

FCC SAR Test Report

APPLICANT : Motorola Mobility, LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola Mobility, LLC
MODEL NAME : 4054
FCC ID : IHDT56QD1
STANDARD : FCC 47 CFR Part 2 (2.1093)
ANSI/IEEE C95.1-1992
IEEE 1528-2003

We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and had been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Eric Huang / Deputy Manager



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility, LLC, Mobile Cellular Phone, 4054**, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary				Highest Simultaneous Transmission 1g SAR (W/kg)
		Head (Separation 0mm) 1g SAR (W/kg)	Body-worn (Separation 15mm) 1g SAR (W/kg)	Wireless Router (Separation 10mm) 1g SAR (W/kg)	Extremity (Separation 0mm) 10g SAR (W/kg)	
PCE	GSM850	0.68	0.61	0.89		1.56
	GSM1900	0.40	1.40	1.37	3.61	
	WCDMA Band V	0.40	0.47	0.66		
	WCDMA Band IV	0.40	1.47	1.38	3.56	
	WCDMA Band II	0.38	1.17	1.07	3.64	
	CDMA 2000 BC10	0.52	0.50	0.64		
	CDMA 2000 BC15	0.51	0.50	0.61		
	CDMA 2000 BC1	0.41	1.45	0.96	3.89	
	LTE Band 12	0.20	0.43	0.47		
	LTE Band 17	0.31	0.44	0.48		
	LTE Band 13	0.29	0.38	0.43		
	LTE Band 5	0.26	0.54	0.76		
	LTE Band 26	0.25	0.47	0.64		
	LTE Band 4	0.24	1.40	1.20	1.61	
	LTE Band 2	0.38	1.33	1.28	3.69	
	LTE Band 25	0.38	1.14	1.25	3.65	
	LTE Band 7	0.19	0.72	1.18	2.61	
	LTE Band 41	0.20	0.50	1.25	1.80	
DTS	WLAN 2.4GHz Band	0.93	0.13	0.23		1.54
NII	WLAN 5.2GHz Band	0.67	0.18	0.18		1.56
	WLAN 5.3GHz Band	0.85	0.16			
	WLAN 5.5GHz Band	0.88	0.32			
	WLAN 5.8GHz Band	0.86	0.36	0.42		
DSS	Bluetooth	0.07	0.01	0.01		1.48
Date of Testing:		08/17/2014 ~ 09/17/2014				

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2003.

2. Administration Data

Testing Laboratory	
Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978

Applicant	
Company Name	Motorola Mobility, LLC
Address	222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States

Manufacturer	
Company Name	Motorola Mobility, LLC
Address	222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States

3. Guidance Standard

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2003
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03
- FCC KDB 865664 D02 SAR Reporting v01r01
- FCC KDB 447498 D01 General RF Exposure Guidance v05r02
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r02
- FCC KDB 248227 D01 SAR meas for 802 11abg v01r02
- FCC KDB 941225 D01 SAR test for 3G devices v02
- FCC KDB 941225 D02 HSPA and 1x Advanced v02r02
- FCC KDB 941225 D03 SAR Test Reduction GSM GPRS EDGE v01
- FCC KDB 941225 D05 SAR for LTE Devices v02r03
- FCC KDB 941225 D06 Hotspot Mode SAR v01r01

4. Equipment Under Test (EUT)

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola Mobility, LLC
Model Name	4054
FCC ID	IHDT56QD1
IMEI Code	990005300022127
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz CDMA2000 BC10: 817.9 MHz ~ 822.9 MHz CDMA2000 BC0: 824.7 MHz ~ 848.31 MHz CDMA 2000 BC1: 1851.25 MHz ~ 1908.75 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz
Mode	• GSM/GPRS/EGPRS • RMC/AMR 12.2Kbps • HSDPA • HSUPA • DC-HSDPA • CDMA: 1xRTT/1xEv-Do(Rv.0)/1xEv-Do(Rv.A) • LTE: QPSK, 16QAM • 802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80 • Bluetooth v3.0+EDR • Bluetooth v4.0-LE • NFC:ASK
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype
Remark: 1. This device supported VoIP in EGPRS, WCDMA, CDMA, LTE (e.g. 3rd party VoIP). 2. While operating in body-adjacent exposure configurations during a mobile hotspot session, reduced power limits are enforced on the GSM1900, WCDMA B2 / B4, CDMA BC1 and LTE B2 / B4 / B7 / B25 / B41 transmitter. More detailed information which can be referred to “operational description”. 3. This device 2.4GHz / 5.2GHz / 5.8GHz WLAN supports Hotspot operation and WiFi Direct (Group Client / Group Owner), and 5.3GHz / 5.5GHz WLAN supports WiFi Direct (Group Client).	

4.2 Maximum Tune-up Limit

Mode	Burst average power(dBm)	
	GSM 850	GSM 1900
GSM (GMSK, 1 Tx slot)	33.00	30.50
GPRS (GMSK, 1 Tx slot)	33.00	30.50
GPRS (GMSK, 2 Tx slots)	33.00	29.50
GPRS (GMSK, 3 Tx slots)	28.75	25.75
GPRS (GMSK, 4 Tx slots)	27.50	24.50
EDGE (8PSK, 1 Tx slot)	28.50	27.50
EDGE (8PSK, 2 Tx slots)	27.50	26.50
EDGE (8PSK, 3 Tx slots)	24.00	23.25
EDGE (8PSK, 4 Tx slots)	22.50	21.50

Band / Mode			Average power(dBm)
WCDMA	Band V / IV / II	AMR / RMC 12.2Kbps	24.0
		HSDPA Subtest-1	23.0
		DC-HSDPA Subtest-1	23.0
		HSUPA Subtest-5	23.0
CDMA		BC10	25.0
		BC0	25.0
		BC1	25.0
LTE		Band 12	24.0
		Band 17	24.0
		Band 13	24.0
		Band 5	24.0
		Band 26	24.0
		Band 4	24.0
		Band 2	24.0
		Band 25	24.0
		Band 7	24.0
		Band 41	24.0

Channel / Mode	BT Average Power (dBm)			
	Mode			
	1Mbps	2Mbps	3Mbps	BT4.0-LE
Low channel	9	5	5	5
Middle channel	10	7	7	7
High channel	9	5	5	5

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)			
		11b	11g	HT20	VHT20
2.4GHz Band	2412	20	20	21	20
	2437	20	23	22	22.5
	2462	20	20	20.5	20

Band / Frequency (MHz)		IEEE 802.11 Average Power (dBm)					
		11a	HT20	HT40	VHT20	VHT40	VHT80
5.2GHz Band	5180	22	20.5		21		
	5190			19		19.5	
	5200	23	21.5		21		
	5210						19.5
	5220	22	21.5		23		
	5230			19.5		21.5	
	5240	22	21.5		23		
5.3GHz Band	5260	22	21.5		22.5		
	5270			19.5		21.5	
	5280	23	21.5		23		
	5290						19.5
	5300	22	21.5		22.5		
	5310			19.5		20	
	5320	22	21.5		21.5		
5.5GHz Band	5500	21.5	21.5		21		
	5510			17		17.5	
	5520	23	21.5		22.5		
	5530						17.5
	5540	23	21.5		22.5		
	5550			21		22	
	5560	23	21.5		22.5		
	5580	21.5	21.5		22.5		
	5660	22.5	20.5		22.5		
	5670			20.5		22	
	5680	22.5	20.5		22.5		
	5690						19.5
	5700	20	20.5		20		
	5710			22		22	
	5720	23	23.5		22		
5.8GHz Band	5745	21	21		20.5		
	5755			18		18.5	
	5765	22.5	22.5		20.5		
	5775						19
	5785	22.5	22.5		22.5		
	5795			20.5		22	
	5805	22.5	22.5		22.5		
	5825	22	22		21.5		

4.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r03																																																						
FCC ID	IHDT56QD1																																																					
Equipment Name	Mobile Cellular Phone																																																					
Operating Frequency Range of each LTE transmission band	LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz																																																					
uplink modulations used	QPSK, and 16QAM																																																					
LTE Voice / Data requirements	Data only																																																					
LTE MPR permanently built-in by design	<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3</th></tr><tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (RB)</th><th rowspan="2">MPR (dB)</th></tr><tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr><tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr></table>								Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3								Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3																																																						
Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)																																															
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz																																																
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																															
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																															
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2																																															
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																					
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																					
Power reduction applied to satisfy SAR compliance	Yes, When operating in hotspot mode that LTE B2 / B4 / B25 / B7 / B41 power reduction applied to satisfy SAR compliance.																																																					
Transmission (H, M, L) channel numbers and frequencies in each LTE band																																																						
LTE Band 12																																																						
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz																																															
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)																																														
L	23017	699.7	23025	700.5	23035	701.5	23060	704																																														
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5																																														
H	23173	715.3	23165	714.5	23155	713.5	23130	711																																														
LTE Band 17																																																						
	Bandwidth 5 MHz			Bandwidth 10 MHz																																																		
	Channel #		Freq.(MHz)	Channel #		Freq. (MHz)																																																
L	23755		706.5	23780		709																																																
M	23790		710	23790		710																																																
H	23825		713.5	23800		711																																																
LTE Band 13																																																						
	Bandwidth 5 MHz			Bandwidth 10 MHz																																																		
	Channel #		Freq.(MHz)	Channel #		Freq.(MHz)																																																
L	23205		779.5																																																			
M	23230		782	23230		782																																																
H	23255		784.5																																																			
LTE Band 5																																																						
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz																																															
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)																																														
L	20407	824.7	20415	825.5	20425	826.5	20450	829																																														
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5																																														
H	20643	848.3	20635	847.5	20625	846.5	20600	844																																														

LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		
H	20733	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510				
M	21100	2535	21100	2535	21100	2535	21100	2535				
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
L M	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2590	40620	2593	40620	2593				
H M	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				

5. RF Exposure Limits

5.1 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.

5.2 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. The 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.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

1. Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

6. Specific Absorption Rate (SAR)

6.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

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

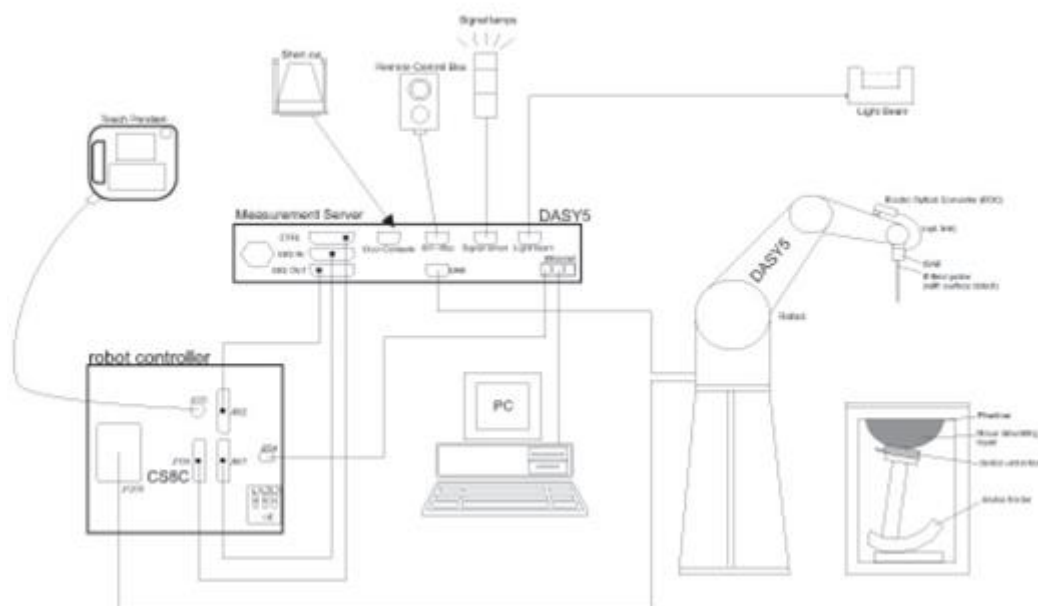
SAR is expressed in units of Watts per kilogram (W/kg)

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

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

7. System Description and Setup

The DASY system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

8. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

- (a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- (b) Read the WWAN RF power level from the base station simulator.
- (c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
- (d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix D demonstrates.
- (c) Set scan area, grid size and other setting on the DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

8.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

8.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

8.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r03 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

8.4 Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r03 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm $2 - 3$ GHz: ≤ 5 mm*	$3 - 4$ GHz: ≤ 5 mm* $4 - 6$ GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	$3 - 4$ GHz: ≤ 4 mm $4 - 5$ GHz: ≤ 3 mm $5 - 6$ GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	$3 - 4$ GHz: ≤ 3 mm $4 - 5$ GHz: ≤ 2.5 mm $5 - 6$ GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	$3 - 4$ GHz: ≥ 28 mm $4 - 5$ GHz: ≥ 25 mm $5 - 6$ GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

8.5 Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASy measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.



9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1012	May. 16, 2014	May. 15, 2015
SPEAG	835MHz System Validation Kit	D835V2	499	Mar. 24, 2014	Mar. 23, 2015
SPEAG	1750MHz System Validation Kit	D1750V2	1068	Nov. 27, 2013	Nov. 26, 2014
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Mar. 21, 2014	Mar. 20, 2015
SPEAG	2450MHz System Validation Kit	D2450V2	869	Jun. 13, 2014	Jun. 12, 2015
SPEAG	2600MHz System Validation Kit	D2600V2	1058	Jun. 23, 2014	Jun. 22, 2015
SPEAG	5GHz System Validation Kit	D5GHzV2	1128	Jul. 22, 2014	Jul. 21, 2015
SPEAG	Data Acquisition Electronics	DAE3	360	Feb. 17, 2014	Feb. 16, 2015
SPEAG	Data Acquisition Electronics	DAE4	1425	Mar. 03, 2014	Mar. 02, 2015
SPEAG	Data Acquisition Electronics	DAE4	1338	Nov. 05, 2013	Nov. 04, 2014
SPEAG	Data Acquisition Electronics	DAE4	778	Aug. 21, 2014	Aug. 20, 2015
SPEAG	Data Acquisition Electronics	DAE3	577	May. 15, 2014	May. 14, 2015
SPEAG	Data Acquisition Electronics	DAE4	1279	Jul. 23, 2014	Jul. 22, 2015
SPEAG	Data Acquisition Electronics	DAE3	495	May. 19, 2014	May. 18, 2015
SPEAG	Data Acquisition Electronics	DAE4	1399	Nov. 07, 2013	Nov. 06, 2014
SPEAG	Dosimetric E-Field Probe	EX3DV4	3873	Aug. 26, 2014	Aug. 25, 2015
SPEAG	Dosimetric E-Field Probe	ES3DV3	3296	Apr. 30, 2014	Apr. 29, 2015
SPEAG	Dosimetric E-Field Probe	ES3DV3	3270	Sep. 24, 2013	Sep. 23, 2014
SPEAG	Dosimetric E-Field Probe	EX3DV4	3935	Nov. 04, 2013	Nov. 03, 2014
SPEAG	Dosimetric E-Field Probe	EX3DV4	3954	Nov. 04, 2013	Nov. 03, 2014
SPEAG	Dosimetric E-Field Probe	EX3DV4	3925	May. 22, 2014	May. 21, 2015
SPEAG	Dosimetric E-Field Probe	EX3DV4	3955	Nov. 12, 2013	Nov. 11, 2014
Wisewind	Thermometer	ETP-101	TM560	Oct. 22, 2013	Oct. 21, 2014
Wisewind	Thermometer	ETP-101	TM685	Oct. 22, 2013	Oct. 21, 2014
Wisewind	Thermometer	HTC-1	TM642	Oct. 22, 2013	Oct. 21, 2014
Wisewind	Thermometer	HTC-1	TM281	Oct. 22, 2013	Oct. 21, 2014
H.M.IRIS	Thermometer	TH-08	TM658	Oct. 22, 2013	Oct. 21, 2014
WonDer	Thermometer	WD-5015	TM225	Dec. 02, 2013	Dec. 01, 2014
Anritsu	Radio Communication Analyzer	MT8820C	6201074414	Feb. 11, 2014	Feb. 10, 2015
Anritsu	Radio Communication Analyzer	MT8820C	6201341950	Dec. 25, 2013	Dec. 24, 2014
Agilent	Wireless Communication Test Set	E5515C	MY50266977	May. 27, 2014	May. 26, 2015
R&S	Radio communication Tester	CMW500	113998	Oct. 04, 2013	Oct. 03, 2014
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Agilent	Signal Generator	E4438C	MY49070755	Oct. 08, 2013	Oct. 07, 2014
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Jul. 23, 2013	Jul. 22, 2014
Agilent	ENA Network Analyzer	E5071C	MY46316648	Feb. 07, 2014	Feb. 06, 2015
Anritsu	Power Meter	ML2495A	1349001	Dec. 04, 2013	Dec. 03, 2014
Anritsu	Power Sensor	MA2411B	1306099	Dec. 03, 2013	Dec. 02, 2014
R&S	Spectrum Analyzer	FSP 30	101329	Jun. 14, 2014	Jun. 13, 2015
Agilent	Dual Directional Coupler	778D	50422	Note 1	
Woken	Attenuator	WK0602-XX	N/A	Note 1	
PE	Attenuator	PE7005-10	N/A	Note 1	
PE	Attenuator	PE7005- 3	N/A	Note 1	
AR	Power Amplifier	5S1G4M2	0328767	Note 1	
Mini-Circuits	Power Amplifier	ZVE-3W	162601250	Note 1	
Mini-Circuits	Power Amplifier	ZHL-42W+	13440021344	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.

10. System Verification

10.1 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (ϵ_r)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0
For Body								
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0	0	31.4	1.95	52.7
2600	68.1	0	0	0.1	0	31.8	2.16	52.5

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

<Tissue Dielectric Parameter Check Results-1>

Frequency (MHz)	Tissue Type	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	Head	22.5	0.895	42.215	0.89	41.90	0.56	0.75	±5	2014/8/18
750	Head	22.7	0.890	40.918	0.89	41.90	0.00	-2.34	±5	2014/9/21
750	Body	22.3	0.964	54.284	0.96	55.50	0.42	-2.19	±5	2014/8/24
750	Body	22.4	0.962	54.809	0.96	55.50	0.21	-1.25	±5	2014/9/14
835	Head	22.6	0.909	43.261	0.90	41.50	1.00	4.24	±5	2014/8/17
835	Head	22.5	0.925	43.289	0.90	41.50	2.78	4.31	±5	2014/8/22
835	Head	22.6	0.894	41.661	0.90	41.50	-0.67	0.39	±5	2014/9/5
835	Head	22.5	0.936	42.537	0.90	41.50	4.00	2.50	±5	2014/9/21
835	Body	22.5	0.953	52.720	0.97	55.20	-1.75	-4.49	±5	2014/8/23
835	Body	22.3	0.996	55.380	0.97	55.20	2.68	0.33	±5	2014/8/25
835	Body	22.6	0.946	56.664	0.97	55.20	-2.47	2.65	±5	2014/9/5
835	Body	22.4	0.942	55.365	0.97	55.20	-2.89	0.30	±5	2014/9/14
1750	Head	22.6	1.407	39.197	1.37	40.10	2.70	-2.25	±5	2014/8/21
1750	Head	22.5	1.411	41.000	1.37	40.10	2.99	2.24	±5	2014/9/21
1750	Body	22.3	1.525	52.092	1.49	53.40	2.35	-2.45	±5	2014/8/30
1750	Body	22.6	1.546	51.744	1.49	53.40	3.76	-3.10	±5	2014/9/10
1750	Body	22.3	1.527	51.825	1.49	53.40	2.48	-2.95	±5	2014/9/13
1750	Body	22.4	1.535	52.125	1.49	53.40	3.02	-2.39	±5	2014/9/18
1750	Body	22.4	1.506	54.574	1.49	53.40	1.07	2.20	±5	2014/9/20

<Tissue Dielectric Parameter Check Results-2>

Frequency (MHz)	Tissue Type	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
1900	Head	22.3	1.428	41.406	1.40	40.00	2.00	3.52	±5	2014/8/20
1900	Head	22.6	1.429	39.029	1.40	40.00	2.07	-2.43	±5	2014/9/5
1900	Head	22.5	1.442	39.019	1.40	40.00	3.00	-2.45	±5	2014/9/21
1900	Body	22.4	1.535	52.471	1.52	53.30	0.99	-1.56	±5	2014/8/26
1900	Body	22.6	1.545	51.942	1.52	53.30	1.64	-2.55	±5	2014/8/29
1900	Body	22.5	1.565	52.780	1.52	53.30	2.96	-0.98	±5	2014/9/4
1900	Body	22.6	1.547	51.948	1.52	53.30	1.78	-2.54	±5	2014/9/10
1900	Body	22.5	1.530	52.859	1.52	53.30	0.66	-0.83	±5	2014/9/11
1900	Body	22.6	1.565	53.988	1.52	53.30	2.96	1.29	±5	2014/9/17
1900	Body	22.4	1.553	53.818	1.52	53.30	2.17	0.97	±5	2014/9/18
1900	Body	22.3	1.574	54.370	1.52	53.30	3.55	2.01	±5	2014/9/19
1900	Body	22.6	1.499	53.260	1.52	53.30	-1.38	-0.08	±5	2014/9/21
2450	Head	22.6	1.833	39.517	1.80	39.20	1.83	0.81	±5	2014/8/29
2450	Head	22.5	1.862	39.195	1.80	39.20	3.44	-0.01	±5	2014/9/10
2450	Head	22.5	1.845	39.275	1.80	39.20	2.50	0.19	±5	2014/9/12
2450	Body	22.4	1.966	52.714	1.95	52.70	0.82	0.03	±5	2014/8/28
2450	Body	22.5	1.964	51.596	1.95	52.70	0.72	-2.09	±5	2014/9/10
2450	Body	22.4	2.015	53.957	1.95	52.70	3.33	2.39	±5	2014/9/14
2600	Head	22.4	1.981	38.254	1.96	39.00	1.07	-1.91	±5	2014/8/22
2600	Head	22.7	1.974	38.204	1.96	39.00	0.71	-2.04	±5	2014/9/11
2600	Head	22.5	1.968	38.254	1.96	39.00	0.41	-1.91	±5	2014/9/21
2600	Body	22.5	2.230	53.823	2.16	52.50	3.24	2.52	±5	2014/8/31
2600	Body	22.7	2.165	53.823	2.16	52.50	0.23	2.52	±5	2014/9/11
2600	Body	22.6	2.209	51.123	2.16	52.50	2.27	-2.62	±5	2014/9/12
2600	Body	22.6	2.201	52.823	2.16	52.50	1.90	0.62	±5	2014/9/17
2600	Body	22.6	2.211	51.086	2.16	52.50	2.36	-2.69	±5	2014/9/20
2600	Body	22.4	2.201	53.623	2.16	52.50	1.90	2.14	±5	2014/9/20
5200	Head	22.5	4.491	37.138	4.66	36.00	-3.63	3.16	±5	2014/8/29
5200	Head	22.3	4.786	35.420	4.66	36.00	2.70	-1.61	±5	2014/9/14
5200	Body	22.5	5.268	47.552	5.30	49.00	-0.60	-2.96	±5	2014/9/7
5200	Body	22.7	5.114	47.437	5.30	49.00	-3.51	-3.19	±5	2014/9/12
5300	Head	22.5	4.585	36.971	4.76	35.90	-3.68	2.98	±5	2014/8/29
5300	Head	22.3	4.889	35.285	4.76	35.90	2.71	-1.71	±5	2014/9/14
5300	Body	22.5	5.405	47.298	5.42	48.90	-0.28	-3.28	±5	2014/9/7
5300	Body	22.7	5.244	47.199	5.42	48.90	-3.25	-3.48	±5	2014/9/12
5600	Head	22.7	5.193	34.701	5.07	35.50	2.43	-2.25	±5	2014/9/6
5600	Head	22.3	5.192	34.709	5.07	35.50	2.41	-2.23	±5	2014/9/14
5600	Body	22.5	5.800	46.785	5.77	48.50	0.52	-3.54	±5	2014/9/7
5600	Body	22.7	5.623	46.749	5.77	48.50	-2.55	-3.61	±5	2014/9/12
5800	Head	22.7	5.381	34.353	5.27	35.30	2.11	-2.68	±5	2014/9/6
5800	Head	22.5	5.080	36.683	5.27	35.30	-3.61	3.92	±5	2014/9/17
5800	Body	22.5	6.153	46.472	6.00	48.20	2.55	-3.59	±5	2014/9/7
5800	Body	22.7	6.127	46.464	6.00	48.20	2.12	-3.60	±5	2014/9/13

**10.2 System Performance Check Results**

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

<System Verification 1g SAR Results-1>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2014/8/18	750	Head	250	D750V3-1012	EX3DV4 - SN3925	DAE3 Sn495	2.11	8.12	8.44	3.94
2014/9/21	750	Head	250	D750V3-1012	ES3DV3 - SN3296	DAE4 Sn778	2.01	8.12	8.04	-0.99
2014/8/24	750	Body	250	D750V3-1012	EX3DV4 - SN3925	DAE3 Sn495	2.04	8.65	8.16	-5.66
2014/9/14	750	Body	250	D750V3-1012	EX3DV4 - SN3925	DAE3 Sn495	2.16	8.65	8.64	-0.12
2014/8/17	835	Head	250	D835V2-499	EX3DV4 - SN3925	DAE3 Sn495	2.33	9.13	9.32	2.08
2014/8/22	835	Head	250	D835V2-499	EX3DV4 - SN3925	DAE3 Sn495	2.14	9.13	8.56	-6.24
2014/9/5	835	Head	250	D835V2-499	EX3DV4 - SN3955	DAE4 Sn1399	2.31	9.13	9.24	1.20
2014/9/21	835	Head	250	D835V2-499	ES3DV3 - SN3296	DAE4 Sn778	2.11	9.13	8.44	-7.56
2014/8/23	835	Body	250	D835V2-499	EX3DV4 - SN3925	DAE3 Sn495	2.24	9.46	8.96	-5.29
2014/8/25	835	Body	250	D835V2-499	EX3DV4 - SN3925	DAE3 Sn495	2.19	9.46	8.76	-7.40
2014/9/5	835	Body	250	D835V2-499	EX3DV4 - SN3955	DAE4 Sn1399	2.45	9.46	9.80	3.59
2014/9/14	835	Body	250	D835V2-499	EX3DV4 - SN3925	DAE3 Sn495	2.31	9.46	9.24	-2.33
2014/8/21	1750	Head	250	D1750V2-1068	EX3DV4 - SN3925	DAE3 Sn495	9.52	37.30	38.08	2.09
2014/9/21	1750	Head	250	D1750V2-1068	EX3DV4 - SN3925	DAE3 Sn495	9.30	37.30	37.20	-0.27
2014/8/30	1750	Body	250	D1750V2-1068	EX3DV4 - SN3925	DAE3 Sn495	8.95	37.50	35.80	-4.53
2014/9/10	1750	Body	250	D1750V2-1068	ES3DV3 - SN3270	DAE3 Sn577	9.72	37.50	38.88	3.68
2014/9/13	1750	Body	250	D1750V2-1068	ES3DV3 - SN3270	DAE3 Sn577	9.25	37.50	37.00	-1.33
2014/9/18	1750	Body	250	D1750V2-1068	EX3DV4 - SN3925	DAE3 Sn495	9.81	37.50	39.24	4.64
2014/9/20	1750	Body	250	D1750V2-1068	ES3DV3 - SN3296	DAE4 Sn778	10.00	37.50	40.00	6.67
2014/8/20	1900	Head	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	10.00	41.00	40.00	-2.44
2014/9/5	1900	Head	250	D1900V2-5d041	EX3DV4 - SN3955	DAE4 Sn1399	9.62	41.00	38.48	-6.15
2014/9/21	1900	Head	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	10.20	41.00	40.80	-0.49
2014/8/26	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	10.30	41.00	41.20	0.49
2014/8/29	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	9.85	41.00	39.40	-3.90
2014/9/4	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3955	DAE4 Sn1399	10.10	41.00	40.40	-1.46
2014/9/10	1900	Body	250	D1900V2-5d041	ES3DV3 - SN3270	DAE3 Sn577	11.00	41.00	44.00	7.32
2014/9/11	1900	Body	250	D1900V2-5d041	ES3DV3 - SN3270	DAE3 Sn577	9.96	41.00	39.84	-2.83
2014/9/17	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	10.10	41.00	40.40	-1.46
2014/9/18	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	10.60	41.00	42.40	3.41
2014/9/19	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3954	DAE3 Sn360	10.90	41.00	43.60	6.34
2014/9/21	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	10.60	41.00	42.40	3.41
2014/8/29	2450	Head	250	D2450V2-869	EX3DV4 - SN3925	DAE3 Sn495	12.40	52.80	49.60	-6.06
2014/9/10	2450	Head	250	D2450V2-869	EX3DV4 - SN3954	DAE4 Sn1425	13.80	52.80	55.20	4.55
2014/9/12	2450	Head	250	D2450V2-869	EX3DV4 - SN3873	DAE4 Sn1279	13.00	52.80	52.00	-1.52
2014/8/28	2450	Body	250	D2450V2-869	EX3DV4 - SN3925	DAE3 Sn495	12.40	50.30	49.60	-1.39
2014/9/10	2450	Body	250	D2450V2-869	EX3DV4 - SN3935	DAE4 Sn1338	13.50	50.30	54.00	7.36
2014/9/14	2450	Body	250	D2450V2-869	EX3DV4 - SN3873	DAE4 Sn1279	13.50	50.30	54.00	7.36
2014/8/22	2600	Head	250	D2600V2-1058	EX3DV4 - SN3925	DAE3 Sn495	13.90	57.90	55.60	-3.97
2014/9/11	2600	Head	250	D2600V2-1058	EX3DV4 - SN3873	DAE4 Sn1279	13.60	57.90	54.40	-6.04
2014/9/21	2600	Head	250	D2600V2-1058	EX3DV4 - SN3925	DAE3 Sn495	13.70	57.90	54.80	-5.35
2014/8/31	2600	Body	250	D2600V2-1058	EX3DV4 - SN3925	DAE3 Sn495	14.20	56.80	56.80	0.00
2014/9/11	2600	Body	250	D2600V2-1058	EX3DV4 - SN3873	DAE4 Sn1279	13.40	56.80	53.60	-5.63
2014/9/12	2600	Body	250	D2600V2-1058	EX3DV4 - SN3935	DAE4 Sn1338	14.70	56.80	58.80	3.52
2014/9/17	2600	Body	250	D2600V2-1058	EX3DV4 - SN3925	DAE3 Sn495	13.50	56.80	54.00	-4.93
2014/9/20	2600	Body	250	D2600V2-1058	ES3DV3 - SN3296	DAE4 Sn778	14.20	56.80	56.80	0.00
2014/9/20	2600	Body	250	D2600V2-1058	EX3DV4 - SN3925	DAE3 Sn495	13.60	56.80	54.40	-4.23



<System Verification 1g SAR Results-2>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
014/8/29	5200	Head	100	D5GHzV2-1128	EX3DV4 - SN3925	DAE3 Sn495	7.57	79.80	75.70	-5.14
2014/9/14	5200	Head	100	D5GHzV2-1128	EX3DV4 - SN3873	DAE4 Sn1279	8.16	79.80	81.60	2.26
2014/9/7	5200	Body	100	D5GHzV2-1128	EX3DV4 - SN3954	DAE4 Sn1425	7.38	76.20	73.80	-3.15
2014/9/12	5200	Body	100	D5GHzV2-1128	EX3DV4 - SN3873	DAE4 Sn1279	8.02	76.20	80.20	5.25
2014/8/29	5300	Head	100	D5GHzV2-1128	EX3DV4 - SN3925	DAE3 Sn495	8.16	81.60	81.60	0.00
2014/9/14	5300	Head	100	D5GHzV2-1128	EX3DV4 - SN3873	DAE4 Sn1279	8.49	81.60	84.90	4.04
2014/9/7	5300	Body	100	D5GHzV2-1128	EX3DV4 - SN3954	DAE4 Sn1425	7.85	77.70	78.50	1.03
2014/9/12	5300	Body	100	D5GHzV2-1128	EX3DV4 - SN3873	DAE4 Sn1279	8.03	77.70	80.30	3.35
2014/9/6	5600	Head	100	D5GHzV2-1128	EX3DV4 - SN3954	DAE4 Sn1425	7.94	84.00	79.40	-5.48
2014/9/14	5600	Head	100	D5GHzV2-1128	EX3DV4 - SN3873	DAE4 Sn1279	8.02	84.00	80.20	-4.52
2014/9/7	5600	Body	100	D5GHzV2-1128	EX3DV4 - SN3954	DAE4 Sn1425	7.91	81.50	79.10	-2.94
2014/9/12	5600	Body	100	D5GHzV2-1128	EX3DV4 - SN3873	DAE4 Sn1279	8.78	81.50	87.80	7.73
2014/9/6	5800	Head	100	D5GHzV2-1128	EX3DV4 - SN3954	DAE4 Sn1425	7.63	78.90	76.30	-3.30
2014/9/17	5800	Head	100	D5GHzV2-1128	EX3DV4 - SN3955	DAE4 Sn1399	7.40	78.90	74.00	-6.21
2014/9/7	5800	Body	100	D5GHzV2-1128	EX3DV4 - SN3954	DAE4 Sn1425	7.86	75.90	78.60	3.56
2014/9/13	5800	Body	100	D5GHzV2-1128	EX3DV4 - SN3873	DAE4 Sn1279	7.81	75.90	78.10	2.90

<System Verification 10g SAR Results-1>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2014/9/18	1750	Body	250	D1750V2-1068	EX3DV4 - SN3925	DAE3 Sn495	5.34	20.10	21.36	6.27
2014/9/18	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	5.55	21.70	22.20	2.30
2014/9/21	1900	Body	250	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn495	5.60	21.70	22.40	3.23
2014/9/20	2600	Body	250	D2600V2-1058	EX3DV4 - SN3925	DAE3 Sn495	6.36	25.30	25.44	0.55

11. RF Exposure Positions

11.1 Ear and handset reference point

Figure 9.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled "M," the left ear reference point (ERP) is marked "LE," and the right ERP is marked "RE." Each ERP is 15 mm along the B-M (back-mouth) line behind the entrance-to-ear-canal (EEC) point, as shown in Figure 9.1.2. The Reference Plane is defined as passing through the two ear reference points and point M. The line N-F (neck-front), also called the reference pivoting line, is normal to the Reference Plane and perpendicular to both a line passing through RE and LE and the B-M line (see Figure 9.1.3). Both N-F and B-M lines should be marked on the exterior of the phantom shell to facilitate handset positioning. Posterior to the N-F line the ear shape is a flat surface with 6 mm thickness at each ERP, and forward of the N-F line the ear is truncated, as illustrated in Figure 9.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

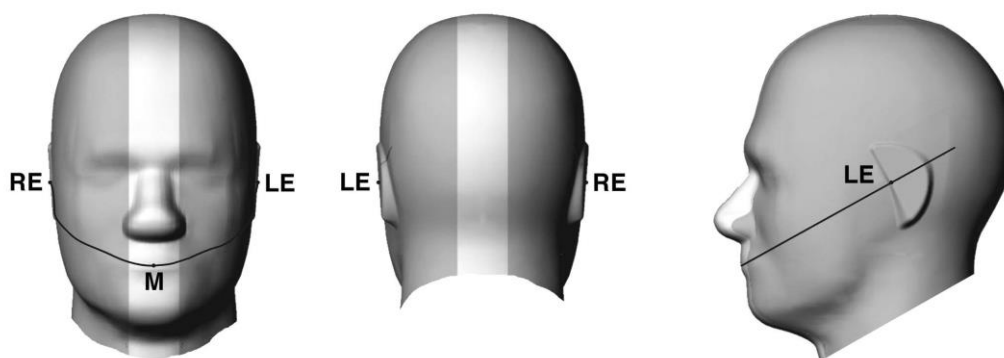


Fig 9.1.1 Front, back, and side views of SAM twin phantom

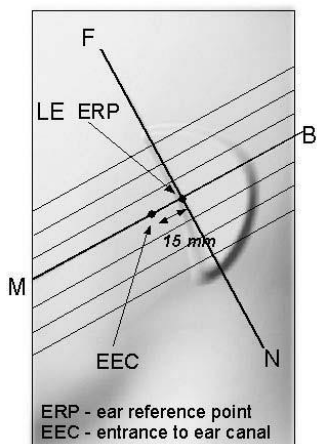


Fig 9.1.2 Close-up side view of phantom showing the ear region.

