FCC SAR Test Report

APPLICANT	:	**Xiaomi Communications Co., Ltd.**
EQUIPMENT	:	**Mobile Phone**
BRAND NAME	:	**POCO**
MODEL NAME	:	**23013PC75G**
FCC ID	:	**2AFZZC75G**
STANDARD	:	**FCC 47 CFR PART 2 (2.1093)**

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Si Zhang

Approved by: Si Zhang

ACCREDITED Cert #5145.02

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

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA2O2410	Rev. 01	Initial issue of report.	Dec. 09, 2022

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Xiaomi Communications Co., Ltd., Mobile Phone, 23013PC75G,** 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	0.88	0.33	0.21	1.58
		GSM1900	0.91	0.69	0.35	
	WCDMA	Band II	**1.09**	1.01	0.80	
		Band IV	0.97	0.84	0.70	
		Band V	0.87	0.34	0.22	
	LTE	Band 2	0.94	0.99	0.73	
		Band 5	0.94	0.39	0.23	
		Band 7	0.97	0.77	0.72	
		Band 38	1.06	0.63	0.29	
		Band 41/38	0.93	0.60	0.43	
		Band 66/4	1.04	0.96	0.85	
	5G NR	n5	1.02	0.43	0.21	
		n7	1.04	0.97	0.75	
		n41/n38	**1.09**	**1.09**	0.75	
		n77	1.04	0.49	1.01	
		n78	1.08	0.94	**1.08**	
DTS	WLAN	2.4GHz WLAN	0.68	0.71	0.31	1.58
NII		5GHz WLAN	**1.09**	1.00	0.47	1.58
DSS	Bluetooth	2.4GHz Bluetooth	0.98	0.29	0.11	1.58

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	WCDMA	Band II	2.54	3.86
		Band IV	2.50	
	LTE	Band 66/4	2.37	3.86
NII	WLAN	5GHz WLAN	**2.55**	3.86
Date of Testing:			2022/11/1 ~ 2022/11/29	

Remark:
1. This device supports LTE B4 / B38 and B66 / B41. Since the supported frequency span for LTE B4 / B38 falls completely within the supports frequency span for LTE B66 / 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 B66 / B41.
2. This device supports 5G NR n38 and 5G NR n41. Since the supported frequency span for 5G NR n38 falls completely within the supports frequency span for 5G NR n41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for 5G NR n41.

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

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

2. Administration Data

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

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR03-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	POCO
Model Name	23013PC75G
FCC ID	2AFZZC75G
IMEI Code	SIM1: 863477060043821 SIM2: 863477060043839
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 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 66: 1710 MHz ~ 1780 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR 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 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 5G NR : CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ax HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/VHT160 WLAN 5GHz 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 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only).
4. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 33.
5. This device has NFC operations, the NFC antenna is integrated into the device for this model, therefore, all SAR test were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the antenna can be found in the operational description. According to FCC KDB publication 447498 D01v06, transmitters are consider to be operating simultaneously when there is overlapping transmission, with the exception of transmission during network hand-offs with maximum hand-off duration less than 30 seconds.
6. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). After pre-scan two SIM cards power, we found test result of the SIM1 was the worse, so we chose SIM1 slot to perform all tests.
7. There are two samples with different memory capacity: sample 1 is 12+256, sample 2 is 8+128G. According to the difference, we choose sample 1 to perform full test.
8. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G&5G and Wi-Fi antennas accordingly. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
9. For WLAN/BT when transmit simultaneous with WWAN, power reduction will be activated to head, hotspot, body-worn and extremity.
10. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
11. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
12. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
13. 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.
14. 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.
15. 5GNR n78 supports HPUE, HPUE power and SAR testing performed separately.
16. For 5GNR n78 HPUE with higher power, so we chose power class 2 full SAR testing and power class 2 SAR can represent power class 3 SAR.
17. The device support DBS (Dual Band Simultaneous) function, when the device 2.4GHz and 5GHz transmit at the same time the module will limit different output power for simultaneous transmission compliance.
18. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
SA	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40
	n38	TDD	30	10, 15, 20, 30, 40
	n41	TDD	30	20, 30, 40, 50, 60, 70, 80, 90, 100
	n77	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
NSA	n5	FDD	15	5, 10, 15, 20
	n78	TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 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>2AFZZC75G</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 38: 2570 MHz ~ 2620 MHz
LTE Band 41: 2496 MHz ~ 2690 MHz
LTE Band 66: 1710 MHz ~ 1780 MHz</td></tr>
<tr><td>Channel Bandwidth</td><td>LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM /256QAM</td></tr>
<tr><td>LTE Voice / Data requirements</td><td>Voice and Data</td></tr>
<tr><td>LTE Release Version</td><td>R15, 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 14.</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 14.</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 3 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 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580				
M	38000	2595	38000	2595	38000	2595	38000	2595				
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

<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 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes

2) LTE Bands tune up:

Band	Antenna	Default	DSI-1	DSI-5	DSI-3	DSI-4
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
LTE Band 4	Ant 2	25.70	19.20	19.20	23.70	23.70
LTE Band 66		25.70	19.20	19.20	23.70	23.70
LTE Band 4	Ant 3	25.70	21.70	19.70	22.70	25.70
LTE Band 66		25.70	20.70	20.70	21.70	25.70
LTE Band 4	Ant 4	25.70	18.70	18.70	20.70	25.70
LTE Band 66		25.70	18.70	18.70	20.70	25.70
LTE Band 4	Ant 5	25.70	25.70	22.70	23.70	25.70
LTE Band 66		25.70	25.70	22.70	23.20	25.70
LTE Band 38	Ant 2	25.70	22.20	22.20	25.70	25.70
LTE Band 41		25.70	22.70	22.70	23.70	23.70
LTE Band 38	Ant 3	25.70	20.20	20.20	23.20	25.70
LTE Band 41		25.70	21.70	21.70	22.70	25.70
LTE Band 38	Ant 4	25.70	20.70	20.70	21.70	25.70
LTE Band 41		25.70	19.20	19.20	21.20	25.70
LTE Band 38	Ant 5	25.70	25.70	23.70	23.70	25.70
LTE Band 41		25.70	25.70	23.20	23.20	25.70

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 n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 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	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n5	LTE B7
LTE Anchor Bands for n78	LTE B2/5/7/38/41

NR Band 5								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165300	826.5	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5
H	169300	846.5	168800	844	168300	841.5	167800	839

NR Band 7														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550

NR Band 38										
	Bandwidth10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515004	2575.02	515502	2577.51	516000	2580	517002	2585.01	518004	2590.02
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	522996	2614.98	522498	2612.49	522000	2610	520998	2604.99	519996	2599.98

NR Band 41																		
	Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		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)	Ch. #	Freq. (MHz)
L	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	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	518598	2592.99
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640

<3700 MHz ~ 3980 MHz>

NR Band 77																				
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3850	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664834	3972.51	664668	3970.02	664334	3965.01	664000	3960	663668	3955.02	663334	3950.01	663000	3945	662668	3940.02	662334	3935.01	662000	3930

NR Band 78																				
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652334	3785.01	652000	3780	651668	3775.02	651334	3770.01	651000	3765	650668	3760.02	650334	3755.01		

<3450 MHz ~ 3550 MHz>

NR Band 77																				
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	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	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636166	3542.52	636000	3540	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

NR Band 78																				
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	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	633334	3500.01	633334	3500.01	633334	3500.01
H	636334	3545.01	636166	3542.52	636000	3540	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

<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 n38	Yes	Yes	Yes	Yes	Yes						
FR1 n41			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2) NR Bands tune up:

Band	Antenna	Default	DSI-1	DSI-5	DSI-3	DSI-4
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
FR1 n38	Ant 2	25.50	20.00	20.00	22.50	22.50
FR1 n41		25.70	19.70	19.70	22.70	22.70
FR1 n38	Ant 3	25.70	21.20	21.20	22.20	25.70
FR1 n41		25.70	22.70	22.70	22.70	25.70
FR1 n38	Ant 4	25.50	18.00	18.00	20.50	25.50
FR1 n41		25.70	18.20	18.20	20.20	25.70
FR1 n38	Ant 5	25.70	25.70	20.70	20.70	25.70
FR1 n41		25.70	25.70	21.20	21.20	25.70

5. Smart Transmit feature for RF Exposure compliance

The 2nd generation of Smart Transmit (GEN2) operates based on pre-defined sub6 antenna groups (AG). This Device is enabled with the Qualcomm® Smart Transmit Gen2 feature. The RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.

Note that WLAN/BT operations are not enabled with Smart Transmit.

This report describes the procedures for the SAR char generation, and the parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit GEN2 Feature.

<Terminologies in this report>

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

<SAR Characterization>

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

<Uncertainty>

Band	Antenna				
GSM 850	Main Ant0	AuX Ant1	NA	NA	NA
GSM 1900	Main Ant5	AuX Ant4	NA	NA	NA
WCDMA B2	Main Ant5	AuX1 Ant4	NA	NA	NA
WCDMA B4	Main Ant2	AuX1 Ant5/4/3	NA	NA	NA
WCDMA B5	Main Ant0	AuX1 Ant1	NA	NA	NA
LTE B2	Main Ant5	AuX1 Ant4	NA	NA	NA
LTE B5	Main Ant0	AuX1 Ant1	NA	NA	NA
LTE B4/7/66/38/41	Main Ant2	AuX1 Ant5	AuX2 Ant4/3	AuX3 Ant3	AuX4 An4
5G NR n5	Main Ant0	AuX1 Ant1	NA	NA	NA
5G NR n7/38/41	Main Ant2	AuX1 Ant5	AuX2 Ant4	AuX3 Ant3	NA
5G NR n77/78	Main Ant7	AuX1 Ant4	AuX2 Ant6	AuX3 Ant8	NA

Tech	Antenna	Total Uncertainty (dB)	Description	
			Antenna Number	Frequency
GSM	Main	1.00	Ant 0/5	All Frequency
	Aux	1.50	Ant 1/4	All Frequency
WADMA	Main	1.00	Ant 5/2/0	All Frequency
	Aux 1	1.50	Ant 1/3/4/5	All Frequency
LTE	Main	1.00	Ant 0	Fre < 1GHz
		0.70	Ant 2/5	All Frequency
	Aux 1	1.20	Ant 1	Fre < 1GHz
		0.70	Ant 5	All Frequency
		1.50	Ant 4	All Frequency
	Aux 2	0.70	Ant 4/3	All Frequency
	Aux 3	1.50	Ant 3	only band7
	Aux 4	1.00	Ant 4	only band7
5GNR	Main	1.00	Ant0	f < 1GHz
		1.00	Ant2	only for 5GNR n38
		0.70	Ant2	1GHz < f < 3GHz (Except 5GNR n38)
		0.70	Ant7	f ≥ 3GHz (Except 5GNR n78 PC2)
		1.50	Ant7	only for 5GNR n78 PC2
	Aux 1	1.20	Ant1	f < 1GHz
		1.20	Ant5	only for 5GNR n38
		0.70	Ant5	1GHz < f < 3GHz (Except 5GNR n38)
		1.50	Ant4	f ≥ 3GHz
	Aux 2	0.70	Ant4	1GHz < f < 3GHz (Except 5GNR n7/n38)
		1.00	Ant4	only for 5GNR n7/n38
		1.50	Ant6	f ≥ 3GHz (Except 5GNR n78 PC3)
		1.20	Ant6	only for 5GNR n78 PC3
	Aux 3	1.50	Ant 8	f ≥ 3GHz
		0.70	Ant 3	1GHz < f < 3GHz (Except 5GNR n7/n38)
		1.50	Ant 3	only for 5GNR n7
		1.20	Ant 3	only for 5GNR n38

Antenna Group:

Antenna Group 0 (AG0)	ANT1 & ANT2& ANT3& ANT4& ANT6 & ANT7 & ANT8
Antenna Group 1 (AG1)	ANT0 & ANT5 & ANT2 & ANT3

Note: Ant2 and Ant3 as shared antenna(s) among AG0 and AG1.

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

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

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

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

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

Band	Antenna	Head DSI 1	Hotspot DSI 5	Body Worn DSI 4	Sensor On DSI 3	Pmax
GSM850	Ant 0	24.0	24.00	24.00	24.00	24.0
GSM850	Ant 1	21.50	21.50	23.50	23.50	23.5
GSM1900	Ant 4	19.00	19.00	19.50	19.50	19.5
GSM1900	Ant 5	21.00	21.00	21.00	21.00	21.0
WCDMA II	Ant 4	18.00	18.00	23.00	21.00	23.0
WCDMA II	Ant 5	24.00	21.50	24.00	22.50	24.0
WCDMA IV	Ant 2	17.50	17.50	22.00	22.00	24.0
WCDMA IV	Ant 3	21.50	21.50	22.00	22.00	23.0
WCDMA IV	Ant 4	17.00	17.00	23.00	20.00	23.0
WCDMA IV	Ant 5	24.00	21.00	24.00	22.50	24.0
WCDMA V	Ant 0	24.00	24.00	24.00	24.00	24.0
WCDMA V	Ant 1	22.00	22.00	24.00	24.00	24.0
LTE Band 2	Ant 4	17.50	17.50	23.50	19.50	23.5
LTE Band 2	Ant 5	25.00	22.50	25.00	23.00	25.0
LTE Band 4	Ant 2	18.50	18.50	23.00	23.00	25.0
LTE Band 4	Ant 3	21.00	19.00	25.00	22.00	25.0
LTE Band 4	Ant 4	18.00	18.00	25.00	20.00	25.0
LTE Band 4	Ant 5	25.00	22.00	25.00	23.00	25.0
LTE Band 5	Ant 0	24.50	24.50	24.50	24.50	24.5
LTE Band 5	Ant 1	23.00	23.00	24.50	24.50	24.5
LTE Band 7	Ant 2	19.50	19.50	22.00	22.00	25.0
LTE Band 7	Ant 3	20.50	20.50	24.00	20.50	24.0
LTE Band 7	Ant 4	17.00	17.00	24.00	19.50	24.0
LTE Band 7	Ant 5	25.00	21.00	25.00	21.00	25.0
LTE Band 66	Ant 2	18.50	18.50	23.00	23.00	25.0
LTE Band 66	Ant 3	20.00	20.00	25.00	21.00	25.0
LTE Band 66	Ant 4	18.00	18.00	25.00	20.00	25.0
LTE Band 66	Ant 5	25.00	22.00	25.00	22.50	25.0
LTE Band 38	Ant 2	19.50	19.50	23.00	23.00	23.0
LTE Band 38	Ant 3	17.50	17.50	23.00	20.50	23.0
LTE Band 38	Ant 4	18.00	18.00	23.00	19.00	23.0
LTE Band 38	Ant 5	23.00	21.00	23.00	21.00	23.0
LTE Band 41	Ant 2	20.00	20.00	21.00	21.00	23.0
LTE Band 41	Ant 3	19.00	19.00	23.00	20.00	23.0
LTE Band 41	Ant 4	16.50	16.50	23.00	18.50	23.0
LTE Band 41	Ant 5	23.00	20.50	23.00	20.50	23.0
FR1 n5	Ant 0	24.50	24.50	24.50	24.50	24.5
FR1 n5	Ant 1	23.00	23.00	24.50	24.50	24.5
FR1 n7	Ant 2	20.50	20.50	21.00	21.00	25.0
FR1 n7	Ant 3	21.00	20.50	24.00	20.50	24.0
FR1 n7	Ant 4	17.00	17.00	23.50	18.50	24.0
FR1 n7	Ant 5	25.00	20.00	25.00	20.00	25.0
FR1 n38	Ant 2	19.00	19.00	21.50	21.50	24.5
FR1 n38	Ant 3	20.00	20.00	24.50	21.00	24.5
FR1 n38	Ant 4	17.00	17.00	24.50	19.50	24.5
FR1 n38	Ant 5	25.00	19.50	25.00	19.50	24.5
FR1 n41	Ant 2	19.00	19.00	22.00	22.00	25.0

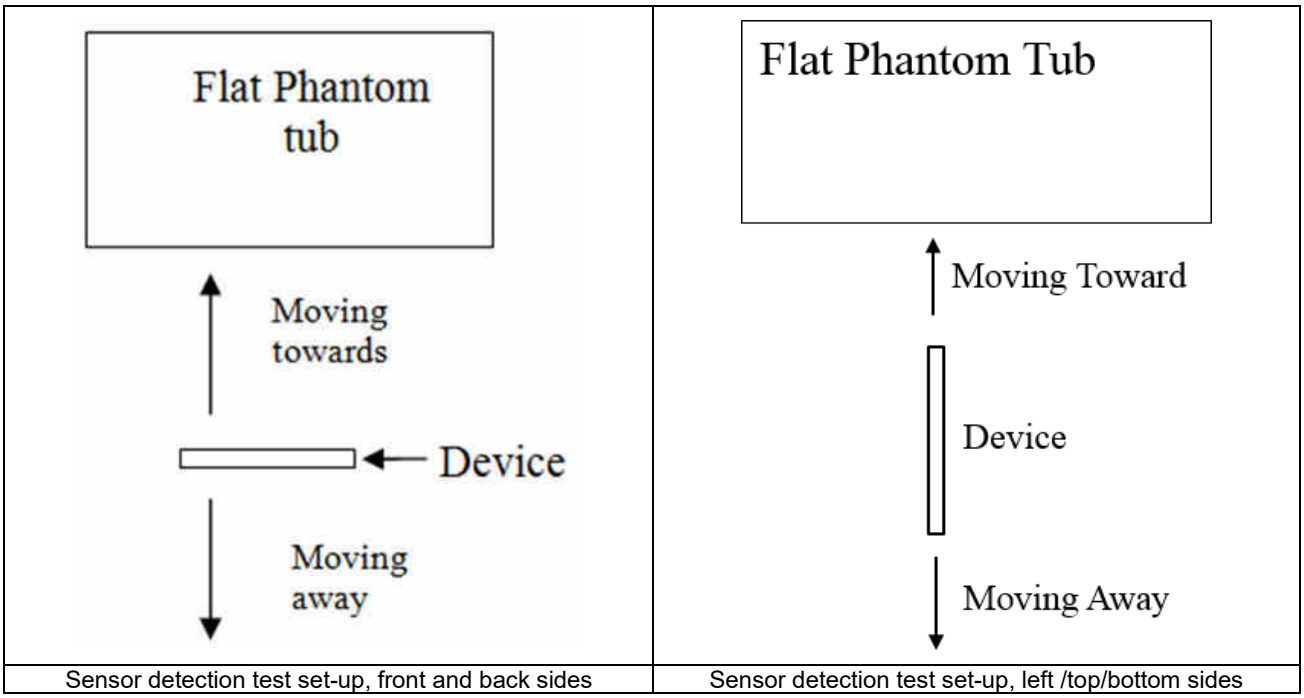
FR1 n41	Ant 3	22.00	22.00	25.00	22.00	25.0
FR1 n41	Ant 4	17.50	17.50	25.00	19.50	25.0
FR1 n41	Ant 5	25.00	20.50	25.00	20.50	25.0
FR1 n77 PC3	Ant 4	16.00	16.00	23.00	19.50	23.0
FR1 n77 PC3	Ant 6	17.00	17.00	23.00	17.00	24.0
FR1 n77 PC3	Ant 7	15.60	15.50	18.00	18.00	25.0
FR1 n77 PC3	Ant 8	19.50	14.50	21.50	14.50	24.0
FR1 n78 PC2	Ant 4	15.50	15.50	24.00	18.00	24.0
FR1 n78 PC2	Ant 6	18.00	18.00	23.00	19.00	27.0
FR1 n78 PC2	Ant 7	14.50	14.50	17.00	17.00	25.5
FR1 n78 PC2	Ant 8	19.50	13.00	19.00	14.00	24.5
FR1 n78 PC3	Ant 4	15.50	15.50	24.00	18.00	23.0
FR1 n78 PC3	Ant 6	18.00	18.00	23.00	19.00	24.5
FR1 n78 PC3	Ant 7	14.50	14.50	17.00	17.00	25.0
FR1 n78 PC3	Ant 8	19.50	13.00	19.00	14.00	24.0

Note: 1) *P_{max} is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + Total uncertainty.
2) All P_{limit} power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD).
3) The max allowed output power is the Plimit + Total uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.
4) GSM/WCDMA applies force peak method. if force peak is set to ‘x’ for a given tech/band/antenna/DSI in the EFS, then the Smart Transmit feature limits the maximum instantaneous Tx power to Plimit for the selected tech/band/antenna /DSI. In other words, with force peak set to ‘x’, under static condition (i.e., fixed tech/band /antenna/DSI) and in single active Tx scenario, Smart Transmit can guarantee Tx power level of Plimit at all times.

6. Proximity Sensor Triggering Test

6.1 Proximity sensor triggering distances(Per KDB616217§6.2)

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 sensor placed coincident with antenna elements at the top/bottom end 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 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 top side of the device use a detection threshold distance. When front/back/left /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 /top/bottom sides

<P-Sensor>

< Sensor for Ant5>

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 Ant3/Ant4/Ant6/Ant8 >

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

7. RF Exposure Limits

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

8. Specific Absorption Rate (SAR)

8.1 Introduction

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

8.2 SAR Definition

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

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

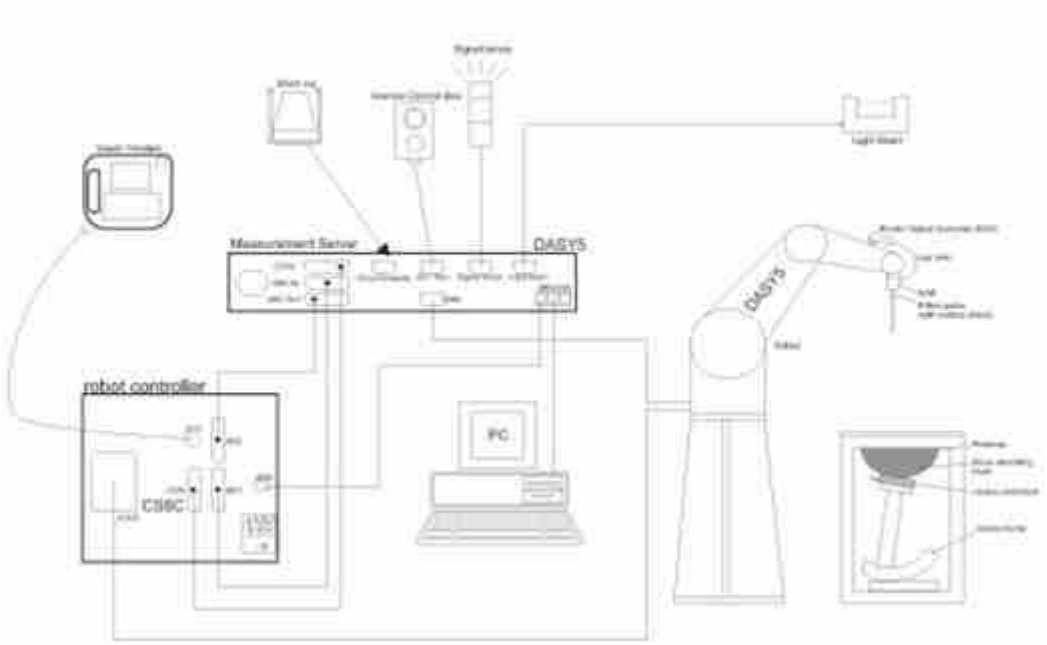
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

9. System Description and Setup

The DASY system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

9.1 E-Field Probe

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

<EX3DV4 Probe>

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

9.2 Data Acquisition Electronics (DAE)

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

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

Photo of DAE

9.3 Phantom

<SAM Twin Phantom>

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

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

<ELI Phantom>

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

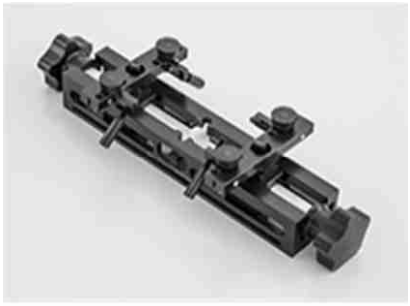
The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices or for evaluating transmitters operating at low frequencies. ELI is fully compatible with standard and all known tissue simulating liquids.

9.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

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

Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

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

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

Mounting Device for Laptops

10. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

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

<SAR measurement>

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

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

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

10.1 Spatial Peak SAR Evaluation

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

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

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

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

10.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe 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.

10.3 Area Scan

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

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

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

10.4 Zoom Scan

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

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

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

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

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

10.5 Volume Scan Procedures

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

10.6 Power Drift Monitoring

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

11. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	835MHz System Validation Kit	D835V2	4d091	2022/8/19	2023/8/18
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2023/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2021/12/20	2022/12/19
SPEAG	2450MHz System Validation Kit	D2450V2	1040	2020/5/6	2023/5/4
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/25
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2020/11/25	2023/11/24
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2020/11/25	2023/11/24
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2020/5/14	2023/5/12
SPEAG	5000MHz System Validation Kit	D5GHzV2	1341	2021/12/13	2022/12/12
SPEAG	Data Acquisition Electronics	DAE4	1358	2022/2/23	2023/2/22
SPEAG	Dosimetric E-Field Probe	EX3DV4	7706	2022/1/20	2023/1/19
SPEAG	SAM Twin Phantom	SAM Twin	TP-1697	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2022/7/14	2023/7/13
Agilent	ENA Series Network Analyzer	E5071C	MY46104587	2022/5/24	2023/5/23
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	2022/1/24	2023/1/23
Anritsu	Vector Signal Generator	MG3710A	6201682672	2022/1/6	2023/1/5
Rohde & Schwarz	Power Meter	NRVD	102081	2022/7/14	2023/7/13
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
R&S	CBT BLUETOOTH TESTER	CBT	100641	2022/1/5	2023/1/4
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2022/10/12	2023/10/11
TES	DIGITAC THERMOMETER	1310	200505600	2022/7/12	2023/7/11
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/1/6	2023/1/5
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	
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	

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.

12. System Verification

12.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 12.1. 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. 12.2.

Fig 12.1 Photo of Liquid Height for Head SAR

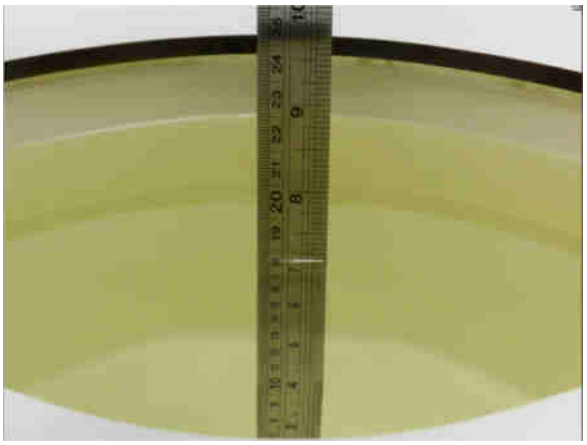


Fig 12.2 Photo of Liquid Height for Body SAR

12.2 Tissue Verification

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

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

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
835	Head	22.8	0.934	41.163	0.90	41.50	3.78	-0.81	±5	2022/11/1
1750	Head	22.7	1.401	40.508	1.37	40.10	2.26	1.02	±5	2022/11/2
1900	Head	22.6	1.422	38.963	1.40	40.00	1.57	-2.59	±5	2022/11/3
2450	Head	22.7	1.809	38.523	1.80	39.20	0.50	-1.73	±5	2022/11/4
2600	Head	22.7	1.926	38.230	1.96	39.00	-1.73	-1.97	±5	2022/11/5
3500	Head	22.6	2.834	39.051	2.91	37.90	-2.61	3.04	±5	2022/11/6
3700	Head	22.8	3.024	38.720	3.12	37.70	-3.08	2.71	±5	2022/11/7
3900	Head	22.6	3.228	38.420	3.32	37.50	-2.77	2.45	±5	2022/11/8
5250	Head	22.6	4.566	35.977	4.71	35.90	-3.06	0.21	±5	2022/11/9
5600	Head	22.7	4.965	35.441	5.07	35.50	-2.07	-0.17	±5	2022/11/10
5750	Head	22.6	5.130	35.252	5.22	35.40	-1.72	-0.42	±5	2022/11/11
835	Head	22.7	0.929	40.902	0.90	41.50	3.22	-1.44	±5	2022/11/12
1750	Head	22.7	1.353	40.085	1.37	40.10	-1.24	-0.04	±5	2022/11/13
1900	Head	22.6	1.459	40.000	1.40	40.00	4.21	0.00	±5	2022/11/14
2600	Head	22.6	1.980	40.595	1.96	39.00	1.02	4.09	±5	2022/11/15
3500	Head	22.6	2.835	39.048	2.91	37.90	-2.58	3.03	±5	2022/11/16
3700	Head	22.7	2.981	38.645	3.12	37.70	-4.46	2.51	±5	2022/11/17
3900	Head	22.8	3.229	38.414	3.32	37.50	-2.74	2.44	±5	2022/11/18
835	Head	22.8	0.911	41.929	0.90	41.50	1.22	1.03	±5	2022/11/19
1750	Head	22.6	1.315	40.193	1.37	40.10	-4.01	0.23	±5	2022/11/20
1900	Head	22.8	1.405	40.179	1.40	40.00	0.36	0.45	±5	2022/11/21
2600	Head	22.8	1.873	39.220	1.96	39.00	-4.44	0.56	±5	2022/11/22
3500	Head	22.9	2.881	38.499	2.91	37.90	-1.00	1.58	±5	2022/11/23
3700	Head	22.6	2.991	38.383	3.12	37.70	-4.13	1.81	±5	2022/11/22
3900	Head	22.7	3.175	38.059	3.32	37.50	-4.37	1.49	±5	2022/11/25
2450	Head	22.8	1.872	40.807	1.80	39.20	4.00	4.10	±5	2022/11/26
5250	Head	22.7	4.575	36.286	4.71	35.90	-2.87	1.08	±5	2022/11/27
5600	Head	22.6	4.952	35.732	5.07	35.50	-2.33	0.65	±5	2022/11/28
5750	Head	22.8	5.134	35.562	5.22	35.40	-1.65	0.46	±5	2022/11/29

12.3 System Performance Check Results

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

<1g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
2022/11/1	835	Head	50	4d091	7706	1358	0.465	9.45	9.3	-1.59
2022/11/2	1750	Head	50	1090	7706	1358	1.850	37.00	37	0.00
2022/11/3	1900	Head	50	5d182	7706	1358	2.040	39.60	40.8	3.03
2022/11/4	2450	Head	50	1040	7706	1358	2.520	51.80	50.4	-2.70
2022/11/5	2600	Head	50	1061	7706	1358	2.820	56.60	56.4	-0.35
2022/11/6	3500	Head	50	1037	7706	1358	3.180	68.00	63.6	-6.47
2022/11/7	3700	Head	50	1008	7706	1358	3.270	67.60	65.4	-3.25
2022/11/8	3900	Head	50	1048	7706	1358	3.230	70.20	64.6	-7.98
2022/11/9	5250	Head	50	1341	7706	1358	3.900	80.70	78	-3.35
2022/11/10	5600	Head	50	1341	7706	1358	3.960	84.50	79.2	-6.27
2022/11/11	5750	Head	50	1341	7706	1358	3.750	80.60	75	-6.95
2022/11/12	835	Head	50	4d091	7706	1358	0.500	9.45	10	5.82
2022/11/13	1750	Head	50	1090	7706	1358	1.790	37.00	35.8	-3.24
2022/11/14	1900	Head	50	5d182	7706	1358	2.090	39.60	41.8	5.56
2022/11/15	2600	Head	50	1061	7706	1358	2.900	56.60	58	2.47
2022/11/16	3500	Head	50	1037	7706	1358	3.180	68.00	63.6	-6.47
2022/11/17	3700	Head	50	1008	7706	1358	3.220	67.60	64.4	-4.73
2022/11/18	3900	Head	50	1048	7706	1358	3.240	70.20	64.8	-7.69
2022/11/19	835	Head	50	4d091	7706	1358	0.486	9.45	9.72	2.86
2022/11/20	1750	Head	50	1090	7706	1358	1.730	37.00	34.6	-6.49
2022/11/21	1900	Head	50	5d182	7706	1358	2.070	39.60	41.4	4.55
2022/11/22	2600	Head	50	1061	7706	1358	2.850	56.60	57	0.71
2022/11/23	3500	Head	50	1037	7706	1358	3.210	68.00	64.2	-5.59
2022/11/22	3700	Head	50	1008	7706	1358	3.330	67.60	66.6	-1.48
2022/11/25	3900	Head	50	1048	7706	1358	3.280	70.20	65.6	-6.55
2022/11/26	2450	Head	50	1040	7706	1358	2.600	51.80	52	0.39
2022/11/27	5250	Head	50	1341	7706	1358	3.910	80.70	78.2	-3.10
2022/11/28	5600	Head	50	1341	7706	1358	3.950	84.50	79	-6.51
2022/11/29	5750	Head	50	1341	7706	1358	3.770	80.60	75.4	-6.45

<10g SAR>

Date	Frequency (MHz)	Tissue Type	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2022/11/1	835	Head	50	4d091	7706	1358	0.308	6.22	6.16	-0.96
2022/11/2	1750	Head	50	1090	7706	1358	1.010	19.50	20.2	3.59
2022/11/3	1900	Head	50	5d182	7706	1358	1.080	20.20	21.6	6.93
2022/11/4	2450	Head	50	1040	7706	1358	1.190	24.00	23.8	-0.83
2022/11/5	2600	Head	50	1061	7706	1358	1.320	25.10	26.4	5.18
2022/11/6	3500	Head	50	1037	7706	1358	1.240	25.40	24.8	-2.36
2022/11/7	3700	Head	50	1008	7706	1358	1.230	24.40	24.6	0.82
2022/11/8	3900	Head	50	1048	7706	1358	1.130	24.40	22.6	-7.38
2022/11/9	5250	Head	50	1341	7706	1358	1.130	23.10	22.6	-2.16
2022/11/10	5600	Head	50	1341	7706	1358	1.150	24.00	23	-4.17
2022/11/11	5750	Head	50	1341	7706	1358	1.070	22.70	21.4	-5.73
2022/11/12	835	Head	50	4d091	7706	1358	0.335	6.22	6.7	7.72
2022/11/13	1750	Head	50	1090	7706	1358	0.973	19.50	19.46	-0.21
2022/11/14	1900	Head	50	5d182	7706	1358	1.060	20.20	21.2	4.95
2022/11/15	2600	Head	50	1061	7706	1358	1.350	25.10	27	7.57
2022/11/16	3500	Head	50	1037	7706	1358	1.240	25.40	24.8	-2.36
2022/11/17	3700	Head	50	1008	7706	1358	1.220	24.40	24.4	0.00
2022/11/18	3900	Head	50	1048	7706	1358	1.130	24.40	22.6	-7.38
2022/11/19	835	Head	50	4d091	7706	1358	0.323	6.22	6.46	3.86
2022/11/20	1750	Head	50	1090	7706	1358	0.941	19.50	18.82	-3.49
2022/11/21	1900	Head	50	5d182	7706	1358	1.040	20.20	20.8	2.97
2022/11/22	2600	Head	50	1061	7706	1358	1.330	25.10	26.6	5.98
2022/11/23	3500	Head	50	1037	7706	1358	1.230	25.40	24.6	-3.15
2022/11/22	3700	Head	50	1008	7706	1358	1.250	24.40	25	2.46
2022/11/25	3900	Head	50	1048	7706	1358	1.180	24.40	23.6	-3.28
2022/11/26	2450	Head	50	1040	7706	1358	1.240	24.00	24.8	3.33
2022/11/27	5250	Head	50	1341	7706	1358	1.130	23.10	22.6	-2.16
2022/11/28	5600	Head	50	1341	7706	1358	1.170	24.00	23.4	-2.50
2022/11/29	5750	Head	50	1341	7706	1358	1.110	22.70	22.2	-2.20

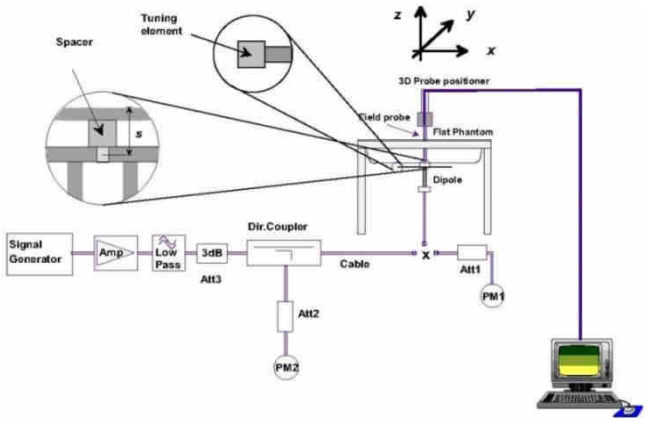


Fig 12.3.1 System Performance Check Setup

Fig 12.3.2 Setup Photo

13. RF Exposure Positions

13.1 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.

