FCC SAR TEST REPORT

FCC ID	:	**2ABZ2-EF000**
Equipment	:	**Smart Phone**
Brand Name	:	**ONEPLUS**
Model Name	:	**DE2118, DE2117**
Applicant	:	**OnePlus Technology (Shenzhen) Co., Ltd. 18C02,18C03,18C04,18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen, Guangdong, China.**
Manufacturer	:	**18C02,18C03,18C04,18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen, Guangdong, China.**
Standard	:	**FCC 47 CFR Part 2 (2.1093)**

The product was received on Jan. 05, 2021 and testing was started from Jan. 27, 2021 and completed on Mar. 08, 2021. 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.

Hank Huang

Reviewed by: Hank Huang / Supervisor

Johnny Chen

Approved by: Johnny Chen / Manager

ACCREDITED Cert #5145.01

Sporton International (ShenZhen) Inc.
1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055
People's Republic of China

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FA110513-01	01	Initial issue of report	Mar. 18, 2021

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **OnePlus Technology (Shenzhen) Co., Ltd., Smart Phone, DE2118, DE2117**, are as follows.

Frequency Band		Highest SAR Summary				Highest Simultaneous Transmission 1g SAR (W/kg)
		Head (Separation 0mm)	Body-worn (Separation 15mm)	Hotspot (Separation 10mm)	Product Specific (Separation 0mm)	
		1g SAR (W/kg)			10g SAR (W/kg)	
GSM	GSM850	0.71	0.35	0.48		1.52
	GSM1900	0.89	0.65	0.79	0.97	
WCDMA	WCDMA V	0.78	0.34	0.45		
	WCDMA IV	1.03	0.92	0.76	1.98	
	WCDMA II	1.04	0.90	1.08	2.43	
LTE	LTE Band 71	**1.09**	0.29	0.40		
	LTE Band 12 / 17	0.88	0.33	0.48		
	LTE Band 13	0.90	0.40	0.40		
	LTE Band 26 / 5	0.76	0.31	0.51		
	LTE Band 66 / 4	0.90	0.98	0.97	2.31	
	LTE Band 25 / 2	0.98	0.93	1.06	2.44	
	LTE Band 7	0.84	0.60	0.89	2.29	
	LTE Band 41 / 38	0.93	0.63	0.93	1.77	
5G NR	N71	**1.09**	0.26	0.37		
	N5	1.00	0.25	0.43		
	N66	1.07	0.78	0.95	**2.55**	
	N25/ N2	0.74	0.92	1.04	2.29	
	N41	0.79	0.90	0.59	2.23	
WLAN	2.4GHz WLAN	0.99	0.40	0.73		1.36
	5GHz WLAN	1.07	**1.18**	**1.19**	2.35	1.52
2.4GHz Band	Bluetooth	0.21	0.17	0.38		1.52
Date of Testing:		2021/01/27 ~ 2021/3/8				

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

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/kg as averaged over any 1 gram of tissue; 10-gram SAR for Product Specific 10g SAR, limit: 4.0W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 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

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 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
- FCC KDB 941225 D07 UMPC Mini Tablet v01r02

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Smart Phone
Brand Name	ONEPLUS
Model Name	DE2118, DE2117
FCC ID	2ABZ2-EF000
IMEI Code	990017690045865
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 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 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 ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz ANT+: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS AMR / RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink) LTE: QPSK, 16QAM, 64QAM, 256QAM(256QAM not supported for Uplink) 5G NR: CP-OFDM / DFT-s-OFDM , PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz : 802.11b/g/n/ac HT20/HT40/VHT20/VHT40 WLAN 5GHz : 802.11a/n/ac HT20/HT40/VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE ANT+: GFSK NFC: ASK
HW Version	10
SW Version	11.0.1.1.DE18CB
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype

Remark:

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP) and LTE supports VoLTE operation.
2. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 33.
3. This device has WWAN UAT and LAT transmitter antennas which can refer to antenna location chapter.
4. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
5. 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 Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description.
6. LTE band 41, 5GNR n41 supports HPUE, HPUE power and SAR testing performed separately.
7. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
8. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA standalone total power level SAR can represent NSA mode SAR.
9. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
10. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
11. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
12. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode.

<5G NR>

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

4.2 General LTE SAR Test and Reporting Considerations

<table>
<tr><th colspan="2">Summarized necessary items addressed in KDB 941225 D05 v02r05</th></tr>
<tr><td>FCC ID</td><td>2ABZ2-EF000</td></tr>
<tr><td>Equipment Name</td><td>Smart Phone</td></tr>
<tr><td>Operating Frequency Range of each LTE transmission band</td><td>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</td></tr>
<tr><td>Channel Bandwidth</td><td>LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 13: 5MHz, 10MHz
LTE Band 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</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Voice and Data</td></tr>
<tr><td>LTE Release Version</td><td>R15, Cat 13</td></tr>
<tr><td>CA Support</td><td>Yes, Uplink and Downlink</td></tr>
<tr><td>LTE MPR permanently built-in by design</td><td>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3
<table>
<tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr>
<tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr>
<tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr>
<tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr>
</table></td></tr>
<tr><td>LTE A-MPR</td><td>In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)</td></tr>
<tr><td>Spectrum plots for RB configuration</td><td>A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.</td></tr>
<tr><td>Power reduction applied to satisfy SAR compliance</td><td>Yes, receiver detected /hotspot /proximity sensor will trigger reduced power for some LTE bands, the detail please referred to section 14.</td></tr>
<tr><td>LTE Carrier Aggregation Combinations</td><td>Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 14.</td></tr>
<tr><td>LTE Carrier Aggregation Additional Information</td><td>1. This device supports LTE Carrier Aggregation (CA) in the uplink for LTE 41C with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance.
2. This device supports maximum of 3 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.</td></tr>
</table>

Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5								
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844
LTE Band 7								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560
LTE Band 12								
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711
LTE Band 13								
	Bandwidth 5 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		782	
M	23230		782					
H	23255		784.5					
LTE Band 17								
	Bandwidth 5 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)	
L	23755		706.5		23780		709	
M	23790		710		23790		710	
H	23825		713.5		23800		711	
LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905

LTE Band 26										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

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

LTE Band 41								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

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

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

5G NR FR1 Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n41: 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n2	LTE B5/12/13
LTE Anchor Bands for n5	LTE B2/66
LTE Anchor Bands for n25	LTE B12
LTE Anchor Bands for n41	LTE B2/25/66
LTE Anchor Bands for n66	LTE B5/12/13
LTE Anchor Bands for n71	LTE B2/66

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band								
NR Band 2								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860
M	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900
NR Band 5								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165300	826.5	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5
H	169300	846.5	168800	844	168300	841.5	167800	839
NR Band 25								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905
NR Band 66								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720
M	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770
NR Band 71								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133100	665.5	133600	668	134100	670.5	134600	673
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5
H	139100	695.5	138600	693	138100	690.5	137600	688

NR Band 41																
	Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	529998	2649.99	528996	2644.98	528000	2640

5. Smart Transmit feature for RF Exposure compliance

WWAN bands are enabled with Qualcomm Smart Transmit feature. This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time.
Note that WLAN operations are not enabled with Smart Transmit.

The FCC RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.

The purpose of this report (Part 1 test) is to demonstrate that the EUT meets FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels.

This report describes the procedures for the SAR char generation, and the parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit Feature.

<Terminologies in this report>

P_{limit}	The time-averaged RF power which corresponds to SAR_design_target.
P_{max}	Maximum target power level
SAR_design_target:	The design target for SAR compliance. It should be less than regulatory SAR limit to account for all device design related uncertainties.
SAR char	P_{limit} for all the technologies/bands for all applicable DSI

<SAR Characterization>

SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating at 6 GHz or below. It will then be used as input for Smart Transmit to control and manage RF exposure for f < 6 GHz.

<SAR design target and uncertainty>

The detail SAR design target relate to each exposure conditions pls refer to operation description

	Uncertainty dB (k=2)
Total uncertainty	1.0

To account for total uncertainty, SAR_design_target should be determined as:

$$SAR\_design\_target < SAR_{regulatory\_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

<P_{limit} for supported technologies and bands (P_{limit} in EFS file)> for UAT

Band	Antenna	Head	Head Sim-2Tx(2.4G)	Head Sim-2Tx(5G)	Body Worn	Hotspot	Extremity	Pmax*
		DSI 1	DSI 2	DSI 3	DSI 0	DSI 5	DSI 7	
GSM850(3 Tx slots)	1	21.7	20.7	20.7	30.0	29.5	24.7	24.7
GSM1900(3 Tx slots)	1	14.3	14.3	14.3	24.8	16.1	16.1	21.7
WCDMA II	1	13.9	13.9	13.9	24.0	16.9	19.9	24.0
WCDMA IV	1	15.7	15.7	15.7	25.5	18.5	20.5	24.0
WCDMA V	1	21.6	19.9	19.9	29.9	28.2	24.0	24.0
LTE B2/25	1	12.8	12.8	12.8	24.0	17.6	19.3	24.0
LTE B66/4	1	13.5	13.5	13.5	24.0	18.2	19.3	24.0
LTE B7	1	16.2	16.2	16.2	25.9	19.0	21.5	23.0
LTE B12/B17	1	22.5	21.0	21.0	29.6	29.7	24.0	24.0
LTE B13	1	22.20	20.7	20.7	28.7	29.3	24.0	24.0
LTE B26/B5	1	20.5	19.5	19.5	29.8	27.4	24.0	24.0
LTE B41/38 PC3	1	16.2	16.2	16.2	24.8	18.5	20.7	22.0
LTE B41 PC2	1	16.2	16.2	16.2	24.8	18.5	20.7	22.4
LTE B71	1	24.4	23.0	23.0	30.2	28.5	24.0	24.0
NR_n71	1	24.5	22.0	22.0	30.9	30.6	24.2	24.2
NR_n5	1	22.00	20.0	20.0	31.0	28.6	24.2	24.2
NR_n66	1	15.0	15.0	15.0	24.2	19.0	20.3	24.2
NR_n25/n2	1	12.5	12.5	12.5	24.2	17.8	19.3	24.2
NR_n41 PC3	4	21.7	21.7	21.7	26.2	15.0	17.5	24.2
NR_n41 PC2	4	21.7	21.7	21.7	26.2	15.0	17.5	26.2

<P_{limit} for supported technologies and bands (P_{limit} in EFS file)> for LAT

Band	Antenna	Head	Head Sim-2Tx(2.4G)	Head Sim-2Tx(5G)	Body Worn	Hotspot	Extremity	Pmax*
		DSI 1	DSI 2	DSI 3	DSI 0	DSI 5	DSI 8	
GSM850(3 Tx slots)	0	32.8	32.8	32.8	32.3	31.8	24.7	24.7
GSM1900(3 Tx slots)	0	33.5	33.5	33.5	25.5	20.1	21.7	21.7
WCDMA II	0	32.7	32.7	32.7	25.4	20.8	20.8	24.0
WCDMA IV	0	33.9	33.9	33.9	25.7	20.0	20.0	24.0
WCDMA V	0	31.5	31.5	31.5	31.0	30.5	24.0	24.0
LTE B2/25	0	33.5	33.5	33.5	25.5	20.2	20.2	24.0
LTE B66/4	0	33.0	33.0	33.0	25.3	20.0	20.0	24.0
LTE B7	0	29.1	29.1	29.1	27.2	22.0	23.0	23.0
LTE B12/B17	0	31.5	31.5	31.5	30.3	28.0	24.0	24.0
LTE B13	0	33.5	33.5	33.5	31.8	30.1	24.0	24.0
LTE B26/B5	0	31.0	31.0	31.0	30.6	29.2	24.0	24.0
LTE B41/38 PC3	0	28.9	28.9	28.9	26.9	21.2	22.4	22.0
LTE B41 PC2	0	28.9	28.9	28.9	26.9	21.2	22.4	22.4
LTE B71	0	31.7	31.7	31.7	30.4	28.8	24.0	24.0
NR_n71	0	33.0	33.0	33.0	32.0	31.6	24.2	24.2
NR_n5	0	32.0	32.0	32.0	31.8	30.4	24.2	24.2
NR_n66	0	34.3	34.3	34.3	26.2	21.0	21.0	24.2
NR_n25/n2	0	33.5	33.5	33.5	25.8	21.2	21.2	24.2

*P_{max} is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1dB uncertainty.

**All P_{limit} power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & NR TDD).

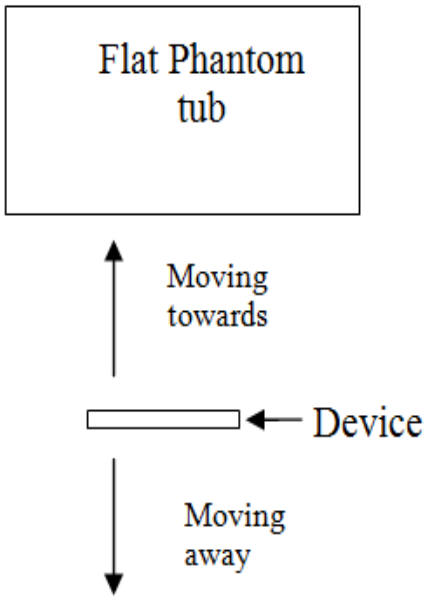
The max allowed output power is the P_{limit} + 1dB device uncertainty, and if P_{limit} is higher than P_{max}, the device output power will be P_{max} instead.

6. Proximity Reduced Triggering Test

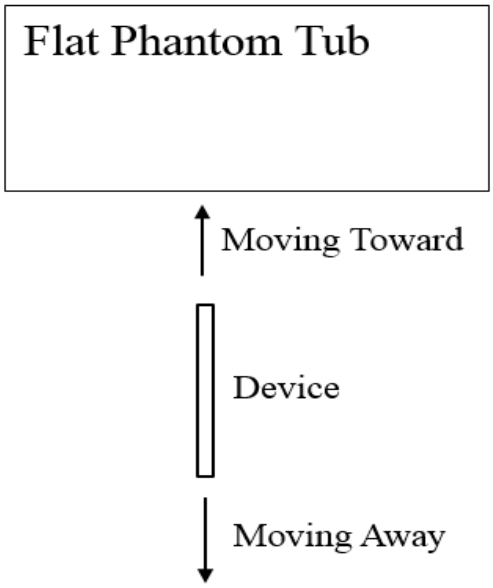
<Proximity Reduced Triggering Distance>:

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 (2600MHz) and lowest (1750MHz) frequency was used for proximity Sensor triggering testing.
2. Capacitive proximity Sensor 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 hand at the front / back /top/bottom/left side of the device.
3. For UAT Antenna: When the sensor is active, the device will reduce maximum output powers on the GSM1900, WCDMA B2/B4, LTE B2/ B4/ B7/ B25 / B66 / B38/ B41, FR1 n2/n25/n66/n41 transmitter.
4. For LAT Antenna: When the sensor is active, the device will reduce maximum output powers on the WCDMA B2/B4, LTE B2/ B4/ B25 / B66, FR1 n66/n25/n2 transmitter.
5. The proximity sensors trigger distance can refer to the following table.
6. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for handheld:
   For UAT:
   Front: 4 mm
   Back: 7 mm
   Top side: 10 mm
   Left side: 3 mm

   For LAT:
   Back: 7 mm
   Bottom side: 7 mm



handheld detection test set-up, front and back faces



handheld detection test set-up, top, bottom and left side

Proximity Sensor Trigger Distance (mm) for UAT								
Position	Front		Back		Top Side		Left Side	
Position	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	5	8	8	11	11	14	4	7

	Proximity Sensor Trigger Distance (mm) for LAT			
Position	Back		Bottom Side	
Position	Moving towards	Moving away	Moving towards	Moving away
Minimum	8	11	8	11

7. RF Exposure Limits

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

8. Specific Absorption Rate (SAR)

8.1 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.

8.2 SAR Definition

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

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

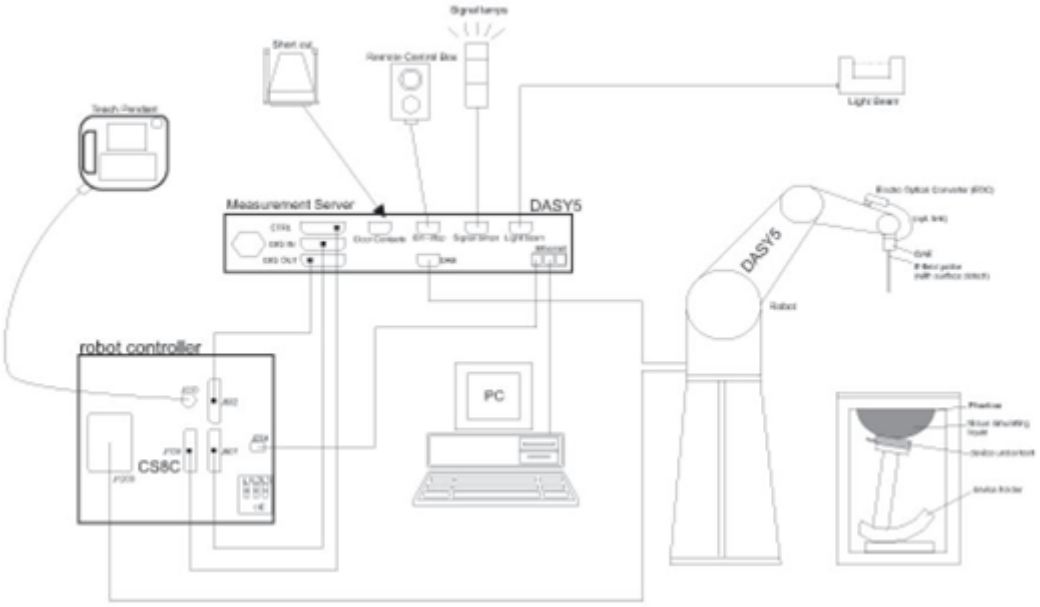
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

9. 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.

9.1 E-Field Probe

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

<EX3DV4 Probe>

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

9.2 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.

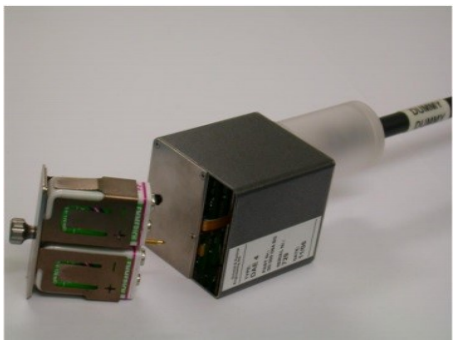
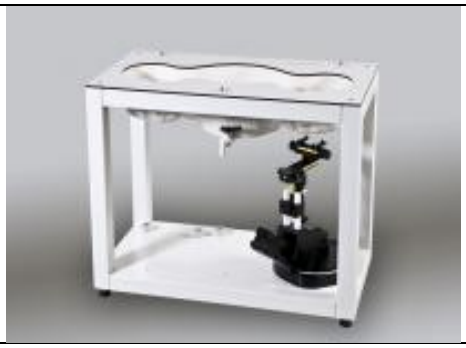


Fig 5.1 Photo of DAE

9.3 Phantom

<SAM Twin Phantom>

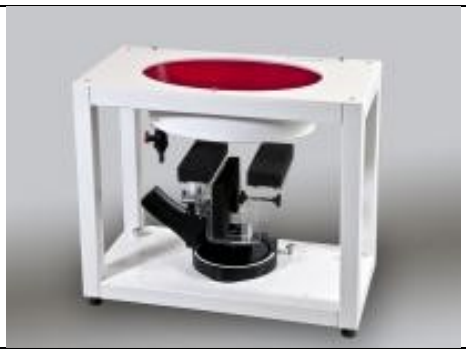
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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



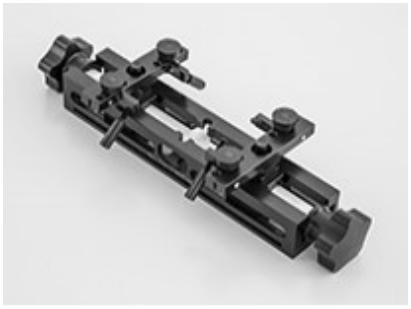
The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

9.4 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

10. 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

10.1 Spatial Peak SAR Evaluation

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

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

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

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

10.2 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 Reduceds to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of Reduced calibration points to probe tip as defined in the probe properties.

10.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

10.4 Zoom Scan

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

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

10.5 Volume Scan Procedures

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

10.6 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.

11. 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	DAE3	528	Mar. 16, 2020	Mar. 15, 2021
SPEAG	Dosimetric E-Field Probe	EX3DV4	3819	Apr. 30, 2020	Apr. 29, 2021
SPEAG	SAM Twin Phantom	QD000P40CC	TP-1500	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio communication analyzer	MT8820C	6201300653	Jul. 21, 2020	Jul. 20, 2021
Anritsu	Radio communication analyzer	MT8821C	6201588577	Mar. 26, 2020	Mar. 25, 2021
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	1144	Dec. 02, 2020	Dec. 01, 2021
Agilent	Signal Generator	N5181A	MY50145381	Dec. 25, 2020	Dec. 24, 2021
Anritsu	Power Senor	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	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	2018100802	Oct. 20, 2020	Oct. 19, 2021
AR	Amplifier	5S1G4	0333096	Note 1	
mini-circuits	Amplifier	ZVE-3W-83+	599201528	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
PASTERNACK	Dual Directional Coupler	PE2214-10	N/A	Note 1	
ET Industries	Dual Directional Coupler	C-058-10	N/A	Note 1	
MCL	Attenuator 1	BW-S10W5	N/A	Note 1	
Weinschel	Attenuator 2	3M-20	N/A	Note 1	
Weinschel	Attenuator 3	MVE2214-03	N/A	Note 1	

General Note:

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

12. System Verification

12.1 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. 10.1. 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. 10.2.

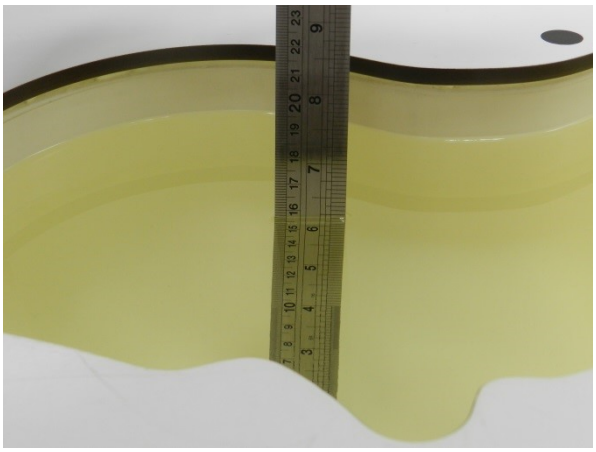


Fig 10.1Photo of Liquid Height for Head SAR

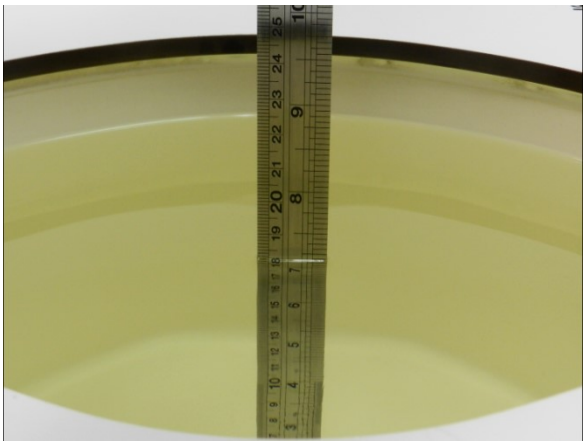


Fig 10.2 Photo of Liquid Height for Body SAR

12.2 Tissue Verification

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

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (εr)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.3	0.880	40.752	0.89	41.90	-1.12	-2.74	±5	2021/1/27
750	Head	22.6	0.896	40.991	0.89	41.90	0.67	-2.17	±5	2021/2/6
835	Head	22.2	0.902	40.749	0.90	41.50	0.22	-1.81	±5	2021/1/28
835	Head	22.7	0.916	41.029	0.90	41.50	1.78	-1.13	±5	2021/2/7
835	Head	22.4	0.877	41.373	0.90	41.50	-2.56	-0.31	±5	2021/2/21
1750	Head	22.2	1.377	41.359	1.37	40.10	0.51	3.14	±5	2021/1/29
1750	Head	22.7	1.381	40.830	1.37	40.10	0.80	1.82	±5	2021/2/8
1750	Head	22.5	1.392	40.573	1.37	40.10	1.61	1.18	±5	2021/2/23
1900	Head	22.1	1.445	41.028	1.40	40.00	3.21	2.57	±5	2021/1/30
1900	Head	22.2	1.457	39.135	1.40	40.00	4.07	-2.16	±5	2021/2/9
1900	Head	22.6	1.440	40.038	1.40	40.00	2.86	0.09	±5	2021/3/8
2450	Head	22.5	1.820	39.753	1.80	39.20	1.11	1.41	±5	2021/2/2
2450	Head	22.5	1.834	39.654	1.80	39.20	1.89	1.16	±5	2021/2/10
2600	Head	22.5	1.992	40.445	1.96	39.00	1.63	3.71	±5	2021/2/1
2600	Head	22.8	2.053	38.335	1.96	39.00	4.74	-1.71	±5	2021/2/11
2600	Head	22.2	2.051	37.775	1.96	39.00	4.64	-3.14	±5	2021/3/7
5250	Head	22.6	4.500	36.973	4.71	35.95	-4.46	2.85	±5	2021/2/3
5250	Head	22.4	4.570	37.646	4.71	35.95	-2.97	4.72	±5	2021/2/12
5600	Head	22.7	4.856	36.517	5.07	35.50	-4.22	2.86	±5	2021/2/4
5600	Head	22.6	4.923	37.157	5.07	35.50	-2.90	4.67	±5	2021/2/13
5750	Head	22.8	5.119	35.497	5.22	35.35	-1.93	0.42	±5	2021/2/5
5750	Head	22.9	5.049	36.943	5.22	35.35	-3.28	4.51	±5	2021/2/14

12.3 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 (%)
2021/1/27	750	Head	250	1099	3819	528	2.28	8.52	9.12	7.04
2021/2/6	750	Head	250	1099	3819	528	2.32	8.52	9.28	8.92
2021/1/28	835	Head	250	4d162	3819	528	2.55	9.61	10.2	6.14
2021/2/7	835	Head	250	4d162	3819	528	2.59	9.61	10.36	7.80
2021/2/21	835	Head	250	4d162	3819	528	2.44	9.61	9.76	1.56
2021/1/29	1750	Head	250	1137	3819	528	9.68	36.50	38.72	6.08
2021/2/8	1750	Head	250	1137	3819	528	9.72	36.50	38.88	6.52
2021/2/23	1750	Head	250	1137	3819	528	9.26	36.50	37.04	1.48
2021/1/30	1900	Head	250	5d182	3819	528	10.20	39.60	40.8	3.03
2021/2/9	1900	Head	250	5d182	3819	528	10.50	39.60	42	6.06
2021/3/8	1900	Head	250	5d182	3819	528	10.60	39.60	42.4	7.07
2021/2/2	2450	Head	250	924	3819	528	13.50	51.40	54	5.06
2021/2/10	2450	Head	250	924	3819	528	13.60	51.40	54.4	5.84
2021/2/1	2600	Head	250	1070	3819	528	15.10	58.10	60.4	3.96
2021/2/11	2600	Head	250	1070	3819	528	15.70	58.10	62.8	8.09
2021/3/7	2600	Head	250	1070	3819	528	14.10	58.10	56.4	-2.93
2021/2/3	5250	Head	100	1167	3819	528	8.23	77.00	82.3	6.88
2021/2/12	5250	Head	100	1167	3819	528	8.21	77.00	82.1	6.62
2021/2/4	5600	Head	100	1167	3819	528	8.42	80.80	84.2	4.21
2021/2/13	5600	Head	100	1167	3819	528	8.46	80.80	84.6	4.70
2021/2/5	5750	Head	100	1167	3819	528	8.01	76.90	80.1	4.16
2021/2/14	5750	Head	100	1167	3819	528	8.04	76.90	80.4	4.55

<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 (%)
2021/1/27	750	Head	250	1099	3819	528	1.53	5.64	6.12	8.51
2021/2/6	750	Head	250	1099	3819	528	1.54	5.64	6.16	9.22
2021/1/28	835	Head	250	4d162	3819	528	1.67	6.35	6.68	5.20
2021/2/7	835	Head	250	4d162	3819	528	1.70	6.35	6.8	7.09
2021/2/21	835	Head	250	4d162	3819	528	1.60	6.35	6.4	0.79
2021/1/29	1750	Head	250	1137	3819	528	5.16	19.50	20.64	5.85
2021/2/8	1750	Head	250	1137	3819	528	5.18	19.50	20.72	6.26
2021/2/23	1750	Head	250	1137	3819	528	4.95	19.50	19.8	1.54
2021/1/30	1900	Head	250	5d182	3819	528	5.35	20.70	21.4	3.38
2021/2/9	1900	Head	250	5d182	3819	528	5.41	20.70	21.64	4.54
2021/3/8	1900	Head	250	5d182	3819	528	5.48	20.70	21.92	5.89
2021/2/2	2450	Head	250	924	3819	528	6.25	24.00	25	4.17
2021/2/10	2450	Head	250	924	3819	528	6.29	24.00	25.16	4.83
2021/2/1	2600	Head	250	1070	3819	528	6.69	26.10	26.76	2.53
2021/2/11	2600	Head	250	1070	3819	528	6.89	26.10	27.56	5.59
2021/3/7	2600	Head	250	1070	3819	528	6.34	26.10	25.36	-2.84
2021/2/3	5250	Head	100	1167	3819	528	2.35	22.00	23.5	6.82
2021/2/12	5250	Head	100	1167	3819	528	2.33	22.00	23.3	5.91
2021/2/4	5600	Head	100	1167	3819	528	2.44	23.20	24.4	5.17
2021/2/13	5600	Head	100	1167	3819	528	2.45	23.20	24.5	5.60
2021/2/5	5750	Head	100	1167	3819	528	2.24	21.60	22.4	3.70
2021/2/14	5750	Head	100	1167	3819	528	2.26	21.60	22.6	4.63

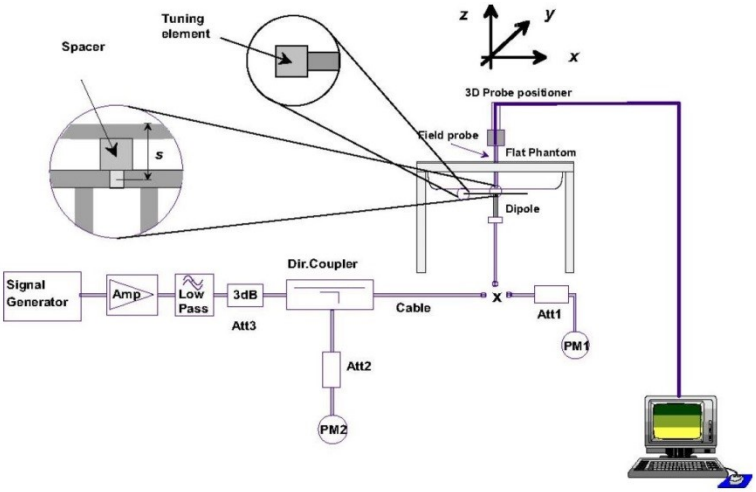


Fig 8.3.1 System Performance Check Setup

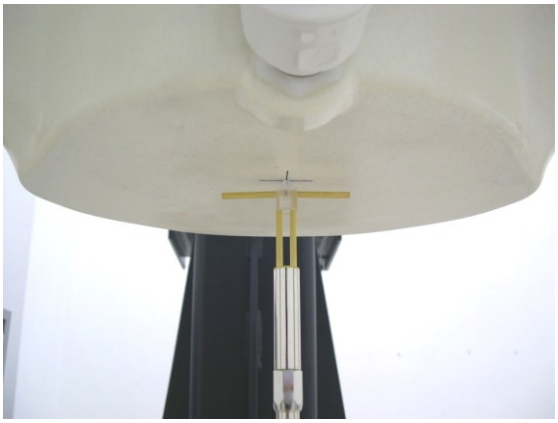


Fig 8.3.2 Setup Photo

13. RF Exposure Positions

13.1 Ear and handset reference point

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

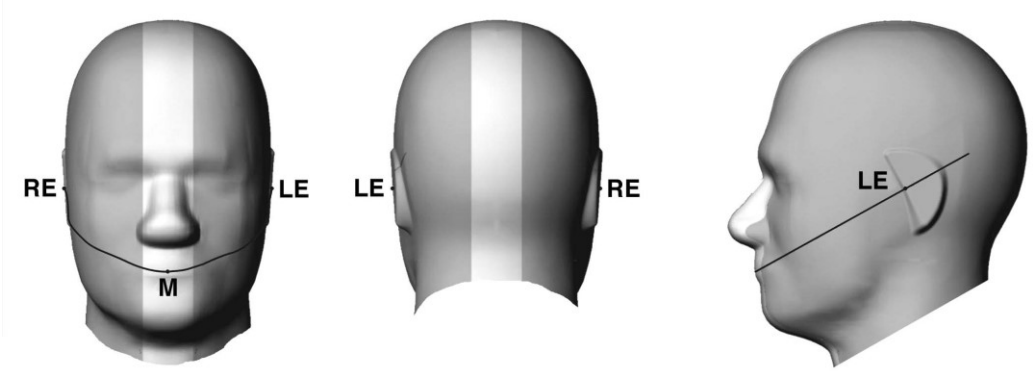


Fig 9.1.1 Front, back, and side views of SAM twin phantom

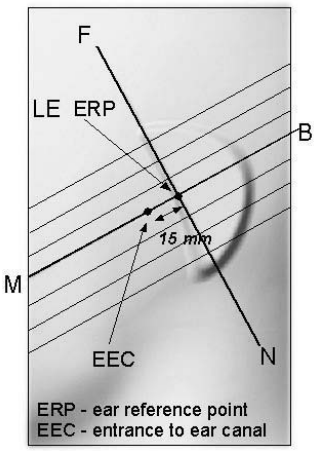


Fig 9.1.2 Close-up side view of phantom showing the ear region.

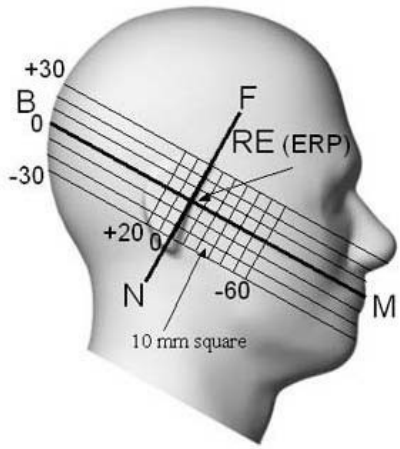


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

13.2 Definition of the cheek position

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

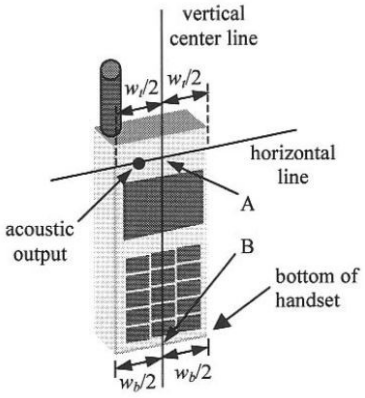


Fig 9.2.1 Handset vertical and horizontal reference lines—"fixed case

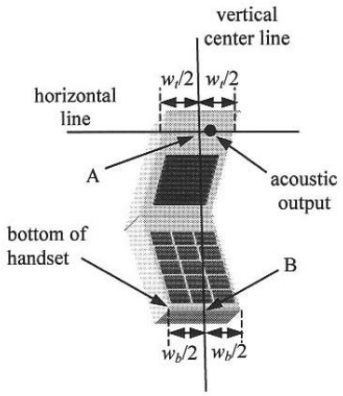


Fig 9.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

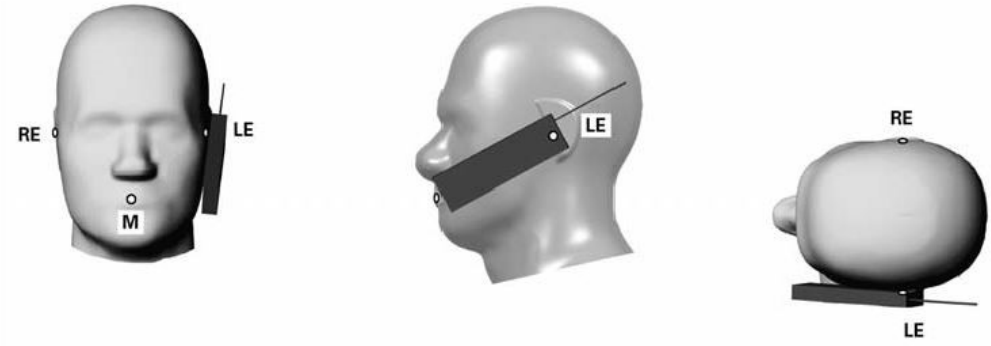


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

13.3 Definition of the tilt position

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

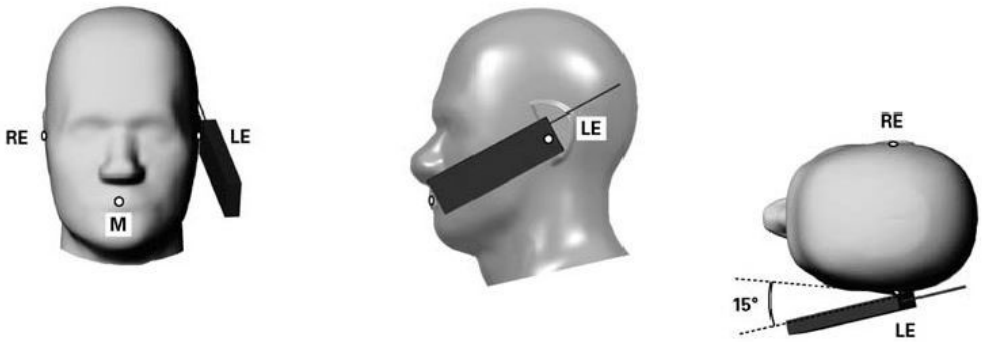


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

13.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 9.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.

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

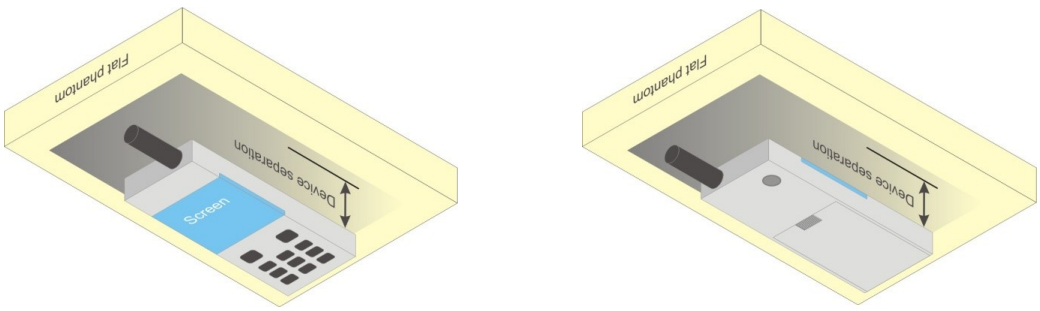


Fig 9.4 Body Worn Position

13.5 Product Specific 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.

13.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

14. GSM/UMTS/LTE Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

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

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For HSPA+ devices supporting 16 QAM in the uplink, power measurements procedure is according to the configurations in Table C.11.1.4 of 3GPP TS 34.121-1.
4. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

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

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

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

Setup Configuration

HSUPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed}1: 47/15 β_{ed}2: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

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

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

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

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

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

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

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

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

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

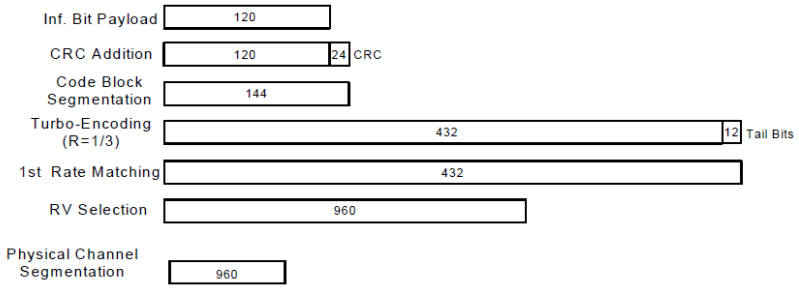


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

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 Parms
   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 (Note3)	β_d	β_{HS} (Note1)	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_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

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

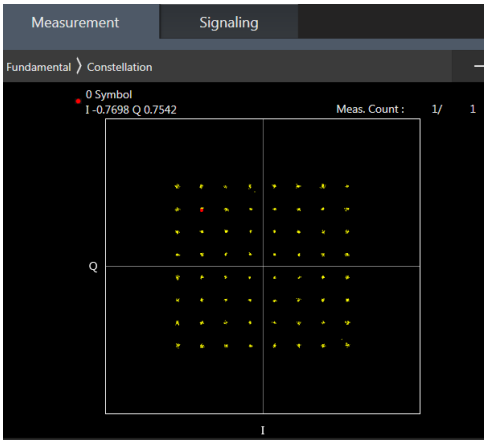
General Note:

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 ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / 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 ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

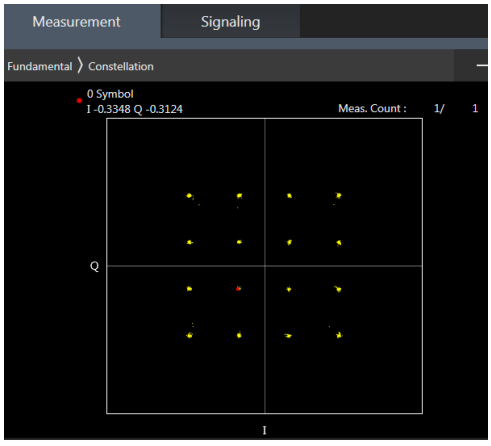
<LTE Conducted Power>

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 output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM



16QAM

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

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

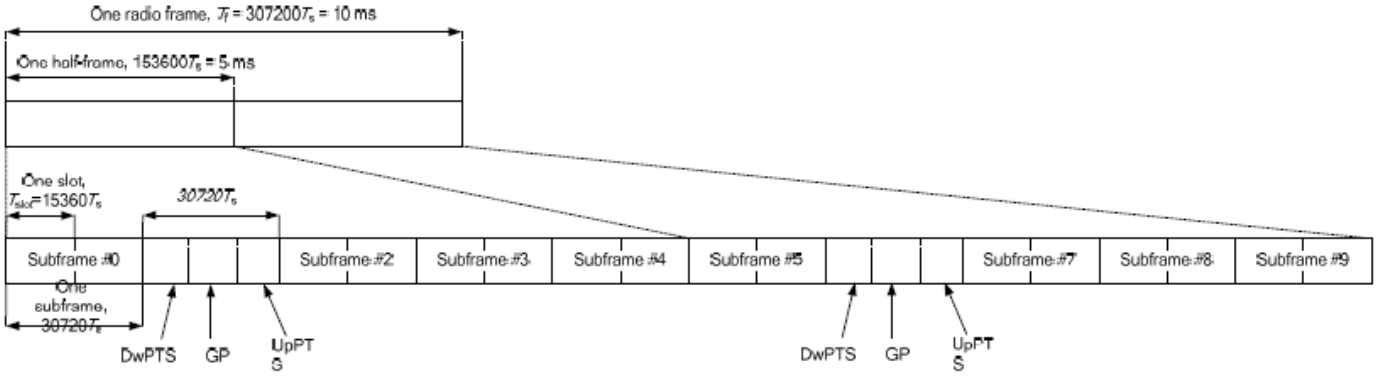


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

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

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

The highest duty factor is resulted from:

For LTE Band 41 Power class 2

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

For LTE Band 41 Power class 3

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

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

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

<LTE Carrier Aggregation combinations>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band and uplink CA. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.
3. All permutations exist. No restrictions on Pcell & Scell combinations.

2CC Downlink Carrier Aggregation				3CC Downlink Carrier Aggregation			
Number	Combination	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset
1	CA_2A-2A	2A,2A-2A	3CC-1	1	CA_2A-2A-4A	2A,4A	
2	CA_2A-4A	2A,4A	3CC-5	2	CA_2A-2A-12A	2A	
3	CA_2A-5A	2A	3CC-9	3	CA_2A-2A-66A	2A,66A	
4	CA_2A-12A	2A	3CC-10	4	CA_2A-2A-71A	2A	
5	CA_2A-66A	2A,66A	3CC-11	5	CA_2A-4A-4A	2A,4A	
6	CA_2A-71A	2A	3CC-4	6	CA_2A-4A-5A		
7	CA_2C	2C	3CC-14	7	CA_2A-4A-12A		
8	CA_4A-4A	4A,4A-4A	3CC-15	8	CA_2A-4A-71A	2A	
9	CA_4A-5A	4A	3CC-6	9	CA_2A-5A-66A		
10	CA_4A-12A	4A	3CC-7	10	CA_2A-12A-66A		
11	CA_4A-71A	4A	3CC-8	11	CA_2A-66A-66A	2A,66A	
12	CA_5A-66A	66A	3CC-9	12	CA_2A-66A-71A		
13	CA_12A-66A	66A	3CC-10	13	CA_2A-66C	2A	
14	CA_25A-25A	25A,25A-25A	3CC-19	14	CA_2C-66A	66A	
15	CA_25A-26A	25A	3CC-19	15	CA_4A-4A-12A	4A	
16	CA_25A-41A	41A		16	CA_4A-4A-71A	4A	
17	CA_26A-41A	41A		17	CA_12A-66A-66A	66A	
18	CA_41A-41A	41A		18	CA_12A-66C		
19	CA_41C	41C	3CC-21	19	CA_25A-25A_26A	25A	
20	CA_66A-66A	66A,66A-66A	3CC-23	20	CA_25A-41C		
21	CA_66A-71A	66A	3CC-23	21	CA_41A-41C	41A	
22	CA_66B	66B		22	CA_41D		
23	CA_66C	66C	3CC-24	23	CA_66A-66A-71A	66A	
				24	CA_66C-71A		

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Bands 2/4/25/66/41 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC Guidance, SAR for downlink 4x4 MIMO was not needed since the maximum average output power in 4x4 downlink MIMO mode was not > 0.25 dB higher than the maximum output power with downlink 4x4 MIMO inactive. When carrier aggregation is applicable, power measurements were performed with the downlink carrier aggregation and 4x4 DL MIMO active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

<LTE Downlink Carrier Aggregation>

General Note:

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

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

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

<LTE Uplink carrier aggregation>

2CC Uplink Carrier Aggregation	
Number	Combination
1	41C

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B41 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. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.

ii. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

iii. Additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.