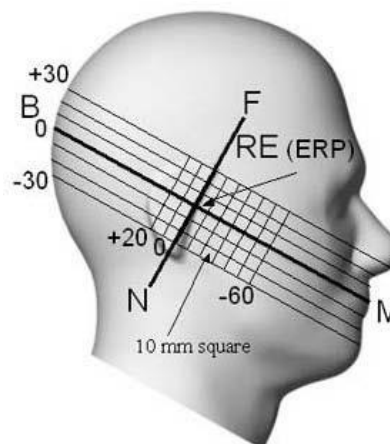


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

11.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width w_t of the handset at the level of the acoustic output (point A in Figure 9.2.1 and Figure 9.2.2), and the midpoint of the width w_b of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 9.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 9.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset 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 9.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 9.2.3. The actual rotation angles should be documented in the test report.



Fig 9.2.1 Handset vertical and horizontal reference lines—"fixed case"

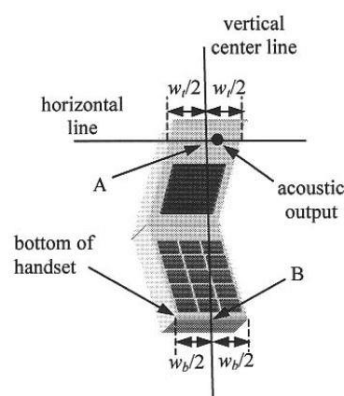


Fig 9.2.2 Handset vertical and horizontal reference lines—"clam-shell case"



Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

11.3 Definition of the tilt position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. While maintaining the orientation of the handset, move the handset away from the pinna along the line passing through RE and LE far enough to allow a rotation of the handset away from the cheek by 15°.
3. Rotate the handset around the horizontal line by 15°.
4. While maintaining the orientation of the handset, move the handset towards the phantom on the line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact point is on the pinna. See Figure 9.3.1. If contact occurs at any location other than the pinna, e.g., the antenna at the back of the phantom head, the angle of the handset should be reduced. In this case, the tilt position is obtained if any point on the handset is in contact with the pinna and a second point

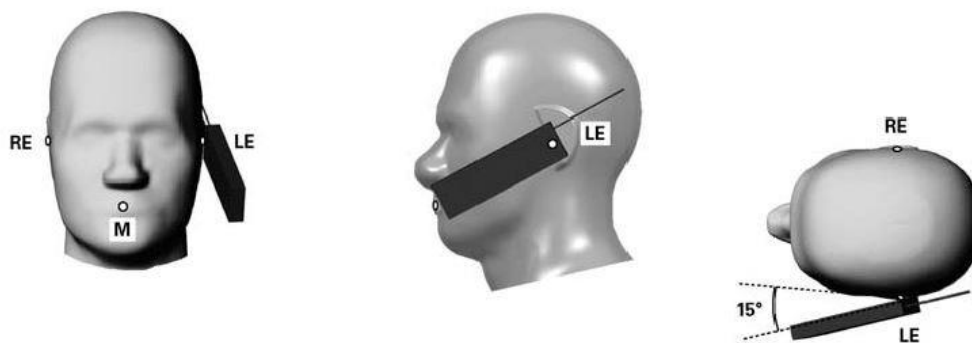


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

11.4 Body Worn Accessory

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 9.4). Per KDB 648474 D04v01r02, 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 447498 D01v05r02 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 body-worn accessory, measured without a headset connected to the handset is $< 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.

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

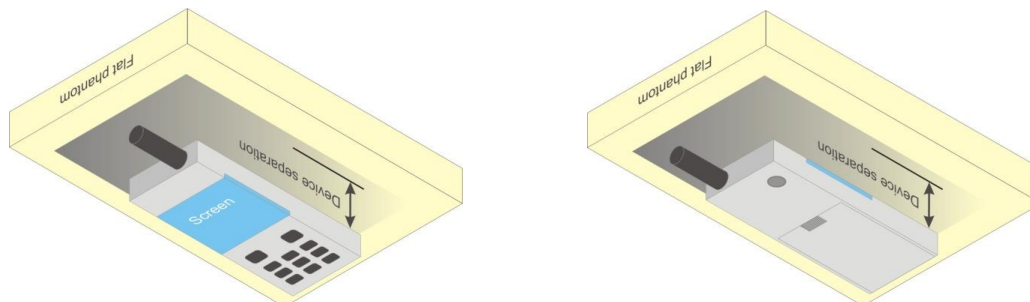


Fig 9.4 Body Worn Position

11.5 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC HDB Publication 941225 D06v01r01 where SAR test considerations for handsets ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm 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 D01v05r02 publication 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.

11.6 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 1-g body and 10-g extremity SAR exclusion thresholds found in KDB Publication 447498 D01v05 should be applied to determine SAR test requirements.

For smart phones with a display diagonal dimension $> 15.0 \text{ cm}$ or an overall diagonal dimension $> 16.0 \text{ cm}$ 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, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless mode and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at $\leq 25 \text{ mm}$ from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.⁶ The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR $> 1.2 \text{ W/kg}$; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold. The normal tablet procedures in KDB 616217 are required when the over diagonal dimension of the device is $> 20.0 \text{ cm}$. Hotspot mode SAR is not required when normal tablet procedures are applied. Extremity 10-g SAR is also not required for the front (top) surface of large form factor full size tablets. The more conservative tablet SAR results can be used to support the 10-g extremity SAR for phablet mode. The simultaneous transmission operating configurations applicable to voice and data transmissions for both phone and mini-tablet modes must be taken into consideration separately for 1-g and 10-g SAR to determine the simultaneous transmission SAR test exclusion and measurement requirements for the relevant wireless mode and exposure conditions

12. Conducted RF Output Power (Unit: dBm)

<GSM Conducted Power>

General Note:

1. According to October 2013TCB Workshop, For GSM / EGPRS, the number of time slots to test for SAR should correspond to the highest source-based time-averaged maximum output power configuration, Considering the possibility of e.g. 3rd party VoIP operation for head and body-worn SAR testing, the EUT was set in GPRS (2Tx slots) for GSM850 and GSM1900, due to its highest frame-average power.
2. For hotspot mode SAR testing, GPRS / EDGE should be evaluated, therefore the EUT was set in GPRS 2 Tx slots for GSM850 and GSM1900, due to its highest frame-average power.

Band GSM850	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	128	189	251		128	189	251	
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8	
GSM (GMSK, 1 Tx slot)	32.92	33.00	32.99	33.00	23.92	24.00	23.99	24.00
GPRS (GMSK, 1 Tx slot) – CS1	32.93	32.99	32.98	33.00	23.93	23.99	23.98	24.00
GPRS (GMSK, 2 Tx slots) – CS1	31.82	31.92	32.00	33.00	25.82	25.92	26.00	27.00
GPRS (GMSK, 3 Tx slots) – CS1	28.07	28.15	28.17	28.75	23.81	23.89	23.91	24.49
GPRS (GMSK, 4 Tx slots) – CS1	26.62	26.78	26.76	27.50	23.62	23.78	23.76	24.50
EDGE (8PSK, 1 Tx slot) – MCS5	26.76	26.93	26.93	28.50	17.76	17.93	17.93	19.50
EDGE (8PSK, 2 Tx slots) – MCS5	25.70	25.85	25.86	27.50	19.70	19.85	19.86	21.50
EDGE (8PSK, 3 Tx slots) – MCS5	22.75	22.80	22.79	24.00	18.49	18.54	18.53	19.74
EDGE (8PSK, 4 Tx slots) – MCS5	21.54	21.67	21.57	22.50	18.54	18.67	18.57	19.50

Band GSM1900	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
TX Channel	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8		1850.2	1880	1909.8	
GSM (GMSK, 1 Tx slot)	29.78	29.63	29.66	30.50	20.78	20.63	20.66	21.50
GPRS (GMSK, 1 Tx slot) – CS1	29.80	29.64	29.68	30.50	20.80	20.64	20.68	21.50
GPRS (GMSK, 2 Tx slots) – CS1	28.61	28.55	28.53	29.50	22.61	22.55	22.53	23.50
GPRS (GMSK, 3 Tx slots) – CS1	24.75	24.71	24.66	25.75	20.49	20.45	20.40	21.49
GPRS (GMSK, 4 Tx slots) – CS1	23.40	23.38	23.35	24.50	20.40	20.38	20.35	21.50
EDGE (8PSK, 1 Tx slot) – MCS5	25.52	25.50	25.50	27.50	16.52	16.50	16.50	18.50
EDGE (8PSK, 2 Tx slots) – MCS5	24.50	24.50	24.51	26.50	18.50	18.50	18.51	20.50
EDGE (8PSK, 3 Tx slots) – MCS5	21.68	21.64	21.64	23.25	17.42	17.38	17.38	18.99
EDGE (8PSK, 4 Tx slots) – MCS5	20.37	20.47	20.49	21.50	17.37	17.47	17.49	18.50

<Additional Test Channel>

Band GSM850	Burst Average Power (dBm)		Tune-up Limit (dBm)	Frame-Average Power (dBm)		Tune-up Limit (dBm)
TX Channel	148	231		148	231	
Frequency (MHz)	828.3	844.7		828.3	844.7	
GPRS (GMSK, 2 Tx slots) – CS1	31.91	31.95	33.00	25.91	25.95	27.00

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set Gain Factors (β_c and β_d) and parameters were set according to each
 - ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - iii. Set RMC 12.2Kbps + HSDPA mode.
 - iv. Set Cell Power = -86 dBm
 - v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
 - vi. Select HSDPA Uplink Parameters
 - vii. Set Delta ACK, Delta NACK and Delta CQI = 8
 - viii. Set Ack-Nack Repetition Factor to 3
 - ix. Set CQI Feedback Cycle (k) to 4 ms
 - x. Set CQI Repetition Factor to 2
 - xi. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Setup Configuration

HSUPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting * :
 - i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
 - iii. Set Cell Power = -86 dBm
 - iv. Set Channel Type = 12.2k + HSPA
 - v. Set UE Target Power
 - vi. Power Ctrl Mode= Alternating bits
 - vii. Set and observe the E-TFCI
 - viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (Note 5) (Note 6)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81
Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference. Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$. Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$. Note 5: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g. Note 6: β_{ed} can not be set directly, it is set by Absolute Grant Value.													

Setup Configuration

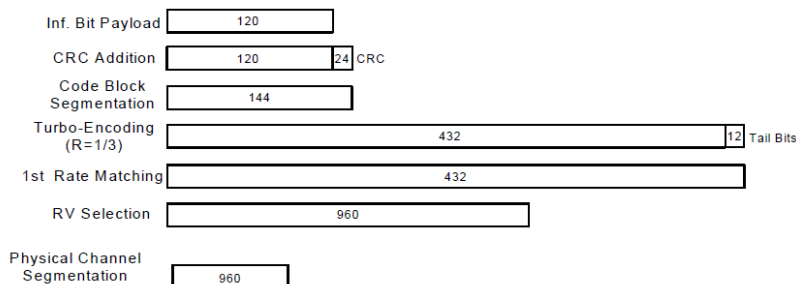
DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set RMC 12.2Kbps + HSDPA mode.
 - ii. Set Cell Power = -25 dBm
 - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - iv. Select HSDPA Uplink Parameters
 - v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - a). Subtest 1: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - vii. Set Ack-Nack Repetition Factor to 3
 - viii. Set CQI Feedback Cycle (k) to 4 ms
 - ix. Set CQI Repetition Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

C.8.1.12 Fixed Reference Channel Definition H-Set 12
Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)
Setup Configuration

<WCDMA Conducted Power>
General Note:

1. SAR testing in AMR configuration is not required when the maximum average output of each RF channel for AMR 12.2Kbps is less than 0.25dB higher than that measured in RMC 12.2Kbps
2. Per KDB 941225 D02v02r02, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA/HSUPA/DC-HSDPA output power is < 0.25dB higher than RMC, or reported SAR with RMC 12.2kbps setting is $\leq 1.2\text{W/kg}$, HSDPA/HSUPA/DC-HSDPA SAR evaluation can be excluded..

Band		WCDMA V			WCDMA II			WCDMA IV		
TX Channel		4132	4182	4233	9262	9400	9538	1312	1413	1513
Frequency (MHz)		826.4	836.4	846.6	1852.4	1880	1907.6	1712.4	1732.6	1752.6
3GPP Rel 99	AMR 12.2Kbps	23.08	23.04	23.07	22.61	22.94	22.74	22.88	22.74	22.86
3GPP Rel 99	RMC 12.2Kbps	23.09	23.06	23.10	22.63	22.95	22.77	22.89	22.75	22.88
3GPP Rel 6	HSDPA Subtest-1	22.10	21.98	22.13	21.66	22.07	21.92	21.93	21.78	21.94
3GPP Rel 6	HSDPA Subtest-2	22.10	22.06	22.12	21.64	22.05	21.89	21.94	21.77	21.94
3GPP Rel 6	HSDPA Subtest-3	21.60	21.59	21.62	21.16	21.65	21.40	21.45	21.19	21.45
3GPP Rel 6	HSDPA Subtest-4	21.59	21.57	21.62	21.17	21.66	21.39	21.44	21.28	21.49
3GPP Rel 8	DC-HSDPA Subtest-1	22.09	21.99	22.12	21.64	22.06	21.90	21.92	21.77	21.93
3GPP Rel 8	DC-HSDPA Subtest-2	22.08	22.05	22.10	21.62	22.04	21.88	21.93	21.75	21.92
3GPP Rel 8	DC-HSDPA Subtest-3	21.68	21.55	21.60	21.14	21.64	21.39	21.44	21.18	21.44
3GPP Rel 8	DC-HSDPA Subtest-4	21.57	21.54	21.58	21.15	21.65	21.38	21.41	21.26	21.48
3GPP Rel 6	HSUPA Subtest-1	21.70	21.68	21.90	21.36	21.82	21.65	21.87	21.59	21.91
3GPP Rel 6	HSUPA Subtest-2	21.03	20.99	21.21	20.75	21.41	21.05	20.53	20.33	20.58
3GPP Rel 6	HSUPA Subtest-3	20.92	20.89	21.24	20.29	20.71	20.59	20.30	20.15	20.42
3GPP Rel 6	HSUPA Subtest-4	21.63	21.47	21.69	20.86	21.49	21.16	21.43	21.15	21.49
3GPP Rel 6	HSUPA Subtest-5	22.09	21.97	22.11	21.66	22.00	21.85	21.90	21.77	22.02

<Additional Test Channel>

Band		WCDMA V		
TX Channel		4141	4183	4224
Frequency (MHz)		828.2	836.6	844.8
3GPP Rel 99	RMC 12.2Kbps	23.12	22.92	23.13

<CDMA2000 Conducted Power>
General Note:

1. Per KDB 941225 D01v02, Head SAR for RC1+SO55 is not required because the maximum average output power of RC1 is less than 1/4 dB higher than RC3+SO55.
2. Per KDB 941225 D01v02, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps). If 1xRTT and Ev-Do Rev A (RETAP 4096 bits) power is high than 1/4dB higher than Re v0, SAR tests with those settings are necessary.
3. Per KDB 941225 D01v02, 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. SAR for multiple code channels (FCH + SCH) is not required when the maximum average output of each RF channel is less than ¼ dB higher than that measured with FCH only.

Band	CDMA2000 BC10			CDMA2000 BC0			CDMA2000 BC1		
TX Channel	476	580	676	1013	384	777	25	600	1175
Frequency (MHz)	817.9	820.5	822.9	824.7	836.52	848.31	1851.25	1880	1908.75
1xRTT RC1 SO55	23.86	23.89	23.85	23.96	24.00	23.92	23.82	24.02	24.00
1xRTT RC3 SO55	23.84	23.85	23.83	23.94	23.98	23.86	23.75	24.03	23.87
1xRTT RC3 SO32(+ F-SCH)	23.84	23.86	23.81	23.93	23.99	23.85	23.80	24.05	23.91
1xRTT RC3 SO32(+SCH)	23.85	23.87	23.86	23.91	23.98	23.84	23.81	24.05	23.95
1xEVDO RTAP 153.6 Kbps	23.85	23.90	23.87	23.98	24.01	23.95	23.88	24.06	24.03
1xEVDO RETAP 4096 bits	23.84	23.88	23.86	23.95	23.99	23.94	23.85	24.02	23.96

<Additional Test Channel>

Band	CDMA2000 BC10			CDMA2000 BC0		
TX Channel	452	560	668	107	383	660
Frequency (MHz)	817.3	820	822.7	828.2	836.5	844.8
1xRTT RC3 SO55	23.96	23.93	23.93	23.95	23.98	23.99
1xRTT RC3 SO32(+ F-SCH)	23.93	23.89	23.88	23.87	23.92	23.96

<LTE Conducted Power>**General Note:**

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r03, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r03, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r03, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r03, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r03, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r03, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r03, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r03, smaller bandwidth SAR testing is not required.

<LTE Band 12>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				23060	23095	23130	24.0	0
Frequency (MHz)				704	707.5	711		
10	QPSK	1	0	22.66	22.70	22.63		
10	QPSK	1	24	22.52	22.52	22.61	23.0	1
10	QPSK	1	49	22.62	22.60	22.61		
10	QPSK	25	0	21.50	21.50	21.60		
10	QPSK	25	12	21.48	21.62	21.66	23.0	1
10	QPSK	25	24	21.53	21.69	21.62		
10	QPSK	50	0	21.65	21.76	21.71		
10	16QAM	1	0	21.67	21.67	21.60	23.0	1
10	16QAM	1	24	21.47	21.65	21.57		
10	16QAM	1	49	21.62	21.62	21.58		
10	16QAM	25	0	20.56	20.49	20.65	22.0	2
10	16QAM	25	12	20.54	20.67	20.64		
10	16QAM	25	24	20.58	20.65	20.68		
10	16QAM	50	0	20.61	20.70	20.71		
Channel				23035	23095	23155	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				701.5	707.5	713.5		
5	QPSK	1	0	22.55	22.66	22.56	24.0	0
5	QPSK	1	12	22.50	22.57	22.53		
5	QPSK	1	24	22.51	22.63	22.54		
5	QPSK	12	0	21.58	21.57	21.66	23.0	1
5	QPSK	12	6	21.60	21.60	21.67		
5	QPSK	12	11	21.58	21.69	21.72		
5	QPSK	25	0	21.49	21.67	21.60	23.0	1
5	16QAM	1	0	21.36	21.50	21.49		
5	16QAM	1	12	21.33	21.48	21.45		
5	16QAM	1	24	21.28	21.43	21.34	22.0	2
5	16QAM	12	0	20.63	20.55	20.71		
5	16QAM	12	6	20.66	20.68	20.63		
5	16QAM	12	11	20.64	20.76	20.70	22.0	2
5	16QAM	25	0	20.56	20.55	20.60		
Channel				23025	23095	23165	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				700.5	707.5	714.5		
3	QPSK	1	0	22.64	22.67	22.67	24.0	0
3	QPSK	1	7	22.44	22.66	22.60		
3	QPSK	1	14	22.62	22.65	22.63		
3	QPSK	8	0	21.60	21.57	21.67	23.0	1
3	QPSK	8	4	21.63	21.66	21.72		
3	QPSK	8	7	21.59	21.71	21.57		
3	QPSK	15	0	21.61	21.68	21.69	23.0	1
3	16QAM	1	0	21.68	21.73	21.61		
3	16QAM	1	7	21.66	21.72	21.48		
3	16QAM	1	14	21.66	21.64	21.58	22.0	2
3	16QAM	8	0	20.65	20.58	20.71		
3	16QAM	8	4	20.59	20.67	20.66		
3	16QAM	8	7	20.70	20.71	20.60	22.0	2
3	16QAM	15	0	20.51	20.58	20.51		

Channel				23017	23095	23173	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				699.7	707.5	715.3		
1.4	QPSK	1	0	22.64	22.68	22.64	24.0	0
1.4	QPSK	1	2	22.62	22.59	22.56		
1.4	QPSK	1	5	22.63	22.67	22.56		
1.4	QPSK	3	0	22.55	22.54	22.63		
1.4	QPSK	3	1	22.52	22.66	22.61		
1.4	QPSK	3	2	22.55	22.62	22.52		
1.4	QPSK	6	0	21.67	21.67	21.60	23.0	1
1.4	16QAM	1	0	21.76	21.60	21.69	23.0	1
1.4	16QAM	1	2	21.50	21.35	21.56		
1.4	16QAM	1	5	21.72	21.58	21.65		
1.4	16QAM	3	0	21.64	21.55	21.60		
1.4	16QAM	3	1	21.62	21.58	21.58		
1.4	16QAM	3	2	21.56	21.59	21.57		
1.4	16QAM	6	0	20.50	20.59	20.59	22.0	2

<Additional Test Channel>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				23038	23152		
Frequency (MHz)				701.8	713.2	24.0	0
5	QPSK	1	0	22.91	23.00		
5	QPSK	12	0	21.81	21.93	23.0	1

<LTE Band 17>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				23780	23790	23800		
Frequency (MHz)				709	710	711		
10	QPSK	1	0	22.70	22.57	22.62		
10	QPSK	1	24	22.56	22.55	22.58	24.0	0
10	QPSK	1	49	22.65	22.55	22.55		
10	QPSK	25	0	21.58	21.54	21.55		
10	QPSK	25	12	21.58	21.63	21.61	23.0	1
10	QPSK	25	24	21.62	21.61	21.60		
10	QPSK	50	0	21.75	21.72	21.69		
10	16QAM	1	0	21.65	21.58	21.62	23.0	1
10	16QAM	1	24	21.55	21.55	21.60		
10	16QAM	1	49	21.62	21.54	21.56		
10	16QAM	25	0	20.58	20.59	20.59	22.0	2
10	16QAM	25	12	20.63	20.62	20.66		
10	16QAM	25	24	20.67	20.66	20.65		
10	16QAM	50	0	20.68	20.68	20.67		
Channel				23755	23790	23825	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				706.5	710	713.5		
5	QPSK	1	0	22.61	22.61	22.58		
5	QPSK	1	12	22.60	22.56	22.55	24.0	0
5	QPSK	1	24	22.60	22.58	22.53		
5	QPSK	12	0	21.66	21.61	21.62		
5	QPSK	12	6	21.63	21.61	21.65	23.0	1
5	QPSK	12	11	21.63	21.64	21.67		
5	QPSK	25	0	21.57	21.62	21.61		
5	16QAM	1	0	21.58	21.58	21.60	23.0	1
5	16QAM	1	12	21.51	21.51	21.59		
5	16QAM	1	24	21.56	21.56	21.53		
5	16QAM	12	0	20.65	20.64	20.67	22.0	2
5	16QAM	12	6	20.66	20.65	20.69		
5	16QAM	12	11	20.68	20.67	20.69		
5	16QAM	25	0	20.62	20.61	20.62		

<LTE Band 13>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel					23230		24.0	0
Frequency (MHz)					782			
10	QPSK	1	0		22.57			
10	QPSK	1	24		22.55		23.0	1
10	QPSK	1	49		22.55			
10	QPSK	25	0		21.54			
10	QPSK	25	12		21.63			
10	QPSK	25	24		21.61		23.0	1
10	QPSK	50	0		21.72			
10	16QAM	1	0		21.58			
10	16QAM	1	24		21.55			
10	16QAM	1	49		21.54		22.0	2
10	16QAM	25	0		20.59			
10	16QAM	25	12		20.62			
10	16QAM	25	24		20.66			
10	16QAM	50	0		20.68			
Channel				23205	23230	23255	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				779.5	782	784.5		
5	QPSK	1	0	22.48	22.46	22.48	24.0	0
5	QPSK	1	12	22.46	22.45	22.45		
5	QPSK	1	24	22.47	22.45	22.46		
5	QPSK	12	0	21.55	21.51	21.53	23.0	1
5	QPSK	12	6	21.55	21.54	21.53		
5	QPSK	12	11	21.54	21.53	21.52		
5	QPSK	25	0	21.47	21.50	21.55		
5	16QAM	1	0	21.47	21.47	21.44	23.0	1
5	16QAM	1	12	21.45	21.39	21.40		
5	16QAM	1	24	21.46	21.45	21.43		
5	16QAM	12	0	20.56	20.57	20.57	22.0	2
5	16QAM	12	6	20.57	20.56	20.57		
5	16QAM	12	11	20.57	20.56	20.56		
5	16QAM	25	0	20.52	20.54	20.51		

<LTE Band 5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				20450	20525	20600	24.0	0
Frequency (MHz)				829	836.5	844		
10	QPSK	1	0	22.58	22.63	22.55		
10	QPSK	1	24	22.56	22.48	22.53	23.0	1
10	QPSK	1	49	22.57	22.55	22.54		
10	QPSK	25	0	21.58	21.62	21.53		
10	QPSK	25	12	21.59	21.65	21.52		
10	QPSK	25	24	21.61	21.55	21.59	23.0	1
10	QPSK	50	0	21.71	21.70	21.64		
10	16QAM	1	0	21.57	21.54	21.54		
10	16QAM	1	24	21.54	21.47	21.52		
10	16QAM	1	49	21.56	21.52	21.53	22.0	2
10	16QAM	25	0	20.59	20.94	20.88		
10	16QAM	25	12	20.60	20.96	20.86		
10	16QAM	25	24	20.63	20.93	20.85		
10	16QAM	50	0	20.64	20.69	20.65	24.0	0
Channel				20425	20525	20625		
Frequency (MHz)				826.5	836.5	846.5		
5	QPSK	1	0	22.61	22.60	22.54	24.0	0
5	QPSK	1	12	22.58	22.47	22.52		
5	QPSK	1	24	22.59	22.50	22.53		
5	QPSK	12	0	21.59	21.64	21.63	23.0	1
5	QPSK	12	6	21.59	21.68	21.59		
5	QPSK	12	11	21.76	21.56	21.60		
5	QPSK	25	0	21.56	21.61	21.55		
5	16QAM	1	0	21.62	21.56	21.52	23.0	1
5	16QAM	1	12	21.58	21.43	21.48		
5	16QAM	1	24	21.53	21.46	21.51		
5	16QAM	12	0	20.64	20.92	20.85	22.0	2
5	16QAM	12	6	20.62	20.90	20.86		
5	16QAM	12	11	20.74	20.92	20.84		
5	16QAM	25	0	20.59	20.63	20.59		
Channel				20415	20525	20635	24.0	0
Frequency (MHz)				825.5	836.5	847.5		
3	QPSK	1	0	22.62	22.60	22.60		
3	QPSK	1	7	22.55	22.52	22.54	23.0	1
3	QPSK	1	14	22.60	22.53	22.59		
3	QPSK	8	0	21.66	21.73	21.60		
3	QPSK	8	4	21.64	21.57	21.63		
3	QPSK	8	7	21.68	21.57	21.66	23.0	1
3	QPSK	15	0	21.62	21.73	21.68		
3	16QAM	1	0	21.71	21.62	21.55		
3	16QAM	1	7	21.51	21.50	21.52		
3	16QAM	1	14	21.70	21.52	21.52	22.0	2
3	16QAM	8	0	20.63	20.93	20.90		
3	16QAM	8	4	20.63	20.93	20.90		
3	16QAM	8	7	20.66	20.94	20.91		
3	16QAM	15	0	20.60	20.67	20.62	24.0	0

Channel				20407	20525	20643	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				824.7	836.5	848.3		
1.4	QPSK	1	0	22.62	22.62	22.62	24.0	0
1.4	QPSK	1	2	22.61	22.59	22.61		
1.4	QPSK	1	5	22.60	22.59	22.58		
1.4	QPSK	3	0	22.60	22.58	22.60		
1.4	QPSK	3	1	22.58	22.58	22.57		
1.4	QPSK	3	2	22.59	22.53	22.59		
1.4	QPSK	6	0	21.65	21.60	21.65	23.0	1
1.4	16QAM	1	0	21.63	21.58	21.63	23.0	1
1.4	16QAM	1	2	21.59	21.54	21.58		
1.4	16QAM	1	5	21.56	21.52	21.57		
1.4	16QAM	3	0	21.60	21.56	21.62		
1.4	16QAM	3	1	21.62	21.53	21.60		
1.4	16QAM	3	2	21.60	21.56	21.62		
1.4	16QAM	6	0	20.53	20.49	20.55	22.0	2

<Additional Test Channel>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				20442	20608		
Frequency (MHz)				828.2	844.8	24.0	0
5	QPSK	1	0	22.90	22.79		
5	QPSK	12	0	21.86	21.78	23.0	1



<LTE Band 26>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				26765	26865	26965		
Frequency (MHz)				821.5	831.5	841.5		
15	QPSK	1	0	22.61	22.54	22.56		
15	QPSK	1	37	22.55	22.47	22.53	24.0	0
15	QPSK	1	74	22.49	22.51	22.52		
15	QPSK	36	0	21.58	21.66	21.54		
15	QPSK	36	18	21.62	21.55	21.60	23.0	1
15	QPSK	36	37	21.62	21.55	21.62		
15	QPSK	75	0	21.64	21.62	21.64		
15	16QAM	1	0	21.49	21.51	21.52	23.0	1
15	16QAM	1	37	21.43	21.43	21.51		
15	16QAM	1	74	21.45	21.48	21.51		
15	16QAM	36	0	20.48	20.55	20.48	22.0	2
15	16QAM	36	18	20.54	20.45	20.54		
15	16QAM	36	37	20.54	20.46	20.55		
15	16QAM	75	0	20.64	20.54	20.60		
Channel				26740	26865	26990	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				819	831.5	844		
10	QPSK	1	0	22.53	22.53	22.56		
10	QPSK	1	24	22.45	22.51	22.54	24.0	0
10	QPSK	1	49	22.47	22.52	22.52		
10	QPSK	25	0	21.59	21.47	21.56		
10	QPSK	25	12	21.49	21.53	21.56	23.0	1
10	QPSK	25	24	21.45	21.55	21.50		
10	QPSK	50	0	21.73	21.60	21.66		
10	16QAM	1	0	21.50	21.49	21.51	23.0	1
10	16QAM	1	24	21.41	21.48	21.48		
10	16QAM	1	49	21.48	21.48	21.50		
10	16QAM	25	0	20.58	20.51	20.55	22.0	2
10	16QAM	25	12	20.50	20.55	20.54		
10	16QAM	25	24	20.47	20.55	20.54		
10	16QAM	50	0	20.63	20.55	20.62		
Channel				26715	26865	27015	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				816.5	831.5	846.5		
5	QPSK	1	0	22.53	22.52	22.56		
5	QPSK	1	12	22.52	22.46	22.54	24.0	0
5	QPSK	1	24	22.50	22.51	22.55		
5	QPSK	12	0	21.61	21.56	21.61		
5	QPSK	12	6	21.62	21.55	21.56	23.0	1
5	QPSK	12	11	21.63	21.52	21.59		
5	QPSK	25	0	21.53	21.49	21.56		
5	16QAM	1	0	21.49	21.47	21.51	23.0	1
5	16QAM	1	12	21.46	21.43	21.49		
5	16QAM	1	24	21.42	21.45	21.48		
5	16QAM	12	0	20.61	20.56	20.62	22.0	2
5	16QAM	12	6	20.60	20.55	20.61		
5	16QAM	12	11	20.61	20.55	20.61		
5	16QAM	25	0	20.56	20.52	20.58		

Channel				26705	26865	27025	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				815.5	831.5	847.5		
3	QPSK	1	0	22.58	22.50	22.57	24.0	0
3	QPSK	1	7	22.53	22.49	22.53		
3	QPSK	1	14	22.56	22.58	22.56		
3	QPSK	8	0	21.57	21.56	21.58	23.0	1
3	QPSK	8	4	21.59	21.53	21.59		
3	QPSK	8	7	21.59	21.57	21.62		
3	QPSK	15	0	21.65	21.53	21.65		
3	16QAM	1	0	21.52	21.48	21.56	23.0	1
3	16QAM	1	7	21.48	21.47	21.52		
3	16QAM	1	14	21.51	21.46	21.54		
3	16QAM	8	0	20.57	20.54	20.62	22.0	2
3	16QAM	8	4	20.57	20.59	20.63		
3	16QAM	8	7	20.60	20.55	20.66		
3	16QAM	15	0	20.58	20.56	20.57		
Channel				26697	26865	27033	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				814.7	831.5	848.3		
1.4	QPSK	1	0	22.58	22.54	22.60	24.0	0
1.4	QPSK	1	2	22.54	22.50	22.58		
1.4	QPSK	1	5	22.54	22.53	22.58		
1.4	QPSK	3	0	22.56	22.50	22.59		
1.4	QPSK	3	1	22.53	22.52	22.59		
1.4	QPSK	3	2	22.57	22.50	22.58		
1.4	QPSK	6	0	21.60	21.58	21.66	23.0	1
1.4	16QAM	1	0	21.54	21.54	21.61	23.0	1
1.4	16QAM	1	2	21.53	21.48	21.55		
1.4	16QAM	1	5	21.48	21.49	21.55		
1.4	16QAM	3	0	21.53	21.52	21.58		
1.4	16QAM	3	1	21.52	21.49	21.58		
1.4	16QAM	3	2	21.51	21.51	21.56		
1.4	16QAM	6	0	20.43	20.47	20.53	22.0	2

<Additional Test Channel>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				26748	26982		
Frequency (MHz)				819.8	843.2		
10	QPSK	1	0	22.76	22.72	24.0	0
10	QPSK	25	0	21.81	21.73	23.0	1



<LTE Band 4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				20050	20175	20300		
Frequency (MHz)				1720	1732.5	1745		
20	QPSK	1	0	23.11	23.10	22.99		
20	QPSK	1	49	23.09	23.03	22.98	24.0	0
20	QPSK	1	99	22.92	22.91	22.81		
20	QPSK	50	0	22.15	22.11	22.07		
20	QPSK	50	24	21.99	22.09	22.02	23.0	1
20	QPSK	50	49	21.99	21.99	21.96		
20	QPSK	100	0	22.04	22.12	22.05		
20	16QAM	1	0	22.06	22.09	21.93	23.0	1
20	16QAM	1	49	22.05	21.95	21.92		
20	16QAM	1	99	21.87	21.80	21.85		
20	16QAM	50	0	21.06	21.01	20.98	22.0	2
20	16QAM	50	24	20.95	21.00	20.98		
20	16QAM	50	49	20.96	20.91	20.97		
20	16QAM	100	0	21.04	21.03	20.99		
Channel				20025	20175	20325	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1717.5	1732.5	1747.5		
15	QPSK	1	0	23.09	23.10	23.02		
15	QPSK	1	37	23.06	22.88	22.84	24.0	0
15	QPSK	1	74	23.07	22.91	22.92		
15	QPSK	36	0	22.08	22.08	22.00		
15	QPSK	36	18	22.09	22.01	22.02	23.0	1
15	QPSK	36	37	21.94	21.97	22.00		
15	QPSK	75	0	22.12	22.12	22.09		
15	16QAM	1	0	22.06	22.10	21.94	23.0	1
15	16QAM	1	37	21.99	21.86	21.83		
15	16QAM	1	74	22.04	21.86	21.89		
15	16QAM	36	0	20.99	20.98	20.93	22.0	2
15	16QAM	36	18	21.01	21.01	20.93		
15	16QAM	36	37	20.93	20.87	20.95		
15	16QAM	75	0	21.04	21.02	21.02		
Channel				20000	20175	20350	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1732.5	1750		
10	QPSK	1	0	23.05	23.05	23.04		
10	QPSK	1	24	23.03	23.02	22.88	24.0	0
10	QPSK	1	49	23.01	22.91	22.92		
10	QPSK	25	0	22.09	22.04	21.94		
10	QPSK	25	12	22.01	22.00	21.90	23.0	1
10	QPSK	25	24	22.02	21.93	21.96		
10	QPSK	50	0	22.08	22.12	22.07		
10	16QAM	1	0	21.99	22.00	21.99	23.0	1
10	16QAM	1	24	21.97	21.96	21.84		
10	16QAM	1	49	21.97	21.85	21.89		
10	16QAM	25	0	21.01	21.05	20.95	22.0	2
10	16QAM	25	12	21.02	21.01	20.93		
10	16QAM	25	24	21.03	20.95	20.96		
10	16QAM	50	0	20.99	21.03	20.99		

