

FCC SAR Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2519-1, XT2519-2, XT2519V
FCC ID : IHDT56AU6
STANDARD : FCC 47 CFR Part 2 (2.1093)

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

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



Approved by: Si Zhang

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
FA510740	Rev. 01	Initial issue of report.	Mar. 07, 2025
FA510740	Rev. 02	Updated Simultaneous in section 17.5/17.6/17.7. This report is an updated version, replacing the report issued on Mar. 07, 2025.	Mar. 28, 2025
FA510740	Rev. 03	Updated 5GNR n14 to perform full SAR testing for hotspot/body. Updated WLAN2.4GHz/5GHz/Bluetooth to perform full SAR testing. This report is an updated version, replacing the report issued on Mar. 28, 2025.	Apr. 15, 2025



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT2519-1, XT2519-2, XT2519V**, 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)			1g SAR (W/kg)	
Licensed	GSM	GSM850	0.32	1.12	1.12	1.59	
		GSM1900	0.15	1.20	1.20		
	WCDMA	WCDMA II	0.84	1.29	1.29		
		WCDMA IV	0.86	1.26	1.26		
		WCDMA V	0.71	1.27	1.27		
	LTE	LTE Band 7	0.18	1.16	1.16		
		LTE Band 12/17	0.84	1.04	1.04		
		LTE Band 13	0.91	0.89	0.89		
		LTE Band 14	0.94	1.11	1.11		
		LTE Band 25/2	0.87	1.13	1.13		
		LTE Band 26/5	0.95	1.09	1.09		
		LTE Band 30	0.88	1.30	1.29		
		LTE Band 66/4	0.86	1.29	1.29		
		LTE Band 71	0.68	0.84	0.84		
		LTE Band 41/38	0.84	1.24	1.24		
		LTE Band 42	0.91	1.08	1.20		
		LTE Band 48	0.91	1.25	1.05		
		5G NR	FR1 n7	0.18	1.29		1.29
			FR1 n12	0.50	0.70		0.70
	FR1 n14		0.82	0.79	0.79		
	FR1 n25/n2		0.88	1.27	1.27		
	FR1 n26/n5		0.82	1.20	1.28		
	FR1 n30		0.89	1.29	1.27		
	FR1 n66		0.89	1.28	1.28		
	FR1 n70		0.89	1.25	1.25		
	FR1 n71		0.92	0.70	0.70		
	FR1 n41/n38		0.86	1.27	1.27		
	FR1 n48		0.88	1.29	1.29		
	FR1 n77/78	0.93	1.08	0.96			
DTS	WLAN	2.4GHz WLAN	1.29	0.67	1.42	1.59	
NII		5GHz WLAN	1.11	0.61	1.17	1.59	
DSS	Bluetooth	2.4GHz Bluetooth	0.15	0.13	<0.10	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	GSM1900	2.32	3.92
	WCDMA	WCDMA II	3.19	
		WCDMA IV	3.16	
		WCDMA V	1.55	
	LTE	LTE Band 7	2.81	
		LTE Band 25/2	2.77	
		LTE Band 30	3.14	
		LTE Band 66/4	3.11	
		LTE Band 41/38	3.12	
		LTE Band 42	2.95	
		LTE Band 48	3.10	
		5G NR	FR1 n7	
	FR1 n25/n2		3.18	
	FR1 n30		3.12	
	FR1 n66		3.20	
	FR1 n70		3.08	
	FR1 n41/n38		3.20	
	FR1 n48		3.10	
	FR1 n77/n78		2.64	
DTS	WLAN	2.4GHz WLAN	2.18	3.92
NII		WLAN5GHz	2.75	3.92
Date of Testing:			2025/1/10 ~ 2025/3/31	

Remark:

1. This device supports LTE B2 / B4 / B5 / B17 / B38 and B25 / B66 / B26 / B12 / B41. Since the supported frequency span for LTE B2 /B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B25 / B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B25 / B66 / B26 / B12 / B41.
2. This device supports 5GNR n38/n5/n78/n2 and n41/n26/n77/n25. Since the supported frequency span for 5GNR n38/n5/n78/n2 falls completely within the supports frequency span for n41/n26/n77/n25, both 5GNR bands have the same target power, and both 5GNR bands share the same transmission path; therefore, SAR was only assessed for n41/n26/n77/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		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR01-KS, SAR04-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	XT2519-1, XT2519-2, XT2519V
FCC ID	IHDT56AU6
IMEI Code	IMEI 1: 355782390035875 IMEI 2: 355782390035883
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 42: 3450 MHz ~ 3550 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 n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n70: 1695 MHz ~ 1710 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz WLAN 6GHz U-NII 5: 5925 MHz ~ 6425 MHz WLAN 6GHz U-NII 6: 6425 MHz ~ 6525 MHz WLAN 6GHz U-NII 7: 6525 MHz ~ 6875 MHz WLAN 6GHz U-NII 8: 6875 MHz ~ 7125 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
Mode	GSM/GPRS/EGPRS



	RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink is supported) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN 2.4GHz 802.11b/g WLAN 2.4GHz 802.11n/ax HT20/HT40/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 NFC: ASK
HW Version	DVT2
SW Version	V2VD35.27
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, LTE and 5GNR (e.g. for 3rd-party VoIP), LTE supports VoLTE operation. 2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications. 3. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only). WLAN 6GHz has no hotspot function. 4. The 2.4GHz/5GHz/6GHz WLAN can transmit in SISO/MIMO antenna mode. 5. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 12. 6. This device 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 when transmit simultaneously with each other, or when transmit simultaneous with WWAN, power reduction will be activated to head exposure condition. For WLAN when transmit simultaneous with WWAN/BT and Proximity sensors trigger, power reduction will be activated to body-worn and extremity exposure conditions. 9. For some WWAN bands, sensor on power level is higher than hotspot power level, so front/back sensor on SAR can represent hotspot conservatively. 10. This device implements antenna tuning techniques for several WWAN (cellular) operating modes and frequencies for the purpose of improving antenna efficiency over a broad range of frequencies. Specifically, these techniques are employed in the LTE and 5GNR modes. In this report SAR was measured according to the normally required SAR configurations with the tuner active and worst tune state (auto tune) was used for SAR testing. The detail descriptions of the antenna tuner and supplemental data for additional information can be referred to section 18 and appendix G. 11. This device supports HPUE mode for LTE Band41 with higher power. 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 power class 3 was chosen to perform full SAR testing and power class 2 verified the worst case of power class 3 SAR. 12. For 5G NR bands, using FTM to perform SAR with default 100% transmission. 13. This device supports HPUE mode for 5GNR n41/n77/n78 HPUE with higher power, so power class 2 was chosen to perform full SAR testing and power class 2 SAR can represent power class 3 SAR. 14. 5G NR n2/n25/n66/n70/n41/n48/n77/n78 supports UL MIMO. 15. 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. 16. The device support DBS (Dual Band Simultaneous) function, when the device WLAN 2.4GHz and WLAN 5GHz or WLAN 6GHz transmit at the same time the device will limit different output power for simultaneous transmission compliance. 17. When the user is talking a call-in head scenario and the receiver detect mechanism trigger, WLAN5GHz/6GHz will be switched from antenna 7 to antenna 10. 18. This device has NFC function and the NFC SAR report will be separately submitted. 19. SAR and Power density test report for WLAN 6GHz U-NII-5/6/7/8 will be separately submitted. About co-located	

- SAR with WWAN/Bluetooth always chose higher SAR of WLAN5GHz U-NII-1/2A/2C/3 and WLAN 6GHz U-NII-5/6/7/8.
20. The different model names are only for market segment purpose, there is no other difference.
21. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n2	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 50
	n12	FDD	15	5, 10, 15
	n25	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n26	FDD	15	5, 10, 15, 20
	n66	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n71	FDD	15	5, 10, 15, 20, 25, 30, 35
	n41	TDD	30	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100
	n48	TDD	30	10, 15, 20, 30, 40
SA	n77	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n2	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 50
	n12	FDD	15	5, 10, 15
	n14	FDD	15	5, 10
	n25	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n26	FDD	15	5, 10, 15, 20
	n30	FDD	15	5, 10
	n66	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n70	FDD	15	5, 10, 15
	n71	FDD	15	5, 10, 15, 20, 25, 30, 35
	n38	TDD	30	10, 15, 20, 25, 30, 40
	n41	TDD	30	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100
	n48	TDD	30	10, 15, 20, 30, 40
	n77	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100



4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																	
FCC ID	IHDT56AU6																																																																
Equipment Name	Mobile Cellular Phone																																																																
Operating Frequency Range of each LTE transmission band	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 42: 3450 MHz ~ 3550 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz																																																																
Channel Bandwidth	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 42: 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																																																																
uplink modulations used	QPSK / 16QAM / 64QAM / 256QAM																																																																
LTE Voice / Data requirements	Voice and Data																																																																
LTE Release Version	R15																																																																
CA Support	Supported, Uplink and Downlink																																																																
LTE MPR permanently built-in by design	<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</th></tr><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>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>256 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></td><td colspan="6">≥ 1</td><td>≤ 5</td></tr></table>			Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3								Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	256 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3		≥ 1						≤ 5
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3																																																																	
Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)																																																										
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz																																																											
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																																										
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																																										
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2																																																										
256 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3																																																										
	≥ 1						≤ 5																																																										
LTE A-MPR	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)																																																																
Spectrum plots for RB configuration	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.																																																																
Power reduction applied to satisfy SAR compliance	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.																																																																
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 14.																																																																
LTE Carrier Aggregation Additional Information	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 3 carriers in the downlink and 2 carriers in the uplink.

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)	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	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)	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	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)	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	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)	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)	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)	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 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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560				
L M	55810	3607	55815	3607.5	55820	3608	55830	3609				
M H	56170	3643	56165	3642.5	56160	3642	56150	3641				
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690				
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)	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 42								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	42115	3452.5	42140	3455	42165	3457.5	42190	3460
M	42590	3500	42590	3500	42590	3500	42590	3500
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540

LTE Band 42								
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	43115	3552.5	43140	3555	43165	3557.5	43190	3560
M	43340	3575	43340	3575	43340	3575	43340	3575
H	43565	3597.5	43540	3595	43515	3592.5	43490	3590

<For LTE Overlap Bands Description>

1) LTE Bands BW

Band	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz
LTE Band 12	Yes	Yes	Yes	Yes		
LTE Band 17			Yes	Yes		
LTE Band 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes
LTE Band 25	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 2	Yes	Yes	Yes	Yes	Yes	Yes



2) LTE Bands tune up:

Band	Antenna	Head	Bodyworn	Hotspot	Extremity	Sensor Off	Default Tune-up Limit
		ECI 2	ECI 3	ECI 7	ECI 6	ECI 4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
LTE Band 12(17)	Ant 0	24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 12(17)	Ant 1	24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 66(4)	Ant 0	24.00	19.20	19.20	22.60	24.00	24.00
LTE Band 66(4)	Ant 1	17.20	18.70	16.20	21.70	24.00	24.00
LTE Band 66(4) other PA	Ant 0	24.00	19.20	19.20	22.60	24.00	24.00
LTE Band 66(4) other PA	Ant 1	17.20	18.70	16.20	21.70	24.00	24.00
LTE Band 26(5)	Ant 0	24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 26(5)	Ant 1	23.70	24.00	24.00	24.00	24.00	24.00
LTE Band 25(2)	Ant 0	24.00	19.10	19.10	22.30	24.00	24.00
LTE Band 25(2)	Ant 1	16.10	17.90	14.70	21.00	24.00	24.00
LTE Band 26(5) other PA	Ant 0	24.00	24.00	24.00	24.00	24.00	24.00
LTE Band 26(5) other PA	Ant 1	23.70	24.00	24.00	24.00	24.00	24.00
LTE Band 41(38)	Ant 0	24.00	20.10	20.10	24.00	24.00	24.00
LTE Band 41 HPUE	Ant 0	26.00	21.70	21.70	26.00	26.00	26.00
LTE Band 41(38) other PA	Ant 0	23.00	20.10	20.10	23.00	23.00	23.00
LTE Band 41 HPUE other PA	Ant 0	26.00	21.70	21.70	26.00	26.00	26.00
LTE Band 41(38)	Ant 1	20.50	21.50	18.60	24.00	24.00	24.00
LTE Band 41 HPUE	Ant 1	22.10	23.10	20.20	26.00	26.00	26.00
LTE Band 41(38) other PA	Ant 1	20.50	21.50	18.60	24.00	24.00	24.00
LTE Band 41 HPUE other PA	Ant 1	22.10	23.10	20.20	27.00	27.00	27.00
LTE Band 41(38)	Ant 2	24.00	23.80	21.90	24.00	24.00	24.00
LTE Band 41 HPUE	Ant 2	27.00	25.40	23.50	27.00	27.00	27.00
LTE Band 41(38) other PA	Ant 2	24.00	23.80	21.90	24.00	24.00	24.00
LTE Band 41 HPUE other PA	Ant 2	27.00	25.40	23.50	27.00	27.00	27.00
LTE Band 41(38)	Ant 10	24.00	19.50	18.00	24.00	24.00	24.00
LTE Band 41 HPUE	Ant 10	25.00	21.10	19.60	25.00	25.00	25.00
LTE Band 41(38) other PA	Ant 10	24.00	19.50	18.00	24.00	24.00	24.00
LTE Band 41 HPUE other PA	Ant 10	27.00	21.10	19.60	27.00	27.00	27.00



	NR Band 12					
	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 14				
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 25																
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz		
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	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	373500	1867.5	374000	1870
M	376500	1882.5	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	379500	1897.5	379000	1895

NR Band 26							
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
M	166300	831.5	166300	831.5	166300	831.5	166300
H	169300	846.5	168800	844	168300	841.5	167800

NR Band 30				
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 66																
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz		
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	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	345500	1727.5	346000	1730
M	349000	1745	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	352500	1762.5	352000	1760

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

NR Band 71													
Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz	
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133100	665.5	133600	668	134100	670.5	134600	673	135100	675.5	135600	678	
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5	136100	680.5	136100	680.5	136100
H	139100	695.5	138600	693	138100	690.5	137600	688	137100	685.5	136600	683	

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

NR Band 41																												
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz		Bandwidth 45MHz		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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	500202	2501.01	500700	2503.5	501204	2506.02	501702	2508.51	502200	2511	502704	2513.52	503202	2516.01	503700	2518.5	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	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	535500	2677.5	534996	2674.98	534498	2672.49	534000	2670	533496	2667.48	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640



NR Band 48										
	Bandwidth 10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	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
M	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

NR Band 77																								
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	664834	3972.51	664668	3970.02	664500	3967.50	664334	3965.01	664000	3960	663668	3955.02	663334	3950.01	663000	3945	662668	3940.02	662334	3935.01	662000	3930

NR Band 78																								
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 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		

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 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>
1) NR Bands BW

Band	5 MHz	10 MHz	15 MHz	20 MHz	25 MHz	30 MHz	35MHz	40 MHz	45 MHz	50 MHz	60 MHz	70 MHz	80 MHz	90 MHz	100MHz
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	Yes	Yes	Yes
FR1 n2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes							
FR1 n25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes							
FR1 n77		Yes	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

2) NR Bands Tune up:

Band	Antenna	Head	Bodyworn	Hotspot	Extremity	Sensor Off	Default Tune-up Limit
		ECI 2	ECI 3	ECI 7	ECI 6	ECI 4	
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	
FR1 n25(2)	Ant 0	24	19.6	19.6	22.1	24	24
FR1 n25(2)	Ant 1	16.4	17.6	13.1	20.6	24	24
FR1 n25(2)	Ant 5	24	24	24	24	24	24
FR1 n25(2) other PA	Ant 0	24	19.6	19.6	22.1	24	24
FR1 n25(2) other PA	Ant 1	16.4	17.6	13.1	20.6	24	24
FR1 n26(5)	Ant 0	24	23.6	23.6	24	24	24
FR1 n26(5)	Ant 1	24	24	23.1	24	24	24
FR1 n41(38)	Ant 0	24	17.4	17.4	20.8	24	24
FR1 n41(38)HPUE	Ant 0	26	17.4	17.4	20.8	26	26
FR1 n41(38) other PA	Ant 0	24	17.4	17.4	20.8	24	24
FR1 n41(38)HPUE other PA	Ant 0	26	17.4	17.4	20.8	26	26
FR1 n41(38)	Ant 1	17.3	18.7	13.9	21.5	24	24
FR1 n41(38)HPUE	Ant 1	17.3	18.7	13.9	21.5	26	26
FR1 n41(38) other PA	Ant 1	17.3	18.7	13.9	21.5	24	24
FR1 n41(38)HPUE other PA	Ant 1	17.3	18.7	13.9	21.5	26	26
FR1 n41(38)	Ant 2	24	21.5	21.5	23.5	24	24
FR1 n41(38)HPUE	Ant 2	27	21.5	21.5	23.5	27	27
FR1 n41(38) other PA	Ant 2	24	21.5	21.5	23.5	24	24
FR1 n41(38)	Ant 10	24	18	16.4	23.7	23.7	24
FR1 n41(38)HPUE	Ant 10	27	18	16.4	23.7	23.7	27
FR1 n41(38) other PA	Ant 10	24	18	16.4	23.7	23.7	24
FR1 n41(38)HPUE other PA	Ant 10	27	18	16.4	23.7	23.7	27
FR1 n77(78) PC3	Ant 2	24	22.8	19.3	20.8	24	24
FR1 n77(78) PC2	Ant 2	27	22.8	19.3	20.8	27	27
FR1 n77(78) PC3 other PA	Ant 2	24	22.8	19.3	20.8	24	24
FR1 n77(78) PC3	Ant 4	16.2	15.8	13	18.7	24	24
FR1 n77(78) PC2	Ant 4	16.2	15.8	13	18.7	27	27
FR1 n77(78) PC3 other PA	Ant 4	16.2	15.8	13	18.7	23	23
FR1 n77(78) PC3	Ant 6	17	19.7	16.5	21.6	22.5	22.5
FR1 n77(78) PC2 other PA	Ant 6	17	19.7	16.5	21.6	27	27
FR1 n77(78) PC3 other PA	Ant 6	17	19.7	16.5	21.6	24	24
FR1 n77(78) PC3	Ant 7	13.5	17.5	14.1	18	18	22.5
FR1 n77(78) PC2 other PA	Ant 7	13.5	17.5	14.1	18	18	27
FR1 n77(78) PC3 other PA	Ant 7	13.5	17.5	14.1	18	18	24

5. TA-SAR feature for RF Exposure compliance

WWAN bands are all enabled with MediaTek TA-SAR Gen2 feature to improve antenna performance by applying separate SAR budgets to each predefined antenna group. 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/BT operations are not enabled with TA-SAR Gen2 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 $\leq 6\text{GHz}$). 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 P_{limit} 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) P_{limit} 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 Gen2 algorithm. SAR char will be entered via the MediaTek's NV suggestion to enable the TA-SAR Gen2 Feature.

<Terminologies in this report>

P_{limit}	The time-averaged RF power which corresponds to SAR _{design_target} .
P_{max}	Maximum target power level
SAR_{design_target}:	The design target for SAR compliance. It should be less than regulatory SAR limit to account for all device design related uncertainty.
SAR char	P _{limit} for all the technologies/bands for all applicable 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 Gen2 algorithm to control and manage RF exposure for $f < 6\text{GHz}$.

SPLSR_Group (Antenna Group):

Antenna Group 0 (AG0)	ANT0 & ANT2
Antenna Group 1 (AG1)	ANT1 & ANT4 & ANT5 & ANT6 & ANT7& ANT10

<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 Gen2 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.

<Plimit for supported technologies and bands >

Band	Antenna	Head ECI2	Body-worn ECI 3	Hotspot ECI 7	Extremity ECI 6	Sensor off ECI 4	Pmax*
GSM850	Ant 0	33.5	26.1	26.1	29.0	25.5	25.5
GSM1900	Ant 0	32.1	20.3	20.3	23.6	22.5	22.5
WCDMA II	Ant 0	29.7	19.2	19.2	22.9	23.0	23.0
WCDMA II	Ant 1	15.6	16.5	14.7	21.0	23.0	23.0
WCDMA IV	Ant 0	29.9	19.2	19.2	22.4	23.0	23.0
WCDMA IV	Ant 1	17.0	19.2	16.7	21.0	23.0	23.0
WCDMA V	Ant 0	31.4	23.4	23.4	26.1	23.0	23.0
WCDMA V	Ant 1	22.6	23.7	23.4	23.0	23.0	23.0
LTE Band 71	Ant 0	33.3	24.8	24.8	27.1	23.0	23.0
LTE Band 71	Ant 1	20.8	24.3	22.7	23.0	23.0	23.0
LTE Band 7	Ant 2	30.6	20.2	20.2	22.1	23.0	23.0
LTE Band 12(17)	Ant 0	31.6	23.9	23.9	25.4	23.0	23.0
LTE Band 12(17)	Ant 1	23.2	27.7	25.5	23.0	23.0	23.0
LTE Band 13	Ant 0	31.4	24.6	24.6	23.0	23.0	23.0
LTE Band 13	Ant 1	22.9	25.6	24.0	23.0	23.0	23.0
LTE Band 14	Ant 0	30.2	23.6	23.6	23.0	23.0	23.0
LTE Band 14	Ant 1	22.7	25.0	23.5	23.0	23.0	23.0
LTE Band 26(5)	Ant 0	30.1	23.6	23.6	23.0	23.0	23.0
LTE Band 26(5)	Ant 1	22.7	24.5	23.0	23.0	23.0	23.0
LTE Band 66(4)	Ant 0	28.4	18.2	18.2	21.6	23.0	23.0
LTE Band 66(4)	Ant 1	16.2	17.7	15.2	20.7	23.0	23.0
LTE Band 66(4) other PA	Ant 0	28.4	18.2	18.2	21.6	23.0	23.0
LTE Band 66(4) other PA	Ant 1	16.2	17.7	15.7	20.7	23.0	23.0
LTE Band 25(2)	Ant 0	28.9	18.1	18.1	21.3	23.0	23.0
LTE Band 25(2)	Ant 1	15.1	16.9	13.7	20.0	23.0	23.0
LTE Band 25(2) other PA	Ant 0	28.9	18.1	18.1	21.3	23.0	23.0
LTE Band 25(2) other PA	Ant 1	15.1	16.9	13.7	20.0	23.0	23.0
LTE Band 30	Ant 1	13.9	19.2	15.9	20.7	23.0	23.0
LTE Band 30	Ant 2	31.6	21.4	21.4	23.1	23.0	23.0
LTE Band 41(38)	Ant 0	41.1	17.1	17.1	21.4	21.4	21.0
LTE Band 41 HPUE	Ant 0	41.1	17.1	17.1	21.4	21.4	21.4
LTE Band 41(38)	Ant 1	17.5	18.5	15.6	21.4	21.4	21.0
LTE Band 41 HPUE	Ant 1	17.5	18.5	15.6	21.4	21.4	21.4
LTE Band 41(38)	Ant 2	31.0	20.8	18.9	22.4	22.4	21.0
LTE Band 41 HPUE	Ant 2	31.0	20.8	18.9	22.4	22.4	22.4
LTE Band 41(38)	Ant 10	38.8	15.9	15.0	21.0	21.0	21.0
LTE Band 41 HPUE	Ant 10	38.8	15.9	15.0	21.0	21.0	20.4

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LTE Band 41(38) other PA	Ant 0	41.1	17.1	17.1	22.4	21.4	20.0
LTE Band 41 HPUE other PA	Ant 0	41.1	17.1	17.1	21.4	21.4	21.4
LTE Band 41(38) other PA	Ant 1	17.5	18.5	15.6	22.4	22.4	21.0
LTE Band 41 HPUE other PA	Ant 1	17.5	18.5	15.6	22.4	22.4	22.4
LTE Band 41(38) other PA	Ant 2	31.0	20.8	18.9	22.4	22.4	21.0
LTE Band 41 HPUE other PA	Ant 2	31.0	20.8	18.9	22.4	22.4	22.4
LTE Band 41(38) other PA	Ant 10	38.8	15.9	15.0	22.4	22.4	21.0
LTE Band 41 HPUE other PA	Ant 10	38.8	15.9	15.0	22.4	22.4	22.4
LTE Band 42	Ant 4	16.0	15.8	11.8	18.7	21.0	21.0
LTE Band 42	Ant 7	14.3	17.6	14.9	18.9	18.5	18.5
LTE Band 42	Ant 2	24.0	21.2	20.4	21.3	21.0	21.0
LTE Band 42	Ant 6	18.3	17.9	16.8	21.0	20.0	20.0
LTE Band 48	Ant 2	26.7	21.9	18.3	20.7	21.0	21.0
LTE Band 48	Ant 4	16.8	15.6	11.7	18.7	21.0	21.0
LTE Band 48	Ant 6	18.5	18.3	17.0	21.4	20.0	20.0
LTE Band 48	Ant 7	13.6	17.3	14.7	18.6	18.6	19.0
FR1 n71	Ant 0	35.4	25.6	25.6	27.6	23.0	23.0
FR1 n71	Ant 1	23.5	26.0	24.4	23.0	23.0	23.0
FR1 n7	Ant 2	31.7	20.7	19.9	22.1	23.0	23.0
FR1 n12	Ant 0	32.6	25.4	25.4	26.1	23.0	23.0
FR1 n12	Ant 1	25.6	27.3	25.8	23.0	23.0	23.0
FR1 n14	Ant 0	33.6	24.5	24.5	26.4	23.0	23.0
FR1 n14	Ant 1	23.4	24.6	23.1	23.0	23.0	23.0
FR1 n25(2)	Ant 0	32.0	18.6	18.6	21.1	23.0	23.0
FR1 n25(2)	Ant 1	15.4	16.6	12.1	19.6	23.0	23.0
FR1 n25(2)	Ant 5	26.0	26.3	23.1	23.0	23.0	23.0
FR1 n25(2) other PA	Ant 0	32.0	18.6	18.6	21.1	23.0	23.0
FR1 n25(2) other PA	Ant 1	15.4	16.6	13.8	19.6	23.0	23.0
FR1 n26(5)	Ant 0	33.7	22.6	22.6	23.0	23.0	23.0
FR1 n26(5)	Ant 1	23.4	23.7	22.1	23.0	23.0	23.0
FR1 n30	Ant 1	15.3	21.7	17.1	23.8	23.0	23.0
FR1 n30	Ant 2	25.1	19.4	18.8	21.2	23.0	23.0
FR1 n66	Ant 0	33.0	17.2	17.2	20.1	23.0	23.0
FR1 n66	Ant 1	16.8	16.9	13.8	19.5	23.0	23.0
FR1 n66	Ant 5	32.6	34.8	29.2	23.0	23.0	23.0
FR1 n66 other PA	Ant 0	33.0	17.2	17.2	20.1	23.0	23.0
FR1 n66 other PA	Ant 1	16.8	16.9	14.9	20.4	23.0	23.0
FR1 n70	Ant 0	33.9	18.1	18.1	20.7	23.0	23.0
FR1 n70	Ant 1	17.5	18.7	14.2	20.3	23.0	23.0
FR1 n70	Ant 5	33.7	33.9	30.5	23.0	23.0	23.0
FR1 n70 other PA	Ant 0	33.9	18.1	18.1	20.7	23.0	23.0
FR1 n70 other PA	Ant 1	17.5	19.4	16.4	20.3	23.0	23.0
FR1 n41(38)	Ant 0	38.0	16.4	16.4	19.8	25.0	23.0
FR1 n41(38)	Ant 1	16.3	17.7	12.9	20.5	25.0	23.0
FR1 n41(38)	Ant 2	33.1	20.5	20.5	22.5	26.0	23.0
FR1 n41(38)	Ant 10	35.0	17.0	15.4	22.7	22.7	23.0
FR1 n41 other PA	Ant 0	38.0	16.4	16.4	19.8	25.0	23.0
FR1 n41 other PA	Ant 1	16.3	17.7	12.9	20.5	25.0	23.0
FR1 n41 other PA	Ant 2	33.1	20.5	20.5	22.5	26.0	23.0
FR1 n41 other PA	Ant 10	35.0	17.0	15.4	22.7	22.7	23.0
FR1 n41(38)HPUE	Ant 0	38.0	16.4	16.4	19.8	25.0	25.0
FR1 n41(38)HPUE	Ant 1	16.3	17.7	12.9	20.5	25.0	25.0
FR1 n41(38)HPUE	Ant 2	33.1	20.5	20.5	22.5	26.0	26.0
FR1 n41(38)HPUE	Ant 10	35.0	17.0	15.4	22.7	22.7	26.0
FR1 n41 HPUE other PA	Ant 0	38.0	16.4	16.4	19.8	25.0	25.0
FR1 n41 HPUE other PA	Ant 1	16.3	17.7	12.9	20.5	25.0	25.0