15. 5G NR Output Power (Unit: dBm)

General Note:

1. NR implementation of n71, n5, n66, n25, n2 and n41 supports NSA operations.
2. NR implementation of n71, n66, n25 and n41 supports SA operations.
3. Following 5G NR n2/n5/n25/n66/n71support SCS 15KHz DFT/CP-OFDM, PI/2 BPSK/QPSK/16QAM/64QAM/256 QAM, Bandwidth 5M/10M/15M/20M.
4. Following 5G NR n41 supports SCS 30KHz DFT/CP-OFDM, PI/2 BPSK/QPSK/16QAM/64QAM/256QAM, Bandwidth 20M/30M/40M/50M/60M/80M/90M/100M.
5. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QMA/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QMA/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
   c. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
   d. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
   e. PI/2 BPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   f. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
   g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
6. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

<3GPP 38.101 MPR for EN-DC>

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

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
		≤ 0.5[2]	≤ 0.5[2]	0[2]
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		
NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26 dBm.				
NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.				

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

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

<Inter Band EN-DC Configuration>

Uplink EN-DC configuration	E-UTRA configuration	NR configuration
DC_5A_n2A	5A	n2A
DC_12A_n2A	12A	n2A
DC_13A_n2A	13A	n2A
DC_2A_n5A	2A	n5A
DC_66A_n5A	66A	n5A
DC_12A_n25A	12A	n25A
DC_5A_n66A	5A	n66A
DC_12A_n66A	12A	n66A
DC_13A_n66A	13A	n66A
DC_2A_n71A	2A	n71A
DC_66A_n71A	66A	n71A
DC_2A_n71AA	2A	n71AA
DC_66A_n71AA	66A	n71AA
DC_2A_n41A	2A	n41A
DC_25A_n41A	25A	n41A
DC_66A_n41A	66A	n41A

16. WiFi/Bluetooth Output Power (Unit: dBm)

General Note:

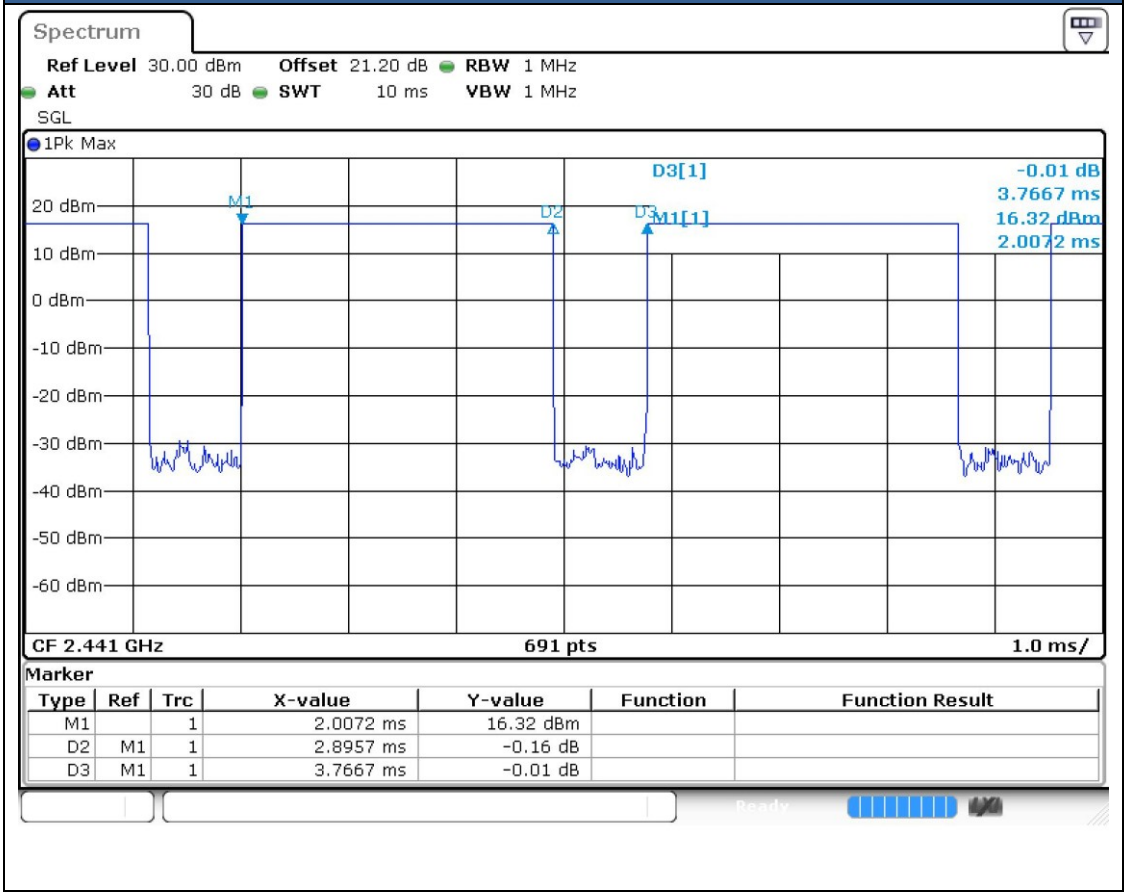
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. 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 76.88% 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.

BT Duty cycle



17. ANT+ Exclusions Applied

Mode Band	Max Average power(dBm)
ANT+	0

Note:

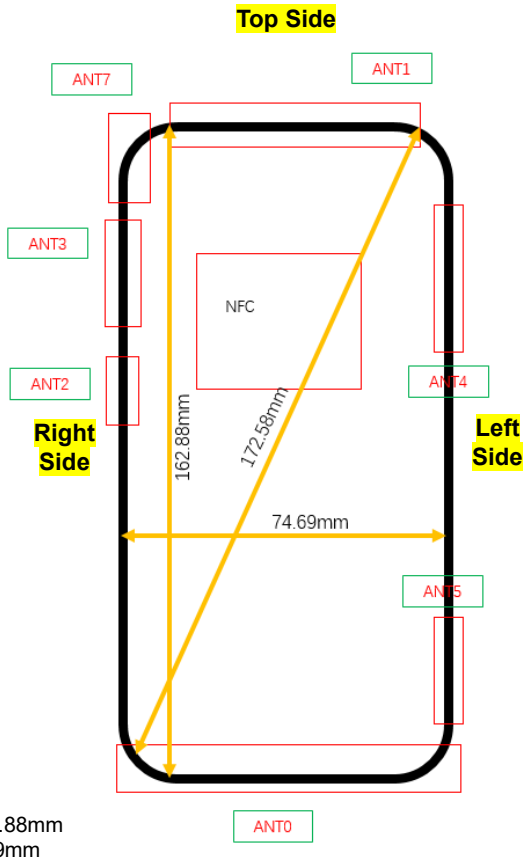
1. Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:
   [(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
   - f(GHz) is the RF channel transmit frequency in GHz
   - Power and distance are rounded to the nearest mW and mm before calculation
   - The result is rounded to one decimal place for comparison

ANT+ Max Power (dBm)	Separation Distance (mm)	Frequency (GHz)	exclusion thresholds
0	< 5	2.48	0.3

Note:

Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 0.3 which is <= 3, SAR testing is not required.

18. Antenna Location



ANT0
TX:663-915MHz,1710-2025MHz,2300-2690MHz
ANT1
TX:663-915MHz,1710-2025MHz,2300-2690MHz
ANT2
GPS L5
ANT3
TX:WIFI 5G Chain0
ANT4
TX:2496-2690MHz
ANT5
RX only
ANT7
TX:WIFI 2.4G Chain0&BT&ANT+
RX: GPS L1

Back View

Length: 162.88mm
Width: 74.69mm
Diagonal: 172.58mm

Antennas Description	
WWAN UAT	ANT 1/4
WWAN LAT	ANT 0
WLAN 2.4GHz Antenna 1 & BT& ANT+&GPS L1	ANT 7
WLAN 5GHz Antenna 1	ANT 3
GPS L5 Antenna	ANT 2

Note: GPS L1 and GPS L5 antenna supports RX only.

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT ANT1	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm
WWAN UAT ANT4	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	>25mm	≤ 25mm
WWAN LAT ANT0	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
BT&2.4GHz WLAN Chain 0&ANT+ ANT7	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
5GHz WLAN Chain 0 ANT3	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm

Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN UAT ANT1	Yes	Yes	Yes	No	Yes	Yes
WWAN UAT ANT4	Yes	Yes	Yes	No	No	Yes
WWAN LAT ANT0	Yes	Yes	No	Yes	Yes	Yes
BT&2.4GHz WLAN Chain 0&ANT+ ANT7	Yes	Yes	Yes	No	Yes	No
5GHz WLAN Chain 0 ANT3	Yes	Yes	Yes	No	Yes	No

General Note:

1. Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 9cm*5cm, the test distance is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge

19. 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, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   · ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   · ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   · ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. When the phone is in talking mode and receiver worked, then power reduction will be implemented immediately at Bluetooth.
5. The device implements the power management and sensor detection for SAR compliance at different exposure conditions (head, body-worn, hotspot/extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. The following power reduction level scenario table used for SAR testing.

WWAN for Head	Power level
WWAN (Standalone)	Reduced Power level 1
WWAN +2.4G WIFI / WWAN +5G WIFI/ WWAN + BT / WWAN + 5G WIFI + BT	Reduced Power level 2

WLAN 2.4G	Power level	WLAN 5G	Power level
2.4G (Standalone)	Reduced Power level 1	5G (Standalone)	Reduced Power level 1
2.4G+WWAN	Reduced Power level 2	5G+WWAN/5G + BT/ WWAN +5G+BT	Reduced Power level 2

BT	Power level
BT (Standalone)	Reduced Power level 1
BT+WWAN/BT+5G/WWAN + 5G WIFI + BT	Reduced Power level 2

6. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
7. 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 product specific 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, WCDMA B2/B4, LTE B66 / B25, 5G NR n66/n25 for LAT, GSM1900, WCDMA B2/B4, LTE B66/B25/B7/41, 5G NR n66/n25 /n41 for UAT and WLAN 5.2/5.8GHz is required to be tested.
8. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
9. 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.
10. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for handheld:
    For UAT:

Front: 4 mm
Back: 7 mm
Top side: 10 mm
Left side: 3 mm

For LAT:
Back: 7 mm
Bottom side: 7 mm

11. UAT means Up Antenna (Top Antenna); LAT means Low Antenna (Bottom Antenna).

GSM Note:

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

UMTS 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 ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / 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 (HSUPA, HSDPA, DC-HSDPA / HSPA+) are less than ¼ 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 output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. 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 band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. The maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion.
   b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
2. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
3. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
4. PI/2 BPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested
5. QPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
6. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
7. This device supports both 5G NR n2 and 5G NR n25. Since the supported frequency span for 5G NR n2 falls completely within the supports frequency span for 5G NR n25, both NR bands have the same target power, and both NR bands share the same transmission path; therefore, SAR was only assessed for 5G NR n25.
8. 5GNR n2 SAR test was covered by 5GNR n25; according to TCB workshop, SAR test for overlapping 5GNR bands can be reduced if
   a. The maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion.
   b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.
9. For 5GNR n2/n5/n25/n41/n66/n71the 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.

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 or U-NII-2A SAR testing is not required when the U-NII-1 or 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 or U-NII-2A.
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.

19.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_UAT	GPRS(3 Tx slots)	Right Cheek	Reduced Level 1	189	836.4	25.80	27.00	1.318	0.13	0.448	0.591
	GSM850_UAT	GPRS(3 Tx slots)	Right Tilted	Reduced Level 1	189	836.4	25.80	27.00	1.318	0.15	0.346	0.456
	GSM850_UAT	GPRS(3 Tx slots)	Left Cheek	Reduced Level 1	189	836.4	25.80	27.00	1.318	-0.15	0.324	0.427
	GSM850_UAT	GPRS(3 Tx slots)	Left Tilted	Reduced Level 1	189	836.4	25.80	27.00	1.318	0.04	0.251	0.331
01	GSM850_UAT	GPRS(3 Tx slots)	Right Cheek	Reduced Level 1	128	824.2	25.70	27.00	1.349	0.15	0.524	**0.707**
	GSM850_UAT	GPRS(3 Tx slots)	Right Cheek	Reduced Level 1	251	848.8	25.78	27.00	1.324	-0.06	0.374	0.495
	GSM850_UAT	GPRS(3 Tx slots)	Right Cheek	Reduced Level 2	189	836.4	25.17	26.00	1.211	0.17	0.400	0.484
	GSM850_UAT	GPRS(3 Tx slots)	Right Tilted	Reduced Level 2	189	836.4	25.17	26.00	1.211	-0.01	0.315	0.381
	GSM850_UAT	GPRS(3 Tx slots)	Left Cheek	Reduced Level 2	189	836.4	25.17	26.00	1.211	0.16	0.285	0.345
	GSM850_UAT	GPRS(3 Tx slots)	Left Tilted	Reduced Level 2	189	836.4	25.17	26.00	1.211	0.08	0.236	0.286
	GSM850_UAT	GPRS(3 Tx slots)	Right Cheek	Reduced Level 2	128	824.2	24.92	26.00	1.282	0.16	0.478	0.613
	GSM850_UAT	GPRS(3 Tx slots)	Right Cheek	Reduced Level 2	251	848.8	24.97	26.00	1.268	-0.16	0.311	0.394
	GSM850_LAT	GPRS(3 Tx slots)	Right Cheek	Full	189	836.4	29.27	30.00	1.183	0.14	0.135	0.160
	GSM850_LAT	GPRS(3 Tx slots)	Right Tilted	Full	189	836.4	29.27	30.00	1.183	0.16	0.070	0.083
	GSM850_LAT	GPRS(3 Tx slots)	Left Cheek	Full	189	836.4	29.27	30.00	1.183	0	0.144	0.170
	GSM850_LAT	GPRS(3 Tx slots)	Left Tilted	Full	189	836.4	29.27	30.00	1.183	0.04	0.070	0.083
	GSM850_LAT	GPRS(3 Tx slots)	Left Cheek	Full	128	824.2	29.12	30.00	1.225	-0.07	0.150	0.184
	GSM850_LAT	GPRS(3 Tx slots)	Left Cheek	Full	251	848.8	28.87	30.00	1.297	-0.1	0.127	0.165
	GSM1900_UAT	GPRS(3 Tx slots)	Right Cheek	Reduced Level 1/2	512	1850.2	18.36	19.60	1.330	-0.13	0.402	0.535
	GSM1900_UAT	GPRS(3 Tx slots)	Right Tilted	Reduced Level 1/2	512	1850.2	18.36	19.60	1.330	0	0.491	0.653
	GSM1900_UAT	GPRS(3 Tx slots)	Left Cheek	Reduced Level 1/2	512	1850.2	18.36	19.60	1.330	0.16	0.262	0.349
	GSM1900_UAT	GPRS(3 Tx slots)	Left Tilted	Reduced Level 1/2	512	1850.2	18.36	19.60	1.330	-0.1	0.333	0.443
02	GSM1900_UAT	GPRS(3 Tx slots)	Right Tilted	Reduced Level 1/2	661	1880	18.30	19.60	1.349	-0.18	0.663	**0.894**
	GSM1900_UAT	GPRS(3 Tx slots)	Right Tilted	Reduced Level 1/2	810	1909.8	18.21	19.60	1.377	0.13	0.595	0.819
	GSM1900_LAT	GPRS(3 Tx slots)	Right Cheek	Full	512	1850.2	25.43	27.00	1.435	-0.12	0.028	0.040
	GSM1900_LAT	GPRS(3 Tx slots)	Right Tilted	Full	512	1850.2	25.43	27.00	1.435	-0.08	0.024	0.035
	GSM1900_LAT	GPRS(3 Tx slots)	Left Cheek	Full	512	1850.2	25.43	27.00	1.435	0.14	0.038	0.054
	GSM1900_LAT	GPRS(3 Tx slots)	Left Tilted	Full	512	1850.2	25.43	27.00	1.435	0.13	0.018	0.025
	GSM1900_LAT	GPRS(3 Tx slots)	Left Cheek	Full	661	1880	25.30	27.00	1.479	0.07	0.038	0.056
	GSM1900_LAT	GPRS(3 Tx slots)	Left Cheek	Full	810	1909.8	25.12	27.00	1.542	0.18	0.051	0.079

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 1	4182	836.4	22.13	22.60	1.114	-0.11	0.661	0.737
	WCDMA V_UAT	RMC 12.2Kbps	Right Tilted	Reduced Level 1	4182	836.4	22.13	22.60	1.114	-0.14	0.531	0.592
	WCDMA V_UAT	RMC 12.2Kbps	Left Cheek	Reduced Level 1	4182	836.4	22.13	22.60	1.114	-0.05	0.515	0.574
	WCDMA V_UAT	RMC 12.2Kbps	Left Tilted	Reduced Level 1	4182	836.4	22.13	22.60	1.114	-0.09	0.399	0.445
03	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 1	4132	826.4	22.01	22.60	1.146	0.17	0.681	**0.780**
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 1	4233	846.6	22.06	22.60	1.132	-0.14	0.554	0.627
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 2	4182	836.4	19.87	20.90	1.268	0.11	0.440	0.558
	WCDMA V_UAT	RMC 12.2Kbps	Right Tilted	Reduced Level 2	4182	836.4	19.87	20.90	1.268	0.09	0.380	0.482
	WCDMA V_UAT	RMC 12.2Kbps	Left Cheek	Reduced Level 2	4182	836.4	19.87	20.90	1.268	-0.14	0.366	0.464
	WCDMA V_UAT	RMC 12.2Kbps	Left Tilted	Reduced Level 2	4182	836.4	19.87	20.90	1.268	0.1	0.280	0.355
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 2	4132	826.4	19.74	20.90	1.306	-0.13	0.458	0.598
	WCDMA V_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 2	4233	846.6	19.82	20.90	1.282	0.01	0.369	0.473
	WCDMA V_LAT	RMC 12.2Kbps	Right Cheek	Full	4182	836.4	24.11	25.00	1.227	0.04	0.132	0.162
	WCDMA V_LAT	RMC 12.2Kbps	Right Tilted	Full	4182	836.4	24.11	25.00	1.227	-0.05	0.073	0.090
	WCDMA V_LAT	RMC 12.2Kbps	Left Cheek	Full	4182	836.4	24.11	25.00	1.227	0.05	0.141	0.173
	WCDMA V_LAT	RMC 12.2Kbps	Left Tilted	Full	4182	836.4	24.11	25.00	1.227	0.08	0.080	0.098
	WCDMA V_LAT	RMC 12.2Kbps	Left Cheek	Full	4132	826.4	24.09	25.00	1.233	0.13	0.169	0.208
	WCDMA V_LAT	RMC 12.2Kbps	Left Cheek	Full	4233	846.6	24.05	25.00	1.245	-0.16	0.153	0.190
	WCDMA IV_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 1/2	1312	1712.4	15.67	16.70	1.268	-0.13	0.636	0.806
04	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	Reduced Level 1/2	1312	1712.4	15.67	16.70	1.268	-0.06	0.809	**1.026**
	WCDMA IV_UAT	RMC 12.2Kbps	Left Cheek	Reduced Level 1/2	1312	1712.4	15.67	16.70	1.268	-0.14	0.397	0.503
	WCDMA IV_UAT	RMC 12.2Kbps	Left Tilted	Reduced Level 1/2	1312	1712.4	15.67	16.70	1.268	0.01	0.521	0.660
	WCDMA IV_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 1/2	1413	1732.6	15.58	16.70	1.294	-0.03	0.623	0.806
	WCDMA IV_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 1/2	1513	1752.6	15.55	16.70	1.303	-0.12	0.588	0.766
	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	Reduced Level 1/2	1413	1732.6	15.58	16.70	1.294	0.03	0.792	1.025
	WCDMA IV_UAT	RMC 12.2Kbps	Right Tilted	Reduced Level 1/2	1513	1752.6	15.55	16.70	1.303	0.01	0.666	0.868
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	Full	1312	1712.4	24.14	25.00	1.219	0.16	0.090	0.109
	WCDMA IV_LAT	RMC 12.2Kbps	Right Tilted	Full	1312	1712.4	24.14	25.00	1.219	-0.07	0.040	0.048
	WCDMA IV_LAT	RMC 12.2Kbps	Left Cheek	Full	1312	1712.4	24.14	25.00	1.219	-0.11	0.072	0.088
	WCDMA IV_LAT	RMC 12.2Kbps	Left Tilted	Full	1312	1712.4	24.14	25.00	1.219	-0.07	0.040	0.049
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	Full	1413	1732.6	24.09	25.00	1.233	-0.17	0.097	0.119
	WCDMA IV_LAT	RMC 12.2Kbps	Right Cheek	Full	1513	1752.6	24.04	25.00	1.247	0	0.076	0.095
	WCDMA II_UAT	RMC 12.2Kbps	Right Cheek	Reduced Level 1/2	9400	1880	13.68	14.90	1.324	-0.11	0.554	0.734
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	Reduced Level 1/2	9400	1880	13.68	14.90	1.324	-0.06	0.703	0.931
	WCDMA II_UAT	RMC 12.2Kbps	Left Cheek	Reduced Level 1/2	9400	1880	13.68	14.90	1.324	-0.1	0.337	0.446
	WCDMA II_UAT	RMC 12.2Kbps	Left Tilted	Reduced Level 1/2	9400	1880	13.68	14.90	1.324	0.19	0.452	0.599
	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	Reduced Level 1/2	9262	1852.4	13.60	14.90	1.349	0.07	0.642	0.866
05	WCDMA II_UAT	RMC 12.2Kbps	Right Tilted	Reduced Level 1/2	9538	1907.6	13.67	14.90	1.327	-0.16	0.786	**1.043**
	WCDMA II_LAT	RMC 12.2Kbps	Right Cheek	Full	9400	1880	24.33	25.00	1.167	0.05	0.100	0.117
	WCDMA II_LAT	RMC 12.2Kbps	Right Tilted	Full	9400	1880	24.33	25.00	1.167	0.09	0.043	0.050
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	Full	9400	1880	24.33	25.00	1.167	0.15	0.138	0.161
	WCDMA II_LAT	RMC 12.2Kbps	Left Tilted	Full	9400	1880	24.33	25.00	1.167	-0.15	0.068	0.079
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	Full	9262	1852.4	24.21	25.00	1.199	0.01	0.085	0.101
	WCDMA II_LAT	RMC 12.2Kbps	Left Cheek	Full	9538	1907.6	24.30	25.00	1.175	0.09	0.090	0.106

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
06	LTE Band 71_UAT	20M	QPSK	1	0	Right Cheek	Full	133322	683	23.95	25.00	1.274	0.08	0.854	**1.088**
	LTE Band 71_UAT	20M	QPSK	1	0	Right Tilted	Full	133322	683	23.95	25.00	1.274	0.12	0.732	0.932
	LTE Band 71_UAT	20M	QPSK	1	0	Left Cheek	Full	133322	683	23.95	25.00	1.274	-0.19	0.603	0.768
	LTE Band 71_UAT	20M	QPSK	1	0	Left Tilted	Full	133322	683	23.95	25.00	1.274	0.14	0.450	0.573
	LTE Band 71_UAT	20M	QPSK	50	0	Right Cheek	Full	133322	683	22.94	24.00	1.276	-0.05	0.673	0.859
	LTE Band 71_UAT	20M	QPSK	50	0	Right Tilted	Full	133322	683	22.94	24.00	1.276	0.09	0.577	0.737
	LTE Band 71_UAT	20M	QPSK	50	0	Left Cheek	Full	133322	683	22.94	24.00	1.276	0.05	0.475	0.606
	LTE Band 71_UAT	20M	QPSK	50	0	Left Tilted	Full	133322	683	22.94	24.00	1.276	-0.04	0.365	0.466
	LTE Band 71_UAT	20M	QPSK	100	0	Right Cheek	Full	133322	683	22.95	24.00	1.274	-0.02	0.631	0.804
	LTE Band 71_UAT	20M	QPSK	100	0	Right Tilted	Full	133322	683	22.95	24.00	1.274	0.07	0.540	0.688
	LTE Band 71_UAT	20M	QPSK	1	0	Right Cheek	Reduced Level 2	133322	683	23.32	24.00	1.169	-0.05	0.707	0.827
	LTE Band 71_UAT	20M	QPSK	1	0	Right Tilted	Reduced Level 2	133322	683	23.32	24.00	1.169	0.07	0.574	0.671
	LTE Band 71_UAT	20M	QPSK	1	0	Left Cheek	Reduced Level 2	133322	683	23.32	24.00	1.169	0.09	0.414	0.484
	LTE Band 71_UAT	20M	QPSK	1	0	Left Tilted	Reduced Level 2	133322	683	23.32	24.00	1.169	-0.12	0.354	0.414
	LTE Band 71_UAT	20M	QPSK	50	0	Right Cheek	Reduced Level 2	133322	683	23.24	24.00	1.191	0.04	0.680	0.810
	LTE Band 71_UAT	20M	QPSK	50	0	Right Tilted	Reduced Level 2	133322	683	23.24	24.00	1.191	0.06	0.553	0.659
	LTE Band 71_UAT	20M	QPSK	50	0	Left Cheek	Reduced Level 2	133322	683	23.24	24.00	1.191	0.07	0.401	0.478
	LTE Band 71_UAT	20M	QPSK	50	0	Left Tilted	Reduced Level 2	133322	683	23.24	24.00	1.191	-0.03	0.344	0.410
	LTE Band 71_UAT	20M	QPSK	100	0	Right Cheek	Reduced Level 2	133322	683	22.82	24.00	1.312	0.08	0.666	0.874
	LTE Band 71_LAT	20M	QPSK	1	0	Right Cheek	Full	133322	683	23.81	25.00	1.315	-0.07	0.121	0.159
	LTE Band 71_LAT	20M	QPSK	1	0	Right Tilted	Full	133322	683	23.81	25.00	1.315	0.12	0.061	0.080
	LTE Band 71_LAT	20M	QPSK	1	0	Left Cheek	Full	133322	683	23.81	25.00	1.315	-0.12	0.154	0.203
	LTE Band 71_LAT	20M	QPSK	1	0	Left Tilted	Full	133322	683	23.81	25.00	1.315	0.07	0.067	0.087
	LTE Band 71_LAT	20M	QPSK	50	0	Right Cheek	Full	133322	683	22.76	24.00	1.330	0.12	0.080	0.107
	LTE Band 71_LAT	20M	QPSK	50	0	Right Tilted	Full	133322	683	22.76	24.00	1.330	0.16	0.040	0.053
	LTE Band 71_LAT	20M	QPSK	50	0	Left Cheek	Full	133322	683	22.76	24.00	1.330	0.03	0.092	0.122
	LTE Band 71_LAT	20M	QPSK	50	0	Left Tilted	Full	133322	683	22.76	24.00	1.330	-0.01	0.045	0.059
07	LTE Band 12_UAT	10M	QPSK	1	0	Right Cheek	Reduced Level 1	23095	707.5	22.60	23.50	1.230	-0.16	0.712	**0.876**
	LTE Band 12_UAT	10M	QPSK	1	0	Right Tilted	Reduced Level 1	23095	707.5	22.60	23.50	1.230	0.1	0.565	0.695
	LTE Band 12_UAT	10M	QPSK	1	0	Left Cheek	Reduced Level 1	23095	707.5	22.60	23.50	1.230	-0.07	0.420	0.517
	LTE Band 12_UAT	10M	QPSK	1	0	Left Tilted	Reduced Level 1	23095	707.5	22.60	23.50	1.230	0.04	0.345	0.424
	LTE Band 12_UAT	10M	QPSK	25	0	Right Cheek	Reduced Level 1	23095	707.5	22.58	23.50	1.236	-0.11	0.701	0.866
	LTE Band 12_UAT	10M	QPSK	25	0	Right Tilted	Reduced Level 1	23095	707.5	22.58	23.50	1.236	0.08	0.563	0.696
	LTE Band 12_UAT	10M	QPSK	25	0	Left Cheek	Reduced Level 1	23095	707.5	22.58	23.50	1.236	0	0.419	0.518
	LTE Band 12_UAT	10M	QPSK	25	0	Left Tilted	Reduced Level 1	23095	707.5	22.58	23.50	1.236	-0.1	0.344	0.425
	LTE Band 12_UAT	10M	QPSK	50	0	Right Cheek	Reduced Level 1	23095	707.5	22.55	23.50	1.245	0.05	0.665	0.828
	LTE Band 12_UAT	10M	QPSK	1	0	Right Cheek	Reduced Level 2	23095	707.5	21.22	22.00	1.197	0.16	0.526	0.629
	LTE Band 12_UAT	10M	QPSK	1	0	Right Tilted	Reduced Level 2	23095	707.5	21.22	22.00	1.197	-0.16	0.400	0.479
	LTE Band 12_UAT	10M	QPSK	1	0	Left Cheek	Reduced Level 2	23095	707.5	21.22	22.00	1.197	0	0.325	0.389
	LTE Band 12_UAT	10M	QPSK	1	0	Left Tilted	Reduced Level 2	23095	707.5	21.22	22.00	1.197	0.17	0.263	0.315
	LTE Band 12_UAT	10M	QPSK	25	0	Right Cheek	Reduced Level 2	23095	707.5	21.05	22.00	1.245	-0.17	0.525	0.653
	LTE Band 12_UAT	10M	QPSK	25	0	Right Tilted	Reduced Level 2	23095	707.5	21.05	22.00	1.245	0.08	0.401	0.499
	LTE Band 12_UAT	10M	QPSK	25	0	Left Cheek	Reduced Level 2	23095	707.5	21.05	22.00	1.245	-0.01	0.322	0.401
	LTE Band 12_UAT	10M	QPSK	25	0	Left Tilted	Reduced Level 2	23095	707.5	21.05	22.00	1.245	0.16	0.259	0.322
	LTE Band 12_LAT	10M	QPSK	1	0	Right Cheek	Full	23095	707.5	23.86	25.00	1.300	0.12	0.146	0.190
	LTE Band 12_LAT	10M	QPSK	1	0	Right Tilted	Full	23095	707.5	23.86	25.00	1.300	0.04	0.076	0.098
	LTE Band 12_LAT	10M	QPSK	1	0	Left Cheek	Full	23095	707.5	23.86	25.00	1.300	0.01	0.160	0.208
	LTE Band 12_LAT	10M	QPSK	1	0	Left Tilted	Full	23095	707.5	23.86	25.00	1.300	-0.09	0.080	0.104
	LTE Band 12_LAT	10M	QPSK	25	0	Right Cheek	Full	23095	707.5	22.88	24.00	1.294	0.04	0.112	0.145
	LTE Band 12_LAT	10M	QPSK	25	0	Right Tilted	Full	23095	707.5	22.88	24.00	1.294	0.17	0.063	0.081
	LTE Band 12_LAT	10M	QPSK	25	0	Left Cheek	Full	23095	707.5	22.88	24.00	1.294	-0.18	0.123	0.159
	LTE Band 12_LAT	10M	QPSK	25	0	Left Tilted	Full	23095	707.5	22.88	24.00	1.294	0.17	0.063	0.082

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_UAT	10M	QPSK	1	0	Right Cheek	Reduced Level 1	23230	782	22.44	23.20	1.191	-0.07	0.729	0.868
	LTE Band 13_UAT	10M	QPSK	1	0	Right Tilted	Reduced Level 1	23230	782	22.44	23.20	1.191	-0.15	0.576	0.686
	LTE Band 13_UAT	10M	QPSK	1	0	Left Cheek	Reduced Level 1	23230	782	22.44	23.20	1.191	0.18	0.554	0.660
	LTE Band 13_UAT	10M	QPSK	1	0	Left Tilted	Reduced Level 1	23230	782	22.44	23.20	1.191	-0.14	0.396	0.472
08	LTE Band 13_UAT	10M	QPSK	25	0	Right Cheek	Reduced Level 1	23230	782	22.34	23.20	1.219	0.1	0.740	**0.902**
	LTE Band 13_UAT	10M	QPSK	25	0	Right Tilted	Reduced Level 1	23230	782	22.34	23.20	1.219	0.07	0.568	0.692
	LTE Band 13_UAT	10M	QPSK	25	0	Left Cheek	Reduced Level 1	23230	782	22.34	23.20	1.219	-0.19	0.547	0.667
	LTE Band 13_UAT	10M	QPSK	25	0	Left Tilted	Reduced Level 1	23230	782	22.34	23.20	1.219	-0.06	0.392	0.478
	LTE Band 13_UAT	10M	QPSK	50	0	Right Cheek	Reduced Level 1	23230	782	22.23	23.20	1.250	0.04	0.675	0.844
	LTE Band 13_UAT	10M	QPSK	1	0	Right Cheek	Reduced Level 2	23230	782	20.87	21.70	1.211	0.14	0.494	0.598
	LTE Band 13_UAT	10M	QPSK	1	0	Right Tilted	Reduced Level 2	23230	782	20.87	21.70	1.211	0.14	0.420	0.508
	LTE Band 13_UAT	10M	QPSK	1	0	Left Cheek	Reduced Level 2	23230	782	20.87	21.70	1.211	0.07	0.383	0.464
	LTE Band 13_UAT	10M	QPSK	1	0	Left Tilted	Reduced Level 2	23230	782	20.87	21.70	1.211	-0.13	0.298	0.361
	LTE Band 13_UAT	10M	QPSK	25	0	Right Cheek	Reduced Level 2	23230	782	20.72	21.70	1.253	0.11	0.489	0.613
	LTE Band 13_UAT	10M	QPSK	25	0	Right Tilted	Reduced Level 2	23230	782	20.72	21.70	1.253	-0.07	0.418	0.524
	LTE Band 13_UAT	10M	QPSK	25	0	Left Cheek	Reduced Level 2	23230	782	20.72	21.70	1.253	-0.17	0.377	0.472
	LTE Band 13_UAT	10M	QPSK	25	0	Left Tilted	Reduced Level 2	23230	782	20.72	21.70	1.253	-0.12	0.295	0.370
	LTE Band 13_LAT	10M	QPSK	1	0	Right Cheek	Full	23230	782	23.90	25.00	1.288	-0.03	0.098	0.127
	LTE Band 13_LAT	10M	QPSK	1	0	Right Tilted	Full	23230	782	23.90	25.00	1.288	0.07	0.042	0.054
	LTE Band 13_LAT	10M	QPSK	1	0	Left Cheek	Full	23230	782	23.90	25.00	1.288	0.03	0.103	0.133
	LTE Band 13_LAT	10M	QPSK	1	0	Left Tilted	Full	23230	782	23.90	25.00	1.288	-0.17	0.047	0.061
	LTE Band 13_LAT	10M	QPSK	25	0	Right Cheek	Full	23230	782	22.94	24.00	1.276	0.11	0.067	0.086
	LTE Band 13_LAT	10M	QPSK	25	0	Right Tilted	Full	23230	782	22.94	24.00	1.276	0.04	0.033	0.042
	LTE Band 13_LAT	10M	QPSK	25	0	Left Cheek	Full	23230	782	22.94	24.00	1.276	-0.12	0.073	0.093
	LTE Band 13_LAT	10M	QPSK	25	0	Left Tilted	Full	23230	782	22.94	24.00	1.276	-0.06	0.036	0.046
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	Reduced Level 1	26965	841.5	20.72	21.50	1.197	-0.1	0.582	0.697
	LTE Band 26_UAT	15M	QPSK	1	0	Right Tilted	Reduced Level 1	26965	841.5	20.72	21.50	1.197	-0.03	0.470	0.562
	LTE Band 26_UAT	15M	QPSK	1	0	Left Cheek	Reduced Level 1	26965	841.5	20.72	21.50	1.197	-0.07	0.470	0.562
	LTE Band 26_UAT	15M	QPSK	1	0	Left Tilted	Reduced Level 1	26965	841.5	20.72	21.50	1.197	-0.09	0.332	0.397
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	Reduced Level 1	26765	821.5	20.60	21.50	1.230	-0.19	0.322	0.396
09	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	Reduced Level 1	26865	831.5	20.62	21.50	1.225	-0.05	0.621	**0.760**
	LTE Band 26_UAT	15M	QPSK	36	39	Right Cheek	Reduced Level 1	26965	841.5	20.47	21.50	1.268	-0.1	0.508	0.644
	LTE Band 26_UAT	15M	QPSK	36	39	Right Tilted	Reduced Level 1	26965	841.5	20.47	21.50	1.268	-0.17	0.419	0.531
	LTE Band 26_UAT	15M	QPSK	36	39	Left Cheek	Reduced Level 1	26965	841.5	20.47	21.50	1.268	-0.17	0.425	0.539
	LTE Band 26_UAT	15M	QPSK	36	39	Left Tilted	Reduced Level 1	26965	841.5	20.47	21.50	1.268	-0.12	0.283	0.359
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	Reduced Level 2	26965	841.5	19.59	20.50	1.233	-0.06	0.447	0.551
	LTE Band 26_UAT	15M	QPSK	1	0	Right Tilted	Reduced Level 2	26965	841.5	19.59	20.50	1.233	0.06	0.375	0.462
	LTE Band 26_UAT	15M	QPSK	1	0	Left Cheek	Reduced Level 2	26965	841.5	19.59	20.50	1.233	0.18	0.388	0.478
	LTE Band 26_UAT	15M	QPSK	1	0	Left Tilted	Reduced Level 2	26965	841.5	19.59	20.50	1.233	0.1	0.343	0.423
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	Reduced Level 2	26765	821.5	19.31	20.50	1.315	0.13	0.286	0.376
	LTE Band 26_UAT	15M	QPSK	1	0	Right Cheek	Reduced Level 2	26865	831.5	19.55	20.50	1.245	0.05	0.510	0.635
	LTE Band 26_UAT	15M	QPSK	36	39	Right Cheek	Reduced Level 2	26965	841.5	19.48	20.50	1.265	-0.17	0.387	0.489
	LTE Band 26_UAT	15M	QPSK	36	39	Right Tilted	Reduced Level 2	26965	841.5	19.48	20.50	1.265	-0.16	0.317	0.401
	LTE Band 26_UAT	15M	QPSK	36	39	Left Cheek	Reduced Level 2	26965	841.5	19.48	20.50	1.265	-0.04	0.338	0.427
	LTE Band 26_UAT	15M	QPSK	36	39	Left Tilted	Reduced Level 2	26965	841.5	19.48	20.50	1.265	0.15	0.289	0.366
	LTE Band 26_LAT	15M	QPSK	1	0	Right Cheek	Full	26965	841.5	23.90	25.00	1.288	-0.06	0.143	0.184
	LTE Band 26_LAT	15M	QPSK	1	0	Right Tilted	Full	26965	841.5	23.90	25.00	1.288	0.16	0.071	0.091
	LTE Band 26_LAT	15M	QPSK	1	0	Left Cheek	Full	26965	841.5	23.90	25.00	1.288	0.14	0.176	0.227
	LTE Band 26_LAT	15M	QPSK	1	0	Left Tilted	Full	26965	841.5	23.90	25.00	1.288	0.07	0.073	0.094
	LTE Band 26_LAT	15M	QPSK	1	0	Left Cheek	Full	26765	821.5	23.71	25.00	1.346	-0.07	0.146	0.196
	LTE Band 26_LAT	15M	QPSK	1	0	Left Cheek	Full	26865	831.5	23.81	25.00	1.315	0.01	0.164	0.216
	LTE Band 26_LAT	15M	QPSK	36	39	Right Cheek	Full	26965	841.5	22.79	24.00	1.321	0.07	0.106	0.140
	LTE Band 26_LAT	15M	QPSK	36	39	Right Tilted	Full	26965	841.5	22.79	24.00	1.321	-0.15	0.060	0.079
	LTE Band 26_LAT	15M	QPSK	36	39	Left Cheek	Full	26965	841.5	22.79	24.00	1.321	0.17	0.127	0.168
	LTE Band 26_LAT	15M	QPSK	36	39	Left Tilted	Full	26965	841.5	22.79	24.00	1.321	-0.12	0.052	0.069

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	132072	1720	13.99	14.50	1.125	0.11	0.463	0.521
	LTE Band 66_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	132072	1720	13.99	14.50	1.125	0.08	0.593	0.667
	LTE Band 66_UAT	20M	QPSK	1	49	Left Cheek	Reduced Level 1/2	132072	1720	13.99	14.50	1.125	0.08	0.289	0.325
	LTE Band 66_UAT	20M	QPSK	1	49	Left Tilted	Reduced Level 1/2	132072	1720	13.99	14.50	1.125	0.01	0.399	0.449
	LTE Band 66_UAT	20M	QPSK	50	50	Right Cheek	Reduced Level 1/2	132072	1720	13.83	14.50	1.167	0.05	0.479	0.559
	LTE Band 66_UAT	20M	QPSK	50	50	Right Tilted	Reduced Level 1/2	132072	1720	13.83	14.50	1.167	0.19	0.573	0.669
	LTE Band 66_UAT	20M	QPSK	50	50	Left Cheek	Reduced Level 1/2	132072	1720	13.83	14.50	1.167	0.11	0.285	0.333
	LTE Band 66_UAT	20M	QPSK	50	50	Left Tilted	Reduced Level 1/2	132072	1720	13.83	14.50	1.167	0.14	0.380	0.443
	LTE Band 66_UAT	20M	QPSK	50	50	Right Tilted	Reduced Level 1/2	132322	1745	13.80	14.50	1.175	-0.02	0.620	0.728
10	LTE Band 66_UAT	20M	QPSK	50	50	Right Tilted	Reduced Level 1/2	132572	1770	13.60	14.50	1.230	0.08	0.733	**0.902**
	LTE Band 66_UAT	20M	QPSK	100	0	Right Tilted	Reduced Level 1/2	132072	1720	13.77	14.50	1.183	0.06	0.586	0.693
	LTE Band 66_LAT	20M	QPSK	1	49	Right Cheek	Full	132072	1720	23.96	25.00	1.271	0.19	0.081	0.103
	LTE Band 66_LAT	20M	QPSK	1	49	Right Tilted	Full	132072	1720	23.96	25.00	1.271	0.17	0.043	0.055
	LTE Band 66_LAT	20M	QPSK	1	49	Left Cheek	Full	132072	1720	23.96	25.00	1.271	-0.13	0.065	0.082
	LTE Band 66_LAT	20M	QPSK	1	49	Left Tilted	Full	132072	1720	23.96	25.00	1.271	0.19	0.058	0.074
	LTE Band 66_LAT	20M	QPSK	1	49	Right Cheek	Full	132322	1745	23.76	25.00	1.330	-0.07	0.090	0.120
	LTE Band 66_LAT	20M	QPSK	1	49	Right Cheek	Full	132572	1770	23.67	25.00	1.358	-0.06	0.109	0.148
	LTE Band 66_LAT	20M	QPSK	50	50	Right Cheek	Full	132072	1720	22.85	24.00	1.303	0.06	0.067	0.087
	LTE Band 66_LAT	20M	QPSK	50	50	Right Tilted	Full	132072	1720	22.85	24.00	1.303	0.19	0.037	0.048
	LTE Band 66_LAT	20M	QPSK	50	50	Left Cheek	Full	132072	1720	22.85	24.00	1.303	0.09	0.054	0.071
	LTE Band 66_LAT	20M	QPSK	50	50	Left Tilted	Full	132072	1720	22.85	24.00	1.303	0.1	0.031	0.041
	LTE Band 25_UAT	20M	QPSK	1	0	Right Cheek	Reduced Level 1/2	26590	1905	12.95	13.80	1.216	0.17	0.570	0.693
	LTE Band 25_UAT	20M	QPSK	1	0	Right Tilted	Reduced Level 1/2	26590	1905	12.95	13.80	1.216	0.18	0.710	0.863
	LTE Band 25_UAT	20M	QPSK	1	0	Left Cheek	Reduced Level 1/2	26590	1905	12.95	13.80	1.216	-0.19	0.345	0.420
	LTE Band 25_UAT	20M	QPSK	1	0	Left Tilted	Reduced Level 1/2	26590	1905	12.95	13.80	1.216	0.19	0.461	0.561
	LTE Band 25_UAT	20M	QPSK	1	0	Right Tilted	Reduced Level 1/2	26140	1860	12.80	13.80	1.259	-0.04	0.625	0.787
	LTE Band 25_UAT	20M	QPSK	1	0	Right Tilted	Reduced Level 1/2	26340	1880	12.86	13.80	1.242	-0.14	0.624	0.775
	LTE Band 25_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	26590	1905	12.82	13.80	1.253	-0.18	0.643	0.806
	LTE Band 25_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	26590	1905	12.82	13.80	1.253	0.04	0.752	0.942
	LTE Band 25_UAT	20M	QPSK	50	24	Left Cheek	Reduced Level 1/2	26590	1905	12.82	13.80	1.253	0.05	0.364	0.456
	LTE Band 25_UAT	20M	QPSK	50	24	Left Tilted	Reduced Level 1/2	26590	1905	12.82	13.80	1.253	-0.14	0.495	0.620
	LTE Band 25_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	26140	1860	12.68	13.80	1.294	-0.11	0.586	0.758
	LTE Band 25_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	26340	1880	12.76	13.80	1.271	0.15	0.590	0.750
	LTE Band 25_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	26140	1860	12.68	13.80	1.294	0.03	0.677	0.876
	LTE Band 25_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	26340	1880	12.76	13.80	1.271	0.06	0.692	0.879
	LTE Band 25_UAT	20M	QPSK	100	0	Right Cheek	Reduced Level 1/2	26590	1905	12.76	13.80	1.271	0.13	0.646	0.821
11	LTE Band 25_UAT	20M	QPSK	100	0	Right Tilted	Reduced Level 1/2	26590	1905	12.76	13.80	1.271	0.08	0.767	**0.975**
	LTE Band 25_LAT	20M	QPSK	1	0	Right Cheek	Full	26590	1905	23.82	25.00	1.312	0.12	0.086	0.113
	LTE Band 25_LAT	20M	QPSK	1	0	Right Tilted	Full	26590	1905	23.82	25.00	1.312	0.07	0.051	0.067
	LTE Band 25_LAT	20M	QPSK	1	0	Left Cheek	Full	26590	1905	23.82	25.00	1.312	0.03	0.097	0.128
	LTE Band 25_LAT	20M	QPSK	1	0	Left Tilted	Full	26590	1905	23.82	25.00	1.312	-0.14	0.044	0.057
	LTE Band 25_LAT	20M	QPSK	1	0	Left Cheek	Full	26140	1860	23.75	25.00	1.334	-0.13	0.091	0.121
	LTE Band 25_LAT	20M	QPSK	1	0	Left Cheek	Full	26340	1880	23.80	25.00	1.318	-0.18	0.101	0.133
	LTE Band 25_LAT	20M	QPSK	50	24	Right Cheek	Full	26590	1905	22.69	24.00	1.352	-0.15	0.065	0.088
	LTE Band 25_LAT	20M	QPSK	50	24	Right Tilted	Full	26590	1905	22.69	24.00	1.352	-0.1	0.042	0.056
	LTE Band 25_LAT	20M	QPSK	50	24	Left Cheek	Full	26590	1905	22.69	24.00	1.352	-0.18	0.079	0.107
	LTE Band 25_LAT	20M	QPSK	50	24	Left Tilted	Full	26590	1905	22.69	24.00	1.352	-0.11	0.039	0.053

