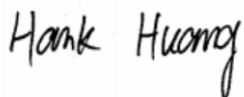


FCC SAR Test Report

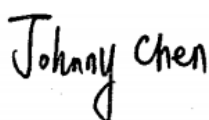
APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2163-4 , XT2163DL
FCC ID : IHDT56ZX2
STANDARD : FCC 47 CFR Part 2 (2.1093)

We, Sporton International (ShenZhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has 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 (ShenZhen) Inc., the test report shall not be reproduced except in full.



Reviewed by: Hank Huang / Supervisor



Approved by: Johnny Chen / Manager



Sporton International (ShenZhen) Inc.

**1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055
People's Republic of China**



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Report No. : FA151921

Revision History

[illegible]

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2163-4 , XT2163DL**, 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	1.28	1.27	1.27	1.59
		GSM1900	1.30	1.40	1.40	
	WCDMA	Band V	1.24	1.40	1.40	
		Band IV	0.44	1.34	1.34	
		Band II	1.22	1.39	1.32	
	LTE	Band 71	0.70	1.21	1.21	
		Band 12/Band 17	0.82	1.11	1.11	
		Band 13	0.40	1.31	1.31	
		Band 26/Band 5	1.32	1.31	1.31	
		Band 66/ Band 4	0.44	1.26	1.26	
		Band 25/Band 2	1.28	1.35	1.35	
		Band 7	1.33	1.35	1.29	
		Band 41/ Band 38	1.32	1.44	1.44	
DTS	WLAN	2.4GHz WLAN	1.15	0.25	1.09	1.59
NII		5GHz WLAN	1.19	0.33	1.20	1.59
DSS	Bluetooth	2.4GHz Bluetooth	<0.10	0.14	0.14	1.58
Highest 10g SAR Summary						
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)		Highest Simultaneous Transmission 10g SAR (W/kg)	
License	GSM	GSM850	3.23		3.97	
		GSM1900	3.58			
	WCDMA	Band V	1.75			
		Band IV	3.26			
		Band II	3.22			
	LTE	Band 71	1.60			
		Band 13	1.76			
		Band 26/Band 5	2.14			
		Band 66/ Band 4	2.99			
		Band 25/Band 2	3.24			
		Band 7	3.18			
		Band 41/Band 38	3.38			
DTS	WLAN	2.4GHz WLAN	3.46		3.96	
NII		5GHz WLAN	2.28		3.97	
Date of Testing:			2021/7/1 ~ 2021/7/19			
Remark: This device supports both LTE B4/5/17/38/2 and B66/26/12/41/25. Since the supported frequency span for LTE B4/5/17/38/2 falls completely within the supports frequency span for LTE B66/26/12/41/25, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66/26/12/41/25.						

**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 (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory		
Test Firm	Sporton International (Shenzhen) Inc.	
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595	
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CN1256	421272

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	XT2163-4 , XT2163DL
FCC ID	IHDT56ZX2
IMEI Code	352304800009854
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 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
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA/HSUPA DC-HSDPA HSPA+ (16QAM uplink is supported) LTE: QPSK, 16QAM, 64QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	DVT2
SW Version	RRR31.Q3-36
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype
Remark: 1. WLAN operation in 5600 MHz ~ 5650 MHz is notched 2. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation. 3. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications. 4. This device 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). 5. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12. 6. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the details about the power	

management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.

7. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head, body-worn, hotspot, extremity.
8. For some WWAN bands, receiver off/sensor on reduced power level is higher than hotspot reduced power level, so front/back receiver off SAR can represent hotspot conservatively.
9. LTE B41 supports HPUE, HPUE power and SAR testing performed separately.

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																										
FCC ID		IHDT56ZX2																																																																								
Equipment Name		Mobile Cellular Phone																																																																								
Operating Frequency Range of each LTE transmission band		LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 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 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz 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		R11, Cat7																																																																								
CA Support		Supported, Uplink and Downlink																																																																								
LTE MPR permanently built-in by design		<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</th></tr><tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr><tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr><tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr><tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr><tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr></table>			Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3								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
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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																																																																			
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 14.																																																																								
LTE Carrier Aggregation Combinations		Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 14.																																																																								
LTE Carrier Aggregation Additional Information		1. This device supports LTE Carrier Aggregation (CA) in the uplink for 41C with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 2 carriers in the downlink and 2 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.																																																																								

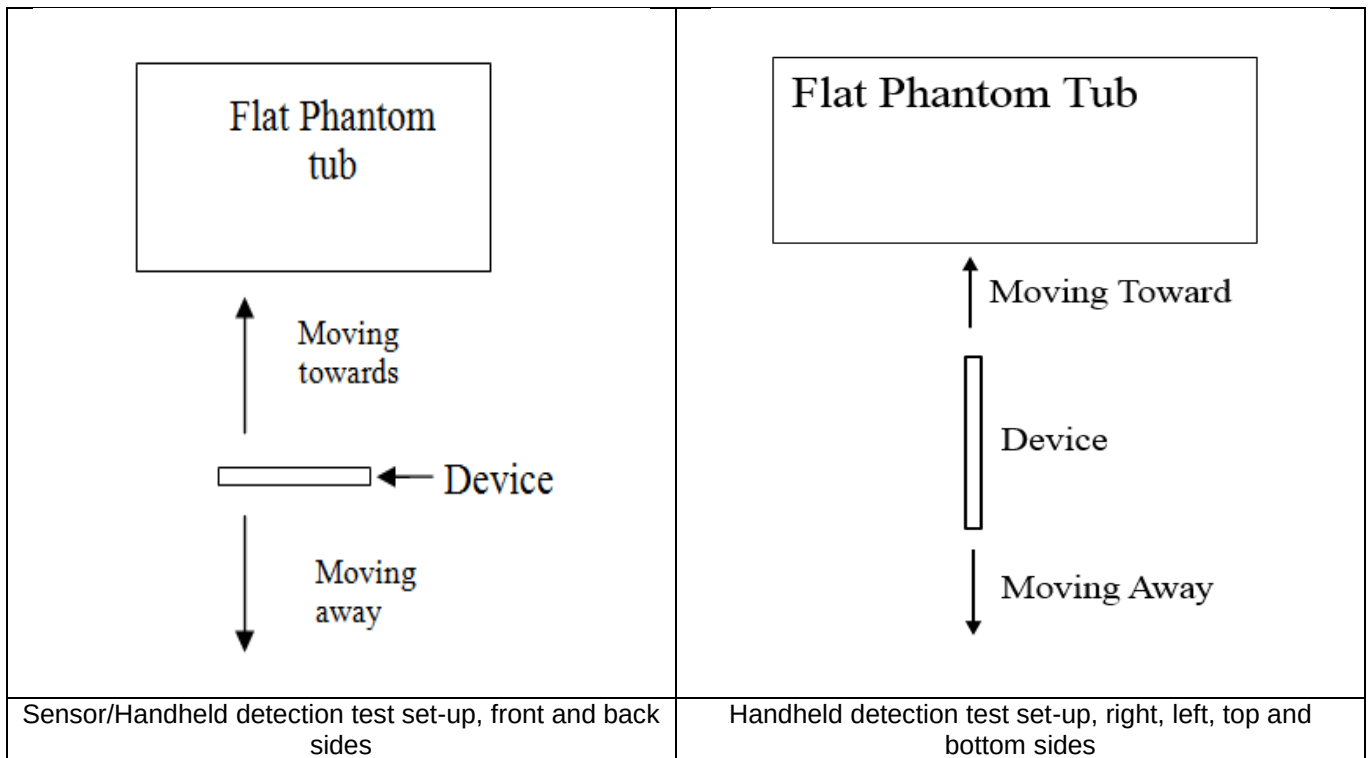
Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	826.5	20450	826.5	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	20625	846.5	20600	846.5	20600	844
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2507.5	20850	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21375	2562.5	21350	2562.5	21350	2560
LTE Band 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	701.5	23060	701.5	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	23155	713.5	23130	713.5	23130	711
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		779.5		23230		779.5	
M	23230		782		23230		782		23230		782	
H	23255		784.5		23255		784.5		23255		784.5	
LTE Band 17												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)		Channel #		Freq. (MHz)	
L	23755		706.5		23780		706.5		23780		709	
M	23790		710		23790		710		23790		710	
H	23825		713.5		23800		713.5		23800		711	

LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		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	26790	824.5
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	26940	838.5
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580	37875	2582.5	37900	2585
M	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610	38125	2607.5	38100	2605
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506	39775	2508.5	39800	2511
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5	40197	2550.7	40210	2552
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	41042	2635.2	41030	2634
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680	41465	2677.5	41440	2675
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673	133247	675.5	133272	678
M	133247	675.5	133272	678	133297	680.5	133322	683	133347	685.5	133372	688
H	133447	695.5	133422	693	133397	690.5	133372	688	133347	685.5	133322	683

5. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (5750MHz) and lowest (750MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensors placed coincident with antenna elements at the top and bottom ends of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back of the device. The output power will reduce to body worn power level when top and bottom sensor pad be detected.
3. The sensors used to detect the proximity of the user's body at the front or back surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s). When front or back body worn condition is detected reduced power will be active.
4. The device employs proximity sensors also can detect the presence of the user's a finger or hand when handheld state at the front/back/right/left/top/bottom side of the device. When front/back/right/left/top/bottom side of handheld condition is detected reduced power will be active.
5. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed:



<P-Sensor>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	21	25	25	30

<Handheld for ANT1>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Right Side		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	9	12	14	24	3	10	13	24

<Handheld for ANT2>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	8	18	15	23	4	7	15	17

<Handheld for ANT4>

Proximity Sensor Triggering Distance (mm)				
Position	Back		Right Side	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	2	5	2	6

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:

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

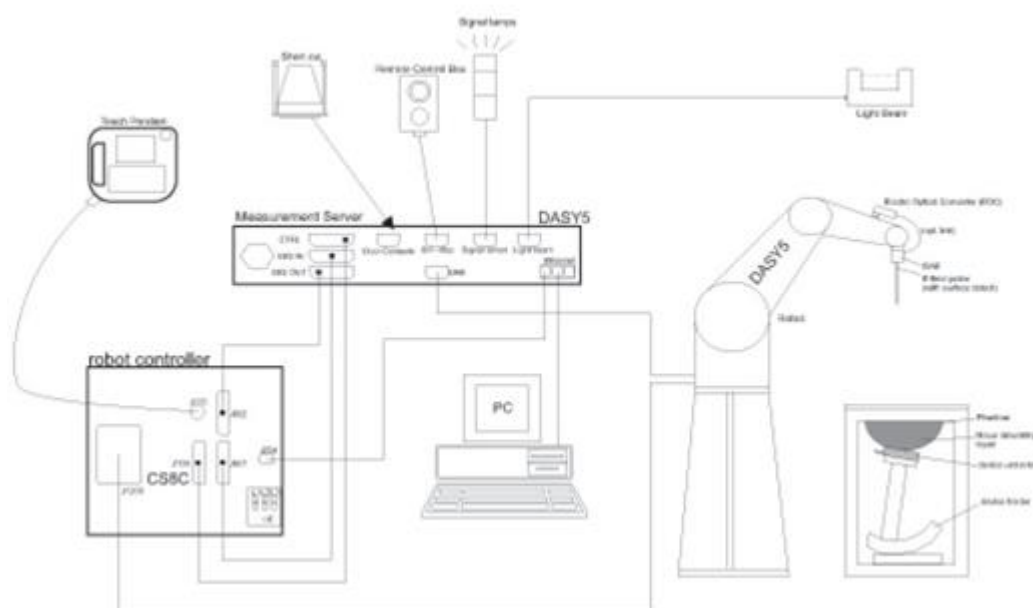
SAR is expressed in units of Watts per kilogram (W/kg)

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

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 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/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 dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 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: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	≤ 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: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm *	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

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	1099	Dec. 06, 2018	Nov. 24, 2021
SPEAG	835MHz System Validation Kit	D835V2	4d162	Dec. 05, 2018	Nov. 24, 2021
SPEAG	1750MHz System Validation Kit	D1750V2	1137	Jul. 30, 2018	Jul. 22, 2021
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	Dec. 07, 2018	Nov. 24, 2021
SPEAG	2450MHz System Validation Kit	D2450V2	924	Sep. 02, 2020	Sep. 01, 2021
SPEAG	2600MHz System Validation Kit	D2600V2	1070	Dec. 07, 2018	Nov. 24, 2021
SPEAG	5000MHz System Validation Kit	D5GHzV2	1167	Aug. 03, 2018	Aug. 02, 2021
SPEAG	Data Acquisition Electronics	DAE4	715	Jul. 27, 2020	Jul. 26, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	7641	Mar. 15, 2021	Mar. 14, 2022
SPEAG	SAM Twin Phantom	QD 000 P40 CD	1670	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio communication analyzer	MT8820C	6201341952	Dec. 25, 2020	Dec. 24, 2021
Anritsu	Radio communication analyzer	MT8820C	6201563813	Dec. 25, 2020	Dec. 24, 2021
Anritsu	Radio communication analyzer	MT8821C	6201588577	Apr. 08, 2021	Apr. 07, 2022
Agilent	Wireless Communication Test Set	E5515C	MY50267224	Jul. 21, 2020	Jul. 20, 2021
Agilent	Network Analyzer	E5071C	MY46523671	Oct. 15, 2020	Oct. 14, 2021
Speag	Dielectric Assessment KIT	DAK-3.5	1071	Dec. 23, 2020	Dec. 22, 2021
Agilent	Signal Generator	N5181A	MY50145381	Dec. 25, 2020	Dec. 24, 2021
Anritsu	Power Sensor	MA2411B	1306099	Dec. 25, 2020	Dec. 24, 2021
Anritsu	Power Meter	ML2495A	1349001	Jul. 21, 2020	Jul. 20, 2021
Anritsu	Power Sensor	MA2411B	1207253	Dec. 25, 2020	Dec. 24, 2021
Anritsu	Power Meter	ML2495A	1218010	Dec. 25, 2020	Dec. 24, 2021
R&S	Power Sensor	NRP50S	101254	Apr. 09, 2021	Apr. 08, 2022
R&S	Power Sensor	NRP8S	109228	Apr. 09, 2021	Apr. 08, 2022
R&S	CBT BLUETOOTH TESTER	CBT	100963	Dec. 25, 2020	Dec. 24, 2021
R&S	Spectrum Analyzer	FSP7	100818	Jul. 21, 2020	Jul. 20, 2021
TES	Hygrometer	1310	200505600	Jul. 30, 2020	Jul. 29, 2021
Anymetre	Thermo-Hygrometer	JR593	2015030903	Jan. 05, 2021	Jan. 04, 2022
SPEAG	Device Holder	N/A	N/A	N/A	N/A
AR	Amplifier	5S1G4	0333096	Note 1	
mini-circuits	Amplifier	ZVE-3W-83+	599201528	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
ET Industries	Dual Directional Coupler	C-058-10	N/A	Note 1	
Weinschel	Attenuator 1	3M-10	N/A	Note 1	
Weinschel	Attenuator 2	3M-20	N/A	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.

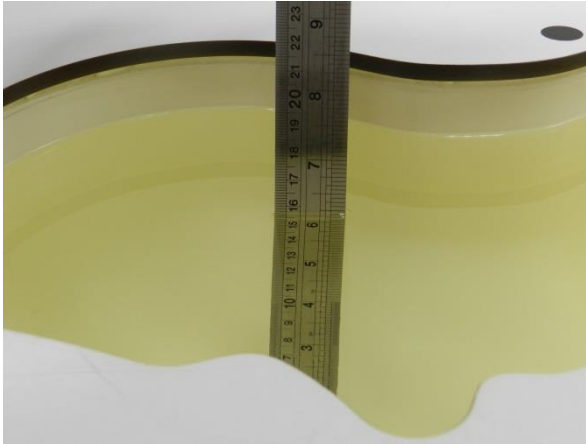


Fig 11.1 Photo of Liquid Height for Head SAR

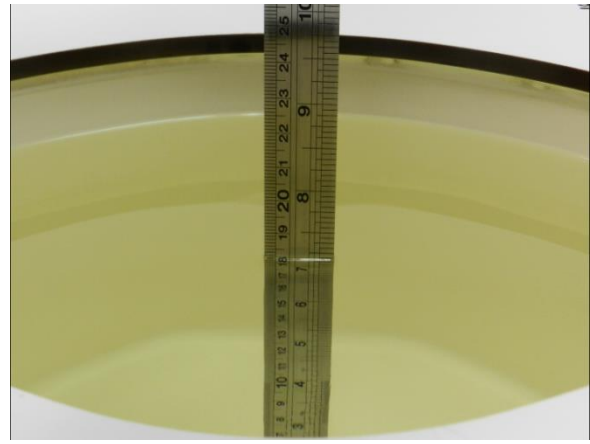


Fig 11.2 Photo of Liquid Height for Body SAR

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	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	22.5	0.895	41.004	0.89	41.90	0.56	-2.14	±5	2021/7/1
750	Head	22.4	0.921	41.563	0.89	41.90	3.48	-0.80	±5	2021/7/7
835	Head	22.5	0.916	41.029	0.90	41.50	1.78	-1.13	±5	2021/7/2
835	Head	22.6	0.910	42.910	0.90	41.50	1.11	3.40	±5	2021/7/8
1750	Head	22.4	1.378	41.340	1.37	40.10	0.58	3.09	±5	2021/7/3
1750	Head	22.6	1.381	40.830	1.37	40.10	0.80	1.82	±5	2021/7/9
1900	Head	22.7	1.435	38.464	1.40	40.00	2.50	-3.84	±5	2021/7/4
1900	Head	22.4	1.446	39.090	1.40	40.00	3.29	-2.27	±5	2021/7/10
2450	Head	22.8	1.834	39.654	1.80	39.20	1.89	1.16	±5	2021/7/5
2450	Head	22.7	1.824	38.032	1.80	39.20	1.33	-2.98	±5	2021/7/11
2600	Head	22.6	2.056	37.284	1.96	39.00	4.90	-4.40	±5	2021/7/6
2600	Head	22.6	1.894	40.240	1.96	39.00	-3.37	3.18	±5	2021/7/12
5250	Head	22.8	4.714	36.412	4.71	35.95	0.08	1.29	±5	2021/7/14
5600	Head	22.7	5.141	35.813	5.07	35.50	1.40	0.88	±5	2021/7/16
5750	Head	22.6	5.315	35.552	5.22	35.35	1.82	0.57	±5	2021/7/19

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 (%)
2021/7/1	750	Head	250	1099	7641	715	2.24	8.52	8.96	5.16
2021/7/7	750	Head	250	1099	7641	715	2.30	8.52	9.2	7.98
2021/7/2	835	Head	250	4d162	7641	715	2.42	9.61	9.68	0.73
2021/7/8	835	Head	250	4d162	7641	715	2.41	9.61	9.64	0.31
2021/7/3	1750	Head	250	1137	7641	715	9.13	36.50	36.52	0.05
2021/7/9	1750	Head	250	1137	7641	715	9.15	36.50	36.6	0.27
2021/7/4	1900	Head	250	5d182	7641	715	9.99	39.60	39.96	0.91
2021/7/10	1900	Head	250	5d182	7641	715	10.10	39.60	40.4	2.02
2021/7/5	2450	Head	250	924	7641	715	12.10	51.40	48.4	-5.84
2021/7/11	2450	Head	250	924	7641	715	12.00	51.40	48	-6.61
2021/7/6	2600	Head	250	1070	7641	715	14.00	58.10	56	-3.61
2021/7/12	2600	Head	250	1070	7641	715	14.10	58.10	56.4	-2.93
2021/7/14	5250	Head	100	1167	7641	715	8.27	77.00	82.7	7.40
2021/7/16	5600	Head	100	1167	7641	715	8.46	80.80	84.6	4.70
2021/7/19	5750	Head	100	1167	7641	715	7.53	76.90	75.3	-2.08

<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 (%)
2021/7/1	750	Head	250	1099	7641	715	1.50	5.64	6	6.38
2021/7/7	750	Head	250	1099	7641	715	1.54	5.64	6.16	9.22
2021/7/2	835	Head	250	4d162	7641	715	1.59	6.35	6.36	0.16
2021/7/8	835	Head	250	4d162	7641	715	1.58	6.35	6.32	-0.47
2021/7/3	1750	Head	250	1137	7641	715	4.85	19.50	19.4	-0.51
2021/7/9	1750	Head	250	1137	7641	715	4.86	19.50	19.44	-0.31
2021/7/4	1900	Head	250	5d182	7641	715	5.06	20.70	20.24	-2.22
2021/7/10	1900	Head	250	5d182	7641	715	5.10	20.70	20.4	-1.45
2021/7/5	2450	Head	250	924	7641	715	5.45	24.00	21.8	-9.17
2021/7/11	2450	Head	250	924	7641	715	5.42	24.00	21.68	-9.67
2021/7/6	2600	Head	250	1070	7641	715	6.05	26.10	24.2	-7.28
2021/7/12	2600	Head	250	1070	7641	715	6.08	26.10	24.32	-6.82
2021/7/14	5250	Head	100	1167	7641	715	2.28	22.00	22.8	3.64
2021/7/16	5600	Head	100	1167	7641	715	2.30	23.20	23	-0.86
2021/7/19	5750	Head	100	1167	7641	715	2.09	21.60	20.9	-3.24

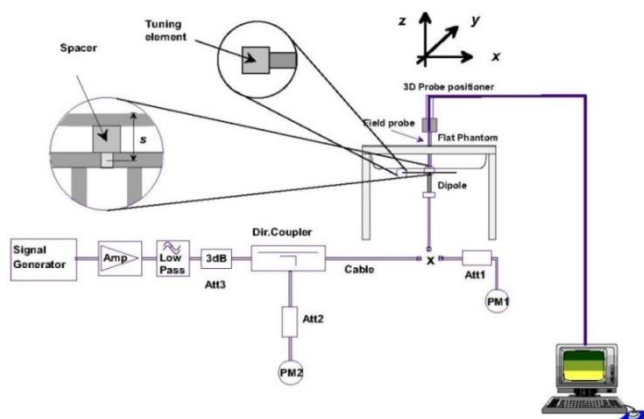


Fig 11.3.1 System Performance Check Setup



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.

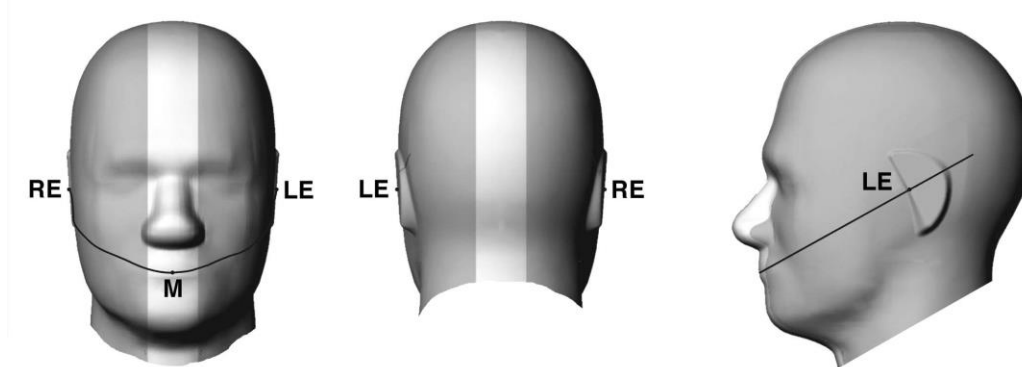


Fig 12.1.1 Front, back, and side views of SAM twin phantom

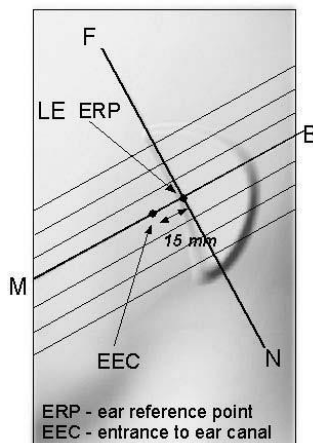


Fig 12.1.2 Close-up side view of phantom showing the ear region.

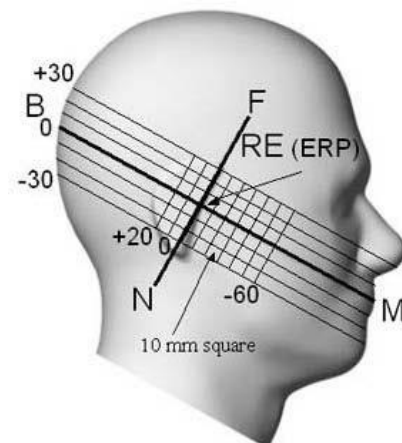


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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 handset. 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.

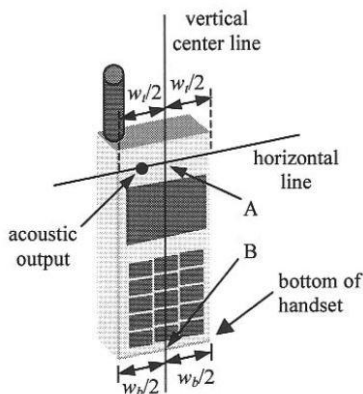


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case"

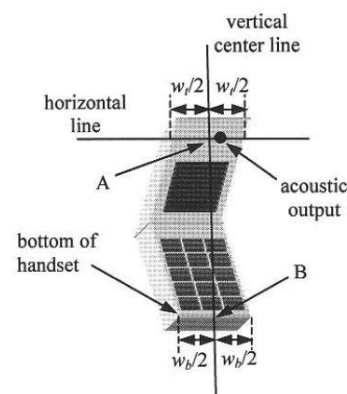


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

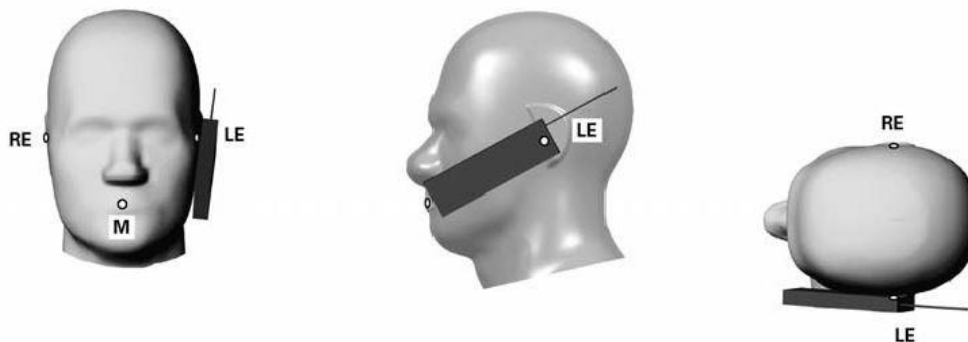


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

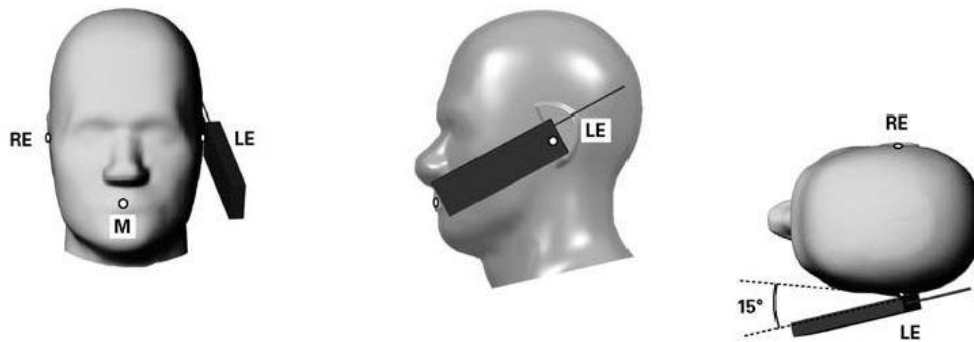


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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 handset attached to the handset.

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

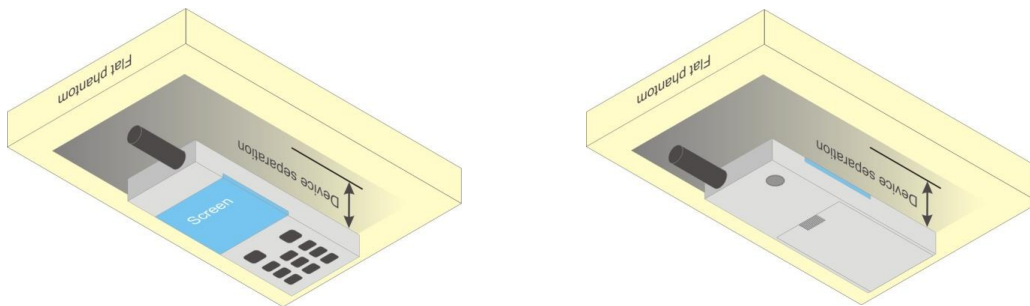


Fig 12.4 Body Worn Position

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 ($L \times W \geq 9$ cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined 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 4Tx slots for GSM850 and 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:

- The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- The RF path losses were compensated into the measurements.
- A call was established between EUT and Base Station with following setting * :
 - Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - 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
 - Set Cell Power = -86 dBm
 - Set Channel Type = 12.2k + HSPA
 - Set UE Target Power
 - Power Ctrl Mode= Alternating bits
 - Set and observe the E-TFCI
 - Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- The transmitted maximum output power was recorded.

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (Note 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	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, TF1) 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.		

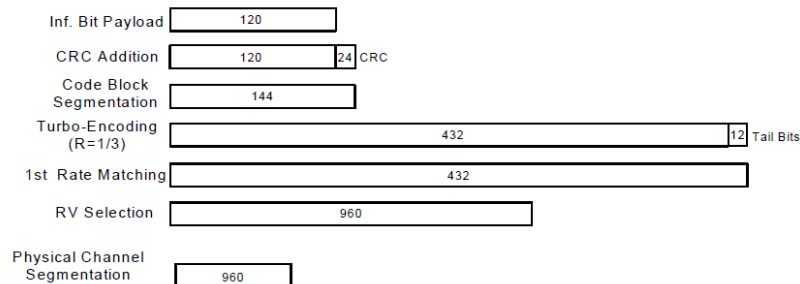


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

HSPA+ 3GPP release 7 (uplink category 7) 16QAM, 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 = 5.2E:HSPA+:UL with 16QAM
 - 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, C11.1.4, quoted from the TS 34.121-1 s5.2E
 - iii. Set Channel Params
 - iv. Set Cell Power = -86 dBm
 - v. Set Channel Type = HSPA
 - vi. Set UE Target Power =21 dBm
 - vii. Power Ctrl Mode= All Up Bits
 - viii. Set Manual Uplink DPCH Bc/Bd = Manual
 - ix. Set Manual Uplink DPCH Bc and Bd=15,15(for 34.121-1 v8.10.0 table C11.1.4 sub-test 1)
 - x. Set HSPA Conn DL Channel Levels
 - xi. Set HS-SCCH Configs
 - xii. Set RB Test Mode Setup
 - xiii. Set Common HSUPA Parameters
 - xiv. Set Serving Grant
 - xv. Confirm that E-TFCI is equal to the target E-TFCI of 105 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note 3)	β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105
Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{fs} = 30/15 * \beta_c$. Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0). Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default. Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value. Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.											

Setup Configuration

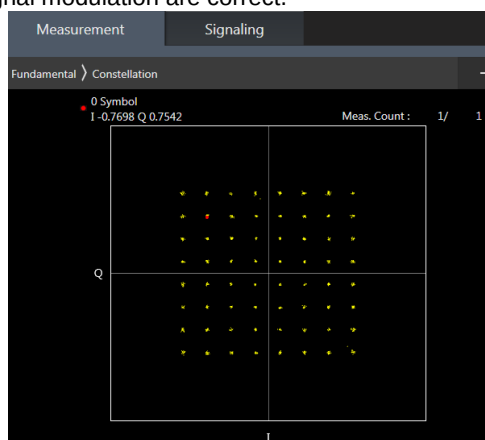
<WCDMA Conducted Power>**General Note:**

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/ HSPA+ 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/ HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA/ HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA/ HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA/ HSPA+

<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 B4/B5/B17/B38/B2 SAR test was covered by B66/B26/B12/B41/B25; 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.

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

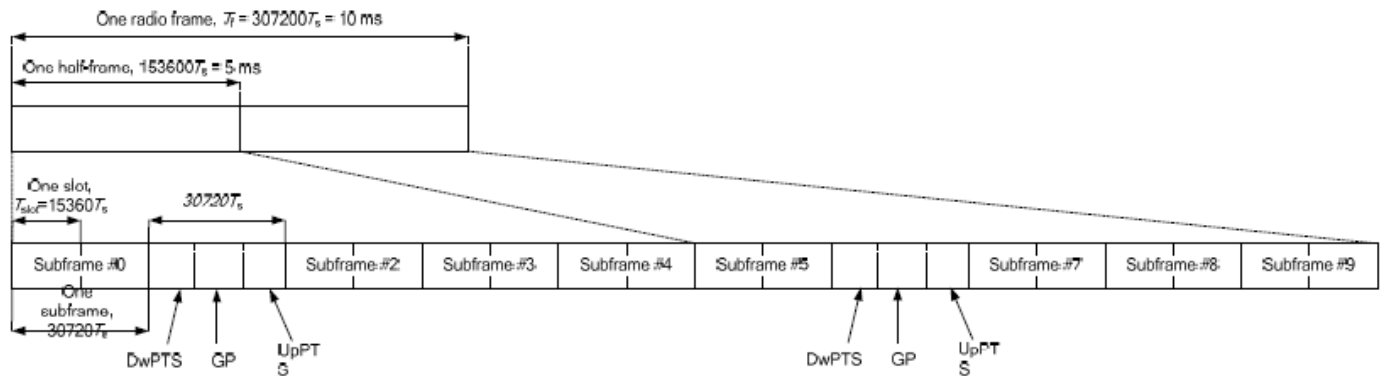


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

For LTE Band 41 Power class 2

- Uplink-downlink configuration: 1. In a half-frame consisted of 5 subframes, uplink operation is in 2 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(2+0.167)/5 = 43.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(2+0.143)/5 = 42.9\%$
- 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

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.

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

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

<LTE Carrier Aggregation>
General Note:

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

2CC Downlink Carrier Aggregation	
Number	Combination
1	CA_2C
2	CA_2A-2A
3	CA_4A-4A
4	CA_5B
5	CA_5A-7A
6	CA_7C
7	CA_7A-7A
8	CA_7A-12A
9	CA_12B
10	CA_25A-25A
11	CA_25A-26A
12	CA_26A-41A
13	CA_38C
14	CA_41C
15	CA_41A-41A
16	CA_66B
17	CA_66C
18	CA_66A-66A
19	CA_2A-5A

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.



LTE UL CA	TX Ant
CA_41C	Ant 1/ Ant 2

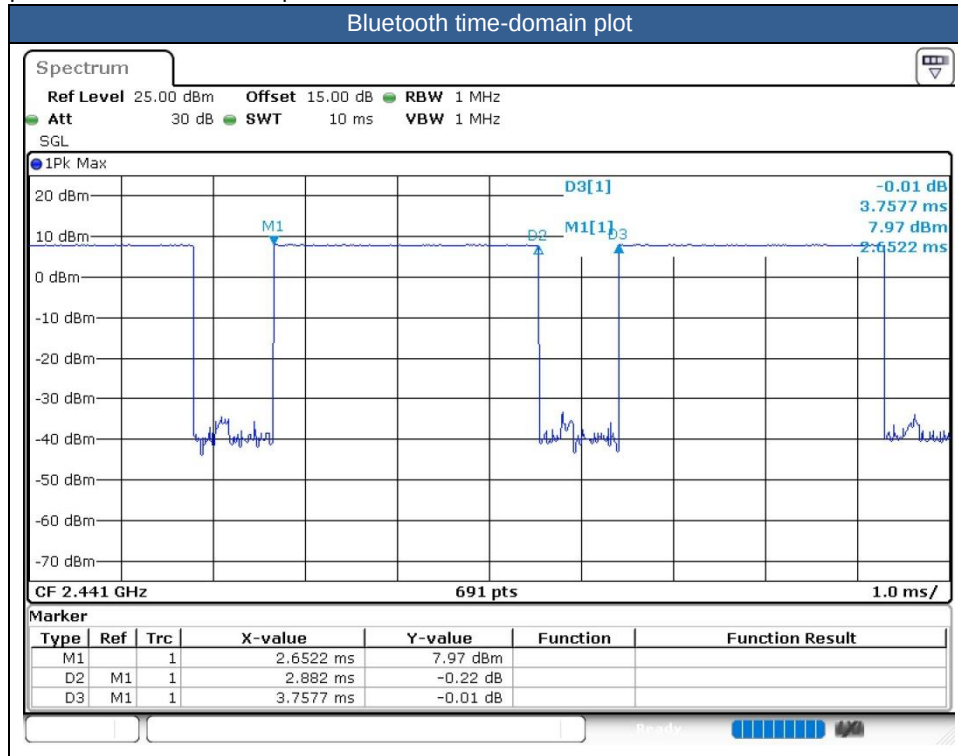
<WLAN Conducted Power>**General Note:**

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 76.7 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for 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 BT/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 of power class 3, 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.
 - f. For TDD LTE SAR measurement of power class 2, 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.
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. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
5. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head, body-worn, hotspot, extremity.
6. For some WWAN bands, receiver off/sensor on reduced power level is higher than hotspot reduced power level, so front/back receiver off SAR can represent hotspot conservatively.
7. LTE B41 supports HPUE, HPUE power and SAR testing performed separately.
8. 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, 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 GSM850/1900, WCDMA Band II/IV/V, LTE Band2/4/5/7/13/25/26/66/38/41/71, WLAN 2.4GHz/ 5.2GHz/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.
9. The following table "n/a" means the measured 1g/10g cube SAR is too small to be found.

