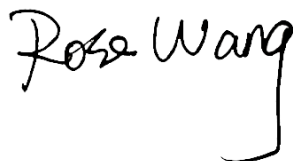


FCC SAR Test Report

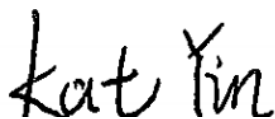
APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2075-2
FCC ID : IHDT56ZC2
STANDARD : FCC 47 CFR Part 2 (2.1093)
ANSI/IEEE C95.1-1992
IEEE 1528-2013

The product was received on May 27, 2020 and testing was started from May 29, 2020 and completed on Jul. 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.



Reviewed by: Rose Wang / Supervisor



Approved by: Kat Yin / Manager



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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1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2075-2**, 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	0.33	0.88	0.88	1.59
		GSM1900	<0.10	1.10	1.10	
	WCDMA	Band II	<0.10	1.18	1.18	
		Band IV	<0.10	1.19	1.19	
		Band V	0.32	1.15	1.15	
	CDMA	CDMA2000 BC0	0.25	1.18	1.07	
		CDMA2000 BC10	0.24	1.19	1.12	
		CDMA2000 BC1	<0.10	1.17	1.17	
	LTE	Band 12/Band 17	0.56	0.84	0.84	
		Band 13	0.19	0.95	0.95	
		Band 14	0.24	1.01	1.01	
		Band 26/ Band 5	0.56	1.19	1.19	
		Band 71	0.24	0.53	0.53	
		Band 25/Band 2	0.57	1.16	1.16	
		Band 66/Band 4	0.53	0.59	0.59	
		Band 7	0.10	0.54	0.54	
	5G NR	Band 30	0.57	0.66	0.66	
		Band 41/Band 38	0.55	1.20	1.19	
		n5	0.52	0.60	0.60	
		n25/n2	0.55	0.60	0.60	
n41		0.11	0.46	0.46		
DTS	WLAN	2.4GHz WLAN	1.09	0.39	1.12	1.59
		5GHz WLAN	0.20	0.38	1.12	1.58
		DSS	Bluetooth	2.4GHz Bluetooth	<0.10	0.21



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	1.88	3.22
		GSM1900	2.48	
	WCDMA	Band II	3.13	
		Band IV	3.11	
	CDMA	CDMA2000 BC1	3.00	
	LTE	Band 25/Band 2	3.08	
		Band 66/Band 4	1.50	
		Band 7	1.46	
		Band 12/Band 17	1.30	
		Band 26/Band 5	1.81	
		Band 30	1.48	
		Band 41/Band 38	2.88	
	5G NR	n25/n2	1.40	
		n41	1.49	
n66		1.59		
DTS	WLAN	2.4GHz WLAN	0.74	3.22
NII		5GHz WLAN	3.13	3.22
Date of Testing:			2020/5/29~2020/7/10	

Remark:

1. 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.
2. This device supports 5GNR n2 and 5GNR n25. Since the supported frequency span for 5GNR n2 falls completely within the supports frequency span for 5GNR n25, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for 5GNR n25.

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	XT2075-2
FCC ID	IHDT56ZC2
IMEI Code	353613110013086
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 5G NR n2 : 1852.5 MHz ~ 1907.5 MHz 5G NR n5 : 826.5 MHz ~ 846.5 MHz 5G NR n25 : 1852.5 MHz ~ 1912.5 MHz 5G NR n41 : 2506.02MHz ~ 2679.99MHz 5G NR n66 : 1712.5 MHz ~ 1777.5 MHz 5G NR n71 : 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(Rel.0)/1xEv-Do(Rev.A) LTE: QPSK, 16QAM, 64QAM 5G NR : CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC:ASK



HW Version	DVT2
SW Version	QPN30.37
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:

- 802.11n-HT40 is not supported in 2.4GHz WLAN.
- This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- 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).
- This device does not support DTM operation and supports GRPS/EGRPS mode up to multi-slot class 12.
- The device implements Proximity sensors/receiver detect mechanism/hotspot trigger reduced power for the power management for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity). The device will invoke corresponding work scenarios power level, which are provided in the operational description.
- For Some WWAN bands, sensor on reduced power level higher than hotspot reduced power level, so front/back sensor on SAR can represent hotspot conservatively.
- For WLAN when transmit simultaneous with WWAN LAT or UAT, power reduction will be activated to head / hotspot / body-worn / extremity.
- P-sensor can detect handheld state, For LTE B5 for Ant 1, full power can be tested pass, so reduced power no need to be evaluated.
- The 2.4GHz/5GHz WLAN can transmit in MIMO antenna mode only and it has no SISO antenna mode.
- 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 WCDMA, CDMA, LTE and 5G NR modes. 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.
- This device supports 5G NR FR1 bands as following table.
- For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
- LTE Band 41 and 5G NR n41 supports HPUE, HPUE power and SAR testing performed separately. LTE Band 41C not supported HPUE.
- 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
- For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n25/n2	FDD	15	5, 10, 15, 20
	n5	FDD	15	5, 10, 15, 20
	n66	FDD	15	5, 10, 15, 20
	n71	FDD	15	5, 10, 15, 20
	n41	TDD	30	20, 40, 50, 60, 80, 90, 100



4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	IHDT56ZC2																																																														
Equipment Name	Mobile Cellular Phone																																																														
Operating Frequency Range of each LTE transmission band	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																																																														
Channel Bandwidth	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																																																														
uplink modulations used	QPSK / 16QAM / 64QAM																																																														
LTE Voice / Data requirements	Voice and Data																																																														
LTE Release Version	R15, Cat12																																																														
CA Support	Supported, Uplink and Downlink																																																														
LTE MPR permanently built-in by design	<p align="center">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</p> <table border="1"> <thead> <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> </thead> <tbody> <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" style="text-align: center;">≥ 1</td> <td>≤ 5</td> </tr> </tbody> </table>	Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3	256 QAM	≥ 1						≤ 5
Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)																																																								
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz																																																									
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64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3																																																								
256 QAM	≥ 1						≤ 5																																																								
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																														
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																														
Power reduction applied to satisfy SAR compliance	Yes, head/body-worn/ hotspot/extremity will trigger reduced power for some LTE bands, the detail please referred to section 13.																																																														
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 13.																																																														
LTE Carrier Aggregation Additional Information	1. This device supports LTE Carrier Aggregation (CA) in the uplink for Inter band and Intra band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 4 carriers in the downlink. 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		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	20407	824.7	20415	825.5	20425	826.5	20450	829	20450	829	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844	20600	844	20600	844
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510	20850	2510	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560	21350	2560	21350	2560
LTE Band 12												
	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	23017	699.7	23025	700.5	23035	701.5	23060	704	23060	704	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711	23130	711	23130	711
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		782		23230		782	
M	23230		782									
H	23255		784.5									
LTE Band 14												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Channel #		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23305		790.5		23330		793		23330		793	
M	23330		793									
H	23355		795.5									
LTE Band 17												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)		Channel #		Freq. (MHz)	
L	23755		706.5		23780		709		23780		709	
M	23790		710		23790		710		23790		710	
H	23825		713.5		23800		711		23800		711	

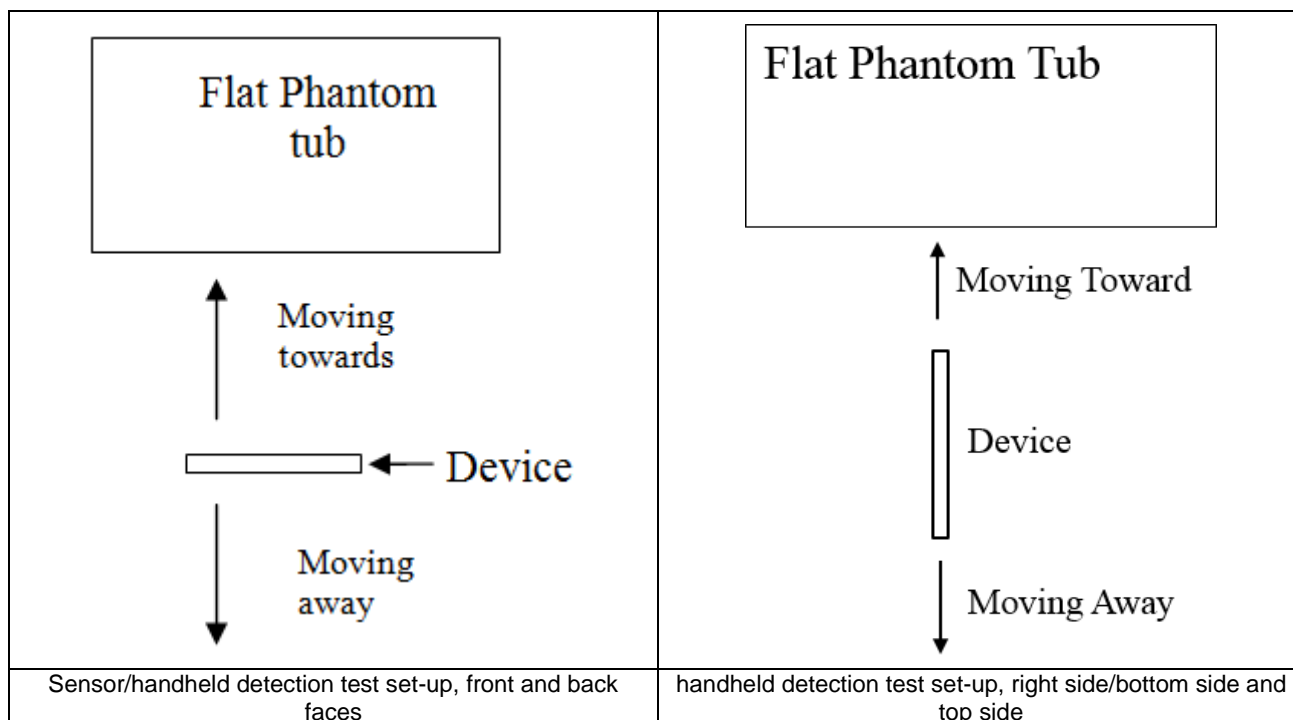


LTE Band 25													
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	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		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5	26765	821.5	
M	26865	831.5	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	26965	841.5	
LTE Band 30													
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz
	Channel #		Freq. (MHz)		Channel #		Freq. (MHz)		Channel #		Freq. (MHz)		Freq. (MHz)
L	27685		2307.5		27710		2310		27710		2310		821.5
M	27710		2310										
H	27735		2312.5										
LTE Band 38													
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 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	37775	2572.5	37800	2575	37825	2577.5	37850	2580	37850	2580	37850	2580	
M	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595	
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610	38150	2610	38150	2610	
LTE Band 41													
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506	39750	2506	39750	2506	
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5	40185	2549.5	40185	2549.5	
M	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593	
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5	41055	2636.5	41055	2636.5	
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680	41490	2680	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		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	133147	665.5	133172	668	133197	670.5	133222	673	133222	673	133222	673	
M	133247	675.5	133272	678	133297	680.5	133322	683	133322	683	133322	683	
H	133447	695.5	133422	693	133397	690.5	133372	688	133372	688	133372	688	

5. Proximity Sensor Triggering Test

5.1 Proximity sensor triggering distances(Per KDB616217§6.2)

- 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 (750MHz) frequency was used for proximity sensor triggering testing.
- 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 or right or top side 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.
- When the proximity sensor is active, GSM850/1900, WCDMA band II/IV, CDMA BC1, LTE band 2/4/5/7/12/25/26/30/66/38/41/41HPUE, 5G NR n2 / n5 / n25 / n66 / n41 / n41HPUE and WLAN5.2GHz / 5.3GHz / 5.5GHz / 5.8GHz reduced power will be active for front/ back body worn SAR.
- P-sensor can detect handheld state, WCDMA band II/IV, CDMA BC1, LTE band 2/4/5/7/12/25/30/66/38/41/41HPUE and 5G NR n2 / n25 / n66 / n41/n41HPUE for front/back/right /bottom/top sides of product specific 10g SAR condition reduced powers will be active for handheld SAR. For LTE band 2/4/25/30/66/41/41HPUE and 5G NR n2 / n25 / n66 right side at ANT 2 perform full power SAR testing, no need to verify reduced power.
- The proximity sensors used to detect the proximity of the user's body at the front or back or bottom or right or top side surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s).
- 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: [19 mm](#)
Back: [25 mm](#)
- 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: [5 mm](#)
Back: [9 mm](#)
Bottom side: [10 mm](#)
Top Side: [10 mm](#)





<P-Sensor>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving away	Moving towards	Moving away	Moving towards
Minimum	25	20	31	26

TX. Band	Proximity Sensor Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
GPRS850 3 Tx slots	31.0	29.0	2
GPRS1900 3 Tx slots	28.0	24.0	4
WCDMA Band II	24.0	17.5	6.5
WCDMA Band IV	24.0	18.5	5.5
CDMA BC1	25.0	19.0	6
LTE Band 2 Ant 1	24.0	15.0	9
LTE Band 25&2 Ant 2	23.0	15.5	7.5
LTE Band 25 Ant 1	24.0	17.0	7
LTE Band 66&4 Ant 1	24.0	15.5	8.5
LTE Band 66&4 Ant 2	23.0	15.5	7.5
LTE Band 5 Ant 1	24.0	20.5	3.5
LTE Band 5 Ant 2	23.5	21.5	2
LTE Band 26 Ant 1	24.0	23.5	0.5
LTE Band 7 Ant 1	24.0	13.5	10.5
LTE Band 12 Ant 1	24.0	22.5	1.5
LTE Band 30 Ant 1	24.0	14.5	9.5
LTE Band 30 Ant 2	23.0	20.0	3
LTE Band 41&38 Class 3 Ant 1	24.0	19.0	5
LTE Band 41 Class 3 Ant 2	23.0	20.5	2.5
LTE Band 41 Class 2 Ant 1	27.0	19.0	8
LTE Band 41 Class 2 Ant 2	26.0	20.5	5.5
FR1 n2 Ant 1	24.0	16.5	7.5
FR1 n25&2 Ant 2	24.0	17.5	6.5
FR1 n5 Ant 1	24.0	22.5	1.5
FR1 n5 Ant 2	24.0	23.5	0.5
FR1 n66 Ant 1	24.0	19.0	5
FR1 n66 Ant 2	24.0	18.0	6
FR1 n41 Class 3 Ant 1	24.0	18.0	6
FR1 n41 Class 2 Ant 1	27.0	18.0	9
WLAN5.2GHz	21.0	15.0	6
WLAN5.3GHz	21.0	15.0	6
WLAN5.5GHz	21.5	15.5	6
WLAN5.8GHz	21.5	18.0	3.5

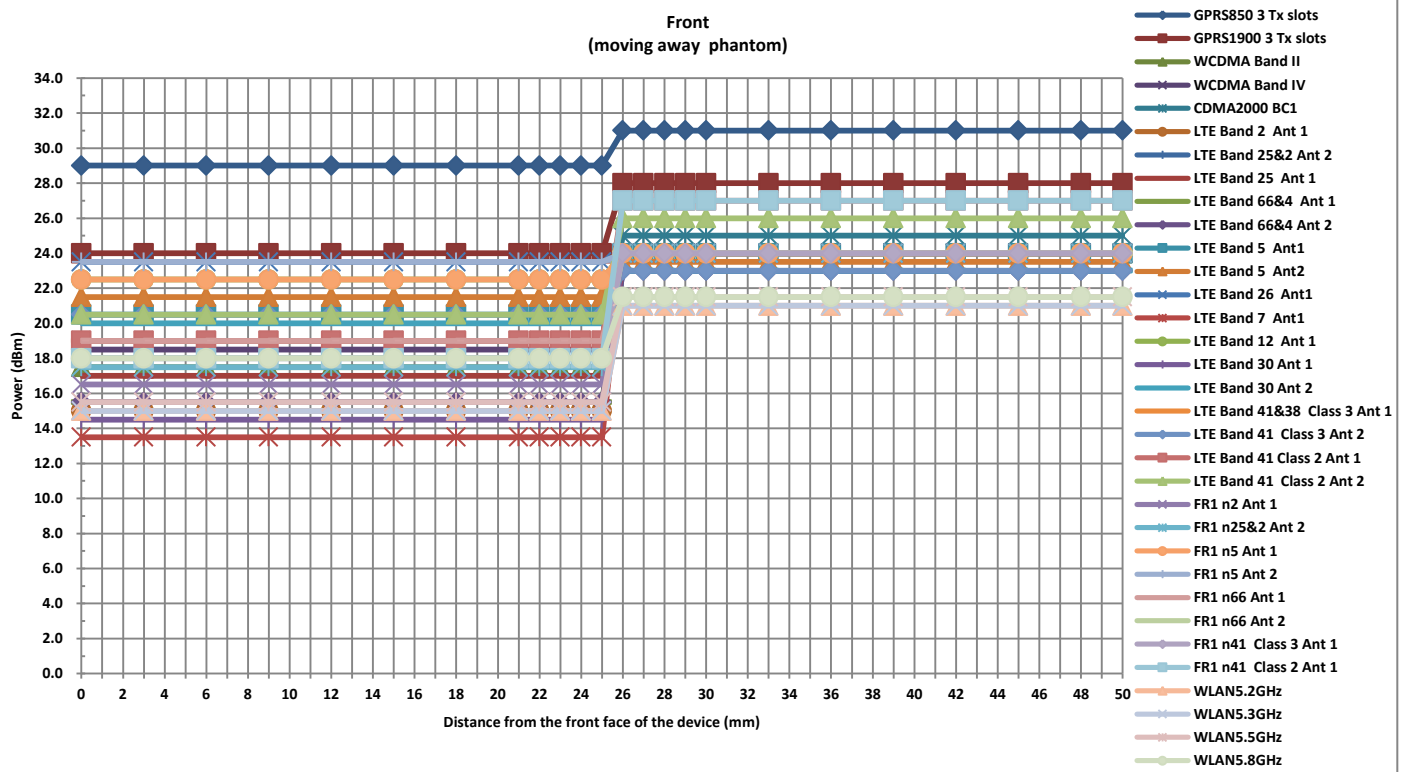


Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)

Distance	Front																							
	50	48	45	42	39	36	33	30	29	28	27	26	25	24	23	22	21	18	15	12	9	6	3	0
GPRS850 3 Tx slots	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
GPRS1900 3 Tx slots	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 5 Ant 2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 26 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
FR1 n5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
FR1 n5 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WLAN5.2GHz	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WLAN5.3GHz	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WLAN5.5GHz	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
WLAN5.8GHz	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

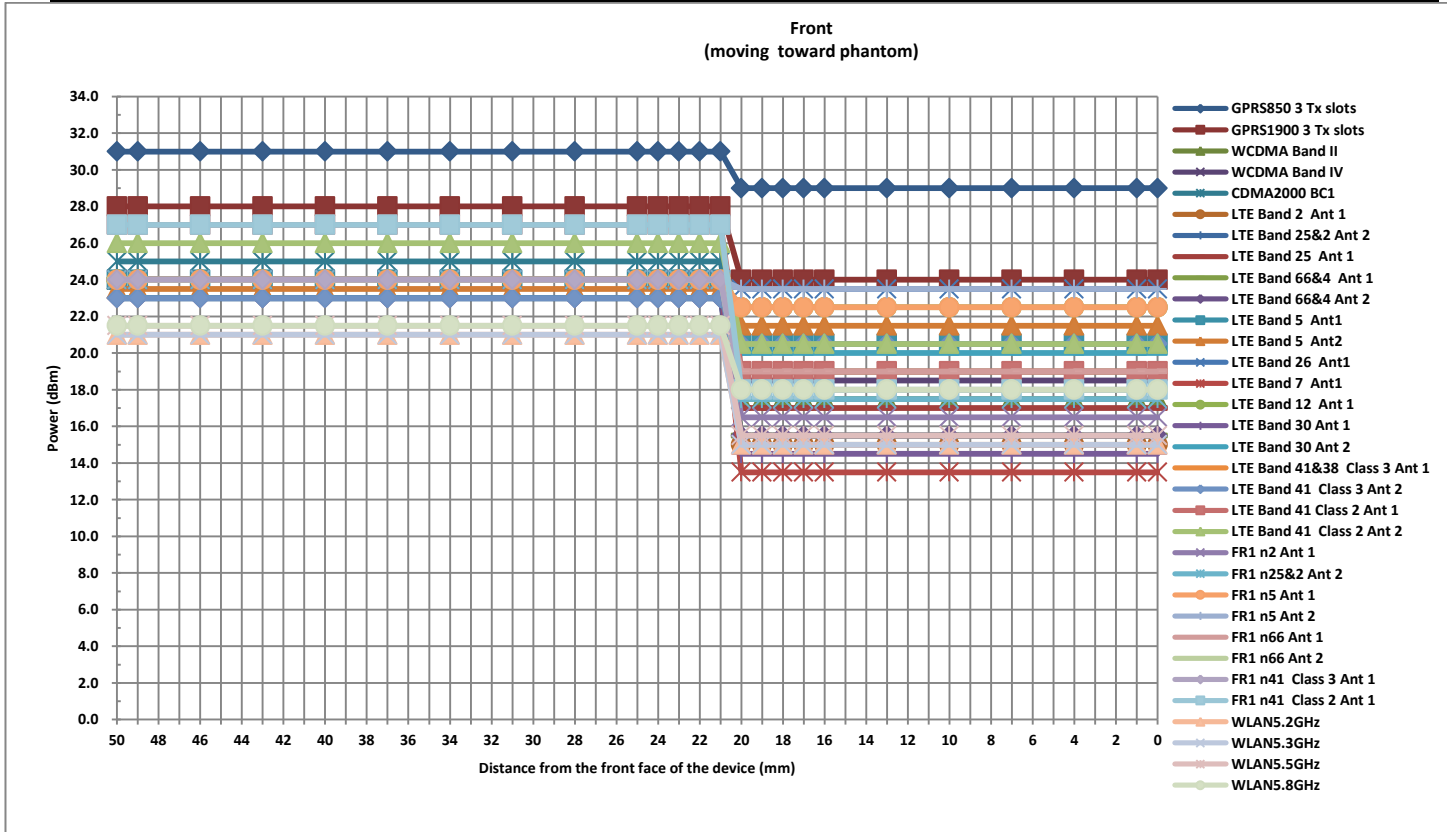


Front
(moving away phantom)



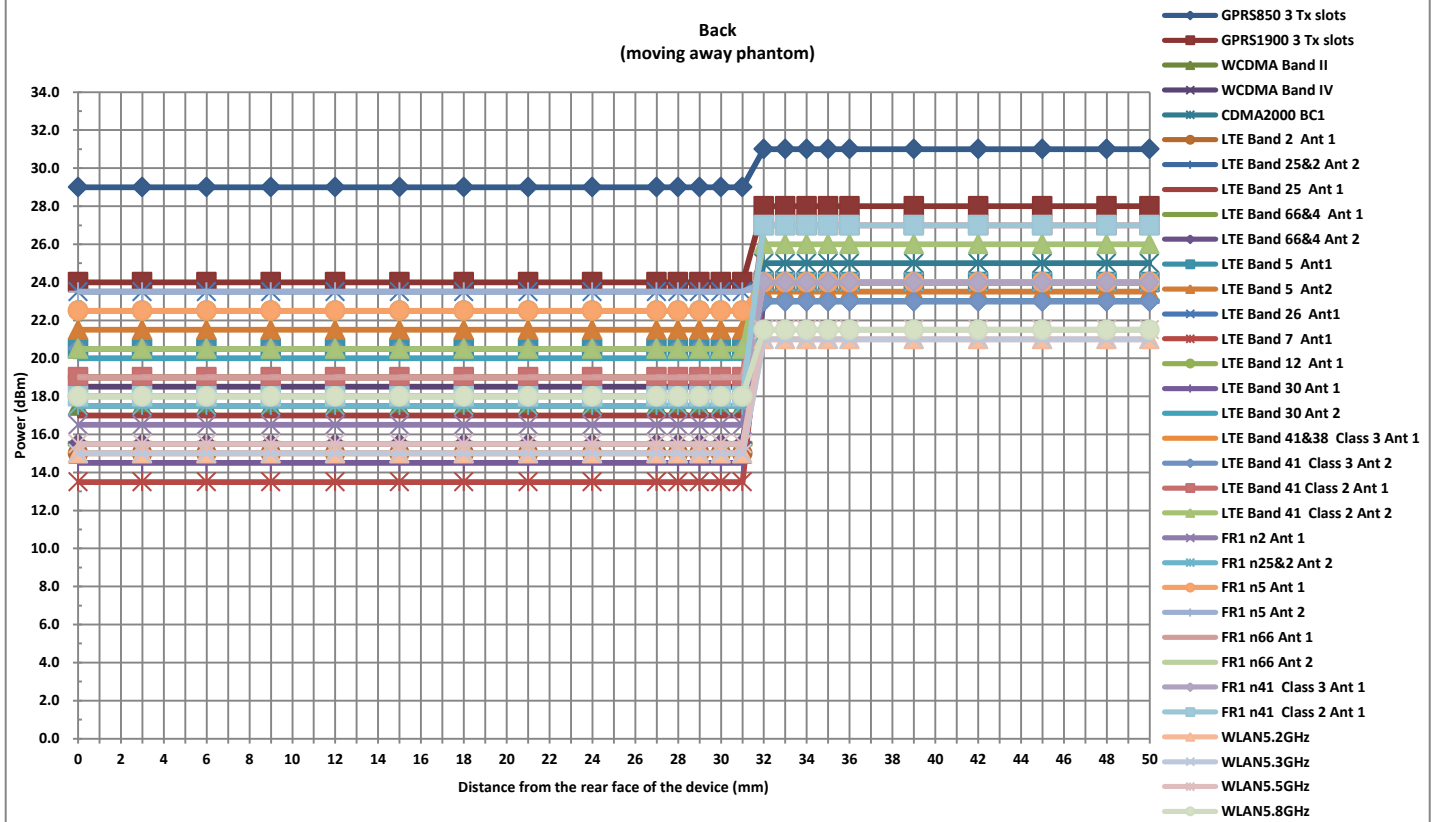


Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																									
Front																									
Distance	50	49	46	43	40	37	34	31	28	25	24	23	22	21	20	19	18	16	15	13	10	7	4	1	0
GPRS850 3 Tx slots	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
GPRS1900 3 Tx slots	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 5 Ant 2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 26 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
FR1 n5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
FR1 n5 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WLAN5.2GHz	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WLAN5.3GHz	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WLAN5.5GHz	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
WLAN5.8GHz	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0



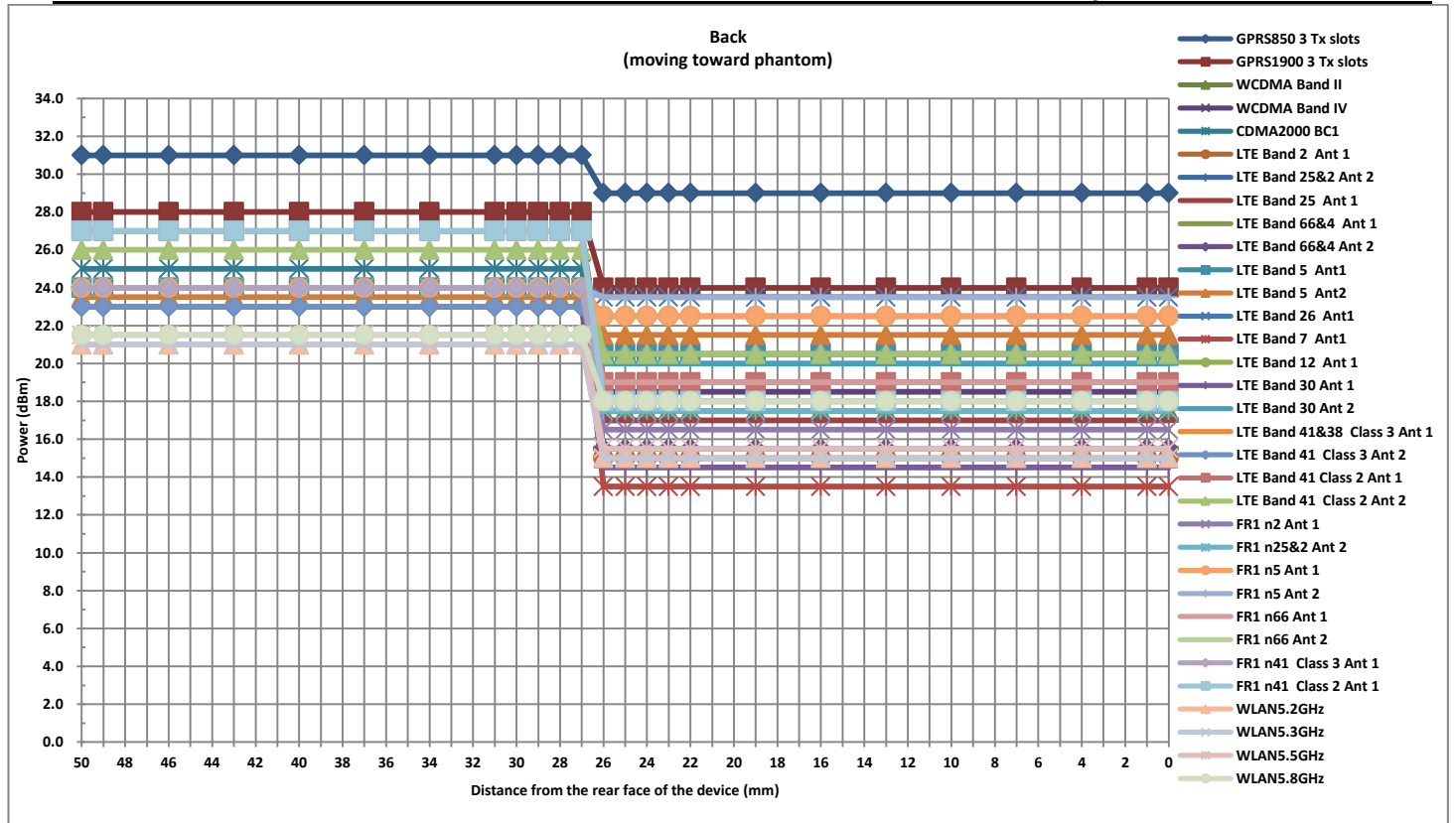


Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	48	45	42	39	36	35	34	33	32	31	30	29	28	27	24	21	18	15	12	9	6	3	0
GPRS850 3 Tx slots	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
GPRS1900 3 Tx slots	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 5 Ant 2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 26 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	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
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
FR1 n5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	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
FR1 n5 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WLAN5.2GHz	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WLAN5.3GHz	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WLAN5.5GHz	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
WLAN5.8GHz	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0





Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	49	46	43	40	37	34	31	30	29	28	27	26	25	24	23	22	19	16	13	10	7	4	1	0
GPRS850 3 Tx slots	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
GPRS1900 3 Tx slots	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 5 Ant 2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 26 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	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
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
FR1 n5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	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
FR1 n5 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WLAN5.2GHz	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WLAN5.3GHz	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
WLAN5.5GHz	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
WLAN5.8GHz	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0



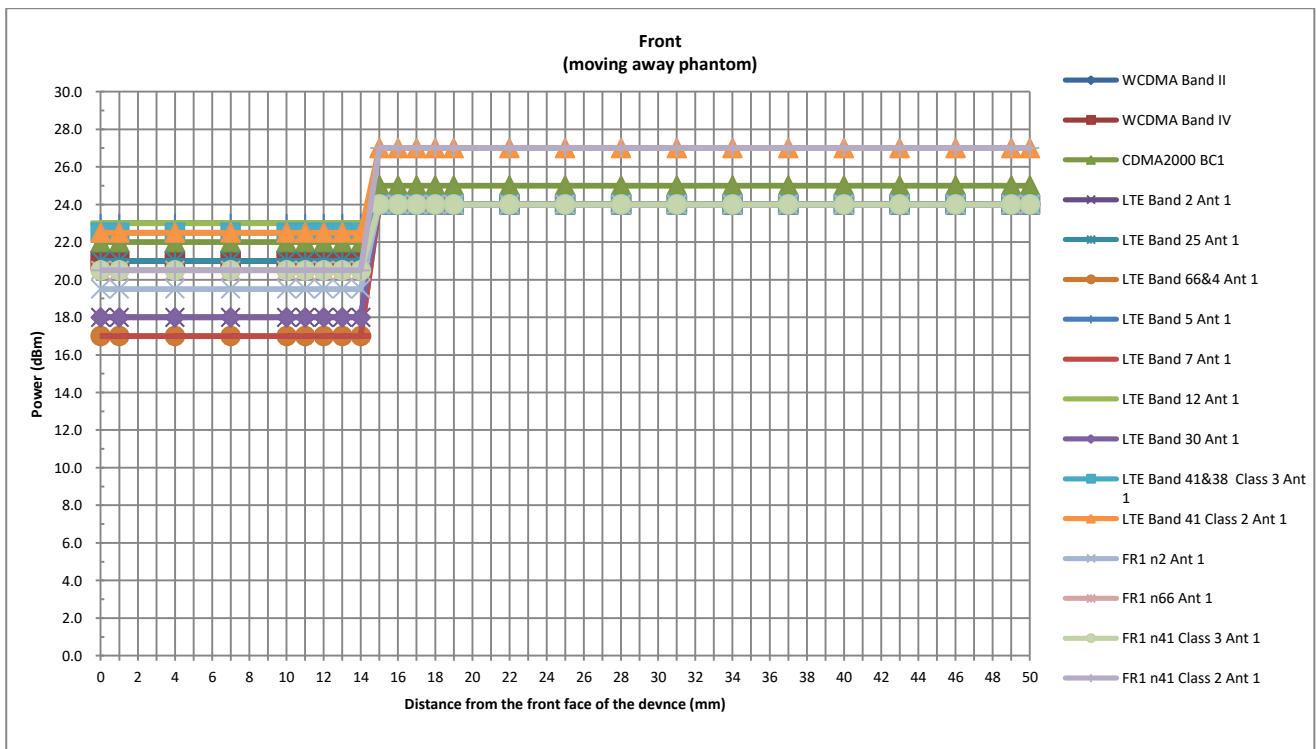
<Handheld-Ant 1>

Position	Front		Back		Bottom Side	
	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards
Minimum	14	6	18	12	18	11

TX. Band	Handheld Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
WCDMA Band II	24.0	21.0	3
WCDMA Band IV	24.0	21.0	3
CDMA BC1	25.0	22.0	3
LTE Band 2 Ant 1	24.0	18.0	6
LTE Band 25 Ant 1	24.0	21.0	3
LTE Band 66&4 Ant 1	24.0	17.0	7
LTE Band 5 Ant 1	24.0	23.0	1
LTE Band 7 Ant 1	24.0	17.0	7
LTE Band 12 Ant 1	24.0	23.0	1
LTE Band 30 Ant 1	24.0	18.0	6
LTE Band 41&38 Class 3 Ant 1	24.0	22.5	1.5
LTE Band 41 Class 2 Ant 1	27.0	22.5	4.5
FR1 n2 Ant 1	24.0	19.5	4.5
FR1 n66 Ant 1	24.0	20.5	3.5
FR1 n41 Class 3 Ant 1	24.0	20.5	3.5
FR1 n41 Class 2 Ant 1	27.0	20.5	6.5

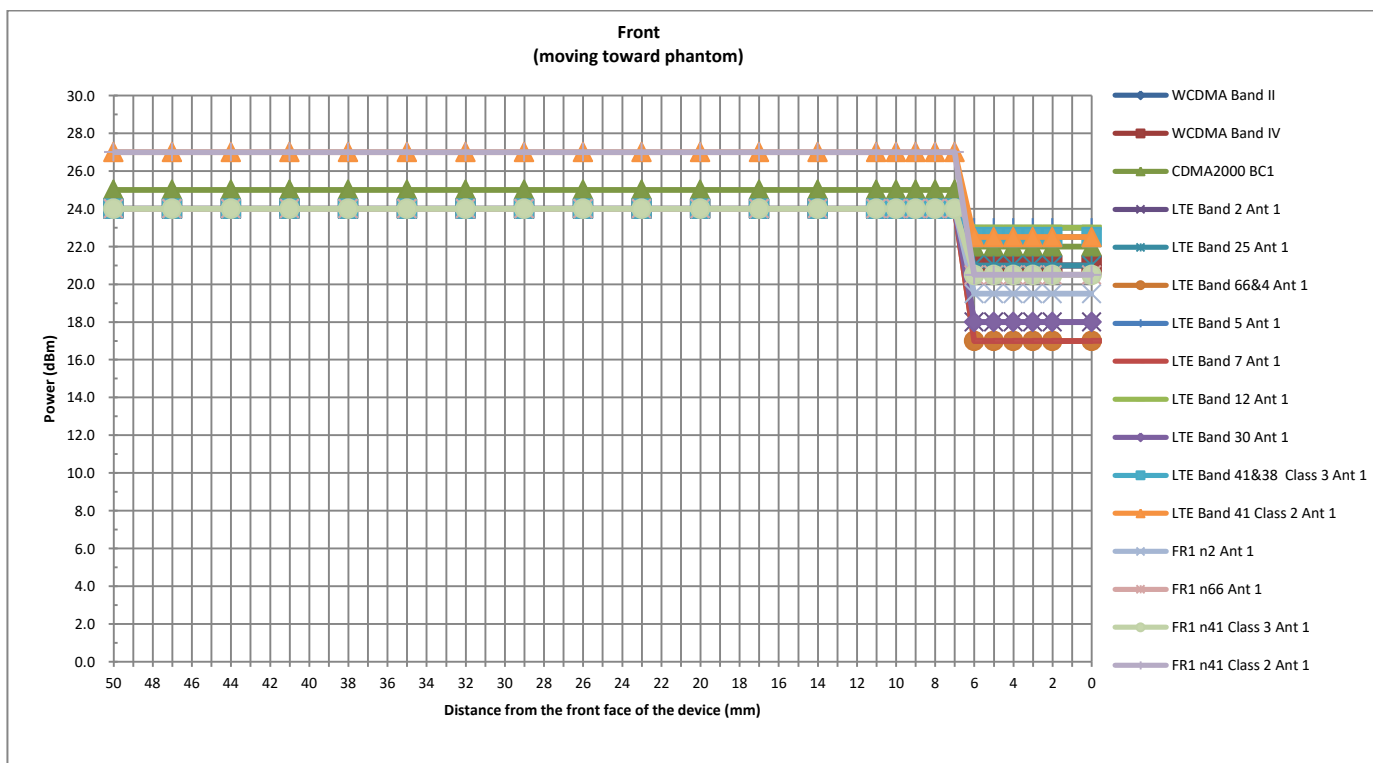


Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	48	45	42	39	36	33	30	27	24	21	18	15	12	11	14	13	12	11	10	7	4	1	0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



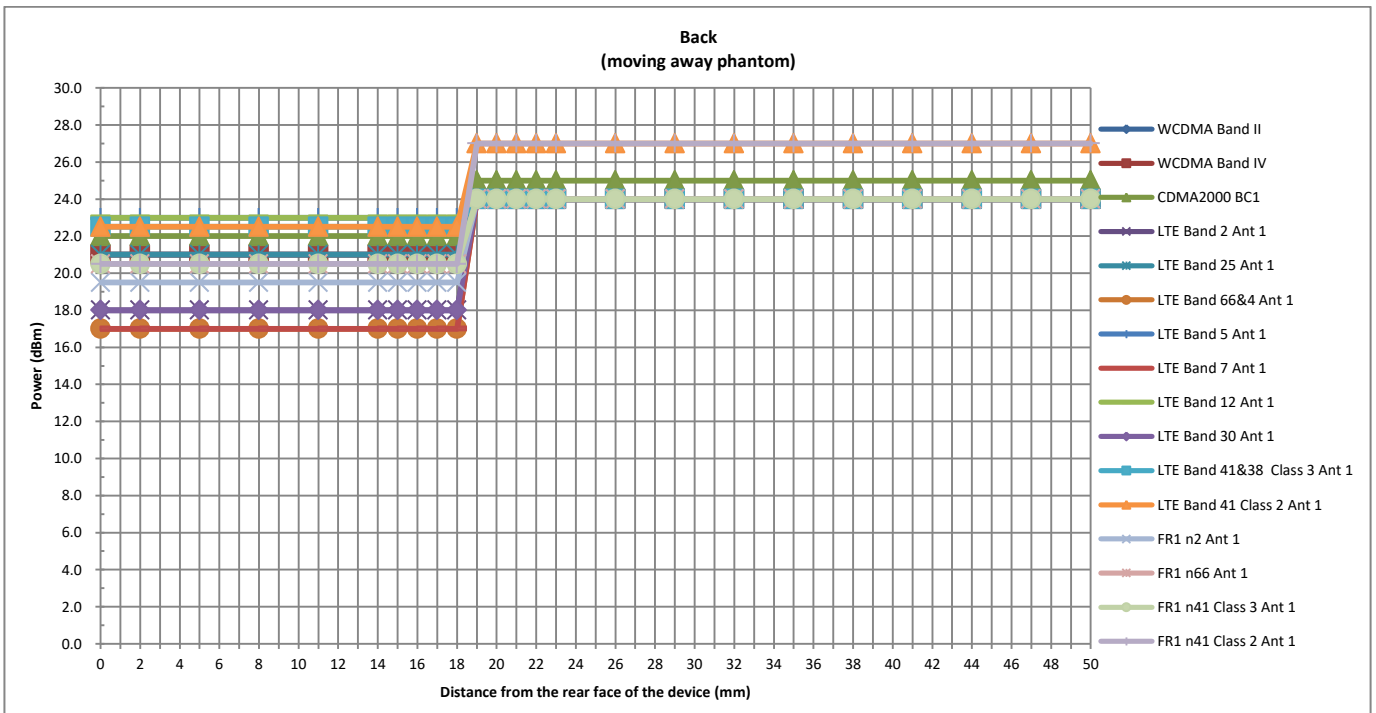


Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	14	11	10	9	8	7	6	5	4	3	2	0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	22.5	22.5	22.5	22.5	22.5	22.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	20.5	20.5	20.5	20.5	20.5	20.5



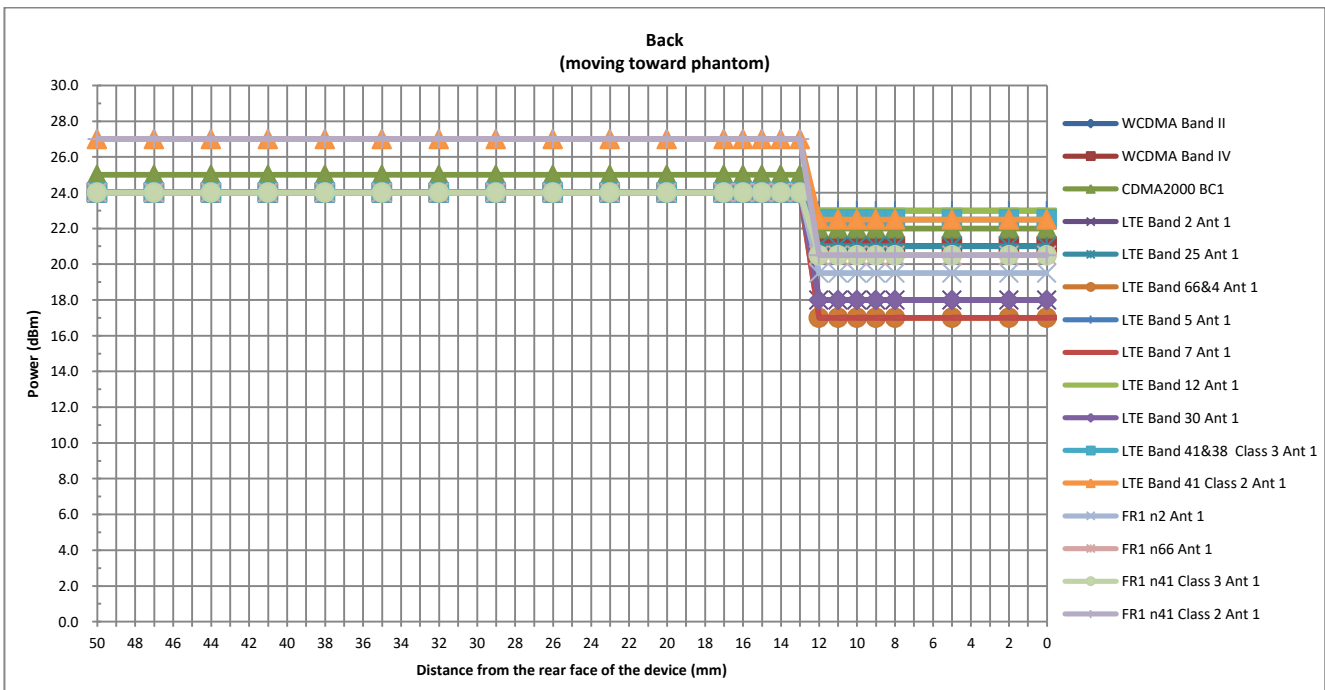


Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	47	44	41	38	35	32	29	26	23	22	21	20	19	18	17	16	15	14	11	8	5	2	0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



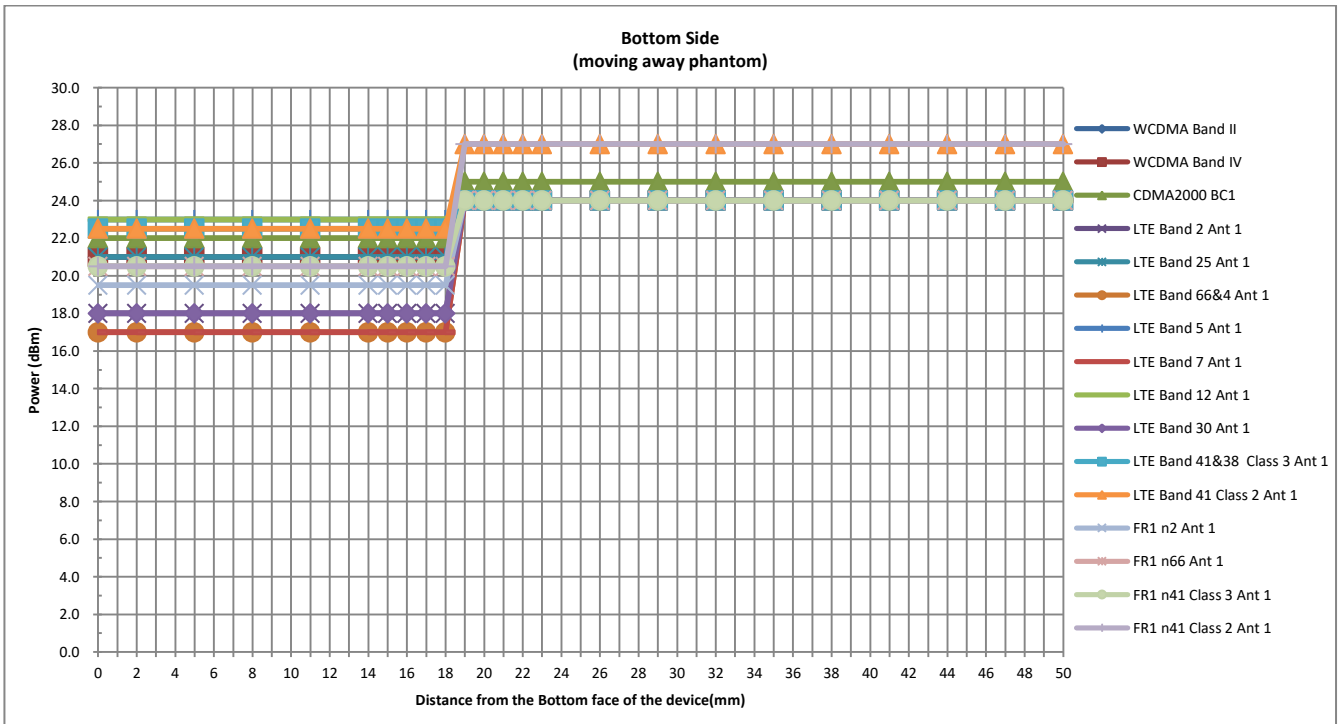


Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	16	15	14	13	12	11	10	9	8	5	2	0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



