FCC SAR Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2043-8
FCC ID	:	IHDT56YN3
STANDARD	:	FCC 47 CFR Part 2 (2.1093) ANSI/IEEE C95.1-1992 IEEE 1528-2013

The product was received on Jan. 16, 2020 and testing was started from Mar. 22, 2020 and completed on Apr. 10, 2020. We, Sporton International (Kunshan) 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 (Kunshan) Inc., the test report shall not be reproduced except in full.

Rose Wang

Reviewed by: Rose Wang / Supervisor

Kat Yin

Approved by: Kat Yin / Manager

ACCREDITED Cert #5145.02

Sporton International (Kunshan) Inc.
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA011607-01	Rev. 01	Initial issue of report	Apr. 23, 2020

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2043-8,** are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 5mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.56	1.35	1.35	1.59
		GSM1900	<0.10	1.39	1.37	
	WCDMA	Band V	0.46	1.38	1.38	
		Band II	0.17	1.40	1.32	
		Band IV	0.22	1.32	1.32	
	CDMA	BC10	0.46	1.29	**1.44**	
		BC0	0.46	1.40	1.33	
		BC1	0.15	1.35	1.27	
	LTE	Band 71	0.23	0.81	0.81	
		Band 12/Band 17	0.33	0.94	0.94	
		Band 13	0.34	1.19	1.19	
		Band 14	0.28	0.99	0.99	
		Band 26/Band 5	0.24	**1.43**	1.43	
		Band 66/Band 4	0.24	1.39	1.39	
		Band 25/Band 2	0.16	1.36	1.36	
		Band 30	0.18	1.32	1.23	
		Band 7	0.17	1.34	1.39	
		Band 41/Band 38	0.20	1.32	1.32	
DTS	WLAN	2.4GHz WLAN	1.12	1.12	1.12	1.59
NII		5GHz WLAN	**1.19**	1.20	1.20	1.57
DSS	Bluetooth	2.4GHz Bluetooth	0.14	<0.10	<0.10	1.50

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	GSM	GSM850	1.63	3.86
		GSM1900	3.46	
	WCDMA	Band V	1.94	
		Band II	**3.49**	
		Band IV	2.76	
	CDMA	BC10	2.35	
		BC0	2.02	
		BC1	3.49	
	LTE	Band 26/Band 5	1.94	
		Band 66/Band 4	**3.49**	
		Band 25/Band 2	3.00	
		Band 30	2.62	
		Band 7	2.81	
		Band 41/Band 38	2.92	
DTS	WLAN	2.4GHz WLAN	3.12	3.86
NII		5GHz WLAN	3.20	3.77
Date of Testing:			2020/3/22~2020/4/10	

Remark: This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE B2 / B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) 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 1528-2013 and FCC KDB publications.

2. Administration Data

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory		
Test Firm	Sporton International (Kunshan) Inc.	
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CN1257	314309

Applicant	
Company Name	Motorola Mobility LLC
Address	222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

Manufacturer	
Company Name	Motorola Mobility LLC
Address	222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

3. Guidance Applied

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 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2043-8
FCC ID	IHDT56YN3
IMEI Code	353579110005333
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz CDMA2000 BC0: 824.7 MHz ~ 848.31 MHz CDMA 2000 BC1: 1851.25 MHz ~ 1908.75 MHz CDMA 2000 BC10: 817.9 MHz ~ 823.1 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 14: 790.5 MHz ~ 795.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 25: 1850.7 MHz ~ 1914.3 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 30: 2307.5 MHz ~ 2312.5 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5 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 HSPA+(16QAM uplink is not supported) CDMA2000 : 1xRTT/1xEv-Do(Rev.0)/1xEv-Do(Rev.A) LTE: QPSK, 16QAM, 64QAM WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz : 802.11a/n/ac HT20/HT40/VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC:ASK
HW Version	DVT2
SW Version	QPR30.80
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. 802.11n-HT40 is not supported in 2.4GHz WLAN. 2. WLAN operation in 5600 MHz ~ 5650 MHz is notched.	

3. This device supports VoIP in GPRS, EGPRS, CDMA, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
4. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
5. This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only).
6. This device does not support DTM operation and supports GRPS/EGRPS mode up to multi-slot class 12.
7. This device supports HPUE for LTE band 41 with class 2 power level, so HPUE SAR has been performed.
8. When the phone is in talking mode and receiver worked, then power reduction will be implemented immediately at WLAN2.4GHz /WLAN5.2GHz/5.3GHz/5.5GHz/5.8GHz.
9. The device employs proximity sensors that detect the presence of the user's body at the front or back faces of the device. When front or back body worn condition is detected, GSM1900, WCDMA band II/IV, CDMA BC1, LTE band 2/4/7/25/30/66/38/41/41HPUE and WLAN2.4GHz/WLAN5.2GHz/5.3GHz/5.5GHz/5.8GHz reduced power will be active.
10. P-sensor can detect handheld state, WCDMA band II/IV, CDMA BC1 and LTE B2/4/7/25/66/30 for front/back /bottom sides of product specific 10g SAR condition reduced powers will be active.
11. When handheld state, when WWAN transmit simultaneous with WLAN/Bluetooth, for WLAN5.2GHz/5.3GHz/5.5GHz /5.8GHz, product specific 10g SAR condition reduced powers will be active for back side. Other faces full power can be tested pass, so reduced power no need to be evaluated.
12. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of GSM1900, WCDMA band II/IV, CDMA BC1, LTE band B2/4/7/25/30/66/38/41/41HPUE and WLAN/5.2GHz/ WLAN/5.8GHz.
13. For P-sensor reduced power level is higher than hotspot reduced power for GSM1900, WCDMA band II/IV, CDMA BC1, LTE band 2/4/7/25/30/66, so for front/back P-sensor SAR can represent conservatively for front/back hotspot SAR.
14. This device has two WWAN transmitter antennas. WWAN antenna 1 is located at the right of bottom edge of the device and WWAN antenna 2 is located at the left side of bottom edge of the device which can refer to antenna location chapter. WWAN antenna 1 frequency bands include GSM850/1900, WCDMA Band II/IV/V, CDMA2000 BC0/BC1/BC10, and LTE Band 2/4/5/12/13/14/17/25/26/66/71, WWAN antenna 2 frequency band include LTE Band 7/30/38/41.
15. This device implements antenna tuning techniques for several WWAN (cellular) operating modes and frequencies for the purpose of improving antenna efficiency over a broad range of frequencies. Specifically, these techniques are employed in the GSM, WCDMA, CDMA and LTE modes of WWAN antenna 1. In this report SAR was measured according to the normally required SAR configurations with the tuner active and worst tune state (auto tune) was used for SAR testing. The detail descriptions of the antenna tuner and supplemental data for additional information on section16.

4.2 General LTE SAR Test and Reporting Considerations

<table>
<tr><th colspan="2">Summarized necessary items addressed in KDB 941225 D05 v02r05</th></tr>
<tr><td>FCC ID</td><td>IHDT56YN3</td></tr>
<tr><td>Equipment Name</td><td>Mobile Cellular Phone</td></tr>
<tr><td>Operating Frequency Range of each LTE transmission band</td><td>LTE Band 2: 1850.7 MHz ~ 1909.3 MHz
LTE Band 4: 1710.7 MHz ~ 1754.3 MHz
LTE Band 5: 824.7 MHz ~ 848.3 MHz
LTE Band 7: 2502.5 MHz ~ 2567.5 MHz
LTE Band 12: 699.7 MHz ~ 715.3 MHz
LTE Band 13: 779.5 MHz ~ 784.5 MHz
LTE Band 14: 790.5 MHz ~ 795.5 MHz
LTE Band 17: 706.5 MHz ~ 713.5 MHz
LTE Band 25: 1850.7 MHz ~ 1914.3 MHz
LTE Band 26: 814.7 MHz ~ 848.3 MHz
LTE Band 30: 2307.5 MHz ~ 2312.5 MHz
LTE Band 38: 2572.5 MHz ~ 2617.5 MHz
LTE Band 41: 2498.5 MHz ~ 2687.5 MHz
LTE Band 66: 1710.7 MHz ~ 1779.3 MHz
LTE Band 71: 665.5 MHz ~ 695.5 MHz</td></tr>
<tr><td>Channel Bandwidth</td><td>LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 13: 5MHz, 10MHz
LTE Band 14: 5MHz, 10MHz
LTE Band 17: 5MHz, 10MHz
LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz
LTE Band 30: 5MHz, 10MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Voice and Data</td></tr>
<tr><td>LTE Release Version</td><td>R12, Cat13</td></tr>
<tr><td>CA Support</td><td>Supported, Uplink and Downlink</td></tr>
<tr><td>LTE MPR permanently built-in by design</td><td>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3
<table>
<tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{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>
<tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr>
<tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr>
</table></td></tr>
<tr><td>LTE A-MPR</td><td>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)</td></tr>
<tr><td>Spectrum plots for RB configuration</td><td>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.</td></tr>
<tr><td>Power reduction applied to satisfy SAR compliance</td><td>Yes
1. The device employs proximity sensors that detect the presence of the user's body at the front or back faces of the device. When front or back body worn condition is detected, LTE band 2/4/7/25/30/66/38/41/41HPUE reduced power will be active.
2. P-sensor can detect handheld state, LTE B2/4/7/25/66/30 for front/back /bottom sides of product specific 10g SAR condition reduced powers will be active.
3. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of LTE band B2/4/7/25/30/66/38/41.</td></tr>
<tr><td>LTE Carrier Aggregation Combinations</td><td>Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 13.</td></tr>
<tr><td>LTE Carrier Aggregation Additional</td><td>1. This device supports LTE Carrier Aggregation (CA) in the uplink for LTE B41C and 5B</td></tr>
</table>

Information	with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 2 carriers in the downlink and uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.

Transmission (H, M, L) channel numbers and frequencies in each LTE band

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 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 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 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)
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 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 13

	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	23205	779.5	23230	782
M	23230	782		
H	23255	784.5		

LTE Band 14

	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Channel #	Channel #	Freq.(MHz)
L	23305	790.5	23330	793
M	23330	793		
H	23355	795.5		

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 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 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)
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	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

LTE Band 30				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	27685	2307.5	27710	2310
M	27710	2310		
H	27735	2312.5		

LTE Band 38								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610

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)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

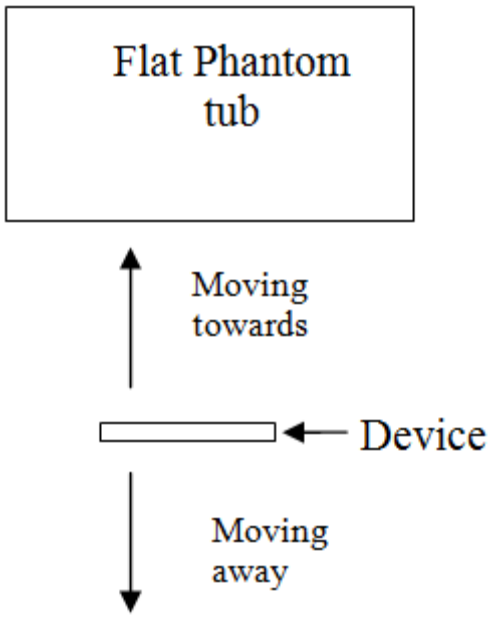
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

LTE Band 71								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673
M	133247	675.5	133272	678	133297	680.5	133322	683
H	133447	695.5	133422	693	133397	690.5	133372	688

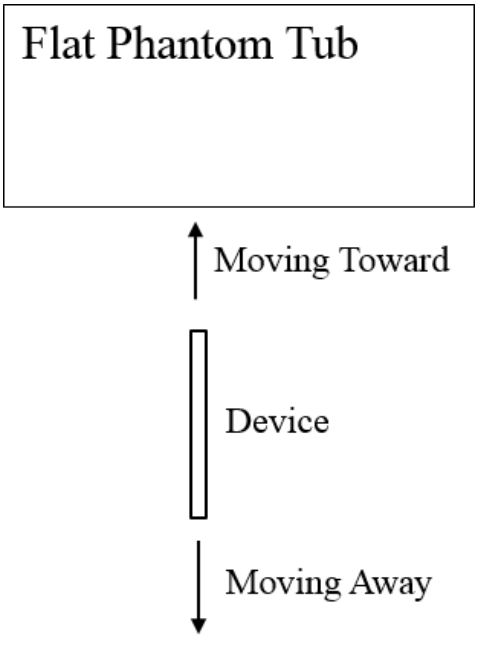
5. Proximity Sensor Triggering Test

5.1 Proximity sensor triggering distances(Per KDB616217§6.2)

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (5825MHz) and lowest (1720MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensor placed coincident with antenna elements at the bottom end of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back or bottom surface of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
3. When the proximity sensor is active, GSM1900, WCDMA band II/IV, CDMA BC1, LTE band 2/4/7/25/30/66/38/41/41HPUE and WLAN2.4GHz/WLAN5.2GHz/5.3GHz/5.5GHz/5.8GHz reduced power will be active for front/ back body worn SAR.
4. P-sensor can detect handheld state, WCDMA band II/IV, CDMA BC1 and LTE B2/4/7/25/66/30 for front/back/ bottom sides of product specific 10g SAR condition reduced powers will be active for handheld SAR.
5. The proximity sensors used to detect the proximity of the user's body at the front or back or bottom side surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s).
6. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for body worn:
   Front: 12 mm
   Back: 18 mm
7. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for handheld:
   Front: 6 mm
   Back: 11 mm
   Bottom side: 11 mm



Sensor/handheld detection test set-up, front and back faces



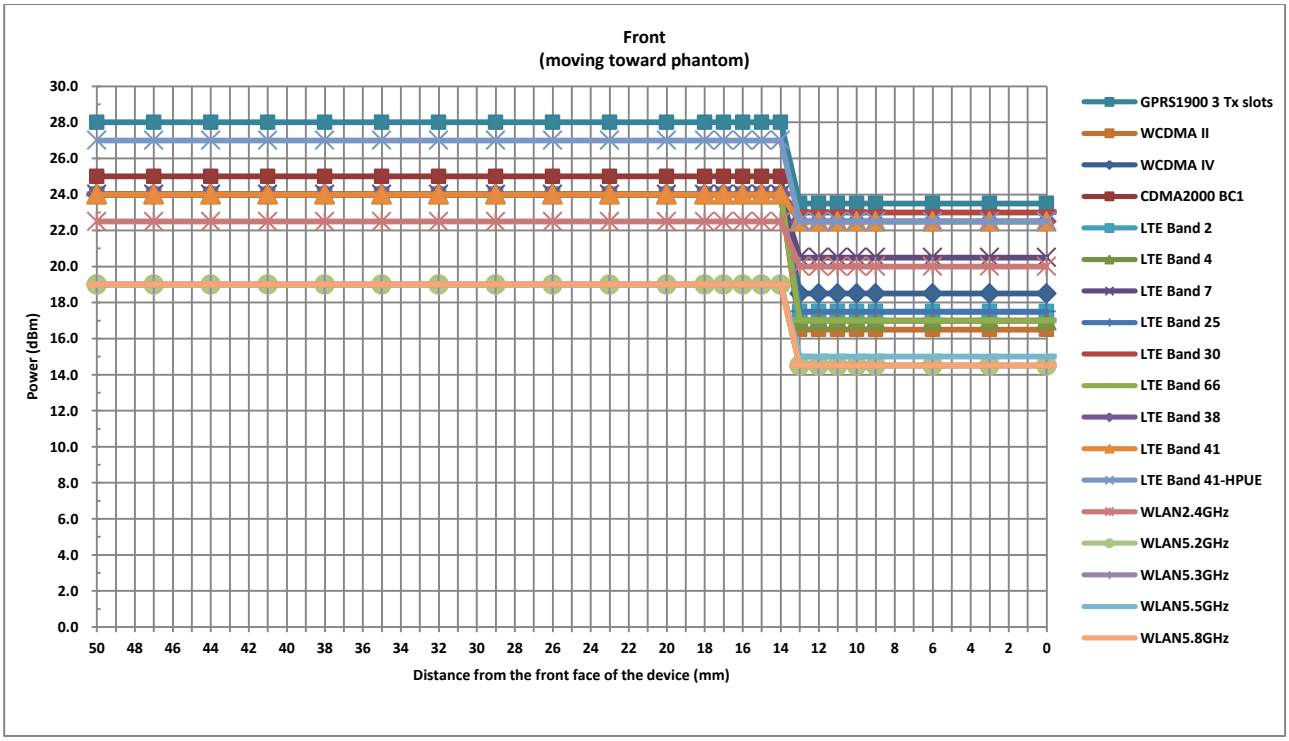
handheld detection test set-up, bottom side

<P-Sensor>

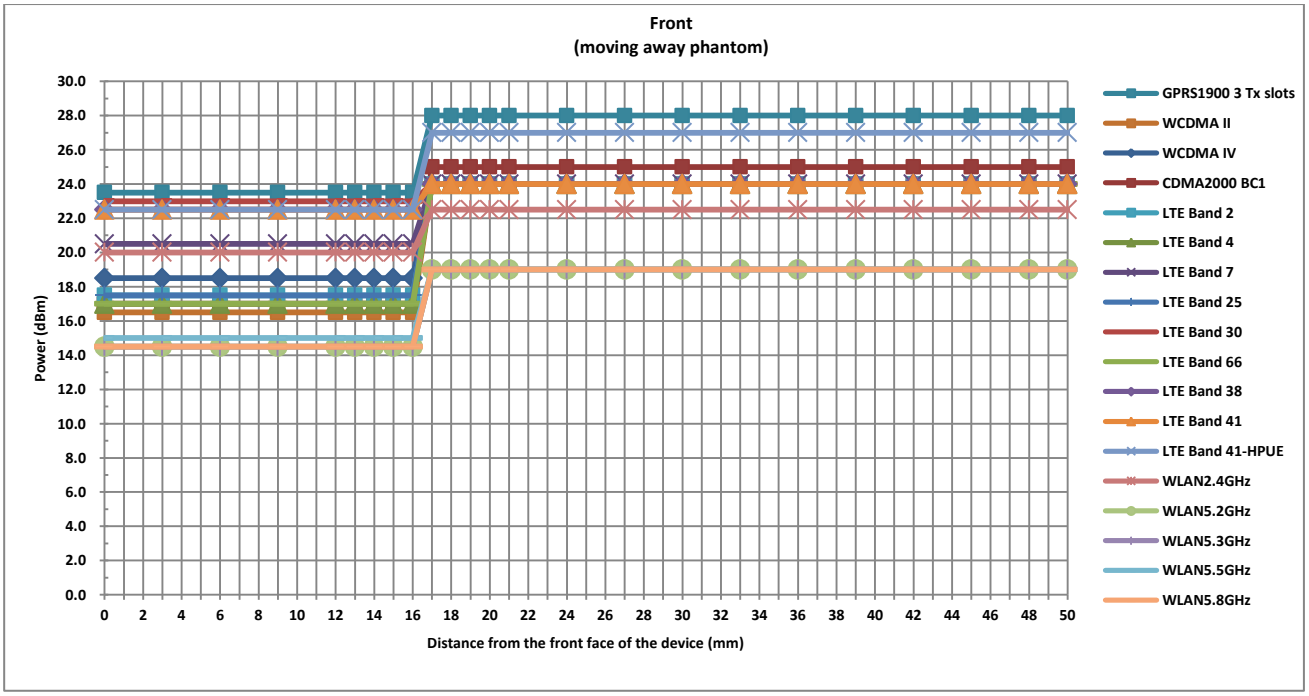
Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	13	16	19	21

TX. Band	Proximity Sensor Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
GPRS1900 3 Tx slots	28	23.5	4.5
WCDMA II	24	16.5	7.5
WCDMA IV	24	18.5	5.5
CDMA2000 BC1	25	17	8
LTE Band 2	24	17.5	6.5
LTE Band 4	24	17	7
LTE Band 7	24	20.5	3.5
LTE Band 25	24	17.5	6.5
LTE Band 30	24	23	1
LTE Band 66	24	17	7
LTE Band 38	24	22.5	1.5
LTE Band 41	24	22.5	1.5
LTE Band 41-HPUE	27	22.5	4.5
WLAN2.4GHz	22.5	20	2.5
WLAN5.2GHz	19	14.5	4.5
WLAN5.3GHz	19	14.5	4.5
WLAN5.5GHz	19	15	4
WLAN5.8GHz	19	14.5	4.5

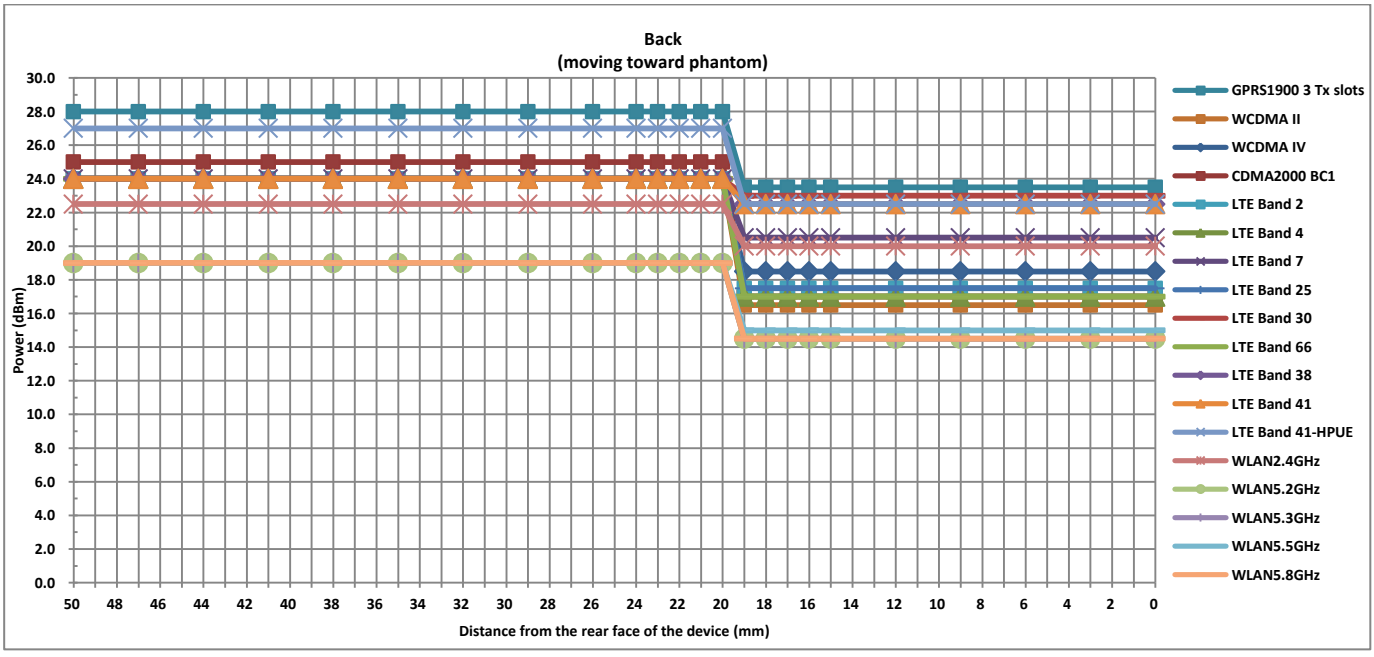
Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	47	44	41	38	35	32	29	26	23	20	18	17	16	15	14	13	12	11	10	9	6	3	0
GPRS1900 3 Tx slots	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	17	17	17	17	17	17	17	17
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17	17	17	17	17	17	17	17
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17	17	17	17	17	17	17	17
LTE Band 38	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41-HPUE	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
WLAN2.4GHz	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	20	20	20	20	20	20	20
WLAN5.2GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
WLAN5.3GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
WLAN5.5GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	15	15	15	15	15	15	15	15
WLAN5.8GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5



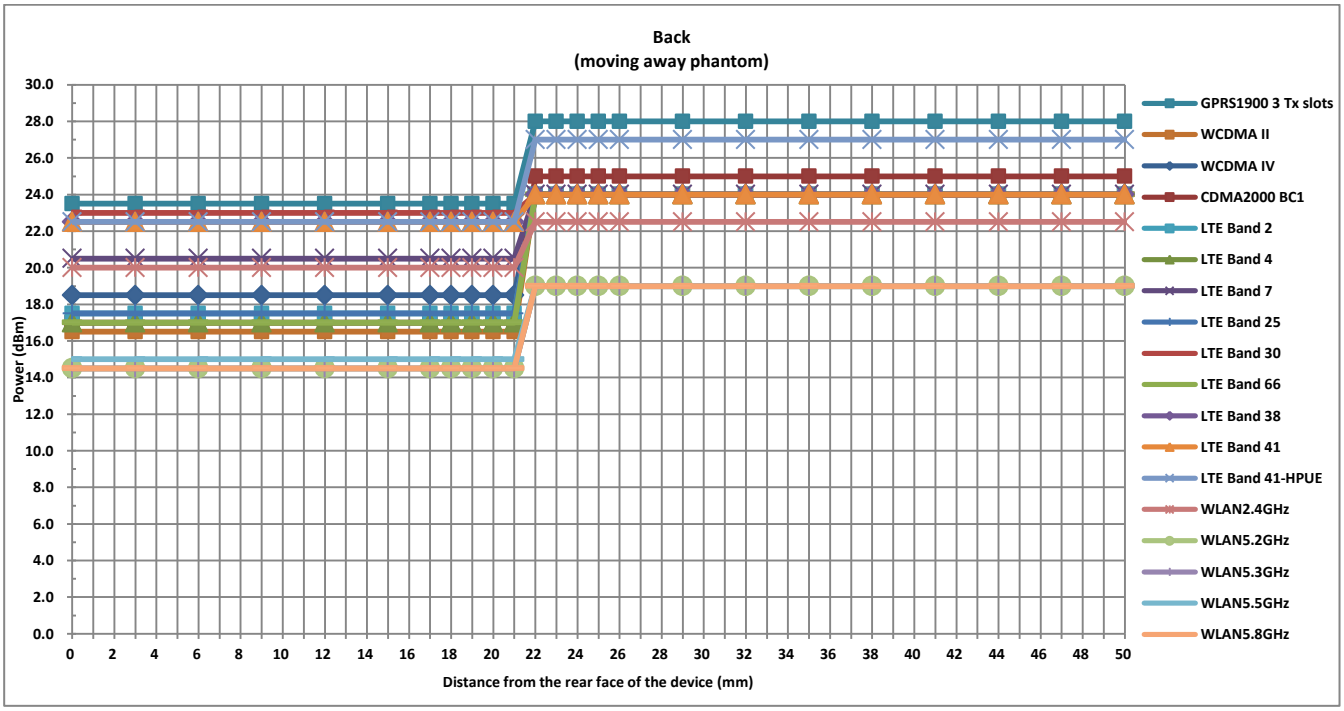
Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	48	45	42	39	36	33	30	27	24	21	20	19	18	17	16	15	14	13	12	9	6	3	0
GPRS1900 3 Tx slots	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	17	17	17	17	17	17	17	17	17
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17	17	17	17	17	17	17	17	17
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17	17	17	17	17	17	17	17	17
LTE Band 38	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41-HPUE	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
WLAN2.4GHz	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	20	20	20	20	20	20	20	20
WLAN5.2GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
WLAN5.3GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
WLAN5.5GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	15	15	15	15	15	15	15	15	15
WLAN5.8GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5



Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																							
Back																							
Distance	50	47	44	41	38	35	32	29	26	24	23	22	21	20	19	18	17	16	15	12	9	6	3	0
GPRS1900 3 Tx slots	28	28	28	28	28	28	28	28	28	28	28	28	28	28	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	17	17	17	17	17	17	17	17	17	17
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17	17	17	17	17	17	17	17	17	17
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	17	17	17	17	17	17	17	17	17	17
LTE Band 38	24	24	24	24	24	24	24	24	24	24	24	24	24	24	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41	24	24	24	24	24	24	24	24	24	24	24	24	24	24	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41-HPUE	27	27	27	27	27	27	27	27	27	27	27	27	27	27	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
WLAN2.4GHz	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	20	20	20	20	20	20	20	20	20
WLAN5.2GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
WLAN5.3GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
WLAN5.5GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	15	15	15	15	15	15	15	15	15	15
WLAN5.8GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5



Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																							
Back																							
Distance	50	47	44	41	38	35	32	29	26	25	24	23	22	21	20	19	18	17	15	12	9	6	3	0
GPRS1900 3 Tx slots	28	28	28	28	28	28	28	28	28	28	28	28	28	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	17	17	17	17	17	17	17	17	17	17	17
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	17	17	17	17	17	17	17	17	17	17	17
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	17	17	17	17	17	17	17	17	17	17	17
LTE Band 38	24	24	24	24	24	24	24	24	24	24	24	24	24	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41	24	24	24	24	24	24	24	24	24	24	24	24	24	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41-HPUE	27	27	27	27	27	27	27	27	27	27	27	27	27	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
WLAN2.4GHz	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	20	20	20	20	20	20	20	20	20	20
WLAN5.2GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
WLAN5.3GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
WLAN5.5GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	15	15	15	15	15	15	15	15	15	15	15
WLAN5.8GHz	19	19	19	19	19	19	19	19	19	19	19	19	19	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5

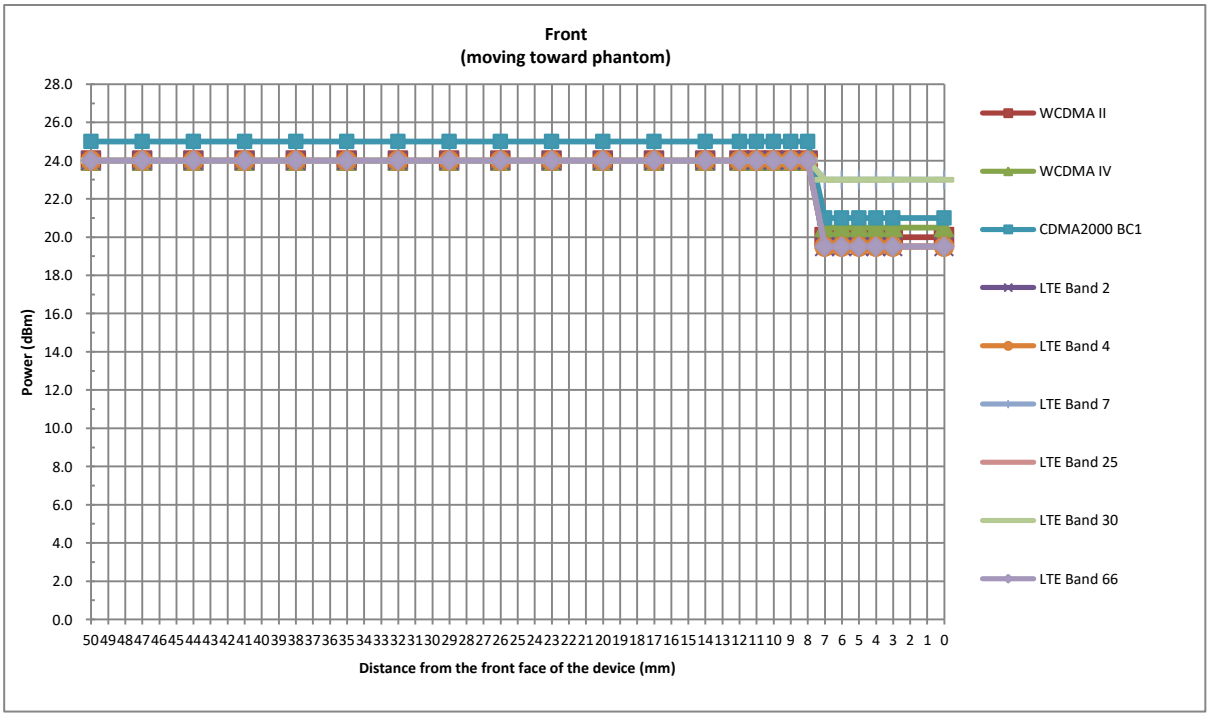


<Handheld>

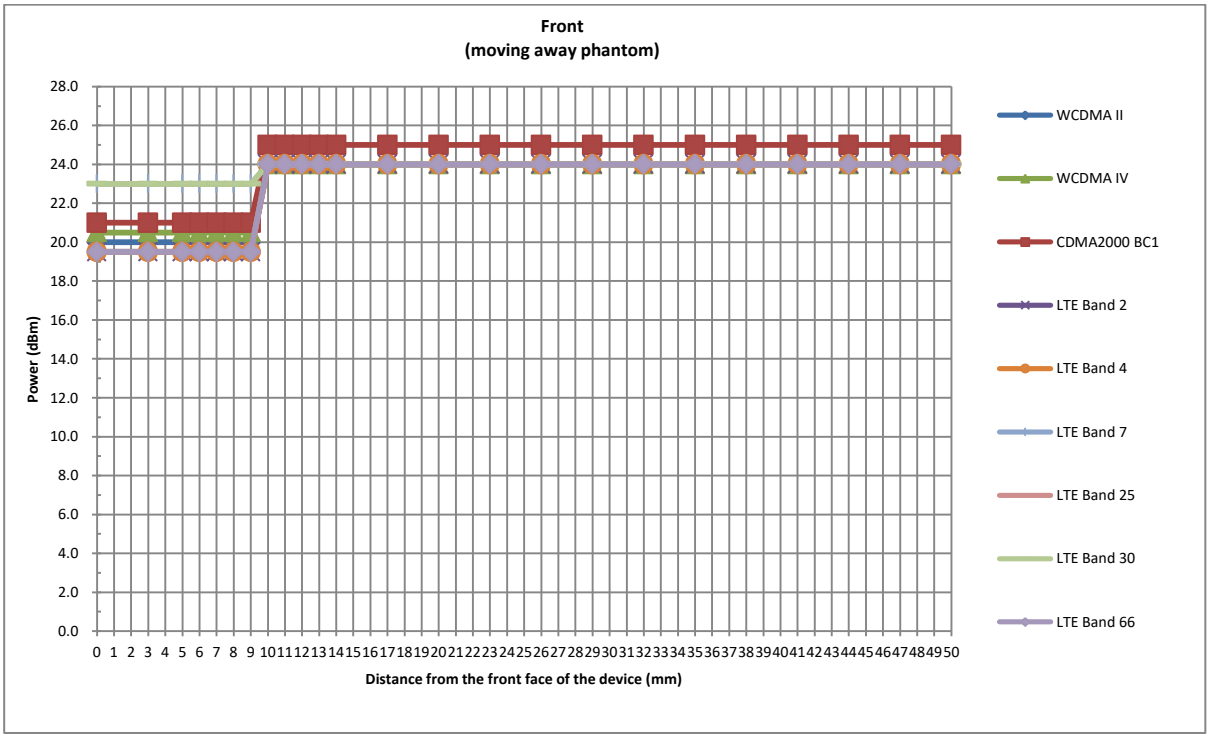
Position	Front		Back		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	7	9	12	14	12	16

TX. Band	Handheld Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
WCDMA II	24	20	4
WCDMA IV	24	20.5	3.5
CDMA2000 BC1	25	21	4
LTE Band 2	24	19.5	4.5
LTE Band 4	24	19.5	4.5
LTE Band 7	24	23	1
LTE Band 25	24	19.5	4.5
LTE Band 30	24	23	1
LTE Band 66	24	19.5	4.5

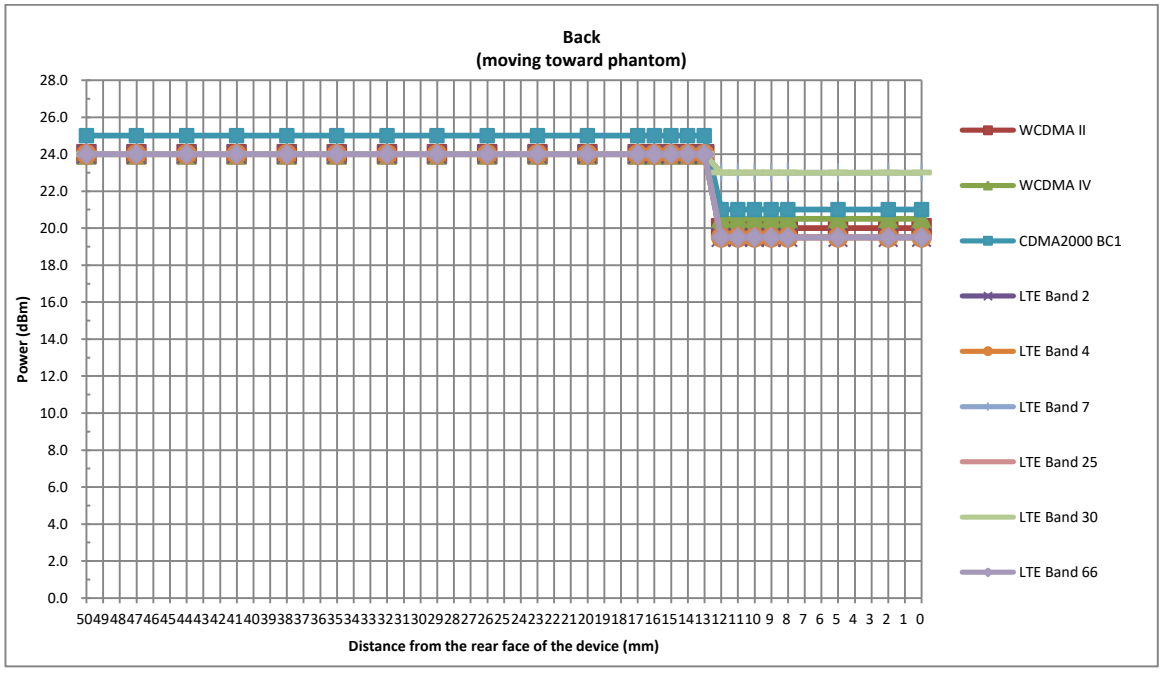
Handheld Triggering Distance (mm) and Triggering Power (dBm)																							
Front																							
Distance	50	47	44	41	38	35	32	29	26	23	20	17	14	12	11	10	9	8	7	6	5	4	3	0
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20	20	20	20	20	20
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	21	21	21	21	21	21
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5



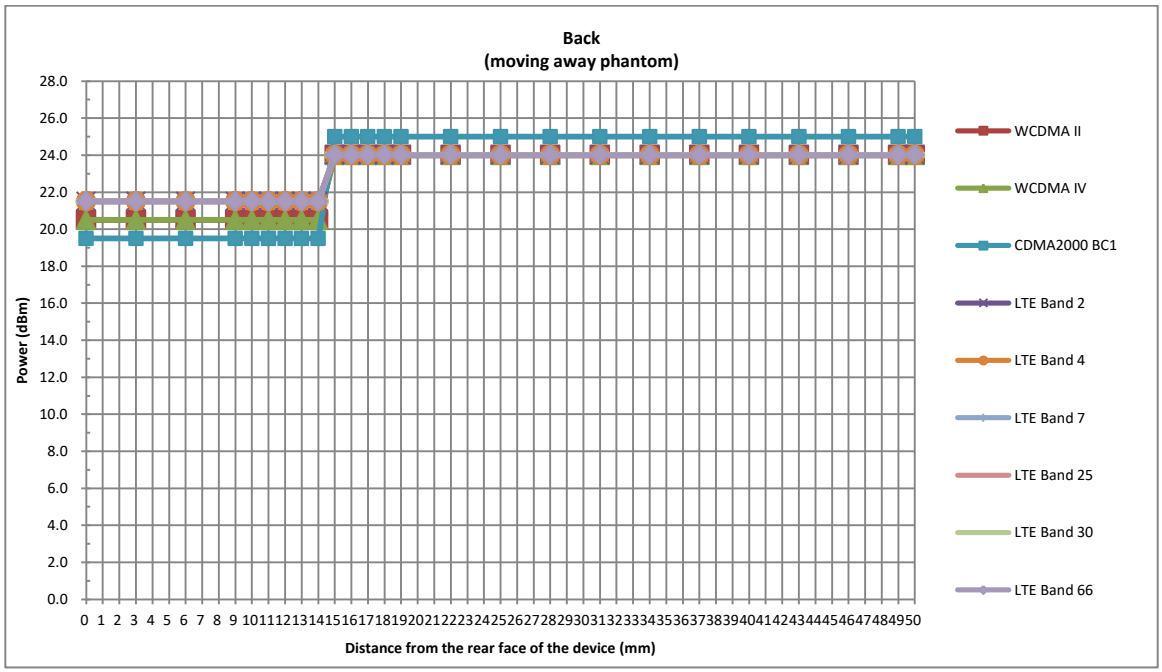
Handheld Triggering Distance (mm) and Triggering Power (dBm)																							
Front																							
Distance	50	47	44	41	38	35	32	29	26	23	20	17	14	13	12	11	10	9	8	7	6	5	3	0
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20	20	20	20	20	20	20
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	21	21	21	21	21	21	21
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5