**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 4Tx slots for GSM850 and 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 $\leq \frac{1}{4}$ 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 / HSPA+ 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 / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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.
5. 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.
6. 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.
7. LTE B4/B5/B17/B38/B2 SAR test was covered by B66/B26/B12/B41/B25; 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 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.

15.1 Head 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 4 Tx slots	Right Cheek	0mm	Ant 1	Full	128	824.2	29.05	30.00	1.245	-0.16	0.609	0.758
	GSM850	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	Full	128	824.2	29.05	30.00	1.245	0.1	0.314	0.391
	GSM850	GPRS 4 Tx slots	Left Cheek	0mm	Ant 1	Full	128	824.2	29.05	30.00	1.245	0.16	0.594	0.739
	GSM850	GPRS 4 Tx slots	Left Tilted	0mm	Ant 1	Full	128	824.2	29.05	30.00	1.245	0.05	0.355	0.442
	GSM850	GPRS 4 Tx slots	Right Cheek	0mm	Ant 1	Full	189	836.4	28.90	30.00	1.288	-0.11	0.606	0.781
	GSM850	GPRS 4 Tx slots	Right Cheek	0mm	Ant 1	Full	251	848.8	28.82	30.00	1.312	0.08	0.584	0.766
	GSM850	GPRS 4 Tx slots	Right Cheek	0mm	Ant 2	Reduced	128	824.2	25.25	26.00	1.189	-0.01	0.985	1.171
	GSM850	GPRS 4 Tx slots	Right Tilted	0mm	Ant 2	Reduced	128	824.2	25.25	26.00	1.189	-0.04	1.040	1.236
	GSM850	GPRS 4 Tx slots	Left Cheek	0mm	Ant 2	Reduced	128	824.2	25.25	26.00	1.189	0.06	0.930	1.105
	GSM850	GPRS 4 Tx slots	Left Tilted	0mm	Ant 2	Reduced	128	824.2	25.25	26.00	1.189	0.19	0.940	1.117
01	GSM850	GPRS 4 Tx slots	Right Cheek	0mm	Ant 2	Reduced	189	836.4	25.19	26.00	1.205	-0.05	1.060	1.277
	GSM850	GPRS 4 Tx slots	Right Cheek	0mm	Ant 2	Reduced	251	848.8	25.00	26.00	1.259	-0.05	1.000	1.259
	GSM850	GPRS 4 Tx slots	Right Tilted	0mm	Ant 2	Reduced	189	836.4	25.19	26.00	1.205	0.1	0.996	1.200
	GSM850	GPRS 4 Tx slots	Right Tilted	0mm	Ant 2	Reduced	251	848.8	25.00	26.00	1.259	0.17	1.010	1.272
	GSM850	GPRS 4 Tx slots	Left Cheek	0mm	Ant 2	Reduced	189	836.4	25.19	26.00	1.205	-0.06	0.772	0.930
	GSM850	GPRS 4 Tx slots	Left Cheek	0mm	Ant 2	Reduced	251	848.8	25.00	26.00	1.259	-0.01	0.930	1.171
	GSM850	GPRS 4 Tx slots	Left Tilted	0mm	Ant 2	Reduced	189	836.4	25.19	26.00	1.205	-0.09	0.930	1.121
	GSM850	GPRS 4 Tx slots	Left Tilted	0mm	Ant 2	Reduced	251	848.8	25.00	26.00	1.259	-0.14	0.920	1.158
	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 1	Full	512	1850.2	26.39	27.50	1.291	0.05	0.531	0.686
	GSM1900	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	Full	512	1850.2	26.39	27.50	1.291	0.19	0.309	0.399
	GSM1900	GPRS 4 Tx slots	Left Cheek	0mm	Ant 1	Full	512	1850.2	26.39	27.50	1.291	0.19	0.480	0.620
	GSM1900	GPRS 4 Tx slots	Left Tilted	0mm	Ant 1	Full	512	1850.2	26.39	27.50	1.291	0.15	0.431	0.557
	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 1	Full	661	1880	26.20	27.50	1.349	0.12	0.609	0.822
	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 1	Full	810	1909.8	26.03	27.50	1.403	0.08	0.643	0.902
	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 2	Reduced	512	1850.2	17.74	18.50	1.191	0.13	0.731	0.871
	GSM1900	GPRS 4 Tx slots	Right Tilted	0mm	Ant 2	Reduced	512	1850.2	17.74	18.50	1.191	-0.15	0.829	0.988
	GSM1900	GPRS 4 Tx slots	Left Cheek	0mm	Ant 2	Reduced	512	1850.2	17.74	18.50	1.191	-0.01	0.452	0.538
	GSM1900	GPRS 4 Tx slots	Left Tilted	0mm	Ant 2	Reduced	512	1850.2	17.74	18.50	1.191	-0.1	0.521	0.621
02	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 2	Reduced	661	1880	17.12	18.50	1.374	0.08	0.945	1.298
	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 2	Reduced	810	1909.8	16.92	18.50	1.439	0.05	0.814	1.171
	GSM1900	GPRS 4 Tx slots	Right Tilted	0mm	Ant 2	Reduced	661	1880	17.12	18.50	1.374	0.09	0.927	1.274
	GSM1900	GPRS 4 Tx slots	Right Tilted	0mm	Ant 2	Reduced	810	1909.8	16.92	18.50	1.439	-0.13	0.840	1.209



<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 V	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	4233	846.6	22.94	24.00	1.276	-0.18	0.472	0.602
	WCDMA V	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	Full	4233	846.6	22.94	24.00	1.276	0.03	0.203	0.259
	WCDMA V	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	Full	4233	846.6	22.94	24.00	1.276	-0.1	0.446	0.569
	WCDMA V	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	Full	4233	846.6	22.94	24.00	1.276	0.16	0.261	0.333
	WCDMA V	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	4132	826.4	22.74	24.00	1.337	0.03	0.410	0.548
	WCDMA V	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	4182	836.4	22.85	24.00	1.303	-0.08	0.422	0.550
	WCDMA V	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	0.03	1.060	1.228
	WCDMA V	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	0.19	1.040	1.205
	WCDMA V	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	-0.06	1.000	1.159
	WCDMA V	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	-0.04	0.990	1.147
03	WCDMA V	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	Reduced	4132	826.4	21.17	22.00	1.211	-0.09	1.020	1.235
	WCDMA V	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	Reduced	4182	836.4	21.19	22.00	1.205	-0.12	1.010	1.217
	WCDMA V	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	Reduced	4132	826.4	21.17	22.00	1.211	-0.08	1.010	1.223
	WCDMA V	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	Reduced	4182	836.4	21.19	22.00	1.205	-0.11	0.990	1.193
	WCDMA V	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	Reduced	4132	826.4	21.17	22.00	1.211	-0.03	0.980	1.186
	WCDMA V	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	Reduced	4182	836.4	21.19	22.00	1.205	-0.06	0.960	1.157
	WCDMA V	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	Reduced	4132	826.4	21.17	22.00	1.211	0.02	0.940	1.138
	WCDMA V	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	Reduced	4182	836.4	21.19	22.00	1.205	0.03	0.920	1.109
	WCDMA IV	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	1413	1732.6	23.20	24.00	1.202	0.06	0.268	0.322
	WCDMA IV	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	Full	1413	1732.6	23.20	24.00	1.202	-0.12	0.170	0.204
	WCDMA IV	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	Full	1413	1732.6	23.20	24.00	1.202	0.07	0.199	0.239
	WCDMA IV	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	Full	1413	1732.6	23.20	24.00	1.202	0.17	0.209	0.251
	WCDMA IV	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	1312	1712.4	23.15	24.00	1.216	0.16	0.259	0.315
04	WCDMA IV	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	1513	1752.6	23.05	24.00	1.245	-0.16	0.355	0.442
	WCDMA II	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	9262	1852.4	23.24	24.00	1.191	0.02	0.414	0.493
	WCDMA II	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	Full	9262	1852.4	23.24	24.00	1.191	0.14	0.258	0.307
	WCDMA II	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	Full	9262	1852.4	23.24	24.00	1.191	-0.12	0.388	0.462
	WCDMA II	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	Full	9262	1852.4	23.24	24.00	1.191	-0.17	0.339	0.404
	WCDMA II	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	9400	1880	23.03	24.00	1.250	0.03	0.487	0.609
	WCDMA II	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	Full	9538	1907.6	22.79	24.00	1.321	0.07	0.482	0.637
	WCDMA II	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	Reduced	9262	1852.4	14.09	15.00	1.233	-0.1	0.525	0.647
	WCDMA II	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	Reduced	9262	1852.4	14.09	15.00	1.233	-0.18	0.583	0.719
	WCDMA II	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	Reduced	9262	1852.4	14.09	15.00	1.233	-0.19	0.335	0.413
	WCDMA II	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	Reduced	9262	1852.4	14.09	15.00	1.233	-0.07	0.395	0.487
	WCDMA II	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	Reduced	9400	1880	13.80	15.00	1.318	0.02	0.642	0.846
05	WCDMA II	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	Reduced	9538	1907.6	13.27	15.00	1.489	0.07	0.820	1.221



<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 71	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	133322	683	22.38	24.00	1.452	0.03	0.313	0.455
	LTE Band 71	20M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	133322	683	22.38	24.00	1.452	-0.15	0.110	0.160
	LTE Band 71	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	133322	683	22.38	24.00	1.452	-0.07	0.242	0.351
	LTE Band 71	20M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	133322	683	22.38	24.00	1.452	0.18	0.131	0.190
	LTE Band 71	20M	QPSK	50	24	Right Cheek	0mm	Ant 1	Full	133322	683	21.44	23.00	1.432	0.06	0.239	0.342
	LTE Band 71	20M	QPSK	50	24	Right Tilted	0mm	Ant 1	Full	133322	683	21.44	23.00	1.432	-0.17	0.118	0.169
	LTE Band 71	20M	QPSK	50	24	Left Cheek	0mm	Ant 1	Full	133322	683	21.44	23.00	1.432	-0.07	0.221	0.317
	LTE Band 71	20M	QPSK	50	24	Left Tilted	0mm	Ant 1	Full	133322	683	21.44	23.00	1.432	-0.18	0.128	0.183
06	LTE Band 71	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Full	133322	683	21.81	23.00	1.315	0.06	0.533	0.701
	LTE Band 71	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Full	133322	683	21.81	23.00	1.315	0.02	0.462	0.608
	LTE Band 71	20M	QPSK	1	0	Left Cheek	0mm	Ant 2	Full	133322	683	21.81	23.00	1.315	0.19	0.324	0.426
	LTE Band 71	20M	QPSK	1	0	Left Tilted	0mm	Ant 2	Full	133322	683	21.81	23.00	1.315	0.13	0.216	0.284
	LTE Band 71	20M	QPSK	50	24	Right Cheek	0mm	Ant 2	Full	133322	683	20.78	22.00	1.324	-0.16	0.365	0.483
	LTE Band 71	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Full	133322	683	20.78	22.00	1.324	-0.13	0.351	0.465
	LTE Band 71	20M	QPSK	50	24	Left Cheek	0mm	Ant 2	Full	133322	683	20.78	22.00	1.324	0.06	0.252	0.334
	LTE Band 71	20M	QPSK	50	24	Left Tilted	0mm	Ant 2	Full	133322	683	20.78	22.00	1.324	-0.19	0.213	0.282
	LTE Band 12	10M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	0.09	0.241	0.327
	LTE Band 12	10M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	-0.02	0.105	0.142
	LTE Band 12	10M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	-0.05	0.186	0.252
	LTE Band 12	10M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	-0.18	0.095	0.129
	LTE Band 12	10M	QPSK	25	12	Right Cheek	0mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	-0.18	0.179	0.241
	LTE Band 12	10M	QPSK	25	12	Right Tilted	0mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	0.17	0.091	0.123
	LTE Band 12	10M	QPSK	25	12	Left Cheek	0mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	-0.04	0.164	0.221
	LTE Band 12	10M	QPSK	25	12	Left Tilted	0mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	-0.18	0.083	0.112
07	LTE Band 12	10M	QPSK	1	0	Right Cheek	0mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	0.08	0.653	0.820
	LTE Band 12	10M	QPSK	1	0	Right Tilted	0mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	-0.1	0.599	0.752
	LTE Band 12	10M	QPSK	1	0	Left Cheek	0mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	0.15	0.600	0.754
	LTE Band 12	10M	QPSK	1	0	Left Tilted	0mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	0.05	0.584	0.734
	LTE Band 12	10M	QPSK	25	12	Right Cheek	0mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	0.19	0.598	0.753
	LTE Band 12	10M	QPSK	25	12	Right Tilted	0mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	0.11	0.540	0.680
	LTE Band 12	10M	QPSK	25	12	Left Cheek	0mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	0.05	0.443	0.558
	LTE Band 12	10M	QPSK	25	12	Left Tilted	0mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	0.15	0.453	0.570
	LTE Band 12	10M	QPSK	50	0	Right Cheek	0mm	Ant 2	Full	23095	707.5	20.93	22.00	1.279	-0.04	0.603	0.771
08	LTE Band 13	10M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	23230	782	22.66	24.00	1.361	0.07	0.290	0.395
	LTE Band 13	10M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	23230	782	22.66	24.00	1.361	0.08	0.135	0.184
	LTE Band 13	10M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	23230	782	22.66	24.00	1.361	0.08	0.268	0.365
	LTE Band 13	10M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	23230	782	22.66	24.00	1.361	0.19	0.138	0.188
	LTE Band 13	10M	QPSK	25	12	Right Cheek	0mm	Ant 1	Full	23230	782	21.74	23.00	1.337	0.02	0.233	0.311
	LTE Band 13	10M	QPSK	25	12	Right Tilted	0mm	Ant 1	Full	23230	782	21.74	23.00	1.337	-0.06	0.113	0.151
	LTE Band 13	10M	QPSK	25	12	Left Cheek	0mm	Ant 1	Full	23230	782	21.74	23.00	1.337	-0.17	0.222	0.297
	LTE Band 13	10M	QPSK	25	12	Left Tilted	0mm	Ant 1	Full	23230	782	21.74	23.00	1.337	0.17	0.118	0.158
	LTE Band 26	15M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	26865	831.5	22.55	24.00	1.396	-0.15	0.351	0.490
	LTE Band 26	15M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	26865	831.5	22.55	24.00	1.396	-0.04	0.179	0.250
	LTE Band 26	15M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	26865	831.5	22.55	24.00	1.396	0.17	0.310	0.433
	LTE Band 26	15M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	26865	831.5	22.55	24.00	1.396	0.14	0.165	0.230
	LTE Band 26	15M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	26765	821.5	22.44	24.00	1.432	0.04	0.366	0.524
	LTE Band 26	15M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	26965	841.5	22.49	24.00	1.416	0.07	0.389	0.551
	LTE Band 26	15M	QPSK	36	20	Right Cheek	0mm	Ant 1	Full	26865	831.5	21.51	23.00	1.409	0.05	0.309	0.435
	LTE Band 26	15M	QPSK	36	20	Right Tilted	0mm	Ant 1	Full	26865	831.5	21.51	23.00	1.409	-0.05	0.160	0.225
	LTE Band 26	15M	QPSK	36	20	Left Cheek	0mm	Ant 1	Full	26865	831.5	21.51	23.00	1.409	0.03	0.265	0.373
	LTE Band 26	15M	QPSK	36	20	Left Tilted	0mm	Ant 1	Full	26865	831.5	21.51	23.00	1.409	-0.02	0.144	0.203



FCC SAR Test Report

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	LTE Band 26	15M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	26865	831.5	20.85	22.00	1.303	0.01	0.944	1.230
	LTE Band 26	15M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	26865	831.5	20.85	22.00	1.303	-0.13	0.939	1.224
	LTE Band 26	15M	QPSK	1	0	Left Cheek	0mm	Ant 2	Reduced	26865	831.5	20.85	22.00	1.303	0.12	0.916	1.194
	LTE Band 26	15M	QPSK	1	0	Left Tilted	0mm	Ant 2	Reduced	26865	831.5	20.85	22.00	1.303	-0.06	0.843	1.099
	LTE Band 26	15M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	26765	821.5	20.74	22.00	1.337	0.11	0.981	1.311
09	LTE Band 26	15M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	26965	841.5	20.70	22.00	1.349	-0.17	0.977	1.318
	LTE Band 26	15M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	26765	821.5	20.74	22.00	1.337	-0.15	0.915	1.223
	LTE Band 26	15M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	26965	841.5	20.70	22.00	1.349	0.18	0.841	1.134
	LTE Band 26	15M	QPSK	1	0	Left Cheek	0mm	Ant 2	Reduced	26765	821.5	20.74	22.00	1.337	0.03	0.891	1.191
	LTE Band 26	15M	QPSK	1	0	Left Cheek	0mm	Ant 2	Reduced	26965	841.5	20.70	22.00	1.349	0.17	0.717	0.967
	LTE Band 26	15M	QPSK	1	0	Left Tilted	0mm	Ant 2	Reduced	26765	821.5	20.74	22.00	1.337	-0.05	0.800	1.069
	LTE Band 26	15M	QPSK	1	0	Left Tilted	0mm	Ant 2	Reduced	26965	841.5	20.70	22.00	1.349	0.1	0.678	0.915
	LTE Band 26	15M	QPSK	36	20	Right Cheek	0mm	Ant 2	Reduced	26865	831.5	19.88	21.00	1.294	-0.19	0.856	1.108
	LTE Band 26	15M	QPSK	36	20	Right Tilted	0mm	Ant 2	Reduced	26865	831.5	19.88	21.00	1.294	0.12	0.764	0.989
	LTE Band 26	15M	QPSK	36	20	Left Cheek	0mm	Ant 2	Reduced	26865	831.5	19.88	21.00	1.294	0.07	0.792	1.025
	LTE Band 26	15M	QPSK	36	20	Left Tilted	0mm	Ant 2	Reduced	26865	831.5	19.88	21.00	1.294	-0.07	0.773	1.000
	LTE Band 26	15M	QPSK	36	20	Right Cheek	0mm	Ant 2	Reduced	26765	821.5	19.78	21.00	1.324	-0.15	0.852	1.128
	LTE Band 26	15M	QPSK	36	20	Right Cheek	0mm	Ant 2	Reduced	26965	841.5	19.87	21.00	1.297	0.19	0.813	1.055
	LTE Band 26	15M	QPSK	36	20	Right Tilted	0mm	Ant 2	Reduced	26765	821.5	19.78	21.00	1.324	-0.14	0.771	1.021
	LTE Band 26	15M	QPSK	36	20	Right Tilted	0mm	Ant 2	Reduced	26965	841.5	19.87	21.00	1.297	0.06	0.725	0.940
	LTE Band 26	15M	QPSK	36	20	Left Cheek	0mm	Ant 2	Reduced	26765	821.5	19.78	21.00	1.324	0.18	0.798	1.057
	LTE Band 26	15M	QPSK	36	20	Left Cheek	0mm	Ant 2	Reduced	26965	841.5	19.87	21.00	1.297	0.12	0.747	0.969
	LTE Band 26	15M	QPSK	36	20	Left Tilted	0mm	Ant 2	Reduced	26765	821.5	19.78	21.00	1.324	-0.03	0.777	1.029
	LTE Band 26	15M	QPSK	36	20	Left Tilted	0mm	Ant 2	Reduced	26965	841.5	19.87	21.00	1.297	0.07	0.727	0.943
	LTE Band 26	15M	QPSK	75	0	Right Cheek	0mm	Ant 2	Reduced	26865	831.5	19.80	21.00	1.318	-0.19	0.881	1.161
	LTE Band 26	15M	QPSK	75	0	Right Tilted	0mm	Ant 2	Reduced	26865	831.5	19.80	21.00	1.318	0.17	0.782	1.031
	LTE Band 26	15M	QPSK	75	0	Left Cheek	0mm	Ant 2	Reduced	26865	831.5	19.80	21.00	1.318	-0.07	0.760	1.002
	LTE Band 26	15M	QPSK	75	0	Left Tilted	0mm	Ant 2	Reduced	26865	831.5	19.80	21.00	1.318	-0.03	0.733	0.966
	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	132322	1745	22.67	24.00	1.358	0.16	0.186	0.253
	LTE Band 66	20M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	132322	1745	22.67	24.00	1.358	0.17	0.117	0.159
	LTE Band 66	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	132322	1745	22.67	24.00	1.358	0.09	0.152	0.206
	LTE Band 66	20M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	132322	1745	22.67	24.00	1.358	-0.01	0.160	0.217
	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	132072	1720	22.58	24.00	1.387	-0.11	0.183	0.254
10	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	132572	1770	22.51	24.00	1.409	0.11	0.312	0.440
	LTE Band 66	20M	QPSK	50	24	Right Cheek	0mm	Ant 1	Full	132322	1745	21.50	23.00	1.413	0.06	0.154	0.218
	LTE Band 66	20M	QPSK	50	24	Right Tilted	0mm	Ant 1	Full	132322	1745	21.50	23.00	1.413	0.06	0.101	0.143
	LTE Band 66	20M	QPSK	50	24	Left Cheek	0mm	Ant 1	Full	132322	1745	21.50	23.00	1.413	0.13	0.133	0.188
	LTE Band 66	20M	QPSK	50	24	Left Tilted	0mm	Ant 1	Full	132322	1745	21.50	23.00	1.413	0.12	0.146	0.206
	LTE Band 25	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	26340	1880	22.84	24.00	1.306	-0.13	0.318	0.415
	LTE Band 25	20M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	26340	1880	22.84	24.00	1.306	0.14	0.206	0.269
	LTE Band 25	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	26340	1880	22.84	24.00	1.306	-0.15	0.287	0.375
	LTE Band 25	20M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	26340	1880	22.84	24.00	1.306	-0.17	0.251	0.328
	LTE Band 25	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	26140	1860	22.61	24.00	1.377	-0.07	0.292	0.402
	LTE Band 25	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	26590	1905	22.63	24.00	1.371	0.1	0.426	0.584
	LTE Band 25	20M	QPSK	50	24	Right Cheek	0mm	Ant 1	Full	26340	1880	21.68	23.00	1.355	0.01	0.280	0.379
	LTE Band 25	20M	QPSK	50	24	Right Tilted	0mm	Ant 1	Full	26340	1880	21.68	23.00	1.355	0.06	0.176	0.239
	LTE Band 25	20M	QPSK	50	24	Left Cheek	0mm	Ant 1	Full	26340	1880	21.68	23.00	1.355	-0.11	0.256	0.347
	LTE Band 25	20M	QPSK	50	24	Left Tilted	0mm	Ant 1	Full	26340	1880	21.68	23.00	1.355	-0.15	0.220	0.298
	LTE Band 25	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	26340	1880	14.55	15.50	1.245	0.18	0.677	0.843
	LTE Band 25	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	26340	1880	14.55	15.50	1.245	0.08	0.746	0.928
	LTE Band 25	20M	QPSK	1	0	Left Cheek	0mm	Ant 2	Reduced	26340	1880	14.55	15.50	1.245	-0.19	0.428	0.533
	LTE Band 25	20M	QPSK	1	0	Left Tilted	0mm	Ant 2	Reduced	26340	1880	14.55	15.50	1.245	0.19	0.498	0.620
	LTE Band 25	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	26140	1860	14.52	15.50	1.253	-0.13	0.634	0.794
	LTE Band 25	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	26590	1905	14.48	15.50	1.265	-0.19	0.721	0.912
	LTE Band 25	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	26140	1860	14.52	15.50	1.253	0.05	0.698	0.875
11	LTE Band 25	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	26590	1905	14.48	15.50	1.265	0.11	1.010	1.277

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FCC SAR Test Report

Report No. : FA151921

	LTE Band 25	20M	QPSK	50	24	Right Cheek	0mm	Ant 2	Reduced	26340	1880	13.63	14.50	1.222	0.04	0.581	0.710
	LTE Band 25	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	26340	1880	13.63	14.50	1.222	0.05	0.661	0.808
	LTE Band 25	20M	QPSK	50	24	Left Cheek	0mm	Ant 2	Reduced	26340	1880	13.63	14.50	1.222	0.1	0.373	0.456
	LTE Band 25	20M	QPSK	50	24	Left Tilted	0mm	Ant 2	Reduced	26340	1880	13.63	14.50	1.222	-0.16	0.422	0.516
	LTE Band 25	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	26140	1860	13.61	14.50	1.227	0.11	0.596	0.732
	LTE Band 25	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	26590	1905	13.46	14.50	1.271	0.02	0.660	0.839
	LTE Band 25	20M	QPSK	100	0	Right Cheek	0mm	Ant 2	Reduced	26340	1880	13.57	14.50	1.239	0.15	0.564	0.699
	LTE Band 25	20M	QPSK	100	0	Right Tilted	0mm	Ant 2	Reduced	26340	1880	13.57	14.50	1.239	0.02	0.636	0.788
	LTE Band 7	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	20850	2510	22.77	24.00	1.327	-0.09	0.281	0.373
	LTE Band 7	20M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	20850	2510	22.77	24.00	1.327	0.13	0.153	0.203
	LTE Band 7	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	20850	2510	22.77	24.00	1.327	-0.06	0.363	0.482
	LTE Band 7	20M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	20850	2510	22.77	24.00	1.327	0.17	0.287	0.381
	LTE Band 7	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	21100	2535	22.72	24.00	1.343	-0.02	0.421	0.565
	LTE Band 7	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	21350	2560	22.65	24.00	1.365	0.14	0.380	0.519
	LTE Band 7	20M	QPSK	50	24	Right Cheek	0mm	Ant 1	Full	20850	2510	21.88	23.00	1.294	0.07	0.236	0.305
	LTE Band 7	20M	QPSK	50	24	Right Tilted	0mm	Ant 1	Full	20850	2510	21.88	23.00	1.294	0.12	0.128	0.166
	LTE Band 7	20M	QPSK	50	24	Left Cheek	0mm	Ant 1	Full	20850	2510	21.88	23.00	1.294	-0.11	0.325	0.421
	LTE Band 7	20M	QPSK	50	24	Left Tilted	0mm	Ant 1	Full	20850	2510	21.88	23.00	1.294	0.11	0.238	0.308
	LTE Band 7	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	20850	2510	15.09	16.00	1.233	0.11	0.653	0.805
	LTE Band 7	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	20850	2510	15.09	16.00	1.233	-0.02	0.689	0.850
	LTE Band 7	20M	QPSK	1	0	Left Cheek	0mm	Ant 2	Reduced	20850	2510	15.09	16.00	1.233	0.16	0.337	0.416
	LTE Band 7	20M	QPSK	1	0	Left Tilted	0mm	Ant 2	Reduced	20850	2510	15.09	16.00	1.233	0.12	0.402	0.496
	LTE Band 7	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	21100	2535	14.94	16.00	1.276	0.06	0.689	0.879
	LTE Band 7	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	21350	2560	14.81	16.00	1.315	-0.06	0.721	0.948
	LTE Band 7	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	21100	2535	14.94	16.00	1.276	-0.05	1.020	1.302
12	LTE Band 7	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	21350	2560	14.81	16.00	1.315	0.13	1.010	1.328
	LTE Band 7	20M	QPSK	50	24	Right Cheek	0mm	Ant 2	Reduced	20850	2510	14.03	15.00	1.250	-0.05	0.552	0.690
	LTE Band 7	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	20850	2510	14.03	15.00	1.250	0.17	0.763	0.954
	LTE Band 7	20M	QPSK	50	24	Left Cheek	0mm	Ant 2	Reduced	20850	2510	14.03	15.00	1.250	0.04	0.283	0.354
	LTE Band 7	20M	QPSK	50	24	Left Tilted	0mm	Ant 2	Reduced	20850	2510	14.03	15.00	1.250	-0.05	0.351	0.439
	LTE Band 7	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	21100	2535	14.01	15.00	1.256	-0.03	0.805	1.011
	LTE Band 7	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	21350	2560	13.85	15.00	1.303	-0.18	0.725	0.945
	LTE Band 7	20M	QPSK	100	0	Right Cheek	0mm	Ant 2	Reduced	20850	2510	13.97	15.00	1.268	0.12	0.513	0.650
	LTE Band 7	20M	QPSK	100	0	Right Tilted	0mm	Ant 2	Reduced	20850	2510	13.97	15.00	1.268	-0.18	0.624	0.791



<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-PC3	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	40185	2549.5	22.68	24.00	1.355	62.9	1.006	0.09	0.143	0.195
	LTE Band 41-PC3	20M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	40185	2549.5	22.68	24.00	1.355	62.9	1.006	0.16	0.122	0.166
	LTE Band 41-PC3	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	40185	2549.5	22.68	24.00	1.355	62.9	1.006	-0.19	0.219	0.299
	LTE Band 41-PC3	20M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	40185	2549.5	22.68	24.00	1.355	62.9	1.006	0.07	0.205	0.279
	LTE Band 41-PC3	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	39750	2506	22.66	24.00	1.361	62.9	1.006	0.1	0.233	0.319
	LTE Band 41-PC3	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	40620	2593	22.59	24.00	1.384	62.9	1.006	-0.17	0.239	0.333
	LTE Band 41-PC3	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	41055	2636.5	22.58	24.00	1.387	62.9	1.006	-0.17	0.245	0.342
	LTE Band 41-PC3	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	41490	2680	22.63	24.00	1.371	62.9	1.006	-0.17	0.279	0.385
	LTE Band 41C-PC3	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	41490+41292	2680+2660.2	22.58	24.00	1.387	62.9	1.006	0.08	0.271	0.378
	LTE Band 41-PC3	20M	QPSK	50	24	Right Cheek	0mm	Ant 1	Full	40185	2549.5	21.86	23.00	1.300	62.9	1.006	-0.02	0.117	0.153
	LTE Band 41-PC3	20M	QPSK	50	24	Right Tilted	0mm	Ant 1	Full	40185	2549.5	21.86	23.00	1.300	62.9	1.006	-0.11	0.094	0.123
	LTE Band 41-PC3	20M	QPSK	50	24	Left Cheek	0mm	Ant 1	Full	40185	2549.5	21.86	23.00	1.300	62.9	1.006	0.06	0.190	0.249
	LTE Band 41-PC3	20M	QPSK	50	24	Left Tilted	0mm	Ant 1	Full	40185	2549.5	21.86	23.00	1.300	62.9	1.006	-0.15	0.162	0.212
	LTE Band 41-PC3	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	40185	2549.5	15.33	16.50	1.309	62.9	1.006	-0.06	0.522	0.687
	LTE Band 41-PC3	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	40185	2549.5	15.33	16.50	1.309	62.9	1.006	0.19	0.854	1.125
	LTE Band 41-PC3	20M	QPSK	1	0	Left Cheek	0mm	Ant 2	Reduced	40185	2549.5	15.33	16.50	1.309	62.9	1.006	-0.02	0.242	0.319
	LTE Band 41-PC3	20M	QPSK	1	0	Left Tilted	0mm	Ant 2	Reduced	40185	2549.5	15.33	16.50	1.309	62.9	1.006	-0.15	0.310	0.408
	LTE Band 41-PC3	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	39750	2506	15.26	16.50	1.330	62.9	1.006	-0.12	0.221	0.296
	LTE Band 41-PC3	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	40620	2593	15.21	16.50	1.346	62.9	1.006	0.07	0.403	0.546
	LTE Band 41-PC3	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	41055	2636.5	15.24	16.50	1.337	62.9	1.006	0.12	0.492	0.662
	LTE Band 41-PC3	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	41490	2680	15.30	16.50	1.318	62.9	1.006	-0.06	0.610	0.809
	LTE Band 41-PC3	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	39750	2506	15.26	16.50	1.330	62.9	1.006	0.17	0.534	0.715
	LTE Band 41-PC3	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	40620	2593	15.21	16.50	1.346	62.9	1.006	-0.15	0.710	0.961
	LTE Band 41-PC3	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	41055	2636.5	15.24	16.50	1.337	62.9	1.006	0.18	0.781	1.050
	LTE Band 41-PC3	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	41490	2680	15.30	16.50	1.318	62.9	1.006	-0.12	0.925	1.227
	LTE Band 41C-PC3	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	41490+41292	2680+2660.2	15.31	16.50	1.315	62.9	1.006	-0.06	0.857	1.134
	LTE Band 41-PC3	20M	QPSK	50	24	Right Cheek	0mm	Ant 2	Reduced	40185	2549.5	14.29	15.50	1.321	62.9	1.006	-0.12	0.425	0.565
	LTE Band 41-PC3	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	40185	2549.5	14.29	15.50	1.321	62.9	1.006	0.03	0.606	0.806
	LTE Band 41-PC3	20M	QPSK	50	24	Left Cheek	0mm	Ant 2	Reduced	40185	2549.5	14.29	15.50	1.321	62.9	1.006	0.05	0.203	0.270
	LTE Band 41-PC3	20M	QPSK	50	24	Left Tilted	0mm	Ant 2	Reduced	40185	2549.5	14.29	15.50	1.321	62.9	1.006	0.06	0.256	0.340
	LTE Band 41-PC3	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	39750	2506	14.28	15.50	1.324	62.9	1.006	0.07	0.461	0.614
	LTE Band 41-PC3	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	40620	2593	14.19	15.50	1.352	62.9	1.006	0.12	0.587	0.798
	LTE Band 41-PC3	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	41055	2636.5	14.28	15.50	1.324	62.9	1.006	-0.06	0.658	0.877
	LTE Band 41-PC3	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	41490	2680	14.26	15.50	1.330	62.9	1.006	0.09	0.660	0.883
	LTE Band 41-PC3	20M	QPSK	100	0	Right Cheek	0mm	Ant 2	Reduced	40185	2549.5	14.29	15.50	1.321	62.9	1.006	0.19	0.461	0.613
	LTE Band 41-PC3	20M	QPSK	100	0	Right Tilted	0mm	Ant 2	Reduced	40185	2549.5	14.29	15.50	1.321	62.9	1.006	0.09	0.501	0.666
	LTE Band 41-PC2	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	Full	40185	2549.5	25.97	27.00	1.268	42.9	1.009	0.01	0.186	0.238
	LTE Band 41-PC2	20M	QPSK	1	0	Right Tilted	0mm	Ant 1	Full	40185	2549.5	25.97	27.00	1.268	42.9	1.009	-0.15	0.152	0.194
	LTE Band 41-PC2	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	40185	2549.5	25.97	27.00	1.268	42.9	1.009	0.19	0.318	0.407
	LTE Band 41-PC2	20M	QPSK	1	0	Left Tilted	0mm	Ant 1	Full	40185	2549.5	25.97	27.00	1.268	42.9	1.009	0.05	0.239	0.306
	LTE Band 41-PC2	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	39750	2506	25.77	27.00	1.327	42.9	1.009	-0.13	0.287	0.384
	LTE Band 41-PC2	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	40620	2593	25.71	27.00	1.346	42.9	1.009	0.02	0.305	0.414
	LTE Band 41-PC2	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	41055	2636.5	25.71	27.00	1.346	42.9	1.009	-0.14	0.308	0.418
	LTE Band 41-PC2	20M	QPSK	1	0	Left Cheek	0mm	Ant 1	Full	41490	2680	25.71	27.00	1.346	42.9	1.009	0.16	0.373	0.507
	LTE Band 41-PC2	20M	QPSK	50	24	Right Cheek	0mm	Ant 1	Full	40185	2549.5	24.98	26.00	1.265	42.9	1.009	-0.07	0.158	0.202
	LTE Band 41-PC2	20M	QPSK	50	24	Right Tilted	0mm	Ant 1	Full	40185	2549.5	24.98	26.00	1.265	42.9	1.009	0.14	0.129	0.165
	LTE Band 41-PC2	20M	QPSK	50	24	Left Cheek	0mm	Ant 1	Full	40185	2549.5	24.98	26.00	1.265	42.9	1.009	0.01	0.265	0.338
	LTE Band 41-PC2	20M	QPSK	50	24	Left Tilted	0mm	Ant 1	Full	40185	2549.5	24.98	26.00	1.265	42.9	1.009	-0.19	0.197	0.251
	LTE Band 41-PC2	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	40185	2549.5	18.22	19.00	1.197	42.9	1.009	-0.1	0.575	0.694
	LTE Band 41-PC2	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	40185	2549.5	18.22	19.00	1.197	42.9	1.009	-0.18	0.960	1.159
	LTE Band 41-PC2	20M	QPSK	1	0	Left Cheek	0mm	Ant 2	Reduced	40185	2549.5	18.22	19.00	1.197	42.9	1.009	0.13	0.290	0.350