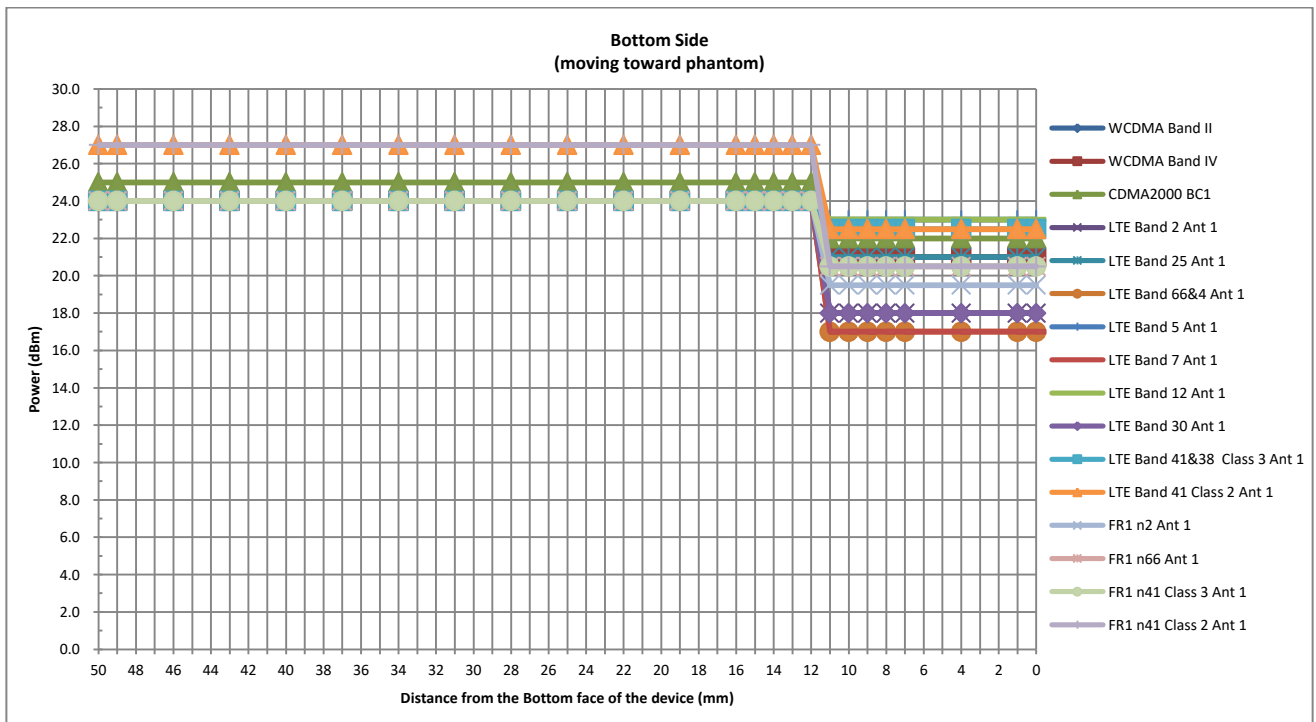


Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Bottom Side																								
Distance	50	47	44	41	38	35	32	29	26	23	22	21	20	19	18	17	16	15	14	11	8	5	2	0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5





Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Bottom Side																									
Distance	50	49	46	43	40	37	34	31	28	25	22	19	16	15	14	13	12	11	10	9	8	7	4	1	0
WCDMA Band II	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
WCDMA Band IV	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
CDMA BC1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 25 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 66&4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 5 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
LTE Band 12 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 30 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 41&38 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
LTE Band 41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
FR1 n2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
FR1 n66 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 3 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5
FR1 n41 Class 2 Ant 1	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5





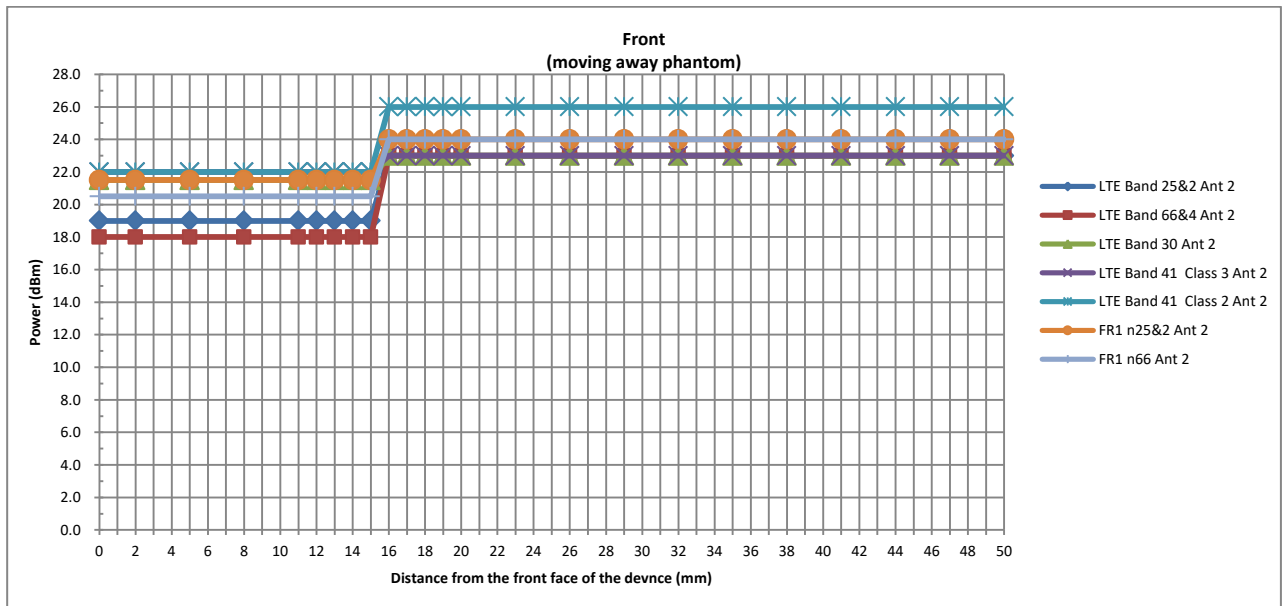
<Handheld-Ant 2>

Position	Front		Back		Top Side		Right Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	15	10	16	10	17	11	12	6

TX. Band	Handheld Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
LTE Band 25&2 Ant 2	23.0	19.0	4
LTE Band 66&4 Ant 2	23.0	18.0	5
LTE Band 30 Ant 2	23.0	21.5	1.5
LTE Band 41 Class 3 Ant 2	23.0	22.0	1
LTE Band 41 Class 2 Ant 2	26.0	22.0	4
FR1 n25&2 Ant 2	24.0	21.5	2.5
FR1 n66 Ant 2	24.0	20.5	3.5

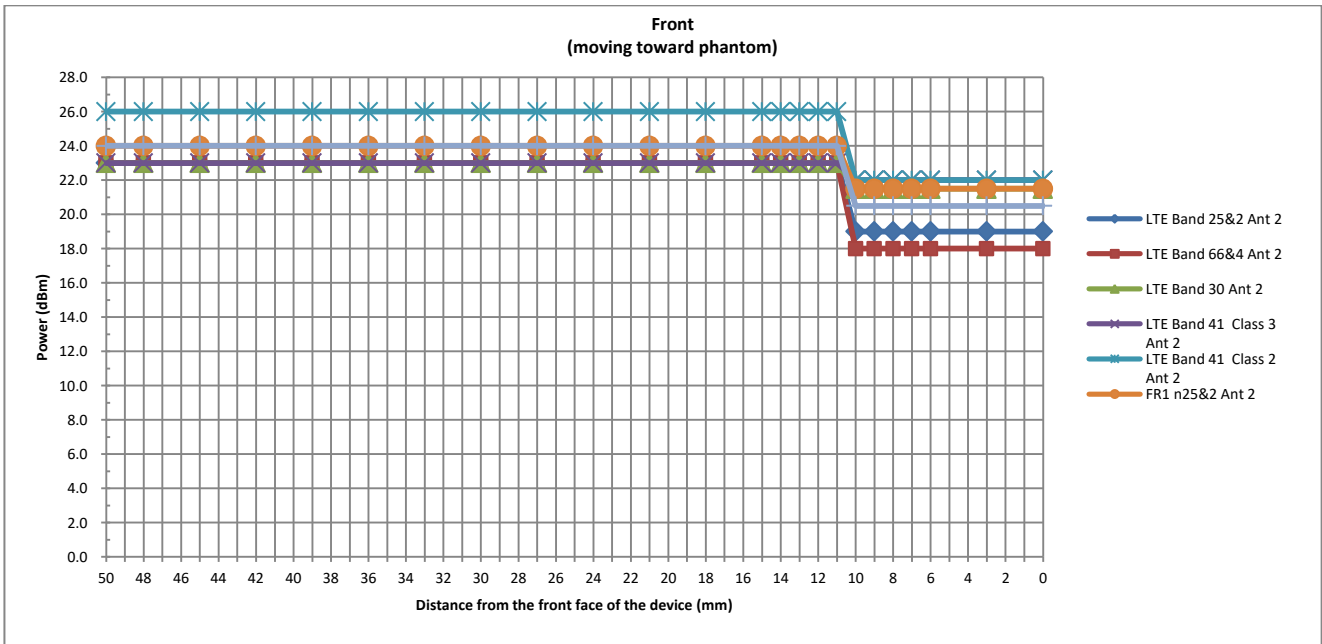


Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Front																									
Distance	50	47	44	41	38	35	32	29	26	23	20	19	18	17	16	15	14	13	12	11	8	5	2	0	
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



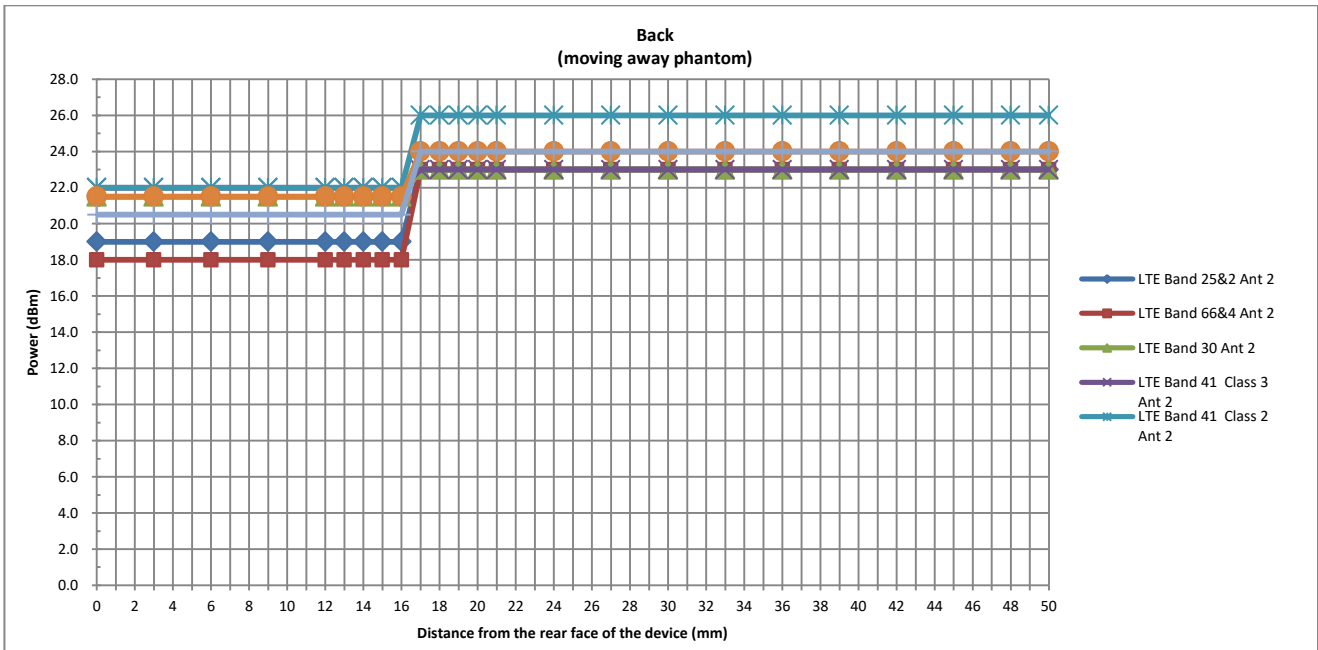


Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	48	45	42	39	36	33	30	27	24	21	18	15	14	13	12	11	10	19	8	7	6	3	0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5



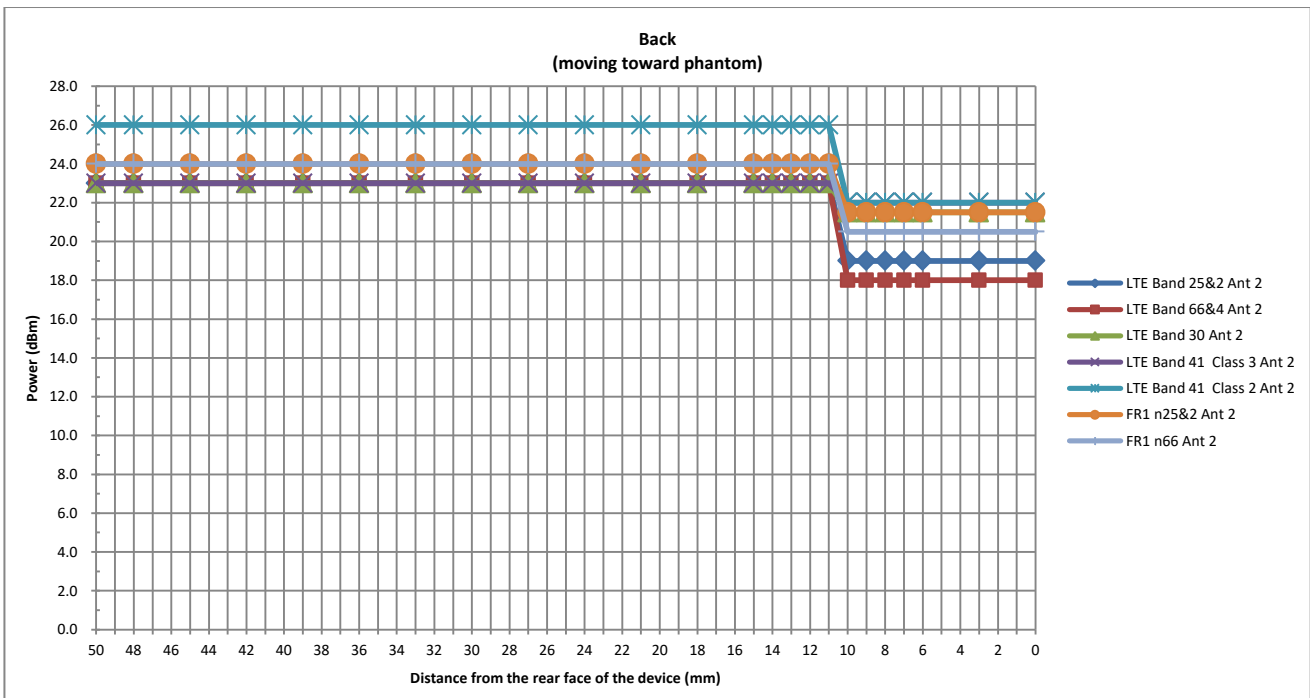


Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	48	45	42	39	36	33	30	27	24	21	20	19	18	17	16	15	14	13	12	9	6	3	0	
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



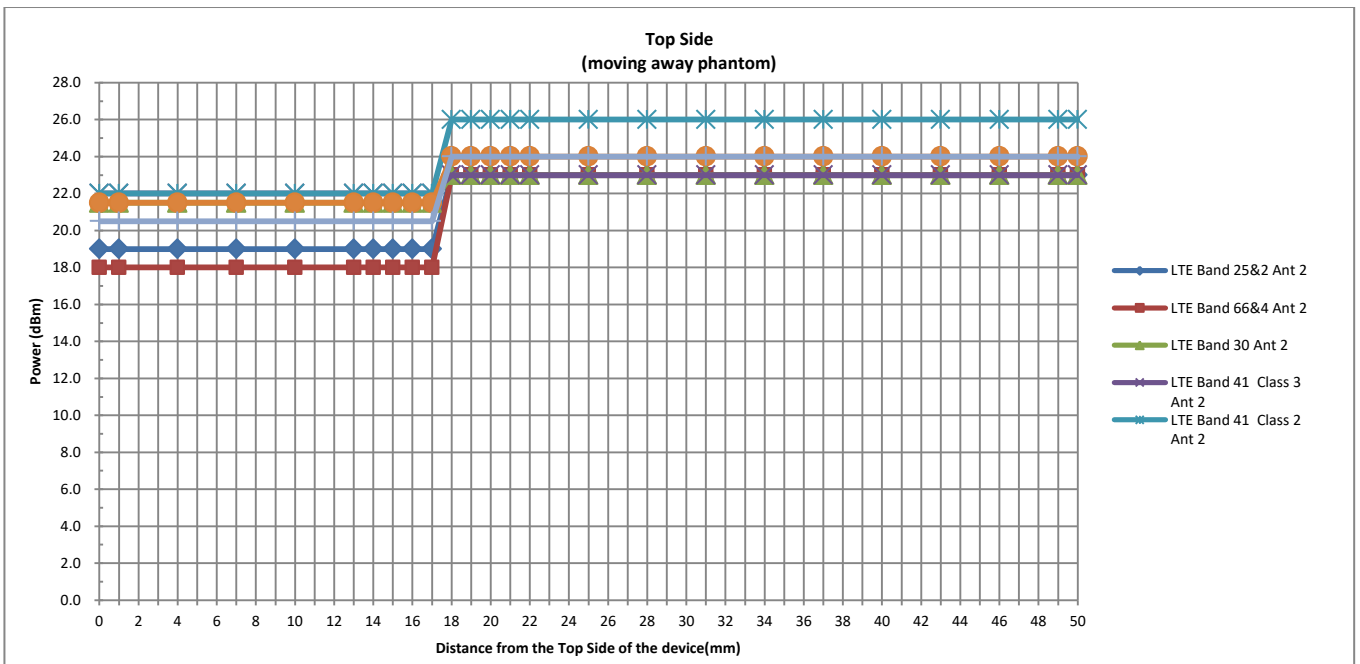


Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	48	45	42	39	36	33	30	27	24	21	18	15	14	13	12	11	10	9	8	7	6	3	0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5



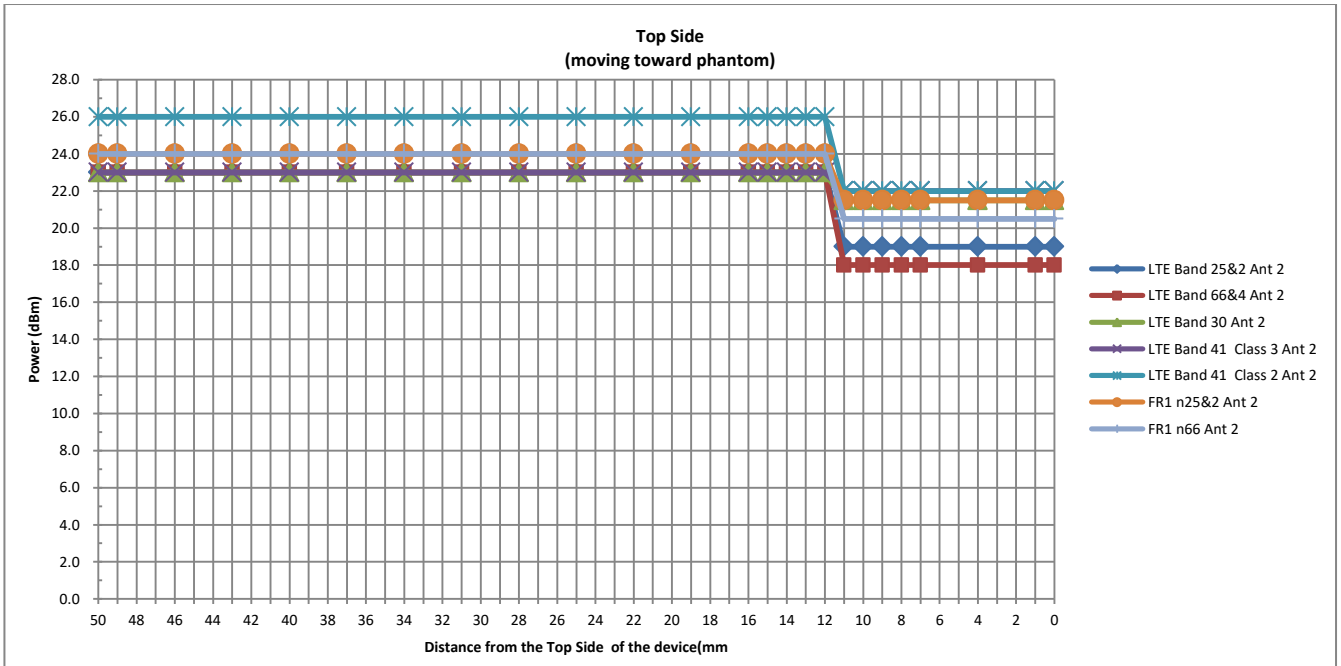


Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Top Side																									
Distance	50	49	46	43	40	37	34	31	28	25	22	21	20	19	18	17	16	15	14	13	10	7	4	1	0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



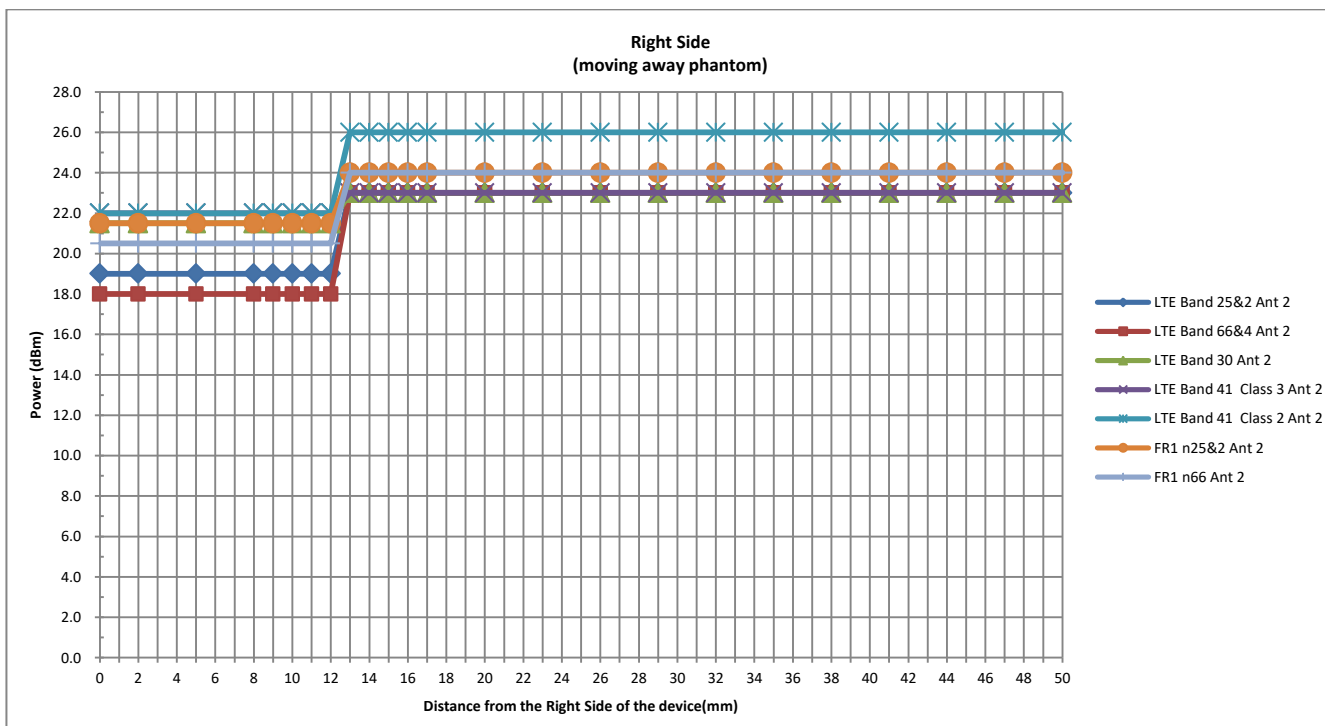


Handheld Triggering Distance (mm) and Triggering Power (dBm)																									
Top Side																									
Distance	50	49	46	43	40	37	34	31	28	25	22	19	16	15	14	13	12	11	10	9	8	7	4	1	0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5



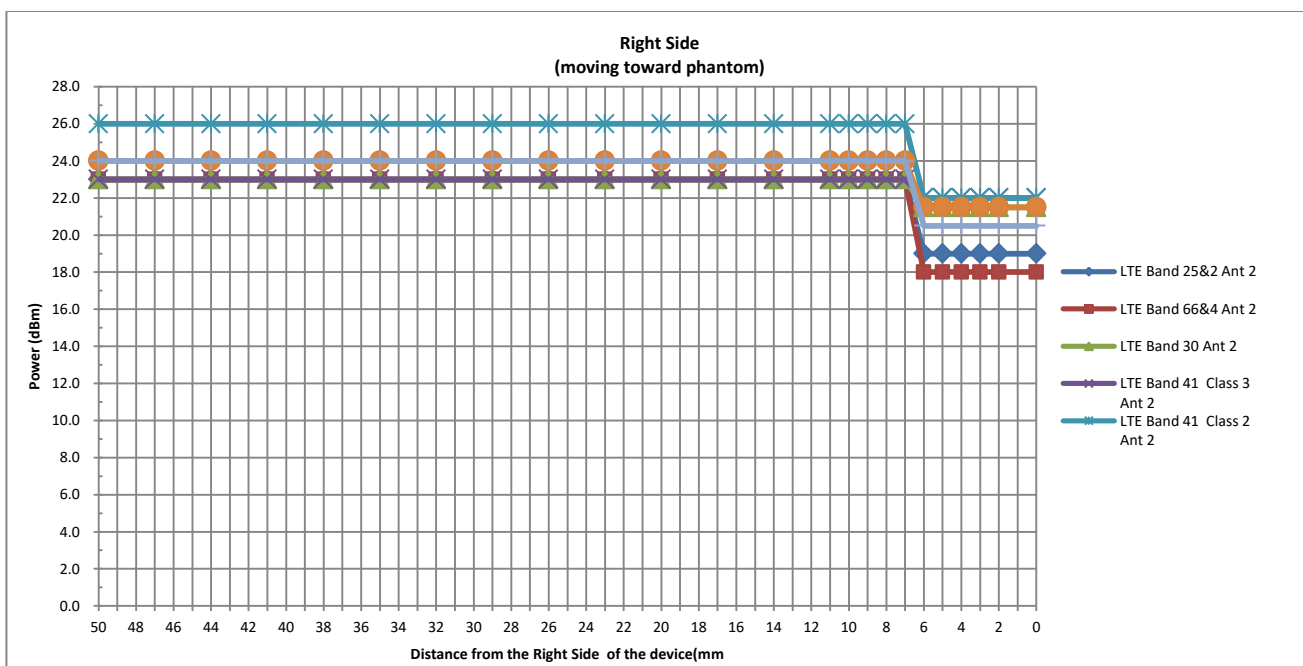


Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Right Side																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	16	15	14	13	12	11	10	9	8	5	2	0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5





Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Right Side																								
Distance	50	47	44	41	38	35	32	29	26	23	20	17	14	11	10	9	8	7	6	5	4	3	2	0
LTE Band 25&2 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0
LTE Band 66&4 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	18.0	18.0	18.0	18.0	18.0	18.0
LTE Band 30 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5
LTE Band 41 Class 3 Ant 2	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0	22.0	22.0
LTE Band 41 Class 2 Ant 2	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	22.0	22.0	22.0	22.0	22.0	22.0
FR1 n25&2 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.5	21.5	21.5	21.5	21.5	21.5
FR1 n66 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.5	20.5	20.5	20.5	20.5	20.5



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:

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

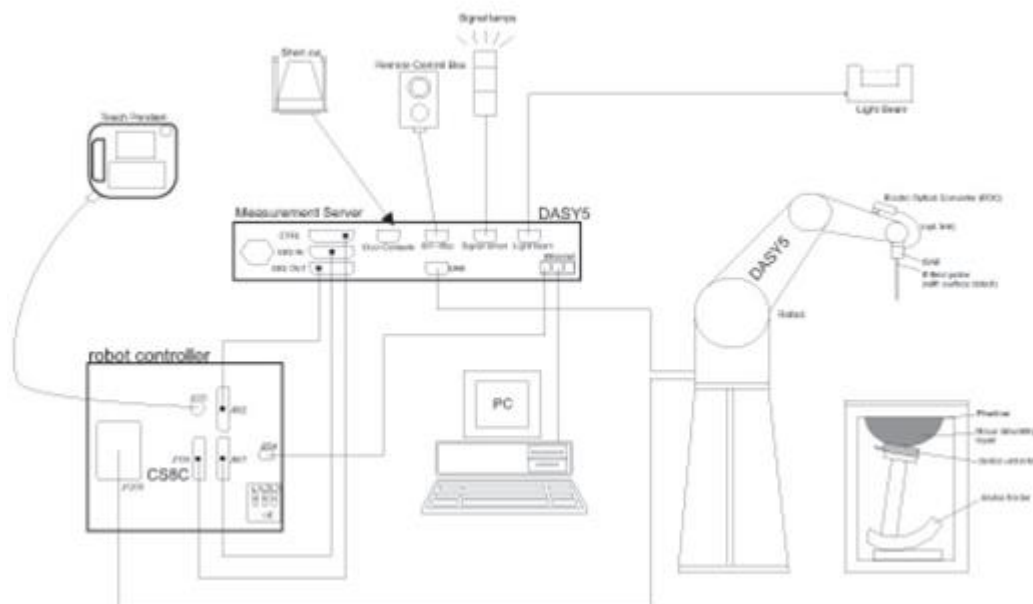
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

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	

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

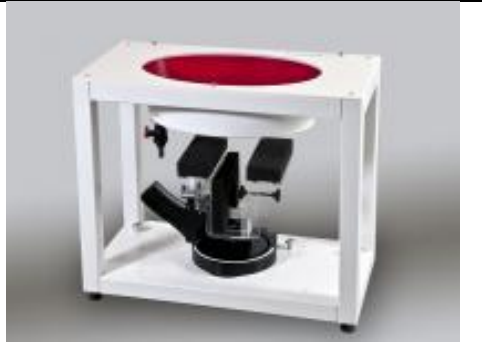
8.3 Phantom

<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 from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

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

9.4 Zoom Scan

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

Zoom scan parameters extracted from FCC KDB 865664 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 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
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 <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

9.5 Volume Scan Procedures

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

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	2018/9/20	2021/9/19
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	1210	2019/7/23	2020/7/22
SPEAG	Dosimetric E-Field Probe	EX3DV4	7592	2020/5/22	2021/5/21
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	2020/4/16	2021/4/15
Agilent	Wireless Communication Test Set	E5515C	MY52102706	2020/4/16	2021/4/15
Agilent	ENA Series Network Analyzer	E5071C	MY46111157	2020/4/16	2021/4/15
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
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	

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.

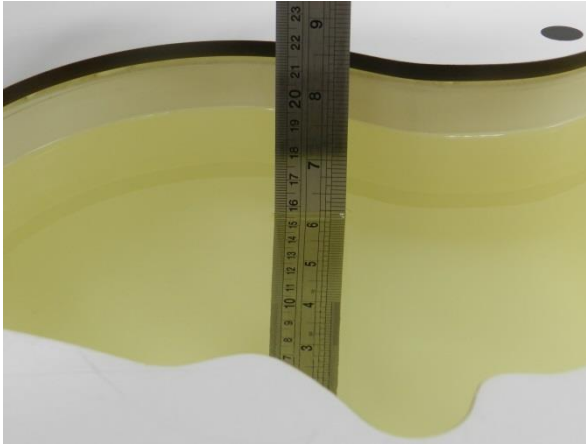


Fig 11.1 Photo of Liquid Height for Head SAR

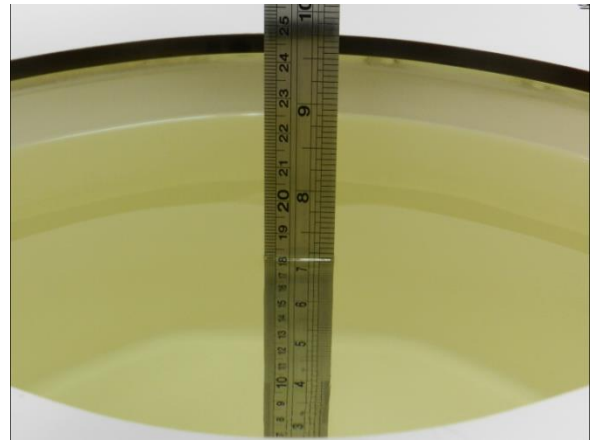


Fig 11.2 Photo of Liquid Height for Body SAR



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 (ε _r)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
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. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
750	Head	22.6	0.924	42.068	0.89	41.9	3.82	0.40	±5	2020/5/29
750	Head	22.8	0.894	41.679	0.89	41.9	0.45	-0.53	±5	2020/6/3
835	Head	22.7	0.942	41.827	0.9	41.5	4.67	0.79	±5	2020/5/31
835	Head	22.7	0.901	41.16	0.9	41.5	0.11	-0.82	±5	2020/6/4
835	Head	22.7	0.915	41.263	0.9	41.5	1.67	-0.57	±5	2020/6/7
1750	Head	22.9	1.351	40.38	1.37	40.1	-1.39	0.70	±5	2020/6/2
1750	Head	22.7	1.36	39.05	1.37	40.1	-0.73	-2.62	±5	2020/6/8
1750	Head	22.9	1.356	41.018	1.37	40.1	-1.02	2.29	±5	2020/6/12
1900	Head	22.6	1.452	39.634	1.4	40	3.71	-0.91	±5	2020/6/5
1900	Head	22.7	1.403	39.095	1.4	40	0.21	-2.26	±6	2020/6/10
1900	Head	22.8	1.434	40.408	1.4	40	2.43	1.02	±5	2020/6/14
2300	Head	22.7	1.737	39.04	1.67	39.5	4.01	-1.16	±5	2020/6/11
2300	Head	22.9	1.686	39.138	1.67	39.5	0.96	-0.92	±5	2020/6/15
2300	Head	22.7	1.589	40.232	1.67	39.5	-4.85	1.85	±5	2020/6/17
2450	Head	22.9	1.857	39.175	1.8	39.2	3.17	-0.06	±5	2020/6/21
2450	Head	22.8	1.86	38.535	1.8	39.2	3.33	-1.70	±5	2020/6/26
2600	Head	22.9	1.978	39.175	1.96	39	0.92	0.45	±5	2020/6/16
2600	Head	22.9	2.032	37.934	1.96	39	3.67	-2.73	±5	2020/6/23
2600	Head	22.7	1.962	40.043	1.96	39	0.10	2.67	±5	2020/6/29
5250	Head	22.8	4.53	36.367	4.71	35.9	-3.82	1.30	±5	2020/6/23
5250	Head	22.7	4.6	36.384	4.71	35.9	-2.34	1.35	±5	2020/6/25
5600	Head	22.8	4.861	35.896	5.07	35.5	-4.12	1.12	±5	2020/6/28
5600	Head	22.8	4.989	35.806	5.07	35.5	-1.60	0.86	±5	2020/7/2
5750	Head	22.7	5.007	35.703	5.22	35.4	-4.08	0.86	±5	2020/7/8
5750	Head	22.7	5.166	35.55	5.22	35.4	-1.03	0.42	±5	2020/7/10



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 (%)
2020/5/29	750	Head	250	1087	7592	1210	2.25	8.36	9.00	7.66
2020/6/3	750	Head	250	1087	7592	1210	2.01	8.36	8.04	-3.83
2020/5/31	835	Head	250	4d151	7592	1210	2.49	9.30	9.96	7.10
2020/6/4	835	Head	250	4d151	7592	1210	2.36	9.30	9.44	1.51
2020/6/7	835	Head	250	4d151	7592	1210	2.47	9.30	9.88	6.24
2020/6/2	1750	Head	250	1090	7592	1210	8.28	36.40	33.12	-9.01
2020/6/8	1750	Head	250	1090	7592	1210	8.65	36.40	34.60	-4.95
2020/6/12	1750	Head	250	1090	7592	1210	8.78	36.40	35.12	-3.52
2020/6/5	1900	Head	250	5d170	7592	1210	10.1	39.00	40.40	3.59
2020/6/10	1900	Head	250	5d170	7592	1210	10	39.00	40.00	2.56
2020/6/14	1900	Head	250	5d170	7592	1210	10.2	39.00	40.80	4.62
2020/6/11	2300	Head	250	1055	7592	1210	11.7	48.70	46.80	-3.90
2020/6/15	2300	Head	250	1055	7592	1210	11.8	48.70	47.20	-3.08
2020/6/17	2300	Head	250	1055	7592	1210	12.1	48.70	48.40	-0.62
2020/6/21	2450	Head	250	908	7592	1210	12.6	52.80	50.40	-4.55
2020/6/26	2450	Head	250	908	7592	1210	13.5	52.80	54.00	2.27
2020/6/16	2600	Head	250	1061	7592	1210	13.3	57.70	53.20	-7.80
2020/6/23	2600	Head	250	1061	7592	1210	14.7	57.70	58.80	1.91
2020/6/29	2600	Head	250	1061	7592	1210	14.2	57.70	56.80	-1.56
2020/6/23	5250	Head	100	1113	7592	1210	7.93	80.50	79.30	-1.49
2020/6/25	5250	Head	100	1113	7592	1210	7.92	80.50	79.20	-1.61
2020/6/28	5600	Head	100	1113	7592	1210	7.56	83.40	75.60	-9.35
2020/7/2	5600	Head	100	1113	7592	1210	7.86	83.40	78.60	-5.76
2020/7/8	5750	Head	100	1113	7592	1210	7.27	80.00	72.70	-9.13
2020/7/10	5750	Head	100	1113	7592	1210	7.28	80.00	72.80	-9.00

<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 (%)
2020/5/29	750	Head	250	1087	7592	1210	1.50	5.65	6.00	6.19
2020/6/3	750	Head	250	1087	7592	1210	1.35	5.65	5.40	-4.42
2020/5/31	835	Head	250	4d151	7592	1210	1.61	6.16	6.44	4.55
2020/6/4	835	Head	250	4d151	7592	1210	1.56	6.16	6.24	1.30
2020/6/7	835	Head	250	4d151	7592	1210	1.64	6.16	6.56	6.49
2020/6/2	1750	Head	250	1090	7592	1210	4.54	19.20	18.16	-5.42
2020/6/8	1750	Head	250	1090	7592	1210	4.59	19.20	18.36	-4.38
2020/6/12	1750	Head	250	1090	7592	1210	4.76	19.20	19.04	-0.83
2020/6/5	1900	Head	250	5d170	7592	1210	5.38	20.30	21.52	6.01
2020/6/10	1900	Head	250	5d170	7592	1210	5.24	20.30	20.96	3.25
2020/6/14	1900	Head	250	5d170	7592	1210	5.43	20.30	21.72	7.00
2020/6/11	2300	Head	250	1055	7592	1210	5.75	23.20	23.00	-0.86
2020/6/15	2300	Head	250	1055	7592	1210	5.66	23.20	22.64	-2.41
2020/6/17	2300	Head	250	1055	7592	1210	6.01	23.20	24.04	3.62
2020/6/21	2450	Head	250	908	7592	1210	5.93	24.20	23.72	-1.98
2020/6/26	2450	Head	250	908	7592	1210	6.42	24.20	25.68	6.12
2020/6/16	2600	Head	250	1061	7592	1210	5.98	25.90	23.92	-7.64
2020/6/23	2600	Head	250	1061	7592	1210	6.78	25.90	27.12	4.71
2020/6/29	2600	Head	250	1061	7592	1210	6.37	25.90	25.48	-1.62
2020/6/23	5250	Head	100	1113	7592	1210	2.31	23.10	23.10	0.00
2020/6/25	5250	Head	100	1113	7592	1210	2.28	23.10	22.80	-1.30
2020/6/28	5600	Head	100	1113	7592	1210	2.15	23.80	21.50	-9.66
2020/7/2	5600	Head	100	1113	7592	1210	2.25	23.80	22.50	-5.46
2020/7/8	5750	Head	100	1113	7592	1210	2.08	22.80	20.80	-8.77
2020/7/10	5750	Head	100	1113	7592	1210	2.08	22.80	20.80	-8.77

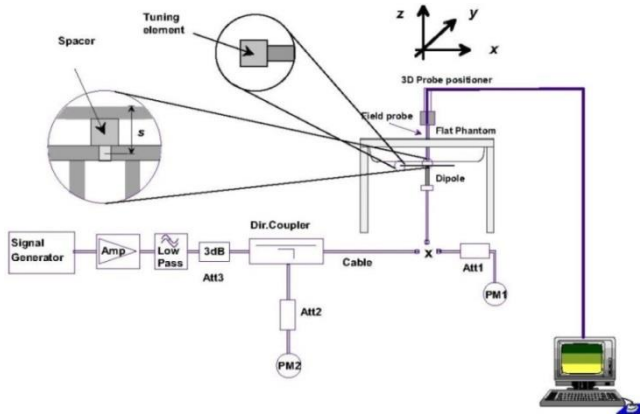


Fig 11.3.1 System Performance Check Setup



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.

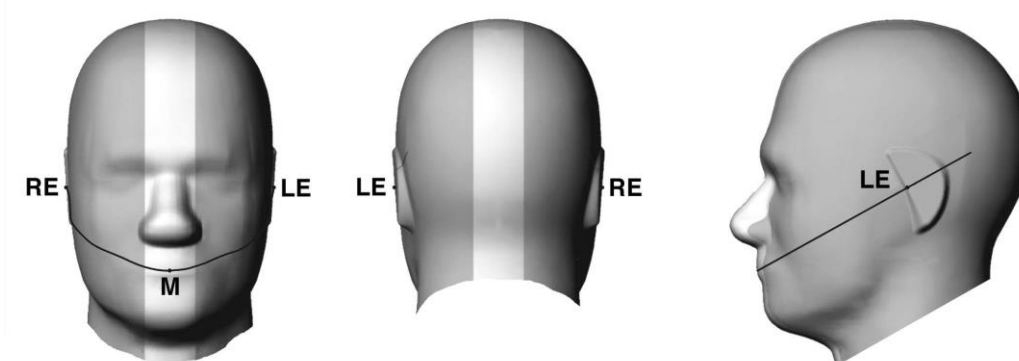


Fig 12.1.1 Front, back, and side views of SAM twin phantom

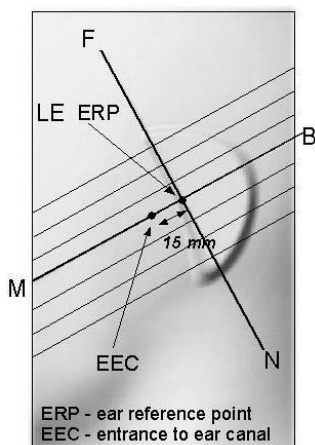


Fig 12.1.2 Close-up side view of phantom showing the ear region.

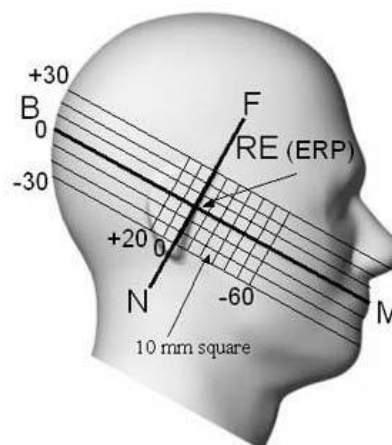


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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 w_t 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 w_b of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 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.