Channel				19975	20175	20375	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1732.5	1752.5		
5	QPSK	1	0	23.06	23.00	22.93	24.0	0
5	QPSK	1	12	23.02	22.90	22.92		
5	QPSK	1	24	23.04	22.92	22.86		
5	QPSK	12	0	22.09	22.05	22.02	23.0	1
5	QPSK	12	6	22.08	22.08	22.01		
5	QPSK	12	11	22.04	21.95	22.05		
5	QPSK	25	0	22.03	22.08	22.06		
5	16QAM	1	0	21.97	22.01	21.88	23.0	1
5	16QAM	1	12	21.93	21.83	21.85		
5	16QAM	1	24	21.92	21.86	21.86		
5	16QAM	12	0	21.05	21.06	21.04	22.0	2
5	16QAM	12	6	21.04	21.06	21.03		
5	16QAM	12	11	21.06	20.96	21.03		
5	16QAM	25	0	21.04	21.04	21.01		
Channel				19965	20175	20385	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1711.5	1732.5	1753.5		
3	QPSK	1	0	23.02	22.87	22.89	24.0	0
3	QPSK	1	7	23.01	22.74	22.88		
3	QPSK	1	14	23.00	22.79	22.81		
3	QPSK	8	0	22.01	22.04	21.86	23.0	1
3	QPSK	8	4	21.95	21.92	21.88		
3	QPSK	8	7	21.98	21.83	21.91		
3	QPSK	15	0	21.94	21.95	21.89		
3	16QAM	1	0	22.16	22.20	22.05	23.0	1
3	16QAM	1	7	22.12	22.05	22.04		
3	16QAM	1	14	22.11	21.97	22.04		
3	16QAM	8	0	20.94	20.94	20.89	22.0	2
3	16QAM	8	4	20.88	20.95	20.89		
3	16QAM	8	7	20.91	20.78	20.85		
3	16QAM	15	0	21.00	20.92	20.95		
Channel				19957	20175	20393	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1710.7	1732.5	1754.3		
1.4	QPSK	1	0	23.00	23.00	22.93	24.0	0
1.4	QPSK	1	2	22.95	22.91	22.86		
1.4	QPSK	1	5	22.97	22.84	22.72		
1.4	QPSK	3	0	22.96	22.99	22.90		
1.4	QPSK	3	1	22.98	22.96	22.92		
1.4	QPSK	3	2	22.99	22.92	22.88		
1.4	QPSK	6	0	21.96	22.03	21.92	23.0	1
1.4	16QAM	1	0	21.93	21.91	21.87	23.0	1
1.4	16QAM	1	2	21.90	21.90	21.83		
1.4	16QAM	1	5	21.88	21.76	21.84		
1.4	16QAM	3	0	21.92	21.90	21.86		
1.4	16QAM	3	1	21.91	21.89	21.85		
1.4	16QAM	3	2	21.92	21.90	21.84		
1.4	16QAM	6	0	20.83	20.87	20.77	22.0	2

<LTE Band 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				18700	18900	19100		
Frequency (MHz)				1860	1880	1900		
20	QPSK	1	0	22.92	22.93	22.94		
20	QPSK	1	49	22.79	22.85	22.92	24.0	0
20	QPSK	1	99	22.79	22.84	22.84		
20	QPSK	50	0	21.89	22.01	21.94		
20	QPSK	50	24	21.86	21.93	21.91	23.0	1
20	QPSK	50	49	21.87	21.92	21.87		
20	QPSK	100	0	21.88	22.01	21.96		
20	16QAM	1	0	21.86	21.85	21.91	23.0	1
20	16QAM	1	49	21.73	21.77	21.90		
20	16QAM	1	99	21.85	21.77	21.78		
20	16QAM	50	0	20.71	20.88	20.86	22.0	2
20	16QAM	50	24	20.74	20.88	20.83		
20	16QAM	50	49	20.78	20.84	20.81		
20	16QAM	100	0	20.78	20.91	20.86		
Channel				18675	18900	19125	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1902.5		
15	QPSK	1	0	22.89	22.92	22.86	24.0	0
15	QPSK	1	37	22.86	22.84	22.84		
15	QPSK	1	74	22.78	22.84	22.84		
15	QPSK	36	0	21.90	21.89	21.93	23.0	1
15	QPSK	36	18	21.80	21.86	21.84		
15	QPSK	36	37	21.80	21.81	21.90		
15	QPSK	75	0	21.85	22.00	21.94	23.0	1
15	16QAM	1	0	21.80	21.85	21.81		
15	16QAM	1	37	21.78	21.76	21.80		
15	16QAM	1	74	21.72	21.77	21.77	22.0	2
15	16QAM	36	0	20.76	20.83	20.83		
15	16QAM	36	18	20.70	20.78	20.78		
15	16QAM	36	37	20.72	20.80	20.81	22.0	2
15	16QAM	75	0	20.76	20.92	20.85		
Channel				18650	18900	19150	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1905		
10	QPSK	1	0	22.85	22.93	22.87	24.0	0
10	QPSK	1	24	22.80	22.77	22.82		
10	QPSK	1	49	22.70	22.82	22.85		
10	QPSK	25	0	21.83	21.96	21.87	23.0	1
10	QPSK	25	12	21.83	21.80	21.89		
10	QPSK	25	24	21.73	21.82	21.84		
10	QPSK	50	0	21.93	21.94	21.90	23.0	1
10	16QAM	1	0	21.76	21.87	21.83		
10	16QAM	1	24	21.74	21.71	21.74		
10	16QAM	1	49	21.66	21.76	21.81	22.0	2
10	16QAM	25	0	20.82	20.91	20.89		
10	16QAM	25	12	20.82	20.82	20.84		
10	16QAM	25	24	20.71	20.83	20.87	22.0	2
10	16QAM	50	0	20.76	20.86	20.81		

Channel				18625	18900	19175	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1907.5		
5	QPSK	1	0	22.84	22.92	22.88	24.0	0
5	QPSK	1	12	22.80	22.80	22.80		
5	QPSK	1	24	22.82	22.84	22.85		
5	QPSK	12	0	21.88	21.81	21.87	23.0	1
5	QPSK	12	6	21.85	21.82	21.92		
5	QPSK	12	11	21.82	21.82	21.89		
5	QPSK	25	0	21.83	21.85	21.86		
5	16QAM	1	0	21.74	21.85	21.78	23.0	1
5	16QAM	1	12	21.71	21.72	21.74		
5	16QAM	1	24	21.70	21.75	21.76		
5	16QAM	12	0	20.82	20.84	20.91	22.0	2
5	16QAM	12	6	20.81	20.83	20.88		
5	16QAM	12	11	20.81	20.83	20.88		
5	16QAM	25	0	20.78	20.82	20.87		
Channel				18615	18900	19185	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1908.5		
3	QPSK	1	0	22.84	22.84	22.89	24.0	0
3	QPSK	1	7	22.81	22.78	22.82		
3	QPSK	1	14	22.82	22.82	22.87		
3	QPSK	8	0	21.81	21.84	21.91	23.0	1
3	QPSK	8	4	21.82	21.83	21.90		
3	QPSK	8	7	21.83	21.83	21.92		
3	QPSK	15	0	21.87	21.84	21.88		
3	16QAM	1	0	21.77	21.78	21.83	23.0	1
3	16QAM	1	7	21.74	21.75	21.82		
3	16QAM	1	14	21.75	21.76	21.80		
3	16QAM	8	0	20.79	20.81	20.89	22.0	2
3	16QAM	8	4	20.79	20.87	20.88		
3	16QAM	8	7	20.80	20.86	20.91		
3	16QAM	15	0	20.79	20.80	20.84		
Channel				18607	18900	19193	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1909.3		
1.4	QPSK	1	0	22.91	22.90	22.92	24.0	0
1.4	QPSK	1	2	22.83	22.85	22.88		
1.4	QPSK	1	5	22.89	22.88	22.91		
1.4	QPSK	3	0	22.89	22.86	22.91		
1.4	QPSK	3	1	22.87	22.85	22.87		
1.4	QPSK	3	2	22.89	22.85	22.86		
1.4	QPSK	6	0	21.91	21.92	21.92	23.0	1
1.4	16QAM	1	0	21.84	21.84	21.89	23.0	1
1.4	16QAM	1	2	21.80	21.80	21.80		
1.4	16QAM	1	5	21.77	21.77	21.81		
1.4	16QAM	3	0	21.82	21.82	21.87		
1.4	16QAM	3	1	21.80	21.81	21.83		
1.4	16QAM	3	2	21.82	21.80	21.86		
1.4	16QAM	6	0	20.69	20.74	20.80	22.0	2

<LTE Band 25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				26140	26340	26590		
Frequency (MHz)				1860	1880	1905		
20	QPSK	1	0	22.90	22.99	22.89		
20	QPSK	1	49	22.85	22.95	22.81	24.0	0
20	QPSK	1	99	22.82	22.82	22.78		
20	QPSK	50	0	21.96	21.99	21.91		
20	QPSK	50	24	21.91	22.02	21.92	23.0	1
20	QPSK	50	49	21.81	21.89	21.87		
20	QPSK	100	0	21.94	21.98	21.93		
20	16QAM	1	0	21.88	21.92	21.85	23.0	1
20	16QAM	1	49	21.80	21.90	21.77		
20	16QAM	1	99	21.71	21.80	21.73		
20	16QAM	50	0	20.83	20.90	20.83	22.0	2
20	16QAM	50	24	20.83	20.95	20.84		
20	16QAM	50	49	20.73	20.82	20.80		
20	16QAM	100	0	20.88	20.98	20.86		
Channel				26115	26340	26615	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1857.5	1880	1907.5		
15	QPSK	1	0	22.89	22.91	22.87		
15	QPSK	1	37	22.85	22.84	22.80	24.0	0
15	QPSK	1	74	22.87	22.86	22.78		
15	QPSK	36	0	21.83	21.95	21.85	23.0	1
15	QPSK	36	18	21.82	22.00	21.81		
15	QPSK	36	37	21.83	21.85	21.85		
15	QPSK	75	0	21.92	22.00	21.91	23.0	1
15	16QAM	1	0	21.84	21.87	21.84		
15	16QAM	1	37	21.80	21.79	21.77		
15	16QAM	1	74	21.82	21.81	21.77	22.0	2
15	16QAM	36	0	20.75	20.86	20.83		
15	16QAM	36	18	20.76	20.89	20.81		
15	16QAM	36	37	20.76	20.81	20.76	22.0	2
15	16QAM	75	0	20.82	20.92	20.84		
Channel				26090	26340	26640	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1855	1880	1910		
10	QPSK	1	0	22.87	22.93	22.84		
10	QPSK	1	24	22.82	22.92	22.81	24.0	0
10	QPSK	1	49	22.82	22.86	22.77		
10	QPSK	25	0	21.81	21.96	21.83	23.0	1
10	QPSK	25	12	21.84	21.97	21.81		
10	QPSK	25	24	21.85	21.84	21.86		
10	QPSK	50	0	21.86	21.95	21.90	23.0	1
10	16QAM	1	0	21.78	21.89	21.81		
10	16QAM	1	24	21.76	21.87	21.71		
10	16QAM	1	49	21.75	21.81	21.74	22.0	2
10	16QAM	25	0	20.82	20.92	20.85		
10	16QAM	25	12	20.82	20.94	20.84		
10	16QAM	25	24	20.83	20.85	20.90	22.0	2
10	16QAM	50	0	20.79	20.90	20.85		

Channel				26065	26340	26665	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1852.5	1880	1912.5		
5	QPSK	1	0	22.84	22.91	22.86	24.0	0
5	QPSK	1	12	22.77	22.82	22.83		
5	QPSK	1	24	22.83	22.82	22.75		
5	QPSK	12	0	21.83	21.98	21.89	23.0	1
5	QPSK	12	6	21.80	21.96	21.91		
5	QPSK	12	11	21.84	21.88	21.80		
5	QPSK	25	0	21.78	22.02	21.85	23.0	1
5	16QAM	1	0	21.74	21.86	21.75		
5	16QAM	1	12	21.71	21.77	21.73		
5	16QAM	1	24	21.73	21.75	21.72	22.0	2
5	16QAM	12	0	20.83	20.96	20.90		
5	16QAM	12	6	20.78	20.95	20.87		
5	16QAM	12	11	20.80	20.87	20.81	20.90	20.90
5	16QAM	25	0	20.80	20.95	20.90		
Channel				26055	26340	26675	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1851.5	1880	1913.5		
3	QPSK	1	0	22.84	22.90	22.90	24.0	0
3	QPSK	1	7	22.83	22.79	22.76		
3	QPSK	1	14	22.81	22.85	22.78		
3	QPSK	8	0	21.88	21.98	21.87	23.0	1
3	QPSK	8	4	21.84	22.00	21.77		
3	QPSK	8	7	21.85	21.91	21.86		
3	QPSK	15	0	21.86	22.01	21.86	23.0	1
3	16QAM	1	0	21.77	21.84	21.80		
3	16QAM	1	7	21.69	21.73	21.64		
3	16QAM	1	14	21.76	21.78	21.78	22.0	2
3	16QAM	8	0	20.83	20.96	20.77		
3	16QAM	8	4	20.81	20.96	20.90		
3	16QAM	8	7	20.83	20.90	20.82	20.86	20.86
3	16QAM	15	0	20.80	20.94	20.86		
Channel				26047	26340	26683	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				1850.7	1880	1914.3		
1.4	QPSK	1	0	22.87	22.98	22.80	24.0	0
1.4	QPSK	1	2	22.81	22.96	22.77		
1.4	QPSK	1	5	22.86	22.88	22.78		
1.4	QPSK	3	0	22.86	22.96	22.78	23.0	1
1.4	QPSK	3	1	22.84	22.95	22.77		
1.4	QPSK	3	2	22.80	22.95	22.75		
1.4	QPSK	6	0	21.87	22.01	21.85	23.0	1
1.4	16QAM	1	0	21.80	21.92	21.80		
1.4	16QAM	1	2	21.77	21.90	21.75		
1.4	16QAM	1	5	21.74	21.81	21.71	23.0	1
1.4	16QAM	3	0	21.78	21.91	21.76		
1.4	16QAM	3	1	21.77	21.90	21.75		
1.4	16QAM	3	2	21.76	21.89	21.76	22.0	2
1.4	16QAM	6	0	20.67	20.85	20.73		

<LTE Band 7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				20850	21100	21350		
Frequency (MHz)				2510	2535	2560		
20	QPSK	1	0	22.79	23.10	22.97		
20	QPSK	1	49	22.64	22.86	22.92	24.0	0
20	QPSK	1	99	22.75	23.02	22.86		
20	QPSK	50	0	21.70	22.01	22.00		
20	QPSK	50	24	21.73	21.94	21.93	23.0	1
20	QPSK	50	49	21.79	21.99	21.97		
20	QPSK	100	0	21.81	22.00	21.92		
20	16QAM	1	0	21.72	21.92	21.93	23.0	1
20	16QAM	1	49	21.54	21.79	21.84		
20	16QAM	1	99	21.66	21.90	21.80		
20	16QAM	50	0	20.61	20.86	20.98	22.0	2
20	16QAM	50	24	20.70	20.88	20.89		
20	16QAM	50	49	20.70	20.90	20.91		
20	16QAM	100	0	20.74	20.98	20.94		
Channel				20825	21100	21375	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				2507.5	2535	2562.5		
15	QPSK	1	0	22.79	22.97	23.04		
15	QPSK	1	37	22.67	22.85	22.86	24.0	0
15	QPSK	1	74	22.72	22.93	22.82		
15	QPSK	36	0	21.67	21.85	22.05		
15	QPSK	36	18	21.66	21.85	21.91	23.0	1
15	QPSK	36	37	21.79	21.95	21.92		
15	QPSK	75	0	21.68	21.90	21.94		
15	16QAM	1	0	21.67	21.86	21.96	23.0	1
15	16QAM	1	37	21.56	21.82	21.82		
15	16QAM	1	74	21.66	21.85	21.79		
15	16QAM	36	0	20.67	20.80	21.00	22.0	2
15	16QAM	36	18	20.58	20.79	20.87		
15	16QAM	36	37	20.69	20.87	20.87		
15	16QAM	75	0	20.64	20.83	20.89		
Channel				20800	21100	21400	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				2505	2535	2565		
10	QPSK	1	0	22.69	22.96	22.89		
10	QPSK	1	24	22.66	22.85	22.82	24.0	0
10	QPSK	1	49	22.64	22.94	22.83		
10	QPSK	25	0	21.69	21.85	21.94		
10	QPSK	25	12	21.69	21.92	21.87	23.0	1
10	QPSK	25	24	21.68	21.96	21.86		
10	QPSK	50	0	21.75	21.93	21.95		
10	16QAM	1	0	21.64	21.86	21.85	23.0	1
10	16QAM	1	24	21.60	21.78	21.81		
10	16QAM	1	49	21.58	21.82	21.78		
10	16QAM	25	0	20.72	20.83	20.91	22.0	2
10	16QAM	25	12	20.71	20.87	20.92		
10	16QAM	25	24	20.69	20.91	20.91		
10	16QAM	50	0	20.66	20.86	20.90		

Channel				20775	21100	21425	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				2502.5	2535	2567.5		
5	QPSK	1	0	22.71	22.88	22.87	24.0	0
5	QPSK	1	12	22.66	22.81	22.83		
5	QPSK	1	24	22.68	22.84	22.84		
5	QPSK	12	0	21.73	21.91	21.91	23.0	1
5	QPSK	12	6	21.71	21.87	21.92		
5	QPSK	12	11	21.72	21.88	21.93		
5	QPSK	25	0	21.70	21.88	21.90		
5	16QAM	1	0	21.64	21.88	21.80	23.0	1
5	16QAM	1	12	21.63	21.77	21.76		
5	16QAM	1	24	21.61	21.82	21.78		
5	16QAM	12	0	20.75	20.86	20.91	22.0	2
5	16QAM	12	6	20.72	20.88	20.90		
5	16QAM	12	11	20.72	20.90	20.88		
5	16QAM	25	0	20.71	20.86	20.86		

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “special subframe S” contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
- Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

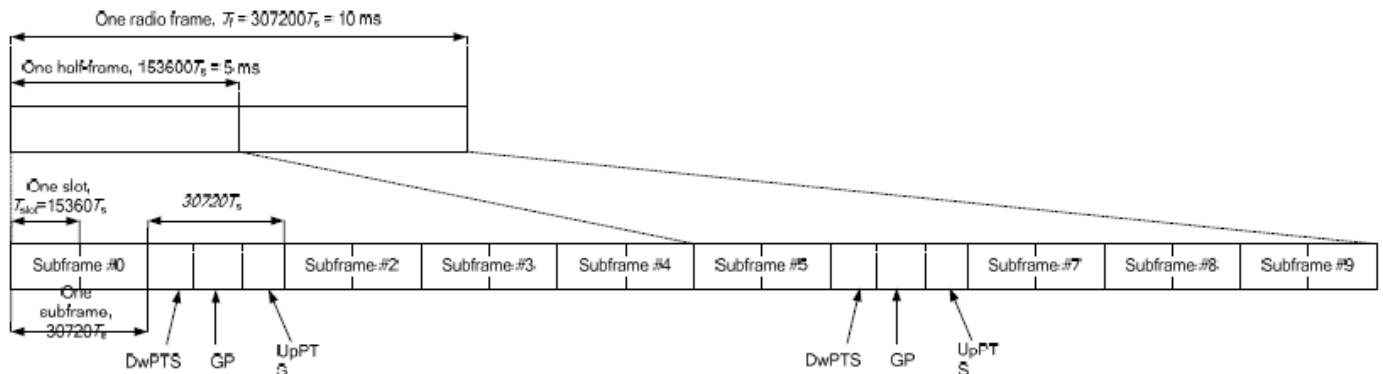


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Special subframe (30720·T _s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~4	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T _s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~3	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is:
 $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is:
 $(3+0.143)/5 = 62.9\%$
- For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.01$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

<LTE Band 41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power Middle High Ch. / Freq.	Power High Ch. / Freq.	Tune up Limit (dBm)	MPR (dB)
Channel				39750	40185	40620	41055	41490	24.0	0
Frequency (MHz)				2506	2549.5	2593	2636.5	2680		
20	QPSK	1	0	23.16	23.09	23.10	22.98	23.03	24.0	0
20	QPSK	1	49	23.09	23.04	23.09	22.97	23.01		
20	QPSK	1	99	23.11	22.97	23.06	22.92	22.99		
20	QPSK	50	0	22.13	22.10	22.11	21.93	22.08	23.0	1
20	QPSK	50	24	22.16	22.14	22.21	21.97	22.00		
20	QPSK	50	49	22.15	22.12	22.22	21.95	21.94		
20	QPSK	100	0	22.12	22.15	22.17	21.91	21.98		
20	16QAM	1	0	22.14	22.07	22.12	21.94	21.97	23.0	1
20	16QAM	1	49	22.05	22.06	22.10	21.93	21.95		
20	16QAM	1	99	22.10	22.04	22.08	21.91	21.96		
20	16QAM	50	0	21.14	21.05	21.07	20.92	21.08	22.0	2
20	16QAM	50	24	21.10	21.10	21.14	21.01	21.04		
20	16QAM	50	49	21.17	21.11	21.18	20.96	20.99		
20	16QAM	100	0	21.17	21.14	21.19	20.96	21.12		
Channel				39725	40173	40620	41068	41515	24.0	0
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5		
15	QPSK	1	0	23.15	23.08	23.13	23.00	23.07	24.0	0
15	QPSK	1	37	23.13	23.06	23.12	22.99	23.06		
15	QPSK	1	74	23.14	23.07	23.11	22.98	23.06		
15	QPSK	36	0	22.14	22.11	22.12	22.00	22.03	23.0	1
15	QPSK	36	18	22.17	22.09	22.18	21.90	21.94		
15	QPSK	36	37	22.13	22.11	22.16	21.98	21.94		
15	QPSK	75	0	22.10	22.15	22.16	21.97	21.95		
15	16QAM	1	0	22.09	22.07	22.15	21.96	21.94	23.0	1
15	16QAM	1	37	22.02	22.03	22.09	21.87	21.89		
15	16QAM	1	74	22.08	22.02	22.13	21.95	21.91		
15	16QAM	36	0	21.02	21.05	21.09	20.91	20.99	22.0	2
15	16QAM	36	18	21.16	21.08	21.09	20.89	20.94		
15	16QAM	36	37	21.08	21.10	21.16	20.98	21.04		
15	16QAM	75	0	21.08	21.11	21.18	20.94	20.98		
Channel				39700	40160	40620	41080	41540	24.0	0
Frequency (MHz)				2501	2547	2593	2639	2685		
10	QPSK	1	0	23.05	23.07	23.14	22.94	22.99	24.0	0
10	QPSK	1	24	23.03	23.02	23.06	22.88	22.97		
10	QPSK	1	49	23.02	23.06	23.10	22.92	22.98		
10	QPSK	25	0	22.11	22.10	22.09	21.99	21.97	23.0	1
10	QPSK	25	12	22.16	22.08	22.13	21.91	21.94		
10	QPSK	25	24	22.17	22.09	22.19	21.95	22.03		
10	QPSK	50	0	22.14	22.07	22.16	21.94	21.97		
10	16QAM	1	0	22.07	22.13	22.17	22.00	21.98	23.0	1
10	16QAM	1	24	22.05	22.03	22.09	21.92	21.97		
10	16QAM	1	49	22.05	22.11	22.15	21.92	21.96		
10	16QAM	25	0	21.17	21.12	21.16	21.05	21.05	22.0	2
10	16QAM	25	12	21.20	21.14	21.17	20.96	21.09		
10	16QAM	25	24	21.22	21.13	21.17	21.02	21.07		
10	16QAM	50	0	21.10	21.09	21.13	20.95	21.02		

Channel				39675	40148	40620	41093	41565	Tune up Limit (dBm)	MPR (dB)
Frequency (MHz)				2498.5	2545.8	2593	2640.3	2687.5		
5	QPSK	1	0	23.05	23.02	23.09	22.90	23.02	24.0	0
5	QPSK	1	12	23.03	23.01	23.06	22.88	22.98		
5	QPSK	1	24	23.04	22.96	23.05	22.89	22.97		
5	QPSK	12	0	22.05	22.10	22.13	21.91	21.95	23.0	1
5	QPSK	12	6	22.06	22.11	22.14	21.89	21.91		
5	QPSK	12	11	22.13	22.06	22.13	21.93	21.93		
5	QPSK	25	0	22.08	22.11	22.12	21.90	21.99		
5	16QAM	1	0	22.07	22.08	22.13	21.92	22.01	23.0	1
5	16QAM	1	12	22.02	22.02	22.07	21.87	21.95		
5	16QAM	1	24	22.03	22.06	22.12	21.90	22.00		
5	16QAM	12	0	21.09	21.10	21.14	20.98	21.09	22.0	2
5	16QAM	12	6	21.12	21.10	21.14	20.96	21.08		
5	16QAM	12	11	21.11	21.11	21.16	21.00	21.08		
5	16QAM	25	0	21.15	21.11	21.18	20.99	21.09		

<2.4GHz Bluetooth v3.0+EDR>

General Note:

- For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
- The duty factor is selected theoretical 83.3% perform Bluetooth SAR testing.

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
v3.0+EDR	CH 00	2402	7.17	4.16	4.13
	CH 39	2441	9.63	6.29	6.30
	CH 78	2480	8.15	4.84	4.85

<2.4GHz Bluetooth v4.0-LE>

Mode / Band	Maximum Average power(dBm)
2.4GHz Bluetooth v4.0-LE	7.0

Note:

- Per KDB 447498 D01v05r02, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison

Bluetooth Max Power (dBm)	Separation Distance (mm)	Frequency (GHz)	exclusion thresholds
7	< 5	2.48	1.57

Note:

Per KDB 447498 D01v05r02, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 1.57 which is ≤ 3 , SAR testing is not required.

<WLAN Conducted Power>
General Note:

1. For IEEE802.11a/b/g SAR testing, highest average RF output power channel for the lowest data rate for 802.11a/b were selected for SAR evaluation. 802.11g were not investigated since the average output powers over all channels and data rates were not more than 0.25 dB higher than the tested channel in the lowest data rate of 802.11b mode.
2. For IEEE802.11n/ac, SAR testing can be conducted on channel with the highest output power when taking into consideration tune-up tolerance for same test configuration that was identified during SAR evaluations for IEEE802.11a/b/g (as applicable) provided bandwidth and test position are the same.
3. For IEEE802.11n/a with multiple channel BW configurations, highest channel BW configuration with highest output power limit shall be tested.
4. Testing of lower BW configurations is not required when the maximum average output of the default test channels in each lower BW configuration is less than 1/4dB higher than the default test channel in the highest BW configuration.

<2.4GHz WLAN>

Mode	Channel	Frequency (MHz)	Average power (dBm)			
			Data Rate			
			1Mbps	2Mbps	5.5Mbps	11Mbps
802.11b	CH 1	2412	19.53	19.26	19.34	19.31
	CH 6	2437	19.96	19.42	19.51	19.66
	CH 11	2462	19.28	19.13	19.12	19.15

Mode	Channel	Frequency (MHz)	Average power (dBm)							
			Data Rate							
			6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
802.11g	CH 1	2412	19.50	19.16	18.93	18.96	19.32	19.10	19.19	19.30
	CH 6	2437	22.92	22.55	22.52	22.62	22.60	22.63	22.65	20.55
	CH 11	2462	19.41	19.09	19.00	19.06	19.29	19.16	19.35	19.25

Mode	Channel	Frequency (MHz)	Average power (dBm)							
			MCS Index							
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n-HT20	CH 1	2412	20.17	19.75	19.53	19.81	20.08	19.83	18.87	18.93
	CH 6	2437	21.74	21.25	21.32	21.29	21.47	21.39	20.48	19.61
	CH 11	2462	19.49	19.13	19.27	19.48	19.47	19.33	19.46	19.48

Mode	Channel	Frequency (MHz)	Average Power (dBm)								
			MCS Index								
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
802.11ac-VHT20	CH 1	2412	19.22	19.13	19.16	19.20	19.16	18.95	19.14	18.49	18.50
	CH 6	2437	22.12	21.94	21.86	22.08	22.07	20.93	20.98	20.03	19.18
	CH 11	2462	19.86	19.62	19.62	19.77	19.84	19.71	19.78	19.73	18.96



<5GHz WLAN>

Mode	Channel	Frequency (MHz)	Average Power (dBm)							
			Data Rate							
			6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
802.11a	CH 36	5180	21.48	21.40	21.42	21.44	21.38	21.34	21.22	20.54
	CH 40	5200	22.80	22.74	22.73	22.65	22.65	22.71	22.60	21.58
	CH 44	5220	21.69	21.55	21.64	21.61	21.60	21.63	21.67	20.57
	CH 48	5240	21.58	21.54	21.52	21.46	21.51	21.54	21.48	20.49
	CH 52	5260	21.61	21.56	21.60	21.51	21.48	21.59	21.53	20.52
	CH 56	5280	22.76	22.65	22.66	22.60	22.68	22.55	22.63	21.57
	CH 60	5300	21.56	21.53	21.52	21.51	21.51	21.52	21.44	20.56
	CH 64	5320	21.58	21.07	21.23	21.38	21.29	21.50	21.57	20.47
	CH 100	5500	21.16	21.07	21.02	21.06	20.93	21.13	21.12	20.20
	CH 104	5520	22.63	22.53	22.55	22.61	22.55	22.37	22.41	21.39
	CH 108	5540	22.71	22.66	22.61	22.60	22.59	22.49	22.56	21.46
	CH 112	5560	22.75	22.73	22.60	22.60	22.61	22.57	22.54	21.52
	CH 116	5580	21.20	21.14	21.07	21.04	21.09	21.19	21.18	20.04
	CH 132	5660	22.33	22.26	22.24	22.27	22.13	22.16	22.21	21.19
	CH 136	5680	22.22	22.12	22.11	22.15	22.04	22.04	21.97	20.88
	CH 140	5700	19.66	19.47	19.52	19.61	19.46	19.48	19.58	19.65
	CH 144	5720	22.65	22.51	22.54	22.63	22.50	22.45	22.56	22.53
	CH 149	5745	20.81	20.71	20.68	20.77	20.69	20.71	20.80	20.14
	CH 153	5765	22.11	22.07	22.08	21.98	21.91	21.96	21.94	21.29
	CH 157	5785	21.95	21.87	21.56	21.77	21.70	21.41	21.22	20.04
	CH 161	5805	22.08	22.03	21.98	21.90	21.90	21.90	22.01	20.89
	CH 165	5825	21.73	21.60	21.45	21.71	21.49	21.57	21.23	20.06

Mode	Channel	Frequency (MHz)	Average Power (dBm)							
			Data Rate							
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n-HT20	CH 36	5180	19.92	19.91	19.85	19.90	19.88	19.88	19.87	19.44
	CH 40	5200	21.03	20.92	20.92	20.98	20.89	20.82	20.87	20.47
	CH 44	5220	20.94	20.92	20.82	20.83	20.86	20.94	19.86	19.39
	CH 48	5240	20.92	20.67	20.89	20.90	20.88	20.88	19.88	19.32
	CH 52	5260	21.28	21.05	21.12	21.22	21.22	21.16	20.60	19.45
	CH 56	5280	21.13	21.01	20.98	21.06	20.97	20.94	20.49	19.34
	CH 60	5300	21.10	21.03	20.86	21.08	21.05	21.07	20.38	19.26
	CH 64	5320	20.97	20.92	20.94	20.93	20.80	20.75	20.47	19.53
	CH 100	5500	20.89	20.81	20.79	20.79	20.84	20.88	20.24	19.20
	CH 104	5520	20.91	20.89	20.83	20.77	20.83	20.73	20.09	19.11
	CH 108	5540	20.93	20.85	20.82	20.86	20.78	20.76	20.13	19.18
	CH 112	5560	20.99	20.91	20.96	20.92	20.79	20.88	20.24	19.25
	CH 116	5580	21.08	20.72	20.77	20.96	21.02	21.06	20.22	19.19
	CH 132	5660	20.34	20.20	20.31	20.22	20.18	20.19	19.52	18.88
	CH 136	5680	20.43	20.33	20.33	20.28	20.25	20.29	20.27	19.17
	CH 140	5700	19.61	19.50	19.48	19.54	19.56	19.56	19.54	19.20
	CH 144	5720	23.31	23.17	23.30	23.20	23.09	23.21	23.17	22.10
	CH 149	5745	20.72	20.65	20.67	20.68	20.67	20.68	20.64	20.14
	CH 153	5765	22.03	21.94	21.92	21.95	21.81	21.97	21.85	21.35
	CH 157	5785	22.13	22.12	22.12	22.10	21.90	22.07	20.78	19.96
	CH 161	5805	22.10	21.96	22.07	21.95	21.87	21.97	21.89	21.59
	CH 165	5825	21.65	21.64	21.58	21.58	21.58	21.51	21.55	20.09

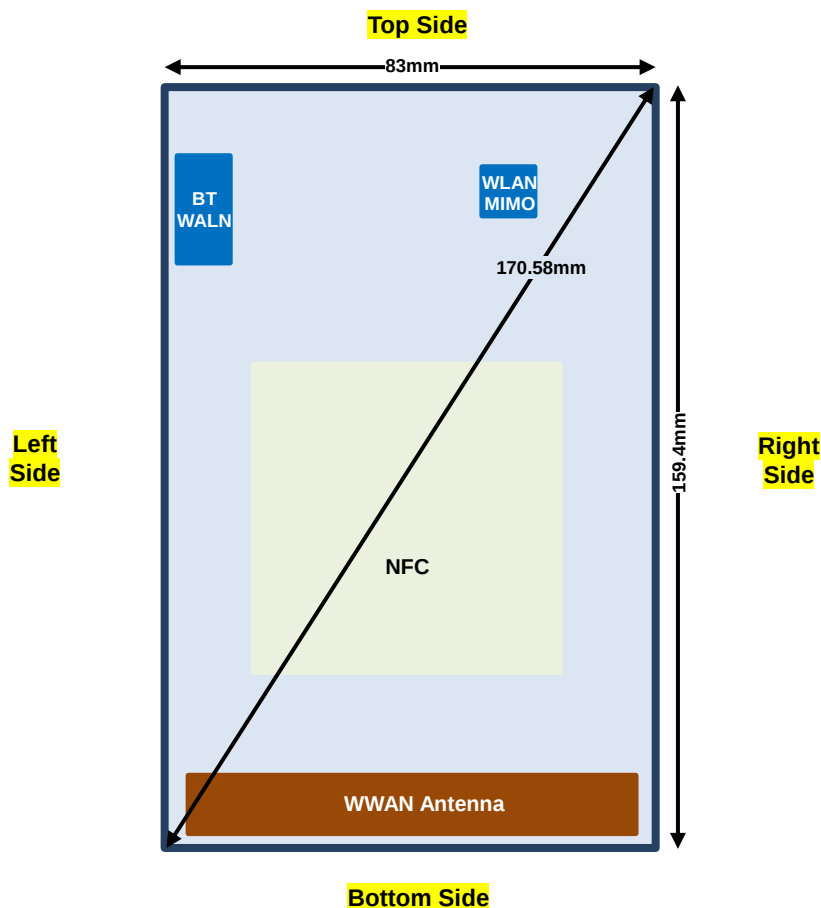
Mode	Channel	Frequency (MHz)	Average Power (dBm)							
			MCS Index							
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n-HT40	CH 38	5190	18.61	18.40	18.50	18.59	18.55	18.58	18.58	18.54
	CH 46	5230	19.32	19.28	19.27	19.27	19.29	19.25	19.29	18.71
	CH 54	5270	19.5	19.39	19.23	19.49	19.39	19.42	19.42	18.76
	CH 62	5310	19.37	19.31	19.23	19.32	19.29	19.29	19.33	18.82
	CH 102	5510	16.52	16.38	16.41	16.33	16.04	16.01	16.05	16.28
	CH 110	5550	20.62	20.33	20.43	20.50	20.44	20.43	19.36	19.70
	CH 134	5670	20.29	20.11	20.08	20.25	20.20	20.21	19.19	19.38
	CH 142	5710	21.69	21.57	21.60	21.57	21.51	21.55	21.52	21.68
	CH 151	5755	17.87	17.58	17.53	17.77	17.71	17.80	17.82	17.92
	CH 159	5795	20.1	20.07	20.00	20.04	20.07	20.07	18.92	19.15