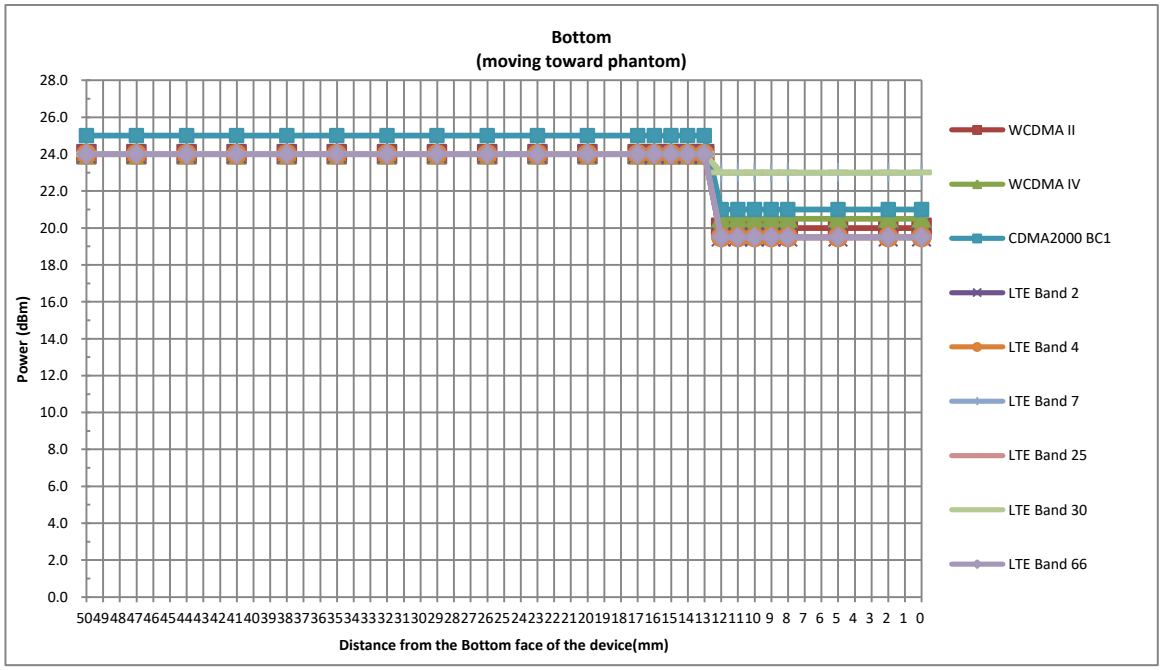
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	16	15	14	13	12	11	10	9	8	5	2	0
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20	20	20	20	20	20	20	20
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	21	21	21	21	21	21	21	21
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5



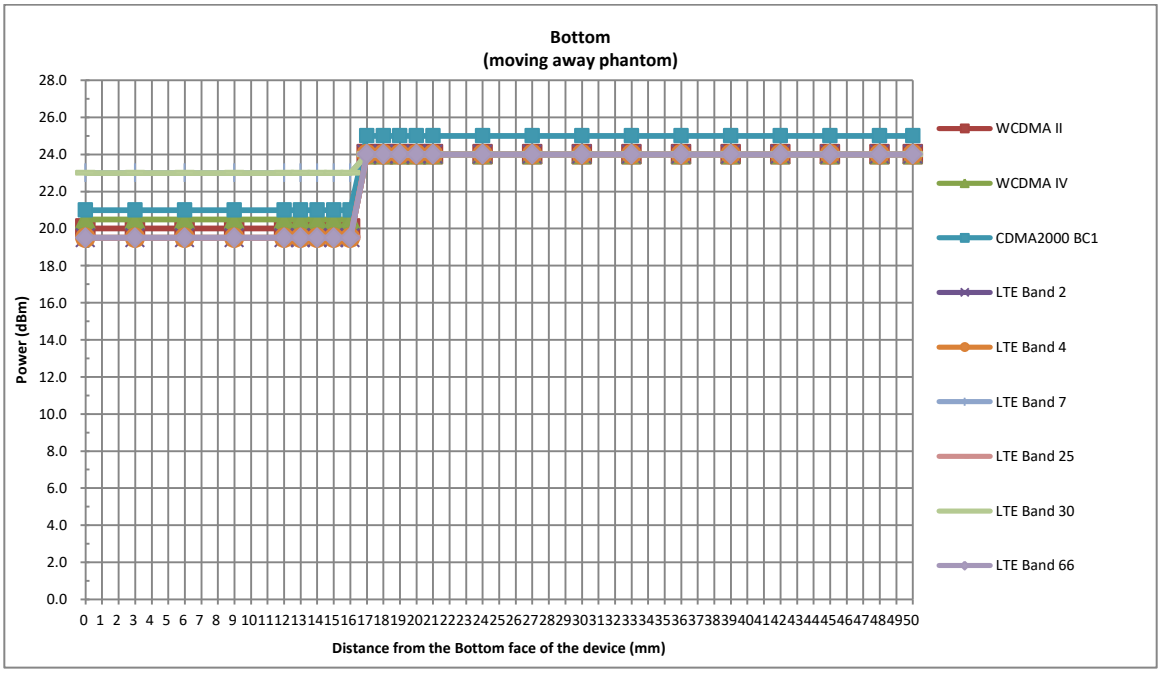
Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	49	46	43	40	37	34	31	28	25	22	19	18	17	16	15	14	13	12	11	10	9	6	3	0
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5



Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Bottom Side																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	16	15	14	13	12	11	10	9	8	5	2	0
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20	20	20	20	20	20	20	20
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	21	21	21	21	21	21	21	21
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5



Handheld Triggering Distance (mm) and Triggering Power (dBm)																							
Bottom Side																							
Distance	50	48	45	42	39	36	33	30	27	24	21	20	19	18	17	16	15	14	13	12	9	6	3	0
WCDMA II	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20	20	20	20	20	20	20	20	20
WCDMA IV	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
CDMA2000 BC1	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	21	21	21	21	21	21	21	21	21
LTE Band 2	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 4	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 7	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23
LTE Band 25	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
LTE Band 30	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23
LTE Band 66	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5



6. RF Exposure Limits

6.1 Uncontrolled Environment

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

6.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. 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

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.

7. Specific Absorption Rate (SAR)

7.1 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.

7.2 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:

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

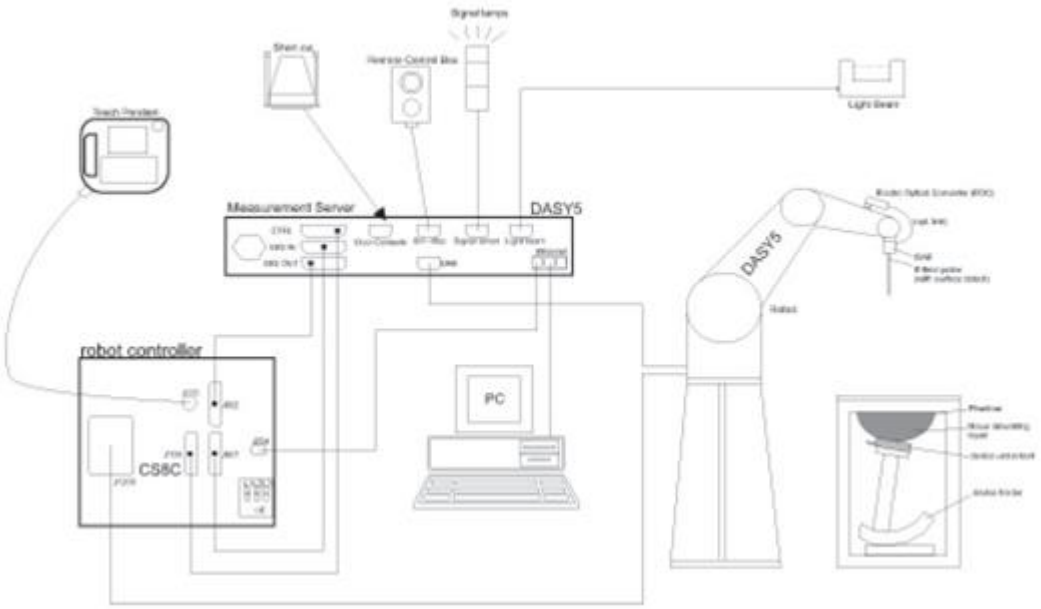
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

8. 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.

8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG).The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	10 MHz – >6 GHz Linearity: ±0.2 dB (30 MHz – 6 GHz)
Directivity	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/g)
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	10 MHz – 4 GHz; Linearity: ±0.2 dB (30 MHz – 4 GHz)
Directivity	±0.2 dB in TSL (rotation around probe axis) ±0.3 dB in TSL (rotation normal to probe axis)
Dynamic Range	5 µW/g – >100 mW/g; Linearity: ±0.2 dB
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm

8.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

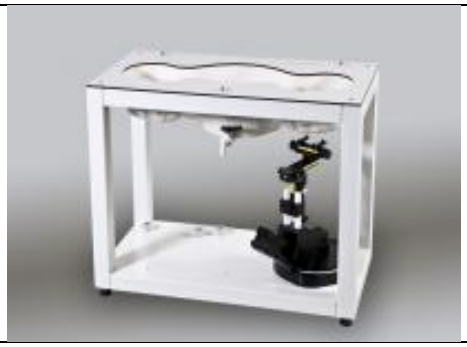
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

8.3 Phantom

<SAM Twin Phantom>

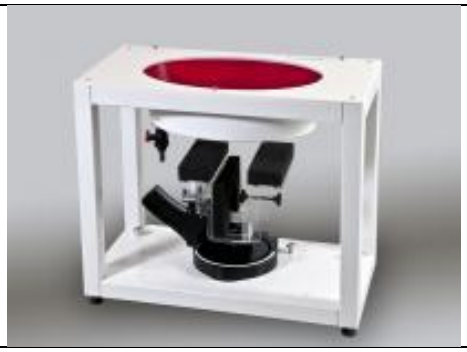
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)
Filling Volume	Approx. 30 liters
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm



The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

8.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

Mounting Device for Laptops

9. 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

9.1 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 form 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

9.2 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.

9.3 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 dB0 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 D01v01r04 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	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
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 ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan

Zoom scans are used 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 shoes 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 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{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: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
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 *reported* SAR from the *area scan based 1-g SAR estimation* 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.

9.5 Volume Scan Procedures

The volume scan is used for 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.

9.6 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.

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2019/3/27	2022/3/26
SPEAG	835MHz System Validation Kit	D835V2	4d151	2019/3/27	2022/3/26
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2019/3/27	2022/3/26
SPEAG	1900MHz System Validation Kit	D1900V2	5d170	2019/3/26	2022/3/25
SPEAG	2300MHz System Validation Kit	D2300V2	1055	2019/9/20	2022/9/19
SPEAG	2450MHz System Validation Kit	D2450V2	908	2019/3/25	2022/3/24
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2018/12/7	2021/12/6
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2019/9/24	2020/9/23
SPEAG	Data Acquisition Electronics	DAE4	871	2019/6/27	2020/6/26
SPEAG	Data Acquisition Electronics	DAE4	1210	2019/7/23	2020/7/22
SPEAG	Dosimetric E-Field Probe	ES3DV3	3293	2019/11/25	2020/11/24
SPEAG	Dosimetric E-Field Probe	EX3DV4	3857	2019/5/27	2020/5/26
SPEAG	SAM Twin Phantom	QD 000 P40 CB	TP-1753	NCR	NCR
SPEAG	SAM Twin Phantom	QD 000 P40 CB	TP-1754	NCR	NCR
SPEAG	SAM Twin Phantom	QD 000 P40 CB	TP-1697	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6201432831	2019/4/17	2020/4/16
Agilent	Wireless Communication Test Set	E5515C	MY52102706	2019/4/17	2020/4/16
Agilent	ENA Series Network Analyzer	E5071C	MY46111157	2019/4/17	2020/4/16
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	2019/10/28	2020/10/27
Anritsu	Vector Signal Generator	MG3710A	6201682672	2020/1/8	2021/1/7
Rohde & Schwarz	Power Meter	NRVD	102081	2019/8/15	2020/8/14
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2019/8/14	2020/8/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2019/8/14	2020/8/13
R&S	CBT BLUETOOTH TESTER	CBT	101641	2020/1/8	2021/1/7
EXA	Spectrum Analyzer	FSV7	101631	2020/1/8	2021/1/7
Testo	Hygrometer	608-H1	1241332088	2020/1/8	2021/1/7
FLUKE	DIGITAC THERMOMETER	51II	97240029	2019/8/15	2020/8/14
ARRA	Power Divider	A3200-2	N/A	Note	
MCL	Attenuation1	BW-S10W5+	N/A	Note	
MCL	Attenuation2	BW-S10W5+	N/A	Note	
MCL	Attenuation3	BW-S10W5+	N/A	Note	
Agilent	Dual Directional Coupler	778D	20500	Note	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note	
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note	

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
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

11. System Verification

11.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.2.

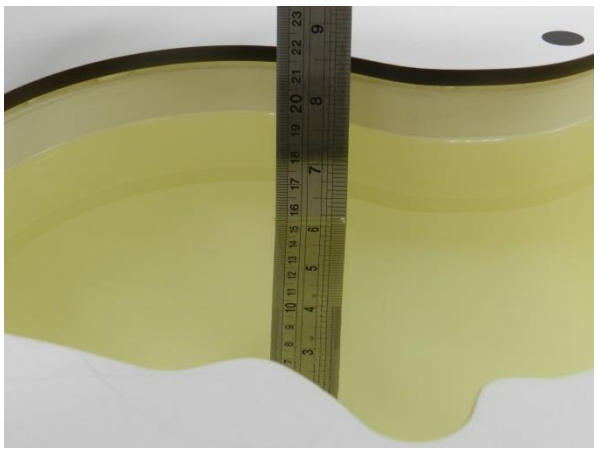


Fig 11.1 Photo of Liquid Height for Head SAR

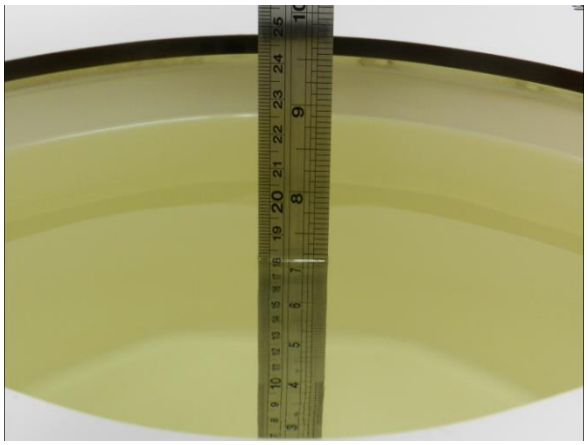


Fig 11.2 Photo of Liquid Height for Body SAR

11.2 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 (εr)
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
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

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>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.8	0.918	42.952	0.89	41.90	3.15	2.51	±5	2020/3/22
750	Head	22.9	0.901	41.231	0.89	41.90	1.24	-1.60	±5	2020/3/23
835	Head	22.7	0.929	42.215	0.90	41.50	3.22	1.72	±5	2020/3/24
1750	Head	22.8	1.382	39.703	1.37	40.10	0.88	-0.99	±5	2020/3/26
1900	Head	22.6	1.421	39.803	1.40	40.00	1.50	-0.49	±5	2020/3/28
2300	Head	22.9	1.687	41.316	1.67	39.50	1.02	4.60	±5	2020/3/31
2450	Head	22.7	1.794	40.777	1.80	39.20	-0.33	4.02	±5	2020/4/1
2600	Head	22.8	1.962	40.355	1.96	39.00	0.10	3.47	±5	2020/4/3
2600	Head	22.7	2.051	38.124	1.96	39.00	4.64	-2.25	±5	2020/4/6
5250	Head	22.6	4.595	36.399	4.71	35.90	-2.44	1.39	±5	2020/4/5
5600	Head	22.6	4.985	35.825	5.07	35.50	-1.68	0.92	±5	2020/4/8
5750	Head	22.8	5.160	35.569	5.22	35.40	-1.15	0.48	±5	2020/4/10

11.3 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.

<1g SAR>

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 (%)
2020/3/22	750	Head	250	1087	3293	871	1.94	8.36	7.76	-7.18
2020/3/23	750	Head	250	1087	3293	871	2.07	8.36	8.28	-0.96
2020/3/24	835	Head	250	4d151	3293	871	2.54	9.30	10.16	9.25
2020/3/26	1750	Head	250	1090	3293	871	9.43	36.40	37.72	3.63
2020/3/28	1900	Head	250	5d170	3293	871	9.65	39.00	38.60	-1.03
2020/3/31	2300	Head	250	1055	3293	871	13.00	48.70	52.00	6.78
2020/4/1	2450	Head	250	908	3293	871	13.30	52.80	53.20	0.76
2020/4/3	2600	Head	250	1061	3293	871	14.30	57.70	57.20	-0.87
2020/4/6	2600	Head	250	1061	3293	871	13.40	57.70	53.60	-7.11
2020/4/5	5250	Head	100	1113	3857	1210	7.78	80.50	77.80	-3.35
2020/4/8	5600	Head	100	1113	3857	1210	7.94	83.40	79.40	-4.80
2020/4/10	5750	Head	100	1113	3857	1210	7.32	80.00	73.20	-8.50

<10g SAR>

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 (%)
2020/3/24	835	Head	250	4d151	3293	871	1.65	6.16	6.60	7.14
2020/3/26	1750	Head	250	1090	3293	871	5.00	19.20	20.00	4.17
2020/3/28	1900	Head	250	5d170	3293	871	4.92	20.30	19.68	-3.05
2020/3/31	2300	Head	250	1055	3293	871	6.15	23.20	24.60	6.03
2020/4/1	2450	Head	250	908	3293	871	6.13	24.20	24.52	1.32
2020/4/3	2600	Head	250	1061	3293	871	6.31	25.90	25.24	-2.55
2020/4/6	2600	Head	250	1061	3293	871	6.18	25.90	24.72	-4.56
2020/4/5	5250	Head	100	1113	3857	1210	2.26	23.10	22.60	-2.16
2020/4/8	5600	Head	100	1113	3857	1210	2.31	23.80	23.10	-2.94
2020/4/10	5750	Head	100	1113	3857	1210	2.12	22.80	21.20	-7.02

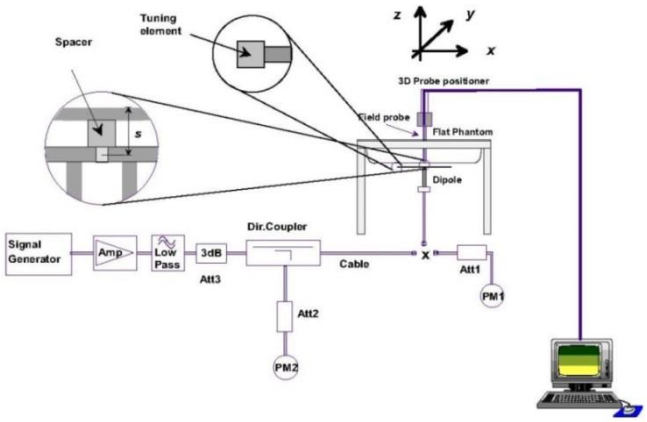


Fig 11.3.1 System Performance Check Setup

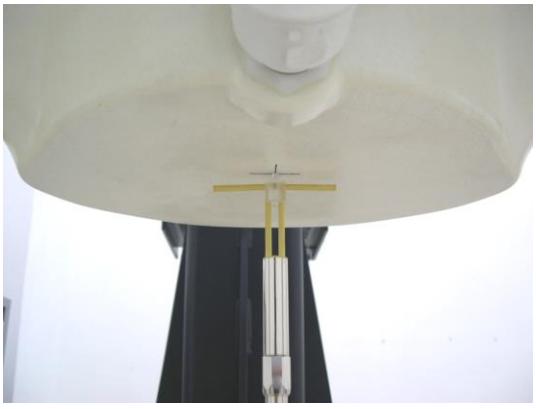


Fig 11.3.2 Setup Photo

12. RF Exposure Positions

12.1 Ear and handset reference point

Figure 12.1.1 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 12.1.2 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 12.1.3). 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 12.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

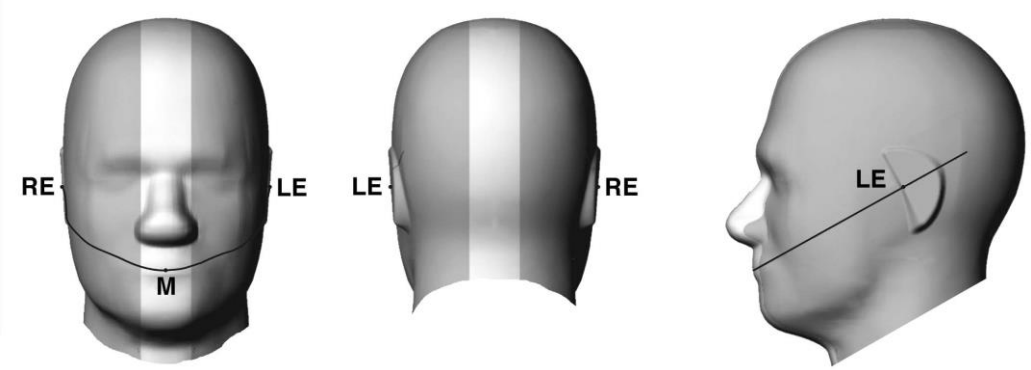


Fig 12.1.1 Front, back, and side views of SAM twin phantom

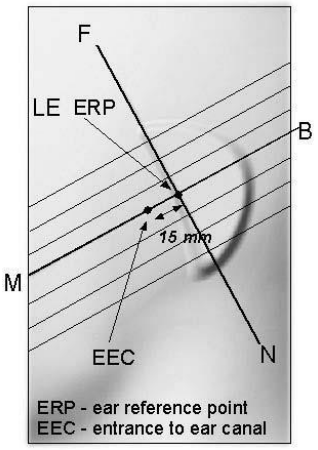


Fig 12.1.2 Close-up side view of phantom showing the ear region.

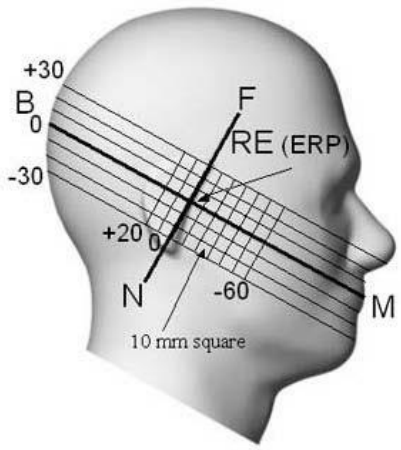


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

12.2 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 wt of the handset at the level of the acoustic output (point A in Figure 12.2.1 and Figure 12.2.2), and the midpoint of the width wb 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 12.2.1). 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 12.2.2), 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 12.2.3), 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 12.2.3. The actual rotation angles should be documented in the test report.

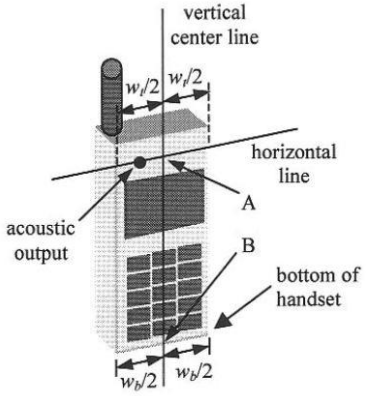


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

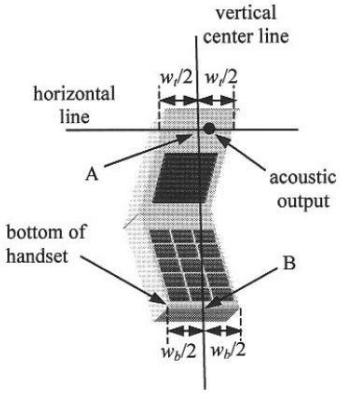


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

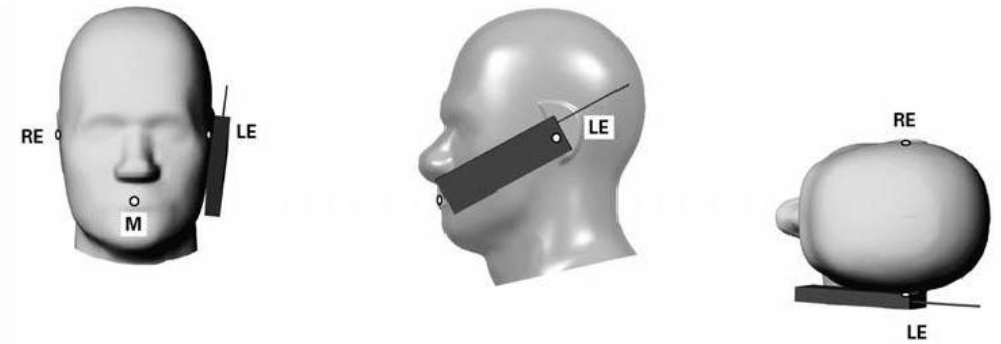


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

12.3 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 12.3.1. 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

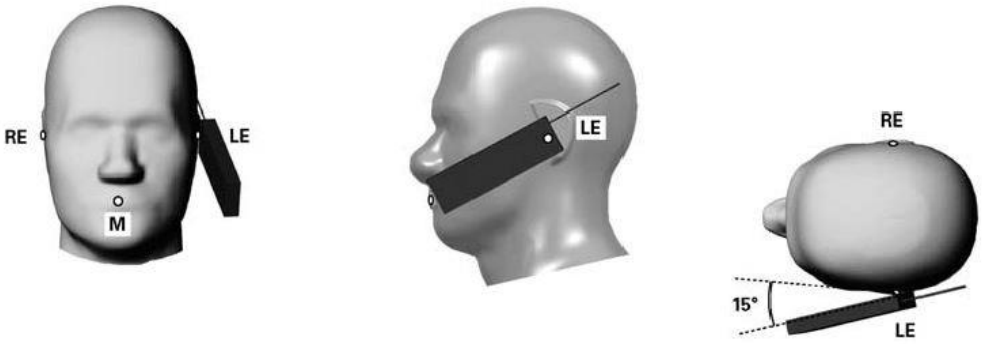


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

12.4 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 12.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for 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 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 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.

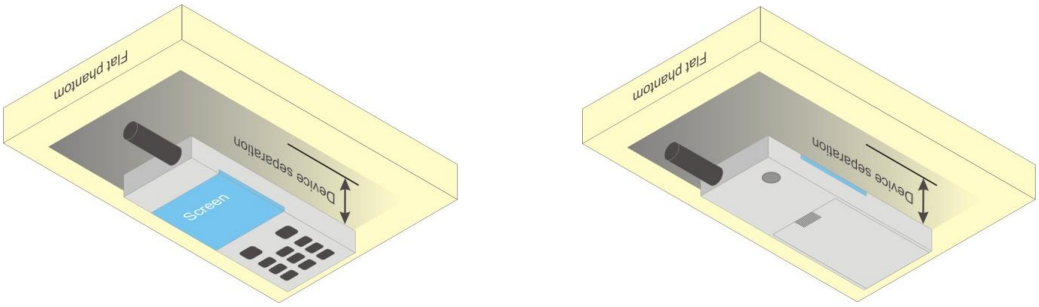


Fig 12.4 Body Worn Position

12.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 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, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.

2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 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 W/kg.

12.6 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 KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 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 form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 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.

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Antenna 1	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
WWAN Antenna 2	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm	≤ 25mm
2.4GHz WLAN & BT	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
5GHz 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 Antenna 1	Yes	Yes	No	Yes	Yes	Yes
WWAN Antenna 2	Yes	Yes	No	Yes	No	Yes
2.4GHz WLAN & BT	Yes	Yes	Yes	No	Yes	No
5GHz WLAN	Yes	Yes	Yes	No	Yes	No

Note:

1. This device has two WWAN transmitter antennas. WWAN antenna 1 is located at the right of bottom edge of the device and WWAN antenna 2 is located at the left side of bottom edge of the device which can refer to antenna location chapter. WWAN antenna 1 frequency bands include GSM850/1900, WCDMA Band II/IV/V, CDMA2000 BC0/BC1/BC10, and LTE Band 2/4/5/12/13/14/17/25/26/66/71, WWAN antenna 2 frequency band include LTE Band 7/30/38/41.
2. 2.4GHz WLAN &BT Antenna is located at the Right-top of the device
3. 5GHz WLAN Antenna is located at the Right-top of the device

13. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS 3Tx slots for GSM850/GSM1900 are considered as the primary mode.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<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 D01v03r01 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} (Note1, 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 Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_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 Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c , and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c .

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, 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 β_c = 11/15 and β_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} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	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	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 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	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c = 10/15 and β_d = 15/15.

Note 4: 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 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

a. The EUT was connected to Base Station 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: β_c/β_d=2/15
      b). Subtest 2: β_c/β_d=12/15
      c). Subtest 3: β_c/β_d=15/8
      d). Subtest 4: β_c/β_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	Proces ses	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.		

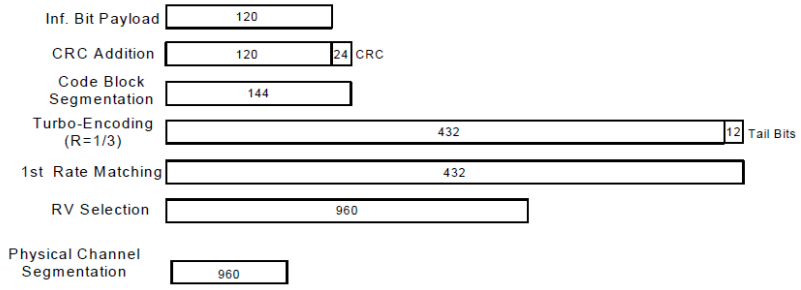


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

<CDMA2000 Conducted Power>

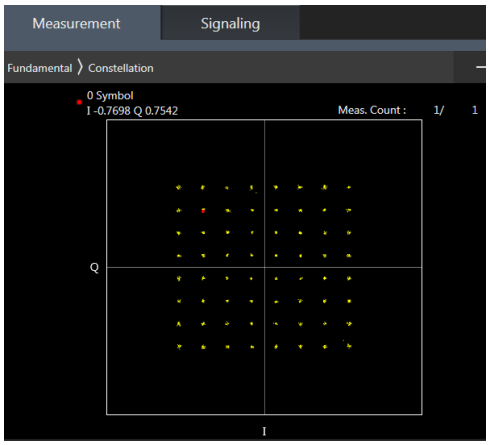
General Note:

1. Per KDB 941225 D01v03r01, SAR for head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55.
2. Per KDB 941225 D01v03r01, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
3. Per KDB 941225 D01v03r01, for Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH), with FCH only as the primary mode.

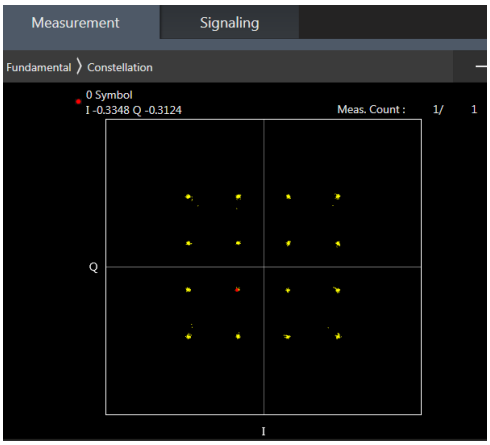
<LTE Conducted Power>

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 D05v02r05, 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 D05v02r05, 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 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, 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 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ 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 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B17 / B2 / B5 / B4 / B38 SAR test was covered by B12 / B25 / B26 / B66 /B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

<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.

a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
b. "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
c. 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.

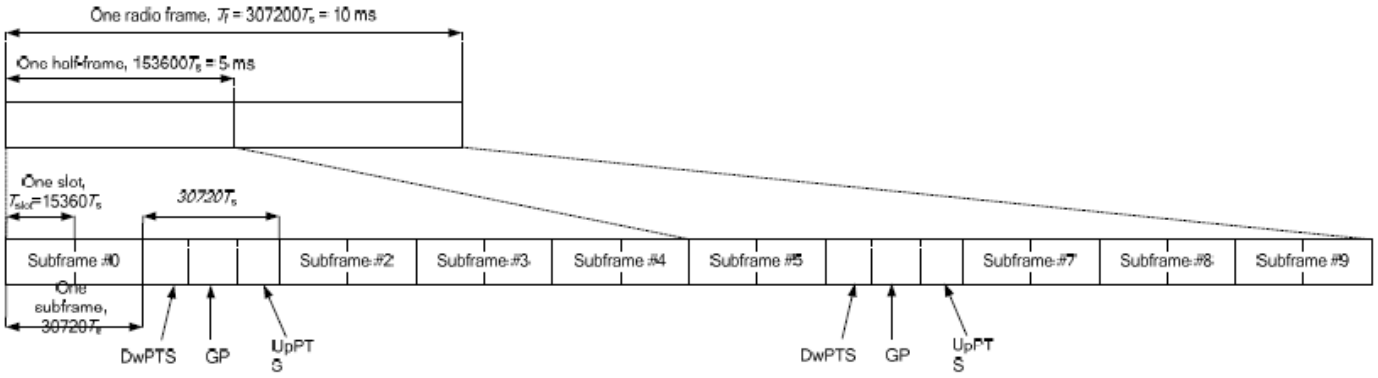


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
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:

For LTE Band 41 Power class 2

i. Uplink-downlink configuration: 1. In a half-frame consisted of 5 subfames, uplink operation is in 2 uplink subframes and 1 special subframe.
ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (2+0.167)/5 = 43.3%
iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: (2+0.143)/5 = 42.9%
v. For TDD LTE SAR measurement, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 43.3%/42.9% = 1.009 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.

For LTE Band 41 Power class 3

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, uplink operation is in 3 uplink subframes and 1 special subframe.
ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
iii. 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%
iv. 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%
v. 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% = 1.006 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.

The device can adjust uplink/downlink configuration automatically according to the transmitting power class level, as followings:

LTE TDD Band	Power Class level	support uplink/downlink configuration
LTE Band 41	> 23	1,2,3,4,5
	=23	0,1,2,3,4,5,6
	< 23	0,1,2,3,4,5,6

<LTE Carrier Aggregation>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. All permutations exist. No restrictions on Pcell & Scell combinations. Only LTE Band 29A is limited to Scell.

Index	2CC	Index	2CC
2CC #1	CA_2A-4A	2CC #29	CA_14A-66A
2CC #2	CA_2A-5A	2CC #30	CA_25A-26A
2CC #3	CA_2A-7A	2CC #31	CA_25A-41A
2CC #4	CA_2A-12A	2CC #32	CA_26A-41A
2CC #5	CA_2A-13A	2CC #33	CA_29A-30A
2CC #6	CA_2A-14A	2CC #34	CA_29A-66A
2CC #7	CA_2A-29A	2CC #35	CA_30A-66A
2CC #8	CA_2A-30A	2CC #36	CA_2C
2CC #9	CA_2A-66A	2CC #37	CA_5B
2CC #10	CA_2A_71A	2CC #38	CA_7B
2CC #11	CA_4A-5A	2CC #39	CA_7C
2CC #12	CA_4A-7A	2CC #40	CA_12B
2CC #13	CA_4A-12A	2CC #41	CA_41C
2CC #14	CA_4A-13A	2CC #42	CA_66B
2CC #15	CA_4A-29A	2CC #43	CA_66C
2CC #16	CA_4A-30A	2CC #44	CA_2A-2A
2CC #17	CA_4A-66A	2CC #45	CA_4A-4A
2CC #18	CA_4A-71A	2CC #46	CA_5A-5A
2CC #19	CA_5A-7A	2CC #47	CA_7A-7A
2CC #20	CA_5A-30A	2CC #48	CA_25A-25A
2CC #21	CA_5A-41A	2CC #49	CA_41A-41A
2CC #22	CA_5A-66A	2CC #50	CA_66A-66A
2CC #23	CA_7A-12A	2CC #51	CA_66A-71A
2CC #24	CA_7A-66A		
2CC #25	CA_12A-30A		
2CC #26	CA_12A-66A		
2CC #27	CA_13A-66A		
2CC #28	CA_14A-30A		

LTE Carrier Aggregation Conducted Power (Downlink)

i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.

ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.

iii. The device supports downlink two carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.

iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

v. For inter-band CA, the SCC selected highest bandwidth and near the middle of its transmission band. For SCC DL RB size and offset will base on the PCC corresponding RB allocation.

vi. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.

vii. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

$$\text{Nominal channel spacing} = \left\lfloor \frac{BW_{Channel(1)} + BW_{Channel(2)} - 0.1\left|BW_{Channel(1)} - BW_{Channel(2)}\right|}{0.6} \right\rfloor 0.3 \ \ [\text{MHz}]$$

LTE Carrier Aggregation Conducted Power (Uplink)

1. This device supports uplink carrier aggregation for LTE CA_5B/CA_41C with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. For the non-contiguously allocated resource blocks which the MPR level is determined by various RB separation and RB sizes requirement, and the allowed MPR levels, settings and the conducted powers are permanently implemented in this device per the 3GPP 36.36.101 section 6.2.3A.1.3 requirements.
2. According to FCC guidance, the output power with uplink CA active was measured for the high / middle / low channel configuration with the highest reported SAR for each exposure condition, the power was measured with wideband signal integration over both component carriers.
3. In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs
4. Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05. The required test channel should be associated with the UL PCC. For channels at the ends of a frequency band, the SCC and subsequent CCs are added to the side within the transmission band. Otherwise, the CCs should be added alternatively to either side of the PCC.