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_UAT	20M	QPSK	1	99	Right Cheek	Reduced Level 1/2	21100	2535	16.52	17.20	1.169	-0.11	0.484	0.566
	LTE Band 7_UAT	20M	QPSK	1	99	Right Tilted	Reduced Level 1/2	21100	2535	16.52	17.20	1.169	0.09	0.633	0.740
	LTE Band 7_UAT	20M	QPSK	1	99	Left Cheek	Reduced Level 1/2	21100	2535	16.52	17.20	1.169	0.11	0.184	0.215
	LTE Band 7_UAT	20M	QPSK	1	99	Left Tilted	Reduced Level 1/2	21100	2535	16.52	17.20	1.169	0.04	0.251	0.294
	LTE Band 7_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	21100	2535	16.45	17.20	1.189	-0.07	0.516	0.613
	LTE Band 7_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	21100	2535	16.45	17.20	1.189	0.01	0.673	0.800
	LTE Band 7_UAT	20M	QPSK	50	24	Left Cheek	Reduced Level 1/2	21100	2535	16.45	17.20	1.189	0.14	0.198	0.235
	LTE Band 7_UAT	20M	QPSK	50	24	Left Tilted	Reduced Level 1/2	21100	2535	16.45	17.20	1.189	-0.12	0.273	0.324
	LTE Band 7_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	20850	2510	16.25	17.20	1.245	-0.05	0.676	0.841
12	LTE Band 7_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	21350	2560	16.36	17.20	1.213	0.02	0.694	**0.842**
	LTE Band 7_UAT	20M	QPSK	100	0	Right Tilted	Reduced Level 1/2	21100	2535	16.34	17.20	1.219	-0.05	0.664	0.809
	LTE Band 7_LAT	20M	QPSK	1	99	Right Cheek	Full	21100	2535	22.95	24.00	1.274	0.08	0.187	0.238
	LTE Band 7_LAT	20M	QPSK	1	99	Right Tilted	Full	21100	2535	22.95	24.00	1.274	-0.13	0.122	0.155
	LTE Band 7_LAT	20M	QPSK	1	99	Left Cheek	Full	21100	2535	22.95	24.00	1.274	-0.02	0.114	0.145
	LTE Band 7_LAT	20M	QPSK	1	99	Left Tilted	Full	21100	2535	22.95	24.00	1.274	-0.03	0.086	0.110
	LTE Band 7_LAT	20M	QPSK	1	99	Right Cheek	Full	20850	2510	22.76	24.00	1.330	-0.09	0.219	0.291
	LTE Band 7_LAT	20M	QPSK	1	99	Right Cheek	Full	21350	2560	22.91	24.00	1.285	-0.17	0.197	0.253
	LTE Band 7_LAT	20M	QPSK	50	24	Right Cheek	Full	21100	2535	21.79	23.00	1.321	-0.17	0.155	0.205
	LTE Band 7_LAT	20M	QPSK	50	24	Right Tilted	Full	21100	2535	21.79	23.00	1.321	0.15	0.100	0.132
	LTE Band 7_LAT	20M	QPSK	50	24	Left Cheek	Full	21100	2535	21.79	23.00	1.321	-0.19	0.101	0.133
	LTE Band 7_LAT	20M	QPSK	50	24	Left Tilted	Full	21100	2535	21.79	23.00	1.321	-0.05	0.070	0.092

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	40620	2593	18.56	19.20	1.159	62.9	1.006	-0.15	0.552	0.643
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	40620	2593	18.56	19.20	1.159	62.9	1.006	0.09	0.654	0.762
	LTE Band 41_UAT	20M	QPSK	1	49	Left Cheek	Reduced Level 1/2	40620	2593	18.56	19.20	1.159	62.9	1.006	-0.13	0.207	0.241
	LTE Band 41_UAT	20M	QPSK	1	49	Left Tilted	Reduced Level 1/2	40620	2593	18.56	19.20	1.159	62.9	1.006	-0.18	0.281	0.328
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	39750	2506	18.42	19.20	1.197	62.9	1.006	-0.17	0.512	0.616
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	40185	2549.5	18.33	19.20	1.222	62.9	1.006	-0.09	0.408	0.501
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	41055	2636.5	18.55	19.20	1.161	62.9	1.006	0.18	0.595	0.695
	LTE Band 41_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	41490	2680	18.44	19.20	1.191	62.9	1.006	-0.05	0.558	0.669
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	39750	2506	18.42	19.20	1.197	62.9	1.006	-0.13	0.667	0.803
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	40185	2549.5	18.33	19.20	1.222	62.9	1.006	0.08	0.489	0.601
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	41055	2636.5	18.55	19.20	1.161	62.9	1.006	0.14	0.732	0.855
	LTE Band 41_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	41490	2680	18.44	19.20	1.191	62.9	1.006	0.01	0.659	0.790
	LTE Band 41_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	40620	2593	18.53	19.20	1.167	62.9	1.006	0.08	0.606	0.711
	LTE Band 41_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	40620	2593	18.53	19.20	1.167	62.9	1.006	0.08	0.712	0.836
	LTE Band 41_UAT	20M	QPSK	50	24	Left Cheek	Reduced Level 1/2	40620	2593	18.53	19.20	1.167	62.9	1.006	-0.19	0.208	0.244
	LTE Band 41_UAT	20M	QPSK	50	24	Left Tilted	Reduced Level 1/2	40620	2593	18.53	19.20	1.167	62.9	1.006	0.05	0.292	0.343
	LTE Band 41_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	39750	2506	18.49	19.20	1.178	62.9	1.006	0.11	0.569	0.674
	LTE Band 41_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	40185	2549.5	18.41	19.20	1.199	62.9	1.006	-0.09	0.452	0.545
	LTE Band 41_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	41055	2636.5	18.52	19.20	1.169	62.9	1.006	-0.08	0.685	0.806
	LTE Band 41_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	41490	2680	18.40	19.20	1.202	62.9	1.006	-0.14	0.625	0.756
	LTE Band 41_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	39750	2506	18.49	19.20	1.178	62.9	1.006	0.06	0.700	0.829
	LTE Band 41_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	40185	2549.5	18.41	19.20	1.199	62.9	1.006	-0.05	0.523	0.631
	LTE Band 41_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	41055	2636.5	18.52	19.20	1.169	62.9	1.006	-0.01	0.755	0.888
	LTE Band 41_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	41490	2680	18.40	19.20	1.202	62.9	1.006	-0.08	0.703	0.850
	LTE Band 41C_UAT	20M	QPSK	1	99	Right Tilted	Reduced Level 1/2	39750(PCC)+ 39948(SCC)	2506(PCC)+ 2525.8(SCC)	18.25	19.20	1.245	62.9	1.006	0.01	0.622	0.779
	LTE Band 41C_UAT	20M	QPSK	1	99	Right Tilted	Reduced Level 1/2	40185(PCC)+ 40383(SCC)	2549.5(PCC) +2569.3(SCC)	18.37	19.20	1.211	62.9	1.006	-0.06	0.494	0.602
	LTE Band 41C_UAT	20M	QPSK	1	0	Right Tilted	Reduced Level 1/2	40620(PCC)+ 40422(SCC)	2593(PCC)+ 2573.2(SCC)	18.43	19.20	1.194	62.9	1.006	0.01	0.720	0.865
	LTE Band 41C_UAT	20M	QPSK	1	0	Right Tilted	Reduced Level 1/2	41055(PCC)+ 40857(SCC)	2636.5(PCC)+ 2616.7(SCC)	18.45	19.20	1.189	62.9	1.006	0.07	0.741	0.886
	LTE Band 41C_UAT	20M	QPSK	1	0	Right Tilted	Reduced Level 1/2	41490(PCC)+ 41292(SCC)	2680(PCC)+ 2660.2(SCC)	18.42	19.20	1.197	62.9	1.006	0.04	0.719	0.866
	LTE Band 41_UAT	20M	QPSK	100	0	Right Cheek	Reduced Level 1/2	40620	2593	18.52	19.20	1.169	62.9	1.006	0.03	0.594	0.699
	LTE Band 41_UAT	20M	QPSK	100	0	Right Tilted	Reduced Level 1/2	40620	2593	18.52	19.20	1.169	62.9	1.006	-0.07	0.682	0.802
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	Full	40620	2593	24.27	25.00	1.183	62.9	1.006	-0.1	0.174	0.207
	LTE Band 41_LAT	20M	QPSK	1	49	Right Tilted	Full	40620	2593	24.27	25.00	1.183	62.9	1.006	-0.04	0.100	0.119
	LTE Band 41_LAT	20M	QPSK	1	49	Left Cheek	Full	40620	2593	24.27	25.00	1.183	62.9	1.006	0.11	0.089	0.105
	LTE Band 41_LAT	20M	QPSK	1	49	Left Tilted	Full	40620	2593	24.27	25.00	1.183	62.9	1.006	0.11	0.069	0.082
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	Full	39750	2506	24.13	25.00	1.222	62.9	1.006	-0.06	0.159	0.195
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	Full	40185	2549.5	23.91	25.00	1.285	62.9	1.006	-0.18	0.180	0.233
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	Full	41055	2636.5	23.95	25.00	1.274	62.9	1.006	0.05	0.192	0.246
	LTE Band 41_LAT	20M	QPSK	1	49	Right Cheek	Full	41490	2680	23.98	25.00	1.265	62.9	1.006	0.17	0.174	0.221
	LTE Band 41C_LAT	20M	QPSK	1	49	Right Cheek	Full	39750(PCC)+ 39948(SCC)	2506(PCC)+ 2525.8(SCC)	23.94	25.00	1.276	62.9	1.006	-0.08	0.152	0.195
	LTE Band 41C_LAT	20M	QPSK	1	49	Right Cheek	Full	40185(PCC)+ 40383(SCC)	2549.5(PCC)+ 2569.3(SCC)	23.73	25.00	1.340	62.9	1.006	-0.16	0.170	0.229
	LTE Band 41C_LAT	20M	QPSK	1	49	Right Cheek	Full	40620(PCC)+ 40422(SCC)	2593(PCC)+ 2573.2(SCC)	23.78	25.00	1.324	62.9	1.006	0.09	0.140	0.187
	LTE Band 41C_LAT	20M	QPSK	1	49	Right Cheek	Full	41055(PCC)+ 40857(SCC)	2636.5(PCC)+ 2616.7(SCC)	24.15	25.00	1.216	62.9	1.006	0.01	0.194	0.237
	LTE Band 41C_LAT	20M	QPSK	1	49	Right Cheek	Full	41490(PCC)+ 41292(SCC)	2680(PCC)+ 2660.2(SCC)	23.99	25.00	1.262	62.9	1.006	0.06	0.183	0.232
	LTE Band 41_LAT	20M	QPSK	50	24	Right Cheek	Full	40620	2593	23.34	24.00	1.164	62.9	1.006	0.08	0.150	0.176
	LTE Band 41_LAT	20M	QPSK	50	24	Right Tilted	Full	40620	2593	23.34	24.00	1.164	62.9	1.006	-0.04	0.084	0.098
	LTE Band 41_LAT	20M	QPSK	50	24	Left Cheek	Full	40620	2593	23.34	24.00	1.164	62.9	1.006	-0.05	0.071	0.083
	LTE Band 41_LAT	20M	QPSK	50	24	Left Tilted	Full	40620	2593	23.34	24.00	1.164	62.9	1.006	-0.19	0.056	0.065
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	40620	2593	20.12	20.80	1.169	42.9	1.009	-0.09	0.530	0.625
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	40620	2593	20.12	20.80	1.169	42.9	1.009	0.19	0.667	0.787
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Left Cheek	Reduced Level 1/2	40620	2593	20.12	20.80	1.169	42.9	1.009	0.06	0.218	0.257
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Left Tilted	Reduced Level 1/2	40620	2593	20.12	20.80	1.169	42.9	1.009	0.17	0.274	0.323
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	39750	2506	20.03	20.80	1.194	42.9	1.009	-0.05	0.560	0.675

	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	40185	2549.5	20.06	20.80	1.186	42.9	1.009	0.15	0.429	0.513
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	41055	2636.5	20.11	20.80	1.172	42.9	1.009	-0.08	0.614	0.726
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Cheek	Reduced Level 1/2	41490	2680	20.03	20.80	1.194	42.9	1.009	-0.06	0.495	0.596
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	39750	2506	20.03	20.80	1.194	42.9	1.009	0.02	0.670	0.807
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	40185	2549.5	20.06	20.80	1.186	42.9	1.009	-0.15	0.520	0.622
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	41055	2636.5	20.11	20.80	1.172	42.9	1.009	0.06	0.725	0.857
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Tilted	Reduced Level 1/2	41490	2680	20.03	20.80	1.194	42.9	1.009	-0.17	0.698	0.841
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	40620	2593	19.93	20.80	1.222	42.9	1.009	0	0.614	0.757
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	40620	2593	19.93	20.80	1.222	42.9	1.009	-0.13	0.705	0.869
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Left Cheek	Reduced Level 1/2	40620	2593	19.93	20.80	1.222	42.9	1.009	0.17	0.227	0.280
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Left Tilted	Reduced Level 1/2	40620	2593	19.93	20.80	1.222	42.9	1.009	0.04	0.291	0.359
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	39750	2506	19.79	20.80	1.262	42.9	1.009	-0.08	0.537	0.684
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	40185	2549.5	19.76	20.80	1.271	42.9	1.009	-0.19	0.401	0.514
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	41055	2636.5	19.91	20.80	1.227	42.9	1.009	0.1	0.606	0.751
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Cheek	Reduced Level 1/2	41490	2680	19.77	20.80	1.268	42.9	1.009	-0.02	0.553	0.707
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	39750	2506	19.79	20.80	1.262	42.9	1.009	-0.01	0.712	0.907
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	40185	2549.5	19.76	20.80	1.271	42.9	1.009	0.07	0.554	0.710
13	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	41055	2636.5	19.91	20.80	1.227	42.9	1.009	0.11	0.749	**0.928**
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Tilted	Reduced Level 1/2	41490	2680	19.77	20.80	1.268	42.9	1.009	-0.05	0.724	0.926
	LTE Band 41(HPUE)_UAT	20M	QPSK	100	0	Right Cheek	Reduced Level 1/2	40620	2593	19.91	20.80	1.227	42.9	1.009	-0.06	0.588	0.728
	LTE Band 41(HPUE)_UAT	20M	QPSK	100	0	Right Tilted	Reduced Level 1/2	40620	2593	19.91	20.80	1.227	42.9	1.009	0.08	0.702	0.869
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Right Cheek	Full	40620	2593	25.80	27.00	1.318	42.9	1.009	0.06	0.192	0.255
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Right Tilted	Full	40620	2593	25.80	27.00	1.318	42.9	1.009	-0.06	0.102	0.136
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Left Cheek	Full	40620	2593	25.80	27.00	1.318	42.9	1.009	-0.17	0.099	0.132
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Left Tilted	Full	40620	2593	25.80	27.00	1.318	42.9	1.009	0.09	0.070	0.092
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Right Cheek	Full	39750	2506	25.79	27.00	1.321	42.9	1.009	0	0.180	0.240
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Right Cheek	Full	40185	2549.5	25.55	27.00	1.396	42.9	1.009	-0.08	0.186	0.262
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Right Cheek	Full	41055	2636.5	25.60	27.00	1.380	42.9	1.009	0.08	0.188	0.262
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Right Cheek	Full	41490	2680	25.64	27.00	1.368	42.9	1.009	-0.06	0.174	0.240
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Right Cheek	Full	40620	2593	25.01	26.00	1.256	42.9	1.009	0.01	0.164	0.208
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Right Tilted	Full	40620	2593	25.01	26.00	1.256	42.9	1.009	0.12	0.085	0.108
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Left Cheek	Full	40620	2593	25.01	26.00	1.256	42.9	1.009	-0.1	0.076	0.096
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Left Tilted	Full	40620	2593	25.01	26.00	1.256	42.9	1.009	-0.17	0.053	0.067

<5GNR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
14	N71_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	Full	136100	680.5	24.36	25.20	1.213	-0.09	0.902	**1.094**
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	Full	136100	680.5	24.36	25.20	1.213	0.05	0.704	0.854
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Left Cheek	Full	136100	680.5	24.36	25.20	1.213	0.17	0.603	0.732
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Left Tilted	Full	136100	680.5	24.36	25.20	1.213	0.06	0.454	0.551
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Right Cheek	Full	136100	680.5	24.26	25.20	1.242	-0.06	0.840	1.043
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Full	136100	680.5	24.26	25.20	1.242	0	0.670	0.832
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Left Cheek	Full	136100	680.5	24.26	25.20	1.242	0.14	0.533	0.662
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Left Tilted	Full	136100	680.5	24.26	25.20	1.242	-0.15	0.442	0.549
	N71_ANT 1	20M	BPSK	100	0	DFT-15	Right Cheek	Full	136100	680.5	23.84	24.70	1.219	0.19	0.816	0.995
	N71_ANT 1	20M	BPSK	100	0	DFT-15	Right Tilted	Full	136100	680.5	23.84	24.70	1.219	-0.06	0.666	0.812
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	Reduced Level 2	136100	680.5	22.34	23.00	1.164	-0.1	0.520	0.605
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	Reduced Level 2	136100	680.5	22.34	23.00	1.164	-0.09	0.447	0.520
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Left Cheek	Reduced Level 2	136100	680.5	22.34	23.00	1.164	-0.17	0.393	0.458
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Left Tilted	Reduced Level 2	136100	680.5	22.34	23.00	1.164	-0.1	0.365	0.425
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Right Cheek	Reduced Level 2	136100	680.5	22.31	23.00	1.172	-0.08	0.500	0.586
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 2	136100	680.5	22.31	23.00	1.172	-0.08	0.414	0.485
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Left Cheek	Reduced Level 2	136100	680.5	22.31	23.00	1.172	-0.08	0.333	0.390
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Left Tilted	Reduced Level 2	136100	680.5	22.31	23.00	1.172	-0.09	0.269	0.315
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Right Cheek	Full	136100	680.5	24.18	25.20	1.265	-0.03	0.106	0.134
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Right Tilted	Full	136100	680.5	24.18	25.20	1.265	-0.14	0.058	0.073
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Left Cheek	Full	136100	680.5	24.18	25.20	1.265	0.08	0.123	0.156
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Left Tilted	Full	136100	680.5	24.18	25.20	1.265	-0.02	0.062	0.079
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Right Cheek	Full	136100	680.5	24.01	25.20	1.315	-0.01	0.092	0.121
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Right Tilted	Full	136100	680.5	24.01	25.20	1.315	-0.13	0.052	0.068
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Left Cheek	Full	136100	680.5	24.01	25.20	1.315	0.16	0.102	0.134
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Left Tilted	Full	136100	680.5	24.01	25.20	1.315	0.06	0.049	0.064
15	N5_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	Reduced Level 1	167300	836.5	22.46	23.00	1.132	0.08	0.883	**1.000**
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	Reduced Level 1	167300	836.5	22.46	23.00	1.132	-0.11	0.737	0.835
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Left Cheek	Reduced Level 1	167300	836.5	22.46	23.00	1.132	-0.01	0.680	0.770
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Left Tilted	Reduced Level 1	167300	836.5	22.46	23.00	1.132	-0.19	0.554	0.627
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Right Cheek	Reduced Level 1	167300	836.5	22.43	23.00	1.140	-0.06	0.811	0.925
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 1	167300	836.5	22.43	23.00	1.140	0.06	0.688	0.784
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Left Cheek	Reduced Level 1	167300	836.5	22.43	23.00	1.140	0.16	0.366	0.417
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Left Tilted	Reduced Level 1	167300	836.5	22.43	23.00	1.140	-0.06	0.308	0.351
	N5_ANT 1	20M	BPSK	100	0	DFT-15	Right Cheek	Reduced Level 1	167300	836.5	22.50	23.00	1.122	0.08	0.847	0.950
	N5_ANT 1	20M	BPSK	100	0	DFT-15	Right Tilted	Reduced Level 1	167300	836.5	22.50	23.00	1.122	0.02	0.475	0.533
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	Reduced Level 2	167300	836.5	20.50	21.00	1.122	0.16	0.549	0.616
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	Reduced Level 2	167300	836.5	20.50	21.00	1.122	0.15	0.329	0.369
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Left Cheek	Reduced Level 2	167300	836.5	20.50	21.00	1.122	0.07	0.240	0.269
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Left Tilted	Reduced Level 2	167300	836.5	20.50	21.00	1.122	-0.03	0.210	0.236
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Right Cheek	Reduced Level 2	167300	836.5	20.46	21.00	1.132	0.06	0.529	0.599
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 2	167300	836.5	20.46	21.00	1.132	0.07	0.441	0.499
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Left Cheek	Reduced Level 2	167300	836.5	20.46	21.00	1.132	-0.01	0.414	0.469
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Left Tilted	Reduced Level 2	167300	836.5	20.46	21.00	1.132	-0.09	0.332	0.376
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Right Cheek	Full	167300	836.5	24.13	25.20	1.279	-0.15	0.132	0.169
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Right Tilted	Full	167300	836.5	24.13	25.20	1.279	0.01	0.056	0.072
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Left Cheek	Full	167300	836.5	24.13	25.20	1.279	-0.02	0.153	0.196
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Left Tilted	Full	167300	836.5	24.13	25.20	1.279	-0.11	0.083	0.106
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Right Cheek	Full	167300	836.5	24.08	25.20	1.294	0.05	0.114	0.148
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Right Tilted	Full	167300	836.5	24.08	25.20	1.294	-0.14	0.066	0.085
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Left Cheek	Full	167300	836.5	24.08	25.20	1.294	-0.19	0.130	0.168
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Left Tilted	Full	167300	836.5	24.08	25.20	1.294	0.15	0.060	0.077

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	Reduced Level 1/2	349000	1745	14.90	16.00	1.288	0.17	0.739	0.952
16	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	Reduced Level 1/2	349000	1745	14.90	16.00	1.288	0.12	0.834	**1.074**
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Left Cheek	Reduced Level 1/2	349000	1745	14.90	16.00	1.288	-0.1	0.362	0.466
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Left Tilted	Reduced Level 1/2	349000	1745	14.90	16.00	1.288	0.04	0.589	0.759
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	Reduced Level 1/2	344000	1720	14.79	16.00	1.321	0.03	0.624	0.824
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	Reduced Level 1/2	354000	1770	14.74	16.00	1.337	0.15	0.615	0.822
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	Reduced Level 1/2	344000	1720	14.79	16.00	1.321	0.15	0.757	1.000
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	Reduced Level 1/2	354000	1770	14.74	16.00	1.337	0.03	0.765	1.022
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Right Cheek	Reduced Level 1/2	349000	1745	14.85	16.00	1.303	-0.09	0.564	0.735
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 1/2	349000	1745	14.85	16.00	1.303	0.05	0.790	1.030
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Left Cheek	Reduced Level 1/2	349000	1745	14.85	16.00	1.303	0.04	0.359	0.468
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Left Tilted	Reduced Level 1/2	349000	1745	14.85	16.00	1.303	-0.19	0.492	0.641
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 1/2	344000	1720	14.70	16.00	1.349	-0.12	0.766	1.033
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 1/2	354000	1770	14.72	16.00	1.343	0.07	0.789	1.059
	N66_ANT 1	20M	BPSK	100	0	DFT-15	Right Cheek	Reduced Level 1/2	349000	1745	14.76	16.00	1.330	0.04	0.583	0.776
	N66_ANT 1	20M	BPSK	100	0	DFT-15	Right Tilted	Reduced Level 1/2	349000	1745	14.76	16.00	1.330	0.07	0.805	1.071
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Right Cheek	Full	349000	1745	24.02	25.20	1.312	0.19	0.087	0.114
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Right Tilted	Full	349000	1745	24.02	25.20	1.312	-0.18	0.034	0.044
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Left Cheek	Full	349000	1745	24.02	25.20	1.312	0.05	0.061	0.081
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Left Tilted	Full	349000	1745	24.02	25.20	1.312	0.11	0.036	0.048
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Right Cheek	Full	349000	1745	23.97	25.20	1.327	-0.09	0.088	0.116
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Right Tilted	Full	349000	1745	23.97	25.20	1.327	-0.12	0.033	0.044
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Left Cheek	Full	349000	1745	23.97	25.20	1.327	-0.13	0.053	0.070
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Left Tilted	Full	349000	1745	23.97	25.20	1.327	0.05	0.030	0.040
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Right Cheek	Full	344000	1720	23.93	25.20	1.340	0.08	0.055	0.074
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Right Cheek	Full	354000	1770	23.90	25.20	1.349	0.01	0.078	0.105
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	Reduced Level 1/2	372000	1860	12.62	13.50	1.225	-0.14	0.354	0.434
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	Reduced Level 1/2	372000	1860	12.62	13.50	1.225	0.1	0.483	0.591
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Left Cheek	Reduced Level 1/2	372000	1860	12.62	13.50	1.225	0.08	0.265	0.325
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Left Tilted	Reduced Level 1/2	372000	1860	12.62	13.50	1.225	0.16	0.311	0.381
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Right Cheek	Reduced Level 1/2	372000	1860	12.58	13.50	1.236	-0.15	0.390	0.482
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 1/2	372000	1860	12.58	13.50	1.236	-0.15	0.559	0.691
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Left Cheek	Reduced Level 1/2	372000	1860	12.58	13.50	1.236	0.01	0.287	0.355
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Left Tilted	Reduced Level 1/2	372000	1860	12.58	13.50	1.236	-0.19	0.329	0.407
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 1/2	376500	1882.5	12.50	13.50	1.259	-0.06	0.535	0.674
17	N25_ANT 1	20M	BPSK	50	28	DFT-15	Right Tilted	Reduced Level 1/2	381000	1905	12.45	13.50	1.274	-0.04	0.577	**0.735**
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Right Cheek	Full	372000	1860	24.23	25.20	1.250	-0.03	0.072	0.090
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Right Tilted	Full	372000	1860	24.23	25.20	1.250	-0.14	0.050	0.063
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Left Cheek	Full	372000	1860	24.23	25.20	1.250	0.14	0.078	0.098
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Left Tilted	Full	372000	1860	24.23	25.20	1.250	-0.17	0.048	0.060
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Right Cheek	Full	372000	1860	24.16	25.20	1.271	-0.11	0.091	0.116
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Right Tilted	Full	372000	1860	24.16	25.20	1.271	0.11	0.042	0.054
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Left Cheek	Full	372000	1860	24.16	25.20	1.271	0.12	0.099	0.126
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Left Tilted	Full	372000	1860	24.16	25.20	1.271	-0.03	0.045	0.057
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Left Cheek	Full	376500	1882.5	24.06	25.20	1.300	0.11	0.086	0.112
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Left Cheek	Full	381000	1905	24.08	25.20	1.294	-0.12	0.109	0.141

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Right Cheek	Reduced Level 1/2	528000	2640	22.04	22.70	1.164	-0.1	0.193	0.225
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Right Tilted	Reduced Level 1/2	528000	2640	22.04	22.70	1.164	-0.04	0.052	0.061
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Left Cheek	Reduced Level 1/2	528000	2640	22.04	22.70	1.164	0.01	0.125	0.146
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Left Tilted	Reduced Level 1/2	528000	2640	22.04	22.70	1.164	-0.03	0.024	0.028
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Right Cheek	Reduced Level 1/2	528000	2640	21.96	22.70	1.186	0.06	0.379	0.449
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Right Tilted	Reduced Level 1/2	528000	2640	21.96	22.70	1.186	-0.02	0.087	0.103
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Left Cheek	Reduced Level 1/2	528000	2640	21.96	22.70	1.186	0.17	0.195	0.231
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Left Tilted	Reduced Level 1/2	528000	2640	21.96	22.70	1.186	0.06	0.032	0.038
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Right Cheek	Reduced Level 1/2	509202	2546.01	21.60	22.70	1.288	0.04	0.610	0.786
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Right Cheek	Reduced Level 1/2	518598	2592.99	21.92	22.70	1.197	0.06	0.532	0.637
	N41_ANT 4	100M	BPSK	270	0	DFT-30	Right Cheek	Reduced Level 1/2	528000	2640	21.91	22.70	1.199	-0.05	0.369	0.443
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Right Cheek	Reduced Level 1/2	528000	2640	22.04	22.70	1.164	-0.1	0.193	0.225
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Right Tilted	Reduced Level 1/2	528000	2640	22.04	22.70	1.164	-0.04	0.052	0.061
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Left Cheek	Reduced Level 1/2	528000	2640	22.04	22.70	1.164	0.01	0.125	0.146
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Left Tilted	Reduced Level 1/2	528000	2640	22.04	22.70	1.164	-0.03	0.024	0.028
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Right Cheek	Reduced Level 1/2	528000	2640	21.96	22.70	1.186	0.06	0.379	0.449
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Right Tilted	Reduced Level 1/2	528000	2640	21.96	22.70	1.186	-0.02	0.087	0.103
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Left Cheek	Reduced Level 1/2	528000	2640	21.96	22.70	1.186	0.17	0.195	0.231
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Left Tilted	Reduced Level 1/2	528000	2640	21.96	22.70	1.186	0.06	0.032	0.038
18	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Right Cheek	Reduced Level 1/2	509202	2546.01	21.60	22.70	1.288	0.04	0.610	**0.786**
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Right Cheek	Reduced Level 1/2	518598	2592.99	21.92	22.70	1.197	0.06	0.532	0.637
	N41(HPUE)_ANT 4	100M	BPSK	270	0	DFT-30	Right Cheek	Reduced Level 1/2	528000	2640	21.91	22.70	1.199	-0.05	0.369	0.443

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Antenna	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	Ant 1	Reduced Level 1	6	2437	15.60	17.00	1.380	100	1.000	0.13	0.330	0.456
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	Ant 1	Reduced Level 1	6	2437	15.60	17.00	1.380	100	1.000	-0.12	0.422	0.583
19	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 1	Reduced Level 1	6	2437	15.60	17.00	1.380	100	1.000	-0.08	0.717	**0.990**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Ant 1	Reduced Level 1	6	2437	15.60	17.00	1.380	100	1.000	-0.06	0.644	0.889
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 1	Reduced Level 1	1	2412	14.70	16.00	1.349	100	1.000	0.19	0.519	0.700
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 1	Reduced Level 1	11	2462	14.80	16.00	1.318	100	1.000	-0.12	0.578	0.762
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Ant 1	Reduced Level 1	1	2412	14.70	16.00	1.349	100	1.000	0.14	0.416	0.561
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Ant 1	Reduced Level 1	11	2462	14.80	16.00	1.318	100	1.000	0.02	0.494	0.651
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	Ant 1	Reduced Level 2	6	2437	13.60	15.00	1.380	100	1.000	-0.06	0.206	0.284
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	Ant 1	Reduced Level 2	6	2437	13.60	15.00	1.380	100	1.000	0.07	0.210	0.290
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 1	Reduced Level 2	6	2437	13.60	15.00	1.380	100	1.000	0.13	0.404	0.558
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Ant 1	Reduced Level 2	6	2437	13.60	15.00	1.380	100	1.000	-0.06	0.368	0.508
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 1	Reduced Level 2	1	2412	12.70	14.00	1.349	100	1.000	0.18	0.318	0.429
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 1	Reduced Level 2	11	2462	12.80	14.00	1.318	100	1.000	0.1	0.363	0.479

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Antenna	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	-0.18	0.105	0.136
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	0.07	0.102	0.133
20	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	0.11	0.510	**0.663**
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	-0.12	0.193	0.251
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	62	5310	15.80	17.50	1.479	97.73	1.023	-0.12	0.357	0.540
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	Ant 1	Reduced Level 2	54	5270	15.48	16.50	1.265	97.73	1.023	0.16	0.095	0.123
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	Ant 1	Reduced Level 2	54	5270	15.48	16.50	1.265	97.73	1.023	0.07	0.073	0.095
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Reduced Level 2	54	5270	15.48	16.50	1.265	97.73	1.023	0.18	0.393	0.508
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	Ant 1	Reduced Level 2	54	5270	15.48	16.50	1.265	97.73	1.023	0.05	0.172	0.223
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Reduced Level 2	62	5310	14.63	16.50	1.538	97.73	1.023	-0.03	0.293	0.461
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	-0.17	0.082	0.112
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	0.15	0.082	0.112
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	0.17	0.384	0.526
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	0.03	0.134	0.184
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	102	5510	14.05	15.50	1.396	97.73	1.023	0.06	0.232	0.331
21	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	126	5630	13.65	15.50	1.531	97.73	1.023	0.14	0.378	**0.592**
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	134	5670	13.72	15.50	1.507	97.73	1.023	0.03	0.351	0.541
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	142	5710	13.52	15.50	1.578	97.73	1.023	0.07	0.330	0.533
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Cheek	Ant 1	Full	159	5795	15.89	17.50	1.449	97.73	1.023	-0.02	0.188	0.279
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	Ant 1	Full	159	5795	15.89	17.50	1.449	97.73	1.023	0.06	0.128	0.190
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	159	5795	15.89	17.50	1.449	97.73	1.023	-0.14	0.680	1.008
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Tilted	Ant 1	Full	159	5795	15.89	17.50	1.449	97.73	1.023	-0.14	0.225	0.333
22	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Full	151	5755	15.56	17.50	1.563	97.73	1.023	0.02	0.669	**1.070**
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Cheek	Ant 1	Reduced Level 2	159	5795	13.89	15.50	1.449	97.73	1.023	0.03	0.110	0.163
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	Ant 1	Reduced Level 2	159	5795	13.89	15.50	1.449	97.73	1.023	0.16	0.088	0.131
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Reduced Level 2	159	5795	13.89	15.50	1.449	97.73	1.023	0.09	0.432	0.640
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Tilted	Ant 1	Reduced Level 2	159	5795	13.89	15.50	1.449	97.73	1.023	0.14	0.151	0.224
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	Ant 1	Reduced Level 2	151	5755	13.56	15.50	1.563	97.73	1.023	-0.15	0.383	0.612

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Antenna	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	DH5	Right Cheek	Ant 1	Reduced Level 1/2	39	2441	9.20	11.00	1.514	76.88	1.301	0.15	0.050	0.098
	Bluetooth	DH5	Right Tilted	Ant 1	Reduced Level 1/2	39	2441	9.20	11.00	1.514	76.88	1.301	-0.18	0.063	0.124
	Bluetooth	DH5	Left Cheek	Ant 1	Reduced Level 1/2	39	2441	9.20	11.00	1.514	76.88	1.301	-0.07	0.105	0.207
	Bluetooth	DH5	Left Tilted	Ant 1	Reduced Level 1/2	39	2441	9.20	11.00	1.514	76.88	1.301	0.16	0.091	0.180
23	Bluetooth	DH5	Left Cheek	Ant 1	Reduced Level 1/2	0	2402	9.00	11.00	1.585	76.88	1.301	0.03	0.101	**0.208**
	Bluetooth	DH5	Left Cheek	Ant 1	Reduced Level 1/2	78	2480	9.00	11.00	1.585	76.88	1.301	-0.02	0.099	0.204

19.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_UAT	GPRS(3 Tx slots)	Front	10mm	Full	189	836.4	28.56	30.00	1.393	0.03	0.264	0.368
	GSM850_UAT	GPRS(3 Tx slots)	Back	10mm	Full	189	836.4	28.56	30.00	1.393	0.01	0.284	0.396
	GSM850_UAT	GPRS(3 Tx slots)	Left Side	10mm	Full	189	836.4	28.56	30.00	1.393	-0.01	0.199	0.277
	GSM850_UAT	GPRS(3 Tx slots)	Right Side	10mm	Full	189	836.4	28.56	30.00	1.393	0.02	0.211	0.294
	GSM850_UAT	GPRS(3 Tx slots)	Top Side	10mm	Full	189	836.4	28.56	30.00	1.393	0.09	0.221	0.308
24	GSM850_UAT	GPRS(3 Tx slots)	Back	10mm	Full	128	824.2	28.41	30.00	1.442	-0.03	0.330	**0.476**
	GSM850_UAT	GPRS(3 Tx slots)	Back	10mm	Full	251	848.8	28.52	30.00	1.406	-0.05	0.283	0.398
	GSM850_LAT	GPRS(3 Tx slots)	Front	10mm	Full	189	836.4	29.27	30.00	1.183	-0.18	0.128	0.151
	GSM850_LAT	GPRS(3 Tx slots)	Back	10mm	Full	189	836.4	29.27	30.00	1.183	0.05	0.219	0.259
	GSM850_LAT	GPRS(3 Tx slots)	Left Side	10mm	Full	189	836.4	29.27	30.00	1.183	0.03	0.184	0.218
	GSM850_LAT	GPRS(3 Tx slots)	Right Side	10mm	Full	189	836.4	29.27	30.00	1.183	0.02	0.107	0.127
	GSM850_LAT	GPRS(3 Tx slots)	Bottom Side	10mm	Full	189	836.4	29.27	30.00	1.183	-0.02	0.176	0.208
	GSM850_LAT	GPRS(3 Tx slots)	Back	10mm	Full	128	824.2	29.12	30.00	1.225	0.16	0.192	0.235
	GSM850_LAT	GPRS(3 Tx slots)	Back	10mm	Full	251	848.8	28.87	30.00	1.297	0.08	0.160	0.208
	GSM1900_UAT	GPRS(3 Tx slots)	Front	10mm	Reduced	512	1850.2	20.45	21.40	1.245	-0.1	0.153	0.190
	GSM1900_UAT	GPRS(3 Tx slots)	Back	10mm	Reduced	512	1850.2	20.45	21.40	1.245	0.16	0.197	0.245
	GSM1900_UAT	GPRS(3 Tx slots)	Left Side	10mm	Reduced	512	1850.2	20.45	21.40	1.245	0.06	0.024	0.029
	GSM1900_UAT	GPRS(3 Tx slots)	Right Side	10mm	Reduced	512	1850.2	20.45	21.40	1.245	0.04	0.019	0.024
	GSM1900_UAT	GPRS(3 Tx slots)	Top Side	10mm	Reduced	512	1850.2	20.45	21.40	1.245	-0.08	0.306	0.381
	GSM1900_UAT	GPRS(3 Tx slots)	Top Side	10mm	Reduced	661	1880	20.35	21.40	1.274	-0.16	0.400	0.509
	GSM1900_UAT	GPRS(3 Tx slots)	Top Side	10mm	Reduced	810	1909.8	20.24	21.40	1.306	0.02	0.446	0.583
	GSM1900_LAT	GPRS(3 Tx slots)	Front	10mm	Reduced	512	1850.2	24.29	25.40	1.291	0.12	0.201	0.260
	GSM1900_LAT	GPRS(3 Tx slots)	Back	10mm	Reduced	512	1850.2	24.29	25.40	1.291	-0.19	0.370	0.478
	GSM1900_LAT	GPRS(3 Tx slots)	Left Side	10mm	Reduced	512	1850.2	24.29	25.40	1.291	0	0.047	0.061
	GSM1900_LAT	GPRS(3 Tx slots)	Right Side	10mm	Reduced	512	1850.2	24.29	25.40	1.291	-0.08	0.078	0.101
	GSM1900_LAT	GPRS(3 Tx slots)	Bottom Side	10mm	Reduced	512	1850.2	24.29	25.40	1.291	-0.17	0.534	0.690
	GSM1900_LAT	GPRS(3 Tx slots)	Bottom Side	10mm	Reduced	661	1880	24.17	25.40	1.327	0.11	0.436	0.579
25	GSM1900_LAT	GPRS(3 Tx slots)	Bottom Side	10mm	Reduced	810	1909.8	23.58	25.40	1.521	-0.08	0.521	**0.792**

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_UAT	RMC 12.2Kbps	Front	10mm	Full	4182	836.4	23.90	25.00	1.288	-0.05	0.266	0.343
26	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Full	4182	836.4	23.90	25.00	1.288	0.03	0.352	**0.453**
	WCDMA V_UAT	RMC 12.2Kbps	Left Side	10mm	Full	4182	836.4	23.90	25.00	1.288	-0.01	0.214	0.276
	WCDMA V_UAT	RMC 12.2Kbps	Right Side	10mm	Full	4182	836.4	23.90	25.00	1.288	-0.02	0.223	0.287
	WCDMA V_UAT	RMC 12.2Kbps	Top Side	10mm	Full	4182	836.4	23.90	25.00	1.288	-0.06	0.225	0.290
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Full	4132	826.4	23.84	25.00	1.306	0.05	0.343	0.448
	WCDMA V_UAT	RMC 12.2Kbps	Back	10mm	Full	4233	846.6	23.86	25.00	1.300	0.01	0.328	0.426
	WCDMA V_LAT	RMC 12.2Kbps	Front	10mm	Full	4182	836.4	24.11	25.00	1.227	-0.01	0.138	0.169
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Full	4182	836.4	24.11	25.00	1.227	0.05	0.217	0.266
	WCDMA V_LAT	RMC 12.2Kbps	Left Side	10mm	Full	4182	836.4	24.11	25.00	1.227	0.06	0.199	0.244
	WCDMA V_LAT	RMC 12.2Kbps	Right Side	10mm	Full	4182	836.4	24.11	25.00	1.227	0.01	0.105	0.129
	WCDMA V_LAT	RMC 12.2Kbps	Bottom Side	10mm	Full	4182	836.4	24.11	25.00	1.227	0.03	0.180	0.221
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Full	4132	826.4	24.09	25.00	1.233	-0.03	0.217	0.268
	WCDMA V_LAT	RMC 12.2Kbps	Back	10mm	Full	4233	846.6	24.05	25.00	1.245	0.11	0.212	0.264
	WCDMA IV_UAT	RMC 12.2Kbps	Front	10mm	Reduced	1312	1712.4	18.37	19.50	1.297	0.03	0.300	0.389
	WCDMA IV_UAT	RMC 12.2Kbps	Back	10mm	Reduced	1312	1712.4	18.37	19.50	1.297	-0.01	0.306	0.397
	WCDMA IV_UAT	RMC 12.2Kbps	Left Side	10mm	Reduced	1312	1712.4	18.37	19.50	1.297	-0.02	0.053	0.069
	WCDMA IV_UAT	RMC 12.2Kbps	Right Side	10mm	Reduced	1312	1712.4	18.37	19.50	1.297	-0.06	0.152	0.197
	WCDMA IV_UAT	RMC 12.2Kbps	Top Side	10mm	Reduced	1312	1712.4	18.37	19.50	1.297	0.05	0.471	0.611
	WCDMA IV_UAT	RMC 12.2Kbps	Top Side	10mm	Reduced	1413	1732.6	18.32	19.50	1.312	0.01	0.499	0.655
	WCDMA IV_UAT	RMC 12.2Kbps	Top Side	10mm	Reduced	1513	1752.6	18.29	19.50	1.321	0.05	0.460	0.608
	WCDMA IV_LAT	RMC 12.2Kbps	Front	10mm	Reduced	1312	1712.4	20.63	21.00	1.089	-0.11	0.206	0.224
	WCDMA IV_LAT	RMC 12.2Kbps	Back	10mm	Reduced	1312	1712.4	20.63	21.00	1.089	0.05	0.386	0.420
	WCDMA IV_LAT	RMC 12.2Kbps	Left Side	10mm	Reduced	1312	1712.4	20.63	21.00	1.089	0.08	0.005	0.005
	WCDMA IV_LAT	RMC 12.2Kbps	Right Side	10mm	Reduced	1312	1712.4	20.63	21.00	1.089	0.04	0.006	0.007
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Reduced	1312	1712.4	20.63	21.00	1.089	0.18	0.555	0.604
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Reduced	1413	1732.6	20.53	21.00	1.114	-0.03	0.612	0.682
27	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	10mm	Reduced	1513	1752.6	20.48	21.00	1.127	-0.05	0.675	**0.761**
	WCDMA II_UAT	RMC 12.2Kbps	Front	10mm	Reduced	9400	1880	16.99	17.90	1.233	-0.01	0.262	0.323
	WCDMA II_UAT	RMC 12.2Kbps	Back	10mm	Reduced	9400	1880	16.99	17.90	1.233	0.05	0.339	0.418
	WCDMA II_UAT	RMC 12.2Kbps	Left Side	10mm	Reduced	9400	1880	16.99	17.90	1.233	0.06	0.049	0.060
	WCDMA II_UAT	RMC 12.2Kbps	Right Side	10mm	Reduced	9400	1880	16.99	17.90	1.233	0.01	0.037	0.046
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	Reduced	9400	1880	16.99	17.90	1.233	0.03	0.507	0.625
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	Reduced	9262	1852.4	16.81	17.90	1.285	0.01	0.434	0.558
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	Reduced	9538	1907.6	16.84	17.90	1.276	0.05	0.569	0.726
	WCDMA II_LAT	RMC 12.2Kbps	Front	10mm	Reduced	9400	1880	21.41	21.80	1.094	0.01	0.269	0.294
	WCDMA II_LAT	RMC 12.2Kbps	Back	10mm	Reduced	9400	1880	21.41	21.80	1.094	0.16	0.698	0.764
	WCDMA II_LAT	RMC 12.2Kbps	Left Side	10mm	Reduced	9400	1880	21.41	21.80	1.094	0.04	0.056	0.061
	WCDMA II_LAT	RMC 12.2Kbps	Right Side	10mm	Reduced	9400	1880	21.41	21.80	1.094	-0.19	0.101	0.110
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Reduced	9400	1880	21.41	21.80	1.094	0.03	0.971	1.062
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Reduced	9262	1852.4	21.33	21.80	1.114	0.07	0.912	1.016
28	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	10mm	Reduced	9538	1907.6	21.35	21.80	1.109	0.14	0.971	**1.077**

