FCC SAR Test Report

APPLICANT	: Xiaomi Communications Co., Ltd.
EQUIPMENT	: Mobile Phone
BRAND NAME	: Xiaomi
MODEL NAME	: A301XM
FCC ID	: 2AFZZND5R
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.

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
FA351205-01	Rev. 01	Initial issue of report.	Jul. 04, 2023
FA351205-01	Rev. 02	1. Updated 5GNR n77 at ant1 and 5GNR n78 at ant7 relevant data at head exposure condition. 2. Updated LTE B42 at ant7 relevant data at hotspot exposure condition.	Jul. 19, 2023

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Xiaomi Communications Co., Ltd., Mobile Phone, A301XM,** 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	0.92	0.49	0.27	1.59
		GSM1900	0.84	1.03	0.31	
	WCDMA	WCDMA II	0.96	**1.09**	0.65	
		WCDMA IV	1.05	0.99	0.38	
		WCDMA V	0.93	0.51	0.26	
	LTE	LTE Band 2	0.82	0.93	0.72	
		LTE Band 4	0.23	0.90	0.56	
		LTE Band 7	1.06	0.69	0.67	
		LTE Band 12/17	0.80	0.29	0.18	
		LTE Band 13	0.86	0.49	0.31	
		LTE Band 26/5	0.98	0.57	0.32	
		LTE Band 41/38	1.07	0.67	0.36	
		LTE Band 42	1.05	0.93	**0.97**	
	5G NR	FR1 n41	1.02	0.65	0.56	
		FR1 n77	1.07	0.60	**0.97**	
		FR1 n78	**1.09**	0.81	0.89	
DTS	WLAN	WLAN2.4GHz	0.94	0.84	0.58	1.59
NII		WLAN5GHz	0.99	0.93	0.28	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.62	0.23	0.14	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	2.39	2.40
NII	WLAN	WLAN5GHz	**2.40**	2.40
Date of Testing:			2023/6/2 ~ 2023/7/17	

Remark:

1. This device supports LTE B5/B17/B38 and B26/B12/B41. Since the supported frequency span for LTE B5/B17/B38 falls completely within the supports frequency span for LTE 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 B26/B12/B41.

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

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

2. Administration Data

Sporton International 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.
	SAR02-KS	CN1257	314309

Applicant	
Company Name	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

Manufacturer	
Company Name	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

3. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Phone
Brand Name	Xiaomi
Model Name	A301XM
FCC ID	2AFZZND5R
IMEI Code	IMEI 1: 869272060005746 IMEI 2: 869272060005753
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 26: 814 MHz ~ 849 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3400 MHz ~ 3550 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 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 WLAN 6GHz U-NII-5: 5925 MHz ~ 6425 MHz WLAN 6GHz U-NII-6: 6425 MHz ~ 6525 MHz WLAN 6GHz U-NII-7: 6525 MHz ~ 6875 MHz WLAN 6GHz U-NII-8: 6875 MHz ~ 7125 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA/HSUPA DC-HSDPA HSPA+ (16QAM uplink is supported) LTE: QPSK, 16QAM, 64QAM, 256QAM(Downlink Only) 5G NR : CP-OFDM / DFT-s-OFDM, 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 VHT20/VHT40/VHT80/VHT160 WLAN 5GHz 802.11ax HE20/HE40/HE80/HE160 WLAN 6GHz 802.11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC: ASK
HW Version	P2.0
SW Version	MIUI 14
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). WLAN 6GHz has no hotspot function.
4. The 2.4GHz/5GHz WLAN can transmit in SISO and MIMO antenna mode.
5. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 33.
6. For dual SIM card mobile has single SIM slots + eSIM (electronic SIM) and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active).
7. The device implements Proximity sensors/receiver detect mechanism/hotspot trigger reduced power for the power management for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity). The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E. power table.
8. For WLAN/BT when transmit simultaneous with WWAN, power reduction will be activated to head, Body, hotspot and extremity exposure conditions.
9. For 5G NR bands, using FTM to perform SAR with default 100% transmission.
10. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
11. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
12. The device support DBS (Dual Band Simultaneous) function, when the device WLAN 2.4GHz and WLAN 5GHz or WLAN 6GHz transmit at the same time the module will limit different output power for simultaneous transmission compliance.
13. There are two samples, sample 1 is 12+256G memory & glass back cover, sample 2 is 12+256G memory & PU back cover. According to the difference, so chose sample 1 to perform full test.
14. This device has NFC function and the NFC SAR report will be separately submitted.
15. SAR and Power density test report for WLAN 6GHz U-NII-5/6/7/8 will be separately submitted. About co-located SAR with WWAN/Bluetooth always chose higher SAR of WLAN5GHz U-NII-1/2A/2C/3 and WLAN 6GHz U-NII-5/6/7/8.
16. This device supports 5GNR FR1 bands as following table, including SA mode only.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
SA	n41	TDD	30	20, 30, 40, 50, 60, 80, 90, 100
	n77	TDD	30	20, 30, 40, 50, 60, 80, 90, 100
	n78	TDD	30	20, 30, 40, 50, 60, 80, 90, 100

4.2 General LTE SAR Test and Reporting Considerations

<table>
<tr><th colspan="2">Summarized necessary items addressed in KDB 941225 D05 v02r05</th></tr>
<tr><td>FCC ID</td><td>2AFZZND5R</td></tr>
<tr><td>Equipment Name</td><td>Mobile 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 26: 814 MHz ~ 849 MHz
LTE Band 38: 2570 MHz ~ 2620 MHz
LTE Band 41: 2496 MHz ~ 2690 MHz
LTE Band 42: 3400 MHz ~ 3550 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 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM / 256QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Voice and Data</td></tr>
<tr><td>LTE Release Version</td><td>R16, Cat18</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 Proximity sensors/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 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 42								
	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	42115	3452.5	42140	3455	42165	3457.5	42190	3460
M	42590	3500	42590	3500	42590	3500	42590	3500
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540

<For LTE Overlap Bands Description>

1) LTE Bands BW

Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
LTE Band 12	Yes	Yes	Yes	Yes		
LTE Band 17			Yes	Yes		
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes

2) LTE Bands tune up

3) Band	Antenna	Default	DSI-0	DSI-4	DSI-1	DSI-3
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
LTE Band 12 Other PA	Ant 0	25.5	25.5	25.5	25.5	25.5
LTE Band 17 Other PA	Ant 0	25.5	25.5	25.5	25.5	25.5
LTE Band 5	Ant 0	25.5	25.5	25.5	25.5	25.5
LTE Band 26	Ant 0	25.5	25.5	25.5	25.5	25.5

Band	Antenna	Default	DSI-0	DSI-4	DSI-1	DSI-3
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
LTE Band 12 Other PA	Ant 1	25.5	25.5	25.5	25.5	25.5
LTE Band 17 Other PA	Ant 1	25.5	25.5	25.5	25.5	25.5
LTE Band 5	Ant 1	25.5	24.5	24.5	25.5	25.5
LTE Band 26	Ant 1	25.5	24.5	24.5	25.5	25.5

Band	Antenna	Default	DSI-0	DSI-4	DSI-1	DSI-3
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
LTE Band 38	Ant 2	25.5	25.5	24.0	24.0	25.5
LTE Band 41	Ant 2	25.5	25.5	23.5	23.5	25.5

Band	Antenna	Default	DSI-0	DSI-4	DSI-1	DSI-3
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
LTE Band 38	Ant 4	25.7	22.7	22.7	25.2	25.2
LTE Band 41	Ant 4	25.7	22.7	22.7	25.2	25.2

Note: For some bands/antennas at some exposure conditions which cannot be covered were fully tested for RF exposure compliance.

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
SCS	TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes

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

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

NR Band 77 SCS30KHz

	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	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840.00	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	664666	3969.99	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	662666	3939.99	662332	3934.98	662000	3930

NR Band 78 SCS30KHz

	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	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	652666	3789.99	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	650666	3759.99	650332	3754.98		

For <3450 MHz ~ 3550 MHz >

NR Band 77 SCS30KHz

	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	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634000	3510	633666	3504.99		

NR Band 78 SCS30KHz

	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	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632668	3490.02	633000	3495		
M	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634000	3510	633666	3504.99		

<For NR Overlap Bands Description>

1) NR Bands BW

Band	10 MHz	15 MHz	20 MHz	30 MHz	40 MHz	50 MHz	60 MHz	70 MHz	80 MHz	90 MHz	100 MHz
FR1 n77			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
FR1 n78			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes

2) NR Bands Tune up:

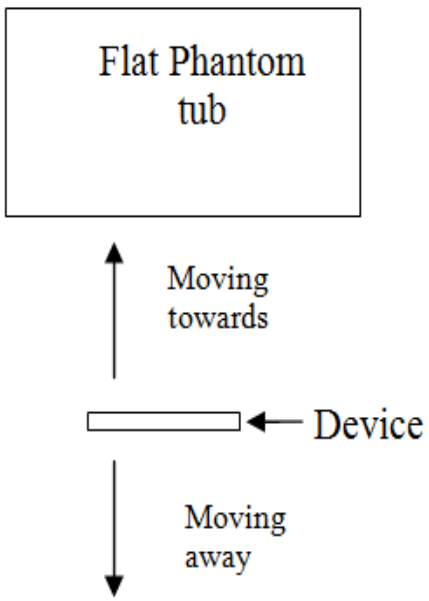
Band	Antenna	Default	DSI-0	DSI-4	DSI-1	DSI-3
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
FR1 n77	Ant 1	25.0	19.0	19.0	20.0	25.0
FR1 n78		25.0	18.50	18.50	19.50	25.0
FR1 n77	Ant 5	25.5	18.5	18.5	18.5	18.5
FR1 n78		25.5	18.0	18.0	19.5	19.5
FR1 n77	Ant 6	26.0	17.5	17.5	20.5	20.5
FR1 n78		26.0	18.0	18.0	20.0	20.0
FR1 n77	Ant 7	25.0	25.0	18.5	18.5	24.0
FR1 n78		25.0	21.0	18.5	18.5	23.5

Note: For some bands/antennas at some exposure conditions which cannot be covered were fully tested for RF exposure compliance.

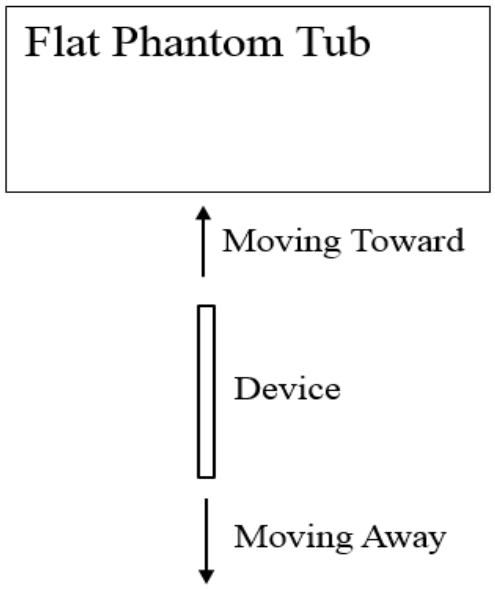
5. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed.
2. Proximity sensor triggering distance testing was performed according and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (3980MHz) and lowest (1750MHz) frequency was used for proximity sensor triggering testing
3. Capacitive proximity sensors placed coincident with antenna elements at the top and bottom ends of the phone are utilized to determine when the device comes in proximity of the user's body or finger or hand at the front or back or bottom or left or right or top side of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
4. The sensors can use to detect the proximity of the user's body or handheld states at the front or back or bottom or left or right or top side of the device use a detection threshold distance. When front/back/left/right/top/bottom sides of body or handheld condition is detected reduced power will be active. The trigger distance shown in the sections below.
5. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed.



Sensor detection test set-up, Front and Back sides



Sensor detection test set-up, Left Side, Right Side, Bottom Side and Top Side

<P-Sensor>

< Sensor for Ant2 >

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Right Side		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	16	16	16	16	16	16	16	16

< Sensor for Ant1/3/7 >

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	6	6	6	6	6	6	6

6. RF Exposure Limits

6.1 Uncontrolled Environment

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

6.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

7. Specific Absorption Rate (SAR)

7.1 Introduction

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

7.2 SAR Definition

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

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

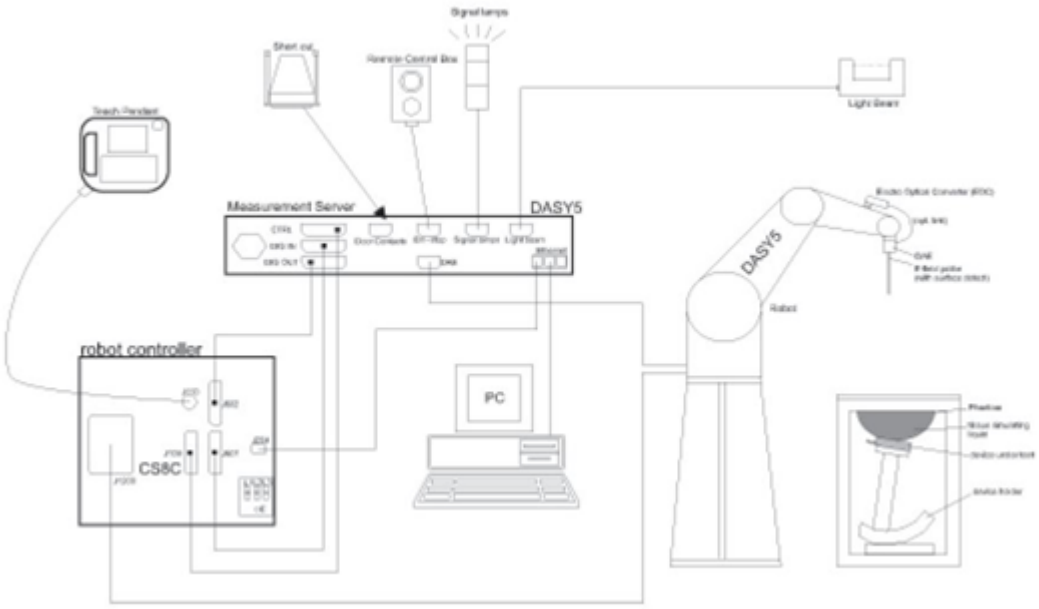
SAR is expressed in units of Watts per kilogram (W/kg)

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

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.

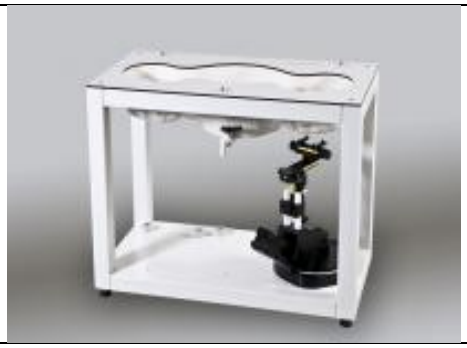
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

8.3 Phantom

<SAM Twin Phantom>

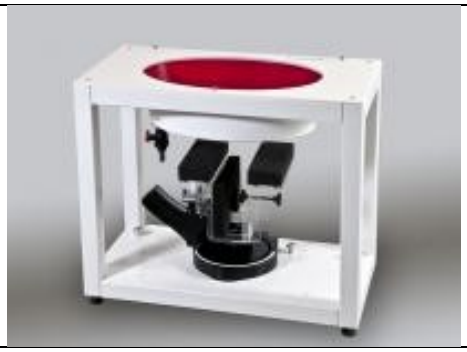
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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 or for evaluating transmitters operating at low frequencies. ELI 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	2025/2/23
SPEAG	835MHz System Validation Kit	D835V2	4d091	2022/8/19	2023/8/18
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2025/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2021/12/20	2024/12/19
SPEAG	2450MHz System Validation Kit	D2450V2	1040	2023/4/25	2024/4/24
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/24
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2020/11/25	2023/11/23
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2020/11/25	2023/11/23
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2023/3/9	2024/3/8
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2022/9/23	2023/9/22
SPEAG	Data Acquisition Electronics	DAE4	1303	2022/11/24	2023/11/23
SPEAG	Data Acquisition Electronics	DAE4	1650	2022/8/5	2023/8/4
SPEAG	Dosimetric E-Field Probe	ES3DV3	3293	2022/11/22	2023/11/21
SPEAG	Dosimetric E-Field Probe	EX3DV4	3857	2022/12/14	2023/12/13
SPEAG	SAM Twin Phantom	SAM Twin	TP-1842	NCR	NCR
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/7/20	2023/7/19
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2022/7/14	2023/7/13
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2023/7/5	2024/7/4
Agilent	ENA Series Network Analyzer	E5071C	MY46111157	2022/9/2	2023/9/1
SPEAG	Dielectric Probe Kit	DAK-3.5	1144	2022/8/15	2023/8/14
Anritsu	Vector Signal Generator	MG3710A	6201682672	2023/1/5	2024/1/4
Rohde & Schwarz	Power Meter	NRVD	102081	2022/7/14	2023/7/13
Rohde & Schwarz	Power Meter	NRVD	102081	2023/7/5	2024/7/4
R&S	BLUETOOTH TESTER	CBT	101246	2023/5/15	2024/5/14
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2022/10/12	2023/10/11
TES	DIGITAC THERMOMETER	1310	220305411	2023/1/8	2024/1/7
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2023/7/5	2024/7/4
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2023/7/5	2024/7/4
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
Agilent	Dual Directional Coupler	778D	20500	Note 1	
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	

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.

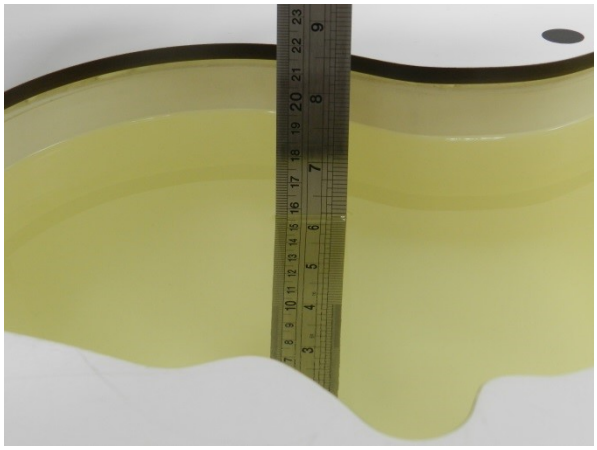


Fig 11.1 Photo of Liquid Height for Head SAR

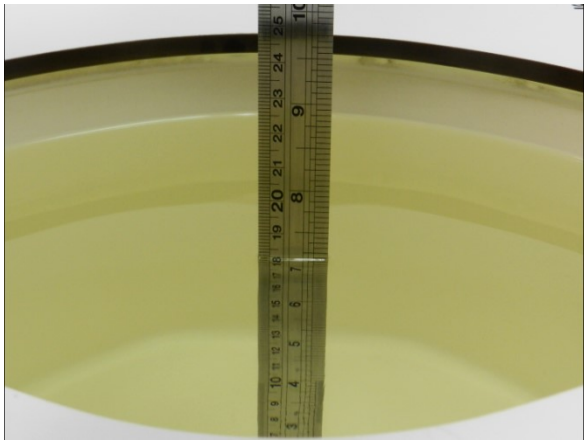


Fig 11.2 Photo of Liquid Height for Body SAR

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)	Head	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.7	0.889	42.269	0.89	41.90	-0.11	0.88	±5	2023/6/17
835	Head	22.8	0.912	41.937	0.90	41.50	1.33	1.05	±5	2023/6/17
1750	Head	22.6	1.315	40.214	1.37	40.10	-4.01	0.28	±5	2023/6/17
1900	Head	22.7	1.405	40.200	1.40	40.00	0.36	0.50	±5	2023/6/18
2600	Head	22.6	2.029	40.337	1.96	39.00	3.52	3.43	±5	2023/6/18
3500	Head	22.6	2.810	38.714	2.91	37.90	-3.44	2.15	±5	2023/6/18
3700	Head	22.7	2.988	38.363	3.12	37.70	-4.23	1.76	±5	2023/6/19
3900	Head	22.9	3.171	38.039	3.32	37.50	-4.49	1.44	±5	2023/6/19
750	Head	22.6	0.888	42.264	0.89	41.90	-0.22	0.87	±5	2023/6/2
835	Head	22.7	0.911	41.930	0.90	41.50	1.22	1.04	±5	2023/6/3
1750	Head	22.8	1.316	40.209	1.37	40.10	-3.94	0.27	±5	2023/6/4
1900	Head	22.8	1.406	40.194	1.40	40.00	0.43	0.49	±5	2023/6/5
2600	Head	22.6	2.030	40.346	1.96	39.00	3.57	3.45	±5	2023/6/6
3500	Head	22.8	2.879	38.500	2.91	37.90	-1.07	1.58	±5	2023/6/7
3700	Head	22.7	3.076	38.038	3.12	37.70	-1.41	0.90	±5	2023/6/8
3900	Head	22.8	3.279	37.617	3.32	37.50	-1.23	0.31	±5	2023/6/9
750	Head	22.6	0.906	42.762	0.89	41.90	1.80	2.06	±5	2023/6/10
835	Head	22.8	0.935	42.525	0.90	41.50	3.89	2.47	±5	2023/6/11
1750	Head	22.7	1.370	41.290	1.37	40.10	0.00	2.97	±5	2023/6/12
1900	Head	22.7	1.427	38.725	1.40	40.00	1.93	-3.19	±5	2023/6/13
2600	Head	22.6	1.931	39.054	1.96	39.00	-1.48	0.14	±5	2023/6/14
3500	Head	22.8	2.786	38.813	2.91	37.90	-4.26	2.41	±5	2023/6/15
3700	Head	22.7	2.995	38.682	3.12	37.70	-4.01	2.60	±5	2023/6/16
3900	Head	22.6	3.174	38.230	3.32	37.50	-4.40	1.95	±5	2023/6/17
2450	Head	22.6	1.744	39.268	1.80	39.20	-3.11	0.17	±5	2023/6/20
5250	Head	22.7	4.574	36.285	4.71	35.90	-2.89	1.07	±5	2023/6/20
5600	Head	22.6	4.951	35.733	5.07	35.50	-2.35	0.66	±5	2023/6/21
5750	Head	22.9	5.134	35.562	5.22	35.40	-1.65	0.46	±5	2023/6/21
3500	Head	22.8	2.810	38.714	2.91	37.90	-3.44	2.15	±5	2023/7/15
3900	Head	22.9	3.171	38.040	3.32	37.50	-4.49	1.44	±5	2023/7/17
3700	Head	22.8	2.988	38.363	3.12	37.70	-4.23	1.76	±5	2023/7/16