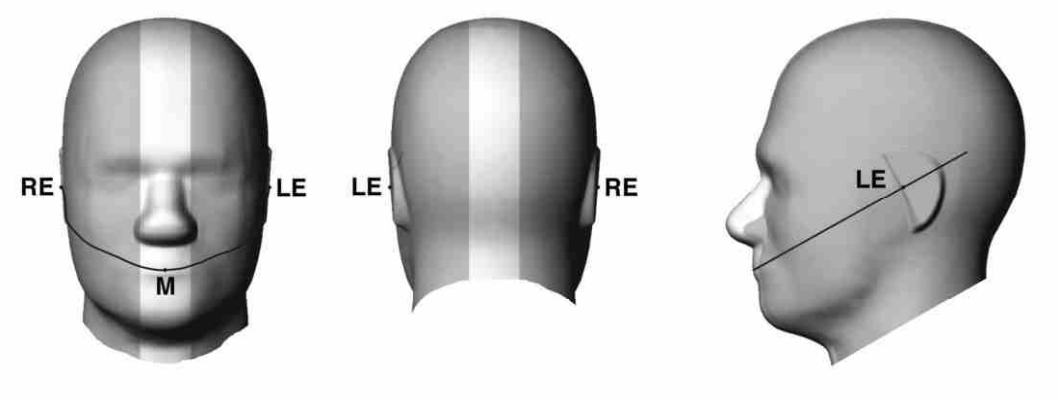


Fig 12.1.1 Front, back, and side views of SAM twin phantom

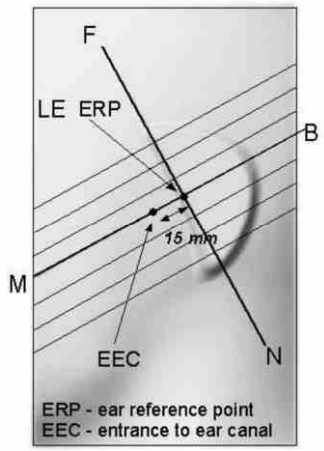


Fig 12.1.2 Close-up side view of phantom showing the ear region.

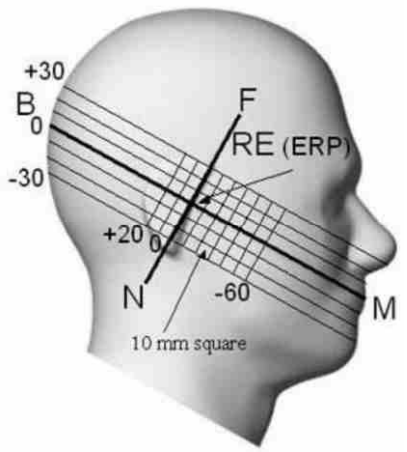


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

13.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width wt of the handset at the level of the acoustic output (point A in Figure 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.

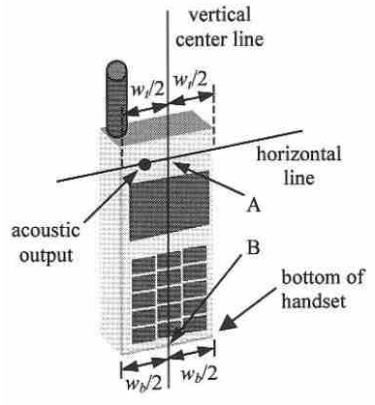


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

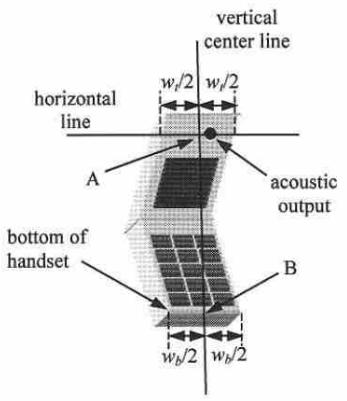


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

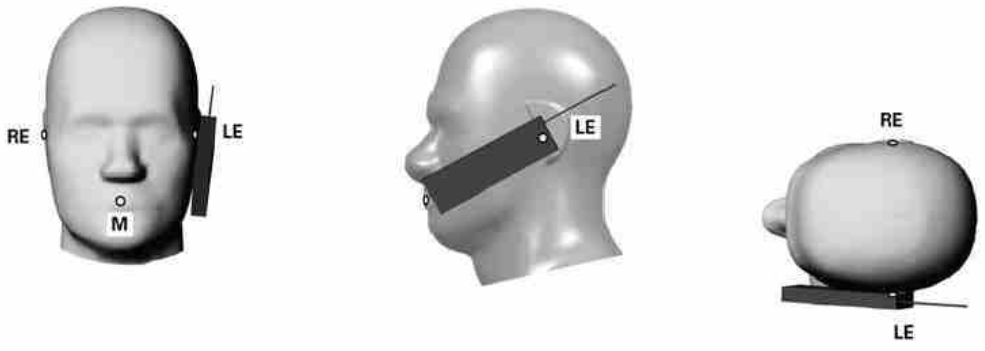


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

13.3 Definition of the tilt position

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

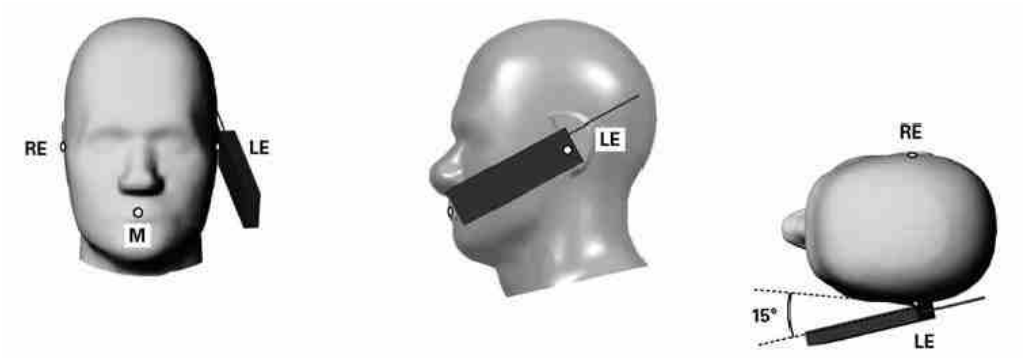


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

13.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 12.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is > 1.2 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.

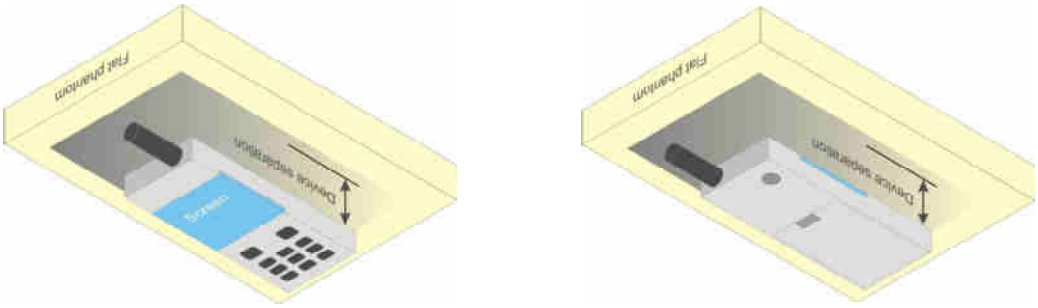


Fig 12.4 Body Worn Position

13.5 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.

13.6 Wireless Router

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

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

14. 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 $\beta_{hs} = 30/15 * \beta_c$.

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

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 $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with $\beta_{hs} = 5/15 * \beta_c$.

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.		

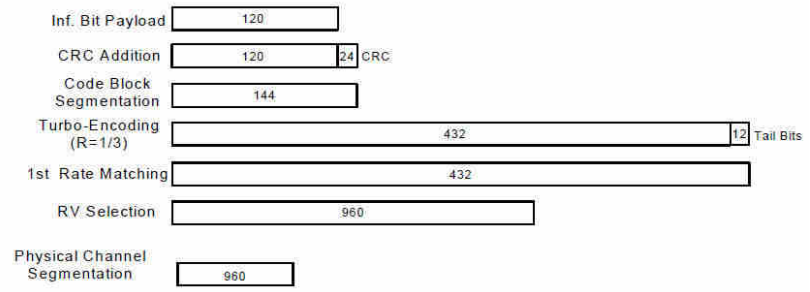


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

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

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

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

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

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with 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>

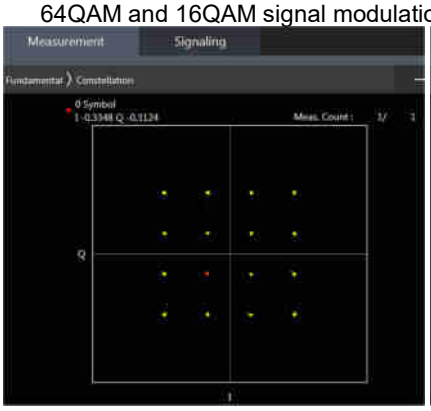
General Note:

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+.

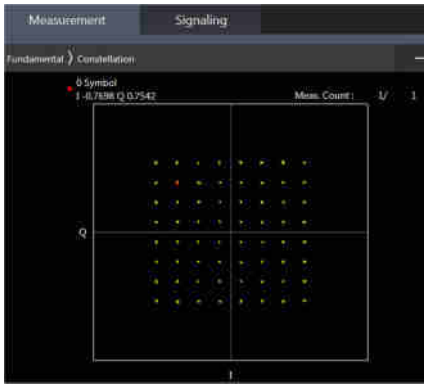
<LTE Conducted Power>

General Note:

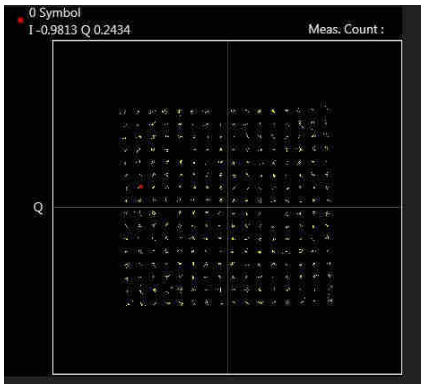
1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested 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 / 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 B4 / B38 SAR test was covered by B66 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 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.

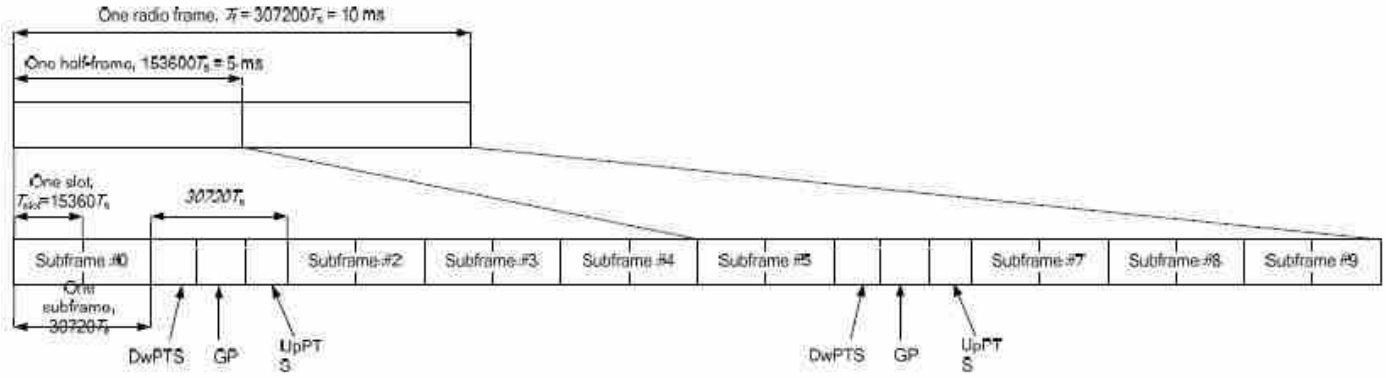


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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. The gray color table is covered by other combinations and no need to verify power.
4. All permutations exist. No restrictions on Pcell & Scell combinations.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation	
Number	Combination	Covered by Measurement Superset	Number	Combination
1	CA_2A-4A		1	CA_2A-7C
2	CA_2A-7A	1-3CC	2	CA_4A-7C
3	CA_4A-5A		3	CA_5A-7A-7A
4	CA_4A-7A	2-3CC	4	CA_41D
5	CA_7A-7A	3-3CC	5	CA_5A-7A-66A
6	CA_7C	1-3CC	6	CA_3A-3A-41A
7	CA_41C	4-3CC		
8	CA_38C			
9	CA_41A-41A			
10	CA_66C			
11	CA_66B			
12	CA_2A-2A			
13	CA_5A-7A	3-3CC		
14	CA_5A-66A	5-3CC		
15	CA_7A-66A	5-3CC		
16	CA_66A-66A			

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.

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Bands B4/7/38/41/66 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

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

4X4 MIMO	WWAN Band
	LTE Band: B4/7/38/41/66

LTE Carrier Aggregation Conducted Power (Uplink)

<Intra-band>

2CC Uplink Carrier Aggregation		
Number	Combination	Ant No.
1	7C	ANT2/3/4/5
2	38C	ANT2/3/4/5

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B7/B38/B42 with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.

ii. The device supports uplink carrier aggregation with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 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 n5, n78 supports NSA operation.
2. 5G NR n5, n7, n38, n41, n77, n78 supports SA operation.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/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 AM 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
4. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
5. 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.
6. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
7. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
8. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
9. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
10. 5GNR n78 supports HPUE, HPUE power and SAR testing performed separately.
11. For 5GNR n78 HPUE with higher power, so we chose power class 2 full SAR testing and power class 2 SAR can represent power class 3 SAR.

<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		

ENDC List	LTE Ant No.	NR Ant No.
DC_2A_n78A	Ant4/5	Ant 4&6&7&8
DC_7A_n78A	Ant2/3/4/5	Ant 4&6&7&8
DC_38A_n78A	Ant2/3/4/5	Ant 4&6&7&8
DC_41A_n78A	Ant2/3/4/5	Ant 4&6&7&8
DC_5A_n78A	Ant0/1	Ant 4&6&7&8
DC_7A_n5A	Ant2/3/4/5	Ant0/1

<WLAN Conducted Power>

General Note:

1. For each frequency band or when MIMO mode was not performed, due to for each antenna, transmit power in SISO operation is larger than (or equal to) the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode.
2. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6W/kg and SAR peak to location ratio ≤ 0.04, no additional SAR measurements for MIMO.
3. 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.
4. 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.
5. 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).
6. 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.
7. 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.
8. For full RU and partial tone size output power measurement, after verification for the partial tone size mode power level will not higher than full tone size power level, so chose full tone power to be measured in this report.
9. When multiple transmission modes (802.11a/g/n/ac/ax) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac then 802.11ax then 802.11be or 802.11g is chosen over 802.11n.
10. 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 power to perform SAR testing.

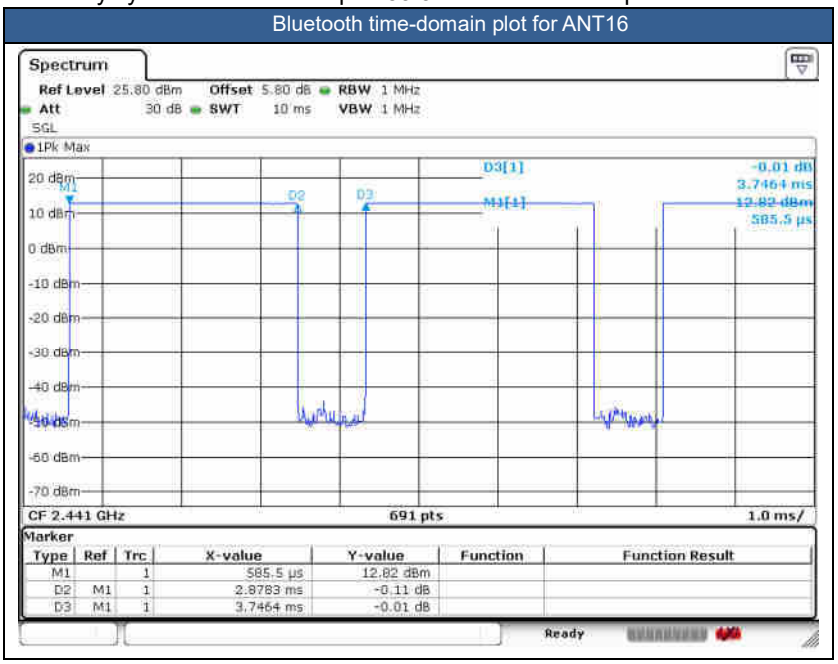
11. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.

<2.4GHz Bluetooth>

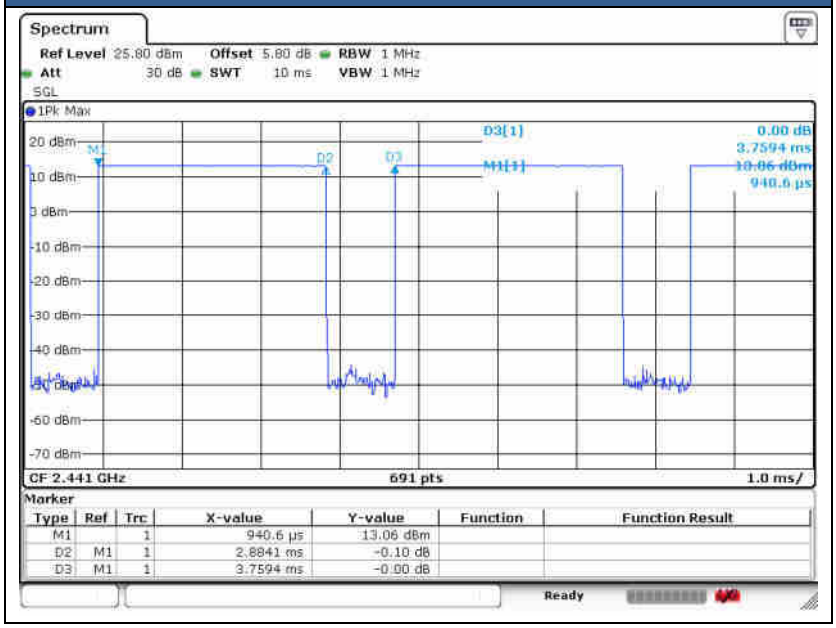
General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 76.83 % for ANT16 and 76.72 % for ANT7 as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to 83.3% for Bluetooth reported SAR calculation

Bluetooth time-domain plot for ANT16



Bluetooth time-domain plot for ANT7



15. Antenna Location

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

16. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of BT/WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   d. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   e. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required 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 the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G&5G and Wi-Fi antennas accordingly. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
5. For WLAN/BT when transmit simultaneous with WWAN, power reduction will be activated to head, hotspot, body-worn and extremity.
6. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
7. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only show one time.
8. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
9. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
10. 5GNR n78 supports HPUE, HPUE power and SAR testing performed separately.
11. For 5GNR n78 HPUE with higher power, so we chose power class 2 full SAR testing and power class 2 SAR can represent power class 3 SAR.
12. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold,
    a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of WCDMA II/IV, LTE B66/4 and WLAN 5.8GHz, therefore product specific 10g SAR is necessary.
    b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.

c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

13. LTE band B4/7/38/41/66 at ant2/3/4/5 and 5GNR n7/38/41 at ant2/3/4/5 support different Pas. For at ant2/5, the maximum power of Main PA is higher than and very close to the other PA, for RF exposure, we choose the main PA to perform full SAR tested to ensure the RF exposure is compliance. For at ant3/4, the maximum power of other PA is higher than and very close to the Main PA, for RF exposure, so we chose the other PA to perform full SAR testing to ensure the RF exposure is compliance and Main PA to verify the worst case.

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 / 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 B4 / B38 SAR test was covered by B66 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
   b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   c. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
   d. PI/2 BPSK /16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM /64QAM/256QAM SAR testing are not required.
   e. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
   f. For 5G FR1 n5/n7/n38/n41/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 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. For full RU and partial tone size output power measurement, after verification for the partial tone size mode power level will not higher than full tone size power level, so chose full tone power to be measured in this report.
7. When multiple transmission modes (802.11a/g/n/ac/ax) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac then 802.11ax then 802.11be or 802.11g is chosen over 802.11n.
8. 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 power to perform SAR testing.

DSI status description：

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

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

Exposure Condition	DSI
Head SAR	DSI 1
Body worn Mode SAR	DSI 4
Hotspot Mode SAR	DSI 5
Extremity(Handheld) SAR	DSI 3

16.1 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)
835MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	DSI 1	189	836.4	27.11	28.00	1.227	-	-	0.03	0.183	0.225
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	DSI 1	189	836.4	27.11	28.00	1.227	-	-	0.08	0.094	0.115
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	DSI 1	189	836.4	27.11	28.00	1.227	-	-	-0.06	0.184	0.226
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	DSI 1	189	836.4	27.11	28.00	1.227	-	-	0.07	0.086	0.106
01	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 1	189	836.4	24.89	26.00	1.291	-	-	-0.07	0.681	**0.879**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 1	DSI 1	189	836.4	24.89	26.00	1.291	-	-	0.11	0.433	0.559
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 1	DSI 1	189	836.4	24.89	26.00	1.291	-	-	0.04	0.277	0.358
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 1	DSI 1	189	836.4	24.89	26.00	1.291	-	-	0.13	0.202	0.261
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 1	128	824.2	24.86	26.00	1.300	-	-	0.03	0.675	0.878
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 1	DSI 1	251	848.8	24.81	26.00	1.315	-	-	0.06	0.667	0.877
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 1	4182	836.4	24.12	25.00	1.225	-	-	0.02	0.188	0.230
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 1	4182	836.4	24.12	25.00	1.225	-	-	-0.11	0.125	0.153
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	4182	836.4	24.12	25.00	1.225	-	-	-0.09	0.207	0.253
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 1	4182	836.4	24.12	25.00	1.225	-	-	-0.17	0.105	0.129
02	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	4182	836.4	22.28	23.50	1.324	-	-	-0.03	0.656	**0.869**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	4182	836.4	22.28	23.50	1.324	-	-	-0.03	0.379	0.502
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4182	836.4	22.28	23.50	1.324	-	-	0.14	0.270	0.358
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	4182	836.4	22.28	23.50	1.324	-	-	-0.18	0.180	0.238
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	4132	826.4	22.20	23.50	1.349	-	-	0.11	0.636	0.858
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	4233	846.6	22.09	23.50	1.384	-	-	0.15	0.626	0.866
	LTE Band 5	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSI 1	20525	836.5	24.49	25.50	1.262	-	-	0.05	0.219	0.276
	LTE Band 5	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSI 1	20525	836.5	24.47	25.50	1.268	-	-	0.08	0.218	0.276
	LTE Band 5	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSI 1	20525	836.5	24.49	25.50	1.262	-	-	0.1	0.136	0.172
	LTE Band 5	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSI 1	20525	836.5	24.47	25.50	1.268	-	-	0.12	0.139	0.176
	LTE Band 5	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSI 1	20525	836.5	24.49	25.50	1.262	-	-	-0.03	0.238	0.300
	LTE Band 5	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSI 1	20525	836.5	24.47	25.50	1.268	-	-	-0.18	0.232	0.294
	LTE Band 5	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSI 1	20525	836.5	24.49	25.50	1.262	-	-	0.02	0.115	0.145
	LTE Band 5	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSI 1	20525	836.5	24.47	25.50	1.268	-	-	-0.05	0.120	0.152
03	LTE Band 5	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSI 1	20525	836.5	23.16	24.20	1.271	-	-	0.07	0.743	**0.944**
	LTE Band 5	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSI 1	20525	836.5	22.93	24.20	1.340	-	-	0.02	0.704	0.943
	LTE Band 5	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSI 1	20525	836.5	23.10	24.20	1.288	-	-	0.03	0.726	0.935
	LTE Band 5	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSI 1	20525	836.5	23.16	24.20	1.271	-	-	0.16	0.420	0.534
	LTE Band 5	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSI 1	20525	836.5	22.93	24.20	1.340	-	-	0.07	0.419	0.561
	LTE Band 5	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSI 1	20525	836.5	23.16	24.20	1.271	-	-	0.07	0.303	0.385
	LTE Band 5	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSI 1	20525	836.5	22.93	24.20	1.340	-	-	-0.16	0.305	0.409
	LTE Band 5	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSI 1	20525	836.5	23.16	24.20	1.271	-	-	0.01	0.204	0.259
	LTE Band 5	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSI 1	20525	836.5	22.93	24.20	1.340	-	-	0.14	0.208	0.279
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	167300	836.5	24.58	25.50	1.236	-	-	0.14	0.216	0.267
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	DSI 1	167300	836.5	24.54	25.50	1.247	-	-	-0.08	0.201	0.251
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	167300	836.5	24.58	25.50	1.236	-	-	-0.17	0.127	0.157
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	DSI 1	167300	836.5	24.54	25.50	1.247	-	-	0.14	0.120	0.150
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	24.58	25.50	1.236	-	-	-0.03	0.219	0.271
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	DSI 1	167300	836.5	24.54	25.50	1.247	-	-	-0.06	0.214	0.267
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	167300	836.5	24.58	25.50	1.236	-	-	-0.12	0.108	0.133
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	DSI 1	167300	836.5	24.54	25.50	1.247	-	-	-0.02	0.105	0.131
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.08	24.20	1.294	-	-	0.04	0.457	0.591
04	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.04	24.20	1.306	-	-	-0.02	0.782	**1.021**
	FR1 n5	20M	QPSK	100	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	DSI 1	167300	836.5	22.94	24.20	1.337	-	-	0.03	0.656	0.877
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 1	167300	836.5	23.08	24.20	1.294	-	-	0.15	0.256	0.331
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	DSI 1	167300	836.5	23.04	24.20	1.306	-	-	-0.07	0.330	0.431

	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.08	24.20	1.294	-	-	0.02	0.189	0.245
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	DSI 1	167300	836.5	23.04	24.20	1.306	-	-	-0.02	0.240	0.313
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 1	167300	836.5	23.08	24.20	1.294	-	-	0.03	0.123	0.159
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	DSI 1	167300	836.5	23.04	24.20	1.306	-	-	0.09	0.162	0.212
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSI 1	1413	1732.6	17.77	18.50	1.183	-	-	0.11	0.397	0.470
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSI 1	1413	1732.6	17.77	18.50	1.183	-	-	0.03	0.084	0.099
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 1	1413	1732.6	17.77	18.50	1.183	-	-	-0.13	0.768	0.909
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSI 1	1413	1732.6	17.77	18.50	1.183	-	-	0.05	0.157	0.186
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 1	1312	1712.4	17.71	18.50	1.199	-	-	-0.13	0.716	0.859
05	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSI 1	1513	1752.6	17.66	18.50	1.213	-	-	-0.07	0.795	**0.965**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 3	DSI 1	1413	1732.6	21.90	23.00	1.288	-	-	-0.14	0.519	0.669
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 3	DSI 1	1413	1732.6	21.90	23.00	1.288	-	-	-0.06	0.122	0.157
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 3	DSI 1	1413	1732.6	21.90	23.00	1.288	-	-	0.07	0.608	0.783
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 3	DSI 1	1413	1732.6	21.90	23.00	1.288	-	-	0.15	0.082	0.106
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	1413	1732.6	17.27	18.50	1.327	-	-	0.09	0.677	0.899
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	1312	1712.4	17.19	18.50	1.352	-	-	0.07	0.659	0.891
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	1513	1752.6	17.23	18.50	1.340	-	-	-0.08	0.694	0.930
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1413	1732.6	17.27	18.50	1.327	-	-	-0.08	0.693	0.920
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1312	1712.4	17.19	18.50	1.352	-	-	-0.18	0.675	0.913
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1513	1752.6	17.23	18.50	1.340	-	-	-0.05	0.693	0.928
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	1413	1732.6	17.27	18.50	1.327	-	-	0.07	0.484	0.642
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	1413	1732.6	17.27	18.50	1.327	-	-	0.09	0.587	0.779
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	1413	1732.6	24.17	25.50	1.358	-	-	-0.05	0.262	0.356
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 5	DSI 1	1413	1732.6	24.17	25.50	1.358	-	-	0.17	0.145	0.197
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 5	DSI 1	1413	1732.6	24.17	25.50	1.358	-	-	-0.16	0.204	0.277
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 5	DSI 1	1413	1732.6	24.17	25.50	1.358	-	-	-0.07	0.164	0.223
	LTE Band 4 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	20175	1732.5	21.26	21.70	1.107	-	-	-0.03	0.628	0.695
06	LTE Band 4 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	20175	1732.5	21.25	21.70	1.109	-	-	-0.07	0.687	**0.762**
	LTE Band 4 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	20175	1732.5	21.26	21.70	1.107	-	-	0.09	0.151	0.167
	LTE Band 4 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	20175	1732.5	21.25	21.70	1.109	-	-	0.14	0.161	0.179
	LTE Band 4 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	20175	1732.5	21.26	21.70	1.107	-	-	0.17	0.642	0.710
	LTE Band 4 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	20175	1732.5	21.25	21.70	1.109	-	-	0.07	0.683	0.758
	LTE Band 4 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	20175	1732.5	21.26	21.70	1.107	-	-	-0.03	0.103	0.114
	LTE Band 4 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	20175	1732.5	21.25	21.70	1.109	-	-	-0.02	0.113	0.125
	LTE Band 4 Main PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	20175	1732.5	20.10	20.70	1.148	-	-	-0.04	0.410	0.471
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	132322	1745	18.70	19.20	1.122	-	-	0.02	0.510	0.572
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	132322	1745	18.68	19.20	1.127	-	-	-0.05	0.515	0.581
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 1	132322	1745	18.70	19.20	1.122	-	-	-0.07	0.087	0.098
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 1	132322	1745	18.68	19.20	1.127	-	-	-0.02	0.088	0.099
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	132322	1745	18.70	19.20	1.122	-	-	0.02	0.863	0.968
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	132072	1720	18.68	19.20	1.127	-	-	0.01	0.715	0.806
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	132572	1770	18.64	19.20	1.138	-	-	0.05	0.827	0.941
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	132322	1745	18.68	19.20	1.127	-	-	0.08	0.806	0.909
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	132072	1720	18.55	19.20	1.161	-	-	0.08	0.745	0.865
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	132572	1770	18.53	19.20	1.167	-	-	-0.07	0.821	0.958
	LTE Band 66	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 2	DSI 1	132322	1745	18.66	19.20	1.132	-	-	0.05	0.792	0.897
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 1	132322	1745	18.70	19.20	1.122	-	-	0.14	0.167	0.187
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 1	132322	1745	18.68	19.20	1.127	-	-	0.01	0.167	0.188
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	132322	1745	20.26	20.70	1.107	-	-	0.01	0.578	0.640
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	132322	1745	20.24	20.70	1.112	-	-	-0.07	0.582	0.647
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	132322	1745	20.26	20.70	1.107	-	-	-0.18	0.115	0.127
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	132322	1745	20.24	20.70	1.112	-	-	0.07	0.116	0.129
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	132322	1745	20.26	20.70	1.107	-	-	-0.13	0.566	0.626
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	132322	1745	20.24	20.70	1.112	-	-	0.06	0.568	0.631
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	132322	1745	20.26	20.70	1.107	-	-	0.04	0.097	0.107
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	132322	1745	20.24	20.70	1.112	-	-	0.06	0.102	0.113

