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SAR EVALUATION REPORT

Applicant Name:
LG Electronics U.S.A., Inc.
111 Sylvan Avenue, North Building
Englewood Cliffs, NJ 07632
United States

Date of Testing:
11/23/20 – 01/21/21
Test Site/Location:
PCTEST Lab, Columbia, MD, USA
Document Serial No.:
1M2011180184-01-R1.ZNF

FCC ID: **ZNFK420TM**

APPLICANT: **LG ELECTRONICS U.S.A., INC.**

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model: LM-K420TM
Additional Models: LMK420TM, K420TM, LM-K420MM, LMK420MM, K420MM, LM-K420PM, LMK420PM, K420PM, LG L560DL, LGL560DL, L560DL, LM-K420QM, LMK420QM, K420QM, LM-K420QM5, LMK420QM5, K420QM5, LM-K420QM6, LMK420QM6, K420QM6, LM-K420QA, LMK420QA, K420QA

Equipment Class	Band & Mode	Tx Frequency	SAR			
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)
PCE	CDMA/EVDO BC10 (§90S)	817.90 - 823.10 MHz	0.21	0.35	0.46	N/A
PCE	CDMA/EVDO BC0 (§22H)	824.70 - 848.31 MHz	0.21	0.43	0.34	N/A
PCE	PCS CDMA/EVDO	1851.25 - 1908.75 MHz	0.31	0.82	0.80	2.22
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.27	0.48	0.50	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	0.23	0.54	0.54	N/A
PCE	UMTS 850	826.40 - 846.60 MHz	0.25	0.44	0.44	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.31	0.88	0.88	2.60
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.37	0.44	0.64	2.56
PCE	LTE Band 71	665.5 - 695.5 MHz	0.18	0.37	0.43	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.21	0.40	0.40	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.17	0.32	0.36	N/A
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.27	0.51	0.51	N/A
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.33	0.83	0.83	3.17
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	0.36	0.83	0.83	2.34
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.19	0.59	1.30	2.70
DTS	2.4 GHz WLAN	2412 - 2462 MHz	1.04	0.34	0.40	N/A
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	0.74	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.93	0.36	N/A	1.84
NII	U-NII-2C	5500 - 5720 MHz	1.10	0.65	N/A	2.35
NII	U-NII-3	5745 - 5825 MHz	1.20	0.54	0.93	N/A
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.18	< 0.1	< 0.1	N/A
Simultaneous SAR per KDB 690783 D01v01r03:			1.59	1.58	1.57	3.75

Note: This revised Test Report (S/N: 1M2011180184-01-R1.ZNF) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.7 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 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 41	Voice/Data	2498.5 - 2687.5 MHz
2.4 GHz WLAN	Voice/Data	2412 - 2462 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
Bluetooth	Data	2402 - 2480 MHz

1.2 Power Reduction for SAR

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

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

1.3 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.

1.3.1 2G/3G/4G Maximum Output Power

CDMA BC10 (815 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Max	Max allowed power	24.9	24.9	24.9
	Nominal	24.4	24.4	24.4
CDMA BC0 (835 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Max	Max allowed power	24.9	24.9	24.9
	Nominal	24.4	24.4	24.4
CDMA BC1 (1900 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		1x-RTT	EVDO Rev 0	EVDO Rev A
Max	Max allowed power	24.7	24.7	24.7
	Nominal	24.2	24.2	24.2
Proximity Sensor Active	Max allowed power	23.2	23.2	23.2
	Nominal	22.7	22.7	22.7

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
Max	Max allowed power	33.7	33.7	32.2	30.4	29.2	27.7	26.2	24.4	23.2
	Nominal	33.2	33.2	31.7	29.9	28.7	27.2	25.7	23.9	22.7
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
Max	Max allowed power	29.7	29.7	29.2	27.4	26.2	26.7	25.2	23.4	22.2
	Nominal	29.2	29.2	28.7	26.9	25.7	26.2	24.7	22.9	21.7

UMTS Band 5 (850 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6
Max	Max allowed power	25.2	25.2	25.2
	Nominal	24.7	24.7	24.7
UMTS Band 4 (1750 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6
Max	Max allowed power	25.2	25.2	25.2
	Nominal	24.7	24.7	24.7
Proximity Sensor Active	Max allowed power	23.2	23.2	23.2
	Nominal	22.7	22.7	22.7
UMTS Band 2 (1900 MHz)				
Power Level		Modulated Average Output Power (in dBm)		
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6
Max	Max allowed power	24.7	24.7	24.7
	Nominal	24.2	24.2	24.2
Proximity Sensor Active	Max allowed power	23.2	23.2	23.2
	Nominal	22.7	22.7	22.7

Mode / Band		Modulated Average Output Power (in	
		Max	Proximity Sensor Active
LTE FDD Band 71	Max allowed power	25.2	25.2
	Nominal	24.7	24.7
LTE FDD Band 12	Max allowed power	25.2	25.2
	Nominal	24.7	24.7
LTE FDD Band 13	Max allowed power	24.2	24.2
	Nominal	23.7	23.7
LTE FDD Band 5	Max allowed power	25.2	25.2
	Nominal	24.7	24.7
LTE FDD Band 26	Max allowed power	25.2	25.2
	Nominal	24.7	24.7
LTE FDD Band 4	Max allowed power	25.2	23.2
	Nominal	24.7	22.7
LTE FDD Band 66	Max allowed power	25.2	23.2
	Nominal	24.7	22.7
LTE FDD Band 2	Max allowed power	24.7	23.2
	Nominal	24.2	22.7
LTE FDD Band 25	Max allowed power	24.7	23.2
	Nominal	24.2	22.7
LTE TDD Band 41 (PC3)	Max allowed power	24.2	23.2
	Nominal	23.7	22.7
LTE TDD Band 41 (PC2)	Max allowed power	27.2	26.2
	Nominal	26.7	25.7

1.3.2 Maximum Bluetooth and SISO WLAN Output Power

Mode	Band	IEEE 802.11 (in dBm)					
		SISO					
		b		g		n	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	21.0	20.0	19.5 ch. 1: 16.5 ch. 2: 19.0 ch 11: 17.0	18.5 15.5 18.0 16.0	19.0 ch. 1: 16.0 ch. 2: 18.5 ch 11: 16.5	18.0 15.0 17.5 15.5

Mode	Band	IEEE 802.11 (in dBm)					
		SISO					
		a		n		ac	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	5200 MHz	17.5	16.5	17.0	16.0	17.0	16.0
	5300 MHz	18.0	17.0	17.5	16.5	17.5	16.5
	5500 MHz	18.0	17.0	17.5	16.5	17.5	16.5
		ch. 100: 16.5	15.5	ch. 100: 16.0	15.0	ch. 100: 16.0	15.0
		ch 116 : 17.0	16.0	ch 116 : 17.0	16.0	ch 116 : 17.0	16.0
		ch 120 : 17.0	16.0	ch 120 : 17.0	16.0	ch 120 : 17.0	16.0
		ch 124 : 17.0	16.0	ch 124 : 17.0	16.0	ch 124 : 17.0	16.0
		ch 128: 17.0	16.0	ch 128: 17.0	16.0	ch 128: 17.0	16.0
		ch. 132: 17.0	16.0	ch. 132: 16.5	15.5	ch. 132: 16.5	15.5
		ch. 136: 16.5	15.5	ch. 136: 16.0	15.0	ch. 136: 16.0	15.0
		ch. 140: 16.5	15.5	ch. 140: 16.0	15.0	ch. 140: 16.0	15.0
		ch. 144: 16.5	15.5	ch. 144: 16.0	15.0	ch. 144: 16.0	15.0
	5800 MHz	17.0	16.0	16.5	15.5	16.5	15.5
		ch. 165: 16.5	15.5	ch. 165: 16.0	15.0	ch. 165: 16.0	15.0
5 GHz WIFI (40MHz BW)	5200 MHz			14.5	13.5	14.5	13.5
				ch. 38: 13.5	12.5	ch. 38: 13.5	12.5
	5300 MHz			15.0	14.0	15.0	14.0
	5500 MHz			15.0	14.0	15.0	14.0
				ch. 102: 12.5	11.5	ch. 102: 12.5	11.5
				ch 126: 14.0	13.0	ch 126: 14.0	13.0
				ch 134: 14.0	13.0	ch 134: 14.0	13.0
				ch. 142: 14.0	13.0	ch. 142: 14.0	13.0
	5800 MHz			15.0	14.0	15.0	14.0
				ch. 159: 14.5	13.5	ch. 159: 14.5	13.5
5 GHz WIFI (80MHz BW)	5200 MHz					11.0	10.0
	5300 MHz					13.0	12.0
	5500 MHz					13.0	12.0
						ch. 106: 11.0	10.0
	5800 MHz					13.5	12.5

Bluetooth (in dBm)	
Max	**Nom**
10.5	9.5

Bluetooth LE (in dBm)	
Max	**Nom**
5.0	4.0

1.3.3 Reduced SISO WLAN Output Power

Mode	Band	IEEE 802.11 (in dBm)					
		SISO					
		b		g		n	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WIFI	2.45 GHz	18.5	17.5	18.5	17.5	18.5	17.5
				ch. 1: 16.5	15.5	ch. 1: 16.0	15.0
				ch. 11: 17.0	16.0	ch. 11: 16.5	15.5

Mode	Band	IEEE 802.11 (in dBm)					
		SISO					
		a		n		ac	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	5200 MHz	14.5	13.5	14.5	13.5	14.5	13.5
	5300 MHz	15.0	14.0	15.0	14.0	15.0	14.0
	5500 MHz	15.0	14.0	15.0	14.0	15.0	14.0
		ch: 116: 14.0	13.0	ch: 116: 14.0	13.0	ch: 116: 14.0	13.0
		ch 120: 14.0	13.0	ch 120: 14.0	13.0	ch 120: 14.0	13.0
		ch 124: 14.0	13.0	ch 124: 14.0	13.0	ch 124: 14.0	13.0
		ch 126: 14.0	13.0	ch 126: 14.0	13.0	ch 126: 14.0	13.0
		ch 132: 14.0	13.0	ch 132: 14.0	13.0	ch 132: 14.0	13.0
		ch. 136: 13.5	12.5	ch. 136: 13.5	12.5	ch. 136: 13.5	12.5
		ch. 140: 13.5	12.5	ch. 140: 13.5	12.5	ch. 140: 13.5	12.5
		ch. 144: 13.5	12.5	ch. 144: 13.5	12.5	ch. 144: 13.5	12.5
	5800 MHz	14.5	13.5	14.5	13.5	14.5	13.5
		ch. 157: 14.0	13.0	ch. 157: 14.0	13.0	ch. 157: 14.0	13.0
		ch. 161: 14.0	13.0	ch. 161: 14.0	13.0	ch. 161: 14.0	13.0
		ch. 165: 13.5	12.5	ch. 165: 13.5	12.5	ch. 165: 13.5	12.5
5 GHz WIFI (40MHz BW)	5200 MHz			14.0	13.0	14.0	13.0
				ch 38: 13.5	12.5	ch 38: 13.5	12.5
	5300 MHz			14.5	13.5	14.5	13.5
	5500 MHz			14.5	13.5	14.5	13.5
				ch. 102: 12.5	11.5	ch. 102: 12.5	11.5
				ch 118: 13.5	12.5	ch 118: 13.5	12.5
				ch 126: 13.5	12.5	ch 126: 13.5	12.5
				ch. 134: 13.5	12.5	ch. 134: 13.5	12.5
				ch. 142: 13.5	12.5	ch. 142: 13.5	12.5
	5800 MHz			14.5	13.5	14.5	13.5
				ch. 159: 14.0	13.0	ch. 159: 14.0	13.0
5 GHz WIFI (80MHz BW)	5200 MHz					11.0	10.0
	5300 MHz					13.0	12.0
	5500 MHz					13.0	12.0
						ch. 106: 11.0	10.0
	5800 MHz					13.5	12.5

1.4 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 F. Since the diagonal dimension of this device is > 160 mm and <200 mm, it is considered a "phablet."

Table 1-1
Device Edges/Sides for SAR Testing

Mode	Back	Front	Top	Bottom	Right	Left
EVDO BC10 (§90S)	Yes	Yes	No	Yes	Yes	Yes
EVDO BC0 (§22H)	Yes	Yes	No	Yes	Yes	Yes
PCS EVDO	Yes	Yes	No	Yes	No	Yes
GPRS 850	Yes	Yes	No	Yes	Yes	Yes
GPRS 1900	Yes	Yes	No	Yes	No	Yes
UMTS 850	Yes	Yes	No	Yes	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	No	Yes
UMTS 1900	Yes	Yes	No	Yes	No	Yes
LTE Band 71	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes	Yes
LTE Band 13	Yes	Yes	No	Yes	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	No	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	No	Yes
LTE Band 41	Yes	Yes	No	Yes	Yes	Yes
2.4 GHz WLAN	Yes	Yes	Yes	No	Yes	No
5 GHz WLAN	Yes	Yes	Yes	No	Yes	No
Bluetooth	Yes	Yes	Yes	No	Yes	No

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

1.5 Simultaneous Transmission Capabilities

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

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

Table 1-2
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Notes
1	1x CDMA voice + 2.4 GHz WI-FI	Yes	Yes	N/A	Yes	
2	1x CDMA voice + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
3	1x CDMA voice + 2.4 GHz Bluetooth	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
4	1x CDMA voice + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
5	GSM voice + 2.4 GHz WI-FI	Yes	Yes	N/A	Yes	
6	GSM voice + 5 GHz WI-FI	Yes	Yes	N/A	Yes	
7	GSM voice + 2.4 GHz Bluetooth	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
8	GSM voice + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
9	UMTS + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	
10	UMTS + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
11	UMTS + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
12	UMTS + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
13	LTE + 2.4 GHz WI-FI	Yes	Yes	Yes	Yes	
14	LTE + 5 GHz WI-FI	Yes	Yes	Yes	Yes	
15	LTE + 2.4 GHz Bluetooth	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
16	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
17	CDMA/EVDO data + 2.4 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
18	CDMA/EVDO data + 5 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
19	CDMA/EVDO data + 2.4 GHz Bluetooth	Yes*^	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered ^ Bluetooth Tethering is considered
20	CDMA/EVDO data + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes*^	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered ^ Bluetooth Tethering is considered
21	GPRS/EDGE + 2.4 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
22	GPRS/EDGE + 5 GHz WI-FI	Yes*	Yes*	Yes	Yes	* Pre-installed VOIP applications are considered
23	GPRS/EDGE + 2.4 GHz Bluetooth	Yes*^	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered ^ Bluetooth Tethering is considered
24	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WI-FI	Yes*^	Yes*	Yes^	Yes	* Pre-installed VOIP applications are considered ^ Bluetooth Tethering is considered

1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. All licensed modes share the same antenna path and cannot transmit simultaneously.
3. 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.
4. Per the manufacturer, WIFI Direct is 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.
5. 5 GHz Wireless Router is only supported for the U-NII-1, and U-NII-3 by S/W, therefore U-NII-2A, and U-NII-2C were not evaluated for wireless router conditions.
6. This device supports VOLTE.
7. This device supports VOWIFI.
8. This device supports Bluetooth Tethering.

1.6 Miscellaneous SAR Test Considerations

(A) WIFI/BT

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

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

supported for U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz, U-NII-1 WLAN, U-NII-3 WLAN and 2.4 BT operations since wireless router 1g SAR was < 1.2 W/kg.

(B) Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

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

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

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB Publication 941225 D05A v01r02, SAR for LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive. The downlink carrier aggregation exclusion analysis can be found in Appendix F.

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" 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. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).

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

This device supports both Power Class 2 (PC2) and Power Class 3 (PC3) for LTE Band 41. Per May 2017 TCB Workshop Notes, SAR tests were performed with Power Class 3 (given the specific UL/DL limitations for Power Class 2). Additionally, SAR testing for the power class 2 condition was evaluated for the highest configuration in Power Class 3 for each test configuration to confirm the results were scalable linearly (See Section 14.1).

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

1.7 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01, D05v02r04, D06v02r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D04v01r03 (Phablet Procedures)
- FCC KDB Publication 616217 D04v01r02 (Proximity Sensor)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)

- May 2017 TCB Workshop Notes (LTE Band 41 Power Class 2/3)
- April 2018 TCB Workshop Notes (LTE Carrier Aggregation)

1.8 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 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 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 41 (2498.5 - 2687.5 MHz)				
Channel Bandwidths	LTE Band 71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (133147)		680.5 (133297)	695.5 (133447)	
LTE Band 71: 10 MHz	668 (133172)		680.5 (133297)	693 (133422)	
LTE Band 71: 15 MHz	670.5 (133197)		680.5 (133297)	690.5 (133397)	
LTE Band 71: 20 MHz	673 (133222)		680.5 (133297)	688 (133372)	
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	N/A		782 (23230)	N/A	
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
UE Category	DL UE Cat 7, UL UE Cat 13				
Modulations Supported in UL	QPSK, 16QAM, 64QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 11. It supports carrier agregation features as shown in section 9 and Appendix F. All other uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 11 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, WIFI Offloading, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

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:

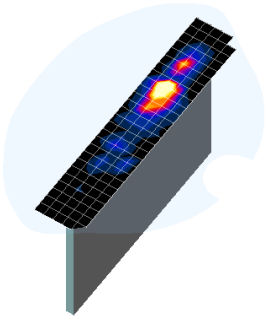


Figure 4-1
Sample SAR Area Scan

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].

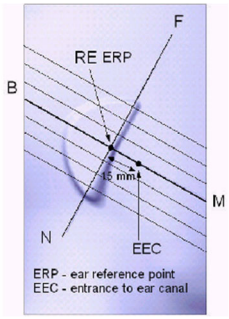


Figure 5-1
Close-Up Side view of ERP

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.

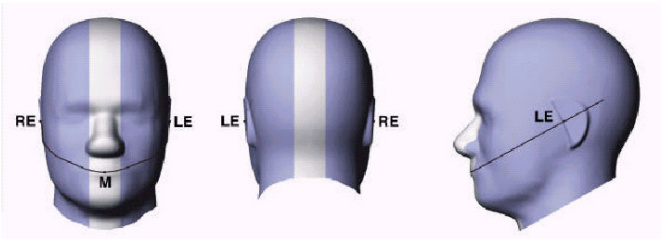


Figure 5-2
Front, back and side view of SAM Twin Phantom

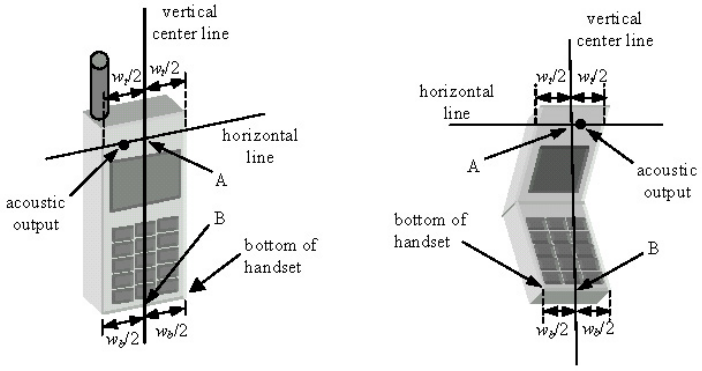


Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

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.

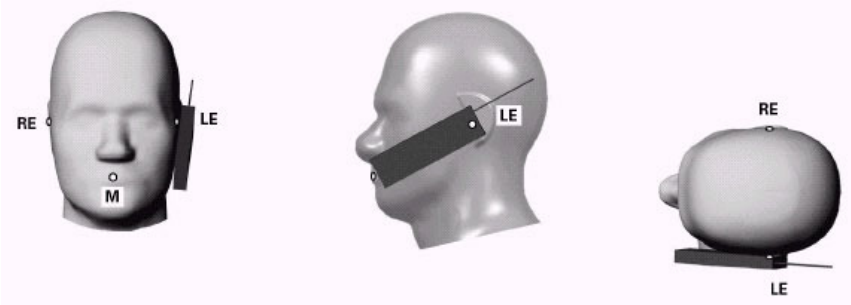


Figure 6-1 Front, Side and Top View of Cheek Position

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).

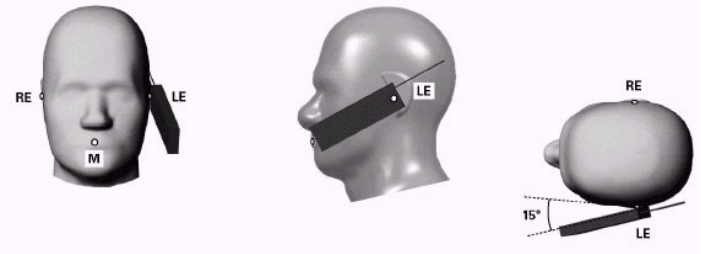


Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

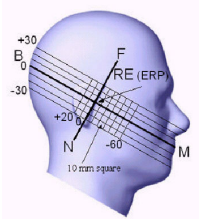


Figure 6-3
Side view w/ relevant markings

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.

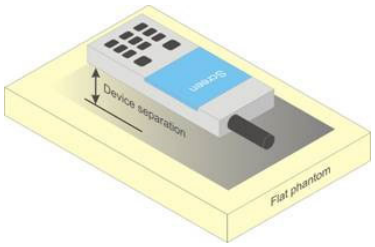


Figure 6-4
Sample Body-Worn Diagram

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 Phablet Configurations

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

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

6.9 Proximity Sensor Considerations

This device uses a power reduction mechanism to reduce output powers in certain use conditions when the device is used close the user's body. When the device's antenna is within a certain distance of the user, the sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, additional evaluation is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional test positions. Sensor triggering distance summary data is included in Appendix G. The sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the sensor entirely covers the antennas.

7 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.

8.5 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.

8.6 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.

8.7 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

8.7.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR systems to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

8.7.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is > 1.2 W/kg. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification. Unless

band gap channels are permanently disabled, SAR must be considered for these channels. Each band is tested independently according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

8.7.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.5 2.4 GHz SAR Test Requirements

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

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

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

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

8.7.6 OFDM Transmission Mode and SAR Test Channel Selection

When the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

8.7.7 Initial Test Configuration Procedure

For OFDM, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order IEEE 802.11 mode.

The channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements (See Section 8.7.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.7.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg, no additional SAR tests for the subsequent test configurations are required. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9 RF CONDUCTED POWERS

9.1 CDMA Conducted Powers

Table 9-1
Maximum Conducted Power

Band	Channel	Rule Part	Frequency	SO55 [dBm]	SO55 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	FCH+SCH	FCH	(RTAP)	(RETAP)
Cellular	564	90S	820.1	24.59	24.67	23.68	24.70	24.90	24.90
Cellular	1013	22H	824.7	24.24	24.33	23.36	24.36	24.80	24.77
	384	22H	836.52	24.60	24.68	23.66	24.68	24.90	24.90
	777	22H	848.31	24.44	24.51	23.51	24.51	24.87	24.83
PCS	25	24E	1851.25	24.35	24.47	23.49	24.46	24.54	24.68
	600	24E	1880	24.14	24.25	23.30	24.25	24.50	24.46
	1175	24E	1908.75	24.20	24.33	23.32	24.28	24.62	24.57

Table 9-2
Reduced Conducted Power

Band	Channel	Rule Part	Frequency	SO55 [dBm]	SO55 [dBm]	TDSO SO32 [dBm]	TDSO SO32 [dBm]	1x EvDO Rev. 0 [dBm]	1x EvDO Rev. A [dBm]
	F-RC		MHz	RC1	RC3	FCH+SCH	FCH	(RTAP)	(RETAP)
PCS	25	24E	1851.25	22.84	22.99	21.95	22.98	23.20	23.20
	600	24E	1880	22.61	22.79	21.75	22.77	23.01	22.99
	1175	24E	1908.75	22.64	22.81	21.77	22.80	23.12	23.15

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.

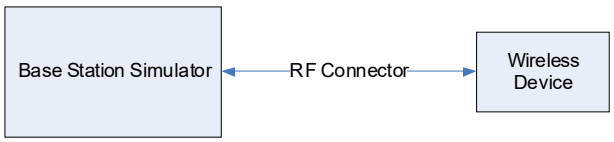


Figure 9-1
Power Measurement Setup

9.2 GSM Conducted Powers

Table 9-3
Maximum Conducted Power

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	33.67	33.69	32.17	30.39	**29.19**	27.65	26.13	24.27	23.09
	190	33.70	33.70	32.19	30.40	**29.20**	27.70	26.18	24.35	23.19
	251	33.69	33.68	32.13	30.32	**29.11**	27.67	26.16	24.24	23.14
GSM 1900	512	28.82	29.00	28.03	26.72	**25.84**	26.57	25.16	23.39	22.18
	661	28.83	29.06	28.10	26.79	**25.74**	26.44	25.07	23.38	22.08
	810	29.08	29.17	28.20	26.95	**25.91**	26.63	25.18	23.37	22.05

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	24.47	24.49	25.98	25.96	**26.01**	18.45	19.94	19.84	19.91
	190	24.50	24.50	26.00	25.97	**26.02**	18.50	19.99	19.92	20.01
	251	24.49	24.48	25.94	25.89	**25.93**	18.47	19.97	19.81	19.96
GSM 1900	512	19.62	19.80	21.84	22.29	**22.66**	17.37	18.97	18.96	19.00
	661	19.63	19.86	21.91	22.36	**22.56**	17.24	18.88	18.95	18.90
	810	19.88	19.97	22.01	22.52	**22.73**	17.43	18.99	18.94	18.87

GSM 850	**Frame Avg.Targets:**	24.00	24.00	25.51	25.47	**25.52**	18.00	19.51	19.47	19.52
GSM 1900		20.00	20.00	22.51	22.47	**22.52**	17.00	18.51	18.47	18.52

Note:

1. Both burst-averaged and calculated frame-averaged powers are included. Frame-averaged power was calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
2. GPRS/EDGE (GMSK) output powers were measured with coding scheme setting of 1 (CS1) on the base station simulator. CS1 was configured to measure GPRS output power measurements and SAR to

ensure GMSK modulation in the signal. Our Investigation has shown that CS1 - CS4 settings do not have any impact on the output levels or modulation in the GPRS modes.

3. EDGE (8-PSK) output powers were measured with MCS7 on the base station simulator. MCS7 coding scheme was used to measure the output powers for EDGE since investigation has shown that choosing MCS7 coding scheme will ensure 8-PSK modulation. It has been shown that MCS levels that produce 8-PSK modulation do not have an impact on output power.

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

Figure 9-2
Power Measurement Setup

9.3 UMTS Conducted Powers

Table 9-4
Maximum Conducted Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	24.86	24.81	24.86	24.80	24.79	24.75	24.42	24.33	24.23	-
99		12.2 kbps AMR	24.88	24.86	24.94	24.80	24.86	24.78	24.38	24.31	24.22	-
6	HSDPA	Subtest 1	24.85	24.76	24.79	24.86	24.92	24.85	24.43	24.35	24.29	0
6		Subtest 2	24.85	24.82	24.71	24.84	24.64	24.82	24.36	24.22	24.22	0
6		Subtest 3	24.70	24.70	24.68	24.36	24.35	24.41	23.97	23.85	23.79	0.5
6		Subtest 4	24.69	24.67	24.70	24.34	24.37	24.35	23.12	23.57	23.76	0.5
6	HSUPA	Subtest 1	22.84	22.79	22.96	22.83	22.79	22.84	22.39	22.35	22.40	2
6		Subtest 2	22.94	22.85	22.90	22.79	22.83	22.80	22.30	22.27	22.23	2
6		Subtest 3	23.86	23.84	23.88	23.78	23.82	23.81	23.35	23.37	23.23	1
6		Subtest 4	22.35	22.34	22.37	22.33	22.32	22.34	21.91	21.83	21.75	2.5
6		Subtest 5	23.82	23.78	23.85	23.52	23.48	23.53	23.37	23.27	23.20	1

Table 9-5
Reduced Conducted Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	22.45	22.46	22.46	22.60	22.53	22.44	-
99		12.2 kbps AMR	22.47	22.49	22.45	22.63	22.50	22.43	-
6	HSDPA	Subtest 1	22.79	22.84	22.62	22.90	22.84	22.78	0
6		Subtest 2	22.79	22.84	22.81	22.75	22.77	22.70	0
6		Subtest 3	22.32	22.31	22.33	22.46	22.24	22.27	0.5
6		Subtest 4	22.29	22.36	22.30	22.36	22.15	22.22	0.5
6	HSUPA	Subtest 1	20.81	20.77	20.79	21.20	21.19	21.19	2
6		Subtest 2	20.78	20.80	20.76	20.85	20.90	20.88	2
6		Subtest 3	21.83	21.79	21.77	21.86	21.83	21.87	1
6		Subtest 4	20.32	20.29	20.33	20.27	20.23	20.25	2.5
6		Subtest 5	21.77	21.81	21.83	21.85	21.72	21.78	1

This device does not support DC-HSDPA.

