FCC SAR Test Report

APPLICANT	: Honor Device Co., Ltd.
EQUIPMENT	: Smart Phone
BRAND NAME	: HONOR
MODEL NAME	: FNE-NX9
FCC ID	: 2AYGCFNE-NX9
STANDARD	: FCC 47 CFR Part 2 (2.1093)

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB 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 Inc. (Kunshan), the test report shall not be reproduced except in full.

Si Zhang

Approved by: Si Zhang

ACCREDITED Cert #5145.02

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

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA242802	Rev. 01	Initial issue of report.	Jul. 08, 2022
FA242802	Rev. 02	Removed 10M&15M bandwidth conducted power for 5GNR n38, added 30M bandwidth conducted power for 5GNR n41	Jul. 12, 2022

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Honor Device Co., Ltd., Smart Phone, FNE-NX9,** are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 15mm)	Highest Simultaneous Transmission
			1g SAR (W/kg)			1g SAR (W/kg)
Licensed	GSM	GSM850	0.60	0.22	0.25	1.59
		GSM1900	1.00	0.24	0.23	
	WCDMA	WCDMA II	0.93	0.57	0.43	
		WCDMA IV	0.71	0.57	0.52	
		WCDMA V	1.00	0.38	0.50	
	LTE	LTE Band 7	**1.07**	0.37	0.33	
		LTE Band 12/17	0.41	0.22	0.16	
		LTE Band 13	0.68	0.31	0.26	
		LTE Band 25/2	0.92	0.57	0.44	
		LTE Band 26/5	0.81	0.36	0.33	
		LTE Band 41/38	0.90	0.41	0.30	
		LTE Band 66/4	0.74	**0.64**	**0.58**	
	5G NR	FR1 n5	0.63	0.23	0.29	
		FR1 n7	0.78	0.31	0.20	
		FR1 n41/n38	0.71	0.38	0.31	
		FR1 n66	0.62	0.47	0.29	
DTS	WLAN	2.4GHz WLAN	0.20	0.18	0.08	1.07
NII		5GHz WLAN	0.43	0.31	0.15	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.58	0.19	0.12	1.59

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	WCDMA	WCDMA II	2.57	3.68
	LTE	LTE Band 66	2.23	
		LTE Band 25	**2.60**	
NII	WLAN	5GHz WLAN	1.07	3.68
DXX	NFC	13.56MHz	<0.10	3.68
Date of Testing:			2022/5/28~ 2022/6/29	

Remark:

1. This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE B2 / B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41.
2. This device supports 5GNR N38 and N41. Since the supported frequency span for 5GNR N38 falls completely within the supports frequency span for N41, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for N41.

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

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

2. Administration Data

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

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR04-KS	CN1257	314309

Applicant	
Company Name	Honor Device Co., Ltd.
Address	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China

Manufacturer	
Company Name	Honor Device Co.,Ltd.
Address	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China

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 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
- IEC/IEEE 62209-1528:2020
- FCC KDB 447498 D04 Interim General RF Exposure Guidance v01

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Smart Phone
Brand Name	HONOR
Model Name	FNE-NX9
FCC ID	2AYGCFNE-NX9
IMEI Code	Sample1: IMEI 1 : 865911060051382 IMEI 2 : 865911060054584 Sample2: IMEI 1 : 865911060051283 IMEI 2 : 865911060054485 Sample3: IMEI 1 : 865911060052232 IMEI 2 : 865911060055433
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 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66: 1710 MHz ~ 1780 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 NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS AMR / RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink is not supported) LTE: QPSK, 16QAM, 64QAM, 256QAM(Downlink only) 5G NR : CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac/ax VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC:ASK

HW Version	HN2FNEM02
SW Version	6.1.0.116(C900E100R1P1)
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), LTE supports VoLTE operation.
2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
3. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only).
4. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12.
5. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). We choose SIM1 to perform full SAR testing and SIM2 to verify the worst case of SIM1.
6. There are three samples, the different between them refer to the FNE-NX9_Operational Description of Product Equality Declaration which is exhibit separately. According to the differences, we choose sample 1 to perform full SAR testing and sample 2/3 to verify the worst case of sample 1.
7. The device implements the power management and 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. It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G&5G and Wi-Fi antennas accordingly. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
8. For WWAN when transmit simultaneous with WLAN, power reduction will be activated to head, body-worn, extremity, also for WLAN when transmit simultaneous with WWAN, power reduction will be activated to head, body-worn, extremity.
9. The device has three batteries. For battery 1/2/3 only suppliers are different, all the other capacity and specifications are same. We chose battery 1 to perform full SAR testing in sample 1 and battery 2/3 verified the worst case in sample 2/3.
10. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
11. 5G NR n41 supports HPUE, HPUE power and SAR testing performed separately, n41 HPUE SAR can represent power class 3 level SAR.
12. 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 SAR can represent NSA mode SAR.
13. 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.
14. 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.
15. 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.
16. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20
	n38	TDD	30	20
	n41	TDD	30	20, 30, 40, 50, 60, 80, 90, 100
	n66	FDD	15	5, 10, 15, 20
SA	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20
	n38	TDD	30	20
	n41	TDD	30	20, 30, 40, 50, 60, 80, 90, 100
	n66	FDD	15	5, 10, 15, 20

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>2AYGCFNE-NX9</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</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</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, Cat13</td></tr>
<tr><td>CA Support</td><td>Supported, Uplink and Downlink</td></tr>
<tr><td>LTE MPR permanently built-in by design</td><td>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3
<table>
<tr><th rowspan="2">Modulation</th><th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th><th rowspan="2">MPR (dB)</th></tr>
<tr><th>1.4 MHz</th><th>3.0 MHz</th><th>5 MHz</th><th>10 MHz</th><th>15 MHz</th><th>20 MHz</th></tr>
<tr><td>QPSK</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 1</td></tr>
<tr><td>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr>
<tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr>
<tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr>
</table></td></tr>
<tr><td>LTE A-MPR</td><td>In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)</td></tr>
<tr><td>Spectrum plots for RB configuration</td><td>A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.</td></tr>
<tr><td>Power reduction applied to satisfy SAR compliance</td><td>Yes, when operating in receiver/hotspot detect mechanism, head/body -worn /hotspot/ extremity will trigger reduced power for some bands applied to satisfy SAR compliance, the detail please referred to section 13.</td></tr>
<tr><td>LTE Carrier Aggregation Combinations</td><td>Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 13.</td></tr>
<tr><td>LTE Carrier Aggregation Additional Information</td><td>1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance.
2. This device supports maximum of 4 carriers in the downlink and 2 carriers in the uplink.</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

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 :1710 MHz ~ 1780 MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
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 n5	LTE B7
LTE Anchor Bands for n7	LTE B2/5/66
LTE Anchor Bands for n38	LTE B5/12
LTE Anchor Bands for n41	LTE B26
LTE Anchor Bands for n66	LTE B7

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band

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 7

	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510
M	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560

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 38

	Bandwidth 20MHz	
	Ch. #	Freq. (MHz)
L	516000	2580
M	519000	2595
H	522000	2610

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

The 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 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.

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 uncertainty.
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>

Item	Uncertainty dB (k=2) for 3G/4G (Excluding LTE B7/B38/B40/B41)	Uncertainty dB (k=2) for LTE B7/B38/B41	Uncertainty dB (k=2) for 2G/5GNR
Sub6 radio TxAGC	1.00	1.20	1.50
Device to device variation	0.50	0.50	0.50
Total uncertainty	1.10	1.30	1.55

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

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

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit, for each characterized technology and band.

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)>

Band	Antenna	Head	Body Worn /Extremity	Head simultaneous WWAN+wifi5G/ WWAN+WiFi5G+BT	Head simultaneous WWAN+wifi2.4G	Body Worn /Extremity simultaneous WWAN+wifi5G/ WWAN+WiFi5G+BT	Body Worn /Extremity simultaneous WWAN+wifi2.4G	Hotspot	Pmax*
		DSI 1	DSI 3	DSI 5	DSI 7	DSI 9	DSI 11	DSI 13	
GSM850	0	30.1	29.9	20.8	21.5	20.8	21.5	20.8	24.0
GSM850	2	21.2	21.2	18.0	18.7	18.0	18.7	18.0	23.7
GSM1900	1	31.8	26.7	17.3	18.0	17.3	18.0	17.3	20.5
GSM1900	6	16.8	17.3	13.6	14.3	14.1	14.8	13.6	19.8
LTE Band 2	1	32.5	23.1	20.9	21.6	19.9	20.6	19.9	24.1
LTE Band 2	6	16.4	21.4	13.2	13.9	18.2	18.9	13.2	23.4
LTE Band 4	1	31.1	23.0	20.9	21.6	19.8	20.5	19.8	24.1
LTE Band 4	6	19.4	22.8	16.2	16.9	19.6	20.3	16.2	23.4
LTE Band 5	0	31.1	29.9	21.3	22.0	21.3	22.0	21.3	24.5
LTE Band 5	2	23.2	29.0	20.0	20.7	21.0	21.7	20.0	24.2
LTE Band 7	1	21.9	21.7	18.7	19.4	18.5	19.2	18.5	23.5
LTE Band 7	6	14.7	17.9	11.5	12.2	14.7	15.4	11.5	22.5
LTE Band 7	5	16.9	20.0	13.7	14.4	16.8	17.5	13.7	23.5
LTE Band 12	0	35.3	32.3	21.3	22.0	21.3	22.0	21.3	24.5
LTE Band 12	2	28.0	32.1	21.0	21.7	21.0	21.7	21.0	24.2
LTE Band 13	0	33.3	30.7	20.3	21.0	20.3	21.0	20.3	23.5
LTE Band 13	2	24.8	29.0	20.0	20.7	20.0	20.7	20.0	23.2
LTE Band 17	0	33.3	32.3	21.3	22.0	21.3	22.0	21.3	24.5
LTE Band 17	2	24.8	32.1	21.0	21.7	21.0	21.7	21.0	24.2
LTE Band 25	1	32.5	23.1	20.9	21.6	19.9	20.6	19.9	24.1
LTE Band 25	6	16.4	21.4	13.2	13.9	18.2	18.9	13.2	23.4
LTE Band 26	0	31.1	29.9	21.3	22.0	21.3	22.0	21.3	24.5
LTE Band 26	2	23.2	29.0	20.0	20.7	21.0	21.7	20.0	24.2
LTE Band 38	1	21.1	20.3	17.9	18.6	17.1	17.8	17.1	21.5
LTE Band 38	6	14.9	17.1	11.7	12.4	13.9	14.6	11.7	20.5
LTE Band 41	1	21.1	20.3	17.9	18.6	17.1	17.8	17.1	21.5
LTE Band 41	6	14.9	17.1	11.7	12.4	13.9	14.6	11.7	20.5
LTE Band 66	1	31.1	23.0	20.9	21.6	19.8	20.5	19.8	24.1
LTE Band 66	6	19.4	22.8	16.2	16.9	19.6	20.3	16.2	23.4
NR5G_N5	0	31.2	30.4	21.3	22.0	21.3	22.0	21.3	24.5
NR5G_N5	2	22.1	29.5	18.9	19.6	21.0	21.7	18.9	24.2
NR5G_N7	5	17.1	20.0	13.9	14.6	16.8	17.5	13.9	24.0
NR5G_N7	1	20.4	20.4	17.2	17.9	17.2	17.9	17.2	24.0
NR5G_N7	6	14.6	17.9	11.4	12.1	14.7	15.4	11.4	23.0
NR5G_N38	5	17.1	20.5	13.9	14.6	17.3	18.0	13.9	24.0
NR5G_N38	9	20.8	21.7	17.6	18.3	18.5	19.2	17.6	21.7
NR5G_N38	1	19.9	19.7	16.7	17.4	16.5	17.2	16.5	21.3
NR5G_N38	6	14.8	18.1	11.6	12.3	14.9	15.6	11.6	20.5
NR5G_N41_PC3	5	16.7	20.5	13.5	14.2	17.3	18.0	13.5	24.0
NR5G_N41_PC3	9	20.8	21.8	17.6	18.3	18.6	19.3	17.6	21.7
NR5G_N41_PC3	1	19.9	19.7	16.7	17.4	16.5	17.2	16.5	21.3
NR5G_N41_PC3	6	14.8	18.1	11.6	12.3	14.9	15.6	11.6	20.5
NR5G_N41 PC2	5	16.7	20.5	13.5	14.2	17.3	18.0	13.5	26.0
NR5G_N41 PC2	9	20.8	21.8	17.6	18.3	18.6	19.3	17.6	23.7
NR5G_N41 PC2	1	19.9	19.7	16.7	17.4	16.5	17.2	16.5	23.3

NR5G_N41 PC2	6	14.8	18.1	11.6	12.3	14.9	15.6	11.6	22.5
NR5G_N66	1	30.6	20.7	20.9	21.6	17.5	18.2	17.5	24.1
NR5G_N66	6	18.5	21.9	15.3	16.0	18.7	19.4	15.3	23.4
WCDMA Band 2	1	32.1	23.1	20.9	21.6	19.9	20.6	19.9	24.1
WCDMA Band 2	6	16.2	21.1	13.0	13.7	17.9	18.6	13.0	23.4
WCDMA Band 4	1	31.2	23.0	20.9	21.6	19.8	20.5	19.8	24.1
WCDMA Band 4	6	19.7	22.8	16.5	17.2	19.6	20.3	16.5	23.4
WCDMA Band 5	0	29.8	28.9	21.3	22.0	21.3	22.0	21.3	24.5
WCDMA Band 5	2	22.7	27.1	19.5	20.2	21.0	21.7	19.5	24.2

Note:
1) *Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax +TxAGC uncertainty.
2) All Plimit 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 & LTE TDD).
3) If force peak is set to 'x' for a given tech/band/antenna/DSI in the EFS, then the Smart Transmit feature limits the maximum instantaneous Tx power to Plimit for the selected tech/band/antenna/DSI. In other words, with force peak set to 'x', under static condition (i.e., fixed tech/band/antenna/DSI) and in single active Tx scenario, Smart Transmit can guarantee Tx power level of Plimit at all times.
4) LTE Band 7 ant 5 only for EN-DC combination.

6. RF Exposure Limits

6.1 Uncontrolled Environment

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

6.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

7. Specific Absorption Rate (SAR)

7.1 Introduction

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

7.2 SAR Definition

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

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

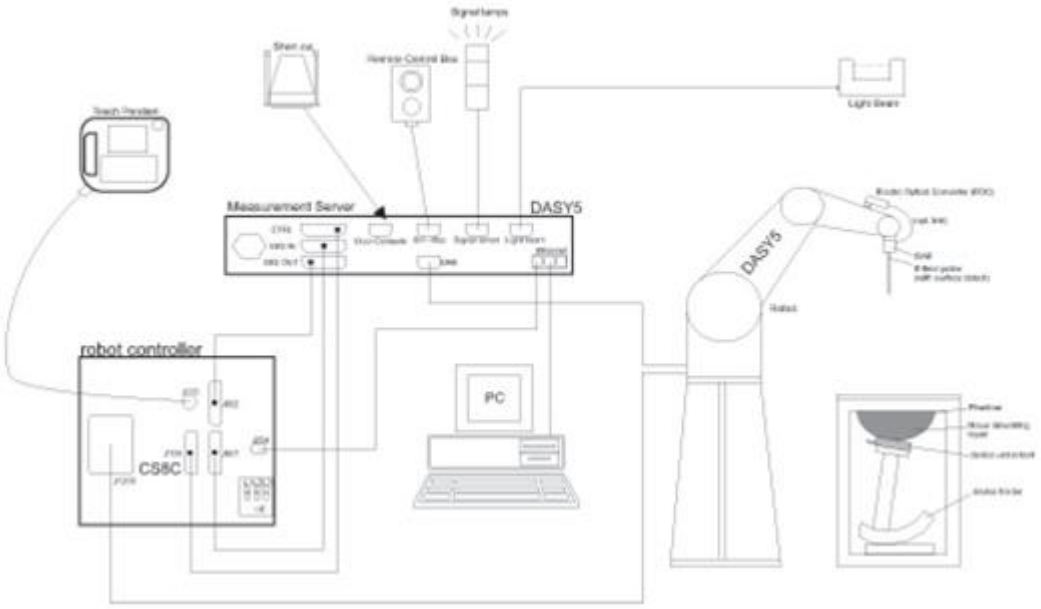
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

8. System Description and Setup

The DASY5 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 Win10 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

8.1 E-Field Probe

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

<ES3DV3 Probe>

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

<EX3DV4 Probe>

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

8.2 Data Acquisition Electronics (DAE)

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

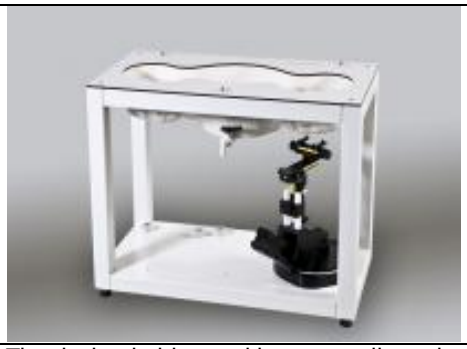
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

8.3 Phantom

<SAM Twin Phantom>

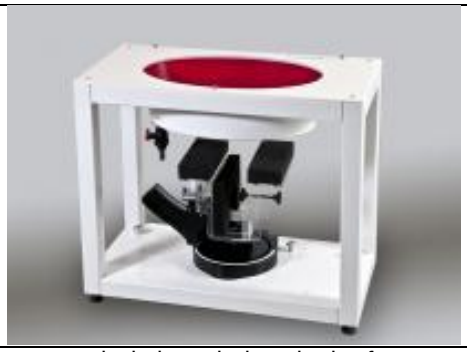
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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

<ELI Phantom>

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



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

8.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

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

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

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

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

Mounting Device for Laptops

9. Measurement Procedures

The measurement procedures are as follows:

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

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

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

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

9.1 Spatial Peak SAR Evaluation

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

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

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

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

9.2 Power Reference Measurement

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

9.3 Area Scan

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

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

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

9.4 Zoom Scan

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

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

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

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

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

9.5 Volume Scan Procedures

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

9.6 Power Drift Monitoring

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

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2022/2/24	2023/2/23
SPEAG	835MHz System Validation Kit	D835V2	4d162	2021/12/17	2022/12/16
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2023/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2021/12/20	2022/12/19
SPEAG	2450MHz System Validation Kit	D2450V2	924	2020/9/2	2023/9/1
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/25
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2019/9/24	2022/9/22
SPEAG	13MHz System Validation Kit	CLA13	1011	2020/7/8	2023/7/7
SPEAG	Data Acquisition Electronics	DAE4	1338	2021/12/1	2022/11/30
SPEAG	Data Acquisition Electronics	DAE4	1279	2021/9/21	2022/9/20
SPEAG	Data Acquisition Electronics	DAE4	699	2022/2/24	2023/2/23
SPEAG	Dosimetric E-Field Probe	ES3DV3	3279	2021/8/24	2022/8/23
SPEAG	Dosimetric E-Field Probe	EX3DV4	7706	2022/1/20	2023/1/19
SPEAG	Dosimetric E-Field Probe	EX3DV4	3931	2021/10/21	2022/10/20
SPEAG	SAM Twin Phantom	SAM Twin	TP-1842	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-1754	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-1796	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306173	2021/7/15	2022/7/14
Agilent	ENA Series Network Analyzer	E5071C	MY46106933	2021/7/31	2022/7/30
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	2022/1/24	2023/1/23
Anritsu	Vector Signal Generator	MG3710A	6201682672	2022/1/6	2023/1/5
Rohde & Schwarz	Power Meter	NRVD	102081	2021/8/12	2022/8/11
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2021/8/12	2022/8/11
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2021/8/12	2022/8/11
R&S	CBT BLUETOOTH TESTER	CBT	100641	2022/1/5	2023/1/4
EXA	Spectrum Analyzer	FSV7	101631	2021/10/14	2022/10/13
FLUKE	DIGITAC THERMOMETER	51II	97240029	2021/10/23	2022/10/22
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/1/6	2023/1/5
SPEAG	Phone Positioner	N/A	N/A	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	

Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

11. System Verification

11.1 Tissue Simulating Liquids

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

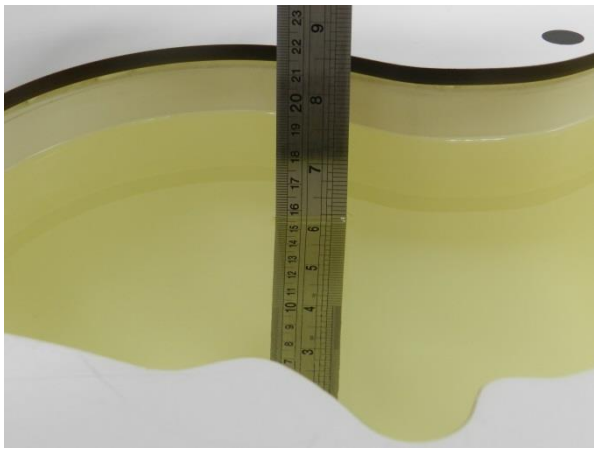


Fig 11.1 Photo of Liquid Height for Head SAR

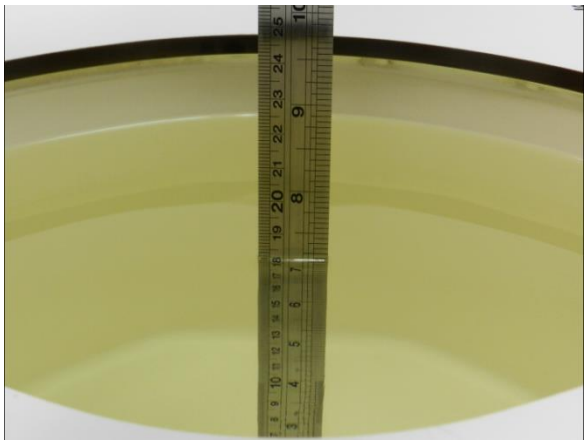


Fig 11.2 Photo of Liquid Height for Body SAR

11.2 Tissue Verification

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

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (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	22.6	0.890	43.676	0.89	41.90	0.00	4.24	±5	2022/5/28
835	Head	22.8	0.927	43.456	0.90	41.50	3.00	4.71	±5	2022/5/29
1750	Head	22.6	1.368	41.091	1.37	40.10	-0.15	2.47	±5	2022/5/30
1900	Head	22.7	1.455	40.877	1.40	40.00	3.93	2.19	±5	2022/5/31
2600	Head	22.6	1.982	39.931	1.96	39.00	1.12	2.39	±5	2022/6/1
750	Head	22.8	0.902	41.615	0.89	41.90	1.35	-0.68	±5	2022/6/2
835	Head	22.7	0.930	41.363	0.90	41.50	3.33	-0.33	±5	2022/6/3
1750	Head	22.6	1.352	40.005	1.37	40.10	-1.31	-0.24	±5	2022/6/4
1900	Head	22.7	1.431	39.775	1.40	40.00	2.21	-0.56	±5	2022/6/5
2600	Head	22.6	1.887	39.254	1.96	39.00	-3.72	0.65	±5	2022/6/6
2450	Head	22.8	1.774	39.455	1.80	39.20	-1.44	0.65	±5	2022/6/25
5250	Head	22.8	4.708	35.833	4.71	35.90	-0.04	-0.19	±5	2022/6/27
5600	Head	22.7	5.131	35.199	5.07	35.50	1.20	-0.85	±5	2022/6/28
5750	Head	22.7	5.304	34.921	5.22	35.40	1.61	-1.35	±5	2022/6/29
13	Head	22.5	0.726	54.258	0.75	55.00	-3.20	1.30	±5	2022/6/23

11.3 System Performance Check Results

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

<1g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2022/5/28	750	Head	50	1087	3279	1338	0.410	8.58	8.2	-4.43
2022/5/29	835	Head	50	4d162	3279	1338	0.476	9.64	9.52	-1.24
2022/5/30	1750	Head	50	1090	3279	1338	1.820	37.00	36.4	-1.62
2022/5/31	1900	Head	50	5d182	3279	1338	1.980	39.60	39.6	0.00
2022/6/1	2600	Head	50	1061	3279	1338	2.780	56.60	55.6	1.56
2022/6/2	750	Head	50	1087	3279	1338	0.426	8.58	8.52	-0.70
2022/6/3	835	Head	50	4d162	3279	1338	0.460	9.64	9.2	-4.56
2022/6/4	1750	Head	50	1090	3279	1338	1.810	37.00	36.2	-2.16
2022/6/5	1900	Head	50	5d182	3279	1338	2.090	39.60	41.8	5.56
2022/6/6	2600	Head	50	1061	3279	1338	2.740	56.60	54.8	-3.18
2022/6/25	2450	Head	50	924	3279	1338	2.410	51.40	48.2	-6.23
2022/6/27	5250	Head	50	1113	7706	1279	3.730	80.50	74.6	-7.33
2022/6/28	5600	Head	50	1113	7706	1279	3.940	83.40	78.8	-5.52
2022/6/29	5750	Head	50	1113	7706	1279	3.690	80.00	73.8	-7.75
2022/6/23	13	Head	250	1011	3931	699	0.142	0.555	0.568	1.43

<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 (%)
2022/5/28	750	Head	50	1087	3279	1338	0.277	5.65	5.54	-1.95
2022/5/29	835	Head	50	4d162	3279	1338	0.310	6.26	6.2	-0.96
2022/5/30	1750	Head	50	1090	3279	1338	0.990	19.50	19.8	1.54
2022/5/31	1900	Head	50	5d182	3279	1338	1.070	20.20	21.4	5.94
2022/6/1	2600	Head	50	1061	3279	1338	1.290	25.10	25.8	2.79
2022/6/2	750	Head	50	1087	3279	1338	0.288	5.65	5.76	1.95
2022/6/3	835	Head	50	4d162	3279	1338	0.310	6.26	6.2	-0.96
2022/6/4	1750	Head	50	1090	3279	1338	0.989	19.50	19.78	1.44
2022/6/5	1900	Head	50	5d182	3279	1338	0.951	20.20	19.02	-5.84
2022/6/6	2600	Head	50	1061	3279	1338	1.270	25.10	25.4	1.20
2022/6/25	2450	Head	50	924	3279	1338	1.160	24.00	23.2	-3.33
2022/6/27	5250	Head	50	1113	7706	1279	1.070	23.10	21.4	-7.36
2022/6/28	5600	Head	50	1113	7706	1279	1.100	23.80	22	-7.56
2022/6/29	5750	Head	50	1113	7706	1279	1.050	22.80	21	-7.89
2022/6/23	13	Head	250	1011	3931	699	0.088	0.343	0.352	3.53

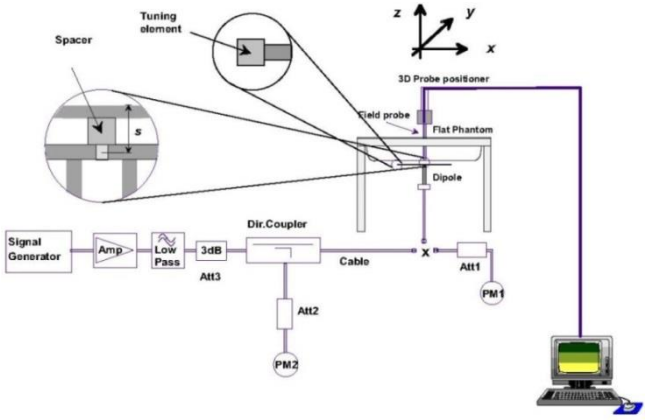


Fig 11.3.1 System Performance Check Setup

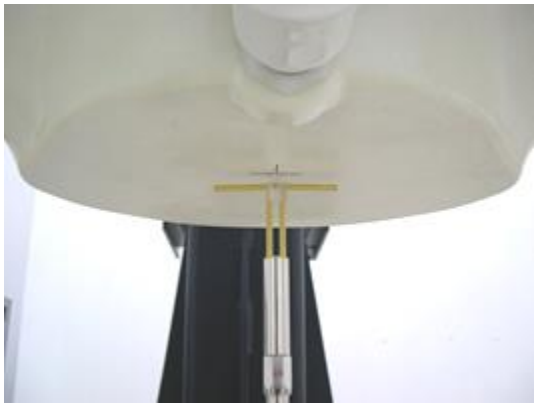


Fig 11.3.2 Setup Photo

12. RF Exposure Positions

12.1 Ear and handset reference point

Figure 12.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled "M," the left ear reference point (ERP) is marked "LE," and the right ERP is marked "RE." Each ERP is 15 mm along the B-M (back-mouth) line behind the entrance-to-ear-canal (EEC) point, as shown in Figure 12.1.2 The Reference Plane is defined as passing through the two ear reference points and point M. The line N-F (neck-front), also called the reference pivoting line, is normal to the Reference Plane and perpendicular to both a line passing through RE and LE and the B-M line (see Figure 12.1.3). Both N-F and B-M lines should be marked on the exterior of the phantom shell to facilitate handset positioning. Posterior to the N-F line the ear shape is a flat surface with 6 mm thickness at each ERP, and forward of the N-F line the ear is truncated, as illustrated in Figure 12.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

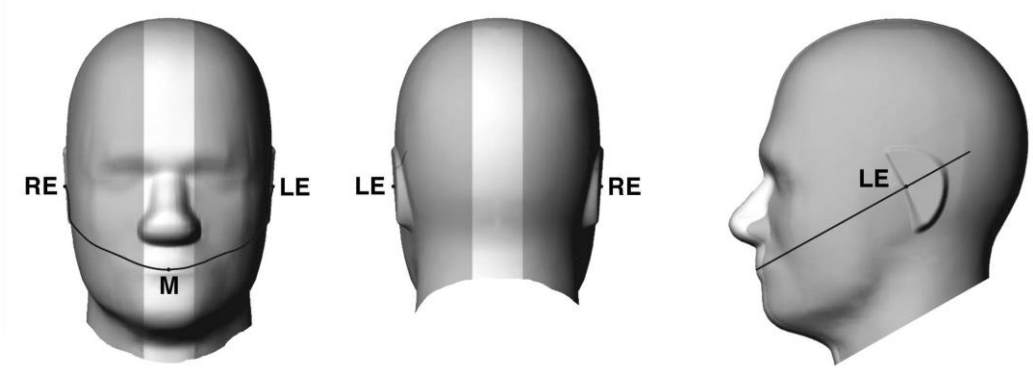


Fig 12.1.1 Front, back, and side views of SAM twin phantom

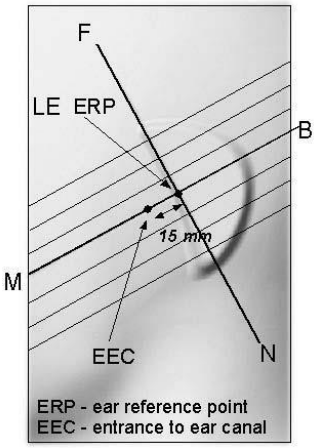


Fig 12.1.2 Close-up side view of phantom showing the ear region.