<Power Measurement Setup>

<WLAN Conducted Power>

General Note:

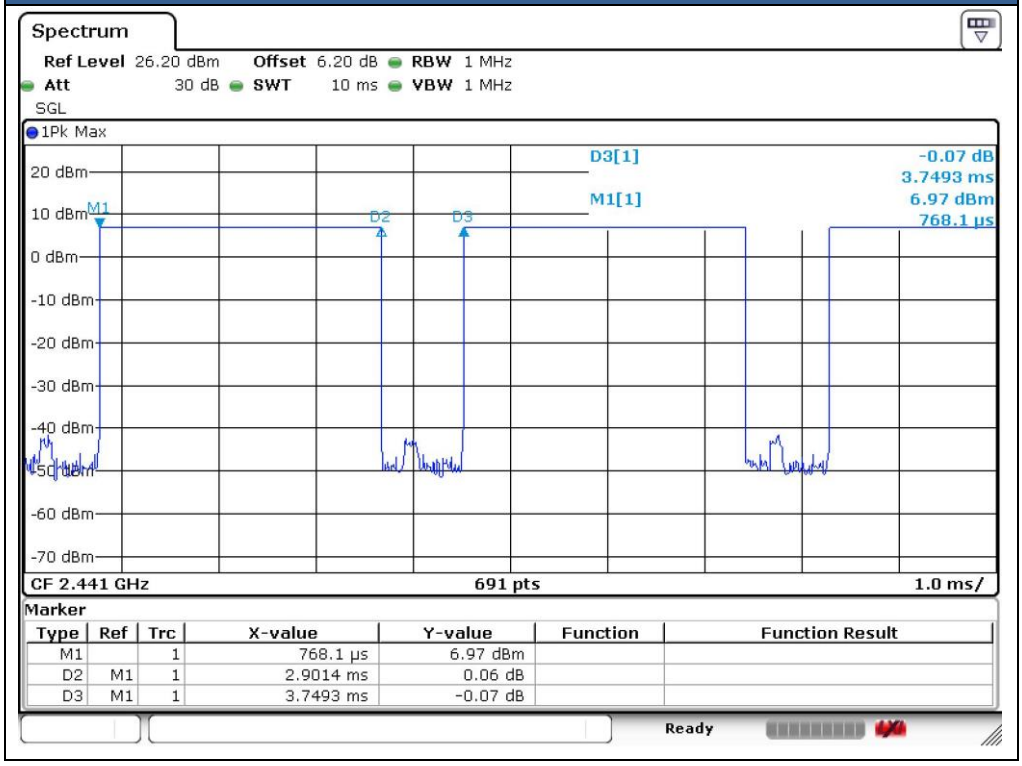
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
2. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
3. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
4. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
   b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
   c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle is 77.39 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation

Bluetooth time-domain plot



14. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, 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 BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   e. 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% = 1.006 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.
2. Per KDB 447498 D01v06, 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. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, 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. Pre KDB648474 D04v01r03, 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. When headset SAR is less than or equal than without headset SAR, no need to verify the remaining channels for headset SAR.
5. When the phone is in talking mode and receiver worked, then power reduction will be implemented immediately at WLAN2.4GHz /WLAN5.2GHz/5.3GHz/5.5GHz/5.8GHz.
6. The device employs proximity sensors that detect the presence of the user's body at the front or back faces of the device. When front or back body worn condition is detected, GSM1900, WCDMA band II/IV, CDMA BC1, LTE band 2/4/7/25/30/66/38/41/41HPUE and WLAN2.4GHz/WLAN5.2GHz/5.3GHz/5.5GHz/5.8GHz reduced power will be active.
7. P-sensor can detect handheld state, WCDMA band II/IV, CDMA BC1 and LTE B2/4/7/25/66/30 for front/back /bottom sides of product specific 10g SAR condition reduced powers will be active.
8. When handheld state, when WWAN transmit simultaneous with WLAN/Bluetooth, for WLAN5.2GHz/5.3GHz/5.5GHz /5.8GHz, product specific 10g SAR condition reduced powers will be active for back side. Other faces full power can be tested pass, so reduced power no need to be evaluated.
9. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of GSM1900, WCDMA band II/IV, CDMA BC1, LTE band B2/4/7/25/30/66/38/41/41HPUE and WLAN/5.2GHz/ WLAN/5.8GHz.
10. For P-sensor reduced power level is higher than hotspot reduced power for GSM1900, WCDMA band II/IV, CDMA BC1, LTE band 2/4/7/25/30/66, so for front/back P-sensor SAR can represent conservatively for front/back hotspot SAR.
11. This device has two WWAN transmitter antennas. WWAN antenna 1 is located at the right of bottom edge of the device and WWAN antenna 2 is located at the left side of bottom edge of the device which can refer to antenna location chapter. WWAN antenna 1 frequency bands include GSM850/1900, WCDMA Band II/IV/V, CDMA2000 BC0/BC1/BC10, and LTE Band 2/4/5/12/13/14/17/25/26/66/71, WWAN antenna 2 frequency band include LTE Band 7/30/38/41.
12. 2.4GHz WLAN &BT Antenna is located at the Right-top of the device
13. 5GHz WLAN Antenna is located at the Right-top of the device
14. Per KDB648474 D04v01r03, 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 (for handheld on state, the maximum full power means reduced power), including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
    a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of GSM850/GSM1900, WCDMA Band II/IV/V, CDMA BC0/ BC1/ BC10, LTE Band 2/4/5/7/25/26/30/66/38/41/41HPUE, and WLAN2.4/5.2/5.3/5.5/5.8GHz therefore product specific 10g SAR is necessary.

b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

15. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for body worn:
Front: 12 mm
Back: 18 mm
16. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for handheld:
Front: 6 mm
Back: 11 mm
Bottom side: 11 mm

GSM Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS 2Tx slots for GSM850/GSM1900 are considered as the primary mode.
2. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”.
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

CDMA Note:

1. Per KDB 941225 D01v03r01, SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55.
2. Per KDB 941225 D01v03r01, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
3. Per KDB 941225 D01v03r01, for Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH), with FCH only as the primary mode.

LTE Note:

1. Per KDB 941225 D05v02r05, 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 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, 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 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ 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 D05v02r05, smaller bandwidth SAR testing is not required.
6. This device supports HPUE for LTE band 41 with class 2 level, so HPUE SAR has been performed.
7. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
8. LTE B2 / B4 / B5 / B17 / B38 SAR test was covered by LTE B25 / B66 / B26 / B12 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   c. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   d. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

WLAN/Bluetooth Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
6. Based on WLAN2.4GHz and Bluetooth share the same antenna, so Bluetooth RF exposure evaluation chose the worst positon of WLAN 2.4GHz Ant to perform Bluetooth SAR test, and used this Bluetooth SAR value conservatively represent other position do co-located analysis with WWAN.
7. Bluetooth distance body SAR performed to do co-located analysis with WWAN analysis.

14.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	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)
	GSM850	GPRS 3 Tx slots	Right Cheek	Full	128	824.2	30.43	31.50	1.279	-0.03	0.350	0.448
	GSM850	GPRS 3 Tx slots	Right Tilted	Full	128	824.2	30.43	31.50	1.279	-0.08	0.188	0.241
	GSM850	GPRS 3 Tx slots	Left Cheek	Full	128	824.2	30.43	31.50	1.279	0	0.271	0.347
	GSM850	GPRS 3 Tx slots	Left Tilted	Full	128	824.2	30.43	31.50	1.279	-0.09	0.147	0.188
01	GSM850	GPRS 3 Tx slots	Right Cheek	Full	189	836.4	30.29	31.50	1.321	0.05	0.424	**0.560**
	GSM850	GPRS 3 Tx slots	Right Cheek	Full	251	848.8	30.26	31.50	1.330	0.06	0.345	0.459
	GSM1900	GPRS 3 Tx slots	Right Cheek	Full	810	1909.8	27.26	28.00	1.186	0.06	0.048	0.057
	GSM1900	GPRS 3 Tx slots	Right Tilted	Full	810	1909.8	27.26	28.00	1.186	0.01	0.022	0.026
	GSM1900	GPRS 3 Tx slots	Left Cheek	Full	810	1909.8	27.26	28.00	1.186	0.01	0.055	0.065
	GSM1900	GPRS 3 Tx slots	Left Tilted	Full	810	1909.8	27.26	28.00	1.186	0.01	0.050	0.059
	GSM1900	GPRS 3 Tx slots	Left Cheek	Full	512	1850.2	27.08	28.00	1.236	0.08	0.072	0.089
02	GSM1900	GPRS 3 Tx slots	Left Cheek	Full	661	1880	27.19	28.00	1.205	0.03	0.077	**0.092**

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	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)
	WCDMA V	RMC 12.2Kbps	Right Cheek	Full	4132	826.4	23.66	24.00	1.081	-0.03	0.409	0.442
	WCDMA V	RMC 12.2Kbps	Right Tilted	Full	4132	826.4	23.66	24.00	1.081	0.01	0.219	0.237
	WCDMA V	RMC 12.2Kbps	Left Cheek	Full	4132	826.4	23.66	24.00	1.081	-0.08	0.281	0.304
	WCDMA V	RMC 12.2Kbps	Left Tilted	Full	4132	826.4	23.66	24.00	1.081	0	0.182	0.197
	WCDMA V	RMC 12.2Kbps	Right Cheek	Full	4182	836.4	23.56	24.00	1.107	-0.05	0.408	0.452
03	WCDMA V	RMC 12.2Kbps	Right Cheek	Full	4233	846.6	23.24	24.00	1.191	0.09	0.385	**0.459**
04	WCDMA II	RMC 12.2Kbps	Right Cheek	Full	9262	1852.4	23.29	24.00	1.178	0.01	0.141	**0.166**
	WCDMA II	RMC 12.2Kbps	Right Tilted	Full	9262	1852.4	23.29	24.00	1.178	-0.09	0.045	0.053
	WCDMA II	RMC 12.2Kbps	Left Cheek	Full	9262	1852.4	23.29	24.00	1.178	0.07	0.103	0.121
	WCDMA II	RMC 12.2Kbps	Left Tilted	Full	9262	1852.4	23.29	24.00	1.178	0.02	0.084	0.099
	WCDMA II	RMC 12.2Kbps	Right Cheek	Full	9400	1880	23.22	24.00	1.197	0.06	0.130	0.156
	WCDMA II	RMC 12.2Kbps	Right Cheek	Full	9538	1907.6	23.27	24.00	1.183	0.08	0.094	0.112
	WCDMA IV	RMC 12.2Kbps	Right Cheek	Full	1513	1752.6	23.22	24.00	1.197	0.05	0.167	0.200
	WCDMA IV	RMC 12.2Kbps	Right Tilted	Full	1513	1752.6	23.22	24.00	1.197	0.09	0.075	0.089
	WCDMA IV	RMC 12.2Kbps	Left Cheek	Full	1513	1752.6	23.22	24.00	1.197	0.02	0.122	0.146
	WCDMA IV	RMC 12.2Kbps	Left Tilted	Full	1513	1752.6	23.22	24.00	1.197	0.03	0.117	0.140
05	WCDMA IV	RMC 12.2Kbps	Right Cheek	Full	1312	1712.4	22.97	24.00	1.268	0.06	0.172	**0.218**
	WCDMA IV	RMC 12.2Kbps	Right Cheek	Full	1413	1732.6	23.14	24.00	1.219	0.02	0.144	0.176

<CDMA SAR>

Plot No.	Band	Mode	Test Position	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)
	CDMA2000 BC10	RC3 SO55	Right Cheek	Full	580	820.5	24.49	25.00	1.125	-0.06	0.393	0.442
	CDMA2000 BC10	RC3 SO55	Right Tilted	Full	580	820.5	24.49	25.00	1.125	-0.03	0.188	0.211
	CDMA2000 BC10	RC3 SO55	Left Cheek	Full	580	820.5	24.49	25.00	1.125	-0.03	0.311	0.350
	CDMA2000 BC10	RC3 SO55	Left Tilted	Full	580	820.5	24.49	25.00	1.125	-0.01	0.171	0.192
	CDMA2000 BC10	RC3 SO55	Right Cheek	Full	476	817.9	24.43	25.00	1.140	-0.03	0.300	0.342
06	CDMA2000 BC10	RC3 SO55	Right Cheek	Full	684	823.1	24.28	25.00	1.180	-0.05	0.391	**0.462**
	CDMA2000 BC0	RC3 SO55	Right Cheek	Full	1013	824.7	24.42	25.00	1.143	-0.02	0.334	0.382
	CDMA2000 BC0	RC3 SO55	Right Tilted	Full	1013	824.7	24.42	25.00	1.143	-0.06	0.171	0.195
	CDMA2000 BC0	RC3 SO55	Left Cheek	Full	1013	824.7	24.42	25.00	1.143	0.02	0.330	0.377
	CDMA2000 BC0	RC3 SO55	Left Tilted	Full	1013	824.7	24.42	25.00	1.143	0.01	0.153	0.175
07	CDMA2000 BC0	RC3 SO55	Right Cheek	Full	384	836.52	24.34	25.00	1.164	0.01	0.396	**0.461**
	CDMA2000 BC0	RC3 SO55	Right Cheek	Full	777	848.31	24.04	25.00	1.247	-0.03	0.360	0.449
08	CDMA2000 BC1	RC3 SO55	Right Cheek	Full	1175	1908.75	24.16	25.00	1.213	0.02	0.122	**0.148**
	CDMA2000 BC1	RC3 SO55	Right Tilted	Full	1175	1908.75	24.16	25.00	1.213	0.03	0.057	0.069
	CDMA2000 BC1	RC3 SO55	Left Cheek	Full	1175	1908.75	24.16	25.00	1.213	0.05	0.118	0.143
	CDMA2000 BC1	RC3 SO55	Left Tilted	Full	1175	1908.75	24.16	25.00	1.213	0.04	0.077	0.093
	CDMA2000 BC1	RC3 SO55	Right Cheek	Full	25	1851.25	24.04	25.00	1.247	0.03	0.119	0.148
	CDMA2000 BC1	RC3 SO55	Right Cheek	Full	600	1880	24.10	25.00	1.230	0.03	0.111	0.137

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	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 71	20M	QPSK	1	0	Right Cheek	Full	133322	683	22.99	24.00	1.262	-0.09	0.165	0.208
	LTE Band 71	20M	QPSK	50	0	Right Cheek	Full	133322	683	22.04	23.00	1.247	0.02	0.091	0.113
	LTE Band 71	20M	QPSK	1	0	Right Tilted	Full	133322	683	22.99	24.00	1.262	-0.03	0.091	0.114
	LTE Band 71	20M	QPSK	50	0	Right Tilted	Full	133322	683	22.04	23.00	1.247	-0.09	0.049	0.061
09	LTE Band 71	20M	QPSK	1	0	Left Cheek	Full	133322	683	22.99	24.00	1.262	-0.04	0.183	**0.231**
	LTE Band 71	20M	QPSK	50	0	Left Cheek	Full	133322	683	22.04	23.00	1.247	0.02	0.090	0.112
	LTE Band 71	20M	QPSK	1	0	Left Tilted	Full	133322	683	22.99	24.00	1.262	-0.03	0.099	0.125
	LTE Band 71	20M	QPSK	50	0	Left Tilted	Full	133322	683	22.04	23.00	1.247	-0.01	0.049	0.061
10	LTE Band 12	10M	QPSK	1	0	Right Cheek	Full	23095	707.5	23.09	24.00	1.233	0.02	0.264	**0.326**
	LTE Band 12	10M	QPSK	25	0	Right Cheek	Full	23095	707.5	22.08	23.00	1.236	0.08	0.152	0.188
	LTE Band 12	10M	QPSK	1	0	Right Tilted	Full	23095	707.5	23.09	24.00	1.233	0.06	0.132	0.163
	LTE Band 12	10M	QPSK	25	0	Right Tilted	Full	23095	707.5	22.08	23.00	1.236	0.01	0.071	0.088
	LTE Band 12	10M	QPSK	1	0	Left Cheek	Full	23095	707.5	23.09	24.00	1.233	0.03	0.241	0.297
	LTE Band 12	10M	QPSK	25	0	Left Cheek	Full	23095	707.5	22.08	23.00	1.236	0.05	0.123	0.152
	LTE Band 12	10M	QPSK	1	0	Left Tilted	Full	23095	707.5	23.09	24.00	1.233	0.05	0.132	0.163
	LTE Band 12	10M	QPSK	25	0	Left Tilted	Full	23095	707.5	22.08	23.00	1.236	0.04	0.068	0.084
11	LTE Band 13	10M	QPSK	1	0	Right Cheek	Full	23230	782	22.68	24.00	1.355	0.01	0.247	**0.335**
	LTE Band 13	10M	QPSK	25	0	Right Cheek	Full	23230	782	21.67	23.00	1.358	0.06	0.138	0.187
	LTE Band 13	10M	QPSK	1	0	Right Tilted	Full	23230	782	22.68	24.00	1.355	0.03	0.126	0.171
	LTE Band 13	10M	QPSK	25	0	Right Tilted	Full	23230	782	21.67	23.00	1.358	0.09	0.080	0.109
	LTE Band 13	10M	QPSK	1	0	Left Cheek	Full	23230	782	22.68	24.00	1.355	0.07	0.226	0.306
	LTE Band 13	10M	QPSK	25	0	Left Cheek	Full	23230	782	21.67	23.00	1.358	0.04	0.133	0.181
	LTE Band 13	10M	QPSK	1	0	Left Tilted	Full	23230	782	22.68	24.00	1.355	0.07	0.144	0.195
	LTE Band 13	10M	QPSK	25	0	Left Tilted	Full	23230	782	21.67	23.00	1.358	0.09	0.082	0.112

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	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 14	10M	QPSK	1	0	Right Cheek	Full	23330	793	23.11	24.00	1.227	0.05	0.187	0.230
	LTE Band 14	10M	QPSK	25	0	Right Cheek	Full	23330	793	22.10	23.00	1.230	0.02	0.136	0.167
	LTE Band 14	10M	QPSK	1	0	Right Tilted	Full	23330	793	23.11	24.00	1.227	0.06	0.105	0.129
	LTE Band 14	10M	QPSK	25	0	Right Tilted	Full	23330	793	22.10	23.00	1.230	0.08	0.077	0.094
12	LTE Band 14	10M	QPSK	1	0	Left Cheek	Full	23330	793	23.11	24.00	1.227	0.05	0.231	**0.284**
	LTE Band 14	10M	QPSK	25	0	Left Cheek	Full	23330	793	22.10	23.00	1.230	0.09	0.159	0.196
	LTE Band 14	10M	QPSK	1	0	Left Tilted	Full	23330	793	23.11	24.00	1.227	0.04	0.128	0.157
	LTE Band 14	10M	QPSK	25	0	Left Tilted	Full	23330	793	22.10	23.00	1.230	0.06	0.097	0.119
13	LTE Band 26	15M	QPSK	1	0	Right Cheek	Full	26865	831.5	23.30	24.00	1.175	0.01	0.206	**0.242**
	LTE Band 26	15M	QPSK	36	0	Right Cheek	Full	26865	831.5	22.28	23.00	1.180	0.03	0.203	0.240
	LTE Band 26	15M	QPSK	1	0	Right Tilted	Full	26865	831.5	23.30	24.00	1.175	0.01	0.197	0.231
	LTE Band 26	15M	QPSK	36	0	Right Tilted	Full	26865	831.5	22.28	23.00	1.180	0.02	0.107	0.126
	LTE Band 26	15M	QPSK	1	0	Left Cheek	Full	26865	831.5	23.30	24.00	1.175	0.03	0.024	0.028
	LTE Band 26	15M	QPSK	36	0	Left Cheek	Full	26865	831.5	22.28	23.00	1.180	0.08	0.012	0.014
	LTE Band 26	15M	QPSK	1	0	Left Tilted	Full	26865	831.5	23.30	24.00	1.175	0.02	0.013	0.015
	LTE Band 26	15M	QPSK	36	0	Left Tilted	Full	26865	831.5	22.28	23.00	1.180	0.09	0.007	0.008
	LTE Band 5	15M	QPSK	1	0	Right Cheek	Full	20525+20597	836.5+843.7	23.39	24.00	1.151	0.03	0.201	0.231
	LTE Band 66	20M	QPSK	1	0	Right Cheek	Full	132072	1720	23.09	24.00	1.233	-0.06	0.121	0.149
	LTE Band 66	20M	QPSK	50	0	Right Cheek	Full	132072	1720	22.01	23.00	1.256	0.02	0.082	0.102
	LTE Band 66	20M	QPSK	1	0	Right Tilted	Full	132072	1720	23.09	24.00	1.233	-0.07	0.072	0.088
	LTE Band 66	20M	QPSK	50	0	Right Tilted	Full	132072	1720	22.01	23.00	1.256	-0.17	0.037	0.046
	LTE Band 66	20M	QPSK	1	0	Left Cheek	Full	132072	1720	23.09	24.00	1.233	0.07	0.105	0.129
	LTE Band 66	20M	QPSK	50	0	Left Cheek	Full	132072	1720	22.01	23.00	1.256	0.06	0.059	0.074
	LTE Band 66	20M	QPSK	1	0	Left Tilted	Full	132072	1720	23.09	24.00	1.233	0.05	0.096	0.118
	LTE Band 66	20M	QPSK	50	0	Left Tilted	Full	132072	1720	22.01	23.00	1.256	0.06	0.060	0.075
	LTE Band 66	20M	QPSK	1	0	Right Cheek	Full	132322	1745	22.93	24.00	1.279	0.02	0.134	0.171
14	LTE Band 66	20M	QPSK	1	0	Right Cheek	Full	132572	1770	23.00	24.00	1.259	0.08	0.191	**0.240**
	LTE Band 25	20M	QPSK	1	0	Right Cheek	Full	26140	1860	23.18	24.00	1.208	-0.01	0.127	0.153
	LTE Band 25	20M	QPSK	50	0	Right Cheek	Full	26140	1860	22.07	23.00	1.239	-0.07	0.066	0.082
	LTE Band 25	20M	QPSK	1	0	Right Tilted	Full	26140	1860	23.18	24.00	1.208	0.05	0.046	0.055
	LTE Band 25	20M	QPSK	50	0	Right Tilted	Full	26140	1860	22.07	23.00	1.239	-0.09	0.022	0.027
	LTE Band 25	20M	QPSK	1	0	Left Cheek	Full	26140	1860	23.18	24.00	1.208	0.05	0.105	0.127
	LTE Band 25	20M	QPSK	50	0	Left Cheek	Full	26140	1860	22.07	23.00	1.239	0.02	0.051	0.063
	LTE Band 25	20M	QPSK	1	0	Left Tilted	Full	26140	1860	23.18	24.00	1.208	0.01	0.090	0.108
	LTE Band 25	20M	QPSK	50	0	Left Tilted	Full	26140	1860	22.07	23.00	1.239	0.08	0.048	0.059
	LTE Band 25	20M	QPSK	1	0	Right Cheek	Full	26340	1880	23.09	24.00	1.233	0.06	0.128	0.158
15	LTE Band 25	20M	QPSK	1	0	Right Cheek	Full	26590	1905	22.90	24.00	1.288	0.02	0.124	**0.160**
	LTE Band 30	10M	QPSK	1	0	Right Cheek	Full	27710	2310	23.31	24.00	1.172	-0.09	0.143	0.168
	LTE Band 30	10M	QPSK	25	0	Right Cheek	Full	27710	2310	22.32	23.00	1.169	0.03	0.072	0.084
	LTE Band 30	10M	QPSK	1	0	Right Tilted	Full	27710	2310	23.31	24.00	1.172	-0.08	0.119	0.139
	LTE Band 30	10M	QPSK	25	0	Right Tilted	Full	27710	2310	22.32	23.00	1.169	0.02	0.066	0.077
16	LTE Band 30	10M	QPSK	1	0	Left Cheek	Full	27710	2310	23.31	24.00	1.172	0.15	0.154	**0.181**
	LTE Band 30	10M	QPSK	25	0	Left Cheek	Full	27710	2310	22.32	23.00	1.169	0.03	0.081	0.095
	LTE Band 30	10M	QPSK	1	0	Left Tilted	Full	27710	2310	23.31	24.00	1.172	0.02	0.065	0.076
	LTE Band 30	10M	QPSK	25	0	Left Tilted	Full	27710	2310	22.32	23.00	1.169	0.05	0.044	0.052
	LTE Band 7	20M	QPSK	1	0	Right Cheek	Full	21350	2560	23.07	24.00	1.239	0.09	0.113	0.140
	LTE Band 7	20M	QPSK	50	0	Right Cheek	Full	21350	2560	22.04	23.00	1.247	-0.04	0.061	0.076
	LTE Band 7	20M	QPSK	1	0	Right Tilted	Full	21350	2560	23.07	24.00	1.239	-0.06	0.110	0.136
	LTE Band 7	20M	QPSK	50	0	Right Tilted	Full	21350	2560	22.04	23.00	1.247	0.06	0.057	0.072
	LTE Band 7	20M	QPSK	1	0	Left Cheek	Full	21350	2560	23.07	24.00	1.239	0.05	0.101	0.125
	LTE Band 7	20M	QPSK	50	0	Left Cheek	Full	21350	2560	22.04	23.00	1.247	0.02	0.060	0.075
	LTE Band 7	20M	QPSK	1	0	Left Tilted	Full	21350	2560	23.07	24.00	1.239	0.04	0.036	0.045
	LTE Band 7	20M	QPSK	50	0	Left Tilted	Full	21350	2560	22.04	23.00	1.247	0.06	0.023	0.029
17	LTE Band 7	20M	QPSK	1	0	Right Cheek	Full	20850	2510	22.68	24.00	1.355	-0.08	0.124	**0.168**
	LTE Band 7	20M	QPSK	1	0	Right Cheek	Full	21100	2535	22.71	24.00	1.346	-0.09	0.103	0.139

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	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	1	0	Right Cheek	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	-0.08	0.075	0.097
	LTE Band 41	20M	QPSK	50	0	Right Cheek	Full	41055	2636.5	21.86	23.00	1.300	62.9	1.006	0.02	0.038	0.050
	LTE Band 41	20M	QPSK	1	0	Right Tilted	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	0.02	0.084	0.109
	LTE Band 41	20M	QPSK	50	0	Right Tilted	Full	41055	2636.5	21.86	23.00	1.300	62.9	1.006	0.03	0.044	0.058
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	0.03	0.105	0.136
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	41055+40857	2636.5+2616.7	23.05	24.00	1.245	62.9	1.006	-0.02	0.101	0.126
	LTE Band 41	20M	QPSK	50	0	Left Cheek	Full	41055	2636.5	21.86	23.00	1.300	62.9	1.006	0.05	0.048	0.062
	LTE Band 41	20M	QPSK	1	0	Left Tilted	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	0.04	0.045	0.058
	LTE Band 41	20M	QPSK	50	0	Left Tilted	Full	41055	2636.5	21.86	23.00	1.300	62.9	1.006	0.02	0.024	0.032
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	39750	2506	22.57	24.00	1.390	62.9	1.006	0.01	0.043	0.060
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	40185	2549.5	22.86	24.00	1.300	62.9	1.006	0.03	0.056	0.074
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	40620	2593	22.82	24.00	1.312	62.9	1.006	0.01	0.081	0.106
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Full	41490	2680	22.65	24.00	1.365	62.9	1.006	0.03	0.076	0.104
18	LTE Band 41-HUPE	20M	QPSK	1	0	Left Cheek	Full	41055	2636.5	25.75	27.00	1.334	42.9	1.009	0.08	0.151	**0.203**
	LTE Band 41-HUPE	20M	QPSK	1	0	Left Cheek	Full	39750	2506	25.57	27.00	1.390	42.9	1.009	0.01	0.081	0.114
	LTE Band 41-HUPE	20M	QPSK	1	0	Left Cheek	Full	40185	2549.5	25.64	27.00	1.368	42.9	1.009	0.03	0.102	0.141
	LTE Band 41-HUPE	20M	QPSK	1	0	Left Cheek	Full	40620	2593	25.71	27.00	1.346	42.9	1.009	0.01	0.113	0.153
	LTE Band 41-HUPE	20M	QPSK	1	0	Left Cheek	Full	41490	2680	25.55	27.00	1.396	42.9	1.009	0.03	0.103	0.145

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	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)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	Reduced	1	2412	16.53	17.00	1.114	100	1.000	0.05	0.351	0.391
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	Reduced	1	2412	16.53	17.00	1.114	100	1.000	-0.02	0.412	0.459
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Reduced	1	2412	16.53	17.00	1.114	100	1.000	0.01	0.823	0.917
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Reduced	6	2437	16.41	17.00	1.146	100	1.000	0.06	0.816	0.935
19	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Reduced	11	2462	16.35	17.00	1.161	100	1.000	0.01	0.963	**1.118**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Reduced	1	2412	16.53	17.00	1.114	100	1.000	0.06	0.567	0.632

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	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)
	Bluetooth	1Mbps	Left Cheek	Full	0	2402	7.67	9.00	1.358	77.39	1.082	0.01	0.079	0.116
20	Bluetooth	1Mbps	Left Cheek	Full	39	2441	7.20	9.00	1.514	77.39	1.082	0.03	0.085	**0.140**
	Bluetooth	1Mbps	Left Cheek	Full	78	2480	7.64	9.00	1.368	77.39	1.082	0.03	0.085	0.126

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	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)
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	Reduced	62	5310	15.36	15.50	1.033	96.3	1.038	0.03	0.855	0.917
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	Reduced	54	5270	15.31	15.50	1.045	96.3	1.038	0.04	0.731	0.793
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	Reduced	62	5310	15.36	15.50	1.033	96.3	1.038	0.03	0.830	0.890
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	Reduced	54	5270	15.31	15.50	1.045	96.3	1.038	0.03	0.706	0.766
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Reduced	62	5310	15.36	15.50	1.033	96.3	1.038	0.04	1.080	1.158
21	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Reduced	54	5270	15.31	15.50	1.045	96.3	1.038	0.03	1.080	**1.171**
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	Reduced	62	5310	15.36	15.50	1.033	96.3	1.038	-0.08	1.030	1.104
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	Reduced	54	5270	15.31	15.50	1.045	96.3	1.038	0.07	0.969	1.051
22	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	Reduced	134	5670	16.51	17.00	1.119	96.3	1.038	-0.11	1.020	**1.185**
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	Reduced	134	5670	16.51	17.00	1.119	96.3	1.038	-0.04	0.929	1.079
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Reduced	134	5670	16.51	17.00	1.119	96.3	1.038	-0.02	0.642	0.746
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	Reduced	134	5670	16.51	17.00	1.119	96.3	1.038	0.01	0.482	0.560
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	Reduced	102	5510	16.15	17.00	1.216	96.3	1.038	0.04	0.921	1.163
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	Reduced	110	5550	16.19	17.00	1.205	96.3	1.038	0.05	0.804	1.006
	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	Reduced	165	5825	17.77	18.00	1.054	98.26	1.018	0.01	1.070	1.149
23	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	Reduced	157	5785	17.75	18.00	1.059	98.26	1.018	-0.05	1.090	**1.175**
	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	Reduced	149	5745	17.70	18.00	1.072	98.26	1.018	0.06	1.050	1.145
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	Reduced	165	5825	17.77	18.00	1.054	98.26	1.018	-0.09	0.902	0.968
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	Reduced	157	5785	17.75	18.00	1.059	98.26	1.018	0.08	1.040	1.121
	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	Reduced	165	5825	17.77	18.00	1.054	98.26	1.018	-0.12	0.674	0.723
	WLAN5.8GHz	802.11a 6Mbps	Left Tilted	Reduced	165	5825	17.77	18.00	1.054	98.26	1.018	-0.02	0.535	0.574

14.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
	GSM850	GPRS 3 Tx slots	Front	5mm	Full	128	824.2	30.43	31.50	1.279	0.01	0.898	1.149
	GSM850	GPRS 3 Tx slots	Front	5mm	Full	189	836.4	30.29	31.50	1.321	-0.06	0.927	1.225
	GSM850	GPRS 3 Tx slots	Front	5mm	Full	251	848.8	30.26	31.50	1.330	0.07	0.931	1.239
	GSM850	GPRS 3 Tx slots	Back	5mm	Full	128	824.2	30.43	31.50	1.279	0.13	0.968	1.238
24	GSM850	GPRS 3 Tx slots	Back	5mm	Full	189	836.4	30.29	31.50	1.321	0.03	1.020	**1.348**
	GSM850	GPRS 3 Tx slots	Back	5mm	Full	251	848.8	30.26	31.50	1.330	0.12	0.929	1.236
	GSM850	GPRS 3 Tx slots	Left Side	5mm	Full	128	824.2	30.43	31.50	1.279	0.18	0.369	0.472
	GSM850	GPRS 3 Tx slots	Right Side	5mm	Full	128	824.2	30.43	31.50	1.279	0.04	0.637	0.815
	GSM850	GPRS 3 Tx slots	Right Side	5mm	Full	189	836.4	30.29	31.50	1.321	0.01	0.614	0.811
	GSM850	GPRS 3 Tx slots	Right Side	5mm	Full	251	848.8	30.26	31.50	1.330	0.11	0.568	0.756
	GSM850	GPRS 3 Tx slots	Bottom Side	5mm	Full	128	824.2	30.43	31.50	1.279	0.08	0.928	1.187
	GSM850	GPRS 3 Tx slots	Bottom Side	5mm	Full	189	836.4	30.29	31.50	1.321	0.09	1.000	1.321
	GSM850	GPRS 3 Tx slots	Bottom Side	5mm	Full	251	848.8	30.26	31.50	1.330	0.01	1.000	1.330
	GSM1900	GPRS 3 Tx slots	Front	5mm	Reduced	810	1909.8	22.89	23.50	1.151	0.17	0.761	0.876
	GSM1900	GPRS 3 Tx slots	Front	5mm	Reduced	512	1850.2	22.68	23.50	1.208	0.09	0.600	0.725
	GSM1900	GPRS 3 Tx slots	Front	5mm	Reduced	661	1880	22.80	23.50	1.175	0.06	0.731	0.859
	GSM1900	GPRS 3 Tx slots	Back	5mm	Reduced	810	1909.8	22.89	23.50	1.151	0.09	1.190	1.369
	GSM1900	GPRS 3 Tx slots	Back	5mm	Reduced	512	1850.2	22.68	23.50	1.208	0.13	1.090	1.317
	GSM1900	GPRS 3 Tx slots	Back	5mm	Reduced	661	1880	22.80	23.50	1.175	0.1	1.150	1.351
	GSM1900	GPRS 3 Tx slots	Left Side	5mm	Reduced	810	1909.8	21.86	22.50	1.159	0.07	0.154	0.178
	GSM1900	GPRS 3 Tx slots	Right Side	5mm	Reduced	810	1909.8	21.86	22.50	1.159	0.07	0.138	0.160
25	GSM1900	GPRS 3 Tx slots	Bottom Side	5mm	Reduced	810	1909.8	21.86	22.50	1.159	0.04	1.200	**1.391**
	GSM1900	GPRS 3 Tx slots	Bottom Side	5mm	Reduced	512	1850.2	21.69	22.50	1.205	-0.05	0.927	1.117
	GSM1900	GPRS 3 Tx slots	Bottom Side	5mm	Reduced	661	1880	21.75	22.50	1.189	0.05	1.140	1.355

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
	WCDMA V	RMC 12.2Kbps	Front	5mm	Full	4132	826.4	23.66	24.00	1.081	-0.05	0.903	0.977
	WCDMA V	RMC 12.2Kbps	Front	5mm	Full	4182	836.4	23.56	24.00	1.107	-0.01	0.997	1.103
	WCDMA V	RMC 12.2Kbps	Front	5mm	Full	4233	846.6	23.24	24.00	1.191	-0.15	0.986	1.175
	WCDMA V	RMC 12.2Kbps	Back	5mm	Full	4132	826.4	23.66	24.00	1.081	0.03	1.150	1.244
26	WCDMA V	RMC 12.2Kbps	Back	5mm	Full	4182	836.4	23.56	24.00	1.107	0.05	1.250	**1.383**
	WCDMA V	RMC 12.2Kbps	Back	5mm	Full	4233	846.6	23.24	24.00	1.191	0.05	1.150	1.370
	WCDMA V	RMC 12.2Kbps	Left Side	5mm	Full	4132	826.4	23.66	24.00	1.081	-0.02	0.418	0.452
	WCDMA V	RMC 12.2Kbps	Right Side	5mm	Full	4132	826.4	23.66	24.00	1.081	0.02	0.711	0.769
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Full	4132	826.4	23.66	24.00	1.081	0.09	1.070	1.157
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Full	4182	836.4	23.56	24.00	1.107	0.08	1.160	1.284
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Full	4233	846.6	23.24	24.00	1.191	0.01	1.140	1.358
	WCDMA II	RMC 12.2Kbps	Front	5mm	Reduced	9262	1852.4	15.78	16.50	1.180	0.17	0.512	0.604
	WCDMA II	RMC 12.2Kbps	Back	5mm	Reduced	9262	1852.4	15.78	16.50	1.180	0.06	0.999	1.179
	WCDMA II	RMC 12.2Kbps	Back	5mm	Reduced	9400	1880	15.74	16.50	1.191	0.08	1.110	1.322
	WCDMA II	RMC 12.2Kbps	Back	5mm	Reduced	9538	1907.6	15.75	16.50	1.189	0.08	0.871	1.035
	WCDMA II	RMC 12.2Kbps	Left Side	5mm	Reduced	9262	1852.4	14.85	15.50	1.161	0.09	0.035	0.040
	WCDMA II	RMC 12.2Kbps	Right Side	5mm	Reduced	9262	1852.4	14.85	15.50	1.161	0.05	0.036	0.041
	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Reduced	9262	1852.4	14.85	15.50	1.161	0.08	1.200	1.394
	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Reduced	9400	1880	14.75	15.50	1.189	-0.02	1.040	1.236
27	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Reduced	9538	1907.6	14.76	15.50	1.186	0.08	1.180	**1.399**
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Reduced	1513	1752.6	17.25	18.50	1.334	-0.13	0.580	0.773
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Reduced	1513	1752.6	17.25	18.50	1.334	-0.07	0.967	1.290
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Reduced	1312	1712.4	17.02	18.50	1.406	0.03	0.889	1.250
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Reduced	1413	1732.6	17.20	18.50	1.349	0.06	0.966	1.303
	WCDMA IV	RMC 12.2Kbps	Left Side	5mm	Reduced	1513	1752.6	15.29	17.00	1.483	0.09	0.035	0.052
	WCDMA IV	RMC 12.2Kbps	Right Side	5mm	Reduced	1513	1752.6	15.29	17.00	1.483	0.01	0.043	0.064
28	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Reduced	1513	1752.6	15.29	17.00	1.483	-0.02	0.893	**1.324**
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Reduced	1312	1712.4	15.08	17.00	1.556	0.05	0.822	1.279
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Reduced	1413	1732.6	15.24	17.00	1.500	0.04	0.867	1.300