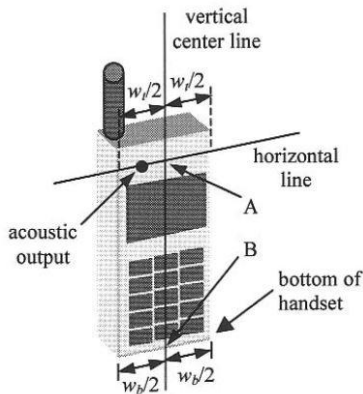


Fig 12.2.1 Handset vertical and horizontal reference lines—“fixed case”

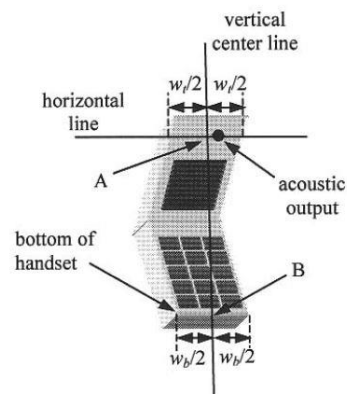


Fig 12.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

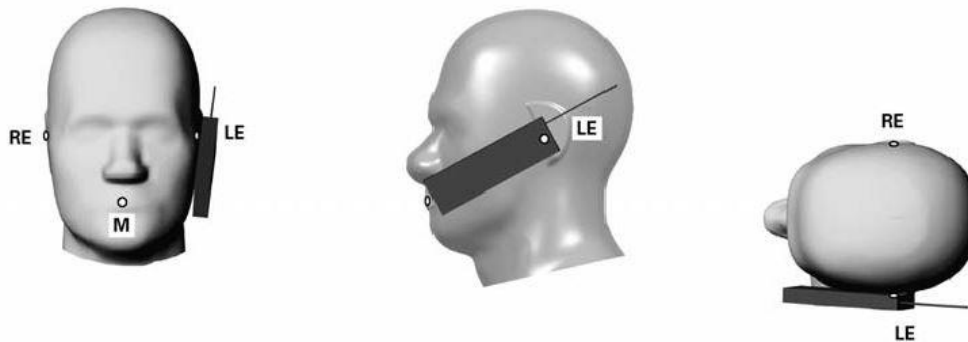


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

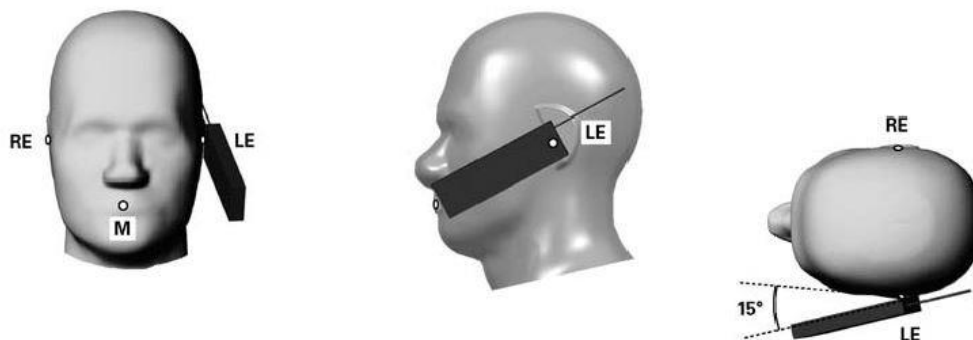


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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 $> 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Accessories for body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

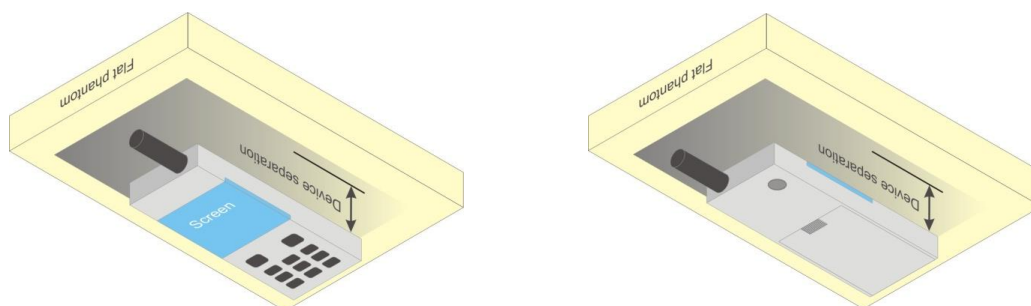


Fig 12.4 Body Worn Position

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 ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

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

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 $\leq 1/4$ 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_o/β_d	β_{HS} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

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

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

Note 3: CM = 1 for $\beta_o/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. 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_o/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Setup Configuration

HSUPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (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	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	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 $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF0) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

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: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - vii. Set Ack-Nack Repetition Factor to 3
 - viii. Set CQI Feedback Cycle (k) to 4 ms
 - ix. Set CQI Repetition Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

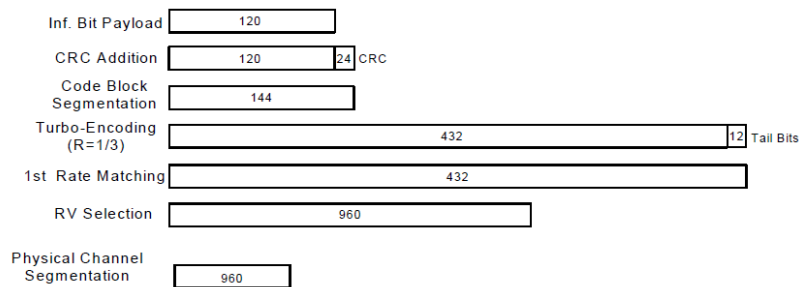


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration



<WCDMA Conducted Power>

General Note:

1. 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 $\leq \frac{1}{4}$ 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 $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

<CDMA2000 Conducted Power>

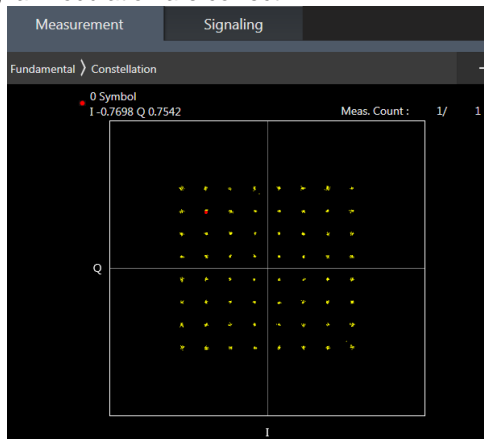
General Note:

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.

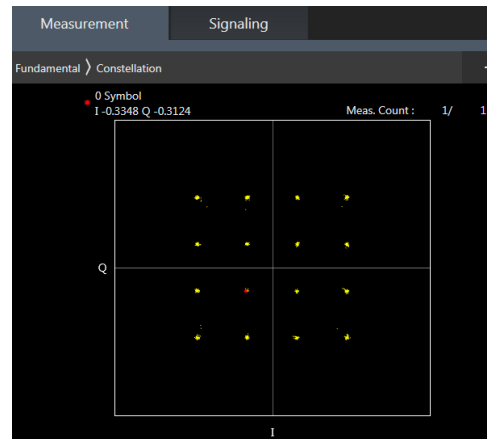
<LTE Conducted Power>

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 $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 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 B2 / B4 / B5 / B17 / B38 SAR test was covered by B25 / B66 / B26 / B12 / 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 \leq 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.

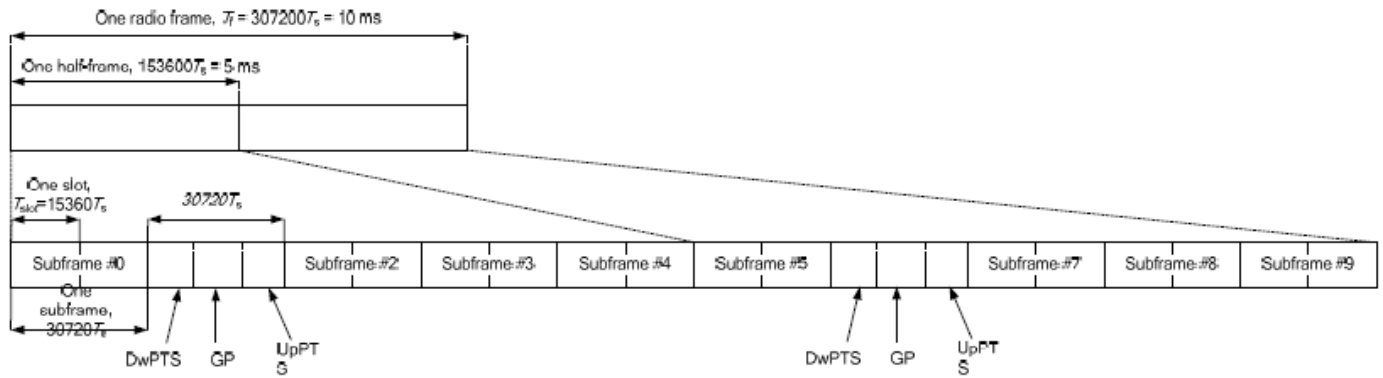


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$12800 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
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 subframes, 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 subframes, 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. The gray color table is covered by other combinations and no need to verify power.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
2CC #1	CA_2C	4CC #13	3CC #1	CA_2A_2A_4A	4CC #1
2CC #2	CA_2A_2A	4CC #1	3CC #2	CA_2A_2A_5A	4CC #6
2CC #3	CA_2A_4A	4CC #17	3CC #3	CA_2A-2A-5B	
2CC #4	CA_2A_5A	4CC #18	3CC #4	CA_2C_12A	
2CC #5	CA_2A_12A	4CC #19	3CC #5	CA_2A_2A_12A	4CC #7
2CC #6	CA_2A_14A	4CC #21	3CC #6	CA_2A_2A_14A	4CC #9
2CC #7	CA_2A_29A	4CC #11	3CC #7	CA_2A_2A_29A	4CC #11
2CC #8	CA_2A_30A	4CC #22	3CC #8	CA_2A_2A_30A	4CC #12
2CC #9	CA_2A_66A	4CC #23	3CC #9	CA_2A-2A-66B	
2CC #10	CA_2A_71A	4CC #4	3CC #10	CA_2C_66A	4CC #13
2CC #11	CA_4A_4A	4CC #26	3CC #11	CA_2A_2A_66A	4CC #15
2CC #12	CA_4A_5A	3CC #38	3CC #12	CA_2A_2A_71A	4CC #4
2CC #13	CA_4A_12A	3CC #39	3CC #13	CA_2A_4A_4A	4CC #17
2CC #14	CA_4A_29A	4CC #28	3CC #14	CA_2A_4A_5A	4CC #2
2CC #15	CA_4A_30A	4CC #28	3CC #15	CA_2A_4A_12A	4CC #3
2CC #16	CA_4A_71A	3CC #37	3CC #16	CA_2A_4A_29A	
2CC #17	CA_5B	3CC #43	3CC #17	CA_2A_4A_30A	
2CC #18	CA_5A_30A	4CC #29	3CC #18	CA_2A_4A_71A	4CC #4
2CC #19	CA_5A_41A		3CC #19	CA_2A-5A-30A	4CC #5
2CC #20	CA_5A_66A	4CC #29	3CC #20	CA_2A-5A-66A	4CC #6
2CC #21	CA_12A_30A	4CC #30	3CC #21	CA_2A-5B-30A	
2CC #22	CA_12A_66A	CA_12A_66A	3CC #22	CA_2A-5B-66A	
2CC #23	CA_14A_30A	4CC #31	3CC #23	CA_2A-12A-30A	4CC #7
2CC #24	CA_14A_66A	4CC #32	3CC #24	CA_2A-12A-66A	4CC #8
2CC #25	CA_25A-25A	3CC #50	3CC #25	CA_2A-14A-30A	4CC #9
2CC #26	CA_25A-26A	3CC #50	3CC #26	CA_2A-14A-66A	4CC #10
2CC #27	CA_25A-41A		3CC #27	CA_2A-29A-30A	4CC #11
2CC #28	CA_26A_41A		3CC #28	CA_2A-29A-66A	
2CC #29	CA_29A_30A	4CC #34	3CC #29	CA_2A-30A-66A	4CC #12
2CC #30	CA_29A_66A	4CC #34	3CC #30	CA_2A-66C	4CC #14
2CC #31	CA_30A_66A	4CC #34	3CC #31	CA_2A-66A-66A	4CC #15
2CC #32	CA_41C	4CC #35	3CC #32	CA_2A-66A-71A	4CC #16
2CC #33	CA_41A_41A	4CC #38	3CC #33	CA_4A-4A-5A	4CC #26
2CC #34	CA_66B	3CC #9	3CC #34	CA_4A-4A-12A	4CC #27
2CC #35	CA_66C	4CC #14	3CC #35	CA_4A-4A-29A	4CC #28
2CC #36	CA_66A_66A	4CC #15	3CC #36	CA_4A-4A-30A	4CC #28
2CC #37	CA_66A_71A	4CC #16	3CC #37	CA_4A-4A-71A	
2CC #38	CA_2A-5B	3CC #3	3CC #38	CA_4A-5A-30A	4CC #26
2CC #39	CA_2A-66B	3CC #9	3CC #39	CA_4A-12A-30A	4CC #27
2CC #40	CA_5B-30A	3CC #43	3CC #40	CA_4A-29A-30A	4CC #28
2CC #41	CA_5B-66A	3CC #43	3CC #41	CA_5A-30A-66A	4CC #29
2CC #42	CA_66A-66B	CA_66A-66C	3CC #42	CA_5A-66A-66A	4CC #29
			3CC #43	CA_5B-30A-66A	
			3CC #44	CA_5B-66A-66A	



			3CC #45	CA_12A-30A-66A	4CC #30
			3CC #46	CA_12A-66C	4CC #19
			3CC #47	CA_12A-66A-66A	4CC #20
			3CC #48	CA_14A-30A-66A	4CC #31
			3CC #49	CA_14A-66A-66A	4CC #32
			3CC #50	CA_25A-25A-26A	
			3CC #51	CA_25A-41C	
			3CC #52	CA_26A-41C	
			3CC #53	CA_29A-30A-66A	4CC #34
			3CC #54	CA_29A-66A-66A	4CC #34
			3CC #55	CA_30A-66A-66A	4CC #34
			3CC #56	CA_41D	4CC #33
			3CC #57	CA_41A-41C	4CC #38
			3CC #58	CA_41A-41A-41A	
			3CC #59	CA_66A-66C	
			3CC #60	CA_66A-66A-66A	4CC #32
			3CC #61	CA_66C-71A	4CC #24
			3CC #62	CA_66A-66A-71A	4CC #25



4CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset
4CC #1	CA_2A-2A-4A-4A	
4CC #2	CA_2A-2A-4A-5A	
4CC #3	CA_2A-2A-4A-12A	
4CC #4	CA_2A-2A-4A-71A	
4CC #5	CA_2A-2A-5A-30A	
4CC #6	CA_2A-2A-5A-66A	
4CC #7	CA_2A-2A-12A-30A	
4CC #8	CA_2A-2A-12A-66A	
4CC #9	CA_2A-2A-14A-30A	
4CC #10	CA_2A-2A-14A-66A	
4CC #11	CA_2A-2A-29A-30A	
4CC #12	CA_2A-2A-30A-66A	
4CC #13	CA_2C-66A-66A	
4CC #14	CA_2A-2A-66C	
4CC #15	CA_2A-2A-66A-66A	
4CC #16	CA_2A-2A-66A-71A	
4CC #17	CA_2A-4A-4A-12A	
4CC #18	CA_2A-5A-66A-66A	
4CC #19	CA_2A-12A-66C	
4CC #20	CA_2A-12A-66A-66A	
4CC #21	CA_2A-14A-66A-66A	
4CC #22	CA_2A-30A-66A-66A	
4CC #23	CA_2A-66A-66A-66A	
4CC #24	CA_2A-66C-71A	
4CC #25	CA_2A-66A-66A-71A	
4CC #26	CA_4A-4A-5A-30A	
4CC #27	CA_4A-4A-12A-30A	
4CC #28	CA_4A-4A-29A-30A	
4CC #29	CA_5A-30A-66A-66A	
4CC #30	CA_12A-30A-66A-66A	
4CC #31	CA_14A-30A-66A-66A	
4CC #32	CA_14A-66A-66A-66A	
4CC #33	CA_25A-41D	
4CC #34	CA_29A-30A-66A-66A	
4CC #35	CA_41C-41C	
4CC #36	CA_41E	
4CC #37	CA_41A-41D	
4CC #38	CA_41A-41A-41C	

4X4 MIMO	WWAN Band
	LTE Band: B2 / B4 / B7 / B25 / B30 / B41 / B66

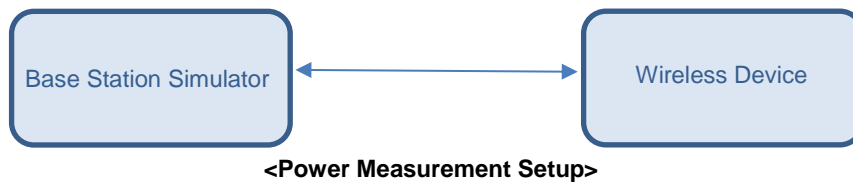
LTE Carrier Aggregation Conducted Power (Downlink)

- 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.

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

LTE Carrier Aggregation Conducted Power (Uplink)

1. This device supports uplink carrier aggregation for LTE 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.



<Inter-band uplink carrier aggregation consideration>

2CC Uplink Carrier Aggregation			
Number	Combination	Top	Bottom
1	2A_4A	2A	4A
2	2A_5A	2A	5A
		5A	2A
3	2A_12A	2A	12A
		12A	2A
4	2A_66A	2A	66A
5	4A_12A	4A	12A
		12A	4A
6	5A_66A	5A	66A
		66A	5A
7	12A_66A	66A	12A
		12A	66A

General Note:

1. According to October 2018 TCB workshop, uplink CA SAR test guidance as follows:
 - a. Provide the single uplink SAR values you have obtained for the relevant SAR configuration and frequency bands that employ inter-band uplink carrier aggregation.
 - b. If the single uplink 1g SAR values for each band are both less than 0.8W/kg and the algebraic summation of the 1g SAR values are less than 1.45W/kg no additional measurements need to be performed.
 - c. If one on the single uplink 1g SAR values is greater than 0.8W/kg, instead of algebraically summing the 1g SAR values, sum up the SAR distributions, similar to the enlarged zoom scan (volume scan) procedures found in FCC KDB publication 865664 D01 SAR measurement 100MHz to 6GHz V01r04.
 - d. If the algebraic sum of the 1g SAR values is > 1.45W/kg additional measurements may have to be made. Submit a KDB inquiry for additional guidance.
2. The single uplink 1g SAR values for each band are both less than 0.8W/kg and the algebraic summation of the 1g SAR value are less than 1.45W/kg, additional measurements are not required
3. The device implanted DPS (Dynamic Power Share) function to achieve higher uplink data rate keeping the total power unchanged in LTE inter band CA uplink mode, when the equipment has a dynamic power sharing capability, it adjusts the LTE two bands power so that the instantaneous total power does not exceed the specified value, Per LTE band performed separately and summed standalone SAR to do co-located analysis with WiFi and Bluetooth. Chose standalone LTE band with higher power SAR to sum inter band CA uplink SAR is more conservative.

5G NR Output Power (Unit: dBm)

General Note:

1. NR implementation of n2, n5, n25, n66, n71, and n41 is limited to EN-DC operations only (NSA), with LTE Bands 2/5/12/25/30/66/41 acting as anchor bands, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
2. Following 5G NR n2/n5/ n25/n66/n71 support SCS 15KHz DFT/CP-OFDM, PI/2 BPSK/QPSK/16QAM/64QAM/256QAM, Bandwidth 5M/10M/15M/20M.
3. Following 5G NR n41 support SCS 30KHz DFT/CP-OFDM, PI/2 BPSK/QPSK/16QAM/64QAM/256QAM, Bandwidth 20M/40M/50M/60M/80M/90M/100M.
4. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
 - b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QMA/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QMA/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
 - c. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK 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
 - d. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
 - e. PI/2 BPSK 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
 - f. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - g. Smaller bandwidth output power for each RB allocation configuration for this device will 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, smaller bandwidth SAR testing is not required for this device
5. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.
6. The device implanted DPS (Dynamic Power Share) function to achieve higher uplink data rate keeping the total power unchanged in 5G NR NSA EN-DC mode according to 3GPP 38.213, when the equipment has a dynamic power sharing capability, it adjusts the LTE or NR transmission power so that the instantaneous total power does not exceed the specified value, when the maximum transmission power of NR (P_{LTE}, P_{NR}) and the specified total power (P_{total}) have been set and the instantaneous calculated total transmission power exceeds P_{total}, the NR transmission power is reduced so that the actual transmission power of the user equipment will not exceed P_{total} power.

<3GPP 38.101 MPR for EN-DC>

Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
		$\leq 0.5^2$	$\leq 0.5^2$	0 ²
	QPSK		≤ 1	0
	16 QAM		≤ 2	≤ 1
	64 QAM		≤ 2.5	
CP-OFDM	256 QAM		≤ 4.5	
	QPSK		≤ 3	≤ 1.5
	16 QAM		≤ 3	≤ 2
	64 QAM		≤ 3.5	
	256 QAM		≤ 6.5	

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26 dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

Table 6.2.2-2 Maximum power reduction (MPR) for power class 2

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5	≤ 0.5	0
	QPSK	≤ 3.5	≤ 1	0
	16 QAM	≤ 3.5	≤ 2	≤ 1
	64 QAM	≤ 3.5		≤ 2.5
	256 QAM		≤ 4.5	
CP-OFDM	QPSK	≤ 3.5	≤ 3	≤ 1.5
	16 QAM	≤ 3.5	≤ 3	≤ 2
	64 QAM		≤ 3.5	
	256 QAM		≤ 6.5	

EN-DC configuration	Top Antenna	Bottom Antenna
DC_2A_n5A	LTE2	n5
	n5	LTE2
DC_2A_n41A	LTE2	n41
DC_2A_n66A	n66	LTE2
DC_2A_n71A	N71	LTE2
DC_5A_n2A	LTE5	n2
	n2	LTE5
DC_5A_n66A	LTE5	n66
	n66	LTE5
DC_12A_n2A	LTE12	n2
	n2	LTE12
DC_12A_n25A	n25	LTE12
DC_12A_n66A	LTE12	n66
	n66	LTE12
DC_25A_n41A	LTE25	N41
DC_30A_n2A	n2	LTE30
	LTE30	n5
DC_30A_n5A	n5	LTE30
	n66	LTE30
DC_30A_n66A	n66	LTE30
DC_41A_n41A	LTE41	n41
DC_66A_n2A	n2	LTE66
DC_66A_n5A	LTE66	n5
	n5	LTE66
DC_66A_n25A	n25	LTE66
DC_66A_n41A	LTE66	n41
DC_66A_n71A	n71	LTE66
DC_(n)41AA	LTE41	n41
DC_2A-7A_n71A	N71	LTE2
	N71	LTE7

Note: DC_2A-7A_n71A, only limited to DC DC_2A_n71A or DC_7A_n71A.



ENDC									
ENDC	Default	Head		Body worn		Hotspot		Handheld	
	max. tune up limit	max. tune up limit	power reduction (dB)	max. tune up limit	power reduction (dB)	max. tune up limit	power reduction (dB)	max. tune up limit	power reduction (dB)
LTE Band 2 Ant 1	24.00	24.00		15.00	9.00	13.00	11.00	18.00	6.00
LTE Band 2 Ant 2	23.00	13.00	10.00	15.50	7.50	14.00	9.00	19.00	4.00
LTE Band 25 Ant 2 Only for ENDC	23.00	13.00	10.00	15.50	7.50	14.00	9.00	19.00	4.00
LTE Band 66 Ant 1	24.00	24.00		15.50	8.50	13.50	10.50	17.00	7.00
LTE Band 66 Ant 2	23.00	12.00	11.00	15.50	7.50	13.50	9.50	18.00	5.00
LTE Band 5 Ant 1	24.00	24.00		20.50	3.50	20.50	3.50	23.00	1.00
LTE Band 5 Ant 2	23.50	19.50	4.00	21.50	2.00	20.50	3.00	23.50	
LTE Band 12 Ant 1	24.00	24.00		22.50	1.50	22.50	1.50	23.00	1.00
LTE Band 12 Ant 2	23.50	20.50	3.00	23.50		23.50		23.50	
LTE Band 30 Ant 1	24.00	24.00		14.50	9.50	12.50	11.50	18.00	6.00
LTE Band 30 Ant 2	23.00	17.00	6.00	20.00	3.00	17.00	6.00	21.50	1.50
LTE Band 41 Class 3 Ant 2 Only For ENDC	23.00	17.50	5.50	20.50	2.50	18.00	5.00	22.00	1.00
LTE Band 41 Class 2 Ant 2 Only For ENDC	26.00	17.50	8.50	20.50	5.50	18.00	8.00	22.00	4.00
FR1 n2 Ant 1	24.00	24.00		16.50	7.50	14.50	9.50	19.50	4.50
FR1 n2 Ant 2	24.00	14.00	10.00	17.50	6.50	15.00	9.00	21.50	2.50
FR1 n25 Ant 2	24.00	14.00	10.00	17.50	6.50	15.00	9.00	21.50	2.50
FR1 n5 Ant 1	24.00	24.00		22.50	1.50	22.50	1.50	24.00	
FR1 n5 Ant 2	24.00	21.00	3.00	23.50	0.50	23.50	0.50	24.00	
FR1 n66 Ant 1	24.00	24.00		19.00	5.00	17.50	6.50	20.50	3.50
FR1 n66 Ant 2	24.00	14.50	9.50	18.00	6.00	16.00	8.00	20.50	3.50
FR1 n71 Ant 2	24.00	24.00		24.00		24.00		24.00	
FR1 n41 Class 3 Ant 1	24.00	24.00		18.00	6.00	16.00	8.00	20.50	3.50
FR1 n41 Class 2 Ant 1	27.00	27.00		18.00	9.00	16.00	11.00	20.50	6.50

Note: For EN-DC component, LTE band 25/41 for ANT 2(top antenna) is limited to EN-DC active and they will act as anchor mode. When EN-DC is not active, LTE band 25/41 will not transmit.

<WLAN Conducted Power>

General Note:

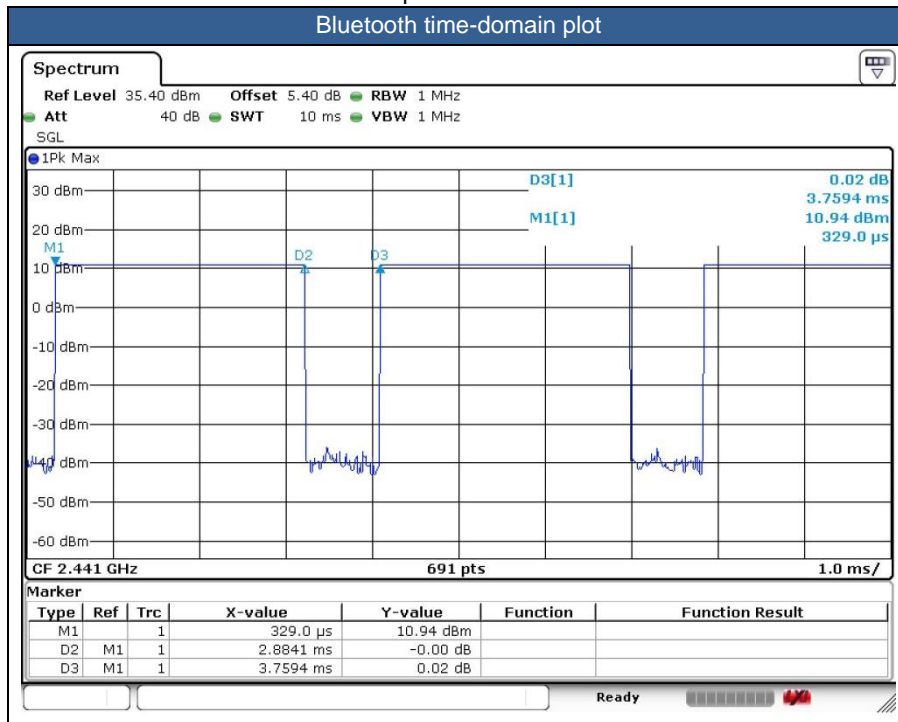
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. 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 76.72 % 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





14. Antenna Location

The detailed antenna location information can refer to SAR Test Setup Photos.

15. 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 ≥ 0.8 W/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. The device implements Proximity sensors/receiver detect mechanism/hotspot trigger reduced power for the power management for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity).
6. The device will invoke corresponding work scenarios power level, which are provided in the operational description.
7. For Some WWAN bands, sensor on reduced power level higher than hotspot reduced power level, so front/back sensor on SAR can represent hotspot conservatively.
8. For WLAN when transmit simultaneous with WWAN LAT or UAT, power reduction will be activated to head / hotspot / body-worn / extremity.
9. P-sensor can detect handheld state, For LTE B5 for Ant 1, full power can be tested pass, so reduced power no need to be evaluated.
10. 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, CDMA2000 BC1, WCDMA Band II/IV, LTE Band 2/4/5/7/12/25/26/30/41/66, 5GNR n2/n25/n66/n41 and WLAN 2.4GHz /WLAN 5.2/5.8GHz 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.
11. 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: [19 mm](#)
Back: [25 mm](#)
12. 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: [5 mm](#)
Back: [9 mm](#)
Bottom side: [10 mm](#)



Top Side: [10 mm](#)

13. For EN-DC component, LTE band 25/41 for ANT 2(top antenna) is limited to EN-DC active and they will act as anchor mode. When EN-DC is not active, LTE band 25/41 will not transmit.
14. UAT means Up Antenna (ANT2); LAT means Lower Antenna/Bottom Antenna (ANT1).

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 3Tx 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 \leq 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 \leq 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 \leq 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.

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 \leq 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 \leq 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 \leq 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 B25 / B66 / B26 / B12 / 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 \leq 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



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 WLAN 2.4GHz and Bluetooth share the same antenna, so Bluetooth RF exposure evaluation chose the worst position 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.



15.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Antenna	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	Ant 1	Full	189	836.4	30.25	31.00	1.189	0.03	0.201	0.239
	GSM850	GPRS(3 Tx slots)	Right Tilted	Ant 1	Full	189	836.4	30.25	31.00	1.189	0.01	0.142	0.169
	GSM850	GPRS(3 Tx slots)	Left Cheek	Ant 1	Full	189	836.4	30.25	31.00	1.189	0.09	0.200	0.238
	GSM850	GPRS(3 Tx slots)	Left Tilted	Ant 1	Full	189	836.4	30.25	31.00	1.189	0.02	0.124	0.147
	GSM850	GPRS(3 Tx slots)	Right Cheek	Ant 1	Full	128	824.2	30.04	31.00	1.247	0.01	0.217	0.271
01	GSM850	GPRS(3 Tx slots)	Right Cheek	Ant 1	Full	251	848.8	29.93	31.00	1.279	0.08	0.256	0.328
	GSM1900	GPRS(3 Tx slots)	Right Cheek	Ant 1	Full	661	1880	27.15	28.00	1.216	-0.02	0.033	0.040
	GSM1900	GPRS(3 Tx slots)	Right Tilted	Ant 1	Full	661	1880	27.15	28.00	1.216	0.03	0.024	0.029
	GSM1900	GPRS(3 Tx slots)	Left Cheek	Ant 1	Full	661	1880	27.15	28.00	1.216	0.01	0.032	0.039
	GSM1900	GPRS(3 Tx slots)	Left Tilted	Ant 1	Full	661	1880	27.15	28.00	1.216	-0.06	0.031	0.038
02	GSM1900	GPRS(3 Tx slots)	Right Cheek	Ant 1	Full	512	1850.2	27.03	28.00	1.250	0.02	0.033	0.041
	GSM1900	GPRS(3 Tx slots)	Right Cheek	Ant 1	Full	810	1909.8	27.14	28.00	1.219	-0.05	0.019	0.023

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Antenna	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 II	RMC 12.2Kbps	Right Cheek	Ant 1	Full	9400	1880	23.62	24.00	1.091	-0.01	0.056	0.061
	WCDMA II	RMC 12.2Kbps	Right Tilted	Ant 1	Full	9400	1880	23.62	24.00	1.091	0.05	0.040	0.044
	WCDMA II	RMC 12.2Kbps	Left Cheek	Ant 1	Full	9400	1880	23.62	24.00	1.091	0.06	0.057	0.062
	WCDMA II	RMC 12.2Kbps	Left Tilted	Ant 1	Full	9400	1880	23.62	24.00	1.091	-0.12	0.048	0.052
03	WCDMA II	RMC 12.2Kbps	Left Cheek	Ant 1	Full	9262	1852.4	23.43	24.00	1.140	0.02	0.067	0.077
	WCDMA II	RMC 12.2Kbps	Left Cheek	Ant 1	Full	9538	1907.6	23.61	24.00	1.094	0.01	0.063	0.069
	WCDMA IV	RMC 12.2Kbps	Right Cheek	Ant 1	Full	1413	1732.6	23.53	24.00	1.114	0.01	0.050	0.056
	WCDMA IV	RMC 12.2Kbps	Right Tilted	Ant 1	Full	1413	1732.6	23.53	24.00	1.114	0.06	0.052	0.058
	WCDMA IV	RMC 12.2Kbps	Left Cheek	Ant 1	Full	1413	1732.6	23.53	24.00	1.114	0.02	0.082	0.091
	WCDMA IV	RMC 12.2Kbps	Left Tilted	Ant 1	Full	1413	1732.6	23.53	24.00	1.114	-0.02	0.078	0.087
04	WCDMA IV	RMC 12.2Kbps	Left Cheek	Ant 1	Full	1312	1712.4	23.20	24.00	1.202	0.01	0.077	0.092
	WCDMA IV	RMC 12.2Kbps	Left Cheek	Ant 1	Full	1513	1752.6	23.52	24.00	1.117	0.07	0.081	0.090
05	WCDMA V	RMC 12.2Kbps	Right Cheek	Ant 1	Full	4182	836.4	23.52	24.00	1.117	0.03	0.285	0.318
	WCDMA V	RMC 12.2Kbps	Right Tilted	Ant 1	Full	4182	836.4	23.52	24.00	1.117	0.05	0.191	0.213
	WCDMA V	RMC 12.2Kbps	Left Cheek	Ant 1	Full	4182	836.4	23.52	24.00	1.117	-0.06	0.147	0.164
	WCDMA V	RMC 12.2Kbps	Left Tilted	Ant 1	Full	4182	836.4	23.52	24.00	1.117	0.02	0.072	0.080
	WCDMA V	RMC 12.2Kbps	Right Cheek	Ant 1	Full	4132	826.4	23.32	24.00	1.169	0.01	0.210	0.246
	WCDMA V	RMC 12.2Kbps	Right Cheek	Ant 1	Full	4233	846.6	23.16	24.00	1.213	-0.12	0.258	0.313



<CDMA SAR>

Plot No.	Band	Mode	Test Position	Antenna	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)
06	CDMA2000 BC0	RC3 SO55	Right Cheek	Ant 1	Full	1013	824.7	24.19	25.00	1.205	0.01	0.203	0.245
	CDMA2000 BC0	RC3 SO55	Right Tilted	Ant 1	Full	1013	824.7	24.19	25.00	1.205	-0.06	0.138	0.166
	CDMA2000 BC0	RC3 SO55	Left Cheek	Ant 1	Full	1013	824.7	24.19	25.00	1.205	0.05	0.176	0.212
	CDMA2000 BC0	RC3 SO55	Left Tilted	Ant 1	Full	1013	824.7	24.19	25.00	1.205	0.02	0.114	0.137
	CDMA2000 BC0	RC3 SO55	Right Cheek	Ant 1	Full	384	836.52	24.18	25.00	1.208	-0.13	0.156	0.188
	CDMA2000 BC0	RC3 SO55	Right Cheek	Ant 1	Full	777	848.31	24.08	25.00	1.236	0.09	0.189	0.234
	CDMA2000 BC10	RC3 SO55	Right Cheek	Ant 1	Full	684	823.1	24.33	25.00	1.167	0.02	0.202	0.236
	CDMA2000 BC10	RC3 SO55	Right Tilted	Ant 1	Full	684	823.1	24.33	25.00	1.167	0.09	0.139	0.162
	CDMA2000 BC10	RC3 SO55	Left Cheek	Ant 1	Full	684	823.1	24.33	25.00	1.167	-0.02	0.177	0.207
	CDMA2000 BC10	RC3 SO55	Left Tilted	Ant 1	Full	684	823.1	24.33	25.00	1.167	0.01	0.116	0.135
	CDMA2000 BC10	RC3 SO55	Right Cheek	Ant 1	Full	476	817.9	24.27	25.00	1.183	0.03	0.201	0.238
07	CDMA2000 BC10	RC3 SO55	Right Cheek	Ant 1	Full	580	820.5	24.31	25.00	1.172	0.09	0.207	0.243
	CDMA2000 BC1	RC3 SO55	Right Cheek	Ant 1	Full	600	1880	24.78	25.00	1.052	0.02	0.054	0.057
	CDMA2000 BC1	RC3 SO55	Right Tilted	Ant 1	Full	600	1880	24.78	25.00	1.052	0.01	0.037	0.039
	CDMA2000 BC1	RC3 SO55	Left Cheek	Ant 1	Full	600	1880	24.78	25.00	1.052	-0.15	0.046	0.048
	CDMA2000 BC1	RC3 SO55	Left Tilted	Ant 1	Full	600	1880	24.78	25.00	1.052	0.06	0.049	0.052
08	CDMA2000 BC1	RC3 SO55	Right Cheek	Ant 1	Full	25	1851.25	24.46	25.00	1.132	0.02	0.059	0.067
	CDMA2000 BC1	RC3 SO55	Right Cheek	Ant 1	Full	1175	1908.75	24.78	25.00	1.052	0.07	0.055	0.058



<FDD LTE SAR>

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Antenna, 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). Contains multiple rows of test data for various LTE bands and configurations.



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Antenna	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)
14	LTE Band 71	20M	QPSK	1	0	Right Cheek	Ant 1	Full	133322	683	23.33	24.00	1.167	0.06	0.203	0.237
	LTE Band 71	20M	QPSK	50	0	Right Cheek	Ant 1	Full	133322	683	22.15	23.00	1.216	0.01	0.122	0.148
	LTE Band 71	20M	QPSK	1	0	Right Tilted	Ant 1	Full	133322	683	23.33	24.00	1.167	0.02	0.083	0.097
	LTE Band 71	20M	QPSK	50	0	Right Tilted	Ant 1	Full	133322	683	22.15	23.00	1.216	-0.03	0.065	0.079
	LTE Band 71	20M	QPSK	1	0	Left Cheek	Ant 1	Full	133322	683	23.33	24.00	1.167	0.05	0.159	0.186
	LTE Band 71	20M	QPSK	50	0	Left Cheek	Ant 1	Full	133322	683	22.15	23.00	1.216	0.01	0.107	0.130
	LTE Band 71	20M	QPSK	1	0	Left Tilted	Ant 1	Full	133322	683	23.33	24.00	1.167	0.02	0.092	0.107
	LTE Band 71	20M	QPSK	50	0	Left Tilted	Ant 1	Full	133322	683	22.15	23.00	1.216	0.09	0.064	0.078
	LTE Band 25	20M	QPSK	1	0	Right Cheek	Ant 1	Full	26340	1880	23.45	24.00	1.135	0.02	0.071	0.081
	LTE Band 25	20M	QPSK	50	0	Right Cheek	Ant 1	Full	26340	1880	22.28	23.00	1.180	0.07	0.051	0.060
	LTE Band 25	20M	QPSK	1	0	Right Tilted	Ant 1	Full	26340	1880	23.45	24.00	1.135	-0.02	0.046	0.052
	LTE Band 25	20M	QPSK	50	0	Right Tilted	Ant 1	Full	26340	1880	22.28	23.00	1.180	0.01	0.035	0.041
	LTE Band 25	20M	QPSK	1	0	Left Cheek	Ant 1	Full	26340	1880	23.45	24.00	1.135	0.06	0.072	0.082
	LTE Band 25	20M	QPSK	50	0	Left Cheek	Ant 1	Full	26340	1880	22.28	23.00	1.180	0.02	0.052	0.061
	LTE Band 25	20M	QPSK	1	0	Left Tilted	Ant 1	Full	26340	1880	23.45	24.00	1.135	0.02	0.051	0.058
	LTE Band 25	20M	QPSK	50	0	Left Tilted	Ant 1	Full	26340	1880	22.28	23.00	1.180	0.01	0.041	0.048
	LTE Band 25	20M	QPSK	1	0	Left Cheek	Ant 1	Full	26140	1860	23.31	24.00	1.172	0.06	0.072	0.085
	LTE Band 25	20M	QPSK	1	0	Left Cheek	Ant 1	Full	26590	1905	23.37	24.00	1.156	-0.02	0.072	0.083
	LTE Band 25-UAT	20M	QPSK	1	0	Right Cheek	Ant 2	Reduced	26340	1880	12.30	13.00	1.175	0.02	0.166	0.195
	LTE Band 25-UAT	20M	QPSK	50	0	Right Cheek	Ant 2	Reduced	26340	1880	12.23	13.00	1.194	0.07	0.160	0.191
	LTE Band 25-UAT	20M	QPSK	1	0	Right Tilted	Ant 2	Reduced	26340	1880	12.30	13.00	1.175	-0.02	0.165	0.194
	LTE Band 25-UAT	20M	QPSK	50	0	Right Tilted	Ant 2	Reduced	26340	1880	12.23	13.00	1.194	0.01	0.162	0.193
	LTE Band 25-UAT	20M	QPSK	1	0	Left Cheek	Ant 2	Reduced	26340	1880	12.30	13.00	1.175	0.06	0.280	0.329
	LTE Band 25-UAT	20M	QPSK	50	0	Left Cheek	Ant 2	Reduced	26340	1880	12.23	13.00	1.194	0.02	0.280	0.334
	LTE Band 25-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	26340	1880	12.30	13.00	1.175	0.02	0.484	0.569
	LTE Band 25-UAT	20M	QPSK	50	0	Left Tilted	Ant 2	Reduced	26340	1880	12.23	13.00	1.194	0.03	0.453	0.541
	LTE Band 25-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	26140	1860	12.30	13.00	1.175	-0.07	0.449	0.528
	LTE Band 25-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	26590	1905	12.23	13.00	1.194	0.01	0.431	0.515
EN-DC																
	LTE Band 25 -UAT	20M	QPSK	1	0	Right Cheek	Ant 2	Reduced	26340	1880	12.30	13.00	1.175	0.02	0.166	0.195
	LTE Band 25 -UAT	20M	QPSK	50	0	Right Cheek	Ant 2	Reduced	26340	1880	12.23	13.00	1.194	0.07	0.160	0.191
	LTE Band 25 -UAT	20M	QPSK	1	0	Right Tilted	Ant 2	Reduced	26340	1880	12.30	13.00	1.175	-0.02	0.165	0.194
	LTE Band 25 -UAT	20M	QPSK	50	0	Right Tilted	Ant 2	Reduced	26340	1880	12.23	13.00	1.194	0.01	0.162	0.193
	LTE Band 25 -UAT	20M	QPSK	1	0	Left Cheek	Ant 2	Reduced	26340	1880	12.30	13.00	1.175	0.06	0.280	0.329
	LTE Band 25 -UAT	20M	QPSK	50	0	Left Cheek	Ant 2	Reduced	26340	1880	12.23	13.00	1.194	0.02	0.280	0.334
15	LTE Band 25 -UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	26340	1880	12.30	13.00	1.175	0.02	0.484	0.569
	LTE Band 25 -UAT	20M	QPSK	50	0	Left Tilted	Ant 2	Reduced	26340	1880	12.23	13.00	1.194	0.03	0.453	0.541
	LTE Band 25 -UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	26140	1860	12.30	13.00	1.175	-0.07	0.449	0.528
	LTE Band 25 -UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	26590	1905	12.23	13.00	1.194	0.01	0.431	0.515



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Antenna	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 66	20M	QPSK	1	0	Right Cheek	Ant 1	Full	132322	1745	22.71	24.00	1.346	0.03	0.090	0.121
	LTE Band 66	20M	QPSK	50	0	Right Cheek	Ant 1	Full	132322	1745	21.50	23.00	1.413	0.09	0.077	0.109
	LTE Band 66	20M	QPSK	1	0	Right Tilted	Ant 1	Full	132322	1745	22.71	24.00	1.346	0.02	0.054	0.073
	LTE Band 66	20M	QPSK	50	0	Right Tilted	Ant 1	Full	132322	1745	21.50	23.00	1.413	0.01	0.046	0.065
	LTE Band 66	20M	QPSK	1	0	Left Cheek	Ant 1	Full	132322	1745	22.71	24.00	1.346	-0.03	0.091	0.122
	LTE Band 66	20M	QPSK	50	0	Left Cheek	Ant 1	Full	132322	1745	21.50	23.00	1.413	0.02	0.081	0.114
	LTE Band 66	20M	QPSK	1	0	Left Tilted	Ant 1	Full	132322	1745	22.71	24.00	1.346	-0.09	0.078	0.105
	LTE Band 66	20M	QPSK	50	0	Left Tilted	Ant 1	Full	132322	1745	21.50	23.00	1.413	-0.13	0.061	0.086
	LTE Band 66	20M	QPSK	1	0	Left Cheek	Ant 1	Full	132072	1720	22.52	24.00	1.406	0.12	0.088	0.124
	LTE Band 66	20M	QPSK	1	0	Left Cheek	Ant 1	Full	132572	1770	22.63	24.00	1.371	0.02	0.085	0.116
	LTE Band 66-UAT	20M	QPSK	1	0	Right Cheek	Ant 2	Reduced	132322	1745	10.72	12.00	1.343	0.06	0.198	0.266
	LTE Band 66-UAT	20M	QPSK	50	0	Right Cheek	Ant 2	Reduced	132322	1745	10.70	12.00	1.349	-0.02	0.212	0.286
	LTE Band 66-UAT	20M	QPSK	1	0	Right Tilted	Ant 2	Reduced	132322	1745	10.72	12.00	1.343	0.05	0.210	0.282
	LTE Band 66-UAT	20M	QPSK	50	0	Right Tilted	Ant 2	Reduced	132322	1745	10.70	12.00	1.349	-0.02	0.223	0.301
	LTE Band 66-UAT	20M	QPSK	1	0	Left Cheek	Ant 2	Reduced	132322	1745	10.72	12.00	1.343	0.01	0.301	0.404
	LTE Band 66-UAT	20M	QPSK	50	0	Left Cheek	Ant 2	Reduced	132322	1745	10.70	12.00	1.349	0.12	0.315	0.425
	LTE Band 66-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	132322	1745	10.72	12.00	1.343	-0.08	0.365	0.490
16	LTE Band 66-UAT	20M	QPSK	50	0	Left Tilted	Ant 2	Reduced	132322	1745	10.70	12.00	1.349	-0.09	0.395	0.533
	LTE Band 66-UAT	20M	QPSK	50	0	Left Tilted	Ant 2	Reduced	132072	1720	10.49	12.00	1.416	-0.03	0.356	0.504
	LTE Band 66-UAT	20M	QPSK	50	0	Left Tilted	Ant 2	Reduced	132572	1770	10.22	12.00	1.507	0.01	0.341	0.514