FR1 n41 HPUE other PA	Ant 10	35.0	17.0	15.4	22.7	22.7	26.0
FR1 n48	Ant 2	27.5	20.2	15.9	18.1	23.0	23.0
FR1 n48	Ant 4	15.6	14.5	11.5	19.0	23.0	23.0
FR1 n48	Ant 6	18.2	18.7	17.3	23.3	22.0	22.0
FR1 n48	Ant 7	10.8	18.0	13.7	19.1	19.1	22.0
FR1 n77(78)	Ant 2	29.1	21.8	18.3	19.8	26.0	23.0
FR1 n77(78)	Ant 4	15.2	14.8	12.0	17.7	26.0	23.0
FR1 n77(78)	Ant 6	16.0	18.7	15.5	20.6	26.0	21.5
FR1 n77(78)	Ant 7	12.5	16.5	13.1	17.0	17.0	21.5
FR1 n77(78) other PA	Ant 2	29.1	21.8	18.3	19.8	26.0	23.0
FR1 n77(78) other PA	Ant 4	15.2	14.8	12.0	17.7	26.0	22.0
FR1 n77(78) other PA	Ant 6	16.0	18.7	15.5	20.6	26.0	23.0
FR1 n77(78) other PA	Ant 7	12.5	16.5	13.1	17.0	17.0	23.0
FR1 n77(78) HPUE	Ant 2	29.1	21.8	18.3	19.8	26.0	26.0
FR1 n77(78) HPUE	Ant 4	15.2	14.8	12.0	17.7	26.0	26.0
FR1 n77(78) HPUE other PA	Ant 6	16.0	18.7	15.5	20.6	26.0	26.0
FR1 n77(78) HPUE other PA	Ant 7	12.5	16.5	13.1	17.0	17.0	26.0

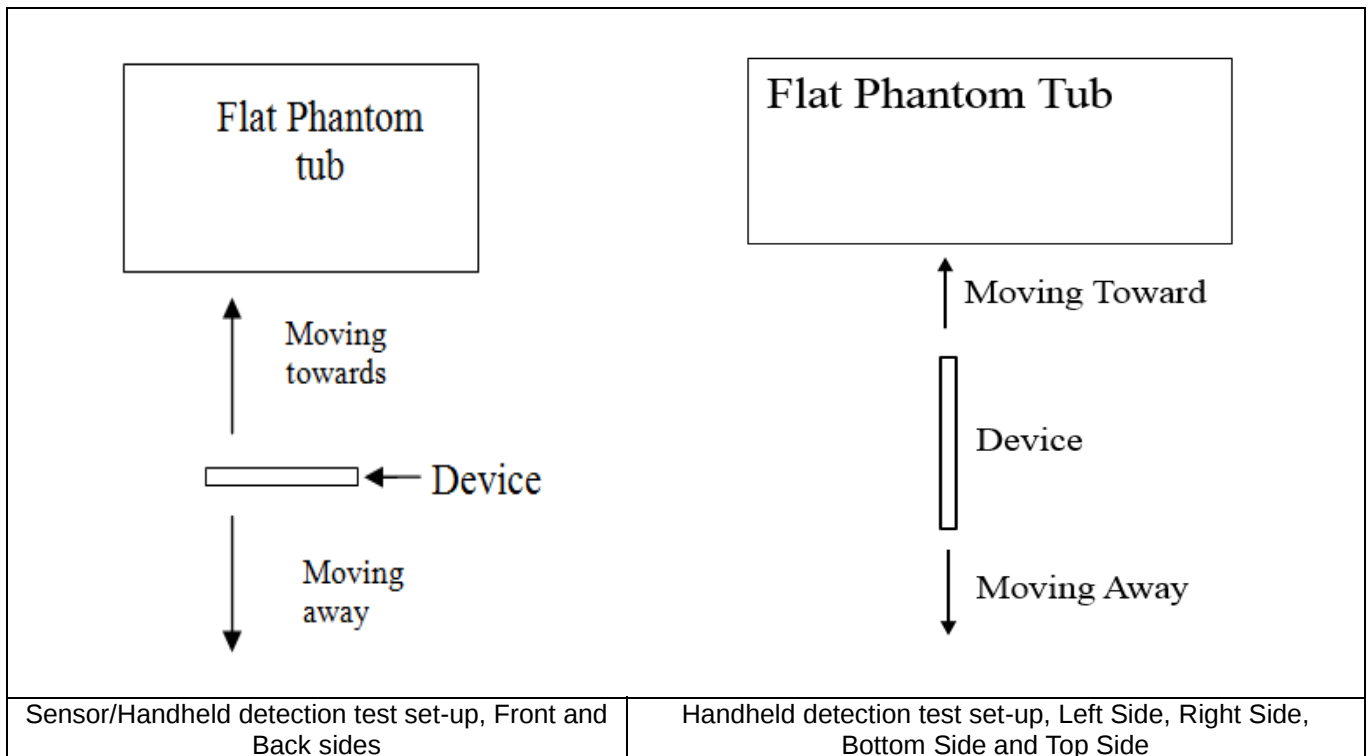
Note:

- 1) *Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1.0 dB device uncertainty.
- 2) All Plimit power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & 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 (7125MHz) and lowest frequency (1750MHz) 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:



<P-Sensor>

Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	16	21	19	24

<Handheld for ANT 0>

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	5	11	14	20	8	13	10	15

<Handheld for ANT1>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	12	8	13	3	8	10	15

<Handheld for ANT 2>

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Right Side		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	10	15	13	19	12	18	11	16

<Handheld for ANT 4>

Proximity Sensor Triggering Distance (mm)						
Position	Front		Back		Left Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	2	6	7	12	9	15

<Handheld for ANT3&6>

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	5	11	9	15	9	14	8	13

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:

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

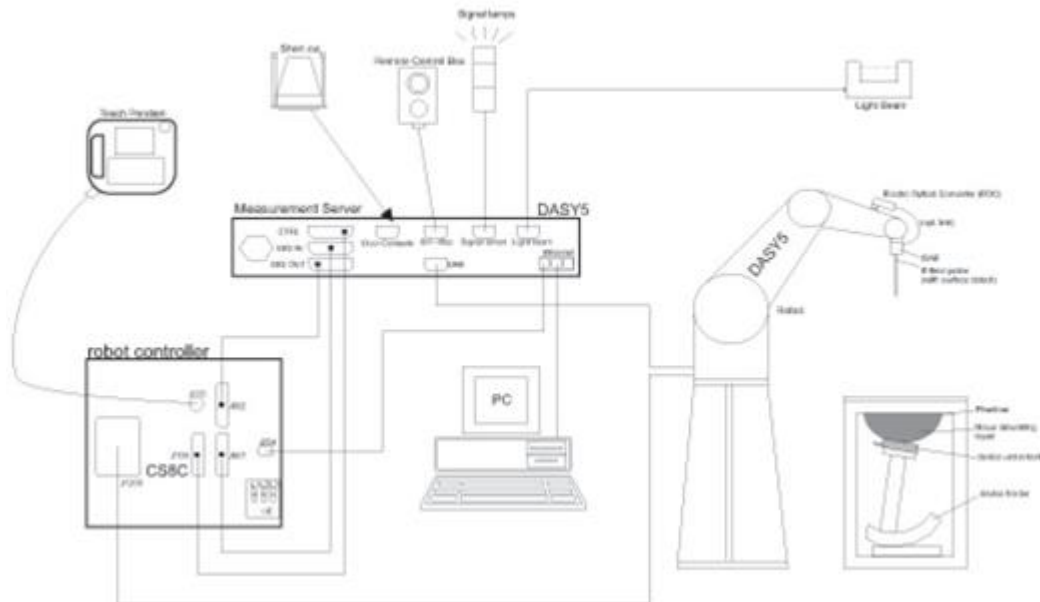
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

9. System Description and Setup

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



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

9.1 E-Field Probe

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

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 10 GHz Linearity: ± 0.2 dB (30 MHz – 10 GHz)	
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/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 from 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 dB) 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	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
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 $\leq$ 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 to 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 whose 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: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 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: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
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 <u>reported</u> SAR from the <u>area scan based 1-g SAR estimation</u> 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 to 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	2025/2/22
SPEAG	750MHz System Validation Kit	D750V3	1099	2024/12/13	2025/12/12
SPEAG	835MHz System Validation Kit	D835V2	4d162	2024/12/13	2025/12/12
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2025/2/22
SPEAG	1900MHz System Validation Kit	D1900V2	5d118	2022/3/30	2025/3/28
SPEAG	2300MHz System Validation Kit	D2300V2	1055	2023/8/21	2025/8/19
SPEAG	2450MHz System Validation Kit	D2450V2	1095	2024/2/8	2026/2/6
SPEAG	2600MHz System Validation Kit	D2600V2	1112	2023/12/18	2025/12/16
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2023/11/20	2025/11/18
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2023/11/20	2025/11/18
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2023/3/9	2025/3/7
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2022/9/23	2025/9/21
SPEAG	Data Acquisition Electronics	DAE4	1338	2024/3/18	2025/3/17
SPEAG	Data Acquisition Electronics	DAE4	1649	2024/7/3	2025/7/2
SPEAG	Data Acquisition Electronics	DAE4	1650	2024/11/25	2025/11/24
SPEAG	Data Acquisition Electronics	DAE4	1358	2024/5/23	2025/5/22
SPEAG	Data Acquisition Electronics	DAE4	1691	2024/4/19	2025/4/18
SPEAG	Dosimetric E-Field Probe	EX3DV4	7630	2024/8/22	2025/8/21
SPEAG	Dosimetric E-Field Probe	EX3DV4	7764	2024/9/2	2025/9/1
SPEAG	Dosimetric E-Field Probe	EX3DV4	3857	2025/2/19	2026/2/18
SPEAG	Dosimetric E-Field Probe	EX3DV4	7774	2024/6/27	2025/6/26
SPEAG	SAM Twin Phantom	SAM Twin	TP-1754	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-2074	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-2022	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-2024	NCR	NCR
SPEAG	SAM Twin Phantom	SAM Twin	TP-1753	NCR	NCR
CHIGO	Thermo-Hygrometer	HTC-1	1929537	2024/5/15	2025/5/14
Beichuang	Thermo-Hygrometer	HTC-1	1929545	2024/5/15	2025/5/14
Beichuang	Thermo-Hygrometer	HTC-1	1929542	2024/5/15	2025/5/14
Beichuang	Thermo-Hygrometer	HTC-1	1929543	2024/5/15	2025/5/14
Beichuang	Thermo-Hygrometer	HTC-1	1929541	2024/5/15	2025/5/14
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Rohde & Schwarz	Signal Generator	SMB100A	100455	2025/1/2	2026/1/1
Rohde & Schwarz	Vector Signal Generator	SMBV100A	258305	2025/1/2	2026/1/1
Keysight	Preamplifier	83017A	MY57280106	2024/4/18	2025/4/17
Anritsu	Radio Communication Analyzer	MT8821C	6262306175	2024/7/4	2025/7/3
Agilent	ENA Series Network Analyzer	E5071C	MY46112129	2024/7/4	2025/7/3
SPEAG	Dielectric Probe Kit	DAK-3.5	1144	2024/8/20	2025/8/19
Anritsu	Vector Signal Generator	MG3710A	6201682672	2025/1/3	2026/1/2
Rohde & Schwarz	Power Meter	NRVD	102081	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2024/7/4	2025/7/3
Rohde & Schwarz	Power Sensor	NRP50S	101385	2024/10/15	2025/10/14
R&S	BLUETOOTH TESTER	CBT	101246	2024/7/4	2025/7/3
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	2024/10/11	2025/10/10
TES	DIGITAC THERMOMETER	TYPE-K	220305411	2025/1/2	2026/1/1
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	
MCL	Attenuation2	BW-S10W5+	N/A	Note 1	
MCL	Attenuation3	BW-S10W5+	N/A	Note 1	
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.

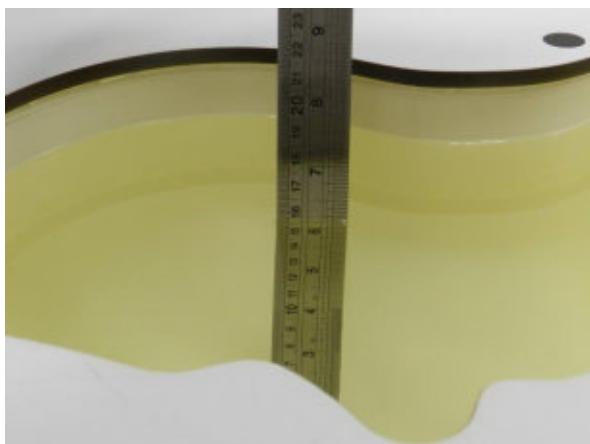

Fig 11.1 Photo of Liquid Height for Head SAR

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 (ϵ_r)
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. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
835	Head	22.9	0.920	40.557	0.90	41.50	2.22	-2.27	±5	2025/1/10
1900	Head	22.8	1.461	38.791	1.40	40.00	4.36	-3.02	±5	2025/1/12
1900	Head	22.7	1.361	38.625	1.40	40.00	-2.79	-3.44	±5	2025/2/11
2300	Head	22.9	1.719	38.785	1.67	39.50	2.93	-1.81	±5	2025/1/13
750	Head	22.6	0.900	41.184	0.89	41.90	1.12	-1.71	±5	2025/1/31
835	Head	22.9	0.924	42.865	0.90	41.50	2.67	3.29	±5	2025/2/1
1750	Head	22.8	1.409	40.669	1.37	40.10	2.85	1.42	±5	2025/2/2
1900	Head	22.6	1.397	39.035	1.40	40.00	-0.21	-2.41	±5	2025/2/3
2300	Head	22.7	1.719	38.785	1.67	39.50	2.93	-1.81	±5	2025/2/4
2600	Head	22.9	1.927	38.322	1.96	39.00	-1.68	-1.74	±5	2025/2/5
3500	Head	22.6	2.826	39.043	2.91	37.90	-2.89	3.02	±5	2025/2/6
3700	Head	22.9	3.117	38.038	3.12	37.70	-0.10	0.90	±5	2025/2/7
3900	Head	22.7	3.219	38.416	3.32	37.50	-3.04	2.44	±5	2025/2/8
750	Head	22.8	0.898	42.323	0.89	41.90	0.90	1.01	±5	2025/2/9
835	Head	22.9	0.928	42.060	0.90	41.50	3.11	1.35	±5	2025/2/10
1750	Head	22.9	1.317	40.224	1.37	40.10	-3.87	0.31	±5	2025/2/11
1900	Head	22.8	1.407	40.215	1.40	40.00	0.50	0.54	±5	2025/2/12
2300	Head	22.9	1.708	39.365	1.67	39.50	2.28	-0.34	±5	2025/2/13
2600	Head	22.7	2.008	40.561	1.96	39.00	2.45	4.00	±5	2025/2/14
3500	Head	22.6	2.881	38.499	2.91	37.90	-1.00	1.58	±5	2025/2/15
3700	Head	22.8	3.077	38.039	3.12	37.70	-1.38	0.90	±5	2025/2/16
3900	Head	22.9	3.281	37.612	3.32	37.50	-1.17	0.30	±5	2025/2/17
750	Head	22.7	0.925	40.700	0.89	41.90	3.93	-2.86	±5	2025/3/29
2450	Head	22.7	1.830	37.500	1.80	39.20	1.67	-4.34	±5	2025/3/29
5250	Head	22.7	4.570	35.500	4.71	35.90	-2.97	-1.11	±5	2025/3/30
5600	Head	22.7	4.950	34.800	5.07	35.50	-2.37	-1.97	±5	2025/3/30
5750	Head	22.7	5.130	34.600	5.22	35.40	-1.72	-2.26	±5	2025/3/30
5250	Head	22.8	4.560	35.000	4.71	35.90	-3.18	-2.51	±5	2025/3/29
5600	Head	22.8	4.950	34.400	5.07	35.50	-2.37	-3.10	±5	2025/3/29
5750	Head	22.8	5.120	34.100	5.22	35.40	-1.92	-3.67	±5	2025/3/29
5250	Head	22.8	4.570	36.000	4.71	35.90	-2.97	0.28	±5	2025/3/29
5600	Head	22.8	4.970	35.400	5.07	35.50	-1.97	-0.28	±5	2025/3/29
5750	Head	22.8	5.140	35.200	5.22	35.40	-1.53	-0.56	±5	2025/3/29
5600	Head	22.7	4.920	34.600	5.07	35.50	-2.96	-2.54	±5	2025/3/31
5250	Head	22.8	4.570	35.700	4.71	35.90	-2.97	-0.56	±5	2025/3/31
5750	Head	22.9	5.120	34.100	5.22	35.40	-1.92	-3.67	±5	2025/3/31

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 (%)
2025/1/10	835	Head	50	4d162	7630	1338	0.478	9.080	9.56	5.29
2025/1/12	1900	Head	50	5d118	7630	1338	1.990	39.30	39.8	1.27
2025/2/11	1900	Head	50	5d118	7630	1338	1.900	39.30	38	-3.31
2025/1/13	2300	Head	50	1055	7630	1338	2.550	48.40	51	5.37
2025/1/31	750	Head	50	1087	7630	1338	0.416	8.58	8.32	-3.03
2025/2/1	835	Head	50	4d162	7630	1338	0.485	9.08	9.7	6.83
2025/2/2	1750	Head	50	1090	7630	1338	1.910	37.00	38.2	3.24
2025/2/3	1900	Head	50	5d118	7630	1338	2.020	39.30	40.4	2.80
2025/2/4	2300	Head	50	1055	7630	1338	2.460	48.40	49.2	1.65
2025/2/5	2600	Head	50	1112	7630	1338	2.690	55.10	53.8	-2.36
2025/2/6	3500	Head	50	1037	7630	1338	3.240	65.40	64.8	-0.92
2025/2/7	3700	Head	50	1008	7630	1338	3.240	67.20	64.8	-3.57
2025/2/8	3900	Head	50	1048	7764	1338	3.350	69.10	67	-3.04
2025/2/9	750	Head	50	1087	7630	1338	0.436	8.58	8.72	1.63
2025/2/10	835	Head	50	4d162	7630	1338	0.467	9.08	9.34	2.86
2025/2/11	1750	Head	50	1090	7630	1338	1.930	37.00	38.6	4.32
2025/2/12	1900	Head	50	5d118	7630	1338	1.970	39.30	39.4	0.25
2025/2/13	2300	Head	50	1055	7630	1338	2.510	48.40	50.2	3.72
2025/2/14	2600	Head	50	1112	7630	1338	2.750	55.10	55	-0.18
2025/2/15	3500	Head	50	1037	7630	1338	3.300	65.40	66	0.92
2025/2/16	3700	Head	50	1008	7630	1338	3.200	67.20	64	-4.76
2025/2/17	3900	Head	50	1048	7764	1338	3.420	69.10	68.4	-1.01
2025/3/29	750	Head	50	1099	3857	1649	0.417	8.28	8.34	0.72
2025/3/29	2450	Head	50	1095	3857	1649	2.730	52.60	54.6	3.80
2025/3/30	5250	Head	50	1113	7774	1650	4.080	81.50	81.6	0.12
2025/3/30	5600	Head	50	1113	7774	1650	4.150	82.60	83	0.48
2025/3/30	5750	Head	50	1113	7774	1650	3.770	80.80	75.4	-6.68
2025/3/29	5250	Head	50	1113	7630	1358	3.820	81.50	76.4	-6.26
2025/3/29	5600	Head	50	1113	7630	1358	3.830	82.60	76.6	-7.26
2025/3/29	5750	Head	50	1113	7630	1358	3.890	80.80	77.8	-3.71
2025/3/29	5250	Head	50	1113	7764	1691	3.950	81.50	79	-3.07
2025/3/29	5600	Head	50	1113	7764	1691	4.160	82.60	83.2	0.73
2025/3/29	5750	Head	50	1113	7764	1691	3.810	80.80	76.2	-5.69
2025/3/31	5600	Head	50	1113	7774	1650	4.250	82.60	85	2.91
2025/3/31	5250	Head	50	1113	7764	1691	3.960	81.50	79.2	-2.82
2025/3/31	5750	Head	50	1113	7630	1358	3.840	80.80	76.8	-4.95

<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 (%)
2025/1/10	835	Head	50	4d162	7630	1338	0.303	5.85	6.06	3.59
2025/1/12	1900	Head	50	5d118	7630	1338	1.020	20.40	20.4	0.00
2025/2/11	1900	Head	50	5d118	7630	1338	1.020	20.40	20.4	0.00
2025/1/13	2300	Head	50	1055	7630	1338	1.230	23.70	24.6	3.80
2025/1/31	750	Head	50	1087	7630	1338	0.278	5.65	5.56	-1.59
2025/2/1	835	Head	50	4d162	7630	1338	0.303	5.85	6.06	3.59
2025/2/2	1750	Head	50	1090	7630	1338	0.998	19.50	19.96	2.36
2025/2/3	1900	Head	50	5d118	7630	1338	1.070	20.40	21.4	4.90
2025/2/4	2300	Head	50	1055	7630	1338	1.210	23.70	24.2	2.11
2025/2/5	2600	Head	50	1112	7630	1338	1.240	24.80	24.8	0.00
2025/2/6	3500	Head	50	1037	7630	1338	1.270	24.70	25.4	2.83
2025/2/7	3700	Head	50	1008	7630	1338	1.240	24.40	24.8	1.64
2025/2/8	3900	Head	50	1048	7764	1338	1.190	24.10	23.8	-1.24
2025/2/9	750	Head	50	1087	7630	1338	0.293	5.65	5.86	3.72
2025/2/10	835	Head	50	4d162	7630	1338	0.298	5.85	5.96	1.88
2025/2/11	1750	Head	50	1090	7630	1338	1.050	19.50	21	7.69
2025/2/12	1900	Head	50	5d118	7630	1338	1.060	20.40	21.2	3.92
2025/2/13	2300	Head	50	1055	7630	1338	1.220	23.70	24.4	2.95
2025/2/14	2600	Head	50	1112	7630	1338	1.270	24.80	25.4	2.42
2025/2/15	3500	Head	50	1037	7630	1338	1.300	24.70	26	5.26
2025/2/16	3700	Head	50	1008	7630	1338	1.230	24.40	24.6	0.82
2025/2/17	3900	Head	50	1048	7764	1338	1.210	24.10	24.2	0.41
2025/3/29	750	Head	50	1099	3857	1649	0.254	5.37	5.08	-5.40
2025/3/29	2450	Head	50	1095	3857	1649	1.330	24.70	26.6	7.69
2025/3/30	5250	Head	50	1113	7774	1650	1.180	23.30	23.6	1.29
2025/3/30	5600	Head	50	1113	7774	1650	1.190	23.70	23.8	0.42
2025/3/30	5750	Head	50	1113	7774	1650	1.080	23.00	21.6	-6.09
2025/3/29	5250	Head	50	1113	7630	1358	1.090	23.30	21.8	-6.44
2025/3/29	5600	Head	50	1113	7630	1358	1.110	23.70	22.2	-6.33
2025/3/29	5750	Head	50	1113	7630	1358	1.120	23.00	22.4	-2.61
2025/3/29	5250	Head	50	1113	7764	1691	1.130	23.30	22.6	-3.00
2025/3/29	5600	Head	50	1113	7764	1691	1.180	23.70	23.6	-0.42
2025/3/29	5750	Head	50	1113	7764	1691	1.090	23.00	21.8	-5.22
2025/3/31	5600	Head	50	1113	7774	1650	1.220	23.70	24.4	2.95
2025/3/31	5250	Head	50	1113	7764	1691	1.140	23.30	22.8	-2.15
2025/3/31	5750	Head	50	1113	7630	1358	1.110	23.00	22.2	-3.48

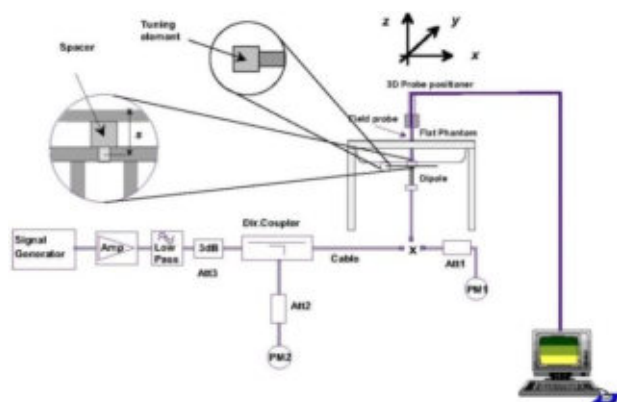


Fig 11.3.1 System Performance Check Setup



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.

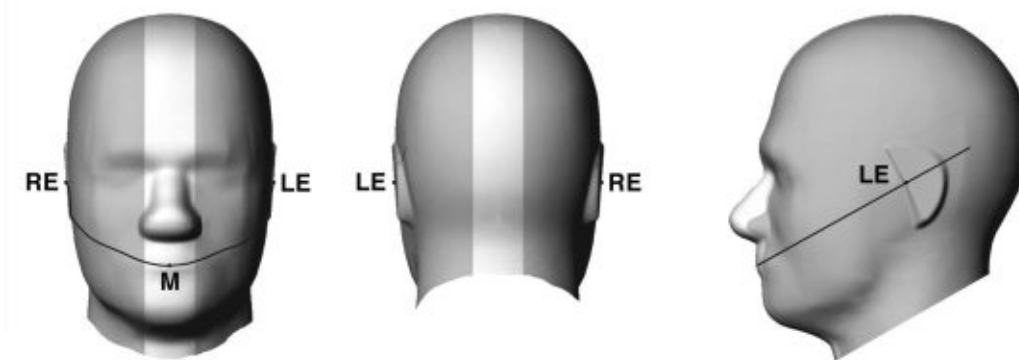


Fig 12.1.1 Front, back, and side views of SAM twin phantom

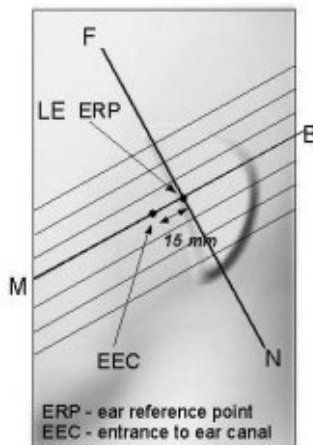


Fig 12.1.2 Close-up side view of phantom showing the ear region.

