FCC SAR Test Report

APPLICANT	: Motorola Mobility LLC
EQUIPMENT	: Mobile Cellular Phone
BRAND NAME	: Motorola
MODEL NAME	: XT2305-1
FCC ID	: IHDT56AL5
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
FA322305	Rev. 01	Initial issue of report.	Apr. 23, 2023
FA322305	Rev. 02	Updated the relevant data of LTE Band 41 and FR1 n41 at Ant 6 and updated the relevant data of FR1 n48 at Ant 7 at head exposure condition.	May 10, 2023

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2305-1,** are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 5mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.69	1.27	1.27	1.59
		GSM1900	0.13	1.18	1.12	
	WCDMA	WCDMA II	0.22	1.06	1.04	
		WCDMA IV	0.13	1.07	1.18	
		WCDMA V	0.45	1.21	1.21	
	LTE	LTE Band 7	0.85	1.09	**1.36**	
		LTE Band 12/17	0.86	1.12	1.12	
		LTE Band 13	0.70	1.34	1.34	
		LTE Band 14	0.74	1.36	**1.36**	
		LTE Band 25/2	0.92	1.29	1.20	
		LTE Band 26/5	0.93	1.05	1.05	
		LTE Band 30	0.83	1.24	1.20	
		LTE Band 66/4	0.79	1.28	1.17	
		LTE Band 71	0.79	0.81	0.85	
		LTE Band 41/38	0.99	1.12	1.09	
		LTE Band 48	0.90	1.21	1.28	
	5G NR	FR1 n7	0.84	**1.44**	1.31	
		FR1 n12	0.82	0.72	0.72	
		FR1 n14	0.88	0.77	0.77	
		FR1 n25/n2	0.93	1.15	1.16	
		FR1 n26/n5	0.99	0.95	0.95	
		FR1 n30	0.88	1.04	1.17	
		FR1 n66	0.88	1.20	1.14	
		FR1 n70	0.80	1.09	1.10	
		FR1 n71	0.90	0.56	0.56	
		FR1 n41/n38	0.92	1.43	1.26	
		FR1 n48	0.96	1.23	1.10	
		FR1 n77/n78	0.95	1.14	1.22	
DTS	WLAN	2.4GHz WLAN	0.96	0.64	1.17	1.59
NII		5GHz WLAN	**1.18**	0.70	1.14	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.74	0.14	0.53	1.59

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	GSM	GSM850	3.16	3.99
		GSM1900	3.25	
	WCDMA	WCDMA II	2.70	
		WCDMA IV	2.73	
		WCDMA V	1.55	
	LTE	LTE Band 7	2.68	
		LTE Band 13	0.93	
		LTE Band 14	1.82	
		LTE Band 25/2	2.99	
		LTE Band 26/5	1.52	
		LTE Band 30	2.49	
		LTE Band 66/4	2.70	
		LTE Band 41/38	2.50	
		LTE Band 48	3.13	
	5G NR	FR1 n7	2.71	
		FR1 n25/n2	2.76	
		FR1 n30	2.70	
		FR1 n66	3.09	
		FR1 n70	2.87	
		FR1 n41/n38	**3.49**	
		FR1 n48	2.62	
		FR1 n77/n78	3.08	
DTS	WLAN	2.4GHz WLAN	2.62	3.96
NII		5GHz WLAN	2.66	3.99
Date of Testing:			2023/3/11 ~ 2023/5/4	

Remark:
1. This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE B2 / B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41.
2. This device supports 5GNR n78/n38/n5/n2 and n77/n41/n26/n25. Since the supported frequency span for 5GNR n78/n38/n5/n2 falls completely within the supports frequency span for n77/n41/n26/n25, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for n77/n41/n26/n25.

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	Motorola Mobility LLC
Address	222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

Manufacturer	
Company Name	Motorola Mobility LLC
Address	222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

3. Guidance Applied

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

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

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2305-1
FCC ID	IHDT56AL5
IMEI Code	351048560018032
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 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 ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz WLAN 6GHz U-NII-5: 5925 MHz ~ 6425 MHz WLAN 6GHz U-NII-6: 6425 MHz ~ 6525 MHz WLAN 6GHz U-NII-7: 6525 MHz ~ 6875 MHz WLAN 6GHz U-NII-8: 6875 MHz ~ 7125 MHz Bluetooth: 2402 MHz ~ 2480 MHz WPT: 111 kHz ~ 145 kHz NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+(16QAM uplink is not 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 802.11ac/ax VHT20/VHT40/HE20/HE40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac/ax VHT20/VHT40/VHT80/HE20/HE40/HE80 WLAN 6GHz 802.11ax HE20/HE40/HE80 Bluetooth BR/EDR/LE WPT: ASK NFC: ASK
HW Version	DVT2
SW Version	TTT33.46
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype

Remark:

1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
3. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only). WLAN6GHz has no hotspot function.
4. The 2.4GHz/5GHz/6GHz WLAN can transmit in SISO and MIMO antenna mode.
5. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12.
6. For dual SIM card mobile has single SIM slots + eSIM (electronic SIM) and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active).
7. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the MediaTek TA-SAR will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. And the device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to power table at appendix E.
8. For WLAN/BT/BLE when transmit simultaneous with WWAN, power reduction will be activated to head. For WLAN/BT/BLE when transmit simultaneous with WWAN and Proximity sensors trigger, power reduction will be activated to body-worn and Handheld.
9. For some WWAN bands, sensor on reduced power level is higher than hotspot reduced power level, so front/back sensor on SAR can represent hotspot conservatively.
10. This device supports HPUE for LTE Band 41 with class 2 level, HPUE power has been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
11. 5GNR n41/n77 supports HPUE, HPUE power and SAR testing performed separately.
12. 5GNR n41/n77 HPUE with higher power, 5G NR n41/n77 HPUE SAR can represent power class 3 level SAR.
13. 5GNR n41/n77/n78/n48 supports UL MIMO.
14. The device supports HPUE (power class 2) under SISO mode and HPUE (power class 1.5) under UL MIMO mode for 5G NR n41/n77.
15. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
16. 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.
17. 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.
18. 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.
19. 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.
20. For 5GNR FDD/TDD supports SCS15KHz and SCS30KHz, after verification for 30KHz at FDD power level is less than 15KHz at FDD power level, also verification for 15KHz at TDD power level is less than 30KHz at TDD power level, so only show 15KHz at FDD power and 30KHz at TDD power, and chose higher power which is SCS15KHz for FDD bands and SCS30KHz for TDD bands to perform SAR testing.
21. SAR and Power density test report for WLAN6GHz U-NII-5/6/7/8 will be separately submitted. About co-located SAR with WWAN/Bluetooth always chose higher SAR of WLAN5G U-NII-1/2A/2C/3 and WLAN6GHz U-NII-5/6/7/8.
22. RF exposure report for WPC (Wireless power charging) will be separately submitted.
23. This device has NFC function and the NFC SAR report will be separately submitted.
24. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
SA	n2	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n5	FDD	15	5, 10, 15, 20
		FDD	30	10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40, 50
		FDD	30	10, 15, 20, 25, 30, 40, 50
	n12	FDD	15	5, 10, 15
		FDD	30	10, 15
	n14	FDD	15	5, 10
		FDD	30	10
	n25	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n26	FDD	15	5, 10, 15, 20
		FDD	30	10, 15, 20
	n30	FDD	15	5, 10
		FDD	30	10
	n66	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n70	FDD	15	5, 10, 15
		FDD	30	10, 15
	n71	FDD	15	5, 10, 15, 20
		FDD	30	10, 15, 20
	n38	TDD	15	5, 10, 15, 20, 25, 30, 40
		TDD	30	10, 15, 20, 25, 30, 40
	n41	TDD	15	10, 15, 20, 30, 40, 50,
		TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n48	TDD	15	10, 15, 20, 30, 40 50
		TDD	30	10, 15, 20, 30, 40, 50, 60, 80, 90, 100
	n77	TDD	15	10, 15, 20, 25, 30, 40, 50
		TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	15	10, 15, 20, 25, 30, 40, 50
		TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
NSA	n2	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n5	FDD	15	5, 10, 15, 20
		FDD	30	10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40, 50
		FDD	30	10, 15, 20, 25, 30, 40, 50
	n25	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n30	FDD	15	5, 10
		FDD	30	10
	n66	FDD	15	5, 10, 15, 20, 25, 30, 40
		FDD	30	10, 15, 20, 25, 30, 40
	n71	FDD	15	5, 10, 15, 20
		FDD	30	10, 15, 20
	n41	TDD	15	10, 15, 20, 30, 40, 50,
		TDD	30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n77	TDD	15	10, 15, 20, 25, 30, 40, 50
		TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	15	10, 15, 20, 25, 30, 40, 50
		TDD	30	10, 15, 20, 25, 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>IHDT56AL5</td></tr>
<tr><td>Equipment Name</td><td>Mobile Cellular Phone</td></tr>
<tr><td>Operating Frequency Range of each LTE transmission band</td><td>LTE Band 2: 1850 MHz ~ 1910 MHz
LTE Band 4: 1710 MHz ~ 1755 MHz
LTE Band 5: 824 MHz ~ 849 MHz
LTE Band 7: 2500 MHz ~ 2570 MHz
LTE Band 12: 699 MHz ~ 716 MHz
LTE Band 13: 777 MHz ~ 787 MHz
LTE Band 14: 788 MHz ~ 798 MHz
LTE Band 17: 704 MHz ~ 716 MHz
LTE Band 25: 1850 MHz ~ 1915 MHz
LTE Band 26: 814 MHz ~ 849 MHz
LTE Band 30: 2305 MHz ~ 2315 MHz
LTE Band 38: 2570 MHz ~ 2620 MHz
LTE Band 41: 2496 MHz ~ 2690 MHz
LTE Band 48: 3550 MHz ~ 3700 MHz
LTE Band 66: 1710 MHz ~ 1780 MHz
LTE Band 71: 663 MHz ~ 698 MHz</td></tr>
<tr><td>Channel Bandwidth</td><td>LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz
LTE Band 13: 5MHz, 10MHz
LTE Band 14: 5MHz, 10MHz
LTE Band 17: 5MHz, 10MHz
LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz
LTE Band 30: 5MHz, 10MHz
LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz</td></tr>
<tr><td>uplink modulations used</td><td>QPSK / 16QAM / 64QAM / 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 and inter-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance.
2. This device supports maximum of 4 carriers in the downlink and 2 carriers in the uplink.</td></tr>
</table>

Transmission (H, M, L) channel numbers and frequencies in each LTE band

LTE Band 2

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900

LTE Band 4

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745

LTE Band 5

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844

LTE Band 7

	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560

LTE Band 12

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711

LTE Band 13

	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	23205	779.5	23230	782
M	23230	782		
H	23255	784.5		

LTE Band 14

	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Channel #	Channel #	Freq.(MHz)
L	23305	790.5	23330	793
M	23330	793		
H	23355	795.5		

LTE Band 17

	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq. (MHz)
L	23755	706.5	23780	709
M	23790	710	23790	710
H	23825	713.5	23800	711

LTE Band 25

	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905

LTE Band 26

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

LTE Band 30				
	Bandwidth 5 MHz		Bandwidth 10 MHz	
	Channel #	Freq.(MHz)	Channel #	Freq.(MHz)
L	27685	2307.5	27710	2310
M	27710	2310		
H	27735	2312.5		

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

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

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

LTE Band 71								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673
M	133247	675.5	133272	678	133297	680.5	133322	683
H	133447	695.5	133422	693	133397	690.5	133372	688

LTE Band 48								
	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	55265	3552.5	55290	3555	55315	3557.5	55340	3560
LM	55810	3607	55815	3607.5	55820	3608	55830	3609
MH	56170	3643	56165	3642.5	56160	3642	56150	3641
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690

<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 2	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 25	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 17			Yes	Yes		
LTE Band 12	Yes	Yes	Yes	Yes		
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	ECI 2	ECI 3	ECI 4	ECI 6	ECI 7
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
LTE Band 2	Ant 0	24.00	24.00	17.00	24.00	21.50	15.00
LTE Band 25		24.00	24.00	17.00	24.00	21.50	15.00
LTE Band 2	Ant 1	24.00	16.50	17.50	24.00	20.00	15.00
LTE Band 25		24.00	16.50	17.50	24.00	20.00	15.00
LTE Band 5	Ant 0	24.00	24.00	22.50	24.00	24.00	22.50
LTE Band 26		24.00	24.00	22.50	24.00	24.00	22.50
LTE Band 5	Ant 1	24.00	21.00	22.50	24.00	23.00	20.50
LTE Band 26		24.00	21.00	22.50	24.00	23.00	20.50
LTE Band 12	Ant 0	24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 17		24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 12	Ant 1	24.00	21.00	23.00	24.00	24.00	21.50
LTE Band 17		24.00	21.00	23.00	24.00	24.00	21.50
LTE Band 4	Ant 0	24.00	24.00	18.00	24.00	20.50	16.00
LTE Band 66		24.00	24.00	18.00	24.00	20.50	16.00
LTE Band 4	Ant 1	24.00	16.00	18.00	24.00	19.50	15.00
LTE Band 66		24.00	16.00	18.00	24.00	19.50	15.00
LTE Band 38	Ant 0	24.00	24.00	21.40	24.00	24.00	20.40
LTE Band 41		24.00	24.00	21.40	24.00	24.00	20.40
LTE Band 38	Ant 1	24.00	17.40	17.90	24.00	20.40	15.40
LTE Band 41		24.00	17.40	17.90	24.00	20.40	15.40

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 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/TDD: SCS15KHz/SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n2	LTE B5/7/12/13/14/30/66/71/48
LTE Anchor Bands for n5	LTE B2/7/30/48/66
LTE Anchor Bands for n7	LTE B2/5/12/66
LTE Anchor Bands for n25	LTE B12/26/66
LTE Anchor Bands for n30	LTE B2/5/12/14/66
LTE Anchor Bands for n41	LTE B2/4/12/25/26/66/71
LTE Anchor Bands for n66	LTE B2/5/7/12/13/14/25/30/48/71
LTE Anchor Bands for n71	LTE B2/7/48/66
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/30/66
LTE Anchor Bands for n78	LTE B2/4/5/7/12/13/25/66/71

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

NR Band 2 SCS15KHz

	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	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870
M	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895	378000	1890

NR Band 2 SCS30KHz

	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)
L	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870
M	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880
H	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895	378000	1890

NR Band 5 SCS15KHz

	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 5 SCS30KHz

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

NR Band 7 SCS15KHz																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	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	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520	505000	2525
M	507000	2535	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	509000	2545

NR Band 7 SCS30KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520	505000	2525
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550	509000	2545

NR Band 12 SCS15KHz						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	140300	701.5	140800	704	141300	706.5
M	141500	707.5	141500	707.5	141500	707.5
H	142700	713.5	142200	711	141700	708.5

NR Band 12 SCS30KHz				
	Bandwidth 10MHz		Bandwidth 15MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	140800	704	141300	706.5
M	141500	707.5	141500	707.5
H	142200	711	141700	708.5

NR Band 14 SCS15KHz				
	Bandwidth 5MHz		Bandwidth 10MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	158100	790.5	158600	793
M	158600	793		
H	159100	795.5		

NR Band 14 SCS30KHz		
	Bandwidth 10MHz	
	Ch. #	Freq. (MHz)
L	158600	793
M		
H		

NR Band 25 SCS15KHz														
	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	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379000	1895

NR Band 25 SCS30KHz												
	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)
L	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379000	1895

NR Band 26 SCS15KHz								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	163300	816.5	163800	819	164300	821.5	164800	824
M	166300	831.5	166300	831.5	166300	831.5	166300	831.5
H	169300	846.5	168800	844	168300	841.5	167800	839

NR Band 26 SCS30KHz						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	163800	819	164300	821.5	164800	824
M	166300	831.5	166300	831.5	166300	831.5
H	168800	844	168300	841.5	167800	839

NR Band 30 SCS15KHz				
	Bandwidth 5MHz		Bandwidth 10MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	461500	2307.5	462000	2310
M	462000	2310		
H	462500	2312.5		

NR Band 30 SCS30KHz		
	Bandwidth 10MHz	
	Ch. #	Freq. (MHz)
L	462000	2310
M		
H		

NR Band 66 SCS15KHz														
	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	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	346000	1730
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352000	1760

NR Band 66 SCS30KHz												
	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)
L	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	346000	1730
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745
H	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352000	1760

NR Band 70 SCS15KHz						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	339500	1697.5	340000	1700	340500	1702.5
M	340500	1702.5	340500	1702.5		
H	341500	1707.5	341000	1705		

NR Band 70 SCS30KHz				
	Bandwidth 10MHz		Bandwidth 15MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	340000	1700	340500	1702.5
M	340500	1702.5		
H	341000	1705		

NR Band 71 SCS15KHz								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133100	665.5	133600	668	134100	670.5	134600	673
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5
H	139100	695.5	138600	693	138100	690.5	137600	688

NR Band 71 SCS30KHz						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133600	668	134100	670.5	134600	673
M	136100	680.5	136100	680.5	136100	680.5
H	138600	693	138100	690.5	137600	688

NR Band 38 SCS15KHz														
	Bandwidth5MHz		Bandwidth10MHz		Bandwidth 15MHz		Bandwidth20MHz		Bandwidth25MHz		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	514500	2572.5	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	523500	2617.5	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98

NR Band 38 SCS30KHz												
	Bandwidth10MHz		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)
L	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98

NR Band 41 SCS15KHz												
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99

NR Band 41 SCS30KHz																				
	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	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	500202	2501.01	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	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	537000	2685	529998	2649.99	528996	2644.98	528000	2640

NR Band 48 SCS15Hz												
	Bandwidth 10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	638000	3570	638334	3575.01
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646332	3694.98	646166	3692.49	646000	3690	645666	3684.99	645332	3679.98	645000	3675

NR Band 48 SCS30Hz																				
	Bandwidth 10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	638000	3570	638334	3575.01	638668	3580.02	639334	3590.01	639668	3595.02	640000	3600
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646332	3694.98	646166	3692.49	646000	3690	645666	3684.99	645332	3679.98	645000	3675	644666	3669.99	644000	3660	643666	3654.99	643332	3649.98

NR Band 77 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	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	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01
M	656000	3840	656000	3840	656000	3840	656000	3840.00	656000	3840.00	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.50	664332	3964.98	664000	3960	663666	3954.99

NR Band 77 SCS30KHz																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		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)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	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	3840	656000	3840	656000	3840.00	656000	3840.00	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.50	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930

NR Band 78 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	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	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01
M	650000	3750	650000	3750	650000	3750	650000	3750.00	650000	3750.00	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652500	3787.5	652334	3785.01	652000	3780	651668	3775.02

NR Band 78 SCS30KHz																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		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)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	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	3750.00	650000	3750.00	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652500	3787.5	652334	3785.01	652000	3780	651668	3775.02	651334	3770.01	651000	3765	650668	3760.02	650334	3755.01		

For <3450 MHz ~ 3550 MHz >

NR Band 77 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	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	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02
M	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	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525

NR Band 77 SCS30KHz																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		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)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	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	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

NR Band 78 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	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	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02
M	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	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525

NR Band 78 SCS30KHz																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		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)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	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	633334	3500.01
H	636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

<For NR Overlap Bands Description>

3) NR Bands BW

Band	5 MHz	10 MHz	15 MHz	20 MHz	25 MHz	30 MHz	40 MHz	50 MHz	60 MHz	70 MHz	80 MHz	90 MHz	100 MHz
FR1 n2	Yes	Yes	Yes	Yes	Yes	Yes	Yes						
FR1 n25	Yes	Yes	Yes	Yes	Yes	Yes	Yes						
FR1 n5	Yes	Yes	Yes	Yes									
FR1 n26	Yes	Yes	Yes	Yes									
FR1 n38		Yes	Yes	Yes	Yes	Yes	Yes						
FR1 n41		Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FR1 n78		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FR1 n77		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

4) NR Bands tune up:

Band	Antenna	Default	ECI 2	ECI 3	ECI 4	ECI 6	ECI 7
		Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit	Tune up Limit
FR1 n2	Ant 0	24.00	24.00	19.00	24.00	24.00	17.00
FR1 n25		24.00	24.00	19.00	24.00	24.00	17.00
FR1 n2	Ant 1	24.00	19.00	19.00	24.00	22.50	17.50
FR1 n25		24.00	19.00	19.00	24.00	22.50	17.50
FR1 n5	Ant 0	24.00	24.00	24.00	24.00	24.00	24.00
FR1 n26		24.00	24.00	24.00	24.00	24.00	24.00
FR1 n5	Ant 1	24.00	23.00	24.00	24.00	24.00	23.00
FR1 n26		24.00	23.00	24.00	24.00	24.00	23.00
FR1 n38	Ant 0	24.00	24.00	20.00	24.00	24.00	18.50
FR1 n41		24.00	24.00	20.00	24.00	24.00	18.50
FR1 n38	Ant 1	24.00	17.50	17.00	24.00	19.50	13.50
FR1 n41		24.00	17.50	17.00	24.00	19.50	13.50
FR1 n78	Ant 2	24.00	24.00	23.00	24.00	21.50	18.50
FR1 n77		24.00	24.00	23.00	24.00	21.50	18.50
FR1 n78	Ant 4	24.00	21.00	21.00	24.00	21.00	16.50
FR1 n77		24.00	21.00	21.00	24.00	21.00	16.50
FR1 n78	Ant 5	24.00	24.00	24.00	24.00	24.00	20.50
FR1 n77		24.00	24.00	24.00	24.00	24.00	20.50
FR1 n78	Ant 7	24.00	16.50	19.50	24.00	21.50	17.00
FR1 n77		24.30	16.80	19.80	24.30	21.80	17.30

5. TA-SAR feature for RF Exposure compliance

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

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

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

The Plimit values correspond to SAR_design_target. The power will be fixed at the static reduce power level at different exposure conditions for RF exposure compliance. For the GSM (TDD) Plimit power levels in the table correspond to the burst average power levels which don't account for TX duty cycle.

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 TA-SAR algorithm. SAR char will be entered via the MediaTek's NV suggestion to enable the TA-SAR 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 ECI

<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 TA-SAR to control and manage RF exposure for f < 6 GHz.

<SAR design target and uncertainty>

Item	Uncertainty dB (k=2)
Total uncertainty	1.5

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 TA-SAR 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.

TA-SAR 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.

<P_{limit} for supported technologies and bands>

Band	Antenna	Head (ECI2)	Body Worn (ECI3)	Hotspot (ECI7)	Extremity (ECI6)	Sensor off (ECI4)	Pmax*
GSM850	Ant 0	27.80	22.00	22.00	25.50	25.50	25.50
GSM1900	Ant 0	32.20	15.00	13.00	20.50	22.50	22.50
WCDMA II	Ant 0	30.50	15.50	13.50	20.50	23.00	23.00
WCDMA IV	Ant 0	32.70	17.00	15.00	20.00	23.00	23.00
WCDMA V	Ant 0	27.40	21.50	21.50	26.00	23.00	23.00
LTE Band 7	Ant 0	35.20	17.00	16.00	20.00	23.00	23.00
LTE Band 7	Ant 1	13.50	13.00	10.50	16.50	23.00	23.00
LTE Band 12(17)	Ant 0	30.10	23.80	23.80	23.00	23.00	23.00
LTE Band 12(17)	Ant 1	20.00	22.00	20.50	23.00	23.00	23.00
LTE Band 13	Ant 0	29.40	23.00	23.00	28.60	23.00	23.00
LTE Band 13	Ant 1	21.00	23.00	21.00	23.00	23.00	23.00
LTE Band 14	Ant 0	29.10	22.50	22.50	25.40	23.00	23.00
LTE Band 14	Ant 1	21.00	23.00	20.50	23.00	23.00	23.00
LTE Band 25(2)	Ant 0	32.20	16.00	14.00	20.50	23.00	23.00
LTE Band 25(2)	Ant 1	15.50	16.50	14.00	19.00	23.00	23.00
LTE Band 26(5)	Ant 0	28.30	21.50	21.50	25.30	23.00	23.00
LTE Band 26(5)	Ant 1	20.00	21.50	19.50	22.00	23.00	23.00
LTE Band 30	Ant 0	35.40	17.00	14.00	21.00	23.00	23.00
LTE Band 30	Ant 1	15.00	16.00	13.00	18.00	23.00	23.00
LTE Band 41-HPUE	Ant 0	36.00	18.40	17.40	21.40	22.40	22.40
LTE Band 41(38)	Ant 0	36.00	18.40	17.40	21.40	22.40	21.00
LTE Band 41-HPUE	Ant 1	14.40	14.90	12.40	17.40	22.40	22.40
LTE Band 41(38)	Ant 1	14.40	14.90	12.40	17.40	22.40	21.00
LTE Band 41-HPUE	Ant 2	33.00	24.60	22.40	22.40	22.40	22.40
LTE Band 41	Ant 2	33.00	24.60	22.40	22.40	22.40	21.00
LTE Band 41-HPUE	Ant 6	20.90	20.40	16.40	22.40	22.40	22.40
LTE Band 41	Ant 6	20.90	20.40	16.40	22.40	22.40	21.00
LTE Band 48	Ant 4	16.00	16.00	12.50	18.50	21.00	21.00
LTE Band 48	Ant 2	24.20	19.00	15.00	18.00	21.00	21.00
LTE Band 48	Ant 7	15.50	16.50	14.00	18.50	21.00	21.00
LTE Band 48	Ant 5	29.00	21.00	17.50	20.00	20.00	21.00
LTE Band 66(4)	Ant 0	33.20	17.00	15.00	19.50	23.00	23.00
LTE Band 66(4)	Ant 1	15.00	17.00	14.00	18.50	23.00	23.00
LTE Band 71	Ant 0	29.10	24.90	24.90	23.00	23.00	23.00
LTE Band 71	Ant 1	19.50	23.00	21.00	23.00	23.00	23.00
5G NR n7	Ant 0	36.00	18.50	18.00	23.80	23.00	23.00
5G NR n7	Ant 1	15.00	15.50	13.50	18.00	23.00	23.00
5G NR n12	Ant 0	32.30	25.50	25.50	23.00	23.00	23.00
5G NR n12	Ant 1	21.00	25.30	23.00	23.00	23.00	23.00
5G NR n14	Ant 0	32.90	25.20	25.20	23.00	23.00	23.00
5G NR n14	Ant 1	22.00	24.70	23.50	23.00	23.00	23.00
5G NR n25(2)	Ant 0	32.70	18.00	16.00	23.60	23.00	23.00
5G NR n25(2)	Ant 1	18.00	18.00	16.50	21.50	23.00	23.00
5G NR n26(5)	Ant 0	30.60	24.20	24.20	23.00	23.00	23.00
5G NR n26(5)	Ant 1	22.00	23.50	22.00	23.00	23.00	23.00
5G NR n30	Ant 0	35.80	18.50	17.00	23.80	23.00	23.00
5G NR n30	Ant 1	17.00	18.00	15.00	20.00	23.00	23.00

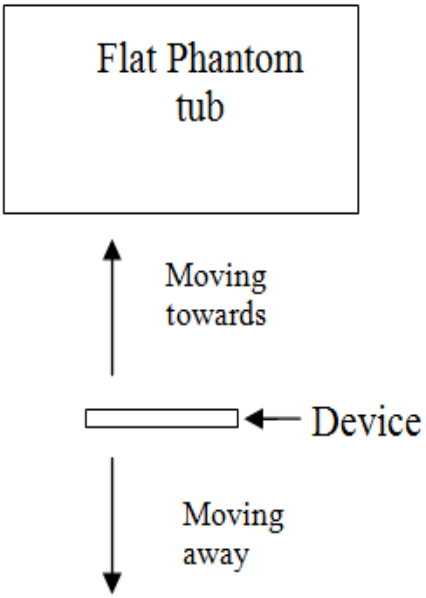
5G NR n41-HPUE	Ant 0	37.10	19.00	17.50	23.00	26.00	26.00
5G NR n41/38	Ant 0	37.10	19.00	17.50	23.00	26.00	23.00
5G NR n41-HPUE	Ant 1	16.50	16.00	12.50	18.50	26.00	26.00
5G NR n41/38	Ant 1	16.50	16.00	12.50	18.50	26.00	23.00
5G NR n41-HPUE	Ant 2	33.50	25.00	23.00	22.00	26.00	26.00
5G NR n41	Ant 2	33.50	25.00	23.00	22.00	26.00	23.00
5G NR n41-HPUE	Ant 6	20.00	20.00	15.00	22.00	22.00	26.00
5G NR n41	Ant 6	20.00	20.00	15.00	22.00	22.00	23.00
5G NR n66	Ant 0	33.60	19.00	17.50	23.00	23.00	23.00
5G NR n66	Ant 1	19.00	20.00	17.00	21.50	23.00	23.00
5G NR n70	Ant 0	34.10	20.00	18.00	22.50	23.00	23.00
5G NR n70	Ant 1	19.00	20.50	19.00	21.00	23.00	23.00
5G NR n71	Ant 0	32.20	26.50	26.50	23.00	23.00	23.00
5G NR n71	Ant 1	22.00	25.80	25.00	23.00	23.00	23.00
5G NR n48	Ant 4	19.00	19.00	14.00	20.00	23.00	23.00
5G NR n48	Ant 2	26.10	22.00	18.00	21.00	23.00	23.00
5G NR n48	Ant 7	16.50	18.00	15.00	21.00	23.00	23.00
5G NR n48	Ant 5	28.50	23.00	21.00	24.80	23.00	23.00
5G NR n77-HPUE	Ant 4	20.00	20.00	15.50	20.00	26.00	26.00
5G NR n77(78)	Ant 4	20.00	20.00	15.50	20.00	26.00	23.00
5G NR n77-HPUE	Ant 2	29.00	22.00	17.50	20.50	26.00	26.00
5G NR n77(78)	Ant 2	29.00	22.00	17.50	20.50	26.00	23.00
5G NR n78	Ant 7	15.50	18.50	16.00	20.50	23.00	23.00
5G NR n77 PC2&PC3	Ant 7	15.80	18.80	16.30	20.80	23.30	23.30
5G NR n77-HPUE	Ant 5	30.60	24.50	19.50	23.50	23.50	26.00
5G NR n77(78)	Ant 5	30.60	24.50	19.50	23.50	23.50	23.00

Note: 1) *P_{max} is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1.0 dB device 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 & NR TDD).
3) The max allowed output power is the Plimit + 1.0 dB device uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.