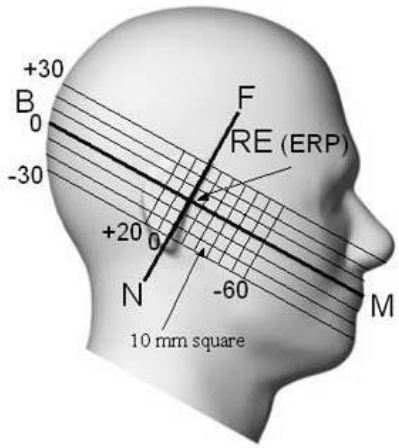


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

12.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width wt of the handset at the level of the acoustic output (point A in Figure 12.2.1 and Figure 12.2.2), and the midpoint of the width wb of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 12.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 12.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 12.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 12.2.3. The actual rotation angles should be documented in the test report.

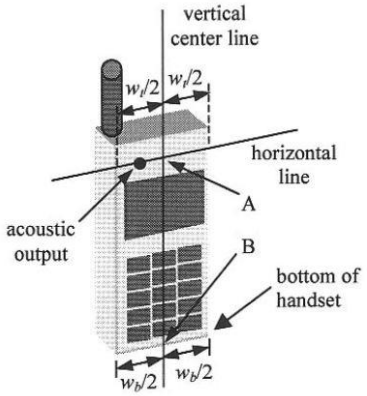


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

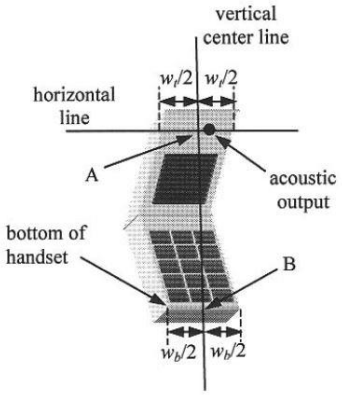


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

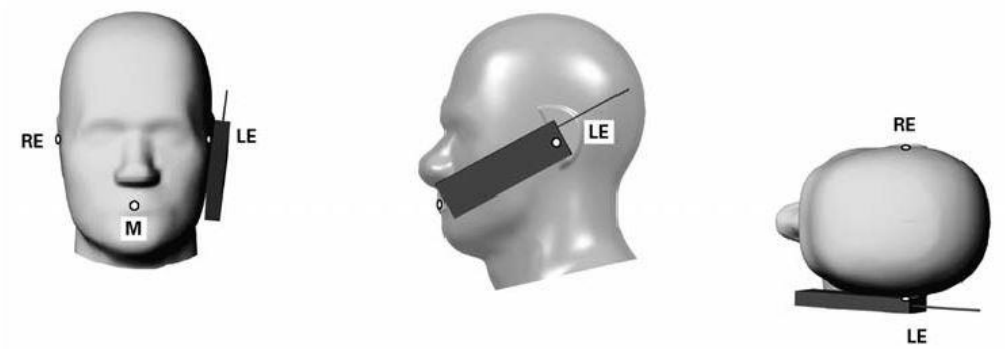


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

12.3 Definition of the tilt position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. While maintaining the orientation of the handset, move the handset away from the pinna along the line passing through RE and LE far enough to allow a rotation of the handset away from the cheek by 15°.
3. Rotate the handset around the horizontal line by 15°.
4. While maintaining the orientation of the handset, move the handset towards the phantom on the line passing through RE and LE until any part of the handset touches the ear. The tilt position is obtained when the contact point is on the pinna. See Figure 12.3.1. If contact occurs at any location other than the pinna, e.g., the antenna at the back of the phantom head, the angle of the handset should be reduced. In this case, the tilt position is obtained if any point on the handset is in contact with the pinna and a second point

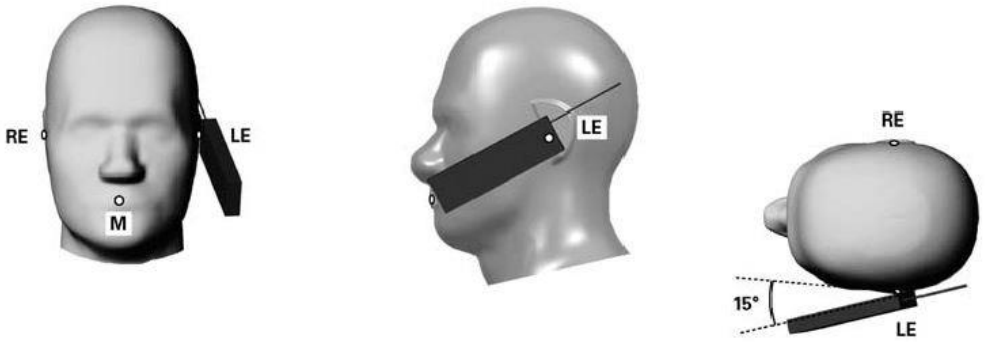


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

12.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 12.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D04 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.

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

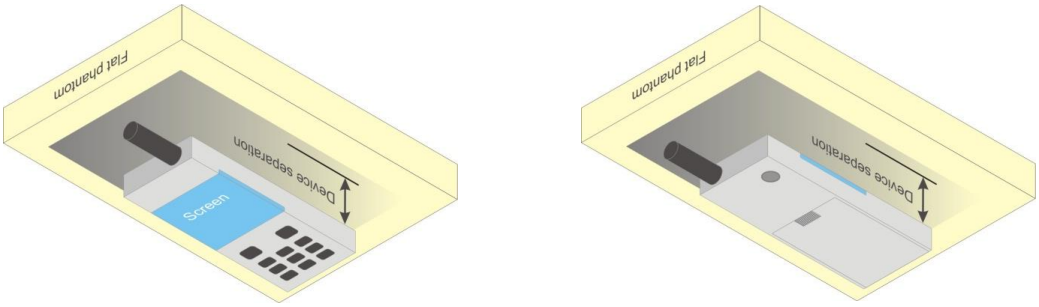


Fig 12.4 Body Worn Position

12.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

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

2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

12.6 Wireless Router

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

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D04 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

13. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

1. Per KDB 447498 D04, 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.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

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

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

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

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

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

Setup Configuration

HSUPA Setup Configuration:

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

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

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

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

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

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

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

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

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

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

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

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

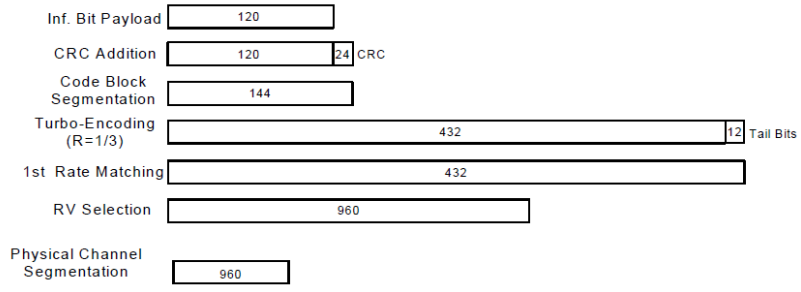


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

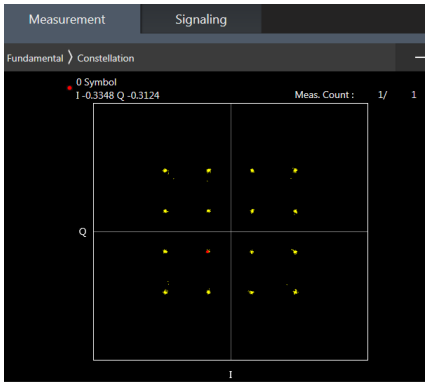
General Note:

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

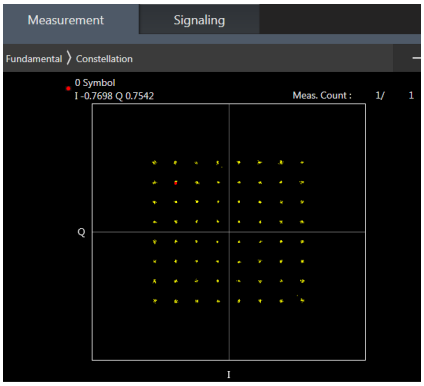
<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM 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 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B2 / B4 /B5 / B17 / B38 SAR test was covered by B25 / B66 / B26 / B12 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ 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 16QAM and 64QAM 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.



16QAM



64QAM

<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.

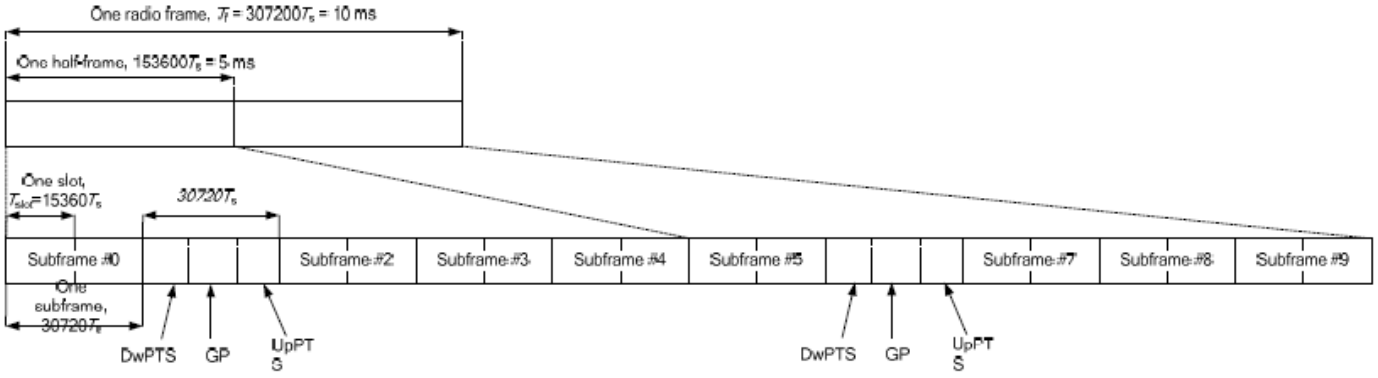


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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:

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.

<LTE Carrier Aggregation>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. The gray color table is covered by other combinations and no need to verify power.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
2CC #1	CA_2C		3CC #1	CA_41D		4CC #1	CA_7C-66A-66A	
2CC #2	CA_5B		3CC #2	CA_41A-41A-41A		4CC #2	CA_2A-4A-7C	
2CC #3	CA_7C	4CC #1	3CC #3	CA_2A-7C	4CC #2	4CC #3	CA_5A_7A_66A_66A	
2CC #4	CA_12B		3CC #4	CA_2A-7A-7A		4CC #4	CA_5A-7C-66A	
2CC #5	CA_38C		3CC #5	CA_4A-7C	4CC #2			
2CC #6	CA_41C	3CC #1	3CC #6	CA_5A-7C	4CC #4			
2CC #7	CA_66C		3CC #7	CA_5A-66A-66A	4CC #3			
2CC #8	CA_4A-4A		3CC #8	CA_7A-66A-66A	4CC #3			
2CC #9	CA_7A-7A		3CC #9	CA_12A-66A-66A				
2CC #10	CA_41A-41A	3CC #2	3CC #10	CA_2A-4A-7A	4CC #2			
2CC #11	CA_66A-66A	3CC #9	3CC #11	CA_5A-7A-66A	4CC #3			
2CC #12	CA_2A-4A	4CC #2	3CC #12	CA_7C-66A	4CC #4			
2CC #13	CA_2A-5A		3CC #13	CA_5A-7A-7A				
2CC #14	CA_2A-7A	4CC #2						
2CC #15	CA_2A-12A							
2CC #16	CA_2A-66A							
2CC #17	CA_4A-5A							
2CC #18	CA_4A-7A	4CC #2						
2CC #19	CA_4A-12A							
2CC #20	CA_4A-17A							
2CC #21	CA_5A-7A	4CC #3						
2CC #22	CA_5A-38A							
2CC #23	CA_5A-41A							
2CC #24	CA_5A-66A	4CC #3						
2CC #25	CA_7A-26A							
2CC #26	CA_7A-66A	4CC #3						
2CC #27	CA_12A-66A	3CC #9						

LTE Carrier Aggregation Conducted Power (Downlink)

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

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

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

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

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

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

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

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE B7/38/41/66 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.

4X4 MIMO	Band
	LTE Band B7/38/41/66

LTE Carrier Aggregation Conducted Power (Uplink)

2CC Uplink Carrier Aggregation		
Number	Combination	Ant No.
1	CA_7C	ANT1/6
2	CA_38C	ANT1/6
3	CA_41C	ANT1/6

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B7/38/41with a maximum of two uplink 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. The device supports uplink carrier aggregation with a maximum of two uplink 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 the 3GPP requirement.

iii. 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.

iv. 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.

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n5 / n7 / n66 / n38 / n41 is SA and NSA mode.
2. 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-s QPSK and the reported SAR for the DFT-s 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/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/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 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
   d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   e. 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
   f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /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
3. 5G NR n41 HPUE with higher power, n41 HPUE SAR can represent power class 3 level SAR.
4. 5G NR n41 supports HPUE, HPUE power and SAR testing performed separately.
5. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
6. 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 SAR can represent NSA mode SAR.
7. 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.
8. 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.
9. 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.

<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		

EN-DC	4G UL	5G-NR UL
DC_2A_n7A	Ant5/9	Ant1/6
DC_5A_n7A	Ant0/2	Ant1/6
DC_5A_n38A	Ant0/2	Ant5/9
DC_7A_n5A	Ant5	Ant0/2
DC_7A_n66A	Ant5	Ant1/6
DC_12A_n38A	Ant0/2	Ant5/9
DC_26A_n41A	Ant0/2	Ant5/9
DC_66A_n7A	Ant5/9	Ant5

<WLAN Conducted Power>

General Note:

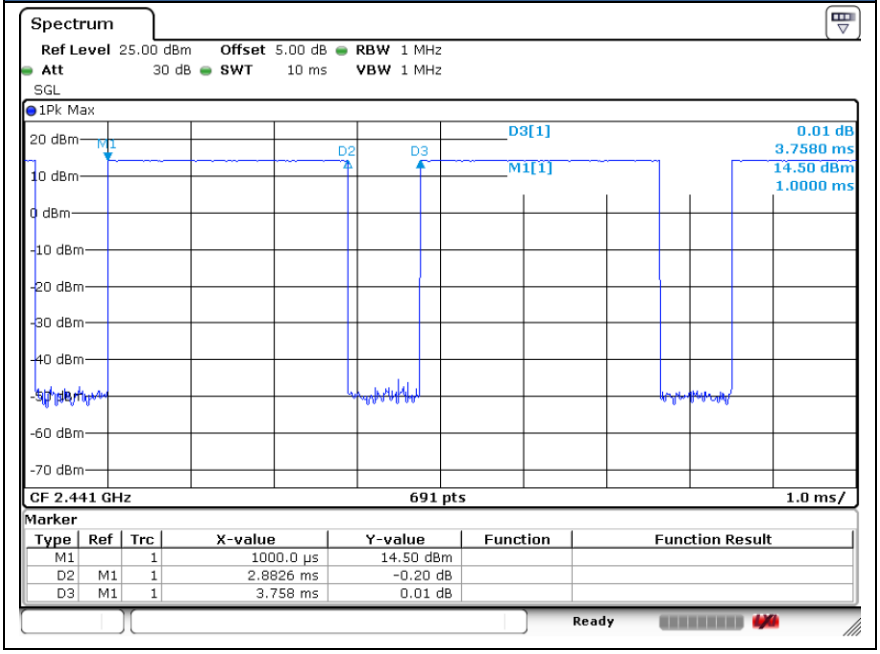
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
2. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
3. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
4. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
   b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
   c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
6. For modes with the same maximum output power, the guidance from section 5.3.2 a) of FCC KDB Publication 248227 D01 should be applied, with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency bands
7. When SAR testing for 802.11ax is required
   a. If the maximum output power is highest for OFDMA scenarios, choose the tone size with the maximum number of tones and the highest maximum output power
   b. Otherwise, consider the fully allocated channel for SAR testing
   c. When SAR testing is required on RU sizes less than the fully allocated channel, use the RU number closest to the middle of the channel, choosing the higher RU number when two RUs are equidistant to the middle of the channel
8. For each antenna, transmit power in SISO operation is larger than or equal to the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode. So WLAN SAR testing was performed on SISO antenna, MIMO SAR base on standalone SAR summed together as MIMO SAR.

<2.4GHz Bluetooth>

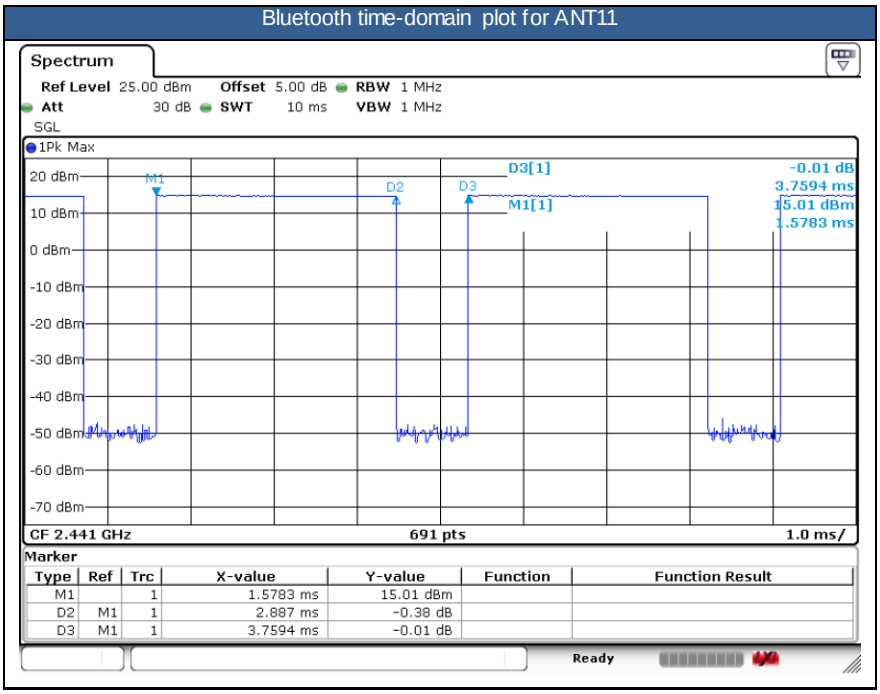
General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 76.71% for ANT8 and 76.79 for ANT11 as following figure, for Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to 83.3% for Bluetooth reported SAR calculation.

Bluetooth time-domain plot for ANT8

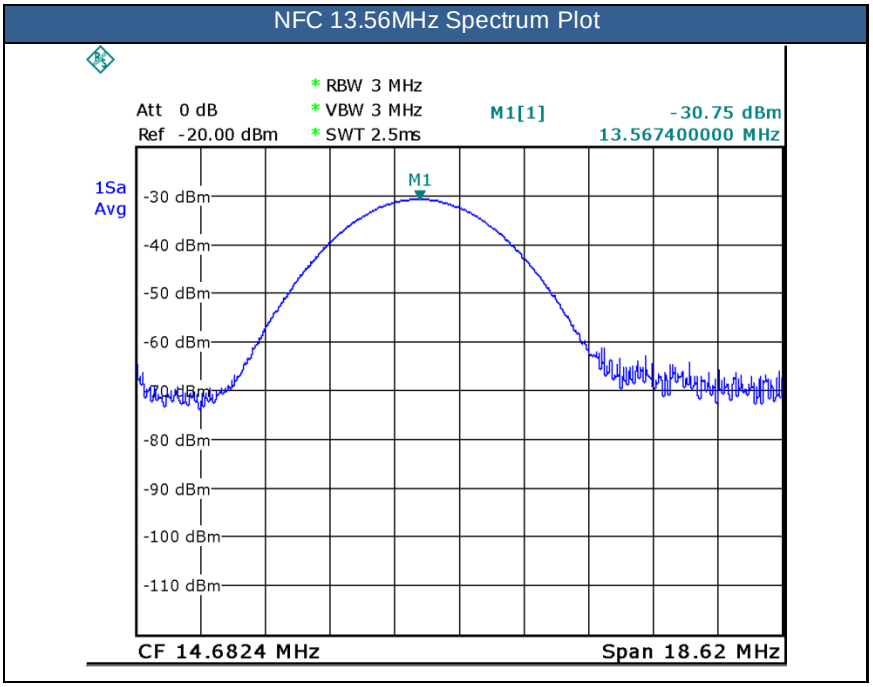


Bluetooth time-domain plot for ANT11

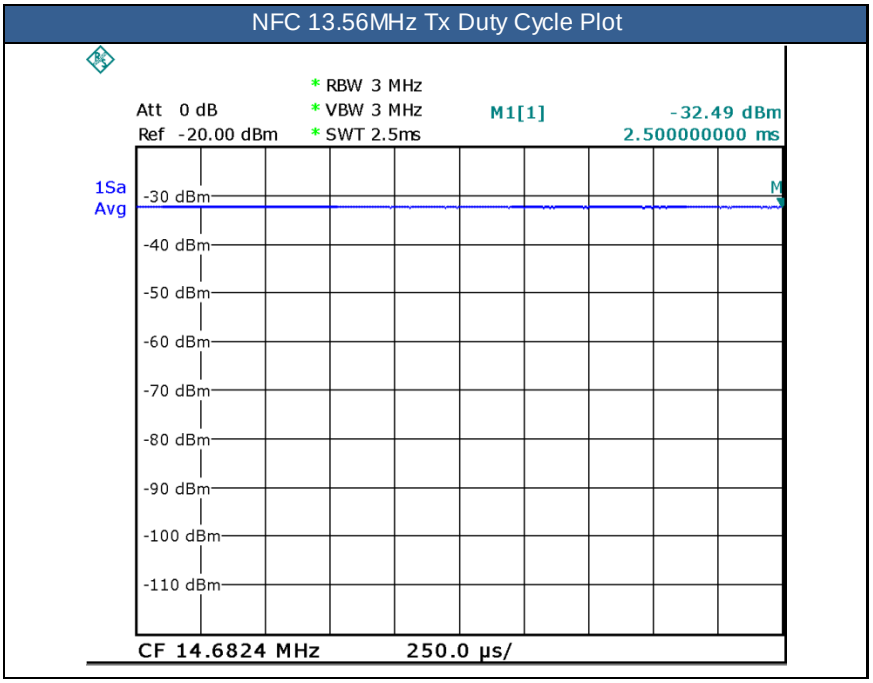


<NFC Duty cycle Plot>

NFC 13.56MHz Spectrum Plot



NFC 13.56MHz Tx Duty Cycle Plot



14. Antenna Location

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

15. SAR Test Results

General Note:

1. Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of BT/WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   d. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   e. For TDD LTE SAR measurement of power class 3, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D04, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). We choose SIM1 to perform full SAR testing and SIM2 to verify the worst case of SIM1.
5. There are three samples, the different between them refer to the FNE-NX9_Operational Description of Product Equality Declaration which is exhibit separately. According to the differences, we choose sample 1 to perform full SAR testing and sample 2/3 to verify the worst case of sample 1.
6. The device implements the power management and 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. It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G&5G and Wi-Fi antennas accordingly. Details about the power management decision are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
7. The device has three batteries. For battery 1/2/3 only suppliers are different. All the other capacity and specifications are same. We chose battery 1 to perform full SAR testing in sample 1 and battery 2/3 verified the worst case in sample 2/3.
8. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
9. 5G NR n41 supports HPUE, HPUE power and SAR testing performed separately, n41 HPUE SAR can represent power class 3 level SAR.
10. 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 SAR can represent NSA mode SAR.
11. 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.
12. 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.
13. 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.
14. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR

must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of WCDMA Band II, LTE Band 25, WLAN5.8GHz, therefore product specific 10g SAR is necessary.
b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

15. NFC mainly operate in hand-held extremity exposure conditions and NFC sensing distance with other device or reading tag is about 20cm, therefore Standalone 10-g extremity SAR testing for NFC will be performed with active mode and max power mode, with 100% duty cycle at 0mm separation distance, and SAR is measured for all edges and surfaces of the device.
16. For NFC test, using FTM (Factory Test Mode) to perform NFC with default 100% transmission. Due to NFC 13.56MHz antenna port is not available on the device to support conducted power measurement, therefore the measured results are referred to as reported SAR.

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.
2. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

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

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM 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 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 B2 / B4 / B5 / B17 / B38 SAR test was covered by LTE B25 / B66 / B26 / B12 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   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:
   a. SAR testing 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.
   b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   c. 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.
   d. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
   e. 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
   f. For 5G FR1 n5 /n7/n38/n41/n66 the maximum bandwidth does not support three non-overlapping channels, 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/Bluetooth Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
6. Bluetooth and WLAN share the same antenna, with similar work frequency, so for Bluetooth SAR testing, we chose the worst positon of WLAN to perform.
7. For each antenna, transmit power in SISO operation is larger than or equal to the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode. So WLAN SAR testing was performed on SISO antenna, MIMO SAR base on standalone SAR summed together as MIMO SAR.

DSI status description：

The device has the following DSI state which used at different exposure condition.

This WWAN bands enabled with Qualcomm Smart Transmit feature which located at chapter 5. The default power is Pmax power, When Plimit power higher than Pmax power, the output power will be limited at Pmax, and so the SAR will use Pmax power to do the testing.

Exposure conditions	Trigger Conditions	DSI
Head(2G/3G/4G/NR)	Receiver on	1
Head(2.4G On)(2G/3G/4G/NR)	Receiver on with Wifi2.4G	7
Head(5G On+BT)(2G/3G/4G/NR)	Receiver on with Wifi5G+BT	5
Hotspot(2G/3G/4G/NR)	Hotspot On	13
Body Worn (2G/3G/4G/NR)	Receiver off	3
Body Worn (2.4G On)(2G/3G/4G/NR)	Receiver off with Wifi2.4G	11
Body Worn (5G On+BT)(2G/3G/4G/NR)	Receiver off with Wifi5G+BT	9
Extremity (2G/3G/4G/NR)	Receiver off	3
Extremity (2.4G On)(2G/3G/4G/NR)	Receiver off with Wifi2.4G	11
Extremity (5G On+BT)(2G/3G/4G/NR)	Receiver off with Wifi5G+BT	9

15.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																			
	LTE Band 12	10M	QPSK	1	0	Right Cheek	0mm	Ant 0	DSI 1	23095	707.5	1	1	24.76	25.50	1.186	-0.01	0.045	0.053
	LTE Band 12	10M	QPSK	25	0	Right Cheek	0mm	Ant 0	DSI 1	23095	707.5	1	1	23.69	24.50	1.205	0.15	0.049	0.059
	LTE Band 12	10M	QPSK	1	0	Right Tilted	0mm	Ant 0	DSI 1	23095	707.5	1	1	24.76	25.50	1.186	-0.16	0.017	0.020
	LTE Band 12	10M	QPSK	25	0	Right Tilted	0mm	Ant 0	DSI 1	23095	707.5	1	1	23.69	24.50	1.205	0.01	0.019	0.023
	LTE Band 12	10M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 1	23095	707.5	1	1	24.76	25.50	1.186	0.05	0.061	0.072
	LTE Band 12	10M	QPSK	25	0	Left Cheek	0mm	Ant 0	DSI 1	23095	707.5	1	1	23.69	24.50	1.205	-0.01	0.064	0.077
	LTE Band 12	10M	QPSK	25	0	Left Cheek	0mm	Ant 0	DSI 1	23095	707.5	1	2	23.69	24.50	1.205	0.02	0.065	0.078
	LTE Band 12	10M	QPSK	25	0	Left Cheek	0mm	Ant 0	DSI 1	23095	707.5	2	2	23.69	24.50	1.205	0.03	0.069	0.083
	LTE Band 12	10M	QPSK	25	0	Left Cheek	0mm	Ant 0	DSI 1	23095	707.5	3	2	23.69	24.50	1.205	-0.02	0.065	0.078
	LTE Band 12	10M	QPSK	1	0	Left Tilted	0mm	Ant 0	DSI 1	23095	707.5	1	1	24.76	25.50	1.186	0.02	0.015	0.018
	LTE Band 12	10M	QPSK	25	0	Left Tilted	0mm	Ant 0	DSI 1	23095	707.5	1	1	23.69	24.50	1.205	0.04	0.028	0.034
	LTE Band 12	10M	QPSK	25	0	Left Cheek	0mm	Ant 0	DSI 5	23095	707.5	2	2	21.46	22.30	1.213	0.02	0.028	0.034
	LTE Band 12	10M	QPSK	25	0	Left Cheek	0mm	Ant 0	DSI 7	23095	707.5	2	2	22.15	23.00	1.216	0.01	0.048	0.058
	LTE Band 12	10M	QPSK	1	0	Right Cheek	0mm	Ant 2	DSI 1	23095	707.5	1	1	24.45	25.20	1.189	0.08	0.237	0.282
	LTE Band 12	10M	QPSK	25	0	Right Cheek	0mm	Ant 2	DSI 1	23095	707.5	1	1	23.40	24.20	1.202	0.01	0.296	0.356
	LTE Band 12	10M	QPSK	25	0	Right Cheek	0mm	Ant 2	DSI 1	23095	707.5	1	2	23.40	24.20	1.202	0.03	0.326	0.392
	LTE Band 12	10M	QPSK	25	0	Right Cheek	0mm	Ant 2	DSI 1	23095	707.5	2	2	23.40	24.20	1.202	0.04	0.278	0.334
01	LTE Band 12	10M	QPSK	25	0	Right Cheek	0mm	Ant 2	DSI 1	23095	707.5	3	2	23.40	24.20	1.202	-0.03	0.342	**0.411**
	LTE Band 12	10M	QPSK	1	0	Right Tilted	0mm	Ant 2	DSI 1	23095	707.5	1	1	24.45	25.20	1.189	0.06	0.063	0.075
	LTE Band 12	10M	QPSK	25	0	Right Tilted	0mm	Ant 2	DSI 1	23095	707.5	1	1	23.40	24.20	1.202	0.11	0.081	0.097
	LTE Band 12	10M	QPSK	1	0	Left Cheek	0mm	Ant 2	DSI 1	23095	707.5	1	1	24.45	25.20	1.189	-0.03	0.104	0.124
	LTE Band 12	10M	QPSK	25	0	Left Cheek	0mm	Ant 2	DSI 1	23095	707.5	1	1	23.40	24.20	1.202	-0.08	0.138	0.166
	LTE Band 12	10M	QPSK	1	0	Left Tilted	0mm	Ant 2	DSI 1	23095	707.5	1	1	24.45	25.20	1.189	0.16	0.046	0.055
	LTE Band 12	10M	QPSK	25	0	Left Tilted	0mm	Ant 2	DSI 1	23095	707.5	1	1	23.40	24.20	1.202	0.14	0.058	0.070
	LTE Band 12	10M	QPSK	25	0	Right Cheek	0mm	Ant 2	DSI 5	23095	707.5	3	2	21.32	22.00	1.169	0.01	0.189	0.221
	LTE Band 12	10M	QPSK	25	0	Right Cheek	0mm	Ant 2	DSI 7	23095	707.5	3	2	21.90	22.70	1.202	0.02	0.219	0.263
	LTE Band 13	10M	QPSK	1	0	Right Cheek	0mm	Ant 0	DSI 1	23230	782	1	1	23.36	24.50	1.300	0.04	0.057	0.074
	LTE Band 13	10M	QPSK	25	0	Right Cheek	0mm	Ant 0	DSI 1	23230	782	1	1	22.36	23.50	1.300	0.16	0.047	0.061
	LTE Band 13	10M	QPSK	1	0	Right Tilted	0mm	Ant 0	DSI 1	23230	782	1	1	23.36	24.50	1.300	-0.16	0.048	0.062
	LTE Band 13	10M	QPSK	25	0	Right Tilted	0mm	Ant 0	DSI 1	23230	782	1	1	22.36	23.50	1.300	-0.06	0.019	0.025
	LTE Band 13	10M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 1	23230	782	1	1	23.36	24.50	1.300	0.05	0.075	0.098
	LTE Band 13	10M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 1	23230	782	1	2	23.36	24.50	1.300	0.02	0.080	0.104
	LTE Band 13	10M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 1	23230	782	2	2	23.36	24.50	1.300	0.03	0.061	0.079
	LTE Band 13	10M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 1	23230	782	3	2	23.36	24.50	1.300	-0.02	0.080	0.104
	LTE Band 13	10M	QPSK	25	0	Left Cheek	0mm	Ant 0	DSI 1	23230	782	1	1	22.36	23.50	1.300	0.06	0.060	0.078
	LTE Band 13	10M	QPSK	1	0	Left Tilted	0mm	Ant 0	DSI 1	23230	782	1	1	23.36	24.50	1.300	0.02	0.042	0.055
	LTE Band 13	10M	QPSK	25	0	Left Tilted	0mm	Ant 0	DSI 1	23230	782	1	1	22.36	23.50	1.300	0.07	0.017	0.022
	LTE Band 13	10M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 5	23230	782	1	2	20.17	21.30	1.297	0.02	0.046	0.060
	LTE Band 13	10M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 7	23230	782	1	2	20.85	22.00	1.303	0.01	0.050	0.065
	LTE Band 13	10M	QPSK	1	0	Right Cheek	0mm	Ant 2	DSI 1	23230	782	1	1	23.12	24.20	1.282	0.05	0.411	0.527
	LTE Band 13	10M	QPSK	1	0	Right Cheek	0mm	Ant 2	DSI 1	23230	782	1	2	23.12	24.20	1.282	-0.02	0.427	0.548
02	LTE Band 13	10M	QPSK	1	0	Right Cheek	0mm	Ant 2	DSI 1	23230	782	2	2	23.12	24.20	1.282	0.04	0.530	**0.680**
	LTE Band 13	10M	QPSK	1	0	Right Cheek	0mm	Ant 2	DSI 1	23230	782	3	2	23.12	24.20	1.282	-0.03	0.525	0.673
	LTE Band 13	10M	QPSK	25	0	Right Cheek	0mm	Ant 2	DSI 1	23230	782	1	1	22.13	23.20	1.279	0.09	0.329	0.421
	LTE Band 13	10M	QPSK	1	0	Right Tilted	0mm	Ant 2	DSI 1	23230	782	1	1	23.12	24.20	1.282	0.03	0.118	0.151
	LTE Band 13	10M	QPSK	25	0	Right Tilted	0mm	Ant 2	DSI 1	23230	782	1	1	22.13	23.20	1.279	0.05	0.093	0.119
	LTE Band 13	10M	QPSK	1	0	Left Cheek	0mm	Ant 2	DSI 1	23230	782	1	1	23.12	24.20	1.282	0.16	0.191	0.245
	LTE Band 13	10M	QPSK	25	0	Left Cheek	0mm	Ant 2	DSI 1	23230	782	1	1	22.13	23.20	1.279	0.05	0.151	0.193
	LTE Band 13	10M	QPSK	1	0	Left Tilted	0mm	Ant 2	DSI 1	23230	782	1	1	23.12	24.20	1.282	0.05	0.081	0.104
	LTE Band 13	10M	QPSK	25	0	Left Tilted	0mm	Ant 2	DSI 1	23230	782	1	1	22.13	23.20	1.279	0.02	0.067	0.086
	LTE Band 13	10M	QPSK	1	0	Right Cheek	0mm	Ant 2	DSI 5	23230	782	2	2	20.15	21.00	1.216	0.02	0.198	0.241
	LTE Band 13	10M	QPSK	1	0	Right Cheek	0mm	Ant 2	DSI 7	23230	782	2	2	20.68	21.70	1.265	0.01	0.230	0.291