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)	Head	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 (%)
2023/6/17	750	Head	50	1087	3293	1303	0.399	8.58	7.98	-6.99
2023/6/17	835	Head	50	4d091	3293	1303	0.477	9.45	9.54	0.95
2023/6/17	1750	Head	50	1090	3293	1303	1.750	37.00	35	-5.41
2023/6/18	1900	Head	50	5d182	3293	1303	1.890	39.60	37.8	-4.55
2023/6/18	2600	Head	50	1061	3293	1303	2.970	56.60	59.4	4.95
2023/6/18	3500	Head	50	1037	3857	1303	3.170	68.00	63.4	-6.76
2023/6/19	3700	Head	50	1008	3857	1303	3.380	67.60	67.6	0.00
2023/6/19	3900	Head	50	1048	3857	1303	3.290	69.10	65.8	-4.78
2023/6/2	750	Head	50	1087	3293	1303	0.397	8.58	7.94	-7.46
2023/6/3	835	Head	50	4d091	3293	1303	0.464	9.45	9.28	-1.80
2023/6/4	1750	Head	50	1090	3293	1303	1.740	37.00	34.8	-5.95
2023/6/5	1900	Head	50	5d182	3293	1303	1.990	39.60	39.8	0.51
2023/6/6	2600	Head	50	1061	3293	1303	2.730	56.60	54.6	-3.53
2023/6/7	3500	Head	50	1037	3857	1303	3.200	68.00	64	-5.88
2023/6/8	3700	Head	50	1008	3857	1303	3.470	67.60	69.4	2.66
2023/6/9	3900	Head	50	1048	3857	1303	3.390	69.10	67.8	-1.88
2023/6/10	750	Head	50	1087	3293	1303	0.398	8.58	7.96	-7.23
2023/6/11	835	Head	50	4d091	3293	1303	0.478	9.45	9.56	1.16
2023/6/12	1750	Head	50	1090	3293	1303	1.810	37.00	36.2	-2.16
2023/6/13	1900	Head	50	5d182	3293	1303	2.030	39.60	40.6	2.53
2023/6/14	2600	Head	50	1061	3293	1303	2.700	56.60	54	-4.59
2023/6/15	3500	Head	50	1037	3857	1303	3.130	68.00	62.6	-7.94
2023/6/16	3700	Head	50	1008	3857	1303	3.390	67.60	67.8	0.30
2023/6/17	3900	Head	50	1048	3857	1303	3.270	69.10	65.4	-5.35
2023/6/20	2450	Head	50	1040	3293	1303	2.570	52.70	51.4	-2.47
2023/6/20	5250	Head	50	1113	3857	1303	3.820	81.50	76.4	-6.26
2023/6/21	5600	Head	50	1113	3857	1303	3.950	82.60	79	-4.36
2023/6/21	5750	Head	50	1113	3857	1303	3.780	80.80	75.6	-6.44
2023/7/15	3500	Head	50	1037	3857	1650	3.320	68.00	66.4	-2.35
2023/7/17	3900	Head	50	1048	3857	1650	3.410	69.10	68.2	-1.30
2023/7/16	3700	Head	50	1008	3857	1650	3.550	67.60	71	5.03

<10g SAR>

Date	Frequency (MHz)	Head	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 (%)
2023/6/17	750	Head	50	1087	3293	1303	0.263	5.65	5.26	-6.90
2023/6/17	835	Head	50	4d091	3293	1303	0.311	6.22	6.22	0.00
2023/6/17	1750	Head	50	1090	3293	1303	0.932	19.50	18.64	-4.41
2023/6/18	1900	Head	50	5d182	3293	1303	0.977	20.20	19.54	-3.27
2023/6/18	2600	Head	50	1061	3293	1303	1.340	25.10	26.8	6.77
2023/6/18	3500	Head	50	1037	3857	1303	1.220	25.40	24.4	-3.94
2023/6/19	3700	Head	50	1008	3857	1303	1.250	24.40	25	2.46
2023/6/19	3900	Head	50	1048	3857	1303	1.160	24.10	23.2	-3.73
2023/6/2	750	Head	50	1087	3293	1303	0.272	5.65	5.44	-3.72
2023/6/3	835	Head	50	4d091	3293	1303	0.304	6.22	6.08	-2.25
2023/6/4	1750	Head	50	1090	3293	1303	0.926	19.50	18.52	-5.03
2023/6/5	1900	Head	50	5d182	3293	1303	1.030	20.20	20.6	1.98
2023/6/6	2600	Head	50	1061	3293	1303	1.240	25.10	24.8	-1.20
2023/6/7	3500	Head	50	1037	3857	1303	1.230	25.40	24.6	-3.15
2023/6/8	3700	Head	50	1008	3857	1303	1.290	24.40	25.8	5.74
2023/6/9	3900	Head	50	1048	3857	1303	1.200	24.10	24	-0.41
2023/6/10	750	Head	50	1087	3293	1303	0.262	5.65	5.24	-7.26
2023/6/11	835	Head	50	4d091	3293	1303	0.313	6.22	6.26	0.64
2023/6/12	1750	Head	50	1090	3293	1303	0.966	19.50	19.32	-0.92
2023/6/13	1900	Head	50	5d182	3293	1303	1.050	20.20	21	3.96
2023/6/14	2600	Head	50	1061	3293	1303	1.180	25.10	23.6	-5.98
2023/6/15	3500	Head	50	1037	3857	1303	1.200	25.40	24	-5.51
2023/6/16	3700	Head	50	1008	3857	1303	1.260	24.40	25.2	3.28
2023/6/17	3900	Head	50	1048	3857	1303	1.160	24.10	23.2	-3.73
2023/6/20	2450	Head	50	1040	3293	1303	1.210	24.60	24.2	-1.63
2023/6/20	5250	Head	50	1113	3857	1303	1.120	23.30	22.4	-3.86
2023/6/21	5600	Head	50	1113	3857	1303	1.100	23.70	22	-7.17
2023/6/21	5750	Head	50	1113	3857	1303	1.090	23.00	21.8	-5.22
2023/7/15	3500	Head	50	1037	3857	1650	1.280	25.40	25.6	0.79
2023/7/17	3900	Head	50	1048	3857	1650	1.210	24.10	24.2	0.41
2023/7/16	3700	Head	50	1008	3857	1650	1.220	24.40	24.4	0.00

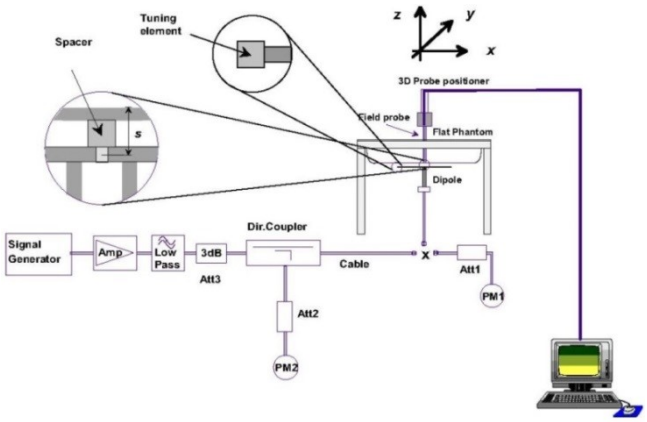


Fig 11.3.1 System Performance Check Setup

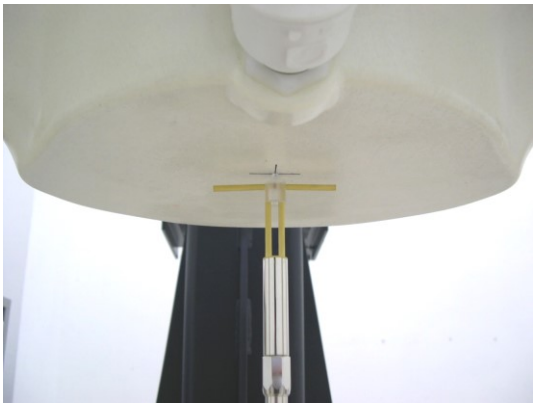


Fig 11.3.2 Setup Photo

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.

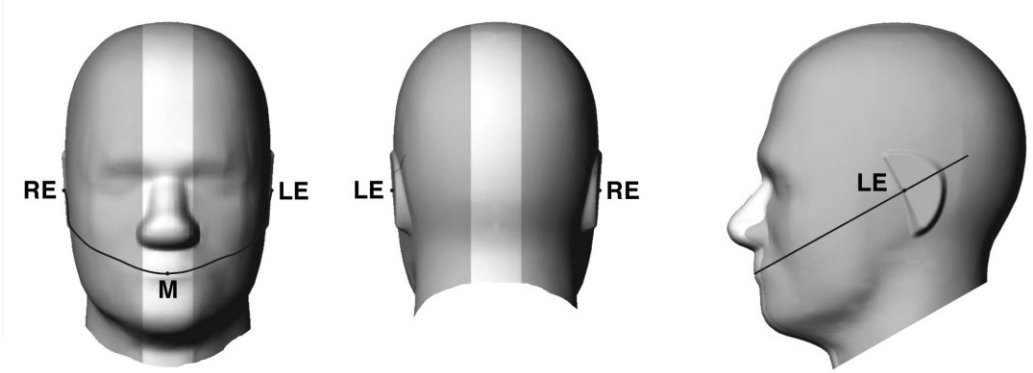


Fig 12.1.1 Front, back, and side views of SAM twin phantom

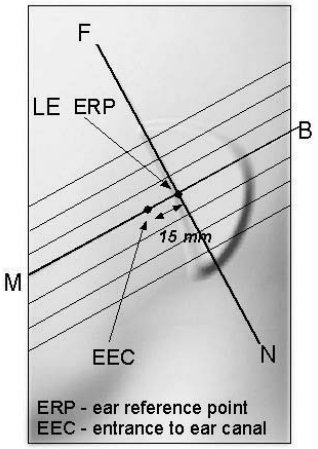


Fig 12.1.2 Close-up side view of phantom showing the ear region.

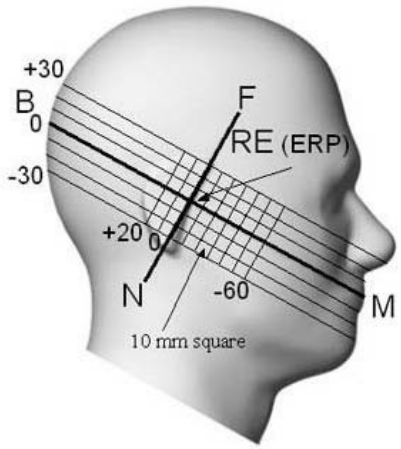


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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.

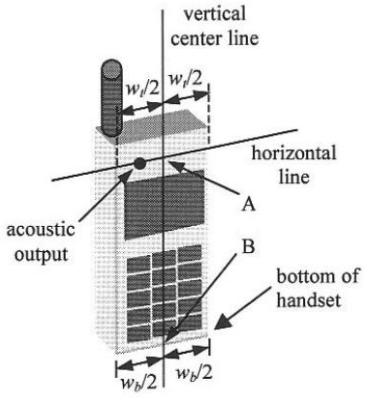


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

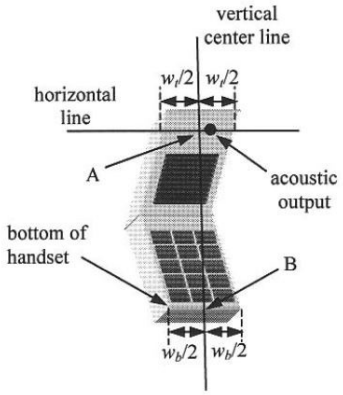


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

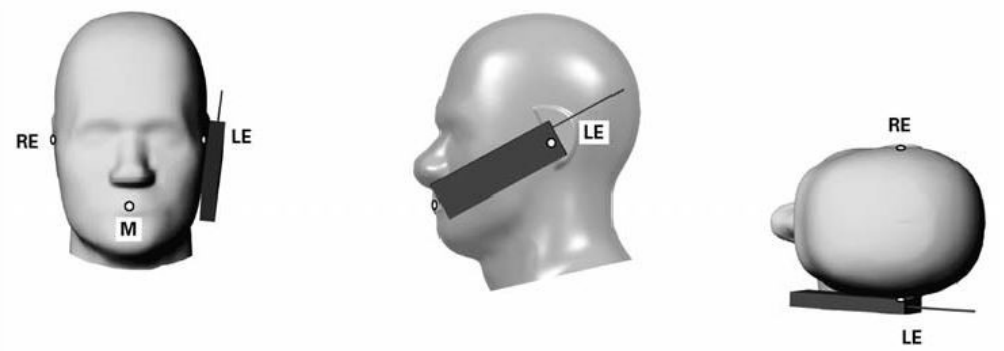


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

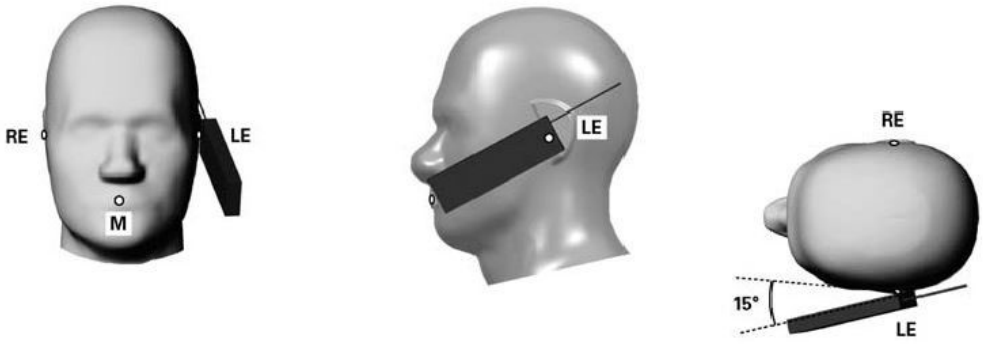


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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

Accessories for body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. 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.

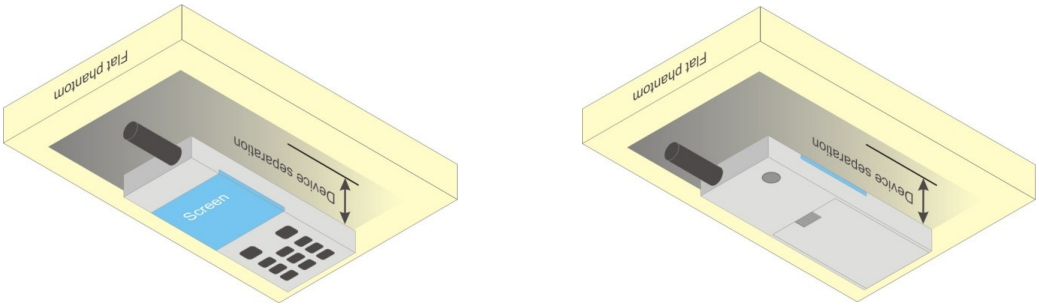


Fig 12.4 Body Worn Position

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 can provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets and support voice calls next to the ear, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

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

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

12.6 Wireless Router

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

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

13. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

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

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

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

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

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

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

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

Setup Configuration

HSUPA Setup Configuration:

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

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

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

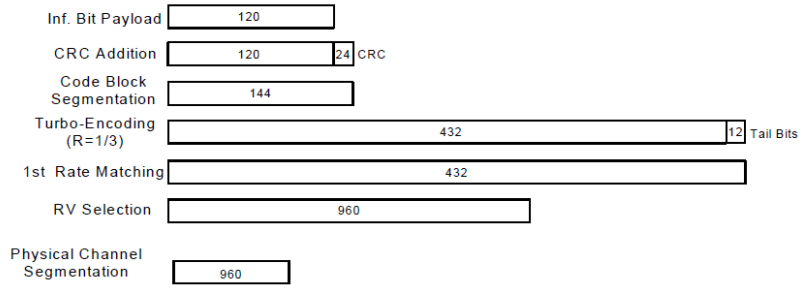


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

HSPA+ 3GPP release 7 (uplink category 7) 16QAM, Setup Configuration:

1. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
2. The RF path losses were compensated into the measurements.
3. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2E:HSPA+:UL with 16QAM
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.4, quoted from the TS 34.121-1 s5.2E
   iii. Set Channel Parms
   iv. Set Cell Power = -86 dBm
   v. Set Channel Type = HSPA
   vi. Set UE Target Power =21 dBm
   vii. Power Ctrl Mode= All Up Bits
   viii. Set Manual Uplink DPCH Bc/Bd = Manual
   ix. Set Manual Uplink DPCH Bc and Bd=15,15(for 34.121-1 v8.10.0 table C11.1.4 sub-test 1)
   x. Set HSPA Conn DL Channel Levels
   xi. Set HS-SCCH Configs
   xii. Set RB Test Mode Setup
   xiii. Set Common HSUPA Parameters
   xiv. Set Serving Grant
   xv. Confirm that E-TFCI is equal to the target E-TFCI of 105 for sub-test 1, and other subtest's E-TFCI
4. The transmitted maximum output power was recorded.

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

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	$\beta_{ed}1$: 30/15 $\beta_{ed}2$: 30/15	$\beta_{ed}3$: 24/15 $\beta_{ed}4$: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.

Setup Configuration

<WCDMA Conducted Power>

General Note:

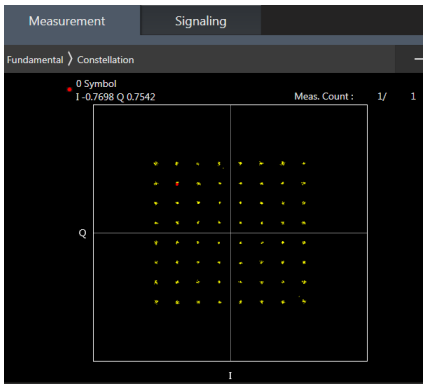
1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA /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

<LTE Conducted Power>

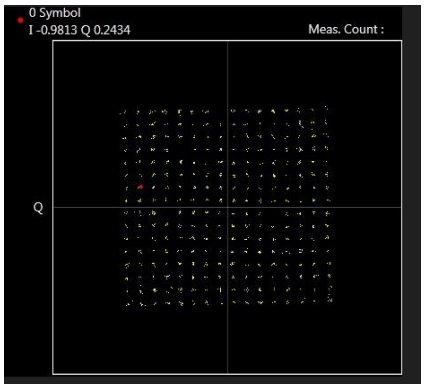
General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/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 B5/B17/B38 was covered by B26/B12/B4; 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 May 2017 TCB workshop, for 16QAM and 64QAM, 256QAM 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 256QAM, 64QAM and 16QAM signal modulation are correct.

16QAM



64QAM



256QAM

<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.

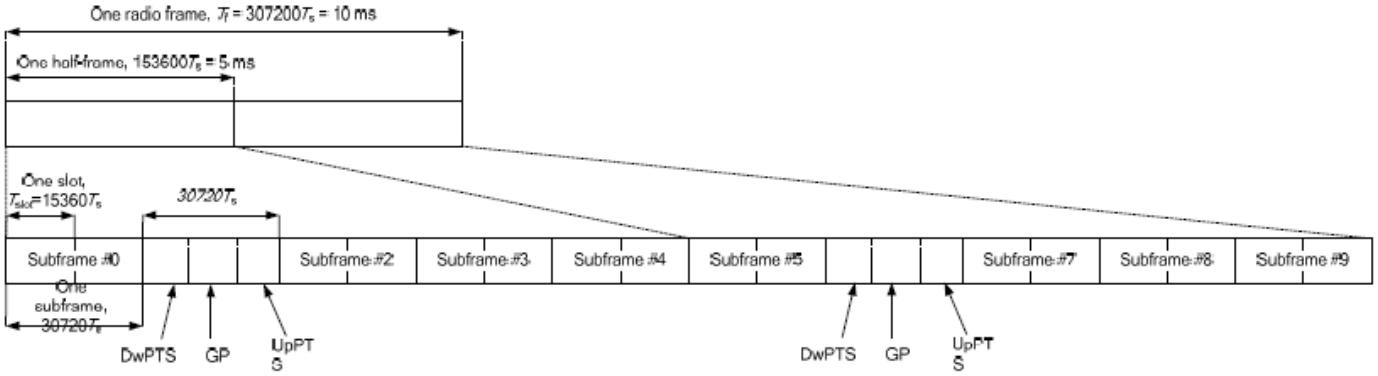


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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. All permutations exist. No restrictions on Pcell & Scell combinations.
4. 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	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset	Number	Combination	4X4 MIMO	Covered by Measurement Superset
1	CA_41C	41C	3CC2	1	CA_41A-42C	41A-42C		1	CA_41C-42C	41C-42C	
2	CA_41A-42A	41A-42A		2	CA_41C-42A	41C-42A					
3	CA_42C	42C	3CC1								

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

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

v. For 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 Band 41/42 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 41/42

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	Antenna Tx
CA_41C	Ant1/2/3/4
CA_42C	Ant1/2/3/4

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B41/42 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 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 Nov. 2017 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 n41/n77/n78 is SA mode only.
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. For 5G NR bands, using FTM to perform SAR with default 100% transmission.
4. For 5GNR, the simultaneous transmission analysis is used standalone SAR at total power level to show compliance.
5. 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.
6. 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		

<WLAN Conducted Power>

General Note:

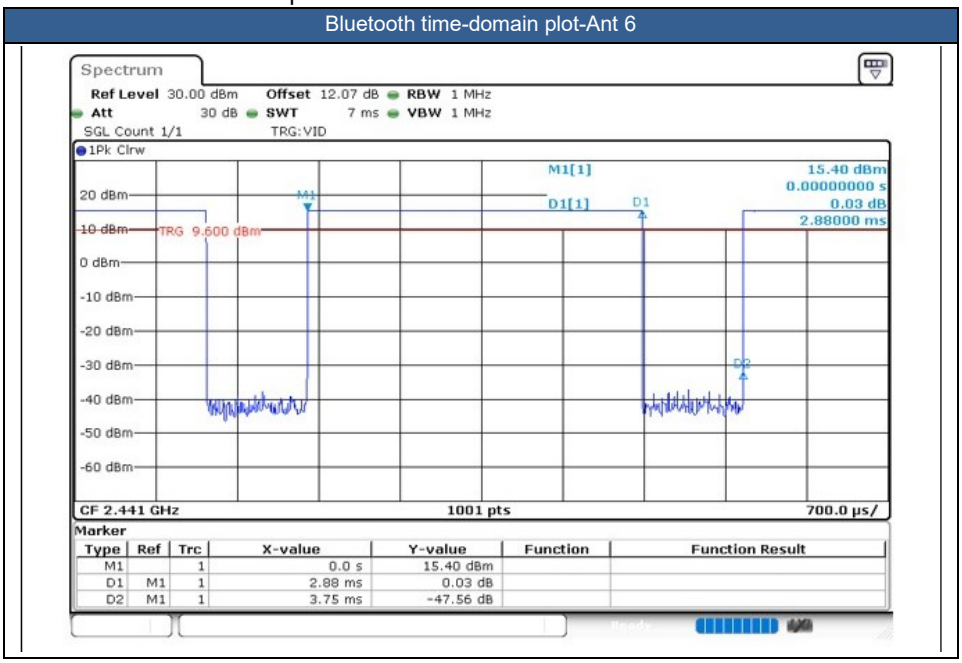
1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) 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 in the initial test configuration. Additional output power measurements were not necessary.
2. 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.
3. 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).
4. 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.
5. 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.
6. 802.11 ax supports both full tone size mode and partial tone size mode, after verification on partial tone size mode that partial size tone mode power will not be higher than full tone size mode, therefore, full tone mode power was chosen to be measured in this report.
7. SISO and MIMO all supported by WLAN2.4GHz/WLAN5GHz, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, so only chose MIMO mode to perform SAR testing.
8. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.