	LTE Band 66 Main PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	132322	1745	19.17	19.70	1.130	-	-	-0.08	0.286	0.323
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	132322	1745	18.09	18.70	1.151	-	-	-0.12	0.872	1.003
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	132072	1720	18.03	18.70	1.167	-	-	-0.12	0.847	0.988
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	132572	1770	18.05	18.70	1.161	-	-	0.18	0.835	0.970
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	132322	1745	18.06	18.70	1.159	-	-	-0.16	0.861	0.998
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	132072	1720	18.01	18.70	1.172	-	-	0.09	0.873	1.023
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	132572	1770	17.98	18.70	1.180	-	-	-0.06	0.835	0.986
	LTE Band 66 Other PA	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	132322	1745	18.04	18.70	1.164	-	-	0.01	0.865	1.007
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	132322	1745	18.09	18.70	1.151	-	-	-0.09	0.878	1.010
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	132072	1720	18.03	18.70	1.167	-	-	-0.08	0.877	1.023
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	132572	1770	18.05	18.70	1.161	-	-	-0.19	0.846	0.983
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	132322	1745	18.06	18.70	1.159	-	-	0.02	0.879	1.019
07	LTE Band 66 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	132072	1720	18.01	18.70	1.172	-	-	0.07	0.891	**1.044**
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	132572	1770	17.98	18.70	1.180	-	-	0.09	0.855	1.009
	LTE Band 66 Other PA	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	DSI 1	132322	1745	18.04	18.70	1.164	-	-	0.06	0.880	1.024
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	132322	1745	18.09	18.70	1.151	-	-	0.15	0.557	0.641
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	132322	1745	18.06	18.70	1.159	-	-	0.05	0.561	0.650
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	132322	1745	18.09	18.70	1.151	-	-	0.06	0.726	0.835
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	132072	1720	18.03	18.70	1.167	-	-	0.01	0.716	0.835
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	132572	1770	18.05	18.70	1.161	-	-	0.03	0.715	0.830
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	132322	1745	18.06	18.70	1.159	-	-	-0.15	0.722	0.837
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	132072	1720	18.01	18.70	1.172	-	-	0.05	0.701	0.822
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	132572	1770	17.98	18.70	1.180	-	-	-0.02	0.698	0.824
	LTE Band 66 Other PA	20M	QPSK	100	0	-	Left Tilted	0mm	Ant 4	DSI 1	132322	1745	18.04	18.70	1.164	-	-	0.02	0.708	0.824
	LTE Band 66 Main PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	132072	1720	17.03	17.70	1.167	-	-	-0.1	0.607	0.708
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	132322	1745	25.17	25.70	1.130	-	-	-0.07	0.281	0.317
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	132322	1745	25.15	25.70	1.135	-	-	0.12	0.223	0.253
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	132322	1745	25.17	25.70	1.130	-	-	-0.02	0.125	0.141
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	132322	1745	25.15	25.70	1.135	-	-	-0.07	0.133	0.151
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	132322	1745	25.17	25.70	1.130	-	-	0.07	0.226	0.255
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	132322	1745	25.15	25.70	1.135	-	-	-0.11	0.232	0.263
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	132322	1745	25.17	25.70	1.130	-	-	0.08	0.160	0.181
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	132322	1745	25.15	25.70	1.135	-	-	-0.14	0.166	0.188
1900MHz																				
08	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 4	DSI 1	661	1880	22.30	23.50	1.318	-	-	0.07	0.690	**0.910**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 4	DSI 1	661	1880	22.30	23.50	1.318	-	-	0.15	0.584	0.770
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 4	DSI 1	661	1880	22.30	23.50	1.318	-	-	0.06	0.472	0.622
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 4	DSI 1	661	1880	22.30	23.50	1.318	-	-	-0.1	0.545	0.718
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 4	DSI 1	512	1850.2	22.21	23.50	1.346	-	-	-0.03	0.668	0.899
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 4	DSI 1	810	1909.8	22.12	23.50	1.374	-	-	-0.19	0.651	0.895
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 5	DSI 1	661	1880	23.76	25.00	1.330	-	-	-0.02	0.093	0.124
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 5	DSI 1	661	1880	23.76	25.00	1.330	-	-	-0.04	0.069	0.092
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 5	DSI 1	661	1880	23.76	25.00	1.330	-	-	0.09	0.099	0.132
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 5	DSI 1	661	1880	23.76	25.00	1.330	-	-	0.12	0.068	0.090
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	9400	1880	18.14	19.50	1.368	-	-	-0.07	0.725	0.992
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	9262	1852.4	18.09	19.50	1.384	-	-	0.01	0.779	1.078
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	9538	1907.6	18.08	19.50	1.387	-	-	0.08	0.670	0.929
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	9400	1880	18.14	19.50	1.368	-	-	0.09	0.724	0.990
09	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	9262	1852.4	18.09	19.50	1.384	-	-	0.03	0.790	**1.093**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	9538	1907.6	18.08	19.50	1.387	-	-	-0.14	0.667	0.925
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	9400	1880	18.14	19.50	1.368	-	-	0.08	0.503	0.688
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	9400	1880	18.14	19.50	1.368	-	-	0.07	0.577	0.789
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	9400	1880	24.14	25.00	1.219	-	-	0.06	0.206	0.251
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 5	DSI 1	9400	1880	24.14	25.00	1.219	-	-	0.06	0.149	0.182
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 5	DSI 1	9400	1880	24.14	25.00	1.219	-	-	-0.06	0.215	0.262
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 5	DSI 1	9400	1880	24.14	25.00	1.219	-	-	0.06	0.146	0.178

	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	17.45	19.00	1.429	-	-	0.05	0.650	0.929
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	18700	1860	17.41	19.00	1.442	-	-	0.03	0.643	0.927
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	19100	1900	17.43	19.00	1.435	-	-	0.01	0.641	0.920
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	17.43	19.00	1.435	-	-	0.07	0.640	0.919
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	18700	1860	17.34	19.00	1.466	-	-	0.02	0.638	0.935
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	19100	1900	17.23	19.00	1.503	-	-	-0.06	0.619	0.930
	LTE Band 2	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	17.40	19.00	1.445	-	-	-0.02	0.636	0.919
10	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	17.45	19.00	1.429	-	-	0.05	0.660	**0.943**
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	18700	1860	17.41	19.00	1.442	-	-	0.07	0.652	0.940
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	19100	1900	17.43	19.00	1.435	-	-	0.05	0.647	0.929
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	17.43	19.00	1.435	-	-	-0.11	0.623	0.894
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	18700	1860	17.34	19.00	1.466	-	-	0.03	0.618	0.906
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	19100	1900	17.23	19.00	1.503	-	-	0.09	0.622	0.935
	LTE Band 2	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	17.40	19.00	1.445	-	-	-0.12	0.641	0.927
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	18900	1880	17.45	19.00	1.429	-	-	0.07	0.420	0.600
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	18900	1880	17.43	19.00	1.435	-	-	0.05	0.420	0.603
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	18900	1880	17.45	19.00	1.429	-	-	-0.08	0.510	0.729
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	18900	1880	17.43	19.00	1.435	-	-	0.02	0.510	0.732
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	18900	1880	25.05	25.70	1.161	-	-	0.03	0.206	0.239
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	18900	1880	25.03	25.70	1.167	-	-	0.08	0.205	0.239
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	18900	1880	25.05	25.70	1.161	-	-	0.18	0.123	0.143
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	18900	1880	25.03	25.70	1.167	-	-	-0.09	0.132	0.154
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	18900	1880	25.05	25.70	1.161	-	-	0.03	0.218	0.253
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	18900	1880	25.03	25.70	1.167	-	-	0.04	0.208	0.243
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	18900	1880	25.05	25.70	1.161	-	-	0.02	0.140	0.163
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	18900	1880	25.03	25.70	1.167	-	-	0.03	0.143	0.167
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	21100	2535	19.72	20.20	1.117	-	-	0.11	0.631	0.705
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	21100	2535	19.70	20.20	1.122	-	-	0.01	0.646	0.725
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 1	21100	2535	19.72	20.20	1.117	-	-	-0.02	0.132	0.147
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 1	21100	2535	19.70	20.20	1.122	-	-	0.14	0.134	0.150
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	21100	2535	19.72	20.20	1.117	-	-	-0.12	0.795	0.888
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	20850	2510	19.70	20.20	1.122	-	-	0.05	0.711	0.798
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	21350	2560	19.65	20.20	1.135	-	-	-0.06	0.808	0.917
	LTE Band 7C	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	21350+21152	2560+2540.2	19.46	20.20	1.186	-	-	0.05	0.762	0.904
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	21100	2535	19.70	20.20	1.122	-	-	0.07	0.789	0.885
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	20850	2510	19.63	20.20	1.140	-	-	0.03	0.724	0.826
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	21350	2560	19.65	20.20	1.135	-	-	-0.05	0.802	0.910
	LTE Band 7	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 2	DSI 1	21100	2535	19.67	20.20	1.130	-	-	0.05	0.782	0.884
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 1	21100	2535	19.72	20.20	1.117	-	-	0.03	0.240	0.268
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 1	21100	2535	19.70	20.20	1.122	-	-	0.04	0.248	0.278
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	21100	2535	20.70	22.00	1.349	-	-	0.08	0.698	0.942
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	20850	2510	20.68	22.00	1.355	-	-	0.01	0.683	0.926
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	21350	2560	20.63	22.00	1.371	-	-	0.02	0.674	0.924
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	21100	2535	20.69	22.00	1.352	-	-	0.08	0.697	0.942
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	20850	2510	20.62	22.00	1.374	-	-	0.08	0.681	0.936
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	21350	2560	20.59	22.00	1.384	-	-	-0.19	0.668	0.924
	LTE Band 7 Other PA	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 3	DSI 1	21100	2535	20.65	22.00	1.365	-	-	-0.12	0.691	0.943
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	21100	2535	20.70	22.00	1.349	-	-	0.02	0.142	0.192
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	21100	2535	20.69	22.00	1.352	-	-	0.07	0.141	0.191
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	21100	2535	20.70	22.00	1.349	-	-	-0.09	0.703	0.948
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	20850	2510	20.68	22.00	1.355	-	-	-0.04	0.692	0.938
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	21350	2560	20.63	22.00	1.371	-	-	0.05	0.687	0.942
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	21100	2535	20.69	22.00	1.352	-	-	0.11	0.710	0.960
	LTE Band 7C Other PA	20M	QPSK	50	50	-	Left Cheek	0mm	Ant 3	DSI 1	21100+21298	2535+2554.8	20.57	22.00	1.390	-	-	0.09	0.683	0.949
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	20850	2510	20.62	22.00	1.374	-	-	0.01	0.698	0.959

	LTE Band 7 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	21350	2560	20.59	22.00	1.384	-	-	0.13	0.683	0.945
	LTE Band 7 Other PA	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI 1	21100	2535	20.65	22.00	1.365	-	-	0.07	0.691	0.943
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	21100	2535	20.70	22.00	1.349	-	-	0.03	0.097	0.131
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	21100	2535	20.69	22.00	1.352	-	-	-0.14	0.097	0.131
	LTE Band 7 Main PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	21100	2535	18.97	20.00	1.268	-	-	-0.06	0.354	0.449
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	17.05	18.00	1.245	-	-	0.08	0.692	0.861
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	20850	2510	17.02	18.00	1.253	-	-	0.15	0.705	0.883
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	21350	2560	16.98	18.00	1.265	-	-	0.17	0.645	0.816
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	17.03	18.00	1.250	-	-	-0.13	0.685	0.856
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	20850	2510	16.83	18.00	1.309	-	-	0.08	0.721	0.944
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	21350	2560	16.99	18.00	1.262	-	-	-0.03	0.666	0.840
	LTE Band 7 Other PA	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	17.00	18.00	1.259	-	-	-0.18	0.684	0.861
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	17.05	18.00	1.245	-	-	-0.03	0.700	0.871
11	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	20850	2510	17.02	18.00	1.253	-	-	0.04	0.774	**0.970**
	LTE Band 7C Other PA	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 4	DSI 1	20850+21048	2510+2529.8	16.98	18.00	1.265	-	-	0.05	0.756	0.956
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	21350	2560	16.98	18.00	1.265	-	-	0.06	0.656	0.830
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	17.03	18.00	1.250	-	-	-0.17	0.704	0.880
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	20850	2510	16.83	18.00	1.309	-	-	0.05	0.735	0.962
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	21350	2560	16.99	18.00	1.262	-	-	0.17	0.673	0.849
	LTE Band 7 Other PA	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	17.00	18.00	1.259	-	-	0.11	0.708	0.891
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	21100	2535	17.05	18.00	1.245	-	-	0.04	0.404	0.503
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	21100	2535	17.03	18.00	1.250	-	-	0.13	0.407	0.509
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	17.05	18.00	1.245	-	-	0.01	0.453	0.564
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	17.03	18.00	1.250	-	-	0.09	0.452	0.565
	LTE Band 7 Main PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	20850	2510	15.70	16.50	1.202	-	-	0.01	0.688	0.827
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	25.25	25.70	1.109	-	-	-0.03	0.173	0.192
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	25.20	25.70	1.122	-	-	0.08	0.171	0.192
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	25.25	25.70	1.109	-	-	-0.05	0.113	0.125
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	25.20	25.70	1.122	-	-	0.03	0.113	0.127
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	21100	2535	25.25	25.70	1.109	-	-	-0.09	0.304	0.337
	LTE Band 7C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 5	DSI 1	21100+21298	2535+2554.8	23.30	23.70	1.096	-	-	0.02	0.194	0.213
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	21100	2535	25.20	25.70	1.122	-	-	0.05	0.297	0.333
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	21100	2535	25.25	25.70	1.109	-	-	-0.11	0.098	0.109
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	21100	2535	25.20	25.70	1.122	-	-	-0.02	0.095	0.107
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	38000	2595	19.69	20.20	1.125	62.9	1.006	0.06	0.430	0.486
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	38000	2595	19.65	20.20	1.135	62.9	1.006	-0.07	0.452	0.516
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	38000	2595	19.69	20.20	1.125	62.9	1.006	0.09	0.098	0.111
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	38000	2595	19.65	20.20	1.135	62.9	1.006	0.08	0.100	0.114
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	38000	2595	19.69	20.20	1.125	62.9	1.006	0.15	0.465	0.526
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	38000	2595	19.65	20.20	1.135	62.9	1.006	0.06	0.469	0.536
	LTE Band 38C Other PA	20M	QPSK	50	50	-	Left Cheek	0mm	Ant 3	DSI 1	37901+38099	2585.1+2604.9	19.48	20.20	1.180	62.9	1.006	0.03	0.446	0.530
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	38000	2595	19.69	20.20	1.125	62.9	1.006	-0.02	0.081	0.092
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	38000	2595	19.65	20.20	1.135	62.9	1.006	0.06	0.085	0.097
	LTE Band 38 Main PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	38000	2595	18.69	19.20	1.125	100	1.000	-0.08	0.229	0.258
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	38000	2595	20.17	20.70	1.130	62.9	1.006	0.09	0.846	0.962
12	LTE Band 38 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	38000	2595	20.15	20.70	1.135	62.9	1.006	-0.03	0.932	**1.064**
	LTE Band 38C Other PA	20M	QPSK	50	50	-	Right Cheek	0mm	Ant 4	DSI 1	37901+38099	2585.1+2604.9	20.03	20.70	1.167	62.9	1.006	0.05	0.889	1.044
	LTE Band 38 Other PA	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	38000	2595	20.11	20.70	1.146	62.9	1.006	0.1	0.779	0.898
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	38000	2595	20.17	20.70	1.130	62.9	1.006	0.05	0.759	0.863
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	38000	2595	20.15	20.70	1.135	62.9	1.006	0.05	0.742	0.847
	LTE Band 38 Other PA	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 4	DSI 1	38000	2595	20.11	20.70	1.146	62.9	1.006	-0.03	0.740	0.853
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	38000	2595	20.17	20.70	1.130	62.9	1.006	-0.11	0.415	0.472
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	38000	2595	20.15	20.70	1.135	62.9	1.006	0.18	0.406	0.464
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	38000	2595	20.17	20.70	1.130	62.9	1.006	0.13	0.456	0.518
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	38000	2595	20.15	20.70	1.135	62.9	1.006	0.01	0.464	0.530
	LTE Band 38 Main PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	38000	2595	19.19	19.70	1.125	100	1.000	-0.03	0.682	0.767

	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	40620	2593	22.26	22.70	1.107	62.9	1.006	0.06	0.630	0.701
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	39750	2506	22.21	22.70	1.119	62.9	1.006	0.01	0.618	0.696
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	40185	2549.5	22.24	22.70	1.112	62.9	1.006	0.09	0.596	0.667
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	41055	2636.5	22.22	22.70	1.117	62.9	1.006	0.05	0.587	0.660
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSI 1	41490	2680	22.14	22.70	1.138	62.9	1.006	-0.03	0.603	0.690
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	40620	2593	22.24	22.70	1.112	62.9	1.006	0.08	0.600	0.671
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	39750	2506	22.03	22.70	1.167	62.9	1.006	0.06	0.586	0.688
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	40185	2549.5	22.18	22.70	1.127	62.9	1.006	0.14	0.592	0.671
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	41055	2636.5	21.98	22.70	1.180	62.9	1.006	0.15	0.604	0.717
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSI 1	41490	2680	22.18	22.70	1.127	62.9	1.006	0.06	0.610	0.692
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSI 1	40620	2593	22.20	22.70	1.122	62.9	1.006	-0.12	0.597	0.674
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSI 1	40620	2593	22.26	22.70	1.107	62.9	1.006	0.12	0.134	0.149
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSI 1	40620	2593	22.24	22.70	1.112	62.9	1.006	0.05	0.133	0.149
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	40620	2593	22.26	22.70	1.107	62.9	1.006	-0.01	0.711	0.792
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	39750	2506	22.21	22.70	1.119	62.9	1.006	0.05	0.702	0.791
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	40185	2549.5	22.24	22.70	1.112	62.9	1.006	0.09	0.695	0.777
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	41055	2636.5	22.22	22.70	1.117	62.9	1.006	0.03	0.713	0.801
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSI 1	41490	2680	22.14	22.70	1.138	62.9	1.006	0.06	0.686	0.785
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	40620	2593	22.24	22.70	1.112	62.9	1.006	0.08	0.736	0.823
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	39750	2506	22.03	22.70	1.167	62.9	1.006	0.1	0.728	0.855
13	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	40185	2549.5	22.18	22.70	1.127	62.9	1.006	0.06	0.823	**0.933**
	LTE Band 38C	20M	QPSK	50	50	-	Left Cheek	0mm	Ant 2	DSI 1	37850+38048	2580+2599.8	21.38	22.20	1.208	62.9	1.006	0.01	0.756	0.919
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	41055	2636.5	21.98	22.70	1.180	62.9	1.006	-0.09	0.716	0.850
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSI 1	41490	2680	22.18	22.70	1.127	62.9	1.006	-0.12	0.611	0.693
	LTE Band 41	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 2	DSI 1	40620	2593	22.20	22.70	1.122	62.9	1.006	0.03	0.721	0.814
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSI 1	40620	2593	22.26	22.70	1.107	62.9	1.006	0.03	0.223	0.248
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSI 1	40620	2593	22.24	22.70	1.112	62.9	1.006	0.06	0.221	0.247
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	40620	2593	21.23	21.70	1.114	62.9	1.006	0.07	0.663	0.743
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	39750	2506	21.16	21.70	1.132	62.9	1.006	-0.13	0.649	0.739
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	40185	2549.5	21.20	21.70	1.122	62.9	1.006	-0.16	0.661	0.746
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	41055	2636.5	21.18	21.70	1.127	62.9	1.006	0.02	0.651	0.738
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 3	DSI 1	41490	2680	21.16	21.70	1.132	62.9	1.006	0.09	0.649	0.739
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	40620	2593	21.20	21.70	1.122	62.9	1.006	0.07	0.654	0.738
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	39750	2506	21.10	21.70	1.148	62.9	1.006	-0.15	0.638	0.737
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	40185	2549.5	21.19	21.70	1.125	62.9	1.006	0.12	0.652	0.738
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	41055	2636.5	21.16	21.70	1.132	62.9	1.006	0.16	0.646	0.736
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 3	DSI 1	41490	2680	21.14	21.70	1.138	62.9	1.006	0.05	0.637	0.729
	LTE Band 41 Other PA	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 3	DSI 1	40620	2593	21.17	21.70	1.130	62.9	1.006	0.08	0.642	0.730
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 3	DSI 1	40620	2593	21.23	21.70	1.114	62.9	1.006	0.02	0.155	0.174
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 3	DSI 1	40620	2593	21.20	21.70	1.122	62.9	1.006	0.03	0.152	0.172
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	40620	2593	21.23	21.70	1.114	62.9	1.006	-0.01	0.666	0.747
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	39750	2506	21.16	21.70	1.132	62.9	1.006	-0.13	0.647	0.737
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	40185	2549.5	21.20	21.70	1.122	62.9	1.006	0.03	0.661	0.746
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	41055	2636.5	21.18	21.70	1.127	62.9	1.006	0.06	0.648	0.735
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	41490	2680	21.16	21.70	1.132	62.9	1.006	0.1	0.652	0.743
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	40620	2593	21.20	21.70	1.122	62.9	1.006	-0.11	0.655	0.739
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	39750	2506	21.10	21.70	1.148	62.9	1.006	0.01	0.641	0.740
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	40185	2549.5	21.19	21.70	1.125	62.9	1.006	0.05	0.621	0.703
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	41055	2636.5	21.16	21.70	1.132	62.9	1.006	0.08	0.609	0.694
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 3	DSI 1	41490	2680	21.14	21.70	1.138	62.9	1.006	-0.14	0.632	0.723
	LTE Band 41 Other PA	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 3	DSI 1	40620	2593	21.17	21.70	1.130	62.9	1.006	-0.02	0.628	0.714
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 3	DSI 1	40620	2593	21.23	21.70	1.114	62.9	1.006	-0.03	0.108	0.121
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 3	DSI 1	40620	2593	21.20	21.70	1.122	62.9	1.006	-0.11	0.108	0.122
	LTE Band 41 Main PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 3	DSI 1	40620	2593	20.39	20.70	1.074		1.000	0.07	0.318	0.342
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	18.69	19.20	1.125	62.9	1.006	0.13	0.543	0.614
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	39750	2506	18.61	19.20	1.146	62.9	1.006	0.02	0.506	0.583

	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	40185	2549.5	18.65	19.20	1.135	62.9	1.006	0.04	0.512	0.585
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	41055	2636.5	18.67	19.20	1.130	62.9	1.006	0.02	0.524	0.596
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	DSI 1	41490	2680	18.62	19.20	1.143	62.9	1.006	0.02	0.522	0.600
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	18.67	19.20	1.130	62.9	1.006	0.02	0.546	0.621
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	39750	2506	18.64	19.20	1.138	62.9	1.006	-0.14	0.537	0.615
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	40185	2549.5	18.57	19.20	1.156	62.9	1.006	0.08	0.528	0.614
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	41055	2636.5	18.62	19.20	1.143	62.9	1.006	0.05	0.531	0.611
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	41490	2680	18.65	19.20	1.135	62.9	1.006	0.03	0.519	0.593
	LTE Band 41 Other PA	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	18.64	19.20	1.138	62.9	1.006	0.13	0.521	0.596
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	18.69	19.20	1.125	62.9	1.006	0.04	0.503	0.569
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	18.67	19.20	1.130	62.9	1.006	0.04	0.525	0.597
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	DSI 1	40620	2593	18.69	19.20	1.125	62.9	1.006	0.19	0.315	0.356
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	DSI 1	40620	2593	18.67	19.20	1.130	62.9	1.006	-0.06	0.315	0.358
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	DSI 1	40620	2593	18.69	19.20	1.125	62.9	1.006	0.03	0.347	0.393
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	DSI 1	40620	2593	18.67	19.20	1.130	62.9	1.006	0.01	0.348	0.396
	LTE Band 41 Main PA	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	17.58	18.20	1.153	100	1.000	-0.02	0.470	0.542
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSI 1	40620	2593	25.23	25.70	1.114	62.9	1.006	-0.12	0.105	0.118
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSI 1	40620	2593	24.14	24.70	1.138	62.9	1.006	-0.08	0.106	0.121
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSI 1	40620	2593	25.23	25.70	1.114	62.9	1.006	-0.08	0.080	0.090
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSI 1	40620	2593	24.14	24.70	1.138	62.9	1.006	0.15	0.080	0.092
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSI 1	40620	2593	25.23	25.70	1.114	62.9	1.006	-0.09	0.199	0.223
	LTE Band 38C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 5	DSI 1	37901+38099	2585.1+2604.9	23.19	23.70	1.125	62.9	1.006	0.01	0.164	0.186
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSI 1	40620	2593	24.14	24.70	1.138	62.9	1.006	0.08	0.192	0.220
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSI 1	40620	2593	25.23	25.70	1.114	62.9	1.006	-0.03	0.056	0.063
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSI 1	40620	2593	24.14	24.70	1.138	62.9	1.006	-0.07	0.055	0.063
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 1	507000	2535	20.71	21.20	1.119	-	-	-0.19	0.645	0.722
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	DSI 1	507000	2535	20.65	21.20	1.135	-	-	0.03	0.687	0.780
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 1	507000	2535	20.71	21.20	1.119	-	-	-0.11	0.123	0.138
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	DSI 1	507000	2535	20.65	21.20	1.135	-	-	-0.09	0.134	0.152
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 1	507000	2535	20.71	21.20	1.119	-	-	0.03	0.780	0.873
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 1	507000	2535	20.65	21.20	1.135	-	-	0.09	0.833	0.945
	FR1 n7	40M	QPSK	216	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	DSI 1	507000	2535	20.60	21.20	1.148	-	-	-0.01	0.845	0.970
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 1	507000	2535	20.71	21.20	1.119	-	-	0.14	0.214	0.240
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	DSI 1	507000	2535	20.65	21.20	1.135	-	-	0.02	0.229	0.260
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI 1	507000	2535	21.20	22.50	1.349	-	-	0.02	0.615	0.830
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI 1	507000	2535	21.18	22.50	1.355	-	-	0.13	0.612	0.829
	FR1 n7 Other PA	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 3	DSI 1	507000	2535	21.15	22.50	1.365	-	-	0.01	0.608	0.830
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI 1	507000	2535	21.20	22.50	1.349	-	-	-0.14	0.131	0.177
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 3	DSI 1	507000	2535	21.18	22.50	1.355	-	-	0.03	0.126	0.171
14	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI 1	507000	2535	21.20	22.50	1.349	-	-	0.01	0.769	**1.037**
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI 1	507000	2535	21.18	22.50	1.355	-	-	-0.12	0.691	0.936
	FR1 n7 Other PA	40M	QPSK	216	0	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI 1	507000	2535	21.15	22.50	1.365	-	-	0.17	0.750	1.023
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI 1	507000	2535	21.20	22.50	1.349	-	-	0.11	0.098	0.132
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 3	DSI 1	507000	2535	21.18	22.50	1.355	-	-	-0.15	0.101	0.137
	FR1 n7 Main PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 3	DSI 1	507000	2535	20.54	22.00	1.400	-	-	0.04	0.551	0.771
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	17.38	18.00	1.153	-	-	-0.02	0.799	0.922
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	17.23	18.00	1.194	-	-	0.11	0.723	0.863
	FR1 n7 Other PA	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	17.20	18.00	1.202	-	-	0.07	0.736	0.885
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	17.38	18.00	1.153	-	-	0.05	0.792	0.914
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	17.23	18.00	1.194	-	-	0.05	0.743	0.887
	FR1 n7 Other PA	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	17.20	18.00	1.202	-	-	0.04	0.761	0.915
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	DSI 1	507000	2535	17.38	18.00	1.153	-	-	-0.14	0.456	0.526
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 4	DSI 1	507000	2535	17.23	18.00	1.194	-	-	0.17	0.458	0.547
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	DSI 1	507000	2535	17.38	18.00	1.153	-	-	0.11	0.484	0.558
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 4	DSI 1	507000	2535	17.23	18.00	1.194	-	-	-0.03	0.471	0.562
	FR1 n7 Main PA	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	16.77	18.00	1.327	-	-	-0.05	0.686	0.911

	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	25.15	25.70	1.135	-	-	0.19	0.160	0.182
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	25.09	25.70	1.151	-	-	0.02	0.170	0.196
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	25.15	25.70	1.135	-	-	0.05	0.101	0.115
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	25.09	25.70	1.151	-	-	0.07	0.106	0.122
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 1	507000	2535	25.15	25.70	1.135	-	-	0.03	0.284	0.322
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	DSI 1	507000	2535	25.09	25.70	1.151	-	-	-0.08	0.288	0.331
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	25.15	25.70	1.135	-	-	0.17	0.077	0.087
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	25.09	25.70	1.151	-	-	0.03	0.083	0.096
	FR1 n38	40M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	519000	2595	19.11	20.00	1.227	-	-	0.03	0.700	0.859
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	519000	2595	19.02	20.00	1.253	-	-	-0.07	0.661	0.828
	FR1 n38	40M	QPSK	100	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	519000	2595	18.98	20.00	1.265	-	-	-0.14	0.682	0.863
	FR1 n38	40M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	519000	2595	19.11	20.00	1.227	-	-	0.04	0.164	0.201
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	519000	2595	19.02	20.00	1.253	-	-	0.04	0.152	0.190
15	FR1 n38	40M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	519000	2595	19.11	20.00	1.227	-	-	-0.01	0.884	**1.085**
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	519000	2595	19.02	20.00	1.253	-	-	-0.17	0.794	0.995
	FR1 n38	40M	QPSK	100	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	519000	2595	18.98	20.00	1.265	-	-	0.06	0.817	1.033
	FR1 n38	40M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	519000	2595	19.11	20.00	1.227	-	-	-0.12	0.251	0.308
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	519000	2595	19.02	20.00	1.253	-	-	0.09	0.230	0.288
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	518598	2592.99	19.02	19.70	1.169	-	-	0.17	0.679	0.794
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSI 1	518598	2592.99	18.95	19.70	1.189	-	-	0.02	0.647	0.769
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	518598	2592.99	19.02	19.70	1.169	-	-	-0.14	0.145	0.170
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSI 1	518598	2592.99	18.95	19.70	1.189	-	-	-0.18	0.151	0.179
16	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	518598	2592.99	19.02	19.70	1.169	-	-	-0.02	0.884	**1.034**
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	518598	2592.99	18.95	19.70	1.189	-	-	-0.18	0.791	0.940
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSI 1	518598	2592.99	18.91	19.70	1.199	-	-	-0.1	0.823	0.987
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	518598	2592.99	19.02	19.70	1.169	-	-	0.06	0.233	0.272
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSI 1	518598	2592.99	18.95	19.70	1.189	-	-	-0.18	0.220	0.261
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 1	518598	2592.99	22.21	22.70	1.119	-	-	-0.05	0.698	0.781
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSI 1	518598	2592.99	22.19	22.70	1.125	-	-	0.08	0.709	0.797
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	518598	2592.99	22.21	22.70	1.119	-	-	-0.12	0.144	0.161
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSI 1	518598	2592.99	22.19	22.70	1.125	-	-	0.1	0.185	0.208
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	518598	2592.99	22.21	22.70	1.119	-	-	0.16	0.745	0.834
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	518598	2592.99	22.19	22.70	1.125	-	-	-0.11	0.837	0.941
	FR1 n41 Other PA	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	518598	2592.99	22.12	22.70	1.143	-	-	-0.04	0.904	1.033
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	518598	2592.99	22.21	22.70	1.119	-	-	0.15	0.109	0.122
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSI 1	518598	2592.99	22.19	22.70	1.125	-	-	-0.11	0.133	0.150
	FR1 n41 Main PA	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSI 1	518598	2592.99	20.33	22.00	1.469	-	-	-0.04	0.591	0.868
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	17.75	18.20	1.109	-	-	-0.01	0.829	0.920
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	17.64	18.20	1.138	-	-	0.13	0.715	0.813
	FR1 n41 Other PA	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	17.50	18.20	1.175	-	-	0.07	0.709	0.833
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	17.75	18.20	1.109	-	-	-0.09	0.739	0.820
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	17.64	18.20	1.138	-	-	0.02	0.715	0.813
	FR1 n41 Other PA	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	17.50	18.20	1.175	-	-	0.06	0.721	0.847
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	518598	2592.99	17.75	18.20	1.109	-	-	0.08	0.457	0.507
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	518598	2592.99	17.64	18.20	1.138	-	-	0.02	0.421	0.479
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	518598	2592.99	17.75	18.20	1.109	-	-	-0.17	0.492	0.546
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	518598	2592.99	17.64	18.20	1.138	-	-	-0.14	0.451	0.513
	FR1 n41 Main PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	16.33	17.50	1.309	-	-	0.08	0.740	0.969
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	25.13	25.70	1.140	-	-	0.04	0.205	0.234
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	25.08	25.70	1.153	-	-	0.11	0.182	0.210
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	25.13	25.70	1.140	-	-	0.02	0.124	0.141
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	25.08	25.70	1.153	-	-	0.03	0.120	0.138
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	518598	2592.99	25.13	25.70	1.140	-	-	-0.07	0.342	0.390
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSI 1	518598	2592.99	25.08	25.70	1.153	-	-	-0.14	0.331	0.382
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	518598	2592.99	25.13	25.70	1.140	-	-	0.07	0.110	0.125
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSI 1	518598	2592.99	25.08	25.70	1.153	-	-	0.05	0.102	0.118

3500MHz																				
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	656000	3840	16.29	17.50	1.321	-	-	0.07	0.679	0.897
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	656000	3840	16.13	17.50	1.371	-	-	0.07	0.600	0.823
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	656000	3840	16.06	17.50	1.393	-	-	0.1	0.613	0.854
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	656000	3840	16.29	17.50	1.321	-	-	-0.08	0.757	1.000
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	656000	3840	16.13	17.50	1.371	-	-	0.06	0.661	0.906
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	656000	3840	16.06	17.50	1.393	-	-	-0.1	0.673	0.938
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	656000	3840	16.29	17.50	1.321	-	-	0.06	0.373	0.493
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	656000	3840	16.13	17.50	1.371	-	-	-0.16	0.320	0.439
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	656000	3840	16.29	17.50	1.321	-	-	-0.09	0.449	0.593
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	656000	3840	16.13	17.50	1.371	-	-	0.04	0.388	0.532
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	633334	3500.01	16.31	17.50	1.315	-	-	-0.16	0.507	0.667
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	633334	3500.01	16.24	17.50	1.337	-	-	-0.08	0.565	0.755
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	633334	3500.01	16.31	17.50	1.315	-	-	-0.06	0.658	0.865
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	633334	3500.01	16.24	17.50	1.337	-	-	0.06	0.759	1.014
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	633334	3500.01	16.20	17.50	1.349	-	-	0.07	0.621	0.838
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	633334	3500.01	16.31	17.50	1.315	-	-	-0.19	0.237	0.312
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	633334	3500.01	16.24	17.50	1.337	-	-	0.07	0.285	0.381
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	633334	3500.01	16.31	17.50	1.315	-	-	0.08	0.290	0.381
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	633334	3500.01	16.24	17.50	1.337	-	-	-0.01	0.356	0.476
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	656000	3840	17.11	18.50	1.377	-	-	-0.14	0.358	0.493
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	656000	3840	17.03	18.50	1.403	-	-	0.02	0.447	0.627
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	656000	3840	17.11	18.50	1.377	-	-	0.03	0.454	0.625
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	656000	3840	17.03	18.50	1.403	-	-	0.02	0.536	0.752
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	656000	3840	17.11	18.50	1.377	-	-	0.02	0.547	0.753
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	656000	3840	17.03	18.50	1.403	-	-	-0.09	0.644	0.903
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	656000	3840	17.00	18.50	1.413	-	-	0.04	0.634	0.896
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	656000	3840	17.11	18.50	1.377	-	-	0.09	0.592	0.815
17	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	656000	3840	17.03	18.50	1.403	-	-	-0.01	0.743	**1.042**
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	656000	3840	17.00	18.50	1.413	-	-	0.02	0.729	1.030
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	633334	3500.01	17.76	18.50	1.186	-	-	0.05	0.333	0.395
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	633334	3500.01	17.71	18.50	1.199	-	-	0.19	0.263	0.315
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	633334	3500.01	17.76	18.50	1.186	-	-	0.08	0.385	0.457
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	633334	3500.01	17.71	18.50	1.199	-	-	-0.03	0.296	0.355
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	633334	3500.01	17.76	18.50	1.186	-	-	0.13	0.460	0.545
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	633334	3500.01	17.71	18.50	1.199	-	-	0.05	0.354	0.425
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	633334	3500.01	17.76	18.50	1.186	-	-	0.04	0.493	0.585
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	633334	3500.01	17.71	18.50	1.199	-	-	0.14	0.378	0.453
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 1	656000	3840	15.73	16.30	1.140	-	-	0.01	0.184	0.210
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 1	656000	3840	15.71	16.30	1.146	-	-	0.05	0.181	0.207
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 1	656000	3840	15.73	16.30	1.140	-	-	0.03	0.153	0.174
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 1	656000	3840	15.71	16.30	1.146	-	-	0.06	0.148	0.170
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	656000	3840	15.73	16.30	1.140	-	-	-0.16	0.782	0.892
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	656000	3840	15.71	16.30	1.146	-	-	-0.04	0.801	0.918
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	656000	3840	15.67	16.30	1.156	-	-	-0.14	0.776	0.897
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 1	656000	3840	15.73	16.30	1.140	-	-	0.11	0.380	0.433
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 1	656000	3840	15.71	16.30	1.146	-	-	-0.18	0.386	0.442
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 1	633334	3500.01	15.85	16.30	1.109	-	-	0.02	0.113	0.125
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 1	633334	3500.01	15.61	16.30	1.172	-	-	0.04	0.122	0.143
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 1	633334	3500.01	15.85	16.30	1.109	-	-	-0.16	0.075	0.083
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 1	633334	3500.01	15.61	16.30	1.172	-	-	0.07	0.086	0.101
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	633334	3500.01	15.85	16.30	1.109	-	-	0.15	0.520	0.577
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	633334	3500.01	15.61	16.30	1.172	-	-	-0.07	0.588	0.689
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 1	633334	3500.01	15.85	16.30	1.109	-	-	0.07	0.201	0.223
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 1	633334	3500.01	15.61	16.30	1.172	-	-	-0.09	0.245	0.287
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	656000	3840	19.69	21.00	1.352	-	-	0.16	0.678	0.917