Mode	Channel	Frequency (MHz)	Average Power (dBm)								
			MCS Index								
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
802.11ac-VHT20	CH 36	5180	20.96	20.93	20.90	20.93	20.49	20.54	18.55	18.55	18.43
	CH 40	5200	20.45	20.33	20.42	20.34	20.00	20.02	18.30	18.32	18.27
	CH 44	5220	22.75	22.52	22.55	21.71	20.59	20.63	18.48	18.25	18.49
	CH 48	5240	22.48	22.43	22.44	21.77	20.61	20.76	18.51	18.47	18.48
	CH 52	5260	22.33	22.30	22.29	21.88	20.68	20.67	18.44	18.48	18.43
	CH 56	5280	22.56	22.46	22.45	22.07	20.98	20.95	18.69	18.72	18.74
	CH 60	5300	22.16	22.14	22.12	21.75	20.52	20.68	18.54	18.45	18.54
	CH 64	5320	21.31	21.29	21.29	21.27	20.55	20.80	18.64	18.51	18.60
	CH 100	5500	20.75	20.62	20.66	20.74	20.96	20.29	19.08	18.08	18.01
	CH 104	5520	22.12	22.07	22.02	22.02	22.00	21.35	20.29	19.15	19.12
	CH 108	5540	22.06	21.99	22.00	21.96	21.81	21.57	20.50	19.37	19.31
	CH 112	5560	22.10	21.96	21.99	21.99	21.85	21.62	20.49	19.48	19.29
	CH 116	5580	21.94	21.92	21.87	21.92	21.40	20.31	19.15	18.01	18.12
	CH 132	5660	22.12	21.98	22.01	21.98	21.94	22.05	21.85	21.99	21.93
	CH 136	5680	22.16	22.02	22.14	22.04	21.93	22.02	22.00	22.04	21.94
	CH 140	5700	19.43	19.36	19.41	19.37	19.39	19.35	19.31	19.31	19.14
	CH 144	5720	21.69	21.57	21.66	21.57	21.48	21.40	21.49	21.40	21.26
	CH 149	5745	20.5	20.35	20.38	20.46	20.48	20.41	20.00	20.06	18.96
	CH 153	5765	20.23	20.06	20.17	20.10	20	20.09	19.72	19.79	18.55
	CH 157	5785	22.18	21.66	21.66	21.60	21.50	21.03	19.92	19.82	18.72
	CH 161	5805	22.18	21.75	21.79	21.71	21.54	21.09	19.88	19.79	18.7
	CH 165	5825	21.46	21.37	21.31	21.37	21.45	20.60	19.77	19.83	18.75

Mode	Channel	Frequency (MHz)	Average Power (dBm)									
			MCS Index									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac-VHT40	CH 38	5190	18.91	18.68	18.75	18.75	18.84	18.86	18.74	18.03	18.04	17.14
	CH 46	5230	21.31	21.07	21.13	21.18	21.26	18.90	18.97	18.03	18.03	17.05
	CH 54	5270	21.09	20.92	21.00	21.07	21.04	18.68	18.81	17.72	17.67	16.60
	CH 62	5310	19.82	19.77	19.78	19.80	19.78	18.80	18.79	17.77	17.76	16.67
	CH 102	5510	17.25	17.21	17.22	17.10	17.21	17.24	17.24	17.21	17.23	17.23
	CH 110	5550	21.84	21.80	21.76	21.73	21.82	19.59	19.64	18.38	18.29	17.45
	CH 134	5670	21.84	21.83	21.77	21.63	21.69	19.26	19.24	18.20	18.25	17.13
	CH 142	5710	21.48	21.39	21.40	21.41	21.27	18.87	18.9	18.74	18.7	17.61
	CH 151	5755	17.95	17.88	17.83	17.84	17.91	17.90	18.20	18.06	18.04	17.07
	CH 159	5795	21.57	21.50	21.51	21.49	21.48	19.04	19.04	18.04	17.98	16.93

Mode	Channel	Frequency (MHz)	Average Power (dBm)									
			MCS Index									
			MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
802.11ac-VHT80	CH 42	5210	19.47	19.22	19.23	19.34	19.43	19.46	19.46	19.42	18.44	18.47
	CH 58	5290	19.39	19.31	19.22	19.38	19.36	19.33	19.32	18.40	18.56	18.46
	CH 106	5530	17.04	16.84	16.92	16.46	16.99	16.96	16.96	17.01	17.03	17.03
	CH 138	5690	19.38	19.31	19.37	19.33	19.17	19.31	16.98	18.35	18.42	18.45
	CH 155	5775	18.61	18.42	18.44	18.44	18.44	18.40	18.38	17.66	17.76	17.81

13. Antenna Location



Front View

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm	≤ 25mm
WLAN	≤ 25mm	≤ 25mm	> 25mm	> 25mm	≤ 25mm	≤ 25mm
Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN	Yes	Yes	No	Yes	Yes	Yes
WLAN	Yes	Yes	Yes	No	Yes	Yes

General Note:

- Referring to KDB 941225 D06 v01r01, when the overall device length and width are ≥ 9cm*5cm, the test distance is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge

14. SAR Test Results

General Note:

1. Per KDB 447498 D01v05r02, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - d. For WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
2. Per KDB 447498 D01v05r02, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Pre KDB648474 D04v01r02, 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, if reported SAR < 1.2 W/kg connected to the headset is not required.
4. Per KDB648474 D04v01r02, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
5. While operating in body-adjacent exposure configurations during a mobile hotspot session, reduced power limits are enforced on the GSM1900, WCDMA B2 / B4, CDMA BC1 and LTE B2 / B4 / B7 / B25 / B41 transmitter. More detailed information which can be referred to "operational description".
6. This device utilizes dynamic antenna tuning on the main antenna. Please refer to the operational description (Exhibit 12) for functionality description, and FCC the pre-test KDB inquiry (Exhibit 12A) for test guidance. Test results for this specific condition are labeled as Triggered in the Antenna Tuner column contained in the tables below.

GSM Note:

1. According to October 2013TCB Workshop, For GSM / EGPRS, the number of time slots to test for SAR should correspond to the highest source-based time-averaged maximum output power configuration, Considering the possibility of e.g. 3rd party VoIP operation for head and body-worn SAR testing, the EUT was set in GPRS (2Tx slots) for GSM850 and GSM1900, due to its highest frame-average power.
2. For hotspot mode SAR testing, GPRS / EDGE should be evaluated, therefore the EUT was set in GPRS 2 Tx slots for GSM850 and GSM1900, due to its highest frame-average power.

WCDMA Note:

1. Per KDB 941225 D02v02r02, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA/HSUPA/DC-HSDPA output power is < 0.25 dB higher than RMC, or reported SAR with RMC 12.2kbps setting is ≤ 1.2 W/kg, HSDPA/HSUPA/DC-HSDPA SAR evaluation can be excluded.

CDMA Note:

1. Per KDB 941225 D01v02, Head SAR for RC3+SO55 is not required because the maximum average output power of RC1 is less than 1/4 dB higher than RC3+SO55 and considering the possibility of e.g. 3rd party VoIP was additional Ev-Do Rev A (RETAP 4096 bits) SAR testing performed on RC3+SO55 worse case.
2. Per KDB 941225 D01v02, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps). If 1xRTT and Ev-Do Rev A (RETAP 4096 bits) power is high than 1/4dB higher than Re v0, SAR tests with those settings are necessary.
3. Per KDB 941225 D01v02, 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. SAR for multiple code channels (FCH + SCH) is not required when the maximum average output of each RF channel is less than 1/4 dB higher than that measured with FCH only. To account for VOIP operation, Ev-Do Rev. A (RETAP 4096 bits) SAR testing was performed at the worst position identified by 1xRTT SAR test results, for both head and body-worn accessory exposure conditions.

LTE Note:

1. Per KDB 941225 D05v02r03, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r03, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r03, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r03, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r03, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r03, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r03, smaller bandwidth SAR testing is not required.
6. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.01$ is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

14.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
01	GSM850	GPRS (2 Tx slots)	Right Cheek	Non-Trigger	251	848.8	32.00	33.00	1.259	-0.12	0.538	0.677
	GSM850	GPRS (2 Tx slots)	Right Cheek	Non-Trigger	128	824.2	31.82	33.00	1.312	-0.11	0.458	0.601
	GSM850	GPRS (2 Tx slots)	Right Cheek	Non-Trigger	189	836.4	31.92	33.00	1.282	0.14	0.525	0.673
	GSM850	GPRS (2 Tx slots)	Right Cheek	Trigger	231	844.7	31.95	33.00	1.274	-0.01	0.396	0.504
	GSM850	GPRS (2 Tx slots)	Right Cheek	Trigger	148	828.3	31.91	33.00	1.285	0.11	0.316	0.406
	GSM850	GPRS (2 Tx slots)	Right Cheek	Trigger	189	836.4	31.92	33.00	1.282	-0.01	0.325	0.417
	GSM850	GPRS (2 Tx slots)	Right Tilted	Non-Trigger	251	848.8	32.00	33.00	1.259	-0.1	0.274	0.345
	GSM850	GPRS (2 Tx slots)	Left Cheek	Non-Trigger	251	848.8	32.00	33.00	1.259	-0.11	0.431	0.543
	GSM850	GPRS (2 Tx slots)	Left Tilted	Non-Trigger	251	848.8	32.00	33.00	1.259	-0.01	0.261	0.329
	GSM1900	GPRS (2 Tx slots)	Right Cheek	Non-Trigger	512	1850.2	28.61	29.50	1.227	-0.06	0.160	0.196
	GSM1900	GPRS (2 Tx slots)	Right Tilted	Non-Trigger	512	1850.2	28.61	29.50	1.227	0.14	0.114	0.140
	GSM1900	GPRS (2 Tx slots)	Left Cheek	Non-Trigger	512	1850.2	28.61	29.50	1.227	-0.04	0.314	0.385
02	GSM1900	GPRS (2 Tx slots)	Left Cheek	Non-Trigger	661	1880	28.55	29.50	1.245	-0.01	0.317	0.395
	GSM1900	GPRS (2 Tx slots)	Left Cheek	Non-Trigger	810	1909.8	28.53	29.50	1.250	-0.04	0.297	0.371
	GSM1900	GPRS (2 Tx slots)	Left Cheek	Trigger	512	1850.2	28.61	29.50	1.227	0.11	0.204	0.250
	GSM1900	GPRS (2 Tx slots)	Left Tilted	Non-Trigger	512	1850.2	28.61	29.50	1.227	-0.07	0.089	0.109

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V	RMC 12.2Kbps	Right Cheek	Non-Trigger	4233	846.6	23.10	24.00	1.230	0.01	0.181	0.223
03	WCDMA V	RMC 12.2Kbps	Right Cheek	Non-Trigger	4132	826.4	23.09	24.00	1.233	0.01	0.325	0.401
	WCDMA V	RMC 12.2Kbps	Right Cheek	Non-Trigger	4182	836.4	23.06	24.00	1.242	0.02	0.318	0.395
	WCDMA V	RMC 12.2Kbps	Right Cheek	Trigger	4224	844.8	23.13	24.00	1.222	0.01	0.075	0.092
	WCDMA V	RMC 12.2Kbps	Right Cheek	Trigger	4183	836.4	22.92	24.00	1.282	-0.06	0.074	0.095
	WCDMA V	RMC 12.2Kbps	Right Cheek	Trigger	4141	828.2	23.12	24.00	1.225	0.02	0.080	0.098
	WCDMA V	RMC 12.2Kbps	Right Tilted	Non-Trigger	4233	846.6	23.10	24.00	1.230	-0.04	0.080	0.098
	WCDMA V	RMC 12.2Kbps	Left Cheek	Non-Trigger	4233	846.6	23.10	24.00	1.230	-0.02	0.140	0.172
	WCDMA V	RMC 12.2Kbps	Left Tilted	Non-Trigger	4233	846.6	23.10	24.00	1.230	0.01	0.088	0.108
	WCDMA IV	RMC 12.2Kbps	Right Cheek	Non-Trigger	1312	1712.4	22.89	24.00	1.291	0.09	0.104	0.134
	WCDMA IV	RMC 12.2Kbps	Right Tilted	Non-Trigger	1312	1712.4	22.89	24.00	1.291	0.02	0.090	0.116
	WCDMA IV	RMC 12.2Kbps	Left Cheek	Non-Trigger	1312	1712.4	22.89	24.00	1.291	0	0.228	0.294
04	WCDMA IV	RMC 12.2Kbps	Left Cheek	Non-Trigger	1413	1732.6	22.75	24.00	1.334	0	0.299	0.399
	WCDMA IV	RMC 12.2Kbps	Left Cheek	Non-Trigger	1513	1752.6	22.88	24.00	1.294	0.01	0.285	0.369
	WCDMA IV	RMC 12.2Kbps	Left Cheek	Trigger	1312	1712.4	22.89	24.00	1.291	0.09	0.102	0.132
	WCDMA IV	RMC 12.2Kbps	Left Tilted	Non-Trigger	1312	1712.4	22.89	24.00	1.291	0.04	0.087	0.112
	WCDMA II	RMC 12.2Kbps	Right Cheek	Non-Trigger	9400	1880	22.95	24.00	1.274	0.11	0.115	0.146
	WCDMA II	RMC 12.2Kbps	Right Tilted	Non-Trigger	9400	1880	22.95	24.00	1.274	0.04	0.090	0.115
	WCDMA II	RMC 12.2Kbps	Left Cheek	Non-Trigger	9400	1880	22.95	24.00	1.274	-0.07	0.290	0.369
	WCDMA II	RMC 12.2Kbps	Left Cheek	Non-Trigger	9262	1852.4	22.63	24.00	1.371	-0.07	0.256	0.351
05	WCDMA II	RMC 12.2Kbps	Left Cheek	Non-Trigger	9538	1907.6	22.77	24.00	1.327	-0.1	0.283	0.376
	WCDMA II	RMC 12.2Kbps	Left Cheek	Trigger	9400	1880	22.95	24.00	1.274	-0.15	0.207	0.264
	WCDMA II	RMC 12.2Kbps	Left Tilted	Non-Trigger	9400	1880	22.95	24.00	1.274	0.04	0.089	0.113



<CDMA SAR>

Plot No.	Band	Mode	Test Position	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
06	CDMA BC10	1xRTT RC3 SO55	Right Cheek	Non-Trigger	580	820.5	23.85	25.00	1.303	0.03	0.397	0.517
	CDMA BC10	RETAP 4096 bits	Right Cheek	Non-Trigger	580	820.5	23.88	25.00	1.294	-0.01	0.301	0.390
	CDMA BC10	1xRTT RC3 SO55	Right Cheek	Trigger	452	817.3	23.96	25.00	1.271	0.07	0.147	0.187
	CDMA BC10	1xRTT RC3 SO55	Right Cheek	Trigger	560	820	23.93	25.00	1.279	0.02	0.152	0.194
	CDMA BC10	1xRTT RC3 SO55	Right Cheek	Trigger	668	822.7	23.93	25.00	1.279	0.02	0.160	0.205
	CDMA BC10	1xRTT RC3 SO55	Right Tilted	Non-Trigger	580	820.5	23.85	25.00	1.303	0.01	0.208	0.271
	CDMA BC10	1xRTT RC3 SO55	Left Cheek	Non-Trigger	580	820.5	23.85	25.00	1.303	0.02	0.354	0.461
	CDMA BC10	1xRTT RC3 SO55	Left Tilted	Non-Trigger	580	820.5	23.85	25.00	1.303	-0.01	0.243	0.317
07	CDMA BC0	1xRTT RC3 SO55	Right Cheek	Non-Trigger	384	836.52	23.98	25.00	1.265	0.06	0.401	0.507
	CDMA BC0	RETAP 4096 bits	Right Cheek	Non-Trigger	384	836.52	23.99	25.00	1.262	-0.03	0.304	0.384
	CDMA BC0	1xRTT RC3 SO55	Right Cheek	Non-Trigger	1013	824.7	23.94	25.00	1.276	0.02	0.326	0.416
	CDMA BC0	1xRTT RC3 SO55	Right Cheek	Non-Trigger	777	848.31	23.86	25.00	1.300	0.08	0.314	0.408
	CDMA BC0	1xRTT RC3 SO55	Right Cheek	Trigger	107	828.2	23.95	25.00	1.274	0.07	0.140	0.178
	CDMA BC0	1xRTT RC3 SO55	Right Cheek	Trigger	383	836.5	23.98	25.00	1.265	0.01	0.193	0.244
	CDMA BC0	1xRTT RC3 SO55	Right Cheek	Trigger	660	844.8	23.99	25.00	1.262	0.03	0.189	0.238
	CDMA BC0	1xRTT RC3 SO55	Right Tilted	Non-Trigger	384	836.52	23.98	25.00	1.265	0.01	0.201	0.254
	CDMA BC0	1xRTT RC3 SO55	Left Cheek	Non-Trigger	384	836.52	23.98	25.00	1.265	0.03	0.301	0.381
	CDMA BC0	1xRTT RC3 SO55	Left Tilted	Non-Trigger	384	836.52	23.98	25.00	1.265	-0.04	0.208	0.263
	CDMA BC1	1xRTT RC3 SO55	Right Cheek	Non-Trigger	600	1880	24.03	25.00	1.250	-0.01	0.163	0.204
	CDMA BC1	1xRTT RC3 SO55	Right Tilted	Non-Trigger	600	1880	24.03	25.00	1.250	0.04	0.108	0.135
	CDMA BC1	1xRTT RC3 SO55	Left Cheek	Non-Trigger	600	1880	24.03	25.00	1.250	-0.08	0.314	0.393
	CDMA BC1	RETAP 4096 bits	Left Cheek	Non-Trigger	600	1880	24.02	25.00	1.253	-0.1	0.296	0.371
	CDMA BC1	1xRTT RC3 SO55	Left Cheek	Non-Trigger	25	1851.25	23.75	25.00	1.334	-0.09	0.286	0.381
08	CDMA BC1	1xRTT RC3 SO55	Left Cheek	Non-Trigger	1175	1908.75	23.87	25.00	1.297	-0.12	0.316	0.410
	CDMA BC1	1xRTT RC3 SO55	Left Cheek	Trigger	600	1880	24.03	25.00	1.250	0.02	0.212	0.265
	CDMA BC1	1xRTT RC3 SO55	Left Tilted	Non-Trigger	600	1880	24.03	25.00	1.250	0.04	0.101	0.126



<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
09	LTE Band 12	10M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	23095	707.5	22.70	24.00	1.349	0.04	0.147	0.198
	LTE Band 12	10M	QPSK	25RB	24Offset	Right Cheek	Non-Trigger	23095	707.5	21.69	23.00	1.352	0.03	0.139	0.188
	LTE Band 12	5M	QPSK	1RB	0offset	Right Cheek	Trigger	23038	701.8	22.91	24.00	1.285	0.05	0.082	0.105
	LTE Band 12	5M	QPSK	1RB	0offset	Right Cheek	Trigger	23095	707.5	22.66	24.00	1.361	0.03	0.088	0.120
	LTE Band 12	5M	QPSK	1RB	0offset	Right Cheek	Trigger	23152	713.2	23.00	24.00	1.259	0.05	0.099	0.125
	LTE Band 12	5M	QPSK	12RB	0offset	Right Cheek	Trigger	23152	713.2	21.93	23.00	1.279	0.1	0.056	0.072
	LTE Band 12	10M	QPSK	1RB	0Offset	Right Tilted	Non-Trigger	23095	707.5	22.70	24.00	1.349	-0.01	0.080	0.108
	LTE Band 12	10M	QPSK	25RB	24Offset	Right Tilted	Non-Trigger	23095	707.5	21.69	23.00	1.352	0.02	0.074	0.100
	LTE Band 12	10M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	23095	707.5	22.70	24.00	1.349	0.03	0.142	0.192
	LTE Band 12	10M	QPSK	25RB	24Offset	Left Cheek	Non-Trigger	23095	707.5	21.69	23.00	1.352	0.04	0.128	0.173
	LTE Band 12	10M	QPSK	1RB	0Offset	Left Tilted	Non-Trigger	23095	707.5	22.70	24.00	1.349	-0.01	0.089	0.120
	LTE Band 12	10M	QPSK	25RB	24Offset	Left Tilted	Non-Trigger	23095	707.5	21.69	23.00	1.352	0.01	0.081	0.110
	LTE Band 17	10M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	23780	709	22.70	24.00	1.349	0	0.160	0.216
	LTE Band 17	10M	QPSK	25RB	12Offset	Right Cheek	Non-Trigger	23790	710	21.63	23.00	1.371	0.02	0.141	0.193
	LTE Band 17	10M	QPSK	1RB	0Offset	Right Tilted	Non-Trigger	23780	709	22.70	24.00	1.349	0.02	0.085	0.115
	LTE Band 17	10M	QPSK	25RB	12Offset	Right Tilted	Non-Trigger	23790	710	21.63	23.00	1.371	-0.04	0.075	0.103
10	LTE Band 17	10M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	23780	709	22.70	24.00	1.349	0.06	0.226	0.305
	LTE Band 17	10M	QPSK	25RB	12Offset	Left Cheek	Non-Trigger	23790	710	21.63	23.00	1.371	0.06	0.135	0.185
	LTE Band 17	5M	QPSK	1RB	0offset	Left Cheek	Trigger	23755	706.5	22.61	24.00	1.377	0.16	0.060	0.083
	LTE Band 17	5M	QPSK	1RB	0offset	Left Cheek	Trigger	23790	710	22.61	24.00	1.377	0.11	0.081	0.112
	LTE Band 17	5M	QPSK	1RB	0offset	Left Cheek	Trigger	23825	713.5	22.58	24.00	1.387	0.17	0.076	0.105
	LTE Band 17	5M	QPSK	12RB	0offset	Left Cheek	Trigger	23825	713.5	21.62	23.00	1.374	0.1	0.044	0.060
	LTE Band 17	10M	QPSK	1RB	0Offset	Left Tilted	Non-Trigger	23780	709	22.70	24.00	1.349	0.04	0.135	0.182
	LTE Band 17	10M	QPSK	25RB	12Offset	Left Tilted	Non-Trigger	23790	710	21.63	23.00	1.371	0.03	0.084	0.115
11	LTE Band 13	10M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	23230	782	22.49	24.00	1.416	0.04	0.207	0.293
	LTE Band 13	10M	QPSK	25RB	24Offset	Right Cheek	Non-Trigger	23230	782	21.51	23.00	1.409	0.03	0.152	0.214
	LTE Band 13	5M	QPSK	1RB	0offset	Right Cheek	Trigger	23205	779.5	22.48	24.00	1.419	0.05	0.083	0.118
	LTE Band 13	5M	QPSK	1RB	0offset	Right Cheek	Trigger	23230	782	22.46	24.00	1.426	0.01	0.138	0.197
	LTE Band 13	5M	QPSK	1RB	0offset	Right Cheek	Trigger	23255	784.5	22.48	24.00	1.419	-0.01	0.142	0.202
	LTE Band 13	5M	QPSK	12RB	0offset	Right Cheek	Trigger	23255	784.5	21.53	23.00	1.403	-0.02	0.077	0.108
	LTE Band 13	10M	QPSK	1RB	0Offset	Right Tilted	Non-Trigger	23230	782	22.49	24.00	1.416	0.03	0.125	0.177
	LTE Band 13	10M	QPSK	25RB	24Offset	Right Tilted	Non-Trigger	23230	782	21.51	23.00	1.409	-0.02	0.095	0.134
	LTE Band 13	10M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	23230	782	22.49	24.00	1.416	0.03	0.175	0.248
	LTE Band 13	10M	QPSK	25RB	24Offset	Left Cheek	Non-Trigger	23230	782	21.51	23.00	1.409	-0.01	0.129	0.182
	LTE Band 13	10M	QPSK	1RB	0Offset	Left Tilted	Non-Trigger	23230	782	22.49	24.00	1.416	0.04	0.115	0.163
	LTE Band 13	10M	QPSK	25RB	24Offset	Left Tilted	Non-Trigger	23230	782	21.51	23.00	1.409	-0.06	0.090	0.127
	LTE Band 5	10M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	20525	836.5	22.63	24.00	1.371	-0.01	0.168	0.230
12	LTE Band 5	10M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	20450	829	22.58	24.00	1.387	0.06	0.184	0.255
	LTE Band 5	10M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	20600	844	22.55	24.00	1.396	0	0.142	0.198
	LTE Band 5	10M	QPSK	25RB	12Offset	Right Cheek	Non-Trigger	20525	836.5	21.65	23.00	1.365	0.04	0.150	0.205
	LTE Band 5	5M	QPSK	1RB	0offset	Right Cheek	Trigger	20442	828.2	22.90	24.00	1.288	-0.01	0.061	0.079
	LTE Band 5	5M	QPSK	1RB	0offset	Right Cheek	Trigger	20525	836.5	22.60	24.00	1.380	0.02	0.067	0.092
	LTE Band 5	5M	QPSK	1RB	0offset	Right Cheek	Trigger	20608	844.8	22.79	24.00	1.321	0.05	0.077	0.102
	LTE Band 5	5M	QPSK	12RB	0offset	Right Cheek	Trigger	20442	828.2	21.86	23.00	1.300	0.1	0.062	0.081
	LTE Band 5	10M	QPSK	1RB	0Offset	Right Tilted	Non-Trigger	20525	836.5	22.63	24.00	1.371	0.03	0.077	0.106
	LTE Band 5	10M	QPSK	25RB	12Offset	Right Tilted	Non-Trigger	20525	836.5	21.65	23.00	1.365	0.03	0.069	0.094
	LTE Band 5	10M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	20525	836.5	22.63	24.00	1.371	0.02	0.124	0.170
	LTE Band 5	10M	QPSK	25RB	12Offset	Left Cheek	Non-Trigger	20525	836.5	21.65	23.00	1.365	0.01	0.111	0.151
	LTE Band 5	10M	QPSK	1RB	0Offset	Left Tilted	Non-Trigger	20525	836.5	22.63	24.00	1.371	0	0.081	0.111
	LTE Band 5	10M	QPSK	25RB	12Offset	Left Tilted	Non-Trigger	20525	836.5	21.65	23.00	1.365	0.04	0.071	0.097



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
13	LTE Band 26	15M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	26765	821.5	22.61	24.00	1.377	-0.01	0.180	0.248
	LTE Band 26	15M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	26865	831.5	22.54	24.00	1.400	0.02	0.151	0.211
	LTE Band 26	15M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	26965	841.5	22.56	24.00	1.393	-0.01	0.120	0.167
	LTE Band 26	15M	QPSK	36RB	0Offset	Right Cheek	Non-Trigger	26865	831.5	21.66	23.00	1.361	0.03	0.135	0.184
	LTE Band 26	10M	QPSK	1RB	0offset	Right Cheek	Trigger	26748	819.8	22.76	24.00	1.330	0	0.080	0.106
	LTE Band 26	10M	QPSK	1RB	0offset	Right Cheek	Trigger	26865	831.5	22.53	24.00	1.403	0	0.121	0.170
	LTE Band 26	10M	QPSK	1RB	0offset	Right Cheek	Trigger	26982	843.2	22.72	24.00	1.343	-0.02	0.137	0.184
	LTE Band 26	10M	QPSK	25RB	0offset	Right Cheek	Trigger	26748	819.8	21.81	23.00	1.315	0.03	0.055	0.072
	LTE Band 26	15M	QPSK	1RB	0Offset	Right Tilted	Non-Trigger	26765	821.5	22.61	24.00	1.377	-0.03	0.093	0.128
	LTE Band 26	15M	QPSK	36RB	0Offset	Right Tilted	Non-Trigger	26865	831.5	21.66	23.00	1.361	-0.01	0.069	0.094
	LTE Band 26	15M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	26765	821.5	22.61	24.00	1.377	0.03	0.139	0.191
	LTE Band 26	15M	QPSK	36RB	0Offset	Left Cheek	Non-Trigger	26865	831.5	21.66	23.00	1.361	0	0.105	0.143
	LTE Band 26	15M	QPSK	1RB	0Offset	Left Tilted	Non-Trigger	26765	821.5	22.61	24.00	1.377	0	0.097	0.134
	LTE Band 26	15M	QPSK	36RB	0Offset	Left Tilted	Non-Trigger	26865	831.5	21.66	23.00	1.361	-0.04	0.073	0.099
	LTE Band 4	20M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	20050	1720	23.11	24.00	1.227	0.06	0.053	0.065
	LTE Band 4	20M	QPSK	50RB	0Offset	Right Cheek	Non-Trigger	20050	1720	22.15	23.00	1.216	0.08	0.049	0.060
	LTE Band 4	20M	QPSK	1RB	0Offset	Right Tilted	Non-Trigger	20050	1720	23.11	24.00	1.227	0.04	0.045	0.055
	LTE Band 4	20M	QPSK	50RB	0Offset	Right Tilted	Non-Trigger	20050	1720	22.15	23.00	1.216	0.06	0.039	0.047
	LTE Band 4	20M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	20050	1720	23.11	24.00	1.227	-0.05	0.122	0.150
	LTE Band 4	20M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	20175	1732.5	23.10	24.00	1.230	0.02	0.170	0.209
14	LTE Band 4	20M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	20300	1745	22.99	24.00	1.262	0.09	0.189	0.238
	LTE Band 4	20M	QPSK	50RB	0Offset	Left Cheek	Non-Trigger	20050	1720	22.15	23.00	1.216	-0.01	0.121	0.147
	LTE Band 4	20M	QPSK	1RB	0offset	Left Cheek	Trigger	20050	1720	23.11	24.00	1.227	0.06	0.103	0.126
	LTE Band 4	20M	QPSK	50RB	0offset	Left Cheek	Trigger	20050	1720	22.15	23.00	1.216	0.07	0.107	0.130
	LTE Band 4	20M	QPSK	1RB	0Offset	Left Tilted	Non-Trigger	20050	1720	23.11	24.00	1.227	0.01	0.052	0.064
	LTE Band 4	20M	QPSK	50RB	0Offset	Left Tilted	Non-Trigger	20050	1720	22.15	23.00	1.216	0.02	0.045	0.055
	LTE Band 2	20M	QPSK	1RB	0offset	Right Cheek	Non-Trigger	19100	1900	22.94	24.00	1.276	-0.02	0.143	0.183
	LTE Band 2	20M	QPSK	50RB	0offset	Right Cheek	Non-Trigger	18900	1880	22.01	23.00	1.256	0.11	0.115	0.144
	LTE Band 2	20M	QPSK	1RB	0offset	Right Tilted	Non-Trigger	19100	1900	22.94	24.00	1.276	0.04	0.101	0.129
	LTE Band 2	20M	QPSK	50RB	0offset	Right Tilted	Non-Trigger	18900	1880	22.01	23.00	1.256	0.03	0.070	0.088
15	LTE Band 2	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	19100	1900	22.94	24.00	1.276	-0.01	0.300	0.383
	LTE Band 2	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	18700	1860	22.92	24.00	1.282	-0.06	0.288	0.369
	LTE Band 2	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	18900	1880	22.93	24.00	1.279	-0.01	0.298	0.381
	LTE Band 2	20M	QPSK	50RB	0offset	Left Cheek	Non-Trigger	18900	1880	22.01	23.00	1.256	-0.01	0.241	0.303
	LTE Band 2	20M	QPSK	1RB	0offset	Left Cheek	Trigger	19100	1900	22.94	24.00	1.276	0.08	0.197	0.251
	LTE Band 2	20M	QPSK	50RB	0offset	Left Cheek	Trigger	18900	1880	22.01	23.00	1.256	0.07	0.150	0.188
	LTE Band 2	20M	QPSK	1RB	0offset	Left Tilted	Non-Trigger	19100	1900	22.94	24.00	1.276	0.03	0.088	0.112
	LTE Band 2	20M	QPSK	50RB	0offset	Left Tilted	Non-Trigger	18900	1880	22.01	23.00	1.256	0.07	0.068	0.085
	LTE Band 25	20M	QPSK	1RB	0offset	Right Cheek	Non-Trigger	26340	1880	22.99	24.00	1.262	0.02	0.136	0.172
	LTE Band 25	20M	QPSK	50RB	24offset	Right Cheek	Non-Trigger	26340	1880	22.02	23.00	1.253	0.06	0.108	0.135
	LTE Band 25	20M	QPSK	1RB	0offset	Right Tilted	Non-Trigger	26340	1880	22.99	24.00	1.262	0.06	0.077	0.097
	LTE Band 25	20M	QPSK	50RB	24offset	Right Tilted	Non-Trigger	26340	1880	22.02	23.00	1.253	0.1	0.066	0.083
16	LTE Band 25	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	26340	1880	22.99	24.00	1.262	0.04	0.298	0.376
	LTE Band 25	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	26140	1860	22.90	24.00	1.288	-0.03	0.257	0.331
	LTE Band 25	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	26590	1905	22.89	24.00	1.291	-0.01	0.259	0.334
	LTE Band 25	20M	QPSK	50RB	24offset	Left Cheek	Non-Trigger	26340	1880	22.02	23.00	1.253	0.02	0.212	0.266
	LTE Band 25	20M	QPSK	1RB	0offset	Left Cheek	Trigger	26340	1880	22.99	24.00	1.262	0.06	0.178	0.225
	LTE Band 25	20M	QPSK	50RB	24offset	Left Cheek	Trigger	26340	1880	22.02	23.00	1.253	0.08	0.145	0.182
	LTE Band 25	20M	QPSK	1RB	0offset	Left Tilted	Non-Trigger	26340	1880	22.99	24.00	1.262	0.03	0.097	0.122
	LTE Band 25	20M	QPSK	50RB	24offset	Left Tilted	Non-Trigger	26340	1880	22.02	23.00	1.253	0.07	0.075	0.094

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7	20M	QPSK	1RB	0Offset	Right Cheek	Non-Trigger	21100	2535	23.10	24.00	1.230	0	0.072	0.089
	LTE Band 7	20M	QPSK	50RB	0Offset	Right Cheek	Non-Trigger	21100	2535	22.01	23.00	1.256	-0.08	0.056	0.070
	LTE Band 7	20M	QPSK	1RB	0Offset	Right Tilted	Non-Trigger	21100	2535	23.10	24.00	1.230	0.19	0.086	0.106
	LTE Band 7	20M	QPSK	50RB	0Offset	Right Tilted	Non-Trigger	21100	2535	22.01	23.00	1.256	0.17	0.072	0.090
	LTE Band 7	20M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	21100	2535	23.10	24.00	1.230	0	0.151	0.186
	LTE Band 7	20M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	20850	2510	22.79	24.00	1.321	-0.05	0.113	0.149
17	LTE Band 7	20M	QPSK	1RB	0Offset	Left Cheek	Non-Trigger	21350	2560	22.97	24.00	1.268	-0.17	0.153	0.194
	LTE Band 7	20M	QPSK	50RB	0Offset	Left Cheek	Non-Trigger	21100	2535	22.01	23.00	1.256	0.14	0.123	0.154
	LTE Band 7	20M	QPSK	1RB	0offset	Left Cheek	Trigger	21100	2535	23.10	24.00	1.230	0.07	0.147	0.181
	LTE Band 7	20M	QPSK	50RB	0offset	Left Cheek	Trigger	21100	2535	22.01	23.00	1.256	0.09	0.108	0.136
	LTE Band 7	20M	QPSK	1RB	0Offset	Left Tilted	Non-Trigger	21100	2535	23.10	24.00	1.230	0.09	0.076	0.094
	LTE Band 7	20M	QPSK	50RB	0Offset	Left Tilted	Non-Trigger	21100	2535	22.01	23.00	1.256	0.01	0.064	0.080