<2.4GHz Bluetooth>

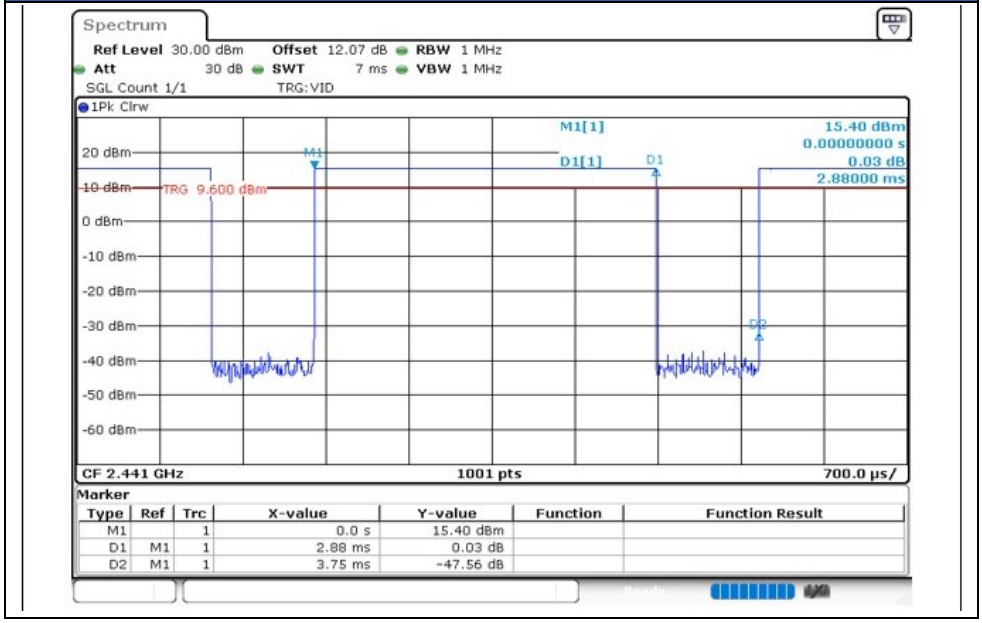
General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 76.8% for ANT6, 76.8% for ANT17 as following figure, Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation.

Bluetooth time-domain plot-Ant 6



Bluetooth time-domain plot-Ant 17



14. Antenna Location

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

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For SAR testing of Bluetooth signal with 83.3% theoretical duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle) *83.3%".
   d. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   e. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   f. 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 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The device implements Proximity sensors/receiver detect mechanism/hotspot trigger reduced power for the power management for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity). The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E. power table.
5. For WLAN/BT when transmit simultaneous with WWAN, power reduction will be activated to head, Body, hotspot and extremity exposure conditions.
6. For 5G NR bands, using FTM to perform SAR with default 100% transmission.
7. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power (for handheld on state, the maximum full power means reduced power), including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
   a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of WCDMA II, 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.
8. According to Nov. 2017 TCB workshop, when the reported 1gSAR for UL CA configuration is <1.2 W/kg, UL CA 1gSAR is not required for all required test channels (PCC based).

UL duty cycle detection mechanism specification:

The device supports the UL duty cycle detection mechanism for LTE TDD B38/41 & 5GNR n41/77/78 (including FR1 SA and FR1 ENDC).The mechanism is that the output power (maximum burst power) is different at different UL duty cycle levels, but maintaining the maximum average power is matched to the SAR is compliant. When at low duty cycle, the transmit power is compensated but does not exceed the upper range defined by the 3GPP standard, thus improving the OTA performance

Note:

1. SAR is not required because the average output power is not higher than the Max UL duty cycle configuration.
2. For each band, the SAR evaluation uses the highest Time-average power configuration.
3. The detail results please referred to KDB inquiry with the FCC and Duty cycle_OD.

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 / HSPA+ is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA/ HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA/ HSPA+ .

LTE 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 B5/B17/B38 was covered by LTE 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 n41/n77 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. The 2.4GHz/5GHz WLAN can transmit in SISO and MIMO antenna mode.
7. SISO and MIMO all supported by WLAN2.4GHz/WLAN5GHz, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, so only chose MIMO mode to perform SAR testing.
8. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.
9. For determination of the scaling factor for report SAR of MIMO mode, if the hot spots are separated the scaling factors are individually determined from each transmit chain. Further simplification chose the worse SAR value and the worst scaling factor from each transmit chain perform reported SAR calculation conservatively. If the hot spots are not spatially separated, the scaling factor is determined from the worst number of each transmit chain.

DSI status description：

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

Exposure Condition	DSI	Trigger conditions
Head SAR	DSI 0	Earpiece On
Hotspot SAR	DSI 4	Hotspot On
Body worn/ Extremity SAR	DSI 3	Sensor Off/ receiver off
Body worn/ Extremity SAR	DSI 1	Sensor On

15.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
750MHz																				
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 0	23095	707.5	24.56	25.50	1.242	-	-	0.03	0.086	0.107
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 0	23095	707.5	23.74	24.50	1.191	-	-	0.17	0.071	0.085
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 0	23095	707.5	24.56	25.50	1.242	-	-	0.02	0.046	0.057
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 0	23095	707.5	23.74	24.50	1.191	-	-	0.03	0.000	0.000
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 0	23095	707.5	24.56	25.50	1.242	-	-	0.11	0.101	0.125
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 0	23095	707.5	23.74	24.50	1.191	-	-	0.1	0.082	0.098
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 0	23095	707.5	24.56	25.50	1.242	-	-	0.03	0.047	0.058
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 0	23095	707.5	23.74	24.50	1.191	-	-	-0.03	0.000	0.000
01	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	23095	707.5	23.74	25.50	1.500	-	-	-0.05	0.534	**0.801**
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 0	23095	707.5	22.76	24.50	1.493	-	-	0.05	0.446	0.666
	LTE Band 12_Other_PA	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	23095	707.5	22.72	24.50	1.507	-	-	-0.15	0.430	0.648
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	23095	707.5	23.74	25.50	1.500	-	-	-0.13	0.285	0.427
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 0	23095	707.5	22.76	24.50	1.493	-	-	-0.15	0.231	0.345
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 0	23095	707.5	23.74	25.50	1.500	-	-	0.14	0.191	0.286
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 0	23095	707.5	22.76	24.50	1.493	-	-	-0.19	0.150	0.224
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 0	23095	707.5	23.74	25.50	1.500	-	-	-0.06	0.150	0.225
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 0	23095	707.5	22.76	24.50	1.493	-	-	0.05	0.119	0.178
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 0	23230	782	24.64	25.50	1.219	-	-	-0.01	0.154	0.188
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 0	23230	782	23.98	24.50	1.127	-	-	-0.05	0.121	0.136
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 0	23230	782	24.64	25.50	1.219	-	-	0.07	0.101	0.123
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 0	23230	782	23.98	24.50	1.127	-	-	-0.14	0.078	0.088
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 0	23230	782	24.64	25.50	1.219	-	-	0.16	0.167	0.204
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 0	23230	782	23.98	24.50	1.127	-	-	-0.02	0.130	0.147
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 0	23230	782	24.64	25.50	1.219	-	-	0.03	0.098	0.119
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 0	23230	782	23.98	24.50	1.127	-	-	-0.14	0.072	0.081
02	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	23230	782	22.97	24.50	1.422	-	-	-0.03	0.607	**0.863**
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 0	23230	782	22.90	24.50	1.445	-	-	-0.14	0.478	0.691
	LTE Band 13	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	23230	782	22.87	24.50	1.455	-	-	-0.03	0.459	0.668
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	23230	782	22.97	24.50	1.422	-	-	-0.12	0.411	0.585
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 0	23230	782	22.90	24.50	1.445	-	-	-0.16	0.328	0.474
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 0	23230	782	22.97	24.50	1.422	-	-	0.15	0.299	0.425
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 0	23230	782	22.90	24.50	1.445	-	-	-0.18	0.239	0.345
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 0	23230	782	22.97	24.50	1.422	-	-	-0.16	0.255	0.363
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 0	23230	782	22.90	24.50	1.445	-	-	0.07	0.200	0.289
835MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 0	189	836.4	26.95	28.00	1.274	-	-	0.07	0.156	0.199
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	DSI 0	189	836.4	26.95	28.00	1.274	-	-	0.17	0.099	0.126
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	DSI 0	189	836.4	26.95	28.00	1.274	-	-	-0.1	0.188	0.239
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	DSI 0	189	836.4	26.95	28.00	1.274	-	-	0.06	0.093	0.118
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 0	189	836.4	24.28	26.00	1.486	-	-	0.06	0.561	0.834
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 0	128	824.2	24.22	26.00	1.507	-	-	0.06	0.516	0.777
03	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 0	251	848.8	24.15	26.00	1.531	-	-	-0.03	0.601	**0.920**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 0	189	836.4	24.28	26.00	1.486	-	-	0.1	0.568	0.844
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 0	128	824.2	24.22	26.00	1.507	-	-	-0.09	0.479	0.722
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 0	251	848.8	24.15	26.00	1.531	-	-	-0.08	0.555	0.850
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 1	DSI 0	189	836.4	24.28	26.00	1.486	-	-	-0.05	0.328	0.487
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 1	DSI 0	189	836.4	24.28	26.00	1.486	-	-	-0.16	0.299	0.444
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 0	4182	836.4	24.16	25.00	1.213	-	-	0.12	0.197	0.239
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 0	4182	836.4	24.16	25.00	1.213	-	-	0.02	0.111	0.135
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 0	4182	836.4	24.16	25.00	1.213	-	-	0.11	0.209	0.254

	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 0	4182	836.4	24.16	25.00	1.213	-	-	-0.16	0.102	0.124
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	4182	836.4	21.72	23.50	1.507	-	-	-0.12	0.542	0.817
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	4132	826.4	21.62	23.50	1.542	-	-	-0.08	0.437	0.674
04	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	4233	846.6	21.63	23.50	1.538	-	-	0.03	0.603	**0.928**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 0	4182	836.4	21.72	23.50	1.507	-	-	-0.09	0.465	0.701
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 0	4132	826.4	21.62	23.50	1.542	-	-	-0.05	0.368	0.567
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 0	4233	846.6	21.63	23.50	1.538	-	-	-0.04	0.523	0.804
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 0	4182	836.4	21.72	23.50	1.507	-	-	0.08	0.267	0.402
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 0	4182	836.4	21.72	23.50	1.507	-	-	-0.01	0.248	0.374
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 0	26865	831.5	24.58	25.50	1.236	-	-	0.01	0.207	0.256
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	DSI 0	26865	831.5	23.63	24.50	1.222	-	-	0.02	0.162	0.198
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 0	26865	831.5	24.58	25.50	1.236	-	-	0.05	0.122	0.151
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	DSI 0	26865	831.5	23.63	24.50	1.222	-	-	-0.03	0.096	0.117
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 0	26865	831.5	24.58	25.50	1.236	-	-	-0.02	0.231	0.286
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	DSI 0	26865	831.5	23.63	24.50	1.222	-	-	0.11	0.184	0.225
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 0	26865	831.5	24.58	25.50	1.236	-	-	-0.12	0.108	0.133
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	DSI 0	26865	831.5	23.63	24.50	1.222	-	-	-0.12	0.086	0.105
05	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	26865	831.5	22.82	24.50	1.472	-	-	-0.01	0.664	**0.978**
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 1	DSI 0	26865	831.5	22.74	24.50	1.500	-	-	0.03	0.512	0.768
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 1	DSI 0	26865	831.5	22.67	24.50	1.524	-	-	-0.12	0.513	0.782
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	26865	831.5	22.82	24.50	1.472	-	-	-0.09	0.363	0.534
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 1	DSI 0	26865	831.5	22.74	24.50	1.500	-	-	-0.03	0.284	0.426
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 0	26865	831.5	22.82	24.50	1.472	-	-	0.02	0.269	0.396
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 1	DSI 0	26865	831.5	22.74	24.50	1.500	-	-	0.06	0.209	0.313
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 0	26865	831.5	22.82	24.50	1.472	-	-	0.11	0.224	0.330
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 1	DSI 0	26865	831.5	22.74	24.50	1.500	-	-	0.07	0.174	0.261
1750MHz																				
06	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	1413	1732.6	17.67	19.50	1.524	-	-	0.06	0.688	**1.049**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	1312	1712.4	17.63	19.50	1.538	-	-	0.01	0.678	1.043
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	1513	1752.6	17.63	19.50	1.538	-	-	-0.05	0.661	1.017
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 0	1413	1732.6	17.67	19.50	1.524	-	-	-0.13	0.518	0.789
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 0	1413	1732.6	17.67	19.50	1.524	-	-	0.03	0.324	0.494
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 0	1413	1732.6	17.67	19.50	1.524	-	-	-0.17	0.403	0.614
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 0	1413	1732.6	23.57	25.00	1.390	-	-	0.08	0.156	0.217
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI 0	1413	1732.6	23.57	25.00	1.390	-	-	0.08	0.054	0.075
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 0	1413	1732.6	23.57	25.00	1.390	-	-	-0.19	0.119	0.165
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI 0	1413	1732.6	23.57	25.00	1.390	-	-	0.15	0.081	0.113
07	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 0	20175	1732.5	24.52	25.70	1.312	-	-	0.06	0.178	**0.234**
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 0	20175	1732.5	23.74	24.70	1.247	-	-	0.02	0.151	0.188
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 0	20175	1732.5	24.52	25.70	1.312	-	-	-0.17	0.075	0.098
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 0	20175	1732.5	23.74	24.70	1.247	-	-	-0.12	0.064	0.080
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 0	20175	1732.5	24.52	25.70	1.312	-	-	0.05	0.140	0.184
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 0	20175	1732.5	23.74	24.70	1.247	-	-	0.13	0.116	0.145
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 0	20175	1732.5	24.52	25.70	1.312	-	-	0.06	0.104	0.136
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 0	20175	1732.5	23.74	24.70	1.247	-	-	0.03	0.085	0.106
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	20175	1732.5	24.36	25.50	1.300	-	-	0.11	0.063	0.082
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	20175	1732.5	23.53	24.50	1.250	-	-	-0.15	0.054	0.068
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 0	20175	1732.5	24.36	25.50	1.300	-	-	0.01	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 0	20175	1732.5	23.53	24.50	1.250	-	-	0.14	0.000	0.000
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 0	20175	1732.5	24.36	25.50	1.300	-	-	-0.09	0.094	0.122
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 0	20175	1732.5	23.53	24.50	1.250	-	-	0.04	0.084	0.105
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 0	20175	1732.5	24.36	25.50	1.300	-	-	-0.05	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 0	20175	1732.5	23.53	24.50	1.250	-	-	0.08	0.000	0.000
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 0	661	1880	18.52	20.00	1.406	-	-	-0.14	0.570	0.801
08	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 0	512	1850.2	18.37	20.00	1.455	-	-	-0.01	0.576	**0.838**

	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 0	810	1909.8	18.35	20.00	1.462	-	-	-0.02	0.498	0.728
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 0	661	1880	18.52	20.00	1.406	-	-	-0.06	0.351	0.494
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 1	DSI 0	661	1880	18.52	20.00	1.406	-	-	0.1	0.217	0.305
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 1	DSI 0	661	1880	18.52	20.00	1.406	-	-	0.07	0.255	0.359
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 2	DSI 0	661	1880	24.02	25.00	1.253	-	-	-0.08	0.076	0.095
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 2	DSI 0	661	1880	24.02	25.00	1.253	-	-	0.09	0.013	0.016
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 2	DSI 0	661	1880	24.02	25.00	1.253	-	-	-0.09	0.082	0.103
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 2	DSI 0	661	1880	24.02	25.00	1.253	-	-	-0.16	0.018	0.023
09	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	9400	1880	15.65	17.50	1.531	-	-	0.04	0.625	**0.957**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	9262	1852.4	15.56	17.50	1.563	-	-	0.06	0.554	0.866
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 0	9538	1907.6	15.58	17.50	1.556	-	-	0.01	0.561	0.873
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 0	9400	1880	15.65	17.50	1.531	-	-	-0.11	0.540	0.827
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 0	9262	1852.4	15.56	17.50	1.563	-	-	0.03	0.485	0.758
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 0	9538	1907.6	15.58	17.50	1.556	-	-	0.01	0.501	0.780
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 0	9400	1880	15.65	17.50	1.531	-	-	0.03	0.260	0.398
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 0	9400	1880	15.65	17.50	1.531	-	-	-0.03	0.351	0.537
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 0	9400	1880	23.61	25.00	1.377	-	-	-0.1	0.190	0.262
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI 0	9400	1880	23.61	25.00	1.377	-	-	0.14	0.129	0.178
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 0	9400	1880	23.61	25.00	1.377	-	-	-0.16	0.182	0.251
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI 0	9400	1880	23.61	25.00	1.377	-	-	0.04	0.133	0.183
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 0	18900	1880	23.60	25.00	1.380	-	-	-0.09	0.169	0.233
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 0	18900	1880	22.76	24.00	1.330	-	-	-0.17	0.136	0.181
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 0	18900	1880	23.60	25.00	1.380	-	-	0.06	0.074	0.102
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 0	18900	1880	22.76	24.00	1.330	-	-	0.18	0.060	0.080
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 0	18900	1880	23.60	25.00	1.380	-	-	-0.04	0.179	0.247
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 0	18900	1880	22.76	24.00	1.330	-	-	0.1	0.152	0.202
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 0	18900	1880	23.60	25.00	1.380	-	-	-0.04	0.073	0.101
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 0	18900	1880	22.76	24.00	1.330	-	-	-0.13	0.098	0.130
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	18900	1880	22.34	23.50	1.306	-	-	-0.1	0.396	0.517
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	18900	1880	22.28	23.50	1.324	-	-	0.04	0.304	0.403
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 0	18900	1880	22.34	23.50	1.306	-	-	-0.09	0.092	0.120
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 0	18900	1880	22.28	23.50	1.324	-	-	0.08	0.074	0.098
10	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 0	18900	1880	22.34	23.50	1.306	-	-	0.08	0.630	**0.823**
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 0	18700	1860	22.21	23.50	1.346	-	-	0.03	0.568	0.764
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 0	19100	1900	22.29	23.50	1.321	-	-	-0.11	0.551	0.728
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 0	18900	1880	22.28	23.50	1.324	-	-	0.03	0.488	0.646
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 0	18700	1860	22.27	23.50	1.327	-	-	0.04	0.473	0.628
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 0	19100	1900	22.25	23.50	1.334	-	-	0.03	0.467	0.623
	LTE Band 2	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 4	DSI 0	18900	1880	22.30	23.50	1.318	-	-	0.01	0.458	0.604
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 0	18900	1880	22.34	23.50	1.306	-	-	-0.15	0.161	0.210
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 0	18900	1880	22.28	23.50	1.324	-	-	-0.04	0.126	0.167
2600MH																				
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 0	21100	2535	24.66	25.50	1.213	-	-	0.13	0.153	0.186
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 0	21100	2535	23.75	24.50	1.189	-	-	0.02	0.124	0.147
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 0	21100	2535	24.66	25.50	1.213	-	-	0.16	0.109	0.132
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 0	21100	2535	23.75	24.50	1.189	-	-	-0.14	0.090	0.107
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 0	21100	2535	24.66	25.50	1.213	-	-	0.13	0.315	0.382
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 0	21100	2535	23.75	24.50	1.189	-	-	-0.04	0.258	0.307
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 0	21100	2535	24.66	25.50	1.213	-	-	0.01	0.073	0.089
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 0	21100	2535	23.75	24.50	1.189	-	-	-0.18	0.059	0.070
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	21100	2535	20.30	21.00	1.175	-	-	0.07	0.725	0.852
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	20850	2510	20.22	21.00	1.197	-	-	-0.12	0.581	0.695
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	21350	2560	20.25	21.00	1.189	-	-	-0.03	0.849	1.009
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	21100	2535	20.14	21.00	1.219	-	-	0.05	0.738	0.900
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	20850	2510	19.93	21.00	1.279	-	-	0.03	0.582	0.745
11	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	21350	2560	20.10	21.00	1.230	-	-	0.06	0.862	**1.060**

	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 0	21100	2535	20.25	21.00	1.189	-	-	0.06	0.732	0.870
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 0	21100	2535	20.30	21.00	1.175	-	-	-0.05	0.105	0.123
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 0	21100	2535	20.14	21.00	1.219	-	-	0.16	0.106	0.129
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 0	21100	2535	20.30	21.00	1.175	-	-	0.03	0.435	0.511
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 0	21100	2535	20.14	21.00	1.219	-	-	-0.15	0.437	0.533
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 0	21100	2535	20.30	21.00	1.175	-	-	0.03	0.187	0.220
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 0	21100	2535	20.14	21.00	1.219	-	-	0.09	0.187	0.228
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	40620	2593	22.55	22.70	1.035	62.9	1.006	0.04	0.879	0.915
	LTE Band 41C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 4	DSI 0	40620+ 40818	2593+ 2612.8	21.90	22.70	1.202	62.9	1.006	0.03	0.712	0.861
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	39750	2506	22.31	22.70	1.094	62.9	1.006	0.12	0.479	0.527
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	40185	2549.5	22.54	22.70	1.038	62.9	1.006	0.02	0.673	0.702
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	41055	2636.5	22.36	22.70	1.081	62.9	1.006	0.02	0.818	0.890
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 0	41490	2680	22.25	22.70	1.109	62.9	1.006	0.03	0.740	0.826
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	40620	2593	22.51	22.70	1.045	62.9	1.006	-0.02	0.797	0.838
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	39750	2506	22.40	22.70	1.072	62.9	1.006	0.02	0.460	0.496
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	40185	2549.5	22.30	22.70	1.096	62.9	1.006	0.06	0.648	0.715
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	41055	2636.5	22.13	22.70	1.140	62.9	1.006	0.05	0.777	0.891
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 0	41490	2680	22.40	22.70	1.072	62.9	1.006	-0.04	0.714	0.770
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 0	40620	2593	22.40	22.70	1.072	62.9	1.006	0.06	0.792	0.854
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 0	40620	2593	22.55	22.70	1.035	62.9	1.006	-0.1	0.092	0.096
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 0	40620	2593	22.51	22.70	1.045	62.9	1.006	0.04	0.088	0.092
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 0	40620	2593	22.55	22.70	1.035	62.9	1.006	-0.08	0.352	0.367
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 0	40620	2593	22.51	22.70	1.045	62.9	1.006	0.02	0.340	0.357
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 0	40620	2593	22.55	22.70	1.035	62.9	1.006	-0.16	0.128	0.133
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 0	40620	2593	22.51	22.70	1.045	62.9	1.006	0.07	0.132	0.139
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 0	40620	2593	25.38	25.50	1.028	62.9	1.006	-0.19	0.087	0.090
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 0	40620	2593	24.46	24.50	1.009	62.9	1.006	0.13	0.071	0.072
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 0	40620	2593	25.38	25.50	1.028	62.9	1.006	0.07	0.050	0.052
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 0	40620	2593	24.46	24.50	1.009	62.9	1.006	0.01	0.043	0.044
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 0	40620	2593	25.38	25.50	1.028	62.9	1.006	0.09	0.157	0.162
	LTE Band 41C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 2	DSI 0	40620+ 40818	2593+ 2612.8	24.91	25.50	1.146	62.9	1.006	0.03	0.124	0.143
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 0	40620	2593	24.46	24.50	1.009	62.9	1.006	0.03	0.134	0.136
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 0	40620	2593	25.38	25.50	1.028	62.9	1.006	-0.1	0.041	0.042
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 0	40620	2593	24.46	24.50	1.009	62.9	1.006	-0.14	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	40620	2593	19.93	20.50	1.140	62.9	1.006	0.03	0.730	0.837
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	39750	2506	19.79	20.50	1.178	62.9	1.006	0.14	0.667	0.790
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	40185	2549.5	19.83	20.50	1.167	62.9	1.006	0.09	0.667	0.783
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	41055	2636.5	19.76	20.50	1.186	62.9	1.006	-0.19	0.724	0.864
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	41490	2680	19.88	20.50	1.153	62.9	1.006	0.05	0.730	0.847
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	40620	2593	19.77	20.50	1.183	62.9	1.006	0.08	0.742	0.883
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	39750	2506	19.45	20.50	1.274	62.9	1.006	0.01	0.680	0.871
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	40185	2549.5	19.54	20.50	1.247	62.9	1.006	-0.14	0.680	0.853
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	41055	2636.5	19.44	20.50	1.276	62.9	1.006	0.1	0.736	0.945
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	41490	2680	19.61	20.50	1.227	62.9	1.006	0.07	0.748	0.924
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 0	40620	2593	19.63	20.50	1.222	62.9	1.006	-0.04	0.736	0.905
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	40620	2593	19.93	20.50	1.140	62.9	1.006	-0.15	0.730	0.837
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	39750	2506	19.79	20.50	1.178	62.9	1.006	-0.15	0.585	0.693
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	40185	2549.5	19.83	20.50	1.167	62.9	1.006	0.06	0.636	0.747
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	41055	2636.5	19.76	20.50	1.186	62.9	1.006	-0.14	0.767	0.915
12	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	41490	2680	19.88	20.50	1.153	62.9	1.006	-0.02	0.923	**1.071**
	LTE Band 41C	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	41490+ 41292	2680+ 2660.2	19.09	20.50	1.384	62.9	1.006	0.01	0.721	1.004
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 0	40620	2593	19.77	20.50	1.183	62.9	1.006	-0.13	0.742	0.883
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 0	39750	2506	19.45	20.50	1.274	62.9	1.006	-0.18	0.595	0.762
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 0	40185	2549.5	19.54	20.50	1.247	62.9	1.006	-0.04	0.649	0.814
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 0	41055	2636.5	19.44	20.50	1.276	62.9	1.006	0.19	0.786	1.009