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	656000	3840	19.66	21.00	1.361	-	-	-0.06	0.759	1.033
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	656000	3840	19.65	21.00	1.365	-	-	-0.03	0.694	0.947
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 1	656000	3840	19.69	21.00	1.352	-	-	0.16	0.334	0.452
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 1	656000	3840	19.66	21.00	1.361	-	-	0.07	0.480	0.653
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 1	656000	3840	19.69	21.00	1.352	-	-	0.03	0.213	0.288
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 1	656000	3840	19.66	21.00	1.361	-	-	0.04	0.298	0.406
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 1	656000	3840	19.69	21.00	1.352	-	-	0.03	0.227	0.307
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 1	656000	3840	19.66	21.00	1.361	-	-	0.13	0.362	0.493
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.66	21.00	1.361	-	-	-0.02	0.594	0.809
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.65	21.00	1.365	-	-	0.19	0.438	0.598
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.61	21.00	1.377	-	-	-0.07	0.511	0.704
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 1	633334	3500.01	19.66	21.00	1.361	-	-	0.17	0.332	0.452
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 1	633334	3500.01	19.65	21.00	1.365	-	-	0.03	0.167	0.228
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.66	21.00	1.361	-	-	0.03	0.210	0.286
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.65	21.00	1.365	-	-	-0.06	0.118	0.161
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 1	633334	3500.01	19.66	21.00	1.361	-	-	0.02	0.195	0.265
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 1	633334	3500.01	19.65	21.00	1.365	-	-	0.03	0.094	0.128
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	650000	3750	15.26	17.00	1.493	-	-	-0.04	0.596	0.890
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	650000	3750	15.18	17.00	1.521	-	-	0.01	0.534	0.812
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	650000	3750	15.17	17.00	1.524	-	-	0.06	0.504	0.768
18	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	650000	3750	15.26	17.00	1.493	-	-	-0.08	0.725	**1.082**
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	650000	3750	15.18	17.00	1.521	-	-	0.08	0.547	0.832
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	650000	3750	15.17	17.00	1.524	-	-	0.08	0.568	0.866
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	650000	3750	15.26	17.00	1.493	-	-	0.1	0.322	0.481
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	650000	3750	15.18	17.00	1.521	-	-	0.17	0.284	0.432
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	650000	3750	15.26	17.00	1.493	-	-	0.17	0.384	0.573
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	650000	3750	15.18	17.00	1.521	-	-	0.05	0.346	0.526
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	633334	3500.01	15.27	17.00	1.489	-	-	0.05	0.382	0.569
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSI 1	633334	3500.01	15.25	17.00	1.496	-	-	0.09	0.429	0.642
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	633334	3500.01	15.27	17.00	1.489	-	-	0.05	0.421	0.627
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	633334	3500.01	15.25	17.00	1.496	-	-	-0.06	0.558	0.835
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSI 1	633334	3500.01	15.23	17.00	1.503	-	-	-0.14	0.493	0.741
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	633334	3500.01	15.27	17.00	1.489	-	-	0.04	0.178	0.265
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSI 1	633334	3500.01	15.25	17.00	1.496	-	-	0.04	0.221	0.331
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	633334	3500.01	15.27	17.00	1.489	-	-	0.09	0.211	0.314
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSI 1	633334	3500.01	15.25	17.00	1.496	-	-	0.1	0.274	0.410
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	650000	3750	17.85	19.50	1.462	-	-	0.07	0.318	0.465
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	650000	3750	17.83	19.50	1.469	-	-	0.07	0.370	0.544
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	650000	3750	17.85	19.50	1.462	-	-	0.07	0.382	0.559
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	650000	3750	17.83	19.50	1.469	-	-	0.12	0.438	0.643
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	650000	3750	17.85	19.50	1.462	-	-	-0.1	0.524	0.766
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	650000	3750	17.83	19.50	1.469	-	-	-0.09	0.592	0.870
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	650000	3750	17.80	19.50	1.479	-	-	0.19	0.524	0.775
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	650000	3750	17.85	19.50	1.462	-	-	0.1	0.522	0.763
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	650000	3750	17.83	19.50	1.469	-	-	-0.16	0.587	0.862
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	650000	3750	17.80	19.50	1.479	-	-	-0.18	0.522	0.772
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	633334	3500.01	18.35	19.50	1.303	-	-	0.04	0.181	0.236
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	DSI 1	633334	3500.01	18.33	19.50	1.309	-	-	0.12	0.258	0.338
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	633334	3500.01	18.35	19.50	1.303	-	-	0.09	0.208	0.271
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	DSI 1	633334	3500.01	18.33	19.50	1.309	-	-	0.07	0.291	0.381
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	633334	3500.01	18.35	19.50	1.303	-	-	0.06	0.626	0.816
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	633334	3500.01	18.33	19.50	1.309	-	-	-0.14	0.353	0.462
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	DSI 1	633334	3500.01	18.31	19.50	1.315	-	-	0.05	0.626	0.823
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	633334	3500.01	18.35	19.50	1.303	-	-	0.07	0.628	0.818
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	633334	3500.01	18.33	19.50	1.309	-	-	0.18	0.374	0.490
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	DSI 1	633334	3500.01	18.31	19.50	1.315	-	-	0.01	0.626	0.823

	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 1	650000	3750	14.64	16.00	1.368	-	-	0.16	0.161	0.220
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 1	650000	3750	14.59	16.00	1.384	-	-	0.04	0.168	0.232
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 1	650000	3750	14.64	16.00	1.368	-	-	-0.02	0.131	0.179
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 1	650000	3750	14.59	16.00	1.384	-	-	-0.03	0.142	0.196
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	650000	3750	14.64	16.00	1.368	-	-	0.01	0.659	0.901
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	650000	3750	14.59	16.00	1.384	-	-	-0.07	0.687	0.951
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	650000	3750	14.54	16.00	1.400	-	-	0.03	0.659	0.922
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 1	650000	3750	14.64	16.00	1.368	-	-	0.05	0.334	0.457
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 1	650000	3750	14.59	16.00	1.384	-	-	0.04	0.355	0.491
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 1	633334	3500.01	14.74	16.00	1.337	-	-	-0.13	0.068	0.091
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	DSI 1	633334	3500.01	14.71	16.00	1.346	-	-	-0.02	0.082	0.110
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 1	633334	3500.01	14.74	16.00	1.337	-	-	-0.17	0.052	0.070
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	DSI 1	633334	3500.01	14.71	16.00	1.346	-	-	-0.08	0.062	0.083
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	633334	3500.01	14.74	16.00	1.337	-	-	0.05	0.312	0.417
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	633334	3500.01	14.71	16.00	1.346	-	-	-0.09	0.393	0.529
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 1	633334	3500.01	14.74	16.00	1.337	-	-	0.03	0.128	0.171
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	DSI 1	633334	3500.01	14.71	16.00	1.346	-	-	0.02	0.161	0.217
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	650000	3750	19.78	21.00	1.324	-	-	-0.18	0.580	0.768
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	650000	3750	19.75	21.00	1.334	-	-	-0.01	0.656	0.875
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	650000	3750	19.73	21.00	1.340	-	-	-0.11	0.631	0.845
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 1	650000	3750	19.78	21.00	1.324	-	-	-0.05	0.255	0.338
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 1	650000	3750	19.75	21.00	1.334	-	-	0.02	0.315	0.420
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 1	650000	3750	19.78	21.00	1.324	-	-	0.1	0.150	0.199
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 1	650000	3750	19.75	21.00	1.334	-	-	0.05	0.212	0.283
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 1	650000	3750	19.78	21.00	1.324	-	-	0.03	0.157	0.208
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 1	650000	3750	19.75	21.00	1.334	-	-	-0.11	0.206	0.275
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.73	21.00	1.340	-	-	0.08	0.608	0.815
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.71	21.00	1.346	-	-	0.02	0.553	0.744
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.66	21.00	1.361	-	-	0.08	0.561	0.764
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 1	633334	3500.01	19.73	21.00	1.340	-	-	-0.11	0.327	0.438
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 8	DSI 1	633334	3500.01	19.71	21.00	1.346	-	-	0.14	0.183	0.246
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.73	21.00	1.340	-	-	0.07	0.218	0.292
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 8	DSI 1	633334	3500.01	19.71	21.00	1.346	-	-	0.16	0.118	0.159
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 1	633334	3500.01	19.73	21.00	1.340	-	-	0.18	0.200	0.268
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 8	DSI 1	633334	3500.01	19.71	21.00	1.346	-	-	-0.16	0.100	0.135

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 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	-0.13	0.177	0.221
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	0.19	0.186	0.233
19	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	0.01	0.541	**0.676**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	-0.05	0.474	0.593
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 16+7	Simultaneous	1	2412	21.02	22.00	1.253	100	1.000	0.01	0.125	0.157
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 16+7	Simultaneous	1	2412	21.02	22.00	1.253	100	1.000	0.06	0.132	0.165
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 16+7	Simultaneous	1	2412	21.02	22.00	1.253	100	1.000	-0.03	0.392	0.491
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 16+7	Simultaneous	1	2412	21.02	22.00	1.253	100	1.000	0.07	0.336	0.421
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 16+7	DBS Simultaneous	1	2412	18.13	19.00	1.222	100	1.000	0.13	0.063	0.077
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 16+7	DBS Simultaneous	1	2412	18.13	19.00	1.222	100	1.000	0.05	0.066	0.081
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 16+7	DBS Simultaneous	1	2412	18.13	19.00	1.222	100	1.000	0.07	0.198	0.242
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 16+7	DBS Simultaneous	1	2412	18.13	19.00	1.222	100	1.000	0.08	0.168	0.205
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	0.1	0.106	0.150
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	-0.06	0.137	0.194
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	-0.1	0.097	0.137
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	0.05	0.133	0.188
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	0.05	0.522	0.756
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	-0.02	0.667	0.966
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 7	Full	0	2402	13.51	15.00	1.409	76.72	1.086	0.09	0.630	0.964
20	Bluetooth	1Mbps	Left Cheek	0mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	-0.08	0.676	**0.979**
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 7	Full	0	2402	13.51	15.00	1.409	76.72	1.086	0.11	0.635	0.972
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	0.04	0.648	0.938
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 7	Full	0	2402	13.51	15.00	1.409	76.72	1.086	0.06	0.610	0.934
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 7	Simultaneous	39	2441	6.42	8.00	1.439	76.72	1.303	-0.02	0.097	0.182
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 7	Simultaneous	39	2441	6.42	8.00	1.439	76.72	1.303	0.06	0.124	0.232
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 7	Simultaneous	39	2441	6.42	8.00	1.439	76.72	1.303	-0.08	0.136	0.255
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 7	Simultaneous	39	2441	6.42	8.00	1.439	76.72	1.303	-0.07	0.122	0.229
						5000MHz										
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	Standalone	58	5290	15.26	16.50	1.330	99.11	1.009	-0.18	0.529	0.710
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	Standalone	58	5290	15.26	16.50	1.330	99.11	1.009	-0.02	0.558	0.749
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	Standalone	58	5290	15.26	16.50	1.330	99.11	1.009	0.03	0.663	0.890
21	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Standalone	58	5290	15.26	16.50	1.330	99.11	1.009	-0.02	0.754	**1.012**
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	DBS Standalone	58	5290	14.31	15.50	1.315	99.11	1.009	-0.02	0.569	0.755
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	Simultaneous	58	5290	12.16	13.50	1.361	99.11	1.009	0.13	0.265	0.364
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	Simultaneous	58	5290	12.16	13.50	1.361	99.11	1.009	0.09	0.280	0.385
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	Simultaneous	58	5290	12.16	13.50	1.361	99.11	1.009	0.18	0.332	0.456
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Simultaneous	58	5290	12.16	13.50	1.361	99.11	1.009	0.02	0.368	0.506
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	DBS Simultaneous	58	5290	9.14	10.50	1.368	99.11	1.009	0.04	0.133	0.184
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	DBS Simultaneous	58	5290	9.14	10.50	1.368	99.11	1.009	-0.09	0.140	0.193
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	DBS Simultaneous	58	5290	9.14	10.50	1.368	99.11	1.009	-0.19	0.167	0.230
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	DBS Simultaneous	58	5290	9.14	10.50	1.368	99.11	1.009	-0.13	0.186	0.257
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	Standalone	122	5610	15.58	16.50	1.236	99.11	1.009	0.03	0.629	0.784
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	Standalone	122	5610	15.58	16.50	1.236	99.11	1.009	0.06	0.754	0.940
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	Standalone	106	5530	15.51	16.50	1.256	99.11	1.009	0.17	0.754	0.956
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	Standalone	122	5610	15.58	16.50	1.236	99.11	1.009	0.04	0.632	0.788
22	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Standalone	122	5610	15.58	16.50	1.236	99.11	1.009	-0.09	0.842	**1.050**
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Standalone	106	5530	15.51	16.50	1.256	99.11	1.009	0.06	0.821	1.040
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	DBS Standalone	122	5610	13.99	15.00	1.262	99.11	1.009	-0.09	0.596	0.759
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	Simultaneous	122	5610	12.88	13.50	1.153	99.11	1.009	0.14	0.308	0.358
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	Simultaneous	122	5610	12.88	13.50	1.153	99.11	1.009	0.11	0.369	0.429
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	Simultaneous	122	5610	12.88	13.50	1.153	99.11	1.009	0.14	0.310	0.361

	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Simultaneous	122	5610	12.88	13.50	1.153	99.11	1.009	0.09	0.422	0.491
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	DBS Simultaneous	122	5610	9.92	10.50	1.143	99.11	1.009	0.06	0.154	0.178
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	DBS Simultaneous	122	5610	9.92	10.50	1.143	99.11	1.009	0.12	0.185	0.213
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	DBS Simultaneous	122	5610	9.92	10.50	1.143	99.11	1.009	0.06	0.155	0.179
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	DBS Simultaneous	122	5610	9.92	10.50	1.143	99.11	1.009	-0.18	0.212	0.244
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	Standalone	155	5775	15.67	16.50	1.211	99.11	1.009	0.01	0.729	0.890
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	Standalone	155	5775	15.67	16.50	1.211	99.11	1.009	0.06	0.875	1.069
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	Standalone	155	5775	15.67	16.50	1.211	99.11	1.009	0.08	0.717	0.876
23	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Standalone	155	5775	15.67	16.50	1.211	99.11	1.009	-0.08	0.895	**1.093**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	DBS Standalone	155	5775	14.23	15.00	1.194	99.11	1.009	-0.08	0.634	0.763
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	Simultaneous	155	5775	12.18	13.00	1.208	99.11	1.009	-0.1	0.318	0.388
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	Simultaneous	155	5775	12.18	13.00	1.208	99.11	1.009	-0.16	0.382	0.466
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	Simultaneous	155	5775	12.18	13.00	1.208	99.11	1.009	0.18	0.313	0.381
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Simultaneous	155	5775	12.18	13.00	1.208	99.11	1.009	-0.08	0.409	0.498
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 6+18	DBS Simultaneous	155	5775	9.14	10.00	1.219	99.11	1.009	0.01	0.159	0.196
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 6+18	DBS Simultaneous	155	5775	9.14	10.00	1.219	99.11	1.009	-0.15	0.191	0.235
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 6+18	DBS Simultaneous	155	5775	9.14	10.00	1.219	99.11	1.009	0.1	0.157	0.193
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	DBS Simultaneous	155	5775	9.14	10.00	1.219	99.11	1.009	0.01	0.200	0.246

16.2 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)
835MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 0	DSI5	189	836.4	27.11	28.00	1.227	-	-	0.02	0.216	0.265
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 0	DSI5	189	836.4	27.11	28.00	1.227	-	-	-0.12	0.213	0.261
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Side	10mm	Ant 0	DSI5	189	836.4	27.11	28.00	1.227	-	-	0.19	0.146	0.179
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 0	DSI5	189	836.4	27.11	28.00	1.227	-	-	0.05	0.134	0.164
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 1	DSI5	189	836.4	24.89	26.00	1.291	-	-	0.05	0.188	0.243
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 1	DSI5	189	836.4	24.89	26.00	1.291	-	-	-0.03	0.232	0.300
24	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 1	DSI5	189	836.4	24.89	26.00	1.291	-	-	-0.02	0.256	**0.331**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 1	DSI5	189	836.4	24.89	26.00	1.291	-	-	0.07	0.094	0.121
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI5	4182	836.4	24.12	25.00	1.225	-	-	0.04	0.275	0.337
25	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI5	4182	836.4	24.12	25.00	1.225	-	-	0.08	0.280	**0.343**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI5	4182	836.4	24.12	25.00	1.225	-	-	0.04	0.175	0.214
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI5	4182	836.4	24.12	25.00	1.225	-	-	-0.01	0.171	0.209
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI5	4182	836.4	22.28	23.50	1.324	-	-	0.09	0.130	0.172
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI5	4182	836.4	22.28	23.50	1.324	-	-	-0.11	0.165	0.219
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI5	4182	836.4	22.28	23.50	1.324	-	-	-0.02	0.214	0.283
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI5	4182	836.4	22.28	23.50	1.324	-	-	-0.01	0.062	0.082
	LTE Band 5	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI5	20525	836.5	24.49	25.50	1.262	-	-	0.07	0.281	0.355
	LTE Band 5	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI5	20525	836.5	24.47	25.50	1.268	-	-	-0.14	0.289	0.366
	LTE Band 5	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI5	20525	836.5	24.49	25.50	1.262	-	-	0.04	0.302	0.381
26	LTE Band 5	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI5	20525	836.5	24.47	25.50	1.268	-	-	-0.07	0.304	**0.385**
	LTE Band 5	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI5	20525	836.5	24.49	25.50	1.262	-	-	-0.08	0.201	0.254
	LTE Band 5	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI5	20525	836.5	24.47	25.50	1.268	-	-	0.01	0.203	0.257
	LTE Band 5	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI5	20525	836.5	24.49	25.50	1.262	-	-	-0.07	0.182	0.230
	LTE Band 5	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI5	20525	836.5	24.47	25.50	1.268	-	-	0.03	0.188	0.238
	LTE Band 5	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI5	20525	836.5	22.93	24.20	1.340	-	-	0.04	0.126	0.169
	LTE Band 5	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI5	20525	836.5	22.70	24.20	1.413	-	-	0.16	0.126	0.178
	LTE Band 5	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI5	20525	836.5	22.93	24.20	1.340	-	-	-0.01	0.157	0.210
	LTE Band 5	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI5	20525	836.5	22.70	24.20	1.413	-	-	0.12	0.157	0.222
	LTE Band 5	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI5	20525	836.5	22.93	24.20	1.340	-	-	0.06	0.181	0.242
	LTE Band 5	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI5	20525	836.5	22.70	24.20	1.413	-	-	0.03	0.170	0.240
	LTE Band 5	10M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI5	20525	836.5	22.93	24.20	1.340	-	-	-0.14	0.059	0.079
	LTE Band 5	10M	QPSK	25	0	-	Top Side	10mm	Ant 1	DSI5	20525	836.5	22.70	24.20	1.413	-	-	-0.16	0.059	0.083
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI5	167300	836.5	24.58	25.50	1.236	-	-	0.05	0.302	0.373
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 0	DSI5	167300	836.5	24.54	25.50	1.247	-	-	0.03	0.321	0.400
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI5	167300	836.5	24.58	25.50	1.236	-	-	0.05	0.310	0.383
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 0	DSI5	167300	836.5	24.54	25.50	1.247	-	-	-0.01	0.336	0.419
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI5	167300	836.5	24.58	25.50	1.236	-	-	0.02	0.225	0.278
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	10mm	Ant 0	DSI5	167300	836.5	24.54	25.50	1.247	-	-	0.15	0.207	0.258
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI5	167300	836.5	24.58	25.50	1.236	-	-	0.07	0.178	0.220
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	10mm	Ant 0	DSI5	167300	836.5	24.54	25.50	1.247	-	-	-0.07	0.188	0.235
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI5	167300	836.5	23.08	24.20	1.294	-	-	-0.19	0.181	0.234
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	10mm	Ant 1	DSI5	167300	836.5	23.04	24.20	1.306	-	-	0.08	0.247	0.323
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI5	167300	836.5	23.08	24.20	1.294	-	-	0.01	0.224	0.290
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	10mm	Ant 1	DSI5	167300	836.5	23.04	24.20	1.306	-	-	0.03	0.305	0.398
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI5	167300	836.5	23.08	24.20	1.294	-	-	-0.11	0.253	0.327
27	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	10mm	Ant 1	DSI5	167300	836.5	23.04	24.20	1.306	-	-	0.08	0.326	**0.426**
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 1	DSI5	167300	836.5	23.08	24.20	1.294	-	-	0.07	0.077	0.100
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	10mm	Ant 1	DSI5	167300	836.5	23.04	24.20	1.306	-	-	0.18	0.097	0.127
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI5	1413	1732.6	17.77	18.50	1.183	-	-	0.07	0.285	0.337

	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI5	1413	1732.6	17.77	18.50	1.183	-	-	0.05	0.211	0.250
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 2	DSI5	1413	1732.6	17.77	18.50	1.183	-	-	0.03	0.476	0.563
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 3	DSI5	1413	1732.6	21.90	23.00	1.288	-	-	0.08	0.218	0.281
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 3	DSI5	1413	1732.6	21.90	23.00	1.288	-	-	-0.07	0.231	0.298
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 3	DSI5	1413	1732.6	21.90	23.00	1.288	-	-	-0.04	0.439	0.566
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 4	DSI5	1413	1732.6	17.27	18.50	1.327	-	-	-0.03	0.155	0.206
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 4	DSI5	1413	1732.6	17.27	18.50	1.327	-	-	-0.14	0.227	0.301
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 4	DSI5	1413	1732.6	17.27	18.50	1.327	-	-	-0.08	0.097	0.129
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 4	DSI5	1413	1732.6	17.27	18.50	1.327	-	-	0.09	0.290	0.385
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 5	DSI5	1413	1732.6	21.57	22.50	1.239	-	-	0.02	0.390	0.483
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 5	DSI5	1413	1732.6	21.57	22.50	1.239	-	-	0.02	0.495	0.613
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 5	DSI5	1413	1732.6	21.57	22.50	1.239	-	-	0.18	0.140	0.173
28	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 5	DSI5	1413	1732.6	21.57	22.50	1.239	-	-	-0.01	0.681	**0.844**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 5	DSI5	1312	1712.4	21.51	22.50	1.256	-	-	-0.12	0.597	0.750
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 5	DSI5	1513	1752.6	21.54	22.50	1.247	-	-	-0.07	0.579	0.722
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI5	132322	1745	18.68	19.20	1.127	-	-	-0.17	0.314	0.354
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI5	132322	1745	18.66	19.20	1.132	-	-	-0.06	0.304	0.344
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI5	132322	1745	18.68	19.20	1.127	-	-	0.06	0.244	0.275
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI5	132322	1745	18.66	19.20	1.132	-	-	0.13	0.257	0.291
	LTE Band 66	20M	QPSK	1	0	-	Right Side	10mm	Ant 2	DSI5	132322	1745	18.68	19.20	1.127	-	-	-0.13	0.526	0.593
	LTE Band 66	20M	QPSK	50	0	-	Right Side	10mm	Ant 2	DSI5	132322	1745	18.66	19.20	1.132	-	-	-0.01	0.516	0.584
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI5	132322	1745	20.26	20.70	1.107	-	-	-0.16	0.198	0.219
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI5	132322	1745	20.24	20.70	1.112	-	-	-0.18	0.182	0.202
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI5	132322	1745	20.26	20.70	1.107	-	-	0.08	0.196	0.217
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI5	132322	1745	20.24	20.70	1.112	-	-	-0.05	0.209	0.232
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI5	132322	1745	20.26	20.70	1.107	-	-	-0.1	0.339	0.375
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI5	132322	1745	20.24	20.70	1.112	-	-	-0.08	0.365	0.406
	LTE Band 66 Main PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI5	132322	1745	19.17	19.70	1.130	-	-	-0.04	0.279	0.315
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI5	132322	1745	18.09	18.70	1.151	-	-	0.07	0.148	0.170
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI5	132322	1745	18.06	18.70	1.159	-	-	0.05	0.150	0.174
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI5	132322	1745	18.09	18.70	1.151	-	-	0.05	0.216	0.249
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI5	132322	1745	18.06	18.70	1.159	-	-	0.14	0.214	0.248
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI5	132322	1745	18.09	18.70	1.151	-	-	0.03	0.097	0.112
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI5	132322	1745	18.06	18.70	1.159	-	-	-0.08	0.098	0.114
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI5	132322	1745	18.09	18.70	1.151	-	-	0.08	0.366	0.421
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI5	132322	1745	18.06	18.70	1.159	-	-	-0.09	0.359	0.416
	LTE Band 66 Main PA	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI5	132322	1745	17.27	17.70	1.104	-	-	-0.05	0.288	0.318
	LTE Band 66	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI5	132322	1745	22.16	22.70	1.132	-	-	0.04	0.498	0.564
	LTE Band 66	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI5	132322	1745	22.13	22.70	1.140	-	-	-0.16	0.494	0.563
	LTE Band 66	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI5	132322	1745	22.16	22.70	1.132	-	-	-0.17	0.609	0.690
	LTE Band 66	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI5	132322	1745	22.13	22.70	1.140	-	-	-0.02	0.623	0.710
	LTE Band 66	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI5	132322	1745	22.16	22.70	1.132	-	-	-0.15	0.227	0.257
	LTE Band 66	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI5	132322	1745	22.13	22.70	1.140	-	-	0.02	0.226	0.258
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	132322	1745	22.16	22.70	1.132	-	-	0.04	0.802	0.908
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	132072	1720	22.10	22.70	1.148	-	-	0.05	0.728	0.836
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	132572	1770	22.14	22.70	1.138	-	-	0.18	0.826	0.940
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	132322	1745	22.13	22.70	1.140	-	-	0.05	0.818	0.933
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	132072	1720	22.05	22.70	1.161	-	-	-0.14	0.748	0.869
29	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	132572	1770	22.09	22.70	1.151	-	-	0.02	0.833	**0.959**
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 5	DSI5	132322	1745	22.09	22.70	1.151	-	-	0.04	0.795	0.915
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 4	DSI5	661	1880	22.30	23.50	1.318	-	-	0.05	0.187	0.247
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 4	DSI5	661	1880	22.30	23.50	1.318	-	-	-0.17	0.267	0.352
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 4	DSI5	661	1880	22.30	23.50	1.318	-	-	0.04	0.128	0.169
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Top Side	10mm	Ant 4	DSI5	661	1880	22.30	23.50	1.318	-	-	0.02	0.415	0.547
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	10mm	Ant 5	DSI5	661	1880	23.76	25.00	1.330	-	-	-0.16	0.326	0.434

	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	10mm	Ant 5	DSI5	661	1880	23.76	25.00	1.330	-	-	0.06	0.429	0.571
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	10mm	Ant 5	DSI5	661	1880	23.76	25.00	1.330	-	-	0.17	0.156	0.208
30	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	10mm	Ant 5	DSI5	661	1880	23.76	25.00	1.330	-	-	0.15	0.522	**0.694**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 4	DSI5	9400	1880	18.14	19.50	1.368	-	-	0.06	0.166	0.227
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 4	DSI5	9400	1880	18.14	19.50	1.368	-	-	0.07	0.234	0.320
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 4	DSI5	9400	1880	18.14	19.50	1.368	-	-	0.06	0.123	0.168
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 4	DSI5	9400	1880	18.14	19.50	1.368	-	-	0.01	0.400	0.547
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 5	DSI5	9400	1880	21.72	22.50	1.197	-	-	-0.04	0.463	0.554
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 5	DSI5	9400	1880	21.72	22.50	1.197	-	-	0.07	0.601	0.719
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 5	DSI5	9400	1880	21.72	22.50	1.197	-	-	0.06	0.208	0.249
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 5	DSI5	9400	1880	21.72	22.50	1.197	-	-	0.09	0.792	0.948
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 5	DSI5	9262	1852.4	21.64	22.50	1.219	-	-	0.04	0.768	0.936
31	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 5	DSI5	9538	1907.6	21.60	22.50	1.230	-	-	0.06	0.824	**1.014**
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI5	18900	1880	17.45	19.00	1.429	-	-	0.04	0.146	0.209
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI5	18900	1880	17.43	19.00	1.435	-	-	0.05	0.151	0.217
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI5	18900	1880	17.45	19.00	1.429	-	-	0.15	0.213	0.304
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI5	18900	1880	17.43	19.00	1.435	-	-	0.02	0.216	0.310
	LTE Band 2	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI5	18900	1880	17.45	19.00	1.429	-	-	0.03	0.114	0.163
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI5	18900	1880	17.43	19.00	1.435	-	-	-0.14	0.112	0.161
	LTE Band 2	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI5	18900	1880	17.45	19.00	1.429	-	-	-0.12	0.379	0.542
	LTE Band 2	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI5	18900	1880	17.43	19.00	1.435	-	-	0.05	0.384	0.551
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI5	18900	1880	22.68	23.20	1.127	-	-	0.04	0.460	0.519
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI5	18900	1880	22.64	23.20	1.138	-	-	0.12	0.469	0.534
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI5	18900	1880	22.68	23.20	1.127	-	-	-0.18	0.596	0.672
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI5	18900	1880	22.64	23.20	1.138	-	-	-0.02	0.625	0.711
	LTE Band 2	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI5	18900	1880	22.68	23.20	1.127	-	-	0.12	0.231	0.260
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI5	18900	1880	22.64	23.20	1.138	-	-	-0.01	0.214	0.243
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	18900	1880	22.68	23.20	1.127	-	-	-0.14	0.844	0.951
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	18700	1860	22.53	23.20	1.167	-	-	0.11	0.806	0.940
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	19100	1900	22.55	23.20	1.161	-	-	0.08	0.833	0.967
32	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	18900	1880	22.64	23.20	1.138	-	-	0.05	0.867	**0.986**
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	18700	1860	22.39	23.20	1.205	-	-	0.01	0.815	0.982
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	19100	1900	22.31	23.20	1.227	-	-	0.08	0.802	0.984
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	10mm	Ant 5	DSI5	18900	1880	22.58	23.20	1.153	-	-	0.14	0.835	0.963
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI5	21100	2535	19.72	20.20	1.117	-	-	0.03	0.273	0.305
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI5	21100	2535	19.70	20.20	1.122	-	-	0.03	0.259	0.291
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI5	21100	2535	19.72	20.20	1.117	-	-	0.03	0.276	0.308
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI5	21100	2535	19.70	20.20	1.122	-	-	0.03	0.271	0.304
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 2	DSI5	21100	2535	19.72	20.20	1.117	-	-	0.11	0.443	0.495
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 2	DSI5	21100	2535	19.70	20.20	1.122	-	-	0.04	0.444	0.498
	LTE Band 7C	20M	QPSK	50	50	-	Right Side	10mm	Ant 2	DSI5	21100+21298	2535+2554.8	19.50	20.20	1.175	-	-	0.01	0.408	0.479
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI5	21100	2535	20.70	22.00	1.349	-	-	-0.19	0.295	0.398
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI5	21100	2535	20.69	22.00	1.352	-	-	-0.15	0.307	0.415
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI5	21100	2535	20.70	22.00	1.349	-	-	0.11	0.303	0.409
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI5	21100	2535	20.69	22.00	1.352	-	-	-0.07	0.309	0.418
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI5	21100	2535	20.70	22.00	1.349	-	-	-0.12	0.558	0.753
33	LTE Band 7 Other PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI5	21100	2535	20.69	22.00	1.352	-	-	-0.06	0.568	**0.768**
	LTE Band 7C Other PA	20M	QPSK	50	50	-	Left Side	10mm	Ant 3	DSI5	21100+21298	2535+2554.8	20.57	22.00	1.390	-	-	-0.03	0.547	0.760
	LTE Band 7 Main PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI5	21100	2535	18.97	20.00	1.268	-	-	0.01	0.251	0.318
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI5	21100	2535	17.24	18.00	1.191	-	-	0.11	0.162	0.193
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI5	21100	2535	17.22	18.00	1.197	-	-	-0.11	0.160	0.191
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI5	21100	2535	17.24	18.00	1.191	-	-	0.05	0.189	0.225
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI5	21100	2535	17.22	18.00	1.197	-	-	0.19	0.185	0.221
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI5	21100	2535	17.24	18.00	1.191	-	-	0.06	0.102	0.122
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI5	21100	2535	17.22	18.00	1.197	-	-	0.13	0.101	0.121