Figure 9-3
Power Measurement Setup

9.4 LTE Conducted Powers

9.4.1 LTE Band 71

Table 9-6
LTE Band 71 Conducted Powers - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 133297 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.66	0	0
	1	50	**25.02**		0
	1	99	24.88		0
	50	0	23.78	0-1	1
	50	25	23.91		1
	50	50	**24.01**		1
	100	0	23.91		1
16QAM	1	0	23.73	0-1	1
	1	50	24.14		1
	1	99	24.03		1
	50	0	22.46	0-2	2
	50	25	22.57		2
	50	50	22.67		2
	100	0	22.60		2
64QAM	1	0	22.59	0-2	2
	1	50	22.97		2
	1	99	22.88		2
	50	0	21.82	0-3	3
	50	25	21.98		3
	50	50	22.04		3
	100	0	21.92		3

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

Table 9-7
LTE Band 71 Conducted Powers - 15 MHz Bandwidth

LTE Band 71 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 133297 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.69	0	0
	1	36	24.81		0
	1	74	24.66		0
	36	0	23.80	0-1	1
	36	18	23.85		1
	36	37	23.86		1
	75	0	23.84		1
16QAM	1	0	23.66	0-1	1
	1	36	23.78		1
	1	74	23.68		1
	36	0	22.79	0-2	2
	36	18	22.84		2
	36	37	22.91		2
	75	0	22.82		2
64QAM	1	0	23.01	0-2	2
	1	36	23.16		2
	1	74	23.04		2
	36	0	21.75	0-3	3
	36	18	21.77		3
	36	37	21.78		3
	75	0	21.76		3

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

Table 9-8
LTE Band 71 Conducted Powers - 10 MHz Bandwidth

LTE Band 71 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 133172 (668.0 MHz)	Mid Channel 133297 (680.5 MHz)	High Channel 133422 (693.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.69	24.73	24.83	0	0
	1	25	24.95	24.86	24.96		0
	1	49	24.78	24.77	24.84		0
	25	0	23.65	23.76	23.79	0-1	1
	25	12	23.73	23.79	23.81		1
	25	25	23.69	23.84	23.82		1
	50	0	23.66	23.84	23.80		1
16QAM	1	0	24.05	23.48	24.12	0-1	1
	1	25	24.20	23.64	24.20		1
	1	49	24.02	23.47	24.12		1
	25	0	22.67	22.82	22.82	0-2	2
	25	12	22.72	22.83	22.84		2
	25	25	22.69	22.90	22.85		2
	50	0	22.68	22.82	22.78		2
64QAM	1	0	22.84	23.04	22.85	0-2	2
	1	25	22.94	23.20	23.02		2
	1	49	22.77	23.02	22.87		2
	25	0	21.59	21.78	21.74	0-3	3
	25	12	21.70	21.80	21.77		3
	25	25	21.63	21.82	21.78		3
	50	0	21.60	21.81	21.78		3

Table 9-9
LTE Band 71 Conducted Powers - 5 MHz Bandwidth

LTE Band 71 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 133147 (665.5 MHz)	Mid Channel 133297 (680.5 MHz)	High Channel 133447 (695.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.58	24.59	24.72	0	0
	1	12	24.95	24.92	25.09		0
	1	24	24.60	24.60	24.73		0
	12	0	23.58	23.73	23.76	0-1	1
	12	6	23.73	23.81	23.81		1
	12	13	23.66	23.80	23.81		1
	25	0	23.65	23.78	23.79		1
16QAM	1	0	23.94	23.69	23.98	0-1	1
	1	12	24.20	23.99	24.20		1
	1	24	23.91	23.67	24.00		1
	12	0	22.68	22.69	22.77	0-2	2
	12	6	22.81	22.80	22.84		2
	12	13	22.74	22.78	22.79		2
	25	0	22.63	22.83	22.76		2
64QAM	1	0	23.02	23.05	22.92	0-2	2
	1	12	23.20	23.20	23.20		2
	1	24	23.00	23.05	22.98		2
	12	0	21.63	21.81	21.81	0-3	3
	12	6	21.77	21.90	21.83		3
	12	13	21.74	21.86	21.83		3
	25	0	21.54	21.77	21.80		3

9.4.2 LTE Band 12

Table 9-10
LTE Band 12 Conducted Powers - 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	24.78	0	0
	1	25	**24.91**		0
	1	49	24.72		0
	25	0	23.84	0-1	1
	25	12	23.85		1
	25	25	**23.89**		1
	50	0	23.87		1
16QAM	1	0	23.85	0-1	1
	1	25	23.88		1
	1	49	23.89		1
	25	0	22.58	0-2	2
	25	12	22.58		2
	25	25	22.67		2
	50	0	22.61		2
64QAM	1	0	22.91	0-2	2
	1	25	23.00		2
	1	49	22.84		2
	25	0	21.93	0-3	3
	25	12	21.94		3
	25	25	22.01		3
	50	0	21.95		3

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

Table 9-11
LTE Band 12 Conducted Powers - 5 MHz Bandwidth

LTE Band 12 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23035 (701.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23155 (713.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.70	24.68	24.55	0	0
	1	12	25.01	25.02	24.88		0
	1	24	24.64	24.63	24.60		0
	12	0	23.77	23.69	23.79	0-1	1
	12	6	23.80	23.78	23.80		1
	12	13	23.72	23.78	23.78		1
	25	0	23.77	23.78	23.74		1
16QAM	1	0	23.92	23.96	23.60	0-1	1
	1	12	24.13	24.20	23.88		1
	1	24	24.00	24.10	23.63		1
	12	0	22.87	22.83	22.79	0-2	2
	12	6	22.89	22.92	22.80		2
	12	13	22.77	22.89	22.71		2
	25	0	22.79	22.76	22.79		2
64QAM	1	0	22.73	23.03	22.97	0-2	2
	1	12	23.09	23.20	23.20		2
	1	24	22.72	23.03	23.14		2
	12	0	21.90	21.80	21.87	0-3	3
	12	6	21.88	21.85	21.90		3
	12	13	21.80	21.88	21.85		3
	25	0	21.83	21.73	21.77		3

Table 9-12
LTE Band 12 Conducted Powers - 3 MHz Bandwidth

LTE Band 12 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23025 (700.5 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23165 (714.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.89	24.82	24.76	0	0
	1	7	24.85	25.02	24.90		0
	1	14	24.85	24.81	24.76		0
	8	0	23.91	23.84	23.82	0-1	1
	8	4	23.93	23.89	23.86		1
	8	7	23.89	23.87	23.83		1
	15	0	23.93	23.90	23.87		1
16QAM	1	0	24.08	24.07	23.93	0-1	1
	1	7	24.20	24.20	24.07		1
	1	14	24.07	24.08	23.87		1
	8	0	22.96	22.90	22.85	0-2	2
	8	4	22.97	22.97	22.86		2
	8	7	22.94	22.96	22.85		2
	15	0	22.91	22.87	22.80		2
64QAM	1	0	23.09	23.07	22.90	0-2	2
	1	7	23.20	23.19	23.04		2
	1	14	23.07	22.99	22.91		2
	8	0	21.97	21.91	21.88	0-3	3
	8	4	22.03	21.99	21.88		3
	8	7	22.04	21.70	21.87		3
	15	0	21.95	21.91	21.81		3

Table 9-13
LTE Band 12 Conducted Powers -1.4 MHz Bandwidth

LTE Band 12 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 23017 (699.7 MHz)	Mid Channel 23095 (707.5 MHz)	High Channel 23173 (715.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.85	24.82	24.74	0	0
	1	2	24.86	24.95	24.89		0
	1	5	24.82	24.80	24.74		0
	3	0	24.87	24.87	24.86		0
	3	2	24.95	24.94	24.87		0
	3	3	24.93	24.97	24.83		0
	6	0	23.97	23.93	23.87	0-1	1
16QAM	1	0	24.09	24.18	24.12	0-1	1
	1	2	24.11	24.01	24.14		1
	1	5	24.01	24.05	23.89		1
	3	0	23.86	23.85	23.84		1
	3	2	23.88	23.87	23.81		1
	3	3	23.73	23.85	23.83		1
	6	0	23.05	23.02	22.94	0-2	2
64QAM	1	0	23.00	23.00	22.86	0-2	2
	1	2	23.10	23.14	23.06		2
	1	5	23.00	22.97	22.88		2
	3	0	23.02	23.11	22.87		2
	3	2	23.04	23.05	23.00		2
	3	3	23.03	22.98	22.80		2
	6	0	21.98	21.94	21.91	0-3	3

9.4.3 LTE Band 13

Table 9-14
LTE Band 13 Conducted Powers - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	23.93	0	0
	1	25	**24.04**		0
	1	49	23.86		0
	25	0	22.90	0-1	1
	25	12	22.98		1
	25	25	**23.00**		1
	50	0	22.95		1
16QAM	1	0	23.03	0-1	1
	1	25	23.20		1
	1	49	23.14		1
	25	0	21.68	0-2	2
	25	12	21.78		2
	25	25	21.76		2
	50	0	21.66		2
64QAM	1	0	21.84	0-2	2
	1	25	22.05		2
	1	49	21.90		2
	25	0	20.97	0-3	3
	25	12	21.03		3
	25	25	21.02		3
	50	0	20.97		3

Table 9-15
LTE Band 13 Conducted Powers - 5 MHz Bandwidth

LTE Band 13 5 MHz Bandwidth					
Modulation	**RB Size**	**RB Offset**	**Mid Channel** **23230 (782.0 MHz)** **Conducted Power [dBm]**	**MPR Allowed per 3GPP [dB]**	**MPR [dB]**
QPSK	1	0	23.88	0	0
	1	12	24.11		0
	1	24	23.81		0
	12	0	22.87	0-1	1
	12	6	23.02		1
	12	13	22.91		1
	25	0	22.92		1
16QAM	1	0	23.19	0-1	1
	1	12	23.20		1
	1	24	23.13		1
	12	0	21.87	0-2	2
	12	6	22.07		2
	12	13	21.94		2
	25	0	21.94		2
64QAM	1	0	22.10	0-2	2
	1	12	22.20		2
	1	24	21.95		2
	12	0	20.95	0-3	3
	12	6	21.08		3
	12	13	20.95		3
	25	0	20.95		3

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

9.4.4 LTE Band 26 (Cell)

Table 9-16
LTE Band 26 (Cell) Conducted Powers - 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	24.77	0	0
	1	36	**24.89**		0
	1	74	24.86		0
	36	0	**24.04**	0-1	1
	36	18	24.00		1
	36	37	23.99		1
	75	0	23.98		1
16QAM	1	0	23.78	0-1	1
	1	36	23.84		1
	1	74	23.94		1
	36	0	22.71	0-2	2
	36	18	22.65		2
	36	37	22.69		2
	75	0	22.71		2
64QAM	1	0	22.77	0-2	2
	1	36	22.86		2
	1	74	22.91		2
	36	0	21.96	0-3	3
	36	18	21.95		3
	36	37	21.97		3
	75	0	21.99		3

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

Table 9-17
LTE Band 26 (Cell) Conducted Powers - 10 MHz Bandwidth

LTE Band 26 (Cell) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26740 (819.0 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 26990 (844.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.76	24.70	24.74	0	0
	1	25	24.79	24.76	24.89		0
	1	49	24.69	24.69	24.80		0
	25	0	23.87	23.98	23.82	0-1	1
	25	12	23.87	23.88	23.90		1
	25	25	23.92	23.81	23.77		1
	50	0	23.90	23.90	23.78		1
16QAM	1	0	24.00	23.90	24.05	0-1	1
	1	25	24.01	24.00	24.10		1
	1	49	23.96	23.99	24.03		1
	25	0	22.79	22.89	22.78	0-2	2
	25	12	22.81	22.77	22.85		2
	25	25	22.87	22.75	22.70		2
	50	0	22.84	22.80	22.72		2
64QAM	1	0	22.89	22.85	22.95	0-2	2
	1	25	22.99	22.91	23.04		2
	1	49	22.89	22.92	22.95		2
	25	0	21.77	21.87	21.74	0-3	3
	25	12	21.79	21.75	21.82		3
	25	25	21.83	21.70	21.70		3
	50	0	21.83	21.81	21.72		3

Table 9-18
LTE Band 26 (Cell) Conducted Powers - 5 MHz Bandwidth

LTE Band 26 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26715 (816.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27015 (846.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.65	24.60	24.63	0	0
	1	12	24.93	24.86	24.95		0
	1	24	24.61	24.59	24.70		0
	12	0	23.86	23.87	23.94	0-1	1
	12	6	23.91	23.88	23.96		1
	12	13	23.85	23.79	23.83		1
	25	0	23.87	23.86	23.91		1
16QAM	1	0	23.89	23.81	23.91	0-1	1
	1	12	24.16	24.06	24.20		1
	1	24	23.88	23.85	24.01		1
	12	0	22.79	22.78	22.91	0-2	2
	12	6	22.84	22.78	22.91		2
	12	13	22.78	22.70	22.76		2
	25	0	22.80	22.76	22.84		2
64QAM	1	0	22.79	22.74	22.84	0-2	2
	1	12	23.04	22.98	23.13		2
	1	24	22.80	22.74	22.63		2
	12	0	21.77	21.76	21.88	0-3	3
	12	6	21.84	21.76	21.89		3
	12	13	21.79	21.69	21.75		3
	25	0	21.77	21.75	21.83		3

Table 9-19
LTE Band 26 (Cell) Conducted Powers - 3 MHz Bandwidth

LTE Band 26 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26705 (815.5 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27025 (847.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.77	24.70	24.82	0	0
	1	7	24.92	24.88	24.98		0
	1	14	24.75	24.70	24.81		0
	8	0	23.87	23.81	23.95	0-1	1
	8	4	23.89	23.82	23.96		1
	8	7	23.85	23.83	23.91		1
	15	0	23.89	23.87	23.96		1
16QAM	1	0	23.96	23.91	24.03	0-1	1
	1	7	24.15	24.06	24.20		1
	1	14	23.96	23.93	24.01		1
	8	0	22.86	22.78	22.92	0-2	2
	8	4	22.88	22.79	22.94		2
	8	7	22.83	22.77	22.93		2
	15	0	22.82	22.77	22.86		2
64QAM	1	0	22.89	22.83	22.93	0-2	2
	1	7	23.02	23.01	23.12		2
	1	14	22.89	22.83	22.97		2
	8	0	21.79	21.74	21.89	0-3	3
	8	4	21.82	21.76	21.90		3
	8	7	21.79	21.75	21.86		3
	15	0	21.81	21.77	21.86		3

Table 9-20
LTE Band 26 (Cell) Conducted Powers -1.4 MHz Bandwidth

LTE Band 26 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26697 (814.7 MHz)	Mid Channel 26865 (831.5 MHz)	High Channel 27033 (848.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.71	24.65	24.75	0	0
	1	2	24.84	24.78	24.90		0
	1	5	24.71	24.64	24.75		0
	3	0	24.81	24.75	24.88		0
	3	2	24.85	24.80	24.89		0
	3	3	24.83	24.75	24.87		0
	6	0	23.91	23.84	23.97	0-1	1
16QAM	1	0	23.89	23.85	23.94	0-1	1
	1	2	24.09	24.01	24.09		1
	1	5	23.93	23.85	24.01		1
	3	0	23.85	23.80	23.88		1
	3	2	23.87	23.80	23.93		1
	3	3	23.87	23.79	23.91		1
	6	0	22.87	22.79	22.94	0-2	2
64QAM	1	0	22.82	22.73	22.90	0-2	2
	1	2	22.98	22.92	23.04		2
	1	5	22.82	22.74	22.94		2
	3	0	22.82	22.72	22.84		2
	3	2	22.84	22.80	22.92		2
	3	3	22.84	22.75	22.89		2
	6	0	21.82	21.75	21.91	0-3	3

9.4.5 LTE Band 66 (AWS)

Table 9-21
LTE Band 66 (AWS) Conducted Powers - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.72	24.78	24.82	0	0
	1	50	24.96	24.98	**25.15**		0
	1	99	24.71	24.95	24.88		0
	50	0	23.99	23.96	24.03	0-1	1
	50	25	24.02	23.99	24.00		1
	50	50	**24.05**	24.01	23.98		1
	100	0	24.02	24.01	23.99		1
16QAM	1	0	23.55	23.58	23.84	0-1	1
	1	50	23.84	23.99	24.08		1
	1	99	23.58	23.79	23.80		1
	50	0	22.52	22.53	22.59	0-2	2
	50	25	22.58	22.56	22.54		2
	50	50	22.60	22.61	22.52		2
	100	0	22.57	22.60	22.60		2
64QAM	1	0	23.09	22.85	22.83	0-2	2
	1	50	23.20	23.19	23.12		2
	1	99	23.08	23.06	22.83		2
	50	0	22.01	22.05	22.15	0-3	3
	50	25	22.07	22.08	22.09		3
	50	50	22.10	22.12	22.11		3
	100	0	22.01	22.10	22.12		3

Table 9-22
LTE Band 66 (AWS) Conducted Powers - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.49	24.54	24.67	0	0
	1	36	24.71	24.62	24.78		0
	1	74	24.66	24.51	24.75		0
	36	0	23.39	23.75	23.86	0-1	1
	36	18	23.80	23.73	23.88		1
	36	37	23.85	23.71	23.91		1
	75	0	23.80	23.72	23.87		1
16QAM	1	0	23.92	23.78	23.90	0-1	1
	1	36	24.02	23.85	24.05		1
	1	74	23.69	23.79	23.91		1
	36	0	22.76	22.70	22.87	0-2	2
	36	18	22.79	22.58	22.90		2
	36	37	22.82	22.64	22.98		2
	75	0	22.79	22.68	22.91		2
64QAM	1	0	22.89	22.71	22.88	0-2	2
	1	36	22.84	22.76	23.06		2
	1	74	22.91	22.55	23.01		2
	36	0	21.76	21.72	21.86	0-3	3
	36	18	21.80	21.67	21.90		3
	36	37	21.85	21.66	22.02		3
	75	0	21.78	21.66	21.89		3

Table 9-23
LTE Band 66 (AWS) Conducted Powers - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.62	24.36	24.72	0	0
	1	25	24.77	24.66	24.89		0
	1	49	24.63	24.53	24.94		0
	25	0	23.82	23.74	23.87	0-1	1
	25	12	23.85	23.73	23.87		1
	25	25	23.79	23.70	23.91		1
	50	0	23.79	23.74	23.89		1
16QAM	1	0	23.92	23.83	24.01	0-1	1
	1	25	24.09	24.01	24.15		1
	1	49	23.94	23.75	23.76		1
	25	0	22.80	22.70	22.81	0-2	2
	25	12	22.83	22.69	22.91		2
	25	25	22.80	22.57	22.89		2
	50	0	22.79	22.78	22.91		2
64QAM	1	0	22.85	22.64	22.86	0-2	2
	1	25	22.71	22.85	23.10		2
	1	49	22.91	22.70	23.02		2
	25	0	21.78	21.70	21.97	0-3	3
	25	12	21.94	21.70	21.91		3
	25	25	21.78	21.65	21.93		3
	50	0	21.79	21.69	21.90		3

Table 9-24
LTE Band 66 (AWS) Conducted Powers - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.56	24.46	24.67	0	0
	1	12	24.85	24.63	24.95		0
	1	24	24.62	24.37	24.69		0
	12	0	23.76	23.64	23.85	0-1	1
	12	6	23.77	23.70	23.91		1
	12	13	23.74	23.64	23.85		1
	25	0	23.65	23.66	23.84		1
16QAM	1	0	23.85	23.77	23.96	0-1	1
	1	12	24.11	23.83	24.15		1
	1	24	23.89	23.78	23.99		1
	12	0	22.75	22.63	22.85	0-2	2
	12	6	22.75	22.58	22.91		2
	12	13	22.73	22.62	22.86		2
	25	0	22.73	22.75	22.87		2
64QAM	1	0	22.80	22.42	22.94	0-2	2
	1	12	23.06	22.91	23.15		2
	1	24	22.76	22.68	22.59		2
	12	0	21.74	21.60	21.86	0-3	3
	12	6	21.64	21.66	21.92		3
	12	13	21.69	21.60	21.90		3
	25	0	21.73	21.61	21.85		3

Table 9-25
LTE Band 66 (AWS) Conducted Powers - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.65	24.56	24.78	0	0
	1	7	24.78	24.67	24.94		0
	1	14	24.62	24.53	24.79		0
	8	0	23.73	23.63	23.83	0-1	1
	8	4	23.69	23.66	23.96		1
	8	7	23.70	23.61	23.73		1
	15	0	23.74	23.64	23.83		1
16QAM	1	0	23.94	23.79	24.06	0-1	1
	1	7	23.88	23.98	24.18		1
	1	14	23.96	23.72	24.07		1
	8	0	22.77	22.70	22.93	0-2	2
	8	4	22.81	22.66	23.01		2
	8	7	22.77	22.64	22.91		2
	15	0	22.73	22.63	22.89		2
64QAM	1	0	22.85	22.74	23.00	0-2	2
	1	7	22.83	22.89	22.91		2
	1	14	22.65	22.75	23.04		2
	8	0	21.74	21.65	21.90	0-3	3
	8	4	21.76	21.64	21.94		3
	8	7	21.73	21.62	21.90		3
	15	0	21.81	21.51	21.85		3

Table 9-26
LTE Band 66 (AWS) Conducted Powers -1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.60	24.50	24.73	0	0
	1	2	24.79	24.71	24.87		0
	1	5	24.50	24.49	24.74		0
	3	0	24.68	24.53	24.84		0
	3	2	24.69	24.49	24.79		0
	3	3	24.68	24.57	24.84		0
	6	0	23.77	23.65	23.85	0-1	1
16QAM	1	0	23.86	23.31	24.01	0-1	1
	1	2	24.08	24.01	24.10		1
	1	5	23.81	23.87	23.86		1
	3	0	23.73	23.58	23.77		1
	3	2	23.87	23.45	23.82		1
	3	3	23.65	23.61	23.84		1
	6	0	22.84	22.72	22.98	0-2	2
64QAM	1	0	22.85	22.70	22.91	0-2	2
	1	2	23.01	22.77	22.54		2
	1	5	22.52	23.00	23.00		2
	3	0	22.71	22.62	22.97		2
	3	2	22.80	22.68	23.05		2
	3	3	22.81	22.70	22.95		2
	6	0	21.73	21.63	21.89	0-3	3

Table 9-27
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.74	22.79	22.89	0	0
	1	50	22.94	23.08	**23.10**		0
	1	99	22.66	22.83	22.77		0
	50	0	22.92	22.99	**23.14**	0-1	0
	50	25	22.98	23.00	23.06		0
	50	50	22.95	22.99	23.02		0
	100	0	22.94	23.02	23.05		0
16QAM	1	0	23.05	23.08	23.19	0-1	0
	1	50	23.19	23.20	23.20		0
	1	99	22.93	23.19	23.17		0
	50	0	22.49	22.53	22.66	0-2	0
	50	25	22.52	22.51	22.57		0
	50	50	22.51	22.52	22.49		0
	100	0	22.46	22.55	22.55		0
64QAM	1	0	23.03	22.84	22.93	0-2	0
	1	50	23.20	23.17	23.08		0
	1	99	22.93	22.93	22.78		0
	50	0	22.00	22.07	22.16	0-3	1
	50	25	22.02	22.05	22.14		1
	50	50	22.01	22.04	22.07		1
	100	0	21.96	22.06	22.11		1

Table 9-28
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132047 (1717.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132597 (1772.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.65	22.62	22.72	0	0
	1	36	22.77	22.73	22.85		0
	1	74	22.74	22.67	22.90		0
	36	0	22.76	22.78	22.94	0-1	0
	36	18	22.81	22.78	22.98		0
	36	37	22.85	22.79	23.02		0
	75	0	22.80	22.74	22.97		0
16QAM	1	0	22.96	22.85	23.05	0-1	0
	1	36	23.05	22.95	23.18		0
	1	74	23.10	22.70	23.18		0
	36	0	22.77	22.74	22.91	0-2	0
	36	18	22.86	22.77	22.95		0
	36	37	22.86	22.74	22.99		0
	75	0	22.81	22.76	22.97		0
64QAM	1	0	22.84	22.75	22.88	0-2	0
	1	36	22.98	22.90	23.07		0
	1	74	22.91	22.86	23.02		0
	36	0	21.77	21.78	21.92	0-3	1
	36	18	21.82	21.76	21.95		1
	36	37	21.86	21.79	22.02		1
	75	0	21.80	21.74	21.96		1

Table 9-29
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132022 (1715.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132622 (1775.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.69	22.67	22.80	0	0
	1	25	22.83	22.80	23.01		0
	1	49	22.75	22.71	22.93		0
	25	0	22.78	22.79	22.94	0-1	0
	25	12	22.81	22.77	22.94		0
	25	25	22.83	22.71	22.98		0
	50	0	22.80	22.83	22.98		0
16QAM	1	0	22.97	22.98	23.13	0-1	0
	1	25	23.16	23.06	23.20		0
	1	49	23.01	22.98	23.20		0
	25	0	22.79	22.78	22.97	0-2	0
	25	12	22.85	22.84	22.97		0
	25	25	22.88	22.78	23.00		0
	50	0	22.82	22.77	22.98		0
64QAM	1	0	22.84	22.82	23.00	0-2	0
	1	25	23.02	22.99	23.20		0
	1	49	22.97	22.84	23.20		0
	25	0	21.79	21.77	21.98	0-3	1
	25	12	21.82	21.76	21.95		1
	25	25	21.84	21.71	21.99		1
	50	0	21.82	21.78	21.95		1

Table 9-30
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131997 (1712.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132647 (1777.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.64	22.61	22.81	0	0
	1	12	22.93	22.85	23.06		0
	1	24	22.69	22.61	22.86		0
	12	0	22.73	22.70	22.90	0-1	0
	12	6	22.78	22.75	22.98		0
	12	13	22.79	22.70	22.97		0
	25	0	22.75	22.71	22.93		0
16QAM	1	0	22.89	22.89	23.09	0-1	0
	1	12	23.20	22.95	23.20		0
	1	24	22.95	23.17	23.09		0
	12	0	22.73	22.68	22.99	0-2	0
	12	6	22.77	22.74	22.99		0
	12	13	22.78	22.70	22.98		0
	25	0	22.77	22.71	22.91		0
64QAM	1	0	22.81	22.78	23.01	0-2	0
	1	12	23.06	23.04	23.20		0
	1	24	22.82	22.79	23.02		0
	12	0	21.76	21.72	21.90	0-3	1
	12	6	21.81	21.71	21.95		1
	12	13	21.81	21.67	21.95		1
	25	0	21.76	21.71	21.90		1

Table 9-31
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131987 (1711.5 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132657 (1778.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.79	22.77	22.88	0	0
	1	7	22.95	22.89	23.06		0
	1	14	22.83	22.76	22.92		0
	8	0	22.79	22.75	22.92	0-1	0
	8	4	22.81	22.77	22.95		0
	8	7	22.79	22.75	22.92		0
	15	0	22.79	22.76	22.92		0
16QAM	1	0	23.05	22.97	23.18	0-1	0
	1	7	23.20	23.12	23.20		0
	1	14	23.07	23.05	23.20		0
	8	0	22.89	22.78	22.99	0-2	0
	8	4	22.88	22.82	23.01		0
	8	7	22.86	22.80	22.98		0
	15	0	22.80	22.75	22.91		0
64QAM	1	0	22.97	22.84	23.03	0-2	0
	1	7	23.03	23.05	23.07		0
	1	14	23.06	22.83	23.09		0
	8	0	21.83	21.78	21.94	0-3	1
	8	4	21.85	21.80	21.98		1
	8	7	21.83	21.78	21.95		1
	15	0	21.77	21.72	21.91		1

Table 9-32
LTE Band 66 (AWS) Reduced Conducted Powers -1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 131979 (1710.7 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132665 (1779.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.76	22.71	22.87	0	0
	1	2	22.86	22.83	22.99		0
	1	5	22.73	22.69	22.85		0
	3	0	22.81	22.76	22.96		0
	3	2	22.84	22.79	22.97		0
	3	3	22.82	22.77	22.94		0
	6	0	22.82	22.78	22.94	0-1	0
16QAM	1	0	22.98	22.90	23.09	0-1	0
	1	2	23.15	23.07	23.20		0
	1	5	22.97	22.97	23.04		0
	3	0	22.85	22.78	22.92		0
	3	2	22.84	22.75	22.95		0
	3	3	22.81	22.73	22.92		0
	6	0	22.90	22.86	23.04	0-2	0
64QAM	1	0	22.91	22.85	23.02	0-2	0
	1	2	22.94	22.96	23.18		0
	1	5	23.08	22.79	23.00		0
	3	0	22.90	22.84	23.04		0
	3	2	22.92	22.89	23.02		0
	3	3	22.91	22.83	23.10		0
	6	0	21.80	21.76	21.89	0-3	1