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	LTE Band 41-PC2	20M	QPSK	1	0	Left Tilted	0mm	Ant 2	Reduced	40185	2549.5	18.22	19.00	1.197	42.9	1.009	0.16	0.353	0.426
	LTE Band 41-PC2	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	39750	2506	18.21	19.00	1.199	42.9	1.009	-0.06	0.216	0.261
	LTE Band 41-PC2	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	40620	2593	18.06	19.00	1.242	42.9	1.009	0.09	0.421	0.527
	LTE Band 41-PC2	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	41055	2636.5	18.09	19.00	1.233	42.9	1.009	-0.09	0.474	0.590
	LTE Band 41-PC2	20M	QPSK	1	0	Right Cheek	0mm	Ant 2	Reduced	41490	2680	18.09	19.00	1.233	42.9	1.009	0.09	0.605	0.753
	LTE Band 41-PC2	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	39750	2506	18.21	19.00	1.199	42.9	1.009	0.06	0.918	1.111
	LTE Band 41-PC2	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	40620	2593	18.06	19.00	1.242	42.9	1.009	0.14	0.931	1.166
	LTE Band 41-PC2	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	41055	2636.5	18.09	19.00	1.233	42.9	1.009	0.01	0.972	1.209
13	LTE Band 41-PC2	20M	QPSK	1	0	Right Tilted	0mm	Ant 2	Reduced	41490	2680	18.09	19.00	1.233	42.9	1.009	0.12	1.060	1.319
	LTE Band 41-PC2	20M	QPSK	50	24	Right Cheek	0mm	Ant 2	Reduced	40185	2549.5	17.45	18.00	1.135	42.9	1.009	-0.15	0.484	0.554
	LTE Band 41-PC2	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	40185	2549.5	17.45	18.00	1.135	42.9	1.009	0.14	0.699	0.801
	LTE Band 41-PC2	20M	QPSK	50	24	Left Cheek	0mm	Ant 2	Reduced	40185	2549.5	17.45	18.00	1.135	42.9	1.009	0.09	0.239	0.274
	LTE Band 41-PC2	20M	QPSK	50	24	Left Tilted	0mm	Ant 2	Reduced	40185	2549.5	17.45	18.00	1.135	42.9	1.009	-0.16	0.292	0.334
	LTE Band 41-PC2	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	39750	2506	17.38	18.00	1.153	42.9	1.009	-0.06	0.526	0.612
	LTE Band 41-PC2	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	40620	2593	17.26	18.00	1.186	42.9	1.009	0.09	0.677	0.810
	LTE Band 41-PC2	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	41055	2636.5	17.35	18.00	1.161	42.9	1.009	-0.09	0.759	0.889
	LTE Band 41-PC2	20M	QPSK	50	24	Right Tilted	0mm	Ant 2	Reduced	41490	2680	17.36	18.00	1.159	42.9	1.009	0.05	0.763	0.892
	LTE Band 41-PC2	20M	QPSK	100	0	Right Cheek	0mm	Ant 2	Reduced	40185	2549.5	17.43	18.00	1.140	42.9	1.009	0.09	0.447	0.514
	LTE Band 41-PC2	20M	QPSK	100	0	Right Tilted	0mm	Ant 2	Reduced	40185	2549.5	17.43	18.00	1.140	42.9	1.009	0.13	0.510	0.587

<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 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	Standalone	6	2437	17.53	19.53	1.585	100	1.000	0.04	0.219	0.347
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	Standalone	6	2437	17.53	19.53	1.585	100	1.000	-0.13	0.220	0.349
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Standalone	6	2437	17.53	19.53	1.585	100	1.000	-0.06	0.605	0.959
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	Standalone	6	2437	17.53	19.53	1.585	100	1.000	-0.17	0.400	0.634
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Standalone	1	2412	17.53	19.53	1.585	100	1.000	0.09	0.591	0.937
14	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Standalone	11	2462	17.48	19.48	1.585	100	1.000	-0.18	0.728	1.154
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	Simultaneous	6	2437	11.56	13.56	1.585	100	1.000	0.02	0.051	0.081
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	Simultaneous	6	2437	11.56	13.56	1.585	100	1.000	0.1	0.050	0.079
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Simultaneous	6	2437	11.56	13.56	1.585	100	1.000	0.07	0.111	0.176
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	Simultaneous	6	2437	11.56	13.56	1.585	100	1.000	-0.04	0.107	0.170
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Simultaneous	1	2412	11.55	13.55	1.585	100	1.000	-0.05	0.123	0.195
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	Simultaneous	11	2462	11.41	13.41	1.585	100	1.000	-0.17	0.165	0.262

<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	DH5 1Mbps	Right Cheek	0mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	0.07	0.019	0.039
	Bluetooth	DH5 1Mbps	Right Tilted	0mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	-0.14	0.018	0.038
15	Bluetooth	DH5 1Mbps	Left Cheek	0mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	0.12	0.045	0.092
	Bluetooth	DH5 1Mbps	Left Tilted	0mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	-0.15	0.039	0.081
	Bluetooth	DH5 1Mbps	Left Cheek	0mm	Ant 3	Full	0	2402	7.80	9.80	1.585	76.7	1.304	-0.02	0.031	0.064
	Bluetooth	DH5 1Mbps	Left Cheek	0mm	Ant 3	Full	39	2441	7.60	9.60	1.585	76.7	1.304	0.13	0.037	0.076



<WLAN5G 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)
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Standalone	58	5290	14.96	16.96	1.585	100	1.000	0.16	0.161	0.255
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Standalone	58	5290	14.96	16.96	1.585	100	1.000	-0.04	0.254	0.403
16	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Standalone	58	5290	14.96	16.96	1.585	100	1.000	0.19	0.753	1.193
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Standalone	58	5290	14.96	16.96	1.585	100	1.000	0.19	0.508	0.805
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Simultaneous	58	5290	8.98	10.98	1.585	100	1.000	-0.04	0.052	0.082
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Simultaneous	58	5290	8.98	10.98	1.585	100	1.000	-0.02	0.048	0.076
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Simultaneous	58	5290	8.98	10.98	1.585	100	1.000	0.04	0.170	0.269
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Simultaneous	58	5290	8.98	10.98	1.585	100	1.000	0.12	0.104	0.165
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Standalone	106	5530	14.35	16.35	1.585	100	1.000	0.13	0.281	0.445
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Standalone	106	5530	14.35	16.35	1.585	100	1.000	0.09	0.340	0.539
17	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Standalone	106	5530	14.35	16.35	1.585	100	1.000	-0.14	0.689	1.092
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Standalone	106	5530	14.35	16.35	1.585	100	1.000	-0.06	0.412	0.653
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Simultaneous	106	5530	8.75	10.75	1.585	100	1.000	0.01	0.043	0.068
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Simultaneous	106	5530	8.75	10.75	1.585	100	1.000	0.13	0.046	0.073
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Simultaneous	106	5530	8.75	10.75	1.585	100	1.000	-0.12	0.182	0.288
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Simultaneous	106	5530	8.75	10.75	1.585	100	1.000	0.12	0.078	0.124
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Standalone	155	5775	13.41	15.41	1.585	100	1.000	0.08	0.181	0.287
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Standalone	155	5775	13.41	15.41	1.585	100	1.000	-0.12	0.234	0.371
18	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Standalone	155	5775	13.41	15.41	1.585	100	1.000	-0.08	0.642	1.018
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Standalone	155	5775	13.41	15.41	1.585	100	1.000	0.01	0.452	0.716
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4	Simultaneous	155	5775	7.92	9.92	1.585	100	1.000	0.04	0.059	0.094
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4	Simultaneous	155	5775	7.92	9.92	1.585	100	1.000	-0.13	0.052	0.082
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4	Simultaneous	155	5775	7.92	9.92	1.585	100	1.000	-0.06	0.180	0.285
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4	Simultaneous	155	5775	7.92	9.92	1.585	100	1.000	-0.17	0.102	0.162

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 4 Tx slots	Front	5mm	Ant 1	Reduced	128	824.2	25.74	26.50	1.191	-0.06	0.717	0.854
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	Reduced	128	824.2	25.74	26.50	1.191	0.08	1.060	1.263
	GSM850	GPRS 4 Tx slots	Left Side	5mm	Ant 1	Reduced	128	824.2	25.74	26.50	1.191	-0.13	0.330	0.393
	GSM850	GPRS 4 Tx slots	Right Side	5mm	Ant 1	Reduced	128	824.2	25.74	26.50	1.191	0.18	0.485	0.578
	GSM850	GPRS 4 Tx slots	Bottom Side	5mm	Ant 1	Reduced	128	824.2	25.74	26.50	1.191	-0.03	0.868	1.034
	GSM850	GPRS 4 Tx slots	Bottom Side	5mm	Ant 1	Reduced	189	836.4	25.65	26.50	1.216	-0.07	0.872	1.061
	GSM850	GPRS 4 Tx slots	Bottom Side	5mm	Ant 1	Reduced	251	848.8	25.62	26.50	1.225	-0.03	0.914	1.119
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 1	Reduced	189	836.4	25.65	26.50	1.216	0.11	0.715	0.870
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 1	Reduced	251	848.8	25.62	26.50	1.225	-0.17	0.674	0.825
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	Reduced	189	836.4	25.65	26.50	1.216	-0.16	1.030	1.253
19	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	Reduced	251	848.8	25.62	26.50	1.225	0.12	1.040	1.274
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 2	Reduced	128	824.2	26.49	27.00	1.125	0.13	0.627	0.705
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 2	Reduced	128	824.2	26.49	27.00	1.125	-0.15	1.100	1.237
	GSM850	GPRS 4 Tx slots	Left Side	5mm	Ant 2	Reduced	128	824.2	26.49	27.00	1.125	-0.17	0.197	0.222
	GSM850	GPRS 4 Tx slots	Right Side	5mm	Ant 2	Reduced	128	824.2	26.49	27.00	1.125	-0.02	0.141	0.159
	GSM850	GPRS 4 Tx slots	Top Side	5mm	Ant 2	Reduced	128	824.2	26.49	27.00	1.125	-0.16	0.941	1.058
	GSM850	GPRS 4 Tx slots	Top Side	5mm	Ant 2	Reduced	189	836.4	26.26	27.00	1.186	0.07	0.844	1.001
	GSM850	GPRS 4 Tx slots	Top Side	5mm	Ant 2	Reduced	251	848.8	26.08	27.00	1.236	-0.16	0.853	1.054
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 2	Reduced	189	836.4	26.26	27.00	1.186	-0.03	1.050	1.245
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 2	Reduced	251	848.8	26.08	27.00	1.236	0.12	0.990	1.224
	GSM1900	GPRS 4 Tx slots	Front	5mm	Ant 1	Reduced	512	1850.2	18.89	20.50	1.449	0.01	0.429	0.622
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 1	Reduced	512	1850.2	18.89	20.50	1.449	-0.08	0.712	1.032
	GSM1900	GPRS 4 Tx slots	Left Side	5mm	Ant 1	Reduced	512	1850.2	17.43	19.00	1.435	-0.02	0.187	0.268
	GSM1900	GPRS 4 Tx slots	Right Side	5mm	Ant 1	Reduced	512	1850.2	17.43	19.00	1.435	-0.02	0.080	0.115
	GSM1900	GPRS 4 Tx slots	Bottom Side	5mm	Ant 1	Reduced	512	1850.2	17.43	19.00	1.435	-0.08	0.592	0.850
	GSM1900	GPRS 4 Tx slots	Bottom Side	5mm	Ant 1	Reduced	661	1880	17.21	19.00	1.510	-0.03	0.682	1.030
	GSM1900	GPRS 4 Tx slots	Bottom Side	5mm	Ant 1	Reduced	810	1909.8	17.03	19.00	1.574	0.14	0.822	1.294
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 1	Reduced	661	1880	18.65	20.50	1.531	-0.16	0.857	1.312
20	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 1	Reduced	810	1909.8	18.58	20.50	1.556	0.15	0.897	1.396
	GSM1900	GPRS 4 Tx slots	Front	5mm	Ant 2	Reduced	512	1850.2	18.35	19.00	1.161	0.19	0.542	0.630
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 2	Reduced	512	1850.2	18.35	19.00	1.161	0.15	0.728	0.846
	GSM1900	GPRS 4 Tx slots	Left Side	5mm	Ant 2	Reduced	512	1850.2	16.92	17.50	1.143	-0.14	0.058	0.066
	GSM1900	GPRS 4 Tx slots	Right Side	5mm	Ant 2	Reduced	512	1850.2	16.92	17.50	1.143	-	n/a	n/a
	GSM1900	GPRS 4 Tx slots	Top Side	5mm	Ant 2	Reduced	512	1850.2	16.92	17.50	1.143	0.03	0.684	0.782
	GSM1900	GPRS 4 Tx slots	Top Side	5mm	Ant 2	Reduced	661	1880	16.24	17.50	1.337	-0.09	0.976	1.305
	GSM1900	GPRS 4 Tx slots	Top Side	5mm	Ant 2	Reduced	810	1909.8	16.00	17.50	1.413	0.06	0.844	1.192
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 2	Reduced	661	1880	17.78	19.00	1.324	-0.11	0.923	1.222
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 2	Reduced	810	1909.8	17.56	19.00	1.393	0.09	0.896	1.248



<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 V	RMC 12.2Kbps	Front	5mm	Ant 1	Reduced	4233	846.6	20.44	21.50	1.276	-0.11	0.639	0.816
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	4233	846.6	20.44	21.50	1.276	-0.19	1.020	1.302
	WCDMA V	RMC 12.2Kbps	Left Side	5mm	Ant 1	Reduced	4233	846.6	20.44	21.50	1.276	0.08	0.250	0.319
	WCDMA V	RMC 12.2Kbps	Right Side	5mm	Ant 1	Reduced	4233	846.6	20.44	21.50	1.276	0.16	0.488	0.623
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	4233	846.6	20.44	21.50	1.276	-0.11	0.814	1.039
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	4132	826.4	20.19	21.50	1.352	0.03	0.728	0.984
	WCDMA V	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	4182	836.4	20.29	21.50	1.321	-0.13	0.773	1.021
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 1	Reduced	4132	826.4	20.19	21.50	1.352	0.01	0.623	0.842
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 1	Reduced	4182	836.4	20.29	21.50	1.321	0.11	0.668	0.883
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	4132	826.4	20.19	21.50	1.352	-0.14	1.030	1.393
21	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	4182	836.4	20.29	21.50	1.321	-0.04	1.060	1.401
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	0.15	0.597	0.692
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	-0.06	0.892	1.034
	WCDMA V	RMC 12.2Kbps	Left Side	5mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	0.02	0.220	0.255
	WCDMA V	RMC 12.2Kbps	Right Side	5mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	-0.11	0.195	0.226
	WCDMA V	RMC 12.2Kbps	Top Side	5mm	Ant 2	Reduced	4233	846.6	21.36	22.00	1.159	0.04	0.708	0.820
	WCDMA V	RMC 12.2Kbps	Top Side	5mm	Ant 2	Reduced	4132	826.4	21.17	22.00	1.211	0.06	0.719	0.870
	WCDMA V	RMC 12.2Kbps	Top Side	5mm	Ant 2	Reduced	4182	836.4	21.18	22.00	1.208	-0.02	0.781	0.943
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 2	Reduced	4132	826.4	21.17	22.00	1.211	0.15	0.888	1.075
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 2	Reduced	4182	836.4	21.18	22.00	1.208	0.13	1.050	1.268
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Ant 1	Reduced	1413	1732.6	18.09	19.00	1.233	-0.08	0.436	0.538
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	1413	1732.6	18.09	19.00	1.233	-0.14	1.030	1.270
	WCDMA IV	RMC 12.2Kbps	Left Side	5mm	Ant 1	Reduced	1413	1732.6	17.13	18.00	1.222	-0.16	0.175	0.214
	WCDMA IV	RMC 12.2Kbps	Right Side	5mm	Ant 1	Reduced	1413	1732.6	17.13	18.00	1.222	0.13	0.077	0.094
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	1413	1732.6	17.13	18.00	1.222	-0.09	1.060	1.295
22	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	1312	1712.4	17.09	18.00	1.233	0.1	1.090	1.344
	WCDMA IV	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	1513	1752.6	17.04	18.00	1.247	-0.14	1.060	1.322
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	1312	1712.4	18.07	19.00	1.239	0.04	1.080	1.338
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	1513	1752.6	18.08	19.00	1.236	-0.11	1.020	1.261
	WCDMA II	RMC 12.2Kbps	Front	5mm	Ant 1	Reduced	9262	1852.4	17.06	18.00	1.242	-0.04	0.503	0.625
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	9262	1852.4	17.06	18.00	1.242	0.08	0.856	1.063
	WCDMA II	RMC 12.2Kbps	Left Side	5mm	Ant 1	Reduced	9262	1852.4	16.09	17.00	1.233	0.03	0.254	0.313
	WCDMA II	RMC 12.2Kbps	Right Side	5mm	Ant 1	Reduced	9262	1852.4	16.09	17.00	1.233	0.08	0.108	0.133
	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	9262	1852.4	16.09	17.00	1.233	-0.04	0.812	1.001
	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	9400	1880	15.85	17.00	1.303	-0.09	0.897	1.169
23	WCDMA II	RMC 12.2Kbps	Bottom Side	5mm	Ant 1	Reduced	9538	1907.6	15.62	17.00	1.374	0.01	1.010	1.388
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	9400	1880	16.77	18.00	1.327	-0.03	0.925	1.228
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 1	Reduced	9538	1907.6	16.66	18.00	1.361	0.1	0.967	1.317
	WCDMA II	RMC 12.2Kbps	Front	5mm	Ant 2	Reduced	9262	1852.4	15.58	16.50	1.236	-0.04	0.500	0.618
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 2	Reduced	9262	1852.4	15.58	16.50	1.236	-0.08	0.654	0.808
	WCDMA II	RMC 12.2Kbps	Left Side	5mm	Ant 2	Reduced	9262	1852.4	14.54	15.50	1.247	0.12	0.070	0.087
	WCDMA II	RMC 12.2Kbps	Right Side	5mm	Ant 2	Reduced	9262	1852.4	14.54	15.50	1.247	-	n/a	n/a
	WCDMA II	RMC 12.2Kbps	Top Side	5mm	Ant 2	Reduced	9262	1852.4	14.54	15.50	1.247	0.19	0.695	0.867
	WCDMA II	RMC 12.2Kbps	Top Side	5mm	Ant 2	Reduced	9400	1880	14.26	15.50	1.330	0.14	0.773	1.028
	WCDMA II	RMC 12.2Kbps	Top Side	5mm	Ant 2	Reduced	9538	1907.6	13.89	15.50	1.449	-0.14	0.871	1.262
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 2	Reduced	9400	1880	15.32	16.50	1.312	-0.15	0.720	0.945
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 2	Reduced	9538	1907.6	14.78	16.50	1.486	-0.18	0.820	1.218



<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 71	20M	QPSK	1	0	Front	5mm	Ant 1	Full	133322	683	22.38	24.00	1.452	0.05	0.399	0.579
24	LTE Band 71	20M	QPSK	1	0	Back	5mm	Ant 1	Full	133322	683	22.38	24.00	1.452	-0.07	0.831	1.207
	LTE Band 71	20M	QPSK	1	0	Left Side	5mm	Ant 1	Full	133322	683	22.38	24.00	1.452	-0.18	0.344	0.500
	LTE Band 71	20M	QPSK	1	0	Right Side	5mm	Ant 1	Full	133322	683	22.38	24.00	1.452	-0.11	0.721	1.047
	LTE Band 71	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Full	133322	683	22.38	24.00	1.452	-0.04	0.591	0.858
	LTE Band 71	20M	QPSK	50	24	Front	5mm	Ant 1	Full	133322	683	21.44	23.00	1.432	-0.19	0.308	0.441
	LTE Band 71	20M	QPSK	50	24	Back	5mm	Ant 1	Full	133322	683	21.44	23.00	1.432	-0.05	0.688	0.985
	LTE Band 71	20M	QPSK	50	24	Left Side	5mm	Ant 1	Full	133322	683	21.44	23.00	1.432	0.09	0.355	0.508
	LTE Band 71	20M	QPSK	50	24	Right Side	5mm	Ant 1	Full	133322	683	21.44	23.00	1.432	-0.1	0.604	0.865
	LTE Band 71	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Full	133322	683	21.44	23.00	1.432	0.17	0.541	0.775
	LTE Band 71	20M	QPSK	100	0	Back	5mm	Ant 1	Full	133322	683	21.43	23.00	1.435	0.04	0.684	0.982
	LTE Band 71	20M	QPSK	100	0	Right Side	5mm	Ant 1	Full	133322	683	21.43	23.00	1.435	0.01	0.640	0.919
	LTE Band 71	20M	QPSK	100	0	Bottom Side	5mm	Ant 1	Full	133322	683	21.43	23.00	1.435	0.1	0.595	0.854
	LTE Band 71	20M	QPSK	1	0	Front	5mm	Ant 2	Full	133322	683	21.81	23.00	1.315	-0.02	0.178	0.234
	LTE Band 71	20M	QPSK	1	0	Back	5mm	Ant 2	Full	133322	683	21.81	23.00	1.315	0.17	0.399	0.525
	LTE Band 71	20M	QPSK	1	0	Left Side	5mm	Ant 2	Full	133322	683	21.81	23.00	1.315	-0.08	0.307	0.404
	LTE Band 71	20M	QPSK	1	0	Right Side	5mm	Ant 2	Full	133322	683	21.81	23.00	1.315	0.13	0.157	0.206
	LTE Band 71	20M	QPSK	1	0	Top Side	5mm	Ant 2	Full	133322	683	21.81	23.00	1.315	0.04	0.240	0.316
	LTE Band 71	20M	QPSK	50	24	Front	5mm	Ant 2	Full	133322	683	20.78	22.00	1.324	0.09	0.143	0.189
	LTE Band 71	20M	QPSK	50	24	Back	5mm	Ant 2	Full	133322	683	20.78	22.00	1.324	0.04	0.279	0.369
	LTE Band 71	20M	QPSK	50	24	Left Side	5mm	Ant 2	Full	133322	683	20.78	22.00	1.324	0.01	0.265	0.351
	LTE Band 71	20M	QPSK	50	24	Right Side	5mm	Ant 2	Full	133322	683	20.78	22.00	1.324	-0.1	0.098	0.130
	LTE Band 71	20M	QPSK	50	24	Top Side	5mm	Ant 2	Full	133322	683	20.78	22.00	1.324	0.1	0.189	0.250
	LTE Band 12	10M	QPSK	1	0	Front	5mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	-0.17	0.442	0.599
25	LTE Band 12	10M	QPSK	1	0	Back	5mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	0.05	0.821	1.113
	LTE Band 12	10M	QPSK	1	0	Left Side	5mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	0.1	0.284	0.385
	LTE Band 12	10M	QPSK	1	0	Right Side	5mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	-0.01	0.536	0.726
	LTE Band 12	10M	QPSK	1	0	Bottom Side	5mm	Ant 1	Full	23095	707.5	22.68	24.00	1.355	0.16	0.371	0.503
	LTE Band 12	10M	QPSK	25	12	Front	5mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	0.05	0.378	0.510
	LTE Band 12	10M	QPSK	25	12	Back	5mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	0.12	0.760	1.025
	LTE Band 12	10M	QPSK	25	12	Left Side	5mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	-0.14	0.228	0.308
	LTE Band 12	10M	QPSK	25	12	Right Side	5mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	0.18	0.459	0.619
	LTE Band 12	10M	QPSK	25	12	Bottom Side	5mm	Ant 1	Full	23095	707.5	21.70	23.00	1.349	-0.14	0.328	0.442
	LTE Band 12	10M	QPSK	50	0	Back	5mm	Ant 1	Full	23095	707.5	21.67	23.00	1.358	-0.14	0.743	1.009
	LTE Band 12	10M	QPSK	1	0	Front	5mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	-0.01	0.233	0.293
	LTE Band 12	10M	QPSK	1	0	Back	5mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	-0.13	0.489	0.614
	LTE Band 12	10M	QPSK	1	0	Left Side	5mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	-0.14	0.247	0.310
	LTE Band 12	10M	QPSK	1	0	Right Side	5mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	0.18	0.145	0.182
	LTE Band 12	10M	QPSK	1	0	Top Side	5mm	Ant 2	Full	23095	707.5	22.01	23.00	1.256	0.08	0.455	0.571
	LTE Band 12	10M	QPSK	25	12	Front	5mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	0.16	0.207	0.261
	LTE Band 12	10M	QPSK	25	12	Back	5mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	0.02	0.441	0.555
	LTE Band 12	10M	QPSK	25	12	Left Side	5mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	-0.18	0.209	0.263
	LTE Band 12	10M	QPSK	25	12	Right Side	5mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	0.14	0.121	0.152
	LTE Band 12	10M	QPSK	25	12	Top Side	5mm	Ant 2	Full	23095	707.5	21.00	22.00	1.259	-0.06	0.407	0.512
	LTE Band 13	10M	QPSK	1	0	Front	5mm	Ant 1	Reduced	23230	782	21.67	23.00	1.358	-0.17	0.568	0.772
26	LTE Band 13	10M	QPSK	1	0	Back	5mm	Ant 1	Reduced	23230	782	21.67	23.00	1.358	0.03	0.961	1.305
	LTE Band 13	10M	QPSK	1	0	Left Side	5mm	Ant 1	Reduced	23230	782	21.67	23.00	1.358	0.06	0.230	0.312
	LTE Band 13	10M	QPSK	1	0	Right Side	5mm	Ant 1	Reduced	23230	782	21.67	23.00	1.358	0.15	0.553	0.751
	LTE Band 13	10M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	23230	782	21.67	23.00	1.358	0.15	0.618	0.839
	LTE Band 13	10M	QPSK	25	12	Front	5mm	Ant 1	Reduced	23230	782	20.68	22.00	1.355	-0.08	0.543	0.736
	LTE Band 13	10M	QPSK	25	12	Back	5mm	Ant 1	Reduced	23230	782	20.68	22.00	1.355	0.01	0.792	1.073



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	LTE Band 13	10M	QPSK	25	12	Left Side	5mm	Ant 1	Reduced	23230	782	20.68	22.00	1.355	-0.11	0.194	0.263
	LTE Band 13	10M	QPSK	25	12	Right Side	5mm	Ant 1	Reduced	23230	782	20.68	22.00	1.355	-0.12	0.547	0.741
	LTE Band 13	10M	QPSK	25	12	Bottom Side	5mm	Ant 1	Reduced	23230	782	20.68	22.00	1.355	-0.02	0.602	0.816
	LTE Band 13	10M	QPSK	50	0	Back	5mm	Ant 1	Reduced	23230	782	20.67	22.00	1.358	-0.14	0.820	1.114
	LTE Band 13	10M	QPSK	50	0	Bottom Side	5mm	Ant 1	Reduced	23230	782	20.67	22.00	1.358	-0.19	0.518	0.704
	LTE Band 26	15M	QPSK	1	0	Front	5mm	Ant 1	Reduced	26865	831.5	20.67	22.00	1.358	0.13	0.543	0.738
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 1	Reduced	26865	831.5	20.67	22.00	1.358	-0.19	0.933	1.267
	LTE Band 26	15M	QPSK	1	0	Left Side	5mm	Ant 1	Reduced	26865	831.5	20.67	22.00	1.358	0.08	0.181	0.246
	LTE Band 26	15M	QPSK	1	0	Right Side	5mm	Ant 1	Reduced	26865	831.5	20.67	22.00	1.358	-0.1	0.372	0.505
	LTE Band 26	15M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	26865	831.5	20.67	22.00	1.358	-0.18	0.668	0.907
	LTE Band 26	15M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	26765	821.5	20.54	22.00	1.400	0.06	0.610	0.854
	LTE Band 26	15M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	26965	841.5	20.60	22.00	1.380	0.08	0.696	0.961
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 1	Reduced	26765	821.5	20.54	22.00	1.400	-0.11	0.886	1.240
27	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 1	Reduced	26965	841.5	20.60	22.00	1.380	0.13	0.948	1.309
	LTE Band 26	15M	QPSK	36	20	Front	5mm	Ant 1	Reduced	26865	831.5	19.75	21.00	1.334	-0.16	0.459	0.612
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 1	Reduced	26865	831.5	19.75	21.00	1.334	-0.14	0.782	1.043
	LTE Band 26	15M	QPSK	36	20	Left Side	5mm	Ant 1	Reduced	26865	831.5	19.75	21.00	1.334	-0.16	0.165	0.220
	LTE Band 26	15M	QPSK	36	20	Right Side	5mm	Ant 1	Reduced	26865	831.5	19.75	21.00	1.334	0.12	0.332	0.443
	LTE Band 26	15M	QPSK	36	20	Bottom Side	5mm	Ant 1	Reduced	26865	831.5	19.75	21.00	1.334	0.01	0.573	0.764
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 1	Reduced	26765	821.5	19.68	21.00	1.355	0.16	0.763	1.034
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 1	Reduced	26965	841.5	19.73	21.00	1.340	0.18	0.771	1.033
	LTE Band 26	15M	QPSK	75	0	Back	5mm	Ant 1	Reduced	26865	831.5	19.60	21.00	1.380	0.02	0.774	1.068
	LTE Band 26	15M	QPSK	75	0	Bottom Side	5mm	Ant 1	Reduced	26865	831.5	19.60	21.00	1.380	-0.15	0.566	0.781
	LTE Band 26	15M	QPSK	1	0	Front	5mm	Ant 2	Full	26865	831.5	21.69	23.00	1.352	-0.04	0.591	0.799
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 2	Full	26865	831.5	21.69	23.00	1.352	-0.13	0.953	1.289
	LTE Band 26	15M	QPSK	1	0	Left Side	5mm	Ant 2	Full	26865	831.5	21.69	23.00	1.352	0.19	0.229	0.310
	LTE Band 26	15M	QPSK	1	0	Right Side	5mm	Ant 2	Full	26865	831.5	21.69	23.00	1.352	0.04	0.190	0.257
	LTE Band 26	15M	QPSK	1	0	Top Side	5mm	Ant 2	Full	26865	831.5	21.69	23.00	1.352	0.12	0.747	1.010
	LTE Band 26	15M	QPSK	1	0	Top Side	5mm	Ant 2	Full	26765	821.5	21.68	23.00	1.355	-0.02	0.565	0.766
	LTE Band 26	15M	QPSK	1	0	Top Side	5mm	Ant 2	Full	26965	841.5	21.68	23.00	1.355	0.04	0.598	0.810
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 2	Full	26765	821.5	21.68	23.00	1.355	0.06	0.873	1.183
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 2	Full	26965	841.5	21.68	23.00	1.355	-0.07	0.823	1.115
	LTE Band 26	15M	QPSK	36	20	Front	5mm	Ant 2	Full	26865	831.5	20.86	22.00	1.300	-0.15	0.513	0.667
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 2	Full	26865	831.5	20.86	22.00	1.300	-0.18	0.942	1.225
	LTE Band 26	15M	QPSK	36	20	Left Side	5mm	Ant 2	Full	26865	831.5	20.86	22.00	1.300	-0.02	0.203	0.264
	LTE Band 26	15M	QPSK	36	20	Right Side	5mm	Ant 2	Full	26865	831.5	20.86	22.00	1.300	-0.06	0.178	0.231
	LTE Band 26	15M	QPSK	36	20	Top Side	5mm	Ant 2	Full	26865	831.5	20.86	22.00	1.300	0.06	0.618	0.804
	LTE Band 26	15M	QPSK	36	20	Top Side	5mm	Ant 2	Full	26765	821.5	20.83	22.00	1.309	-0.15	0.503	0.659
	LTE Band 26	15M	QPSK	36	20	Top Side	5mm	Ant 2	Full	26965	841.5	20.85	22.00	1.303	-0.01	0.490	0.639
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 2	Full	26765	821.5	20.83	22.00	1.309	-0.1	0.913	1.195
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 2	Full	26965	841.5	20.85	22.00	1.303	-0.17	0.853	1.112
	LTE Band 26	15M	QPSK	75	0	Back	5mm	Ant 2	Full	26865	831.5	20.79	22.00	1.321	-0.13	0.642	0.848
	LTE Band 26	15M	QPSK	75	0	Top Side	5mm	Ant 2	Full	26865	831.5	20.79	22.00	1.321	0.13	0.509	0.673
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	132322	1745	18.04	19.00	1.247	0.04	0.432	0.539
28	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	132322	1745	18.04	19.00	1.247	0.09	1.010	1.260
	LTE Band 66	20M	QPSK	1	0	Left Side	5mm	Ant 1	Reduced	132322	1745	17.06	18.00	1.242	-0.07	0.162	0.201
	LTE Band 66	20M	QPSK	1	0	Right Side	5mm	Ant 1	Reduced	132322	1745	17.06	18.00	1.242	0	0.075	0.093
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	132322	1745	17.06	18.00	1.242	-0.13	0.947	1.176
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	132072	1720	16.89	18.00	1.291	0.13	0.957	1.236
	LTE Band 66	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	132572	1770	16.71	18.00	1.346	0.17	0.926	1.246
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	132072	1720	17.84	19.00	1.306	-0.17	0.900	1.176
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	132572	1770	17.76	19.00	1.330	0.14	0.943	1.255
	LTE Band 66	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	132322	1745	16.98	18.00	1.265	0.07	0.369	0.467
	LTE Band 66	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	132322	1745	16.98	18.00	1.265	0.16	0.793	1.003
	LTE Band 66	20M	QPSK	50	24	Left Side	5mm	Ant 1	Reduced	132322	1745	15.96	17.00	1.271	-0.03	0.145	0.184
	LTE Band 66	20M	QPSK	50	24	Right Side	5mm	Ant 1	Reduced	132322	1745	15.96	17.00	1.271	0.12	0.066	0.084