	LTE Band 7 Other PA	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI5	21100	2535	17.24	18.00	1.191	-	-	0.06	0.324	0.386
	LTE Band 7C Other PA	20M	QPSK	1	99	-	Top Side	10mm	Ant 4	DSI5	21100+21298	2535+2554.8	17.01	18.00	1.256	-	-	-0.07	0.301	0.378
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI5	21100	2535	17.22	18.00	1.197	-	-	0.04	0.310	0.371
	LTE Band 7 Main PA	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI5	21100	2535	15.82	16.50	1.169	-	-	0.02	0.244	0.285
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI5	21100	2535	21.25	21.70	1.109	-	-	0.01	0.374	0.415
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI5	21100	2535	21.21	21.70	1.119	-	-	-0.13	0.374	0.419
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI5	21100	2535	21.25	21.70	1.109	-	-	0.07	0.465	0.516
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI5	21100	2535	21.21	21.70	1.119	-	-	-0.12	0.481	0.538
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI5	21100	2535	21.25	21.70	1.109	-	-	0.04	0.134	0.149
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI5	21100	2535	21.21	21.70	1.119	-	-	0.04	0.130	0.146
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	21100	2535	21.25	21.70	1.109	-	-	0.1	0.532	0.590
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	21100	2535	21.21	21.70	1.119	-	-	0.05	0.537	0.601
	LTE Band 7C	20M	QPSK	50	50	-	Bottom Side	10mm	Ant 5	DSI5	21100+21298	2535+2554.8	21.19	21.70	1.125	-	-	0.03	0.513	0.577
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI5	38000	2595	20.17	20.70	1.130	62.9	1.006	0.04	0.180	0.205
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI5	38000	2595	20.15	20.70	1.135	62.9	1.006	0.02	0.184	0.210
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI5	38000	2595	20.17	20.70	1.130	62.9	1.006	0.03	0.199	0.226
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI5	38000	2595	20.15	20.70	1.135	62.9	1.006	-0.14	0.201	0.230
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI5	38000	2595	20.17	20.70	1.130	62.9	1.006	0.18	0.099	0.113
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI5	38000	2595	20.15	20.70	1.135	62.9	1.006	0.06	0.108	0.123
	LTE Band 38 Other PA	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI5	38000	2595	20.17	20.70	1.130	62.9	1.006	0.09	0.300	0.341
	LTE Band 38 Other PA	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI5	38000	2595	20.15	20.70	1.135	62.9	1.006	-0.04	0.302	0.345
	LTE Band 38C Other PA	20M	QPSK	50	50	-	Top Side	10mm	Ant 4	DSI5	37901+38099	2585.1+2604.9	20.03	20.70	1.167	62.9	1.006	0.02	0.275	0.323
	LTE Band 38 Main PA	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI5	38000	2595	19.19	19.70	1.125	100	1.000	0.05	0.271	0.305
	LTE Band 38	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI5	38000	2595	23.18	23.70	1.127	62.9	1.006	0.05	0.348	0.395
	LTE Band 38	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI5	38000	2595	23.15	23.70	1.135	62.9	1.006	0.07	0.363	0.414
	LTE Band 38	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI5	38000	2595	23.18	23.70	1.127	62.9	1.006	-0.01	0.470	0.533
	LTE Band 38	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI5	38000	2595	23.15	23.70	1.135	62.9	1.006	-0.01	0.502	0.573
	LTE Band 38	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI5	38000	2595	23.18	23.70	1.127	62.9	1.006	0.07	0.121	0.137
	LTE Band 38	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI5	38000	2595	23.15	23.70	1.135	62.9	1.006	0.07	0.118	0.135
	LTE Band 38	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	38000	2595	23.18	23.70	1.127	62.9	1.006	0.02	0.529	0.600
34	LTE Band 38	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	38000	2595	23.15	23.70	1.135	62.9	1.006	0.06	0.552	**0.630**
	LTE Band 38C	20M	QPSK	50	50	-	Bottom Side	10mm	Ant 5	DSI5	37901+38099	2585.1+2604.9	23.13	23.70	1.140	62.9	1.006	-0.02	0.526	0.603
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI5	40620	2593	22.26	22.70	1.107	62.9	1.006	-0.09	0.282	0.314
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI5	40620	2593	22.24	22.70	1.112	62.9	1.006	0.07	0.276	0.309
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI5	40620	2593	22.26	22.70	1.107	62.9	1.006	-0.17	0.281	0.313
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI5	40620	2593	22.24	22.70	1.112	62.9	1.006	-0.1	0.273	0.305
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 2	DSI5	40620	2593	22.26	22.70	1.107	62.9	1.006	-0.18	0.470	0.523
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 2	DSI5	40620	2593	22.24	22.70	1.112	62.9	1.006	-0.02	0.518	0.579
	LTE Band 38C	20M	QPSK	50	50	-	Right Side	10mm	Ant 2	DSI5	37901+38099	2585.1+2604.9	21.43	22.20	1.194	62.9	1.006	0.02	0.458	0.550
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Front	10mm	Ant 3	DSI5	40620	2593	21.23	21.70	1.114	62.9	1.006	-0.18	0.263	0.295
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Front	10mm	Ant 3	DSI5	40620	2593	21.20	21.70	1.122	62.9	1.006	0.07	0.265	0.299
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Back	10mm	Ant 3	DSI5	40620	2593	21.23	21.70	1.114	62.9	1.006	0.11	0.240	0.269
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 3	DSI5	40620	2593	21.20	21.70	1.122	62.9	1.006	0.06	0.243	0.274
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI5	40620	2593	21.23	21.70	1.114	62.9	1.006	-0.01	0.411	0.461
	LTE Band 38C Other PA	20M	QPSK	1	99	-	Left Side	10mm	Ant 3	DSI5	37901+38099	2585.1+2604.9	19.61	20.20	1.146	62.9	1.006	0.02	0.328	0.378
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 3	DSI5	40620	2593	21.20	21.70	1.122	62.9	1.006	0.03	0.402	0.454
	LTE Band 41 Main PA	20M	QPSK	1	0	-	Left Side	10mm	Ant 3	DSI5	40620	2593	20.39	20.70	1.074	100	1.000	0.02	0.263	0.282
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Front	10mm	Ant 4	DSI5	40620	2593	18.69	19.20	1.125	62.9	1.006	-0.07	0.127	0.144
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Front	10mm	Ant 4	DSI5	40620	2593	18.67	19.20	1.130	62.9	1.006	0.06	0.126	0.143
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Back	10mm	Ant 4	DSI5	40620	2593	18.69	19.20	1.125	62.9	1.006	-0.1	0.145	0.164
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 4	DSI5	40620	2593	18.67	19.20	1.130	62.9	1.006	0.04	0.139	0.158
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Side	10mm	Ant 4	DSI5	40620	2593	18.69	19.20	1.125	62.9	1.006	0.08	0.072	0.081
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Left Side	10mm	Ant 4	DSI5	40620	2593	18.67	19.20	1.130	62.9	1.006	0.04	0.074	0.084
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI5	40620	2593	18.69	19.20	1.125	62.9	1.006	0.05	0.224	0.253
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Top Side	10mm	Ant 4	DSI5	40620	2593	18.67	19.20	1.130	62.9	1.006	0.12	0.220	0.250
	LTE Band 41 Main PA	20M	QPSK	1	0	-	Top Side	10mm	Ant 4	DSI5	40620	2593	17.65	18.20	1.135	100	1.000	0.07	0.204	0.232

	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI5	40620	2593	22.74	23.20	1.112	62.9	1.006	0.07	0.350	0.391
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI5	40620	2593	22.72	23.20	1.117	62.9	1.006	0.02	0.352	0.395
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI5	40620	2593	22.74	23.20	1.112	62.9	1.006	-0.12	0.460	0.514
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI5	40620	2593	22.72	23.20	1.117	62.9	1.006	-0.14	0.463	0.520
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI5	40620	2593	22.74	23.20	1.112	62.9	1.006	0.08	0.120	0.134
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI5	40620	2593	22.72	23.20	1.117	62.9	1.006	0.06	0.123	0.138
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI5	40620	2593	22.74	23.20	1.112	62.9	1.006	-0.12	0.527	0.589
35	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	40620	2593	22.72	23.20	1.117	62.9	1.006	0.05	0.532	**0.598**
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI5	507000	2535	20.71	21.20	1.119	-	-	-0.12	0.326	0.365
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 2	DSI5	507000	2535	20.65	21.20	1.135	-	-	0.16	0.346	0.393
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI5	507000	2535	20.71	21.20	1.119	-	-	0.01	0.308	0.345
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 2	DSI5	507000	2535	20.65	21.20	1.135	-	-	-0.12	0.330	0.375
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	10mm	Ant 2	DSI5	507000	2535	20.71	21.20	1.119	-	-	0.03	0.546	0.611
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	10mm	Ant 2	DSI5	507000	2535	20.65	21.20	1.135	-	-	-0.03	0.553	0.628
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 3	DSI5	507000	2535	20.65	22.00	1.365	-	-	0.01	0.398	0.543
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 3	DSI5	507000	2535	20.58	22.00	1.387	-	-	0.05	0.410	0.569
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 3	DSI5	507000	2535	20.65	22.00	1.365	-	-	0.17	0.395	0.539
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 3	DSI5	507000	2535	20.58	22.00	1.387	-	-	0.04	0.405	0.562
36	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 3	DSI5	507000	2535	20.65	22.00	1.365	-	-	0.03	0.709	**0.967**
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 3	DSI5	507000	2535	20.58	22.00	1.387	-	-	-0.02	0.652	0.904
	FR1 n7 Other PA	40M	QPSK	216	0	DFT-SCS-15KHz	Left Side	10mm	Ant 3	DSI5	507000	2535	20.35	22.00	1.462	-	-	0.03	0.643	0.940
	FR1 n7 Main PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 3	DSI5	507000	2535	20.06	21.50	1.393	-	-	-0.05	0.413	0.575
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 4	DSI5	507000	2535	17.38	18.00	1.153	-	-	-0.16	0.152	0.175
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 4	DSI5	507000	2535	17.23	18.00	1.194	-	-	-0.11	0.155	0.185
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 4	DSI5	507000	2535	17.38	18.00	1.153	-	-	-0.08	0.173	0.200
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 4	DSI5	507000	2535	17.23	18.00	1.194	-	-	0.07	0.172	0.205
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 4	DSI5	507000	2535	17.38	18.00	1.153	-	-	0.1	0.103	0.119
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 4	DSI5	507000	2535	17.23	18.00	1.194	-	-	0.14	0.104	0.124
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 4	DSI5	507000	2535	17.38	18.00	1.153	-	-	0.09	0.322	0.371
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	10mm	Ant 4	DSI5	507000	2535	17.23	18.00	1.194	-	-	0.05	0.272	0.325
	FR1 n7 Main PA	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	10mm	Ant 4	DSI5	507000	2535	16.77	18.00	1.327	-	-	0.18	0.308	0.409
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI5	507000	2535	20.25	20.70	1.109	-	-	-0.02	0.301	0.334
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	10mm	Ant 5	DSI5	507000	2535	20.22	20.70	1.117	-	-	0.09	0.295	0.329
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI5	507000	2535	20.25	20.70	1.109	-	-	0.02	0.382	0.424
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	10mm	Ant 5	DSI5	507000	2535	20.22	20.70	1.117	-	-	0.04	0.406	0.453
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI5	507000	2535	20.25	20.70	1.109	-	-	0.04	0.122	0.135
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	10mm	Ant 5	DSI5	507000	2535	20.22	20.70	1.117	-	-	-0.02	0.124	0.138
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	10mm	Ant 5	DSI5	507000	2535	20.25	20.70	1.109	-	-	-0.05	0.422	0.468
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	10mm	Ant 5	DSI5	507000	2535	20.22	20.70	1.117	-	-	0.07	0.460	0.514
	FR1 n38	40M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI5	519000	2595	19.11	20.00	1.227	-	-	0.02	0.317	0.389
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI5	519000	2595	19.02	20.00	1.253	-	-	0.07	0.283	0.355
	FR1 n38	40M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI5	519000	2595	19.11	20.00	1.227	-	-	0.07	0.291	0.357
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI5	519000	2595	19.02	20.00	1.253	-	-	0.16	0.264	0.331
37	FR1 n38	40M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 2	DSI5	519000	2595	19.11	20.00	1.227	-	-	0.04	0.485	**0.595**
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Side	10mm	Ant 2	DSI5	519000	2595	19.02	20.00	1.253	-	-	-0.19	0.471	0.590
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI5	518598	2592.99	19.02	19.70	1.169	-	-	0.02	0.319	0.373
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI5	518598	2592.99	18.95	19.70	1.189	-	-	0.07	0.287	0.341
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI5	518598	2592.99	19.02	19.70	1.169	-	-	0.06	0.302	0.353
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI5	518598	2592.99	18.95	19.70	1.189	-	-	0.01	0.254	0.302
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 2	DSI5	518598	2592.99	19.02	19.70	1.169	-	-	-0.08	0.507	0.593
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 2	DSI5	518598	2592.99	18.95	19.70	1.189	-	-	-0.18	0.444	0.528
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI5	518598	2592.99	22.21	22.70	1.119	-	-	0.13	0.573	0.641
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI5	518598	2592.99	22.19	22.70	1.125	-	-	0.17	0.610	0.686
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI5	518598	2592.99	22.21	22.70	1.119	-	-	-0.06	0.567	0.635
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI5	518598	2592.99	22.19	22.70	1.125	-	-	-0.1	0.622	0.700
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI5	518598	2592.99	22.21	22.70	1.119	-	-	0.11	0.941	1.053

38	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI5	518598	2592.99	22.19	22.70	1.125	-	-	0.05	0.971	**1.092**
	FR1 n41 Other PA	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI5	518598	2592.99	22.12	22.70	1.143	-	-	0.01	0.922	1.054
	FR1 n41 Main PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI5	518598	2592.99	20.38	22.00	1.452	-	-	0.07	0.442	0.642
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	518598	2592.99	17.75	18.20	1.109	-	-	0.02	0.198	0.220
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	518598	2592.99	17.64	18.20	1.138	-	-	0.07	0.184	0.209
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	518598	2592.99	17.75	18.20	1.109	-	-	-0.15	0.208	0.231
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	518598	2592.99	17.64	18.20	1.138	-	-	0.04	0.207	0.235
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	518598	2592.99	17.75	18.20	1.109	-	-	0.07	0.114	0.126
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	518598	2592.99	17.64	18.20	1.138	-	-	-0.08	0.097	0.110
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	518598	2592.99	17.75	18.20	1.109	-	-	0.02	0.342	0.379
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	518598	2592.99	17.64	18.20	1.138	-	-	0.04	0.303	0.345
	FR1 n41 Main PA	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	518598	2592.99	16.33	17.50	1.309	-	-	0.09	0.253	0.331
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI5	518598	2592.99	20.74	21.20	1.112	-	-	0.02	0.358	0.398
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI5	518598	2592.99	20.69	21.20	1.125	-	-	0.02	0.358	0.403
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI5	518598	2592.99	20.74	21.20	1.112	-	-	0.14	0.469	0.521
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI5	518598	2592.99	20.69	21.20	1.125	-	-	0.02	0.454	0.511
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI5	518598	2592.99	20.74	21.20	1.112	-	-	0.14	0.138	0.153
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI5	518598	2592.99	20.69	21.20	1.125	-	-	0.02	0.130	0.146
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI5	518598	2592.99	20.74	21.20	1.112	-	-	0.05	0.033	0.037
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI5	518598	2592.99	20.69	21.20	1.125	-	-	0.03	0.549	0.617
3500MHz																				
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	656000	3840	16.29	17.50	1.321	-	-	0.03	0.088	0.116
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	656000	3840	16.13	17.50	1.371	-	-	0.09	0.086	0.118
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	656000	3840	16.29	17.50	1.321	-	-	0.18	0.118	0.156
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	656000	3840	16.13	17.50	1.371	-	-	0.08	0.113	0.155
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	656000	3840	16.29	17.50	1.321	-	-	0.04	0.056	0.074
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	656000	3840	16.13	17.50	1.371	-	-	0.18	0.049	0.067
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	656000	3840	16.29	17.50	1.321	-	-	-0.01	0.254	0.336
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	656000	3840	16.13	17.50	1.371	-	-	-0.06	0.212	0.291
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	633334	3500.01	16.31	17.50	1.315	-	-	0.05	0.120	0.158
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	633334	3500.01	16.24	17.50	1.337	-	-	-0.18	0.116	0.155
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	633334	3500.01	16.31	17.50	1.315	-	-	0.02	0.275	0.362
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	633334	3500.01	16.24	17.50	1.337	-	-	0.02	0.246	0.329
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	633334	3500.01	16.31	17.50	1.315	-	-	-0.08	0.063	0.083
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	633334	3500.01	16.24	17.50	1.337	-	-	0.13	0.065	0.087
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	633334	3500.01	16.31	17.50	1.315	-	-	-0.09	0.308	0.405
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	633334	3500.01	16.24	17.50	1.337	-	-	-0.15	0.299	0.400
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI5	656000	3840	17.11	18.50	1.377	-	-	0.04	0.120	0.165
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI5	656000	3840	17.03	18.50	1.403	-	-	-0.14	0.127	0.178
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI5	656000	3840	17.11	18.50	1.377	-	-	0.09	0.265	0.365
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI5	656000	3840	17.03	18.50	1.403	-	-	0.08	0.256	0.359
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI5	656000	3840	17.11	18.50	1.377	-	-	0.02	0.202	0.278
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI5	656000	3840	17.03	18.50	1.403	-	-	-0.02	0.284	0.398
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI5	633334	3500.01	17.76	18.50	1.186	-	-	-0.11	0.095	0.113
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI5	633334	3500.01	17.71	18.50	1.199	-	-	0.09	0.076	0.091
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI5	633334	3500.01	17.76	18.50	1.186	-	-	-0.06	0.249	0.295
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI5	633334	3500.01	17.71	18.50	1.199	-	-	0.08	0.240	0.288
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI5	633334	3500.01	17.76	18.50	1.186	-	-	0.05	0.222	0.263
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI5	633334	3500.01	17.71	18.50	1.199	-	-	-0.19	0.221	0.265
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI5	656000	3840	15.63	16.20	1.140	-	-	0.11	0.120	0.137
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI5	656000	3840	15.61	16.20	1.146	-	-	0.15	0.120	0.137
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI5	656000	3840	15.63	16.20	1.140	-	-	0.05	0.157	0.179
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI5	656000	3840	15.61	16.20	1.146	-	-	0.09	0.143	0.164
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI5	656000	3840	15.63	16.20	1.140	-	-	0.08	0.325	0.371
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI5	656000	3840	15.61	16.20	1.146	-	-	-0.09	0.284	0.325
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI5	656000	3840	15.63	16.20	1.140	-	-	0.09	0.058	0.066

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI5	656000	3840	15.61	16.20	1.146	-	-	0.08	0.059	0.068
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI5	633334	3500.01	15.75	16.20	1.109	-	-	0.06	0.088	0.098
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI5	633334	3500.01	15.51	16.20	1.172	-	-	0.07	0.102	0.120
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI5	633334	3500.01	15.75	16.20	1.109	-	-	-0.1	0.106	0.118
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI5	633334	3500.01	15.51	16.20	1.172	-	-	0.06	0.119	0.139
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI5	633334	3500.01	15.75	16.20	1.109	-	-	0.09	0.187	0.207
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI5	633334	3500.01	15.51	16.20	1.172	-	-	0.03	0.223	0.261
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI5	633334	3500.01	15.75	16.20	1.109	-	-	-0.02	0.042	0.047
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI5	633334	3500.01	15.51	16.20	1.172	-	-	0.07	0.044	0.052
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI5	656000	3840	14.68	16.00	1.355	-	-	0.05	0.063	0.085
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI5	656000	3840	14.65	16.00	1.365	-	-	0.05	0.034	0.046
39	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	656000	3840	14.68	16.00	1.355	-	-	-0.09	0.358	**0.485**
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	656000	3840	14.65	16.00	1.365	-	-	0.03	0.293	0.400
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI5	656000	3840	14.68	16.00	1.355	-	-	0.01	0.146	0.198
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI5	656000	3840	14.65	16.00	1.365	-	-	0.04	0.140	0.191
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI5	656000	3840	14.68	16.00	1.355	-	-	-0.12	0.063	0.085
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI5	656000	3840	14.65	16.00	1.365	-	-	0.01	0.065	0.089
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI5	633334	3500.01	14.64	16.00	1.368	-	-	0.02	0.067	0.092
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI5	633334	3500.01	14.61	16.00	1.377	-	-	0.13	0.038	0.052
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	633334	3500.01	14.64	16.00	1.368	-	-	0.05	0.293	0.401
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	633334	3500.01	14.61	16.00	1.377	-	-	-0.09	0.303	0.417
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI5	633334	3500.01	14.64	16.00	1.368	-	-	-0.15	0.115	0.157
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI5	633334	3500.01	14.61	16.00	1.377	-	-	-0.16	0.116	0.160
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI5	633334	3500.01	14.64	16.00	1.368	-	-	-0.05	0.041	0.056
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI5	633334	3500.01	14.61	16.00	1.377	-	-	0.03	0.055	0.076
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	650000	3750	15.26	17.00	1.493	-	-	0.12	0.078	0.116
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	650000	3750	15.18	17.00	1.521	-	-	-0.14	0.077	0.117
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	650000	3750	15.26	17.00	1.493	-	-	0.18	0.107	0.160
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	650000	3750	15.18	17.00	1.521	-	-	0.15	0.086	0.131
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	650000	3750	15.26	17.00	1.493	-	-	-0.11	0.055	0.082
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	650000	3750	15.18	17.00	1.521	-	-	0.13	0.047	0.071
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	650000	3750	15.26	17.00	1.493	-	-	0.09	0.205	0.306
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	650000	3750	15.18	17.00	1.521	-	-	0.18	0.180	0.274
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	633334	3500.01	15.27	17.00	1.489	-	-	0.05	0.077	0.115
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI5	633334	3500.01	15.25	17.00	1.496	-	-	0.07	0.085	0.127
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	633334	3500.01	15.27	17.00	1.489	-	-	0.05	0.192	0.286
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI5	633334	3500.01	15.25	17.00	1.496	-	-	0.04	0.183	0.274
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	633334	3500.01	15.27	17.00	1.489	-	-	0.05	0.047	0.070
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI5	633334	3500.01	15.25	17.00	1.496	-	-	0.1	0.050	0.075
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	633334	3500.01	15.27	17.00	1.489	-	-	0.05	0.228	0.340
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI5	633334	3500.01	15.25	17.00	1.496	-	-	0.07	0.241	0.361
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI5	650000	3750	17.85	19.50	1.462	-	-	0.09	0.141	0.206
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI5	650000	3750	17.83	19.50	1.469	-	-	-0.1	0.166	0.244
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI5	650000	3750	17.85	19.50	1.462	-	-	0.08	0.298	0.436
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI5	650000	3750	17.83	19.50	1.469	-	-	-0.04	0.372	0.546
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI5	650000	3750	17.85	19.50	1.462	-	-	0.13	0.224	0.328
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI5	650000	3750	17.83	19.50	1.469	-	-	0.02	0.247	0.363
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI5	633334	3500.01	18.35	19.50	1.303	-	-	0.15	0.075	0.098
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 6	DSI5	633334	3500.01	18.33	19.50	1.309	-	-	0.05	0.046	0.060
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI5	633334	3500.01	18.35	19.50	1.303	-	-	-0.05	0.234	0.305
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 6	DSI5	633334	3500.01	18.33	19.50	1.309	-	-	-0.17	0.139	0.182
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI5	633334	3500.01	18.35	19.50	1.303	-	-	-0.05	0.067	0.087
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 6	DSI5	633334	3500.01	18.33	19.50	1.309	-	-	0.11	0.106	0.139
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI5	650000	3750	14.64	16.00	1.368	-	-	0.03	0.116	0.159
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI5	650000	3750	14.59	16.00	1.384	-	-	-0.02	0.120	0.166
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI5	650000	3750	14.64	16.00	1.368	-	-	0.06	0.131	0.179

	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI5	650000	3750	14.59	16.00	1.384	-	-	-0.18	0.150	0.208
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI5	650000	3750	14.64	16.00	1.368	-	-	-0.09	0.259	0.354
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI5	650000	3750	14.59	16.00	1.384	-	-	-0.06	0.273	0.378
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI5	650000	3750	14.64	16.00	1.368	-	-	-0.07	0.049	0.067
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI5	650000	3750	14.59	16.00	1.384	-	-	0.04	0.053	0.073
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI5	633334	3500.01	14.74	16.00	1.337	-	-	0.04	0.077	0.103
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 7	DSI5	633334	3500.01	14.71	16.00	1.346	-	-	0.19	0.092	0.124
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI5	633334	3500.01	14.74	16.00	1.337	-	-	0.05	0.094	0.126
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 7	DSI5	633334	3500.01	14.71	16.00	1.346	-	-	0.09	0.107	0.144
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI5	633334	3500.01	14.74	16.00	1.337	-	-	-0.06	0.175	0.234
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 7	DSI5	633334	3500.01	14.71	16.00	1.346	-	-	-0.05	0.209	0.281
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI5	633334	3500.01	14.74	16.00	1.337	-	-	0.18	0.036	0.048
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 7	DSI5	633334	3500.01	14.71	16.00	1.346	-	-	0.02	0.035	0.047
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI5	650000	3750	13.22	14.50	1.343	-	-	0.05	0.023	0.031
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI5	650000	3750	13.17	14.50	1.358	-	-	-0.12	0.058	0.079
40	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	650000	3750	13.22	14.50	1.343	-	-	0.03	0.701	**0.941**
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	650000	3750	13.17	14.50	1.358	-	-	0.17	0.560	0.761
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	650000	3750	13.19	14.50	1.352	-	-	0.09	0.530	0.717
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI5	650000	3750	13.22	14.50	1.343	-	-	0.16	0.219	0.294
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI5	650000	3750	13.17	14.50	1.358	-	-	0.04	0.175	0.238
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI5	650000	3750	13.22	14.50	1.343	-	-	0.02	0.058	0.078
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI5	650000	3750	13.17	14.50	1.358	-	-	-0.14	0.058	0.079
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI5	633334	3500.01	13.20	14.50	1.349	-	-	-0.06	0.032	0.043
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 8	DSI5	633334	3500.01	13.16	14.50	1.361	-	-	-0.16	0.019	0.026
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	633334	3500.01	13.20	14.50	1.349	-	-	0.03	0.155	0.209
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 8	DSI5	633334	3500.01	13.16	14.50	1.361	-	-	0.02	0.145	0.197
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI5	633334	3500.01	13.20	14.50	1.349	-	-	0.06	0.062	0.084
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 8	DSI5	633334	3500.01	13.16	14.50	1.361	-	-	-0.08	0.058	0.079
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI5	633334	3500.01	13.20	14.50	1.349	-	-	0.04	0.022	0.030
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 8	DSI5	633334	3500.01	13.16	14.50	1.361	-	-	0.02	0.017	0.023

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 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	0.19	0.426	0.533
41	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	-0.07	0.566	**0.708**
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	0.15	0.525	0.656
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	0.03	0.458	0.573
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 16+7	Simultaneous	1	2412	21.02	22.00	1.253	100	1.000	0.04	0.289	0.362
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 16+7	Simultaneous	1	2412	21.02	22.00	1.253	100	1.000	0.02	0.399	0.500
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 16+7	Simultaneous	1	2412	21.02	22.00	1.253	100	1.000	0.02	0.365	0.457
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 16+7	Simultaneous	1	2412	21.02	22.00	1.253	100	1.000	-0.07	0.312	0.391
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 16+7	DBS Simultaneous	1	2412	18.13	19.00	1.222	100	1.000	0.05	0.144	0.176
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 16+7	DBS Simultaneous	1	2412	18.13	19.00	1.222	100	1.000	0.13	0.196	0.239
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 16+7	DBS Simultaneous	1	2412	18.13	19.00	1.222	100	1.000	0.06	0.178	0.217
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 16+7	DBS Simultaneous	1	2412	18.13	19.00	1.222	100	1.000	-0.05	0.152	0.186
	Bluetooth	1Mbps	Front	10mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	0.18	0.048	0.068
	Bluetooth	1Mbps	Back	10mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	-0.1	0.079	0.112
	Bluetooth	1Mbps	Right Side	10mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	0.04	0.011	0.016
	Bluetooth	1Mbps	Top Side	10mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	-0.08	0.109	0.154
	Bluetooth	1Mbps	Front	10mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	-0.18	0.111	0.161
	Bluetooth	1Mbps	Back	10mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	0.16	0.139	0.201
42	Bluetooth	1Mbps	Right Side	10mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	-0.02	0.200	**0.290**
	Bluetooth	1Mbps	Top Side	10mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	-0.16	0.010	0.014
5000MHz																

	WLAN5.2GHz	802.11a 6Mbps	Front	10mm	Ant 6+18	Full	48	5240	17.89	19.00	1.291	98.99	1.010	-0.13	0.187	0.244
	WLAN5.2GHz	802.11a 6Mbps	Back	10mm	Ant 6+18	Full	48	5240	17.89	19.00	1.291	98.99	1.010	0.04	0.408	0.532
	WLAN5.2GHz	802.11a 6Mbps	Right Side	10mm	Ant 6+18	Full	48	5240	17.89	19.00	1.291	98.99	1.010	-0.19	0.155	0.202
43	WLAN5.2GHz	802.11a 6Mbps	Top Side	10mm	Ant 6+18	Full	48	5240	17.89	19.00	1.291	98.99	1.010	-0.01	0.766	**0.999**
	WLAN5.2GHz	802.11a 6Mbps	Top Side	10mm	Ant 6+18	Full	36	5180	17.84	19.00	1.306	98.99	1.010	-0.13	0.748	0.987
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 6+18	DBS Standalone	42	5210	16.38	17.50	1.294	99.11	1.009	-0.01	0.608	0.795
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 6+18	Simultaneous	42	5210	14.45	15.50	1.274	99.11	1.009	0.05	0.088	0.113
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 6+18	Simultaneous	42	5210	14.45	15.50	1.274	99.11	1.009	-0.04	0.200	0.257
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+18	Simultaneous	42	5210	14.45	15.50	1.274	99.11	1.009	0.03	0.075	0.096
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 6+18	Simultaneous	42	5210	14.45	15.50	1.274	99.11	1.009	0.16	0.381	0.490
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 6+18	DBS Simultaneous	42	5210	11.38	12.50	1.294	99.11	1.009	0.08	0.059	0.077
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 6+18	DBS Simultaneous	42	5210	11.38	12.50	1.294	99.11	1.009	-0.07	0.120	0.157
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+18	DBS Simultaneous	42	5210	11.38	12.50	1.294	99.11	1.009	0.06	0.045	0.059
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 6+18	DBS Simultaneous	42	5210	11.38	12.50	1.294	99.11	1.009	-0.17	0.188	0.246
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 6+18	Standalone	155	5775	17.03	18.00	1.250	99.11	1.009	0.03	0.320	0.404
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 6+18	Standalone	155	5775	17.03	18.00	1.250	99.11	1.009	-0.09	0.584	0.737
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+18	Standalone	155	5775	17.03	18.00	1.250	99.11	1.009	-0.03	0.606	0.765
44	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 6+18	Standalone	155	5775	17.03	18.00	1.250	99.11	1.009	-0.06	0.788	**0.994**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 6+18	DBS Standalone	155	5775	16.08	17.00	1.236	99.11	1.009	-0.06	0.626	0.781
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 6+18	Simultaneous	155	5775	14.14	15.00	1.219	99.11	1.009	0.05	0.156	0.192
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 6+18	Simultaneous	155	5775	14.14	15.00	1.219	99.11	1.009	0.01	0.286	0.352
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+18	Simultaneous	155	5775	14.14	15.00	1.219	99.11	1.009	0.06	0.300	0.369
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 6+18	Simultaneous	155	5775	14.14	15.00	1.219	99.11	1.009	-0.12	0.395	0.486
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 6+18	DBS Simultaneous	155	5775	11.09	12.00	1.233	99.11	1.009	-0.07	0.078	0.097
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 6+18	DBS Simultaneous	155	5775	11.09	12.00	1.233	99.11	1.009	0.06	0.152	0.189
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+18	DBS Simultaneous	155	5775	11.09	12.00	1.233	99.11	1.009	0.08	0.164	0.204
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 6+18	DBS Simultaneous	155	5775	11.09	12.00	1.233	99.11	1.009	0.08	0.198	0.246