	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 0	41490	2680	19.61	20.50	1.227	62.9	1.006	0.01	0.861	1.063
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 0	40620	2593	19.63	20.50	1.222	62.9	1.006	0.06	0.748	0.919
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 0	40620	2593	19.93	20.50	1.140	62.9	1.006	-0.07	0.320	0.367
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 0	40620	2593	19.77	20.50	1.183	62.9	1.006	-0.03	0.324	0.386
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 0	40620	2593	19.93	20.50	1.140	62.9	1.006	0.06	0.413	0.474
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 0	40620	2593	19.77	20.50	1.183	62.9	1.006	-0.18	0.264	0.314
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 0	40620	2593	20.80	22.00	1.318	62.9	1.006	-0.03	0.721	0.956
	LTE Band 41C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 3	DSI 0	40620+ 40818	2593+ 2612.8	20.11	22.00	1.545	62.9	1.006	0.01	0.601	0.934
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 0	39750	2506	20.65	22.00	1.365	62.9	1.006	0.15	0.442	0.607
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 0	41490	2680	20.73	22.00	1.340	62.9	1.006	0.07	0.480	0.647
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 0	40185	2549.5	20.69	22.00	1.352	62.9	1.006	0.05	0.545	0.741
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 0	41055	2636.5	20.75	22.00	1.334	62.9	1.006	0.13	0.605	0.812
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 0	40620	2593	20.76	22.00	1.330	62.9	1.006	0.08	0.569	0.762
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 0	39750	2506	20.60	22.00	1.380	62.9	1.006	-0.14	0.367	0.510
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 0	41490	2680	20.68	22.00	1.355	62.9	1.006	0.14	0.404	0.551
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 0	40185	2549.5	20.64	22.00	1.368	62.9	1.006	-0.19	0.462	0.636
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 0	41055	2636.5	20.55	22.00	1.396	62.9	1.006	-0.02	0.502	0.705
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 3	DSI 0	40620	2593	20.69	22.00	1.352	62.9	1.006	0.07	0.563	0.766
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 0	40620	2593	20.80	22.00	1.318	62.9	1.006	-0.17	0.222	0.294
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 0	40620	2593	20.76	22.00	1.330	62.9	1.006	0.19	0.180	0.241
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 0	40620	2593	20.80	22.00	1.318	62.9	1.006	0.02	0.559	0.741
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 0	39750	2506	20.65	22.00	1.365	62.9	1.006	0.06	0.501	0.688
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 0	41490	2680	20.73	22.00	1.340	62.9	1.006	0.01	0.499	0.673
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 0	40185	2549.5	20.69	22.00	1.352	62.9	1.006	-0.05	0.482	0.656
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 0	41055	2636.5	20.75	22.00	1.334	62.9	1.006	0.03	0.476	0.639
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 0	40620	2593	20.76	22.00	1.330	62.9	1.006	0.06	0.429	0.574
	LTE Band 41	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI 0	40620	2593	20.69	22.00	1.352	62.9	1.006	0.03	0.411	0.559
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 0	40620	2593	20.80	22.00	1.318	62.9	1.006	0.17	0.120	0.159
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 0	40620	2593	20.76	22.00	1.330	62.9	1.006	-0.1	0.101	0.135
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 0	518598	2592.99	19.49	19.70	1.050	-	-	-0.17	0.882	0.926
13	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 0	518598	2592.99	19.46	19.70	1.057	-	-	-0.03	0.966	**1.021**
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 0	518598	2592.99	19.38	19.70	1.076	-	-	0.08	0.813	0.875
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 0	518598	2592.99	19.49	19.70	1.050	-	-	0.02	0.109	0.114
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 0	518598	2592.99	19.46	19.70	1.057	-	-	0.07	0.112	0.118
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 0	518598	2592.99	19.49	19.70	1.050	-	-	-0.15	0.464	0.487
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 0	518598	2592.99	19.46	19.70	1.057	-	-	0.04	0.343	0.362
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 0	518598	2592.99	19.49	19.70	1.050	-	-	0.07	0.158	0.166
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 0	518598	2592.99	19.46	19.70	1.057	-	-	-0.15	0.155	0.164
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 0	518598	2592.99	25.38	25.70	1.076	-	-	-0.12	0.163	0.175
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 0	518598	2592.99	25.35	25.70	1.084	-	-	-0.19	0.156	0.169
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 0	518598	2592.99	25.38	25.70	1.076	-	-	0.09	0.094	0.101
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 0	518598	2592.99	25.35	25.70	1.084	-	-	0.07	0.090	0.098
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 0	518598	2592.99	25.38	25.70	1.076	-	-	0.14	0.291	0.313
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 0	518598	2592.99	25.35	25.70	1.084	-	-	0.11	0.276	0.299
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 0	518598	2592.99	25.38	25.70	1.076	-	-	0.01	0.079	0.085
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 0	518598	2592.99	25.35	25.70	1.084	-	-	0.17	0.080	0.087
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	518598	2592.99	17.97	19.00	1.268	-	-	0.02	0.571	0.724
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	518598	2592.99	17.93	19.00	1.279	-	-	-0.07	0.584	0.747
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	518598	2592.99	17.97	19.00	1.268	-	-	0.05	0.638	0.809
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	518598	2592.99	17.93	19.00	1.279	-	-	0.04	0.701	0.897
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	518598	2592.99	17.88	19.00	1.294	-	-	0.01	0.624	0.808
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	518598	2592.99	17.97	19.00	1.268	-	-	-0.09	0.297	0.376
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	518598	2592.99	17.93	19.00	1.279	-	-	0.03	0.311	0.398
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	518598	2592.99	17.97	19.00	1.268	-	-	-0.08	0.329	0.417
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	518598	2592.99	17.93	19.00	1.279	-	-	-0.04	0.341	0.436
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 0	518598	2592.99	18.08	19.50	1.387	-	-	-0.02	0.419	0.581

	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 0	518598	2592.99	18.02	19.50	1.406	-	-	0.05	0.477	0.671
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 0	518598	2592.99	18.08	19.50	1.387	-	-	0.16	0.119	0.165
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 0	518598	2592.99	18.02	19.50	1.406	-	-	0.12	0.149	0.210
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 0	518598	2592.99	18.08	19.50	1.387	-	-	-0.15	0.382	0.530
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 0	518598	2592.99	18.02	19.50	1.406	-	-	0.07	0.397	0.558
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 0	518598	2592.99	18.08	19.50	1.387	-	-	0.1	0.069	0.096
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 0	518598	2592.99	18.02	19.50	1.406	-	-	0.16	0.077	0.108
3500MHz																				
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 0	42590	3500	20.17	20.50	1.079	62.9	1.006	0.11	0.332	0.360
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 0	42590	3500	19.92	20.50	1.143	62.9	1.006	-0.03	0.322	0.370
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 0	42590	3500	20.17	20.50	1.079	62.9	1.006	-0.16	0.431	0.468
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 0	42590	3500	19.92	20.50	1.143	62.9	1.006	0.06	0.440	0.506
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 0	42590	3500	20.17	20.50	1.079	62.9	1.006	-0.14	0.570	0.619
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 0	42590	3500	19.92	20.50	1.143	62.9	1.006	0.03	0.582	0.669
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 0	42590	3500	20.17	20.50	1.079	62.9	1.006	-0.03	0.744	0.808
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 0	42190	3460	20.06	20.50	1.107	62.9	1.006	-0.02	0.887	0.987
	LTE Band 42C	20M	QPSK	1	99	-	Left Tilted	0mm	Ant 5	DSI 0	42190+ 42388	3460+ 3479.8	18.92	20.50	1.439	62.9	1.006	0.01	0.651	0.942
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 0	42990	3540	20.01	20.50	1.119	62.9	1.006	0.14	0.704	0.793
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 0	42590	3500	19.92	20.50	1.143	62.9	1.006	0.18	0.761	0.875
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 0	42190	3460	19.67	20.50	1.211	62.9	1.006	-0.02	0.800	0.974
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 0	42990	3540	19.80	20.50	1.175	62.9	1.006	0.12	0.716	0.846
	LTE Band 42	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 5	DSI 0	42590	3500	19.74	20.50	1.191	62.9	1.006	0.08	0.744	0.892
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	42590	3500	19.60	21.00	1.380	62.9	1.006	-0.01	0.535	0.743
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	42190	3460	19.39	21.00	1.449	62.9	1.006	-0.19	0.533	0.777
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 0	42990	3540	19.38	21.00	1.452	62.9	1.006	-0.18	0.572	0.836
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	42590	3500	19.31	21.00	1.476	62.9	1.006	0.17	0.520	0.772
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	42190	3460	19.23	21.00	1.503	62.9	1.006	-0.08	0.574	0.868
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 0	42990	3540	19.09	21.00	1.552	62.9	1.006	-0.07	0.516	0.806
	LTE Band 42	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSI 0	42590	3500	19.40	21.00	1.445	62.9	1.006	-0.09	0.533	0.775
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	42590	3500	19.60	21.00	1.380	62.9	1.006	-0.17	0.708	0.983
14	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	42190	3460	19.39	21.00	1.449	62.9	1.006	0.01	0.721	**1.051**
	LTE Band 42C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 1	DSI 0	42190+ 42388	3460+ 3479.8	18.56	20.50	1.563	62.9	1.006	0.09	0.652	1.025
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 0	42990	3540	19.38	21.00	1.452	62.9	1.006	-0.12	0.701	1.024
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 0	42590	3500	19.31	21.00	1.476	62.9	1.006	-0.15	0.669	0.993
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 0	42190	3460	19.23	21.00	1.503	62.9	1.006	0.06	0.681	1.030
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSI 0	42990	3540	19.09	21.00	1.552	62.9	1.006	0.07	0.629	0.982
	LTE Band 42	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSI 0	42590	3500	19.40	21.00	1.445	62.9	1.006	0.02	0.706	1.027
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 0	42590	3500	19.60	21.00	1.380	62.9	1.006	0.02	0.206	0.286
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSI 0	42590	3500	19.31	21.00	1.476	62.9	1.006	0.02	0.211	0.313
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 0	42590	3500	19.60	21.00	1.380	62.9	1.006	-0.16	0.267	0.371
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSI 0	42590	3500	19.31	21.00	1.476	62.9	1.006	-0.12	0.284	0.422
	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	DSI 0	42590	3500	17.94	18.50	1.138	62.9	1.006	0.05	0.110	0.126
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	DSI 0	42590	3500	17.66	18.50	1.213	62.9	1.006	0.01	0.119	0.145
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	DSI 0	42590	3500	17.94	18.50	1.138	62.9	1.006	-0.04	0.119	0.136
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	DSI 0	42590	3500	17.66	18.50	1.213	62.9	1.006	0.06	0.119	0.145
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 0	42590	3500	17.94	18.50	1.138	62.9	1.006	0.02	0.756	0.865
	LTE Band 42C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 6	DSI 0	42590+ 42788	3500+ 3519.8	16.72	18.00	1.343	62.9	1.006	0.06	0.623	0.842
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 0	42190	3460	17.84	18.50	1.164	62.9	1.006	0.01	0.701	0.821
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	DSI 0	42990	3540	17.66	18.50	1.213	62.9	1.006	-0.13	0.652	0.796
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 0	42590	3500	17.66	18.50	1.213	62.9	1.006	0.01	0.701	0.856
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 0	42190	3460	17.63	18.50	1.222	62.9	1.006	0.16	0.689	0.847
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	DSI 0	42990	3540	17.52	18.50	1.253	62.9	1.006	0.07	0.671	0.846
	LTE Band 42	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 6	DSI 0	42590	3500	17.62	18.50	1.225	62.9	1.006	0.13	0.650	0.801
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	DSI 0	42590	3500	17.94	18.50	1.138	62.9	1.006	0.08	0.119	0.136
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	DSI 0	42590	3500	17.66	18.50	1.213	62.9	1.006	0.04	0.119	0.145

	LTE Band 42	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 7	DSI 0	42590	3500	23.55	24.50	1.245	62.9	1.006	0.1	0.346	0.433
	LTE Band 42C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 7	DSI 0	42590+ 42788	3500+ 3519.8	22.84	24.00	1.306	62.9	1.006	0.09	0.311	0.409
	LTE Band 42	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 7	DSI 0	42590	3500	22.50	23.50	1.259	62.9	1.006	-0.13	0.341	0.432
	LTE Band 42	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 7	DSI 0	42590	3500	23.55	24.50	1.245	62.9	1.006	0.03	0.058	0.073
	LTE Band 42	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 7	DSI 0	42590	3500	22.50	23.50	1.259	62.9	1.006	0.11	0.058	0.073
	LTE Band 42	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	DSI 0	42590	3500	23.55	24.50	1.245	62.9	1.006	0.06	0.108	0.135
	LTE Band 42	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	DSI 0	42590	3500	22.50	23.50	1.259	62.9	1.006	0.14	0.105	0.133
	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	DSI 0	42590	3500	23.55	24.50	1.245	62.9	1.006	-0.11	0.036	0.045
	LTE Band 42	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 7	DSI 0	42590	3500	22.50	23.50	1.259	62.9	1.006	-0.12	0.045	0.057
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 0	656000	3840	17.78	18.50	1.180	-	-	0.17	0.169	0.199
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 0	656000	3840	17.68	18.50	1.208	-	-	-0.04	0.176	0.213
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 0	656000	3840	17.78	18.50	1.180	-	-	-0.07	0.279	0.329
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 0	656000	3840	17.68	18.50	1.208	-	-	0.08	0.273	0.330
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 0	656000	3840	17.78	18.50	1.180	-	-	-0.07	0.455	0.537
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 0	656000	3840	17.68	18.50	1.208	-	-	-0.08	0.636	0.768
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	656000	3840	17.78	18.50	1.180	-	-	0.02	0.658	0.777
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	656000	3840	17.68	18.50	1.208	-	-	-0.12	0.575	0.694
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 0	633334	3500.01	17.76	18.50	1.186	-	-	0.05	0.352	0.417
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 0	633334	3500.01	17.59	18.50	1.233	-	-	0.15	0.342	0.422
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.76	18.50	1.186	-	-	-0.09	0.440	0.522
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.59	18.50	1.233	-	-	0.05	0.430	0.530
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 0	633334	3500.01	17.76	18.50	1.186	-	-	-0.06	0.648	0.768
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 0	633334	3500.01	17.59	18.50	1.233	-	-	-0.02	0.627	0.773
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.76	18.50	1.186	-	-	-0.04	0.850	1.008
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.59	18.50	1.233	-	-	0.09	0.814	1.004
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.55	18.50	1.245	-	-	0.07	0.803	0.999
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	656000	3840	17.28	19.00	1.486	-	-	-0.02	0.257	0.382
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	656000	3840	17.20	19.00	1.514	-	-	0.02	0.239	0.362
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	656000	3840	17.28	19.00	1.486	-	-	0.03	0.643	0.955
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	656000	3840	17.20	19.00	1.514	-	-	-0.02	0.491	0.743
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	656000	3840	17.12	19.00	1.542	-	-	0.05	0.505	0.779
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	656000	3840	17.28	19.00	1.486	-	-	0.06	0.147	0.218
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	656000	3840	17.20	19.00	1.514	-	-	-0.01	0.137	0.207
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	656000	3840	17.28	19.00	1.486	-	-	0.03	0.180	0.267
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	656000	3840	17.20	19.00	1.514	-	-	0.05	0.138	0.209
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	633334	3500.01	17.34	19.00	1.466	-	-	0.02	0.583	0.854
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	633334	3500.01	17.27	19.00	1.489	-	-	0.01	0.573	0.853
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	633334	3500.01	17.16	19.00	1.528	-	-	0.02	0.513	0.784
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	633334	3500.01	17.34	19.00	1.466	-	-	0.02	0.689	1.010
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	633334	3500.01	17.27	19.00	1.489	-	-	0.07	0.669	0.996
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	633334	3500.01	17.16	19.00	1.528	-	-	0.01	0.657	1.004
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	633334	3500.01	17.34	19.00	1.466	-	-	0.02	0.256	0.375
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	633334	3500.01	17.27	19.00	1.489	-	-	0.01	0.226	0.337
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	633334	3500.01	17.34	19.00	1.466	-	-	0.08	0.311	0.456
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	633334	3500.01	17.27	19.00	1.489	-	-	0.01	0.284	0.423
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 0	656000	3840	16.02	17.50	1.406	-	-	0.01	0.064	0.090
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 0	656000	3840	15.98	17.50	1.419	-	-	0.16	0.059	0.084
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 0	656000	3840	16.02	17.50	1.406	-	-	-0.01	0.054	0.076
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 0	656000	3840	15.98	17.50	1.419	-	-	0.12	0.053	0.075
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	656000	3840	16.02	17.50	1.406	-	-	0.02	0.505	0.710
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	656000	3840	15.98	17.50	1.419	-	-	-0.08	0.515	0.731
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 0	656000	3840	16.02	17.50	1.406	-	-	-0.13	0.278	0.391
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 0	656000	3840	15.98	17.50	1.419	-	-	0.14	0.274	0.389
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.28	17.50	1.324	-	-	-0.01	0.109	0.144
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.21	17.50	1.346	-	-	0.06	0.163	0.219
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 0	633334	3500.01	16.28	17.50	1.324	-	-	0.06	0.075	0.099

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 0	633334	3500.01	16.21	17.50	1.346	-	-	0.02	0.116	0.156
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.28	17.50	1.324	-	-	0.16	0.572	0.758
15	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.21	17.50	1.346	-	-	-0.07	0.797	**1.073**
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.06	17.50	1.393	-	-	0.06	0.731	1.018
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 0	633334	3500.01	16.28	17.50	1.324	-	-	0.06	0.222	0.294
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 0	633334	3500.01	16.21	17.50	1.346	-	-	0.03	0.335	0.451
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	656000	3840	23.28	25.00	1.486	-	-	-0.19	0.109	0.162
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	656000	3840	23.14	25.00	1.535	-	-	0.07	0.233	0.358
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 0	656000	3840	23.28	25.00	1.486	-	-	0.13	0.109	0.162
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 0	656000	3840	23.14	25.00	1.535	-	-	0.08	0.172	0.264
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 0	656000	3840	23.28	25.00	1.486	-	-	-0.17	0.121	0.180
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 0	656000	3840	23.14	25.00	1.535	-	-	-0.03	0.142	0.218
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 0	656000	3840	23.28	25.00	1.486	-	-	0.01	0.078	0.116
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 0	656000	3840	23.14	25.00	1.535	-	-	-0.06	0.099	0.152
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	633334	3500.01	23.60	25.00	1.380	-	-	0.02	0.356	0.491
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	633334	3500.01	23.56	25.00	1.393	-	-	0.07	0.391	0.545
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 0	633334	3500.01	23.60	25.00	1.380	-	-	0.08	0.122	0.168
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 0	633334	3500.01	23.56	25.00	1.393	-	-	-0.19	0.137	0.191
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 0	633334	3500.01	23.60	25.00	1.380	-	-	0.05	0.212	0.293
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 0	633334	3500.01	23.56	25.00	1.393	-	-	0.03	0.237	0.330
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 0	633334	3500.01	23.60	25.00	1.380	-	-	0.01	0.056	0.077
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 0	633334	3500.01	23.56	25.00	1.393	-	-	0.05	0.066	0.092
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 0	650000	3750	17.34	18.00	1.164	-	-	0.1	0.314	0.366
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 0	650000	3750	17.23	18.00	1.194	-	-	0.08	0.336	0.401
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 0	650000	3750	17.34	18.00	1.164	-	-	-0.06	0.449	0.523
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 0	650000	3750	17.23	18.00	1.194	-	-	-0.1	0.457	0.546
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 0	650000	3750	17.34	18.00	1.164	-	-	0.16	0.506	0.589
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 0	650000	3750	17.23	18.00	1.194	-	-	0	0.516	0.616
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	650000	3750	17.34	18.00	1.164	-	-	0.04	0.637	0.742
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	650000	3750	17.23	18.00	1.194	-	-	-0.06	0.614	0.733
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 0	633334	3500.01	17.26	18.00	1.186	-	-	0.03	0.283	0.336
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 0	633334	3500.01	17.18	18.00	1.208	-	-	-0.15	0.291	0.351
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.26	18.00	1.186	-	-	0.02	0.391	0.464
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.18	18.00	1.208	-	-	0.02	0.387	0.467
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 0	633334	3500.01	17.26	18.00	1.186	-	-	0.07	0.534	0.633
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 0	633334	3500.01	17.18	18.00	1.208	-	-	0	0.533	0.644
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.26	18.00	1.186	-	-	0.14	0.533	0.632
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.18	18.00	1.208	-	-	-0.07	0.751	0.907
	FR1 n78	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 0	633334	3500.01	17.05	18.00	1.245	-	-	0.03	0.701	0.872
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	650000	3750	16.81	18.50	1.476	-	-	-0.02	0.343	0.506
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	650000	3750	16.74	18.50	1.500	-	-	-0.14	0.352	0.528
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	650000	3750	16.81	18.50	1.476	-	-	0.02	0.470	0.694
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	650000	3750	16.74	18.50	1.500	-	-	0.03	0.442	0.663
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	650000	3750	16.81	18.50	1.476	-	-	0.13	0.171	0.252
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	650000	3750	16.74	18.50	1.500	-	-	0.15	0.178	0.267
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	650000	3750	16.81	18.50	1.476	-	-	0.11	0.222	0.328
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	650000	3750	16.74	18.50	1.500	-	-	0.12	0.217	0.325
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	633334	3500.01	16.93	18.50	1.435	-	-	-0.03	0.397	0.570
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	633334	3500.01	16.87	18.50	1.455	-	-	0.07	0.433	0.630
	FR1 n78	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSI 0	633334	3500.01	16.74	18.50	1.500	-	-	0.07	0.380	0.570
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	633334	3500.01	16.93	18.50	1.435	-	-	-0.06	0.475	0.682
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	633334	3500.01	16.87	18.50	1.455	-	-	-0.01	0.572	0.833
	FR1 n78	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSI 0	633334	3500.01	16.74	18.50	1.500	-	-	0.02	0.470	0.705
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	633334	3500.01	16.93	18.50	1.435	-	-	0.04	0.163	0.234
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSI 0	633334	3500.01	16.87	18.50	1.455	-	-	0.09	0.177	0.258
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	633334	3500.01	16.93	18.50	1.435	-	-	0.13	0.195	0.280