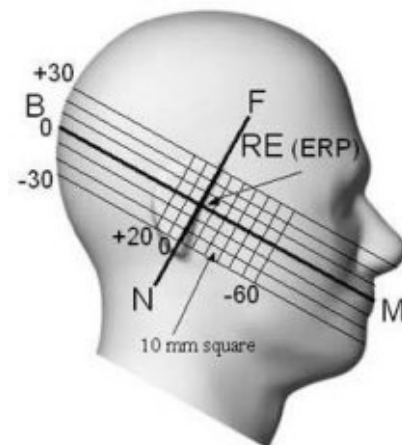


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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 w_t 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 w_b 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 handset. 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.

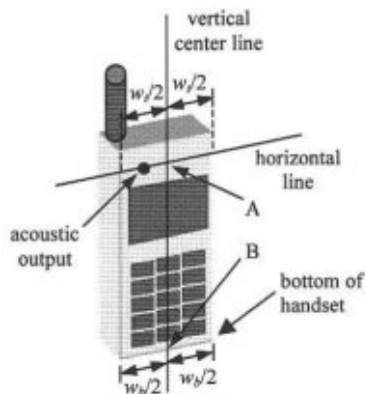


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case"

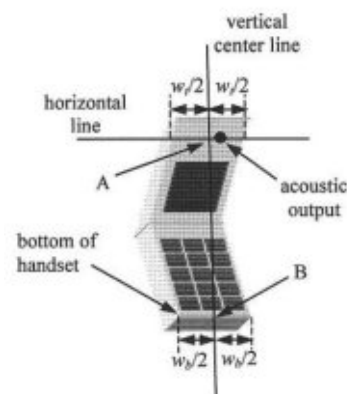


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

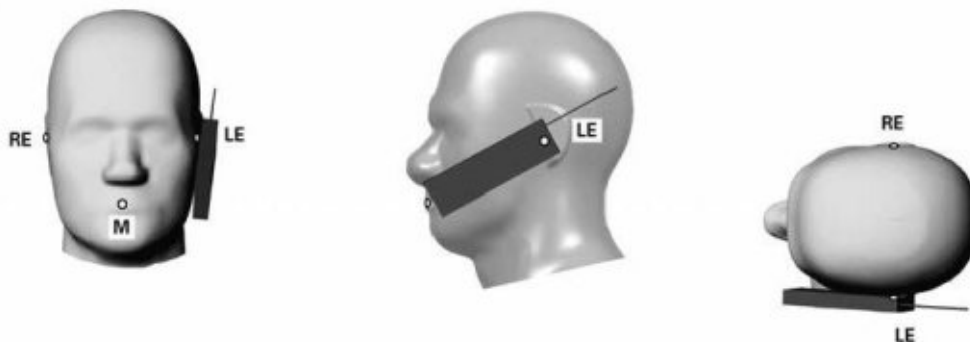


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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 $> 1.2 \text{ W/kg}$, 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-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

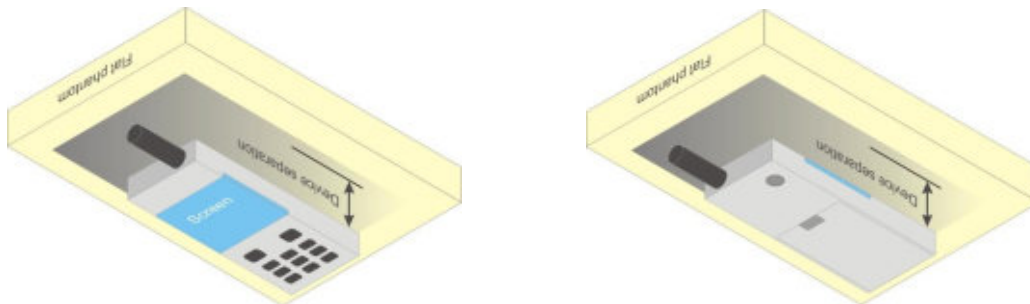


Fig 12.4 Body Worn Position

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 ($L \times W \geq 9$ 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 from 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 $\leq 1/4$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Conducted Power>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (Note 1, 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 $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

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

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCCH, 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 $\beta_c = 11/15$ and $\beta_d = 15/15$.

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} (Note 1)	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	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	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 $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. 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 $\beta_c = 10/15$ and $\beta_d = 15/15$.

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

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

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

Setup Configuration

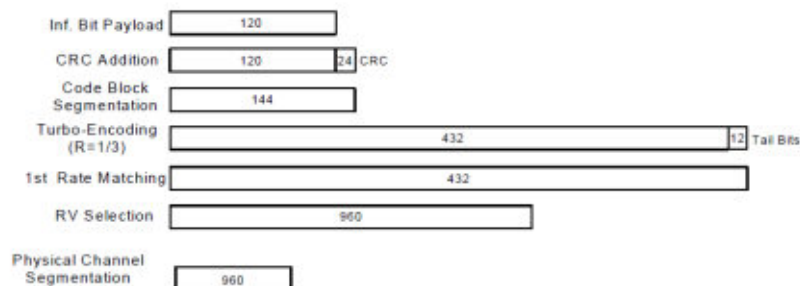
DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set RMC 12.2Kbps + HSDPA mode.
 - ii. Set Cell Power = -25 dBm
 - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - iv. Select HSDPA Uplink Parameters
 - v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - a). Subtest 1: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - 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	TTIs	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{info})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.		
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.		


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

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

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

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

Sub-test	β_c (Note 3)	β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105

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

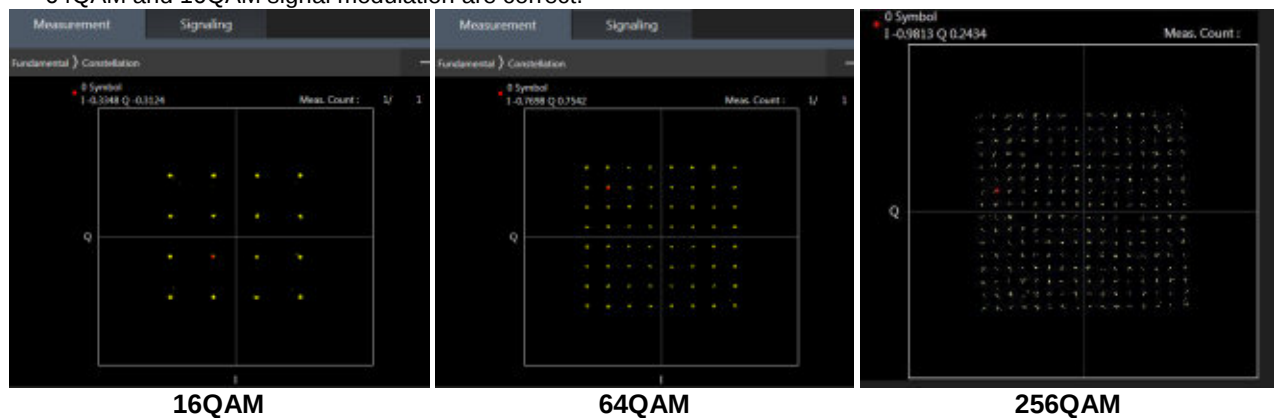
Setup Configuration
<WCDMA Conducted Power>
General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

<LTE Conducted Power>

General Note:

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



<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.

- 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “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
- 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.

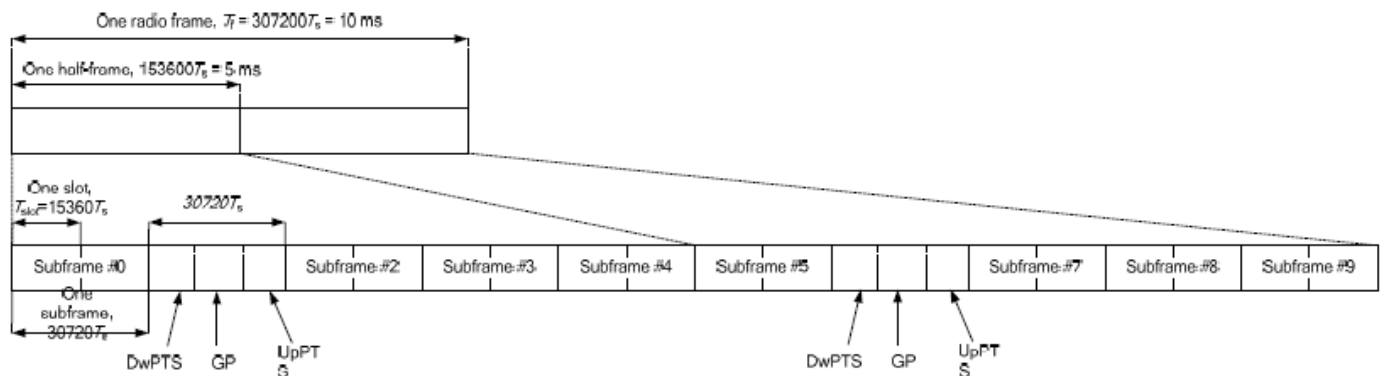


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
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

- Uplink-downlink configuration: 1. In a half-frame consisted of 5 subframes, uplink operation is in 2 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(2+0.167)/5 = 43.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(2+0.143)/5 = 42.9\%$
- 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

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- 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>

The detailed LTE Carrier Aggregation conducted power table can refer to Appendix F.

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. All permutations exist. No restrictions on Pcell & Scell combinations.
4. Per Oct. 2024 TCB workshop, Manufacturer declares that TX power measurement for multiple DL CA configurations is deemed not required as the DL CA has no impact on the TX power according to preliminary scan. TX power measured in LTE standalone operation represents the worst case.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation		
Number	Combination	4X4 MIMO	Number	Combination	4X4 MIMO
1	CA_12A-30A	30A	1	CA_12A-30A-66A	30A-66A, 66A, 30A
2	CA_12A-48A	48A	2	CA_12A-48C	48C, 48A
3	CA_12A-66A	66A	3	CA_12A-66A-66A	66A-66A, 66A
4	CA_12B		4	CA_12A-66C	66C, 66A
5	CA_13A-48A	48A	5	CA_12B-66A	66A
6	CA_13A-66A	66A	6	CA_13A-48A-66A	48A-66A, 66A, 48A
7	CA_14A-30A	30A	7	CA_13A-48C	48C, 48A
8	CA_14A-66A	66A	8	CA_13A-66A-66A	66A-66A, 66A
9	CA_17A-30A	30A	9	CA_14A-30A-66A	30A-66A, 66A, 30A
10	CA_25A-25A	25A-25A, 25A	10	CA_14A-66A-66A	66A-66A, 66A
11	CA_25A-26A	25A	11	CA_25A-25A-26A	25A-25A, 25A
12	CA_25A-41A	25A-41A, 41A, 25A	12	CA_25A-25A-66A	25A-66A, 25A-25A, 66A, 25A
13	CA_25A-66A	25A-66A, 66A, 25A	13	CA_25A-41C	41C, 41A, 25A
14	CA_26A-41A	41A	14	CA_26A-41C	41C, 41A
15	CA_2A-12A	2A	15	CA_2A-12A-30A	2A-30A, 30A, 2A
16	CA_2A-13A	2A	16	CA_2A-12A-66A	2A-66A, 66A, 2A
17	CA_2A-14A	2A	17	CA_2A-12B	2A
18	CA_2A-17A	2A	18	CA_2A-13A-48A	2A-48A, 48A, 2A
19	CA_2A-2A	2A-2A, 2A	19	CA_2A-13A-66A	2A-66A, 66A, 2A
20	CA_2A-30A	2A-30A, 30A, 2A	20	CA_2A-14A-30A	2A-30A, 30A, 2A
21	CA_2A-48A	2A-48A, 48A, 2A	21	CA_2A-14A-66A	2A-66A, 66A, 2A
22	CA_2A-4A	2A-4A, 4A, 2A	22	CA_2A-2A-12A	2A-2A, 2A
23	CA_2A-5A	2A	23	CA_2A-2A-13A	2A-2A, 2A
24	CA_2A-66A	2A-66A, 66A, 2A	24	CA_2A-2A-14A	2A-2A, 2A
25	CA_2A-71A	2A	25	CA_2A-2A-17A	2A-2A, 2A
26	CA_2A-7A	2A-7A, 7A, 2A	26	CA_2A-2A-30A	2A-30A, 2A-2A, 30A, 2A
27	CA_2C	2C, 2A	27	CA_2A-2A-4A	2A-4A, 2A-2A, 4A, 2A
28	CA_30A-66A	30A-66A, 66A, 30A	28	CA_2A-2A-5A	2A-2A, 2A
29	CA_38C	38C, 38A	29	CA_2A-2A-66A	2A-66A, 2A-2A, 66A, 2A
30	CA_41A-41A	41A-41A, 41A	30	CA_2A-2A-71A	2A-2A, 2A
31	CA_41A-48A	41A-48A, 48A, 41A	31	CA_2A-2A-7A	2A-7A, 2A-2A, 7A, 2A
32	CA_41C	41C, 41A	32	CA_2A-30A-66A	30A-66A, 2A-66A, 2A-30A, 66A, 30A, 2A
33	CA_48A-48A	48A-48A, 48A	33	CA_2A-48A-48A	48A-48A, 2A-48A, 48A, 2A
34	CA_48A-66A	48A-66A, 66A, 48A	34	CA_2A-48A-66A	48A-66A, 2A-66A, 2A-48A, 66A, 48A, 2A
35	CA_48A-71A	48A	35	CA_2A-48C	48C, 48A, 2A
36	CA_48B	48B, 48A	36	CA_2A-4A-12A	2A-4A, 4A, 2A
37	CA_48C	48C, 48A	37	CA_2A-4A-13A	2A-4A, 4A, 2A
38	CA_4A-12A	4A	38	CA_2A-4A-17A	2A-4A, 4A, 2A



FCC SAR Test Report

Report No. : FA510740

39	CA_4A-13A	4A	39	CA_2A-4A-30A	4A-30A, 2A-4A, 2A-30A, 4A, 30A, 2A
40	CA_4A-17A	4A	40	CA_2A-4A-4A	4A-4A, 2A-4A, 4A, 2A
41	CA_4A-30A	4A-30A, 4A, 30A	41	CA_2A-4A-5A	2A-4A, 4A, 2A
42	CA_4A-48A	4A-48A, 4A, 48A	42	CA_2A-4A-71A	2A-4A, 4A, 2A
43	CA_4A-4A	4A-4A, 4A	43	CA_2A-4A-7A	4A-7A, 2A-7A, 2A-4A, 7A, 4A, 2A
44	CA_4A-5A	4A	44	CA_2A-5A-30A	2A-30A, 30A, 2A
45	CA_4A-71A	4A	45	CA_2A-5A-48A	2A-48A, 48A, 2A
46	CA_4A-7A	4A-7A, 7A, 4A	46	CA_2A-5A-66A	2A-66A, 66A, 2A
47	CA_5A-30A	30A	47	CA_2A-5A-7A	2A-7A, 7A, 2A
48	CA_5A-41A	41A	48	CA_2A-5B	2A
49	CA_5A-48A	48A	49	CA_2A-66A-66A	66A-66A, 2A-66A, 66A, 2A
50	CA_5A-66A	66A	50	CA_2A-66A-71A	2A-66A, 66A, 2A
51	CA_5A-7A	7A	51	CA_2A-66B	66B, 66A, 2A
52	CA_5B		52	CA_2A-66C	66C, 66A, 2A
53	CA_66A-66A	66A-66A, 66A	53	CA_2A-7A-12A	2A-7A, 7A, 2A
54	CA_66A-71A	66A	54	CA_2A-7A-13A	2A-7A, 7A, 2A
55	CA_66B	66B, 66A	55	CA_2A-7A-66A	7A-66A, 2A-7A, 2A-66A, 7A, 66A, 2A
56	CA_66C	66C, 66A	56	CA_2A-7A-7A	7A-7A, 2A-7A, 7A, 2A
57	CA_7A-12A	7A	57	CA_2A-7C	7C, 7A, 2A
58	CA_7A-13A	7A	58	CA_2C-12A	2C, 2A
59	CA_7A-25A	7A-25A, 7A, 25A	59	CA_2C-66A	2C, 66A, 2A
60	CA_7A-66A	7A-66A, 7A, 66A	60	CA_30A-66A-66A	66A-66A, 30A-66A, 66A, 30A
61	CA_7A-7A	7A-7A, 7A	61	CA_41A-41C	41C, 41A
62	CA_7B	7B, 7A	62	CA_41D	
63	CA_7C	7C, 7A	63	CA_48A-48A-66A	48A-66A, 48A-48A, 66A, 48A
			64	CA_48A-48A-71A	48A-48A, 48A
			65	CA_48A-48C	48C, 48A
			66	CA_48A-66A-66A	66A-66A, 48A-66A, 66A, 48A
			67	CA_48C-66A	48C, 66A, 48A
			68	CA_48C-71A	48C, 48A
			69	CA_48D	
			70	CA_4A-12A-30A	4A-30A, 4A, 30A
			71	CA_4A-12B	4A
			72	CA_4A-48C	48C, 4A, 48A
			73	CA_4A-4A-12A	4A-4A, 4A
			74	CA_4A-4A-13A	4A-4A, 4A
			75	CA_4A-4A-17A	4A-4A, 4A
			76	CA_4A-4A-5A	4A-4A, 4A
			77	CA_4A-4A-71A	4A-4A, 4A
			78	CA_4A-4A-7A	4A-7A, 4A-4A, 7A, 4A
			79	CA_4A-5A-30A	4A-30A, 4A, 30A
			80	CA_4A-7A-12A	4A-7A, 7A, 4A
			81	CA_4A-7A-71A	4A-7A, 7A, 4A
			82	CA_4A-7A-7A	7A-7A, 4A-7A, 7A, 4A
			83	CA_4A-7C	7C, 7A, 4A
			84	CA_5A-30A-66A	30A-66A, 66A, 30A
			85	CA_5A-48A-48A	48A-48A, 48A
			86	CA_5A-48A-66A	48A-66A, 66A, 48A
			87	CA_5A-48C	48C, 48A
			88	CA_5A-66A-66A	66A-66A, 66A
			89	CA_5A-7A-66A	7A-66A, 7A, 66A
			90	CA_5A-7A-7A	7A-7A, 7A
			91	CA_5A-7C	7C, 7A
			92	CA_5B-30A	30A
			93	CA_5B-66A	66A
			94	CA_66A-66A-66A	66A-66A, 66A



			95	CA_66A-66A-71A	66A-66A, 66A
			96	CA_66A-66B	66B, 66A
			97	CA_66A-66C	66C, 66A
			98	CA_66C-71A	66C, 66A
			99	CA_7A-12A-66A	7A-66A, 7A, 66A
			100	CA_7A-13A-66A	7A-66A, 7A, 66A
			101	CA_7A-25A-25A	7A-25A, 25A-25A, 7A, 25A
			102	CA_7A-25A-66A	7A-66A, 7A-25A, 25A-66A, 7A, 66A, 25A
			103	CA_7A-66A-66A	7A-66A, 66A-66A, 7A, 66A
			104	CA_7A-7A-13A	7A-7A, 7A
			105	CA_7A-7A-25A	7A-7A, 7A-25A, 7A, 25A
			106	CA_7A-7A-66A	7A-7A, 7A-66A, 7A, 66A
			107	CA_7C-13A	7C, 7A
			108	CA_7C-66A	7C, 7A, 66A

LTE Carrier Aggregation Conducted Power (Downlink)

- i. According to KDB941225 D05A v01r02, Uplink maximum output power measurement with downlink carrier aggregation active should be measured, using the highest output channel measured without downlink carrier aggregation, to confirm that uplink maximum output power with downlink carrier aggregation active remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output measured without downlink carrier aggregation active.
- ii. Uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded.
- iii. The device supports downlink three carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
- iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.
- v. For inter-band CA, the SCC selected highest bandwidth and near the middle of its transmission band. For SCC DL RB size and offset will base on the PCC corresponding RB allocation.
- vi. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.
- vii. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Band 2/4/7/25/30/38/41/42/48/66 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 2/4/7/25/30/38/41/42/48/66

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	Antenna Tx
CA_5B	Ant0/1
CA_41C	Ant2/1/0/10
CA_48B	Ant4/7/2/6
CA_48C	Ant4/7/2/6

<Intra-band>
General Note:

- i. The device supports intra-band uplink carrier aggregation for LTE B5/41/48 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. 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.
- iii. Additional SAR measurement for LTE UL CA with 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.
- iv. LTE CA_48B test was covered by LTE CA_48C; therefore, SAR was only assessed for LTE CA_48C.

<Inter-band uplink carrier aggregation consideration>

LTE Uplink CA	2CC Uplink Carrier Aggregation							
Inter-band	Main Antenna Tx	ASDiv-1 Tx	ASDiv-2 Tx	ASDiv-3 Tx	ASDiv-4 Tx	ASDiv-5 Tx	ASDiv-6 Tx	ASDiv-7 Tx
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_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 7	Ant 0 + Ant 2	Ant 0 + Ant 6	Ant 1 + Ant 4	Ant 1 + Ant 7	Ant 1 + Ant 2	Ant 1 + Ant 6
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-71A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_48A-66A	ANT4+ANT0	ANT7+ANT0	ANT2+ANT0	ANT6+ANT0	ANT4+ANT1	ANT7+ANT1	ANT2+ANT1	ANT6+ANT1
CA_4A-12A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_4A-13A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_4A-5A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_5A-66A	Ant 0 + Ant 1	Ant 1 + Ant 0						

General Note:

1. The single carrier of inter band CA uplink power level is the same as Non-CA standalone LTE power level.
2. The product implements MediaTek TA-SAR Gen2 feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with RF exposure limit over a defined time window, for SAR (transmit frequency $\leq 6\text{GHz}$). 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. For LTE inter-band CA mode, MediaTek TA-SAR Gen2 algorithm in WWAN adds directly the time-averaged RF exposure between two LTE bands. TA-SAR Gen2 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/n12/n25/n26/n41/n48/n66/n71/n77/n78 is NSA mode.
2. 5G NR n2/n5/n7/n12/n14/n25/n26/n30/n38/n41/n48/n66/n70/n71/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 bands, using FTM to perform SAR with default 100% transmission.
5. For 5G NR, the simultaneous transmission analysis is used standalone SAR at total power level to show compliance.
6. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
7. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
8. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose DFT-s-OFDM to perform SAR testing.
9. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
10. For 5G NR inter-band CA mode, MediaTek TA-SAR Gen2 algorithm in WWAN adds directly the time-averaged RF exposure between two 5G NR bands. MediaTek TA-SAR Gen2 algorithm controls the total RF exposure base on 5G NR inter CA bands to not exceed FCC limit.