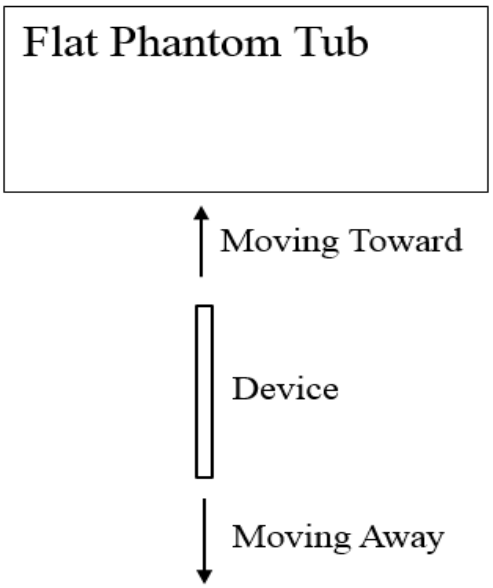
6. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance>:

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (5850MHz) and lowest (750MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensors placed coincident with antenna elements at the top and bottom ends of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back of the device.
3. The output power will reduce to body worn power level when top and bottom sensor pad be detected.
4. The sensors used to detect the proximity of the user's body at the front or back surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s). When front or back body worn condition is detected reduced power will be active.
5. The device employs proximity sensors also can detect the presence of the user's a finger or hand when handheld state at the front/back/top/bottom/left/right sides of the device. When front/back/top/bottom/left/right sides of handheld condition is detected reduced power will be active.
6. 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/Handheld detection test set-up, Front and Back sides



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

<P-Sensor>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	20	21	18	24

<Handheld for ANT 0>

Proximity Sensor Triggering Distance (mm)						
Position	Front		Back		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	10	14	8	14	10	16

<Handheld for ANT1&4>

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	7	14	7	10	8	13	9	13

<Handheld for ANT2>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	10	13	7	9	12	16	8	11

<Handheld for ANT 3&7&8>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Right Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	10	13	7	9	10	13	12	16

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:

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

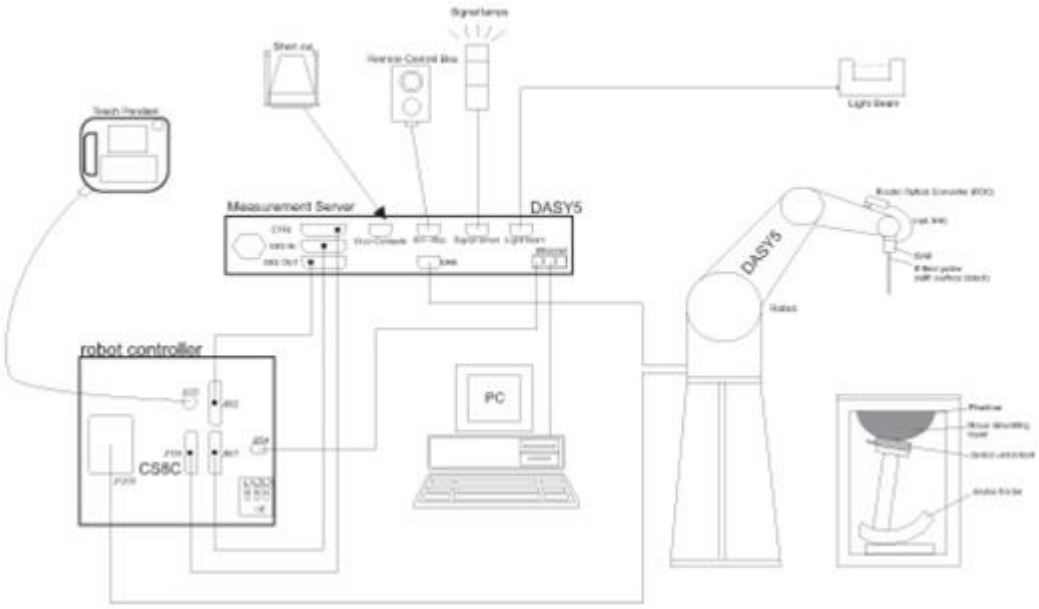
SAR is expressed in units of Watts per kilogram (W/kg)

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

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 DASY5 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win10 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

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.

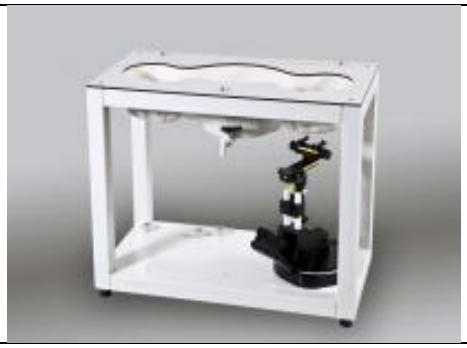
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

9.3 Phantom

<SAM Twin Phantom>

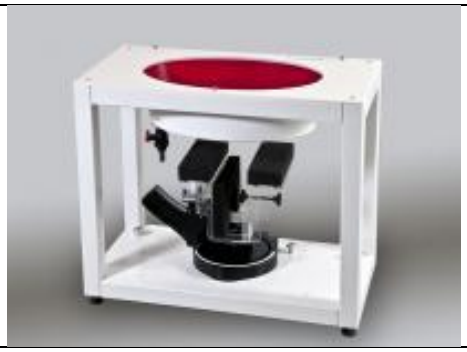
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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

10.4 Zoom Scan

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

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

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

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

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

10.5 Volume Scan Procedures

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

10.6 Power Drift Monitoring

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

11. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2022/2/24	2025/2/23
SPEAG	835MHz System Validation Kit	D835V2	4d091	2022/8/19	2023/8/18
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2025/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2021/12/20	2024/12/19
SPEAG	2300MHz System Validation Kit	D2300V2	1055	2020/9/15	2023/9/13
SPEAG	2450MHz System Validation Kit	D2450V2	1040	2020/5/6	2023/5/4
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/24
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2020/11/25	2023/11/23
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2020/11/25	2023/11/23
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2020/5/14	2023/5/12
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2022/9/23	2023/9/22
SPEAG	Data Acquisition Electronics	DAE4	1338	2022/12/15	2023/12/14
SPEAG	Dosimetric E-Field Probe	EX3DV4	3857	2022/12/14	2023/12/13
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	1144	2022/8/15	2023/8/14
Anritsu	Vector Signal Generator	MG3710A	6201682672	2023/1/5	2024/1/4
Rohde & Schwarz	Power Meter	NRVD	102081	2022/7/14	2023/7/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2022/7/14	2023/7/13
R&S	BLUETOOTH TESTER	CBT	101246	2022/5/24	2023/5/23
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2022/10/12	2023/10/11
TES	DIGITAC THERMOMETER	1310	220305411	2023/1/8	2024/1/7
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/7/20	2023/7/19
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. 11.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.2.

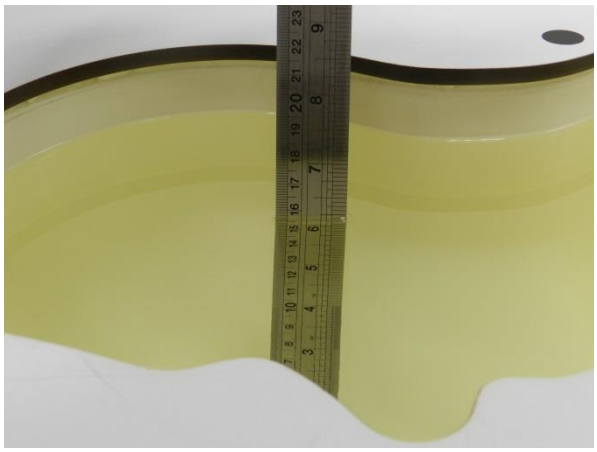


Fig 11.1 Photo of Liquid Height for Head SAR

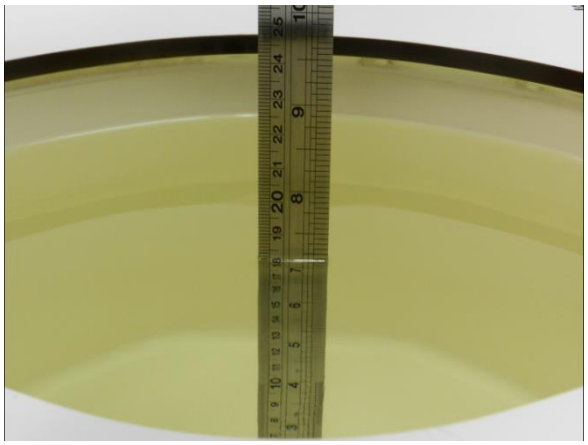


Fig 11.2 Photo of Liquid Height for Body SAR

12.2 Tissue Verification

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

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

Simulating Liquid for 5GHz, Manufactured by SPEAG

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.6	0.903	41.448	0.89	41.90	1.46	-1.08	±5	2023/3/11
835	Head	22.7	0.934	41.163	0.90	41.50	3.78	-0.81	±5	2023/3/12
1750	Head	22.6	1.401	40.508	1.37	40.10	2.26	1.02	±5	2023/3/13
1900	Head	22.8	1.422	38.963	1.40	40.00	1.57	-2.59	±5	2023/3/14
2300	Head	22.9	1.719	38.686	1.67	39.50	2.93	-2.06	±5	2023/3/15
2450	Head	22.8	1.809	38.523	1.80	39.20	0.50	-1.73	±5	2023/3/29
2600	Head	22.8	1.926	38.230	1.96	39.00	-1.73	-1.97	±5	2023/3/16
3500	Head	22.7	2.834	39.051	2.91	37.90	-2.61	3.04	±5	2023/3/17
3700	Head	22.6	3.043	38.220	3.12	37.70	-2.47	1.38	±5	2023/3/18
3900	Head	22.7	3.228	38.420	3.32	37.50	-2.77	2.45	±5	2023/3/19
5250	Head	22.6	4.573	35.719	4.71	35.90	-2.91	-0.50	±5	2023/3/30
5600	Head	22.7	4.946	35.100	5.07	35.50	-2.45	-1.13	±5	2023/3/31
5750	Head	22.6	5.106	34.868	5.22	35.40	-2.18	-1.50	±5	2023/4/1
750	Head	22.8	0.900	41.197	0.89	41.90	1.12	-1.68	±5	2023/3/20
835	Head	22.6	0.929	40.902	0.90	41.50	3.22	-1.44	±5	2023/3/21
1750	Head	22.7	1.353	40.085	1.37	40.10	-1.24	-0.04	±5	2023/3/22
1900	Head	22.8	1.459	40.000	1.40	40.00	4.21	0.00	±5	2023/3/23
2300	Head	22.6	1.693	39.510	1.67	39.50	1.38	0.03	±5	2023/3/24
2450	Head	22.8	1.872	40.807	1.80	39.20	4.00	4.10	±5	2023/4/2
2600	Head	22.8	1.980	40.595	1.96	39.00	1.02	4.09	±5	2023/3/25
3500	Head	22.7	2.835	39.048	2.91	37.90	-2.58	3.03	±5	2023/3/26
3700	Head	22.6	2.981	38.645	3.12	37.70	-4.46	2.51	±5	2023/3/27
3900	Head	22.7	3.229	38.414	3.32	37.50	-2.74	2.44	±5	2023/3/28
5250	Head	22.6	4.575	36.286	4.71	35.90	-2.87	1.08	±5	2023/4/3
5600	Head	22.8	4.952	35.732	5.07	35.50	-2.33	0.65	±5	2023/4/4
5750	Head	22.7	5.134	35.562	5.22	35.40	-1.65	0.46	±5	2023/4/5
2600	Head	22.8	2.031	40.261	1.96	39.00	3.62	3.23	±5	2023/5/3
3700	Head	22.6	2.995	38.285	3.12	37.70	-4.01	1.55	±5	2023/5/4

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 (%)
2023/3/11	750	Head	50	1087	3857	1338	0.436	8.58	8.72	1.63
2023/3/12	835	Head	50	4d091	3857	1338	0.488	9.45	9.76	3.28
2023/3/13	1750	Head	50	1090	3857	1338	1.870	37.00	37.4	1.08
2023/3/14	1900	Head	50	5d182	3857	1338	2.020	39.60	40.4	2.02
2023/3/15	2300	Head	50	1055	3857	1338	2.340	47.70	46.8	-1.89
2023/3/29	2450	Head	50	1040	3857	1338	2.430	51.80	48.6	-6.18
2023/3/16	2600	Head	50	1061	3857	1338	2.630	56.60	52.6	-7.07
2023/3/17	3500	Head	50	1037	3857	1338	3.220	68.00	64.4	-5.29
2023/3/18	3700	Head	50	1008	3857	1338	3.360	67.60	67.2	-0.59
2023/3/19	3900	Head	50	1048	3857	1338	3.370	70.20	67.4	-3.99
2023/3/30	5250	Head	50	1113	3857	1338	3.950	81.50	79	-3.07
2023/3/31	5600	Head	50	1113	3857	1338	4.290	82.60	85.8	3.87
2023/4/1	5750	Head	50	1113	3857	1338	3.810	80.80	76.2	-5.69
2023/3/20	750	Head	50	1087	3857	1338	0.434	8.58	8.68	1.17
2023/3/21	835	Head	50	4d091	3857	1338	0.453	9.45	9.06	-4.13
2023/3/22	1750	Head	50	1090	3857	1338	1.820	37.00	36.4	-1.62
2023/3/23	1900	Head	50	5d182	3857	1338	2.060	39.60	41.2	4.04
2023/3/24	2300	Head	50	1055	3857	1338	2.320	47.70	46.4	-2.73
2023/4/2	2450	Head	50	1040	3857	1338	2.520	51.80	50.4	-2.70
2023/3/25	2600	Head	50	1061	3857	1338	2.730	56.60	54.6	-3.53
2023/3/26	3500	Head	50	1037	3857	1338	3.270	68.00	65.4	-3.82
2023/3/27	3700	Head	50	1008	3857	1338	3.320	67.60	66.4	-1.78
2023/3/28	3900	Head	50	1048	3857	1338	3.380	70.20	67.6	-3.70
2023/4/3	5250	Head	50	1113	3857	1338	3.800	81.50	76	-6.75
2023/4/4	5600	Head	50	1113	3857	1338	4.040	82.60	80.8	-2.18
2023/4/5	5750	Head	50	1113	3857	1338	3.820	80.80	76.4	-5.45
2023/5/3	2600	Head	50	1061	3857	1338	2.610	56.60	52.2	-7.77
2023/5/4	3700	Head	50	1008	3857	1338	3.190	67.60	63.8	-5.62

<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 (%)
2023/3/11	750	Head	50	1087	3857	1338	0.287	5.65	5.74	1.59
2023/3/12	835	Head	50	4d091	3857	1338	0.315	6.22	6.3	1.29
2023/3/13	1750	Head	50	1090	3857	1338	0.990	19.50	19.8	1.54
2023/3/14	1900	Head	50	5d182	3857	1338	1.040	20.20	20.8	2.97
2023/3/15	2300	Head	50	1055	3857	1338	1.120	22.90	22.4	-2.18
2023/3/29	2450	Head	50	1040	3857	1338	1.130	24.00	22.6	-5.83
2023/3/16	2600	Head	50	1061	3857	1338	1.180	25.10	23.6	-5.98
2023/3/17	3500	Head	50	1037	3857	1338	1.240	25.40	24.8	-2.36
2023/3/18	3700	Head	50	1008	3857	1338	1.260	24.40	25.2	3.28
2023/3/19	3900	Head	50	1048	3857	1338	1.240	24.40	24.8	1.64
2023/3/30	5250	Head	50	1113	3857	1338	1.130	23.30	22.6	-3.00
2023/3/31	5600	Head	50	1113	3857	1338	1.210	23.70	24.2	2.11
2023/4/1	5750	Head	50	1113	3857	1338	1.080	23.00	21.6	-6.09
2023/3/20	750	Head	50	1087	3857	1338	0.287	5.65	5.74	1.59
2023/3/21	835	Head	50	4d091	3857	1338	0.299	6.22	5.98	-3.86
2023/3/22	1750	Head	50	1090	3857	1338	0.968	19.50	19.36	-0.72
2023/3/23	1900	Head	50	5d182	3857	1338	1.070	20.20	21.4	5.94
2023/3/24	2300	Head	50	1055	3857	1338	1.110	22.90	22.2	-3.06
2023/4/2	2450	Head	50	1040	3857	1338	1.170	24.00	23.4	-2.50
2023/3/25	2600	Head	50	1061	3857	1338	1.230	25.10	24.6	-1.99
2023/3/26	3500	Head	50	1037	3857	1338	1.260	25.40	25.2	-0.79
2023/3/27	3700	Head	50	1008	3857	1338	1.240	24.40	24.8	1.64
2023/3/28	3900	Head	50	1048	3857	1338	1.190	24.40	23.8	-2.46
2023/4/3	5250	Head	50	1113	3857	1338	1.130	23.30	22.6	-3.00
2023/4/4	5600	Head	50	1113	3857	1338	1.160	23.70	23.2	-2.11
2023/4/5	5750	Head	50	1113	3857	1338	1.080	23.00	21.6	-6.09
2023/5/3	2600	Head	50	1061	3857	1338	1.170	25.10	23.4	-6.77
2023/5/4	3700	Head	50	1008	3857	1338	1.190	24.40	23.8	-2.46

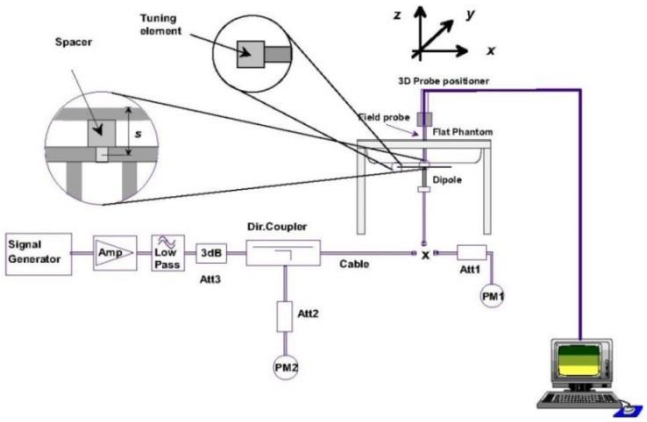


Fig 11.3.1 System Performance Check Setup

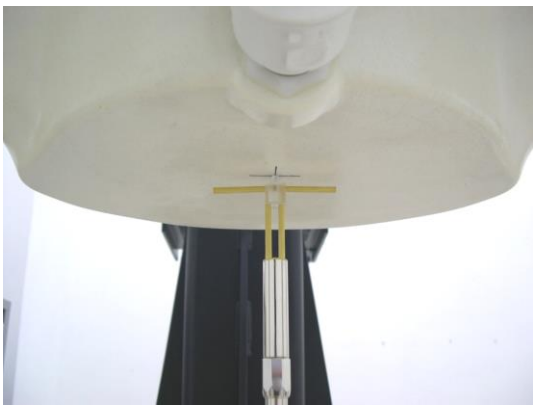


Fig 11.3.2 Setup Photo

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.

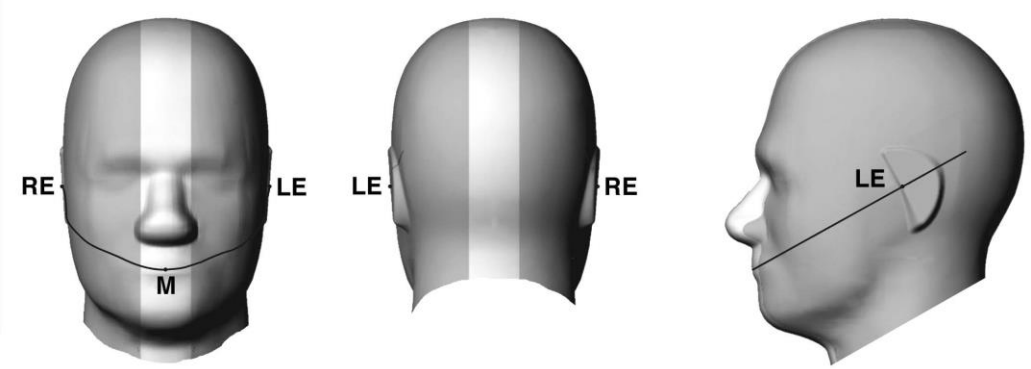


Fig 12.1.1 Front, back, and side views of SAM twin phantom

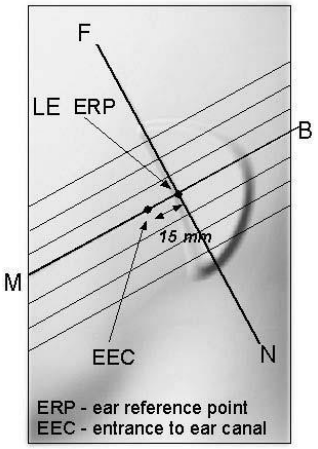


Fig 12.1.2 Close-up side view of phantom showing the ear region.

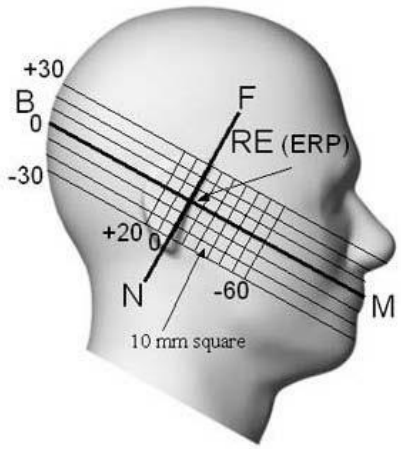


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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.