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
	CDMA2000 BC10	RTAP 153.6Kbps	Front	5mm	Full	580	820.5	24.44	25.00	1.138	-0.05	0.848	0.965
	CDMA2000 BC10	RTAP 153.6Kbps	Front	5mm	Full	476	817.9	24.43	25.00	1.140	0	0.795	0.906
	CDMA2000 BC10	RTAP 153.6Kbps	Front	5mm	Full	684	823.1	24.26	25.00	1.186	-0.09	0.807	0.957
29	CDMA2000 BC10	RTAP 153.6Kbps	Back	5mm	Full	580	820.5	24.44	25.00	1.138	0.03	1.130	**1.286**
	CDMA2000 BC10	RTAP 153.6Kbps	Back	5mm	Full	476	817.9	24.43	25.00	1.140	0.03	1.040	1.186
	CDMA2000 BC10	RTAP 153.6Kbps	Back	5mm	Full	684	823.1	24.26	25.00	1.186	0.01	1.070	1.269
	CDMA2000 BC10	RTAP 153.6Kbps	Left Side	5mm	Full	580	820.5	24.44	25.00	1.138	0.09	0.436	0.496
	CDMA2000 BC10	RTAP 153.6Kbps	Right Side	5mm	Full	580	820.5	24.44	25.00	1.138	0.06	0.685	0.779
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	5mm	Full	580	820.5	24.44	25.00	1.138	0.09	0.911	1.036
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	5mm	Full	476	817.9	24.43	25.00	1.140	0.05	0.992	1.131
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	5mm	Full	684	823.1	24.26	25.00	1.186	0.09	1.030	1.221
	CDMA2000 BC0	RTAP 153.6Kbps	Front	5mm	Full	1013	824.7	24.41	25.00	1.146	-0.02	0.817	0.936
	CDMA2000 BC0	RTAP 153.6Kbps	Front	5mm	Full	384	836.52	24.41	25.00	1.146	-0.09	0.778	0.891
	CDMA2000 BC0	RTAP 153.6Kbps	Front	5mm	Full	777	848.31	24.40	25.00	1.148	-0.01	0.673	0.773
	CDMA2000 BC0	RTAP 153.6Kbps	Back	5mm	Full	1013	824.7	24.41	25.00	1.146	0.02	1.130	1.294
30	CDMA2000 BC0	RTAP 153.6Kbps	Back	5mm	Full	384	836.52	24.41	25.00	1.146	0.02	1.220	**1.398**
	CDMA2000 BC0	RTAP 153.6Kbps	Back	5mm	Full	777	848.31	24.40	25.00	1.148	0.01	1.080	1.240
	CDMA2000 BC0	RTAP 153.6Kbps	Left Side	5mm	Full	1013	824.7	24.41	25.00	1.146	0.02	0.389	0.446
	CDMA2000 BC0	RTAP 153.6Kbps	Right Side	5mm	Full	1013	824.7	24.41	25.00	1.146	0.01	0.637	0.730
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	5mm	Full	1013	824.7	24.41	25.00	1.146	0.04	0.896	1.026
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	5mm	Full	384	836.52	24.41	25.00	1.146	0.05	1.050	1.203
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	5mm	Full	777	848.31	24.40	25.00	1.148	0.06	0.974	1.118
	CDMA2000 BC1	RTAP 153.6Kbps	Front	5mm	Reduced	1175	1908.75	16.35	17.00	1.161	0.08	0.707	0.821
	CDMA2000 BC1	RTAP 153.6Kbps	Front	5mm	Reduced	600	1880	16.32	17.00	1.169	0.13	0.619	0.724
	CDMA2000 BC1	RTAP 153.6Kbps	Front	5mm	Reduced	25	1851.25	16.32	17.00	1.169	0.12	0.532	0.622
	CDMA2000 BC1	RTAP 153.6Kbps	Back	5mm	Reduced	1175	1908.75	16.35	17.00	1.161	0.19	1.160	1.347
	CDMA2000 BC1	RTAP 153.6Kbps	Back	5mm	Reduced	600	1880	16.32	17.00	1.169	0.05	0.975	1.140
	CDMA2000 BC1	RTAP 153.6Kbps	Back	5mm	Reduced	25	1851.25	16.32	17.00	1.169	0.02	1.100	1.286
	CDMA2000 BC1	RTAP 153.6Kbps	Left Side	5mm	Reduced	1175	1908.75	15.38	16.50	1.294	0.06	0.027	0.035
	CDMA2000 BC1	RTAP 153.6Kbps	Right Side	5mm	Reduced	1175	1908.75	15.38	16.50	1.294	0.05	0.043	0.055
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	1175	1908.75	15.38	16.50	1.294	0.03	0.975	1.262
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	600	1880	15.35	16.50	1.303	0.09	0.877	1.143
31	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	5mm	Reduced	25	1851.25	15.37	16.50	1.297	0.03	1.040	**1.349**

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 71	20M	QPSK	1	0	Front	5mm	Full	133322	683	22.99	24.00	1.262	-0.03	0.442	0.558
	LTE Band 71	20M	QPSK	50	0	Front	5mm	Full	133322	683	22.04	23.00	1.247	0.03	0.206	0.257
32	LTE Band 71	20M	QPSK	1	0	Back	5mm	Full	133322	683	22.99	24.00	1.262	-0.04	0.645	**0.814**
	LTE Band 71	20M	QPSK	50	0	Back	5mm	Full	133322	683	22.04	23.00	1.247	0.06	0.462	0.576
	LTE Band 71	20M	QPSK	100	0	Back	5mm	Full	133322	683	21.88	23.00	1.294	0.09	0.382	0.494
	LTE Band 71	20M	QPSK	1	0	Left Side	5mm	Full	133322	683	22.99	24.00	1.262	0.03	0.255	0.322
	LTE Band 71	20M	QPSK	50	0	Left Side	5mm	Full	133322	683	22.04	23.00	1.247	0.01	0.153	0.191
	LTE Band 71	20M	QPSK	1	0	Right Side	5mm	Full	133322	683	22.99	24.00	1.262	0.04	0.377	0.476
	LTE Band 71	20M	QPSK	50	0	Right Side	5mm	Full	133322	683	22.04	23.00	1.247	0.03	0.189	0.236
	LTE Band 71	20M	QPSK	1	0	Bottom Side	5mm	Full	133322	683	22.99	24.00	1.262	0.09	0.441	0.556
	LTE Band 71	20M	QPSK	50	0	Bottom Side	5mm	Full	133322	683	22.04	23.00	1.247	0.03	0.254	0.317
	LTE Band 12	10M	QPSK	1	0	Front	5mm	Full	23095	707.5	23.09	24.00	1.233	-0.14	0.531	0.655
	LTE Band 12	10M	QPSK	25	0	Front	5mm	Full	23095	707.5	22.08	23.00	1.236	-0.09	0.261	0.323
33	LTE Band 12	10M	QPSK	1	0	Back	5mm	Full	23095	707.5	23.09	24.00	1.233	-0.01	0.759	**0.936**
	LTE Band 12	10M	QPSK	25	0	Back	5mm	Full	23095	707.5	22.08	23.00	1.236	-0.02	0.399	0.493
	LTE Band 12	10M	QPSK	50	0	Back	5mm	Full	23095	707.5	22.08	23.00	1.236	0.03	0.224	0.277
	LTE Band 12	10M	QPSK	1	0	Left Side	5mm	Full	23095	707.5	23.09	24.00	1.233	0.03	0.314	0.387
	LTE Band 12	10M	QPSK	25	0	Left Side	5mm	Full	23095	707.5	22.08	23.00	1.236	0.03	0.169	0.209
	LTE Band 12	10M	QPSK	1	0	Right Side	5mm	Full	23095	707.5	23.09	24.00	1.233	0.05	0.434	0.535
	LTE Band 12	10M	QPSK	25	0	Right Side	5mm	Full	23095	707.5	22.08	23.00	1.236	-0.04	0.242	0.299
	LTE Band 12	10M	QPSK	1	0	Bottom Side	5mm	Full	23095	707.5	23.09	24.00	1.233	0.09	0.606	0.747
	LTE Band 12	10M	QPSK	25	0	Bottom Side	5mm	Full	23095	707.5	22.08	23.00	1.236	0.07	0.611	0.755
	LTE Band 13	10M	QPSK	1	0	Front	5mm	Full	23230	782	22.68	24.00	1.355	0.06	0.561	0.760
	LTE Band 13	10M	QPSK	25	0	Front	5mm	Full	23230	782	21.67	23.00	1.358	0.03	0.354	0.481
34	LTE Band 13	10M	QPSK	1	0	Back	5mm	Full	23230	782	22.68	24.00	1.355	-0.08	0.881	**1.194**
	LTE Band 13	10M	QPSK	25	0	Back	5mm	Full	23230	782	21.67	23.00	1.358	0.1	0.517	0.702
	LTE Band 13	10M	QPSK	50	0	Back	5mm	Full	23230	782	21.65	23.00	1.365	0.03	0.473	0.645
	LTE Band 13	10M	QPSK	1	0	Left Side	5mm	Full	23230	782	22.68	24.00	1.355	0.03	0.407	0.552
	LTE Band 13	10M	QPSK	25	0	Left Side	5mm	Full	23230	782	21.67	23.00	1.358	0.03	0.240	0.326
	LTE Band 13	10M	QPSK	1	0	Right Side	5mm	Full	23230	782	22.68	24.00	1.355	0.06	0.614	0.832
	LTE Band 13	10M	QPSK	25	0	Right Side	5mm	Full	23230	782	21.67	23.00	1.358	0.03	0.362	0.492
	LTE Band 13	10M	QPSK	50	0	Right Side	5mm	Full	23230	782	21.65	23.00	1.365	0.03	0.351	0.479
	LTE Band 13	10M	QPSK	1	0	Bottom Side	5mm	Full	23230	782	22.68	24.00	1.355	0.09	0.795	1.077
	LTE Band 13	10M	QPSK	25	0	Bottom Side	5mm	Full	23230	782	21.67	23.00	1.358	0.04	0.469	0.637
	LTE Band 13	10M	QPSK	50	0	Bottom Side	5mm	Full	23230	782	21.65	23.00	1.365	0.04	0.355	0.484
	LTE Band 14	10M	QPSK	1	0	Front	5mm	Full	23330	793	23.11	24.00	1.227	-0.09	0.532	0.653
	LTE Band 14	10M	QPSK	25	0	Front	5mm	Full	23330	793	22.10	23.00	1.230	0.04	0.400	0.492
35	LTE Band 14	10M	QPSK	1	0	Back	5mm	Full	23330	793	23.11	24.00	1.227	0.04	0.810	**0.994**
	LTE Band 14	10M	QPSK	25	0	Back	5mm	Full	23330	793	22.10	23.00	1.230	0.07	0.522	0.642
	LTE Band 14	10M	QPSK	50	0	Back	5mm	Full	23330	793	22.07	23.00	1.239	0.01	0.485	0.601
	LTE Band 14	10M	QPSK	1	0	Left Side	5mm	Full	23330	793	23.11	24.00	1.227	0.01	0.358	0.439
	LTE Band 14	10M	QPSK	25	0	Left Side	5mm	Full	23330	793	22.10	23.00	1.230	0.03	0.257	0.316
	LTE Band 14	10M	QPSK	1	0	Right Side	5mm	Full	23330	793	23.11	24.00	1.227	0.04	0.584	0.717
	LTE Band 14	10M	QPSK	25	0	Right Side	5mm	Full	23330	793	22.10	23.00	1.230	0.04	0.450	0.554
	LTE Band 14	10M	QPSK	1	0	Bottom Side	5mm	Full	23330	793	23.11	24.00	1.227	0.04	0.677	0.831
	LTE Band 14	10M	QPSK	25	0	Bottom Side	5mm	Full	23330	793	22.10	23.00	1.230	0.05	0.509	0.626
	LTE Band 14	10M	QPSK	50	0	Bottom Side	5mm	Full	23330	793	22.07	23.00	1.239	0.09	0.425	0.526

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 26	15M	QPSK	1	0	Front	5mm	Full	26865	831.5	23.30	24.00	1.175	0.04	0.876	1.029
	LTE Band 26	15M	QPSK	36	0	Front	5mm	Full	26865	831.5	22.28	23.00	1.180	-0.07	0.582	0.687
	LTE Band 26	15M	QPSK	75	0	Front	5mm	Full	26865	831.5	22.29	23.00	1.178	0.03	0.587	0.691
36	LTE Band 26	15M	QPSK	1	0	Back	5mm	Full	26865	831.5	23.30	24.00	1.175	-0.07	1.220	**1.433**
	LTE Band 26	15M	QPSK	36	0	Back	5mm	Full	26865	831.5	22.28	23.00	1.180	0.06	0.677	0.799
	LTE Band 26	15M	QPSK	75	0	Back	5mm	Full	26865	831.5	22.29	23.00	1.178	0.05	0.812	0.956
	LTE Band 5	15M	QPSK	1	0	Back	0mm	Full	20525+20597	836.5+843.7	23.39	24.00	1.151	-0.05	1.020	1.174
	LTE Band 26	15M	QPSK	1	0	Left Side	5mm	Full	26865	831.5	23.30	24.00	1.175	-0.03	0.685	0.805
	LTE Band 26	15M	QPSK	36	0	Left Side	5mm	Full	26865	831.5	22.28	23.00	1.180	-0.08	0.202	0.238
	LTE Band 26	15M	QPSK	75	0	Left Side	5mm	Full	26865	831.5	22.29	23.00	1.178	0.07	0.222	0.261
	LTE Band 26	15M	QPSK	1	0	Right Side	5mm	Full	26865	831.5	23.30	24.00	1.175	0.07	0.665	0.781
	LTE Band 26	15M	QPSK	36	0	Right Side	5mm	Full	26865	831.5	22.28	23.00	1.180	0.02	0.360	0.425
	LTE Band 26	15M	QPSK	1	0	Bottom Side	5mm	Full	26865	831.5	23.30	24.00	1.175	0.04	1.070	1.257
	LTE Band 26	15M	QPSK	36	0	Bottom Side	5mm	Full	26865	831.5	22.28	23.00	1.180	0.03	0.603	0.712
	LTE Band 26	15M	QPSK	75	0	Bottom Side	5mm	Full	26865	831.5	22.29	23.00	1.178	0.11	0.596	0.702
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Reduced	132072	1720	16.49	17.00	1.125	-0.02	0.565	0.635
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Reduced	132072	1720	16.00	17.00	1.259	0.02	0.572	0.720
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Reduced	132072	1720	16.49	17.00	1.125	-0.05	1.030	1.158
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Reduced	132322	1745	16.34	17.00	1.164	-0.07	1.020	1.187
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Reduced	132572	1770	16.37	17.00	1.156	0.07	1.100	1.272
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Reduced	132072	1720	16.00	17.00	1.259	0.01	1.050	1.322
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Reduced	132322	1745	15.85	17.00	1.303	0.02	1.000	1.303
37	LTE Band 66	20M	QPSK	50	0	Back	5mm	Reduced	132572	1770	16.05	17.00	1.245	-0.01	1.120	**1.394**
	LTE Band 66	20M	QPSK	100	0	Back	5mm	Reduced	132072	1720	15.95	17.00	1.274	0.03	1.090	1.388
	LTE Band 66	20M	QPSK	1	0	Left Side	5mm	Reduced	132072	1720	14.44	15.50	1.276	0.03	0.031	0.039
	LTE Band 66	20M	QPSK	50	0	Left Side	5mm	Reduced	132072	1720	14.21	15.50	1.346	-0.06	0.031	0.041
	LTE Band 66	20M	QPSK	1	0	Right Side	5mm	Reduced	132072	1720	14.44	15.50	1.276	0.03	0.047	0.060
	LTE Band 66	20M	QPSK	50	0	Right Side	5mm	Reduced	132072	1720	14.21	15.50	1.346	0.05	0.047	0.063
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Reduced	132072	1720	14.44	15.50	1.276	0.08	0.898	1.146
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Reduced	132322	1745	14.34	15.50	1.306	0.03	0.962	1.257
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Reduced	132572	1770	14.21	15.50	1.346	0.08	0.908	1.222
	LTE Band 66	20M	QPSK	50	0	Bottom Side	5mm	Reduced	132072	1720	14.21	15.50	1.346	0.09	0.881	1.186
	LTE Band 66	20M	QPSK	50	0	Bottom Side	5mm	Reduced	132322	1745	14.12	15.50	1.374	0.02	0.817	1.123
	LTE Band 66	20M	QPSK	50	0	Bottom Side	5mm	Reduced	132572	1770	14.00	15.50	1.413	0.01	0.748	1.057
	LTE Band 66	20M	QPSK	100	0	Bottom Side	5mm	Reduced	132072	1720	13.94	15.50	1.432	0.04	0.755	1.081

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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	1	0	Front	5mm	Reduced	26140	1860	16.56	17.50	1.242	-0.06	0.613	0.761
	LTE Band 25	20M	QPSK	50	0	Front	5mm	Reduced	26140	1860	16.06	17.50	1.393	-0.07	0.595	0.829
	LTE Band 25	20M	QPSK	50	0	Front	5mm	Reduced	26340	1880	16.05	17.50	1.396	0.03	0.622	0.869
	LTE Band 25	20M	QPSK	50	0	Front	5mm	Reduced	26590	1905	15.95	17.50	1.429	0.01	0.672	0.960
	LTE Band 25	20M	QPSK	100	0	Front	5mm	Reduced	26140	1860	16.00	17.50	1.413	0.07	0.620	0.876
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Reduced	26140	1860	16.56	17.50	1.242	0.02	1.030	1.279
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Reduced	26340	1880	16.18	17.50	1.355	0.07	0.816	1.106
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Reduced	26590	1905	16.45	17.50	1.274	0.1	0.922	1.174
	LTE Band 25	20M	QPSK	50	0	Back	5mm	Reduced	26140	1860	16.06	17.50	1.393	0.04	0.822	1.145
	LTE Band 25	20M	QPSK	50	0	Back	5mm	Reduced	26340	1880	16.05	17.50	1.396	0.16	0.880	1.229
38	LTE Band 25	20M	QPSK	50	0	Back	5mm	Reduced	26590	1905	15.95	17.50	1.429	0.08	0.948	**1.355**
	LTE Band 25	20M	QPSK	100	0	Back	5mm	Reduced	26140	1860	16.00	17.50	1.413	0.19	0.855	1.208
	LTE Band 25	20M	QPSK	1	0	Left Side	5mm	Reduced	26140	1860	14.19	15.50	1.352	0.02	0.021	0.028
	LTE Band 25	20M	QPSK	50	0	Left Side	5mm	Reduced	26140	1860	14.02	15.50	1.406	0.14	0.029	0.040
	LTE Band 25	20M	QPSK	1	0	Right Side	5mm	Reduced	26140	1860	14.19	15.50	1.352	0.04	0.028	0.037
	LTE Band 25	20M	QPSK	50	0	Right Side	5mm	Reduced	26140	1860	14.02	15.50	1.406	0.04	0.027	0.038
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Reduced	26140	1860	14.19	15.50	1.352	0.08	0.703	0.951
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Reduced	26340	1880	14.10	15.50	1.380	0.04	0.827	1.142
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Reduced	26590	1905	14.12	15.50	1.374	0.05	0.759	1.043
	LTE Band 25	20M	QPSK	50	0	Bottom Side	5mm	Reduced	26140	1860	14.02	15.50	1.406	0.01	0.957	1.346
	LTE Band 25	20M	QPSK	50	0	Bottom Side	5mm	Reduced	26340	1880	14.00	15.50	1.413	0.01	0.724	1.023
	LTE Band 25	20M	QPSK	50	0	Bottom Side	5mm	Reduced	26590	1905	13.57	15.50	1.560	0.01	0.826	1.288
	LTE Band 25	20M	QPSK	100	0	Bottom Side	5mm	Reduced	26140	1860	13.89	15.50	1.449	0.04	0.741	1.074
	LTE Band 30	10M	QPSK	1	0	Front	5mm	Reduced	27710	2310	22.44	23.00	1.138	0.03	1.080	1.229
	LTE Band 30	10M	QPSK	25	0	Front	5mm	Reduced	27710	2310	22.25	23.00	1.189	0.02	0.740	0.879
	LTE Band 30	10M	QPSK	50	0	Front	5mm	Reduced	27710	2310	22.18	23.00	1.208	0.12	0.726	0.877
	LTE Band 30	10M	QPSK	1	0	Back	5mm	Reduced	27710	2310	22.44	23.00	1.138	-0.17	1.060	1.206
	LTE Band 30	10M	QPSK	25	0	Back	5mm	Reduced	27710	2310	22.25	23.00	1.189	0.16	1.020	1.212
	LTE Band 30	10M	QPSK	50	0	Back	5mm	Reduced	27710	2310	22.18	23.00	1.208	-0.14	0.735	0.888
	LTE Band 30	10M	QPSK	1	0	Left Side	5mm	Reduced	27710	2310	21.10	21.50	1.096	0.01	0.204	0.224
	LTE Band 30	10M	QPSK	25	0	Left Side	5mm	Reduced	27710	2310	20.99	21.50	1.125	0.11	0.198	0.223
	LTE Band 30	10M	QPSK	1	0	Right Side	5mm	Reduced	27710	2310	21.10	21.50	1.096	0.04	0.164	0.180
	LTE Band 30	10M	QPSK	25	0	Right Side	5mm	Reduced	27710	2310	20.99	21.50	1.125	0.04	0.159	0.179
39	LTE Band 30	10M	QPSK	1	0	Bottom Side	5mm	Reduced	27710	2310	21.10	21.50	1.096	0.12	1.200	**1.316**
	LTE Band 30	10M	QPSK	25	0	Bottom Side	5mm	Reduced	27710	2310	20.99	21.50	1.125	0.02	1.160	1.305
	LTE Band 30	10M	QPSK	50	0	Bottom Side	5mm	Reduced	27710	2310	20.86	21.50	1.159	0.02	1.100	1.275

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 7	20M	QPSK	1	0	Front	5mm	Reduced	21350	2560	19.63	20.50	1.222	-0.02	0.646	0.789
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Reduced	21350	2560	19.43	20.50	1.279	0.02	0.716	0.916
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Reduced	20850	2510	19.27	20.50	1.327	0.05	0.576	0.765
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Reduced	21100	2535	19.21	20.50	1.346	0.01	0.647	0.871
	LTE Band 7	20M	QPSK	100	0	Front	5mm	Reduced	21350	2560	19.37	20.50	1.297	0.02	0.853	1.106
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Reduced	21350	2560	19.63	20.50	1.222	0.16	0.995	1.216
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Reduced	20850	2510	19.55	20.50	1.245	0.01	0.918	1.142
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Reduced	21100	2535	19.61	20.50	1.227	0.07	0.922	1.132
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Reduced	21350	2560	19.43	20.50	1.279	0.08	1.010	1.292
40	LTE Band 7	20M	QPSK	50	0	Back	5mm	Reduced	20850	2510	19.27	20.50	1.327	-0.02	1.010	**1.341**
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Reduced	21100	2535	19.21	20.50	1.346	0.04	0.882	1.187
	LTE Band 7	20M	QPSK	100	0	Back	5mm	Reduced	21350	2560	19.37	20.50	1.297	0.08	0.721	0.935
	LTE Band 7	20M	QPSK	1	0	Left Side	5mm	Reduced	21350	2560	20.07	20.50	1.104	0.02	0.720	0.795
	LTE Band 7	20M	QPSK	1	0	Left Side	5mm	Reduced	20850	2510	20.00	20.50	1.122	0.04	0.637	0.715
	LTE Band 7	20M	QPSK	1	0	Left Side	5mm	Reduced	21100	2535	19.98	20.50	1.127	0.02	0.609	0.686
	LTE Band 7	20M	QPSK	50	0	Left Side	5mm	Reduced	21350	2560	19.98	20.50	1.127	0.03	0.697	0.786
	LTE Band 7	20M	QPSK	50	0	Left Side	5mm	Reduced	20850	2510	19.82	20.50	1.169	0.04	0.618	0.723
	LTE Band 7	20M	QPSK	50	0	Left Side	5mm	Reduced	21100	2535	19.79	20.50	1.178	0.07	0.627	0.738
	LTE Band 7	20M	QPSK	100	0	Left Side	5mm	Reduced	21350	2560	19.96	20.50	1.132	-0.01	0.771	0.873
	LTE Band 7	20M	QPSK	1	0	Right Side	5mm	Reduced	21350	2560	20.07	20.50	1.104	0.07	0.217	0.240
	LTE Band 7	20M	QPSK	50	0	Right Side	5mm	Reduced	21350	2560	19.98	20.50	1.127	0.03	0.228	0.257
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Reduced	21350	2560	20.07	20.50	1.104	0.06	1.070	1.181
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Reduced	20850	2510	20.00	20.50	1.122	-0.03	0.900	1.010
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Reduced	21100	2535	19.98	20.50	1.127	-0.06	0.964	1.087
	LTE Band 7	20M	QPSK	50	0	Bottom Side	5mm	Reduced	21350	2560	19.98	20.50	1.127	0.04	1.120	1.262
	LTE Band 7	20M	QPSK	50	0	Bottom Side	5mm	Reduced	20850	2510	19.82	20.50	1.169	0.01	0.873	1.021
	LTE Band 7	20M	QPSK	50	0	Bottom Side	5mm	Reduced	21100	2535	19.79	20.50	1.178	0.04	0.963	1.134
	LTE Band 7	20M	QPSK	100	0	Bottom Side	5mm	Reduced	21350	2560	19.96	20.50	1.132	0.01	1.130	1.280

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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	1	0	Front	5mm	Reduced	41055	2636.5	22.34	22.50	1.038	62.9	1.006	-0.19	0.919	0.959
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	39750	2506	21.95	22.50	1.135	62.9	1.006	0.03	0.634	0.724
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	40185	2549.5	22.07	22.50	1.104	62.9	1.006	0.01	0.722	0.802
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	40620	2593	22.23	22.50	1.064	62.9	1.006	0.03	0.868	0.929
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Reduced	41490	2680	22.28	22.50	1.052	62.9	1.006	0.02	0.487	0.515
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	41055	2636.5	21.85	22.50	1.161	62.9	1.006	0.07	0.574	0.671
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	39750	2506	21.44	22.50	1.276	62.9	1.006	0.01	0.386	0.496
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	40185	2549.5	21.52	22.50	1.253	62.9	1.006	-0.04	0.428	0.540
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	40620	2593	21.77	22.50	1.183	62.9	1.006	0.01	0.483	0.575
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Reduced	41490	2680	21.79	22.50	1.178	62.9	1.006	-0.02	0.437	0.518
	LTE Band 41	20M	QPSK	100	0	Front	5mm	Reduced	41055	2636.5	21.77	22.50	1.183	62.9	1.006	0.01	0.527	0.627
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	41055	2636.5	22.34	22.50	1.038	62.9	1.006	0.09	0.995	1.039
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	39750	2506	21.95	22.50	1.135	62.9	1.006	0.08	0.638	0.728
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	40185	2549.5	22.07	22.50	1.104	62.9	1.006	-0.1	1.010	1.122
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	40620	2593	22.23	22.50	1.064	62.9	1.006	0.17	1.140	1.220
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Reduced	41490	2680	22.28	22.50	1.052	62.9	1.006	0.09	1.210	1.281
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	41055	2636.5	21.85	22.50	1.161	62.9	1.006	0.02	0.885	1.034
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	39750	2506	21.44	22.50	1.276	62.9	1.006	0.01	0.812	1.043
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	40185	2549.5	21.52	22.50	1.253	62.9	1.006	0.1	0.656	0.827
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	40620	2593	21.77	22.50	1.183	62.9	1.006	0.04	0.760	0.905
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Reduced	41490	2680	21.79	22.50	1.178	62.9	1.006	0.09	0.794	0.941
41	LTE Band 41	20M	QPSK	100	0	Back	5mm	Reduced	41055	2636.5	21.77	22.50	1.183	62.9	1.006	0.05	1.110	**1.321**
	LTE Band 41	20M	QPSK	100	0	Back	5mm	Reduced	41055+40857	2636.5+2616.7	22.41	22.50	1.021	62.9	1.006	-0.03	1.030	1.058
	LTE Band 41	20M	QPSK	1	0	Left Side	5mm	Reduced	41055	2636.5	22.34	22.50	1.038	62.9	1.006	0.17	0.490	0.511
	LTE Band 41	20M	QPSK	50	0	Left Side	5mm	Reduced	41055	2636.5	21.85	22.50	1.161	62.9	1.006	0.02	0.288	0.337
	LTE Band 41	20M	QPSK	1	0	Right Side	5mm	Reduced	41055	2636.5	22.34	22.50	1.038	62.9	1.006	0.01	0.216	0.225
	LTE Band 41	20M	QPSK	50	0	Right Side	5mm	Reduced	41055	2636.5	21.85	22.50	1.161	62.9	1.006	0.09	0.127	0.148
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	41055	2636.5	22.34	22.50	1.038	62.9	1.006	0.1	1.200	1.253
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	39750	2506	21.95	22.50	1.135	62.9	1.006	0.08	1.020	1.165
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	40185	2549.5	22.07	22.50	1.104	62.9	1.006	-0.02	1.140	1.266
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	40620	2593	22.23	22.50	1.064	62.9	1.006	0.09	1.200	1.285
	LTE Band 41	20M	QPSK	1	0	Bottom Side	5mm	Reduced	41490	2680	22.28	22.50	1.052	62.9	1.006	0.06	0.979	1.036
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	41055	2636.5	21.85	22.50	1.161	62.9	1.006	0.17	0.706	0.825
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	39750	2506	21.44	22.50	1.276	62.9	1.006	0.05	0.650	0.835
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	40185	2549.5	21.52	22.50	1.253	62.9	1.006	0.02	0.616	0.777
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	40620	2593	21.77	22.50	1.183	62.9	1.006	0.18	0.675	0.803
	LTE Band 41	20M	QPSK	50	0	Bottom Side	5mm	Reduced	41490	2680	21.79	22.50	1.178	62.9	1.006	0.15	0.695	0.823
	LTE Band 41	20M	QPSK	100	0	Bottom Side	5mm	Reduced	41055	2636.5	21.77	22.50	1.183	62.9	1.006	0.1	0.705	0.839
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	41055	2636.5	22.09	22.50	1.099	42.9	1.009	0.07	0.872	0.967
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	39750	2506	22.02	22.50	1.117	42.9	1.009	0.02	0.804	0.906
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	40185	2549.5	21.98	22.50	1.127	42.9	1.009	0.02	0.837	0.952
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	40620	2593	21.96	22.50	1.132	42.9	1.009	0.01	0.865	0.988
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	Reduced	41490	2680	21.98	22.50	1.127	42.9	1.009	0.04	0.863	0.982

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Reduced	1	2412	19.66	20.00	1.081	100	1.000	0.06	0.819	0.886
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Reduced	11	2462	19.44	20.00	1.138	100	1.000	-0.05	0.883	1.005
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Reduced	1	2412	19.66	20.00	1.081	100	1.000	-0.12	0.938	1.014
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Reduced	6	2437	19.39	20.00	1.151	100	1.000	-0.07	0.909	1.046
42	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Reduced	11	2462	19.44	20.00	1.138	100	1.000	-0.06	0.987	**1.123**
	WLAN2.4GHz	802.11b 1Mbps	Left side	5mm	Reduced	1	2412	19.66	20.00	1.081	100	1.000	-0.1	0.072	0.077
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Reduced	1	2412	19.66	20.00	1.081	100	1.000	-0.06	0.701	0.758
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Reduced	1	2412	19.66	20.00	1.081	100	1.000	-0.15	0.733	0.793

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
	Bluetooth	1Mbps	Back	5mm	Full	0	2402	7.67	9.00	1.358	77.39	1.082	0.03	0.031	0.046
	Bluetooth	1Mbps	Back	5mm	Full	39	2441	7.20	9.00	1.514	77.39	1.082	0.04	0.033	0.055
43	Bluetooth	1Mbps	Back	5mm	Full	78	2480	7.64	9.00	1.368	77.39	1.082	0.01	0.043	**0.063**

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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)
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	0.02	0.307	0.329
44	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	-0.03	1.110	**1.190**
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Reduced	46	5230	14.09	14.50	1.099	96.3	1.038	0.02	0.905	1.032
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	5mm	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	0.05	0.204	0.219
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	5mm	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	0.01	0.100	0.107
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	5mm	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	0.02	0.591	0.634
	WLAN5.8GHz	802.11a 6Mbps	Front	5mm	Reduced	165	5825	14.45	14.50	1.012	98.26	1.018	0.05	0.193	0.199
45	WLAN5.8GHz	802.11a 6Mbps	Back	5mm	Reduced	165	5825	14.45	14.50	1.012	98.26	1.018	-0.09	1.160	**1.195**
	WLAN5.8GHz	802.11a 6Mbps	Back	5mm	Reduced	149	5745	14.38	14.50	1.028	98.26	1.018	-0.01	1.050	1.099
	WLAN5.8GHz	802.11a 6Mbps	Back	5mm	Reduced	157	5785	14.26	14.50	1.057	98.26	1.018	-0.01	1.050	1.130
	WLAN5.8GHz	802.11a 6Mbps	Right Side	5mm	Reduced	165	5825	14.45	14.50	1.012	98.26	1.018	0.05	0.054	0.056
	WLAN5.8GHz	802.11a 6Mbps	Top Side	5mm	Reduced	165	5825	14.45	14.50	1.012	98.26	1.018	-0.09	0.275	0.283

14.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	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)
	GSM850	GPRS 3 Tx slots	Front	5mm	-	Full	128	824.2	30.43	31.50	1.279	0.01	0.898	1.149
	GSM850	GPRS 3 Tx slots	Front	5mm	-	Full	189	836.4	30.29	31.50	1.321	-0.06	0.927	1.225
	GSM850	GPRS 3 Tx slots	Front	5mm	-	Full	251	848.8	30.26	31.50	1.330	0.07	0.931	1.239
	GSM850	GPRS 3 Tx slots	Back	5mm	-	Full	128	824.2	30.43	31.50	1.279	0.13	0.968	1.238
46	GSM850	GPRS 3 Tx slots	Back	5mm	-	Full	189	836.4	30.29	31.50	1.321	0.03	1.020	**1.348**
	GSM850	GPRS 3 Tx slots	Back	5mm	-	Full	251	848.8	30.26	31.50	1.330	0.12	0.929	1.236
	GSM850	GPRS 3 Tx slots	Back	5mm	Headset	Full	189	836.4	30.29	31.50	1.321	0.07	0.594	0.785
	GSM1900	GPRS 3 Tx slots	Front	5mm	-	Reduced	810	1909.8	22.89	23.50	1.151	0.17	0.761	0.876
	GSM1900	GPRS 3 Tx slots	Front	5mm	-	Reduced	512	1850.2	22.68	23.50	1.208	0.09	0.600	0.725
	GSM1900	GPRS 3 Tx slots	Front	5mm	-	Reduced	661	1880	22.80	23.50	1.175	0.06	0.731	0.859
47	GSM1900	GPRS 3 Tx slots	Back	5mm	-	Reduced	810	1909.8	22.89	23.50	1.151	0.09	1.190	**1.369**
	GSM1900	GPRS 3 Tx slots	Back	5mm	-	Reduced	512	1850.2	22.68	23.50	1.208	0.13	1.090	1.317
	GSM1900	GPRS 3 Tx slots	Back	5mm	-	Reduced	661	1880	22.80	23.50	1.175	0.1	1.150	1.351
	GSM1900	GPRS 3 Tx slots	Back	5mm	Headset	Reduced	810	1909.8	22.89	23.50	1.151	0.02	0.974	1.121
	GSM1900	GPRS 3 Tx slots	Front	12mm	-	Full	810	1909.8	27.26	28.00	1.186	0.02	0.532	0.631
	GSM1900	GPRS 3 Tx slots	Back	18mm	-	Full	810	1909.8	27.26	28.00	1.186	0.1	0.498	0.591

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	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)
	WCDMA V	RMC 12.2Kbps	Front	5mm	-	Full	4132	826.4	23.66	24.00	1.081	-0.05	0.903	0.977
	WCDMA V	RMC 12.2Kbps	Front	5mm	-	Full	4182	836.4	23.56	24.00	1.107	-0.01	0.997	1.103
	WCDMA V	RMC 12.2Kbps	Front	5mm	-	Full	4233	846.6	23.24	24.00	1.191	-0.15	0.986	1.175
	WCDMA V	RMC 12.2Kbps	Back	5mm	-	Full	4132	826.4	23.66	24.00	1.081	0.03	1.150	1.244
48	WCDMA V	RMC 12.2Kbps	Back	5mm	-	Full	4182	836.4	23.56	24.00	1.107	0.05	1.250	**1.383**
	WCDMA V	RMC 12.2Kbps	Back	5mm	-	Full	4233	846.6	23.24	24.00	1.191	0.05	1.150	1.370
	WCDMA V	RMC 12.2Kbps	Back	5mm	Headset	Full	4182	836.4	23.56	24.00	1.107	0.07	1.190	1.317
	WCDMA II	RMC 12.2Kbps	Front	5mm	-	Reduced	9262	1852.4	15.78	16.50	1.180	0.17	0.512	0.604
	WCDMA II	RMC 12.2Kbps	Back	5mm	-	Reduced	9262	1852.4	15.78	16.50	1.180	0.06	0.999	1.179
49	WCDMA II	RMC 12.2Kbps	Back	5mm	-	Reduced	9400	1880	15.74	16.50	1.191	0.08	1.110	**1.322**
	WCDMA II	RMC 12.2Kbps	Back	5mm	-	Reduced	9538	1907.6	15.75	16.50	1.189	0.08	0.871	1.035
	WCDMA II	RMC 12.2Kbps	Back	5mm	Headset	Reduced	9400	1880	15.74	16.50	1.191	0.02	0.675	0.804
	WCDMA II	RMC 12.2Kbps	Front	12mm	-	Full	9262	1852.4	23.29	24.00	1.178	0.1	0.878	1.034
	WCDMA II	RMC 12.2Kbps	Back	18mm	-	Full	9400	1880	23.22	24.00	1.197	-0.15	0.800	0.957
	WCDMA IV	RMC 12.2Kbps	Front	5mm	-	Reduced	1513	1752.6	17.25	18.50	1.334	-0.13	0.580	0.773
	WCDMA IV	RMC 12.2Kbps	Back	5mm	-	Reduced	1513	1752.6	17.25	18.50	1.334	-0.07	0.967	1.290
	WCDMA IV	RMC 12.2Kbps	Back	5mm	-	Reduced	1312	1712.4	17.02	18.50	1.406	0.03	0.889	1.250
	WCDMA IV	RMC 12.2Kbps	Back	5mm	-	Reduced	1413	1732.6	17.20	18.50	1.349	0.06	0.966	1.303
50	WCDMA IV	RMC 12.2Kbps	Back	5mm	Headset	Reduced	1413	1732.6	17.20	18.50	1.349	0.16	0.981	**1.323**
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Headset	Reduced	1513	1752.6	17.25	18.50	1.334	0.06	0.974	1.299
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Headset	Reduced	1312	1712.4	17.02	18.50	1.406	0.01	0.914	1.285
	WCDMA IV	RMC 12.2Kbps	Front	12mm	-	Full	1513	1752.6	23.22	24.00	1.197	0.05	1.070	1.281
	WCDMA IV	RMC 12.2Kbps	Back	18mm	-	Full	1413	1732.6	23.14	24.00	1.219	0.08	0.804	0.980