	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSI 0	633334	3500.01	16.87	18.50	1.455	-	-	0.08	0.225	0.327
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 0	650000	3750	16.73	18.00	1.340	-	-	-0.13	0.126	0.169
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 0	650000	3750	16.55	18.00	1.396	-	-	0.03	0.103	0.144
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 0	650000	3750	16.73	18.00	1.340	-	-	0.14	0.106	0.142
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 0	650000	3750	16.55	18.00	1.396	-	-	-0.01	0.086	0.120
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	650000	3750	16.73	18.00	1.340	-	-	-0.15	0.648	0.868
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	650000	3750	16.55	18.00	1.396	-	-	-0.03	0.601	0.839
	FR1 n78	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	650000	3750	16.41	18.00	1.442	-	-	0.02	0.661	0.953
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 0	650000	3750	16.73	18.00	1.340	-	-	0.06	0.271	0.363
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 0	650000	3750	16.55	18.00	1.396	-	-	-0.18	0.267	0.373
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.93	18.00	1.279	-	-	0.09	0.117	0.150
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.88	18.00	1.294	-	-	-0.18	0.151	0.195
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 0	633334	3500.01	16.93	18.00	1.279	-	-	-0.03	0.088	0.113
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 0	633334	3500.01	16.88	18.00	1.294	-	-	-0.08	0.114	0.148
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.93	18.00	1.279	-	-	-0.08	0.552	0.706
16	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.88	18.00	1.294	-	-	-0.04	0.842	**1.090**
	FR1 n78	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 0	633334	3500.01	16.62	18.00	1.374	-	-	0.13	0.759	1.043
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 0	633334	3500.01	16.93	18.00	1.279	-	-	0.06	0.201	0.257
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 0	633334	3500.01	16.88	18.00	1.294	-	-	0.1	0.266	0.344
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	650000	3750	19.51	21.00	1.409	-	-	-0.02	0.049	0.069
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	650000	3750	19.37	21.00	1.455	-	-	0.07	0.071	0.103
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 0	650000	3750	19.51	21.00	1.409	-	-	0.02	0.027	0.038
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 0	650000	3750	19.37	21.00	1.455	-	-	-0.01	0.035	0.051
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 0	650000	3750	19.51	21.00	1.409	-	-	0.07	0.038	0.054
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 0	650000	3750	19.37	21.00	1.455	-	-	0.02	0.052	0.076
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 0	650000	3750	19.51	21.00	1.409	-	-	-0.05	0.034	0.048
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 0	650000	3750	19.37	21.00	1.455	-	-	0.07	0.029	0.042
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	633334	3500.01	19.57	21.00	1.390	-	-	0.07	0.576	0.801
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	633334	3500.01	19.45	21.00	1.429	-	-	0.03	0.690	0.986
	FR1 n78	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 0	633334	3500.01	19.37	21.00	1.455	-	-	0.05	0.599	0.872
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 0	633334	3500.01	19.57	21.00	1.390	-	-	0.07	0.131	0.182
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 0	633334	3500.01	19.45	21.00	1.429	-	-	-0.01	0.147	0.210
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 0	633334	3500.01	19.57	21.00	1.390	-	-	0.04	0.198	0.275
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 0	633334	3500.01	19.45	21.00	1.429	-	-	-0.02	0.183	0.261
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 0	633334	3500.01	19.57	21.00	1.390	-	-	0.03	0.059	0.082
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 0	633334	3500.01	19.45	21.00	1.429	-	-	-0.04	0.049	0.070

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 17+6(6)	Standalone	1	2412	15.83	17.00	1.309	98.47	1.016	-0.12	0.246	0.327
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 17+6(6)	Standalone	1	2412	15.83	17.00	1.309	98.47	1.016	0.13	0.252	0.335
17	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 17+6(6)	Standalone	1	2412	15.83	17.00	1.309	98.47	1.016	-0.02	0.707	**0.940**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 17+6(6)	Standalone	1	2412	15.83	17.00	1.309	98.47	1.016	0.08	0.227	0.302
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 17+6(17)	Standalone	11	2462	15.71	17.00	1.346	98.47	1.016	-0.16	0.559	0.764
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 17+6(6)	DBS only	1	2412	14.31	15.50	1.315	98.47	1.016	0.04	0.515	0.688
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 17+6(6)	non DBS&DBS	1	2412	9.28	10.50	1.324	98.47	1.016	0.09	0.055	0.074
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 17+6(6)	non DBS&DBS	1	2412	9.28	10.50	1.324	98.47	1.016	-0.14	0.057	0.077
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 17+6(6)	non DBS&DBS	1	2412	9.28	10.50	1.324	98.47	1.016	0.01	0.159	0.214
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 17+6(6)	non DBS&DBS	1	2412	9.28	10.50	1.324	98.47	1.016	-0.05	0.051	0.069
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	0.04	0.220	0.297
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	-0.11	0.251	0.339
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	-0.06	0.252	0.340
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	0.01	0.250	0.338
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 17	Simultaneous	39	2441	9.58	10.50	1.236	76.8	1.085	0.04	0.049	0.066
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 17	Simultaneous	39	2441	9.58	10.50	1.236	76.8	1.085	0.05	0.058	0.078
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 17	Simultaneous	39	2441	9.58	10.50	1.236	76.8	1.085	0.09	0.061	0.082
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 17	Simultaneous	39	2441	9.58	10.50	1.236	76.8	1.085	-0.17	0.057	0.076
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	0.06	0.089	0.127
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	-0.16	0.053	0.076
18	Bluetooth	1Mbps	Left Cheek	0mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	-0.04	0.437	**0.624**
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	0.07	0.124	0.177
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 6	Simultaneous	39	2441	8.89	10.00	1.291	76.8	1.085	0.04	0.032	0.045
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 6	Simultaneous	39	2441	8.89	10.00	1.291	76.8	1.085	-0.07	0.022	0.031
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 6	Simultaneous	39	2441	8.89	10.00	1.291	76.8	1.085	0.01	0.099	0.139
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 6	Simultaneous	39	2441	8.89	10.00	1.291	76.8	1.085	0.01	0.030	0.042
5000MHz																
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5+18	Standalone	54	5270	17.11	18.50	1.378	91.43	1.094	-0.05	0.311	0.469
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5+18	Standalone	54	5270	17.11	18.50	1.378	91.43	1.094	-0.13	0.356	0.537
19	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5+18	Standalone	54	5270	17.11	18.50	1.378	91.43	1.094	0.08	0.658	**0.992**
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5+18	Standalone	62	5310	16.63	18.00	1.372	91.43	1.094	-0.19	0.338	0.507
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5+18	Standalone	54	5270	17.11	18.50	1.378	91.43	1.094	-0.15	0.588	0.887
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5+18	Standalone	62	5310	16.63	18.00	1.372	91.43	1.094	0.06	0.300	0.450
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5+18	DBS only	54	5270	15.69	17.00	1.352	91.43	1.094	0.03	0.515	0.762
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5+18	non DBS&DBS	54	5270	10.22	11.50	1.342	91.43	1.094	-0.1	0.079	0.116
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5+18	non DBS&DBS	54	5270	10.22	11.50	1.342	91.43	1.094	0.14	0.091	0.134
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5+18	non DBS&DBS	54	5270	10.22	11.50	1.342	91.43	1.094	0.01	0.141	0.207
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5+18	non DBS&DBS	54	5270	10.22	11.50	1.342	91.43	1.094	0.17	0.140	0.206
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	0.03	0.122	0.190
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	0.07	0.136	0.212
20	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	0.09	0.363	**0.566**
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	-0.04	0.262	0.409
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5+18(18)	non DBS&DBS	110	5550	8.16	9.50	1.361	91.43	1.094	0.06	0.051	0.076
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5+18(18)	non DBS&DBS	110	5550	8.16	9.50	1.361	91.43	1.094	0.06	0.058	0.086
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5+18(18)	non DBS&DBS	110	5550	8.16	9.50	1.361	91.43	1.094	0.16	0.138	0.206
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5+18(18)	non DBS&DBS	110	5550	8.16	9.50	1.361	91.43	1.094	0.04	0.112	0.167
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	0.07	0.127	0.185
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	0.18	0.141	0.206
21	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	-0.08	0.256	**0.374**
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	0.07	0.227	0.331
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 5+18(18)	non DBS&DBS	159	5795	8.21	9.50	1.346	91.43	1.094	0.11	0.075	0.110
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 5+18(18)	non DBS&DBS	159	5795	8.21	9.50	1.346	91.43	1.094	-0.07	0.086	0.127
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 5+18(18)	non DBS&DBS	159	5795	8.21	9.50	1.346	91.43	1.094	-0.08	0.138	0.203
	WLAN5.8GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 5+18(18)	non DBS&DBS	159	5795	8.21	9.50	1.346	91.43	1.094	-0.06	0.135	0.199

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)	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)
								750MHz												
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 4	23095	707.5	24.56	25.50	1.242	-	-	-0.11	0.219	0.272
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI 4	23095	707.5	23.74	24.50	1.191	-	-	0.07	0.183	0.218
22	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 4	23095	707.5	24.56	25.50	1.242	-	-	-0.01	0.231	**0.287**
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 4	23095	707.5	23.74	24.50	1.191	-	-	0.12	0.194	0.231
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 4	23095	707.5	24.56	25.50	1.242	-	-	0.02	0.113	0.140
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI 4	23095	707.5	23.74	24.50	1.191	-	-	0.03	0.094	0.112
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 4	23095	707.5	24.56	25.50	1.242	-	-	0.12	0.118	0.147
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI 4	23095	707.5	23.74	24.50	1.191	-	-	-0.12	0.098	0.117
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 4	23095	707.5	23.74	25.50	1.500	-	-	-0.12	0.069	0.103
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 4	23095	707.5	22.76	24.50	1.493	-	-	0.15	0.057	0.085
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 4	23095	707.5	23.74	25.50	1.500	-	-	-0.01	0.154	0.231
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 4	23095	707.5	22.76	24.50	1.493	-	-	-0.17	0.078	0.116
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 4	23095	707.5	23.74	25.50	1.500	-	-	0.11	0.134	0.201
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 4	23095	707.5	22.76	24.50	1.493	-	-	0.02	0.115	0.172
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 4	23095	707.5	23.74	25.50	1.500	-	-	0.02	0.068	0.102
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Top Side	10mm	Ant 1	DSI 4	23095	707.5	22.76	24.50	1.493	-	-	-0.18	0.057	0.085
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 4	23230	782	24.64	25.50	1.219	-	-	-0.01	0.341	0.416
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI 4	23230	782	23.98	24.50	1.127	-	-	0.08	0.267	0.301
23	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 4	23230	782	24.64	25.50	1.219	-	-	0.07	0.343	**0.485**
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI 4	23230	782	23.98	24.50	1.127	-	-	0.02	0.260	0.293
	LTE Band 13	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 4	23230	782	24.64	25.50	1.219	-	-	-0.08	0.197	0.240
	LTE Band 13	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI 4	23230	782	23.98	24.50	1.127	-	-	-0.03	0.198	0.223
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 4	23230	782	24.64	25.50	1.219	-	-	0.04	0.188	0.229
	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI 4	23230	782	23.98	24.50	1.127	-	-	0.06	0.141	0.159
	LTE Band 13	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 4	23230	782	22.97	24.50	1.422	-	-	0.09	0.160	0.228
	LTE Band 13	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI 4	23230	782	22.90	24.50	1.445	-	-	-0.03	0.161	0.233
	LTE Band 13	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 4	23230	782	22.97	24.50	1.413	-	-	-0.01	0.232	0.328
	LTE Band 13	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI 4	23230	782	22.90	24.50	1.445	-	-	0.02	0.231	0.334
	LTE Band 13	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 4	23230	782	22.97	24.50	1.422	-	-	-0.15	0.181	0.257
	LTE Band 13	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI 4	23230	782	22.90	24.50	1.445	-	-	0.05	0.179	0.259
	LTE Band 13	10M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 4	23230	782	22.97	24.50	1.422	-	-	0.07	0.160	0.228
	LTE Band 13	10M	QPSK	25	0	-	Top Side	10mm	Ant 1	DSI 4	23230	782	22.90	24.50	1.445	-	-	0.12	0.165	0.238
								835MHz												
24	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 0	DSI 4	189	836.4	26.95	28.00	1.274	-	-	0.04	0.384	**0.489**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 0	DSI 4	189	836.4	26.95	28.00	1.274	-	-	0.17	0.371	0.472
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Side	10mm	Ant 0	DSI 4	189	836.4	26.95	28.00	1.274	-	-	0.03	0.161	0.205
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 0	DSI 4	189	836.4	26.95	28.00	1.274	-	-	0.04	0.233	0.297
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 1	DSI 4	189	836.4	24.28	26.00	1.486	-	-	0.18	0.130	0.193
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 1	DSI 4	189	836.4	24.28	26.00	1.486	-	-	-0.17	0.168	0.250
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 1	DSI 4	189	836.4	24.28	26.00	1.486	-	-	-0.12	0.103	0.153
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 1	DSI 4	189	836.4	24.28	26.00	1.486	-	-	0.13	0.141	0.210
25	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 4	4182	836.4	24.16	25.00	1.213	-	-	0.06	0.423	**0.513**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 4	4182	836.4	24.16	25.00	1.213	-	-	0.09	0.410	0.497
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 4	4182	836.4	24.16	25.00	1.213	-	-	0.06	0.185	0.224
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 4	4182	836.4	24.16	25.00	1.213	-	-	-0.07	0.226	0.274
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 4	4182	836.4	21.72	23.50	1.507	-	-	0.02	0.110	0.166
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 4	4182	836.4	21.72	23.50	1.507	-	-	-0.06	0.166	0.250
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 4	4182	836.4	21.72	23.50	1.507	-	-	0.07	0.097	0.146
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 4	4182	836.4	21.72	23.50	1.507	-	-	0.06	0.109	0.164
	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 0	DSI 4	26865	831.5	24.58	25.50	1.236	-	-	0.05	0.457	0.565

	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 0	DSI 4	26865	831.5	23.63	24.50	1.222	-	-	0.02	0.349	0.426
26	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 0	DSI 4	26865	831.5	24.58	25.50	1.236	-	-	-0.01	0.458	**0.566**
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 0	DSI 4	26865	831.5	23.63	24.50	1.222	-	-	0.08	0.354	0.433
	LTE Band 26	15M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI 4	26865	831.5	24.58	25.50	1.236	-	-	0.17	0.189	0.234
	LTE Band 26	15M	QPSK	36	0	-	Right Side	10mm	Ant 0	DSI 4	26865	831.5	23.63	24.50	1.222	-	-	-0.15	0.145	0.177
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI 4	26865	831.5	24.58	25.50	1.236	-	-	0.07	0.263	0.325
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	10mm	Ant 0	DSI 4	26865	831.5	23.63	24.50	1.222	-	-	0.06	0.204	0.249
	LTE Band 26	15M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 4	26865	831.5	22.82	24.50	1.472	-	-	0.02	0.142	0.209
	LTE Band 26	15M	QPSK	36	0	-	Front	10mm	Ant 1	DSI 4	26865	831.5	22.74	24.50	1.500	-	-	0.19	0.139	0.208
	LTE Band 26	15M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 4	26865	831.5	22.82	24.50	1.472	-	-	0.01	0.192	0.283
	LTE Band 26	15M	QPSK	36	0	-	Back	10mm	Ant 1	DSI 4	26865	831.5	22.74	24.50	1.500	-	-	0.07	0.184	0.276
	LTE Band 26	15M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 4	26865	831.5	22.82	24.50	1.472	-	-	0.1	0.117	0.172
	LTE Band 26	15M	QPSK	36	0	-	Left Side	10mm	Ant 1	DSI 4	26865	831.5	22.74	24.50	1.500	-	-	-0.18	0.114	0.171
	LTE Band 26	15M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 4	26865	831.5	22.82	24.50	1.472	-	-	0.03	0.151	0.222
	LTE Band 26	15M	QPSK	36	0	-	Top Side	10mm	Ant 1	DSI 4	26865	831.5	22.74	24.50	1.500	-	-	-0.16	0.146	0.219
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 4	1413	1732.6	17.67	19.50	1.524	-	-	-0.08	0.137	0.209
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 4	1413	1732.6	17.67	19.50	1.524	-	-	0.02	0.162	0.247
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 4	1413	1732.6	17.67	19.50	1.524	-	-	0.16	0.105	0.160
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 4	1413	1732.6	17.67	19.50	1.524	-	-	-0.04	0.226	0.344
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI 4	1413	1732.6	22.10	23.50	1.380	-	-	0.11	0.396	0.547
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 4	1413	1732.6	22.10	23.50	1.380	-	-	0.06	0.505	0.697
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 4	1413	1732.6	22.10	23.50	1.380	-	-	0.03	0.135	0.186
27	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 2	DSI 4	1413	1732.6	22.10	23.50	1.380	-	-	0.03	0.715	**0.987**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 2	DSI 4	1312	1712.4	21.97	23.50	1.422	-	-	0.07	0.659	0.937
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 2	DSI 4	1513	1752.6	21.96	23.50	1.426	-	-	-0.09	0.685	0.977
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 4	20175	1732.5	22.07	23.20	1.297	-	-	0.17	0.332	0.431
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 4	20175	1732.5	22.04	23.20	1.306	-	-	-0.14	0.346	0.452
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 4	20175	1732.5	22.07	23.20	1.297	-	-	-0.04	0.424	0.550
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 4	20175	1732.5	22.04	23.20	1.306	-	-	-0.19	0.459	0.600
	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 4	20175	1732.5	22.07	23.20	1.297	-	-	-0.14	0.086	0.112
	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 4	20175	1732.5	22.04	23.20	1.306	-	-	0.04	0.111	0.145
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 4	20175	1732.5	22.07	23.20	1.297	-	-	0.14	0.584	0.758
28	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 4	20175	1732.5	22.04	23.20	1.306	-	-	0.06	0.688	**0.899**
	LTE Band 4	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 2	DSI 4	20175	1732.5	21.90	23.20	1.349	-	-	-0.16	0.629	0.848
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	20175	1732.5	24.36	25.50	1.300	-	-	0.18	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 4	20175	1732.5	23.53	24.50	1.250	-	-	-0.16	0.000	0.000
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	20175	1732.5	24.36	25.50	1.300	-	-	-0.07	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 4	20175	1732.5	23.53	24.50	1.250	-	-	0.03	0.000	0.000
	LTE Band 4	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 4	20175	1732.5	24.36	25.50	1.300	-	-	-0.01	0.065	0.085
	LTE Band 4	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	20175	1732.5	23.53	24.50	1.250	-	-	-0.17	0.056	0.070
	LTE Band 4	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	20175	1732.5	24.36	25.50	1.300	-	-	0.07	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 4	20175	1732.5	23.53	24.50	1.250	-	-	0.09	0.000	0.000
1900MHz																				
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 1	DSI 4	661	1880	18.52	20.00	1.406	-	-	-0.15	0.119	0.167
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 1	DSI 4	661	1880	18.52	20.00	1.406	-	-	-0.12	0.150	0.211
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 1	DSI 4	661	1880	18.52	20.00	1.406	-	-	-0.15	0.117	0.165
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Top Side	10mm	Ant 1	DSI 4	661	1880	18.52	20.00	1.406	-	-	-0.15	0.181	0.254
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 2	DSI 4	661	1880	24.02	25.00	1.253	-	-	0.15	0.418	0.524
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 2	DSI 4	661	1880	24.02	25.00	1.253	-	-	0.13	0.535	0.670
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 2	DSI 4	661	1880	24.02	25.00	1.253	-	-	-0.13	0.136	0.170
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 2	DSI 4	661	1880	24.02	25.00	1.253	-	-	0.18	0.790	0.990
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 2	DSI 4	512	1850.2	23.92	25.00	1.282	-	-	0.01	0.745	0.955
29	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 2	DSI 4	810	1909.8	23.90	25.00	1.288	-	-	0.05	0.803	**1.034**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 4	9400	1880	15.65	17.50	1.531	-	-	0.06	0.122	0.187
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 4	9400	1880	15.65	17.50	1.531	-	-	0.05	0.153	0.234

	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 4	9400	1880	15.65	17.50	1.531	-	-	0.06	0.114	0.175
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 4	9400	1880	15.65	17.50	1.531	-	-	0.18	0.200	0.306
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI 4	9400	1880	20.15	21.50	1.365	-	-	0.11	0.395	0.539
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI 4	9400	1880	20.15	21.50	1.365	-	-	0.11	0.503	0.686
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI 4	9400	1880	20.15	21.50	1.365	-	-	0.06	0.146	0.199
30	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 2	DSI 4	9400	1880	20.15	21.50	1.365	-	-	0.05	0.795	**1.085**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 2	DSI 4	9262	1852.4	20.05	21.50	1.396	-	-	0.07	0.768	1.072
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 2	DSI 4	9538	1907.6	20.11	21.50	1.377	-	-	-0.07	0.765	1.054
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 4	18900	1880	20.28	21.50	1.324	-	-	-0.1	0.339	0.449
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 4	18900	1880	20.21	21.50	1.346	-	-	0.08	0.337	0.454
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 4	18900	1880	20.28	21.50	1.324	-	-	0.08	0.447	0.592
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 4	18900	1880	20.21	21.50	1.346	-	-	0.05	0.448	0.603
	LTE Band 2	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 4	18900	1880	20.28	21.50	1.324	-	-	-0.02	0.108	0.143
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 4	18900	1880	20.21	21.50	1.346	-	-	-0.08	0.108	0.145
31	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 4	18900	1880	20.28	21.50	1.324	-	-	0.02	0.705	**0.934**
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 4	18700	1860	20.24	21.50	1.337	-	-	0.01	0.691	0.924
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 4	19100	1900	20.18	21.50	1.355	-	-	0.05	0.682	0.924
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 4	18900	1880	20.21	21.50	1.346	-	-	-0.13	0.687	0.925
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 4	18700	1860	20.17	21.50	1.358	-	-	0.02	0.659	0.895
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 4	19100	1900	20.12	21.50	1.374	-	-	0.04	0.652	0.896
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 2	DSI 4	18900	1880	20.15	21.50	1.365	-	-	0.03	0.666	0.909
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	18900	1880	22.34	23.50	1.306	-	-	0.04	0.209	0.273
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 4	18900	1880	22.28	23.50	1.324	-	-	0.04	0.214	0.283
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	18900	1880	22.34	23.50	1.306	-	-	0.19	0.302	0.394
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 4	18900	1880	22.28	23.50	1.324	-	-	0.06	0.298	0.395
	LTE Band 2	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 4	18900	1880	22.34	23.50	1.306	-	-	-0.05	0.427	0.558
	LTE Band 2	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	18900	1880	22.28	23.50	1.324	-	-	-0.07	0.426	0.564
	LTE Band 2	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	18900	1880	22.34	23.50	1.306	-	-	-0.07	0.000	0.000
	LTE Band 2	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 4	18900	1880	22.28	23.50	1.324	-	-	0.09	0.000	0.000
								2600MHz												
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 4	21100	2535	21.18	22.00	1.208	-	-	-0.05	0.264	0.319
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 4	21100	2535	21.09	22.00	1.233	-	-	0.14	0.267	0.329
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 4	21100	2535	21.18	22.00	1.208	-	-	0.16	0.430	0.519
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 4	21100	2535	21.09	22.00	1.233	-	-	0.06	0.434	0.535
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 4	21100	2535	21.18	22.00	1.208	-	-	-0.09	0.119	0.144
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 4	21100	2535	21.09	22.00	1.233	-	-	-0.04	0.119	0.147
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 4	21100	2535	21.18	22.00	1.208	-	-	0.05	0.452	0.546
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 4	21100	2535	21.09	22.00	1.233	-	-	0.09	0.451	0.556
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	21100	2535	20.30	21.00	1.175	-	-	-0.11	0.233	0.274
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 4	21100	2535	20.14	21.00	1.219	-	-	0.11	0.235	0.286
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	21100	2535	20.30	21.00	1.175	-	-	0.03	0.283	0.332
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 4	21100	2535	20.14	21.00	1.219	-	-	-0.16	0.289	0.352
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 4	21100	2535	20.30	21.00	1.175	-	-	0.16	0.538	0.632
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	21100	2535	20.14	21.00	1.219	-	-	-0.08	0.544	0.663
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	20850	2510	19.93	21.00	1.279	-	-	0.08	0.477	0.610
32	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	21350	2560	20.10	21.00	1.230	-	-	0.09	0.563	**0.693**
	LTE Band 7	20M	QPSK	100	0	-	Right Side	10mm	Ant 4	DSI 4	21100	2535	20.25	21.00	1.189	-	-	0.03	0.550	0.654
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	21100	2535	20.30	21.00	1.175	-	-	0.09	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 4	21100	2535	20.14	21.00	1.219	-	-	0.02	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI 4	40620	2593	22.55	22.70	1.035	62.9	1.006	0.03	0.300	0.312
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI 4	40620	2593	22.51	22.70	1.045	62.9	1.006	0.04	0.307	0.323
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI 4	40620	2593	22.55	22.70	1.035	62.9	1.006	0.02	0.398	0.414
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI 4	40620	2593	22.51	22.70	1.045	62.9	1.006	0.02	0.394	0.414
33	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 4	40620	2593	22.55	22.70	1.035	62.9	1.006	0.01	0.642	**0.669**
	LTE Band 41C	20M	QPSK	1	99	-	Right Side	10mm	Ant 4	DSI 4	40620+ 40818	2593+ 2612.8	21.80	22.70	1.230	62.9	1.006	0.07	0.531	0.657
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 4	39750	2506	22.31	22.70	1.094	62.9	1.006	0.06	0.601	0.661