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
835MHz																				
	GSM850	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 0	DSI 1	189	836.4	1	1	33.38	34.50	1.294	0.08	0.109	0.141
	GSM850	-	-	-	-	GSM Voice	Right Tilted	0mm	Ant 0	DSI 1	189	836.4	1	1	33.38	34.50	1.294	0.04	0.075	0.097
	GSM850	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 0	DSI 1	189	836.4	1	1	33.38	34.50	1.294	0.02	0.158	0.204
	GSM850	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 0	DSI 1	189	836.4	1	2	33.38	34.50	1.294	0.03	0.114	0.148
	GSM850	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 0	DSI 1	189	836.4	2	1	33.38	34.50	1.294	-0.04	0.146	0.189
	GSM850	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 0	DSI 1	189	836.4	3	1	33.38	34.50	1.294	0.05	0.184	0.238
	GSM850	-	-	-	-	GSM Voice	Left Tilted	0mm	Ant 0	DSI 1	189	836.4	1	1	33.38	34.50	1.294	-0.13	0.074	0.096
	GSM850	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 0	DSI 5	189	836.4	3	1	30.23	31.30	1.279	0.02	0.067	0.086
	GSM850	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 0	DSI 7	189	836.4	3	1	30.83	32.00	1.309	0.01	0.074	0.097
03	GSM850	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 2	DSI 1	189	836.4	1	1	30.61	31.70	1.285	0.01	0.466	**0.599**
	GSM850	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 2	DSI 1	189	836.4	1	2	30.61	31.70	1.285	0.03	0.442	0.568
	GSM850	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 2	DSI 1	189	836.4	2	1	30.61	31.70	1.285	-0.02	0.382	0.491
	GSM850	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 2	DSI 1	189	836.4	3	1	30.61	31.70	1.285	0.01	0.454	0.584
	GSM850	-	-	-	-	GSM Voice	Right Tilted	0mm	Ant 2	DSI 1	189	836.4	1	1	30.61	31.70	1.285	0.02	0.122	0.157
	GSM850	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 2	DSI 1	189	836.4	1	1	30.61	31.70	1.285	0.12	0.220	0.283
	GSM850	-	-	-	-	GSM Voice	Left Tilted	0mm	Ant 2	DSI 1	189	836.4	1	1	30.61	31.70	1.285	0.04	0.090	0.116
	GSM850	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 2	DSI 5	189	836.4	1	1	27.27	28.50	1.327	0.02	0.232	0.308
	GSM850	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 2	DSI 7	189	836.4	1	1	28.00	29.20	1.318	0.01	0.289	0.381
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 1	4182	836.4	1	1	24.64	25.50	1.219	-0.17	0.143	0.174
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 1	4182	836.4	1	1	24.64	25.50	1.219	-0.08	0.087	0.106
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	4182	836.4	1	1	24.64	25.50	1.219	-0.01	0.201	0.245
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	4182	836.4	1	2	24.64	25.50	1.219	0.03	0.168	0.205
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	4182	836.4	2	1	24.64	25.50	1.219	-0.04	0.201	0.245
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	4182	836.4	3	1	24.64	25.50	1.219	0.01	0.236	0.288
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 1	4182	836.4	1	1	24.64	25.50	1.219	0.06	0.092	0.112
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 5	4182	836.4	3	1	21.68	22.30	1.153	0.01	0.080	0.092
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 7	4182	836.4	3	1	22.26	23.00	1.186	0.02	0.100	0.119
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	4182	836.4	1	1	22.88	23.70	1.208	0.08	0.729	0.880
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	4132	826.4	1	1	22.81	23.70	1.227	0.07	0.632	0.776
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	4233	846.6	1	1	22.71	23.70	1.256	0.02	0.642	0.806
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	4182	836.4	1	2	22.88	23.70	1.208	-0.03	0.706	0.853
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	4182	836.4	2	1	22.88	23.70	1.208	0.05	0.654	0.790
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	4182	836.4	3	1	22.88	23.70	1.208	-0.02	0.735	0.888
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	4132	826.4	3	1	22.81	23.70	1.227	0.03	0.632	0.776
04	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	4233	846.6	3	1	22.71	23.70	1.256	-0.03	0.792	**0.995**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI 1	4182	836.4	1	1	22.88	23.70	1.208	0.09	0.228	0.275
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 1	4182	836.4	1	1	22.88	23.70	1.208	0.08	0.394	0.476
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI 1	4182	836.4	1	1	22.88	23.70	1.208	-0.02	0.162	0.196
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 5	4182	836.4	3	1	19.70	20.50	1.202	0.03	0.307	0.369
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 7	4182	836.4	3	1	20.45	21.20	1.189	0.01	0.382	0.454
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	26865	831.5	1	1	24.61	25.50	1.227	0.06	0.084	0.103
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	DSI 1	26865	831.5	1	1	23.67	24.50	1.211	0.08	0.028	0.034
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	26865	831.5	1	1	24.61	25.50	1.227	0.04	0.056	0.069
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	DSI 1	26865	831.5	1	1	23.67	24.50	1.211	-0.06	0.048	0.058
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	1	1	24.61	25.50	1.227	-0.05	0.112	0.137
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	1	2	24.61	25.50	1.227	0.03	0.119	0.146
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	2	2	24.61	25.50	1.227	-0.01	0.148	0.182
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	3	2	24.61	25.50	1.227	0.04	0.174	0.214
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	1	1	23.67	24.50	1.211	-0.06	0.099	0.120
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	26865	831.5	1	1	24.61	25.50	1.227	-0.19	0.056	0.069
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	DSI 1	26865	831.5	1	1	23.67	24.50	1.211	0.09	0.050	0.061
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 5	26865	831.5	3	2	21.44	22.30	1.219	-0.02	0.055	0.067

	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 7	26865	831.5	3	2	22.12	23.00	1.225	0.03	0.075	0.092
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	26865	831.5	1	1	23.36	24.20	1.213	0.01	0.585	0.710
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	26865	831.5	1	2	23.36	24.20	1.213	0.01	0.606	0.735
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	26865	831.5	2	2	23.36	24.20	1.213	-0.03	0.529	0.642
05	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	26865	831.5	3	2	23.36	24.20	1.213	0.04	0.668	**0.811**
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 2	DSI 1	26865	831.5	3	2	23.23	24.20	1.250	0.02	0.634	0.793
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 2	DSI 1	26865	831.5	1	1	23.21	24.20	1.256	0.06	0.507	0.637
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 1	26865	831.5	1	1	23.36	24.20	1.213	0.09	0.168	0.204
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 2	DSI 1	26865	831.5	1	1	23.21	24.20	1.256	-0.05	0.147	0.185
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	26865	831.5	1	1	23.36	24.20	1.213	0.05	0.295	0.358
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 2	DSI 1	26865	831.5	1	1	23.21	24.20	1.256	-0.07	0.257	0.323
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 1	26865	831.5	1	1	23.36	24.20	1.213	0.08	0.123	0.149
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 2	DSI 1	26865	831.5	1	1	23.21	24.20	1.256	-0.03	0.106	0.133
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 5	26865	831.5	3	2	20.11	21.00	1.227	0.02	0.320	0.393
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 7	26865	831.5	3	2	20.93	21.70	1.194	0.05	0.370	0.442
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	167300	836.5	1	1	24.37	25.70	1.358	-0.11	0.097	0.132
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	167300	836.5	1	1	24.32	25.70	1.374	0.06	0.104	0.143
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	167300	836.5	1	1	24.37	25.70	1.358	0.05	0.066	0.090
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	167300	836.5	1	1	24.32	25.70	1.374	-0.08	0.067	0.092
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	1	1	24.37	25.70	1.358	0.16	0.132	0.179
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	1	1	24.32	25.70	1.374	0.03	0.141	0.194
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	1	2	24.32	25.70	1.374	-0.03	0.124	0.170
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	2	1	24.32	25.70	1.374	0.04	0.120	0.165
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	3	1	24.32	25.70	1.374	0.01	0.128	0.176
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	167300	836.5	1	1	24.37	25.70	1.358	0.09	0.062	0.084
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	167300	836.5	1	1	24.32	25.70	1.374	0.08	0.069	0.095
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 5	167300	836.5	1	1	21.16	22.80	1.459	0.03	0.074	0.108
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 7	167300	836.5	1	1	21.89	23.50	1.449	0.01	0.081	0.117
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 1	167300	836.5	1	1	22.23	23.60	1.371	-0.15	0.365	0.500
06	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 1	167300	836.5	1	1	22.10	23.60	1.413	0.09	0.444	**0.627**
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 1	167300	836.5	1	2	22.10	23.60	1.413	0.04	0.377	0.533
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 1	167300	836.5	2	1	22.10	23.60	1.413	-0.02	0.361	0.510
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 1	167300	836.5	3	1	22.10	23.60	1.413	0.01	0.391	0.552
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 1	167300	836.5	1	1	22.23	23.60	1.371	0.13	0.107	0.147
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 1	167300	836.5	1	1	22.10	23.60	1.413	0.05	0.114	0.161
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 1	167300	836.5	1	1	22.23	23.60	1.371	0.14	0.210	0.288
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 1	167300	836.5	1	1	22.10	23.60	1.413	0.13	0.229	0.323
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 1	167300	836.5	1	1	22.23	23.60	1.371	0.16	0.081	0.111
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 1	167300	836.5	1	1	22.10	23.60	1.413	0.08	0.082	0.116
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 5	167300	836.5	1	1	18.99	20.40	1.384	0.04	0.224	0.310
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 7	167300	836.5	1	1	19.65	21.10	1.396	0.02	0.234	0.327

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	1413	1732.6	1	1	24.44	25.10	1.164	-0.06	0.140	0.163
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	1413	1732.6	1	1	24.44	25.10	1.164	0.11	0.062	0.072
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	1413	1732.6	1	1	24.44	25.10	1.164	0.07	0.148	0.172
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	1413	1732.6	1	2	24.44	25.10	1.164	0.03	0.116	0.135
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	1413	1732.6	2	1	24.44	25.10	1.164	-0.02	0.120	0.140
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	1413	1732.6	3	1	24.44	25.10	1.164	0.01	0.163	0.190
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	1413	1732.6	1	1	24.44	25.10	1.164	0.01	0.070	0.081
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 5	1413	1732.6	3	1	21.10	21.90	1.202	0.02	0.063	0.076
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 7	1413	1732.6	3	1	21.92	22.60	1.169	0.01	0.078	0.091
07	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	1413	1732.6	1	1	19.78	20.70	1.236	-0.06	0.573	**0.708**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	1413	1732.6	1	2	19.78	20.70	1.236	0.02	0.539	0.666

	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	1413	1732.6	2	1	19.78	20.70	1.236	-0.03	0.475	0.587
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	1413	1732.6	3	1	19.78	20.70	1.236	0.01	0.526	0.650
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 6	DSI 1	1413	1732.6	1	1	19.78	20.70	1.236	-0.11	0.568	0.702
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 6	DSI 1	1413	1732.6	1	1	19.78	20.70	1.236	0.08	0.387	0.478
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 6	DSI 1	1413	1732.6	1	1	19.78	20.70	1.236	0.04	0.459	0.567
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 5	1413	1732.6	1	1	16.65	17.50	1.216	0.02	0.243	0.296
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 7	1413	1732.6	1	1	17.31	18.20	1.227	0.01	0.284	0.349
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	132322	1745	1	1	24.08	25.10	1.265	0.06	0.111	0.140
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	132322	1745	1	1	23.04	24.10	1.276	0.18	0.093	0.119
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	132322	1745	1	1	24.08	25.10	1.265	0.08	0.047	0.059
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	132322	1745	1	1	23.04	24.10	1.276	-0.18	0.041	0.052
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	132322	1745	1	1	24.08	25.10	1.265	0.08	0.125	0.158
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	132322	1745	1	2	24.08	25.10	1.265	0.03	0.114	0.144
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	132322	1745	2	1	24.08	25.10	1.265	-0.04	0.115	0.145
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	132322	1745	3	1	24.08	25.10	1.265	0.05	0.155	0.196
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	132322	1745	1	1	23.04	24.10	1.276	-0.13	0.105	0.134
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	132322	1745	1	1	24.08	25.10	1.265	0.05	0.058	0.073
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	132322	1745	1	1	23.04	24.10	1.276	0.03	0.048	0.061
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 5	132322	1745	3	1	21.07	21.90	1.211	0.02	0.065	0.079
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 7	132322	1745	3	1	21.33	22.60	1.340	0.01	0.072	0.096
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	132322	1745	1	1	19.21	20.40	1.315	-0.02	0.515	0.677
08	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	132322	1745	1	1	19.15	20.40	1.334	-0.06	0.553	**0.737**
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	132322	1745	1	2	19.15	20.40	1.334	0.03	0.496	0.661
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	132322	1745	2	1	19.15	20.40	1.334	-0.04	0.437	0.583
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	132322	1745	3	1	19.15	20.40	1.334	0.05	0.490	0.653
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	132322	1745	1	1	19.21	20.40	1.315	0.01	0.473	0.622
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	132322	1745	1	1	19.15	20.40	1.334	-0.02	0.505	0.673
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 1	132322	1745	1	1	19.21	20.40	1.315	-0.07	0.362	0.476
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 1	132322	1745	1	1	19.15	20.40	1.334	-0.09	0.388	0.517
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 1	132322	1745	1	1	19.21	20.40	1.315	-0.1	0.416	0.547
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 1	132322	1745	1	1	19.15	20.40	1.334	0.14	0.442	0.589
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 5	132322	1745	1	1	16.06	17.20	1.300	-0.01	0.255	0.332
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 7	132322	1745	1	1	16.76	17.90	1.300	0.02	0.294	0.382
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	349000	1745	1	1	24.08	25.60	1.419	0.11	0.133	0.189
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	349000	1745	1	1	24.04	25.60	1.432	0.15	0.142	0.203
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 1	349000	1745	1	1	24.08	25.60	1.419	-0.16	0.056	0.079
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 1	349000	1745	1	1	24.04	25.60	1.432	-0.05	0.066	0.095
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	349000	1745	1	1	24.08	25.60	1.419	0.07	0.153	0.217
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	349000	1745	1	2	24.08	25.60	1.419	0.02	0.128	0.182
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	349000	1745	2	1	24.08	25.60	1.419	-0.02	0.118	0.167
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	349000	1745	3	1	24.08	25.60	1.419	0.04	0.108	0.153
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	349000	1745	1	1	24.04	25.60	1.432	0.03	0.148	0.212
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 1	349000	1745	1	1	24.08	25.60	1.419	-0.09	0.084	0.119
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 1	349000	1745	1	1	24.04	25.60	1.432	0.02	0.089	0.127
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 5	349000	1745	1	1	20.78	22.40	1.452	0.01	0.063	0.091
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 7	349000	1745	1	1	21.40	23.10	1.479	0.02	0.074	0.109
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 1	349000	1745	1	1	18.56	20.00	1.393	-0.14	0.331	0.461
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 1	349000	1745	1	1	18.51	20.00	1.409	-0.08	0.377	0.531
09	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 1	349000	1745	1	2	18.51	20.00	1.409	-0.02	0.441	**0.621**
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 1	349000	1745	2	2	18.51	20.00	1.409	0.03	0.413	0.582
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 1	349000	1745	3	2	18.51	20.00	1.409	0.04	0.403	0.568
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 1	349000	1745	1	1	18.56	20.00	1.393	-0.02	0.309	0.430
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 1	349000	1745	1	1	18.51	20.00	1.409	-0.14	0.352	0.496
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 6	DSI 1	349000	1745	1	1	18.56	20.00	1.393	0.15	0.221	0.308
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 6	DSI 1	349000	1745	1	1	18.51	20.00	1.409	0.08	0.238	0.335
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 6	DSI 1	349000	1745	1	1	18.56	20.00	1.393	-0.18	0.253	0.352

	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 6	DSI 1	349000	1745	1	1	18.51	20.00	1.409	0.05	0.271	0.382
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 5	349000	1745	1	2	15.44	16.80	1.368	0.03	0.210	0.287
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 7	349000	1745	1	2	16.16	17.50	1.361	0.01	0.245	0.334

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
1900MHz																				
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 1	DSI 1	661	1880	1	1	29.74	31.00	1.337	0.07	0.054	0.072
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 1	DSI 1	661	1880	1	2	29.74	31.00	1.337	0.02	0.028	0.037
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 1	DSI 1	661	1880	2	1	29.74	31.00	1.337	-0.01	0.031	0.041
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 1	DSI 1	661	1880	3	1	29.74	31.00	1.337	0.02	0.024	0.032
	GSM1900	-	-	-	-	GSM Voice	Right Tilted	0mm	Ant 1	DSI 1	661	1880	1	1	29.74	31.00	1.337	0.03	0.035	0.047
	GSM1900	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 1	DSI 1	661	1880	1	1	29.74	31.00	1.337	0.06	0.043	0.057
	GSM1900	-	-	-	-	GSM Voice	Left Tilted	0mm	Ant 1	DSI 1	661	1880	1	1	29.74	31.00	1.337	0.06	0.028	0.037
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 1	DSI 5	661	1880	1	1	26.51	27.80	1.346	0.01	0.019	0.026
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 1	DSI 7	661	1880	1	1	27.14	28.50	1.368	0.02	0.024	0.033
10	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 6	DSI 1	661	1880	1	1	25.78	27.30	1.419	0.11	0.705	**1.000**
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 6	DSI 1	512	1850.2	1	1	25.69	27.30	1.449	-0.03	0.571	0.827
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 6	DSI 1	810	1909.8	1	1	25.78	27.30	1.419	-0.15	0.636	0.903
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 6	DSI 1	661	1880	1	2	25.78	27.30	1.419	-0.02	0.667	0.947
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 6	DSI 1	661	1880	2	1	25.78	27.30	1.419	0.01	0.563	0.799
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 6	DSI 1	661	1880	3	1	25.78	27.30	1.419	0.04	0.588	0.834
	GSM1900	-	-	-	-	GSM Voice	Right Tilted	0mm	Ant 6	DSI 1	661	1880	1	1	25.78	27.30	1.419	-0.06	0.666	0.945
	GSM1900	-	-	-	-	GSM Voice	Right Tilted	0mm	Ant 6	DSI 1	512	1850.2	1	1	25.69	27.30	1.449	0.07	0.515	0.746
	GSM1900	-	-	-	-	GSM Voice	Right Tilted	0mm	Ant 6	DSI 1	810	1909.8	1	1	25.78	27.30	1.419	0.04	0.667	0.947
	GSM1900	-	-	-	-	GSM Voice	Left Cheek	0mm	Ant 6	DSI 1	661	1880	1	1	25.78	27.30	1.419	0.02	0.479	0.680
	GSM1900	-	-	-	-	GSM Voice	Left Tilted	0mm	Ant 6	DSI 1	661	1880	1	1	25.78	27.30	1.419	-0.04	0.563	0.799
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 6	DSI 5	661	1880	1	1	22.41	24.10	1.476	0.01	0.309	0.456
	GSM1900	-	-	-	-	GSM Voice	Right Cheek	0mm	Ant 6	DSI 7	661	1880	1	1	23.14	24.80	1.466	0.02	0.394	0.577
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	9400	1880	1	1	24.39	25.10	1.178	0.04	0.121	0.142
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	9400	1880	1	2	24.39	25.10	1.178	0.03	0.088	0.104
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	9400	1880	2	1	24.39	25.10	1.178	-0.04	0.098	0.115
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	9400	1880	3	1	24.39	25.10	1.178	0.01	0.133	0.157
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	9400	1880	1	1	24.39	25.10	1.178	-0.07	0.065	0.077
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	9400	1880	1	1	24.39	25.10	1.178	0.16	0.116	0.137
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	9400	1880	1	1	24.39	25.10	1.178	0.19	0.073	0.086
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 5	9400	1880	3	1	21.23	21.90	1.167	0.03	0.046	0.054
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 7	9400	1880	3	1	21.96	22.60	1.159	0.01	0.060	0.070
11	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	9400	1880	1	1	16.14	17.20	1.276	0.02	0.727	**0.928**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	9262	1852.4	1	1	16.06	17.20	1.300	0.08	0.628	0.817
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	9538	1907.6	1	1	16.03	17.20	1.309	0.05	0.703	0.920
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	9400	1880	1	2	16.14	17.20	1.276	0.03	0.721	0.920
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	9400	1880	2	1	16.14	17.20	1.276	-0.03	0.675	0.862
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	9400	1880	3	1	16.14	17.20	1.276	0.01	0.703	0.897
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 6	DSI 1	9400	1880	1	1	16.14	17.20	1.276	0.16	0.668	0.853
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 6	DSI 1	9262	1852.4	1	1	16.06	17.20	1.300	0.01	0.572	0.744
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 6	DSI 1	9538	1907.6	1	1	16.03	17.20	1.309	0.11	0.642	0.840
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 6	DSI 1	9400	1880	1	1	16.14	17.20	1.276	0.08	0.484	0.618
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 6	DSI 1	9400	1880	1	1	16.14	17.20	1.276	-0.09	0.566	0.722
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 5	9400	1880	1	1	12.97	14.00	1.268	0.04	0.330	0.418
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 7	9400	1880	1	1	13.59	14.70	1.291	0.02	0.376	0.485
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	26340	1880	1	1	23.93	25.10	1.309	0.06	0.086	0.113
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	26340	1880	1	2	23.93	25.10	1.309	0.03	0.070	0.092
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	26340	1880	2	1	23.93	25.10	1.309	-0.03	0.086	0.113
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	26340	1880	3	1	23.93	25.10	1.309	0.01	0.109	0.143
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	26340	1880	1	1	23.04	24.10	1.276	0.19	0.072	0.092

	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	26340	1880	1	1	23.93	25.10	1.309	-0.17	0.056	0.073
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	26340	1880	1	1	23.04	24.10	1.276	-0.12	0.045	0.057
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	26340	1880	1	1	23.93	25.10	1.309	0.14	0.081	0.106
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	26340	1880	1	1	23.04	24.10	1.276	0.19	0.063	0.080
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	26340	1880	1	1	23.93	25.10	1.309	0.03	0.062	0.081
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	26340	1880	1	1	23.04	24.10	1.276	0.08	0.047	0.060
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 5	26340	1880	3	1	21.14	21.90	1.191	0.03	0.051	0.061
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 7	26340	1880	3	1	21.48	22.60	1.294	0.01	0.056	0.072
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	26340	1880	1	1	16.31	17.40	1.285	0.18	0.675	0.868
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	26140	1860	1	1	16.22	17.40	1.312	0.03	0.650	0.853
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	26590	1905	1	1	16.15	17.40	1.334	0.07	0.661	0.881
12	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	26340	1880	1	1	16.25	17.40	1.303	-0.01	0.708	**0.923**
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	26140	1860	1	1	16.14	17.40	1.337	0.14	0.662	0.885
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	26590	1905	1	1	16.21	17.40	1.315	0.06	0.696	0.915
	LTE Band 25	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 6	DSI 1	26340	1880	1	1	16.28	17.40	1.294	0.18	0.700	0.906
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	26340	1880	1	2	16.25	17.40	1.303	0.01	0.697	0.908
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	26340	1880	2	1	16.25	17.40	1.303	-0.03	0.628	0.818
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	26340	1880	3	1	16.25	17.40	1.303	0.04	0.695	0.906
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	26340	1880	1	1	16.31	17.40	1.285	-0.11	0.665	0.855
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	26140	1860	1	1	16.22	17.40	1.312	0.03	0.630	0.827
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	26590	1905	1	1	16.15	17.40	1.334	0.08	0.641	0.855
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	26340	1880	1	1	16.25	17.40	1.303	0.05	0.705	0.919
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	26140	1860	1	1	16.14	17.40	1.337	0.01	0.681	0.910
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	26590	1905	1	1	16.21	17.40	1.315	0.02	0.690	0.908
	LTE Band 25	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 6	DSI 1	26340	1880	1	1	16.28	17.40	1.294	0.09	0.688	0.890
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 1	26340	1880	1	1	16.31	17.40	1.285	0.04	0.433	0.557
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 1	26340	1880	1	1	16.25	17.40	1.303	-0.13	0.453	0.590
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 1	26340	1880	1	1	16.31	17.40	1.285	0.06	0.502	0.645
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 1	26340	1880	1	1	16.25	17.40	1.303	-0.14	0.527	0.687
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 5	26340	1880	1	1	13.24	14.20	1.247	0.01	0.351	0.438
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 7	26340	1880	1	1	13.76	14.90	1.300	0.03	0.396	0.515

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	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)
2600MHz																						
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	21100	2535	1	1	21.88	23.10	1.324	-	-	0.04	0.082	0.109
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	21100	2535	1	1	21.83	23.10	1.340	-	-	0.05	0.089	0.119
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	21100	2535	1	1	21.88	23.10	1.324	-	-	0.08	0.048	0.064
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	21100	2535	1	1	21.83	23.10	1.340	-	-	0.09	0.052	0.070
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	21100	2535	1	1	21.88	23.10	1.324	-	-	0.03	0.119	0.158
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	21100	2535	1	1	21.83	23.10	1.340	-	-	0.01	0.127	0.170
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	21100	2535	1	2	21.83	23.10	1.340	-	-	0.03	0.146	0.196
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	21100	2535	2	2	21.83	23.10	1.340	-	-	-0.02	0.112	0.150
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	21100	2535	3	2	21.83	23.10	1.340	-	-	0.04	0.141	0.189
	LTE Band 7	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 1	DSI 1	21100+ 21298	2535+ 2554.8	1	2	22.06	23.10	1.271	-	-	0.01	0.124	0.158
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	21100	2535	1	1	21.88	23.10	1.324	-	-	0.07	0.042	0.056
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	21100	2535	1	1	21.83	23.10	1.340	-	-	0.05	0.043	0.058
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 5	21100	2535	1	2	18.65	19.90	1.334	-	-	0.02	0.066	0.088
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 7	21100	2535	1	2	19.34	20.60	1.337	-	-	0.01	0.078	0.104
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	1	1	16.55	18.10	1.429	-	-	0.02	0.517	0.739
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	1	1	16.51	18.10	1.442	-	-	-0.05	0.524	0.756
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	1	2	16.55	18.10	1.429	-	-	0.03	0.558	0.797
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	1	2	16.51	18.10	1.442	-	-	0.03	0.643	0.927
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	20850	2510	1	2	16.38	18.10	1.486	-	-	0.06	0.631	0.938
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21350	2560	1	2	16.38	18.10	1.486	-	-	0.03	0.560	0.832
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	1	2	16.49	18.10	1.449	-	-	0.07	0.600	0.869
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	2	2	16.55	18.10	1.429	-	-	-0.04	0.433	0.619
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	2	2	16.51	18.10	1.442	-	-	-0.04	0.597	0.861
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	20850	2510	2	2	16.38	18.10	1.486	-	-	0.06	0.431	0.640
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21350	2560	2	2	16.38	18.10	1.486	-	-	-0.03	0.381	0.566
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	2	2	16.49	18.10	1.449	-	-	-0.05	0.502	0.727
13	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	3	2	16.55	18.10	1.429	-	-	0.05	0.747	**1.067**
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	20850	2510	3	2	16.42	18.10	1.472	-	-	0.04	0.721	1.062
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	21350	2560	3	2	16.38	18.10	1.486	-	-	0.06	0.714	1.061
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	3	2	16.51	18.10	1.442	-	-	0.05	0.632	0.911
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	20850	2510	3	2	16.38	18.10	1.486	-	-	0.06	0.651	0.967
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21350	2560	3	2	16.38	18.10	1.486	-	-	-0.03	0.633	0.941
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	3	2	16.49	18.10	1.449	-	-	-0.05	0.633	0.917
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	1	1	16.55	18.10	1.429	-	-	0.07	0.401	0.573
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	1	1	16.51	18.10	1.442	-	-	0.16	0.404	0.583
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	21100	2535	1	1	16.55	18.10	1.429	-	-	-0.01	0.126	0.180
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	21100	2535	1	1	16.51	18.10	1.442	-	-	0.04	0.139	0.200
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	21100	2535	1	1	16.55	18.10	1.429	-	-	0.04	0.103	0.147
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	21100	2535	1	1	16.51	18.10	1.442	-	-	0.05	0.119	0.172
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 5	21100	2535	3	2	13.84	15.20	1.368	-	-	0.02	0.291	0.398
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 7	21100	2535	3	2	14.36	15.70	1.361	-	-	0.02	0.329	0.448
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	21100	2535	1	1	14.78	15.90	1.294	-	-	0.04	0.478	0.619
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	21100	2535	1	1	14.75	15.90	1.303	-	-	-0.15	0.527	0.687
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	21100	2535	1	1	14.78	15.90	1.294	-	-	-0.16	0.588	0.761
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	21100	2535	1	1	14.75	15.90	1.303	-	-	-0.04	0.677	0.882
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	20850	2510	1	1	14.62	15.90	1.343	-	-	-0.08	0.501	0.673
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	21350	2560	1	1	14.68	15.90	1.324	-	-	-0.13	0.451	0.597
	LTE Band 7	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 6	DSI 1	21100	2535	1	1	14.68	15.90	1.324	-	-	-0.17	0.584	0.773
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	21100	2535	1	2	14.75	15.90	1.303	-	-	0.02	0.663	0.864
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	21100	2535	2	1	14.75	15.90	1.303	-	-	-0.03	0.512	0.667
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	21100	2535	3	1	14.75	15.90	1.303	-	-	0.05	0.600	0.782