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Antenna	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	Right Cheek	Ant 1	Full	21100	2535	22.91	24.00	1.285	0.01	0.058	0.075
	LTE Band 7	20M	QPSK	50	0	Right Cheek	Ant 1	Full	21100	2535	21.65	23.00	1.365	0.03	0.051	0.070
	LTE Band 7	20M	QPSK	1	0	Right Tilted	Ant 1	Full	21100	2535	22.91	24.00	1.285	0.06	0.055	0.071
	LTE Band 7	20M	QPSK	50	0	Right Tilted	Ant 1	Full	21100	2535	21.65	23.00	1.365	-0.02	0.040	0.055
	LTE Band 7	20M	QPSK	1	0	Left Cheek	Ant 1	Full	21100	2535	22.91	24.00	1.285	0.05	0.045	0.058
	LTE Band 7	20M	QPSK	50	0	Left Cheek	Ant 1	Full	21100	2535	21.65	23.00	1.365	-0.02	0.027	0.037
	LTE Band 7	20M	QPSK	1	0	Left Tilted	Ant 1	Full	21100	2535	22.91	24.00	1.285	0.01	0.065	0.084
	LTE Band 7	20M	QPSK	50	0	Left Tilted	Ant 1	Full	21100	2535	21.65	23.00	1.365	0.12	0.049	0.067
17	LTE Band 7	20M	QPSK	1	0	Left Tilted	Ant 1	Full	20850	2510	22.71	24.00	1.346	0.17	0.070	0.095
	LTE Band 7	20M	QPSK	1	0	Left Tilted	Ant 1	Full	21350	2560	22.68	24.00	1.355	0.06	0.063	0.085
	LTE Band 30	10M	QPSK	1	0	Right Cheek	Ant 1	Full	27710	2310	23.59	24.00	1.099	0.06	0.078	0.086
	LTE Band 30	10M	QPSK	25	0	Right Cheek	Ant 1	Full	27710	2310	22.60	23.00	1.096	0.02	0.054	0.059
	LTE Band 30	10M	QPSK	1	0	Right Tilted	Ant 1	Full	27710	2310	23.59	24.00	1.099	0.02	0.064	0.070
	LTE Band 30	10M	QPSK	25	0	Right Tilted	Ant 1	Full	27710	2310	22.60	23.00	1.096	0.01	0.047	0.052
	LTE Band 30	10M	QPSK	1	0	Left Cheek	Ant 1	Full	27710	2310	23.59	24.00	1.099	0.06	0.087	0.095
	LTE Band 30	10M	QPSK	25	0	Left Cheek	Ant 1	Full	27710	2310	22.60	23.00	1.096	-0.02	0.061	0.067
	LTE Band 30	10M	QPSK	1	0	Left Tilted	Ant 1	Full	27710	2310	23.59	24.00	1.099	0.11	0.069	0.076
	LTE Band 30	10M	QPSK	25	0	Left Tilted	Ant 1	Full	27710	2310	22.60	23.00	1.096	0.03	0.042	0.046
	LTE Band 30-UAT	10M	QPSK	1	0	Right Cheek	Ant 2	Reduced	27710	2310	16.17	17.00	1.211	0.01	0.202	0.245
	LTE Band 30-UAT	10M	QPSK	25	0	Right Cheek	Ant 2	Reduced	27710	2310	16.03	17.00	1.250	-0.03	0.202	0.253
	LTE Band 30-UAT	10M	QPSK	1	0	Right Tilted	Ant 2	Reduced	27710	2310	16.17	17.00	1.211	0.02	0.210	0.254
	LTE Band 30-UAT	10M	QPSK	25	0	Right Tilted	Ant 2	Reduced	27710	2310	16.03	17.00	1.250	-0.09	0.204	0.255
	LTE Band 30-UAT	10M	QPSK	1	0	Left Cheek	Ant 2	Reduced	27710	2310	16.17	17.00	1.211	-0.13	0.299	0.362
	LTE Band 30-UAT	10M	QPSK	25	0	Left Cheek	Ant 2	Reduced	27710	2310	16.03	17.00	1.250	0.05	0.301	0.376
18	LTE Band 30-UAT	10M	QPSK	1	0	Left Tilted	Ant 2	Reduced	27710	2310	16.17	17.00	1.211	-0.03	0.470	0.569
	LTE Band 30-UAT	10M	QPSK	25	0	Left Tilted	Ant 2	Reduced	27710	2310	16.03	17.00	1.250	0.03	0.433	0.541



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Antenna	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	Ant 1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	0.02	0.035	0.047	
	LTE Band 41	20M	QPSK	50	0	Right Cheek	Ant 1	Full	40620	2593	21.78	23.00	1.324	62.9	1.006	0.01	0.020	0.027	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	Ant 1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	-0.03	0.015	0.020	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	Ant 1	Full	40620	2593	21.78	23.00	1.324	62.9	1.006	0.02	0.014	0.019	
	LTE Band 41	20M	QPSK	1	0	Left Cheek	Ant 1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	-0.09	0.032	0.042	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	Ant 1	Full	40620	2593	21.78	23.00	1.324	62.9	1.006	-0.13	0.016	0.021	
	LTE Band 41	20M	QPSK	1	0	Left Tilted	Ant 1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	0.05	0.019	0.025	
	LTE Band 41	20M	QPSK	50	0	Left Tilted	Ant 1	Full	40620	2593	21.78	23.00	1.324	62.9	1.006	-0.03	0.014	0.019	
	LTE Band 41	20M	QPSK	1	0	Right Cheek	Ant 1	Full	39750	2506	22.62	24.00	1.374	62.9	1.006	0.09	0.059	0.081	
	LTE Band 41 C	20M	QPSK	1	0	Right Cheek	Ant 1	Full	39750+39948	2506+2525.8	22.91	24.00	1.285	62.9	1.006	0.06	0.043	0.056	
	LTE Band 41-HPUE	20M	QPSK	1	0	Right Cheek	Ant 1	Full	39750	2506	25.28	27.00	1.486	42.9	1.009	-0.01	0.073	0.109	
	LTE Band 41	20M	QPSK	1	0	Right Cheek	Ant 1	Full	40185	2549.5	22.71	24.00	1.346	62.9	1.006	0.03	0.031	0.042	
	LTE Band 41	20M	QPSK	1	0	Right Cheek	Ant 1	Full	41055	2636.5	22.73	24.00	1.340	62.9	1.006	0.01	0.029	0.039	
	LTE Band 41	20M	QPSK	1	0	Right Cheek	Ant 1	Full	41490	2680	22.71	24.00	1.346	62.9	1.006	-0.02	0.024	0.032	
EN-DC																			
	LTE Band 41-UAT	20M	QPSK	1	0	Right Cheek	Ant 2	Reduced	40620	2593	16.75	17.50	1.189	62.9	1.006	0.03	0.213	0.255	
	LTE Band 41-UAT	20M	QPSK	50	0	Right Cheek	Ant 2	Reduced	40620	2593	16.68	17.50	1.208	62.9	1.006	0.02	0.231	0.281	
	LTE Band 41-UAT	20M	QPSK	1	0	Right Tilted	Ant 2	Reduced	40620	2593	16.75	17.50	1.189	62.9	1.006	0.05	0.258	0.308	
	LTE Band 41-UAT	20M	QPSK	50	0	Right Tilted	Ant 2	Reduced	40620	2593	16.68	17.50	1.208	62.9	1.006	0.06	0.275	0.334	
	LTE Band 41-UAT	20M	QPSK	1	0	Left Cheek	Ant 2	Reduced	40620	2593	16.75	17.50	1.189	62.9	1.006	0.1	0.314	0.375	
	LTE Band 41-UAT	20M	QPSK	50	0	Left Cheek	Ant 2	Reduced	40620	2593	16.68	17.50	1.208	62.9	1.006	0.03	0.341	0.414	
19	LTE Band 41-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	40620	2593	16.75	17.50	1.189	62.9	1.006	0.03	0.460	0.550	
	LTE Band 41C-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	40620+40818	2593+2612.8	16.93	17.50	1.140	62.9	1.006	0.01	0.410	0.470	
	LTE Band 41-HPUE-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	40620	2593	16.75	17.50	1.189	42.9	1.009	0.01	0.320	0.384	
	LTE Band 41-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	39750	2506	16.53	17.50	1.250	62.9	1.006	0.02	0.393	0.494	
	LTE Band 41-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	40185	2549.5	16.57	17.50	1.239	62.9	1.006	-0.09	0.422	0.526	
	LTE Band 41-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	41055	2636.5	16.53	17.50	1.250	62.9	1.006	-0.13	0.411	0.517	
	LTE Band 41-UAT	20M	QPSK	1	0	Left Tilted	Ant 2	Reduced	41490	2680	16.34	17.50	1.306	62.9	1.006	0.05	0.388	0.510	
	LTE Band 41-UAT	20M	QPSK	50	0	Left Tilted	Ant 2	Reduced	40620	2593	16.68	17.50	1.208	62.9	1.006	0.05	0.432	0.525	



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Antenna	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)
	FR1 N66	20M	QPSK	1	1	15KHz	Right Cheek	Ant 1	Full	349000	1745	23.08	24.00	1.236	0.02	0.047	0.058
	FR1 N66	20M	QPSK	50	28	15KHz	Right Cheek	Ant 1	Full	349000	1745	22.90	24.00	1.288	0.05	0.033	0.042
	FR1 N66	20M	QPSK	1	1	15KHz	Right Tilted	Ant 1	Full	349000	1745	23.08	24.00	1.236	-0.01	0.031	0.038
	FR1 N66	20M	QPSK	50	28	15KHz	Right Tilted	Ant 1	Full	349000	1745	22.90	24.00	1.288	0.03	0.023	0.029
	FR1 N66	20M	QPSK	1	1	15KHz	Left Cheek	Ant 1	Full	349000	1745	23.08	24.00	1.236	0.03	0.048	0.059
	FR1 N66	20M	QPSK	50	28	15KHz	Left Cheek	Ant 1	Full	349000	1745	22.90	24.00	1.288	-0.05	0.033	0.043
	FR1 N66	20M	QPSK	1	1	15KHz	Left Tilted	Ant 1	Full	349000	1745	23.08	24.00	1.236	0.15	0.046	0.056
	FR1 N66	20M	QPSK	50	28	15KHz	Left Tilted	Ant 1	Full	349000	1745	22.90	24.00	1.288	0.06	0.030	0.039
	FR1 N66	20M	QPSK	1	1	15KHz	Left Cheek	Ant 1	Full	344000	1720	22.93	24.00	1.279	0.05	0.037	0.047
	FR1 N66	20M	QPSK	1	1	15KHz	Left Cheek	Ant 1	Full	354000	1770	22.89	24.00	1.291	0.08	0.044	0.056
	FR1 N66	20M	QPSK	1	1	15KHz	Right Cheek	Ant 2	Reduced	349000	1745	14.04	14.50	1.112	0.14	0.234	0.260
	FR1 N66	20M	QPSK	50	0	15KHz	Right Cheek	Ant 2	Reduced	349000	1745	13.93	14.50	1.140	0.06	0.166	0.189
	FR1 N66	20M	QPSK	1	1	15KHz	Right Tilted	Ant 2	Reduced	349000	1745	14.04	14.50	1.112	-0.08	0.263	0.292
	FR1 N66	20M	QPSK	50	0	15KHz	Right Tilted	Ant 2	Reduced	349000	1745	13.93	14.50	1.140	0.03	0.226	0.258
	FR1 N66	20M	QPSK	1	1	15KHz	Left Cheek	Ant 2	Reduced	349000	1745	14.04	14.50	1.112	-0.06	0.444	0.494
	FR1 N66	20M	QPSK	50	0	15KHz	Left Cheek	Ant 2	Reduced	349000	1745	13.93	14.50	1.140	0.03	0.382	0.436
23	FR1 N66	20M	QPSK	1	1	15KHz	Left Tilted	Ant 2	Reduced	349000	1745	14.04	14.50	1.112	-0.05	0.489	0.544
	FR1 N66	20M	QPSK	1	1	15KHz	Left Tilted	Ant 2	Reduced	344000	1720	14.03	14.50	1.114	0.08	0.479	0.534
	FR1 N66	20M	QPSK	1	1	15KHz	Left Tilted	Ant 2	Reduced	354000	1770	14.02	14.50	1.117	-0.04	0.439	0.490
	FR1 N66	20M	QPSK	50	0	15KHz	Left Tilted	Ant 2	Reduced	349000	1745	13.93	14.50	1.140	-0.15	0.456	0.520
	FR1 N71	20M	QPSK	1	1	15KHz	Right Cheek	Ant 2	Full	136100	680.5	23.13	24.00	1.222	-0.04	0.265	0.324
	FR1 N71	20M	QPSK	50	28	15KHz	Right Cheek	Ant 2	Full	136100	680.5	22.80	24.00	1.318	0.06	0.255	0.336
	FR1 N71	20M	QPSK	1	1	15KHz	Right Tilted	Ant 2	Full	136100	680.5	23.13	24.00	1.222	-0.04	0.204	0.249
	FR1 N71	20M	QPSK	50	28	15KHz	Right Tilted	Ant 2	Full	136100	680.5	22.80	24.00	1.318	0.03	0.205	0.270
	FR1 N71	20M	QPSK	1	1	15KHz	Left Cheek	Ant 2	Full	136100	680.5	23.13	24.00	1.222	0.02	0.523	0.639
24	FR1 N71	20M	QPSK	50	28	15KHz	Left Cheek	Ant 2	Full	136100	680.5	22.80	24.00	1.318	0.06	0.495	0.653
	FR1 N71	20M	QPSK	1	1	15KHz	Left Tilted	Ant 2	Full	136100	680.5	23.13	24.00	1.222	-0.02	0.430	0.525
	FR1 N71	20M	QPSK	50	28	15KHz	Left Tilted	Ant 2	Full	136100	680.5	22.80	24.00	1.318	0.03	0.490	0.646



<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Antenna	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)
25	WLAN2.4GHz	802.11b 1Mbps	Right Check	3+6	Reduced	1	2412	20.90	21.50	1.148	100	1.000	0.03	0.946	1.086
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	3+6	Reduced	1	2412	20.90	21.50	1.148	100	1.000	0.06	0.650	0.746
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	3+6	Reduced	1	2412	20.90	21.50	1.148	100	1.000	0.01	0.447	0.513
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	3+6	Reduced	1	2412	20.90	21.50	1.148	100	1.000	0.02	0.413	0.474
	WLAN2.4GHz	802.11b 1Mbps	Right Check	3+6	Reduced	6	2437	20.18	21.50	1.355	100	1.000	-0.03	0.796	1.079
	WLAN2.4GHz	802.11b 1Mbps	Right Check	3+6	Reduced	11	2462	20.15	21.50	1.365	100	1.000	0.05	0.783	1.068
	WLAN2.4GHz	802.11b 1Mbps	Right Check	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	0.03	0.323	0.379
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	0.02	0.277	0.325
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	0.05	0.190	0.223
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	0.06	0.178	0.209
	WLAN2.4GHz	802.11b 1Mbps	Right Check	3+6	Simultaneous	6	2437	15.07	16.50	1.390	100	1.000	0.1	0.231	0.321
	WLAN2.4GHz	802.11b 1Mbps	Right Check	3+6	Simultaneous	11	2462	14.92	16.50	1.439	100	1.000	0.03	0.261	0.376

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Antenna	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)
26	Bluetooth	1Mbps	Right Check	Ant 6	Full	39	2441	11.40	12.00	1.148	76.72	1.086	0.07	0.026	0.033
	Bluetooth	1Mbps	Right Check	Ant 6	Full	0	2402	10.22	12.00	1.507	76.72	1.086	0.02	0.017	0.028
	Bluetooth	1Mbps	Right Check	Ant 6	Full	78	2480	10.20	12.00	1.514	76.72	1.086	0.09	0.015	0.025

<WLAN 5G SAR>

Plot No.	Band	Mode	Test Position	Antenna	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	802.11a 6Mbps	Right Check	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.02	0.033	0.038
	WLAN5.3GHz	802.11a 6Mbps	Right Tilted	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.01	0.044	0.051
	WLAN5.3GHz	802.11a 6Mbps	Left Cheek	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.05	0.041	0.048
	WLAN5.3GHz	802.11a 6Mbps	Left Tilted	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.11	0.050	0.058
	WLAN5.3GHz	802.11a 6Mbps	Left Tilted	5+6	Full	52	5260	20.35	21.00	1.161	98.62	1.014	0.09	0.043	0.051
27	WLAN5.3GHz	802.11a 6Mbps	Left Tilted	5+6	Full	64	5320	20.41	21.00	1.146	98.62	1.014	0.01	0.055	0.064
	WLAN5.5GHz	802.11a 6Mbps	Right Check	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.02	0.078	0.094
	WLAN5.5GHz	802.11a 6Mbps	Right Tilted	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	-0.01	0.082	0.098
	WLAN5.5GHz	802.11a 6Mbps	Left Cheek	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.03	0.080	0.096
28	WLAN5.3GHz	802.11a 6Mbps	Left Tilted	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.02	0.169	0.203
	WLAN5.3GHz	802.11a 6Mbps	Left Tilted	5+6	Full	100	5500	20.59	21.50	1.233	98.62	1.014	-0.05	0.076	0.095
	WLAN5.5GHz	802.11a 6Mbps	Left Tilted	5+6	Full	140	5700	20.53	21.50	1.250	98.62	1.014	0.11	0.066	0.084
	WLAN5.8GHz	802.11a 6Mbps	Right Check	5+6	Full	149	5745	20.98	21.50	1.127	98.62	1.014	0.03	0.088	0.101
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	5+6	Full	149	5745	20.98	21.50	1.127	98.62	1.014	0.09	0.130	0.149
	WLAN5.3GHz	802.11a 6Mbps	Left Cheek	5+6	Full	149	5745	20.98	21.50	1.127	98.62	1.014	-0.02	0.063	0.072
	WLAN5.3GHz	802.11a 6Mbps	Left Tilted	5+6	Full	149	5745	20.98	21.50	1.127	98.62	1.014	0.01	0.065	0.074
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	5+6	Full	157	5785	20.55	21.50	1.245	98.62	1.014	-0.12	0.075	0.095
29	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	5+6	Full	165	5825	20.94	21.50	1.138	98.62	1.014	0.05	0.156	0.180



15.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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	5	1	Reduced	189	836.4	28.52	29.00	1.117	0.03	0.622	0.695
	GSM850	GPRS(3 Tx slots)	Back	5	1	Reduced	189	836.4	28.52	29.00	1.117	0.01	0.723	0.807
	GSM850	GPRS(3 Tx slots)	Back	5	1	Reduced	128	824.2	28.38	29.00	1.153	0.01	0.693	0.799
30	GSM850	GPRS(3 Tx slots)	Back	5	1	Reduced	251	848.8	28.05	29.00	1.245	0.02	0.703	0.875
	GSM850	GPRS(3 Tx slots)	Left Side	5	1	Reduced	189	836.4	28.52	29.00	1.117	-0.02	0.246	0.275
	GSM850	GPRS(3 Tx slots)	Right Side	5	1	Reduced	189	836.4	28.52	29.00	1.117	0.12	0.149	0.166
	GSM850	GPRS(3 Tx slots)	Bottom Side	5	1	Reduced	189	836.4	28.52	29.00	1.117	0.03	0.534	0.596
	GSM1900	GPRS(3 Tx slots)	Front	5	1	Reduced	661	1880	23.78	24.00	1.052	0.02	0.607	0.639
	GSM1900	GPRS(3 Tx slots)	Back	5	1	Reduced	661	1880	23.78	24.00	1.052	0.06	0.907	0.954
31	GSM1900	GPRS(3 Tx slots)	Back	5	1	Reduced	512	1850.2	23.30	24.00	1.175	0	0.940	1.104
	GSM1900	GPRS(3 Tx slots)	Back	5	1	Reduced	810	1909.8	23.28	24.00	1.180	0.05	0.816	0.963
	GSM1900	GPRS(3 Tx slots)	Left Side	5	1	Reduced	661	1880	21.56	22.00	1.107	0.06	0.041	0.045
	GSM1900	GPRS(3 Tx slots)	Right Side	5	1	Reduced	661	1880	21.56	22.00	1.107	0.01	0.053	0.059
	GSM1900	GPRS(3 Tx slots)	Bottom Side	5	1	Reduced	661	1880	21.56	22.00	1.107	0.03	0.891	0.986
	GSM1900	GPRS(3 Tx slots)	Bottom Side	5	1	Reduced	512	1850.2	21.23	22.00	1.194	0.05	0.896	1.070
	GSM1900	GPRS(3 Tx slots)	Bottom Side	5	1	Reduced	810	1909.8	21.51	22.00	1.119	0.1	0.955	1.069

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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 II	RMC 12.2Kbps	Front	5	1	Reduced	9400	1880	17.26	17.50	1.057	0.01	0.511	0.540
32	WCDMA II	RMC 12.2Kbps	Back	5	1	Reduced	9400	1880	17.26	17.50	1.057	-0.01	1.120	1.184
	WCDMA II	RMC 12.2Kbps	Back	5	1	Reduced	9262	1852.4	17.15	17.50	1.084	0.03	1.030	1.116
	WCDMA II	RMC 12.2Kbps	Back	5	1	Reduced	9538	1907.6	16.95	17.50	1.135	0.05	1.010	1.146
	WCDMA II	RMC 12.2Kbps	Left Side	5	1	Reduced	9400	1880	15.85	16.00	1.035	0	0.042	0.043
	WCDMA II	RMC 12.2Kbps	Right Side	5	1	Reduced	9400	1880	15.85	16.00	1.035	0.01	0.056	0.058
	WCDMA II	RMC 12.2Kbps	Bottom Side	5	1	Reduced	9400	1880	15.85	16.00	1.035	0.03	1.130	1.170
	WCDMA II	RMC 12.2Kbps	Bottom Side	5	1	Reduced	9262	1852.4	15.60	16.00	1.096	0.03	1.050	1.151
	WCDMA II	RMC 12.2Kbps	Bottom Side	5	1	Reduced	9538	1907.6	15.57	16.00	1.104	0.02	1.055	1.165
	WCDMA IV	RMC 12.2Kbps	Front	5	1	Reduced	1413	1732.6	18.21	18.50	1.069	0.06	0.669	0.715
	WCDMA IV	RMC 12.2Kbps	Back	5	1	Reduced	1413	1732.6	18.21	18.50	1.069	0.01	0.969	1.036
	WCDMA IV	RMC 12.2Kbps	Back	5	1	Reduced	1312	1712.4	18.16	18.50	1.081	0.05	0.879	0.951
33	WCDMA IV	RMC 12.2Kbps	Back	5	1	Reduced	1513	1752.6	18.13	18.50	1.089	0.06	1.090	1.187
	WCDMA IV	RMC 12.2Kbps	Left Side	5	1	Reduced	1413	1732.6	16.29	16.50	1.050	0.01	0.035	0.037
	WCDMA IV	RMC 12.2Kbps	Right Side	5	1	Reduced	1413	1732.6	16.29	16.50	1.050	0.03	0.059	0.062
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5	1	Reduced	1413	1732.6	16.29	16.50	1.050	0.05	0.840	0.882
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5	1	Reduced	1312	1712.4	16.21	16.50	1.069	0.01	0.795	0.850
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5	1	Reduced	1513	1752.6	16.27	16.50	1.054	0.08	1.120	1.181
	WCDMA V	RMC 12.2Kbps	Front	5	1	Full	4182	836.4	23.52	24.00	1.117	0.01	0.417	0.466
	WCDMA V	RMC 12.2Kbps	Back	5	1	Full	4182	836.4	23.52	24.00	1.117	0.03	0.827	0.924
	WCDMA V	RMC 12.2Kbps	Back	5	1	Full	4132	826.4	23.32	24.00	1.169	0.01	0.718	0.840
34	WCDMA V	RMC 12.2Kbps	Back	5	1	Full	4233	846.6	23.16	24.00	1.213	0.01	0.949	1.152
	WCDMA V	RMC 12.2Kbps	Left Side	5	1	Full	4182	836.4	23.52	24.00	1.117	0.06	0.320	0.357
	WCDMA V	RMC 12.2Kbps	Right Side	5	1	Full	4182	836.4	23.52	24.00	1.117	0.01	0.356	0.398
	WCDMA V	RMC 12.2Kbps	Bottom Side	5	1	Full	4182	836.4	23.52	24.00	1.117	0.05	0.757	0.845
	WCDMA V	RMC 12.2Kbps	Bottom Side	5	1	Full	4132	826.4	23.32	24.00	1.169	0.03	0.666	0.779
	WCDMA V	RMC 12.2Kbps	Bottom Side	5	1	Full	4233	846.6	23.16	24.00	1.213	0.01	0.881	1.069



<CDMA2000 SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0	RTAP 153.6Kbps	Front	5	1	Full	384	836.52	24.17	25.00	1.211	0.03	0.418	0.506
	CDMA BC0	RTAP 153.6Kbps	Back	5	1	Full	384	836.52	24.17	25.00	1.211	0.05	0.699	0.846
35	CDMA BC0	RTAP 153.6Kbps	Back	5	1	Full	1013	824.7	24.15	25.00	1.216	0.05	0.972	1.182
	CDMA BC0	RTAP 153.6Kbps	Back	5	1	Full	777	848.31	24.08	25.00	1.236	0.01	0.783	0.968
	CDMA BC0	RTAP 153.6Kbps	Left Side	5	1	Full	384	836.52	24.17	25.00	1.211	0.06	0.215	0.260
	CDMA BC0	RTAP 153.6Kbps	Right Side	5	1	Full	384	836.52	24.17	25.00	1.211	0.01	0.266	0.322
	CDMA BC0	RTAP 153.6Kbps	Bottom Side	5	1	Full	384	836.52	24.17	25.00	1.211	0.03	0.677	0.820
	CDMA BC0	RTAP 153.6Kbps	Bottom Side	5	1	Full	1013	824.7	24.15	25.00	1.216	0.03	0.532	0.647
	CDMA BC0	RTAP 153.6Kbps	Bottom Side	5	1	Full	777	848.31	24.08	25.00	1.236	0.01	0.670	0.828
	CDMA BC10	RTAP 153.6Kbps	Front	5	1	Full	580	820.5	24.29	25.00	1.178	0.01	0.556	0.655
	CDMA BC10	RTAP 153.6Kbps	Back	5	1	Full	580	820.5	24.29	25.00	1.178	0.02	0.904	1.065
	CDMA BC10	RTAP 153.6Kbps	Back	5	1	Full	476	817.9	24.28	25.00	1.180	0.03	0.893	1.054
36	CDMA BC10	RTAP 153.6Kbps	Back	5	1	Full	684	823.1	24.23	25.00	1.194	-0.07	0.999	1.193
	CDMA BC10	RTAP 153.6Kbps	Left Side	5	1	Full	580	820.5	24.29	25.00	1.178	0.01	0.216	0.254
	CDMA BC10	RTAP 153.6Kbps	Right Side	5	1	Full	580	820.5	24.29	25.00	1.178	0.05	0.404	0.476
	CDMA BC10	RTAP 153.6Kbps	Bottom Side	5	1	Full	580	820.5	24.29	25.00	1.178	0.06	0.883	1.040
	CDMA BC10	RTAP 153.6Kbps	Bottom Side	5	1	Full	476	817.9	24.28	25.00	1.180	0.01	0.761	0.898
	CDMA BC10	RTAP 153.6Kbps	Bottom Side	5	1	Full	684	823.1	24.23	25.00	1.194	0.05	0.902	1.077
	CDMA BC1	RTAP 153.6Kbps	Front	5	1	Reduced	1175	1908.75	15.62	16.50	1.225	0.05	0.246	0.301
	CDMA BC1	RTAP 153.6Kbps	Back	5	1	Reduced	1175	1908.75	15.62	16.50	1.225	0.06	0.523	0.640
	CDMA BC1	RTAP 153.6Kbps	Left Side	5	1	Reduced	1175	1908.75	15.62	16.50	1.225	0	0.036	0.044
	CDMA BC1	RTAP 153.6Kbps	Right Side	5	1	Reduced	1175	1908.75	15.62	16.50	1.225	0	0.077	0.094
	CDMA BC1	RTAP 153.6Kbps	Bottom Side	5	1	Reduced	1175	1908.75	15.62	16.50	1.225	0.08	0.877	1.074
	CDMA BC1	RTAP 153.6Kbps	Bottom Side	5	1	Reduced	25	1851.25	15.58	16.50	1.236	0	0.907	1.121
37	CDMA BC1	RTAP 153.6Kbps	Bottom Side	5	1	Reduced	600	1880	15.61	16.50	1.227	0.06	0.955	1.172



<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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 17	10M	QPSK	1	0	Front	5	1	Full	23790	710	23.27	24.00	1.183	0.02	0.433	0.512
	LTE Band 17	10M	QPSK	25	0	Front	5	1	Full	23790	710	22.27	23.00	1.183	0.03	0.190	0.225
38	LTE Band 17	10M	QPSK	1	0	Back	5	1	Full	23790	710	23.27	24.00	1.183	0.06	0.710	0.840
	LTE Band 17	10M	QPSK	25	0	Back	5	1	Full	23790	710	22.27	23.00	1.183	0.01	0.343	0.406
	LTE Band 17	10M	QPSK	50	0	Back	5	1	Full	23790	710	22.25	23.00	1.189	0.03	0.320	0.380
	LTE Band 17	10M	QPSK	1	0	Left Side	5	1	Full	23790	710	23.27	24.00	1.183	0.01	0.265	0.314
	LTE Band 17	10M	QPSK	25	0	Left Side	5	1	Full	23790	710	22.27	23.00	1.183	0.05	0.144	0.170
	LTE Band 17	10M	QPSK	1	0	Right Side	5	1	Full	23790	710	23.27	24.00	1.183	0.03	0.246	0.291
	LTE Band 17	10M	QPSK	25	0	Right Side	5	1	Full	23790	710	22.27	23.00	1.183	0.01	0.143	0.169
	LTE Band 17	10M	QPSK	1	0	Bottom Side	5	1	Full	23790	710	23.27	24.00	1.183	0.03	0.428	0.506
	LTE Band 17	10M	QPSK	25	0	Bottom Side	5	1	Full	23790	710	22.27	23.00	1.183	0.01	0.259	0.306
	LTE Band 12-LAT	10M	QPSK	1	0	Front	5	1	Reduced	23095	707.5	22.16	22.50	1.081	-0.03	0.302	0.327
	LTE Band 12-LAT	10M	QPSK	25	0	Front	5	1	Reduced	23095	707.5	21.93	22.50	1.140	-0.01	0.216	0.246
	LTE Band 12-LAT	10M	QPSK	1	0	Back	5	1	Reduced	23095	707.5	22.16	22.50	1.081	0.02	0.539	0.583
	LTE Band 12-LAT	10M	QPSK	25	0	Back	5	1	Reduced	23095	707.5	21.93	22.50	1.140	-0.06	0.382	0.436
	LTE Band 12-LAT	10M	QPSK	1	0	Left Side	5	1	Reduced	23095	707.5	22.16	22.50	1.081	0.05	0.181	0.196
	LTE Band 12-LAT	10M	QPSK	25	0	Left Side	5	1	Reduced	23095	707.5	21.93	22.50	1.140	0.07	0.123	0.140
	LTE Band 12-LAT	10M	QPSK	1	0	Right Side	5	1	Reduced	23095	707.5	22.16	22.50	1.081	0.11	0.174	0.188
	LTE Band 12-LAT	10M	QPSK	25	0	Right Side	5	1	Reduced	23095	707.5	21.93	22.50	1.140	0.03	0.126	0.144
	LTE Band 12-LAT	10M	QPSK	1	0	Bottom Side	5	1	Reduced	23095	707.5	22.16	22.50	1.081	0.01	0.394	0.426
	LTE Band 12-LAT	10M	QPSK	25	0	Bottom Side	5	1	Reduced	23095	707.5	21.93	22.50	1.140	0.03	0.282	0.322
	LTE Band 12-UAT	10M	QPSK	1	0	Front	5	2	Full	23095	707.5	22.49	23.50	1.262	-0.04	0.286	0.361
	LTE Band 12-UAT	10M	QPSK	25	0	Front	5	2	Full	23095	707.5	21.34	22.50	1.306	-0.06	0.170	0.222
	LTE Band 12-UAT	10M	QPSK	1	0	Back	5	2	Full	23095	707.5	22.49	23.50	1.262	0.03	0.174	0.220
	LTE Band 12-UAT	10M	QPSK	25	0	Back	5	2	Full	23095	707.5	21.34	22.50	1.306	0.01	0.144	0.188
	LTE Band 12-UAT	10M	QPSK	1	0	Right Side	5	2	Full	23095	707.5	22.49	23.50	1.262	0.01	0.232	0.293
	LTE Band 12-UAT	10M	QPSK	25	0	Right Side	5	2	Full	23095	707.5	21.34	22.50	1.306	0.03	0.129	0.168
	LTE Band 12-UAT	10M	QPSK	1	0	Top Side	5	2	Full	23095	707.5	22.49	25.00	1.782	0.01	0.317	0.565
	LTE Band 12-UAT	10M	QPSK	25	0	Top Side	5	2	Full	23095	707.5	21.34	22.50	1.306	0.01	0.162	0.212
	LTE Band 13	10M	QPSK	1	0	Front	5	1	Full	23230	782	22.95	24.00	1.274	0.09	0.420	0.535
	LTE Band 13	10M	QPSK	25	0	Front	5	1	Full	23230	782	21.91	23.00	1.285	0.04	0.256	0.329
39	LTE Band 13	10M	QPSK	1	0	Back	5	1	Full	23230	782	22.95	24.00	1.274	0.06	0.748	0.953
	LTE Band 13	10M	QPSK	25	0	Back	5	1	Full	23230	782	21.91	23.00	1.285	0.05	0.419	0.539
	LTE Band 13	10M	QPSK	50	0	Back	5	1	Full	23230	782	21.59	23.00	1.384	0.04	0.442	0.612
	LTE Band 13	10M	QPSK	1	0	Left Side	5	1	Full	23230	782	22.95	24.00	1.274	0.06	0.220	0.280
	LTE Band 13	10M	QPSK	25	0	Left Side	5	1	Full	23230	782	21.91	23.00	1.285	0.08	0.131	0.168
	LTE Band 13	10M	QPSK	1	0	Right Side	5	1	Full	23230	782	22.95	24.00	1.274	0.03	0.297	0.378
	LTE Band 13	10M	QPSK	25	0	Right Side	5	1	Full	23230	782	21.91	23.00	1.285	0.04	0.181	0.233
	LTE Band 13	10M	QPSK	1	0	Bottom Side	5	1	Full	23230	782	22.95	24.00	1.274	0.05	0.332	0.423
	LTE Band 13	10M	QPSK	25	0	Bottom Side	5	1	Full	23230	782	21.91	23.00	1.285	0.03	0.273	0.351



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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 66-LAT	20M	QPSK	1	0	Front	5	1	Reduced	132322	1745	14.73	15.50	1.194	-0.03	0.301	0.359
	LTE Band 66-LAT	20M	QPSK	50	0	Front	5	1	Reduced	132322	1745	14.65	15.50	1.216	0.01	0.322	0.392
	LTE Band 66-LAT	20M	QPSK	1	0	Back	5	1	Reduced	132322	1745	14.73	15.50	1.194	0.08	0.483	0.577
	LTE Band 66-LAT	20M	QPSK	50	0	Back	5	1	Reduced	132322	1745	14.65	15.50	1.216	0.06	0.487	0.592
	LTE Band 66-LAT	20M	QPSK	50	0	Back	5	1	Reduced	132072	1720	14.41	15.50	1.285	0.02	0.460	0.591
	LTE Band 66-LAT	20M	QPSK	50	0	Back	5	1	Reduced	132572	1770	14.34	15.50	1.306	0.03	0.441	0.576
	LTE Band 66-LAT	20M	QPSK	1	0	Left Side	5	1	Reduced	132322	1745	12.72	13.50	1.197	0.01	0.023	0.028
	LTE Band 66-LAT	20M	QPSK	50	0	Left Side	5	1	Reduced	132322	1745	12.71	13.50	1.199	0.03	0.031	0.037
	LTE Band 66-LAT	20M	QPSK	1	0	Right Side	5	1	Reduced	132322	1745	12.72	13.50	1.197	0.05	0.053	0.063
	LTE Band 66-LAT	20M	QPSK	50	0	Right Side	5	1	Reduced	132322	1745	12.71	13.50	1.199	0.01	0.051	0.061
	LTE Band 66-LAT	20M	QPSK	1	0	Bottom Side	5	1	Reduced	132322	1745	12.72	13.50	1.197	0.08	0.459	0.549
	LTE Band 66-LAT	20M	QPSK	50	0	Bottom Side	5	1	Reduced	132322	1745	12.71	13.50	1.199	0.03	0.491	0.589
	LTE Band 66-UAT	20M	QPSK	1	0	Front	5	2	Reduced	132322	1745	14.55	15.50	1.245	0.09	0.445	0.554
45	LTE Band 66-UAT	20M	QPSK	50	0	Front	5	2	Reduced	132322	1745	14.54	15.50	1.247	0.01	0.475	0.593
	LTE Band 66-UAT	20M	QPSK	50	0	Front	5	2	Reduced	132072	1720	14.14	15.50	1.368	0.02	0.423	0.579
	LTE Band 66-UAT	20M	QPSK	50	0	Front	5	2	Reduced	132572	1770	14.12	15.50	1.374	0.05	0.399	0.548
	LTE Band 66-UAT	20M	QPSK	1	0	Back	5	2	Reduced	132322	1745	14.55	15.50	1.245	0.06	0.369	0.459
	LTE Band 66-UAT	20M	QPSK	50	0	Back	5	2	Reduced	132322	1745	14.54	15.50	1.247	0.01	0.403	0.503
	LTE Band 66-UAT	20M	QPSK	1	0	Right Side	5	2	Reduced	132322	1745	12.58	13.50	1.236	0.06	0.061	0.075
	LTE Band 66-UAT	20M	QPSK	50	0	Right Side	5	2	Reduced	132322	1745	12.43	13.50	1.279	0.05	0.060	0.077
	LTE Band 66-UAT	20M	QPSK	1	0	Top Side	5	2	Reduced	132322	1745	12.58	13.50	1.236	0.01	0.349	0.431
	LTE Band 66-UAT	20M	QPSK	50	0	Top Side	5	2	Reduced	132322	1745	12.43	13.50	1.279	0.08	0.460	0.589
	LTE Band 7	20M	QPSK	1	0	Front	5	1	Reduced	21100	2535	12.60	13.50	1.230	0.03	0.176	0.217
	LTE Band 7	20M	QPSK	50	0	Front	5	1	Reduced	21100	2535	12.57	13.50	1.239	0.01	0.165	0.204
	LTE Band 7	20M	QPSK	1	0	Back	5	1	Reduced	21100	2535	12.60	13.50	1.230	0.05	0.426	0.524
46	LTE Band 7	20M	QPSK	50	0	Back	5	1	Reduced	21100	2535	12.57	13.50	1.239	0.01	0.438	0.543
	LTE Band 7	20M	QPSK	50	0	Back	5	1	Reduced	20850	2510	12.50	13.50	1.259	0.01	0.411	0.517
	LTE Band 7	20M	QPSK	50	0	Back	5	1	Reduced	21350	2560	12.47	13.50	1.268	0.01	0.399	0.506
	LTE Band 7	20M	QPSK	1	0	Left Side	5	1	Reduced	21100	2535	10.14	11.00	1.219	0.01	0.006	0.007
	LTE Band 7	20M	QPSK	50	0	Left Side	5	1	Reduced	21100	2535	10.05	11.00	1.245	0.03	0.007	0.009
	LTE Band 7	20M	QPSK	1	0	Right Side	5	1	Reduced	21100	2535	10.14	11.00	1.219	0.05	0.082	0.100
	LTE Band 7	20M	QPSK	50	0	Right Side	5	1	Reduced	21100	2535	10.05	11.00	1.245	0.01	0.079	0.098
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5	1	Reduced	21100	2535	10.14	11.00	1.219	0.05	0.412	0.502
	LTE Band 7	20M	QPSK	50	0	Bottom Side	5	1	Reduced	21100	2535	10.05	11.00	1.245	0.01	0.423	0.526



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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 30-LAT	10M	QPSK	1	0	Front	5	1	Reduced	27710	2310	14.31	14.50	1.045	0.01	0.259	0.271
	LTE Band 30-LAT	10M	QPSK	25	0	Front	5	1	Reduced	27710	2310	13.90	14.50	1.148	0.05	0.258	0.296
47	LTE Band 30-LAT	10M	QPSK	1	0	Back	5	1	Reduced	27710	2310	14.31	14.50	1.045	0.03	0.628	0.656
	LTE Band 30-LAT	10M	QPSK	25	0	Back	5	1	Reduced	27710	2310	13.90	14.50	1.148	0.01	0.560	0.643
	LTE Band 30-LAT	10M	QPSK	1	0	Left Side	5	1	Reduced	27710	2310	12.33	12.50	1.040	0.06	0.000	0.000
	LTE Band 30-LAT	10M	QPSK	25	0	Left Side	5	1	Reduced	27710	2310	12.22	12.50	1.067	0.01	0.000	0.000
	LTE Band 30-LAT	10M	QPSK	1	0	Right Side	5	1	Reduced	27710	2310	12.33	12.50	1.040	0.05	0.127	0.132
	LTE Band 30-LAT	10M	QPSK	25	0	Right Side	5	1	Reduced	27710	2310	12.22	12.50	1.067	0.03	0.126	0.134
	LTE Band 30-LAT	10M	QPSK	1	0	Bottom Side	5	1	Reduced	27710	2310	12.33	12.50	1.040	0.01	0.588	0.611
	LTE Band 30-LAT	10M	QPSK	25	0	Bottom Side	5	1	Reduced	27710	2310	12.22	12.50	1.067	0.03	0.593	0.632
	LTE Band 30-UAT	10M	QPSK	1	0	Front	5	2	Reduced	27710	2310	18.93	20.00	1.279	-0.09	0.426	0.545
	LTE Band 30-UAT	10M	QPSK	25	0	Front	5	2	Reduced	27710	2310	18.88	20.00	1.294	-0.07	0.460	0.595
	LTE Band 30-UAT	10M	QPSK	1	0	Back	5	2	Reduced	27710	2310	18.93	20.00	1.279	0.01	0.396	0.507
	LTE Band 30-UAT	10M	QPSK	25	0	Back	5	2	Reduced	27710	2310	18.88	20.00	1.294	0.03	0.395	0.511
	LTE Band 30-UAT	10M	QPSK	1	0	Right Side	5	2	Reduced	27710	2310	16.10	17.00	1.230	0.01	0.061	0.075
	LTE Band 30-UAT	10M	QPSK	25	0	Right Side	5	2	Reduced	27710	2310	15.82	17.00	1.312	0.03	0.062	0.081
	LTE Band 30-UAT	10M	QPSK	1	0	Top Side	5	2	Reduced	27710	2310	16.10	17.00	1.230	0.12	0.425	0.523
	LTE Band 30-UAT	10M	QPSK	25	0	Top Side	5	2	Reduced	27710	2310	15.82	17.00	1.312	0.01	0.373	0.489



<TDD LTE SAR>

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Antenna, 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). Rows include LTE Band 41, LTE Band 41C, and EN-DC configurations.