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41	20M	QPSK	1RB	0offset	Right Cheek	Non-Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	-0.05	0.078	0.095
	LTE Band 41	20M	QPSK	50RB	49offset	Right Cheek	Non-Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	0.17	0.035	0.042
	LTE Band 41	20M	QPSK	1RB	0offset	Right Tilted	Non-Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	-0.04	0.068	0.083
	LTE Band 41	20M	QPSK	50RB	49offset	Right Tilted	Non-Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	0.04	0.038	0.046
18	LTE Band 41	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	-0.03	0.163	0.199
	LTE Band 41	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	40620	2593	23.10	24.00	1.230	62.9	1.01	0.04	0.151	0.187
	LTE Band 41	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	41490	2680	23.03	24.00	1.250	62.9	1.01	-0.04	0.156	0.196
	LTE Band 41	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	40185	2549.5	23.09	24.00	1.233	62.9	1.01	0.03	0.153	0.190
	LTE Band 41	20M	QPSK	1RB	0offset	Left Cheek	Non-Trigger	41055	2636.5	22.98	24.00	1.265	62.9	1.01	-0.02	0.150	0.191
	LTE Band 41	20M	QPSK	50RB	49offset	Left Cheek	Non-Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	-0.04	0.084	0.101
	LTE Band 41	20M	QPSK	1RB	0offset	Left Cheek	Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	0.09	0.076	0.093
	LTE Band 41	20M	QPSK	50RB	49offset	Left Cheek	Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	0.05	0.052	0.063
	LTE Band 41	20M	QPSK	1RB	0offset	Left Tilted	Non-Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	0.03	0.065	0.079
	LTE Band 41	20M	QPSK	50RB	49offset	Left Tilted	Non-Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	0.07	0.032	0.039

**<WLAN SAR>**

Plot No.	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
19	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	6	2437	19.96	20.00	1.009	100.00	1.000	-0.1	0.417	0.421
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	6	2437	22.92	23.00	1.019	97.17	1.029	-0.01	0.887	0.930
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	1	2412	19.50	20.00	1.122	97.17	1.029	0.04	0.427	0.493
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	11	2462	19.41	20.00	1.146	97.17	1.029	0.02	0.483	0.569
	WLAN2.4GHz	802.11n-HT20 MCS0	Right Cheek	6	2437	21.74	22.00	1.062	97.98	1.021	0.12	0.720	0.780
	WLAN2.4GHz	802.11ac-VHT20 MCS0	Right Cheek	6	2437	22.12	22.50	1.091	97.00	1.031	-0.16	0.657	0.739
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	6	2437	19.96	20.00	1.009	100.00	1.000	0.07	0.321	0.324
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	6	2437	19.96	20.00	1.009	100.00	1.000	0.03	0.325	0.328
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	6	2437	19.96	20.00	1.009	100.00	1.000	0.06	0.308	0.311
20	WLAN5GHz	802.11a 6Mbps	Right Cheek	40	5200	22.80	23.00	1.047	97.64	1.024	-0.16	0.628	0.673
	WLAN5GHz	802.11a 6Mbps	Right Cheek	44	5220	21.69	22.00	1.074	97.64	1.024	0.07	0.368	0.405
	WLAN5GHz	802.11n-HT20 MCS0	Right Cheek	40	5200	21.03	21.50	1.114	97.46	1.026	0.07	0.374	0.428
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	46	5230	19.32	19.50	1.042	94.95	1.053	-0.15	0.215	0.236
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	44	5220	22.75	23.00	1.059	97.49	1.026	-0.19	0.422	0.459
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Cheek	46	5230	21.31	21.50	1.045	95.00	1.053	-0.12	0.304	0.334
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	42	5210	19.47	19.50	1.007	90.59	1.104	0.08	0.208	0.231
	WLAN5GHz	802.11a 6Mbps	Right Tilted	40	5200	22.80	23.00	1.047	97.64	1.024	0.13	0.241	0.258
	WLAN5GHz	802.11a 6Mbps	Left Cheek	40	5200	22.80	23.00	1.047	97.64	1.024	0.09	0.180	0.193
	WLAN5GHz	802.11a 6Mbps	Left Tilted	40	5200	22.80	23.00	1.047	97.64	1.024	0.1	0.144	0.154
	WLAN5GHz	802.11a 6Mbps	Right Cheek	56	5280	22.76	23.00	1.057	97.64	1.024	-0.12	0.668	0.723
	WLAN5GHz	802.11n-HT20 MCS0	Right Cheek	52	5260	21.28	21.50	1.052	97.46	1.026	-0.08	0.434	0.468
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	54	5270	19.50	19.50	1.000	94.95	1.053	-0.19	0.255	0.269
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	56	5280	22.56	23.00	1.107	97.49	1.026	-0.12	0.752	0.854
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	60	5300	22.16	22.50	1.081	97.49	1.026	-0.16	0.497	0.551
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Cheek	54	5270	21.09	21.50	1.099	95.00	1.053	-0.08	0.339	0.392
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	58	5290	19.39	19.50	1.026	90.59	1.104	-0.13	0.177	0.200
	WLAN5GHz	802.11a 6Mbps	Right Tilted	56	5280	22.76	23.00	1.057	97.64	1.024	-0.02	0.189	0.205
	WLAN5GHz	802.11a 6Mbps	Left Cheek	56	5280	22.76	23.00	1.057	97.64	1.024	-0.01	0.169	0.183
	WLAN5GHz	802.11a 6Mbps	Left Tilted	56	5280	22.76	23.00	1.057	97.64	1.024	-0.03	0.119	0.129
21	WLAN5GHz	802.11a 6Mbps	Right Cheek	112	5560	22.75	23.00	1.059	97.64	1.024	0.03	0.605	0.656
	WLAN5GHz	802.11a 6Mbps	Right Cheek	108	5540	22.71	23.00	1.069	97.64	1.024	0.19	0.566	0.620
	WLAN5GHz	802.11a 6Mbps	Right Cheek	144	5720	22.65	23.00	1.084	97.64	1.024	-0.15	0.667	0.740
	WLAN5GHz	802.11n-HT20 MCS0	Right Cheek	144	5720	23.31	23.50	1.045	97.46	1.026	-0.19	0.715	0.766
	WLAN5GHz	802.11n-HT20 MCS0	Right Cheek	108	5540	20.93	21.50	1.140	97.46	1.026	-0.08	0.528	0.618
	WLAN5GHz	802.11n-HT20 MCS0	Right Cheek	116	5580	21.08	21.50	1.102	97.46	1.026	-0.03	0.572	0.646
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	142	5710	21.69	22.00	1.074	94.95	1.053	0.1	0.642	0.726
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	102	5510	16.52	17.00	1.117	94.95	1.053	-0.04	0.146	0.172
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	110	5550	20.62	21.00	1.091	94.95	1.053	0.07	0.456	0.524
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	134	5670	20.29	20.50	1.050	94.95	1.053	-0.1	0.525	0.580
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	136	5680	22.16	22.50	1.081	97.49	1.026	-0.01	0.603	0.669
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	104	5520	22.12	22.50	1.091	97.49	1.026	0.01	0.610	0.683
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	112	5560	22.10	22.50	1.096	97.49	1.026	-0.17	0.535	0.602
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Cheek	110	5550	21.84	22.00	1.038	95.00	1.053	0.02	0.666	0.728
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Cheek	102	5510	17.25	17.50	1.059	95.00	1.053	-0.12	0.204	0.228
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Cheek	134	5670	21.84	22.00	1.038	95.00	1.053	-0.13	0.780	0.852
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Cheek	142	5710	21.48	22.00	1.127	95.00	1.053	-0.16	0.743	0.882
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	138	5690	19.38	19.50	1.028	90.59	1.104	-0.19	0.463	0.525
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	106	5530	17.04	17.50	1.112	90.59	1.104	-0.1	0.170	0.209
	WLAN5GHz	802.11a 6Mbps	Right Tilted	112	5560	22.75	23.00	1.059	97.64	1.024	-0.06	0.139	0.151
	WLAN5GHz	802.11a 6Mbps	Left Cheek	112	5560	22.75	23.00	1.059	97.64	1.024	-0.07	0.280	0.304
	WLAN5GHz	802.11a 6Mbps	Left Tilted	112	5560	22.75	23.00	1.059	97.64	1.024	-0.08	0.239	0.259

Plot No.	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5GHz	802.11a 6Mbps	Right Cheek	153	5765	22.11	22.50	1.094	97.64	1.024	-0.14	0.706	0.791
	WLAN5GHz	802.11a 6Mbps	Right Cheek	157	5785	21.95	22.50	1.135	97.64	1.024	-0.18	0.704	0.818
23	WLAN5GHz	802.11a 6Mbps	Right Cheek	161	5805	22.08	22.50	1.102	97.64	1.024	0.13	0.763	0.861
	WLAN5GHz	802.11n-HT20 MCS0	Right Cheek	157	5785	22.13	22.50	1.089	97.46	1.026	-0.15	0.675	0.754
	WLAN5GHz	802.11n-HT20 MCS0	Right Cheek	153	5765	22.03	22.50	1.114	97.46	1.026	-0.1	0.653	0.747
	WLAN5GHz	802.11n-HT20 MCS0	Right Cheek	161	5805	22.10	22.50	1.096	97.46	1.026	-0.1	0.695	0.782
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	159	5795	20.10	20.50	1.096	94.95	1.053	0.04	0.498	0.575
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	161	5805	22.18	22.50	1.076	97.49	1.026	-0.11	0.689	0.761
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	149	5745	20.50	20.50	1.000	97.49	1.026	-0.13	0.599	0.615
	WLAN5GHz	802.11ac-VHT20 MCS0	Right Cheek	157	5785	22.18	22.50	1.076	97.49	1.026	-0.15	0.707	0.781
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Cheek	159	5795	21.57	22.00	1.104	95.00	1.053	-0.12	0.583	0.678
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Cheek	151	5755	17.95	18.50	1.135	95.00	1.053	0.1	0.257	0.307
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	155	5775	18.61	19.00	1.094	90.59	1.104	0.15	0.274	0.331
	WLAN5GHz	802.11a 6Mbps	Right Tilted	153	5765	22.11	22.50	1.094	97.64	1.024	0.19	0.223	0.250
	WLAN5GHz	802.11a 6Mbps	Left Cheek	153	5765	22.11	22.50	1.094	97.64	1.024	0.06	0.253	0.283
	WLAN5GHz	802.11a 6Mbps	Left Tilted	153	5765	22.11	22.50	1.094	97.64	1.024	-0.13	0.223	0.250

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Right Cheek	39	2441	9.63	10.00	1.089	-0.01	0.065	0.071
	Bluetooth	1Mbps	Right Cheek	0	2402	7.17	9.00	1.524	-0.13	0.039	0.059
24	Bluetooth	1Mbps	Right Cheek	78	2480	8.15	9.00	1.216	0.06	0.059	0.072
	Bluetooth	1Mbps	Right Tilted	39	2441	9.63	10.00	1.089	0.19	0.031	0.034
	Bluetooth	1Mbps	Left Cheek	39	2441	9.63	10.00	1.089	-0.15	0.007	0.007
	Bluetooth	1Mbps	Left Tilted	39	2441	9.63	10.00	1.089	-0.12	0.011	0.012

14.2 Wireless Router SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
25	GSM850	GPRS (2 Tx slots)	Front	1cm	OFF	251	848.8	32.00	33.00	1.259	-0.1	0.705	0.888
	GSM850	GPRS (2 Tx slots)	Front	1cm	OFF	128	824.2	31.82	33.00	1.312	-0.06	0.569	0.747
	GSM850	GPRS (2 Tx slots)	Front	1cm	OFF	189	836.4	31.92	33.00	1.282	-0.12	0.624	0.800
	GSM850	GPRS (2 Tx slots)	Back	1cm	OFF	251	848.8	32.00	33.00	1.259	-0.12	0.497	0.626
	GSM850	GPRS (2 Tx slots)	Left Side	1cm	OFF	251	848.8	32.00	33.00	1.259	-0.03	0.088	0.111
	GSM850	GPRS (2 Tx slots)	Right Side	1cm	OFF	251	848.8	32.00	33.00	1.259	-0.05	0.439	0.553
	GSM850	GPRS (2 Tx slots)	Bottom Side	1cm	OFF	251	848.8	32.00	33.00	1.259	0.01	0.526	0.662
	GSM1900	GPRS (2 Tx slots)	Front	1cm	ON	512	1850.2		23.50	1.000	0.03	0.843	0.843
	GSM1900	GPRS (2 Tx slots)	Front	1cm	ON	661	1880		23.50	1.000	0.03	0.767	0.767
	GSM1900	GPRS (2 Tx slots)	Front	1cm	ON	810	1909.8		23.50	1.000	0.1	0.621	0.621
	GSM1900	GPRS (2 Tx slots)	Back	1cm	ON	512	1850.2		23.50	1.000	0.07	0.749	0.749
	GSM1900	GPRS (2 Tx slots)	Left Side	1cm	ON	512	1850.2		23.50	1.000	-0.02	0.130	0.130
	GSM1900	GPRS (2 Tx slots)	Right Side	1cm	ON	512	1850.2		23.50	1.000	0.11	0.026	0.026
	GSM1900	GPRS (2 Tx slots)	Bottom Side	1cm	ON	512	1850.2		23.50	1.000	0.04	1.250	0.669
26	GSM1900	GPRS (2 Tx slots)	Bottom Side	1cm	ON	661	1880		23.50	1.000	-0.06	1.370	1.370
	GSM1900	GPRS (2 Tx slots)	Bottom Side	1cm	ON	810	1909.8		23.50	1.000	-0.07	1.300	1.300

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
27	WCDMA V	RMC 12.2Kbps	Front	1cm	OFF	4233	846.6	23.10	24.00	1.230	-0.04	0.535	0.658
	WCDMA V	RMC 12.2Kbps	Front	1cm	OFF	4132	826.4	23.09	24.00	1.233	-0.04	0.519	0.640
	WCDMA V	RMC 12.2Kbps	Front	1cm	OFF	4182	836.4	23.06	24.00	1.242	-0.05	0.518	0.643
	WCDMA V	RMC 12.2Kbps	Back	1cm	OFF	4233	846.6	23.10	24.00	1.230	-0.03	0.475	0.584
	WCDMA V	RMC 12.2Kbps	Left Side	1cm	OFF	4233	846.6	23.10	24.00	1.230	0	0.240	0.295
	WCDMA V	RMC 12.2Kbps	Right Side	1cm	OFF	4233	846.6	23.10	24.00	1.230	-0.01	0.521	0.641
	WCDMA V	RMC 12.2Kbps	Bottom Side	1cm	OFF	4233	846.6	23.10	24.00	1.230	0.02	0.328	0.404
	WCDMA IV	RMC 12.2Kbps	Front	1cm	ON	1312	1712.4		19.50	1.000	0.03	0.883	0.883
	WCDMA IV	RMC 12.2Kbps	Front	1cm	ON	1413	1732.6		19.50	1.000	-0.04	0.960	0.960
	WCDMA IV	RMC 12.2Kbps	Front	1cm	ON	1513	1752.6		19.50	1.000	0.08	1.140	1.140
	WCDMA IV	RMC 12.2Kbps	Back	1cm	ON	1312	1712.4		19.50	1.000	0.04	0.712	0.712
	WCDMA IV	RMC 12.2Kbps	Left Side	1cm	ON	1312	1712.4		19.50	1.000	0.01	0.124	0.124
	WCDMA IV	RMC 12.2Kbps	Right Side	1cm	ON	1312	1712.4		19.50	1.000	0.06	0.090	0.090
	WCDMA IV	RMC 12.2Kbps	Bottom Side	1cm	ON	1312	1712.4		19.50	1.000	-0.04	1.060	1.060
	WCDMA IV	RMC 12.2Kbps	Bottom Side	1cm	ON	1413	1732.6		19.50	1.000	-0.04	1.220	1.220
28	WCDMA IV	RMC 12.2Kbps	Bottom Side	1cm	ON	1513	1752.6		19.50	1.000	-0.02	1.380	1.380
	WCDMA II	RMC 12.2Kbps	Front	1cm	ON	9400	1880		18.50	1.000	0.01	0.556	0.556
	WCDMA II	RMC 12.2Kbps	Back	1cm	ON	9400	1880		18.50	1.000	0.02	0.440	0.440
	WCDMA II	RMC 12.2Kbps	Left Side	1cm	ON	9400	1880		18.50	1.000	-0.08	0.073	0.073
	WCDMA II	RMC 12.2Kbps	Right Side	1cm	ON	9400	1880		18.50	1.000	-0.01	0.022	0.022
29	WCDMA II	RMC 12.2Kbps	Bottom Side	1cm	ON	9400	1880		18.50	1.000	-0.07	1.070	1.070
	WCDMA II	RMC 12.2Kbps	Bottom Side	1cm	ON	9262	1852.4		18.50	1.000	-0.04	0.969	0.969
	WCDMA II	RMC 12.2Kbps	Bottom Side	1cm	ON	9538	1907.6		18.50	1.000	-0.06	0.998	0.998



<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC10	RTAP 153.6Kbps	Front	1cm	OFF	580	820.5	23.90	25.00	1.288	0.01	0.396	0.510
	CDMA BC10	RTAP 153.6Kbps	Back	1cm	OFF	580	820.5	23.90	25.00	1.288	0.01	0.332	0.428
	CDMA BC10	RTAP 153.6Kbps	Left Side	1cm	OFF	580	820.5	23.90	25.00	1.288	0.02	0.210	0.271
30	CDMA BC10	RTAP 153.6Kbps	Right Side	1cm	OFF	580	820.5	23.90	25.00	1.288	0	0.493	0.635
	CDMA BC10	RTAP 153.6Kbps	Bottom Side	1cm	OFF	580	820.5	23.90	25.00	1.288	0.01	0.255	0.329
	CDMA BC0	RTAP 153.6Kbps	Front	1cm	OFF	384	836.52	24.01	25.00	1.256	0.01	0.412	0.517
	CDMA BC0	RTAP 153.6Kbps	Back	1cm	OFF	384	836.52	24.01	25.00	1.256	0.01	0.324	0.407
	CDMA BC0	RTAP 153.6Kbps	Left Side	1cm	OFF	384	836.52	24.01	25.00	1.256	0	0.199	0.250
31	CDMA BC0	RTAP 153.6Kbps	Right Side	1cm	OFF	384	836.52	24.01	25.00	1.256	0.02	0.483	0.607
	CDMA BC0	RTAP 153.6Kbps	Right Side	1cm	OFF	1013	824.7	23.98	25.00	1.265	-0.01	0.426	0.539
	CDMA BC0	RTAP 153.6Kbps	Right Side	1cm	OFF	777	848.31	23.95	25.00	1.274	-0.01	0.393	0.500
	CDMA BC0	RTAP 153.6Kbps	Bottom Side	1cm	OFF	384	836.52	24.01	25.00	1.256	-0.01	0.262	0.329
	CDMA BC1	RTAP 153.6Kbps	Front	1cm	ON	600	1880		18.50	1.000	0.08	0.476	0.476
	CDMA BC1	RTAP 153.6Kbps	Back	1cm	ON	600	1880		18.50	1.000	0.03	0.412	0.412
	CDMA BC1	RTAP 153.6Kbps	Left Side	1cm	ON	600	1880		18.50	1.000	0.04	0.101	0.101
	CDMA BC1	RTAP 153.6Kbps	Right Side	1cm	ON	600	1880		18.50	1.000	0.14	0.021	0.021
32	CDMA BC1	RTAP 153.6Kbps	Bottom Side	1cm	ON	600	1880		18.50	1.000	-0.06	0.957	0.957
	CDMA BC1	RTAP 153.6Kbps	Bottom Side	1cm	ON	25	1851.25		18.50	1.000	-0.02	0.920	0.920
	CDMA BC1	RTAP 153.6Kbps	Bottom Side	1cm	ON	1175	1908.75		18.50	1.000	-0.01	0.925	0.925

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12	10M	QPSK	1RB	0Offset	Front	1cm	OFF	23095	707.5	22.70	24.00	1.349	0	0.322	0.434
	LTE Band 12	10M	QPSK	25RB	24Offset	Front	1cm	OFF	23095	707.5	21.69	23.00	1.352	-0.01	0.202	0.273
33	LTE Band 12	10M	QPSK	1RB	0Offset	Back	1cm	OFF	23095	707.5	22.70	24.00	1.349	-0.02	0.348	0.469
	LTE Band 12	10M	QPSK	25RB	24Offset	Back	1cm	OFF	23095	707.5	21.69	23.00	1.352	-0.01	0.212	0.287
	LTE Band 12	10M	QPSK	1RB	0Offset	Left Side	1cm	OFF	23095	707.5	22.70	24.00	1.349	0.01	0.266	0.359
	LTE Band 12	10M	QPSK	25RB	24Offset	Left Side	1cm	OFF	23095	707.5	21.69	23.00	1.352	0.04	0.161	0.218
	LTE Band 12	10M	QPSK	1RB	0Offset	Right Side	1cm	OFF	23095	707.5	22.70	24.00	1.349	-0.01	0.344	0.464
	LTE Band 12	10M	QPSK	25RB	24Offset	Right Side	1cm	OFF	23095	707.5	21.69	23.00	1.352	0.01	0.209	0.283
	LTE Band 12	10M	QPSK	1RB	0Offset	Bottom Side	1cm	OFF	23095	707.5	22.70	24.00	1.349	-0.01	0.134	0.181
	LTE Band 12	10M	QPSK	25RB	24Offset	Bottom Side	1cm	OFF	23095	707.5	21.69	23.00	1.352	-0.02	0.089	0.120
	LTE Band 17	10M	QPSK	1RB	0Offset	Front	1cm	OFF	23780	709	22.70	24.00	1.349	-0.01	0.337	0.455
	LTE Band 17	10M	QPSK	25RB	12Offset	Front	1cm	OFF	23790	710	21.63	23.00	1.371	-0.02	0.199	0.273
34	LTE Band 17	10M	QPSK	1RB	0Offset	Back	1cm	OFF	23780	709	22.70	24.00	1.349	0	0.359	0.484
	LTE Band 17	10M	QPSK	25RB	12Offset	Back	1cm	OFF	23790	710	21.63	23.00	1.371	0	0.210	0.288
	LTE Band 17	10M	QPSK	1RB	0Offset	Left Side	1cm	OFF	23780	709	22.70	24.00	1.349	0	0.273	0.368
	LTE Band 17	10M	QPSK	25RB	12Offset	Left Side	1cm	OFF	23790	710	21.63	23.00	1.371	-0.01	0.162	0.222
	LTE Band 17	10M	QPSK	1RB	0Offset	Right Side	1cm	OFF	23780	709	22.70	24.00	1.349	0	0.353	0.476
	LTE Band 17	10M	QPSK	25RB	12Offset	Right Side	1cm	OFF	23790	710	21.63	23.00	1.371	0	0.208	0.285
	LTE Band 17	10M	QPSK	1RB	0Offset	Bottom Side	1cm	OFF	23780	709	22.70	24.00	1.349	-0.01	0.140	0.189
	LTE Band 17	10M	QPSK	25RB	12Offset	Bottom Side	1cm	OFF	23790	709	21.63	23.00	1.371	0.06	0.087	0.119



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
35	LTE Band 13	10M	QPSK	1RB	0Offset	Front	1cm	OFF	23230	782	22.49	24.00	1.416	-0.04	0.301	0.426
	LTE Band 13	10M	QPSK	25RB	24Offset	Front	1cm	OFF	23230	782	21.51	23.00	1.409	-0.03	0.234	0.330
	LTE Band 13	10M	QPSK	1RB	0Offset	Back	1cm	OFF	23230	782	22.49	24.00	1.416	-0.05	0.271	0.384
	LTE Band 13	10M	QPSK	25RB	24Offset	Back	1cm	OFF	23230	782	21.51	23.00	1.409	-0.04	0.174	0.245
	LTE Band 13	10M	QPSK	1RB	0Offset	Left Side	1cm	OFF	23230	782	22.49	24.00	1.416	-0.04	0.185	0.262
	LTE Band 13	10M	QPSK	25RB	24Offset	Left Side	1cm	OFF	23230	782	21.51	23.00	1.409	-0.06	0.124	0.175
	LTE Band 13	10M	QPSK	1RB	0Offset	Right Side	1cm	OFF	23230	782	22.49	24.00	1.416	-0.02	0.279	0.395
	LTE Band 13	10M	QPSK	25RB	24Offset	Right Side	1cm	OFF	23230	782	21.51	23.00	1.409	0.04	0.205	0.289
	LTE Band 13	10M	QPSK	1RB	0Offset	Bottom Side	1cm	OFF	23230	782	22.49	24.00	1.416	-0.03	0.173	0.245
	LTE Band 13	10M	QPSK	25RB	24Offset	Bottom Side	1cm	OFF	23230	782	21.51	23.00	1.409	0.04	0.122	0.172
	LTE Band 5	10M	QPSK	1RB	0offset	Front	1cm	OFF	20525	836.5	22.63	24.00	1.371	0.02	0.477	0.654
	LTE Band 5	10M	QPSK	25RB	12offset	Front	1cm	OFF	20525	836.5	21.65	23.00	1.365	-0.09	0.291	0.397
	LTE Band 5	10M	QPSK	1RB	0offset	Back	1cm	OFF	20525	836.5	22.63	24.00	1.371	0.02	0.335	0.459
	LTE Band 5	10M	QPSK	25RB	12offset	Back	1cm	OFF	20525	836.5	21.65	23.00	1.365	-0.07	0.205	0.280
	LTE Band 5	10M	QPSK	1RB	0offset	Left Side	1cm	OFF	20525	836.5	22.63	24.00	1.371	-0.01	0.261	0.358
	LTE Band 5	10M	QPSK	25RB	12offset	Left Side	1cm	OFF	20525	836.5	21.65	23.00	1.365	0	0.156	0.213
	LTE Band 5	10M	QPSK	1RB	0offset	Right Side	1cm	OFF	20525	836.5	22.63	24.00	1.371	-0.02	0.486	0.666
36	LTE Band 5	10M	QPSK	1RB	0offset	Right Side	1cm	OFF	20450	829	22.58	24.00	1.387	-0.01	0.549	0.761
	LTE Band 5	10M	QPSK	1RB	0offset	Right Side	1cm	OFF	20600	844	22.55	24.00	1.396	0	0.451	0.630
	LTE Band 5	10M	QPSK	25RB	12offset	Right Side	1cm	OFF	20525	836.5	21.65	23.00	1.365	-0.02	0.295	0.403
	LTE Band 5	10M	QPSK	1RB	0offset	Bottom Side	1cm	OFF	20525	836.5	22.63	24.00	1.371	-0.08	0.294	0.403
	LTE Band 5	10M	QPSK	25RB	12offset	Bottom Side	1cm	OFF	20525	836.5	21.65	23.00	1.365	-0.13	0.181	0.247
	LTE Band 26	15M	QPSK	1RB	0offset	Front	1cm	OFF	26765	821.5	22.61	24.00	1.377	-0.06	0.315	0.434
	LTE Band 26	15M	QPSK	36RB	0offset	Front	1cm	OFF	26865	831.5	21.66	23.00	1.361	-0.06	0.238	0.324
	LTE Band 26	15M	QPSK	1RB	0offset	Back	1cm	OFF	26765	821.5	22.61	24.00	1.377	-0.01	0.268	0.369
	LTE Band 26	15M	QPSK	36RB	0offset	Back	1cm	OFF	26865	831.5	21.66	23.00	1.361	-0.01	0.200	0.272
	LTE Band 26	15M	QPSK	1RB	0offset	Left Side	1cm	OFF	26765	821.5	22.61	24.00	1.377	0	0.216	0.297
	LTE Band 26	15M	QPSK	36RB	0offset	Left Side	1cm	OFF	26865	831.5	21.66	23.00	1.361	0	0.152	0.207
	LTE Band 26	15M	QPSK	1RB	0offset	Right Side	1cm	OFF	26765	821.5	22.61	24.00	1.377	-0.01	0.375	0.516
37	LTE Band 26	15M	QPSK	1RB	0offset	Right Side	1cm	OFF	26865	831.5	22.54	24.00	1.400	0	0.459	0.642
	LTE Band 26	15M	QPSK	1RB	0offset	Right Side	1cm	OFF	26965	841.5	22.56	24.00	1.393	0.02	0.376	0.524
	LTE Band 26	15M	QPSK	36RB	0offset	Right Side	1cm	OFF	26865	831.5	21.66	23.00	1.361	-0.04	0.284	0.387
	LTE Band 26	15M	QPSK	1RB	0offset	Bottom Side	1cm	OFF	26765	821.5	22.61	24.00	1.377	-0.02	0.202	0.278
	LTE Band 26	15M	QPSK	36RB	0offset	Bottom Side	1cm	OFF	26865	831.5	21.66	23.00	1.361	-0.05	0.163	0.222



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 4	20M	QPSK	1RB	0offset	Front	1cm	ON	20050	1720		20.00	1.000	0.16	0.836	0.836
	LTE Band 4	20M	QPSK	1RB	0offset	Front	1cm	ON	20175	1732.5		20.00	1.000	0.1	0.952	0.952
	LTE Band 4	20M	QPSK	1RB	0offset	Front	1cm	ON	20300	1745		20.00	1.000	0.09	0.989	0.989
	LTE Band 4	20M	QPSK	50RB	0Offset	Front	1cm	ON	20050	1720		20.00	1.000	0.07	0.687	0.687
	LTE Band 4	20M	QPSK	100RB	0Offset	Front	1cm	ON	20175	1732.5		20.00	1.000	0.09	0.749	0.749
	LTE Band 4	20M	QPSK	1RB	0offset	Back	1cm	ON	20050	1720		20.00	1.000	0.01	0.860	0.860
	LTE Band 4	20M	QPSK	1RB	0offset	Back	1cm	ON	20175	1732.5		20.00	1.000	0.03	0.958	0.958
	LTE Band 4	20M	QPSK	1RB	0offset	Back	1cm	ON	20300	1745		20.00	1.000	0.06	1.020	1.020
	LTE Band 4	20M	QPSK	50RB	0Offset	Back	1cm	ON	20050	1720		20.00	1.000	0.03	0.677	0.677
	LTE Band 4	20M	QPSK	100RB	0Offset	Back	1cm	ON	20175	1732.5		20.00	1.000	0.1	0.779	0.779
	LTE Band 4	20M	QPSK	1RB	0Offset	Left Side	1cm	ON	20050	1720		20.00	1.000	0.03	0.095	0.095
	LTE Band 4	20M	QPSK	50RB	0Offset	Left Side	1cm	ON	20050	1720		20.00	1.000	0.04	0.095	0.095
	LTE Band 4	20M	QPSK	1RB	0Offset	Right Side	1cm	ON	20050	1720		20.00	1.000	0	0.072	0.072
	LTE Band 4	20M	QPSK	50RB	0Offset	Right Side	1cm	ON	20050	1720		20.00	1.000	0.08	0.069	0.069
	LTE Band 4	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	20050	1720		20.00	1.000	-0.05	0.988	0.988
	LTE Band 4	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	20175	1732.5		20.00	1.000	-0.08	1.110	1.110
38	LTE Band 4	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	20300	1745		20.00	1.000	-0.09	1.200	1.200
	LTE Band 4	20M	QPSK	50RB	0Offset	Bottom Side	1cm	ON	20050	1720		20.00	1.000	-0.09	0.788	0.788
	LTE Band 4	20M	QPSK	100RB	0Offset	Bottom Side	1cm	ON	20175	1732.5		20.00	1.000	-0.03	0.868	0.868
	LTE Band 2	20M	QPSK	1RB	0offset	Front	1cm	ON	19100	1900		18.00	1.000	0.06	0.713	0.713
	LTE Band 2	20M	QPSK	50RB	0offset	Front	1cm	ON	18900	1880		18.00	1.000	0	0.578	0.578
	LTE Band 2	20M	QPSK	1RB	0offset	Back	1cm	ON	19100	1900		18.00	1.000	-0.02	0.584	0.584
	LTE Band 2	20M	QPSK	50RB	0offset	Back	1cm	ON	18900	1880		18.00	1.000	-0.01	0.482	0.482
	LTE Band 2	20M	QPSK	1RB	0offset	Left Side	1cm	ON	19100	1900		18.00	1.000	-0.1	0.108	0.108
	LTE Band 2	20M	QPSK	50RB	0offset	Left Side	1cm	ON	18900	1880		18.00	1.000	0.03	0.105	0.105
	LTE Band 2	20M	QPSK	1RB	0offset	Right Side	1cm	ON	19100	1900		18.00	1.000	0.03	0.031	0.031
	LTE Band 2	20M	QPSK	50RB	0offset	Right Side	1cm	ON	18900	1880		18.00	1.000	0.05	0.026	0.026
39	LTE Band 2	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	19100	1900		18.00	1.000	-0.04	1.280	1.280
	LTE Band 2	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	18700	1860		18.00	1.000	0.02	1.240	1.240
	LTE Band 2	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	18900	1880		18.00	1.000	-0.03	1.270	1.270
	LTE Band 2	20M	QPSK	50RB	0offset	Bottom Side	1cm	ON	18900	1880		18.00	1.000	-0.04	0.994	0.994
	LTE Band 2	20M	QPSK	50RB	0offset	Bottom Side	1cm	ON	18700	1860		18.00	1.000	-0.04	0.970	0.970
	LTE Band 2	20M	QPSK	50RB	0offset	Bottom Side	1cm	ON	19100	1900		18.00	1.000	-0.03	0.996	0.996
	LTE Band 2	20M	QPSK	100RB	0offset	Bottom Side	1cm	ON	18900	1880		18.00	1.000	-0.02	1.000	1.000



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 25	20M	QPSK	1RB	0offset	Front	1cm	ON	26340	1880		18.50	1.000	0.12	0.653	0.653
	LTE Band 25	20M	QPSK	50RB	24offset	Front	1cm	ON	26340	1880		18.50	1.000	0.15	0.515	0.515
	LTE Band 25	20M	QPSK	1RB	0offset	Back	1cm	ON	26340	1880		18.50	1.000	-0.1	0.632	0.632
	LTE Band 25	20M	QPSK	50RB	24offset	Back	1cm	ON	26340	1880		18.50	1.000	0.07	0.454	0.454
	LTE Band 25	20M	QPSK	1RB	0offset	Left Side	1cm	ON	26340	1880		18.50	1.000	-0.01	0.124	0.124
	LTE Band 25	20M	QPSK	50RB	24offset	Left Side	1cm	ON	26340	1880		18.50	1.000	-0.02	0.103	0.103
	LTE Band 25	20M	QPSK	1RB	0offset	Right Side	1cm	ON	26340	1880		18.50	1.000	-0.02	0.031	0.031
	LTE Band 25	20M	QPSK	50RB	24offset	Right Side	1cm	ON	26340	1880		18.50	1.000	0.01	0.024	0.024
40	LTE Band 25	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	26340	1880		18.50	1.000	-0.11	1.250	1.250
	LTE Band 25	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	26140	1860		18.50	1.000	-0.02	1.210	1.210
	LTE Band 25	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	26590	1905		18.50	1.000	-0.03	1.240	1.240
	LTE Band 25	20M	QPSK	50RB	24offset	Bottom Side	1cm	ON	26340	1880		18.50	1.000	-0.16	0.998	0.998
	LTE Band 25	20M	QPSK	50RB	0offset	Bottom Side	1cm	ON	26140	1860		18.50	1.000	-0.08	0.958	0.958
	LTE Band 25	20M	QPSK	50RB	24offset	Bottom Side	1cm	ON	26590	1905		18.50	1.000	-0.03	0.943	0.943
	LTE Band 25	20M	QPSK	100RB	0offset	Bottom Side	1cm	ON	26340	1880		18.50	1.000	-0.07	0.981	0.981
	LTE Band 7	20M	QPSK	1RB	0Offset	Front	1cm	ON	21100	2535		20.20	1.000	0.09	0.473	0.473
	LTE Band 7	20M	QPSK	50RB	0Offset	Front	1cm	ON	21100	2535		20.20	1.000	0.14	0.388	0.388
	LTE Band 7	20M	QPSK	1RB	0Offset	Back	1cm	ON	21100	2535		20.20	1.000	-0.03	0.455	0.455
	LTE Band 7	20M	QPSK	50RB	0Offset	Back	1cm	ON	21100	2535		20.20	1.000	-0.02	0.352	0.352
	LTE Band 7	20M	QPSK	1RB	0Offset	Left Side	1cm	ON	21100	2535		20.20	1.000	-0.08	0.264	0.264
	LTE Band 7	20M	QPSK	50RB	0Offset	Left Side	1cm	ON	21100	2535		20.20	1.000	-0.09	0.214	0.214
	LTE Band 7	20M	QPSK	1RB	0Offset	Right Side	1cm	ON	21100	2535		20.20	1.000	0.16	0.020	0.020
	LTE Band 7	20M	QPSK	50RB	0Offset	Right Side	1cm	ON	21100	2535		20.20	1.000	0.09	0.015	0.015
	LTE Band 7	20M	QPSK	1RB	0Offset	Bottom Side	1cm	ON	21100	2535		20.20	1.000	0.03	1.040	1.040
41	LTE Band 7	20M	QPSK	1RB	0Offset	Bottom Side	1cm	ON	20850	2510		20.20	1.000	0.02	1.180	1.180
	LTE Band 7	20M	QPSK	1RB	0Offset	Bottom Side	1cm	ON	21350	2560		20.20	1.000	-0.08	0.947	0.947
	LTE Band 7	20M	QPSK	50RB	0Offset	Bottom Side	1cm	ON	21100	2535		20.20	1.000	-0.03	0.818	0.818
	LTE Band 7	20M	QPSK	50RB	49Offset	Bottom Side	1cm	ON	20850	2510		20.20	1.000	-0.12	0.979	0.979
	LTE Band 7	20M	QPSK	50RB	0Offset	Bottom Side	1cm	ON	21350	2560		20.20	1.000	-0.09	0.882	0.882
	LTE Band 7	20M	QPSK	100RB	0Offset	Bottom Side	1cm	ON	21100	2535		20.20	1.000	-0.01	0.959	0.959