9.4.6 LTE Band 25 (PCS)

Table 9-33
LTE Band 25 (PCS) Conducted Powers - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.30	24.44	24.32	0	0
	1	50	24.54	**24.68**	24.61		0
	1	99	24.35	24.42	24.41		0
	50	0	23.48	23.56	23.48	0-1	1
	50	25	23.57	23.52	23.48		1
	50	50	**23.58**	23.49	23.30		1
	100	0	23.55	23.52	23.39		1
16QAM	1	0	23.59	23.54	23.55	0-1	1
	1	50	23.47	23.66	23.47		1
	1	99	23.37	23.61	23.49		1
	50	0	22.31	22.38	22.29	0-2	2
	50	25	22.44	22.52	22.39		2
	50	50	22.49	22.45	22.41		2
	100	0	22.51	22.56	22.46		2
64QAM	1	0	22.63	22.54	22.40	0-2	2
	1	50	22.70	22.69	22.67		2
	1	99	22.67	22.53	22.30		2
	50	0	21.54	21.61	21.60	0-3	3
	50	25	21.61	21.63	21.62		3
	50	50	21.64	21.55	21.45		3
	100	0	21.57	21.60	21.51		3

Table 9-34
LTE Band 25 (PCS) Conducted Powers - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.50	24.43	24.48	0	0
	1	36	24.56	24.51	24.52		0
	1	74	24.47	24.41	24.37		0
	36	0	23.58	23.54	23.60	0-1	1
	36	18	23.58	23.56	23.60		1
	36	37	23.60	23.54	23.54		1
	75	0	23.53	23.44	23.61		1
16QAM	1	0	23.70	23.67	23.70	0-1	1
	1	36	23.70	23.69	23.70		1
	1	74	23.31	23.70	23.64		1
	36	0	22.57	22.54	22.64	0-2	2
	36	18	22.63	22.55	22.64		2
	36	37	22.60	22.51	22.52		2
	75	0	22.59	22.56	22.52		2
64QAM	1	0	22.68	22.61	22.70	0-2	2
	1	36	22.70	22.70	22.62		2
	1	74	22.64	22.67	22.54		2
	36	0	21.55	21.53	21.65	0-3	3
	36	18	21.64	21.57	21.65		3
	36	37	21.62	21.57	21.55		3
	75	0	21.58	21.54	21.59		3

Table 9-35
LTE Band 25 (PCS) Conducted Powers - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.55	24.48	24.54	0	0
	1	25	24.59	24.57	24.57		0
	1	49	24.48	24.50	24.38		0
	25	0	23.55	23.53	23.59	0-1	1
	25	12	23.58	23.56	23.58		1
	25	25	23.51	23.53	23.47		1
	50	0	23.57	23.55	23.59		1
16QAM	1	0	23.70	23.67	23.60	0-1	1
	1	25	23.70	23.70	23.70		1
	1	49	23.70	23.70	23.61		1
	25	0	22.60	22.58	22.68	0-2	2
	25	12	22.62	22.59	22.64		2
	25	25	22.63	22.57	22.49		2
	50	0	22.63	22.57	22.62		2
64QAM	1	0	22.70	22.66	22.70	0-2	2
	1	25	22.70	22.70	22.70		2
	1	49	22.70	22.70	22.60		2
	25	0	21.58	21.55	21.64	0-3	3
	25	12	21.60	21.58	21.63		3
	25	25	21.58	21.61	21.51		3
	50	0	21.62	21.56	21.60		3

Table 9-36
LTE Band 25 (PCS) Conducted Powers - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.39	24.36	24.32	0	0
	1	12	24.67	24.41	24.58		0
	1	24	24.37	24.38	24.23		0
	12	0	23.52	23.48	23.51	0-1	1
	12	6	23.60	23.21	23.53		1
	12	13	23.48	23.47	23.40		1
	25	0	23.53	23.51	23.45		1
16QAM	1	0	23.65	23.59	23.57	0-1	1
	1	12	23.69	23.70	23.70		1
	1	24	23.62	23.65	23.42		1
	12	0	22.53	22.49	22.53	0-2	2
	12	6	22.57	22.53	22.54		2
	12	13	22.52	22.51	22.41		2
	25	0	22.54	22.56	22.50		2
64QAM	1	0	22.59	22.56	22.55	0-2	2
	1	12	22.70	22.70	22.70		2
	1	24	22.57	22.59	22.45		2
	12	0	21.54	21.51	21.54	0-3	3
	12	6	21.51	21.56	21.55		3
	12	13	21.55	21.45	21.42		3
	25	0	21.54	21.41	21.49		3

Table 9-37
LTE Band 25 (PCS) Conducted Powers - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.09	24.41	24.35	0	0
	1	7	24.61	24.45	24.46		0
	1	14	24.45	24.33	24.31		0
	8	0	23.49	23.41	23.42	0-1	1
	8	4	23.50	23.44	23.40		1
	8	7	23.47	23.40	23.34		1
	15	0	23.48	23.37	23.43		1
16QAM	1	0	23.69	23.24	23.56	0-1	1
	1	7	23.69	23.70	23.70		1
	1	14	23.70	23.66	23.53		1
	8	0	22.58	22.53	22.51	0-2	2
	8	4	22.56	22.57	22.49		2
	8	7	22.57	22.50	22.44		2
	15	0	22.49	22.44	22.44		2
64QAM	1	0	22.68	22.59	22.58	0-2	2
	1	7	22.70	22.70	22.70		2
	1	14	22.62	22.60	22.49		2
	8	0	21.57	21.46	21.49	0-3	3
	8	4	21.54	21.50	21.48		3
	8	7	21.53	21.48	21.43		3
	15	0	21.48	21.40	21.42		3

Table 9-38
LTE Band 25 (PCS) Conducted Powers -1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	24.36	24.35	24.23	0	0
	1	2	24.50	24.45	24.33		0
	1	5	24.37	24.31	24.21		0
	3	0	24.45	24.39	24.32		0
	3	2	24.55	24.40	24.34		0
	3	3	24.45	24.39	24.31		0
	6	0	23.48	23.39	23.37	0-1	1
16QAM	1	0	23.61	23.58	23.43	0-1	1
	1	2	23.34	23.68	23.54		1
	1	5	23.56	23.56	23.45		1
	3	0	23.27	23.35	23.30		1
	3	2	23.42	23.58	23.31		1
	3	3	23.40	23.38	23.24		1
	6	0	22.56	22.53	22.46	0-2	2
64QAM	1	0	22.55	22.51	22.46	0-2	2
	1	2	22.66	22.61	22.70		2
	1	5	22.57	22.48	22.44		2
	3	0	22.56	22.47	22.47		2
	3	2	22.53	22.47	22.48		2
	3	3	22.46	22.48	22.44		2
	6	0	21.46	21.39	21.38	0-3	3

Table 9-39
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.59	22.72	22.72	0	0
	1	50	22.71	22.74	**22.94**		0
	1	99	22.70	22.79	22.62		0
	50	0	22.98	23.01	23.01	0-1	0
	50	25	23.07	23.00	**23.08**		0
	50	50	23.04	22.92	22.81		0
	100	0	22.92	22.89	22.88		0
16QAM	1	0	23.17	23.19	23.07	0-1	0
	1	50	23.20	23.20	23.19		0
	1	99	23.13	23.17	22.92		0
	50	0	22.45	22.39	22.47	0-2	0.5
	50	25	22.61	22.42	22.38		0.5
	50	50	22.55	22.51	22.55		0.5
	100	0	22.39	22.52	22.44		0.5
64QAM	1	0	22.51	22.39	22.58	0-2	0.5
	1	50	22.68	22.62	22.70		0.5
	1	99	22.47	22.33	22.46		0.5
	50	0	21.50	21.58	21.55	0-3	1.5
	50	25	21.58	21.54	21.55		1.5
	50	50	21.56	21.45	21.38		1.5
	100	0	21.54	21.46	21.46		1.5

Table 9-40
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26115 (1857.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26615 (1907.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.13	23.01	23.02	0	0
	1	36	23.15	23.09	23.05		0
	1	74	23.04	23.09	23.01		0
	36	0	23.09	23.12	23.14	0-1	0
	36	18	23.12	23.14	23.16		0
	36	37	23.15	23.16	23.12		0
	75	0	23.12	23.13	23.16		0
16QAM	1	0	22.99	23.08	23.11	0-1	0
	1	36	23.01	23.17	22.89		0
	1	74	22.91	23.11	22.94		0
	36	0	22.62	22.58	22.64	0-2	0.5
	36	18	22.62	22.58	22.66		0.5
	36	37	22.66	22.61	22.62		0.5
	75	0	22.58	22.51	22.67		0.5
64QAM	1	0	22.42	22.59	22.68	0-2	0.5
	1	36	22.29	22.70	22.50		0.5
	1	74	22.22	22.66	22.47		0.5
	36	0	21.53	21.43	21.69	0-3	1.5
	36	18	21.55	21.49	21.49		1.5
	36	37	21.58	21.52	21.64		1.5
	75	0	21.63	21.49	21.67		1.5

Table 9-41
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26090 (1855.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26640 (1910.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.18	23.02	23.00	0	0
	1	25	23.00	23.11	23.18		0
	1	49	23.12	23.05	23.02		0
	25	0	23.11	23.05	23.14	0-1	0
	25	12	23.11	23.09	23.12		0
	25	25	23.15	23.09	23.02		0
	50	0	23.02	23.08	23.09		0
16QAM	1	0	23.20	23.20	23.14	0-1	0
	1	25	23.13	23.15	23.19		0
	1	49	23.20	23.13	23.17		0
	25	0	22.49	22.61	22.41	0-2	0.5
	25	12	22.41	22.65	22.37		0.5
	25	25	22.46	22.63	22.49		0.5
	50	0	22.38	22.56	22.50		0.5
64QAM	1	0	22.40	22.62	22.44	0-2	0.5
	1	25	22.39	22.50	22.35		0.5
	1	49	22.50	22.65	22.36		0.5
	25	0	21.60	21.66	21.40	0-3	1.5
	25	12	21.47	21.52	21.60		1.5
	25	25	21.32	21.58	21.56		1.5
	50	0	21.44	21.62	21.63		1.5

Table 9-42
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26065 (1852.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26665 (1912.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.17	23.03	22.90	0	0
	1	12	23.20	23.15	23.16		0
	1	24	23.11	23.01	22.87		0
	12	0	23.11	23.06	23.12	0-1	0
	12	6	23.18	23.15	23.14		0
	12	13	23.11	23.11	23.04		0
	25	0	23.13	23.10	23.07		0
16QAM	1	0	23.14	23.03	23.10	0-1	0
	1	12	23.11	23.19	23.20		0
	1	24	23.20	23.07	23.05		0
	12	0	22.56	22.66	22.64	0-2	0.5
	12	6	22.63	22.62	22.68		0.5
	12	13	22.60	22.67	22.56		0.5
	25	0	22.69	22.62	22.56		0.5
64QAM	1	0	22.31	22.45	22.58	0-2	0.5
	1	12	22.21	22.69	22.62		0.5
	1	24	22.44	22.45	22.54		0.5
	12	0	21.60	21.55	21.57	0-3	1.5
	12	6	21.64	21.61	21.61		1.5
	12	13	21.55	21.62	21.49		1.5
	25	0	21.63	21.64	21.54		1.5

Table 9-43
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26055 (1851.5 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26675 (1913.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.11	23.06	23.02	0	0
	1	7	23.16	23.17	23.13		0
	1	14	23.20	23.02	23.00		0
	8	0	23.16	23.08	23.12	0-1	0
	8	4	23.15	23.13	23.11		0
	8	7	23.12	23.07	23.05		0
	15	0	23.11	23.05	23.11		0
16QAM	1	0	23.11	23.01	23.04	0-1	0
	1	7	23.04	23.04	22.98		0
	1	14	23.06	23.10	22.94		0
	8	0	22.55	22.47	22.49	0-2	0.5
	8	4	22.50	22.55	22.68		0.5
	8	7	22.22	22.56	22.63		0.5
	15	0	22.47	22.51	22.60		0.5
64QAM	1	0	22.62	22.29	22.54	0-2	0.5
	1	7	22.41	22.39	22.63		0.5
	1	14	22.41	22.38	22.44		0.5
	8	0	21.67	21.67	21.68	0-3	1.5
	8	4	21.68	21.70	21.60		1.5
	8	7	21.64	21.63	21.56		1.5
	15	0	21.70	21.51	21.59		1.5

Table 9-44
LTE Band 25 (PCS) Reduced Conducted Powers -1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26047 (1850.7 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26683 (1914.3 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.11	23.02	22.90	0	0
	1	2	23.12	23.15	23.02		0
	1	5	23.16	23.05	22.91		0
	3	0	23.13	23.10	23.02		0
	3	2	23.12	23.12	23.10		0
	3	3	23.18	23.11	23.07		0
	6	0	23.15	23.05	23.06	0-1	0
16QAM	1	0	23.13	22.89	23.11	0-1	0
	1	2	23.12	23.01	23.19		0
	1	5	23.17	22.90	23.12		0
	3	0	23.19	23.06	22.95		0
	3	2	23.17	23.03	22.96		0
	3	3	23.16	23.02	22.95		0
	6	0	22.50	22.64	22.61	0-2	0.5
64QAM	1	0	22.67	22.64	22.44	0-2	0.5
	1	2	22.42	22.61	22.50		0.5
	1	5	22.41	22.63	22.42		0.5
	3	0	22.36	22.64	22.55		0.5
	3	2	22.52	22.66	22.63		0.5
	3	3	22.55	22.66	22.57		0.5
	6	0	21.69	21.58	21.54	0-3	1.5

9.4.7 LTE Band 41

Table 9-45
LTE Band 41 PC3 Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.36	23.28	23.28	23.43	23.46	0	0
	1	50	23.41	23.32	23.37	23.72	**23.76**		0
	1	99	23.26	23.15	23.16	23.49	23.65		0
	50	0	22.34	22.27	22.33	22.66	22.74	0-1	1
	50	25	22.43	22.30	22.38	22.56	**22.82**		1
	50	50	22.40	22.23	22.29	22.61	22.75		1
	100	0	22.36	22.25	22.32	22.60	22.76		1
16QAM	1	0	22.42	22.35	22.35	22.56	22.68	0-1	1
	1	50	22.50	22.33	22.44	22.79	22.83		1
	1	99	22.36	22.21	22.24	22.61	22.77		1
	50	0	21.37	21.31	21.36	21.61	21.75	0-2	2
	50	25	21.46	21.32	21.40	21.71	21.83		2
	50	50	21.42	21.22	21.30	21.66	21.78		2
	100	0	21.37	21.25	21.34	21.62	21.77		2
64QAM	1	0	21.24	21.18	21.25	21.45	21.62	0-2	2
	1	50	21.54	21.35	21.39	21.73	21.91		2
	1	99	21.26	21.11	21.14	21.47	21.71		2
	50	0	20.40	20.33	20.38	20.62	20.80	0-3	3
	50	25	20.48	20.34	20.39	20.73	20.86		3
	50	50	20.45	20.27	20.27	20.64	20.78		3
	100	0	20.40	20.28	20.31	20.60	20.78		3

Table 9-46
LTE Band 41 PC3 Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	23.12	22.86	23.01	23.20	23.50	0	0
	1	36	23.19	22.98	23.02	23.32	23.55		0
	1	74	23.04	22.90	22.81	23.26	23.47		0
	36	0	22.17	21.99	22.16	22.41	22.64	0-1	1
	36	18	22.18	22.01	22.11	22.43	22.64		1
	36	37	22.13	22.00	22.08	22.42	22.61		1
	75	0	22.05	21.97	22.13	22.43	22.60		1
16QAM	1	0	22.17	21.98	22.23	22.35	22.64	0-1	1
	1	36	22.27	22.10	22.20	22.50	22.73		1
	1	74	22.14	22.02	22.03	22.46	22.71		1
	36	0	21.11	20.92	21.13	21.37	21.64	0-2	2
	36	18	21.15	20.98	21.08	21.42	21.61		2
	36	37	21.09	20.91	21.01	21.36	21.58		2
	75	0	21.18	21.03	21.12	21.49	21.63		2
64QAM	1	0	20.82	20.60	20.81	21.00	21.25	0-2	2
	1	36	20.88	20.70	20.80	21.10	21.29		2
	1	74	20.70	20.62	20.63	21.03	21.19		2
	36	0	20.11	20.00	20.14	20.36	20.62	0-3	3
	36	18	20.16	19.98	20.11	20.42	20.60		3
	36	37	20.13	19.94	20.01	20.38	20.55		3
	75	0	20.17	20.01	20.13	20.44	20.62		3

Table 9-47
LTE Band 41 PC3 Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.06	22.89	23.00	23.22	23.51	0	0
	1	25	23.00	22.85	22.90	23.26	23.45		0
	1	49	23.04	22.89	22.87	23.22	23.47		0
	25	0	22.13	21.96	22.12	22.39	22.61	0-1	1
	25	12	22.16	21.96	22.08	22.42	22.62		1
	25	25	22.09	21.92	22.04	22.40	22.55		1
	50	0	22.14	21.97	22.10	22.47	22.61		1
16QAM	1	0	22.17	22.04	22.21	22.42	22.69	0-1	1
	1	25	22.13	21.99	22.10	22.43	22.60		1
	1	49	22.16	22.03	22.08	22.44	22.65		1
	25	0	21.13	21.00	21.09	21.42	21.63	0-2	2
	25	12	21.19	20.95	21.08	21.47	21.64		2
	25	25	21.18	20.96	21.06	21.42	21.57		2
	50	0	21.18	21.05	21.24	21.55	21.66		2
64QAM	1	0	20.83	20.64	20.79	20.99	21.25	0-2	2
	1	25	20.76	20.57	20.67	20.96	21.19		2
	1	49	20.80	20.61	20.65	20.99	21.21		2
	25	0	20.22	20.08	20.17	20.41	20.67	0-3	3
	25	12	20.24	20.06	20.14	20.46	20.65		3
	25	25	20.19	20.00	20.09	20.39	20.62		3
	50	0	20.17	20.03	20.15	20.48	20.60		3

Table 9-48
LTE Band 41 PC3 Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.05	22.82	22.90	23.10	23.45	0	0
	1	12	23.26	23.07	23.14	23.45	23.69		0
	1	24	23.03	22.79	22.84	23.19	23.43		0
	12	0	22.15	21.96	22.03	22.33	22.60	0-1	1
	12	6	22.21	22.04	22.11	22.41	22.63		1
	12	13	22.12	21.92	22.05	22.42	22.57		1
	25	0	22.12	21.94	22.08	22.44	22.59		1
16QAM	1	0	22.14	21.97	22.14	22.37	22.61	0-1	1
	1	12	22.41	22.16	22.32	22.65	22.88		1
	1	24	22.14	21.94	22.07	22.40	22.57		1
	12	0	21.08	20.98	21.04	21.35	21.54	0-2	2
	12	6	21.16	20.92	21.10	21.39	21.55		2
	12	13	21.08	20.87	21.00	21.34	21.47		2
	25	0	21.16	20.96	21.11	21.45	21.56		2
64QAM	1	0	20.72	20.51	20.73	20.95	21.18	0-2	2
	1	12	21.01	20.80	21.00	21.25	21.43		2
	1	24	20.70	20.55	20.67	20.96	21.12		2
	12	0	20.16	19.98	20.12	20.38	20.58	0-3	3
	12	6	20.24	19.99	20.16	20.42	20.64		3
	12	13	20.15	19.94	20.11	20.40	20.58		3
	25	0	20.23	20.05	20.18	20.47	20.62		3

Table 9-49
LTE Band 41 PC2 Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	26.21	26.16	26.26	26.44	26.57	0	0
	1	50	26.79	26.32	26.38	26.64	26.78		0
	1	99	26.32	26.08	26.17	26.48	26.64		0
	50	0	25.31	25.24	25.34	25.60	25.77	0-1	1
	50	25	25.41	25.27	25.40	25.69	25.86		1
	50	50	25.37	25.21	25.30	25.63	25.81		1
	100	0	25.35	25.23	25.32	25.62	25.82		1

Table 9-50
LTE Band 41 PC3 Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	22.62	22.51	22.46	22.75	23.04	0	0
	1	50	22.86	22.63	22.59	23.13	**23.18**		0
	1	99	22.64	22.44	22.60	22.81	23.12		0
	50	0	22.73	22.58	22.60	22.92	23.16	0-1	0
	50	25	22.81	22.61	22.67	23.02	**23.19**		0
	50	50	22.78	22.58	22.61	22.95	23.18		0
	100	0	22.76	22.60	22.63	22.97	23.17		0
16QAM	1	0	22.64	22.47	22.16	22.72	22.97	0-1	0
	1	50	22.80	22.57	22.30	22.92	23.16		0
	1	99	22.74	22.42	22.16	22.77	23.11		0
	50	0	21.74	21.61	21.59	21.94	22.18	0-2	1
	50	25	21.85	21.62	21.66	22.02	22.19		1
	50	50	21.81	21.57	21.62	21.94	22.12		1
	100	0	21.77	21.61	21.64	21.99	22.14		1
64QAM	1	0	21.62	21.53	21.76	21.79	22.09	0-2	1
	1	50	21.93	21.70	21.79	22.07	22.19		1
	1	99	21.70	21.46	21.77	21.86	22.06		1
	50	0	20.80	20.69	20.60	20.98	21.09	0-3	2
	50	25	20.86	20.69	20.62	21.05	21.19		2
	50	50	20.85	20.64	20.57	20.99	21.16		2
	100	0	20.79	20.64	20.58	20.97	21.12		2

Table 9-51
LTE Band 41 PC3 Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	22.56	22.44	22.73	22.93	23.12	0	0
	1	36	22.67	22.56	22.76	23.07	23.15		0
	1	74	22.47	22.45	22.62	22.98	23.05		0
	36	0	22.68	22.55	22.83	23.12	23.20	0-1	0
	36	18	22.70	22.58	22.81	23.16	23.19		0
	36	37	22.67	22.61	22.75	23.11	23.19		0
	75	0	22.65	22.61	22.81	23.14	23.20		0
16QAM	1	0	22.57	22.49	22.74	22.91	23.17	0-1	0
	1	36	22.70	22.61	22.77	23.15	23.20		0
	1	74	22.56	22.57	22.66	22.97	23.09		0
	36	0	21.62	21.52	21.78	22.03	22.19	0-2	1
	36	18	21.64	21.54	21.72	22.11	22.18		1
	36	37	21.57	21.54	21.70	22.08	22.11		1
	75	0	21.68	21.64	21.85	22.20	22.19		1
64QAM	1	0	21.33	21.21	21.44	21.62	21.85	0-2	1
	1	36	21.42	21.31	21.52	21.84	21.92		1
	1	74	21.22	21.26	21.30	21.68	21.76		1
	36	0	20.66	20.57	20.91	21.12	21.20	0-3	2
	36	18	20.70	20.61	20.84	21.15	21.20		2
	36	37	20.63	20.62	20.74	21.11	21.17		2
	75	0	20.73	20.64	20.90	21.20	21.19		2

Table 9-52
LTE Band 41 PC3 Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	22.67	22.48	22.79	23.10	23.18	0	0
	1	25	22.64	22.49	22.71	23.02	23.10		0
	1	49	22.63	22.58	22.73	23.07	23.10		0
	25	0	22.72	22.60	22.77	23.10	23.20	0-1	0
	25	12	22.70	22.60	22.84	23.18	23.19		0
	25	25	22.63	22.60	22.74	23.08	23.17		0
	50	0	22.70	22.61	22.83	23.18	23.18		0
16QAM	1	0	22.68	22.56	22.86	23.10	23.17	0-1	0
	1	25	22.56	22.60	22.66	23.02	23.16		0
	1	49	22.62	22.59	22.78	23.14	23.18		0
	25	0	21.69	21.68	21.87	22.17	22.19	0-2	1
	25	12	21.78	21.69	21.86	22.19	22.20		1
	25	25	21.71	21.68	21.85	22.19	22.18		1
	50	0	21.76	21.72	21.95	22.20	22.18		1
64QAM	1	0	21.41	21.25	21.56	21.82	21.94	0-2	1
	1	25	21.35	21.17	21.46	21.80	21.84		1
	1	49	21.39	21.37	21.48	21.84	21.87		1
	25	0	20.73	20.55	20.88	21.18	21.20	0-3	2
	25	12	20.76	20.62	20.79	21.13	21.19		2
	25	25	20.71	20.55	20.80	21.12	21.20		2
	50	0	20.78	20.74	20.98	21.20	21.17		2

Table 9-53
LTE Band 41 PC3 Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	22.53	22.43	22.61	22.97	23.06	0	0
	1	12	22.78	22.68	22.93	23.20	23.19		0
	1	24	22.48	22.44	22.57	22.93	23.03		0
	12	0	22.68	22.56	22.77	23.10	23.19	0-1	0
	12	6	22.76	22.67	22.86	23.18	23.17		0
	12	13	22.69	22.57	22.78	23.11	23.20		0
	25	0	22.67	22.55	22.77	23.12	23.19		0
16QAM	1	0	22.61	22.44	22.73	23.04	23.14	0-1	0
	1	12	22.86	22.83	22.94	23.19	23.20		0
	1	24	22.59	22.51	22.67	23.04	23.10		0
	12	0	21.58	21.50	21.75	22.07	22.13	0-2	1
	12	6	21.66	21.59	21.79	22.06	22.20		1
	12	13	21.60	21.52	21.72	22.01	22.12		1
	25	0	21.73	21.63	21.89	22.17	22.19		1
64QAM	1	0	21.28	21.19	21.41	21.71	21.80	0-2	1
	1	12	21.58	21.49	21.64	21.96	22.04		1
	1	24	21.25	21.17	21.36	21.70	21.75		1
	12	0	20.60	20.51	20.75	20.99	21.11	0-3	2
	12	6	20.66	20.61	20.79	21.08	21.20		2
	12	13	20.60	20.49	20.71	21.03	21.11		2
	25	0	20.68	20.55	20.82	21.05	21.20		2

Table 9-54
LTE Band 41 PC2 Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	24.86	24.60	24.99	25.60	25.65	0	0
	1	50	25.07	24.88	25.21	25.87	25.77		0
	1	99	24.80	24.63	25.12	25.64	25.64		0
	50	0	24.97	24.41	25.11	25.84	25.83	0-1	0
	50	25	24.97	24.68	25.20	25.89	25.85		0
	50	50	24.85	24.68	25.14	25.87	25.72		0
	100	0	24.77	24.77	25.15	25.79	25.73		0

9.4.8 LTE Uplink Carrier Aggregation Conducted Powers

Table 9-55
LTE B41 Uplink Carrier Aggregation Maximum Conducted Powers

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41	20	39750	2506.0	QPSK	1	99	LTE B41	20	39948	2525.8	QPSK	1	0	24.10	23.26
CA_41C	LTE B41	20	41490	2680.0	QPSK	1	0	LTE B41	20	41292	2660.2	QPSK	1	99	23.06	23.46
	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_41C	LTE B41 PC2	20	39750	2506.0	QPSK	1	99	LTE B41 PC2	20	39948	2525.8	QPSK	1	0	27.12	26.32
CA_41C	LTE B41 PC2	20	41490	2680.0	QPSK	1	0	LTE B41 PC2	20	41292	2660.2	QPSK	1	99	26.07	26.57

9.5 WLAN Conducted Powers

Table 9-56
2.4 GHz WLAN Maximum Average RF Power

2.4GHz Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11b	802.11g	802.11n
		Average	Average	Average
2412	1	20.20	15.66	15.01
2417	2		18.41	17.89
2422	3		18.69	18.36
2437	6	20.38	18.66	18.06
2457	10		18.82	18.02
2462	11	20.30	16.28	15.63

Table 9-57
5 GHz WLAN Maximum Average RF Power

5GHz (20MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11a	802.11n	802.11ac
		Average	Average	Average
5180	36	17.07	16.53	16.58
5200	40	17.23	16.61	16.55
5220	44	17.10	16.57	16.54
5240	48	17.18	16.53	16.51
5260	52	17.58	16.97	16.96
5280	56	17.61	16.89	16.99
5300	60	17.74	16.73	17.12
5320	64	17.41	16.88	16.82
5500	100	16.33	15.48	15.46
5520	104	17.72	16.88	16.94
5540	108	17.76	16.85	16.88
5600	120	16.98	16.51	16.36
5620	124	16.85	16.26	16.16
5720	144	15.82	15.32	15.33
5745	149	16.61	16.01	15.95
5785	157	16.71	16.12	16.10
5805	161	16.38	15.81	15.76
5825	165	16.08	15.58	15.50