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 71_UAT	20M	QPSK	1	0	Front	10mm	Full	133322	683	23.95	25.00	1.274	0.02	0.192	0.245
	LTE Band 71_UAT	20M	QPSK	1	0	Back	10mm	Full	133322	683	23.95	25.00	1.274	-0.09	0.252	0.321
	LTE Band 71_UAT	20M	QPSK	1	0	Left Side	10mm	Full	133322	683	23.95	25.00	1.274	-0.01	0.303	0.386
	LTE Band 71_UAT	20M	QPSK	1	0	Right Side	10mm	Full	133322	683	23.95	25.00	1.274	-0.02	0.222	0.283
	LTE Band 71_UAT	20M	QPSK	1	0	Top Side	10mm	Full	133322	683	23.95	25.00	1.274	0.04	0.122	0.155
	LTE Band 71_UAT	20M	QPSK	50	0	Front	10mm	Full	133322	683	22.94	24.00	1.276	0.08	0.159	0.203
	LTE Band 71_UAT	20M	QPSK	50	0	Back	10mm	Full	133322	683	22.94	24.00	1.276	0.01	0.201	0.257
	LTE Band 71_UAT	20M	QPSK	50	0	Left Side	10mm	Full	133322	683	22.94	24.00	1.276	0.06	0.276	0.352
	LTE Band 71_UAT	20M	QPSK	50	0	Right Side	10mm	Full	133322	683	22.94	24.00	1.276	0.09	0.190	0.243
	LTE Band 71_UAT	20M	QPSK	50	0	Top Side	10mm	Full	133322	683	22.94	24.00	1.276	0.18	0.098	0.125
	LTE Band 71_LAT	20M	QPSK	1	0	Front	10mm	Full	133322	683	23.81	25.00	1.315	0.03	0.161	0.212
	LTE Band 71_LAT	20M	QPSK	1	0	Back	10mm	Full	133322	683	23.81	25.00	1.315	-0.06	0.216	0.284
29	LTE Band 71_LAT	20M	QPSK	1	0	Left Side	10mm	Full	133322	683	23.81	25.00	1.315	-0.02	0.301	**0.396**
	LTE Band 71_LAT	20M	QPSK	1	0	Right Side	10mm	Full	133322	683	23.81	25.00	1.315	-0.03	0.203	0.267
	LTE Band 71_LAT	20M	QPSK	1	0	Bottom Side	10mm	Full	133322	683	23.81	25.00	1.315	-0.04	0.182	0.239
	LTE Band 71_LAT	20M	QPSK	50	0	Front	10mm	Full	133322	683	22.76	24.00	1.330	0.12	0.118	0.157
	LTE Band 71_LAT	20M	QPSK	50	0	Back	10mm	Full	133322	683	22.76	24.00	1.330	-0.07	0.156	0.208
	LTE Band 71_LAT	20M	QPSK	50	0	Left Side	10mm	Full	133322	683	22.76	24.00	1.330	0.05	0.235	0.313
	LTE Band 71_LAT	20M	QPSK	50	0	Right Side	10mm	Full	133322	683	22.76	24.00	1.330	0.07	0.154	0.205
	LTE Band 71_LAT	20M	QPSK	50	0	Bottom Side	10mm	Full	133322	683	22.76	24.00	1.330	-0.09	0.139	0.185
	LTE Band 12_UAT	10M	QPSK	1	0	Front	10mm	Full	23095	707.5	24.08	25.00	1.236	0.06	0.215	0.266
	LTE Band 12_UAT	10M	QPSK	1	0	Back	10mm	Full	23095	707.5	24.08	25.00	1.236	-0.03	0.243	0.300
	LTE Band 12_UAT	10M	QPSK	1	0	Left Side	10mm	Full	23095	707.5	24.08	25.00	1.236	-0.19	0.258	0.319
	LTE Band 12_UAT	10M	QPSK	1	0	Right Side	10mm	Full	23095	707.5	24.08	25.00	1.236	0.12	0.220	0.272
	LTE Band 12_UAT	10M	QPSK	1	0	Top Side	10mm	Full	23095	707.5	24.08	25.00	1.236	0.05	0.136	0.168
	LTE Band 12_UAT	10M	QPSK	25	0	Front	10mm	Full	23095	707.5	23.07	24.00	1.239	0.02	0.173	0.214
	LTE Band 12_UAT	10M	QPSK	25	0	Back	10mm	Full	23095	707.5	23.07	24.00	1.239	0.05	0.194	0.240
	LTE Band 12_UAT	10M	QPSK	25	0	Left Side	10mm	Full	23095	707.5	23.07	24.00	1.239	0.13	0.203	0.251
	LTE Band 12_UAT	10M	QPSK	25	0	Right Side	10mm	Full	23095	707.5	23.07	24.00	1.239	0.05	0.177	0.219
	LTE Band 12_UAT	10M	QPSK	25	0	Top Side	10mm	Full	23095	707.5	23.07	24.00	1.239	-0.07	0.113	0.140
	LTE Band 12_LAT	10M	QPSK	1	0	Front	10mm	Full	23095	707.5	23.86	25.00	1.300	-0.09	0.154	0.200
	LTE Band 12_LAT	10M	QPSK	1	0	Back	10mm	Full	23095	707.5	23.86	25.00	1.300	0.02	0.201	0.261
30	LTE Band 12_LAT	10M	QPSK	1	0	Left Side	10mm	Full	23095	707.5	23.86	25.00	1.300	-0.15	0.366	**0.476**
	LTE Band 12_LAT	10M	QPSK	1	0	Right Side	10mm	Full	23095	707.5	23.86	25.00	1.300	0.17	0.155	0.202
	LTE Band 12_LAT	10M	QPSK	1	0	Bottom Side	10mm	Full	23095	707.5	23.86	25.00	1.300	-0.03	0.134	0.174
	LTE Band 12_LAT	10M	QPSK	25	0	Front	10mm	Full	23095	707.5	22.88	24.00	1.294	-0.04	0.129	0.167
	LTE Band 12_LAT	10M	QPSK	25	0	Back	10mm	Full	23095	707.5	22.88	24.00	1.294	0.08	0.167	0.216
	LTE Band 12_LAT	10M	QPSK	25	0	Left Side	10mm	Full	23095	707.5	22.88	24.00	1.294	0.02	0.298	0.386
	LTE Band 12_LAT	10M	QPSK	25	0	Right Side	10mm	Full	23095	707.5	22.88	24.00	1.294	0.01	0.129	0.167
	LTE Band 12_LAT	10M	QPSK	25	0	Bottom Side	10mm	Full	23095	707.5	22.88	24.00	1.294	-0.09	0.113	0.146

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_UAT	10M	QPSK	1	0	Front	10mm	Full	23230	782	24.00	25.00	1.259	-0.07	0.237	0.298
	LTE Band 13_UAT	10M	QPSK	1	0	Back	10mm	Full	23230	782	24.00	25.00	1.259	0.15	0.291	0.366
31	LTE Band 13_UAT	10M	QPSK	1	0	Left Side	10mm	Full	23230	782	24.00	25.00	1.259	0.16	0.316	**0.398**
	LTE Band 13_UAT	10M	QPSK	1	0	Right Side	10mm	Full	23230	782	24.00	25.00	1.259	0.03	0.253	0.319
	LTE Band 13_UAT	10M	QPSK	1	0	Top Side	10mm	Full	23230	782	24.00	25.00	1.259	-0.11	0.171	0.215
	LTE Band 13_UAT	10M	QPSK	25	0	Front	10mm	Full	23230	782	22.89	24.00	1.291	0.03	0.190	0.245
	LTE Band 13_UAT	10M	QPSK	25	0	Back	10mm	Full	23230	782	22.89	24.00	1.291	0.09	0.249	0.322
	LTE Band 13_UAT	10M	QPSK	25	0	Left Side	10mm	Full	23230	782	22.89	24.00	1.291	-0.06	0.267	0.345
	LTE Band 13_UAT	10M	QPSK	25	0	Right Side	10mm	Full	23230	782	22.89	24.00	1.291	0.05	0.202	0.261
	LTE Band 13_UAT	10M	QPSK	25	0	Top Side	10mm	Full	23230	782	22.89	24.00	1.291	0.03	0.145	0.187
	LTE Band 13_LAT	10M	QPSK	1	0	Front	10mm	Full	23230	782	23.90	25.00	1.288	-0.01	0.106	0.137
	LTE Band 13_LAT	10M	QPSK	1	0	Back	10mm	Full	23230	782	23.90	25.00	1.288	-0.08	0.162	0.209
	LTE Band 13_LAT	10M	QPSK	1	0	Left Side	10mm	Full	23230	782	23.90	25.00	1.288	0.05	0.223	0.287
	LTE Band 13_LAT	10M	QPSK	1	0	Right Side	10mm	Full	23230	782	23.90	25.00	1.288	0.04	0.108	0.139
	LTE Band 13_LAT	10M	QPSK	1	0	Bottom Side	10mm	Full	23230	782	23.90	25.00	1.288	0.08	0.146	0.188
	LTE Band 13_LAT	10M	QPSK	25	0	Front	10mm	Full	23230	782	22.94	24.00	1.276	0.03	0.083	0.106
	LTE Band 13_LAT	10M	QPSK	25	0	Back	10mm	Full	23230	782	22.94	24.00	1.276	-0.04	0.120	0.153
	LTE Band 13_LAT	10M	QPSK	25	0	Left Side	10mm	Full	23230	782	22.94	24.00	1.276	0.08	0.168	0.214
	LTE Band 13_LAT	10M	QPSK	25	0	Right Side	10mm	Full	23230	782	22.94	24.00	1.276	-0.02	0.083	0.105
	LTE Band 13_LAT	10M	QPSK	25	0	Bottom Side	10mm	Full	23230	782	22.94	24.00	1.276	0.06	0.114	0.146
	LTE Band 26_UAT	15M	QPSK	1	0	Front	10mm	Full	26965	841.5	23.94	25.00	1.276	0.08	0.347	0.443
32	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Full	26965	841.5	23.94	25.00	1.276	0.09	0.401	**0.512**
	LTE Band 26_UAT	15M	QPSK	1	0	Left Side	10mm	Full	26965	841.5	23.94	25.00	1.276	0.08	0.110	0.140
	LTE Band 26_UAT	15M	QPSK	1	0	Right Side	10mm	Full	26965	841.5	23.94	25.00	1.276	0.06	0.203	0.259
	LTE Band 26_UAT	15M	QPSK	1	0	Top Side	10mm	Full	26965	841.5	23.94	25.00	1.276	-0.15	0.270	0.345
	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Full	26765	821.5	23.70	25.00	1.349	0.18	0.290	0.391
	LTE Band 26_UAT	15M	QPSK	1	0	Back	10mm	Full	26865	831.5	23.77	25.00	1.327	0.02	0.381	0.506
	LTE Band 26_UAT	15M	QPSK	36	39	Front	10mm	Full	26965	841.5	22.81	24.00	1.315	0.05	0.253	0.333
	LTE Band 26_UAT	15M	QPSK	36	39	Back	10mm	Full	26965	841.5	22.81	24.00	1.315	0.11	0.291	0.383
	LTE Band 26_UAT	15M	QPSK	36	39	Left Side	10mm	Full	26965	841.5	22.81	24.00	1.315	0.07	0.087	0.114
	LTE Band 26_UAT	15M	QPSK	36	39	Right Side	10mm	Full	26965	841.5	22.81	24.00	1.315	0.02	0.172	0.226
	LTE Band 26_UAT	15M	QPSK	36	39	Top Side	10mm	Full	26965	841.5	22.81	24.00	1.315	-0.08	0.218	0.287
	LTE Band 26_LAT	15M	QPSK	1	0	Front	10mm	Full	26965	841.5	23.90	25.00	1.288	0.06	0.171	0.220
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Full	26965	841.5	23.90	25.00	1.288	-0.11	0.270	0.348
	LTE Band 26_LAT	15M	QPSK	1	0	Left Side	10mm	Full	26965	841.5	23.90	25.00	1.288	-0.05	0.196	0.252
	LTE Band 26_LAT	15M	QPSK	1	0	Right Side	10mm	Full	26965	841.5	23.90	25.00	1.288	0.02	0.108	0.139
	LTE Band 26_LAT	15M	QPSK	1	0	Bottom Side	10mm	Full	26965	841.5	23.90	25.00	1.288	-0.07	0.207	0.267
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Full	26765	821.5	23.71	25.00	1.346	-0.18	0.219	0.295
	LTE Band 26_LAT	15M	QPSK	1	0	Back	10mm	Full	26865	831.5	23.81	25.00	1.315	-0.01	0.256	0.337
	LTE Band 26_LAT	15M	QPSK	36	39	Front	10mm	Full	26965	841.5	22.79	24.00	1.321	-0.03	0.135	0.178
	LTE Band 26_LAT	15M	QPSK	36	39	Back	10mm	Full	26965	841.5	22.79	24.00	1.321	0.01	0.230	0.304
	LTE Band 26_LAT	15M	QPSK	36	39	Left Side	10mm	Full	26965	841.5	22.79	24.00	1.321	0.09	0.135	0.178
	LTE Band 26_LAT	15M	QPSK	36	39	Right Side	10mm	Full	26965	841.5	22.79	24.00	1.321	-0.07	0.073	0.097
	LTE Band 26_LAT	15M	QPSK	36	39	Bottom Side	10mm	Full	26965	841.5	22.79	24.00	1.321	0.11	0.180	0.238

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_UAT	20M	QPSK	1	49	Front	10mm	Reduced	132072	1720	18.58	19.20	1.153	0.06	0.394	0.454
	LTE Band 66_UAT	20M	QPSK	1	49	Back	10mm	Reduced	132072	1720	18.58	19.20	1.153	-0.07	0.436	0.503
	LTE Band 66_UAT	20M	QPSK	1	49	Left Side	10mm	Reduced	132072	1720	18.58	19.20	1.153	-0.13	0.048	0.055
	LTE Band 66_UAT	20M	QPSK	1	49	Right Side	10mm	Reduced	132072	1720	18.58	19.20	1.153	-0.09	0.043	0.050
	LTE Band 66_UAT	20M	QPSK	1	49	Top Side	10mm	Reduced	132072	1720	18.58	19.20	1.153	-0.16	0.615	0.709
	LTE Band 66_UAT	20M	QPSK	50	50	Front	10mm	Reduced	132072	1720	18.52	19.20	1.169	0.13	0.375	0.439
	LTE Band 66_UAT	20M	QPSK	50	50	Back	10mm	Reduced	132072	1720	18.52	19.20	1.169	0.07	0.409	0.478
	LTE Band 66_UAT	20M	QPSK	50	50	Left Side	10mm	Reduced	132072	1720	18.52	19.20	1.169	0.01	0.044	0.051
	LTE Band 66_UAT	20M	QPSK	50	50	Right Side	10mm	Reduced	132072	1720	18.52	19.20	1.169	0.14	0.043	0.050
	LTE Band 66_UAT	20M	QPSK	50	50	Top Side	10mm	Reduced	132072	1720	18.52	19.20	1.169	-0.09	0.618	0.723
	LTE Band 66_UAT	20M	QPSK	50	50	Top Side	10mm	Reduced	132322	1745	18.43	19.20	1.194	0.06	0.715	0.854
	LTE Band 66_UAT	20M	QPSK	50	50	Top Side	10mm	Reduced	132572	1770	18.37	19.20	1.211	-0.08	0.734	0.889
	LTE Band 66_UAT	20M	QPSK	100	0	Top Side	10mm	Reduced	132072	1720	18.43	19.20	1.194	-0.02	0.620	0.740
	LTE Band 66_LAT	20M	QPSK	1	49	Front	10mm	Reduced	132072	1720	20.26	21.00	1.186	-0.04	0.249	0.295
	LTE Band 66_LAT	20M	QPSK	1	49	Back	10mm	Reduced	132072	1720	20.26	21.00	1.186	-0.05	0.463	0.549
	LTE Band 66_LAT	20M	QPSK	1	49	Left Side	10mm	Reduced	132072	1720	20.26	21.00	1.186	0.05	0.042	0.050
	LTE Band 66_LAT	20M	QPSK	1	49	Right Side	10mm	Reduced	132072	1720	20.26	21.00	1.186	-0.12	0.068	0.081
	LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	10mm	Reduced	132072	1720	20.26	21.00	1.186	0.04	0.672	0.797
	LTE Band 66_LAT	20M	QPSK	50	50	Front	10mm	Reduced	132072	1720	20.15	21.00	1.216	0.15	0.257	0.313
	LTE Band 66_LAT	20M	QPSK	50	50	Back	10mm	Reduced	132072	1720	20.15	21.00	1.216	-0.18	0.481	0.585
	LTE Band 66_LAT	20M	QPSK	50	50	Left Side	10mm	Reduced	132072	1720	20.15	21.00	1.216	0.1	0.045	0.055
	LTE Band 66_LAT	20M	QPSK	50	50	Right Side	10mm	Reduced	132072	1720	20.15	21.00	1.216	0.09	0.062	0.075
	LTE Band 66_LAT	20M	QPSK	50	50	Bottom Side	10mm	Reduced	132072	1720	20.15	21.00	1.216	0.08	0.706	0.859
	LTE Band 66_LAT	20M	QPSK	50	50	Bottom Side	10mm	Reduced	132322	1745	19.99	21.00	1.262	-0.16	0.734	0.926
33	LTE Band 66_LAT	20M	QPSK	50	50	Bottom Side	10mm	Reduced	132572	1770	19.92	21.00	1.282	-0.14	0.757	**0.971**
	LTE Band 66_LAT	20M	QPSK	100	0	Bottom Side	10mm	Reduced	132072	1720	20.08	21.00	1.236	-0.15	0.665	0.822
	LTE Band 25_UAT	20M	QPSK	1	0	Front	10mm	Reduced	26590	1905	17.85	18.60	1.189	-0.02	0.410	0.487
	LTE Band 25_UAT	20M	QPSK	1	0	Back	10mm	Reduced	26590	1905	17.85	18.60	1.189	-0.09	0.534	0.635
	LTE Band 25_UAT	20M	QPSK	1	0	Left Side	10mm	Reduced	26590	1905	17.85	18.60	1.189	-0.12	0.059	0.070
	LTE Band 25_UAT	20M	QPSK	1	0	Right Side	10mm	Reduced	26590	1905	17.85	18.60	1.189	0.02	0.004	0.005
	LTE Band 25_UAT	20M	QPSK	1	0	Top Side	10mm	Reduced	26590	1905	17.85	18.60	1.189	0.18	0.778	0.925
	LTE Band 25_UAT	20M	QPSK	1	0	Top Side	10mm	Reduced	26140	1860	17.56	18.60	1.271	-0.11	0.622	0.790
	LTE Band 25_UAT	20M	QPSK	1	0	Top Side	10mm	Reduced	26340	1880	17.65	18.60	1.245	-0.14	0.637	0.793
	LTE Band 25_UAT	20M	QPSK	50	24	Front	10mm	Reduced	26590	1905	17.78	18.60	1.208	-0.16	0.470	0.568
	LTE Band 25_UAT	20M	QPSK	50	24	Back	10mm	Reduced	26590	1905	17.78	18.60	1.208	0.12	0.489	0.591
	LTE Band 25_UAT	20M	QPSK	50	24	Left Side	10mm	Reduced	26590	1905	17.78	18.60	1.208	-0.02	0.056	0.068
	LTE Band 25_UAT	20M	QPSK	50	24	Right Side	10mm	Reduced	26590	1905	17.78	18.60	1.208	-0.01	0.005	0.006
34	LTE Band 25_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	26590	1905	17.78	18.60	1.208	-0.05	0.876	**1.058**
	LTE Band 25_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	26140	1860	17.54	18.60	1.276	0.12	0.740	0.945
	LTE Band 25_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	26340	1880	17.65	18.60	1.245	0.06	0.748	0.931
	LTE Band 25_UAT	20M	QPSK	100	0	Top Side	10mm	Reduced	26590	1905	17.73	18.60	1.222	0.16	0.805	0.984
	LTE Band 25_LAT	20M	QPSK	1	0	Front	10mm	Reduced	26590	1905	20.38	21.20	1.208	-0.09	0.235	0.284
	LTE Band 25_LAT	20M	QPSK	1	0	Back	10mm	Reduced	26590	1905	20.38	21.20	1.208	0.06	0.493	0.595
	LTE Band 25_LAT	20M	QPSK	1	0	Left Side	10mm	Reduced	26590	1905	20.38	21.20	1.208	-0.1	0.049	0.059
	LTE Band 25_LAT	20M	QPSK	1	0	Right Side	10mm	Reduced	26590	1905	20.38	21.20	1.208	0.11	0.097	0.117
	LTE Band 25_LAT	20M	QPSK	1	0	Bottom Side	10mm	Reduced	26590	1905	20.38	21.20	1.208	-0.08	0.773	0.934
	LTE Band 25_LAT	20M	QPSK	1	0	Bottom Side	10mm	Reduced	26140	1860	20.30	21.20	1.230	-0.01	0.718	0.883
	LTE Band 25_LAT	20M	QPSK	1	0	Bottom Side	10mm	Reduced	26340	1880	20.33	21.20	1.222	0.01	0.735	0.898
	LTE Band 25_LAT	20M	QPSK	50	24	Front	10mm	Reduced	26590	1905	20.34	21.20	1.219	0.13	0.265	0.323
	LTE Band 25_LAT	20M	QPSK	50	24	Back	10mm	Reduced	26590	1905	20.34	21.20	1.219	-0.12	0.592	0.722
	LTE Band 25_LAT	20M	QPSK	50	24	Left Side	10mm	Reduced	26590	1905	20.34	21.20	1.219	0	0.057	0.069
	LTE Band 25_LAT	20M	QPSK	50	24	Right Side	10mm	Reduced	26590	1905	20.34	21.20	1.219	0.19	0.106	0.129
	LTE Band 25_LAT	20M	QPSK	50	24	Bottom Side	10mm	Reduced	26590	1905	20.34	21.20	1.219	-0.11	0.782	0.953
	LTE Band 25_LAT	20M	QPSK	50	24	Bottom Side	10mm	Reduced	26140	1860	20.18	21.20	1.265	-0.14	0.746	0.943
	LTE Band 25_LAT	20M	QPSK	50	24	Bottom Side	10mm	Reduced	26340	1880	20.23	21.20	1.250	0.02	0.764	0.955
	LTE Band 25_LAT	20M	QPSK	100	0	Bottom Side	10mm	Reduced	26590	1905	20.26	21.20	1.242	0.03	0.767	0.952

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_UAT	20M	QPSK	1	99	Front	10mm	Reduced	21100	2535	19.30	20.00	1.175	0.06	0.196	0.230
	LTE Band 7_UAT	20M	QPSK	1	99	Back	10mm	Reduced	21100	2535	19.30	20.00	1.175	-0.1	0.384	0.451
	LTE Band 7_UAT	20M	QPSK	1	99	Left Side	10mm	Reduced	21100	2535	19.30	20.00	1.175	0.11	0.173	0.203
	LTE Band 7_UAT	20M	QPSK	1	99	Right Side	10mm	Reduced	21100	2535	19.30	20.00	1.175	-0.08	0.012	0.014
	LTE Band 7_UAT	20M	QPSK	1	99	Top Side	10mm	Reduced	21100	2535	19.30	20.00	1.175	-0.01	0.556	0.653
	LTE Band 7_UAT	20M	QPSK	50	24	Front	10mm	Reduced	21100	2535	19.19	20.00	1.205	-0.12	0.207	0.249
	LTE Band 7_UAT	20M	QPSK	50	24	Back	10mm	Reduced	21100	2535	19.19	20.00	1.205	-0.14	0.403	0.486
	LTE Band 7_UAT	20M	QPSK	50	24	Left Side	10mm	Reduced	21100	2535	19.19	20.00	1.205	0.19	0.173	0.208
	LTE Band 7_UAT	20M	QPSK	50	24	Right Side	10mm	Reduced	21100	2535	19.19	20.00	1.205	-0.11	0.016	0.019
	LTE Band 7_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	21100	2535	19.19	20.00	1.205	-0.14	0.608	0.733
35	LTE Band 7_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	20850	2510	18.88	20.00	1.294	0.13	0.691	**0.894**
	LTE Band 7_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	21350	2560	18.97	20.00	1.268	-0.14	0.587	0.744
	LTE Band 7_UAT	20M	QPSK	100	0	Top Side	10mm	Reduced	21100	2535	19.01	20.00	1.256	-0.12	0.606	0.761
	LTE Band 7_LAT	20M	QPSK	1	99	Front	10mm	Reduced	21100	2535	22.25	23.00	1.189	-0.09	0.260	0.309
	LTE Band 7_LAT	20M	QPSK	1	99	Back	10mm	Reduced	21100	2535	22.25	23.00	1.189	0.06	0.537	0.638
	LTE Band 7_LAT	20M	QPSK	1	99	Left Side	10mm	Reduced	21100	2535	22.25	23.00	1.189	-0.1	0.003	0.004
	LTE Band 7_LAT	20M	QPSK	1	99	Right Side	10mm	Reduced	21100	2535	22.25	23.00	1.189	0.11	0.123	0.146
	LTE Band 7_LAT	20M	QPSK	1	99	Bottom Side	10mm	Reduced	21100	2535	22.25	23.00	1.189	-0.08	0.272	0.323
	LTE Band 7_LAT	20M	QPSK	1	99	Back	10mm	Reduced	20850	2510	21.88	23.00	1.294	-0.01	0.400	0.518
	LTE Band 7_LAT	20M	QPSK	1	99	Back	10mm	Reduced	21350	2560	21.91	23.00	1.285	0.01	0.409	0.526
	LTE Band 7_LAT	20M	QPSK	50	24	Front	10mm	Reduced	21100	2535	22.18	23.00	1.208	0.13	0.268	0.324
	LTE Band 7_LAT	20M	QPSK	50	24	Back	10mm	Reduced	21100	2535	22.18	23.00	1.208	-0.12	0.441	0.533
	LTE Band 7_LAT	20M	QPSK	50	24	Left Side	10mm	Reduced	21100	2535	22.18	23.00	1.208	0	0.002	0.002
	LTE Band 7_LAT	20M	QPSK	50	24	Right Side	10mm	Reduced	21100	2535	22.18	23.00	1.208	0.19	0.128	0.155
	LTE Band 7_LAT	20M	QPSK	50	24	Bottom Side	10mm	Reduced	21100	2535	22.18	23.00	1.208	-0.11	0.221	0.267

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_UAT	20M	QPSK	1	49	Front	10mm	Reduced	40620	2593	21.18	21.50	1.076	62.9	1.006	-0.09	0.213	0.231
	LTE Band 41_UAT	20M	QPSK	1	49	Back	10mm	Reduced	40620	2593	21.18	21.50	1.076	62.9	1.006	0.06	0.431	0.467
	LTE Band 41_UAT	20M	QPSK	1	49	Left Side	10mm	Reduced	40620	2593	21.18	21.50	1.076	62.9	1.006	-0.1	0.179	0.194
	LTE Band 41_UAT	20M	QPSK	1	49	Right Side	10mm	Reduced	40620	2593	21.18	21.50	1.076	62.9	1.006	0.11	0.016	0.017
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	Reduced	40620	2593	21.18	21.50	1.076	62.9	1.006	-0.08	0.641	0.694
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	Reduced	39750	2506	20.97	21.50	1.130	62.9	1.006	0.01	0.761	0.865
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	Reduced	40185	2549.5	20.91	21.50	1.146	62.9	1.006	0.13	0.518	0.597
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	Reduced	41055	2636.5	21.11	21.50	1.094	62.9	1.006	-0.12	0.570	0.627
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	Reduced	41490	2680	21.16	21.50	1.081	62.9	1.006	0.1	0.492	0.535
	LTE Band 41_UAT	20M	QPSK	50	24	Front	10mm	Reduced	40620	2593	21.17	21.50	1.079	62.9	1.006	-0.09	0.222	0.241
	LTE Band 41_UAT	20M	QPSK	50	24	Back	10mm	Reduced	40620	2593	21.17	21.50	1.079	62.9	1.006	0.06	0.451	0.490
	LTE Band 41_UAT	20M	QPSK	50	24	Left Side	10mm	Reduced	40620	2593	21.17	21.50	1.079	62.9	1.006	-0.1	0.174	0.189
	LTE Band 41_UAT	20M	QPSK	50	24	Right Side	10mm	Reduced	40620	2593	21.17	21.50	1.079	62.9	1.006	0.11	0.015	0.016
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	40620	2593	21.17	21.50	1.079	62.9	1.006	-0.08	0.700	0.760
36	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	39750	2506	20.93	21.50	1.140	62.9	1.006	-0.12	0.811	**0.930**
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	40185	2549.5	20.86	21.50	1.159	62.9	1.006	0.11	0.465	0.542
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	41055	2636.5	21.05	21.50	1.109	62.9	1.006	-0.08	0.468	0.522
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	41490	2680	21.09	21.50	1.099	62.9	1.006	-0.08	0.397	0.439
	LTE Band 41C_UAT	20M	QPSK	1	99	Top Side	10mm	Reduced	39750(PCC)+ 39948(SCC)	2506(PCC)+ 2525.8(SCC)	20.24	21.50	1.337	62.9	1.006	0.08	0.547	0.736
	LTE Band 41C_UAT	20M	QPSK	1	99	Top Side	10mm	Reduced	40185(PCC)+ 40383(SCC)	2549.5(PCC)+ 2569.3(SCC)	20.33	21.50	1.309	62.9	1.006	-0.01	0.341	0.449
	LTE Band 41C_UAT	20M	QPSK	1	0	Top Side	10mm	Reduced	40620(PCC)+ 40422(SCC)	2593(PCC)+ 2573.2(SCC)	20.29	21.50	1.321	62.9	1.006	0.03	0.443	0.589
	LTE Band 41C_UAT	20M	QPSK	1	0	Top Side	10mm	Reduced	41055(PCC)+ 40857(SCC)	2636.5(PCC)+ 2616.7(SCC)	20.36	21.50	1.300	62.9	1.006	0.01	0.436	0.570
	LTE Band 41C_UAT	20M	QPSK	1	0	Top Side	10mm	Reduced	41490(PCC)+ 41292(SCC)	2680(PCC)+ 2660.2(SCC)	20.29	21.50	1.321	62.9	1.006	0.01	0.404	0.537
	LTE Band 41_UAT	20M	QPSK	100	0	Top Side	10mm	Reduced	40620	2593	21.11	21.50	1.094	62.9	1.006	0.02	0.538	0.592
	LTE Band 41_LAT	20M	QPSK	1	49	Front	10mm	Reduced	40620	2593	22.94	24.20	1.337	62.9	1.006	0.02	0.122	0.164
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	Reduced	40620	2593	22.94	24.20	1.337	62.9	1.006	0	0.449	0.604
	LTE Band 41_LAT	20M	QPSK	1	49	Left Side	10mm	Reduced	40620	2593	22.94	24.20	1.337	62.9	1.006	0.1	0.036	0.048
	LTE Band 41_LAT	20M	QPSK	1	49	Right Side	10mm	Reduced	40620	2593	22.94	24.20	1.337	62.9	1.006	0.11	0.062	0.083
	LTE Band 41_LAT	20M	QPSK	1	49	Bottom Side	10mm	Reduced	40620	2593	22.94	24.20	1.337	62.9	1.006	0.1	0.083	0.112
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	Reduced	39750	2506	22.66	24.20	1.426	62.9	1.006	0.13	0.112	0.161
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	Reduced	40185	2549.5	22.68	24.20	1.419	62.9	1.006	-0.1	0.186	0.266
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	Reduced	41055	2636.5	22.86	24.20	1.361	62.9	1.006	-0.19	0.488	0.668
	LTE Band 41_LAT	20M	QPSK	1	49	Back	10mm	Reduced	41490	2680	22.77	24.20	1.390	62.9	1.006	0.17	0.493	0.689
	LTE Band 41C_LAT	20M	QPSK	1	99	Back	10mm	Reduced	39750(PCC)+ 39948(SCC)	2506(PCC)+ 2525.8(SCC)	22.84	24.20	1.368	62.9	1.006	0.02	0.344	0.473
	LTE Band 41C_LAT	20M	QPSK	1	99	Back	10mm	Reduced	40185(PCC)+ 40383(SCC)	2549.5(PCC)+ 2569.3(SCC)	22.75	24.20	1.396	62.9	1.006	0.01	0.354	0.497
	LTE Band 41C_LAT	20M	QPSK	1	0	Back	10mm	Reduced	40620(PCC)+ 40422(SCC)	2593(PCC)+ 2573.2(SCC)	22.88	24.20	1.355	62.9	1.006	-0.08	0.353	0.481
	LTE Band 41C_LAT	20M	QPSK	1	0	Back	10mm	Reduced	41055(PCC)+ 40857(SCC)	2636.5(PCC)+ 2616.7(SCC)	22.92	24.20	1.343	62.9	1.006	-0.02	0.463	0.625
	LTE Band 41C_LAT	20M	QPSK	1	0	Back	10mm	Reduced	41490(PCC)+ 41292(SCC)	2680(PCC)+ 2660.2(SCC)	22.90	24.20	1.349	62.9	1.006	-0.15	0.394	0.535
	LTE Band 41_LAT	20M	QPSK	50	24	Front	10mm	Reduced	40620	2593	22.76	24.00	1.330	62.9	1.006	0.09	0.103	0.138
	LTE Band 41_LAT	20M	QPSK	50	24	Back	10mm	Reduced	40620	2593	22.76	24.00	1.330	62.9	1.006	-0.18	0.175	0.234
	LTE Band 41_LAT	20M	QPSK	50	24	Left Side	10mm	Reduced	40620	2593	22.76	24.00	1.330	62.9	1.006	0.06	0.035	0.046
	LTE Band 41_LAT	20M	QPSK	50	24	Right Side	10mm	Reduced	40620	2593	22.76	24.00	1.330	62.9	1.006	0.08	0.059	0.079
	LTE Band 41_LAT	20M	QPSK	50	24	Bottom Side	10mm	Reduced	40620	2593	22.76	24.00	1.330	62.9	1.006	-0.01	0.080	0.107
	LTE Band 41_LAT	20M	QPSK	100	0	Back	10mm	Reduced	40620	2593	22.74	24.00	1.337	62.9	1.006	0.09	0.180	0.242
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Front	10mm	Reduced	40620	2593	22.94	23.10	1.038	42.9	1.009	-0.11	0.212	0.222
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Back	10mm	Reduced	40620	2593	22.94	23.10	1.038	42.9	1.009	-0.14	0.268	0.281
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Left Side	10mm	Reduced	40620	2593	22.94	23.10	1.038	42.9	1.009	-0.1	0.149	0.156
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Right Side	10mm	Reduced	40620	2593	22.94	23.10	1.038	42.9	1.009	0.11	0.010	0.010
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Top Side	10mm	Reduced	40620	2593	22.94	23.10	1.038	42.9	1.009	-0.08	0.391	0.409
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Front	10mm	Reduced	40620	2593	22.89	23.10	1.050	42.9	1.009	-0.16	0.223	0.236
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Back	10mm	Reduced	40620	2593	22.89	23.10	1.050	42.9	1.009	0.02	0.421	0.446

	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Left Side	10mm	Reduced	40620	2593	22.89	23.10	1.050	42.9	1.009	0.01	0.159	0.168
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Right Side	10mm	Reduced	40620	2593	22.89	23.10	1.050	42.9	1.009	0.11	0.015	0.016
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	40620	2593	22.89	23.10	1.050	42.9	1.009	-0.08	0.528	0.559
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	39750	2506	22.84	23.10	1.062	42.9	1.009	0.02	0.731	0.783
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	40185	2549.5	22.75	23.10	1.084	42.9	1.009	0.01	0.475	0.519
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	41055	2636.5	22.86	23.10	1.057	42.9	1.009	0.11	0.489	0.521
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Top Side	10mm	Reduced	41490	2680	22.87	23.10	1.054	42.9	1.009	-0.08	0.412	0.438
	LTE Band 41(HPUE)_UAT	20M	QPSK	100	0	Top Side	10mm	Reduced	40620	2593	22.69	23.10	1.099	42.9	1.009	0.19	0.552	0.612
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Front	10mm	Reduced	40620	2593	25.22	25.80	1.143	42.9	1.009	-0.1	0.087	0.100
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Back	10mm	Reduced	40620	2593	25.22	25.80	1.143	42.9	1.009	0.11	0.145	0.167
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Left Side	10mm	Reduced	40620	2593	25.22	25.80	1.143	42.9	1.009	-0.08	0.036	0.041
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Right Side	10mm	Reduced	40620	2593	25.22	25.80	1.143	42.9	1.009	-0.09	0.043	0.050
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Bottom Side	10mm	Reduced	40620	2593	25.22	25.80	1.143	42.9	1.009	0.06	0.065	0.075
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Front	10mm	Reduced	40620	2593	25.11	25.80	1.172	42.9	1.009	-0.12	0.097	0.115
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Back	10mm	Reduced	40620	2593	25.11	25.80	1.172	42.9	1.009	0.1	0.164	0.194
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Left Side	10mm	Reduced	40620	2593	25.11	25.80	1.172	42.9	1.009	0.11	0.034	0.040
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Right Side	10mm	Reduced	40620	2593	25.11	25.80	1.172	42.9	1.009	-0.08	0.047	0.056
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Bottom Side	10mm	Reduced	40620	2593	25.11	25.80	1.172	42.9	1.009	-0.09	0.066	0.078
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Back	10mm	Reduced	39750	2506	25.09	25.80	1.178	42.9	1.009	-0.1	0.342	0.406
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Back	10mm	Reduced	40185	2549.5	25.04	25.80	1.191	42.9	1.009	0.11	0.350	0.421
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Back	10mm	Reduced	41055	2636.5	24.95	25.80	1.216	42.9	1.009	-0.08	0.500	0.614
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Back	10mm	Reduced	41490	2680	24.98	25.80	1.208	42.9	1.009	-0.1	0.502	0.612
	LTE Band 41(HPUE)_LAT	20M	QPSK	100	0	Back	10mm	Reduced	40620	2593	25.08	25.80	1.180	42.9	1.009	-0.1	0.159	0.189

<5GNR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Front	10mm	Full	136100	680.5	24.36	25.20	1.213	-0.05	0.184	0.223
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Back	10mm	Full	136100	680.5	24.36	25.20	1.213	0.01	0.209	0.254
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Left Side	10mm	Full	136100	680.5	24.36	25.20	1.213	-0.05	0.267	0.324
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Right Side	10mm	Full	136100	680.5	24.36	25.20	1.213	-0.11	0.207	0.251
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Top Side	10mm	Full	136100	680.5	24.36	25.20	1.213	0.09	0.089	0.108
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Front	10mm	Full	136100	680.5	24.26	25.20	1.242	-0.12	0.200	0.248
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Back	10mm	Full	136100	680.5	24.26	25.20	1.242	-0.01	0.217	0.269
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Left Side	10mm	Full	136100	680.5	24.26	25.20	1.242	-0.08	0.279	0.346
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Right Side	10mm	Full	136100	680.5	24.26	25.20	1.242	0.16	0.230	0.286
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Full	136100	680.5	24.26	25.20	1.242	-0.03	0.089	0.111
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Front	10mm	Full	136100	680.5	24.18	25.20	1.265	0.19	0.143	0.181
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Back	10mm	Full	136100	680.5	24.18	25.20	1.265	0.19	0.169	0.214
37	N71_ANT 0	20M	BPSK	1	1	DFT-15	Left Side	10mm	Full	136100	680.5	24.18	25.20	1.265	-0.13	0.289	**0.366**
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Right Side	10mm	Full	136100	680.5	24.18	25.20	1.265	0.02	0.151	0.191
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	10mm	Full	136100	680.5	24.18	25.20	1.265	0.04	0.137	0.173
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Front	10mm	Full	136100	680.5	24.01	25.20	1.315	0.18	0.124	0.163
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Back	10mm	Full	136100	680.5	24.01	25.20	1.315	-0.02	0.137	0.180
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Left Side	10mm	Full	136100	680.5	24.01	25.20	1.315	-0.17	0.254	0.334
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Right Side	10mm	Full	136100	680.5	24.01	25.20	1.315	-0.04	0.133	0.175
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	10mm	Full	136100	680.5	24.01	25.20	1.315	-0.16	0.116	0.153
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Front	10mm	Full	167300	836.5	24.38	25.20	1.208	-0.05	0.254	0.307
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Back	10mm	Full	167300	836.5	24.38	25.20	1.208	0.15	0.311	0.376
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Left Side	10mm	Full	167300	836.5	24.38	25.20	1.208	0.16	0.102	0.123
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Right Side	10mm	Full	167300	836.5	24.38	25.20	1.208	0.19	0.152	0.184
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Top Side	10mm	Full	167300	836.5	24.38	25.20	1.208	0.06	0.232	0.280
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Front	10mm	Full	167300	836.5	24.28	25.20	1.236	-0.18	0.298	0.368
38	N5_ANT 1	20M	BPSK	50	28	DFT-15	Back	10mm	Full	167300	836.5	24.28	25.20	1.236	-0.15	0.351	**0.434**
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Left Side	10mm	Full	167300	836.5	24.28	25.20	1.236	-0.03	0.129	0.159
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Right Side	10mm	Full	167300	836.5	24.28	25.20	1.236	0.19	0.169	0.209
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Full	167300	836.5	24.28	25.20	1.236	0.12	0.264	0.326
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Front	10mm	Full	167300	836.5	24.13	25.20	1.279	-0.19	0.129	0.165
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Back	10mm	Full	167300	836.5	24.13	25.20	1.279	0.02	0.224	0.287
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Left Side	10mm	Full	167300	836.5	24.13	25.20	1.279	0.1	0.157	0.201
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Right Side	10mm	Full	167300	836.5	24.13	25.20	1.279	0	0.091	0.116
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	10mm	Full	167300	836.5	24.13	25.20	1.279	0.14	0.174	0.223
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Front	10mm	Full	167300	836.5	24.08	25.20	1.294	-0.01	0.135	0.175
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Back	10mm	Full	167300	836.5	24.08	25.20	1.294	-0.16	0.222	0.287
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Left Side	10mm	Full	167300	836.5	24.08	25.20	1.294	-0.02	0.140	0.181
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Right Side	10mm	Full	167300	836.5	24.08	25.20	1.294	0.18	0.083	0.107
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	10mm	Full	167300	836.5	24.08	25.20	1.294	-0.07	0.174	0.225

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Front	10mm	Reduced	349000	1745	19.30	20.00	1.175	-0.11	0.484	0.569
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Back	10mm	Reduced	349000	1745	19.30	20.00	1.175	-0.05	0.500	0.587
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Left Side	10mm	Reduced	349000	1745	19.30	20.00	1.175	0.12	0.071	0.084
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Side	10mm	Reduced	349000	1745	19.30	20.00	1.175	-0.16	0.062	0.073
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Top Side	10mm	Reduced	349000	1745	19.30	20.00	1.175	0.02	0.654	0.768
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Front	10mm	Reduced	349000	1745	19.29	20.00	1.178	0.1	0.501	0.590
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Back	10mm	Reduced	349000	1745	19.29	20.00	1.178	0.07	0.527	0.621
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Left Side	10mm	Reduced	349000	1745	19.29	20.00	1.178	-0.08	0.058	0.069
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Right Side	10mm	Reduced	349000	1745	19.29	20.00	1.178	0.18	0.056	0.066
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Reduced	349000	1745	19.29	20.00	1.178	-0.13	0.663	0.781
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Reduced	344000	1720	18.89	20.00	1.291	0.04	0.588	0.759
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Reduced	354000	1770	18.97	20.00	1.268	-0.01	0.633	0.802
39	N66_ANT 1	20M	BPSK	100	0	DFT-15	Top Side	10mm	Reduced	349000	1745	19.00	20.00	1.259	0.06	0.752	**0.947**
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Front	10mm	Reduced	349000	1745	21.21	22.00	1.199	-0.11	0.254	0.305
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Back	10mm	Reduced	349000	1745	21.21	22.00	1.199	0.19	0.476	0.571
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Left Side	10mm	Reduced	349000	1745	21.21	22.00	1.199	-0.08	0.051	0.061
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Right Side	10mm	Reduced	349000	1745	21.21	22.00	1.199	-0.13	0.082	0.098
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	10mm	Reduced	349000	1745	21.21	22.00	1.199	-0.02	0.639	0.766
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	10mm	Reduced	344000	1720	21.14	22.00	1.219	-0.14	0.567	0.691
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	10mm	Reduced	354000	1770	21.01	22.00	1.256	-0.1	0.735	0.923
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Front	10mm	Reduced	349000	1745	21.18	22.00	1.208	0.18	0.262	0.316
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Back	10mm	Reduced	349000	1745	21.18	22.00	1.208	-0.15	0.471	0.569
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Left Side	10mm	Reduced	349000	1745	21.18	22.00	1.208	-0.02	0.053	0.064
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Right Side	10mm	Reduced	349000	1745	21.18	22.00	1.208	-0.07	0.085	0.103
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	10mm	Reduced	349000	1745	21.18	22.00	1.208	0.11	0.632	0.763
	N66_ANT 0	20M	BPSK	100	0	DFT-15	Bottom Side	10mm	Reduced	349000	1745	21.09	22.00	1.233	0.03	0.509	0.628
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Front	10mm	Reduced	372000	1860	18.04	18.80	1.191	-0.08	0.406	0.484
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Back	10mm	Reduced	372000	1860	18.04	18.80	1.191	-0.15	0.442	0.527
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Left Side	10mm	Reduced	372000	1860	18.04	18.80	1.191	0.1	0.059	0.070
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Right Side	10mm	Reduced	372000	1860	18.04	18.80	1.191	0.12	0.040	0.048
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Top Side	10mm	Reduced	372000	1860	18.04	18.80	1.191	0.09	0.508	0.605
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Front	10mm	Reduced	372000	1860	17.94	18.80	1.219	-0.1	0.426	0.519
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Back	10mm	Reduced	372000	1860	17.94	18.80	1.219	0.04	0.478	0.583
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Left Side	10mm	Reduced	372000	1860	17.94	18.80	1.219	-0.01	0.059	0.072
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Right Side	10mm	Reduced	372000	1860	17.94	18.80	1.219	-0.04	0.043	0.052
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Reduced	372000	1860	17.94	18.80	1.219	-0.13	0.611	0.745
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Reduced	376500	1882.5	17.84	18.80	1.247	-0.12	0.590	0.736
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Reduced	381000	1905	17.82	18.80	1.253	-0.03	0.757	0.949
	N25_ANT 1	20M	BPSK	100	0	DFT-15	Top Side	10mm	Reduced	372000	1860	17.90	18.80	1.230	0.06	0.698	0.859
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Front	10mm	Reduced	372000	1860	21.41	22.20	1.199	-0.12	0.271	0.325
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Back	10mm	Reduced	372000	1860	21.41	22.20	1.199	-0.05	0.620	0.744
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Left Side	10mm	Reduced	372000	1860	21.41	22.20	1.199	0.01	0.060	0.072
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Right Side	10mm	Reduced	372000	1860	21.41	22.20	1.199	0.06	0.091	0.109
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	10mm	Reduced	372000	1860	21.41	22.20	1.199	-0.09	0.813	0.975
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	10mm	Reduced	376500	1882.5	21.30	22.20	1.230	-0.03	0.834	1.026
40	N25_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	10mm	Reduced	381000	1905	21.32	22.20	1.225	0.04	0.851	**1.042**
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Front	10mm	Reduced	372000	1860	21.37	22.20	1.211	-0.08	0.268	0.324
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Back	10mm	Reduced	372000	1860	21.37	22.20	1.211	-0.17	0.615	0.745
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Left Side	10mm	Reduced	372000	1860	21.37	22.20	1.211	0	0.060	0.073
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Right Side	10mm	Reduced	372000	1860	21.37	22.20	1.211	-0.18	0.091	0.110
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	10mm	Reduced	372000	1860	21.37	22.20	1.211	0.11	0.806	0.976
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	10mm	Reduced	376500	1882.5	21.33	22.20	1.222	-0.17	0.826	1.009
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	10mm	Reduced	381000	1905	21.34	22.20	1.219	-0.01	0.832	1.014
	N25_ANT 0	20M	BPSK	100	0	DFT-15	Bottom Side	10mm	Reduced	372000	1860	21.35	22.20	1.216	-0.15	0.790	0.961