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1cm	ON	39750	2506		23.00	1.000	62.9	1.01	0.03	0.822	0.827
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.02	0.584	0.588
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1cm	ON	41490	2680		23.00	1.000	62.9	1.01	-0.04	0.542	0.545
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1cm	ON	40185	2549.5		23.00	1.000	62.9	1.01	0.05	0.708	0.712
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1cm	ON	41055	2636.5		23.00	1.000	62.9	1.01	-0.09	0.462	0.465
	LTE Band 41	20M	QPSK	50RB	49offset	Front	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.12	0.349	0.351
	LTE Band 41	20M	QPSK	100RB	0offset	Front	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.07	0.360	0.362
	LTE Band 41	20M	QPSK	1RB	0offset	Back	1cm	ON	39750	2506		23.00	1.000	62.9	1.01	-0.02	0.621	0.625
	LTE Band 41	20M	QPSK	1RB	0offset	Back	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.06	0.298	0.300
	LTE Band 41	20M	QPSK	1RB	0offset	Back	1cm	ON	41490	2680		23.00	1.000	62.9	1.01	-0.1	0.243	0.244
	LTE Band 41	20M	QPSK	1RB	0offset	Back	1cm	ON	40185	2549.5		23.00	1.000	62.9	1.01	0.05	0.521	0.524
	LTE Band 41	20M	QPSK	1RB	0offset	Back	1cm	ON	41055	2636.5		23.00	1.000	62.9	1.01	-0.09	0.324	0.326
	LTE Band 41	20M	QPSK	50RB	49offset	Back	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.07	0.228	0.229
	LTE Band 41	20M	QPSK	100RB	0offset	Back	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.03	0.236	0.237
	LTE Band 41	20M	QPSK	1RB	0offset	Left Side	1cm	ON	39750	2506		23.00	1.000	62.9	1.01	-0.13	0.202	0.203
	LTE Band 41	20M	QPSK	50RB	49offset	Left Side	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.1	0.163	0.164
	LTE Band 41	20M	QPSK	1RB	0offset	Right Side	1cm	ON	39750	2506		23.00	1.000	62.9	1.01	0.06	0.024	0.024
	LTE Band 41	20M	QPSK	50RB	49offset	Right Side	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	0.19	0.019	0.019
	LTE Band 41	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	39750	2506		23.00	1.000	62.9	1.01	-0.15	1.010	1.016
	LTE Band 41	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.14	1.070	1.076
	LTE Band 41	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	41490	2680		23.00	1.000	62.9	1.01	-0.02	0.612	0.616
42	LTE Band 41	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	40185	2549.5		23.00	1.000	62.9	1.01	0.01	1.240	1.247
	LTE Band 41	20M	QPSK	1RB	0offset	Bottom Side	1cm	ON	41055	2636.5		23.00	1.000	62.9	1.01	-0.16	0.768	0.773
	LTE Band 41	20M	QPSK	50RB	49offset	Bottom Side	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.03	0.570	0.573
	LTE Band 41	20M	QPSK	100RB	0offset	Bottom Side	1cm	ON	40620	2593		23.00	1.000	62.9	1.01	-0.11	0.593	0.597

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	1cm	6	2437	19.96	20.00	1.009	100.00	1.000	0.04	0.123	0.124
	WLAN2.4GHz	802.11b 1Mbps	Back	1cm	6	2437	19.96	20.00	1.009	100.00	1.000	0.11	0.123	0.124
	WLAN2.4GHz	802.11b 1Mbps	Left Side	1cm	6	2437	19.96	20.00	1.009	100.00	1.000	-0.08	0.155	0.156
43	WLAN2.4GHz	802.11g 6Mbps	Left Side	1cm	6	2437	22.92	23.00	1.019	97.17	1.029	-0.04	0.215	0.225
	WLAN2.4GHz	802.11g 6Mbps	Left Side	1cm	1	2412	19.50	20.00	1.122	97.17	1.029	-0.05	0.089	0.103
	WLAN2.4GHz	802.11g 6Mbps	Left Side	1cm	11	2462	19.41	20.00	1.146	97.17	1.029	-0.09	0.104	0.123
	WLAN2.4GHz	802.11n-HT20 MCS0	Left Side	1cm	6	2437	21.74	22.00	1.062	97.98	1.021	0.19	0.168	0.182
	WLAN2.4GHz	802.11ac-VHT20 MCS0	Left Side	1cm	6	2437	22.12	22.50	1.091	97.00	1.031	0.08	0.162	0.182
	WLAN2.4GHz	802.11b 1Mbps	Right Side	1cm	6	2437	19.96	20.00	1.009	100.00	1.000	-0.03	0.032	0.032
	WLAN2.4GHz	802.11b 1Mbps	Top Side	1cm	6	2437	19.96	20.00	1.009	100.00	1.000	-0.08	0.081	0.082
	WLAN5GHz	802.11a 6Mbps	Front	1cm	40	5200	22.80	23.00	1.047	97.64	1.024	-0.13	0.093	0.100
	WLAN5GHz	802.11a 6Mbps	Back	1cm	40	5200	22.80	23.00	1.047	97.64	1.024	-0.05	0.160	0.172
44	WLAN5GHz	802.11a 6Mbps	Left Side	1cm	40	5200	22.80	23.00	1.047	97.64	1.024	-0.06	0.166	0.178
	WLAN5GHz	802.11a 6Mbps	Left Side	1cm	44	5220	21.69	22.00	1.074	97.64	1.024	0.01	0.157	0.173
	WLAN5GHz	802.11n-HT20 MCS0	Left Side	1cm	40	5200	21.03	21.50	1.114	97.46	1.026	-0.01	0.077	0.088
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	1cm	46	5230	19.32	19.50	1.042	94.95	1.053	-0.13	0.033	0.036
	WLAN5GHz	802.11ac-VHT20 MCS0	Left Side	1cm	44	5220	22.75	23.00	1.059	97.49	1.026	-0.04	0.135	0.147
	WLAN5GHz	802.11ac-VHT40 MCS0	Left Side	1cm	46	5230	21.31	21.50	1.045	95.00	1.053	0.09	0.062	0.068
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	1cm	42	5210	19.47	19.50	1.007	90.59	1.104	0.12	0.033	0.037
	WLAN5GHz	802.11a 6Mbps	Right Side	1cm	40	5200	22.80	23.00	1.047	97.64	1.024	-0.1	0.021	0.023
	WLAN5GHz	802.11a 6Mbps	Top Side	1cm	40	5200	22.80	23.00	1.047	97.64	1.024	-0.01	0.035	0.038
	WLAN5GHz	802.11a 6Mbps	Front	1cm	153	5765	22.11	22.50	1.094	97.64	1.024	-0.03	0.132	0.148
	WLAN5GHz	802.11a 6Mbps	Back	1cm	153	5765	22.11	22.50	1.094	97.64	1.024	-0.02	0.256	0.287
45	WLAN5GHz	802.11n-HT20 MCS0	Back	1cm	157	5785	22.13	22.50	1.089	97.46	1.026	0.02	0.375	0.419
	WLAN5GHz	802.11n-HT20 MCS0	Back	1cm	153	5765	22.03	22.50	1.114	97.46	1.026	0.1	0.264	0.302
	WLAN5GHz	802.11n-HT20 MCS0	Back	1cm	161	5805	22.10	22.50	1.096	97.46	1.026	0.01	0.323	0.363
	WLAN5GHz	802.11n-HT40 MCS0	Back	1cm	159	5795	20.10	20.50	1.096	94.95	1.053	0.01	0.191	0.221
	WLAN5GHz	802.11ac-VHT20 MCS0	Back	1cm	161	5805	22.18	22.50	1.076	97.49	1.026	0	0.348	0.384
	WLAN5GHz	802.11ac-VHT40 MCS0	Back	1cm	159	5795	21.57	22.00	1.104	95.00	1.053	0.11	0.224	0.260
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	1cm	155	5775	18.61	19.00	1.094	90.59	1.104	0.08	0.123	0.149
	WLAN5GHz	802.11a 6Mbps	Left Side	1cm	153	5765	22.11	22.50	1.094	97.64	1.024	0.06	0.123	0.138
	WLAN5GHz	802.11a 6Mbps	Right Side	1cm	153	5765	22.11	22.50	1.094	97.64	1.024	-0.08	0.098	0.110
	WLAN5GHz	802.11a 6Mbps	Top Side	1cm	153	5765	22.11	22.50	1.094	97.64	1.024	-0.03	0.071	0.080

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	1cm	39	2441	9.63	10.00	1.089	-0.07	0.007	0.007
	Bluetooth	1Mbps	Back	1cm	39	2441	9.63	10.00	1.089	-0.09	0.006	0.007
	Bluetooth	1Mbps	Left Side	1cm	39	2441	9.63	10.00	1.089	-0.18	0.011	0.012
	Bluetooth	1Mbps	Left Side	1cm	0	2402	7.17	9.00	1.524	-0.12	0.007	0.011
46	Bluetooth	1Mbps	Left Side	1cm	78	2480	8.15	9.00	1.216	-0.06	0.011	0.013
	Bluetooth	1Mbps	Right Side	1cm	39	2441	9.63	10.00	1.089	-0.16	0.000	0.001
	Bluetooth	1Mbps	Top Side	1cm	39	2441	9.63	10.00	1.089	0.19	0.006	0.007

14.3 Extremity SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	GSM1900	GPRS (2 Tx slots)	Front	0cm	Trigger	512	1850.2	28.61	29.50	1.227	0.11	2.910	3.572
47	GSM1900	GPRS (2 Tx slots)	Front	0cm	Trigger	661	1880	28.55	29.50	1.245	0.1	2.900	3.609
	GSM1900	GPRS (2 Tx slots)	Front	0cm	Trigger	810	1909.8	28.53	29.50	1.250	0.04	2.850	3.563
	GSM1900	GPRS (2 Tx slots)	Back	0cm	Trigger	512	1850.2	28.61	29.50	1.227	0.14	2.780	3.412
	GSM1900	GPRS (2 Tx slots)	Back	0cm	Trigger	661	1880	28.55	29.50	1.245	0.02	2.710	3.373
	GSM1900	GPRS (2 Tx slots)	Back	0cm	Trigger	810	1909.8	28.53	29.50	1.250	0.18	2.550	3.188
	GSM1900	GPRS (2 Tx slots)	Bottom Side	0cm	Trigger	512	1850.2	28.61	29.50	1.227	0.07	2.010	2.467
	GSM1900	GPRS (2 Tx slots)	Bottom Side	0cm	Trigger	661	1880	28.55	29.50	1.245	0.12	1.830	2.277
	GSM1900	GPRS (2 Tx slots)	Bottom Side	0cm	Trigger	810	1909.8	28.53	29.50	1.250	0.04	1.670	2.088

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WCDMA IV	RMC 12.2Kbps	Front	0cm	Trigger	1312	1712.4	22.89	24.00	1.291	-0.08	1.610	2.079
	WCDMA IV	RMC 12.2Kbps	Front	0cm	Trigger	1413	1732.6	22.75	24.00	1.334	-0.15	2.510	3.347
	WCDMA IV	RMC 12.2Kbps	Front	0cm	Trigger	1513	1752.6	22.88	24.00	1.294	-0.1	2.270	2.938
	WCDMA IV	RMC 12.2Kbps	Back	0cm	Trigger	1312	1712.4	22.89	24.00	1.291	0.05	1.530	1.976
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0cm	Trigger	1312	1712.4	22.89	24.00	1.291	-0.09	2.050	2.647
48	WCDMA IV	RMC 12.2Kbps	Bottom Side	0cm	Trigger	1413	1732.6	22.75	24.00	1.334	-0.04	2.670	3.561
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0cm	Trigger	1513	1752.6	22.88	24.00	1.294	-0.02	2.190	2.834
49	WCDMA II	RMC 12.2Kbps	Front	0cm	Trigger	9400	1880	22.95	24.00	1.274	0.12	2.860	3.642
	WCDMA II	RMC 12.2Kbps	Front	0cm	Trigger	9262	1852.4	22.63	24.00	1.371	0.1	2.610	3.578
	WCDMA II	RMC 12.2Kbps	Front	0cm	Trigger	9538	1907.6	22.77	24.00	1.327	0.04	2.680	3.557
	WCDMA II	RMC 12.2Kbps	Back	0cm	Trigger	9400	1880	22.95	24.00	1.274	0.04	2.700	3.438
	WCDMA II	RMC 12.2Kbps	Back	0cm	Trigger	9262	1852.4	22.63	24.00	1.371	0.05	2.400	3.290
	WCDMA II	RMC 12.2Kbps	Back	0cm	Trigger	9538	1907.6	22.77	24.00	1.327	0.06	2.640	3.504
	WCDMA II	RMC 12.2Kbps	Bottom Side	0cm	Trigger	9400	1880	22.95	24.00	1.274	-0.02	1.960	2.496
	WCDMA II	RMC 12.2Kbps	Bottom Side	0cm	Trigger	9262	1852.4	22.63	24.00	1.371	-0.04	1.670	2.289
	WCDMA II	RMC 12.2Kbps	Bottom Side	0cm	Trigger	9538	1907.6	22.77	24.00	1.327	-0.09	1.920	2.549

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
50	CDMA2000 BC1	RTAP 153.6Kbps	Front	0cm	Trigger	600	1880	24.06	25.00	1.242	0.19	3.130	3.886
	CDMA2000 BC1	RTAP 153.6Kbps	Front	0cm	Trigger	25	1851.25	23.88	25.00	1.294	0	2.950	3.818
	CDMA2000 BC1	RTAP 153.6Kbps	Front	0cm	Trigger	1175	1908.75	24.03	25.00	1.250	0.11	2.800	3.501
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0cm	Trigger	600	1880	24.06	25.00	1.242	0.19	2.840	3.526
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0cm	Trigger	25	1851.25	23.88	25.00	1.294	0.1	2.760	3.572
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0cm	Trigger	1175	1908.75	24.03	25.00	1.250	0.04	2.680	3.351
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	0cm	Trigger	600	1880	24.06	25.00	1.242	0.07	1.940	2.409
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	0cm	Trigger	25	1851.25	23.88	25.00	1.294	0.08	1.940	2.511
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	0cm	Trigger	1175	1908.75	24.03	25.00	1.250	0.03	1.870	2.338

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 4	20M	QPSK	1RB	0Offset	Front	0cm	Trigger	20050	1720	23.11	24.00	1.227	-0.1	1.240	1.522
	LTE Band 4	20M	QPSK	50RB	0Offset	Front	0cm	Trigger	20050	1720	22.15	23.00	1.216	-0.04	1.130	1.374
	LTE Band 4	20M	QPSK	1RB	0Offset	Back	0cm	Trigger	20050	1720	23.11	24.00	1.227	0.14	0.999	1.226
	LTE Band 4	20M	QPSK	50RB	0Offset	Back	0cm	Trigger	20050	1720	22.15	23.00	1.216	0.14	0.955	1.161
51	LTE Band 4	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	20050	1720	23.11	24.00	1.227	-0.06	1.310	1.608
	LTE Band 4	20M	QPSK	50RB	0Offset	Bottom Side	0cm	Trigger	20050	1720	22.15	23.00	1.216	-0.05	1.180	1.435
52	LTE Band 2	20M	QPSK	1RB	0Offset	Front	0cm	Trigger	19100	1900	22.94	24.00	1.276	0.04	2.890	3.689
	LTE Band 2	20M	QPSK	1RB	0Offset	Front	0cm	Trigger	18700	1860	22.92	24.00	1.282	0	2.810	3.603
	LTE Band 2	20M	QPSK	1RB	0Offset	Front	0cm	Trigger	18900	1880	22.93	24.00	1.279	0.09	2.810	3.595
	LTE Band 2	20M	QPSK	50RB	0Offset	Front	0cm	Trigger	18900	1880	22.01	23.00	1.256	0.1	2.230	2.801
	LTE Band 2	20M	QPSK	50RB	0Offset	Front	0cm	Trigger	18700	1860	21.89	23.00	1.291	0.09	2.190	2.828
	LTE Band 2	20M	QPSK	50RB	0Offset	Front	0cm	Trigger	19100	1900	21.94	23.00	1.276	0.06	2.220	2.834
	LTE Band 2	20M	QPSK	100RB	0Offset	Front	0cm	Trigger	18900	1880	22.01	23.00	1.256	-0.1	2.240	2.814
	LTE Band 2	20M	QPSK	1RB	0Offset	Back	0cm	Trigger	19100	1900	22.94	24.00	1.276	0.05	2.780	3.548
	LTE Band 2	20M	QPSK	1RB	0Offset	Back	0cm	Trigger	18700	1860	22.92	24.00	1.282	0.16	2.680	3.437
	LTE Band 2	20M	QPSK	1RB	0Offset	Back	0cm	Trigger	18900	1880	22.93	24.00	1.279	0.18	2.730	3.493
	LTE Band 2	20M	QPSK	50RB	0Offset	Back	0cm	Trigger	18900	1880	22.01	23.00	1.256	0.15	2.130	2.675
	LTE Band 2	20M	QPSK	50RB	0Offset	Back	0cm	Trigger	18700	1860	21.89	23.00	1.291	0.17	2.030	2.621
	LTE Band 2	20M	QPSK	50RB	0Offset	Back	0cm	Trigger	19100	1900	21.94	23.00	1.276	0.18	2.110	2.693
	LTE Band 2	20M	QPSK	100RB	0Offset	Back	0cm	Trigger	18900	1880	22.01	23.00	1.256	0.18	2.140	2.688
	LTE Band 2	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	19100	1900	22.94	24.00	1.276	0.08	1.720	2.195
	LTE Band 2	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	18700	1860	22.92	24.00	1.282	0.02	1.770	2.270
	LTE Band 2	20M	QPSK	50RB	0Offset	Bottom Side	0cm	Trigger	18900	1880	22.93	24.00	1.279	0.01	1.750	2.239
	LTE Band 2	20M	QPSK	100RB	0Offset	Bottom Side	0cm	Trigger	18900	1880	22.01	23.00	1.256	-0.06	1.350	1.696
	LTE Band 2	20M	QPSK	100RB	0Offset	Bottom Side	0cm	Trigger	18900	1880	22.01	23.00	1.256	0.02	1.360	1.708



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
53	LTE Band 25	20M	QPSK	1RB	0Offset	Front	0cm	Trigger	26340	1880	22.99	24.00	1.262	0.12	2.890	3.647
	LTE Band 25	20M	QPSK	1RB	0Offset	Front	0cm	Trigger	26140	1860	22.90	24.00	1.288	0.08	2.790	3.594
	LTE Band 25	20M	QPSK	1RB	0Offset	Front	0cm	Trigger	26590	1905	22.89	24.00	1.291	0.1	2.740	3.538
	LTE Band 25	20M	QPSK	50RB	24Offset	Front	0cm	Trigger	26340	1880	22.02	23.00	1.253	0.15	2.240	2.807
	LTE Band 25	20M	QPSK	50RB	0Offset	Front	0cm	Trigger	26140	1860	21.96	23.00	1.271	0.07	2.210	2.808
	LTE Band 25	20M	QPSK	50RB	24Offset	Front	0cm	Trigger	26590	1905	21.92	23.00	1.282	0.02	2.150	2.757
	LTE Band 25	20M	QPSK	100RB	0Offset	Front	0cm	Trigger	26340	1880	21.98	23.00	1.265	0.12	2.230	2.820
	LTE Band 25	20M	QPSK	1RB	0Offset	Back	0cm	Trigger	26340	1880	22.99	24.00	1.262	0.14	2.560	3.230
	LTE Band 25	20M	QPSK	1RB	0Offset	Back	0cm	Trigger	26140	1860	22.90	24.00	1.288	0.09	2.570	3.311
	LTE Band 25	20M	QPSK	1RB	0Offset	Back	0cm	Trigger	26590	1905	22.89	24.00	1.291	0.03	2.470	3.189
	LTE Band 25	20M	QPSK	50RB	24Offset	Back	0cm	Trigger	26340	1880	22.02	23.00	1.253	0.01	2.020	2.531
	LTE Band 25	20M	QPSK	50RB	0Offset	Back	0cm	Trigger	26140	1860	21.96	23.00	1.271	0.11	2.030	2.579
	LTE Band 25	20M	QPSK	50RB	24Offset	Back	0cm	Trigger	26590	1905	21.92	23.00	1.282	0.02	1.930	2.475
	LTE Band 25	20M	QPSK	100RB	0Offset	Back	0cm	Trigger	26340	1880	21.98	23.00	1.265	0.13	2.040	2.580
	LTE Band 25	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	26340	1880	22.99	24.00	1.262	-0.09	1.850	2.334
	LTE Band 25	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	26140	1860	22.90	24.00	1.288	-0.13	1.930	2.486
	LTE Band 25	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	26590	1905	22.89	24.00	1.291	-0.11	1.790	2.311
	LTE Band 25	20M	QPSK	50RB	24Offset	Bottom Side	0cm	Trigger	26340	1880	22.02	23.00	1.253	-0.1	1.480	1.855
	LTE Band 25	20M	QPSK	100RB	0Offset	Bottom Side	0cm	Trigger	26340	1880	21.98	23.00	1.265	-0.11	1.480	1.872
	LTE Band 7	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	21100	2535	23.10	24.00	1.230	-0.06	2.040	2.510
	LTE Band 7	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	20850	2510	22.79	24.00	1.321	-0.04	1.480	1.956
54	LTE Band 7	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	21350	2560	22.97	24.00	1.268	-0.06	2.060	2.611
	LTE Band 7	20M	QPSK	50RB	0Offset	Bottom Side	0cm	Trigger	21100	2535	22.01	23.00	1.256	-0.08	1.350	1.696
	LTE Band 7	20M	QPSK	100RB	0Offset	Bottom Side	0cm	Trigger	21100	2535	22.00	23.00	1.259	-0.08	1.360	1.712

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 41	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	-0.02	1.380	1.685
55	LTE Band 41	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	40620	2593	23.10	24.00	1.230	62.9	1.01	-0.07	1.450	1.795
	LTE Band 41	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	41490	2680	23.03	24.00	1.250	62.9	1.01	-0.1	1.230	1.547
	LTE Band 41	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	40185	2549.5	23.09	24.00	1.233	62.9	1.01	-0.02	1.440	1.786
	LTE Band 41	20M	QPSK	1RB	0Offset	Bottom Side	0cm	Trigger	41055	2636.5	22.98	24.00	1.265	62.9	1.01	-0.07	1.240	1.578
	LTE Band 41	20M	QPSK	50RB	49Offset	Bottom Side	0cm	Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	-0.07	0.814	0.980
	LTE Band 41	20M	QPSK	100RB	0Offset	Bottom Side	0cm	Trigger	40620	2593	22.17	23.00	1.211	62.9	1.01	-0.06	0.812	0.989

14.4 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Headset	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
56	GSM850	GPRS (2 Tx slots)	Front	1.5cm		Non-Trigger	251	848.8	32.00	33.00	1.259	-0.02	0.483	0.608
	GSM850	GPRS (2 Tx slots)	Front	1.5cm		Non-Trigger	128	824.2	31.82	33.00	1.312	-0.01	0.437	0.573
	GSM850	GPRS (2 Tx slots)	Front	1.5cm		Non-Trigger	189	836.4	31.92	33.00	1.282	-0.04	0.460	0.590
	GSM850	GPRS (2 Tx slots)	Front	1.5cm	Headset	Trigger	148	828.3	31.91	33.00	1.285	-0.03	0.367	0.472
	GSM850	GPRS (2 Tx slots)	Front	1.5cm	Headset	Trigger	189	836.4	31.92	33.00	1.282	-0.03	0.324	0.415
	GSM850	GPRS (2 Tx slots)	Front	1.5cm	Headset	Trigger	231	844.7	31.95	33.00	1.274	0	0.348	0.443
	GSM850	GPRS (2 Tx slots)	Back	1.5cm		Non-Trigger	251	848.8	32.00	33.00	1.259	-0.01	0.396	0.499
57	GSM1900	GPRS (2 Tx slots)	Front	1.5cm		Non-Trigger	512	1850.2	28.61	29.50	1.227	-0.14	1.140	1.399
	GSM1900	GPRS (2 Tx slots)	Front	1.5cm		Non-Trigger	661	1880	28.55	29.50	1.245	-0.1	1.050	1.307
	GSM1900	GPRS (2 Tx slots)	Front	1.5cm		Non-Trigger	810	1909.8	28.53	29.50	1.250	-0.04	0.970	1.213
	GSM1900	GPRS (2 Tx slots)	Front	1.5cm	Headset	Non-Trigger	512	1850.2	28.61	29.50	1.227	-0.06	1.130	1.387
	GSM1900	GPRS (2 Tx slots)	Front	1.5cm	Headset	Non-Trigger	661	1880	28.55	29.50	1.245	-0.1	1.030	1.282
	GSM1900	GPRS (2 Tx slots)	Front	1.5cm	Headset	Non-Trigger	810	1909.8	28.53	29.50	1.250	-0.06	0.939	1.174
	GSM1900	GPRS (2 Tx slots)	Front	1.5cm	Headset	Trigger	512	1850.2	28.61	29.50	1.227	-0.14	1.110	1.362
	GSM1900	GPRS (2 Tx slots)	Front	1.5cm	Headset	Trigger	661	1880	28.55	29.50	1.245	-0.01	1.050	1.307
	GSM1900	GPRS (2 Tx slots)	Front	1.5cm	Headset	Trigger	810	1909.8	28.53	29.50	1.250	0.01	0.919	1.149
	GSM1900	GPRS (2 Tx slots)	Back	1.5cm		Non-Trigger	512	1850.2	28.61	29.50	1.227	0.09	1.080	1.326
	GSM1900	GPRS (2 Tx slots)	Back	1.5cm		Non-Trigger	661	1880	28.55	29.50	1.245	-0.08	0.806	1.003
	GSM1900	GPRS (2 Tx slots)	Back	1.5cm		Non-Trigger	810	1909.8	28.53	29.50	1.250	-0.06	0.734	0.918
	GSM1900	GPRS (2 Tx slots)	Back	1.5cm	Headset	Non-Trigger	512	1850.2	28.61	29.50	1.227	-0.08	0.950	1.166
	GSM1900	GPRS (2 Tx slots)	Back	1.5cm	Headset	Non-Trigger	661	1880	28.55	29.50	1.245	-0.06	0.842	1.048
	GSM1900	GPRS (2 Tx slots)	Back	1.5cm	Headset	Non-Trigger	810	1909.8	28.53	29.50	1.250	-0.08	0.762	0.953



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Headset	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	4233	846.6	23.10	24.00	1.230	0	0.349	0.429
58	WCDMA V	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	4132	826.4	23.09	24.00	1.233	-0.02	0.381	0.470
	WCDMA V	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	4182	836.4	23.06	24.00	1.242	0.05	0.365	0.453
	WCDMA V	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	4141	828.2	23.12	24.00	1.225	0	0.237	0.290
	WCDMA V	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	4183	836.6	22.92	24.00	1.282	0.02	0.197	0.253
	WCDMA V	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	4224	844.8	23.13	24.00	1.222	-0.02	0.184	0.225
	WCDMA V	RMC 12.2Kbps	Back	1.5cm		Non-Trigger	4233	846.6	23.10	24.00	1.230	-0.02	0.317	0.390
	WCDMA IV	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	1312	1712.4	22.89	24.00	1.291	-0.06	0.630	0.813
	WCDMA IV	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	1413	1732.6	22.75	24.00	1.334	-0.01	1.080	1.440
	WCDMA IV	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	1513	1752.6	22.88	24.00	1.294	-0.02	1.020	1.320
59	WCDMA IV	RMC 12.2Kbps	Front	1.5cm	Headset	Non-Trigger	1413	1732.6	22.75	24.00	1.334	0.16	1.100	1.467
	WCDMA IV	RMC 12.2Kbps	Front	1.5cm	Headset	Non-Trigger	1312	1712.4	22.89	24.00	1.291	-0.04	0.636	0.821
	WCDMA IV	RMC 12.2Kbps	Front	1.5cm	Headset	Non-Trigger	1513	1752.6	22.88	24.00	1.294	0	1.020	1.320
	WCDMA IV	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	1413	1732.6	22.75	24.00	1.334	0.01	1.090	1.454
	WCDMA IV	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	1312	1712.4	22.89	24.00	1.291	0.02	0.631	0.815
	WCDMA IV	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	1513	1752.6	22.88	24.00	1.294	0.02	1.030	1.333
	WCDMA IV	RMC 12.2Kbps	Back	1.5cm		Non-Trigger	1312	1712.4	22.89	24.00	1.291	-0.04	0.616	0.795
	WCDMA II	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	9400	1880	22.95	24.00	1.274	0.01	0.868	1.105
60	WCDMA II	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	9262	1852.4	22.63	24.00	1.371	0	0.850	1.165
	WCDMA II	RMC 12.2Kbps	Front	1.5cm		Non-Trigger	9538	1907.6	22.77	24.00	1.327	0.01	0.799	1.061
	WCDMA II	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	9400	1880	22.95	24.00	1.274	0.01	0.875	1.114
	WCDMA II	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	9262	1852.4	22.63	24.00	1.371	0.02	0.839	1.150
	WCDMA II	RMC 12.2Kbps	Front	1.5cm	Headset	Trigger	9538	1907.6	22.77	24.00	1.327	-0.04	0.819	1.087
	WCDMA II	RMC 12.2Kbps	Back	1.5cm		Non-Trigger	9400	1880	22.95	24.00	1.274	-0.04	0.803	1.023
	WCDMA II	RMC 12.2Kbps	Back	1.5cm		Non-Trigger	9262	1852.4	22.63	24.00	1.371	-0.02	0.797	1.093
	WCDMA II	RMC 12.2Kbps	Back	1.5cm		Non-Trigger	9538	1907.6	22.77	24.00	1.327	0	0.714	0.948



<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Headset	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
61	CDMA BC10	1xRTT RC3 SO32	Front	1.5cm		Non-Trigger	580	820.5	23.86	25.00	1.300	-0.01	0.387	0.503
	CDMA BC10	RETAP 4096 bits	Front	1.5cm		Non-Trigger	580	820.5	23.88	25.00	1.294	-0.02	0.345	0.446
	CDMA BC10	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	452	817.3	23.93	25.00	1.279	0.07	0.167	0.214
	CDMA BC10	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	560	820	23.89	25.00	1.291	-0.01	0.184	0.238
	CDMA BC10	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	668	822.7	23.88	25.00	1.294	-0.07	0.192	0.248
	CDMA BC10	1xRTT RC3 SO32	Back	1.5cm		Non-Trigger	580	820.5	23.86	25.00	1.300	0	0.328	0.426
62	CDMA BC0	1xRTT RC3 SO32	Front	1.5cm		Non-Trigger	384	836.52	23.99	25.00	1.262	-0.02	0.398	0.502
	CDMA BC0	RETAP 4096 bits	Front	1.5cm		Non-Trigger	384	836.52	23.99	25.00	1.262	-0.01	0.317	0.400
	CDMA BC0	1xRTT RC3 SO32	Front	1.5cm		Non-Trigger	1013	824.7	23.93	25.00	1.279	-0.02	0.318	0.407
	CDMA BC0	1xRTT RC3 SO32	Front	1.5cm		Non-Trigger	777	848.31	23.85	25.00	1.303	0	0.250	0.326
	CDMA BC0	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	107	828.2	23.87	25.00	1.297	-0.02	0.225	0.292
	CDMA BC0	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	383	836.5	23.92	25.00	1.282	0.04	0.208	0.267
	CDMA BC0	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	660	844.8	23.96	25.00	1.271	0.01	0.190	0.241
	CDMA BC0	1xRTT RC3 SO32	Back	1.5cm		Non-Trigger	384	836.52	23.99	25.00	1.262	-0.01	0.320	0.404
	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm		Non-Trigger	600	1880	24.05	25.00	1.245	-0.01	1.050	1.307
63	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm		Non-Trigger	25	1851.25	23.80	25.00	1.318	0.01	1.100	1.450
	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm		Non-Trigger	1175	1908.75	23.91	25.00	1.285	0.01	0.978	1.257
	CDMA BC1	RETAP 4096 bits	Front	1.5cm		Non-Trigger	600	1880	24.02	25.00	1.253	0	1.040	1.303
	CDMA BC1	RETAP 4096 bits	Front	1.5cm		Non-Trigger	25	1851.25	23.85	25.00	1.303	-0.01	1.010	1.316
	CDMA BC1	RETAP 4096 bits	Front	1.5cm		Non-Trigger	1175	1908.75	23.96	25.00	1.271	0.01	0.919	1.168
	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm	Headset	Non-Trigger	600	1880	24.05	25.00	1.245	-0.02	1.060	1.319
	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm	Headset	Non-Trigger	25	1851.25	23.80	25.00	1.318	0	1.080	1.424
	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm	Headset	Non-Trigger	1175	1908.75	23.91	25.00	1.285	0	0.994	1.278
	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	600	1880	24.05	25.00	1.245	-0.01	1.120	1.394
	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	25	1851.25	23.80	25.00	1.318	-0.01	1.080	1.424
	CDMA BC1	1xRTT RC3 SO32	Front	1.5cm	Headset	Trigger	1175	1908.75	23.91	25.00	1.285	-0.01	1.080	1.388
	CDMA BC1	1xRTT RC3 SO32	Back	1.5cm		Non-Trigger	600	1880	24.05	25.00	1.245	-0.02	0.878	1.093
	CDMA BC1	1xRTT RC3 SO32	Back	1.5cm		Non-Trigger	25	1851.25	23.80	25.00	1.318	-0.17	0.885	1.167
	CDMA BC1	1xRTT RC3 SO32	Back	1.5cm		Non-Trigger	1175	1908.75	23.91	25.00	1.285	0.01	0.823	1.058