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	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)
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Front	5mm	-	Full	580	820.5	24.46	25.00	1.132	0.05	0.893	1.011
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Front	5mm	-	Full	476	817.9	24.44	25.00	1.138	0.05	0.841	0.957
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Front	5mm	-	Full	684	823.1	24.26	25.00	1.186	0.05	0.917	1.087
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Back	5mm	-	Full	580	820.5	24.46	25.00	1.132	0.01	1.170	1.325
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Back	5mm	-	Full	476	817.9	24.44	25.00	1.138	0.04	1.100	1.251
51	CDMA2000 BC10	RC3 SO32 (F+SCH)	Back	5mm	-	Full	684	823.1	24.26	25.00	1.186	0.02	1.210	**1.435**
	CDMA2000 BC10	RC3 SO32 (F+SCH)	Back	5mm	Headset	Full	684	823.1	24.26	25.00	1.186	-0.03	1.110	1.316
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Front	5mm	-	Full	1013	824.7	24.38	25.00	1.153	0.03	0.685	0.790
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Back	5mm	-	Full	1013	824.7	24.38	25.00	1.153	0.03	1.100	1.269
52	CDMA2000 BC0	RC3 SO32 (F+SCH)	Back	5mm	-	Full	384	836.52	24.38	25.00	1.153	0.01	1.150	**1.326**
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Back	5mm	-	Full	777	848.31	24.03	25.00	1.250	-0.01	0.995	1.244
	CDMA2000 BC0	RC3 SO32 (F+SCH)	Back	5mm	Headset	Full	384	836.52	24.38	25.00	1.153	-0.08	1.120	1.292
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	1175	1908.75	16.67	17.00	1.079	0.01	0.689	0.743
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	25	1851.25	16.60	17.00	1.096	0.01	0.583	0.639
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	5mm	-	Reduced	600	1880	16.64	17.00	1.086	0.01	0.679	0.738
53	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	1175	1908.75	16.67	17.00	1.079	0.18	1.180	**1.273**
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	25	1851.25	16.60	17.00	1.096	-0.05	0.864	0.947
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	5mm	-	Reduced	600	1880	16.64	17.00	1.086	-0.07	1.000	1.086
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	5mm	Headset	Reduced	1175	1908.75	16.67	17.00	1.079	0.08	0.958	1.034
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Front	12mm	-	Full	1175	1908.75	24.11	25.00	1.227	-0.05	1.030	1.264
	CDMA2000 BC1	RC3 SO32 (F+SCH)	Back	18mm	-	Full	1175	1908.75	24.11	25.00	1.227	-0.06	0.961	1.180

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Headset	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 71	20M	QPSK	1	0	Front	5mm	-	Full	133322	683	22.99	24.00	1.262	-0.03	0.442	0.558
	LTE Band 71	20M	QPSK	50	0	Front	5mm	-	Full	133322	683	22.04	23.00	1.247	0.03	0.206	0.257
54	LTE Band 71	20M	QPSK	1	0	Back	5mm	-	Full	133322	683	22.99	24.00	1.262	-0.04	0.645	**0.814**
	LTE Band 71	20M	QPSK	50	0	Back	5mm	-	Full	133322	683	22.04	23.00	1.247	0.06	0.462	0.576
	LTE Band 71	20M	QPSK	100	0	Back	5mm	-	Full	133322	683	21.88	23.00	1.294	0.09	0.382	0.494
	LTE Band 12	10M	QPSK	1	0	Front	5mm	-	Full	23095	707.5	23.09	24.00	1.233	-0.14	0.531	0.655
	LTE Band 12	10M	QPSK	25	0	Front	5mm	-	Full	23095	707.5	22.08	23.00	1.236	-0.09	0.261	0.323
55	LTE Band 12	10M	QPSK	1	0	Back	5mm	-	Full	23095	707.5	23.09	24.00	1.233	-0.01	0.759	**0.936**
	LTE Band 12	10M	QPSK	25	0	Back	5mm	-	Full	23095	707.5	22.08	23.00	1.236	-0.02	0.399	0.493
	LTE Band 12	10M	QPSK	50	0	Back	5mm	-	Full	23095	707.5	22.08	23.00	1.236	0.03	0.224	0.277
	LTE Band 13	10M	QPSK	1	0	Front	5mm	-	Full	23230	782	22.68	24.00	1.355	0.06	0.561	0.760
	LTE Band 13	10M	QPSK	25	0	Front	5mm	-	Full	23230	782	21.67	23.00	1.358	0.03	0.354	0.481
56	LTE Band 13	10M	QPSK	1	0	Back	5mm	-	Full	23230	782	22.68	24.00	1.355	-0.08	0.881	**1.194**
	LTE Band 13	10M	QPSK	25	0	Back	5mm	-	Full	23230	782	21.67	23.00	1.358	0.1	0.517	0.702
	LTE Band 13	10M	QPSK	50	0	Back	5mm	-	Full	23230	782	21.65	23.00	1.365	0.03	0.473	0.645
	LTE Band 14	10M	QPSK	1	0	Front	5mm	-	Full	23330	793	23.11	24.00	1.227	-0.09	0.532	0.653
	LTE Band 14	10M	QPSK	25	0	Front	5mm	-	Full	23330	793	22.10	23.00	1.230	0.04	0.400	0.492
57	LTE Band 14	10M	QPSK	1	0	Back	5mm	-	Full	23330	793	23.11	24.00	1.227	0.04	0.810	**0.994**
	LTE Band 14	10M	QPSK	25	0	Back	5mm	-	Full	23330	793	22.10	23.00	1.230	0.07	0.522	0.642
	LTE Band 14	10M	QPSK	50	0	Back	5mm	-	Full	23330	793	22.07	23.00	1.239	0.01	0.485	0.601
	LTE Band 26	15M	QPSK	1	0	Front	5mm	-	Full	26865	831.5	23.30	24.00	1.175	0.04	0.876	1.029
	LTE Band 26	15M	QPSK	36	0	Front	5mm	-	Full	26865	831.5	22.28	23.00	1.180	-0.07	0.582	0.687
	LTE Band 26	15M	QPSK	75	0	Front	5mm	-	Full	26865	831.5	22.29	23.00	1.178	0.03	0.587	0.691
58	LTE Band 26	15M	QPSK	1	0	Back	5mm	-	Full	26865	831.5	23.30	24.00	1.175	-0.07	1.220	**1.433**
	LTE Band 26	15M	QPSK	36	0	Back	5mm	-	Full	26865	831.5	22.28	23.00	1.180	0.06	0.677	0.799
	LTE Band 26	15M	QPSK	75	0	Back	5mm	-	Full	26865	831.5	22.29	23.00	1.178	0.05	0.812	0.956
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Headset	Full	26865	831.5	23.30	24.00	1.175	-0.03	0.965	1.134
	LTE Band 66	20M	QPSK	1	0	Front	5mm	-	Reduced	132072	1720	16.49	17.00	1.125	-0.02	0.565	0.635
	LTE Band 66	20M	QPSK	50	0	Front	5mm	-	Reduced	132072	1720	16.00	17.00	1.259	0.02	0.572	0.720
	LTE Band 66	20M	QPSK	1	0	Back	5mm	-	Reduced	132072	1720	16.49	17.00	1.125	-0.05	1.030	1.158
	LTE Band 66	20M	QPSK	1	0	Back	5mm	-	Reduced	132322	1745	16.34	17.00	1.164	-0.07	1.020	1.187
	LTE Band 66	20M	QPSK	1	0	Back	5mm	-	Reduced	132572	1770	16.37	17.00	1.156	0.07	1.100	1.272
	LTE Band 66	20M	QPSK	50	0	Back	5mm	-	Reduced	132072	1720	16.00	17.00	1.259	0.01	1.050	1.322
	LTE Band 66	20M	QPSK	50	0	Back	5mm	-	Reduced	132322	1745	15.85	17.00	1.303	0.02	1.000	1.303
59	LTE Band 66	20M	QPSK	50	0	Back	5mm	-	Reduced	132572	1770	16.05	17.00	1.245	-0.01	1.120	**1.394**
	LTE Band 66	20M	QPSK	100	0	Back	5mm	-	Reduced	132072	1720	15.95	17.00	1.274	0.03	1.090	1.388
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Headset	Reduced	132572	1770	16.05	17.00	1.245	0.06	1.040	1.294
	LTE Band 66	20M	QPSK	1	0	Front	12mm	-	Full	132072	1720	23.09	24.00	1.233	0.16	0.783	0.966
	LTE Band 66	20M	QPSK	1	0	Back	18mm	-	Full	132072	1720	23.09	24.00	1.233	0.14	0.755	0.931

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Headset	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	1	0	Front	5mm	-	Reduced	26140	1860	16.56	17.50	1.242	-0.06	0.613	0.761
	LTE Band 25	20M	QPSK	50	0	Front	5mm	-	Reduced	26140	1860	16.06	17.50	1.393	-0.07	0.595	0.829
	LTE Band 25	20M	QPSK	50	0	Front	5mm	-	Reduced	26340	1880	16.05	17.50	1.396	0.03	0.622	0.869
	LTE Band 25	20M	QPSK	50	0	Front	5mm	-	Reduced	26590	1905	15.95	17.50	1.429	0.01	0.671	0.959
	LTE Band 25	20M	QPSK	100	0	Front	5mm	-	Reduced	26140	1860	16.00	17.50	1.413	0.07	0.620	0.876
	LTE Band 25	20M	QPSK	1	0	Back	5mm	-	Reduced	26140	1860	16.56	17.50	1.242	0.02	1.030	1.279
	LTE Band 25	20M	QPSK	1	0	Back	5mm	-	Reduced	26340	1880	16.18	17.50	1.355	0.07	0.816	1.106
	LTE Band 25	20M	QPSK	1	0	Back	5mm	-	Reduced	26590	1905	16.45	17.50	1.274	0.1	0.922	1.174
	LTE Band 25	20M	QPSK	50	0	Back	5mm	-	Reduced	26140	1860	16.06	17.50	1.393	0.04	0.822	1.145
	LTE Band 25	20M	QPSK	50	0	Back	5mm	-	Reduced	26340	1880	16.05	17.50	1.396	0.16	0.880	1.229
60	LTE Band 25	20M	QPSK	50	0	Back	5mm	-	Reduced	26590	1905	15.95	17.50	1.429	0.08	0.948	**1.355**
	LTE Band 25	20M	QPSK	100	0	Back	5mm	-	Reduced	26140	1860	16.00	17.50	1.413	0.19	0.855	1.208
	LTE Band 25	20M	QPSK	50	0	Back	5mm	Headset	Reduced	26590	1905	15.95	17.50	1.429	0.12	0.945	1.350
	LTE Band 25	20M	QPSK	1	0	Front	12mm	-	Full	26590	1905	22.90	24.00	1.288	-0.13	0.940	1.211
	LTE Band 25	20M	QPSK	1	0	Back	18mm	-	Full	26590	1905	22.90	24.00	1.288	-0.06	0.998	1.286
61	LTE Band 30	10M	QPSK	1	0	Front	5mm	-	Reduced	27710	2310	22.44	23.00	1.138	0.03	1.080	**1.229**
	LTE Band 30	10M	QPSK	25	0	Front	5mm	-	Reduced	27710	2310	22.25	23.00	1.189	0.02	0.740	0.879
	LTE Band 30	10M	QPSK	50	0	Front	5mm	-	Reduced	27710	2310	22.18	23.00	1.208	0.12	0.726	0.877
	LTE Band 30	10M	QPSK	1	0	Back	5mm	-	Reduced	27710	2310	22.44	23.00	1.138	-0.17	1.060	1.206
	LTE Band 30	10M	QPSK	25	0	Back	5mm	-	Reduced	27710	2310	22.25	23.00	1.189	0.16	1.020	1.212
	LTE Band 30	10M	QPSK	50	0	Back	5mm	-	Reduced	27710	2310	22.18	23.00	1.208	-0.14	0.735	0.888
	LTE Band 30	10M	QPSK	1	0	Front	5mm	Headset	Reduced	27710	2310	22.44	23.00	1.138	-0.04	1.040	1.183
	LTE Band 30	10M	QPSK	1	0	Front	12mm	-	Full	27710	2310	23.31	24.00	1.172	-0.19	0.587	0.688
	LTE Band 30	10M	QPSK	1	0	Back	18mm	-	Full	27710	2310	23.31	24.00	1.172	0.05	0.279	0.327
	LTE Band 7	20M	QPSK	1	0	Front	5mm	-	Reduced	21350	2560	19.63	20.50	1.222	-0.02	0.646	0.789
	LTE Band 7	20M	QPSK	50	0	Front	5mm	-	Reduced	21350	2560	19.43	20.50	1.279	0.02	0.716	0.916
	LTE Band 7	20M	QPSK	50	0	Front	5mm	-	Reduced	20850	2510	19.27	20.50	1.327	0.05	0.576	0.765
	LTE Band 7	20M	QPSK	50	0	Front	5mm	-	Reduced	21100	2535	19.21	20.50	1.346	0.01	0.647	0.871
	LTE Band 7	20M	QPSK	100	0	Front	5mm	-	Reduced	21350	2560	19.37	20.50	1.297	0.02	0.853	1.106
	LTE Band 7	20M	QPSK	1	0	Back	5mm	-	Reduced	21350	2560	19.63	20.50	1.222	0.16	0.995	1.216
	LTE Band 7	20M	QPSK	1	0	Back	5mm	-	Reduced	20850	2510	19.55	20.50	1.245	0.01	0.918	1.142
	LTE Band 7	20M	QPSK	1	0	Back	5mm	-	Reduced	21100	2535	19.61	20.50	1.227	0.07	0.922	1.132
	LTE Band 7	20M	QPSK	50	0	Back	5mm	-	Reduced	21350	2560	19.43	20.50	1.279	0.08	1.010	1.292
	LTE Band 7	20M	QPSK	50	0	Back	5mm	-	Reduced	20850	2510	19.27	20.50	1.327	-0.02	1.010	1.341
	LTE Band 7	20M	QPSK	50	0	Back	5mm	-	Reduced	21100	2535	19.21	20.50	1.346	0.04	0.882	1.187
	LTE Band 7	20M	QPSK	100	0	Back	5mm	-	Reduced	21350	2560	19.37	20.50	1.297	0.08	0.721	0.935
62	LTE Band 7	20M	QPSK	50	0	Back	5mm	Headset	Reduced	20850	2510	19.27	20.50	1.327	0.06	1.050	**1.394**
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Headset	Reduced	21100	2535	19.21	20.50	1.346	-0.14	1.010	1.359
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Headset	Reduced	21350	2560	19.43	20.50	1.279	0.15	1.030	1.318
	LTE Band 7	20M	QPSK	1	0	Front	12mm	-	Full	21350	2560	23.07	24.00	1.239	-0.01	0.333	0.413
	LTE Band 7	20M	QPSK	0	0	Back	18mm	-	Full	20850	2510	22.68	24.00	1.355	0.07	0.152	0.206

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Headset	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	1	0	Front	5mm	-	Reduced	41055	2636.5	22.34	22.50	1.038	62.9	1.006	-0.19	0.919	0.959
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	39750	2506	21.95	22.50	1.135	62.9	1.006	0.03	0.634	0.724
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	40185	2549.5	22.07	22.50	1.104	62.9	1.006	0.01	0.722	0.802
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	40620	2593	22.23	22.50	1.064	62.9	1.006	0.03	0.868	0.929
	LTE Band 41	20M	QPSK	1	0	Front	5mm	-	Reduced	41490	2680	22.28	22.50	1.052	62.9	1.006	0.02	0.487	0.515
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	41055	2636.5	21.85	22.50	1.161	62.9	1.006	0.07	0.574	0.671
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	39750	2506	21.44	22.50	1.276	62.9	1.006	0.01	0.386	0.496
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	40185	2549.5	21.52	22.50	1.253	62.9	1.006	-0.04	0.428	0.540
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	40620	2593	21.77	22.50	1.183	62.9	1.006	0.01	0.483	0.575
	LTE Band 41	20M	QPSK	50	0	Front	5mm	-	Reduced	41490	2680	21.79	22.50	1.178	62.9	1.006	-0.02	0.437	0.518
	LTE Band 41	20M	QPSK	100	0	Front	5mm	-	Reduced	41055	2636.5	21.77	22.50	1.183	62.9	1.006	0.01	0.527	0.627
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	41055	2636.5	22.34	22.50	1.038	62.9	1.006	0.09	0.995	1.039
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	39750	2506	21.95	22.50	1.135	62.9	1.006	0.08	0.638	0.728
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	40185	2549.5	22.07	22.50	1.104	62.9	1.006	-0.1	1.010	1.122
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	40620	2593	22.23	22.50	1.064	62.9	1.006	0.17	1.140	1.220
	LTE Band 41	20M	QPSK	1	0	Back	5mm	-	Reduced	41490	2680	22.28	22.50	1.052	62.9	1.006	0.09	1.210	1.281
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	41055	2636.5	21.85	22.50	1.161	62.9	1.006	0.02	0.885	1.034
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	39750	2506	21.44	22.50	1.276	62.9	1.006	0.01	0.812	1.043
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	40185	2549.5	21.52	22.50	1.253	62.9	1.006	0.1	0.656	0.827
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	40620	2593	21.77	22.50	1.183	62.9	1.006	0.04	0.760	0.905
	LTE Band 41	20M	QPSK	50	0	Back	5mm	-	Reduced	41490	2680	21.79	22.50	1.178	62.9	1.006	0.09	0.794	0.941
63	LTE Band 41	20M	QPSK	100	0	Back	5mm	-	Reduced	41055	2636.5	21.77	22.50	1.183	62.9	1.006	0.05	1.110	**1.321**
	LTE Band 41	20M	QPSK	100	0	Back	5mm	-	Reduced	41055+40857	2636.5+2616.7	22.41	22.50	1.021	62.9	1.006	-0.03	1.030	1.058
	LTE Band 41	20M	QPSK	100	0	Back	5mm	Headset	Reduced	41055	2636.5	21.77	22.50	1.183	62.9	1.006	0.09	1.040	1.238
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	41055	2636.5	22.09	22.50	1.099	42.9	1.009	0.07	0.872	0.967
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	39750	2506	22.02	22.50	1.117	42.9	1.009	0.02	0.804	0.906
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	40185	2549.5	21.98	22.50	1.127	42.9	1.009	0.02	0.837	0.952
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	40620	2593	21.96	22.50	1.132	42.9	1.009	0.01	0.865	0.988
	LTE Band 41-HPUE	20M	QPSK	1	0	Back	5mm	-	Reduced	41490	2680	21.98	22.50	1.127	42.9	1.009	0.04	0.863	0.982
	LTE Band 41	20M	QPSK	1	0	Front	12mm	-	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	0.09	0.300	0.390
	LTE Band 41	20M	QPSK	1	0	Back	18mm	-	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	0.04	0.215	0.279

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	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)
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	-	Reduced	1	2412	19.66	20.00	1.081	100	1.000	0.06	0.819	0.886
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	-	Reduced	11	2462	19.44	20.00	1.138	100	1.000	-0.05	0.883	1.005
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	-	Reduced	1	2412	19.66	20.00	1.081	100	1.000	-0.12	0.938	1.014
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	-	Reduced	6	2437	19.39	20.00	1.151	100	1.000	-0.07	0.909	1.046
64	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	-	Reduced	11	2462	19.44	20.00	1.138	100	1.000	-0.06	0.987	**1.123**
	WLAN2.4GHz	802.11b 1Mbps	Front	12mm	-	Full	11	2462	20.92	22.50	1.439	100	1.000	0.01	0.251	0.361
	WLAN2.4GHz	802.11b 1Mbps	Back	18mm	-	Full	11	2462	20.92	22.50	1.439	100	1.000	0.06	0.147	0.212

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	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)
	Bluetooth	1Mbps	Back	5mm	-	Full	0	2402	7.67	9.00	1.358	77.39	1.082	0.03	0.031	0.046
	Bluetooth	1Mbps	Back	5mm	-	Full	39	2441	7.20	9.00	1.514	77.39	1.082	0.04	0.033	0.055
65	Bluetooth	1Mbps	Back	5mm	-	Full	78	2480	7.64	9.00	1.368	77.39	1.082	0.01	0.043	**0.063**

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Headset	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)
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	-	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	0.02	0.307	0.329
66	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	-0.03	1.110	**1.190**
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	46	5230	14.09	14.50	1.099	96.3	1.038	0.02	0.905	1.032
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	12mm	-	Full	38	5190	17.31	19.00	1.476	96.3	1.038	0.02	0.177	0.271
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	18mm	-	Full	38	5190	17.31	19.00	1.476	96.3	1.038	0.01	0.292	0.447
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	5mm	-	Reduced	62	5310	13.49	14.50	1.262	96.3	1.038	0.01	0.353	0.462
67	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	62	5310	13.49	14.50	1.262	96.3	1.038	0.01	0.679	**0.889**
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	54	5270	13.48	14.50	1.265	96.3	1.038	-0.09	0.614	0.806
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	12mm	-	Full	62	5310	17.98	19.00	1.265	96.3	1.038	0.01	0.284	0.373
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	18mm	-	Full	62	5310	17.98	19.00	1.265	96.3	1.038	0.01	0.478	0.628
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	5mm	-	Reduced	134	5670	14.69	15.00	1.074	96.3	1.038	0.02	0.213	0.237
68	WLAN5.5GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	134	5670	14.69	15.00	1.074	96.3	1.038	-0.01	1.040	**1.159**
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	110	5550	14.63	15.00	1.089	96.3	1.038	-0.02	1.020	1.153
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	5mm	-	Reduced	102	5510	14.46	15.00	1.132	96.3	1.038	-0.02	0.898	1.056
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	12mm	-	Full	134	5670	18.46	19.00	1.132	96.3	1.038	0.01	0.253	0.297
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	18mm	-	Full	134	5670	18.46	19.00	1.132	96.3	1.038	0.01	0.269	0.316
	WLAN5.8GHz	802.11a 6Mbps	Front	5mm	-	Reduced	165	5825	14.45	14.50	1.012	98.26	1.018	0.05	0.193	0.199
69	WLAN5.8GHz	802.11a 6Mbps	Back	5mm	-	Reduced	165	5825	14.45	14.50	1.012	98.26	1.018	-0.09	1.160	**1.195**
	WLAN5.8GHz	802.11a 6Mbps	Back	5mm	-	Reduced	149	5745	14.38	14.50	1.028	98.26	1.018	-0.01	1.050	1.099
	WLAN5.8GHz	802.11a 6Mbps	Back	5mm	-	Reduced	157	5785	14.26	14.50	1.057	98.26	1.018	-0.01	1.050	1.130
	WLAN5.8GHz	802.11a 6Mbps	Front	12mm	-	Full	165	5825	18.25	19.00	1.189	98.26	1.018	0.01	0.164	0.198
	WLAN5.8GHz	802.11a 6Mbps	Back	18mm	-	Full	165	5825	18.25	19.00	1.189	98.26	1.018	0.04	0.670	0.811

14.4 Product specific 10g SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	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)
70	GSM850	GPRS 3 Tx slots	Front	0mm	Full	128	824.2	30.43	31.50	1.279	0.18	1.27	**1.625**
	GSM850	GPRS 3 Tx slots	Back	0mm	Full	128	824.2	30.43	31.50	1.279	-0.01	0.929	1.189
	GSM850	GPRS 3 Tx slots	Bottom Side	0mm	Full	128	824.2	30.43	31.50	1.279	0.01	0.525	0.672
	GSM1900	GPRS 3 Tx slots	Front	0mm	Full	810	1909.8	27.26	28.00	1.186	0.03	1.7	2.016
	GSM1900	GPRS 3 Tx slots	Front	0mm	Full	521	1850.2	27.08	28.00	1.236	0.01	1.65	2.039
	GSM1900	GPRS 3 Tx slots	Front	0mm	Full	661	1880	27.19	28.00	1.205	0.01	1.68	2.024
	GSM1900	GPRS 3 Tx slots	Back	0mm	Full	810	1909.8	27.26	28.00	1.186	0.04	1.91	2.265
	GSM1900	GPRS 3 Tx slots	Back	0mm	Full	512	1850.2	27.08	28.00	1.236	0.16	1.98	2.447
	GSM1900	GPRS 3 Tx slots	Back	0mm	Full	661	1880	27.19	28.00	1.205	0.11	1.97	2.374
	GSM1900	GPRS 3 Tx slots	Bottom Side	0mm	Full	810	1909.8	27.26	28.00	1.186	0.01	2.16	2.561
71	GSM1900	GPRS 3 Tx slots	Bottom Side	0mm	Full	512	1850.2	27.08	28.00	1.236	0.06	2.8	**3.461**
	GSM1900	GPRS 3 Tx slots	Bottom Side	0mm	Full	661	1880	27.19	28.00	1.205	0.02	2.55	3.073

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	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)
72	WCDMA V	RMC 12.2Kbps	Back	0mm	Full	4132	826.4	23.66	24.00	1.081	-0.08	1.79	**1.936**
	WCDMA V	RMC 12.2Kbps	Bottom Side	0mm	Full	4132	826.4	23.66	24.00	1.081	0.03	1.31	1.417
	WCDMA II	RMC 12.2Kbps	Front	0mm	Reduced	9262	1852.4	19.13	20.00	1.222	0.02	1.88	2.297
	WCDMA II	RMC 12.2Kbps	Front	0mm	Reduced	9400	1880	19.05	20.00	1.245	0.06	1.7	2.116
	WCDMA II	RMC 12.2Kbps	Front	0mm	Reduced	9538	1907.6	19.04	20.00	1.247	0.12	2	2.495
	WCDMA II	RMC 12.2Kbps	Back	0mm	Reduced	9262	1852.4	19.13	20.00	1.222	-0.04	2.35	2.871
	WCDMA II	RMC 12.2Kbps	Back	0mm	Reduced	9400	1880	19.05	20.00	1.245	-0.05	2.23	2.775
	WCDMA II	RMC 12.2Kbps	Back	0mm	Reduced	9538	1907.6	19.04	20.00	1.247	0.02	2.32	2.894
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Reduced	9262	1852.4	19.13	20.00	1.222	-0.05	2.59	3.164
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Reduced	9400	1880	19.05	20.00	1.245	-0.04	2.44	3.037
73	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Reduced	9538	1907.6	19.04	20.00	1.247	-0.04	2.8	**3.493**
	WCDMA II	RMC 12.2Kbps	Front	6mm	Full	9538	1907.6	23.27	24.00	1.183	0.03	1.22	1.443
	WCDMA II	RMC 12.2Kbps	Back	11mm	Full	9538	1907.6	23.27	24.00	1.183	0.08	1.09	1.29
	WCDMA II	RMC 12.2Kbps	Bottom Side	11mm	Full	9538	1907.6	23.27	24.00	1.183	-0.06	1.3	1.538
	WCDMA IV	RMC 12.2Kbps	Front	0mm	Reduced	1513	1752.6	18.99	20.50	1.416	0.09	1.28	1.812
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Reduced	1513	1752.6	18.99	20.50	1.416	0.04	1.74	2.463
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Reduced	1312	1712.4	18.78	20.50	1.486	0.08	1.55	2.303
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Reduced	1413	1732.6	18.95	20.50	1.429	0.08	1.68	2.401
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1513	1752.6	18.99	20.50	1.416	0.01	1.92	2.718
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1312	1712.4	18.78	20.50	1.486	0.08	1.61	2.392
74	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1413	1732.6	18.95	20.50	1.429	0.06	1.93	**2.758**
	WCDMA IV	RMC 12.2Kbps	Front	6mm	Full	1513	1752.6	23.22	24.00	1.197	0.01	1.46	1.747
	WCDMA IV	RMC 12.2Kbps	Back	11mm	Full	1513	1752.6	23.22	24.00	1.197	0.04	1.19	1.424
	WCDMA IV	RMC 12.2Kbps	Bottom Side	11mm	Full	1413	1732.6	23.22	24.00	1.197	0.11	1.3	1.556

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	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)
	CDMA2000 BC10	RTAP 153.6Kbps	Back	0mm	Full	580	820.5	24.44	25.00	1.138	0.04	1.92	2.184
	CDMA2000 BC10	RTAP 153.6Kbps	Back	0mm	Full	476	817.9	24.43	25.00	1.140	0.04	1.96	2.235
75	CDMA2000 BC10	RTAP 153.6Kbps	Back	0mm	Full	684	823.1	24.26	25.00	1.186	0.1	1.98	**2.348**
	CDMA2000 BC10	RTAP 153.6Kbps	Bottom Side	0mm	Full	580	820.5	24.44	25.00	1.138	0.01	1.34	1.524
76	CDMA2000 BC0	RTAP 153.6Kbps	Back	0mm	Full	1013	824.7	24.41	25.00	1.146	-0.01	1.76	**2.016**
	CDMA2000 BC0	RTAP 153.6Kbps	Back	0mm	Full	384	836.52	24.41	25.00	1.146	-0.06	1.73	1.982
	CDMA2000 BC0	RTAP 153.6Kbps	Back	0mm	Full	777	848.31	24.40	25.00	1.148	0.08	1.58	1.814
	CDMA2000 BC0	RTAP 153.6Kbps	Bottom Side	0mm	Full	1013	824.7	24.41	25.00	1.146	0.08	1.25	1.432
	CDMA2000 BC1	RTAP 153.6Kbps	Front	0mm	Reduced	1175	1908.75	20.27	21.00	1.183	0.05	1.96	2.319
	CDMA2000 BC1	RTAP 153.6Kbps	Front	0mm	Reduced	600	1880	20.16	21.00	1.213	0.03	1.62	1.966
	CDMA2000 BC1	RTAP 153.6Kbps	Front	0mm	Reduced	25	1851.25	20.14	21.00	1.219	0.03	1.75	2.133
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0mm	Reduced	1175	1908.75	20.27	21.00	1.183	0.1	2.52	2.981
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0mm	Reduced	600	1880	20.16	21.00	1.213	0.11	2.56	3.106
	CDMA2000 BC1	RTAP 153.6Kbps	Back	0mm	Reduced	25	1851.25	20.14	21.00	1.219	-0.05	2.35	2.865
77	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	0mm	Reduced	1175	1908.75	20.27	21.00	1.183	-0.07	2.95	**3.490**
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	0mm	Reduced	600	1880	20.16	21.00	1.213	0.04	2.56	3.106
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	0mm	Reduced	25	1851.25	20.14	21.00	1.219	-0.01	2.52	3.072
	CDMA2000 BC1	RTAP 153.6Kbps	Front	6mm	Full	1175	1908.75	24.15	25.00	1.216	0.07	1.31	1.593
	CDMA2000 BC1	RTAP 153.6Kbps	Back	11mm	Full	600	1880	24.02	25.00	1.253	-0.13	0.603	0.756
	CDMA2000 BC1	RTAP 153.6Kbps	Bottom Side	11mm	Full	1175	1908.75	24.15	25.00	1.216	0.09	1.47	1.788

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	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)
78	LTE Band 26	15M	QPSK	1	0	Back	0mm	Full	26865	831.5	23.30	24.00	1.175	-0.06	1.65	**1.939**
	LTE Band 26	15M	QPSK	36	0	Back	0mm	Full	26865	831.5	22.28	23.00	1.180	-0.06	1.08	1.275
	LTE Band 5	15M	QPSK	1	0	Back	0mm	Full	20525+20597	836.5+843.7	23.39	24.00	1.151	0.01	1.48	1.703
	LTE Band 26	15M	QPSK	1	0	Bottom Side	0mm	Full	26865	831.5	23.30	24.00	1.175	0.08	1.26	1.480
	LTE Band 26	15M	QPSK	36	0	Bottom Side	0mm	Full	26865	831.5	22.28	23.00	1.180	0.08	0.656	0.774
	LTE Band 66	20M	QPSK	1	0	Front	0mm	Reduced	132072	1720	19.13	19.50	1.089	-0.05	1.37	1.492
	LTE Band 66	20M	QPSK	50	0	Front	0mm	Reduced	132072	1720	18.98	19.50	1.127	-0.05	1.4	1.578
	LTE Band 66	20M	QPSK	1	0	Back	0mm	Reduced	132072	1720	19.13	19.50	1.089	-0.05	2.18	2.374
	LTE Band 66	20M	QPSK	1	0	Back	0mm	Reduced	132322	1745	18.89	19.50	1.151	-0.07	2.21	2.543
	LTE Band 66	20M	QPSK	1	0	Back	0mm	Reduced	132572	1770	18.98	19.50	1.127	0.07	2.29	2.581
	LTE Band 66	20M	QPSK	50	0	Back	0mm	Reduced	132072	1720	18.98	19.50	1.127	-0.05	2.42	2.728
	LTE Band 66	20M	QPSK	50	0	Back	0mm	Reduced	132322	1745	18.64	19.50	1.219	-0.07	2.35	2.865
	LTE Band 66	20M	QPSK	50	0	Back	0mm	Reduced	132572	1770	18.70	19.50	1.202	0.07	2.36	2.837
	LTE Band 66	20M	QPSK	100	0	Back	0mm	Reduced	132072	1720	18.74	19.50	1.191	-0.05	2.39	2.847
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Reduced	132072	1720	19.13	19.50	1.089	0.09	2.62	2.853
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Reduced	132322	1745	18.89	19.50	1.151	0.03	2.76	3.176
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Reduced	132572	1770	18.98	19.50	1.127	0.04	2.83	3.19
	LTE Band 66	20M	QPSK	50	0	Bottom Side	0mm	Reduced	132072	1720	18.98	19.50	1.127	0.09	2.66	2.998
	LTE Band 66	20M	QPSK	50	0	Bottom Side	0mm	Reduced	132322	1745	18.64	19.50	1.219	0.03	2.71	3.303
79	LTE Band 66	20M	QPSK	50	0	Bottom Side	0mm	Reduced	132572	1770	18.70	19.50	1.202	0.04	2.9	**3.487**
	LTE Band 66	20M	QPSK	100	0	Bottom Side	0mm	Reduced	132572	1770	18.74	19.50	1.191	0.04	2.32	2.764
	LTE Band 66	20M	QPSK	1	0	Front	6mm	Full	132072	1720	23.09	24.00	1.233	0.03	0.95	1.171
	LTE Band 66	20M	QPSK	1	0	Back	11mm	Full	132322	1745	22.93	24.00	1.279	0.03	0.54	0.691
	LTE Band 66	20M	QPSK	1	0	Bottom Side	11mm	Full	132572	1770	22.93	24.00	1.279	0.02	0.46	0.589

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	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 25	20M	QPSK	1	0	Front	0mm	Reduced	26140	1860	18.89	19.50	1.151	0.05	1.7	1.956
	LTE Band 25	20M	QPSK	50	0	Front	0mm	Reduced	26140	1860	18.47	19.50	1.268	0.06	1.66	2.104
	LTE Band 25	20M	QPSK	50	0	Front	0mm	Reduced	26340	1880	18.43	19.50	1.279	0.03	1.56	1.996
	LTE Band 25	20M	QPSK	50	0	Front	0mm	Reduced	26590	1905	18.38	19.50	1.294	0.08	1.79	2.317
	LTE Band 25	20M	QPSK	100	0	Front	0mm	Reduced	26140	1860	18.37	19.50	1.297	0.03	1.73	2.244
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Reduced	26140	1860	18.89	19.50	1.151	-0.1	1.82	2.094
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Reduced	26340	1880	18.53	19.50	1.250	-0.07	1.57	1.963
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Reduced	26590	1905	18.82	19.50	1.169	0.05	1.7	1.988
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Reduced	26140	1860	18.47	19.50	1.268	-0.06	2.34	2.966
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Reduced	26340	1880	18.43	19.50	1.279	-0.05	2.16	2.763
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Reduced	26590	1905	18.38	19.50	1.294	-0.04	2.23	2.886
	LTE Band 25	20M	QPSK	100	0	Back	0mm	Reduced	26140	1860	18.37	19.50	1.297	-0.12	2.27	2.945
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Reduced	26140	1860	18.89	19.50	1.151	0.05	2.13	2.451
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Reduced	26340	1880	18.53	19.50	1.250	0.02	2.17	2.713
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Reduced	26590	1905	18.82	19.50	1.169	0.06	2.11	2.468
	LTE Band 25	20M	QPSK	50	0	Bottom Side	0mm	Reduced	26140	1860	18.47	19.50	1.268	0.08	2.23	2.827
	LTE Band 25	20M	QPSK	50	0	Bottom Side	0mm	Reduced	26340	1880	18.43	19.50	1.279	0.06	2.31	2.955
	LTE Band 25	20M	QPSK	50	0	Bottom Side	0mm	Reduced	26590	1905	18.38	19.50	1.294	0.07	2.31	2.990
80	LTE Band 25	20M	QPSK	100	0	Bottom Side	0mm	Reduced	26140	1860	18.37	19.50	1.297	0.05	2.31	**2.996**
	LTE Band 25	20M	QPSK	1	0	Front	6mm	Full	26590	1905	22.90	24.00	1.288	-0.03	1.22	1.572
	LTE Band 25	20M	QPSK	1	0	Back	11mm	Full	26140	1860	23.18	24.00	1.208	-0.15	0.673	0.813
	LTE Band 25	20M	QPSK	1	0	Bottom Side	11mm	Full	26140	1860	23.18	24.00	1.208	0.02	0.81	0.978
	LTE Band 30	10M	QPSK	1	0	Front	0mm	Reduced	27710	2310	22.44	23.00	1.138	0.04	1.4	1.593
	LTE Band 30	10M	QPSK	25	0	Front	0mm	Reduced	27710	2310	22.25	23.00	1.189	0.19	1.16	1.379
81	LTE Band 30	10M	QPSK	1	0	Back	0mm	Reduced	27710	2310	22.44	23.00	1.138	0.05	2.3	**2.617**
	LTE Band 30	10M	QPSK	25	0	Back	0mm	Reduced	27710	2310	22.25	23.00	1.189	0.09	1.83	2.175
	LTE Band 30	10M	QPSK	50	0	Back	0mm	Reduced	27710	2310	22.18	23.00	1.208	-0.01	1.82	2.198
	LTE Band 30	10M	QPSK	1	0	Bottom Side	0mm	Reduced	27710	2310	22.44	23.00	1.138	0.03	1.86	2.116
	LTE Band 30	10M	QPSK	25	0	Bottom Side	0mm	Reduced	27710	2310	22.25	23.00	1.189	0.01	1.28	1.521
	LTE Band 30	10M	QPSK	50	0	Bottom Side	0mm	Reduced	27710	2310	22.18	23.00	1.208	0.07	1.26	1.522
	LTE Band 30	10M	QPSK	1	0	Front	6mm	Full	27710	2310	23.31	24.00	1.172	0.05	0.661	0.775
	LTE Band 30	10M	QPSK	1	0	Back	11mm	Full	27710	2310	23.31	24.00	1.172	0.02	0.642	0.753
	LTE Band 30	10M	QPSK	1	0	Bottom Side	11mm	Full	27710	2310	23.31	24.00	1.172	0.02	0.53	0.621

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	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 7	20M	QPSK	1	0	Front	0mm	Reduced	21350	2560	22.29	23.00	1.178	0.02	2.230	2.626
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Reduced	20850	2510	22.11	23.00	1.227	0.01	1.780	2.185
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Reduced	21100	2535	22.12	23.00	1.225	0.03	1.830	2.241
	LTE Band 7	20M	QPSK	50	0	Front	0mm	Reduced	21350	2560	22.11	23.00	1.227	0.06	1.360	1.669
	LTE Band 7	20M	QPSK	100	0	Front	0mm	Reduced	20850	2510	22.07	23.00	1.239	0.03	1.385	1.716
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Reduced	21350	2560	22.29	23.00	1.178	0.02	2.330	2.744
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Reduced	20850	2510	22.11	23.00	1.227	0.05	2.280	2.799
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Reduced	21100	2535	22.11	23.00	1.227	0.08	2.250	2.762
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Reduced	21350	2560	22.11	23.00	1.227	0.12	2.160	2.651
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Reduced	21100	2535	21.94	23.00	1.276	0.02	1.850	2.361
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Reduced	20850	2510	21.92	23.00	1.282	0.03	1.930	2.475
	LTE Band 7	20M	QPSK	100	0	Back	0mm	Reduced	21350	2560	22.07	23.00	1.239	0.03	2.180	2.701
	LTE Band 7	20M	QPSK	1	0	Left Side	0mm	Full	21350	2560	23.07	24.00	1.239	0.05	1.435	1.778
	LTE Band 7	20M	QPSK	50	0	Left Side	0mm	Full	21350	2560	22.04	23.00	1.247	0.06	0.971	1.211
82	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Reduced	21350	2560	22.29	23.00	1.178	-0.06	2.390	**2.814**
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Reduced	21100	2535	22.12	23.00	1.225	0.02	2.140	2.621
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Reduced	20850	2510	22.11	23.00	1.227	0.05	2.260	2.774
	LTE Band 7	20M	QPSK	50	0	Bottom Side	0mm	Reduced	21350	2560	22.11	23.00	1.227	0.06	1.780	2.185
	LTE Band 7	20M	QPSK	50	0	Bottom Side	0mm	Reduced	21100	2535	21.94	23.00	1.276	0.01	1.530	1.953
	LTE Band 7	20M	QPSK	50	0	Bottom Side	0mm	Reduced	20850	2510	21.92	23.00	1.282	0.03	1.630	2.090
	LTE Band 7	20M	QPSK	100	0	Bottom Side	0mm	Reduced	21350	2560	22.07	23.00	1.239	0.02	1.760	2.180
	LTE Band 7	20M	QPSK	1	0	Front	6mm	Full	21350	2560	23.07	24.00	1.239	0.07	0.674	0.835
	LTE Band 7	20M	QPSK	1	0	Back	11mm	Full	20850	2510	22.68	24.00	1.355	-0.02	0.411	0.557
	LTE Band 7	20M	QPSK	1	0	Bottom Side	11mm	Full	21350	2560	23.07	24.00	1.239	-0.03	0.354	0.439