	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	5	2	Reduced	40620	2593	17.14	18.00	1.219	62.9	1.006	0.04	0.446	0.547
	LTE Band 41 HPUE-UAT	20M	QPSK	1	0	Top Side	5	2	Reduced	40620	2593	17.14	18.00	1.219	42.9	1.009	0.02	0.312	0.384
	LTE Band 41-UAT	20M	QPSK	50	0	Top Side	5	2	Reduced	40620	2593	17.10	18.00	1.230	62.9	1.006	0.06	0.407	0.504
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	5	2	Reduced	39750	2506	17.09	18.00	1.233	62.9	1.006	0.02	0.398	0.494
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	5	2	Reduced	40185	2549.5	17.09	18.00	1.233	62.9	1.006	0.05	0.395	0.490
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	5	2	Reduced	41055	2636.5	17.11	18.00	1.227	62.9	1.006	0.01	0.411	0.508
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	5	2	Reduced	41490	2680	17.06	18.00	1.242	62.9	1.006	-0.06	0.423	0.528

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)
	FR1 N5	20M	QPSK	1	1	15KHz	Front	5	1	Reduced	167300	836.5	22.48	22.50	1.005	-0.11	0.327	0.329
	FR1 N5	20M	QPSK	50	28	15KHz	Front	5	1	Reduced	167300	836.5	22.38	22.50	1.028	0.05	0.355	0.365
	FR1 N5	20M	QPSK	1	1	15KHz	Back	5	1	Reduced	167300	836.5	22.48	22.50	1.005	0.09	0.585	0.588
49	FR1 N5	20M	QPSK	50	28	15KHz	Back	5	1	Reduced	167300	836.5	22.38	22.50	1.028	0.02	0.579	0.595
	FR1 N5	20M	QPSK	1	1	15KHz	Left Side	5	1	Reduced	167300	836.5	22.48	22.50	1.005	0.03	0.181	0.182
	FR1 N5	20M	QPSK	50	28	15KHz	Left Side	5	1	Reduced	167300	836.5	22.38	22.50	1.028	0.02	0.143	0.147
	FR1 N5	20M	QPSK	1	1	15KHz	Right Side	5	1	Reduced	167300	836.5	22.48	22.50	1.005	0.05	0.356	0.358
	FR1 N5	20M	QPSK	50	28	15KHz	Right Side	5	1	Reduced	167300	836.5	22.38	22.50	1.028	0.01	0.311	0.320
	FR1 N5	20M	QPSK	1	1	15KHz	Bottom Side	5	1	Reduced	167300	836.5	22.48	22.50	1.005	-0.06	0.522	0.524
	FR1 N5	20M	QPSK	50	28	15KHz	Bottom Side	5	1	Reduced	167300	836.5	22.38	22.50	1.028	0.08	0.445	0.457
	FR1 N5	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	167300	836.5	23.03	23.50	1.114	-0.18	0.498	0.555
	FR1 N5	20M	QPSK	50	28	15KHz	Front	5	2	Reduced	167300	836.5	22.75	23.50	1.189	-0.09	0.380	0.452
	FR1 N5	20M	QPSK	1	1	15KHz	Back	5	2	Reduced	167300	836.5	23.03	23.50	1.114	-0.12	0.388	0.432
	FR1 N5	20M	QPSK	50	28	15KHz	Back	5	2	Reduced	167300	836.5	22.75	23.50	1.189	-0.18	0.295	0.351
	FR1 N5	20M	QPSK	1	1	15KHz	Right Side	5	2	Reduced	167300	836.5	23.03	23.50	1.114	0.15	0.501	0.558
	FR1 N5	20M	QPSK	50	28	15KHz	Right Side	5	2	Reduced	167300	836.5	22.75	23.50	1.189	0.02	0.316	0.376
	FR1 N5	20M	QPSK	1	1	15KHz	Top Side	5	2	Reduced	167300	836.5	23.03	23.50	1.114	-0.08	0.516	0.575
	FR1 N5	20M	QPSK	50	28	15KHz	Top Side	5	2	Reduced	167300	836.5	22.75	23.50	1.189	0.1	0.499	0.593
	FR1 N2	20M	QPSK	1	53	15KHz	Front	5	1	Reduced	376500	1882.5	15.91	16.50	1.146	0.07	0.299	0.343
	FR1 N2	20M	QPSK	50	28	15KHz	Front	5	1	Reduced	376500	1882.5	15.85	16.50	1.161	0.05	0.238	0.276
50	FR1 N2	20M	QPSK	1	53	15KHz	Back	5	1	Reduced	376500	1882.5	15.91	16.50	1.146	-0.04	0.521	0.597
	FR1 N2	20M	QPSK	1	53	15KHz	Back	5	1	Reduced	372000	1860	15.64	16.50	1.219	0.02	0.469	0.572
	FR1 N2	20M	QPSK	1	53	15KHz	Back	5	1	Reduced	381000	1905	15.57	16.50	1.239	-0.05	0.451	0.559
	FR1 N2	20M	QPSK	50	28	15KHz	Back	5	1	Reduced	376500	1882.5	15.85	16.50	1.161	0.04	0.470	0.546
	FR1 N2	20M	QPSK	1	53	15KHz	Left Side	5	1	Reduced	376500	1882.5	13.88	14.50	1.153	0.05	0.104	0.120
	FR1 N2	20M	QPSK	50	28	15KHz	Left Side	5	1	Reduced	376500	1882.5	13.85	14.50	1.161	0.01	0.065	0.075
	FR1 N2	20M	QPSK	1	53	15KHz	Right Side	5	1	Reduced	376500	1882.5	13.88	14.50	1.153	0.03	0.213	0.246
	FR1 N2	20M	QPSK	50	28	15KHz	Right Side	5	1	Reduced	376500	1882.5	13.85	14.50	1.161	0.02	0.188	0.218
	FR1 N2	20M	QPSK	1	53	15KHz	Bottom Side	5	1	Reduced	376500	1882.5	13.88	14.50	1.153	0.09	0.418	0.482
	FR1 N2	20M	QPSK	50	28	15KHz	Bottom Side	5	1	Reduced	376500	1882.5	13.85	14.50	1.161	0.01	0.374	0.434
	FR1 N25	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	376500	1882.5	16.97	17.50	1.130	-0.08	0.493	0.557
	FR1 N25	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	372000	1860	16.80	17.50	1.175	0.02	0.456	0.536
	FR1 N25	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	381000	1905	16.80	17.50	1.175	-0.01	0.461	0.542
	FR1 N25	20M	QPSK	50	28	15KHz	Front	5	2	Reduced	376500	1882.5	16.86	17.50	1.159	0.04	0.480	0.556
	FR1 N25	20M	QPSK	1	1	15KHz	Back	5	2	Reduced	376500	1882.5	16.97	17.50	1.130	-0.02	0.466	0.526
	FR1 N25	20M	QPSK	50	28	15KHz	Back	5	2	Reduced	376500	1882.5	16.86	17.50	1.159	0.08	0.462	0.535
	FR1 N25	20M	QPSK	1	1	15KHz	Right Side	5	2	Reduced	376500	1882.5	14.36	15.00	1.159	0.02	0.497	0.576
	FR1 N25	20M	QPSK	1	1	15KHz	Right Side	5	2	Reduced	372000	1860	14.20	15.00	1.202	-0.05	0.471	0.566
	FR1 N25	20M	QPSK	1	1	15KHz	Right Side	5	2	Reduced	381000	1905	14.21	15.00	1.199	0.08	0.460	0.552
	FR1 N25	20M	QPSK	50	28	15KHz	Right Side	5	2	Reduced	376500	1882.5	14.23	15.00	1.194	0.01	0.404	0.482
	FR1 N25	20M	QPSK	1	1	15KHz	Top Side	5	2	Reduced	376500	1882.5	14.36	15.00	1.159	-0.05	0.482	0.559
	FR1 N25	20M	QPSK	50	28	15KHz	Top Side	5	2	Reduced	376500	1882.5	14.23	15.00	1.194	-0.07	0.481	0.574



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)
	FR1 N41/HPUE	100M	QPSK	1	1	30KHz	Front	5	1	Reduced	518598	2592.99	17.58	18.00	1.102	0.01	0.139	0.153
	FR1 N41/HPUE	100M	QPSK	135	0	30KHz	Front	5	1	Reduced	518598	2592.99	17.36	18.00	1.159	0.04	0.157	0.182
	FR1 N41/HPUE	100M	QPSK	1	1	30KHz	Back	5	1	Reduced	518598	2592.99	17.58	18.00	1.102	0.06	0.338	0.372
51	FR1 N41/HPUE	100M	QPSK	135	0	30KHz	Back	5	1	Reduced	518598	2592.99	17.36	18.00	1.159	0.03	0.399	0.462
	FR1 N41/HPUE	100M	QPSK	135	0	30KHz	Back	5	1	Reduced	509202	2546.01	17.03	18.00	1.250	0.05	0.366	0.458
	FR1 N41/HPUE	100M	QPSK	135	0	30KHz	Back	5	1	Reduced	528000	2640	17.14	18.00	1.219	0.03	0.328	0.400
	FR1 N41/HPUE	100M	QPSK	1	1	30KHz	Left Side	5	1	Reduced	518598	2592.99	15.68	16.00	1.076	0.02	0.028	0.030
	FR1 N41/HPUE	100M	QPSK	135	0	30KHz	Left Side	5	1	Reduced	518598	2592.99	15.66	16.00	1.081	0.05	0.031	0.034
	FR1 N41/HPUE	100M	QPSK	1	1	30KHz	Right Side	5	1	Reduced	518598	2592.99	15.68	16.00	1.076	0.01	0.400	0.431
	FR1 N41/HPUE	100M	QPSK	135	0	30KHz	Right Side	5	1	Reduced	518598	2592.99	15.66	16.00	1.081	0.03	0.414	0.448
	FR1 N41/HPUE	100M	QPSK	1	1	30KHz	Bottom Side	5	1	Reduced	518598	2592.99	15.68	16.00	1.076	-0.05	0.365	0.393
	FR1 N41/HPUE	100M	QPSK	135	0	30KHz	Bottom Side	5	1	Reduced	518598	2592.99	15.66	16.00	1.081	0.07	0.315	0.341
	FR1 N41/HPUE	100M	QPSK	1	1	30KHz	Bottom Side	5	1	Reduced	509202	2546.01	15.68	16.00	1.076	0.03	0.326	0.351
	FR1 N41/HPUE	100M	QPSK	1	1	30KHz	Bottom Side	5	1	Reduced	528000	2640	15.66	16.00	1.081	0.01	0.352	0.381
	FR1 N66	20M	QPSK	1	1	15KHz	Front	5	1	Reduced	349000	1745	17.94	19.00	1.276	0.09	0.355	0.453
	FR1 N66	20M	QPSK	50	0	15KHz	Front	5	1	Reduced	349000	1745	17.77	19.00	1.327	0.02	0.349	0.463
52	FR1 N66	20M	QPSK	1	1	15KHz	Back	5	1	Reduced	349000	1745	17.94	19.00	1.276	0.06	0.461	0.588
	FR1 N66	20M	QPSK	1	1	15KHz	Back	5	1	Reduced	346000	1730	17.88	19.00	1.294	0.06	0.426	0.551
	FR1 N66	20M	QPSK	1	1	15KHz	Back	5	1	Reduced	352000	1760	17.86	19.00	1.300	0.06	0.435	0.566
	FR1 N66	20M	QPSK	50	0	15KHz	Back	5	1	Reduced	349000	1745	17.77	19.00	1.327	0.04	0.441	0.585
	FR1 N66	20M	QPSK	1	0	15KHz	Left Side	5	1	Reduced	349000	1745	16.68	17.50	1.208	0.01	0.027	0.033
	FR1 N66	20M	QPSK	50	0	15KHz	Left Side	5	1	Reduced	349000	1745	16.38	17.50	1.294	0.02	0.027	0.034
	FR1 N66	20M	QPSK	1	0	15KHz	Right Side	5	1	Reduced	349000	1745	16.68	17.50	1.208	0.05	0.042	0.051
	FR1 N66	20M	QPSK	50	0	15KHz	Right Side	5	1	Reduced	349000	1745	16.38	17.50	1.294	0.01	0.013	0.017
	FR1 N66	20M	QPSK	1	0	15KHz	Bottom Side	5	1	Reduced	349000	1745	16.68	17.50	1.208	0.12	0.449	0.542
	FR1 N66	20M	QPSK	50	0	15KHz	Bottom Side	5	1	Reduced	349000	1745	16.38	17.50	1.294	0.01	0.452	0.585
	FR1 N66	20M	QPSK	50	0	15KHz	Bottom Side	5	1	Reduced	346000	1730	16.33	17.50	1.309	-0.14	0.444	0.581
	FR1 N66	20M	QPSK	50	0	15KHz	Bottom Side	5	1	Reduced	352000	1760	16.35	17.50	1.303	-0.02	0.439	0.572
	FR1 N66	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	349000	1745	17.59	18.00	1.099	0.02	0.467	0.513
	FR1 N66	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	344000	1720	17.54	18.00	1.112	-0.05	0.426	0.474
	FR1 N66	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	354000	1770	17.55	18.00	1.109	0.01	0.439	0.487
	FR1 N66	20M	QPSK	50	0	15KHz	Front	5	2	Reduced	349000	1745	17.44	18.00	1.138	0.03	0.432	0.491
	FR1 N66	20M	QPSK	1	1	15KHz	Back	5	2	Reduced	349000	1745	17.59	18.00	1.099	0.02	0.458	0.503
	FR1 N66	20M	QPSK	50	0	15KHz	Back	5	2	Reduced	349000	1745	17.44	18.00	1.138	0.05	0.415	0.472
	FR1 N66	20M	QPSK	1	1	15KHz	Right Side	5	2	Reduced	349000	1745	15.71	16.00	1.069	-0.02	0.506	0.541
	FR1 N66	20M	QPSK	1	1	15KHz	Right Side	5	2	Reduced	344000	1720	15.68	16.00	1.076	0.09	0.481	0.518
	FR1 N66	20M	QPSK	1	1	15KHz	Right Side	5	2	Reduced	354000	1770	15.67	16.00	1.079	0.01	0.469	0.506
	FR1 N66	20M	QPSK	50	0	15KHz	Right Side	5	2	Reduced	349000	1745	15.58	16.00	1.102	0.03	0.378	0.416
	FR1 N66	20M	QPSK	1	1	15KHz	Top Side	5	2	Reduced	349000	1745	15.71	16.00	1.069	0.04	0.467	0.499
	FR1 N66	20M	QPSK	50	0	15KHz	Top Side	5	2	Reduced	349000	1745	15.58	16.00	1.102	0.04	0.455	0.501



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)
	FR1 N71	20M	QPSK	1	1	15KHz	Front	5	2	Full	136100	680.5	23.13	24.00	1.222	-0.07	0.147	0.180
	FR1 N71	20M	QPSK	50	28	15KHz	Front	5	2	Full	136100	680.5	22.80	24.00	1.318	0.06	0.140	0.185
	FR1 N71	20M	QPSK	1	1	15KHz	Back	5	2	Full	136100	680.5	23.13	24.00	1.222	0.14	0.151	0.184
	FR1 N71	20M	QPSK	50	28	15KHz	Back	5	2	Full	136100	680.5	22.80	24.00	1.318	0.03	0.108	0.142
	FR1 N71	20M	QPSK	1	1	15KHz	Left Side	5	2	Full	136100	680.5	23.13	24.00	1.222	0.07	0.062	0.076
	FR1 N71	20M	QPSK	50	28	15KHz	Left Side	5	2	Full	136100	680.5	22.80	24.00	1.318	0.06	0.039	0.052
	FR1 N71	20M	QPSK	1	1	15KHz	Right Side	5	2	Full	136100	680.5	23.13	24.00	1.222	0.02	0.164	0.200
	FR1 N71	20M	QPSK	50	28	15KHz	Right Side	5	2	Full	136100	680.5	22.80	24.00	1.318	0.03	0.116	0.153
53	FR1 N71	20M	QPSK	1	1	15KHz	Top Side	5	2	Full	136100	680.5	23.13	24.00	1.222	-0.15	0.180	0.220
	FR1 N71	20M	QPSK	50	28	15KHz	Top Side	5	2	Full	136100	680.5	22.80	24.00	1.318	-0.14	0.122	0.161

<WLAN 2.4GHz SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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	5	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	-0.14	0.113	0.132
54	WLAN2.4GHz	802.11b 1Mbps	Back	5	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	-0.02	0.334	0.392
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	0.01	0.057	0.067
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	0.01	0.068	0.080
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	0.02	0.121	0.142
	WLAN2.4GHz	802.11b 1Mbps	Back	5	3+6	Simultaneous	6	2437	15.07	16.50	1.390	100	1.000	0.02	0.228	0.317
	WLAN2.4GHz	802.11b 1Mbps	Back	5	3+6	Simultaneous	11	2462	14.92	16.50	1.439	100	1.000	0.05	0.231	0.332

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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	5	6	Full	39	2441	11.40	12.00	1.148	76.72	1.086	0.04	0.105	0.131
	Bluetooth	1Mbps	Back	5	6	Full	0	2402	10.22	12.00	1.507	76.72	1.086	0.07	0.102	0.167
55	Bluetooth	1Mbps	Back	5	6	Full	78	2480	10.20	12.00	1.514	76.72	1.086	0.01	0.127	0.209

<WLAN 5GHz SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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	802.11a 6Mbps	Front	5	5+6	Simultaneous	36	5180	9.88	11.00	1.294	98.62	1.014	0.09	0.040	0.052
	WLAN5.2GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	36	5180	9.88	11.00	1.294	98.62	1.014	0.01	0.265	0.348
	WLAN5.2GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	44	5220	9.74	11.00	1.337	98.62	1.014	-0.03	0.234	0.317
56	WLAN5.2GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	48	5240	9.83	11.00	1.309	98.62	1.014	0.1	0.289	0.384
	WLAN5.2GHz	802.11a 6Mbps	Left Side	5	5+6	Simultaneous	36	5180	9.88	11.00	1.294	98.62	1.014	0.05	0.053	0.070
	WLAN5.2GHz	802.11a 6Mbps	Right Side	5	5+6	Simultaneous	36	5180	9.88	11.00	1.294	98.62	1.014	0.03	0.090	0.118
	WLAN5.2GHz	802.11a 6Mbps	Top Side	5	5+6	Simultaneous	36	5180	9.88	11.00	1.294	98.62	1.014	0.01	0.049	0.064
	WLAN5.8GHz	802.11a 6Mbps	Front	5	5+6	Simultaneous	165	5825	12.40	13.00	1.148	98.62	1.014	-0.04	0.035	0.041
	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	165	5825	12.40	13.00	1.148	98.62	1.014	0.06	0.208	0.242
57	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	149	5745	12.26	13.00	1.186	98.62	1.014	-0.04	0.298	0.358
	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	157	5785	12.06	13.00	1.242	98.62	1.014	0.03	0.219	0.276
	WLAN5.8GHz	802.11a 6Mbps	Left Side	5	5+6	Simultaneous	165	5825	12.40	13.00	1.148	98.62	1.014	0.02	0.058	0.068
	WLAN5.8GHz	802.11a 6Mbps	Right Side	5	5+6	Simultaneous	165	5825	12.40	13.00	1.148	98.62	1.014	0.06	0.055	0.064
	WLAN5.8GHz	802.11a 6Mbps	Top Side	5	5+6	Simultaneous	165	5825	12.40	13.00	1.148	98.62	1.014	-0.02	0.056	0.065



15.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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	5	1	Reduced	189	836.4	28.52	29.00	1.117	0.03	0.622	0.695
	GSM850	GPRS(3 Tx slots)	Back	5	1	Reduced	189	836.4	28.52	29.00	1.117	0.01	0.723	0.807
	GSM850	GPRS(3 Tx slots)	Back	5	1	Reduced	128	824.2	28.38	29.00	1.153	0.01	0.693	0.799
58	GSM850	GPRS(3 Tx slots)	Back	5	1	Reduced	251	848.8	28.05	29.00	1.245	0.02	0.703	0.875
	GSM850	GPRS(3 Tx slots)	Front	19	1	Full	189	836.4	30.25	31.00	1.189	0.03	0.286	0.340
	GSM850	GPRS(3 Tx slots)	Back	25	1	Full	128	824.2	30.04	31.00	1.247	0.02	0.207	0.258
	GSM1900	GPRS(3 Tx slots)	Front	5	1	Reduced	661	1880	23.78	24.00	1.052	0.02	0.607	0.639
	GSM1900	GPRS(3 Tx slots)	Back	5	1	Reduced	661	1880	23.78	24.00	1.052	0.06	0.907	0.954
59	GSM1900	GPRS(3 Tx slots)	Back	5	1	Reduced	512	1850.2	23.30	24.00	1.175	0	0.940	1.104
	GSM1900	GPRS(3 Tx slots)	Back	5	1	Reduced	810	1909.8	23.28	24.00	1.180	0.05	0.816	0.963
	GSM1900	GPRS(3 Tx slots)	Front	19	1	Full	661	1880	27.15	28.00	1.216	0.03	0.106	0.129
	GSM1900	GPRS(3 Tx slots)	Back	25	1	Full	512	1850.2	27.03	28.00	1.250	0.02	0.122	0.153

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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 II	RMC 12.2Kbps	Front	5	1	Reduced	9400	1880	17.26	17.50	1.057	0.01	0.511	0.540
60	WCDMA II	RMC 12.2Kbps	Back	5	1	Reduced	9400	1880	17.26	17.50	1.057	-0.01	1.120	1.184
	WCDMA II	RMC 12.2Kbps	Back	5	1	Reduced	9262	1852.4	17.15	17.50	1.084	0.03	1.030	1.116
	WCDMA II	RMC 12.2Kbps	Back	5	1	Reduced	9538	1907.6	16.95	17.50	1.135	0.05	1.010	1.146
	WCDMA II	RMC 12.2Kbps	Front	19	1	Full	9400	1880	23.62	24.00	1.091	0.03	0.362	0.395
	WCDMA II	RMC 12.2Kbps	Back	25	1	Full	9400	1880	23.62	24.00	1.091	0.01	0.446	0.487
	WCDMA IV	RMC 12.2Kbps	Front	5	1	Reduced	1413	1732.6	18.21	18.50	1.069	0.06	0.669	0.715
	WCDMA IV	RMC 12.2Kbps	Back	5	1	Reduced	1413	1732.6	18.21	18.50	1.069	0.01	0.969	1.036
	WCDMA IV	RMC 12.2Kbps	Back	5	1	Reduced	1312	1712.4	18.16	18.50	1.081	0.05	0.879	0.951
61	WCDMA IV	RMC 12.2Kbps	Back	5	1	Reduced	1513	1752.6	18.13	18.50	1.089	0.06	1.090	1.187
	WCDMA IV	RMC 12.2Kbps	Front	19	1	Full	1413	1732.6	23.53	24.00	1.114	0.03	0.242	0.270
	WCDMA IV	RMC 12.2Kbps	Back	25	1	Full	1513	1752.6	23.52	24.00	1.117	0.1	0.234	0.261
	WCDMA V	RMC 12.2Kbps	Front	5	1	Full	4182	836.4	23.52	24.00	1.117	0.01	0.417	0.466
	WCDMA V	RMC 12.2Kbps	Back	5	1	Full	4182	836.4	23.52	24.00	1.117	0.03	0.827	0.924
	WCDMA V	RMC 12.2Kbps	Back	5	1	Full	4132	826.4	23.32	24.00	1.169	0.01	0.718	0.840
62	WCDMA V	RMC 12.2Kbps	Back	5	1	Full	4233	846.6	23.16	24.00	1.213	0.01	0.949	1.152



<CDMA2000 SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA BC0	RC3 SO32 (F+SCH)	Front	5	1	Full	1013	824.7	24.19	25.00	1.205	0.03	0.220	0.265
	CDMA BC0	RC3 SO32 (F+SCH)	Back	5	1	Full	1013	824.7	24.19	25.00	1.205	0.02	0.807	0.972
	CDMA BC0	RC3 SO32 (F+SCH)	Back	5	1	Full	384	836.52	24.18	25.00	1.208	0.01	0.688	0.831
63	CDMA BC0	RC3 SO32 (F+SCH)	Back	5	1	Full	777	848.31	24.09	25.00	1.233	0.02	0.868	1.070
	CDMA BC10	RC3 SO32 (F+SCH)	Front	5	1	Full	684	823.1	24.33	25.00	1.167	0.01	0.433	0.505
	CDMA BC10	RC3 SO32 (F+SCH)	Back	5	1	Full	684	823.1	24.33	25.00	1.167	0.02	0.913	1.065
	CDMA BC10	RC3 SO32 (F+SCH)	Back	5	1	Full	476	817.9	24.29	25.00	1.178	0.07	0.835	0.983
64	CDMA BC10	RC3 SO32 (F+SCH)	Back	5	1	Full	580	820.5	24.31	25.00	1.172	0.01	0.952	1.116
	CDMA BC1	RC3 SO32 (F+SCH)	Front	5	1	Reduced	1175	1908.75	18.34	19.00	1.164	0.02	0.556	0.647
	CDMA BC1	RC3 SO32 (F+SCH)	Back	5	1	Reduced	1175	1908.75	18.34	19.00	1.164	0.01	0.856	0.996
	CDMA BC1	RC3 SO32 (F+SCH)	Back	5	1	Reduced	25	1851.25	18.14	19.00	1.219	0.02	0.934	1.139
65	CDMA BC1	RC3 SO32 (F+SCH)	Back	5	1	Reduced	600	1880	18.24	19.00	1.191	0.06	0.982	1.170
	CDMA BC1	RC3 SO32 (F+SCH)	Front	19	1	Full	1175	1908.75	24.78	25.00	1.052	-0.03	0.362	0.381
	CDMA BC1	RC3 SO32 (F+SCH)	Back	25	1	Full	600	1880	24.78	25.00	1.052	0.02	0.413	0.434

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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 17	10M	QPSK	1	0	Front	5	1	Full	23790	710	23.27	24.00	1.183	0.02	0.433	0.512
	LTE Band 17	10M	QPSK	25	0	Front	5	1	Full	23790	710	22.27	23.00	1.183	0.03	0.190	0.225
66	LTE Band 17	10M	QPSK	1	0	Back	5	1	Full	23790	710	23.27	24.00	1.183	0.06	0.710	0.840
	LTE Band 17	10M	QPSK	25	0	Back	5	1	Full	23790	710	22.27	23.00	1.183	0.01	0.343	0.406
	LTE Band 17	10M	QPSK	50	0	Back	5	1	Full	23790	710	22.25	23.00	1.189	0.03	0.320	0.380
	LTE Band 12-LAT	10M	QPSK	1	0	Front	5	1	Reduced	23095	707.5	22.16	22.50	1.081	-0.03	0.302	0.327
	LTE Band 12-LAT	10M	QPSK	25	0	Front	5	1	Reduced	23095	707.5	21.93	22.50	1.140	-0.01	0.216	0.246
	LTE Band 12-LAT	10M	QPSK	1	0	Back	5	1	Reduced	23095	707.5	22.16	22.50	1.081	0.02	0.539	0.583
	LTE Band 12-LAT	10M	QPSK	25	0	Back	5	1	Reduced	23095	707.5	21.93	22.50	1.140	-0.06	0.382	0.436
	LTE Band 12-LAT	10M	QPSK	1	0	Back	19	1	Full	23095	707.5	23.28	24.00	1.180	-0.01	0.174	0.205
	LTE Band 12-LAT	10M	QPSK	1	0	Back	25	1	Full	23095	707.5	23.28	24.00	1.180	0.03	0.126	0.149
	LTE Band 12-UAT	10M	QPSK	1	0	Front	5	2	Full	23095	707.5	22.49	23.50	1.262	-0.04	0.286	0.361
	LTE Band 12-UAT	10M	QPSK	25	0	Front	5	2	Full	23095	707.5	21.34	22.50	1.306	-0.06	0.170	0.222
	LTE Band 12-UAT	10M	QPSK	1	0	Back	5	2	Full	23095	707.5	22.49	23.50	1.262	0.03	0.174	0.220
	LTE Band 12-UAT	10M	QPSK	25	0	Back	5	2	Full	23095	707.5	21.34	22.50	1.306	0.01	0.144	0.188
	LTE Band 13	10M	QPSK	1	0	Front	5	1	Full	23230	782	22.95	24.00	1.274	0.09	0.420	0.535
	LTE Band 13	10M	QPSK	25	0	Front	5	1	Full	23230	782	21.91	23.00	1.285	0.04	0.256	0.329
67	LTE Band 13	10M	QPSK	1	0	Back	5	1	Full	23230	782	22.95	24.00	1.274	0.06	0.748	0.953
	LTE Band 13	10M	QPSK	25	0	Back	5	1	Full	23230	782	21.91	23.00	1.285	0.05	0.419	0.539
	LTE Band 13	10M	QPSK	50	0	Back	5	1	Full	23230	782	21.59	23.00	1.384	0.04	0.442	0.612



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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	Front	5	1	Full	23330	793	22.95	24.00	1.274	0.05	0.456	0.581
	LTE Band 14	10M	QPSK	25	0	Front	5	1	Full	23330	793	21.80	23.00	1.318	0.03	0.245	0.323
68	LTE Band 14	10M	QPSK	1	0	Back	5	1	Full	23330	793	22.95	24.00	1.274	0.01	0.790	1.006
	LTE Band 14	10M	QPSK	25	0	Back	5	1	Full	23330	793	21.80	23.00	1.318	0.05	0.440	0.580
	LTE Band 14	10M	QPSK	50	0	Back	5	1	Full	23330	793	21.74	23.00	1.337	0.03	0.377	0.504
	LTE Band 26	15M	QPSK	1	0	Front	5	1	Reduced	26865	831.5	22.40	23.50	1.288	0.02	0.519	0.669
	LTE Band 26	15M	QPSK	36	0	Front	5	1	Reduced	26865	831.5	21.65	23.00	1.365	0.03	0.314	0.428
69	LTE Band 26	15M	QPSK	1	0	Back	5	1	Reduced	26865	831.5	22.40	23.50	1.288	0.05	0.922	1.188
	LTE Band 26	15M	QPSK	36	0	Back	5	1	Reduced	26865	831.5	21.65	23.00	1.365	0.03	0.489	0.667
	LTE Band 26	15M	QPSK	75	0	Back	5	1	Reduced	26865	831.5	21.55	23.00	1.396	0.01	0.501	0.700
	LTE Band 26	15M	QPSK	1	0	Front	19	1	Full	26865	831.5	23.22	24.00	1.197	0.03	0.213	0.255
	LTE Band 26	15M	QPSK	1	0	Back	25	1	Full	26865	831.5	23.22	24.00	1.197	0.01	0.161	0.193
	LTE Band 5-LAT	10M	QPSK	1	0	Front	5	1	Reduced	20525	836.5	20.29	20.50	1.050	0.09	0.275	0.289
	LTE Band 5-LAT	10M	QPSK	25	0	Front	5	1	Reduced	20525	836.5	20.28	20.50	1.052	-0.01	0.274	0.288
	LTE Band 5-LAT	10M	QPSK	1	0	Back	5	1	Reduced	20525	836.5	20.29	20.50	1.050	0.11	0.449	0.471
	LTE Band 5B-LAT	10M	QPSK	1	0	Back	5	1	Reduced	20575+20476	841.5+831.6	19.97	20.50	1.130	0.06	0.397	0.449
	LTE Band 5-LAT	10M	QPSK	25	0	Back	5	1	Reduced	20525	836.5	20.28	20.50	1.052	0.09	0.438	0.461
	LTE Band 5-LAT	15M	QPSK	1	0	Front	19	1	Full	20525	836.5	23.10	24.00	1.230	0.02	0.225	0.277
	LTE Band 5-LAT	15M	QPSK	1	0	Back	25	1	Full	20525	836.5	23.10	24.00	1.230	-0.11	0.158	0.194
	LTE Band 5-UAT	10M	QPSK	1	0	Front	5	2	Reduced	20525	836.5	20.44	21.50	1.276	-0.08	0.417	0.532
	LTE Band 5B-UAT	10M	QPSK	1	0	Front	5	2	Reduced	20575+20476	841.5+831.6	20.04	21.50	1.400	0.02	0.367	0.514
	LTE Band 5-UAT	10M	QPSK	25	0	Front	5	2	Reduced	20525	836.5	20.33	21.50	1.309	-0.04	0.401	0.525
	LTE Band 5-UAT	10M	QPSK	1	0	Back	5	2	Reduced	20525	836.5	20.44	21.50	1.276	0.08	0.302	0.385
	LTE Band 5-UAT	10M	QPSK	25	0	Back	5	2	Reduced	20525	836.5	20.33	21.50	1.309	0.01	0.295	0.386
	LTE Band 5-UAT	10M	QPSK	1	0	Front	19	2	Full	20525	836.5	22.45	23.50	1.274	0.03	0.033	0.041
	LTE Band 5-UAT	10M	QPSK	1	0	Back	25	2	Full	20525	836.5	22.45	23.50	1.274	0.01	0.019	0.024
	LTE Band 71	20M	QPSK	1	0	Front	5	1	Full	133322	683	23.33	24.00	1.167	0.01	0.266	0.310
	LTE Band 71	20M	QPSK	50	0	Front	5	1	Full	133322	683	22.15	23.00	1.216	0.02	0.176	0.214
71	LTE Band 71	20M	QPSK	1	0	Back	5	1	Full	133322	683	23.33	24.00	1.167	0.03	0.456	0.532
	LTE Band 71	20M	QPSK	50	0	Back	5	1	Full	133322	683	22.15	23.00	1.216	0.01	0.297	0.361

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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	5	1	Reduced	26340	1880	16.47	17.00	1.130	0.01	0.541	0.611
	LTE Band 25	20M	QPSK	50	0	Front	5	1	Reduced	26340	1880	16.45	17.00	1.135	0.03	0.515	0.584
	LTE Band 25	20M	QPSK	1	0	Back	5	1	Reduced	26340	1880	16.47	17.00	1.130	0.01	0.893	1.009
	LTE Band 25	20M	QPSK	1	0	Back	5	1	Reduced	26140	1860	16.36	17.00	1.159	0.05	0.869	1.007
72	LTE Band 25	20M	QPSK	1	0	Back	5	1	Reduced	26590	1905	16.41	17.00	1.146	0.03	1.010	1.157
	LTE Band 25	20M	QPSK	50	0	Back	5	1	Reduced	26340	1880	16.45	17.00	1.135	0.01	0.877	0.996
	LTE Band 25	20M	QPSK	50	0	Back	5	1	Reduced	26140	1860	16.37	17.00	1.156	0.05	0.928	1.072
	LTE Band 25	20M	QPSK	50	0	Back	5	1	Reduced	26590	1905	16.26	17.00	1.186	0.03	0.932	1.106
	LTE Band 25	20M	QPSK	100	0	Back	5	1	Reduced	26340	1880	16.40	17.00	1.148	0.05	0.863	0.991
	LTE Band 25	20M	QPSK	1	0	Front	19	1	Full	26340	1880	23.45	24.00	1.135	0.01	0.370	0.419
	LTE Band 25	20M	QPSK	1	0	Back	25	1	Full	26590	1905	23.37	24.00	1.156	0.03	0.422	0.488
	LTE Band 2-LAT	20M	QPSK	1	0	Front	5	1	Reduced	18900	1880	14.46	15.00	1.132	0.05	0.295	0.334
	LTE Band 2-LAT	20M	QPSK	50	0	Front	5	1	Reduced	18900	1880	14.35	15.00	1.161	0.03	0.293	0.340
	LTE Band 2-LAT	20M	QPSK	1	0	Back	5	1	Reduced	18900	1880	14.46	15.00	1.132	0.05	0.513	0.581
	LTE Band 2-LAT	20M	QPSK	1	0	Back	5	1	Reduced	18700	1860	14.41	15.00	1.146	0.01	0.457	0.523
	LTE Band 2-LAT	20M	QPSK	1	0	Back	5	1	Reduced	19100	1900	14.23	15.00	1.194	0.03	0.423	0.505
	LTE Band 2-LAT	20M	QPSK	50	0	Back	5	1	Reduced	18900	1880	14.35	15.00	1.161	0.06	0.472	0.548
	LTE Band 2-LAT	20M	QPSK	1	0	Front	19	1	Full	18900	1880	22.90	24.00	1.288	0.11	0.289	0.372
	LTE Band 2-LAT	20M	QPSK	1	0	Back	25	1	Full	18900	1880	22.90	24.00	1.288	-0.12	0.332	0.428
	LTE Band 25-UAT	20M	QPSK	1	0	Front	5	2	Reduced	26340	1880	14.88	15.50	1.153	0.01	0.466	0.538
	LTE Band 25-UAT	20M	QPSK	50	0	Front	5	2	Reduced	26340	1880	14.87	15.50	1.156	0.02	0.458	0.529
	LTE Band 25-UAT	20M	QPSK	50	0	Front	5	2	Reduced	26140	1860	14.58	15.50	1.236	-0.03	0.421	0.520
	LTE Band 25-UAT	20M	QPSK	50	0	Front	5	2	Reduced	26590	1905	14.58	15.50	1.236	0.01	0.411	0.508
	LTE Band 25-UAT	20M	QPSK	1	0	Back	5	2	Reduced	26340	1880	14.88	15.50	1.153	0.08	0.334	0.385
	LTE Band 25-UAT	20M	QPSK	50	0	Back	5	2	Reduced	26340	1880	14.87	15.50	1.156	0.06	0.327	0.378
	LTE Band 25-UAT	20M	QPSK	1	0	Front	19	2	Full	26340	1880	22.17	23.00	1.449	0.01	0.179	0.259
	LTE Band 25-UAT	20M	QPSK	1	0	Back	25	2	Full	26340	1880	22.17	23.00	1.291	0.03	0.098	0.127
EN-DC																	
	LTE Band 25-UAT	20M	QPSK	1	0	Front	5	2	Reduced	26340	1880	14.88	15.50	1.153	0.01	0.466	0.538
	LTE Band 25-UAT	20M	QPSK	50	0	Front	5	2	Reduced	26340	1880	14.87	15.50	1.156	0.02	0.458	0.529
	LTE Band 25-UAT	20M	QPSK	50	0	Front	5	2	Reduced	26140	1860	14.58	15.50	1.236	-0.03	0.421	0.520
	LTE Band 25-UAT	20M	QPSK	50	0	Front	5	2	Reduced	26590	1905	14.58	15.50	1.236	0.01	0.411	0.508
	LTE Band 25-UAT	20M	QPSK	1	0	Back	5	2	Reduced	26340	1880	14.88	15.50	1.153	0.08	0.334	0.385
	LTE Band 25-UAT	20M	QPSK	50	0	Back	5	2	Reduced	26340	1880	14.87	15.50	1.156	0.06	0.327	0.378
	LTE Band 25-UAT	20M	QPSK	1	0	Front	19	2	Full	26340	1880	22.17	23.00	1.449	0.01	0.179	0.259
	LTE Band 25-UAT	20M	QPSK	1	0	Back	25	2	Full	26340	1880	22.17	23.00	1.291	0.03	0.098	0.127



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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 66-LAT	20M	QPSK	1	0	Front	5	1	Reduced	132322	1745	14.73	15.50	1.194	-0.03	0.301	0.359
	LTE Band 66-LAT	20M	QPSK	50	0	Front	5	1	Reduced	132322	1745	14.65	15.50	1.216	0.01	0.322	0.392
	LTE Band 66-LAT	20M	QPSK	1	0	Back	5	1	Reduced	132322	1745	14.73	15.50	1.194	0.08	0.483	0.577
	LTE Band 66-LAT	20M	QPSK	50	0	Back	5	1	Reduced	132322	1745	14.65	15.50	1.216	0.06	0.487	0.592
	LTE Band 66-LAT	20M	QPSK	50	0	Back	5	1	Reduced	132072	1720	14.41	15.50	1.285	0.02	0.460	0.591
	LTE Band 66-LAT	20M	QPSK	50	0	Back	5	1	Reduced	132572	1770	14.34	15.50	1.306	0.03	0.441	0.576
	LTE Band 66-LAT	20M	QPSK	1	0	Front	19	1	Full	132322	1745	22.71	24.00	1.346	-0.01	0.283	0.381
	LTE Band 66-LAT	20M	QPSK	1	0	Back	25	1	Full	132322	1745	22.71	24.00	1.346	0.02	0.343	0.462
	LTE Band 66-UAT	20M	QPSK	1	0	Front	5	2	Reduced	132322	1745	14.55	15.50	1.245	0.09	0.445	0.554
73	LTE Band 66-UAT	20M	QPSK	50	0	Front	5	2	Reduced	132322	1745	14.54	15.50	1.247	0.01	0.475	0.593
	LTE Band 66-UAT	20M	QPSK	50	0	Front	5	2	Reduced	132072	1720	14.14	15.50	1.368	0.02	0.423	0.579
	LTE Band 66-UAT	20M	QPSK	50	0	Front	5	2	Reduced	132572	1770	14.12	15.50	1.374	0.05	0.399	0.548
	LTE Band 66-UAT	20M	QPSK	1	0	Back	5	2	Reduced	132322	1745	14.55	15.50	1.245	0.06	0.369	0.459
	LTE Band 66-UAT	20M	QPSK	50	0	Back	5	2	Reduced	132322	1745	14.54	15.50	1.247	0.01	0.403	0.503
	LTE Band 66-UAT	20M	QPSK	1	0	Front	19	2	Full	132322	1745	21.80	23.00	1.479	0.03	0.151	0.223
	LTE Band 66-UAT	20M	QPSK	1	0	Back	25	2	Full	132322	1745	21.80	23.00	1.318	0.02	0.042	0.056
	LTE Band 7	20M	QPSK	1	0	Front	5	1	Reduced	21100	2535	12.60	13.50	1.230	0.03	0.176	0.217
	LTE Band 7	20M	QPSK	50	0	Front	5	1	Reduced	21100	2535	12.57	13.50	1.239	0.01	0.165	0.204
	LTE Band 7	20M	QPSK	1	0	Back	5	1	Reduced	21100	2535	12.60	13.50	1.230	0.05	0.426	0.524
74	LTE Band 7	20M	QPSK	50	0	Back	5	1	Reduced	21100	2535	12.57	13.50	1.239	0.01	0.438	0.543
	LTE Band 7	20M	QPSK	50	0	Back	5	1	Reduced	20850	2510	12.50	13.50	1.259	0.01	0.411	0.517
	LTE Band 7	20M	QPSK	50	0	Back	5	1	Reduced	21350	2560	12.47	13.50	1.268	0.01	0.399	0.506
	LTE Band 7	20M	QPSK	1	0	Front	19	1	Full	21100	2535	22.91	24.00	1.285	0.01	0.411	0.411
	LTE Band 7	20M	QPSK	1	0	Back	25	1	Full	21100	2535	22.91	24.00	1.355	0.03	0.501	0.518

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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 30-LAT	10M	QPSK	1	0	Front	5	1	Reduced	27710	2310	14.31	14.50	1.045	0.01	0.259	0.271
	LTE Band 30-LAT	10M	QPSK	25	0	Front	5	1	Reduced	27710	2310	13.90	14.50	1.148	0.05	0.258	0.296
75	LTE Band 30-LAT	10M	QPSK	1	0	Back	5	1	Reduced	27710	2310	14.31	14.50	1.045	0.03	0.628	0.656
	LTE Band 30-LAT	10M	QPSK	25	0	Back	5	1	Reduced	27710	2310	13.90	14.50	1.148	0.01	0.560	0.643
	LTE Band 30-LAT	10M	QPSK	1	0	Front	19	1	Full	27710	2310	23.59	24.00	1.099	-0.01	0.417	0.458
	LTE Band 30-LAT	10M	QPSK	1	0	Back	25	1	Full	27710	2310	23.59	24.00	1.099	0.02	0.379	0.417
	LTE Band 30-UAT	10M	QPSK	1	0	Front	5	2	Reduced	27710	2310	18.93	20.00	1.279	-0.09	0.426	0.545
	LTE Band 30-UAT	10M	QPSK	25	0	Front	5	2	Reduced	27710	2310	18.88	20.00	1.294	-0.07	0.460	0.595
	LTE Band 30-UAT	10M	QPSK	1	0	Back	5	2	Reduced	27710	2310	18.93	20.00	1.279	0.01	0.396	0.507
	LTE Band 30-UAT	10M	QPSK	25	0	Back	5	2	Reduced	27710	2310	18.88	20.00	1.294	0.03	0.395	0.511
	LTE Band 30-UAT	10M	QPSK	1	0	Front	19	2	Full	27710	2310	21.85	23.00	1.303	0.01	0.021	0.027
	LTE Band 30-UAT	10M	QPSK	1	0	Back	25	2	Full	27710	2310	21.85	23.00	1.303	0.03	0.015	0.019



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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	5	1	Reduced	40620	2593	18.14	19.00	1.219	62.9	1.006	0.03	0.356	0.437
	LTE Band 41	20M	QPSK	50	0	Front	5	1	Reduced	40620	2593	17.94	19.00	1.276	62.9	1.006	0.1	0.320	0.411
	LTE Band 41	20M	QPSK	1	0	Back	5	1	Reduced	40620	2593	18.14	19.00	1.219	62.9	1.006	-0.01	0.908	1.113
76	LTE Band 41	20M	QPSK	1	0	Back	5	1	Reduced	39750	2506	17.76	19.00	1.330	62.9	1.006	0.01	0.890	1.191
	LTE Band 41C	20M	QPSK	1	0	Back	5	1	Reduced	39750+39948	2506+2525.8	18.16	19.00	1.213	62.9	1.006	-0.12	0.856	1.045
	LTE Band 41	20M	QPSK	1	0	Back	5	1	Reduced	40185	2549.5	17.69	19.00	1.352	62.9	1.006	0.06	0.873	1.187
	LTE Band 41	20M	QPSK	1	0	Back	5	1	Reduced	41055	2636.5	17.80	19.00	1.318	62.9	1.006	0.15	0.806	1.069
	LTE Band 41	20M	QPSK	1	0	Back	5	1	Reduced	41490	2680	17.81	19.00	1.315	62.9	1.006	0.02	0.876	1.159
	LTE Band 41	20M	QPSK	50	0	Back	5	1	Reduced	40620	2593	17.94	19.00	1.276	62.9	1.006	-0.08	0.382	0.491
	LTE Band 41	20M	QPSK	50	0	Back	5	1	Reduced	39750	2506	17.92	19.00	1.282	62.9	1.006	0.06	0.399	0.515
	LTE Band 41	20M	QPSK	50	0	Back	5	1	Reduced	40185	2549.5	17.72	19.00	1.343	62.9	1.006	-0.11	0.403	0.544
	LTE Band 41	20M	QPSK	50	0	Back	5	1	Reduced	41055	2636.5	17.87	19.00	1.297	62.9	1.006	0.05	0.395	0.515
	LTE Band 41	20M	QPSK	50	0	Back	5	1	Reduced	41490	2680	17.88	19.00	1.294	62.9	1.006	0.09	0.337	0.439
	LTE Band 41	20M	QPSK	100	0	Back	5	1	Reduced	40620	2593	17.93	19.00	1.279	62.9	1.006	0.02	0.794	1.022
	LTE Band 41	20M	QPSK	1	0	Front	19	1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	0.01	0.165	0.221
	LTE Band 41	20M	QPSK	1	0	Back	25	1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	0.03	0.204	0.274
	LTE Band 41 HPUE	20M	QPSK	1	0	Back	5	1	Reduced	40620	2593	18.14	19.00	1.219	42.9	1.009	0.01	0.530	0.652
	LTE Band 41 HPUE	20M	QPSK	1	0	Back	5	1	Reduced	39750	2506	17.76	19.00	1.330	42.9	1.009	0.05	0.570	0.765
	LTE Band 41 HPUE	20M	QPSK	1	0	Back	5	1	Reduced	40185	2549.5	17.69	19.00	1.352	42.9	1.009	0.02	0.502	0.685
	LTE Band 41 HPUE	20M	QPSK	1	0	Back	5	1	Reduced	41055	2636.5	17.80	19.00	1.318	42.9	1.009	0.06	0.521	0.693
	LTE Band 41 HPUE	20M	QPSK	1	0	Back	5	1	Reduced	41490	2680	17.81	19.00	1.315	42.9	1.009	0.04	0.517	0.686
	LTE Band 41 HPUE	20M	QPSK	1	0	Back	25	1	Full	40620	2593	25.58	27.00	1.387	42.9	1.009	0.03	0.425	0.595
EN-DC																			
	LTE Band 41/ HPUE -UAT	20M	QPSK	1	0	Front	5	2	Reduced	40620	2593	19.71	20.50	1.199	62.9	1.006	-0.11	0.428	0.516
	LTE Band 41-UAT	20M	QPSK	50	0	Front	5	2	Reduced	40620	2593	19.69	20.50	1.205	62.9	1.006	0.07	0.420	0.509
	LTE Band 41 HPUE-UAT	20M	QPSK	1	0	Front	5	2	Reduced	40620	2593	19.71	20.50	1.199	42.9	1.009	-0.02	0.300	0.363
	LTE Band 41 HPUE-UAT	20M	QPSK	1	0	Front	19	2	Full	40620	2593	25.06	26.00	1.355	42.9	1.009	0.03	0.251	0.343
	LTE Band 41-UAT	20M	QPSK	1	0	Front	5	2	Reduced	39750	2506	19.51	20.50	1.256	62.9	1.006	-0.03	0.381	0.481
	LTE Band 41-UAT	20M	QPSK	1	0	Front	5	2	Reduced	40185	2549.5	19.22	20.50	1.343	62.9	1.006	0.06	0.366	0.494
	LTE Band 41-UAT	20M	QPSK	1	0	Front	5	2	Reduced	41055	2636.5	19.59	20.50	1.233	62.9	1.006	-0.01	0.394	0.489
	LTE Band 41-UAT	20M	QPSK	1	0	Front	5	2	Reduced	41490	2680	19.34	20.50	1.306	62.9	1.006	0.08	0.375	0.493
	LTE Band 41-UAT	20M	QPSK	1	0	Back	5	2	Reduced	40620	2593	19.71	20.50	1.199	62.9	1.006	0.02	0.427	0.515
	LTE Band 41-UAT	20M	QPSK	50	0	Back	5	2	Reduced	40620	2593	19.69	20.50	1.205	62.9	1.006	0.02	0.425	0.515
	LTE Band 41-UAT	20M	QPSK	1	0	Front	19	2	Full	40620	2593	22.08	23.00	1.355	62.9	1.006	0.03	0.115	0.157
	LTE Band 41-UAT	20M	QPSK	1	0	Back	25	2	Full	40620	2593	22.08	23.00	1.355	62.9	1.006	0.05	0.088	0.120



<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)
	FR1 N5	20M	QPSK	1	1	15KHz	Front	5	1	Reduced	167300	836.5	22.48	22.50	1.005	-0.11	0.327	0.329
	FR1 N5	20M	QPSK	50	28	15KHz	Front	5	1	Reduced	167300	836.5	22.38	22.50	1.028	0.05	0.355	0.365
	FR1 N5	20M	QPSK	1	1	15KHz	Back	5	1	Reduced	167300	836.5	22.48	22.50	1.005	0.09	0.585	0.588
77	FR1 N5	20M	QPSK	50	28	15KHz	Back	5	1	Reduced	167300	836.5	22.38	22.50	1.028	0.02	0.579	0.595
	FR1 N5	20M	QPSK	1	1	15KHz	Front	19	1	Full	167300	836.5	23.96	24.00	1.009	-0.02	0.226	0.228
	FR1 N5	20M	QPSK	1	1	15KHz	Back	25	1	Full	167300	836.5	23.96	24.00	1.009	0.01	0.211	0.213
	FR1 N5	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	167300	836.5	23.03	23.50	1.114	-0.18	0.498	0.555
	FR1 N5	20M	QPSK	50	28	15KHz	Front	5	2	Reduced	167300	836.5	22.75	23.50	1.189	-0.09	0.380	0.452
	FR1 N5	20M	QPSK	1	1	15KHz	Back	5	2	Reduced	167300	836.5	23.03	23.50	1.114	-0.12	0.388	0.432
	FR1 N5	20M	QPSK	50	28	15KHz	Back	5	2	Reduced	167300	836.5	22.75	23.50	1.189	-0.18	0.295	0.351
	FR1 N5	20M	QPSK	1	1	15KHz	Front	19	2	Full	167300	836.5	23.33	24.00	1.167	0.01	0.189	0.221
	FR1 N5	20M	QPSK	1	1	15KHz	Back	25	2	Full	167300	836.5	23.33	24.00	1.167	0.02	0.168	0.196
	FR1 N2	20M	QPSK	1	53	15KHz	Front	5	1	Reduced	376500	1882.5	15.91	16.50	1.146	0.07	0.299	0.343
	FR1 N2	20M	QPSK	50	28	15KHz	Front	5	1	Reduced	376500	1882.5	15.85	16.50	1.161	0.05	0.238	0.276
78	FR1 N2	20M	QPSK	1	53	15KHz	Back	5	1	Reduced	376500	1882.5	15.91	16.50	1.146	-0.04	0.521	0.597
	FR1 N2	20M	QPSK	1	53	15KHz	Back	5	1	Reduced	372000	1860	15.64	16.50	1.219	0.02	0.469	0.572
	FR1 N2	20M	QPSK	1	53	15KHz	Back	5	1	Reduced	381000	1905	15.57	16.50	1.239	-0.05	0.451	0.559
	FR1 N2	20M	QPSK	50	28	15KHz	Back	5	1	Reduced	376500	1882.5	15.85	16.50	1.161	0.04	0.470	0.546
	FR1 N2	20M	QPSK	1	53	15KHz	Front	19	1	Full	376000	1880	23.05	24.00	1.245	0.02	0.356	0.443
	FR1 N2	20M	QPSK	1	53	15KHz	Back	25	1	Full	376000	1880	23.05	24.00	1.245	0.02	0.167	0.208
	FR1 N25	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	376500	1882.5	16.97	17.50	1.130	-0.08	0.493	0.557
	FR1 N25	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	372000	1860	16.80	17.50	1.175	0.02	0.456	0.536
	FR1 N25	20M	QPSK	1	1	15KHz	Front	5	2	Reduced	381000	1905	16.80	17.50	1.175	-0.01	0.461	0.542
	FR1 N25	20M	QPSK	50	28	15KHz	Front	5	2	Reduced	376500	1882.5	16.86	17.50	1.159	0.04	0.480	0.556
	FR1 N25	20M	QPSK	1	1	15KHz	Back	5	2	Reduced	376500	1882.5	16.97	17.50	1.130	-0.02	0.466	0.526
	FR1 N25	20M	QPSK	50	28	15KHz	Back	5	2	Reduced	376500	1882.5	16.86	17.50	1.159	0.08	0.462	0.535
	FR1 N25	20M	QPSK	1	1	15KHz	Front	19	2	Full	376500	1882.5	23.36	24.00	1.159	0.02	0.103	0.119
	FR1 N25	20M	QPSK	1	1	15KHz	Back	25	2	Full	376500	1882.5	23.36	24.00	1.159	0.02	0.053	0.061



Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Mode, Test Position, Gap (mm), Antenna, 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). Rows include test results for FR1 N41 and FR1 N66 series.