Table 9-58
2.4 GHz WLAN Reduced Average RF Power

2.4GHz Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11b	802.11g	802.11n
		Average	Average	Average
2412	1	17.70	15.66	15.01
2417	2		17.91	17.89
2437	6	17.99	18.09	17.94
2457	10		17.96	17.89
2462	11	17.77	16.28	15.63

Table 9-59
5 GHz WLAN Reduced Average RF Power

5GHz (20MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11a
		Average
5180	36	14.35
5200	40	14.39
5220	44	14.47
5240	48	14.38
5260	52	14.98
5280	56	14.97
5300	60	14.86
5320	64	14.98
5500	100	14.98
5560	112	14.92
5600	120	13.92
5620	124	13.92
5720	144	13.18

5GHz (40MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11n
		Average
5755	151	13.72
5795	159	13.25

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

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

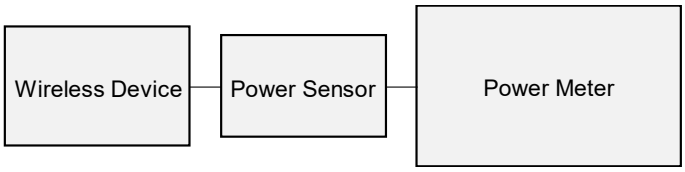


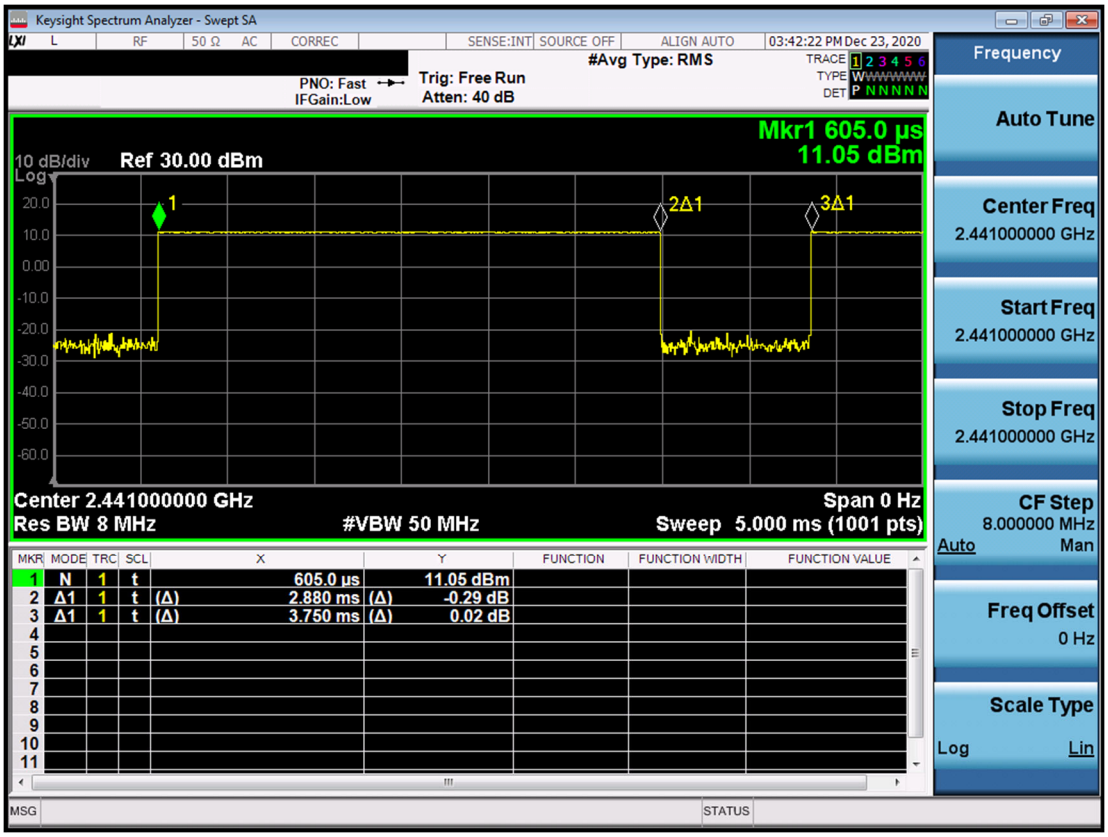
Figure 9-4
Power Measurement Setup

9.6 Bluetooth Conducted Powers

Table 9-60
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	7.95	6.237
2441	1.0	39	10.15	10.351
2480	1.0	78	10.11	10.257
2402	2.0	0	5.83	3.828
2441	2.0	39	7.47	5.585
2480	2.0	78	7.69	5.875
2402	3.0	0	5.92	3.908
2441	3.0	39	7.54	5.675
2480	3.0	78	7.77	5.984

Figure 9-5
Bluetooth Transmission Plot



Equation 9-1
Bluetooth Duty Cycle Calculation

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

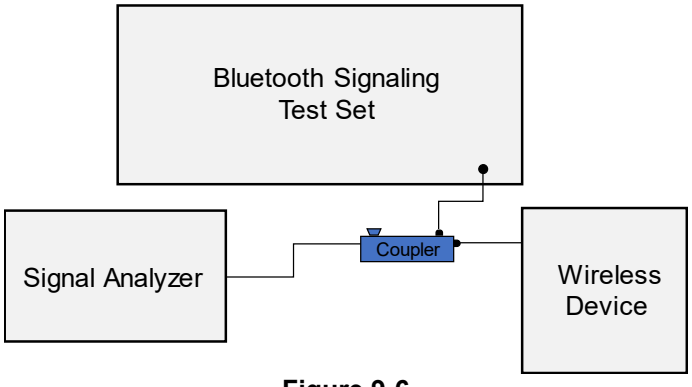


Figure 9-6
Power Measurement Setup

10 SYSTEM VERIFICATION

10.1 Tissue Verification

Table 10-1
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
12/03/2020	750 Head	20.4	680	0.866	43.461	0.888	42.305	-2.48%	2.73%
			695	0.871	43.424	0.889	42.227	-2.02%	2.83%
			700	0.872	43.409	0.889	42.201	-1.91%	2.86%
			710	0.876	43.378	0.890	42.149	-1.57%	2.92%
			720	0.879	43.347	0.891	42.097	-1.35%	2.97%
			725	0.881	43.329	0.891	42.071	-1.12%	2.99%
			740	0.886	43.281	0.893	41.994	-0.78%	3.06%
			755	0.891	43.235	0.894	41.916	-0.34%	3.15%
			770	0.897	43.199	0.895	41.838	0.22%	3.25%
			785	0.903	43.165	0.896	41.760	0.78%	3.36%
			800	0.908	43.124	0.897	41.682	1.23%	3.46%
12/03/2020	835 Head	20.4	820	0.915	43.057	0.899	41.578	1.78%	3.56%
			835	0.920	43.003	0.900	41.500	2.22%	3.62%
			850	0.926	42.961	0.916	41.500	1.09%	3.52%
12/07/2020	835 Head	19.8	820	0.915	43.315	0.899	41.578	1.78%	4.18%
			835	0.921	43.260	0.900	41.500	2.33%	4.24%
			850	0.927	43.212	0.916	41.500	1.20%	4.13%
12/28/2020	835 Head	20.8	820	0.908	42.618	0.899	41.578	1.00%	2.50%
			835	0.913	42.623	0.900	41.500	1.44%	2.71%
			850	0.919	42.567	0.916	41.500	0.33%	2.57%
01/06/2021	835 Head	21.9	820	0.892	42.210	0.899	41.578	-0.78%	1.52%
			835	0.908	42.006	0.900	41.500	0.89%	1.22%
			850	0.924	41.792	0.916	41.500	0.87%	0.70%
12/7/2020	1750 Head	20.2	1710	1.319	38.893	1.348	40.142	-2.15%	-3.11%
			1750	1.357	38.744	1.371	40.079	-1.02%	-3.33%
			1790	1.394	38.546	1.394	40.016	0.00%	-3.67%
12/8/2020	1900 Head	21.6	1850	1.421	40.222	1.400	40.000	1.50%	0.56%
			1880	1.440	40.172	1.400	40.000	2.86%	0.43%
			1910	1.461	40.119	1.400	40.000	4.36%	0.30%
12/14/2020	2450 Head	24.1	2400	1.765	38.621	1.756	39.289	0.51%	-1.70%
			2450	1.823	38.409	1.800	39.200	1.28%	-2.02%
			2500	1.881	38.217	1.855	39.136	1.40%	-2.35%
12/17/2020	2450 Head	24.6	2400	1.821	38.479	1.756	39.289	3.70%	-2.06%
			2450	1.877	38.258	1.800	39.200	4.28%	-2.40%
			2500	1.937	38.068	1.855	39.136	4.42%	-2.73%
01/18/2021	2600 Head	23.8	2600	2.035	38.080	1.964	39.009	3.62%	-2.38%
			2650	2.097	37.875	2.018	38.945	3.91%	-2.75%
			2680	2.133	37.760	2.051	38.907	4.00%	-2.95%
			2700	2.155	37.667	2.073	38.882	3.96%	-3.12%

Table 10-2
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
12/14/2020	5200-5800 Head	23.5	5180	4.412	35.599	4.635	36.009	-4.81%	-1.14%
			5190	4.426	35.579	4.645	35.998	-4.71%	-1.16%
			5200	4.439	35.569	4.655	35.986	-4.64%	-1.16%
			5210	4.450	35.567	4.666	35.975	-4.63%	-1.13%
			5220	4.460	35.560	4.676	35.963	-4.62%	-1.12%
			5240	4.478	35.510	4.696	35.940	-4.64%	-1.20%
			5250	4.490	35.483	4.706	35.929	-4.59%	-1.24%
			5260	4.501	35.461	4.717	35.917	-4.58%	-1.27%
			5270	4.511	35.441	4.727	35.906	-4.57%	-1.30%
			5280	4.522	35.429	4.737	35.894	-4.54%	-1.30%
			5290	4.533	35.418	4.748	35.883	-4.53%	-1.30%
			5300	4.544	35.411	4.758	35.871	-4.50%	-1.28%
			5310	4.553	35.389	4.768	35.860	-4.51%	-1.31%
			5320	4.562	35.377	4.778	35.849	-4.52%	-1.32%
			5500	4.747	35.115	4.963	35.643	-4.35%	-1.48%
			5510	4.758	35.097	4.973	35.632	-4.32%	-1.50%
			5520	4.772	35.078	4.983	35.620	-4.23%	-1.52%
			5530	4.788	35.056	4.994	35.609	-4.12%	-1.55%
			5540	4.803	35.040	5.004	35.597	-4.02%	-1.56%
			5550	4.815	35.034	5.014	35.586	-3.97%	-1.55%
			5560	4.825	35.029	5.024	35.574	-3.96%	-1.53%
			5580	4.834	34.977	5.045	35.551	-4.18%	-1.61%
			5600	4.855	34.926	5.065	35.529	-4.15%	-1.70%
			5610	4.872	34.913	5.076	35.518	-4.02%	-1.70%
			5620	4.887	34.899	5.086	35.506	-3.91%	-1.71%
			5640	4.913	34.873	5.106	35.483	-3.78%	-1.72%
			5660	4.929	34.863	5.127	35.460	-3.86%	-1.68%
			5670	4.933	34.836	5.137	35.449	-3.97%	-1.73%
			5680	4.940	34.807	5.147	35.437	-4.02%	-1.78%
			5690	4.954	34.787	5.158	35.426	-3.96%	-1.80%
			5700	4.970	34.776	5.168	35.414	-3.83%	-1.80%
			5710	4.983	34.764	5.178	35.403	-3.77%	-1.80%
			5720	4.995	34.752	5.188	35.391	-3.72%	-1.81%
			5745	5.026	34.711	5.214	35.363	-3.61%	-1.84%
			5750	5.031	34.700	5.219	35.357	-3.60%	-1.86%
			5755	5.035	34.688	5.224	35.351	-3.62%	-1.88%
			5765	5.043	34.678	5.234	35.340	-3.65%	-1.87%
			5775	5.053	34.656	5.245	35.329	-3.66%	-1.90%
			5785	5.065	34.634	5.255	35.317	-3.62%	-1.93%
			5795	5.079	34.616	5.265	35.305	-3.53%	-1.95%
			5805	5.093	34.598	5.275	35.294	-3.45%	-1.97%
			5825	5.115	34.564	5.296	35.271	-3.42%	-2.00%

Table 10-3
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
12/30/2020	5200-5800 Head	21.1	5180	4.490	34.775	4.635	36.009	-3.13%	-3.43%
			5190	4.503	34.755	4.645	35.998	-3.06%	-3.45%
			5200	4.515	34.747	4.655	35.986	-3.01%	-3.44%
			5210	4.526	34.733	4.666	35.975	-3.00%	-3.45%
			5220	4.536	34.722	4.676	35.963	-2.99%	-3.45%
			5240	4.552	34.674	4.696	35.940	-3.07%	-3.52%
			5250	4.562	34.647	4.706	35.929	-3.06%	-3.57%
			5260	4.572	34.623	4.717	35.917	-3.07%	-3.60%
			5270	4.584	34.599	4.727	35.906	-3.03%	-3.64%
			5280	4.598	34.579	4.737	35.894	-2.93%	-3.66%
			5290	4.613	34.561	4.748	35.883	-2.84%	-3.68%
			5300	4.627	34.551	4.758	35.871	-2.75%	-3.68%
			5310	4.637	34.542	4.768	35.860	-2.75%	-3.68%
			5320	4.647	34.534	4.778	35.849	-2.74%	-3.67%
			5500	4.847	34.248	4.963	35.643	-2.34%	-3.91%
			5510	4.861	34.238	4.973	35.632	-2.25%	-3.91%
			5520	4.878	34.229	4.983	35.620	-2.11%	-3.91%
			5530	4.892	34.218	4.994	35.609	-2.04%	-3.91%
			5540	4.905	34.216	5.004	35.597	-1.98%	-3.88%
			5550	4.916	34.213	5.014	35.586	-1.95%	-3.86%
			5560	4.924	34.203	5.024	35.574	-1.99%	-3.85%
			5580	4.936	34.150	5.045	35.551	-2.16%	-3.94%
			5600	4.963	34.097	5.065	35.529	-2.01%	-4.03%
			5610	4.979	34.078	5.076	35.518	-1.91%	-4.05%
			5620	4.995	34.067	5.086	35.506	-1.79%	-4.05%
			5640	5.022	34.063	5.106	35.483	-1.65%	-4.00%
			5660	5.039	34.040	5.127	35.460	-1.72%	-4.00%
			5670	5.040	34.012	5.137	35.449	-1.89%	-4.05%
			5680	5.046	33.983	5.147	35.437	-1.96%	-4.10%
			5690	5.058	33.946	5.158	35.426	-1.94%	-4.18%
			5700	5.076	33.917	5.168	35.414	-1.78%	-4.23%
			5710	5.092	33.897	5.178	35.403	-1.66%	-4.25%
			5720	5.106	33.894	5.188	35.391	-1.58%	-4.23%
			5745	5.145	33.873	5.214	35.363	-1.32%	-4.21%
			5750	5.151	33.870	5.219	35.357	-1.30%	-4.21%
			5755	5.154	33.867	5.224	35.351	-1.34%	-4.20%
			5765	5.155	33.856	5.234	35.340	-1.51%	-4.20%
			5775	5.156	33.830	5.245	35.329	-1.70%	-4.24%
			5785	5.163	33.790	5.255	35.317	-1.75%	-4.32%
			5795	5.177	33.747	5.265	35.305	-1.67%	-4.41%
			5800	5.187	33.731	5.270	35.300	-1.57%	-4.44%
			5800	5.187	33.731	5.270	35.300	-1.57%	-4.44%
			5805	5.196	33.719	5.275	35.294	-1.50%	-4.46%
			5825	5.230	33.696	5.296	35.271	-1.25%	-4.47%

Table 10-4
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
11/30/2020	750 Body	21.4	680	0.942	54.809	0.958	55.804	-1.67%	-1.78%
			695	0.948	54.791	0.959	55.745	-1.15%	-1.71%
			710	0.953	54.766	0.960	55.687	-0.73%	-1.65%
			725	0.958	54.725	0.961	55.629	-0.31%	-1.63%
			740	0.964	54.672	0.963	55.570	0.10%	-1.62%
			755	0.970	54.626	0.964	55.512	0.62%	-1.60%
			770	0.975	54.593	0.965	55.453	1.04%	-1.55%
			785	0.981	54.571	0.966	55.395	1.55%	-1.49%
			800	0.986	54.550	0.967	55.336	1.96%	-1.42%
12/2/2020	750 Body	20.3	725	0.954	53.834	0.961	55.629	-0.73%	-3.23%
			740	0.960	53.799	0.963	55.570	-0.31%	-3.19%
			755	0.966	53.767	0.964	55.512	0.21%	-3.14%
			770	0.971	53.733	0.965	55.453	0.62%	-3.10%
			785	0.977	53.702	0.966	55.395	1.14%	-3.06%
			800	0.983	53.668	0.967	55.336	1.65%	-3.01%
11/30/2020	835 Body	21.6	820	0.997	54.216	0.969	55.258	2.89%	-1.89%
			835	1.003	54.164	0.970	55.200	3.40%	-1.88%
			850	1.009	54.127	0.988	55.154	2.13%	-1.86%
12/08/2020	835 Body	20.7	820	0.976	54.558	0.969	55.258	0.72%	-1.27%
			835	0.983	54.511	0.970	55.200	1.34%	-1.25%
			850	0.989	54.474	0.988	55.154	0.10%	-1.23%
12/10/2020	835 Body	20.4	820	0.995	53.162	0.969	55.258	2.68%	-3.79%
			835	1.000	53.123	0.970	55.200	3.09%	-3.76%
			850	1.006	53.091	0.988	55.154	1.82%	-3.74%
01/04/2021	835 Body	22.1	820	0.937	53.973	0.969	55.258	-3.30%	-2.33%
			835	0.952	53.825	0.970	55.200	-1.86%	-2.49%
			850	0.967	53.667	0.988	55.154	-2.13%	-2.70%
12/02/2020	1750 Body	20.4	1710	1.455	52.321	1.463	53.537	-0.55%	-2.27%
			1750	1.492	52.231	1.488	53.432	0.27%	-2.25%
			1790	1.531	52.112	1.514	53.326	1.12%	-2.28%
12/02/2020	1750 Body	20.8	1710	1.478	52.190	1.463	53.537	1.03%	-2.52%
			1750	1.504	52.140	1.488	53.432	1.08%	-2.42%
			1790	1.530	52.061	1.514	53.326	1.06%	-2.37%
12/07/2020	1750 Body	19.0	1710	1.486	51.887	1.463	53.537	1.57%	-3.08%
			1750	1.525	51.744	1.488	53.432	2.49%	-3.16%
			1790	1.563	51.584	1.514	53.326	3.24%	-3.27%
12/09/2020	1750 Body	24.4	1710	1.471	51.264	1.463	53.537	0.55%	-4.25%
			1720	1.482	51.220	1.469	53.511	0.88%	-4.28%
			1745	1.511	51.108	1.485	53.445	1.75%	-4.37%
			1750	1.517	51.089	1.488	53.432	1.95%	-4.39%
			1770	1.538	51.024	1.501	53.379	2.47%	-4.41%
			1790	1.558	50.962	1.514	53.326	2.91%	-4.43%
12/2/2020	1900 Body	21.3	1850	1.522	51.345	1.520	53.300	0.13%	-3.67%
			1880	1.558	51.235	1.520	53.300	2.50%	-3.87%
			1910	1.594	51.127	1.520	53.300	4.87%	-4.08%
12/7/2020	1900 Body	21.5	1850	1.509	51.008	1.520	53.300	-0.72%	-4.30%
			1880	1.544	50.890	1.520	53.300	1.58%	-4.52%
			1910	1.579	50.774	1.520	53.300	3.88%	-4.74%
12/30/2020	1900 Body	22.1	1850	1.482	52.672	1.520	53.300	-2.50%	-1.18%
			1860	1.493	52.660	1.520	53.300	-1.78%	-1.20%
			1880	1.515	52.613	1.520	53.300	-0.33%	-1.29%
			1900	1.535	52.531	1.520	53.300	0.99%	-1.44%
			1905	1.540	52.509	1.520	53.300	1.32%	-1.48%
			1910	1.545	52.486	1.520	53.300	1.64%	-1.53%
			1950	1.588	52.362	1.520	53.300	4.47%	-1.76%
01/03/2021	1900 Body	24.6	1850	1.480	52.078	1.520	53.300	-2.63%	-2.29%
			1860	1.491	52.056	1.520	53.300	-1.91%	-2.33%
			1880	1.512	51.998	1.520	53.300	-0.53%	-2.44%
			1900	1.535	51.932	1.520	53.300	0.99%	-2.57%
			1905	1.540	51.916	1.520	53.300	1.32%	-2.60%
			1910	1.546	51.902	1.520	53.300	1.71%	-2.62%
			1950	1.590	51.782	1.520	53.300	4.61%	-2.85%

Table 10-5
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
11/23/2020	2450 Body	23.0	2400	1.926	52.777	1.902	52.767	1.26%	0.02%
			2450	1.999	52.654	1.950	52.700	2.51%	-0.09%
			2500	2.062	52.419	2.021	52.636	2.03%	-0.41%
			2510	2.078	52.382	2.035	52.623	2.11%	-0.46%
			2535	2.117	52.275	2.071	52.592	2.22%	-0.60%
			2550	2.135	52.240	2.092	52.573	2.06%	-0.63%
			2560	2.154	52.218	2.106	52.560	2.28%	-0.65%
			2600	2.198	52.043	2.163	52.509	1.62%	-0.89%
			2650	2.272	51.852	2.234	52.445	1.70%	-1.13%
			2680	2.316	51.763	2.277	52.407	1.71%	-1.23%
			2700	2.340	51.696	2.305	52.382	1.52%	-1.31%
12/14/2020	2450 Body	23.2	2400	1.983	52.172	1.902	52.767	4.26%	-1.13%
			2450	2.042	52.036	1.950	52.700	4.72%	-1.26%
			2500	2.101	51.924	2.021	52.636	3.96%	-1.35%
01/21/2021	2450 Body	22.0	2400	1.984	52.086	1.902	52.767	4.31%	-1.29%
			2450	2.045	51.939	1.950	52.700	4.87%	-1.44%
			2480	2.081	51.856	1.993	52.662	4.42%	-1.53%
			2500	2.104	51.767	2.021	52.636	4.11%	-1.65%
			2510	2.118	51.736	2.035	52.623	4.08%	-1.69%
			2535	2.156	51.645	2.071	52.592	4.10%	-1.80%
			2550	2.174	51.619	2.092	52.573	3.92%	-1.81%
			2560	2.187	51.594	2.106	52.560	3.85%	-1.84%
			2600	2.226	51.497	2.163	52.509	2.91%	-1.93%
			2650	2.289	51.306	2.234	52.445	2.46%	-2.17%
			2680	2.330	51.229	2.277	52.407	2.33%	-2.25%
			2700	2.350	51.195	2.305	52.382	1.95%	-2.27%

Table 10-6
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
12/21/2020	5200-5800 Body	21.8	5180	5.410	47.818	5.276	49.041	2.54%	-2.49%
			5190	5.425	47.802	5.288	49.028	2.59%	-2.50%
			5200	5.440	47.799	5.299	49.014	2.66%	-2.48%
			5210	5.452	47.795	5.311	49.001	2.65%	-2.46%
			5220	5.463	47.780	5.323	48.987	2.63%	-2.46%
			5240	5.484	47.742	5.346	48.960	2.58%	-2.49%
			5250	5.500	47.722	5.358	48.947	2.65%	-2.50%
			5260	5.516	47.696	5.369	48.933	2.74%	-2.53%
			5270	5.528	47.658	5.381	48.919	2.73%	-2.58%
			5280	5.540	47.646	5.393	48.906	2.73%	-2.58%
			5290	5.554	47.652	5.404	48.892	2.78%	-2.54%
			5300	5.570	47.657	5.416	48.879	2.84%	-2.50%
			5310	5.583	47.637	5.428	48.865	2.86%	-2.51%
			5320	5.593	47.611	5.439	48.851	2.83%	-2.54%
			5500	5.829	47.302	5.650	48.607	3.17%	-2.68%
			5510	5.845	47.287	5.661	48.594	3.25%	-2.69%
			5520	5.862	47.270	5.673	48.580	3.33%	-2.70%
			5530	5.878	47.253	5.685	48.566	3.39%	-2.70%
			5540	5.892	47.238	5.696	48.553	3.44%	-2.71%
			5550	5.905	47.230	5.708	48.539	3.45%	-2.70%
			5560	5.917	47.220	5.720	48.526	3.44%	-2.69%
			5580	5.942	47.180	5.743	48.499	3.47%	-2.72%
			5600	5.969	47.140	5.766	48.471	3.52%	-2.75%
			5610	5.984	47.137	5.778	48.458	3.57%	-2.73%
			5620	5.997	47.119	5.790	48.444	3.58%	-2.74%
			5640	6.031	47.078	5.813	48.417	3.75%	-2.77%
			5660	6.058	47.046	5.837	48.390	3.79%	-2.78%
			5670	6.069	47.017	5.848	48.376	3.78%	-2.81%
			5680	6.080	46.996	5.860	48.363	3.75%	-2.83%
			5690	6.092	46.989	5.872	48.349	3.75%	-2.81%
			5700	6.106	46.982	5.883	48.336	3.79%	-2.80%
			5710	6.121	46.965	5.895	48.322	3.83%	-2.81%
			5720	6.136	46.942	5.907	48.309	3.88%	-2.83%
			5745	6.173	46.892	5.936	48.275	3.99%	-2.86%
			5750	6.182	46.881	5.942	48.268	4.04%	-2.87%
			5755	6.189	46.871	5.947	48.261	4.07%	-2.88%
			5765	6.203	46.861	5.959	48.248	4.09%	-2.87%
			5775	6.217	46.853	5.971	48.234	4.12%	-2.86%
			5785	6.232	46.844	5.982	48.220	4.18%	-2.85%
			5795	6.247	46.820	5.994	48.207	4.22%	-2.88%
			5800	6.253	46.809	6.000	48.200	4.22%	-2.89%
			5805	6.260	46.792	6.006	48.193	4.23%	-2.91%
			5825	6.286	46.749	6.029	48.166	4.26%	-2.94%

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 10-7
System Verification Results – 1g