<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	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
		$\leq 0.5^2$	$\leq 0.5^2$	0 ²
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
CP-OFDM	256 QAM	≤ 4.5		
	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-1 Tx	ASDiv-2 Tx	ASDiv-3 Tx	ASDiv-4 Tx	ASDiv-5 Tx	ASDiv-6 Tx	ASDiv-7 Tx
	LTE+NR	LTE+NR	LTE+NR	LTE+NR	LTE+NR	LTE+NR	LTE+NR	LTE+NR
DC_12A_n25A	ANT0 + ANT1	ANT1 + ANT0						
DC_12A_n2A	ANT0 + ANT1	ANT1 + ANT0						
DC_12A_n41A	Ant 0 + Ant 1	Ant 0 + Ant 2	Ant 0 + Ant 10	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 10		
DC_12A_n66A	ANT0 + ANT1	ANT1 + ANT0						
DC_12A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_12A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_12A_n7A	Ant 1 + Ant 2	Ant 0 + Ant 2						
DC_13A_n2A	ANT0 + ANT1	ANT1 + ANT0						
DC_13A_n66A	ANT0 + ANT1	ANT1 + ANT0						
DC_13A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_13A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_14A_n2A	ANT0 + ANT1	ANT1 + ANT0						
DC_14A_n66A	ANT0 + ANT1	ANT1 + ANT0						
DC_14A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_25A_n41A	Ant 0 + Ant 1	Ant 0 + Ant 2	Ant 0 + Ant 10	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 10		
DC_25A_n66A	ANT0 + ANT1	ANT1 + ANT0						
DC_25A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_25A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_26A_n25A	ANT0 + ANT1	ANT1 + ANT0						
DC_26A_n41A	Ant 0 + Ant 1	Ant 0 + Ant 2	Ant 0 + Ant 10	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 10		
DC_26A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_26A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_2A_n12A	Ant 0 + Ant 1	Ant 1 + Ant 0						
DC_2A_n41A	Ant 0 + Ant 1	Ant 0 + Ant 2	Ant 0 + Ant 10	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 10		
DC_2A_n5A	ANT0 + ANT1	ANT1 + ANT0						
DC_2A_n66A	ANT0 + ANT1	ANT1 + ANT0						
DC_2A_n71A	ANT0 + ANT1	ANT1 + ANT0						



DC_2A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_2A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_2A_n7A	Ant 1 + Ant 2	Ant 0 + Ant 2						
DC_30A_n2A	ANT2 + ANT1	ANT2 + ANT0	ANT1 + ANT0					
DC_30A_n5A	ANT2 + ANT1	ANT2 + ANT0	ANT1 + ANT0					
DC_30A_n66A	ANT2 + ANT1	ANT2 + ANT0	ANT1 + ANT0					
DC_30A_n77A	ANT2 + ANT7	ANT2+ ANT4		ANT2 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_38A_n78A	ANT2 + ANT7	ANT2+ ANT4		ANT2 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_41A_n77A	ANT2 + ANT7	ANT2+ ANT4		ANT2 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_41A_n78A	ANT2 + ANT7	ANT2+ ANT4		ANT2 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_48A_n2A	ANT4 + ANT1	ANT7 + ANT1	ANT2 + ANT1	ANT6 + ANT1	ANT4 + ANT1	ANT7 + ANT0	ANT2 + ANT0	ANT6 + ANT0
DC_48A_n5A	ANT4 + ANT1	ANT7 + ANT1	ANT2 + ANT1	ANT6 + ANT1	ANT4 + ANT0	ANT7 + ANT0	ANT2 + ANT0	ANT6 + ANT0
DC_48A_n66A	ANT4 + ANT1	ANT7 + ANT1	ANT2 + ANT1	ANT6 + ANT1	ANT4 + ANT0	ANT7 + ANT0	ANT2 + ANT0	ANT6 + ANT0
DC_48A_n71A	ANT4 + ANT1	ANT7 + ANT1	ANT2 + ANT1	ANT6 + ANT1	ANT4 + ANT0	ANT7 + ANT0	ANT2 + ANT0	ANT6 + ANT0
DC_4A_n2A	ANT0 + ANT1	ANT1 + ANT0						
DC_4A_n41A	Ant 0 + Ant 1	Ant 0 + Ant 2	Ant 0 + Ant 10	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 10		
DC_4A_n5A	ANT0 + ANT1	ANT1 + ANT0						
DC_4A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_4A_n7A	Ant 1 + Ant 2	Ant 0 + Ant 2						
DC_5A_n2A	ANT0 + ANT1	ANT1 + ANT0						
DC_5A_n41A	Ant 0 + Ant 1	Ant 0 + Ant 2	Ant 0 + Ant 10	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 10		
DC_5A_n48A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_5A_n66A	ANT0 + ANT1	ANT1 + ANT0						
DC_5A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_5A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_5A_n7A	Ant 1 + Ant 2	Ant 0 + Ant 2						
DC_66A_n12A	Ant 0 + Ant 1	Ant 1 + Ant 0						
DC_66A_n25A	ANT0 + ANT1	ANT1 + ANT0						
DC_66A_n2A	ANT0 + ANT1	ANT1 + ANT0						
DC_66A_n41A	Ant 0 + Ant 1	Ant 0 + Ant 2	Ant 0 + Ant 10	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 10		
DC_66A_n5A	ANT0 + ANT1	ANT1 + ANT0						
DC_66A_n71A	ANT0 + ANT1	ANT1 + ANT0						
DC_66A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_66A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_66A_n7A	Ant 1 + Ant 2	Ant 0 + Ant 2						
DC_71A_n2A	ANT0 + ANT1	ANT1 + ANT0						
DC_71A_n41A	Ant 0 + Ant 1	Ant 0 + Ant 2	Ant 0 + Ant 10	Ant 1 + Ant 0	Ant 1 + Ant 2	Ant 1 + Ant 10		
DC_71A_n48A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_71A_n66A	ANT0 + ANT1	ANT1 + ANT0						
DC_71A_n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_71A_n78A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
DC_7A_n25A	ANT2 + ANT1	ANT2 + ANT0						
DC_7A_n26A	ANT2 + ANT1	ANT2 + ANT0						
DC_7A_n2A	ANT2 + ANT1	ANT2 + ANT0						
DC_7A_n5A	ANT2 + ANT1	ANT2 + ANT0						
DC_7A_n66A	ANT2 + ANT1	ANT2 + ANT0						
DC_7A_n71A	ANT2 + ANT1	ANT2 + ANT0						
DC_7A_n77A	ANT2 + ANT7	ANT2+ ANT4	ANT2 + ANT6					
DC_7A_n78A	ANT2 + ANT7	ANT2+ ANT4	ANT2 + ANT6					
DC_66A_n48A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6

**Inter-Band CA Configuration:**

NR Uplink CA	2CC Uplink Carrier Aggregation							
Inter-band	Main Antenna Tx	ASDiv-1 Tx	ASDiv-2 Tx	ASDiv-3 Tx	ASDiv-4 Tx	ASDiv-5 Tx	ASDiv-6 Tx	ASDiv-7 Tx
CA_n12A-n66A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_n12A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n14A-n30A	Ant 1 + Ant 2	Ant 0 + Ant 1	ANT0 + ANT2					
CA_n14A-n66A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_n14A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n25A-n41A	Ant 1 + Ant 2	Ant 1 + Ant 0	Ant 1 + Ant 10	Ant 0 + Ant 2	Ant 0 + Ant 1	Ant 0 + Ant 10		
CA_n25A-n48A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n25A-n66A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_n25A-n71A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_n25A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n26A-n66A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_n26A-n70A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_n26A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n2A-n12A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_n2A-n14A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_n2A-n30A	Ant 1 + Ant 2	Ant 0 + Ant 1	ANT0 + ANT2					
CA_n2A-n48A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n2A-n5A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_n2A-n66A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_n2A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n30A-n66A	Ant 2 + Ant 1	Ant 1 + Ant 0	Ant 2 + Ant 0					
CA_n30A-n77A	ANT2 + ANT4	ANT2 + ANT7						
CA_n41A-n48A	ANT2 + ANT4	ANT2 + ANT7		ANT2 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n41A-n66A	Ant 2 + Ant 1	Ant 0 + Ant 1	Ant 10 + Ant 1	Ant 2 + Ant 0	Ant 1 + Ant 0	Ant 10 + Ant 0		
CA_n41A-n71A	Ant 2 + Ant 1	Ant 0 + Ant 1	Ant 10 + Ant 1	Ant 2 + Ant 0	Ant 1 + Ant 0	Ant 10 + Ant 0		
CA_n41A-n77A	ANT2 + ANT4	ANT2 + ANT7		ANT2 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n48A-n66A	ANT4+ANT0	ANT7+ANT0	ANT2+ANT0	ANT6+ANT0	ANT4+ANT1	ANT7+ANT1	ANT2+ANT1	ANT6+ANT1
CA_n48A-n70A	ANT4+ANT0	ANT7+ANT0	ANT2+ANT0	ANT6+ANT0	ANT4+ANT1	ANT7+ANT1	ANT2+ANT1	ANT6+ANT1
CA_n48A-n71A	ANT4+ANT0	ANT7+ANT0	ANT2+ANT0	ANT6+ANT0	ANT4+ANT1	ANT7+ANT1	ANT2+ANT1	ANT6+ANT1
CA_n5A-n30A	Ant 1 + Ant 2	Ant 0 + Ant 1	ANT0 + ANT2					
CA_n5A-n48A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n5A-n66A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_n5A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n66A-n71A	Ant 1 + Ant 0	Ant 0 + Ant 1						
CA_n66A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n70A-n71A	Ant 0 + Ant 1	Ant 1 + Ant 0						
CA_n70A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6
CA_n71A-n77A	ANT0 + ANT4	ANT0 + ANT7	ANT0 + ANT2	ANT0 + ANT6	ANT1 + ANT4	ANT1 + ANT7	ANT1 + ANT2	ANT1 + ANT6

NR UL MIMO Bands Configuration:

ULMIMO Mode	Default	ASDIV	ASDIV	ASDIV
5G NR n2	Ant 0 + ANT1	Ant 5 +ANT1	/	/
5G NR n25	Ant 0 + ANT1	Ant 5 +ANT1	/	/
5G NR n66	Ant 0 + ANT1	Ant 5 +ANT1	/	/
5G NR n70	Ant 0 + ANT1	Ant 5 +ANT1	/	/
5G NR n41	Ant 2 + ANT1	Ant 0 + ANT1	Ant 2 + ANT10	Ant 0 + ANT10
5G NR n48	Ant 4 + ANT7	Ant 2 + ANT7	Ant 4 + ANT6	Ant 2 + ANT6
5G NR n77	Ant 4 + ANT7	Ant 2 + ANT7	Ant 4 + ANT6	Ant 2 + ANT6
5G NR n78	Ant 4 + ANT7	Ant 2 + ANT7	Ant 4 + ANT6	Ant 2 + ANT6

<WLAN Conducted Power>**General Note:**

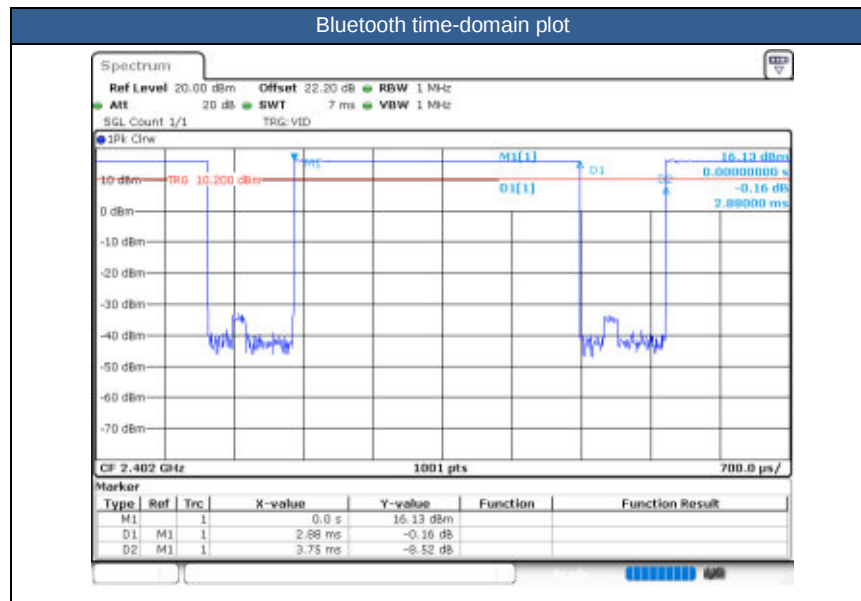
1. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration. Additional output power measurements were not necessary.
2. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
3. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
4. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
5. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
 - b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
6. 802.11 ax supports both full tone size mode and partial tone size mode, after verification on partial tone size mode that partial size tone mode power will not be higher than full tone size mode, therefore, full tone mode power was chosen to be measured in this report.
7. The 2.4GHz/5GHz/6GHz WLAN can transmit in SISO/MIMO antenna mode.
8. When the user is talking a call-in head scenario and the receiver detect mechanism trigger, WLAN5GHz will be switched from antenna 7 to antenna 10, so WLAN5GHz at Antenna 10 was performed SAR testing for Head SAR only and WLAN5GHz at Antenna 7 was performed SAR testing for Body-worn, hotspot and extremity SAR only.
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.
10. For WLAN 2.4GHz SAR testing was performed on dual antenna, due to RF power in MIMO mode is larger to the single antenna RF power in MIMO mode.
11. For WLAN 5GHz SAR testing was performed on single antenna at head exposure condition, due to RF power in SISO mode is larger or equal to per single antenna RF power in MIMO mode, and for RF exposure assessment of

MIMO mode simultaneous transmission exclusion analysis was performed with SAR test results of each antenna in SISO mode. For WLAN 5GHz SAR testing was performed on dual antenna at Body-worn, hotspot and extremity exposure condition, due to RF power in MIMO mode is larger to the single antenna RF power in MIMO mode.

<2.4GHz Bluetooth>

General Note:

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





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 WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
 - f. For TDD LTE SAR measurement of power class 3, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8 W/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. 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 GSM1900, WCDMA Band II/IV/V, LTE Band 2/4/7/25/30/66/38/41/42/48, 5G NR n2/n7/n25/n30/n66/n70/n38/n41/n48/n77/n78, WLAN 2.4/5.2/5.8GHz, therefore product specific 10g SAR is necessary.
 - b. WLAN 5.3/5.8GHz 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.
6. 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.
7. According to Nov. 2017 TCB workshop, when the reported 1gSAR for UL CA configuration is <1.2 W/kg, UL CA 1gSAR is not required for all required test channels (PCC based).
8. LTE B2/4/25/66 and 5G NR n2/n25/n66/n70 at Ant 0/1, LTE Band 38/41 and 5G NR n38/41 at Ant 2/0/1/10, and 5G NR n48/n77/n78 at Ant 4/7/2/6 support different PAs for same antennas. And some LTE/NR bands support Other PA only under ENDC& UL CA. Some LTE/NR bands support different PAs for some antennas, whether it is the maximum power of Main PA is higher than and very close to the other PA, for RF exposure, after verification all PAs in a same position, so the worst-case PA was chosen to perform full SAR testing to ensure the RF exposure is compliance and another PA verified the worst case.
9. SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hotspot SAR.
10. For Phablet devices, when hotspot mode is not supported, Product specific 10-g SAR is required for all surfaces and

edges with an antenna located at $\leq 25\text{mm}$ from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.

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 $\leq \frac{1}{4}$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA / HSPA+ is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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 $\frac{1}{2}$ 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 B17 / B4 / B5 / B38 SAR test was covered by B12 / B66 / B26 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is $\leq$ 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 $\frac{1}{2}$ 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 $\frac{1}{2}$ 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 n2/n5/n7/n12/n25/n26/n66/n38/n41/n77 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

WLAN/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. 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.

ECI status description:

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

This WWAN bands enabled with MediaTek TA-SAR Gen2 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	Trigger conditions
Head SAR	ECI2	Earpiece On
Hotspot SAR	ECI7	Hotspot On
Body worn SAR	ECI3	Sensor On
Extremity SAR	ECI6	Sensor On
Body worn/ Extremity SAR	ECI4	Sensor Off



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	133297	680.5	23.60	24.00	1.096	-	-	-0.18	0.096	0.105
	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	133297	680.5	22.68	23.00	1.076	-	-	0.02	0.058	0.062
	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	133297	680.5	23.60	24.00	1.096	-	-	0.16	0.046	0.050
	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	133297	680.5	22.68	23.00	1.076	-	-	-0.03	0.000	0.000
	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	133297	680.5	23.60	24.00	1.096	-	-	0.07	0.110	0.121
	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	133297	680.5	22.68	23.00	1.076	-	-	0	0.068	0.073
	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	133297	680.5	23.60	24.00	1.096	-	-	0.01	0.060	0.066
	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	133297	680.5	22.68	23.00	1.076	-	-	-0.01	0.000	0.000
01	LTE Band 71	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	133297	680.5	21.75	21.80	1.012	-	-	-0.05	0.671	0.679
	LTE Band 71	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	133297	680.5	21.61	21.80	1.045	-	-	-0.06	0.397	0.415
	LTE Band 71	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	133297	680.5	21.75	21.80	1.012	-	-	-0.09	0.628	0.635
	LTE Band 71	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	133297	680.5	21.61	21.80	1.045	-	-	-0.17	0.369	0.386
	LTE Band 71	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	133297	680.5	21.75	21.80	1.012	-	-	0.18	0.354	0.358
	LTE Band 71	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	133297	680.5	21.61	21.80	1.045	-	-	-0.17	0.206	0.215
	LTE Band 71	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	133297	680.5	21.75	21.80	1.012	-	-	-0.05	0.384	0.388
	LTE Band 71	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	133297	680.5	21.61	21.80	1.045	-	-	0	0.230	0.240
	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	23095	707.5	23.09	24.00	1.233	-	-	-0.01	0.136	0.168
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI 2	23095	707.5	22.10	23.00	1.230	-	-	-0.09	0.083	0.102
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	23095	707.5	23.09	24.00	1.233	-	-	0.05	0.067	0.083
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI 2	23095	707.5	22.10	23.00	1.230	-	-	0.02	0.043	0.053
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	23095	707.5	23.09	24.00	1.233	-	-	-0.13	0.145	0.179
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI 2	23095	707.5	22.10	23.00	1.230	-	-	0.17	0.097	0.119
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	23095	707.5	23.09	24.00	1.233	-	-	0.06	0.085	0.105
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI 2	23095	707.5	22.10	23.00	1.230	-	-	0	0.054	0.066
02	LTE Band 12	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	23095	707.5	22.88	24.00	1.294	-	-	0.15	0.649	0.840
	LTE Band 12	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI 2	23095	707.5	21.95	23.00	1.274	-	-	-0.04	0.474	0.604
	LTE Band 12	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	23095	707.5	21.86	23.00	1.300	-	-	-0.15	0.382	0.497
	LTE Band 12	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	23095	707.5	22.88	24.00	1.294	-	-	0.11	0.568	0.735
	LTE Band 12	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI 2	23095	707.5	21.95	23.00	1.274	-	-	-0.02	0.362	0.461
	LTE Band 12	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	23095	707.5	22.88	24.00	1.294	-	-	0.04	0.304	0.393
	LTE Band 12	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI 2	23095	707.5	21.95	23.00	1.274	-	-	0.13	0.185	0.236
	LTE Band 12	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	23095	707.5	22.88	24.00	1.294	-	-	-0.18	0.340	0.440
	LTE Band 12	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI 2	23095	707.5	21.95	23.00	1.274	-	-	-0.11	0.223	0.284
	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	23230	782	22.96	24.00	1.271	-	-	-0.16	0.120	0.152
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	ECI 2	23230	782	22.00	23.00	1.259	-	-	-0.15	0.074	0.093
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	23230	782	22.96	24.00	1.271	-	-	-0.06	0.053	0.067
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	ECI 2	23230	782	22.00	23.00	1.259	-	-	-0.14	0.000	0.000
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	23230	782	22.96	24.00	1.271	-	-	-0.19	0.145	0.184
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	ECI 2	23230	782	22.00	23.00	1.259	-	-	0.01	0.091	0.115
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	23230	782	22.96	24.00	1.271	-	-	0.06	0.082	0.104
	LTE Band 13	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	ECI 2	23230	782	22.00	23.00	1.259	-	-	0.02	0.051	0.064
03	LTE Band 13	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	23230	782	22.85	24.00	1.303	-	-	0.05	0.699	0.911
	LTE Band 13	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI 2	23230	782	21.84	23.00	1.306	-	-	0.12	0.435	0.568
	LTE Band 13	10M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	23230	782	21.88	23.00	1.294	-	-	-0.16	0.418	0.541
	LTE Band 13	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	23230	782	22.85	24.00	1.303	-	-	-0.12	0.624	0.813
	LTE Band 13	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI 2	23230	782	21.84	23.00	1.306	-	-	0.07	0.381	0.498
	LTE Band 13	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	23230	782	21.88	23.00	1.294	-	-	-0.02	0.362	0.468
	LTE Band 13	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	23230	782	22.85	24.00	1.303	-	-	-0.05	0.377	0.491
	LTE Band 13	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI 2	23230	782	21.84	23.00	1.306	-	-	-0.13	0.240	0.313
	LTE Band 13	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	23230	782	22.85	24.00	1.303	-	-	0.08	0.373	0.486



FCC SAR Test Report

Report No. : FA510740

	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	158600	793	23.07	24.00	1.239	-	-	0.13	0.043	0.053
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	158600	793	23.03	24.00	1.250	-	-	0.19	0.090	0.113
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	158600	793	23.07	24.00	1.239	-	-	0.07	0.000	0.000
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	158600	793	23.03	24.00	1.250	-	-	0.08	0.000	0.000
07	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	158600	793	23.17	24.00	1.211	-	-	-0.12	0.673	0.815
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	158600	793	23.02	24.00	1.253	-	-	-0.06	0.645	0.808
	FR1 n14	10M	QPSK	50	0	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	158600	793	22.07	23.00	1.239	-	-	0	0.423	0.524
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	158600	793	23.17	24.00	1.211	-	-	-0.03	0.531	0.643
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	158600	793	23.02	24.00	1.253	-	-	0.07	0.527	0.660
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	158600	793	23.17	24.00	1.211	-	-	-0.03	0.401	0.485
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	158600	793	23.02	24.00	1.253	-	-	0.02	0.383	0.480
	FR1 n14	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	158600	793	23.17	24.00	1.211	-	-	0.12	0.374	0.453
	FR1 n14	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	158600	793	23.02	24.00	1.253	-	-	0.02	0.371	0.465
835MHz																				
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Cheek	0mm	Ant 0	ECI 2	189	836.4	28.25	29.50	1.334	-	-	0	0.191	0.255
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Right Tilted	0mm	Ant 0	ECI 2	189	836.4	28.25	29.50	1.334	-	-	-0.1	0.093	0.124
08	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Cheek	0mm	Ant 0	ECI 2	189	836.4	28.25	29.50	1.334	-	-	0.05	0.237	0.316
	GSM850	-	-	-	-	GPRS (4 Tx slots)	Left Tilted	0mm	Ant 0	ECI 2	189	836.4	28.25	29.50	1.334	-	-	0	0.115	0.153
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	ECI 2	4182	836.4	23.53	24.00	1.114	-	-	0.07	0.124	0.138
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	ECI 2	4182	836.4	23.53	24.00	1.114	-	-	0.15	0.067	0.075
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	ECI 2	4182	836.4	23.53	24.00	1.114	-	-	-0.05	0.165	0.184
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	ECI 2	4182	836.4	23.53	24.00	1.114	-	-	-0.08	0.088	0.098
09	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	ECI 2	4182	836.4	23.37	23.60	1.054	-	-	0.09	0.673	0.710
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	ECI 2	4182	836.4	23.37	23.60	1.054	-	-	-0.13	0.544	0.574
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	ECI 2	4182	836.4	23.37	23.60	1.054	-	-	0.03	0.349	0.368
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	ECI 2	4182	836.4	23.37	23.60	1.054	-	-	-0.01	0.335	0.353
	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	26865	831.5	22.64	24.00	1.368	-	-	0.04	0.144	0.197
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 0	ECI 2	26865	831.5	21.73	23.00	1.340	-	-	0.11	0.090	0.121
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	26865	831.5	22.64	24.00	1.368	-	-	-0.13	0.071	0.097
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 0	ECI 2	26865	831.5	21.73	23.00	1.340	-	-	0.12	0.048	0.064
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	26865	831.5	22.64	24.00	1.368	-	-	-0.11	0.179	0.245
	LTE Band 5B	10M	QPSK	1	49	-	Left Cheek	0mm	Ant 0	ECI 2	20476+20575	831.6+841.5	22.45	24.00	1.429	-	-	0.07	0.154	0.220
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 0	ECI 2	26865	831.5	21.73	23.00	1.340	-	-	0.17	0.112	0.150
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	26865	831.5	22.64	24.00	1.368	-	-	-0.16	0.094	0.129
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 0	ECI 2	26865	831.5	21.73	23.00	1.340	-	-	-0.17	0.059	0.079
10	LTE Band 26	15M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	26865	831.5	22.62	24.00	1.374	-	-	0.01	0.692	0.951
	LTE Band 5B	10M	QPSK	1	49	-	Right Cheek	0mm	Ant 1	ECI 2	20476+20575	831.6+841.5	22.41	23.70	1.346	-	-	0.09	0.657	0.884
	LTE Band 26	15M	QPSK	36	0	-	Right Cheek	0mm	Ant 1	ECI 2	26865	831.5	21.73	23.00	1.340	-	-	0.11	0.457	0.612
	LTE Band 26	15M	QPSK	75	0	-	Right Cheek	0mm	Ant 1	ECI 2	26865	831.5	21.65	23.00	1.365	-	-	-0.05	0.452	0.617
	LTE Band 26	15M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26865	831.5	22.62	24.00	1.374	-	-	-0.01	0.604	0.830
	LTE Band 26	15M	QPSK	36	0	-	Right Tilted	0mm	Ant 1	ECI 2	26865	831.5	21.73	23.00	1.340	-	-	-0.14	0.400	0.536
	LTE Band 26	15M	QPSK	75	0	-	Right Tilted	0mm	Ant 1	ECI 2	26865	831.5	21.65	23.00	1.365	-	-	-0.15	0.395	0.539
	LTE Band 26	15M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	26865	831.5	22.62	24.00	1.374	-	-	-0.12	0.392	0.539
	LTE Band 26	15M	QPSK	36	0	-	Left Cheek	0mm	Ant 1	ECI 2	26865	831.5	21.73	23.00	1.340	-	-	-0.17	0.253	0.339
	LTE Band 26	15M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	26865	831.5	22.62	24.00	1.374	-	-	0.01	0.398	0.547
	LTE Band 26	15M	QPSK	36	0	-	Left Tilted	0mm	Ant 1	ECI 2	26865	831.5	21.73	23.00	1.340	-	-	0.02	0.264	0.354
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	166300	831.5	22.38	24.00	1.452	-	-	-0.01	0.061	0.089
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	166300	831.5	22.30	24.00	1.479	-	-	0.09	0.072	0.106
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	166300	831.5	22.38	24.00	1.452	-	-	0.1	0.001	0.001
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	166300	831.5	22.30	24.00	1.479	-	-	-0.04	0.000	0.000
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	166300	831.5	22.38	24.00	1.452	-	-	0.15	0.077	0.112
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	166300	831.5	22.30	24.00	1.479	-	-	0.08	0.084	0.124
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	166300	831.5	22.38	24.00	1.452	-	-	-0.16	0.046	0.067
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	166300	831.5	22.30	24.00	1.479	-	-	0.05	0.048	0.071
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	166300	831.5	23.14	24.00	1.219	-	-	-0.18	0.652	0.795



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Report No. : FA510740

	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	26340	1880	22.59	24.00	1.384	-	-	-0.16	0.193	0.267
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	26340	1880	21.61	23.00	1.377	-	-	0.15	0.155	0.213
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	26340	1880	22.59	24.00	1.384	-	-	-0.15	0.081	0.112
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	26340	1880	21.61	23.00	1.377	-	-	0.06	0.065	0.090
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	26340	1880	22.59	24.00	1.384	-	-	0.15	0.120	0.166
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	26340	1880	21.61	23.00	1.377	-	-	-0.1	0.102	0.140
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	26340	1880	22.59	24.00	1.384	-	-	0.17	0.088	0.122
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	26340	1880	21.61	23.00	1.377	-	-	0.13	0.083	0.114
	LTE Band 25 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	26340	1880	22.59	24.00	1.384	-	-	-0.1	0.175	0.242
	LTE Band 25	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	26340	1880	14.97	16.10	1.297	-	-	-0.02	0.540	0.700
	LTE Band 25	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	26340	1880	14.89	16.10	1.321	-	-	0.13	0.448	0.592
18	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26340	1880	14.97	16.10	1.297	-	-	-0.09	0.669	0.868
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26140	1860	14.86	16.10	1.330	-	-	-0.03	0.582	0.774
	LTE Band 25	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26590	1905	14.83	16.10	1.340	-	-	-0.13	0.579	0.776
	LTE Band 25	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	26340	1880	14.89	16.10	1.321	-	-	0.05	0.554	0.732
	LTE Band 25	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	ECI 2	26340	1880	14.63	16.10	1.403	-	-	0.07	0.559	0.784
	LTE Band 25	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	26340	1880	14.97	16.10	1.297	-	-	0	0.299	0.388
	LTE Band 25	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	26340	1880	14.89	16.10	1.321	-	-	-0.01	0.239	0.316
	LTE Band 25	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	26340	1880	14.97	16.10	1.297	-	-	0.1	0.373	0.484
	LTE Band 25	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	26340	1880	14.89	16.10	1.321	-	-	-0.12	0.304	0.402
	LTE Band 25 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	26340	1880	14.97	16.10	1.297	-	-	0.18	0.603	0.782
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	376500	1882.5	22.79	24.00	1.321	-	-	-0.05	0.102	0.135
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 0	ECI 2	376500	1882.5	22.70	24.00	1.349	-	-	-0.12	0.110	0.148
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	376500	1882.5	22.79	24.00	1.321	-	-	0.18	0.048	0.063
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 0	ECI 2	376500	1882.5	22.70	24.00	1.349	-	-	0.14	0.058	0.078
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	376500	1882.5	22.79	24.00	1.321	-	-	0.03	0.118	0.156
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	376500	1882.5	22.70	24.00	1.349	-	-	0.09	0.090	0.121
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	376500	1882.5	22.79	24.00	1.321	-	-	-0.13	0.058	0.077
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 0	ECI 2	376500	1882.5	22.70	24.00	1.349	-	-	-0.09	0.058	0.078
	FR1 n25 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 0	ECI 2	376500	1882.5	22.79	24.00	1.321	-	-	0.07	0.105	0.139
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	376500	1882.5	15.57	16.40	1.211	-	-	-0.18	0.652	0.789
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	376500	1882.5	15.52	16.40	1.225	-	-	0.12	0.624	0.764
19	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	376500	1882.5	15.57	16.40	1.211	-	-	-0.05	0.727	0.880
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	376500	1882.5	15.52	16.40	1.225	-	-	0.11	0.701	0.858
	FR1 n25	40M	QPSK	216	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	376500	1882.5	15.29	16.40	1.291	-	-	-0.06	0.556	0.718
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	376500	1882.5	15.57	16.40	1.211	-	-	-0.02	0.360	0.436
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	376500	1882.5	15.52	16.40	1.225	-	-	0.02	0.341	0.418
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	376500	1882.5	15.57	16.40	1.211	-	-	0.02	0.458	0.554
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	376500	1882.5	15.52	16.40	1.225	-	-	-0.11	0.451	0.552
	FR1 n25 Other PA	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	376500	1882.5	15.57	16.40	1.211	-	-	-0.1	0.684	0.828
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	ECI 2	376500	1882.5	23.20	24.00	1.202	-	-	-0.05	0.097	0.117
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Cheek	0mm	Ant 5	ECI 2	376500	1882.5	23.11	24.00	1.227	-	-	0.03	0.102	0.125
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	ECI 2	376500	1882.5	23.20	24.00	1.202	-	-	-0.06	0.000	0.000
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Tilted	0mm	Ant 5	ECI 2	376500	1882.5	23.11	24.00	1.227	-	-	0.01	0.043	0.053
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	ECI 2	376500	1882.5	23.20	24.00	1.202	-	-	-0.03	0.331	0.398
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Cheek	0mm	Ant 5	ECI 2	376500	1882.5	23.11	24.00	1.227	-	-	0.03	0.364	0.447
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	ECI 2	376500	1882.5	23.20	24.00	1.202	-	-	-0.17	0.062	0.075
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Tilted	0mm	Ant 5	ECI 2	376500	1882.5	23.11	24.00	1.227	-	-	0.02	0.072	0.088
2300MHz																				
	LTE Band 30	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	ECI 2	27710	2310	23.09	24.00	1.233	-	-	-0.11	0.147	0.181
	LTE Band 30	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 2	ECI 2	27710	2310	22.09	23.00	1.233	-	-	0.18	0.110	0.136
	LTE Band 30	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	27710	2310	23.09	24.00	1.233	-	-	0.16	0.044	0.054
	LTE Band 30	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 2	ECI 2	27710	2310	22.09	23.00	1.233	-	-	0.19	0.000	0.000
	LTE Band 30	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	ECI 2	27710	2310	23.09	24.00	1.233	-	-	0.13	0.114	0.141
	LTE Band 30	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 2	ECI 2	27710	2310	22.09	23.00	1.233	-	-	-0.03	0.087	0.107



