Right	Cheek	A	QPSK	25	25	2763M	1:1	0.081	1.268	0.103	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	0	0.04	0	Right	Tilt	A	QPSK	1	0	2763M	1:1	0.051	1.262	0.064	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	0	0.16	1	Right	Tilt	A	QPSK	25	25	2763M	1:1	0.034	1.268	0.043	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	0	0.17	0	Left	Cheek	A	QPSK	1	0	2763M	1:1	0.069	1.262	0.087	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	0	0.11	1	Left	Cheek	A	QPSK	25	25	2763M	1:1	0.048	1.268	0.061	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	0	-0.17	0	Left	Tilt	A	QPSK	1	0	2763M	1:1	0.028	1.262	0.035	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	0	0.15	1	Left	Tilt	A	QPSK	25	25	2763M	1:1	0.014	1.268	0.018	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-8
LTE Band 26 (Cell) Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	0	0.14	0	Right	Cheek	A	QPSK	1	0	0412M	1:1	0.113	1.318	0.149	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	0	0.18	1	Right	Cheek	A	QPSK	36	18	0412M	1:1	0.095	1.300	0.124	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	0	0.18	0	Right	Tilt	A	QPSK	1	0	0412M	1:1	0.050	1.318	0.066	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	0	0.16	1	Right	Tilt	A	QPSK	36	18	0412M	1:1	0.038	1.300	0.049	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	0	0.12	0	Left	Cheek	A	QPSK	1	0	0412M	1:1	0.072	1.318	0.095	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	0	0.17	1	Left	Cheek	A	QPSK	36	18	0412M	1:1	0.067	1.300	0.087	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	0	0.17	0	Left	Tilt	A	QPSK	1	0	0412M	1:1	0.036	1.318	0.047	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	0	0.15	1	Left	Tilt	A	QPSK	36	18	0412M	1:1	0.032	1.300	0.042	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	0.00	0	Right	Cheek	A + B	QPSK	1	0	0412M	1:1	0.130	1.318	0.171	A8
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.06	1	Right	Cheek	A + B	QPSK	36	18	0412M	1:1	0.094	1.300	0.122	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.08	0	Right	Tilt	A + B	QPSK	1	0	0412M	1:1	0.058	1.318	0.076	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	-0.17	1	Right	Tilt	A + B	QPSK	36	18	0412M	1:1	0.036	1.300	0.047	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	0.08	0	Left	Cheek	A + B	QPSK	1	0	0412M	1:1	0.096	1.318	0.127	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.06	1	Left	Cheek	A + B	QPSK	36	18	0412M	1:1	0.070	1.300	0.091	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.15	0	Left	Tilt	A + B	QPSK	1	0	0412M	1:1	0.045	1.318	0.059	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	-0.14	1	Left	Tilt	A + B	QPSK	36	18	0412M	1:1	0.031	1.300	0.040	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-9
LTE Band 5 (Cell) Head SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna Config.	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																	(W/kg)		(W/kg)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	0	0.01	0	Right	Cheek	A	QPSK	1	0	0412M	1:1	0.127	1.483	0.188	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	-0.01	1	Right	Cheek	A	QPSK	25	0	0412M	1:1	0.108	1.503	0.162	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	23.90	0	0.16	0	Right	Cheek	A	QPSK	1	0	0412M	1:1	0.130	1.549	0.201	
	SCC	829.30	20453			5										1	24						
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.13	0	Right	Tilt	A	QPSK	1	0	0412M	1:1	0.048	1.483	0.071	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.15	1	Right	Tilt	A	QPSK	25	0	0412M	1:1	0.042	1.503	0.063	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	0	0.02	0	Left	Cheek	A	QPSK	1	0	0412M	1:1	0.076	1.483	0.113	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	0	0.04	1	Left	Cheek	A	QPSK	25	0	0412M	1:1	0.064	1.503	0.096	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	0	-0.02	0	Left	Tilt	A	QPSK	1	0	0412M	1:1	0.040	1.483	0.059	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	0	0.00	1	Left	Tilt	A	QPSK	25	0	0412M	1:1	0.032	1.503	0.048	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.05	0	Right	Cheek	A + B	QPSK	1	0	0412M	1:1	0.128	1.483	0.190	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.06	1	Right	Cheek	A + B	QPSK	25	0	0412M	1:1	0.101	1.503	0.152	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	23.90	72	0.00	0	Right	Cheek	A + B	QPSK	1	0	0412M	1:1	0.130	1.549	0.201	A9
	SCC	829.30	20453			5										1	24						
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.08	0	Right	Tilt	A + B	QPSK	1	0	0412M	1:1	0.061	1.483	0.090	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	-0.19	1	Right	Tilt	A + B	QPSK	25	0	0412M	1:1	0.041	1.503	0.062	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.09	0	Left	Cheek	A + B	QPSK	1	0	0412M	1:1	0.082	1.483	0.122	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.09	1	Left	Cheek	A + B	QPSK	25	0	0412M	1:1	0.064	1.503	0.096	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	-0.14	0	Left	Tilt	A + B	QPSK	1	0	0412M	1:1	0.032	1.483	0.047	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	-0.06	1	Left	Tilt	A + B	QPSK	25	0	0412M	1:1	0.024	1.503	0.036	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-10
NR Band n71 Head SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.13	0	Right	Cheek	0	DFT-S-OFDM	QPSK	1	1	0525M	1:1	0.087	1.265	0.110	A10
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	0.01	0	Right	Cheek	0	DFT-S-OFDM	QPSK	50	28	0525M	1:1	0.082	1.306	0.107	
680.50	136100	Mid	NR Band n71	20	24.0	22.90	A + B	0.15	1.5	Right	Cheek	0	CP-OFDM	QPSK	1	1	0525M	1:1	0.059	1.288	0.076	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.18	0	Right	Tilt	0	DFT-S-OFDM	QPSK	1	1	0525M	1:1	0.057	1.265	0.072	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	0.03	0	Right	Tilt	0	DFT-S-OFDM	QPSK	50	28	0525M	1:1	0.036	1.306	0.047	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.15	0	Left	Cheek	0	DFT-S-OFDM	QPSK	1	1	0525M	1:1	0.073	1.265	0.092	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.05	0	Left	Cheek	0	DFT-S-OFDM	QPSK	50	28	0525M	1:1	0.069	1.306	0.090	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.06	0	Left	Tilt	0	DFT-S-OFDM	QPSK	1	1	0525M	1:1	0.034	1.265	0.043	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	0.03	0	Left	Tilt	0	DFT-S-OFDM	QPSK	50	28	0525M	1:1	0.032	1.306	0.042	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	0.05	0	Right	Cheek	0	DFT-S-OFDM	QPSK	1	1	0412M	1:1	0.067	1.265	0.085	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.08	0	Right	Cheek	0	DFT-S-OFDM	QPSK	50	28	0412M	1:1	0.039	1.306	0.051	
680.50	136100	Mid	NR Band n71	20	24.0	22.90	A	0.16	1.5	Right	Cheek	0	CP-OFDM	QPSK	1	1	0412M	1:1	0.042	1.288	0.054	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	0.14	0	Right	Tilt	13	DFT-S-OFDM	QPSK	1	1	0412M	1:1	0.027	1.265	0.034	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.12	0	Right	Tilt	13	DFT-S-OFDM	QPSK	50	28	0412M	1:1	0.026	1.306	0.034	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	0.18	0	Left	Cheek	13	DFT-S-OFDM	QPSK	1	1	0412M	1:1	0.038	1.265	0.048	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	-0.08	0	Left	Cheek	13	DFT-S-OFDM	QPSK	50	28	0412M	1:1	0.050	1.306	0.065	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	0.13	0	Left	Tilt	13	DFT-S-OFDM	QPSK	1	1	0412M	1:1	0.011	1.265	0.014	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.19	0	Left	Tilt	13	DFT-S-OFDM	QPSK	50	28	0412M	1:1	0.017	1.306	0.022	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-11
NR Band n12 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	0.17	0	Right	Cheek	0	DFT-S-OFDM	QPSK	1	40	0412M	1:1	0.083	1.406	0.117	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	0.14	0	Right	Cheek	0	DFT-S-OFDM	QPSK	36	22	0412M	1:1	0.076	1.445	0.110	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	0.15	0	Right	Tilt	0	DFT-S-OFDM	QPSK	1	40	0412M	1:1	0.053	1.406	0.075	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.07	0	Right	Tilt	0	DFT-S-OFDM	QPSK	36	22	0412M	1:1	0.050	1.445	0.072	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.09	0	Left	Cheek	0	DFT-S-OFDM	QPSK	1	40	0412M	1:1	0.098	1.406	0.138	A11
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.08	0	Left	Cheek	0	DFT-S-OFDM	QPSK	36	22	0412M	1:1	0.092	1.445	0.133	
707.50	141500	Mid	NR Band n12	15	24.0	22.18	A + B	0.13	1.5	Left	Cheek	0	CP-OFDM	QPSK	1	1	0412M	1:1	0.064	1.521	0.097	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.18	0	Left	Tilt	0	DFT-S-OFDM	QPSK	1	40	0412M	1:1	0.041	1.406	0.058	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	0.03	0	Left	Tilt	0	DFT-S-OFDM	QPSK	36	22	0412M	1:1	0.047	1.445	0.068	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	-0.13	0	Right	Cheek	10	DFT-S-OFDM	QPSK	1	40	2763M	1:1	0.089	1.406	0.125	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	0.10	0	Right	Cheek	10	DFT-S-OFDM	QPSK	36	22	2763M	1:1	0.085	1.445	0.123	
707.50	141500	Mid	NR Band n12	15	24.0	22.18	A	0.19	1.5	Right	Cheek	10	CP-OFDM	QPSK	1	1	2763M	1:1	0.054	1.521	0.082	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	0.18	0	Right	Tilt	13	DFT-S-OFDM	QPSK	1	40	2763M	1:1	0.047	1.406	0.066	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	0.18	0	Right	Tilt	13	DFT-S-OFDM	QPSK	36	22	2763M	1:1	0.049	1.445	0.071	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	-0.06	0	Left	Cheek	13	DFT-S-OFDM	QPSK	1	40	2763M	1:1	0.066	1.406	0.093	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	0.11	0	Left	Cheek	13	DFT-S-OFDM	QPSK	36	22	2763M	1:1	0.068	1.445	0.098	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	0.15	0	Left	Tilt	56	DFT-S-OFDM	QPSK	1	40	2763M	1:1	0.043	1.406	0.060	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	0.12	0	Left	Tilt	56	DFT-S-OFDM	QPSK	36	22	2763M	1:1	0.039	1.445	0.056	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-12
NR Band n5 (cell) Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Side	Test Position	Antenna State	Waveform	Modulation	RB Size	RB Offset	Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	0.11	0	Right	Cheek	0	DFT-S-OFDM	QPSK	1	53	0356M	1:1	0.124	1.026	0.127	A12
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	0.11	0	Right	Cheek	72	DFT-S-OFDM	QPSK	50	28	0356M	1:1	0.122	1.084	0.132	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	23.23	A	0.12	1.5	Right	Cheek	0	CP-OFDM	QPSK	1	1	0356M	1:1	0.095	1.194	0.113	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	-0.18	0	Right	Tilt	72	DFT-S-OFDM	QPSK	1	53	0356M	1:1	0.040	1.026	0.041	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	0.14	0	Right	Tilt	72	DFT-S-OFDM	QPSK	50	28	0356M	1:1	0.044	1.084	0.048	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	0.12	0	Left	Cheek	0	DFT-S-OFDM	QPSK	1	53	0356M	1:1	0.112	1.026	0.115	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	0.12	0	Left	Cheek	0	DFT-S-OFDM	QPSK	50	28	0356M	1:1	0.094	1.084	0.102	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	0.13	0	Left	Tilt	0	DFT-S-OFDM	QPSK	1	53	0356M	1:1	0.052	1.026	0.053	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	0.01	0	Left	Tilt	0	DFT-S-OFDM	QPSK	50	28	0356M	1:1	0.046	1.084	0.050	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	-0.02	0	Right	Cheek	72	DFT-S-OFDM	QPSK	1	53	1840M	1:1	0.123	1.026	0.126	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.04	0	Right	Cheek	72	DFT-S-OFDM	QPSK	50	28	1840M	1:1	0.122	1.084	0.132	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	23.23	A + B	0.12	1.5	Right	Cheek	72	CP-OFDM	QPSK	1	1	1840M	1:1	0.077	1.194	0.092	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.19	0	Right	Tilt	72	DFT-S-OFDM	QPSK	1	53	1840M	1:1	0.123	1.026	0.126	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.00	0	Right	Tilt	72	DFT-S-OFDM	QPSK	50	28	1840M	1:1	0.121	1.084	0.131	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.13	0	Left	Cheek	72	DFT-S-OFDM	QPSK	1	53	1840M	1:1	0.072	1.026	0.074	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.14	0	Left	Cheek	72	DFT-S-OFDM	QPSK	50	28	1840M	1:1	0.077	1.084	0.083	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.11	0	Left	Tilt	72	DFT-S-OFDM	QPSK	1	53	1840M	1:1	0.030	1.026	0.031	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.15	0	Left	Tilt	72	DFT-S-OFDM	QPSK	50	28	1840M	1:1	0.033	1.084	0.036	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram												

11.2 Standalone Body-Worn SAR Data

Table 11-13
UMTS/CDMA Body-Worn SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	TDSO / SO32	26.0	24.26	0	0.02	15 mm	A	0356M	1:1	back	0.126	1.493	0.188	A13
820.10	564	CDMA BC10 (§90S)	TDSO / SO32	26.0	24.26	72	0.03	15 mm	A + B	0356M	1:1	back	0.117	1.493	0.175	
836.52	384	CDMA BC0 (§22H)	TDSO / SO32	26.0	24.26	9	-0.02	15 mm	A	0356M	1:1	back	0.174	1.493	0.260	A15
836.52	384	CDMA BC0 (§22H)	TDSO / SO32	26.0	24.26	72	0.05	15 mm	A + B	0356M	1:1	back	0.124	1.493	0.185	
836.60	4183	UMTS 850	RMC	25.8	24.48	9	0.00	15 mm	A	1840M	1:1	back	0.144	1.355	0.195	A17
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.13	15 mm	A + B	0356M	1:1	back	0.137	1.355	0.186	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-14
LTE Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	25.31	0	-0.07	0	A + B	0525M	QPSK	1	0	15 mm	back	1:1	0.227	1.119	0.254	A19
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	0.09	1	A + B	0525M	QPSK	50	25	15 mm	back	1:1	0.184	1.119	0.206	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	13	-0.01	0	A	0525M	QPSK	1	0	15 mm	back	1:1	0.150	1.119	0.168	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	13	0.00	1	A	0525M	QPSK	50	25	15 mm	back	1:1	0.121	1.119	0.135	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	-0.01	0	A + B	0525M	QPSK	1	25	15 mm	back	1:1	0.165	1.355	0.224	A21
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.03	1	A + B	0525M	QPSK	25	12	15 mm	back	1:1	0.138	1.315	0.181	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	18	0.06	0	A	0525M	QPSK	1	25	15 mm	back	1:1	0.100	1.355	0.136	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	18	0.12	1	A	0525M	QPSK	25	12	15 mm	back	1:1	0.083	1.315	0.109	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	-0.04	0	A + B	0525M	QPSK	1	49	15 mm	back	1:1	0.171	1.274	0.218	A23
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.02	1	A + B	0525M	QPSK	25	25	15 mm	back	1:1	0.148	1.245	0.184	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	12	0.04	0	A	0525M	QPSK	1	49	15 mm	back	1:1	0.135	1.274	0.172	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	12	0.04	1	A	0525M	QPSK	25	25	15 mm	back	1:1	0.108	1.245	0.134	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	-0.02	0	A + B	0525M	QPSK	1	0	15 mm	back	1:1	0.202	1.262	0.255	A25
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.13	1	A + B	0525M	QPSK	25	25	15 mm	back	1:1	0.142	1.268	0.180	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	12	0.06	0	A	0525M	QPSK	1	0	15 mm	back	1:1	0.113	1.262	0.143	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	12	0.10	1	A	0525M	QPSK	25	25	15 mm	back	1:1	0.099	1.268	0.126	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	45	0.00	0	A	0412M	QPSK	1	0	15 mm	back	1:1	0.127	1.318	0.167	A27
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	45	-0.01	1	A	0412M	QPSK	36	18	15 mm	back	1:1	0.106	1.300	0.138	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	0.10	0	A + B	0412M	QPSK	1	0	15 mm	back	1:1	0.109	1.318	0.144	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.06	1	A + B	0412M	QPSK	36	18	15 mm	back	1:1	0.080	1.300	0.104	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	9	0.02	0	A	0356M	QPSK	1	0	15 mm	back	1:1	0.165	1.483	0.245	A29
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	9	0.03	1	A	0356M	QPSK	25	0	15 mm	back	1:1	0.132	1.503	0.198	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.01	0	A + B	0356M	QPSK	1	0	15 mm	back	1:1	0.110	1.483	0.163	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.04	1	A + B	0356M	QPSK	25	0	15 mm	back	1:1	0.087	1.503	0.131	

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

Table 11-15
NR Body-Worn SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.01	0	0	0525M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.241	1.265	**0.305**	A31
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	0.02	0	0	0525M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.223	1.306	0.291	
680.50	136100	Mid	NR Band n71	20	24.0	22.90	A + B	-0.05	1.5	0	0525M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.163	1.288	0.210	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	-0.02	0	13	0525M	DFT-S-OFDM	QPSK	1	1	15 mm	back	1:1	0.156	1.265	0.197	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	-0.06	0	13	0525M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.158	1.306	0.206	
680.50	136100	Mid	NR Band n71	20	24.0	22.90	A	-0.03	1.5	13	0525M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.112	1.288	0.144	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	0.02	0	0	0525M	DFT-S-OFDM	QPSK	1	40	15 mm	back	1:1	0.170	1.406	0.239	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	0.09	0	0	0525M	DFT-S-OFDM	QPSK	36	22	15 mm	back	1:1	0.174	1.445	0.251	A33
707.50	141500	Mid	NR Band n12	15	24.0	22.18	A + B	-0.02	1.5	0	0525M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.136	1.521	0.207	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	0.10	0	18	0525M	DFT-S-OFDM	QPSK	1	40	15 mm	back	1:1	0.096	1.406	0.135	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	0.03	0	18	0525M	DFT-S-OFDM	QPSK	36	22	15 mm	back	1:1	0.097	1.445	0.140	
707.50	141500	Mid	NR Band n12	15	24.0	22.18	A	-0.13	1.5	18	0525M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.069	1.521	0.105	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	0.02	0	9	0356M	DFT-S-OFDM	QPSK	1	53	15 mm	back	1:1	0.146	1.026	0.150	A35
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	-0.07	0	9	0356M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.138	1.084	0.150	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	23.23	A	0.08	1.5	9	0356M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.082	1.194	0.098	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.20	0	72	0412M	DFT-S-OFDM	QPSK	1	53	15 mm	back	1:1	0.135	1.026	0.139	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.19	0	72	0412M	DFT-S-OFDM	QPSK	50	28	15 mm	back	1:1	0.142	1.084	0.154	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	23.23	A + B	0.05	1.5	72	0412M	CP-OFDM	QPSK	1	1	15 mm	back	1:1	0.087	1.194	0.104	