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	LTE Band 66	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	132322	1745	15.96	17.00	1.271	-0.08	0.802	1.019
	LTE Band 66	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	132072	1720	15.95	17.00	1.274	0.01	0.803	1.023
	LTE Band 66	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	132572	1770	15.67	17.00	1.358	-0.05	0.771	1.047
	LTE Band 66	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	132072	1720	16.97	18.00	1.268	-0.17	0.813	1.031
	LTE Band 66	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	132572	1770	16.77	18.00	1.327	-0.12	0.790	1.049
	LTE Band 66	20M	QPSK	100	0	Back	5mm	Ant 1	Reduced	132322	1745	16.95	18.00	1.274	-0.04	0.793	1.010
	LTE Band 66	20M	QPSK	100	0	Bottom Side	5mm	Ant 1	Reduced	132322	1745	15.96	17.00	1.271	0.03	0.802	1.019
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	26340	1880	17.58	18.50	1.236	-0.02	0.536	0.662
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	26340	1880	17.58	18.50	1.236	0.03	0.874	1.080
	LTE Band 25	20M	QPSK	1	0	Left Side	5mm	Ant 1	Reduced	26340	1880	16.58	17.50	1.236	0.11	0.251	0.310
	LTE Band 25	20M	QPSK	1	0	Right Side	5mm	Ant 1	Reduced	26340	1880	16.58	17.50	1.236	-0.08	0.101	0.125
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	26340	1880	16.58	17.50	1.236	-0.07	0.839	1.037
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	26140	1860	16.47	17.50	1.268	-0.1	0.788	0.999
	LTE Band 25	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	26590	1905	16.17	17.50	1.358	0.02	0.956	1.299
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	26140	1860	17.51	18.50	1.256	-0.03	0.834	1.048
29	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	26590	1905	17.28	18.50	1.324	0.03	1.020	1.351
	LTE Band 25	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	26340	1880	16.59	17.50	1.233	0.12	0.454	0.560
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	26340	1880	16.59	17.50	1.233	-0.16	0.743	0.916
	LTE Band 25	20M	QPSK	50	24	Left Side	5mm	Ant 1	Reduced	26340	1880	15.57	16.50	1.239	0.08	0.232	0.287
	LTE Band 25	20M	QPSK	50	24	Right Side	5mm	Ant 1	Reduced	26340	1880	15.57	16.50	1.239	-0.11	0.087	0.108
	LTE Band 25	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	26340	1880	15.57	16.50	1.239	0.12	0.732	0.907
	LTE Band 25	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	26140	1860	15.52	16.50	1.253	-0.19	0.669	0.838
	LTE Band 25	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	26590	1905	15.28	16.50	1.324	-0.11	0.764	1.012
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	26140	1860	16.56	17.50	1.242	0.09	0.701	0.870
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	26590	1905	16.28	17.50	1.324	-0.08	0.771	1.021
	LTE Band 25	20M	QPSK	100	0	Back	5mm	Ant 1	Reduced	26340	1880	16.56	17.50	1.242	-0.16	0.741	0.920
	LTE Band 25	20M	QPSK	100	0	Bottom Side	5mm	Ant 1	Reduced	26340	1880	15.49	16.50	1.262	-0.08	0.719	0.907
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Ant 2	Reduced	26340	1880	16.03	17.00	1.250	0.19	0.588	0.735
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	26340	1880	16.03	17.00	1.250	0.07	0.893	1.116
	LTE Band 25	20M	QPSK	1	0	Left Side	5mm	Ant 2	Reduced	26340	1880	14.55	15.50	1.245	0.18	0.086	0.107
	LTE Band 25	20M	QPSK	1	0	Right Side	5mm	Ant 2	Reduced	26340	1880	14.55	15.50	1.245	-	n/a	n/a
	LTE Band 25	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	26340	1880	14.55	15.50	1.245	0.19	0.957	1.191
	LTE Band 25	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	26140	1860	14.52	15.50	1.253	-0.01	0.886	1.110
	LTE Band 25	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	26590	1905	14.48	15.50	1.265	-0.09	0.994	1.257
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	26140	1860	15.95	17.00	1.274	-0.11	0.782	0.996
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	26590	1905	15.92	17.00	1.282	-0.19	0.986	1.264
	LTE Band 25	20M	QPSK	50	24	Front	5mm	Ant 2	Reduced	26340	1880	15.08	16.00	1.236	-0.02	0.500	0.618
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	26340	1880	15.08	16.00	1.236	-0.08	0.724	0.895
	LTE Band 25	20M	QPSK	50	24	Left Side	5mm	Ant 2	Reduced	26340	1880	13.63	14.50	1.222	-0.14	0.076	0.093
	LTE Band 25	20M	QPSK	50	24	Right Side	5mm	Ant 2	Reduced	26340	1880	13.63	14.50	1.222	-	n/a	n/a
	LTE Band 25	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	26340	1880	13.63	14.50	1.222	-0.03	0.835	1.020
	LTE Band 25	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	26140	1860	13.61	14.50	1.227	-0.01	0.767	0.941
	LTE Band 25	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	26590	1905	13.46	14.50	1.271	0.12	0.869	1.104
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	26140	1860	15.04	16.00	1.247	0.13	0.659	0.822
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	26590	1905	14.88	16.00	1.294	0.16	0.760	0.984
	LTE Band 25	20M	QPSK	100	0	Back	5mm	Ant 2	Reduced	26340	1880	14.92	16.00	1.282	-0.17	0.664	0.851
	LTE Band 25	20M	QPSK	100	0	Top Side	5mm	Ant 2	Reduced	26340	1880	13.57	14.50	1.239	0.04	0.736	0.912
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	20850	2510	17.88	19.00	1.294	-0.12	0.711	0.920
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	20850	2510	17.88	19.00	1.294	0.03	1.000	1.294
	LTE Band 7	20M	QPSK	1	0	Left Side	5mm	Ant 1	Reduced	20850	2510	16.96	18.00	1.271	-0.19	0.203	0.258
	LTE Band 7	20M	QPSK	1	0	Right Side	5mm	Ant 1	Reduced	20850	2510	16.96	18.00	1.271	-0.19	0.104	0.132
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	20850	2510	16.96	18.00	1.271	0.03	0.821	1.043
	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	21100	2535	16.84	18.00	1.306	-0.16	0.978	1.277
30	LTE Band 7	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	21350	2560	16.80	18.00	1.318	0.09	1.020	1.345
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	21100	2535	17.73	19.00	1.340	0.18	0.686	0.919
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	21350	2560	17.77	19.00	1.327	0.16	0.670	0.889

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	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	21100	2535	17.73	19.00	1.340	-0.03	0.940	1.259
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	21350	2560	17.77	19.00	1.327	0.17	0.930	1.234
	LTE Band 7	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	20850	2510	16.97	18.00	1.268	0.05	0.572	0.725
	LTE Band 7	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	20850	2510	16.97	18.00	1.268	0.05	0.865	1.097
	LTE Band 7	20M	QPSK	50	24	Left Side	5mm	Ant 1	Reduced	20850	2510	15.91	17.00	1.285	0.17	0.173	0.222
	LTE Band 7	20M	QPSK	50	24	Right Side	5mm	Ant 1	Reduced	20850	2510	15.91	17.00	1.285	-0.13	0.085	0.109
	LTE Band 7	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	20850	2510	15.91	17.00	1.285	-0.01	0.806	1.036
	LTE Band 7	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	21100	2535	15.85	17.00	1.303	0.08	0.808	1.053
	LTE Band 7	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	21350	2560	15.85	17.00	1.303	0.13	0.863	1.125
	LTE Band 7	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	21100	2535	16.87	18.00	1.297	0.06	0.807	1.047
	LTE Band 7	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	21350	2560	16.93	18.00	1.279	0.16	0.732	0.937
	LTE Band 7	20M	QPSK	100	0	Front	5mm	Ant 1	Reduced	20850	2510	16.89	18.00	1.291	-0.05	0.567	0.732
	LTE Band 7	20M	QPSK	100	0	Back	5mm	Ant 1	Reduced	20850	2510	16.89	18.00	1.291	-0.06	0.848	1.095
	LTE Band 7	20M	QPSK	100	0	Bottom Side	5mm	Ant 1	Reduced	20850	2510	15.85	17.00	1.303	0.13	0.785	1.023
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 2	Reduced	20850	2510	13.43	14.50	1.279	-0.05	0.260	0.333
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	20850	2510	13.43	14.50	1.279	-0.07	0.686	0.878
	LTE Band 7	20M	QPSK	1	0	Left Side	5mm	Ant 2	Reduced	20850	2510	13.43	14.50	1.279	-0.04	0.086	0.110
	LTE Band 7	20M	QPSK	1	0	Right Side	5mm	Ant 2	Reduced	20850	2510	13.43	14.50	1.279	-	n/a	n/a
	LTE Band 7	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	20850	2510	13.43	14.50	1.279	0.14	0.904	1.157
	LTE Band 7	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	21100	2535	13.39	14.50	1.291	0.12	0.905	1.169
	LTE Band 7	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	21350	2560	13.27	14.50	1.327	-0.11	0.893	1.185
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	21100	2535	13.39	14.50	1.291	-0.08	0.713	0.921
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	21350	2560	13.27	14.50	1.327	-0.01	0.934	1.240
	LTE Band 7	20M	QPSK	50	24	Front	5mm	Ant 2	Reduced	20850	2510	12.45	13.50	1.274	0.05	0.223	0.284
	LTE Band 7	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	20850	2510	12.45	13.50	1.274	0.12	0.618	0.787
	LTE Band 7	20M	QPSK	50	24	Left Side	5mm	Ant 2	Reduced	20850	2510	12.45	13.50	1.274	-0.12	0.076	0.097
	LTE Band 7	20M	QPSK	50	24	Right Side	5mm	Ant 2	Reduced	20850	2510	12.45	13.50	1.274	-	n/a	n/a
	LTE Band 7	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	20850	2510	12.45	13.50	1.274	-0.1	0.767	0.977
	LTE Band 7	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	21100	2535	12.36	13.50	1.300	-0.01	0.769	1.000
	LTE Band 7	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	21350	2560	12.35	13.50	1.303	0.14	0.826	1.076
	LTE Band 7	20M	QPSK	100	0	Back	5mm	Ant 2	Reduced	20850	2510	12.39	13.50	1.291	-0.1	0.634	0.819
	LTE Band 7	20M	QPSK	100	0	Top Side	5mm	Ant 2	Reduced	20850	2510	12.39	13.50	1.291	0.18	0.714	0.922



<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-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	40185	2549.5	19.48	20.50	1.265	62.9	1.006	0.05	0.641	0.816
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	40185	2549.5	19.48	20.50	1.265	62.9	1.006	0.07	0.839	1.067
	LTE Band 41-PC3	20M	QPSK	1	0	Left Side	5mm	Ant 1	Reduced	40185	2549.5	18.39	19.50	1.291	62.9	1.006	-0.1	0.191	0.248
	LTE Band 41-PC3	20M	QPSK	1	0	Right Side	5mm	Ant 1	Reduced	40185	2549.5	18.39	19.50	1.291	62.9	1.006	0.09	0.107	0.139
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	40185	2549.5	18.39	19.50	1.291	62.9	1.006	0.14	0.967	1.256
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	39750	2506	18.26	19.50	1.330	62.9	1.006	0.15	0.894	1.197
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	40620	2593	18.38	19.50	1.294	62.9	1.006	0.15	0.905	1.178
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	41055	2636.5	18.34	19.50	1.306	62.9	1.006	-0.17	0.977	1.284
	LTE Band 41C-PC3	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	41055+40857	2636.5+2616.7	18.47	19.50	1.268	62.9	1.006	0.01	0.937	1.195
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	41490	2680	18.38	19.50	1.294	62.9	1.006	0.15	0.926	1.206
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	39750	2506	19.45	20.50	1.274	62.9	1.006	-0.13	0.629	0.806
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	40620	2593	19.30	20.50	1.318	62.9	1.006	0.18	0.614	0.814
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	41055	2636.5	19.43	20.50	1.279	62.9	1.006	-0.17	0.588	0.757
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	41490	2680	19.41	20.50	1.285	62.9	1.006	0.11	0.582	0.753
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	39750	2506	19.45	20.50	1.274	62.9	1.006	0.04	0.945	1.211
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	40620	2593	19.30	20.50	1.318	62.9	1.006	-0.18	0.742	0.984
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	41055	2636.5	19.43	20.50	1.279	62.9	1.006	-0.08	0.677	0.871
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	41490	2680	19.41	20.50	1.285	62.9	1.006	-0.07	0.665	0.860
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	40185	2549.5	18.69	19.50	1.205	62.9	1.006	-0.07	0.524	0.635
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	40185	2549.5	18.69	19.50	1.205	62.9	1.006	-0.19	0.674	0.817
	LTE Band 41-PC3	20M	QPSK	50	24	Left Side	5mm	Ant 1	Reduced	40185	2549.5	17.47	18.50	1.268	62.9	1.006	0.03	0.160	0.204
	LTE Band 41-PC3	20M	QPSK	50	24	Right Side	5mm	Ant 1	Reduced	40185	2549.5	17.47	18.50	1.268	62.9	1.006	-0.13	0.090	0.115
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	40185	2549.5	17.47	18.50	1.268	62.9	1.006	0.01	0.806	1.028
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	39750	2506	17.44	18.50	1.276	62.9	1.006	0.19	0.766	0.984
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	40620	2593	17.25	18.50	1.334	62.9	1.006	0.19	0.797	1.069
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	41055	2636.5	17.26	18.50	1.330	62.9	1.006	-0.18	0.817	1.094
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	41490	2680	17.31	18.50	1.315	62.9	1.006	-0.03	0.826	1.093
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	39750	2506	18.67	19.50	1.211	62.9	1.006	0.04	0.513	0.625
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	40620	2593	18.53	19.50	1.250	62.9	1.006	-0.18	0.471	0.592
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	41055	2636.5	18.59	19.50	1.233	62.9	1.006	-0.08	0.470	0.583
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	41490	2680	18.63	19.50	1.222	62.9	1.006	0.03	0.459	0.564
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	39750	2506	18.67	19.50	1.211	62.9	1.006	0.06	0.744	0.906
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	40620	2593	18.53	19.50	1.250	62.9	1.006	0.03	0.584	0.735
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	41055	2636.5	18.59	19.50	1.233	62.9	1.006	-0.15	0.561	0.696
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	41490	2680	18.63	19.50	1.222	62.9	1.006	-0.06	0.554	0.681
	LTE Band 41-PC3	20M	QPSK	100	0	Front	5mm	Ant 1	Reduced	40185	2549.5	18.69	19.50	1.205	62.9	1.006	0.03	0.517	0.627
	LTE Band 41-PC3	20M	QPSK	100	0	Back	5mm	Ant 1	Reduced	40185	2549.5	18.69	19.50	1.205	62.9	1.006	-0.1	0.672	0.815
	LTE Band 41-PC3	20M	QPSK	100	0	Bottom Side	5mm	Ant 1	Reduced	40185	2549.5	17.41	18.50	1.285	62.9	1.006	-0.11	0.784	1.014
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 2	Reduced	40185	2549.5	14.46	15.50	1.271	62.9	1.006	0.1	0.223	0.285
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	40185	2549.5	14.46	15.50	1.271	62.9	1.006	-0.09	0.681	0.870
	LTE Band 41-PC3	20M	QPSK	1	0	Left Side	5mm	Ant 2	Reduced	40185	2549.5	13.99	15.00	1.262	62.9	1.006	0.07	0.058	0.074
	LTE Band 41-PC3	20M	QPSK	1	0	Right Side	5mm	Ant 2	Reduced	40185	2549.5	13.99	15.00	1.262	62.9	1.006	-	n/a	n/a
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	40185	2549.5	13.99	15.00	1.262	62.9	1.006	-0.15	0.727	0.923
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	39750	2506	13.97	15.00	1.268	62.9	1.006	-0.11	0.643	0.820
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	40620	2593	13.73	15.00	1.340	62.9	1.006	-0.19	0.743	1.001
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	41055	2636.5	13.79	15.00	1.321	62.9	1.006	0.05	0.848	1.127
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	41490	2680	13.75	15.00	1.334	62.9	1.006	0.19	0.949	1.273
	LTE Band 41C-PC3	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	41490+41292	2680+2660.2	13.88	15.00	1.294	62.9	1.006	0.08	0.910	1.185
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	39750	2506	14.36	15.50	1.300	62.9	1.006	0	0.616	0.806
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	40620	2593	14.37	15.50	1.297	62.9	1.006	-0.09	0.793	1.035
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	41055	2636.5	14.44	15.50	1.276	62.9	1.006	-0.09	0.891	1.144



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	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	41490	2680	14.34	15.50	1.306	62.9	1.006	-0.19	0.926	1.217
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 2	Reduced	40185	2549.5	13.81	14.50	1.172	62.9	1.006	-0.05	0.179	0.211
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	40185	2549.5	13.81	14.50	1.172	62.9	1.006	-0.05	0.572	0.675
	LTE Band 41-PC3	20M	QPSK	50	24	Left Side	5mm	Ant 2	Reduced	40185	2549.5	13.04	14.00	1.247	62.9	1.006	-0.05	0.049	0.061
	LTE Band 41-PC3	20M	QPSK	50	24	Right Side	5mm	Ant 2	Reduced	40185	2549.5	13.04	14.00	1.247	62.9	1.006	-	n/a	n/a
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	40185	2549.5	13.04	14.00	1.247	62.9	1.006	0.16	0.679	0.852
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	39750	2506	12.99	14.00	1.262	62.9	1.006	0.19	0.552	0.701
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	40620	2593	12.73	14.00	1.340	62.9	1.006	0.1	0.618	0.833
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	41055	2636.5	12.64	14.00	1.368	62.9	1.006	0.07	0.716	0.985
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	41490	2680	12.59	14.00	1.384	62.9	1.006	0.16	0.770	1.072
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	39750	2506	13.74	14.50	1.191	62.9	1.006	0.19	0.378	0.453
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	40620	2593	13.76	14.50	1.186	62.9	1.006	0.1	0.444	0.530
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	41055	2636.5	13.73	14.50	1.194	62.9	1.006	0.11	0.542	0.651
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	41490	2680	13.77	14.50	1.183	62.9	1.006	0.16	0.596	0.709
	LTE Band 41-PC3	20M	QPSK	100	0	Back	5mm	Ant 2	Reduced	40185	2549.5	13.70	14.50	1.202	62.9	1.006	0.15	0.549	0.664
	LTE Band 41-PC3	20M	QPSK	100	0	Top Side	5mm	Ant 2	Reduced	40185	2549.5	13.13	14.00	1.222	62.9	1.006	-0.19	0.654	0.804
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	40185	2549.5	21.51	22.50	1.256	42.9	1.009	0.12	0.646	0.819
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	40185	2549.5	21.51	22.50	1.256	42.9	1.009	-0.04	0.891	1.129
	LTE Band 41-PC2	20M	QPSK	1	0	Left Side	5mm	Ant 1	Reduced	40185	2549.5	20.63	21.50	1.222	42.9	1.009	-0.12	0.179	0.221
	LTE Band 41-PC2	20M	QPSK	1	0	Right Side	5mm	Ant 1	Reduced	40185	2549.5	20.63	21.50	1.222	42.9	1.009	0.18	0.094	0.116
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	40185	2549.5	20.63	21.50	1.222	42.9	1.009	0.19	0.865	1.066
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	39750	2506	20.62	21.50	1.225	42.9	1.009	0.16	0.815	1.007
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	40620	2593	20.50	21.50	1.259	42.9	1.009	0.19	0.838	1.064
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	41055	2636.5	20.57	21.50	1.239	42.9	1.009	0.04	0.983	1.229
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	5mm	Ant 1	Reduced	41490	2680	20.53	21.50	1.250	42.9	1.009	0.16	0.844	1.065
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	39750	2506	21.44	22.50	1.276	42.9	1.009	0.07	0.638	0.822
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	40620	2593	21.41	22.50	1.285	42.9	1.009	0.17	0.580	0.752
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	41055	2636.5	21.40	22.50	1.288	42.9	1.009	0.12	0.585	0.760
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	Reduced	41490	2680	21.42	22.50	1.282	42.9	1.009	-0.05	0.558	0.722
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	39750	2506	21.44	22.50	1.276	42.9	1.009	-0.18	0.956	1.231
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	40620	2593	21.41	22.50	1.285	42.9	1.009	-0.05	0.792	1.027
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	41055	2636.5	21.40	22.50	1.288	42.9	1.009	0.13	0.713	0.927
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	Reduced	41490	2680	21.42	22.50	1.282	42.9	1.009	0.15	0.703	0.910
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	40185	2549.5	20.84	21.50	1.164	42.9	1.009	-0.01	0.537	0.631
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	40185	2549.5	20.84	21.50	1.164	42.9	1.009	0.01	0.726	0.853
	LTE Band 41-PC2	20M	QPSK	50	24	Left Side	5mm	Ant 1	Reduced	40185	2549.5	19.63	20.50	1.222	42.9	1.009	-0.13	0.145	0.179
	LTE Band 41-PC2	20M	QPSK	50	24	Right Side	5mm	Ant 1	Reduced	40185	2549.5	19.63	20.50	1.222	42.9	1.009	0.14	0.079	0.097
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	40185	2549.5	19.63	20.50	1.222	42.9	1.009	-0.13	0.709	0.874
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	39750	2506	19.62	20.50	1.225	42.9	1.009	0.18	0.678	0.838
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	40620	2593	19.48	20.50	1.265	42.9	1.009	-0.11	0.688	0.878
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	41055	2636.5	19.53	20.50	1.250	42.9	1.009	0.11	0.686	0.865
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	5mm	Ant 1	Reduced	41490	2680	19.56	20.50	1.242	42.9	1.009	0.15	0.708	0.887
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	39750	2506	20.83	21.50	1.167	42.9	1.009	-0.01	0.410	0.483
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	40620	2593	20.66	21.50	1.213	42.9	1.009	-0.18	0.375	0.459
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	41055	2636.5	20.74	21.50	1.191	42.9	1.009	-0.05	0.372	0.447
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	Reduced	41490	2680	20.70	21.50	1.202	42.9	1.009	-0.13	0.365	0.443
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	39750	2506	20.83	21.50	1.167	42.9	1.009	0.04	0.811	0.955
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	40620	2593	20.66	21.50	1.213	42.9	1.009	-0.07	0.629	0.770
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	41055	2636.5	20.74	21.50	1.191	42.9	1.009	-0.04	0.603	0.725
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	Reduced	41490	2680	20.70	21.50	1.202	42.9	1.009	0.16	0.596	0.723
	LTE Band 41-PC2	20M	QPSK	100	0	Front	5mm	Ant 1	Reduced	40185	2549.5	20.66	21.50	1.213	42.9	1.009	0.11	0.491	0.601
	LTE Band 41-PC2	20M	QPSK	100	0	Back	5mm	Ant 1	Reduced	40185	2549.5	20.66	21.50	1.213	42.9	1.009	0.01	0.566	0.693
	LTE Band 41-PC2	20M	QPSK	100	0	Bottom Side	5mm	Ant 1	Reduced	40185	2549.5	19.66	20.50	1.213	42.9	1.009	0.08	0.774	0.948
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 2	Reduced	40185	2549.5	16.47	17.50	1.268	42.9	1.009	-0.04	0.249	0.318
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	40185	2549.5	16.47	17.50	1.268	42.9	1.009	0.01	0.787	1.007
	LTE Band 41-PC2	20M	QPSK	1	0	Left Side	5mm	Ant 2	Reduced	40185	2549.5	16.00	17.00	1.259	42.9	1.009	-	n/a	n/a

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	LTE Band 41-PC2	20M	QPSK	1	0	Right Side	5mm	Ant 2	Reduced	40185	2549.5	16.00	17.00	1.259	42.9	1.009	-	n/a	n/a
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	40185	2549.5	16.00	17.00	1.259	42.9	1.009	-0.12	0.758	0.963
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	39750	2506	15.92	17.00	1.282	42.9	1.009	0.12	0.592	0.766
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	40620	2593	15.78	17.00	1.324	42.9	1.009	-0.05	0.787	1.052
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	41055	2636.5	15.65	17.00	1.365	42.9	1.009	0.17	0.853	1.174
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	5mm	Ant 2	Reduced	41490	2680	15.76	17.00	1.330	42.9	1.009	0.15	1.000	1.342
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	39750	2506	16.27	17.50	1.327	42.9	1.009	0.12	0.621	0.832
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	40620	2593	16.20	17.50	1.349	42.9	1.009	0.15	0.801	1.090
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	41055	2636.5	15.99	17.50	1.416	42.9	1.009	0.16	0.903	1.290
31	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	Reduced	41490	2680	15.99	17.50	1.416	42.9	1.009	0.02	1.010	1.443
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 2	Reduced	40185	2549.5	15.64	16.50	1.219	42.9	1.009	-0.07	0.211	0.260
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	40185	2549.5	15.64	16.50	1.219	42.9	1.009	0.14	0.682	0.839
	LTE Band 41-PC2	20M	QPSK	50	24	Left Side	5mm	Ant 2	Reduced	40185	2549.5	15.14	16.00	1.219	42.9	1.009	-	n/a	n/a
	LTE Band 41-PC2	20M	QPSK	50	24	Right Side	5mm	Ant 2	Reduced	40185	2549.5	15.14	16.00	1.219	42.9	1.009	-	n/a	n/a
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	40185	2549.5	15.14	16.00	1.219	42.9	1.009	-0.15	0.641	0.788
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	39750	2506	15.08	16.00	1.236	42.9	1.009	-0.14	0.504	0.629
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	40620	2593	14.87	16.00	1.297	42.9	1.009	0.11	0.636	0.832
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	41055	2636.5	14.70	16.00	1.349	42.9	1.009	-0.12	0.761	1.036
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	5mm	Ant 2	Reduced	41490	2680	14.75	16.00	1.334	42.9	1.009	-0.03	0.803	1.080
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	39750	2506	15.56	16.50	1.242	42.9	1.009	0.15	0.410	0.514
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	40620	2593	15.28	16.50	1.324	42.9	1.009	0.11	0.502	0.671
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	41055	2636.5	15.21	16.50	1.346	42.9	1.009	0.06	0.574	0.779
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	Reduced	41490	2680	15.23	16.50	1.340	42.9	1.009	0.18	0.604	0.816
	LTE Band 41-PC2	20M	QPSK	100	0	Back	5mm	Ant 2	Reduced	40185	2549.5	15.57	16.50	1.239	42.9	1.009	-0.03	0.683	0.854
	LTE Band 41-PC2	20M	QPSK	100	0	Top Side	5mm	Ant 2	Reduced	40185	2549.5	15.06	16.00	1.242	42.9	1.009	-0.02	0.663	0.831

<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 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 3	Reduced	6	2437	9.57	11.57	1.585	100	1.000	0.19	0.052	0.082
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	Reduced	6	2437	9.57	11.57	1.585	100	1.000	0.07	0.133	0.211
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 3	Reduced	6	2437	9.57	11.57	1.585	100	1.000	0.01	0.042	0.067
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 3	Reduced	6	2437	9.57	11.57	1.585	100	1.000	0.09	0.047	0.074
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 3	Reduced	6	2437	9.57	11.57	1.585	100	1.000	-0.01	0.049	0.078
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	Reduced	1	2412	9.56	11.56	1.585	100	1.000	-0.03	0.125	0.198
32	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	Reduced	11	2462	9.43	11.43	1.585	100	1.000	0.06	0.159	0.252

<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	DH5 1Mbps	Front	5mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	0.14	0.022	0.045
33	Bluetooth	DH5 1Mbps	Back	5mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	0.03	0.069	0.143
	Bluetooth	DH5 1Mbps	Left Side	5mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	-0.18	0.004	0.008
	Bluetooth	DH5 1Mbps	Right Side	5mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	-0.07	0.022	0.045
	Bluetooth	DH5 1Mbps	Top Side	5mm	Ant 3	Full	78	2480	7.80	9.80	1.585	76.7	1.304	-0.07	0.021	0.043
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 3	Full	0	2402	7.80	9.80	1.585	76.7	1.304	-0.12	0.051	0.105
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 3	Full	39	2441	7.60	9.60	1.585	76.7	1.304	0.09	0.058	0.120

<WLAN5G 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	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	Reduced	42	5210	9.41	11.41	1.585	100	1.000	0.11	0.129	0.204
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	Reduced	42	5210	9.41	11.41	1.585	100	1.000	-0.06	0.187	0.296
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4	Reduced	42	5210	9.41	11.41	1.585	100	1.000	-	n/a	n/a
34	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4	Reduced	42	5210	9.41	11.41	1.585	100	1.000	0.02	0.206	0.326
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4	Reduced	42	5210	9.41	11.41	1.585	100	1.000	0.04	0.093	0.147
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	Reduced	155	5775	8.42	10.42	1.585	100	1.000	0.07	0.129	0.204
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	Reduced	155	5775	8.42	10.42	1.585	100	1.000	0.02	0.189	0.300
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 4	Reduced	155	5775	8.42	10.42	1.585	100	1.000	-	n/a	n/a
35	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4	Reduced	155	5775	8.42	10.42	1.585	100	1.000	0.15	0.206	0.326
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 4	Reduced	155	5775	8.42	10.42	1.585	100	1.000	-0.13	0.122	0.193



15.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 1	-	Reduced	128	824.2	25.74	26.50	1.191	-0.06	0.717	0.854
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	-	Reduced	128	824.2	25.74	26.50	1.191	0.08	1.060	1.263
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 1	-	Reduced	189	836.4	25.65	26.50	1.216	0.11	0.715	0.870
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 1	-	Reduced	251	848.8	25.62	26.50	1.225	-0.17	0.674	0.825
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	-	Reduced	189	836.4	25.65	26.50	1.216	-0.16	1.030	1.253
36	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	-	Reduced	251	848.8	25.62	26.50	1.225	0.12	1.040	1.274
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	Headset	Reduced	251	848.8	25.62	26.50	1.225	0.13	1.010	1.237
	GSM850	GPRS 4 Tx slots	Front	20mm	Ant 1	-	Full	189	836.4	28.90	30.00	1.288	0.1	0.398	0.513
	GSM850	GPRS 4 Tx slots	Back	24mm	Ant 1	-	Full	251	848.8	28.82	30.00	1.312	0.18	0.312	0.409
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 2	-	Reduced	128	824.2	26.49	27.00	1.125	0.13	0.627	0.705
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 2	-	Reduced	128	824.2	26.49	27.00	1.125	-0.15	1.100	1.237
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 2	-	Reduced	189	836.4	26.26	27.00	1.186	-0.03	1.050	1.245
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 2	-	Reduced	251	848.8	26.08	27.00	1.236	0.12	0.990	1.224
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 2	Headset	Reduced	189	836.4	26.26	27.00	1.186	0.18	0.960	1.138
	GSM850	GPRS 4 Tx slots	Front	20mm	Ant 2	-	Full	128	824.2	28.19	29.00	1.205	-0.18	0.185	0.223
	GSM850	GPRS 4 Tx slots	Back	24mm	Ant 2	-	Full	189	836.4	28.00	29.00	1.259	0.07	0.137	0.172
	GSM1900	GPRS 4 Tx slots	Front	5mm	Ant 1	-	Reduced	512	1850.2	18.89	20.50	1.449	0.01	0.429	0.622
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 1	-	Reduced	512	1850.2	18.89	20.50	1.449	-0.08	0.712	1.032
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 1	-	Reduced	661	1880	18.65	20.50	1.531	-0.16	0.857	1.312
37	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 1	-	Reduced	810	1909.8	18.58	20.50	1.556	0.15	0.897	1.396
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 1	Headset	Reduced	810	1909.8	18.58	20.50	1.556	0.1	0.817	1.271
	GSM1900	GPRS 4 Tx slots	Front	20mm	Ant 1	-	Full	512	1850.2	26.39	27.50	1.291	0.15	0.413	0.533
	GSM1900	GPRS 4 Tx slots	Back	24mm	Ant 1	-	Full	810	1909.8	26.03	27.50	1.403	0.02	0.484	0.679
	GSM1900	GPRS 4 Tx slots	Front	5mm	Ant 2	-	Reduced	512	1850.2	18.35	19.00	1.161	0.19	0.542	0.630
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 2	-	Reduced	512	1850.2	18.35	19.00	1.161	0.15	0.728	0.846
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 2	-	Reduced	661	1880	17.78	19.00	1.324	-0.11	0.923	1.222
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 2	-	Reduced	810	1909.8	17.56	19.00	1.393	0.09	0.896	1.248
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 2	Headset	Reduced	810	1909.8	17.56	19.00	1.393	-0.17	0.889	1.239
	GSM1900	GPRS 4 Tx slots	Front	20mm	Ant 2	-	Full	512	1850.2	24.32	25.50	1.312	0.08	0.264	0.346
	GSM1900	GPRS 4 Tx slots	Back	24mm	Ant 2	-	Full	810	1909.8	24.00	25.50	1.413	0.15	0.219	0.309



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 1	-	Reduced	4233	846.6	20.44	21.50	1.276	-0.11	0.639	0.816
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	4233	846.6	20.44	21.50	1.276	-0.19	1.020	1.302
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 1	-	Reduced	4132	826.4	20.19	21.50	1.352	0.01	0.623	0.842
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 1	-	Reduced	4182	836.4	20.29	21.50	1.321	0.11	0.668	0.883
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	4132	826.4	20.19	21.50	1.352	-0.14	1.030	1.393
38	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	4182	836.4	20.29	21.50	1.321	-0.04	1.060	1.401
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	Headset	Reduced	4182	836.4	20.29	21.50	1.321	0.03	0.980	1.295
	WCDMA V	RMC 12.2Kbps	Front	20mm	Ant 1	-	Full	4182	836.4	22.85	24.00	1.303	-0.19	0.297	0.387
	WCDMA V	RMC 12.2Kbps	Back	24mm	Ant 1	-	Full	4182	836.4	22.85	24.00	1.303	0.16	0.278	0.362
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 2	-	Reduced	4233	846.6	21.36	22.00	1.159	0.15	0.597	0.692
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 2	-	Reduced	4233	846.6	21.36	22.00	1.159	-0.06	0.892	1.034
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 2	-	Reduced	4132	826.4	21.17	22.00	1.211	0.15	0.888	1.075
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 2	-	Reduced	4182	836.4	21.18	22.00	1.208	0.13	1.050	1.268
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 2	Headset	Reduced	4182	836.4	21.18	22.00	1.208	-0.1	0.980	1.184
	WCDMA V	RMC 12.2Kbps	Front	20mm	Ant 2	-	Full	4233	846.6	22.15	23.00	1.216	-0.05	0.143	0.174
	WCDMA V	RMC 12.2Kbps	Back	24mm	Ant 2	-	Full	4182	836.4	21.98	23.00	1.265	0.03	0.137	0.173
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Ant 1	-	Reduced	1413	1732.6	18.09	19.00	1.233	-0.08	0.436	0.538
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	1413	1732.6	18.09	19.00	1.233	-0.14	1.030	1.270
39	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	1312	1712.4	18.07	19.00	1.239	0.04	1.080	1.338
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	1513	1752.6	18.08	19.00	1.236	-0.11	1.020	1.261
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 1	Headset	Reduced	1312	1712.4	18.07	19.00	1.239	0.05	1.050	1.301
	WCDMA IV	RMC 12.2Kbps	Front	20mm	Ant 1	-	Full	1413	1732.6	23.20	24.00	1.202	-0.11	0.255	0.307
	WCDMA IV	RMC 12.2Kbps	Back	24mm	Ant 1	-	Full	1312	1712.4	23.15	24.00	1.216	-0.07	0.328	0.399
	WCDMA II	RMC 12.2Kbps	Front	5mm	Ant 1	-	Reduced	9262	1852.4	17.06	18.00	1.242	-0.04	0.503	0.625
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	9262	1852.4	17.06	18.00	1.242	0.08	0.856	1.063
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	9400	1880	16.77	18.00	1.327	-0.03	0.925	1.228
40	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 1	-	Reduced	9538	1907.6	16.66	18.00	1.361	0.1	0.967	1.317
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 1	Headset	Reduced	9538	1907.6	16.66	18.00	1.361	0.18	0.931	1.268
	WCDMA II	RMC 12.2Kbps	Front	20mm	Ant 1	-	Full	9262	1852.4	23.24	24.00	1.191	0.08	0.341	0.406
	WCDMA II	RMC 12.2Kbps	Back	24mm	Ant 1	-	Full	9538	1907.6	22.79	24.00	1.321	0.07	0.392	0.518
	WCDMA II	RMC 12.2Kbps	Front	5mm	Ant 2	-	Reduced	9262	1852.4	15.58	16.50	1.236	-0.04	0.500	0.618
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 2	-	Reduced	9262	1852.4	15.58	16.50	1.236	-0.08	0.654	0.808
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 2	-	Reduced	9400	1880	15.32	16.50	1.312	-0.15	0.720	0.945
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 2	-	Reduced	9538	1907.6	14.78	16.50	1.486	-0.18	0.820	1.218
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 2	Headset	Reduced	9538	1907.6	14.78	16.50	1.486	0.18	0.745	1.107
	WCDMA II	RMC 12.2Kbps	Front	20mm	Ant 2	-	Full	9262	1852.4	21.82	23.00	1.312	0.06	0.232	0.304
	WCDMA II	RMC 12.2Kbps	Back	24mm	Ant 2	-	Full	9538	1907.6	21.25	23.00	1.496	0.07	0.265	0.397