16.3 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)
835MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 0	DSI4	189	836.4	27.11	28.00	1.227	-	-	-0.05	0.133	0.163
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 0	DSI4	189	836.4	27.11	28.00	1.227	-	-	0.03	0.122	0.150
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 1	DSI4	189	836.4	26.54	28.00	1.400	-	-	0.13	0.127	0.178
45	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 1	DSI4	189	836.4	26.54	28.00	1.400	-	-	-0.04	0.151	**0.211**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI4	4182	836.4	24.12	25.00	1.225	-	-	0.01	0.180	0.220
46	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI4	4182	836.4	24.12	25.00	1.225	-	-	-0.02	0.181	**0.222**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DSI4	4182	836.4	24.13	25.50	1.371	-	-	0.01	0.123	0.169
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DSI4	4182	836.4	24.13	25.50	1.371	-	-	0.04	0.143	0.196
	LTE Band 5	10M	QPSK	1	0	-	Front	15mm	Ant 0	DSI4	20525	836.5	24.49	25.50	1.262	-	-	0.02	0.180	0.227
	LTE Band 5	10M	QPSK	25	0	-	Front	15mm	Ant 0	DSI4	20525	836.5	24.47	25.50	1.268	-	-	0.07	0.182	0.231
47	LTE Band 5	10M	QPSK	1	0	-	Back	15mm	Ant 0	DSI4	20525	836.5	24.49	25.50	1.262	-	-	0.02	0.185	**0.233**
	LTE Band 5	10M	QPSK	25	0	-	Back	15mm	Ant 0	DSI4	20525	836.5	24.47	25.50	1.268	-	-	-0.18	0.183	0.232
	LTE Band 5	10M	QPSK	1	0	-	Front	15mm	Ant 1	DSI4	20525	836.5	24.61	25.70	1.285	-	-	0.09	0.121	0.156
	LTE Band 5	10M	QPSK	25	0	-	Front	15mm	Ant 1	DSI4	20525	836.5	24.53	25.70	1.309	-	-	0.13	0.121	0.158
	LTE Band 5	10M	QPSK	1	0	-	Back	15mm	Ant 1	DSI4	20525	836.5	24.61	25.70	1.285	-	-	-0.01	0.142	0.183
	LTE Band 5	10M	QPSK	25	0	-	Back	15mm	Ant 1	DSI4	20525	836.5	24.53	25.70	1.309	-	-	-0.05	0.140	0.183
48	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI4	167300	836.5	24.58	25.50	1.236	-	-	-0.02	0.169	**0.209**
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 0	DSI4	167300	836.5	24.54	25.50	1.247	-	-	-0.08	0.167	0.208
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI4	167300	836.5	24.58	25.50	1.236	-	-	-0.09	0.161	0.199
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 0	DSI4	167300	836.5	24.54	25.50	1.247	-	-	-0.01	0.159	0.198
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 1	DSI4	167300	836.5	24.58	25.70	1.294	-	-	-0.05	0.075	0.097
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Front	15mm	Ant 1	DSI4	167300	836.5	24.55	25.70	1.303	-	-	-0.18	0.098	0.128
	FR1 n5	20M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI4	167300	836.5	24.58	25.70	1.294	-	-	0.02	0.118	0.153
	FR1 n5	20M	QPSK	50	28	DFT-SCS-15KHz	Back	15mm	Ant 1	DSI4	167300	836.5	24.55	25.70	1.303	-	-	0.02	0.060	0.078
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 2	DSI4	1413	1732.6	22.25	23.00	1.189	-	-	0.11	0.261	0.310
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 2	DSI4	1413	1732.6	22.25	23.00	1.189	-	-	0.04	0.215	0.256
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 3	DSI4	1413	1732.6	22.26	23.50	1.330	-	-	0.07	0.117	0.156
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 3	DSI4	1413	1732.6	22.26	23.50	1.330	-	-	-0.06	0.118	0.157
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 4	DSI4	1413	1732.6	23.17	24.50	1.358	-	-	0.17	0.314	0.427
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI4	1413	1732.6	23.17	24.50	1.358	-	-	-0.19	0.409	0.556
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 5	DSI4	1413	1732.6	24.17	25.50	1.358	-	-	0.05	0.416	0.565
49	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 5	DSI4	1413	1732.6	24.17	25.50	1.358	-	-	-0.03	0.516	**0.701**
	LTE Band 66	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI4	132322	1745	23.16	23.70	1.132	-	-	-0.06	0.328	0.371
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI4	132322	1745	23.12	23.70	1.143	-	-	-0.03	0.322	0.368
	LTE Band 66	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI4	132322	1745	23.16	23.70	1.132	-	-	0.08	0.245	0.277
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI4	132322	1745	23.12	23.70	1.143	-	-	-0.17	0.261	0.298
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI4	132322	1745	25.20	25.70	1.122	-	-	0.08	0.274	0.307
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI4	132322	1745	25.15	25.70	1.135	-	-	0.06	0.303	0.344
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI4	132322	1745	25.20	25.70	1.122	-	-	-0.09	0.338	0.379
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI4	132322	1745	25.15	25.70	1.135	-	-	0.01	0.229	0.260
	LTE Band 66 Main PA	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI4	132322	1745	24.18	24.70	1.127	-	-	-0.09	0.204	0.230
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI4	132322	1745	25.12	25.70	1.143	-	-	0.07	0.571	0.653
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI4	132322	1745	24.99	25.70	1.178	-	-	-0.16	0.567	0.668
50	LTE Band 66 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	132322	1745	25.12	25.70	1.143	-	-	-0.05	0.740	**0.846**
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	132072	1720	24.95	25.70	1.189	-	-	-0.01	0.698	0.830
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	132572	1770	24.97	25.70	1.183	-	-	0.15	0.676	0.800
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI4	132322	1745	24.99	25.70	1.178	-	-	0.12	0.715	0.842
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI4	132072	1720	24.96	25.70	1.186	-	-	0.06	0.670	0.794
	LTE Band 66 Other PA	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI4	132572	1770	24.85	25.70	1.216	-	-	0.02	0.682	0.829

	LTE Band 66 Other PA	20M	QPSK	100	0	-	Back	15mm	Ant 4	DSI4	132322	1745	24.95	25.70	1.189	-	-	0.05	0.669	0.795
	LTE Band 66 Main PA	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	132322	1745	24.24	24.70	1.112	-	-	-0.06	0.430	0.478
	LTE Band 66	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI4	132322	1745	25.17	25.70	1.130	-	-	-0.15	0.557	0.629
	LTE Band 66	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI4	132322	1745	25.15	25.70	1.135	-	-	0.08	0.564	0.640
	LTE Band 66	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI4	132322	1745	25.17	25.70	1.130	-	-	-0.19	0.695	0.785
	LTE Band 66	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI4	132322	1745	25.15	25.70	1.135	-	-	0.01	0.689	0.782
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 4	DSI4	661	1880	22.30	24.00	1.479	-	-	0.09	0.110	0.163
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 4	DSI4	661	1880	22.30	24.00	1.479	-	-	-0.08	0.143	0.212
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	15mm	Ant 5	DSI4	661	1880	23.76	25.00	1.330	-	-	-0.11	0.199	0.265
51	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	15mm	Ant 5	DSI4	661	1880	23.76	25.00	1.330	-	-	0.01	0.264	**0.351**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 4	DSI4	9400	1880	22.84	24.50	1.466	-	-	-0.07	0.276	0.404
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 4	DSI4	9400	1880	22.84	24.50	1.466	-	-	-0.07	0.367	0.538
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 5	DSI4	9400	1880	24.14	25.00	1.219	-	-	0.07	0.514	0.627
52	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 5	DSI4	9400	1880	24.14	25.00	1.219	-	-	-0.08	0.655	**0.798**
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI4	18900	1880	23.55	25.00	1.396	-	-	-0.13	0.329	0.459
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI4	18900	1880	23.48	25.00	1.419	-	-	-0.13	0.330	0.468
	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	18900	1880	23.55	25.00	1.396	-	-	-0.05	0.465	0.649
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI4	18900	1880	23.48	25.00	1.419	-	-	0.01	0.461	0.654
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI4	18900	1880	25.05	25.70	1.161	-	-	0.01	0.471	0.547
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI4	18900	1880	25.03	25.70	1.167	-	-	0.01	0.454	0.530
	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI4	18900	1880	25.05	25.70	1.161	-	-	-0.01	0.617	0.717
53	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI4	18900	1880	25.03	25.70	1.167	-	-	-0.01	0.629	**0.734**
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI4	21100	2535	22.28	22.70	1.102	-	-	-0.09	0.253	0.279
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI4	21100	2535	22.11	22.70	1.146	-	-	0.17	0.245	0.281
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI4	21100	2535	22.28	22.70	1.102	-	-	-0.04	0.284	0.313
	LTE Band 7C	20M	QPSK	1	99	-	Back	15mm	Ant 2	DSI4	21100+21298	2535+2554.8	22.06	22.70	1.159	-	-	0.08	0.266	0.308
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI4	21100	2535	22.11	22.70	1.146	-	-	0.08	0.266	0.305
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI4	21100	2535	24.21	25.50	1.346	-	-	0.09	0.333	0.448
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI4	21100	2535	24.19	25.50	1.352	-	-	-0.11	0.341	0.461
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI4	21100	2535	24.21	25.50	1.346	-	-	0.03	0.332	0.447
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI4	21100	2535	24.19	25.50	1.352	-	-	-0.07	0.349	0.472
	LTE Band 7C Other PA	20M	QPSK	50	50	-	Back	15mm	Ant 3	DSI4	21100+21298	2535+2554.8	22.19	23.50	1.352	-	-	0.06	0.223	0.302
	LTE Band 7 Main PA	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI4	21100	2535	23.35	24.50	1.303	-	-	-0.01	0.269	0.351
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI4	21100	2535	24.23	25.00	1.194	-	-	-0.19	0.399	0.476
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI4	21100	2535	24.18	25.00	1.208	-	-	-0.18	0.401	0.484
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	21100	2535	24.23	25.00	1.194	-	-	-0.09	0.469	0.560
	LTE Band 7C Other PA	20M	QPSK	1	99	-	Back	15mm	Ant 4	DSI4	21100+21298	2535+2554.8	22.23	23.00	1.194	-	-	0.08	0.453	0.541
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI4	21100	2535	24.18	25.00	1.208	-	-	0.14	0.463	0.559
	LTE Band 7 Main PA	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	21100	2535	23.79	24.50	1.178	-	-	-0.05	0.465	0.548
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI4	21100	2535	25.25	25.70	1.109	-	-	0.06	0.527	0.585
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI4	21100	2535	25.20	25.70	1.122	-	-	0.15	0.529	0.594
54	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI4	21100	2535	25.25	25.70	1.109	-	-	-0.18	0.650	**0.721**
	LTE Band 7C	20M	QPSK	1	99	-	Back	15mm	Ant 5	DSI4	21100+21298	2535+2554.8	23.30	23.70	1.096	-	-	0.02	0.625	0.685
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI4	21100	2535	25.20	25.70	1.122	-	-	-0.03	0.642	0.720
55	LTE Band 38	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI4	38000	2595	25.14	25.70	1.138	62.9	1.006	-0.01	0.255	**0.292**
	LTE Band 38C	20M	QPSK	1	99	-	Front	15mm	Ant 2	DSI4	37901+38099	2585.1+2604.9	23.21	23.70	1.119	62.9	1.006	0.06	0.236	0.266
	LTE Band 38	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI4	38000	2595	24.12	24.70	1.143	62.9	1.006	0.15	0.201	0.231
	LTE Band 38	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI4	38000	2595	25.14	25.70	1.138	62.9	1.006	0.05	0.233	0.267
	LTE Band 38	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI4	38000	2595	24.12	24.70	1.143	62.9	1.006	-0.11	0.180	0.207
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI4	40620	2593	23.29	23.70	1.099	62.9	1.006	-0.09	0.156	0.172
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI4	40620	2593	23.26	23.70	1.107	62.9	1.006	0.01	0.149	0.166
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI4	40620	2593	23.29	23.70	1.099	62.9	1.006	-0.02	0.139	0.154
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI4	40620	2593	23.26	23.70	1.107	62.9	1.006	-0.07	0.135	0.150
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Front	15mm	Ant 3	DSI4	40620	2593	25.20	25.70	1.122	62.9	1.006	-0.18	0.305	0.344

	LTE Band 41 Other PA	20M	QPSK	50	0	-	Front	15mm	Ant 3	DSI4	40620	2593	24.15	24.70	1.135	62.9	1.006	-0.07	0.301	0.344
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI4	40620	2593	25.20	25.70	1.122	62.9	1.006	-0.06	0.312	0.352
	LTE Band 38C Other PA	20M	QPSK	1	99	-	Back	15mm	Ant 3	DSI4	37901+38099	2585.1+2604.9	23.12	23.70	1.143	62.9	1.006	-0.01	0.239	0.275
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Back	15mm	Ant 3	DSI4	40620	2593	24.15	24.70	1.135	62.9	1.006	0.13	0.305	0.348
	LTE Band 41 Main PA	20M	QPSK	1	0	-	Back	15mm	Ant 3	DSI4	40620	2593	24.24	24.70	1.112	100	1.000	-0.03	0.170	0.189
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Front	15mm	Ant 4	DSI4	40620	2593	25.21	25.70	1.119	62.9	1.006	0.05	0.351	0.395
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Front	15mm	Ant 4	DSI4	40620	2593	24.14	24.70	1.138	62.9	1.006	-0.02	0.341	0.390
56	LTE Band 41 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	40620	2593	25.21	25.70	1.119	62.9	1.006	-0.01	0.379	**0.427**
	LTE Band 38C Other PA	20M	QPSK	1	99	-	Back	15mm	Ant 4	DSI4	37901+38099	2585.1+2604.9	23.06	23.70	1.159	62.9	1.006	-0.02	0.316	0.368
	LTE Band 41 Other PA	20M	QPSK	50	0	-	Back	15mm	Ant 4	DSI4	40620	2593	24.14	24.70	1.138	62.9	1.006	0.14	0.367	0.420
	LTE Band 41 Main PA	20M	QPSK	1	0	-	Back	15mm	Ant 4	DSI4	40620	2593	24.20	24.70	1.122	100	1.000	-0.01	0.373	0.419
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI4	40620	2593	25.23	25.70	1.114	62.9	1.006	0.07	0.246	0.276
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI4	40620	2593	24.14	24.70	1.138	62.9	1.006	0.05	0.244	0.279
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI4	40620	2593	25.23	25.70	1.114	62.9	1.006	0.03	0.305	0.342
	LTE Band 38C	20M	QPSK	1	99	-	Back	15mm	Ant 5	DSI4	37901+38099	2585.1+2604.9	23.19	23.70	1.125	62.9	1.006	0.01	0.244	0.276
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI4	40620	2593	24.14	24.70	1.138	62.9	1.006	0.04	0.298	0.341
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 2	DSI4	507000	2535	21.18	21.70	1.127	-	-	-0.01	0.212	0.239
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 2	DSI4	507000	2535	21.14	21.70	1.138	-	-	0.12	0.218	0.248
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI4	507000	2535	21.18	21.70	1.127	-	-	0.08	0.182	0.205
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 2	DSI4	507000	2535	21.14	21.70	1.138	-	-	0.02	0.188	0.214
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 3	DSI4	507000	2535	24.24	25.50	1.337	-	-	0.03	0.360	0.481
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 3	DSI4	507000	2535	24.08	25.50	1.387	-	-	-0.06	0.380	0.527
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 3	DSI4	507000	2535	24.24	25.50	1.337	-	-	-0.15	0.376	0.503
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 3	DSI4	507000	2535	24.08	25.50	1.387	-	-	-0.09	0.400	0.555
	FR1 n7 Main PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 3	DSI4	507000	2535	23.50	25.00	1.413	-	-	-0.02	0.215	0.304
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 4	DSI4	507000	2535	23.71	24.50	1.199	-	-	-0.14	0.384	0.461
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 4	DSI4	507000	2535	23.66	24.50	1.213	-	-	0.03	0.384	0.466
	FR1 n7 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 4	DSI4	507000	2535	23.71	24.50	1.199	-	-	-0.12	0.413	0.495
	FR1 n7 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 4	DSI4	507000	2535	23.66	24.50	1.213	-	-	0.07	0.494	0.599
	FR1 n7 Main PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 4	DSI4	507000	2535	23.25	24.50	1.334	-	-	-0.06	0.420	0.560
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Front	15mm	Ant 5	DSI4	507000	2535	25.15	25.70	1.135	-	-	0.01	0.455	0.516
	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Front	15mm	Ant 5	DSI4	507000	2535	25.09	25.70	1.151	-	-	0.08	0.474	0.545
	FR1 n7	40M	QPSK	1	1	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI4	507000	2535	25.15	25.70	1.135	-	-	0.03	0.635	0.721
57	FR1 n7	40M	QPSK	108	54	DFT-SCS-15KHz	Back	15mm	Ant 5	DSI4	507000	2535	25.09	25.70	1.151	-	-	-0.05	0.648	**0.746**
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI4	518598	2592.99	22.02	22.70	1.169	-	-	0.04	0.163	0.191
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI4	518598	2592.99	22.01	22.70	1.172	-	-	-0.05	0.165	0.193
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI4	518598	2592.99	22.02	22.70	1.169	-	-	0.04	0.143	0.167
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI4	518598	2592.99	22.01	22.70	1.172	-	-	0.05	0.131	0.154
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI4	518598	2592.99	25.21	25.70	1.119	-	-	0.06	0.489	0.547
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI4	518598	2592.99	25.10	25.70	1.148	-	-	0.05	0.521	0.598
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI4	518598	2592.99	25.21	25.70	1.119	-	-	-0.12	0.518	0.580
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI4	518598	2592.99	25.10	25.70	1.148	-	-	-0.05	0.582	0.668
	FR1 n41 Main PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI4	518598	2592.99	23.26	25.00	1.493	-	-	-0.09	0.283	0.422
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	518598	2592.99	25.17	25.70	1.130	-	-	-0.1	0.595	0.672
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	518598	2592.99	25.11	25.70	1.146	-	-	0.05	0.560	0.641
58	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	518598	2592.99	25.17	25.70	1.130	-	-	-0.01	0.665	**0.751**
	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	518598	2592.99	25.11	25.70	1.146	-	-	0.07	0.606	0.694
	FR1 n41 Main PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	518598	2592.99	23.62	25.00	1.374	-	-	0.02	0.521	0.716
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI4	518598	2592.99	25.13	25.70	1.140	-	-	0.03	0.470	0.536
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI4	518598	2592.99	25.08	25.70	1.153	-	-	0.08	0.491	0.566
	FR1 n41	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI4	518598	2592.99	25.13	25.70	1.140	-	-	-0.07	0.641	0.731
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI4	518598	2592.99	25.08	25.70	1.153	-	-	0.07	0.622	0.717
										3500MHz									
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	656000	3840	23.14	24.50	1.368	-	-	-0.17	0.277	0.379
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	656000	3840	23.06	24.50	1.393	-	-	-0.02	0.261	0.364
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	656000	3840	23.14	24.50	1.368	-	-	-0.09	0.346	0.473

	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	656000	3840	23.06	24.50	1.393	-	-	0.1	0.338	0.471
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	633334	3500.01	23.19	24.50	1.352	-	-	-0.04	0.298	0.403
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	633334	3500.01	23.16	24.50	1.361	-	-	0.08	0.314	0.427
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	633334	3500.01	23.19	24.50	1.352	-	-	-0.05	0.659	0.891
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	633334	3500.01	23.16	24.50	1.361	-	-	-0.03	0.628	0.855
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	633334	3500.01	22.09	23.50	1.384	-	-	-0.09	0.611	0.845
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI4	656000	3840	23.13	24.50	1.371	-	-	0.04	0.301	0.413
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI4	656000	3840	23.03	24.50	1.403	-	-	-0.05	0.315	0.442
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	656000	3840	23.13	24.50	1.371	-	-	-0.02	0.643	0.881
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	656000	3840	23.03	24.50	1.403	-	-	0.04	0.555	0.779
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	656000	3840	22.99	24.50	1.416	-	-	0.05	0.528	0.748
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI4	633334	3500.01	23.78	24.50	1.180	-	-	0.13	0.194	0.229
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI4	633334	3500.01	23.69	24.50	1.205	-	-	-0.03	0.163	0.196
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	633334	3500.01	23.78	24.50	1.180	-	-	-0.04	0.486	0.574
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	633334	3500.01	23.69	24.50	1.205	-	-	-0.08	0.482	0.581
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI4	656000	3840	18.29	18.70	1.099	-	-	0.03	0.116	0.127
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI4	656000	3840	18.25	18.70	1.109	-	-	0.04	0.108	0.120
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI4	656000	3840	18.29	18.70	1.099	-	-	-0.08	0.153	0.168
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI4	656000	3840	18.25	18.70	1.109	-	-	0.03	0.143	0.159
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI4	633334	3500.01	18.16	18.70	1.132	-	-	0.08	0.091	0.103
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI4	633334	3500.01	18.11	18.70	1.146	-	-	0.01	0.104	0.119
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI4	633334	3500.01	18.16	18.70	1.132	-	-	0.05	0.110	0.125
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI4	633334	3500.01	18.11	18.70	1.146	-	-	-0.04	0.125	0.143
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 8	DSI4	656000	3840	21.67	23.00	1.358	-	-	0.06	0.067	0.091
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 8	DSI4	656000	3840	21.63	23.00	1.371	-	-	-0.07	0.077	0.106
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	656000	3840	21.67	23.00	1.358	-	-	-0.04	0.724	0.983
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	656000	3840	21.63	23.00	1.371	-	-	0.08	0.611	0.838
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	656000	3840	21.58	23.00	1.387	-	-	0.02	0.701	0.972
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 8	DSI4	633334	3500.01	21.62	23.00	1.374	-	-	0.15	0.163	0.224
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 8	DSI4	633334	3500.01	21.59	23.00	1.384	-	-	0.09	0.098	0.136
	FR1 n77	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	633334	3500.01	21.62	23.00	1.374	-	-	-0.16	0.723	0.993
59	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	633334	3500.01	21.59	23.00	1.384	-	-	-0.08	0.727	**1.006**
	FR1 n77	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	633334	3500.01	21.58	23.00	1.387	-	-	0.08	0.703	0.975
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	650000	3750	23.69	25.50	1.517	-	-	0.04	0.400	0.607
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	650000	3750	23.55	25.50	1.567	-	-	0.09	0.372	0.583
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	650000	3750	23.69	25.50	1.517	-	-	-0.04	0.531	0.806
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	650000	3750	23.55	25.50	1.567	-	-	0.15	0.425	0.666
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	650000	3750	22.57	24.50	1.560	-	-	0.04	0.491	0.766
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	633334	3500.01	23.75	25.50	1.496	-	-	-0.09	0.310	0.464
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI4	633334	3500.01	23.71	25.50	1.510	-	-	0.13	0.312	0.471
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	633334	3500.01	23.75	25.50	1.496	-	-	-0.03	0.664	0.994
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	633334	3500.01	23.71	25.50	1.510	-	-	0.18	0.623	0.941
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI4	633334	3500.01	22.68	24.50	1.521	-	-	0.16	0.642	0.976
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI4	650000	3750	22.85	24.50	1.462	-	-	0.15	0.242	0.354
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI4	650000	3750	22.83	24.50	1.469	-	-	0.13	0.294	0.432
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	650000	3750	22.85	24.50	1.462	-	-	0.02	0.563	0.823
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	650000	3750	22.83	24.50	1.469	-	-	-0.03	0.687	1.009
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	650000	3750	22.51	24.50	1.581	-	-	0.03	0.629	0.995
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI4	633334	3500.01	23.38	24.50	1.294	-	-	0.03	0.214	0.277
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 6	DSI4	633334	3500.01	23.30	24.50	1.318	-	-	-0.11	0.187	0.247
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	633334	3500.01	23.38	24.50	1.294	-	-	0.08	0.560	0.725
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 6	DSI4	633334	3500.01	23.30	24.50	1.318	-	-	-0.06	0.573	0.755
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI4	650000	3750	16.96	18.50	1.426	-	-	-0.09	0.138	0.197
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI4	650000	3750	16.94	18.50	1.432	-	-	0.15	0.155	0.222
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI4	650000	3750	16.96	18.50	1.426	-	-	0.03	0.170	0.242
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI4	650000	3750	16.94	18.50	1.432	-	-	-0.04	0.177	0.253

	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI4	633334	3500.01	17.23	18.50	1.340	-	-	-0.09	0.075	0.101
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 7	DSI4	633334	3500.01	17.19	18.50	1.352	-	-	0.19	0.058	0.078
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI4	633334	3500.01	17.23	18.50	1.340	-	-	0.14	0.061	0.082
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 7	DSI4	633334	3500.01	17.19	18.50	1.352	-	-	0.14	0.074	0.100
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 8	DSI4	650000	3750	19.26	20.50	1.330	-	-	0.07	0.057	0.076
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 8	DSI4	650000	3750	19.04	20.50	1.400	-	-	0.02	0.034	0.048
60	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	650000	3750	19.26	20.50	1.330	-	-	-0.09	0.814	**1.083**
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	650000	3750	19.04	20.50	1.400	-	-	-0.02	0.615	0.861
	FR1 n78 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	650000	3750	19.11	20.50	1.377	-	-	0.18	0.768	1.058
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 8	DSI4	633334	3500.01	19.17	20.50	1.358	-	-	0.03	0.100	0.136
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 8	DSI4	633334	3500.01	19.06	20.50	1.393	-	-	0.07	0.087	0.121
	FR1 n78 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	633334	3500.01	19.17	20.50	1.358	-	-	0.09	0.399	0.542
	FR1 n78 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	633334	3500.01	19.06	20.50	1.393	-	-	-0.04	0.387	0.539

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 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	0.12	0.194	0.243
61	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 16+7	Full	1	2412	22.53	23.50	1.250	100	1.000	-0.02	0.248	**0.310**
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 16+7	DBS Simultaneous	1	2412	21.61	22.50	1.227	100	1.000	0.19	0.197	0.242
	Bluetooth	1Mbps	Front	15mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	-0.01	0.020	0.029
	Bluetooth	1Mbps	Back	15mm	Ant 16	Full	0	2402	13.84	15.00	1.305	76.83	1.084	-0.01	0.036	0.051
	Bluetooth	1Mbps	Front	15mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	-0.03	0.056	0.081
62	Bluetooth	1Mbps	Back	15mm	Ant 7	Full	39	2441	13.75	15.00	1.333	76.72	1.086	-0.07	0.076	**0.110**
5000MHz																
	WLAN5.2GHz	802.11a 6Mbps	Front	15mm	Ant 6+18	Full	48	5240	17.89	19.00	1.291	98.99	1.010	0.06	0.105	0.137
63	WLAN5.2GHz	802.11a 6Mbps	Back	15mm	Ant 6+18	Full	48	5240	17.89	19.00	1.291	98.99	1.010	0.01	0.191	**0.249**
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 6+18	Full	142	5710	18.87	20.00	1.297	100	1.000	0.07	0.219	0.284
64	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 6+18	Full	142	5710	18.87	20.00	1.297	100	1.000	0.06	0.343	**0.445**
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 6+18	DBS Simultaneous	122	5610	16.27	17.00	1.183	99.11	1.009	0.03	0.198	0.236
	WLAN5.8GHz	802.11n-HT40 MCS0	Front	15mm	Ant 6+18	Full	151	5755	18.36	19.50	1.300	100	1.000	0.1	0.200	0.260
65	WLAN5.8GHz	802.11n-HT40 MCS0	Back	15mm	Ant 6+18	Full	151	5755	18.36	19.50	1.300	100	1.000	0.01	0.359	**0.467**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 6+18	DBS Simultaneous	155	5775	15.59	16.50	1.233	99.11	1.009	0.06	0.201	0.250

16.4 Product Specific 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 10g SAR (W/kg)	Reported 10g SAR (W/kg)
1750MHz																				
66	WCDMA IV					RMC 12.2Kbps	Right Side	0mm	Ant 2	DSI3	1413	1732.6	22.25	23.00	1.189	100	1.000	-0.06	2.10	**2.496**
	WCDMA IV					RMC 12.2Kbps	Right Side	0mm	Ant 2	DSI3	1312	1712.4	22.21	23.00	1.199	100	1.000	0.09	1.94	2.327
	WCDMA IV					RMC 12.2Kbps	Right Side	0mm	Ant 2	DSI3	1513	1752.6	22.18	23.00	1.208	100	1.000	0.06	2.03	2.452
	LTE Band 66	20M	QPSK	1	0		Right Side	0mm	Ant 2	DSI3	132322	1745	23.16	23.70	1.132	100	1.000	-0.13	2.010	2.276
	LTE Band 66	20M	QPSK	1	0		Right Side	0mm	Ant 2	DSI3	132072	1720	23.09	23.70	1.151	100	1.000	0.03	1.950	2.244
	LTE Band 66	20M	QPSK	1	0		Right Side	0mm	Ant 2	DSI3	132572	1770	22.93	23.70	1.194	100	1.000	0.08	1.870	2.233
67	LTE Band 66	20M	QPSK	50	0		Right Side	0mm	Ant 2	DSI3	132322	1745	23.12	23.70	1.143	100	1.000	0.01	2.07	**2.366**
	LTE Band 66	20M	QPSK	50	0		Right Side	0mm	Ant 2	DSI3	132072	1720	23.10	23.70	1.148	100	1.000	0.06	1.93	2.216
	LTE Band 66	20M	QPSK	50	0		Right Side	0mm	Ant 2	DSI3	132572	1770	22.89	23.70	1.205	100	1.000	0.01	1.87	2.253
	LTE Band 66	20M	QPSK	100	0		Right Side	0mm	Ant 2	DSI3	132322	1745	23.09	23.70	1.151	100	1.000	0.01	1.94	2.233
	WCDMA II					RMC 12.2Kbps	Bottom Side	0mm	Ant 5	DSI3	9400	1880	22.76	23.50	1.186	100	1.000	0.08	1.97	2.336
68	WCDMA II					RMC 12.2Kbps	Bottom Side	0mm	Ant 5	DSI3	9262	1852.4	22.64	23.50	1.219	100	1.000	0.07	2.08	**2.535**
	WCDMA II					RMC 12.2Kbps	Bottom Side	0mm	Ant 5	DSI3	9538	1907.6	22.60	23.50	1.230	100	1.000	0.17	1.92	2.362
	WCDMA II					RMC 12.2Kbps	Bottom Side	15mm	Ant 5	DSI4	9262	1852.4	24.01	25.00	1.256	100	1.000	0.07	0.283	0.355
5000MHz																				
	WLAN5.3GHz					802.11n-HT40 MCS0	Front	0mm	Ant 6+18	Full	62	5310	17.00	18.50	1.411	100	1.000	-0.17	0.516	0.728
	WLAN5.3GHz					802.11n-HT40 MCS0	Back	0mm	Ant 6+18	Full	62	5310	17.00	18.50	1.411	100	1.000	-0.13	0.447	0.631
	WLAN5.3GHz					802.11n-HT40 MCS0	Right Side	0mm	Ant 6+18	Full	62	5310	17.00	18.50	1.411	100	1.000	-0.06	0.588	0.830
69	WLAN5.3GHz					802.11n-HT40 MCS0	Top Side	0mm	Ant 6+18	Full	62	5310	17.00	18.50	1.411	100	1.000	-0.04	1.810	**2.554**
	WLAN5.3GHz					802.11n-HT40 MCS0	Top Side	0mm	Ant 6+18	Full	54	5270	16.91	18.50	1.443	100	1.000	0.06	1.720	2.482
	WLAN5.5GHz					802.11n-HT40 MCS0	Front	0mm	Ant 6+18	Full	142	5710	18.87	20.00	1.297	100	1.000	0.03	0.889	1.153
	WLAN5.5GHz					802.11n-HT40 MCS0	Back	0mm	Ant 6+18	Full	142	5710	18.87	20.00	1.297	100	1.000	-0.04	0.716	0.929
	WLAN5.5GHz					802.11n-HT40 MCS0	Right Side	0mm	Ant 6+18	Full	142	5710	18.87	20.00	1.297	100	1.000	-0.03	1.050	1.362
70	WLAN5.5GHz					802.11n-HT40 MCS0	Top Side	0mm	Ant 6+18	Full	142	5710	18.87	20.00	1.297	100	1.000	0.03	1.950	**2.529**
	WLAN5.5GHz					802.11n-HT40 MCS0	Top Side	0mm	Ant 6+18	Full	126	5630	18.86	20.00	1.301	100	1.000	0.07	1.810	2.356
71	WLAN5.8GHz					802.11n-HT40 MCS0	Top Side	0mm	Ant 6+18	Full	151	5755	18.36	19.50	1.300	100	1.000	-0.01	1.850	**2.405**
	WLAN5.8GHz					802.11n-HT40 MCS0	Top Side	0mm	Ant 6+18	Full	159	5795	18.36	19.50	1.300	100	1.000	0.03	1.640	2.132

16.5 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	LTE Band 66Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	132072	1720	18.01	18.70	1.172	-	-	0.07	0.891	1	1.044
2nd	LTE Band 66Other PA	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	DSI 1	132072	1720	18.01	18.70	1.172	-	-	0.09	0.884	1.008	1.036
1st	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	656000	3840	15.71	16.30	1.146	-	-	-0.04	0.801	1	0.918
2nd	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	DSI 1	656000	3840	15.71	16.30	1.146	-	-	0.09	0.793	1.010	0.908
1st	WLAN5.5GHz	-	-	-	-	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Standalone	122	5610	15.58	16.50	1.236	99.11	1.009	-0.09	0.842	1	1.050
2nd	WLAN5.5GHz	-	-	-	-	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Standalone	122	5610	15.58	16.50	1.236	99.11	1.009	0.01	0.801	1.051	0.999
1st	WLAN5.8GHz	-	-	-	-	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Standalone	155	5775	15.67	16.50	1.211	99.11	1.009	-0.08	0.895	1	1.093
2nd	WLAN5.8GHz	-	-	-	-	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 6+18	Standalone	155	5775	15.67	16.50	1.211	99.11	1.009	-0.01	0.819	1.093	1.000
1st	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	18900	1880	22.64	23.20	1.138	-	-	0.05	0.867	1	0.986
2nd	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI5	18900	1880	22.64	23.20	1.138	-	-	0.05	0.854	1.015	0.972
1st	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI5	518598	2592.99	22.19	22.70	1.125	-	-	0.05	0.971	1	1.092
2nd	FR1 n41 Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 3	DSI5	518598	2592.99	22.19	22.70	1.125	-	-	0.09	0.963	1.008	1.083
1st	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	650000	3750	19.26	20.50	1.330	-	-	-0.09	0.814	1	1.083
2nd	FR1 n78	100M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 8	DSI4	650000	3750	19.26	20.50	1.330	-	-	0.05	0.801	1.016	1.066

<10g>

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)	Ratio	Reported 10g SAR (W/kg)
1st	WCDMA IV	RMC 12.2Kbps	Right Side	0mm	Ant 2	DSI3	1413	1732.6	22.25	23.00	1.189	-0.06	2.10	1	2.496
2nd	WCDMA IV	RMC 12.2Kbps	Right Side	0mm	Ant 2	DSI3	1413	1732.6	22.25	23.00	1.189	0.03	1.96	1.071	2.329
1st	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 5	DSI3	9262	1852.4	22.64	23.50	1.219	0.07	2.08	1	2.535
2nd	WCDMA II	RMC 12.2Kbps	Bottom Side	0mm	Ant 5	DSI3	9262	1852.4	22.64	23.50	1.219	0.01	2.02	1.030	2.462

General Note:

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

17. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product Specific
1.	WWAN + WLAN 2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN 5GHz	Yes	Yes	Yes	Yes
3.	WLAN 5GHz + Bluetooth	Yes	Yes	Yes	Yes
4.	WLAN 2.4GHz + WLAN 5GHz	Yes	Yes	Yes	Yes
5.	WWAN + WLAN 5GHz + Bluetooth	Yes	Yes	Yes	Yes
6.	WWAN + WLAN 2.4GHz + WLAN 5GHz	Yes	Yes	Yes	Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. WWAN above includes 5G NR bands.
3. EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
4. For EN-DC mode, Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from 5G NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G NR to not exceed FCC limit. Therefore, simultaneous transmission compliance between 4G+5G NR operation is demonstrated in the Part 2 Report during algorithm validation. In Part 1 Report, simultaneous transmission compliance was evaluated individually with other Radios (WLAN or BT) using one of 4G or 5G NR.
5. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
6. This device 2.4GHz WLAN/ 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
7. WLAN2.4GHz/WLAN5GHz MIMO SAR can represent SISO SAR to do co-located SAR analysis.
8. According to the EUT characteristic, two Bluetooth antennas cannot transmit simultaneously with each other.
9. According to the EUT characteristic, WLAN 2.4GHz and Bluetooth cannot transmit simultaneously.
10. According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
11. According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz can transmit simultaneously.
12. 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.
13. The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
14. Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
15. The reported SAR summation is calculated based on the same configuration and test position.
16. 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.
    v) The SPLSR calculated results please refer to section 17.7.

17.1 5G NR + LTE + WLAN + BT Sim-Tx analysis

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

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

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

*x% * A + (100-x)% * B ≤ 1.0,*

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

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

*x% * A + (100-x)% * B + C ≤ 1.0* (1)

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

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

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

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

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

Else, if A + C > 1.0 and/or B + C > 1.0, then the followings need to hold true for compliance:

i. A and C are decoupled based on the SPLSR criteria, and

ii. (100-x)% * B + C ≤ 1.0, and

iii. x% * A + (100-x)% * B ≤ 1.0

Note iii. is covered in Part 2 report; i. and ii. should be addressed in Part 2 report.