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

11.3 Standalone Hotspot SAR Data

Table 11-16
CDMA and UMTS Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	0	0.02	10 mm	A	0356M	1:1	back	0.251	1.549	0.389	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	0	0.03	10 mm	A	0356M	1:1	front	0.075	1.549	0.116	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	0	0.15	10 mm	A	0356M	1:1	bottom	0.089	1.549	0.138	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	0	0.02	10 mm	A	0356M	1:1	right	0.173	1.549	0.268	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.07	10 mm	A + B	0356M	1:1	back	0.281	1.549	0.435	A14
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.03	10 mm	A + B	0356M	1:1	front	0.083	1.549	0.129	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	0.00	10 mm	A + B	0356M	1:1	bottom	0.082	1.549	0.127	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.04	10 mm	A + B	0356M	1:1	right	0.186	1.549	0.288	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	0.06	10 mm	A + B	0356M	1:1	left	0.072	1.549	0.112	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	9	0.01	10 mm	A	0356M	1:1	back	0.333	1.570	0.523	A16
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	9	-0.02	10 mm	A	0356M	1:1	front	0.097	1.570	0.152	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	9	0.09	10 mm	A	0356M	1:1	bottom	0.110	1.570	0.173	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	9	0.01	10 mm	A	0356M	1:1	right	0.211	1.570	0.331	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	0.08	10 mm	A + B	0356M	1:1	back	0.258	1.570	0.405	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	0.06	10 mm	A + B	0356M	1:1	front	0.075	1.570	0.118	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	0.14	10 mm	A + B	0356M	1:1	bottom	0.073	1.570	0.115	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.03	10 mm	A + B	0356M	1:1	right	0.160	1.570	0.251	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.06	10 mm	A + B	0356M	1:1	left	0.076	1.570	0.119	
836.60	4183	UMTS 850	RMC	25.8	24.48	9	-0.06	10 mm	A	1840M	1:1	back	0.323	1.355	0.438	A18
836.60	4183	UMTS 850	RMC	25.8	24.48	9	0.00	10 mm	A	1840M	1:1	front	0.118	1.355	0.160	
836.60	4183	UMTS 850	RMC	25.8	24.48	9	0.08	10 mm	A	1840M	1:1	bottom	0.124	1.355	0.168	
836.60	4183	UMTS 850	RMC	25.8	24.48	9	0.03	10 mm	A	1840M	1:1	right	0.310	1.355	0.420	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	-0.17	10 mm	A + B	0356M	1:1	back	0.317	1.355	0.430	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.00	10 mm	A + B	0356M	1:1	front	0.103	1.355	0.140	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.05	10 mm	A + B	0356M	1:1	bottom	0.090	1.355	0.122	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.01	10 mm	A + B	0356M	1:1	right	0.320	1.355	0.434	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.07	10 mm	A + B	0356M	1:1	left	0.066	1.355	0.089	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-17
LTE Band 71 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	25.31	0	-0.05	0	A + B	0525M	QPSK	1	0	10 mm	back	1:1	0.283	1.119	0.317	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	0.04	1	A + B	0525M	QPSK	50	25	10 mm	back	1:1	0.216	1.119	0.242	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	0.06	0	A + B	0525M	QPSK	1	0	10 mm	front	1:1	0.172	1.119	0.192	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	0.04	1	A + B	0525M	QPSK	50	25	10 mm	front	1:1	0.134	1.119	0.150	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	0.00	0	A + B	0525M	QPSK	1	0	10 mm	bottom	1:1	0.081	1.119	0.091	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	0.02	1	A + B	0525M	QPSK	50	25	10 mm	bottom	1:1	0.062	1.119	0.069	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	0.01	0	A + B	0525M	QPSK	1	0	10 mm	right	1:1	0.502	1.119	0.562	A20
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	-0.03	1	A + B	0525M	QPSK	50	25	10 mm	right	1:1	0.409	1.119	0.458	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	0	0.02	0	A + B	0525M	QPSK	1	0	10 mm	left	1:1	0.193	1.119	0.216	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	0	-0.07	1	A + B	0525M	QPSK	50	25	10 mm	left	1:1	0.162	1.119	0.181	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	13	0.03	0	A	0525M	QPSK	1	0	10 mm	back	1:1	0.205	1.119	0.229	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	13	0.00	1	A	0525M	QPSK	50	25	10 mm	back	1:1	0.172	1.119	0.192	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	13	0.19	0	A	0525M	QPSK	1	0	10 mm	front	1:1	0.098	1.119	0.110	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	13	0.18	1	A	0525M	QPSK	50	25	10 mm	front	1:1	0.081	1.119	0.091	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	121	0.13	0	A	0525M	QPSK	1	0	10 mm	bottom	1:1	0.071	1.119	0.079	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	121	0.03	1	A	0525M	QPSK	50	25	10 mm	bottom	1:1	0.057	1.119	0.064	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	13	-0.06	0	A	0525M	QPSK	1	0	10 mm	right	1:1	0.380	1.119	0.425	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	13	0.01	1	A	0525M	QPSK	50	25	10 mm	right	1:1	0.298	1.119	0.333	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-18
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	24.48	0	0.15	0	A + B	0525M	QPSK	1	25	10 mm	back	1:1	0.286	1.355	0.388	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	0.07	1	A + B	0525M	QPSK	25	12	10 mm	back	1:1	0.239	1.315	0.314	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	-0.11	0	A + B	0525M	QPSK	1	25	10 mm	front	1:1	0.144	1.355	0.195	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	0.05	1	A + B	0525M	QPSK	25	12	10 mm	front	1:1	0.121	1.315	0.159	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	0.16	0	A + B	0525M	QPSK	1	25	10 mm	bottom	1:1	0.079	1.355	0.107	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	0.18	1	A + B	0525M	QPSK	25	12	10 mm	bottom	1:1	0.064	1.315	0.084	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	0.02	0	A + B	0525M	QPSK	1	25	10 mm	right	1:1	0.354	1.355	0.480	A22
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.02	1	A + B	0525M	QPSK	25	12	10 mm	right	1:1	0.298	1.315	0.392	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	0	0.15	0	A + B	0525M	QPSK	1	25	10 mm	left	1:1	0.148	1.355	0.201	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	0	-0.01	1	A + B	0525M	QPSK	25	12	10 mm	left	1:1	0.124	1.315	0.163	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	9	-0.18	0	A	0525M	QPSK	1	25	10 mm	back	1:1	0.196	1.355	0.266	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	9	-0.13	1	A	0525M	QPSK	25	12	10 mm	back	1:1	0.153	1.315	0.201	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	82	0.06	0	A	0525M	QPSK	1	25	10 mm	front	1:1	0.076	1.355	0.103	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	82	0.04	1	A	0525M	QPSK	25	12	10 mm	front	1:1	0.063	1.315	0.083	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	56	-0.06	0	A	0525M	QPSK	1	25	10 mm	bottom	1:1	0.084	1.355	0.114	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	56	0.00	1	A	0525M	QPSK	25	12	10 mm	bottom	1:1	0.070	1.315	0.092	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	9	-0.06	0	A	0525M	QPSK	1	25	10 mm	right	1:1	0.232	1.355	0.314	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	9	-0.01	1	A	0525M	QPSK	25	12	10 mm	right	1:1	0.197	1.315	0.259	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-19
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	24.75	108	0.05	0	A + B	0525M	QPSK	1	49	10 mm	back	1:1	0.342	1.274	0.436	A24
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	0.02	1	A + B	0525M	QPSK	25	25	10 mm	back	1:1	0.282	1.245	0.351	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	0.01	0	A + B	0525M	QPSK	1	49	10 mm	front	1:1	0.142	1.274	0.181	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	0.01	1	A + B	0525M	QPSK	25	25	10 mm	front	1:1	0.116	1.245	0.144	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	0.12	0	A + B	0525M	QPSK	1	49	10 mm	bottom	1:1	0.093	1.274	0.118	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	0.05	1	A + B	0525M	QPSK	25	25	10 mm	bottom	1:1	0.076	1.245	0.095	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	-0.02	0	A + B	0525M	QPSK	1	49	10 mm	right	1:1	0.282	1.274	0.359	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.09	1	A + B	0525M	QPSK	25	25	10 mm	right	1:1	0.234	1.245	0.291	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	0.15	0	A + B	0525M	QPSK	1	49	10 mm	left	1:1	0.158	1.274	0.201	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	0.01	1	A + B	0525M	QPSK	25	25	10 mm	left	1:1	0.126	1.245	0.157	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	12	-0.11	0	A	0525M	QPSK	1	49	10 mm	back	1:1	0.242	1.274	0.308	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	12	-0.07	1	A	0525M	QPSK	25	25	10 mm	back	1:1	0.207	1.245	0.258	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	12	0.03	0	A	0525M	QPSK	1	49	10 mm	front	1:1	0.093	1.274	0.118	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	12	-0.03	1	A	0525M	QPSK	25	25	10 mm	front	1:1	0.084	1.245	0.105	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	12	0.02	0	A	0525M	QPSK	1	49	10 mm	bottom	1:1	0.093	1.274	0.118	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	12	0.06	1	A	0525M	QPSK	25	25	10 mm	bottom	1:1	0.078	1.245	0.097	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	12	0.01	0	A	0525M	QPSK	1	49	10 mm	right	1:1	0.188	1.274	0.240	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	12	0.05	1	A	0525M	QPSK	25	25	10 mm	right	1:1	0.161	1.245	0.200	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-20
LTE Band 14 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	0.09	0	A + B	0525M	QPSK	1	0	10 mm	back	1:1	0.350	1.262	0.442	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	0.09	1	A + B	0525M	QPSK	25	25	10 mm	back	1:1	0.282	1.268	0.358	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	-0.09	0	A + B	0525M	QPSK	1	0	10 mm	front	1:1	0.147	1.262	0.186	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	0.05	1	A + B	0525M	QPSK	25	25	10 mm	front	1:1	0.108	1.268	0.137	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	0.00	0	A + B	0525M	QPSK	1	0	10 mm	bottom	1:1	0.096	1.262	0.121	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.04	1	A + B	0525M	QPSK	25	25	10 mm	bottom	1:1	0.081	1.268	0.103	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	-0.02	0	A + B	0525M	QPSK	1	0	10 mm	right	1:1	0.364	1.262	0.459	A26
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.04	1	A + B	0525M	QPSK	25	25	10 mm	right	1:1	0.273	1.268	0.346	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	0.00	0	A + B	0525M	QPSK	1	0	10 mm	left	1:1	0.168	1.262	0.212	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	0.07	1	A + B	0525M	QPSK	25	25	10 mm	left	1:1	0.121	1.268	0.153	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	12	-0.10	0	A	0525M	QPSK	1	0	10 mm	back	1:1	0.210	1.262	0.265	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	12	0.00	1	A	0525M	QPSK	25	25	10 mm	back	1:1	0.195	1.268	0.247	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	12	-0.02	0	A	0525M	QPSK	1	0	10 mm	front	1:1	0.090	1.262	0.114	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	12	0.10	1	A	0525M	QPSK	25	25	10 mm	front	1:1	0.073	1.268	0.093	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	12	0.11	0	A	0525M	QPSK	1	0	10 mm	bottom	1:1	0.084	1.262	0.106	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	12	0.12	1	A	0525M	QPSK	25	25	10 mm	bottom	1:1	0.071	1.268	0.090	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	12	0.04	0	A	0525M	QPSK	1	0	10 mm	right	1:1	0.213	1.262	0.269	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	12	0.09	1	A	0525M	QPSK	25	25	10 mm	right	1:1	0.168	1.268	0.213	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-21
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	45	-0.19	0	A	0412M	QPSK	1	0	10 mm	back	1:1	0.299	1.318	0.394	A28
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	45	-0.06	1	A	0412M	QPSK	36	18	10 mm	back	1:1	0.254	1.300	0.330	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	45	-0.06	0	A	0412M	QPSK	1	0	10 mm	front	1:1	0.067	1.318	0.088	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	45	0.05	1	A	0412M	QPSK	36	18	10 mm	front	1:1	0.055	1.300	0.072	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	45	0.06	0	A	0412M	QPSK	1	0	10 mm	bottom	1:1	0.111	1.318	0.146	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	45	0.06	1	A	0412M	QPSK	36	18	10 mm	bottom	1:1	0.090	1.300	0.117	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	45	-0.04	0	A	0412M	QPSK	1	0	10 mm	right	1:1	0.188	1.318	0.248	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	45	-0.03	1	A	0412M	QPSK	36	18	10 mm	right	1:1	0.155	1.300	0.202	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	0.03	0	A + B	0412M	QPSK	1	0	10 mm	back	1:1	0.226	1.318	0.298	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.04	1	A + B	0412M	QPSK	36	18	10 mm	back	1:1	0.174	1.300	0.226	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.16	0	A + B	0412M	QPSK	1	0	10 mm	front	1:1	0.088	1.318	0.116	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.10	1	A + B	0412M	QPSK	36	18	10 mm	front	1:1	0.071	1.300	0.092	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	0.10	0	A + B	0412M	QPSK	1	0	10 mm	bottom	1:1	0.074	1.318	0.098	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.10	1	A + B	0412M	QPSK	36	18	10 mm	bottom	1:1	0.057	1.300	0.074	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.04	0	A + B	0412M	QPSK	1	0	10 mm	right	1:1	0.163	1.318	0.215	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	-0.04	1	A + B	0412M	QPSK	36	18	10 mm	right	1:1	0.130	1.300	0.169	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	0.03	0	A + B	0412M	QPSK	1	0	10 mm	left	1:1	0.081	1.318	0.107	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.03	1	A + B	0412M	QPSK	36	18	10 mm	left	1:1	0.067	1.300	0.087	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-22
LTE Band 5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																								
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.																	(W/kg)		(W/kg)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	9	-0.12	0	A	0356M	QPSK	1	0	10 mm	back	1:1	0.318	1.483	0.472	A30
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	9	0.00	1	A	0356M	QPSK	25	0	10 mm	back	1:1	0.230	1.503	0.346	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	23.90	9	-0.03	0	A	0356M	QPSK	1	0	10 mm	back	1:1	0.290	1.549	0.449	
	SCC	829.30	20453			5									1	24							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	9	0.00	0	A	0356M	QPSK	1	0	10 mm	front	1:1	0.093	1.483	0.138	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	9	0.07	1	A	0356M	QPSK	25	0	10 mm	front	1:1	0.076	1.503	0.114	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	0	-0.02	0	A	0356M	QPSK	1	0	10 mm	bottom	1:1	0.114	1.483	0.169	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	0	0.06	1	A	0356M	QPSK	25	0	10 mm	bottom	1:1	0.092	1.503	0.138	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	0	-0.02	0	A	0356M	QPSK	1	0	10 mm	right	1:1	0.207	1.483	0.307	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	0	-0.07	1	A	0356M	QPSK	25	0	10 mm	right	1:1	0.171	1.503	0.257	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.07	0	A + B	0356M	QPSK	1	0	10 mm	back	1:1	0.233	1.483	0.346	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.07	1	A + B	0356M	QPSK	25	0	10 mm	back	1:1	0.186	1.503	0.280	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.07	0	A + B	0356M	QPSK	1	0	10 mm	front	1:1	0.091	1.483	0.135	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.11	1	A + B	0356M	QPSK	25	0	10 mm	front	1:1	0.069	1.503	0.104	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.07	0	A + B	0356M	QPSK	1	0	10 mm	bottom	1:1	0.074	1.483	0.110	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.12	1	A + B	0356M	QPSK	25	0	10 mm	bottom	1:1	0.056	1.503	0.084	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	-0.01	0	A + B	0356M	QPSK	1	0	10 mm	right	1:1	0.144	1.483	0.214	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	-0.06	1	A + B	0356M	QPSK	25	0	10 mm	right	1:1	0.115	1.503	0.173	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	0.00	0	A + B	0356M	QPSK	1	0	10 mm	left	1:1	0.084	1.483	0.125	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	-0.03	1	A + B	0356M	QPSK	25	0	10 mm	left	1:1	0.068	1.503	0.102	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-23
NR Band n71 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.00	0.0	0	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.296	1.265	0.374	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.04	0.0	0	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.279	1.306	0.364	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.02	0.0	0	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.174	1.265	0.220	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	0.07	0.0	0	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.167	1.306	0.218	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.03	0.0	0	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.089	1.265	0.113	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	0.10	0.0	0	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.087	1.306	0.114	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.07	0.0	0	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.484	1.265	**0.612**	A32
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	0.07	0.0	0	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.464	1.306	**0.606**	
680.50	136100	Mid	NR Band n71	20	24.0	22.90	A + B	-0.08	1.5	0	0525M	CP-OFDM	QPSK	1	1	10 mm	right	1:1	0.326	1.288	0.420	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.00	0.0	0	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	left	1:1	0.192	1.265	0.243	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.12	0.0	0	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	left	1:1	0.182	1.306	0.238	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	0.01	0.0	13	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.185	1.265	0.234	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.06	0.0	13	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.185	1.306	0.242	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	-0.11	0.0	13	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.101	1.265	0.128	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	0.00	0.0	13	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.106	1.306	0.138	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	-0.10	0.0	121	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.059	1.265	0.075	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	-0.14	0.0	121	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.054	1.306	0.071	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A	-0.01	0.0	13	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.378	1.265	0.478	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A	-0.03	0.0	13	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.370	1.306	0.483	
680.50	136100	Mid	NR Band n71	20	24.0	22.90	A	0.05	1.5	13	0525M	CP-OFDM	QPSK	1	1	10 mm	right	1:1	0.268	1.288	0.345	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-24
NR Band n12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	0.10	0.0	0	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	back	1:1	0.302	1.406	0.425	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	0.17	0.0	0	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	back	1:1	0.293	1.445	0.423	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.02	0.0	0	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	front	1:1	0.152	1.406	0.214	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.02	0.0	0	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	front	1:1	0.149	1.445	0.215	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.01	0.0	0	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	bottom	1:1	0.094	1.406	0.132	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	0.00	0.0	0	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	bottom	1:1	0.090	1.445	0.130	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.09	0.0	0	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	right	1:1	0.341	1.406	0.479	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.20	0.0	0	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	right	1:1	0.347	1.445	0.501	A34
707.50	141500	Mid	NR Band n12	15	24.0	22.18	A + B	-0.14	1.5	0	0525M	CP-OFDM	QPSK	1	1	10 mm	right	1:1	0.293	1.521	0.446	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	0.01	0.0	0	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	left	1:1	0.146	1.406	0.205	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	0.06	0.0	0	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	left	1:1	0.153	1.445	0.221	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	0.07	0.0	9	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	back	1:1	0.183	1.406	0.257	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	0.03	0.0	9	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	back	1:1	0.184	1.445	0.266	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	0.08	0.0	82	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	front	1:1	0.083	1.406	0.117	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	0.06	0.0	82	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	front	1:1	0.080	1.445	0.116	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	-0.09	0.0	56	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	bottom	1:1	0.076	1.406	0.107	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	0.15	0.0	56	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	bottom	1:1	0.076	1.445	0.110	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A	-0.03	0.0	9	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	right	1:1	0.215	1.406	0.302	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A	-0.10	0.0	9	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	right	1:1	0.212	1.445	0.306	
707.50	141500	Mid	NR Band n12	15	24.0	22.18	A	-0.17	1.5	9	0525M	CP-OFDM	QPSK	1	1	10 mm	right	1:1	0.159	1.521	0.242	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 11-25
NR Band n5 (Cell) Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	-0.12	0	9	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	back	1:1	0.268	1.026	0.275	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	-0.09	0	9	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.269	1.084	0.292	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	23.23	A	-0.03	1.5	9	0412M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.176	1.194	0.210	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	-0.02	0	9	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	front	1:1	0.101	1.026	0.104	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	-0.04	0	9	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.100	1.084	0.108	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	0.00	0	0	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	bottom	1:1	0.106	1.026	0.109	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	0.07	0	0	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.107	1.084	0.116	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A	-0.02	0	0	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	right	1:1	0.197	1.026	0.202	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A	-0.02	0	0	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.201	1.084	0.218	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.19	0	72	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	back	1:1	0.330	1.026	0.339	A36
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.02	0	72	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.292	1.084	0.317	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	23.23	A + B	0.07	1.5	72	0412M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.184	1.194	0.220	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.01	0	72	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	front	1:1	0.092	1.026	0.094	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.04	0	72	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.090	1.084	0.098	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.03	0	72	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	bottom	1:1	0.062	1.026	0.064	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.01	0	72	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.063	1.084	0.068	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	-0.09	0	72	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	right	1:1	0.162	1.026	0.166	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	-0.02	0	72	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.168	1.084	0.182	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.02	0	72	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	left	1:1	0.070	1.026	0.072	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.02	0	72	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	left	1:1	0.073	1.084	0.079	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram									

11.4 Standalone UMPC Body SAR

Table 11-26
CDMA and UMTS UMPC Body SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Duty Cycle	Side	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.07	10 mm	A + B	0412M	1:1	back	0.421	1.549	0.652	A37
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	0.00	10 mm	A + B	0412M	1:1	front	0.300	1.549	0.465	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.01	10 mm	A + B	0412M	1:1	bottom	0.217	1.549	0.336	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.02	10 mm	A + B	0412M	1:1	right	0.179	1.549	0.277	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.03	72	-0.02	10 mm	A + B	0412M	1:1	back	0.466	1.574	0.733	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.01	10 mm	A + B	0412M	1:1	back	0.489	1.570	**0.768**	A38
848.31	777	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.02	72	-0.05	10 mm	A + B	0412M	1:1	back	0.484	1.578	0.764	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.03	10 mm	A + B	0412M	1:1	front	0.297	1.570	0.466	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	0.04	10 mm	A + B	0412M	1:1	bottom	0.274	1.570	0.430	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.01	10 mm	A + B	0412M	1:1	right	0.165	1.570	0.259	
826.40	4132	UMTS 850	RMC	25.8	24.47	72	-0.15	10 mm	A + B	1840M	1:1	back	0.459	1.358	0.623	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.03	10 mm	A + B	1840M	1:1	back	0.478	1.355	0.648	A39
846.60	4233	UMTS 850	RMC	25.8	24.35	72	-0.09	10 mm	A + B	1840M	1:1	back	0.438	1.396	0.611	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.01	10 mm	A + B	1840M	1:1	front	0.321	1.355	0.435	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.02	10 mm	A + B	1840M	1:1	bottom	0.286	1.355	0.388	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.05	10 mm	A + B	1840M	1:1	right	0.245	1.355	0.332	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram				