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	LTE Band 30	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	ECI 2	27710	2310	23.09	24.00	1.233	-	-	0.12	0.075	0.092
	LTE Band 30	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 2	ECI 2	27710	2310	22.09	23.00	1.233	-	-	0.19	0.057	0.070
	LTE Band 30	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	27710	2310	14.18	14.90	1.180	-	-	-0.09	0.639	0.754
	LTE Band 30	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	ECI 2	27710	2310	14.15	14.90	1.189	-	-	-0.12	0.520	0.618
20	LTE Band 30	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	27710	2310	14.18	14.90	1.180	-	-	-0.08	0.741	0.875
	LTE Band 30	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	ECI 2	27710	2310	14.15	14.90	1.189	-	-	-0.18	0.611	0.726
	LTE Band 30	10M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	27710	2310	13.93	14.90	1.250	-	-	-0.06	0.593	0.741
	LTE Band 30	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	27710	2310	14.18	14.90	1.180	-	-	0.07	0.214	0.253
	LTE Band 30	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	ECI 2	27710	2310	14.15	14.90	1.189	-	-	-0.15	0.180	0.214
	LTE Band 30	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	27710	2310	14.18	14.90	1.180	-	-	-0.08	0.301	0.355
	LTE Band 30	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	ECI 2	27710	2310	14.15	14.90	1.189	-	-	-0.04	0.235	0.279
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	ECI 2	462000	2310	23.41	24.00	1.146	-	-	-0.07	0.152	0.174
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	ECI 2	462000	2310	23.24	24.00	1.191	-	-	-0.08	0.148	0.176
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	ECI 2	462000	2310	23.41	24.00	1.146	-	-	0.12	0.054	0.062
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	ECI 2	462000	2310	23.24	24.00	1.191	-	-	-0.07	0.050	0.060
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	ECI 2	462000	2310	23.41	24.00	1.146	-	-	-0.05	0.112	0.128
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	ECI 2	462000	2310	23.24	24.00	1.191	-	-	-0.04	0.104	0.124
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	ECI 2	462000	2310	23.41	24.00	1.146	-	-	0.13	0.059	0.068
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	ECI 2	462000	2310	23.24	24.00	1.191	-	-	-0.03	0.062	0.074
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	462000	2310	15.34	16.30	1.247	-	-	0.09	0.602	0.751
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Cheek	0mm	Ant 1	ECI 2	462000	2310	15.24	16.30	1.276	-	-	0.06	0.578	0.738
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	462000	2310	15.34	16.30	1.247	-	-	0.17	0.691	0.862
21	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	462000	2310	15.24	16.30	1.276	-	-	-0.05	0.693	0.885
	FR1 n30	10M	QPSK	50	0	DFT-SCS-15KHz	Right Tilted	0mm	Ant 1	ECI 2	462000	2310	15.05	16.30	1.334	-	-	0.06	0.438	0.584
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	462000	2310	15.34	16.30	1.247	-	-	0.01	0.197	0.246
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Cheek	0mm	Ant 1	ECI 2	462000	2310	15.24	16.30	1.276	-	-	-0.11	0.204	0.260
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	462000	2310	15.34	16.30	1.247	-	-	0.09	0.258	0.322
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Tilted	0mm	Ant 1	ECI 2	462000	2310	15.24	16.30	1.276	-	-	-0.02	0.267	0.341
2600MHz																				
22	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	ECI 2	21100	2535	23.08	24.00	1.236	-	-	0.02	0.143	0.177
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	ECI 2	21100	2535	22.11	23.00	1.227	-	-	-0.08	0.112	0.137
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	21100	2535	23.08	24.00	1.236	-	-	0.06	0.048	0.059
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	ECI 2	21100	2535	22.11	23.00	1.227	-	-	0.15	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	ECI 2	21100	2535	23.08	24.00	1.236	-	-	-0.08	0.102	0.126
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	ECI 2	21100	2535	22.11	23.00	1.227	-	-	-0.05	0.081	0.099
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	ECI 2	21100	2535	23.08	24.00	1.236	-	-	-0.18	0.079	0.098
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	ECI 2	21100	2535	22.11	23.00	1.227	-	-	-0.08	0.067	0.082
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	ECI 2	40620	2593	22.82	24.00	1.312	62.9	1.006	0.18	0.098	0.129
	LTE Band 41C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 2	ECI 2	40620+ 40818	2593+ 2612.8	22.61	24.00	1.377	62.9	1.006	0.06	0.086	0.119
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	ECI 2	40620	2593	21.81	23.00	1.315	62.9	1.006	0.1	0.079	0.105
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	40620	2593	22.82	24.00	1.312	62.9	1.006	0.03	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	ECI 2	40620	2593	21.81	23.00	1.315	62.9	1.006	0.04	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	ECI 2	40620	2593	22.82	24.00	1.312	62.9	1.006	-0.09	0.065	0.086
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	ECI 2	40620	2593	21.81	23.00	1.315	62.9	1.006	0	0.050	0.066
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	ECI 2	40620	2593	22.82	24.00	1.312	62.9	1.006	0.11	0.056	0.074
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	ECI 2	40620	2593	21.81	23.00	1.315	62.9	1.006	0.14	0.048	0.064
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	ECI 2	40620	2593	25.67	27.00	1.358	42.9	1.009	-0.15	0.123	0.169
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 2	ECI 2	40620+ 40818	2593+ 2612.8	25.64	27.00	1.368	42.9	1.009	-0.11	0.110	0.152
	LTE Band 41 HPUE Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	ECI 2	40620	2593	25.67	27.00	1.358	42.9	1.009	0.02	0.109	0.149
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	ECI 2	40620	2593	19.89	20.50	1.151	62.9	1.006	-0.03	0.513	0.594
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	ECI 2	40620	2593	19.82	20.50	1.169	62.9	1.006	0.17	0.443	0.521
23	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	19.89	20.50	1.151	62.9	1.006	-0.08	0.724	0.838
	LTE Band 41C	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 1	ECI 2	40620+ 40818	2593+ 2612.8	19.80	20.50	1.175	62.9	1.006	-0.08	0.703	0.831
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	39750	2506	19.86	20.50	1.159	62.9	1.006	0.01	0.689	0.803



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	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	40185	2549.5	19.98	20.50	1.127	62.9	1.006	-0.13	0.649	0.736
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	41055	2636.5	19.86	20.50	1.159	62.9	1.006	-0.03	0.467	0.544
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	41490	2680	19.78	20.50	1.180	62.9	1.006	0.02	0.443	0.526
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	19.82	20.50	1.169	62.9	1.006	0.02	0.491	0.578
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	19.51	20.50	1.256	62.9	1.006	0.02	0.486	0.614
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	ECI 2	40620	2593	19.89	20.50	1.151	62.9	1.006	0.01	0.178	0.206
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	ECI 2	40620	2593	19.82	20.50	1.169	62.9	1.006	-0.03	0.138	0.162
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	ECI 2	40620	2593	19.89	20.50	1.151	62.9	1.006	-0.13	0.247	0.286
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	ECI 2	40620	2593	19.82	20.50	1.169	62.9	1.006	0.07	0.190	0.224
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	21.88	22.10	1.052	42.9	1.009	0.02	0.756	0.802
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Right Tilted	0mm	Ant 1	ECI 2	40620+ 40818	2593+ 2612.8	21.78	22.10	1.076	42.9	1.009	0.02	0.722	0.784
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	ECI 2	40620	2593	19.89	20.50	1.151	62.9	1.006	0.16	0.695	0.805
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	40620	2593	23.05	24.00	1.245	62.9	1.006	0.17	0.008	0.010
	LTE Band 41C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	ECI 2	40620+ 40818	2593+ 2612.8	22.95	24.00	1.274	62.9	1.006	0.03	0.004	0.005
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	ECI 2	40620	2593	22.05	23.00	1.245	62.9	1.006	0.06	0.005	0.006
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	ECI 2	40620	2593	23.05	24.00	1.245	62.9	1.006	-0.18	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	ECI 2	40620	2593	22.05	23.00	1.245	62.9	1.006	0.06	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	ECI 2	40620	2593	23.05	24.00	1.245	62.9	1.006	0.18	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	ECI 2	40620	2593	22.05	23.00	1.245	62.9	1.006	-0.19	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	ECI 2	40620	2593	23.05	24.00	1.245	62.9	1.006	0.17	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	ECI 2	40620	2593	22.05	23.00	1.245	62.9	1.006	-0.16	0.000	0.000
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	40620	2593	24.54	26.00	1.400	42.9	1.009	-0.08	0.009	0.013
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 0	ECI 2	40620+ 40818	2593+ 2612.8	24.61	26.00	1.377	42.9	1.009	0.07	0.006	0.008
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	ECI 2	40620	2593	21.96	23.00	1.271	62.9	1.006	0.03	0.002	0.003
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 10	ECI 2	40620	2593	23.21	24.00	1.199	62.9	1.006	0.12	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 10	ECI 2	40620	2593	22.17	23.00	1.211	62.9	1.006	-0.17	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 10	ECI 2	40620	2593	23.21	24.00	1.199	62.9	1.006	-0.17	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 10	ECI 2	40620	2593	22.17	23.00	1.211	62.9	1.006	0.02	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 10	ECI 2	40620	2593	23.21	24.00	1.199	62.9	1.006	-0.07	0.008	0.010
	LTE Band 41C	20M	QPSK	1	99	-	Left Cheek	0mm	Ant 10	ECI 2	40620+ 40818	2593+ 2612.8	23.36	24.00	1.159	62.9	1.006	-0.07	0.007	0.008
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 10	ECI 2	40620	2593	22.17	23.00	1.211	62.9	1.006	-0.03	0.001	0.001
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 10	ECI 2	40620	2593	23.21	24.00	1.199	62.9	1.006	0	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 10	ECI 2	40620	2593	22.17	23.00	1.211	62.9	1.006	0.09	0.000	0.000
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 10	ECI 2	40620	2593	24.11	25.00	1.227	42.9	1.009	-0.02	0.007	0.009
	LTE Band 41C HPUE	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 10	ECI 2	40620+ 40818	2593+ 2612.8	24.27	25.00	1.183	42.9	1.009	-0.02	0.005	0.006
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 10	ECI 2	40620	2593	23.21	24.00	1.199	62.9	1.006	-0.07	0.001	0.001
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	ECI 2	507000	2535	22.81	24.00	1.315	-	-	0.09	0.131	0.172
24	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Cheek	0mm	Ant 2	ECI 2	507000	2535	22.65	24.00	1.365	-	-	-0.16	0.128	0.175
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	ECI 2	507000	2535	22.81	24.00	1.315	-	-	-0.03	0.043	0.057
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Tilted	0mm	Ant 2	ECI 2	507000	2535	22.65	24.00	1.365	-	-	0.03	0.040	0.055
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	ECI 2	507000	2535	22.81	24.00	1.315	-	-	0.1	0.085	0.112
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Cheek	0mm	Ant 2	ECI 2	507000	2535	22.65	24.00	1.365	-	-	0.03	0.081	0.111
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	ECI 2	507000	2535	22.81	24.00	1.315	-	-	0.06	0.063	0.083
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Tilted	0mm	Ant 2	ECI 2	507000	2535	22.65	24.00	1.365	-	-	0.12	0.068	0.093
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	518598	2592.99	26.22	27.00	1.197	-	-	-0.03	0.210	0.251
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	518598	2592.99	26.10	27.00	1.230	-	-	0.11	0.181	0.223
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	518598	2592.99	26.22	27.00	1.197	-	-	0.08	0.077	0.092
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	518598	2592.99	26.10	27.00	1.230	-	-	0.07	0.052	0.064
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	518598	2592.99	26.22	27.00	1.197	-	-	0.09	0.137	0.164
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	518598	2592.99	26.10	27.00	1.230	-	-	-0.12	0.121	0.149
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	518598	2592.99	26.22	27.00	1.197	-	-	0.1	0.105	0.126
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	518598	2592.99	26.10	27.00	1.230	-	-	-0.16	0.095	0.117
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	518598	2592.99	23.33	24.00	1.167	-	-	0.18	0.192	0.224



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	Other PA																			
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	ECI 2	518598	2592.99	16.45	17.30	1.216	-	-	0.17	0.600	0.730
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	ECI 2	518598	2592.99	16.24	17.30	1.276	-	-	0.12	0.546	0.697
25	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.45	17.30	1.216	-	-	0.06	0.706	0.859
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.24	17.30	1.276	-	-	-0.12	0.608	0.776
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.12	17.30	1.312	-	-	-0.1	0.605	0.794
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	ECI 2	518598	2592.99	16.45	17.30	1.216	-	-	0.16	0.107	0.130
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	ECI 2	518598	2592.99	16.24	17.30	1.276	-	-	-0.09	0.124	0.158
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.45	17.30	1.216	-	-	0.08	0.149	0.181
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.24	17.30	1.276	-	-	0.06	0.161	0.206
	FR1 n41 HPUE Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	ECI 2	518598	2592.99	16.45	17.30	1.216	-	-	0.03	0.654	0.795
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	ECI 2	518598	2592.99	24.63	26.00	1.371	-	-	-0.07	0.042	0.058
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	ECI 2	518598	2592.99	24.41	26.00	1.442	-	-	0.12	0.047	0.068
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	ECI 2	518598	2592.99	24.63	26.00	1.371	-	-	0.08	0.040	0.055
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	ECI 2	518598	2592.99	24.41	26.00	1.442	-	-	0.15	0.044	0.063
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	ECI 2	518598	2592.99	24.63	26.00	1.371	-	-	-0.11	0.039	0.053
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	ECI 2	518598	2592.99	24.41	26.00	1.442	-	-	-0.05	0.000	0.000
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	ECI 2	518598	2592.99	24.63	26.00	1.371	-	-	0.02	0.000	0.000
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	ECI 2	518598	2592.99	24.41	26.00	1.442	-	-	-0.05	0.000	0.000
	FR1 n41 HPUE Main PA	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	ECI 2	518598	2592.99	22.90	24.00	1.288	-	-	0.12	0.036	0.046
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	ECI 2	518598	2592.99	25.74	27.00	1.337	-	-	0.03	0.000	0.000
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 10	ECI 2	518598	2592.99	25.61	27.00	1.377	-	-	0.05	0.045	0.062
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 10	ECI 2	518598	2592.99	25.74	27.00	1.337	-	-	-0.14	0.044	0.059
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 10	ECI 2	518598	2592.99	25.61	27.00	1.377	-	-	-0.17	0.052	0.072
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	ECI 2	518598	2592.99	25.74	27.00	1.337	-	-	0.05	0.064	0.086
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	ECI 2	518598	2592.99	25.61	27.00	1.377	-	-	0.13	0.080	0.110
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 10	ECI 2	518598	2592.99	25.74	27.00	1.337	-	-	0.05	0.050	0.067
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 10	ECI 2	518598	2592.99	25.61	27.00	1.377	-	-	-0.03	0.052	0.072
	FR1 n41 HPUE Main PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 10	ECI 2	518598	2592.99	25.39	27.00	1.449	-	-	0.13	0.074	0.107
3500MHz																				
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	42590	3500	18.29	19.00	1.178	62.9	1.006	0	0.594	0.704
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	42190	3460	18.28	19.00	1.180	62.9	1.006	0.08	0.564	0.670
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	42990	3540	18.22	19.00	1.197	62.9	1.006	0.01	0.581	0.699
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	42590	3500	18.27	19.00	1.183	62.9	1.006	0.1	0.481	0.572
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	ECI 2	42590	3500	18.03	19.00	1.250	62.9	1.006	0.1	0.467	0.587
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	42590	3500	18.29	19.00	1.178	62.9	1.006	0.07	0.157	0.186
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	42590	3500	18.27	19.00	1.183	62.9	1.006	0.15	0.125	0.149
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	ECI 2	42590	3500	18.29	19.00	1.178	62.9	1.006	0.1	0.204	0.242
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	ECI 2	42590	3500	18.27	19.00	1.183	62.9	1.006	0.09	0.162	0.193
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	42590	3500	18.29	19.00	1.178	62.9	1.006	-0.12	0.058	0.069
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 4	ECI 2	42590	3500	18.27	19.00	1.183	62.9	1.006	-0.08	0.049	0.058
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 7	ECI 2	42590	3500	16.72	17.30	1.143	62.9	1.006	0.18	0.420	0.483
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 7	ECI 2	42590	3500	16.64	17.30	1.164	62.9	1.006	-0.07	0.329	0.385
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 7	ECI 2	42590	3500	16.72	17.30	1.143	62.9	1.006	-0.12	0.461	0.530
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 7	ECI 2	42590	3500	16.64	17.30	1.164	62.9	1.006	0	0.364	0.426
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	42590	3500	16.72	17.30	1.143	62.9	1.006	-0.02	0.724	0.832
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	42190	3460	16.69	17.30	1.151	62.9	1.006	-0.07	0.696	0.806
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	42990	3540	16.61	17.30	1.172	62.9	1.006	-0.14	0.690	0.814
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	42680	3509	16.60	17.30	1.175	62.9	1.006	-0.06	0.688	0.813



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	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	43000	3541	16.53	17.30	1.194	62.9	1.006	-0.08	0.624	0.750
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 7	ECI 2	43490	3590	16.58	17.30	1.180	62.9	1.006	0.05	0.633	0.752
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	42590	3500	16.64	17.30	1.164	62.9	1.006	-0.07	0.577	0.676
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	42190	3460	16.59	17.30	1.178	62.9	1.006	0.03	0.553	0.655
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	42990	3540	16.57	17.30	1.183	62.9	1.006	-0.08	0.561	0.668
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	42680	3509	16.52	17.30	1.197	62.9	1.006	0.04	0.558	0.672
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 7	ECI 2	43000	3541	16.52	17.30	1.197	62.9	1.006	-0.08	0.563	0.678
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 7	ECI 2	42590	3500	16.41	17.30	1.227	62.9	1.006	-0.02	0.622	0.768
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 7	ECI 2	42590	3500	16.72	17.30	1.143	62.9	1.006	0.12	0.516	0.593
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 7	ECI 2	42590	3500	16.64	17.30	1.164	62.9	1.006	-0.12	0.410	0.480
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	ECI 2	42590	3500	23.15	24.00	1.216	62.9	1.006	0.1	0.456	0.558
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	ECI 2	42590	3500	22.19	23.00	1.205	62.9	1.006	0.1	0.362	0.439
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	ECI 2	42590	3500	23.15	24.00	1.216	62.9	1.006	0.02	0.175	0.214
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	ECI 2	42590	3500	22.19	23.00	1.205	62.9	1.006	0	0.138	0.167
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	ECI 2	42590	3500	23.15	24.00	1.216	62.9	1.006	0.02	0.296	0.362
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	ECI 2	42590	3500	22.19	23.00	1.205	62.9	1.006	-0.08	0.232	0.281
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	ECI 2	42590	3500	23.15	24.00	1.216	62.9	1.006	-0.03	0.368	0.450
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	ECI 2	42590	3500	22.19	23.00	1.205	62.9	1.006	-0.06	0.287	0.348
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 6	ECI 2	42590	3500	20.75	21.40	1.161	62.9	1.006	0.01	0.225	0.263
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 6	ECI 2	42590	3500	20.68	21.40	1.180	62.9	1.006	0.03	0.176	0.209
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 6	ECI 2	42590	3500	20.75	21.40	1.161	62.9	1.006	-0.01	0.202	0.236
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 6	ECI 2	42590	3500	20.68	21.40	1.180	62.9	1.006	-0.18	0.159	0.189
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	42590	3500	20.75	21.40	1.161	62.9	1.006	-0.05	0.698	0.816
26	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	42190	3460	20.69	21.40	1.178	62.9	1.006	-0.02	0.768	0.910
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 6	ECI 2	42990	3540	20.65	21.40	1.189	62.9	1.006	-0.14	0.603	0.721
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	ECI 2	42590	3500	20.68	21.40	1.180	62.9	1.006	0.06	0.552	0.655
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	ECI 2	42190	3460	20.64	21.40	1.191	62.9	1.006	-0.08	0.532	0.638
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 6	ECI 2	42990	3540	20.62	21.40	1.197	62.9	1.006	0.1	0.524	0.631
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Left Cheek	0mm	Ant 6	ECI 2	42590	3500	20.50	21.40	1.230	62.9	1.006	-0.05	0.534	0.661
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 6	ECI 2	42590	3500	20.75	21.40	1.161	62.9	1.006	-0.15	0.531	0.620
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 6	ECI 2	42590	3500	20.68	21.40	1.180	62.9	1.006	-0.02	0.411	0.488
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	55830	3609	18.64	19.90	1.337	62.9	1.006	-0.17	0.644	0.866
27	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	55340	3560	18.46	19.90	1.393	62.9	1.006	0.02	0.651	0.912
	LTE Band 48C	20M	QPSK	1	99	-	Right Cheek	0mm	Ant 4	ECI 2	55340+55538	3560+3579.8	18.53	19.80	1.340	62.9	1.006	-0.09	0.632	0.852
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	56150	3641	18.57	19.90	1.358	62.9	1.006	0.15	0.587	0.802
	LTE Band 48	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 4	ECI 2	56640	3690	18.41	19.90	1.409	62.9	1.006	-0.17	0.494	0.700
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	55830	3609	18.55	19.90	1.365	62.9	1.006	-0.02	0.519	0.712
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	55340	3560	18.43	19.90	1.403	62.9	1.006	0.06	0.525	0.741
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	56150	3641	18.47	19.90	1.390	62.9	1.006	-0.09	0.473	0.661
	LTE Band 48	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 4	ECI 2	56640	3690	18.31	19.90	1.442	62.9	1.006	-0.08	0.398	0.577
	LTE Band 48	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 4	ECI 2	55830	3609	18.29	19.90	1.449	62.9	1.006	-0.11	0.508	0.740
	LTE Band 48	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 4	ECI 2	55830	3609	18.64	19.90	1.337	62.9	1.006	-0.01	0.168	0.226
	LTE Band 48	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 4	ECI 2	55830	3609	18.55	19.90	1.365	62.9	1.006	-0.01	0.135	0.185
	LTE Band 48	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 4	ECI 2	55830	3609	18.64	19.90	1.337	62.9	1.006	0.01	0.182	0.245
	LTE Band 48	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 4	ECI 2	55830	3609	18.55	19.90	1.365	62.9	1.006	-0.09	0.146	0.200
	LTE Band 48	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 4	ECI 2	55830	3609	18.64	19.90	1.337	62.9	1.006	0.06	0.058	0.078