	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 4	40185	2549.5	22.54	22.70	1.038	62.9	1.006	0.05	0.562	0.587
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 4	41055	2636.5	22.36	22.70	1.081	62.9	1.006	-0.01	0.556	0.605
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 4	DSI 4	41490	2680	22.25	22.70	1.109	62.9	1.006	0.06	0.559	0.624
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	40620	2593	22.51	22.70	1.045	62.9	1.006	0.03	0.631	0.663
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	39750	2506	22.40	22.70	1.072	62.9	1.006	0.07	0.601	0.648
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	40185	2549.5	22.30	22.70	1.096	62.9	1.006	0.01	0.581	0.641
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	41055	2636.5	22.13	22.70	1.140	62.9	1.006	-0.11	0.575	0.660
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 4	DSI 4	41490	2680	22.40	22.70	1.072	62.9	1.006	0.05	0.563	0.607
	LTE Band 41	20M	QPSK	100	0	-	Right Side	10mm	Ant 4	DSI 4	40620	2593	22.40	22.70	1.072	62.9	1.006	0.06	0.571	0.616
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI 4	40620	2593	22.55	22.70	1.035	62.9	1.006	0.03	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI 4	40620	2593	22.51	22.70	1.045	62.9	1.006	0.06	0.000	0.000
	LTE Band 38	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 4	38000	2595	23.78	24.00	1.052	62.9	1.006	0.02	0.326	0.345
	LTE Band 38	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 4	38000	2595	23.66	24.00	1.081	62.9	1.006	0.12	0.330	0.359
	LTE Band 38	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 4	38000	2595	23.78	24.00	1.052	62.9	1.006	-0.12	0.531	0.562
	LTE Band 38	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 4	38000	2595	23.66	24.00	1.081	62.9	1.006	-0.15	0.550	0.598
	LTE Band 38	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 4	38000	2595	23.78	24.00	1.052	62.9	1.006	-0.17	0.141	0.149
	LTE Band 38	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 4	38000	2595	23.66	24.00	1.081	62.9	1.006	0.08	0.171	0.186
	LTE Band 38	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 4	38000	2595	23.78	24.00	1.052	62.9	1.006	-0.08	0.590	0.624
	LTE Band 38	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 4	38000	2595	23.66	24.00	1.081	62.9	1.006	0.03	0.571	0.621
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI 4	40620	2593	23.45	23.50	1.012	62.9	1.006	-0.12	0.293	0.298
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI 4	40620	2593	23.35	23.50	1.035	62.9	1.006	0.07	0.297	0.309
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI 4	40620	2593	23.45	23.50	1.012	62.9	1.006	0.01	0.477	0.485
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI 4	40620	2593	23.35	23.50	1.035	62.9	1.006	0.04	0.494	0.514
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI 4	40620	2593	23.45	23.50	1.012	62.9	1.006	0.1	0.127	0.129
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI 4	40620	2593	23.35	23.50	1.035	62.9	1.006	0.11	0.154	0.160
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 2	DSI 4	40620	2593	23.45	23.50	1.012	62.9	1.006	-0.14	0.530	0.539
	LTE Band 41C	20M	QPSK	1	99	-	Bottom Side	10mm	Ant 2	DSI 4	40620+ 40818	2593+ 2612.8	22.74	23.50	1.191	62.9	1.006	0.01	0.421	0.505
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 2	DSI 4	40620	2593	23.35	23.50	1.035	62.9	1.006	0.03	0.509	0.530
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 4	40620	2593	19.93	20.50	1.140	62.9	1.006	-0.06	0.163	0.187
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 4	40620	2593	19.77	20.50	1.183	62.9	1.006	0.02	0.162	0.193
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 4	40620	2593	19.93	20.50	1.140	62.9	1.006	-0.14	0.185	0.212
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 4	40620	2593	19.77	20.50	1.183	62.9	1.006	0.18	0.186	0.221
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 4	40620	2593	19.93	20.50	1.140	62.9	1.006	-0.13	0.136	0.156
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 4	40620	2593	19.77	20.50	1.183	62.9	1.006	-0.17	0.136	0.162
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 4	40620	2593	19.93	20.50	1.140	62.9	1.006	0.01	0.249	0.286
	LTE Band 41C	20M	QPSK	1	99	-	Top Side	10mm	Ant 1	DSI 4	40620+ 40818	2593+ 2612.8	19.22	20.50	1.343	62.9	1.006	0.09	0.201	0.272
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI 4	40620	2593	19.77	20.50	1.183	62.9	1.006	0.03	0.225	0.268
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI 4	40620	2593	20.80	22.00	1.318	62.9	1.006	-0.03	0.252	0.334
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI 4	40620	2593	20.76	22.00	1.330	62.9	1.006	-0.07	0.254	0.340
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI 4	40620	2593	20.80	22.00	1.318	62.9	1.006	0.06	0.204	0.271
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI 4	40620	2593	20.76	22.00	1.330	62.9	1.006	-0.1	0.213	0.285
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI 4	40620	2593	20.80	22.00	1.318	62.9	1.006	0.03	0.400	0.530
	LTE Band 41C	20M	QPSK	1	99	-	Left Side	10mm	Ant 3	DSI 4	40620+ 40818	2593+ 2612.8	20.11	22.00	1.545	62.9	1.006	0.01	0.321	0.499
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI 4	40620	2593	20.76	22.00	1.330	62.9	1.006	0.09	0.387	0.518
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 3	DSI 4	40620	2593	20.80	22.00	1.318	62.9	1.006	-0.15	0.046	0.061
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 3	DSI 4	40620	2593	20.76	22.00	1.330	62.9	1.006	0.09	0.046	0.062
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 4	518598	2592.99	19.49	19.70	1.050	-	-	0.07	0.256	0.269
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI 4	518598	2592.99	19.46	19.70	1.057	-	-	0.16	0.239	0.253
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	518598	2592.99	19.49	19.70	1.050	-	-	0.02	0.315	0.331
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI 4	518598	2592.99	19.46	19.70	1.057	-	-	-0.11	0.299	0.316
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 4	DSI 4	518598	2592.99	19.49	19.70	1.050	-	-	-0.09	0.490	0.514
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 4	DSI 4	518598	2592.99	19.46	19.70	1.057	-	-	-0.17	0.465	0.491
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	518598	2592.99	19.49	19.70	1.050	-	-	0.04	0.000	0.000
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI 4	518598	2592.99	19.46	19.70	1.057	-	-	0.02	0.000	0.000
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	518598	2592.99	21.77	22.20	1.104	-	-	0.06	0.348	0.384

	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI 4	518598	2592.99	21.72	22.20	1.117	-	-	0.05	0.343	0.383
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	518598	2592.99	21.77	22.20	1.104	-	-	-0.14	0.519	0.573
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI 4	518598	2592.99	21.72	22.20	1.117	-	-	0.07	0.531	0.593
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 4	518598	2592.99	21.77	22.20	1.104	-	-	-0.06	0.153	0.169
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI 4	518598	2592.99	21.72	22.20	1.117	-	-	0.02	0.147	0.164
34	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 2	DSI 4	518598	2592.99	21.77	22.20	1.104	-	-	0.02	0.586	**0.647**
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 2	DSI 4	518598	2592.99	21.72	22.20	1.117	-	-	0.07	0.553	0.618
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	518598	2592.99	17.97	19.00	1.268	-	-	0.03	0.158	0.200
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	518598	2592.99	17.93	19.00	1.279	-	-	0.01	0.159	0.203
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	518598	2592.99	17.97	19.00	1.268	-	-	-0.09	0.188	0.238
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	518598	2592.99	17.93	19.00	1.279	-	-	0.04	0.194	0.248
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	518598	2592.99	17.97	19.00	1.268	-	-	0.09	0.128	0.162
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	518598	2592.99	17.93	19.00	1.279	-	-	0.12	0.142	0.182
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	518598	2592.99	17.97	19.00	1.268	-	-	0.11	0.213	0.270
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	518598	2592.99	17.93	19.00	1.279	-	-	0.06	0.252	0.322
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 4	518598	2592.99	18.07	19.50	1.390	-	-	0.02	0.190	0.264
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI 4	518598	2592.99	17.94	19.50	1.432	-	-	0.08	0.222	0.318
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 4	518598	2592.99	18.07	19.50	1.390	-	-	0.03	0.150	0.208
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI 4	518598	2592.99	17.94	19.50	1.432	-	-	-0.18	0.174	0.249
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 4	518598	2592.99	18.07	19.50	1.390	-	-	-0.12	0.306	0.425
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI 4	518598	2592.99	17.94	19.50	1.432	-	-	0.07	0.359	0.514
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 4	518598	2592.99	18.07	19.50	1.390	-	-	0.04	0.000	0.000
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI 4	518598	2592.99	17.94	19.50	1.432	-	-	0.04	0.043	0.062
3500MHz																				
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI 4	42590	3500	20.17	20.50	1.079	62.9	1.006	-0.12	0.126	0.137
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI 4	42590	3500	19.92	20.50	1.143	62.9	1.006	0.17	0.128	0.147
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI 4	42590	3500	20.17	20.50	1.079	62.9	1.006	0.02	0.171	0.186
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI 4	42590	3500	19.92	20.50	1.143	62.9	1.006	-0.12	0.161	0.185
	LTE Band 42	20M	QPSK	1	0	-	Right Side	10mm	Ant 5	DSI 4	42590	3500	20.17	20.50	1.079	62.9	1.006	0.18	0.105	0.114
	LTE Band 42	20M	QPSK	50	0	-	Right Side	10mm	Ant 5	DSI 4	42590	3500	19.92	20.50	1.143	62.9	1.006	0.09	0.095	0.109
	LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 5	DSI 4	42590	3500	20.17	20.50	1.079	62.9	1.006	0.04	0.319	0.346
	LTE Band 42C	20M	QPSK	1	99	-	Top Side	10mm	Ant 5	DSI 4	42590+ 42788	3500+ 3519.8	19.05	20.50	1.396	62.9	1.006	0.09	0.230	0.323
	LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 5	DSI 4	42590	3500	19.92	20.50	1.143	62.9	1.006	-0.08	0.295	0.339
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI 4	42590	3500	19.60	21.00	1.380	62.9	1.006	0.03	0.126	0.175
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI 4	42590	3500	19.31	21.00	1.476	62.9	1.006	0.1	0.116	0.172
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI 4	42590	3500	19.60	21.00	1.380	62.9	1.006	0.12	0.305	0.424
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI 4	42590	3500	19.31	21.00	1.476	62.9	1.006	0.08	0.298	0.442
	LTE Band 42	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI 4	42590	3500	19.60	21.00	1.380	62.9	1.006	0.08	0.131	0.182
	LTE Band 42	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI 4	42590	3500	19.31	21.00	1.476	62.9	1.006	0.07	0.130	0.193
	LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI 4	42590	3500	19.60	21.00	1.380	62.9	1.006	0.08	0.354	0.492
	LTE Band 42C	20M	QPSK	1	99	-	Top Side	10mm	Ant 1	DSI 4	42590+ 42788	3500+ 3519.8	18.61	20.50	1.545	62.9	1.006	0.01	0.311	0.483
	LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI 4	42590	3500	19.31	21.00	1.476	62.9	1.006	0.06	0.331	0.491
	LTE Band 42	20M	QPSK	1	0	-	Front	10mm	Ant 6	DSI 4	42590	3500	17.94	18.50	1.138	62.9	1.006	0.19	0.110	0.126
	LTE Band 42	20M	QPSK	50	0	-	Front	10mm	Ant 6	DSI 4	42590	3500	17.66	18.50	1.213	62.9	1.006	-0.06	0.117	0.143
	LTE Band 42	20M	QPSK	1	0	-	Back	10mm	Ant 6	DSI 4	42590	3500	17.94	18.50	1.138	62.9	1.006	-0.1	0.113	0.129
	LTE Band 42	20M	QPSK	50	0	-	Back	10mm	Ant 6	DSI 4	42590	3500	17.66	18.50	1.213	62.9	1.006	-0.17	0.104	0.127
	LTE Band 42	20M	QPSK	1	0	-	Right Side	10mm	Ant 6	DSI 4	42590	3500	17.94	18.50	1.138	62.9	1.006	-0.08	0.249	0.285
	LTE Band 42C	20M	QPSK	1	99	-	Right Side	10mm	Ant 6	DSI 4	42590+ 42788	3500+ 3519.8	16.72	18.00	1.343	62.9	1.006	0.01	0.209	0.282
	LTE Band 42	20M	QPSK	50	0	-	Right Side	10mm	Ant 6	DSI 4	42590	3500	17.66	18.50	1.213	62.9	1.006	0.17	0.231	0.282
	LTE Band 42	20M	QPSK	1	0	-	Top Side	10mm	Ant 6	DSI 4	42590	3500	17.94	18.50	1.138	62.9	1.006	0.19	0.031	0.035
	LTE Band 42	20M	QPSK	50	0	-	Top Side	10mm	Ant 6	DSI 4	42590	3500	17.66	18.50	1.213	62.9	1.006	0.06	0.031	0.038
	LTE Band 42	20M	QPSK	1	0		Front	10mm	Ant 7	DSI 4	42590	3500	18.18	19.00	1.208	62.9	1.006	0.05	0.035	0.043
	LTE Band 42	20M	QPSK	50	0		Front	10mm	Ant 7	DSI 4	42590	3500	18.11	19.00	1.227	62.9	1.006	0.06	0.033	0.041
	LTE Band 42	20M	QPSK	1	0		Back	10mm	Ant 7	DSI 4	42590	3500	18.18	19.00	1.208	62.9	1.006	0.05	0.647	0.786
	LTE Band 42	20M	QPSK	1	0		Back	10mm	Ant 7	DSI 4	42190	3460	18.07	19.00	1.239	62.9	1.006	0.08	0.420	0.523

35	LTE Band 42	20M	QPSK	1	0		Back	10mm	Ant 7	DSI 4	42990	3540	18.07	19.00	1.239	62.9	1.006	0.06	0.744	**0.927**
	LTE Band 42C	20M	QPSK	1	0		Back	10mm	Ant 7	DSI 4	42990+ 42792	3540+ 3520.2	17.17	18.50	1.358	62.9	1.006	0.03	0.641	0.876
	LTE Band 42	20M	QPSK	50	0		Back	10mm	Ant 7	DSI 4	42590	3500	18.11	19.00	1.227	62.9	1.006	0.07	0.637	0.787
	LTE Band 42	20M	QPSK	50	0		Back	10mm	Ant 7	DSI 4	42190	3460	17.92	19.00	1.282	62.9	1.006	-0.14	0.512	0.660
	LTE Band 42	20M	QPSK	50	0		Back	10mm	Ant 7	DSI 4	42990	3540	17.98	19.00	1.265	62.9	1.006	-0.08	0.677	0.861
	LTE Band 42	20M	QPSK	100	0		Back	10mm	Ant 7	DSI 4	42590	3500	17.96	19.00	1.271	62.9	1.006	0.16	0.607	0.776
	LTE Band 42	20M	QPSK	1	0		Left Side	10mm	Ant 7	DSI 4	42590	3500	18.18	19.00	1.208	62.9	1.006	0.08	0.205	0.249
	LTE Band 42	20M	QPSK	50	0		Left Side	10mm	Ant 7	DSI 4	42590	3500	18.11	19.00	1.227	62.9	1.006	-0.02	0.195	0.241
	LTE Band 42	20M	QPSK	1	0		Top Side	10mm	Ant 7	DSI 4	42590	3500	18.18	19.00	1.208	62.9	1.006	0.02	0.000	0.000
	LTE Band 42	20M	QPSK	50	0		Top Side	10mm	Ant 7	DSI 4	42590	3500	18.11	19.00	1.227	62.9	1.006	0.08	0.000	0.000
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 4	656000	3840	17.78	18.50	1.180	-	-	0.04	0.111	0.131
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 4	656000	3840	17.68	18.50	1.208	-	-	-0.18	0.121	0.146
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 4	656000	3840	17.78	18.50	1.180	-	-	-0.17	0.101	0.119
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 4	656000	3840	17.68	18.50	1.208	-	-	0.15	0.101	0.122
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 4	656000	3840	17.78	18.50	1.180	-	-	0.03	0.030	0.035
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 4	656000	3840	17.68	18.50	1.208	-	-	-0.07	0.000	0.000
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 4	656000	3840	17.78	18.50	1.180	-	-	0.03	0.087	0.103
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 4	656000	3840	17.68	18.50	1.208	-	-	0.14	0.101	0.122
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 4	656000	3840	17.78	18.50	1.180	-	-	0.03	0.274	0.323
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 4	656000	3840	17.68	18.50	1.208	-	-	0.06	0.346	0.418
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 4	633334	3500.01	17.76	18.50	1.186	-	-	0.08	0.119	0.141
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 4	633334	3500.01	17.59	18.50	1.233	-	-	-0.07	0.116	0.143
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 4	633334	3500.01	17.76	18.50	1.186	-	-	0.12	0.154	0.183
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 4	633334	3500.01	17.59	18.50	1.233	-	-	0.09	0.144	0.178
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 4	633334	3500.01	17.76	18.50	1.186	-	-	0.08	0.040	0.047
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 4	633334	3500.01	17.59	18.50	1.233	-	-	-0.07	0.052	0.064
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 4	633334	3500.01	17.76	18.50	1.186	-	-	0.07	0.085	0.101
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 4	633334	3500.01	17.59	18.50	1.233	-	-	0.13	0.099	0.122
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 4	633334	3500.01	17.76	18.50	1.186	-	-	0.02	0.301	0.357
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 4	633334	3500.01	17.59	18.50	1.233	-	-	0.01	0.306	0.377
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	656000	3840	17.28	19.00	1.486	-	-	0.01	0.088	0.131
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	656000	3840	17.20	19.00	1.514	-	-	0.03	0.097	0.147
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	656000	3840	17.28	19.00	1.486	-	-	-0.04	0.229	0.340
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	656000	3840	17.20	19.00	1.514	-	-	0.05	0.208	0.315
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	656000	3840	17.28	19.00	1.486	-	-	-0.01	0.085	0.126
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	656000	3840	17.20	19.00	1.514	-	-	0.05	0.080	0.121
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	656000	3840	17.28	19.00	1.486	-	-	-0.01	0.331	0.492
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	656000	3840	17.20	19.00	1.514	-	-	0.03	0.270	0.409
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	633334	3500.01	17.34	19.00	1.466	-	-	0.01	0.111	0.163
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	633334	3500.01	17.27	19.00	1.489	-	-	-0.02	0.113	0.168
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	633334	3500.01	17.34	19.00	1.466	-	-	0.04	0.261	0.383
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	633334	3500.01	17.27	19.00	1.489	-	-	0.07	0.284	0.423
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	633334	3500.01	17.34	19.00	1.466	-	-	-0.01	0.141	0.207
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	633334	3500.01	17.27	19.00	1.489	-	-	0.07	0.154	0.229
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	633334	3500.01	17.34	19.00	1.466	-	-	-0.01	0.339	0.497
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	633334	3500.01	17.27	19.00	1.489	-	-	0.05	0.351	0.523
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 4	656000	3840	16.02	17.50	1.406	-	-	0.12	0.122	0.172
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 4	656000	3840	15.98	17.50	1.419	-	-	-0.15	0.116	0.165
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 4	656000	3840	16.02	17.50	1.406	-	-	-0.1	0.122	0.172
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 4	656000	3840	15.98	17.50	1.419	-	-	0.09	0.119	0.169
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 4	656000	3840	16.02	17.50	1.406	-	-	-0.05	0.235	0.330
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 4	656000	3840	15.98	17.50	1.419	-	-	0.02	0.219	0.311
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 4	656000	3840	16.02	17.50	1.406	-	-	-0.17	0.044	0.062
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 4	656000	3840	15.98	17.50	1.419	-	-	-0.16	0.044	0.062
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 4	633334	3500.01	16.28	17.50	1.324	-	-	0.07	0.165	0.219
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 4	633334	3500.01	16.21	17.50	1.346	-	-	0.07	0.200	0.269