Table 11-27
LTE Band 71 UMPC Body SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	25.31	9	0.03	0	A + B	0525M	QPSK	1	0	10 mm	back	1:1	0.413	1.119	0.462	A40
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	9	0.01	1	A + B	0525M	QPSK	50	25	10 mm	back	1:1	0.314	1.119	0.351	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	18	0.05	0	A + B	0525M	QPSK	1	0	10 mm	front	1:1	0.266	1.119	0.298	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	18	0.00	1	A + B	0525M	QPSK	50	25	10 mm	front	1:1	0.211	1.119	0.236	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	9	-0.11	0	A + B	0525M	QPSK	1	0	10 mm	bottom	1:1	0.253	1.119	0.283	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	9	0.02	1	A + B	0525M	QPSK	50	25	10 mm	bottom	1:1	0.190	1.119	0.213	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	18	-0.12	0	A + B	0525M	QPSK	1	0	10 mm	right	1:1	0.330	1.119	0.369	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	18	-0.05	1	A + B	0525M	QPSK	50	25	10 mm	right	1:1	0.266	1.119	0.298	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-28
LTE Band 12 UMPC Body SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	24.48	9	0.04	0	A + B	0525M	QPSK	1	25	10 mm	back	1:1	0.410	1.355	0.556	A41
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	9	-0.04	1	A + B	0525M	QPSK	25	12	10 mm	back	1:1	0.350	1.315	0.460	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	9	-0.06	0	A + B	0525M	QPSK	1	25	10 mm	front	1:1	0.259	1.355	0.351	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	9	0.01	1	A + B	0525M	QPSK	25	12	10 mm	front	1:1	0.217	1.315	0.285	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	9	-0.08	0	A + B	0525M	QPSK	1	25	10 mm	bottom	1:1	0.209	1.355	0.283	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	9	0.15	1	A + B	0525M	QPSK	25	12	10 mm	bottom	1:1	0.172	1.315	0.226	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	117	-0.01	0	A + B	0525M	QPSK	1	25	10 mm	right	1:1	0.196	1.355	0.266	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	117	-0.08	1	A + B	0525M	QPSK	25	12	10 mm	right	1:1	0.165	1.315	0.217	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-29
LTE Band 13 UMPC Body SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	24.75	108	-0.02	0	A + B	0525M	QPSK	1	49	10 mm	back	1:1	0.545	1.274	0.694	A42
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.03	1	A + B	0525M	QPSK	25	25	10 mm	back	1:1	0.440	1.245	0.548	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	0.00	0	A + B	0525M	QPSK	1	49	10 mm	front	1:1	0.413	1.274	0.526	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.03	1	A + B	0525M	QPSK	25	25	10 mm	front	1:1	0.334	1.245	0.416	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	0.15	0	A + B	0525M	QPSK	1	49	10 mm	bottom	1:1	0.259	1.274	0.330	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	0.01	1	A + B	0525M	QPSK	25	25	10 mm	bottom	1:1	0.210	1.245	0.261	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	-0.01	0	A + B	0525M	QPSK	1	49	10 mm	right	1:1	0.185	1.274	0.236	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.10	1	A + B	0525M	QPSK	25	25	10 mm	right	1:1	0.144	1.245	0.179	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-30
LTE Band 14 UMPC Body SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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.																				
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	0.11	0	A + B	0525M	QPSK	1	0	10 mm	back	1:1	0.557	1.262	0.703	A43
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	0.09	1	A + B	0525M	QPSK	25	25	10 mm	back	1:1	0.457	1.268	0.579	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	0.01	0	A + B	0525M	QPSK	1	0	10 mm	front	1:1	0.433	1.262	0.546	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.01	1	A + B	0525M	QPSK	25	25	10 mm	front	1:1	0.346	1.268	0.439	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	-0.02	0	A + B	0525M	QPSK	1	0	10 mm	bottom	1:1	0.295	1.262	0.372	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.03	1	A + B	0525M	QPSK	25	25	10 mm	bottom	1:1	0.239	1.268	0.303	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	-0.07	0	A + B	0525M	QPSK	1	0	10 mm	right	1:1	0.243	1.262	0.307	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.04	1	A + B	0525M	QPSK	25	25	10 mm	right	1:1	0.182	1.268	0.231	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-31
LTE Band 26 (Cell) UMPC Body SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	24.60	72	0.04	0	A + B	0356M	QPSK	1	0	10 mm	back	1:1	0.442	1.318	0.583	A44
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.06	1	A + B	0356M	QPSK	36	18	10 mm	back	1:1	0.374	1.300	0.486	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	0.00	0	A + B	0356M	QPSK	1	0	10 mm	front	1:1	0.320	1.318	0.422	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.04	1	A + B	0356M	QPSK	36	18	10 mm	front	1:1	0.263	1.300	0.342	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.01	0	A + B	0356M	QPSK	1	0	10 mm	bottom	1:1	0.282	1.318	0.372	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	0.05	1	A + B	0356M	QPSK	36	18	10 mm	bottom	1:1	0.250	1.300	0.325	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.02	0	A + B	0356M	QPSK	1	0	10 mm	right	1:1	0.206	1.318	0.272	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	-0.03	1	A + B	0356M	QPSK	36	18	10 mm	right	1:1	0.172	1.300	0.224	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-32
LTE Band 5 (Cell) UMPC Body SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	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	25.8	24.09	72	0.17	0	A + B	0412M	QPSK	1	0	10 mm	back	1:1	0.464	1.483	0.688	A45
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.05	1	A + B	0412M	QPSK	25	0	10 mm	back	1:1	0.376	1.503	0.565	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	23.90	72	-0.13	0	A + B	0412M	QPSK	1	0	10 mm	back	1:1	0.436	1.549	0.675	
	SCC	829.30	20453			5									1	24							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	-0.02	0	A + B	0412M	QPSK	1	0	10 mm	front	1:1	0.327	1.483	0.485	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.01	1	A + B	0412M	QPSK	25	0	10 mm	front	1:1	0.261	1.503	0.392	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	108	0.12	0	A + B	0412M	QPSK	1	0	10 mm	bottom	1:1	0.307	1.483	0.455	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	108	-0.09	1	A + B	0412M	QPSK	25	0	10 mm	bottom	1:1	0.239	1.503	0.359	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	109	0.03	0	A + B	0412M	QPSK	1	0	10 mm	right	1:1	0.235	1.483	0.349	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	109	0.03	1	A + B	0412M	QPSK	25	0	10 mm	right	1:1	0.190	1.503	0.286	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram												

Table 11-33
NR Band n71 UMPC Body SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.00	0.0	9	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	back	1:1	0.458	1.265	0.579	A46
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	0.06	0.0	9	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.428	1.306	0.559	
680.50	136100	Mid	NR Band n71	20	24.0	22.90	A + B	0.08	1.5	9	0525M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.313	1.288	0.403	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.03	0.0	18	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	front	1:1	0.271	1.265	0.343	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.05	0.0	18	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.259	1.306	0.338	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.18	0.0	9	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	bottom	1:1	0.241	1.265	0.305	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.01	0.0	9	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.225	1.306	0.294	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.11	0.0	18	0525M	DFT-S-OFDM	QPSK	1	1	10 mm	right	1:1	0.339	1.265	0.429	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.01	0.0	18	0525M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.308	1.306	0.402	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-34
NR Band n12 UMPC Body SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	0.03	0.0	9	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	back	1:1	0.455	1.406	0.640	A47
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.02	0.0	9	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	back	1:1	0.436	1.445	0.630	
707.50	141500	Mid	NR Band n12	15	24.0	22.18	A + B	0.03	1.5	9	0525M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.302	1.521	0.459	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.01	0.0	9	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	front	1:1	0.263	1.406	0.370	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.01	0.0	9	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	front	1:1	0.251	1.445	0.363	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	0.14	0.0	9	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	bottom	1:1	0.178	1.406	0.250	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	0.02	0.0	9	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	bottom	1:1	0.175	1.445	0.253	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.13	0.0	117	0525M	DFT-S-OFDM	QPSK	1	40	10 mm	right	1:1	0.223	1.406	0.314	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.05	0.0	117	0525M	DFT-S-OFDM	QPSK	36	22	10 mm	right	1:1	0.224	1.445	0.324	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-35
NR Band n5 (Cell) UMPC Body SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	MPR [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.00	0	72	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	back	1:1	0.474	1.026	0.486	A48
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	-0.06	0	72	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	back	1:1	0.465	1.084	0.504	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	23.23	A + B	-0.03	1.5	72	0412M	CP-OFDM	QPSK	1	1	10 mm	back	1:1	0.336	1.194	0.401	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.00	0	72	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	front	1:1	0.312	1.026	0.320	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.01	0	72	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	front	1:1	0.316	1.084	0.343	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.03	0	108	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	bottom	1:1	0.267	1.026	0.274	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	-0.09	0	108	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	bottom	1:1	0.262	1.084	0.284	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.01	0	109	0412M	DFT-S-OFDM	QPSK	1	53	10 mm	right	1:1	0.160	1.026	0.164	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	-0.01	0	109	0412M	DFT-S-OFDM	QPSK	50	28	10 mm	right	1:1	0.166	1.084	0.180	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram									

11.5 Standalone UMPC Extremity SAR

Table 11-36
CDMA and UMTS UMPC Extremity SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.06	0 mm	A + B	0412M	1:1	back	0.885	1.549	1.371	A49
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.02	0 mm	A + B	0412M	1:1	front	0.646	1.549	1.001	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	0.08	0 mm	A + B	0412M	1:1	bottom	0.593	1.549	0.919	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	26.0	24.10	72	-0.20	0 mm	A + B	0412M	1:1	right	0.619	1.549	0.959	
824.70	1013	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.03	72	-0.18	0 mm	A + B	0412M	1:1	back	1.000	1.574	1.574	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.14	0 mm	A + B	0412M	1:1	back	1.010	1.570	1.586	A50
848.31	777	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.02	72	-0.19	0 mm	A + B	0412M	1:1	back	0.996	1.578	1.572	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.01	0 mm	A + B	0412M	1:1	front	0.633	1.570	0.994	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.12	0 mm	A + B	0412M	1:1	bottom	0.699	1.570	1.097	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	26.0	24.04	72	-0.16	0 mm	A + B	0412M	1:1	right	0.690	1.570	1.083	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	-0.20	0 mm	A + B	1840M	1:1	back	1.100	1.355	1.491	A51
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.02	0 mm	A + B	1840M	1:1	front	0.639	1.355	0.866	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	-0.13	0 mm	A + B	1840M	1:1	bottom	0.687	1.355	0.931	
836.60	4183	UMTS 850	RMC	25.8	24.48	72	0.00	0 mm	A + B	1840M	1:1	right	0.742	1.355	1.005	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-37
LTE Band 71 UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	9	-0.04	0	A + B	0525M	QPSK	1	0	0 mm	back	1:1	1.020	1.119	1.141	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	9	-0.05	1	A + B	0525M	QPSK	50	25	0 mm	back	1:1	0.792	1.119	0.886	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	18	0.02	0	A + B	0525M	QPSK	1	0	0 mm	front	1:1	0.649	1.119	0.726	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	18	0.00	1	A + B	0525M	QPSK	50	25	0 mm	front	1:1	0.497	1.119	0.556	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	18	-0.06	0	A + B	0525M	QPSK	1	0	0 mm	bottom	1:1	1.170	1.119	1.309	A52
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	18	-0.02	1	A + B	0525M	QPSK	50	25	0 mm	bottom	1:1	0.917	1.119	1.026	
680.50	133297	Mid	LTE Band 71	20	25.8	25.31	117	-0.13	0	A + B	0525M	QPSK	1	0	0 mm	right	1:1	1.130	1.119	1.264	
680.50	133297	Mid	LTE Band 71	20	24.8	24.31	117	-0.12	1	A + B	0525M	QPSK	50	25	0 mm	right	1:1	0.855	1.119	0.957	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams				

Table 11-38
LTE Band 12 UMPC Extremity SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	9	-0.10	0	A + B	0525M	QPSK	1	25	0 mm	back	1:1	1.010	1.355	1.369	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	9	-0.11	1	A + B	0525M	QPSK	25	12	0 mm	back	1:1	0.845	1.315	1.111	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	9	0.01	0	A + B	0525M	QPSK	1	25	0 mm	front	1:1	0.632	1.355	0.856	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	9	0.01	1	A + B	0525M	QPSK	25	12	0 mm	front	1:1	0.528	1.315	0.694	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	9	0.03	0	A + B	0525M	QPSK	1	25	0 mm	bottom	1:1	0.811	1.355	1.099	
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	9	-0.04	1	A + B	0525M	QPSK	25	12	0 mm	bottom	1:1	0.706	1.315	0.928	
707.50	23095	Mid	LTE Band 12	10	25.8	24.48	108	-0.06	0	A + B	0525M	QPSK	1	25	0 mm	right	1:1	1.230	1.355	1.667	A53
707.50	23095	Mid	LTE Band 12	10	24.8	23.61	108	-0.05	1	A + B	0525M	QPSK	25	12	0 mm	right	1:1	1.040	1.315	1.368	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-39
LTE Band 13 UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	0.01	0	A + B	0525M	QPSK	1	49	0 mm	back	1:1	1.190	1.274	1.516	A54
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.09	1	A + B	0525M	QPSK	25	25	0 mm	back	1:1	0.978	1.245	1.218	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	0.02	0	A + B	0525M	QPSK	1	49	0 mm	front	1:1	0.828	1.274	1.055	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.02	1	A + B	0525M	QPSK	25	25	0 mm	front	1:1	0.672	1.245	0.837	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	-0.09	0	A + B	0525M	QPSK	1	49	0 mm	bottom	1:1	0.886	1.274	1.129	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.11	1	A + B	0525M	QPSK	25	25	0 mm	bottom	1:1	0.734	1.245	0.914	
782.00	23230	Mid	LTE Band 13	10	25.8	24.75	108	-0.16	0	A + B	0525M	QPSK	1	49	0 mm	right	1:1	0.937	1.274	1.194	
782.00	23230	Mid	LTE Band 13	10	24.8	23.85	108	-0.09	1	A + B	0525M	QPSK	25	25	0 mm	right	1:1	0.776	1.245	0.966	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-40
LTE Band 14 UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	-0.18	0	A + B	0525M	QPSK	1	0	0 mm	back	1:1	1.180	1.262	1.489	A55
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.19	1	A + B	0525M	QPSK	25	25	0 mm	back	1:1	0.978	1.268	1.240	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	0.01	0	A + B	0525M	QPSK	1	0	0 mm	front	1:1	0.848	1.262	1.070	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	0.00	1	A + B	0525M	QPSK	25	25	0 mm	front	1:1	0.673	1.268	0.853	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	-0.17	0	A + B	0525M	QPSK	1	0	0 mm	bottom	1:1	0.845	1.262	1.066	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.11	1	A + B	0525M	QPSK	25	25	0 mm	bottom	1:1	0.707	1.268	0.896	
793.00	23330	Mid	LTE Band 14	10	25.8	24.79	108	-0.13	0	A + B	0525M	QPSK	1	0	0 mm	right	1:1	0.949	1.262	1.198	
793.00	23330	Mid	LTE Band 14	10	24.8	23.77	108	-0.12	1	A + B	0525M	QPSK	25	25	0 mm	right	1:1	0.753	1.268	0.955	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams			

Table 11-41
LTE Band 26 (Cell) UMPC Extremity SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.15	0	A + B	0356M	QPSK	1	0	0 mm	back	1:1	1.080	1.318	1.423	A56
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	-0.13	1	A + B	0356M	QPSK	36	18	0 mm	back	1:1	0.883	1.300	1.148	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.02	0	A + B	0356M	QPSK	1	0	0 mm	front	1:1	0.760	1.318	1.002	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	-0.01	1	A + B	0356M	QPSK	36	18	0 mm	front	1:1	0.623	1.300	0.810	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.19	0	A + B	0356M	QPSK	1	0	0 mm	bottom	1:1	0.650	1.318	0.857	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	-0.19	1	A + B	0356M	QPSK	36	18	0 mm	bottom	1:1	0.521	1.300	0.677	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.8	24.60	72	-0.14	0	A + B	0356M	QPSK	1	0	0 mm	right	1:1	0.567	1.318	0.747	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.8	23.66	72	-0.12	1	A + B	0356M	QPSK	36	18	0 mm	right	1:1	0.478	1.300	0.621	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams										

Table 11-42
LTE Band 5 (Cell) UMPC Extremity SAR

MEASUREMENT RESULTS																							
1 CC Uplink | 2 CC Uplink	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Tune State	Power Drift [dB]	MPR [dB]	Antenna Config.	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
		MHz	Ch.																	(W/kg)		(W/kg)	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	-0.09	0	A + B	0412M	QPSK	1	0	0 mm	back	1:1	1.030	1.483	1.527	A57
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	-0.02	1	A + B	0412M	QPSK	25	0	0 mm	back	1:1	0.827	1.503	1.243	
2 CC Uplink	PCC	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	23.90	72	-0.20	0	A + B	0412M	QPSK	1	0	0 mm	back	1:1	0.995	1.549	1.541	
	SCC	829.30	20453			5									1	24							
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	-0.07	0	A + B	0412M	QPSK	1	0	0 mm	front	1:1	0.707	1.483	1.048	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	0.02	1	A + B	0412M	QPSK	25	0	0 mm	front	1:1	0.568	1.503	0.854	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	109	-0.16	0	A + B	0412M	QPSK	1	0	0 mm	bottom	1:1	0.680	1.483	1.008	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	109	-0.14	1	A + B	0412M	QPSK	25	0	0 mm	bottom	1:1	0.533	1.503	0.801	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	25.8	24.09	72	-0.18	0	A + B	0412M	QPSK	1	0	0 mm	right	1:1	0.617	1.483	0.915	
1 CC Uplink	N/A	836.50	20525	Mid	LTE Band 5 (Cell)	10	24.8	23.03	72	-0.10	1	A + B	0412M	QPSK	25	0	0 mm	right	1:1	0.508	1.503	0.764	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams										

Table 11-43
NR Band n71 UMPC Extremity SAR

MEASUREMENT RESULTS																						
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.16	0	9	0525M	DFT-S-OFDM	QPSK	1	1	0 mm	back	1:1	1.170	1.265	1.480	A58
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.03	0	9	0525M	DFT-S-OFDM	QPSK	50	28	0 mm	back	1:1	1.110	1.306	1.450	
680.50	136100	Mid	NR Band n71	20	24.0	22.90	A + B	-0.08	1.5	9	0525M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	0.823	1.288	1.060	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.03	0	18	0525M	DFT-S-OFDM	QPSK	1	1	0 mm	front	1:1	0.646	1.265	0.817	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.04	0	18	0525M	DFT-S-OFDM	QPSK	50	28	0 mm	front	1:1	0.608	1.306	0.794	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	-0.11	0	18	0525M	DFT-S-OFDM	QPSK	1	1	0 mm	bottom	1:1	0.997	1.265	1.261	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.01	0	18	0525M	DFT-S-OFDM	QPSK	50	28	0 mm	bottom	1:1	0.929	1.306	1.213	
680.50	136100	Mid	NR Band n71	20	25.5	24.48	A + B	0.10	0	117	0525M	DFT-S-OFDM	QPSK	1	1	0 mm	right	1:1	1.070	1.265	1.354	
680.50	136100	Mid	NR Band n71	20	25.5	24.34	A + B	-0.12	0	117	0525M	DFT-S-OFDM	QPSK	50	28	0 mm	right	1:1	0.962	1.306	1.256	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams										

Table 11-44
NR Band n12 UMPC Extremity SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.16	0	9	0525M	DFT-S-OFDM	QPSK	1	40	0 mm	back	1:1	1.050	1.406	1.476	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.12	0	9	0525M	DFT-S-OFDM	QPSK	36	22	0 mm	back	1:1	1.080	1.445	1.561	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.03	0	9	0525M	DFT-S-OFDM	QPSK	1	40	0 mm	front	1:1	0.624	1.406	0.877	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.02	0	9	0525M	DFT-S-OFDM	QPSK	36	22	0 mm	front	1:1	0.621	1.445	0.897	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	0.05	0	9	0525M	DFT-S-OFDM	QPSK	1	40	0 mm	bottom	1:1	0.973	1.406	1.368	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	0.18	0	9	0525M	DFT-S-OFDM	QPSK	36	22	0 mm	bottom	1:1	0.998	1.445	1.442	
707.50	141500	Mid	NR Band n12	15	25.5	24.02	A + B	-0.09	0	108	0525M	DFT-S-OFDM	QPSK	1	40	0 mm	right	1:1	1.200	1.406	1.687	
707.50	141500	Mid	NR Band n12	15	25.5	23.90	A + B	-0.06	0	108	0525M	DFT-S-OFDM	QPSK	36	22	0 mm	right	1:1	1.320	1.445	1.907	A59
707.50	141500	Mid	NR Band n12	15	24.0	22.18	A + B	-0.19	1.5	108	0525M	CP-OFDM	QPSK	1	1	0 mm	right	1:1	0.824	1.521	1.253	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams														

Table 11-45
NR Band n5 (Cell) UMPC Extremity SAR

MEASUREMENT RESULTS																							
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Antenna Config	Power Drift [dB]	MPR [dB]	Antenna State	Serial Number	Waveform	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	-0.17	0	72	0412M	DFT-S-OFDM	QPSK	1	53	0 mm	back	1:1	0.942	1.026	0.966	A60
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	-0.18	0	72	0412M	DFT-S-OFDM	QPSK	50	28	0 mm	back	1:1	0.899	1.084	0.975	
836.50	167300	Mid	NR Band n5 (Cell)	20	24.0	23.23	A + B	-0.11	1.5	72	0412M	CP-OFDM	QPSK	1	1	0 mm	back	1:1	0.623	1.194	0.744	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	0.14	0	72	0412M	DFT-S-OFDM	QPSK	1	53	0 mm	front	1:1	0.689	1.026	0.707	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	0.13	0	72	0412M	DFT-S-OFDM	QPSK	50	28	0 mm	front	1:1	0.699	1.084	0.758	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	-0.20	0	109	0412M	DFT-S-OFDM	QPSK	1	53	0 mm	bottom	1:1	0.764	1.026	0.784	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	-0.11	0	109	0412M	DFT-S-OFDM	QPSK	50	28	0 mm	bottom	1:1	0.620	1.084	0.672	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.39	A + B	-0.09	0	72	0412M	DFT-S-OFDM	QPSK	1	53	0 mm	right	1:1	0.641	1.026	0.658	
836.50	167300	Mid	NR Band n5 (Cell)	20	25.5	25.15	A + B	-0.12	0	72	0412M	DFT-S-OFDM	QPSK	50	28	0 mm	right	1:1	0.630	1.084	0.683	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams														

11.6 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were not required since measured SAR results for all frequency bands were less than 0.8 W/kg.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 6.7 for more details).

10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" when it is in closed configuration since the diagonal dimension is > 160 mm and < 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.
11. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 14 for supplemental data.
12. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds below.
13. Per FCC KDB Publication 941225 D07v01r02, this device is considered a "UMPC mini-tablet" when it is in open configuration. UMPC body 1g SAR tests are required on all surfaces and edges ≤ 25 mm from a transmitting antenna. Therefore, to address hand exposure, UMPC extremity 10g SAR tests are required at a test separation distance of 0 mm for all measured 1g SAR (at 10 mm) configurations.
14. 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).

CDMA Notes:

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

UMTS Notes:

1. UMTS mode was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
2. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the 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 8.6.4.

2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
3. A-MPR was disabled for all SAR tests by setting NS=01 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. For LTE Band 5, 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 supports SA and NSA mode. In EN-DC mode, NR operates with the LTE Bands shown in the NR FR1 checklist acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
2. Due to test setup limitations, SAR testing for NR 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 S/N 1M2104020031-28.A3L (Rev 1)
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 14 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.

12 FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

12.1 Introduction

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

12.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D01v06 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g SAR for all the simultaneous transmitting antennas in a specific 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 or 10g SAR.

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

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

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.

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

Please refer to WIFI 6 GHz RF Exposure Report S/N 1M2104020031-22.A3L for 6 GHz WLAN standalone reported SAR results

The modes/bands from the supplemental data were evaluated for simultaneous transmission compliance. Please refer to RF Exposure Technical Report S/N 1M2104020031-01.A3L (Rev 1) for original compliance evaluation.