<WLAN 2.4GHZ SAR>

Table with columns: Plot No., Band, Mode, Test Position, Gap (mm), Antenna, 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). Rows include test results for WLAN2.4GHz series.

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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	5	6	Full	39	2441	11.40	12.00	1.148	76.72	1.086	0.04	0.105	0.131
	Bluetooth	1Mbps	Back	5	6	Full	0	2402	10.22	12.00	1.507	76.72	1.086	0.07	0.102	0.167
83	Bluetooth	1Mbps	Back	5	6	Full	78	2480	10.20	12.00	1.514	76.72	1.086	0.01	0.127	0.209

<WLAN 5GHz SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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	802.11a 6Mbps	Front	5	5+6	Simultaneous	36	5180	9.88	11.00	1.294	98.62	1.014	0.09	0.040	0.052
	WLAN5.2GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	36	5180	9.88	11.00	1.294	98.62	1.014	0.01	0.265	0.348
	WLAN5.2GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	44	5220	9.74	11.00	1.337	98.62	1.014	-0.03	0.234	0.317
108	WLAN5.2GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	48	5240	9.83	11.00	1.309	98.62	1.014	0.1	0.289	0.384
	WLAN5.3GHz	802.11a 6Mbps	Front	5	5+6	Reduced	56	5280	14.28	15.00	1.180	98.62	1.014	0.05	0.047	0.056
84	WLAN5.3GHz	802.11a 6Mbps	Back	5	5+6	Reduced	56	5280	14.28	15.00	1.180	98.62	1.014	-0.03	0.912	1.092
	WLAN5.3GHz	802.11a 6Mbps	Back	5	5+6	Reduced	52	5260	14.23	15.00	1.194	98.62	1.014	0.03	0.710	0.860
	WLAN5.3GHz	802.11a 6Mbps	Back	5	5+6	Reduced	64	5320	13.91	15.00	1.285	98.62	1.014	0.01	0.584	0.761
	WLAN5.3GHz	802.11a 6Mbps	Front	19	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.01	0.010	0.012
	WLAN5.3GHz	802.11a 6Mbps	Back	25	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.03	0.643	0.745
	WLAN5.3GHz	802.11a 6Mbps	Front	5	5+6	Simultaneous	64	5320	9.66	10.50	1.213	98.62	1.014	0.09	0.047	0.058
	WLAN5.3GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	64	5320	9.66	10.50	1.213	98.62	1.014	0.01	0.203	0.250
	WLAN5.3GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	52	5260	9.27	10.50	1.327	98.62	1.014	0.1	0.256	0.345
	WLAN5.3GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	56	5280	9.61	10.50	1.227	98.62	1.014	-0.03	0.291	0.362
	WLAN5.5GHz	802.11a 6Mbps	Front	5	5+6	Sensor on	116	5580	14.47	15.50	1.268	98.62	1.014	0.01	0.092	0.118
85	WLAN5.5GHz	802.11a 6Mbps	Back	5	5+6	Sensor on	116	5580	14.47	15.50	1.268	98.62	1.014	0.03	0.874	1.123
	WLAN5.5GHz	802.11a 6Mbps	Back	5	5+6	Sensor on	100	5500	13.72	15.50	1.507	98.62	1.014	0.02	0.535	0.817
	WLAN5.5GHz	802.11a 6Mbps	Back	5	5+6	Sensor on	140	5700	14.12	15.50	1.374	98.62	1.014	0.05	0.639	0.890
	WLAN5.5GHz	802.11a 6Mbps	Front	19	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.03	0.002	0.002
	WLAN5.5GHz	802.11a 6Mbps	Back	25	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.01	0.820	0.984
	WLAN5.5GHz	802.11a 6Mbps	Front	5	5+6	Simultaneous	116	5580	9.09	10.00	1.233	98.62	1.014	0.03	0.092	0.115
	WLAN5.5GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	116	5580	9.09	10.00	1.233	98.62	1.014	0.1	0.263	0.329
	WLAN5.5GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	100	5500	8.33	10.00	1.469	98.62	1.014	0.03	0.213	0.317
	WLAN5.5GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	140	5700	8.55	10.00	1.396	98.62	1.014	0.01	0.187	0.265
	WLAN5.8GHz	802.11a 6Mbps	Front	5	5+6	Reduced	149	5745	16.13	18.00	1.538	98.62	1.014	0.02	0.056	0.087
86	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Reduced	149	5745	16.13	18.00	1.538	98.62	1.014	-0.01	0.647	1.009
	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Reduced	157	5785	16.02	18.00	1.578	98.62	1.014	0.02	0.562	0.899
	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Reduced	165	5825	16.07	18.00	1.560	98.62	1.014	0.03	0.417	0.659
	WLAN5.8GHz	802.11a 6Mbps	Front	19	5+6	Full	149	5745	20.98	21.50	1.127	98.62	1.014	0.02	0.056	0.064
	WLAN5.8GHz	802.11a 6Mbps	Back	25	5+6	Full	149	5745	20.98	21.50	1.127	98.62	1.014	0.03	0.618	0.706
	WLAN5.8GHz	802.11a 6Mbps	Front	5	5+6	Simultaneous	165	5825	12.40	13.00	1.148	98.62	1.014	-0.04	0.035	0.041
	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	165	5825	12.40	13.00	1.148	98.62	1.014	0.06	0.208	0.242
	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	149	5745	12.26	13.00	1.186	98.62	1.014	-0.04	0.298	0.358
	WLAN5.8GHz	802.11a 6Mbps	Back	5	5+6	Simultaneous	157	5785	12.06	13.00	1.242	98.62	1.014	0.03	0.219	0.276



15.4 Product specific 10g SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)
	GSM850	GPRS(3 Tx slots)	Back	0mm	Ant 1	Full	189	836.4	30.25	31.00	1.189	0.03	1.410	1.676
87	GSM850	GPRS(3 Tx slots)	Back	0mm	Ant 1	Full	128	824.2	30.04	31.00	1.247	0.06	1.510	1.884
	GSM850	GPRS(3 Tx slots)	Back	0mm	Ant 1	Full	251	848.8	29.93	31.00	1.279	-0.02	1.370	1.753
	GSM1900	GPRS(3 Tx slots)	Front	0mm	Ant 1	Full	661	1880	27.15	28.00	1.216	0.03	1.150	1.399
88	GSM1900	GPRS(3 Tx slots)	Back	0mm	Ant 1	Full	661	1880	27.15	28.00	1.216	0.01	2.040	2.481
	GSM1900	GPRS(3 Tx slots)	Back	0mm	Ant 1	Full	512	1850.2	27.03	28.00	1.250	0.02	1.810	2.263
	GSM1900	GPRS(3 Tx slots)	Back	0mm	Ant 1	Full	810	1909.8	27.14	28.00	1.219	0.05	1.890	2.304
	GSM1900	GPRS(3 Tx slots)	Bottom Side	0mm	Ant 1	Full	661	1880	27.15	28.00	1.216	0.03	1.370	1.666

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)
	WCDMA II	RMC 12.2Kbps	Front	0mm	Ant 1	Reduced	9400	1880	20.76	21.00	1.057	0.02	1.710	1.807
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	9400	1880	20.76	21.00	1.057	0.03	2.690	2.843
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	9262	1852.4	20.72	21.00	1.067	0.03	2.710	2.890
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	9538	1907.6	20.66	21.00	1.081	0.01	2.530	2.736
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	9400	1880	20.76	21.00	1.057	0.05	2.810	2.970
89	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	9262	1852.4	20.72	21.00	1.067	0.04	2.930	3.125
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	9538	1907.6	20.66	21.00	1.081	0.05	2.700	2.920
	WCDMA II	RMC 12.2Kbps	Front	5mm	Ant 1	Full	9400	1880	23.62	24.00	1.091	0.06	1.290	1.408
	WCDMA II	RMC 12.2Kbps	Back	9mm	Ant 1	Full	9262	1852.4	23.43	24.00	1.140	0.01	1.250	1.425
	WCDMA II	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	Full	9262	1852.4	23.43	24.00	1.140	0.05	1.300	1.482
	WCDMA IV	RMC 12.2Kbps	Front	0mm	Ant 1	Reduced	1413	1732.6	20.49	21.00	1.125	0.03	1.380	1.552
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	1413	1732.6	20.49	21.00	1.125	0.05	2.460	2.767
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	1312	1712.4	20.45	21.00	1.135	0.03	2.390	2.713
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	1513	1752.6	20.43	21.00	1.140	0.01	2.340	2.668
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	1413	1732.6	20.49	21.00	1.125	0.03	2.680	3.014
90	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	1312	1712.4	20.45	21.00	1.135	0.06	2.740	3.110
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	1513	1752.6	20.43	21.00	1.140	0.01	2.640	3.010
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Ant 1	Full	1413	1732.6	23.53	24.00	1.114	0.03	0.737	0.821
	WCDMA IV	RMC 12.2Kbps	Back	9mm	Ant 1	Full	1413	1732.6	23.53	24.00	1.114	0.05	1.010	1.125
	WCDMA IV	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	Full	1312	1712.4	23.20	24.00	1.202	0.03	1.070	1.286

<CDMA2000 SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)
	CDMA BC1	RTAP 153.6Kbps	Front	0mm	Ant 1	Reduced	1175	1908.75	21.35	22.00	1.161	0.03	1.670	1.940
	CDMA BC1	RTAP 153.6Kbps	Back	0mm	Ant 1	Reduced	1175	1908.75	21.35	22.00	1.161	0.01	2.430	2.822
	CDMA BC1	RTAP 153.6Kbps	Back	0mm	Ant 1	Reduced	25	1851.25	21.21	22.00	1.199	0.03	2.470	2.963
	CDMA BC1	RTAP 153.6Kbps	Back	0mm	Ant 1	Reduced	600	1880	21.29	22.00	1.178	0.01	2.480	2.920
91	CDMA BC1	RTAP 153.6Kbps	Bottom Side	0mm	Ant 1	Reduced	1175	1908.75	21.35	22.00	1.161	0.02	2.580	2.997
	CDMA BC1	RTAP 153.6Kbps	Bottom Side	0mm	Ant 1	Reduced	25	1851.25	21.21	22.00	1.199	0.01	2.490	2.987
	CDMA BC1	RTAP 153.6Kbps	Bottom Side	0mm	Ant 1	Reduced	600	1880	21.29	22.00	1.178	0.09	2.340	2.756
	CDMA BC1	RTAP 153.6Kbps	Front	5mm	Ant 1	Full	1175	1908.75	24.76	25.00	1.057	0	0.941	0.994
	CDMA BC1	RTAP 153.6Kbps	Back	9mm	Ant 1	Full	1175	1908.75	24.76	25.00	1.057	0.01	1.120	1.184
	CDMA BC1	RTAP 153.6Kbps	Bottom Side	10mm	Ant 1	Full	600	1880	24.65	25.00	1.084	0.03	1.370	1.485

**<LTE SAR>**

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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	Ant 1	Reduced	26340	1880	20.34	21.00	1.164	0.06	1.610	1.874
	LTE Band 25	20M	QPSK	50	0	Front	0mm	Ant 1	Reduced	26340	1880	20.15	21.00	1.216	0.01	1.670	2.031
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	26340	1880	20.34	21.00	1.164	0.03	2.310	2.689
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	26140	1860	20.11	21.00	1.227	0.02	2.320	2.848
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	26590	1905	20.09	21.00	1.233	0.01	2.180	2.688
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	26340	1880	20.15	21.00	1.216	0.03	2.130	2.590
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	26140	1860	19.95	21.00	1.274	0.05	2.220	2.827
	LTE Band 25	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	26590	1905	19.90	21.00	1.288	0.03	2.170	2.796
	LTE Band 25	20M	QPSK	100	0	Back	0mm	Ant 1	Reduced	26340	1880	20.07	21.00	1.239	0.01	2.140	2.651
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	26340	1880	20.34	21.00	1.164	0.05	2.240	2.608
92	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	26140	1860	20.11	21.00	1.227	0.01	2.510	3.081
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	26590	1905	20.09	21.00	1.233	0.03	2.100	2.590
	LTE Band 25	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	26340	1880	20.15	21.00	1.216	0.01	2.120	2.578
	LTE Band 25	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	26140	1860	19.95	21.00	1.274	0.06	2.060	2.623
	LTE Band 25	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	26590	1905	19.90	21.00	1.288	0.03	2.260	2.911
	LTE Band 25	20M	QPSK	100	0	Bottom Side	0mm	Ant 1	Reduced	26340	1880	20.07	21.00	1.239	0.01	2.170	2.688
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Ant 1	Full	26340	1880	23.45	24.00	1.135	0.01	1.150	1.305
	LTE Band 25	20M	QPSK	1	0	Back	9mm	Ant 1	Full	26140	1860	23.31	24.00	1.172	0.04	1.050	1.231
	LTE Band 25	20M	QPSK	1	0	Bottom Side	10mm	Ant 1	Full	26140	1860	23.31	24.00	1.172	0.06	1.160	1.360
	LTE Band 2-LAT	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	18900	1880	17.36	18.00	1.159	0.05	0.739	0.856
	LTE Band 2-LAT	20M	QPSK	50	0	Front	0mm	Ant 1	Reduced	18900	1880	17.12	18.00	1.225	0.01	0.738	0.904
	LTE Band 2-LAT	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	18900	1880	17.36	18.00	1.159	0.08	1.190	1.379
	LTE Band 2-LAT	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	18700	1860	17.32	18.00	1.169	0.01	1.080	1.263
	LTE Band 2-LAT	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	19100	1900	17.12	18.00	1.225	-0.03	1.110	1.359
	LTE Band 2-LAT	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	18900	1880	17.12	18.00	1.225	0.03	1.010	1.237
	LTE Band 2-LAT	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	18900	1880	17.36	18.00	1.159	0.05	0.887	1.028
	LTE Band 2-LAT	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	18900	1880	17.12	18.00	1.225	0.03	0.918	1.124
	LTE Band 2-LAT	20M	QPSK	1	0	Front	5mm	Ant 1	Full	18900	1880	22.90	24.00	1.288	0.02	0.956	1.232
	LTE Band 2-LAT	20M	QPSK	1	0	Back	9mm	Ant 1	Full	18900	1880	22.90	24.00	1.288	-0.01	0.905	1.166
	LTE Band 2-LAT	20M	QPSK	1	0	Bottom Side	10mm	Ant 1	Full	18900	1880	22.90	24.00	1.288	0.03	0.932	1.201
	LTE Band 25-UAT	20M	QPSK	1	0	Front	0mm	Ant 2	Reduced	26340	1880	18.16	19.00	1.213	0.06	0.944	1.145
	LTE Band 25-UAT	20M	QPSK	50	0	Front	0mm	Ant 2	Reduced	26340	1880	18.15	19.00	1.216	0.04	0.924	1.124
	LTE Band 25-UAT	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	26340	1880	18.16	19.00	1.213	0.06	0.738	0.895
	LTE Band 25-UAT	20M	QPSK	50	0	Back	0mm	Ant 2	Reduced	26340	1880	18.15	19.00	1.216	0.06	0.722	0.878
	LTE Band 25-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	26340	1880	18.16	19.00	1.213	0.01	0.745	0.904
	LTE Band 25-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	26340	1880	18.15	19.00	1.216	0.03	0.982	1.194
	LTE Band 25-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	26140	1860	17.98	19.00	1.265	-0.01	0.923	1.167
	LTE Band 25-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	26590	1905	17.98	19.00	1.265	0.01	0.902	1.141
	LTE Band 25-UAT	20M	QPSK	1	0	Front	5mm	Ant 2	Full	26340	1880	22.17	23.00	1.211	0.01	0.562	0.680
	LTE Band 25-UAT	20M	QPSK	1	0	Back	9mm	Ant 2	Full	26340	1880	22.17	23.00	1.211	0.08	0.389	0.471
	LTE Band 25-UAT	20M	QPSK	1	0	Top Side	10mm	Ant 2	Full	26340	1880	22.17	23.00	1.211	0.03	0.790	0.956
EN-DC																	
	LTE Band 25-UAT	20M	QPSK	1	0	Front	0mm	Ant 2	Reduced	26340	1880	18.16	19.00	1.213	0.06	0.944	1.145
	LTE Band 25-UAT	20M	QPSK	50	0	Front	0mm	Ant 2	Reduced	26340	1880	18.15	19.00	1.216	0.04	0.924	1.124
	LTE Band 25-UAT	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	26340	1880	18.16	19.00	1.213	0.06	0.738	0.895
	LTE Band 25-UAT	20M	QPSK	50	0	Back	0mm	Ant 2	Reduced	26340	1880	18.15	19.00	1.216	0.06	0.722	0.878
	LTE Band 25-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	26340	1880	18.16	19.00	1.213	0.01	0.745	0.904
	LTE Band 25-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	26340	1880	18.15	19.00	1.216	0.03	0.982	1.194
	LTE Band 25-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	26140	1860	17.98	19.00	1.265	-0.01	0.923	1.167
	LTE Band 25-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	26590	1905	17.98	19.00	1.265	0.01	0.902	1.141
	LTE Band 25-UAT	20M	QPSK	1	0	Front	5mm	Ant 2	Full	26340	1880	22.17	23.00	1.211	0.01	0.562	0.680
	LTE Band 25-UAT	20M	QPSK	1	0	Back	9mm	Ant 2	Full	26340	1880	22.17	23.00	1.211	0.08	0.389	0.471
	LTE Band 25-UAT	20M	QPSK	1	0	Top Side	10mm	Ant 2	Full	26340	1880	22.17	23.00	1.211	0.03	0.790	0.956



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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 66-LAT	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	132322	1745	16.38	17.00	1.153	0.05	0.519	0.599
	LTE Band 66-LAT	20M	QPSK	50	0	Front	0mm	Ant 1	Reduced	132322	1745	15.96	17.00	1.271	0.03	0.554	0.704
	LTE Band 66-LAT	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	132322	1745	16.38	17.00	1.153	0.01	0.870	1.004
	LTE Band 66-LAT	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	132322	1745	15.96	17.00	1.271	0.05	0.939	1.193
	LTE Band 66-LAT	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	132322	1745	16.38	17.00	1.153	0.01	0.933	1.076
	LTE Band 66-LAT	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	132322	1745	15.96	17.00	1.271	0.08	1.060	1.347
	LTE Band 66-LAT	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	132072	1720	15.84	17.00	1.306	0.08	1.010	1.319
	LTE Band 66-LAT	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	132572	1770	15.85	17.00	1.303	0.08	0.984	1.282
	LTE Band 66-LAT	20M	QPSK	1	0	Front	5mm	Ant 1	Full	132322	1745	22.71	24.00	1.346	0.02	0.942	1.268
	LTE Band 66-LAT	20M	QPSK	50	0	Back	9mm	Ant 1	Full	132322	1745	22.71	24.00	1.346	0.05	0.985	1.326
	LTE Band 66-LAT	20M	QPSK	1	0	Bottom Side	10mm	Ant 1	Full	132322	1745	22.71	24.00	1.346	-0.01	0.847	1.140
	LTE Band 66-UAT	20M	QPSK	1	0	Front	0mm	Ant 2	Reduced	132322	1745	16.97	18.00	1.268	0.03	0.896	1.136
	LTE Band 66-UAT	20M	QPSK	50	0	Front	0mm	Ant 2	Reduced	132322	1745	16.84	18.00	1.306	0.05	0.948	1.238
	LTE Band 66-UAT	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	132322	1745	16.97	18.00	1.268	0.03	0.707	0.896
	LTE Band 66-UAT	20M	QPSK	50	0	Back	0mm	Ant 2	Reduced	132322	1745	16.84	18.00	1.306	0.01	0.763	0.997
	LTE Band 66-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	132322	1745	16.97	18.00	1.268	0.05	1.050	1.331
93	LTE Band 66-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	132322	1745	16.84	18.00	1.306	0.02	1.150	1.502
	LTE Band 66-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	132072	1720	16.74	18.00	1.337	-0.01	1.030	1.377
	LTE Band 66-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	132572	1770	16.40	18.00	1.445	0.06	0.939	1.357
	LTE Band 66-UAT	20M	QPSK	1	0	Front	5mm	Ant 2	Full	132322	1745	21.80	23.00	1.318	0.03	0.669	0.882
	LTE Band 66-UAT	20M	QPSK	1	0	Back	9mm	Ant 2	Full	132322	1745	21.80	23.00	1.318	0.01	0.452	0.596
	LTE Band 66-UAT	20M	QPSK	1	0	Top Side	10mm	Ant 2	Full	132322	1745	21.80	23.00	1.318	0.03	0.858	1.131
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Ant 1	Handheld on	21100	2535	16.45	17.00	1.135	0.03	0.445	0.505
	LTE Band 7	20M	QPSK	50	0	Front	0mm	Ant 1	Handheld on	21100	2535	16.44	17.00	1.138	0	0.463	0.527
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Ant 1	Handheld on	21100	2535	16.45	17.00	1.135	0.01	0.867	0.984
	LTE Band 7	20M	QPSK	50	0	Back	0mm	Ant 1	Handheld on	21100	2535	16.44	17.00	1.138	0.05	0.887	1.009
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Handheld on	21100	2535	16.45	17.00	1.135	0.07	1.280	1.453
94	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Handheld on	20850	2510	16.20	17.00	1.202	0.02	1.210	1.455
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Handheld on	21350	2560	16.24	17.00	1.191	-0.03	1.200	1.429
	LTE Band 7	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Handheld on	21100	2535	16.44	17.00	1.138	0	1.108	1.260
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 1	Full	21100	2535	22.91	24.00	1.285	0.01	1.070	1.375
	LTE Band 7	20M	QPSK	1	0	Back	9mm	Ant 1	Full	21100	2535	22.91	24.00	1.285	0.03	1.090	1.401
	LTE Band 7	20M	QPSK	1	0	Bottom Side	10mm	Ant 1	Full	21100	2535	22.91	24.00	1.285	0.01	1.130	1.452
	LTE Band 12-LAT	10M	QPSK	1	0	Front	0mm	Ant 1	Reduced	23095	707.5	22.69	23.00	1.074	0.01	0.609	0.654
	LTE Band 12-LAT	10M	QPSK	25	0	Front	0mm	Ant 1	Reduced	23095	707.5	22.62	23.00	1.091	0.05	0.371	0.405
95	LTE Band 12-LAT	10M	QPSK	1	0	Back	0mm	Ant 1	Reduced	23095	707.5	22.69	23.00	1.074	0.03	1.210	1.300
	LTE Band 12-LAT	10M	QPSK	25	0	Back	0mm	Ant 1	Reduced	23095	707.5	22.62	23.00	1.091	0.01	0.679	0.741
	LTE Band 12-LAT	10M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	23095	707.5	22.69	23.00	1.074	0.06	1.050	1.128
	LTE Band 12-LAT	10M	QPSK	25	0	Bottom Side	0mm	Ant 1	Reduced	23095	707.5	22.62	23.00	1.091	0.08	0.671	0.732
	LTE Band 12-LAT	10M	QPSK	1	0	Front	5mm	Ant 1	Full	23095	707.5	23.28	24.00	1.180	-0.01	0.852	1.006
	LTE Band 12-LAT	10M	QPSK	1	0	Back	9mm	Ant 1	Full	23095	707.5	23.28	24.00	1.180	0.05	0.912	1.076
	LTE Band 12-LAT	10M	QPSK	1	0	Bottom Side	10mm	Ant 1	Full	23095	707.5	23.28	24.00	1.180	-0.06	0.468	0.552



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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)
96	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 1	Full	26865	831.5	23.22	24.00	1.197	0.01	1.480	1.771
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 1	Full	26865	831.5	23.22	24.00	1.197	0.05	1.510	1.807
	LTE Band 5B	10M	QPSK	1	0	Back	0mm	Ant 1	Full	20575+20476	841.5+831.6	22.91	24.00	1.285	0.03	1.320	1.697
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 1	Full	26865	831.5	23.22	24.00	1.197	0.03	1.480	1.771
	LTE Band 5-UAT	10M	QPSK	1	0	Front	0mm	Ant 2	Full	20525	836.5	22.45	23.50	1.274	0.06	0.736	0.937
	LTE Band 5-UAT	10M	QPSK	25	0	Front	0mm	Ant 2	Full	20525	836.5	21.35	22.50	1.303	0.01	0.578	0.753
	LTE Band 5-UAT	10M	QPSK	1	0	Back	0mm	Ant 2	Full	20525	836.5	22.45	23.50	1.274	0.05	0.557	0.709
	LTE Band 5-UAT	10M	QPSK	25	0	Back	0mm	Ant 2	Full	20525	836.5	21.35	22.50	1.303	0.03	0.425	0.554
	LTE Band 5-UAT	10M	QPSK	1	0	Top Side	0mm	Ant 2	Full	20525	836.5	22.45	23.50	1.274	0.01	0.860	1.095
98	LTE Band 5B-UAT	10M	QPSK	1	0	Top Side	0mm	Ant 2	Full	20575+20476	841.5+831.6	22.57	23.50	1.239	0.02	0.786	0.974
	LTE Band 5-UAT	10M	QPSK	25	0	Top Side	0mm	Ant 2	Full	20525	836.5	21.35	22.50	1.303	0.05	0.655	0.854
	LTE Band 30-LAT	10M	QPSK	1	0	Front	0mm	Ant 1	Reduced	27710	2310	17.74	18.00	1.062	0.05	0.706	0.750
	LTE Band 30-LAT	10M	QPSK	25	0	Front	0mm	Ant 1	Reduced	27710	2310	17.58	18.00	1.102	0.03	0.715	0.788
	LTE Band 30-LAT	10M	QPSK	1	0	Back	0mm	Ant 1	Reduced	27710	2310	17.74	18.00	1.062	0.01	1.380	1.465
	LTE Band 30-LAT	10M	QPSK	25	0	Back	0mm	Ant 1	Reduced	27710	2310	17.58	18.00	1.102	0.05	1.340	1.476
	LTE Band 30-LAT	10M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	27710	2310	17.74	18.00	1.062	0.03	1.300	1.380
	LTE Band 30-LAT	10M	QPSK	25	0	Bottom Side	0mm	Ant 1	Reduced	27710	2310	17.58	18.00	1.102	0.01	1.260	1.388
	LTE Band 30-LAT	10M	QPSK	25	0	Front	5mm	Ant 1	Full	27710	2310	23.59	24.00	1.099	0.02	0.894	0.983
	LTE Band 30-LAT	10M	QPSK	1	0	Back	9mm	Ant 1	Full	27710	2310	23.59	24.00	1.099	-0.1	1.100	1.209
	LTE Band 30-LAT	10M	QPSK	25	0	Bottom Side	10mm	Ant 1	Full	27710	2310	23.59	24.00	1.099	0.02	1.200	1.319
	LTE Band 30 -UAT	10M	QPSK	1	0	Front	0mm	Ant 2	Reduced	27710	2310	20.86	21.50	1.159	0.03	0.780	0.904
	LTE Band 30 -UAT	10M	QPSK	25	0	Front	0mm	Ant 2	Reduced	27710	2310	20.62	21.50	1.225	0.05	0.556	0.681
	LTE Band 30 -UAT	10M	QPSK	1	0	Back	0mm	Ant 2	Reduced	27710	2310	20.86	21.50	1.159	0.01	0.704	0.816
	LTE Band 30 -UAT	10M	QPSK	25	0	Back	0mm	Ant 2	Reduced	27710	2310	20.62	21.50	1.225	0.05	0.513	0.628
	LTE Band 30 -UAT	10M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	27710	2310	20.86	21.50	1.159	0.08	1.160	1.344
	LTE Band 30 -UAT	10M	QPSK	25	0	Top Side	0mm	Ant 2	Reduced	27710	2310	20.62	21.50	1.225	0.03	0.800	0.980
	LTE Band 30 -UAT	10M	QPSK	1	0	Front	5mm	Ant 2	Full	27710	2310	21.85	23.00	1.303	0.01	0.022	0.029
LTE Band 30 -UAT	10M	QPSK	1	0	Back	9mm	Ant 2	Full	27710	2310	21.85	23.00	1.303	0	0.042	0.054	
LTE Band 30 -UAT	10M	QPSK	1	0	Top Side	10mm	Ant 2	Full	27710	2310	21.85	23.00	1.303	0.01	0.313	0.408	



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	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	Ant 1	Reduced	40620	2593	21.78	22.50	1.180	62.9	1.006	0.03	0.806	0.957
	LTE Band 41	20M	QPSK	50	0	Front	0mm	Ant 1	Reduced	40620	2593	21.73	22.50	1.194	62.9	1.006	0.05	0.632	0.759
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	40620	2593	21.78	22.50	1.180	62.9	1.006	0.03	1.970	2.339
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	39750	2506	21.38	22.50	1.294	62.9	1.006	0.03	2.030	2.643
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	40185	2549.5	21.42	22.50	1.282	62.9	1.006	0.12	2.170	2.799
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	41055	2636.5	21.34	22.50	1.306	62.9	1.006	0.01	2.130	2.799
	LTE Band 41	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	41490	2680	21.51	22.50	1.256	62.9	1.006	0.03	2.030	2.565
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	40620	2593	21.73	22.50	1.194	62.9	1.006	0.05	1.320	1.586
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	39750	2506	21.49	22.50	1.262	62.9	1.006	0.05	1.440	1.828
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	40185	2549.5	21.34	22.50	1.306	62.9	1.006	0.08	1.410	1.853
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	41055	2636.5	21.43	22.50	1.279	62.9	1.006	0.03	1.440	1.853
	LTE Band 41	20M	QPSK	50	0	Back	0mm	Ant 1	Reduced	41490	2680	21.57	22.50	1.239	62.9	1.006	0.01	1.340	1.670
	LTE Band 41	20M	QPSK	100	0	Back	0mm	Ant 1	Reduced	40620	2593	21.69	22.50	1.205	62.9	1.006	0	1.450	1.758
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40620	2593	21.78	22.50	1.180	62.9	1.006	0.03	2.090	2.482
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	39750	2506	21.38	22.50	1.294	62.9	1.006	0.05	2.200	2.864
99	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	21.42	22.50	1.282	62.9	1.006	0.06	2.230	2.877
	LTE Band 41C	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40185+40383	2549.5+2569.3	21.66	22.50	1.213	62.9	1.006	0.01	1.930	2.356
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	41055	2636.5	21.34	22.50	1.306	62.9	1.006	0.01	2.090	2.746
	LTE Band 41	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	41490	2680	21.51	22.50	1.256	62.9	1.006	0.03	1.890	2.388
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	40620	2593	21.73	22.50	1.194	62.9	1.006	0.01	1.560	1.874
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	39750	2506	21.49	22.50	1.262	62.9	1.006	0.01	1.620	2.056
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	21.34	22.50	1.306	62.9	1.006	0.05	1.690	2.221
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	41055	2636.5	21.43	22.50	1.279	62.9	1.006	0.08	1.540	1.982
	LTE Band 41	20M	QPSK	50	0	Bottom Side	0mm	Ant 1	Reduced	41490	2680	21.57	22.50	1.239	62.9	1.006	0.03	1.210	1.508
	LTE Band 41	20M	QPSK	100	0	Bottom Side	0mm	Ant 1	Reduced	40620	2593	21.69	22.50	1.205	62.9	1.006	0.01	1.570	1.903
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Ant 1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	0	0.628	0.842
	LTE Band 41	20M	QPSK	1	0	Back	9mm	Ant 1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	0.03	0.556	0.746
	LTE Band 41	20M	QPSK	1	0	Bottom Side	10mm	Ant 1	Full	40620	2593	22.75	24.00	1.334	62.9	1.006	0.05	0.723	0.970
	LTE Band 41 HPUE	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40620	2593	21.78	22.50	1.180	42.9	1.009	0.08	1.310	1.560
	LTE Band 41 HPUE	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	39750	2506	21.38	22.50	1.294	42.9	1.009	0	1.540	2.011
	LTE Band 41 HPUE	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	21.42	22.50	1.282	42.9	1.009	0.01	1.280	1.656
	LTE Band 41 HPUE	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	41055	2636.5	21.34	22.50	1.306	42.9	1.009	0.03	1.460	1.924
	LTE Band 41 HPUE	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	41490	2680	21.51	22.50	1.256	42.9	1.009	0.03	1.340	1.698
	LTE Band 41 HPUE	20M	QPSK	1	0	Bottom Side	10mm	Ant 1	Full	40620	2593	25.58	27.00	1.387	42.9	1.009	0.01	0.957	1.339
EN-DC																			
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	40620	2593	20.84	22.00	1.306	62.9	1.006	0.03	0.801	1.053
	LTE Band 41 HPUE-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	40620	2593	20.84	22.00	1.306	42.9	1.009	0.02	0.559	0.737
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	39750	2506	20.65	22.00	1.365	62.9	1.006	0.03	0.764	1.049
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	40185	2549.5	20.70	22.00	1.349	62.9	1.006	0.03	0.732	0.993
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	41055	2636.5	20.62	22.00	1.374	62.9	1.006	0.03	0.726	1.004
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	41490	2680	20.43	22.00	1.435	62.9	1.006	0.03	0.706	1.020
	LTE Band 41-UAT	20M	QPSK	50	0	Top Side	0mm	Ant 2	Reduced	40620	2593	20.67	22.00	1.358	62.9	1.006	0.05	0.726	0.992
	LTE Band 41-UAT	20M	QPSK	1	0	Top Side	10mm	Ant 2	Full	40620	2593	22.08	23.00	1.236	62.9	1.006	0.01	0.174	0.216
	LTE Band 41 HPUE-UAT	20M	QPSK	1	0	Top Side	10mm	Ant 2	Full	40620	2593	25.06	26.00	1.242	62.9	1.006	-0.02	0.151	0.189



<5G NR SAR>

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Mode, Test Position, Gap (mm), Antenna, 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). Contains multiple rows of test data for various bands and configurations.



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	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)
	FR1 N66	20M	QPSK	1	1	15KHz	Front	0mm	Ant 1	Reduced	349000	1745	19.89	20.50	1.151	0.01	0.700	0.806
	FR1 N66	20M	QPSK	50	0	15KHz	Front	0mm	Ant 1	Reduced	349000	1745	19.64	20.50	1.219	0.01	0.673	0.820
	FR1 N66	20M	QPSK	1	1	15KHz	Back	0mm	Ant 1	Reduced	349000	1745	19.89	20.50	1.151	0.02	1.280	1.473
	FR1 N66	20M	QPSK	50	0	15KHz	Back	0mm	Ant 1	Reduced	349000	1745	19.64	20.50	1.219	0.02	1.100	1.341
	FR1 N66	20M	QPSK	1	1	15KHz	Bottom Side	0mm	Ant 1	Reduced	349000	1745	19.89	20.50	1.151	0.05	1.260	1.450
102	FR1 N66	20M	QPSK	50	0	15KHz	Bottom Side	0mm	Ant 1	Reduced	349000	1745	19.64	20.50	1.219	0.05	1.300	1.585
	FR1 N66	20M	QPSK	50	0	15KHz	Bottom Side	0mm	Ant 1	Reduced	346000	1730	19.41	20.50	1.285	-0.1	1.220	1.568
	FR1 N66	20M	QPSK	50	0	15KHz	Bottom Side	0mm	Ant 1	Reduced	352000	1760	19.27	20.50	1.327	-0.09	1.180	1.566
	FR1 N66	20M	QPSK	1	1	15KHz	Front	5mm	Ant 1	Full	349000	1745	23.08	24.00	1.236	0.04	0.587	0.726
	FR1 N66	20M	QPSK	1	1	15KHz	Back	9mm	Ant 1	Full	349000	1745	23.08	24.00	1.236	0.07	0.527	0.651
	FR1 N66	20M	QPSK	1	1	15KHz	Bottom Side	10mm	Ant 1	Full	349000	1745	23.08	24.00	1.236	0.01	0.614	0.759
	FR1 N66	20M	QPSK	1	1	15KHz	Front	0mm	Ant 2	Reduced	349000	1745	20.36	20.50	1.033	0.05	1.043	1.077
	FR1 N66	20M	QPSK	50	0	15KHz	Front	0mm	Ant 2	Reduced	349000	1745	20.24	20.50	1.062	0.02	1.046	1.111
	FR1 N66	20M	QPSK	1	1	15KHz	Back	0mm	Ant 2	Reduced	349000	1745	20.36	20.50	1.033	0.01	0.968	1.000
	FR1 N66	20M	QPSK	50	0	15KHz	Back	0mm	Ant 2	Reduced	349000	1745	20.24	20.50	1.062	0.03	0.953	1.012
	FR1 N66	20M	QPSK	1	1	15KHz	Top Side	0mm	Ant 2	Reduced	349000	1745	20.36	20.50	1.033	0.05	1.405	1.451
	FR1 N66	20M	QPSK	1	1	15KHz	Top Side	0mm	Ant 2	Reduced	344000	1720	20.34	20.50	1.038	0.08	1.408	1.461
	FR1 N66	20M	QPSK	1	1	15KHz	Top Side	0mm	Ant 2	Reduced	354000	1770	20.36	20.50	1.033	0.03	1.410	1.456
	FR1 N66	20M	QPSK	50	0	15KHz	Top Side	0mm	Ant 2	Reduced	349000	1745	20.24	20.50	1.062	0.01	1.380	1.465
	FR1 N66	20M	QPSK	1	1	15KHz	Front	5mm	Ant 2	Full	349000	1745	23.36	24.00	1.159	0.04	1.090	1.263
	FR1 N66	20M	QPSK	1	1	15KHz	Back	9mm	Ant 2	Full	349000	1745	23.36	24.00	1.159	0.07	0.601	0.696
	FR1 N66	20M	QPSK	1	1	15KHz	Top Side	10mm	Ant 2	Full	349000	1745	23.36	24.00	1.159	0.01	0.885	1.026

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)
103	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	3+6	Full	1	2412	22.11	22.50	1.094	100	1.000	0.04	0.676	0.740
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	3+6	Full	6	2437	22.12	22.50	1.091	100	1.000	0.02	0.623	0.680
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	3+6	Full	11	2462	22.11	22.50	1.094	100	1.000	-0.03	0.589	0.644
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	3+6	Simultaneous	1	2412	15.81	16.50	1.172	100	1.000	0.06	0.217	0.254



<WLAN 5GHz SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	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)
	WLAN5.2GHz	802.11a 6Mbps	Back	0mm	5+6	Full	36	5180	19.52	21.00	1.406	98.62	1.014	0.03	1.600	2.281
	WLAN5.2GHz	802.11a 6Mbps	Back	0mm	5+6	Full	44	5220	20.42	21.00	1.143	98.62	1.014	0.02	2.060	2.387
104	WLAN5.2GHz	802.11a 6Mbps	Back	0mm	5+6	Full	48	5240	20.58	21.00	1.102	98.62	1.014	0.05	2.210	2.468
	WLAN5.2GHz	802.11a 6Mbps	Back	0mm	5+6	Simultaneous	48	5240	9.83	11.00	1.309	98.62	1.014	-0.06	0.177	0.235
	WLAN5.3GHz	802.11a 6Mbps	Front	0mm	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.05	0.022	0.025
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	-0.03	2.530	2.932
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	5+6	Full	52	5260	20.35	21.00	1.161	98.62	1.014	0.03	2.470	2.909
105	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	5+6	Full	64	5320	20.41	21.00	1.146	98.62	1.014	0.01	2.560	2.974
	WLAN5.3GHz	802.11a 6Mbps	Left Side	0mm	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	-0.1	0.036	0.042
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.03	0.192	0.223
	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	5+6	Full	56	5280	20.42	21.00	1.143	98.62	1.014	0.01	0.063	0.073
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	5+6	Simultaneous	64	5320	9.66	10.50	1.213	98.62	1.014	0.09	0.200	0.246
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.03	0.039	0.047
106	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.02	2.610	3.131
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	5+6	Full	100	5500	20.59	21.50	1.233	98.62	1.014	0.05	2.430	3.038
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	5+6	Full	140	5700	20.53	21.50	1.250	98.62	1.014	0.06	2.420	3.068
	WLAN5.5GHz	802.11a 6Mbps	Left Side	0mm	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.1	0.095	0.114
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.03	0.289	0.347
	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	-0.04	0.144	0.173
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	5+6	Simultaneous	116	5580	9.09	10.00	1.233	98.62	1.014	-0.11	0.185	0.231
107	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	5+6	Full	149	5745	20.98	21.50	1.127	98.62	1.014	0.01	1.240	1.417
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	5+6	Full	157	5785	20.55	21.50	1.245	98.62	1.014	-0.02	0.944	1.191
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	5+6	Full	165	5825	20.94	21.50	1.138	98.62	1.014	0.03	0.912	1.052
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	5+6	Simultaneous	149	5745	12.26	13.00	1.186	98.62	1.014	0.04	0.217	0.261

15.5 Repeated SAR Measurement

<1g>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Ant.	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	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	1	Reduced	9400	1880	15.85	16.00	1.035	-	-	0.03	1.130	1	1.170
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	1	Reduced	9400	1880	15.85	16.00	1.035	-	-	-0.06	1.070	1.056	1.108
1st	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	1	Reduced	1513	1752.6	16.27	16.50	1.054	-	-	0.08	1.120	1	1.181
2nd	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	1	Reduced	1513	1752.6	16.27	16.50	1.054	-	-	0.08	1.120	1	1.181
1st	CDMA BC10	-	-	-	-	RTAP 153.6Kbps	Back	5mm	1	Full	684	823.1	24.23	25.00	1.194	-	-	-0.07	0.999	1	1.193
2nd	CDMA BC10	-	-	-	-	RTAP 153.6Kbps	Back	5mm	1	Full	684	823.1	24.23	25.00	1.194	-	-	0.06	0.971	1.029	1.159
1st	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	1	Reduced	39790	2510	16.45	17.50	1.274	62.9	1.006	0.04	0.874	1	1.120
2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	1	Reduced	40620	2593	16.83	17.50	1.167	62.9	1.006	0.05	0.971	0.900	1.140
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Back	5mm	3+6	Full	1	2412	22.11	22.50	1.094	100	1.000	0.06	1.020	1	1.116
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Back	5mm	3+6	Full	1	2412	22.11	22.50	1.094	100	1.000	-0.09	0.985	1.036	1.078
1st	WLAN5GHz	-	-	-	-	802.11a 6Mbps	Back	5mm	5+6	Reduced	56	5280	14.28	15.00	1.180	98.62	1.014	-0.03	0.912	1	1.092
2nd	WLAN5GHz	-	-	-	-	802.11a 6Mbps	Back	5mm	5+6	Reduced	56	5280	14.28	15.00	1.180	98.62	1.014	0.12	0.899	1.014	1.076

<10g>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Ant.	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	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	1	Reduced	9262	1852.4	20.72	21.00	1.067	-	-	0.04	2.930	1	3.125
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	1	Reduced	9262	1852.4	20.72	21.00	1.067	-	-	0.04	2.870	1.021	3.061
1st	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	1	Reduced	1312	1712.4	20.45	21.00	1.135	-	-	0.06	2.740	1	3.110
2nd	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	1	Reduced	1312	1712.4	20.45	21.00	1.135	-	-	-0.05	2.670	1.026	3.030
1st	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	1	Reduced	40185	2549.5	21.42	22.50	1.282	62.9	1.006	0.06	2.230	1	2.877
2nd	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	0mm	1	Reduced	40185	2549.5	21.42	22.50	1.282	62.9	1.006	-0.06	2.170	1.028	2.799
1st	WLAN5.5GHz	-	-	-	-	802.11a 6Mbps	Back	0mm	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.02	2.610	1	3.131
2nd	WLAN5.5GHz	-	-	-	-	802.11a 6Mbps	Back	0mm	5+6	Full	116	5580	20.77	21.50	1.183	98.62	1.014	0.02	2.530	1.032	3.035

General Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8W/kg$.
- 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.
- 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.
- The ratio is the difference in percentage between original and repeated *measured SAR*.
- All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.