<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Headset	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
64	LTE Band 12	10M	QPSK	1RB	0Offset	Front	1.5cm		Non-Trigger	23095	707.5	22.70	24.00	1.349	-0.01	0.316	0.426
	LTE Band 12	10M	QPSK	25RB	24Offset	Front	1.5cm		Non-Trigger	23095	707.5	21.69	23.00	1.352	0.02	0.198	0.268
	LTE Band 12	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23038	701.8	22.91	24.00	1.285	-0.01	0.201	0.258
	LTE Band 12	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23095	707.5	22.66	24.00	1.361	0	0.142	0.193
	LTE Band 12	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23152	713.2	23.00	24.00	1.259	-0.01	0.232	0.292
	LTE Band 12	5M	QPSK	12RB	0Offset	Front	1.5cm	Headset	Trigger	23152	713.2	21.93	23.00	1.279	0	0.101	0.129
	LTE Band 12	10M	QPSK	1RB	0Offset	Back	1.5cm		Non-Trigger	23095	707.5	22.70	24.00	1.349	0	0.284	0.383
	LTE Band 12	10M	QPSK	25RB	24Offset	Back	1.5cm		Non-Trigger	23095	707.5	21.69	23.00	1.352	0.02	0.173	0.234
65	LTE Band 17	10M	QPSK	1RB	0Offset	Front	1.5cm		Non-Trigger	23780	709	22.70	24.00	1.349	0.04	0.324	0.437
	LTE Band 17	10M	QPSK	25RB	12Offset	Front	1.5cm		Non-Trigger	23790	710	21.63	23.00	1.371	-0.01	0.198	0.271
	LTE Band 17	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23755	706.5	22.61	24.00	1.377	0.01	0.098	0.135
	LTE Band 17	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23790	710	22.61	24.00	1.377	0.09	0.091	0.125
	LTE Band 17	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23825	713.5	22.58	24.00	1.387	0.05	0.113	0.157
	LTE Band 17	5M	QPSK	12RB	0Offset	Front	1.5cm	Headset	Trigger	23825	713.5	21.62	23.00	1.374	0	0.055	0.076
	LTE Band 17	10M	QPSK	1RB	0Offset	Back	1.5cm		Non-Trigger	23780	709	22.70	24.00	1.349	0.01	0.291	0.393
	LTE Band 17	10M	QPSK	25RB	12Offset	Back	1.5cm		Non-Trigger	23790	710	21.63	23.00	1.371	0.01	0.170	0.233
66	LTE Band 13	10M	QPSK	1RB	0Offset	Front	1.5cm		Non-Trigger	23230	782	22.49	24.00	1.416	0	0.270	0.382
	LTE Band 13	10M	QPSK	25RB	24Offset	Front	1.5cm		Non-Trigger	23230	782	21.51	23.00	1.409	0.02	0.190	0.268
	LTE Band 13	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23205	779.5	22.48	24.00	1.419	0.08	0.182	0.258
	LTE Band 13	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23230	782	22.46	24.00	1.426	-0.1	0.130	0.185
	LTE Band 13	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	23255	784.5	22.48	24.00	1.419	0	0.190	0.270
	LTE Band 13	5M	QPSK	12RB	0Offset	Front	1.5cm	Headset	Trigger	23255	784.5	21.53	23.00	1.403	0.05	0.123	0.173
	LTE Band 13	10M	QPSK	1RB	0Offset	Back	1.5cm		Non-Trigger	23230	782	22.49	24.00	1.416	0.01	0.218	0.309
	LTE Band 13	10M	QPSK	25RB	24Offset	Back	1.5cm		Non-Trigger	23230	782	21.51	23.00	1.409	0.02	0.147	0.207
	LTE Band 5	10M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	20525	836.5	22.63	24.00	1.371	-0.01	0.352	0.483
67	LTE Band 5	10M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	20450	829	22.58	24.00	1.387	0	0.388	0.538
	LTE Band 5	10M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	20600	844	22.55	24.00	1.396	0.01	0.313	0.437
	LTE Band 5	10M	QPSK	25RB	12offset	Front	1.5cm		Non-Trigger	20525	836.5	21.65	23.00	1.365	-0.01	0.209	0.285
	LTE Band 5	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	20442	828.2	22.90	24.00	1.288	0.02	0.217	0.280
	LTE Band 5	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	20525	836.5	22.60	24.00	1.380	-0.04	0.162	0.224
	LTE Band 5	5M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	20608	844.8	22.79	24.00	1.321	-0.01	0.165	0.218
	LTE Band 5	5M	QPSK	12RB	0Offset	Front	1.5cm	Headset	Trigger	20442	828.2	21.86	23.00	1.300	-0.03	0.104	0.135
	LTE Band 5	10M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	20525	836.5	22.63	24.00	1.371	-0.01	0.314	0.430
	LTE Band 5	10M	QPSK	25RB	12offset	Back	1.5cm		Non-Trigger	20525	836.5	21.65	23.00	1.365	0.01	0.187	0.255
	LTE Band 26	15M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	26765	821.5	22.61	24.00	1.377	-0.04	0.289	0.398
68	LTE Band 26	15M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	26865	831.5	22.54	24.00	1.400	-0.01	0.339	0.474
	LTE Band 26	15M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	26965	841.5	22.56	24.00	1.393	0.01	0.273	0.380
	LTE Band 26	15M	QPSK	36RB	0offset	Front	1.5cm		Non-Trigger	26865	831.5	21.66	23.00	1.361	0	0.210	0.286
	LTE Band 26	10M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	26748	819.8	22.76	24.00	1.330	0.01	0.187	0.249
	LTE Band 26	10M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	26865	831.5	22.53	24.00	1.403	0.14	0.144	0.202
	LTE Band 26	10M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	26982	843.2	22.72	24.00	1.343	-0.01	0.151	0.203
	LTE Band 26	10M	QPSK	25RB	0Offset	Front	1.5cm	Headset	Trigger	26748	819.8	21.81	23.00	1.315	-0.01	0.083	0.109
	LTE Band 26	15M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	26765	821.5	22.61	24.00	1.377	-0.02	0.256	0.353
	LTE Band 26	15M	QPSK	36RB	0offset	Back	1.5cm		Non-Trigger	26865	831.5	21.66	23.00	1.361	-0.02	0.189	0.257



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Headset	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
69	LTE Band 4	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	20050	1720	23.11	24.00	1.227	0.03	0.718	0.881
	LTE Band 4	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	20175	1732.5	23.10	24.00	1.230	0.03	1.140	1.403
	LTE Band 4	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	20300	1745	22.99	24.00	1.262	-0.1	1.100	1.388
	LTE Band 4	20M	QPSK	50RB	0offset	Front	1.5cm		Non-Trigger	20050	1720	22.15	23.00	1.216	0	0.696	0.846
	LTE Band 4	20M	QPSK	50RB	0offset	Front	1.5cm		Non-Trigger	20175	1732.5	22.11	23.00	1.227	0.07	0.749	0.919
	LTE Band 4	20M	QPSK	50RB	0offset	Front	1.5cm		Non-Trigger	20300	1745	22.07	23.00	1.239	0	0.803	0.995
	LTE Band 4	20M	QPSK	100RB	0offset	Front	1.5cm		Non-Trigger	20175	1732.5	22.12	23.00	1.225	0.03	0.775	0.949
	LTE Band 4	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Non-Trigger	20050	1720	23.11	24.00	1.227	0	0.704	0.864
	LTE Band 4	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Non-Trigger	20175	1732.5	23.10	24.00	1.230	0.02	1.130	1.390
	LTE Band 4	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Non-Trigger	20300	1745	22.99	24.00	1.262	0.02	1.090	1.375
70	LTE Band 4	20M	QPSK	50RB	0offset	Front	1.5cm	Headset	Non-Trigger	20050	1720	22.15	23.00	1.216	0.02	0.698	0.849
	LTE Band 4	20M	QPSK	50RB	0offset	Front	1.5cm	Headset	Non-Trigger	20175	1732.5	22.11	23.00	1.227	0.01	0.756	0.928
	LTE Band 4	20M	QPSK	50RB	0offset	Front	1.5cm	Headset	Non-Trigger	20300	1745	22.07	23.00	1.239	-0.01	0.793	0.982
	LTE Band 4	20M	QPSK	100RB	0offset	Front	1.5cm	Headset	Non-Trigger	20175	1732.5	22.12	23.00	1.225	0.02	0.778	0.953
	LTE Band 4	20M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	20050	1720	23.11	24.00	1.227	0.01	0.606	0.744
	LTE Band 4	20M	QPSK	50RB	0Offset	Front	1.5cm	Headset	Trigger	20050	1720	22.15	23.00	1.216	0.05	0.507	0.617
	LTE Band 4	20M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	20050	1720	23.11	24.00	1.227	0	0.637	0.782
	LTE Band 4	20M	QPSK	50RB	0offset	Back	1.5cm		Non-Trigger	20050	1720	22.15	23.00	1.216	0.02	0.525	0.638
	LTE Band 2	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	19100	1900	22.94	24.00	1.276	-0.14	0.931	1.188
	LTE Band 2	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	18700	1860	22.92	24.00	1.282	0.01	1.030	1.321
	LTE Band 2	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	18900	1880	22.93	24.00	1.279	0	0.960	1.228
	LTE Band 2	20M	QPSK	50RB	0offset	Front	1.5cm		Non-Trigger	18900	1880	22.01	23.00	1.256	0.02	0.611	0.767
	LTE Band 2	20M	QPSK	100RB	0offset	Front	1.5cm		Non-Trigger	18900	1880	22.01	23.00	1.256	-0.02	0.611	0.767
	LTE Band 2	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Non-Trigger	18700	1860	22.92	24.00	1.282	-0.01	1.040	1.331
	LTE Band 2	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Non-Trigger	19100	1900	22.94	24.00	1.276	-0.01	0.968	1.236
	LTE Band 2	20M	QPSK	50RB	0offset	Front	1.5cm	Headset	Non-Trigger	18900	1880	22.01	23.00	1.256	-0.01	0.623	0.783
	LTE Band 2	20M	QPSK	100RB	0offset	Front	1.5cm	Headset	Non-Trigger	18900	1880	22.01	23.00	1.256	0	0.613	0.770
	LTE Band 2	20M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	19100	1900	22.94	24.00	1.276	0.01	1.020	1.302
	LTE Band 2	20M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	18700	1860	22.92	24.00	1.282	0.18	0.865	1.109
	LTE Band 2	20M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	18900	1880	22.93	24.00	1.279	0	1.040	1.331
	LTE Band 2	20M	QPSK	50RB	0Offset	Front	1.5cm	Headset	Trigger	18900	1880	22.01	23.00	1.256	-0.01	0.689	0.865
	LTE Band 2	20M	QPSK	50RB	0Offset	Front	1.5cm	Headset	Trigger	18700	1860	21.89	23.00	1.291	0	0.711	0.918
	LTE Band 2	20M	QPSK	50RB	0Offset	Front	1.5cm	Headset	Trigger	19100	1900	21.94	23.00	1.276	0	0.648	0.827
	LTE Band 2	20M	QPSK	100RB	0Offset	Front	1.5cm	Headset	Trigger	18900	1880	22.01	23.00	1.256	0.02	0.672	0.844
	LTE Band 2	20M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	19100	1900	22.94	24.00	1.276	0	0.891	1.137
	LTE Band 2	20M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	18700	1860	22.92	24.00	1.282	-0.03	0.995	1.276
	LTE Band 2	20M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	18900	1880	22.93	24.00	1.279	0.08	0.944	1.208
	LTE Band 2	20M	QPSK	50RB	0offset	Back	1.5cm		Non-Trigger	18900	1880	22.01	23.00	1.256	-0.03	0.598	0.751
	LTE Band 2	20M	QPSK	100RB	0offset	Back	1.5cm		Non-Trigger	18900	1880	22.01	23.00	1.256	0.07	0.591	0.742
	LTE Band 2	20M	QPSK	1RB	0offset	Back	1.5cm	Headset	Non-Trigger	19100	1900	22.94	24.00	1.276	-0.03	0.903	1.153
	LTE Band 2	20M	QPSK	1RB	0offset	Back	1.5cm	Headset	Non-Trigger	18700	1860	22.92	24.00	1.282	-0.01	1.020	1.308
	LTE Band 2	20M	QPSK	1RB	0offset	Back	1.5cm	Headset	Non-Trigger	18900	1880	22.93	24.00	1.279	0.03	0.952	1.218
	LTE Band 2	20M	QPSK	50RB	0offset	Back	1.5cm	Headset	Non-Trigger	18900	1880	22.01	23.00	1.256	-0.01	0.539	0.677
	LTE Band 2	20M	QPSK	100RB	0offset	Back	1.5cm	Headset	Non-Trigger	18900	1880	22.01	23.00	1.256	0.04	0.542	0.681



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Headset	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
71	LTE Band 25	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	26340	1880	22.99	24.00	1.262	0	0.826	1.042
	LTE Band 25	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	26140	1860	22.90	24.00	1.288	0.02	0.883	1.138
	LTE Band 25	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	26590	1905	22.89	24.00	1.291	0.01	0.762	0.984
	LTE Band 25	20M	QPSK	50RB	24offset	Front	1.5cm		Non-Trigger	26340	1880	22.02	23.00	1.253	0.01	0.634	0.794
	LTE Band 25	20M	QPSK	100RB	0offset	Front	1.5cm		Non-Trigger	26340	1880	21.98	23.00	1.265	-0.01	0.646	0.817
	LTE Band 25	20M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	26340	1880	22.99	24.00	1.262	-0.02	0.871	1.099
	LTE Band 25	20M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	26140	1860	22.90	24.00	1.288	-0.02	0.863	1.112
	LTE Band 25	20M	QPSK	1RB	0Offset	Front	1.5cm	Headset	Trigger	26590	1905	22.89	24.00	1.291	-0.01	0.848	1.095
	LTE Band 25	20M	QPSK	50RB	24Offset	Front	1.5cm	Headset	Trigger	26340	1880	22.02	23.00	1.253	-0.01	0.709	0.888
	LTE Band 25	20M	QPSK	50RB	0Offset	Front	1.5cm	Headset	Trigger	26140	1860	21.96	23.00	1.271	0	0.731	0.929
	LTE Band 25	20M	QPSK	50RB	24Offset	Front	1.5cm	Headset	Trigger	26590	1905	21.92	23.00	1.282	-0.02	0.668	0.857
	LTE Band 25	20M	QPSK	100RB	0Offset	Front	1.5cm	Headset	Trigger	26340	1880	21.98	23.00	1.265	0	0.709	0.897
	LTE Band 25	20M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	26340	1880	22.99	24.00	1.262	0.1	0.759	0.958
	LTE Band 25	20M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	26140	1860	22.90	24.00	1.288	0.02	0.842	1.085
	LTE Band 25	20M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	26590	1905	22.89	24.00	1.291	-0.1	0.725	0.936
	LTE Band 25	20M	QPSK	50RB	24offset	Back	1.5cm		Non-Trigger	26340	1880	22.02	23.00	1.253	0.08	0.598	0.749
	LTE Band 25	20M	QPSK	100RB	0offset	Back	1.5cm		Non-Trigger	26340	1880	21.98	23.00	1.265	0.01	0.602	0.761
	LTE Band 7	20M	QPSK	1RB	0Offset	Front	1.5cm		Non-Trigger	21100	2535	23.10	24.00	1.230	-0.04	0.567	0.698
	LTE Band 7	20M	QPSK	1RB	0Offset	Front	1.5cm		Non-Trigger	20850	2510	22.79	24.00	1.321	-0.04	0.548	0.724
	LTE Band 7	20M	QPSK	1RB	0Offset	Front	1.5cm		Non-Trigger	21350	2560	22.97	24.00	1.268	-0.02	0.517	0.655
72	LTE Band 7	20M	QPSK	50RB	0Offset	Front	1.5cm		Non-Trigger	21100	2535	22.01	23.00	1.256	-0.05	0.448	0.563
	LTE Band 7	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Trigger	21100	2535	23.10	24.00	1.230	0.01	0.579	0.712
	LTE Band 7	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Trigger	20850	2510	22.79	24.00	1.321	0.07	0.530	0.700
	LTE Band 7	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Trigger	21350	2560	22.97	24.00	1.268	-0.03	0.523	0.663
	LTE Band 7	20M	QPSK	50RB	0offset	Front	1.5cm	Headset	Trigger	21100	2535	22.01	23.00	1.256	-0.02	0.334	0.420
	LTE Band 7	20M	QPSK	1RB	0Offset	Back	1.5cm		Non-Trigger	21100	2535	23.10	24.00	1.230	0.02	0.454	0.559
	LTE Band 7	20M	QPSK	50RB	0Offset	Back	1.5cm		Non-Trigger	21100	2535	22.01	23.00	1.256	0.03	0.357	0.448
	LTE Band 7	20M	QPSK	50RB	0Offset	Back	1.5cm		Non-Trigger	21100	2535	22.01	23.00	1.256	0.03	0.357	0.448
	LTE Band 7	20M	QPSK	50RB	0Offset	Back	1.5cm		Non-Trigger	21100	2535	22.01	23.00	1.256	0.03	0.357	0.448
	LTE Band 7	20M	QPSK	50RB	0Offset	Back	1.5cm		Non-Trigger	21100	2535	22.01	23.00	1.256	0.03	0.357	0.448

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (cm)	Headset	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
73	LTE Band 41	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	-0.02	0.407	0.497
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	40620	2593	23.10	24.00	1.230	62.9	1.01	-0.02	0.253	0.313
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	41490	2680	23.03	24.00	1.250	62.9	1.01	-0.09	0.286	0.360
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	40185	2549.5	23.09	24.00	1.233	62.9	1.01	-0.07	0.342	0.424
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1.5cm		Non-Trigger	41055	2636.5	22.98	24.00	1.265	62.9	1.01	-0.07	0.258	0.328
	LTE Band 41	20M	QPSK	50RB	49offset	Front	1.5cm		Non-Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	-0.04	0.138	0.166
	LTE Band 41	20M	QPSK	1RB	0offset	Front	1.5cm	Headset	Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	-0.02	0.401	0.489
	LTE Band 41	20M	QPSK	50RB	49offset	Front	1.5cm	Headset	Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	0.01	0.181	0.218
	LTE Band 41	20M	QPSK	1RB	0offset	Back	1.5cm		Non-Trigger	39750	2506	23.16	24.00	1.213	62.9	1.01	0.07	0.362	0.442
	LTE Band 41	20M	QPSK	50RB	49offset	Back	1.5cm		Non-Trigger	40620	2593	22.22	23.00	1.197	62.9	1.01	0.1	0.115	0.138

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	1.5cm	6	2437	19.96	20.00	1.009	100.00	1.000	0.02	0.075	0.076
	WLAN2.4GHz	802.11b 1Mbps	Back	1.5cm	6	2437	19.96	20.00	1.009	100.00	1.000	0.08	0.084	0.085
	WLAN2.4GHz	802.11g 6Mbps	Back	1.5cm	6	2437	22.92	23.00	1.019	97.17	1.029	0.19	0.069	0.072
	WLAN2.4GHz	802.11n-HT20 MCS0	Back	1.5cm	6	2437	21.74	22.00	1.062	97.98	1.021	-0.01	0.109	0.118
74	WLAN2.4GHz	802.11ac-VHT20 MCS0	Back	1.5cm	6	2437	22.12	22.50	1.091	97.00	1.031	0.12	0.114	0.128
	WLAN2.4GHz	802.11ac-VHT20 MCS0	Back	1.5cm	1	2412	19.22	20.00	1.197	97.00	1.031	-0.01	0.037	0.046
	WLAN2.4GHz	802.11ac-VHT20 MCS0	Back	1.5cm	11	2462	19.86	20.00	1.033	97.00	1.031	0.04	0.084	0.089
	WLAN5GHz	802.11a 6Mbps	Front	1.5cm	40	5200	22.80	23.00	1.047	97.64	1.024	-0.01	0.028	0.030
	WLAN5GHz	802.11a 6Mbps	Back	1.5cm	40	5200	22.80	23.00	1.047	97.64	1.024	-0.04	0.148	0.159
75	WLAN5GHz	802.11a 6Mbps	Back	1.5cm	44	5200	21.69	22.00	1.074	97.64	1.024	0.02	0.163	0.179
	WLAN5GHz	802.11n-HT20 MCS0	Back	1.5cm	40	5200	21.03	21.50	1.114	97.46	1.026	0.03	0.066	0.075
	WLAN5GHz	802.11n-HT40 MCS0	Back	1.5cm	46	5230	19.32	19.50	1.042	94.95	1.053	-0.07	0.039	0.043
	WLAN5GHz	802.11ac-VHT20 MCS0	Back	1.5cm	44	5220	22.75	23.00	1.059	97.49	1.026	0.04	0.125	0.136
	WLAN5GHz	802.11ac-VHT40 MCS0	Back	1.5cm	46	5230	21.31	21.50	1.045	95.00	1.053	-0.14	0.069	0.076
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	1.5cm	42	5210	19.47	19.50	1.007	90.59	1.104	0.17	0.031	0.034
	WLAN5GHz	802.11a 6Mbps	Front	1.5cm	56	5280	22.76	23.00	1.057	97.64	1.024	-0.08	0.067	0.073
76	WLAN5GHz	802.11a 6Mbps	Back	1.5cm	56	5280	22.76	23.00	1.057	97.64	1.024	-0.14	0.150	0.162
	WLAN5GHz	802.11a 6Mbps	Back	1.5cm	64	5320	21.58	22.00	1.102	97.64	1.024	-0.03	0.136	0.153
	WLAN5GHz	802.11n-HT20 MCS0	Back	1.5cm	52	5260	21.28	21.50	1.052	97.46	1.026	-0.07	0.097	0.105
	WLAN5GHz	802.11n-HT40 MCS0	Back	1.5cm	54	5270	19.50	19.50	1.000	94.95	1.053	0.05	0.046	0.048
	WLAN5GHz	802.11ac-VHT20 MCS0	Back	1.5cm	56	5280	22.56	23.00	1.107	97.49	1.026	-0.07	0.130	0.148
	WLAN5GHz	802.11ac-VHT40 MCS0	Back	1.5cm	54	5270	21.09	21.50	1.099	95.00	1.053	0.08	0.060	0.069
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	1.5cm	58	5290	19.39	19.50	1.026	90.59	1.104	0.09	0.040	0.045
	WLAN5GHz	802.11a 6Mbps	Front	1.5cm	112	5560	22.75	23.00	1.059	97.64	1.024	-0.01	0.050	0.054
	WLAN5GHz	802.11a 6Mbps	Back	1.5cm	112	5560	22.75	23.00	1.059	97.64	1.024	-0.12	0.280	0.304
	WLAN5GHz	802.11n-HT20 MCS0	Back	1.5cm	144	5720	23.31	23.50	1.045	97.46	1.026	0.01	0.264	0.283
	WLAN5GHz	802.11n-HT40 MCS0	Back	1.5cm	142	5710	21.69	22.00	1.074	94.95	1.053	0.18	0.256	0.290
77	WLAN5GHz	802.11ac-VHT20 MCS0	Back	1.5cm	136	5680	22.16	22.50	1.081	97.49	1.026	-0.18	0.290	0.322
	WLAN5GHz	802.11ac-VHT20 MCS0	Back	1.5cm	104	5520	22.12	22.50	1.091	97.49	1.026	0	0.280	0.314
	WLAN5GHz	802.11ac-VHT20 MCS0	Back	1.5cm	112	5560	22.10	22.50	1.096	97.49	1.026	-0.12	0.253	0.285
	WLAN5GHz	802.11ac-VHT40 MCS0	Back	1.5cm	110	5550	21.84	22.00	1.038	95.00	1.053	0	0.239	0.261
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	1.5cm	138	5690	19.38	19.50	1.028	90.59	1.104	0.11	0.188	0.213
	WLAN5GHz	802.11a 6Mbps	Front	1.5cm	153	5765	22.11	22.50	1.094	97.64	1.024	-0.02	0.081	0.091
	WLAN5GHz	802.11a 6Mbps	Back	1.5cm	153	5765	22.11	22.50	1.094	97.64	1.024	-0.16	0.244	0.273
78	WLAN5GHz	802.11a 6Mbps	Back	1.5cm	157	5785	21.95	22.50	1.135	97.64	1.024	-0.05	0.312	0.363
	WLAN5GHz	802.11a 6Mbps	Back	1.5cm	161	5805	22.08	22.50	1.102	97.64	1.024	-0.11	0.317	0.358
	WLAN5GHz	802.11n-HT20 MCS0	Back	1.5cm	157	5785	22.13	22.50	1.089	97.46	1.026	0	0.286	0.320
	WLAN5GHz	802.11n-HT40 MCS0	Back	1.5cm	159	5795	20.10	20.50	1.096	94.95	1.053	-0.13	0.151	0.174
	WLAN5GHz	802.11ac-VHT20 MCS0	Back	1.5cm	161	5805	22.18	22.50	1.076	97.49	1.026	0.02	0.275	0.304
	WLAN5GHz	802.11ac-VHT40 MCS0	Back	1.5cm	159	5795	21.57	22.00	1.104	95.00	1.053	0.06	0.192	0.223
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	1.5cm	155	5775	18.61	19.00	1.094	90.59	1.104	0.11	0.101	0.122

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	1.5cm	39	2441	9.63	10.00	1.089	-0.19	0.006	0.006
79	Bluetooth	1Mbps	Front	1.5cm	0	2441	7.17	9.00	1.524	-0.19	0.005	0.008
	Bluetooth	1Mbps	Front	1.5cm	78	2441	8.15	9.00	1.216	-0.19	0.006	0.007
	Bluetooth	1Mbps	Back	1.5cm	39	2441	9.63	10.00	1.089	-0.11	0.002	0.002

14.5 Repeated SAR Measurement

General Note:

1. Per KDB 865664 D01v01r03, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
2. Per KDB 865664 D01v01r03, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, only one repeated measurement is required.
3. Per KDB 865664 D01v01r03, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The ratio is the difference in percentage between original and repeated *measured SAR*.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

<1g Repeated SAR>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (cm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	1cm	ON	661	1880		23.50	1.000	-	-	-0.06	1.370	-	1.370
2nd	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Bottom Side	1cm	ON	661	1880		23.50	1.000	-	-	-0.18	1.330	1.03	1.330
1st	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	1cm	ON	1513	1752.6		19.50	1.000	-	-	-0.02	1.380	-	1.380
2nd	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	1cm	ON	1513	1752.6		19.50	1.000	-	-	-0.08	1.360	1.04	1.360
1st	LTE Band 41	20M	QPSK	1RB	0offset	-	Bottom Side	1cm	ON	40185	2549.5		23.00	1.000	62.9	1.01	0.01	1.240	-	1.247
2nd	LTE Band 41	20M	QPSK	1RB	0offset	-	Bottom Side	1cm	ON	40185	2549.5		23.00	1.000	62.9	1.01	-0.17	1.220	1.02	1.227
1st	WLAN2.4GHz	-	-	-	-	802.11g 6Mbps	Right Cheek	-	-	6	2437	22.92	23.00	1.019	97.17	1.029	-0.01	0.887	-	0.930
2nd	WLAN2.4GHz	-	-	-	-	802.11g 6Mbps	Right Cheek	-	-	6	2437	22.92	23.00	1.019	97.17	1.029	-0.01	0.881	1.01	0.923

<10g Repeated SAR>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (cm)	Antenna Tuner	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	WCDMA IV					RMC 12.2Kbps	Bottom Side	0cm	Trigger	1413	1732.6	22.75	24.00	1.334	-0.04	2.670	-	3.561
2nd	WCDMA IV					RMC 12.2Kbps	Bottom Side	0cm	Trigger	1413	1732.6	22.75	24.00	1.334	-0.03	2.630	1.02	3.507
1st	CDMA2000 BC1					RTAP 153.6Kbps	Front	0cm	Trigger	600	1880	24.06	25.00	1.242	0.19	3.130	-	3.886
2nd	CDMA2000 BC1					RTAP 153.6Kbps	Front	0cm	Trigger	600	1880	24.06	25.00	1.242	-0.09	3.010	1.04	3.737
1st	LTE Band 7	20M	QPSK	1RB	0Offset		Bottom Side	0cm	Trigger	21350	2560	22.97	24.00	1.268	-0.06	2.060	-	2.611
2nd	LTE Band 7	20M	QPSK	1RB	0Offset		Bottom Side	0cm	Trigger	21350	2560	22.97	24.00	1.268	-0.06	2.010	1.02	2.548

15. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Mobile Phone				Note
		Head	Body-worn	Wireless Router	Extremity	
1.	GSM(Voice) + WLAN2.4GHz(data)	Yes	Yes		Yes	
2.	WCDMA(Voice) + WLAN2.4GHz(data)	Yes	Yes		Yes	
3.	CDMA(Voice) + WLAN2.4GHz(data)	Yes	Yes		Yes	
4.	GSM(Voice) + Bluetooth(data)	Yes	Yes		Yes	
5.	WCDMA((Voice) + Bluetooth(data)	Yes	Yes		Yes	
6.	CDMA((Voice) + Bluetooth(data)	Yes	Yes		Yes	
7.	GSM(Voice) + WLAN5GHz(data)	Yes	Yes		Yes	
8.	WCDMA((Voice) + WLAN5GHz(data)	Yes	Yes		Yes	
9.	CDMA((Voice) + WLAN5GHz(data)	Yes	Yes		Yes	
10.	GPRS/EDGE(Data) + WLAN2.4GHz(data)	Yes	Yes	Yes	Yes	2.4GHz Hotspot
11.	WCDMA(Data) + WLAN2.4GHz(data)	Yes	Yes	Yes	Yes	2.4GHz Hotspot
12.	CDMA(Data) + WLAN2.4GHz(data)	Yes	Yes	Yes	Yes	2.4GHz Hotspot
13.	LTE(Data) + WLAN2.4GHz(data)	Yes	Yes	Yes	Yes	2.4GHz Hotspot
14.	GPRS/EDGE(Data) + Bluetooth(data)	Yes	Yes	Yes	Yes	Bluetooth Tethering
15.	WCDMA(Data) + Bluetooth(data)	Yes	Yes	Yes	Yes	Bluetooth Tethering
16.	CDMA(Data) + Bluetooth(data)	Yes	Yes	Yes	Yes	Bluetooth Tethering
17.	LTE(Data) + Bluetooth(data)	Yes	Yes	Yes	Yes	Bluetooth Tethering
18.	GPRS/EDGE(Data) + WLAN5GHz(data)	Yes	Yes	Yes	Yes	WiFi Direct
19.	WCDMA(Data) + WLAN5GHz(data)	Yes	Yes	Yes	Yes	WiFi Direct
20.	CDMA(Data) + WLAN5GHz(data)	Yes	Yes	Yes	Yes	WiFi Direct
21.	LTE(Data) + WLAN5GHz(data)	Yes	Yes	Yes	Yes	WiFi Direct

General Note:

1. This device supported VoIP in EGPRS, WCDMA, CDMA, LTE (e.g. 3rd party VoIP).
2. The WLAN cannot transmit simultaneously with Bluetooth.
3. This device 2.4GHz / 5.2GHz / 5.8GHz WLAN supports Hotspot operation and WiFi Direct (Group Client / Group Owner), and 5.3GHz / 5.5GHz WLAN supports WiFi Direct (Group Client).
4. The worst case 2.4GHz / 5GHz WLAN reported SAR for each configuration was used for SAR summation, Therefore, the following summations represent the absolute worst cases for simultaneous transmission with the WLAN.
5. In body-worn exposure condition, the WWAN connection a headset SAR simultaneously transmission was select WLAN without connect a headset SAR for conservatively summation.
6. Per KDB 447498 D01v05r02, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg.
 - ii) $SPLSR = (SAR1 + SAR2)1.5 / (\min. \text{ separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan
 - iii) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg
 - v) The SPLSR calculated results please refer to section 15.4.