12.3 Head SAR Simultaneous Transmission Analysis

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

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.463	0.617
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.463	0.658
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.463	**0.709**
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.463	0.665
	UMTS 850 Ant A	0.241	0.463	0.704
	UMTS 850 Ant A + B	0.184	0.463	0.647
	LTE Band 71 Ant A + B	0.138	0.463	0.601
	LTE Band 71 Ant A	0.063	0.463	0.526
	LTE Band 12 Ant A + B	0.207	0.463	0.670
	LTE Band 12 Ant A	0.091	0.463	0.554
	LTE Band 13 Ant A + B	0.164	0.463	0.627
	LTE Band 13 Ant A	0.101	0.463	0.564
	LTE Band 14 Ant A + B	0.160	0.463	0.623
	LTE Band 14 Ant A	0.143	0.463	0.606
	LTE Band 26 (Cell) Ant A	0.149	0.463	0.612
	LTE Band 26 (Cell) Ant A + B	0.171	0.463	0.634
	LTE Band 5 (Cell) Ant A	0.201	0.463	0.664
	LTE Band 5 (Cell) Ant A + B	0.201	0.463	0.664
	NR Band n71 Antenna A + B	0.110	0.463	0.573
	NR Band n71 Antenna A	0.085	0.463	0.548
	NR Band n12 Antenna A + B	0.138	0.463	0.601
	NR Band n12 Antenna A	0.125	0.463	0.588
	NR Band n5 (Cell) Antenna A	0.132	0.463	0.595
	NR Band n5 (Cell) Antenna A + B	0.132	0.463	0.595

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

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.268	0.299	0.422	0.453
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.268	0.299	0.463	0.494
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.268	0.299	0.514	**0.545**
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.268	0.299	0.470	0.501
	UMTS 850 Ant A	0.241	0.268	0.299	0.509	0.540
	UMTS 850 Ant A + B	0.184	0.268	0.299	0.452	0.483
	LTE Band 71 Ant A + B	0.138	0.268	0.299	0.406	0.437
	LTE Band 71 Ant A	0.063	0.268	0.299	0.331	0.362
	LTE Band 12 Ant A + B	0.207	0.268	0.299	0.475	0.506
	LTE Band 12 Ant A	0.091	0.268	0.299	0.359	0.390
	LTE Band 13 Ant A + B	0.164	0.268	0.299	0.432	0.463
	LTE Band 13 Ant A	0.101	0.268	0.299	0.369	0.400
	LTE Band 14 Ant A + B	0.160	0.268	0.299	0.428	0.459
	LTE Band 14 Ant A	0.143	0.268	0.299	0.411	0.442
	LTE Band 26 (Cell) Ant A	0.149	0.268	0.299	0.417	0.448
	LTE Band 26 (Cell) Ant A + B	0.171	0.268	0.299	0.439	0.470
	LTE Band 5 (Cell) Ant A	0.201	0.268	0.299	0.469	0.500
	LTE Band 5 (Cell) Ant A + B	0.201	0.268	0.299	0.469	0.500
	NR Band n71 Antenna A + B	0.110	0.268	0.299	0.378	0.409
	NR Band n71 Antenna A	0.085	0.268	0.299	0.353	0.384
	NR Band n12 Antenna A + B	0.138	0.268	0.299	0.406	0.437
	NR Band n12 Antenna A	0.125	0.268	0.299	0.393	0.424
	NR Band n5 (Cell) Antenna A	0.132	0.268	0.299	0.400	0.431
	NR Band n5 (Cell) Antenna A + B	0.132	0.268	0.299	0.400	0.431

Table 12-3
Simultaneous Transmission Scenario with 6 GHz WLAN (Held to Ear)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.250	0.404
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.250	0.445
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.250	**0.496**
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.250	0.452
	UMTS 850 Ant A	0.241	0.250	0.491
	UMTS 850 Ant A + B	0.184	0.250	0.434
	LTE Band 71 Ant A + B	0.138	0.250	0.388
	LTE Band 71 Ant A	0.063	0.250	0.313
	LTE Band 12 Ant A + B	0.207	0.250	0.457
	LTE Band 12 Ant A	0.091	0.250	0.341
	LTE Band 13 Ant A + B	0.164	0.250	0.414
	LTE Band 13 Ant A	0.101	0.250	0.351
	LTE Band 14 Ant A + B	0.160	0.250	0.410
	LTE Band 14 Ant A	0.143	0.250	0.393
	LTE Band 26 (Cell) Ant A	0.149	0.250	0.399
	LTE Band 26 (Cell) Ant A + B	0.171	0.250	0.421
	LTE Band 5 (Cell) Ant A	0.201	0.250	0.451
	LTE Band 5 (Cell) Ant A + B	0.201	0.250	0.451
	NR Band n71 Antenna A + B	0.110	0.250	0.360
	NR Band n71 Antenna A	0.085	0.250	0.335
	NR Band n12 Antenna A + B	0.138	0.250	0.388
	NR Band n12 Antenna A	0.125	0.250	0.375
	NR Band n5 (Cell) Antenna A	0.132	0.250	0.382
	NR Band n5 (Cell) Antenna A + B	0.132	0.250	0.382

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

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.463	0.299	0.916
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.463	0.299	0.957
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.463	0.299	**1.008**
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.463	0.299	0.964
	UMTS 850 Ant A	0.241	0.463	0.299	1.003
	UMTS 850 Ant A + B	0.184	0.463	0.299	0.946
	LTE Band 71 Ant A + B	0.138	0.463	0.299	0.900
	LTE Band 71 Ant A	0.063	0.463	0.299	0.825
	LTE Band 12 Ant A + B	0.207	0.463	0.299	0.969
	LTE Band 12 Ant A	0.091	0.463	0.299	0.853
	LTE Band 13 Ant A + B	0.164	0.463	0.299	0.926
	LTE Band 13 Ant A	0.101	0.463	0.299	0.863
	LTE Band 14 Ant A + B	0.160	0.463	0.299	0.922
	LTE Band 14 Ant A	0.143	0.463	0.299	0.905
	LTE Band 26 (Cell) Ant A	0.149	0.463	0.299	0.911
	LTE Band 26 (Cell) Ant A + B	0.171	0.463	0.299	0.933
	LTE Band 5 (Cell) Ant A	0.201	0.463	0.299	0.963
	LTE Band 5 (Cell) Ant A + B	0.201	0.463	0.299	0.963
	NR Band n71 Antenna A + B	0.110	0.463	0.299	0.872
	NR Band n71 Antenna A	0.085	0.463	0.299	0.847
	NR Band n12 Antenna A + B	0.138	0.463	0.299	0.900
	NR Band n12 Antenna A	0.125	0.463	0.299	0.887
	NR Band n5 (Cell) Antenna A	0.132	0.463	0.299	0.894
	NR Band n5 (Cell) Antenna A + B	0.132	0.463	0.299	0.894

Table 12-5
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 6 GHz WLAN MIMO (Held to Ear)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.463	0.250	0.867
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.463	0.250	0.908
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.463	0.250	**0.959**
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.463	0.250	0.915
	UMTS 850 Ant A	0.241	0.463	0.250	0.954
	UMTS 850 Ant A + B	0.184	0.463	0.250	0.897
	LTE Band 71 Ant A + B	0.138	0.463	0.250	0.851
	LTE Band 71 Ant A	0.063	0.463	0.250	0.776
	LTE Band 12 Ant A + B	0.207	0.463	0.250	0.920
	LTE Band 12 Ant A	0.091	0.463	0.250	0.804
	LTE Band 13 Ant A + B	0.164	0.463	0.250	0.877
	LTE Band 13 Ant A	0.101	0.463	0.250	0.814
	LTE Band 14 Ant A + B	0.160	0.463	0.250	0.873
	LTE Band 14 Ant A	0.143	0.463	0.250	0.856
	LTE Band 26 (Cell) Ant A	0.149	0.463	0.250	0.862
	LTE Band 26 (Cell) Ant A + B	0.171	0.463	0.250	0.884
	LTE Band 5 (Cell) Ant A	0.201	0.463	0.250	0.914
	LTE Band 5 (Cell) Ant A + B	0.201	0.463	0.250	0.914
	NR Band n71 Antenna A + B	0.110	0.463	0.250	0.823
	NR Band n71 Antenna A	0.085	0.463	0.250	0.798
	NR Band n12 Antenna A + B	0.138	0.463	0.250	0.851
	NR Band n12 Antenna A	0.125	0.463	0.250	0.838
	NR Band n5 (Cell) Antenna A	0.132	0.463	0.250	0.845
	NR Band n5 (Cell) Antenna A + B	0.132	0.463	0.250	0.845

Table 12-6
Simultaneous Transmission Scenario with Bluetooth (Held to Ear)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.339	0.007	0.493	0.161
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.339	0.007	0.534	0.202
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.339	0.007	**0.585**	0.253
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.339	0.007	0.541	0.209
	UMTS 850 Ant A	0.241	0.339	0.007	0.580	0.248
	UMTS 850 Ant A + B	0.184	0.339	0.007	0.523	0.191
	LTE Band 71 Ant A + B	0.138	0.339	0.007	0.477	0.145
	LTE Band 71 Ant A	0.063	0.339	0.007	0.402	0.070
	LTE Band 12 Ant A + B	0.207	0.339	0.007	0.546	0.214
	LTE Band 12 Ant A	0.091	0.339	0.007	0.430	0.098
	LTE Band 13 Ant A + B	0.164	0.339	0.007	0.503	0.171
	LTE Band 13 Ant A	0.101	0.339	0.007	0.440	0.108
	LTE Band 14 Ant A + B	0.160	0.339	0.007	0.499	0.167
	LTE Band 14 Ant A	0.143	0.339	0.007	0.482	0.150
	LTE Band 26 (Cell) Ant A	0.149	0.339	0.007	0.488	0.156
	LTE Band 26 (Cell) Ant A + B	0.171	0.339	0.007	0.510	0.178
	LTE Band 5 (Cell) Ant A	0.201	0.339	0.007	0.540	0.208
	LTE Band 5 (Cell) Ant A + B	0.201	0.339	0.007	0.540	0.208
	NR Band n71 Antenna A + B	0.110	0.339	0.007	0.449	0.117
	NR Band n71 Antenna A	0.085	0.339	0.007	0.424	0.092
	NR Band n12 Antenna A + B	0.138	0.339	0.007	0.477	0.145
	NR Band n12 Antenna A	0.125	0.339	0.007	0.464	0.132
	NR Band n5 (Cell) Antenna A	0.132	0.339	0.007	0.471	0.139
	NR Band n5 (Cell) Antenna A + B	0.132	0.339	0.007	0.471	0.139

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

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.001	0.339	0.494
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.001	0.339	0.535
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.001	0.339	**0.586**
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.001	0.339	0.542
	UMTS 850 Ant A	0.241	0.001	0.339	0.581
	UMTS 850 Ant A + B	0.184	0.001	0.339	0.524
	LTE Band 71 Ant A + B	0.138	0.001	0.339	0.478
	LTE Band 71 Ant A	0.063	0.001	0.339	0.403
	LTE Band 12 Ant A + B	0.207	0.001	0.339	0.547
	LTE Band 12 Ant A	0.091	0.001	0.339	0.431
	LTE Band 13 Ant A + B	0.164	0.001	0.339	0.504
	LTE Band 13 Ant A	0.101	0.001	0.339	0.441
	LTE Band 14 Ant A + B	0.160	0.001	0.339	0.500
	LTE Band 14 Ant A	0.143	0.001	0.339	0.483
	LTE Band 26 (Cell) Ant A	0.149	0.001	0.339	0.489
	LTE Band 26 (Cell) Ant A + B	0.171	0.001	0.339	0.511
	LTE Band 5 (Cell) Ant A	0.201	0.001	0.339	0.541
	LTE Band 5 (Cell) Ant A + B	0.201	0.001	0.339	0.541
	NR Band n71 Antenna A + B	0.110	0.001	0.339	0.450
	NR Band n71 Antenna A	0.085	0.001	0.339	0.425
	NR Band n12 Antenna A + B	0.138	0.001	0.339	0.478
	NR Band n12 Antenna A	0.125	0.001	0.339	0.465
	NR Band n5 (Cell) Antenna A	0.132	0.001	0.339	0.472
	NR Band n5 (Cell) Antenna A + B	0.132	0.001	0.339	0.472

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

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.299	0.339	0.007	0.792	0.460
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.299	0.339	0.007	0.833	0.501
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.299	0.339	0.007	**0.884**	0.552
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.299	0.339	0.007	0.840	0.508
	UMTS 850 Ant A	0.241	0.299	0.339	0.007	0.879	0.547
	UMTS 850 Ant A + B	0.184	0.299	0.339	0.007	0.822	0.490
	LTE Band 71 Ant A + B	0.138	0.299	0.339	0.007	0.776	0.444
	LTE Band 71 Ant A	0.063	0.299	0.339	0.007	0.701	0.369
	LTE Band 12 Ant A + B	0.207	0.299	0.339	0.007	0.845	0.513
	LTE Band 12 Ant A	0.091	0.299	0.339	0.007	0.729	0.397
	LTE Band 13 Ant A + B	0.164	0.299	0.339	0.007	0.802	0.470
	LTE Band 13 Ant A	0.101	0.299	0.339	0.007	0.739	0.407
	LTE Band 14 Ant A + B	0.160	0.299	0.339	0.007	0.798	0.466
	LTE Band 14 Ant A	0.143	0.299	0.339	0.007	0.781	0.449
	LTE Band 26 (Cell) Ant A	0.149	0.299	0.339	0.007	0.787	0.455
	LTE Band 26 (Cell) Ant A + B	0.171	0.299	0.339	0.007	0.809	0.477
	LTE Band 5 (Cell) Ant A	0.201	0.299	0.339	0.007	0.839	0.507
	LTE Band 5 (Cell) Ant A + B	0.201	0.299	0.339	0.007	0.839	0.507
	NR Band n71 Antenna A + B	0.110	0.299	0.339	0.007	0.748	0.416
	NR Band n71 Antenna A	0.085	0.299	0.339	0.007	0.723	0.391
	NR Band n12 Antenna A + B	0.138	0.299	0.339	0.007	0.776	0.444
	NR Band n12 Antenna A	0.125	0.299	0.339	0.007	0.763	0.431
	NR Band n5 (Cell) Antenna A	0.132	0.299	0.339	0.007	0.770	0.438
	NR Band n5 (Cell) Antenna A + B	0.132	0.299	0.339	0.007	0.770	0.438

Table 12-9
Simultaneous Transmission Scenario with 6 GHz WLAN MIMO and Bluetooth (Held to Ear)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.250	0.339	0.007	0.743	0.411
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.250	0.339	0.007	0.784	0.452
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.250	0.339	0.007	**0.835**	0.503
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.250	0.339	0.007	0.791	0.459
	UMTS 850 Ant A	0.241	0.250	0.339	0.007	0.830	0.498
	UMTS 850 Ant A + B	0.184	0.250	0.339	0.007	0.773	0.441
	LTE Band 71 Ant A + B	0.138	0.250	0.339	0.007	0.727	0.395
	LTE Band 71 Ant A	0.063	0.250	0.339	0.007	0.652	0.320
	LTE Band 12 Ant A + B	0.207	0.250	0.339	0.007	0.796	0.464
	LTE Band 12 Ant A	0.091	0.250	0.339	0.007	0.680	0.348
	LTE Band 13 Ant A + B	0.164	0.250	0.339	0.007	0.753	0.421
	LTE Band 13 Ant A	0.101	0.250	0.339	0.007	0.690	0.358
	LTE Band 14 Ant A + B	0.160	0.250	0.339	0.007	0.749	0.417
	LTE Band 14 Ant A	0.143	0.250	0.339	0.007	0.732	0.400
	LTE Band 26 (Cell) Ant A	0.149	0.250	0.339	0.007	0.738	0.406
	LTE Band 26 (Cell) Ant A + B	0.171	0.250	0.339	0.007	0.760	0.428
	LTE Band 5 (Cell) Ant A	0.201	0.250	0.339	0.007	0.790	0.458
	LTE Band 5 (Cell) Ant A + B	0.201	0.250	0.339	0.007	0.790	0.458
	NR Band n71 Antenna A + B	0.110	0.250	0.339	0.007	0.699	0.367
	NR Band n71 Antenna A	0.085	0.250	0.339	0.007	0.674	0.342
	NR Band n12 Antenna A + B	0.138	0.250	0.339	0.007	0.727	0.395
	NR Band n12 Antenna A	0.125	0.250	0.339	0.007	0.714	0.382
	NR Band n5 (Cell) Antenna A	0.132	0.250	0.339	0.007	0.721	0.389
	NR Band n5 (Cell) Antenna A + B	0.132	0.250	0.339	0.007	0.721	0.389

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

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.001	0.299	0.339	0.793
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.001	0.299	0.339	0.834
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.001	0.299	0.339	**0.885**
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.001	0.299	0.339	0.841
	UMTS 850 Ant A	0.241	0.001	0.299	0.339	0.880
	UMTS 850 Ant A + B	0.184	0.001	0.299	0.339	0.823
	LTE Band 71 Ant A + B	0.138	0.001	0.299	0.339	0.777
	LTE Band 71 Ant A	0.063	0.001	0.299	0.339	0.702
	LTE Band 12 Ant A + B	0.207	0.001	0.299	0.339	0.846
	LTE Band 12 Ant A	0.091	0.001	0.299	0.339	0.730
	LTE Band 13 Ant A + B	0.164	0.001	0.299	0.339	0.803
	LTE Band 13 Ant A	0.101	0.001	0.299	0.339	0.740
	LTE Band 14 Ant A + B	0.160	0.001	0.299	0.339	0.799
	LTE Band 14 Ant A	0.143	0.001	0.299	0.339	0.782
	LTE Band 26 (Cell) Ant A	0.149	0.001	0.299	0.339	0.788
	LTE Band 26 (Cell) Ant A + B	0.171	0.001	0.299	0.339	0.810
	LTE Band 5 (Cell) Ant A	0.201	0.001	0.299	0.339	0.840
	LTE Band 5 (Cell) Ant A + B	0.201	0.001	0.299	0.339	0.840
	NR Band n71 Antenna A + B	0.110	0.001	0.299	0.339	0.749
	NR Band n71 Antenna A	0.085	0.001	0.299	0.339	0.724
	NR Band n12 Antenna A + B	0.138	0.001	0.299	0.339	0.777
	NR Band n12 Antenna A	0.125	0.001	0.299	0.339	0.764
	NR Band n5 (Cell) Antenna A	0.132	0.001	0.299	0.339	0.771
	NR Band n5 (Cell) Antenna A + B	0.132	0.001	0.299	0.339	0.771

Table 12-11
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2, 6 GHz WLAN MIMO, and Bluetooth Antenna 1, (Held to Ear)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Head SAR	CDMA/EVDO BC10 (§90S) Ant A	0.154	0.001	0.250	0.339	0.744
	CDMA/EVDO BC10 (§90S) Ant A +	0.195	0.001	0.250	0.339	0.785
	CDMA/EVDO BC0 (§22H) Ant A	0.246	0.001	0.250	0.339	**0.836**
	CDMA/EVDO BC0 (§22H) Ant A + B	0.202	0.001	0.250	0.339	0.792
	UMTS 850 Ant A	0.241	0.001	0.250	0.339	0.831
	UMTS 850 Ant A + B	0.184	0.001	0.250	0.339	0.774
	LTE Band 71 Ant A + B	0.138	0.001	0.250	0.339	0.728
	LTE Band 71 Ant A	0.063	0.001	0.250	0.339	0.653
	LTE Band 12 Ant A + B	0.207	0.001	0.250	0.339	0.797
	LTE Band 12 Ant A	0.091	0.001	0.250	0.339	0.681
	LTE Band 13 Ant A + B	0.164	0.001	0.250	0.339	0.754
	LTE Band 13 Ant A	0.101	0.001	0.250	0.339	0.691
	LTE Band 14 Ant A + B	0.160	0.001	0.250	0.339	0.750
	LTE Band 14 Ant A	0.143	0.001	0.250	0.339	0.733
	LTE Band 26 (Cell) Ant A	0.149	0.001	0.250	0.339	0.739
	LTE Band 26 (Cell) Ant A + B	0.171	0.001	0.250	0.339	0.761
	LTE Band 5 (Cell) Ant A	0.201	0.001	0.250	0.339	0.791
	LTE Band 5 (Cell) Ant A + B	0.201	0.001	0.250	0.339	0.791
	NR Band n71 Antenna A + B	0.110	0.001	0.250	0.339	0.700
	NR Band n71 Antenna A	0.085	0.001	0.250	0.339	0.675
	NR Band n12 Antenna A + B	0.138	0.001	0.250	0.339	0.728
	NR Band n12 Antenna A	0.125	0.001	0.250	0.339	0.715
	NR Band n5 (Cell) Antenna A	0.132	0.001	0.250	0.339	0.722
	NR Band n5 (Cell) Antenna A + B	0.132	0.001	0.250	0.339	0.722

12.4 Body-Worn Simultaneous Transmission Analysis

Table 12-12
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.045	0.026	0.259
	CDMA BC10 (§90S) Ant A + B	0.175	0.045	0.026	0.246
	CDMA BC0 (§22H) Ant A	0.260	0.045	0.026	0.331
	CDMA BC0 (§22H) Ant A + B	0.185	0.045	0.026	0.256
	UMTS 850 Ant A	0.195	0.045	0.026	0.266
	UMTS 850 Ant A + B	0.186	0.045	0.026	0.257
	LTE Band 71 Ant A + B	0.254	0.045	0.026	0.325
	LTE Band 71 Ant A	0.168	0.045	0.026	0.239
	LTE Band 12 Ant A + B	0.224	0.045	0.026	0.295
	LTE Band 12 Ant A	0.136	0.045	0.026	0.207
	LTE Band 13 Ant A + B	0.218	0.045	0.026	0.289
	LTE Band 13 Ant A	0.172	0.045	0.026	0.243
	LTE Band 14 Ant A + B	0.255	0.045	0.026	0.326
	LTE Band 14 Ant A	0.143	0.045	0.026	0.214
	LTE Band 26 (Cell) Ant A	0.167	0.045	0.026	0.238
	LTE Band 26 (Cell) Ant A + B	0.144	0.045	0.026	0.215
	LTE Band 5 (Cell) Ant A	0.245	0.045	0.026	0.316
	LTE Band 5 (Cell) Ant A + B	0.163	0.045	0.026	0.234
	NR Band n71 Antenna A + B	0.305	0.045	0.026	**0.376**
	NR Band n71 Antenna A	0.206	0.045	0.026	0.277
	NR Band n12 Antenna A + B	0.251	0.045	0.026	0.322
	NR Band n12 Antenna A	0.140	0.045	0.026	0.211
	NR Band n5 (Cell) Antenna A	0.150	0.045	0.026	0.221
	NR Band n5 (Cell) Antenna A + B	0.154	0.045	0.026	0.225