	LTE Band 7C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 6	DSI 1	21100+ 21298	2535+ 2554.8	1	1	14.77	15.90	1.297	-	-	0.08	0.573	0.743
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 1	21100	2535	1	1	14.78	15.90	1.294	-	-	0.14	0.226	0.292
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 1	21100	2535	1	1	14.75	15.90	1.303	-	-	0.07	0.247	0.322
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 1	21100	2535	1	1	14.78	15.90	1.294	-	-	0.08	0.277	0.358
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 1	21100	2535	1	1	14.75	15.90	1.303	-	-	0.16	0.291	0.379
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 5	21100	2535	1	1	11.41	12.70	1.346	-	-	0.02	0.342	0.460
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 7	21100	2535	1	1	12.17	13.40	1.327	-	-	0.03	0.389	0.516
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	40620	2593	1	1	23.53	24.30	1.194	62.9	1.006	-0.01	0.075	0.090
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	40620	2593	1	1	22.66	23.70	1.271	62.9	1.006	0.16	0.063	0.081
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	40620	2593	1	1	23.53	24.30	1.194	62.9	1.006	-0.09	0.049	0.059
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 1	40620	2593	1	1	22.66	23.70	1.271	62.9	1.006	-0.08	0.041	0.052
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	40620	2593	1	1	23.53	24.30	1.194	62.9	1.006	0.18	0.078	0.094
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	40620	2593	1	2	23.53	24.30	1.194	62.9	1.006	0.03	0.100	0.120
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	40620	2593	2	2	23.53	24.30	1.194	62.9	1.006	-0.03	0.079	0.095
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	40620	2593	3	2	23.53	24.30	1.194	62.9	1.006	0.01	0.100	0.120
	LTE Band 41C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 1	DSI 1	40620+ 40818	2593+ 2612.8	1	2	23.37	24.30	1.239	62.9	1.006	0.02	0.082	0.102
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 1	40620	2593	1	1	22.66	23.70	1.271	62.9	1.006	0.03	0.073	0.093
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	40620	2593	1	1	23.53	24.30	1.194	62.9	1.006	0.04	0.035	0.042
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 1	40620	2593	1	1	22.66	23.70	1.271	62.9	1.006	0.09	0.032	0.041
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 5	40620	2593	1	2	20.18	21.20	1.265	62.9	1.006	0.02	0.049	0.062
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 7	40620	2593	1	2	20.94	21.90	1.247	62.9	1.006	0.01	0.056	0.070
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	40620	2593	1	1	17.12	18.10	1.253	62.9	1.006	0.08	0.542	0.683
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	39750	2506	1	1	17.04	18.10	1.276	62.9	1.006	0.01	0.411	0.528
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	40185	2549.5	1	1	17.02	18.10	1.282	62.9	1.006	-0.03	0.548	0.707
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	41055	2636.5	1	1	17.08	18.10	1.265	62.9	1.006	0.06	0.423	0.538
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 1	41490	2680	1	1	17.10	18.10	1.259	62.9	1.006	0.05	0.400	0.507
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	40620	2593	1	1	17.04	18.10	1.276	62.9	1.006	0.02	0.580	0.745
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	39750	2506	1	1	16.98	18.10	1.294	62.9	1.006	-0.04	0.592	0.771
14	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	40185	2549.5	1	1	16.90	18.10	1.318	62.9	1.006	0.01	0.677	**0.898**
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	41055	2636.5	1	1	16.95	18.10	1.303	62.9	1.006	-0.03	0.531	0.696
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	41490	2680	1	1	16.92	18.10	1.312	62.9	1.006	0.07	0.496	0.655
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 6	DSI 1	40620	2593	1	1	17.10	18.10	1.259	62.9	1.006	0.07	0.518	0.656
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	40185	2549.5	1	2	16.90	18.10	1.318	62.9	1.006	-0.03	0.567	0.752
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	40185	2549.5	2	1	16.90	18.10	1.318	62.9	1.006	0.04	0.500	0.663
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 1	40185	2549.5	3	1	16.90	18.10	1.318	62.9	1.006	0.05	0.550	0.729
	LTE Band 41C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 6	DSI 1	40185+ 40383	2593+ 2569.3	1	1	16.81	18.10	1.346	62.9	1.006	0.03	0.556	0.753
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	40620	2593	1	1	17.12	18.10	1.253	62.9	1.006	-0.1	0.650	0.819
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	39750	2506	1	1	17.04	18.10	1.276	62.9	1.006	0.19	0.451	0.579
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	40185	2549.5	1	1	17.02	18.10	1.282	62.9	1.006	0.12	0.525	0.677
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	41055	2636.5	1	1	17.08	18.10	1.265	62.9	1.006	0.18	0.401	0.510
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 1	41490	2680	1	1	17.10	18.10	1.259	62.9	1.006	0.1	0.397	0.503
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	40620	2593	1	1	17.04	18.10	1.276	62.9	1.006	0.03	0.646	0.830
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	39750	2506	1	1	16.98	18.10	1.294	62.9	1.006	0.02	0.442	0.575
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	40185	2549.5	1	1	16.90	18.10	1.318	62.9	1.006	0.1	0.535	0.709
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	41055	2636.5	1	1	16.95	18.10	1.303	62.9	1.006	0.12	0.586	0.768
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 1	41490	2680	1	1	16.92	18.10	1.312	62.9	1.006	0.05	0.566	0.747
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 6	DSI 1	40620	2593	1	1	17.10	18.10	1.259	62.9	1.006	-0.03	0.616	0.780
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 1	40620	2593	1	1	17.12	18.10	1.253	62.9	1.006	0.06	0.333	0.420
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 1	40620	2593	1	1	17.04	18.10	1.276	62.9	1.006	0.13	0.330	0.424
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 1	40620	2593	1	1	17.12	18.10	1.253	62.9	1.006	0.04	0.421	0.531
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 1	40620	2593	1	1	17.04	18.10	1.276	62.9	1.006	-0.15	0.433	0.556
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 5	40620	2593	1	1	13.99	14.90	1.233	62.9	1.006	0.01	0.283	0.351
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 7	40620	2593	1	1	14.60	15.60	1.259	62.9	1.006	0.02	0.331	0.419
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	507000	2535	1	1	20.71	21.90	1.315	-	-	0.02	0.066	0.087
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	507000	2535	1	1	20.67	21.90	1.327	-	-	-0.13	0.068	0.090

	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 1	507000	2535	1	1	20.71	21.90	1.315	-	-	0.05	0.054	0.071
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 1	507000	2535	1	1	20.67	21.90	1.327	-	-	-0.02	0.069	0.092
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	507000	2535	1	1	20.71	21.90	1.315	-	-	0.1	0.097	0.128
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	507000	2535	1	2	20.71	21.90	1.315	-	-	0.02	0.102	0.134
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	507000	2535	2	2	20.71	21.90	1.315	-	-	0.01	0.078	0.103
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	507000	2535	3	2	20.71	21.90	1.315	-	-	0.04	0.078	0.103
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	507000	2535	1	1	20.67	21.90	1.327	-	-	0.05	0.083	0.110
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 1	507000	2535	1	1	20.71	21.90	1.315	-	-	0.02	0.020	0.026
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 1	507000	2535	1	1	20.67	21.90	1.327	-	-	-0.07	0.046	0.061
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 5	507000	2535	1	2	17.44	18.70	1.337	-	-	0.02	0.044	0.059
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 7	507000	2535	1	2	18.02	19.40	1.374	-	-	-0.01	0.050	0.069
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	1	1	17.07	18.60	1.422	-	-	0.08	0.527	0.750
15	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	1	1	16.92	18.60	1.472	-	-	-0.05	0.531	**0.782**
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	1	2	16.92	18.60	1.472	-	-	0.03	0.521	0.767
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	2	1	16.92	18.60	1.472	-	-	0.04	0.476	0.701
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	3	1	16.92	18.60	1.472	-	-	-0.02	0.522	0.769
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	1	1	17.07	18.60	1.422	-	-	-0.02	0.428	0.609
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	1	1	16.92	18.60	1.472	-	-	-0.06	0.434	0.639
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 1	507000	2535	1	1	17.07	18.60	1.422	-	-	0.1	0.148	0.211
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 1	507000	2535	1	1	16.92	18.60	1.472	-	-	-0.02	0.149	0.219
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	1	1	17.07	18.60	1.422	-	-	0.04	0.109	0.155
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	1	1	16.92	18.60	1.472	-	-	-0.09	0.110	0.162
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 5	507000	2535	1	1	13.67	15.40	1.489	-	-	0.03	0.270	0.402
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 7	507000	2535	1	1	14.30	16.10	1.514	-	-	0.01	0.313	0.474
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 1	507000	2535	1	1	15.18	16.10	1.236	-	-	0.14	0.441	0.545
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 6	DSI 1	507000	2535	1	1	15.11	16.10	1.256	-	-	0.08	0.414	0.520
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 1	507000	2535	1	1	15.18	16.10	1.236	-	-	0.05	0.467	0.577
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 1	507000	2535	1	1	15.11	16.10	1.256	-	-	0.05	0.509	0.639
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 1	507000	2535	1	2	15.11	16.10	1.256	-	-	0.03	0.473	0.594
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 1	507000	2535	2	1	15.11	16.10	1.256	-	-	0.03	0.406	0.510
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 1	507000	2535	3	1	15.11	16.10	1.256	-	-	0.04	0.419	0.526
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 6	DSI 1	507000	2535	1	1	15.18	16.10	1.236	-	-	0.09	0.272	0.336
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 6	DSI 1	507000	2535	1	1	15.11	16.10	1.256	-	-	-0.01	0.261	0.328
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 6	DSI 1	507000	2535	1	1	15.18	16.10	1.236	-	-	0.07	0.311	0.384
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 6	DSI 1	507000	2535	1	1	15.11	16.10	1.256	-	-	0.09	0.284	0.357
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 5	507000	2535	1	1	11.75	12.90	1.303	-	-	0.04	0.158	0.206
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 6	DSI 7	507000	2535	1	1	12.25	13.60	1.365	-	-	0.02	0.248	0.338
16	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	519000	2595	1	1	17.12	18.60	1.406	-	-	0.03	0.507	**0.713**
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	519000	2595	1	2	17.12	18.60	1.406	-	-	0.03	0.501	0.704
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	519000	2595	2	1	17.12	18.60	1.406	-	-	-0.01	0.474	0.666
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	519000	2595	3	1	17.12	18.60	1.406	-	-	0.02	0.503	0.707
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	519000	2595	1	1	17.09	18.60	1.416	-	-	0.07	0.460	0.651
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	519000	2595	1	1	17.12	18.60	1.406	-	-	0.15	0.428	0.602
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	519000	2595	1	1	17.09	18.60	1.416	-	-	0.05	0.396	0.561
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	519000	2595	1	1	17.12	18.60	1.406	-	-	0.1	0.117	0.165
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	519000	2595	1	1	17.09	18.60	1.416	-	-	-0.08	0.106	0.150
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	519000	2595	1	1	17.12	18.60	1.406	-	-	-0.03	0.122	0.172
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	519000	2595	1	1	17.09	18.60	1.416	-	-	-0.06	0.109	0.154
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 5	519000	2595	1	1	13.84	15.40	1.432	-	-	0.01	0.285	0.408
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 7	519000	2595	1	1	14.46	16.10	1.459	-	-	0.02	0.329	0.480
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 1	518598	2592.99	1	1	19.82	21.40	1.439	-	-	0.02	0.040	0.058
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 1	518598	2592.99	1	1	19.69	21.40	1.483	-	-	0.01	0.044	0.065
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 1	518598	2592.99	1	1	19.82	21.40	1.439	-	-	0.07	0.026	0.037
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 1	518598	2592.99	1	1	19.69	21.40	1.483	-	-	0.04	0.025	0.037
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	518598	2592.99	1	1	19.82	21.40	1.439	-	-	0.14	0.061	0.088
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	518598	2592.99	1	1	19.69	21.40	1.483	-	-	0.04	0.077	0.114

	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	518598	2592.99	1	2	19.69	21.40	1.483	-	-	0.03	0.074	0.110
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	518598	2592.99	2	1	19.69	21.40	1.483	-	-	-0.02	0.061	0.090
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 1	518598	2592.99	3	1	19.69	21.40	1.483	-	-	0.04	0.057	0.085
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 1	518598	2592.99	1	1	19.82	21.40	1.439	-	-	-0.01	0.030	0.043
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 1	518598	2592.99	1	1	19.69	21.40	1.483	-	-	0.08	0.033	0.049
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 5	518598	2592.99	1	1	16.53	18.20	1.469	-	-	0.02	0.033	0.048
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 7	518598	2592.99	1	1	17.50	18.90	1.380	-	-	0.03	0.041	0.057
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	1	1	16.76	18.20	1.393	-	-	-0.02	0.421	0.587
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	1	2	16.76	18.20	1.393	-	-	0.03	0.442	0.616
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	2	2	16.76	18.20	1.393	-	-	-0.04	0.412	0.574
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	3	2	16.76	18.20	1.393	-	-	0.03	0.443	0.617
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	1	1	16.71	18.20	1.409	-	-	0.03	0.413	0.582
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	1	1	16.76	18.20	1.393	-	-	-0.11	0.355	0.495
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	1	1	16.71	18.20	1.409	-	-	0.04	0.357	0.503
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	518598	2592.99	1	1	16.76	18.20	1.393	-	-	0.14	0.110	0.153
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	518598	2592.99	1	1	16.71	18.20	1.409	-	-	-0.08	0.088	0.124
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	518598	2592.99	1	1	16.76	18.20	1.393	-	-	-0.18	0.097	0.135
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	518598	2592.99	1	1	16.71	18.20	1.409	-	-	-0.14	0.109	0.154
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 5	518598	2592.99	3	2	13.43	15.00	1.435	-	-	-0.03	0.225	0.323
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 7	518598	2592.99	3	2	14.07	15.70	1.455	-	-	0.01	0.255	0.371
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	518598	2592.99	1	1	14.88	16.30	1.387	-	-	-0.11	0.410	0.569
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	518598	2592.99	1	1	14.71	16.30	1.442	-	-	0.18	0.337	0.486
17	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	518598	2592.99	1	1	14.88	16.30	1.387	-	-	0.06	0.451	**0.625**
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	518598	2592.99	1	2	14.88	16.30	1.387	-	-	0.03	0.449	0.623
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	518598	2592.99	2	1	14.88	16.30	1.387	-	-	-0.01	0.347	0.481
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	518598	2592.99	3	1	14.88	16.30	1.387	-	-	0.02	0.404	0.560
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	518598	2592.99	1	1	14.71	16.30	1.442	-	-	-0.05	0.368	0.531
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	518598	2592.99	1	1	14.88	16.30	1.387	-	-	0.01	0.274	0.380
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	518598	2592.99	1	1	14.71	16.30	1.442	-	-	-0.12	0.238	0.343
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	518598	2592.99	1	1	14.88	16.30	1.387	-	-	0.04	0.318	0.441
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	518598	2592.99	1	1	14.71	16.30	1.442	-	-	0.04	0.260	0.375
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 5	518598	2592.99	1	1	11.94	13.10	1.306	-	-	0.01	0.218	0.285
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 7	518598	2592.99	1	1	12.47	13.80	1.358	-	-	0.02	0.252	0.342
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 1	518598	2592.99	1	1	20.84	22.30	1.400	-	-	-0.14	0.078	0.109
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 9	DSI 1	518598	2592.99	1	1	20.81	22.30	1.409	-	-	-0.07	0.089	0.125
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 9	DSI 1	518598	2592.99	1	1	20.84	22.30	1.400	-	-	0.15	0.092	0.129
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 9	DSI 1	518598	2592.99	1	1	20.81	22.30	1.409	-	-	0.07	0.101	0.142
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	518598	2592.99	1	1	20.84	22.30	1.400	-	-	-0.08	0.302	0.423
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	518598	2592.99	1	1	20.81	22.30	1.409	-	-	0.01	0.357	0.503
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	518598	2592.99	1	2	20.81	22.30	1.409	-	-	0.03	0.394	0.555
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	518598	2592.99	2	2	20.81	22.30	1.409	-	-	-0.03	0.365	0.514
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 1	518598	2592.99	3	2	20.81	22.30	1.409	-	-	0.02	0.338	0.476
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 9	DSI 1	518598	2592.99	1	1	20.84	22.30	1.400	-	-	0.05	0.261	0.365
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 9	DSI 1	518598	2592.99	1	1	20.81	22.30	1.409	-	-	-0.16	0.301	0.424
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 5	518598	2592.99	1	2	17.67	19.10	1.390	-	-	0.03	0.168	0.234
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 9	DSI 7	518598	2592.99	1	2	18.31	19.80	1.409	-	-	0.01	0.196	0.276

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	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)
2450MHz																		
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 8	Standalone & simultaneous	1	2412	1	1	12.66	13.00	1.081	100	1.000	0.06	0.092	0.099
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	Standalone & simultaneous	1	2412	1	1	12.66	13.00	1.081	100	1.000	0.05	0.115	0.124
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8	Standalone & simultaneous	1	2412	1	1	12.66	13.00	1.081	100	1.000	-0.15	0.171	0.185
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8	Standalone & simultaneous	1	2412	2	1	12.66	13.00	1.081	100	1.000	0.03	0.157	0.170
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8	Standalone & simultaneous	1	2412	3	1	12.66	13.00	1.081	100	1.000	0.07	0.154	0.167
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8	Standalone & simultaneous	1	2412	1	1	12.66	13.00	1.081	100	1.000	0.07	0.155	0.168
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 11	Standalone & simultaneous	1	2412	1	1	12.55	13.00	1.109	100	1.000	0.12	0.052	0.058
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 11	Standalone & simultaneous	1	2412	1	1	12.55	13.00	1.109	100	1.000	0.04	0.030	0.033
18	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 11	Standalone & simultaneous	1	2412	1	1	12.55	13.00	1.109	100	1.000	0.03	0.182	**0.202**
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 11	Standalone & simultaneous	1	2412	2	1	12.55	13.00	1.109	100	1.000	0.06	0.169	0.187
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 11	Standalone & simultaneous	1	2412	3	1	12.55	13.00	1.109	100	1.000	0.02	0.146	0.162
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 11	Standalone & simultaneous	1	2412	1	1	12.55	13.00	1.109	100	1.000	-0.16	0.071	0.079
19	Bluetooth	1Mbps	Left Cheek	0mm	Ant 8	Full	78	2480	1	1	16.03	18.00	1.574	76.71	1.086	-0.01	0.338	**0.578**
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 8	Full	78	2480	2	1	16.03	18.00	1.574	76.71	1.086	0.13	0.291	0.497
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 8	Full	78	2480	3	1	16.03	18.00	1.574	76.71	1.086	0.01	0.267	0.456
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 11	Full	0	2402	1	1	15.83	16.50	1.167	76.79	1.085	-0.09	0.283	0.358
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 11	Full	0	2402	2	1	15.83	16.50	1.167	76.79	1.085	0.09	0.262	0.332
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 11	Full	0	2402	3	1	15.83	16.50	1.167	76.79	1.085	0.01	0.255	0.323
5000MHz																		
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	Standalone & simultaneous	58	5290	1	1	9.34	11.00	1.466	100	1.000	0.05	0.120	0.176
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	Standalone & simultaneous	58	5290	1	1	9.34	11.00	1.466	100	1.000	0.06	0.144	0.211
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Standalone & simultaneous	58	5290	1	1	9.34	11.00	1.466	100	1.000	-0.09	0.146	0.214
20	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Standalone & simultaneous	58	5290	1	1	9.34	11.00	1.466	100	1.000	-0.02	0.166	**0.243**
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Standalone & simultaneous	58	5290	2	1	9.34	11.00	1.466	100	1.000	0.07	0.099	0.145
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Standalone & simultaneous	58	5290	3	1	9.34	11.00	1.466	100	1.000	0.01	0.125	0.183
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 11	Standalone & simultaneous	58	5290	1	1	9.98	11.00	1.265	100	1.000	0.16	0.035	0.044
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 11	Standalone & simultaneous	58	5290	1	1	9.98	11.00	1.265	100	1.000	-0.1	0.053	0.067
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	58	5290	1	1	9.98	11.00	1.265	100	1.000	0.06	0.067	0.085
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	58	5290	2	1	9.98	11.00	1.265	100	1.000	0.01	0.062	0.078
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	58	5290	3	1	9.98	11.00	1.265	100	1.000	0.07	0.066	0.083
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 11	Standalone & simultaneous	58	5290	1	1	9.98	11.00	1.265	100	1.000	-0.11	0.050	0.063
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	Standalone & simultaneous	122	5610	1	1	10.79	11.00	1.050	100	1.000	0.1	0.201	0.211
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	Standalone & simultaneous	122	5610	1	1	10.79	11.00	1.050	100	1.000	0.07	0.225	0.236
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Standalone & simultaneous	122	5610	1	1	10.79	11.00	1.050	100	1.000	-0.16	0.274	0.288
21	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Standalone & simultaneous	122	5610	1	1	10.79	11.00	1.050	100	1.000	0.09	0.278	**0.292**
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Standalone & simultaneous	122	5610	2	1	10.79	11.00	1.050	100	1.000	0.02	0.150	0.157
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Standalone & simultaneous	122	5610	3	1	10.79	11.00	1.050	100	1.000	0.09	0.201	0.211
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 11	Standalone & simultaneous	122	5610	1	1	10.94	11.00	1.014	100	1.000	0.02	0.049	0.050
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 11	Standalone & simultaneous	122	5610	1	1	10.94	11.00	1.014	100	1.000	-0.03	0.021	0.021
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	122	5610	1	1	10.94	11.00	1.014	100	1.000	0.06	0.085	0.086
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	122	5610	2	1	10.94	11.00	1.014	100	1.000	0.08	0.064	0.065
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	122	5610	3	1	10.94	11.00	1.014	100	1.000	0.01	0.079	0.080
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 11	Standalone & simultaneous	122	5610	1	1	10.94	11.00	1.014	100	1.000	0.1	0.029	0.029
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	Standalone & simultaneous	155	5775	1	1	10.95	11.00	1.012	100	1.000	0.15	0.286	0.289
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	Standalone & simultaneous	155	5775	1	1	10.95	11.00	1.012	100	1.000	-0.07	0.310	0.314
22	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Standalone & simultaneous	155	5775	1	1	10.95	11.00	1.012	100	1.000	-0.05	0.425	**0.430**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Standalone & simultaneous	155	5775	2	1	10.95	11.00	1.012	100	1.000	0.07	0.398	0.403
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	Standalone & simultaneous	155	5775	3	1	10.95	11.00	1.012	100	1.000	-0.06	0.356	0.360
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	Standalone & simultaneous	155	5775	1	1	10.95	11.00	1.012	100	1.000	0.07	0.424	0.429
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 11	Standalone & simultaneous	155	5775	1	1	10.76	11.00	1.057	100	1.000	-0.06	0.059	0.062
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 11	Standalone & simultaneous	155	5775	1	1	10.76	11.00	1.057	100	1.000	-0.1	0.080	0.085
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	155	5775	1	1	10.76	11.00	1.057	100	1.000	-0.12	0.118	0.125
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	155	5775	2	1	10.76	11.00	1.057	100	1.000	0.07	0.102	0.108
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 11	Standalone & simultaneous	155	5775	3	1	10.76	11.00	1.057	100	1.000	0.03	0.098	0.104
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 11	Standalone & simultaneous	155	5775	1	1	10.76	11.00	1.057	100	1.000	-0.18	0.039	0.041

15.2 Hotspot SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
	LTE Band 12	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.46	22.30	1.213	0.01	0.080	0.097
	LTE Band 12	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.43	22.30	1.222	0.04	0.089	0.109
	LTE Band 12	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.46	22.30	1.213	0.18	0.110	0.133
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.43	22.30	1.222	-0.02	0.119	0.145
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 13	23095	707.5	1	2	21.43	22.30	1.222	0.04	0.165	0.202
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 13	23095	707.5	2	2	21.43	22.30	1.222	0.17	0.135	0.165
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 13	23095	707.5	3	2	21.43	22.30	1.222	0.02	0.135	0.165
	LTE Band 12	10M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.46	22.30	1.213	-0.15	0.041	0.050
	LTE Band 12	10M	QPSK	25	0	-	Left Side	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.43	22.30	1.222	0.08	0.049	0.060
	LTE Band 12	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.46	22.30	1.213	-0.1	0.053	0.064
	LTE Band 12	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.43	22.30	1.222	-0.13	0.057	0.070
	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.46	22.30	1.213	0.16	0.043	0.052
	LTE Band 12	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI 13	23095	707.5	1	1	21.43	22.30	1.222	0.08	0.048	0.059
	LTE Band 12	10M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.34	22.00	1.164	-0.08	0.033	0.038
	LTE Band 12	10M	QPSK	25	0	-	Front	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.30	22.00	1.175	-0.11	0.058	0.068
	LTE Band 12	10M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.34	22.00	1.164	0.04	0.110	0.128
	LTE Band 12	10M	QPSK	25	0	-	Back	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.30	22.00	1.175	0.17	0.118	0.139
	LTE Band 12	10M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.34	22.00	1.164	0.02	0.160	0.186
23	LTE Band 12	10M	QPSK	25	0	-	Left Side	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.30	22.00	1.175	0.04	0.185	**0.217**
	LTE Band 12	10M	QPSK	25	0	-	Left Side	10mm	Ant 2	DSI 13	23095	707.5	1	2	21.30	22.00	1.175	0.11	0.183	0.215
	LTE Band 12	10M	QPSK	25	0	-	Left Side	10mm	Ant 2	DSI 13	23095	707.5	2	1	21.30	22.00	1.175	-0.07	0.171	0.201
	LTE Band 12	10M	QPSK	25	0	-	Left Side	10mm	Ant 2	DSI 13	23095	707.5	3	1	21.30	22.00	1.175	0.06	0.181	0.213
	LTE Band 12	10M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.34	22.00	1.164	0.05	0.010	0.012
	LTE Band 12	10M	QPSK	25	0	-	Top Side	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.30	22.00	1.175	-0.13	0.005	0.006
	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.34	22.00	1.164	-0.09	0.003	0.003
	LTE Band 12	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 2	DSI 13	23095	707.5	1	1	21.30	22.00	1.175	-0.19	0.001	0.001
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 13	23230	782	1	1	20.16	21.30	1.300	-0.14	0.088	0.114
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI 13	23230	782	1	1	20.15	21.30	1.303	-0.01	0.091	0.119
	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 13	23230	782	1	1	20.16	21.30	1.300	0.03	0.106	0.138
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 13	23230	782	1	1	20.15	21.30	1.303	0.03	0.109	0.142
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 13	23230	782	1	2	20.15	21.30	1.303	0.06	0.070	0.091
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 13	23230	782	2	1	20.15	21.30	1.303	-0.13	0.105	0.137
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 13	23230	782	3	1	20.15	21.30	1.303	0.09	0.100	0.130
	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 13	23230	782	1	1	20.16	21.30	1.300	0.11	0.003	0.004
	LTE Band 13	10M	QPSK	25	0	-	Left Side	10mm	Ant 0	DSI 13	23230	782	1	1	20.15	21.30	1.303	-0.07	0.002	0.003
	LTE Band 13	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 13	23230	782	1	1	20.16	21.30	1.300	0.06	0.054	0.070
	LTE Band 13	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI 13	23230	782	1	1	20.15	21.30	1.303	-0.18	0.055	0.072
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 13	23230	782	1	1	20.16	21.30	1.300	0.02	0.068	0.088
	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI 13	23230	782	1	1	20.15	21.30	1.303	0.1	0.065	0.085
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 13	23230	782	1	1	19.94	21.00	1.276	0.06	0.100	0.128
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 2	DSI 13	23230	782	1	1	19.87	21.00	1.297	-0.13	0.092	0.119
	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 13	23230	782	1	1	19.94	21.00	1.276	0.09	0.207	0.264
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 2	DSI 13	23230	782	1	1	19.87	21.00	1.297	0.06	0.201	0.261
24	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 13	23230	782	1	1	19.94	21.00	1.276	0.07	0.244	**0.311**
	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 13	23230	782	1	2	19.94	21.00	1.276	0.06	0.201	0.257
	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 13	23230	782	2	1	19.94	21.00	1.276	0.05	0.242	0.309
	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 13	23230	782	3	1	19.94	21.00	1.276	-0.11	0.242	0.309
	LTE Band 13	10M	QPSK	25	0	-	Left Side	10mm	Ant 2	DSI 13	23230	782	1	1	19.87	21.00	1.297	-0.14	0.216	0.280
	LTE Band 13	10M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 13	23230	782	1	1	19.94	21.00	1.276	0.02	0.005	0.006
	LTE Band 13	10M	QPSK	25	0	-	Top Side	10mm	Ant 2	DSI 13	23230	782	1	1	19.87	21.00	1.297	0.06	0.002	0.003
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 13	23230	782	1	1	19.94	21.00	1.276	0.05	0.001	0.001