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	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	633334	3500.01	15.28	16.50	1.324	-	-	0.17	0.646	0.856
	FR1 n77 Part 27Q HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	633334	3500.01	15.07	16.50	1.390	-	-	-0.02	0.662	0.920
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	ECI 2	633334	3500.01	15.35	16.50	1.303	-	-	-0.12	0.119	0.155
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	ECI 2	633334	3500.01	15.28	16.50	1.324	-	-	0	0.167	0.221
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	ECI 2	633334	3500.01	15.35	16.50	1.303	-	-	0	0.170	0.222
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	ECI 2	633334	3500.01	15.28	16.50	1.324	-	-	-0.04	0.233	0.309
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	ECI 2	633334	3500.01	15.35	16.50	1.303	-	-	-0.16	0.051	0.066
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	ECI 2	633334	3500.01	15.28	16.50	1.324	-	-	0.05	0.065	0.086
	FR1 n77 Part 27Q Other PA	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	ECI 2	633334	3500.01	15.02	16.50	1.406	-	-	0.14	0.652	0.917
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	656000	3840	12.81	13.70	1.227	-	-	0.02	0.329	0.404
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	656000	3840	12.61	13.70	1.285	-	-	0.15	0.375	0.482
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	656000	3840	12.81	13.70	1.227	-	-	0.04	0.370	0.454
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	656000	3840	12.61	13.70	1.285	-	-	-0.05	0.444	0.571
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	12.81	13.70	1.227	-	-	-0.15	0.529	0.649
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	12.61	13.70	1.285	-	-	0.11	0.654	0.841
	FR1 n77 Part 27Q	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	12.49	13.70	1.321	-	-	-0.13	0.632	0.835
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	656000	3840	12.81	13.70	1.227	-	-	0.1	0.524	0.643
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	656000	3840	12.61	13.70	1.285	-	-	-0.09	0.645	0.829
	FR1 n77 Part 27Q	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	656000	3840	12.49	13.70	1.321	-	-	-0.14	0.619	0.818
	FR1 n77 Part 27Q HPUE Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	656000	3840	12.67	13.70	1.268	-	-	0.18	0.635	0.805
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	633334	3500.01	12.51	13.70	1.315	-	-	0.13	0.382	0.502
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 7	ECI 2	633334	3500.01	12.41	13.70	1.346	-	-	0.01	0.356	0.479
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	633334	3500.01	12.51	13.70	1.315	-	-	0.18	0.389	0.512
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 7	ECI 2	633334	3500.01	12.41	13.70	1.346	-	-	0.01	0.361	0.486
29	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	633334	3500.01	12.51	13.70	1.315	-	-	0.14	0.703	0.925
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	633334	3500.01	12.41	13.70	1.346	-	-	-0.06	0.642	0.864
	FR1 n77 Part 27Q	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	633334	3500.01	12.15	13.70	1.429	-	-	-0.08	0.640	0.914
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	633334	3500.01	12.51	13.70	1.315	-	-	0.07	0.611	0.804
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	633334	3500.01	12.41	13.70	1.346	-	-	-0.04	0.567	0.763
	FR1 n77 Part 27Q	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 7	ECI 2	633334	3500.01	12.15	13.70	1.429	-	-	-0.04	0.591	0.844
	FR1 n77 Part 27Q HPUE Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 7	ECI 2	633334	3500.01	12.55	13.70	1.303	-	-	-0.05	0.675	0.880
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	656000	3840	26.37	27.00	1.156	-	-	-0.07	0.539	0.623
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	656000	3840	26.24	27.00	1.191	-	-	0.14	0.455	0.542
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	656000	3840	26.37	27.00	1.156	-	-	-0.13	0.181	0.209
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	656000	3840	26.24	27.00	1.191	-	-	-0.04	0.149	0.177
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	656000	3840	26.37	27.00	1.156	-	-	0.04	0.351	0.406
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	656000	3840	26.24	27.00	1.191	-	-	0.02	0.271	0.323
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	656000	3840	26.37	27.00	1.156	-	-	0.09	0.366	0.423
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	656000	3840	26.24	27.00	1.191	-	-	-0.14	0.300	0.357
	FR1 n77 Part 27Q Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	656000	3840	23.31	24.00	1.172	-	-	0.11	0.511	0.599
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	633334	3500.01	26.49	27.00	1.125	-	-	-0.19	0.257	0.289
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	633334	3500.01	26.32	27.00	1.169	-	-	0.11	0.188	0.220
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	633334	3500.01	26.49	27.00	1.125	-	-	0.16	0.092	0.103
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	ECI 2	633334	3500.01	26.32	27.00	1.169	-	-	-0.08	0.079	0.092
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	633334	3500.01	26.49	27.00	1.125	-	-	-0.1	0.150	0.169
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	ECI 2	633334	3500.01	26.32	27.00	1.169	-	-	0.17	0.105	0.123
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	633334	3500.01	26.49	27.00	1.125	-	-	-0.12	0.164	0.184
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	ECI 2	633334	3500.01	26.32	27.00	1.169	-	-	-0.03	0.145	0.170



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FR1 n77 Part 27Q Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	ECI 2	633334	3500.01	23.43	24.00	1.140	-	-	0.14	0.235	0.268
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	ECI 2	656000	3840	15.93	17.00	1.279	-	-	-0.07	0.150	0.192
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	ECI 2	656000	3840	15.78	17.00	1.324	-	-	0.18	0.167	0.221
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	ECI 2	656000	3840	15.93	17.00	1.279	-	-	0.03	0.124	0.159
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	ECI 2	656000	3840	15.78	17.00	1.324	-	-	0.01	0.138	0.183
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	656000	3840	15.93	17.00	1.279	-	-	-0.14	0.672	0.860
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	656000	3840	15.78	17.00	1.324	-	-	0.15	0.650	0.861
FR1 n77 Part 27Q	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	656000	3840	15.64	17.00	1.368	-	-	-0.01	0.548	0.750
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	ECI 2	656000	3840	15.93	17.00	1.279	-	-	0.11	0.336	0.430
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	ECI 2	656000	3840	15.78	17.00	1.324	-	-	0.08	0.389	0.515
FR1 n77 Part 27Q HPUE Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	656000	3840	15.96	17.00	1.271	-	-	-0.03	0.624	0.793
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	ECI 2	633334	3500.01	15.92	17.00	1.282	-	-	-0.01	0.213	0.273
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 6	ECI 2	633334	3500.01	15.78	17.00	1.324	-	-	0.09	0.188	0.249
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	ECI 2	633334	3500.01	15.92	17.00	1.282	-	-	-0.04	0.199	0.255
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 6	ECI 2	633334	3500.01	15.78	17.00	1.324	-	-	-0.1	0.179	0.237
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	633334	3500.01	15.92	17.00	1.282	-	-	-0.07	0.696	0.893
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	633334	3500.01	15.78	17.00	1.324	-	-	0.02	0.614	0.813
FR1 n77 Part 27Q	100M	QPSK	270	0	DFT-SCS-30KHz	Left Cheek	0mm	Ant 6	ECI 2	633334	3500.01	15.92	17.00	1.282	-	-	-0.01	0.610	0.782
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	ECI 2	633334	3500.01	15.78	17.00	1.324	-	-	0.06	0.555	0.735
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	ECI 2	633334	3500.01	15.92	17.00	1.282	-	-	0.1	0.500	0.641
FR1 n77 Part 27Q HPUE Other PA	100M	QPSK	270	0	DFT-SCS-30KHz	Left Tilted	0mm	Ant 6	ECI 2	633334	3500.01	15.60	17.00	1.380	-	-	-0.17	0.598	0.825

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)
WLAN/BT																
30	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3+5(3)	Standalone	6	2437	17.36	18.50	1.300	99.52	1.005	-0.02	0.463	0.605
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3+5(3)	Standalone	6	2437	17.36	18.50	1.300	99.52	1.005	0.04	0.528	0.690
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+5(3)	Standalone	6	2437	17.36	18.50	1.300	99.52	1.005	-0.04	0.986	1.288
	WLAN2.4GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 3+5(3)	Standalone	6	2437	17.30	18.50	1.318	94.2	1.062	0.08	0.654	0.916
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+5(3)	Standalone	1	2412	17.02	18.50	1.406	99.52	1.005	-0.19	0.709	1.002
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+5(3)	Standalone	11	2462	16.86	18.50	1.459	99.52	1.005	-0.02	0.574	0.842
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+5(3)	Standalone	6	2437	17.36	18.50	1.300	99.52	1.005	0.02	0.527	0.689
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3+5(3)	Simultaneous	6	2437	11.87	13.00	1.297	99.52	1.005	0.13	0.095	0.124
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3+5(3)	Simultaneous	6	2437	11.87	13.00	1.297	99.52	1.005	0.06	0.133	0.173
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+5(3)	Simultaneous	6	2437	11.87	13.00	1.297	99.52	1.005	-0.02	0.190	0.248
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+5(3)	Simultaneous	6	2437	11.87	13.00	1.297	99.52	1.005	0.02	0.134	0.175
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3+5(3)	DBS Simultaneous	6	2437	8.91	10.00	1.285	99.52	1.005	-0.02	0.050	0.065
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3+5(3)	DBS Simultaneous	6	2437	8.91	10.00	1.285	99.52	1.005	0.02	0.069	0.089
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3+5(3)	DBS Simultaneous	6	2437	8.91	10.00	1.285	99.52	1.005	-0.09	0.098	0.127
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3+5(3)	DBS Simultaneous	6	2437	8.91	10.00	1.285	99.52	1.005	-0.06	0.080	0.103
31	Bluetooth	1Mbps	Right Cheek	0mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	-0.13	0.057	0.084
	Bluetooth	1Mbps	Right Tilted	0mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	0.07	0.046	0.068
	Bluetooth	1Mbps	Left Cheek	0mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	-0.03	0.099	0.147
	Bluetooth	1Mbps	Left Tilted	0mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	0.02	0.086	0.127
32	WLAN5.3GHz	802.11ac VHT80 MCS0	Right Cheek	0mm	Ant 6	Standalone	58	5290	15.10	16.50	1.380	86.49	1.156	0.08	0.277	0.442
	WLAN5.3GHz	802.11ac VHT80 MCS0	Right Tilted	0mm	Ant 6	Standalone	58	5290	15.10	16.50	1.380	86.49	1.156	0.01	0.259	0.413
	WLAN5.3GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Standalone	58	5290	15.10	16.50	1.380	86.49	1.156	-0.02	0.679	1.083
	WLAN5.3GHz	802.11ac VHT80 MCS0	Left Tilted	0mm	Ant 6	Standalone	58	5290	15.10	16.50	1.380	86.49	1.156	0.03	0.673	1.074
	WLAN5.3GHz	802.11ac VHT80 MCS0	Right Cheek	0mm	Ant 6	Simultaneous	58	5290	10.10	11.50	1.380	86.49	1.156	0.06	0.163	0.260
	WLAN5.3GHz	802.11ac VHT80 MCS0	Right Tilted	0mm	Ant 6	Simultaneous	58	5290	10.10	11.50	1.380	86.49	1.156	0.02	0.121	0.193
	WLAN5.3GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Simultaneous	58	5290	10.10	11.50	1.380	86.49	1.156	-0.08	0.188	0.300
	WLAN5.3GHz	802.11ac VHT80 MCS0	Left Tilted	0mm	Ant 6	Simultaneous	58	5290	10.10	11.50	1.380	86.49	1.156	-0.08	0.171	0.273
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 10	Full power	54	5270	19.86	21.50	1.458	94.12	1.062	-0.15	0.022	0.034
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 10	Full power	54	5270	19.86	21.50	1.458	94.12	1.062	-0.06	0.030	0.046



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	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 10	Full power	54	5270	19.86	21.50	1.458	94.12	1.062	-0.14	0.025	0.039
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 10	Full power	54	5270	19.86	21.50	1.458	94.12	1.062	-0.19	0.015	0.023
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 10	Full power	62	5310	19.27	21.00	1.488	94.12	1.062	0.01	0.032	0.051
	WLAN5.5GHz	802.11ac VHT80 MCS0	Right Cheek	0mm	Ant 6	Standalone	138	5690	15.50	17.00	1.412	86.49	1.156	0.1	0.193	0.315
	WLAN5.5GHz	802.11ac VHT80 MCS0	Right Tilted	0mm	Ant 6	Standalone	138	5690	15.50	17.00	1.412	86.49	1.156	-0.18	0.197	0.322
33	WLAN5.5GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Standalone	138	5690	15.50	17.00	1.412	86.49	1.156	-0.1	0.669	1.092
	WLAN5.5GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Standalone	106	5530	15.46	17.00	1.425	86.49	1.156	0.1	0.503	0.829
	WLAN5.5GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Standalone	122	5610	15.21	16.50	1.346	86.49	1.156	0.12	0.496	0.772
	WLAN5.5GHz	802.11ac VHT80 MCS0	Left Tilted	0mm	Ant 6	Standalone	138	5690	15.50	17.00	1.412	86.49	1.156	0.08	0.456	0.745
	WLAN5.5GHz	802.11ac VHT80 MCS0	Right Cheek	0mm	Ant 6	Simultaneous	138	5690	10.50	12.00	1.412	86.49	1.156	0.12	0.048	0.078
	WLAN5.5GHz	802.11ac VHT80 MCS0	Right Tilted	0mm	Ant 6	Simultaneous	138	5690	10.50	12.00	1.412	86.49	1.156	-0.16	0.059	0.096
	WLAN5.5GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Simultaneous	138	5690	10.50	12.00	1.412	86.49	1.156	-0.17	0.212	0.346
	WLAN5.5GHz	802.11ac VHT80 MCS0	Left Tilted	0mm	Ant 6	Simultaneous	138	5690	10.50	12.00	1.412	86.49	1.156	-0.03	0.141	0.230
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 10	Full power	110	5550	19.30	21.00	1.478	94.12	1.062	-0.02	0.000	0.000
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 10	Full power	110	5550	19.30	21.00	1.478	94.12	1.062	0.1	0.049	0.077
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 10	Full power	110	5550	19.30	21.00	1.478	94.12	1.062	0.04	0.056	0.088
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 10	Full power	110	5550	19.30	21.00	1.478	94.12	1.062	0.13	0.029	0.046
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 10	Full power	102	5510	18.94	20.50	1.431	94.12	1.062	-0.18	0.039	0.059
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 10	Full power	134	5670	18.81	20.50	1.475	94.12	1.062	-0.11	0.012	0.019
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 10	Full power	142	5710	18.72	20.00	1.342	94.12	1.062	-0.16	0.042	0.060
	WLAN5.8GHz	802.11ac VHT80 MCS0	Right Cheek	0mm	Ant 6	Standalone	155	5775	16.42	18.00	1.439	86.49	1.156	0.14	0.256	0.426
	WLAN5.8GHz	802.11ac VHT80 MCS0	Right Tilted	0mm	Ant 6	Standalone	155	5775	16.42	18.00	1.439	86.49	1.156	0.11	0.252	0.419
34	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Standalone	155	5775	16.42	18.00	1.439	86.49	1.156	0.09	0.666	1.108
	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Tilted	0mm	Ant 6	Standalone	155	5775	16.42	18.00	1.439	86.49	1.156	-0.05	0.461	0.767
	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Simultaneous	155	5775	11.32	13.00	1.472	86.49	1.156	-0.12	0.064	0.109
	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Tilted	0mm	Ant 6	Simultaneous	155	5775	11.32	13.00	1.472	86.49	1.156	0.07	0.061	0.104
	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 6	Simultaneous	155	5775	11.32	13.00	1.472	86.49	1.156	0.18	0.198	0.337
	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Tilted	0mm	Ant 6	Simultaneous	155	5775	11.32	13.00	1.472	86.49	1.156	0.14	0.216	0.368
	WLAN5.8GHz	802.11ac VHT80 MCS0	Right Cheek	0mm	Ant 10	Full power	155	5775	19.40	21.00	1.445	86.49	1.156	0.01	0.035	0.058
	WLAN5.8GHz	802.11ac VHT80 MCS0	Right Tilted	0mm	Ant 10	Full power	155	5775	19.40	21.00	1.445	86.49	1.156	-0.04	0.081	0.135
	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Cheek	0mm	Ant 10	Full power	155	5775	19.40	21.00	1.445	86.49	1.156	-0.15	0.036	0.060
	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Tilted	0mm	Ant 10	Full power	155	5775	19.40	21.00	1.445	86.49	1.156	0.11	0.037	0.062



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																				
35	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	133297	680.5	23.60	24.00	1.096	-	-	0.08	0.132	0.145
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	133297	680.5	22.68	23.00	1.076	-	-	0.01	0.090	0.097
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	133297	680.5	23.60	24.00	1.096	-	-	-0.05	0.770	0.844
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	133297	680.5	22.68	23.00	1.076	-	-	0.03	0.523	0.563
	LTE Band 71	20M	QPSK	100	0	-	Back	5mm	Ant 0	ECI 7	133297	680.5	22.66	23.00	1.081	-	-	-0.08	0.246	0.266
	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	133297	680.5	23.60	24.00	1.096	-	-	-0.08	0.483	0.530
	LTE Band 71	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	133297	680.5	22.68	23.00	1.076	-	-	0.1	0.286	0.308
	LTE Band 71	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	133297	680.5	23.60	24.00	1.096	-	-	0.1	0.109	0.120
	LTE Band 71	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	133297	680.5	22.68	23.00	1.076	-	-	0.12	0.073	0.079
	LTE Band 71	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	133297	680.5	23.60	24.00	1.096	-	-	0.08	0.440	0.482
	LTE Band 71	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	133297	680.5	22.68	23.00	1.076	-	-	-0.17	0.230	0.248
	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	133297	680.5	22.61	23.70	1.285	-	-	0.11	0.235	0.302
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	133297	680.5	21.65	23.00	1.365	-	-	-0.05	0.146	0.199
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	133297	680.5	22.61	23.70	1.285	-	-	-0.1	0.480	0.617
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	133297	680.5	21.65	23.00	1.365	-	-	0.18	0.263	0.359
	LTE Band 71	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	133297	680.5	22.61	23.70	1.285	-	-	-0.17	0.168	0.216
	LTE Band 71	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	133297	680.5	21.65	23.00	1.365	-	-	0.17	0.113	0.154
	LTE Band 71	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	133297	680.5	22.61	23.70	1.285	-	-	-0.05	0.091	0.117
	LTE Band 71	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	133297	680.5	21.65	23.00	1.365	-	-	0.01	0.059	0.081
36	LTE Band 71	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	133297	680.5	22.61	23.70	1.285	-	-	0.1	0.364	0.468
	LTE Band 71	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	133297	680.5	21.65	23.00	1.365	-	-	-0.17	0.155	0.212
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	23095	707.5	23.09	24.00	1.233	-	-	-0.01	0.267	0.329
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI 7	23095	707.5	22.10	23.00	1.230	-	-	-0.08	0.189	0.233
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23095	707.5	23.09	24.00	1.233	-	-	-0.02	0.844	1.041
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI 7	23095	707.5	22.10	23.00	1.230	-	-	0.05	0.545	0.670
	LTE Band 12	10M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	23095	707.5	22.12	23.00	1.225	-	-	0.06	0.553	0.677
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	23095	707.5	23.09	24.00	1.233	-	-	-0.09	0.642	0.792
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI 7	23095	707.5	22.10	23.00	1.230	-	-	-0.08	0.361	0.444
	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	23095	707.5	23.09	24.00	1.233	-	-	0.12	0.177	0.218
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI 7	23095	707.5	22.10	23.00	1.230	-	-	0.03	0.106	0.130
	LTE Band 12	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	23095	707.5	23.09	24.00	1.233	-	-	0.18	0.434	0.535
	LTE Band 12	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI 7	23095	707.5	22.10	23.00	1.230	-	-	0.16	0.265	0.326
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	23095	707.5	22.88	24.00	1.294	-	-	-0.1	0.145	0.188
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI 7	23095	707.5	21.95	23.00	1.274	-	-	0.01	0.092	0.117
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	23095	707.5	22.88	24.00	1.294	-	-	-0.05	0.231	0.299
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI 7	23095	707.5	21.95	23.00	1.274	-	-	-0.15	0.189	0.241
	LTE Band 12	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	23095	707.5	22.88	24.00	1.294	-	-	0.19	0.097	0.126
	LTE Band 12	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI 7	23095	707.5	21.95	23.00	1.274	-	-	0.07	0.059	0.075
37	LTE Band 12	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	23095	707.5	22.88	24.00	1.294	-	-	-0.18	0.070	0.091
	LTE Band 12	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI 7	23095	707.5	21.95	23.00	1.274	-	-	0.03	0.045	0.057
	LTE Band 12	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	23095	707.5	22.88	24.00	1.294	-	-	-0.02	0.268	0.347
	LTE Band 12	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	ECI 7	23095	707.5	21.95	23.00	1.274	-	-	-0.15	0.163	0.208
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	23230	782	22.96	24.00	1.271	-	-	0.11	0.276	0.351
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI 7	23230	782	22.00	23.00	1.259	-	-	-0.08	0.163	0.205
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23230	782	22.96	24.00	1.271	-	-	-0.05	0.704	0.894
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI 7	23230	782	22.00	23.00	1.259	-	-	-0.17	0.473	0.595
	LTE Band 13	10M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	23230	782	21.93	23.00	1.279	-	-	-0.08	0.386	0.494
	LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	23230	782	22.96	24.00	1.271	-	-	-0.04	0.384	0.488
	LTE Band 13	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI 7	23230	782	22.00	23.00	1.259	-	-	-0.08	0.214	0.269
	LTE Band 13	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	23230	782	22.96	24.00	1.271	-	-	0.17	0.132	0.168



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	LTE Band 13	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI 7	23230	782	22.00	23.00	1.259	-	-	0.18	0.079	0.099
	LTE Band 13	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	23230	782	22.96	24.00	1.271	-	-	-0.04	0.348	0.442
	LTE Band 13	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI 7	23230	782	22.00	23.00	1.259	-	-	-0.08	0.251	0.316
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	23230	782	22.85	24.00	1.303	-	-	-0.13	0.260	0.339
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI 7	23230	782	21.84	23.00	1.306	-	-	0.06	0.147	0.192
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	23230	782	22.85	24.00	1.303	-	-	-0.02	0.376	0.490
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI 7	23230	782	21.84	23.00	1.306	-	-	-0.03	0.300	0.392
	LTE Band 13	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	23230	782	22.85	24.00	1.303	-	-	-0.03	0.079	0.103
	LTE Band 13	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI 7	23230	782	21.84	23.00	1.306	-	-	0.08	0.067	0.088
	LTE Band 13	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	23230	782	22.85	24.00	1.303	-	-	-0.07	0.107	0.139
	LTE Band 13	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI 7	23230	782	21.84	23.00	1.306	-	-	0.05	0.047	0.061
	LTE Band 13	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	23230	782	22.85	24.00	1.303	-	-	-0.11	0.265	0.345
	LTE Band 13	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	ECI 7	23230	782	21.84	23.00	1.306	-	-	-0.12	0.222	0.290
	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	23330	793	22.74	24.00	1.337	-	-	-0.16	0.343	0.458
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 0	ECI 7	23330	793	21.79	23.00	1.321	-	-	-0.02	0.192	0.254
38	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	23330	793	22.74	24.00	1.337	-	-	-0.02	0.828	1.107
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 0	ECI 7	23330	793	21.79	23.00	1.321	-	-	0.15	0.514	0.679
	LTE Band 14	10M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	23330	793	21.73	23.00	1.340	-	-	-0.09	0.459	0.615
	LTE Band 14	10M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	23330	793	22.74	24.00	1.337	-	-	0.11	0.483	0.646
	LTE Band 14	10M	QPSK	25	0	-	Left Side	5mm	Ant 0	ECI 7	23330	793	21.79	23.00	1.321	-	-	-0.05	0.284	0.375
	LTE Band 14	10M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	23330	793	22.74	24.00	1.337	-	-	-0.08	0.148	0.198
	LTE Band 14	10M	QPSK	25	0	-	Right Side	5mm	Ant 0	ECI 7	23330	793	21.79	23.00	1.321	-	-	0.16	0.093	0.123
	LTE Band 14	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	23330	793	22.74	24.00	1.337	-	-	0.05	0.424	0.567
	LTE Band 14	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 0	ECI 7	23330	793	21.79	23.00	1.321	-	-	0.05	0.273	0.361
	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	23330	793	22.69	24.00	1.352	-	-	-0.15	0.242	0.327
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI 7	23330	793	21.72	23.00	1.343	-	-	0.02	0.143	0.192
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	23330	793	22.69	24.00	1.352	-	-	-0.01	0.409	0.553
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI 7	23330	793	21.72	23.00	1.343	-	-	0.07	0.245	0.329
	LTE Band 14	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	23330	793	22.69	24.00	1.352	-	-	0.13	0.150	0.203
	LTE Band 14	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI 7	23330	793	21.72	23.00	1.343	-	-	-0.18	0.070	0.094
	LTE Band 14	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	23330	793	22.69	24.00	1.352	-	-	0.02	0.094	0.127
	LTE Band 14	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI 7	23330	793	21.72	23.00	1.343	-	-	0.16	0.061	0.082
	LTE Band 14	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	23330	793	22.69	24.00	1.352	-	-	-0.03	0.281	0.380
	LTE Band 14	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	ECI 7	23330	793	21.72	23.00	1.343	-	-	0.07	0.176	0.236
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	0	0.189	0.227
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	0.01	0.171	0.207
39	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	0.01	0.582	0.698
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	-0.01	0.496	0.602
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	-0.04	0.384	0.461
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	-0.09	0.397	0.482
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	-0.1	0.071	0.085
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	0.18	0.094	0.114
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	136100	680.5	23.21	24.00	1.199	-	-	-0.17	0.348	0.417
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	136100	680.5	23.16	24.00	1.213	-	-	-0.04	0.320	0.388
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	136100	680.5	23.29	24.00	1.178	-	-	-0.01	0.179	0.211
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	136100	680.5	23.23	24.00	1.194	-	-	-0.09	0.180	0.215
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	136100	680.5	23.29	24.00	1.178	-	-	0.05	0.322	0.379
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	136100	680.5	23.23	24.00	1.194	-	-	-0.07	0.379	0.453
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	136100	680.5	23.29	24.00	1.178	-	-	-0.13	0.097	0.114
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	136100	680.5	23.23	24.00	1.194	-	-	0.17	0.105	0.125
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	136100	680.5	23.29	24.00	1.178	-	-	0.06	0.070	0.082
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	136100	680.5	23.23	24.00	1.194	-	-	0	0.083	0.099
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	136100	680.5	23.29	24.00	1.178	-	-	-0.04	0.218	0.257
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	136100	680.5	23.23	24.00	1.194	-	-	-0.15	0.273	0.326
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	141500	707.5	23.00	24.00	1.259	-	-	-0.02	0.211	0.266
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	141500	707.5	22.94	24.00	1.276	-	-	0.1	0.194	0.248