Table 12-13
Simultaneous Transmission Scenario with 5 GHz WLAN (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.000	0.004	0.188	0.192
	CDMA BC10 (§90S) Ant A + B	0.175	0.000	0.004	0.175	0.179
	CDMA BC0 (§22H) Ant A	0.260	0.000	0.004	0.260	0.264
	CDMA BC0 (§22H) Ant A + B	0.185	0.000	0.004	0.185	0.189
	UMTS 850 Ant A	0.195	0.000	0.004	0.195	0.199
	UMTS 850 Ant A + B	0.186	0.000	0.004	0.186	0.190
	LTE Band 71 Ant A + B	0.254	0.000	0.004	0.254	0.258
	LTE Band 71 Ant A	0.168	0.000	0.004	0.168	0.172
	LTE Band 12 Ant A + B	0.224	0.000	0.004	0.224	0.228
	LTE Band 12 Ant A	0.136	0.000	0.004	0.136	0.140
	LTE Band 13 Ant A + B	0.218	0.000	0.004	0.218	0.222
	LTE Band 13 Ant A	0.172	0.000	0.004	0.172	0.176
	LTE Band 14 Ant A + B	0.255	0.000	0.004	0.255	0.259
	LTE Band 14 Ant A	0.143	0.000	0.004	0.143	0.147
	LTE Band 26 (Cell) Ant A	0.167	0.000	0.004	0.167	0.171
	LTE Band 26 (Cell) Ant A + B	0.144	0.000	0.004	0.144	0.148
	LTE Band 5 (Cell) Ant A	0.245	0.000	0.004	0.245	0.249
	LTE Band 5 (Cell) Ant A + B	0.163	0.000	0.004	0.163	0.167
	NR Band n71 Antenna A + B	0.305	0.000	0.004	0.305	**0.309**
	NR Band n71 Antenna A	0.206	0.000	0.004	0.206	0.210
	NR Band n12 Antenna A + B	0.251	0.000	0.004	0.251	0.255
	NR Band n12 Antenna A	0.140	0.000	0.004	0.140	0.144
	NR Band n5 (Cell) Antenna A	0.150	0.000	0.004	0.150	0.154
	NR Band n5 (Cell) Antenna A + B	0.154	0.000	0.004	0.154	0.158

Table 12-14
Simultaneous Transmission Scenario with 6 GHz WLAN (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.007	0.195
	CDMA BC10 (§90S) Ant A + B	0.175	0.007	0.182
	CDMA BC0 (§22H) Ant A	0.260	0.007	0.267
	CDMA BC0 (§22H) Ant A + B	0.185	0.007	0.192
	UMTS 850 Ant A	0.195	0.007	0.202
	UMTS 850 Ant A + B	0.186	0.007	0.193
	LTE Band 71 Ant A + B	0.254	0.007	0.261
	LTE Band 71 Ant A	0.168	0.007	0.175
	LTE Band 12 Ant A + B	0.224	0.007	0.231
	LTE Band 12 Ant A	0.136	0.007	0.143
	LTE Band 13 Ant A + B	0.218	0.007	0.225
	LTE Band 13 Ant A	0.172	0.007	0.179
	LTE Band 14 Ant A + B	0.255	0.007	0.262
	LTE Band 14 Ant A	0.143	0.007	0.150
	LTE Band 26 (Cell) Ant A	0.167	0.007	0.174
	LTE Band 26 (Cell) Ant A + B	0.144	0.007	0.151
	LTE Band 5 (Cell) Ant A	0.245	0.007	0.252
	LTE Band 5 (Cell) Ant A + B	0.163	0.007	0.170
	NR Band n71 Antenna A + B	0.305	0.007	**0.312**
	NR Band n71 Antenna A	0.206	0.007	0.213
	NR Band n12 Antenna A + B	0.251	0.007	0.258
	NR Band n12 Antenna A	0.140	0.007	0.147
	NR Band n5 (Cell) Antenna A	0.150	0.007	0.157
	NR Band n5 (Cell) Antenna A + B	0.154	0.007	0.161

Table 12-15
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.045	0.026	0.004	0.263
	CDMA BC10 (§90S) Ant A + B	0.175	0.045	0.026	0.004	0.250
	CDMA BC0 (§22H) Ant A	0.260	0.045	0.026	0.004	0.335
	CDMA BC0 (§22H) Ant A + B	0.185	0.045	0.026	0.004	0.260
	UMTS 850 Ant A	0.195	0.045	0.026	0.004	0.270
	UMTS 850 Ant A + B	0.186	0.045	0.026	0.004	0.261
	LTE Band 71 Ant A + B	0.254	0.045	0.026	0.004	0.329
	LTE Band 71 Ant A	0.168	0.045	0.026	0.004	0.243
	LTE Band 12 Ant A + B	0.224	0.045	0.026	0.004	0.299
	LTE Band 12 Ant A	0.136	0.045	0.026	0.004	0.211
	LTE Band 13 Ant A + B	0.218	0.045	0.026	0.004	0.293
	LTE Band 13 Ant A	0.172	0.045	0.026	0.004	0.247
	LTE Band 14 Ant A + B	0.255	0.045	0.026	0.004	0.330
	LTE Band 14 Ant A	0.143	0.045	0.026	0.004	0.218
	LTE Band 26 (Cell) Ant A	0.167	0.045	0.026	0.004	0.242
	LTE Band 26 (Cell) Ant A + B	0.144	0.045	0.026	0.004	0.219
	LTE Band 5 (Cell) Ant A	0.245	0.045	0.026	0.004	0.320
	LTE Band 5 (Cell) Ant A + B	0.163	0.045	0.026	0.004	0.238
	NR Band n71 Antenna A + B	0.305	0.045	0.026	0.004	**0.380**
	NR Band n71 Antenna A	0.206	0.045	0.026	0.004	0.281
	NR Band n12 Antenna A + B	0.251	0.045	0.026	0.004	0.326
	NR Band n12 Antenna A	0.140	0.045	0.026	0.004	0.215
	NR Band n5 (Cell) Antenna A	0.150	0.045	0.026	0.004	0.225
	NR Band n5 (Cell) Antenna A + B	0.154	0.045	0.026	0.004	0.229

Table 12-16
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 6 GHz WLAN MIMO (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.045	0.026	0.007	0.266
	CDMA BC10 (§90S) Ant A + B	0.175	0.045	0.026	0.007	0.253
	CDMA BC0 (§22H) Ant A	0.260	0.045	0.026	0.007	0.338
	CDMA BC0 (§22H) Ant A + B	0.185	0.045	0.026	0.007	0.263
	UMTS 850 Ant A	0.195	0.045	0.026	0.007	0.273
	UMTS 850 Ant A + B	0.186	0.045	0.026	0.007	0.264
	LTE Band 71 Ant A + B	0.254	0.045	0.026	0.007	0.332
	LTE Band 71 Ant A	0.168	0.045	0.026	0.007	0.246
	LTE Band 12 Ant A + B	0.224	0.045	0.026	0.007	0.302
	LTE Band 12 Ant A	0.136	0.045	0.026	0.007	0.214
	LTE Band 13 Ant A + B	0.218	0.045	0.026	0.007	0.296
	LTE Band 13 Ant A	0.172	0.045	0.026	0.007	0.250
	LTE Band 14 Ant A + B	0.255	0.045	0.026	0.007	0.333
	LTE Band 14 Ant A	0.143	0.045	0.026	0.007	0.221
	LTE Band 26 (Cell) Ant A	0.167	0.045	0.026	0.007	0.245
	LTE Band 26 (Cell) Ant A + B	0.144	0.045	0.026	0.007	0.222
	LTE Band 5 (Cell) Ant A	0.245	0.045	0.026	0.007	0.323
	LTE Band 5 (Cell) Ant A + B	0.163	0.045	0.026	0.007	0.241
	NR Band n71 Antenna A + B	0.305	0.045	0.026	0.007	**0.383**
	NR Band n71 Antenna A	0.206	0.045	0.026	0.007	0.284
	NR Band n12 Antenna A + B	0.251	0.045	0.026	0.007	0.329
	NR Band n12 Antenna A	0.140	0.045	0.026	0.007	0.218
	NR Band n5 (Cell) Antenna A	0.150	0.045	0.026	0.007	0.228
	NR Band n5 (Cell) Antenna A + B	0.154	0.045	0.026	0.007	0.232

Table 12-17
Simultaneous Transmission Scenario with Bluetooth (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.019	0.013	0.207	0.201
	CDMA BC10 (§90S) Ant A + B	0.175	0.019	0.013	0.194	0.188
	CDMA BC0 (§22H) Ant A	0.260	0.019	0.013	0.279	0.273
	CDMA BC0 (§22H) Ant A + B	0.185	0.019	0.013	0.204	0.198
	UMTS 850 Ant A	0.195	0.019	0.013	0.214	0.208
	UMTS 850 Ant A + B	0.186	0.019	0.013	0.205	0.199
	LTE Band 71 Ant A + B	0.254	0.019	0.013	0.273	0.267
	LTE Band 71 Ant A	0.168	0.019	0.013	0.187	0.181
	LTE Band 12 Ant A + B	0.224	0.019	0.013	0.243	0.237
	LTE Band 12 Ant A	0.136	0.019	0.013	0.155	0.149
	LTE Band 13 Ant A + B	0.218	0.019	0.013	0.237	0.231
	LTE Band 13 Ant A	0.172	0.019	0.013	0.191	0.185
	LTE Band 14 Ant A + B	0.255	0.019	0.013	0.274	0.268
	LTE Band 14 Ant A	0.143	0.019	0.013	0.162	0.156
	LTE Band 26 (Cell) Ant A	0.167	0.019	0.013	0.186	0.180
	LTE Band 26 (Cell) Ant A + B	0.144	0.019	0.013	0.163	0.157
	LTE Band 5 (Cell) Ant A	0.245	0.019	0.013	0.264	0.258
	LTE Band 5 (Cell) Ant A + B	0.163	0.019	0.013	0.182	0.176
	NR Band n71 Antenna A + B	0.305	0.019	0.013	**0.324**	0.318
	NR Band n71 Antenna A	0.206	0.019	0.013	0.225	0.219
	NR Band n12 Antenna A + B	0.251	0.019	0.013	0.270	0.264
	NR Band n12 Antenna A	0.140	0.019	0.013	0.159	0.153
	NR Band n5 (Cell) Antenna A	0.150	0.019	0.013	0.169	0.163
	NR Band n5 (Cell) Antenna A + B	0.154	0.019	0.013	0.173	0.167

Table 12-18
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2 and Bluetooth Antenna 1 (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.026	0.019	0.233
	CDMA BC10 (§90S) Ant A + B	0.175	0.026	0.019	0.220
	CDMA BC0 (§22H) Ant A	0.260	0.026	0.019	0.305
	CDMA BC0 (§22H) Ant A + B	0.185	0.026	0.019	0.230
	UMTS 850 Ant A	0.195	0.026	0.019	0.240
	UMTS 850 Ant A + B	0.186	0.026	0.019	0.231
	LTE Band 71 Ant A + B	0.254	0.026	0.019	0.299
	LTE Band 71 Ant A	0.168	0.026	0.019	0.213
	LTE Band 12 Ant A + B	0.224	0.026	0.019	0.269
	LTE Band 12 Ant A	0.136	0.026	0.019	0.181
	LTE Band 13 Ant A + B	0.218	0.026	0.019	0.263
	LTE Band 13 Ant A	0.172	0.026	0.019	0.217
	LTE Band 14 Ant A + B	0.255	0.026	0.019	0.300
	LTE Band 14 Ant A	0.143	0.026	0.019	0.188
	LTE Band 26 (Cell) Ant A	0.167	0.026	0.019	0.212
	LTE Band 26 (Cell) Ant A + B	0.144	0.026	0.019	0.189
	LTE Band 5 (Cell) Ant A	0.245	0.026	0.019	0.290
	LTE Band 5 (Cell) Ant A + B	0.163	0.026	0.019	0.208
	NR Band n71 Antenna A + B	0.305	0.026	0.019	**0.350**
	NR Band n71 Antenna A	0.206	0.026	0.019	0.251
	NR Band n12 Antenna A + B	0.251	0.026	0.019	0.296
	NR Band n12 Antenna A	0.140	0.026	0.019	0.185
	NR Band n5 (Cell) Antenna A	0.150	0.026	0.019	0.195
	NR Band n5 (Cell) Antenna A + B	0.154	0.026	0.019	0.199

Table 12-19
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO and Bluetooth (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.004	0.019	0.013	0.211	0.205
	CDMA BC10 (§90S) Ant A + B	0.175	0.004	0.019	0.013	0.198	0.192
	CDMA BC0 (§22H) Ant A	0.260	0.004	0.019	0.013	0.283	0.277
	CDMA BC0 (§22H) Ant A + B	0.185	0.004	0.019	0.013	0.208	0.202
	UMTS 850 Ant A	0.195	0.004	0.019	0.013	0.218	0.212
	UMTS 850 Ant A + B	0.186	0.004	0.019	0.013	0.209	0.203
	LTE Band 71 Ant A + B	0.254	0.004	0.019	0.013	0.277	0.271
	LTE Band 71 Ant A	0.168	0.004	0.019	0.013	0.191	0.185
	LTE Band 12 Ant A + B	0.224	0.004	0.019	0.013	0.247	0.241
	LTE Band 12 Ant A	0.136	0.004	0.019	0.013	0.159	0.153
	LTE Band 13 Ant A + B	0.218	0.004	0.019	0.013	0.241	0.235
	LTE Band 13 Ant A	0.172	0.004	0.019	0.013	0.195	0.189
	LTE Band 14 Ant A + B	0.255	0.004	0.019	0.013	0.278	0.272
	LTE Band 14 Ant A	0.143	0.004	0.019	0.013	0.166	0.160
	LTE Band 26 (Cell) Ant A	0.167	0.004	0.019	0.013	0.190	0.184
	LTE Band 26 (Cell) Ant A + B	0.144	0.004	0.019	0.013	0.167	0.161
	LTE Band 5 (Cell) Ant A	0.245	0.004	0.019	0.013	0.268	0.262
	LTE Band 5 (Cell) Ant A + B	0.163	0.004	0.019	0.013	0.186	0.180
	NR Band n71 Antenna A + B	0.305	0.004	0.019	0.013	**0.328**	0.322
	NR Band n71 Antenna A	0.206	0.004	0.019	0.013	0.229	0.223
	NR Band n12 Antenna A + B	0.251	0.004	0.019	0.013	0.274	0.268
	NR Band n12 Antenna A	0.140	0.004	0.019	0.013	0.163	0.157
	NR Band n5 (Cell) Antenna A	0.150	0.004	0.019	0.013	0.173	0.167
	NR Band n5 (Cell) Antenna A + B	0.154	0.004	0.019	0.013	0.177	0.171

Table 12-20
Simultaneous Transmission Scenario with 6 GHz WLAN MIMO and Bluetooth (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.007	0.019	0.013	0.214	0.208
	CDMA BC10 (§90S) Ant A + B	0.175	0.007	0.019	0.013	0.201	0.195
	CDMA BC0 (§22H) Ant A	0.260	0.007	0.019	0.013	0.286	0.280
	CDMA BC0 (§22H) Ant A + B	0.185	0.007	0.019	0.013	0.211	0.205
	UMTS 850 Ant A	0.195	0.007	0.019	0.013	0.221	0.215
	UMTS 850 Ant A + B	0.186	0.007	0.019	0.013	0.212	0.206
	LTE Band 71 Ant A + B	0.254	0.007	0.019	0.013	0.280	0.274
	LTE Band 71 Ant A	0.168	0.007	0.019	0.013	0.194	0.188
	LTE Band 12 Ant A + B	0.224	0.007	0.019	0.013	0.250	0.244
	LTE Band 12 Ant A	0.136	0.007	0.019	0.013	0.162	0.156
	LTE Band 13 Ant A + B	0.218	0.007	0.019	0.013	0.244	0.238
	LTE Band 13 Ant A	0.172	0.007	0.019	0.013	0.198	0.192
	LTE Band 14 Ant A + B	0.255	0.007	0.019	0.013	0.281	0.275
	LTE Band 14 Ant A	0.143	0.007	0.019	0.013	0.169	0.163
	LTE Band 26 (Cell) Ant A	0.167	0.007	0.019	0.013	0.193	0.187
	LTE Band 26 (Cell) Ant A + B	0.144	0.007	0.019	0.013	0.170	0.164
	LTE Band 5 (Cell) Ant A	0.245	0.007	0.019	0.013	0.271	0.265
	LTE Band 5 (Cell) Ant A + B	0.163	0.007	0.019	0.013	0.189	0.183
	NR Band n71 Antenna A + B	0.305	0.007	0.019	0.013	**0.331**	0.325
	NR Band n71 Antenna A	0.206	0.007	0.019	0.013	0.232	0.226
	NR Band n12 Antenna A + B	0.251	0.007	0.019	0.013	0.277	0.271
	NR Band n12 Antenna A	0.140	0.007	0.019	0.013	0.166	0.160
	NR Band n5 (Cell) Antenna A	0.150	0.007	0.019	0.013	0.176	0.170
	NR Band n5 (Cell) Antenna A + B	0.154	0.007	0.019	0.013	0.180	0.174

Table 12-21
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2, 5 GHz WLAN MIMO, and Bluetooth Antenna 1, (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.026	0.004	0.019	0.237
	CDMA BC10 (§90S) Ant A + B	0.175	0.026	0.004	0.019	0.224
	CDMA BC0 (§22H) Ant A	0.260	0.026	0.004	0.019	0.309
	CDMA BC0 (§22H) Ant A + B	0.185	0.026	0.004	0.019	0.234
	UMTS 850 Ant A	0.195	0.026	0.004	0.019	0.244
	UMTS 850 Ant A + B	0.186	0.026	0.004	0.019	0.235
	LTE Band 71 Ant A + B	0.254	0.026	0.004	0.019	0.303
	LTE Band 71 Ant A	0.168	0.026	0.004	0.019	0.217
	LTE Band 12 Ant A + B	0.224	0.026	0.004	0.019	0.273
	LTE Band 12 Ant A	0.136	0.026	0.004	0.019	0.185
	LTE Band 13 Ant A + B	0.218	0.026	0.004	0.019	0.267
	LTE Band 13 Ant A	0.172	0.026	0.004	0.019	0.221
	LTE Band 14 Ant A + B	0.255	0.026	0.004	0.019	0.304
	LTE Band 14 Ant A	0.143	0.026	0.004	0.019	0.192
	LTE Band 26 (Cell) Ant A	0.167	0.026	0.004	0.019	0.216
	LTE Band 26 (Cell) Ant A + B	0.144	0.026	0.004	0.019	0.193
	LTE Band 5 (Cell) Ant A	0.245	0.026	0.004	0.019	0.294
	LTE Band 5 (Cell) Ant A + B	0.163	0.026	0.004	0.019	0.212
	NR Band n71 Antenna A + B	0.305	0.026	0.004	0.019	**0.354**
	NR Band n71 Antenna A	0.206	0.026	0.004	0.019	0.255
	NR Band n12 Antenna A + B	0.251	0.026	0.004	0.019	0.300
	NR Band n12 Antenna A	0.140	0.026	0.004	0.019	0.189
	NR Band n5 (Cell) Antenna A	0.150	0.026	0.004	0.019	0.199
	NR Band n5 (Cell) Antenna A + B	0.154	0.026	0.004	0.019	0.203

Table 12-22
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2, 6 GHz WLAN MIMO, and Bluetooth Antenna 1, (Body-Worn at 1.5 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Body - Worn SAR	CDMA BC10 (§90S) Ant A	0.188	0.026	0.007	0.019	0.240
	CDMA BC10 (§90S) Ant A + B	0.175	0.026	0.007	0.019	0.227
	CDMA BC0 (§22H) Ant A	0.260	0.026	0.007	0.019	0.312
	CDMA BC0 (§22H) Ant A + B	0.185	0.026	0.007	0.019	0.237
	UMTS 850 Ant A	0.195	0.026	0.007	0.019	0.247
	UMTS 850 Ant A + B	0.186	0.026	0.007	0.019	0.238
	LTE Band 71 Ant A + B	0.254	0.026	0.007	0.019	0.306
	LTE Band 71 Ant A	0.168	0.026	0.007	0.019	0.220
	LTE Band 12 Ant A + B	0.224	0.026	0.007	0.019	0.276
	LTE Band 12 Ant A	0.136	0.026	0.007	0.019	0.188
	LTE Band 13 Ant A + B	0.218	0.026	0.007	0.019	0.270
	LTE Band 13 Ant A	0.172	0.026	0.007	0.019	0.224
	LTE Band 14 Ant A + B	0.255	0.026	0.007	0.019	0.307
	LTE Band 14 Ant A	0.143	0.026	0.007	0.019	0.195
	LTE Band 26 (Cell) Ant A	0.167	0.026	0.007	0.019	0.219
	LTE Band 26 (Cell) Ant A + B	0.144	0.026	0.007	0.019	0.196
	LTE Band 5 (Cell) Ant A	0.245	0.026	0.007	0.019	0.297
	LTE Band 5 (Cell) Ant A + B	0.163	0.026	0.007	0.019	0.215
	NR Band n71 Antenna A + B	0.305	0.026	0.007	0.019	**0.357**
	NR Band n71 Antenna A	0.206	0.026	0.007	0.019	0.258
	NR Band n12 Antenna A + B	0.251	0.026	0.007	0.019	0.303
	NR Band n12 Antenna A	0.140	0.026	0.007	0.019	0.192
	NR Band n5 (Cell) Antenna A	0.150	0.026	0.007	0.019	0.202
	NR Band n5 (Cell) Antenna A + B	0.154	0.026	0.007	0.019	0.206