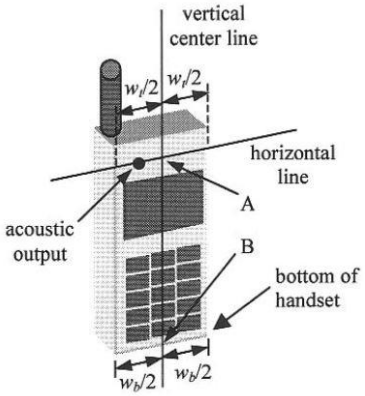


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

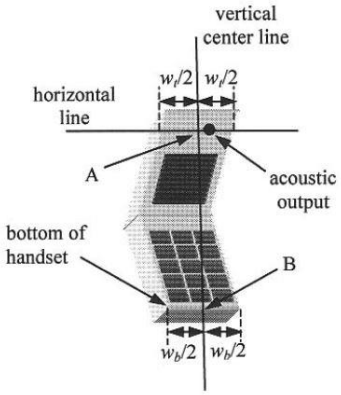


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

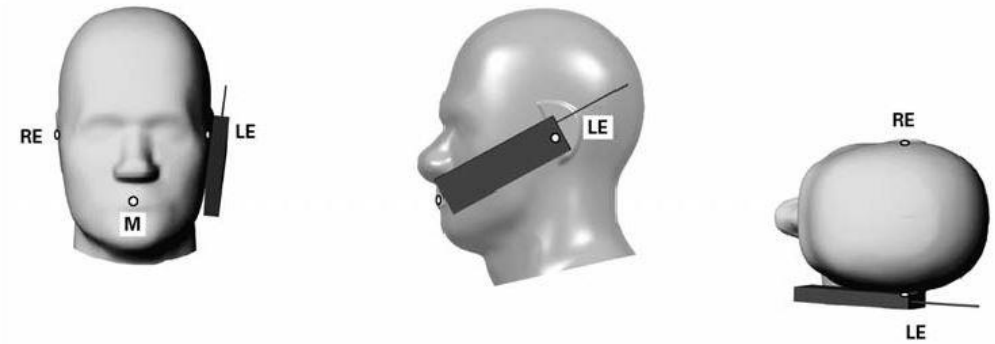


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

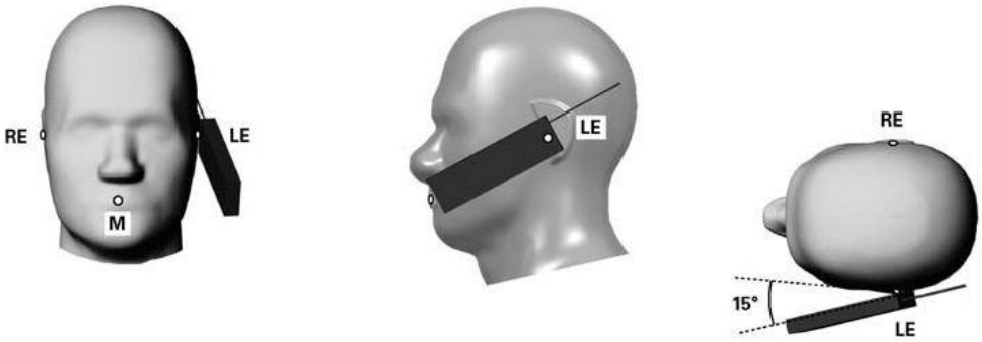


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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

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

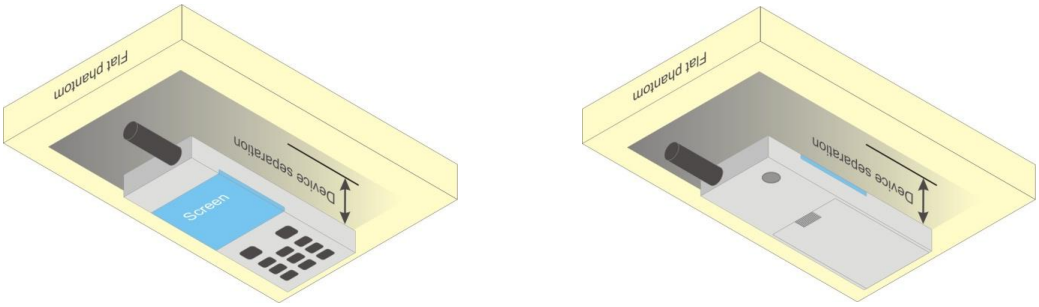


Fig 12.4 Body Worn Position

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 DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

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

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

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

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

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

Setup Configuration

HSUPA Setup Configuration:

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

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

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

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

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

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

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

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

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

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

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

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

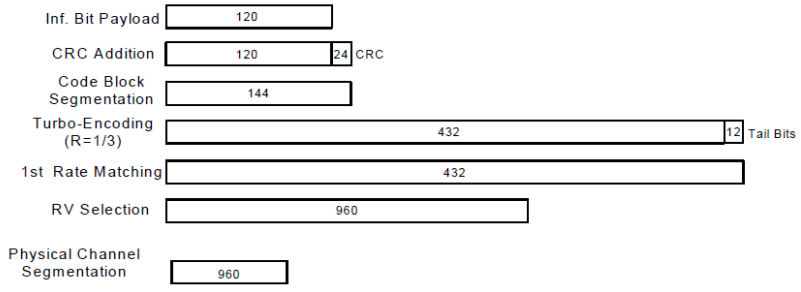


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

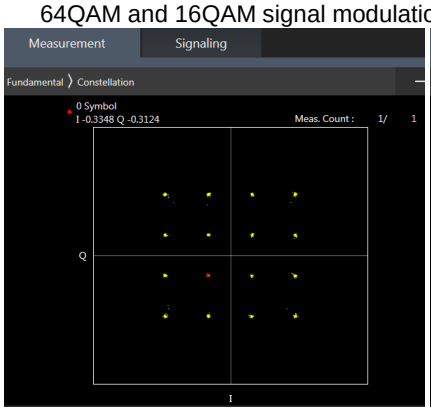
General Note:

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

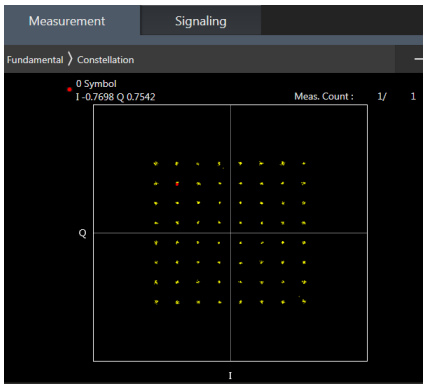
<LTE Conducted Power>

General Note:

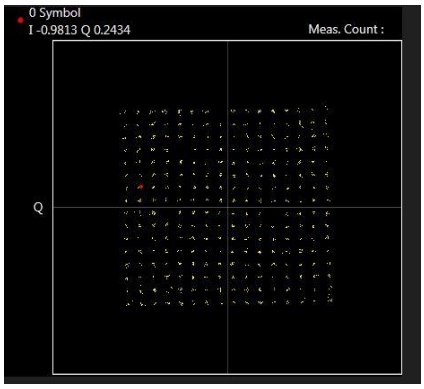
1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B2 / B4 /B5 / B17 / B38 SAR test was covered by B25 / B66 / B26 / B12 / B41 / B48; 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.

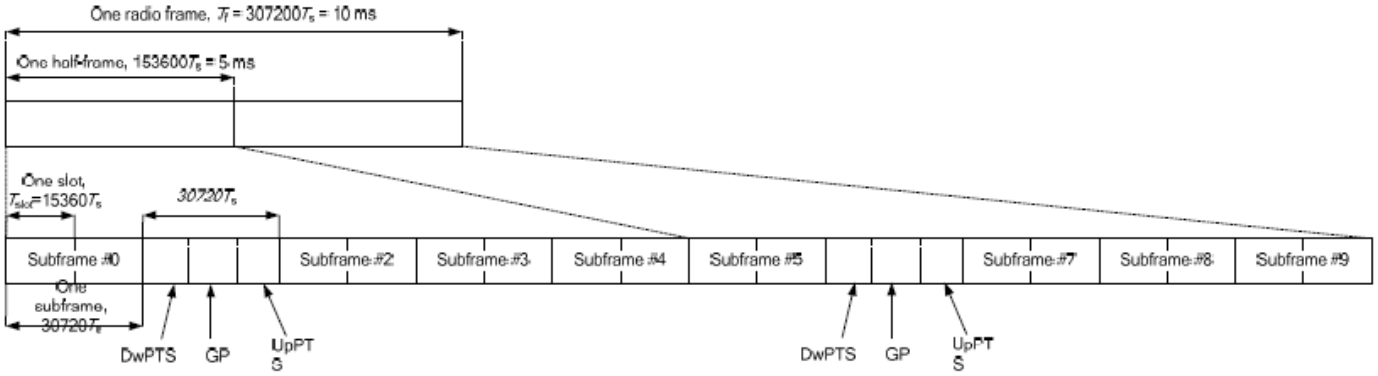


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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:

For LTE TDD Power class 2

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

For LTE TDD Power class 3

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

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

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

<LTE Carrier Aggregation>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. All permutations exist. No restrictions on Pcell & Scell combinations. Only LTE Band 29A is limited to Scell.
4. The gray color table is covered by other combinations and no need to verify power.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	CA_12A-30A	3CC#1	1	CA_12A-30A-66A	4CC#1	1	CA_12A-30A-66A-66A	
2	CA_12A-48A		2	CA_12A-48C		2	CA_12B-66A-66A	
3	CA_12A-66A	3CC#1	3	CA_12A-66A-66A	4CC#1	3	CA_13A-48A-48A-66A	
4	CA_12B	3CC#5	4	CA_12A-66C		4	CA_13A-48A-48C	
5	CA_13A-48A	3CC#6	5	CA_12B-66A	4CC#2	5	CA_13A-48A-66B	
6	CA_13A-66A	3CC#7	6	CA_13A-48A-48A	4CC#3	6	CA_13A-48A-66C	
7	CA_14A-30A	3CC#12	7	CA_13A-48A-66A	4CC#3	7	CA_13A-48C-66A	
8	CA_14A-66A	3CC#12	8	CA_13A-48C	4CC#4	8	CA_13A-48D	
9	CA_25A-25A	3CC#14	9	CA_13A-66A-66A	4CC#9	9	CA_13A-66A-66A-66A	
10	CA_25A-26A	3CC#14	10	CA_13A-66B	4CC#10	10	CA_13A-66A-66B	
11	CA_25A-41A		11	CA_13A-66C	4CC#6	11	CA_14A-30A-66A-66A	
12	CA_26A-41A		12	CA_14A-30A-66A	4CC#11	12	CA_14A-66A-66A-66A	
13	CA_29A-30A	3CC#17	13	CA_14A-66A-66A	4CC#11	13	CA_25A-41D	
14	CA_29A-66A	3CC#18	14	CA_25A-25A-26A		14	CA_29A-30A-66A-66A	
15	CA_2A-12A	3CC#19	15	CA_25A-41C		15	CA_2A-12A-30A-66A	
16	CA_2A-13A	3CC#22	16	CA_26A-41C		16	CA_2A-12A-66A-66A	
17	CA_2A-14A	3CC#24	17	CA_29A-30A-66A	4CC#27	17	CA_2A-12A-66C	
18	CA_2A-29A	3CC#26	18	CA_29A-66A-66A	4CC#14	18	CA_2A-12B-66A	
19	CA_2A-2A	3CC#28	19	CA_2A-12A-30A	4CC#15	19	CA_2A-13A-48A-48A	
20	CA_2A-30A	3CC#24	20	CA_2A-12A-66A	4CC#15	20	CA_2A-13A-48A-66A	
21	CA_2A-48A	3CC#22	21	CA_2A-12B	4CC#18	21	CA_2A-13A-48C	
22	CA_2A-4A	3CC#33	22	CA_2A-13A-48A	4CC#20	22	CA_2A-13A-66A-66A	
23	CA_2A-5A	3CC#34	23	CA_2A-13A-66A	4CC#20	23	CA_2A-13A-66B	
24	CA_2A-66A	3CC#35	24	CA_2A-14A-30A	4CC#25	24	CA_2A-13A-66C	
25	CA_2A-71A	3CC#36	25	CA_2A-14A-66A	4CC#25	25	CA_2A-14A-30A-66A	
26	CA_2A-7A	3CC#37	26	CA_2A-29A-30A	4CC#27	26	CA_2A-14A-66A-66A	
27	CA_2C	3CC#65	27	CA_2A-29A-66A	4CC#27	27	CA_2A-29A-30A-66A	
28	CA_30A-66A	3CC#38	28	CA_2A-2A-12A	4CC#28	28	CA_2A-2A-12A-30A	
29	CA_41A-41A		29	CA_2A-2A-13A	4CC#31	29	CA_2A-2A-12A-66A	
30	CA_41A-48A		30	CA_2A-2A-14A	4CC#33	30	CA_2A-2A-12B	
31	CA_41C	3CC#15	31	CA_2A-2A-29A	4CC#34	31	CA_2A-2A-13A-66A	
32	CA_48A-48A	3CC#39	32	CA_2A-2A-30A	4CC#35	32	CA_2A-2A-14A-30A	
33	CA_48A-66A	3CC#40	33	CA_2A-2A-4A	4CC#36	33	CA_2A-2A-14A-66A	
34	CA_48A-71A	3CC#72	34	CA_2A-2A-5A	4CC#39	34	CA_2A-2A-29A-30A	
35	CA_48B		35	CA_2A-2A-66A	4CC#42	35	CA_2A-2A-30A-66A	
36	CA_48C	3CC#78	36	CA_2A-2A-71A	4CC#40	36	CA_2A-2A-4A-12A	
37	CA_4A-12A	3CC#42	37	CA_2A-2A-7A	4CC#43	37	CA_2A-2A-4A-13A	
38	CA_4A-13A	3CC#43	38	CA_2A-30A-66A	4CC#35	38	CA_2A-2A-4A-4A	
39	CA_4A-29A	3CC#44	39	CA_2A-48A-48A	4CC#52	39	CA_2A-2A-4A-5A	
40	CA_4A-30A	3CC#45	40	CA_2A-48A-66A	4CC#52	40	CA_2A-2A-4A-71A	
41	CA_4A-48A		41	CA_2A-48C	4CC#55	41	CA_2A-2A-5A-30A	
42	CA_4A-4A	3CC#46	42	CA_2A-4A-12A	4CC#58	42	CA_2A-2A-5A-66A	
43	CA_4A-5A	3CC#47	43	CA_2A-4A-13A	4CC#59	43	CA_2A-2A-5A-7A	
44	CA_4A-71A	3CC#48	44	CA_2A-4A-29A		44	CA_2A-2A-5B	

45	CA_4A-7A	3CC#49	45	CA_2A-4A-30A		45	CA_2A-2A-66A-66A	
46	CA_5A-30A	3CC#50	46	CA_2A-4A-4A	4CC#58	46	CA_2A-2A-66A-71A	
47	CA_5A-41A		47	CA_2A-4A-5A	4CC#60	47	CA_2A-2A-66B	
48	CA_5A-48A	3CC#51	48	CA_2A-4A-71A	4CC#61	48	CA_2A-2A-66C	
49	CA_5A-5A	3CC#99	49	CA_2A-4A-7A	4CC#63	49	CA_2A-2A-7A-12A	
50	CA_5A-66A	3CC#95	50	CA_2A-5A-30A	4CC#66	50	CA_2A-2A-7A-66A	
51	CA_5A-7A	3CC#103	51	CA_2A-5A-48A	4CC#67	51	CA_2A-30A-66A-66A	
52	CA_5B	3CC#106	52	CA_2A-5A-66A	4CC#68	52	CA_2A-48A-48A-66A	
53	CA_66A-66A	3CC#74	53	CA_2A-5A-7A		53	CA_2A-48A-48C	
54	CA_66A-71A	3CC#109	54	CA_2A-5B	4CC#74	54	CA_2A-48A-66A-66A	
55	CA_66B	3CC#101	55	CA_2A-66A-66A	4CC#76	55	CA_2A-48C-66A	
56	CA_66C	3CC#102	56	CA_2A-66A-71A	4CC#77	56	CA_2A-48D	
57	CA_7A-12A	3CC#113	57	CA_2A-66B	4CC#78	57	CA_2A-4A-12B	
58	CA_7A-13A	3CC#114	58	CA_2A-66C	4CC#79	58	CA_2A-4A-4A-12A	
59	CA_7A-29A	3CC#115	59	CA_2A-7A-12A	4CC#80	59	CA_2A-4A-4A-13A	
60	CA_7A-66A	3CC#113	60	CA_2A-7A-13A	4CC#81	60	CA_2A-4A-4A-5A	
61	CA_7A-7A	3CC#93	61	CA_2A-7A-29A	4CC#82	61	CA_2A-4A-4A-71A	
62	CA_7B		62	CA_2A-7A-66A	4CC#80	62	CA_2A-4A-5B	
63	CA_7C	3CC#120	63	CA_2A-7A-7A	4CC#84	63	CA_2A-4A-7A-12A	
64			64	CA_2A-7C	4CC#87	64	CA_2A-4A-7A-7A	
65			65	CA_2C-12A		65	CA_2A-4A-7C	
66			66	CA_2C-66A	4CC#89	66	CA_2A-5A-30A-66A	
67			67	CA_30A-66A-66A	4CC#105	67	CA_2A-5A-48A-48A	
68			68	CA_41A-41C		68	CA_2A-5A-48A-66A	
69			69	CA_41D	4CC#13	69	CA_2A-5A-48C	
70			70	CA_48A-48A-48A		70	CA_2A-5A-5A-66A	
71			71	CA_48A-48A-66A	4CC#90	71	CA_2A-5A-66A-66A	
72			72	CA_48A-48A-71A		72	CA_2A-5A-66B	
73			73	CA_48A-48C	4CC#93	73	CA_2A-5A-66C	
74			74	CA_48A-66A-66A	4CC#95	74	CA_2A-5B-30A	
75			75	CA_48A-66B	4CC#91	75	CA_2A-5B-66A	
76			76	CA_48A-66C	4CC#92	76	CA_2A-66A-66A-66A	
77			77	CA_48C-66A	4CC#93	77	CA_2A-66A-66A-71A	
78			78	CA_48C-71A		78	CA_2A-66A-66B	
79			79	CA_48D	4CC#94	79	CA_2A-66C-71A	
80			80	CA_4A-12A-30A		80	CA_2A-7A-12A-66A	
81			81	CA_4A-12B	4CC#103	81	CA_2A-7A-13A-66A	
82			82	CA_4A-29A-30A		82	CA_2A-7A-29A-66A	
83			83	CA_4A-48C		83	CA_2A-7A-66A-66A	
84			84	CA_4A-4A-12A	4CC#58	84	CA_2A-7A-7A-13A	
85			85	CA_4A-4A-13A	4CC#59	85	CA_2A-7A-7A-29A	
86			86	CA_4A-4A-5A	4CC#60	86	CA_2A-7A-7A-66A	
87			87	CA_4A-4A-71A	4CC#61	87	CA_2A-7C-13A	
88			88	CA_4A-4A-7A		88	CA_2A-7C-66A	
89			89	CA_4A-5A-30A		89	CA_2C-66A-66A	
90			90	CA_4A-5B	4CC#62	90	CA_48A-48A-66A-66A	
91			91	CA_4A-7A-12A	4CC#63	91	CA_48A-48A-66B	
92			92	CA_4A-7A-71A		92	CA_48A-48A-66C	
93			93	CA_4A-7A-7A	4CC#64	93	CA_48A-48C-66A	
94			94	CA_4A-7C	4CC#65	94	CA_48A-48D	
95			95	CA_5A-30A-66A	4CC#105	95	CA_48A-66A-66A-66A	
96			96	CA_5A-48A-48A	4CC#106	96	CA_48C-48C	
97			97	CA_5A-48A-66A	4CC#106	97	CA_48C-66A-66A	
98			98	CA_5A-48C	4CC#107	98	CA_48C-66B	
99			99	CA_5A-5A-66A	4CC#111	99	CA_48C-66C	
100			100	CA_5A-66A-66A	4CC#111	100	CA_48D-66A	

101			101	CA_5A-66B	4CC#112	101	CA_48E	
102			102	CA_5A-66C	4CC#113	102	CA_4A-48D	
103			103	CA_5A-7A-66A	4CC#115	103	CA_4A-4A-12B	
104			104	CA_5A-7A-7A	4CC#115	104	CA_4A-4A-5B	
105			105	CA_5A-7C	4CC#116	105	CA_5A-30A-66A-66A	
106			106	CA_5B-30A	4CC#117	106	CA_5A-48A-48A-66A	
107			107	CA_5B-66A	4CC#117	107	CA_5A-48A-48C	
108			108	CA_66A-66A-66A	4CC#95	108	CA_5A-48A-66A-66A	
109			109	CA_66A-66A-71A		109	CA_5A-48C-66A	
110			110	CA_66A-66B	4CC#10	110	CA_5A-48D	
111			111	CA_66A-66C		111	CA_5A-5A-66A-66A	
112			112	CA_66C-71A		112	CA_5A-5A-66B	
113			113	CA_7A-12A-66A	4CC#121	113	CA_5A-5A-66C	
114			114	CA_7A-13A-66A	4CC#81	114	CA_5A-7A-66A-66A	
115			115	CA_7A-29A-66A	4CC#122	115	CA_5A-7A-7A-66A	
116			116	CA_7A-66A-66A	4CC#121	116	CA_5A-7C-66A	
117			117	CA_7A-7A-13A	4CC#84	117	CA_5B-30A-66A	
118			118	CA_7A-7A-29A	4CC#122	118	CA_5B-66A-66A	
119			119	CA_7A-7A-66A	4CC#123	119	CA_5B-66B	
120			120	CA_7C-13A	4CC#124	120	CA_5B-66C	
121			121	CA_7C-29A		121	CA_7A-12A-66A-66A	
122			122	CA_7C-66A	4CC#125	122	CA_7A-7A-29A-66A	
						123	CA_7A-7A-66A-66A	
						124	CA_7C-13A-66A	
						125	CA_7C-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 four carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.

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

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

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

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

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Band 2/4/7/25/30/41/48/66 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

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

4X4 MIMO	Band
	LTE Band 2/4/7/25/30/41/48/66

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation	
Intra-band	Main Antenna Tx	ASDiv Tx
CA_5B	Ant 0	Ant 1
CA_66B	Ant 0	Ant 1
CA_66C	Ant 0	Ant 1
CA_7C	Ant 0	Ant 1
CA_41C	Ant 0	Ant 1
CA_48B	Ant 4	Ant 2
CA_48C	Ant 4	Ant 2

<Intra-band>

General Note:

i. The device supports intra-band uplink carrier aggregation for LTE B5/7/66/41/48 with a maximum of two uplink component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.

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

iii. According Nov. 2017 TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

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

v. LTE CA_66B, LTE CA_48B test was covered by CA_66C, LTE CA_48C; therefore, SAR was only assessed for CA_66C, LTE CA_48C.

<Inter-band uplink carrier aggregation consideration>

CA Inter-band	Main Antenna Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx
CA_2A-12A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_2A-13A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_2A-14A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_2A-48A	Ant 0 + Ant 4	Ant 0 + Ant 2	Ant 0 + Ant 7	Ant 0 + Ant 5	Ant 1 + Ant 4	Ant 1 + Ant 2	Ant 1 + Ant 7	Ant 1 + Ant 5
CA_2A-4A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_2A-5A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_2A-66A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_2A-7A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_4A-12A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_4A-13A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_4A-5A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_4A-7A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_5A-66A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_5A-7A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_5A-48A	Ant 0 + Ant 4	Ant 0 + Ant 2	Ant 0 + Ant 7	Ant 0 + Ant 5	Ant 1 + Ant 4	Ant 1 + Ant 2	Ant 1 + Ant 7	Ant 1 + Ant 5
CA_12A-66A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_13A-66A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_14A-66A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_25A-26A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_25A-41A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_48A-66A	Ant 4 + Ant 0	Ant 2 + Ant 0	Ant 7 + Ant 0	Ant 5 + Ant 0	Ant 4 + Ant 1	Ant 2 + Ant 1	Ant 7 + Ant 1	Ant 5 + Ant 1

General Note:

1. The single carrier of inte-band CA uplink power level is the same as Non-CA standalone LTE power level.
2. The product implements MediaTek TA-SAR feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.
3. MediaTek's TA-SAR algorithm controls the total RF exposure base on LTE inter CA bands to not exceed FCC limit. In Part 1 Report, simultaneous transmission compliance was evaluated with other Radios (WLAN or BT) using standalone LTE SAR mode.

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n2/n5/n7/n25/n30/n66/n71/n41/n77/n78 is NSA mode.
2. 5G NR n2/n5/n7/n12/n14/n25/n26/n30/n66/n70/n71/n38/n41/n48/n77/n78 is SA mode.
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-s QPSK and the reported SAR for the DFT-s QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
   c. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
   d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
   e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested
   f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
   g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
5. 5GNR n41/n77 supports HPUE, HPUE power and SAR testing performed separately.
6. 5GNR n41/n77 HPUE with higher power, 5G NR n41/n77 HPUE SAR can represent power class 3 level SAR.
7. 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.
8. 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.
9. 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.
10. 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.
11. 5GNR n41/n77/n78/n48 supports UL MIMO.
12. The device supports HPUE (power class 2) under SISO mode and HPUE (power class 1.5) under UL MIMO mode for 5G NR n41/n77.

<3GPP 38.101 MPR for EN-DC>

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

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
		≤ 0.5[2]	≤ 0.5[2]	0[2]
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26 dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

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

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

<EN-DC combination>

ENDC	Main Antenna Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx		ASDiv Tx	
	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX	LTE TX	NR TX
DC_12A_n2A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_13A_n2A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_14A_n2A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_30A_n2A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_5A_n2A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_66A_n2A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_71A_n2A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_7A_n2A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_48A_n2A	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 0	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5	Ant 1
DC_2A_n5A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_30A_n5A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_48A_n5A	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 0	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5	Ant 1
DC_66A_n5A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_7A_n5A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_12A_n7A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_2A_n7A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_5A_n7A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_66A_n7A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_12A_n25A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_26A_n25A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_66A_n25A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_12A_n30A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_14A_n30A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_2A_n30A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_5A_n30A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_66A_n30A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/

DC_12A_n41A	Ant 1	Ant 0	/	/	Ant 1	Ant 6	Ant 1	Ant 2	/	/	Ant 0	Ant 1	Ant 0	Ant 6	Ant 0	Ant 2
DC_25A_n41A	Ant 1	Ant 0	/	/	Ant 1	Ant 6	Ant 1	Ant 2	/	/	Ant 0	Ant 1	Ant 0	Ant 6	Ant 0	Ant 2
DC_26A_n41A	Ant 1	Ant 0	/	/	Ant 1	Ant 6	Ant 1	Ant 2	/	/	Ant 0	Ant 1	Ant 0	Ant 6	Ant 0	Ant 2
DC_2A_n41A	Ant 1	Ant 0	/	/	Ant 1	Ant 6	Ant 1	Ant 2	/	/	Ant 0	Ant 1	Ant 0	Ant 6	Ant 0	Ant 2
DC_4A_n41A	Ant 1	Ant 0	/	/	Ant 1	Ant 6	Ant 1	Ant 2	/	/	Ant 0	Ant 1	Ant 0	Ant 6	Ant 0	Ant 2
DC_66A_n41A	Ant 1	Ant 0	/	/	Ant 1	Ant 6	Ant 1	Ant 2	/	/	Ant 0	Ant 1	Ant 0	Ant 6	Ant 0	Ant 2
DC_71A_n41A	Ant 1	Ant 0	/	/	Ant 1	Ant 6	Ant 1	Ant 2	/	/	Ant 0	Ant 1	Ant 0	Ant 6	Ant 0	Ant 2
DC_12A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_13A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_14A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_2A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_30A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_48A_n66A	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 0	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5	Ant 1
DC_5A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_71A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_7A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_25A_n66A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_2A_n71A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_48A_n71A	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 0	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5	Ant 1
DC_66A_n71A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_7A_n71A	Ant 1	Ant 0	Ant 0	Ant 1	/	/	/	/	/	/	/	/	/	/	/	/
DC_12A_n77A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_13A_n77A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_14A_n77A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_2A_n77A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_5A_n77A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_66A_n77A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_7A_n77A	Ant 1	Ant 2	Ant 1	Ant 4	Ant 1	Ant 7	Ant 1	Ant 5	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5
DC_30A_n77A	Ant 1	Ant 2	Ant 1	Ant 4	Ant 1	Ant 7	Ant 1	Ant 5	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5
DC_12A_n78A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_13A_n78A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_25A_n78A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_2A_n78A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_4A_n78A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_5A_n78A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_66A_n78A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_71A_n78A	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5	Ant 1	Ant 4	Ant 1	Ant 2	Ant 1	Ant 7	Ant 1	Ant 5
DC_7A_n78A	Ant 1	Ant 2	Ant 1	Ant 4	Ant 1	Ant 7	Ant 1	Ant 5	Ant 0	Ant 4	Ant 0	Ant 2	Ant 0	Ant 7	Ant 0	Ant 5

<NR Inter-band CA Configuration>

NRDC	Main Antenna Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx	ASDiv Tx
CA_n25A-n41A	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 6	Ant 0 + Ant 1	Ant 0 + Ant 6	Ant 0 + Ant 2	/	/
CA_n2A-n77A	Ant 0 + Ant 4	Ant 0 + Ant 2	Ant 0 + Ant 7	Ant 0 + Ant 5	Ant 1 + Ant 4	Ant 1 + Ant 2	Ant 1 + Ant 7	Ant 1 + Ant 5
CA_n30A-n77A	Ant 1 + Ant 2	Ant 1 + Ant 4	Ant 1 + Ant 7	Ant 1 + Ant 5	Ant 0 + Ant 2	Ant 0 + Ant 4	Ant 0 + Ant 7	Ant 0 + Ant 5
CA_n41A-n66A	Ant 0 + Ant 1	Ant 2 + Ant 1	Ant 6 + Ant 1	Ant 1 + Ant 0	Ant 2 + Ant 0	Ant 6 + Ant 0	/	/
CA_n41A-n71A	Ant 0 + Ant 1	/	Ant 6 + Ant 1	Ant 2 + Ant 0	/	Ant 1 + Ant 0	Ant 6 + Ant 0	Ant 2 + Ant 0
CA_n5A-n77A	Ant 0 + Ant 4	Ant 0 + Ant 2	Ant 0 + Ant 7	Ant 0 + Ant 5	Ant 1 + Ant 4	Ant 1 + Ant 2	Ant 1 + Ant 7	Ant 1 + Ant 5
CA_n66A-n77A	Ant 0 + Ant 4	Ant 0 + Ant 2	Ant 0 + Ant 7	Ant 0 + Ant 5	Ant 1 + Ant 4	Ant 1 + Ant 2	Ant 1 + Ant 7	Ant 1 + Ant 5
CA_n66A-n71A	ANT0+ANT1	ANT1+ANT0						
CA_n70A-n71A	ANT0+ANT1	ANT1+ANT0						
CA_n26A-n70A	ANT1+ANT0	ANT0+ANT1						
CA_n26A-n66A	ANT1+ANT0	ANT0+ANT1						