	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 4	633334	3500.01	16.28	17.50	1.324	-	-	0.03	0.151	0.200
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 4	633334	3500.01	16.21	17.50	1.346	-	-	0.02	0.213	0.287
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 4	633334	3500.01	16.28	17.50	1.324	-	-	-0.19	0.326	0.432
36	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 4	633334	3500.01	16.21	17.50	1.346	-	-	-0.03	0.445	**0.599**
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 4	633334	3500.01	16.28	17.50	1.324	-	-	0.18	0.086	0.114
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 4	633334	3500.01	16.21	17.50	1.346	-	-	0.06	0.067	0.090
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 4	656000	3840	16.88	18.50	1.452	-	-	0.04	0.000	0.000
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 4	656000	3840	16.77	18.50	1.489	-	-	-0.17	0.000	0.000
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	656000	3840	16.88	18.50	1.452	-	-	0.05	0.239	0.347
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	656000	3840	16.77	18.50	1.489	-	-	-0.06	0.203	0.302
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 4	656000	3840	16.88	18.50	1.452	-	-	0.07	0.078	0.113
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 4	656000	3840	16.77	18.50	1.489	-	-	0.09	0.068	0.101
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 4	656000	3840	16.88	18.50	1.452	-	-	0.06	0.000	0.000
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 4	656000	3840	16.77	18.50	1.489	-	-	-0.09	0.000	0.000
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 4	633334	3500.01	17.08	18.50	1.387	-	-	-0.17	0.052	0.072
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 4	633334	3500.01	16.94	18.50	1.432	-	-	0.07	0.043	0.062
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	633334	3500.01	17.08	18.50	1.387	-	-	-0.08	0.300	0.416
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	633334	3500.01	16.94	18.50	1.432	-	-	0.11	0.417	0.597
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 4	633334	3500.01	17.08	18.50	1.387	-	-	-0.05	0.132	0.183
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 4	633334	3500.01	16.94	18.50	1.432	-	-	0.15	0.155	0.222
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 4	633334	3500.01	17.08	18.50	1.387	-	-	0.05	0.040	0.055
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 4	633334	3500.01	16.94	18.50	1.432	-	-	0.11	0.000	0.000
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 4	650000	3750	17.34	18.00	1.164	-	-	-0.1	0.098	0.114
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 4	650000	3750	17.23	18.00	1.194	-	-	-0.07	0.110	0.131
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 4	650000	3750	17.34	18.00	1.164	-	-	0.05	0.113	0.132
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 4	650000	3750	17.23	18.00	1.194	-	-	0.17	0.114	0.136
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 4	650000	3750	17.34	18.00	1.164	-	-	0.19	0.000	0.000
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 4	650000	3750	17.23	18.00	1.194	-	-	0.06	0.045	0.054
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 4	650000	3750	17.34	18.00	1.164	-	-	-0.11	0.089	0.104
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 4	650000	3750	17.23	18.00	1.194	-	-	-0.15	0.104	0.124
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 4	650000	3750	17.34	18.00	1.164	-	-	-0.1	0.275	0.320
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 4	650000	3750	17.23	18.00	1.194	-	-	0.03	0.312	0.373
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 4	633334	3500.01	17.26	18.00	1.186	-	-	0.04	0.108	0.128
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI 4	633334	3500.01	17.18	18.00	1.208	-	-	-0.17	0.102	0.123
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 4	633334	3500.01	17.26	18.00	1.186	-	-	0.03	0.087	0.103
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI 4	633334	3500.01	17.18	18.00	1.208	-	-	0.02	0.140	0.169
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 4	633334	3500.01	17.26	18.00	1.186	-	-	-0.11	0.000	0.000
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI 4	633334	3500.01	17.18	18.00	1.208	-	-	0.04	0.051	0.062
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 4	633334	3500.01	17.26	18.00	1.186	-	-	0.05	0.089	0.106
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 5	DSI 4	633334	3500.01	17.18	18.00	1.208	-	-	-0.09	0.118	0.143
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 4	633334	3500.01	17.26	18.00	1.186	-	-	0.01	0.306	0.363
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 5	DSI 4	633334	3500.01	17.18	18.00	1.208	-	-	0.16	0.304	0.367
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	650000	3750	16.81	18.50	1.476	-	-	-0.04	0.147	0.217
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	650000	3750	16.74	18.50	1.500	-	-	0.17	0.154	0.231
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	650000	3750	16.81	18.50	1.476	-	-	-0.01	0.236	0.348
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	650000	3750	16.74	18.50	1.500	-	-	0.09	0.275	0.412
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	650000	3750	16.81	18.50	1.476	-	-	-0.17	0.082	0.121
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	650000	3750	16.74	18.50	1.500	-	-	-0.14	0.095	0.142
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	650000	3750	16.81	18.50	1.476	-	-	-0.03	0.340	0.502
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	650000	3750	16.74	18.50	1.500	-	-	-0.06	0.372	0.558
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	633334	3500.01	16.93	18.50	1.435	-	-	0.14	0.124	0.178
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI 4	633334	3500.01	16.87	18.50	1.455	-	-	0.05	0.134	0.195
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	633334	3500.01	16.93	18.50	1.435	-	-	0.04	0.314	0.451
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI 4	633334	3500.01	16.87	18.50	1.455	-	-	0.1	0.293	0.426
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	633334	3500.01	16.93	18.50	1.435	-	-	-0.01	0.133	0.191
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI 4	633334	3500.01	16.87	18.50	1.455	-	-	0.11	0.114	0.166

	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	633334	3500.01	16.93	18.50	1.435	-	-	0.05	0.302	0.434
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI 4	633334	3500.01	16.87	18.50	1.455	-	-	-0.04	0.323	0.470
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 4	650000	3750	16.73	18.00	1.340	-	-	-0.1	0.205	0.275
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 4	650000	3750	16.55	18.00	1.396	-	-	0.04	0.198	0.276
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 4	650000	3750	16.73	18.00	1.340	-	-	0.16	0.174	0.233
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 4	650000	3750	16.55	18.00	1.396	-	-	0.02	0.181	0.253
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 4	650000	3750	16.73	18.00	1.340	-	-	-0.01	0.388	0.520
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 4	650000	3750	16.55	18.00	1.396	-	-	0.17	0.378	0.528
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 4	650000	3750	16.73	18.00	1.340	-	-	-0.07	0.071	0.095
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 4	650000	3750	16.55	18.00	1.396	-	-	0.03	0.071	0.099
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 4	633334	3500.01	16.93	18.00	1.279	-	-	-0.02	0.148	0.189
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI 4	633334	3500.01	16.88	18.00	1.294	-	-	0.08	0.201	0.260
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 4	633334	3500.01	16.93	18.00	1.279	-	-	0.09	0.143	0.183
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI 4	633334	3500.01	16.88	18.00	1.294	-	-	0.19	0.192	0.248
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 4	633334	3500.01	16.93	18.00	1.279	-	-	-0.18	0.331	0.423
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 6	DSI 4	633334	3500.01	16.88	18.00	1.294	-	-	-0.03	0.384	0.497
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 4	633334	3500.01	16.93	18.00	1.279	-	-	0.11	0.000	0.000
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI 4	633334	3500.01	16.88	18.00	1.294	-	-	0.14	0.051	0.066
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 4	650000	3750	16.96	18.50	1.426	-	-	0.14	0.000	0.000
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 4	650000	3750	16.78	18.50	1.486	-	-	0.05	0.000	0.000
37	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	650000	3750	16.96	18.50	1.426	-	-	-0.02	0.568	**0.810**
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	650000	3750	16.78	18.50	1.486	-	-	0.06	0.434	0.645
	FR1 n78	100M	QPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	650000	3750	16.66	18.50	1.528	-	-	0.09	0.412	0.629
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 4	650000	3750	16.96	18.50	1.426	-	-	-0.18	0.132	0.188
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 4	650000	3750	16.78	18.50	1.486	-	-	0.03	0.124	0.184
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 4	650000	3750	16.96	18.50	1.426	-	-	-0.02	0.000	0.000
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 4	650000	3750	16.78	18.50	1.486	-	-	-0.04	0.000	0.000
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 4	633334	3500.01	17.07	18.50	1.390	-	-	0.05	0.093	0.129
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI 4	633334	3500.01	17.03	18.50	1.403	-	-	-0.1	0.095	0.133
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	633334	3500.01	17.07	18.50	1.390	-	-	0.16	0.335	0.466
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI 4	633334	3500.01	17.03	18.50	1.403	-	-	-0.14	0.401	0.563
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 4	633334	3500.01	17.07	18.50	1.390	-	-	-0.17	0.224	0.311
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 7	DSI 4	633334	3500.01	17.03	18.50	1.403	-	-	-0.14	0.244	0.342
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 4	633334	3500.01	17.07	18.50	1.390	-	-	0.18	0.000	0.000
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI 4	633334	3500.01	17.03	18.50	1.403	-	-	-0.13	0.000	0.000

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 17+6(6)	Full Power	1	2412	17.70	19.00	1.349	98.47	1.016	0.02	0.194	0.266
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 17+6(6)	Full Power	1	2412	17.70	19.00	1.349	98.47	1.016	0.06	0.576	0.789
38	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 17+6(17)	Full Power	11	2462	17.60	19.00	1.380	98.47	1.016	0.03	0.601	**0.843**
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 17+6(17)	Full Power	6	2437	17.30	19.00	1.479	98.47	1.016	0.09	0.512	0.769
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 17+6(6)	Full Power	1	2412	17.70	19.00	1.349	98.47	1.016	0.12	0.371	0.508
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 17+6(6)	Full Power	1	2412	17.70	19.00	1.349	98.47	1.016	0.09	0.145	0.199
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 17+6(17)	non DBS	11	2462	15.71	17.00	1.346	98.47	1.016	0.03	0.391	0.535
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 17+6(17)	DBS	11	2462	13.25	14.50	1.334	98.47	1.016	0.03	0.165	0.224
	Bluetooth	1Mbps	Front	10mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	0.08	0.046	0.062
	Bluetooth	1Mbps	Back	10mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	0.12	0.145	0.196
	Bluetooth	1Mbps	Right Side	10mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	0.09	0.033	0.045
	Bluetooth	1Mbps	Top Side	10mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	0.02	0.095	0.128
	Bluetooth	1Mbps	Front	10mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	0.06	0.099	0.141
	Bluetooth	1Mbps	Back	10mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	0.06	0.069	0.098
39	Bluetooth	1Mbps	Right Side	10mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	0.14	0.162	**0.231**
	Bluetooth	1Mbps	Top Side	10mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	0.02	0.001	0.001
5000MHz																
	WLAN5.2GHz	802.11a 6Mbps	Front	10mm	Ant 5+18	Full Power	44	5220	20.50	22.00	1.414	96.55	1.036	0.06	0.269	0.394
	WLAN5.2GHz	802.11a 6Mbps	Back	10mm	Ant 5+18	Full Power	44	5220	20.50	22.00	1.414	96.55	1.036	0.05	0.361	0.529
	WLAN5.2GHz	802.11a 6Mbps	Right Side	10mm	Ant 5+18	Full Power	44	5220	20.50	22.00	1.414	96.55	1.036	0.06	0.318	0.466
40	WLAN5.2GHz	802.11a 6Mbps	Top Side	10mm	Ant 5+18	Full Power	44	5220	20.50	22.00	1.414	96.55	1.036	-0.02	0.638	**0.934**
	WLAN5.2GHz	802.11a 6Mbps	Top Side	10mm	Ant 5+18	Full Power	36	5180	20.50	22.00	1.412	96.55	1.036	-0.05	0.499	0.730
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 5+18	non DBS	38	5190	18.16	19.50	1.360	91.43	1.094	0.03	0.135	0.201
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5+18	non DBS	38	5190	18.16	19.50	1.360	91.43	1.094	0.01	0.175	0.260
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 5+18	non DBS	38	5190	18.16	19.50	1.360	91.43	1.094	0.02	0.152	0.226
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 5+18	non DBS	38	5190	18.16	19.50	1.360	91.43	1.094	0.06	0.311	0.463
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	10mm	Ant 5+18	DBS	38	5190	15.09	16.50	1.384	91.43	1.094	0.02	0.066	0.100
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5+18	DBS	38	5190	15.09	16.50	1.384	91.43	1.094	-0.15	0.081	0.123
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 5+18	DBS	38	5190	15.09	16.50	1.384	91.43	1.094	0.04	0.074	0.112
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 5+18	DBS	38	5190	15.09	16.50	1.384	91.43	1.094	0.01	0.148	0.224
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	10mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	-0.05	0.088	0.128
	WLAN5.8GHz	802.11n-HT40 MCS0	Back	10mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	0.08	0.089	0.130
	WLAN5.8GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	0.17	0.133	0.194
41	WLAN5.8GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	-0.08	0.144	**0.210**

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)	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)
750MHz																				
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 3	23095	707.5	24.56	25.50	1.242	-	-	0.02	0.142	0.176
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Front	15mm	Ant 0	DSI 3	23095	707.5	23.74	24.50	1.191	-	-	0.06	0.118	0.141
42	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 3	23095	707.5	24.56	25.50	1.242	-	-	-0.03	0.148	**0.184**
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Back	15mm	Ant 0	DSI 3	23095	707.5	23.74	24.50	1.191	-	-	-0.04	0.122	0.145
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 3	23095	707.5	23.74	25.50	1.500	-	-	0.02	0.099	0.148
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Front	15mm	Ant 1	DSI 3	23095	707.5	22.76	24.50	1.493	-	-	-0.04	0.082	0.122
	LTE Band 12_Other_PA	10M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 3	23095	707.5	23.74	25.50	1.500	-	-	-0.16	0.098	0.147
	LTE Band 12_Other_PA	10M	QPSK	25	0	-	Back	15mm	Ant 1	DSI 3	23095	707.5	22.76	24.50	1.493	-	-	0.05	0.083	0.124
43	LTE Band 13	10M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 3	23230	782	24.64	25.50	1.219	-	-	0.01	0.258	**0.314**
	LTE Band 13	10M	QPSK	25	0	-	Front	15mm	Ant 0	DSI 3	23230	782	23.98	24.50	1.127	-	-	0.09	0.195	0.220
	LTE Band 13	10M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 3	23230	782	24.64	25.50	1.219	-	-	-0.05	0.255	0.311
	LTE Band 13	10M	QPSK	25	0	-	Back	15mm	Ant 0	DSI 3	23230	782	23.98	24.50	1.127	-	-	-0.04	0.195	0.220
	LTE Band 13	10M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 3	23230	782	23.98	25.50	1.419	-	-	0.17	0.125	0.177
	LTE Band 13	10M	QPSK	25	0	-	Front	15mm	Ant 1	DSI 3	23230	782	22.90	24.50	1.445	-	-	-0.14	0.092	0.133
	LTE Band 13	10M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 3	23230	782	23.98	25.50	1.419	-	-	0.07	0.122	0.173
	LTE Band 13	10M	QPSK	25	0	-	Back	15mm	Ant 1	DSI 3	23230	782	22.90	24.50	1.445	-	-	-0.14	0.093	0.134
835MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 0	DSI 3	189	836.4	26.95	28.00	1.274	-	-	0.03	0.200	0.255
44	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI 3	189	836.4	26.95	28.00	1.274	-	-	0.02	0.208	**0.265**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 1	DSI 3	189	836.4	26.07	27.50	1.390	-	-	0.07	0.099	0.138
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI 3	189	836.4	26.07	27.50	1.390	-	-	0.08	0.126	0.175
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI 3	4182	836.4	24.16	25.00	1.213	-	-	0.07	0.209	0.254
45	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI 3	4182	836.4	24.16	25.00	1.213	-	-	0.08	0.214	**0.260**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 3	4182	836.4	23.36	25.00	1.459	-	-	0.06	0.104	0.152
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 3	4182	836.4	23.36	25.00	1.459	-	-	-0.01	0.132	0.193
	LTE Band 26	15M	QPSK	1	0	-	Front	15mm	Ant 0	DSI 3	26865	831.5	24.58	25.50	1.236	-	-	0.14	0.252	0.311
	LTE Band 26	15M	QPSK	36	0	-	Front	15mm	Ant 0	DSI 3	26865	831.5	23.63	24.50	1.222	-	-	0.02	0.199	0.243
46	LTE Band 26	15M	QPSK	1	0	-	Back	15mm	Ant 0	DSI 3	26865	831.5	24.58	25.50	1.236	-	-	-0.06	0.255	**0.315**
	LTE Band 26	15M	QPSK	36	0	-	Back	15mm	Ant 0	DSI 3	26865	831.5	23.63	24.50	1.222	-	-	0.03	0.203	0.248
	LTE Band 26	15M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 3	26865	831.5	23.77	25.50	1.489	-	-	0.09	0.098	0.146
	LTE Band 26	15M	QPSK	36	0	-	Front	15mm	Ant 1	DSI 3	26865	831.5	22.74	24.50	1.500	-	-	0.07	0.086	0.129
	LTE Band 26	15M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 3	26865	831.5	23.77	25.50	1.489	-	-	0.14	0.123	0.183
	LTE Band 26	15M	QPSK	36	0	-	Back	15mm	Ant 1	DSI 3	26865	831.5	22.74	24.50	1.500	-	-	0.03	0.109	0.163
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 3	1413	1732.6	22.19	24.00	1.517	-	-	-0.12	0.209	0.317
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 3	1413	1732.6	22.19	24.00	1.517	-	-	-0.15	0.245	0.372
47	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 2	DSI 3	1413	1732.6	23.57	25.00	1.390	-	-	-0.07	0.273	**0.379**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 2	DSI 3	1413	1732.6	23.57	25.00	1.390	-	-	0.19	0.216	0.300
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI 3	20175	1732.5	24.52	25.70	1.312	-	-	-0.02	0.353	0.463
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI 3	20175	1732.5	23.74	24.70	1.247	-	-	0.02	0.286	0.357
48	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 3	20175	1732.5	24.52	25.70	1.312	-	-	-0.02	0.430	**0.564**
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI 3	20175	1732.5	23.74	24.70	1.247	-	-	0.05	0.360	0.449
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 3	20175	1732.5	24.36	25.50	1.300	-	-	0.08	0.011	0.015
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 3	20175	1732.5	23.53	24.50	1.250	-	-	-0.12	0.000	0.000
	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 3	20175	1732.5	24.36	25.50	1.300	-	-	-0.14	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 3	20175	1732.5	23.53	24.50	1.250	-	-	0.03	0.000	0.000
1900MHz																				
	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Front	15mm	Ant 1	DSI 3	661	1880	28.24	30.00	1.500	-	-	0.17	0.122	0.183
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Front	15mm	Ant 1	DSI 3	661	1880	25.31	27.00	1.476	-	-	0.03	0.126	0.186
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 1	DSI 3	661	1880	23.96	25.20	1.330	-	-	0.08	0.140	0.186

	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 1	DSI 3	661	1880	22.47	24.00	1.422	-	-	-0.11	0.126	0.179
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 1	DSI 3	661	1880	23.96	25.20	1.330	-	-	0.03	0.087	0.116
	GSM1900	-	-	-	-	GPRS (1 Tx slot)	Front	15mm	Ant 2	DSI 3	661	1880	30.01	31.00	1.256	-	-	-0.08	0.175	0.220
	GSM1900	-	-	-	-	GPRS (2 Tx slots)	Front	15mm	Ant 2	DSI 3	661	1880	27.11	28.00	1.227	-	-	0.09	0.182	0.223
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 2	DSI 3	661	1880	25.34	26.20	1.219	-	-	-0.13	0.183	0.223
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 2	DSI 3	661	1880	24.02	25.00	1.253	-	-	0.02	0.186	0.233
49	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 2	DSI 3	661	1880	24.02	25.00	1.253	-	-	-0.15	0.246	**0.308**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 3	9400	1880	22.12	24.00	1.542	-	-	-0.04	0.260	0.401
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 3	9400	1880	22.12	24.00	1.542	-	-	0.04	0.325	0.501
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 2	DSI 3	9400	1880	23.61	25.00	1.377	-	-	0.08	0.366	0.504
50	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 2	DSI 3	9400	1880	23.61	25.00	1.377	-	-	-0.02	0.475	**0.654**
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI 3	18900	1880	23.60	25.00	1.380	-	-	-0.1	0.402	0.555
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI 3	18900	1880	22.76	24.00	1.330	-	-	-0.03	0.326	0.434
51	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 3	18900	1880	23.60	25.00	1.380	-	-	0.02	0.524	**0.723**
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI 3	18900	1880	22.76	24.00	1.330	-	-	-0.16	0.421	0.560
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 3	18900	1880	23.35	24.50	1.303	-	-	0.07	0.225	0.293
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 3	18900	1880	22.42	23.50	1.282	-	-	-0.04	0.192	0.246
	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 3	18900	1880	23.35	24.50	1.303	-	-	-0.02	0.297	0.387
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 3	18900	1880	22.42	23.50	1.282	-	-	0.07	0.248	0.318
	2600MHz																			
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI 3	21100	2535	24.66	25.50	1.213	-	-	-0.03	0.330	0.400
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI 3	21100	2535	23.75	24.50	1.189	-	-	0.13	0.260	0.309
52	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 3	21100	2535	24.66	25.50	1.213	-	-	-0.03	0.554	**0.672**
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI 3	21100	2535	23.75	24.50	1.189	-	-	0.110	0.444	0.528
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 3	21100	2535	22.32	23.00	1.169	-	-	0.07	0.172	0.201
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 3	21100	2535	22.24	23.00	1.191	-	-	-0.15	0.190	0.226
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 3	21100	2535	22.32	23.00	1.169	-	-	-0.01	0.245	0.287
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 3	21100	2535	22.24	23.00	1.191	-	-	0.03	0.241	0.287
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI 3	40620	2593	25.31	25.70	1.094	62.9	1.006	0.05	0.178	0.196
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI 3	40620	2593	24.43	24.70	1.064	62.9	1.006	-0.19	0.172	0.184
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI 3	40620	2593	25.31	25.70	1.094	62.9	1.006	-0.04	0.245	0.270
	LTE Band 41C	20M	QPSK	1	99	-	Back	15mm	Ant 4	DSI 3	40620+ 40818	2593+ 2612.8	24.34	25.20	1.219	62.9	1.006	0.03	0.215	0.264
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI 3	40620	2593	24.43	24.70	1.064	62.9	1.006	0.04	0.228	0.244
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI 3	40620	2593	25.38	25.50	1.028	62.9	1.006	-0.18	0.210	0.217
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI 3	40620	2593	24.46	24.50	1.009	62.9	1.006	0.07	0.181	0.184
53	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI 3	40620	2593	25.38	25.50	1.028	62.9	1.006	-0.05	0.351	**0.363**
	LTE Band 41C	20M	QPSK	1	99	-	Back	15mm	Ant 2	DSI 3	40620+ 40818	2593+ 2612.8	24.91	25.50	1.146	62.9	1.006	0.09	0.301	0.347
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI 3	40620	2593	24.46	24.50	1.009	62.9	1.006	0.17	0.319	0.324
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 3	40620	2593	23.81	24.50	1.172	62.9	1.006	-0.03	0.153	0.180
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 3	40620	2593	23.02	23.50	1.117	62.9	1.006	0.05	0.142	0.160
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 3	40620	2593	23.81	24.50	1.172	62.9	1.006	-0.11	0.230	0.271
	LTE Band 41C	20M	QPSK	1	99	-	Back	15mm	Ant 1	DSI 3	40620+ 40818	2593+ 2612.8	23.45	24.50	1.274	62.9	1.006	0.03	0.201	0.258
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 3	40620	2593	23.02	23.50	1.117	62.9	1.006	0.05	0.205	0.230
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI 3	40620	2593	23.25	24.50	1.334	62.9	1.006	0.09	0.164	0.220
	LTE Band 41C	20M	QPSK	1	99	-	Front	15mm	Ant 3	DSI 3	40620+ 40818	2593+ 2612.8	22.67	24.50	1.524	62.9	1.006	0.02	0.123	0.189
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI 3	40620	2593	22.41	23.50	1.285	62.9	1.006	0.06	0.150	0.194
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI 3	40620	2593	23.25	24.50	1.334	62.9	1.006	0.07	0.133	0.178
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI 3	40620	2593	22.41	23.50	1.285	62.9	1.006	-0.11	0.119	0.154
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 3	518598	2592.99	22.76	23.20	1.107	-	-	0.06	0.202	0.224
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI 3	518598	2592.99	22.74	23.20	1.112	-	-	0.15	0.183	0.203
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 3	518598	2592.99	22.76	23.20	1.107	-	-	0.03	0.258	0.286
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI 3	518598	2592.99	22.74	23.20	1.112	-	-	0.03	0.238	0.265
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 3	518598	2592.99	25.38	25.70	1.076	-	-	-0.12	0.343	0.369
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI 3	518598	2592.99	25.35	25.70	1.084	-	-	0.19	0.341	0.370
54	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 3	518598	2592.99	25.38	25.70	1.076	-	-	0.05	0.521	**0.561**