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	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	ECI 7	4182	836.4	23.37	24.00	1.156	-	-	0.14	0.109	0.126
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 1	ECI 7	4182	836.4	23.37	24.00	1.156	-	-	-0.17	0.080	0.092
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	ECI 7	4182	836.4	23.37	24.00	1.156	-	-	0.17	0.300	0.347
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	ECI 7	4132	826.4	23.08	24.00	1.236	-	-	-0.13	0.461	0.570
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	ECI 7	4233	846.6	23.26	24.00	1.186	-	-	-0.05	0.407	0.483
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	26865	831.5	22.64	24.00	1.368	-	-	0.01	0.277	0.379
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 0	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	0.1	0.195	0.261
44	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	22.64	24.00	1.368	-	-	-0.1	0.799	1.093
	LTE Band 5B	10M	QPSK	1	49	-	Back	5mm	Ant 0	ECI 7	20476+ 20575	831.6+ 841.5	22.45	24.00	1.429	-	-	0.02	0.752	1.075
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	-0.17	0.564	0.756
	LTE Band 26	15M	QPSK	75	0	-	Back	5mm	Ant 0	ECI 7	26865	831.5	21.62	23.00	1.374	-	-	0.04	0.592	0.813
	LTE Band 26	15M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	26865	831.5	22.64	24.00	1.368	-	-	-0.01	0.324	0.443
	LTE Band 26	15M	QPSK	36	0	-	Left Side	5mm	Ant 0	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	-0.08	0.217	0.291
	LTE Band 26	15M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	26865	831.5	22.64	24.00	1.368	-	-	0.05	0.189	0.259
	LTE Band 26	15M	QPSK	36	0	-	Right Side	5mm	Ant 0	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	0.06	0.123	0.165
	LTE Band 26	15M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	26865	831.5	22.64	24.00	1.368	-	-	-0.09	0.386	0.528
	LTE Band 26	15M	QPSK	36	0	-	Bottom Side	5mm	Ant 0	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	-0.08	0.289	0.387
	LTE Band 26	15M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	26865	831.5	22.62	24.00	1.374	-	-	0.13	0.342	0.470
	LTE Band 26	15M	QPSK	36	0	-	Front	5mm	Ant 1	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	0.12	0.219	0.293
	LTE Band 26	15M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	26865	831.5	22.62	24.00	1.374	-	-	-0.05	0.440	0.605
	LTE Band 5B	10M	QPSK	1	49	-	Back	5mm	Ant 1	ECI 7	20476+ 20575	831.6+ 841.5	22.41	24.00	1.442	-	-	0.06	0.405	0.584
	LTE Band 26	15M	QPSK	36	0	-	Back	5mm	Ant 1	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	0.03	0.307	0.411
	LTE Band 26	15M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	26865	831.5	22.62	24.00	1.374	-	-	0.18	0.126	0.173
	LTE Band 26	15M	QPSK	36	0	-	Left Side	5mm	Ant 1	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	0.16	0.081	0.109
	LTE Band 26	15M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	26865	831.5	22.62	24.00	1.374	-	-	-0.1	0.111	0.153
	LTE Band 26	15M	QPSK	36	0	-	Right Side	5mm	Ant 1	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	0.07	0.072	0.096
	LTE Band 26	15M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26865	831.5	22.62	24.00	1.374	-	-	0.18	0.405	0.556
	LTE Band 26	15M	QPSK	36	0	-	Top Side	5mm	Ant 1	ECI 7	26865	831.5	21.73	23.00	1.340	-	-	-0.1	0.313	0.419
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	166300	831.5	22.38	23.60	1.324	-	-	0.01	0.411	0.544
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	166300	831.5	22.30	23.60	1.349	-	-	-0.15	0.372	0.502
45	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	22.38	23.60	1.324	-	-	-0.02	0.903	1.196
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	22.30	23.60	1.349	-	-	0.19	0.771	1.040
	FR1 n26	20M	QPSK	100	0	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	166300	831.5	21.38	23.00	1.452	-	-	0.07	0.821	1.192
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	166300	831.5	22.38	23.60	1.324	-	-	-0.18	0.464	0.614
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	166300	831.5	22.30	23.60	1.349	-	-	0.03	0.481	0.649
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	166300	831.5	22.38	23.60	1.324	-	-	-0.15	0.184	0.244
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	166300	831.5	22.30	23.60	1.349	-	-	-0.15	0.172	0.232
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	166300	831.5	22.38	23.60	1.324	-	-	0.11	0.500	0.662
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	166300	831.5	22.30	23.60	1.349	-	-	-0.08	0.494	0.666
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	166300	831.5	23.14	24.00	1.219	-	-	-0.17	0.363	0.442
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	166300	831.5	23.03	24.00	1.250	-	-	-0.08	0.396	0.495
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	166300	831.5	23.14	24.00	1.219	-	-	-0.02	0.618	0.753
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	166300	831.5	23.03	24.00	1.250	-	-	-0.04	0.440	0.550
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	166300	831.5	23.14	24.00	1.219	-	-	0.17	0.154	0.188
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	166300	831.5	23.03	24.00	1.250	-	-	0.18	0.142	0.178
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	166300	831.5	23.14	24.00	1.219	-	-	-0.04	0.135	0.165
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	166300	831.5	23.03	24.00	1.250	-	-	-0.08	0.131	0.164
	FR1 n26	20M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	166300	831.5	23.14	24.00	1.219	-	-	-0.13	0.598	0.729
	FR1 n26	20M	QPSK	50	28	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	166300	831.5	23.03	24.00	1.250	-	-	-0.13	0.575	0.719
1750MHz																				
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	1413	1732.6	18.98	20.20	1.324	-	-	-0.03	0.769	1.018
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	1312	1712.4	18.68	20.20	1.419	-	-	-0.03	0.739	1.049
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	1513	1752.6	18.92	20.20	1.343	-	-	0.08	0.760	1.021
46	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	1413	1732.6	18.98	20.20	1.324	-	-	0.03	0.952	1.261
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	1312	1712.4	18.68	20.20	1.419	-	-	-0.07	0.885	1.256



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	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	1513	1752.6	18.92	20.20	1.343	-	-	0.05	0.912	1.225
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI 7	1413	1732.6	18.98	20.20	1.324	-	-	-0.11	0.903	1.196
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI 7	1312	1712.4	18.68	20.20	1.419	-	-	-0.12	0.866	1.229
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI 7	1513	1752.6	18.92	20.20	1.343	-	-	0.03	0.917	1.231
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	ECI 7	1413	1732.6	18.98	20.20	1.324	-	-	-0.16	0.072	0.095
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	1413	1732.6	18.98	20.20	1.324	-	-	-0.02	0.785	1.040
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	1312	1712.4	18.68	20.20	1.419	-	-	0.15	0.825	1.171
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	1513	1752.6	18.92	20.20	1.343	-	-	-0.09	0.681	0.914
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	ECI 7	1413	1732.6	16.43	17.70	1.340	-	-	-0.03	0.205	0.275
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	ECI 7	1413	1732.6	16.43	17.70	1.340	-	-	0.01	0.276	0.370
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	ECI 7	1413	1732.6	16.43	17.70	1.340	-	-	-0.06	0.046	0.062
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 1	ECI 7	1413	1732.6	16.43	17.70	1.340	-	-	-0.04	0.012	0.016
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	ECI 7	1413	1732.6	16.43	17.70	1.340	-	-	-0.09	0.305	0.409
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	132322	1745	17.92	19.20	1.343	-	-	-0.13	0.666	0.894
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	132072	1720	17.79	19.20	1.384	-	-	0.17	0.599	0.829
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	132572	1770	17.82	19.20	1.374	-	-	0.06	0.675	0.927
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	132322	1745	17.84	19.20	1.368	-	-	0	0.423	0.579
	LTE Band 66	20M	QPSK	100	0	-	Front	5mm	Ant 0	ECI 7	132322	1745	17.67	19.20	1.422	-	-	0.11	0.394	0.560
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	132322	1745	17.92	19.20	1.343	-	-	-0.02	0.926	1.243
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	132072	1720	17.79	19.20	1.384	-	-	0.1	0.859	1.188
47	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	132572	1770	17.82	19.20	1.374	-	-	0.03	0.937	1.287
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	132322	1745	17.84	19.20	1.368	-	-	0.04	0.593	0.811
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	132072	1720	17.64	19.20	1.432	-	-	0.13	0.548	0.785
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	132572	1770	17.78	19.20	1.387	-	-	-0.18	0.588	0.815
	LTE Band 66	20M	QPSK	100	0	-	Back	5mm	Ant 0	ECI 7	132322	1745	17.67	19.20	1.422	-	-	-0.11	0.579	0.824
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	132322	1745	17.92	19.20	1.343	-	-	-0.16	0.771	1.035
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	132072	1720	17.79	19.20	1.384	-	-	-0.15	0.747	1.034
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	132572	1770	17.82	19.20	1.374	-	-	-0.06	0.823	1.131
	LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	132322	1745	17.84	19.20	1.368	-	-	-0.14	0.505	0.691
	LTE Band 66	20M	QPSK	100	0	-	Left Side	5mm	Ant 0	ECI 7	132322	1745	17.67	19.20	1.422	-	-	0.06	0.465	0.661
	LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	132322	1745	17.92	19.20	1.343	-	-	0.02	0.054	0.073
	LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	132322	1745	17.84	19.20	1.368	-	-	0.12	0.040	0.055
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	132322	1745	17.92	19.20	1.343	-	-	-0.16	0.830	1.114
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	132072	1720	17.79	19.20	1.384	-	-	-0.12	0.827	1.144
	LTE Band 66	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	132572	1770	17.82	19.20	1.374	-	-	0.07	0.783	1.076
	LTE Band 66	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	132322	1745	17.84	19.20	1.368	-	-	-0.02	0.523	0.715
	LTE Band 66	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI 7	132322	1745	17.67	19.20	1.422	-	-	0.08	0.479	0.681
	LTE Band 66 Other PA	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	132572	1770	17.82	19.20	1.374	-	-	0.16	0.640	0.879
	LTE Band 66	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	132322	1745	15.22	16.20	1.253	-	-	0.14	0.205	0.257
	LTE Band 66	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	132322	1745	15.12	16.20	1.282	-	-	0.16	0.150	0.192
	LTE Band 66	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	132322	1745	15.22	16.20	1.253	-	-	-0.02	0.295	0.370
	LTE Band 66	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	132322	1745	15.12	16.20	1.282	-	-	0.17	0.232	0.298
	LTE Band 66	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	132322	1745	15.22	16.20	1.253	-	-	-0.06	0.045	0.056
	LTE Band 66	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	132322	1745	15.12	16.20	1.282	-	-	-0.13	0.033	0.042
	LTE Band 66	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	132322	1745	15.22	16.20	1.253	-	-	-0.01	0.013	0.016
	LTE Band 66	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	132322	1745	15.12	16.20	1.282	-	-	-0.11	0.009	0.012
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	132322	1745	15.22	16.20	1.253	-	-	0.19	0.531	0.665
	LTE Band 66	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	132322	1745	15.12	16.20	1.282	-	-	-0.06	0.295	0.378
	LTE Band 66	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	132322	1745	15.22	16.20	1.253	-	-	0.03	0.508	0.637
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	340500	1702.5	18.08	19.10	1.265	-	-	-0.13	0.661	0.836
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	340500	1702.5	17.88	19.10	1.324	-	-	0.01	0.658	0.871
	FR1 n70	15M	QPSK	75	0	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	340500	1702.5	17.75	19.10	1.365	-	-	-0.11	0.618	0.843
48	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	340500	1702.5	18.08	19.10	1.265	-	-	0.12	0.991	1.253
	FR1 n70	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	340500	1702.5	17.88	19.10	1.324	-	-	0.03	0.937	1.241
	FR1 n70	15M	QPSK	75	0	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	340500	1702.5	17.75	19.10	1.365	-	-	-0.05	0.916	1.250
	FR1 n70	15M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	340500	1702.5	18.08	19.10	1.265	-	-	0.14	0.918	1.161



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	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 5	ECI 7	349000	1745	22.97	24.00	1.268	-	-	-0.09	0.000	0.000
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 5	ECI 7	349000	1745	23.14	24.00	1.219	-	-	-0.09	0.048	0.059
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 5	ECI 7	349000	1745	22.97	24.00	1.268	-	-	-0.12	0.036	0.046
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 5	ECI 7	349000	1745	23.14	24.00	1.219	-	-	-0.06	0.000	0.000
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 5	ECI 7	349000	1745	22.97	24.00	1.268	-	-	-0.19	0.000	0.000
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 5	ECI 7	349000	1745	23.14	24.00	1.219	-	-	0.09	0.123	0.150
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 5	ECI 7	349000	1745	22.97	24.00	1.268	-	-	0.13	0.109	0.138
	FR1 n66	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 5	ECI 7	349000	1745	23.14	24.00	1.219	-	-	-0.08	0.000	0.000
	FR1 n66	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 5	ECI 7	349000	1745	22.97	24.00	1.268	-	-	0.08	0.000	0.000
1900MHz																				
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	ECI 7	661	1880	23.64	24.30	1.164	-	-	-0.04	0.740	0.861
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	ECI 7	512	1850.2	23.57	24.30	1.183	-	-	0.12	0.702	0.830
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Front	5mm	Ant 0	ECI 7	810	1909.8	23.63	24.30	1.167	-	-	0.09	0.676	0.789
50	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	661	1880	23.64	24.30	1.164	-	-	-0.09	1.030	1.199
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	512	1850.2	23.57	24.30	1.183	-	-	-0.03	0.914	1.081
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Back	5mm	Ant 0	ECI 7	810	1909.8	23.63	24.30	1.167	-	-	-0.06	0.985	1.149
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	ECI 7	661	1880	23.64	24.30	1.164	-	-	0.08	0.850	0.990
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	ECI 7	512	1850.2	23.57	24.30	1.183	-	-	-0.07	0.695	0.822
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Left Side	5mm	Ant 0	ECI 7	810	1909.8	23.63	24.30	1.167	-	-	0.11	0.734	0.856
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Right Side	5mm	Ant 0	ECI 7	661	1880	23.64	24.30	1.164	-	-	-0.13	0.097	0.113
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI 7	661	1880	23.64	24.30	1.164	-	-	0.04	0.811	0.944
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI 7	512	1850.2	23.57	24.30	1.183	-	-	0.17	0.715	0.846
	GSM1900	-	-	-	-	GPRS (4 Tx slots)	Bottom Side	5mm	Ant 0	ECI 7	810	1909.8	23.63	24.30	1.167	-	-	-0.1	0.676	0.789
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	9400	1880	19.06	20.20	1.300	-	-	-0.05	0.626	0.814
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	9262	1852.4	18.73	20.20	1.403	-	-	-0.04	0.734	1.030
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 0	ECI 7	9538	1907.6	19.00	20.20	1.318	-	-	0.01	0.660	0.870
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	9400	1880	19.06	20.20	1.300	-	-	-0.09	0.796	1.035
51	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	9262	1852.4	18.73	20.20	1.403	-	-	0.02	0.921	1.292
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 0	ECI 7	9538	1907.6	19.00	20.20	1.318	-	-	0.03	0.881	1.161
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 0	ECI 7	9400	1880	19.06	20.20	1.300	-	-	-0.11	0.591	0.768
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 0	ECI 7	9400	1880	19.06	20.20	1.300	-	-	-0.15	0.070	0.091
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	9400	1880	19.06	20.20	1.300	-	-	0.06	0.761	0.989
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	9262	1852.4	18.73	20.20	1.403	-	-	0.15	0.850	1.192
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	5mm	Ant 0	ECI 7	9538	1907.6	19.00	20.20	1.318	-	-	-0.1	0.797	1.051
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	5mm	Ant 1	ECI 7	9400	1880	14.95	15.70	1.189	-	-	0	0.223	0.265
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 1	ECI 7	9400	1880	14.95	15.70	1.189	-	-	0.09	0.380	0.452
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 1	ECI 7	9400	1880	14.95	15.70	1.189	-	-	-0.03	0.051	0.061
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	5mm	Ant 1	ECI 7	9400	1880	14.95	15.70	1.189	-	-	-0.08	0.012	0.014
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	5mm	Ant 1	ECI 7	9400	1880	14.95	15.70	1.189	-	-	-0.07	0.435	0.517
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	26340	1880	18.34	19.10	1.191	-	-	-0.13	0.557	0.664
	LTE Band 25	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	26340	1880	18.24	19.10	1.219	-	-	0.12	0.461	0.562
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26340	1880	18.34	19.10	1.191	-	-	-0.02	0.858	1.022
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26140	1860	18.15	19.10	1.245	-	-	0.02	0.689	0.857
52	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26590	1905	18.22	19.10	1.225	-	-	0.07	0.919	1.125
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	26340	1880	18.24	19.10	1.219	-	-	0.12	0.715	0.872
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	26140	1860	17.98	19.10	1.294	-	-	0.02	0.578	0.748
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	26590	1905	18.15	19.10	1.245	-	-	-0.11	0.753	0.937
	LTE Band 25	20M	QPSK	100	0	-	Back	5mm	Ant 0	ECI 7	26340	1880	18.09	19.10	1.262	-	-	-0.11	0.622	0.785
	LTE Band 25	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	26340	1880	18.34	19.10	1.191	-	-	-0.05	0.630	0.750
	LTE Band 25	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	26340	1880	18.24	19.10	1.219	-	-	0.01	0.502	0.612
	LTE Band 25	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	26340	1880	18.34	19.10	1.191	-	-	0.02	0.067	0.080
	LTE Band 25	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	26340	1880	18.24	19.10	1.219	-	-	-0.11	0.053	0.065
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	26340	1880	18.34	19.10	1.191	-	-	0.18	0.896	1.067
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	26140	1860	18.15	19.10	1.245	-	-	0.16	0.869	1.081
	LTE Band 25	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	26590	1905	18.22	19.10	1.225	-	-	0.19	0.861	1.054
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	26340	1880	18.24	19.10	1.219	-	-	0.13	0.735	0.896



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	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	26140	1860	17.98	19.10	1.294	-	-	-0.03	0.718	0.929
	LTE Band 25	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	26590	1905	18.15	19.10	1.245	-	-	0.12	0.700	0.871
	LTE Band 25	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 0	ECI 7	26340	1880	18.09	19.10	1.262	-	-	0.19	0.692	0.873
	LTE Band 25 Other PA	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	26590	1905	18.22	19.10	1.225	-	-	-0.09	0.837	1.025
	LTE Band 25	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	26340	1880	13.49	14.70	1.321	-	-	-0.08	0.267	0.353
	LTE Band 25	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	26340	1880	13.34	14.70	1.368	-	-	-0.08	0.214	0.293
	LTE Band 25	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	26340	1880	13.49	14.70	1.321	-	-	0.04	0.405	0.535
	LTE Band 25	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	26340	1880	13.34	14.70	1.368	-	-	0.11	0.321	0.439
	LTE Band 25	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	26340	1880	13.49	14.70	1.321	-	-	-0.03	0.062	0.082
	LTE Band 25	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	26340	1880	13.34	14.70	1.368	-	-	-0.16	0.048	0.066
	LTE Band 25	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	26340	1880	13.49	14.70	1.321	-	-	-0.02	0.015	0.020
	LTE Band 25	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	26340	1880	13.34	14.70	1.368	-	-	0.08	0.011	0.015
	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26340	1880	13.49	14.70	1.321	-	-	0	0.519	0.686
	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26140	1860	13.31	14.70	1.377	-	-	-0.04	0.419	0.577
	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26590	1905	13.42	14.70	1.343	-	-	0.17	0.362	0.486
	LTE Band 25	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	26340	1880	13.34	14.70	1.368	-	-	0.18	0.351	0.480
	LTE Band 25	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	26140	1860	13.19	14.70	1.416	-	-	0.03	0.347	0.491
	LTE Band 25	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	26590	1905	13.29	14.70	1.384	-	-	0.01	0.290	0.401
	LTE Band 25	20M	QPSK	100	0	-	Top Side	5mm	Ant 1	ECI 7	26340	1880	13.21	14.70	1.409	-	-	0.04	0.369	0.520
	LTE Band 25	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	26340	1880	13.49	14.70	1.321	-	-	-0.04	0.507	0.670
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	376500	1882.5	18.77	19.60	1.211	-	-	-0.1	0.614	0.743
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	376500	1882.5	18.64	19.60	1.247	-	-	0.1	0.648	0.808
	FR1 n25	40M	QPSK	216	0	DFT-SCS-15KHz	Front	5mm	Ant 0	ECI 7	376500	1882.5	18.36	19.60	1.330	-	-	0.17	0.599	0.797
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	376500	1882.5	18.77	19.60	1.211	-	-	-0.06	0.908	1.099
53	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	376500	1882.5	18.64	19.60	1.247	-	-	0.04	1.020	1.272
	FR1 n25	40M	QPSK	216	0	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	376500	1882.5	18.36	19.60	1.330	-	-	0.07	0.949	1.263
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	376500	1882.5	18.77	19.60	1.211	-	-	0.11	0.596	0.722
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 0	ECI 7	376500	1882.5	18.64	19.60	1.247	-	-	-0.18	0.629	0.785
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	376500	1882.5	18.77	19.60	1.211	-	-	-0.01	0.068	0.082
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 0	ECI 7	376500	1882.5	18.64	19.60	1.247	-	-	-0.11	0.083	0.104
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	376500	1882.5	18.77	19.60	1.211	-	-	0.04	0.923	1.117
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	376500	1882.5	18.64	19.60	1.247	-	-	0.16	1.010	1.260
	FR1 n25	40M	QPSK	216	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 0	ECI 7	376500	1882.5	18.36	19.60	1.330	-	-	0.17	0.905	1.204
	FR1 n25 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 0	ECI 7	376500	1882.5	18.64	19.60	1.247	-	-	0.06	0.968	1.207
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	376500	1882.5	12.17	13.10	1.239	-	-	0.03	0.166	0.206
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	376500	1882.5	12.08	13.10	1.265	-	-	0.1	0.178	0.225
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	376500	1882.5	12.17	13.10	1.239	-	-	0.06	0.273	0.338
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	376500	1882.5	12.08	13.10	1.265	-	-	0.12	0.285	0.360
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	376500	1882.5	12.17	13.10	1.239	-	-	0.11	0.040	0.050
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	376500	1882.5	12.08	13.10	1.265	-	-	0.08	0.038	0.048
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	376500	1882.5	12.17	13.10	1.239	-	-	0.07	0.009	0.011
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	376500	1882.5	12.08	13.10	1.265	-	-	0.09	0.007	0.009
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	376500	1882.5	12.17	13.10	1.239	-	-	-0.12	0.301	0.373
	FR1 n25	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	376500	1882.5	12.08	13.10	1.265	-	-	0.1	0.429	0.543
	FR1 n25 Other PA	40M	QPSK	108	54	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	376500	1882.5	12.08	13.10	1.265	-	-	-0.07	0.410	0.519
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 5	ECI 7	376500	1882.5	23.20	24.00	1.202	-	-	0.12	0.157	0.189
	FR1 n25	40M	QPSK	120	60	DFT-SCS-15KHz	Front	5mm	Ant 5	ECI 7	376500	1882.5	23.11	24.00	1.227	-	-	0.08	0.141	0.173
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 5	ECI 7	376500	1882.5	23.20	24.00	1.202	-	-	0.15	0.302	0.363
	FR1 n25	40M	QPSK	120	60	DFT-SCS-15KHz	Back	5mm	Ant 5	ECI 7	376500	1882.5	23.11	24.00	1.227	-	-	-0.11	0.283	0.347
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 5	ECI 7	376500	1882.5	23.20	24.00	1.202	-	-	-0.05	0.000	0.000
	FR1 n25	40M	QPSK	120	60	DFT-SCS-15KHz	Left Side	5mm	Ant 5	ECI 7	376500	1882.5	23.11	24.00	1.227	-	-	0.02	0.000	0.000
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 5	ECI 7	376500	1882.5	23.20	24.00	1.202	-	-	-0.05	0.509	0.612
	FR1 n25	40M	QPSK	120	60	DFT-SCS-15KHz	Right Side	5mm	Ant 5	ECI 7	376500	1882.5	23.11	24.00	1.227	-	-	-0.11	0.497	0.610
	FR1 n25	40M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 5	ECI 7	376500	1882.5	23.20	24.00	1.202	-	-	0.05	0.000	0.000
	FR1 n25	40M	QPSK	120	60	DFT-SCS-15KHz	Top Side	5mm	Ant 5	ECI 7	376500	1882.5	23.11	24.00	1.227	-	-	-0.14	0.000	0.000
2300MHz																				



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	LTE Band 30	10M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	27710	2310	21.19	22.40	1.321	-	-	-0.17	0.726	0.959
	LTE Band 30	10M	QPSK	25	0	-	Front	5mm	Ant 2	ECI 7	27710	2310	21.08	22.40	1.355	-	-	0.05	0.546	0.740
	LTE Band 30	10M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	27710	2310	21.05	22.40	1.365	-	-	0.13	0.503	0.686
	LTE Band 30	10M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	27710	2310	21.19	22.40	1.321	-	-	0.01	0.880	1.163
	LTE Band 30	10M	QPSK	25	0	-	Back	5mm	Ant 2	ECI 7	27710	2310	21.08	22.40	1.355	-	-	0.05	0.764	1.035
	LTE Band 30	10M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	27710	2310	21.05	22.40	1.365	-	-	-0.03	0.831	1.134
	LTE Band 30	10M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	27710	2310	21.19	22.40	1.321	-	-	-0.12	0.058	0.077
	LTE Band 30	10M	QPSK	25	0	-	Left Side	5mm	Ant 2	ECI 7	27710	2310	21.08	22.40	1.355	-	-	0	0.040	0.054
	LTE Band 30	10M	QPSK	1	0	-	Right Side	5mm	Ant 2	ECI 7	27710	2310	21.19	22.40	1.321	-	-	0.18	0.479	0.633
	LTE Band 30	10M	QPSK	25	0	-	Right Side	5mm	Ant 2	ECI 7	27710	2310	21.08	22.40	1.355	-	-	0.1	0.369	0.500
54	LTE Band 30	10M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	27710	2310	21.19	22.40	1.321	-	-	-0.01	0.980	1.295
	LTE Band 30	10M	QPSK	25	0	-	Bottom Side	5mm	Ant 2	ECI 7	27710	2310	21.08	22.40	1.355	-	-	0.02	0.797	1.080
	LTE Band 30	10M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	27710	2310	21.05	22.40	1.365	-	-	0.07	0.831	1.134
	LTE Band 30	10M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	27710	2310	15.67	16.90	1.327	-	-	-0.08	0.179	0.238
	LTE Band 30	10M	QPSK	25	0	-	Front	5mm	Ant 1	ECI 7	27710	2310	15.63	16.90	1.340	-	-	-0.16	0.131	0.175
	LTE Band 30	10M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	27710	2310	15.67	16.90	1.327	-	-	0.15	0.335	0.445
	LTE Band 30	10M	QPSK	25	0	-	Back	5mm	Ant 1	ECI 7	27710	2310	15.63	16.90	1.340	-	-	-0.08	0.235	0.315
	LTE Band 30	10M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	27710	2310	15.67	16.90	1.327	-	-	-0.07	0.118	0.157
	LTE Band 30	10M	QPSK	25	0	-	Left Side	5mm	Ant 1	ECI 7	27710	2310	15.63	16.90	1.340	-	-	0.13	0.091	0.122
	LTE Band 30	10M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	27710	2310	15.67	16.90	1.327	-	-	0.11	0.005	0.007
	LTE Band 30	10M	QPSK	25	0	-	Right Side	5mm	Ant 1	ECI 7	27710	2310	15.63	16.90	1.340	-	-	-0.12	0.004	0.005
	LTE Band 30	10M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	27710	2310	15.67	16.90	1.327	-	-	-0.04	0.465	0.617
	LTE Band 30	10M	QPSK	25	0	-	Top Side	5mm	Ant 1	ECI 7	27710	2310	15.63	16.90	1.340	-	-	-0.08	0.325	0.435
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 2	ECI 7	462000	2310	18.52	19.80	1.343	-	-	-0.07	0.465	0.624
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	5mm	Ant 2	ECI 7	462000	2310	18.43	19.80	1.371	-	-	0.04	0.424	0.581
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	ECI 7	462000	2310	18.52	19.80	1.343	-	-	0.09	0.695	0.933
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 2	ECI 7	462000	2310	18.43	19.80	1.371	-	-	0.1	0.642	0.880
	FR1 n30	10M	QPSK	50	0	DFT-SCS-15KHz	Back	5mm	Ant 2	ECI 7	462000	2310	18.12	19.80	1.472	-	-	0.08	0.625	0.920
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 2	ECI 7	462000	2310	18.52	19.80	1.343	-	-	0.07	0.037	0.050
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	5mm	Ant 2	ECI 7	462000	2310	18.43	19.80	1.371	-	-	0.1	0.035	0.048
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 2	ECI 7	462000	2310	18.52	19.80	1.343	-	-	-0.09	0.337	0.453
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Side	5mm	Ant 2	ECI 7	462000	2310	18.43	19.80	1.371	-	-	0.02	0.343	0.470
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 2	ECI 7	462000	2310	18.52	19.80	1.343	-	-	0.02	0.875	1.175
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Bottom Side	5mm	Ant 2	ECI 7	462000	2310	18.43	19.80	1.371	-	-	-0.11	0.910	1.248
55	FR1 n30	10M	QPSK	50	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 2	ECI 7	462000	2310	18.12	19.80	1.472	-	-	-0.08	0.875	1.288
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	462000	2310	17.41	18.10	1.172	-	-	0.08	0.137	0.161
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Front	5mm	Ant 1	ECI 7	462000	2310	17.24	18.10	1.219	-	-	-0.02	0.173	0.211
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	462000	2310	17.41	18.10	1.172	-	-	-0.03	0.235	0.275
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Back	5mm	Ant 1	ECI 7	462000	2310	17.24	18.10	1.219	-	-	0.07	0.304	0.371
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	462000	2310	17.41	18.10	1.172	-	-	0.08	0.121	0.142
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Left Side	5mm	Ant 1	ECI 7	462000	2310	17.24	18.10	1.219	-	-	-0.11	0.162	0.197
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	462000	2310	17.41	18.10	1.172	-	-	-0.17	0.012	0.014
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Right Side	5mm	Ant 1	ECI 7	462000	2310	17.24	18.10	1.219	-	-	0.15	0.013	0.016
	FR1 n30	10M	QPSK	1	1	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	462000	2310	17.41	18.10	1.172	-	-	-0.17	0.417	0.489
	FR1 n30	10M	QPSK	25	14	DFT-SCS-15KHz	Top Side	5mm	Ant 1	ECI 7	462000	2310	17.24	18.10	1.219	-	-	-0.02	0.520	0.634
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	21100	2535	20.68	21.20	1.127	-	-	-0.11	0.478	0.539
	LTE Band 7	20M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	21100	2535	20.64	21.20	1.138	-	-	0.12	0.382	0.435
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	21100	2535	20.68	21.20	1.127	-	-	-0.1	0.915	1.031
56	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	20850	2510	20.56	21.20	1.159	-	-	-0.08	0.999	1.158
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	21350	2560	20.58	21.20	1.153	-	-	0.12	0.905	1.044
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	21100	2535	20.64	21.20	1.138	-	-	0.02	0.708	0.805
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	20850	2510	20.54	21.20	1.164	-	-	0.01	0.769	0.895
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	21350	2560	20.57	21.20	1.156	-	-	0.05	0.741	0.857
	LTE Band 7	20M	QPSK	100	0	-	Back	5mm	Ant 2	ECI 7	21100	2535	20.63	21.20	1.140	-	-	-0.16	0.694	0.791
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	21100	2535	20.68	21.20	1.127	-	-	0.08	0.047	0.053