NR UL MIMO Bands Configuration:

ULMIMO Mode	Antenna Tx		Antenna Tx		Antenna Tx		Antenna Tx	
	Tx0	Tx1	Tx0	Tx1	Tx0	Tx1	Tx0	Tx1
5G NR n41	Ant 0	Ant 1	Ant 0	Ant 6	Ant 2	Ant 1	Ant 2	Ant 6
5G NR n48	Ant 4	Ant 2	Ant 4	Ant 5	Ant 7	Ant 2	Ant 7	Ant 5
5G NR n77	Ant 4	Ant 2	Ant 4	Ant 5	Ant 7	Ant 2	Ant 7	Ant 5
5G NR n78	Ant 4	Ant 2	Ant 4	Ant 5	Ant 7	Ant 2	Ant 7	Ant 5

<WLAN Conducted Power>

General Note:

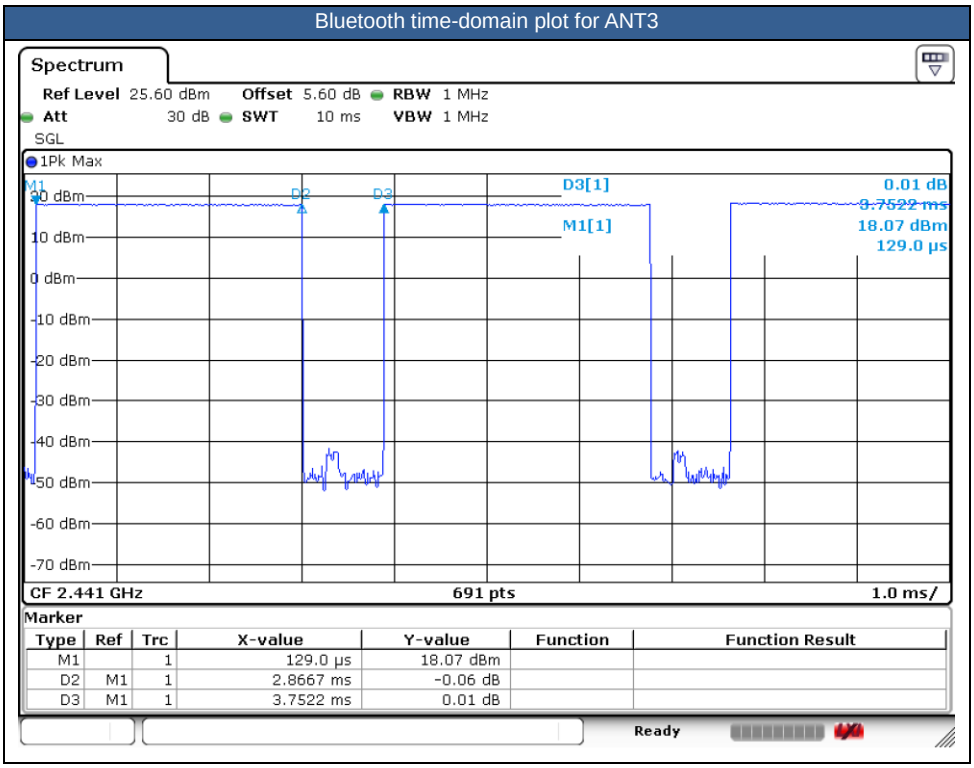
1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration. Additional output power measurements were not necessary.
2. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
3. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
4. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
5. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
   a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
   b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
   c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
6. 802.11ax full tone and partial tone supported for WLAN2.4GHz/WLAN5GHz, after verification for the partial tone power level is far less than full tone power level, so we chose full tone power to be measured in this report.
7. The 2.4GHz/5GHz/6GHz WLAN can transmit in SISO and MIMO antenna mode.
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 mode to perform SAR testing. However, in order to do SISO simultaneous transmission, we tested the WLAN 2.4G SISO antenna 8.
9. 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 76.40% for ANT3 as following figure, Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation

Bluetooth time-domain plot for ANT3



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 WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For SAR testing of Bluetooth signal with 83.3% theoretical duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle) *83.3%".
   d. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   e. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
   f. For TDD LTE SAR measurement of power class 3, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
   g. For TDD LTE SAR measurement of power class 2, the duty cycle 1:2.33 (42.9 %) was used perform testing and considering the theoretical duty cycle of 43.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 42.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 43.3%/42.9% = 1.009 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
   - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
   - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
   - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The device implements the power management and proximity sensor /receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the MediaTek TA-SAR will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description. 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/BLE when transmit simultaneous with WWAN, power reduction will be activated to head. For WLAN/BT/BLE when transmit simultaneous with WWAN and Proximity sensors trigger, power reduction will be activated to body-worn and Handheld.
6. For some WWAN bands, sensor on reduced power level is higher than hotspot reduced power level, so front/back sensor on SAR can represent hotspot conservatively.
7. This device supports HPUE for LTE Band 41 with class 2 level, HPUE power has been measured separately. For HPUE power is higher than power class 3 but with lower duty cycle, the maximum average power for class 2 and class 3 is almost the same, so we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.
8. 5GNR n41/n77 supports HPUE, HPUE power and SAR testing performed separately.
9. 5G NR n41/n77 HPUE with higher power, 5G NR n41/n77 HPUE SAR can represent power class 3 level SAR.
10. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
11. For 5GNR FDD/TDD supports SCS15KHz and SCS30KHz, after verification for 30KHz at FDD power level is less than 15KHz at FDD power level, also verification for 15KHz at TDD power level is less than 30KHz at TDD power level, so only show 15KHz at FDD power and 30KHz at TDD power, and chose higher power which is SCS15KHz for FDD bands and SCS30KHz for TDD bands to perform SAR testing.
12. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
13. 5GNR NSA mode, the power level is the same as 5GNR SA mode, so 5GNR NSA mode and SA mode power table only

show one time.

14. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
15. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
16. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
    a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of GSM850/1900, WCDMA Band II/IV/V, LTE Band 2/4/5/7/13/14/25/26/30/38/41/48/66, 5GNR n2/n7/n25/n30/n66/n70/n38/n41/n48/n77/n78, WLAN2.4/5.2/5.8GHz, 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.
17. For determination of the scaling factor for report SAR of MIMO mode, if the hot spots are separated the scaling factors are individually determined from each transmit chain. Further simplification chose the worse SAR value and the worst scaling factor from each transmit chain perform reported SAR calculation conservatively. If the hot spots are not spatially separated, the scaling factor is determined from the worst number of each transmit chain.
18. Although the headset SAR is greater than 0.8 W/kg, the headset SAR verified the worst of the non-headset SAR and less than non-headset SAR, so there is no need to be tested other channels.
19. Although the distance 1gSAR is greater than 0.8 W/kg at body-worn exposure conditions, the distance SAR verified the worst of the non-distance SAR and less than non-distance SAR, so there is no need to be tested other channels.
20. According to Nov. 2017 TCB workshop, when the reported SAR for UL CA configuration is <1.2 W/kg, UL CA SAR is not required for all required test channels (PCC based).

GSM Note:

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

WCDMA Note:

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

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is > not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE B2 / B4 /B5 / B17 / B38 SAR test was covered by B25 / B66 / B26 / B12 / B41 / B48; 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/n26/n41/n66/n77 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

WLAN/Bluetooth Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
6. SISO and MIMO all supported by WLAN2.4GHz/WLAN5GHz, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, so only chose MIMO mode to perform SAR testing. However, in order to do SISO simultaneous transmission, we tested the WLAN 2.4G SISO antenna 8.
7. 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.

ECI status description：

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

This WWAN bands enabled with MediaTek TA-SAR 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	ECI
Head SAR	ECI2
Body worn Mode SAR	ECI3
Hotspot Mode SAR	ECI7
Extremity(Handheld) SAR	ECI6
Sensor off SAR	ECI4

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)
750MHz																				
	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	133322	683	23.28	24.00	1.180	-	-	0.05	0.257	0.303
	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	133222	673	23.21	24.00	1.199	-	-	0.04	0.233	0.279
	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	133372	688	23.23	24.00	1.194	-	-	0.01	0.240	0.287
	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	133322	683	22.32	23.00	1.169	-	-	-0.16	0.202	0.236
	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	133322	683	23.28	24.00	1.180	-	-	0.07	0.150	0.177
	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	133322	683	22.32	23.00	1.169	-	-	0.02	0.131	0.153
	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	133322	683	23.28	24.00	1.180	-	-	-0.14	0.233	0.275
	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	133322	683	22.32	23.00	1.169	-	-	0.01	0.200	0.234
	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	133322	683	23.28	24.00	1.180	-	-	-0.03	0.165	0.195
	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	133322	683	22.32	23.00	1.169	-	-	-0.07	0.128	0.15
	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	133322	683	19.52	20.50	1.253	-	-	-0.07	0.620	0.777
	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	133322	683	19.50	20.50	1.259	-	-	0.09	0.515	0.648
01	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	133322	683	19.52	20.50	1.253	-	-	0.03	0.631	**0.791**
	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	133222	673	19.51	20.50	1.256	-	-	-0.16	0.611	0.767
	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	133372	688	19.42	20.50	1.282	-	-	0.01	0.603	0.773
	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	133322	683	19.50	20.50	1.259	-	-	-0.1	0.602	0.758
	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	133322	683	19.52	20.50	1.253	-	-	-0.18	0.252	0.316
	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	133322	683	19.50	20.50	1.259	-	-	0.08	0.212	0.267
	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	133322	683	19.52	20.50	1.253	-	-	-0.15	0.293	0.367
	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	133322	683	19.50	20.50	1.259	-	-	0.12	0.243	0.306
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	23095	707.5	23.05	24.00	1.245	-	-	0.08	0.208	0.259
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	23060	704	22.99	24.00	1.262	-	-	-0.04	0.188	0.237
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	23130	711	22.91	24.00	1.285	-	-	0.01	0.171	0.220
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI 2	23095	707.5	22.02	23.00	1.253	-	-	-0.12	0.158	0.198
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	23095	707.5	23.05	24.00	1.245	-	-	-0.1	0.122	0.152
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI 2	23095	707.5	22.02	23.00	1.253	-	-	0.07	0.103	0.129
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	23095	707.5	23.05	24.00	1.245	-	-	0.06	0.183	0.228
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI 2	23095	707.5	22.02	23.00	1.253	-	-	-0.18	0.158	0.198
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	23095	707.5	23.05	24.00	1.245	-	-	-0.11	0.126	0.157
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI 2	23095	707.5	22.02	23.00	1.253	-	-	0.07	0.104	0.13
02	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	23095	707.5	20.19	21.00	1.205	-	-	-0.04	0.712	**0.858**
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	23060	704	20.16	21.00	1.213	-	-	0.04	0.656	0.796
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	23130	711	20.12	21.00	1.225	-	-	0.11	0.639	0.783
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI 2	23095	707.5	20.09	21.00	1.233	-	-	-0.18	0.611	0.753
	LTE Band 12	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	23095	707.5	20.03	21.00	1.250	-	-	-0.15	0.616	0.77
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	23095	707.5	20.19	21.00	1.205	-	-	0.09	0.660	0.795
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI 2	23095	707.5	20.09	21.00	1.233	-	-	-0.07	0.554	0.683
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	23095	707.5	20.19	21.00	1.205	-	-	0.04	0.279	0.336
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI 2	23095	707.5	20.09	21.00	1.233	-	-	0.04	0.239	0.295
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	23095	707.5	20.19	21.00	1.205	-	-	0.07	0.313	0.377
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI 2	23095	707.5	20.09	21.00	1.233	-	-	-0.03	0.249	0.307
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	23230	782	23.05	24.00	1.245	-	-	-0.04	0.229	0.285
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI 2	23230	782	21.91	23.00	1.285	-	-	0.15	0.201	0.258
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	23230	782	23.05	24.00	1.245	-	-	0.04	0.134	0.167
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI 2	23230	782	21.91	23.00	1.285	-	-	0.01	0.107	0.138
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	23230	782	23.05	24.00	1.245	-	-	0.08	0.173	0.215
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI 2	23230	782	21.91	23.00	1.285	-	-	0.04	0.143	0.184
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	23230	782	23.05	24.00	1.245	-	-	-0.07	0.122	0.152
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI 2	23230	782	21.91	23.00	1.285	-	-	0.08	0.101	0.13
03	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	23230	782	21.47	22.00	1.130	-	-	0.06	0.615	**0.695**

	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI 2	23230	782	21.40	22.00	1.148	-	-	-0.13	0.546	0.627
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	23230	782	21.47	22.00	1.130	-	-	0.01	0.606	0.685
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI 2	23230	782	21.40	22.00	1.148	-	-	0.03	0.446	0.512
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	23230	782	21.47	22.00	1.130	-	-	0.02	0.161	0.182
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI 2	23230	782	21.40	22.00	1.148	-	-	-0.11	0.148	0.17
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	23230	782	21.47	22.00	1.130	-	-	0.05	0.310	0.35
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI 2	23230	782	21.40	22.00	1.148	-	-	0.15	0.284	0.326
	LTE Band 14	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	23330	793	22.84	24.00	1.306	-	-	0.03	0.289	0.377
	LTE Band 14	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI 2	23330	793	21.78	23.00	1.324	-	-	0.04	0.233	0.309
	LTE Band 14	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	23330	793	22.84	24.00	1.306	-	-	0.02	0.159	0.208
	LTE Band 14	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI 2	23330	793	21.78	23.00	1.324	-	-	0.11	0.121	0.16
	LTE Band 14	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	23330	793	22.84	24.00	1.306	-	-	0.04	0.215	0.281
	LTE Band 14	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI 2	23330	793	21.78	23.00	1.324	-	-	0.13	0.191	0.253
	LTE Band 14	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	23330	793	22.84	24.00	1.306	-	-	0.13	0.153	0.2
	LTE Band 14	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI 2	23330	793	21.78	23.00	1.324	-	-	-0.05	0.122	0.162
04	LTE Band 14	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	23330	793	21.11	22.00	1.227	-	-	0.07	0.604	**0.741**
	LTE Band 14	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI 2	23330	793	21.00	22.00	1.259	-	-	-0.08	0.585	0.736
	LTE Band 14	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	23330	793	21.11	22.00	1.227	-	-	-0.06	0.583	0.716
	LTE Band 14	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI 2	23330	793	21.00	22.00	1.259	-	-	0.03	0.541	0.681
	LTE Band 14	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	23330	793	21.11	22.00	1.227	-	-	0.1	0.276	0.339
	LTE Band 14	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI 2	23330	793	21.00	22.00	1.259	-	-	0.16	0.233	0.293
	LTE Band 14	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	23330	793	21.11	22.00	1.227	-	-	0.01	0.301	0.369
	LTE Band 14	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI 2	23330	793	21.00	22.00	1.259	-	-	-0.16	0.274	0.345
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	136100	680.5	23.25	24.00	1.189	-	-	-0.12	0.144	0.171
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	136100	680.5	23.21	24.00	1.199	-	-	-0.08	0.151	0.181
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	134600	673	22.99	24.00	1.262	-	-	-0.06	0.138	0.174
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	137600	688	22.92	24.00	1.282	-	-	0.16	0.130	0.167
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	136100	680.5	23.25	24.00	1.189	-	-	-0.1	0.084	0.1
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	136100	680.5	23.21	24.00	1.199	-	-	-0.17	0.089	0.107
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	136100	680.5	23.25	24.00	1.189	-	-	0.05	0.136	0.162
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	136100	680.5	23.21	24.00	1.199	-	-	-0.17	0.134	0.161
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	136100	680.5	23.25	24.00	1.189	-	-	0.08	0.087	0.103
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	136100	680.5	23.21	24.00	1.199	-	-	0.08	0.088	0.106
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	136100	680.5	22.03	23.00	1.250	-	-	0.08	0.535	0.669
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	136100	680.5	21.97	23.00	1.268	-	-	0.17	0.622	0.788
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	136100	680.5	22.03	23.00	1.250	-	-	0.03	0.665	0.831
05	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	136100	680.5	21.97	23.00	1.268	-	-	0.09	0.710	**0.9**
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	134600	673	21.91	23.00	1.285	-	-	0.04	0.656	0.843
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	137600	688	21.86	23.00	1.300	-	-	0.01	0.611	0.794
	FR1 n71	20M	QPSK	100	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	136100	680.5	21.92	23.00	1.282	-	-	0.09	0.605	0.776
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	136100	680.5	22.03	23.00	1.250	-	-	0.11	0.219	0.274
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	136100	680.5	21.97	23.00	1.268	-	-	0.04	0.260	0.33
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	136100	680.5	22.03	23.00	1.250	-	-	0.05	0.294	0.368
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	136100	680.5	21.97	23.00	1.268	-	-	0.04	0.344	0.436
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	141500	707.5	23.07	24.00	1.239	-	-	-0.02	0.118	0.146
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	141500	707.5	22.89	24.00	1.291	-	-	-0.19	0.122	0.158
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	141300	706.5	22.82	24.00	1.312	-	-	0.09	0.109	0.143
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	141700	708.5	22.64	24.00	1.368	-	-	0.09	0.110	0.15
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	141500	707.5	23.07	24.00	1.239	-	-	0.1	0.073	0.09
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	141500	707.5	22.89	24.00	1.291	-	-	-0.01	0.069	0.089
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	141500	707.5	23.07	24.00	1.239	-	-	-0.17	0.100	0.124
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	141500	707.5	22.89	24.00	1.291	-	-	-0.04	0.105	0.136
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	141500	707.5	23.07	24.00	1.239	-	-	0.03	0.071	0.088
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	141500	707.5	22.89	24.00	1.291	-	-	0.08	0.068	0.088
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	141500	707.5	21.05	22.00	1.245	-	-	0.03	0.611	0.76
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	141500	707.5	20.99	22.00	1.262	-	-	-0.09	0.512	0.646

06	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	141500	707.5	21.05	22.00	1.245	-	-	-0.04	0.657	**0.818**
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	141300	706.5	20.94	22.00	1.276	-	-	0.1	0.633	0.808
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	141700	708.5	20.97	22.00	1.268	-	-	-0.04	0.642	0.814
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	141500	707.5	20.99	22.00	1.262	-	-	0.02	0.632	0.797
	FR1 n12	15M	QPSK	75	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	141500	707.5	20.91	22.00	1.285	-	-	0.02	0.524	0.673
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	141500	707.5	21.05	22.00	1.245	-	-	-0.06	0.258	0.321
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	141500	707.5	20.99	22.00	1.262	-	-	0.15	0.268	0.338
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	141500	707.5	21.05	22.00	1.245	-	-	0.05	0.312	0.388
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	141500	707.5	20.99	22.00	1.262	-	-	0.18	0.329	0.415
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	158600	793	23.33	24.00	1.167	-	-	-0.05	0.099	0.116
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	158600	793	23.29	24.00	1.178	-	-	0.01	0.112	0.132
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	158600	793	23.33	24.00	1.167	-	-	0.07	0.053	0.062
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	158600	793	23.29	24.00	1.178	-	-	0.05	0.057	0.067
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	158600	793	23.33	24.00	1.167	-	-	-0.09	0.077	0.09
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	158600	793	23.29	24.00	1.178	-	-	0.08	0.087	0.102
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	158600	793	23.33	24.00	1.167	-	-	0.06	0.056	0.065
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	158600	793	23.29	24.00	1.178	-	-	0.03	0.059	0.069
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	158600	793	22.03	23.00	1.250	-	-	-0.08	0.687	0.859
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	158600	793	21.96	23.00	1.271	-	-	0.04	0.650	0.826
	FR1 n14	10M	QPSK	50	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	158600	793	21.90	23.00	1.288	-	-	-0.02	0.471	0.607
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	158600	793	22.03	23.00	1.250	-	-	0.18	0.600	0.75
07	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	158600	793	21.96	23.00	1.271	-	-	-0.05	0.689	**0.875**
	FR1 n14	10M	QPSK	50	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	158600	793	21.90	23.00	1.288	-	-	0.02	0.555	0.715
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	158600	793	22.03	23.00	1.250	-	-	0.02	0.320	0.4
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	158600	793	21.96	23.00	1.271	-	-	0.03	0.327	0.415
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	158600	793	22.03	23.00	1.250	-	-	0.08	0.367	0.459
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	158600	793	21.96	23.00	1.271	-	-	-0.18	0.368	0.468
835MHz																				
08	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	ECI 2	189	836.4	28.17	29.50	1.358	-	-	0.03	0.504	**0.685**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	ECI 2	128	824.2	28.08	29.50	1.387	-	-	-0.01	0.479	0.664
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	ECI 2	251	848.8	28.10	29.50	1.380	-	-	0.02	0.473	0.653
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	ECI 2	189	836.4	28.17	29.50	1.358	-	-	0.11	0.217	0.295
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI 2	189	836.4	28.17	29.50	1.358	-	-	0.09	0.358	0.486
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	ECI 2	189	836.4	28.17	29.50	1.358	-	-	0.06	0.228	0.31
09	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI 2	4182	836.4	22.75	24.00	1.334	-	-	0.03	0.336	**0.448**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI 2	4132	826.4	22.66	24.00	1.361	-	-	-0.01	0.301	0.410
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI 2	4233	846.6	22.62	24.00	1.374	-	-	0.11	0.313	0.430
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	ECI 2	4182	836.4	22.75	24.00	1.334	-	-	-0.16	0.184	0.245
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI 2	4182	836.4	22.75	24.00	1.334	-	-	-0.12	0.230	0.307
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	ECI 2	4182	836.4	22.75	24.00	1.334	-	-	0.08	0.175	0.233
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	26865	831.5	23.09	24.00	1.233	-	-	-0.02	0.252	0.311
	LTE Band 5B	10M	QPSK	1	49	-	Right Cheek	0mm	Ant 0	ECI 2	20476+ 20575	831.6+ 841.5	22.86	24.00	1.300	-	-	0.06	0.226	0.294
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	ECI 2	26865	831.5	22.10	23.00	1.230	-	-	-0.09	0.220	0.271
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	26865	831.5	23.09	24.00	1.233	-	-	-0.17	0.129	0.159
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	ECI 2	26865	831.5	22.10	23.00	1.230	-	-	-0.18	0.103	0.127
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	26865	831.5	23.09	24.00	1.233	-	-	-0.19	0.173	0.213
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	ECI 2	26865	831.5	22.10	23.00	1.230	-	-	-0.18	0.154	0.189
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	26865	831.5	23.09	24.00	1.233	-	-	-0.05	0.124	0.153
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	ECI 2	26865	831.5	22.10	23.00	1.230	-	-	-0.16	0.098	0.121
10	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	26865	831.5	19.97	21.00	1.268	-	-	-0.01	0.736	**0.933**
	LTE Band 5B	10M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	ECI 2	20476+ 20575	831.6+ 841.5	19.66	21.00	1.361	-	-	0.05	0.684	0.931
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 1	ECI 2	26865	831.5	19.81	21.00	1.315	-	-	0.13	0.648	0.852
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 1	ECI 2	26865	831.5	19.69	21.00	1.352	-	-	0.06	0.649	0.877
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26865	831.5	19.97	21.00	1.268	-	-	-0.13	0.700	0.887
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 1	ECI 2	26865	831.5	19.81	21.00	1.315	-	-	-0.13	0.632	0.831

	LTE Band 26	15M	QPSK	75	0	-	Right Tilted	0mm	Ant 1	ECI 2	26865	831.5	19.69	21.00	1.352	-	-	-0.08	0.633	0.856
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	26865	831.5	19.97	21.00	1.268	-	-	-0.11	0.330	0.418
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 1	ECI 2	26865	831.5	19.81	21.00	1.315	-	-	-0.04	0.311	0.409
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	26865	831.5	19.97	21.00	1.268	-	-	-0.16	0.381	0.483
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 1	ECI 2	26865	831.5	19.81	21.00	1.315	-	-	0.03	0.384	0.505
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	166300	831.5	23.16	24.00	1.213	-	-	-0.08	0.171	0.207
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	166300	831.5	23.00	24.00	1.259	-	-	0.09	0.185	0.233
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	164800	824	22.95	24.00	1.274	-	-	-0.13	0.158	0.201
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	167800	839	22.82	24.00	1.312	-	-	-0.04	0.166	0.218
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	166300	831.5	23.16	24.00	1.213	-	-	0.05	0.087	0.106
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	166300	831.5	23.00	24.00	1.259	-	-	0.02	0.093	0.117
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	166300	831.5	23.16	24.00	1.213	-	-	0.08	0.122	0.148
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	166300	831.5	23.00	24.00	1.259	-	-	-0.14	0.128	0.161
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	166300	831.5	23.16	24.00	1.213	-	-	0.09	0.078	0.095
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	166300	831.5	23.00	24.00	1.259	-	-	-0.02	0.091	0.115
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	166300	831.5	22.04	23.00	1.247	-	-	0.06	0.738	0.921
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	166300	831.5	21.98	23.00	1.265	-	-	0.17	0.647	0.818
	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	166300	831.5	21.83	23.00	1.309	-	-	0.14	0.677	0.886
11	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	166300	831.5	22.04	23.00	1.247	-	-	0.02	0.797	**0.994**
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	164800	824	21.93	23.00	1.279	-	-	0.05	0.755	0.966
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	167800	839	21.89	23.00	1.291	-	-	0.08	0.731	0.944
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	166300	831.5	21.98	23.00	1.265	-	-	0.02	0.764	0.966
	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	166300	831.5	21.83	23.00	1.309	-	-	0.03	0.756	0.99
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	166300	831.5	22.04	23.00	1.247	-	-	-0.06	0.341	0.425
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	166300	831.5	21.98	23.00	1.265	-	-	0.01	0.341	0.431
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	166300	831.5	22.04	23.00	1.247	-	-	0.03	0.412	0.514
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	166300	831.5	21.98	23.00	1.265	-	-	0.09	0.395	0.500
	1750MHz																			
12	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI 2	1413	1732.6	23.32	24.00	1.169	-	-	0.08	0.113	**0.132**
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI 2	1312	1712.4	23.22	24.00	1.197	-	-	0.05	0.101	0.121
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI 2	1513	1752.6	23.29	24.00	1.178	-	-	-0.06	0.091	0.107
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	ECI 2	1413	1732.6	23.32	24.00	1.169	-	-	-0.06	0.076	0.089
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI 2	1413	1732.6	23.32	24.00	1.169	-	-	0.17	0.103	0.12
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	ECI 2	1413	1732.6	23.32	24.00	1.169	-	-	-0.17	0.073	0.085
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	132322	1745	23.26	24.00	1.186	-	-	0.02	0.100	0.119
	LTE Band 66C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	ECI 2	132322+132520	1745+1764.8	23.12	24.00	1.225	-	-	0.06	0.093	0.114
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	132072	1720	23.24	24.00	1.191	-	-	0.05	0.092	0.110
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	132572	1770	23.11	24.00	1.227	-	-	-0.06	0.088	0.108
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	132322	1745	22.27	23.00	1.183	-	-	0.18	0.086	0.102
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	132322	1745	23.26	24.00	1.186	-	-	0.03	0.059	0.07
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	132322	1745	22.27	23.00	1.183	-	-	0.04	0.049	0.058
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	132322	1745	23.26	24.00	1.186	-	-	0.05	0.092	0.109
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	132322	1745	22.27	23.00	1.183	-	-	0.04	0.076	0.09
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	132322	1745	23.26	24.00	1.186	-	-	-0.06	0.060	0.071
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	132322	1745	22.27	23.00	1.183	-	-	-0.14	0.049	0.058
	LTE Band 66	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	132322	1745	15.08	16.00	1.236	-	-	0.07	0.514	0.635
	LTE Band 66	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	132322	1745	15.01	16.00	1.256	-	-	0.07	0.403	0.506
13	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	132322	1745	15.08	16.00	1.236	-	-	-0.07	0.635	**0.785**
	LTE Band 66C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 1	ECI 2	132322+ 132520	1745+ 1764.8	14.97	16.00	1.268	-	-	0.01	0.608	0.771
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	132072	1720	15.03	16.00	1.250	-	-	0.15	0.511	0.639
	LTE Band 66	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	132572	1770	15.03	16.00	1.250	-	-	0.03	0.558	0.698
	LTE Band 66	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	132322	1745	15.01	16.00	1.256	-	-	0.15	0.436	0.548
	LTE Band 66	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	132322	1745	15.08	16.00	1.236	-	-	-0.04	0.258	0.319
	LTE Band 66	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	132322	1745	15.01	16.00	1.256	-	-	0.04	0.206	0.259
	LTE Band 66	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	132322	1745	15.08	16.00	1.236	-	-	0.08	0.306	0.378
	LTE Band 66	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	132322	1745	15.01	16.00	1.256	-	-	0.02	0.248	0.311