12.5 Hotspot SAR Simultaneous Transmission Analysis

Table 12-23
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Hotspot at 1.0 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	EVDO BC10 (§90S) Ant A	0.389	0.471	0.204	1.064
	EVDO BC10 (§90S) Ant A + B	0.435	0.471	0.204	1.110
	EVDO BC0 (§22H) Ant A	0.523	0.471	0.204	1.198
	EVDO BC0 (§22H) Ant A + B	0.405	0.471	0.204	1.080
	UMTS 850 Ant A	0.438	0.471	0.204	1.113
	UMTS 850 Ant A + B	0.434	0.471	0.204	1.109
	LTE Band 71 Ant A + B	0.562	0.471	0.204	1.237
	LTE Band 71 Ant A	0.425	0.471	0.204	1.100
	LTE Band 12 Ant A + B	0.480	0.471	0.204	1.155
	LTE Band 12 Ant A	0.314	0.471	0.204	0.989
	LTE Band 13 Ant A + B	0.436	0.471	0.204	1.111
	LTE Band 13 Ant A	0.308	0.471	0.204	0.983
	LTE Band 14 Ant A + B	0.459	0.471	0.204	1.134
	LTE Band 14 Ant A	0.269	0.471	0.204	0.944
	LTE Band 26 (Cell) Ant A	0.394	0.471	0.204	1.069
	LTE Band 26 (Cell) Ant A + B	0.298	0.471	0.204	0.973
	LTE Band 5 (Cell) Ant A	0.472	0.471	0.204	1.147
	LTE Band 5 (Cell) Ant A + B	0.346	0.471	0.204	1.021
	NR Band n71 Antenna A + B	0.612	0.471	0.204	**1.287**
	NR Band n71 Antenna A	0.483	0.471	0.204	1.158
	NR Band n12 Antenna A + B	0.501	0.471	0.204	1.176
	NR Band n12 Antenna A	0.306	0.471	0.204	0.981
	NR Band n5 (Cell) Antenna A	0.292	0.471	0.204	0.967
	NR Band n5 (Cell) Antenna A + B	0.339	0.471	0.204	1.014

Table 12-24
Simultaneous Transmission Scenario with 5 GHz WLAN (Hotspot at 1.0 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Hotspot SAR	EVDO BC10 (§90S) Ant A	0.389	0.070	0.063	0.459	0.452
	EVDO BC10 (§90S) Ant A + B	0.435	0.070	0.063	0.505	0.498
	EVDO BC0 (§22H) Ant A	0.523	0.070	0.063	0.593	0.586
	EVDO BC0 (§22H) Ant A + B	0.405	0.070	0.063	0.475	0.468
	UMTS 850 Ant A	0.438	0.070	0.063	0.508	0.501
	UMTS 850 Ant A + B	0.434	0.070	0.063	0.504	0.497
	LTE Band 71 Ant A + B	0.562	0.070	0.063	0.632	0.625
	LTE Band 71 Ant A	0.425	0.070	0.063	0.495	0.488
	LTE Band 12 Ant A + B	0.480	0.070	0.063	0.550	0.543
	LTE Band 12 Ant A	0.314	0.070	0.063	0.384	0.377
	LTE Band 13 Ant A + B	0.436	0.070	0.063	0.506	0.499
	LTE Band 13 Ant A	0.308	0.070	0.063	0.378	0.371
	LTE Band 14 Ant A + B	0.459	0.070	0.063	0.529	0.522
	LTE Band 14 Ant A	0.269	0.070	0.063	0.339	0.332
	LTE Band 26 (Cell) Ant A	0.394	0.070	0.063	0.464	0.457
	LTE Band 26 (Cell) Ant A + B	0.298	0.070	0.063	0.368	0.361
	LTE Band 5 (Cell) Ant A	0.472	0.070	0.063	0.542	0.535
	LTE Band 5 (Cell) Ant A + B	0.346	0.070	0.063	0.416	0.409
	NR Band n71 Antenna A + B	0.612	0.070	0.063	**0.682**	0.675
	NR Band n71 Antenna A	0.483	0.070	0.063	0.553	0.546
	NR Band n12 Antenna A + B	0.501	0.070	0.063	0.571	0.564
	NR Band n12 Antenna A	0.306	0.070	0.063	0.376	0.369
	NR Band n5 (Cell) Antenna A	0.292	0.070	0.063	0.362	0.355
	NR Band n5 (Cell) Antenna A + B	0.339	0.070	0.063	0.409	0.402

Table 12-25
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (Hotspot at 1.0 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Hotspot SAR	EVDO BC10 (§90S) Ant A	0.389	0.471	0.204	0.063	1.127
	EVDO BC10 (§90S) Ant A + B	0.435	0.471	0.204	0.063	1.173
	EVDO BC0 (§22H) Ant A	0.523	0.471	0.204	0.063	1.261
	EVDO BC0 (§22H) Ant A + B	0.405	0.471	0.204	0.063	1.143
	UMTS 850 Ant A	0.438	0.471	0.204	0.063	1.176
	UMTS 850 Ant A + B	0.434	0.471	0.204	0.063	1.172
	LTE Band 71 Ant A + B	0.562	0.471	0.204	0.063	1.300
	LTE Band 71 Ant A	0.425	0.471	0.204	0.063	1.163
	LTE Band 12 Ant A + B	0.480	0.471	0.204	0.063	1.218
	LTE Band 12 Ant A	0.314	0.471	0.204	0.063	1.052
	LTE Band 13 Ant A + B	0.436	0.471	0.204	0.063	1.174
	LTE Band 13 Ant A	0.308	0.471	0.204	0.063	1.046
	LTE Band 14 Ant A + B	0.459	0.471	0.204	0.063	1.197
	LTE Band 14 Ant A	0.269	0.471	0.204	0.063	1.007
	LTE Band 26 (Cell) Ant A	0.394	0.471	0.204	0.063	1.132
	LTE Band 26 (Cell) Ant A + B	0.298	0.471	0.204	0.063	1.036
	LTE Band 5 (Cell) Ant A	0.472	0.471	0.204	0.063	1.210
	LTE Band 5 (Cell) Ant A + B	0.346	0.471	0.204	0.063	1.084
	NR Band n71 Antenna A + B	0.612	0.471	0.204	0.063	**1.350**
	NR Band n71 Antenna A	0.483	0.471	0.204	0.063	1.221
	NR Band n12 Antenna A + B	0.501	0.471	0.204	0.063	1.239
	NR Band n12 Antenna A	0.306	0.471	0.204	0.063	1.044
	NR Band n5 (Cell) Antenna A	0.292	0.471	0.204	0.063	1.030
	NR Band n5 (Cell) Antenna A + B	0.339	0.471	0.204	0.063	1.077

Table 12-26
Simultaneous Transmission Scenario with Bluetooth (Hotspot at 1.0 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
Hotspot SAR	EVDO BC10 (§90S) Ant A	0.389	0.211	0.148	0.600	0.537
	EVDO BC10 (§90S) Ant A + B	0.435	0.211	0.148	0.646	0.583
	EVDO BC0 (§22H) Ant A	0.523	0.211	0.148	0.734	0.671
	EVDO BC0 (§22H) Ant A + B	0.405	0.211	0.148	0.616	0.553
	UMTS 850 Ant A	0.438	0.211	0.148	0.649	0.586
	UMTS 850 Ant A + B	0.434	0.211	0.148	0.645	0.582
	LTE Band 71 Ant A + B	0.562	0.211	0.148	0.773	0.710
	LTE Band 71 Ant A	0.425	0.211	0.148	0.636	0.573
	LTE Band 12 Ant A + B	0.480	0.211	0.148	0.691	0.628
	LTE Band 12 Ant A	0.314	0.211	0.148	0.525	0.462
	LTE Band 13 Ant A + B	0.436	0.211	0.148	0.647	0.584
	LTE Band 13 Ant A	0.308	0.211	0.148	0.519	0.456
	LTE Band 14 Ant A + B	0.459	0.211	0.148	0.670	0.607
	LTE Band 14 Ant A	0.269	0.211	0.148	0.480	0.417
	LTE Band 26 (Cell) Ant A	0.394	0.211	0.148	0.605	0.542
	LTE Band 26 (Cell) Ant A + B	0.298	0.211	0.148	0.509	0.446
	LTE Band 5 (Cell) Ant A	0.472	0.211	0.148	0.683	0.620
	LTE Band 5 (Cell) Ant A + B	0.346	0.211	0.148	0.557	0.494
	NR Band n71 Antenna A + B	0.612	0.211	0.148	**0.823**	0.760
	NR Band n71 Antenna A	0.483	0.211	0.148	0.694	0.631
	NR Band n12 Antenna A + B	0.501	0.211	0.148	0.712	0.649
	NR Band n12 Antenna A	0.306	0.211	0.148	0.517	0.454
	NR Band n5 (Cell) Antenna A	0.292	0.211	0.148	0.503	0.440
	NR Band n5 (Cell) Antenna A + B	0.339	0.211	0.148	0.550	0.487

Table 12-27
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2 and Bluetooth Antenna 1 (Hotspot at 1.0 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	2	1+2+3
Hotspot SAR	EVDO BC10 (§90S) Ant A	0.389	0.204	0.211	0.804
	EVDO BC10 (§90S) Ant A + B	0.435	0.204	0.211	0.850
	EVDO BC0 (§22H) Ant A	0.523	0.204	0.211	0.938
	EVDO BC0 (§22H) Ant A + B	0.405	0.204	0.211	0.820
	UMTS 850 Ant A	0.438	0.204	0.211	0.853
	UMTS 850 Ant A + B	0.434	0.204	0.211	0.849
	LTE Band 71 Ant A + B	0.562	0.204	0.211	0.977
	LTE Band 71 Ant A	0.425	0.204	0.211	0.840
	LTE Band 12 Ant A + B	0.480	0.204	0.211	0.895
	LTE Band 12 Ant A	0.314	0.204	0.211	0.729
	LTE Band 13 Ant A + B	0.436	0.204	0.211	0.851
	LTE Band 13 Ant A	0.308	0.204	0.211	0.723
	LTE Band 14 Ant A + B	0.459	0.204	0.211	0.874
	LTE Band 14 Ant A	0.269	0.204	0.211	0.684
	LTE Band 26 (Cell) Ant A	0.394	0.204	0.211	0.809
	LTE Band 26 (Cell) Ant A + B	0.298	0.204	0.211	0.713
	LTE Band 5 (Cell) Ant A	0.472	0.204	0.211	0.887
	LTE Band 5 (Cell) Ant A + B	0.346	0.204	0.211	0.761
	NR Band n71 Antenna A + B	0.612	0.204	0.211	**1.027**
	NR Band n71 Antenna A	0.483	0.204	0.211	0.898
	NR Band n12 Antenna A + B	0.501	0.204	0.211	0.916
	NR Band n12 Antenna A	0.306	0.204	0.211	0.721
	NR Band n5 (Cell) Antenna A	0.292	0.204	0.211	0.707
	NR Band n5 (Cell) Antenna A + B	0.339	0.204	0.211	0.754

Table 12-28
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO and Bluetooth (Hotspot at 1.0 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
Hotspot SAR	EVDO BC10 (§90S) Ant A	0.389	0.063	0.211	0.148	0.663	0.600
	EVDO BC10 (§90S) Ant A + B	0.435	0.063	0.211	0.148	0.709	0.646
	EVDO BC0 (§22H) Ant A	0.523	0.063	0.211	0.148	0.797	0.734
	EVDO BC0 (§22H) Ant A + B	0.405	0.063	0.211	0.148	0.679	0.616
	UMTS 850 Ant A	0.438	0.063	0.211	0.148	0.712	0.649
	UMTS 850 Ant A + B	0.434	0.063	0.211	0.148	0.708	0.645
	LTE Band 71 Ant A + B	0.562	0.063	0.211	0.148	0.836	0.773
	LTE Band 71 Ant A	0.425	0.063	0.211	0.148	0.699	0.636
	LTE Band 12 Ant A + B	0.480	0.063	0.211	0.148	0.754	0.691
	LTE Band 12 Ant A	0.314	0.063	0.211	0.148	0.588	0.525
	LTE Band 13 Ant A + B	0.436	0.063	0.211	0.148	0.710	0.647
	LTE Band 13 Ant A	0.308	0.063	0.211	0.148	0.582	0.519
	LTE Band 14 Ant A + B	0.459	0.063	0.211	0.148	0.733	0.670
	LTE Band 14 Ant A	0.269	0.063	0.211	0.148	0.543	0.480
	LTE Band 26 (Cell) Ant A	0.394	0.063	0.211	0.148	0.668	0.605
	LTE Band 26 (Cell) Ant A + B	0.298	0.063	0.211	0.148	0.572	0.509
	LTE Band 5 (Cell) Ant A	0.472	0.063	0.211	0.148	0.746	0.683
	LTE Band 5 (Cell) Ant A + B	0.346	0.063	0.211	0.148	0.620	0.557
	NR Band n71 Antenna A + B	0.612	0.063	0.211	0.148	**0.886**	0.823
	NR Band n71 Antenna A	0.483	0.063	0.211	0.148	0.757	0.694
	NR Band n12 Antenna A + B	0.501	0.063	0.211	0.148	0.775	0.712
	NR Band n12 Antenna A	0.306	0.063	0.211	0.148	0.580	0.517
	NR Band n5 (Cell) Antenna A	0.292	0.063	0.211	0.148	0.566	0.503
	NR Band n5 (Cell) Antenna A + B	0.339	0.063	0.211	0.148	0.613	0.550

Table 12-29
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2, 5 GHz WLAN MIMO, and Bluetooth Antenna 1, (Hotspot at 1.0 cm)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
Hotspot SAR	EVDO BC10 (§90S) Ant A	0.389	0.204	0.063	0.211	0.867
	EVDO BC10 (§90S) Ant A + B	0.435	0.204	0.063	0.211	0.913
	EVDO BC0 (§22H) Ant A	0.523	0.204	0.063	0.211	1.001
	EVDO BC0 (§22H) Ant A + B	0.405	0.204	0.063	0.211	0.883
	UMTS 850 Ant A	0.438	0.204	0.063	0.211	0.916
	UMTS 850 Ant A + B	0.434	0.204	0.063	0.211	0.912
	LTE Band 71 Ant A + B	0.562	0.204	0.063	0.211	1.040
	LTE Band 71 Ant A	0.425	0.204	0.063	0.211	0.903
	LTE Band 12 Ant A + B	0.480	0.204	0.063	0.211	0.958
	LTE Band 12 Ant A	0.314	0.204	0.063	0.211	0.792
	LTE Band 13 Ant A + B	0.436	0.204	0.063	0.211	0.914
	LTE Band 13 Ant A	0.308	0.204	0.063	0.211	0.786
	LTE Band 14 Ant A + B	0.459	0.204	0.063	0.211	0.937
	LTE Band 14 Ant A	0.269	0.204	0.063	0.211	0.747
	LTE Band 26 (Cell) Ant A	0.394	0.204	0.063	0.211	0.872
	LTE Band 26 (Cell) Ant A + B	0.298	0.204	0.063	0.211	0.776
	LTE Band 5 (Cell) Ant A	0.472	0.204	0.063	0.211	0.950
	LTE Band 5 (Cell) Ant A + B	0.346	0.204	0.063	0.211	0.824
	NR Band n71 Antenna A + B	0.612	0.204	0.063	0.211	**1.090**
	NR Band n71 Antenna A	0.483	0.204	0.063	0.211	0.961
	NR Band n12 Antenna A + B	0.501	0.204	0.063	0.211	0.979
	NR Band n12 Antenna A	0.306	0.204	0.063	0.211	0.784
	NR Band n5 (Cell) Antenna A	0.292	0.204	0.063	0.211	0.770
	NR Band n5 (Cell) Antenna A + B	0.339	0.204	0.063	0.211	0.817

12.6 UMPC Body Simultaneous Transmission Analysis

Table 12-30
Simultaneous Transmission Scenario with 2.4 GHz WLAN (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.412	1.064
	EVDO BC0 (§22H) Ant A + B	0.768	0.412	**1.180**
	UMTS 850 Ant A+B	0.648	0.412	1.060
	LTE Band 71 Ant A + B	0.462	0.412	0.874
	LTE Band 12 Ant A + B	0.556	0.412	0.968
	LTE Band 13 Ant A + B	0.694	0.412	1.106
	LTE Band 14 Ant A + B	0.703	0.412	1.115
	LTE Band 26 (Cell) Ant A + B	0.583	0.412	0.995
	LTE Band 5 (Cell) Ant A + B	0.688	0.412	1.100
	NR Band n71 Ant A+B	0.579	0.412	0.991
	NR Band n12 Ant A+B	0.640	0.412	1.052
	NR Band n5 (Cell) Ant A+B	0.504	0.412	0.916

Table 12-31
Simultaneous Transmission Scenario with 5 GHz WLAN (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.179	0.220	0.831	0.872
	EVDO BC0 (§22H) Ant A + B	0.768	0.179	0.220	0.947	**0.988**
	UMTS 850 Ant A+B	0.648	0.179	0.220	0.827	0.868
	LTE Band 71 Ant A + B	0.462	0.179	0.220	0.641	0.682
	LTE Band 12 Ant A + B	0.556	0.179	0.220	0.735	0.776
	LTE Band 13 Ant A + B	0.694	0.179	0.220	0.873	0.914
	LTE Band 14 Ant A + B	0.703	0.179	0.220	0.882	0.923
	LTE Band 26 (Cell) Ant A + B	0.583	0.179	0.220	0.762	0.803
	LTE Band 5 (Cell) Ant A + B	0.688	0.179	0.220	0.867	0.908
	NR Band n71 Ant A+B	0.579	0.179	0.220	0.758	0.799
	NR Band n12 Ant A+B	0.640	0.179	0.220	0.819	0.860
	NR Band n5 (Cell) Ant A+B	0.504	0.179	0.220	0.683	0.724

Table 12-32
Simultaneous Transmission Scenario with 6 GHz WLAN (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.020	0.672
	EVDO BC0 (§22H) Ant A + B	0.768	0.020	**0.788**
	UMTS 850 Ant A+B	0.648	0.020	0.668
	LTE Band 71 Ant A + B	0.462	0.020	0.482
	LTE Band 12 Ant A + B	0.556	0.020	0.576
	LTE Band 13 Ant A + B	0.694	0.020	0.714
	LTE Band 14 Ant A + B	0.703	0.020	0.723
	LTE Band 26 (Cell) Ant A + B	0.583	0.020	0.603
	LTE Band 5 (Cell) Ant A + B	0.688	0.020	0.708
	NR Band n71 Ant A+B	0.579	0.020	0.599
	NR Band n12 Ant A+B	0.640	0.020	0.660
	NR Band n5 (Cell) Ant A+B	0.504	0.020	0.524

Table 12-33
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO at 18 dBm SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.123	0.220	0.995
	EVDO BC0 (§22H) Ant A + B	0.768	0.123	0.220	**1.111**
	UMTS 850 Ant A+B	0.648	0.123	0.220	0.991
	LTE Band 71 Ant A + B	0.462	0.123	0.220	0.805
	LTE Band 12 Ant A + B	0.556	0.123	0.220	0.899
	LTE Band 13 Ant A + B	0.694	0.123	0.220	1.037
	LTE Band 14 Ant A + B	0.703	0.123	0.220	1.046
	LTE Band 26 (Cell) Ant A + B	0.583	0.123	0.220	0.926
	LTE Band 5 (Cell) Ant A + B	0.688	0.123	0.220	1.031
	NR Band n71 Ant A+B	0.579	0.123	0.220	0.922
	NR Band n12 Ant A+B	0.640	0.123	0.220	0.983
	NR Band n5 (Cell) Ant A+B	0.504	0.123	0.220	0.847

Table 12-34
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 6 GHz WLAN MIMO (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO at 18 dBm SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.123	0.020	0.795
	EVDO BC0 (§22H) Ant A + B	0.768	0.123	0.020	**0.911**
	UMTS 850 Ant A+B	0.648	0.123	0.020	0.791
	LTE Band 71 Ant A + B	0.462	0.123	0.020	0.605
	LTE Band 12 Ant A + B	0.556	0.123	0.020	0.699
	LTE Band 13 Ant A + B	0.694	0.123	0.020	0.837
	LTE Band 14 Ant A + B	0.703	0.123	0.020	0.846
	LTE Band 26 (Cell) Ant A + B	0.583	0.123	0.020	0.726
	LTE Band 5 (Cell) Ant A + B	0.688	0.123	0.020	0.831
	NR Band n71 Ant A+B	0.579	0.123	0.020	0.722
	NR Band n12 Ant A+B	0.640	0.123	0.020	0.783
	NR Band n5 (Cell) Ant A+B	0.504	0.123	0.020	0.647

Table 12-35
Simultaneous Transmission Scenario with Bluetooth (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.254	0.092	0.906	0.744
	EVDO BC0 (§22H) Ant A + B	0.768	0.254	0.092	**1.022**	0.860
	UMTS 850 Ant A+B	0.648	0.254	0.092	0.902	0.740
	LTE Band 71 Ant A + B	0.462	0.254	0.092	0.716	0.554
	LTE Band 12 Ant A + B	0.556	0.254	0.092	0.810	0.648
	LTE Band 13 Ant A + B	0.694	0.254	0.092	0.948	0.786
	LTE Band 14 Ant A + B	0.703	0.254	0.092	0.957	0.795
	LTE Band 26 (Cell) Ant A + B	0.583	0.254	0.092	0.837	0.675
	LTE Band 5 (Cell) Ant A + B	0.688	0.254	0.092	0.942	0.780
	NR Band n71 Ant A+B	0.579	0.254	0.092	0.833	0.671
	NR Band n12 Ant A+B	0.640	0.254	0.092	0.894	0.732
	NR Band n5 (Cell) Ant A+B	0.504	0.254	0.092	0.758	0.596

Table 12-36
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2 and Bluetooth Antenna 1 (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	2	1+2+3
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.168	0.254	1.074
	EVDO BC0 (§22H) Ant A + B	0.768	0.168	0.254	**1.190**
	UMTS 850 Ant A+B	0.648	0.168	0.254	1.070
	LTE Band 71 Ant A + B	0.462	0.168	0.254	0.884
	LTE Band 12 Ant A + B	0.556	0.168	0.254	0.978
	LTE Band 13 Ant A + B	0.694	0.168	0.254	1.116
	LTE Band 14 Ant A + B	0.703	0.168	0.254	1.125
	LTE Band 26 (Cell) Ant A + B	0.583	0.168	0.254	1.005
	LTE Band 5 (Cell) Ant A + B	0.688	0.168	0.254	1.110
	NR Band n71 Ant A+B	0.579	0.168	0.254	1.001
	NR Band n12 Ant A+B	0.640	0.168	0.254	1.062
	NR Band n5 (Cell) Ant A+B	0.504	0.168	0.254	0.926