17.2 Sub6 Antenna Groups

The 2nd generation of Smart Transmit (GEN2) operates based on pre-defined sub6 antenna groups (AG). Sub6 Tx antennas in the device are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from other AG. This is accomplished by demonstrating below conditions for all exposure positions under each DSI for a given exposure category.

1) Case 1: Sum of SAR of one antenna from each of the sub6 AGs and the RF exposure from radios outside Smart Transmit is less than regulatory limits for each supported DSI. This condition must be demonstrated for all antenna combinations of sub6 AGs.
   i. For a given DSI, obtain the highest *reported* SAR for each antenna out of all supported technologies and frequency bands. Obtain the maximum *reported* SAR for each AG by taking the maximum out of *reported* SAR for all antennas belonging to each AG.
   ii. Demonstrate that the sum of maximum reported SAR (normalized to regulatory limit) from each of the sub6 AGs and the sum of reported SAR (normalized to regulatory limit) from all supported radios outside of Smart Transmit should be less than 1.0
2) Case 2: If the Case 1 is NOT met, then for a given antenna grouping scheme plus external radios/antennas (ERs) (referred to as 'configuration'), demonstrate all AG pairs, all ER pairs and all (AG, ER) pairs in the configuration meet SPLSR criteria (Section 4.3.2 (c) in FCC KDB 447498 D01 v06) for each exposure position under each supported DSI. For a given exposure position under a given DSI, prove all AG pairs, all ER pairs and all (AG, ER) pairs (if there are external radios outside Smart Transmit) in the configuration meet SPLSR.
3) Case 3: When One or more antenna(s) can be placed as shared antenna(s) among multiple AGs as described in this Section. Repeat the same procedure to check if the new antenna grouping scheme (using shared antenna) with all supported external radios meets Case 1 or Case 2 so that each AG in the new antenna grouping scheme can operate independently.
   a) For antenna grouping, only Case 1 or Case 2 (not both) needs to be met for each exposure position of all supported DSIs under a given exposure category. To further clarify, only one of the two conditions (either Case 1 or Case 2) should be used for a given exposure position to demonstrate RF exposure is mutually exclusive among all antenna groups (including external radios). In other words, a combination of Case 1 and Case 2 CANNOT be used for a given exposure position, i.e., mutual exclusivity between AGs CANNOT be demonstrated by using Case 1 for some antenna combinations and using Case 2 for remaining antenna combinations.
   b) New antenna grouping analysis with one or more antenna(s) as a shared antenna (sAnt). AG0, AG1 and WLAN must be demonstrated to transmit independently with a shared antenna (sAnt) configured in AG0/AG1. The TER for simultaneous analysis for sub6 radios should be given by the sum of these RF exposures meets (i) and (ii) :
      i. { [max.SAR.without.sAnt.AG0+ max.SAR.without.sAnt.AG1] + WIFI/BT worst-case reported SAR} ≤ 1.6 (for 1g, or 4.0 for 10g).
      ii. { [max.SAR.sAnt] + WIFI/BT worst-case reported SAR} ≤ 1.6 (for 1g, or 4.0 for 10g).
   c) For a given exposure position under a given DSI, prove all AG pairs, all ER pairs and all (AG, ER) pairs (if there are external radios outside Smart Transmit) in the configuration meet SPLSR.

This device supports two sub6 AG: AG0 and AG1, the detailed please refer to the below table:

Antenna Group 0 (AG0)	ANT1 & ANT2& ANT3& ANT4& ANT6 & ANT7 & ANT8
Antenna Group 1 (AG1)	ANT0 & ANT5 & ANT2 & ANT3

Note: Ant2 and Ant3 as shared antennas (sAnt) among AG0 and AG1.

The conditions are verified through the following criterias:

i) (SAR1 + SAR2 criteria): If SPLSR criteria is not used, then the highest reported SAR at *Plimit* for each antenna should be obtained out of all supported technologies and frequency bands for each DSI. Demonstrate that the sum of reported SAR of one antenna from each of the sub6 AGs and the sum of RF exposure from all supported radios outside of Smart Transmit should be less than the regulatory limit as given below for each DSI.

1. Obtain the worst-case reported SAR for each antenna group (i.e., maximum *reported* SAR at *Plimit* out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and obtain the worst-case RF exposure for each external radio, and demonstrate that the sum of these RF exposures meets: { [max.SAR.AG0+ max.SAR.AG1] + WIFI/BT worst-case reported SAR} ≤ 1.6 (for 1g, or 4.0 for 10g). (WIFI/BT worst-case reported SAR is the worst SAR in all combinations of WIFI and BT simultaneous transmission)

ii) (SPLSR criteria): For each antenna, obtain the highest reported SAR value at *Plimit* out of all supported technologies for each frequency band. Using these values, demonstrate for a given DSI that every antenna from one sub6 AG meets SPLSR criteria with every antenna in another sub6 AG for all frequency bands. This criteria must be demonstrated for all antenna pair combinations irrespective of supported simultaneous transmission scenarios as given below for each DSI:

a. SPLSR criteria should be met for all antenna pair combinations of AG0 and AG1. As it can be seen, these include all combinations of antenna groups, antennas, and frequency bands.
b. Obtain combined SAR per AG: Obtain the worst-case conservative combined SAR and its peak location for each AG.
c. Use the 'closest' peak location out of all antennas of AGj to evaluate SPLSR with other AGs in the configuration. Note, by 'closest', select the peak location out of all antennas (ϵ AGj) that is closest to the peak location of other AG where SPLSR is evaluated.

iii) (combination of SPLSR & SAR1+SAR2 criteria): If SPLSR criteria for all the combinations of sub6 antenna groups in (i) is demonstrated to show that each AG is mutually exclusive from other AGs, and if the WIFI/BT antennas supported outside of Smart Transmit do not meet SPLSR criteria, then the condition in (ii) reduces to: {max.SAR.AG0 + worst-case reported SAR} ≤ 1.6 and {max.SAR.AG1+ worst-case reported SAR } ≤ 1.6 for compliance demonstration (for 1g, or 4.0 for 10g).

For summed SAR results and SPLSR detailed analysis, please refer to section 17.3 / 17.4 / 17.5 / 17.6 /17.7 of this report. All of the combinations of sub6 antenna groups are sufficient to show that AG0 is mutually exclusive from AG1 and that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.

17.3 Head Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

<AG0 maximum report SAR>:

Test Position	Ant1	Ant4	Ant6	Ant7	Ant8	MAX
Right Cheek	1.021	1.078	0.627	0.232	1.033	1.078
Right Tilted	0.561	1.093	0.752	0.196	0.653	1.093
Left Cheek	0.409	0.688	0.903	0.951	0.406	0.951
Left Tilted	0.279	0.837	1.042	0.491	0.493	1.042

<AG1 maximum report SAR>:

Test Position	Ant0	Ant5	MAX
Right Cheek	0.276	0.356	0.356
Right Tilted	0.176	0.197	0.197
Left Cheek	0.300	0.390	0.390
Left Tilted	0.152	0.223	0.223

<WLAN+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	Bluetooth Ant16	Bluetooth Ant7	WLAN2.4GHz+ WLAN5GHz	WLAN5GHz+ Bluetooth Ant16	WLAN5GHz+ Bluetooth Ant7	Wlan+BT worst case
Right Cheek	0.157	0.077	0.388	0.196	0.150	0.182	0.273	0.346	0.378	0.388
Right Tilted	0.491	0.242	0.466	0.235	0.194	0.232	0.477	0.429	0.467	0.491
Left Cheek	0.165	0.081	0.456	0.230	0.137	0.255	0.311	0.367	0.485	0.485
Left Tilted	0.421	0.205	0.506	0.257	0.188	0.229	0.462	0.445	0.486	0.506

<AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG0	AG1	Wlan/BT worst case	AG0+AG1+wlan +BT worse case
Right Cheek	1.078	0.356	0.388	**1.82**
Right Tilted	1.093	0.197	0.491	**1.78**
Left Cheek	0.951	0.390	0.485	**1.83**
Left Tilted	1.042	0.223	0.506	**1.77**

<Shared Ant + WLAN+BT Worse-case>:

Test Position	Ant2	Wlan+BT worst case	sAnt +wlan +BT worst case
Right Cheek	0.863	0.388	1.25
Right Tilted	0.201	0.491	0.69
Left Cheek	1.085	0.485	1.57
Left Tilted	0.308	0.506	0.81

Test Position	Ant3	Wlan+BT worst case	sAnt +wlan +BT worst case
Right Cheek	0.943	0.388	1.33
Right Tilted	0.208	0.491	0.70
Left Cheek	1.037	0.485	1.52
Left Tilted	0.150	0.506	0.66

Note: The results marked yellow in above tables refer to the detailed analysis corresponding to each position below tables.

Right Cheek					
Ant combination	AG1 SAR	AG0 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst case(DBS)	Note
Ant0-Ant1	0.276	1.021	0.388	**1.69**	Case1
Ant0-Ant4	0.276	1.078	0.388	**1.74**	Case2
Ant0-Ant6	0.276	0.627	0.388	1.29	-
Ant0-Ant7	0.276	0.232	0.388	0.90	-
Ant0-Ant8	0.276	1.033	0.388	**1.70**	Case3
Ant5-Ant1	0.356	1.021	0.388	**1.77**	Case4
Ant5-Ant4	0.356	1.078	0.388	**1.82**	Case5
Ant5-Ant6	0.356	0.627	0.388	1.37	-
Ant5-Ant7	0.356	0.232	0.388	0.98	-
Ant5-Ant8	0.356	1.033	0.388	**1.78**	Case6

Right Tilted					
Ant combination	AG1 SAR	AG0 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst case(DBS)	Note
Ant0-Ant1	0.176	0.561	0.491	1.23	-
Ant0-Ant4	0.176	1.093	0.491	**1.76**	Case7
Ant0-Ant6	0.176	0.752	0.491	1.42	-
Ant0-Ant7	0.176	0.196	0.491	0.86	-
Ant0-Ant8	0.176	0.653	0.491	1.32	-
Ant5-Ant1	0.197	0.561	0.491	1.25	-
Ant5-Ant4	0.197	1.093	0.491	**1.78**	Case8
Ant5-Ant6	0.197	0.752	0.491	1.44	-
Ant5-Ant7	0.197	0.196	0.491	0.88	-
Ant5-Ant8	0.197	0.653	0.491	1.34	-

Left Cheek					
Ant combination	AG1 SAR	AG0 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst case(DBS)	Note
Ant0-Ant1	0.300	0.409	0.485	1.19	-
Ant0-Ant4	0.300	0.688	0.485	1.47	-
Ant0-Ant6	0.300	0.903	0.485	**1.69**	Case9
Ant0-Ant7	0.300	0.951	0.485	**1.74**	Case10
Ant0-Ant8	0.300	0.406	0.485	1.19	-
Ant5-Ant1	0.390	0.409	0.485	1.28	-
Ant5-Ant4	0.390	0.688	0.485	1.56	-
Ant5-Ant6	0.390	0.903	0.485	**1.78**	Case11
Ant5-Ant7	0.390	0.951	0.485	**1.83**	Case12
Ant5-Ant8	0.390	0.406	0.485	1.28	-

Left Tilted					
Ant combination	AG1 SAR	AG0 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst case(DBS)	Note
Ant0-Ant1	0.152	0.279	0.506	0.94	-
Ant0-Ant4	0.152	0.837	0.506	1.50	-
Ant0-Ant6	0.152	1.042	0.506	**1.70**	Case13
Ant0-Ant7	0.152	0.491	0.506	1.15	-
Ant0-Ant8	0.152	0.493	0.506	1.15	-
Ant5-Ant1	0.223	0.279	0.506	1.01	-
Ant5-Ant4	0.223	0.837	0.506	1.57	-
Ant5-Ant6	0.223	1.042	0.506	**1.77**	Case14
Ant5-Ant7	0.223	0.491	0.506	1.22	-
Ant5-Ant8	0.223	0.493	0.506	1.22	-

<AG0 + WLAN/BT SAR>

NO	1	2	3	4	5	6	7	8	9	4+9	1+2	1+7	1+5+8	1+6+8	1+3+8
Test Position	WWAN AG0	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN2.4GHz Ant 7+16 (DBS Standalone)	Bluetooth Ant16	Bluetooth Ant7	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	WLAN5GHz Ant 6+18 (DBS Standalone)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Right Cheek	1.078	0.157	0.077	0.221	0.150	0.182	0.388	0.196	0.763	0.98	1.24	1.47	1.42	1.46	1.35
Right Tilted	1.093	0.491	0.242	0.676	0.194	0.232	0.466	0.235	0.763	1.44	1.58	1.56	1.52	1.56	1.57
Left Cheek	0.951	0.165	0.081	0.233	0.137	0.255	0.456	0.230	0.763	1.00	1.12	1.41	1.32	1.44	1.26
Left Tilted	1.042	0.421	0.205	0.593	0.188	0.229	0.506	0.257	0.763	1.36	1.46	1.55	1.49	1.53	1.50

<AG1 + WLAN/BT SAR>

NO	1	2	3	4	5	6	7	8	9	4+9	1+2	1+7	1+5+8	1+6+8	1+3+8
Test Position	WWAN AG1	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN2.4GHz Ant 7+16 (DBS Standalone)	Bluetooth Ant16	Bluetooth Ant7	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	WLAN5GHz Ant 6+18 (DBS Standalone)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Right Cheek	0.356	0.157	0.077	0.221	0.150	0.182	0.388	0.196	0.763	0.98	0.51	0.74	0.70	0.73	0.63
Right Tilted	0.197	0.491	0.242	0.676	0.194	0.232	0.466	0.235	0.763	1.44	0.69	0.66	0.63	0.66	0.67
Left Cheek	0.390	0.165	0.081	0.233	0.137	0.255	0.456	0.230	0.763	1.00	0.56	0.85	0.76	0.88	0.70
Left Tilted	0.223	0.421	0.205	0.593	0.188	0.229	0.506	0.257	0.763	1.36	0.64	0.73	0.67	0.71	0.69

17.4 Hotspot Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

<AG0 maximum report SAR>:

Test Position	Ant1	Ant4	Ant6	Ant7	Ant8	MAX
Front	0.323	0.247	0.244	0.166	0.092	0.323
Back	0.398	0.362	0.546	0.208	0.941	0.941
Left Side	0.426	0.169			0.294	0.426
Right Side				0.378		0.378
Top Side	0.127	0.551	0.398	0.073	0.089	0.551

<AG1 maximum report SAR>:

Test Position	Ant0	Ant5	MAX
Front	0.400	0.564	0.564
Back	0.419	0.719	0.719
Left Side		0.260	0.260
Right Side	0.278		0.278
Bottom Side	0.238	1.014	1.014

<WLAN+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	Bluetooth Ant16	Bluetooth Ant7	WLAN2.4GHz+ WLAN5GHz	WLAN5GHz+ Bluetooth Ant16	WLAN5GHz+ Bluetooth Ant7	Wlan+BT worst case
Front	0.362	0.176	0.192	0.097	0.068	0.161	0.273	0.165	0.258	0.362
Back	0.500	0.239	0.352	0.189	0.112	0.201	0.428	0.301	0.390	0.500
Right Side	0.457	0.217	0.369	0.204	0.016	0.290	0.421	0.220	0.494	0.494
Top Side	0.391	0.186	0.490	0.246	0.154	0.014	0.432	0.400	0.260	0.490

<AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG0	AG1	Wlan+BT worst case	MAX
Front	0.323	0.564	0.362	1.25
Back	0.941	0.719	0.500	**2.16**
Left Side	0.426	0.260		0.69
Right Side	0.378	0.278	0.494	1.15
Top Side	0.551		0.490	1.04
Bottom Side		1.014		1.01

<Shared Ant + WLAN+BT Worse-case>:

Test Position	Ant2	Wlan+BT worst case	sAnt +wlan +BT worst case
Front	0.393	0.362	0.76
Back	0.375	0.500	0.88
Left Side			0.00
Right Side	0.628	0.494	1.12
Top Side		0.490	0.49
Bottom Side			0.00

Test Position	Ant3	Wlan+BT worst case	sAnt +wlan +BT worst case
Front 10mm	0.686	0.362	1.05
Back 10mm	0.700	0.500	1.20
Left Side 10mm	1.092		1.09
Right Side 10mm		0.494	0.49
Top Side 10mm		0.490	0.49
Bottom Side 10mm			0.00

Note: The results marked yellow in above tables refer to the detailed analysis corresponding to each position below tables.

Back side					
Ant combination	AG1 SAR	AG0 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst case(DBS)	Note
Ant0-Ant1	0.419	0.398	0.500	1.32	
Ant0-Ant4	0.419	0.362	0.500	1.28	
Ant0-Ant6	0.419	0.546	0.500	1.47	
Ant0-Ant7	0.419	0.208	0.500	1.13	
Ant0-Ant8	0.419	0.941	0.500	**1.86**	Case15
Ant5-Ant1	0.719	0.398	0.500	**1.62**	Case16
Ant5-Ant4	0.719	0.362	0.500	**1.58**	
Ant5-Ant6	0.719	0.546	0.500	**1.77**	Case17
Ant5-Ant7	0.719	0.208	0.500	1.43	
Ant5-Ant8	0.719	0.941	0.500	**2.16**	Case18

<AG0 + WLAN/BT SAR>

NO	1	2	3	4	5	6	7	8	9	4+9	1+2	1+7	1+5+8	1+6+8	1+3+8
Test Position	WWAN AG0	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN2.4GHz Ant 7+16 (DBS Standalone)	Bluetooth Ant16	Bluetooth Ant7	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	WLAN5GHz Ant 6+18 (DBS Standalone)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.323	0.362	0.176	0.533	0.068	0.161	0.192	0.097	0.795	1.33	0.69	0.52	0.49	0.58	0.60
Back	0.941	0.500	0.239	0.708	0.112	0.201	0.352	0.189	0.795	1.50	1.44	1.29	1.24	1.33	1.37
Left Side	0.426									0.00	0.43	0.43	0.43	0.43	0.43
Right Side	0.378	0.457	0.217	0.656	0.016	0.290	0.369	0.204	0.795	1.45	0.84	0.75	0.60	0.87	0.80
Top Side	0.551	0.391	0.186	0.573	0.154	0.014	0.490	0.246	0.795	1.37	0.94	1.04	0.95	0.81	0.98
Bottom Side										0.00	0.00	0.00	0.00	0.00	0.00

<AG1 + WLAN/BT SAR>

NO	1	2	3	4	5	6	7	8	9	4+9	1+2	1+7	1+5+8	1+6+8	1+3+8
Test Position	WWAN AG1	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN2.4GHz Ant 7+16 (DBS Standalone)	Bluetooth Ant16	Bluetooth Ant7	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	WLAN5GHz Ant 6+18 (DBS Standalone)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.564	0.362	0.176	0.533	0.068	0.161	0.192	0.097	0.795	1.33	0.93	0.76	0.73	0.82	0.84
Back	0.719	0.500	0.239	0.708	0.112	0.201	0.352	0.189	0.795	1.50	1.22	1.07	1.02	1.11	1.15
Left Side	0.260									0.00	0.26	0.26	0.26	0.26	0.26
Right Side	0.278	0.457	0.217	0.656	0.016	0.290	0.369	0.204	0.795	1.45	0.74	0.65	0.50	0.77	0.70
Top Side		0.391	0.186	0.573	0.154	0.014	0.490	0.246	0.795	1.37	0.39	0.49	0.40	0.26	0.43
Bottom Side	1.014									0.00	1.01	1.01	1.01	1.01	1.01

17.5 Body-Worn Accessory Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

<AG0 maximum report SAR>:

Test Position	Ant1	Ant4	Ant6	Ant7	Ant8	MAX
Front	0.178	0.672	0.442	0.222	0.224	0.672
Back	0.211	0.994	1.009	0.253	1.083	1.083

<AG1 maximum report SAR>:

Test Position	Ant0	Ant5	MAX
Front	0.231	0.640	0.640
Back	0.233	0.798	0.798

<WLAN+BT Worse-case SAR>:

Test Position	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	Bluetooth Ant16	Bluetooth Ant7	WLAN2.4GHz+ WLAN5GHz	WLAN5GHz+ Bluetooth Ant16	WLAN5GHz+ Bluetooth Ant7	Wlan+BT worst case
Front	0.243	0.242	0.284	0.250	0.029	0.081	0.492	0.279	0.331	0.492
Back	0.310	0.242	0.467	0.250	0.051	0.110	0.492	0.301	0.360	0.492

<AG0 + AG1 + WLAN+BT Worse-case>:

Test Position	AG0	AG1	Wlan+BT worst case	AG0+AG1+wlan +BT worse case
Front	0.672	0.640	0.492	**1.80**
Back	1.083	0.798	0.492	**2.37**

<Shared Ant + WLAN+BT Worse-case>:

Test Position	Ant2	Wlan+BT worst case	sAnt +wlan +BT worst case
Front	0.371	0.492	0.86
Back	0.313	0.492	0.81

Test Position	Ant3	Wlan+BT worst case	sAnt +wlan +BT worst case
Front	0.598	0.492	1.09
Back	0.668	0.492	1.16

Note: The results marked yellow in above tables refer to the detailed analysis corresponding to each position below tables.

Front side					
Ant combination	AG1 SAR	AG0 SAR	Wlan+BT worst case	AG0+AG1+wlan +BT worst case(DBS)	Note
Ant0-Ant1	0.231	0.178	0.492	0.90	
Ant0-Ant4	0.231	0.672	0.492	1.40	
Ant0-Ant6	0.231	0.442	0.492	1.17	
Ant0-Ant7	0.231	0.222	0.492	0.95	
Ant0-Ant8	0.231	0.224	0.492	0.95	
Ant5-Ant1	0.640	0.178	0.492	1.31	
Ant5-Ant4	0.640	0.672	0.492	**1.80**	Case19
Ant5-Ant6	0.640	0.442	0.492	1.57	
Ant5-Ant7	0.640	0.222	0.492	1.35	
Ant5-Ant8	0.640	0.224	0.492	1.36	

Back side					
Ant combination	AG1	AG0	Wlan+BT worst case	AG0+AG1+wlan +BT worst case(DBS)	Note
	SAR	SAR			
Ant0-Ant1	0.233	0.211	0.492	0.94	
Ant0-Ant4	0.233	0.994	0.492	**1.72**	Case20
Ant0-Ant6	0.233	1.009	0.492	**1.73**	Case21
Ant0-Ant7	0.233	0.253	0.492	0.98	
Ant0-Ant8	0.233	1.083	0.492	**1.81**	Case22
Ant5-Ant1	0.798	0.211	0.492	1.50	
Ant5-Ant4	0.798	0.994	0.492	**2.28**	Case23
Ant5-Ant6	0.798	1.009	0.492	**2.30**	Case24
Ant5-Ant7	0.798	0.253	0.492	1.54	
Ant5-Ant8	0.798	1.083	0.492	**2.37**	Case25

<AG0 + WLAN/BT SAR>

NO	1	2	3	4	5	6	7	8	9	4+9	1+2	1+7	1+5+8	1+6+8	1+3+8
Test Position	WWAN AG0	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN2.4GHz Ant 7+16 (DBS Standalone)	Bluetooth Ant16	Bluetooth Ant7	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	WLAN5GHz Ant 6+18 (DBS Standalone)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.672	0.243	0.242	0.243	0.029	0.081	0.284	0.250	0.284	0.53	0.92	0.96	0.95	1.00	1.16
Back	1.083	0.310	0.242	0.310	0.051	0.110	0.467	0.250	0.467	0.78	1.39	1.55	1.38	1.44	1.58

<AG1 + WLAN/BT SAR>

NO	1	2	3	4	5	6	7	8	9	4+9	1+2	1+7	1+5+8	1+6+8	1+3+8
Test Position	WWAN AG1	WLAN2.4GHz Ant 7+16 Simultaneous	WLAN2.4GHz Ant 7+16 DBS Simultaneous	WLAN2.4GHz Ant 7+16 (DBS Standalone)	Bluetooth Ant16	Bluetooth Ant7	WLAN5GHz Ant 6+18 Simultaneous	WLAN5GHz Ant 6+18 DBS Simultaneous	WLAN5GHz Ant 6+18 (DBS Standalone)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Front	0.640	0.243	0.242	0.243	0.029	0.081	0.284	0.250	0.284	0.53	0.88	0.92	0.92	0.97	1.13
Back	0.798	0.310	0.242	0.310	0.051	0.110	0.467	0.250	0.467	0.78	1.11	1.27	1.10	1.16	1.29

17.6 Product Specific 10g SAR Exposure Conditions

General Note: The unit of SAR evaluation is W/kg.

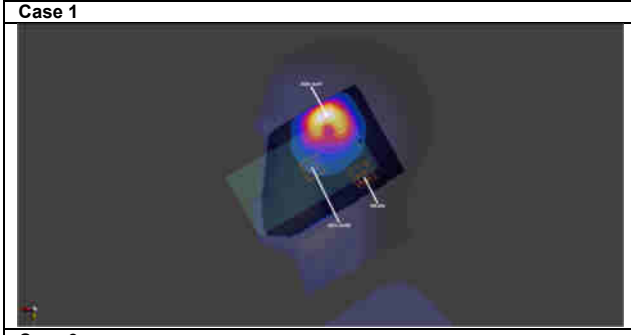
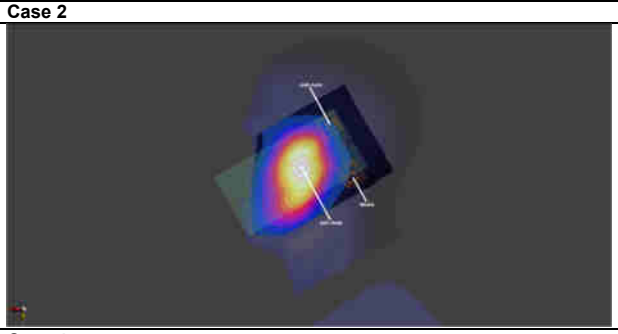
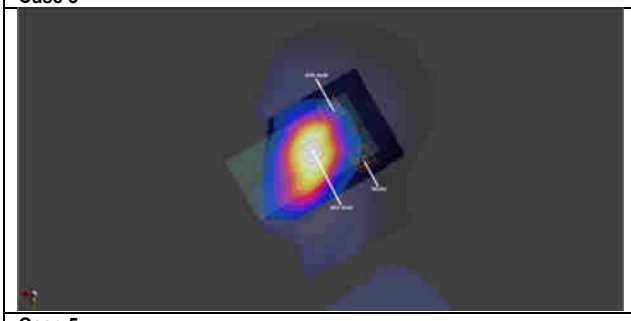
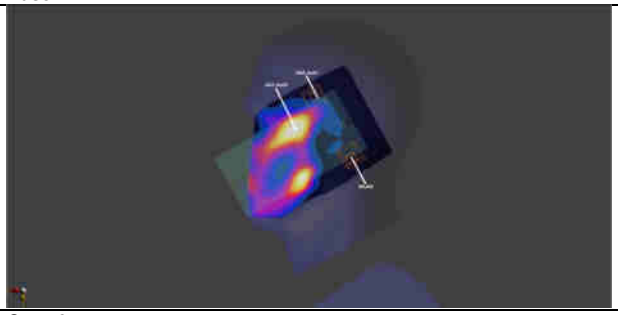
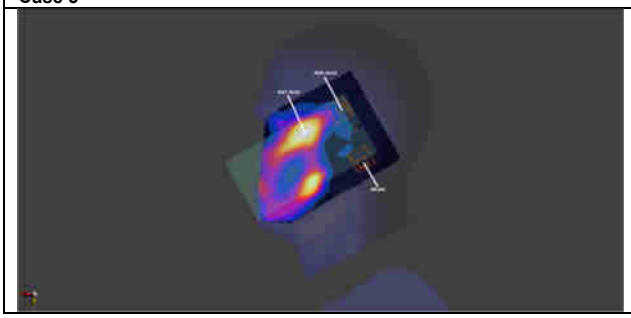
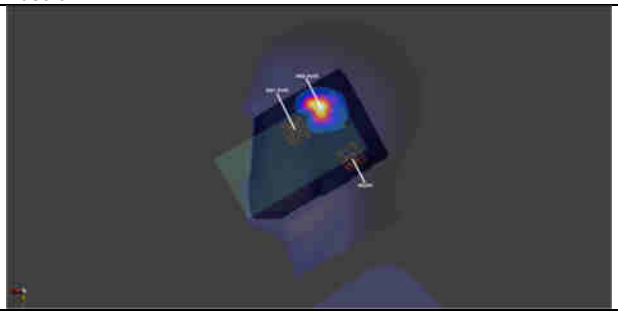
< AG0 +AG1 + WLAN SAR>

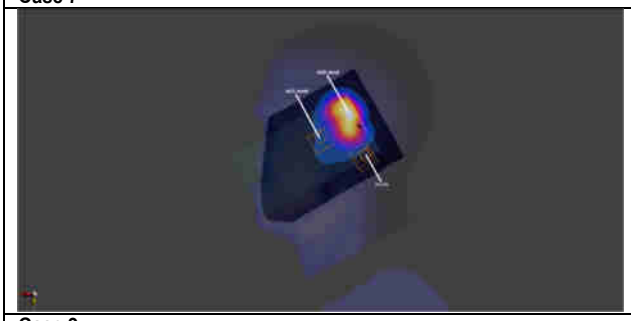
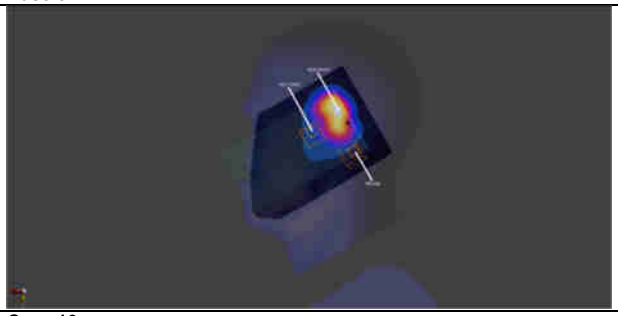
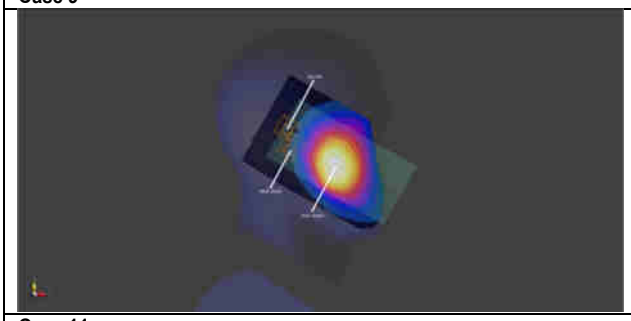
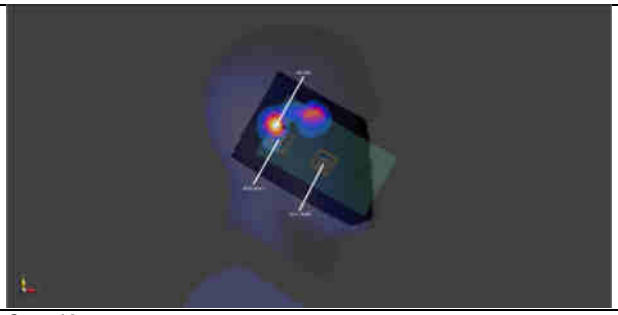
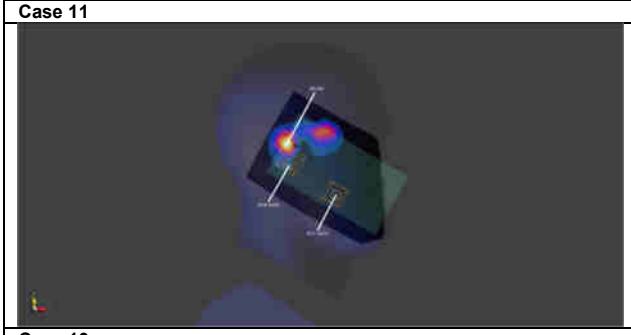
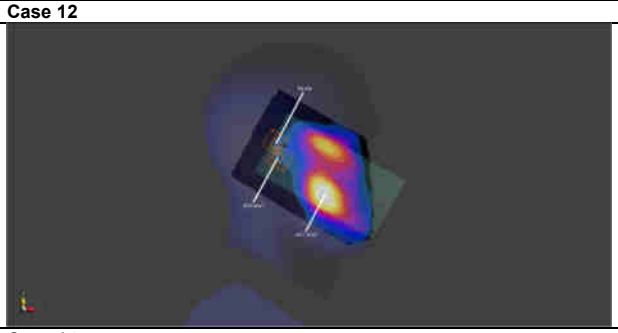
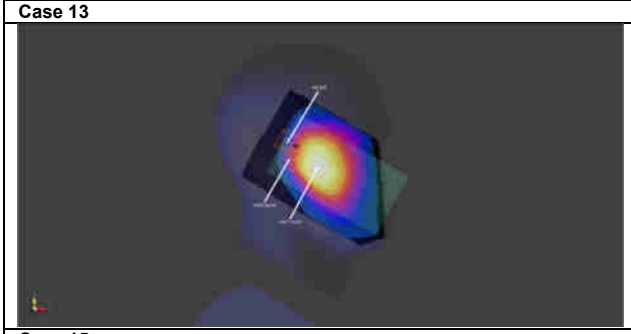
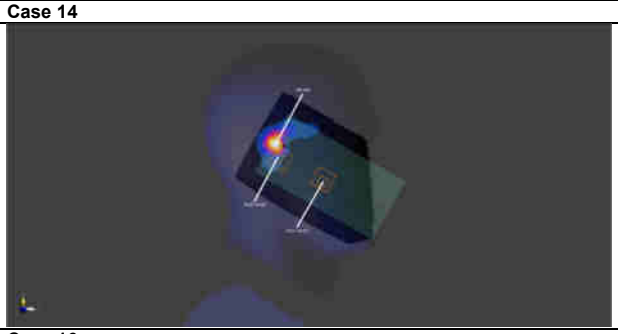
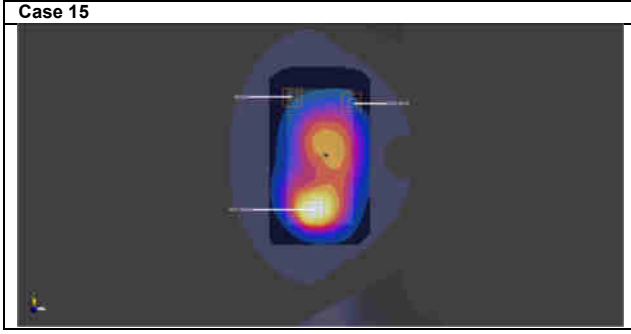
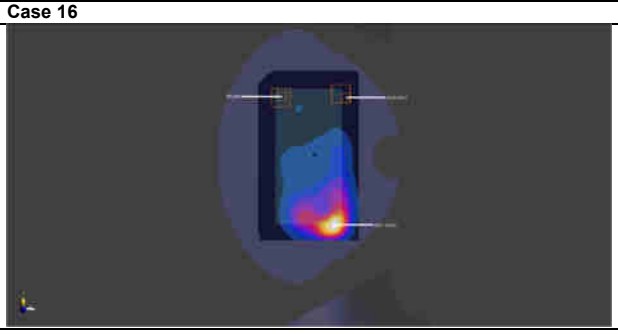
NO	1	2	1+2
Test Position	WWAN	WLAN5GHz Ant 17+18	Summed 10g SAR (W/kg)
Front		1.153	1.15
Back		0.929	0.93
Left Side			
Right Side	2.496	1.362	**3.86**
Top Side		2.554	2.55
Bottom Side	2.535		2.54

17.7 SPLSR Evaluation and Analysis

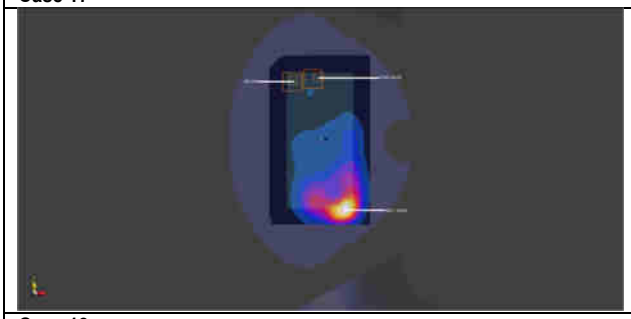
General Note:

1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of [(x1−x2)2 + (y1−y2)2 + (z1−z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. SPLSR = (SAR1 + SAR2)1.5 / (min. separation distance, mm). If SPLSR ≤ 0.04 for 1g SAR, simultaneously transmission SAR measurement is not necessary.
3. Per April 2022 TCB Workshop Notes, AG0 was summed algebraically with the BT/WIFI Antenna 6/7/16/18 for the purposes of hybrid SPLSR combination and they are located at the top of the device.
4. Per April 2022 TCB Workshop, instead of doing a small volume scan over a co-located antenna pair, used summing the SAR values of the co-located pair and using that value in SPLSR calculation. In the calculation used the minimum distance between the spatially separated antenna and the closest antenna of the co-located antenna pair to be conservative.
5. The axis peak locations refer to Section 17.8.