15.1 Head Exposure Conditions

WWAN Band		Exposure Position	1	2	3	1+2 Summed SAR (W/kg)	1+3 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	2.4GHz WLAN	2.4GHz Bluetooth				
			SAR (W/kg)	SAR (W/kg)	SAR (W/kg)				
GSM	GSM850	Right Cheek	0.677	0.930	0.072	1.61	0.75	0.03	Case 1
		Right Tilted	0.345	0.324	0.034	0.67	0.38		
		Left Cheek	0.543	0.328	0.007	0.87	0.55		
		Left Tilted	0.329	0.311	0.012	0.64	0.34		
	GSM1900	Right Cheek	0.196	0.930	0.072	1.13	0.27		
		Right Tilted	0.140	0.324	0.034	0.46	0.17		
		Left Cheek	0.395	0.328	0.007	0.72	0.40		
		Left Tilted	0.109	0.311	0.012	0.42	0.12		
WCDMA	Band V	Right Cheek	0.401	0.930	0.072	1.33	0.47		
		Right Tilted	0.098	0.324	0.034	0.42	0.13		
		Left Cheek	0.172	0.328	0.007	0.50	0.18		
		Left Tilted	0.108	0.311	0.012	0.42	0.12		
	Band IV	Right Cheek	0.134	0.930	0.072	1.06	0.21		
		Right Tilted	0.116	0.324	0.034	0.44	0.15		
		Left Cheek	0.399	0.328	0.007	0.73	0.41		
		Left Tilted	0.112	0.311	0.012	0.42	0.12		
	Band II	Right Cheek	0.146	0.930	0.072	1.08	0.22		
		Right Tilted	0.115	0.324	0.034	0.44	0.15		
		Left Cheek	0.376	0.328	0.007	0.70	0.38		
		Left Tilted	0.113	0.311	0.012	0.42	0.13		
CDMA	BC10	Right Cheek	0.517	0.930	0.072	1.45	0.59		
		Right Tilted	0.271	0.324	0.034	0.60	0.31		
		Left Cheek	0.461	0.328	0.007	0.79	0.47		
		Left Tilted	0.317	0.311	0.012	0.63	0.33		
	BC0	Right Cheek	0.507	0.930	0.072	1.44	0.58		
		Right Tilted	0.254	0.324	0.034	0.58	0.29		
		Left Cheek	0.381	0.328	0.007	0.71	0.39		
		Left Tilted	0.263	0.311	0.012	0.57	0.28		
	BC1	Right Cheek	0.204	0.930	0.072	1.13	0.28		
		Right Tilted	0.135	0.324	0.034	0.46	0.17		
		Left Cheek	0.410	0.328	0.007	0.74	0.42		
		Left Tilted	0.126	0.311	0.012	0.44	0.14		



WWAN Band		Exposure Position	1	2	3	1+2 Summed SAR (W/kg)	1+3 Summed SAR (W/kg)	SPLSR	Case No
			WWAN SAR (W/kg)	2.4GHz WLAN SAR (W/kg)	2.4GHz Bluetooth SAR (W/kg)				
LTE	Band 12	Right Cheek	0.198	0.930	0.072	1.13	0.27		
		Right Tilted	0.108	0.324	0.034	0.43	0.14		
		Left Cheek	0.192	0.328	0.007	0.52	0.20		
		Left Tilted	0.120	0.311	0.012	0.43	0.13		
	Band 17	Right Cheek	0.216	0.930	0.072	1.15	0.29		
		Right Tilted	0.115	0.324	0.034	0.44	0.15		
		Left Cheek	0.305	0.328	0.007	0.63	0.31		
		Left Tilted	0.182	0.311	0.012	0.49	0.19		
	Band 13	Right Cheek	0.293	0.930	0.072	1.22	0.37		
		Right Tilted	0.177	0.324	0.034	0.50	0.21		
		Left Cheek	0.248	0.328	0.007	0.58	0.26		
		Left Tilted	0.163	0.311	0.012	0.47	0.18		
	Band 5	Right Cheek	0.255	0.930	0.072	1.19	0.33		
		Right Tilted	0.106	0.324	0.034	0.43	0.14		
		Left Cheek	0.170	0.328	0.007	0.50	0.18		
		Left Tilted	0.111	0.311	0.012	0.42	0.12		
	Band 26	Right Cheek	0.248	0.930	0.072	1.18	0.32		
		Right Tilted	0.128	0.324	0.034	0.45	0.16		
		Left Cheek	0.191	0.328	0.007	0.52	0.20		
		Left Tilted	0.134	0.311	0.012	0.45	0.15		
	Band 4	Right Cheek	0.065	0.930	0.072	1.00	0.14		
		Right Tilted	0.055	0.324	0.034	0.38	0.09		
		Left Cheek	0.238	0.328	0.007	0.57	0.25		
		Left Tilted	0.064	0.311	0.012	0.38	0.08		
	Band 2	Right Cheek	0.183	0.930	0.072	1.11	0.26		
		Right Tilted	0.129	0.324	0.034	0.45	0.16		
		Left Cheek	0.383	0.328	0.007	0.71	0.39		
		Left Tilted	0.112	0.311	0.012	0.42	0.12		
	Band 25	Right Cheek	0.172	0.930	0.072	1.10	0.24		
		Right Tilted	0.097	0.324	0.034	0.42	0.13		
		Left Cheek	0.376	0.328	0.007	0.70	0.38		
		Left Tilted	0.122	0.311	0.012	0.43	0.13		
	Band 7	Right Cheek	0.089	0.930	0.072	1.02	0.16		
		Right Tilted	0.106	0.324	0.034	0.43	0.14		
		Left Cheek	0.194	0.328	0.007	0.52	0.20		
		Left Tilted	0.094	0.311	0.012	0.41	0.11		
	Band 41	Right Cheek	0.095	0.930	0.072	1.03	0.17		
		Right Tilted	0.083	0.324	0.034	0.41	0.12		
		Left Cheek	0.199	0.328	0.007	0.53	0.21		
		Left Tilted	0.079	0.311	0.012	0.39	0.09		

WWAN Band		Exposure Position	1	2		1+2 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	5.2GHz / 5.3GHz / 5.5GHz / 5.8GHz WALN				
			SAR (W/kg)	Band	SAR (W/kg)			
GSM	GSM850	Right Cheek	0.677	5.5GHz WLAN	0.882	1.56		
		Right Tilted	0.345	5.2GHz WLAN	0.258	0.60		
		Left Cheek	0.543	5.5GHz WLAN	0.304	0.85		
		Left Tilted	0.329	5.5GHz WLAN	0.259	0.59		
	GSM1900	Right Cheek	0.196	5.5GHz WLAN	0.882	1.08		
		Right Tilted	0.140	5.2GHz WLAN	0.258	0.40		
		Left Cheek	0.395	5.5GHz WLAN	0.304	0.70		
		Left Tilted	0.109	5.5GHz WLAN	0.259	0.37		
WCDMA	Band V	Right Cheek	0.401	5.5GHz WLAN	0.882	1.28		
		Right Tilted	0.098	5.2GHz WLAN	0.258	0.36		
		Left Cheek	0.172	5.5GHz WLAN	0.304	0.48		
		Left Tilted	0.108	5.5GHz WLAN	0.259	0.37		
	Band IV	Right Cheek	0.134	5.5GHz WLAN	0.882	1.02		
		Right Tilted	0.116	5.2GHz WLAN	0.258	0.37		
		Left Cheek	0.399	5.5GHz WLAN	0.304	0.70		
		Left Tilted	0.112	5.5GHz WLAN	0.259	0.37		
	Band II	Right Cheek	0.146	5.5GHz WLAN	0.882	1.03		
		Right Tilted	0.115	5.2GHz WLAN	0.258	0.37		
		Left Cheek	0.376	5.5GHz WLAN	0.304	0.68		
		Left Tilted	0.113	5.5GHz WLAN	0.259	0.37		
CDMA	BC10	Right Cheek	0.517	5.5GHz WLAN	0.882	1.40		
		Right Tilted	0.271	5.2GHz WLAN	0.258	0.53		
		Left Cheek	0.461	5.5GHz WLAN	0.304	0.77		
		Left Tilted	0.317	5.5GHz WLAN	0.259	0.58		
	BC0	Right Cheek	0.507	5.5GHz WLAN	0.882	1.39		
		Right Tilted	0.254	5.2GHz WLAN	0.258	0.51		
		Left Cheek	0.381	5.5GHz WLAN	0.304	0.69		
		Left Tilted	0.263	5.5GHz WLAN	0.259	0.52		
	BC1	Right Cheek	0.204	5.5GHz WLAN	0.882	1.09		
		Right Tilted	0.135	5.2GHz WLAN	0.258	0.39		
		Left Cheek	0.410	5.5GHz WLAN	0.304	0.71		
		Left Tilted	0.126	5.5GHz WLAN	0.259	0.39		



WWAN Band		Exposure Position	1	2		1+2 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	5.2GHz / 5.3GHz / 5.5GHz / 5.8GHz WALN				
			SAR (W/kg)	Band	SAR (W/kg)			
LTE	Band 12	Right Cheek	0.198	5.5GHz WLAN	0.882	1.08		
		Right Tilted	0.108	5.2GHz WLAN	0.258	0.37		
		Left Cheek	0.192	5.5GHz WLAN	0.304	0.50		
		Left Tilted	0.120	5.5GHz WLAN	0.259	0.38		
	Band 17	Right Cheek	0.216	5.5GHz WLAN	0.882	1.10		
		Right Tilted	0.115	5.2GHz WLAN	0.258	0.37		
		Left Cheek	0.305	5.5GHz WLAN	0.304	0.61		
		Left Tilted	0.182	5.5GHz WLAN	0.259	0.44		
	Band 13	Right Cheek	0.293	5.5GHz WLAN	0.882	1.18		
		Right Tilted	0.177	5.2GHz WLAN	0.258	0.44		
		Left Cheek	0.248	5.5GHz WLAN	0.304	0.55		
		Left Tilted	0.163	5.5GHz WLAN	0.259	0.42		
	Band 5	Right Cheek	0.255	5.5GHz WLAN	0.882	1.14		
		Right Tilted	0.106	5.2GHz WLAN	0.258	0.36		
		Left Cheek	0.170	5.5GHz WLAN	0.304	0.47		
		Left Tilted	0.111	5.5GHz WLAN	0.259	0.37		
	Band 26	Right Cheek	0.248	5.5GHz WLAN	0.882	1.13		
		Right Tilted	0.128	5.2GHz WLAN	0.258	0.39		
		Left Cheek	0.191	5.5GHz WLAN	0.304	0.50		
		Left Tilted	0.134	5.5GHz WLAN	0.259	0.39		
	Band 4	Right Cheek	0.065	5.5GHz WLAN	0.882	0.95		
		Right Tilted	0.055	5.2GHz WLAN	0.258	0.31		
		Left Cheek	0.238	5.5GHz WLAN	0.304	0.54		
		Left Tilted	0.064	5.5GHz WLAN	0.259	0.32		
	Band 2	Right Cheek	0.183	5.5GHz WLAN	0.882	1.07		
		Right Tilted	0.129	5.2GHz WLAN	0.258	0.39		
		Left Cheek	0.383	5.5GHz WLAN	0.304	0.69		
		Left Tilted	0.112	5.5GHz WLAN	0.259	0.37		
	Band 25	Right Cheek	0.172	5.5GHz WLAN	0.882	1.05		
		Right Tilted	0.097	5.2GHz WLAN	0.258	0.36		
		Left Cheek	0.376	5.5GHz WLAN	0.304	0.68		
		Left Tilted	0.122	5.5GHz WLAN	0.259	0.38		
	Band 7	Right Cheek	0.089	5.5GHz WLAN	0.882	0.97		
		Right Tilted	0.106	5.2GHz WLAN	0.258	0.36		
		Left Cheek	0.194	5.5GHz WLAN	0.304	0.50		
		Left Tilted	0.094	5.5GHz WLAN	0.259	0.35		
	Band 41	Right Cheek	0.095	5.5GHz WLAN	0.882	0.98		
		Right Tilted	0.083	5.2GHz WLAN	0.258	0.34		
		Left Cheek	0.199	5.5GHz WLAN	0.304	0.50		
		Left Tilted	0.079	5.5GHz WLAN	0.259	0.34		



15.2 Wireless Router Exposure Conditions

WWAN Band		Exposure Position	1	2	3	1+2 Summed SAR (W/kg)	1+3 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	2.4GHz WLAN	2.4GHz Bluetooth				
			SAR (W/kg)	SAR (W/kg)	SAR (W/kg)				
GSM	GSM850	Front	0.888	0.124	0.007	1.01	0.90		
		Back	0.626	0.124	0.007	0.75	0.63		
		Left side	0.111	0.225	0.013	0.34	0.12		
		Right side	0.553	0.032	0.001	0.59	0.55		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.662			0.66	0.66		
	GSM1900	Front	0.843	0.124	0.007	0.97	0.85		
		Back	0.749	0.124	0.007	0.87	0.76		
		Left side	0.130	0.225	0.013	0.36	0.14		
		Right side	0.026	0.032	0.001	0.06	0.03		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	1.370			1.37	1.37		
WCDMA	Band V	Front	0.658	0.124	0.007	0.78	0.67		
		Back	0.584	0.124	0.007	0.71	0.59		
		Left side	0.295	0.225	0.013	0.52	0.31		
		Right side	0.641	0.032	0.001	0.67	0.64		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.404			0.40	0.40		
	Band IV	Front	1.140	0.124	0.007	1.26	1.15		
		Back	0.712	0.124	0.007	0.84	0.72		
		Left side	0.124	0.225	0.013	0.35	0.14		
		Right side	0.090	0.032	0.001	0.12	0.09		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	1.380			1.38	1.38		
	Band II	Front	0.556	0.124	0.007	0.68	0.56		
		Back	0.440	0.124	0.007	0.56	0.45		
		Left side	0.073	0.225	0.013	0.30	0.09		
		Right side	0.022	0.032	0.001	0.05	0.02		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	1.070			1.07	1.07		
CDMA	BC10	Front	0.510	0.124	0.007	0.63	0.52		
		Back	0.428	0.124	0.007	0.55	0.44		
		Left side	0.271	0.225	0.013	0.50	0.28		
		Right side	0.635	0.032	0.001	0.67	0.64		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.329			0.33	0.33		
	BC0	Front	0.517	0.124	0.007	0.64	0.52		
		Back	0.407	0.124	0.007	0.53	0.41		
		Left side	0.250	0.225	0.013	0.48	0.26		
		Right side	0.607	0.032	0.001	0.64	0.61		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.329			0.33	0.33		
	BC1	Front	0.476	0.124	0.007	0.60	0.48		
		Back	0.412	0.124	0.007	0.54	0.42		
		Left side	0.101	0.225	0.013	0.33	0.11		
		Right side	0.021	0.032	0.001	0.05	0.02		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.957			0.96	0.96		

WWAN Band		Exposure Position	1	2	3	1+2 Summed SAR (W/kg)	1+3 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	2.4GHz WLAN	2.4GHz Bluetooth				
			SAR (W/kg)	SAR (W/kg)	SAR (W/kg)				
LTE	Band 12	Front	0.434	0.124	0.007	0.56	0.44		
		Back	0.469	0.124	0.007	0.59	0.48		
		Left side	0.359	0.225	0.013	0.58	0.37		
		Right side	0.464	0.032	0.001	0.50	0.47		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.181			0.18	0.18		
	Band 17	Front	0.455	0.124	0.007	0.58	0.46		
		Back	0.484	0.124	0.007	0.61	0.49		
		Left side	0.368	0.225	0.013	0.59	0.38		
		Right side	0.476	0.032	0.001	0.51	0.48		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.189			0.19	0.19		
	Band 13	Front	0.426	0.124	0.007	0.55	0.43		
		Back	0.384	0.124	0.007	0.51	0.39		
		Left side	0.262	0.225	0.013	0.49	0.28		
		Right side	0.395	0.032	0.001	0.43	0.40		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.245			0.25	0.25		
	Band 5	Front	0.654	0.124	0.007	0.78	0.66		
		Back	0.459	0.124	0.007	0.58	0.47		
		Left side	0.358	0.225	0.013	0.58	0.37		
		Right side	0.761	0.032	0.001	0.79	0.76		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.403			0.40	0.40		
	Band 26	Front	0.434	0.124	0.007	0.56	0.44		
		Back	0.369	0.124	0.007	0.49	0.38		
		Left side	0.297	0.225	0.013	0.52	0.31		
		Right side	0.642	0.032	0.001	0.67	0.64		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	0.278			0.28	0.28		
	Band 4	Front	0.989	0.124	0.007	1.11	1.00		
		Back	1.020	0.124	0.007	1.14	1.03		
		Left side	0.095	0.225	0.013	0.32	0.11		
		Right side	0.072	0.032	0.001	0.10	0.07		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	1.200			1.20	1.20		
	Band 2	Front	0.713	0.124	0.007	0.84	0.72		
		Back	0.584	0.124	0.007	0.71	0.59		
		Left side	0.108	0.225	0.013	0.33	0.12		
		Right side	0.031	0.032	0.001	0.06	0.03		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	1.280			1.28	1.28		
	Band 25	Front	0.653	0.124	0.007	0.78	0.66		
		Back	0.632	0.124	0.007	0.76	0.64		
		Left side	0.124	0.225	0.013	0.35	0.14		
		Right side	0.031	0.032	0.001	0.06	0.03		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	1.250			1.25	1.25		

WWAN Band		Exposure Position	1	2	3	1+2 Summed SAR (W/kg)	1+3 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	2.4GHz WLAN	2.4GHz Bluetooth				
			SAR (W/kg)	SAR (W/kg)	SAR (W/kg)				
LTE	Band 7	Front	0.473	0.124	0.007	0.60	0.48		
		Back	0.455	0.124	0.007	0.58	0.46		
		Left side	0.264	0.225	0.013	0.49	0.28		
		Right side	0.020	0.032	0.001	0.05	0.02		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	1.180			1.18	1.18		
	Band 41	Front	0.827	0.124	0.007	0.95	0.83		
		Back	0.625	0.124	0.007	0.75	0.63		
		Left side	0.203	0.225	0.013	0.43	0.22		
		Right side	0.024	0.032	0.001	0.06	0.03		
		Top side		0.082	0.007	0.08	0.01		
		Bottom side	1.247			1.25	1.25		

WWAN Band		Exposure Position	1	2		1+2 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	5.2GHz / 5.8GHz WALN				
			SAR (W/kg)	Band	SAR (W/kg)			
GSM	GSM850	Front	0.888	5.8GHz WLAN	0.148	1.04		
		Back	0.626	5.8GHz WLAN	0.419	1.05		
		Left side	0.111	5.2GHz WLAN	0.178	0.29		
		Right side	0.553	5.8GHz WLAN	0.110	0.66		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.662			0.66		
	GSM1900	Front	0.843	5.8GHz WLAN	0.148	0.99		
		Back	0.749	5.8GHz WLAN	0.419	1.17		
		Left side	0.13	5.2GHz WLAN	0.178	0.31		
		Right side	0.026	5.8GHz WLAN	0.110	0.14		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	1.37			1.37		
WCDMA	Band V	Front	0.658	5.8GHz WLAN	0.148	0.81		
		Back	0.584	5.8GHz WLAN	0.419	1.00		
		Left side	0.295	5.2GHz WLAN	0.178	0.47		
		Right side	0.641	5.8GHz WLAN	0.110	0.75		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.404			0.40		
	Band IV	Front	1.14	5.8GHz WLAN	0.148	1.29		
		Back	0.712	5.8GHz WLAN	0.419	1.13		
		Left side	0.124	5.2GHz WLAN	0.178	0.30		
		Right side	0.09	5.8GHz WLAN	0.110	0.20		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	1.38			1.38		
	Band II	Front	0.556	5.8GHz WLAN	0.148	0.70		
		Back	0.44	5.8GHz WLAN	0.419	0.86		
		Left side	0.073	5.2GHz WLAN	0.178	0.25		
		Right side	0.022	5.8GHz WLAN	0.110	0.13		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	1.07			1.07		

WWAN Band		Exposure Position	1	2		1+2 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	5.2GHz / 5.8GHz WALN				
			SAR (W/kg)	Band	SAR (W/kg)			
CDMA	BC10	Front	0.51	5.8GHz WLAN	0.148	0.66		
		Back	0.428	5.8GHz WLAN	0.419	0.85		
		Left side	0.271	5.2GHz WLAN	0.178	0.45		
		Right side	0.635	5.8GHz WLAN	0.110	0.75		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.329			0.33		
	BC0	Front	0.517	5.8GHz WLAN	0.148	0.67		
		Back	0.407	5.8GHz WLAN	0.419	0.83		
		Left side	0.25	5.2GHz WLAN	0.178	0.43		
		Right side	0.607	5.8GHz WLAN	0.110	0.72		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.329			0.33		
	BC1	Front	0.476	5.8GHz WLAN	0.148	0.62		
		Back	0.412	5.8GHz WLAN	0.419	0.83		
		Left side	0.101	5.2GHz WLAN	0.178	0.28		
		Right side	0.021	5.8GHz WLAN	0.110	0.13		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.957			0.96		
LTE	Band 12	Front	0.434	5.8GHz WLAN	0.148	0.58		
		Back	0.469	5.8GHz WLAN	0.419	0.89		
		Left side	0.359	5.2GHz WLAN	0.178	0.54		
		Right side	0.464	5.8GHz WLAN	0.110	0.57		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.181			0.18		
	Band 17	Front	0.455	5.8GHz WLAN	0.148	0.60		
		Back	0.484	5.8GHz WLAN	0.419	0.90		
		Left side	0.368	5.2GHz WLAN	0.178	0.55		
		Right side	0.476	5.8GHz WLAN	0.110	0.59		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.189			0.19		
	Band 13	Front	0.426	5.8GHz WLAN	0.148	0.57		
		Back	0.384	5.8GHz WLAN	0.419	0.80		
		Left side	0.262	5.2GHz WLAN	0.178	0.44		
		Right side	0.395	5.8GHz WLAN	0.110	0.51		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.245			0.25		
	Band 5	Front	0.654	5.8GHz WLAN	0.148	0.80		
		Back	0.459	5.8GHz WLAN	0.419	0.88		
		Left side	0.358	5.2GHz WLAN	0.178	0.54		
		Right side	0.761	5.8GHz WLAN	0.110	0.87		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	0.403			0.40		
Band 26	Front	0.434	5.8GHz WLAN	0.148	0.58			
	Back	0.369	5.8GHz WLAN	0.419	0.79			
	Left side	0.297	5.2GHz WLAN	0.178	0.48			
	Right side	0.642	5.8GHz WLAN	0.110	0.75			
	Top side		5.8GHz WLAN	0.080	0.08			
	Bottom side	0.278			0.28			

WWAN Band		Exposure Position	1	2		1+2 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	5.2GHz / 5.8GHz WALN				
			SAR (W/kg)	Band	SAR (W/kg)			
LTE	Band 4	Front	0.989	5.8GHz WLAN	0.148	1.14		
		Back	1.02	5.8GHz WLAN	0.419	1.44		
		Left side	0.095	5.2GHz WLAN	0.178	0.27		
		Right side	0.072	5.8GHz WLAN	0.110	0.18		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	1.2			1.20		
	Band 2	Front	0.713	5.8GHz WLAN	0.148	0.86		
		Back	0.584	5.8GHz WLAN	0.419	1.00		
		Left side	0.108	5.2GHz WLAN	0.178	0.29		
		Right side	0.031	5.8GHz WLAN	0.110	0.14		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	1.28			1.28		
	Band 25	Front	0.653	5.8GHz WLAN	0.148	0.80		
		Back	0.632	5.8GHz WLAN	0.419	1.05		
		Left side	0.124	5.2GHz WLAN	0.178	0.30		
		Right side	0.031	5.8GHz WLAN	0.110	0.14		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	1.25			1.25		
	Band 7	Front	0.473	5.8GHz WLAN	0.148	0.62		
		Back	0.455	5.8GHz WLAN	0.419	0.87		
		Left side	0.264	5.2GHz WLAN	0.178	0.44		
		Right side	0.02	5.8GHz WLAN	0.110	0.13		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	1.18			1.18		
	Band 41	Front	0.827	5.8GHz WLAN	0.148	0.98		
		Back	0.625	5.8GHz WLAN	0.419	1.04		
		Left side	0.203	5.2GHz WLAN	0.178	0.38		
		Right side	0.024	5.8GHz WLAN	0.110	0.13		
		Top side		5.8GHz WLAN	0.080	0.08		
		Bottom side	1.247			1.25		



15.3 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1	2	3	1+2 Summed SAR (W/kg)	1+3 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	2.4GHz WLAN	2.4GHz Bluetooth				
			SAR (W/kg)	SAR (W/kg)	SAR (W/kg)				
GSM	GSM850	Front	0.608	0.076	0.008	0.68	0.62		
		Back	0.499	0.128	0.002	0.63	0.50		
		Front with Headset	0.472	0.076	0.008	0.55	0.48		
	GSM1900	Front	1.399	0.076	0.008	1.48	1.41		
		Back	1.326	0.128	0.002	1.45	1.33		
		Front with Headset	1.387	0.076	0.008	1.46	1.40		
		Back with Headset	1.166	0.128	0.002	1.29	1.17		
WCDMA	Band V	Front	0.470	0.076	0.008	0.55	0.48		
		Back	0.390	0.128	0.002	0.52	0.39		
		Front with Headset	0.290	0.076	0.008	0.37	0.30		
	Band IV	Front	1.440	0.076	0.008	1.52	1.45		
		Back	0.795	0.128	0.002	0.92	0.80		
		Front with Headset	1.467	0.076	0.008	1.54	1.48		
	Band II	Front	1.165	0.076	0.008	1.24	1.17		
		Back	1.093	0.128	0.002	1.22	1.10		
		Front with Headset	1.150	0.076	0.008	1.23	1.16		
CDMA	BC10	Front	0.503	0.076	0.008	0.58	0.51		
		Back	0.426	0.128	0.002	0.55	0.43		
		Front with Headset	0.248	0.076	0.008	0.32	0.26		
	BC0	Front	0.502	0.076	0.008	0.58	0.51		
		Back	0.404	0.128	0.002	0.53	0.41		
		Front with Headset	0.292	0.076	0.008	0.37	0.30		
	BC1	Front	1.450	0.076	0.008	1.53	1.46		
		Back	1.167	0.128	0.002	1.30	1.17		
		Front with Headset	1.424	0.076	0.008	1.50	1.43		



WWAN Band		Exposure Position	1	2	3	1+2 Summed SAR (W/kg)	1+3 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	2.4GHz WLAN	2.4GHz Bluetooth				
			SAR (W/kg)	SAR (W/kg)	SAR (W/kg)				
LTE	Band 12	Front	0.426	0.076	0.008	0.50	0.43		
		Back	0.383	0.128	0.002	0.51	0.39		
		Front with Headset	0.292	0.076	0.008	0.37	0.30		
	Band 17	Front	0.437	0.076	0.008	0.51	0.45		
		Back	0.393	0.128	0.002	0.52	0.40		
		Front with Headset	0.157	0.076	0.008	0.23	0.17		
	Band 13	Front	0.382	0.076	0.008	0.46	0.39		
		Back	0.309	0.128	0.002	0.44	0.31		
		Front with Headset	0.270	0.076	0.008	0.35	0.28		
	Band 5	Front	0.538	0.076	0.008	0.61	0.55		
		Back	0.430	0.128	0.002	0.56	0.43		
		Front with Headset	0.280	0.076	0.008	0.36	0.29		
	Band 26	Front	0.474	0.076	0.008	0.55	0.48		
		Back	0.353	0.128	0.002	0.48	0.36		
		Front with Headset	0.249	0.076	0.008	0.33	0.26		
	Band 4	Front	1.403	0.076	0.008	1.48	1.41		
		Back	0.782	0.128	0.002	0.91	0.78		
		Front with Headset	1.390	0.076	0.008	1.47	1.40		
	Band 2	Front	1.321	0.076	0.008	1.40	1.33		
		Back	1.276	0.128	0.002	1.40	1.28		
		Front with Headset	1.334	0.076	0.008	1.41	1.34		
	Band 25	Back with Headset	1.308	0.128	0.002	1.44	1.31		
		Front	1.138	0.076	0.008	1.21	1.15		
		Back	1.085	0.128	0.002	1.21	1.09		
		Front with Headset	1.112	0.076	0.008	1.19	1.12		
	Band 7	Front	0.724	0.076	0.008	0.80	0.73		
		Back	0.559	0.128	0.002	0.69	0.56		
		Front with Headset	0.712	0.076	0.008	0.79	0.72		
	Band 41	Front	0.497	0.076	0.008	0.57	0.51		
		Back	0.442	0.128	0.002	0.57	0.44		
		Front with Headset	0.489	0.076	0.008	0.57	0.50		

WWAN Band		Exposure Position	1	2		1+2 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	5.2GHz / 5.3GHz / 5.5GHz / 5.8GHz WALN				
			SAR (W/kg)	Band	SAR (W/kg)			
GSM	GSM850	Front	0.608	5.8GHz WLAN	0.091	0.70		
		Back	0.499	5.8GHz WLAN	0.363	0.86		
		Front with Headset	0.472	5.8GHz WLAN	0.091	0.56		
	GSM1900	Front	1.399	5.8GHz WLAN	0.091	1.49		
		Back	1.326	5.8GHz WLAN	0.363	1.69	0.01	Case 2
		Front with Headset	1.387	5.8GHz WLAN	0.091	1.48		
		Back with Headset	1.166	5.8GHz WLAN	0.363	1.53		
WCDMA	Band V	Front	0.470	5.8GHz WLAN	0.091	0.56		
		Back	0.390	5.8GHz WLAN	0.363	0.75		
		Front with Headset	0.290	5.8GHz WLAN	0.091	0.38		
	Band IV	Front	1.440	5.8GHz WLAN	0.091	1.53		
		Back	0.795	5.8GHz WLAN	0.363	1.16		
		Front with Headset	1.467	5.8GHz WLAN	0.091	1.56		
	Band II	Front	1.165	5.8GHz WLAN	0.091	1.26		
		Back	1.093	5.8GHz WLAN	0.363	1.46		
		Front with Headset	1.150	5.8GHz WLAN	0.091	1.24		
CDMA	BC10	Front	0.503	5.8GHz WLAN	0.091	0.59		
		Back	0.426	5.8GHz WLAN	0.363	0.79		
		Front with Headset	0.248	5.8GHz WLAN	0.091	0.34		
	BC0	Front	0.502	5.8GHz WLAN	0.091	0.59		
		Back	0.404	5.8GHz WLAN	0.363	0.77		
		Front with Headset	0.292	5.8GHz WLAN	0.091	0.38		
	BC1	Front	1.450	5.8GHz WLAN	0.091	1.54		
		Back	1.167	5.8GHz WLAN	0.363	1.53		
		Front with Headset	1.424	5.8GHz WLAN	0.091	1.52		



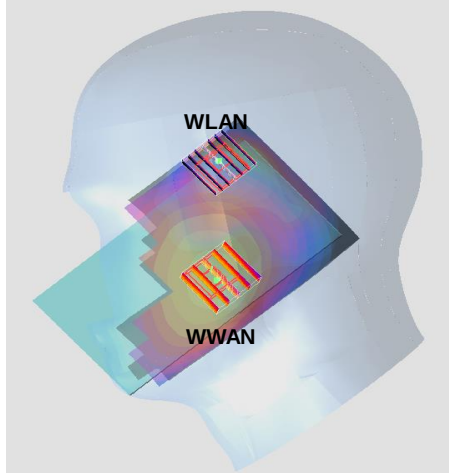
WWAN Band		Exposure Position	1	2		1+2 Summed SAR (W/kg)	SPLSR	Case No
			WWAN	5.2GHz / 5.3GHz / 5.5GHz / 5.8GHz WALN				
			SAR (W/kg)	Band	SAR (W/kg)			
LTE	Band 12	Front	0.426	5.8GHz WLAN	0.091	0.52		
		Back	0.383	5.8GHz WLAN	0.363	0.75		
		Front with Headset	0.292	5.8GHz WLAN	0.091	0.38		
	Band 17	Front	0.437	5.8GHz WLAN	0.091	0.53		
		Back	0.393	5.8GHz WLAN	0.363	0.76		
		Front with Headset	0.157	5.8GHz WLAN	0.091	0.25		
	Band 13	Front	0.382	5.8GHz WLAN	0.091	0.47		
		Back	0.309	5.8GHz WLAN	0.363	0.67		
		Front with Headset	0.270	5.8GHz WLAN	0.091	0.36		
	Band 5	Front	0.538	5.8GHz WLAN	0.091	0.63		
		Back	0.430	5.8GHz WLAN	0.363	0.79		
		Front with Headset	0.280	5.8GHz WLAN	0.091	0.37		
	Band 26	Front	0.474	5.8GHz WLAN	0.091	0.57		
		Back	0.353	5.8GHz WLAN	0.363	0.72		
		Front with Headset	0.249	5.8GHz WLAN	0.091	0.34		
	Band 4	Front	1.403	5.8GHz WLAN	0.091	1.49		
		Back	0.782	5.8GHz WLAN	0.363	1.15		
		Front with Headset	1.390	5.8GHz WLAN	0.091	1.48		
	Band 2	Front	1.321	5.8GHz WLAN	0.091	1.41		
		Back	1.276	5.8GHz WLAN	0.363	1.64	0.01	Case 3
		Front with Headset	1.334	5.8GHz WLAN	0.091	1.43		
		Back with Headset	1.308	5.8GHz WLAN	0.363	1.67	0.01	Case 4
	Band 25	Front	1.138	5.8GHz WLAN	0.091	1.23		
		Back	1.085	5.8GHz WLAN	0.363	1.45		
		Front with Headset	1.112	5.8GHz WLAN	0.091	1.20		
	Band 7	Front	0.724	5.8GHz WLAN	0.091	0.82		
		Back	0.559	5.8GHz WLAN	0.363	0.92		
		Front with Headset	0.712	5.8GHz WLAN	0.091	0.80		
	Band 41	Front	0.497	5.8GHz WLAN	0.091	0.59		
		Back	0.442	5.8GHz WLAN	0.363	0.81		
		Front with Headset	0.489	5.8GHz WLAN	0.091	0.58		

15.4 SPLSR Evaluation and Analysis

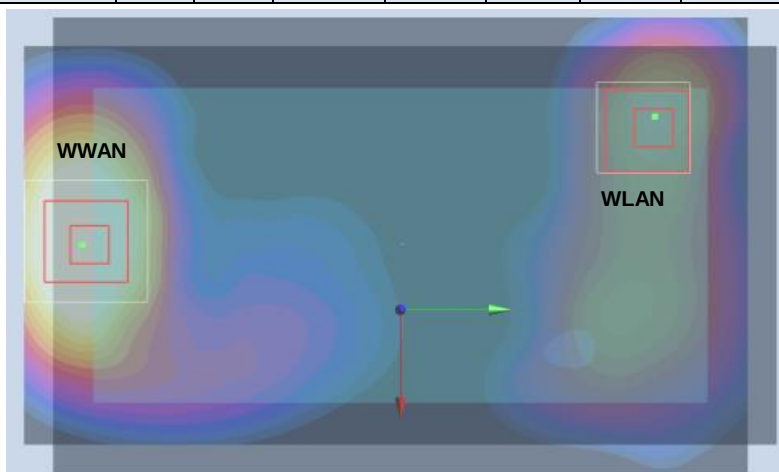
General Note:

1. $SPLSR = (SAR_1 + SAR_2)^{1.5} / (min. \text{ separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary

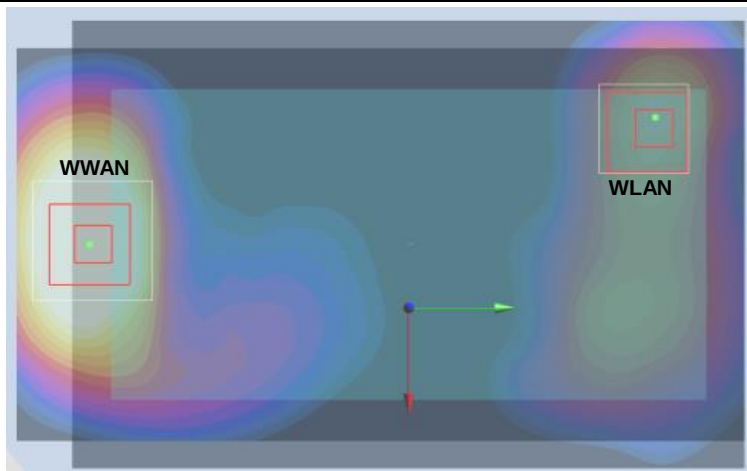
Case 1	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM850	Right Cheek	0.677	0	X	Y	Z	74.2	1.61	0.03	Not required
	2.4GHz WLAN		0.930	0	0.0439	-0.338	-0.17				



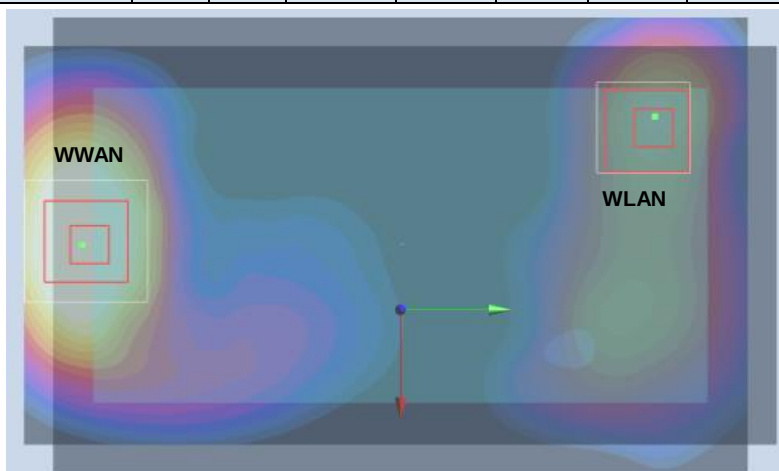
Case 2	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	GSM1900	Back	1.326	1.5	X	Y	Z	151.5	1.69	0.01	Not required
	5.8GHz WLAN		0.363	1.5	-0.048	0.067	-0.205				



Case 3	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 2	Back	1.276	1.5	X	Y	Z	154.5	1.64	0.01	Not required
	5.8GHz WLAN		0.363	1.5	-0.048	0.067	-0.205				



Case 4	Band	Position	SAR (W/kg)	Gap (cm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 2	Back with Headset	1.308	1.5	X	Y	Z	157.4	1.67	0.01	Not required
	5.8GHz WLAN		0.363	1.5	-0.048	0.067	-0.205				



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16. Uncertainty Assessment

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) k is the coverage factor

Table 16.1. Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)
Measurement System							
Probe Calibration	6.0	Normal	1	1	1	± 6.0 %	± 6.0 %
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	± 1.9 %	± 1.9 %
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	± 3.9 %	± 3.9 %
Boundary Effects	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
System Detection Limits	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	0.3	Normal	1	1	1	± 0.3 %	± 0.3 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Noise	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Ambient Reflections	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Probe Positioner	0.4	Rectangular	√3	1	1	± 0.2 %	± 0.2 %
Probe Positioning	2.9	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Max. SAR Eval.	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Test Sample Related							
Device Positioning	2.9	Normal	1	1	1	± 2.9 %	± 2.9 %
Device Holder	3.6	Normal	1	1	1	± 3.6 %	± 3.6 %
Power Drift	5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %
Phantom and Setup							
Phantom Uncertainty	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %
Liquid Conductivity (Meas.)	2.5	Normal	1	0.64	0.43	± 1.6 %	± 1.1 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	0.49	± 1.7 %	± 1.4 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	0.49	± 1.5 %	± 1.2 %
Combined Standard Uncertainty						± 11.0 %	± 10.8 %
Coverage Factor for 95 %						K=2	
Expanded Uncertainty						± 22.0 %	± 21.5 %

Table 16.2. Uncertainty Budget for frequency range 300 MHz to 3 GHz

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)
Measurement System							
Probe Calibration	6.55	Normal	1	1	1	± 6.55 %	± 6.55 %
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	± 1.9 %	± 1.9 %
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	± 3.9 %	± 3.9 %
Boundary Effects	2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
System Detection Limits	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	0.3	Normal	1	1	1	± 0.3 %	± 0.3 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Noise	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Ambient Reflections	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Probe Positioner	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Probe Positioning	9.9	Rectangular	√3	1	1	± 5.7 %	± 5.7 %
Max. SAR Eval.	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Test Sample Related							
Device Positioning	2.9	Normal	1	1	1	± 2.9 %	± 2.9 %
Device Holder	3.6	Normal	1	1	1	± 3.6 %	± 3.6 %
Power Drift	5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %
Phantom and Setup							
Phantom Uncertainty	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %
Liquid Conductivity (Meas.)	2.5	Normal	1	0.64	0.43	± 1.6 %	± 1.1 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	0.49	± 1.7 %	± 1.4 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	0.49	± 1.5 %	± 1.2 %
Combined Standard Uncertainty						± 12.8 %	± 12.6 %
Coverage Factor for 95 %						K=2	
Expanded Uncertainty						± 25.6 %	± 25.2 %

Table 16.3. Uncertainty Budget for frequency range 3G Hz to 6 GHz

17. References

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- [10] FCC KDB 941225 D03 v01, "Recommended SAR Test Reduction Procedures for GSM / GPRS / EDGE", December 2008
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