	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 2	DSI 13	23230	782	1	1	19.87	21.00	1.297	-0.11	0.001	0.001
								835MHz												
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 0	DSI 13	189	836.4	1	1	24.11	25.30	1.315	0.14	0.124	0.163
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 0	DSI 13	189	836.4	1	1	24.11	25.30	1.315	0.16	0.141	0.185
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 0	DSI 13	189	836.4	1	2	24.11	25.30	1.315	0.05	0.149	0.196
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 0	DSI 13	189	836.4	2	2	24.11	25.30	1.315	0.09	0.161	0.212
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 0	DSI 13	189	836.4	3	2	24.11	25.30	1.315	-0.02	0.160	0.210
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 0	DSI 13	189	836.4	1	1	24.11	25.30	1.315	0.17	0.005	0.007
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Side	10mm	Ant 0	DSI 13	189	836.4	1	1	24.11	25.30	1.315	0.14	0.038	0.050
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 0	DSI 13	189	836.4	1	1	24.11	25.30	1.315	-0.11	0.091	0.120
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 2	DSI 13	189	836.4	1	1	21.75	22.50	1.189	0.05	0.076	0.090
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 2	DSI 13	189	836.4	1	1	21.75	22.50	1.189	0.09	0.143	0.170
25	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 13	189	836.4	1	1	21.75	22.50	1.189	-0.02	0.181	**0.215**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 13	189	836.4	1	2	21.75	22.50	1.189	0.01	0.139	0.165
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 13	189	836.4	2	1	21.75	22.50	1.189	0.17	0.139	0.165
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 13	189	836.4	3	1	21.75	22.50	1.189	0.06	0.158	0.188
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 2	DSI 13	189	836.4	1	1	21.75	22.50	1.189	0.07	0.003	0.004
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 2	DSI 13	189	836.4	1	1	21.75	22.50	1.189	0.04	0.001	0.001
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 13	4182	836.4	1	1	21.81	22.30	1.119	-0.07	0.191	0.214
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 13	4182	836.4	1	1	21.81	22.30	1.119	-0.08	0.226	0.253
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 13	4182	836.4	1	2	21.81	22.30	1.119	0.17	0.201	0.225
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 13	4182	836.4	2	1	21.81	22.30	1.119	0.06	0.228	0.255
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 13	4182	836.4	3	1	21.81	22.30	1.119	0.07	0.243	0.272
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 13	4182	836.4	1	1	21.81	22.30	1.119	0.06	0.001	0.001
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 13	4182	836.4	1	1	21.81	22.30	1.119	0.07	0.071	0.079
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 13	4182	836.4	1	1	21.81	22.30	1.119	0.06	0.133	0.149
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI 13	4182	836.4	1	1	19.70	20.50	1.202	0.15	0.129	0.155
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 13	4182	836.4	1	1	19.70	20.50	1.202	-0.17	0.275	0.331
26	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 13	4182	836.4	1	1	19.70	20.50	1.202	0.05	0.314	**0.378**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 13	4182	836.4	1	2	19.70	20.50	1.202	0.06	0.265	0.319
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 13	4182	836.4	2	1	19.70	20.50	1.202	-0.05	0.233	0.280
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 13	4182	836.4	3	1	19.70	20.50	1.202	-0.07	0.266	0.320
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 2	DSI 13	4182	836.4	1	1	19.70	20.50	1.202	0.14	0.002	0.002
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 2	DSI 13	4182	836.4	1	1	19.70	20.50	1.202	-0.03	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.47	22.30	1.211	0.05	0.124	0.150
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.45	22.30	1.216	0.06	0.135	0.164
	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.47	22.30	1.211	-0.05	0.157	0.190
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.45	22.30	1.216	-0.07	0.163	0.198
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 0	DSI 13	26865	831.5	1	2	21.45	22.30	1.216	0.06	0.168	0.204
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 0	DSI 13	26865	831.5	2	2	21.45	22.30	1.216	0.07	0.196	0.238
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 0	DSI 13	26865	831.5	3	2	21.45	22.30	1.216	0.06	0.218	0.265
	LTE Band 26	15M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.47	22.30	1.211	0.04	0.008	0.010
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.45	22.30	1.216	-0.12	0.005	0.006
	LTE Band 26	15M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.47	22.30	1.211	0.07	0.048	0.058
	LTE Band 26	15M	QPSK	36	0	-	Right Side	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.45	22.30	1.216	-0.02	0.069	0.084
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.47	22.30	1.211	0.03	0.096	0.116
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	10mm	Ant 0	DSI 13	26865	831.5	1	1	21.45	22.30	1.216	0.02	0.104	0.126
	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.11	21.00	1.227	-0.05	0.119	0.146
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.09	21.00	1.233	0.1	0.123	0.152
	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.11	21.00	1.227	0.04	0.238	0.292
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.09	21.00	1.233	0.14	0.253	0.312
	LTE Band 26	15M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.11	21.00	1.227	-0.16	0.269	0.330
27	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.09	21.00	1.233	-0.16	0.292	**0.360**
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 2	DSI 13	26865	831.5	1	2	20.09	21.00	1.233	0.17	0.226	0.279
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 2	DSI 13	26865	831.5	2	1	20.09	21.00	1.233	0.06	0.200	0.247
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 2	DSI 13	26865	831.5	3	1	20.09	21.00	1.233	0.07	0.235	0.290

	LTE Band 26	15M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.11	21.00	1.227	-0.12	0.002	0.002
	LTE Band 26	15M	QPSK	36	0	-	Top Side	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.09	21.00	1.233	-0.11	0.001	0.001
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.11	21.00	1.227	0.04	0.001	0.001
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	10mm	Ant 2	DSI 13	26865	831.5	1	1	20.09	21.00	1.233	0.17	0.001	0.001
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.34	22.80	1.400	0.11	0.115	0.161
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.28	22.80	1.419	0.03	0.122	0.173
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.34	22.80	1.400	0.16	0.155	0.217
28	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.28	22.80	1.419	-0.01	0.160	**0.227**
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 13	167300	836.5	1	2	21.28	22.80	1.419	0.07	0.134	0.190
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 13	167300	836.5	2	1	21.28	22.80	1.419	-0.02	0.145	0.206
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI 13	167300	836.5	3	1	21.28	22.80	1.419	0.03	0.153	0.217
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.34	22.80	1.400	-0.13	0.003	0.004
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.28	22.80	1.419	0.05	0.001	0.001
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.34	22.80	1.400	0.02	0.046	0.064
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.28	22.80	1.419	0.03	0.043	0.061
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.34	22.80	1.400	-0.13	0.083	0.116
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI 13	167300	836.5	1	1	21.28	22.80	1.419	0.06	0.077	0.109
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.92	20.40	1.406	0.04	0.067	0.094
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.89	20.40	1.416	0.11	0.080	0.113
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.92	20.40	1.406	0.06	0.123	0.173
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.89	20.40	1.416	0.06	0.133	0.188
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.92	20.40	1.406	-0.08	0.135	0.190
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.89	20.40	1.416	-0.02	0.147	0.208
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 13	167300	836.5	1	2	18.89	20.40	1.416	0.03	0.115	0.163
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 13	167300	836.5	2	1	18.89	20.40	1.416	-0.13	0.108	0.153
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 2	DSI 13	167300	836.5	3	1	18.89	20.40	1.416	0.06	0.125	0.177
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.92	20.40	1.406	-0.04	0.005	0.007
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.89	20.40	1.416	0.07	0.003	0.004
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.92	20.40	1.406	0.1	0.003	0.004
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 2	DSI 13	167300	836.5	1	1	18.89	20.40	1.416	0.03	0.001	0.001
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 13	1413	1732.6	1	1	20.12	20.80	1.169	-0.19	0.212	0.248
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 13	1413	1732.6	1	1	20.12	20.80	1.169	0.05	0.322	0.377
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 13	1413	1732.6	1	1	20.12	20.80	1.169	0.17	0.094	0.110
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 1	DSI 13	1413	1732.6	1	1	20.12	20.80	1.169	0.08	0.065	0.076
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 13	1413	1732.6	1	1	20.12	20.80	1.169	-0.06	0.420	0.491
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 13	1413	1732.6	1	2	20.12	20.80	1.169	0.04	0.432	0.505
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 13	1413	1732.6	2	2	20.12	20.80	1.169	0.11	0.489	0.572
29	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 13	1413	1732.6	3	2	20.12	20.80	1.169	0.06	0.490	**0.573**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 6	DSI 13	1413	1732.6	1	1	16.57	17.50	1.239	0.07	0.054	0.067
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 6	DSI 13	1413	1732.6	1	1	16.57	17.50	1.239	0.05	0.081	0.100
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 6	DSI 13	1413	1732.6	1	1	16.57	17.50	1.239	-0.04	0.003	0.004
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 6	DSI 13	1413	1732.6	1	1	16.57	17.50	1.239	0.08	0.001	0.001
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 13	1413	1732.6	1	1	16.57	17.50	1.239	-0.14	0.099	0.123
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 13	1413	1732.6	1	2	16.57	17.50	1.239	-0.09	0.099	0.123
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 13	1413	1732.6	2	1	16.57	17.50	1.239	0.17	0.087	0.108
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 13	1413	1732.6	3	1	16.57	17.50	1.239	0.06	0.013	0.016
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 13	132322	1745	1	1	19.66	20.80	1.300	0.02	0.169	0.220
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 13	132322	1745	1	1	19.63	20.80	1.309	-0.07	0.176	0.230
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 13	132322	1745	1	1	19.66	20.80	1.300	0.08	0.266	0.346
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 13	132322	1745	1	1	19.63	20.80	1.309	0.03	0.270	0.353
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 13	132322	1745	1	1	19.66	20.80	1.300	-0.15	0.073	0.095
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 13	132322	1745	1	1	19.63	20.80	1.309	0.07	0.075	0.098
	LTE Band 66	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 13	132322	1745	1	1	19.66	20.80	1.300	-0.16	0.060	0.078
	LTE Band 66	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 13	132322	1745	1	1	19.63	20.80	1.309	0.05	0.065	0.085
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 13	132322	1745	1	1	19.66	20.80	1.300	0.04	0.358	0.465

	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	132322	1745	1	1	19.63	20.80	1.309	0.05	0.359	0.470
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	132322	1745	1	2	19.63	20.80	1.309	0.04	0.392	0.513
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	132322	1745	2	2	19.63	20.80	1.309	0.11	0.462	0.605
30	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	132322	1745	3	2	19.63	20.80	1.309	0.06	0.485	**0.635**
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 13	132322	1745	1	1	15.99	17.20	1.321	0.07	0.037	0.049
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 13	132322	1745	1	1	15.90	17.20	1.349	0.01	0.037	0.050
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 13	132322	1745	1	1	15.99	17.20	1.321	0.02	0.058	0.077
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 13	132322	1745	1	1	15.90	17.20	1.349	0.06	0.060	0.081
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 13	132322	1745	1	1	15.99	17.20	1.321	0.03	0.005	0.007
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 6	DSI 13	132322	1745	1	1	15.90	17.20	1.349	-0.03	0.003	0.004
	LTE Band 66	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 13	132322	1745	1	1	15.99	17.20	1.321	0.05	0.003	0.004
	LTE Band 66	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 13	132322	1745	1	1	15.90	17.20	1.349	0.04	0.002	0.003
	LTE Band 66	20M	QPSK	1	0	-	Top Side	10mm	Ant 6	DSI 13	132322	1745	1	1	15.99	17.20	1.321	0.12	0.065	0.086
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	132322	1745	1	1	15.90	17.20	1.349	0.09	0.072	0.097
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	132322	1745	1	2	15.90	17.20	1.349	0.03	0.091	0.123
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	132322	1745	2	2	15.90	17.20	1.349	-0.15	0.077	0.104
	LTE Band 66	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	132322	1745	3	2	15.90	17.20	1.349	0.07	0.090	0.121
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 13	349000	1745	1	1	17.62	19.00	1.374	-0.08	0.123	0.169
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 13	349000	1745	1	1	17.61	19.00	1.377	-0.14	0.127	0.175
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 13	349000	1745	1	1	17.62	19.00	1.374	-0.09	0.194	0.267
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 13	349000	1745	1	1	17.61	19.00	1.377	0.14	0.188	0.259
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 13	349000	1745	1	1	17.62	19.00	1.374	-0.14	0.047	0.065
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 13	349000	1745	1	1	17.61	19.00	1.377	-0.12	0.051	0.070
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 13	349000	1745	1	1	17.62	19.00	1.374	0.07	0.002	0.003
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 13	349000	1745	1	1	17.61	19.00	1.377	0.11	0.002	0.003
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	349000	1745	1	1	17.62	19.00	1.374	-0.01	0.244	0.335
31	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	349000	1745	1	2	17.62	19.00	1.374	0.12	0.339	**0.466**
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	349000	1745	2	2	17.62	19.00	1.374	0.09	0.307	0.422
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	349000	1745	3	2	17.62	19.00	1.374	0.03	0.291	0.400
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	349000	1745	1	1	17.61	19.00	1.377	-0.05	0.242	0.333
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 6	DSI 13	349000	1745	1	1	15.44	16.80	1.368	0.07	0.045	0.062
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 6	DSI 13	349000	1745	1	1	15.42	16.80	1.374	0.08	0.047	0.065
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 6	DSI 13	349000	1745	1	1	15.44	16.80	1.368	0.07	0.064	0.088
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 6	DSI 13	349000	1745	1	1	15.42	16.80	1.374	-0.16	0.066	0.091
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 6	DSI 13	349000	1745	1	1	15.44	16.80	1.368	0.07	0.003	0.004
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 6	DSI 13	349000	1745	1	1	15.42	16.80	1.374	0.07	0.002	0.003
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 6	DSI 13	349000	1745	1	1	15.44	16.80	1.368	0.07	0.001	0.001
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 6	DSI 13	349000	1745	1	1	15.42	16.80	1.374	-0.17	0.001	0.001
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	349000	1745	1	1	15.44	16.80	1.368	-0.03	0.077	0.105
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	349000	1745	1	1	15.42	16.80	1.374	-0.11	0.089	0.122
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	349000	1745	1	2	15.42	16.80	1.374	-0.16	0.090	0.124
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	349000	1745	2	2	15.42	16.80	1.374	0.07	0.071	0.098
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	349000	1745	3	2	15.42	16.80	1.374	0.07	0.078	0.107
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 1	DSI 13	661	1880	1	1	20.12	21.80	1.472	-0.16	0.061	0.090
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 1	DSI 13	661	1880	1	1	20.12	21.80	1.472	-0.07	0.093	0.137
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 1	DSI 13	661	1880	1	1	20.12	21.80	1.472	0.16	0.029	0.043
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Side	10mm	Ant 1	DSI 13	661	1880	1	1	20.12	21.80	1.472	-0.06	0.002	0.003
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 1	DSI 13	661	1880	1	1	20.12	21.80	1.472	0.18	0.145	0.213
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 1	DSI 13	661	1880	1	2	20.12	21.80	1.472	-0.03	0.138	0.203
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 1	DSI 13	661	1880	2	1	20.12	21.80	1.472	-0.11	0.134	0.197
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 1	DSI 13	661	1880	3	1	20.12	21.80	1.472	-0.16	0.139	0.205
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 6	DSI 13	661	1880	1	1	16.70	18.10	1.380	-0.13	0.090	0.124
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 6	DSI 13	661	1880	1	1	16.70	18.10	1.380	0.18	0.132	0.182
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 6	DSI 13	661	1880	1	1	16.70	18.10	1.380	0.17	0.003	0.004
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Side	10mm	Ant 6	DSI 13	661	1880	1	1	16.70	18.10	1.380	0.12	0.002	0.003

32	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 6	DSI 13	661	1880	1	1	16.70	18.10	1.380	0.06	0.177	**0.244**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 6	DSI 13	661	1880	1	2	16.70	18.10	1.380	-0.06	0.166	0.229
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 6	DSI 13	661	1880	2	1	16.70	18.10	1.380	0.18	0.176	0.243
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 6	DSI 13	661	1880	3	1	16.70	18.10	1.380	-0.03	0.147	0.203
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 13	9400	1880	1	1	20.16	20.90	1.186	-0.08	0.157	0.186
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 13	9400	1880	1	1	20.16	20.90	1.186	-0.19	0.255	0.302
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 13	9400	1880	1	1	20.16	20.90	1.186	0.02	0.059	0.070
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 1	DSI 13	9400	1880	1	1	20.16	20.90	1.186	-0.05	0.041	0.049
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 13	9400	1880	1	1	20.16	20.90	1.186	-0.1	0.378	0.448
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 13	9400	1880	1	2	20.16	20.90	1.186	0.12	0.388	0.460
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 13	9400	1880	2	2	20.16	20.90	1.186	0.07	0.413	0.490
33	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 13	9400	1880	3	2	20.16	20.90	1.186	-0.06	0.482	**0.572**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 6	DSI 13	9400	1880	1	1	12.92	14.00	1.282	0.07	0.079	0.101
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 6	DSI 13	9400	1880	1	1	12.92	14.00	1.282	0.03	0.115	0.147
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 6	DSI 13	9400	1880	1	1	12.92	14.00	1.282	0.13	0.002	0.003
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 6	DSI 13	9400	1880	1	1	12.92	14.00	1.282	0.07	0.001	0.001
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 13	9400	1880	1	1	12.92	14.00	1.282	-0.08	0.149	0.191
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 13	9400	1880	1	2	12.92	14.00	1.282	-0.05	0.140	0.180
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 13	9400	1880	2	1	12.92	14.00	1.282	-0.1	0.136	0.174
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 13	9400	1880	3	1	12.92	14.00	1.282	0.12	0.136	0.174
	LTE Band 25	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 13	26340	1880	1	1	19.69	20.90	1.321	-0.11	0.127	0.168
	LTE Band 25	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 13	26340	1880	1	1	19.66	20.90	1.330	-0.1	0.133	0.177
	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 13	26340	1880	1	1	19.69	20.90	1.321	0.05	0.199	0.263
	LTE Band 25	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 13	26340	1880	1	1	19.66	20.90	1.330	-0.09	0.216	0.287
	LTE Band 25	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 13	26340	1880	1	1	19.69	20.90	1.321	-0.06	0.052	0.069
	LTE Band 25	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 13	26340	1880	1	1	19.66	20.90	1.330	-0.03	0.048	0.064
	LTE Band 25	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 13	26340	1880	1	1	19.69	20.90	1.321	0.08	0.038	0.050
	LTE Band 25	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 13	26340	1880	1	1	19.66	20.90	1.330	0.06	0.037	0.049
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 13	26340	1880	1	1	19.69	20.90	1.321	0.11	0.296	0.391
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	26340	1880	1	1	19.66	20.90	1.330	0.09	0.326	0.434
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	26340	1880	1	2	19.66	20.90	1.330	0.07	0.350	0.466
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	26340	1880	2	2	19.66	20.90	1.330	0.03	0.379	0.504
34	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	26340	1880	3	2	19.66	20.90	1.330	0.13	0.427	**0.568**
	LTE Band 25	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 13	26340	1880	1	1	13.06	14.20	1.300	0.08	0.064	0.083
	LTE Band 25	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 13	26340	1880	1	1	13.01	14.20	1.315	-0.16	0.069	0.091
	LTE Band 25	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 13	26340	1880	1	1	13.06	14.20	1.300	-0.12	0.096	0.125
	LTE Band 25	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 13	26340	1880	1	1	13.01	14.20	1.315	-0.04	0.105	0.138
	LTE Band 25	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 13	26340	1880	1	1	13.06	14.20	1.300	0.12	0.003	0.004
	LTE Band 25	20M	QPSK	50	0	-	Left Side	10mm	Ant 6	DSI 13	26340	1880	1	1	13.01	14.20	1.315	0.05	0.003	0.004
	LTE Band 25	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 13	26340	1880	1	1	13.06	14.20	1.300	0.07	0.003	0.004
	LTE Band 25	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 13	26340	1880	1	1	13.01	14.20	1.315	-0.18	0.003	0.004
	LTE Band 25	20M	QPSK	1	0	-	Top Side	10mm	Ant 6	DSI 13	26340	1880	1	1	13.06	14.20	1.300	0.04	0.135	0.176
	LTE Band 25	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	26340	1880	1	1	13.01	14.20	1.315	0.05	0.139	0.183
	LTE Band 25	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	26340	1880	1	2	13.01	14.20	1.315	0.07	0.146	0.192
	LTE Band 25	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	26340	1880	2	2	13.01	14.20	1.315	-0.08	0.131	0.172
	LTE Band 25	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	26340	1880	3	2	13.01	14.20	1.315	-0.05	0.139	0.183

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	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)
2600MHz																						
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 13	21100	2535	1	1	18.41	19.70	1.346	-	-	0.09	0.133	0.179
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 13	21100	2535	1	1	18.38	19.70	1.355	-	-	0.12	0.135	0.183
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 13	21100	2535	1	1	18.41	19.70	1.346	-	-	0.03	0.188	0.253
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 13	21100	2535	1	1	18.38	19.70	1.355	-	-	0.04	0.201	0.272
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 13	21100	2535	1	1	18.41	19.70	1.346	-	-	0.18	0.052	0.070
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 13	21100	2535	1	1	18.38	19.70	1.355	-	-	0.06	0.057	0.077
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 13	21100	2535	1	1	18.41	19.70	1.346	-	-	0.06	0.032	0.043
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 13	21100	2535	1	1	18.38	19.70	1.355	-	-	0.07	0.037	0.050
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 13	21100	2535	1	1	18.41	19.70	1.346	-	-	0.02	0.274	0.369
35	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	21100	2535	1	1	18.38	19.70	1.355	-	-	0.03	0.276	**0.374**
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	21100	2535	1	2	18.38	19.70	1.355	-	-	0.09	0.275	0.373
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	21100	2535	2	1	18.38	19.70	1.355	-	-	0.12	0.239	0.324
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	21100	2535	3	1	18.38	19.70	1.355	-	-	0.03	0.269	0.365
	LTE Band 7C	20M	QPSK	1	99	-	Bottom Side	10mm	Ant 1	DSI 13	21100+ 21298	2535+ 2554.8	1	1	18.67	19.70	1.268	-	-	0.08	0.240	0.304
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 13	21100	2535	1	1	13.39	14.90	1.416	-	-	-0.06	0.041	0.058
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 13	21100	2535	1	1	13.36	14.90	1.426	-	-	-0.07	0.037	0.053
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 13	21100	2535	1	1	13.39	14.90	1.416	-	-	-0.05	0.070	0.099
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 13	21100	2535	1	1	13.36	14.90	1.426	-	-	-0.18	0.067	0.096
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI 13	21100	2535	1	1	13.39	14.90	1.416	-	-	0.09	0.081	0.115
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 13	21100	2535	1	1	13.36	14.90	1.426	-	-	-0.08	0.083	0.118
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 13	21100	2535	1	2	13.36	14.90	1.426	-	-	0.06	0.075	0.107
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 13	21100	2535	2	1	13.36	14.90	1.426	-	-	0.07	0.083	0.118
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI 13	21100	2535	3	1	13.36	14.90	1.426	-	-	0.02	0.113	0.161
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 5	DSI 13	21100	2535	1	1	13.39	14.90	1.416	-	-	0.07	0.003	0.004
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 5	DSI 13	21100	2535	1	1	13.36	14.90	1.426	-	-	-0.03	0.003	0.004
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 5	DSI 13	21100	2535	1	1	13.39	14.90	1.416	-	-	0.03	0.052	0.074
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 5	DSI 13	21100	2535	1	1	13.36	14.90	1.426	-	-	-0.07	0.044	0.063
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 13	21100	2535	1	1	11.44	12.70	1.337	-	-	0.15	0.041	0.055
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 13	21100	2535	1	1	11.32	12.70	1.374	-	-	0.02	0.043	0.059
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 13	21100	2535	1	1	11.44	12.70	1.337	-	-	-0.08	0.090	0.120
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 13	21100	2535	1	1	11.32	12.70	1.374	-	-	-0.04	0.091	0.125
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 13	21100	2535	1	1	11.44	12.70	1.337	-	-	-0.15	0.021	0.028
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 6	DSI 13	21100	2535	1	1	11.32	12.70	1.374	-	-	0.04	0.032	0.044
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 13	21100	2535	1	1	11.44	12.70	1.337	-	-	0.17	0.002	0.003
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 13	21100	2535	1	1	11.32	12.70	1.374	-	-	0.13	0.001	0.001
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 6	DSI 13	21100	2535	1	1	11.44	12.70	1.337	-	-	-0.17	0.139	0.186
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 6	DSI 13	21100	2535	1	2	11.44	12.70	1.337	-	-	0.09	0.154	0.206
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 6	DSI 13	21100	2535	2	2	11.44	12.70	1.337	-	-	0.12	0.133	0.178
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 6	DSI 13	21100	2535	3	2	11.44	12.70	1.337	-	-	0.03	0.203	0.271
	LTE Band 7C	20M	QPSK	1	99	-	Top Side	10mm	Ant 6	DSI 13	21100+ 21298	2535+ 2554.8	1	2	11.58	12.70	1.294	-	-	0.01	0.116	0.150
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	21100	2535	1	1	11.32	12.70	1.374	-	-	0.05	0.128	0.176
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 13	40620	2593	1	1	19.56	20.30	1.186	62.9	1.006	0.15	0.124	0.148
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 13	40620	2593	1	1	19.49	20.30	1.205	62.9	1.006	-0.15	0.116	0.141
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 13	40620	2593	1	1	19.56	20.30	1.186	62.9	1.006	0.05	0.195	0.233
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 13	40620	2593	1	1	19.49	20.30	1.205	62.9	1.006	0.09	0.202	0.245
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 13	40620	2593	1	1	19.56	20.30	1.186	62.9	1.006	-0.09	0.044	0.052
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 13	40620	2593	1	1	19.49	20.30	1.205	62.9	1.006	0.11	0.046	0.056
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI 13	40620	2593	1	1	19.56	20.30	1.186	62.9	1.006	0.03	0.034	0.041
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI 13	40620	2593	1	1	19.49	20.30	1.205	62.9	1.006	-0.08	0.057	0.069
36	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 13	40620	2593	1	1	19.56	20.30	1.186	62.9	1.006	0.07	0.343	**0.409**
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 13	40620	2593	1	2	19.56	20.30	1.186	62.9	1.006	-0.15	0.341	0.407

	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 13	40620	2593	2	1	19.56	20.30	1.186	62.9	1.006	0.04	0.323	0.385
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 1	DSI 13	40620	2593	3	1	19.56	20.30	1.186	62.9	1.006	0.17	0.336	0.401
	LTE Band 41C	20M	QPSK	1	99	-	Bottom Side	10mm	Ant 1	DSI 13	40620+ 40818	2593+ 2612.8	1	1	19.26	20.30	1.271	62.9	1.006	0.02	0.296	0.378
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 1	DSI 13	40620	2593	1	1	19.49	20.30	1.205	62.9	1.006	0.11	0.306	0.371
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 13	40620	2593	1	1	13.90	14.90	1.259	62.9	1.006	-0.07	0.038	0.048
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 13	40620	2593	1	1	13.83	14.90	1.279	62.9	1.006	0.18	0.036	0.046
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 13	40620	2593	1	1	13.90	14.90	1.259	62.9	1.006	0.1	0.071	0.090
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 13	40620	2593	1	1	13.83	14.90	1.279	62.9	1.006	0.04	0.073	0.094
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 6	DSI 13	40620	2593	1	1	13.90	14.90	1.259	62.9	1.006	0.07	0.039	0.049
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 6	DSI 13	40620	2593	1	1	13.83	14.90	1.279	62.9	1.006	0.03	0.033	0.042
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 13	40620	2593	1	1	13.90	14.90	1.259	62.9	1.006	0.05	0.002	0.003
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 13	40620	2593	1	1	13.83	14.90	1.279	62.9	1.006	0.07	0.002	0.003
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 6	DSI 13	40620	2593	1	1	13.90	14.90	1.259	62.9	1.006	0.11	0.090	0.114
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	40620	2593	1	1	13.83	14.90	1.279	62.9	1.006	0.05	0.095	0.122
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	40620	2593	1	2	13.83	14.90	1.279	62.9	1.006	-0.07	0.113	0.145
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	40620	2593	2	2	13.83	14.90	1.279	62.9	1.006	0.18	0.105	0.135
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 13	40620	2593	3	2	13.83	14.90	1.279	62.9	1.006	0.1	0.108	0.139
	LTE Band 41C	20M	QPSK	1	99	-	Top Side	10mm	Ant 6	DSI 13	40620+ 40818	2593+ 2612.8	1	2	13.82	14.90	1.282	62.9	1.006	0.03	0.077	0.099
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 13	507000	2535	1	1	17.06	18.70	1.459	-	-	0.04	0.098	0.143
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI 13	507000	2535	1	1	17.02	18.70	1.472	-	-	0.13	0.103	0.152
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 13	507000	2535	1	1	17.06	18.70	1.459	-	-	0.04	0.149	0.217
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI 13	507000	2535	1	1	17.02	18.70	1.472	-	-	0.02	0.144	0.212
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 13	507000	2535	1	1	17.06	18.70	1.459	-	-	0.01	0.043	0.063
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI 13	507000	2535	1	1	17.02	18.70	1.472	-	-	-0.07	0.024	0.035
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 13	507000	2535	1	1	17.06	18.70	1.459	-	-	-0.08	0.002	0.003
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 1	DSI 13	507000	2535	1	1	17.02	18.70	1.472	-	-	0.02	0.001	0.001
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	507000	2535	1	1	17.06	18.70	1.459	-	-	-0.07	0.207	0.302
37	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	507000	2535	1	1	17.02	18.70	1.472	-	-	-0.16	0.208	**0.306**
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	507000	2535	1	2	17.02	18.70	1.472	-	-	0.04	0.184	0.271
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	507000	2535	2	1	17.02	18.70	1.472	-	-	0.13	0.181	0.266
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 1	DSI 13	507000	2535	3	1	17.02	18.70	1.472	-	-	0.04	0.173	0.255
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 13	507000	2535	1	1	14.07	15.40	1.358	-	-	0.03	0.066	0.090
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI 13	507000	2535	1	1	14.02	15.40	1.374	-	-	0.06	0.057	0.078
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 13	507000	2535	1	1	14.07	15.40	1.358	-	-	-0.11	0.105	0.143
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI 13	507000	2535	1	1	14.02	15.40	1.374	-	-	0.07	0.106	0.146
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 13	507000	2535	1	1	14.07	15.40	1.358	-	-	0.06	0.126	0.171
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 13	507000	2535	1	1	14.02	15.40	1.374	-	-	-0.07	0.125	0.172
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 13	507000	2535	1	2	14.02	15.40	1.374	-	-	-0.07	0.066	0.091
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 13	507000	2535	2	1	14.02	15.40	1.374	-	-	0.18	0.051	0.070
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI 13	507000	2535	3	1	14.02	15.40	1.374	-	-	0.1	0.059	0.081
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 5	DSI 13	507000	2535	1	1	14.07	15.40	1.358	-	-	0.14	0.002	0.003
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 5	DSI 13	507000	2535	1	1	14.02	15.40	1.374	-	-	-0.03	0.001	0.001
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 5	DSI 13	507000	2535	1	1	14.07	15.40	1.358	-	-	-0.12	0.069	0.094
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 5	DSI 13	507000	2535	1	1	14.02	15.40	1.374	-	-	-0.03	0.087	0.120
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 6	DSI 13	507000	2535	1	1	11.80	12.90	1.288	-	-	0.06	0.044	0.057
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 6	DSI 13	507000	2535	1	1	11.69	12.90	1.321	-	-	0.05	0.043	0.057
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 6	DSI 13	507000	2535	1	1	11.80	12.90	1.288	-	-	0.16	0.076	0.098
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 6	DSI 13	507000	2535	1	1	11.69	12.90	1.321	-	-	-0.12	0.074	0.098
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 6	DSI 13	507000	2535	1	1	11.80	12.90	1.288	-	-	-0.16	0.005	0.006
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 6	DSI 13	507000	2535	1	1	11.69	12.90	1.321	-	-	-0.19	0.003	0.004
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 6	DSI 13	507000	2535	1	1	11.80	12.90	1.288	-	-	-0.13	0.003	0.004
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 6	DSI 13	507000	2535	1	1	11.69	12.90	1.321	-	-	0.04	0.002	0.003
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	507000	2535	1	1	11.80	12.90	1.288	-	-	0.08	0.122	0.157
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	507000	2535	1	1	11.69	12.90	1.321	-	-	-0.18	0.127	0.168
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	507000	2535	1	2	11.69	12.90	1.321	-	-	0.04	0.149	0.197
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	507000	2535	2	2	11.69	12.90	1.321	-	-	0.13	0.121	0.160