Table 12-37
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO and Bluetooth (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.220	0.254	0.092	1.126	0.964
	EVDO BC0 (§22H) Ant A + B	0.768	0.220	0.254	0.092	**1.242**	1.080
	UMTS 850 Ant A+B	0.648	0.220	0.254	0.092	1.122	0.960
	LTE Band 71 Ant A + B	0.462	0.220	0.254	0.092	0.936	0.774
	LTE Band 12 Ant A + B	0.556	0.220	0.254	0.092	1.030	0.868
	LTE Band 13 Ant A + B	0.694	0.220	0.254	0.092	1.168	1.006
	LTE Band 14 Ant A + B	0.703	0.220	0.254	0.092	1.177	1.015
	LTE Band 26 (Cell) Ant A + B	0.583	0.220	0.254	0.092	1.057	0.895
	LTE Band 5 (Cell) Ant A + B	0.688	0.220	0.254	0.092	1.162	1.000
	NR Band n71 Ant A+B	0.579	0.220	0.254	0.092	1.053	0.891
	NR Band n12 Ant A+B	0.640	0.220	0.254	0.092	1.114	0.952
	NR Band n5 (Cell) Ant A+B	0.504	0.220	0.254	0.092	0.978	0.816

Table 12-38
Simultaneous Transmission Scenario with 6 GHz WLAN MIMO and Bluetooth (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.020	0.254	0.092	0.926	0.764
	EVDO BC0 (§22H) Ant A + B	0.768	0.020	0.254	0.092	**1.042**	0.880
	UMTS 850 Ant A+B	0.648	0.020	0.254	0.092	0.922	0.760
	LTE Band 71 Ant A + B	0.462	0.020	0.254	0.092	0.736	0.574
	LTE Band 12 Ant A + B	0.556	0.020	0.254	0.092	0.830	0.668
	LTE Band 13 Ant A + B	0.694	0.020	0.254	0.092	0.968	0.806
	LTE Band 14 Ant A + B	0.703	0.020	0.254	0.092	0.977	0.815
	LTE Band 26 (Cell) Ant A + B	0.583	0.020	0.254	0.092	0.857	0.695
	LTE Band 5 (Cell) Ant A + B	0.688	0.020	0.254	0.092	0.962	0.800
	NR Band n71 Ant A+B	0.579	0.020	0.254	0.092	0.853	0.691
	NR Band n12 Ant A+B	0.640	0.020	0.254	0.092	0.914	0.752
	NR Band n5 (Cell) Ant A+B	0.504	0.020	0.254	0.092	0.778	0.616

Table 12-39
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2, 5 GHz WLAN MIMO, and Bluetooth Antenna 1, (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.168	0.220	0.254	1.294
	EVDO BC0 (§22H) Ant A + B	0.768	0.168	0.220	0.254	**1.410**
	UMTS 850 Ant A+B	0.648	0.168	0.220	0.254	1.290
	LTE Band 71 Ant A + B	0.462	0.168	0.220	0.254	1.104
	LTE Band 12 Ant A + B	0.556	0.168	0.220	0.254	1.198
	LTE Band 13 Ant A + B	0.694	0.168	0.220	0.254	1.336
	LTE Band 14 Ant A + B	0.703	0.168	0.220	0.254	1.345
	LTE Band 26 (Cell) Ant A + B	0.583	0.168	0.220	0.254	1.225
	LTE Band 5 (Cell) Ant A + B	0.688	0.168	0.220	0.254	1.330
	NR Band n71 Ant A+B	0.579	0.168	0.220	0.254	1.221
	NR Band n12 Ant A+B	0.640	0.168	0.220	0.254	1.282
	NR Band n5 (Cell) Ant A+B	0.504	0.168	0.220	0.254	1.146

Table 12-40
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2, 6 GHz WLAN MIMO, and Bluetooth Antenna 1, (UMPC Body)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
UMPC Body SAR	EVDO BC10 (§90S) Ant A + B	0.652	0.168	0.020	0.254	1.094
	EVDO BC0 (§22H) Ant A + B	0.768	0.168	0.020	0.254	**1.210**
	UMTS 850 Ant A+B	0.648	0.168	0.020	0.254	1.090
	LTE Band 71 Ant A + B	0.462	0.168	0.020	0.254	0.904
	LTE Band 12 Ant A + B	0.556	0.168	0.020	0.254	0.998
	LTE Band 13 Ant A + B	0.694	0.168	0.020	0.254	1.136
	LTE Band 14 Ant A + B	0.703	0.168	0.020	0.254	1.145
	LTE Band 26 (Cell) Ant A + B	0.583	0.168	0.020	0.254	1.025
	LTE Band 5 (Cell) Ant A + B	0.688	0.168	0.020	0.254	1.130
	NR Band n71 Ant A+B	0.579	0.168	0.020	0.254	1.021
	NR Band n12 Ant A+B	0.640	0.168	0.020	0.254	1.082
	NR Band n5 (Cell) Ant A+B	0.504	0.168	0.020	0.254	0.946

12.7 UMPC Extremity Simultaneous Transmission Analysis

Table 12-41
Simultaneous Transmission Scenario with 2.4 GHz WLAN (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	1.571	2.942
	EVDO BC0 (§22H) Ant A + B	1.586	1.571	3.157
	UMTS 850 Ant A+B	1.491	1.571	3.062
	LTE Band 71 Ant A + B	1.309	1.571	2.880
	LTE Band 12 Ant A + B	1.667	1.571	3.238
	LTE Band 13 Ant A + B	1.516	1.571	3.087
	LTE Band 14 Ant A + B	1.489	1.571	3.060
	LTE Band 26 (Cell) Ant A + B	1.423	1.571	2.994
	LTE Band 5 (Cell) Ant A + B	1.541	1.571	3.112
	NR Band n71 Ant A+B	1.480	1.571	3.051
	NR Band n12 Ant A+B	1.907	1.571	**3.478**
	NR Band n5 (Cell) Ant A+B	0.975	1.571	2.546

Table 12-42
Simultaneous Transmission Scenario with 5 GHz WLAN (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.782	0.954	2.153	2.325
	EVDO BC0 (§22H) Ant A + B	1.586	0.782	0.954	2.368	2.540
	UMTS 850 Ant A+B	1.491	0.782	0.954	2.273	2.445
	LTE Band 71 Ant A + B	1.309	0.782	0.954	2.091	2.263
	LTE Band 12 Ant A + B	1.667	0.782	0.954	2.449	2.621
	LTE Band 13 Ant A + B	1.516	0.782	0.954	2.298	2.470
	LTE Band 14 Ant A + B	1.489	0.782	0.954	2.271	2.443
	LTE Band 26 (Cell) Ant A + B	1.423	0.782	0.954	2.205	2.377
	LTE Band 5 (Cell) Ant A + B	1.541	0.782	0.954	2.323	2.495
	NR Band n71 Ant A+B	1.480	0.782	0.954	2.262	2.434
	NR Band n12 Ant A+B	1.907	0.782	0.954	2.689	**2.861**
	NR Band n5 (Cell) Ant A+B	0.975	0.782	0.954	1.757	1.929

Table 12-43
Simultaneous Transmission Scenario with 6 GHz WLAN (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.142	1.513
	EVDO BC0 (§22H) Ant A + B	1.586	0.142	1.728
	UMTS 850 Ant A+B	1.491	0.142	1.633
	LTE Band 71 Ant A + B	1.309	0.142	1.451
	LTE Band 12 Ant A + B	1.667	0.142	1.809
	LTE Band 13 Ant A + B	1.516	0.142	1.658
	LTE Band 14 Ant A + B	1.489	0.142	1.631
	LTE Band 26 (Cell) Ant A + B	1.423	0.142	1.565
	LTE Band 5 (Cell) Ant A + B	1.541	0.142	1.683
	NR Band n71 Ant A+B	1.480	0.142	1.622
	NR Band n12 Ant A+B	1.907	0.142	**2.049**
	NR Band n5 (Cell) Ant A+B	0.975	0.142	1.117

Table 12-44
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 5 GHz WLAN MIMO (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO at 18 dBm SAR (W/kg)	5 GHz WLAN MIMO at 18 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.577	0.402	2.350
	EVDO BC0 (§22H) Ant A + B	1.586	0.577	0.402	2.565
	UMTS 850 Ant A+B	1.491	0.577	0.402	2.470
	LTE Band 71 Ant A + B	1.309	0.577	0.402	2.288
	LTE Band 12 Ant A + B	1.667	0.577	0.402	2.646
	LTE Band 13 Ant A + B	1.516	0.577	0.402	2.495
	LTE Band 14 Ant A + B	1.489	0.577	0.402	2.468
	LTE Band 26 (Cell) Ant A + B	1.423	0.577	0.402	2.402
	LTE Band 5 (Cell) Ant A + B	1.541	0.577	0.402	2.520
	NR Band n71 Ant A+B	1.480	0.577	0.402	2.459
	NR Band n12 Ant A+B	1.907	0.577	0.402	**2.886**
	NR Band n5 (Cell) Ant A+B	0.975	0.577	0.402	1.954

Table 12-45
Simultaneous Transmission Scenario with 2.4 GHz WLAN MIMO and 6 GHz WLAN MIMO (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN MIMO at 18 dBm SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.577	0.142	2.090
	EVDO BC0 (§22H) Ant A + B	1.586	0.577	0.142	2.305
	UMTS 850 Ant A+B	1.491	0.577	0.142	2.210
	LTE Band 71 Ant A + B	1.309	0.577	0.142	2.028
	LTE Band 12 Ant A + B	1.667	0.577	0.142	2.386
	LTE Band 13 Ant A + B	1.516	0.577	0.142	2.235
	LTE Band 14 Ant A + B	1.489	0.577	0.142	2.208
	LTE Band 26 (Cell) Ant A + B	1.423	0.577	0.142	2.142
	LTE Band 5 (Cell) Ant A + B	1.541	0.577	0.142	2.260
	NR Band n71 Ant A+B	1.480	0.577	0.142	2.199
	NR Band n12 Ant A+B	1.907	0.577	0.142	**2.626**
	NR Band n5 (Cell) Ant A+B	0.975	0.577	0.142	1.694

Table 12-46
Simultaneous Transmission Scenario with Bluetooth (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	1+2	1+3
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	1.394	0.263	2.765	1.634
	EVDO BC0 (§22H) Ant A + B	1.586	1.394	0.263	2.980	1.849
	UMTS 850 Ant A+B	1.491	1.394	0.263	2.885	1.754
	LTE Band 71 Ant A + B	1.309	1.394	0.263	2.703	1.572
	LTE Band 12 Ant A + B	1.667	1.394	0.263	3.061	1.930
	LTE Band 13 Ant A + B	1.516	1.394	0.263	2.910	1.779
	LTE Band 14 Ant A + B	1.489	1.394	0.263	2.883	1.752
	LTE Band 26 (Cell) Ant A + B	1.423	1.394	0.263	2.817	1.686
	LTE Band 5 (Cell) Ant A + B	1.541	1.394	0.263	2.935	1.804
	NR Band n71 Ant A+B	1.480	1.394	0.263	2.874	1.743
	NR Band n12 Ant A+B	1.907	1.394	0.263	**3.301**	2.170
	NR Band n5 (Cell) Ant A+B	0.975	1.394	0.263	2.369	1.238

Table 12-47
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2 and Bluetooth Antenna 1 (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	2.4 GHz Bluetooth Ant 1 SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.669	1.394	3.434
	EVDO BC0 (§22H) Ant A + B	1.586	0.669	1.394	3.649
	UMTS 850 Ant A+B	1.491	0.669	1.394	3.554
	LTE Band 71 Ant A + B	1.309	0.669	1.394	3.372
	LTE Band 12 Ant A + B	1.667	0.669	1.394	3.730
	LTE Band 13 Ant A + B	1.516	0.669	1.394	3.579
	LTE Band 14 Ant A + B	1.489	0.669	1.394	3.552
	LTE Band 26 (Cell) Ant A + B	1.423	0.669	1.394	3.486
	LTE Band 5 (Cell) Ant A + B	1.541	0.669	1.394	3.604
	NR Band n71 Ant A+B	1.480	0.669	1.394	3.543
	NR Band n12 Ant A+B	1.907	0.669	1.394	**3.970**
	NR Band n5 (Cell) Ant A+B	0.975	0.669	1.394	3.038

Table 12-48
Simultaneous Transmission Scenario with 5 GHz WLAN MIMO and Bluetooth (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	5 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 at 12.0 dBm SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.954	0.287	0.263	2.612	2.588
	EVDO BC0 (§22H) Ant A + B	1.586	0.954	0.287	0.263	2.827	2.803
	UMTS 850 Ant A+B	1.491	0.954	0.287	0.263	2.732	2.708
	LTE Band 71 Ant A + B	1.309	0.954	0.287	0.263	2.550	2.526
	LTE Band 12 Ant A + B	1.667	0.954	0.287	0.263	2.908	2.884
	LTE Band 13 Ant A + B	1.516	0.954	0.287	0.263	2.757	2.733
	LTE Band 14 Ant A + B	1.489	0.954	0.287	0.263	2.730	2.706
	LTE Band 26 (Cell) Ant A + B	1.423	0.954	0.287	0.263	2.664	2.640
	LTE Band 5 (Cell) Ant A + B	1.541	0.954	0.287	0.263	2.782	2.758
	NR Band n71 Ant A+B	1.480	0.954	0.287	0.263	2.721	2.697
	NR Band n12 Ant A+B	1.907	0.954	0.287	0.263	**3.148**	3.124
	NR Band n5 (Cell) Ant A+B	0.975	0.954	0.287	0.263	2.216	2.192

Table 12-49
Simultaneous Transmission Scenario with 6 GHz WLAN MIMO and Bluetooth (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 at 12.0 dBm SAR (W/kg)	2.4 GHz Bluetooth Ant 2 SAR (W/kg)	Σ SAR (W/kg)	
		1	2	3	4	1+2+3	1+2+4
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.142	0.287	0.263	1.800	1.776
	EVDO BC0 (§22H) Ant A + B	1.586	0.142	0.287	0.263	2.015	1.991
	UMTS 850 Ant A+B	1.491	0.142	0.287	0.263	1.920	1.896
	LTE Band 71 Ant A + B	1.309	0.142	0.287	0.263	1.738	1.714
	LTE Band 12 Ant A + B	1.667	0.142	0.287	0.263	2.096	2.072
	LTE Band 13 Ant A + B	1.516	0.142	0.287	0.263	1.945	1.921
	LTE Band 14 Ant A + B	1.489	0.142	0.287	0.263	1.918	1.894
	LTE Band 26 (Cell) Ant A + B	1.423	0.142	0.287	0.263	1.852	1.828
	LTE Band 5 (Cell) Ant A + B	1.541	0.142	0.287	0.263	1.970	1.946
	NR Band n71 Ant A+B	1.480	0.142	0.287	0.263	1.909	1.885
	NR Band n12 Ant A+B	1.907	0.142	0.287	0.263	**2.336**	2.312
	NR Band n5 (Cell) Ant A+B	0.975	0.142	0.287	0.263	1.404	1.380

Table 12-50
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2, 5 GHz WLAN MIMO, and Bluetooth Antenna 1, (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 at 15 dBm SAR (W/kg)	5 GHz WLAN MIMO at 18 dBm SAR (W/kg)	2.4 GHz Bluetooth Ant 1 at 12.0 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.199	0.402	0.287	2.259
	EVDO BC0 (§22H) Ant A + B	1.586	0.199	0.402	0.287	2.474
	UMTS 850 Ant A+B	1.491	0.199	0.402	0.287	2.379
	LTE Band 71 Ant A + B	1.309	0.199	0.402	0.287	2.197
	LTE Band 12 Ant A + B	1.667	0.199	0.402	0.287	2.555
	LTE Band 13 Ant A + B	1.516	0.199	0.402	0.287	2.404
	LTE Band 14 Ant A + B	1.489	0.199	0.402	0.287	2.377
	LTE Band 26 (Cell) Ant A + B	1.423	0.199	0.402	0.287	2.311
	LTE Band 5 (Cell) Ant A + B	1.541	0.199	0.402	0.287	2.429
	NR Band n71 Ant A+B	1.480	0.199	0.402	0.287	2.368
	NR Band n12 Ant A+B	1.907	0.199	0.402	0.287	**2.795**
	NR Band n5 (Cell) Ant A+B	0.975	0.199	0.402	0.287	1.863

Table 12-51
Simultaneous Transmission Scenario with 2.4 GHz WLAN Antenna 2, 6 GHz WLAN MIMO, and Bluetooth Antenna 1, (UMPC Extremity)

Configuration	Mode	2G/3G/4G/5G SAR (W/kg)	2.4 GHz WLAN Ant 2 at 15 dBm SAR (W/kg)	6 GHz WLAN MIMO SAR (W/kg)	2.4 GHz Bluetooth Ant 1 at 12.0 dBm SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	4	1+2+3+4
UMPC Extremity SAR	EVDO BC10 (§90S) Ant A + B	1.371	0.199	0.142	0.287	1.999
	EVDO BC0 (§22H) Ant A + B	1.586	0.199	0.142	0.287	2.214
	UMTS 850 Ant A+B	1.491	0.199	0.142	0.287	2.119
	LTE Band 71 Ant A + B	1.309	0.199	0.142	0.287	1.937
	LTE Band 12 Ant A + B	1.667	0.199	0.142	0.287	2.295
	LTE Band 13 Ant A + B	1.516	0.199	0.142	0.287	2.144
	LTE Band 14 Ant A + B	1.489	0.199	0.142	0.287	2.117
	LTE Band 26 (Cell) Ant A + B	1.423	0.199	0.142	0.287	2.051
	LTE Band 5 (Cell) Ant A + B	1.541	0.199	0.142	0.287	2.169
	NR Band n71 Ant A+B	1.480	0.199	0.142	0.287	2.108
	NR Band n12 Ant A+B	1.907	0.199	0.142	0.287	**2.535**
	NR Band n5 (Cell) Ant A+B	0.975	0.199	0.142	0.287	1.603

12.8 Simultaneous Transmission Conclusion

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

13 SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

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

13.2 Measurement Uncertainty

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

14 ADDITIONAL TESTING PER FCC GUIDANCE

14.1 Tuner Testing

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

To evaluate all the tuner states, the 152 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 152 states.

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

The modes/bands affected by the permissive changes were evaluated for tuner testing. Please refer to RF Exposure Technical Report S/N 1M2104020031-01.A3L (Rev 1) for original compliance evaluation.