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Front	10mm	Reduced	528000	2640	15.43	16.00	1.140	-0.17	0.020	0.023
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Back	10mm	Reduced	528000	2640	15.43	16.00	1.140	0.06	0.118	0.135
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Left Side	10mm	Reduced	528000	2640	15.43	16.00	1.140	0.11	0.078	0.089
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Right Side	10mm	Reduced	528000	2640	15.43	16.00	1.140	0.06	0.004	0.005
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Top Side	10mm	Reduced	528000	2640	15.43	16.00	1.140	-0.05	0.005	0.006
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Front	10mm	Reduced	528000	2640	15.40	16.00	1.148	-0.09	0.021	0.024
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	10mm	Reduced	528000	2640	15.40	16.00	1.148	-0.18	0.270	0.310
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Left Side	10mm	Reduced	528000	2640	15.40	16.00	1.148	0.14	0.142	0.163
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Right Side	10mm	Reduced	528000	2640	15.40	16.00	1.148	0.06	0.005	0.006
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Top Side	10mm	Reduced	528000	2640	15.40	16.00	1.148	-0.09	0.006	0.007
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	10mm	Reduced	509202	2546.01	14.98	16.00	1.265	0.07	0.469	0.593
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	10mm	Reduced	518598	2592.99	15.37	16.00	1.156	0.1	0.416	0.481
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Front	10mm	Reduced	528000	2640	15.43	16.00	1.140	-0.17	0.020	0.023
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Back	10mm	Reduced	528000	2640	15.43	16.00	1.140	0.06	0.118	0.135
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Left Side	10mm	Reduced	528000	2640	15.43	16.00	1.140	0.11	0.078	0.089
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Right Side	10mm	Reduced	528000	2640	15.43	16.00	1.140	0.06	0.004	0.005
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Top Side	10mm	Reduced	528000	2640	15.43	16.00	1.140	-0.05	0.005	0.006
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Front	10mm	Reduced	528000	2640	15.40	16.00	1.148	-0.09	0.021	0.024
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	10mm	Reduced	528000	2640	15.40	16.00	1.148	-0.18	0.270	0.310
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Left Side	10mm	Reduced	528000	2640	15.40	16.00	1.148	0.14	0.142	0.163
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Right Side	10mm	Reduced	528000	2640	15.40	16.00	1.148	0.06	0.005	0.006
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Top Side	10mm	Reduced	528000	2640	15.40	16.00	1.148	-0.09	0.006	0.007
41	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	10mm	Reduced	509202	2546.01	14.98	16.00	1.265	0.07	0.469	**0.593**
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	10mm	Reduced	518598	2592.99	15.37	16.00	1.156	0.1	0.416	0.481

<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	10mm	Ant 1	Full	6	2437	20.60	22.00	1.380	100	1.000	-0.08	0.428	0.591
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 1	Full	6	2437	20.60	22.00	1.380	100	1.000	-0.17	0.480	0.663
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 1	Full	6	2437	20.60	22.00	1.380	100	1.000	-0.17	0.081	0.112
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 1	Full	6	2437	20.60	22.00	1.380	100	1.000	-0.17	0.169	0.233
42	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	Full	6	2437	20.60	22.00	1.380	100	1.000	0.06	0.531	**0.733**
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	Full	1	2412	19.70	21.00	1.349	100	1.000	-0.08	0.407	0.549
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	Full	11	2462	19.80	21.00	1.318	100	1.000	0.18	0.450	0.593
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 1	Reduced Level 2	6	2437	15.60	17.00	1.380	100	1.000	-0.02	0.132	0.182
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 1	Reduced Level 2	6	2437	15.60	17.00	1.380	100	1.000	-0.02	0.145	0.200
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 1	Reduced Level 2	6	2437	15.60	17.00	1.380	100	1.000	-0.14	0.026	0.036
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 1	Reduced Level 2	6	2437	15.60	17.00	1.380	100	1.000	0.19	0.050	0.069
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	Reduced Level 2	6	2437	15.60	17.00	1.380	100	1.000	0.13	0.161	0.222
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	Reduced Level 2	1	2412	14.70	16.00	1.349	100	1.000	-0.11	0.133	0.179
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 1	Reduced Level 2	11	2462	14.80	16.00	1.318	100	1.000	-0.09	0.148	0.195

<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	802.11n-HT40 MCS0	Front	10mm	Ant 1	Full	46	5230	16.88	17.50	1.153	97.73	1.023	0.01	0.136	0.160
43	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	Full	46	5230	16.88	17.50	1.153	97.73	1.023	0.19	0.959	**1.132**
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 1	Full	46	5230	16.88	17.50	1.153	97.73	1.023	0.13	0.002	0.002
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	Full	46	5230	16.88	17.50	1.153	97.73	1.023	-0.11	0.494	0.583
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 1	Full	46	5230	16.88	17.50	1.153	97.73	1.023	-0.09	0.058	0.069
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	Full	38	5190	16.45	17.50	1.274	97.73	1.023	0.03	0.771	1.004
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 1	Reduced Level 2	46	5230	13.88	14.50	1.153	97.73	1.023	-0.08	0.084	0.099
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	Reduced Level 2	46	5230	13.88	14.50	1.153	97.73	1.023	-0.17	0.510	0.602
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 1	Reduced Level 2	46	5230	13.88	14.50	1.153	97.73	1.023	-0.17	0.001	0.001
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	Reduced Level 2	46	5230	13.88	14.50	1.153	97.73	1.023	-0.17	0.227	0.268
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 1	Reduced Level 2	46	5230	13.88	14.50	1.153	97.73	1.023	0.06	0.035	0.041
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	Reduced Level 2	38	5190	13.34	14.50	1.306	97.73	1.023	-0.08	0.451	0.603
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	10mm	Ant 1	Reduced Level 1	159	5795	13.95	15.50	1.429	97.73	1.023	-0.11	0.119	0.174
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	Reduced Level 1	159	5795	13.95	15.50	1.429	97.73	1.023	-0.09	0.809	1.183
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 1	Reduced Level 1	159	5795	13.95	15.50	1.429	97.73	1.023	0.15	0.015	0.022
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	Reduced Level 1	159	5795	13.95	15.50	1.429	97.73	1.023	-0.18	0.346	0.506
	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 1	Reduced Level 1	159	5795	13.95	15.50	1.429	97.73	1.023	-0.12	0.084	0.122
44	WLAN5.8GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	Reduced Level 1	151	5755	13.85	15.50	1.462	97.73	1.023	0.09	0.793	**1.186**
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	10mm	Ant 1	Reduced Level 2	159	5795	10.57	12.50	1.560	97.73	1.023	0.15	0.062	0.099
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	Reduced Level 2	159	5795	10.57	12.50	1.560	97.73	1.023	-0.18	0.366	0.584
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 1	Reduced Level 2	159	5795	10.57	12.50	1.560	97.73	1.023	-0.16	0.007	0.011
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 1	Reduced Level 2	159	5795	10.57	12.50	1.560	97.73	1.023	-0.09	0.168	0.268
	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 1	Reduced Level 2	159	5795	10.57	12.50	1.560	97.73	1.023	0.15	0.040	0.064
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	10mm	Ant 1	Reduced Level 2	151	5755	10.52	12.50	1.578	97.73	1.023	-0.18	0.374	0.604

<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	Front	10mm	Ant 1	Full	39	2441	16.80	18.00	1.318	76.88	1.301	0.01	0.119	0.204
	Bluetooth	DH5	Back	10mm	Ant 1	Full	39	2441	16.80	18.00	1.318	76.88	1.301	-0.14	0.167	0.286
	Bluetooth	DH5	Left Side	10mm	Ant 1	Full	39	2441	16.80	18.00	1.318	76.88	1.301	-0.05	0.016	0.028
	Bluetooth	DH5	Right Side	10mm	Ant 1	Full	39	2441	16.80	18.00	1.318	76.88	1.301	0.02	0.063	0.109
	Bluetooth	DH5	Top Side	10mm	Ant 1	Full	39	2441	16.80	18.00	1.318	76.88	1.301	0.11	0.186	0.319
	Bluetooth	DH5	Top Side	10mm	Ant 1	Full	0	2402	16.10	18.00	1.549	76.88	1.301	-0.08	0.176	0.355
45	Bluetooth	DH5	Top Side	10mm	Ant 1	Full	78	2480	16.20	18.00	1.514	76.88	1.301	-0.13	0.192	**0.378**
	Bluetooth	DH5	Front	10mm	Ant 1	Reduced Level 2	39	2441	15.20	16.00	1.202	76.88	1.301	-0.18	0.074	0.116
	Bluetooth	DH5	Back	10mm	Ant 1	Reduced Level 2	39	2441	15.20	16.00	1.202	76.88	1.301	-0.15	0.098	0.154
	Bluetooth	DH5	Left Side	10mm	Ant 1	Reduced Level 2	39	2441	15.20	16.00	1.202	76.88	1.301	-0.1	0.013	0.021
	Bluetooth	DH5	Right Side	10mm	Ant 1	Reduced Level 2	39	2441	15.20	16.00	1.202	76.88	1.301	0.01	0.055	0.086
	Bluetooth	DH5	Top Side	10mm	Ant 1	Reduced Level 2	39	2441	15.20	16.00	1.202	76.88	1.301	0.02	0.118	0.185
	Bluetooth	DH5	Top Side	10mm	Ant 1	Reduced Level 2	0	2402	14.50	16.00	1.413	76.88	1.301	-0.03	0.116	0.213
	Bluetooth	DH5	Top Side	10mm	Ant 1	Reduced Level 2	78	2480	15.00	16.00	1.259	76.88	1.301	0.13	0.140	0.229

19.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_UAT	GPRS(3 Tx slots)	Front	15mm	Full	189	836.4	28.56	30.00	1.393	0.05	0.213	0.297
46	GSM850_UAT	GPRS(3 Tx slots)	Back	15mm	Full	189	836.4	28.56	30.00	1.393	-0.19	0.254	**0.354**
	GSM850_UAT	GPRS(3 Tx slots)	Back	15mm	Full	128	824.2	28.41	30.00	1.442	0.07	0.234	0.337
	GSM850_UAT	GPRS(3 Tx slots)	Back	15mm	Full	251	848.8	28.52	30.00	1.406	0.14	0.205	0.288
	GSM850_LAT	GPRS(3 Tx slots)	Front	15mm	Full	189	836.4	29.27	30.00	1.183	0.05	0.136	0.161
	GSM850_LAT	GPRS(3 Tx slots)	Back	15mm	Full	189	836.4	29.27	30.00	1.183	-0.12	0.163	0.193
	GSM850_LAT	GPRS(3 Tx slots)	Back	15mm	Full	128	824.2	29.12	30.00	1.225	-0.05	0.168	0.206
	GSM850_LAT	GPRS(3 Tx slots)	Back	15mm	Full	251	848.8	28.87	30.00	1.297	0.01	0.103	0.134
	GSM1900_UAT	GPRS(3 Tx slots)	Front	15mm	Full	512	1850.2	25.41	27.00	1.442	0.03	0.242	0.349
	GSM1900_UAT	GPRS(3 Tx slots)	Back	15mm	Full	512	1850.2	25.41	27.00	1.442	0.06	0.337	0.486
47	GSM1900_UAT	GPRS(3 Tx slots)	Back	15mm	Full	661	1880	25.33	27.00	1.469	-0.03	0.443	**0.651**
	GSM1900_UAT	GPRS(3 Tx slots)	Back	15mm	Full	810	1909.8	25.21	27.00	1.510	0.13	0.386	0.583
	GSM1900_LAT	GPRS(3 Tx slots)	Front	15mm	Full	512	1850.2	25.43	27.00	1.435	-0.05	0.115	0.165
	GSM1900_LAT	GPRS(3 Tx slots)	Back	15mm	Full	512	1850.2	25.43	27.00	1.435	-0.12	0.255	0.366
	GSM1900_LAT	GPRS(3 Tx slots)	Back	15mm	Full	661	1880	25.30	27.00	1.479	-0.13	0.333	0.493
	GSM1900_LAT	GPRS(3 Tx slots)	Back	15mm	Full	810	1909.8	25.12	27.00	1.542	-0.02	0.268	0.413

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA V_UAT	RMC 12.2Kbps	Front	15mm	Full	4182	836.4	23.90	25.00	1.288	0.05	0.225	0.290
48	WCDMA V_UAT	RMC 12.2Kbps	Back	15mm	Full	4182	836.4	23.90	25.00	1.288	-0.13	0.262	**0.338**
	WCDMA V_UAT	RMC 12.2Kbps	Back	15mm	Full	4132	826.4	23.84	25.00	1.306	-0.18	0.256	0.334
	WCDMA V_UAT	RMC 12.2Kbps	Back	15mm	Full	4233	846.6	23.86	25.00	1.300	0.02	0.236	0.307
	WCDMA V_LAT	RMC 12.2Kbps	Front	15mm	Full	4182	836.4	24.11	25.00	1.227	-0.01	0.145	0.178
	WCDMA V_LAT	RMC 12.2Kbps	Back	15mm	Full	4182	836.4	24.11	25.00	1.227	0.1	0.177	0.217
	WCDMA V_LAT	RMC 12.2Kbps	Back	15mm	Full	4132	826.4	24.09	25.00	1.233	0.08	0.190	0.234
	WCDMA V_LAT	RMC 12.2Kbps	Back	15mm	Full	4233	846.6	24.05	25.00	1.245	0.07	0.154	0.192
	WCDMA IV_UAT	RMC 12.2Kbps	Front	15mm	Full	1312	1712.4	23.90	25.00	1.288	-0.06	0.673	0.867
49	WCDMA IV_UAT	RMC 12.2Kbps	Back	15mm	Full	1312	1712.4	23.90	25.00	1.288	-0.16	0.717	**0.924**
	WCDMA IV_UAT	RMC 12.2Kbps	Front	15mm	Full	1413	1732.6	23.88	25.00	1.294	0.07	0.617	0.799
	WCDMA IV_UAT	RMC 12.2Kbps	Front	15mm	Full	1513	1752.6	23.83	25.00	1.309	0.02	0.570	0.746
	WCDMA IV_UAT	RMC 12.2Kbps	Back	15mm	Full	1413	1732.6	23.88	25.00	1.294	0.18	0.691	0.894
	WCDMA IV_UAT	RMC 12.2Kbps	Back	15mm	Full	1513	1752.6	23.83	25.00	1.309	-0.07	0.671	0.878
	WCDMA IV_LAT	RMC 12.2Kbps	Front	15mm	Full	1312	1712.4	24.14	25.00	1.219	0.17	0.256	0.312
	WCDMA IV_LAT	RMC 12.2Kbps	Back	15mm	Full	1312	1712.4	24.14	25.00	1.219	0.05	0.482	0.588
	WCDMA IV_LAT	RMC 12.2Kbps	Back	15mm	Full	1413	1732.6	24.09	25.00	1.233	0.04	0.589	0.726
	WCDMA IV_LAT	RMC 12.2Kbps	Back	15mm	Full	1513	1752.6	24.04	25.00	1.247	0.11	0.639	0.797
	WCDMA II_UAT	RMC 12.2Kbps	Front	15mm	Full	9400	1880	23.96	25.00	1.271	0.19	0.490	0.623
	WCDMA II_UAT	RMC 12.2Kbps	Back	15mm	Full	9400	1880	23.96	25.00	1.271	0.01	0.653	0.830
	WCDMA II_UAT	RMC 12.2Kbps	Back	15mm	Full	9262	1852.4	23.84	25.00	1.306	0.16	0.588	0.768
	WCDMA II_UAT	RMC 12.2Kbps	Back	15mm	Full	9538	1907.6	23.89	25.00	1.291	0.14	0.657	0.848
	WCDMA II_LAT	RMC 12.2Kbps	Front	15mm	Full	9400	1880	24.33	25.00	1.167	0.17	0.279	0.326
	WCDMA II_LAT	RMC 12.2Kbps	Back	15mm	Full	9400	1880	24.33	25.00	1.167	0.16	0.719	0.839
	WCDMA II_LAT	RMC 12.2Kbps	Back	15mm	Full	9262	1852.4	24.21	25.00	1.199	-0.13	0.715	0.858
50	WCDMA II_LAT	RMC 12.2Kbps	Back	15mm	Full	9538	1907.6	24.30	25.00	1.175	-0.15	0.764	**0.898**

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 71_UAT	20M	QPSK	1	0	Front	15mm	Full	133322	683	23.95	25.00	1.274	0.05	0.181	0.231
51	LTE Band 71_UAT	20M	QPSK	1	0	Back	15mm	Full	133322	683	23.95	25.00	1.274	-0.17	0.225	**0.287**
	LTE Band 71_UAT	20M	QPSK	50	0	Front	15mm	Full	133322	683	22.94	24.00	1.276	-0.01	0.159	0.203
	LTE Band 71_UAT	20M	QPSK	50	0	Back	15mm	Full	133322	683	22.94	24.00	1.276	-0.08	0.182	0.232
	LTE Band 71_LAT	20M	QPSK	1	0	Front	15mm	Full	133322	683	23.81	25.00	1.315	0.06	0.158	0.208
	LTE Band 71_LAT	20M	QPSK	1	0	Back	15mm	Full	133322	683	23.81	25.00	1.315	0.09	0.204	0.268
	LTE Band 71_LAT	20M	QPSK	50	0	Front	15mm	Full	133322	683	22.76	24.00	1.330	0.11	0.116	0.154
	LTE Band 71_LAT	20M	QPSK	50	0	Back	15mm	Full	133322	683	22.76	24.00	1.330	-0.18	0.159	0.212
	LTE Band 12_UAT	10M	QPSK	1	0	Front	15mm	Full	23095	707.5	24.08	25.00	1.236	0.08	0.215	0.266
52	LTE Band 12_UAT	10M	QPSK	1	0	Back	15mm	Full	23095	707.5	24.08	25.00	1.236	-0.19	0.263	**0.325**
	LTE Band 12_UAT	10M	QPSK	25	0	Front	15mm	Full	23095	707.5	23.07	24.00	1.239	-0.07	0.173	0.214
	LTE Band 12_UAT	10M	QPSK	25	0	Back	15mm	Full	23095	707.5	23.07	24.00	1.239	0.12	0.199	0.247
	LTE Band 12_LAT	10M	QPSK	1	0	Front	15mm	Full	23095	707.5	23.86	25.00	1.300	-0.09	0.175	0.228
	LTE Band 12_LAT	10M	QPSK	1	0	Back	15mm	Full	23095	707.5	23.86	25.00	1.300	-0.15	0.215	0.280
	LTE Band 12_LAT	10M	QPSK	25	0	Front	15mm	Full	23095	707.5	22.88	24.00	1.294	-0.06	0.138	0.179
	LTE Band 12_LAT	10M	QPSK	25	0	Back	15mm	Full	23095	707.5	22.88	24.00	1.294	0.12	0.170	0.220
	LTE Band 13_UAT	10M	QPSK	1	0	Front	15mm	Full	23230	782	24.00	25.00	1.259	0.03	0.275	0.346
53	LTE Band 13_UAT	10M	QPSK	1	0	Back	15mm	Full	23230	782	24.00	25.00	1.259	-0.12	0.315	**0.397**
	LTE Band 13_UAT	10M	QPSK	25	0	Front	15mm	Full	23230	782	22.89	24.00	1.291	0.06	0.206	0.266
	LTE Band 13_UAT	10M	QPSK	25	0	Back	15mm	Full	23230	782	22.89	24.00	1.291	0.15	0.245	0.316
	LTE Band 13_LAT	10M	QPSK	1	0	Front	15mm	Full	23230	782	23.90	25.00	1.288	-0.02	0.135	0.174
	LTE Band 13_LAT	10M	QPSK	1	0	Back	15mm	Full	23230	782	23.90	25.00	1.288	-0.05	0.154	0.198
	LTE Band 13_LAT	10M	QPSK	25	0	Front	15mm	Full	23230	782	22.94	24.00	1.276	-0.05	0.090	0.115
	LTE Band 13_LAT	10M	QPSK	25	0	Back	15mm	Full	23230	782	22.94	24.00	1.276	0.06	0.109	0.139
	LTE Band 26_UAT	15M	QPSK	1	0	Front	15mm	Full	26965	841.5	23.94	25.00	1.276	0.03	0.206	0.263
	LTE Band 26_UAT	15M	QPSK	1	0	Back	15mm	Full	26965	841.5	23.94	25.00	1.276	-0.05	0.230	0.294
54	LTE Band 26_UAT	15M	QPSK	1	0	Back	15mm	Full	26765	821.5	23.70	25.00	1.349	-0.01	0.229	**0.309**
	LTE Band 26_UAT	15M	QPSK	1	0	Back	15mm	Full	26865	831.5	23.77	25.00	1.327	-0.04	0.224	0.297
	LTE Band 26_UAT	15M	QPSK	36	39	Front	15mm	Full	26965	841.5	22.81	24.00	1.315	0.08	0.166	0.218
	LTE Band 26_UAT	15M	QPSK	36	39	Back	15mm	Full	26965	841.5	22.81	24.00	1.315	-0.06	0.207	0.272
	LTE Band 26_LAT	15M	QPSK	1	0	Front	15mm	Full	26965	841.5	23.90	25.00	1.288	0.06	0.148	0.191
	LTE Band 26_LAT	15M	QPSK	1	0	Back	15mm	Full	26965	841.5	23.90	25.00	1.288	0.06	0.175	0.225
	LTE Band 26_LAT	15M	QPSK	1	0	Back	15mm	Full	26765	821.5	23.71	25.00	1.346	-0.09	0.184	0.248
	LTE Band 26_LAT	15M	QPSK	1	0	Back	15mm	Full	26865	831.5	23.81	25.00	1.315	-0.08	0.196	0.258
	LTE Band 26_LAT	15M	QPSK	36	39	Front	15mm	Full	26965	841.5	22.79	24.00	1.321	-0.06	0.100	0.132
	LTE Band 26_LAT	15M	QPSK	36	39	Back	15mm	Full	26965	841.5	22.79	24.00	1.321	0.05	0.116	0.153

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_UAT	20M	QPSK	1	49	Front	15mm	Full	132072	1720	23.85	25.00	1.303	0.1	0.445	0.580
	LTE Band 66_UAT	20M	QPSK	1	49	Back	15mm	Full	132072	1720	23.85	25.00	1.303	0.19	0.515	0.671
	LTE Band 66_UAT	20M	QPSK	50	50	Front	15mm	Full	132072	1720	22.63	24.00	1.371	0.16	0.449	0.616
	LTE Band 66_UAT	20M	QPSK	50	50	Back	15mm	Full	132072	1720	22.63	24.00	1.371	0.12	0.514	0.705
	LTE Band 66_UAT	20M	QPSK	50	50	Back	15mm	Full	132322	1745	22.57	24.00	1.390	-0.07	0.641	0.891
	LTE Band 66_UAT	20M	QPSK	50	50	Back	15mm	Full	132572	1770	22.51	24.00	1.409	-0.04	0.659	0.929
	LTE Band 66_UAT	20M	QPSK	100	0	Back	15mm	Full	132072	1720	22.62	24.00	1.374	0.05	0.524	0.720
	LTE Band 66_LAT	20M	QPSK	1	49	Front	15mm	Full	132072	1720	23.96	25.00	1.271	0.16	0.332	0.422
	LTE Band 66_LAT	20M	QPSK	1	49	Back	15mm	Full	132072	1720	23.96	25.00	1.271	0.05	0.673	0.855
55	LTE Band 66_LAT	20M	QPSK	1	49	Back	15mm	Full	132322	1745	23.76	25.00	1.330	-0.07	0.735	**0.978**
	LTE Band 66_LAT	20M	QPSK	1	49	Back	15mm	Full	132572	1770	23.67	25.00	1.358	-0.13	0.646	0.877
	LTE Band 66_LAT	20M	QPSK	50	50	Front	15mm	Full	132072	1720	22.85	24.00	1.303	0.03	0.278	0.362
	LTE Band 66_LAT	20M	QPSK	50	50	Back	15mm	Full	132072	1720	22.85	24.00	1.303	-0.09	0.551	0.718
	LTE Band 66_LAT	20M	QPSK	100	0	Back	15mm	Full	132072	1720	22.78	24.00	1.324	0.11	0.541	0.716
	LTE Band 25_UAT	20M	QPSK	1	0	Front	15mm	Full	26590	1905	23.84	25.00	1.306	0.04	0.466	0.609
	LTE Band 25_UAT	20M	QPSK	1	0	Back	15mm	Full	26590	1905	23.84	25.00	1.306	-0.07	0.592	0.773
	LTE Band 25_UAT	20M	QPSK	50	24	Front	15mm	Full	26590	1905	22.71	24.00	1.346	-0.13	0.502	0.676
	LTE Band 25_UAT	20M	QPSK	50	24	Back	15mm	Full	26590	1905	22.71	24.00	1.346	-0.18	0.685	0.922
	LTE Band 25_UAT	20M	QPSK	50	24	Back	15mm	Full	26140	1860	22.55	24.00	1.396	0.19	0.575	0.803
	LTE Band 25_UAT	20M	QPSK	50	24	Back	15mm	Full	26340	1880	22.57	24.00	1.390	-0.14	0.583	0.810
56	LTE Band 25_UAT	20M	QPSK	100	0	Back	15mm	Full	26590	1905	22.70	24.00	1.349	-0.19	0.686	**0.925**
	LTE Band 25_LAT	20M	QPSK	1	0	Front	15mm	Full	26590	1905	23.82	25.00	1.312	-0.01	0.284	0.373
	LTE Band 25_LAT	20M	QPSK	1	0	Back	15mm	Full	26590	1905	23.82	25.00	1.312	0.18	0.681	0.894
	LTE Band 25_LAT	20M	QPSK	1	0	Back	15mm	Full	26140	1860	23.75	25.00	1.334	0.13	0.609	0.812
	LTE Band 25_LAT	20M	QPSK	1	0	Back	15mm	Full	26340	1880	23.80	25.00	1.318	-0.07	0.635	0.837
	LTE Band 25_LAT	20M	QPSK	50	24	Front	15mm	Full	26590	1905	22.69	24.00	1.352	-0.02	0.234	0.316
	LTE Band 25_LAT	20M	QPSK	50	24	Back	15mm	Full	26590	1905	22.69	24.00	1.352	-0.14	0.549	0.742
	LTE Band 25_LAT	20M	QPSK	100	0	Back	15mm	Full	26590	1905	22.71	24.00	1.346	0.14	0.498	0.670
	LTE Band 7_UAT	20M	QPSK	1	99	Front	15mm	Full	21100	2535	23.08	24.00	1.236	0.12	0.200	0.247
	LTE Band 7_UAT	20M	QPSK	1	99	Back	15mm	Full	21100	2535	23.08	24.00	1.236	-0.04	0.412	0.509
57	LTE Band 7_UAT	20M	QPSK	1	99	Back	15mm	Full	20850	2510	22.78	24.00	1.324	-0.11	0.455	**0.603**
	LTE Band 7_UAT	20M	QPSK	1	99	Back	15mm	Full	21350	2560	23.00	24.00	1.259	0.09	0.407	0.512
	LTE Band 7_UAT	20M	QPSK	50	24	Front	15mm	Full	21100	2535	22.06	23.00	1.242	0.06	0.172	0.214
	LTE Band 7_UAT	20M	QPSK	50	24	Back	15mm	Full	21100	2535	22.06	23.00	1.242	-0.17	0.350	0.435
	LTE Band 7_LAT	20M	QPSK	1	99	Front	15mm	Full	21100	2535	22.95	24.00	1.274	0.17	0.178	0.227
	LTE Band 7_LAT	20M	QPSK	1	99	Back	15mm	Full	21100	2535	22.95	24.00	1.274	0.11	0.355	0.452
	LTE Band 7_LAT	20M	QPSK	1	99	Back	15mm	Full	20850	2510	22.76	24.00	1.330	0.09	0.327	0.435
	LTE Band 7_LAT	20M	QPSK	1	99	Back	15mm	Full	21350	2560	22.91	24.00	1.285	0.06	0.318	0.409
	LTE Band 7_LAT	20M	QPSK	50	24	Front	15mm	Full	21100	2535	21.79	23.00	1.321	0.07	0.148	0.196
	LTE Band 7_LAT	20M	QPSK	50	24	Back	15mm	Full	21100	2535	21.79	23.00	1.321	-0.16	0.277	0.366

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_UAT	20M	QPSK	1	49	Front	15mm	Full	40620	2593	23.95	25.00	1.274	62.9	1.006	-0.03	0.202	0.259
	LTE Band 41_UAT	20M	QPSK	1	49	Back	15mm	Full	40620	2593	23.95	25.00	1.274	62.9	1.006	0.15	0.435	0.557
58	LTE Band 41_UAT	20M	QPSK	1	49	Back	15mm	Full	39750	2506	23.80	25.00	1.318	62.9	1.006	0.03	0.472	**0.626**
	LTE Band 41_UAT	20M	QPSK	1	49	Back	15mm	Full	40185	2549.5	23.68	25.00	1.355	62.9	1.006	0.04	0.346	0.472
	LTE Band 41_UAT	20M	QPSK	1	49	Back	15mm	Full	41055	2636.5	23.70	25.00	1.349	62.9	1.006	-0.05	0.436	0.592
	LTE Band 41_UAT	20M	QPSK	1	49	Back	15mm	Full	41490	2680	23.88	25.00	1.294	62.9	1.006	0.04	0.421	0.548
	LTE Band 41C_UAT	20M	QPSK	1	49	Back	15mm	Full	39750(PCC)+ 39948(SCC)	2506(PCC)+ 2525.8(SCC)	23.61	25.00	1.377	62.9	1.006	-0.13	0.330	0.457
	LTE Band 41C_UAT	20M	QPSK	1	49	Back	15mm	Full	40185(PCC)+ 40383(SCC)	2549.5(PCC)+ 2569.3(SCC)	23.39	25.00	1.449	62.9	1.006	-0.13	0.225	0.328
	LTE Band 41C_UAT	20M	QPSK	1	49	Back	15mm	Full	40620(PCC)+ 40422(SCC)	2593(PCC)+ 2573.2(SCC)	23.68	25.00	1.355	62.9	1.006	-0.07	0.289	0.394
	LTE Band 41C_UAT	20M	QPSK	1	49	Back	15mm	Full	41055(PCC)+ 40857(SCC)	2636.5(PCC)+ 2616.7(SCC)	23.69	25.00	1.352	62.9	1.006	-0.13	0.298	0.405
	LTE Band 41C_UAT	20M	QPSK	1	49	Back	15mm	Full	41490(PCC)+ 41292(SCC)	2680(PCC)+ 2660.2(SCC)	23.64	25.00	1.368	62.9	1.006	0.02	0.286	0.394
	LTE Band 41_UAT	20M	QPSK	50	24	Front	15mm	Full	40620	2593	23.00	24.00	1.259	62.9	1.006	0.14	0.167	0.212
	LTE Band 41_UAT	20M	QPSK	50	24	Back	15mm	Full	40620	2593	23.00	24.00	1.259	62.9	1.006	-0.14	0.360	0.456
	LTE Band 41_UAT	20M	QPSK	100	0	Back	15mm	Full	40620	2593	22.99	24.00	1.262	62.9	1.006	0.16	0.363	0.461
	LTE Band 41_LAT	20M	QPSK	1	49	Front	15mm	Full	40620	2593	24.27	25.00	1.183	62.9	1.006	-0.11	0.129	0.154
	LTE Band 41_LAT	20M	QPSK	1	49	Back	15mm	Full	40620	2593	24.27	25.00	1.183	62.9	1.006	0.17	0.282	0.336
	LTE Band 41_LAT	20M	QPSK	1	49	Back	15mm	Full	39750	2506	24.13	25.00	1.222	62.9	1.006	0.07	0.277	0.340
	LTE Band 41_LAT	20M	QPSK	1	49	Back	15mm	Full	40185	2549.5	23.91	25.00	1.285	62.9	1.006	0.15	0.297	0.384
	LTE Band 41_LAT	20M	QPSK	1	49	Back	15mm	Full	41055	2636.5	23.95	25.00	1.274	62.9	1.006	-0.14	0.297	0.380
	LTE Band 41_LAT	20M	QPSK	1	49	Back	15mm	Full	41490	2680	23.98	25.00	1.265	62.9	1.006	0.06	0.299	0.380
	LTE Band 41C_LAT	20M	QPSK	1	49	Back	15mm	Full	39750(PCC)+ 39948(SCC)	2506(PCC)+ 2525.8(SCC)	23.94	25.00	1.276	62.9	1.006	-0.05	0.213	0.274
	LTE Band 41C_LAT	20M	QPSK	1	49	Back	15mm	Full	40185(PCC)+ 40383(SCC)	2549.5(PCC)+ 2569.3(SCC)	23.73	25.00	1.340	62.9	1.006	0.14	0.213	0.287
	LTE Band 41C_LAT	20M	QPSK	1	49	Back	15mm	Full	40620(PCC)+ 40422(SCC)	2593(PCC)+ 2573.2(SCC)	23.78	25.00	1.324	62.9	1.006	-0.09	0.227	0.302
	LTE Band 41C_LAT	20M	QPSK	1	49	Back	15mm	Full	41055(PCC)+ 40857(SCC)	2636.5(PCC)+ 2616.7(SCC)	24.15	25.00	1.216	62.9	1.006	0.04	0.310	0.379
	LTE Band 41C_LAT	20M	QPSK	1	49	Back	15mm	Full	41490(PCC)+ 41292(SCC)	2680(PCC)+ 2660.2(SCC)	23.99	25.00	1.262	62.9	1.006	-0.03	0.257	0.326
	LTE Band 41_LAT	20M	QPSK	50	24	Front	15mm	Full	40620	2593	23.34	24.00	1.164	62.9	1.006	-0.07	0.106	0.124
	LTE Band 41_LAT	20M	QPSK	50	24	Back	15mm	Full	40620	2593	23.34	24.00	1.164	62.9	1.006	0.16	0.211	0.247
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Front	15mm	Full	41490	2680	25.84	27.00	1.306	42.9	1.009	0.05	0.261	0.344
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Back	15mm	Full	41490	2680	25.84	27.00	1.306	42.9	1.009	-0.09	0.401	0.528
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Back	15mm	Full	39750	2506	25.80	27.00	1.318	42.9	1.009	0.15	0.455	0.605
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Back	15mm	Full	40185	2549.5	25.59	27.00	1.384	42.9	1.009	-0.05	0.336	0.469
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Back	15mm	Full	40620	2593	25.70	27.00	1.349	42.9	1.009	0.16	0.391	0.532
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Back	15mm	Full	41055	2636.5	25.68	27.00	1.355	42.9	1.009	-0.08	0.416	0.569
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Front	15mm	Full	41490	2680	24.93	26.00	1.279	42.9	1.009	0.06	0.220	0.284
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Back	15mm	Full	41490	2680	24.93	26.00	1.279	42.9	1.009	-0.09	0.362	0.467
	LTE Band 41(HPUE)_UAT	20M	QPSK	100	0	Back	15mm	Full	41490	2680	24.92	26.00	1.282	42.9	1.009	-0.18	0.351	0.454
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Front	15mm	Full	40620	2593	25.80	27.00	1.318	42.9	1.009	-0.01	0.143	0.190
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Back	15mm	Full	40620	2593	25.80	27.00	1.318	42.9	1.009	0	0.299	0.398
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Back	15mm	Full	39750	2506	25.79	27.00	1.321	42.9	1.009	0.06	0.294	0.392
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Back	15mm	Full	40185	2549.5	25.55	27.00	1.396	42.9	1.009	-0.06	0.312	0.440
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Back	15mm	Full	41055	2636.5	25.60	27.00	1.380	42.9	1.009	-0.03	0.299	0.416
	LTE Band 41(HPUE)_LAT	20M	QPSK	1	49	Back	15mm	Full	41490	2680	25.64	27.00	1.368	42.9	1.009	-0.05	0.318	0.439
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Front	15mm	Full	40620	2593	25.01	26.00	1.256	42.9	1.009	-0.03	0.125	0.158
	LTE Band 41(HPUE)_LAT	20M	QPSK	50	24	Back	15mm	Full	40620	2593	25.01	26.00	1.256	42.9	1.009	0.08	0.241	0.305

<5GNR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Front	15mm	Full	136100	680.5	24.36	25.20	1.213	0.05	0.172	0.209
	N71_ANT 1	20M	BPSK	1	1	DFT-15	Back	15mm	Full	136100	680.5	24.36	25.20	1.213	-0.03	0.187	0.227
	N71_ANT 1	20M	BPSK	50	28	DFT-15	Front	15mm	Full	136100	680.5	24.26	25.20	1.242	0.1	0.194	0.241
59	N71_ANT 1	20M	BPSK	50	28	DFT-15	Back	15mm	Full	136100	680.5	24.26	25.20	1.242	-0.08	0.205	**0.255**
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Front	15mm	Full	136100	680.5	24.18	25.20	1.265	0.04	0.137	0.173
	N71_ANT 0	20M	BPSK	1	1	DFT-15	Back	15mm	Full	136100	680.5	24.18	25.20	1.265	-0.03	0.156	0.197
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Front	15mm	Full	136100	680.5	24.01	25.20	1.315	0.06	0.121	0.159
	N71_ANT 0	20M	BPSK	50	28	DFT-15	Back	15mm	Full	136100	680.5	24.01	25.20	1.315	0.02	0.147	0.193
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Front	15mm	Full	167300	836.5	24.38	25.20	1.208	0.01	0.150	0.181
	N5_ANT 1	20M	BPSK	1	1	DFT-15	Back	15mm	Full	167300	836.5	24.38	25.20	1.208	-0.05	0.160	0.193
	N5_ANT 1	20M	BPSK	50	28	DFT-15	Front	15mm	Full	167300	836.5	24.28	25.20	1.236	-0.14	0.186	0.230
60	N5_ANT 1	20M	BPSK	50	28	DFT-15	Back	15mm	Full	167300	836.5	24.28	25.20	1.236	-0.08	0.200	**0.247**
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Front	15mm	Full	167300	836.5	24.13	25.20	1.279	0.07	0.138	0.177
	N5_ANT 0	20M	BPSK	1	1	DFT-15	Back	15mm	Full	167300	836.5	24.13	25.20	1.279	-0.06	0.159	0.203
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Front	15mm	Full	167300	836.5	24.08	25.20	1.294	0.11	0.117	0.151
	N5_ANT 0	20M	BPSK	50	28	DFT-15	Back	15mm	Full	167300	836.5	24.08	25.20	1.294	0.16	0.127	0.164
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Front	15mm	Full	349000	1745	23.52	25.20	1.472	-0.1	0.496	0.730
61	N66_ANT 1	20M	BPSK	1	1	DFT-15	Back	15mm	Full	349000	1745	23.52	25.20	1.472	0.09	0.529	**0.779**
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Back	15mm	Full	344000	1720	23.38	25.20	1.521	0.12	0.427	0.649
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Back	15mm	Full	354000	1770	23.44	25.20	1.500	0.16	0.476	0.714
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Front	15mm	Full	349000	1745	23.46	25.20	1.493	-0.12	0.467	0.697
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Back	15mm	Full	349000	1745	23.46	25.20	1.493	-0.02	0.507	0.757
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Front	15mm	Full	349000	1745	24.02	25.20	1.312	-0.12	0.270	0.354
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Back	15mm	Full	349000	1745	24.02	25.20	1.312	-0.11	0.494	0.648
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Front	15mm	Full	349000	1745	23.97	25.20	1.327	-0.12	0.278	0.369
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Back	15mm	Full	349000	1745	23.97	25.20	1.327	-0.06	0.508	0.674
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Back	15mm	Full	344000	1720	23.93	25.20	1.340	-0.11	0.500	0.670
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Back	15mm	Full	354000	1770	23.90	25.20	1.349	0.16	0.555	0.749
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Front	15mm	Full	372000	1860	23.81	25.20	1.377	0	0.514	0.708
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Back	15mm	Full	372000	1860	23.81	25.20	1.377	0.14	0.610	0.840
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Back	15mm	Full	376500	1882.5	23.66	25.20	1.426	0.03	0.493	0.703
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Back	15mm	Full	381000	1905	23.70	25.20	1.413	0.17	0.555	0.784
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Front	15mm	Full	372000	1860	23.66	25.20	1.426	0.14	0.438	0.624
62	N25_ANT 1	20M	BPSK	50	28	DFT-15	Back	15mm	Full	372000	1860	23.66	25.20	1.426	0.18	0.648	**0.924**
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Back	15mm	Full	376500	1882.5	23.62	25.20	1.439	-0.13	0.542	0.780
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Back	15mm	Full	381000	1905	23.64	25.20	1.432	0.19	0.581	0.832
	N25_ANT 1	20M	BPSK	100	0	DFT-15	Back	15mm	Full	372000	1860	23.21	24.70	1.409	0.05	0.535	0.754
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Front	15mm	Full	372000	1860	24.23	25.20	1.250	0	0.279	0.349
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Back	15mm	Full	372000	1860	24.23	25.20	1.250	-0.12	0.628	0.785
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Front	15mm	Full	372000	1860	24.16	25.20	1.271	0.1	0.275	0.349
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Back	15mm	Full	372000	1860	24.16	25.20	1.271	-0.06	0.626	0.795
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Back	15mm	Full	376500	1882.5	24.06	25.20	1.300	-0.09	0.623	0.810
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Back	15mm	Full	381000	1905	24.08	25.20	1.294	-0.08	0.687	0.889
	N25_ANT 0	20M	BPSK	100	0	DFT-15	Back	15mm	Full	372000	1860	23.64	24.70	1.276	0.05	0.628	0.802

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Front	15mm	Full	528000	2640	24.62	25.20	1.143	0.18	0.003	0.003
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Back	15mm	Full	528000	2640	24.62	25.20	1.143	-0.19	0.181	0.207
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Front	15mm	Full	528000	2640	24.51	25.20	1.172	0.05	0.010	0.012
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	15mm	Full	528000	2640	24.51	25.20	1.172	0.11	0.372	0.436
63	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	15mm	Full	509202	2546.01	23.97	25.20	1.327	-0.09	0.677	**0.899**
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	15mm	Full	518598	2592.99	24.37	25.20	1.211	-0.15	0.584	0.707
	N41_ANT 4	100M	BPSK	270	0	DFT-30	Back	15mm	Full	528000	2640	24.47	24.70	1.054	0.05	0.600	0.633
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Front	15mm	Full	528000	2640	26.57	27.20	1.156	0.18	0.003	0.003
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Back	15mm	Full	528000	2640	26.57	27.20	1.156	-0.19	0.181	0.209
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Front	15mm	Full	528000	2640	26.37	27.20	1.211	0.05	0.010	0.012
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	15mm	Full	528000	2640	26.37	27.20	1.211	0.11	0.372	0.450
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	15mm	Full	509202	2546.01	26.01	27.20	1.315	-0.09	0.677	0.890
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	15mm	Full	518598	2592.99	26.24	27.20	1.247	-0.15	0.584	0.728
	N41(HPUE)_ANT 4	100M	BPSK	270	0	DFT-30	Back	15mm	Full	528000	2640	25.83	26.70	1.222	0.05	0.600	0.733

<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	15mm	Ant 1	Full	6	2437	20.60	22.00	1.380	100	1.000	0	0.270	0.373
64	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 1	Full	6	2437	20.60	22.00	1.380	100	1.000	0.1	0.293	**0.404**
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 1	Full	1	2412	19.70	21.00	1.349	100	1.000	0.04	0.225	0.304
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 1	Full	11	2462	19.80	21.00	1.318	100	1.000	-0.17	0.242	0.319
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 1	Reduced Level 2	6	2437	18.60	20.00	1.380	100	1.000	0.04	0.178	0.246
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 1	Reduced Level 2	6	2437	18.60	20.00	1.380	100	1.000	0.17	0.189	0.261
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 1	Reduced Level 2	1	2412	17.60	19.00	1.380	100	1.000	0.19	0.146	0.202
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 1	Reduced Level 2	11	2462	17.70	19.00	1.349	100	1.000	0.12	0.157	0.212

<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	802.11n-HT40 MCS0	Front	15mm	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	0.07	0.080	0.104
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	-0.1	0.702	0.912
65	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	62	5310	15.80	17.50	1.479	97.73	1.023	0.19	0.730	**1.105**
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	15mm	Ant 1	Reduced Level 2	54	5270	10.53	11.50	1.250	97.73	1.023	-0.01	0.012	0.015
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	54	5270	10.53	11.50	1.250	97.73	1.023	-0.19	0.176	0.225
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	62	5310	9.63	11.50	1.538	97.73	1.023	-0.06	0.220	0.346
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	0.08	0.069	0.095
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	-0.07	0.812	1.113
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	102	5510	14.05	15.50	1.396	97.73	1.023	0.1	0.803	1.147
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	126	5630	13.65	15.50	1.531	97.73	1.023	0.02	0.738	1.156
66	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	134	5670	13.72	15.50	1.507	97.73	1.023	0.17	0.755	**1.164**
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	142	5710	13.52	15.50	1.578	97.73	1.023	0.08	0.561	0.905
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 1	Reduced Level 2	110	5550	8.24	9.50	1.337	97.73	1.023	-0.07	0.025	0.034
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	110	5550	8.24	9.50	1.337	97.73	1.023	-0.12	0.186	0.254
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	102	5510	8.23	9.50	1.340	97.73	1.023	-0.17	0.185	0.254
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	126	5630	7.80	9.50	1.479	97.73	1.023	-0.05	0.187	0.283
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	134	5670	7.64	9.50	1.535	97.73	1.023	-0.17	0.163	0.256
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	142	5710	7.55	9.50	1.567	97.73	1.023	-0.1	0.127	0.204
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	15mm	Ant 1	Full	159	5795	15.89	17.50	1.449	97.73	1.023	-0.03	0.128	0.190
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	159	5795	15.89	17.50	1.449	97.73	1.023	0.12	0.641	0.950
67	WLAN5.8GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Full	151	5755	15.56	17.50	1.563	97.73	1.023	-0.02	0.735	**1.175**
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	15mm	Ant 1	Reduced Level 2	159	5795	9.57	11.50	1.560	97.73	1.023	-0.11	0.050	0.080
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	159	5795	9.57	11.50	1.560	97.73	1.023	0.09	0.139	0.222
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	15mm	Ant 1	Reduced Level 2	151	5755	9.52	11.50	1.578	97.73	1.023	-0.19	0.149	0.240

<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	Front	15mm	Ant 1	Full	39	2441	16.80	18.00	1.318	76.88	1.301	0.1	0.060	0.103
	Bluetooth	DH5	Back	15mm	Ant 1	Full	39	2441	16.80	18.00	1.318	76.88	1.301	0.1	0.065	0.111
68	Bluetooth	DH5	Back	15mm	Ant 1	Full	0	2402	16.10	18.00	1.549	76.88	1.301	-0.06	0.086	**0.174**
	Bluetooth	DH5	Back	15mm	Ant 1	Full	78	2480	16.20	18.00	1.514	76.88	1.301	0.11	0.066	0.130
	Bluetooth	DH5	Front	15mm	Ant 1	Reduced Level 2	39	2441	15.20	16.00	1.202	76.88	1.301	0.02	0.054	0.085
	Bluetooth	DH5	Back	15mm	Ant 1	Reduced Level 2	39	2441	15.20	16.00	1.202	76.88	1.301	-0.08	0.063	0.098
	Bluetooth	DH5	Back	15mm	Ant 1	Reduced Level 2	0	2402	14.50	16.00	1.413	76.88	1.301	0.08	0.059	0.108
	Bluetooth	DH5	Back	15mm	Ant 1	Reduced Level 2	78	2480	15.00	16.00	1.259	76.88	1.301	-0.09	0.063	0.103