	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 6	DSI 13	507000	2535	3	2	11.69	12.90	1.321	-	-	0.04	0.129	0.170
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 13	519000	2595	1	1	13.92	15.40	1.406	-	-	-0.11	0.053	0.075
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 13	519000	2595	1	1	13.91	15.40	1.409	-	-	0.05	0.044	0.062
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	519000	2595	1	1	13.92	15.40	1.406	-	-	-0.06	0.090	0.127
38	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	519000	2595	1	2	13.92	15.40	1.406	-	-	0.06	0.094	**0.132**
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	519000	2595	2	2	13.92	15.40	1.406	-	-	0.05	0.071	0.100
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	519000	2595	3	2	13.92	15.40	1.406	-	-	0.16	0.077	0.108
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	519000	2595	1	1	13.91	15.40	1.409	-	-	0.09	0.084	0.118
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 13	519000	2595	1	1	13.92	15.40	1.406	-	-	-0.16	0.078	0.110
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 13	519000	2595	1	1	13.91	15.40	1.409	-	-	0.08	0.074	0.104
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 13	519000	2595	1	1	13.92	15.40	1.406	-	-	-0.12	0.033	0.046
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 13	519000	2595	1	1	13.91	15.40	1.409	-	-	0.04	0.044	0.062
	FR1 n38	20M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 13	519000	2595	1	1	13.92	15.40	1.406	-	-	0.15	0.079	0.111
	FR1 n38	20M	QPSK	25	13	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 13	519000	2595	1	1	13.91	15.40	1.409	-	-	0.03	0.085	0.120
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.65	18.00	1.365	-	-	-0.16	0.085	0.116
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.51	18.00	1.409	-	-	0.01	0.100	0.141
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.65	18.00	1.365	-	-	-0.11	0.119	0.162
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.51	18.00	1.409	-	-	0.05	0.146	0.206
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.65	18.00	1.365	-	-	0.1	0.015	0.020
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.51	18.00	1.409	-	-	0.09	0.038	0.054
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.65	18.00	1.365	-	-	-0.16	0.049	0.067
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.51	18.00	1.409	-	-	0.08	0.050	0.070
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.65	18.00	1.365	-	-	-0.12	0.216	0.295
39	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 13	518598	2592.99	1	1	16.51	18.00	1.409	-	-	0.07	0.268	**0.378**
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 13	518598	2592.99	1	2	16.51	18.00	1.409	-	-	-0.16	0.267	0.376
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 13	518598	2592.99	2	1	16.51	18.00	1.409	-	-	0.01	0.264	0.372
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 1	DSI 13	518598	2592.99	3	1	16.51	18.00	1.409	-	-	-0.11	0.265	0.373
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.46	15.00	1.426	-	-	0.14	0.052	0.074
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.44	15.00	1.432	-	-	0.04	0.041	0.059
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.46	15.00	1.426	-	-	0.15	0.099	0.141
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	518598	2592.99	1	2	13.46	15.00	1.426	-	-	-0.16	0.093	0.133
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	518598	2592.99	2	1	13.46	15.00	1.426	-	-	0.08	0.063	0.090
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	518598	2592.99	3	1	13.46	15.00	1.426	-	-	-0.12	0.085	0.121
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.44	15.00	1.432	-	-	0.07	0.096	0.137
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.46	15.00	1.426	-	-	-0.01	0.091	0.130
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.44	15.00	1.432	-	-	0.05	0.071	0.102
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.46	15.00	1.426	-	-	-0.17	0.042	0.060
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.44	15.00	1.432	-	-	0.07	0.039	0.056
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.46	15.00	1.426	-	-	-0.16	0.062	0.088
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 13	518598	2592.99	1	1	13.44	15.00	1.432	-	-	-0.09	0.090	0.129
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.75	13.10	1.365	-	-	0.08	0.045	0.061
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.66	13.10	1.393	-	-	0.09	0.028	0.039
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.75	13.10	1.365	-	-	0.02	0.068	0.093
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.66	13.10	1.393	-	-	0.08	0.064	0.089
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.75	13.10	1.365	-	-	-0.14	0.005	0.007
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.66	13.10	1.393	-	-	-0.18	0.003	0.004
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.75	13.10	1.365	-	-	0.05	0.002	0.003
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.66	13.10	1.393	-	-	0.17	0.003	0.004
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.75	13.10	1.365	-	-	-0.07	0.094	0.128
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 13	518598	2592.99	1	2	11.75	13.10	1.365	-	-	0.08	0.095	0.130
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 13	518598	2592.99	2	2	11.75	13.10	1.365	-	-	0.09	0.080	0.109
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 13	518598	2592.99	3	2	11.75	13.10	1.365	-	-	0.02	0.088	0.120
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 13	518598	2592.99	1	1	11.66	13.10	1.393	-	-	-0.07	0.079	0.110
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.85	19.10	1.334	-	-	0.13	0.050	0.067
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.82	19.10	1.343	-	-	0.07	0.050	0.067
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.85	19.10	1.334	-	-	0.03	0.065	0.087

	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.82	19.10	1.343	-	-	0.07	0.086	0.115
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.85	19.10	1.334	-	-	0.01	0.033	0.044
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.82	19.10	1.343	-	-	0.01	0.023	0.031
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.85	19.10	1.334	-	-	-0.12	0.062	0.083
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.82	19.10	1.343	-	-	-0.1	0.103	0.138
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 9	DSI 13	518598	2592.99	1	2	17.82	19.10	1.343	-	-	0.07	0.108	0.145
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 9	DSI 13	518598	2592.99	2	2	17.82	19.10	1.343	-	-	-0.16	0.086	0.115
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 9	DSI 13	518598	2592.99	3	2	17.82	19.10	1.343	-	-	-0.09	0.086	0.115
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.85	19.10	1.334	-	-	0.07	0.058	0.077
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 9	DSI 13	518598	2592.99	1	1	17.82	19.10	1.343	-	-	-0.08	0.060	0.081

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	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)
2450MHZ																		
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 8	simultaneous	1	2412	1	1	14.66	16.00	1.361	100	1.000	0.08	0.044	0.060
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 8	simultaneous	1	2412	1	1	14.66	16.00	1.361	100	1.000	-0.05	0.071	0.097
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 8	simultaneous	1	2412	1	1	14.66	16.00	1.361	100	1.000	0.08	0.021	0.029
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 8	simultaneous	1	2412	1	1	14.66	16.00	1.361	100	1.000	0.18	0.002	0.003
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 8	simultaneous	1	2412	1	1	14.66	16.00	1.361	100	1.000	0.05	0.094	0.128
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 8	simultaneous	1	2412	2	1	14.66	16.00	1.361	100	1.000	0.03	0.092	0.125
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 8	simultaneous	1	2412	3	1	14.66	16.00	1.361	100	1.000	0.07	0.090	0.123
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 11	simultaneous	1	2412	1	1	14.62	16.00	1.374	100	1.000	0.03	0.069	0.095
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 11	simultaneous	1	2412	1	1	14.62	16.00	1.374	100	1.000	-0.1	0.115	0.158
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 11	simultaneous	1	2412	1	1	14.62	16.00	1.374	100	1.000	0.02	0.002	0.003
40	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 11	simultaneous	1	2412	1	1	14.62	16.00	1.374	100	1.000	0.01	0.134	**0.184**
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 11	simultaneous	1	2412	2	1	14.62	16.00	1.374	100	1.000	0.02	0.129	0.177
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 11	simultaneous	1	2412	3	1	14.62	16.00	1.374	100	1.000	0.09	0.125	0.172
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 11	simultaneous	1	2412	1	1	14.62	16.00	1.374	100	1.000	-0.15	0.001	0.001
41	Bluetooth	1Mbps	Top Side	10mm	Ant 8	Full	78	2480	1	1	16.03	18.00	1.573	76.71	1.086	0.02	0.111	**0.190**
	Bluetooth	1Mbps	Top Side	10mm	Ant 8	Full	78	2480	2	1	16.03	18.00	1.573	76.71	1.086	0.07	0.099	0.169
	Bluetooth	1Mbps	Top Side	10mm	Ant 8	Full	78	2480	3	1	16.03	18.00	1.573	76.71	1.086	0.03	0.105	0.179
	Bluetooth	1Mbps	Right Side	10mm	Ant 11	Full	0	2402	1	1	15.83	16.50	1.168	76.79	1.085	0.08	0.107	0.136
	Bluetooth	1Mbps	Right Side	10mm	Ant 11	Full	0	2402	2	1	15.83	16.50	1.168	76.79	1.085	-0.03	0.088	0.111
	Bluetooth	1Mbps	Right Side	10mm	Ant 11	Full	0	2402	3	1	15.83	16.50	1.168	76.79	1.085	0.08	0.098	0.124
5000MHZ																		
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 7	simultaneous	46	5230	1	1	13.05	14.00	1.245	100	1.000	0.08	0.066	0.082
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 7	simultaneous	46	5230	1	1	13.05	14.00	1.245	100	1.000	0.14	0.052	0.065
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 7	simultaneous	46	5230	1	1	13.05	14.00	1.245	100	1.000	0.06	0.052	0.065
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 7	simultaneous	46	5230	1	1	13.05	14.00	1.245	100	1.000	0.04	0.057	0.071
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 7	simultaneous	46	5230	1	1	13.05	14.00	1.245	100	1.000	0.09	0.071	0.088
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 7	simultaneous	46	5230	2	1	13.05	14.00	1.245	100	1.000	0.08	0.064	0.080
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 7	simultaneous	46	5230	3	1	13.05	14.00	1.245	100	1.000	0.01	0.061	0.076
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 11	simultaneous	46	5230	1	1	13.95	14.00	1.012	100	1.000	0.05	0.080	0.081
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 11	simultaneous	46	5230	1	1	13.95	14.00	1.012	100	1.000	0.07	0.103	0.104
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 11	simultaneous	46	5230	1	1	13.95	14.00	1.012	100	1.000	0.12	0.106	0.107
42	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 11	simultaneous	46	5230	1	1	13.95	14.00	1.012	100	1.000	-0.02	0.150	**0.152**
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 11	simultaneous	46	5230	2	1	13.95	14.00	1.012	100	1.000	0.06	0.145	0.147
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 11	simultaneous	46	5230	3	1	13.95	14.00	1.012	100	1.000	0.09	0.134	0.136
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 11	simultaneous	46	5230	1	1	13.95	14.00	1.012	100	1.000	-0.01	0.086	0.087
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 7	simultaneous	155	5775	1	1	12.51	14.00	1.409	100	1.000	0.09	0.090	0.127
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 7	simultaneous	155	5775	1	1	12.51	14.00	1.409	100	1.000	0.03	0.099	0.140
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 7	simultaneous	155	5775	1	1	12.51	14.00	1.409	100	1.000	0.06	0.071	0.100
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 7	simultaneous	155	5775	1	1	12.51	14.00	1.409	100	1.000	0.11	0.062	0.087
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 7	simultaneous	155	5775	1	1	12.51	14.00	1.409	100	1.000	0.09	0.139	0.196
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 7	simultaneous	155	5775	2	1	12.51	14.00	1.409	100	1.000	0.01	0.136	0.192
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 7	simultaneous	155	5775	3	1	12.51	14.00	1.409	100	1.000	0.08	0.125	0.176
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 11	simultaneous	155	5775	1	1	13.26	14.00	1.186	100	1.000	0.07	0.094	0.111
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 11	simultaneous	155	5775	1	1	13.26	14.00	1.186	100	1.000	0.07	0.250	0.296
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 11	simultaneous	155	5775	1	1	13.26	14.00	1.186	100	1.000	0.08	0.152	0.180
43	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 11	simultaneous	155	5775	1	1	13.26	14.00	1.186	100	1.000	0.07	0.263	**0.312**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 11	simultaneous	155	5775	2	1	13.26	14.00	1.186	100	1.000	0.08	0.212	0.251
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 11	simultaneous	155	5775	3	1	13.26	14.00	1.186	100	1.000	0.09	0.260	0.308
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 11	simultaneous	155	5775	1	1	13.26	14.00	1.186	100	1.000	0.05	0.112	0.133

15.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
	LTE Band 12	10M	QPSK	1	0		Front	15mm	Ant 0	DSI3	23095	707.5	1	1	24.76	25.50	1.186	0.17	0.094	0.111
	LTE Band 12	10M	QPSK	25	0		Front	15mm	Ant 0	DSI3	23095	707.5	1	1	23.69	24.50	1.205	0.08	0.100	0.121
	LTE Band 12	10M	QPSK	1	0		Back	15mm	Ant 0	DSI3	23095	707.5	1	1	24.76	25.50	1.186	-0.17	0.127	0.151
44	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 0	DSI3	23095	707.5	1	1	23.69	24.50	1.205	0.01	0.136	**0.164**
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 0	DSI3	23095	707.5	1	2	23.69	24.50	1.205	-0.03	0.129	0.155
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 0	DSI3	23095	707.5	2	1	23.69	24.50	1.205	0.04	0.132	0.159
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 0	DSI3	23095	707.5	3	1	23.69	24.50	1.205	0.01	0.126	0.152
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 0	DSI9	23095	707.5	1	1	21.46	22.30	1.213	-0.03	0.077	0.093
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 0	DSI11	23095	707.5	1	1	22.15	23.00	1.216	-0.01	0.088	0.107
	LTE Band 12	10M	QPSK	1	0		Front	15mm	Ant 2	DSI3	23095	707.5	1	1	24.45	25.20	1.189	-0.01	0.033	0.039
	LTE Band 12	10M	QPSK	25	0		Front	15mm	Ant 2	DSI3	23095	707.5	1	1	23.40	24.20	1.202	0.08	0.055	0.066
	LTE Band 12	10M	QPSK	1	0		Back	15mm	Ant 2	DSI3	23095	707.5	1	1	24.45	25.20	1.189	0.12	0.081	0.096
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 2	DSI3	23095	707.5	1	1	23.40	24.20	1.202	-0.13	0.108	0.130
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 2	DSI3	23095	707.5	1	2	23.40	24.20	1.202	0.02	0.131	0.157
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 2	DSI3	23095	707.5	2	2	23.40	24.20	1.202	-0.03	0.105	0.126
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 2	DSI3	23095	707.5	3	2	23.40	24.20	1.202	0.04	0.134	0.161
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 2	DSI9	23095	707.5	3	2	21.32	22.00	1.169	0.01	0.073	0.085
	LTE Band 12	10M	QPSK	25	0		Back	15mm	Ant 2	DSI11	23095	707.5	3	2	21.90	22.70	1.202	0.04	0.088	0.106
	LTE Band 13	10M	QPSK	1	0		Front	15mm	Ant 0	DSI3	23230	782	1	1	23.36	24.50	1.300	-0.13	0.118	0.153
	LTE Band 13	10M	QPSK	25	0		Front	15mm	Ant 0	DSI3	23230	782	1	1	22.36	23.50	1.300	-0.17	0.094	0.122
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 0	DSI3	23230	782	1	1	23.36	24.50	1.300	-0.1	0.145	0.189
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 0	DSI3	23230	782	1	2	23.36	24.50	1.300	0.02	0.135	0.176
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 0	DSI3	23230	782	2	1	23.36	24.50	1.300	-0.03	0.137	0.178
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 0	DSI3	23230	782	3	1	23.36	24.50	1.300	0.03	0.132	0.172
	LTE Band 13	10M	QPSK	25	0		Back	15mm	Ant 0	DSI3	23230	782	1	1	22.36	23.50	1.300	-0.12	0.112	0.146
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 0	DSI9	23230	782	1	1	20.17	21.30	1.297	0.03	0.066	0.086
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 0	DSI11	23230	782	1	1	20.85	22.00	1.303	0.01	0.077	0.100
	LTE Band 13	10M	QPSK	1	0		Front	15mm	Ant 2	DSI3	23230	782	1	1	23.12	24.20	1.282	0.1	0.109	0.140
	LTE Band 13	10M	QPSK	25	0		Front	15mm	Ant 2	DSI3	23230	782	1	1	22.13	23.20	1.279	0.17	0.083	0.106
45	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 2	DSI3	23230	782	1	1	23.12	24.20	1.282	-0.06	0.202	**0.259**
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 2	DSI3	23230	782	1	2	23.12	24.20	1.282	-0.02	0.191	0.245
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 2	DSI3	23230	782	2	1	23.12	24.20	1.282	0.03	0.199	0.255
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 2	DSI3	23230	782	3	1	23.12	24.20	1.282	0.01	0.197	0.253
	LTE Band 13	10M	QPSK	25	0		Back	15mm	Ant 2	DSI3	23230	782	1	1	22.13	23.20	1.279	-0.12	0.166	0.212
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 2	DSI9	23230	782	1	1	20.15	21.00	1.216	0.03	0.089	0.108
	LTE Band 13	10M	QPSK	1	0		Back	15mm	Ant 2	DSI11	23230	782	1	1	20.68	21.70	1.265	0.04	0.107	0.135
835MHz																				
	GSM850					GPRS (4 Tx slots)	Front	15mm	Ant 0	DSI3	189	836.4	1	1	26.66	28.50	1.528	0.01	0.140	0.214
46	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI3	189	836.4	1	1	26.66	28.50	1.528	-0.07	0.164	**0.251**
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI3	189	836.4	1	2	26.66	28.50	1.528	0.04	0.136	0.208
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI3	189	836.4	2	1	26.66	28.50	1.528	0.05	0.147	0.225
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI3	189	836.4	3	1	26.66	28.50	1.528	0.05	0.158	0.241
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI9	189	836.4	1	1	23.43	25.30	1.538	-0.05	0.085	0.131
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI11	189	836.4	1	1	24.13	26.00	1.538	0.06	0.082	0.126
	GSM850					GPRS (4 Tx slots)	Front	15mm	Ant 2	DSI3	189	836.4	1	1	25.07	25.70	1.156	-0.17	0.070	0.081
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 2	DSI3	189	836.4	1	1	25.07	25.70	1.156	-0.09	0.140	0.162
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 2	DSI3	189	836.4	1	2	25.07	25.70	1.156	0.03	0.140	0.162
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 2	DSI3	189	836.4	2	1	25.07	25.70	1.156	0.01	0.138	0.160
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 2	DSI3	189	836.4	3	1	25.07	25.70	1.156	-0.03	0.169	0.195
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 2	DSI9	189	836.4	3	1	21.79	22.50	1.178	0.04	0.063	0.074
	GSM850					GPRS (4 Tx slots)	Back	15mm	Ant 2	DSI11	189	836.4	3	1	22.54	23.20	1.164	0.05	0.079	0.092

	WCDMA V					RMC 12.2Kbps	Front	15mm	Ant 0	DSI3	4182	836.4	1	1	24.64	25.50	1.219	0.01	0.213	0.260
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 0	DSI3	4182	836.4	1	1	24.64	25.50	1.219	-0.04	0.249	0.304
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 0	DSI3	4182	836.4	1	2	24.64	25.50	1.219	0.03	0.221	0.269
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 0	DSI3	4182	836.4	2	1	24.64	25.50	1.219	0.04	0.267	0.325
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 0	DSI3	4182	836.4	3	1	24.64	25.50	1.219	-0.02	0.292	0.356
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 0	DSI9	4182	836.4	3	1	21.68	22.30	1.153	0.01	0.100	0.115
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 0	DSI11	4182	836.4	3	1	22.26	23.00	1.186	0.06	0.119	0.141
	WCDMA V					RMC 12.2Kbps	Front	15mm	Ant 2	DSI3	4182	836.4	1	1	24.34	25.20	1.219	-0.12	0.224	0.273
47	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 2	DSI3	4182	836.4	1	1	24.34	25.20	1.219	-0.04	0.413	**0.503**
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 2	DSI3	4182	836.4	1	2	24.34	25.20	1.219	-0.01	0.330	0.402
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 2	DSI3	4182	836.4	2	1	24.34	25.20	1.219	0.02	0.299	0.364
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 2	DSI3	4182	836.4	3	1	24.34	25.20	1.219	0.04	0.361	0.440
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 2	DSI9	4182	836.4	1	1	21.21	22.00	1.199	-0.05	0.183	0.220
	WCDMA V					RMC 12.2Kbps	Back	15mm	Ant 2	DSI11	4182	836.4	1	1	21.90	22.70	1.202	0.05	0.192	0.231
	LTE Band 26	15M	QPSK	1	0		Front	15mm	Ant 0	DSI3	26865	831.5	1	1	24.61	25.50	1.227	-0.03	0.133	0.163
	LTE Band 26	15M	QPSK	36	0		Front	15mm	Ant 0	DSI3	26865	831.5	1	1	23.67	24.50	1.211	0.1	0.113	0.137
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 0	DSI3	26865	831.5	1	1	24.61	25.50	1.227	-0.04	0.160	0.196
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 0	DSI3	26865	831.5	1	2	24.61	25.50	1.227	-0.03	0.174	0.214
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 0	DSI3	26865	831.5	2	2	24.61	25.50	1.227	0.01	0.207	0.254
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 0	DSI3	26865	831.5	3	2	24.61	25.50	1.227	0.02	0.231	0.284
	LTE Band 26	15M	QPSK	36	0		Back	15mm	Ant 0	DSI3	26865	831.5	1	1	23.67	24.50	1.211	-0.09	0.158	0.191
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 0	DSI9	26865	831.5	3	2	21.44	22.30	1.219	0.04	0.078	0.095
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 0	DSI11	26865	831.5	3	2	22.12	23.00	1.225	0.01	0.095	0.116
	LTE Band 26	15M	QPSK	1	0		Front	15mm	Ant 2	DSI3	26865	831.5	1	1	24.38	25.20	1.208	0.08	0.149	0.180
	LTE Band 26	15M	QPSK	36	0		Front	15mm	Ant 2	DSI3	26865	831.5	1	1	23.21	24.20	1.256	0.03	0.118	0.148
48	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 2	DSI3	26865	831.5	1	1	24.38	25.20	1.208	-0.08	0.271	**0.327**
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 2	DSI3	26865	831.5	1	2	24.38	25.20	1.208	0.03	0.264	0.319
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 2	DSI3	26865	831.5	2	1	24.38	25.20	1.208	0.01	0.228	0.275
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 2	DSI3	26865	831.5	3	1	24.38	25.20	1.208	0.03	0.270	0.326
	LTE Band 26	15M	QPSK	36	0		Back	15mm	Ant 2	DSI3	26865	831.5	1	1	23.21	24.20	1.256	-0.11	0.231	0.290
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 2	DSI9	26865	831.5	1	1	21.13	22.00	1.222	0.04	0.127	0.155
	LTE Band 26	15M	QPSK	1	0		Back	15mm	Ant 2	DSI11	26865	831.5	1	1	21.92	22.70	1.197	0.01	0.157	0.188
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI3	167300	836.5	1	1	24.37	25.70	1.358	-0.19	0.117	0.159
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI3	167300	836.5	1	1	24.32	25.70	1.374	0.06	0.126	0.173
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI3	167300	836.5	1	1	24.37	25.70	1.358	-0.16	0.153	0.208
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI3	167300	836.5	1	1	24.32	25.70	1.374	0.04	0.163	0.224
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI3	167300	836.5	1	2	24.32	25.70	1.374	0.01	0.158	0.217
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI3	167300	836.5	2	1	24.32	25.70	1.374	-0.03	0.164	0.225
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI3	167300	836.5	3	1	24.32	25.70	1.374	0.04	0.172	0.236
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI9	167300	836.5	3	1	21.16	22.80	1.459	0.06	0.092	0.134
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI11	167300	836.5	3	1	21.89	23.50	1.449	0.03	0.103	0.149
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 2	DSI3	167300	836.5	1	1	24.12	25.70	1.439	-0.04	0.115	0.165
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 2	DSI3	167300	836.5	1	1	24.08	25.70	1.452	-0.12	0.116	0.168
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI3	167300	836.5	1	1	24.12	25.70	1.439	0.08	0.195	0.281
49	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI3	167300	836.5	1	1	24.08	25.70	1.452	0.04	0.197	**0.286**
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI3	167300	836.5	1	2	24.08	25.70	1.452	0.02	0.191	0.277
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI3	167300	836.5	2	1	24.08	25.70	1.452	0.03	0.184	0.267
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI3	167300	836.5	3	1	24.08	25.70	1.452	-0.03	0.196	0.285
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI9	167300	836.5	1	1	20.85	22.50	1.462	0.04	0.109	0.159
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI11	167300	836.5	1	1	21.42	23.20	1.506	0.04	0.122	0.184

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
1750MHz																				
	WCDMA IV					RMC 12.2Kbps	Front	15mm	Ant 1	DSI3	1413	1732.6	1	1	23.31	24.00	1.172	-0.07	0.240	0.281
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 1	DSI3	1413	1732.6	1	1	23.31	24.00	1.172	0.08	0.364	0.427
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 1	DSI3	1413	1732.6	1	2	23.31	24.00	1.172	0.02	0.340	0.399
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 1	DSI3	1413	1732.6	2	1	23.31	24.00	1.172	-0.03	0.392	0.460
50	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 1	DSI3	1413	1732.6	3	1	23.31	24.00	1.172	0.05	0.440	**0.516**
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 1	DSI9	1413	1732.6	3	1	20.14	20.80	1.164	-0.01	0.154	0.179
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 1	DSI11	1413	1732.6	3	1	20.77	21.50	1.183	0.05	0.189	0.224
	WCDMA IV					RMC 12.2Kbps	Front	15mm	Ant 6	DSI3	1413	1732.6	1	1	22.66	23.80	1.300	-0.07	0.128	0.166
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 6	DSI3	1413	1732.6	1	1	22.66	23.80	1.300	-0.01	0.165	0.215
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 6	DSI3	1413	1732.6	1	2	22.66	23.80	1.300	0.01	0.147	0.191
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 6	DSI3	1413	1732.6	2	1	22.66	23.80	1.300	0.04	0.137	0.178
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 6	DSI3	1413	1732.6	3	1	22.66	23.80	1.300	-0.01	0.144	0.187
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 6	DSI9	1413	1732.6	1	1	19.49	20.60	1.291	0.03	0.073	0.094
	WCDMA IV					RMC 12.2Kbps	Back	15mm	Ant 6	DSI11	1413	1732.6	1	1	20.31	21.30	1.256	0.01	0.083	0.104
	LTE Band 66	20M	QPSK	1	0		Front	15mm	Ant 1	DSI3	132322	1745	1	1	22.85	24.00	1.303	0.01	0.209	0.272
	LTE Band 66	20M	QPSK	50	0		Front	15mm	Ant 1	DSI3	132322	1745	1	1	22.78	24.00	1.324	0.13	0.228	0.302
	LTE Band 66	20M	QPSK	1	0		Back	15mm	Ant 1	DSI3	132322	1745	1	1	22.85	24.00	1.303	0.06	0.307	0.400
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	132322	1745	1	1	22.78	24.00	1.324	0.05	0.321	0.425
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	132322	1745	1	2	22.78	24.00	1.324	-0.02	0.304	0.403
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	132322	1745	2	1	22.78	24.00	1.324	0.04	0.383	0.507
51	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	132322	1745	3	1	22.78	24.00	1.324	0.01	0.436	**0.577**
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 1	DSI9	132322	1745	3	1	19.51	20.80	1.346	-0.03	0.157	0.211
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 1	DSI11	132322	1745	3	1	20.27	21.50	1.327	0.01	0.179	0.238
	LTE Band 66	20M	QPSK	1	0		Front	15mm	Ant 6	DSI3	132322	1745	1	1	22.57	23.80	1.327	-0.16	0.126	0.167
	LTE Band 66	20M	QPSK	50	0		Front	15mm	Ant 6	DSI3	132322	1745	1	1	22.17	23.40	1.327	-0.18	0.117	0.155
	LTE Band 66	20M	QPSK	1	0		Back	15mm	Ant 6	DSI3	132322	1745	1	1	22.57	23.80	1.327	-0.1	0.153	0.203
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	132322	1745	1	1	22.17	23.40	1.327	-0.07	0.156	0.207
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	132322	1745	1	2	22.17	23.40	1.327	0.04	0.138	0.183
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	132322	1745	2	1	22.17	23.40	1.327	-0.01	0.119	0.158
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	132322	1745	3	1	22.17	23.40	1.327	0.03	0.131	0.174
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 6	DSI9	132322	1745	1	1	19.28	20.60	1.355	-0.05	0.063	0.085
	LTE Band 66	20M	QPSK	50	0		Back	15mm	Ant 6	DSI11	132322	1745	1	1	20.05	21.30	1.334	0.01	0.076	0.101
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 1	DSI3	349000	1745	1	1	20.72	22.20	1.406	0.03	0.122	0.172
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 1	DSI3	349000	1745	1	1	20.64	22.20	1.432	-0.14	0.121	0.173
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	349000	1745	1	1	20.72	22.20	1.406	-0.09	0.169	0.238
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	349000	1745	1	1	20.64	22.20	1.432	-0.01	0.172	0.246
52	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	349000	1745	1	2	20.64	22.20	1.432	0.01	0.204	**0.292**
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	349000	1745	2	2	20.64	22.20	1.432	-0.02	0.198	0.284
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	349000	1745	3	2	20.64	22.20	1.432	0.05	0.187	0.268
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI9	349000	1745	1	2	17.41	19.00	1.442	-0.06	0.099	0.143
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI11	349000	1745	1	2	18.05	19.70	1.462	0.01	0.111	0.162
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 6	DSI3	349000	1745	1	1	22.16	23.40	1.330	0.04	0.129	0.172
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 6	DSI3	349000	1745	1	1	22.13	23.40	1.340	0.03	0.134	0.180
	FR1 n66	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	349000	1745	1	1	22.16	23.40	1.330	0.04	0.157	0.209
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	349000	1745	1	1	22.13	23.40	1.340	-0.06	0.171	0.229
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	349000	1745	1	2	22.13	23.40	1.340	-0.02	0.144	0.193
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	349000	1745	2	1	22.13	23.40	1.340	0.01	0.127	0.170
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	349000	1745	3	1	22.13	23.40	1.340	-0.04	0.128	0.171
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI9	349000	1745	1	1	18.90	20.20	1.349	0.03	0.075	0.085
	FR1 n66	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI11	349000	1745	1	1	19.47	20.90	1.390	0.01	0.084	0.101
1900MHz																				
	GSM1900					GPRS (4 Tx slots)	Front	15mm	Ant 1	DSI3	661	1880	1	1	23.21	25.00	1.510	0.07	0.064	0.097