**<FDD LTE SAR>**

Plot No.	Band	BW (MHz)	Modulation	RB Size	offset	Test Position	Gap (mm)	Antenna	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
41	LTE Band 71	20M	QPSK	1	0	Front	5mm	Ant 1	-	Full	133322	683	22.38	24.00	1.452	0.05	0.399	0.579
	LTE Band 71	20M	QPSK	1	0	Back	5mm	Ant 1	-	Full	133322	683	22.38	24.00	1.452	-0.07	0.831	1.207
	LTE Band 71	20M	QPSK	1	0	Back	5mm	Ant 1	Headset	Full	133322	683	22.38	24.00	1.452	-0.05	0.830	1.205
	LTE Band 71	20M	QPSK	50	24	Front	5mm	Ant 1	-	Full	133322	683	21.44	23.00	1.432	-0.19	0.308	0.441
	LTE Band 71	20M	QPSK	50	24	Back	5mm	Ant 1	-	Full	133322	683	21.44	23.00	1.432	-0.05	0.688	0.985
	LTE Band 71	20M	QPSK	100	0	Back	5mm	Ant 1	-	Full	133322	683	21.43	23.00	1.435	0.04	0.684	0.982
	LTE Band 71	20M	QPSK	1	0	Front	5mm	Ant 2	-	Full	133322	683	21.81	23.00	1.315	-0.02	0.178	0.234
	LTE Band 71	20M	QPSK	1	0	Back	5mm	Ant 2	-	Full	133322	683	21.81	23.00	1.315	0.17	0.399	0.525
	LTE Band 71	20M	QPSK	50	24	Front	5mm	Ant 2	-	Full	133322	683	20.78	22.00	1.324	0.09	0.143	0.189
	LTE Band 71	20M	QPSK	50	24	Back	5mm	Ant 2	-	Full	133322	683	20.78	22.00	1.324	0.04	0.279	0.369
42	LTE Band 12	10M	QPSK	1	0	Front	5mm	Ant 1	-	Full	23095	707.5	22.68	24.00	1.355	-0.17	0.442	0.599
	LTE Band 12	10M	QPSK	1	0	Back	5mm	Ant 1	-	Full	23095	707.5	22.68	24.00	1.355	0.05	0.821	1.113
	LTE Band 12	10M	QPSK	25	12	Front	5mm	Ant 1	-	Full	23095	707.5	21.70	23.00	1.349	0.05	0.378	0.510
	LTE Band 12	10M	QPSK	25	12	Back	5mm	Ant 1	-	Full	23095	707.5	21.70	23.00	1.349	0.12	0.760	1.025
	LTE Band 12	10M	QPSK	50	0	Back	5mm	Ant 1	-	Full	23095	707.5	21.67	23.00	1.358	-0.14	0.743	1.009
	LTE Band 12	10M	QPSK	1	0	Front	5mm	Ant 2	-	Full	23095	707.5	22.01	23.00	1.256	-0.01	0.233	0.293
	LTE Band 12	10M	QPSK	1	0	Back	5mm	Ant 2	-	Full	23095	707.5	22.01	23.00	1.256	-0.13	0.489	0.614
	LTE Band 12	10M	QPSK	25	12	Front	5mm	Ant 2	-	Full	23095	707.5	21.00	22.00	1.259	0.16	0.207	0.261
	LTE Band 12	10M	QPSK	25	12	Back	5mm	Ant 2	-	Full	23095	707.5	21.00	22.00	1.259	0.02	0.441	0.555
43	LTE Band 13	10M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	23230	782	21.67	23.00	1.358	-0.17	0.568	0.772
	LTE Band 13	10M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	23230	782	21.67	23.00	1.358	0.03	0.961	1.305
	LTE Band 13	10M	QPSK	1	0	Back	5mm	Ant 1	Headset	Reduced	23230	782	21.67	23.00	1.358	-0.16	0.960	1.304
	LTE Band 13	10M	QPSK	1	0	Front	20mm	Ant 1	-	Full	23230	782	22.66	24.00	1.361	0.06	0.225	0.306
	LTE Band 13	10M	QPSK	1	0	Back	24mm	Ant 1	-	Full	23230	782	22.66	24.00	1.361	-0.16	0.219	0.298
	LTE Band 13	10M	QPSK	25	12	Front	5mm	Ant 1	-	Reduced	23230	782	20.68	22.00	1.355	-0.08	0.543	0.736
	LTE Band 13	10M	QPSK	25	12	Back	5mm	Ant 1	-	Reduced	23230	782	20.68	22.00	1.355	0.01	0.792	1.073
	LTE Band 13	10M	QPSK	50	0	Back	5mm	Ant 1	-	Reduced	23230	782	20.67	22.00	1.358	-0.14	0.820	1.114
	LTE Band 26	15M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	26865	831.5	20.67	22.00	1.358	0.13	0.543	0.738
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	26865	831.5	20.67	22.00	1.358	-0.19	0.933	1.267
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	26765	821.5	20.54	22.00	1.400	-0.11	0.886	1.240
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	26965	841.5	20.60	22.00	1.380	0.13	0.948	1.309
44	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 1	Headset	Reduced	26965	841.5	20.60	22.00	1.380	-0.01	0.947	1.307
	LTE Band 26	15M	QPSK	1	0	Front	20mm	Ant 1	-	Full	26865	831.5	22.55	24.00	1.396	0.17	0.206	0.288
	LTE Band 26	15M	QPSK	1	0	Back	24mm	Ant 1	-	Full	26965	841.5	22.49	24.00	1.416	0.11	0.213	0.302
	LTE Band 26	15M	QPSK	36	20	Front	5mm	Ant 1	-	Reduced	26865	831.5	19.75	21.00	1.334	-0.16	0.459	0.612
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 1	-	Reduced	26865	831.5	19.75	21.00	1.334	-0.14	0.782	1.043
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 1	-	Reduced	26765	821.5	19.68	21.00	1.355	0.16	0.763	1.034
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 1	-	Reduced	26965	841.5	19.73	21.00	1.340	0.18	0.771	1.033
	LTE Band 26	15M	QPSK	75	0	Back	5mm	Ant 1	-	Reduced	26865	831.5	19.60	21.00	1.380	0.02	0.774	1.068
	LTE Band 26	15M	QPSK	1	0	Front	5mm	Ant 2	-	Full	26865	831.5	21.69	23.00	1.352	-0.04	0.591	0.799
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 2	-	Full	26865	831.5	21.69	23.00	1.352	-0.13	0.953	1.289
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 2	-	Full	26765	821.5	21.68	23.00	1.355	0.06	0.873	1.183
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 2	-	Full	26965	841.5	21.68	23.00	1.355	-0.07	0.823	1.115
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 2	Headset	Full	26865	831.5	21.69	23.00	1.352	-0.09	0.934	1.263
	LTE Band 26	15M	QPSK	36	20	Front	5mm	Ant 2	-	Full	26865	831.5	20.86	22.00	1.300	-0.15	0.513	0.667
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 2	-	Full	26865	831.5	20.86	22.00	1.300	-0.18	0.942	1.225
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 2	-	Full	26765	821.5	20.83	22.00	1.309	-0.1	0.913	1.195
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 2	-	Full	26965	841.5	20.85	22.00	1.303	-0.17	0.853	1.112
	LTE Band 26	15M	QPSK	36	20	Back	5mm	Ant 2	Headset	Full	26865	831.5	20.86	22.00	1.300	0.02	0.921	1.197
	LTE Band 26	15M	QPSK	75	0	Back	5mm	Ant 2	-	Full	26865	831.5	20.79	22.00	1.321	-0.13	0.642	0.848
45	LTE Band 66	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	132322	1745	18.04	19.00	1.247	0.04	0.432	0.539
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	132322	1745	18.04	19.00	1.247	0.09	1.010	1.260



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	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	132072	1720	17.84	19.00	1.306	-0.17	0.900	1.176
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	132572	1770	17.76	19.00	1.330	0.14	0.943	1.255
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 1	Headset	Reduced	132322	1745	18.04	19.00	1.247	0.08	0.997	1.244
	LTE Band 66	20M	QPSK	1	0	Front	20mm	Ant 1	-	Full	132322	1745	22.67	24.00	1.358	0.17	0.219	0.297
	LTE Band 66	20M	QPSK	1	0	Back	24mm	Ant 1	-	Full	132322	1745	22.67	24.00	1.358	0.19	0.282	0.383
	LTE Band 66	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	132322	1745	16.98	18.00	1.265	0.07	0.369	0.467
	LTE Band 66	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	132322	1745	16.98	18.00	1.265	0.16	0.793	1.003
	LTE Band 66	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	132072	1720	16.97	18.00	1.268	-0.17	0.813	1.031
	LTE Band 66	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	132572	1770	16.77	18.00	1.327	-0.12	0.790	1.049
	LTE Band 66	20M	QPSK	100	0	Back	5mm	Ant 1	-	Reduced	132322	1745	16.95	18.00	1.274	-0.04	0.793	1.010
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	26340	1880	17.58	18.50	1.236	-0.02	0.536	0.662
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	26340	1880	17.58	18.50	1.236	0.03	0.874	1.080
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	26140	1860	17.51	18.50	1.256	-0.03	0.834	1.048
46	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	26590	1905	17.28	18.50	1.324	0.03	1.020	1.351
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 1	Headset	Reduced	26590	1905	17.28	18.50	1.324	-0.19	0.927	1.228
	LTE Band 25	20M	QPSK	1	0	Front	20mm	Ant 1	-	Full	26340	1880	22.84	24.00	1.306	-0.01	0.309	0.404
	LTE Band 25	20M	QPSK	1	0	Back	24mm	Ant 1	-	Full	26590	1905	22.63	24.00	1.371	0	0.353	0.484
	LTE Band 25	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	26340	1880	16.59	17.50	1.233	0.12	0.454	0.560
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	26340	1880	16.59	17.50	1.233	-0.16	0.743	0.916
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	26140	1860	16.56	17.50	1.242	0.09	0.701	0.870
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	26590	1905	16.28	17.50	1.324	-0.08	0.771	1.021
	LTE Band 25	20M	QPSK	100	0	Back	5mm	Ant 1	-	Reduced	26340	1880	16.56	17.50	1.242	-0.16	0.741	0.920
	LTE Band 25	20M	QPSK	1	0	Front	5mm	Ant 2	-	Reduced	26340	1880	16.03	17.00	1.250	0.19	0.588	0.735
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	26340	1880	16.03	17.00	1.250	0.07	0.893	1.116
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	26140	1860	15.95	17.00	1.274	-0.11	0.782	0.996
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	26590	1905	15.92	17.00	1.282	-0.19	0.986	1.264
	LTE Band 25	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	26590	1905	15.92	17.00	1.282	-0.17	0.923	1.184
	LTE Band 25	20M	QPSK	1	0	Front	20mm	Ant 2	-	Full	26340	1880	21.25	22.00	1.189	-0.14	0.409	0.486
	LTE Band 25	20M	QPSK	1	0	Back	24mm	Ant 2	-	Full	26590	1905	20.79	22.00	1.321	0.12	0.335	0.443
	LTE Band 25	20M	QPSK	50	24	Front	5mm	Ant 2	-	Reduced	26340	1880	15.08	16.00	1.236	-0.02	0.500	0.618
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	26340	1880	15.08	16.00	1.236	-0.08	0.724	0.895
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	26140	1860	15.04	16.00	1.247	0.13	0.659	0.822
	LTE Band 25	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	26590	1905	14.88	16.00	1.294	0.16	0.760	0.984
	LTE Band 25	20M	QPSK	100	0	Back	5mm	Ant 2	-	Reduced	26340	1880	14.92	16.00	1.282	-0.17	0.664	0.851
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	20850	2510	17.88	19.00	1.294	-0.12	0.711	0.920
47	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	20850	2510	17.88	19.00	1.294	0.03	1.000	1.294
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	21100	2535	17.73	19.00	1.340	0.18	0.686	0.919
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	21350	2560	17.77	19.00	1.327	0.16	0.670	0.889
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	21100	2535	17.73	19.00	1.340	-0.03	0.940	1.259
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	21350	2560	17.77	19.00	1.327	0.17	0.930	1.234
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 1	Headset	Reduced	20850	2510	17.88	19.00	1.294	0.15	0.980	1.268
	LTE Band 7	20M	QPSK	1	0	Front	20mm	Ant 1	-	Full	20850	2510	22.77	24.00	1.327	0.1	0.264	0.350
	LTE Band 7	20M	QPSK	1	0	Back	24mm	Ant 1	-	Full	20850	2510	22.77	24.00	1.327	0.04	0.311	0.413
	LTE Band 7	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	20850	2510	16.97	18.00	1.268	0.05	0.572	0.725
	LTE Band 7	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	20850	2510	16.97	18.00	1.268	0.05	0.865	1.097
	LTE Band 7	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	21100	2535	16.87	18.00	1.297	0.06	0.807	1.047
	LTE Band 7	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	21350	2560	16.93	18.00	1.279	0.16	0.732	0.937
	LTE Band 7	20M	QPSK	100	0	Front	5mm	Ant 1	-	Reduced	20850	2510	16.89	18.00	1.291	-0.05	0.567	0.732
	LTE Band 7	20M	QPSK	100	0	Back	5mm	Ant 1	-	Reduced	20850	2510	16.89	18.00	1.291	-0.06	0.848	1.095
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 2	-	Reduced	20850	2510	13.43	14.50	1.279	-0.05	0.260	0.333
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	20850	2510	13.43	14.50	1.279	-0.07	0.686	0.878
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	21100	2535	13.39	14.50	1.291	-0.08	0.713	0.921
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	21350	2560	13.27	14.50	1.327	-0.01	0.934	1.240
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	21350	2560	13.27	14.50	1.327	0.14	0.912	1.211
	LTE Band 7	20M	QPSK	1	0	Front	20mm	Ant 2	-	Full	20850	2510	20.95	22.00	1.274	0.02	0.299	0.381
	LTE Band 7	20M	QPSK	1	0	Back	24mm	Ant 2	-	Full	21350	2560	20.71	22.00	1.346	0.08	0.406	0.546

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LTE Band 7	20M	QPSK	50	24	Front	5mm	Ant 2	-	Reduced	20850	2510	12.45	13.50	1.274	0.05	0.223	0.284
LTE Band 7	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	20850	2510	12.45	13.50	1.274	0.12	0.618	0.787
LTE Band 7	20M	QPSK	100	0	Back	5mm	Ant 2	-	Reduced	20850	2510	12.39	13.50	1.291	-0.1	0.634	0.819

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	40185	2549.5	19.48	20.50	1.265	62.9	1.006	0.05	0.641	0.816
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	40185	2549.5	19.48	20.50	1.265	62.9	1.006	0.07	0.839	1.067
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	39750	2506	19.45	20.50	1.274	62.9	1.006	-0.13	0.629	0.806
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	40620	2593	19.30	20.50	1.318	62.9	1.006	0.18	0.614	0.814
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	41055	2636.5	19.43	20.50	1.279	62.9	1.006	-0.17	0.588	0.757
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	41490	2680	19.41	20.50	1.285	62.9	1.006	0.11	0.582	0.753
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	39750+39948	2506+2525.8	19.36	20.50	1.300	62.9	1.006	0.12	0.883	1.155
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	39750	2506	19.45	20.50	1.274	62.9	1.006	0.04	0.945	1.211
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	40620	2593	19.30	20.50	1.318	62.9	1.006	-0.18	0.742	0.984
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	41055	2636.5	19.43	20.50	1.279	62.9	1.006	-0.08	0.677	0.871
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	41490	2680	19.41	20.50	1.285	62.9	1.006	-0.07	0.665	0.860
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 1	Headset	Reduced	39750	2506	19.45	20.50	1.274	62.9	1.006	0.09	0.893	1.144
	LTE Band 41-PC3	20M	QPSK	1	0	Front	20mm	Ant 1	-	Full	39750	2506	22.66	24.00	1.361	62.9	1.006	0.02	0.215	0.294
	LTE Band 41-PC3	20M	QPSK	1	0	Back	24mm	Ant 1	-	Full	39750	2506	22.66	24.00	1.361	62.9	1.006	0.01	0.250	0.343
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	40185	2549.5	18.69	19.50	1.205	62.9	1.006	-0.07	0.524	0.635
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	40185	2549.5	18.69	19.50	1.205	62.9	1.006	-0.19	0.674	0.817
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	39750	2506	18.67	19.50	1.211	62.9	1.006	0.04	0.513	0.625
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	40620	2593	18.53	19.50	1.250	62.9	1.006	-0.18	0.471	0.592
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	41055	2636.5	18.59	19.50	1.233	62.9	1.006	-0.08	0.470	0.583
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	41490	2680	18.63	19.50	1.222	62.9	1.006	0.03	0.459	0.564
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	39750	2506	18.67	19.50	1.211	62.9	1.006	0.06	0.744	0.906
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	40620	2593	18.53	19.50	1.250	62.9	1.006	0.03	0.584	0.735
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	41055	2636.5	18.59	19.50	1.233	62.9	1.006	-0.15	0.561	0.696
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	41490	2680	18.63	19.50	1.222	62.9	1.006	-0.06	0.554	0.681
	LTE Band 41-PC3	20M	QPSK	100	0	Front	5mm	Ant 1	-	Reduced	40185	2549.5	18.69	19.50	1.205	62.9	1.006	0.03	0.517	0.627
	LTE Band 41-PC3	20M	QPSK	100	0	Back	5mm	Ant 1	-	Reduced	40185	2549.5	18.69	19.50	1.205	62.9	1.006	-0.1	0.672	0.815
	LTE Band 41-PC3	20M	QPSK	1	0	Front	5mm	Ant 2	-	Reduced	40185	2549.5	14.46	15.50	1.271	62.9	1.006	0.1	0.223	0.285
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	40185	2549.5	14.46	15.50	1.271	62.9	1.006	-0.09	0.681	0.870
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	39750	2506	14.36	15.50	1.300	62.9	1.006	0	0.616	0.806
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	40620	2593	14.37	15.50	1.297	62.9	1.006	-0.09	0.793	1.035
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	41055	2636.5	14.44	15.50	1.276	62.9	1.006	-0.09	0.891	1.144
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	41490	2680	14.34	15.50	1.306	62.9	1.006	-0.19	0.926	1.217
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	41490	2680	14.34	15.50	1.306	62.9	1.006	0.11	1.070	1.406
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	41490+41292	2680+2660.2	14.27	15.50	1.327	62.9	1.006	0.05	1.040	1.389
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	39750	2506+2525.8	14.34	15.50	1.306	62.9	1.006	0.12	0.606	0.796
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	40185+39987	2549.5+2529.7	14.45	15.50	1.274	62.9	1.006	0.07	0.695	0.890
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	40620+40422	2593+2573.2	14.21	15.50	1.346	62.9	1.006	-0.05	0.824	1.116
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	41055+40857	2636.5+2616.7	14.25	15.50	1.334	62.9	1.006	0.07	0.903	1.211
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	40185	2549.5	14.46	15.50	1.271	62.9	1.006	-0.01	0.698	0.892
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	39750	2506	14.36	15.50	1.300	62.9	1.006	0.02	0.621	0.812
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	40620	2593	14.37	15.50	1.297	62.9	1.006	-0.11	0.817	1.066
	LTE Band 41-PC3	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	41055	2636.5	14.44	15.50	1.276	62.9	1.006	0.04	0.930	1.194
	LTE Band 41-PC3	20M	QPSK	1	0	Front	20mm	Ant 2	-	Full	40185	2549.5	20.87	22.00	1.297	62.9	1.006	-0.11	0.317	0.414
	LTE Band 41-PC3	20M	QPSK	1	0	Back	24mm	Ant 2	-	Full	41490	2680	20.72	22.00	1.343	62.9	1.006	0.08	0.473	0.639
	LTE Band 41-PC3	20M	QPSK	50	24	Front	5mm	Ant 2	-	Reduced	40185	2549.5	13.81	14.50	1.172	62.9	1.006	-0.05	0.179	0.211
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	40185	2549.5	13.81	14.50	1.172	62.9	1.006	-0.05	0.572	0.675

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FCC SAR Test Report

Report No. : FA151921

	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	39750	2506	13.74	14.50	1.191	62.9	1.006	0.19	0.378	0.453
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	40620	2593	13.76	14.50	1.186	62.9	1.006	0.1	0.444	0.530
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	41055	2636.5	13.73	14.50	1.194	62.9	1.006	0.11	0.542	0.651
	LTE Band 41-PC3	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	41490	2680	13.77	14.50	1.183	62.9	1.006	0.16	0.596	0.709
	LTE Band 41-PC3	20M	QPSK	100	0	Back	5mm	Ant 2	-	Reduced	40185	2549.5	13.70	14.50	1.202	62.9	1.006	0.15	0.549	0.664
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	40185	2549.5	21.51	22.50	1.256	42.9	1.009	0.12	0.646	0.819
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	40185	2549.5	21.51	22.50	1.256	42.9	1.009	-0.04	0.891	1.129
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	39750	2506	21.44	22.50	1.276	42.9	1.009	0.07	0.638	0.822
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	40620	2593	21.41	22.50	1.285	42.9	1.009	0.17	0.580	0.752
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	41055	2636.5	21.40	22.50	1.288	42.9	1.009	0.12	0.585	0.760
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 1	-	Reduced	41490	2680	21.42	22.50	1.282	42.9	1.009	-0.05	0.558	0.722
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	39750	2506	21.44	22.50	1.276	42.9	1.009	-0.18	0.956	1.231
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	40620	2593	21.41	22.50	1.285	42.9	1.009	-0.05	0.792	1.027
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	41055	2636.5	21.40	22.50	1.288	42.9	1.009	0.13	0.713	0.927
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	-	Reduced	41490	2680	21.42	22.50	1.282	42.9	1.009	0.15	0.703	0.910
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 1	Headset	Reduced	39750	2506	21.44	22.50	1.276	42.9	1.009	0.03	0.953	1.227
	LTE Band 41-PC2	20M	QPSK	1	0	Front	20mm	Ant 1	-	Full	39750	2506	25.77	27.00	1.327	42.9	1.009	0.02	0.201	0.270
	LTE Band 41-PC2	20M	QPSK	1	0	Back	24mm	Ant 1	-	Full	39750	2506	25.77	27.00	1.327	42.9	1.009	-0.09	0.202	0.271
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	40185	2549.5	20.84	21.50	1.164	42.9	1.009	-0.01	0.537	0.631
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	40185	2549.5	20.84	21.50	1.164	42.9	1.009	0.01	0.726	0.853
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	39750	2506	20.83	21.50	1.167	42.9	1.009	-0.01	0.410	0.483
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	40620	2593	20.66	21.50	1.213	42.9	1.009	-0.18	0.375	0.459
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	41055	2636.5	20.74	21.50	1.191	42.9	1.009	-0.05	0.372	0.447
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 1	-	Reduced	41490	2680	20.70	21.50	1.202	42.9	1.009	-0.13	0.365	0.443
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	39750	2506	20.83	21.50	1.167	42.9	1.009	0.04	0.811	0.955
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	40620	2593	20.66	21.50	1.213	42.9	1.009	-0.07	0.629	0.770
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	41055	2636.5	20.74	21.50	1.191	42.9	1.009	-0.04	0.603	0.725
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 1	-	Reduced	41490	2680	20.70	21.50	1.202	42.9	1.009	0.16	0.596	0.723
	LTE Band 41-PC2	20M	QPSK	100	0	Front	5mm	Ant 1	-	Reduced	40185	2549.5	20.66	21.50	1.213	42.9	1.009	0.11	0.491	0.601
	LTE Band 41-PC2	20M	QPSK	100	0	Back	5mm	Ant 1	-	Reduced	40185	2549.5	20.66	21.50	1.213	42.9	1.009	0.01	0.566	0.693
	LTE Band 41-PC2	20M	QPSK	1	0	Front	5mm	Ant 2	-	Reduced	40185	2549.5	16.47	17.50	1.268	42.9	1.009	-0.04	0.249	0.318
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	40185	2549.5	16.47	17.50	1.268	42.9	1.009	0.01	0.787	1.007
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	39750	2506	16.27	17.50	1.327	42.9	1.009	0.12	0.621	0.832
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	40620	2593	16.20	17.50	1.349	42.9	1.009	0.15	0.801	1.090
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	41055	2636.5	15.99	17.50	1.416	42.9	1.009	0.16	0.903	1.290
48	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	-	Reduced	41490	2680	15.99	17.50	1.416	42.9	1.009	0.02	1.010	1.443
	LTE Band 41-PC2	20M	QPSK	1	0	Back	5mm	Ant 2	Headset	Reduced	41490	2680	15.99	17.50	1.416	42.9	1.009	0.12	0.742	1.060
	LTE Band 41-PC2	20M	QPSK	1	0	Front	20mm	Ant 2	-	Full	40185	2549.5	24.18	25.00	1.208	42.9	1.009	0.06	0.138	0.168
	LTE Band 41-PC2	20M	QPSK	1	0	Back	24mm	Ant 2	-	Full	41490	2680	23.98	25.00	1.265	42.9	1.009	-0.14	0.334	0.426
	LTE Band 41-PC2	20M	QPSK	50	24	Front	5mm	Ant 2	-	Reduced	40185	2549.5	15.64	16.50	1.219	42.9	1.009	-0.07	0.211	0.260
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	40185	2549.5	15.64	16.50	1.219	42.9	1.009	0.14	0.682	0.839
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	39750	2506	15.56	16.50	1.242	42.9	1.009	0.15	0.410	0.514
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	40620	2593	15.28	16.50	1.324	42.9	1.009	0.11	0.502	0.671
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	41055	2636.5	15.21	16.50	1.346	42.9	1.009	0.06	0.574	0.779
	LTE Band 41-PC2	20M	QPSK	50	24	Back	5mm	Ant 2	-	Reduced	41490	2680	15.23	16.50	1.340	42.9	1.009	0.18	0.604	0.816
	LTE Band 41-PC2	20M	QPSK	100	0	Back	5mm	Ant 2	-	Reduced	40185	2549.5	15.57	16.50	1.239	42.9	1.009	-0.03	0.683	0.854

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 3	-	Reduced	6	2437	15.53	17.53	1.585	100	1.000	0.19	0.321	0.509
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	-	Reduced	6	2437	15.53	17.53	1.585	100	1.000	0.1	0.549	0.870
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	-	Reduced	1	2412	15.52	17.52	1.585	100	1.000	0.19	0.647	1.025
49	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	-	Reduced	11	2462	15.42	17.42	1.585	100	1.000	0.14	0.688	1.090
	WLAN2.4GHz	802.11b 1Mbps	Front	20mm	Ant 3	-	Full	6	2437	21.00	23.00	1.585	100	1.000	0.1	0.059	0.094
	WLAN2.4GHz	802.11b 1Mbps	Back	24mm	Ant 3	-	Full	11	2462	20.90	22.90	1.585	100	1.000	-0.01	0.086	0.136
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 3	-	Simultaneous	6	2437	9.57	11.57	1.585	100	1.000	0.19	0.052	0.082
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	-	Simultaneous	6	2437	9.57	11.57	1.585	100	1.000	0.07	0.133	0.211
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	-	Simultaneous	1	2412	9.56	11.56	1.585	100	1.000	-0.03	0.125	0.198
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	-	Simultaneous	11	2462	9.43	11.43	1.585	100	1.000	-0.08	0.159	0.252

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	DH5 1Mbps	Front	5mm	Ant 3	-	Full	78	2480	7.80	9.80	1.585	76.7	1.304	0.14	0.022	0.045
50	Bluetooth	DH5 1Mbps	Back	5mm	Ant 3	-	Full	78	2480	7.80	9.80	1.585	76.7	1.304	0.03	0.069	0.143
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 3	-	Full	0	2402	7.80	9.80	1.585	76.7	1.304	-0.12	0.051	0.105
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 3	-	Full	39	2441	7.60	9.60	1.585	76.7	1.304	0.09	0.058	0.120



<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	5mm	Ant 4	-	Reduced	54	5270	16.40	18.40	1.585	100	1.000	-0.14	0.358	0.567
51	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 4	-	Reduced	54	5270	16.40	18.40	1.585	100	1.000	0.13	0.754	1.195
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 4	-	Reduced	62	5310	16.38	18.38	1.585	100	1.000	0.01	0.744	1.179
	WLAN5.3GHz	802.11a 6Mbps	Front	20mm	Ant 4	-	Full	64	5320	18.91	20.91	1.585	100	1.000	0.13	0.126	0.200
	WLAN5.3GHz	802.11a 6Mbps	Back	24mm	Ant 4	-	Full	64	5320	18.91	20.91	1.585	100	1.000	0.13	0.145	0.230
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	-	Simultaneous	58	5290	9.95	11.95	1.585	100	1.000	0.06	0.112	0.178
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	-	Simultaneous	58	5290	9.95	11.95	1.585	100	1.000	0.06	0.180	0.285
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	-	Reduced	106	5530	15.30	17.30	1.585	100	1.000	0.15	0.438	0.694
52	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	-	Reduced	106	5530	15.30	17.30	1.585	100	1.000	0.06	0.739	1.171
	WLAN5.5GHz	802.11a 6Mbps	Front	20mm	Ant 4	-	Full	140	5700	18.66	20.66	1.585	100	1.000	0.09	0.157	0.249
	WLAN5.5GHz	802.11a 6Mbps	Back	24mm	Ant 4	-	Full	140	5700	18.66	20.66	1.585	100	1.000	-0.18	0.183	0.290
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	-	Simultaneous	106	5530	9.28	11.28	1.585	100	1.000	0.18	0.102	0.162
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	-	Simultaneous	106	5530	9.28	11.28	1.585	100	1.000	0.01	0.164	0.260
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	-	Reduced	155	5775	14.44	16.44	1.585	100	1.000	0.15	0.252	0.399
53	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	-	Reduced	155	5775	14.44	16.44	1.585	100	1.000	0.14	0.752	1.192
	WLAN5.8GHz	802.11a 6Mbps	Front	20mm	Ant 4	-	Full	149	5745	18.28	20.28	1.585	100	1.000	0.13	0.141	0.223
	WLAN5.8GHz	802.11a 6Mbps	Back	24mm	Ant 4	-	Full	149	5745	18.28	20.28	1.585	100	1.000	0.17	0.169	0.268
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	-	Simultaneous	155	5775	8.42	10.42	1.585	100	1.000	0.07	0.099	0.157
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	-	Simultaneous	155	5775	8.42	10.42	1.585	100	1.000	0.02	0.189	0.300



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 4 Tx slots	Front	0mm	Ant 1	Full	128	824.2	29.05	30.00	1.245	0.07	1.100	1.369
	GSM850	GPRS 4 Tx slots	Back	0mm	Ant 1	Full	128	824.2	29.05	30.00	1.245	0.04	1.980	2.464
	GSM850	GPRS 4 Tx slots	Back	0mm	Ant 1	Full	189	836.4	28.90	30.00	1.288	-0.03	1.970	2.538
	GSM850	GPRS 4 Tx slots	Back	0mm	Ant 1	Full	251	848.8	28.82	30.00	1.312	0.15	1.940	2.546
	GSM850	GPRS 4 Tx slots	Right Side	0mm	Ant 1	Full	128	824.2	29.05	30.00	1.245	0.1	0.780	0.971
	GSM850	GPRS 4 Tx slots	Bottom Side	0mm	Ant 1	Full	128	824.2	29.05	30.00	1.245	0.11	1.960	2.439
	GSM850	GPRS 4 Tx slots	Bottom Side	0mm	Ant 1	Full	189	836.4	28.90	30.00	1.288	0.13	1.950	2.512
	GSM850	GPRS 4 Tx slots	Bottom Side	0mm	Ant 1	Full	251	848.8	28.82	30.00	1.312	-0.17	2.050	2.690
	GSM850	GPRS 4 Tx slots	Front	0mm	Ant 2	Full	128	824.2	28.19	29.00	1.205	-0.04	1.700	2.049
	GSM850	GPRS 4 Tx slots	Front	0mm	Ant 2	Full	189	836.4	28.00	29.00	1.259	0.13	2.000	2.518
	GSM850	GPRS 4 Tx slots	Front	0mm	Ant 2	Full	251	848.8	27.94	29.00	1.276	0.05	1.800	2.298
54	GSM850	GPRS 4 Tx slots	Back	0mm	Ant 2	Full	128	824.2	28.19	29.00	1.205	-0.17	2.680	3.229
	GSM850	GPRS 4 Tx slots	Back	0mm	Ant 2	Full	189	836.4	28.00	29.00	1.259	-0.16	2.430	3.059
	GSM850	GPRS 4 Tx slots	Back	0mm	Ant 2	Full	251	848.8	27.94	29.00	1.276	0.06	2.370	3.025
	GSM850	GPRS 4 Tx slots	Top Side	0mm	Ant 2	Full	128	824.2	28.19	29.00	1.205	-0.07	1.940	2.338
	GSM850	GPRS 4 Tx slots	Top Side	0mm	Ant 2	Full	189	836.4	28.00	29.00	1.259	-0.03	1.760	2.216
	GSM850	GPRS 4 Tx slots	Top Side	0mm	Ant 2	Full	251	848.8	27.94	29.00	1.276	-0.03	1.460	1.864
	GSM1900	GPRS 4 Tx slots	Front	0mm	Ant 1	Reduced	512	1850.2	20.37	22.00	1.455	0.17	1.030	1.499
	GSM1900	GPRS 4 Tx slots	Back	0mm	Ant 1	Reduced	512	1850.2	20.37	22.00	1.455	-0.07	1.550	2.256
	GSM1900	GPRS 4 Tx slots	Back	0mm	Ant 1	Reduced	661	1880	20.19	22.00	1.517	-0.08	1.860	2.822
	GSM1900	GPRS 4 Tx slots	Back	0mm	Ant 1	Reduced	810	1909.8	20.07	22.00	1.560	-0.02	1.980	3.088
	GSM1900	GPRS 4 Tx slots	Left Side	0mm	Ant 1	Full	512	1850.2	26.39	27.50	1.291	-0.08	2.480	3.202
	GSM1900	GPRS 4 Tx slots	Left Side	0mm	Ant 1	Full	661	1880	26.20	27.50	1.349	-0.02	2.480	3.345
55	GSM1900	GPRS 4 Tx slots	Left Side	0mm	Ant 1	Full	810	1909.8	26.03	27.50	1.403	-0.11	2.550	3.577
	GSM1900	GPRS 4 Tx slots	Bottom Side	0mm	Ant 1	Reduced	512	1850.2	20.37	22.00	1.455	-0.13	1.320	1.921
	GSM1900	GPRS 4 Tx slots	Front	8mm	Ant 1	Full	512	1850.2	26.39	27.50	1.291	0.19	0.860	1.110
	GSM1900	GPRS 4 Tx slots	Back	13mm	Ant 1	Full	810	1909.8	26.03	27.50	1.403	0.12	0.786	1.103
	GSM1900	GPRS 4 Tx slots	Bottom Side	12mm	Ant 1	Full	512	1850.2	26.39	27.50	1.291	-0.12	1.170	1.511
	GSM1900	GPRS 4 Tx slots	Front	0mm	Ant 2	Reduced	512	1850.2	20.21	21.00	1.199	0.14	1.120	1.343
	GSM1900	GPRS 4 Tx slots	Back	0mm	Ant 2	Reduced	512	1850.2	20.21	21.00	1.199	-0.07	1.730	2.075
	GSM1900	GPRS 4 Tx slots	Back	0mm	Ant 2	Reduced	661	1880	19.59	21.00	1.384	0.11	1.700	2.352
	GSM1900	GPRS 4 Tx slots	Back	0mm	Ant 2	Reduced	810	1909.8	19.62	21.00	1.374	0.13	1.750	2.405
	GSM1900	GPRS 4 Tx slots	Top Side	0mm	Ant 2	Reduced	512	1850.2	20.21	21.00	1.199	0.17	1.820	2.183
	GSM1900	GPRS 4 Tx slots	Top Side	0mm	Ant 2	Reduced	661	1880	19.59	21.00	1.384	-0.19	2.060	2.850
	GSM1900	GPRS 4 Tx slots	Top Side	0mm	Ant 2	Reduced	810	1909.8	19.62	21.00	1.374	0.15	2.410	3.311
	GSM1900	GPRS 4 Tx slots	Front	7mm	Ant 2	Full	512	1850.2	24.32	25.50	1.312	-0.12	0.830	1.089
	GSM1900	GPRS 4 Tx slots	Back	14mm	Ant 2	Full	810	1909.8	24.00	25.50	1.413	-0.04	0.480	0.678
	GSM1900	GPRS 4 Tx slots	Top Side	14mm	Ant 2	Full	810	1909.8	24.00	25.50	1.413	0.18	0.681	0.962