19.4 Product Specific SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	GSM1900_UAT	GPRS(3 Tx slots)	Top Side	0mm	Reduced	512	1850.2	20.45	21.40	1.245	0.13	0.409	0.509
	GSM1900_UAT	GPRS(3 Tx slots)	Top Side	0mm	Reduced	661	1880	20.35	21.40	1.274	-0.11	0.457	0.582
	GSM1900_UAT	GPRS(3 Tx slots)	Top Side	0mm	Reduced	810	1909.8	20.24	21.40	1.306	-0.02	0.410	0.536
69	GSM1900_UAT	GPRS(3 Tx slots)	Top Side	10mm	Full	661	1880	25.33	27.00	1.469	0.03	0.663	**0.974**

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WCDMA IV_UAT	RMC 12.2Kbps	Front	0mm	Reduced	1312	1712.4	20.32	21.50	1.312	0.16	1.430	1.876
70	WCDMA IV_UAT	RMC 12.2Kbps	Front	0mm	Reduced	1413	1732.6	20.21	21.50	1.346	0.08	1.470	**1.978**
	WCDMA IV_UAT	RMC 12.2Kbps	Front	0mm	Reduced	1513	1752.6	20.19	21.50	1.352	0.08	1.340	1.812
	WCDMA IV_UAT	RMC 12.2Kbps	Back	0mm	Reduced	1312	1712.4	20.32	21.50	1.312	0.14	1.250	1.640
	WCDMA IV_UAT	RMC 12.2Kbps	Top Side	0mm	Reduced	1312	1712.4	20.32	21.50	1.312	0.1	1.000	1.312
	WCDMA IV_UAT	RMC 12.2Kbps	Front	4mm	Full	1413	1732.6	23.88	25.00	1.294	0.18	1.300	1.682
	WCDMA IV_UAT	RMC 12.2Kbps	Back	7mm	Full	1312	1712.4	23.90	25.00	1.288	-0.03	1.130	1.456
	WCDMA IV_UAT	RMC 12.2Kbps	Top Side	10mm	Full	1312	1712.4	23.90	25.00	1.288	0.02	0.777	1.001
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1312	1712.4	20.63	21.00	1.089	-0.15	1.550	1.688
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1413	1732.6	20.53	21.00	1.114	-0.15	1.500	1.671
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	0mm	Reduced	1513	1752.6	20.48	21.00	1.127	0.05	1.430	1.612
	WCDMA IV_LAT	RMC 12.2Kbps	Bottom Side	7mm	Full	1312	1712.4	24.14	25.00	1.219	0.03	1.090	1.329
71	WCDMA II_UAT	RMC 12.2Kbps	Front	0mm	Reduced	9400	1880	19.72	20.90	1.312	0.16	1.850	**2.428**
	WCDMA II_UAT	RMC 12.2Kbps	Front	0mm	Reduced	9262	1852.4	19.51	20.90	1.377	0.05	1.690	2.327
	WCDMA II_UAT	RMC 12.2Kbps	Front	0mm	Reduced	9538	1907.6	19.64	20.90	1.337	0.16	1.690	2.259
	WCDMA II_UAT	RMC 12.2Kbps	Back	0mm	Reduced	9400	1880	19.72	20.90	1.312	0.17	1.200	1.575
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	0mm	Reduced	9400	1880	19.72	20.90	1.312	0.17	1.470	1.929
	WCDMA II_UAT	RMC 12.2Kbps	Front	4mm	Full	9400	1880	23.96	25.00	1.271	0.03	1.240	1.576
	WCDMA II_UAT	RMC 12.2Kbps	Back	7mm	Full	9400	1880	23.96	25.00	1.271	-0.03	0.826	1.049
	WCDMA II_UAT	RMC 12.2Kbps	Top Side	10mm	Full	9400	1880	23.96	25.00	1.271	0.04	0.702	0.892
	WCDMA II_LAT	RMC 12.2Kbps	Back	0mm	Reduced	9400	1880	21.41	21.80	1.094	-0.14	1.570	1.718
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	0mm	Reduced	9400	1880	21.41	21.80	1.094	-0.18	1.880	2.057
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	0mm	Reduced	9262	1852.4	21.33	21.80	1.114	0	1.840	2.050
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	0mm	Reduced	9538	1907.6	21.35	21.80	1.109	0.07	1.690	1.875
	WCDMA II_LAT	RMC 12.2Kbps	Back	7mm	Full	9400	1880	24.33	25.00	1.167	-0.13	1.070	1.248
	WCDMA II_LAT	RMC 12.2Kbps	Bottom Side	7mm	Full	9400	1880	24.33	25.00	1.167	-0.11	1.310	1.529

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 66_UAT	20M	QPSK	1	49	Front	0mm	Reduced	132072	1720	20.05	20.30	1.059	0.06	1.490	1.578
	LTE Band 66_UAT	20M	QPSK	1	49	Back	0mm	Reduced	132072	1720	20.05	20.30	1.059	0.15	1.100	1.165
	LTE Band 66_UAT	20M	QPSK	1	49	Top Side	0mm	Reduced	132072	1720	20.05	20.30	1.059	-0.06	1.400	1.483
	LTE Band 66_UAT	20M	QPSK	1	49	Front	4mm	Full	132072	1720	23.85	25.00	1.303	0.12	1.200	1.564
	LTE Band 66_UAT	20M	QPSK	1	49	Back	7mm	Full	132072	1720	23.85	25.00	1.303	-0.14	1.030	1.342
	LTE Band 66_UAT	20M	QPSK	1	49	Top Side	10mm	Full	132072	1720	23.85	25.00	1.303	0.04	0.656	0.855
	LTE Band 66_UAT	20M	QPSK	50	50	Front	0mm	Reduced	132072	1720	19.89	20.30	1.099	-0.02	1.510	1.659
	LTE Band 66_UAT	20M	QPSK	50	50	Front	0mm	Reduced	132322	1745	19.75	20.30	1.135	-0.17	1.570	1.782
	LTE Band 66_UAT	20M	QPSK	50	50	Front	0mm	Reduced	132572	1770	19.64	20.30	1.164	0.04	1.650	1.921
	LTE Band 66_UAT	20M	QPSK	50	50	Back	0mm	Reduced	132072	1720	19.89	20.30	1.099	0.06	1.180	1.297
	LTE Band 66_UAT	20M	QPSK	50	50	Top Side	0mm	Reduced	132072	1720	19.89	20.30	1.099	0.09	1.460	1.605
	LTE Band 66_UAT	20M	QPSK	50	50	Front	4mm	Full	132572	1770	22.51	24.00	1.409	0.17	1.300	1.832
	LTE Band 66_UAT	20M	QPSK	50	50	Back	7mm	Full	132072	1720	22.63	24.00	1.371	0.13	1.180	1.618
	LTE Band 66_UAT	20M	QPSK	50	50	Top Side	10mm	Full	132072	1720	22.63	24.00	1.371	0.09	0.664	0.910
	LTE Band 66_LAT	20M	QPSK	1	49	Back	0mm	Reduced	132072	1720	20.26	21.00	1.186	0	1.160	1.375
	LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	0mm	Reduced	132072	1720	20.26	21.00	1.186	-0.17	1.720	2.040
	LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	0mm	Reduced	132322	1745	20.06	21.00	1.242	-0.16	1.660	2.061
	LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	0mm	Reduced	132572	1770	20.05	21.00	1.245	0.12	1.650	2.053
	LTE Band 66_LAT	20M	QPSK	1	49	Back	7mm	Full	132072	1720	23.96	25.00	1.271	0.05	0.924	1.174
	LTE Band 66_LAT	20M	QPSK	1	49	Bottom Side	7mm	Full	132322	1745	23.76	25.00	1.330	-0.07	1.360	1.809
	LTE Band 66_LAT	20M	QPSK	50	50	Back	0mm	Reduced	132072	1720	20.15	21.00	1.216	0.06	1.200	1.459
	LTE Band 66_LAT	20M	QPSK	50	50	Bottom Side	0mm	Reduced	132072	1720	20.15	21.00	1.216	0.03	1.770	2.153
	LTE Band 66_LAT	20M	QPSK	50	50	Bottom Side	0mm	Reduced	132322	1745	19.99	21.00	1.262	0.02	1.670	2.107
	LTE Band 66_LAT	20M	QPSK	50	50	Bottom Side	0mm	Reduced	132572	1770	19.92	21.00	1.282	-0.15	1.700	2.180
	LTE Band 66_LAT	20M	QPSK	50	50	Back	7mm	Full	132072	1720	22.85	24.00	1.303	-0.02	0.827	1.078
	LTE Band 66_LAT	20M	QPSK	50	50	Bottom Side	7mm	Full	132572	1770	22.81	24.00	1.315	-0.17	1.130	1.486
72	LTE Band 66_LAT	20M	QPSK	100	0	Bottom Side	0mm	Reduced	132072	1720	20.08	21.00	1.236	-0.02	1.870	**2.311**
	LTE Band 66_LAT	20M	QPSK	100	0	Bottom Side	7mm	Full	132072	1720	22.78	24.00	1.324	-0.09	1.110	1.470
	LTE Band 25_UAT	20M	QPSK	1	0	Front	0mm	Reduced	26590	1905	19.58	20.30	1.180	-0.06	1.860	2.195
	LTE Band 25_UAT	20M	QPSK	1	0	Front	0mm	Reduced	26140	1860	19.29	20.30	1.262	-0.09	1.740	2.196
	LTE Band 25_UAT	20M	QPSK	1	0	Front	0mm	Reduced	26340	1880	19.47	20.30	1.211	-0.06	1.630	1.973
	LTE Band 25_UAT	20M	QPSK	1	0	Back	0mm	Reduced	26590	1905	19.58	20.30	1.180	0.08	1.340	1.582
	LTE Band 25_UAT	20M	QPSK	1	0	Top Side	0mm	Reduced	26590	1905	19.58	20.30	1.180	-0.16	1.810	2.136
	LTE Band 25_UAT	20M	QPSK	1	0	Top Side	0mm	Reduced	26140	1860	19.29	20.30	1.262	-0.17	1.390	1.754
	LTE Band 25_UAT	20M	QPSK	1	0	Top Side	0mm	Reduced	26340	1880	19.47	20.30	1.211	-0.19	1.450	1.755
	LTE Band 25_UAT	20M	QPSK	1	0	Front	4mm	Full	26140	1860	23.45	25.00	1.429	0.09	0.976	1.395
	LTE Band 25_UAT	20M	QPSK	1	0	Back	7mm	Full	26590	1905	23.84	25.00	1.306	0.17	0.810	1.058
	LTE Band 25_UAT	20M	QPSK	1	0	Top Side	10mm	Full	26590	1905	23.84	25.00	1.306	-0.04	0.791	1.033
	LTE Band 25_UAT	20M	QPSK	50	24	Front	0mm	Reduced	26590	1905	19.48	20.30	1.208	-0.06	1.910	2.307
	LTE Band 25_UAT	20M	QPSK	50	24	Front	0mm	Reduced	26140	1860	19.22	20.30	1.282	0.1	1.720	2.206
	LTE Band 25_UAT	20M	QPSK	50	24	Front	0mm	Reduced	26340	1880	19.32	20.30	1.253	-0.09	1.700	2.130
	LTE Band 25_UAT	20M	QPSK	50	24	Back	0mm	Reduced	26590	1905	19.48	20.30	1.208	-0.17	1.540	1.860
	LTE Band 25_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	26590	1905	19.48	20.30	1.208	-0.01	1.820	2.198
	LTE Band 25_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	26140	1860	19.22	20.30	1.282	-0.03	1.380	1.770
	LTE Band 25_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	26340	1880	19.32	20.30	1.253	-0.04	1.470	1.842
	LTE Band 25_UAT	20M	QPSK	50	24	Front	4mm	Full	26590	1905	22.71	24.00	1.346	0.17	1.160	1.561
	LTE Band 25_UAT	20M	QPSK	50	24	Back	7mm	Full	26590	1905	22.71	24.00	1.346	0.16	0.891	1.199
	LTE Band 25_UAT	20M	QPSK	50	24	Top Side	10mm	Full	26590	1905	22.71	24.00	1.346	-0.05	0.859	1.156
73	LTE Band 25_UAT	20M	QPSK	100	0	Front	0mm	Reduced	26590	1905	19.46	20.30	1.213	0.11	2.010	**2.439**
	LTE Band 25_UAT	20M	QPSK	100	0	Top Side	0mm	Reduced	26590	1905	19.46	20.30	1.213	0.17	1.840	2.233
	LTE Band 25_UAT	20M	QPSK	100	0	Front	4mm	Full	26590	1905	22.70	24.00	1.349	0.15	1.010	1.362
	LTE Band 25_UAT	20M	QPSK	100	0	Top Side	10mm	Full	26590	1905	22.70	24.00	1.349	-0.07	0.820	1.106
	LTE Band 25_LAT	20M	QPSK	1	0	Back	0mm	Reduced	26590	1905	20.38	21.20	1.208	-0.19	1.480	1.788

	LTE Band 25_LAT	20M	QPSK	1	0	Bottom Side	0mm	Reduced	26590	1905	20.38	21.20	1.208	-0.14	1.670	2.017
	LTE Band 25_LAT	20M	QPSK	1	0	Bottom Side	0mm	Reduced	26140	1860	20.30	21.20	1.230	0.04	1.550	1.907
	LTE Band 25_LAT	20M	QPSK	1	0	Bottom Side	0mm	Reduced	26340	1880	20.33	21.20	1.222	0.04	1.540	1.882
	LTE Band 25_LAT	20M	QPSK	1	0	Back	7mm	Full	26590	1905	23.82	25.00	1.312	0.04	0.882	1.157
	LTE Band 25_LAT	20M	QPSK	1	0	Bottom Side	7mm	Full	26590	1905	23.82	25.00	1.312	0.03	1.500	1.968
	LTE Band 25_LAT	20M	QPSK	50	24	Back	0mm	Reduced	26590	1905	20.34	21.20	1.219	0.13	1.430	1.743
	LTE Band 25_LAT	20M	QPSK	50	24	Bottom Side	0mm	Reduced	26590	1905	20.34	21.20	1.219	-0.17	1.520	1.853
	LTE Band 25_LAT	20M	QPSK	100	0	Bottom Side	0mm	Reduced	26590	1905	20.26	21.20	1.242	0.16	1.520	1.887
	LTE Band 7_UAT	20M	QPSK	1	99	Back	0mm	Reduced	21100	2535	21.70	22.50	1.202	0.07	1.850	2.224
	LTE Band 7_UAT	20M	QPSK	1	99	Back	0mm	Reduced	20850	2510	21.33	22.50	1.309	-0.19	1.630	2.134
	LTE Band 7_UAT	20M	QPSK	1	99	Back	0mm	Reduced	21350	2560	21.50	22.50	1.259	-0.11	1.700	2.140
	LTE Band 7_UAT	20M	QPSK	1	99	Top Side	0mm	Reduced	21100	2535	21.70	22.50	1.202	0.08	1.620	1.948
	LTE Band 7_UAT	20M	QPSK	1	99	Back	7mm	Full	21100	2535	23.08	24.00	1.236	0.15	0.688	0.850
	LTE Band 7_UAT	20M	QPSK	1	99	Top Side	10mm	Full	21100	2535	23.08	24.00	1.236	0.06	0.480	0.593
	LTE Band 7_UAT	20M	QPSK	50	24	Back	0mm	Reduced	21100	2535	21.62	22.50	1.225	0.05	1.690	2.070
74	LTE Band 7_UAT	20M	QPSK	50	24	Back	0mm	Reduced	20850	2510	21.33	22.50	1.309	-0.11	1.750	**2.291**
	LTE Band 7_UAT	20M	QPSK	50	24	Back	0mm	Reduced	21350	2560	21.49	22.50	1.262	0.09	1.770	2.233
	LTE Band 7_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	21100	2535	21.62	22.50	1.225	0.04	1.620	1.984
	LTE Band 7_UAT	20M	QPSK	50	24	Back	7mm	Full	20850	2510	21.78	23.00	1.324	-0.13	0.641	0.849
	LTE Band 7_UAT	20M	QPSK	50	24	Top Side	10mm	Full	21100	2535	22.06	23.00	1.242	0.14	0.409	0.508
	LTE Band 7_UAT	20M	QPSK	100	0	Back	0mm	Reduced	21100	2535	21.48	22.50	1.265	0.14	1.530	1.935

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	0mm	Reduced	40620	2593	22.82	23.70	1.225	62.9	1.006	0.01	1.240	1.528
	LTE Band 41_UAT	20M	QPSK	1	49	Top Side	10mm	Full	40620	2593	23.95	25.00	1.274	62.9	1.006	-0.08	0.505	0.647
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	40620	2593	22.64	23.70	1.276	62.9	1.006	0.02	1.360	1.746
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	39750	2506	22.49	23.70	1.321	62.9	1.006	0.14	1.300	1.728
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	40185	2549.5	22.44	23.70	1.337	62.9	1.006	0.02	1.130	1.519
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	41055	2636.5	22.63	23.70	1.279	62.9	1.006	0.02	1.330	1.712
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	41490	2680	22.55	23.70	1.303	62.9	1.006	-0.16	1.100	1.442
	LTE Band 41C_UAT	20M	QPSK	1	99	Top Side	0mm	Reduced	39750(PCC)+ 39948(SCC)	2506(PCC)+ 2525.8(SCC)	22.39	23.70	1.352	62.9	1.006	0.18	1.180	1.605
	LTE Band 41C_UAT	20M	QPSK	1	99	Top Side	0mm	Reduced	40185(PCC)+ 40383(SCC)	2549.5(PCC)+ 2569.3(SCC)	22.53	23.70	1.309	62.9	1.006	0.12	0.954	1.256
	LTE Band 41C_UAT	20M	QPSK	1	0	Top Side	0mm	Reduced	40620(PCC)+ 40422(SCC)	2593(PCC)+ 2573.2(SCC)	22.48	23.70	1.324	62.9	1.006	-0.04	1.310	1.745
	LTE Band 41C_UAT	20M	QPSK	1	0	Top Side	0mm	Reduced	41055(PCC)+ 40857(SCC)	2636.5(PCC)+ 2616.7(SCC)	22.55	23.70	1.303	62.9	1.006	-0.05	1.300	1.704
	LTE Band 41C_UAT	20M	QPSK	1	0	Top Side	0mm	Reduced	41490(PCC)+ 41292(SCC)	2680(PCC)+ 2660.2(SCC)	22.48	23.70	1.324	62.9	1.006	0.09	1.210	1.612
	LTE Band 41_UAT	20M	QPSK	50	24	Top Side	10mm	Full	40620	2593	23.00	24.00	1.259	62.9	1.006	0.02	0.418	0.529
	LTE Band 41_UAT	20M	QPSK	100	0	Top Side	0mm	Reduced	40620	2593	22.62	23.70	1.282	62.9	1.006	-0.07	1.330	1.716
75	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Top Side	0mm	Reduced	40620	2593	24.39	25.30	1.233	42.9	1.009	0.11	1.420	**1.767**
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Top Side	0mm	Reduced	39750	2506	24.18	25.30	1.294	42.9	1.009	0.11	1.350	1.763
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Top Side	0mm	Reduced	40185	2549.5	24.05	25.30	1.334	42.9	1.009	-0.08	1.310	1.763
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Top Side	0mm	Reduced	41055	2636.5	24.27	25.30	1.268	42.9	1.009	-0.01	1.100	1.407
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Top Side	0mm	Reduced	41490	2680	24.24	25.30	1.276	42.9	1.009	0.01	1.330	1.713
	LTE Band 41(HPUE)_UAT	20M	QPSK	1	49	Top Side	10mm	Full	40620	2593	25.70	27.00	1.349	42.9	1.009	0.02	0.497	0.676
	LTE Band 41(HPUE)_UAT	20M	QPSK	50	24	Top Side	0mm	Reduced	40620	2593	24.38	25.30	1.236	42.9	1.009	-0.08	1.320	1.646

<5GNR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Front	0mm	Reduced	349000	1745	20.64	21.30	1.164	-0.13	1.770	2.061
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Front	0mm	Reduced	344000	1720	20.57	21.30	1.183	-0.11	1.570	1.857
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Front	0mm	Reduced	354000	1770	20.45	21.30	1.216	-0.06	1.520	1.849
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Back	0mm	Reduced	349000	1745	20.64	21.30	1.164	0	1.160	1.350
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Top Side	0mm	Reduced	349000	1745	20.64	21.30	1.164	-0.07	1.100	1.281
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Front	4mm	Full	349000	1745	23.52	25.20	1.472	-0.11	1.090	1.605
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Back	7mm	Full	349000	1745	23.52	25.20	1.472	-0.06	0.914	1.346
	N66_ANT 1	20M	BPSK	1	1	DFT-15	Top Side	10mm	Full	349000	1745	23.52	25.20	1.472	0	0.640	0.942
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Front	0mm	Reduced	349000	1745	20.57	21.30	1.183	0.05	1.670	1.976
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Back	0mm	Reduced	349000	1745	20.57	21.30	1.183	-0.13	1.020	1.207
	N66_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	0mm	Reduced	349000	1745	20.57	21.30	1.183	0.04	1.020	1.207
	N66_ANT 1	20M	BPSK	100	0	DFT-15	Front	0mm	Reduced	349000	1745	20.50	21.30	1.202	0.06	1.710	2.056
	N66_ANT 1	20M	BPSK	100	0	DFT-15	Top Side	0mm	Reduced	349000	1745	20.50	21.30	1.202	0.01	0.948	1.140
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	0mm	Reduced	349000	1745	21.21	22.00	1.199	-0.05	2.020	2.423
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	0mm	Reduced	344000	1720	21.14	22.00	1.219	0.1	1.980	2.414
76	N66_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	0mm	Reduced	354000	1770	21.01	22.00	1.256	0.11	2.030	**2.550**
	N66_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	7mm	Full	354000	1770	23.99	25.20	1.321	-0.05	1.050	1.387
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	0mm	Reduced	349000	1745	21.18	22.00	1.208	-0.02	2.110	2.548
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	0mm	Reduced	344000	1720	21.10	22.00	1.230	-0.01	1.910	2.350
	N66_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	0mm	Reduced	354000	1770	21.03	22.00	1.250	-0.06	1.790	2.238
	N66_ANT 0	20M	BPSK	100	0	DFT-15	Bottom Side	0mm	Reduced	354000	1770	21.09	22.00	1.233	0.06	1.900	2.343
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Front	0mm	Reduced	372000	1860	19.62	20.30	1.169	0.14	1.470	1.719
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Back	0mm	Reduced	372000	1860	19.62	20.30	1.169	0.03	0.980	1.146
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Top Side	0mm	Reduced	372000	1860	19.62	20.30	1.169	0.01	1.370	1.602
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Front	4mm	Full	372000	1860	23.81	25.20	1.377	0.14	1.210	1.666
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Back	7mm	Full	372000	1860	23.81	25.20	1.377	0.03	0.790	1.088
	N25_ANT 1	20M	BPSK	1	1	DFT-15	Top Side	10mm	Full	372000	1860	23.81	25.20	1.377	0.01	0.666	0.917
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Front	0mm	Reduced	372000	1860	19.54	20.30	1.191	-0.08	1.500	1.787
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Front	0mm	Reduced	376500	1882.5	19.47	20.30	1.211	0.07	1.560	1.889
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Front	0mm	Reduced	381000	1905	19.44	20.30	1.219	0.19	1.730	2.109
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Back	0mm	Reduced	372000	1860	19.54	20.30	1.191	-0.17	1.090	1.298
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	0mm	Reduced	372000	1860	19.54	20.30	1.191	-0.05	1.310	1.561
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Front	4mm	Full	381000	1905	23.64	25.20	1.432	0.01	1.430	2.048
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Front	4mm	Full	372000	1860	23.66	25.20	1.426	0.02	1.200	1.711
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Front	4mm	Full	376500	1882.5	23.62	25.20	1.439	0.04	1.150	1.655
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Back	7mm	Full	372000	1860	23.66	25.20	1.426	0.07	0.800	1.140
	N25_ANT 1	20M	BPSK	50	28	DFT-15	Top Side	10mm	Full	372000	1860	23.66	25.20	1.426	0.05	0.322	0.459
	N25_ANT 1	20M	BPSK	100	0	DFT-15	Front	0mm	Reduced	372000	1860	19.53	20.30	1.194	0.01	1.590	1.898
	N25_ANT 1	20M	BPSK	100	0	DFT-15	Front	4mm	Full	372000	1860	23.21	24.70	1.409	0.02	1.300	1.832
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Back	0mm	Reduced	372000	1860	21.41	22.20	1.199	-0.18	1.850	2.219
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Back	0mm	Reduced	376500	1882.5	21.30	22.20	1.230	0.11	1.440	1.772
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Back	0mm	Reduced	381000	1905	21.32	22.20	1.225	-0.13	1.450	1.776
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	0mm	Reduced	372000	1860	21.41	22.20	1.199	0.06	1.660	1.991
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	0mm	Reduced	376500	1882.5	21.30	22.20	1.230	-0.15	1.790	2.202
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	0mm	Reduced	381000	1905	21.32	22.20	1.225	0.11	1.710	2.094
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Back	7mm	Full	372000	1860	24.23	25.20	1.250	0.06	1.030	1.288
	N25_ANT 0	20M	BPSK	1	1	DFT-15	Bottom Side	7mm	Full	376500	1882.5	24.10	25.20	1.288	-0.15	1.250	1.610
77	N25_ANT 0	20M	BPSK	50	28	DFT-15	Back	0mm	Reduced	372000	1860	21.37	22.20	1.211	0.13	1.890	**2.288**
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Back	0mm	Reduced	376500	1882.5	21.33	22.20	1.222	0.02	1.460	1.784
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Back	0mm	Reduced	381000	1905	21.34	22.20	1.219	-0.07	1.490	1.816
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	0mm	Reduced	372000	1860	21.37	22.20	1.211	-0.19	1.700	2.058
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	0mm	Reduced	376500	1882.5	21.33	22.20	1.222	0.11	1.800	2.199
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	0mm	Reduced	381000	1905	21.34	22.20	1.219	-0.06	1.760	2.145
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Back	7mm	Full	372000	1860	24.16	25.20	1.271	0.09	1.050	1.334
	N25_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	7mm	Full	376500	1882.5	24.06	25.20	1.300	0.05	1.260	1.638
	N25_ANT 0	20M	BPSK	100	0	DFT-15	Bottom Side	0mm	Reduced	372000	1860	21.35	22.20	1.216	0.07	1.600	1.946

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Back	0mm	Reduced	528000	2640	17.93	18.50	1.140	-0.19	0.641	0.731
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Back	0mm	Reduced	509202	2546.01	17.56	18.50	1.242	-0.15	1.270	1.577
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Back	0mm	Reduced	518598	2592.99	17.89	18.50	1.151	0.11	0.966	1.112
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Left Side	0mm	Reduced	528000	2640	17.93	18.50	1.140	0.05	0.402	0.458
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Back	7mm	Full	509202	2546.01	24.03	25.20	1.309	0.02	0.728	0.953
	N41_ANT 4	100M	BPSK	1	271	DFT-30	Left Side	3mm	Full	528000	2640	24.62	25.20	1.143	0.05	0.398	0.455
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	0mm	Reduced	528000	2640	17.90	18.50	1.148	0.18	1.210	1.389
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	0mm	Reduced	509202	2546.01	17.48	18.50	1.265	0.16	1.760	2.226
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	0mm	Reduced	518598	2592.99	17.87	18.50	1.156	-0.06	1.480	1.711
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Left Side	0mm	Reduced	528000	2640	17.90	18.50	1.148	-0.05	0.736	0.845
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Back	7mm	Full	509202	2546.01	23.97	25.20	1.327	0.11	1.050	1.394
	N41_ANT 4	100M	BPSK	135	69	DFT-30	Left Side	3mm	Full	528000	2640	24.51	25.20	1.172	-0.05	0.700	0.821
	N41_ANT 4	100M	BPSK	270	0	DFT-30	Back	0mm	Reduced	528000	2640	17.82	18.50	1.169	0.11	1.150	1.345
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Back	0mm	Reduced	528000	2640	17.93	18.50	1.140	-0.19	0.641	0.731
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Back	0mm	Reduced	509202	2546.01	17.56	18.50	1.242	-0.15	1.270	1.577
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Back	0mm	Reduced	518598	2592.99	17.89	18.50	1.151	0.11	0.966	1.112
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Left Side	0mm	Reduced	528000	2640	17.93	18.50	1.140	0.05	0.402	0.458
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Back	7mm	Full	509202	2546.01	25.98	27.20	1.324	0.02	0.728	0.964
	N41(HPUE)_ANT 4	100M	BPSK	1	271	DFT-30	Left Side	3mm	Full	528000	2640	26.57	27.20	1.156	0.05	0.398	0.460
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	0mm	Reduced	528000	2640	17.90	18.50	1.148	0.18	1.210	1.389
78	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	0mm	Reduced	509202	2546.01	17.48	18.50	1.265	0.16	1.760	**2.226**
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	0mm	Reduced	518598	2592.99	17.87	18.50	1.156	-0.06	1.480	1.711
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Left Side	0mm	Reduced	528000	2640	17.90	18.50	1.148	-0.05	0.736	0.845
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Back	7mm	Full	509202	2546.01	26.01	27.20	1.315	0.11	1.050	1.381
	N41(HPUE)_ANT 4	100M	BPSK	135	69	DFT-30	Left Side	3mm	Full	528000	2640	26.37	27.20	1.211	-0.05	0.700	0.847
	N41(HPUE)_ANT 4	100M	BPSK	270	0	DFT-30	Back	0mm	Reduced	528000	2640	17.82	18.50	1.169	0.11	1.150	1.345

<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	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	46	5230	16.88	17.50	1.153	97.73	1.023	0.11	1.520	1.794
79	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	38	5190	16.45	17.50	1.274	97.73	1.023	0.13	1.380	**1.798**
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	46	5230	10.48	11.50	1.265	97.73	1.023	0.12	0.357	0.462
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	38	5190	10.34	11.50	1.306	97.73	1.023	0.14	0.333	0.445
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	-0.11	0.247	0.321
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	-0.09	1.470	1.911
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	0.15	0.013	0.017
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	-0.18	1.210	1.573
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 1	Full	54	5270	16.46	17.50	1.271	97.73	1.023	-0.12	0.067	0.087
80	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	62	5310	15.80	17.50	1.479	97.73	1.023	0.18	1.550	**2.345**
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 1	Reduced Level 2	54	5270	10.53	11.50	1.250	97.73	1.023	0.06	0.060	0.077
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	54	5270	10.53	11.50	1.250	97.73	1.023	-0.13	0.325	0.416
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 1	Reduced Level 2	54	5270	10.53	11.50	1.250	97.73	1.023	-0.01	0.005	0.006
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 1	Reduced Level 2	54	5270	10.53	11.50	1.250	97.73	1.023	0.07	0.293	0.375
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 1	Reduced Level 2	54	5270	10.53	11.50	1.250	97.73	1.023	0.17	0.000	0.000
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	62	5310	9.63	11.50	1.538	97.73	1.023	-0.19	0.348	0.548
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	-0.01	0.213	0.292
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	0.07	0.887	1.216
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	0.17	0.009	0.013
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	-0.19	0.694	0.951
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 1	Full	110	5550	14.23	15.50	1.340	97.73	1.023	0.11	0.052	0.071
81	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	102	5510	14.05	15.50	1.396	97.73	1.023	-0.18	0.975	**1.393**
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	126	5630	13.65	15.50	1.531	97.73	1.023	-0.13	0.781	1.223
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	134	5670	13.72	15.50	1.507	97.73	1.023	-0.01	0.785	1.210
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	142	5710	13.52	15.50	1.578	97.73	1.023	-0.13	0.706	1.140
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 1	Reduced Level 2	110	5550	8.24	9.50	1.337	97.73	1.023	-0.11	0.088	0.120
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	110	5550	8.24	9.50	1.337	97.73	1.023	-0.09	0.228	0.312
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 1	Reduced Level 2	110	5550	8.24	9.50	1.337	97.73	1.023	0.15	0.001	0.001
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 1	Reduced Level 2	110	5550	8.24	9.50	1.337	97.73	1.023	-0.18	0.183	0.250
	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 1	Reduced Level 2	110	5550	8.24	9.50	1.337	97.73	1.023	-0.12	0.016	0.022
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	102	5510	8.23	9.50	1.340	97.73	1.023	-0.16	0.210	0.288
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	126	5630	7.80	9.50	1.479	97.73	1.023	0.15	0.167	0.253
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	134	5670	7.64	9.50	1.535	97.73	1.023	-0.18	0.172	0.270
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	142	5710	7.55	9.50	1.567	97.73	1.023	-0.16	0.189	0.303
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	159	5795	15.89	17.50	1.449	97.73	1.023	0.1	0.971	1.439
82	WLAN5.8GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Full	151	5755	15.56	17.50	1.563	97.73	1.023	-0.06	1.000	**1.599**
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	159	5795	9.57	11.50	1.560	97.73	1.023	0.11	0.288	0.459
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	0mm	Ant 1	Reduced Level 2	151	5755	9.52	11.50	1.578	97.73	1.023	0.12	0.233	0.376

19.5 Repeated SAR Measurement

<1g>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 25_UAT	20M	QPSK	50	24	-	Top Side	10mm	Reduced	26590	1905	17.78	18.60	1.208		1.000	-0.05	0.876	1	1.058
2nd	LTE Band 25_UAT	20M	QPSK	50	24	-	Top Side	10mm	Reduced	26590	1905	17.78	18.60	1.208		1.000	-0.08	0.865	1.013	1.045
1st	LTE Band 41_UAT	20M	QPSK	50	24	-	Top Side	10mm	Reduced	39750	2506	20.93	21.50	1.140	62.9	1.006	-0.12	0.811	1	0.930
2nd	LTE Band 41_UAT	20M	QPSK	50	24	-	Top Side	10mm	Reduced	39750	2506	20.93	21.50	1.140	62.9	1.006	-0.1	0.800	1.014	0.918
1st	N71_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	0mm	Full	136100	680.5	24.36	25.20	1.213		1.000	-0.09	0.902	1	1.094
2nd	N71_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	0mm	Full	136100	680.5	24.36	25.20	1.213		1.000	0.03	0.895	1.008	1.086
1st	N5_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	0mm	Reduced Level 1	167300	836.5	22.46	23.00	1.132		1.000	0.08	0.883	1	1.000
2nd	N5_ANT 1	20M	BPSK	1	1	DFT-15	Right Cheek	0mm	Reduced Level 1	167300	836.5	22.46	23.00	1.132		1.000	0.01	0.860	1.027	0.974
1st	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	0mm	Reduced Level 1/2	349000	1745	14.90	16.00	1.288		1.000	0.12	0.834	1	1.074
2nd	N66_ANT 1	20M	BPSK	1	1	DFT-15	Right Tilted	0mm	Reduced Level 1/2	349000	1745	14.90	16.00	1.288		1.000	0.01	0.820	1.017	1.056
1st	WLAN5.2GHz	-	-	-	-	802.11n-HT40 MCS0	Back	10mm	Full	46	5230	16.88	17.50	1.153	97.73	1.023	0.19	0.959	1	1.132
2nd	WLAN5.2GHz	-	-	-	-	802.11n-HT40 MCS0	Back	10mm	Full	46	5230	16.88	17.50	1.153	97.73	1.023	0.07	0.920	1.042	1.086
1st	WLAN5.8GHz	-	-	-	-	802.11n-HT40 MCS0	Back	10mm	Reduced Level 1	159	5795	13.95	15.50	1.429	97.73	1.023	-0.09	0.809	1	1.183
2nd	WLAN5.8GHz	-	-	-	-	802.11n-HT40 MCS0	Back	10mm	Reduced Level 1	159	5795	13.95	15.50	1.429	97.73	1.023	0.02	0.798	1.014	1.166
1st	WLAN5.5GHz	-	-	-	-	802.11n-HT40 MCS0	Back	15mm	Full	110	5550	14.23	15.50	1.340	97.73	1.023	-0.07	0.812	1	1.113
2nd	WLAN5.5GHz	-	-	-	-	802.11n-HT40 MCS0	Back	15mm	Full	110	5550	14.23	15.50	1.340	97.73	1.023	-0.12	0.804	1.010	1.102

<10g>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	LTE Band 25_UAT	20M	QPSK	100	0	-	Front	0mm	Reduced	26590	1905	19.46	20.30	1.213	0.11	2.010	1	2.439
2nd	LTE Band 25_UAT	20M	QPSK	100	0	-	Front	0mm	Reduced	26590	1905	19.46	20.30	1.213	0.02	1.960	1.026	2.378
1st	N66_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	0mm	Reduced	349000	1745	21.18	22.00	1.208	-0.02	2.110	1	2.548
2nd	N66_ANT 0	20M	BPSK	50	28	DFT-15	Bottom Side	0mm	Reduced	349000	1745	21.18	22.00	1.208	-0.14	2.030	1.039	2.452

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The ratio is the difference in percentage between original and repeated *measured SAR*.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

20. 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.	WLAN 5GHz + Bluetooth	Yes	Yes	Yes	Yes
5.	WWAN + WLAN5GHz+ Bluetooth	Yes	Yes	Yes	Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. EUT will choose each GSM, WCDMA, LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
3. 5GNR supports SA and NSA mode.
4. For EN-DC mode, Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure from 4G (LTE) and time-averaged RF exposure from 5G NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G NR to not exceed FCC limit. Therefore, simultaneous transmission compliance between 4G+5G NR operation is demonstrated in the Part 2 Report during algorithm validation. In Part 1 Report, simultaneous transmission compliance was evaluated individually with other Radios (WLAN or BT) using either 4G or 5G NR.
5. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
6. 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).
7. EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment.
8. WLAN2.4GHz and Bluetooth share the same antenna, and cannot transmit simultaneously.
9. According to the EUT character, WLAN 5GHz and Bluetooth can transmit simultaneously.
10. For simultaneously analysis, since the SAR summation of 3 transmitters can cover others combination of 2 transmitters, therefore in this section did not additional to evaluate 2TX combination of simultaneously transmission.
11. Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
12. For Product Specific Exposure, always chose higher SAR between 0mm SAR and sensor off distance SAR to do co-located analysis.
13. All licensed modes share the same antenna part and cannot transmit simultaneously.
14. The Scaled SAR summation is calculated based on the same configuration and test position.
15. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
    iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.

20.1 5G NR + LTE + WLAN + BT Sim-Tx analysis

In 5G NR + LTE + WLAN + BT simultaneous transmission, 5G NR and LTE transmission are managed and controlled by Qualcomm® Smart Transmit, while the RF exposure from WLAN and BT radios is managed using legacy approach, i.e., through a fixed power back-off if needed.

Since WLAN and BT do not employ time-averaging, 1gSAR and 10gSAR measurement for WLAN and BT need to be conducted at their corresponding rated power following current FCC test procedures to determine reported SAR values.

Smart Transmit current implementation assumes hotspots from 5G NR and LTE are collocated. Therefore, for a total of 100% exposure margin, if LTE uses x%, then the exposure margin left for 5G NR is capped to (100-x)%. Thus, the compliance equation for LTE + 5G NR is

*x% * A + (100-x)% * B ≤ 1.0,*

Where, A is normalized reported time-averaged SAR exposure ratio from LTE, and A ≤ 1.0; B is normalized reported time-averaged exposure ratio from 5G NR (i.e. SAR exposure for 5G FR1), and B ≤1.0.

Let C = normalized reported SAR exposure ratio from WLAN+BT, then for compliance,

*x% * A + (100-x)% * B + C ≤ 1.0* (1)

x% * A + (100-x)% * B ≤ x% * max(A, B) + (100-x)% * max(A, B) ≤ max(A, B)

*x% * A + (100-x)% * B + C ≤ max(A, B) + C ≤ 1.0* (2)

if A + C ≤ 1.0 and B + C ≤ 1.0 can be proven, then “x% * A + (100-x)% * B + C ≤ 1.0”. Therefore simultaneous transmission analysis for 5G NR + LTE + WLAN + BT can be performed in two steps

Step 1: Prove total exposure ratio (TER) of LTE + WLAN + BT < 1
Step 2: Prove total exposure ratio (TER) of 5G NR + WLAN + BT < 1

Above analysis is also apply to LTE inter band uplink, LTE + LTE + WLAN + BT simultaneous transmission, So inter band CA uplink no need to do additional simultaneously analysis again. Only required comply with total exposure ratio (TER) of LTE + WLAN + BT < 1.