	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	349000	1745	23.24	24.00	1.191	-	-	0.12	0.040	0.048
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	349000	1745	23.18	24.00	1.208	-	-	0.19	0.052	0.063
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	349000	1745	23.24	24.00	1.191	-	-	-0.06	0.001	0.001
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	349000	1745	23.18	24.00	1.208	-	-	0.03	0.001	0.001
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	349000	1745	23.24	24.00	1.191	-	-	0.14	0.074	0.088
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	349000	1745	23.18	24.00	1.208	-	-	0.02	0.088	0.106
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	346000	1730	23.12	24.00	1.225	-	-	0.03	0.071	0.087
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	352000	1760	23.15	24.00	1.216	-	-	0.08	0.068	0.083
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	349000	1745	23.24	24.00	1.191	-	-	0.11	0.010	0.012
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	349000	1745	23.18	24.00	1.208	-	-	0.19	0.041	0.05
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	349000	1745	19.45	20.00	1.135	-	-	-0.09	0.599	0.68
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	349000	1745	19.39	20.00	1.151	-	-	0.09	0.662	0.762
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	349000	1745	19.45	20.00	1.135	-	-	0.15	0.692	0.785
14	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	349000	1745	19.39	20.00	1.151	-	-	0.01	0.766	**0.882**
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	346000	1730	19.34	20.00	1.164	-	-	0.02	0.731	0.851
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	352000	1760	19.34	20.00	1.164	-	-	0.11	0.746	0.868
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	349000	1745	19.26	20.00	1.186	-	-	0.06	0.562	0.666
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	349000	1745	19.45	20.00	1.135	-	-	0.02	0.283	0.321
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	349000	1745	19.39	20.00	1.151	-	-	-0.06	0.342	0.394
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	349000	1745	19.45	20.00	1.135	-	-	0.04	0.426	0.484
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	349000	1745	19.39	20.00	1.151	-	-	-0.13	0.411	0.473
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	340500	1702.5	23.28	24.00	1.180	-	-	0.02	0.058	0.068
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	340500	1702.5	23.22	24.00	1.197	-	-	0.19	0.066	0.079
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	340500	1702.5	23.28	24.00	1.180	-	-	0.03	0.001	0.001
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	340500	1702.5	23.22	24.00	1.197	-	-	-0.19	0.051	0.061
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	340500	1702.5	23.28	24.00	1.180	-	-	0.05	0.099	0.117
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	340500	1702.5	23.22	24.00	1.197	-	-	0.02	0.098	0.117
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	340500	1702.5	23.28	24.00	1.180	-	-	-0.13	0.001	0.001
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	340500	1702.5	23.22	24.00	1.197	-	-	-0.07	0.001	0.001
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	340500	1702.5	19.32	20.00	1.169	-	-	0.08	0.618	0.723
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	340500	1702.5	19.28	20.00	1.180	-	-	0.02	0.639	0.754
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	340500	1702.5	19.32	20.00	1.169	-	-	0.07	0.642	0.751
15	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	340500	1702.5	19.28	20.00	1.180	-	-	-0.07	0.674	**0.796**
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	340500	1702.5	19.32	20.00	1.169	-	-	0.07	0.250	0.292
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	340500	1702.5	19.28	20.00	1.180	-	-	0.14	0.260	0.307
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	340500	1702.5	19.32	20.00	1.169	-	-	0.05	0.288	0.337
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	340500	1702.5	19.28	20.00	1.180	-	-	-0.18	0.303	0.358
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	ECI 2	661	1880	25.68	26.50	1.208	-	-	0.16	0.060	0.072
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	ECI 2	661	1880	25.68	26.50	1.208	-	-	0.03	0.058	0.070
16	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI 2	661	1880	25.68	26.50	1.208	-	-	-0.04	0.109	**0.132**
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI 2	512	1850.2	25.60	26.50	1.230	-	-	-0.14	0.089	0.109
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI 2	810	1909.8	25.49	26.50	1.262	-	-	0.05	0.101	0.127
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	ECI 2	661	1880	25.68	26.50	1.208	-	-	0.01	0.048	0.058
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI 2	9400	1880	23.45	24.00	1.135	-	-	0.03	0.129	0.146
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	ECI 2	9400	1880	23.45	24.00	1.135	-	-	0.01	0.107	0.121
17	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI 2	9400	1880	23.45	24.00	1.135	-	-	-0.09	0.196	**0.222**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI 2	9262	1852.4	23.36	24.00	1.159	-	-	0.01	0.158	0.183
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI 2	9538	1907.6	23.35	24.00	1.161	-	-	0.05	0.162	0.188
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	ECI 2	9400	1880	23.45	24.00	1.135	-	-	-0.11	0.101	0.115
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	26340	1880	23.18	24.00	1.208	-	-	0.09	0.082	0.099
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	26340	1880	22.05	23.00	1.245	-	-	-0.16	0.000	0.000
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	26340	1880	23.18	24.00	1.208	-	-	-0.1	0.067	0.081
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	26340	1880	22.05	23.00	1.245	-	-	0.08	0.043	0.054
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	26340	1880	23.18	24.00	1.208	-	-	-0.05	0.131	0.158
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	26140	1860	23.13	24.00	1.222	-	-	-0.09	0.111	0.136

	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	26590	1905	23.06	24.00	1.242	-	-	0.05	0.118	0.147
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	26340	1880	22.05	23.00	1.245	-	-	-0.08	0.068	0.085
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	26340	1880	23.18	24.00	1.208	-	-	0.01	0.060	0.072
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	26340	1880	22.05	23.00	1.245	-	-	0.14	0.000	0
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	26340	1880	15.68	16.50	1.208	-	-	0.08	0.628	0.759
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	26340	1880	15.63	16.50	1.222	-	-	0.11	0.531	0.649
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26340	1880	15.68	16.50	1.208	-	-	0.06	0.671	0.810
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26140	1860	15.39	16.50	1.291	-	-	-0.11	0.685	0.884
18	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26590	1905	15.45	16.50	1.274	-	-	0.01	0.724	**0.922**
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	26340	1880	15.63	16.50	1.222	-	-	0.08	0.638	0.78
	LTE Band 25	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	ECI 2	26340	1880	15.47	16.50	1.268	-	-	0.07	0.657	0.833
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	26340	1880	15.68	16.50	1.208	-	-	0.06	0.412	0.498
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	26340	1880	15.63	16.50	1.222	-	-	-0.03	0.356	0.435
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	26340	1880	15.68	16.50	1.208	-	-	0.08	0.464	0.56
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	26340	1880	15.63	16.50	1.222	-	-	0.13	0.408	0.498
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	376500	1882.5	23.34	24.00	1.164	-	-	0.09	0.076	0.088
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	376500	1882.5	23.12	24.00	1.225	-	-	0.06	0.073	0.089
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	376500	1882.5	23.34	24.00	1.164	-	-	0.02	0.065	0.076
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	376500	1882.5	23.12	24.00	1.225	-	-	0.08	0.055	0.067
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	376500	1882.5	23.34	24.00	1.164	-	-	0.03	0.122	0.142
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	374000	1870	23.27	24.00	1.183	-	-	0.04	0.113	0.134
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	379000	1895	23.26	24.00	1.186	-	-	0.11	0.108	0.128
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	376500	1882.5	23.12	24.00	1.225	-	-	0.16	0.114	0.14
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	376500	1882.5	23.34	24.00	1.164	-	-	0.14	0.053	0.062
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	376500	1882.5	23.12	24.00	1.225	-	-	-0.18	0.046	0.056
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	376500	1882.5	18.07	19.00	1.239	-	-	-0.07	0.719	0.891
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	376500	1882.5	18.02	19.00	1.253	-	-	-0.14	0.710	0.890
	FR1 n25	40M	QPSK	216	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	376500	1882.5	17.98	19.00	1.265	-	-	0.03	0.653	0.826
19	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	376500	1882.5	18.07	19.00	1.239	-	-	-0.01	0.752	**0.932**
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	374000	1870	18.02	19.00	1.253	-	-	0.04	0.733	0.919
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	379000	1895	17.99	19.00	1.262	-	-	0.16	0.720	0.909
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	376500	1882.5	18.02	19.00	1.253	-	-	-0.18	0.731	0.916
	FR1 n25	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	376500	1882.5	17.98	19.00	1.265	-	-	-0.15	0.699	0.884
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	376500	1882.5	18.07	19.00	1.239	-	-	-0.16	0.457	0.566
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	376500	1882.5	18.02	19.00	1.253	-	-	-0.11	0.454	0.569
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	376500	1882.5	18.07	19.00	1.239	-	-	0.11	0.526	0.652
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	376500	1882.5	18.02	19.00	1.253	-	-	-0.16	0.529	0.663
2300MHz																				
	LTE Band 30	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	27710	2310	23.02	24.00	1.253	-	-	-0.19	0.050	0.063
	LTE Band 30	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI 2	27710	2310	21.91	23.00	1.285	-	-	-0.17	0.038	0.049
	LTE Band 30	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	27710	2310	23.02	24.00	1.253	-	-	0.15	0.038	0.048
	LTE Band 30	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI 2	27710	2310	21.91	23.00	1.285	-	-	-0.05	0.001	0.001
	LTE Band 30	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	27710	2310	23.02	24.00	1.253	-	-	0.03	0.057	0.072
	LTE Band 30	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI 2	27710	2310	21.91	23.00	1.285	-	-	-0.07	0.001	0.001
	LTE Band 30	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	27710	2310	23.02	24.00	1.253	-	-	-0.1	0.001	0.001
	LTE Band 30	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI 2	27710	2310	21.91	23.00	1.285	-	-	-0.16	0.001	0.001
	LTE Band 30	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	27710	2310	15.10	16.00	1.230	-	-	0.04	0.563	0.693
	LTE Band 30	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI 2	27710	2310	15.02	16.00	1.253	-	-	0.07	0.484	0.607
20	LTE Band 30	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	27710	2310	15.10	16.00	1.230	-	-	0.06	0.672	**0.827**
	LTE Band 30	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI 2	27710	2310	15.02	16.00	1.253	-	-	0.02	0.646	0.81
	LTE Band 30	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	27710	2310	15.00	16.00	1.259	-	-	0.05	0.546	0.687
	LTE Band 30	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	27710	2310	15.10	16.00	1.230	-	-	0.07	0.444	0.546
	LTE Band 30	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI 2	27710	2310	15.02	16.00	1.253	-	-	0.05	0.439	0.55
	LTE Band 30	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	27710	2310	15.10	16.00	1.230	-	-	0.05	0.451	0.555
	LTE Band 30	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI 2	27710	2310	15.02	16.00	1.253	-	-	0.15	0.436	0.546
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	462000	2310	23.49	24.00	1.125	-	-	-0.13	0.001	0.001

	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	462000	2310	23.42	24.00	1.143	-	-	-0.11	0.001	0.001
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	462000	2310	23.49	24.00	1.125	-	-	-0.13	0.046	0.052
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	462000	2310	23.42	24.00	1.143	-	-	0.1	0.043	0.049
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	462000	2310	23.49	24.00	1.125	-	-	0.03	0.066	0.074
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	462000	2310	23.42	24.00	1.143	-	-	-0.17	0.064	0.073
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	462000	2310	23.49	24.00	1.125	-	-	-0.17	0.001	0.001
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	462000	2310	23.42	24.00	1.143	-	-	0.08	0.001	0.001
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	462000	2310	17.44	18.00	1.138	-	-	0.07	0.747	0.85
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	462000	2310	17.37	18.00	1.156	-	-	0.01	0.644	0.745
	FR1 n30	10M	QPSK	50	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	462000	2310	17.33	18.00	1.167	-	-	-0.06	0.622	0.726
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	462000	2310	17.44	18.00	1.138	-	-	0.06	0.653	0.743
21	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	462000	2310	17.37	18.00	1.156	-	-	0.11	0.759	**0.877**
	FR1 n30	10M	QPSK	50	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	462000	2310	17.33	18.00	1.167	-	-	-0.04	0.634	0.74
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	462000	2310	17.44	18.00	1.138	-	-	-0.08	0.437	0.497
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	462000	2310	17.37	18.00	1.156	-	-	0.07	0.548	0.634
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	462000	2310	17.44	18.00	1.138	-	-	-0.13	0.468	0.532
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	462000	2310	17.37	18.00	1.156	-	-	-0.15	0.538	0.622
2600Mhz																				
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	21100	2535	22.97	24.00	1.268	-	-	0.08	0.067	0.085
	LTE Band 7C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	ECI 2	21100+ 21298	2535+ 2554.8	22.83	24.00	1.309	-	-	0.01	0.059	0.077
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	20850	2510	22.92	24.00	1.282	-	-	-0.08	0.055	0.071
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	21350	2560	22.88	24.00	1.294	-	-	-0.15	0.060	0.078
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	21100	2535	22.01	23.00	1.256	-	-	0.02	0.038	0.048
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	21100	2535	22.97	24.00	1.268	-	-	0.13	0.001	0.001
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	21100	2535	22.01	23.00	1.256	-	-	-0.04	0.000	0
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	21100	2535	22.97	24.00	1.268	-	-	0.02	0.061	0.077
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	21100	2535	22.01	23.00	1.256	-	-	0.08	0.001	0.001
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	21100	2535	22.97	24.00	1.268	-	-	0.03	0.031	0.039
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	21100	2535	22.01	23.00	1.256	-	-	-0.1	0.001	0.001
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	21100	2535	13.60	14.50	1.230	-	-	-0.11	0.526	0.647
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	21100	2535	13.57	14.50	1.239	-	-	0.07	0.273	0.338
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	21100	2535	13.60	14.50	1.230	-	-	0.02	0.675	0.830
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	20850	2510	13.51	14.50	1.256	-	-	0.05	0.616	0.774
22	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	21350	2560	13.56	14.50	1.242	-	-	0.05	0.682	**0.847**
	LTE Band 7C	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	21350+ 21152	2560+ 2540.2	13.35	14.50	1.303	-	-	0.09	0.648	0.844
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	21100	2535	13.57	14.50	1.239	-	-	-0.19	0.630	0.78
	LTE Band 7	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	ECI 2	21100	2535	13.52	14.50	1.253	-	-	0.03	0.646	0.81
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	21100	2535	13.60	14.50	1.230	-	-	0.13	0.359	0.442
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	21100	2535	13.57	14.50	1.239	-	-	0.01	0.292	0.362
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	21100	2535	13.60	14.50	1.230	-	-	0.19	0.448	0.551
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	21100	2535	13.57	14.50	1.239	-	-	0.12	0.436	0.540
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	40620	2593	23.24	24.00	1.191	62.9	1.006	-0.05	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	40620	2593	22.26	23.00	1.186	62.9	1.006	0.09	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	40620	2593	23.24	24.00	1.191	62.9	1.006	-0.15	0.025	0.030
	LTE Band 41C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 0	ECI 2	40620+ 40818	2593+ 2612.8	23.03	24.00	1.250	62.9	1.006	0.05	0.019	0.024
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	40620	2593	22.26	23.00	1.186	62.9	1.006	0.05	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	40620	2593	23.24	24.00	1.191	62.9	1.006	-0.12	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	40620	2593	22.26	23.00	1.186	62.9	1.006	0.03	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	40620	2593	23.24	24.00	1.191	62.9	1.006	0.15	0.021	0.025
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	40620	2593	22.26	23.00	1.186	62.9	1.006	-0.03	0.001	0.001
	LTE Band 41 PC2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	40620	2593	26.46	27.00	1.132	42.9	1.009	0.05	0.035	0.040
	LTE Band 41C PC2	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 0	ECI 2	40620+ 40818	2593+ 2612.8	26.30	27.00	1.175	42.9	1.009	0.07	0.028	0.033
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	40620	2593	16.61	17.40	1.199	62.9	1.006	0.06	0.438	0.529
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	40620	2593	16.52	17.40	1.225	62.9	1.006	0.02	0.385	0.474
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	16.61	17.40	1.199	62.9	1.006	0.12	0.599	0.723

	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	39750	2506	16.36	17.40	1.271	62.9	1.006	-0.08	0.510	0.652
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	40185	2549.5	16.52	17.40	1.225	62.9	1.006	0.11	0.661	0.814
	LTE Band 41C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 1	ECI 2	40185+ 40383	2549.5+ 2569.3	16.38	17.40	1.265	62.9	1.006	0.07	0.622	0.791
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	41055	2636.5	16.47	17.40	1.239	62.9	1.006	0.03	0.571	0.712
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	41490	2680	16.31	17.40	1.285	62.9	1.006	-0.18	0.550	0.711
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	16.52	17.40	1.225	62.9	1.006	-0.04	0.468	0.577
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	16.41	17.40	1.256	62.9	1.006	-0.08	0.353	0.446
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	40620	2593	16.61	17.40	1.199	62.9	1.006	0.08	0.311	0.375
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	40620	2593	16.52	17.40	1.225	62.9	1.006	-0.11	0.191	0.235
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	40620	2593	16.61	17.40	1.199	62.9	1.006	-0.17	0.405	0.489
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	40620	2593	16.52	17.40	1.225	62.9	1.006	0.08	0.362	0.446
	LTE Band 41 PC2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	40185	2549.5	18.02	19.00	1.253	42.9	1.009	0.04	0.697	0.881
	LTE Band 41C PC2	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 1	ECI 2	40185+ 40383	2549.5+ 2569.3	17.89	19.00	1.291	42.9	1.009	0.01	0.646	0.842
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	ECI 2	40620	2593	22.85	24.00	1.303	62.9	1.006	0.03	0.042	0.055
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	ECI 2	40620	2593	21.97	23.00	1.268	62.9	1.006	-0.02	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	40620	2593	22.85	24.00	1.303	62.9	1.006	0.02	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	ECI 2	40620	2593	21.97	23.00	1.268	62.9	1.006	-0.02	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	ECI 2	40620	2593	22.85	24.00	1.303	62.9	1.006	0.01	0.061	0.08
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	ECI 2	40620	2593	21.97	23.00	1.268	62.9	1.006	0.03	0.046	0.059
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	ECI 2	40620	2593	22.85	24.00	1.303	62.9	1.006	-0.14	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	ECI 2	40620	2593	21.97	23.00	1.268	62.9	1.006	0.04	0.001	0.001
	LTE Band 41 PC2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	ECI 2	40620	2593	25.82	27.00	1.312	42.9	1.009	0.05	0.081	0.107
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	ECI 2	40620	2593	22.67	23.90	1.327	62.9	1.006	0.01	0.500	0.668
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	ECI 2	39750	2506	22.57	23.90	1.358	62.9	1.006	0.04	0.418	0.571
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	ECI 2	40185	2549.5	22.50	23.90	1.380	62.9	1.006	0.02	0.483	0.671
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	ECI 2	41055	2636.5	22.58	23.90	1.355	62.9	1.006	-0.16	0.531	0.724
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	ECI 2	41490	2680	22.49	23.90	1.384	62.9	1.006	-0.03	0.516	0.718
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	ECI 2	40620	2593	21.55	23.00	1.396	62.9	1.006	0.05	0.422	0.593
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 6	ECI 2	40620	2593	21.52	23.00	1.406	62.9	1.006	0.04	0.413	0.584
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	ECI 2	40620	2593	22.67	23.90	1.327	62.9	1.006	-0.15	0.124	0.166
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	ECI 2	40620	2593	21.55	23.00	1.396	62.9	1.006	0.04	0.105	0.147
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	40620	2593	22.67	23.90	1.327	62.9	1.006	0.07	0.575	0.768
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	39750	2506	22.57	23.90	1.358	62.9	1.006	0.01	0.473	0.646
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	40185	2549.5	22.50	23.90	1.380	62.9	1.006	0.03	0.605	0.84
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	41055	2636.5	22.58	23.90	1.355	62.9	1.006	-0.15	0.671	0.915
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	41490	2680	22.49	23.90	1.384	62.9	1.006	0.03	0.510	0.71
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	ECI 2	40620	2593	21.55	23.00	1.396	62.9	1.006	0.17	0.353	0.496
	LTE Band 41	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 6	ECI 2	40620	2593	21.52	23.00	1.406	62.9	1.006	0.11	0.344	0.487
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	ECI 2	40620	2593	22.67	23.90	1.327	62.9	1.006	-0.19	0.067	0.089
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	ECI 2	40620	2593	21.55	23.00	1.396	62.9	1.006	0.1	0.055	0.077
23	LTE Band 41 PC2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	41055	2636.5	23.99	25.50	1.416	42.9	1.009	-0.11	0.693	**0.990**
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	507000	2535	22.98	24.00	1.265	-	-	-0.02	0.045	0.057
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	507000	2535	22.90	24.00	1.288	-	-	-0.08	0.049	0.063
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	505000	2525	22.88	24.00	1.294	-	-	-0.04	0.033	0.043
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	509000	2545	22.84	24.00	1.306	-	-	0.06	0.041	0.054
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	507000	2535	22.98	24.00	1.265	-	-	-0.04	0.001	0.001
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	507000	2535	22.90	24.00	1.288	-	-	0.08	0.001	0.001
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	507000	2535	22.98	24.00	1.265	-	-	0.02	0.001	0.001
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	507000	2535	22.90	24.00	1.288	-	-	0.08	0.047	0.061
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	507000	2535	22.98	24.00	1.265	-	-	-0.15	0.034	0.043
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	507000	2535	22.90	24.00	1.288	-	-	0.18	0.039	0.05
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	507000	2535	15.38	16.00	1.153	-	-	0.11	0.461	0.532
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	507000	2535	15.32	16.00	1.169	-	-	0.15	0.547	0.640
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	507000	2535	15.38	16.00	1.153	-	-	-0.04	0.595	0.686
24	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	507000	2535	15.32	16.00	1.169	-	-	-0.02	0.715	**0.836**

	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	505000	2525	15.16	16.00	1.213	-	-	0.08	0.676	0.82
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	509000	2545	15.22	16.00	1.197	-	-	-0.15	0.633	0.758
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	507000	2535	15.30	16.00	1.175	-	-	-0.17	0.528	0.62
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	507000	2535	15.38	16.00	1.153	-	-	0.04	0.313	0.361
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	507000	2535	15.32	16.00	1.169	-	-	0.08	0.393	0.46
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	507000	2535	15.38	16.00	1.153	-	-	-0.06	0.386	0.445
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	507000	2535	15.32	16.00	1.169	-	-	-0.17	0.484	0.566
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	ECI 2	518598	2592.99	25.97	27.00	1.268	-	-	0.07	0.060	0.076
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	ECI 2	518598	2592.99	25.86	27.00	1.300	-	-	0.17	0.074	0.096
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	ECI 2	510000	2550	25.61	27.00	1.377	-	-	0.08	0.068	0.094
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	ECI 2	528000	2640	25.71	27.00	1.346	-	-	-0.17	0.067	0.09
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	ECI 2	518598	2592.99	25.97	27.00	1.268	-	-	0.04	0.001	0.001
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	ECI 2	518598	2592.99	25.86	27.00	1.300	-	-	0.02	0.001	0.001
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	ECI 2	518598	2592.99	25.97	27.00	1.268	-	-	0.08	0.055	0.07
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	ECI 2	518598	2592.99	25.86	27.00	1.300	-	-	-0.19	0.066	0.086
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	ECI 2	518598	2592.99	25.97	27.00	1.268	-	-	0.04	0.043	0.055
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	ECI 2	518598	2592.99	25.86	27.00	1.300	-	-	0.16	0.044	0.057
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	ECI 2	518598	2592.99	16.69	17.50	1.205	-	-	0.15	0.597	0.719
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	ECI 2	518598	2592.99	16.60	17.50	1.230	-	-	-0.02	0.641	0.789
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.69	17.50	1.205	-	-	0.04	0.718	0.865
25	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.60	17.50	1.230	-	-	-0.05	0.749	**0.921**
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.48	17.50	1.265	-	-	0.17	0.601	0.76
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	ECI 2	518598	2592.99	16.69	17.50	1.205	-	-	-0.16	0.409	0.493
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	ECI 2	518598	2592.99	16.60	17.50	1.230	-	-	-0.08	0.437	0.538
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.69	17.50	1.205	-	-	-0.06	0.476	0.574
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.60	17.50	1.230	-	-	-0.03	0.524	0.645
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	518598	2592.99	25.53	27.00	1.403	-	-	-0.13	0.061	0.086
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	518598	2592.99	25.50	27.00	1.413	-	-	0.07	0.102	0.144
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	518598	2592.99	25.53	27.00	1.403	-	-	0.03	0.044	0.062
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	518598	2592.99	25.50	27.00	1.413	-	-	0.07	0.062	0.088
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	518598	2592.99	25.53	27.00	1.403	-	-	0.05	0.093	0.13
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	518598	2592.99	25.50	27.00	1.413	-	-	0.05	0.158	0.223
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	518598	2592.99	25.53	27.00	1.403	-	-	-0.05	0.042	0.059
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	518598	2592.99	25.50	27.00	1.413	-	-	-0.06	0.061	0.086
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	ECI 2	518598	2592.99	19.92	21.00	1.282	-	-	0.07	0.464	0.595
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	ECI 2	518598	2592.99	19.90	21.00	1.288	-	-	0.05	0.535	0.689
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	ECI 2	518598	2592.99	19.73	21.00	1.340	-	-	0.06	0.488	0.654
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	ECI 2	518598	2592.99	19.92	21.00	1.282	-	-	0.05	0.109	0.14
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	ECI 2	518598	2592.99	19.90	21.00	1.288	-	-	-0.06	0.200	0.258
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	518598	2592.99	19.92	21.00	1.282	-	-	0.07	0.694	0.89
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	518598	2592.99	19.90	21.00	1.288	-	-	0.04	0.710	0.915
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	518598	2592.99	19.73	21.00	1.340	-	-	0.07	0.651	0.872
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	ECI 2	518598	2592.99	19.92	21.00	1.282	-	-	0.11	0.073	0.094
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	ECI 2	518598	2592.99	19.90	21.00	1.288	-	-	0.17	0.091	0.117
	3500MHz																			
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	55830	3609	18.29	19.00	1.178	62.9	1.006	-0.16	0.689	0.816
26	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	55340	3560	18.11	19.00	1.227	62.9	1.006	0.08	0.728	**0.899**
	LTE Band 48C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 4	ECI 2	55340+ 55538	3560+ 3579.8	17.99	19.00	1.262	62.9	1.006	0.06	0.699	0.887
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	56150	3641	18.15	19.00	1.216	62.9	1.006	0.04	0.659	0.806
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	56640	3690	18.11	19.00	1.227	62.9	1.006	-0.16	0.638	0.788
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	55830	3609	18.21	19.00	1.199	62.9	1.006	0.08	0.516	0.623
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	55340	3560	18.11	19.00	1.227	62.9	1.006	0.08	0.535	0.661
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	56150	3641	18.11	19.00	1.227	62.9	1.006	0.11	0.605	0.747
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	56640	3690	18.07	19.00	1.239	62.9	1.006	0.16	0.604	0.753
	LTE Band 48	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	ECI 2	55830	3609	18.28	19.00	1.180	62.9	1.006	-0.05	0.612	0.727
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	55830	3609	18.29	19.00	1.178	62.9	1.006	0.17	0.294	0.348