Table 14-1
UMTS/CDMA Supplemental Head SAR Data

Supplemental Head SAR Data					
UMTS B5 Ant A		CDMA BC10 Ant A		CDMA BC0 Ant A	
RMC		EVDO Rev.A		EVDO Rev.A	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	836.60	Frequency (MHz)	820.10	Frequency (MHz)	836.52
Channel	4183	Channel	564	Channel	384
Measured 1g SAR (W/kg)	0.178	Measured 1g SAR (W/kg)	0.099	Measured 1g SAR (W/kg)	0.157
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.215	Auto-tune (State 1)	0.134	Auto-tune (State 0)	0.205
Default (State 0)	0.232	Default (State 0)	0.131	Default (State 0)	0.224
State 0	0.232	State 1	0.136	State 0	0.224
State 23	0.141	State 25	0.013	State 2	0.220
State 48	0.190	State 49	0.103	State 19	0.166
State 60	0.060	State 73	0.134	State 26	0.017
State 62	0.013	State 97	0.011	State 50	0.146
State 72	0.228	State 102	0.046	State 74	0.207
State 96	0.052	State 115	0.036	State 98	0.014
State 104	0.064	State 121	0.097	State 105	0.025
State 120	0.178	State 126	0.098	State 113	0.142
State 144	0.231	State 145	0.078	State 122	0.122
				State 146	0.227

Supplemental Head SAR Data					
UMTS B5 Ant A + B		CDMA BC10 Ant A + B		CDMA BC0 Ant A + B	
RMC		CDMA		CDMA	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	836.60	Frequency (MHz)	820.10	Frequency (MHz)	836.52
Channel	4183	Channel	564	Channel	384
Measured 1g SAR (W/kg)	0.136	Measured 1g SAR (W/kg)	0.131	Measured 1g SAR (W/kg)	0.136
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 72)	0.191	Auto-tune (State 108)	0.170	Auto-tune (State 108)	0.194
Default (State 0)	0.178	Default (State 0)	0.161	Default (State 0)	0.163
State 2	0.170	State 7	0.002	State 5	0.100
State 3	0.156	State 33	0.002	State 12	0.119
State 6	0.050	State 47	0.008	State 13	0.109
State 30	0.089	State 59	0.004	State 35	0.004
State 45	0.149	State 62	0.001	State 53	0.006
State 68	0.050	State 72	0.011	State 63	0.106
State 72	0.190	State 93	0.006	State 76	0.108
State 98	0.006	State 103	0.004	State 99	0.110
State 100	0.097	State 108	0.158	State 104	0.042
State 121	0.088	State 125	0.001	State 108	0.177
State 150	0.195	State 137	0.005	State 129	0.087

Table 14-2
LTE Supplemental Head SAR Data

Supplemental Head SAR Data					
LTE B71 Ant A + B		LTE B12 Ant A + B		LTE B13 Ant A + B	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00
Channel	133297	Channel	23095	Channel	23230
Measured 1g SAR (W/kg)	0.123	Measured 1g SAR (W/kg)	0.153	Measured 1g SAR (W/kg)	0.129
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.173	Auto-tune (State 0)	0.164	Auto-tune (State 36)	0.160
Default (State 108)	0.181	Default (State 45)	0.148	Default (State 0)	0.159
State 0	0.179	State 0	0.166	State 5	0.076
State 3	0.171	State 4	0.108	State 29	0.111
State 13	0.117	State 28	0.088	State 36	0.159
State 27	0.050	State 42	0.033	State 45	0.150
State 51	0.028	State 52	0.014	State 53	0.005
State 75	0.148	State 64	0.088	State 67	0.084
State 89	0.002	State 76	0.088	State 77	0.064
State 99	0.059	State 90	0.143	State 92	0.123
State 109	0.168	State 100	0.085	State 101	0.099
State 123	0.020	State 124	0.010	State 108	0.151
State 147	0.100	State 148	0.157	State 125	0.004
				State 149	0.141

Supplemental Head SAR Data					
LTE B71 Ant A		LTE B12 Ant A		LTE B13 Ant A	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00
Channel	133297	Channel	23095	Channel	23230
Measured 1g SAR (W/kg)	0.057	Measured 1g SAR (W/kg)	0.067	Measured 1g SAR (W/kg)	0.079
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.074	Auto-tune (State 13)	0.086	Auto-tune (State 130)	0.105
Default (State 0)	0.075	Default (State 0)	0.067	Default (State 0)	0.088
State 0	0.075	State 10	0.082	State 0	0.088
State 2	0.055	State 13	0.078	State 3	0.067
State 5	0.036	State 20	0.084	State 7	0.012
State 13	0.082	State 42	0.010	State 32	0.051
State 40	0.041	State 54	0.075	State 37	0.077
State 52	0.013	State 56	0.082	State 61	0.015
State 61	0.007	State 69	0.014	State 78	0.026
State 88	0.011	State 83	0.077	State 85	0.110
State 94	0.068	State 89	0.015	State 105	0.011
State 107	0.000	State 110	0.034	State 111	0.062
State 119	0.082	State 131	0.063	State 130	0.110
State 128	0.069	State 142	0.004		
State 140	0.009	State 147	0.076		

Table 14-3
LTE Supplemental Head SAR Data Continued

Supplemental Head SAR Data					
LTE B14 Ant A + B		LTE B5 Ant A		LTE B26 Ant A	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	793.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50
Channel	23330	Channel	20525	Channel	26865
Measured 1g SAR (W/kg)	0.127	Measured 1g SAR (W/kg)	0.127	Measured 1g SAR (W/kg)	0.113
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 36)	0.223	Auto-tune (State 0)	0.166	Auto-tune (State 0)	0.151
Default (State 0)	0.140	Default (State 0)	0.189	Default (State 0)	0.171
State 2	0.138	State 0	0.189	State 0	0.171
State 6	0.039	State 7	0.050	State 8	0.030
State 14	0.091	State 25	0.025	State 32	0.055
State 20	0.126	State 31	0.089	State 36	0.171
State 30	0.101	State 38	0.184	State 56	0.129
State 36	0.141	State 55	0.150	State 80	0.024
State 54	0.113	State 61	0.022	State 96	0.038
State 78	0.055	State 79	0.040	State 99	0.086
State 102	0.087	State 103	0.075	State 104	0.043
State 126	0.119	State 127	0.154	State 128	0.130
State 150	0.141	State 134	0.009	State 136	0.084

Supplemental Head SAR Data					
LTE B14 Ant A		LTE B5 Ant A + B		LTE B26 Ant A + B	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	793.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50
Channel	23330	Channel	20525	Channel	26865
Measured 1g SAR (W/kg)	0.113	Measured 1g SAR (W/kg)	0.128	Measured 1g SAR (W/kg)	0.130
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.144	Auto-tune (State 72)	0.155	Auto-tune (State 72)	0.194
Default (State 0)	0.149	Default (State 0)	0.157	Default (State 0)	0.199
State 0	0.149	State 0	0.157	State 4	0.143
State 13	0.152	State 1	0.146	State 21	0.115
State 21	0.149	State 9	0.157	State 23	0.078
State 26	0.020	State 10	0.117	State 40	0.133
State 36	0.150	State 16	0.013	State 41	0.099
State 50	0.137	State 34	0.008	State 60	0.029
State 66	0.106	State 56	0.100	State 71	0.004
State 77	0.076	State 70	0.006	State 72	0.183
State 92	0.150	State 72	0.155	State 89	0.006
State 114	0.040	State 95	0.047	State 105	0.017
State 120	0.148	State 102	0.061	State 111	0.126
State 124	0.040	State 108	0.157	State 115	0.015
State 146	0.153	State 126	0.124	State 140	0.039

Table 14-4
NR Supplemental Head SAR Data

Supplemental Head SAR Data					
NR Band n71 Ant A + B		NR Band n12 Ant A + B		NR Band n5 Ant A	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 1 RB, 40 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50
Channel	136100	Channel	141500	Channel	167300
Measured 1g SAR (W/kg)	0.087	Measured 1g SAR (W/kg)	0.098	Measured 1g SAR (W/kg)	0.133
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.110	Auto-tune (State 0)	0.128	Auto-tune (State 72)	0.155
Default (State 108)	0.115	Default (State 45)	0.102	Default (State 0)	0.163
State 0	0.110	State 0	0.128	State 0	0.163
State 9	0.059	State 10	0.100	State 11	0.140
State 33	0.006	State 24	0.016	State 35	0.001
State 39	0.104	State 28	0.052	State 48	0.135
State 57	0.064	State 34	0.003	State 59	0.080
State 81	0.070	State 44	0.004	State 72	0.155
State 85	0.064	State 45	0.102	State 80	0.011
State 88	0.006	State 58	0.064	State 83	0.138
State 91	0.068	State 82	0.090	State 95	0.072
State 129	0.058	State 106	0.002	State 107	0.000
State 140	0.013	State 110	0.082	State 131	0.066
		State 130	0.055	State 145	0.116

Supplemental Head SAR Data					
NR Band n71 Ant A		NR Band n12 Ant A		NR Band n5 Ant A + B	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 1 RB, 40 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50
Channel	136100	Channel	141500	Channel	167300
Measured 1g SAR (W/kg)	0.067	Measured 1g SAR (W/kg)	0.089	Measured 1g SAR (W/kg)	0.122
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.075	Auto-tune (State 10)	0.118	Auto-tune (State 72)	0.150
Default (State 0)	0.075	Default (State 0)	0.099	Default (State 0)	0.139
State 0	0.075	State 0	0.099	State 10	0.112
State 4	0.047	State 10	0.118	State 14	0.055
State 13	0.075	State 13	0.101	State 26	0.002
State 14	0.078	State 34	0.007	State 44	0.003
State 31	0.024	State 52	0.030	State 65	0.070
State 47	0.067	State 56	0.118	State 69	0.010
State 71	0.000	State 70	0.007	State 72	0.150
State 83	0.070	State 80	0.001	State 78	0.018
State 90	0.045	State 99	0.065	State 106	0.002
State 98	0.003	State 112	0.035	State 113	0.045
State 116	0.004	State 126	0.113	State 128	0.084
State 127	0.059	State 139	0.065	State 143	0.000
State 148	0.063	State 150	0.076		

Table 14-5
UMTS/CDMA Supplemental Body SAR Data

Supplemental Body SAR Data					
UMTS B5 Ant A + B		CDMA BC10 Ant A + B		CDMA BC0 Ant A + B	
RMC		EVDO Rev.0		EVDO Rev.0	
Test Position	Back (UMPC)	Test Position	Back (UMPC)	Test Position	Back (UMPC)
Spacing	10mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	836.60	Frequency (MHz)	820.10	Frequency (MHz)	836.52
Channel	4183	Channel	564	Channel	384
Measured 1g SAR (W/kg)	0.478	Measured 1g SAR (W/kg)	0.421	Measured 1g SAR (W/kg)	0.489
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 72)	0.796	Auto-tune (State 72)	0.777	Auto-tune (State 72)	0.645
Default (State 0)	0.582	Default (State 0)	0.668	Default (State 0)	0.621
State 12	0.509	State 13	0.482	State 14	0.367
State 36	0.689	State 37	0.709	State 38	0.606
State 49	0.453	State 59	0.302	State 40	0.527
State 56	0.488	State 61	0.064	State 62	0.040
State 60	0.138	State 65	0.309	State 70	0.042
State 72	0.706	State 72	0.708	State 71	0.024
State 73	0.652	State 85	0.423	State 72	0.621
State 84	0.457	State 109	0.687	State 78	0.195
State 119	0.507	State 125	0.032	State 86	0.301
State 132	0.326	State 133	0.049	State 110	0.559
				State 134	0.030

Supplemental Body SAR Data					
UMTS B5 Ant A		CDMA BC10 Ant A		CDMA BC0 Ant A	
RMC		EVDO Rev.0		EVDO Rev.0	
Test Position	Back	Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	836.60	Frequency (MHz)	820.10	Frequency (MHz)	836.52
Channel	4183	Channel	564	Channel	384
Measured 1g SAR (W/kg)	0.323	Measured 1g SAR (W/kg)	0.251	Measured 1g SAR (W/kg)	0.333
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 9)	0.490	Auto-tune (State 0)	0.477	Auto-tune (State 9)	0.548
Default (State 0)	0.475	Default (State 0)	0.456	Default (State 0)	0.526
State 9	0.472	State 0	0.465	State 9	0.535
State 18	0.471	State 8	0.057	State 17	0.087
State 29	0.471	State 28	0.375	State 25	0.134
State 46	0.471	State 32	0.320	State 37	0.433
State 67	0.471	State 50	0.373	State 42	0.151
State 82	0.471	State 75	0.282	State 58	0.445
State 110	0.470	State 81	0.466	State 80	0.051
State 116	0.471	State 92	0.444	State 107	0.062
State 130	0.470	State 117	0.458	State 122	0.310
State 147	0.470	State 120	0.402	State 124	0.106
		State 144	0.457	State 127	0.481

Table 14-6
LTE Supplemental Body SAR Data

Supplemental Body SAR Data					
LTE B71 Ant A		LTE B12 Ant A		LTE B13 Ant A	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset	
Test Position	Right	Test Position	Right	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00
Channel	133297	Channel	23095	Channel	23230
Measured 1g SAR (W/kg)	0.380	Measured 1g SAR (W/kg)	0.232	Measured 1g SAR (W/kg)	0.242
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 13)	0.539	Auto-tune (State 9)	0.350	Auto-tune (State 12)	0.359
Default (State 0)	0.468	Default (State 0)	0.304	Default (State 0)	0.344
State 8	0.070	State 9	0.346	State 1	0.311
State 13	0.518	State 18	0.327	State 12	0.362
State 24	0.171	State 33	0.075	State 22	0.348
State 28	0.229	State 41	0.121	State 30	0.225
State 36	0.446	State 56	0.335	State 44	0.054
State 48	0.523	State 65	0.262	State 52	0.119
State 60	0.152	State 82	0.346	State 72	0.312
State 74	0.331	State 97	0.092	State 77	0.193
State 87	0.207	State 115	0.036	State 93	0.349
State 105	0.049	State 132	0.148	State 102	0.215
State 121	0.470			State 117	0.323
State 138	0.178				

Supplemental Body SAR Data					
LTE B71 Ant A + B		LTE B12 Ant A + B		LTE B13 Ant A + B	
QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 49 RB Offset	
Test Position	Right	Test Position	Back (UMPC)	Test Position	Back (UMPC)
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00
Channel	133297	Channel	23095	Channel	23230
Measured 1g SAR (W/kg)	0.502	Measured 1g SAR (W/kg)	0.410	Measured 1g SAR (W/kg)	0.545
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.701	Auto-tune (State 9)	0.688	Auto-tune (State 108)	0.836
Default (State 108)	0.698	Default (State 0)	0.662	Default (State 0)	0.826
State 0	0.701	State 0	0.662	State 17	0.054
State 15	0.117	State 9	0.684	State 24	0.197
State 26	0.026	State 16	0.108	State 41	0.564
State 39	0.549	State 40	0.304	State 52	0.096
State 51	0.101	State 50	0.366	State 65	0.443
State 63	0.253	State 58	0.476	State 77	0.506
State 74	0.572	State 64	0.532	State 89	0.051
State 87	0.086	State 88	0.086	State 91	0.657
State 111	0.473	State 112	0.248	State 108	0.818
State 116	0.038	State 117	0.659	State 113	0.472
State 135	0.284	State 122	0.309	State 137	0.426
		State 136	0.511		

Table 14-7
LTE Supplemental Body SAR Data Continued

Supplemental Body SAR Data					
LTE B14 Ant A + B		LTE B5 Ant A + B		LTE B26 Ant A + B	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Back (UMPC)	Test Position	Back (UMPC)	Test Position	Back (UMPC)
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	793.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50
Channel	23330	Channel	20525	Channel	26865
Measured 1g SAR (W/kg)	0.557	Measured 1g SAR (W/kg)	0.464	Measured 1g SAR (W/kg)	0.442
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 108)	0.884	Auto-tune (State 72)	0.747	Auto-tune (State 72)	0.651
Default (State 0)	0.863	Default (State 0)	0.748	Default (State 0)	0.654
State 18	0.566	State 19	0.558	State 7	0.184
State 29	0.486	State 37	0.770	State 20	0.447
State 42	0.311	State 43	0.158	State 44	0.095
State 66	0.429	State 67	0.310	State 68	0.170
State 68	0.270	State 72	0.782	State 72	0.700
State 97	0.086	State 86	0.364	State 92	0.444
State 101	0.465	State 100	0.389	State 116	0.068
State 108	0.864	State 105	0.085	State 118	0.533
State 114	0.247	State 108	0.782	State 137	0.277
State 128	0.674	State 109	0.717	State 140	0.133
State 138	0.384	State 115	0.117	State 149	0.485
		State 129	0.470		
		State 139	0.267		

Supplemental Body SAR Data					
LTE B14 Ant A(M1 ONLY)		LTE B5 Ant A		LTE B26 Ant A	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Right	Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	793.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50
Channel	23330	Channel	20525	Channel	26865
Measured 1g SAR (W/kg)	0.213	Measured 1g SAR (W/kg)	0.318	Measured 1g SAR (W/kg)	0.299
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 12)	0.289	Auto-tune (State 9)	0.508	Auto-tune (State 45)	0.485
Default (State 0)	0.285	Default (State 0)	0.527	Default (State 0)	0.494
State 0	0.285	State 9	0.542	State 43	0.080
State 12	0.293	State 20	0.515	State 45	0.505
State 17	0.040	State 39	0.376	State 49	0.416
State 23	0.266	State 48	0.474	State 64	0.420
State 38	0.228	State 54	0.530	State 79	0.073
State 57	0.308	State 74	0.377	State 86	0.314
State 68	0.175	State 84	0.439	State 90	0.489
State 86	0.265	State 94	0.425	State 112	0.383
State 103	0.211	State 114	0.120	State 123	0.162
State 108	0.277	State 134	0.072	State 136	0.414
State 116	0.034	State 138	0.410	State 145	0.482

Table 14-8
NR Supplemental Body SAR Data

Supplemental Body SAR Data					
NR Band n71 Ant A + B		NR Band n12 Ant A + B		NR Band n5 Ant A + B	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 1 RB, 40 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset	
Test Position	Right	Test Position	Back (UMPC)	Test Position	Back(UMPC)
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50
Channel	136100	Channel	141500	Channel	167300
Measured 1g SAR (W/kg)	0.484	Measured 1g SAR (W/kg)	0.455	Measured 1g SAR (W/kg)	0.465
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.609	Auto-tune (State 9)	0.717	Auto-tune (State 72)	0.760
Default (State 108)	0.653	Default (State 9)	0.717	Default (State 0)	0.733
State 0	0.609	State 1	0.511	State 22	0.492
State 8	0.058	State 9	0.717	State 51	0.189
State 21	0.371	State 22	0.527	State 66	0.347
State 32	0.109	State 46	0.647	State 72	0.760
State 45	0.406	State 70	0.065	State 88	0.080
State 69	0.037	State 94	0.456	State 97	0.070
State 90	0.389	State 98	0.055	State 108	0.696
State 93	0.319	State 107	0.038	State 109	0.699
State 117	0.448	State 117	0.696	State 118	0.603
State 133	0.026	State 118	0.593	State 131	0.285
State 141	0.027	State 121	0.435	State 135	0.458
		State 142	0.054	State 141	0.077
				State 142	0.038

Supplemental Body SAR Data					
NR Band n71 Ant A		NR Band n12 Ant A		NR Band n5 Ant A	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset	
Test Position	Right	Test Position	Right	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	680.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50
Channel	136100	Channel	141500	Channel	167300
Measured 1g SAR (W/kg)	0.370	Measured 1g SAR (W/kg)	0.212	Measured 1g SAR (W/kg)	0.269
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 13)	0.485	Auto-tune (State 9)	0.342	Auto-tune (State 9)	0.437
Default (State 0)	0.531	Default (State 0)	0.308	Default (State 0)	0.419
State 6	0.168	State 9	0.342	State 9	0.437
State 13	0.485	State 11	0.360	State 12	0.393
State 16	0.121	State 25	0.103	State 23	0.309
State 39	0.326	State 35	0.023	State 47	0.403
State 46	0.531	State 56	0.347	State 63	0.371
State 77	0.229	State 58	0.334	State 71	0.043
State 91	0.488	State 67	0.220	State 95	0.262
State 109	0.322	State 82	0.346	State 119	0.364
State 121	0.469	State 85	0.321	State 143	0.040
State 129	0.457	State 104	0.147	State 146	0.405
State 134	0.037	State 121	0.313	State 148	0.381
State 144	0.485	State 137	0.260		
		State 149	0.328		

15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	85033E	3.5mm Standard Calibration Kit	7/7/2021	Annual	7/7/2022	MY53402352
Agilent	8753ES	S-Parameter Vector Network Analyzer	9/16/2020	Annual	9/16/2021	MY40000670
Agilent	E4438C	ESG Vector Signal Generator	12/2/2020	Annual	12/2/2021	MY42081752
Agilent	E4440A	PSA Series Spectrum Analyzer	1/29/2021	Annual	1/29/2022	MY46186272
Agilent	E5515C	Wireless Communications Test Set	5/4/2021	Biennial	5/4/2023	GB41450275
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB44450273
Agilent	N5182A	MXG Vector Signal Generator	6/21/2021	Annual	6/21/2022	MY47420603
Agilent	N9020A	MXA Signal Analyzer	12/21/2020	Annual	12/21/2021	MY50200571
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Anritsu	MA24106A	USB Power Sensor	9/15/2020	Annual	9/15/2021	1244515
Anritsu	MA24106A	USB Power Sensor	3/2/2021	Annual	3/2/2022	1244524
Anritsu	MT8820C	Radio Communication Analyzer	9/30/2020	Annual	9/30/2021	6201240328
Anritsu	MT8821C	Radio Communication Analyzer	4/16/2021	Annual	4/16/2022	6200901190
COMTech	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M1S5A00-009
Control Company	4040	Therm./ Clock/ Humidity Monitor	2/23/2021	Annual	2/23/2022	160574418
Control Company	4352	Ultra Long Stem Thermometer	3/2/2021	Annual	3/2/2022	160508097
Control Company	4352	Long Stem Thermometer	1/24/2020	Biennial	1/24/2022	200043588
HEWLETT PACKARD	8753E	Network Analyzer	12/10/2020	Annual	12/10/2021	US38161081
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight	E7515B	UXM 5G WIRELESS TEST PLATFORM	11/14/2020	Annual	11/14/2021	MY60192562
Keysight	E7770A	CIU Common Interface Unit w/ Kit	10/23/2020	Annual	10/23/2021	MY60250248
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	9/1/2020	Annual	9/1/2021	MY53401181
Keysight Technologies	N9020A	MXA Signal Analyzer	2/24/2021	Annual	2/24/2022	MY48010233
Keysight Technologies	N9020A	MXA Signal Analyzer	8/14/2020	Annual	8/14/2021	US46470561
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
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
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	NC-100	Torque Wrench	8/4/2020	Biennial	8/4/2022	1445
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	11/4/2020	Annual	11/4/2021	100976
Rohde & Schwarz	CMW500	Radio Communication Tester	10/16/2020	Annual	10/16/2021	101699
Seekonk	NC-100	Torque Wrench	8/5/2020	Biennial	8/5/2022	N/A
Seekonk Inc	NC-100	Torque Wrench	8/4/2020	Biennial	8/4/2022	N/A
SPEAG	D750V3	750 MHz SAR Dipole	3/16/2020	Biennial	3/16/2022	1003
SPEAG	D750V3	750 MHz SAR Dipole	3/9/2021	Annual	3/9/2022	1054
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	1161
SPEAG	D835V2	835 MHz SAR Dipole	1/21/2021	Annual	1/21/2022	4d132
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	4d133
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/15/2021	Annual	6/15/2022	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/7/2021	Annual	4/7/2022	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/11/2020	Annual	8/11/2021	1450
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/7/2020	Annual	12/7/2021	1533
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2021	Annual	1/13/2022	1558
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/12/2021	Annual	5/12/2022	1070
SPEAG	EX3DV4	SAR Probe	1/20/2021	Annual	1/20/2022	3589
SPEAG	EX3DV4	SAR Probe	7/31/2020	Annual	7/31/2021	7308
SPEAG	EX3DV4	SAR Probe	4/19/2021	Annual	4/19/2022	7357
SPEAG	EX3DV4	SAR Probe	6/21/2021	Annual	6/21/2022	7409
SPEAG	EX3DV4	SAR Probe	12/11/2020	Annual	12/11/2021	7571
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1237

Note: 1. Each equipment item was used solely within its respective calibration period.
2. 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.

16 MEASUREMENT UNCERTAINTIES

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System									
Probe Calibration	E.2.1	6.55	N	1	1	1	6.6	6.6	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	2	R	1.73	1	1	1.2	1.2	∞
Linearity	E.2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E.2.4	0.25	R	1.73	1	1	0.1	0.1	∞
Readout Electronics	E.2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.8	R	1.73	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E.6.3	6.7	R	1.73	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	4	R	1.73	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E.4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E.4.1	1.67	N	1	1	1	1.7	1.7	5
Output Power Variation - SAR drift measurement	E.2.9	5	R	1.73	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.73	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	E.3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E.3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E.3.4	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	E.3.4	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)			RSS				11.6	11.4	191
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				23.2	22.8	

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

17 CONCLUSION

17.1 Measurement Conclusion

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

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

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