20.2 Head Exposure Conditions

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 1 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
GSM	GSM850_UAT	Right Cheek	0.613	0.284	0.163	0.098	0.90	0.78	0.71
		Right Tilted	0.381	0.290	0.131	0.124	0.67	0.51	0.51
		Left Cheek	0.345	0.558	0.640	0.208	0.90	0.99	0.55
		Left Tilted	0.286	0.508	0.224	0.180	0.79	0.51	0.47
	GSM1900_UAT	Right Cheek	0.535	0.284	0.163	0.098	0.82	0.70	0.63
		Right Tilted	0.894	0.290	0.131	0.124	1.18	1.03	1.02
		Left Cheek	0.349	0.558	0.640	0.208	0.91	0.99	0.56
		Left Tilted	0.443	0.508	0.224	0.180	0.95	0.67	0.62
WCDMA	WCDMA II_UAT	Right Cheek	0.734	0.284	0.163	0.098	1.02	0.90	0.83
		Right Tilted	1.043	0.290	0.131	0.124	1.33	1.17	1.17
		Left Cheek	0.446	0.558	0.640	0.208	1.00	1.09	0.65
		Left Tilted	0.599	0.508	0.224	0.180	1.11	0.82	0.78
	WCDMA IV_UAT	Right Cheek	0.806	0.284	0.163	0.098	1.09	0.97	0.90
		Right Tilted	1.026	0.290	0.131	0.124	1.32	1.16	1.15
		Left Cheek	0.503	0.558	0.640	0.208	1.06	1.14	0.71
		Left Tilted	0.660	0.508	0.224	0.180	1.17	0.88	0.84
	WCDMA V_UAT	Right Cheek	0.598	0.284	0.163	0.098	0.88	0.76	0.70
		Right Tilted	0.482	0.290	0.131	0.124	0.77	0.61	0.61
		Left Cheek	0.464	0.558	0.640	0.208	1.02	1.10	0.67
		Left Tilted	0.355	0.508	0.224	0.180	0.86	0.58	0.54
LTE	LTE Band 71_UAT	Right Cheek	0.874	0.284	0.163	0.098	1.16	1.04	0.97
		Right Tilted	0.671	0.290	0.131	0.124	0.96	0.80	0.80
		Left Cheek	0.484	0.558	0.640	0.208	1.04	1.12	0.69
		Left Tilted	0.414	0.508	0.224	0.180	0.92	0.64	0.59
	LTE Band 12_UAT	Right Cheek	0.653	0.284	0.163	0.098	0.94	0.82	0.75
		Right Tilted	0.499	0.290	0.131	0.124	0.79	0.63	0.62
		Left Cheek	0.401	0.558	0.640	0.208	0.96	1.04	0.61
		Left Tilted	0.322	0.508	0.224	0.180	0.83	0.55	0.50
	LTE Band 13_UAT	Right Cheek	0.613	0.284	0.163	0.098	0.90	0.78	0.71
		Right Tilted	0.524	0.290	0.131	0.124	0.81	0.66	0.65
		Left Cheek	0.472	0.558	0.640	0.208	1.03	1.11	0.68
		Left Tilted	0.370	0.508	0.224	0.180	0.88	0.59	0.55
	LTE Band 26_UAT	Right Cheek	0.635	0.284	0.163	0.098	0.92	0.80	0.73
		Right Tilted	0.462	0.290	0.131	0.124	0.75	0.59	0.59
		Left Cheek	0.478	0.558	0.640	0.208	1.04	1.12	0.69
		Left Tilted	0.423	0.508	0.224	0.180	0.93	0.65	0.60
	LTE Band 66_UAT	Right Cheek	0.559	0.284	0.163	0.098	0.84	0.72	0.66
		Right Tilted	0.902	0.290	0.131	0.124	1.19	1.03	1.03
		Left Cheek	0.333	0.558	0.640	0.208	0.89	0.97	0.54
		Left Tilted	0.449	0.508	0.224	0.180	0.96	0.67	0.63
	LTE Band 25_UAT	Right Cheek	0.821	0.284	0.163	0.098	1.11	0.98	0.92
		Right Tilted	0.975	0.290	0.131	0.124	1.27	1.11	1.10
		Left Cheek	0.456	0.558	0.640	0.208	1.01	1.10	0.66
		Left Tilted	0.620	0.508	0.224	0.180	1.13	0.84	0.80
	LTE Band 7_UAT	Right Cheek	0.613	0.284	0.163	0.098	0.90	0.78	0.71
		Right Tilted	0.842	0.290	0.131	0.124	1.13	0.97	0.97
		Left Cheek	0.235	0.558	0.640	0.208	0.79	0.88	0.44
		Left Tilted	0.324	0.508	0.224	0.180	0.83	0.55	0.50
	LTE Band 41_UAT	Right Cheek	0.806	0.284	0.163	0.098	1.09	0.97	0.90
		Right Tilted	0.888	0.290	0.131	0.124	1.18	1.02	1.01

		Left Cheek	0.244	0.558	0.640	0.208	0.80	0.88	0.45
		Left Tilted	0.343	0.508	0.224	0.180	0.85	0.57	0.52
	LTE Band 41(HPUE)_UAT	Right Cheek	0.757	0.284	0.163	0.098	1.04	0.92	0.86
		Right Tilted	0.928	0.290	0.131	0.124	1.22	1.06	1.05
		Left Cheek	0.280	0.558	0.640	0.208	0.84	0.92	0.49
		Left Tilted	0.359	0.508	0.224	0.180	0.87	0.58	0.54

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)
GSM	GSM850_UAT	Right Cheek	0.613	0.163	0.098	0.87
		Right Tilted	0.381	0.131	0.124	0.64
		Left Cheek	0.345	0.640	0.208	1.19
		Left Tilted	0.286	0.224	0.180	0.69
	GSM1900_UAT	Right Cheek	0.535	0.163	0.098	0.80
		Right Tilted	0.894	0.131	0.124	1.15
		Left Cheek	0.349	0.640	0.208	1.20
		Left Tilted	0.443	0.224	0.180	0.85
WCDMA	WCDMA II_UAT	Right Cheek	0.734	0.163	0.098	1.00
		Right Tilted	1.043	0.131	0.124	1.30
		Left Cheek	0.446	0.640	0.208	1.29
		Left Tilted	0.599	0.224	0.180	1.00
	WCDMA IV_UAT	Right Cheek	0.806	0.163	0.098	1.07
		Right Tilted	1.026	0.131	0.124	1.28
		Left Cheek	0.503	0.640	0.208	1.35
		Left Tilted	0.660	0.224	0.180	1.06
	WCDMA V_UAT	Right Cheek	0.598	0.163	0.098	0.86
		Right Tilted	0.482	0.131	0.124	0.74
		Left Cheek	0.464	0.640	0.208	1.31
		Left Tilted	0.355	0.224	0.180	0.76
LTE	LTE Band 71_UAT	Right Cheek	0.874	0.163	0.098	1.14
		Right Tilted	0.671	0.131	0.124	0.93
		Left Cheek	0.484	0.640	0.208	1.33
		Left Tilted	0.414	0.224	0.180	0.82
	LTE Band 12_UAT	Right Cheek	0.653	0.163	0.098	0.91
		Right Tilted	0.499	0.131	0.124	0.75
		Left Cheek	0.401	0.640	0.208	1.25
		Left Tilted	0.322	0.224	0.180	0.73
	LTE Band 13_UAT	Right Cheek	0.613	0.163	0.098	0.87
		Right Tilted	0.524	0.131	0.124	0.78
		Left Cheek	0.472	0.640	0.208	1.32
		Left Tilted	0.370	0.224	0.180	0.77
	LTE Band 26_UAT	Right Cheek	0.635	0.163	0.098	0.90
		Right Tilted	0.462	0.131	0.124	0.72
		Left Cheek	0.478	0.640	0.208	1.33
		Left Tilted	0.423	0.224	0.180	0.83
	LTE Band 66_UAT	Right Cheek	0.559	0.163	0.098	0.82
		Right Tilted	0.902	0.131	0.124	1.16
		Left Cheek	0.333	0.640	0.208	1.18
		Left Tilted	0.449	0.224	0.180	0.85
	LTE Band 25_UAT	Right Cheek	0.821	0.163	0.098	1.08
		Right Tilted	0.975	0.131	0.124	1.23
		Left Cheek	0.456	0.640	0.208	1.30
		Left Tilted	0.620	0.224	0.180	1.02
	LTE Band 7_UAT	Right Cheek	0.613	0.163	0.098	0.87

		Right Tilted	0.842	0.131	0.124	1.10
		Left Cheek	0.235	0.640	0.208	1.08
		Left Tilted	0.324	0.224	0.180	0.73
	LTE Band 41_UAT	Right Cheek	0.806	0.163	0.098	1.07
		Right Tilted	0.888	0.131	0.124	1.14
		Left Cheek	0.244	0.640	0.208	1.09
		Left Tilted	0.343	0.224	0.180	0.75
	LTE Band 41(HPUE)_UAT	Right Cheek	0.757	0.163	0.098	1.02
		Right Tilted	0.928	0.131	0.124	1.18
		Left Cheek	0.280	0.640	0.208	1.13
		Left Tilted	0.359	0.224	0.180	0.76

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850_LAT	Right Cheek	0.160	0.284	0.163	0.098	0.44	0.32	0.26
		Right Tilted	0.083	0.290	0.131	0.124	0.37	0.21	0.21
		Left Cheek	0.184	0.558	0.640	0.208	0.74	0.82	0.39
		Left Tilted	0.083	0.508	0.224	0.180	0.59	0.31	0.26
	GSM1900_LAT	Right Cheek	0.040	0.284	0.163	0.098	0.32	0.20	0.14
		Right Tilted	0.035	0.290	0.131	0.124	0.33	0.17	0.16
		Left Cheek	0.079	0.558	0.640	0.208	0.64	0.72	0.29
		Left Tilted	0.025	0.508	0.224	0.180	0.53	0.25	0.21
WCDMA	WCDMA II_LAT	Right Cheek	0.117	0.284	0.163	0.098	0.40	0.28	0.22
		Right Tilted	0.050	0.290	0.131	0.124	0.34	0.18	0.17
		Left Cheek	0.161	0.558	0.640	0.208	0.72	0.80	0.37
		Left Tilted	0.079	0.508	0.224	0.180	0.59	0.30	0.26
	WCDMA IV_LAT	Right Cheek	0.119	0.284	0.163	0.098	0.40	0.28	0.22
		Right Tilted	0.048	0.290	0.131	0.124	0.34	0.18	0.17
		Left Cheek	0.088	0.558	0.640	0.208	0.65	0.73	0.30
		Left Tilted	0.049	0.508	0.224	0.180	0.56	0.27	0.23
	WCDMA V_LAT	Right Cheek	0.162	0.284	0.163	0.098	0.45	0.33	0.26
		Right Tilted	0.090	0.290	0.131	0.124	0.38	0.22	0.21
		Left Cheek	0.208	0.558	0.640	0.208	0.77	0.85	0.42
		Left Tilted	0.098	0.508	0.224	0.180	0.61	0.32	0.28
LTE	LTE Band 71_LAT	Right Cheek	0.159	0.284	0.163	0.098	0.44	0.32	0.26
		Right Tilted	0.080	0.290	0.131	0.124	0.37	0.21	0.20
		Left Cheek	0.203	0.558	0.640	0.208	0.76	0.84	0.41
		Left Tilted	0.087	0.508	0.224	0.180	0.60	0.31	0.27
	LTE Band 12_LAT	Right Cheek	0.190	0.284	0.163	0.098	0.47	0.35	0.29
		Right Tilted	0.098	0.290	0.131	0.124	0.39	0.23	0.22
		Left Cheek	0.208	0.558	0.640	0.208	0.77	0.85	0.42
		Left Tilted	0.104	0.508	0.224	0.180	0.61	0.33	0.28
	LTE Band 13_LAT	Right Cheek	0.127	0.284	0.163	0.098	0.41	0.29	0.23
		Right Tilted	0.054	0.290	0.131	0.124	0.34	0.19	0.18
		Left Cheek	0.133	0.558	0.640	0.208	0.69	0.77	0.34
		Left Tilted	0.061	0.508	0.224	0.180	0.57	0.29	0.24
	LTE Band 26_LAT	Right Cheek	0.184	0.284	0.163	0.098	0.47	0.35	0.28
		Right Tilted	0.091	0.290	0.131	0.124	0.38	0.22	0.22
		Left Cheek	0.227	0.558	0.640	0.208	0.79	0.87	0.44
		Left Tilted	0.094	0.508	0.224	0.180	0.60	0.32	0.27
	LTE Band 66_LAT	Right Cheek	0.148	0.284	0.163	0.098	0.43	0.31	0.25
		Right Tilted	0.055	0.290	0.131	0.124	0.35	0.19	0.18
		Left Cheek	0.082	0.558	0.640	0.208	0.64	0.72	0.29

		Left Tilted	0.074	0.508	0.224	0.180	0.58	0.30	0.25
	LTE Band 25_LAT	Right Cheek	0.113	0.284	0.163	0.098	0.40	0.28	0.21
		Right Tilted	0.067	0.290	0.131	0.124	0.36	0.20	0.19
		Left Cheek	0.133	0.558	0.640	0.208	0.69	0.77	0.34
		Left Tilted	0.057	0.508	0.224	0.180	0.57	0.28	0.24
	LTE Band 7_LAT	Right Cheek	0.291	0.284	0.163	0.098	0.58	0.45	0.39
		Right Tilted	0.155	0.290	0.131	0.124	0.45	0.29	0.28
		Left Cheek	0.145	0.558	0.640	0.208	0.70	0.79	0.35
		Left Tilted	0.110	0.508	0.224	0.180	0.62	0.33	0.29
	LTE Band 41_LAT	Right Cheek	0.246	0.284	0.163	0.098	0.53	0.41	0.34
		Right Tilted	0.119	0.290	0.131	0.124	0.41	0.25	0.24
		Left Cheek	0.105	0.558	0.640	0.208	0.66	0.75	0.31
		Left Tilted	0.082	0.508	0.224	0.180	0.59	0.31	0.26
	LTE Band 41(HPUE)_LAT	Right Cheek	0.262	0.284	0.163	0.098	0.55	0.43	0.36
		Right Tilted	0.136	0.290	0.131	0.124	0.43	0.27	0.26
		Left Cheek	0.132	0.558	0.640	0.208	0.69	0.77	0.34
		Left Tilted	0.092	0.508	0.224	0.180	0.60	0.32	0.27

WWAN Band		Exposure Position	1	4	6	1+4+6 Summed 1g SAR (W/kg)
			WWAN	5GHz WLAN Ant 1	Bluetooth Ant 1	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
GSM	GSM850_LAT	Right Cheek	0.160	0.163	0.098	0.42
		Right Tilted	0.083	0.131	0.124	0.34
		Left Cheek	0.184	0.640	0.208	1.03
		Left Tilted	0.083	0.224	0.180	0.49
	GSM1900_LAT	Right Cheek	0.040	0.163	0.098	0.30
		Right Tilted	0.035	0.131	0.124	0.29
		Left Cheek	0.079	0.640	0.208	0.93
		Left Tilted	0.025	0.224	0.180	0.43
WCDMA	WCDMA II_LAT	Right Cheek	0.117	0.163	0.098	0.38
		Right Tilted	0.050	0.131	0.124	0.31
		Left Cheek	0.161	0.640	0.208	1.01
		Left Tilted	0.079	0.224	0.180	0.48
	WCDMA IV_LAT	Right Cheek	0.119	0.163	0.098	0.38
		Right Tilted	0.048	0.131	0.124	0.30
		Left Cheek	0.088	0.640	0.208	0.94
		Left Tilted	0.049	0.224	0.180	0.45
	WCDMA V_LAT	Right Cheek	0.162	0.163	0.098	0.42
		Right Tilted	0.090	0.131	0.124	0.35
		Left Cheek	0.208	0.640	0.208	1.06
		Left Tilted	0.098	0.224	0.180	0.50
LTE	LTE Band 71_LAT	Right Cheek	0.159	0.163	0.098	0.42
		Right Tilted	0.080	0.131	0.124	0.34
		Left Cheek	0.203	0.640	0.208	1.05
		Left Tilted	0.087	0.224	0.180	0.49
	LTE Band 12_LAT	Right Cheek	0.190	0.163	0.098	0.45
		Right Tilted	0.098	0.131	0.124	0.35
		Left Cheek	0.208	0.640	0.208	1.06
		Left Tilted	0.104	0.224	0.180	0.51
	LTE Band 13_LAT	Right Cheek	0.127	0.163	0.098	0.39
		Right Tilted	0.054	0.131	0.124	0.31
		Left Cheek	0.133	0.640	0.208	0.98
		Left Tilted	0.061	0.224	0.180	0.47
	LTE Band 26_LAT	Right Cheek	0.184	0.163	0.098	0.45
		Right Tilted	0.091	0.131	0.124	0.35

		Left Cheek	0.227	0.640	0.208	1.08
		Left Tilted	0.094	0.224	0.180	0.50
	LTE Band 66_LAT	Right Cheek	0.148	0.163	0.098	0.41
		Right Tilted	0.055	0.131	0.124	0.31
		Left Cheek	0.082	0.640	0.208	0.93
		Left Tilted	0.074	0.224	0.180	0.48
	LTE Band 25_LAT	Right Cheek	0.113	0.163	0.098	0.37
		Right Tilted	0.067	0.131	0.124	0.32
		Left Cheek	0.133	0.640	0.208	0.98
		Left Tilted	0.057	0.224	0.180	0.46
	LTE Band 7_LAT	Right Cheek	0.291	0.163	0.098	0.55
		Right Tilted	0.155	0.131	0.124	0.41
		Left Cheek	0.145	0.640	0.208	0.99
		Left Tilted	0.110	0.224	0.180	0.51
	LTE Band 41_LAT	Right Cheek	0.246	0.163	0.098	0.51
		Right Tilted	0.119	0.131	0.124	0.37
		Left Cheek	0.105	0.640	0.208	0.95
		Left Tilted	0.082	0.224	0.180	0.49
	LTE Band 41(HPUE)_LAT	Right Cheek	0.262	0.163	0.098	0.52
		Right Tilted	0.136	0.131	0.124	0.39
		Left Cheek	0.132	0.640	0.208	0.98
		Left Tilted	0.092	0.224	0.180	0.50

<5GNR>

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
NR	N71_ANT 1	Right Cheek	0.605	0.284	0.163	0.098	0.89	0.77	0.70
		Right Tilted	0.520	0.290	0.131	0.124	0.81	0.65	0.64
		Left Cheek	0.458	0.558	0.640	0.208	1.02	1.10	0.67
		Left Tilted	0.425	0.508	0.224	0.180	0.93	0.65	0.61
	N5_ANT 1	Right Cheek	0.616	0.284	0.163	0.098	0.90	0.78	0.71
		Right Tilted	0.499	0.290	0.131	0.124	0.79	0.63	0.62
		Left Cheek	0.469	0.558	0.640	0.208	1.03	1.11	0.68
		Left Tilted	0.376	0.508	0.224	0.180	0.88	0.60	0.56
	N66_ANT 1	Right Cheek	0.952	0.284	0.163	0.098	1.24	1.12	1.05
		Right Tilted	1.074	0.290	0.131	0.124	**1.36**	1.21	1.20
		Left Cheek	0.468	0.558	0.640	0.208	1.03	1.11	0.68
		Left Tilted	0.759	0.508	0.224	0.180	1.27	0.98	0.94
	N25_ANT 1	Right Cheek	0.482	0.284	0.163	0.098	0.77	0.65	0.58
		Right Tilted	0.735	0.290	0.131	0.124	1.03	0.87	0.86
		Left Cheek	0.355	0.558	0.640	0.208	0.91	1.00	0.56
		Left Tilted	0.407	0.508	0.224	0.180	0.92	0.63	0.59
	N41_ANT 4	Right Cheek	0.786	0.284	0.163	0.098	1.07	0.95	0.88
		Right Tilted	0.103	0.290	0.131	0.124	0.39	0.23	0.23
		Left Cheek	0.231	0.558	0.640	0.208	0.79	0.87	0.44
		Left Tilted	0.038	0.508	0.224	0.180	0.55	0.26	0.22
	N41(HPUE)_ANT 4	Right Cheek	0.786	0.284	0.163	0.098	1.07	0.95	0.88
		Right Tilted	0.103	0.290	0.131	0.124	0.39	0.23	0.23
		Left Cheek	0.231	0.558	0.640	0.208	0.79	0.87	0.44
		Left Tilted	0.038	0.508	0.224	0.180	0.55	0.26	0.22

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)
NR	N71_ANT 1	Right Cheek	0.605	0.163	0.098	0.87
		Right Tilted	0.520	0.131	0.124	0.78
		Left Cheek	0.458	0.640	0.208	1.31
		Left Tilted	0.425	0.224	0.180	0.83
	N5_ANT 1	Right Cheek	0.616	0.163	0.098	0.88
		Right Tilted	0.499	0.131	0.124	0.75
		Left Cheek	0.469	0.640	0.208	1.32
		Left Tilted	0.376	0.224	0.180	0.78
	N66_ANT 1	Right Cheek	0.952	0.163	0.098	1.21
		Right Tilted	1.074	0.131	0.124	1.33
		Left Cheek	0.468	0.640	0.208	1.32
		Left Tilted	0.759	0.224	0.180	1.16
	N25_ANT 1	Right Cheek	0.482	0.163	0.098	0.74
		Right Tilted	0.735	0.131	0.124	0.99
		Left Cheek	0.355	0.640	0.208	1.20
		Left Tilted	0.407	0.224	0.180	0.81
	N41_ANT 4	Right Cheek	0.786	0.163	0.098	1.05
		Right Tilted	0.103	0.131	0.124	0.36
		Left Cheek	0.231	0.640	0.208	1.08
		Left Tilted	0.038	0.224	0.180	0.44
	N41(HPUE)_ANT 4	Right Cheek	0.786	0.163	0.098	1.05
		Right Tilted	0.103	0.131	0.124	0.36
		Left Cheek	0.231	0.640	0.208	1.08
		Left Tilted	0.038	0.224	0.180	0.44

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
NR	N71_ANT 0	Right Cheek	0.134	0.284	0.163	0.098	0.42	0.30	0.23
		Right Tilted	0.073	0.290	0.131	0.124	0.36	0.20	0.20
		Left Cheek	0.156	0.558	0.640	0.208	0.71	0.80	0.36
		Left Tilted	0.079	0.508	0.224	0.180	0.59	0.30	0.26
	N5_ANT 0	Right Cheek	0.169	0.284	0.163	0.098	0.45	0.33	0.27
		Right Tilted	0.085	0.290	0.131	0.124	0.38	0.22	0.21
		Left Cheek	0.196	0.558	0.640	0.208	0.75	0.84	0.40
		Left Tilted	0.106	0.508	0.224	0.180	0.61	0.33	0.29
	N66_ANT 0	Right Cheek	0.116	0.284	0.163	0.098	0.40	0.28	0.21
		Right Tilted	0.044	0.290	0.131	0.124	0.33	0.18	0.17
		Left Cheek	0.081	0.558	0.640	0.208	0.64	0.72	0.29
		Left Tilted	0.048	0.508	0.224	0.180	0.56	0.27	0.23
	N25_ANT 0	Right Cheek	0.116	0.284	0.163	0.098	0.40	0.28	0.21
		Right Tilted	0.063	0.290	0.131	0.124	0.35	0.19	0.19
		Left Cheek	0.141	0.558	0.640	0.208	0.70	0.78	0.35
		Left Tilted	0.060	0.508	0.224	0.180	0.57	0.28	0.24

WWAN Band		Exposure Position	1	4	6	1+4+6
			WWAN	5GHz WLAN Ant 1	Bluetooth Ant 1	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
NR	N71_ANT 0	Right Cheek	0.134	0.163	0.098	0.40
		Right Tilted	0.073	0.131	0.124	0.33
		Left Cheek	0.156	0.640	0.208	1.00
		Left Tilted	0.079	0.224	0.180	0.48
	N5_ANT 0	Right Cheek	0.169	0.163	0.098	0.43
		Right Tilted	0.085	0.131	0.124	0.34
		Left Cheek	0.196	0.640	0.208	1.04
		Left Tilted	0.106	0.224	0.180	0.51
	N66_ANT 0	Right Cheek	0.116	0.163	0.098	0.38
		Right Tilted	0.044	0.131	0.124	0.30
		Left Cheek	0.081	0.640	0.208	0.93
		Left Tilted	0.048	0.224	0.180	0.45
	N25_ANT 0	Right Cheek	0.116	0.163	0.098	0.38
		Right Tilted	0.063	0.131	0.124	0.32
		Left Cheek	0.141	0.640	0.208	0.99
		Left Tilted	0.060	0.224	0.180	0.46

20.3 Hotspot Exposure Conditions

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850_UAT	Front	0.368	0.182	0.099	0.116	0.55	0.47	0.48
		Back	0.476	0.200	0.604	0.154	0.68	1.08	0.63
		Left side	0.277	0.036	0.011	0.021	0.31	0.29	0.30
		Right side	0.294	0.069	0.268	0.086	0.36	0.56	0.38
		Top side	0.308	0.222	0.064	0.229	0.53	0.37	0.54
		Bottom side					0.00	0.00	0.00
	GSM1900_UAT	Front	0.190	0.182	0.099	0.116	0.37	0.29	0.31
		Back	0.245	0.200	0.604	0.154	0.45	0.85	0.40
		Left side	0.029	0.036	0.011	0.021	0.07	0.04	0.05
		Right side	0.024	0.069	0.268	0.086	0.09	0.29	0.11
		Top side	0.583	0.222	0.064	0.229	0.81	0.65	0.81
		Bottom side					0.00	0.00	0.00
WCDMA	WCDMA II_UAT	Front	0.323	0.182	0.099	0.116	0.51	0.42	0.44
		Back	0.418	0.200	0.604	0.154	0.62	1.02	0.57
		Left side	0.060	0.036	0.011	0.021	0.10	0.07	0.08
		Right side	0.046	0.069	0.268	0.086	0.12	0.31	0.13
		Top side	0.726	0.222	0.064	0.229	0.95	0.79	0.96
		Bottom side					0.00	0.00	0.00
	WCDMA IV_UAT	Front	0.389	0.182	0.099	0.116	0.57	0.49	0.51
		Back	0.397	0.200	0.604	0.154	0.60	1.00	0.55
		Left side	0.069	0.036	0.011	0.021	0.11	0.08	0.09
		Right side	0.197	0.069	0.268	0.086	0.27	0.47	0.28
		Top side	0.655	0.222	0.064	0.229	0.88	0.72	0.88
		Bottom side					0.00	0.00	0.00
	WCDMA V_UAT	Front	0.343	0.182	0.099	0.116	0.53	0.44	0.46
		Back	0.453	0.200	0.604	0.154	0.65	1.06	0.61
		Left side	0.276	0.036	0.011	0.021	0.31	0.29	0.30
		Right side	0.287	0.069	0.268	0.086	0.36	0.56	0.37
		Top side	0.290	0.222	0.064	0.229	0.51	0.35	0.52
		Bottom side					0.00	0.00	0.00
LTE	LTE Band 71_UAT	Front	0.245	0.182	0.099	0.116	0.43	0.34	0.36
		Back	0.321	0.200	0.604	0.154	0.52	0.93	0.48
		Left side	0.386	0.036	0.011	0.021	0.42	0.40	0.41
		Right side	0.283	0.069	0.268	0.086	0.35	0.55	0.37
		Top side	0.155	0.222	0.064	0.229	0.38	0.22	0.38
		Bottom side					0.00	0.00	0.00
	LTE Band 12_UAT	Front	0.266	0.182	0.099	0.116	0.45	0.37	0.38
		Back	0.300	0.200	0.604	0.154	0.50	0.90	0.45
		Left side	0.319	0.036	0.011	0.021	0.36	0.33	0.34
		Right side	0.272	0.069	0.268	0.086	0.34	0.54	0.36
		Top side	0.168	0.222	0.064	0.229	0.39	0.23	0.40
		Bottom side					0.00	0.00	0.00
	LTE Band 13_UAT	Front	0.298	0.182	0.099	0.116	0.48	0.40	0.41
		Back	0.366	0.200	0.604	0.154	0.57	0.97	0.52
		Left side	0.398	0.036	0.011	0.021	0.43	0.41	0.42
		Right side	0.319	0.069	0.268	0.086	0.39	0.59	0.41
		Top side	0.215	0.222	0.064	0.229	0.44	0.28	0.44
		Bottom side					0.00	0.00	0.00
	LTE Band 26_UAT	Front	0.443	0.182	0.099	0.116	0.63	0.54	0.56
		Back	0.512	0.200	0.604	0.154	0.71	1.12	0.67

		Left side	0.140	0.036	0.011	0.021	0.18	0.15	0.16
		Right side	0.259	0.069	0.268	0.086	0.33	0.53	0.35
		Top side	0.345	0.222	0.064	0.229	0.57	0.41	0.57
		Bottom side					0.00	0.00	0.00
	LTE Band 66_UAT	Front	0.454	0.182	0.099	0.116	0.64	0.55	0.57
		Back	0.503	0.200	0.604	0.154	0.70	1.11	0.66
		Left side	0.055	0.036	0.011	0.021	0.09	0.07	0.08
		Right side	0.050	0.069	0.268	0.086	0.12	0.32	0.14
		Top side	0.889	0.222	0.064	0.229	1.11	0.95	1.12
		Bottom side					0.00	0.00	0.00
	LTE Band 25_UAT	Front	0.568	0.182	0.099	0.116	0.75	0.67	0.68
		Back	0.635	0.200	0.604	0.154	0.84	1.24	0.79
		Left side	0.070	0.036	0.011	0.021	0.11	0.08	0.09
		Right side	0.006	0.069	0.268	0.086	0.08	0.27	0.09
		Top side	1.058	0.222	0.064	0.229	1.28	1.12	1.29
		Bottom side					0.00	0.00	0.00
	LTE Band 7_UAT	Front	0.249	0.182	0.099	0.116	0.43	0.35	0.37
		Back	0.486	0.200	0.604	0.154	0.69	1.09	0.64
		Left side	0.208	0.036	0.011	0.021	0.24	0.22	0.23
		Right side	0.019	0.069	0.268	0.086	0.09	0.29	0.11
		Top side	0.894	0.222	0.064	0.229	1.12	0.96	1.12
		Bottom side					0.00	0.00	0.00
	LTE Band 41_UAT	Front	0.241	0.182	0.099	0.116	0.42	0.34	0.36
		Back	0.490	0.200	0.604	0.154	0.69	1.09	0.64
		Left side	0.194	0.036	0.011	0.021	0.23	0.21	0.22
		Right side	0.017	0.069	0.268	0.086	0.09	0.29	0.10
		Top side	0.930	0.222	0.064	0.229	1.15	0.99	1.16
		Bottom side					0.00	0.00	0.00
	LTE Band 41(HPUE)_UAT	Front	0.236	0.182	0.099	0.116	0.42	0.34	0.35
		Back	0.446	0.200	0.604	0.154	0.65	1.05	0.60
		Left side	0.168	0.036	0.011	0.021	0.20	0.18	0.19
		Right side	0.016	0.069	0.268	0.086	0.09	0.28	0.10
		Top side	0.783	0.222	0.064	0.229	1.01	0.85	1.01
		Bottom side					0.00	0.00	0.00

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)
GSM	GSM850_UAT	Front	0.368	0.099	0.116	0.58
		Back	0.476	0.604	0.154	1.23
		Left side	0.277	0.011	0.021	0.31
		Right side	0.294	0.268	0.086	0.65
		Top side	0.308	0.064	0.229	0.60
		Bottom side				0.00
	GSM1900_UAT	Front	0.190	0.099	0.116	0.41
		Back	0.245	0.604	0.154	1.00
		Left side	0.029	0.011	0.021	0.06
		Right side	0.024	0.268	0.086	0.38
		Top side	0.583	0.064	0.229	0.88
		Bottom side				0.00
WCDMA	WCDMA II_UAT	Front	0.323	0.099	0.116	0.54
		Back	0.418	0.604	0.154	1.18
		Left side	0.060	0.011	0.021	0.09
		Right side	0.046	0.268	0.086	0.40
		Top side	0.726	0.064	0.229	1.02
		Bottom side				0.00
	WCDMA IV_UAT	Front	0.389	0.099	0.116	0.60
		Back	0.397	0.604	0.154	1.16
		Left side	0.069	0.011	0.021	0.10
		Right side	0.197	0.268	0.086	0.55
		Top side	0.655	0.064	0.229	0.95
		Bottom side				0.00
	WCDMA V_UAT	Front	0.343	0.099	0.116	0.56
		Back	0.453	0.604	0.154	1.21
		Left side	0.276	0.011	0.021	0.31
		Right side	0.287	0.268	0.086	0.64
		Top side	0.290	0.064	0.229	0.58
		Bottom side				0.00
LTE	LTE Band 71_UAT	Front	0.245	0.099	0.116	0.46
		Back	0.321	0.604	0.154	1.08
		Left side	0.386	0.011	0.021	0.42
		Right side	0.283	0.268	0.086	0.64
		Top side	0.155	0.064	0.229	0.45
		Bottom side				0.00
	LTE Band 12_UAT	Front	0.266	0.099	0.116	0.48
		Back	0.300	0.604	0.154	1.06
		Left side	0.319	0.011	0.021	0.35
		Right side	0.272	0.268	0.086	0.63
		Top side	0.168	0.064	0.229	0.46
		Bottom side				0.00
	LTE Band 13_UAT	Front	0.298	0.099	0.116	0.51
		Back	0.366	0.604	0.154	1.12
		Left side	0.398	0.011	0.021	0.43
		Right side	0.319	0.268	0.086	0.67
		Top side	0.215	0.064	0.229	0.51
		Bottom side				0.00
	LTE Band 26_UAT	Front	0.443	0.099	0.116	0.66
		Back	0.512	0.604	0.154	1.27
		Left side	0.140	0.011	0.021	0.17

		Right side	0.259	0.268	0.086	0.61
		Top side	0.345	0.064	0.229	0.64
		Bottom side				0.00
	LTE Band 66_UAT	Front	0.454	0.099	0.116	0.67
		Back	0.503	0.604	0.154	1.26
		Left side	0.055	0.011	0.021	0.09
		Right side	0.050	0.268	0.086	0.40
		Top side	0.889	0.064	0.229	1.18
		Bottom side				0.00
	LTE Band 25_UAT	Front	0.568	0.099	0.116	0.78
		Back	0.635	0.604	0.154	1.39
		Left side	0.070	0.011	0.021	0.10
		Right side	0.006	0.268	0.086	0.36
		Top side	1.058	0.064	0.229	1.35
		Bottom side				0.00
	LTE Band 7_UAT	Front	0.249	0.099	0.116	0.46
		Back	0.486	0.604	0.154	1.24
		Left side	0.208	0.011	0.021	0.24
		Right side	0.019	0.268	0.086	0.37
		Top side	0.894	0.064	0.229	1.19
		Bottom side				0.00
	LTE Band 41_UAT	Front	0.241	0.099	0.116	0.46
		Back	0.490	0.604	0.154	1.25
		Left side	0.194	0.011	0.021	0.23
		Right side	0.017	0.268	0.086	0.37
		Top side	0.930	0.064	0.229	1.22
		Bottom side				0.00
	LTE Band 41(HPUE)_UAT	Front	0.236	0.099	0.116	0.45
		Back	0.446	0.604	0.154	1.20
		Left side	0.168	0.011	0.021	0.20
		Right side	0.016	0.268	0.086	0.37
		Top side	0.783	0.064	0.229	1.08
		Bottom side				0.00

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 1 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
GSM	GSM850_LAT	Front	0.151	0.182	0.099	0.116	0.33	0.25	0.27
		Back	0.259	0.200	0.604	0.154	0.46	0.86	0.41
		Left side	0.218	0.036	0.011	0.021	0.25	0.23	0.24
		Right side	0.127	0.069	0.268	0.086	0.20	0.40	0.21
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.208				0.21	0.21	0.21
	GSM1900_LAT	Front	0.260	0.182	0.099	0.116	0.44	0.36	0.38
		Back	0.478	0.200	0.604	0.154	0.68	1.08	0.63
		Left side	0.061	0.036	0.011	0.021	0.10	0.07	0.08
		Right side	0.101	0.069	0.268	0.086	0.17	0.37	0.19
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.792				0.79	0.79	0.79
WCDMA	WCDMA II_LAT	Front	0.294	0.182	0.099	0.116	0.48	0.39	0.41
		Back	0.764	0.200	0.604	0.154	0.96	1.37	0.92
		Left side	0.061	0.036	0.011	0.021	0.10	0.07	0.08
		Right side	0.110	0.069	0.268	0.086	0.18	0.38	0.20
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	1.077				1.08	1.08	1.08
	WCDMA IV_LAT	Front	0.224	0.182	0.099	0.116	0.41	0.32	0.34
		Back	0.420	0.200	0.604	0.154	0.62	1.02	0.57
		Left side	0.005	0.036	0.011	0.021	0.04	0.02	0.03
		Right side	0.007	0.069	0.268	0.086	0.08	0.28	0.09
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.761				0.76	0.76	0.76
	WCDMA V_LAT	Front	0.169	0.182	0.099	0.116	0.35	0.27	0.29
		Back	0.268	0.200	0.604	0.154	0.47	0.87	0.42
		Left side	0.244	0.036	0.011	0.021	0.28	0.26	0.27
		Right side	0.129	0.069	0.268	0.086	0.20	0.40	0.22
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.221				0.22	0.22	0.22
LTE	LTE Band 71_LAT	Front	0.212	0.182	0.099	0.116	0.39	0.31	0.33
		Back	0.284	0.200	0.604	0.154	0.48	0.89	0.44
		Left side	0.396	0.036	0.011	0.021	0.43	0.41	0.42
		Right side	0.267	0.069	0.268	0.086	0.34	0.54	0.35
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.239				0.24	0.24	0.24
	LTE Band 12_LAT	Front	0.200	0.182	0.099	0.116	0.38	0.30	0.32
		Back	0.261	0.200	0.604	0.154	0.46	0.87	0.42
		Left side	0.476	0.036	0.011	0.021	0.51	0.49	0.50
		Right side	0.202	0.069	0.268	0.086	0.27	0.47	0.29
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.174				0.17	0.17	0.17
	LTE Band 13_LAT	Front	0.137	0.182	0.099	0.116	0.32	0.24	0.25
		Back	0.209	0.200	0.604	0.154	0.41	0.81	0.36
		Left side	0.287	0.036	0.011	0.021	0.32	0.30	0.31
		Right side	0.139	0.069	0.268	0.086	0.21	0.41	0.23
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.188				0.19	0.19	0.19
	LTE Band 26_LAT	Front	0.220	0.182	0.099	0.116	0.40	0.32	0.34
		Back	0.348	0.200	0.604	0.154	0.55	0.95	0.50
		Left side	0.252	0.036	0.011	0.021	0.29	0.26	0.27

		Right side	0.139	0.069	0.268	0.086	0.21	0.41	0.23
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.267				0.27	0.27	0.27
	LTE Band 66_LAT	Front	0.313	0.182	0.099	0.116	0.50	0.41	0.43
		Back	0.585	0.200	0.604	0.154	0.79	1.19	0.74
		Left side	0.055	0.036	0.011	0.021	0.09	0.07	0.08
		Right side	0.081	0.069	0.268	0.086	0.15	0.35	0.17
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.971				0.97	0.97	0.97
	LTE Band 25_LAT	Front	0.323	0.182	0.099	0.116	0.51	0.42	0.44
		Back	0.722	0.200	0.604	0.154	0.92	1.33	0.88
		Left side	0.069	0.036	0.011	0.021	0.11	0.08	0.09
		Right side	0.129	0.069	0.268	0.086	0.20	0.40	0.22
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.955				0.96	0.96	0.96
	LTE Band 7_LAT	Front	0.324	0.182	0.099	0.116	0.51	0.42	0.44
		Back	0.638	0.200	0.604	0.154	0.84	1.24	0.79
		Left side	0.004	0.036	0.011	0.021	0.04	0.02	0.03
		Right side	0.155	0.069	0.268	0.086	0.22	0.42	0.24
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.323				0.32	0.32	0.32
	LTE Band 41_LAT	Front	0.164	0.182	0.099	0.116	0.35	0.26	0.28
		Back	0.689	0.200	0.604	0.154	0.89	1.29	0.84
		Left side	0.048	0.036	0.011	0.021	0.08	0.06	0.07
		Right side	0.083	0.069	0.268	0.086	0.15	0.35	0.17
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.112				0.11	0.11	0.11
	LTE Band 41(HPUE)_LAT	Front	0.115	0.182	0.099	0.116	0.30	0.21	0.23
		Back	0.614	0.200	0.604	0.154	0.81	1.22	0.77
		Left side	0.041	0.036	0.011	0.021	0.08	0.05	0.06
		Right side	0.056	0.069	0.268	0.086	0.13	0.32	0.14
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.078				0.08	0.08	0.08

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)
GSM	GSM850_LAT	Front	0.151	0.099	0.116	0.37
		Back	0.259	0.604	0.154	1.02
		Left side	0.218	0.011	0.021	0.25
		Right side	0.127	0.268	0.086	0.48
		Top side		0.064	0.229	0.29
		Bottom side	0.208			0.21
	GSM1900_LAT	Front	0.260	0.099	0.116	0.48
		Back	0.478	0.604	0.154	1.24
		Left side	0.061	0.011	0.021	0.09
		Right side	0.101	0.268	0.086	0.46
		Top side		0.064	0.229	0.29
		Bottom side	0.792			0.79
WCDMA	WCDMA II_LAT	Front	0.294	0.099	0.116	0.51
		Back	0.764	0.604	0.154	**1.52**
		Left side	0.061	0.011	0.021	0.09
		Right side	0.110	0.268	0.086	0.46
		Top side		0.064	0.229	0.29
		Bottom side	1.077			1.08
	WCDMA IV_LAT	Front	0.224	0.099	0.116	0.44
		Back	0.420	0.604	0.154	1.18
		Left side	0.005	0.011	0.021	0.04
		Right side	0.007	0.268	0.086	0.36
		Top side		0.064	0.229	0.29
		Bottom side	0.761			0.76
	WCDMA V_LAT	Front	0.169	0.099	0.116	0.38
		Back	0.268	0.604	0.154	1.03
		Left side	0.244	0.011	0.021	0.28
		Right side	0.129	0.268	0.086	0.48
		Top side		0.064	0.229	0.29
		Bottom side	0.221			0.22
LTE	LTE Band 71_LAT	Front	0.212	0.099	0.116	0.43
		Back	0.284	0.604	0.154	1.04
		Left side	0.396	0.011	0.021	0.43
		Right side	0.267	0.268	0.086	0.62
		Top side		0.064	0.229	0.29
		Bottom side	0.239			0.24
	LTE Band 12_LAT	Front	0.200	0.099	0.116	0.42
		Back	0.261	0.604	0.154	1.02
		Left side	0.476	0.011	0.021	0.51
		Right side	0.202	0.268	0.086	0.56
		Top side		0.064	0.229	0.29
		Bottom side	0.174			0.17
	LTE Band 13_LAT	Front	0.137	0.099	0.116	0.35
		Back	0.209	0.604	0.154	0.97
		Left side	0.287	0.011	0.021	0.32
		Right side	0.139	0.268	0.086	0.49
		Top side		0.064	0.229	0.29
		Bottom side	0.188			0.19
	LTE Band 26_LAT	Front	0.220	0.099	0.116	0.44
		Back	0.348	0.604	0.154	0.11
		Left side	0.252	0.011	0.021	0.28

		Right side	0.139	0.268	0.086	0.49
		Top side		0.064	0.229	0.29
		Bottom side	0.267			0.27
	LTE Band 66_LAT	Front	0.313	0.099	0.116	0.53
		Back	0.585	0.604	0.154	1.34
		Left side	0.055	0.011	0.021	0.09
		Right side	0.081	0.268	0.086	0.44
		Top side		0.064	0.229	0.29
		Bottom side	0.971			0.97
	LTE Band 25_LAT	Front	0.323	0.099	0.116	0.54
		Back	0.722	0.604	0.154	1.48
		Left side	0.069	0.011	0.021	0.10
		Right side	0.129	0.268	0.086	0.48
		Top side		0.064	0.229	0.29
		Bottom side	0.955			0.96
	LTE Band 7_LAT	Front	0.324	0.099	0.116	0.54
		Back	0.638	0.604	0.154	1.40
		Left side	0.004	0.011	0.021	0.04
		Right side	0.155	0.268	0.086	0.51
		Top side		0.064	0.229	0.29
		Bottom side	0.323			0.32
	LTE Band 41_LAT	Front	0.164	0.099	0.116	0.38
		Back	0.689	0.604	0.154	1.45
		Left side	0.048	0.011	0.021	0.08
		Right side	0.083	0.268	0.086	0.44
		Top side		0.064	0.229	0.29
		Bottom side	0.112			0.11
	LTE Band 41(HPUE)_LAT	Front	0.115	0.099	0.116	0.33
		Back	0.614	0.604	0.154	1.37
		Left side	0.041	0.011	0.021	0.07
		Right side	0.056	0.268	0.086	0.41
		Top side		0.064	0.229	0.29
		Bottom side	0.078			0.08

<5GNR>

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 1 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
NR	N71_ANT 1	Front	0.248	0.182	0.099	0.116	0.43	0.35	0.36
		Back	0.269	0.200	0.604	0.154	0.47	0.87	0.42
		Left side	0.346	0.036	0.011	0.021	0.38	0.36	0.37
		Right side	0.286	0.069	0.268	0.086	0.36	0.55	0.37
		Top side	0.111	0.222	0.064	0.229	0.33	0.18	0.34
		Bottom side					0.00	0.00	0.00
	N5_ANT 1	Front	0.368	0.182	0.099	0.116	0.55	0.47	0.48
		Back	0.434	0.200	0.604	0.154	0.63	1.04	0.59
		Left side	0.159	0.036	0.011	0.021	0.20	0.17	0.18
		Right side	0.209	0.069	0.268	0.086	0.28	0.48	0.30
		Top side	0.326	0.222	0.064	0.229	0.55	0.39	0.56
		Bottom side					0.00	0.00	0.00
	N66_ANT 1	Front	0.590	0.182	0.099	0.116	0.77	0.69	0.71
		Back	0.621	0.200	0.604	0.154	0.82	1.23	0.78
		Left side	0.084	0.036	0.011	0.021	0.12	0.10	0.11
		Right side	0.073	0.069	0.268	0.086	0.14	0.34	0.16
		Top side	0.947	0.222	0.064	0.229	1.17	1.01	1.18
		Bottom side					0.00	0.00	0.00
	N25_ANT 1	Front	0.519	0.182	0.099	0.116	0.70	0.62	0.64
		Back	0.583	0.200	0.604	0.154	0.78	1.19	0.74
		Left side	0.072	0.036	0.011	0.021	0.11	0.08	0.09
		Right side	0.052	0.069	0.268	0.086	0.12	0.32	0.14
		Top side	0.949	0.222	0.064	0.229	1.17	1.01	1.18
		Bottom side					0.00	0.00	0.00
	N41_ANT 4	Front	0.024	0.182	0.099	0.116	0.21	0.12	0.14
		Back	0.593	0.200	0.604	0.154	0.79	1.20	0.75
		Left side	0.163	0.036	0.011	0.021	0.20	0.17	0.18
		Right side	0.006	0.069	0.268	0.086	0.08	0.27	0.09
		Top side	0.007	0.222	0.064	0.229	0.23	0.07	0.24
		Bottom side					0.00	0.00	0.00
	N41(HPUE)_ANT 4	Front	0.024	0.182	0.099	0.116	0.21	0.12	0.14
		Back	0.593	0.200	0.604	0.154	0.79	1.20	0.75
		Left side	0.163	0.036	0.011	0.021	0.20	0.17	0.18
		Right side	0.006	0.069	0.268	0.086	0.08	0.27	0.09
		Top side	0.007	0.222	0.064	0.229	0.23	0.07	0.24
		Bottom side					0.00	0.00	0.00

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)
NR	N71_ANT 1	Front	0.248	0.099	0.116	0.46
		Back	0.269	0.604	0.154	1.03
		Left side	0.346	0.011	0.021	0.38
		Right side	0.286	0.268	0.086	0.64
		Top side	0.111	0.064	0.229	0.40
		Bottom side				0.00
	N5_ANT 1	Front	0.368	0.099	0.116	0.58
		Back	0.434	0.604	0.154	1.19
		Left side	0.159	0.011	0.021	0.19
		Right side	0.209	0.268	0.086	0.56
		Top side	0.326	0.064	0.229	0.62
		Bottom side				0.00
	N66_ANT 1	Front	0.590	0.099	0.116	0.81
		Back	0.621	0.604	0.154	1.38
		Left side	0.084	0.011	0.021	0.12
		Right side	0.073	0.268	0.086	0.43
		Top side	0.947	0.064	0.229	1.24
		Bottom side				0.00
	N25_ANT 1	Front	0.519	0.099	0.116	0.73
		Back	0.583	0.604	0.154	1.34
		Left side	0.072	0.011	0.021	0.10
		Right side	0.052	0.268	0.086	0.41
		Top side	0.949	0.064	0.229	1.24
		Bottom side				0.00
	N41_ANT 4	Front	0.024	0.099	0.116	0.24
		Back	0.593	0.604	0.154	1.35
		Left side	0.163	0.011	0.021	0.20
		Right side	0.006	0.268	0.086	0.36
		Top side	0.007	0.064	0.229	0.30
		Bottom side				0.00
	N41(HPUE)_ANT 4	Front	0.024	0.099	0.116	0.24
		Back	0.593	0.604	0.154	1.35
		Left side	0.163	0.011	0.021	0.20
		Right side	0.006	0.268	0.086	0.36
		Top side	0.007	0.064	0.229	0.30
		Bottom side				0.00

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
NR	N71_ANT 0	Front	0.181	0.182	0.099	0.116	0.36	0.28	0.30
		Back	0.214	0.200	0.604	0.154	0.41	0.82	0.37
		Left side	0.366	0.036	0.011	0.021	0.40	0.38	0.39
		Right side	0.191	0.069	0.268	0.086	0.26	0.46	0.28
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.173				0.17	0.17	0.17
	N5_ANT 0	Front	0.175	0.182	0.099	0.116	0.36	0.27	0.29
		Back	0.287	0.200	0.604	0.154	0.49	0.89	0.44
		Left side	0.201	0.036	0.011	0.021	0.24	0.21	0.22
		Right side	0.116	0.069	0.268	0.086	0.19	0.38	0.20
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.225				0.23	0.23	0.23
	N66_ANT 0	Front	0.316	0.182	0.099	0.116	0.50	0.42	0.43
		Back	0.571	0.200	0.604	0.154	0.77	1.18	0.73
		Left side	0.064	0.036	0.011	0.021	0.10	0.08	0.09
		Right side	0.103	0.069	0.268	0.086	0.17	0.37	0.19
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	0.923				0.92	0.92	0.92
	N25_ANT 0	Front	0.325	0.182	0.099	0.116	0.51	0.42	0.44
		Back	0.745	0.200	0.604	0.154	0.95	1.35	0.90
		Left side	0.073	0.036	0.011	0.021	0.11	0.08	0.09
		Right side	0.110	0.069	0.268	0.086	0.18	0.38	0.20
		Top side		0.222	0.064	0.229	0.22	0.06	0.23
		Bottom side	1.042				1.04	1.04	1.04

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)
NR	N71_ANT 0	Front	0.181	0.099	0.116	0.40
		Back	0.214	0.604	0.154	0.97
		Left side	0.366	0.011	0.021	0.40
		Right side	0.191	0.268	0.086	0.55
		Top side		0.064	0.229	0.29
		Bottom side	0.173			0.17
	N5_ANT 0	Front	0.175	0.099	0.116	0.39
		Back	0.287	0.604	0.154	1.05
		Left side	0.201	0.011	0.021	0.23
		Right side	0.116	0.268	0.086	0.47
		Top side		0.064	0.229	0.29
		Bottom side	0.225			0.23
	N66_ANT 0	Front	0.316	0.099	0.116	0.53
		Back	0.571	0.604	0.154	1.33
		Left side	0.064	0.011	0.021	0.10
		Right side	0.103	0.268	0.086	0.46
		Top side		0.064	0.229	0.29
		Bottom side	0.923			0.92
	N25_ANT 0	Front	0.325	0.099	0.116	0.54
		Back	0.745	0.604	0.154	1.50
		Left side	0.073	0.011	0.021	0.11
		Right side	0.110	0.268	0.086	0.46
		Top side		0.064	0.229	0.29
		Bottom side	1.042			1.04