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{1g} (W/kg)	1 W Target SAR_{1g} (W/kg)	1 W Normalized SAR_{1g} (W/kg)	$Deviation_{1g}$ (%)
AM7	750	HEAD	12/03/2020	21.9	21.5	0.200	1057	7420	1.590	8.520	7.950	-6.69%
AM7	835	HEAD	12/03/2020	21.9	21.5	0.200	4d040	7420	2.030	9.500	10.150	6.84%
AM7	850	HEAD	12/07/2020	21.6	20.4	0.200	1010	7420	2.010	9.840	10.050	2.13%
E	835	HEAD	12/28/2020	22.5	21.5	0.200	4d047	3589	1.890	9.420	9.450	0.32%
P	835	HEAD	01/06/2021	23.7	22.0	0.200	4d132	7308	1.940	9.650	9.700	0.52%
AM6	1750	HEAD	12/07/2020	24.7	20.2	0.100	1083	7546	3.660	36.100	36.600	1.39%
AM7	1900	HEAD	12/08/2020	22.9	22.1	0.100	5d030	7420	4.140	39.900	41.400	3.76%
E	2450	HEAD	12/14/2020	24.6	23.0	0.100	981	3589	5.340	52.300	53.400	2.10%
E	2450	HEAD	12/17/2020	24.9	23.6	0.100	981	3589	4.980	52.300	49.800	-4.78%
E	2600	HEAD	01/18/2021	22.9	22.3	0.100	1064	7571	5.440	58.100	54.400	-6.37%
H	5250	HEAD	12/14/2020	24.0	23.5	0.050	1057	7357	3.830	79.200	76.600	-3.28%
H	5250	HEAD	12/30/2020	23.3	21.1	0.050	1057	7357	3.700	79.200	74.000	-6.57%
H	5600	HEAD	12/14/2020	24.0	23.5	0.050	1057	7357	3.890	84.100	77.800	-7.49%
H	5600	HEAD	12/30/2020	23.3	21.1	0.050	1057	7357	3.970	84.100	79.400	-5.59%
H	5750	HEAD	12/14/2020	24.0	23.5	0.050	1057	7357	3.640	80.500	72.800	-9.57%
H	5750	HEAD	12/30/2020	23.3	21.1	0.050	1057	7357	3.900	80.500	78.000	-3.11%
AM7	750	BODY	11/30/2020	21.1	21.3	0.200	1034	7420	1.800	8.570	9.000	5.02%
AM7	750	BODY	12/02/2020	22.9	20.8	0.200	1034	7420	1.850	8.570	9.250	7.93%
AM6	835	BODY	11/30/2020	20.8	20.5	0.200	4d180	7546	2.060	9.590	10.300	7.40%
AM6	835	BODY	12/08/2020	22.9	19.7	0.200	4d040	7546	1.880	9.530	9.400	-1.36%
AM6	835	BODY	12/10/2020	21.6	20.1	0.200	4d040	7546	1.970	9.530	9.850	3.36%
D	835	BODY	01/04/2021	23.1	22.1	0.200	4d133	7488	1.830	9.750	9.150	-6.15%
AM1	1750	BODY	12/02/2020	23.1	20.8	0.100	1083	7427	3.870	37.100	38.700	4.31%
AM7	1750	BODY	12/02/2020	22.9	20.8	0.100	1083	7420	3.820	37.100	38.200	2.96%
H	1750	BODY	12/09/2020	24.7	24.4	0.100	1008	7357	3.950	37.400	39.500	5.61%
AM4	1900	BODY	12/02/2020	21.8	21.4	0.100	5d030	7421	4.260	39.900	42.600	6.77%
AM4	1900	BODY	12/07/2020	21.0	20.6	0.100	5d030	7421	4.240	39.900	42.400	6.27%
J	1900	BODY	12/30/2020	20.8	21.0	0.100	5d080	7410	4.030	39.200	40.300	2.81%
J	1900	BODY	01/03/2021	20.3	22.6	0.100	5d080	7410	4.020	39.200	40.200	2.55%
P	2450	BODY	11/23/2020	23.3	21.5	0.100	797	7308	4.900	49.400	49.000	-0.81%
K	2450	BODY	12/14/2020	24.2	23.5	0.100	797	7409	5.100	49.400	51.000	3.24%
K	2450	BODY	01/21/2021	23.4	22.0	0.100	719	7409	5.370	50.700	53.700	5.92%
P	2600	BODY	11/23/2020	23.3	21.5	0.100	1064	7308	5.420	55.600	54.200	-2.52%
K	2600	BODY	01/21/2021	23.4	22.0	0.100	1004	7409	5.550	54.800	55.500	1.28%
G	5250	BODY	12/21/2020	22.6	21.8	0.050	1237	7406	3.510	75.600	70.200	-7.14%
G	5600	BODY	12/21/2020	22.6	21.8	0.050	1237	7406	3.970	78.500	79.400	1.15%
G	5750	BODY	12/21/2020	22.6	21.8	0.050	1237	7406	3.560	75.900	71.200	-6.19%

Table 10-8
System Verification Results – 10g

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR_{10g} (W/kg)	1 W Target SAR_{10g} (W/kg)	1 W Normalized SAR_{10g} (W/kg)	$Deviation_{10g}$ (%)
AM1	1750	BODY	12/02/2020	23.1	20.8	0.100	1083	7427	2.050	19.700	20.500	4.06%
AM6	1750	BODY	12/07/2020	22.0	19.2	0.100	1083	7546	2.080	19.700	20.800	5.58%
AM4	1900	BODY	12/07/2020	21.0	20.6	0.100	5d030	7421	2.170	21.100	21.700	2.84%
J	1900	BODY	01/03/2021	20.3	22.6	0.100	5d080	7410	2.040	20.600	20.400	-0.97%
K	2450	BODY	01/21/2021	23.4	22.0	0.100	719	7409	2.450	23.900	24.500	2.51%
K	2600	BODY	01/21/2021	23.4	22.0	0.100	1004	7409	2.420	24.700	24.200	-2.02%
G	5250	BODY	12/21/2020	22.6	21.8	0.050	1237	7406	0.984	21.200	19.680	-7.17%
G	5600	BODY	12/21/2020	22.6	21.8	0.050	1237	7406	1.100	22.000	22.000	0.00%
G	5750	BODY	12/21/2020	22.6	21.8	0.050	1237	7406	0.984	21.200	19.680	-7.17%

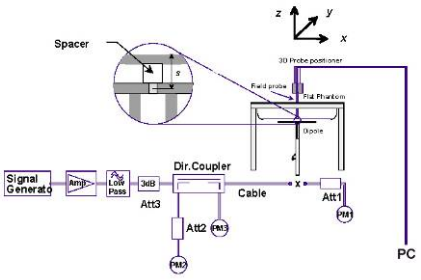


Figure 10-1
System Verification Setup Diagram

Figure 10-2
System Verification Setup Photo

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]	Power Drift [dB]	Side	Test Position	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	24.9	24.67	0.05	Right	Cheek	13757	1:1	0.198	1.054	0.209	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	24.9	24.67	0.04	Right	Tilt	13757	1:1	0.106	1.054	0.112	
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	24.9	24.67	0.13	Left	Cheek	13757	1:1	0.199	1.054	0.210	A1
820.10	564	CDMA BC10 (§90S)	RC3 / SO55	24.9	24.67	0.03	Left	Tilt	13757	1:1	0.110	1.054	0.116	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	24.9	24.90	0.06	Right	Cheek	13757	1:1	0.144	1.000	0.144	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	24.9	24.90	0.17	Right	Tilt	13757	1:1	0.093	1.000	0.093	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	24.9	24.90	0.01	Left	Cheek	13757	1:1	0.165	1.000	0.165	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. A	24.9	24.90	0.10	Left	Tilt	13757	1:1	0.101	1.000	0.101	
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]	Power Drift [dB]	Side	Test Position	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	24.9	24.68	0.08	Right	Cheek	12213	1:1	0.196	1.052	0.206	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	24.9	24.68	0.19	Right	Tilt	12213	1:1	0.104	1.052	0.109	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	24.9	24.68	0.12	Left	Cheek	12213	1:1	0.202	1.052	0.213	A2
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	24.9	24.68	0.09	Left	Tilt	12213	1:1	0.104	1.052	0.109	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	24.9	24.90	0.15	Right	Cheek	12213	1:1	0.196	1.000	0.196	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	24.9	24.90	0.13	Right	Tilt	12213	1:1	0.112	1.000	0.112	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	24.9	24.90	0.03	Left	Cheek	12213	1:1	0.181	1.000	0.181	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	24.9	24.90	0.13	Left	Tilt	12213	1:1	0.098	1.000	0.098	
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
PCS CDMA Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
1880.00	600	PCS CDMA	RC3 / SO55	24.7	24.25	-0.12	Right	Cheek	13757	1:1	0.203	1.109	0.225	
1880.00	600	PCS CDMA	RC3 / SO55	24.7	24.25	-0.03	Right	Tilt	13757	1:1	0.159	1.109	0.176	
1880.00	600	PCS CDMA	RC3 / SO55	24.7	24.25	-0.01	Left	Cheek	13757	1:1	0.281	1.109	0.312	
1880.00	600	PCS CDMA	RC3 / SO55	24.7	24.25	-0.05	Left	Tilt	13757	1:1	0.221	1.109	0.245	
1880.00	600	PCS CDMA	EVDO Rev. A	24.7	24.46	0.13	Right	Cheek	13757	1:1	0.214	1.057	0.226	
1880.00	600	PCS CDMA	EVDO Rev. A	24.7	24.46	0.12	Right	Tilt	13757	1:1	0.158	1.057	0.167	
1880.00	600	PCS CDMA	EVDO Rev. A	24.7	24.46	-0.12	Left	Cheek	13757	1:1	0.283	1.057	0.299	A3
1880.00	600	PCS CDMA	EVDO Rev. A	24.7	24.46	0.12	Left	Tilt	13757	1:1	0.207	1.057	0.219	
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
GSM 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	# of Time Slots	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
836.60	190	GSM 850	GSM	33.7	33.70	0.13	Right	Cheek	14003	1	1:8.3	0.208	1.000	0.208	
836.60	190	GSM 850	GSM	33.7	33.70	0.06	Right	Tilt	14003	1	1:8.3	0.113	1.000	0.113	
836.60	190	GSM 850	GSM	33.7	33.70	0.00	Left	Cheek	14003	1	1:8.3	0.202	1.000	0.202	
836.60	190	GSM 850	GSM	33.7	33.70	0.11	Left	Tilt	14003	1	1:8.3	0.099	1.000	0.099	
836.60	190	GSM 850	GPRS	29.2	29.20	-0.03	Right	Cheek	14003	4	1:2.076	0.266	1.000	0.266	A4
836.60	190	GSM 850	GPRS	29.2	29.20	0.02	Right	Tilt	14003	4	1:2.076	0.151	1.000	0.151	
836.60	190	GSM 850	GPRS	29.2	29.20	0.00	Left	Cheek	14003	4	1:2.076	0.251	1.000	0.251	
836.60	190	GSM 850	GPRS	29.2	29.20	0.08	Left	Tilt	14003	4	1:2.076	0.124	1.000	0.124	
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
GSM 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	# of Time Slots	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1880.00	661	GSM 1900	GSM	29.7	28.83	0.09	Right	Cheek	13757	1	1:8.3	0.102	1.222	0.125	
1880.00	661	GSM 1900	GSM	29.7	28.83	0.13	Right	Tilt	13757	1	1:8.3	0.075	1.222	0.092	
1880.00	661	GSM 1900	GSM	29.7	28.83	0.00	Left	Cheek	13757	1	1:8.3	0.140	1.222	0.171	
1880.00	661	GSM 1900	GSM	29.7	28.83	0.20	Left	Tilt	13757	1	1:8.3	0.090	1.222	0.110	
1880.00	661	GSM 1900	GPRS	26.2	25.74	0.05	Right	Cheek	13757	4	1:2.076	0.136	1.112	0.151	
1880.00	661	GSM 1900	GPRS	26.2	25.74	-0.13	Right	Tilt	13757	4	1:2.076	0.114	1.112	0.127	
1880.00	661	GSM 1900	GPRS	26.2	25.74	-0.07	Left	Cheek	13757	4	1:2.076	0.207	1.112	0.230	A5
1880.00	661	GSM 1900	GPRS	26.2	25.74	-0.04	Left	Tilt	13757	4	1:2.076	0.145	1.112	0.161	
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
UMTS 850 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	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	25.2	24.81	-0.02	Right	Cheek	13757	1:1	0.225	1.094	0.246	A6
836.60	4183	UMTS 850	RMC	25.2	24.81	-0.05	Right	Tilt	13757	1:1	0.113	1.094	0.124	
836.60	4183	UMTS 850	RMC	25.2	24.81	-0.06	Left	Cheek	13757	1:1	0.220	1.094	0.241	
836.60	4183	UMTS 850	RMC	25.2	24.81	0.00	Left	Tilt	13757	1:1	0.115	1.094	0.126	
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
UMTS 1750 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	0.08	Right	Cheek	13500	1:1	0.194	1.099	0.213	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	0.18	Right	Tilt	13500	1:1	0.174	1.099	0.191	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	-0.02	Left	Cheek	13500	1:1	0.283	1.099	0.311	A7
1732.40	1412	UMTS 1750	RMC	25.2	24.79	0.11	Left	Tilt	13500	1:1	0.155	1.099	0.170	
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
UMTS 1900 Head SAR

MEASUREMENT RESULTS														
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	-0.03	Right	Cheek	13757	1:1	0.231	1.089	0.252	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	0.12	Right	Tilt	13757	1:1	0.182	1.089	0.198	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	-0.12	Left	Cheek	13757	1:1	0.341	1.089	**0.371**	A8
1880.00	9400	UMTS 1900	RMC	24.7	24.33	-0.11	Left	Tilt	13757	1:1	0.218	1.089	0.237	
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 71 Head SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	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	25.2	25.02	-0.04	0	Right	Cheek	QPSK	1	50	13757	1:1	0.170	1.042	0.177	A9
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	0.11	1	Right	Cheek	QPSK	50	50	13757	1:1	0.128	1.045	0.134	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	-0.02	0	Right	Tilt	QPSK	1	50	13757	1:1	0.090	1.042	0.094	
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	0.03	1	Right	Tilt	QPSK	50	50	13757	1:1	0.062	1.045	0.065	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	-0.16	0	Left	Cheek	QPSK	1	50	13757	1:1	0.131	1.042	0.137	
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	-0.02	1	Left	Cheek	QPSK	50	50	13757	1:1	0.116	1.045	0.121	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	-0.12	0	Left	Tilt	QPSK	1	50	13757	1:1	0.080	1.042	0.083	
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	-0.04	1	Left	Tilt	QPSK	50	50	13757	1:1	0.065	1.045	0.068	
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
LTE Band 12 Head SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	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	25.2	24.91	0.18	0	Right	Cheek	QPSK	1	25	13757	1:1	0.196	1.069	0.210	A10
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	0.01	1	Right	Cheek	QPSK	25	25	13757	1:1	0.156	1.074	0.168	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	0.06	0	Right	Tilt	QPSK	1	25	13757	1:1	0.118	1.069	0.126	
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	0.01	1	Right	Tilt	QPSK	25	25	13757	1:1	0.088	1.074	0.095	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	-0.15	0	Left	Cheek	QPSK	1	25	13757	1:1	0.180	1.069	0.192	
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	0.10	1	Left	Cheek	QPSK	25	25	13757	1:1	0.139	1.074	0.149	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	-0.06	0	Left	Tilt	QPSK	1	25	13757	1:1	0.103	1.069	0.110	
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	-0.01	1	Left	Tilt	QPSK	25	25	13757	1:1	0.084	1.074	0.090	
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
LTE Band 13 Head SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	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	24.2	24.04	0.00	0	Right	Cheek	QPSK	1	25	13757	1:1	0.159	1.038	0.165	
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	0.02	1	Right	Cheek	QPSK	25	25	13757	1:1	0.147	1.047	0.154	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	-0.14	0	Right	Tilt	QPSK	1	25	13757	1:1	0.097	1.038	0.101	
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	-0.01	1	Right	Tilt	QPSK	25	25	13757	1:1	0.079	1.047	0.083	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	0.12	0	Left	Cheek	QPSK	1	25	13757	1:1	0.166	1.038	0.172	A11
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	0.01	1	Left	Cheek	QPSK	25	25	13757	1:1	0.138	1.047	0.144	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	0.00	0	Left	Tilt	QPSK	1	25	13757	1:1	0.090	1.038	0.093	
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	0.00	1	Left	Tilt	QPSK	25	25	13757	1:1	0.076	1.047	0.080	
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
LTE Band 26 (Cell) Head SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	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	25.2	24.89	0.05	0	Right	Cheek	QPSK	1	36	13757	1:1	0.245	1.074	0.263	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.07	1	Right	Cheek	QPSK	36	0	13757	1:1	0.204	1.038	0.212	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	0.01	0	Right	Tilt	QPSK	1	36	13757	1:1	0.119	1.074	0.128	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	-0.08	1	Right	Tilt	QPSK	36	0	13757	1:1	0.097	1.038	0.101	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	-0.09	0	Left	Cheek	QPSK	1	36	13757	1:1	0.249	1.074	0.267	A12
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.06	1	Left	Cheek	QPSK	36	0	13757	1:1	0.198	1.038	0.206	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	0.05	0	Left	Tilt	QPSK	1	36	13757	1:1	0.128	1.074	0.137	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.04	1	Left	Tilt	QPSK	36	0	13757	1:1	0.105	1.038	0.109	
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 11-13
LTE Band 66 (AWS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.15	0	Right	Cheek	QPSK	1	50	13500	1:1	0.164	1.012	0.166	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	-0.04	1	Right	Cheek	QPSK	50	50	13500	1:1	0.157	1.035	0.162	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	0.20	0	Right	Tilt	QPSK	1	50	13500	1:1	0.194	1.012	0.196	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	0.20	1	Right	Tilt	QPSK	50	50	13500	1:1	0.117	1.035	0.121	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.12	0	Left	Cheek	QPSK	1	50	13500	1:1	0.330	1.012	0.334	A13
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	0.05	1	Left	Cheek	QPSK	50	50	13500	1:1	0.225	1.035	0.233	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.12	0	Left	Tilt	QPSK	1	50	13500	1:1	0.183	1.012	0.185	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	0.04	1	Left	Tilt	QPSK	50	50	13500	1:1	0.133	1.035	0.138	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 11-14
LTE Band 25 (PCS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Device Serial Number	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.06	0	Right	Cheek	QPSK	1	50	13757	1:1	0.239	1.005	0.240	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	0.07	1	Right	Cheek	QPSK	50	50	13757	1:1	0.200	1.028	0.206	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	0.08	0	Right	Tilt	QPSK	1	50	13757	1:1	0.204	1.005	0.205	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	0.02	1	Right	Tilt	QPSK	50	50	13757	1:1	0.153	1.028	0.157	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.17	0	Left	Cheek	QPSK	1	50	13757	1:1	0.360	1.005	0.362	A14
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.01	1	Left	Cheek	QPSK	50	50	13757	1:1	0.303	1.028	0.311	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.15	0	Left	Tilt	QPSK	1	50	13757	1:1	0.199	1.005	0.200	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.02	1	Left	Tilt	QPSK	50	50	13757	1:1	0.180	1.028	0.185	
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 11-15
LTE Band 41 Head SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2 CC Uplink, Power Class	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Side	Test Position	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 - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.19	0	Right	Cheek	QPSK	1	50	13211	1:1.58	0.060	1.107	0.066	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.21	1	Right	Cheek	QPSK	50	25	13211	1:1.58	0.043	1.091	0.047	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.14	0	Right	Tilt	QPSK	1	50	13211	1:1.58	0.056	1.107	0.062	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.16	1	Right	Tilt	QPSK	50	25	13211	1:1.58	0.044	1.091	0.048	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.46	0.12	0	Left	Cheek	QPSK	1	0	13211	1:1.58	0.114	1.186	0.135	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	-0.07	0	Left	Cheek	QPSK	1	50	13211	1:1.58	0.114	1.107	0.126	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.01	1	Left	Cheek	QPSK	50	25	13211	1:1.58	0.085	1.091	0.093	
1 CC Uplink - Power Class 2	2680.00	41490	High	LTE Band 41	20	27.2	26.57	0.13	0	Left	Cheek	QPSK	1	0	13211	1:2.31	0.166	1.156	0.192	A15
1 CC Uplink - Power Class 2	2680.00	41490	High	LTE Band 41	20	27.2	26.78	-0.03	0	Left	Cheek	QPSK	1	50	13211	1:2.31	0.157	1.102	0.173	
2 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.06	0.13	0	Left	Cheek	QPSK	1	0	13211	1:1.58	0.109	1.300	0.142	
	2660.20	41292											1	99						
2 CC Uplink - Power Class 2	2680.00	41490	High	LTE Band 41	20	27.2	26.07	0.12	0	Left	Cheek	QPSK	1	0	13211	1:2.31	0.149	1.297	0.193	
	2660.20	41292											1	99						
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.14	0	Left	Tilt	QPSK	1	50	13211	1:1.58	0.078	1.107	0.086	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.09	1	Left	Tilt	QPSK	50	25	13211	1:1.58	0.057	1.091	0.062	
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 11-16
DTS Head SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	18.5	17.99	0.02	Right	Cheek	13914	1	99.0	0.502	0.320	1.125	1.010	0.364	
2437	6	802.11b	DSSS	22	18.5	17.99	-0.17	Right	Tilt	13914	1	99.0	0.351	-	1.125	1.010	-	
2412	1	802.11b	DSSS	22	18.5	17.70	0.21	Left	Cheek	13914	1	99.0	1.107	0.793	1.202	1.010	0.963	
2437	6	802.11b	DSSS	22	18.5	17.99	0.10	Left	Cheek	13914	1	99.0	1.163	0.821	1.125	1.010	0.933	
2462	11	802.11b	DSSS	22	18.5	17.77	0.12	Left	Cheek	13914	1	99.0	1.189	0.872	1.183	1.010	**1.042**	A16
2412	1	802.11b	DSSS	22	18.5	17.70	0.16	Left	Tilt	13914	1	99.0	1.014	0.576	1.202	1.010	0.699	
2437	6	802.11b	DSSS	22	18.5	17.99	0.13	Left	Tilt	13914	1	99.0	0.921	0.704	1.125	1.010	0.800	
2462	11	802.11b	DSSS	22	18.5	17.77	0.15	Left	Tilt	13914	1	99.0	1.166	0.669	1.183	1.010	0.799	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-17
NII Head SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												W/kg	(W/kg)			(W/kg)	
5260	52	802.11a	OFDM	20	15.0	14.98	0.12	Right	Cheek	15299	6	96.9	1.012	-	1.005	1.032	-	
5260	52	802.11a	OFDM	20	15.0	14.98	-0.13	Right	Tilt	15299	6	96.9	1.303	0.733	1.005	1.032	0.760	
5260	52	802.11a	OFDM	20	15.0	14.98	0.13	Left	Cheek	15299	6	96.9	1.141	-	1.005	1.032	-	
5260	52	802.11a	OFDM	20	15.0	14.98	-0.13	Left	Tilt	15299	6	96.9	1.716	0.901	1.005	1.032	0.934	
5320	64	802.11a	OFDM	20	15.0	14.98	0.15	Left	Tilt	15299	6	96.9	1.198	0.865	1.005	1.032	0.897	
5260	52	802.11a	OFDM	20	15.0	14.98	0.16	Left	Tilt	15299	6	96.9	1.936	0.860	1.005	1.032	0.892	
5500	100	802.11a	OFDM	20	15.0	14.98	-0.12	Right	Cheek	15299	6	96.9	1.476	0.678	1.005	1.032	0.703	
5500	100	802.11a	OFDM	20	15.0	14.98	0.19	Right	Tilt	15299	6	96.9	1.898	0.861	1.005	1.032	0.893	
5560	112	802.11a	OFDM	20	15.0	14.92	-0.03	Right	Tilt	15299	6	96.9	1.563	0.873	1.019	1.032	0.918	
5500	100	802.11a	OFDM	20	15.0	14.98	0.17	Left	Cheek	15299	6	96.9	1.076	-	1.005	1.032	-	
5500	100	802.11a	OFDM	20	15.0	14.98	0.14	Left	Tilt	15299	6	96.9	2.150	1.060	1.005	1.032	1.099	A17
5560	112	802.11a	OFDM	20	15.0	14.92	-0.14	Left	Tilt	15299	6	96.9	2.003	0.993	1.019	1.032	1.044	
5500	100	802.11a	OFDM	20	15.0	14.98	0.04	Left	Tilt	15299	6	96.9	1.804	1.040	1.005	1.032	1.079	
5755	151	802.11n	OFDM	40	14.5	13.72	-0.12	Right	Cheek	15299	13.5	88.0	1.320	0.630	1.197	1.136	0.857	
5795	159	802.11n	OFDM	40	14.0	13.25	0.10	Right	Cheek	15299	13.5	88.0	1.160	0.578	1.189	1.136	0.781	
5755	151	802.11n	OFDM	40	14.5	13.72	0.13	Right	Tilt	15299	13.5	88.0	1.648	0.801	1.197	1.136	1.089	
5795	159	802.11n	OFDM	40	14.0	13.25	0.15	Right	Tilt	15299	13.5	88.0	1.449	0.718	1.189	1.136	0.970	
5755	151	802.11n	OFDM	40	14.5	13.72	0.16	Left	Cheek	15299	13.5	88.0	0.996	0.610	1.197	1.136	0.829	
5795	159	802.11n	OFDM	40	14.0	13.25	-0.10	Left	Cheek	15299	13.5	88.0	1.003	0.587	1.189	1.136	0.793	
5755	151	802.11n	OFDM	40	14.5	13.72	0.19	Left	Tilt	15299	13.5	88.0	1.364	0.881	1.197	1.136	1.198	
5795	159	802.11n	OFDM	40	14.0	13.25	0.13	Left	Tilt	15299	13.5	88.0	1.414	0.722	1.189	1.136	0.975	
5755	151	802.11n	OFDM	40	14.5	13.72	0.12	Left	Tilt	15299	13.5	88.0	1.728	0.815	1.197	1.136	1.108	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								Head 1.6 W/kg (mW/g) averaged over 1 gram										

Note: Blue entry represent variability measurement.

Table 11-18
DSS Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Side	Test Position	Device Serial Number	Data Rate (Mbps)	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2441.00	39	Bluetooth	FHSS	10.5	10.15	-0.15	Right	Cheek	13914	1	76.8	0.058	1.084	1.302	0.082	
2441.00	39	Bluetooth	FHSS	10.5	10.15	-0.02	Right	Tilt	13914	1	76.8	0.054	1.084	1.302	0.076	
2441.00	39	Bluetooth	FHSS	10.5	10.15	0.12	Left	Cheek	13914	1	76.8	0.129	1.084	1.302	**0.182**	A18
2441.00	39	Bluetooth	FHSS	10.5	10.15	0.13	Left	Tilt	13914	1	76.8	0.093	1.084	1.302	0.131	
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 11-19
GSM/UMTS/CDMA Body-Worn SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	# of Time Slots	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	24.9	24.70	-0.02	10 mm	12213	N/A	1:1	back	0.336	1.047	0.352	A19
836.52	384	CDMA BC0 (§22H)	TDSO / SO32	24.9	24.68	0.02	10 mm	13757	N/A	1:1	back	0.406	1.052	0.427	A21
1851.25	25	PCS CDMA	TDSO / SO32	24.7	24.46	-0.06	10 mm	12213	N/A	1:1	back	0.682	1.057	0.721	
1880.00	600	PCS CDMA	TDSO / SO32	24.7	24.25	-0.12	10 mm	12213	N/A	1:1	back	0.690	1.109	0.765	
1908.75	1175	PCS CDMA	TDSO / SO32	24.7	24.28	-0.16	10 mm	12213	N/A	1:1	back	0.747	1.102	0.823	A23
836.60	190	GSM 850	GSM	33.7	33.70	-0.05	10 mm	12213	1	1:8.3	back	0.306	1.000	0.306	
836.60	190	GSM 850	GPRS	29.2	29.20	-0.12	10 mm	12213	4	1:2.076	back	0.482	1.000	0.482	A25
1880.00	661	GSM 1900	GSM	29.7	28.83	0.00	10 mm	12213	1	1:8.3	back	0.249	1.222	0.304	
1880.00	661	GSM 1900	GPRS	26.2	25.74	-0.05	10 mm	12213	4	1:2.076	back	0.487	1.112	0.542	A27
836.60	4183	UMTS 850	RMC	25.2	24.81	-0.07	10 mm	13500	N/A	1:1	back	0.403	1.094	0.441	A28
1712.40	1312	UMTS 1750	RMC	25.2	24.80	0.00	10 mm	13500	N/A	1:1	back	0.704	1.096	0.772	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	-0.08	10 mm	13500	N/A	1:1	back	0.742	1.099	0.815	
1752.60	1513	UMTS 1750	RMC	25.2	24.75	-0.04	10 mm	13500	N/A	1:1	back	0.794	1.109	**0.881**	A29
1880.00	9400	UMTS 1900	RMC	24.7	24.33	0.00	10 mm	12213	N/A	1:1	back	0.402	1.089	0.438	A30
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 Body-Worn SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	-0.03	0	13500	QPSK	1	50	10 mm	back	1:1	0.359	1.042	0.374	A32
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	0.00	1	13500	QPSK	50	50	10 mm	back	1:1	0.299	1.045	0.312	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	-0.11	0	13757	QPSK	1	25	10 mm	back	1:1	0.378	1.069	0.404	A34
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	-0.16	1	13757	QPSK	25	25	10 mm	back	1:1	0.317	1.074	0.340	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	-0.02	0	13757	QPSK	1	25	10 mm	back	1:1	0.311	1.038	0.323	A35
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	-0.01	1	13757	QPSK	25	25	10 mm	back	1:1	0.260	1.047	0.272	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	-0.03	0	12213	QPSK	1	36	10 mm	back	1:1	0.476	1.074	0.511	A37
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.03	1	12213	QPSK	36	0	10 mm	back	1:1	0.390	1.038	0.405	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.2	24.96	-0.11	0	13757	QPSK	1	50	10 mm	back	1:1	0.636	1.057	0.672	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.2	24.98	0.00	0	13757	QPSK	1	50	10 mm	back	1:1	0.680	1.052	0.715	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.12	0	13757	QPSK	1	50	10 mm	back	1:1	0.823	1.012	0.833	A38
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	-0.06	1	13757	QPSK	50	50	10 mm	back	1:1	0.514	1.035	0.532	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.02	-0.05	1	13757	QPSK	100	0	10 mm	back	1:1	0.508	1.042	0.529	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.01	0	13757	QPSK	1	50	10 mm	back	1:1	0.801	1.012	0.811	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	24.54	-0.10	0	12213	QPSK	1	50	10 mm	back	1:1	0.798	1.038	0.828	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.12	0	12213	QPSK	1	50	10 mm	back	1:1	0.787	1.005	0.791	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.7	24.61	-0.10	0	12213	QPSK	1	50	10 mm	back	1:1	0.816	1.021	0.833	A39
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.10	1	12213	QPSK	50	50	10 mm	back	1:1	0.630	1.028	0.648	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.55	-0.12	1	12213	QPSK	100	0	10 mm	back	1:1	0.628	1.035	0.650	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.7	24.61	-0.10	0	12213	QPSK	1	50	10 mm	back	1:1	0.813	1.021	0.830	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram				

Note: Blue entry represent variability measurement.