	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	55830	3609	18.21	19.00	1.199	62.9	1.006	0.16	0.245	0.296
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	ECI 2	55830	3609	18.29	19.00	1.178	62.9	1.006	0.02	0.189	0.224
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	ECI 2	55830	3609	18.21	19.00	1.199	62.9	1.006	0.02	0.181	0.218
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	55830	3609	18.29	19.00	1.178	62.9	1.006	0.11	0.146	0.173
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	ECI 2	55830	3609	18.21	19.00	1.199	62.9	1.006	0.02	0.126	0.152
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	ECI 2	55830	3609	22.83	24.00	1.309	62.9	1.006	-0.09	0.356	0.469
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	ECI 2	55830	3609	21.71	23.00	1.346	62.9	1.006	-0.12	0.266	0.360
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	55830	3609	22.83	24.00	1.309	62.9	1.006	0.16	0.568	0.748
	LTE Band 48C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 2	ECI 2	55830+ 56028	3609+ 3628.8	22.79	24.00	1.321	62.9	1.006	-0.03	0.553	0.735
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	55340	3560	22.75	24.00	1.334	62.9	1.006	0.04	0.521	0.699
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	56150	3641	22.67	24.00	1.358	62.9	1.006	0.01	0.533	0.728
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	56640	3690	22.73	24.00	1.340	62.9	1.006	-0.01	0.522	0.704
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	ECI 2	55830	3609	21.71	23.00	1.346	62.9	1.006	-0.06	0.487	0.659
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	ECI 2	55340	3560	21.70	23.00	1.349	62.9	1.006	-0.04	0.477	0.647
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	ECI 2	56150	3641	21.63	23.00	1.371	62.9	1.006	0.06	0.457	0.63
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	ECI 2	56640	3690	21.69	23.00	1.352	62.9	1.006	0.09	0.466	0.634
	LTE Band 48	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 2	ECI 2	55830	3609	21.74	23.00	1.337	62.9	1.006	0.05	0.461	0.620
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	ECI 2	55830	3609	22.83	24.00	1.309	62.9	1.006	0.11	0.439	0.578
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	ECI 2	55830	3609	21.71	23.00	1.346	62.9	1.006	0.14	0.441	0.597
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	ECI 2	55830	3609	22.83	24.00	1.309	62.9	1.006	-0.08	0.374	0.493
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	ECI 2	55830	3609	21.71	23.00	1.346	62.9	1.006	0.05	0.276	0.374
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 7	ECI 2	55830	3609	17.47	18.50	1.268	62.9	1.006	-0.04	0.202	0.258
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 7	ECI 2	55830	3609	17.42	18.50	1.282	62.9	1.006	0.01	0.198	0.255
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 7	ECI 2	55830	3609	17.47	18.50	1.268	62.9	1.006	-0.13	0.173	0.221
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 7	ECI 2	55830	3609	17.42	18.50	1.282	62.9	1.006	-0.02	0.155	0.2
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	55830	3609	17.47	18.50	1.268	62.9	1.006	0.08	0.610	0.778
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	55340	3560	17.44	18.50	1.276	62.9	1.006	0.07	0.570	0.732
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	56150	3641	17.09	18.50	1.384	62.9	1.006	0.05	0.643	0.895
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	56640	3690	17.26	18.50	1.330	62.9	1.006	-0.12	0.542	0.725
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	55830	3609	17.42	18.50	1.282	62.9	1.006	0.07	0.513	0.662
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	55340	3560	17.31	18.50	1.315	62.9	1.006	0.08	0.571	0.755
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	56150	3641	16.93	18.50	1.435	62.9	1.006	0.06	0.518	0.748
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	56640	3690	17.22	18.50	1.343	62.9	1.006	0.06	0.557	0.752
	LTE Band 48	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 7	ECI 2	55830	3609	17.40	18.50	1.288	62.9	1.006	-0.15	0.506	0.656
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	ECI 2	55830	3609	17.47	18.50	1.268	62.9	1.006	0.18	0.254	0.324
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 7	ECI 2	55830	3609	17.42	18.50	1.282	62.9	1.006	-0.07	0.222	0.286
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	ECI 2	55830	3609	22.89	24.00	1.291	62.9	1.006	0.01	0.223	0.29
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	ECI 2	55830	3609	21.79	23.00	1.321	62.9	1.006	0.02	0.191	0.254
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	ECI 2	55830	3609	22.89	24.00	1.291	62.9	1.006	-0.04	0.093	0.121
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	ECI 2	55830	3609	21.79	23.00	1.321	62.9	1.006	-0.18	0.067	0.089
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	ECI 2	55830	3609	22.89	24.00	1.291	62.9	1.006	0.08	0.144	0.187
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	ECI 2	55830	3609	21.79	23.00	1.321	62.9	1.006	0.07	0.107	0.142
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	ECI 2	55830	3609	22.89	24.00	1.291	62.9	1.006	0.07	0.137	0.178
	LTE Band 48	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	ECI 2	55830	3609	21.79	23.00	1.321	62.9	1.006	-0.17	0.101	0.134
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	641666	3624.99	19.46	20.00	1.132	-	-	-0.04	0.667	0.755
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	641666	3624.99	19.33	20.00	1.167	-	-	0.06	0.600	0.700
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	ECI 2	641666	3624.99	19.46	20.00	1.132	-	-	0.05	0.282	0.319
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	ECI 2	641666	3624.99	19.33	20.00	1.167	-	-	-0.06	0.268	0.313
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	ECI 2	641666	3624.99	19.46	20.00	1.132	-	-	0.05	0.174	0.197
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	ECI 2	641666	3624.99	19.33	20.00	1.167	-	-	-0.11	0.175	0.204
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	ECI 2	641666	3624.99	19.46	20.00	1.132	-	-	0.15	0.117	0.132
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	ECI 2	641666	3624.99	19.33	20.00	1.167	-	-	0.1	0.107	0.125
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	641666	3624.99	23.53	24.00	1.114	-	-	-0.13	0.316	0.352
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	641666	3624.99	23.48	24.00	1.127	-	-	0.07	0.327	0.369
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	641666	3624.99	23.53	24.00	1.114	-	-	0.04	0.346	0.386
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	641666	3624.99	23.48	24.00	1.127	-	-	-0.15	0.373	0.42

	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	641666	3624.99	23.53	24.00	1.114	-	-	0.1	0.504	0.562
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	641666	3624.99	23.48	24.00	1.127	-	-	-0.05	0.542	0.611
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	641666	3624.99	23.53	24.00	1.114	-	-	-0.07	0.218	0.243
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	641666	3624.99	23.48	24.00	1.127	-	-	-0.13	0.234	0.264
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	641666	3624.99	16.49	17.50	1.262	-	-	-0.13	0.283	0.357
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	641666	3624.99	16.42	17.50	1.282	-	-	0.04	0.323	0.414
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	641666	3624.99	16.49	17.50	1.262	-	-	-0.15	0.249	0.314
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	641666	3624.99	16.42	17.50	1.282	-	-	-0.05	0.253	0.324
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	641666	3624.99	16.49	17.50	1.262	-	-	0.05	0.495	0.625
27	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	641666	3624.99	16.42	17.50	1.282	-	-	0.09	0.747	**0.958**
	FR1 n48	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	641666	3624.99	16.35	17.50	1.303	-	-	-0.11	0.599	0.781
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	641666	3624.99	16.49	17.50	1.262	-	-	0.1	0.347	0.438
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	641666	3624.99	16.42	17.50	1.282	-	-	-0.13	0.414	0.531
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	ECI 2	641666	3624.99	23.34	24.00	1.164	-	-	0.06	0.300	0.349
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	ECI 2	641666	3624.99	23.29	24.00	1.178	-	-	-0.17	0.271	0.319
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	ECI 2	641666	3624.99	23.34	24.00	1.164	-	-	-0.05	0.001	0.001
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	ECI 2	641666	3624.99	23.29	24.00	1.178	-	-	0.08	0.001	0.001
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	ECI 2	641666	3624.99	23.34	24.00	1.164	-	-	0.01	0.030	0.035
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	ECI 2	641666	3624.99	23.29	24.00	1.178	-	-	0.03	0.001	0.001
	FR1 n48	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	641666	3624.99	23.34	24.00	1.164	-	-	-0.07	0.001	0.001
	FR1 n48	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	641666	3624.99	23.29	24.00	1.178	-	-	0.06	0.001	0.001
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	656000	3840	20.23	21.00	1.194	-	-	0.08	0.677	0.808
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	656000	3840	20.20	21.00	1.202	-	-	-0.05	0.724	0.870
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	656000	3840	20.14	21.00	1.219	-	-	0.09	0.675	0.823
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	ECI 2	656000	3840	20.23	21.00	1.194	-	-	0.04	0.301	0.359
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	ECI 2	656000	3840	20.20	21.00	1.202	-	-	0.05	0.320	0.385
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	ECI 2	656000	3840	20.23	21.00	1.194	-	-	-0.1	0.183	0.218
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	ECI 2	656000	3840	20.20	21.00	1.202	-	-	0.08	0.197	0.237
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	ECI 2	656000	3840	20.23	21.00	1.194	-	-	0.01	0.116	0.139
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	ECI 2	656000	3840	20.20	21.00	1.202	-	-	0.04	0.100	0.12
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	633334	3500.01	20.28	21.00	1.180	-	-	0.04	0.711	0.839
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	633334	3500.01	20.23	21.00	1.194	-	-	0.04	0.656	0.783
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	633334	3500.01	20.17	21.00	1.211	-	-	-0.07	0.721	0.873
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	ECI 2	633334	3500.01	20.28	21.00	1.180	-	-	-0.08	0.278	0.328
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	ECI 2	633334	3500.01	20.23	21.00	1.194	-	-	0.07	0.203	0.242
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	ECI 2	633334	3500.01	20.28	21.00	1.180	-	-	-0.06	0.174	0.205
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	ECI 2	633334	3500.01	20.23	21.00	1.194	-	-	0.05	0.137	0.164
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	ECI 2	633334	3500.01	20.28	21.00	1.180	-	-	0.05	0.104	0.123
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	ECI 2	633334	3500.01	20.23	21.00	1.194	-	-	0.12	0.085	0.101
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	656000	3840	25.91	27.00	1.285	-	-	0.02	0.373	0.479
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	656000	3840	25.88	27.00	1.294	-	-	0.04	0.402	0.520
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	656000	3840	25.91	27.00	1.285	-	-	0.01	0.355	0.456
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	656000	3840	25.88	27.00	1.294	-	-	0.08	0.382	0.494
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	656000	3840	25.91	27.00	1.285	-	-	-0.05	0.442	0.568
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	656000	3840	25.88	27.00	1.294	-	-	0.08	0.487	0.63
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	656000	3840	25.91	27.00	1.285	-	-	0.08	0.275	0.353
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	656000	3840	25.88	27.00	1.294	-	-	-0.13	0.237	0.307
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	633334	3500.01	25.92	27.00	1.282	-	-	0.07	0.272	0.349
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	633334	3500.01	25.87	27.00	1.297	-	-	-0.07	0.267	0.346
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	633334	3500.01	25.92	27.00	1.282	-	-	0.03	0.276	0.354
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	633334	3500.01	25.87	27.00	1.297	-	-	-0.1	0.313	0.406
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	633334	3500.01	25.92	27.00	1.282	-	-	0.07	0.400	0.513
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	633334	3500.01	25.87	27.00	1.297	-	-	0.07	0.468	0.607
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	633334	3500.01	25.92	27.00	1.282	-	-	-0.05	0.163	0.209
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	633334	3500.01	25.87	27.00	1.297	-	-	-0.13	0.189	0.245
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	656000	3840	15.67	16.80	1.297	-	-	0.18	0.165	0.214

	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	656000	3840	15.55	16.80	1.334	-	-	-0.02	0.130	0.173
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	656000	3840	15.67	16.80	1.297	-	-	0.02	0.134	0.174
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	656000	3840	15.55	16.80	1.334	-	-	0.07	0.106	0.141
28	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	15.67	16.80	1.297	-	-	-0.05	0.733	**0.951**
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	15.55	16.80	1.334	-	-	0.07	0.584	0.779
	FR1 n77 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	15.54	16.80	1.337	-	-	-0.04	0.582	0.778
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	656000	3840	15.67	16.80	1.297	-	-	0.04	0.217	0.281
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	656000	3840	15.55	16.80	1.334	-	-	0.07	0.189	0.252
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	633334	3500.01	15.85	16.80	1.245	-	-	0.08	0.214	0.266
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	633334	3500.01	15.82	16.80	1.253	-	-	-0.18	0.296	0.371
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	633334	3500.01	15.85	16.80	1.245	-	-	0.1	0.183	0.228
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	633334	3500.01	15.82	16.80	1.253	-	-	-0.02	0.284	0.356
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	633334	3500.01	15.85	16.80	1.245	-	-	0.08	0.293	0.365
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	633334	3500.01	15.82	16.80	1.253	-	-	0.03	0.402	0.504
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	633334	3500.01	15.85	16.80	1.245	-	-	0.06	0.276	0.343
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	633334	3500.01	15.82	16.80	1.253	-	-	0.12	0.345	0.432
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	ECI 2	656000	3840	25.89	27.00	1.291	-	-	0.02	0.111	0.143
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	ECI 2	656000	3840	25.73	27.00	1.340	-	-	0.03	0.085	0.114
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	ECI 2	656000	3840	25.89	27.00	1.291	-	-	0.06	0.065	0.084
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	ECI 2	656000	3840	25.73	27.00	1.340	-	-	-0.02	0.044	0.059
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	ECI 2	656000	3840	25.89	27.00	1.291	-	-	-0.16	0.116	0.15
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	ECI 2	656000	3840	25.73	27.00	1.340	-	-	0.14	0.064	0.086
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	656000	3840	25.89	27.00	1.291	-	-	0.09	0.078	0.101
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	656000	3840	25.73	27.00	1.340	-	-	0.15	0.073	0.098
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	ECI 2	633334	3500.01	26.31	27.00	1.172	-	-	-0.02	0.360	0.422
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	ECI 2	633334	3500.01	26.27	27.00	1.183	-	-	0.18	0.205	0.243
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	ECI 2	633334	3500.01	26.31	27.00	1.172	-	-	0.08	0.372	0.436
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	ECI 2	633334	3500.01	26.27	27.00	1.183	-	-	0.03	0.091	0.108
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	ECI 2	633334	3500.01	26.31	27.00	1.172	-	-	-0.18	0.211	0.247
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	ECI 2	633334	3500.01	26.27	27.00	1.183	-	-	0.13	0.144	0.17
	FR1 n77 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	633334	3500.01	26.31	27.00	1.172	-	-	-0.17	0.260	0.305
	FR1 n77 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	ECI 2	633334	3500.01	26.27	27.00	1.183	-	-	-0.14	0.143	0.169

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 3+8(8)	Receiver on	11	2462	16.22	17.50	1.343	99.31	1.007	0.03	0.335	0.453
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3+8(8)	Receiver on	11	2462	16.22	17.50	1.343	99.31	1.007	0.02	0.352	0.476
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+8(8)	Receiver on	11	2462	16.22	17.50	1.343	99.31	1.007	0.01	0.668	0.903
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+8(3)	Receiver on	6	2437	15.81	17.50	1.476	99.31	1.007	0.09	0.611	0.908
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+8(3)	Receiver on	1	2412	15.82	17.50	1.472	99.31	1.007	0.05	0.613	0.909
29	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+8(8)	Receiver on	11	2462	16.22	17.50	1.343	99.31	1.007	-0.07	0.706	**0.955**
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+8(3)	Receiver on	6	2437	15.81	17.50	1.476	99.31	1.007	-0.08	0.572	0.85
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+8(3)	Receiver on	1	2412	15.82	17.50	1.472	99.31	1.007	-0.07	0.604	0.896
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+8(8)	Simultaneous	11	2462	13.68	15.00	1.355	99.31	1.007	0.05	0.256	0.349
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 8	Simultaneous	6	2437	10.23	11.00	1.194	99.31	1.007	0.04	0.018	0.022
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	Simultaneous	6	2437	10.23	11.00	1.194	99.31	1.007	-0.11	0.022	0.026
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8	Simultaneous	6	2437	10.23	11.00	1.194	99.31	1.007	0.04	0.044	0.053
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8	Simultaneous	6	2437	10.23	11.00	1.194	99.31	1.007	0.01	0.051	0.061
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8	Simultaneous	1	2412	9.97	11.00	1.268	99.31	1.007	0.02	0.045	0.057
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8	Simultaneous	11	2462	9.86	11.00	1.300	99.31	1.007	0.06	0.041	0.054
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 3	Receiver on	39	2441	18.29	19.00	1.178	76.4	1.090	0.04	0.345	0.443
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 3	Receiver on	39	2441	18.29	19.00	1.178	76.4	1.090	0.11	0.416	0.534
30	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	Receiver on	39	2441	18.29	19.00	1.178	76.4	1.090	-0.03	0.578	**0.742**
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	Receiver on	0	2402	17.30	19.00	1.479	76.40	1.090	0.05	0.383	0.617
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	Receiver on	78	2480	17.73	19.00	1.340	76.40	1.090	0.09	0.476	0.695
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 3	Receiver on	39	2441	18.29	19.00	1.178	76.4	1.090	-0.04	0.56	0.719
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	Simultaneous	39	2441	10.01	11.00	1.256	76.4	1.090	-0.03	0.099	0.136
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	Simultaneous For WLAN 2.4G Ant 8	39	2441	6.26	7.00	1.186	76.4	1.090	0.01	0.001	0.001
5000MHz																
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 3+8(3)	Receiver on	54	5270	15.77	17.00	1.327	93.9	1.065	0.05	0.334	0.472
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 3+8(3)	Receiver on	54	5270	15.77	17.00	1.327	93.9	1.065	0.12	0.304	0.430
31	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+8(3)	Receiver on	54	5270	15.77	17.00	1.327	93.9	1.065	-0.09	0.835	**1.180**
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+8(3)	Receiver on	62	5310	13.88	15.50	1.451	93.9	1.065	-0.01	0.518	0.801
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 3+8(3)	Receiver on	54	5270	15.77	17.00	1.327	93.9	1.065	-0.18	0.802	1.134
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 3+8(3)	Receiver on	62	5310	13.88	15.50	1.451	93.9	1.065	0.01	0.423	0.654
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 3+8(3)	Simultaneous	58	5290	11.01	12.00	1.256	88.79	1.126	0.06	0.276	0.39
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 3+8(8)	Receiver on	110	5550	15.64	17.00	1.368	93.9	1.065	-0.09	0.251	0.366
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 3+8(8)	Receiver on	110	5550	15.64	17.00	1.368	93.9	1.065	-0.08	0.235	0.342
32	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+8(8)	Receiver on	110	5550	15.64	17.00	1.368	93.9	1.065	0.03	0.744	**1.084**
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+8(8)	Receiver on	134	5670	15.71	17.00	1.346	93.9	1.065	0.02	0.513	0.735
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+8(8)	Receiver on	102	5510	12.98	14.50	1.419	93.9	1.065	0.09	0.346	0.523
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 3+8(8)	Receiver on	110	5550	15.64	17.00	1.368	93.9	1.065	0.11	0.543	0.791
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 3+8(8)	Simultaneous	106	5530	10.64	12.00	1.368	88.79	1.126	0.03	0.224	0.345
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 3+8(3)	Receiver on	155	5775	17.10	18.50	1.380	88.79	1.126	0.14	0.235	0.365
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 3+8(3)	Receiver on	155	5775	17.10	18.50	1.380	88.79	1.126	0.03	0.239	0.371
33	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 3+8(3)	Receiver on	155	5775	17.10	18.50	1.380	88.79	1.126	-0.05	0.651	**1.012**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 3+8(3)	Receiver on	155	5775	17.10	18.50	1.380	88.79	1.126	0.05	0.456	0.709
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 3+8(3)	Simultaneous	155	5775	12.71	14.00	1.346	88.79	1.126	0.04	0.224	0.339

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)
750MHz																				
	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	133322	683	23.28	24.00	1.180	-	-	0.03	0.465	0.549
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	133322	683	22.32	23.00	1.169	-	-	-0.17	0.230	0.269
34	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	133322	683	23.28	24.00	1.180	-	-	-0.05	0.685	**0.809**
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	133222	673	23.21	24.00	1.199	-	-	0.04	0.647	0.776
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	133372	688	23.23	24.00	1.194	-	-	0.11	0.661	0.789
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	133322	683	22.32	23.00	1.169	-	-	0.08	0.538	0.629
	LTE Band 71	20M	QPSK	100	0	-	Back	5mm	Ant 0	ECI 7	133322	683	22.28	23.00	1.180	-	-	0.16	0.512	0.604
	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	133322	683	23.28	24.00	1.180	-	-	0.05	0.307	0.362
	LTE Band 71	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	133322	683	22.32	23.00	1.169	-	-	0.05	0.240	0.281
	LTE Band 71	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	133322	683	23.28	24.00	1.180	-	-	-0.07	0.410	0.484
	LTE Band 71	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	133322	683	22.32	23.00	1.169	-	-	-0.14	0.390	0.456
	LTE Band 71	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	133322	683	23.28	24.00	1.180	-	-	0.01	0.487	0.575
	LTE Band 71	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	133322	683	22.32	23.00	1.169	-	-	0.07	0.336	0.393
	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	133322	683	21.21	22.00	1.199	-	-	0.07	0.159	0.191
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	133322	683	21.18	22.00	1.208	-	-	0.03	0.076	0.092
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	133322	683	21.21	22.00	1.199	-	-	0.05	0.396	0.475
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	133322	683	21.18	22.00	1.208	-	-	0.05	0.180	0.217
	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	133322	683	21.21	22.00	1.199	-	-	-0.12	0.233	0.279
	LTE Band 71	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	133322	683	21.18	22.00	1.208	-	-	0.09	0.116	0.140
	LTE Band 71	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	133322	683	21.21	22.00	1.199	-	-	-0.07	0.080	0.096
	LTE Band 71	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	133322	683	21.18	22.00	1.208	-	-	0.07	0.043	0.052
	LTE Band 71	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	133322	683	21.21	22.00	1.199	-	-	-0.09	0.448	0.537
	LTE Band 71	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	133222	673	21.16	22.00	1.213	-	-	0.06	0.411	0.499
	LTE Band 71	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	133372	688	21.10	22.00	1.230	-	-	0.05	0.396	0.487
	LTE Band 71	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	133322	683	21.18	22.00	1.208	-	-	-0.16	0.201	0.243
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	23095	707.5	23.05	24.00	1.245	-	-	0.06	0.548	0.682
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI 7	23095	707.5	22.02	23.00	1.253	-	-	-0.14	0.465	0.583
35	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23095	707.5	23.05	24.00	1.245	-	-	0.01	0.896	**1.115**
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23060	704	22.99	24.00	1.262	-	-	-0.05	0.822	1.037
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23130	711	22.91	24.00	1.285	-	-	0.11	0.838	1.077
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI 7	23095	707.5	22.02	23.00	1.253	-	-	0.08	0.630	0.789
	LTE Band 12	10M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	23095	707.5	21.96	23.00	1.271	-	-	0.02	0.622	0.790
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	23095	707.5	23.05	24.00	1.245	-	-	0.04	0.243	0.302
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI 7	23095	707.5	22.02	23.00	1.253	-	-	-0.06	0.118	0.148
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	23095	707.5	23.05	24.00	1.245	-	-	0.05	0.413	0.514
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI 7	23095	707.5	22.02	23.00	1.253	-	-	0.05	0.396	0.496
	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	23095	707.5	23.05	24.00	1.245	-	-	0.05	0.394	0.490
	LTE Band 12	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI 7	23095	707.5	22.02	23.00	1.253	-	-	-0.04	0.287	0.360
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	23095	707.5	20.78	21.50	1.180	-	-	0.19	0.182	0.215
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI 7	23095	707.5	20.72	21.50	1.197	-	-	0.04	0.088	0.105
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	23095	707.5	20.78	21.50	1.180	-	-	0.14	0.365	0.431
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI 7	23095	707.5	20.72	21.50	1.197	-	-	0.02	0.170	0.203
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	23095	707.5	20.78	21.50	1.180	-	-	0.14	0.232	0.274
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI 7	23095	707.5	20.72	21.50	1.197	-	-	-0.13	0.111	0.133
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	23095	707.5	20.78	21.50	1.180	-	-	-0.19	0.081	0.096
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI 7	23095	707.5	20.72	21.50	1.197	-	-	-0.02	0.041	0.049
	LTE Band 12	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	23095	707.5	20.78	21.50	1.180	-	-	-0.04	0.445	0.525
	LTE Band 12	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	23060	704	20.74	21.50	1.191	-	-	-0.04	0.355	0.423
	LTE Band 12	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	23130	711	20.71	21.50	1.199	-	-	-0.04	0.367	0.440
	LTE Band 12	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	ECI 7	23095	707.5	20.72	21.50	1.197	-	-	-0.14	0.212	0.254
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	23230	782	23.05	24.00	1.245	-	-	0.08	0.627	0.780
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI 7	23230	782	21.91	23.00	1.285	-	-	0.11	0.356	0.458