	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI3	661	1880	1	1	23.21	25.00	1.510	-0.06	0.103	0.156
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI3	661	1880	1	2	23.21	25.00	1.510	-0.03	0.053	0.080
53	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI3	661	1880	2	1	23.21	25.00	1.510	0.02	0.153	**0.231**
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI3	661	1880	3	1	23.21	25.00	1.510	0.05	0.138	0.208
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI9	661	1880	2	1	20.06	21.80	1.493	-0.01	0.047	0.070
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI11	661	1880	2	1	20.63	22.50	1.538	0.03	0.053	0.082
	GSM1900					GPRS (4 Tx slots)	Front	15mm	Ant 6	DSI3	661	1880	1	1	20.08	21.80	1.486	0.03	0.043	0.064
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 6	DSI3	661	1880	1	1	20.08	21.80	1.486	-0.06	0.061	0.091
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 6	DSI3	661	1880	1	2	20.08	21.80	1.486	-0.02	0.088	0.131
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 6	DSI3	661	1880	2	2	20.08	21.80	1.486	0.01	0.083	0.123
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 6	DSI3	661	1880	3	2	20.08	21.80	1.486	-0.02	0.070	0.104
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 6	DSI9	661	1880	1	2	16.84	18.60	1.500	0.04	0.036	0.054
	GSM1900					GPRS (4 Tx slots)	Back	15mm	Ant 6	DSI11	661	1880	1	2	17.50	19.30	1.514	0.05	0.049	0.074
	WCDMA II					RMC 12.2Kbps	Front	15mm	Ant 1	DSI3	9400	1880	1	1	23.40	24.10	1.175	0.03	0.200	0.235
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 1	DSI3	9400	1880	1	1	23.40	24.10	1.175	-0.04	0.304	0.357
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 1	DSI3	9400	1880	1	2	23.40	24.10	1.175	-0.03	0.266	0.313
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 1	DSI3	9400	1880	2	1	23.40	24.10	1.175	0.01	0.291	0.342
54	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 1	DSI3	9400	1880	3	1	23.40	24.10	1.175	0.05	0.369	**0.434**
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 1	DSI9	9400	1880	3	1	20.21	20.90	1.172	-0.04	0.124	0.145
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 1	DSI11	9400	1880	3	1	20.91	21.60	1.172	0.03	0.144	0.169
	WCDMA II					RMC 12.2Kbps	Front	15mm	Ant 6	DSI3	9400	1880	1	1	20.94	22.10	1.306	0.15	0.199	0.260
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 6	DSI3	9400	1880	1	1	20.94	22.10	1.306	0.01	0.288	0.376
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 6	DSI3	9400	1880	1	2	20.94	22.10	1.306	0.05	0.328	0.428
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 6	DSI3	9400	1880	2	2	20.94	22.10	1.306	-0.01	0.319	0.417
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 6	DSI3	9400	1880	3	2	20.94	22.10	1.306	0.02	0.325	0.425
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 6	DSI9	9400	1880	1	2	17.80	18.90	1.288	0.03	0.148	0.191
	WCDMA II					RMC 12.2Kbps	Back	15mm	Ant 6	DSI11	9400	1880	1	2	18.60	19.60	1.259	-0.05	0.170	0.214
	LTE Band 25	20M	QPSK	1	0		Front	15mm	Ant 1	DSI3	26340	1880	1	1	22.92	24.10	1.312	-0.17	0.160	0.210
	LTE Band 25	20M	QPSK	50	0		Front	15mm	Ant 1	DSI3	26340	1880	1	1	22.90	24.10	1.318	-0.06	0.174	0.229
	LTE Band 25	20M	QPSK	1	0		Back	15mm	Ant 1	DSI3	26340	1880	1	1	22.92	24.10	1.312	0.02	0.256	0.336
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	26340	1880	1	1	22.90	24.10	1.318	-0.06	0.274	0.361
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	26340	1880	1	2	22.90	24.10	1.318	-0.03	0.230	0.303
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	26340	1880	2	1	22.90	24.10	1.318	0.01	0.256	0.337
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	26340	1880	3	1	22.90	24.10	1.318	-0.04	0.249	0.328
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 1	DSI9	26340	1880	1	1	19.57	20.90	1.358	0.05	0.118	0.160
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 1	DSI11	26340	1880	1	1	20.35	21.60	1.334	0.02	0.131	0.175
	LTE Band 25	20M	QPSK	1	0		Front	15mm	Ant 6	DSI3	26340	1880	1	1	21.24	22.40	1.306	-0.18	0.217	0.283
	LTE Band 25	20M	QPSK	50	0		Front	15mm	Ant 6	DSI3	26340	1880	1	1	21.21	22.40	1.315	0.02	0.230	0.303
	LTE Band 25	20M	QPSK	1	0		Back	15mm	Ant 6	DSI3	26340	1880	1	1	21.24	22.40	1.306	0.08	0.317	0.414
55	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	26340	1880	1	1	21.21	22.40	1.315	0.11	0.332	**0.437**
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	26340	1880	1	2	21.21	22.40	1.315	-0.02	0.330	0.434
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	26340	1880	2	1	21.21	22.40	1.315	0.03	0.315	0.414
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	26340	1880	3	1	21.21	22.40	1.315	0.01	0.329	0.433
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 6	DSI9	26340	1880	1	1	18.11	19.20	1.285	0.04	0.160	0.206
	LTE Band 25	20M	QPSK	50	0		Back	15mm	Ant 6	DSI11	26340	1880	1	1	18.64	19.90	1.337	-0.03	0.190	0.254

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	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)
2600MHz																						
	LTE Band 7	20M	QPSK	1	0		Front	15mm	Ant 1	DSI3	21100	2535	1	1	21.71	22.90	1.315	-	-	-0.11	0.156	0.205
	LTE Band 7	20M	QPSK	50	0		Front	15mm	Ant 1	DSI3	21100	2535	1	1	21.64	22.90	1.337	-	-	0.07	0.174	0.233
	LTE Band 7	20M	QPSK	1	0		Back	15mm	Ant 1	DSI3	21100	2535	1	1	21.71	22.90	1.315	-	-	0.06	0.236	0.310
56	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	21100	2535	1	1	21.64	22.90	1.337	-	-	-0.06	0.248	**0.331**
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	21100	2535	1	2	21.64	22.90	1.337	-	-	-0.03	0.245	0.327
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	21100	2535	2	1	21.64	22.90	1.337	-	-	0.03	0.197	0.263
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	21100	2535	3	1	21.64	22.90	1.337	-	-	0.05	0.241	0.322
	LTE Band 7C	20M	QPSK	1	99		Back	15mm	Ant 1	DSI3	21100+ 21298	2535+ 2554.8	1	1	21.93	22.90	1.250	-	-	0.03	0.192	0.240
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 1	DSI9	21100	2535	1	1	18.57	19.70	1.297	-	-	-0.02	0.123	0.160
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 1	DSI11	21100	2535	1	1	19.05	20.40	1.365	-	-	0.01	0.128	0.175
	LTE Band 7	20M	QPSK	1	0		Front	15mm	Ant 5	DSI3	21100	2535	1	1	19.60	21.20	1.445	-	-	0.08	0.075	0.108
	LTE Band 7	20M	QPSK	50	0		Front	15mm	Ant 5	DSI3	21100	2535	1	1	19.57	21.20	1.455	-	-	-0.15	0.076	0.111
	LTE Band 7	20M	QPSK	1	0		Back	15mm	Ant 5	DSI3	21100	2535	1	1	19.60	21.20	1.445	-	-	-0.07	0.127	0.184
	LTE Band 7	20M	QPSK	1	0		Back	15mm	Ant 5	DSI3	21100	2535	1	2	19.60	21.20	1.445	-	-	-0.03	0.145	0.210
	LTE Band 7	20M	QPSK	1	0		Back	15mm	Ant 5	DSI3	21100	2535	2	2	19.60	21.20	1.445	-	-	0.01	0.143	0.207
	LTE Band 7	20M	QPSK	1	0		Back	15mm	Ant 5	DSI3	21100	2535	3	2	19.60	21.20	1.445	-	-	0.03	0.179	0.259
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 5	DSI3	21100	2535	1	1	19.57	21.20	1.455	-	-	-0.02	0.117	0.170
	LTE Band 7	20M	QPSK	1	0		Back	15mm	Ant 5	DSI9	21100	2535	3	2	16.92	18.00	1.282	-	-	-0.03	0.069	0.088
	LTE Band 7	20M	QPSK	1	0		Back	15mm	Ant 5	DSI11	21100	2535	3	2	17.34	18.70	1.368	-	-	0.05	0.082	0.112
	LTE Band 7	20M	QPSK	1	0		Front	15mm	Ant 6	DSI3	21100	2535	1	1	18.06	19.10	1.271	-	-	-0.16	0.103	0.131
	LTE Band 7	20M	QPSK	50	0		Front	15mm	Ant 6	DSI3	21100	2535	1	1	18.03	19.10	1.279	-	-	0.09	0.106	0.136
	LTE Band 7	20M	QPSK	1	0		Back	15mm	Ant 6	DSI3	21100	2535	1	1	18.06	19.10	1.271	-	-	-0.03	0.191	0.243
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	21100	2535	1	1	18.03	19.10	1.279	-	-	0.04	0.214	0.274
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	21100	2535	1	2	18.03	19.10	1.279	-	-	-0.03	0.212	0.271
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	21100	2535	2	1	18.03	19.10	1.279	-	-	0.04	0.203	0.260
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	21100	2535	3	1	18.03	19.10	1.279	-	-	-0.02	0.210	0.269
	LTE Band 7C	20M	QPSK	1	99		Back	15mm	Ant 6	DSI3	21100+ 21298	2535+ 2554.8	1	1	17.68	19.10	1.387	-	-	0.05	0.189	0.262
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 6	DSI9	21100	2535	1	1	14.88	15.90	1.265	-	-	0.01	0.102	0.129
	LTE Band 7	20M	QPSK	50	0		Back	15mm	Ant 6	DSI11	21100	2535	1	1	15.53	16.60	1.279	-	-	-0.03	0.119	0.152
	LTE Band 41	20M	QPSK	1	0		Front	15mm	Ant 1	DSI3	40620	2593	1	1	22.66	23.50	1.213	62.9	1.006	-0.17	0.165	0.201
	LTE Band 41	20M	QPSK	50	0		Front	15mm	Ant 1	DSI3	40620	2593	1	1	22.62	23.50	1.225	62.9	1.006	0.08	0.179	0.221
57	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 1	DSI3	40620	2593	1	1	22.66	23.50	1.213	62.9	1.006	-0.09	0.248	**0.303**
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 1	DSI3	40620	2593	1	2	22.66	23.50	1.213	62.9	1.006	-0.02	0.245	0.299
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 1	DSI3	40620	2593	2	1	22.66	23.50	1.213	62.9	1.006	0.04	0.210	0.256
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 1	DSI3	40620	2593	3	1	22.66	23.50	1.213	62.9	1.006	0.05	0.227	0.277
	LTE Band 41C	20M	QPSK	1	99		Back	15mm	Ant 1	DSI3	40620+ 40818	2593+ 2612.8	1	1	22.45	23.50	1.274	62.9	1.006	0.07	0.211	0.270
	LTE Band 41	20M	QPSK	50	0		Back	15mm	Ant 1	DSI3	40620	2593	1	1	22.62	23.50	1.225	62.9	1.006	-0.1	0.214	0.264
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 1	DSI9	40620	2593	1	1	19.40	20.40	1.259	62.9	1.006	0.03	0.118	0.149
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 1	DSI11	40620	2593	1	1	20.16	21.10	1.242	62.9	1.006	0.07	0.137	0.171
	LTE Band 41	20M	QPSK	1	0		Front	15mm	Ant 6	DSI3	40620	2593	1	1	19.29	20.30	1.262	62.9	1.006	0.02	0.074	0.094
	LTE Band 41	20M	QPSK	50	0		Front	15mm	Ant 6	DSI3	40620	2593	1	1	19.25	20.30	1.274	62.9	1.006	-0.09	0.076	0.097
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 6	DSI3	40620	2593	1	1	19.29	20.30	1.262	62.9	1.006	0.18	0.151	0.192
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 6	DSI3	40620	2593	1	2	19.29	20.30	1.262	62.9	1.006	0.03	0.129	0.164
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 6	DSI3	40620	2593	2	1	19.29	20.30	1.262	62.9	1.006	-0.01	0.126	0.160
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 6	DSI3	40620	2593	3	1	19.29	20.30	1.262	62.9	1.006	0.03	0.139	0.176
	LTE Band 41C	20M	QPSK	1	99		Back	15mm	Ant 6	DSI3	40620+ 40818	2593+ 2612.8	1	1	19.23	20.30	1.279	62.9	1.006	0.08	0.077	0.099
	LTE Band 41	20M	QPSK	50	0		Back	15mm	Ant 6	DSI3	40620	2593	1	1	19.25	20.30	1.274	62.9	1.006	0.03	0.147	0.188
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 6	DSI9	40620	2593	1	1	16.53	17.20	1.167	62.9	1.006	-0.03	0.057	0.067
	LTE Band 41	20M	QPSK	1	0		Back	15mm	Ant 6	DSI11	40620	2593	1	1	16.96	17.90	1.242	62.9	1.006	0.04	0.072	0.090
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 1	DSI3	507000	2535	1	1	20.71	21.90	1.315	-	-	-0.1	0.098	0.129
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 1	DSI3	507000	2535	1	1	20.67	21.90	1.327	-	-	-0.17	0.104	0.138

	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	507000	2535	1	1	20.71	21.90	1.315	-	-	-0.07	0.136	0.179
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	507000	2535	1	1	20.67	21.90	1.327	-	-	-0.05	0.137	0.182
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	507000	2535	1	2	20.67	21.90	1.327	-	-	0.03	0.135	0.179
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	507000	2535	2	1	20.67	21.90	1.327	-	-	0.01	0.137	0.182
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI3	507000	2535	3	1	20.67	21.90	1.327	-	-	-0.04	0.138	**0.183**
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI9	507000	2535	3	1	17.42	18.70	1.343	-	-	0.04	0.083	0.111
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI11	507000	2535	3	1	17.95	19.40	1.396	-	-	0.01	0.087	0.121
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 5	DSI3	507000	2535	1	1	20.14	21.50	1.368	-	-	-0.12	0.094	0.129
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 5	DSI3	507000	2535	1	1	20.06	21.50	1.393	-	-	-0.05	0.091	0.127
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI3	507000	2535	1	1	20.14	21.50	1.368	-	-	-0.17	0.140	0.191
58	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI3	507000	2535	1	1	20.06	21.50	1.393	-	-	-0.12	0.142	**0.198**
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI3	507000	2535	1	2	20.06	21.50	1.393	-	-	-0.02	0.140	0.195
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI3	507000	2535	2	1	20.06	21.50	1.393	-	-	0.04	0.120	0.167
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI3	507000	2535	3	1	20.06	21.50	1.393	-	-	0.05	0.138	0.192
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI9	507000	2535	1	1	16.73	18.30	1.435	-	-	0.02	0.079	0.113
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI11	507000	2535	1	1	17.30	19.00	1.479	-	-	-0.01	0.087	0.129
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 6	DSI3	507000	2535	1	1	18.20	19.40	1.318	-	-	0.04	0.087	0.115
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 6	DSI3	507000	2535	1	1	18.10	19.40	1.349	-	-	-0.07	0.089	0.120
	FR1 n7	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	507000	2535	1	1	18.20	19.40	1.318	-	-	-0.07	0.131	0.173
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	507000	2535	1	1	18.10	19.40	1.349	-	-	-0.04	0.134	0.181
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	507000	2535	1	2	18.10	19.40	1.349	-	-	-0.03	0.134	0.181
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	507000	2535	2	1	18.10	19.40	1.349	-	-	0.02	0.114	0.154
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI3	507000	2535	3	1	18.10	19.40	1.349	-	-	-0.05	0.125	0.169
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI9	507000	2535	1	1	15.05	16.20	1.303	-	-	0.06	0.074	0.096
	FR1 n7	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 6	DSI11	507000	2535	1	1	15.53	16.90	1.371	-	-	0.07	0.082	0.112
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI3	518598	2592.99	1	1	19.72	21.20	1.406	-	-	0.08	0.099	0.139
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI3	518598	2592.99	1	1	19.59	21.20	1.449	-	-	0.02	0.106	0.154
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	518598	2592.99	1	1	19.72	21.20	1.406	-	-	0.06	0.138	0.194
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	518598	2592.99	1	1	19.59	21.20	1.449	-	-	-0.04	0.164	0.238
59	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	518598	2592.99	1	2	19.59	21.20	1.449	-	-	0.03	0.211	**0.306**
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	518598	2592.99	2	2	19.59	21.20	1.449	-	-	-0.04	0.191	0.277
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	518598	2592.99	3	2	19.59	21.20	1.449	-	-	0.05	0.192	0.278
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI9	518598	2592.99	1	2	16.67	18.00	1.358	-	-	0.07	0.098	0.133
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI11	518598	2592.99	1	2	17.32	18.70	1.374	-	-	0.02	0.107	0.147
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	518598	2592.99	1	1	20.73	22.00	1.340	-	-	-0.04	0.085	0.114
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	518598	2592.99	1	1	20.67	22.00	1.358	-	-	0.05	0.070	0.095
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	518598	2592.99	1	1	20.73	22.00	1.340	-	-	0.11	0.155	0.208
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	518598	2592.99	1	1	20.67	22.00	1.358	-	-	-0.06	0.170	0.231
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	518598	2592.99	1	2	20.67	22.00	1.358	-	-	0.03	0.203	**0.276**
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	518598	2592.99	2	2	20.67	22.00	1.358	-	-	-0.04	0.122	0.166
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	518598	2592.99	3	2	20.67	22.00	1.358	-	-	0.01	0.163	0.221
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI9	518598	2592.99	1	2	17.32	18.80	1.406	-	-	0.03	0.082	0.115
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI11	518598	2592.99	1	2	17.87	19.50	1.455	-	-	0.03	0.093	0.135
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI3	518598	2592.99	1	1	18.14	19.60	1.400	-	-	-0.08	0.086	0.120
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI3	518598	2592.99	1	1	18.13	19.60	1.403	-	-	0.07	0.073	0.102
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI3	518598	2592.99	1	1	18.14	19.60	1.400	-	-	0.08	0.136	**0.190**
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI3	518598	2592.99	1	2	18.14	19.60	1.400	-	-	-0.03	0.134	0.188
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI3	518598	2592.99	2	1	18.14	19.60	1.400	-	-	0.04	0.097	0.136
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI3	518598	2592.99	3	1	18.14	19.60	1.400	-	-	-0.02	0.129	0.181
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI3	518598	2592.99	1	1	18.13	19.60	1.403	-	-	0.02	0.128	0.180
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI9	518598	2592.99	1	1	15.00	16.40	1.380	-	-	0.07	0.064	0.088
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI11	518598	2592.99	1	1	15.54	17.10	1.432	-	-	-0.02	0.068	0.097
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI3	518598	2592.99	1	1	22.11	23.30	1.315	-	-	-0.04	0.044	0.058
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 9	DSI3	518598	2592.99	1	1	21.92	23.30	1.374	-	-	0.18	0.045	0.062
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI3	518598	2592.99	1	1	22.11	23.30	1.315	-	-	-0.11	0.069	0.091
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI3	518598	2592.99	1	1	21.92	23.30	1.374	-	-	-0.08	0.097	**0.133**

	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI3	518598	2592.99	1	2	21.92	23.30	1.374	-	-	-0.03	0.092	0.126
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI3	518598	2592.99	2	1	21.92	23.30	1.374	-	-	0.01	0.082	0.113
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI3	518598	2592.99	3	1	21.92	23.30	1.374	-	-	0.04	0.094	0.129
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI9	518598	2592.99	1	1	18.97	20.10	1.297	-	-	-0.05	0.046	0.060
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 9	DSI11	518598	2592.99	1	1	19.33	20.80	1.403	-	-	0.07	0.048	0.067

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	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)
2450MHz																		
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 8	Standalone	1	2412	1	1	14.66	16.50	1.528	100	1.000	0.07	0.010	0.015
60	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 8	Standalone	1	2412	1	1	14.66	16.50	1.528	100	1.000	-0.03	0.049	**0.075**
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 8	Standalone	1	2412	2	1	14.66	16.50	1.528	100	1.000	0.01	0.042	0.064
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 8	Standalone	1	2412	3	1	14.66	16.50	1.528	100	1.000	0.05	0.035	0.053
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 11	Standalone	1	2412	1	1	14.62	16.50	1.542	100	1.000	0.01	0.028	0.043
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 11	Standalone	1	2412	1	1	14.62	16.50	1.542	100	1.000	-0.06	0.046	0.071
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 11	Standalone	1	2412	2	1	14.62	16.50	1.542	100	1.000	0.04	0.035	0.054
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 11	Standalone	1	2412	3	1	14.62	16.50	1.542	100	1.000	-0.02	0.045	0.069
61	Bluetooth	1Mbps	Back	15mm	Ant 8	Full	78	2480	1	1	16.03	18.00	1.573	76.71	1.086	-0.05	0.056	**0.096**
	Bluetooth	1Mbps	Back	15mm	Ant 8	Full	78	2480	2	1	16.03	18.00	1.573	76.71	1.086	0.01	0.044	0.075
	Bluetooth	1Mbps	Back	15mm	Ant 8	Full	78	2480	3	1	16.03	18.00	1.573	76.71	1.086	0.07	0.050	0.085
	Bluetooth	1Mbps	Back	15mm	Ant 11	Full	0	2402	1	1	15.83	16.50	1.168	76.79	1.085	-0.06	0.050	0.063
	Bluetooth	1Mbps	Back	15mm	Ant 11	Full	0	2402	2	1	15.83	16.50	1.168	76.79	1.085	0.07	0.035	0.044
	Bluetooth	1Mbps	Back	15mm	Ant 11	Full	0	2402	3	1	15.83	16.50	1.168	76.79	1.085	-0.03	0.028	0.035
5000MHz																		
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Front	15mm	Ant 7	Standalone	54	5270	1	1	15.41	17.00	1.442	100	1.000	-0.15	0.027	0.039
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Back	15mm	Ant 7	Standalone	54	5270	1	1	15.41	17.00	1.442	100	1.000	-0.09	0.033	0.048
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Back	15mm	Ant 7	Standalone	54	5270	2	1	15.41	17.00	1.442	100	1.000	-0.03	0.053	0.076
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Back	15mm	Ant 7	Standalone	54	5270	3	1	15.41	17.00	1.442	100	1.000	0.07	0.049	0.071
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	15mm	Ant 11	Standalone	54	5270	1	1	14.79	15.00	1.050	100	1.000	-0.01	0.089	0.093
62	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 11	Standalone	54	5270	1	1	14.79	15.00	1.050	100	1.000	0.09	0.094	**0.099**
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 11	Standalone	54	5270	2	1	14.79	15.00	1.050	100	1.000	-0.03	0.087	0.091
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 11	Standalone	54	5270	3	1	14.79	15.00	1.050	100	1.000	0.02	0.091	0.096
	WLAN5.5GHz	802.11a 6Mbps	Front	15mm	Ant 7	Standalone	116	5580	1	1	15.42	17.00	1.439	100	1.000	0.05	0.061	0.088
63	WLAN5.5GHz	802.11a 6Mbps	Back	15mm	Ant 7	Standalone	116	5580	1	1	15.42	17.00	1.439	100	1.000	0.02	0.100	**0.144**
	WLAN5.5GHz	802.11a 6Mbps	Back	15mm	Ant 7	Standalone	116	5580	2	1	15.42	17.00	1.439	100	1.000	0.09	0.091	0.131
	WLAN5.5GHz	802.11a 6Mbps	Back	15mm	Ant 7	Standalone	116	5580	3	1	15.42	17.00	1.439	100	1.000	0.12	0.081	0.117
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 11	Standalone	138	5690	1	1	14.22	15.00	1.197	100	1.000	-0.19	0.098	0.117
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 11	Standalone	138	5690	1	1	14.22	15.00	1.197	100	1.000	0.06	0.107	0.128
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 11	Standalone	138	5690	2	1	14.22	15.00	1.197	100	1.000	0.07	0.098	0.117
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 11	Standalone	138	5690	3	1	14.22	15.00	1.197	100	1.000	0.01	0.102	0.122
	WLAN5.8GHz	802.11a 6Mbps	Front	15mm	Ant 7	Standalone	149	5745	1	1	16.78	17.00	1.052	100	1.000	0.02	0.106	0.112
64	WLAN5.8GHz	802.11a 6Mbps	Back	15mm	Ant 7	Standalone	149	5745	1	1	16.78	17.00	1.052	100	1.000	-0.07	0.145	**0.153**
	WLAN5.8GHz	802.11a 6Mbps	Back	15mm	Ant 7	Standalone	149	5745	2	1	16.78	17.00	1.052	100	1.000	0.09	0.122	0.128
	WLAN5.8GHz	802.11a 6Mbps	Back	15mm	Ant 7	Standalone	149	5745	3	1	16.78	17.00	1.052	100	1.000	0.01	0.130	0.137
	WLAN5.8GHz	802.11ac-VHT40 MCS0	Front	15mm	Ant 11	Standalone	151	5755	1	1	14.65	15.00	1.084	100	1.000	0.06	0.108	0.117
	WLAN5.8GHz	802.11ac-VHT40 MCS0	Back	15mm	Ant 11	Standalone	151	5755	1	1	14.65	15.00	1.084	100	1.000	0.01	0.122	0.132
	WLAN5.8GHz	802.11ac-VHT40 MCS0	Back	15mm	Ant 11	Standalone	151	5755	2	1	14.65	15.00	1.084	100	1.000	0.04	0.117	0.127
	WLAN5.8GHz	802.11ac-VHT40 MCS0	Back	15mm	Ant 11	Standalone	151	5755	3	1	14.65	15.00	1.084	100	1.000	0.07	0.062	0.067

15.4 Product specific 10g SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
1750MHz																				
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 3	132322	1745	1	1	22.85	24.00	1.303	0.05	1.55	2.020
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 3	132072	1720	1	1	22.80	24.00	1.318	0.17	1.53	2.017
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 1	DSI 3	132572	1770	1	1	22.67	24.00	1.358	0.08	1.54	2.092
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132322	1745	1	1	22.85	24.00	1.303	-0.06	1.56	2.066
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132072	1720	1	1	22.80	24.00	1.318	-0.03	1.52	2.065
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132572	1770	1	1	22.67	24.00	1.358	0.05	1.61	2.187
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132572	1770	1	2	22.85	24.00	1.303	0.04	1.55	2.105
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132072	1720	1	2	22.85	24.00	1.303	0.12	1.50	2.037
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132322	1745	1	2	22.80	24.00	1.318	-0.06	1.63	2.159
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132572	1770	2	1	22.67	24.00	1.358	0.04	1.58	2.146
70	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132572	1770	3	1	22.85	24.00	1.303	-0.07	1.64	**2.228**
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132072	1720	3	1	22.80	24.00	1.318	0.08	1.54	2.092
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 1	DSI 3	132322	1745	3	1	22.67	24.00	1.358	-0.09	1.62	2.145
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 1	DSI 3	132322	1745	1	1	22.85	24.00	1.303	0.02	1.58	2.131
1900MHz																				
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9400	1880	1	1	20.94	22.10	1.306	0.09	1.75	2.286
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9262	1852.4	1	1	20.89	22.10	1.321	0.04	1.68	2.220
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9538	1907.6	1	1	20.85	22.10	1.334	0.03	1.76	2.347
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9538	1907.6	1	2	20.85	22.10	1.334	0.12	1.91	2.547
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9262	1852.4	1	2	20.89	22.10	1.321	0.01	1.78	2.352
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9400	1880	1	2	20.94	22.10	1.306	0.03	1.86	2.429
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9538	1907.6	2	2	20.85	22.10	1.334	0.07	1.84	2.454
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9262	1852.4	2	2	20.89	22.10	1.321	0.02	1.76	2.325
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9400	1880	2	2	20.94	22.10	1.306	0.01	1.74	2.273
65	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9538	1907.6	3	2	20.85	22.10	1.334	-0.06	1.93	**2.574**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9262	1852.4	3	2	20.89	22.10	1.321	0.06	1.83	2.418
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	0mm	Ant 6	DSI 3	9400	1880	3	2	20.94	22.10	1.306	0.08	1.85	2.416
	LTE Band 25	20M	QPSK	1	0	-	Top Side	0mm	Ant 6	DSI 3	26340	1880	1	1	21.24	22.40	1.306	-0.01	1.62	2.116
	LTE Band 25	20M	QPSK	1	0	-	Top Side	0mm	Ant 6	DSI 3	26140	1860	1	1	21.08	22.40	1.355	0.03	1.59	2.155
	LTE Band 25	20M	QPSK	1	0	-	Top Side	0mm	Ant 6	DSI 3	26590	1905	1	1	20.96	22.40	1.393	0.15	1.66	2.313
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26340	1880	1	1	21.21	22.40	1.315	0.02	1.70	2.236
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26140	1860	1	1	21.13	22.40	1.340	0.06	1.56	2.090
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26590	1905	1	1	21.18	22.40	1.324	0.03	1.77	2.344
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26590	1905	1	2	21.18	22.40	1.324	-0.12	1.87	2.477
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26140	1860	1	2	21.13	22.40	1.340	-0.12	1.84	2.465
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26340	1880	1	2	21.21	22.40	1.315	-0.12	1.74	2.288
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26590	1905	2	2	21.18	22.40	1.324	-0.04	1.72	2.278
66	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26590	1905	3	2	21.18	22.40	1.324	0.12	1.96	**2.596**
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26140	1860	3	2	21.13	22.40	1.340	0.06	1.85	2.478
	LTE Band 25	20M	QPSK	50	0	-	Top Side	0mm	Ant 6	DSI 3	26340	1880	3	2	21.21	22.40	1.315	0.04	1.79	2.354
	LTE Band 25	20M	QPSK	100	0	-	Top Side	0mm	Ant 6	DSI 3	26340	1880	1	1	21.22	22.40	1.312	0.02	1.64	2.152

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Sample	SIM	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)
						5000MHz												
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Front	0mm	Ant 7	Standalone	54	5270	1	1	15.41	17.00	1.442	100	1.000	0.06	0.134	0.193
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Back	0mm	Ant 7	Standalone	54	5270	1	1	15.41	17.00	1.442	100	1.000	0.06	0.093	0.134
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Left Side	0mm	Ant 7	Standalone	54	5270	1	1	15.41	17.00	1.442	100	1.000	0.02	0.006	0.009
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Right Side	0mm	Ant 7	Standalone	54	5270	1	1	15.41	17.00	1.442	100	1.000	0.06	0.014	0.020
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Top Side	0mm	Ant 7	Standalone	54	5270	1	1	15.41	17.00	1.442	100	1.000	0.06	0.384	0.554
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Top Side	0mm	Ant 7	Standalone	54	5270	2	1	15.41	17.00	1.442	100	1.000	0.03	0.352	0.508
	WLAN5.3GHz	802.11ac-VHT40 MCS0	Top Side	0mm	Ant 7	Standalone	54	5270	3	1	15.41	17.00	1.442	100	1.000	0.01	0.313	0.451
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 11	Standalone	54	5270	1	1	14.79	15.00	1.050	100	1.000	0.04	0.158	0.166
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 11	Standalone	54	5270	1	1	14.79	15.00	1.050	100	1.000	0.05	0.285	0.299
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 11	Standalone	54	5270	1	1	14.79	15.00	1.050	100	1.000	0.02	0.030	0.031
67	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 11	Standalone	54	5270	1	1	14.79	15.00	1.050	100	1.000	0.03	0.542	**0.569**
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 11	Standalone	54	5270	2	1	14.79	15.00	1.050	100	1.000	0.06	0.533	0.559
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 11	Standalone	54	5270	3	1	14.79	15.00	1.050	100	1.000	0.01	0.529	0.555
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 11	Standalone	54	5270	1	1	14.79	15.00	1.050	100	1.000	-0.16	0.083	0.087
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	Ant 7	Standalone	116	5580	1	1	15.42	17.00	1.439	100	1.000	-0.13	0.326	0.469
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	Ant 7	Standalone	116	5580	1	1	15.42	17.00	1.439	100	1.000	0.05	0.198	0.285
	WLAN5.5GHz	802.11a 6Mbps	Left Side	0mm	Ant 7	Standalone	116	5580	1	1	15.42	17.00	1.439	100	1.000	0.03	0.015	0.022
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 7	Standalone	116	5580	1	1	15.42	17.00	1.439	100	1.000	0.14	0.066	0.095
68	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Ant 7	Standalone	116	5580	1	1	15.42	17.00	1.439	100	1.000	0.08	0.693	**0.997**
	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Ant 7	Standalone	116	5580	2	1	15.42	17.00	1.439	100	1.000	0.01	0.598	0.860
	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Ant 7	Standalone	116	5580	3	1	15.42	17.00	1.439	100	1.000	-0.08	0.681	0.980
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 11	Standalone	138	5690	1	1	14.22	15.00	1.197	100	1.000	0.02	0.115	0.138
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 11	Standalone	138	5690	1	1	14.22	15.00	1.197	100	1.000	0.03	0.202	0.242
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 11	Standalone	138	5690	1	1	14.22	15.00	1.197	100	1.000	0.02	0.018	0.022
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 11	Standalone	138	5690	1	1	14.22	15.00	1.197	100	1.000	0.02	0.334	0.400
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 11	Standalone	138	5690	2	1	14.22	15.00	1.197	100	1.000	0.07	0.300	0.359
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 11	Standalone	138	5690	3	1	14.22	15.00	1.197	100	1.000	0.01	0.324	0.388
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 11	Standalone	138	5690	1	1	14.22	15.00	1.197	100	1.000	0.04	0.052	0.062

<NFC SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Freq. (MHz)	Sample	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	NFC	ASK	Front	0mm	13.56	1	-0.03	0.001	0.001
69	NFC	ASK	Back	0mm	13.56	1	0.19	0.026	**0.026**
	NFC	ASK	Back	0mm	13.56	2	-0.19	0.025	0.025
	NFC	ASK	Back	0mm	13.56	3	-0.19	0.023	0.023
	NFC	ASK	Left Side	0mm	13.56	1	-0.16	0.002	0.002
	NFC	ASK	Right Side	0mm	13.56	1	-0.14	0.001	0.001
	NFC	ASK	Top Side	0mm	13.56	1	0.17	0.001	0.001
	NFC	ASK	Bottom Side	0mm	13.56	1	0.12	0.001	0.001

16. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	WWAN + NFC				Yes
5.	WLAN5GHz+ Bluetooth	Yes	Yes	Yes	Yes
6.	NFC + Bluetooth				Yes
7.	NFC + WLAN2.4GHz				Yes
8.	NFC + WLAN5GHz				Yes
9.	WWAN + WLAN5GHz+ Bluetooth	Yes	Yes	Yes	Yes
10.	WWAN + WLAN5GHz+ Bluetooth + NFC				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. WWAN above includes 5G NR bands and and EN-DC combination.
3. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
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 one of 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). WIFI 6E has no hotspot function.
7. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
8. WLAN 2.4GHz and Bluetooth share the same antenna, and they cannot transmit simultaneously each other.
9. According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
10. According to the EUT characteristic, NFC and WLAN 2.4GHz/5GHz/Bluetooth can transmit simultaneously.
11. According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz can't transmit simultaneously.
12. The maximum SAR summation is calculated based on the same configuration and test position.
13. 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.
14. Per KDB 447498 D04, 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.