20.4 Body-Worn Accessory Exposure Conditions

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850_UAT	Front	0.297	0.246	0.080	0.085	0.54	0.38	0.38
		Back	0.354	0.261	0.346	0.108	0.62	0.70	0.46
	GSM1900_UAT	Front	0.349	0.246	0.080	0.085	0.60	0.43	0.43
		Back	0.651	0.261	0.346	0.108	0.91	1.00	0.76
WCDMA	WCDMA II_UAT	Front	0.623	0.246	0.080	0.085	0.87	0.70	0.71
		Back	0.848	0.261	0.346	0.108	1.11	1.19	0.96
	WCDMA IV_UAT	Front	0.867	0.246	0.080	0.085	1.11	0.95	0.95
		Back	0.924	0.261	0.346	0.108	1.19	1.27	1.03
	WCDMA V_UAT	Front	0.290	0.246	0.080	0.085	0.54	0.37	0.38
		Back	0.338	0.261	0.346	0.108	0.60	0.68	0.45
LTE	LTE Band 71_UAT	Front	0.231	0.246	0.080	0.085	0.48	0.31	0.32
		Back	0.287	0.261	0.346	0.108	0.55	0.63	0.40
	LTE Band 12_UAT	Front	0.266	0.246	0.080	0.085	0.51	0.35	0.35
		Back	0.325	0.261	0.346	0.108	0.59	0.67	0.43
	LTE Band 13_UAT	Front	0.346	0.246	0.080	0.085	0.59	0.43	0.43
		Back	0.397	0.261	0.346	0.108	0.66	0.74	0.51
	LTE Band 26_UAT	Front	0.263	0.246	0.080	0.085	0.51	0.34	0.35
		Back	0.309	0.261	0.346	0.108	0.57	0.66	0.42
	LTE Band 66_UAT	Front	0.616	0.246	0.080	0.085	0.86	0.70	0.70
		Back	0.929	0.261	0.346	0.108	1.19	1.28	1.04
	LTE Band 25_UAT	Front	0.676	0.246	0.080	0.085	0.92	0.76	0.76
		Back	0.925	0.261	0.346	0.108	1.19	1.27	1.03
	LTE Band 7_UAT	Front	0.247	0.246	0.080	0.085	0.49	0.33	0.33
		Back	0.603	0.261	0.346	0.108	0.86	0.95	0.71
	LTE Band 41_UAT	Front	0.259	0.246	0.080	0.085	0.51	0.34	0.34
		Back	0.626	0.261	0.346	0.108	0.89	0.97	0.73
	LTE Band 41(HPUE)_UAT	Front	0.344	0.246	0.080	0.085	0.59	0.42	0.43
		Back	0.605	0.261	0.346	0.108	0.87	0.95	0.71

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)
GSM	GSM850_UAT	Front	0.297	0.080	0.085	0.46
		Back	0.354	0.346	0.108	0.81
	GSM1900_UAT	Front	0.349	0.080	0.085	0.51
		Back	0.651	0.346	0.108	1.11
WCDMA	WCDMA II_UAT	Front	0.623	0.080	0.085	0.79
		Back	0.848	0.346	0.108	1.30
	WCDMA IV_UAT	Front	0.867	0.080	0.085	1.03
		Back	0.924	0.346	0.108	1.38
	WCDMA V_UAT	Front	0.290	0.080	0.085	0.46
		Back	0.338	0.346	0.108	0.79
LTE	LTE Band 71_UAT	Front	0.231	0.080	0.085	0.40
		Back	0.287	0.346	0.108	0.74
	LTE Band 12_UAT	Front	0.266	0.080	0.085	0.43
		Back	0.325	0.346	0.108	0.78
	LTE Band 13_UAT	Front	0.346	0.080	0.085	0.51
		Back	0.397	0.346	0.108	0.85
	LTE Band 26_UAT	Front	0.263	0.080	0.085	0.43
		Back	0.309	0.346	0.108	0.76
	LTE Band 66_UAT	Front	0.616	0.080	0.085	0.78
		Back	0.929	0.346	0.108	1.38
	LTE Band 25_UAT	Front	0.676	0.080	0.085	0.84
		Back	0.925	0.346	0.108	1.38
	LTE Band 7_UAT	Front	0.247	0.080	0.085	0.41
		Back	0.603	0.346	0.108	1.06
	LTE Band 41_UAT	Front	0.259	0.080	0.085	0.42
		Back	0.626	0.346	0.108	1.08
	LTE Band 41(HPUE)_UAT	Front	0.344	0.080	0.085	0.51
		Back	0.605	0.346	0.108	1.08

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
GSM	GSM850_LAT	Front	0.161	0.246	0.080	0.085	0.41	0.24	0.25
		Back	0.206	0.261	0.346	0.108	0.47	0.55	0.31
	GSM1900_LAT	Front	0.165	0.246	0.080	0.085	0.41	0.25	0.25
		Back	0.493	0.261	0.346	0.108	0.75	0.84	0.60
WCDMA	WCDMA II_LAT	Front	0.326	0.246	0.080	0.085	0.57	0.41	0.41
		Back	0.898	0.261	0.346	0.108	1.16	1.24	1.01
	WCDMA IV_LAT	Front	0.312	0.246	0.080	0.085	0.56	0.39	0.40
		Back	0.797	0.261	0.346	0.108	1.06	1.14	0.91
	WCDMA V_LAT	Front	0.178	0.246	0.080	0.085	0.42	0.26	0.26
		Back	0.234	0.261	0.346	0.108	0.50	0.58	0.34
LTE	LTE Band 71_LAT	Front	0.208	0.246	0.080	0.085	0.45	0.29	0.29
		Back	0.268	0.261	0.346	0.108	0.53	0.61	0.38
	LTE Band 12_LAT	Front	0.228	0.246	0.080	0.085	0.47	0.31	0.31
		Back	0.280	0.261	0.346	0.108	0.54	0.63	0.39
	LTE Band 13_LAT	Front	0.174	0.246	0.080	0.085	0.42	0.25	0.26
		Back	0.198	0.261	0.346	0.108	0.46	0.54	0.31
	LTE Band 26_LAT	Front	0.191	0.246	0.080	0.085	0.44	0.27	0.28
		Back	0.258	0.261	0.346	0.108	0.52	0.60	0.37
	LTE Band 66_LAT	Front	0.422	0.246	0.080	0.085	0.67	0.50	0.51
		Back	0.978	0.261	0.346	0.108	1.24	1.32	1.09
	LTE Band 25_LAT	Front	0.373	0.246	0.080	0.085	0.62	0.45	0.46
		Back	0.894	0.261	0.346	0.108	1.16	1.24	1.00
	LTE Band 7_LAT	Front	0.227	0.246	0.080	0.085	0.47	0.31	0.31
		Back	0.452	0.261	0.346	0.108	0.71	0.80	0.56
	LTE Band 41_LAT	Front	0.154	0.246	0.080	0.085	0.40	0.23	0.24
		Back	0.384	0.261	0.346	0.108	0.65	0.73	0.49
	LTE Band 41(HPUE)_LAT	Front	0.190	0.246	0.080	0.085	0.44	0.27	0.28
		Back	0.440	0.261	0.346	0.108	0.70	0.79	0.55

WWAN Band		Exposure Position	1 WWAN 1g SAR (W/kg)	4 5GHz WLAN Ant 1 1g SAR (W/kg)	6 Bluetooth Ant 1 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)
GSM	GSM850_LAT	Front	0.161	0.080	0.085	0.33
		Back	0.206	0.346	0.108	0.66
	GSM1900_LAT	Front	0.165	0.080	0.085	0.33
		Back	0.493	0.346	0.108	0.95
WCDMA	WCDMA II_LAT	Front	0.326	0.080	0.085	0.49
		Back	0.898	0.346	0.108	1.35
	WCDMA IV_LAT	Front	0.312	0.080	0.085	0.48
		Back	0.797	0.346	0.108	1.25
	WCDMA V_LAT	Front	0.178	0.080	0.085	0.34
		Back	0.234	0.346	0.108	0.69
LTE	LTE Band 71_LAT	Front	0.208	0.080	0.085	0.37
		Back	0.268	0.346	0.108	0.72
	LTE Band 12_LAT	Front	0.228	0.080	0.085	0.39
		Back	0.280	0.346	0.108	0.73
	LTE Band 13_LAT	Front	0.174	0.080	0.085	0.34
		Back	0.198	0.346	0.108	0.65
	LTE Band 26_LAT	Front	0.191	0.080	0.085	0.36
		Back	0.258	0.346	0.108	0.71
	LTE Band 66_LAT	Front	0.422	0.080	0.085	0.59
		Back	0.978	0.346	0.108	1.43
	LTE Band 25_LAT	Front	0.373	0.080	0.085	0.54
		Back	0.894	0.346	0.108	1.35
	LTE Band 7_LAT	Front	0.227	0.080	0.085	0.39
		Back	0.452	0.346	0.108	0.91
	LTE Band 41_LAT	Front	0.154	0.080	0.085	0.32
		Back	0.384	0.346	0.108	0.84
	LTE Band 41(HPUE)_LAT	Front	0.190	0.080	0.085	0.36
		Back	0.440	0.346	0.108	0.89

<5GNR>

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
NR	N71_ANT 1	Front	0.241	0.246	0.080	0.085	0.49	0.32	0.33
		Back	0.255	0.261	0.346	0.108	0.52	0.60	0.36
	N5_ANT 1	Front	0.230	0.246	0.080	0.085	0.48	0.31	0.32
		Back	0.247	0.261	0.346	0.108	0.51	0.59	0.36
	N66_ANT 1	Front	0.730	0.246	0.080	0.085	0.98	0.81	0.82
		Back	0.779	0.261	0.346	0.108	1.04	1.13	0.89
	N25_ANT 1	Front	0.708	0.246	0.080	0.085	0.95	0.79	0.79
		Back	0.924	0.261	0.346	0.108	1.19	1.27	1.03
	N41_ANT 4	Front	0.012	0.246	0.080	0.085	0.26	0.09	0.10
		Back	0.899	0.261	0.346	0.108	1.16	1.25	1.01
	N41(HPUE)_ANT 4	Front	0.012	0.246	0.080	0.085	0.26	0.09	0.10
		Back	0.890	0.261	0.346	0.108	1.15	1.24	1.00

WWAN Band		Exposure Position	1	4	6	1+4+6 Summed 1g SAR (W/kg)
			WWAN	5GHz WLAN Ant 1	Bluetooth Ant 1	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
NR	N71_ANT 1	Front	0.241	0.080	0.085	0.41
		Back	0.255	0.346	0.108	0.71
	N66_ANT 1	Front	0.730	0.080	0.085	0.90
		Back	0.779	0.346	0.108	1.23
	N25_ANT 1	Front	0.708	0.080	0.085	0.87
		Back	0.924	0.346	0.108	1.38
	N41_ANT 4	Front	0.012	0.080	0.085	0.18
		Back	0.899	0.346	0.108	1.35
	N41(HPUE)_ANT 4	Front	0.012	0.080	0.085	0.18
		Back	0.890	0.346	0.108	1.34

WWAN Band		Exposure Position	1	2	4	6	1+2 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+6 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1			
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
NR	N71_ANT 0	Front	0.173	0.246	0.080	0.085	0.42	0.25	0.26
		Back	0.197	0.261	0.346	0.108	0.46	0.54	0.31
	N5_ANT 0	Front	0.177	0.246	0.080	0.085	0.42	0.26	0.26
		Back	0.203	0.261	0.346	0.108	0.46	0.55	0.31
	N66_ANT 0	Front	0.369	0.246	0.080	0.085	0.62	0.45	0.45
		Back	0.749	0.261	0.346	0.108	1.01	1.10	0.86
	N25_ANT 0	Front	0.349	0.246	0.080	0.085	0.60	0.43	0.43
		Back	0.889	0.261	0.346	0.108	1.15	1.24	1.00

WWAN Band		Exposure Position	1	4	6	1+4+6 Summed 1g SAR (W/kg)
			WWAN	5GHz WLAN Ant 1	Bluetooth Ant 1	
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
NR	N71_ANT 0	Front	0.173	0.080	0.085	0.34
		Back	0.197	0.346	0.108	0.65
	N5_ANT 0	Front	0.177	0.080	0.085	0.34
		Back	0.203	0.346	0.108	0.66
	N66_ANT 0	Front	0.369	0.080	0.085	0.53
		Back	0.749	0.346	0.108	1.20
	N25_ANT 0	Front	0.349	0.080	0.085	0.51
		Back	0.889	0.346	0.108	1.34

20.5 Product Specific Exposure Conditions

WWAN Band		Exposure Position	1 WWAN 10g SAR (W/kg)	4 5GHz WLAN Ant 1 10g SAR (W/kg)	1+4 Summed 10g SAR (W/kg)
GSM	GSM1900_UAT	Front		0.120	0.12
		Back		0.548	0.55
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side	0.974	0.022	1.00
		Bottom side			0.00
WCDMA	WCDMA II_UAT	Front	2.428	0.120	2.55
		Back	1.575	0.548	2.12
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side	1.929	0.022	1.95
		Bottom side			0.00
	WCDMA IV_UAT	Front	1.978	0.120	2.10
		Back	1.640	0.548	2.19
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side	1.312	0.022	1.33
		Bottom side			0.00
LTE	LTE Band 66_UAT	Front	1.921	0.120	2.04
		Back	1.618	0.548	2.17
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side	1.605	0.022	1.63
		Bottom side			0.00
	LTE Band 25_UAT	Front	2.439	0.120	2.56
		Back	1.860	0.548	2.41
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side	2.233	0.022	2.26
		Bottom side			0.00
	LTE Band 7_UAT	Front		0.120	0.12
		Back	2.291	0.548	**2.84**
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side	1.984	0.022	2.01
		Bottom side			0.00
	LTE Band 41_UAT	Front		0.120	0.12
		Back		0.548	0.55
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side	1.746	0.022	1.77
		Bottom side			0.00
	LTE Band 41(HPUE)_UAT	Front		0.120	0.12
		Back		0.548	0.55
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side	1.767	0.022	1.79
		Bottom side			0.00

WWAN Band		Exposure Position	1 WWAN 10g SAR (W/kg)	4 5GHz WLAN Ant 1 10g SAR (W/kg)	1+4 Summed 10g SAR (W/kg)
WCDMA	WCDMA II_LAT	Front		0.120	0.12
		Back	1.718	0.548	2.27
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side		0.022	0.02
		Bottom side	2.057		2.06
	WCDMA IV_LAT	Front		0.120	0.12
		Back		0.548	0.55
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side		0.022	0.02
		Bottom side	1.688		1.69
LTE	LTE Band 66_LAT	Front		0.120	0.12
		Back	1.459	0.548	2.01
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side		0.022	0.02
		Bottom side	2.311		2.31
	LTE Band 25_LAT	Front		0.120	0.12
		Back	1.788	0.548	2.34
		Left side		0.006	0.01
		Right side		0.375	0.38
		Top side		0.022	0.02
		Bottom side	2.017		2.02

<5GNR>

WWAN Band		Exposure Position	1 WWAN 10g SAR (W/kg)	4 5GHz WLAN Ant 1 10g SAR (W/kg)	1+4 Summed 10g SAR (W/kg)
NR	N66_ANT 1	Front	2.061	0.120	2.18
		Back	1.350	0.548	1.90
		Left side		0.001	0.00
		Right side		0.375	0.38
		Top side	1.281	0.022	1.30
		Bottom side			0.00
	N25_ANT 1	Front	2.109	0.120	2.23
		Back	1.298	0.548	1.85
		Left side		0.001	0.00
		Right side		0.375	0.38
		Top side	1.602	0.022	1.62
		Bottom side			0.00
	N41_ANT 4	Front		0.120	0.12
		Back	2.226	0.548	2.77
		Left side	0.845	0.001	0.85
		Right side		0.375	0.38
		Top side		0.022	0.02
		Bottom side			0.00
	N41(HPUE)_ANT 4	Front		0.120	0.12
		Back	2.226	0.548	2.77
		Left side	0.845	0.001	0.85
		Right side		0.375	0.38
		Top side		0.022	0.02
		Bottom side			0.00

WWAN Band		Exposure Position	1 WWAN 10g SAR (W/kg)	4 5GHz WLAN Ant 1 10g SAR (W/kg)	1+4 Summed 10g SAR (W/kg)
NR	N66_ANT 0	Front		0.120	0.12
		Back	1.751	0.548	2.30
		Left side		0.001	0.00
		Right side		0.375	0.38
		Top side		0.022	0.02
		Bottom side	2.550		2.55
	N25_ANT 0	Front		0.120	0.12
		Back	2.288	0.548	2.84
		Left side		0.001	0.00
		Right side		0.375	0.38
		Top side		0.022	0.02
		Bottom side	2.202		2.20

Test Engineer : Changlin Huang, Bin He, Mengming Dai

21. Uncertainty Assessment

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

22. 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 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

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

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

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

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

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

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

[12] FCC KDB 941225 D07 v01r02, " SAR Evaluation Procedures for UMPC Mini-Tablet Devices", Oct 2015.

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

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

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2021.01.27

System Check_Head_750MHz

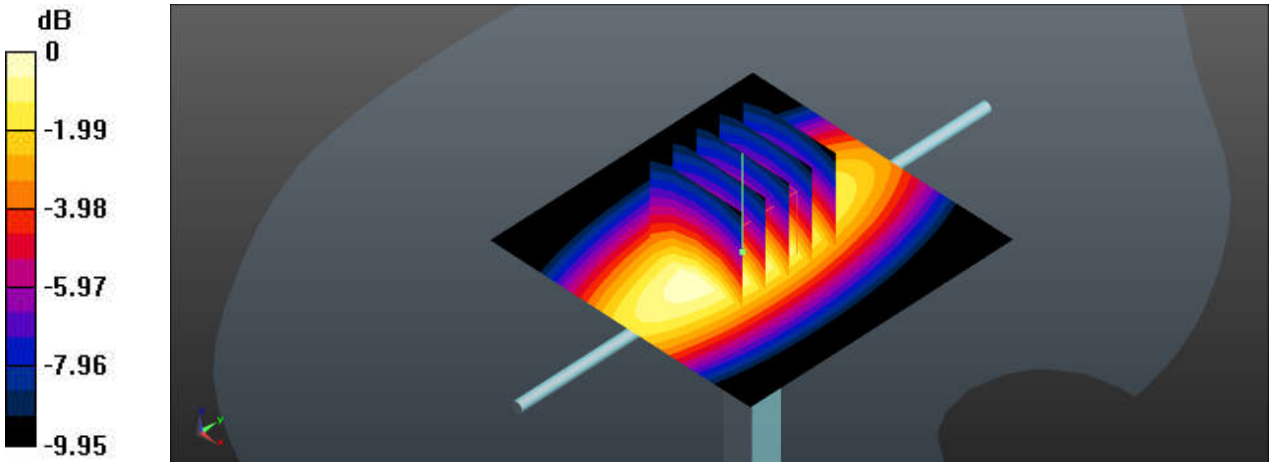
DUT: D750V3-SN:1099

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750_210127 Medium parameters used: f = 750 MHz; σ = 0.88 S/m; ε_r = 40.752; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.64, 9.64, 9.64); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- 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) = 2.87 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 58.24 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 3.36 W/kg
SAR(1 g) = 2.28 W/kg; SAR(10 g) = 1.53 W/kg
Maximum value of SAR (measured) = 2.86 W/kg



0 dB = 2.86 W/kg

System Check_Head_750MHz

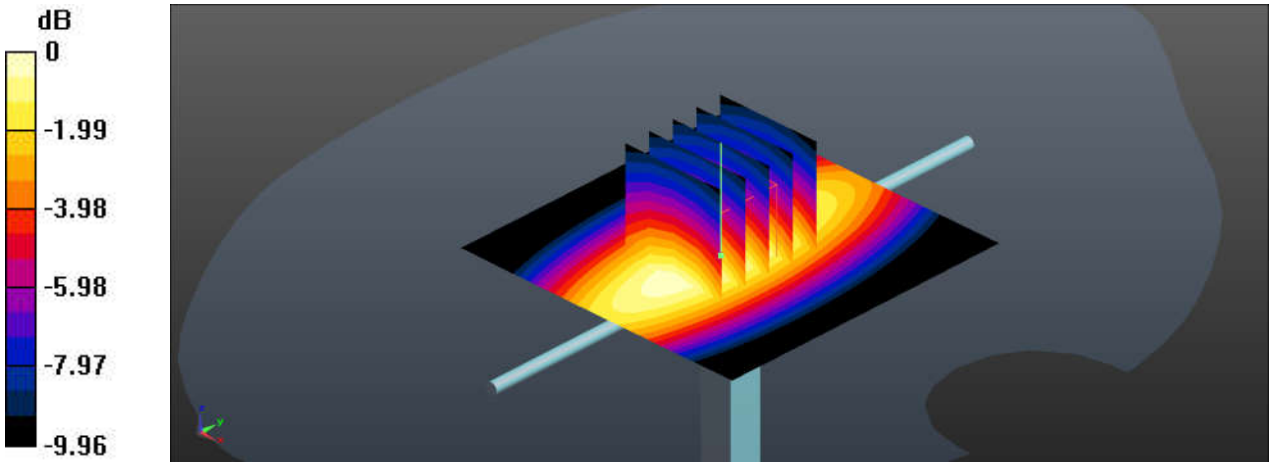
DUT: D750V3-SN:1099

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750_210206 Medium parameters used: f = 750 MHz; σ = 0.896 S/m; ε_r = 40.991; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.64, 9.64, 9.64); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- 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) = 2.92 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 58.24 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 3.42 W/kg
SAR(1 g) = 2.32 W/kg; SAR(10 g) = 1.54 W/kg
Maximum value of SAR (measured) = 2.92 W/kg



0 dB = 2.92 W/kg

System Check_Head_835MHz

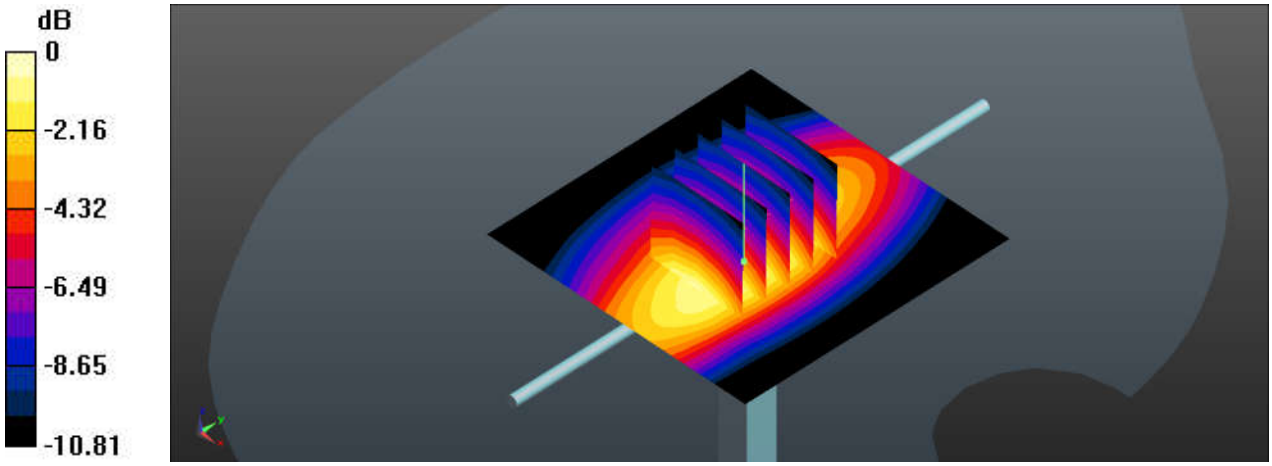
DUT: D835V2-SN:4d162

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835_210128 Medium parameters used: f = 835 MHz; σ = 0.902 S/m; ε_r = 40.749; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.39, 9.39, 9.39); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- 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) = 2.85 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.95 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.80 W/kg
SAR(1 g) = 2.55 W/kg; SAR(10 g) = 1.67 W/kg
Maximum value of SAR (measured) = 3.19 W/kg



0 dB = 3.19 W/kg

System Check_Head_835MHz

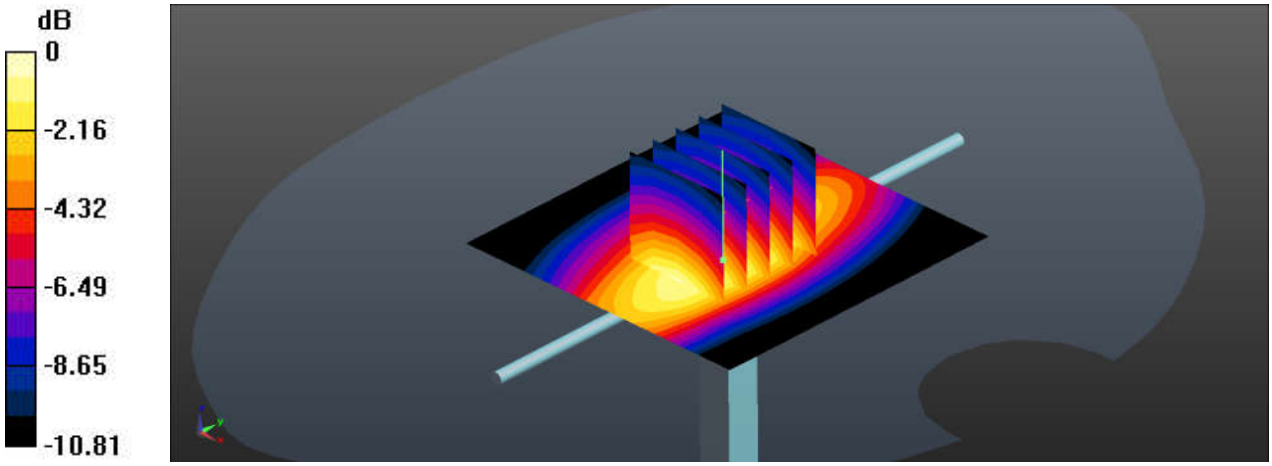
DUT: D835V2-SN:4d162

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835_210207 Medium parameters used: f = 835 MHz; σ = 0.916 S/m; ε_r = 41.029; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.39, 9.39, 9.39); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- 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) = 2.90 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.95 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 3.86 W/kg
SAR(1 g) = 2.59 W/kg; SAR(10 g) = 1.7 W/kg
Maximum value of SAR (measured) = 3.24 W/kg



0 dB = 3.24 W/kg

System Check_Head_835MHz

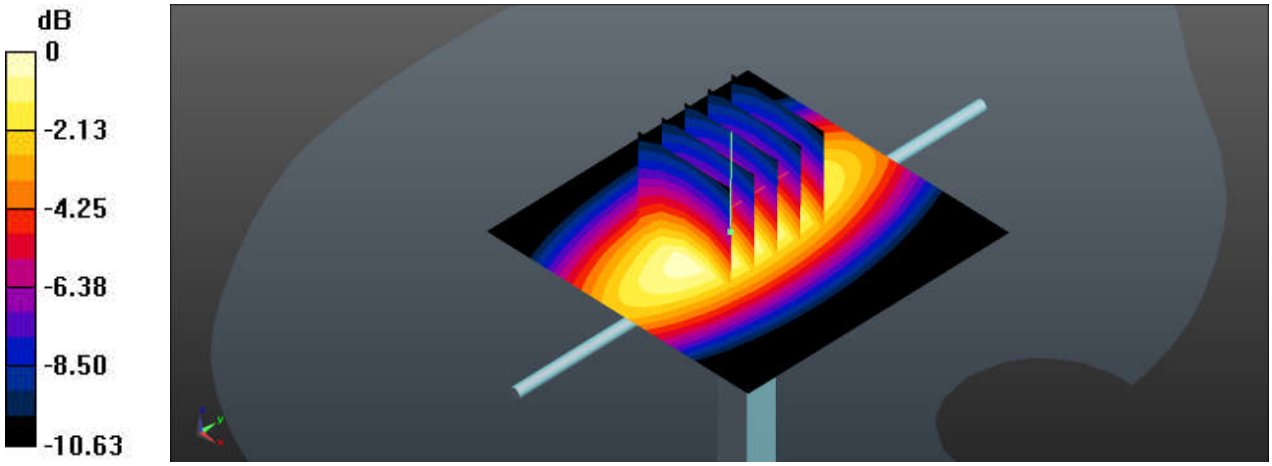
DUT: D835V2-SN:4d162

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835_210221 Medium parameters used: f = 835 MHz; σ = 0.877 S/m; ε_r = 41.373; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(9.39, 9.39, 9.39); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- 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) = 3.09 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 59.79 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.64 W/kg
SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.6 W/kg
Maximum value of SAR (measured) = 3.08 W/kg



0 dB = 3.08 W/kg

System Check_Head_1750MHz

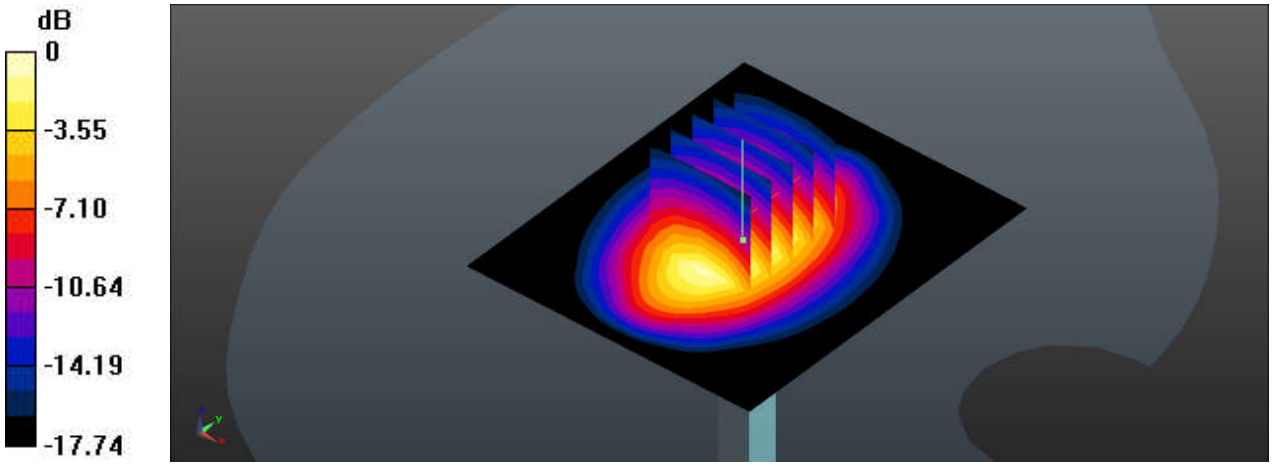
DUT: D1750V2-SN:1137

Communication System: UID 0, CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750_210129 Medium parameters used: f = 1750 MHz; σ = 1.377 S/m; ε_r = 41.359; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.43, 8.43, 8.43); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.5 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 101.7 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 17.8 W/kg
SAR(1 g) = 9.68 W/kg; SAR(10 g) = 5.16 W/kg
Maximum value of SAR (measured) = 13.8 W/kg



0 dB = 13.8 W/kg

System Check_Head_1750MHz

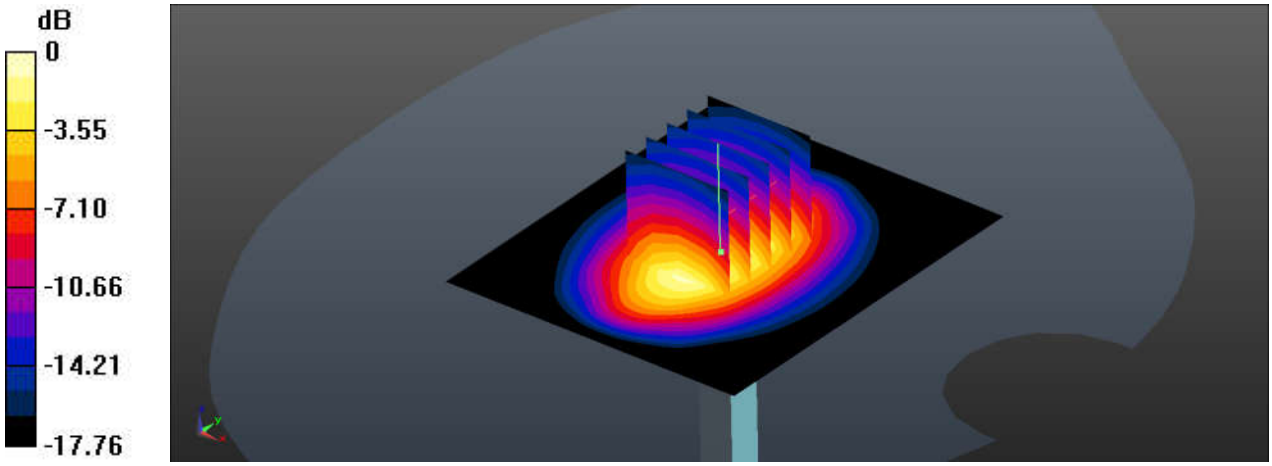
DUT: D1750V2-SN:1137

Communication System: UID 0, CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750_210208 Medium parameters used: f = 1750 MHz; σ = 1.381 S/m; ε_r = 40.83; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.43, 8.43, 8.43); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.5 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 101.7 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 17.9 W/kg
SAR(1 g) = 9.72 W/kg; SAR(10 g) = 5.18 W/kg
Maximum value of SAR (measured) = 13.9 W/kg



0 dB = 13.9 W/kg

System Check_Head_1750MHz

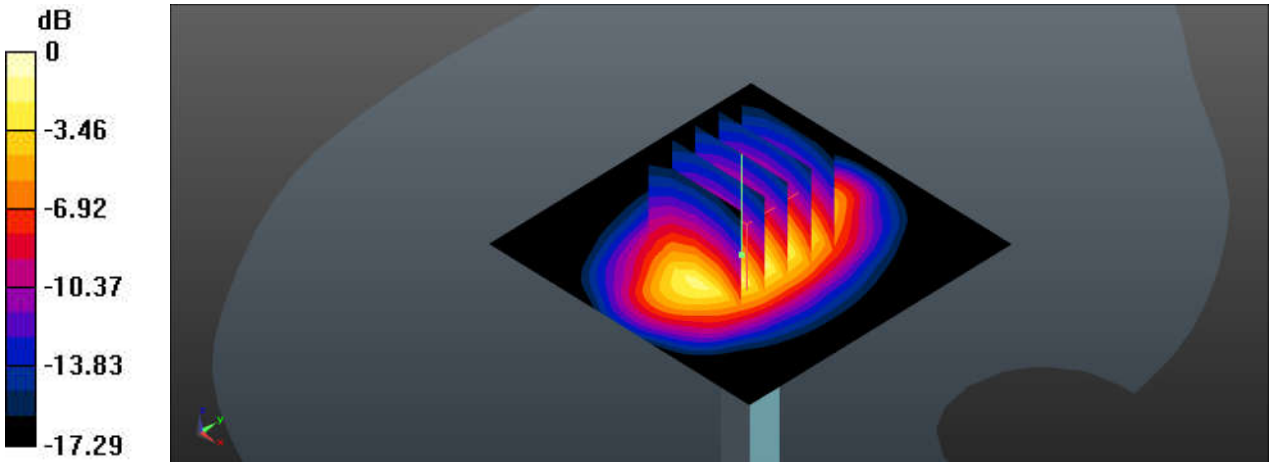
DUT: D1750V2-SN:1137

Communication System: UID 0, CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750_210223 Medium parameters used: f = 1750 MHz; σ = 1.392 S/m; ε_r = 40.573; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.43, 8.43, 8.43); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

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

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 104.6 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(1 g) = 9.26 W/kg; SAR(10 g) = 4.95 W/kg
Maximum value of SAR (measured) = 14.3 W/kg



0 dB = 14.3 W/kg

System Check_Head_1900MHz

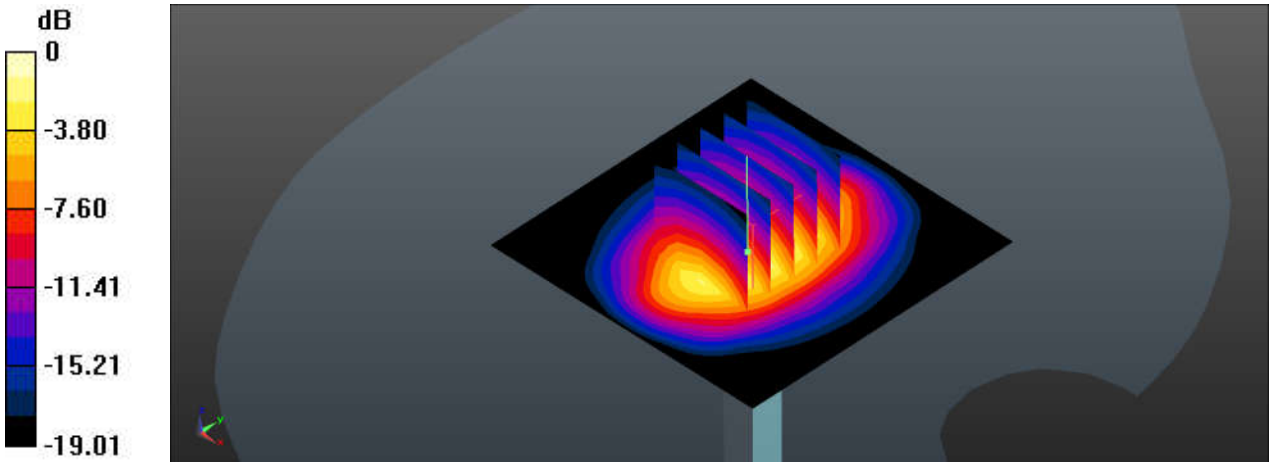
DUT: D1900V2-SN:5d182

Communication System: UID 0, CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900_210130 Medium parameters used: f = 1900 MHz; σ = 1.445 S/m; ε_r = 41.028; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.1, 8.1, 8.1); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- 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) = 15.4 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 104.2 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 19.8 W/kg
SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.35 W/kg
Maximum value of SAR (measured) = 15.2 W/kg



0 dB = 15.2 W/kg

System Check_Head_1900MHz

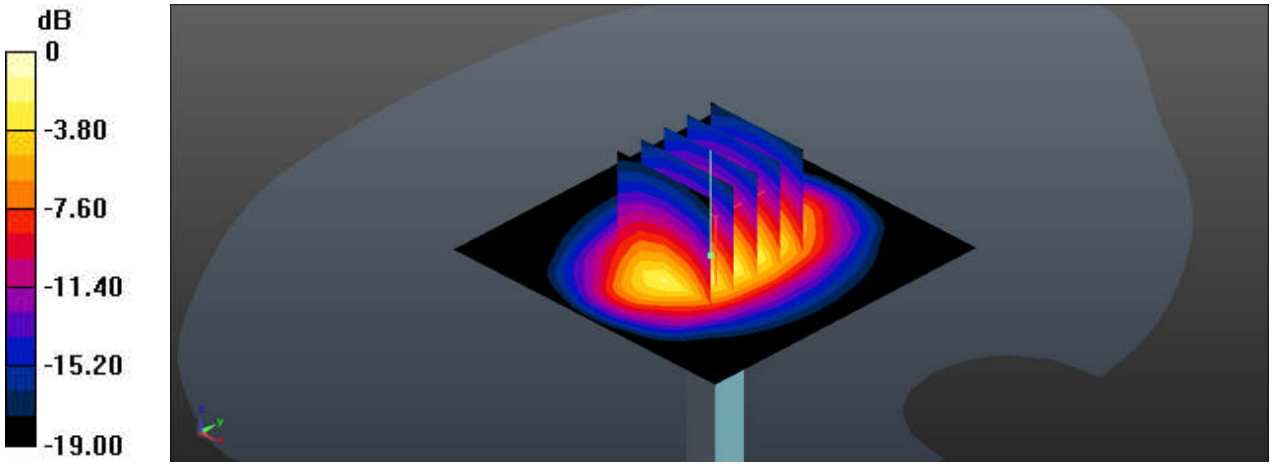
DUT: D1900V2-SN:5d182

Communication System: UID 0, CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900_210209 Medium parameters used: f = 1900 MHz; σ = 1.457 S/m; ε_r = 39.135; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.1, 8.1, 8.1); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- 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) = 15.5 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 104.2 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 20.0 W/kg
SAR(1 g) = 10.5 W/kg; SAR(10 g) = 5.41 W/kg
Maximum value of SAR (measured) = 15.3 W/kg



0 dB = 15.3 W/kg

System Check_Head_1900MHz

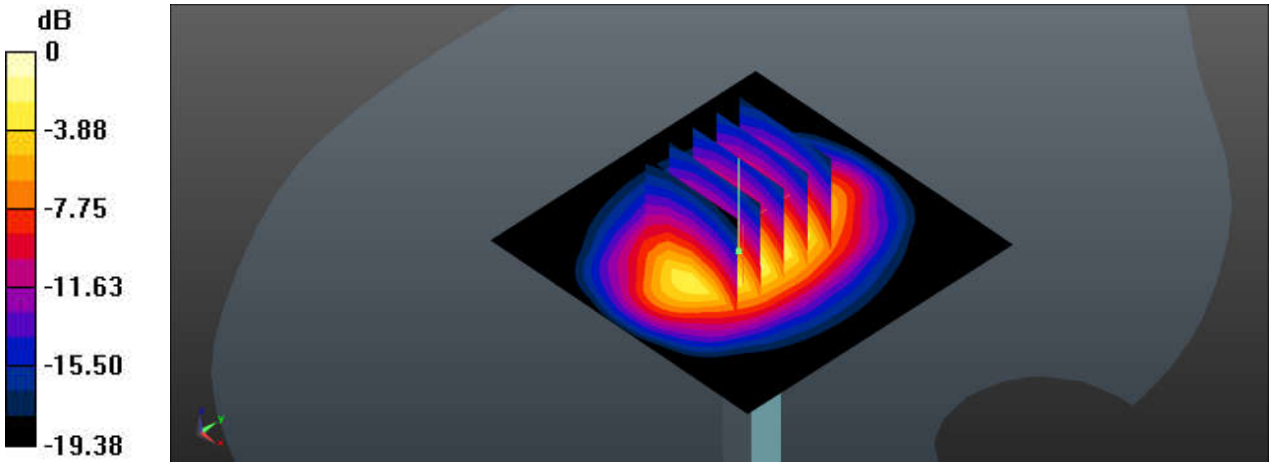
DUT: D1900V2-SN:5d182

Communication System: UID 0, CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900_210308 Medium parameters used: f = 1900 MHz; σ = 1.44 S/m; ε_r = 40.038; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(8.1, 8.1, 8.1); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- 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) = 15.7 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 105.6 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 20.1 W/kg
SAR(1 g) = 10.6 W/kg; SAR(10 g) = 5.48 W/kg
Maximum value of SAR (measured) = 15.2 W/kg



0 dB = 15.2 W/kg

System Check_Head_2450MHz

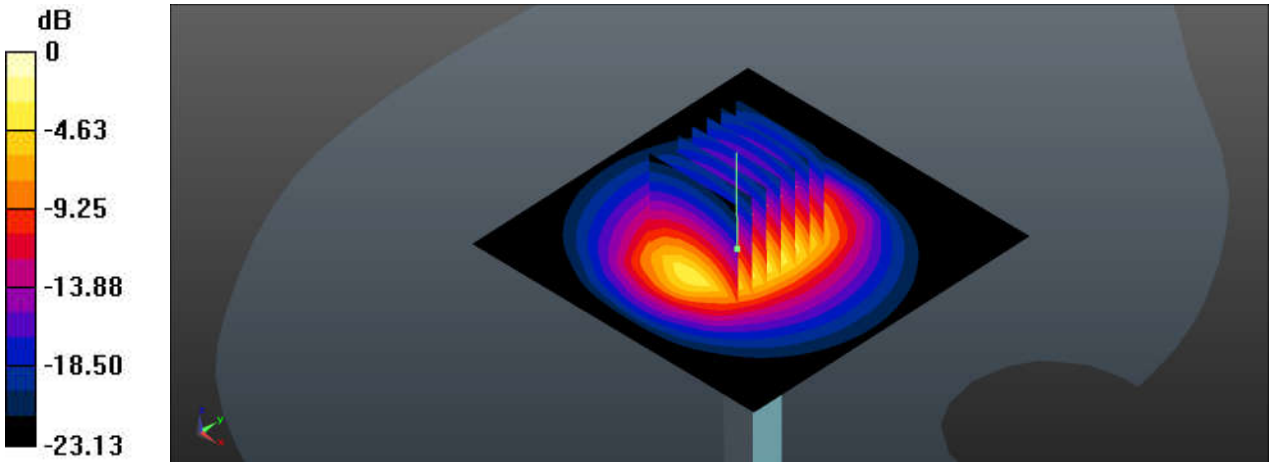
DUT: D2450V2-SN:924

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450_210202 Medium parameters used: f = 2450 MHz; σ = 1.82 S/m; ε_r = 39.753; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.42, 7.42, 7.42); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 21.2 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.59 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 28.6 W/kg
SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.25 W/kg
Maximum value of SAR (measured) = 20.8 W/kg



0 dB = 20.8 W/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2021.02.10

System Check_Head_2450MHz

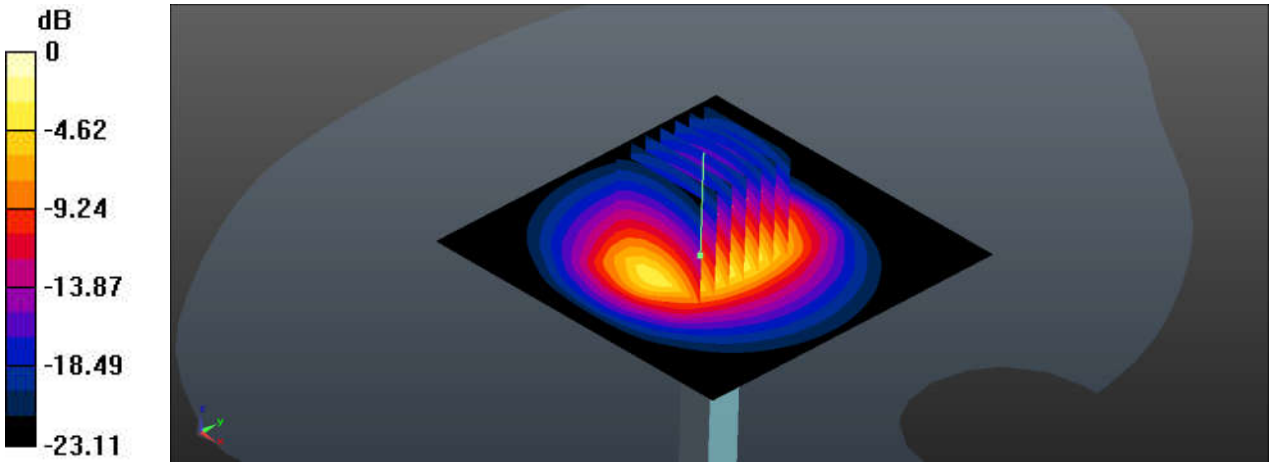
DUT: D2450V2-SN:924

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450_210210 Medium parameters used: f = 2450 MHz; σ = 1.834 S/m; ε_r = 39.654; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(7.42, 7.42, 7.42); Calibrated: 2020.04.30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn528; Calibrated: 2020.03.16
- Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1500
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 21.4 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.59 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 28.8 W/kg
SAR(1 g) = 13.6 W/kg; SAR(10 g) = 6.29 W/kg
Maximum value of SAR (measured) = 20.9 W/kg



0 dB = 20.9 W/kg