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	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 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 41	20M	QPSK	1	0	Front	0mm	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	0.03	1.230	1.598
	LTE Band 41	20M	QPSK	50	0	Front	0mm	Full	41055	2636.5	21.86	23.00	1.300	62.9	1.006	0.06	0.665	0.870
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	0.01	1.420	1.845
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Full	39750	2506	22.57	24.00	1.390	62.9	1.006	-0.06	1.340	1.874
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Full	40185	2549.5	22.86	24.00	1.300	62.9	1.006	0.03	0.829	1.084
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Full	40620	2593	22.82	24.00	1.312	62.9	1.006	0.1	1.530	2.020
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Full	41490	2680	22.65	24.00	1.365	62.9	1.006	0.06	1.160	1.592
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Full	41055	2636.5	21.86	23.00	1.300	62.9	1.006	-0.04	1.390	1.818
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Full	39750	2506	21.57	23.00	1.390	62.9	1.006	-0.18	1.190	1.664
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Full	40185	2549.5	21.79	23.00	1.321	62.9	1.006	0.07	1.260	1.675
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Full	40620	2593	21.83	23.00	1.309	62.9	1.006	0.02	1.390	1.831
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Full	41490	2680	21.69	23.00	1.352	62.9	1.006	0.05	1.280	1.741
	LTE Band 41	20M	QPSK	100	0	Back	0mm	Full	41055	2636.5	21.78	23.00	1.324	62.9	1.006	0.03	1.340	1.785
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	0.05	1.480	1.922
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Full	39750	2506	22.57	24.00	1.390	62.9	1.006	0.08	1.430	2.000
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Full	40185	2549.5	22.86	24.00	1.300	62.9	1.006	0.01	1.480	1.936
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Full	40620	2593	22.82	24.00	1.312	62.9	1.006	0.08	1.530	2.020
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Full	40620+40422	2593+2573.2	22.78	24.00	1.324	62.9	1.006	-0.02	1.470	1.958
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Full	41490	2680	22.65	24.00	1.365	62.9	1.006	0.01	1.220	1.675
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Full	41055	2636.5	21.86	23.00	1.300	62.9	1.006	-0.09	0.800	1.046
	LTE Band 41	20M	QPSK	100	0	Bottom Side	0mm	Full	41055	2636.5	21.78	23.00	1.324	62.9	1.006	0.01	1.030	1.372
	LTE Band 41	20M	QPSK	1	0	Front	6mm	Full	41055	2636.5	22.89	24.00	1.291	62.9	1.006	-0.03	0.364	0.473
	LTE Band 41	20M	QPSK	1	0	Back	11mm	Full	40620	2593	22.82	24.00	1.312	62.9	1.006	0.06	0.185	0.244
	LTE Band 41	20M	QPSK	1	0	Bottom Side	11mm	Full	40620	2593	22.82	24.00	1.312	62.9	1.006	0.05	0.220	0.290
83	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	0mm	Full	40620	2593	25.71	27.00	1.346	42.9	1.009	0.05	2.150	**2.920**
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	0mm	Full	39750	2506	25.57	27.00	1.390	42.9	1.009	0.02	1.860	2.609
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	0mm	Full	40185	2549.5	25.64	27.00	1.368	42.9	1.009	0.02	1.980	2.732
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	0mm	Full	41055	2636.5	25.75	27.00	1.334	42.9	1.009	0.02	2.030	2.731
	LTE Band 41-HPUE	20M	QPSK	1	0	Bottom Side	0mm	Full	41490	2680	25.55	27.00	1.396	42.9	1.009	0.02	1.470	2.071

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	0mm	Full	1	2412	20.78	22.50	1.486	100	1.000	0.03	2	2.972
	WLAN2.4GHz	802.11b 1Mbps	Front	0mm	Full	6	2437	20.84	22.50	1.466	100	1.000	0.02	1.98	2.902
84	WLAN2.4GHz	802.11b 1Mbps	Front	0mm	Full	11	2462	20.92	22.50	1.439	100	1.000	0.04	2.17	**3.122**
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Full	1	2412	20.78	22.50	1.486	100	1.000	0.04	1.8	2.675
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Full	11	2462	20.92	22.50	1.439	100	1.000	0.03	1.83	2.633
	WLAN2.4GHz	802.11b 1Mbps	Right Side	0mm	Full	11	2462	20.92	22.50	1.439	100	1.000	0.03	0.903	1.299
	WLAN2.4GHz	802.11b 1Mbps	Top Side	0mm	Full	1	2412	20.78	22.50	1.486	100	1.000	0.01	1.7	2.526
	WLAN2.4GHz	802.11b 1Mbps	Top Side	0mm	Full	11	2462	20.92	22.50	1.439	100	1.000	0.06	1.69	2.432
	WLAN2.4GHz	802.11b 1Mbps	Front	6mm	Full	11	2462	20.92	22.50	1.439	100	1.000	0.02	0.276	0.397
	WLAN2.4GHz	802.11b 1Mbps	Back	11mm	Full	1	2412	20.78	22.50	1.486	100	1.000	0.01	0.255	0.379

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	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 10g SAR (W/kg)	Reported 10g SAR (W/kg)
85	WLAN5.2GHz-	802.11n-HT40 MCS0	Back	0mm	Full	38	5190	17.31	19.00	1.476	96.3	1.038	0.01	1.79	**2.742**
	WLAN5.2GHz-	802.11n-HT40 MCS0	Back	0mm	Full	46	5230	17.29	19.00	1.483	96.3	1.038	0.09	1.69	2.601
	WLAN5.2GHz-	802.11n-HT40 MCS0	Top Side	0mm	Full	38	5190	17.31	19.00	1.476	96.3	1.038	0.02	1.47	2.252
	WLAN5.2GHz-	802.11n-HT40 MCS0	Top Side	0mm	Full	46	5230	17.29	19.00	1.483	96.3	1.038	0.05	1.3	2.001
	WLAN5.2GHz-	802.11n-HT40 MCS0	Back	0mm	Reduced	38	5190	17.31	18.50	1.315	96.3	1.038	0.04	1.79	2.444
	WLAN5.2GHz-	802.11n-HT40 MCS0	Back	0mm	Reduced	46	5230	17.29	18.50	1.321	96.3	1.038	0.09	1.69	2.318
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Full	62	5310	17.98	19.00	1.265	96.3	1.038	0.06	0.792	1.040
	WLAN5.3GHz-	802.11n-HT40 MCS0	Back	0mm	Full	62	5310	17.98	19.00	1.265	96.3	1.038	0.06	2.43	3.190
86	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Full	54	5270	17.78	19.00	1.324	96.3	1.038	0	2.33	**3.203**
	WLAN5.3GHz-	802.11n-HT40 MCS0	Back	0mm	Reduced	62	5310	17.98	18.00	1.005	96.3	1.038	0.06	2.43	2.534
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Reduced	54	5270	17.78	18.00	1.052	96.3	1.038	0.04	2.33	2.544
	WLAN5.3GHz-	802.11n-HT40 MCS0	Right Side	0mm	Full	62	5310	17.98	19.00	1.265	96.3	1.038	0.02	0.191	0.251
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Full	62	5310	17.98	19.00	1.265	96.3	1.038	0.01	1.08	1.418
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Full	134	5670	18.46	19.00	1.132	96.3	1.038	0.09	0.647	0.761
87	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Full	134	5670	18.46	19.00	1.132	96.3	1.038	0.09	2.46	**2.892**
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Full	102	5510	17.57	19.00	1.390	96.3	1.038	0.04	1.56	2.251
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Full	110	5550	17.56	19.00	1.393	96.3	1.038	0.1	1.76	2.545
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Full	134	5670	18.46	19.00	1.132	96.3	1.038	0.18	0.155	0.182
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Full	134	5670	18.46	19.00	1.132	96.3	1.038	0.04	0.56	0.658
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Reduced	134	5670	18.46	18.50	1.009	96.3	1.038	0.06	2.46	2.577
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Reduced	102	5510	17.57	18.50	1.239	96.3	1.038	0.07	1.56	2.006
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Reduced	110	5550	17.56	18.50	1.242	96.3	1.038	0.06	1.76	2.268
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	11mm	Reduced	134	5670	18.46	18.50	1.009	96.3	1.038	0.02	0.43	0.45
88	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	Full	165	5825	18.25	19.00	1.189	98.26	1.018	0.02	2.38	**2.880**
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	Full	157	5785	18.21	19.00	1.199	98.26	1.018	0.01	2.32	2.833
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	Full	149	5745	18.17	19.00	1.211	98.26	1.018	0.01	2.06	2.539
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	Reduced	165	5825	18.25	18.50	1.059	98.26	1.018	0.02	2.38	2.566
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	Reduced	157	5785	18.21	18.50	1.069	98.26	1.018	0.01	2.32	2.525
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	Reduced	149	5745	18.17	18.50	1.079	98.26	1.018	0.01	2.06	2.263

14.5 TDD LTE Band 41(HPUE) Linearity Data Analysis

LTE Band 41(HPUE)-Linearity Data for Head		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	0.136	0.203
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	0.186	
% deviation from expected linearity		9.36%

LTE Band 41(HPUE)-Linearity Data for Hotspot		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	22.50	22.50
Reported 1g SAR (W/kg)	1.321	0.967
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	112.57	77.00
Linearity SAR (W/kg)	0.904	
% deviation from expected linearity		7.01%

LTE Band 41(HPUE)-Linearity Data for Body-Worn		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	22.50	22.50
Reported 1g SAR (W/kg)	1.321	0.967
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	112.57	77.00
Linearity SAR (W/kg)	0.904	
% deviation from expected linearity		7.01%

LTE Band 41(HPUE)-Linearity Data for Handheld		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.00
Reported 1g SAR (W/kg)	2.020	2.920
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	2.757	
% deviation from expected linearity		5.91%

General Note:

1. The device can adjust uplink/downlink configuration automatically according to the transmitting power class level for LTE band 41.
2. According to TCB Workshop May 2017, Rel. 14 has introduced HPUE Power Class 2 for Band 41. HPUE Power Class 2 does not support uplink downlink configurations 0 and 6.
3. Power class 3 is expected to be the dominant use configuration; therefore, SAR should be tested as normally required.
4. Power class 2 is tested using the highest SAR test configuration in power class 3 of each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in power class 2.
5. Separate SAR testing for Power Class 2 is not required when
   – the reported SAR vs. output power can be linearly scaled with < 10%
   – discrepancy between power classes and all *reported* 1g SAR are < 1.4 W/kg (The same procedures should be adapted for measurements according to extremity limits by applying a factor of 2.5 for extremity exposure.)

14.6 Repeated SAR Measurement

<1g>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	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	WLAN5.3GHz	-	-	-	-	802.11n-HT40 MCS0	Left Cheek	0	Reduced	54	5270	15.31	15.50	1.045	96.3	1.038	0.03	1.080	1	1.171
2nd	WLAN5.3GHz	-	-	-	-	802.11n-HT40 MCS0	Left Cheek	0	Reduced	54	5270	15.31	15.50	1.045	96.3	1.038	-0.02	1.070	1.009	1.160
1st	GSM1900	-	-	-	-	GPRS 3 Tx slots	Bottom Side	5	Reduced	810	1909.8	21.86	22.50	1.159	-	-	0.04	1.200	1	1.391
2nd	GSM1900	-	-	-	-	GPRS 3 Tx slots	Bottom Side	5	Reduced	810	1909.8	21.86	22.50	1.159	-	-	-0.02	1.180	1.017	1.367
1st	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5	Full	4182	836.4	23.56	24.00	1.107	-	-	0.05	1.250	1	1.383
2nd	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5	Full	4182	836.4	23.56	24.00	1.107	-	-	0.01	1.220	1.025	1.350
1st	LTE Band 13	10M	QPSK	1	0	-	Back	5	Full	23230	782	22.68	24.00	1.355	-	-	-0.08	0.881	1	1.194
2nd	LTE Band 13	10M	QPSK	1	0	-	Back	5	Full	23230	782	22.68	24.00	1.355	-	-	0.01	0.879	1.002	1.191
1st	LTE Band 66	20M	QPSK	50	0	-	Back	5	Reduced	132572	1770	16.05	17.00	1.245	-	-	-0.01	1.120	1	1.394
2nd	LTE Band 66	20M	QPSK	50	0	-	Back	5	Reduced	132572	1770	16.05	17.00	1.245	-	-	-0.01	1.100	1.018	1.369
1st	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	5	Reduced	27710	2310	21.10	21.50	1.096	-	-	0.12	1.200	1	1.316
2nd	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	5	Reduced	27710	2310	21.10	21.50	1.096	-	-	-0.02	1.180	1.017	1.294
1st	LTE Band 41	20M	QPSK	1	0	-	Back	5	Reduced	41490	2680	22.28	22.50	1.052	62.9	1.006	0.09	1.210	1	1.281
2nd	LTE Band 41	20M	QPSK	1	0	-	Back	5	Reduced	41490	2680	22.28	22.50	1.052	62.9	1.006	-0.02	1.190	1.017	1.259
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Back	5	Reduced	11	2462	19.44	20.00	1.138	100	1.000	-0.06	0.987	1	1.123
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Back	5	Reduced	11	2462	19.44	20.00	1.138	100	1.000	0.01	0.975	1.012	1.109
1st	WLAN5.2GHz	-	-	-	-	802.11n-HT40 MCS0	Back	5	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	-0.03	1.110	1	1.190
2nd	WLAN5.2GHz	-	-	-	-	802.11n-HT40 MCS0	Back	5	Reduced	38	5190	14.36	14.50	1.033	96.3	1.038	0.04	1.090	1.018	1.168
1st	WLAN5.8GHz	-	-	-	-	802.11a 6Mbps	Back	5	Reduced	165	5825	14.45	14.50	1.012	98.26	1.018	-0.09	1.160	1	1.195
2nd	WLAN5.8GHz	-	-	-	-	802.11a 6Mbps	Back	5	Reduced	165	5825	14.45	14.50	1.012	98.26	1.018	0.01	1.100	1.055	1.133
1st	WLAN5.5GHz	-	-	-	-	802.11n-HT40 MCS0	Back	5	Reduced	134	5670	14.69	15.00	1.074	96.3	1.038	-0.01	1.040	1	1.159
2nd	WLAN5.5GHz	-	-	-	-	802.11n-HT40 MCS0	Back	5	Reduced	134	5670	14.69	15.00	1.074	96.3	1.038	0.06	1.010	1.030	1.126

<10g>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	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 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	CDMA2000 BC10	-	-	-	-	RTAP 153.6Kbps	Back	0	Full	684	823.1	24.26	25.00	1.186	-	-	0.1	1.98	1	2.348
2nd	CDMA2000 BC10	-	-	-	-	RTAP 153.6Kbps	Back	0	Full	684	823.1	24.26	25.00	1.186	-	-	-0.02	1.94	1.021	2.300
1st	CDMA2000 BC1	-	-	-	-	RTAP 153.6Kbps	Bottom Side	0	Reduced	1175	1908.75	20.27	21.00	1.183	-	-	-0.07	2.95	1	3.490
2nd	CDMA2000 BC1	-	-	-	-	RTAP 153.6Kbps	Bottom Side	0	Reduced	1175	1908.75	20.27	21.00	1.183	-	-	0.01	2.91	1.014	3.443
1st	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0	Reduced	132572	1770	18.70	19.50	1.202	-	-	0.04	2.90	1	3.487
2nd	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0	Reduced	132572	1770	18.70	19.50	1.202	-	-	0.04	2.88	1.007	3.463
1st	LTE Band 30	10M	QPSK	1	0	-	Back	0	Reduced	27710	2310	22.44	23.00	1.138	-	-	0.05	2.30	1	2.617
2nd	LTE Band 30	10M	QPSK	1	0	-	Back	0	Reduced	27710	2310	22.44	23.00	1.138	-	-	0.03	2.27	1.013	2.582
1st	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	0	Reduced	21350	2560	22.29	23.00	1.178	-	-	-0.06	2.39	1	2.814
2nd	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	0	Reduced	21350	2560	22.29	23.00	1.178	-	-	0.02	2.32	1.030	2.732
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Front	0	Full	11	2462	20.92	22.50	1.439	100	1.000	0.04	2.17	1	3.122
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Front	0	Full	11	2462	20.92	22.50	1.439	100	1.000	0.07	2.14	1.014	3.079
1st	WLAN5.3GHz	-	-	-	-	802.11n-HT40 MCS0	Back	0	Full	62	5310	17.98	19.00	1.265	96.3	1.038	0.06	2.43	1	3.190
2nd	WLAN5.3GHz	-	-	-	-	802.11n-HT40 MCS0	Back	0	Full	62	5310	17.98	19.00	1.265	96.3	1.038	0.04	2.40	1.013	3.151
1st	WLAN5.5GHz	-	-	-	-	802.11n-HT40 MCS0	Back	0	Full	134	5670	18.46	19.00	1.132	96.3	1.038	0.09	2.46	1	2.892
2nd	WLAN5.5GHz	-	-	-	-	802.11n-HT40 MCS0	Back	0	Full	134	5670	18.46	19.00	1.132	96.3	1.038	-0.04	2.43	1.012	2.856
1st	WLAN5.8GHz	-	-	-	-	802.11a 6Mbps	Back	0	Full	165	5825	18.25	19.00	1.189	98.26	1.018	0.02	2.38	1	2.88
2nd	WLAN5.8GHz	-	-	-	-	802.11a 6Mbps	Back	0	Full	165	5825	18.25	19.00	1.189	98.26	1.018	-0.03	2.35	1.013	2.843

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. Per KDB 865664 D01v01r04, 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.

15. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	GSM Voice + WLAN2.4GHz	Yes	Yes		
2.	GPRS/EDGE + WLAN2.4GHz	Yes	Yes	Yes	Yes
3.	WCDMA + WLAN2.4GHz	Yes	Yes	Yes	Yes
4.	CDMA + WLAN2.4GHz	Yes	Yes	Yes	Yes
5.	LTE + WLAN2.4GHz	Yes	Yes	Yes	Yes
6.	GSM Voice + WLAN5.3/5.5GHz	Yes	Yes		
7.	GPRS/EDGE + WLAN5.3/5.5GHz	Yes	Yes		Yes
8.	WCDMA + WLAN5.3/5.5GHz	Yes	Yes		Yes
9.	CDMA + WLAN5.3/5.5GHz	Yes	Yes		Yes
10.	LTE + WLAN5.3/5.5GHz	Yes	Yes		Yes
11.	GSM Voice + WLAN5.2/5.8GHz	Yes	Yes		
12.	GPRS/EDGE + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
13.	WCDMA + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
14.	CDMA + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
15.	LTE + WLAN5.2/5.8GHz	Yes	Yes	Yes	Yes
16.	GSM Voice + Bluetooth	Yes	Yes		
17.	GPRS/EDGE + Bluetooth	Yes	Yes	Yes	Yes
18.	WCDMA + Bluetooth	Yes	Yes	Yes	Yes
19.	CDMA + Bluetooth	Yes	Yes	Yes	Yes
20.	LTE + Bluetooth	Yes	Yes	Yes	Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, CDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. EUT will choose each GSM, CDMA, WCDMA and LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
3. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
4. This device 2.4GHz WLAN/ 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
5. EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment though they have independent antenna.
6. WLAN 2.4GHz and Bluetooth share the same antenna so can't transmit simultaneously.
7. According to the EUT character, WLAN 5GHz and Bluetooth can't transmit simultaneously.
8. Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
9. The reported SAR summation is calculated based on the same configuration and test position.
10. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. 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 ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
    v) The SPLSR calculated results please refer to section 15.5.

15.1 Head Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3			1+4
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Case No	SPLSR	Summed 1g SAR (W/kg)
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)					
GSM	GSM850	Right Cheek	0.560	0.391	1.185	0.140	0.95	**1.75**	**#01**	**0.03**	0.70
		Right Tilted	0.241	0.459	1.121	0.140	0.70	1.36			0.38
		Left Cheek	0.347	1.118	1.171	0.140	1.47	1.52			0.49
		Left Tilted	0.188	0.632	1.104	0.140	0.82	1.29			0.33
	GSM1900	Right Cheek	0.057	0.391	1.185	0.140	0.45	1.24			0.20
		Right Tilted	0.026	0.459	1.121	0.140	0.49	1.15			0.17
		Left Cheek	0.092	1.118	1.171	0.140	1.21	1.26			0.23
		Left Tilted	0.059	0.632	1.104	0.140	0.69	1.16			0.20
WCDMA	WCDMA II	Right Cheek	0.166	0.391	1.185	0.140	0.56	1.35			0.31
		Right Tilted	0.053	0.459	1.121	0.140	0.51	1.17			0.19
		Left Cheek	0.121	1.118	1.171	0.140	1.24	1.29			0.26
		Left Tilted	0.099	0.632	1.104	0.140	0.73	1.20			0.24
	WCDMA IV	Right Cheek	0.218	0.391	1.185	0.140	0.61	1.40			0.36
		Right Tilted	0.089	0.459	1.121	0.140	0.55	1.21			0.23
		Left Cheek	0.146	1.118	1.171	0.140	1.26	1.32			0.29
		Left Tilted	0.140	0.632	1.104	0.140	0.77	1.24			0.28
	WCDMA V	Right Cheek	0.459	0.391	1.185	0.140	0.85	**1.64**	**#02**	**0.03**	0.60
		Right Tilted	0.237	0.459	1.121	0.140	0.70	1.36			0.38
		Left Cheek	0.304	1.118	1.171	0.140	1.42	1.48			0.44
		Left Tilted	0.197	0.632	1.104	0.140	0.83	1.30			0.34
CDMA	CDMA2000 BC0	Right Cheek	0.461	0.391	1.185	0.140	0.85	**1.65**	**#03**	**0.03**	0.60
		Right Tilted	0.195	0.459	1.121	0.140	0.65	1.32			0.34
		Left Cheek	0.377	1.118	1.171	0.140	1.50	1.55			0.52
		Left Tilted	0.175	0.632	1.104	0.140	0.81	1.28			0.32
	CDMA2000 BC1	Right Cheek	0.148	0.391	1.185	0.140	0.54	1.33			0.29
		Right Tilted	0.069	0.459	1.121	0.140	0.53	1.19			0.21
		Left Cheek	0.143	1.118	1.171	0.140	1.26	1.31			0.28
		Left Tilted	0.093	0.632	1.104	0.140	0.73	1.20			0.23
	CDMA2000 BC10	Right Cheek	0.462	0.391	1.185	0.140	0.85	**1.65**	**#04**	**0.03**	0.60
		Right Tilted	0.211	0.459	1.121	0.140	0.67	1.33			0.35
		Left Cheek	0.350	1.118	1.171	0.140	1.47	1.52			0.49
		Left Tilted	0.192	0.632	1.104	0.140	0.82	1.30			0.33
LTE	LTE Band 7	Right Cheek	0.168	0.391	1.185	0.140	0.56	1.35			0.31
		Right Tilted	0.136	0.459	1.121	0.140	0.60	1.26			0.28
		Left Cheek	0.125	1.118	1.171	0.140	1.24	1.30			0.27
		Left Tilted	0.045	0.632	1.104	0.140	0.68	1.15			0.19
	LTE Band 12	Right Cheek	0.326	0.391	1.185	0.140	0.72	1.51			0.47
		Right Tilted	0.163	0.459	1.121	0.140	0.62	1.28			0.30
		Left Cheek	0.297	1.118	1.171	0.140	1.42	1.47			0.44
		Left Tilted	0.163	0.632	1.104	0.140	0.80	1.27			0.30
	LTE Band 13	Right Cheek	0.335	0.391	1.185	0.140	0.73	1.52			0.48
		Right Tilted	0.171	0.459	1.121	0.140	0.63	1.29			0.31
		Left Cheek	0.306	1.118	1.171	0.140	1.42	1.48			0.45
		Left Tilted	0.195	0.632	1.104	0.140	0.83	1.30			0.34
	LTE Band 14	Right Cheek	0.230	0.391	1.185	0.140	0.62	1.42			0.37
		Right Tilted	0.129	0.459	1.121	0.140	0.59	1.25			0.27
		Left Cheek	0.284	1.118	1.171	0.140	1.40	1.46			0.42
		Left Tilted	0.157	0.632	1.104	0.140	0.79	1.26			0.30

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN 1g SAR (W/kg)	3 5GHz WLAN 1g SAR (W/kg)	4 Bluetooth 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
LTE	LTE Band 25	Right Cheek	0.160	0.391	1.185	0.140	0.55	1.35	0.30
		Right Tilted	0.055	0.459	1.121	0.140	0.51	1.18	0.20
		Left Cheek	0.127	1.118	1.171	0.140	1.25	1.30	0.27
		Left Tilted	0.108	0.632	1.104	0.140	0.74	1.21	0.25
	LTE Band 26	Right Cheek	0.242	0.391	1.185	0.140	0.63	1.43	0.38
		Right Tilted	0.231	0.459	1.121	0.140	0.69	1.35	0.37
		Left Cheek	0.028	1.118	1.171	0.140	1.15	1.20	0.17
		Left Tilted	0.015	0.632	1.104	0.140	0.65	1.12	0.16
	LTE Band 30	Right Cheek	0.168	0.391	1.185	0.140	0.56	1.35	0.31
		Right Tilted	0.139	0.459	1.121	0.140	0.60	1.26	0.28
		Left Cheek	0.181	1.118	1.171	0.140	1.30	1.35	0.32
		Left Tilted	0.076	0.632	1.104	0.140	0.71	1.18	0.22
	LTE Band 41	Right Cheek	0.097	0.391	1.185	0.140	0.49	1.28	0.24
		Right Tilted	0.109	0.459	1.121	0.140	0.57	1.23	0.25
		Left Cheek	0.203	1.118	1.171	0.140	1.32	1.37	0.34
		Left Tilted	0.058	0.632	1.104	0.140	0.69	1.16	0.20
	LTE Band 66	Right Cheek	0.240	0.391	1.185	0.140	0.63	1.43	0.38
		Right Tilted	0.088	0.459	1.121	0.140	0.55	1.21	0.23
		Left Cheek	0.129	1.118	1.171	0.140	1.25	1.30	0.27
		Left Tilted	0.118	0.632	1.104	0.140	0.75	1.22	0.26
	LTE Band 71	Right Cheek	0.208	0.391	1.185	0.140	0.60	1.39	0.35
		Right Tilted	0.114	0.459	1.121	0.140	0.57	1.24	0.25
		Left Cheek	0.231	1.118	1.171	0.140	1.35	1.40	0.37
		Left Tilted	0.125	0.632	1.104	0.140	0.76	1.23	0.27

15.2 Hotspot Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2			1+3			1+4
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth	Summed 1g SAR (W/kg)	Case No	SPLSR	Summed 1g SAR (W/kg)	Case No	SPLSR	Summed 1g SAR (W/kg)
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)							
GSM	GSM850	Front	1.239	1.005	0.329	0.063	**2.24**	**#06**	**0.02**	**1.57**			1.30
		Back	1.348	1.123	1.195	0.063	**2.47**	**#07**	**0.03**	**2.54**	**#08**	**0.03**	1.41
		Left side	0.472	0.077	0.219	0.063	0.55			0.69			0.54
		Right side	0.815	0.758	0.107	0.063	**1.57**			0.92			0.88
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.330				1.33			1.33			1.33
	GSM1900	Front	0.876	1.005	0.329	0.063	**1.88**	**#09**	**0.02**	1.21			0.94
		Back	1.369	1.123	1.195	0.063	**2.49**	**#10**	**0.03**	**2.56**	**#11**	**0.03**	1.43
		Left side	0.178	0.077	0.219	0.063	0.26			0.40			0.24
		Right side	0.160	0.758	0.107	0.063	0.92			0.27			0.22
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.391				1.39			1.39			1.39
WCDMA	WCDMA II	Front	0.604	1.005	0.329	0.063	**1.61**	**#12**	**0.01**	0.93			0.67
		Back	1.322	1.123	1.195	0.063	**2.45**	**#13**	**0.03**	**2.52**	**#14**	**0.03**	1.39
		Left side	0.040	0.077	0.219	0.063	0.12			0.26			0.10
		Right side	0.041	0.758	0.107	0.063	0.80			0.15			0.10
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.399				1.40			1.40			1.40
	WCDMA IV	Front	0.773	1.005	0.329	0.063	**1.78**	**#15**	**0.02**	1.10			0.84
		Back	1.303	1.123	1.195	0.063	**2.43**	**#16**	**0.03**	**2.50**	**#17**	**0.03**	1.37
		Left side	0.052	0.077	0.219	0.063	0.13			0.27			0.12
		Right side	0.064	0.758	0.107	0.063	0.82			0.17			0.13
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.324				1.32			1.32			1.32
	WCDMA V	Front	1.175	1.005	0.329	0.063	**2.18**	**#18**	**0.02**	1.50			1.24
		Back	1.383	1.123	1.195	0.063	**2.51**	**#19**	**0.03**	**2.58**	**#20**	**0.03**	1.45
		Left side	0.452	0.077	0.219	0.063	0.53			0.67			0.52
		Right side	0.769	0.758	0.107	0.063	1.53			0.88			0.83
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.358				1.36			1.36			1.36
CDMA	CDMA2000 BC0	Front	0.936	1.005	0.329	0.063	**1.94**	**#21**	**0.02**	1.27			1.00
		Back	1.398	1.123	1.195	0.063	**2.52**	**#22**	**0.03**	**2.59**	**#23**	**0.03**	1.46
		Left side	0.446	0.077	0.219	0.063	0.52			0.67			0.51
		Right side	0.730	0.758	0.107	0.063	1.49			0.84			0.79
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.203				1.20			1.20			1.20
	CDMA2000 BC1	Front	0.821	1.005	0.329	0.063	**1.83**	**#24**	**0.02**	1.15			0.88
		Back	1.347	1.123	1.195	0.063	**2.47**	**#25**	**0.03**	**2.54**	**#26**	**0.03**	1.41
		Left side	0.035	0.077	0.219	0.063	0.11			0.25			0.10
		Right side	0.055	0.758	0.107	0.063	0.81			0.16			0.12
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.349				1.35			1.35			1.35
	CDMA2000 BC10	Front	0.965	1.005	0.329	0.063	**1.97**	**#27**	**0.02**	1.29			1.03
		Back	1.286	1.123	1.195	0.063	**2.41**	**#28**	**0.03**	**2.48**	**#29**	**0.03**	1.35
		Left side	0.496	0.077	0.219	0.063	0.57			0.72			0.56
		Right side	0.779	0.758	0.107	0.063	1.54			0.89			0.84
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.221				1.22			1.22			1.22

WWAN Band		Exposure Position	1	2	3	4	1+2			1+3			1+4
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth	Summed 1g SAR (W/kg)	Case No	SPLSR	Summed 1g SAR (W/kg)	Case No	SPLSR	Summed 1g SAR (W/kg)
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)							
LTE	LTE Band 7	Front	1.106	1.005	0.329	0.063	**2.11**	**#30**	**0.02**	1.44			1.17
		Back	1.341	1.123	1.195	0.063	**2.46**	**#31**	**0.03**	**2.54**	**#32**	**0.03**	1.40
		Left side	0.873	0.077	0.219	0.063	0.95			1.09			0.94
		Right side	0.257	0.758	0.107	0.063	1.02			0.36			0.32
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.280				1.28			1.28			1.28
	LTE Band 12	Front	0.655	1.005	0.329	0.063	**1.66**	**#33**	**0.01**	0.98			0.72
		Back	0.936	1.123	1.195	0.063	**2.06**	**#34**	**0.02**	**2.13**	**#35**	**0.02**	1.00
		Left side	0.387	0.077	0.219	0.063	0.46			0.61			0.45
		Right side	0.535	0.758	0.107	0.063	1.29			0.64			0.60
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	0.755				0.76			0.76			0.76
	LTE Band 13	Front	0.760	1.005	0.329	0.063	**1.77**	**#36**	**0.02**	1.09			0.82
		Back	1.194	1.123	1.195	0.063	**2.32**	**#37**	**0.03**	**2.39**	**#38**	**0.02**	1.26
		Left side	0.552	0.077	0.219	0.063	0.63			0.77			0.62
		Right side	0.832	0.758	0.107	0.063	**1.59**			0.94			0.90
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.077				1.08			1.08			1.08
	LTE Band 14	Front	0.653	1.005	0.329	0.063	**1.66**	**#39**	**0.01**	0.98			0.72
		Back	0.994	1.123	1.195	0.063	**2.12**	**#40**	**0.02**	**2.19**	**#41**	**0.02**	1.06
		Left side	0.439	0.077	0.219	0.063	0.52			0.66			0.50
		Right side	0.717	0.758	0.107	0.063	1.48			0.82			0.78
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	0.831				0.83			0.83			0.83
	LTE Band 25	Front	0.960	1.005	0.329	0.063	**1.97**	**#42**	**0.02**	1.29			1.02
		Back	1.355	1.123	1.195	0.063	**2.48**	**#43**	**0.03**	**2.55**	**#44**	**0.03**	1.42
		Left side	0.040	0.077	0.219	0.063	0.12			0.26			0.10
		Right side	0.038	0.758	0.107	0.063	0.80			0.15			0.10
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.346				1.35			1.35			1.35
	LTE Band 26	Front	1.029	1.005	0.329	0.063	**2.03**	**#45**	**0.02**	1.36			1.09
		Back	1.433	1.123	1.195	0.063	**2.56**	**#46**	**0.03**	**2.63**	**#47**	**0.03**	1.50
		Left side	0.805	0.077	0.219	0.063	0.88			1.02			0.87
		Right side	0.781	0.758	0.107	0.063	1.54			0.89			0.84
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.257				1.26			1.26			1.26
	LTE Band 30	Front	1.229	1.005	0.329	0.063	**2.23**	**#48**	**0.02**	1.56			1.29
		Back	1.212	1.123	1.195	0.063	**2.34**	**#49**	**0.03**	**2.41**	**#50**	**0.03**	1.28
		Left side	0.224	0.077	0.219	0.063	0.30			0.44			0.29
		Right side	0.180	0.758	0.107	0.063	0.94			0.29			0.24
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.316				1.32			1.32			1.32
	LTE Band 41	Front	0.959	1.005	0.329	0.063	**1.96**	**#51**	**0.02**	1.29			1.02
		Back	1.321	1.123	1.195	0.063	**2.44**	**#52**	**0.03**	**2.52**	**#53**	**0.03**	1.38
		Left side	0.511	0.077	0.219	0.063	0.59			0.73			0.57
		Right side	0.225	0.758	0.107	0.063	0.98			0.33			0.29
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.285				1.29			1.29			1.29

WWAN Band		Exposure Position	1	2	3	4	1+2			1+3			1+4
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth	Summed	Case	SPLSR	Summed	Case	SPLSR	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	No		1g SAR (W/kg)	No		1g SAR (W/kg)
LTE	LTE Band 66	Front	0.720	1.005	0.329	0.063	**1.73**	**#54**	**0.01**	1.05			0.78
		Back	1.394	1.123	1.195	0.063	**2.52**	**#55**	**0.03**	**2.59**	**#56**	**0.03**	1.46
		Left side	0.041	0.077	0.219	0.063	0.12			0.26			0.10
		Right side	0.063	0.758	0.107	0.063	0.82			0.17			0.13
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	1.257				1.26			1.26			1.26
	LTE Band 71	Front	0.558	1.005	0.329	0.063	1.56			0.89			0.62
		Back	0.814	1.123	1.195	0.063	**1.94**	**#57**	**0.02**	**2.01**	**#58**	**0.02**	0.88
		Left side	0.322	0.077	0.219	0.063	0.40			0.54			0.39
		Right side	0.476	0.758	0.107	0.063	1.23			0.58			0.54
		Top side		0.793	0.634	0.063	0.79			0.63			0.06
		Bottom side	0.556				0.56			0.56			0.56