Table 11-21
LTE B41 Body-Worn SAR

MEASUREMENT RESULTS																						
1 CC Uplink | 2 CC Uplink, Power Class	Component Carrier	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
		MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.2	23.46	-0.04	0	13211	QPSK	1	0	10 mm	back	1:1.58	0.352	1.186	0.417	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.12	0	13211	QPSK	1	50	10 mm	back	1:1.58	0.361	1.107	0.400	
1 CC Uplink - Power Class 3	N/A	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.07	1	13211	QPSK	50	25	10 mm	back	1:1.58	0.310	1.091	0.338	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	27.2	26.57	0.01	0	13211	QPSK	1	0	10 mm	back	1:2.31	0.485	1.156	0.561	
1 CC Uplink - Power Class 2	N/A	2680.00	41490	High	LTE Band 41	20	27.2	26.78	0.02	0	13211	QPSK	1	50	10 mm	back	1:2.31	0.536	1.102	0.591	A40
2 CC Uplink - Power Class 3	PCC	2680.00	41490	High	LTE Band 41	20	24.2	23.06	0.01	0	13211	QPSK	1	0	10 mm	back	1:1.58	0.325	1.300	0.423	
	SCC	2660.20	41292										1	99							
2 CC Uplink - Power Class 2	PCC	2680.00	41490	High	LTE Band 41	20	27.2	26.07	0.02	0	13211	QPSK	1	0	10 mm	back	1:2.31	0.451	1.297	0.585	
	SCC	2660.20	41292										1	99							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram				

Table 11-22
DTS Body-Worn SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	21.0	20.38	0.09	10 mm	15299	1	back	99.0	0.452	0.290	1.153	1.010	**0.338**	A42
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
NII Body-Worn SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												W/kg	(W/kg)			(W/kg)	
5300	60	802.11a	OFDM	20	18.0	17.74	0.09	10 mm	15299	6	back	96.9	0.595	0.324	1.062	1.032	0.355	
5520	104	802.11a	OFDM	20	18.0	17.72	-0.08	10 mm	15299	6	back	96.9	1.131	0.590	1.067	1.032	**0.650**	A44
5540	108	802.11a	OFDM	20	18.0	17.76	-0.01	10 mm	15299	6	back	96.9	1.048	0.562	1.057	1.032	0.613	
5600	120	802.11a	OFDM	20	17.0	16.98	-0.02	10 mm	15299	6	back	96.9	1.045	0.469	1.005	1.032	0.486	
5720	144	802.11a	OFDM	20	16.5	15.82	0.01	10 mm	15299	6	back	96.9	0.868	0.438	1.169	1.032	0.528	
5785	157	802.11a	OFDM	20	17.0	16.71	0.18	10 mm	15299	6	back	96.9	1.099	0.489	1.069	1.032	0.539	
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
DSS Body-Worn SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	10.5	10.15	0.12	10 mm	15299	1	back	76.8	0.032	1.084	1.302	**0.045**	A46
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**							**Body** **1.6 W/kg (mW/g)** averaged over 1 gram									

11.3 Standalone Hotspot SAR Data

Table 11-25
GPRS/UMTS/CDMA Hotspot SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	# of Time Slots	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	24.9	24.90	-0.21	10 mm	12213	N/A	1:1	back	0.455	1.000	0.455	A20
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	24.9	24.90	0.04	10 mm	12213	N/A	1:1	front	0.209	1.000	0.209	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	24.9	24.90	0.11	10 mm	12213	N/A	1:1	bottom	0.266	1.000	0.266	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	24.9	24.90	-0.06	10 mm	12213	N/A	1:1	right	0.285	1.000	0.285	
820.10	564	CDMA BC10 (§90S)	EVDO Rev. 0	24.9	24.90	-0.03	10 mm	12213	N/A	1:1	left	0.212	1.000	0.212	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	24.9	24.90	-0.02	10 mm	13757	N/A	1:1	back	0.339	1.000	0.339	A22
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	24.9	24.90	0.01	10 mm	13757	N/A	1:1	front	0.181	1.000	0.181	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	24.9	24.90	-0.02	10 mm	13757	N/A	1:1	bottom	0.217	1.000	0.217	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	24.9	24.90	-0.15	10 mm	13757	N/A	1:1	right	0.249	1.000	0.249	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. 0	24.9	24.90	0.01	10 mm	13757	N/A	1:1	left	0.167	1.000	0.167	
1851.25	25	PCS CDMA	EVDO Rev. 0	24.7	24.54	0.05	10 mm	12213	N/A	1:1	back	0.761	1.038	0.790	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.7	24.50	0.04	10 mm	12213	N/A	1:1	back	0.716	1.047	0.750	
1908.75	1175	PCS CDMA	EVDO Rev. 0	24.7	24.62	0.02	10 mm	12213	N/A	1:1	back	0.789	1.019	0.804	A24
1880.00	600	PCS CDMA	EVDO Rev. 0	24.7	24.50	0.02	10 mm	12213	N/A	1:1	front	0.442	1.047	0.463	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.7	24.50	0.01	10 mm	12213	N/A	1:1	bottom	0.599	1.047	0.627	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.7	24.50	0.01	10 mm	12213	N/A	1:1	left	0.494	1.047	0.517	
836.60	190	GSM 850	GPRS	29.2	29.20	-0.12	10 mm	12213	4	1:2.076	back	0.482	1.000	0.482	
836.60	190	GSM 850	GPRS	29.2	29.20	0.00	10 mm	12213	4	1:2.076	front	0.318	1.000	0.318	
836.60	190	GSM 850	GPRS	29.2	29.20	0.01	10 mm	12213	4	1:2.076	bottom	0.323	1.000	0.323	
836.60	190	GSM 850	GPRS	29.2	29.20	0.04	10 mm	12213	4	1:2.076	right	0.499	1.000	0.499	A26
836.60	190	GSM 850	GPRS	29.2	29.20	0.00	10 mm	12213	4	1:2.076	left	0.326	1.000	0.326	
1880.00	661	GSM 1900	GPRS	26.2	25.74	-0.05	10 mm	12213	4	1:2.076	back	0.487	1.112	0.542	A27
1880.00	661	GSM 1900	GPRS	26.2	25.74	-0.01	10 mm	12213	4	1:2.076	front	0.261	1.112	0.290	
1880.00	661	GSM 1900	GPRS	26.2	25.74	-0.10	10 mm	12213	4	1:2.076	bottom	0.353	1.112	0.393	
1880.00	661	GSM 1900	GPRS	26.2	25.74	-0.01	10 mm	12213	4	1:2.076	left	0.367	1.112	0.408	
836.60	4183	UMTS 850	RMC	25.2	24.81	-0.07	10 mm	13500	N/A	1:1	back	0.403	1.094	0.441	A28
836.60	4183	UMTS 850	RMC	25.2	24.81	-0.10	10 mm	13500	N/A	1:1	front	0.235	1.094	0.257	
836.60	4183	UMTS 850	RMC	25.2	24.81	0.01	10 mm	13500	N/A	1:1	bottom	0.270	1.094	0.295	
836.60	4183	UMTS 850	RMC	25.2	24.81	0.05	10 mm	13500	N/A	1:1	right	0.322	1.094	0.352	
836.60	4183	UMTS 850	RMC	25.2	24.81	-0.16	10 mm	13500	N/A	1:1	left	0.220	1.094	0.241	
1712.40	1312	UMTS 1750	RMC	25.2	24.80	0.00	10 mm	13500	N/A	1:1	back	0.704	1.096	0.772	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	-0.08	10 mm	13500	N/A	1:1	back	0.742	1.099	0.815	
1752.60	1513	UMTS 1750	RMC	25.2	24.75	-0.04	10 mm	13500	N/A	1:1	back	0.794	1.109	0.881	A29
1732.40	1412	UMTS 1750	RMC	25.2	24.79	-0.15	10 mm	13500	N/A	1:1	front	0.575	1.099	0.632	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	-0.08	10 mm	13500	N/A	1:1	bottom	0.498	1.099	0.547	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	0.18	10 mm	13500	N/A	1:1	left	0.686	1.099	0.754	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	0.00	10 mm	12213	N/A	1:1	back	0.402	1.089	0.438	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	0.00	10 mm	12213	N/A	1:1	front	0.331	1.089	0.360	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	-0.02	10 mm	12213	N/A	1:1	bottom	0.491	1.089	0.535	
1852.40	9262	UMTS 1900	RMC	24.7	24.42	0.02	10 mm	12213	N/A	1:1	left	0.593	1.067	0.633	A31
1880.00	9400	UMTS 1900	RMC	24.7	24.33	0.01	10 mm	12213	N/A	1:1	left	0.565	1.089	0.615	
1907.60	9538	UMTS 1900	RMC	24.7	24.23	-0.03	10 mm	12213	N/A	1:1	left	0.572	1.114	0.637	
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 11-26
LTE Band 71 Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	-0.03	0	13500	QPSK	1	50	10 mm	back	1:1	0.359	1.042	0.374	
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	0.00	1	13500	QPSK	50	50	10 mm	back	1:1	0.299	1.045	0.312	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	0.01	0	13500	QPSK	1	50	10 mm	front	1:1	0.225	1.042	0.234	
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	0.00	1	13500	QPSK	50	50	10 mm	front	1:1	0.192	1.045	0.201	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	-0.05	0	13500	QPSK	1	50	10 mm	bottom	1:1	0.124	1.042	0.129	
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	-0.06	1	13500	QPSK	50	50	10 mm	bottom	1:1	0.101	1.045	0.106	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	-0.01	0	13500	QPSK	1	50	10 mm	right	1:1	0.410	1.042	0.427	A33
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	-0.01	1	13500	QPSK	50	50	10 mm	right	1:1	0.316	1.045	0.330	
680.50	133297	Mid	LTE Band 71	20	25.2	25.02	0.00	0	13500	QPSK	1	50	10 mm	left	1:1	0.217	1.042	0.226	
680.50	133297	Mid	LTE Band 71	20	24.2	24.01	-0.03	1	13500	QPSK	50	50	10 mm	left	1:1	0.158	1.045	0.165	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-27
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	-0.11	0	13757	QPSK	1	25	10 mm	back	1:1	0.378	1.069	0.404	A34
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	-0.16	1	13757	QPSK	25	25	10 mm	back	1:1	0.317	1.074	0.340	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	-0.02	0	13757	QPSK	1	25	10 mm	front	1:1	0.237	1.069	0.253	
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	-0.02	1	13757	QPSK	25	25	10 mm	front	1:1	0.200	1.074	0.215	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	-0.01	0	13757	QPSK	1	25	10 mm	bottom	1:1	0.127	1.069	0.136	
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	-0.02	1	13757	QPSK	25	25	10 mm	bottom	1:1	0.110	1.074	0.118	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	-0.01	0	13757	QPSK	1	25	10 mm	right	1:1	0.343	1.069	0.367	
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	0.00	1	13757	QPSK	25	25	10 mm	right	1:1	0.309	1.074	0.332	
707.50	23095	Mid	LTE Band 12	10	25.2	24.91	0.10	0	13757	QPSK	1	25	10 mm	left	1:1	0.189	1.069	0.202	
707.50	23095	Mid	LTE Band 12	10	24.2	23.89	-0.04	1	13757	QPSK	25	25	10 mm	left	1:1	0.170	1.074	0.183	
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 11-28
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	-0.02	0	13757	QPSK	1	25	10 mm	back	1:1	0.311	1.038	0.323	
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	-0.01	1	13757	QPSK	25	25	10 mm	back	1:1	0.260	1.047	0.272	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	0.04	0	13757	QPSK	1	25	10 mm	front	1:1	0.210	1.038	0.218	
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	-0.03	1	13757	QPSK	25	25	10 mm	front	1:1	0.179	1.047	0.187	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	-0.05	0	13757	QPSK	1	25	10 mm	bottom	1:1	0.150	1.038	0.156	
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	0.01	1	13757	QPSK	25	25	10 mm	bottom	1:1	0.134	1.047	0.140	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	-0.05	0	13757	QPSK	1	25	10 mm	right	1:1	0.346	1.038	0.359	A36
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	0.03	1	13757	QPSK	25	25	10 mm	right	1:1	0.300	1.047	0.314	
782.00	23230	Mid	LTE Band 13	10	24.2	24.04	0.00	0	13757	QPSK	1	25	10 mm	left	1:1	0.213	1.038	0.221	
782.00	23230	Mid	LTE Band 13	10	23.2	23.00	-0.02	1	13757	QPSK	25	25	10 mm	left	1:1	0.185	1.047	0.194	
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 11-29
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	-0.03	0	12213	QPSK	1	36	10 mm	back	1:1	0.476	1.074	0.511	A37
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.03	1	12213	QPSK	36	0	10 mm	back	1:1	0.390	1.038	0.405	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	-0.02	0	12213	QPSK	1	36	10 mm	front	1:1	0.281	1.074	0.302	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.01	1	12213	QPSK	36	0	10 mm	front	1:1	0.234	1.038	0.243	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	0.00	0	12213	QPSK	1	36	10 mm	bottom	1:1	0.296	1.074	0.318	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.01	1	12213	QPSK	36	0	10 mm	bottom	1:1	0.248	1.038	0.257	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	-0.04	0	12213	QPSK	1	36	10 mm	right	1:1	0.396	1.074	0.425	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.00	1	12213	QPSK	36	0	10 mm	right	1:1	0.318	1.038	0.330	
831.50	26865	Mid	LTE Band 26 (Cell)	15	25.2	24.89	0.01	0	12213	QPSK	1	36	10 mm	left	1:1	0.273	1.074	0.293	
831.50	26865	Mid	LTE Band 26 (Cell)	15	24.2	24.04	0.00	1	12213	QPSK	36	0	10 mm	left	1:1	0.223	1.038	0.231	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-30
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.2	24.96	-0.11	0	13757	QPSK	1	50	10 mm	back	1:1	0.636	1.057	0.672	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.2	24.98	0.00	0	13757	QPSK	1	50	10 mm	back	1:1	0.680	1.052	0.715	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.12	0	13757	QPSK	1	50	10 mm	back	1:1	0.823	1.012	0.833	A38
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	-0.06	1	13757	QPSK	50	50	10 mm	back	1:1	0.514	1.035	0.532	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.02	-0.05	1	13757	QPSK	100	0	10 mm	back	1:1	0.508	1.042	0.529	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	0.06	0	13757	QPSK	1	50	10 mm	front	1:1	0.509	1.012	0.515	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	0.04	1	13757	QPSK	50	50	10 mm	front	1:1	0.407	1.035	0.421	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	0.00	0	13757	QPSK	1	50	10 mm	bottom	1:1	0.470	1.012	0.476	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	0.15	1	13757	QPSK	50	50	10 mm	bottom	1:1	0.390	1.035	0.404	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.01	0	13757	QPSK	1	50	10 mm	left	1:1	0.776	1.012	0.785	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	-0.02	1	13757	QPSK	50	50	10 mm	left	1:1	0.539	1.035	0.558	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.01	0	13757	QPSK	1	50	10 mm	back	1:1	0.801	1.012	0.811	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram					

Note: Blue entry represent variability measurement.

Table 11-31
LTE Band 25 (PCS) Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.															(W/kg)		(W/kg)	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	24.54	-0.10	0	12213	QPSK	1	50	10 mm	back	1:1	0.798	1.038	0.828	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.12	0	12213	QPSK	1	50	10 mm	back	1:1	0.787	1.005	0.791	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.7	24.61	-0.10	0	12213	QPSK	1	50	10 mm	back	1:1	0.816	1.021	0.833	A39
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.10	1	12213	QPSK	50	50	10 mm	back	1:1	0.630	1.028	0.648	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.55	-0.12	1	12213	QPSK	100	0	10 mm	back	1:1	0.628	1.035	0.650	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	0.01	0	12213	QPSK	1	50	10 mm	front	1:1	0.478	1.005	0.480	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	0.00	1	12213	QPSK	50	50	10 mm	front	1:1	0.362	1.028	0.372	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.03	0	12213	QPSK	1	50	10 mm	bottom	1:1	0.583	1.005	0.586	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.01	1	12213	QPSK	50	50	10 mm	bottom	1:1	0.427	1.028	0.439	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	0.02	0	12213	QPSK	1	50	10 mm	left	1:1	0.507	1.005	0.510	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.03	1	12213	QPSK	50	50	10 mm	left	1:1	0.430	1.028	0.442	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.7	24.61	-0.10	0	12213	QPSK	1	50	10 mm	back	1:1	0.813	1.021	0.830	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram					

Note: Blue entry represent variability measurement.

Table 11-32
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2 CC Uplink, Power Class	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
	MHz	Ch.															(W/kg)		(W/kg)	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.12	0	13211	QPSK	1	50	10 mm	back	1:1.58	0.361	1.107	0.400	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.07	1	13211	QPSK	50	25	10 mm	back	1:1.58	0.310	1.091	0.338	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	-0.04	0	13757	QPSK	1	50	10 mm	front	1:1.58	0.379	1.107	0.420	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.02	1	13757	QPSK	50	25	10 mm	front	1:1.58	0.302	1.091	0.329	
1 CC Uplink - Power Class 3	2506.00	39750	Low	LTE Band 41	20	24.2	23.41	0.15	0	13757	QPSK	1	50	10 mm	bottom	1:1.58	0.836	1.199	1.002	
1 CC Uplink - Power Class 3	2506.00	39750	Low	LTE Band 41	20	24.2	23.26	0.00	0	13211	QPSK	1	99	10 mm	bottom	1:1.58	0.801	1.242	0.995	
1 CC Uplink - Power Class 3	2549.50	40185	Low-Mid	LTE Band 41	20	24.2	23.32	0.12	0	13757	QPSK	1	50	10 mm	bottom	1:1.58	0.732	1.225	0.897	
1 CC Uplink - Power Class 3	2593.00	40620	Mid	LTE Band 41	20	24.2	23.37	-0.09	0	13757	QPSK	1	50	10 mm	bottom	1:1.58	0.650	1.211	0.787	
1 CC Uplink - Power Class 3	2636.50	41055	Mid-High	LTE Band 41	20	24.2	23.72	0.01	0	13757	QPSK	1	50	10 mm	bottom	1:1.58	0.635	1.117	0.709	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	-0.12	0	13757	QPSK	1	50	10 mm	bottom	1:1.58	0.683	1.107	0.756	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	-0.02	1	13757	QPSK	50	25	10 mm	bottom	1:1.58	0.530	1.091	0.578	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.76	0.00	1	13757	QPSK	100	0	10 mm	bottom	1:1.58	0.523	1.107	0.579	
1 CC Uplink - Power Class 2	2506.00	39750	Low	LTE Band 41	20	27.2	26.32	-0.12	0	13211	QPSK	1	99	10 mm	bottom	1:2.31	1.040	1.225	1.274	
1 CC Uplink - Power Class 2	2506.00	39750	Low	LTE Band 41	20	27.2	26.79	-0.01	0	13211	QPSK	1	50	10 mm	bottom	1:2.31	1.180	1.099	**1.297**	
2 CC Uplink - Power Class 3	2506.00	39750	Low	LTE Band 41	20	24.2	24.10	-0.19	0	13211	QPSK	1	99	10 mm	bottom	1:1.58	0.942	1.023	0.964	
	2525.80	39948										1	0							
2 CC Uplink - Power Class 2	2506.00	39750	Low	LTE Band 41	20	27.2	27.12	-0.09	0	13211	QPSK	1	99	10 mm	bottom	1:2.31	1.260	1.019	1.284	A41
	2525.80	39948										1	0							
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.02	0	13757	QPSK	1	50	10 mm	right	1:1.58	0.133	1.107	0.147	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.01	1	13757	QPSK	50	25	10 mm	right	1:1.58	0.103	1.091	0.112	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.14	0	13757	QPSK	1	50	10 mm	left	1:1.58	0.139	1.107	0.154	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.00	1	13757	QPSK	50	25	10 mm	left	1:1.58	0.102	1.091	0.111	
2 CC Uplink - Power Class 2	2506.00	39750	Low	LTE Band 41	20	27.2	27.12	-0.09	0	13211	QPSK	1	99	10 mm	bottom	1:2.31	1.260	1.019	1.284	
	2525.80	39948										1	0							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram					

Note: Blue entry represent variability measurement.

Table 11-33
WLAN Hotspot SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												W/kg	(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	21.0	20.38	0.09	10 mm	15299	1	back	99.0	0.452	0.290	1.153	1.010	0.338	
2437	6	802.11b	DSSS	22	21.0	20.38	0.16	10 mm	15299	1	front	99.0	0.334	-	1.153	1.010	-	
2437	6	802.11b	DSSS	22	21.0	20.38	0.12	10 mm	15299	1	top	99.0	0.313	-	1.153	1.010	-	
2437	6	802.11b	DSSS	22	21.0	20.38	0.12	10 mm	15299	1	right	99.0	0.522	0.340	1.153	1.010	**0.396**	A43
5200	40	802.11a	OFDM	20	17.5	17.23	0.12	10 mm	15299	6	back	96.9	0.525	0.300	1.064	1.032	0.329	
5200	40	802.11a	OFDM	20	17.5	17.23	0.13	10 mm	15299	6	front	96.9	0.307	0.170	1.064	1.032	0.187	
5200	40	802.11a	OFDM	20	17.5	17.23	0.14	10 mm	15299	6	top	96.9	1.544	0.672	1.064	1.032	0.738	
5200	40	802.11a	OFDM	20	17.5	17.23	0.11	10 mm	15299	6	right	96.9	0.192	0.094	1.064	1.032	0.103	
5785	157	802.11a	OFDM	20	17.0	16.71	0.18	10 mm	15299	6	back	96.9	1.099	0.489	1.069	1.032	0.539	
5785	157	802.11a	OFDM	20	17.0	16.71	0.12	10 mm	15299	6	front	96.9	0.397	0.195	1.069	1.032	0.215	
5745	149	802.11a	OFDM	20	17.0	16.61	0.14	10 mm	15299	6	top	96.9	1.886	0.822	1.094	1.032	**0.928**	A45
5785	157	802.11a	OFDM	20	17.0	16.71	0.12	10 mm	15299	6	top	96.9	1.816	0.775	1.069	1.032	0.855	
5805	161	802.11a	OFDM	20	17.0	16.38	0.17	10 mm	15299	6	top	96.9	1.673	0.719	1.153	1.032	0.856	
5785	157	802.11a	OFDM	20	17.0	16.71	0.19	10 mm	15299	6	right	96.9	0.210	0.097	1.069	1.032	0.107	

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 11-34
DSS Hotspot SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g) (W/kg)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.															
2441	39	Bluetooth	FHSS	10.5	10.15	0.12	10 mm	15299	1	back	76.8	0.032	1.084	1.302	**0.045**	A46
2441	39	Bluetooth	FHSS	10.5	10.15	-0.13	10 mm	15299	1	front	76.8	0.012	1.084	1.302	0.017	
2441	39	Bluetooth	FHSS	10.5	10.15	0.20	10 mm	15299	1	top	76.8	0.018	1.084	1.302	0.025	
2441	39	Bluetooth	FHSS	10.5	10.15	0.13	10 mm	15299	1	right	76.8	0.027	1.084	1.302	0.038	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**							**Body** **1.6 W/kg (mW/g)** averaged over 1 gram									

11.4 Standalone Phablet SAR Data

Table 11-35
UMTS/CDMA Phablet SAR Data

MEASUREMENT RESULTS														
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Duty Cycle	Side	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.										(W/kg)		(W/kg)	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.7	24.50	-0.07	2 mm	12213	1:1	back	1.760	1.047	1.843	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.7	24.50	0.01	0 mm	12213	1:1	front	1.430	1.047	1.497	
1880.00	600	PCS CDMA	EVDO Rev. 0	24.7	24.50	0.09	2 mm	12213	1:1	bottom	0.985	1.047	1.031	
1851.25	25	PCS CDMA	EVDO Rev. 0	24.7	24.54	0.04	0 mm	12213	1:1	left	2.140	1.038	2.221	A47
1880.00	600	PCS CDMA	EVDO Rev. 0	24.7	24.50	-0.13	0 mm	12213	1:1	left	1.910	1.047	2.000	
1908.75	1175	PCS CDMA	EVDO Rev. 0	24.7	24.62	0.03	0 mm	12213	1:1	left	2.010	1.019	2.048	
1880.00	600	PCS CDMA	EVDO Rev. 0	23.2	23.01	-0.02	0 mm	12213	1:1	back	1.610	1.045	1.682	
1880.00	600	PCS CDMA	EVDO Rev. 0	23.2	23.01	-0.15	0 mm	12213	1:1	bottom	0.965	1.045	1.008	
1712.40	1312	UMTS 1750	RMC	25.2	24.80	-0.01	2 mm	13500	1:1	back	2.150	1.096	2.356	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	-0.01	2 mm	13500	1:1	back	2.120	1.099	2.330	
1752.60	1513	UMTS 1750	RMC	25.2	24.75	-0.11	2 mm	13500	1:1	back	2.140	1.109	2.373	
1712.40	1312	UMTS 1750	RMC	25.2	24.80	0.06	0 mm	13500	1:1	front	2.290	1.096	2.510	A48
1732.40	1412	UMTS 1750	RMC	25.2	24.79	0.06	0 mm	13500	1:1	front	2.090	1.099	2.297	
1752.60	1513	UMTS 1750	RMC	25.2	24.75	0.04	0 mm	13500	1:1	front	2.120	1.109	2.351	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	-0.12	2 mm	13500	1:1	bottom	0.997	1.099	1.096	
1712.40	1312	UMTS 1750	RMC	25.2	24.80	-0.17	0 mm	13500	1:1	left	1.880	1.096	2.060	
1732.40	1412	UMTS 1750	RMC	25.2	24.79	-0.06	0 mm	13500	1:1	left	1.920	1.099	2.110	
1752.60	1513	UMTS 1750	RMC	25.2	24.75	-0.07	0 mm	13500	1:1	left	1.970	1.109	2.185	
1712.40	1312	UMTS 1750	RMC	23.2	22.45	-0.11	0 mm	13500	1:1	back	2.190	1.189	2.604	
1732.40	1412	UMTS 1750	RMC	23.2	22.46	-0.11	0 mm	13500	1:1	back	2.120	1.186	2.514	
1752.60	1513	UMTS 1750	RMC	23.2	22.46	-0.12	0 mm	13500	1:1	back	2.140	1.186	2.538	
1732.40	1412	UMTS 1750	RMC	23.2	22.46	-0.01	0 mm	13500	1:1	bottom	0.984	1.186	1.167	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	-0.01	2 mm	12213	1:1	back	1.730	1.089	1.884	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	0.04	0 mm	12213	1:1	front	1.570	1.089	1.710	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	-0.03	2 mm	12213	1:1	bottom	1.070	1.089	1.165	
1852.40	9262	UMTS 1900	RMC	24.7	24.42	-0.19	0 mm	12213	1:1	left	2.020	1.067	2.155	
1880.00	9400	UMTS 1900	RMC	24.7	24.33	0.02	0 mm	12213	1:1	left	2.050	1.089	2.232	
1907.60	9538	UMTS 1900	RMC	24.7	24.23	-0.03	0 mm	12213	1:1	left	1.880	1.114	2.094	
1852.40	9262	UMTS 1900	RMC	23.2	22.60	-0.01	0 mm	12213	1:1	back	2.230	1.148	2.560	A49
1880.00	9400	UMTS 1900	RMC	23.2	22.53	0.00	0 mm	12213	1:1	back	2.130	1.167	2.486	
1907.60	9538	UMTS 1900	RMC	23.2	22.44	0.00	0 mm	12213	1:1	back	2.090	1.191	2.489	
1880.00	9400	UMTS 1900	RMC	23.2	22.53	-0.12	0 mm	12213	1:1	bottom	1.240	1.167	1.447	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Phablet 4.0 W/kg (mW/g) averaged over 10 grams							