15.6 TDD B41 Linearity Data Analysis

General Note:

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required

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)	0.081	0.109
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	159.00	217.01
Linearity SAR (W/kg)	0.111	
% deviation from expected linearity		-1.40%

LTE Band 41-UAT(HPUE)-Linearity Data for Head		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	17.50	17.50
Reported 1g SAR (W/kg)	0.550	0.384
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	35.60	24.35
Linearity SAR (W/kg)	0.376	
% deviation from expected linearity		2.07%

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)	17.50	17.50
Reported 1g SAR (W/kg)	1.197	0.870
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	35.60	24.35
Linearity SAR (W/kg)	0.819	
% deviation from expected linearity		6.25%

LTE Band 41-UAT(HPUE)-Linearity Data for Hotspot		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	18.00	18.00
Reported 1g SAR (W/kg)	0.547	0.384
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	39.94	27.32
Linearity SAR (W/kg)	0.374	
% deviation from expected linearity		2.63%



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)	19.00	19.00
Reported 1g SAR (W/kg)	1.191	0.765
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	50.28	34.39
Linearity SAR (W/kg)	0.815	
% deviation from expected linearity		-6.10%
LTE Band 41-UAT(HPUE)-Linearity Data for Body-worn		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	20.50	20.50
Reported 1g SAR (W/kg)	0.516	0.363
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	71.02	48.58
Linearity SAR (W/kg)	0.353	
% deviation from expected linearity		2.84%
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)	22.50	22.50
Reported 10g SAR (W/kg)	3.059	2.011
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	112.57	77.00
Linearity SAR (W/kg)	2.092	
% deviation from expected linearity		-3.89%
LTE Band 41UAT(HPUE)-Linearity Data for Handheld		
	LTE Band 41 (Power Class 3)	LTE Band 41 (Power Class 2)
Maximum Tune up Power (dBm)	22.00	22.00
Reported 10g SAR (W/kg)	1.053	0.737
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	100.32	68.63
Linearity SAR (W/kg)	0.720	
% deviation from expected linearity		2.32%

16. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	GSM Voice + WLAN2.4GHz MIMO	Yes	Yes		Yes
2.	GPRS/EDGE + WLAN2.4GHz MIMO	Yes	Yes	Yes	Yes
3.	CDMA + WLAN2.4GHz MIMO	Yes	Yes	Yes	Yes
4.	WCDMA + WLAN2.4GHz MIMO	Yes	Yes	Yes	Yes
5.	LTE + WLAN2.4GHz MIMO	Yes	Yes	Yes	Yes
6.	GSM Voice + WLAN5.3/5.5GHz MIMO	Yes	Yes		Yes
7.	GPRS/EDGE + WLAN5.3/5.5GHz MIMO	Yes	Yes		Yes
8.	CDMA + WLAN5.3/5.5GHz MIMO	Yes	Yes		Yes
9.	WCDMA + WLAN5.3/5.5GHz MIMO	Yes	Yes		Yes
10.	LTE + WLAN5.3/5.5GHz MIMO	Yes	Yes		Yes
11.	GSM Voice + WLAN5.2/5.8GHz MIMO	Yes	Yes		Yes
12.	GPRS/EDGE + WLAN5.2/5.8GHz MIMO	Yes	Yes	Yes	Yes
13.	CDMA + WLAN5.2/5.8GHz MIMO	Yes	Yes	Yes	Yes
14.	WCDMA + WLAN5.2/5.8GHz MIMO	Yes	Yes	Yes	Yes
15.	LTE + WLAN5.2/5.8GHz MIMO	Yes	Yes	Yes	Yes
16.	GSM Voice + Bluetooth	Yes	Yes		Yes
17.	GPRS/EDGE + Bluetooth	Yes	Yes	Yes	Yes
18.	CDMA + Bluetooth	Yes	Yes	Yes	Yes
19.	WCDMA + Bluetooth	Yes	Yes	Yes	Yes
20.	LTE + Bluetooth	Yes	Yes	Yes	Yes
21.	5G NR + LTE+ 2.4GHz WLAN MIMO	Yes	Yes	Yes	Yes
22.	5G NR+ LTE + WLAN5.3/5.5GHz MIMO	Yes	Yes		Yes
23.	5G NR+ LTE + WLAN5.2/5.8GHz MIMO	Yes	Yes	Yes	Yes
24.	5G NR + 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, WCDMA, CDMA 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) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, 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 $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ 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.



16.1 Head Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM	GSM850	Right Cheek	0.328	0.379	0.101	0.033	0.71	0.43	0.36
		Right Tilted	0.169	0.325	0.180	0.033	0.49	0.35	0.20
		Left Cheek	0.238	0.223	0.096	0.033	0.46	0.33	0.27
		Left Tilted	0.147	0.209	0.203	0.033	0.36	0.35	0.18
	GSM1900	Right Cheek	0.041	0.379	0.101	0.033	0.42	0.14	0.07
		Right Tilted	0.029	0.325	0.180	0.033	0.35	0.21	0.06
		Left Cheek	0.039	0.223	0.096	0.033	0.26	0.14	0.07
		Left Tilted	0.038	0.209	0.203	0.033	0.25	0.24	0.07
WCDMA	WCDMA II	Right Cheek	0.061	0.379	0.101	0.033	0.44	0.16	0.09
		Right Tilted	0.044	0.325	0.180	0.033	0.37	0.22	0.08
		Left Cheek	0.077	0.223	0.096	0.033	0.30	0.17	0.11
		Left Tilted	0.052	0.209	0.203	0.033	0.26	0.26	0.09
	WCDMA IV	Right Cheek	0.056	0.379	0.101	0.033	0.44	0.16	0.09
		Right Tilted	0.058	0.325	0.180	0.033	0.38	0.24	0.09
		Left Cheek	0.092	0.223	0.096	0.033	0.32	0.19	0.13
		Left Tilted	0.087	0.209	0.203	0.033	0.30	0.29	0.12
	WCDMA V	Right Cheek	0.318	0.379	0.101	0.033	0.70	0.42	0.35
		Right Tilted	0.213	0.325	0.180	0.033	0.54	0.39	0.25
		Left Cheek	0.164	0.223	0.096	0.033	0.39	0.26	0.20
		Left Tilted	0.080	0.209	0.203	0.033	0.29	0.28	0.11
CDMA	CDMA2000 BC0	Right Cheek	0.245	0.379	0.101	0.033	0.62	0.35	0.28
		Right Tilted	0.166	0.325	0.180	0.033	0.49	0.35	0.20
		Left Cheek	0.212	0.223	0.096	0.033	0.44	0.31	0.25
		Left Tilted	0.137	0.209	0.203	0.033	0.35	0.34	0.17
	CDMA2000 BC1	Right Cheek	0.067	0.379	0.101	0.033	0.45	0.17	0.10
		Right Tilted	0.039	0.325	0.180	0.033	0.36	0.22	0.07
		Left Cheek	0.048	0.223	0.096	0.033	0.27	0.14	0.08
		Left Tilted	0.052	0.209	0.203	0.033	0.26	0.26	0.09
	CDMA2000 BC10	Right Cheek	0.243	0.379	0.101	0.033	0.62	0.34	0.28
		Right Tilted	0.162	0.325	0.180	0.033	0.49	0.34	0.20
		Left Cheek	0.207	0.223	0.096	0.033	0.43	0.30	0.24
		Left Tilted	0.135	0.209	0.203	0.033	0.34	0.34	0.17
LTE	LTE Band 25 Ant 1	Right Cheek	0.081	0.379	0.101	0.033	0.46	0.18	0.11
		Right Tilted	0.052	0.325	0.180	0.033	0.38	0.23	0.09
		Left Cheek	0.085	0.223	0.096	0.033	0.31	0.18	0.12
		Left Tilted	0.058	0.209	0.203	0.033	0.27	0.26	0.09
	LTE Band 2 Ant 2	Right Cheek	0.195	0.379	0.101	0.033	0.57	0.30	0.23
		Right Tilted	0.194	0.325	0.180	0.033	0.52	0.37	0.23
		Left Cheek	0.334	0.223	0.096	0.033	0.56	0.43	0.37
		Left Tilted	0.569	0.209	0.203	0.033	0.78	0.77	0.60
	LTE Band 66&4 Ant 1	Right Cheek	0.121	0.379	0.101	0.033	0.50	0.22	0.15
		Right Tilted	0.073	0.325	0.180	0.033	0.40	0.25	0.11
		Left Cheek	0.124	0.223	0.096	0.033	0.35	0.22	0.16
		Left Tilted	0.105	0.209	0.203	0.033	0.31	0.31	0.14
	LTE Band 66&4 Ant 2	Right Cheek	0.286	0.379	0.101	0.033	0.67	0.39	0.32
		Right Tilted	0.301	0.325	0.180	0.033	0.63	0.48	0.33
		Left Cheek	0.425	0.223	0.096	0.033	0.65	0.52	0.46
		Left Tilted	0.533	0.209	0.203	0.033	0.74	0.74	0.57



WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 26 Ant 1	Right Cheek	0.288	0.379	0.101	0.033	0.67	0.39	0.32
		Right Tilted	0.202	0.325	0.180	0.033	0.53	0.38	0.24
		Left Cheek	0.226	0.223	0.096	0.033	0.45	0.32	0.26
		Left Tilted	0.132	0.209	0.203	0.033	0.34	0.34	0.17
	LTE Band 5 Ant 2	Right Cheek	0.380	0.379	0.101	0.033	0.76	0.48	0.41
		Right Tilted	0.315	0.325	0.180	0.033	0.64	0.50	0.35
		Left Cheek	0.542	0.223	0.096	0.033	0.77	0.64	0.58
		Left Tilted	0.557	0.209	0.203	0.033	0.77	0.76	0.59
	LTE Band 7 Ant1	Right Cheek	0.075	0.379	0.101	0.033	0.45	0.18	0.11
		Right Tilted	0.071	0.325	0.180	0.033	0.40	0.25	0.10
		Left Cheek	0.058	0.223	0.096	0.033	0.28	0.15	0.09
		Left Tilted	0.095	0.209	0.203	0.033	0.30	0.30	0.13
	LTE Band 12&17 Ant 1	Right Cheek	0.227	0.379	0.101	0.033	0.61	0.33	0.26
		Right Tilted	0.149	0.325	0.180	0.033	0.47	0.33	0.18
		Left Cheek	0.220	0.223	0.096	0.033	0.44	0.32	0.25
		Left Tilted	0.097	0.209	0.203	0.033	0.31	0.30	0.13
	LTE Band 12 Ant 2	Right Cheek	0.357	0.379	0.101	0.033	0.74	0.46	0.39
		Right Tilted	0.250	0.325	0.180	0.033	0.58	0.43	0.28
		Left Cheek	0.531	0.223	0.096	0.033	0.75	0.63	0.56
		Left Tilted	0.563	0.209	0.203	0.033	0.77	0.77	0.60
	LTE Band 13 Ant 1	Right Cheek	0.194	0.379	0.101	0.033	0.57	0.30	0.23
		Right Tilted	0.171	0.325	0.180	0.033	0.50	0.35	0.20
		Left Cheek	0.185	0.223	0.096	0.033	0.41	0.28	0.22
		Left Tilted	0.101	0.209	0.203	0.033	0.31	0.30	0.13
	LTE Band 14 Ant 1	Right Cheek	0.194	0.379	0.101	0.033	0.57	0.30	0.23
		Right Tilted	0.172	0.325	0.180	0.033	0.50	0.35	0.21
		Left Cheek	0.242	0.223	0.096	0.033	0.47	0.34	0.28
		Left Tilted	0.108	0.209	0.203	0.033	0.32	0.31	0.14
	LTE Band 30 Ant 1	Right Cheek	0.086	0.379	0.101	0.033	0.47	0.19	0.12
		Right Tilted	0.070	0.325	0.180	0.033	0.40	0.25	0.10
		Left Cheek	0.095	0.223	0.096	0.033	0.32	0.19	0.13
		Left Tilted	0.076	0.209	0.203	0.033	0.29	0.28	0.11
	LTE Band 30 Ant 2	Right Cheek	0.253	0.379	0.101	0.033	0.63	0.35	0.29
		Right Tilted	0.255	0.325	0.180	0.033	0.58	0.44	0.29
		Left Cheek	0.376	0.223	0.096	0.033	0.60	0.47	0.41
		Left Tilted	0.569	0.209	0.203	0.033	0.78	0.77	0.60
	LTE Band 71 Ant 1	Right Cheek	0.237	0.379	0.101	0.033	0.62	0.34	0.27
		Right Tilted	0.097	0.325	0.180	0.033	0.42	0.28	0.13
		Left Cheek	0.186	0.223	0.096	0.033	0.41	0.28	0.22
		Left Tilted	0.107	0.209	0.203	0.033	0.32	0.31	0.14
LTE Band 41 Ant1	Right Cheek	0.109	0.379	0.101	0.033	0.49	0.21	0.14	
	Right Tilted	0.020	0.325	0.180	0.033	0.35	0.20	0.05	
	Left Cheek	0.042	0.223	0.096	0.033	0.27	0.14	0.08	
	Left Tilted	0.025	0.209	0.203	0.033	0.23	0.23	0.06	



WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 2 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 4&66 Ant 1	Right Cheek	0.121	0.195	0.379	0.101	0.033	0.70	0.42	0.35
		Right Tilted	0.073	0.194	0.325	0.180	0.033	0.59	0.45	0.30
		Left Cheek	0.124	0.334	0.223	0.096	0.033	0.68	0.55	0.49
		Left Tilted	0.105	0.569	0.209	0.203	0.033	0.88	0.88	0.71
	LTE Band 5 Ant 1	Right Cheek	0.288	0.195	0.379	0.101	0.033	0.86	0.58	0.52
		Right Tilted	0.202	0.194	0.325	0.180	0.033	0.72	0.58	0.43
		Left Cheek	0.226	0.334	0.223	0.096	0.033	0.78	0.66	0.59
		Left Tilted	0.132	0.569	0.209	0.203	0.033	0.91	0.90	0.73
	LTE Band 12 Ant 1	Right Cheek	0.227	0.195	0.379	0.101	0.033	0.80	0.52	0.46
		Right Tilted	0.149	0.194	0.325	0.180	0.033	0.67	0.52	0.38
		Left Cheek	0.220	0.334	0.223	0.096	0.033	0.78	0.65	0.59
		Left Tilted	0.097	0.569	0.209	0.203	0.033	0.88	0.87	0.70

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 2 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 2	Right Cheek	0.380	0.081	0.379	0.101	0.033	0.84	0.56	0.49
		Right Tilted	0.315	0.052	0.325	0.180	0.033	0.69	0.55	0.40
		Left Cheek	0.542	0.085	0.223	0.096	0.033	0.85	0.72	0.66
		Left Tilted	0.557	0.058	0.209	0.203	0.033	0.82	0.82	0.65
	LTE Band 12 Ant 2	Right Cheek	0.357	0.081	0.379	0.101	0.033	0.82	0.54	0.47
		Right Tilted	0.250	0.052	0.325	0.180	0.033	0.63	0.48	0.34
		Left Cheek	0.531	0.085	0.223	0.096	0.033	0.84	0.71	0.65
		Left Tilted	0.563	0.058	0.209	0.203	0.033	0.83	0.82	0.65

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66&4 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 12 Ant 2	Right Cheek	0.357	0.121	0.379	0.101	0.033	0.86	0.58	0.51
		Right Tilted	0.250	0.073	0.325	0.180	0.033	0.65	0.50	0.36
		Left Cheek	0.531	0.124	0.223	0.096	0.033	0.88	0.75	0.69
		Left Tilted	0.563	0.105	0.209	0.203	0.033	0.88	0.87	0.70



WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66&4 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 12 Ant 1	Right Cheek	0.227	0.286	0.379	0.101	0.033	0.89	0.61	0.55
		Right Tilted	0.149	0.301	0.325	0.180	0.033	0.78	0.63	0.48
		Left Cheek	0.220	0.425	0.223	0.096	0.033	0.87	0.74	0.68
		Left Tilted	0.097	0.533	0.209	0.203	0.033	0.84	0.83	0.66

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 2	Right Cheek	0.380	0.121	0.379	0.101	0.033	0.88	0.60	0.53
		Right Tilted	0.315	0.073	0.325	0.180	0.033	0.71	0.57	0.42
		Left Cheek	0.542	0.124	0.223	0.096	0.033	0.89	0.76	0.70
		Left Tilted	0.557	0.105	0.209	0.203	0.033	0.87	0.87	0.70

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 1	Right Cheek	0.288	0.286	0.379	0.101	0.033	0.95	0.68	0.61
		Right Tilted	0.202	0.301	0.325	0.180	0.033	0.83	0.68	0.54
		Left Cheek	0.226	0.425	0.223	0.096	0.033	0.87	0.75	0.68
		Left Tilted	0.132	0.533	0.209	0.203	0.033	0.87	0.87	0.70



<5G NR>

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N5 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 2	Right Cheek	0.195	0.246	0.379	0.101	0.033	0.82	0.54	0.47
	Right Tilted	0.194	0.113	0.325	0.180	0.033	0.63	0.49	0.34
	Left Cheek	0.334	0.192	0.223	0.096	0.033	0.75	0.62	0.56
	Left Tilted	0.569	0.104	0.209	0.203	0.033	0.88	0.88	0.71
LTE Band 30 Ant 2	Right Cheek	0.253	0.246	0.379	0.101	0.033	0.88	0.60	0.53
	Right Tilted	0.255	0.113	0.325	0.180	0.033	0.69	0.55	0.40
	Left Cheek	0.376	0.192	0.223	0.096	0.033	0.79	0.66	0.60
	Left Tilted	0.569	0.104	0.209	0.203	0.033	0.88	0.88	0.71
LTE Band 66 Ant 2	Right Cheek	0.286	0.246	0.379	0.101	0.033	0.91	0.63	0.57
	Right Tilted	0.301	0.113	0.325	0.180	0.033	0.74	0.59	0.45
	Left Cheek	0.425	0.192	0.223	0.096	0.033	0.84	0.71	0.65
	Left Tilted	0.533	0.104	0.209	0.203	0.033	0.85	0.84	0.67

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N5 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Right Cheek	0.081	0.377	0.379	0.101	0.033	0.84	0.56	0.49
	Right Tilted	0.052	0.338	0.325	0.180	0.033	0.72	0.57	0.42
	Left Cheek	0.085	0.517	0.223	0.096	0.033	0.83	0.70	0.64
	Left Tilted	0.058	0.489	0.209	0.203	0.033	0.76	0.75	0.58
LTE Band 30 Ant 1	Right Cheek	0.086	0.377	0.379	0.101	0.033	0.84	0.56	0.50
	Right Tilted	0.070	0.338	0.325	0.180	0.033	0.73	0.59	0.44
	Left Cheek	0.095	0.517	0.223	0.096	0.033	0.84	0.71	0.65
	Left Tilted	0.076	0.489	0.209	0.203	0.033	0.77	0.77	0.60
LTE Band 66 Ant 1	Right Cheek	0.121	0.377	0.379	0.101	0.033	0.88	0.60	0.53
	Right Tilted	0.073	0.338	0.325	0.180	0.033	0.74	0.59	0.44
	Left Cheek	0.124	0.517	0.223	0.096	0.033	0.86	0.74	0.67
	Left Tilted	0.105	0.489	0.209	0.203	0.033	0.80	0.80	0.63



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N2 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 2	Right Cheek	0.380	0.072	0.379	0.101	0.033	0.83	0.55	0.49
	Right Tilted	0.315	0.042	0.325	0.180	0.033	0.68	0.54	0.39
	Left Cheek	0.542	0.056	0.223	0.096	0.033	0.82	0.69	0.63
	Left Tilted	0.557	0.053	0.209	0.203	0.033	0.82	0.81	0.64
LTE Band 12 Ant 2	Right Cheek	0.357	0.072	0.379	0.101	0.033	0.81	0.53	0.46
	Right Tilted	0.250	0.042	0.325	0.180	0.033	0.62	0.47	0.33
	Left Cheek	0.531	0.056	0.223	0.096	0.033	0.81	0.68	0.62
	Left Tilted	0.563	0.053	0.209	0.203	0.033	0.83	0.82	0.65

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N25&2 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 1	Right Cheek	0.288	0.253	0.379	0.101	0.033	0.92	0.64	0.57
	Right Tilted	0.202	0.281	0.325	0.180	0.033	0.81	0.66	0.52
	Left Cheek	0.226	0.500	0.223	0.096	0.033	0.95	0.82	0.76
	Left Tilted	0.132	0.548	0.209	0.203	0.033	0.89	0.88	0.71
LTE Band 12 Ant 1	Right Cheek	0.227	0.253	0.379	0.101	0.033	0.86	0.58	0.51
	Right Tilted	0.149	0.281	0.325	0.180	0.033	0.76	0.61	0.46
	Left Cheek	0.220	0.500	0.223	0.096	0.033	0.94	0.82	0.75
	Left Tilted	0.097	0.548	0.209	0.203	0.033	0.85	0.85	0.68
LTE Band 30 Ant 1	Right Cheek	0.086	0.253	0.379	0.101	0.033	0.72	0.44	0.37
	Right Tilted	0.070	0.281	0.325	0.180	0.033	0.68	0.53	0.38
	Left Cheek	0.095	0.500	0.223	0.096	0.033	0.82	0.69	0.63
	Left Tilted	0.076	0.548	0.209	0.203	0.033	0.83	0.83	0.66
LTE Band 66 Ant 1	Right Cheek	0.121	0.253	0.379	0.101	0.033	0.75	0.48	0.41
	Right Tilted	0.073	0.281	0.325	0.180	0.033	0.68	0.53	0.39
	Left Cheek	0.124	0.500	0.223	0.096	0.033	0.85	0.72	0.66
	Left Tilted	0.105	0.548	0.209	0.203	0.033	0.86	0.86	0.69



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N66 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 2	Right Cheek	0.380	0.058	0.379	0.101	0.033	0.82	0.54	0.47
	Right Tilted	0.315	0.038	0.325	0.180	0.033	0.68	0.53	0.39
	Left Cheek	0.542	0.059	0.223	0.096	0.033	0.82	0.70	0.63
	Left Tilted	0.557	0.056	0.209	0.203	0.033	0.82	0.82	0.65
LTE Band 12 Ant 2	Right Cheek	0.357	0.058	0.379	0.101	0.033	0.79	0.52	0.45
	Right Tilted	0.250	0.038	0.325	0.180	0.033	0.61	0.47	0.32
	Left Cheek	0.531	0.059	0.223	0.096	0.033	0.81	0.69	0.62
	Left Tilted	0.563	0.056	0.209	0.203	0.033	0.83	0.82	0.65

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N66 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Right Cheek	0.081	0.260	0.379	0.101	0.033	0.72	0.44	0.37
	Right Tilted	0.052	0.292	0.325	0.180	0.033	0.67	0.52	0.38
	Left Cheek	0.085	0.494	0.223	0.096	0.033	0.80	0.68	0.61
	Left Tilted	0.058	0.544	0.209	0.203	0.033	0.81	0.81	0.64
LTE Band 5 Ant 1	Right Cheek	0.288	0.260	0.379	0.101	0.033	0.93	0.65	0.58
	Right Tilted	0.202	0.292	0.325	0.180	0.033	0.82	0.67	0.53
	Left Cheek	0.226	0.494	0.223	0.096	0.033	0.94	0.82	0.75
	Left Tilted	0.132	0.544	0.209	0.203	0.033	0.89	0.88	0.71
LTE Band 12 Ant 1	Right Cheek	0.227	0.260	0.379	0.101	0.033	0.87	0.59	0.52
	Right Tilted	0.149	0.292	0.325	0.180	0.033	0.77	0.62	0.47
	Left Cheek	0.220	0.494	0.223	0.096	0.033	0.94	0.81	0.75
	Left Tilted	0.097	0.544	0.209	0.203	0.033	0.85	0.84	0.67
LTE Band 30 Ant 1	Right Cheek	0.086	0.260	0.379	0.101	0.033	0.73	0.45	0.38
	Right Tilted	0.070	0.292	0.325	0.180	0.033	0.69	0.54	0.40
	Left Cheek	0.095	0.494	0.223	0.096	0.033	0.81	0.69	0.62
	Left Tilted	0.076	0.544	0.209	0.203	0.033	0.83	0.82	0.65



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N71 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Right Cheek	0.081	0.336	0.379	0.101	0.033	0.80	0.52	0.45
	Right Tilted	0.052	0.270	0.325	0.180	0.033	0.65	0.50	0.36
	Left Cheek	0.085	0.653	0.223	0.096	0.033	0.96	0.83	0.77
	Left Tilted	0.058	0.646	0.209	0.203	0.033	0.91	0.91	0.74
LTE Band 66 Ant 1	Right Cheek	0.121	0.336	0.379	0.101	0.033	0.84	0.56	0.49
	Right Tilted	0.073	0.270	0.325	0.180	0.033	0.67	0.52	0.38
	Left Cheek	0.124	0.653	0.223	0.096	0.033	1.00	0.87	0.81
	Left Tilted	0.105	0.646	0.209	0.203	0.033	0.96	0.95	0.78
LTE Band 7 Ant 1	Right Cheek	0.075	0.336	0.379	0.101	0.033	0.79	0.51	0.44
	Right Tilted	0.071	0.270	0.325	0.180	0.033	0.67	0.52	0.37
	Left Cheek	0.058	0.653	0.223	0.096	0.033	0.93	0.81	0.74
	Left Tilted	0.095	0.646	0.209	0.203	0.033	0.95	0.94	0.77

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N41 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 25&2 Ant 2	Right Cheek	0.195	0.039	0.379	0.101	0.033	0.61	0.34	0.27
	Right Tilted	0.194	0.035	0.325	0.180	0.033	0.55	0.41	0.26
	Left Cheek	0.334	0.060	0.223	0.096	0.033	0.62	0.49	0.43
	Left Tilted	0.569	0.106	0.209	0.203	0.033	0.88	0.88	0.71
LTE Band 66 Ant 2	Right Cheek	0.286	0.039	0.379	0.101	0.033	0.70	0.43	0.36
	Right Tilted	0.301	0.035	0.325	0.180	0.033	0.66	0.52	0.37
	Left Cheek	0.425	0.060	0.223	0.096	0.033	0.71	0.58	0.52
	Left Tilted	0.533	0.106	0.209	0.203	0.033	0.85	0.84	0.67
LTE Band 41 Ant 2	Right Cheek	0.281	0.039	0.379	0.101	0.033	0.70	0.42	0.35
	Right Tilted	0.334	0.035	0.325	0.180	0.033	0.69	0.55	0.40
	Left Cheek	0.414	0.060	0.223	0.096	0.033	0.70	0.57	0.51
	Left Tilted	0.550	0.106	0.209	0.203	0.033	0.87	0.86	0.69



16.2 Hotspot Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM	GSM850	Front	0.695	0.132	0.052	0.209	0.83	0.75	0.90
		Back	0.875	0.392	0.384	0.209	1.27	1.26	1.08
		Left side	0.275	0.067	0.070	0.209	0.34	0.35	0.48
		Right side	0.166	0.080	0.118	0.209	0.25	0.28	0.38
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	0.596				0.60	0.60	0.60	
	GSM1900	Front	0.639	0.132	0.052	0.209	0.77	0.69	0.85
		Back	1.104	0.392	0.384	0.209	1.50	1.49	1.31
		Left side	0.045	0.067	0.070	0.209	0.11	0.12	0.25
		Right side	0.059	0.080	0.118	0.209	0.14	0.18	0.27
Top side			0.142	0.065	0.209	0.14	0.07	0.21	
Bottom side	1.070				1.07	1.07	1.07		
WCDMA	WCDMA II	Front	0.540	0.132	0.052	0.209	0.67	0.59	0.75
		Back	1.184	0.392	0.384	0.209	1.58	1.57	1.39
		Left side	0.043	0.067	0.070	0.209	0.11	0.11	0.25
		Right side	0.058	0.080	0.118	0.209	0.14	0.18	0.27
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	1.170				1.17	1.17	1.17	
	WCDMA IV	Front	0.715	0.132	0.052	0.209	0.85	0.77	0.92
		Back	1.187	0.392	0.384	0.209	1.58	1.57	1.40
		Left side	0.037	0.067	0.070	0.209	0.10	0.11	0.25
		Right side	0.062	0.080	0.118	0.209	0.14	0.18	0.27
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	1.181				1.18	1.18	1.18	
	WCDMA V	Front	0.466	0.132	0.052	0.209	0.60	0.52	0.68
		Back	1.152	0.392	0.384	0.209	1.54	1.54	1.36
		Left side	0.357	0.067	0.070	0.209	0.42	0.43	0.57
		Right side	0.398	0.080	0.118	0.209	0.48	0.52	0.61
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	1.069				1.07	1.07	1.07	
CDMA	CDMA2000 BC0	Front	0.506	0.132	0.052	0.209	0.64	0.56	0.72
		Back	1.182	0.392	0.384	0.209	1.57	1.57	1.39
		Left side	0.260	0.067	0.070	0.209	0.33	0.33	0.47
		Right side	0.322	0.080	0.118	0.209	0.40	0.44	0.53
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	0.828				0.83	0.83	0.83	
	CDMA2000 BC1	Front	0.301	0.132	0.052	0.209	0.43	0.35	0.51
		Back	0.640	0.392	0.384	0.209	1.03	1.02	0.85
		Left side	0.044	0.067	0.070	0.209	0.11	0.11	0.25
		Right side	0.094	0.080	0.118	0.209	0.17	0.21	0.30
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	1.172				1.17	1.17	1.17	
	CDMA2000 BC10	Front	0.655	0.132	0.052	0.209	0.79	0.71	0.86
		Back	1.193	0.392	0.384	0.209	1.59	1.58	1.40
		Left side	0.254	0.067	0.070	0.209	0.32	0.32	0.46
		Right side	0.476	0.080	0.118	0.209	0.56	0.59	0.69
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	1.077				1.08	1.08	1.08	



WWAN Band	Exposure Position	1	2	3	4	1+2	1+3	1+4	
		WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed	
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
LTE	LTE Band 25 Ant 1	Front	0.611	0.132	0.052	0.209	0.74	0.66	0.82
		Back	1.157	0.392	0.384	0.209	1.55	1.54	1.37
		Left side	0.045	0.067	0.070	0.209	0.11	0.12	0.25
		Right side	0.078	0.080	0.118	0.209	0.16	0.20	0.29
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	1.150				1.15	1.15	1.15
	LTE Band 2&25 Ant 2	Front	0.538	0.132	0.052	0.209	0.67	0.59	0.75
		Back	0.378	0.392	0.384	0.209	0.77	0.76	0.59
		Left side		0.067	0.070	0.209	0.07	0.07	0.21
		Right side	0.061	0.080	0.118	0.209	0.14	0.18	0.27
		Top side	0.541	0.142	0.065	0.209	0.68	0.61	0.75
		Bottom side							
	LTE Band 66&4 Ant 1	Front	0.392	0.132	0.052	0.209	0.52	0.44	0.60
		Back	0.592	0.392	0.384	0.209	0.98	0.98	0.80
		Left side	0.037	0.067	0.070	0.209	0.10	0.11	0.25
		Right side	0.063	0.080	0.118	0.209	0.14	0.18	0.27
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	0.589				0.59	0.59	0.59
	LTE Band 66&4 Ant 2	Front	0.593	0.132	0.052	0.209	0.73	0.65	0.80
		Back	0.503	0.392	0.384	0.209	0.90	0.89	0.71
		Left side		0.067	0.070	0.209	0.07	0.07	0.21
		Right side	0.077	0.080	0.118	0.209	0.16	0.20	0.29
		Top side	0.589	0.142	0.065	0.209	0.73	0.65	0.80
		Bottom side							
	LTE Band 26 Ant 1	Front	0.669	0.132	0.052	0.209	0.80	0.72	0.88
		Back	1.188	0.392	0.384	0.209	1.58	1.57	1.40
		Left side	0.255	0.067	0.070	0.209	0.32	0.33	0.46
		Right side	0.250	0.080	0.118	0.209	0.33	0.37	0.46
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	0.754				0.75	0.75	0.75
	LTE Band 5 Ant 2	Front	0.532	0.132	0.052	0.209	0.66	0.58	0.74
		Back	0.386	0.392	0.384	0.209	0.78	0.77	0.60
		Left side		0.067	0.070	0.209	0.07	0.07	0.21
		Right side	0.240	0.080	0.118	0.209	0.32	0.36	0.45
		Top side	0.463	0.142	0.065	0.209	0.61	0.53	0.67
		Bottom side							
	LTE Band 7 Ant1	Front	0.217	0.132	0.052	0.209	0.35	0.27	0.43
		Back	0.543	0.392	0.384	0.209	0.94	0.93	0.75
		Left side	0.009	0.067	0.070	0.209	0.08	0.08	0.22
		Right side	0.100	0.080	0.118	0.209	0.18	0.22	0.31
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	0.526				0.53	0.53	0.53
LTE Band 12 Ant 1	Front	0.327	0.132	0.052	0.209	0.46	0.38	0.54	
	Back	0.583	0.392	0.384	0.209	0.98	0.97	0.79	
	Left side	0.196	0.067	0.070	0.209	0.26	0.27	0.41	
	Right side	0.188	0.080	0.118	0.209	0.27	0.31	0.40	
	Top side		0.142	0.065	0.209	0.14	0.07	0.21	
	Bottom side	0.426				0.43	0.43	0.43	



WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 17 Ant 1	Front	0.512	0.132	0.052	0.209	0.64	0.56	0.72
		Back	0.840	0.392	0.384	0.209	1.23	1.22	1.05
		Left side	0.314	0.067	0.070	0.209	0.38	0.38	0.52
		Right side	0.291	0.080	0.118	0.209	0.37	0.41	0.50
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	0.506				0.51	0.51	0.51
	LTE Band 12 Ant 2	Front	0.361	0.132	0.052	0.209	0.49	0.41	0.57
		Back	0.220	0.392	0.384	0.209	0.61	0.60	0.43
		Left side		0.067	0.070	0.209	0.07	0.07	0.21
		Right side	0.293	0.080	0.118	0.209	0.37	0.41	0.50
		Top side	0.565	0.142	0.065	0.209	0.71	0.63	0.77
		Bottom side							
	LTE Band 13 Ant 1	Front	0.535	0.132	0.052	0.209	0.67	0.59	0.74
		Back	0.953	0.392	0.384	0.209	1.35	1.34	1.16
		Left side	0.280	0.067	0.070	0.209	0.35	0.35	0.49
		Right side	0.378	0.080	0.118	0.209	0.46	0.50	0.59
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	0.423				0.42	0.42	0.42
	LTE Band 14 Ant 1	Front	0.581	0.132	0.052	0.209	0.71	0.63	0.79
		Back	1.006	0.392	0.384	0.209	1.40	1.39	1.22
		Left side	0.273	0.067	0.070	0.209	0.34	0.34	0.48
		Right side	0.423	0.080	0.118	0.209	0.50	0.54	0.63
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	0.475				0.48	0.48	0.48
	LTE Band 30 Ant 1	Front	0.296	0.132	0.052	0.209	0.43	0.35	0.51
		Back	0.656	0.392	0.384	0.209	1.05	1.04	0.87
		Left side	0.000	0.067	0.070	0.209	0.07	0.07	0.21
		Right side	0.134	0.080	0.118	0.209	0.21	0.25	0.34
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	0.632				0.63	0.63	0.63
	LTE Band 30 Ant 2	Front	0.595	0.132	0.052	0.209	0.73	0.65	0.80
		Back	0.511	0.392	0.384	0.209	0.90	0.90	0.72
		Left side		0.067	0.070	0.209	0.07	0.07	0.21
		Right side	0.081	0.080	0.118	0.209	0.16	0.20	0.29
		Top side	0.523	0.142	0.065	0.209	0.67	0.59	0.73
		Bottom side							
	LTE Band 71 Ant 1	Front	0.310	0.132	0.052	0.209	0.44	0.36	0.52
		Back	0.532	0.392	0.384	0.209	0.92	0.92	0.74
		Left side	0.336	0.067	0.070	0.209	0.40	0.41	0.55
		Right side	0.312	0.080	0.118	0.209	0.39	0.43	0.52
		Top side		0.142	0.065	0.209	0.14	0.07	0.21
		Bottom side	0.426				0.43	0.43	0.43
LTE Band 41 Ant1	Front	0.437	0.132	0.052	0.209	0.57	0.49	0.65	
	Back	1.191	0.392	0.384	0.209	1.58	1.58	1.40	
	Left side	0.017	0.067	0.070	0.209	0.08	0.09	0.23	
	Right side	0.154	0.080	0.118	0.209	0.23	0.27	0.36	
	Top side		0.142	0.065	0.209	0.14	0.07	0.21	
	Bottom side	1.197				1.20	1.20	1.20	



WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 2 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 4&66 Ant 1	Front	0.392	0.538	0.132	0.052	0.209	1.06	0.98	1.14
		Back	0.592	0.378	0.392	0.384	0.209	1.36	1.35	1.18
		Left side	0.037		0.067	0.070	0.209	0.10	0.11	0.25
		Right side	0.063	0.061	0.080	0.118	0.209	0.20	0.24	0.33
		Top side		0.541	0.142	0.065	0.209	0.68	0.61	0.75
		Bottom side	0.589					0.59	0.59	0.59
	LTE Band 5 Ant 1	Front	0.289	0.538	0.132	0.052	0.209	0.96	0.88	1.04
		Back	0.471	0.378	0.392	0.384	0.209	1.24	1.23	1.06
		Left side	0.092		0.067	0.070	0.209	0.16	0.16	0.30
		Right side	0.178	0.061	0.080	0.118	0.209	0.32	0.36	0.45
		Top side		0.541	0.142	0.065	0.209	0.68	0.61	0.75
		Bottom side	0.438					0.44	0.44	0.44
	LTE Band 12 Ant 1	Front	0.327	0.538	0.132	0.052	0.209	1.00	0.92	1.07
		Back	0.583	0.378	0.392	0.384	0.209	1.35	1.35	1.17
		Left side	0.196		0.067	0.070	0.209	0.26	0.27	0.41
		Right side	0.188	0.061	0.080	0.118	0.209	0.33	0.37	0.46
		Top side		0.541	0.142	0.065	0.209	0.68	0.61	0.75
		Bottom side	0.426					0.43	0.43	0.43

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 2 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 2	Front	0.532	0.340	0.132	0.052	0.209	1.00	0.92	1.08
		Back	0.386	0.581	0.392	0.384	0.209	1.36	1.35	1.18
		Left side		0.032	0.067	0.070	0.209	0.10	0.10	0.24
		Right side	0.240	0.041	0.080	0.118	0.209	0.36	0.40	0.49
		Top side	0.463		0.142	0.065	0.209	0.61	0.53	0.67
		Bottom side		0.526				0.53	0.53	0.53
	LTE Band 12 Ant 2	Front	0.361	0.340	0.132	0.052	0.209	0.83	0.75	0.91
		Back	0.220	0.581	0.392	0.384	0.209	1.19	1.19	1.01
		Left side		0.032	0.067	0.070	0.209	0.10	0.10	0.24
		Right side	0.293	0.041	0.080	0.118	0.209	0.41	0.45	0.54
		Top side	0.565		0.142	0.065	0.209	0.71	0.63	0.77
		Bottom side		0.526				0.53	0.53	0.53



WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66&4 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 12 Ant 2	Front	0.361	0.392	0.132	0.052	0.209	0.89	0.81	0.96
		Back	0.220	0.592	0.392	0.384	0.209	1.20	1.20	1.02
		Left side		0.037	0.067	0.070	0.209	0.10	0.11	0.25
		Right side	0.293	0.063	0.080	0.118	0.209	0.44	0.47	0.57
		Top side	0.565		0.142	0.065	0.209	0.71	0.63	0.77
		Bottom side		0.589				0.59	0.59	0.59

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66&4 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 12 Ant 1	Front	0.327	0.593	0.132	0.052	0.209	1.05	0.97	1.13
		Back	0.583	0.503	0.392	0.384	0.209	1.48	1.47	1.30
		Left side	0.196		0.067	0.070	0.209	0.26	0.27	0.41
		Right side	0.188	0.077	0.080	0.118	0.209	0.35	0.38	0.47
		Top side		0.589	0.142	0.065	0.209	0.73	0.65	0.80
		Bottom side	0.426					0.43	0.43	0.43

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 2	Front	0.532	0.392	0.132	0.052	0.209	1.06	0.98	1.13
		Back	0.386	0.592	0.392	0.384	0.209	1.37	1.36	1.19
		Left side		0.037	0.067	0.070	0.209	0.10	0.11	0.25
		Right side	0.240	0.063	0.080	0.118	0.209	0.38	0.42	0.51
		Top side	0.463		0.142	0.065	0.209	0.61	0.53	0.67
		Bottom side		0.589				0.59	0.59	0.59

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 1	Front	0.289	0.593	0.132	0.052	0.209	1.01	0.93	1.09
		Back	0.471	0.503	0.392	0.384	0.209	1.37	1.36	1.18
		Left side	0.092		0.067	0.070	0.209	0.16	0.16	0.30
		Right side	0.178	0.077	0.080	0.118	0.209	0.34	0.37	0.46
		Top side		0.589	0.142	0.065	0.209	0.73	0.65	0.80
		Bottom side	0.438					0.44	0.44	0.44



<5G NR>

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N5 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 2	Front	0.538	0.365	0.132	0.052	0.209	1.04	0.96	1.11
	Back	0.378	0.595	0.392	0.384	0.209	1.37	1.36	1.18
	Left side		0.182	0.067	0.070	0.209	0.25	0.25	0.39
	Right side	0.061	0.358	0.080	0.118	0.209	0.50	0.54	0.63
	Top side	0.541		0.142	0.065	0.209	0.68	0.61	0.75
	Bottom side		0.524				0.52	0.52	0.52
LTE Band 30 Ant 2	Front	0.595	0.365	0.132	0.052	0.209	1.09	1.01	1.17
	Back	0.511	0.595	0.392	0.384	0.209	1.50	1.49	1.32
	Left side		0.182	0.067	0.070	0.209	0.25	0.25	0.39
	Right side	0.081	0.358	0.080	0.118	0.209	0.52	0.56	0.65
	Top side	0.523		0.142	0.065	0.209	0.67	0.59	0.73
	Bottom side		0.524				0.52	0.52	0.52
LTE Band 66 Ant 2	Front	0.593	0.365	0.132	0.052	0.209	1.09	1.01	1.17
	Back	0.503	0.595	0.392	0.384	0.209	1.49	1.48	1.31
	Left side		0.182	0.067	0.070	0.209	0.25	0.25	0.39
	Right side	0.077	0.358	0.080	0.118	0.209	0.52	0.55	0.64
	Top side	0.589		0.142	0.065	0.209	0.73	0.65	0.80
	Bottom side		0.524				0.52	0.52	0.52

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N5 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Front	0.340	0.555	0.132	0.052	0.209	1.03	0.95	1.10
	Back	0.581	0.432	0.392	0.384	0.209	1.41	1.40	1.22
	Left side	0.032		0.067	0.070	0.209	0.10	0.10	0.24
	Right side	0.041	0.558	0.080	0.118	0.209	0.68	0.72	0.81
	Top side		0.593	0.142	0.065	0.209	0.74	0.66	0.80
	Bottom side	0.526					0.53	0.53	0.53
LTE Band 30 Ant 1	Front	0.296	0.555	0.132	0.052	0.209	0.98	0.90	1.06
	Back	0.656	0.432	0.392	0.384	0.209	1.48	1.47	1.30
	Left side			0.067	0.070	0.209	0.07	0.07	0.21
	Right side	0.134	0.558	0.080	0.118	0.209	0.77	0.81	0.90
	Top side		0.593	0.142	0.065	0.209	0.74	0.66	0.80
	Bottom side	0.632					0.63	0.63	0.63
LTE Band 66 Ant 1	Front	0.392	0.555	0.132	0.052	0.209	1.08	1.00	1.16
	Back	0.592	0.432	0.392	0.384	0.209	1.42	1.41	1.23
	Left side	0.037		0.067	0.070	0.209	0.10	0.11	0.25
	Right side	0.063	0.558	0.080	0.118	0.209	0.70	0.74	0.83
	Top side		0.593	0.142	0.065	0.209	0.74	0.66	0.80
	Bottom side	0.589					0.59	0.59	0.59