15.3 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2			1+3			1+4
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth	Summed 1g SAR (W/kg)	Case No	SPLSR	Summed 1g SAR (W/kg)	Case No	SPLSR	Summed 1g SAR (W/kg)
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)							
GSM	GSM850	Front	1.239	1.005	0.462	0.063	**2.24**	**#06**	**0.02**	**1.70**	**#59**	**0.01**	1.30
		Back	1.348	1.123	1.195	0.063	**2.47**	**#07**	**0.03**	**2.54**	**#08**	**0.03**	1.41
		Back with Headset	0.785				0.79			0.79			0.79
	GSM1900	Front	0.876	1.005	0.462	0.063	**1.88**	**#09**	**0.02**	1.34			0.94
		Back	1.369	1.123	1.195	0.063	**2.49**	**#10**	**0.03**	**2.56**	**#11**	**0.03**	1.43
		Back with Headset	1.121				1.12			1.12			1.12
WCDMA	WCDMA II	Front	0.604	1.005	0.462	0.063	**1.61**	**#12**	**0.01**	1.07			0.67
		Back	1.322	1.123	1.195	0.063	**2.45**	**#13**	**0.03**	**2.52**	**#14**	**0.03**	1.39
		Back with Headset	0.804				0.80			0.80			0.80
	WCDMA IV	Front	0.773	1.005	0.462	0.063	**1.78**	**#15**	**0.02**	1.24			0.84
		Back	1.303	1.123	1.195	0.063	**2.43**	**#16**	**0.03**	**2.50**	**#17**	**0.03**	1.37
		Back with Headset	1.323				1.32			1.32			1.32
	WCDMA V	Front	1.175	1.005	0.462	0.063	**2.18**	**#18**	**0.02**	**1.64**	**#60**	**0.01**	1.24
		Back	1.383	1.123	1.195	0.063	**2.51**	**#19**	**0.03**	**2.58**	**#20**	**0.03**	1.45
		Back with Headset	1.317				1.32			1.32			1.32
CDMA	CDMA2000 BC0	Front	0.790	1.005	0.462	0.063	**1.80**	**#61**	**0.02**	1.25			0.85
		Back	1.326	1.123	1.195	0.063	**2.45**	**#62**	**0.03**	**2.52**	**#63**	**0.03**	1.39
		Back with Headset	1.292				1.29			1.29			1.29
	CDMA2000 BC1	Front	0.743	1.005	0.462	0.063	**1.75**	**#64**	**0.02**	1.21			0.81
		Back	1.273	1.123	1.195	0.063	**2.40**	**#65**	**0.03**	**2.47**	**#66**	**0.03**	1.34
		Back with Headset	1.034				1.03			1.03			1.03
	CDMA2000 BC10	Front	1.087	1.005	0.462	0.063	**2.09**	**#67**	**0.02**	**1.55**			1.15
		Back	1.435	1.123	1.195	0.063	**2.56**	**#68**	**0.03**	**2.63**	**#69**	**0.03**	**1.50**
		Back with Headset	1.316				1.32			1.32			1.32
LTE	LTE Band 7	Front	1.106	1.005	0.462	0.063	**2.11**	**#30**	**0.02**	1.57			1.17
		Back	1.341	1.123	1.195	0.063	**2.46**	**#31**	**0.03**	**2.54**	**#32**	**0.03**	1.40
		Back with Headset	1.394				1.39			1.39			1.39
	LTE Band 12	Front	0.655	1.005	0.462	0.063	**1.66**	**#33**	**0.01**	1.12			0.72
		Back	0.936	1.123	1.195	0.063	**2.06**	**#34**	**0.02**	**2.13**	**#35**	**0.02**	1.00
	LTE Band 13	Front	0.760	1.005	0.462	0.063	**1.77**	**#36**	**0.02**	1.22			0.82
		Back	1.194	1.123	1.195	0.063	**2.32**	**#37**	**0.03**	**2.39**	**#38**	**0.02**	1.26
	LTE Band 14	Front	0.653	1.005	0.462	0.063	**1.66**	**#39**	**0.01**	1.12			0.72
		Back	0.994	1.123	1.195	0.063	**2.12**	**#40**	**0.02**	**2.19**	**#41**	**0.02**	1.06
	LTE Band 25	Front	0.960	1.005	0.462	0.063	**1.97**	**#42**	**0.02**	1.42			1.02
		Back	1.355	1.123	1.195	0.063	**2.48**	**#43**	**0.03**	**2.55**	**#44**	**0.03**	1.42
		Back with Headset	1.350				1.35			1.35			1.35
	LTE Band 26	Front	1.029	1.005	0.462	0.063	**2.03**	**#45**	**0.02**	1.49			1.09
		Back	1.433	1.123	1.195	0.063	**2.56**	**#46**	**0.03**	**2.63**	**#47**	**0.03**	1.50
		Back with Headset	1.134				1.13			1.13			1.13
	LTE Band 30	Front	1.229	1.005	0.462	0.063	**2.23**	**#48**	**0.02**	**1.69**	**#70**	**0.01**	1.29
		Back	1.212	1.123	1.195	0.063	**2.34**	**#49**	**0.03**	**2.41**	**#50**	**0.03**	1.28
		Front with Headset	1.183				1.18			1.18			1.18
	LTE Band 41	Front	0.959	1.005	0.462	0.063	**1.96**	**#51**	**0.02**	**1.42**			1.02
		Back	1.321	1.123	1.195	0.063	**2.44**	**#52**	**0.03**	**2.52**	**#53**	**0.03**	1.38
		Back with Headset	1.238				1.24			1.24			1.24
	LTE Band 66	Front	0.720	1.005	0.462	0.063	**1.73**	**#54**	**0.01**	1.18			0.78
		Back	1.394	1.123	1.195	0.063	**2.52**	**#55**	**0.03**	**2.59**	**#56**	**0.03**	1.46
		Back with Headset	1.294				1.29			1.29			1.29
	LTE Band 71	Front	0.558	1.005	0.462	0.063	1.56			1.02			0.62
		Back	0.814	1.123	1.195	0.063	**1.94**	**#57**	**0.02**	**2.01**	**#58**	**0.02**	0.88

WWAN Band		Exposure Position	1	2	3	1+2			1+3		
			WWAN 1g SAR (W/kg)	2.4GHz WLAN 1g SAR (W/kg)	5GHz WLAN 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Case No	SPLSR	Summed 1g SAR (W/kg)	Case No	SPLSR
GSM	GSM1900	Front at 12mm	0.631	0.361	0.373	0.99			1.00		
		Back at 18mm	0.591	0.212	0.811	0.80			1.40		
WCDMA	WCDMA II	Front at 12mm	1.034	0.361	0.373	1.40			1.41		
		Back at 18mm	0.957	0.212	0.811	1.17			**1.77**	**#71**	**0.02**
	WCDMA IV	Front at 12mm	1.281	0.361	0.373	**1.64**	**#72**	**0.01**	**1.65**	**#73**	**0.01**
		Back at 18mm	0.980	0.212	0.811	1.19			**1.79**	**#74**	**0.02**
CDMA	CDMA2000 BC1	Front at 12mm	1.264	0.361	0.373	**1.63**	**#75**	**0.01**	**1.64**	**#76**	**0.01**
		Back at 18mm	1.180	0.212	0.811	1.39			**1.99**	**#77**	**0.02**
LTE	LTE Band 7	Front at 12mm	0.426	0.361	0.373	0.79			0.80		
		Back at 18mm	0.202	0.212	0.811	0.41			1.01		
	LTE Band 25	Front at 12mm	1.211	0.361	0.373	1.57			1.58		
		Back at 18mm	1.286	0.212	0.811	1.50			**2.10**	**#78**	**0.02**
	LTE Band 30	Front at 12mm	0.688	0.361	0.373	1.05			1.06		
		Back at 18mm	0.327	0.212	0.811	0.54			1.14		
	LTE Band 41	Front at 12mm	0.390	0.361	0.373	0.75			0.76		
		Back at 18mm	0.279	0.212	0.811	0.49			1.09		
	LTE Band 66	Front at 12mm	0.966	0.361	0.373	1.33			1.34		
		Back at 18mm	0.931	0.212	0.811	1.14			**1.74**	**#79**	**0.02**

15.4 Product specific 10g SAR Exposure Conditions

WWAN Band		Exposure Position	1	2	3	1+2			1+3		
			WWAN	2.4GHz WLAN	5GHz WLAN	Summed	Case	SPLSR	Summed	Case	SPLSR
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	No		10g SAR (W/kg)	No	
GSM	GSM850	Front at 0mm	1.625	3.122	1.040	**4.75**	**#87**	**0.07**	2.67		
		Back at 0mm	1.189	2.675	2.577	**3.86**			**3.77**		
		Bottom side at 0mm	0.672			0.67			0.67		
	GSM1900	Front at 0mm	2.039	3.122	1.040	**5.16**	**#89**	**0.08**	3.08		
		Back at 0mm	2.447	2.675	2.577	**5.12**	**#90**	**0.08**	**5.02**	**#91**	**0.08**
		Bottom side at 0mm	3.461			3.46			3.46		
WCDMA	WCDMA II	Front at 0mm	2.495	3.122	1.040	**5.62**	**#92**	**0.09**	3.54		
		Back at 0mm	2.894	2.675	2.577	**5.57**	**#93**	**0.09**	**5.47**	**#94**	**0.09**
		Bottom side at 0mm	3.493			3.49			3.49		
	WCDMA IV	Front at 0mm	1.812	3.122	1.040	**4.93**	**#95**	**0.07**	2.85		
		Back at 0mm	2.463	2.675	2.577	**5.14**	**#96**	**0.08**	**5.04**	**#97**	**0.08**
		Bottom side at 0mm	2.758			2.76			2.76		
	WCDMA V	Front at 0mm		3.122	1.040	3.12			1.04		
		Back at 0mm	1.936	2.675	2.577	**4.61**	**#98**	**0.07**	**4.51**	**#99**	**0.07**
		Bottom side at 0mm	1.417			1.42			1.42		
CDMA	CDMA2000 BC0	Front at 0mm		3.122	1.040	3.12			1.04		
		Back at 0mm	2.016	2.675	2.577	**4.69**	**#100**	**0.07**	**4.59**	**#101**	**0.07**
		Bottom side at 0mm	1.432			1.43			1.43		
	CDMA2000 BC1	Front at 0mm	2.319	3.122	1.040	**5.44**	**#102**	**0.08**	3.36		
		Back at 0mm	3.106	2.675	2.577	**5.78**	**#103**	**0.10**	**5.68**	**#104**	**0.10**
		Bottom side at 0mm	3.490			3.49			3.49		
	CDMA2000 BC10	Front at 0mm		3.122	1.040	3.12			1.04		
		Back at 0mm	2.348	2.675	2.577	**5.02**	**#105**	**0.08**	**4.93**	**#106**	**0.08**
		Bottom side at 0mm	1.524			1.52			1.52		
LTE	LTE Band 7	Front at 0mm	2.626	3.122	1.040	**5.75**	**#107**	**0.09**	3.67		
		Back at 0mm	2.799	2.675	2.577	**5.47**	**#108**	**0.08**	**5.38**	**#109**	**0.09**
		Left side at 0mm	1.778			1.78			1.78		
		Bottom side at 0mm	2.814			2.81			2.81		
	LTE Band 25	Front at 0mm	2.317	3.122	1.040	**5.44**	**#110**	**0.08**	3.36		
		Back at 0mm	2.966	2.675	2.577	**5.64**	**#111**	**0.09**	**5.54**	**#112**	**0.09**
		Bottom side at 0mm	2.996			3.00			3.00		
	LTE Band 26	Front at 0mm		3.122	1.040	3.12			1.04		
		Back at 0mm	1.939	2.675	2.577	**4.61**	**#113**	**0.07**	**4.52**	**#114**	**0.07**
		Bottom side at 0mm	1.480			1.48			1.48		
	LTE Band 30	Front at 0mm	1.593	3.122	1.040	**4.72**	**#115**	**0.06**	2.63		
		Back at 0mm	2.617	2.675	2.577	**5.29**	**#116**	**0.09**	**5.19**	**#117**	**0.09**
		Bottom side at 0mm	2.116			2.12			2.12		
	LTE Band 41	Front at 0mm	1.598	3.122	1.040	**4.72**	**#118**	**0.07**	2.64		
		Back at 0mm	2.020	2.675	2.577	**4.70**	**#119**	**0.07**	**4.60**	**#120**	**0.07**
		Bottom side at 0mm	2.920			2.92			2.92		
	LTE Band 66	Front at 0mm	1.578	3.122	1.040	**4.70**	**#121**	**0.07**	2.62		
		Back at 0mm	2.865	2.675	2.577	**5.54**	**#122**	**0.09**	**5.44**	**#123**	**0.09**
		Bottom side at 0mm	3.487			3.49			3.49		

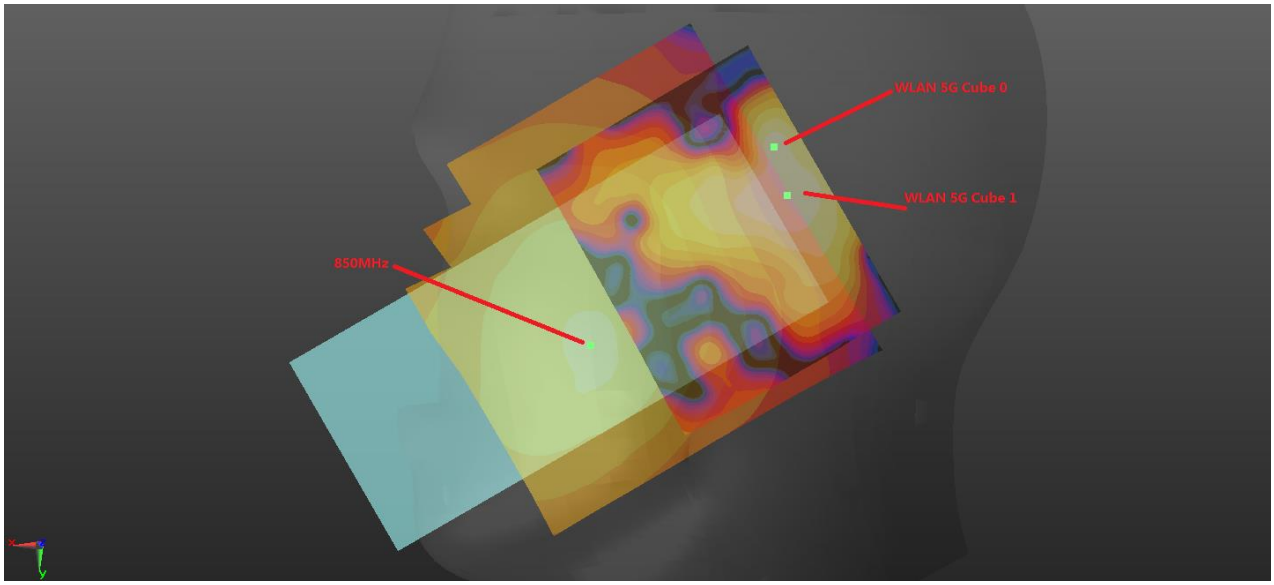
WWAN Band		Exposure Position	1 WWAN 10g SAR (W/kg)	2 2.4GHz WLAN 10g SAR (W/kg)	3 5GHz WLAN 10g SAR (W/kg)	1+2 Summed 10g SAR (W/kg)	1+3 Summed 10g SAR (W/kg)
WCDMA	WCDMA II	Front at 6mm	1.443	0.397	1.040	1.84	2.48
		Back at 11mm	1.290	0.379	0.450	1.67	1.74
		Bottom side at 11mm	1.538			1.54	1.54
	WCDMA IV	Front at 6mm	1.747	0.397	1.040	2.14	2.79
		Back at 11mm	1.424	0.379	0.450	1.80	1.87
		Bottom side at 11mm	1.556			1.56	1.56
CDMA	CDMA2000 BC1	Front at 6mm	1.593	0.397	1.040	1.99	2.63
		Back at 11mm	0.756	0.379	0.450	1.14	1.21
		Bottom side at 11mm	1.788			1.79	1.79
LTE	LTE Band 7	Front at 6mm	0.835	0.397	1.040	1.23	1.88
		Back at 11mm	0.557	0.379	0.450	0.94	1.01
		Bottom side at 11mm	0.439			0.44	0.44
	LTE Band 25	Front at 6mm	1.572	0.397	1.040	1.97	2.61
		Back at 11mm	0.813	0.379	0.450	1.19	1.26
		Bottom side at 11mm	0.978			0.98	0.98
	LTE Band 66	Front at 6mm	1.171	0.397	1.040	1.57	2.21
		Back at 11mm	0.691	0.379	0.450	1.07	1.14
		Bottom side at 11mm	0.589			0.59	0.59
	LTE Band 41	Front at 6mm	0.473	0.397	1.040	0.87	1.51
		Back at 11mm	0.244	0.379	0.450	0.62	0.69
		Bottom side at 11mm	0.290			0.29	0.29

Remark:
1. For Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.
2. If SPLSR ≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.

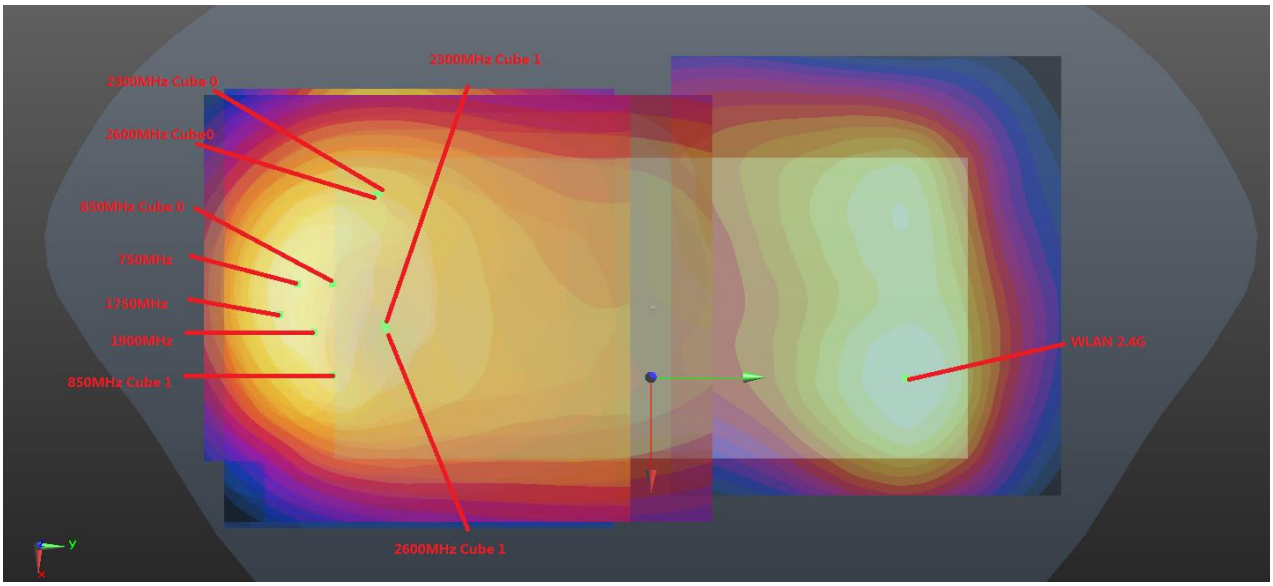
15.5 SPLSR Evaluation and Analysis

General Note:

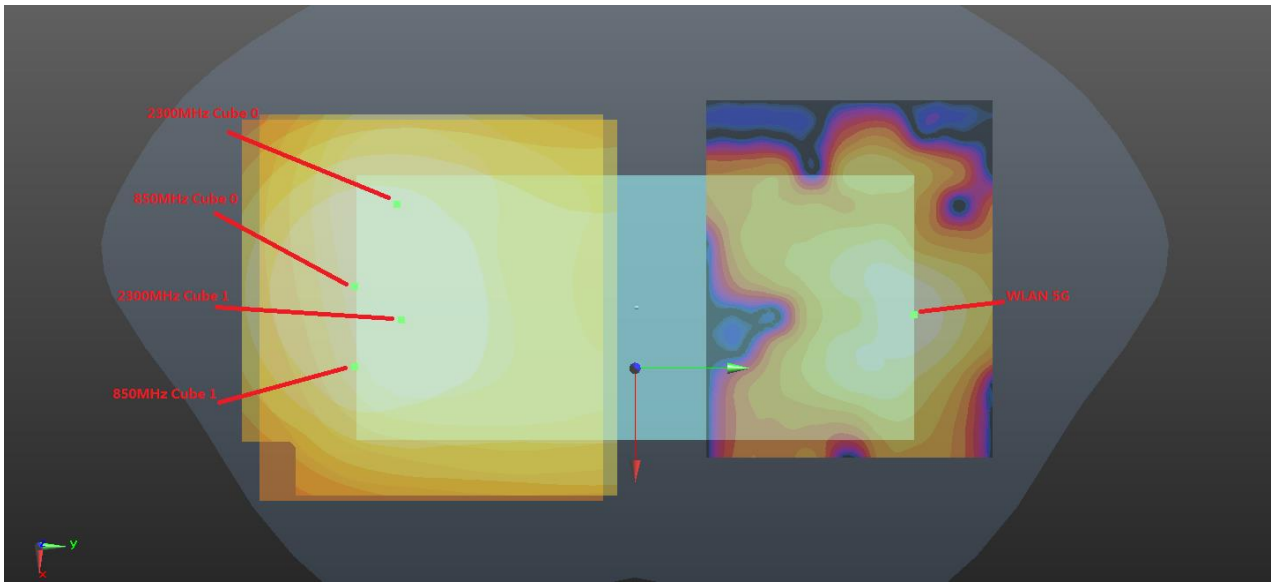
1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of [(x1−x2)2 + (y1−y2)2 + (z1−z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. SPLSR = (SAR1 + SAR2)1.5 / (min. separation distance, mm). If SPLSR ≤ 0.04 for 1g SAR and SPLSR ≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.



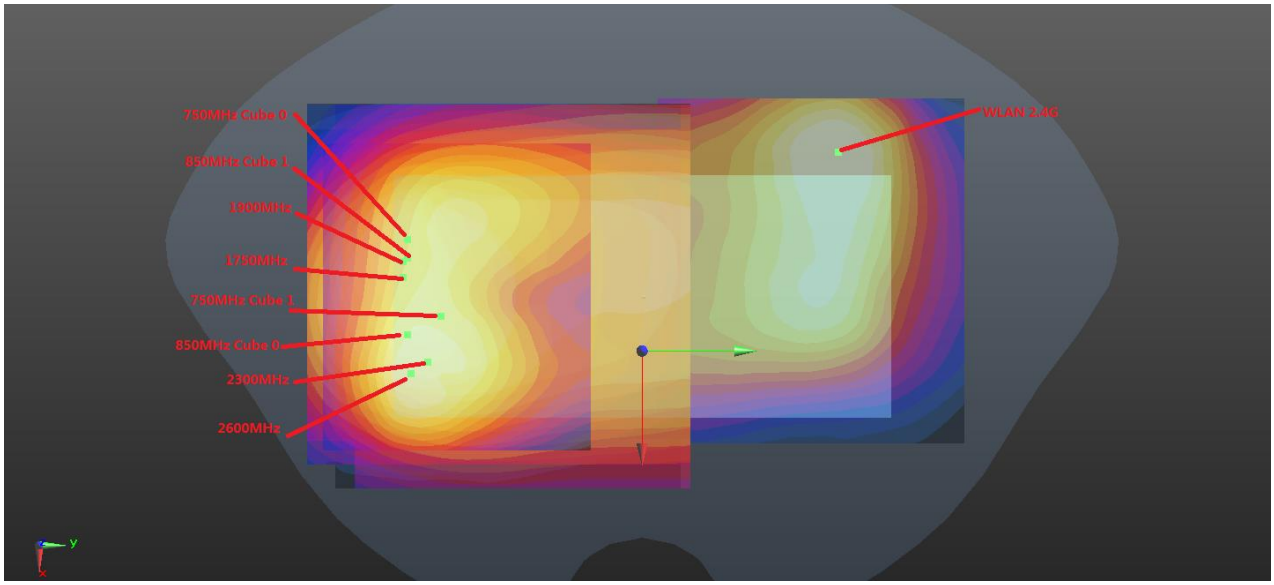
Head



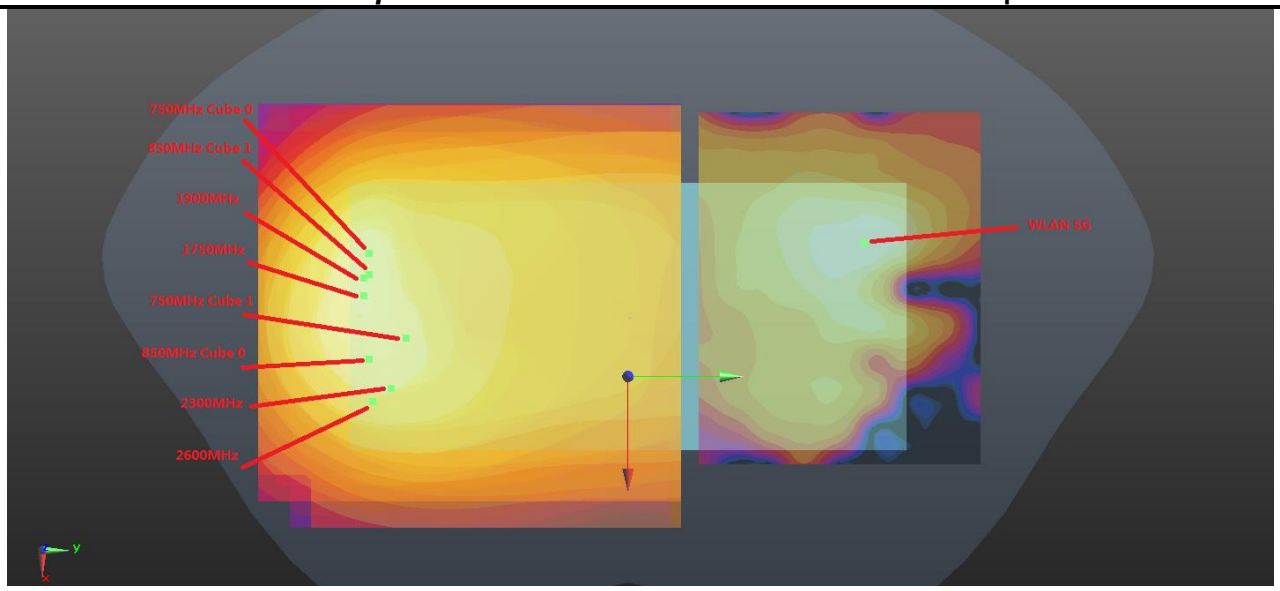
Front(5mm)+2.4G(5mm)



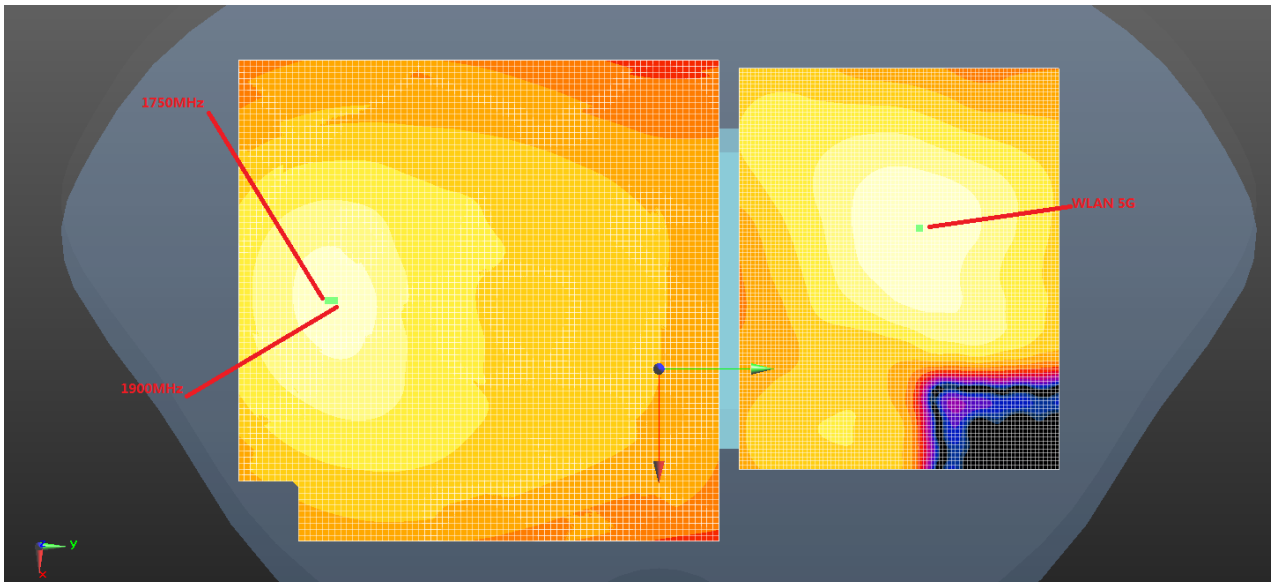
Front(5mm)+5G(5mm)



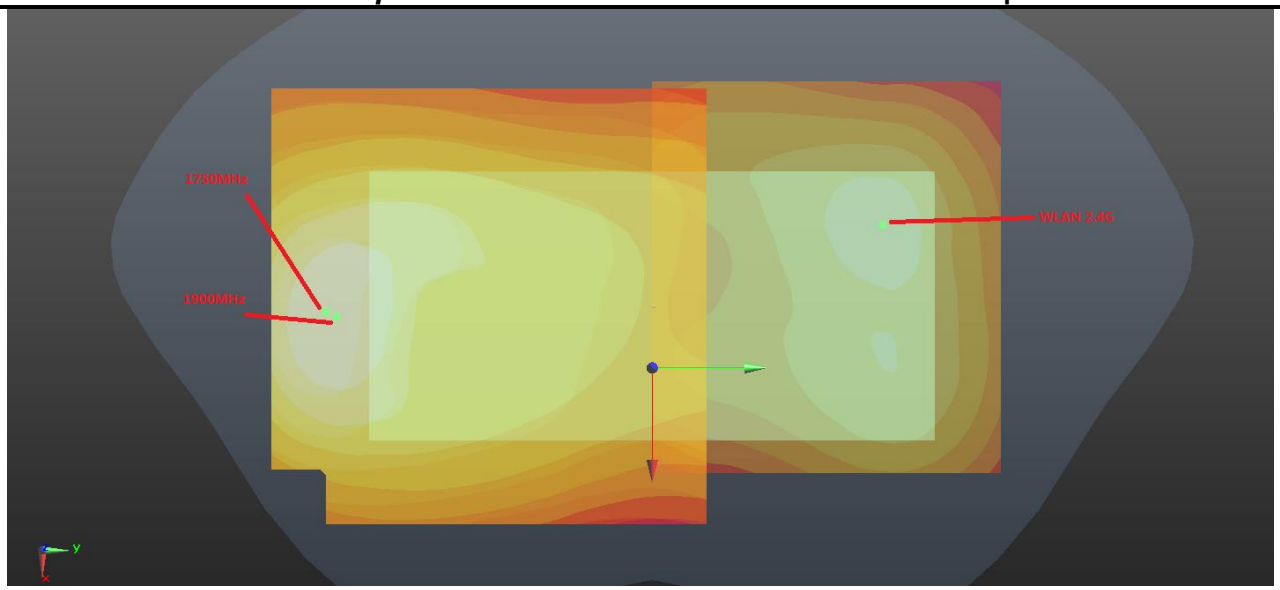
Back(5mm)+2.4G(5mm)



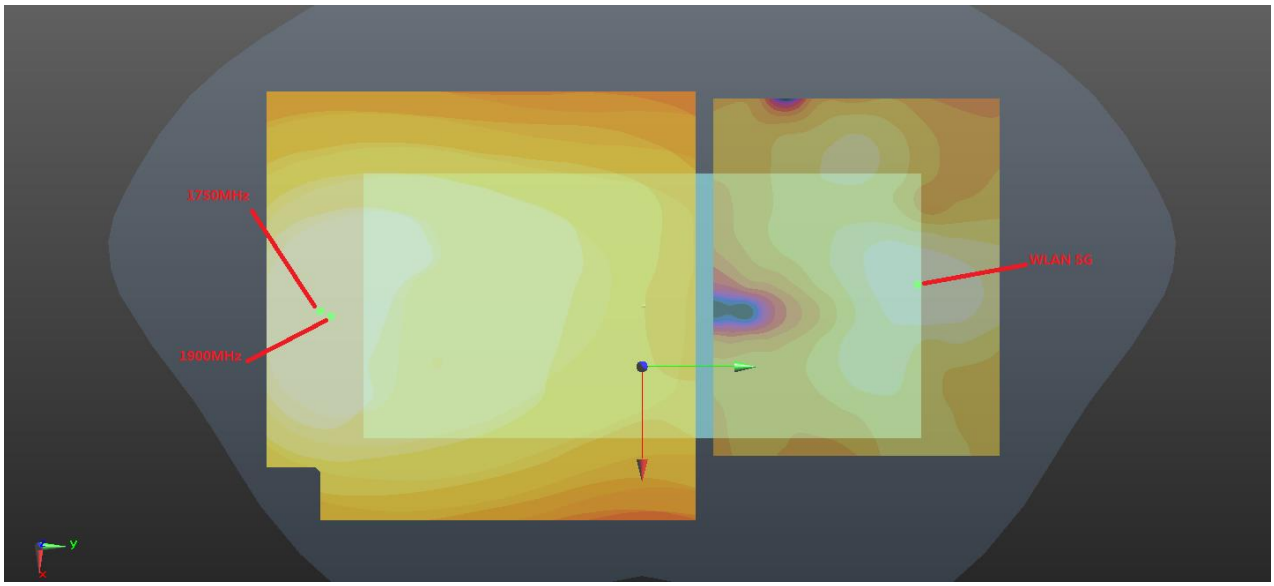
Back(5mm)+5G(5mm)



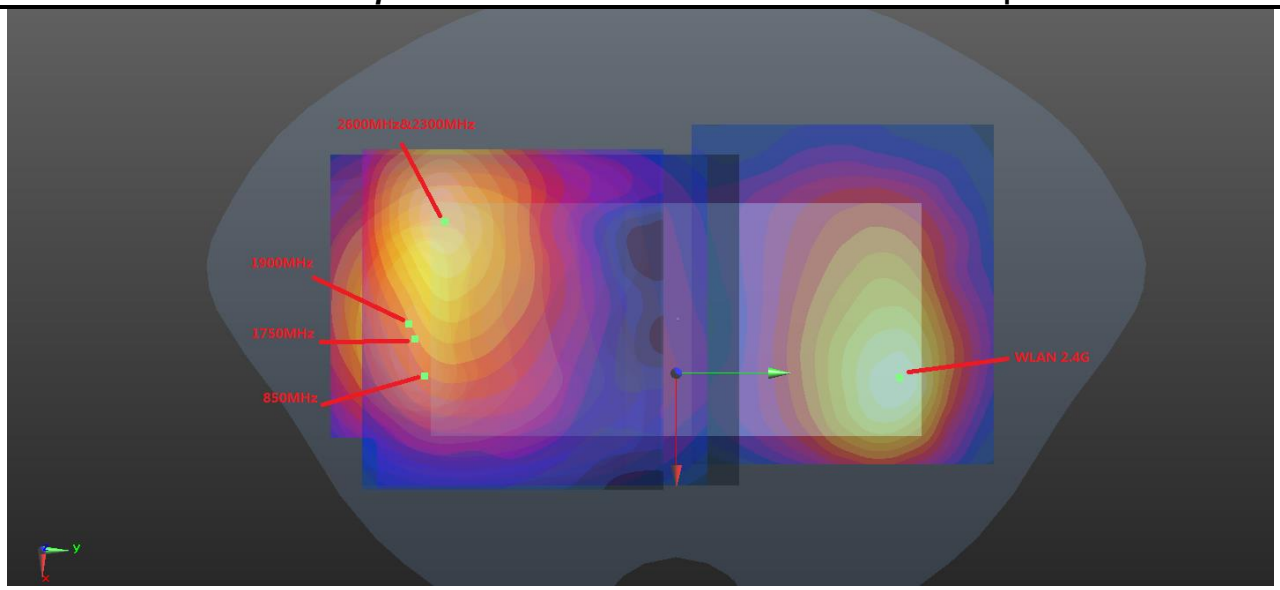
Back (18mm) + 5G (18mm)



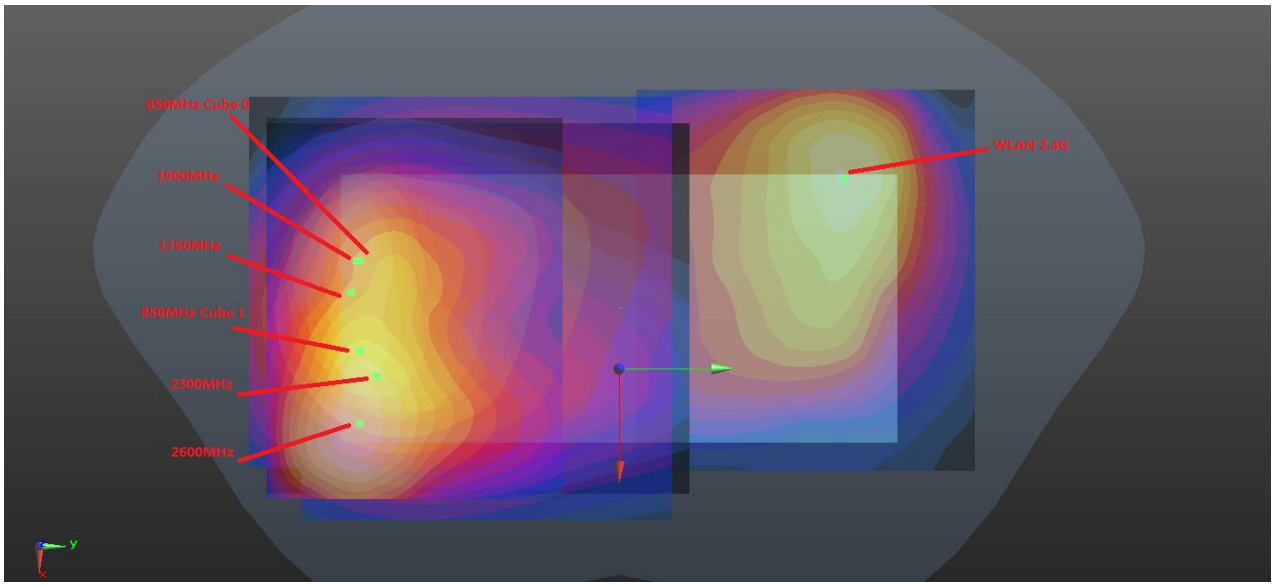
Front (12mm) + 2.4G (12mm)



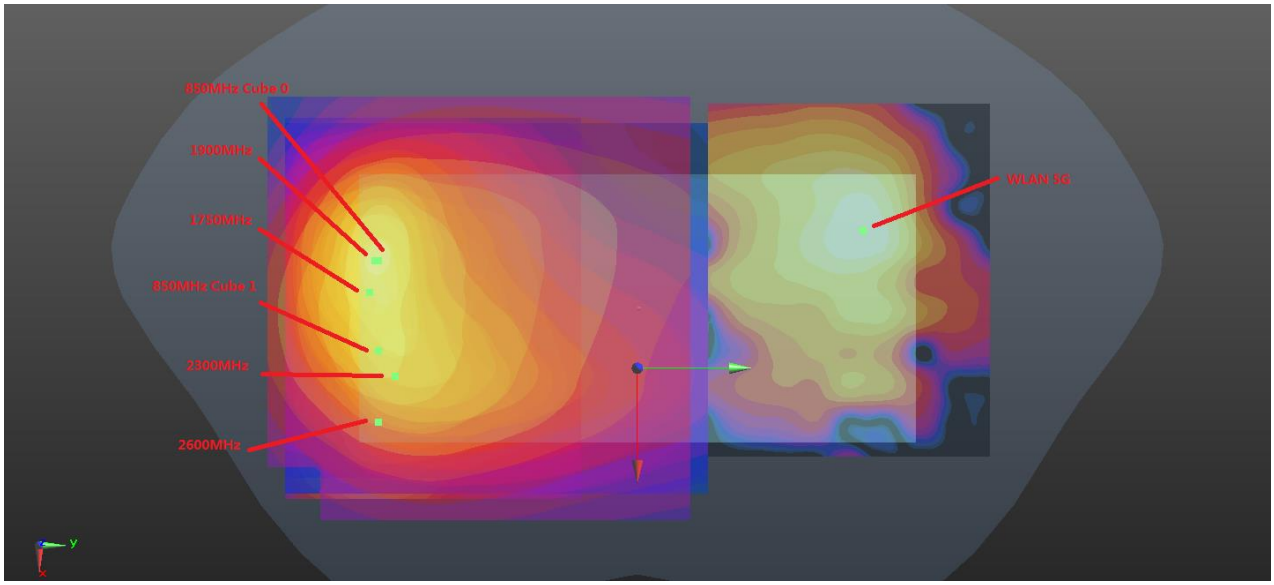
Front (12mm) + 5G (12mm)



Front (0mm) + 2.4G (0mm)



Back (0mm) + 2.4G (0mm)



Back (0mm) + 5G (0mm)