<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 V	RMC 12.2Kbps	Front	0mm	Ant 1	Full	4233	846.6	22.94	24.00	1.276	-0.02	1.180	1.506
56	WCDMA V	RMC 12.2Kbps	Back	0mm	Ant 1	Full	4233	846.6	22.94	24.00	1.276	0.15	1.370	1.749
	WCDMA V	RMC 12.2Kbps	Back	0mm	Ant 1	Full	4132	826.4	22.74	24.00	1.337	0.01	1.290	1.724
	WCDMA V	RMC 12.2Kbps	Back	0mm	Ant 1	Full	4182	836.4	22.85	24.00	1.303	0.17	1.320	1.720
	WCDMA V	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Full	4233	846.6	22.94	24.00	1.276	0.19	1.220	1.557
	WCDMA V	RMC 12.2Kbps	Back	0mm	Ant 2	Full	4233	846.6	22.15	23.00	1.216	-0.03	1.410	1.715
	WCDMA V	RMC 12.2Kbps	Back	0mm	Ant 2	Full	4132	826.4	21.98	23.00	1.265	-0.08	1.320	1.669
	WCDMA V	RMC 12.2Kbps	Back	0mm	Ant 2	Full	4182	836.4	21.98	23.00	1.265	0.17	1.350	1.707
	WCDMA IV	RMC 12.2Kbps	Front	0mm	Ant 1	Reduced	1413	1732.6	20.63	21.50	1.222	0.04	1.580	1.930
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	1413	1732.6	20.63	21.50	1.222	-0.01	2.430	2.969
57	WCDMA IV	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	1312	1712.4	20.52	21.50	1.253	0.04	2.600	3.258
	WCDMA IV	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	1513	1752.6	20.58	21.50	1.236	-0.02	2.350	2.904
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	1413	1732.6	20.63	21.50	1.222	0.06	2.160	2.639
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	1312	1712.4	20.52	21.50	1.253	0.03	2.200	2.757
	WCDMA IV	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	1513	1752.6	20.58	21.50	1.236	0.05	2.140	2.645
	WCDMA IV	RMC 12.2Kbps	Front	8mm	Ant 1	Full	1413	1732.6	23.20	24.00	1.202	-0.02	0.511	0.614
	WCDMA IV	RMC 12.2Kbps	Back	13mm	Ant 1	Full	1312	1712.4	23.15	24.00	1.216	-0.19	0.612	0.744
	WCDMA IV	RMC 12.2Kbps	Bottom Side	12mm	Ant 1	Full	1312	1712.4	23.15	24.00	1.216	0.01	0.752	0.915
	WCDMA II	RMC 12.2Kbps	Front	0mm	Ant 1	Reduced	9262	1852.4	19.98	20.50	1.127	0.1	1.380	1.556
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	9262	1852.4	19.98	20.50	1.127	0.01	2.100	2.367
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	9400	1880	19.75	20.50	1.189	-0.1	2.260	2.686
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	9538	1907.6	19.70	20.50	1.202	-0.14	2.560	3.078
	WCDMA II	RMC 12.2Kbps	Left Side	0mm	Ant 1	Full	9262	1852.4	23.24	24.00	1.191	-0.15	2.050	2.442
	WCDMA II	RMC 12.2Kbps	Left Side	0mm	Ant 1	Full	9400	1880	23.03	24.00	1.250	-0.18	2.190	2.738
	WCDMA II	RMC 12.2Kbps	Left Side	0mm	Ant 1	Full	9538	1907.6	22.79	24.00	1.321	0.15	2.380	3.145
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	9262	1852.4	19.98	20.50	1.127	-0.06	1.840	2.074
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	9400	1880	19.75	20.50	1.189	-0.09	1.870	2.222
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 1	Reduced	9538	1907.6	19.70	20.50	1.202	0.02	1.930	2.320
	WCDMA II	RMC 12.2Kbps	Front	8mm	Ant 1	Full	9262	1852.4	23.24	24.00	1.191	0.13	0.835	0.995
	WCDMA II	RMC 12.2Kbps	Back	13mm	Ant 1	Full	9538	1907.6	22.79	24.00	1.321	0.11	0.645	0.852
	WCDMA II	RMC 12.2Kbps	Bottom Side	12mm	Ant 1	Full	9538	1907.6	22.79	24.00	1.321	0.07	1.010	1.335
	WCDMA II	RMC 12.2Kbps	Front	0mm	Ant 2	Reduced	9262	1852.4	17.26	18.50	1.330	-0.19	0.960	1.277
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 2	Reduced	9262	1852.4	17.26	18.50	1.330	0.15	1.510	2.009
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 2	Reduced	9400	1880	17.01	18.50	1.409	0.04	1.580	2.227
	WCDMA II	RMC 12.2Kbps	Back	0mm	Ant 2	Reduced	9538	1907.6	16.74	18.50	1.500	0.04	1.530	2.295
	WCDMA II	RMC 12.2Kbps	Top Side	0mm	Ant 2	Reduced	9262	1852.4	17.26	18.50	1.330	-0.09	1.850	2.461
	WCDMA II	RMC 12.2Kbps	Top Side	0mm	Ant 2	Reduced	9400	1880	17.01	18.50	1.409	0.11	2.010	2.833
58	WCDMA II	RMC 12.2Kbps	Top Side	0mm	Ant 2	Reduced	9538	1907.6	16.74	18.50	1.500	0.07	2.150	3.224
	WCDMA II	RMC 12.2Kbps	Front	7mm	Ant 2	Full	9262	1852.4	21.82	23.00	1.312	-0.08	0.787	1.033
	WCDMA II	RMC 12.2Kbps	Back	14mm	Ant 2	Full	9538	1907.6	21.25	23.00	1.496	-0.12	0.425	0.636
	WCDMA II	RMC 12.2Kbps	Top Side	14mm	Ant 2	Full	9538	1907.6	21.25	23.00	1.496	0.07	0.476	0.712



<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 10g SAR (W/kg)	Reported 10g SAR (W/kg)
59	LTE Band 71	20M	QPSK	1	0	Back	0mm	Ant 1	Full	133322	683	22.38	24.00	1.452	0.13	1.100	1.597
	LTE Band 71	20M	QPSK	50	24	Back	0mm	Ant 1	Full	133322	683	21.44	23.00	1.432	0.02	0.985	1.411
60	LTE Band 13	10M	QPSK	1	0	Back	0mm	Ant 1	Full	23230	782	22.66	24.00	1.361	0.16	1.290	1.756
	LTE Band 13	10M	QPSK	25	12	Back	0mm	Ant 1	Full	23230	782	21.74	23.00	1.337	-0.04	1.030	1.377
	LTE Band 26	15M	QPSK	1	0	Front	0mm	Ant 1	Full	26865	831.5	22.55	24.00	1.396	-0.08	0.875	1.222
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 1	Full	26865	831.5	22.55	24.00	1.396	0.01	1.390	1.941
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 1	Full	26765	821.5	22.44	24.00	1.432	0.04	1.190	1.704
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 1	Full	26965	841.5	22.49	24.00	1.416	0	1.190	1.685
	LTE Band 26	15M	QPSK	1	0	Bottom Side	0mm	Ant 1	Full	26865	831.5	22.55	24.00	1.396	-0.11	1.230	1.718
	LTE Band 26	15M	QPSK	36	20	Front	0mm	Ant 1	Full	26865	831.5	21.51	23.00	1.409	-0.11	1.140	1.607
	LTE Band 26	15M	QPSK	36	20	Back	0mm	Ant 1	Full	26865	831.5	21.51	23.00	1.409	0.11	1.110	1.564
	LTE Band 26	15M	QPSK	36	20	Bottom Side	0mm	Ant 1	Full	26865	831.5	21.51	23.00	1.409	0.07	1.200	1.691
61	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 2	Full	26865	831.5	21.69	23.00	1.352	0.16	1.580	2.136
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 2	Full	26765	821.5	21.68	23.00	1.355	0.16	1.570	2.128
	LTE Band 26	15M	QPSK	1	0	Back	0mm	Ant 2	Full	26965	841.5	21.68	23.00	1.355	-0.03	1.460	1.979
	LTE Band 26	15M	QPSK	36	20	Back	0mm	Ant 2	Full	26865	831.5	20.86	22.00	1.300	0.02	1.190	1.547
	LTE Band 26	15M	QPSK	75	0	Back	0mm	Ant 2	Full	26865	831.5	20.79	22.00	1.321	0.14	0.950	1.255
	LTE Band 66	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	132322	1745	20.01	21.00	1.256	0.15	1.390	1.746
	LTE Band 66	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	132322	1745	20.01	21.00	1.256	-0.1	1.980	2.487
	LTE Band 66	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	132072	1720	19.88	21.00	1.294	-0.19	1.910	2.472
62	LTE Band 66	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	132572	1770	19.72	21.00	1.343	0.13	2.230	2.994
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	132322	1745	20.01	21.00	1.256	0	1.810	2.273
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	132072	1720	19.88	21.00	1.294	-0.15	1.860	2.407
	LTE Band 66	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	132572	1770	19.72	21.00	1.343	0.16	1.870	2.511
	LTE Band 66	20M	QPSK	1	0	Front	8mm	Ant 1	Full	132322	1745	22.67	24.00	1.358	0.07	0.520	0.706
	LTE Band 66	20M	QPSK	1	0	Back	13mm	Ant 1	Full	132572	1770	22.51	24.00	1.409	-0.03	0.478	0.674
	LTE Band 66	20M	QPSK	1	0	Bottom Side	12mm	Ant 1	Full	132572	1770	22.51	24.00	1.409	0.12	0.703	0.991
	LTE Band 66	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	132322	1745	19.01	20.00	1.256	-0.08	1.140	1.432
	LTE Band 66	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	132322	1745	19.01	20.00	1.256	-0.19	1.710	2.148
	LTE Band 66	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	132072	1720	18.99	20.00	1.262	-0.13	1.620	2.044
	LTE Band 66	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	132572	1770	18.83	20.00	1.309	-0.09	1.760	2.304
	LTE Band 66	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	132322	1745	19.01	20.00	1.256	0.16	1.600	2.010
	LTE Band 66	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	132072	1720	18.99	20.00	1.262	0.05	1.590	2.006
	LTE Band 66	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	132572	1770	18.83	20.00	1.309	0.16	1.560	2.042
	LTE Band 66	20M	QPSK	100	0	Back	0mm	Ant 1	Reduced	132322	1745	18.93	20.00	1.279	-0.08	1.680	2.149
	LTE Band 66	20M	QPSK	100	0	Bottom Side	0mm	Ant 1	Reduced	132322	1745	18.93	20.00	1.279	-0.19	1.580	2.021
	LTE Band 25	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	26340	1880	20.09	21.00	1.233	0.16	1.370	1.689
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	26340	1880	20.09	21.00	1.233	0.05	2.210	2.725
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	26140	1860	20.06	21.00	1.242	0.02	2.100	2.607
63	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	26590	1905	19.80	21.00	1.318	0.18	2.460	3.243
	LTE Band 25	20M	QPSK	1	0	Left Side	0mm	Ant 1	Full	26340	1880	22.84	24.00	1.306	0.02	1.920	2.508
	LTE Band 25	20M	QPSK	1	0	Left Side	0mm	Ant 1	Full	26140	1860	22.61	24.00	1.377	0.01	1.800	2.479
	LTE Band 25	20M	QPSK	1	0	Left Side	0mm	Ant 1	Full	26590	1905	22.63	24.00	1.371	0.03	2.040	2.797
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	26340	1880	20.09	21.00	1.233	0.07	1.760	2.170
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	26140	1860	20.06	21.00	1.242	0.13	1.650	2.049
	LTE Band 25	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	26590	1905	19.80	21.00	1.318	0.02	1.920	2.531
	LTE Band 25	20M	QPSK	1	0	Front	8mm	Ant 1	Full	26340	1880	22.84	24.00	1.306	0.01	0.637	0.832
	LTE Band 25	20M	QPSK	1	0	Back	13mm	Ant 1	Full	26590	1905	22.63	24.00	1.371	-0.04	0.553	0.758
	LTE Band 25	20M	QPSK	1	0	Bottom Side	12mm	Ant 1	Full	26590	1905	22.63	24.00	1.371	-0.19	0.890	1.220
	LTE Band 25	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	26340	1880	19.17	20.00	1.211	0.17	1.160	1.404
	LTE Band 25	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	26340	1880	19.17	20.00	1.211	0.12	1.920	2.324



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	LTE Band 25	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	26140	1860	18.92	20.00	1.282	0.03	1.800	2.308
	LTE Band 25	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	26590	1905	18.81	20.00	1.315	0.05	2.010	2.644
	LTE Band 25	20M	QPSK	50	24	Left Side	0mm	Ant 1	Full	26340	1880	21.68	23.00	1.355	0.19	1.700	2.304
	LTE Band 25	20M	QPSK	50	24	Left Side	0mm	Ant 1	Full	26140	1860	21.67	23.00	1.358	-0.01	1.610	2.187
	LTE Band 25	20M	QPSK	50	24	Left Side	0mm	Ant 1	Full	26590	1905	21.44	23.00	1.432	-0.09	1.740	2.492
	LTE Band 25	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	26340	1880	19.17	20.00	1.211	0.1	1.740	2.106
	LTE Band 25	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	26140	1860	18.92	20.00	1.282	-0.09	1.430	1.834
	LTE Band 25	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	26590	1905	18.81	20.00	1.315	0.06	1.620	2.131
	LTE Band 25	20M	QPSK	100	0	Back	0mm	Ant 1	Reduced	26340	1880	19.14	20.00	1.219	-0.01	1.840	2.243
	LTE Band 25	20M	QPSK	100	0	Left Side	0mm	Ant 1	Full	26340	1880	21.66	23.00	1.361	0.12	1.670	2.274
	LTE Band 25	20M	QPSK	100	0	Bottom Side	0mm	Ant 1	Reduced	26340	1880	19.14	20.00	1.219	0.13	1.590	1.938
	LTE Band 25	20M	QPSK	1	0	Front	0mm	Ant 2	Reduced	26340	1880	18.07	19.00	1.239	0.19	1.220	1.511
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	26340	1880	18.07	19.00	1.239	0.08	1.850	2.292
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	26140	1860	18.03	19.00	1.250	-0.05	1.780	2.225
	LTE Band 25	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	26590	1905	17.91	19.00	1.285	-0.01	1.960	2.519
	LTE Band 25	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	26340	1880	18.07	19.00	1.239	-0.09	2.180	2.701
	LTE Band 25	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	26140	1860	18.03	19.00	1.250	0.13	2.070	2.588
	LTE Band 25	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	26590	1905	17.91	19.00	1.285	0.07	2.470	3.175
	LTE Band 25	20M	QPSK	1	0	Front	7mm	Ant 2	Full	26340	1880	21.25	22.00	1.189	0.11	0.619	0.736
	LTE Band 25	20M	QPSK	1	0	Back	14mm	Ant 2	Full	26590	1905	20.79	22.00	1.321	-0.04	0.328	0.433
	LTE Band 25	20M	QPSK	1	0	Top Side	14mm	Ant 2	Full	26590	1905	20.79	22.00	1.321	-0.02	0.457	0.604
	LTE Band 25	20M	QPSK	50	24	Front	0mm	Ant 2	Reduced	26340	1880	17.08	18.00	1.236	0.07	1.050	1.298
	LTE Band 25	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	26340	1880	17.08	18.00	1.236	-0.04	1.590	1.965
	LTE Band 25	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	26340	1880	17.08	18.00	1.236	0.17	1.910	2.361
	LTE Band 25	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	26140	1860	17.05	18.00	1.245	0.03	1.800	2.240
	LTE Band 25	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	26590	1905	16.94	18.00	1.276	-0.11	2.000	2.553
	LTE Band 25	20M	QPSK	100	0	Back	0mm	Ant 2	Reduced	26340	1880	17.08	18.00	1.236	0.18	1.090	1.347
	LTE Band 25	20M	QPSK	100	0	Top Side	0mm	Ant 2	Reduced	26340	1880	17.08	18.00	1.236	0.16	1.600	1.978
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	20850	2510	20.46	21.50	1.271	0.09	1.730	2.198
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	21100	2535	20.25	21.50	1.334	0.19	1.570	2.094
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	21350	2560	20.26	21.50	1.330	0.06	1.560	2.076
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	20850	2510	20.46	21.50	1.271	-0.1	2.360	2.999
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	21100	2535	20.25	21.50	1.334	0.04	2.200	2.934
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	21350	2560	20.26	21.50	1.330	0.15	2.210	2.940
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	20850	2510	20.46	21.50	1.271	-0.18	1.940	2.465
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	21100	2535	20.25	21.50	1.334	0.13	1.810	2.414
	LTE Band 7	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	21350	2560	20.26	21.50	1.330	0.01	1.850	2.461
	LTE Band 7	20M	QPSK	1	0	Front	8mm	Ant 1	Full	20850	2510	22.77	24.00	1.327	0.03	0.684	0.908
	LTE Band 7	20M	QPSK	1	0	Back	13mm	Ant 1	Full	20850	2510	22.77	24.00	1.327	0.07	0.423	0.561
	LTE Band 7	20M	QPSK	1	0	Bottom Side	12mm	Ant 1	Full	20850	2510	22.77	24.00	1.327	0.06	0.690	0.916
	LTE Band 7	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	20850	2510	19.46	20.50	1.271	0.04	1.300	1.652
	LTE Band 7	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	20850	2510	19.46	20.50	1.271	0.19	2.010	2.554
	LTE Band 7	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	21100	2535	19.45	20.50	1.274	-0.05	2.000	2.547
	LTE Band 7	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	21350	2560	19.43	20.50	1.279	-0.06	2.040	2.610
	LTE Band 7	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	20850	2510	19.46	20.50	1.271	-0.02	1.590	2.020
	LTE Band 7	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	21100	2535	19.45	20.50	1.274	-0.1	1.650	2.101
	LTE Band 7	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	21350	2560	19.43	20.50	1.279	0.19	1.750	2.239
	LTE Band 7	20M	QPSK	100	0	Front	0mm	Ant 1	Reduced	20850	2510	19.41	20.50	1.285	0.19	1.270	1.632
	LTE Band 7	20M	QPSK	100	0	Back	0mm	Ant 1	Reduced	20850	2510	19.41	20.50	1.285	-0.05	2.050	2.635
	LTE Band 7	20M	QPSK	100	0	Bottom Side	0mm	Ant 1	Reduced	20850	2510	19.41	20.50	1.285	-0.06	1.560	2.005
	LTE Band 7	20M	QPSK	1	0	Front	0mm	Ant 2	Reduced	20850	2510	17.56	18.50	1.242	-0.07	0.844	1.048
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	20850	2510	17.56	18.50	1.242	0.01	2.490	3.092
64	LTE Band 7	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	21100	2535	17.52	18.50	1.253	-0.08	2.540	3.183
	LTE Band 7	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	21350	2560	17.32	18.50	1.312	-0.08	2.400	3.149
	LTE Band 7	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	20850	2510	17.56	18.50	1.242	-0.08	2.140	2.657
	LTE Band 7	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	21100	2535	17.52	18.50	1.253	-0.13	2.100	2.632

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LTE Band 7	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	21350	2560	17.32	18.50	1.312	-0.02	2.090	2.742
LTE Band 7	20M	QPSK	1	0	Front	7mm	Ant 2	Full	20850	2510	20.95	22.00	1.274	0.16	0.450	0.573
LTE Band 7	20M	QPSK	1	0	Back	14mm	Ant 2	Full	21100	2535	20.79	22.00	1.321	-0.16	0.345	0.456
LTE Band 7	20M	QPSK	1	0	Top Side	14mm	Ant 2	Full	21350	2560	20.71	22.00	1.346	0.14	0.471	0.634
LTE Band 7	20M	QPSK	50	24	Front	0mm	Ant 2	Reduced	20850	2510	16.55	17.50	1.245	-0.1	0.711	0.885
LTE Band 7	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	20850	2510	16.55	17.50	1.245	-0.01	2.180	2.713
LTE Band 7	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	21100	2535	16.53	17.50	1.250	-0.03	2.120	2.651
LTE Band 7	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	21350	2560	16.37	17.50	1.297	-0.14	2.090	2.711
LTE Band 7	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	20850	2510	16.55	17.50	1.245	0.05	1.810	2.253
LTE Band 7	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	21100	2535	16.53	17.50	1.250	0.02	1.780	2.225
LTE Band 7	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	21350	2560	16.37	17.50	1.297	0.08	1.770	2.296
LTE Band 7	20M	QPSK	100	0	Back	0mm	Ant 2	Reduced	20850	2510	16.48	17.50	1.265	-0.08	2.290	2.896
LTE Band 7	20M	QPSK	100	0	Top Side	0mm	Ant 2	Reduced	20850	2510	16.48	17.50	1.265	-0.13	1.960	2.479

<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-PC3	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	40185	2549.5	21.89	23.00	1.291	62.9	1.006	0.09	1.400	1.819
	LTE Band 41-PC3	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	39750	2506	21.77	23.00	1.327	62.9	1.006	0.14	1.380	1.843
	LTE Band 41-PC3	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	40620	2593	21.79	23.00	1.321	62.9	1.006	-0.02	1.370	1.821
	LTE Band 41-PC3	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	41055	2636.5	21.87	23.00	1.297	62.9	1.006	-0.02	1.350	1.762
	LTE Band 41-PC3	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	41490	2680	21.78	23.00	1.324	62.9	1.006	0.04	1.400	1.865
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	40185	2549.5	21.89	23.00	1.291	62.9	1.006	-0.19	2.060	2.676
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	39750	2506	21.77	23.00	1.327	62.9	1.006	0.01	2.090	2.791
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	40620	2593	21.79	23.00	1.321	62.9	1.006	0.04	2.100	2.791
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	41055	2636.5	21.87	23.00	1.297	62.9	1.006	0.14	2.260	2.949
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	41490	2680	21.78	23.00	1.324	62.9	1.006	-0.02	2.340	3.118
	LTE Band 41C-PC3	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	41490+41292	2680+2660.2	21.74	23.00	1.337	62.9	1.006	-0.07	2.220	2.985
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	21.89	23.00	1.291	62.9	1.006	-0.02	1.850	2.403
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	39750	2506	21.77	23.00	1.327	62.9	1.006	0.17	1.690	2.257
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40620	2593	21.79	23.00	1.321	62.9	1.006	0.04	2.010	2.672
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	41055	2636.5	21.87	23.00	1.297	62.9	1.006	0	2.190	2.858
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	41490	2680	21.78	23.00	1.324	62.9	1.006	-0.14	2.290	3.051
	LTE Band 41-PC3	20M	QPSK	1	0	Front	8mm	Ant 1	Full	41490	2680	22.63	24.00	1.371	62.9	1.006	0.01	0.562	0.775
	LTE Band 41-PC3	20M	QPSK	1	0	Back	13mm	Ant 1	Full	41490	2680	22.63	24.00	1.371	62.9	1.006	-0.04	0.307	0.423
	LTE Band 41-PC3	20M	QPSK	1	0	Bottom Side	12mm	Ant 1	Full	41490	2680	22.63	24.00	1.371	62.9	1.006	-0.1	0.596	0.822
	LTE Band 41-PC3	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	40185	2549.5	21.02	22.00	1.253	62.9	1.006	-0.06	1.160	1.462
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	40185	2549.5	21.02	22.00	1.253	62.9	1.006	-0.15	1.720	2.168
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	39750	2506	21.00	22.00	1.259	62.9	1.006	0.01	1.760	2.229
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	40620	2593	20.76	22.00	1.330	62.9	1.006	-0.14	1.750	2.342
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	41055	2636.5	20.77	22.00	1.327	62.9	1.006	0.07	1.950	2.604
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	41490	2680	20.80	22.00	1.318	62.9	1.006	-0.07	2.140	2.838
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	21.02	22.00	1.253	62.9	1.006	0	1.590	2.004
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	39750	2506	21.00	22.00	1.259	62.9	1.006	-0.05	1.470	1.862
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	40620	2593	20.76	22.00	1.330	62.9	1.006	-0.17	1.700	2.275
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	41055	2636.5	20.77	22.00	1.327	62.9	1.006	-0.04	1.900	2.537
	LTE Band 41-PC3	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	41490	2680	20.80	22.00	1.318	62.9	1.006	0.06	1.990	2.639
	LTE Band 41-PC3	20M	QPSK	100	0	Front	0mm	Ant 1	Reduced	40185	2549.5	20.87	22.00	1.297	62.9	1.006	-0.14	1.160	1.514
	LTE Band 41-PC3	20M	QPSK	100	0	Back	0mm	Ant 1	Reduced	40185	2549.5	20.87	22.00	1.297	62.9	1.006	0.07	1.600	2.088
	LTE Band 41-PC3	20M	QPSK	100	0	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	20.87	22.00	1.297	62.9	1.006	-0.07	1.610	2.101
	LTE Band 41-PC3	20M	QPSK	1	0	Front	0mm	Ant 2	Reduced	40185	2549.5	19.49	20.50	1.262	62.9	1.006	-0.13	1.000	1.269
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	40185	2549.5	19.49	20.50	1.262	62.9	1.006	-0.09	2.610	3.313
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	39750	2506	19.32	20.50	1.312	62.9	1.006	-0.04	2.550	3.366

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65	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	40620	2593	19.29	20.50	1.321	62.9	1.006	0.11	2.540	3.376
	LTE Band 41C-PC3	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	40620+ 40422	2593+ 2573.2	19.34	20.50	1.306	62.9	1.006	0.07	2.270	2.983
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	41055	2636.5	19.26	20.50	1.330	62.9	1.006	-0.03	2.510	3.359
	LTE Band 41-PC3	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	41490	2680	18.96	20.50	1.426	62.9	1.006	0.02	2.260	3.241
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	40185	2549.5	19.49	20.50	1.262	62.9	1.006	0.03	2.320	2.945
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	39750	2506	19.32	20.50	1.312	62.9	1.006	-0.08	2.340	3.089
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	40620	2593	19.29	20.50	1.321	62.9	1.006	-0.05	2.380	3.164
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	41055	2636.5	19.26	20.50	1.330	62.9	1.006	-0.05	2.280	3.052
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	41490	2680	18.96	20.50	1.426	62.9	1.006	0.14	2.110	3.026
	LTE Band 41-PC3	20M	QPSK	1	0	Front	7mm	Ant 2	Full	40185	2549.5	20.87	22.00	1.297	62.9	1.006	0.11	0.368	0.480
	LTE Band 41-PC3	20M	QPSK	1	0	Back	14mm	Ant 2	Full	40620	2593	20.72	22.00	1.343	62.9	1.006	-0.15	0.268	0.362
	LTE Band 41-PC3	20M	QPSK	1	0	Top Side	14mm	Ant 2	Full	40620	2593	20.72	22.00	1.343	62.9	1.006	0.12	0.385	0.520
	LTE Band 41-PC3	20M	QPSK	50	24	Front	0mm	Ant 2	Reduced	40185	2549.5	18.46	19.50	1.271	62.9	1.006	-0.16	0.857	1.095
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	40185	2549.5	18.46	19.50	1.271	62.9	1.006	0.18	2.330	2.978
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	39750	2506	18.45	19.50	1.274	62.9	1.006	0.05	2.430	3.113
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	40620	2593	17.98	19.50	1.419	62.9	1.006	0	2.270	3.241
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	41055	2636.5	17.93	19.50	1.435	62.9	1.006	-0.17	2.230	3.220
	LTE Band 41-PC3	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	41490	2680	17.97	19.50	1.422	62.9	1.006	-0.07	2.040	2.919
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	40185	2549.5	18.46	19.50	1.271	62.9	1.006	0.06	1.970	2.518
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	39750	2506	18.45	19.50	1.274	62.9	1.006	0.04	2.030	2.601
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	40620	2593	17.98	19.50	1.419	62.9	1.006	0.19	2.000	2.855
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	41055	2636.5	17.93	19.50	1.435	62.9	1.006	0.03	1.940	2.802
	LTE Band 41-PC3	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	41490	2680	17.97	19.50	1.422	62.9	1.006	0.07	1.760	2.518
	LTE Band 41-PC3	20M	QPSK	100	0	Back	0mm	Ant 2	Reduced	40185	2549.5	18.39	19.50	1.291	62.9	1.006	-0.16	2.310	3.001
	LTE Band 41-PC3	20M	QPSK	100	0	Top Side	0mm	Ant 2	Reduced	40185	2549.5	18.39	19.50	1.291	62.9	1.006	0.18	1.930	2.507
	LTE Band 41-PC2	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	40185	2549.5	24.02	25.00	1.253	42.9	1.009	-0.07	1.460	1.846
	LTE Band 41-PC2	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	39750	2506	23.95	25.00	1.274	42.9	1.009	0.18	1.090	1.401
	LTE Band 41-PC2	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	40620	2593	23.94	25.00	1.276	42.9	1.009	-0.11	1.080	1.391
	LTE Band 41-PC2	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	41055	2636.5	23.95	25.00	1.274	42.9	1.009	0.12	1.070	1.375
	LTE Band 41-PC2	20M	QPSK	1	0	Front	0mm	Ant 1	Reduced	41490	2680	24.01	25.00	1.256	42.9	1.009	0.16	1.100	1.394
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	40185	2549.5	24.02	25.00	1.253	42.9	1.009	-0.02	2.010	2.541
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	39750	2506	23.95	25.00	1.274	42.9	1.009	-0.03	2.050	2.634
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	40620	2593	23.94	25.00	1.276	42.9	1.009	0.01	2.050	2.640
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	41055	2636.5	23.95	25.00	1.274	42.9	1.009	-0.02	2.170	2.788
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 1	Reduced	41490	2680	24.01	25.00	1.256	42.9	1.009	0.08	2.400	3.042
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	24.02	25.00	1.253	42.9	1.009	0.15	1.950	2.466
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	39750	2506	23.95	25.00	1.274	42.9	1.009	0.16	1.780	2.287
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	40620	2593	23.94	25.00	1.276	42.9	1.009	-0.19	2.140	2.756
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	41055	2636.5	23.95	25.00	1.274	42.9	1.009	0.08	2.320	2.981
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	0mm	Ant 1	Reduced	41490	2680	24.01	25.00	1.256	42.9	1.009	0.14	2.410	3.054
	LTE Band 41-PC2	20M	QPSK	1	0	Front	8mm	Ant 1	Full	40185	2549.5	25.97	27.00	1.268	42.9	1.009	0.18	0.420	0.537
	LTE Band 41-PC2	20M	QPSK	1	0	Back	13mm	Ant 1	Full	41490	2680	25.71	27.00	1.346	42.9	1.009	-0.12	0.225	0.306
	LTE Band 41-PC2	20M	QPSK	1	0	Bottom Side	12mm	Ant 1	Full	41490	2680	25.71	27.00	1.346	42.9	1.009	-0.12	0.449	0.610
	LTE Band 41-PC2	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	40185	2549.5	23.14	24.00	1.219	42.9	1.009	0.15	1.220	1.501
	LTE Band 41-PC2	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	39750	2506	23.08	24.00	1.236	42.9	1.009	0.12	0.931	1.161
	LTE Band 41-PC2	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	40620	2593	22.92	24.00	1.282	42.9	1.009	-0.08	0.884	1.144
	LTE Band 41-PC2	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	41055	2636.5	23.04	24.00	1.247	42.9	1.009	-0.03	0.905	1.139
	LTE Band 41-PC2	20M	QPSK	50	24	Front	0mm	Ant 1	Reduced	41490	2680	23.05	24.00	1.245	42.9	1.009	0.01	0.934	1.173
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	40185	2549.5	23.14	24.00	1.219	42.9	1.009	0.03	1.700	2.091
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	39750	2506	23.08	24.00	1.236	42.9	1.009	0.11	1.740	2.170
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	40620	2593	22.92	24.00	1.282	42.9	1.009	0.19	1.710	2.213
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	41055	2636.5	23.04	24.00	1.247	42.9	1.009	-0.02	1.900	2.391
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 1	Reduced	41490	2680	23.05	24.00	1.245	42.9	1.009	0.12	2.080	2.612
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	23.14	24.00	1.219	42.9	1.009	-0.08	1.700	2.091
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	39750	2506	23.08	24.00	1.236	42.9	1.009	-0.02	1.580	1.970
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	40620	2593	22.92	24.00	1.282	42.9	1.009	0.12	1.830	2.368

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	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	41055	2636.5	23.04	24.00	1.247	42.9	1.009	-0.18	2.070	2.605
	LTE Band 41-PC2	20M	QPSK	50	24	Bottom Side	0mm	Ant 1	Reduced	41490	2680	23.05	24.00	1.245	42.9	1.009	0.1	2.190	2.750
	LTE Band 41-PC2	20M	QPSK	100	0	Front	0mm	Ant 1	Reduced	40185	2549.5	23.06	24.00	1.242	42.9	1.009	0.08	0.928	1.163
	LTE Band 41-PC2	20M	QPSK	100	0	Back	0mm	Ant 1	Reduced	40185	2549.5	23.06	24.00	1.242	42.9	1.009	0.14	1.230	1.541
	LTE Band 41-PC2	20M	QPSK	100	0	Bottom Side	0mm	Ant 1	Reduced	40185	2549.5	23.06	24.00	1.242	42.9	1.009	0.18	1.260	1.579
	LTE Band 41-PC2	20M	QPSK	1	0	Front	0mm	Ant 2	Reduced	40185	2549.5	21.73	22.50	1.194	42.9	1.009	0.16	0.920	1.108
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	40185	2549.5	21.73	22.50	1.194	42.9	1.009	0.1	2.450	2.952
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	39750	2506	21.72	22.50	1.197	42.9	1.009	0.18	2.530	3.055
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	40620	2593	21.58	22.50	1.236	42.9	1.009	-0.18	2.540	3.168
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	41055	2636.5	21.57	22.50	1.239	42.9	1.009	0.05	2.370	2.962
	LTE Band 41-PC2	20M	QPSK	1	0	Back	0mm	Ant 2	Reduced	41490	2680	21.60	22.50	1.230	42.9	1.009	0.05	2.230	2.768
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	40185	2549.5	21.73	22.50	1.194	42.9	1.009	0.07	2.130	2.566
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	39750	2506	21.72	22.50	1.197	42.9	1.009	-0.13	2.160	2.608
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	40620	2593	21.58	22.50	1.236	42.9	1.009	0.14	2.170	2.706
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	41055	2636.5	21.57	22.50	1.239	42.9	1.009	-0.1	2.080	2.600
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	0mm	Ant 2	Reduced	41490	2680	21.60	22.50	1.230	42.9	1.009	-0.14	1.910	2.371
	LTE Band 41-PC2	20M	QPSK	1	0	Front	7mm	Ant 2	Full	40185	2549.5	24.18	25.00	1.208	42.9	1.009	-0.08	0.279	0.340
	LTE Band 41-PC2	20M	QPSK	1	0	Back	14mm	Ant 2	Full	40620	2593	23.90	25.00	1.288	42.9	1.009	0.05	0.253	0.329
	LTE Band 41-PC2	20M	QPSK	1	0	Top Side	14mm	Ant 2	Full	40620	2593	23.90	25.00	1.288	42.9	1.009	-0.1	0.283	0.368
	LTE Band 41-PC2	20M	QPSK	50	24	Front	0mm	Ant 2	Reduced	40185	2549.5	20.81	21.50	1.172	42.9	1.009	-0.09	0.784	0.927
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	40185	2549.5	20.81	21.50	1.172	42.9	1.009	0.14	2.060	2.436
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	39750	2506	20.80	21.50	1.175	42.9	1.009	-0.1	2.150	2.549
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	40620	2593	20.72	21.50	1.197	42.9	1.009	-0.14	2.030	2.451
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	41055	2636.5	20.76	21.50	1.186	42.9	1.009	0.08	2.010	2.405
	LTE Band 41-PC2	20M	QPSK	50	24	Back	0mm	Ant 2	Reduced	41490	2680	20.78	21.50	1.180	42.9	1.009	0.18	1.850	2.203
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	40185	2549.5	20.81	21.50	1.172	42.9	1.009	0.1	1.820	2.153
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	39750	2506	20.80	21.50	1.175	42.9	1.009	-0.16	1.870	2.217
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	40620	2593	20.72	21.50	1.197	42.9	1.009	-0.17	1.830	2.210
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	41055	2636.5	20.76	21.50	1.186	42.9	1.009	-0.1	1.770	2.118
	LTE Band 41-PC2	20M	QPSK	50	24	Top Side	0mm	Ant 2	Reduced	41490	2680	20.78	21.50	1.180	42.9	1.009	0.17	1.590	1.894
	LTE Band 41-PC2	20M	QPSK	100	0	Back	0mm	Ant 2	Reduced	40185	2549.5	20.88	21.50	1.153	42.9	1.009	-0.14	2.290	2.665
	LTE Band 41-PC2	20M	QPSK	100	0	Top Side	0mm	Ant 2	Reduced	40185	2549.5	20.88	21.50	1.153	42.9	1.009	-0.08	2.150	2.502