36	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23230	782	23.05	24.00	1.245	-	-	-0.09	1.080	**1.344**
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI 7	23230	782	21.91	23.00	1.285	-	-	0.02	0.807	1.037
	LTE Band 13	10M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	23230	782	22.05	23.00	1.245	-	-	0.13	0.810	1.008
	LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	23230	782	23.05	24.00	1.245	-	-	0.06	0.186	0.231
	LTE Band 13	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI 7	23230	782	21.91	23.00	1.285	-	-	-0.1	0.104	0.134
	LTE Band 13	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	23230	782	23.05	24.00	1.245	-	-	0.04	0.336	0.418
	LTE Band 13	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI 7	23230	782	21.91	23.00	1.285	-	-	0.13	0.187	0.240
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	23230	782	23.05	24.00	1.245	-	-	0.09	0.415	0.516
	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI 7	23230	782	21.91	23.00	1.285	-	-	0.07	0.328	0.422
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	23230	782	21.47	22.00	1.130	-	-	0.09	0.210	0.237
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI 7	23230	782	21.40	22.00	1.148	-	-	0.03	0.120	0.138
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	23230	782	21.47	22.00	1.130	-	-	0.09	0.332	0.375
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI 7	23230	782	21.40	22.00	1.148	-	-	-0.08	0.186	0.214
	LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	23230	782	21.47	22.00	1.130	-	-	-0.05	0.197	0.223
	LTE Band 13	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI 7	23230	782	21.40	22.00	1.148	-	-	0.04	0.112	0.129
	LTE Band 13	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	23230	782	21.47	22.00	1.130	-	-	-0.15	0.088	0.099
	LTE Band 13	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI 7	23230	782	21.40	22.00	1.148	-	-	0.08	0.048	0.055
	LTE Band 13	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	23230	782	21.47	22.00	1.130	-	-	-0.08	0.509	0.575
	LTE Band 13	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	ECI 7	23230	782	21.40	22.00	1.148	-	-	-0.05	0.286	0.328
	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	23330	793	22.41	23.50	1.285	-	-	-0.03	0.811	1.042
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI 7	23330	793	21.78	23.00	1.324	-	-	-0.04	0.644	0.853
	LTE Band 14	10M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	23330	793	21.79	23.00	1.321	-	-	-0.11	0.642	0.848
37	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23330	793	22.41	23.50	1.285	-	-	0.01	1.060	**1.362**
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI 7	23330	793	21.78	23.00	1.324	-	-	0.02	0.874	1.157
	LTE Band 14	10M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	23330	793	21.79	23.00	1.321	-	-	0.15	0.866	1.144
	LTE Band 14	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	23330	793	22.41	23.50	1.285	-	-	0.09	0.256	0.329
	LTE Band 14	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI 7	23330	793	21.78	23.00	1.324	-	-	-0.15	0.120	0.159
	LTE Band 14	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	23330	793	22.41	23.50	1.285	-	-	0.12	0.487	0.626
	LTE Band 14	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI 7	23330	793	21.78	23.00	1.324	-	-	0.03	0.229	0.303
	LTE Band 14	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	23330	793	22.41	23.50	1.285	-	-	-0.17	0.693	0.891
	LTE Band 14	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI 7	23330	793	21.78	23.00	1.324	-	-	0.15	0.532	0.705
	LTE Band 14	10M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	23330	793	21.79	23.00	1.321	-	-	0.18	0.538	0.711
	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	23330	793	20.53	21.50	1.250	-	-	-0.12	0.228	0.285
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI 7	23330	793	20.50	21.50	1.259	-	-	-0.17	0.106	0.133
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	23330	793	20.53	21.50	1.250	-	-	0.15	0.341	0.426
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI 7	23330	793	20.50	21.50	1.259	-	-	0.19	0.260	0.327
	LTE Band 14	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	23330	793	20.53	21.50	1.250	-	-	-0.1	0.223	0.279
	LTE Band 14	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI 7	23330	793	20.50	21.50	1.259	-	-	-0.15	0.206	0.259
	LTE Band 14	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	23330	793	20.53	21.50	1.250	-	-	0.13	0.111	0.139
	LTE Band 14	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI 7	23330	793	20.50	21.50	1.259	-	-	0.01	0.052	0.065
	LTE Band 14	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	23330	793	20.53	21.50	1.250	-	-	-0.07	0.510	0.638
	LTE Band 14	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	ECI 7	23330	793	20.50	21.50	1.259	-	-	-0.07	0.341	0.429
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	136100	680.5	23.25	24.00	1.189	-	-	0.11	0.317	0.377
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	-0.02	0.330	0.396
38	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	136100	680.5	23.25	24.00	1.189	-	-	0.05	0.471	**0.560**
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	134600	673	23.14	24.00	1.219	-	-	0.08	0.455	0.555
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	137600	688	22.96	24.00	1.271	-	-	0.1	0.431	0.548
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	-0.13	0.449	0.539
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	136100	680.5	23.25	24.00	1.189	-	-	0.08	0.216	0.257
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	-0.14	0.184	0.221
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	136100	680.5	23.25	24.00	1.189	-	-	0.11	0.274	0.326
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	0.06	0.245	0.294
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	136100	680.5	23.25	24.00	1.189	-	-	-0.09	0.307	0.365
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	-0.09	0.279	0.335
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	-0.1	0.159	0.193
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	136100	680.5	23.03	24.00	1.250	-	-	-0.05	0.185	0.231
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	-0.12	0.329	0.399

	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	136100	680.5	23.03	24.00	1.250	-	-	-0.09	0.406	0.508
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	134600	673	23.01	24.00	1.256	-	-	0.04	0.371	0.466
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	137600	688	22.90	24.00	1.288	-	-	0.08	0.370	0.477
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	0.07	0.147	0.178
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	136100	680.5	23.03	24.00	1.250	-	-	0.15	0.178	0.223
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	0.02	0.045	0.055
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	136100	680.5	23.03	24.00	1.250	-	-	0.09	0.056	0.070
	FR1 n71	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	-0.12	0.227	0.275
	FR1 n71	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	136100	680.5	23.03	24.00	1.250	-	-	-0.17	0.323	0.404
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	0.18	0.359	0.445
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	141500	707.5	22.89	24.00	1.291	-	-	0.04	0.381	0.492
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	0.08	0.536	0.664
39	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	141500	707.5	22.89	24.00	1.291	-	-	0.02	0.554	**0.715**
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	141300	706.5	22.82	24.00	1.312	-	-	0.04	0.511	0.671
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	141700	708.5	22.64	24.00	1.368	-	-	-0.07	0.504	0.689
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	-0.15	0.165	0.204
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	141500	707.5	22.89	24.00	1.291	-	-	0.19	0.168	0.217
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	0.08	0.265	0.328
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	141500	707.5	22.89	24.00	1.291	-	-	0.04	0.266	0.343
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	0.06	0.226	0.280
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	141500	707.5	22.89	24.00	1.291	-	-	0.05	0.270	0.349
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	141500	707.5	23.17	24.00	1.211	-	-	0.02	0.202	0.245
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	0.05	0.215	0.266
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	141500	707.5	23.17	24.00	1.211	-	-	-0.05	0.458	0.554
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	-0.05	0.369	0.457
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	141500	707.5	23.17	24.00	1.211	-	-	0.13	0.196	0.237
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	-0.09	0.210	0.260
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	141500	707.5	23.17	24.00	1.211	-	-	-0.04	0.067	0.081
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	-0.17	0.076	0.094
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	141500	707.5	23.17	24.00	1.211	-	-	-0.13	0.367	0.444
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	141500	707.5	23.07	24.00	1.239	-	-	-0.17	0.474	0.587
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	141300	706.5	22.98	24.00	1.265	-	-	0.03	0.400	0.506
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	141700	708.5	23.02	24.00	1.253	-	-	-0.05	0.422	0.529
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	158600	793	23.33	24.00	1.167	-	-	0.01	0.449	0.524
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	158600	793	23.29	24.00	1.178	-	-	0.02	0.414	0.488
40	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	158600	793	23.33	24.00	1.167	-	-	0.04	0.660	**0.770**
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	158600	793	23.29	24.00	1.178	-	-	0.03	0.636	0.749
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	158600	793	23.33	24.00	1.167	-	-	0.09	0.125	0.146
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	158600	793	23.29	24.00	1.178	-	-	-0.02	0.113	0.133
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	158600	793	23.33	24.00	1.167	-	-	-0.1	0.240	0.280
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	158600	793	23.29	24.00	1.178	-	-	-0.16	0.239	0.281
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	158600	793	23.33	24.00	1.167	-	-	-0.18	0.377	0.440
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	158600	793	23.29	24.00	1.178	-	-	0.04	0.346	0.407
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	158600	793	22.94	24.00	1.276	-	-	0.03	0.135	0.172
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	158600	793	22.85	24.00	1.303	-	-	0.06	0.145	0.189
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	158600	793	22.94	24.00	1.276	-	-	-0.18	0.293	0.374
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	158600	793	22.85	24.00	1.303	-	-	0.04	0.315	0.410
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	158600	793	22.94	24.00	1.276	-	-	0.07	0.135	0.172
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	158600	793	22.85	24.00	1.303	-	-	-0.09	0.127	0.166
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	158600	793	22.94	24.00	1.276	-	-	0.07	0.066	0.084
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	158600	793	22.85	24.00	1.303	-	-	0.06	0.068	0.089
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	158600	793	22.94	24.00	1.276	-	-	0.04	0.299	0.382
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	158600	793	22.85	24.00	1.303	-	-	-0.06	0.433	0.564
835MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	ECI 7	189	836.4	24.94	26.00	1.276	-	-	0.14	0.490	0.625
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	189	836.4	24.94	26.00	1.276	-	-	0.05	0.762	0.973
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	128	824.2	24.87	26.00	1.297	-	-	0.07	0.766	0.994

41	GSM850	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	251	848.8	24.90	26.00	1.288	-	-	-0.03	0.983	**1.266**
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	ECI 7	189	836.4	24.94	26.00	1.276	-	-	0.18	0.051	0.065
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Side	5mm	Ant 0	ECI 7	189	836.4	24.94	26.00	1.276	-	-	0.05	0.153	0.195
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI 7	189	836.4	24.94	26.00	1.276	-	-	0.08	0.413	0.527
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	4182	836.4	21.32	22.50	1.312	-	-	-0.03	0.388	0.509
42	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	4182	836.4	21.32	22.50	1.312	-	-	0.01	0.919	**1.206**
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	4132	826.4	21.23	22.50	1.340	-	-	0.02	0.834	1.117
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	4233	846.6	21.29	22.50	1.321	-	-	0.07	0.851	1.124
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI 7	4182	836.4	21.32	22.50	1.312	-	-	0.06	0.053	0.070
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	ECI 7	4182	836.4	21.32	22.50	1.312	-	-	0.01	0.138	0.181
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	4182	836.4	21.32	22.50	1.312	-	-	0.02	0.337	0.442
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	26865	831.5	21.63	22.50	1.222	-	-	0.12	0.691	0.844
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 0	ECI 7	26865	831.5	21.60	22.50	1.230	-	-	0.04	0.629	0.774
	LTE Band 26	15M	QPSK	75	0	-	Front	5mm	Ant 0	ECI 7	26865	831.5	21.55	22.50	1.245	-	-	0.01	0.611	0.760
43	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	21.63	22.50	1.222	-	-	-0.02	0.859	**1.050**
	LTE Band 5B	10M	QPSK	1	49	-	Back	5mm	Ant 0	ECI 7	20476+20575	831.6+841.5	21.44	22.50	1.276	-	-	0.03	0.812	1.036
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	21.60	22.50	1.230	-	-	-0.06	0.620	0.763
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	21.55	22.50	1.245	-	-	0.03	0.633	0.788
	LTE Band 26	15M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	26865	831.5	21.63	22.50	1.222	-	-	-0.03	0.129	0.158
	LTE Band 26	15M	QPSK	36	0	-	Left Side	5mm	Ant 0	ECI 7	26865	831.5	21.60	22.50	1.230	-	-	0.04	0.060	0.074
	LTE Band 26	15M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	26865	831.5	21.63	22.50	1.222	-	-	-0.1	0.338	0.413
	LTE Band 26	15M	QPSK	36	0	-	Right Side	5mm	Ant 0	ECI 7	26865	831.5	21.60	22.50	1.230	-	-	0.03	0.157	0.193
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	26865	831.5	21.63	22.50	1.222	-	-	0.07	0.687	0.839
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	5mm	Ant 0	ECI 7	26865	831.5	21.60	22.50	1.230	-	-	-0.08	0.638	0.785
	LTE Band 26	15M	QPSK	75	0	-	Bottom Side	5mm	Ant 0	ECI 7	26865	831.5	21.55	22.50	1.245	-	-	0.05	0.641	0.798
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	26865	831.5	19.41	20.50	1.285	-	-	-0.04	0.179	0.230
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 1	ECI 7	26865	831.5	19.34	20.50	1.306	-	-	0.11	0.105	0.137
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	26865	831.5	19.41	20.50	1.285	-	-	-0.18	0.266	0.342
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 1	ECI 7	26865	831.5	19.34	20.50	1.306	-	-	0.02	0.174	0.227
	LTE Band 26	15M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	26865	831.5	19.41	20.50	1.285	-	-	0.13	0.177	0.227
	LTE Band 26	15M	QPSK	36	0	-	Left Side	5mm	Ant 1	ECI 7	26865	831.5	19.34	20.50	1.306	-	-	0.08	0.104	0.136
	LTE Band 26	15M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	26865	831.5	19.41	20.50	1.285	-	-	0.06	0.053	0.068
	LTE Band 26	15M	QPSK	36	0	-	Right Side	5mm	Ant 1	ECI 7	26865	831.5	19.34	20.50	1.306	-	-	0.08	0.028	0.037
	LTE Band 26	15M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26865	831.5	19.41	20.50	1.285	-	-	-0.04	0.420	0.540
	LTE Band 5B	10M	QPSK	1	49	-	Top Side	5mm	Ant 1	ECI 7	20476 +20575	831.6 +841.5	19.05	20.50	1.396	-	-	0.08	0.379	0.529
	LTE Band 26	15M	QPSK	36	0	-	Top Side	5mm	Ant 1	ECI 7	26865	831.5	19.34	20.50	1.306	-	-	0.02	0.199	0.260
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	166300	831.5	23.16	24.00	1.213	-	-	0.04	0.521	0.632
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	166300	831.5	23.00	24.00	1.259	-	-	-0.15	0.521	0.656
44	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	23.16	24.00	1.213	-	-	0.03	0.779	**0.945**
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	164800	824	23.07	24.00	1.239	-	-	0.06	0.721	0.893
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	167800	839	23.05	24.00	1.245	-	-	-0.01	0.704	0.876
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	23.00	24.00	1.259	-	-	0.03	0.747	0.940
	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	21.94	23.00	1.276	-	-	0.02	0.579	0.739
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	166300	831.5	23.16	24.00	1.213	-	-	0.07	0.070	0.085
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	166300	831.5	23.00	24.00	1.259	-	-	0.07	0.074	0.093
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	166300	831.5	23.16	24.00	1.213	-	-	0.02	0.202	0.245
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	166300	831.5	23.00	24.00	1.259	-	-	-0.05	0.203	0.256
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	166300	831.5	23.16	24.00	1.213	-	-	0.06	0.437	0.530
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	166300	831.5	23.00	24.00	1.259	-	-	-0.16	0.413	0.520
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	166300	831.5	22.04	23.00	1.247	-	-	0.04	0.225	0.281
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	166300	831.5	21.98	23.00	1.265	-	-	-0.02	0.219	0.277
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	166300	831.5	22.04	23.00	1.247	-	-	0.05	0.374	0.467
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	166300	831.5	21.98	23.00	1.265	-	-	-0.06	0.428	0.541
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	166300	831.5	22.04	23.00	1.247	-	-	0.06	0.219	0.273
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	166300	831.5	21.98	23.00	1.265	-	-	0.06	0.193	0.244
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	166300	831.5	22.04	23.00	1.247	-	-	-0.03	0.071	0.089
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	166300	831.5	21.98	23.00	1.265	-	-	0.09	0.067	0.085

	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	166300	831.5	22.04	23.00	1.247	-	-	0.04	0.420	0.524
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	166300	831.5	21.98	23.00	1.265	-	-	-0.01	0.538	0.680
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	1413	1732.6	15.38	16.00	1.153	-	-	0.06	0.414	0.478
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	1413	1732.6	15.38	16.00	1.153	-	-	-0.18	0.472	0.544
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI 7	1413	1732.6	15.38	16.00	1.153	-	-	0.08	0.026	0.030
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	ECI 7	1413	1732.6	15.38	16.00	1.153	-	-	0.03	0.013	0.015
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	1413	1732.6	15.38	16.00	1.153	-	-	0.03	0.831	0.959
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	1312	1712.4	15.26	16.00	1.186	-	-	0.06	0.763	0.905
45	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	1513	1752.6	15.29	16.00	1.178	-	-	0.08	0.906	**1.067**
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	132322	1745	15.23	16.00	1.194	-	-	0.14	0.553	0.660
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	132322	1745	15.19	16.00	1.205	-	-	-0.18	0.450	0.542
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	132322	1745	15.23	16.00	1.194	-	-	-0.1	0.639	0.763
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	132322	1745	15.19	16.00	1.205	-	-	0.12	0.521	0.628
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	132322	1745	15.23	16.00	1.194	-	-	0.09	0.029	0.035
	LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	132322	1745	15.19	16.00	1.205	-	-	0.04	0.023	0.028
	LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	132322	1745	15.23	16.00	1.194	-	-	-0.09	0.037	0.044
	LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	132322	1745	15.19	16.00	1.205	-	-	0.07	0.029	0.035
46	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	132322	1745	15.23	16.00	1.194	-	-	-0.05	1.070	**1.278**
	LTE Band 66C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	ECI 7	132322 +132520	1745 +1764.8	15.10	16.00	1.230	-	-	0.03	0.971	1.195
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	132072	1720	15.12	16.00	1.225	-	-	0.03	1.010	1.237
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	132572	1770	15.20	16.00	1.202	-	-	-0.11	1.050	1.262
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	132322	1745	15.19	16.00	1.205	-	-	0.16	0.867	1.045
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	132072	1720	15.08	16.00	1.236	-	-	0.1	0.815	1.007
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	132572	1770	15.07	16.00	1.239	-	-	0.05	0.836	1.036
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI 7	132322	1745	15.12	16.00	1.225	-	-	0.08	0.854	1.046
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	132322	1745	14.18	15.00	1.208	-	-	0.13	0.242	0.292
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	132322	1745	14.16	15.00	1.213	-	-	-0.19	0.190	0.231
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	132322	1745	14.18	15.00	1.208	-	-	-0.19	0.268	0.324
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	132322	1745	14.16	15.00	1.213	-	-	0.05	0.216	0.262
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	132322	1745	14.18	15.00	1.208	-	-	-0.04	0.103	0.124
	LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	132322	1745	14.16	15.00	1.213	-	-	0.07	0.083	0.101
	LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	132322	1745	14.18	15.00	1.208	-	-	0.02	0.017	0.021
	LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	132322	1745	14.16	15.00	1.213	-	-	0.02	0.015	0.018
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	132322	1745	14.18	15.00	1.208	-	-	-0.06	0.475	0.574
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	132322 +132520	1745 +1764.8	14.05	15.00	1.245	-	-	0.03	0.452	0.563
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	132072	1720	14.11	15.00	1.227	-	-	-0.03	0.411	0.504
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	132572	1770	14.08	15.00	1.236	-	-	0.06	0.434	0.536
	LTE Band 66	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	132322	1745	14.16	15.00	1.213	-	-	0.08	0.353	0.428
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	349000	1745	17.84	18.50	1.164	-	-	0.03	0.469	0.546
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	349000	1745	17.79	18.50	1.178	-	-	-0.01	0.528	0.622
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	349000	1745	17.84	18.50	1.164	-	-	-0.03	0.649	0.756
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	349000	1745	17.79	18.50	1.178	-	-	-0.12	0.602	0.709
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	349000	1745	17.84	18.50	1.164	-	-	0.06	0.037	0.043
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	349000	1745	17.79	18.50	1.178	-	-	0.05	0.039	0.046
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	349000	1745	17.84	18.50	1.164	-	-	0.07	0.030	0.035
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	349000	1745	17.79	18.50	1.178	-	-	-0.16	0.030	0.035
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	349000	1745	17.84	18.50	1.164	-	-	0.13	0.880	1.024
47	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	349000	1745	17.79	18.50	1.178	-	-	0.09	1.020	**1.201**
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	346000	1730	17.70	18.50	1.202	-	-	0.12	0.912	1.096
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	352000	1760	17.74	18.50	1.191	-	-	0.03	0.893	1.064
	FR1 n66	40M	QPSK	216	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	349000	1745	17.67	18.50	1.211	-	-	0.09	0.826	1.000
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	349000	1745	17.44	18.00	1.138	-	-	0.12	0.243	0.276
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	349000	1745	17.36	18.00	1.159	-	-	0.16	0.280	0.324
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	349000	1745	17.44	18.00	1.138	-	-	0.15	0.368	0.419
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	349000	1745	17.36	18.00	1.159	-	-	-0.12	0.343	0.397
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	349000	1745	17.44	18.00	1.138	-	-	0.02	0.124	0.141

	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	349000	1745	17.36	18.00	1.159	-	-	0.02	0.115	0.133
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	349000	1745	17.44	18.00	1.138	-	-	-0.15	0.016	0.018
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	349000	1745	17.36	18.00	1.159	-	-	0.13	0.021	0.024
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	349000	1745	17.44	18.00	1.138	-	-	0.06	0.429	0.488
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	349000	1745	17.36	18.00	1.159	-	-	-0.07	0.536	0.621
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	346000	1730	17.22	18.00	1.197	-	-	0.02	0.411	0.492
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	352000	1760	17.33	18.00	1.167	-	-	0.05	0.465	0.543
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	340500	1702.5	18.37	19.00	1.156	-	-	-0.08	0.471	0.545
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	340500	1702.5	18.32	19.00	1.169	-	-	0.07	0.492	0.575
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	340500	1702.5	18.37	19.00	1.156	-	-	0.05	0.598	0.691
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	340500	1702.5	18.32	19.00	1.169	-	-	-0.1	0.631	0.738
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	340500	1702.5	18.37	19.00	1.156	-	-	0.07	0.032	0.037
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	340500	1702.5	18.32	19.00	1.169	-	-	-0.17	0.032	0.037
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	340500	1702.5	18.37	19.00	1.156	-	-	0.04	0.026	0.030
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	340500	1702.5	18.32	19.00	1.169	-	-	0.01	0.027	0.032
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	340500	1702.5	18.37	19.00	1.156	-	-	-0.16	0.926	1.071
48	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	340500	1702.5	18.32	19.00	1.169	-	-	-0.06	0.932	**1.090**
	FR1 n70	15M	QPSK	75	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	340500	1702.5	18.23	19.00	1.194	-	-	-0.16	0.880	1.051
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	340500	1702.5	19.32	20.00	1.169	-	-	-0.14	0.247	0.289
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	340500	1702.5	19.28	20.00	1.180	-	-	-0.15	0.251	0.296
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	340500	1702.5	19.32	20.00	1.169	-	-	-0.12	0.437	0.511
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	340500	1702.5	19.28	20.00	1.180	-	-	-0.05	0.451	0.532
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	340500	1702.5	19.32	20.00	1.169	-	-	-0.02	0.116	0.136
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	340500	1702.5	19.28	20.00	1.180	-	-	0.05	0.127	0.150
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	340500	1702.5	19.32	20.00	1.169	-	-	-0.08	0.012	0.014
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	340500	1702.5	19.28	20.00	1.180	-	-	-0.08	0.014	0.017
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	340500	1702.5	19.32	20.00	1.169	-	-	-0.13	0.417	0.488
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	340500	1702.5	19.28	20.00	1.180	-	-	-0.09	0.412	0.486
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	ECI 7	661	1880	16.51	17.00	1.119	-	-	0.07	0.438	0.490
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	661	1880	16.51	17.00	1.119	-	-	-0.01	0.456	0.510
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	ECI 7	661	1880	16.51	17.00	1.119	-	-	0.05	0.036	0.040
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Side	5mm	Ant 0	ECI 7	661	1880	16.51	17.00	1.119	-	-	-0.09	0.016	0.018
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI 7	661	1880	16.51	17.00	1.119	-	-	-0.17	0.974	1.090
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI 7	512	1850.2	16.47	17.00	1.130	-	-	0.18	0.918	1.037
49	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI 7	810	1909.8	16.48	17.00	1.127	-	-	0.08	1.050	**1.184**
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	9400	1880	13.97	14.50	1.130	-	-	0.09	0.346	0.391
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	9400	1880	13.97	14.50	1.130	-	-	0.16	0.388	0.438
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI 7	9400	1880	13.97	14.50	1.130	-	-	0.06	0.032	0.036
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	ECI 7	9400	1880	13.97	14.50	1.130	-	-	0.03	0.009	0.010
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	9400	1880	13.97	14.50	1.130	-	-	0.11	0.824	0.931
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	9262	1852.4	13.89	14.50	1.151	-	-	0.04	0.786	0.905
50	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	9538	1907.6	13.83	14.50	1.167	-	-	0.04	0.908	**1.059**
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	26340	1880	14.22	15.00	1.197	-	-	0.12	0.549	0.657
	LTE Band 25	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	26340	1880	14.16	15.00	1.213	-	-	0.01	0.395	0.479
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26340	1880	14.22	15.00	1.197	-	-	0.13	0.646	0.773
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	26340	1880	14.16	15.00	1.213	-	-	0.06	0.550	0.667
	LTE Band 25	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	26340	1880	14.22	15.00	1.197	-	-	0.06	0.033	0.039
	LTE Band 25	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	26340	1880	14.16	15.00	1.213	-	-	-0.15	0.017	0.021
	LTE Band 25	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	26340	1880	14.22	15.00	1.197	-	-	0.06	0.018	0.022
	LTE Band 25	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	26340	1880	14.16	15.00	1.213	-	-	-0.15	0.010	0.012
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	26340	1880	14.22	15.00	1.197	-	-	-0.12	1.050	1.257
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	26140	1860	14.18	15.00	1.208	-	-	0.07	0.919	1.110
51	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	26590	1905	14.15	15.00	1.216	-	-	-0.06	1.060	**1.289**
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	26340	1880	14.16	15.00	1.213	-	-	0.03	0.870	1.056
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	26140	1860	14.12	15.00	1.225	-	-	0.05	0.900	1.102
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	26590	1905	14.09	15.00	1.233	-	-	-0.12	0.875	1.079