Head 0mm											
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 1	GSM850	Right Cheek	0.56	0mm	52.66	47.85	-3.25	77.0	1.75	0.03	Not required
	WLAN5GHz Cube0		1.185	0mm	-6.16	-1.33	3.63				
	GSM850	Right Cheek	0.56	0mm	52.66	47.85	-3.25	77.7	1.39	0.02	Not required
	WLAN5GHz Cube1		0.825	0mm	-1.92	-7.08	2.67				
Case 2	WCDMA V	Right Cheek	0.459	0mm	45.02	41.67	-4.87	67.4	1.64	0.03	Not required
	WLAN5GHz Cube0		1.185	0mm	-6.16	-1.33	3.63				
	WCDMA V	Right Cheek	0.459	0mm	45.02	41.67	-4.87	68.1	1.28	0.02	Not required
	WLAN5GHz Cube1		0.825	0mm	-1.92	-7.08	2.67				
Case 3	CDMA2000 BC0	Right Cheek	0.461	0mm	46.17	49.8	-5.26	73.7	1.65	0.03	Not required
	WLAN5GHz Cube0		1.185	0mm	-6.16	-1.33	3.63				
	CDMA2000 BC0	Right Cheek	0.461	0mm	46.17	49.8	-5.26	74.9	1.29	0.02	Not required
	WLAN5GHz Cube1		0.825	0mm	-1.92	-7.08	2.67				
Case 4	CDMA2000 BC10	Right Cheek	0.462	0mm	46.16	49.79	-5.13	73.7	1.65	0.03	Not required
	WLAN5GHz Cube0		1.185	0mm	-6.16	-1.33	3.63				
	CDMA2000 BC10	Right Cheek	0.462	0mm	46.16	49.79	-5.13	74.9	1.29	0.02	Not required
	WLAN5GHz Cube1		0.825	0mm	-1.92	-7.08	2.67				
Hotspot 5mm											
Case 6	GSM850	Front	1.239	5mm	-8.9	-83.9	-1.7	149.5	2.24	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
Case 7	GSM850	Back	1.348	5mm	14	-80.6	-1.61	150.5	2.47	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
Case 8	GSM850	Back	1.348	5mm	14	-80.6	-1.61	152.6	2.54	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
Case 9	GSM1900	Front	0.876	5mm	-1.3	-81	-2.2	145.1	1.88	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
Case 10	GSM1900	Back	1.369	5mm	-9	-74.9	-2.26	138.2	2.49	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 11	GSM1900	Back	1.369	5mm	-9	-74.9	-2.26	144.4	2.56	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
Case 12	WCDMA II	Front	0.604	5mm	-2.9	-82.3	-2.18	146.7	1.61	0.01	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
Case 13	WCDMA II	Back	1.322	5mm	-10.5	-76	-2.29	138.9	2.45	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
Case 14	WCDMA II	Back	1.322	5mm	-10.5	-76	-2.29	145.5	2.52	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
Case 15	WCDMA IV	Front	0.773	5mm	-1.3	-82.4	-2.15	146.5	1.78	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
Case 16	WCDMA IV	Back	1.303	5mm	-9	-74.5	-2.34	137.8	2.43	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
Case 17	WCDMA IV	Back	1.303	5mm	-9	-74.5	-2.34	144.0	2.50	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
Case 18	WCDMA V Cube0	Front	1.175	5mm	-7.6	-84.9	-1.65	150.2	2.18	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
	WCDMA V Cube1	Front	0.959	5mm	0.5	-84.9	-1.61	148.6	1.96	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
Case 19	WCDMA V Cube0	Back	1.383	5mm	4	-81.5	-4.59	148.1	2.51	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
	WCDMA V Cube1	Back	1.35	5mm	4	-81.5	-4.59	148.1	2.47	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
Case 20	WCDMA V Cube0	Back	1.383	5mm	4	-81.5	-4.59	152.1	2.58	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
	WCDMA V Cube1	Back	1.35	5mm	4	-81.5	-4.59	152.1	2.55	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 21	CDMA2000 BC0 Cube0	Front	0.936	5mm	-7.6	-82.3	-3.66	147.7	1.94	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
	CDMA2000 BC0 Cube1	Front	0.813	5mm	2	-81.5	-3.6	145.1	1.82	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 22	CDMA2000 BC0	Back	1.398	5mm	3	-79	1.55	145.3	2.52	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 23	CDMA2000 BC0	Back	1.398	5mm	3	-79	1.55	149.3	2.59	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 24	CDMA2000 BC1	Front	0.821	5mm	-1.4	-81	-2.15	145.1	1.83	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 25	CDMA2000 BC1	Back	1.347	5mm	-10.5	-75	-2.21	137.9	2.47	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 26	CDMA2000 BC1	Back	1.347	5mm	-10.5	-75	-2.21	144.5	2.54	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 27	CDMA2000 BC10 Cube0	Front	0.965	5mm	-6.1	-82.5	-3.66	147.6	1.97	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
	CDMA2000 BC10 Cube1	Front	0.817	5mm	2	-81.5	-3.6	145.1	1.82	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 28	CDMA2000 BC10 Cube0	Back	1.286	5mm	-17.9	-79.9	-3.73	141.3	2.41	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
	CDMA2000 BC10 Cube1	Back	1.217	5mm	3	-82.4	-3.58	148.6	2.34	0.02	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 29	CDMA2000 BC10 Cube0	Back	1.286	5mm	-17.9	-79.9	-3.73	149.5	2.48	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
	CDMA2000 BC10 Cube1	Back	1.217	5mm	3	-82.4	-3.58	152.8	2.41	0.02	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 30	LTE Band 7 Cube0	Front	1.106	5mm	-29.6	-70.8	-2.44	143.4	2.11	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
	LTE Band 7 Cube1	Front	0.821	5mm	7.8	-65.4	-2.29	128.3	1.83	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 31	LTE Band 7	Back	1.341	5mm	28	-72.4	-2.12	148.9	2.46	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 32	LTE Band 7	Back	1.341	5mm	28	-72.4	-2.12	147.9	2.54	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 33	LTE Band 12	Front	0.655	5mm	-6	-85.4	-4.53	150.4	1.66	0.01	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 34	LTE Band 12 Cube0	Back	0.879	5mm	-16.4	-78.3	-4.67	140.1	2.00	0.02	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
	LTE Band 12 Cube1	Back	0.936	5mm	12.4	-71	-4.53	141.1	2.06	0.02	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 35	LTE Band 12 Cube0	Back	0.879	5mm	-16.4	-78.3	-4.67	147.9	2.07	0.02	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
	LTE Band 12 Cube1	Back	0.936	5mm	12.4	-71	-4.53	143.0	2.13	0.02	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 36	LTE Band 13	Front	0.76	5mm	-8.8	-83.3	1.81	148.8	1.77	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 37	LTE Band 13 Cube0	Back	1.194	5mm	-16.4	-78.3	-4.68	140.1	2.32	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
	LTE Band 13 Cube1	Back	1.109	5mm	10.8	-79	-4.45	148.0	2.23	0.02	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 38	LTE Band 13 Cube0	Back	1.194	5mm	-16.4	-78.3	-4.68	147.9	2.39	0.02	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
	LTE Band 13 Cube1	Back	1.109	5mm	10.8	-79	-4.45	150.6	2.30	0.02	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 39	LTE Band 14	Front	0.653	5mm	-5.6	-89.9	1.68	154.6	1.66	0.01	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 40	LTE Band 14 Cube0	Back	0.994	5mm	-17.9	-78.3	-4.68	139.8	2.12	0.02	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
	LTE Band 14 Cube1	Back	0.922	5mm	10.8	-79	-4.44	148.0	2.05	0.02	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 41	LTE Band 14 Cube0	Back	0.994	5mm	-17.9	-78.3	-4.68	147.9	2.19	0.02	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
	LTE Band 14 Cube1	Back	0.922	5mm	10.8	-79	-4.44	150.6	2.12	0.02	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 42	LTE Band 25	Front	0.96	5mm	2.8	-81.4	-1.68	144.8	1.97	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 43	LTE Band 25	Back	1.355	5mm	-6.2	-75	1.98	138.9	2.48	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 44	LTE Band 25	Back	1.355	5mm	-6.2	-75	1.98	144.6	2.55	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 45	LTE Band 26	Front	1.029	5mm	-8.8	-88.3	1.7	153.7	2.03	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 46	LTE Band 26 Cube0	Back	1.398	5mm	-17.9	-78.3	-4.7	139.8	2.52	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
	LTE Band 26 Cube1	Back	1.433	5mm	4.5	-80	-4.55	146.8	2.56	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 47	LTE Band 26 Cube0	Back	1.398	5mm	-17.9	-78.3	-4.7	147.9	2.59	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
	LTE Band 26 Cube1	Back	1.433	5mm	4.5	-80	-4.55	150.6	2.63	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 48	LTE Band 30 Cube0	Front	1.229	5mm	-30.8	-69.6	-2.46	142.7	2.23	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
	LTE Band 30 Cube1	Front	0.957	5mm	1.6	-65.4	-2.36	129.3	1.96	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 49	LTE Band 30	Back	1.212	5mm	22.4	-63.2	-2.09	138.2	2.34	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 50	LTE Band 30	Back	1.212	5mm	22.4	-63.2	-2.09	137.5	2.41	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 51	LTE Band 41 Cube0	Front	0.959	5mm	-31	-68.8	-2.5	142.1	1.96	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
	LTE Band 41 Cube1	Front	0.679	5mm	6.4	-64.6	-2.34	127.7	1.68	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 52	LTE Band 41	Back	1.321	5mm	17.2	-74.2	-2.17	145.9	2.44	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 53	LTE Band 41	Back	1.321	5mm	17.2	-74.2	-2.17	147.0	2.52	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 54	LTE Band 66	Front	0.72	5mm	-0.1	-88.3	-3.32	152.1	1.73	0.01	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 55	LTE Band 66	Back	1.394	5mm	-9.2	-75	-2.26	138.2	2.52	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 56	LTE Band 66	Back	1.394	5mm	-9.2	-75	-2.26	144.5	2.59	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 57	LTE Band 71	Back	0.814	5mm	10.9	-69.5	-3.64	139.1	1.94	0.02	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 58	LTE Band 71	Back	0.814	5mm	10.9	-69.5	-3.64	141.2	2.01	0.02	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

Body Worn 5mm

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 59	GSM850	Front	1.239	5mm	-8.9	-83.9	-1.7	162.1	1.70	0.01	Not required
	WLAN5GHz		0.462	5mm	8.4	77.2	1.59				
Case 60	WCDMA V Cube0	Front	1.175	5mm	-7.6	-84.9	-1.65	162.9	1.64	0.01	Not required
	WLAN5GHz		0.462	5mm	8.4	77.2	1.59				
	WCDMA V Cube1	Front	0.959	5mm	0.5	-84.9	-1.61	162.3	1.42	0.01	Not required
	WLAN5GHz		0.462	5mm	8.4	77.2	1.59				
Case 61	CDMA2000 BC0	Front	0.79	5mm	-10.6	-80.1	1.5	146.2	1.80	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
Case 62	CDMA2000 BC0	Back	1.326	5mm	10.9	-73.9	1.68	143.1	2.45	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
Case 63	CDMA2000 BC0	Back	1.326	5mm	10.9	-73.9	1.68	145.4	2.52	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
Case 64	CDMA2000 BC1	Front	0.743	5mm	-1.4	-82.3	-2.04	146.4	1.75	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				
Case 65	CDMA2000 BC1	Back	1.273	5mm	-4.5	-76.5	-1.79	140.8	2.40	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				
Case 66	CDMA2000 BC1	Back	1.273	5mm	-4.5	-76.5	-1.79	146.2	2.47	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				
Case 67	CDMA2000 BC10	Front	1.087	5mm	-12.3	-78.5	1.51	145.0	2.09	0.02	Not required
	WLAN2.4GHz		1.005	5mm	25.2	61.6	2.32				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 68	CDMA2000 BC10	Back	1.389	5mm	10.9	-73.9	1.62	143.1	2.51	0.03	Not required
	WLAN2.4GHz		1.123	5mm	-41.2	59.4	1.76				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 69	CDMA2000 BC10	Back	1.389	5mm	10.9	-73.9	1.62	145.4	2.58	0.03	Not required
	WLAN5GHz		1.195	5mm	-13.8	69.4	1.72				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 70	LTE Band 30 Cube0	Front	1.229	5mm	-30.8	-69.6	-2.46	152.0	1.69	0.01	Not required
	WLAN5GHz		0.462	5mm	8.4	77.2	1.59				
	LTE Band 30 Cube1	Front	0.957	5mm	1.6	-65.4	-2.36	142.8	1.42	0.01	Not required
	WLAN5GHz		0.462	5mm	8.4	77.2	1.59				

18mm

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 71	WCDMA II	Back	0.957	18mm	0	-81	-1.73	146.4	1.77	0.02	Not required
	WLAN5GHz		0.811	18mm	-10	65	1.43				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 74	WCDMA IV	Back	0.980	18mm	0	-80.9	-1.75	146.3	1.79	0.02	Not required
	WLAN5GHz		0.811	18mm	-10	65	1.43				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 77	CDMA2000 BC1	Back	1.18	18mm	-10.6	-76.4	-1.77	141.4	1.99	0.02	Not required
	WLAN5GHz		0.811	18mm	-10	65	1.43				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 78	LTE Band 25	Back	1.286	18mm	-1.6	-79.5	-1.74	144.8	2.10	0.02	Not required
	WLAN5GHz		0.811	18mm	-10	65	1.43				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 79	LTE Band 66	Back	0.931	18mm	-0.1	-79.4	-1.74	144.8	1.74	0.02	Not required
	WLAN5GHz		0.811	18mm	-10	65	1.43				

12mm											
	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 72	WCDMA IV	Front	1.281	12mm	4.7	-88.4	-1.63	152.7	1.64	0.01	Not required
	WLAN2.4GHz		0.361	12mm	-9.4	63.6	1.49				
Case 73	WCDMA IV	Front	1.281	12mm	4.7	-88.4	-1.63	164.2	1.65	0.01	Not required
	WLAN5GHz		0.373	12mm	3.4	75.8	1.54				
Case 75	CDMA2000 BC1	Front	1.264	12mm	4.6	-83.8	-1.66	148.1	1.63	0.01	Not required
	WLAN2.4GHz		0.361	12mm	-9.4	63.6	1.49				
Case 76	CDMA2000 BC1	Front	1.264	12mm	4.6	-83.8	-1.66	159.6	1.64	0.01	Not required
	WLAN5GHz		0.373	12mm	3.4	75.8	1.54				
0mm											
Case 87	GSM850	Front	1.625	0mm	16.4	-81.6	-1.25	153.2	4.75	0.07	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				
Case 89	GSM1900	Front	2.039	0mm	1.5	-80.2	-2.14	153.8	5.16	0.08	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				
Case 90	GSM1900	Back	2.447	0mm	-15.1	-74.5	-2.2	140.0	5.12	0.08	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				
Case 91	GSM1900	Back	2.447	0mm	-15.1	-74.5	-2.2	136.8	5.02	0.08	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				
Case 92	WCDMA II	Front	2.495	0mm	1.4	-78.7	-1.89	152.4	5.62	0.09	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				
Case 93	WCDMA II	Back	2.894	0mm	-12.4	-74.6	-2	140.4	5.57	0.09	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				
Case 94	WCDMA II	Back	2.894	0mm	-12.4	-74.6	-2	136.9	5.47	0.09	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 95	WCDMA IV	Front	1.812	0mm	6	-83	-1.41	155.8	4.93	0.07	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				
Case 96	WCDMA IV	Back	2.463	0mm	-9.3	-76	-2.01	142.2	5.14	0.08	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				
Case 97	WCDMA IV	Back	2.463	0mm	-9.3	-76	-2.01	138.3	5.04	0.08	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				
Case 98	WCDMA V Cube0	Back	1.936	0mm	-18.3	-76.4	-3.53	141.7	4.61	0.07	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				
	WCDMA V Cube1	Back	1.644	0mm	5.5	-78	-3.41	147.0	4.32	0.06	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				
Case 99	WCDMA V Cube0	Back	1.936	0mm	-18.3	-76.4	-3.53	138.8	4.51	0.07	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				
	WCDMA V Cube1	Back	1.644	0mm	5.5	-78	-3.41	141.5	4.22	0.06	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				
Case 100	CDMA2000 BC0	Back	2.016	0mm	-22.3	-77.3	1.57	142.2	4.69	0.07	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				
Case 101	CDMA2000 BC0	Back	2.016	0mm	-22.3	-77.3	1.57	139.8	4.59	0.07	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				
Case 102	CDMA2000 BC1	Front	2.319	0mm	7.6	-81.4	-1.57	154.0	5.44	0.08	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				
Case 103	CDMA2000 BC1	Back	3.106	0mm	-4.7	-75.5	-1.75	142.4	5.78	0.10	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				
Case 104	CDMA2000 BC1	Back	3.106	0mm	-4.7	-75.5	-1.75	138.0	5.68	0.10	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 105	CDMA2000 BC10	Back	2.348	0mm	-21.1	-78.5	1.73	143.5	5.02	0.08	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 106	CDMA2000 BC10	Back	2.348	0mm	-21.1	-78.5	1.73	140.9	4.93	0.08	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 107	LTE Band 7	Front	2.626	0mm	-32.2	-77.6	0.4	160.9	5.75	0.09	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 108	LTE Band 7	Back	2.799	0mm	30.4	-75.6	-1.56	152.4	5.47	0.08	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 109	LTE Band 7	Back	2.799	0mm	30.4	-75.6	-1.56	144.5	5.38	0.09	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 110	LTE Band 25	Front	2.317	0mm	6	-83	-1.43	155.8	5.44	0.08	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 111	LTE Band 25	Back	2.966	0mm	-7.7	-77	-1.61	143.4	5.64	0.09	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 112	LTE Band 25	Back	2.966	0mm	-7.7	-77	-1.61	139.3	5.54	0.09	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 113	LTE Band 26	Back	1.939	0mm	-17.9	-76.7	-4.66	142.1	4.61	0.07	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 114	LTE Band 26	Back	1.939	0mm	-17.9	-76.7	-4.66	139.2	4.52	0.07	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 115	LTE Band 30	Front	1.593	0mm	-32.2	-75.6	0.38	159.0	4.72	0.06	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				

	Summed SAR (W/kg)	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 116	LTE Band 30	Back	2.617	0mm	19.2	-69.8	-2.11	143.0	5.29	0.09	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 117	LTE Band 30	Back	2.617	0mm	19.2	-69.8	-2.11	135.9	5.19	0.09	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 118	LTE Band 41	Front	1.598	0mm	-32.8	-72.4	-2.42	156.4	4.72	0.07	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X						
Case 119	LTE Band 41	Back	2.02	0mm	16.8	-71.2	-2.03	143.5	4.70	0.07	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 120	LTE Band 41	Back	2.02	0mm	16.8	-71.2	-2.03	136.7	4.60	0.07	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 121	LTE Band 66	Front	1.578	0mm	-1.6	-81	-2	155.2	4.70	0.07	Not required
	WLAN2.4GHz		3.122	0mm	29.4	71	2.51				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 122	LTE Band 66	Back	2.865	0mm	-15	-76.5	-1.94	142.0	5.54	0.09	Not required
	WLAN2.4GHz		2.675	0mm	-28.8	64.8	2.12				

	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 123	LTE Band 66	Back	2.865	0mm	-15	-76.5	-1.94	138.8	5.44	0.09	Not required
	WLAN5GHz		2.577	0mm	-12.8	62.2	2.27				

16. Supplemental Tuner Tests Results

General Note:

1. The following test procedure was followed to demonstrate that the SAR results in this report represent the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR will be measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements will be evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence to the antenna characteristics, other than impedance matching.
2. To evaluate all of the tuner states, the 144 tuner states are divided evenly GSM850/1900，WCDMA Band II/IV/V, CDMA2000 BC0/BC1/BC10 and LTE band 12/13/14/25/26/66/71, mode and exposure combinations so that at least one single point SAR measurement is measured in each configuration. Single point time-sweep measurements will be performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state will be established remotely so that the device is not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe will remain stationary at the same position throughout the entire series of single point measurements for each combination.
3. This device supports LTE B5 / B17/ B4/ B2 and B26 / B12/ B66/ B25. Since the supported frequency span for LTE LTE B5 / B17/ B4/ B2 falls completely within the supports frequency span for LTE B26 / B12/ B66/ B25, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, chose LTE B26 / B12/ B66/ B25 for dynamic antenna analysis.
4. According to workshop 2019, if any single point SAR measurement result is > 1.2 W/kg for a band/exposure condition combination set, all supported tuner states are evaluated with single point SAR measurements for the combination. So we verified the single point SAR that bands with SAR value high than 1.2W/Kg.
5. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

16.1 Supplemental Tuner Head & Body SAR Results

Please refer to Appendix F.

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17. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

18. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[6] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.

[7] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[8] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[9] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[10] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015

[11] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[12] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[13] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[14] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

------THE END------

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.3.22

System Check_Head_750MHz

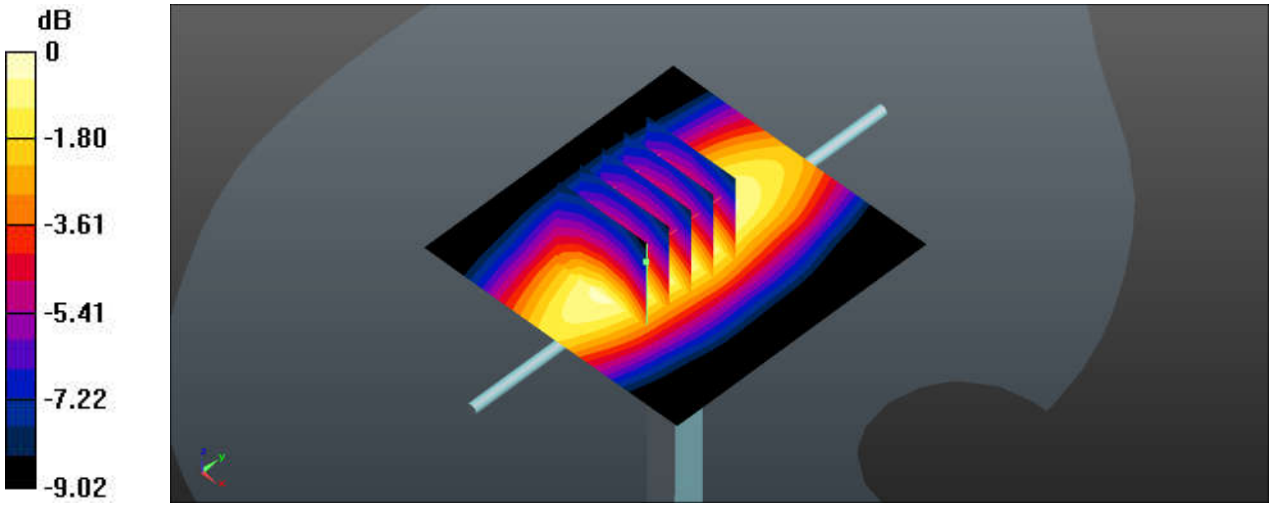
DUT: D750V3 - SN:1087

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 750 MHz; σ = 0.918 S/m; ε_r = 42.952; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃； Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3293; ConvF(6.56, 6.56, 6.56); Calibrated: 2019/11/25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn871; Calibrated: 2019/6/27
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.42 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 45.93 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 2.60 W/kg
SAR(1 g) = 1.94 W/kg; SAR(10 g) = 1.36 W/kg
Maximum value of SAR (measured) = 2.34 W/kg



0 dB = 2.34 W/kg = 3.69 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.3.23

System Check_Head_750MHz

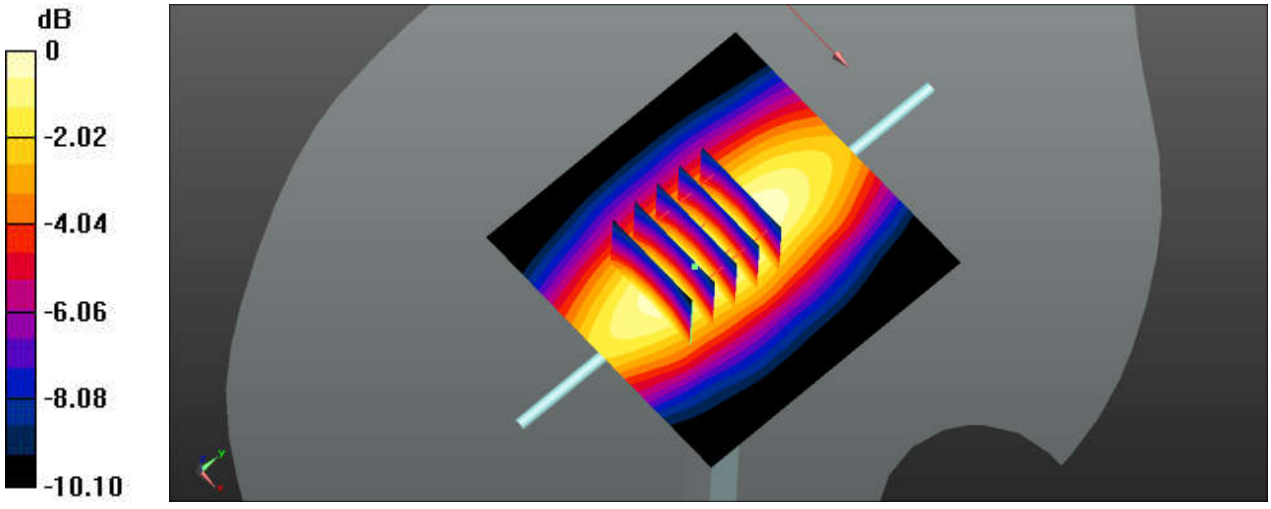
DUT: D750V3 - SN:1087

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 750 MHz; σ = 0.901 S/m; ε_r = 41.231; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3293; ConvF(6.56, 6.56, 6.56); Calibrated: 2019/11/25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn871; Calibrated: 2019/6/27
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.39 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 50.65 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 3.11 W/kg
SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.37 W/kg
Maximum value of SAR (measured) = 2.42 W/kg



0 dB = 2.42 W/kg = 3.84 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.3.24

System Check_Head_835MHz

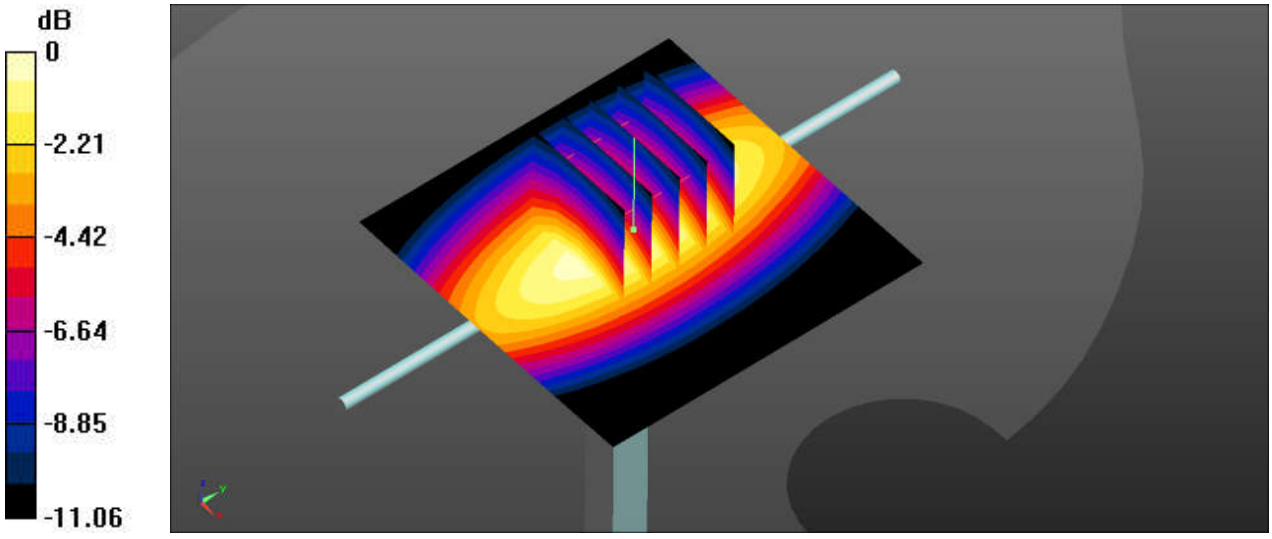
DUT: D835V2 - SN:4d151

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 835 MHz; σ = 0.929 S/m; ε_r = 42.215; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3293; ConvF(6.39, 6.39, 6.39); Calibrated: 2019.11.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn871; Calibrated: 2019.6.27
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.41 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.15 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.97 W/kg
SAR(1 g) = 2.54 W/kg; SAR(10 g) = 1.65 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 64.1%
Maximum value of SAR (measured) = 3.47 W/kg



0 dB = 3.47 W/kg = 5.40 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.3.26

System Check_Head_1750MHz

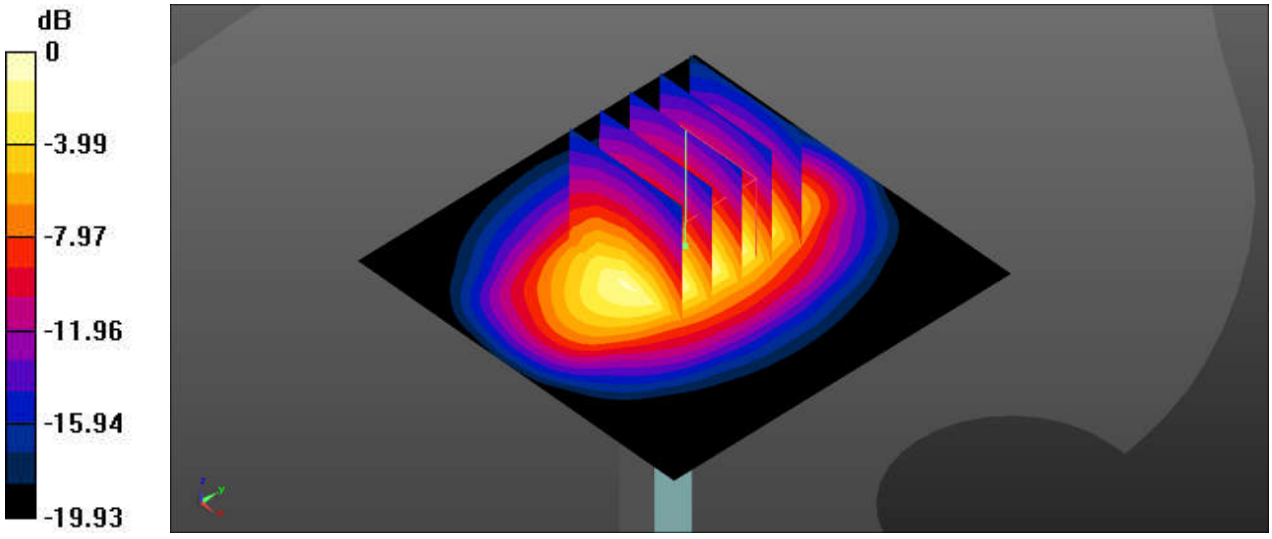
DUT: D1750V2 - SN:1090

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1750 MHz; σ = 1.382 S/m; ε_r = 39.703; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3293; ConvF(5.53, 5.53, 5.53); Calibrated: 2019.11.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn871; Calibrated: 2019.6.27
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.6 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 101.1 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 9.43 W/kg; SAR(10 g) = 5 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 53.9%
Maximum value of SAR (measured) = 14.5 W/kg



0 dB = 14.5 W/kg = 11.61 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.3.28

System Check_Head_1900MHz

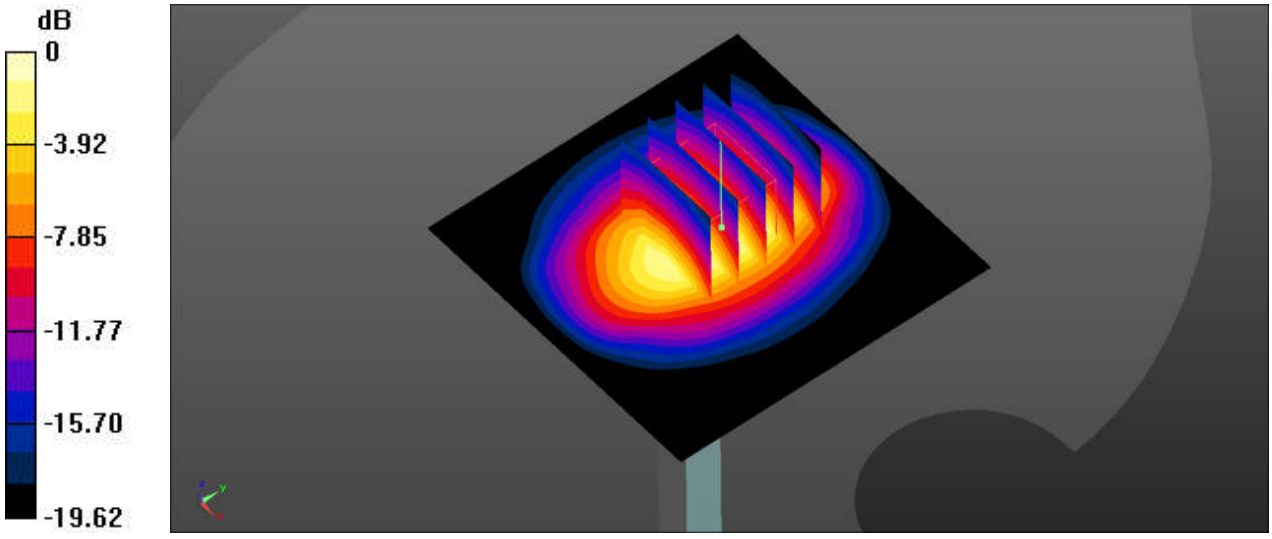
DUT: D1900V2 - SN:5d170

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.421 S/m; ε_r = 39.803; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3293; ConvF(5.32, 5.32, 5.32); Calibrated: 2019.11.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn871; Calibrated: 2019.6.27
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.4 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 85.30 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 18.5 W/kg
SAR(1 g) = 9.65 W/kg; SAR(10 g) = 4.92 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 51.9%
Maximum value of SAR (measured) = 14.1 W/kg



0 dB = 14.1 W/kg = 11.49 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.3.31

System Check_Head_2300MHz

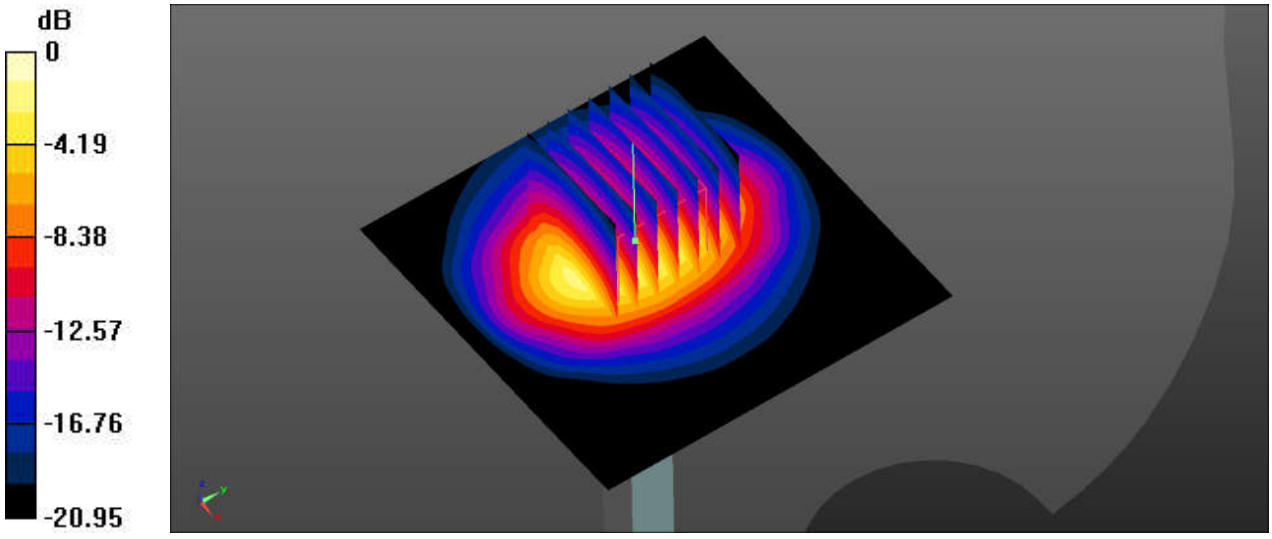
DUT: D2300V2 - SN:1055

Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium: HSL_2300 Medium parameters used: f = 2300 MHz; σ = 1.687 S/m; ε_r = 41.316; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3293; ConvF(4.89, 4.89, 4.89); Calibrated: 2019.11.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn871; Calibrated: 2019.6.27
- Phantom: SAM1; Type: SAM; Serial: TP-1753
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 19.9 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 79.41 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 26.1 W/kg
SAR(1 g) = 13 W/kg; SAR(10 g) = 6.15 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 50.3%
Maximum value of SAR (measured) = 19.6 W/kg



0 dB = 19.6 W/kg = 12.92 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2020.4.1

System Check_Head_2450MHz

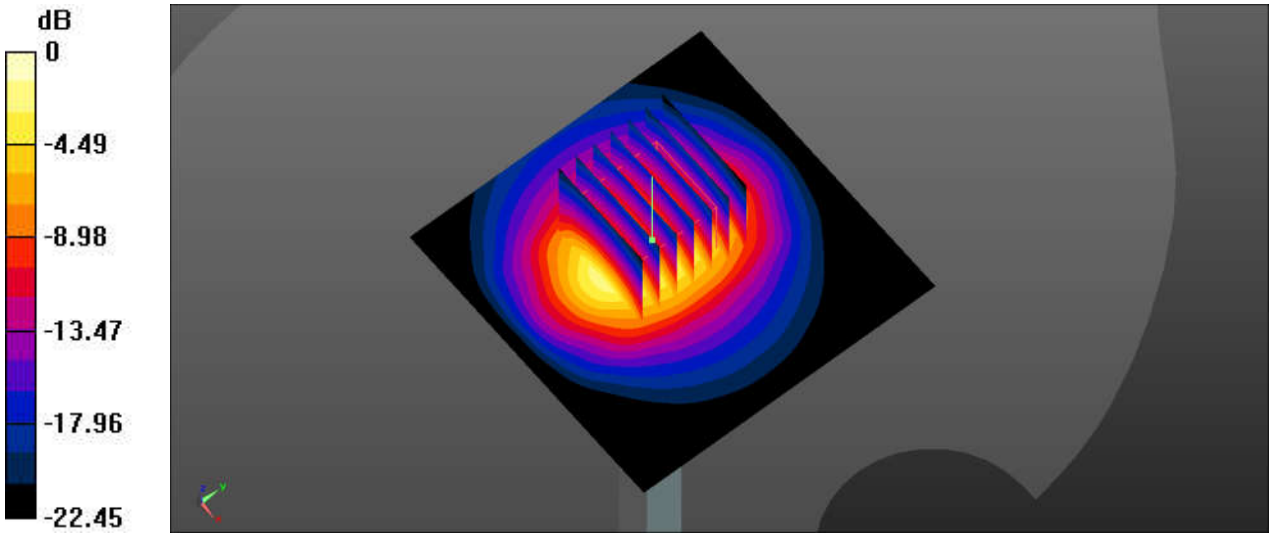
DUT: D2450V2 - SN:908

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2450 MHz; σ = 1.794 S/m; ε_r = 40.777; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3293; ConvF(4.6, 4.6, 4.6); Calibrated: 2019.11.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn871; Calibrated: 2019.6.27
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 21.6 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 76.62 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 27.9 W/kg
SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.13 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 47.7%
Maximum value of SAR (measured) = 20.5 W/kg



0 dB = 20.5 W/kg = 13.12 dBW/kg