<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)
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3	Full	6	2437	21.00	23.00	1.585	100	1.000	-0.09	1.920	3.043
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3	Full	1	2412	21.00	23.00	1.585	100	1.000	-0.05	1.880	2.980
66	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3	Full	11	2462	20.90	22.90	1.585	100	1.000	0.09	2.180	3.455
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3	Simultaneous	6	2437	15.06	17.06	1.585	100	1.000	0.16	0.349	0.553
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3	Simultaneous	1	2412	15.03	17.03	1.585	100	1.000	0.15	0.361	0.572
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3	Simultaneous	11	2462	14.91	16.91	1.585	100	1.000	-0.02	0.368	0.583



<WLAN5G 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	Front	0mm	Ant 4	Full	48	5240	18.45	20.45	1.585	100	1.000	-0.18	0.683	1.082
	WLAN5.2GHz	802.11a 6Mbps	Back	0mm	Ant 4	Full	48	5240	18.45	20.45	1.585	100	1.000	0.05	0.702	1.113
	WLAN5.2GHz	802.11a 6Mbps	Left Side	0mm	Ant 4	Full	48	5240	18.45	20.45	1.585	100	1.000	0.15	0.042	0.067
67	WLAN5.2GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	48	5240	18.45	20.45	1.585	100	1.000	0.1	1.070	1.696
	WLAN5.2GHz	802.11a 6Mbps	Top Side	0mm	Ant 4	Full	48	5240	18.45	20.45	1.585	100	1.000	-0.13	0.668	1.059
	WLAN5.2GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	36	5180	18.22	20.22	1.585	100	1.000	0.13	0.997	1.580
	WLAN5.2GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	40	5200	18.44	20.44	1.585	100	1.000	0.15	0.812	1.287
	WLAN5.2GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	44	5220	18.36	20.36	1.585	100	1.000	-0.12	0.623	0.987
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4	Simultaneous	42	5210	13.36	15.36	1.585	100	1.000	-0.12	0.339	0.537
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4	Simultaneous	42	5210	13.36	15.36	1.585	100	1.000	-0.12	0.339	0.537
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4	Simultaneous	42	5210	13.36	15.36	1.585	100	1.000	0.15	0.019	0.030
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4	Simultaneous	42	5210	13.36	15.36	1.585	100	1.000	0.1	0.458	0.726
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 4	Simultaneous	42	5210	13.36	15.36	1.585	100	1.000	-0.13	0.210	0.333
	WLAN5.3GHz	802.11a 6Mbps	Front	0mm	Ant 4	Full	64	5320	18.91	20.91	1.585	100	1.000	-0.07	0.861	1.365
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	Ant 4	Full	64	5320	18.91	20.91	1.585	100	1.000	0.01	0.715	1.133
	WLAN5.3GHz	802.11a 6Mbps	Left Side	0mm	Ant 4	Full	64	5320	18.91	20.91	1.585	100	1.000	0.15	0.053	0.084
68	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	64	5320	18.91	20.91	1.585	100	1.000	-0.18	1.170	1.854
	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	Ant 4	Full	64	5320	18.91	20.91	1.585	100	1.000	0.01	0.513	0.813
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	52	5260	18.84	20.84	1.585	100	1.000	-0.18	0.925	1.466
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	56	5280	18.81	20.81	1.585	100	1.000	-0.19	1.050	1.664
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	60	5300	18.82	20.82	1.585	100	1.000	0.06	0.903	1.431
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4	Simultaneous	58	5290	15.45	17.45	1.585	100	1.000	0.18	0.427	0.677
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4	Simultaneous	58	5290	15.45	17.45	1.585	100	1.000	0.09	0.319	0.506
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4	Simultaneous	58	5290	15.45	17.45	1.585	100	1.000	0.09	0.023	0.036
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4	Simultaneous	58	5290	15.45	17.45	1.585	100	1.000	0.11	0.527	0.835
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 4	Simultaneous	58	5290	15.45	17.45	1.585	100	1.000	0.1	0.291	0.461
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	Ant 4	Full	140	5700	18.66	20.66	1.585	100	1.000	0.09	0.992	1.572
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	Ant 4	Full	140	5700	18.66	20.66	1.585	100	1.000	0.17	1.140	1.807
	WLAN5.5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4	Full	140	5700	18.66	20.66	1.585	100	1.000	-0.09	0.295	0.468
69	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	140	5700	18.66	20.66	1.585	100	1.000	-0.11	1.440	2.282
	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4	Full	140	5700	18.66	20.66	1.585	100	1.000	0.08	0.837	1.327
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	100	5500	18.59	20.59	1.585	100	1.000	0.14	0.944	1.496
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	116	5580	18.49	20.49	1.585	100	1.000	0.05	1.420	2.251
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	132	5660	18.36	20.36	1.585	100	1.000	0.16	1.190	1.886
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4	Simultaneous	106	5530	13.25	15.25	1.585	100	1.000	-0.06	0.284	0.450
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4	Simultaneous	106	5530	13.25	15.25	1.585	100	1.000	-0.07	0.377	0.598
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4	Simultaneous	106	5530	13.25	15.25	1.585	100	1.000	-0.04	0.023	0.036
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4	Simultaneous	106	5530	13.25	15.25	1.585	100	1.000	-0.04	0.496	0.786
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 4	Simultaneous	106	5530	13.25	15.25	1.585	100	1.000	0.05	0.216	0.342
	WLAN5.8GHz	802.11a 6Mbps	Back	0mm	Ant 4	Full	149	5745	18.28	20.28	1.585	100	1.000	-0.01	0.753	1.193
70	WLAN5.8GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	149	5745	18.28	20.28	1.585	100	1.000	0.14	1.390	2.203
	WLAN5.8GHz	802.11a 6Mbps	Top Side	0mm	Ant 4	Full	149	5745	18.28	20.28	1.585	100	1.000	-0.11	0.942	1.493
	WLAN5.8GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	157	5785	17.80	19.80	1.585	100	1.000	-0.14	1.280	2.029
	WLAN5.8GHz	802.11a 6Mbps	Right Side	0mm	Ant 4	Full	165	5825	17.54	19.54	1.585	100	1.000	-0.08	1.310	2.076
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4	Simultaneous	155	5775	11.90	13.90	1.585	100	1.000	-0.03	0.335	0.531
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4	Simultaneous	155	5775	11.90	13.90	1.585	100	1.000	-0.16	0.448	0.710
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 4	Simultaneous	155	5775	11.90	13.90	1.585	100	1.000	0.15	0.237	0.376

15.5 Repeated SAR Measurement

<1g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	GSM850	-	-	-	-	GPRS 4 Tx slots	Back	5mm	Ant 2		Reduced	128	824.2	26.49	27.00	1.125	-	-	-0.15	1.100	1	1.237
2nd	GSM850	-	-	-	-	GPRS 4 Tx slots	Back	5mm	Ant 2		Reduced	128	824.2	26.49	27.00	1.125	-	-	0.07	1.080	1.019	1.215
1st	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 1		Reduced	1312	1712.4	17.09	18.00	1.233	-	-	0.1	1.090	1	1.344
2nd	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 1		Reduced	1312	1712.4	17.09	18.00	1.233	-	-	-0.14	1.060	1.028	1.307
1st	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1		Reduced	23230	782	21.67	23.00	1.358	-	-	0.03	0.961	1	1.305
2nd	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1		Reduced	23230	782	21.67	23.00	1.358	-	-	0.18	0.958	1.003	1.301
1st	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 1		Reduced	26590	1905	17.28	18.50	1.324	-	-	0.03	1.020	1	1.351
2nd	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 1		Reduced	26590	1905	17.28	18.50	1.324	-	-	-0.08	1.010	1.010	1.338
1st	LTE Band 41-PC3	20M	QPSK	1	0	-	Back	5mm	Ant 2	Headset	Reduced	41490	2680	14.34	15.50	1.306	62.9	1.006	0.11	1.070	1	1.406
2nd	LTE Band 41-PC3	20M	QPSK	1	0	-	Back	5mm	Ant 2	Headset	Reduced	41490	2680	14.34	15.50	1.306	62.9	1.006	0.19	1.050	1.019	1.380

<10g>

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	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	GSM850	-	-	-	-	GPRS 4 Tx slots	Back	0mm	Ant 2	Full	128	824.2	28.19	29.00	1.205	-	-	-0.17	2.680	1	3.229
2nd	GSM850	-	-	-	-	GPRS 4 Tx slots	Back	0mm	Ant 2	Full	128	824.2	28.19	29.00	1.205	-	-	0.12	2.660	1.008	3.205
1st	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	1312	1712.4	20.52	21.50	1.253	-	-	0.04	2.600	1	3.258
2nd	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	1312	1712.4	20.52	21.50	1.253	-	-	-0.14	2.560	1.016	3.208
1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	9538	1907.6	19.70	20.50	1.202	-	-	-0.14	2.560	1	3.078
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 1	Reduced	9538	1907.6	19.70	20.50	1.202	-	-	-0.11	2.530	1.012	3.042
1st	LTE Band 41-PC3	20M	QPSK	1	0	-	Back	0mm	Ant 2	Reduced	40185	2549.5	19.49	20.50	1.262	62.9	1.006	-0.09	2.610	1	3.313
2nd	LTE Band 41-PC3	20M	QPSK	1	0	-	Back	0mm	Ant 2	Reduced	40185	2549.5	19.49	20.50	1.262	62.9	1.006	0.1	2.580	1.012	3.275
1st	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Back	0mm	Ant 3	Full	11	2462	20.90	22.90	1.585	100	1.000	0.09	2.180	1	3.455
2nd	WLAN2.4GHz	-	-	-	-	802.11b 1Mbps	Back	0mm	Ant 3	Full	11	2462	20.90	22.90	1.585	100	1.000	0.07	2.150	1.014	3.408

General Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
- Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, only one repeated measurement is required.
- 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.

16. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	Bluetooth + WLAN5GHz	Yes	Yes	Yes	Yes
5.	WWAN + Bluetooth + WLAN5GHz	Yes	Yes	Yes	Yes

General Note:

- This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- EUT will choose each GSM, WCDMA and LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- This device 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).
- WIFI 5.3/5.3GHz has no hotspot function.
- The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
- WLAN 2.4GHz and Bluetooth share the same antenna so can't transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz can't transmit simultaneously.
- The maximum SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$ for 1g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg.
 - The SPLSR calculated results please refer to section 16.5.



16.2 Head Exposure Conditions

WWAN Band		Exposure Position	1	3	6	9	1+3	1+6	1+6+9
			WWAN	2.4GHz WLAN Ant 3	5GHz WLAN Ant 4	Bluetooth Ant 3	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	GSM850Ant 1	Right Cheek	0.781	0.081	0.094	0.039	0.86	0.88	0.91
		Right Tilted	0.391	0.079	0.082	0.038	0.47	0.47	0.51
		Left Cheek	0.739	0.262	0.288	0.092	1.00	1.03	1.12
		Left Tilted	0.442	0.170	0.165	0.081	0.61	0.61	0.69
	GSM850Ant 2	Right Cheek	1.277	0.081	0.094	0.039	1.36	1.37	1.41
		Right Tilted	1.272	0.079	0.082	0.038	1.35	1.35	1.39
		Left Cheek	1.171	0.262	0.288	0.092	1.43	1.46	1.55
		Left Tilted	1.158	0.170	0.165	0.081	1.33	1.32	1.40
	GSM1900Ant 1	Right Cheek	0.902	0.081	0.094	0.039	0.98	1.00	1.04
		Right Tilted	0.399	0.079	0.082	0.038	0.48	0.48	0.52
		Left Cheek	0.620	0.262	0.288	0.092	0.88	0.91	1.00
		Left Tilted	0.557	0.170	0.165	0.081	0.73	0.72	0.80
	GSM1900Ant 2	Right Cheek	1.298	0.081	0.094	0.039	1.38	1.39	1.43
		Right Tilted	1.274	0.079	0.082	0.038	1.35	1.36	1.39
		Left Cheek	0.538	0.262	0.288	0.092	0.80	0.83	0.92
		Left Tilted	0.621	0.170	0.165	0.081	0.79	0.79	0.87
WCDMA	WCDMA VAnt 1	Right Cheek	0.602	0.081	0.094	0.039	0.68	0.70	0.74
		Right Tilted	0.259	0.079	0.082	0.038	0.34	0.34	0.38
		Left Cheek	0.569	0.262	0.288	0.092	0.83	0.86	0.95
		Left Tilted	0.333	0.170	0.165	0.081	0.50	0.50	0.58
	WCDMA VAnt 2	Right Cheek	1.235	0.081	0.094	0.039	1.32	1.33	1.37
		Right Tilted	1.223	0.079	0.082	0.038	1.30	1.31	1.34
		Left Cheek	1.186	0.262	0.288	0.092	1.45	1.47	1.57
		Left Tilted	1.147	0.170	0.165	0.081	1.32	1.31	1.39
	WCDMA IVAnt 1	Right Cheek	0.442	0.081	0.094	0.039	0.52	0.54	0.58
		Right Tilted	0.204	0.079	0.082	0.038	0.28	0.29	0.32
		Left Cheek	0.239	0.262	0.288	0.092	0.50	0.53	0.62
		Left Tilted	0.251	0.170	0.165	0.081	0.42	0.42	0.50
	WCDMA IIAnt 1	Right Cheek	0.637	0.081	0.094	0.039	0.72	0.73	0.77
		Right Tilted	0.307	0.079	0.082	0.038	0.39	0.39	0.43
		Left Cheek	0.462	0.262	0.288	0.092	0.72	0.75	0.84
		Left Tilted	0.404	0.170	0.165	0.081	0.57	0.57	0.65
	WCDMA IIAnt 2	Right Cheek	0.647	0.081	0.094	0.039	0.73	0.74	0.78
		Right Tilted	1.221	0.079	0.082	0.038	1.30	1.30	1.34
		Left Cheek	0.413	0.262	0.288	0.092	0.68	0.70	0.79
		Left Tilted	0.487	0.170	0.165	0.081	0.66	0.65	0.73
LTE	LTE Band 71Ant 1	Right Cheek	0.455	0.081	0.094	0.039	0.54	0.55	0.59
		Right Tilted	0.169	0.079	0.082	0.038	0.25	0.25	0.29
		Left Cheek	0.351	0.262	0.288	0.092	0.61	0.64	0.73
		Left Tilted	0.190	0.170	0.165	0.081	0.36	0.36	0.44
	LTE Band 71Ant 2	Right Cheek	0.701	0.081	0.094	0.039	0.78	0.80	0.83
		Right Tilted	0.608	0.079	0.082	0.038	0.69	0.69	0.73
		Left Cheek	0.426	0.262	0.288	0.092	0.69	0.71	0.81
		Left Tilted	0.284	0.170	0.165	0.081	0.45	0.45	0.53
	LTE Band 12Ant 1	Right Cheek	0.327	0.081	0.094	0.039	0.41	0.42	0.46
		Right Tilted	0.142	0.079	0.082	0.038	0.22	0.22	0.26
		Left Cheek	0.252	0.262	0.288	0.092	0.51	0.54	0.63
		Left Tilted	0.129	0.170	0.165	0.081	0.30	0.29	0.38
	LTE Band 12Ant 2	Right Cheek	0.820	0.081	0.094	0.039	0.90	0.91	0.95



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		Right Tilted	0.752	0.079	0.082	0.038	0.83	0.83	0.87
		Left Cheek	0.754	0.262	0.288	0.092	1.02	1.04	1.13
		Left Tilted	0.734	0.170	0.165	0.081	0.90	0.90	0.98
	LTE Band 13Ant 1	Right Cheek	0.395	0.081	0.094	0.039	0.48	0.49	0.53
		Right Tilted	0.184	0.079	0.082	0.038	0.26	0.27	0.30
		Left Cheek	0.365	0.262	0.288	0.092	0.63	0.65	0.75
		Left Tilted	0.188	0.170	0.165	0.081	0.36	0.35	0.43
	LTE Band 26Ant 1	Right Cheek	0.551	0.081	0.094	0.039	0.63	0.65	0.68
		Right Tilted	0.250	0.079	0.082	0.038	0.33	0.33	0.37
		Left Cheek	0.433	0.262	0.288	0.092	0.70	0.72	0.81
		Left Tilted	0.230	0.170	0.165	0.081	0.40	0.40	0.48
	LTE Band 26Ant 2	Right Cheek	1.318	0.081	0.094	0.039	1.40	1.41	1.45
		Right Tilted	1.224	0.079	0.082	0.038	1.30	1.31	1.34
		Left Cheek	1.194	0.262	0.288	0.092	1.46	1.48	1.57
		Left Tilted	1.099	0.170	0.165	0.081	1.27	1.26	1.35
	LTE Band 66Ant 1	Right Cheek	0.440	0.081	0.094	0.039	0.52	0.53	0.57
		Right Tilted	0.159	0.079	0.082	0.038	0.24	0.24	0.28
		Left Cheek	0.206	0.262	0.288	0.092	0.47	0.49	0.59
		Left Tilted	0.217	0.170	0.165	0.081	0.39	0.38	0.46
	LTE Band 25Ant 1	Right Cheek	0.584	0.081	0.094	0.039	0.67	0.68	0.72
		Right Tilted	0.269	0.079	0.082	0.038	0.35	0.35	0.39
		Left Cheek	0.375	0.262	0.288	0.092	0.64	0.66	0.76
		Left Tilted	0.328	0.170	0.165	0.081	0.50	0.49	0.57
	LTE Band 25Ant 2	Right Cheek	0.912	0.081	0.094	0.039	0.99	1.01	1.05
		Right Tilted	1.277	0.079	0.082	0.038	1.36	1.36	1.40
		Left Cheek	0.533	0.262	0.288	0.092	0.80	0.82	0.91
		Left Tilted	0.620	0.170	0.165	0.081	0.79	0.79	0.87
	LTE Band 7Ant 1	Right Cheek	0.373	0.081	0.094	0.039	0.45	0.47	0.51
		Right Tilted	0.203	0.079	0.082	0.038	0.28	0.29	0.32
		Left Cheek	0.565	0.262	0.288	0.092	0.83	0.85	0.95
		Left Tilted	0.381	0.170	0.165	0.081	0.55	0.55	0.63
	LTE Band 7Ant 2	Right Cheek	0.948	0.081	0.094	0.039	1.03	1.04	1.08
		Right Tilted	1.328	0.079	0.082	0.038	1.41	1.41	1.45
		Left Cheek	0.416	0.262	0.288	0.092	0.68	0.70	0.80
		Left Tilted	0.496	0.170	0.165	0.081	0.67	0.66	0.74
	LTE Band 41-PC3Ant 1	Right Cheek	0.195	0.081	0.094	0.039	0.28	0.29	0.33
		Right Tilted	0.166	0.079	0.082	0.038	0.25	0.25	0.29
		Left Cheek	0.385	0.262	0.288	0.092	0.65	0.67	0.77
		Left Tilted	0.279	0.170	0.165	0.081	0.45	0.44	0.53
	LTE Band 41-PC3Ant 2	Right Cheek	0.809	0.081	0.094	0.039	0.89	0.90	0.94
		Right Tilted	1.227	0.079	0.082	0.038	1.31	1.31	1.35
		Left Cheek	0.319	0.262	0.288	0.092	0.58	0.61	0.70
		Left Tilted	0.408	0.170	0.165	0.081	0.58	0.57	0.65
	LTE Band 41-PC2Ant 1	Right Cheek	0.238	0.081	0.094	0.039	0.32	0.33	0.37
		Right Tilted	0.194	0.079	0.082	0.038	0.27	0.28	0.31
		Left Cheek	0.507	0.262	0.288	0.092	0.77	0.80	0.89
		Left Tilted	0.306	0.170	0.165	0.081	0.48	0.47	0.55
	LTE Band 41-PC2Ant 2	Right Cheek	0.753	0.081	0.094	0.039	0.83	0.85	0.89
		Right Tilted	1.319	0.079	0.082	0.038	1.40	1.40	1.44
		Left Cheek	0.350	0.262	0.288	0.092	0.61	0.64	0.73
		Left Tilted	0.426	0.170	0.165	0.081	0.60	0.59	0.67



16.3 Hotspot Exposure Conditions

WWAN Band		Exposure Position	1	3	6	9	1+3	1+6	1+6+9	Case No
			WWAN	2.4GHz WLAN Ant 3	5GHz WLAN Ant 4	Bluetooth Ant 3	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	GSM850Ant 1	Front	0.870	0.082	0.204	0.045	0.95	1.07	1.12	
		Back	1.274	0.252	0.300	0.143	1.53	1.57	1.72	Case 5
		Left side	0.393	0.067		0.008	0.46	0.39	0.40	
		Right side	0.578	0.074	0.326	0.045	0.65	0.90	0.95	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.119				1.12	1.12	1.12	
	GSM850Ant 2	Front	0.705	0.082	0.204	0.045	0.79	0.91	0.95	
		Back	1.245	0.252	0.300	0.143	1.50	1.55	1.69	Case 6
		Left side	0.222	0.067		0.008	0.29	0.22	0.23	
		Right side	0.159	0.074	0.326	0.045	0.23	0.49	0.53	
		Top side	1.058	0.078	0.193	0.043	1.14	1.25	1.29	
		Bottom side					0.00	0.00	0.00	
	GSM1900Ant 1	Front	0.622	0.082	0.204	0.045	0.70	0.83	0.87	
		Back	1.396	0.252	0.300	0.143	1.65	1.70 *	1.84	Case 1. Case 7
		Left side	0.268	0.067		0.008	0.34	0.27	0.28	
		Right side	0.115	0.074	0.326	0.045	0.19	0.44	0.49	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.294				1.29	1.29	1.29	
	GSM1900Ant 2	Front	0.630	0.082	0.204	0.045	0.71	0.83	0.88	
		Back	1.248	0.252	0.300	0.143	1.50	1.55	1.69	Case 8
		Left side	0.066	0.067		0.008	0.13	0.07	0.07	
		Right side		0.074	0.326	0.045	0.07	0.33	0.37	
		Top side	1.305	0.078	0.193	0.043	1.38	1.50	1.54	
		Bottom side					0.00	0.00	0.00	
WCDMA	WCDMA VAnt 1	Front	0.883	0.082	0.204	0.045	0.97	1.09	1.13	
		Back	1.401	0.252	0.300	0.143	1.65	1.70 *	1.84	Case 2. Case 9
		Left side	0.319	0.067		0.008	0.39	0.32	0.33	
		Right side	0.623	0.074	0.326	0.045	0.70	0.95	0.99	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.039				1.04	1.04	1.04	
	WCDMA VAnt 2	Front	0.692	0.082	0.204	0.045	0.77	0.90	0.94	
		Back	1.268	0.252	0.300	0.143	1.52	1.57	1.71	Case 10
		Left side	0.255	0.067		0.008	0.32	0.26	0.26	
		Right side	0.226	0.074	0.326	0.045	0.30	0.55	0.60	
		Top side	0.943	0.078	0.193	0.043	1.02	1.14	1.18	
		Bottom side					0.00	0.00	0.00	
	WCDMA IVAnt 1	Front	0.538	0.082	0.204	0.045	0.62	0.74	0.79	
		Back	1.338	0.252	0.300	0.143	1.59	1.64 *	1.78	Case 11
		Left side	0.214	0.067		0.008	0.28	0.21	0.22	
		Right side	0.094	0.074	0.326	0.045	0.17	0.42	0.47	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.344				1.34	1.34	1.34	
	WCDMA IIAnt 1	Front	0.625	0.082	0.204	0.045	0.71	0.83	0.87	
		Back	1.317	0.252	0.300	0.143	1.57	1.62 *	1.76	Case 12
		Left side	0.313	0.067		0.008	0.38	0.31	0.32	
		Right side	0.133	0.074	0.326	0.045	0.21	0.46	0.50	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.388				1.39	1.39	1.39	



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	WCDMA IIAnt 2	Front	0.618	0.082	0.204	0.045	0.70	0.82	0.87	
		Back	1.218	0.252	0.300	0.143	1.47	1.52	1.66	Case 13
		Left side	0.087	0.067		0.008	0.15	0.09	0.10	
		Right side		0.074	0.326	0.045	0.07	0.33	0.37	
		Top side	1.262	0.078	0.193	0.043	1.34	1.46	1.50	
		Bottom side					0.00	0.00	0.00	
LTE	LTE Band 71Ant 1	Front	0.579	0.082	0.204	0.045	0.66	0.78	0.83	
		Back	1.207	0.252	0.300	0.143	1.46	1.51	1.65	Case 14
		Left side	0.508	0.067		0.008	0.58	0.51	0.52	
		Right side	1.047	0.074	0.326	0.045	1.12	1.37	1.42	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	0.858				0.86	0.86	0.86	
	LTE Band 71Ant 2	Front	0.234	0.082	0.204	0.045	0.32	0.44	0.48	
		Back	0.525	0.252	0.300	0.143	0.78	0.83	0.97	
		Left side	0.404	0.067		0.008	0.47	0.40	0.41	
		Right side	0.206	0.074	0.326	0.045	0.28	0.53	0.58	
		Top side	0.316	0.078	0.193	0.043	0.39	0.51	0.55	
		Bottom side					0.00	0.00	0.00	
	LTE Band 12Ant 1	Front	0.599	0.082	0.204	0.045	0.68	0.80	0.85	
		Back	1.113	0.252	0.300	0.143	1.37	1.41	1.56	
		Left side	0.385	0.067		0.008	0.45	0.39	0.39	
		Right side	0.726	0.074	0.326	0.045	0.80	1.05	1.10	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	0.503				0.50	0.50	0.50	
	LTE Band 12Ant 2	Front	0.293	0.082	0.204	0.045	0.38	0.50	0.54	
		Back	0.614	0.252	0.300	0.143	0.87	0.91	1.06	
		Left side	0.310	0.067		0.008	0.38	0.31	0.32	
		Right side	0.182	0.074	0.326	0.045	0.26	0.51	0.55	
		Top side	0.571	0.078	0.193	0.043	0.65	0.76	0.81	
		Bottom side					0.00	0.00	0.00	
	LTE Band 13Ant 1	Front	0.772	0.082	0.204	0.045	0.85	0.98	1.02	
		Back	1.305	0.252	0.300	0.143	1.56	1.61 *	1.75	Case 15
		Left side	0.312	0.067		0.008	0.38	0.31	0.32	
		Right side	0.751	0.074	0.326	0.045	0.83	1.08	1.12	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	0.839				0.84	0.84	0.84	
	LTE Band 26Ant 1	Front	0.738	0.082	0.204	0.045	0.82	0.94	0.99	
		Back	1.309	0.252	0.300	0.143	1.56	1.61 *	1.75	Case 16
		Left side	0.246	0.067		0.008	0.31	0.25	0.25	
		Right side	0.505	0.074	0.326	0.045	0.58	0.83	0.88	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	0.961				0.96	0.96	0.96	
	LTE Band 26Ant 2	Front	0.799	0.082	0.204	0.045	0.88	1.00	1.05	
		Back	1.289	0.252	0.300	0.143	1.54	1.59	1.73	Case 17
		Left side	0.310	0.067		0.008	0.38	0.31	0.32	
		Right side	0.257	0.074	0.326	0.045	0.33	0.58	0.63	
		Top side	1.010	0.078	0.193	0.043	1.09	1.20	1.25	
		Bottom side					0.00	0.00	0.00	
	LTE Band 66Ant 1	Front	0.539	0.082	0.204	0.045	0.62	0.74	0.79	
		Back	1.260	0.252	0.300	0.143	1.51	1.56	1.70	Case 18
		Left side	0.201	0.067		0.008	0.27	0.20	0.21	
		Right side	0.093	0.074	0.326	0.045	0.17	0.42	0.46	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.246				1.25	1.25	1.25	
	LTE Band 25Ant 1	Front	0.662	0.082	0.204	0.045	0.74	0.87	0.91	
		Back	1.351	0.252	0.300	0.143	1.60	1.65 *	1.79	Case 3. Case 19

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		Left side	0.310	0.067		0.008	0.38	0.31	0.32	
		Right side	0.125	0.074	0.326	0.045	0.20	0.45	0.50	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.299				1.30	1.30	1.30	
	LTE Band 25Ant 2	Front	0.735	0.082	0.204	0.045	0.82	0.94	0.98	
		Back	1.264	0.252	0.300	0.143	1.52	1.56	1.71	Case 20
		Left side	0.107	0.067		0.008	0.17	0.11	0.12	
		Right side		0.074	0.326	0.045	0.07	0.33	0.37	
		Top side	1.257	0.078	0.193	0.043	1.34	1.45	1.49	
		Bottom side					0.00	0.00	0.00	
	LTE Band 7Ant 1	Front	0.920	0.082	0.204	0.045	1.00	1.12	1.17	
		Back	1.294	0.252	0.300	0.143	1.55	1.59	1.74	Case 21
		Left side	0.258	0.067		0.008	0.33	0.26	0.27	
		Right side	0.132	0.074	0.326	0.045	0.21	0.46	0.50	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.345				1.35	1.35	1.35	
	LTE Band 7Ant 2	Front	0.333	0.082	0.204	0.045	0.42	0.54	0.58	
		Back	1.240	0.252	0.300	0.143	1.49	1.54	1.68	Case 22
		Left side	0.110	0.067		0.008	0.18	0.11	0.12	
		Right side		0.074	0.326	0.045	0.07	0.33	0.37	
		Top side	1.185	0.078	0.193	0.043	1.26	1.38	1.42	
		Bottom side					0.00	0.00	0.00	
	LTE Band 41-PC3Ant 1	Front	0.816	0.082	0.204	0.045	0.90	1.02	1.07	
		Back	1.211	0.252	0.300	0.143	1.46	1.51	1.65	Case 23
		Left side	0.248	0.067		0.008	0.32	0.25	0.26	
		Right side	0.139	0.074	0.326	0.045	0.21	0.47	0.51	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.284				1.28	1.28	1.28	
	LTE Band 41-PC3Ant 2	Front	0.285	0.082	0.204	0.045	0.37	0.49	0.53	
		Back	1.217	0.252	0.300	0.143	1.47	1.52	1.66	Case 24
		Left side	0.074	0.067		0.008	0.14	0.07	0.08	
		Right side		0.074	0.326	0.045	0.07	0.33	0.37	
		Top side	1.273	0.078	0.193	0.043	1.35	1.47	1.51	
		Bottom side					0.00	0.00	0.00	
	LTE Band 41-PC2Ant 1	Front	0.822	0.082	0.204	0.045	0.90	1.03	1.07	
		Back	1.231	0.252	0.300	0.143	1.48	1.53	1.67	Case 25
		Left side	0.221	0.067		0.008	0.29	0.22	0.23	
		Right side	0.116	0.074	0.326	0.045	0.19	0.44	0.49	
		Top side		0.078	0.193	0.043	0.08	0.19	0.24	
		Bottom side	1.229				1.23	1.23	1.23	
	LTE Band 41-PC2Ant 2	Front	0.318	0.082	0.204	0.045	0.40	0.52	0.57	
		Back	1.443	0.252	0.300	0.143	1.70	1.74 *	1.89	Case 4. Case 26
		Left side		0.067		0.008	0.07	0.00	0.01	
		Right side		0.074	0.326	0.045	0.07	0.33	0.37	
		Top side	1.342	0.078	0.193	0.043	1.42	1.54	1.58	
		Bottom side					0.00	0.00	0.00	

“*” means sum SAR value is higher than 1.6W/kg for 2 transmitters, the multi-band analysis is included at 3 transmitters, for those bands with the same SAR value used for 3 transmitters. Due to 3 transmitters value is more conservatively than 2 transmitters, so multi-band analysis for 3 transmitters can represent 2 transmitters.



16.4 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1	3	6	9	1+3	1+6	1+6+9	Case No
			WWAN	2.4GHz WLAN Ant 3	5GHz WLAN Ant 4	Bluetooth Ant 3	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	GSM850Ant 1	Front	0.870	0.082	0.178	0.045	0.95	1.05	1.09	
		Back	1.274	0.252	0.300	0.143	1.53	1.57	1.72	Case 5
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.237				1.24	1.24	1.24	
	GSM850Ant 2	Front	0.705	0.082	0.178	0.045	0.79	0.88	0.93	
		Back	1.245	0.252	0.300	0.143	1.50	1.55	1.69	Case 6
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.138				1.14	1.14	1.14	
	GSM1900Ant 1	Front	0.622	0.082	0.178	0.045	0.70	0.80	0.85	
		Back	1.396	0.252	0.300	0.143	1.65	1.70 *	1.84	Case 1. Case 7
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.271				1.27	1.27	1.27	
	GSM1900Ant 2	Front	0.630	0.082	0.178	0.045	0.71	0.81	0.85	
		Back	1.248	0.252	0.300	0.143	1.50	1.55	1.69	Case 8
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.239				1.24	1.24	1.24	
WCDMA	WCDMA VAnt 1	Front	0.883	0.082	0.178	0.045	0.97	1.06	1.11	
		Back	1.401	0.252	0.300	0.143	1.65	1.70 *	1.84	Case 2. Case 9
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.295				1.30	1.30	1.30	
	WCDMA VAnt 2	Front	0.692	0.082	0.178	0.045	0.77	0.87	0.92	
		Back	1.268	0.252	0.300	0.143	1.52	1.57	1.71	Case 10
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.184				1.18	1.18	1.18	
	WCDMA IVAnt 1	Front	0.538	0.082	0.178	0.045	0.62	0.72	0.76	
		Back	1.338	0.252	0.300	0.143	1.59	1.64 *	1.78	Case 11
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.301				1.30	1.30	1.30	
	WCDMA IIAnt 1	Front	0.625	0.082	0.178	0.045	0.71	0.80	0.85	
		Back	1.317	0.252	0.300	0.143	1.57	1.62 *	1.76	Case 12
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.268				1.27	1.27	1.27	
WCDMA IIAnt 2	Front	0.618	0.082	0.178	0.045	0.70	0.80	0.84		
	Back	1.218	0.252	0.300	0.143	1.47	1.52	1.66	Case 13	
	Front with Headset					0.00	0.00	0.00		
	Back with Headset	1.107				1.11	1.11	1.11		
LTE	LTE Band 71Ant 1	Front	0.579	0.082	0.178	0.045	0.66	0.76	0.80	
		Back	1.207	0.252	0.300	0.143	1.46	1.51	1.65	Case 14
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.205				1.21	1.21	1.21	
	LTE Band 71Ant 2	Front	0.234	0.082	0.178	0.045	0.32	0.41	0.46	
		Back	0.525	0.252	0.300	0.143	0.78	0.83	0.97	
		Front with Headset					0.00	0.00	0.00	
		Back with Headset					0.00	0.00	0.00	
	LTE Band 12Ant 1	Front	0.599	0.082	0.178	0.045	0.68	0.78	0.82	
		Back	1.113	0.252	0.300	0.143	1.37	1.41	1.56	
		Front with Headset					0.00	0.00	0.00	
		Back with Headset					0.00	0.00	0.00	
LTE Band 12Ant 2	Front	0.293	0.082	0.178	0.045	0.38	0.47	0.52		



		Back	0.614	0.252	0.300	0.143	0.87	0.91	1.06	
		Front with Headset					0.00	0.00	0.00	
		Back with Headset					0.00	0.00	0.00	
	LTE Band 13Ant 1	Front	0.772	0.082	0.178	0.045	0.85	0.95	1.00	
		Back	1.305	0.252	0.300	0.143	1.56	1.61 *	1.75	Case 15
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.304				1.30	1.30	1.30	
	LTE Band 26Ant 1	Front	0.738	0.082	0.178	0.045	0.82	0.92	0.96	
		Back	1.309	0.252	0.300	0.143	1.56	1.61 *	1.75	Case 16
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.307				1.31	1.31	1.31	
	LTE Band 26Ant 2	Front	0.799	0.082	0.178	0.045	0.88	0.98	1.02	
		Back	1.289	0.252	0.300	0.143	1.54	1.59	1.73	Case 17
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.263				1.26	1.26	1.26	
	LTE Band 66Ant 1	Front	0.539	0.082	0.178	0.045	0.62	0.72	0.76	
		Back	1.260	0.252	0.300	0.143	1.51	1.56	1.70	Case 18
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.244				1.24	1.24	1.24	
	LTE Band 25Ant 1	Front	0.662	0.082	0.178	0.045	0.74	0.84	0.89	
		Back	1.351	0.252	0.300	0.143	1.60	1.65 *	1.79	Case 3. Case 19
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.228				1.23	1.23	1.23	
	LTE Band 25Ant 2	Front	0.735	0.082	0.178	0.045	0.82	0.91	0.96	
		Back	1.264	0.252	0.300	0.143	1.52	1.56	1.71	Case 20
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.184				1.18	1.18	1.18	
	LTE Band 7Ant 1	Front	0.920	0.082	0.178	0.045	1.00	1.10	1.14	
		Back	1.294	0.252	0.300	0.143	1.55	1.59	1.74	Case 21
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.268				1.27	1.27	1.27	
	LTE Band 7Ant 2	Front	0.333	0.082	0.178	0.045	0.42	0.51	0.56	
		Back	1.240	0.252	0.300	0.143	1.49	1.54	1.68	Case 22
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.211				1.21	1.21	1.21	
	LTE Band 41-PC3Ant 1	Front	0.816	0.082	0.178	0.045	0.90	0.99	1.04	
		Back	1.211	0.252	0.300	0.143	1.46	1.51	1.65	Case 23
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.144				1.14	1.14	1.14	
	LTE Band 41-PC3Ant 2	Front	0.285	0.082	0.178	0.045	0.37	0.46	0.51	
		Back	1.217	0.252	0.300	0.143	1.47	1.52	1.66	Case 24
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.406				1.41	1.41	1.41	
	LTE Band 41-PC2Ant 1	Front	0.822	0.082	0.178	0.045	0.90	1.00	1.05	
		Back	1.231	0.252	0.300	0.143	1.48	1.53	1.67	Case 25
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.227				1.23	1.23	1.23	
	LTE Band 41-PC2Ant 2	Front	0.318	0.082	0.178	0.045	0.40	0.50	0.54	
		Back	1.443	0.252	0.300	0.143	1.70	1.74 *	1.89	Case 4. Case 26
		Front with Headset					0.00	0.00	0.00	
		Back with Headset	1.060				1.06	1.06	1.06	

“*” means sum SAR value is higher than 1.6W/kg for 2 transmitters, the multi-band analysis is included at 3 transmitters, for those bands with the same SAR value used for 3 transmitters. Due to 3 transmitters value is more conservatively than 2 transmitters, so multi-band analysis for 3 transmitters can represent 2 transmitters.