16.1 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

.

16.2 Head Exposure Conditions

FR1 Band	Exposure Position	1	2	3	4	5	6	7	1+2+3	1+4+5+6	1+4+5+7
		WWAN	WLAN2.4GHz Ant 8	WLAN2.4GHz Ant 11	WLAN5GHz Ant 7	WLAN5GHz Ant 11	Bluetooth Ant 8	Bluetooth Ant 11	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN Bands DSI5 for 5G+BT	Right Cheek	0.460	0.099	0.058	0.289	0.062	0.578	0.358		1.39	1.17
	Right Tilted	0.460	0.124	0.033	0.314	0.085	0.578	0.358		1.44	1.22
	Left Cheek	0.460	0.185	0.202	0.430	0.125	0.578	0.358		**1.59**	1.37
	Left Tilted	0.460	0.168	0.079	0.429	0.063	0.578	0.358		1.53	1.31
WWAN Bands DSI7 for 2.4G	Right Cheek	0.577	0.099	0.058	0.289	0.062	0.578	0.358	0.73		
	Right Tilted	0.577	0.124	0.033	0.314	0.085	0.578	0.358	0.73		
	Left Cheek	0.577	0.185	0.202	0.430	0.125	0.578	0.358	**0.96**		
	Left Tilted	0.577	0.168	0.079	0.429	0.063	0.578	0.358	0.82		

16.3 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3	1+4+5+6	1+4+5+7
		WWAN	WLAN2.4GHz Ant 8	WLAN2.4GHz Ant 11	WLAN5GHz Ant 7	WLAN5GHz Ant 11	Bluetooth Ant 8	Bluetooth Ant 11	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN All Bands	Front	0.248	0.060	0.095	0.127	0.111	0.190	0.136	0.40	0.68	0.62
	Back	0.377	0.097	0.158	0.140	0.296	0.190	0.136	0.63	1.00	0.95
	Left side	0.378	0.029	0.003	0.100	0.180	0.190	0.136	0.41	0.85	0.79
	Right side	0.145	0.003	0.184	0.087	0.312	0.190	0.136	0.33	0.73	0.68
	Top side	0.271	0.128	0.001	0.196	0.133	0.190	0.136	0.40	0.79	0.74
	Bottom side	0.635					0.190	0.136	0.64	0.83	0.77

16.4 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+3	1+4+5+6	1+4+5+7
		WWAN	WLAN2.4GHz Ant 8	WLAN2.4GHz Ant 11	WLAN5GHz Ant 7	WLAN5GHz Ant 11	Bluetooth Ant 8	Bluetooth Ant 11	Summed	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN Bands DSI9 for 5G+BT	Front	0.220	0.015	0.043	0.112	0.117	0.096	0.063		0.55	0.51
	Back	0.220	0.075	0.071	0.153	0.132	0.096	0.063		0.60	0.57
WWAN Bands DSI11 for 2.4G	Front	0.254	0.015	0.043	0.112	0.117	0.096	0.063	0.31		
	Back	0.254	0.075	0.071	0.153	0.132	0.096	0.063	0.40		

16.5 Product specific 10g SAR Exposure Conditions

WWAN Band	Exposure Position	1	5	6	7	1+5+6+7
		WWAN	NFC	WLAN5GHz Ant 7	WLAN5GHz Ant 11	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
WWAN All Bands	Front		0.001	0.469	0.166	0.64
	Back		0.026	0.285	0.299	0.61
	Left side		0.002	0.022	0.031	0.06
	Right side		0.001	0.095	0.569	0.67
	Top side	2.596	0.001	0.997	0.087	**3.68**
	Bottom side	2.228	0.001			2.23

Remark:
1. For Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

Test Engineer : Martin Li, Varus Wang, Ricky Gu, Light Wang, Damon Zhu

17. Uncertainty Assessment

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

18. References

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

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

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

[4] SPEAG DASY System Handbook

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

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

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

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

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

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

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

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

[13] IEC/IEEE 62209-1528:2020, “Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)”, Oct. 2020

[14] FCC KDB 447498 D04 v01, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Nov 2021

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

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022.5.28

System Check_Head_750MHz

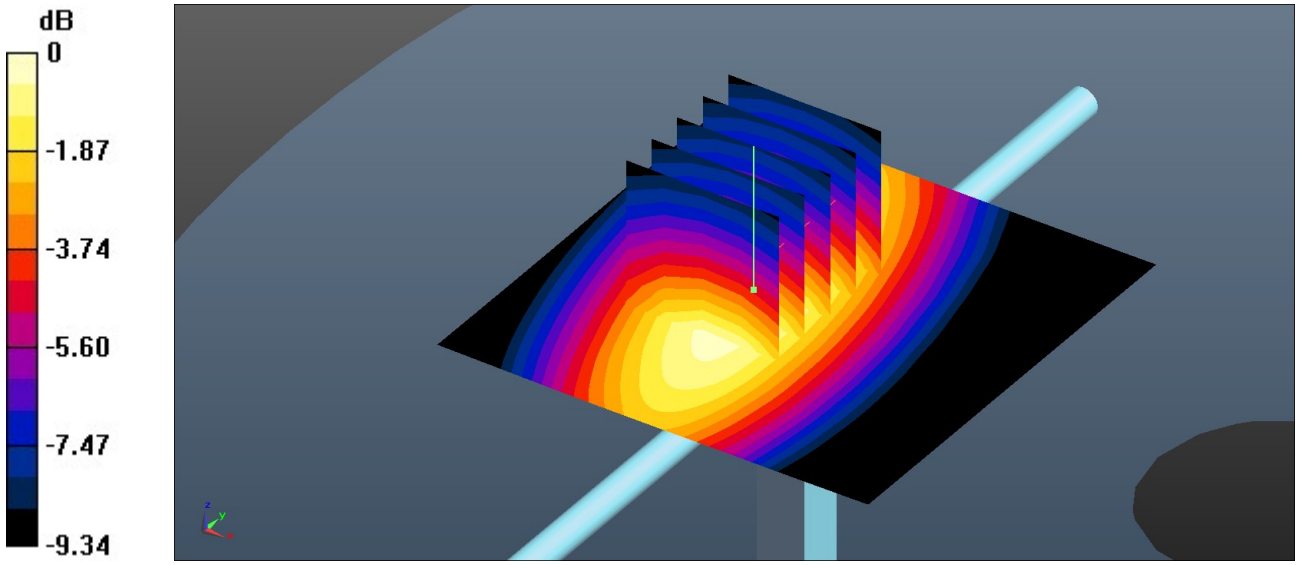
DUT: D750V3 - SN:1087

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 750 MHz; σ = 0.89 S/m; ε_r = 43.676; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.48, 6.48, 6.48); Calibrated: 2021.8.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2021.12.1
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.470 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.79 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.591 W/kg
SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.277 W/kg
Maximum value of SAR (measured) = 0.475 W/kg



0 dB = 0.475 W/kg = -3.23 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022.5.29

System Check_Head_835MHz

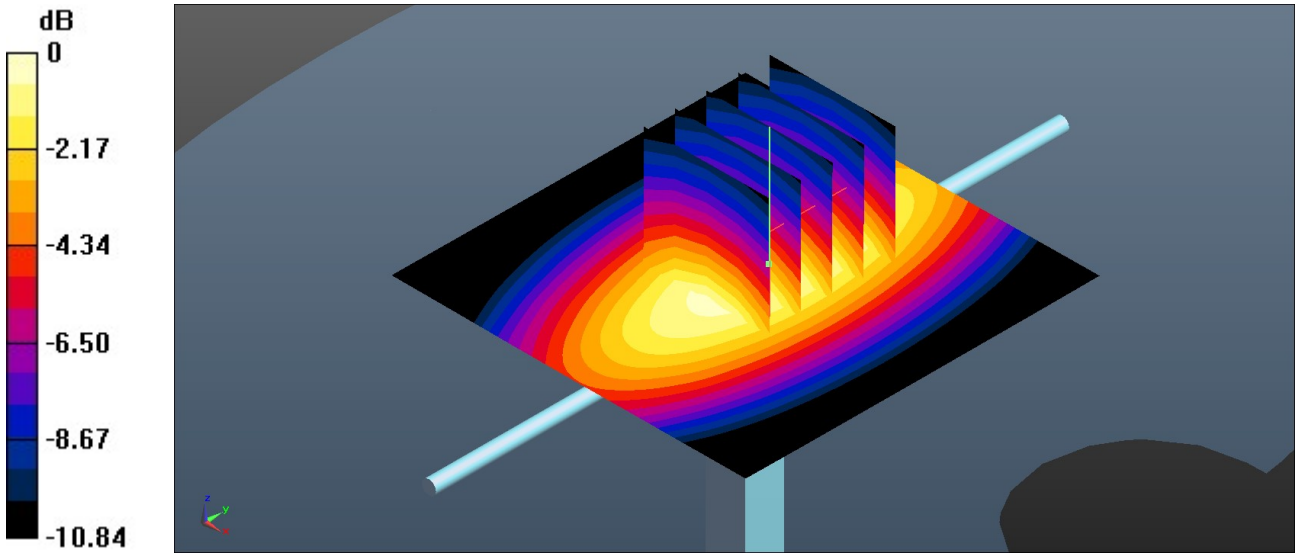
DUT: D835V2 - SN:4d162

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 835 MHz; σ = 0.927 S/m; ε_r = 43.456; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.23, 6.23, 6.23); Calibrated: 2021.8.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2021.12.1
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.559 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.54 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.720 W/kg
SAR(1 g) = 0.476 W/kg; SAR(10 g) = 0.310 W/kg
Maximum value of SAR (measured) = 0.559 W/kg



0 dB = 0.559 W/kg = -2.53 dBW/kg

System Check_Head_1750MHz

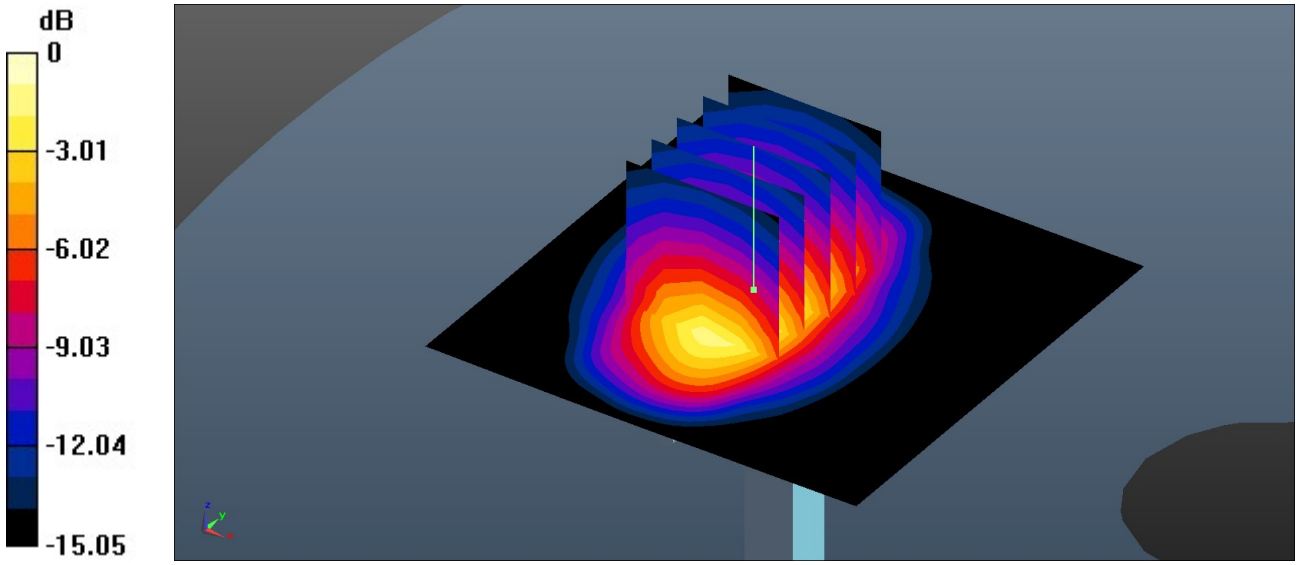
DUT: D1750V2 - SN:1090

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1750 MHz; σ = 1.368 S/m; ε_r = 41.091; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.52, 5.52, 5.52); Calibrated: 2021.8.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2021.12.1
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.38 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 35.62 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 3.15 W/kg
SAR(1 g) = 1.82 W/kg; SAR(10 g) = 0.990 W/kg
Maximum value of SAR (measured) = 2.28 W/kg



0 dB = 2.28 W/kg = 3.58 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022.5.31

System Check_Head_1900MHz

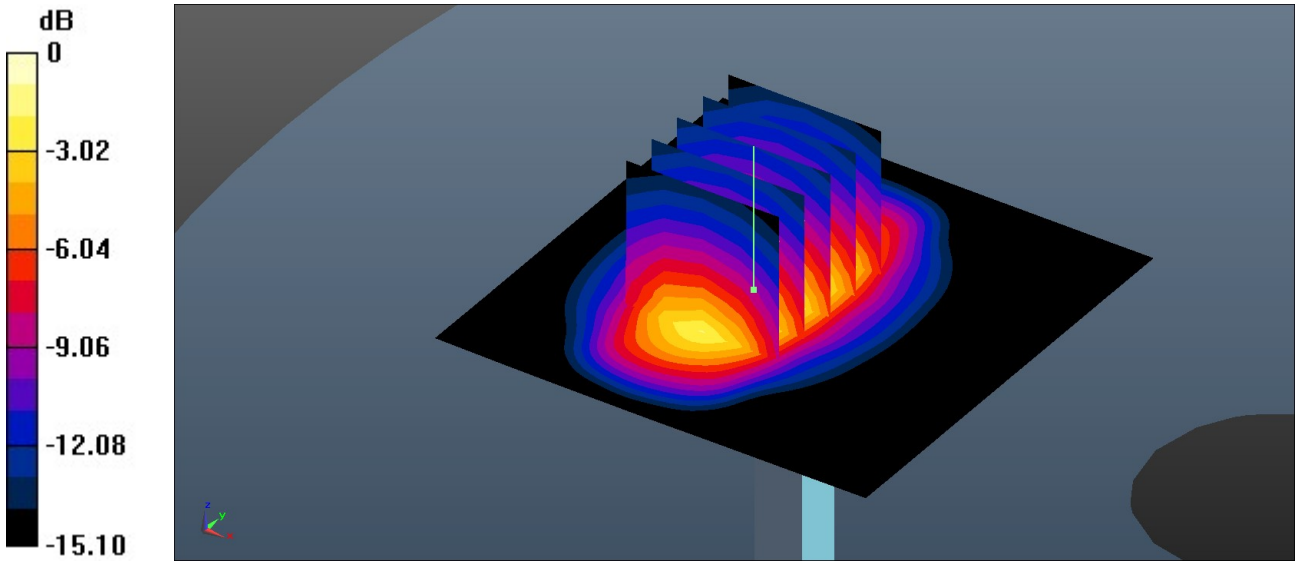
DUT: D1900V2 - SN:5d182

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.455 S/m; ε_r = 40.877; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.28, 5.28, 5.28); Calibrated: 2021.8.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2021.12.1
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.61 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 36.24 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 3.45 W/kg
SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.07 W/kg
Maximum value of SAR (measured) = 2.48 W/kg



0 dB = 2.48 W/kg = 3.94 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022.6.1

System Check_Head_2600MHz

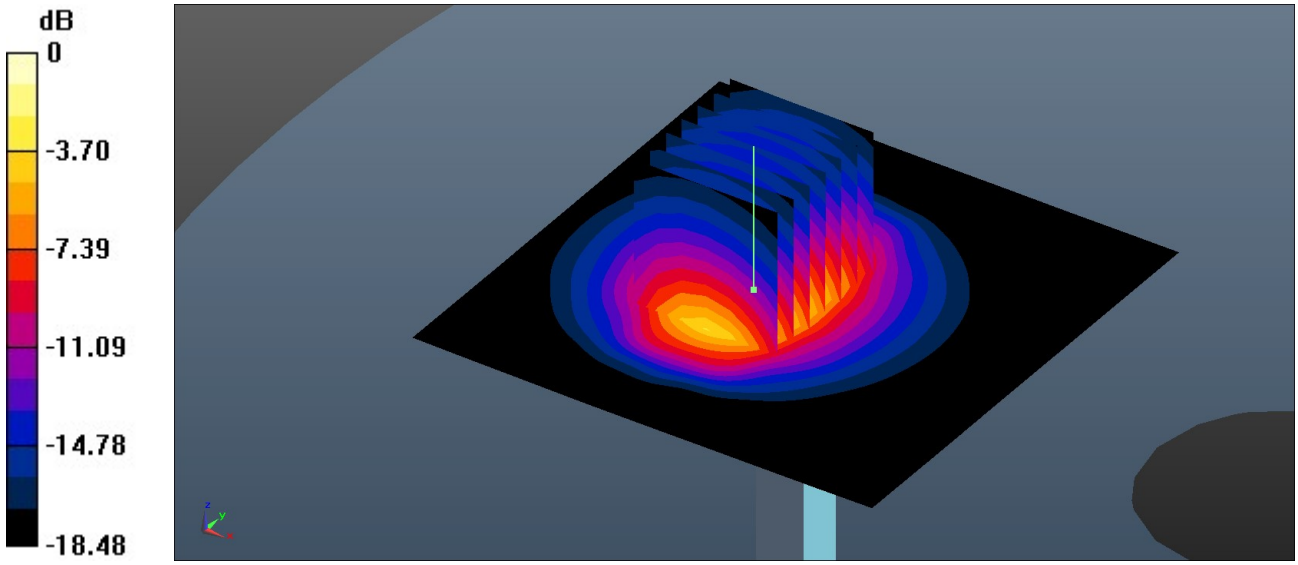
DUT: D2600V2 - SN:1061

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2600 MHz; σ = 1.982 S/m; ε_r = 39.931; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(4.47, 4.47, 4.47); Calibrated: 2021.8.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2021.12.1
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 3.77 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.98 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 5.59 W/kg
SAR(1 g) = 2.78 W/kg; SAR(10 g) = 1.29 W/kg
Maximum value of SAR (measured) = 3.67 W/kg



0 dB = 3.67 W/kg = 5.65 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022.6.2

System Check_Head_750MHz

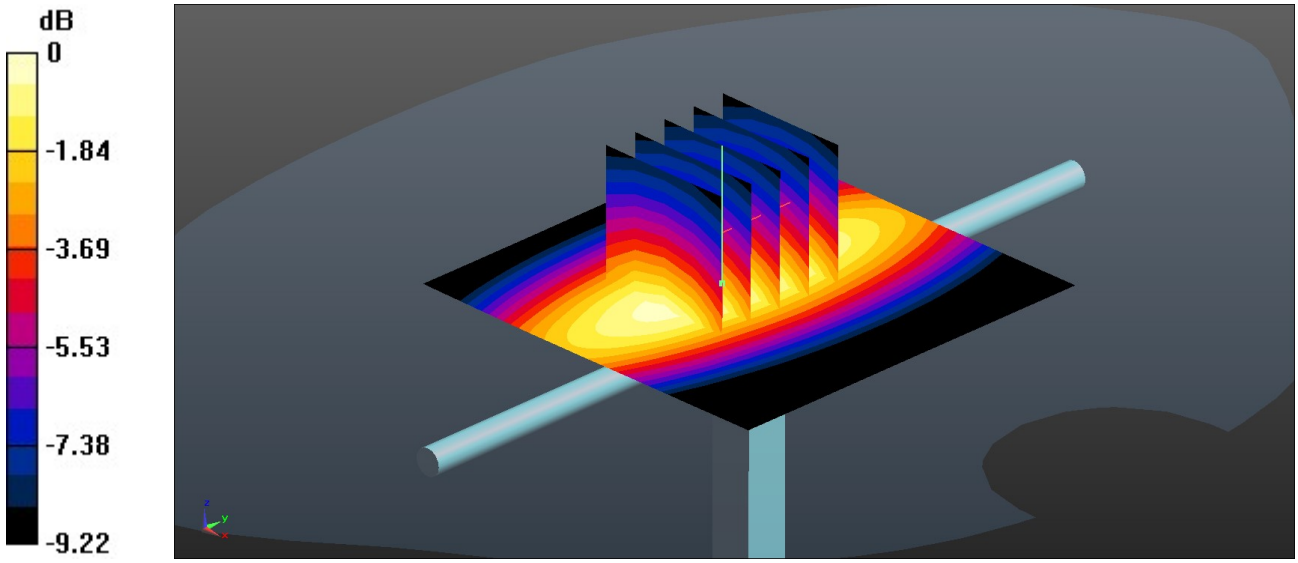
DUT: D750V3 - SN:1087

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 750 MHz; σ = 0.902 S/m; ε_r = 41.615; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.48, 6.48, 6.48); Calibrated: 2021.8.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2021.12.1
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.491 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.55 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.613 W/kg
SAR(1 g) = 0.426 W/kg; SAR(10 g) = 0.288 W/kg
Maximum value of SAR (measured) = 0.493 W/kg



0 dB = 0.493 W/kg = -3.07 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022.6.3

System Check_Head_835MHz

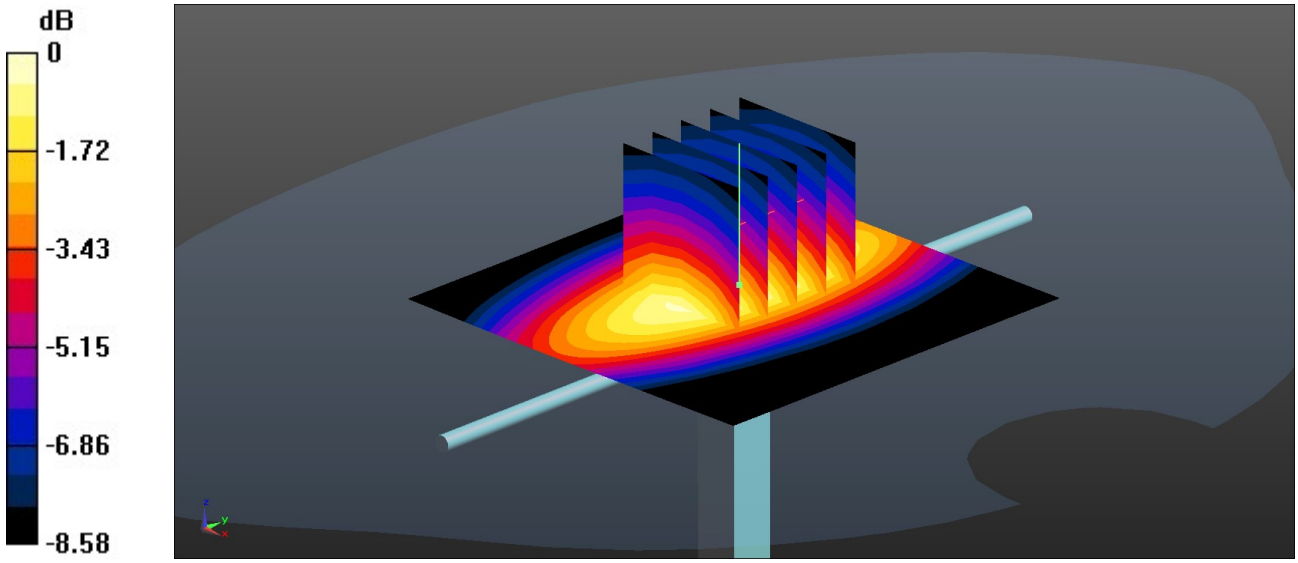
DUT: D835V2 - SN:4d162

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 835 MHz; σ = 0.93 S/m; ε_r = 41.363; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(6.23, 6.23, 6.23); Calibrated: 2021.8.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2021.12.1
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.185 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.99 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.227 W/kg
SAR(1 g) = 0.460 W/kg; SAR(10 g) = 0.310 W/kg
Maximum value of SAR (measured) = 0.185 W/kg



0 dB = 0.185 W/kg = -7.33 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2022.6.4

System Check_Head_1750MHz

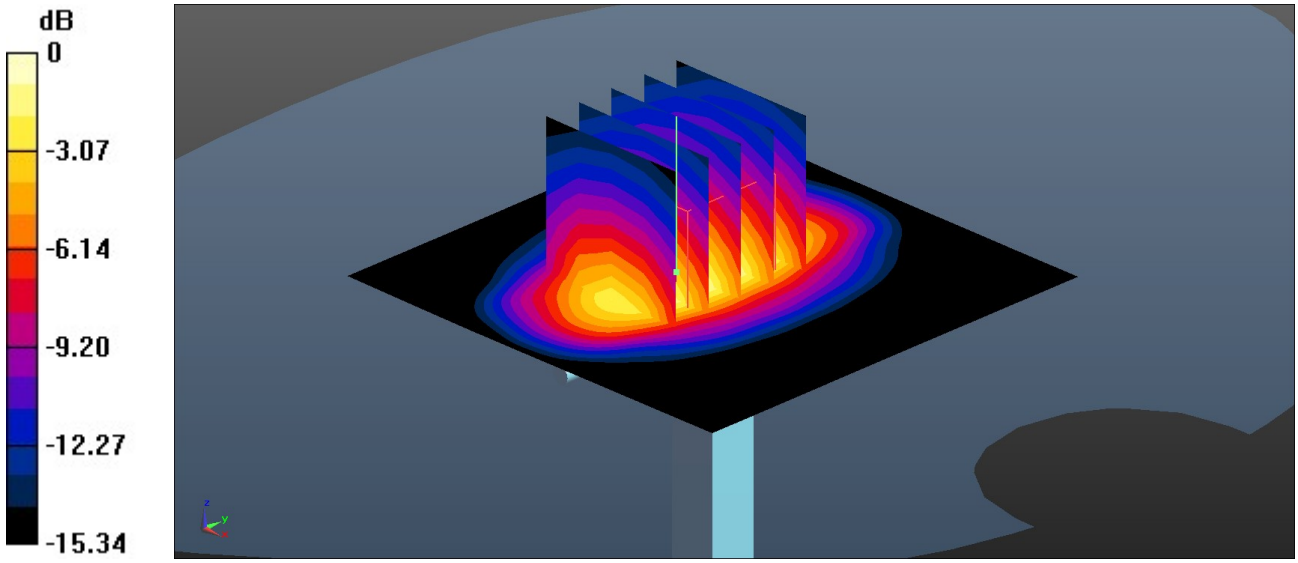
DUT: D1750V2 - SN:1090

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1750 MHz; σ = 1.352 S/m; ε_r = 40.005; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3279; ConvF(5.52, 5.52, 5.52); Calibrated: 2021.8.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1338; Calibrated: 2021.12.1
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.33 W/kg

Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 38.90 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.12 W/kg
SAR(1 g) = 1.81 W/kg; SAR(10 g) = 0.989 W/kg
Maximum value of SAR (measured) = 2.24 W/kg



0 dB = 2.24 W/kg = 3.50 dBW/kg