	LTE Band 25	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI 7	26340	1880	14.13	15.00	1.222	-	-	-0.11	0.768	0.938
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	26340	1880	14.31	15.00	1.172	-	-	0.05	0.354	0.415
	LTE Band 25	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	26340	1880	14.23	15.00	1.194	-	-	0.1	0.284	0.339
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	26340	1880	14.31	15.00	1.172	-	-	0.15	0.392	0.460
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	26340	1880	14.23	15.00	1.194	-	-	-0.12	0.304	0.363
	LTE Band 25	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	26340	1880	14.31	15.00	1.172	-	-	-0.08	0.113	0.132
	LTE Band 25	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	26340	1880	14.23	15.00	1.194	-	-	0.07	0.061	0.073
	LTE Band 25	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	26340	1880	14.31	15.00	1.172	-	-	-0.05	0.038	0.045
	LTE Band 25	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	26340	1880	14.23	15.00	1.194	-	-	-0.05	0.021	0.025
	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26340	1880	14.31	15.00	1.172	-	-	-0.02	0.545	0.639
	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26140	1860	14.23	15.00	1.194	-	-	0.06	0.447	0.534
	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26590	1905	14.19	15.00	1.205	-	-	0.02	0.482	0.581
	LTE Band 25	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	26340	1880	14.23	15.00	1.194	-	-	0.03	0.484	0.578
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	376500	1882.5	16.45	17.00	1.135	-	-	0.1	0.507	0.575
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	376500	1882.5	16.39	17.00	1.151	-	-	-0.13	0.535	0.616
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	376500	1882.5	16.45	17.00	1.135	-	-	0.12	0.625	0.709
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	376500	1882.5	16.39	17.00	1.151	-	-	0.13	0.675	0.777
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	376500	1882.5	16.45	17.00	1.135	-	-	0.03	0.037	0.042
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	376500	1882.5	16.39	17.00	1.151	-	-	0.04	0.037	0.043
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	376500	1882.5	16.45	17.00	1.135	-	-	-0.13	0.020	0.023
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	376500	1882.5	16.39	17.00	1.151	-	-	-0.14	0.022	0.025
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	376500	1882.5	16.45	17.00	1.135	-	-	0.05	0.929	1.054
52	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	376500	1882.5	16.39	17.00	1.151	-	-	-0.03	1.000	**1.151**
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	374000	1870	16.35	17.00	1.161	-	-	0.03	0.855	0.993
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	379000	1895	16.38	17.00	1.153	-	-	0.03	0.862	0.994
	FR1 n25	40M	QPSK	216	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	376500	1882.5	16.31	17.00	1.172	-	-	0.01	0.880	1.032
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	376500	1882.5	16.57	17.50	1.239	-	-	0.12	0.307	0.380
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	376500	1882.5	16.50	17.50	1.259	-	-	0.04	0.325	0.409
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	376500	1882.5	16.57	17.50	1.239	-	-	0.17	0.498	0.617
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	376500	1882.5	16.50	17.50	1.259	-	-	-0.11	0.512	0.645
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	374000	1870	16.47	17.50	1.268	-	-	0.03	0.488	0.619
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	379000	1895	16.38	17.50	1.294	-	-	0.05	0.455	0.589
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	376500	1882.5	16.57	17.50	1.239	-	-	0.02	0.111	0.138
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	376500	1882.5	16.50	17.50	1.259	-	-	0.06	0.106	0.133
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	376500	1882.5	16.57	17.50	1.239	-	-	0.06	0.030	0.037
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	376500	1882.5	16.50	17.50	1.259	-	-	-0.03	0.028	0.035
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	376500	1882.5	16.57	17.50	1.239	-	-	0.02	0.516	0.639
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	376500	1882.5	16.50	17.50	1.259	-	-	0.04	0.500	0.629
2300Mhz																				
	LTE Band 30	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	27710	2310	13.94	15.00	1.276	-	-	0.19	0.463	0.591
	LTE Band 30	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI 7	27710	2310	13.87	15.00	1.297	-	-	0.05	0.343	0.445
	LTE Band 30	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	27710	2310	13.94	15.00	1.276	-	-	0.13	0.557	0.711
	LTE Band 30	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI 7	27710	2310	13.87	15.00	1.297	-	-	0.09	0.490	0.636
	LTE Band 30	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	27710	2310	13.94	15.00	1.276	-	-	-0.18	0.009	0.011
	LTE Band 30	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI 7	27710	2310	13.87	15.00	1.297	-	-	0.06	0.005	0.006
	LTE Band 30	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	27710	2310	13.94	15.00	1.276	-	-	0.06	0.040	0.051
	LTE Band 30	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI 7	27710	2310	13.87	15.00	1.297	-	-	-0.12	0.019	0.025
53	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	27710	2310	13.94	15.00	1.276	-	-	-0.04	0.973	**1.242**
	LTE Band 30	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI 7	27710	2310	13.87	15.00	1.297	-	-	0.07	0.811	1.052
	LTE Band 30	10M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	27710	2310	13.82	15.00	1.312	-	-	0.05	0.814	1.068
	LTE Band 30	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	27710	2310	13.09	14.00	1.233	-	-	-0.17	0.253	0.312
	LTE Band 30	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI 7	27710	2310	13.00	14.00	1.259	-	-	0.06	0.132	0.166
	LTE Band 30	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	27710	2310	13.09	14.00	1.233	-	-	-0.18	0.277	0.342
	LTE Band 30	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI 7	27710	2310	13.00	14.00	1.259	-	-	0.04	0.145	0.183
	LTE Band 30	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	27710	2310	13.09	14.00	1.233	-	-	-0.01	0.046	0.057
	LTE Band 30	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI 7	27710	2310	13.00	14.00	1.259	-	-	0.06	0.024	0.030
	LTE Band 30	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	27710	2310	13.09	14.00	1.233	-	-	0.1	0.021	0.026

	LTE Band 30	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI 7	27710	2310	13.00	14.00	1.259	-	-	0.02	0.011	0.014
	LTE Band 30	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	27710	2310	13.09	14.00	1.233	-	-	-0.03	0.479	0.591
	LTE Band 30	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	ECI 7	27710	2310	13.00	14.00	1.259	-	-	0.03	0.254	0.320
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	462000	2310	17.57	18.00	1.104	-	-	-0.12	0.429	0.474
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	462000	2310	17.51	18.00	1.119	-	-	-0.17	0.449	0.503
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	462000	2310	17.57	18.00	1.104	-	-	-0.12	0.502	0.554
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	462000	2310	17.51	18.00	1.119	-	-	0.06	0.592	0.663
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	462000	2310	17.57	18.00	1.104	-	-	-0.06	0.015	0.017
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	462000	2310	17.51	18.00	1.119	-	-	0.07	0.013	0.015
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	462000	2310	17.57	18.00	1.104	-	-	0.09	0.038	0.042
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	462000	2310	17.51	18.00	1.119	-	-	-0.19	0.042	0.047
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	462000	2310	17.57	18.00	1.104	-	-	0.05	0.856	0.945
54	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	462000	2310	17.51	18.00	1.119	-	-	-0.04	0.929	**1.040**
	FR1 n30	10M	QPSK	50	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	462000	2310	17.46	18.00	1.132	-	-	0.03	0.802	0.908
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	462000	2310	15.44	16.00	1.138	-	-	-0.08	0.241	0.274
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	462000	2310	15.38	16.00	1.153	-	-	0.05	0.257	0.296
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	462000	2310	15.44	16.00	1.138	-	-	0.01	0.379	0.431
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	462000	2310	15.38	16.00	1.153	-	-	0.09	0.405	0.467
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	462000	2310	15.44	16.00	1.138	-	-	0.14	0.048	0.055
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	462000	2310	15.38	16.00	1.153	-	-	0.08	0.050	0.058
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	462000	2310	15.44	16.00	1.138	-	-	-0.13	0.023	0.026
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	462000	2310	15.38	16.00	1.153	-	-	-0.06	0.023	0.027
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	462000	2310	15.44	16.00	1.138	-	-	0.09	0.491	0.559
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	462000	2310	15.38	16.00	1.153	-	-	0.04	0.506	0.584
2600Mhz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	21100	2535	16.09	17.00	1.233	-	-	0.08	0.526	0.649
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	21100	2535	16.04	17.00	1.247	-	-	0.05	0.403	0.503
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	21100	2535	16.09	17.00	1.233	-	-	0.15	0.719	0.887
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	20850	2510	16.03	17.00	1.250	-	-	0.07	0.734	0.918
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	21350	2560	15.99	17.00	1.262	-	-	0.13	0.717	0.905
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	21100	2535	16.04	17.00	1.247	-	-	0.05	0.690	0.861
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	20850	2510	15.94	17.00	1.276	-	-	0.16	0.688	0.878
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	21350	2560	15.87	17.00	1.297	-	-	-0.15	0.684	0.887
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 0	ECI 7	21100	2535	16.01	17.00	1.256	-	-	0.07	0.685	0.860
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	21100	2535	16.09	17.00	1.233	-	-	0.14	0.025	0.031
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	21100	2535	16.04	17.00	1.247	-	-	-0.07	0.016	0.020
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	21100	2535	16.09	17.00	1.233	-	-	0.01	0.054	0.067
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	21100	2535	16.04	17.00	1.247	-	-	0.07	0.026	0.032
55	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	21100	2535	16.09	17.00	1.233	-	-	-0.01	0.886	**1.093**
	LTE Band 7C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	ECI 7	21100 +21298	2535 +2554.8	15.91	17.00	1.285	-	-	0.05	0.841	1.081
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	20850	2510	16.03	17.00	1.250	-	-	0.04	0.861	1.076
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	21350	2560	15.99	17.00	1.262	-	-	-0.1	0.859	1.084
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	21100	2535	16.04	17.00	1.247	-	-	-0.19	0.806	1.005
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	20850	2510	15.94	17.00	1.276	-	-	0.15	0.762	0.973
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	21350	2560	15.87	17.00	1.297	-	-	0.04	0.766	0.994
	LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI 7	21100	2535	16.01	17.00	1.256	-	-	0.07	0.779	0.978
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	21100	2535	10.59	11.50	1.233	-	-	0.14	0.162	0.200
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	21100	2535	10.50	11.50	1.259	-	-	0.1	0.124	0.156
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	21100	2535	10.59	11.50	1.233	-	-	-0.02	0.251	0.310
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	21100	2535	10.50	11.50	1.259	-	-	-0.01	0.199	0.251
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	21100	2535	10.59	11.50	1.233	-	-	0.05	0.034	0.042
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	21100	2535	10.50	11.50	1.259	-	-	0.04	0.028	0.035
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	21100	2535	10.59	11.50	1.233	-	-	0.06	0.008	0.010
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	21100	2535	10.50	11.50	1.259	-	-	0.09	0.004	0.005
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	21100	2535	10.59	11.50	1.233	-	-	-0.05	0.420	0.518
	LTE Band 7C	20M	QPSK	1	99	-	Top Side	5mm	Ant 1	ECI 7	21100 +21298	2535 +2554.8	10.47	11.50	1.268	-	-	0.03	0.405	0.513
	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	20850	2510	10.53	11.50	1.250	-	-	0.02	0.360	0.450

	LTE Band 7	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	21350	2560	10.51	11.50	1.256	-	-	0.04	0.330	0.414
	LTE Band 7	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	21100	2535	10.50	11.50	1.259	-	-	-0.15	0.316	0.398
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	40620	2593	19.61	20.40	1.199	62.9	1.006	0.18	0.347	0.419
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	40620	2593	19.52	20.40	1.225	62.9	1.006	0.05	0.229	0.282
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	40620	2593	19.61	20.40	1.199	62.9	1.006	-0.08	0.496	0.599
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	40620	2593	19.52	20.40	1.225	62.9	1.006	0.08	0.340	0.419
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	40620	2593	19.61	20.40	1.199	62.9	1.006	0.15	0.126	0.152
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	40620	2593	19.52	20.40	1.225	62.9	1.006	0.05	0.088	0.108
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	40620	2593	19.61	20.40	1.199	62.9	1.006	0.09	0.150	0.181
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	40620	2593	19.52	20.40	1.225	62.9	1.006	0.01	0.090	0.111
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	40620	2593	19.61	20.40	1.199	62.9	1.006	-0.08	0.880	1.062
	LTE Band 41C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	ECI 7	40620 +40818	2593 +2612.8	19.49	20.40	1.233	62.9	1.006	0.02	0.801	0.994
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	39750	2506	19.46	20.40	1.242	62.9	1.006	0.05	0.844	1.054
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	40185	2549.5	19.53	20.40	1.222	62.9	1.006	-0.08	0.852	1.047
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	41055	2636.5	19.50	20.40	1.230	62.9	1.006	0.05	0.825	1.021
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	41490	2680	19.44	20.40	1.247	62.9	1.006	0.11	0.807	1.013
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	40620	2593	19.52	20.40	1.225	62.9	1.006	0.01	0.724	0.892
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	39750	2506	19.31	20.40	1.285	62.9	1.006	-0.13	0.689	0.891
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	40185	2549.5	19.46	20.40	1.242	62.9	1.006	0.04	0.573	0.716
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	41055	2636.5	19.30	20.40	1.288	62.9	1.006	0.02	0.663	0.859
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	41490	2680	19.42	20.40	1.253	62.9	1.006	0.13	0.640	0.807
	LTE Band 41	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI 7	40620	2593	19.47	20.40	1.239	62.9	1.006	0.06	0.740	0.922
56	LTE Band 41 PC2	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	40620	2593	21.23	22.00	1.194	42.9	1.009	0.01	0.931	**1.122**
	LTE Band 41C PC2	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 0	ECI 7	40620 +40818	2593 +2612.8	21.05	22.00	1.245	42.9	1.009	0.03	0.887	1.114
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	40620	2593	14.55	15.40	1.216	62.9	1.006	0.07	0.160	0.196
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	40620	2593	14.43	15.40	1.250	62.9	1.006	0.03	0.105	0.132
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	40620	2593	14.55	15.40	1.216	62.9	1.006	0.06	0.302	0.369
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	40620	2593	14.43	15.40	1.250	62.9	1.006	-0.09	0.197	0.248
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	40620	2593	14.55	15.40	1.216	62.9	1.006	0.05	0.025	0.031
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	40620	2593	14.43	15.40	1.250	62.9	1.006	0.09	0.016	0.020
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	40620	2593	14.55	15.40	1.216	62.9	1.006	-0.12	0.191	0.234
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	40620	2593	14.43	15.40	1.250	62.9	1.006	0.05	0.130	0.164
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	40620	2593	14.55	15.40	1.216	62.9	1.006	0.07	0.457	0.559
	LTE Band 41C	20M	QPSK	1	99	-	Top Side	5mm	Ant 1	ECI 7	40620 +40818	2593 +2612.8	14.38	15.40	1.265	62.9	1.006	0.02	0.433	0.551
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	40620	2593	14.43	15.40	1.250	62.9	1.006	0.06	0.367	0.462
	LTE Band 41 PC2	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	40620	2593	16.20	17.00	1.202	42.9	1.009	0.05	0.475	0.576
	LTE Band 41C PC2	20M	QPSK	1	99	-	Top Side	5mm	Ant 1	ECI 7	40620 +40818	2593 +2612.8	16.11	17.00	1.227	42.9	1.009	0.01	0.461	0.571
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	40620	2593	22.85	24.00	1.303	62.9	1.006	0.14	0.244	0.320
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	40620	2593	21.97	23.00	1.268	62.9	1.006	-0.06	0.166	0.212
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	40620	2593	22.85	24.00	1.303	62.9	1.006	0.14	0.398	0.522
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	40620	2593	21.97	23.00	1.268	62.9	1.006	0.08	0.254	0.324
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	40620	2593	22.85	24.00	1.303	62.9	1.006	-0.07	0.646	0.847
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	39750	2506	22.43	24.00	1.435	62.9	1.006	0.02	0.581	0.839
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	40185	2549.5	22.57	24.00	1.390	62.9	1.006	0.09	0.591	0.826
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	41055	2636.5	22.69	24.00	1.352	62.9	1.006	0.03	0.614	0.835
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	41490	2680	22.79	24.00	1.321	62.9	1.006	0.05	0.633	0.841
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	40620	2593	21.97	23.00	1.268	62.9	1.006	0.17	0.627	0.800
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	39750	2506	21.58	23.00	1.387	62.9	1.006	0.06	0.605	0.844
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	40185	2549.5	21.67	23.00	1.358	62.9	1.006	0.01	0.597	0.816
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	41055	2636.5	21.78	23.00	1.324	62.9	1.006	0.07	0.611	0.814
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	41490	2680	21.74	23.00	1.337	62.9	1.006	0.12	0.599	0.805
	LTE Band 41	20M	QPSK	100	0	-	Left Side	5mm	Ant 2	ECI 7	40620	2593	21.91	23.00	1.285	62.9	1.006	0.07	0.601	0.777
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	ECI 7	40620	2593	22.85	24.00	1.303	62.9	1.006	0.02	0.030	0.039
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	ECI 7	40620	2593	21.97	23.00	1.268	62.9	1.006	0.18	0.010	0.013
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	40620	2593	22.85	24.00	1.303	62.9	1.006	-0.11	0.144	0.189
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	40620	2593	21.97	23.00	1.268	62.9	1.006	-0.16	0.100	0.128
	LTE Band 41 PC2	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	40620	2593	25.82	27.00	1.312	42.9	1.009	0.03	0.847	1.121

	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 6	ECI 7	40620	2593	18.21	19.40	1.315	62.9	1.006	0.07	0.218	0.288
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 6	ECI 7	40620	2593	18.18	19.40	1.324	62.9	1.006	0.05	0.172	0.229
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 6	ECI 7	40620	2593	18.21	19.40	1.315	62.9	1.006	-0.08	0.277	0.367
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 6	ECI 7	40620	2593	18.18	19.40	1.324	62.9	1.006	-0.18	0.227	0.302
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 6	ECI 7	40620	2593	18.21	19.40	1.315	62.9	1.006	-0.09	0.399	0.528
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 6	ECI 7	40620	2593	18.18	19.40	1.324	62.9	1.006	0.09	0.328	0.437
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 6	ECI 7	40620	2593	18.21	19.40	1.315	62.9	1.006	0.15	0.037	0.049
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 6	ECI 7	40620	2593	18.18	19.40	1.324	62.9	1.006	0.09	0.029	0.039
	LTE Band 41 PC2	20M	QPSK	1	0	-	Left Side	5mm	Ant 6	ECI 7	40620	2593	19.56	21.00	1.393	42.9	1.009	0.11	0.401	0.564
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	507000	2535	17.87	19.00	1.297	-	-	0.02	0.723	0.938
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	507000	2535	17.84	19.00	1.306	-	-	-0.07	0.696	0.909
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	507000	2535	17.74	19.00	1.337	-	-	0.02	0.581	0.777
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	507000	2535	17.87	19.00	1.297	-	-	0.17	0.979	1.270
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	507000	2535	17.84	19.00	1.306	-	-	0.07	0.934	1.220
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	507000	2535	17.74	19.00	1.337	-	-	-0.01	0.730	0.976
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	507000	2535	17.87	19.00	1.297	-	-	-0.19	0.015	0.019
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	507000	2535	17.84	19.00	1.306	-	-	0.02	0.014	0.018
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	507000	2535	17.87	19.00	1.297	-	-	0.07	0.074	0.096
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	507000	2535	17.84	19.00	1.306	-	-	-0.11	0.072	0.094
57	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	507000	2535	17.87	19.00	1.297	-	-	0.01	1.110	**1.440**
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	505000	2525	17.73	19.00	1.340	-	-	0.05	0.968	1.297
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	509000	2545	17.83	19.00	1.309	-	-	0.03	0.982	1.286
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	507000	2535	17.84	19.00	1.306	-	-	0.03	1.020	1.332
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	507000	2535	17.74	19.00	1.337	-	-	0.08	0.917	1.226
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	507000	2535	14.06	14.50	1.107	-	-	-0.02	0.181	0.200
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	507000	2535	14.02	14.50	1.117	-	-	-0.08	0.218	0.243
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	507000	2535	14.06	14.50	1.107	-	-	0.07	0.373	0.413
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	507000	2535	14.02	14.50	1.117	-	-	-0.08	0.480	0.536
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	507000	2535	14.06	14.50	1.107	-	-	-0.04	0.041	0.045
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	507000	2535	14.02	14.50	1.117	-	-	0.13	0.045	0.050
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	507000	2535	14.06	14.50	1.107	-	-	0.12	0.011	0.012
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	507000	2535	14.02	14.50	1.117	-	-	-0.11	0.010	0.011
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	507000	2535	14.06	14.50	1.107	-	-	0.18	0.459	0.508
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	507000	2535	14.02	14.50	1.117	-	-	0.01	0.530	0.592
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	505000	2525	13.96	14.50	1.132	-	-	0.05	0.440	0.498
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	509000	2545	13.92	14.50	1.143	-	-	0.02	0.462	0.528
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	ECI 7	518598	2592.99	17.44	18.50	1.276	-	-	0.09	0.591	0.754
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 0	ECI 7	518598	2592.99	17.39	18.50	1.291	-	-	-0.01	0.721	0.931
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 0	ECI 7	518598	2592.99	17.36	18.50	1.300	-	-	0.12	0.637	0.828
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 7	518598	2592.99	17.44	18.50	1.276	-	-	-0.01	0.792	1.011
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 7	518598	2592.99	17.39	18.50	1.291	-	-	0.07	0.774	0.999
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 7	518598	2592.99	17.36	18.50	1.300	-	-	-0.05	0.701	0.911
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 0	ECI 7	518598	2592.99	17.44	18.50	1.276	-	-	0.08	0.015	0.019
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 0	ECI 7	518598	2592.99	17.39	18.50	1.291	-	-	0.05	0.011	0.014
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 0	ECI 7	518598	2592.99	17.44	18.50	1.276	-	-	-0.18	0.062	0.079
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 0	ECI 7	518598	2592.99	17.39	18.50	1.291	-	-	0.02	0.058	0.075
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	ECI 7	518598	2592.99	17.44	18.50	1.276	-	-	0.02	0.950	1.213
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	ECI 7	518598	2592.99	17.39	18.50	1.291	-	-	-0.04	0.964	1.245
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	ECI 7	518598	2592.99	17.36	18.50	1.300	-	-	0.06	0.863	1.122
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	ECI 7	518598	2592.99	12.54	13.50	1.247	-	-	0.06	0.188	0.235
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 1	ECI 7	518598	2592.99	12.46	13.50	1.271	-	-	0.07	0.198	0.252
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	ECI 7	518598	2592.99	12.54	13.50	1.247	-	-	-0.09	0.370	0.462
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 1	ECI 7	518598	2592.99	12.46	13.50	1.271	-	-	-0.03	0.352	0.447
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 1	ECI 7	518598	2592.99	12.54	13.50	1.247	-	-	-0.08	0.035	0.044
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 1	ECI 7	518598	2592.99	12.46	13.50	1.271	-	-	-0.14	0.027	0.034
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 1	ECI 7	518598	2592.99	12.54	13.50	1.247	-	-	-0.02	0.012	0.015
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 1	ECI 7	518598	2592.99	12.46	13.50	1.271	-	-	-0.02	0.019	0.024

	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 1	ECI 7	518598	2592.99	12.54	13.50	1.247	-	-	-0.03	0.451	0.563
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 1	ECI 7	518598	2592.99	12.46	13.50	1.271	-	-	-0.07	0.489	0.621
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	518598	2592.99	22.83	24.00	1.309	-	-	0.03	0.533	0.698
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	518598	2592.99	22.82	24.00	1.312	-	-	0.14	0.607	0.797
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	518598	2592.99	22.64	24.00	1.368	-	-	0.01	0.542	0.741
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	518598	2592.99	22.83	24.00	1.309	-	-	-0.13	0.834	1.092
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	518598	2592.99	22.82	24.00	1.312	-	-	0.04	1.010	1.325
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	518598	2592.99	22.64	24.00	1.368	-	-	0.04	1.030	1.409
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	518598	2592.99	22.83	24.00	1.309	-	-	0.03	0.975	1.276
58	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	518598	2592.99	22.82	24.00	1.312	-	-	-0.09	1.090	**1.430**
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	518598	2592.99	22.64	24.00	1.368	-	-	-0.05	1.020	1.395
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	518598	2592.99	22.83	24.00	1.309	-	-	-0.11	0.010	0.013
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	518598	2592.99	22.82	24.00	1.312	-	-	0.04	0.010	0.013
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	518598	2592.99	22.83	24.00	1.309	-	-	0.09	0.180	0.236
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	518598	2592.99	22.82	24.00	1.312	-	-	-0.18	0.262	0.344
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 6	ECI 7	518598	2592.99	14.87	16.00	1.297	-	-	0.08	0.237	0.307
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 6	ECI 7	518598	2592.99	14.80	16.00	1.318	-	-	-0.07	0.215	0.283
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	518598	2592.99	14.87	16.00	1.297	-	-	0.05	0.194	0.252
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	518598	2592.99	14.80	16.00	1.318	-	-	0.02	0.275	0.363
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	518598	2592.99	14.87	16.00	1.297	-	-	0.05	0.476	0.617
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	518598	2592.99	14.80	16.00	1.318	-	-	0.06	0.514	0.678
	FR1 n41 PC2	100M	QPSK	270	0	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	518598	2592.99	14.73	16.00	1.340	-	-	0.05	0.451	0.604
	FR1 n41 PC2	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 6	ECI 7	518598	2592.99	14.87	16.00	1.297	-	-	0.05	0.040	0.052
	FR1 n41 PC2	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 6	ECI 7	518598	2592.99	14.80	16.00	1.318	-	-	0.02	0.029	0.038
3500MHz																				
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 4	ECI 7	55830	3609	14.82	15.50	1.169	62.9	1.006	0.03	0.226	0.266
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 4	ECI 7	55830	3609	14.77	15.50	1.183	62.9	1.006	-0.04	0.201	0.239
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	55830	3609	14.82	15.50	1.169	62.9	1.006	0.03	0.366	0.431
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 4	ECI 7	55830	3609	14.77	15.50	1.183	62.9	1.006	0.06	0.285	0.339
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	55830	3609	14.82	15.50	1.169	62.9	1.006	0.02	0.538	0.633
	LTE Band 48C	20M	QPSK	1	99	-	Left Side	5mm	Ant 4	ECI 7	55830 +56028	3609 +3628.8	14.65	15.50	1.216	62.9	1.006	0.01	0.509	0.623
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	55340	3560	14.79	15.50	1.178	62.9	1.006	-0.19	0.523	0.620
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	56150	3641	14.78	15.50	1.180	62.9	1.006	-0.06	0.516	0.613
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	56640	3690	14.80	15.50	1.175	62.9	1.006	-0.18	0.526	0.622
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI 7	55830	3609	14.77	15.50	1.183	62.9	1.006	0.08	0.467	0.556
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI 7	55340	3560	14.60	15.50	1.230	62.9	1.006	-0.05	0.464	0.574
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI 7	56150	3641	14.70	15.50	1.202	62.9	1.006	0.1	0.458	0.554
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI 7	56640	3690	14.64	15.50	1.219	62.9	1.006	0.06	0.455	0.558
	LTE Band 48	20M	QPSK	100	0	-	Left Side	5mm	Ant 4	ECI 7	55830	3609	14.74	15.50	1.191	62.9	1.006	-0.14	0.463	0.555
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 4	ECI 7	55830	3609	14.82	15.50	1.169	62.9	1.006	0.07	0.011	0.013
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 4	ECI 7	55830	3609	14.77	15.50	1.183	62.9	1.006	0.04	0.006	0.007
	LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	55830	3609	14.82	15.50	1.169	62.9	1.006	0.08	0.056	0.066
	LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 4	ECI 7	55830	3609	14.77	15.50	1.183	62.9	1.006	0.04	0.027	0.032
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	55830	3609	16.78	18.00	1.324	62.9	1.006	0.03	0.366	0.488
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	55830	3609	16.75	18.00	1.334	62.9	1.006	0.02	0.283	0.380
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	55830	3609	16.78	18.00	1.324	62.9	1.006	0.04	0.311	0.414
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	55830	3609	16.75	18.00	1.334	62.9	1.006	-0.06	0.252	0.338
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	55830	3609	16.78	18.00	1.324	62.9	1.006	-0.07	0.824	1.098
	LTE Band 48C	20M	QPSK	1	99	-	Left Side	5mm	Ant 2	ECI 7	55830 +56028	3609 +3628.8	16.74	18.00	1.337	62.9	1.006	0.07	0.811	1.090
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	55340	3560	16.71	18.00	1.346	62.9	1.006	0.01	0.743	1.006
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	56150	3641	16.68	18.00	1.355	62.9	1.006	0.07	0.652	0.889
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	56640	3690	16.73	18.00	1.340	62.9	1.006	0.16	0.655	0.883
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	55830	3609	16.75	18.00	1.334	62.9	1.006	0.18	0.607	0.814
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	55340	3560	16.65	18.00	1.365	62.9	1.006	0.01	0.610	0.837
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	56150	3641	16.74	18.00	1.337	62.9	1.006	0.03	0.625	0.840
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	56640	3690	16.71	18.00	1.346	62.9	1.006	0.08	0.614	0.831
	LTE Band 48	20M	QPSK	100	0	-	Left Side	5mm	Ant 2	ECI 7	55830	3609	16.72	18.00	1.343	62.9	1.006	0.17	0.617	0.833