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N2 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 2	Front	0.532	0.343	0.132	0.052	0.209	1.01	0.93	1.08
	Back	0.386	0.597	0.392	0.384	0.209	1.38	1.37	1.19
	Left side		0.120	0.067	0.070	0.209	0.19	0.19	0.33
	Right side	0.240	0.246	0.080	0.118	0.209	0.57	0.60	0.70
	Top side	0.463		0.142	0.065	0.209	0.61	0.53	0.67
	Bottom side		0.482				0.48	0.48	0.48
LTE Band 12 Ant 2	Front	0.361	0.343	0.132	0.052	0.209	0.84	0.76	0.91
	Back	0.220	0.597	0.392	0.384	0.209	1.21	1.20	1.03
	Left side		0.120	0.067	0.070	0.209	0.19	0.19	0.33
	Right side	0.293	0.246	0.080	0.118	0.209	0.62	0.66	0.75
	Top side	0.565		0.142	0.065	0.209	0.71	0.63	0.77
	Bottom side		0.482				0.48	0.48	0.48

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N2&2 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 1	Front	0.289	0.557	0.132	0.052	0.209	0.98	0.90	1.06
	Back	0.471	0.535	0.392	0.384	0.209	1.40	1.39	1.22
	Left side	0.092		0.067	0.070	0.209	0.16	0.16	0.30
	Right side	0.178	0.576	0.080	0.118	0.209	0.83	0.87	0.96
	Top side		0.574	0.142	0.065	0.209	0.72	0.64	0.78
	Bottom side	0.438					0.44	0.44	0.44
LTE Band 12 Ant 1	Front	0.327	0.557	0.132	0.052	0.209	1.02	0.94	1.09
	Back	0.583	0.535	0.392	0.384	0.209	1.51	1.50	1.33
	Left side	0.196		0.067	0.070	0.209	0.26	0.27	0.41
	Right side	0.188	0.576	0.080	0.118	0.209	0.84	0.88	0.97
	Top side		0.574	0.142	0.065	0.209	0.72	0.64	0.78
	Bottom side	0.426					0.43	0.43	0.43
LTE Band 30 Ant 1	Front	0.296	0.557	0.132	0.052	0.209	0.99	0.91	1.06
	Back	0.656	0.535	0.392	0.384	0.209	1.58	1.58	1.40
	Left side			0.067	0.070	0.209	0.07	0.07	0.21
	Right side	0.134	0.576	0.080	0.118	0.209	0.79	0.83	0.92
	Top side		0.574	0.142	0.065	0.209	0.72	0.64	0.78
	Bottom side	0.632					0.63	0.63	0.63
LTE Band 66 Ant 1	Front	0.392	0.557	0.132	0.052	0.209	1.08	1.00	1.16
	Back	0.592	0.535	0.392	0.384	0.209	1.52	1.51	1.34
	Left side	0.037		0.067	0.070	0.209	0.10	0.11	0.25
	Right side	0.063	0.576	0.080	0.118	0.209	0.72	0.76	0.85
	Top side		0.574	0.142	0.065	0.209	0.72	0.64	0.78
	Bottom side	0.589					0.59	0.59	0.59



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N66 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 2	Front	0.532	0.463	0.132	0.052	0.209	1.13	1.05	1.20
	Back	0.386	0.588	0.392	0.384	0.209	1.37	1.36	1.18
	Left side		0.034	0.067	0.070	0.209	0.10	0.10	0.24
	Right side	0.240	0.051	0.080	0.118	0.209	0.37	0.41	0.50
	Top side	0.463		0.142	0.065	0.209	0.61	0.53	0.67
	Bottom side		0.585				0.59	0.59	0.59
LTE Band 12 Ant 2	Front	0.361	0.463	0.132	0.052	0.209	0.96	0.88	1.03
	Back	0.220	0.588	0.392	0.384	0.209	1.20	1.19	1.02
	Left side		0.034	0.067	0.070	0.209	0.10	0.10	0.24
	Right side	0.293	0.051	0.080	0.118	0.209	0.42	0.46	0.55
	Top side	0.565		0.142	0.065	0.209	0.71	0.63	0.77
	Bottom side		0.585				0.59	0.59	0.59

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N66 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Front	0.340	0.513	0.132	0.052	0.209	0.99	0.91	1.06
	Back	0.581	0.503	0.392	0.384	0.209	1.48	1.47	1.29
	Left side	0.032		0.067	0.070	0.209	0.10	0.10	0.24
	Right side	0.041	0.541	0.080	0.118	0.209	0.66	0.70	0.79
	Top side		0.501	0.142	0.065	0.209	0.64	0.57	0.71
	Bottom side	0.526					0.53	0.53	0.53
LTE Band 5 Ant 1	Front	0.289	0.513	0.132	0.052	0.209	0.93	0.85	1.01
	Back	0.471	0.503	0.392	0.384	0.209	1.37	1.36	1.18
	Left side	0.092		0.067	0.070	0.209	0.16	0.16	0.30
	Right side	0.178	0.541	0.080	0.118	0.209	0.80	0.84	0.93
	Top side		0.501	0.142	0.065	0.209	0.64	0.57	0.71
	Bottom side	0.438					0.44	0.44	0.44
LTE Band 12 Ant 1	Front	0.327	0.513	0.132	0.052	0.209	0.97	0.89	1.05
	Back	0.583	0.503	0.392	0.384	0.209	1.48	1.47	1.30
	Left side	0.196		0.067	0.070	0.209	0.26	0.27	0.41
	Right side	0.188	0.541	0.080	0.118	0.209	0.81	0.85	0.94
	Top side		0.501	0.142	0.065	0.209	0.64	0.57	0.71
	Bottom side	0.426					0.43	0.43	0.43
LTE Band 30 Ant 1	Front	0.296	0.513	0.132	0.052	0.209	0.94	0.86	1.02
	Back	0.656	0.503	0.392	0.384	0.209	1.55	1.54	1.37
	Left side			0.067	0.070	0.209	0.07	0.07	0.21
	Right side	0.134	0.541	0.080	0.118	0.209	0.76	0.79	0.88
	Top side		0.501	0.142	0.065	0.209	0.64	0.57	0.71
	Bottom side	0.632					0.63	0.63	0.63



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N71 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Front	0.340	0.185	0.132	0.052	0.209	0.66	0.58	0.73
	Back	0.581	0.184	0.392	0.384	0.209	1.16	1.15	0.97
	Left side	0.032	0.076	0.067	0.070	0.209	0.18	0.18	0.32
	Right side	0.041	0.200	0.080	0.118	0.209	0.32	0.36	0.45
	Top side			0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	0.526	0.220				0.75	0.75	0.75
LTE Band 66 Ant 1	Front	0.392	0.185	0.132	0.052	0.209	0.71	0.63	0.79
	Back	0.592	0.184	0.392	0.384	0.209	1.17	1.16	0.99
	Left side	0.037	0.076	0.067	0.070	0.209	0.18	0.18	0.32
	Right side	0.063	0.200	0.080	0.118	0.209	0.34	0.38	0.47
	Top side			0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	0.589	0.220				0.81	0.81	0.81
LTE Band 7 Ant 1	Front	0.217	0.185	0.132	0.052	0.209	0.53	0.45	0.61
	Back	0.543	0.184	0.392	0.384	0.209	1.12	1.11	0.94
	Left side	0.009	0.076	0.067	0.070	0.209	0.15	0.16	0.29
	Right side	0.100	0.200	0.080	0.118	0.209	0.38	0.42	0.51
	Top side			0.142	0.065	0.209	0.14	0.07	0.21
	Bottom side	0.526	0.220				0.75	0.75	0.75

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N41 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 25&2 Ant 2	Front	0.538	0.182	0.132	0.052	0.209	0.85	0.77	0.93
	Back	0.378	0.462	0.392	0.384	0.209	1.23	1.22	1.05
	Left side		0.034	0.067	0.070	0.209	0.10	0.10	0.24
	Right side	0.061	0.448	0.080	0.118	0.209	0.59	0.63	0.72
	Top side	0.541		0.142	0.065	0.209	0.68	0.61	0.75
	Bottom side		0.393				0.39	0.39	0.39
LTE Band 66 Ant 2	Front	0.593	0.182	0.132	0.052	0.209	0.91	0.83	0.98
	Back	0.503	0.462	0.392	0.384	0.209	1.36	1.35	1.17
	Left side		0.034	0.067	0.070	0.209	0.10	0.10	0.24
	Right side	0.077	0.448	0.080	0.118	0.209	0.61	0.64	0.73
	Top side	0.589		0.142	0.065	0.209	0.73	0.65	0.80
	Bottom side		0.393				0.39	0.39	0.39
LTE Band 41 Ant 2	Front	0.516	0.182	0.132	0.052	0.209	0.83	0.75	0.91
	Back	0.515	0.462	0.392	0.384	0.209	1.37	1.36	1.19
	Left side		0.034	0.067	0.070	0.209	0.10	0.10	0.24
	Right side	0.075	0.448	0.080	0.118	0.209	0.60	0.64	0.73
	Top side	0.547		0.142	0.065	0.209	0.69	0.61	0.76
	Bottom side		0.393				0.39	0.39	0.39



16.3 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM	GSM850	Front	0.695	0.132	0.115	0.209	0.83	0.81	0.90
		Back	0.875	0.392	0.384	0.209	1.27	1.26	1.08
	GSM1900	Front	0.639	0.132	0.115	0.209	0.77	0.75	0.85
		Back	1.104	0.392	0.384	0.209	1.50	1.49	1.31
WCDMA	WCDMA II	Front	0.540	0.132	0.115	0.209	0.67	0.66	0.75
		Back	1.184	0.392	0.384	0.209	1.58	1.57	1.39
	WCDMA IV	Front	0.715	0.132	0.115	0.209	0.85	0.83	0.92
		Back	1.187	0.392	0.384	0.209	1.58	1.57	1.40
	WCDMA V	Front	0.466	0.132	0.115	0.209	0.60	0.58	0.68
		Back	1.152	0.392	0.384	0.209	1.54	1.54	1.36
CDMA	CDMA2000 BC0	Front	0.265	0.132	0.115	0.209	0.40	0.38	0.47
		Back	1.070	0.392	0.384	0.209	1.46	1.45	1.28
	CDMA2000 BC1	Front	0.647	0.132	0.115	0.209	0.78	0.76	0.86
		Back	1.170	0.392	0.384	0.209	1.56	1.55	1.38
	CDMA2000 BC10	Front	0.505	0.132	0.115	0.209	0.64	0.62	0.71
		Back	1.116	0.392	0.384	0.209	1.51	1.50	1.33
LTE	LTE Band 25 Ant 1	Front	0.611	0.132	0.115	0.209	0.74	0.73	0.82
		Back	1.157	0.392	0.384	0.209	1.55	1.54	1.37
	LTE Band 2 Ant 2	Front	0.538	0.132	0.115	0.209	0.67	0.65	0.75
		Back	0.378	0.392	0.384	0.209	0.77	0.76	0.59
	LTE Band 66&4 Ant 1	Front	0.392	0.132	0.115	0.209	0.52	0.51	0.60
		Back	0.592	0.392	0.384	0.209	0.98	0.98	0.80
	LTE Band 66&4 Ant 2	Front	0.593	0.132	0.115	0.209	0.73	0.71	0.80
		Back	0.503	0.392	0.384	0.209	0.90	0.89	0.71
	LTE Band 26 Ant 1	Front	0.669	0.132	0.115	0.209	0.80	0.78	0.88
		Back	1.188	0.392	0.384	0.209	1.58	1.57	1.40
	LTE Band 5 Ant 2	Front	0.532	0.132	0.115	0.209	0.66	0.65	0.74
		Back	0.386	0.392	0.384	0.209	0.78	0.77	0.60
	LTE Band 7 Ant1	Front	0.411	0.132	0.115	0.209	0.54	0.53	0.62
		Back	0.543	0.392	0.384	0.209	0.94	0.93	0.75
	LTE Band 12 Ant 1	Front	0.327	0.132	0.115	0.209	0.46	0.44	0.54
		Back	0.583	0.392	0.384	0.209	0.98	0.97	0.79
	LTE Band 17 Ant 1	Front	0.512	0.132	0.115	0.209	0.64	0.63	0.72
		Back	0.840	0.392	0.384	0.209	1.23	1.22	1.05
	LTE Band 12 Ant 2	Front	0.361	0.132	0.115	0.209	0.49	0.48	0.57
		Back	0.220	0.392	0.384	0.209	0.61	0.60	0.43
	LTE Band 13 Ant 1	Front	0.535	0.132	0.115	0.209	0.67	0.65	0.74
		Back	0.953	0.392	0.384	0.209	1.35	1.34	1.16
	LTE Band 14 Ant 1	Front	0.581	0.132	0.115	0.209	0.71	0.70	0.79
		Back	1.006	0.392	0.384	0.209	1.40	1.39	1.22
	LTE Band 30 Ant 1	Front	0.458	0.132	0.115	0.209	0.59	0.57	0.67
		Back	0.656	0.392	0.384	0.209	1.05	1.04	0.87
	LTE Band 30 Ant 2	Front	0.595	0.132	0.115	0.209	0.73	0.71	0.80
		Back	0.511	0.392	0.384	0.209	0.90	0.90	0.72
	LTE Band 71 Ant 1	Front	0.310	0.132	0.115	0.209	0.44	0.43	0.52
		Back	0.532	0.392	0.384	0.209	0.92	0.92	0.74
	LTE Band 41 Ant1	Front	0.437	0.132	0.115	0.209	0.57	0.55	0.65
		Back	1.191	0.392	0.384	0.209	1.58	1.58	1.40

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 2 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 4&66 Ant 1	Front	0.392	0.538	0.132	0.115	0.209	1.06	1.05	1.14
		Back	0.592	0.378	0.392	0.384	0.209	1.36	1.35	1.18
	LTE Band 5 Ant 1	Front	0.289	0.538	0.132	0.115	0.209	0.96	0.94	1.04
		Back	0.471	0.378	0.392	0.384	0.209	1.24	1.23	1.06
	LTE Band 12 Ant 1	Front	0.327	0.538	0.132	0.115	0.209	1.00	0.98	1.07
		Back	0.583	0.378	0.392	0.384	0.209	1.35	1.35	1.17

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 2 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 2	Front	0.532	0.340	0.132	0.115	0.209	1.00	0.99	1.08
		Back	0.386	0.581	0.392	0.384	0.209	1.36	1.35	1.18
	LTE Band 12 Ant 2	Front	0.361	0.340	0.132	0.115	0.209	0.83	0.82	0.91
		Back	0.220	0.581	0.392	0.384	0.209	1.19	1.19	1.01

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 6&4 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 12 Ant 2	Front	0.361	0.392	0.132	0.115	0.209	0.89	0.87	0.96
		Back	0.220	0.592	0.392	0.384	0.209	1.20	1.20	1.02

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66&4 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 12 Ant 1	Front	0.327	0.593	0.132	0.115	0.209	1.05	1.04	1.13
		Back	0.583	0.503	0.392	0.384	0.209	1.48	1.47	1.30

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 2	Front	0.532	0.392	0.132	0.115	0.209	1.06	1.04	1.13
		Back	0.386	0.592	0.392	0.384	0.209	1.37	1.36	1.19

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE	LTE Band 5 Ant 1	Front	0.289	0.593	0.132	0.115	0.209	1.01	1.00	1.09
		Back	0.471	0.503	0.392	0.384	0.209	1.37	1.36	1.18



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WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N5 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 2	Front	0.538	0.365	0.132	0.115	0.209	1.04	1.02	1.11
	Back	0.378	0.595	0.392	0.384	0.209	1.37	1.36	1.18
LTE Band 30 Ant 2	Front	0.595	0.365	0.132	0.115	0.209	1.09	1.08	1.17
	Back	0.511	0.595	0.392	0.384	0.209	1.50	1.49	1.32
LTE Band 66 Ant 2	Front	0.593	0.365	0.132	0.115	0.209	1.09	1.07	1.17
	Back	0.503	0.595	0.392	0.384	0.209	1.49	1.48	1.31

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N5 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Front	0.340	0.555	0.132	0.115	0.209	1.03	1.01	1.10
	Back	0.581	0.432	0.392	0.384	0.209	1.41	1.40	1.22
LTE Band 30 Ant 1	Front	0.458	0.555	0.132	0.115	0.209	1.15	1.13	1.22
	Back	0.656	0.432	0.392	0.384	0.209	1.48	1.47	1.30
LTE Band 66 Ant 1	Front	0.392	0.555	0.132	0.115	0.209	1.08	1.06	1.16
	Back	0.592	0.432	0.392	0.384	0.209	1.42	1.41	1.23

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N2 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 2	Front	0.532	0.443	0.132	0.115	0.209	1.11	1.09	1.18
	Back	0.386	0.597	0.392	0.384	0.209	1.38	1.37	1.19
LTE Band 12 Ant 2	Front	0.361	0.443	0.132	0.115	0.209	0.94	0.92	1.01
	Back	0.220	0.597	0.392	0.384	0.209	1.21	1.20	1.03

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N25&2 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 1	Front	0.289	0.557	0.132	0.115	0.209	0.98	0.96	1.06
	Back	0.471	0.535	0.392	0.384	0.209	1.40	1.39	1.22
LTE Band 12 Ant 1	Front	0.327	0.557	0.132	0.115	0.209	1.02	1.00	1.09
	Back	0.583	0.535	0.392	0.384	0.209	1.51	1.50	1.33
LTE Band 30 Ant 1	Front	0.458	0.557	0.132	0.115	0.209	1.15	1.13	1.22
	Back	0.656	0.535	0.392	0.384	0.209	1.58	1.58	1.40
LTE Band 66 Ant 1	Front	0.392	0.557	0.132	0.115	0.209	1.08	1.06	1.16
	Back	0.592	0.535	0.392	0.384	0.209	1.52	1.51	1.34



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N66 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 5 Ant 2	Front	0.532	0.463	0.132	0.115	0.209	1.13	1.11	1.20
	Back	0.386	0.588	0.392	0.384	0.209	1.37	1.36	1.18
LTE Band 12 Ant 2	Front	0.361	0.463	0.132	0.115	0.209	0.96	0.94	1.03
	Back	0.220	0.588	0.392	0.384	0.209	1.20	1.19	1.02

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N66 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Front	0.340	0.513	0.132	0.115	0.209	0.99	0.97	1.06
	Back	0.581	0.503	0.392	0.384	0.209	1.48	1.47	1.29
LTE Band 5 Ant 1	Front	0.289	0.513	0.132	0.115	0.209	0.93	0.92	1.01
	Back	0.471	0.503	0.392	0.384	0.209	1.37	1.36	1.18
LTE Band 12 Ant 1	Front	0.327	0.513	0.132	0.115	0.209	0.97	0.96	1.05
	Back	0.583	0.503	0.392	0.384	0.209	1.48	1.47	1.30
LTE Band 30 Ant 1	Front	0.458	0.513	0.132	0.115	0.209	1.10	1.09	1.18
	Back	0.656	0.503	0.392	0.384	0.209	1.55	1.54	1.37

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N71 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 2 Ant 1	Front	0.340	0.185	0.132	0.115	0.209	0.66	0.64	0.73
	Back	0.581	0.184	0.392	0.384	0.209	1.16	1.15	0.97
LTE Band 66 Ant 1	Front	0.392	0.185	0.132	0.115	0.209	0.71	0.69	0.79
	Back	0.592	0.184	0.392	0.384	0.209	1.17	1.16	0.99
LTE Band 7 Ant 1	Front	0.411	0.185	0.132	0.115	0.209	0.73	0.71	0.81
	Back	0.543	0.184	0.392	0.384	0.209	1.12	1.11	0.94

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N41 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 25&2 Ant 2	Front	0.538	0.206	0.132	0.115	0.209	0.88	0.86	0.95
	Back	0.378	0.462	0.392	0.384	0.209	1.23	1.22	1.05
LTE Band 66 Ant 2	Front	0.593	0.206	0.132	0.115	0.209	0.93	0.91	1.01
	Back	0.503	0.462	0.392	0.384	0.209	1.36	1.35	1.17
LTE Band 41 Ant 2	Front	0.516	0.206	0.132	0.115	0.209	0.85	0.84	0.93
	Back	0.515	0.462	0.392	0.384	0.209	1.37	1.36	1.19

Note: For Front/Back, always chose higher SAR between 5mm SAR and sensor off distance SAR to do co-located analysis.



16.4 Product specific 10g SAR Exposure Conditions

WWAN Band		Exposure Position	1	2	3	4	1+2	1+3	1+4
			WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
GSM	GSM850	Front			0.047			0.05	
		Back	1.884	0.254	0.261		2.14	2.15	1.88
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side							
	GSM1900	Front	1.399		0.047		1.40	1.45	1.40
		Back	2.481	0.254	0.261		2.74	2.74	2.48
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side	1.666				1.67	1.67	1.67
WCDMA	WCDMA II	Front	1.807		0.047		1.81	1.85	1.81
		Back	2.890	0.254	0.261		3.14	3.15	2.89
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side	3.125				3.13	3.13	3.13
	WCDMA IV	Front	1.552		0.047		1.55	1.60	1.55
		Back	2.767	0.254	0.261		3.02	3.03	2.77
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side	3.110				3.11	3.11	3.11
CDMA	CDMA2000 BC1	Front	1.940		0.047		1.94	1.99	1.94
		Back	2.963	0.254	0.261		3.22	3.22	2.96
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side	2.997				3.00	3.00	3.00
LTE	LTE Band 25 Ant 1	Front	2.031		0.047		2.03	2.08	2.03
		Back	2.848	0.254	0.261		3.10	3.11	2.85
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side	3.081				3.08	3.08	3.08
	LTE Band 2 Ant 2	Front	1.145		0.047		1.15	1.19	1.15
		Back	0.895	0.254	0.261		1.15	1.16	0.90
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side	1.194		0.173		1.19	1.37	1.19
		Bottom side							
	LTE Band 66&4 Ant 1	Front	1.268		0.047		1.27	1.32	1.27
		Back	1.326	0.254	0.261		1.58	1.59	1.33
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side	1.347				1.35	1.35	1.35



WWAN Band	Exposure Position	1	2	3	4	1+2	1+3	1+4	
		WWAN	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed	
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	
LTE Band 66&4 Ant 2	Front	1.238		0.047		1.24	1.29	1.24	
	Back	0.997	0.254	0.261		1.25	1.26	1.00	
	Left side			0.114			0.11		
	Right side			0.347			0.35		
	Top side	1.502		0.173		1.50	1.68	1.50	
	Bottom side								
	LTE Band 26 Ant 1	Front			0.047			0.05	
		Back	1.807	0.254	0.261		2.06	2.07	1.81
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side							
	LTE Band 5 Ant 2	Front	0.937		0.047		0.94	0.98	0.94
		Back	0.709	0.254	0.261		0.96	0.97	0.71
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side	1.095		0.173		1.10	1.27	1.10
		Bottom side							
	LTE Band 7 Ant1	Front	1.375		0.047		1.38	1.42	1.38
		Back	1.401	0.254	0.261		1.66	1.66	1.40
		Left side			0.114			0.11	
		Right side			0.347			0.35	
		Top side			0.173			0.17	
		Bottom side	1.455				1.46	1.46	1.46
LTE Band 12&17 Ant 1	Front	1.006		0.047		1.01	1.05	1.01	
	Back	1.300	0.254	0.261		1.55	1.56	1.30	
	Left side			0.114			0.11		
	Right side			0.347			0.35		
	Top side			0.173			0.17		
	Bottom side	1.128				1.13	1.13	1.13	
LTE Band 30 Ant 1	Front	0.983		0.047		0.98	1.03	0.98	
	Back	1.476	0.254	0.261		1.73	1.74	1.48	
	Left side			0.114			0.11		
	Right side			0.347			0.35		
	Top side			0.173			0.17		
	Bottom side	1.388				1.39	1.39	1.39	
LTE Band 30 Ant 2	Front	0.904		0.047		0.90	0.95	0.90	
	Back	0.816	0.254	0.261		1.07	1.08	0.82	
	Left side			0.114			0.11		
	Right side			0.347			0.35		
	Top side	1.344		0.173		1.34	1.52	1.34	
	Bottom side								
LTE Band 41 Ant1	Front	0.957		0.047		0.96	1.00	0.96	
	Back	2.799	0.254	0.261		3.05	3.06	2.80	
	Left side			0.114			0.11		
	Right side			0.347			0.35		
	Top side			0.173			0.17		
	Bottom side	2.877				2.88	2.88	2.88	



WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN 10g SAR (W/kg)	WWAN LTE Band 2 Ant 2 10g SAR (W/kg)	2.4GHz WLAN MIMO 10g SAR (W/kg)	5GHz WLAN MIMO 10g SAR (W/kg)	Bluetooth 10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)
LTE	LTE Band 4&66 Ant 1	Front	1.268	1.145		0.047		2.41	2.46	2.41
		Back	1.326	0.895	0.254	0.261		2.48	2.48	2.22
		Left side				0.114			0.11	
		Right side				0.347			0.35	
		Top side		1.194		0.173		1.19	1.37	1.19
		Bottom side	1.347					1.35	1.35	1.35
	LTE Band 5 Ant 1	Front		1.145		0.047		1.15	1.19	1.15
		Back	1.807	0.895	0.254	0.261		2.96	2.96	2.70
		Left side				0.114			0.11	
		Right side				0.347			0.35	
		Top side		1.194		0.173		1.19	1.37	1.19
		Bottom side								
	LTE Band 12 Ant 1	Front	1.006	1.145		0.047		2.15	2.20	2.15
		Back	1.300	0.895	0.254	0.261		2.45	2.46	2.20
		Left side				0.114			0.11	
		Right side				0.347			0.35	
		Top side		1.194		0.173		1.19	1.37	1.19
		Bottom side								

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN 10g SAR (W/kg)	WWAN LTE Band 2 Ant 1 10g SAR (W/kg)	2.4GHz WLAN MIMO 10g SAR (W/kg)	5GHz WLAN MIMO 10g SAR (W/kg)	Bluetooth 10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)
LTE	LTE Band 5 Ant 2	Front	0.937	1.232		0.047		2.17	2.22	2.17
		Back	0.709	1.379	0.254	0.261		2.34	2.35	2.09
		Left side				0.114			0.11	
		Right side				0.347			0.35	
		Top side	1.095			0.173		1.10	1.27	1.10
		Bottom side		1.201				1.20	1.20	1.20

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN 10g SAR (W/kg)	WWAN LTE Band 66&4 Ant 2 10g SAR (W/kg)	2.4GHz WLAN MIMO 10g SAR (W/kg)	5GHz WLAN MIMO 10g SAR (W/kg)	Bluetooth 10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)	Summed 10g SAR (W/kg)
LTE	LTE Band 12 Ant 1	Front	1.006	1.238		0.047		2.24	2.29	2.24
		Back	1.300	0.997	0.254	0.261		2.55	2.56	2.30
		Left side				0.114			0.11	
		Right side				0.347			0.35	
		Top side		1.502		0.173		1.50	1.68	1.50
		Bottom side								



WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE	LTE Band 5 Ant 2	Front	0.937	1.268		0.047		2.21	2.25	2.21
		Back	0.709	1.326	0.254	0.261		2.29	2.30	2.04
		Left side				0.114			0.11	
		Right side				0.347			0.35	
		Top side	1.095			0.173		1.10	1.27	1.10
		Bottom side		1.347				1.35	1.35	1.35

WWAN Band		Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
			WWAN	WWAN LTE Band 66 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE	LTE Band 5 Ant 1	Front		1.238		0.047		1.24	1.29	1.24
		Back	1.807	0.997	0.254	0.261		3.06	3.07	2.80
		Left side				0.114			0.11	
		Right side				0.347			0.35	
		Top side		1.502		0.173		1.50	1.68	1.50
		Bottom side								



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WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N2 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band 5 Ant 2	Front	0.937	1.094		0.047		2.03	2.08	2.03
	Back	0.709	1.236	0.254	0.261		2.20	2.21	1.95
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side	1.095			0.173		1.10	1.27	1.10
	Bottom side		1.125				1.13	1.13	1.13
LTE Band 12 Ant 2	Front	0.937	1.094		0.047		2.03	2.08	2.03
	Back	0.709	1.236	0.254	0.261		2.20	2.21	1.95
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side	1.095			0.173		1.10	1.27	1.10
	Bottom side		1.125				1.13	1.13	1.13

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N2&2 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band 5 Ant 1	Front		1.399		0.047		1.40	1.45	1.40
	Back	1.807	1.132	0.254	0.261		3.19	3.20	2.94
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side		0.968		0.173		0.97	1.14	0.97
	Bottom side								
LTE Band 12 Ant 1	Front	1.006	1.399		0.047		2.41	2.45	2.41
	Back	1.300	1.132	0.254	0.261		2.69	2.69	2.43
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side		0.968		0.173		0.97	1.14	0.97
	Bottom side	1.128					1.13	1.13	1.13
LTE Band 30 Ant 1	Front	0.983	1.399		0.047		2.38	2.43	2.38
	Back	1.476	1.132	0.254	0.261		2.86	2.87	2.61
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side		0.968		0.173		0.97	1.14	0.97
	Bottom side	1.388					1.39	1.39	1.39
LTE Band 66 Ant 1	Front	1.268	1.399		0.047		2.67	2.71	2.67
	Back	1.326	1.132	0.254	0.261		2.71	2.72	2.46
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side		0.968		0.173		0.97	1.14	0.97
	Bottom side	1.347					1.35	1.35	1.35



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N66 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band 5 Ant 2	Front	0.937	0.820		0.047		1.76	1.80	1.76
	Back	0.709	1.473	0.254	0.261		2.44	2.44	2.18
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side	1.095			0.173		1.10	1.27	1.10
	Bottom side		1.585				1.59	1.59	1.59

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N66 Ant 2	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band 2 Ant 1	Front	1.232	1.263		0.047		2.50	2.54	2.50
	Back	1.379	1.012	0.254	0.261		2.65	2.65	2.39
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side		1.456		0.173		1.46	1.63	1.46
	Bottom side	1.201					1.20	1.20	1.20
LTE Band 5 Ant 1	Front		1.263		0.047		1.26	1.31	1.26
	Back	1.807	1.012	0.254	0.261		3.07	3.08	2.82
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side		1.456		0.173		1.46	1.63	1.46
	Bottom side								
LTE Band 12 Ant 1	Front	1.006	1.263		0.047		2.27	2.32	2.27
	Back	1.300	1.012	0.254	0.261		2.57	2.57	2.31
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side		1.456		0.173		1.46	1.63	1.46
	Bottom side	1.128					1.13	1.13	1.13
LTE Band 30 Ant 1	Front	0.983	1.263		0.047		2.25	2.29	2.25
	Back	1.476	1.012	0.254	0.261		2.74	2.75	2.49
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side		1.456		0.173		1.46	1.63	1.46
	Bottom side	1.388					1.39	1.39	1.39



WWAN Band	Exposure Position	1	2	3	4	5	1+2+3	1+2+4	1+2+5
		WWAN	WWAN FR1 N41 Ant 1	2.4GHz WLAN MIMO	5GHz WLAN MIMO	Bluetooth	Summed	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band 25&2 Ant 2	Front	1.145	0.595		0.047		1.74	1.79	1.74
	Back	0.895	1.488	0.254	0.261		2.64	2.64	2.38
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side	1.194			0.173		1.19	1.37	1.19
	Bottom side		1.415				1.42	1.42	1.42
LTE Band 66 Ant 2	Front	1.238	0.595		0.047		1.83	1.88	1.83
	Back	0.997	1.488	0.254	0.261		2.74	2.75	2.49
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side	1.502			0.173		1.50	1.68	1.50
	Bottom side		1.415				1.42	1.42	1.42
LTE Band 41 Ant 2	Front		0.595		0.047		0.60	0.64	0.60
	Back		1.488	0.254	0.261		1.74	1.75	1.49
	Left side				0.114			0.11	
	Right side				0.347			0.35	
	Top side	1.053			0.173		1.05	1.23	1.05
	Bottom side		1.415				1.42	1.42	1.42

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. For Front/Back, always chose higher SAR between 5mm SAR and sensor off distance SAR to do co-located analysis.
3. If SPLSR ≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.

17. 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 among bands (except for GSM850/1900), 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 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, chose LTE B25 / B66 / B26 / B12 / B41 for dynamic antenna analysis.
4. This device supports 5GNR n2 and 5GNR n25. Since the supported frequency span for 5GNR n2 falls completely within the supports frequency span for 5GNR n25, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for 5GNR n25.
5. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

17.1 Supplemental Tuner Head & Body SAR Results

Please refer to Appendix F.

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18. 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 $\leq 30\%$, 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.

19. 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.

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: $f = 750 \text{ MHz}$; $\sigma = 0.924 \text{ S/m}$; $\epsilon_r = 42.068$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(10.31, 10.31, 10.31); Calibrated: 2020.5.22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 2.81 W/kg

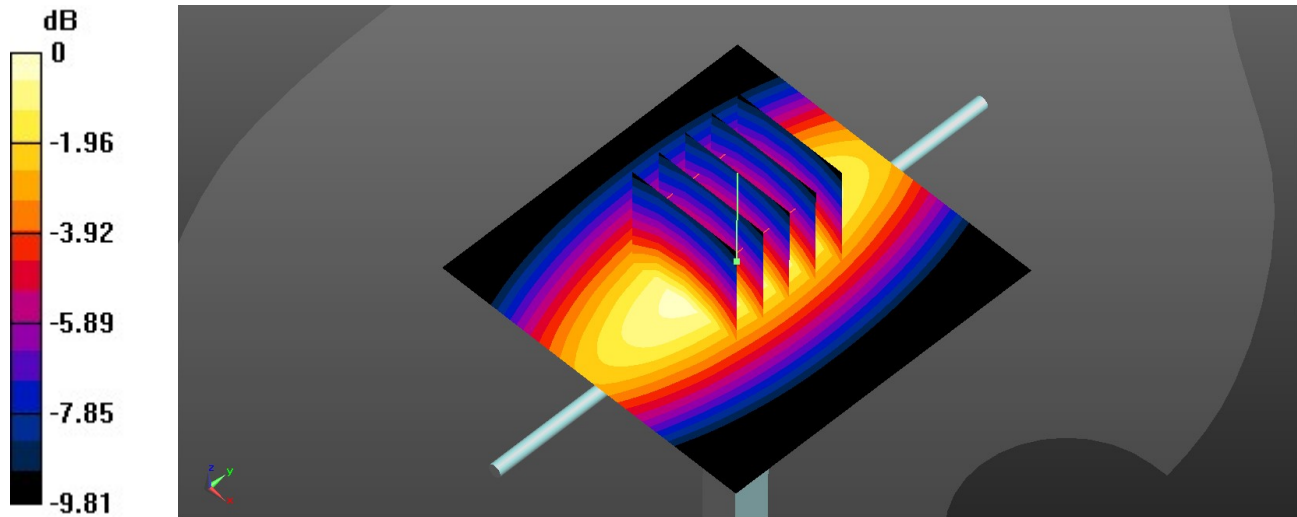
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 61.37 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 3.42 W/kg

SAR(1 g) = 2.25 W/kg; SAR(10 g) = 1.5 W/kg

Maximum value of SAR (measured) = 2.85 W/kg



0 dB = 2.85 W/kg = 4.55 dBW/kg

System Check_Head_750MHz

DUT: D750V3 - SN:1087

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: HSL_750 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.894 \text{ S/m}$; $\epsilon_r = 41.679$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.1 \text{ }^\circ\text{C}$; Liquid Temperature : $22.8 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(10.31, 10.31, 10.31); Calibrated: 2020.5.22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 2.52 W/kg

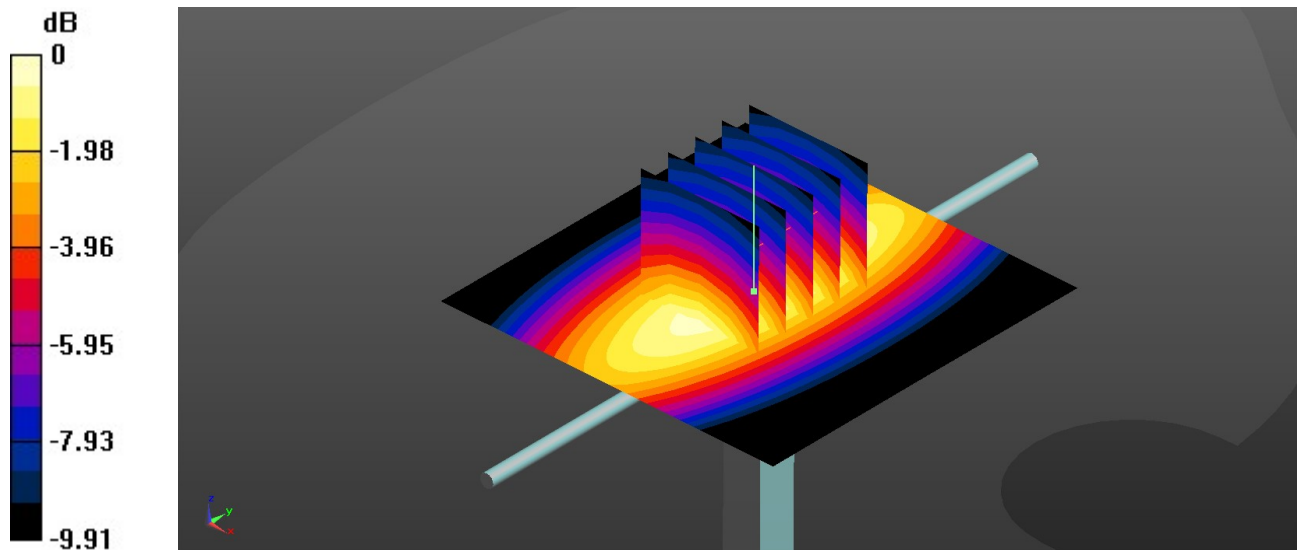
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 49.47 V/m ; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.91 W/kg

SAR(1 g) = 2.01 W/kg ; SAR(10 g) = 1.35 W/kg

Maximum value of SAR (measured) = 2.51 W/kg



0 dB = $2.51 \text{ W/kg} = 4.00 \text{ dBW/kg}$

System Check_Head_835MHz

DUT: D835V2 - SN:4d151

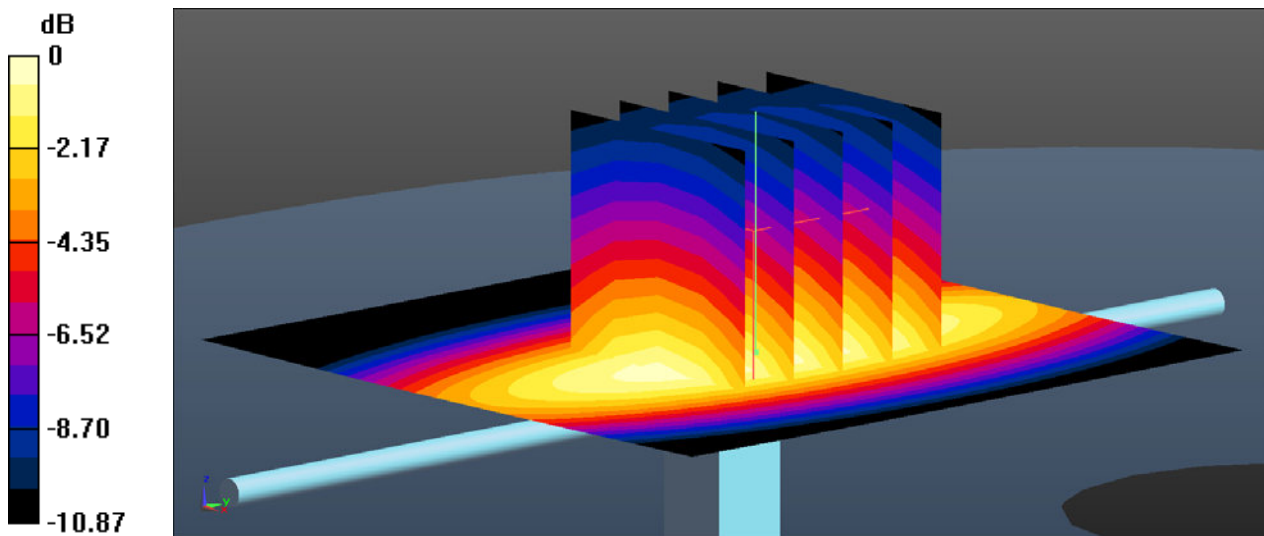
Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.942 \text{ S/m}$; $\epsilon_r = 41.827$; $\rho = 1000 \text{ kg/m}^3$
Ambient Temperature : $23.3 \text{ }^\circ\text{C}$; Liquid Temperature : $22.7 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(10.05, 10.05, 10.05); Calibrated: 2020.5.22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 2.89 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 56.37 V/m ; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 3.79 W/kg
SAR(1 g) = 2.49 W/kg ; SAR(10 g) = 1.61 W/kg
Maximum value of SAR (measured) = 2.91 W/kg



0 dB = $2.91 \text{ W/kg} = 4.64 \text{ dBW/kg}$

System Check_Head_835MHz

DUT: D835V2 - SN:4d151

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL_835 Medium parameters used: $f = 835$ MHz; $\sigma = 0.901$ S/m; $\epsilon_r = 41.16$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(10.05, 10.05, 10.05); Calibrated: 2020.5.22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.98 W/kg

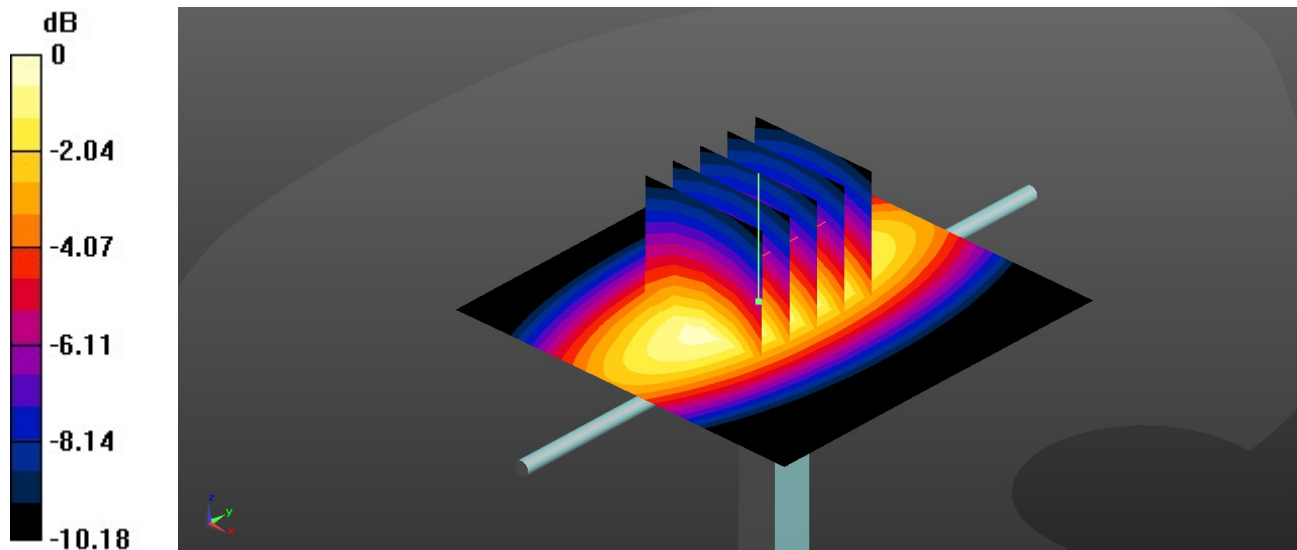
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 52.57 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.50 W/kg

SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.56 W/kg

Maximum value of SAR (measured) = 2.98 W/kg



0 dB = 2.98 W/kg = 4.74 dBW/kg

System Check_Head_835MHz

DUT: D835V2 - SN:4d151

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL_835 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.915 \text{ S/m}$; $\epsilon_r = 41.263$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.3 \text{ }^\circ\text{C}$; Liquid Temperature : $22.7 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7592; ConvF(10.05, 10.05, 10.05); Calibrated: 2020.5.22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 3.12 W/kg

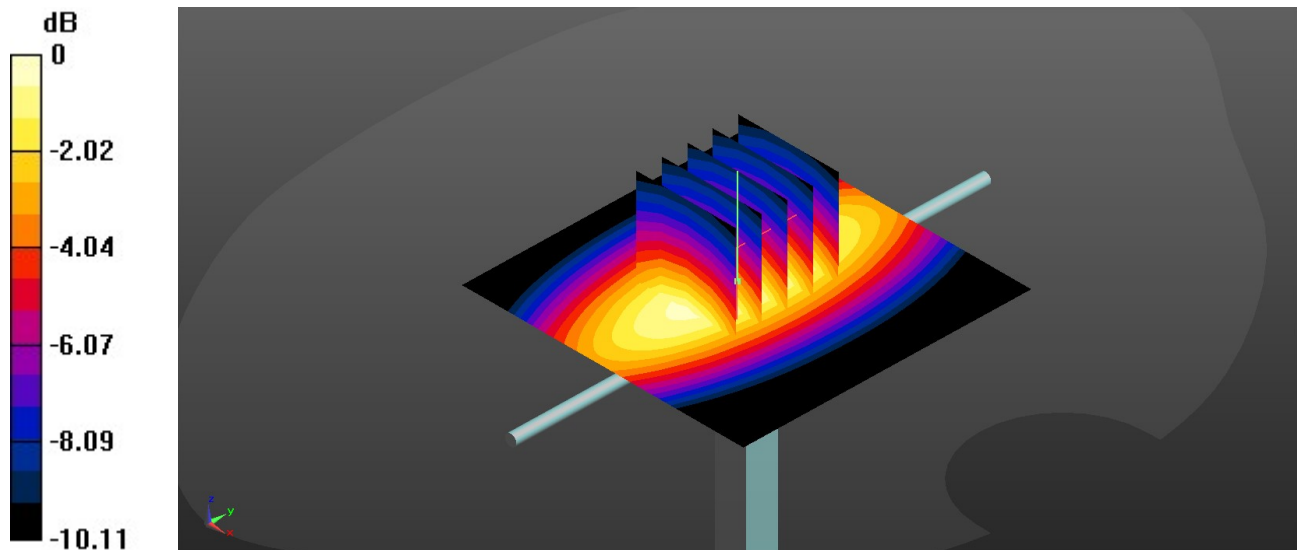
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 53.36 V/m ; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 3.69 W/kg

SAR(1 g) = 2.47 W/kg ; SAR(10 g) = 1.64 W/kg

Maximum value of SAR (measured) = 3.13 W/kg



0 dB = $3.13 \text{ W/kg} = 4.96 \text{ dBW/kg}$