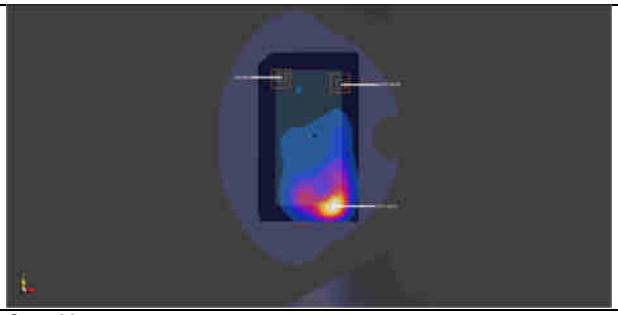
Case 1	Case 2
	
Case 3	**Case 4**
	
Case 5	**Case 6**
	

Case 7	Case 8
	
Case 9	**Case 10**
	
Case 11	**Case 12**
	
Case 13	**Case 14**
	
Case 15	**Case 16**
	

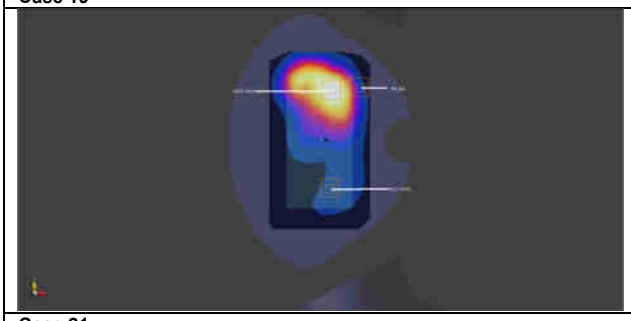
Case 17



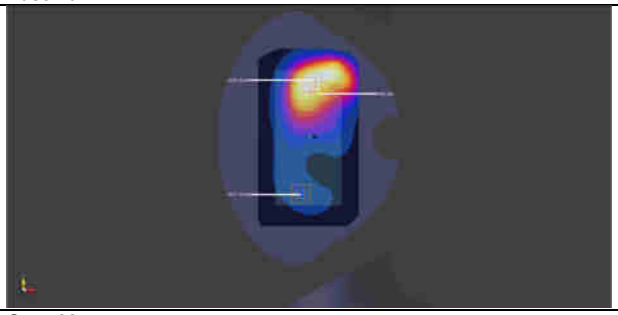
Case 18



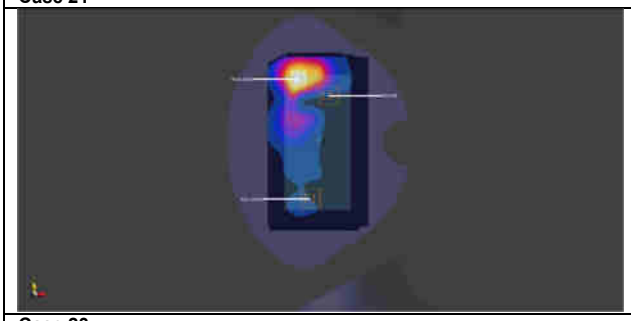
Case 19



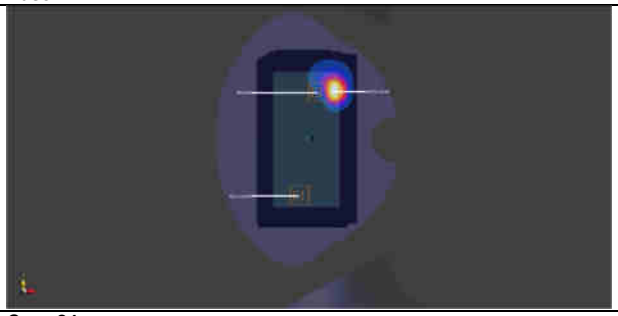
Case 20



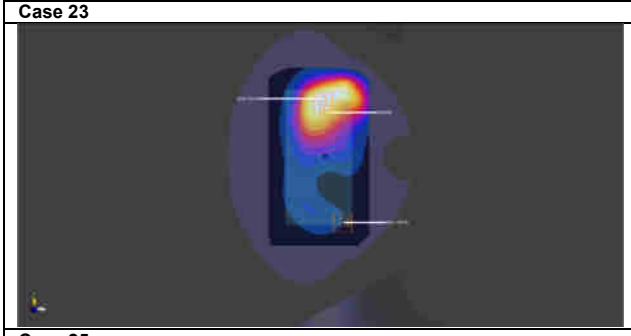
Case 21



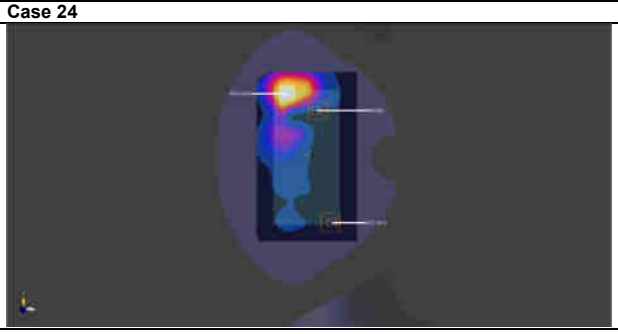
Case 22



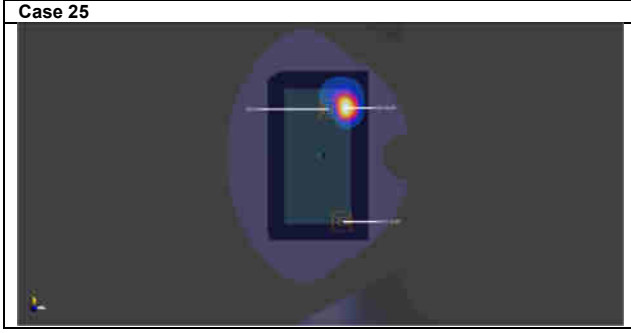
Case 23



Case 24



Case 25



<Head>

Case No	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 1	AG1-Ant0	Right Cheek	0.276	0mm	54.4	-280.9	-172.5	61.3	1.69	0.04	Not required
	AG0-Ant1		1.021	0mm	40.4	-340.5	-169.7				
	WLAN		0.388	0mm	-5.1	-270.2	-160.9				
Case 2	AG1-Ant0	Right Cheek	0.276	0mm	54.4	-280.9	-172.5	59.6	1.74	0.04	Not required
	AG0-Ant4		1.078	0mm	15.8	-326.3	-170.7				
	WLAN		0.388	0mm	-5.1	-270.2	-160.9				
Case 3	AG1-Ant0	Right Cheek	0.276	0mm	54.4	-280.9	-172.5	55.5	1.70	0.04	Not required
	AG0-Ant8		1.033	0mm	32.7	-332	-171.4				
	WLAN		0.388	0mm	-5.1	-270.2	-160.9				
Case 4	AG1-Ant5	Right Cheek	0.356	0mm	59.6	-267.7	-171.5	65.6	1.77	0.04	Not required
	AG0-Ant1		1.021	0mm	40.4	-340.5	-169.7				
	WLAN		0.388	0mm	-5.1	-270.2	-160.9				
Case 5	AG1-Ant5	Right Cheek	0.356	0mm	59.6	-267.7	-171.5	65.6	1.82	0.04	Not required
	AG0-Ant4		1.078	0mm	15.8	-326.3	-170.7				
	WLAN		0.388	0mm	-5.1	-270.2	-160.9				
Case 6	AG1-Ant5	Right Cheek	0.356	0mm	59.6	-267.7	-171.5	65.6	1.78	0.04	Not required
	AG0-Ant8		1.033	0mm	32.7	-332	-171.4				
	WLAN		0.388	0mm	-5.1	-270.2	-160.9				
Case 7	AG1-Ant0	Right Tilted	0.176	0mm	51.5	-272.7	-172.9	59.0	1.76	0.04	Not required
	AG0-Ant4		1.093	0mm	10.3	-323.9	-170.3				
	WLAN		0.491	0mm	-3.5	-292	-163.9				
Case 8	AG1-Ant5	Right Tilted	0.197	0mm	59.9	-278.3	-171.2	65.3	1.78	0.04	Not required
	AG0-Ant4		1.093	0mm	10.3	-323.9	-170.3				
	WLAN		0.491	0mm	-3.5	-292	-163.9				
Case 9	AG1-Ant0	Left Cheek	0.300	0mm	55	263.6	-171.1	65.8	1.69	0.03	Not required
	AG0-Ant6		0.903	0mm	7.1	308.7	-169.5				
	WLAN		0.485	0mm	1.9	311.6	-168.9				
Case 10	AG1-Ant0	Left Cheek	0.300	0mm	55	263.6	-171.1	63.6	1.74	0.04	Not required
	AG0-Ant7		0.951	0mm	-3	288.7	-164				
	WLAN		0.485	0mm	1.9	311.6	-168.9				
Case 11	AG1-Ant5	Left Cheek	0.390	0mm	58.8	261	-170.9	70.4	1.78	0.03	Not required
	AG0-Ant6		0.903	0mm	7.1	308.7	-169.5				
	WLAN		0.485	0mm	1.9	311.6	-168.9				
Case 12	AG1-Ant5	Left Cheek	0.390	0mm	58.8	261	-170.9	68.1	1.83	0.04	Not required
	AG0-Ant7		0.951	0mm	-3	288.7	-164				
	WLAN		0.485	0mm	1.9	311.6	-168.9				
Case 13	AG1-Ant0	Left Tilted	0.152	0mm	56.4	261.7	-172.6	71.9	1.70	0.03	Not required
	AG0-Ant6		1.042	0mm	3.3	310	-169				
	WLAN		0.506	0mm	2.2	311.5	-168.9				
Case 14	AG1-Ant5	Left Tilted	0.223	0mm	52.3	265.9	-171.5	66.0	1.77	0.04	Not required
	AG0-Ant6		1.042	0mm	3.3	310	-169				
	WLAN		0.506	0mm	2.2	311.5	-168.9				

<Hotspot>

Case No	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 15	AG1-Ant0	Back Side	0.419	10mm	-25	-61.1	-203.3	128.5	1.86	0.02	Not required
	AG0-Ant8		0.941	10mm	15	61	-203.3				
	WLAN		0.500	10mm	-55	70.8	-203.3				
Case 16	AG1-Ant5	Back Side	0.719	10mm	5	-77.1	-203.3	154.6	1.62	0.01	Not required
	AG0-Ant1		0.398	10mm	5	77.5	-203.3				
	WLAN		0.500	10mm	-55	70.8	-203.3				
Case 17	AG1-Ant5	Back Side	0.719	10mm	5	-77.1	-203.3	156.0	1.77	0.02	Not required
	AG0-Ant6		0.546	10mm	-25	76	-203.3				
	WLAN		0.500	10mm	-55	70.8	-203.3				
Case 18	AG1-Ant5	Back Side	0.719	10mm	5	-77.1	-203.3	138.5	2.16	0.02	Not required
	AG0-Ant8		0.941	10mm	15	61	-203.3				
	WLAN		0.500	10mm	-55	70.8	-203.3				

<Body-worn>

Case No	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 19	AG1-Ant5	Front side	0.640	15mm	-10	-53.9	-203.3	113.3	1.80	0.02	Not required
	AG0-Ant4		0.672	15mm	-10	59.4	-203.3				
	WLAN		0.492	15mm	25	59.5	-203.3				
Case 20	AG1-Ant0	Back Side	0.233	15mm	-40	-64.7	-20.3	219.1	1.72	0.01	Not required
	AG0-Ant4		0.994	15mm	-25	63.5	-203.3				
	WLAN		0.492	15mm	-15	53.1	-203.3				
Case 21	AG1-Ant0	Back Side	0.233	15mm	-40	-64.7	-20.3	219.1	1.73	0.01	Not required
	AG0-Ant6		1.009	15mm	-55	73.9	-203.3				
	WLAN		0.492	15mm	-15	53.1	-203.3				
Case 22	AG1-Ant0	Back Side	0.233	15mm	-40	-64.7	-20.3	219.1	1.81	0.01	Not required
	AG0-Ant8		1.083	15mm	5	57	-203.3				
	WLAN		0.492	15mm	-15	53.1	-203.3				
Case 23	AG1-Ant5	Back Side	0.798	15mm	5	-73.6	-203.3	128.3	2.28	0.03	Not required
	AG0-Ant4		0.994	15mm	-25	63.5	-203.3				
	WLAN		0.492	15mm	-15	53.1	-203.3				
Case 24	AG1-Ant5	Back Side	0.798	15mm	5	-73.6	-203.3	128.3	2.30	0.03	Not required
	AG0-Ant6		1.009	15mm	-55	73.9	-203.3				
	WLAN		0.492	15mm	-15	53.1	-203.3				
Case 25	AG1-Ant5	Back Side	0.798	15mm	5	-73.6	-203.3	128.3	2.37	0.03	Not required
	AG0-Ant8		1.083	15mm	5	57	-203.3				
	WLAN		0.492	15mm	-15	53.1	-203.3				

17.8 Maximum Report SAR And SAR Peak Locations

General Note:

1. The maximum report SAR and SAR Peak Locations corresponding to each position of each frequency band of each antenna in the below tables are as follows.
2. The unit of SAR evaluation is W/kg. The unit of x, y, z with Axis evaluation is mm.

<Head>

Right Cheek					
BT Ant16	SAR	0.154	WLAN2.4G MIMO	SAR	0.221
	Axis	X:11.9Y:-305.9Z:-170		Axis	X:4.1Y:-299Z:-168.3
BT Ant7	SAR	0.182	WLAN5G MIMO	SAR	0.89
	Axis	X:-5.1Y:-270.2Z:-160.9		Axis	X:2.2Y:-311.3Z:-168.9
Right Tilted					
BT Ant16	SAR	0.198	WLAN2.4G MIMO	SAR	0.676
	Axis	X:9.5Y:-307.2Z:-169.7		Axis	X:-0.7Y:-311.3Z:-166.4
BT Ant7	SAR	0.232	WLAN5G MIMO	SAR	1.069
	Axis	X:-3.5Y:-292.0Z:-163.9		Axis	X:3.3Y:-297.5Z:-169
Left Cheek					
BT Ant16	SAR	0.141	WLAN2.4G MIMO	SAR	0.233
	Axis	X:10.2Y:329.6Z:-170.1		Axis	X:26Y:331.9Z:-171
BT Ant7	SAR	0.255	WLAN5G MIMO	SAR	0.89
	Axis	X:35.9Y:337.4Z:-170.4		Axis	X:1.9Y:311.6Z:-168.9
Left Tilted					
BT Ant16	SAR	0.193	WLAN2.4G MIMO	SAR	0.593
	Axis	X:17Y:337.1Z:-170.2		Axis	X:20.3Y:335.2Z:-170.6
BT Ant7	SAR	0.229	WLAN5G MIMO	SAR	1.093
	Axis	X:33.6Y:338.8Z:-170.3		Axis	X:2.2Y:311.5Z:-168.9

Right Cheek								
Band		Ant0	Ant5	Ant1	Ant4	Ant6	Ant7	Ant8
GSM850 4TX	SAR	0.225		0.879				
	Axis	X:56.7Y:-279.5Z:-172.1		X:37.8Y:-342Z:-169.7				
GSM1900 4TX	SAR		0.124		0.91			
	Axis		X:53.5Y:-247Z:-170.1		X:31Y:-329Z:-171.3			
WCDMA II	SAR		0.251		1.078			
	Axis		X:53.1Y:-247.3Z:-170.2		X:32.3Y:-328.3Z:-171.4			
WCDMA IV	SAR		0.356		0.93			
	Axis		X:53.1Y:-247.3Z:-170.2		X:28.4Y:-328.6Z:-171			
WCDMA V	SAR	0.23		0.869				
	Axis	X:57.7Y:-278.9Z:-172		X:40.4Y:-340.5Z:-169.7				
LTE Band 2	SAR		0.239		0.935			
	Axis		X:25.1Y:-247.1Z:-165.3		X:25.4Y:-330.2Z:-171.2			
LTE Band 5	SAR	0.276		0.944				
	Axis	X:54.4Y:-280.9Z:-172.5		X:38.6Y:-341.5Z:-169.6				
LTE Band 7	SAR		0.192		0.944			
	Axis		X:53.1Y:-247.2Z:-170.4		X:25.6Y:-332.2Z:-171			
LTE Band 66	SAR		0.317		1.023			
	Axis		X:54.7Y:-246.2Z:-169.8		X:29.9Y:-329.6Z:-171.3			
LTE Band 38	SAR		0.121		1.064			
	Axis		X:59.3Y:-260.8Z:-171.6		X:28.7Y:-330.4Z:-171.2			
LTE Band 41	SAR		0.121		0.621			
	Axis		X:71.3Y:-263.7Z:-168.1		X:28.2Y:-330.7Z:-171.2			
FR1 n5	SAR	0.267		1.021				
	Axis	X:55.4Y:-280.2Z:-172.4		X:38.8Y:-341.4Z:-169.7				
FR1 n7	SAR		0.196		0.922			
	Axis		X:53.4Y:-247Z:-170.3		X:27.7Y:-331Z:-171			

FR1 n41	SAR		0.234		0.969			
	Axis		X:59.6Y:-267.7Z:-171.5		X:27.2Y:-331.2Z:-171.1			
FR1 n77	SAR				0.897	N/A	N/A	1.033
	Axis				X:15.8Y:-326.3Z:-170.7	N/A	N/A	X:32.7Y:-332Z:-171.4
FR1 n78	SAR				0.89	N/A	N/A	0.875
	Axis				X:15.1Y:-326.8Z:-170.7	N/A	N/A	X:31Y:-335Z:-171.3

Right Tilted

Band		Ant0	Ant5	Ant1	Ant4	Ant6	Ant7	Ant8
GSM850 4TX	SAR	0.115		N/A				
	Axis	X:51.5Y:-272.7Z:-172.9		N/A				
GSM1900 4TX	SAR		0.092		0.77			
	Axis		X:52.5Y:-265.5Z:-170.1		X:9.8Y:-324.2Z:-170.2			
WCDMA I I	SAR		0.182		1.093			
	Axis		X:52.7Y:-266.6Z:-169.9		X:10.3Y:-323.9Z:-170.3			
WCDMA IV	SAR		0.197		0.928			
	Axis		X:59.9Y:-278.3Z:-171.2		X:10.1Y:-325.1Z:-170.5			
WCDMA V	SAR	0.153		N/A				
	Axis	X:57.1Y:-271.4Z:-172.6		N/A				
LTE Band 2	SAR		0.154		0.943			
	Axis		X:53.3Y:-265.1Z:-170.2		X:16.2Y:-325.3Z:-170.6			
LTE Band 5	SAR	0.176		N/A				
	Axis	X:58.4Y:-270.6Z:-172.7		N/A				
LTE Band 7	SAR		0.127		0.97			
	Axis		X:53.1Y:-262.2Z:-171.4		X:16.3Y:-326.1Z:-170.8			
LTE Band 66	SAR		0.151		1.044			
	Axis		X:51.2Y:-266.3Z:-170		X:8.3Y:-325.1Z:-170			
LTE Band 38	SAR		0.092		0.863			
	Axis		X:56.8Y:-260.1Z:-171.7		X:16.9Y:-325.7Z:-170.8			
LTE Band 41	SAR		0.092		0.597			
	Axis		X:52.2.1Y:-268.3Z:-171.5		X:16.1Y:-326.2Z:-170.7			
FR1 n5	SAR	0.157		N/A				
	Axis	X:57.8Y:-271.9Z:-172.6		N/A				
FR1 n7	SAR		0.122		0.915			
	Axis		X:53.6Y:-261.9Z:-171.4		X:16.4Y:-326Z:-170.7			
FR1 n41	SAR		0.141		0.847			
	Axis		X:53.1Y:-267.8Z:-171.5		X:15.6Y:-326.5Z:-170.7			
FR1 n77	SAR				1.014	N/A	N/A	N/A
	Axis				X:16.1Y:-326.2Z:-170.7	N/A	N/A	N/A
FR1 n78	SAR				1.082	N/A	N/A	N/A
	Axis				X:17.1Y:-325.6Z:-170.8	N/A	N/A	N/A

Left Cheek

Band		Ant0	Ant5	Ant1	Ant4	Ant6	Ant7	Ant8
GSM850 4TX	SAR	0.226		N/A				
	Axis	X:57.8Y:261.6Z:-171.1		N/A				
GSM1900 4TX	SAR		0.132		N/A			
	Axis		X:62.3Y:258.9Z:-169.9		N/A			
WCDMA I I	SAR		0.262		N/A			
	Axis		X:58.8Y:261Z:-170.9		N/A			
WCDMA IV	SAR		0.277		N/A			
	Axis		X:56.8Y:254.3Z:-170.1		N/A			
WCDMA V	SAR	0.253		N/A				
	Axis	X:55Y:263.6Z:-171.1		N/A				
LTE Band 2	SAR		0.253		N/A			
	Axis		X:54.3Y:246.7Z:-170.1		N/A			

LTE Band 5	SAR	0.3		N/A				
	Axis	X:55Y:263.3Z:-171.7		N/A				
LTE Band 7	SAR		0.337		N/A			
	Axis		X:51.1Y:248.3Z:-170.7		N/A			
LTE Band 66	SAR		0.263		N/A			
	Axis		X:61.1Y:242.3Z:-167.9		N/A			
LTE Band 38	SAR		0.223		N/A			
	Axis		X:52.1Y:247.7Z:-170.5		N/A			
LTE Band 41	SAR		0.223		N/A			
	Axis		X:53.7Y:246.8Z:-170.2		N/A			
FR1 n5	SAR	0.271		N/A				
	Axis	X:55.5Y:263Z:-171.6		N/A				
FR1 n7	SAR		0.331		N/A			
	Axis		X:52.6Y:247.4Z:-170.4		N/A			
FR1 n41	SAR		0.39		N/A			
	Axis		X:52.1Y:247.7Z:-170.4		N/A			
FR1 n77	SAR				N/A	0.903	0.918	N/A
	Axis				N/A	X:7.1Y:308.7Z:-169.5	X:-1.4Y:289.8Z:-164.2	N/A
FR1 n78	SAR				N/A	0.87	0.951	N/A
	Axis				N/A	X:1.9Y:311.6Z:-169.9	X:-3Y:288.7Z:-164	N/A

Left Tilted								
Band		Ant0	Ant5	Ant1	Ant4	Ant6	Ant7	Ant8
GSM850 4TX	SAR	0.106		N/A				
	Axis	X:55.6Y:256.9Z:-171.5		N/A				
GSM1900 4TX	SAR		0.09		N/A			
	Axis		X:52.3Y:265.9 Z:-171.5		N/A			
WCDMA II	SAR		0.178		N/A			
	Axis		X:59Y:258.9 Z:-171.1		N/A			
WCDMA IV	SAR		0.223		N/A			
	Axis		X:51.3Y:252.3 Z:-169.9		N/A			
WCDMA V	SAR	0.129		N/A				
	Axis	X:56.4Y:261.7Z:-172.6		N/A				
LTE Band 2	SAR		0.167		N/A			
	Axis		X:54.5Y:257.6Z:-167.3		N/A			
LTE Band 5	SAR	0.152		N/A				
	Axis	X:59.1Y:259.1Z:-172.8		N/A				
LTE Band 7	SAR		0.109		N/A			
	Axis		X:54.7Y:257.2Z:-167.1		N/A			
LTE Band 66	SAR		0.188		N/A			
	Axis		X:51.3Y:252.5Z:-171.8		N/A			
LTE Band 38	SAR		0.063		N/A			
	Axis		X:54.2Y:257.5Z:-167		N/A			
LTE Band 41	SAR		0.063		N/A			
	Axis		X:53.4Y:258Z:-166.9		N/A			
FR1 n5	SAR	0.133		N/A				
	Axis	X:58.7Y:259.3Z:-172.8		N/A				
FR1 n7	SAR		0.096		N/A			
	Axis		X53.5Y:259.3Z:-168.2		N/A			
FR1 n41	SAR		0.125		N/A			
	Axis		X52.7Y:258.4Z:-166.8		N/A			
FR1 n77	SAR				N/A	1.042	N/A	N/A
	Axis				N/A	X:3.3Y:310.9Z:-169	N/A	N/A
FR1 n78	SAR				N/A	0.862	N/A	N/A
	Axis				N/A	X:3Y:311Z:-169	N/A	N/A

<Hotspot>

Back side					
BT Ant16	SAR	0.114	WLAN2.4G MIMO	SAR	0.708
	Axis	X:-35Y:88.9Z:-203.3		Axis	X:-55Y:76.8Z:-203.3
BT Ant7	SAR	0.201	WLAN5G MIMO	SAR	0.737
	Axis	X:-55Y:70.8Z:-203.3		Axis	X:-25Y:79.3Z:-203.3

Band		Ant0	Ant5	Ant1	Ant4	Ant6	Ant7	Ant8
GSM850 4TX	SAR	0.261		0.3				
	Axis	X:-25Y:-61.6Z:-203.3		X:5.0Y:79.1Z:-203.3				
GSM1900 4TX	SAR		0.571		N/A			
	Axis		X:5.0Y:-81.9Z:-203.3		N/A			
WCDMA I I	SAR		0.719		N/A			
	Axis		X:5.0Y:-78.7Z:-203.3		N/A			
WCDMA IV	SAR		0.613		N/A			
	Axis		X:5.0Y:-85.5Z:-203.3		N/A			
WCDMA V	SAR	0.343		0.219				
	Axis	X:-25Y:-61.6Z:-203.3		X:5.0Y:77.5Z:-203.3				
LTE Band 2	SAR		0.711		N/A			
	Axis		X:5.0Y:-82.3Z:-203.3		N/A			
LTE Band 5	SAR	0.385		0.222				
	Axis	X:-25Y:-66.1Z:-203.3		X:5.0Y:79.7Z:-203.3				
LTE Band 7	SAR		0.538		N/A			
	Axis		X:5.0Y:-77.1Z:-203.3		N/A			
LTE Band 66	SAR		0.71		N/A			
	Axis		X:5.0Y:-82.3Z:-203.3		N/A			
LTE Band 38	SAR		0.573		N/A			
	Axis		X:5.0Y:-77.8Z:-203.3		N/A			
LTE Band 41	SAR		0.52		N/A			
	Axis		X:5.0Y:-79.5Z:-203.3		N/A			
FR1 n5	SAR	0.419		0.398				
	Axis	X:-40Y:-63.5Z:-203.3		X:5.0Y:78.5Z:-203.3				
FR1 n7	SAR		0.453		N/A			
	Axis		X:5.0Y:-79.8Z:-203.3		N/A			
FR1 n41	SAR		0.521		N/A			
	Axis		X:5.0Y:-82.7Z:-203.3		N/A			
FR1 n77	SAR				N/A	0.365	N/A	0.485
	Axis				N/A	X:-25Y:76.3Z:-203.3	N/A	X:15Y:61.0Z:-203.3
FR1 n78	SAR				N/A	0.546	N/A	0.941
	Axis				N/A	X:-25Y:76.0Z:-203.3	N/A	X:15Y:61.0Z:-203.3

<Body-worn>

Fron side					
BT Ant16	SAR	0.029	WLAN2.4G MIMO	SAR	0.243
	Axis	X:25Y:59.5Z:-203.3		Axis	X:15Y:69.4Z:-203.3
BT Ant7	SAR	0.081	WLAN5G MIMO	SAR	0.284
	Axis	X:-35Y:61.7Z:-203.3		Axis	X:-25Y:81.7Z:-203.3

Back side					
BT Ant16	SAR	0.052	WLAN2.4G MIMO	SAR	0.31
	Axis	X:-65Y:58Z:-203.3		Axis	X:-55Y:70.5Z:-203.3
BT Ant7	SAR	0.11	WLAN5G MIMO	SAR	0.467
	Axis	X:-15Y:53.1Z:-203.3		Axis	X:-25Y:79.9Z:-203.3

Front side								
Band		Ant0	Ant5	Ant1	Ant4	Ant6	Ant7	Ant8
GSM850 4TX	SAR	N/A		N/A				
	Axis	N/A		N/A				
GSM1900 4TX	SAR		0.265		0.163			
	Axis		X:-40Y:-85Z:-203.3		X:-10Y:63.9Z:-203.3			
WCDMA II	SAR		0.627		0.404			
	Axis		X:-40Y:-86Z:-203.3		X:-40Y:-83.9Z:-203.3			
WCDMA IV	SAR		0.565		0.427			
	Axis		X:-10Y:-53.9Z:-203.3		X:-10Y:59.4Z:-203.3			
WCDMA V	SAR	N/A		N/A				
	Axis	N/A		N/A				
LTE Band 2	SAR		0.547		0.468			
	Axis		X:-40Y:-87.1Z:-203.3		X:-10Y:-76.7Z:-203.3			
LTE Band 5	SAR	N/A		N/A				
	Axis	N/A		N/A				
LTE Band 7	SAR		0.594		0.484			
	Axis		X:-45Y:-79.5Z:-203.3		X:-45Y:76.0Z:-203.3			
LTE Band 66	SAR		0.64		0.668			
	Axis		X:-10Y:-56.4Z:-203.3		X:-10Y:64.5Z:-203.3			
LTE Band 38	SAR		0.279		0.395			
	Axis		X:-45Y:-80.2Z:-203.3		X:-45Y:68.7Z:-203.3			
LTE Band 41	SAR		0.279		0.395			
	Axis		X:-45Y:-82.8Z:-203.3		X:-45Y:70.0Z:-203.3			
FR1 n5	SAR	N/A		N/A				
	Axis	N/A		N/A				
FR1 n7	SAR		0.545		0.466			
	Axis		X:-5Y:-73.7Z:-203.3		X:-5Y:73.7Z:-203.3			
FR1 n41	SAR		0.566		0.672			
	Axis		X:-45Y:-87.6Z:-203.3		X:-55Y:70.5Z:-203.3			
FR1 n77	SAR				0.427	N/A	N/A	N/A
	Axis				X:-45Y:79.9Z:-203.3	N/A	N/A	N/A
FR1 n78	SAR				0.607	N/A	N/A	N/A
	Axis				X:-45Y:80.2Z:-203.3	N/A	N/A	N/A

Back side								
Band		Ant0	Ant5	Ant1	Ant4	Ant6	Ant7	Ant8
GSM850 4TX	SAR	0.15		N/A				
	Axis	X:-25Y:-64.8Z:-203.3		N/A				
GSM1900 4TX	SAR		0.351		0.212			
	Axis		X:5Y:-84.1Z:-203.3		X:5Y:75.8Z:-203.3			
WCDMA II	SAR		0.798		0.538			
	Axis		X:5Y:-80.9Z:-203.3		X:-10Y:78.3Z:-203.3			
WCDMA IV	SAR		0.701		0.556			
	Axis		X:5Y:-80.8Z:-203.3		X:-25Y:68.2Z:-203.3			
WCDMA V	SAR	0.222		N/A				
	Axis	X:-40Y:-66.2Z:-203.3		N/A				
LTE Band 2	SAR		0.734		0.654			
	Axis		X:5Y:-82.8Z:-203.3		X:-10Y:83.7Z:-203.3			
LTE Band 5	SAR	0.233		N/A				
	Axis	X:-40Y:-64.7Z:-203.3		N/A				
LTE Band 7	SAR		0.721		0.56			
	Axis		X:5Y:-73.6Z:-203.3		X:5Y:69.6Z:-203.3			
LTE Band 66	SAR		0.785		0.846			
	Axis		X:5Y:-77.8Z:-203.3		X:-25Y:63.5Z:-203.3			
LTE Band 38	SAR		0.343		0.427			
	Axis		X:-5Y:-75.8Z:-203.3		X:-5Y:76Z:-203.3			
LTE Band 41	SAR		0.343		0.427			
	Axis		X:5Y:-76.2Z:-203.3		X:5Y:68.3Z:-203.3			
FR1 n5	SAR	0.199		N/A				
	Axis	X:-40Y:-65.2Z:-203.3		N/A				
FR1 n7	SAR		0.746		0.599			
	Axis		X:-5Y:-86Z:-203.3		X:-35Y:65.6Z:-203.3			
FR1 n41	SAR		0.731		0.751			
	Axis		X:-5Y:-86Z:-203.3		X:-35Y:69.1Z:-203.3			
FR1 n77	SAR				0.891	0.881	N/A	1.006
	Axis				X:-5Y:75.1Z:-203.3	X:-55Y:73.9Z:-203.3	N/A	X:5Y:57Z:-203.3
FR1 n78	SAR				0.994	1.009	N/A	1.083
	Axis				X:5Y:76.5Z:-203.3	X:-55Y:74.4Z:-203.3	N/A	X:5Y:57.5Z:-203.3

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

18. Uncertainty Assessment

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

19. References

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

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

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

[4] SPEAG DASY System Handbook

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

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

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

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

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

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

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

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

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

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

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