Table 11-36
LTE Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	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)	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.2	24.96	0.00	0	13500	QPSK	1	50	2 mm	back	1:1	2.390	1.057	2.526	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.2	24.98	0.01	0	13500	QPSK	1	50	2 mm	back	1:1	2.360	1.052	2.483	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.01	0	13500	QPSK	1	50	2 mm	back	1:1	2.360	1.012	2.388	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	-0.11	1	13500	QPSK	50	50	2 mm	back	1:1	1.960	1.035	2.029	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.2	24.01	0.00	1	13500	QPSK	50	50	2 mm	back	1:1	1.910	1.045	1.996	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.2	24.03	-0.01	1	13500	QPSK	50	0	2 mm	back	1:1	1.870	1.040	1.945	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.02	-0.14	1	13500	QPSK	100	0	2 mm	back	1:1	1.980	1.042	2.063	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.2	24.96	0.17	0	13500	QPSK	1	50	0 mm	front	1:1	2.450	1.057	2.590	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.2	24.98	0.09	0	13500	QPSK	1	50	0 mm	front	1:1	2.470	1.052	2.598	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	0.03	0	13500	QPSK	1	50	0 mm	front	1:1	2.500	1.012	2.530	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	0.05	1	13500	QPSK	50	50	0 mm	front	1:1	2.000	1.035	2.070	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.2	24.01	0.08	1	13500	QPSK	50	50	0 mm	front	1:1	1.980	1.045	2.069	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.2	24.03	0.02	1	13500	QPSK	50	0	0 mm	front	1:1	1.980	1.040	2.059	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.02	-0.06	1	13500	QPSK	100	0	0 mm	front	1:1	1.910	1.042	1.990	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	0.03	0	13500	QPSK	1	50	2 mm	bottom	1:1	1.010	1.012	1.022	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	-0.14	1	13500	QPSK	50	50	2 mm	bottom	1:1	0.883	1.035	0.914	
1720.00	132072	Low	LTE Band 66 (AWS)	20	25.2	24.96	-0.13	0	13500	QPSK	1	50	0 mm	left	1:1	2.750	1.057	2.907	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	25.2	24.98	-0.11	0	13500	QPSK	1	50	0 mm	left	1:1	2.880	1.052	3.030	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.14	0	13500	QPSK	1	50	0 mm	left	1:1	3.130	1.012	3.168	A50
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.05	-0.13	1	13500	QPSK	50	50	0 mm	left	1:1	2.230	1.035	2.308	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24.2	24.01	-0.13	1	13500	QPSK	50	50	0 mm	left	1:1	2.260	1.045	2.362	
1770.00	132572	High	LTE Band 66 (AWS)	20	24.2	24.03	-0.19	1	13500	QPSK	50	0	0 mm	left	1:1	2.330	1.040	2.423	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24.2	24.02	0.01	1	13500	QPSK	100	0	0 mm	left	1:1	2.270	1.042	2.365	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.2	22.94	-0.11	0	13500	QPSK	1	50	0 mm	back	1:1	2.330	1.062	2.474	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.2	23.08	-0.11	0	13500	QPSK	1	50	0 mm	back	1:1	2.420	1.028	2.488	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.2	23.10	-0.11	0	13500	QPSK	1	50	0 mm	back	1:1	2.390	1.023	2.445	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.2	22.98	-0.12	0	13500	QPSK	50	25	0 mm	back	1:1	2.310	1.052	2.430	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.2	23.00	-0.14	0	13500	QPSK	50	25	0 mm	back	1:1	2.240	1.047	2.345	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.2	23.14	-0.13	0	13500	QPSK	50	0	0 mm	back	1:1	2.380	1.014	2.413	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.2	23.05	-0.11	0	13500	QPSK	100	0	0 mm	back	1:1	2.340	1.035	2.422	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.2	23.10	-0.17	0	13500	QPSK	1	50	0 mm	bottom	1:1	1.070	1.023	1.095	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.2	23.14	-0.11	0	13500	QPSK	50	0	0 mm	bottom	1:1	1.070	1.014	1.085	
1770.00	132572	High	LTE Band 66 (AWS)	20	25.2	25.15	-0.12	0	13500	QPSK	1	50	0 mm	left	1:1	2.950	1.012	2.985	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.01	0	12213	QPSK	1	50	2 mm	back	1:1	1.790	1.005	1.799	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.01	1	12213	QPSK	50	50	2 mm	back	1:1	1.510	1.028	1.552	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	24.54	0.03	0	12213	QPSK	1	50	0 mm	front	1:1	2.020	1.038	2.097	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.01	0	12213	QPSK	1	50	0 mm	front	1:1	2.030	1.005	2.040	
1905.00	26590	High	LTE Band 25 (PCS)	20	24.7	24.61	-0.17	0	12213	QPSK	1	50	0 mm	front	1:1	1.870	1.021	1.909	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.01	1	12213	QPSK	50	50	0 mm	front	1:1	1.620	1.028	1.665	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.55	0.14	1	12213	QPSK	100	0	0 mm	front	1:1	1.460	1.035	1.511	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	0.02	0	12213	QPSK	1	50	2 mm	bottom	1:1	1.020	1.005	1.025	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.04	1	12213	QPSK	50	50	2 mm	bottom	1:1	0.817	1.028	0.840	
1860.00	26140	Low	LTE Band 25 (PCS)	20	24.7	24.54	-0.04	0	12213	QPSK	1	50	0 mm	left	1:1	2.250	1.038	2.336	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.06	0	12213	QPSK	1	50	0 mm	left	1:1	2.260	1.005	2.271	A51
1905.00	26590	High	LTE Band 25 (PCS)	20	24.7	24.61	-0.03	0	12213	QPSK	1	50	0 mm	left	1:1	2.200	1.021	2.246	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.58	-0.08	1	12213	QPSK	50	50	0 mm	left	1:1	1.840	1.028	1.892	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.7	23.56	-0.09	1	12213	QPSK	50	0	0 mm	left	1:1	1.930	1.033	1.994	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.7	23.48	-0.09	1	12213	QPSK	50	0	0 mm	left	1:1	1.830	1.052	1.925	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.7	23.55	-0.09	1	12213	QPSK	100	0	0 mm	left	1:1	1.850	1.035	1.915	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.2	22.71	-0.13	0	12213	QPSK	1	50	0 mm	back	1:1	1.850	1.119	2.070	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.2	22.79	-0.13	0	12213	QPSK	1	99	0 mm	back	1:1	1.860	1.099	2.044	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.2	22.94	-0.12	0	12213	QPSK	1	50	0 mm	back	1:1	1.950	1.062	2.071	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.2	23.07	-0.12	0	12213	QPSK	50	25	0 mm	back	1:1	2.040	1.030	2.101	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.2	23.01	-0.12	0	12213	QPSK	50	0	0 mm	back	1:1	2.110	1.045	2.205	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.2	23.08	-0.13	0	12213	QPSK	50	25	0 mm	back	1:1	1.970	1.028	2.025	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.2	22.92	-0.12	0	12213	QPSK	100	0	0 mm	back	1:1	2.080	1.067	2.219	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.2	22.94	-0.12	0	12213	QPSK	1	50	0 mm	bottom	1:1	1.160	1.062	1.232	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.2	23.08	-0.02	0	12213	QPSK	50	25	0 mm	bottom	1:1	1.160	1.028	1.192	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	24.7	24.68	-0.06	0	12213	QPSK	1	50	0 mm	left	1:1	2.200	1.005	2.211	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams			

Note: Blue entry represent variability measurement.

Table 11-37
LTE B41 Phablet SAR

MEASUREMENT RESULTS																					
1 CC Uplink | 2 CC Uplink, Power Class	FREQUENCY			Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
	MHz	Ch.																			
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.18	0	15117	QPSK	1	50	2 mm	back	1:1.58	1.160	1.107	1.284	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.18	1	15117	QPSK	50	25	2 mm	back	1:1.58	0.903	1.091	0.985	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	-0.04	0	15117	QPSK	1	50	0 mm	front	1:1.58	1.170	1.107	1.295	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	-0.10	1	15117	QPSK	50	25	0 mm	front	1:1.58	0.914	1.091	0.997	
1 CC Uplink - Power Class 3	2506.00	39750	Low	LTE Band 41	20	24.2	23.41	0.16	0	13211	QPSK	1	50	2 mm	bottom	1:1.58	1.480	1.199	1.775	
1 CC Uplink - Power Class 3	2506.00	39750	Low	LTE Band 41	20	24.2	23.26	-0.10	0	13211	QPSK	1	99	2 mm	bottom	1:1.58	1.630	1.242	2.024	
1 CC Uplink - Power Class 3	2549.50	40185	Low-Mid	LTE Band 41	20	24.2	23.32	0.21	0	15117	QPSK	1	50	2 mm	bottom	1:1.58	1.390	1.225	1.703	
1 CC Uplink - Power Class 3	2593.00	40620	Mid	LTE Band 41	20	24.2	23.37	0.19	0	15117	QPSK	1	50	2 mm	bottom	1:1.58	1.230	1.211	1.490	
1 CC Uplink - Power Class 3	2636.50	41055	Mid-High	LTE Band 41	20	24.2	23.72	0.17	0	15117	QPSK	1	50	2 mm	bottom	1:1.58	1.280	1.117	1.430	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.08	0	15117	QPSK	1	50	2 mm	bottom	1:1.58	1.440	1.107	1.594	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	-0.15	1	15117	QPSK	50	25	2 mm	bottom	1:1.58	1.140	1.091	1.244	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.76	0.11	1	15117	QPSK	100	0	2 mm	bottom	1:1.58	1.030	1.107	1.140	
1 CC Uplink - Power Class 2	2506.00	39750	Low	LTE Band 41	20	27.2	26.32	0.14	0	13211	QPSK	1	99	2 mm	bottom	1:2.31	2.100	1.225	2.573	
1 CC Uplink - Power Class 2	2506.00	39750	Low	LTE Band 41	20	27.2	26.79	0.15	0	13211	QPSK	1	50	2 mm	bottom	1:2.31	2.220	1.099	2.440	
2 CC Uplink - Power Class 3	2506.00	39750	Low	LTE Band 41	20	24.2	24.10	-0.11	0	13211	QPSK	1	99	2 mm	bottom	1:1.58	1.950	1.023	1.995	
	2525.80	39948										1	0							
2 CC Uplink - Power Class 2	2506.00	39750	Low	LTE Band 41	20	27.2	27.12	0.15	0	13211	QPSK	1	99	2 mm	bottom	1:2.31	2.650	1.019	2.700	A52
	2525.80	39948										1	0							
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	0.00	0	15117	QPSK	1	50	0 mm	right	1:1.58	0.401	1.107	0.444	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	-0.19	1	15117	QPSK	50	25	0 mm	right	1:1.58	0.308	1.091	0.336	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	24.2	23.76	-0.01	0	15117	QPSK	1	50	0 mm	left	1:1.58	0.369	1.107	0.408	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	22.82	0.00	1	15117	QPSK	50	25	0 mm	left	1:1.58	0.289	1.091	0.315	
1 CC Uplink - Power Class 3	2506.00	39750	Low	LTE Band 41	20	23.2	22.86	-0.09	0	15117	QPSK	1	50	0 mm	back	1:1.58	1.250	1.081	1.351	
1 CC Uplink - Power Class 3	2549.50	40185	Low-Mid	LTE Band 41	20	23.2	22.63	-0.12	0	15117	QPSK	1	50	0 mm	back	1:1.58	1.290	1.140	1.471	
1 CC Uplink - Power Class 3	2593.00	40620	Mid	LTE Band 41	20	23.2	22.60	-0.20	0	15117	QPSK	1	99	0 mm	back	1:1.58	1.240	1.148	1.424	
1 CC Uplink - Power Class 3	2636.50	41055	Mid-High	LTE Band 41	20	23.2	23.13	-0.12	0	15117	QPSK	1	50	0 mm	back	1:1.58	1.450	1.016	1.473	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	23.18	-0.12	0	15117	QPSK	1	50	0 mm	back	1:1.58	1.660	1.005	1.668	
1 CC Uplink - Power Class 3	2506.00	39750	Low	LTE Band 41	20	23.2	22.81	-0.11	0	15117	QPSK	50	25	0 mm	back	1:1.58	1.230	1.094	1.346	
1 CC Uplink - Power Class 3	2549.50	40185	Low-Mid	LTE Band 41	20	23.2	22.61	-0.09	0	15117	QPSK	50	25	0 mm	back	1:1.58	1.280	1.146	1.467	
1 CC Uplink - Power Class 3	2593.00	40620	Mid	LTE Band 41	20	23.2	22.67	-0.16	0	15117	QPSK	50	25	0 mm	back	1:1.58	1.300	1.130	1.469	
1 CC Uplink - Power Class 3	2636.50	41055	Mid-High	LTE Band 41	20	23.2	23.02	-0.21	0	15117	QPSK	50	25	0 mm	back	1:1.58	1.430	1.042	1.490	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	23.19	-0.12	0	15117	QPSK	50	25	0 mm	back	1:1.58	1.640	1.002	1.643	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	23.17	-0.12	0	15117	QPSK	100	0	0 mm	back	1:1.58	1.630	1.007	1.641	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	23.18	0.01	0	15117	QPSK	1	50	0 mm	bottom	1:1.58	1.450	1.005	1.457	
1 CC Uplink - Power Class 3	2680.00	41490	High	LTE Band 41	20	23.2	23.19	-0.05	0	15117	QPSK	50	25	0 mm	bottom	1:1.58	1.430	1.002	1.433	
2 CC Uplink - Power Class 2	2506.00	39750	Low	LTE Band 41	20	27.2	27.12	0.11	0	13211	QPSK	1	99	2 mm	bottom	1:2.31	2.640	1.019	2.690	
	2525.80	39948										1	0							
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Phablet 4.0 W/kg (mW/g) averaged over 10 grams									

Note: Blue entry represent variability measurement.

Table 11-38
WLAN Phablet SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.												W/kg	(W/kg)			(W/kg)	
5300	60	802.11a	OFDM	20	18.0	17.74	-0.19	0 mm	15299	6	back	96.9	8.193	0.817	1.062	1.032	0.895	
5300	60	802.11a	OFDM	20	18.0	17.74	0.14	0 mm	15299	6	front	96.9	3.029	0.414	1.062	1.032	0.454	
5300	60	802.11a	OFDM	20	18.0	17.74	0.15	0 mm	15299	6	top	96.9	26.116	1.680	1.062	1.032	1.841	
5300	60	802.11a	OFDM	20	18.0	17.74	0.15	0 mm	15299	6	right	96.9	0.855	-	1.062	1.032	-	
5540	108	802.11a	OFDM	20	18.0	17.76	-0.18	0 mm	15299	6	back	96.9	13.336	1.050	1.057	1.032	1.145	
5540	108	802.11a	OFDM	20	18.0	17.76	0.15	0 mm	15299	6	front	96.9	4.393	0.577	1.057	1.032	0.629	
5520	104	802.11a	OFDM	20	18.0	17.72	0.13	0 mm	15299	6	top	96.9	35.803	1.890	1.067	1.032	2.081	
5540	108	802.11a	OFDM	20	18.0	17.76	0.11	0 mm	15299	6	top	96.9	43.286	1.930	1.057	1.032	2.105	
5600	120	802.11a	OFDM	20	17.0	16.98	0.14	0 mm	15299	6	top	96.9	42.056	1.960	1.005	1.032	2.033	A53
5720	144	802.11a	OFDM	20	16.5	15.82	0.11	0 mm	15299	6	top	96.9	37.522	1.950	1.169	1.032	2.352	
5540	108	802.11a	OFDM	20	18.0	17.76	0.15	0 mm	15299	6	right	96.9	0.939	-	1.057	1.032	-	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams					

11.5 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 10 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 13 for variability analysis.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 6.7 for more details).
10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" 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. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).
11. This device utilizes power reduction for some wireless modes and technologies, as outlined in Section 1.3. The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous transmission scenarios.
12. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds below.

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
3. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the 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.
4. GPRS was additionally evaluated for head and body-worn exposure conditions to address possible VoIP scenarios.

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.

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. Per FCC KDB Publication 447498 D01v06, when the reported LTE Band 41 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions. Please see Section 14 for linearity results.
7. For LTE Band 41, per FCC guidance, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active. The SCC was configured with the closest available contiguous channel. The

two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.

WLAN Notes:

1. For held-to-ear, hotspot, and phablet operations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g evaluations, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 8.7.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 8.7.6 for more information.
4. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
5. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 100% transmission duty factor to determine compliance. See Section 9.6 for the time domain plot and calculation for the duty factor of the device.
2. Head and Hotspot Bluetooth SAR were evaluated for BT BR tethering applications.

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.

12.3 Head SAR Simultaneous Transmission Analysis

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	CDMA/EVDO BC10 (§90S)	0.210	1.042	1.252
	CDMA/EVDO BC0 (§22H)	0.213	1.042	1.255
	PCS CDMA/EVDO	0.312	1.042	1.354
	GSM/GPRS 850	0.266	1.042	1.308
	GSM/GPRS 1900	0.230	1.042	1.272
	UMTS 850	0.246	1.042	1.288
	UMTS 1750	0.311	1.042	1.353
	UMTS 1900	0.371	1.042	**1.413**
	LTE Band 71	0.177	1.042	1.219
	LTE Band 12	0.210	1.042	1.252
	LTE Band 13	0.172	1.042	1.214
	LTE Band 26 (Cell)	0.267	1.042	1.309
	LTE Band 66 (AWS)	0.334	1.042	1.376
	LTE Band 25 (PCS)	0.362	1.042	1.404
	LTE Band 41	0.193	1.042	1.235

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	CDMA/EVDO BC10 (§90S)	0.210	1.198	1.408
	CDMA/EVDO BC0 (§22H)	0.213	1.198	1.411
	PCS CDMA/EVDO	0.312	1.198	1.510
	GSM/GPRS 850	0.266	1.198	1.464
	GSM/GPRS 1900	0.230	1.198	1.428
	UMTS 850	0.246	1.198	1.444
	UMTS 1750	0.311	1.198	1.509
	UMTS 1900	0.371	1.198	**1.569**
	LTE Band 71	0.177	1.198	1.375
	LTE Band 12	0.210	1.198	1.408
	LTE Band 13	0.172	1.198	1.370
	LTE Band 26 (Cell)	0.267	1.198	1.465
	LTE Band 66 (AWS)	0.334	1.198	1.532
	LTE Band 25 (PCS)	0.362	1.198	1.560
	LTE Band 41	0.193	1.198	1.391

Table 12-3
Simultaneous Transmission Scenario with Bluetooth (Held to Ear)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Head SAR	CDMA/EVDO BC10 (§90S)	0.210	0.182	0.392
	CDMA/EVDO BC0 (§22H)	0.213	0.182	0.395
	PCS CDMA/EVDO	0.312	0.182	0.494
	GSM/GPRS 850	0.266	0.182	0.448
	GSM/GPRS 1900	0.230	0.182	0.412
	UMTS 850	0.246	0.182	0.428
	UMTS 1750	0.311	0.182	0.493
	UMTS 1900	0.371	0.182	**0.553**
	LTE Band 71	0.177	0.182	0.359
	LTE Band 12	0.210	0.182	0.392
	LTE Band 13	0.172	0.182	0.354
	LTE Band 26 (Cell)	0.267	0.182	0.449
	LTE Band 66 (AWS)	0.334	0.182	0.516
	LTE Band 25 (PCS)	0.362	0.182	0.544
	LTE Band 41	0.193	0.182	0.375

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	CDMA/EVDO BC10 (§90S)	0.210	0.182	1.198	**1.590**
	CDMA/EVDO BC0 (§22H)	0.213	0.182	1.198	**1.593**
	PCS CDMA/EVDO	0.312	0.182	1.198	See Table Below
	GSM/GPRS 850	0.266	0.182	1.198	See Table Below
	GSM/GPRS 1900	0.230	0.182	1.198	See Table Below
	UMTS 850	0.246	0.182	1.198	See Table Below
	UMTS 1750	0.311	0.182	1.198	See Table Below
	UMTS 1900	0.371	0.182	1.198	See Table Below
	LTE Band 71	0.177	0.182	1.198	1.557
	LTE Band 12	0.210	0.182	1.198	**1.590**
	LTE Band 13	0.172	0.182	1.198	1.552
	LTE Band 26 (Cell)	0.267	0.182	1.198	See Table Below
	LTE Band 66 (AWS)	0.334	0.182	1.198	See Table Below
	LTE Band 25 (PCS)	0.362	0.182	1.198	See Table Below
	LTE Band 41	0.193	0.182	1.198	1.573

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.226	0.082	0.857	1.165
	Right Tilt	0.176	0.076	1.089	1.341
	Left Cheek	0.312	0.182	0.829	1.323
	Left Tilt	0.245	0.131	1.198	**1.574**

Simult Tx	Configuration	GSM/GPRS 850 SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.266	0.082	0.857	1.205
	Right Tilt	0.151	0.076	1.089	1.316
	Left Cheek	0.251	0.182	0.829	1.262
	Left Tilt	0.124	0.131	1.198	**1.453**

Simult Tx	Configuration	GSM/GPRS 1900 SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.151	0.082	0.857	1.090
	Right Tilt	0.127	0.076	1.089	1.292
	Left Cheek	0.230	0.182	0.829	1.241
	Left Tilt	0.161	0.131	1.198	**1.490**

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.246	0.082	0.857	1.185
	Right Tilt	0.124	0.076	1.089	1.289
	Left Cheek	0.241	0.182	0.890	1.313
	Left Tilt	0.126	0.131	1.198	**1.455**

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.213	0.082	0.857	1.152
	Right Tilt	0.191	0.076	1.089	1.356
	Left Cheek	0.311	0.182	0.890	1.383
	Left Tilt	0.170	0.131	1.198	**1.499**

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.252	0.082	0.857	1.191
	Right Tilt	0.198	0.076	1.089	1.363
	Left Cheek	0.371	0.182	0.890	1.443
	Left Tilt	0.237	0.131	1.198	**1.566**

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.263	0.082	0.857	1.202
	Right Tilt	0.128	0.076	1.089	1.293
	Left Cheek	0.267	0.182	0.890	1.339
	Left Tilt	0.137	0.131	1.198	**1.466**

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.166	0.082	0.857	1.105
	Right Tilt	0.196	0.076	1.089	1.361
	Left Cheek	0.334	0.182	0.890	1.406
	Left Tilt	0.185	0.131	1.198	**1.514**

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Head SAR	Right Cheek	0.240	0.082	0.857	1.179
	Right Tilt	0.205	0.076	1.089	1.370
	Left Cheek	0.362	0.182	0.890	1.434
	Left Tilt	0.200	0.131	1.198	**1.529**

12.4 Body-Worn Simultaneous Transmission Analysis

Table 12-5
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Body-Worn at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	CDMA BC10 (§90S)	0.352	0.338	0.690
	CDMA BC0 (§22H)	0.427	0.338	0.765
	PCS CDMA	0.823	0.338	1.161
	GSM/GPRS 850	0.482	0.338	0.820
	GSM/GPRS 1900	0.542	0.338	0.880
	UMTS 850	0.441	0.338	0.779
	UMTS 1750	0.881	0.338	1.219
	UMTS 1900	0.438	0.338	0.776
	LTE Band 71	0.374	0.338	0.712
	LTE Band 12	0.404	0.338	0.742
	LTE Band 13	0.323	0.338	0.661
	LTE Band 26 (Cell)	0.511	0.338	0.849
	LTE Band 66 (AWS)	0.833	0.338	1.171
	LTE Band 25 (PCS)	0.833	0.338	1.171
	LTE Band 41	0.591	0.338	0.929

Table 12-6
Simultaneous Transmission Scenario with 5 GHz WLAN (Body-Worn at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	CDMA BC10 (§90S)	0.352	0.650	1.002
	CDMA BC0 (§22H)	0.427	0.650	1.077
	PCS CDMA	0.823	0.650	1.473
	GSM/GPRS 850	0.482	0.650	1.132
	GSM/GPRS 1900	0.542	0.650	1.192
	UMTS 850	0.441	0.650	1.091
	UMTS 1750	0.881	0.650	**1.531**
	UMTS 1900	0.438	0.650	1.088
	LTE Band 71	0.374	0.650	1.024
	LTE Band 12	0.404	0.650	1.054
	LTE Band 13	0.323	0.650	0.973
	LTE Band 26 (Cell)	0.511	0.650	1.161
	LTE Band 66 (AWS)	0.833	0.650	1.483
	LTE Band 25 (PCS)	0.833	0.650	1.483
	LTE Band 41	0.591	0.650	1.241

Table 12-7
Simultaneous Transmission Scenario with Bluetooth (Body-Worn at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Body-Worn	CDMA BC10 (§90S)	0.352	0.045	0.397
	CDMA BC0 (§22H)	0.427	0.045	0.472
	PCS CDMA	0.823	0.045	0.868
	GSM/GPRS 850	0.482	0.045	0.527
	GSM/GPRS 1900	0.542	0.045	0.587
	UMTS 850	0.441	0.045	0.486
	UMTS 1750	0.881	0.045	**0.926**
	UMTS 1900	0.438	0.045	0.483
	LTE Band 71	0.374	0.045	0.419
	LTE Band 12	0.404	0.045	0.449
	LTE Band 13	0.323	0.045	0.368
	LTE Band 26 (Cell)	0.511	0.045	0.556
	LTE Band 66 (AWS)	0.833	0.045	0.878
	LTE Band 25 (PCS)	0.833	0.045	0.878
	LTE Band 41	0.591	0.045	0.636

Table 12-8
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN (Body-Worn at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Body-Worn	CDMA BC10 (§90S)	0.352	0.045	0.650	1.047
	CDMA BC0 (§22H)	0.427	0.045	0.650	1.122
	PCS CDMA	0.823	0.045	0.650	1.518
	GSM/GPRS 850	0.482	0.045	0.650	1.177
	GSM/GPRS 1900	0.542	0.045	0.650	1.237
	UMTS 850	0.441	0.045	0.650	1.136
	UMTS 1750	0.881	0.045	0.650	**1.576**
	UMTS 1900	0.438	0.045	0.650	1.133
	LTE Band 71	0.374	0.045	0.650	1.069
	LTE Band 12	0.404	0.045	0.650	1.099
	LTE Band 13	0.323	0.045	0.650	1.018
	LTE Band 26 (Cell)	0.511	0.045	0.650	1.206
	LTE Band 66 (AWS)	0.833	0.045	0.650	1.528
	LTE Band 25 (PCS)	0.833	0.045	0.650	1.528
	LTE Band 41	0.591	0.045	0.650	1.286

12.5 Hotspot SAR Simultaneous Transmission Analysis

Table 12-9
Simultaneous Transmission Scenario with 2.4 GHz WLAN (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.455	0.396	0.851
	EVDO BC0 (§22H)	0.339	0.396	0.735
	PCS EVDO	0.804	0.396	1.200
	GPRS 850	0.499	0.396	0.895
	GPRS 1900	0.542	0.396	0.938
	UMTS 850	0.441	0.396	0.837
	UMTS 1750	0.881	0.396	**1.277**
	UMTS 1900	0.637	0.396	1.033
	LTE Band 71	0.427	0.396	0.823
	LTE Band 12	0.404	0.396	0.800
	LTE Band 13	0.359	0.396	0.755
	LTE Band 26 (Cell)	0.511	0.396	0.907
	LTE Band 66 (AWS)	0.833	0.396	1.229
	LTE Band 25 (PCS)	0.833	0.396	1.229
	LTE Band 41	1.297	0.396	See Table Below

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.400	0.338	0.738
	Front	0.420	0.396*	0.816
	Top	-	0.396*	0.396
	Bottom	1.297	-	**1.297**
	Right	0.147	0.396	0.543
	Left	0.154	-	0.154

Table 12-10
Simultaneous Transmission Scenario with 5 GHz WLAN (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.455	0.928	1.383
	EVDO BC0 (§22H)	0.339	0.928	1.267
	PCS EVDO	0.804	0.928	See Table Below
	GPRS 850	0.499	0.928	1.427
	GPRS 1900	0.542	0.928	1.470
	UMTS 850	0.441	0.928	1.369
	UMTS 1750	0.881	0.928	See Table Below
	UMTS 1900	0.637	0.928	**1.565**
	LTE Band 71	0.427	0.928	1.355
	LTE Band 12	0.404	0.928	1.332
	LTE Band 13	0.359	0.928	1.287
	LTE Band 26 (Cell)	0.511	0.928	1.439
	LTE Band 66 (AWS)	0.833	0.928	See Table Below
	LTE Band 25 (PCS)	0.833	0.928	See Table Below
	LTE Band 41	1.297	0.928	See Table Below

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.804	0.539	**1.343**
	Front	0.463	0.215	0.678
	Top	-	0.928	0.928
	Bottom	0.627	-	0.627
	Right	-	0.107	0.107
	Left	0.517	-	0.517

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.881	0.539	**1.420**
	Front	0.632	0.215	0.847
	Top	-	0.928	0.928
	Bottom	0.547	-	0.547
	Right	-	0.107	0.107
	Left	0.754	-	0.754