	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI 3	518598	2592.99	25.35	25.70	1.084	-	-	0.07	0.514	0.557
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	518598	2592.99	19.96	21.00	1.271	-	-	-0.02	0.116	0.147
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	518598	2592.99	19.94	21.00	1.276	-	-	0.16	0.118	0.151
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	518598	2592.99	19.96	21.00	1.271	-	-	-0.04	0.185	0.235
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	518598	2592.99	19.94	21.00	1.276	-	-	0.14	0.180	0.230
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI 3	518598	2592.99	23.19	24.50	1.352	-	-	0.02	0.255	0.345
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI 3	518598	2592.99	23.14	24.50	1.368	-	-	0.15	0.291	0.398
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 3	518598	2592.99	23.19	24.50	1.352	-	-	-0.07	0.202	0.273
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI 3	518598	2592.99	23.14	24.50	1.368	-	-	0.04	0.225	0.308
3500MHz																				
	LTE Band 42	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI 3	42590	3500	22.19	22.50	1.074	62.9	1.006	0.07	0.081	0.088
	LTE Band 42	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI 3	42590	3500	21.98	22.50	1.127	62.9	1.006	-0.17	0.089	0.101
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI 3	42590	3500	22.19	22.50	1.074	62.9	1.006	0.01	0.112	0.121
	LTE Band 42C	20M	QPSK	1	99	-	Back	15mm	Ant 5	DSI 3	42590+ 42788	3500+ 3519.8	20.98	22.50	1.419	62.9	1.006	-0.07	0.075	0.107
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI 3	42590	3500	21.98	22.50	1.127	62.9	1.006	-0.16	0.106	0.120
	LTE Band 42	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI 3	42590	3500	21.98	23.50	1.419	62.9	1.006	-0.1	0.095	0.136
	LTE Band 42	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI 3	42590	3500	21.90	23.50	1.445	62.9	1.006	0.09	0.100	0.145
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI 3	42590	3500	21.98	23.50	1.419	62.9	1.006	0.05	0.207	0.296
	LTE Band 42C	20M	QPSK	1	99	-	Back	15mm	Ant 1	DSI 3	42590+ 42788	3500+ 3519.8	21.59	23.00	1.384	62.9	1.006	0.09	0.192	0.267
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI 3	42590	3500	21.90	23.50	1.445	62.9	1.006	0.06	0.160	0.233
	LTE Band 42	20M	QPSK	1	0	-	Front	15mm	Ant 6	DSI 3	42590	3500	21.30	22.00	1.175	62.9	1.006	0.06	0.146	0.173
	LTE Band 42C	20M	QPSK	1	99	-	Front	15mm	Ant 6	DSI 3	42590+ 42788	3500+ 3519.8	20.29	21.50	1.321	62.9	1.006	0.01	0.125	0.166
	LTE Band 42	20M	QPSK	50	0	-	Front	15mm	Ant 6	DSI 3	42590	3500	21.27	22.00	1.183	62.9	1.006	0.07	0.141	0.168
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 6	DSI 3	42590	3500	21.30	22.00	1.175	62.9	1.006	-0.11	0.134	0.158
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 6	DSI 3	42590	3500	21.27	22.00	1.183	62.9	1.006	0.1	0.144	0.171
	LTE Band 42	20M	QPSK	1	0	-	Front	15mm	Ant 7	DSI 3	42590	3500	23.55	24.50	1.245	62.9	1.006	0.06	0.070	0.088
	LTE Band 42	20M	QPSK	50	0	-	Front	15mm	Ant 7	DSI 3	42590	3500	22.50	23.50	1.259	62.9	1.006	-0.15	0.068	0.086
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 7	DSI 3	42590	3500	23.55	24.50	1.245	62.9	1.006	-0.11	0.635	0.795
	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 7	DSI 3	42190	3460	23.52	24.50	1.253	62.9	1.006	-0.09	0.481	0.606
55	LTE Band 42	20M	QPSK	1	0	-	Back	15mm	Ant 7	DSI 3	42990	3540	23.48	24.50	1.265	62.9	1.006	-0.01	0.760	**0.967**
	LTE Band 42C	20M	QPSK	1	99	-	Back	15mm	Ant 7	DSI 3	42590+ 42788	3500+ 3519.8	22.84	24.00	1.306	62.9	1.006	0.09	0.715	0.940
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 7	DSI 3	42590	3500	22.50	23.50	1.259	62.9	1.006	-0.06	0.512	0.648
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 7	DSI 3	42190	3460	22.45	23.50	1.274	62.9	1.006	0.09	0.388	0.497
	LTE Band 42	20M	QPSK	50	0	-	Back	15mm	Ant 7	DSI 3	42990	3540	22.40	23.50	1.288	62.9	1.006	-0.07	0.619	0.802
	LTE Band 42	20M	QPSK	100	0	-	Back	15mm	Ant 7	DSI 3	42590	3500	22.37	23.50	1.297	62.9	1.006	-0.18	0.627	0.818
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 3	656000	3840	17.78	18.50	1.180	-	-	-0.03	0.066	0.078
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 3	656000	3840	17.68	18.50	1.208	-	-	0.03	0.057	0.069
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 3	656000	3840	17.78	18.50	1.180	-	-	0.1	0.000	0.000
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 3	656000	3840	17.68	18.50	1.208	-	-	-0.07	0.059	0.071
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 3	633334	3500.01	17.76	18.50	1.186	-	-	0.03	0.056	0.066
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 3	633334	3500.01	17.59	18.50	1.233	-	-	0.19	0.058	0.072
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 3	633334	3500.01	17.76	18.50	1.186	-	-	0.04	0.073	0.087
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 3	633334	3500.01	17.59	18.50	1.233	-	-	0.09	0.071	0.088
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	656000	3840	23.31	25.00	1.476	-	-	-0.12	0.140	0.207
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	656000	3840	23.27	25.00	1.489	-	-	0.09	0.089	0.133
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	656000	3840	23.31	25.00	1.476	-	-	-0.07	0.385	0.568
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	656000	3840	23.27	25.00	1.489	-	-	-0.17	0.245	0.365
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	633334	3500.01	23.33	25.00	1.469	-	-	0.03	0.175	0.257
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	633334	3500.01	23.31	25.00	1.476	-	-	-0.11	0.195	0.288
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	633334	3500.01	23.33	25.00	1.469	-	-	0.06	0.417	0.613
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	633334	3500.01	23.31	25.00	1.476	-	-	0.17	0.498	0.735
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 3	656000	3840	19.08	20.50	1.387	-	-	0.12	0.125	0.173
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 3	656000	3840	19.07	20.50	1.390	-	-	0.03	0.121	0.168
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 3	656000	3840	19.08	20.50	1.387	-	-	0.16	0.114	0.158
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 3	656000	3840	19.07	20.50	1.390	-	-	-0.14	0.119	0.165

	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 3	633334	3500.01	19.18	20.50	1.355	-	-	-0.1	0.135	0.183
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 3	633334	3500.01	19.14	20.50	1.368	-	-	0.18	0.186	0.254
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 3	633334	3500.01	19.18	20.50	1.355	-	-	0.1	0.127	0.172
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 3	633334	3500.01	19.14	20.50	1.368	-	-	-0.04	0.172	0.235
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI 3	656000	3840	22.34	24.00	1.466	-	-	0.09	0.068	0.100
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI 3	656000	3840	22.33	24.00	1.469	-	-	-0.14	0.061	0.090
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	656000	3840	22.34	24.00	1.466	-	-	0.02	0.405	0.594
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	656000	3840	22.33	24.00	1.469	-	-	0.06	0.358	0.526
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI 3	633334	3500.01	22.67	24.00	1.358	-	-	0.03	0.087	0.118
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI 3	633334	3500.01	22.65	24.00	1.365	-	-	-0.03	0.095	0.130
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	633334	3500.01	22.67	24.00	1.358	-	-	0.05	0.584	0.793
56	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	633334	3500.01	22.65	24.00	1.365	-	-	0.01	0.711	**0.970**
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	633334	3500.01	22.56	24.00	1.393	-	-	0.09	0.651	0.907
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 3	650000	3750	18.84	19.50	1.164	-	-	-0.17	0.064	0.075
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 3	650000	3750	18.73	19.50	1.194	-	-	0.08	0.074	0.088
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 3	650000	3750	18.84	19.50	1.164	-	-	0.04	0.068	0.079
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 3	650000	3750	18.73	19.50	1.194	-	-	0.06	0.067	0.080
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 3	633334	3500.01	18.76	19.50	1.186	-	-	0.08	0.070	0.083
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI 3	633334	3500.01	18.68	19.50	1.208	-	-	0.07	0.065	0.079
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 3	633334	3500.01	18.76	19.50	1.186	-	-	0.03	0.089	0.106
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI 3	633334	3500.01	18.68	19.50	1.208	-	-	-0.08	0.078	0.094
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	650000	3750	23.35	25.00	1.462	-	-	-0.15	0.271	0.396
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	650000	3750	23.31	25.00	1.476	-	-	0.17	0.297	0.438
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	650000	3750	23.35	25.00	1.462	-	-	-0.09	0.466	0.681
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	650000	3750	23.31	25.00	1.476	-	-	-0.03	0.517	0.763
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	633334	3500.01	23.41	25.00	1.442	-	-	-0.12	0.239	0.345
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI 3	633334	3500.01	23.34	25.00	1.466	-	-	-0.19	0.251	0.368
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	633334	3500.01	23.41	25.00	1.442	-	-	-0.19	0.521	0.751
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI 3	633334	3500.01	23.34	25.00	1.466	-	-	-0.17	0.542	0.794
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 3	650000	3750	18.80	20.00	1.318	-	-	0.15	0.137	0.181
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 3	650000	3750	18.62	20.00	1.374	-	-	0.03	0.130	0.179
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 3	650000	3750	18.80	20.00	1.318	-	-	-0.1	0.127	0.167
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 3	650000	3750	18.62	20.00	1.374	-	-	0.08	0.131	0.180
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 3	633334	3500.01	18.96	20.00	1.271	-	-	0.08	0.124	0.158
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI 3	633334	3500.01	18.92	20.00	1.282	-	-	-0.01	0.163	0.209
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 3	633334	3500.01	18.96	20.00	1.271	-	-	0.01	0.118	0.150
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI 3	633334	3500.01	18.92	20.00	1.282	-	-	-0.15	0.154	0.197
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI 3	650000	3750	21.91	23.50	1.442	-	-	0.04	0.111	0.160
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI 3	650000	3750	21.86	23.50	1.459	-	-	-0.12	0.081	0.118
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	650000	3750	21.91	23.50	1.442	-	-	-0.12	0.566	0.816
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	650000	3750	21.86	23.50	1.459	-	-	0.04	0.408	0.595
	FR1 n78	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	650000	3750	21.68	23.50	1.521	-	-	0.01	0.411	0.625
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI 3	633334	3500.01	22.11	23.50	1.377	-	-	-0.1	0.219	0.302
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI 3	633334	3500.01	22.10	23.50	1.380	-	-	-0.19	0.227	0.313
	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	633334	3500.01	22.11	23.50	1.377	-	-	-0.07	0.643	0.886
57	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	633334	3500.01	22.10	23.50	1.380	-	-	0.07	0.646	**0.892**
	FR1 n78	100M	QPSK	270	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI 3	633334	3500.01	21.94	23.50	1.432	-	-	0.03	0.601	0.861

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 17+6(6)	Full Power	1	2412	17.70	19.00	1.349	98.47	1.016	-0.01	0.111	0.152
58	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 17+6(6)	Full Power	1	2412	17.70	19.00	1.349	98.47	1.016	0.19	0.420	**0.576**
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 17+6(6)	DBS	1	2412	15.13	16.50	1.371	98.47	1.016	0.01	0.175	0.244
	Bluetooth	1Mbps	Front	15mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	0.06	0.076	0.103
59	Bluetooth	1Mbps	Back	15mm	Ant 17	Full Power	39	2441	16.55	17.50	1.245	76.8	1.085	0.04	0.101	**0.136**
	Bluetooth	1Mbps	Front	15mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	0.07	0.029	0.041
	Bluetooth	1Mbps	Back	15mm	Ant 6	Full Power	39	2441	16.31	17.50	1.315	76.8	1.085	-0.11	0.044	0.063
5000MHz																
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	15mm	Ant 5+18	Full Power	54	5270	20.50	22.00	1.413	91.43	1.094	0.02	0.178	0.275
60	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 5+18	Full Power	54	5270	20.50	22.00	1.413	91.43	1.094	-0.09	0.181	**0.280**
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 5+18	DBS	54	5270	18.43	20.00	1.435	91.43	1.094	0.01	0.121	0.190
61	WLAN5.5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	-0.09	0.054	**0.084**
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	0.02	0.024	0.037
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	15mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	0.08	0.047	0.069
62	WLAN5.8GHz	802.11n-HT40 MCS0	Back	15mm	Ant 5+18(18)	Full Power	159	5795	10.25	11.50	1.334	91.43	1.094	-0.03	0.057	**0.083**

15.4 Product specific 10g SAR

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
1900MHz														
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 2	DSI 1	9400	1880	20.64	22.00	1.368	0.11	1.68	2.298
	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 2	DSI 1	9262	1852.4	20.47	22.00	1.422	-0.02	1.63	2.318
63	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 2	DSI 1	9538	1907.6	20.53	22.00	1.403	0.06	1.70	2.385
	WCDMA II	RMC 12.2Kbps	Bottom Side	15mm	Ant 2	DSI 3	9400	1880	23.61	25.00	1.377	0.01	0.675	0.930

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
5000MHz																
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 5+18	Standalone	54	5270	19.58	21.00	1.388	91.43	1.094	0.02	0.861	1.307
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 5+18	Standalone	54	5270	19.58	21.00	1.388	91.43	1.094	0.11	0.228	0.346
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 5+18	Standalone	54	5270	19.58	21.00	1.388	91.43	1.094	0.04	1.070	1.624
64	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5+18	Standalone	54	5270	19.58	21.00	1.388	91.43	1.094	0.07	1.580	2.399
	WLAN5.3GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5+18	Standalone	62	5310	17.62	19.00	1.375	91.43	1.094	0.08	0.773	1.163
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	0.04	0.337	0.526
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	-0.16	0.092	0.144
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	-0.17	0.349	0.544
65	WLAN5.5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 5+18(18)	Full Power	110	5550	12.46	14.00	1.426	91.43	1.094	0.05	0.543	0.847

15.5 Repeated SAR Measurement

<1g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 0	518598	2592.99	19.46	19.70	1.057	-	-	-0.03	0.966	1	1.021
2nd	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 0	518598	2592.99	19.46	19.70	1.057	-	-	0.01	0.951	1.016	1.005
1st	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 0	42190	3460	20.06	20.50	1.107	62.9	1.006	-0.02	0.887	1	0.987
2nd	LTE Band 42	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 0	42190	3460	20.06	20.50	1.107	62.9	1.006	0.01	0.864	1.027	0.962
1st	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 2	DSI 4	810	1909.8	23.90	25.00	1.288	-	-	0.05	0.803	1	1.034
2nd	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 2	DSI 4	810	1909.8	23.90	25.00	1.288	-	-	0.03	0.775	1.036	0.998

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN 2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN 5GHz/6GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	WLAN 5GHz/6GHz + Bluetooth	Yes	Yes	Yes	Yes
5.	WLAN 2.4GHz SISO(ANT6) + Bluetooth ant17	Yes	Yes	Yes	Yes
6.	WLAN 2.4GHz + WLAN 5GHz/6GHz	Yes	Yes	Yes	Yes
7.	WLAN 2.4GHz SISO(ANT6) + WLAN 5GHz/6GHz + Bluetooth ant17	Yes	Yes	Yes	Yes
8.	WWAN + WLAN 5GHz/6GHz + Bluetooth	Yes	Yes	Yes	Yes
9.	WWAN + WLAN 2.4GHz SISO(ANT6) + Bluetooth ant17	Yes	Yes	Yes	Yes
10.	WWAN + WLAN 2.4GHz + WLAN 5GHz/6GHz	Yes	Yes	Yes	Yes
11.	WWAN + WLAN 2.4GHz SISO(ANT6) + WLAN 5GHz/6GHz + Bluetooth ant17	Yes	Yes	Yes	Yes
12.	WWAN + WLAN 2.4GHz + NFC				Yes
13.	WWAN + WLAN 5GHz/6GHz + NFC				Yes
14.	WWAN + Bluetooth + NFC				Yes
15.	WLAN 5GHz/6GHz + Bluetooth + NFC				Yes
16.	WLAN 2.4GHz SISO(ANT6) + Bluetooth ant17 + NFC				Yes
17.	WLAN 2.4GHz + WLAN 5GHz/6GHz + NFC				Yes
18.	WLAN 2.4GHz SISO(ANT6) + WLAN 5GHz/6GHz + Bluetooth ant17 + NFC				Yes
19.	WWAN + WLAN 5GHz/6GHz + Bluetooth + NFC				Yes
20.	WWAN + WLAN 2.4GHz SISO(ANT6) + Bluetooth ant17 + NFC				Yes
21.	WWAN + WLAN 2.4GHz + WLAN 5GHz/6GHz + NFC				Yes
22.	WWAN + WLAN 2.4GHz SISO(ANT6) + WLAN 5GHz/6GHz + Bluetooth ant17 + 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.
3. The 2.4GHz/5GHz WLAN can transmit in SISO and MIMO antenna mode.
4. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
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). WLAN 6GHz has no hotspot function.
7. WLAN2.4GHz/WLAN5GHz MIMO SAR can represent SISO SAR to do co-located SAR analysis.
8. According to the EUT characteristic, WLAN5GHz/6GHz and Bluetooth can transmit simultaneously.
9. According to the EUT characteristic, WLAN 5GHz/6GHz and WLAN 2.4GHz can transmit simultaneously; WLAN 5GHz/6GHz + WLAN 2.4GHz ANT6 + Bluetooth ANT17 can transmit simultaneously.
10. According to the EUT characteristic, WLAN 2.4GHz Ant17 and Bluetooth share the same antenna and they cannot transmit simultaneously each other, and WLAN 2.4GHz Ant6 and Bluetooth Ant17 can transmit simultaneously.
11. NFC can transmit simultaneously with other Radios in extremity exposure condition.
12. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
13. When stand-alone SAR is not required for a transmitter or antenna, its SAR is considered zero in the SAR summing process to assess Multi-band transmission SAR compliance.
14. For standalone WWAN, always choose the highest SAR among all WWAN bands for each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each bands.
15. The maximum SAR summation is calculated based on the same configuration and test position.
16. 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.
17. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.

ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.

iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.

iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.

18. The WLAN6GHz Sim-Tx analysis guidance with other transmitters was based on SAR test results. The simultaneous transmission and test exemption analysis were compliant with KDB 447498 D01. For the device does not support FR2 or other MPE field measurement, therefore section 16 in the SAR report has no TER analysis according to KDB 987594 requirement.

16.1 Head Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	9	10	11	12	2+5	2+8	1+6+11	1+9+11	1+6+12	1+9+12	1+4+7+11	1+4+10+11
		WWAN	WLAN 2.4GHz Ant17+6 DBS only	WLAN 2.4GHz Ant17+6 non DBS	WLAN 2.4GHz Ant17+6 DBS	WLAN 5GHz Ant5+18 DBS only	WLAN 5GHz Ant5+18 non DBS	WLAN 5GHz Ant5+18 DBS	WLAN 6GHz Ant5+18 DBS only	WLAN 6GHz Ant5+18 non DBS	WLAN 6GHz Ant5+18 DBS	Bluetooth Ant 17	Bluetooth Ant 6	Summed	Summed	Summed	Summed	Summed	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)	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	Right Cheek	1.060	0.688	0.074	0.074	0.762	0.116	0.116	0.330	0.158	0.158	0.066	0.045	1.45	1.02	1.24	1.28	1.22	1.26	1.32	1.36
	Right Tilted	1.071	0.688	0.077	0.077	0.762	0.134	0.134	0.338	0.158	0.158	0.078	0.031	1.45	1.03	1.28	1.31	1.24	1.26	1.36	1.38
	Left Cheek	1.090	0.688	0.214	0.214	0.762	0.207	0.207	0.364	0.158	0.158	0.082	0.139	1.45	1.05	1.38	1.33	1.44	1.39	**1.59**	1.54
	Left Tilted	1.008	0.688	0.069	0.069	0.762	0.206	0.206	0.493	0.158	0.158	0.076	0.042	1.45	1.18	1.29	1.24	1.26	1.21	1.36	1.31

16.2 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	9	2+5	1+6+8	1+6+9	1+4+7+8
		WWAN	WLAN2.4GHz Ant17+6 DBS only	WLAN2.4GHz Ant17+6 non DBS	WLAN2.4GHz Ant17+6 DBS	WLAN5GHz Ant5+18 DBS only	WLAN5GHz Ant5+18 non DBS	WLAN5GHz Ant5+18 DBS	Bluetooth Ant 17	Bluetooth Ant 6	Summed	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)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN All bands	Front	0.565	0.266	0.535	0.224	0.394	0.201	0.128	0.062	0.141	0.66	0.83	0.91	0.98
	Back	1.040	0.843	0.535	0.224	0.529	0.260	0.130	0.196	0.098	1.37	1.50	1.40	1.59
	Left side	0.530									0.00	0.53	0.53	0.53
	Right side	0.693	0.508	0.535	0.224	0.466	0.226	0.194	0.045	0.231	0.97	0.96	1.15	1.16
	Top side	0.565	0.199	0.535	0.224	0.934	0.463	0.224	0.128	0.001	1.13	1.16	1.03	1.14
	Bottom side	1.085									0.00	1.09	1.09	1.09

16.3 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	9	10	11	12	2+5	2+8	1+6+11	1+9+11	1+6+12	1+9+12	1+4+7+11	1+4+10+11
		WWAN	WLAN 2.4GHz Ant17+6 DBS only	WLAN 2.4GHz Ant17+6 non DBS	WLAN 2.4GHz Ant17+6 DBS	WLAN 5GHz Ant5+18 DBS only	WLAN 5GHz Ant5+18 non DBS	WLAN 5GHz Ant5+18 DBS	WLAN 6GHz Ant5+18 DBS only	WLAN 6GHz Ant5+18 non DBS	WLAN 6GHz Ant5+18 DBS	Bluetooth Ant 17	Bluetooth Ant 6	Summed	Summed	Summed	Summed	Summed	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)	1g SAR (W/kg)	4cm^2 (W/m^2)	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	0.555	0.152	0.152	0.244	0.275	0.275	0.190	0.055	0.055	0.055	0.103	0.041	0.43	0.21	0.93	0.71	0.87	0.65	1.09	0.96
	Back	0.970	0.576	0.576	0.244	0.280	0.280	0.190	0.095	0.095	0.095	0.136	0.063	0.86	0.67	1.39	1.20	1.31	1.13	1.54	1.45

16.4 Product specific 10g SAR Exposure Conditions

Remark:

1. For WLAN2.4GHz/ Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

WWAN Band	Exposure Position	1	2	3	4	**1+2+4**	**1+3+4**
		WWAN	WLAN5GHz Ant5+18	WLAN6GHz Ant5+18	NFC Ant 6	Summed	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
WWAN All bands	Front		1.307	0.186	0.004	1.31	0.19
	Back		0.346	0.072	0.008	0.35	0.08
	Left side				0.003	0.00	0.00
	Right side		1.624	0.280	0.001	1.63	0.28
	Top side		2.399	0.427	0.003	**2.40**	0.43
	Bottom side	2.385			0.001	2.39	2.39

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17. Uncertainty Assessment

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

18. References

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

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

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

[4] SPEAG DASY System Handbook

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

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

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

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

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

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

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

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

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