16.5 Product Specific 10g SAR Exposure Conditions

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.

WWAN Band		Exposure Position	1	2	5	1+2	1+5
			WWAN	2.4GHz WLAN Ant 3	5GHz WLAN Ant 4	Summed	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
GSM	GSM850Ant 1	Front	1.369		0.677	1.37	2.05
		Back	2.546	0.583	0.598	3.13	3.14
		Left side			0.036	0.00	0.04
		Right side	0.971		0.835	0.97	1.81
		Top side			0.461	0.00	0.46
		Bottom side	2.690			2.69	2.69
	GSM850Ant 2	Front	2.518		0.677	2.52	3.20
		Back	3.229	0.583	0.598	3.81	3.83
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side	2.338		0.461	2.34	2.80
		Bottom side				0.00	0.00
	GSM1900Ant 1	Front	1.499		0.677	1.50	2.18
		Back	3.088	0.583	0.598	3.67	3.69
		Left side	3.577		0.036	3.58	3.61
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	1.921			1.92	1.92
	GSM1900Ant 2	Front	1.343		0.677	1.34	2.02
		Back	2.405	0.583	0.598	2.99	3.00
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side	3.311		0.461	3.31	3.77
		Bottom side				0.00	0.00
WCDMA	WCDMA VAnt 1	Front	1.506		0.677	1.51	2.18
		Back	1.749	0.583	0.598	2.33	2.35
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	1.557			1.56	1.56
	WCDMA VAnt 2	Front			0.677	0.00	0.68
		Back	1.715	0.583	0.598	2.30	2.31
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side				0.00	0.00
	WCDMA IVAnt 1	Front	1.930		0.677	1.93	2.61
		Back	3.258	0.583	0.598	3.84	3.86
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	2.757			2.76	2.76
	WCDMA IIAnt 1	Front	1.556		0.677	1.56	2.23
		Back	3.078	0.583	0.598	3.66	3.68
		Left side	3.145		0.036	3.15	3.18
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side				0.00	0.00



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	WCDMA II Ant 2	Bottom side	2.320			2.32	2.32
		Front	1.277		0.677	1.28	1.95
		Back	2.295	0.583	0.598	2.88	2.89
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side	3.224		0.461	3.22	3.69
		Bottom side				0.00	0.00
LTE	LTE Band 71 Ant 1	Front			0.677	0.00	0.68
		Back	1.597	0.583	0.598	2.18	2.20
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side				0.00	0.00
	LTE Band 13 Ant 1	Front			0.677	0.00	0.68
		Back	1.756	0.583	0.598	2.34	2.35
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side				0.00	0.00
	LTE Band 26 Ant 1	Front	1.607		0.677	1.61	2.28
		Back	1.941	0.583	0.598	2.52	2.54
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	1.718			1.72	1.72
	LTE Band 26 Ant 2	Front			0.677	0.00	0.68
		Back	2.136	0.583	0.598	2.72	2.73
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side				0.00	0.00
	LTE Band 66 Ant 1	Front	1.746		0.677	1.75	2.42
		Back	2.994	0.583	0.598	3.58	3.59
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	2.511			2.51	2.51
	LTE Band 25 Ant 1	Front	1.689		0.677	1.69	2.37
		Back	3.243	0.583	0.598	3.83	3.84
		Left side	2.797		0.036	2.80	2.83
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	2.531			2.53	2.53
	LTE Band 25 Ant 2	Front	1.511		0.677	1.51	2.19
		Back	2.519	0.583	0.598	3.10	3.12
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side	3.175		0.461	3.18	3.64
		Bottom side				0.00	0.00
	LTE Band 7 Ant 1	Front	2.198		0.677	2.20	2.88
		Back	2.999	0.583	0.598	3.58	3.60
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	2.465			2.47	2.47
	LTE Band 7 Ant	Front	1.048		0.677	1.05	1.73

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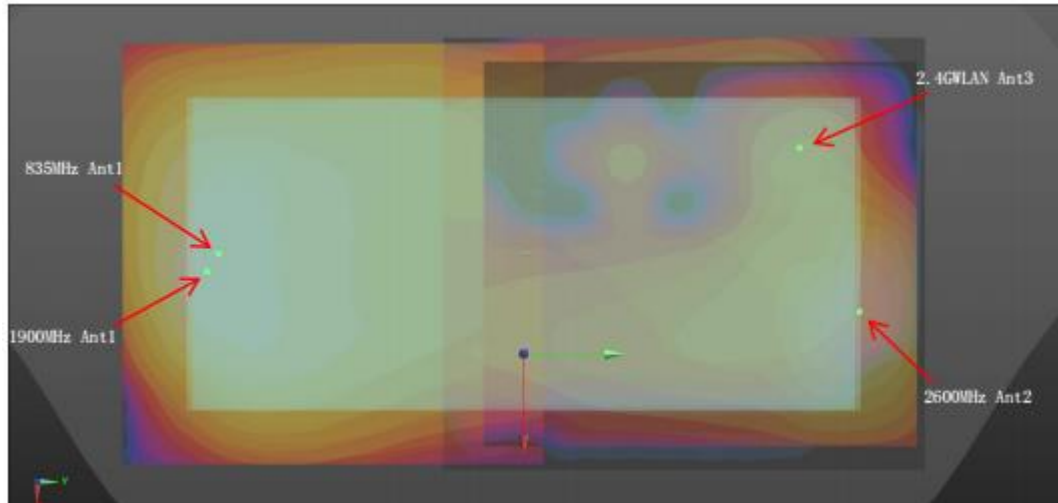


	2	Back	3.183	0.583	0.598	3.77	3.78
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side	2.742		0.461	2.74	3.20
		Bottom side				0.00	0.00
	LTE Band 41-PC3Ant 1	Front	1.865		0.677	1.87	2.54
		Back	3.118	0.583	0.598	3.70	3.72
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	3.051			3.05	3.05
	LTE Band 41-PC3Ant 2	Front	1.269		0.677	1.27	1.95
		Back	3.376	0.583	0.598	3.96	3.97
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side	3.164		0.461	3.16	3.63
		Bottom side				0.00	0.00
	LTE Band 41-PC2Ant 1	Front	1.846		0.677	1.85	2.52
		Back	3.042	0.583	0.598	3.63	3.64
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side			0.461	0.00	0.46
		Bottom side	3.054			3.05	3.05
	LTE Band 41-PC2Ant 2	Front	1.108		0.677	1.11	1.79
		Back	3.168	0.583	0.598	3.75	3.77
		Left side			0.036	0.00	0.04
		Right side			0.835	0.00	0.84
		Top side	2.706		0.461	2.71	3.17
		Bottom side				0.00	0.00

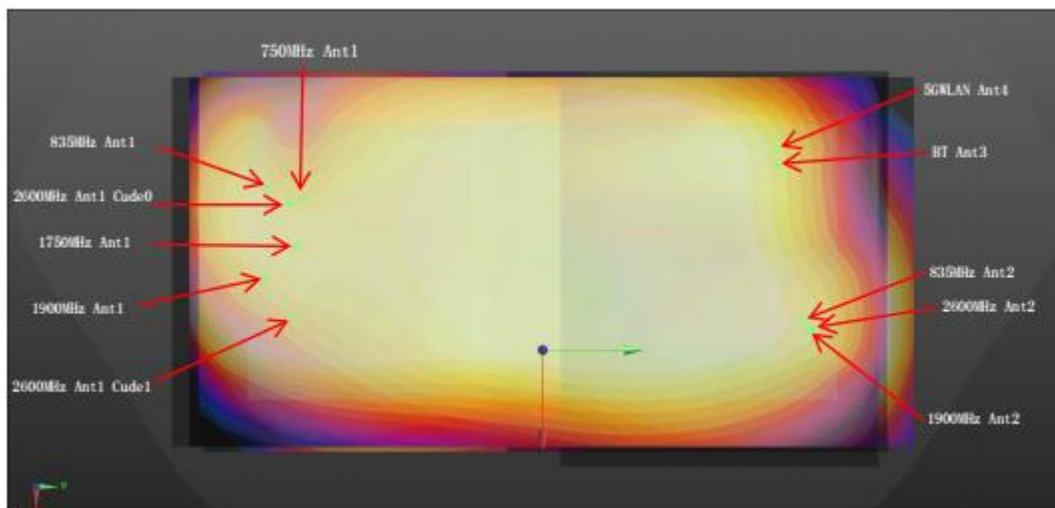
16.6 SPLSR Evaluation and Analysis

General Note:

1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. $SPLSR = (SAR_1 + SAR_2)1.5 / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.



WWAN+WLAN2.4GHz_Back 5mm



WWAN+WLAN5GHz+Bluetooth_Back 5mm



Case 1	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	GSM1900_ANT1	Back	1.396	5	-0.0205	-0.079	-0.209	151.0	1.65	0.01	Not required
	WLAN2.4GHz		0.252	5	-0.0514	0.0688	-0.209				
Case 2	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	WCDMA V_ANT1	Back	1.401	5	-0.0275	-0.0685	-0.209	139.4	1.65	0.02	Not required
	WLAN2.4GHz		0.252	5	-0.0514	0.0688	-0.209				
Case 3	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 25_ANT1	Back	1.351	5	-0.025	-0.076	-0.209	147.2	1.60	0.01	Not required
	WLAN2.4GHz		0.252	5	-0.0514	0.0688	-0.209				
Case 4	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	LTE Band 41-PC2_ANT2	Back	1.443	5	-0.0086	0.0936	-0.208	49.5	1.70	0.04	Not required
	WLAN2.4GHz		0.252	5	-0.0514	0.0688	-0.209				
Case 5	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	GSM850_ANT1	Back	1.274	5	-0.046	-0.078	-0.209	155.5	1.57	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	GSM850_ANT1	Back	1.274	5	-0.046	-0.078	-0.209	144.8	1.42	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 6	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	GSM850_ANT2	Back	1.245	5	-0.0085	0.074	-0.209	49.6	1.55	0.04	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	GSM850_ANT2	Back	1.245	5	-0.0085	0.074	-0.209	44.7	1.39	0.04	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 7	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	GSM1900_ANT1	Back	1.396	5	-0.0205	-0.079	-0.209	160.5	1.70	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	GSM1900_ANT1	Back	1.396	5	-0.0205	-0.079	-0.209	149.1	1.54	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				



Case 8	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Case 8	GSM1900_ANT2	Back	1.248	5	-0.0055	0.075	-0.208	52.5	1.55	0.04	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	GSM1900_ANT2	Back	1.248	5	-0.0055	0.075	-0.208	47.9	1.39	0.03	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 9	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	WCDMA V_ANT1	Back	1.401	5	-0.0275	-0.0685	-0.209	148.7	1.70	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	WCDMA V_ANT1	Back	1.401	5	-0.0275	-0.0685	-0.209	137.4	1.54	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 10	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	WCDMA V_ANT2	Back	1.268	5	-0.0055	0.075	-0.209	52.6	1.57	0.04	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	WCDMA V_ANT2	Back	1.268	5	-0.0055	0.075	-0.209	47.8	1.41	0.04	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 11	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	WCDMA IV	Back	1.338	5	-0.0295	-0.07	-0.209	149.8	1.64	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	WCDMA IV	Back	1.338	5	-0.0295	-0.07	-0.209	138.5	1.48	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 12	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	WCDMA II_ANT1	Back	1.317	5	-0.022	-0.0685	-0.209	149.9	1.62	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	WCDMA II_ANT1	Back	1.317	5	-0.022	-0.0685	-0.209	138.5	1.46	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				



	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Case 13	WCDMA II_ANT2	Back	1.218	5	-0.004	0.079	-0.208	54.0	1.52	0.03	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	WCDMA II_ANT2	Back	1.218	5	-0.004	0.079	-0.208	50.2	1.36	0.03	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 14	LTE Band 71_ANT1	Back	1.207	5	-0.043	-0.0685	-0.209	146.3	1.51	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 71_ANT1	Back	1.207	5	-0.043	-0.0685	-0.209	135.4	1.35	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 15	LTE Band 13_ANT1	Back	1.305	5	-0.0245	-0.067	-0.209	147.9	1.61	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 13_ANT1	Back	1.305	5	-0.0245	-0.067	-0.209	136.5	1.45	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 16	LTE Band 26_ANT1	Back	1.309	5	-0.0365	-0.0805	-0.209	159.0	1.61	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 26_ANT1	Back	1.309	5	-0.0365	-0.0805	-0.209	148.0	1.45	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 17	LTE Band 26_ANT2	Back	1.289	5	-0.0055	0.0735	-0.209	52.7	1.59	0.04	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 26_ANT2	Back	1.289	5	-0.0055	0.0735	-0.209	47.6	1.43	0.04	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				



	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Case 18	LTE Band 66_ANT1	Back	1.26	5	-0.011	-0.0805	-0.208	164.4	1.56	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 66_ANT1	Back	1.26	5	-0.011	-0.0805	-0.208	152.9	1.40	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 19	LTE Band 25_ANT1	Back	1.351	5	-0.025	-0.076	-0.209	156.5	1.65	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 25_ANT1	Back	1.351	5	-0.025	-0.076	-0.209	145.2	1.49	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 20	LTE Band 25_ANT2	Back	1.264	5	-0.004	0.0785	-0.208	54.0	1.56	0.04	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 25_ANT2	Back	1.264	5	-0.004	0.0785	-0.208	50.0	1.41	0.03	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 21	LTE Band 7_ANT1 Cube0	Back	1.294	5	-0.0418	-0.072	-0.209	149.9	1.59	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 7_ANT1 Cube0	Back	1.294	5	-0.0418	-0.072	-0.209	139.0	1.44	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	LTE Band 7_ANT1 Cube1	Back	1.294	5	-0.0144	-0.0758	-0.209	158.9	1.59	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 7_ANT1 Cube1	Back	1.294	5	-0.0144	-0.0758	-0.209	147.4	1.44	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
Case 22	LTE Band 7_ANT2	Back	1.24	5	-0.0058	0.0764	-0.208	52.2	1.54	0.04	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 7_ANT2	Back	1.24	5	-0.0058	0.0764	-0.208	47.8	1.38	0.03	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				



	Band	Position	SAR (W/kg)	Gap	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
	Case 23	LTE Band 41-PC3_ANT1 Cube0	Back	1.211	5	-0.0442	-0.082	-0.209	159.6	1.51	0.01
WLAN5GHz		0.3		5	-0.058	0.077	-0.207				
LTE Band 41-PC3_ANT1 Cube0		Back	1.211	5	-0.0442	-0.082	-0.209	148.8	1.35	0.01	Not required
Bluetooth			0.143	5	-0.0526	0.0666	-0.209				
LTE Band 41-PC3_ANT1 Cube1		Back	1.211	5	-0.0154	-0.082	-0.209	164.6	1.51	0.01	Not required
WLAN5GHz			0.3	5	-0.058	0.077	-0.207				
LTE Band 41-PC3_ANT1 Cube1		Back	1.211	5	-0.0154	-0.082	-0.209	153.2	1.35	0.01	Not required
Bluetooth			0.143	5	-0.0526	0.0666	-0.209				
WLAN5GHz		Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
Bluetooth			0.143	5	-0.0526	0.0666	-0.209				
Case 24	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 41-PC3_ANT2	Back	1.217	5	-0.0106	0.0732	-0.208	47.6	1.52	0.04	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 41-PC3_ANT2	Back	1.217	5	-0.0106	0.0732	-0.208	42.5	1.36	0.04	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required
Bluetooth	0.143		5	-0.0526	0.0666	-0.209					
Case 25	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 41-PC2_ANT1 Cube0	Back	1.231	5	-0.0454	-0.0832	-0.209	160.7	1.53	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 41-PC2_ANT1 Cube0	Back	1.231	5	-0.0454	-0.0832	-0.209	150.0	1.37	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
	LTE Band 41-PC2_ANT1 Cube1	Back	1.231	5	-0.0166	-0.082	-0.209	164.3	1.53	0.01	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 41-PC2_ANT1 Cube1	Back	1.231	5	-0.0166	-0.082	-0.209	152.9	1.37	0.01	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required	
Bluetooth		0.143	5	-0.0526	0.0666	-0.209					
Case 26	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (m)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	LTE Band 41-PC2_ANT2	Back	1.443	5	-0.0086	0.0936	-0.208	52.1	1.74	0.04	Not required
	WLAN5GHz		0.3	5	-0.058	0.077	-0.207				
	LTE Band 41-PC2_ANT2	Back	1.443	5	-0.0086	0.0936	-0.208	51.6	1.59	0.04	Not required
	Bluetooth		0.143	5	-0.0526	0.0666	-0.209				
WLAN5GHz	Back	0.3	5	-0.058	0.077	-0.207	11.9	0.44	0.02	Not required	
Bluetooth		0.143	5	-0.0526	0.0666	-0.209					

Test Engineer : Hank Huang, Bin He, David Dai

17. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, 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.

18. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [6] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.
- [7] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [8] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [9] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [10] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [11] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [12] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [13] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [14] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

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



Appendix A. Plots of System Performance Check

The plots are shown as follows.

System Check_Head_750MHz

DUT: D750V3-SN:1099

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

Medium: HSL_750_210701 Medium parameters used: $f = 750$ MHz; $\sigma = 0.895$ S/m; $\epsilon_r = 41.004$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C; Liquid Temperature : 22.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7641; ConvF(11.05, 11.05, 11.05); Calibrated: 2021/3/15
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2020/7/27
- Phantom: Twin-SAM1(P1aP2a20); Type: QD 000 P40 CD; Serial: TP:1670
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 2.96 W/kg

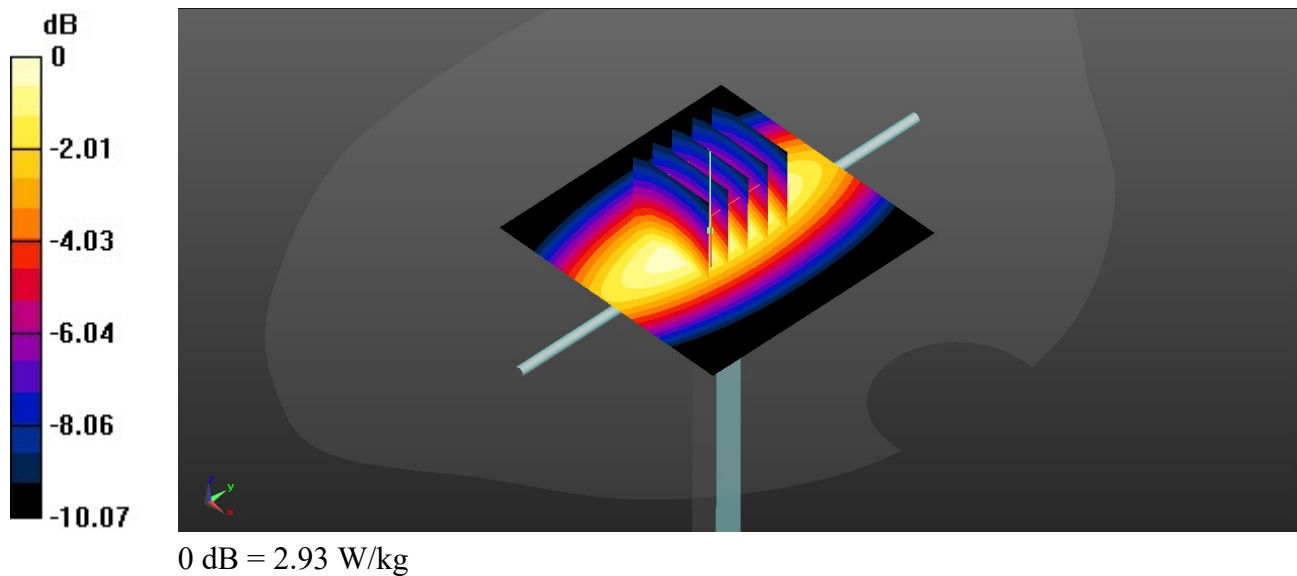
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 61.22 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.31 W/kg

SAR(1 g) = 2.24 W/kg; SAR(10 g) = 1.5 W/kg

Maximum value of SAR (measured) = 2.93 W/kg



System Check_Head_750MHz

DUT: D750V3-SN:1099

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

Medium: HSL_750_210707 Medium parameters used: $f = 750$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 41.563$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7641; ConvF(11.05, 11.05, 11.05); Calibrated: 2021/3/15
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2020/7/27
- Phantom: Twin-SAM1(P1aP2a20); Type: QD 000 P40 CD; Serial: TP:1670
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 3.05 W/kg

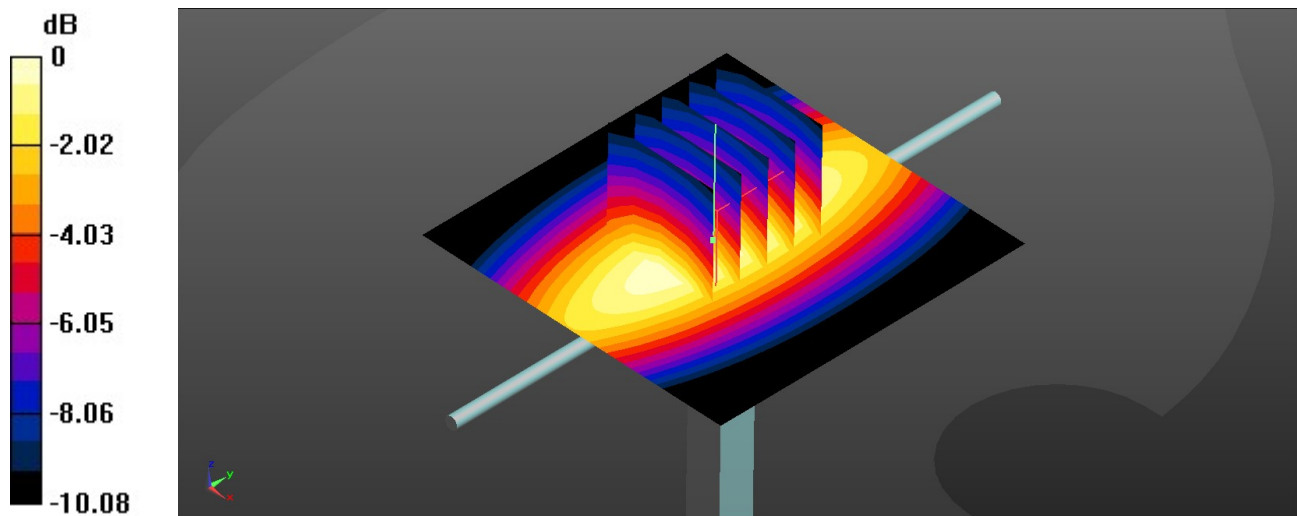
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 61.22 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.40 W/kg

SAR(1 g) = 2.3 W/kg; SAR(10 g) = 1.54 W/kg

Maximum value of SAR (measured) = 3.02 W/kg



0 dB = 3.02 W/kg

System Check_Head_835MHz

DUT: D835V2-SN:4d162

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

Medium: HSL_835_210702 Medium parameters used: $f = 835$ MHz; $\sigma = 0.916$ S/m; $\epsilon_r = 41.029$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C; Liquid Temperature : 22.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7641; ConvF(10.9, 10.9, 10.9); Calibrated: 2021/3/15
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2020/7/27
- Phantom: Twin-SAM1(P1aP2a20); Type: QD 000 P40 CD; Serial: TP:1670
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 3.26 W/kg

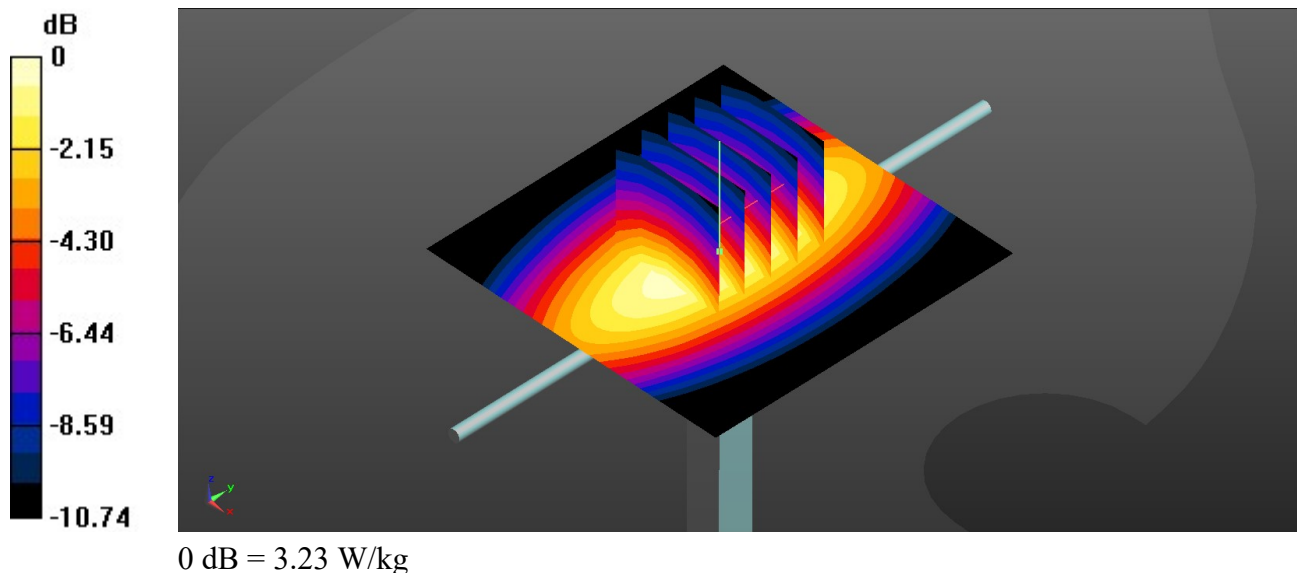
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 62.99 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.65 W/kg

SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.59 W/kg

Maximum value of SAR (measured) = 3.23 W/kg



System Check_Head_835MHz

DUT: D835V2-SN:4d162

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

Medium: HSL_835_210708 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ S/m}$; $\epsilon_r = 42.91$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 23.6 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7641; ConvF(10.9, 10.9, 10.9); Calibrated: 2021/3/15
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2020/7/27
- Phantom: Twin-SAM1(P1aP2a20); Type: QD 000 P40 CD; Serial: TP:1670
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.24 W/kg

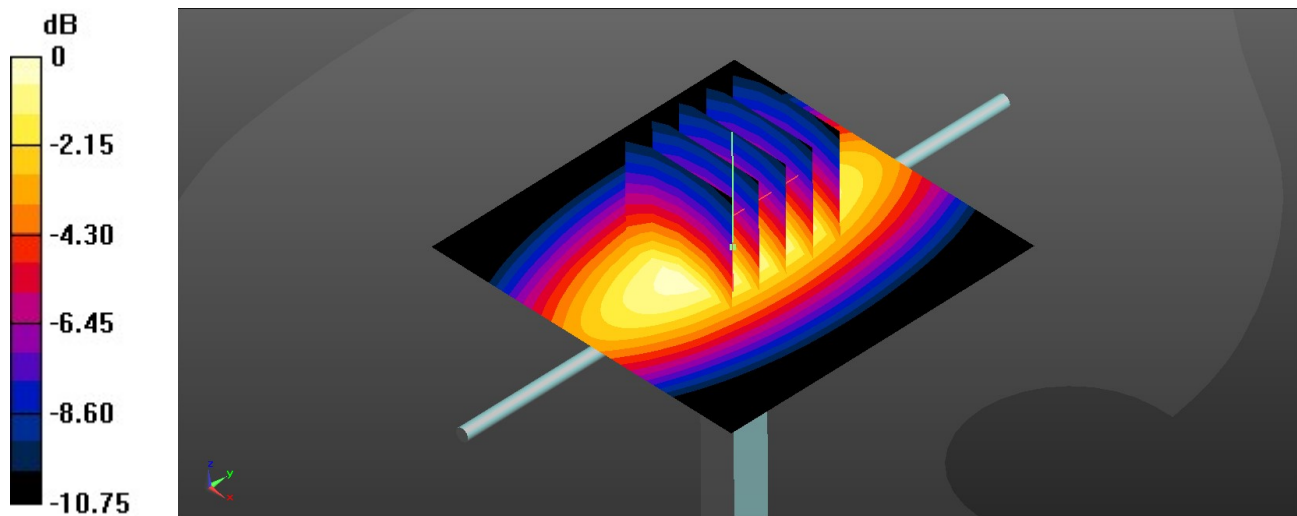
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 62.99 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 3.62 W/kg

SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.58 W/kg

Maximum value of SAR (measured) = 3.21 W/kg



0 dB = 3.21 W/kg

System Check_Head_1750MHz

DUT: D1750V2-SN:1137

Communication System: UID 0, CW (0); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: HSL_1750_210703 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.378$ S/m; $\epsilon_r = 41.34$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C; Liquid Temperature : 22.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7641; ConvF(9.41, 9.41, 9.41); Calibrated: 2021/3/15
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2020/7/27
- Phantom: Twin-SAM1(P1aP2a20); Type: QD 000 P40 CD; Serial: TP:1670
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 14.2 W/kg

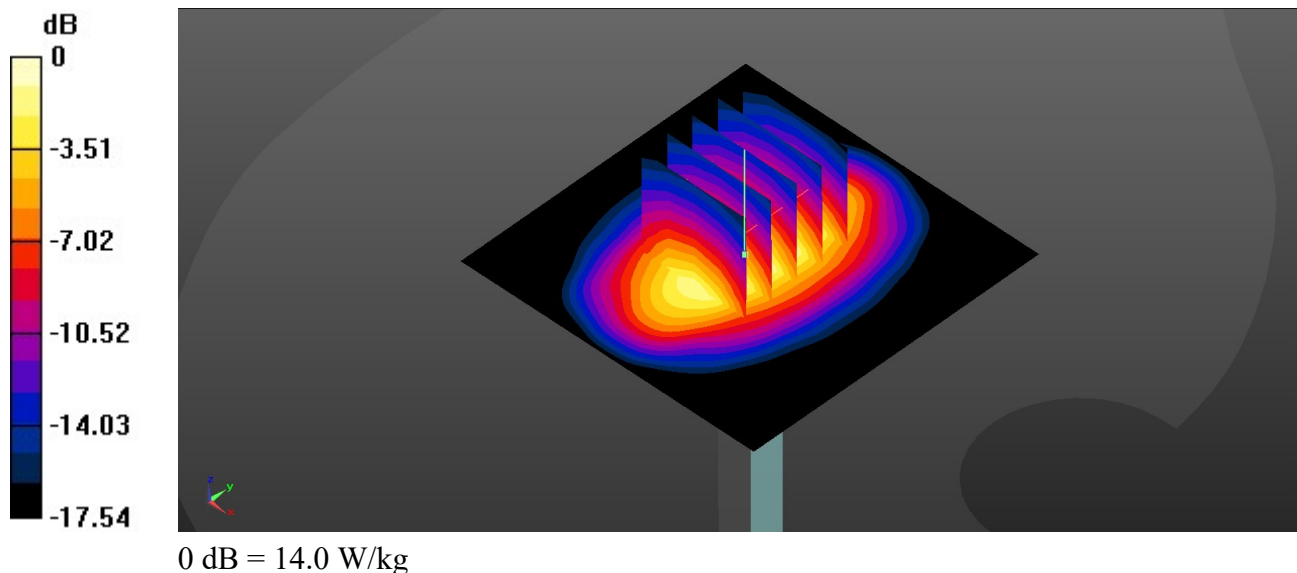
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 102.1 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 17.1 W/kg

SAR(1 g) = 9.13 W/kg; SAR(10 g) = 4.85 W/kg

Maximum value of SAR (measured) = 14.0 W/kg



System Check_Head_1750MHz

DUT: D1750V2-SN:1137

Communication System: UID 0, CW (0); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: HSL_1750_210709 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.381$ S/m; $\epsilon_r = 40.83$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7641; ConvF(9.41, 9.41, 9.41); Calibrated: 2021/3/15
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn715; Calibrated: 2020/7/27
- Phantom: Twin-SAM1(P1aP2a20); Type: QD 000 P40 CD; Serial: TP:1670
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 14.2 W/kg

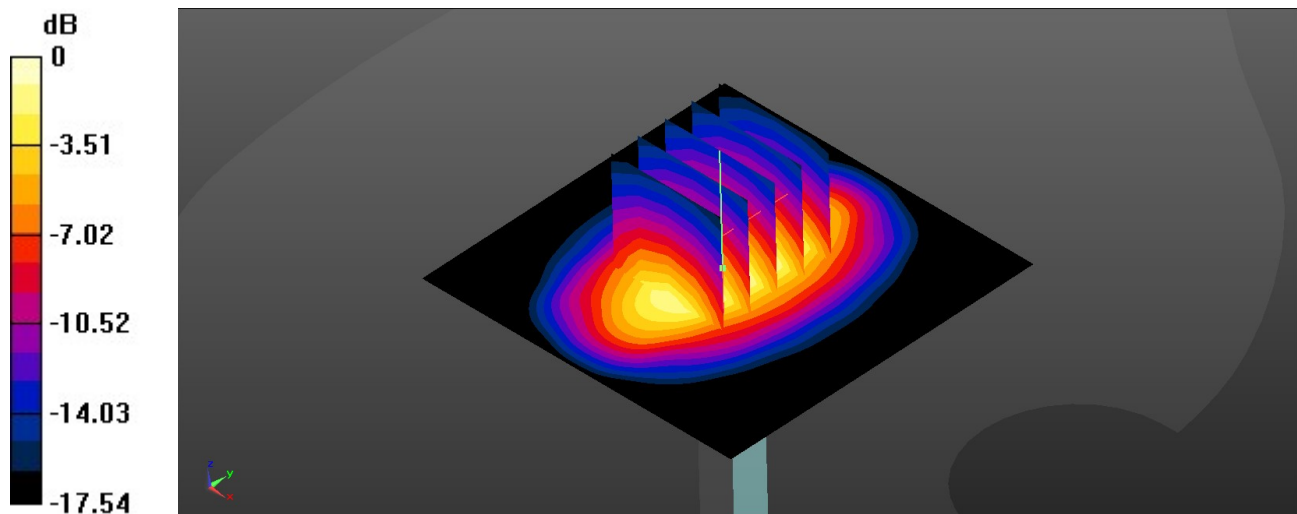
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 102.1 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 17.1 W/kg

SAR(1 g) = 9.15 W/kg; SAR(10 g) = 4.86 W/kg

Maximum value of SAR (measured) = 14.0 W/kg



0 dB = 14.0 W/kg