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.833	0.539	**1.372**
	Front	0.515	0.215	0.730
	Top	-	0.928	0.928
	Bottom	0.476	-	0.476
	Right	-	0.107	0.107
	Left	0.785	-	0.785

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.833	0.539	**1.372**
	Front	0.480	0.215	0.695
	Top	-	0.928	0.928
	Bottom	0.586	-	0.586
	Right	-	0.107	0.107
	Left	0.510	-	0.510

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	Back	0.400	0.539	0.939
	Front	0.420	0.215	0.635
	Top	-	0.928	0.928
	Bottom	1.297	-	**1.297**
	Right	0.147	0.107	0.254
	Left	0.154	-	0.154

Table 12-11
Simultaneous Transmission Scenario with Bluetooth (Hotspot at 1.0 cm)

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Hotspot SAR	EVDO BC10 (§90S)	0.455	0.045	0.500
	EVDO BC0 (§22H)	0.339	0.045	0.384
	PCS EVDO	0.804	0.045	0.849
	GPRS 850	0.499	0.045	0.544
	GPRS 1900	0.542	0.045	0.587
	UMTS 850	0.441	0.045	0.486
	UMTS 1750	0.881	0.045	0.926
	UMTS 1900	0.637	0.045	0.682
	LTE Band 71	0.427	0.045	0.472
	LTE Band 12	0.404	0.045	0.449
	LTE Band 13	0.359	0.045	0.404
	LTE Band 26 (Cell)	0.511	0.045	0.556
	LTE Band 66 (AWS)	0.833	0.045	0.878
	LTE Band 25 (PCS)	0.833	0.045	0.878
	LTE Band 41	1.297	0.045	**1.342**

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

Exposure Condition	Mode	2G/3G/4G SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	EVDO BC10 (§90S)	0.455	0.045	0.928	1.428
	EVDO BC0 (§22H)	0.339	0.045	0.928	1.312
	PCS EVDO	0.804	0.045	0.928	See Table Below
	GPRS 850	0.499	0.045	0.928	1.472
	GPRS 1900	0.542	0.045	0.928	**1.515**
	UMTS 850	0.441	0.045	0.928	1.414
	UMTS 1750	0.881	0.045	0.928	See Table Below
	UMTS 1900	0.637	0.045	0.928	See Table Below
	LTE Band 71	0.427	0.045	0.928	1.400
	LTE Band 12	0.404	0.045	0.928	1.377
	LTE Band 13	0.359	0.045	0.928	1.332
	LTE Band 26 (Cell)	0.511	0.045	0.928	1.484
	LTE Band 66 (AWS)	0.833	0.045	0.928	See Table Below
	LTE Band 25 (PCS)	0.833	0.045	0.928	See Table Below
	LTE Band 41	1.297	0.045	0.928	See Table Below

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.804	0.045	0.539	**1.388**
	Front	0.463	0.017	0.215	0.695
	Top	-	0.025	0.928	0.953
	Bottom	0.627	-	-	0.627
	Right	-	0.038	0.107	0.145
	Left	0.517	-	-	0.517

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.881	0.045	0.539	**1.465**
	Front	0.632	0.017	0.215	0.864
	Top	-	0.025	0.928	0.953
	Bottom	0.547	-	-	0.547
	Right	-	0.038	0.107	0.145
	Left	0.754	-	-	0.754

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.438	0.045	0.539	**1.022**
	Front	0.360	0.017	0.215	0.592
	Top	-	0.025	0.928	0.953
	Bottom	0.535	-	-	0.535
	Right	-	0.038	0.107	0.145
	Left	0.637	-	-	0.637

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.833	0.045	0.539	**1.417**
	Front	0.515	0.017	0.215	0.747
	Top	-	0.025	0.928	0.953
	Bottom	0.476	-	-	0.476
	Right	-	0.038	0.107	0.145
	Left	0.785	-	-	0.785

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.833	0.045	0.539	**1.417**
	Front	0.480	0.017	0.215	0.712
	Top	-	0.025	0.928	0.953
	Bottom	0.586	-	-	0.586
	Right	-	0.038	0.107	0.145
	Left	0.510	-	-	0.510

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz Bluetooth SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	3	1+2+3
Hotspot SAR	Back	0.400	0.045	0.539	0.984
	Front	0.420	0.017	0.215	0.652
	Top	-	0.025	0.928	0.953
	Bottom	1.297	-	-	**1.297**
	Right	0.147	0.038	0.107	0.292
	Left	0.154	-	-	0.154

12.6 Phablet Simultaneous Transmission Analysis

Per FCC KDB Publication 648474 D04 Handset SAR, Phablet SAR tests were not required if wireless router 1g SAR (scaled to the maximum output power, including tolerance) < 1.2 W/kg. Therefore, no further analysis beyond the tables included in this section was required to determine that possible simultaneous transmission scenarios would not exceed the SAR limit.

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.

Table 12-13
Simultaneous Transmission Scenario with 5 GHz WLAN (Phablet)

Simult Tx	Configuration	PCS EVDO SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.843	1.145	**2.988**
	Front	1.497	0.629	2.126
	Top	-	2.559	2.559
	Bottom	1.031	-	1.031
	Right	-	2.559*	2.559
	Left	2.221	-	2.221

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	2.604	1.145	**3.749**
	Front	2.510	0.629	3.139
	Top	-	2.559	2.559
	Bottom	1.167	-	1.167
	Right	-	2.559*	2.559
	Left	2.185	-	2.185

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	2.560	1.145	**3.705**
	Front	1.710	0.629	2.339
	Top	-	2.559	2.559
	Bottom	1.447	-	1.447
	Right	-	2.559*	2.559
	Left	2.232	-	2.232

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	2.526	1.145	**3.671**
	Front	2.598	0.629	3.227
	Top	-	2.559	2.559
	Bottom	1.095	-	1.095
	Right	-	2.559*	2.559
	Left	3.168	-	3.168

Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	2.219	1.145	**3.364**
	Front	2.097	0.629	2.726
	Top	-	2.559	2.559
	Bottom	1.232	-	1.232
	Right	-	2.559*	2.559
	Left	2.336	-	2.336

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN SAR (W/kg)	Σ SAR (W/kg)
		1	2	1+2
Phablet SAR	Back	1.668	1.145	**2.813**
	Front	1.295	0.629	1.924
	Top	-	2.352	2.352
	Bottom	2.700	-	2.700
	Right	0.444	2.352*	2.796
	Left	0.408	-	0.408

12.7 Simultaneous Transmission Conclusion

The above numerical summed SAR results for all the worst-case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases

will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528-2013 Section 6.3.4.1.2.

13 SAR MEASUREMENT VARIABILITY

13.1 Measurement Variability

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

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

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

Table 13-1
Head SAR Measurement Variability Results

HEAD VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Side	Test Position	Data Rate (Mbps)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
5250	5260.00	52	802.11a, 20 MHz Bandwidth	OFDM	Left	Tilt	6	0.901	0.860	1.05	N/A	N/A	N/A	N/A
5600	5500.00	100	802.11a, 20 MHz Bandwidth	OFDM	Left	Tilt	6	1.060	1.040	1.02	N/A	N/A	N/A	N/A
5750	5755.00	151	802.11n, 40 MHz Bandwidth	OFDM	Left	Tilt	13.5	0.881	0.815	1.08	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 13-2
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS													
Band	FREQUENCY		Mode	Service	Side	Spacing	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.					(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1770.00	132572	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 1 RB, 50 RB Offset	back	10 mm	0.823	0.801	1.03	N/A	N/A	N/A	N/A
1900	1905.00	26590	LTE Band 25 (PCS), 20 MHz Bandwidth	QPSK, 1 RB, 50 RB Offset	back	10 mm	0.816	0.813	1.00	N/A	N/A	N/A	N/A
2450	2506.00	39750	LTE Band 41, 20 MHz Bandwidth	QPSK, 1 RB, 99 RB Offset	bottom	10 mm	1.260	1.260	1.00	N/A	N/A	N/A	N/A
	2525.80	39948		QPSK, 1 RB, 0 RB Offset									
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 13-3
Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS													
Band	FREQUENCY		Mode	Service	Side	Spacing	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.					(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1770.00	132572	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 1 RB, 50 RB Offset	left	0 mm	3.130	2.950	1.06	N/A	N/A	N/A	N/A
1900	1882.50	26365	LTE Band 25 (PCS), 20 MHz Bandwidth	QPSK, 1 RB, 50 RB Offset	left	0 mm	2.260	2.200	1.03	N/A	N/A	N/A	N/A
2450	2506.00	39750	LTE Band 41, 20 MHz Bandwidth	QPSK, 1 RB, 99 RB Offset	bottom	2 mm	2.650	2.640	1.00	N/A	N/A	N/A	N/A
	2525.80	39948		QPSK, 1 RB, 0 RB Offset									
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Phablet 4.0 W/kg (mW/g) averaged over 10 grams						

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 LTE Band 41 Power Class 2 and Power Class 3 Linearity

This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the highest power and available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR for each exposure condition. The linearity between the Power Class 2 and Power Class 3 SAR results and the respective frame averaged powers was calculated to determine that the results were linear.
Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes was < 10% and all reported SAR values were < 1.4 W/kg for 1g and < 3.5 W/kg for 10g. When ULCA is active, the linearity between the Power Class 2 with ULCA active and Power Class 3 with ULCA active SAR results and the respective frame averaged powers was calculated to determine that the results were linear.

Table 14-1
LTE Band 41 Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.20	27.20
Measured Output Power (dBm)	23.46	26.57
Measured SAR (W/kg)	0.114	0.166
Measured Power (mW)	221.82	453.94
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	140.41	196.56
% deviation from expected linearity		4.02%

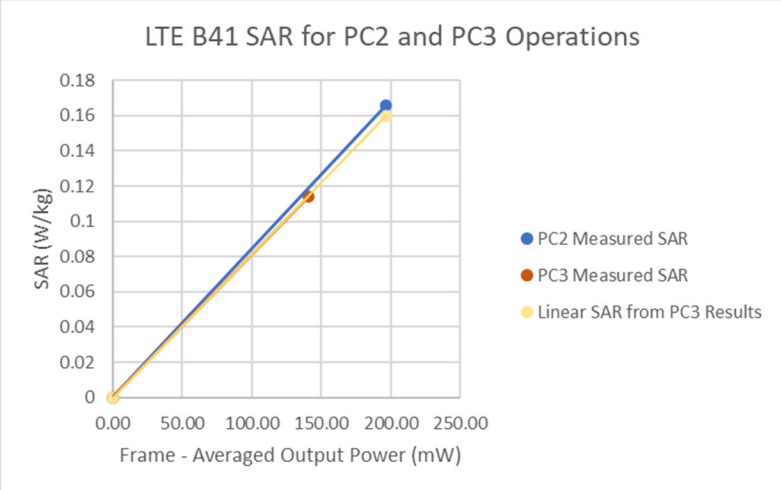


Figure 14-1
LTE Band 41 Head Linearity

Table 14-2
LTE Band 41 ULCA Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.20	27.20
Measured Output Power (dBm)	23.06	26.07
Measured SAR (W/kg)	0.109	0.149
Measured Power (mW)	202.30	404.58
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	128.06	175.18
% deviation from expected linearity		-0.07%

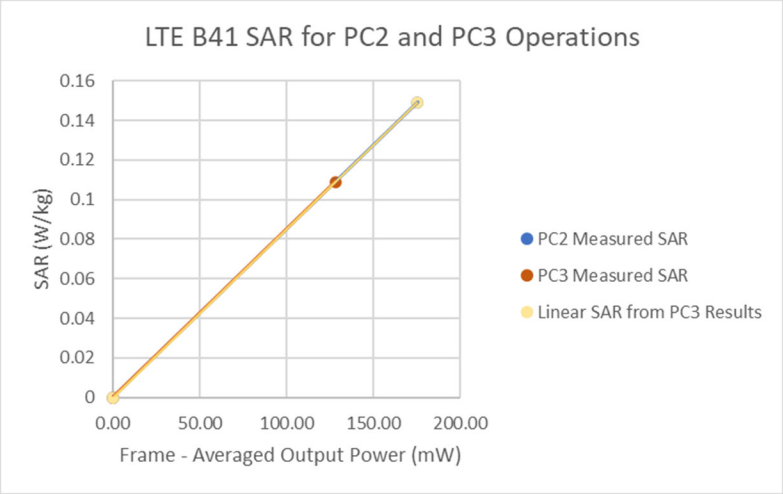


Figure 14-2
LTE Band 41 ULCA Head Linearity

Table 14-3
LTE Band 41 Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.20	27.20
Measured Output Power (dBm)	23.76	26.78
Measured SAR (W/kg)	0.361	0.536
Measured Power (mW)	237.68	476.43
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	150.45	206.29
% deviation from expected linearity		8.29%

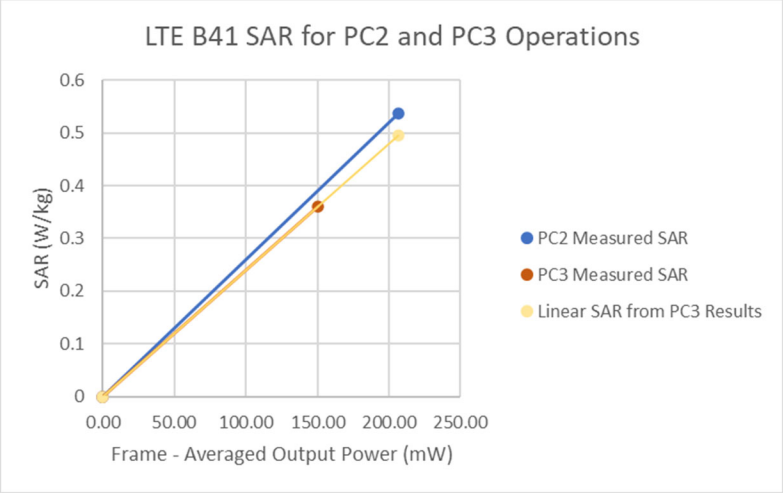


Figure 14-3
LTE Band 41 Body-Worn Linearity

Table 14-4
LTE Band 41 ULCA Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.20	27.20
Measured Output Power (dBm)	23.06	26.07
Measured SAR (W/kg)	0.325	0.451
Measured Power (mW)	202.30	404.58
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	128.06	175.18
% deviation from expected linearity		1.44%

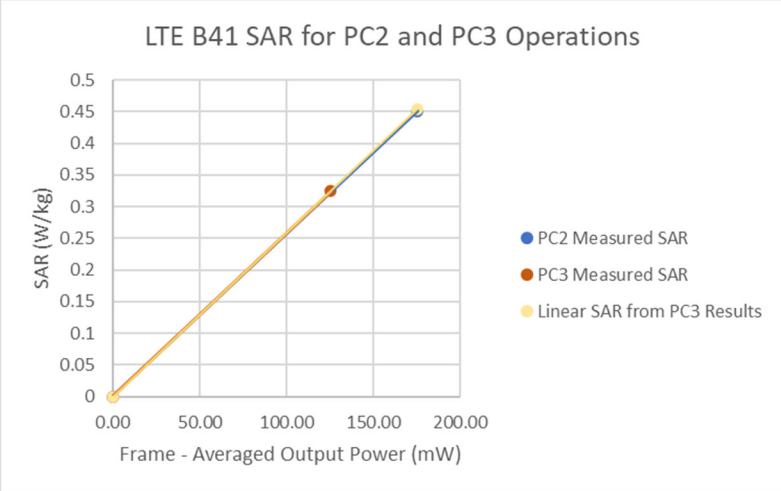


Figure 14-4
LTE Band 41 ULCA Body-Worn Linearity

Table 14-5
LTE Band 41 Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.20	27.20
Measured Output Power (dBm)	23.26	26.32
Measured SAR (W/kg)	0.801	1.040
Measured Power (mW)	211.84	428.55
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	134.09	185.56
% deviation from expected linearity		-6.18%

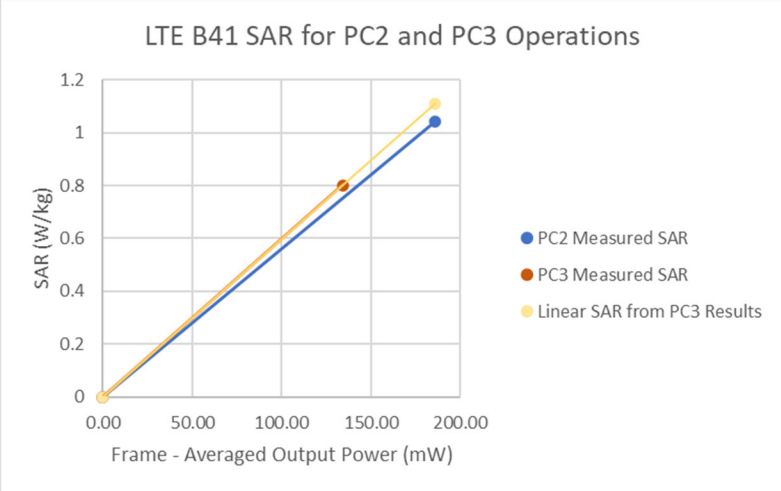


Figure 14-5
LTE Band 41 Hotspot Linearity

Table 14-6
LTE Band 41 ULCA Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.20	27.20
Measured Output Power (dBm)	24.10	27.12
Measured SAR (W/kg)	0.942	1.260
Measured Power (mW)	257.04	515.23
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	162.71	223.09
% deviation from expected linearity		-2.45%

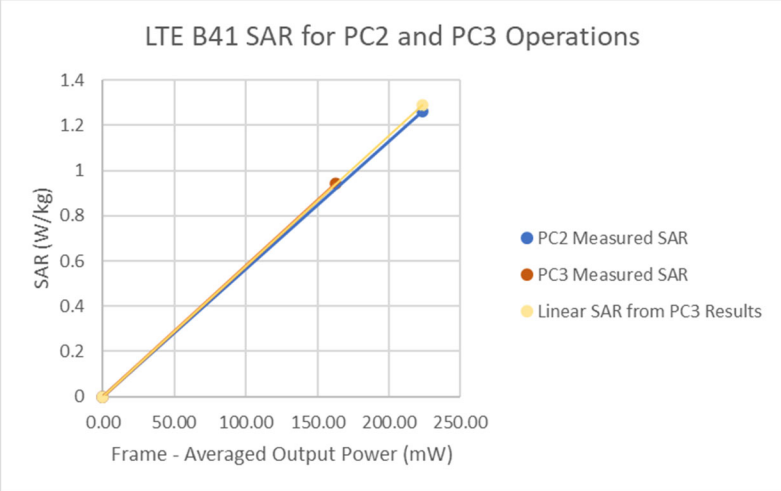


Figure 14-6
LTE Band 41 ULCA Hotspot Linearity

Table 14-7
LTE Band 41 Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.20	27.20
Measured Output Power (dBm)	23.26	26.32
Measured SAR (W/kg)	1.630	2.100
Measured Power (mW)	211.84	428.55
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	134.09	185.56
% deviation from expected linearity		-6.90%

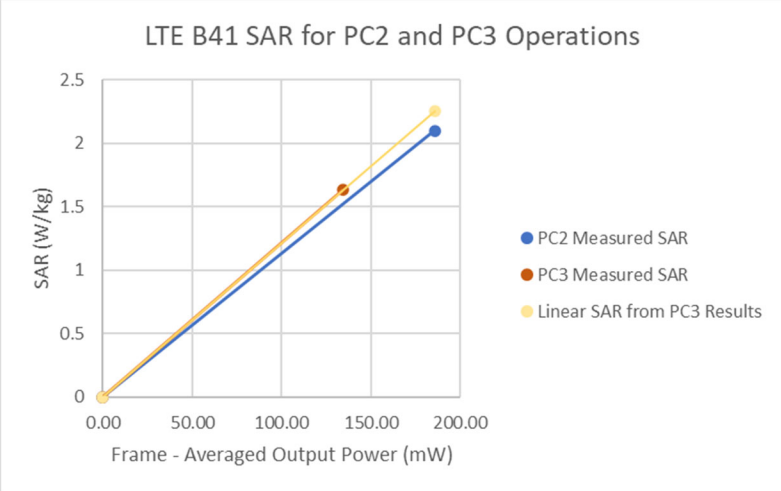


Figure 14-7
LTE Band 41 Phablet Linearity

Table 14-8
LTE Band 41 ULCA Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	24.20	27.20
Measured Output Power (dBm)	24.10	27.12
Measured SAR (W/kg)	1.950	2.640
Measured Power (mW)	257.04	515.23
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	162.71	223.09
% deviation from expected linearity		-1.26%

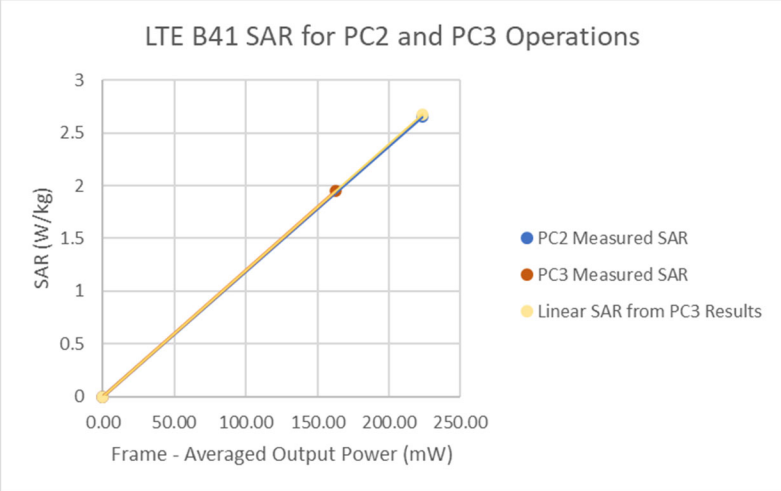


Figure 14-8
LTE Band 41 ULCA Phablet Linearity

15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	85033E	3.5mm Standard Calibration Kit	6/6/2020	Annual	6/6/2021	MY53402352
Agilent	8594A	(9kHz-2.9GHz) Spectrum Analyzer	N/A	N/A	N/A	3051A00187
Agilent	8753ES	Network Analyzer	3/5/2020	Annual	3/5/2021	MY40001472
Agilent	8753ES	S-Parameter Network Analyzer	1/16/2020	Annual	1/16/2021	US39170118
Agilent	8753ES	S-Parameter Vector Network Analyzer	12/15/2020	Annual	12/15/2021	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	12/14/2020	Biennial	12/14/2022	MY42082385
Agilent	E5515C	8960 Series 10 Wireless Communications Test Set	2/10/2020	Annual	2/10/2021	GB42230325
Agilent	E5515C	Wireless Communications Test Set	2/26/2020	Annual	2/26/2021	GB44400860
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Agilent	N5182A	MXG Vector Signal Generator	2/19/2020	Annual	2/19/2021	MY47420651
Agilent	N9030A	PXA Signal Analyzer (44GHz)	8/17/2020	Annual	8/17/2021	MY52350166
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433972
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433974
Anritsu	MA24106A	USB Power Sensor	9/15/2020	Annual	9/15/2021	1244515
Anritsu	MA2411B	Pulse Power Sensor	8/12/2020	Annual	8/12/2021	1207364
Anritsu	ML2495A	Power Meter	11/3/2020	Annual	11/3/2021	1039008
Anritsu	MT8821C	Radio Communication Analyzer	3/10/2020	Annual	3/10/2021	6200901190
Anritsu	MT8821C	Radio Communication Analyzer	6/15/2020	Annual	6/15/2021	6201381794
Control Company	4040	Therm./ Clock/ Humidity Monitor	3/6/2020	Biennial	3/6/2022	200170313
Control Company	4352	Long Stem Thermometer	6/26/2019	Biennial	6/26/2021	192282739
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
KEYSIGHT	E4438C	VECTOR SIGNAL GENERATOR	6/22/2020	Annual	6/22/2021	MY45092078
Keysight Technologies	AT/N6705B	DC Power Supply	N/A	N/A	N/A	MY53001315
Keysight Technologies	N6705B	DC Power Analyzer	4/27/2019	Biennial	4/27/2021	MY53004059
Keysight Technologies	U3401A	Digital Multimeter	5/14/2020	Biennial	5/14/2022	MY57201470
Insize	1108-150	Digital Caliper	1/17/2020	Biennial	1/17/2022	409193536
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
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
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
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
Pasternack	NC-100	Torque Wrench	8/4/2020	Biennial	8/4/2022	N/A
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	11/4/2020	Annual	11/4/2021	100976
Rohde & Schwarz	CMW500	Radio Communication Tester	11/5/2020	Annual	11/5/2021	112347
Rohde & Schwarz	ZNLE6	Vector Network Analyzer	9/29/2020	Annual	9/29/2021	101307
SPEAG	DAK-12	Dielectric Assessment Kit (10MHz - 3GHz)	11/12/2020	Annual	11/12/2021	1121
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/12/2020	Annual	5/12/2021	1070
SPEAG	D750V3	750 MHz SAR Dipole	5/18/2018	Triennial	5/18/2021	1034
SPEAG	D750V3	750 MHz SAR Dipole	6/20/2019	Biennial	6/20/2021	1057
SPEAG	D835V2	835 MHz SAR Dipole	3/13/2019	Biennial	3/13/2021	4d047
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Triennial	10/19/2021	4d133
SPEAG	D850V2	850 MHz SAR Dipole	9/8/2020	Annual	9/8/2021	1010
SPEAG	D835V2	835 MHz SAR Dipole	6/20/2019	Biennial	6/20/2021	4d040
SPEAG	D835V2	835 MHz SAR Dipole	1/13/2020	Annual	1/13/2021	4d132
SPEAG	D835V2	835 MHz SAR Dipole	5/18/2018	Triennial	5/18/2021	4d180
SPEAG	D1750V2	1750 MHz SAR Dipole	6/19/2019	Biennial	6/19/2021	1083
SPEAG	D1765V2	1765 MHz SAR Dipole	5/23/2018	Triennial	5/23/2021	1008
SPEAG	D1900V2	1900 MHz SAR Dipole	6/19/2019	Biennial	6/19/2021	5d030
SPEAG	D2450V2	2450 MHz SAR Dipole	8/14/2020	Annual	8/14/2021	719
SPEAG	D2450V2	2450 MHz SAR Dipole	9/9/2020	Annual	9/9/2021	797
SPEAG	D2600V2	2600 MHz SAR Dipole	4/11/2018	Triennial	4/11/2021	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	6/14/2019	Biennial	6/14/2021	1064
SPEAG	D5GHzV2	5 GHz SAR Dipole	1/16/2018	Triennial	1/16/2021	1057
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Triennial	10/23/2021	5d080
SPEAG	D2450V2	2450 MHz SAR Dipole	8/16/2018	Triennial	8/16/2021	981
SPEAG	D5GHzV2	5 GHz SAR Dipole	8/10/2018	Triennial	8/10/2021	1237
SPEAG	EX3DV4	SAR Probe	10/21/2020	Annual	10/21/2021	7420
SPEAG	EX3DV4	SAR Probe	2/19/2020	Annual	2/19/2021	7427
SPEAG	EX3DV4	SAR Probe	6/23/2020	Annual	6/23/2021	7406
SPEAG	EX3DV4	SAR Probe	7/31/2020	Annual	7/31/2021	7308
SPEAG	EX3DV4	SAR Probe	1/21/2020	Annual	1/21/2021	3589
SPEAG	EX3DV4	SAR Probe	4/21/2020	Annual	4/21/2021	7357
SPEAG	EX3DV4	SAR Probe	3/20/2020	Annual	3/20/2021	7421
SPEAG	EX3DV4	SAR Probe	7/20/2020	Annual	7/20/2021	7410
SPEAG	EX3DV4	SAR Probe	7/16/2020	Annual	7/16/2021	7546
SPEAG	EX3DV4	SAR Probe	6/23/2020	Annual	6/23/2021	7409
SPEAG	EX3DV4	SAR Probe	1/21/2020	Annual	1/21/2021	7488
SPEAG	EX3DV4	SAR Probe	12/11/2020	Annual	12/11/2021	7571
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/12/2020	Annual	10/12/2021	1213
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/13/2020	Annual	2/13/2021	1403
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/14/2020	Annual	5/14/2021	1583
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/11/2020	Annual	8/11/2021	1450
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/15/2020	Annual	4/15/2021	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/19/2020	Annual	3/19/2021	604
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/15/2020	Annual	7/15/2021	1322
SPEAG	DAE4	Data Acquisition Electronics	4/14/2020	Annual	4/14/2021	1532
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2020	Annual	6/18/2021	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/7/2020	Annual	12/7/2021	1533

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

16 MEASUREMENT UNCERTAINTIES

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

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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