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	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	21100	2535	20.64	21.20	1.138	-	-	-0.09	0.039	0.044
	LTE Band 7	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	ECI 7	21100	2535	20.68	21.20	1.127	-	-	-0.17	0.492	0.555
	LTE Band 7	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	ECI 7	21100	2535	20.64	21.20	1.138	-	-	-0.07	0.386	0.439
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	21100	2535	20.68	21.20	1.127	-	-	-0.07	0.821	0.925
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	20850	2510	20.56	21.20	1.159	-	-	-0.11	0.816	0.946
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	21350	2560	20.58	21.20	1.153	-	-	-0.11	0.872	1.006
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	21100	2535	20.64	21.20	1.138	-	-	-0.03	0.638	0.726
	LTE Band 7	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 2	ECI 7	21100	2535	20.63	21.20	1.140	-	-	0.07	0.614	0.700
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	40620	2593	21.48	21.90	1.102	62.9	1.006	0.12	0.500	0.554
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	40620	2593	21.44	21.90	1.112	62.9	1.006	0.13	0.427	0.478
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	40620	2593	21.48	21.90	1.102	62.9	1.006	0.14	0.775	0.859
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	39750	2506	21.27	21.90	1.156	62.9	1.006	0.04	0.711	0.827
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	40185	2549.5	21.39	21.90	1.125	62.9	1.006	0.11	0.724	0.819
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	41055	2636.5	21.42	21.90	1.117	62.9	1.006	0.12	0.763	0.857
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	41490	2680	21.28	21.90	1.153	62.9	1.006	0.03	0.719	0.834
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	40620	2593	21.44	21.90	1.112	62.9	1.006	0.04	0.535	0.598
	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 2	ECI 7	40620	2593	21.24	21.90	1.164	62.9	1.006	-0.07	0.506	0.593
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	40620	2593	21.48	21.90	1.102	62.9	1.006	-0.02	0.048	0.053
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	40620	2593	21.44	21.90	1.112	62.9	1.006	-0.08	0.041	0.046
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	ECI 7	40620	2593	21.48	21.90	1.102	62.9	1.006	0.18	0.540	0.598
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	ECI 7	40620	2593	21.44	21.90	1.112	62.9	1.006	0.08	0.441	0.493
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	40620	2593	21.48	21.90	1.102	62.9	1.006	-0.1	0.911	1.010
	LTE Band 41C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 2	ECI 7	40620+ 40818	2593+ 2612.8	21.29	21.90	1.151	62.9	1.006	-0.04	0.866	1.003
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	39750	2506	21.27	21.90	1.156	62.9	1.006	0.08	0.617	0.718
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	40185	2549.5	21.39	21.90	1.125	62.9	1.006	-0.09	0.633	0.716
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	41055	2636.5	21.42	21.90	1.117	62.9	1.006	0.03	0.760	0.854
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	41490	2680	21.28	21.90	1.153	62.9	1.006	0.03	0.768	0.891
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	40620	2593	21.44	21.90	1.112	62.9	1.006	0.19	0.529	0.592
	LTE Band 41	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 2	ECI 7	40620	2593	21.24	21.90	1.164	62.9	1.006	0.05	0.503	0.589
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	40620	2593	23.35	23.50	1.035	42.9	1.009	-0.08	1.040	1.086
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 2	ECI 7	40620+ 40818	2593+ 2612.8	23.09	23.50	1.099	42.9	1.009	0.03	0.970	1.076
	LTE Band 41 HPUE Other PA	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	40620	2593	23.35	23.50	1.035	42.9	1.009	-0.05	1.010	1.055
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 1	ECI 7	40620	2593	18.24	18.60	1.086	62.9	1.006	-0.13	0.189	0.207
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 1	ECI 7	40620	2593	18.12	18.60	1.117	62.9	1.006	-0.01	0.144	0.162
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 1	ECI 7	40620	2593	18.24	18.60	1.086	62.9	1.006	0.02	0.362	0.396
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 1	ECI 7	40620	2593	18.12	18.60	1.117	62.9	1.006	-0.16	0.271	0.304
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 1	ECI 7	40620	2593	18.24	18.60	1.086	62.9	1.006	-0.05	0.202	0.221
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 1	ECI 7	40620	2593	18.12	18.60	1.117	62.9	1.006	-0.09	0.161	0.181
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 1	ECI 7	40620	2593	18.24	18.60	1.086	62.9	1.006	0.18	0.001	0.001
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 1	ECI 7	40620	2593	18.12	18.60	1.117	62.9	1.006	0.01	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	40620	2593	18.24	18.60	1.086	62.9	1.006	-0.16	0.488	0.533
	LTE Band 41C	20M	QPSK	1	99	-	Top Side	5mm	Ant 1	ECI 7	40620+ 40818	2593+ 2612.8	18.09	18.60	1.125	62.9	1.006	0.02	0.461	0.522
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	39750	2506	18.16	18.60	1.107	62.9	1.006	-0.06	0.465	0.518
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	40185	2549.5	18.33	18.60	1.064	62.9	1.006	-0.08	0.449	0.481
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	41055	2636.5	18.12	18.60	1.117	62.9	1.006	0.07	0.306	0.344
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	41490	2680	18.14	18.60	1.112	62.9	1.006	-0.04	0.301	0.337
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	ECI 7	40620	2593	18.12	18.60	1.117	62.9	1.006	-0.04	0.350	0.393
	LTE Band 41	20M	QPSK	100	0	-	Top Side	5mm	Ant 1	ECI 7	40620	2593	17.82	18.60	1.197	62.9	1.006	0.02	0.348	0.419
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	40620	2593	19.83	20.20	1.089	42.9	1.009	0.07	0.507	0.557
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Top Side	5mm	Ant 1	ECI 7	40620+ 40818	2593+ 2612.8	19.68	20.20	1.127	42.9	1.009	-0.04	0.482	0.548
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	ECI 7	40620	2593	18.24	18.60	1.086	62.9	1.006	0.02	0.465	0.508
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 0	ECI 7	40620	2593	18.62	20.10	1.406	62.9	1.006	-0.07	0.141	0.199
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 0	ECI 7	40620	2593	18.65	20.10	1.396	62.9	1.006	0.18	0.115	0.162
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	40620	2593	18.62	20.10	1.406	62.9	1.006	0.03	0.697	0.986



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	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	39750	2506	18.47	20.10	1.455	62.9	1.006	-0.14	0.457	0.669
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	40185	2549.5	18.64	20.10	1.400	62.9	1.006	0.15	0.648	0.912
57	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	41055	2636.5	18.79	20.10	1.352	62.9	1.006	0.03	0.914	1.243
	LTE Band 41C	20M	QPSK	1	99	-	Back	5mm	Ant 0	ECI 7	41055+ 41253	2636.5+ 2656.3	18.59	20.10	1.416	62.9	1.006	0.04	0.825	1.175
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	41490	2680	18.60	20.10	1.413	62.9	1.006	-0.18	0.765	1.087
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	40620	2593	18.65	20.10	1.396	62.9	1.006	0.11	0.532	0.747
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	39750	2506	18.36	20.10	1.493	62.9	1.006	-0.1	0.376	0.565
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	40185	2549.5	18.46	20.10	1.459	62.9	1.006	0.17	0.525	0.770
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	41055	2636.5	18.68	20.10	1.387	62.9	1.006	-0.01	0.729	1.017
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 0	ECI 7	41490	2680	18.53	20.10	1.435	62.9	1.006	0.09	0.606	0.875
	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 0	ECI 7	40620	2593	18.28	20.10	1.521	62.9	1.006	-0.04	0.545	0.834
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 0	ECI 7	40620	2593	18.62	20.10	1.406	62.9	1.006	-0.1	0.056	0.079
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 0	ECI 7	40620	2593	18.65	20.10	1.396	62.9	1.006	0.04	0.046	0.065
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 0	ECI 7	40620	2593	18.62	20.10	1.406	62.9	1.006	0.02	0.014	0.020
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 0	ECI 7	40620	2593	18.65	20.10	1.396	62.9	1.006	-0.01	0.014	0.020
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 0	ECI 7	40620	2593	18.62	20.10	1.406	62.9	1.006	0.06	0.392	0.554
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 0	ECI 7	40620	2593	18.65	20.10	1.396	62.9	1.006	0.02	0.311	0.437
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	41055	2636.5	20.42	21.70	1.343	42.9	1.009	0.05	0.847	1.148
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Back	5mm	Ant 0	ECI 7	41055+ 41253	2636.5+ 2656.3	20.08	21.70	1.452	42.9	1.009	0.04	0.745	1.092
	LTE Band 41 Other PA	20M	QPSK	1	0	-	Back	5mm	Ant 0	ECI 7	41055	2636.5	18.79	20.10	1.352	62.9	1.006	0.05	0.899	1.223
	LTE Band 41	20M	QPSK	1	0	-	Front	5mm	Ant 10	ECI 7	40620	2593	17.20	18.00	1.202	62.9	1.006	0.04	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Front	5mm	Ant 10	ECI 7	40620	2593	17.04	18.00	1.247	62.9	1.006	-0.05	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 7	40620	2593	17.20	18.00	1.202	62.9	1.006	0.01	0.501	0.606
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 7	39750	2506	17.23	18.00	1.194	62.9	1.006	0.02	0.339	0.407
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 7	40185	2549.5	16.93	18.00	1.279	62.9	1.006	0.17	0.391	0.503
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 7	41055	2636.5	17.09	18.00	1.233	62.9	1.006	0.1	0.481	0.597
	LTE Band 41	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 7	41490	2680	17.06	18.00	1.242	62.9	1.006	0.08	0.496	0.620
	LTE Band 41C	20M	QPSK	1	99	-	Back	5mm	Ant 10	ECI 7	41490+ 41292	2680+ 2660.2	17.11	18.00	1.227	62.9	1.006	0.04	0.485	0.599
	LTE Band 41	20M	QPSK	50	0	-	Back	5mm	Ant 10	ECI 7	40620	2593	17.04	18.00	1.247	62.9	1.006	-0.04	0.218	0.274
	LTE Band 41	20M	QPSK	100	0	-	Back	5mm	Ant 10	ECI 7	40620	2593	16.79	18.00	1.321	62.9	1.006	-0.05	0.353	0.469
	LTE Band 41	20M	QPSK	1	0	-	Left Side	5mm	Ant 10	ECI 7	40620	2593	17.20	18.00	1.202	62.9	1.006	-0.03	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Left Side	5mm	Ant 10	ECI 7	40620	2593	17.04	18.00	1.247	62.9	1.006	-0.05	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Right Side	5mm	Ant 10	ECI 7	40620	2593	17.20	18.00	1.202	62.9	1.006	0.05	0.032	0.039
	LTE Band 41	20M	QPSK	50	0	-	Right Side	5mm	Ant 10	ECI 7	40620	2593	17.04	18.00	1.247	62.9	1.006	-0.12	0.027	0.034
	LTE Band 41	20M	QPSK	1	0	-	Top Side	5mm	Ant 10	ECI 7	40620	2593	17.20	18.00	1.202	62.9	1.006	-0.02	0.022	0.027
	LTE Band 41	20M	QPSK	50	0	-	Top Side	5mm	Ant 10	ECI 7	40620	2593	17.04	18.00	1.247	62.9	1.006	-0.13	0.016	0.020
	LTE Band 41 HPUE	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 7	41490	2680	18.07	19.60	1.422	42.9	1.009	0.03	0.442	0.634
	LTE Band 41C HPUE	20M	QPSK	1	99	-	Back	5mm	Ant 10	ECI 7	41490+ 41292	2680+ 2660.2	18.01	19.60	1.442	42.9	1.009	-0.06	0.403	0.586
	LTE Band 41 HPUE Main PA	20M	QPSK	1	0	-	Back	5mm	Ant 10	ECI 7	41490	2680	18.07	19.60	1.422	62.9	1.006	0.18	0.321	0.459
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 2	ECI 7	507000	2535	19.84	20.90	1.276	-	-	0.08	0.577	0.737
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Front	5mm	Ant 2	ECI 7	507000	2535	19.75	20.90	1.303	-	-	-0.09	0.592	0.771
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 2	ECI 7	507000	2535	19.84	20.90	1.276	-	-	0.14	0.760	0.970
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Back	5mm	Ant 2	ECI 7	507000	2535	19.75	20.90	1.303	-	-	0.02	0.790	1.030
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Back	5mm	Ant 2	ECI 7	507000	2535	19.59	20.90	1.352	-	-	0.18	0.745	1.007
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Left Side	5mm	Ant 2	ECI 7	507000	2535	19.84	20.90	1.276	-	-	-0.09	0.046	0.059
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Left Side	5mm	Ant 2	ECI 7	507000	2535	19.75	20.90	1.303	-	-	-0.01	0.042	0.055
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Right Side	5mm	Ant 2	ECI 7	507000	2535	19.84	20.90	1.276	-	-	0.16	0.543	0.693
	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Right Side	5mm	Ant 2	ECI 7	507000	2535	19.75	20.90	1.303	-	-	0.16	0.647	0.843
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Right Side	5mm	Ant 2	ECI 7	507000	2535	19.59	20.90	1.352	-	-	0	0.523	0.707
	FR1 n7	50M	QPSK	1	1	DFT-SCS-15KHz	Bottom Side	5mm	Ant 2	ECI 7	507000	2535	19.84	20.90	1.276	-	-	0.15	0.972	1.241
58	FR1 n7	50M	QPSK	135	68	DFT-SCS-15KHz	Bottom Side	5mm	Ant 2	ECI 7	507000	2535	19.75	20.90	1.303	-	-	-0.15	0.987	1.286
	FR1 n7	50M	QPSK	270	0	DFT-SCS-15KHz	Bottom Side	5mm	Ant 2	ECI 7	507000	2535	19.59	20.90	1.352	-	-	0.03	0.947	1.280
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	518598	2592.99	20.25	21.50	1.334	-	-	-0.04	0.734	0.979



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	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	518598	2592.99	20.20	21.50	1.349	-	-	0.18	0.609	0.822
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	518598	2592.99	20.01	21.50	1.409	-	-	0	0.600	0.846
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	518598	2592.99	20.25	21.50	1.334	-	-	0.02	0.953	1.271
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	518598	2592.99	20.20	21.50	1.349	-	-	0.18	0.730	0.985
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	518598	2592.99	20.01	21.50	1.409	-	-	-0.02	0.688	0.970
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	518598	2592.99	20.25	21.50	1.334	-	-	0.11	0.071	0.095
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	518598	2592.99	20.20	21.50	1.349	-	-	-0.07	0.063	0.085
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	518598	2592.99	20.25	21.50	1.334	-	-	-0.16	0.776	1.035
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	518598	2592.99	20.20	21.50	1.349	-	-	0.14	0.637	0.859
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	518598	2592.99	20.01	21.50	1.409	-	-	0.03	0.595	0.839
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	518598	2592.99	20.25	21.50	1.334	-	-	0.14	0.864	1.152
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	518598	2592.99	20.20	21.50	1.349	-	-	0.12	0.851	1.148
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	518598	2592.99	20.01	21.50	1.409	-	-	0.1	0.800	1.127
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	518598	2592.99	20.25	21.50	1.334	-	-	0.05	0.888	1.184
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	ECI 7	518598	2592.99	12.95	13.90	1.245	-	-	-0.08	0.169	0.210
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 1	ECI 7	518598	2592.99	12.79	13.90	1.291	-	-	0.13	0.169	0.218
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	ECI 7	518598	2592.99	12.95	13.90	1.245	-	-	0.03	0.338	0.421
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 1	ECI 7	518598	2592.99	12.79	13.90	1.291	-	-	0.18	0.308	0.398
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 1	ECI 7	518598	2592.99	12.95	13.90	1.245	-	-	0.12	0.206	0.256
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 1	ECI 7	518598	2592.99	12.79	13.90	1.291	-	-	0.04	0.208	0.269
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 1	ECI 7	518598	2592.99	12.95	13.90	1.245	-	-	0.03	0.011	0.014
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 1	ECI 7	518598	2592.99	12.79	13.90	1.291	-	-	0.06	0.009	0.012
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 1	ECI 7	518598	2592.99	12.95	13.90	1.245	-	-	0.03	0.458	0.570
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 1	ECI 7	518598	2592.99	12.79	13.90	1.291	-	-	-0.17	0.486	0.628
	FR1 n41 HPUE Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 1	ECI 7	518598	2592.99	12.79	13.90	1.291	-	-	-0.11	0.467	0.603
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	ECI 7	518598	2592.99	16.72	17.40	1.169	-	-	-0.04	0.197	0.230
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 0	ECI 7	518598	2592.99	16.56	17.40	1.213	-	-	0.16	0.235	0.285
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 7	518598	2592.99	16.72	17.40	1.169	-	-	0.02	0.823	0.962
59	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 7	518598	2592.99	16.56	17.40	1.213	-	-	0.04	1.050	1.274
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 7	518598	2592.99	16.42	17.40	1.253	-	-	-0.17	1.010	1.266
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 0	ECI 7	518598	2592.99	16.72	17.40	1.169	-	-	0.12	0.070	0.082
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 0	ECI 7	518598	2592.99	16.56	17.40	1.213	-	-	-0.01	0.097	0.118
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 0	ECI 7	518598	2592.99	16.72	17.40	1.169	-	-	0.02	0.032	0.037
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 0	ECI 7	518598	2592.99	16.56	17.40	1.213	-	-	-0.05	0.027	0.033
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	ECI 7	518598	2592.99	16.72	17.40	1.169	-	-	-0.13	0.420	0.491
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 0	ECI 7	518598	2592.99	16.56	17.40	1.213	-	-	0.09	0.505	0.613
	FR1 n41 HPUE Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	ECI 7	518598	2592.99	16.56	17.40	1.213	-	-	0.07	0.997	1.210
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 10	ECI 7	518598	2592.99	15.64	16.40	1.191	-	-	0.09	0.008	0.010
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 10	ECI 7	518598	2592.99	15.51	16.40	1.227	-	-	0.13	0.009	0.011
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 10	ECI 7	518598	2592.99	15.64	16.40	1.191	-	-	-0.08	0.376	0.448
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 10	ECI 7	518598	2592.99	15.51	16.40	1.227	-	-	-0.07	0.511	0.627
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 10	ECI 7	518598	2592.99	15.64	16.40	1.191	-	-	0.01	0.011	0.013
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 10	ECI 7	518598	2592.99	15.51	16.40	1.227	-	-	-0.19	0.010	0.012
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 10	ECI 7	518598	2592.99	15.64	16.40	1.191	-	-	0.06	0.041	0.049
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 10	ECI 7	518598	2592.99	15.51	16.40	1.227	-	-	0.18	0.038	0.047
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 10	ECI 7	518598	2592.99	15.64	16.40	1.191	-	-	-0.15	0.024	0.029
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 10	ECI 7	518598	2592.99	15.51	16.40	1.227	-	-	0.11	0.020	0.025
	FR1 n41 HPUE Main PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 10	ECI 7	518598	2592.99	15.59	16.40	1.205	-	-	0.03	0.487	0.587
3500MHz																				
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 4	ECI 7	42590	3500	13.87	14.80	1.239	62.9	1.006	0.07	0.104	0.130
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 4	ECI 7	42590	3500	13.73	14.80	1.279	62.9	1.006	0.18	0.087	0.112
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	42590	3500	13.87	14.80	1.239	62.9	1.006	-0.13	0.193	0.241
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 4	ECI 7	42590	3500	13.73	14.80	1.279	62.9	1.006	-0.07	0.196	0.252
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	42590	3500	13.87	14.80	1.239	62.9	1.006	0.13	0.487	0.607



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	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	42190	3460	13.66	14.80	1.300	62.9	1.006	-0.16	0.244	0.319
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	42990	3540	13.73	14.80	1.279	62.9	1.006	0.12	0.474	0.610
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI 7	42590	3500	13.73	14.80	1.279	62.9	1.006	0.12	0.380	0.489
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Left Side	5mm	Ant 4	ECI 7	42590	3500	13.52	14.80	1.343	62.9	1.006	0.05	0.034	0.046
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 4	ECI 7	42590	3500	13.87	14.80	1.239	62.9	1.006	-0.16	0.003	0.004
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 4	ECI 7	42590	3500	13.73	14.80	1.279	62.9	1.006	0.05	0.003	0.004
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	42590	3500	13.87	14.80	1.239	62.9	1.006	-0.01	0.022	0.027
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 4	ECI 7	42590	3500	13.73	14.80	1.279	62.9	1.006	0.17	0.018	0.023
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 7	ECI 7	42590	3500	16.72	17.90	1.312	62.9	1.006	0.11	0.286	0.378
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 7	ECI 7	42590	3500	16.64	17.90	1.337	62.9	1.006	-0.03	0.219	0.294
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 7	ECI 7	42590	3500	16.72	17.90	1.312	62.9	1.006	0.13	0.297	0.392
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 7	ECI 7	42590	3500	16.64	17.90	1.337	62.9	1.006	0.15	0.237	0.319
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 7	ECI 7	42590	3500	16.72	17.90	1.312	62.9	1.006	-0.06	0.041	0.054
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Side	5mm	Ant 7	ECI 7	42590	3500	16.64	17.90	1.337	62.9	1.006	0.18	0.038	0.051
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 7	ECI 7	42590	3500	16.72	17.90	1.312	62.9	1.006	-0.05	0.091	0.120
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 7	ECI 7	42590	3500	16.64	17.90	1.337	62.9	1.006	-0.07	0.069	0.093
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 7	ECI 7	42590	3500	16.72	17.90	1.312	62.9	1.006	-0.03	0.456	0.602
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 7	ECI 7	42190	3460	16.50	17.90	1.380	62.9	1.006	0.1	0.439	0.610
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 7	ECI 7	42990	3540	16.61	17.90	1.346	62.9	1.006	0.15	0.424	0.574
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 7	ECI 7	42590	3500	16.64	17.90	1.337	62.9	1.006	-0.15	0.360	0.484
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Top Side	5mm	Ant 7	ECI 7	42590	3500	16.41	17.90	1.409	62.9	1.006	0.15	0.341	0.483
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	42590	3500	22.87	23.40	1.130	62.9	1.006	0.11	0.712	0.809
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	42190	3460	22.75	23.40	1.161	62.9	1.006	-0.03	0.653	0.763
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	42990	3540	22.82	23.40	1.143	62.9	1.006	0.02	0.699	0.804
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	42590	3500	22.19	23.00	1.205	62.9	1.006	-0.16	0.601	0.729
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	42190	3460	21.98	23.00	1.265	62.9	1.006	-0.17	0.577	0.734
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	42990	3540	22.11	23.00	1.227	62.9	1.006	0.13	0.595	0.735
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Front	5mm	Ant 2	ECI 7	42590	3500	22.10	23.00	1.230	62.9	1.006	0.18	0.589	0.729
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	42590	3500	22.87	23.40	1.130	62.9	1.006	0.1	0.725	0.824
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	42190	3460	22.75	23.40	1.161	62.9	1.006	0.06	0.513	0.599
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	42990	3540	22.82	23.40	1.143	62.9	1.006	0.17	0.558	0.642
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	42590	3500	22.19	23.00	1.205	62.9	1.006	-0.14	0.712	0.863
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	42190	3460	21.98	23.00	1.265	62.9	1.006	-0.04	0.554	0.705
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	42990	3540	22.11	23.00	1.227	62.9	1.006	0	0.586	0.724
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Back	5mm	Ant 2	ECI 7	42590	3500	22.10	23.00	1.230	62.9	1.006	0.15	0.607	0.751
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	42590	3500	22.87	23.40	1.130	62.9	1.006	-0.13	0.123	0.140
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	42590	3500	22.19	23.00	1.205	62.9	1.006	0.12	0.103	0.125
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	ECI 7	42590	3500	22.87	23.40	1.130	62.9	1.006	0.06	0.947	1.076
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	ECI 7	42190	3460	22.75	23.40	1.161	62.9	1.006	-0.11	0.823	0.962
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	ECI 7	42990	3540	22.82	23.40	1.143	62.9	1.006	-0.17	0.856	0.984
60	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	ECI 7	42590	3500	22.19	23.00	1.205	62.9	1.006	0.16	0.889	1.078
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	ECI 7	42190	3460	21.98	23.00	1.265	62.9	1.006	0	0.777	0.989
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	ECI 7	42990	3540	22.11	23.00	1.227	62.9	1.006	0.06	0.692	0.854



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	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Right Side	5mm	Ant 2	ECI 7	42590	3500	22.10	23.00	1.230	62.9	1.006	-0.16	0.816	1.010
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	42590	3500	22.87	23.40	1.130	62.9	1.006	-0.18	0.877	0.997
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	42190	3460	22.75	23.40	1.161	62.9	1.006	0.05	0.842	0.984
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	42990	3540	22.82	23.40	1.143	62.9	1.006	-0.04	0.844	0.970
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	42590	3500	22.19	23.00	1.205	62.9	1.006	0.15	0.777	0.942
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	42190	3460	21.98	23.00	1.265	62.9	1.006	0.01	0.722	0.919
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	42990	3540	22.11	23.00	1.227	62.9	1.006	0.01	0.741	0.915
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 2	ECI 7	42590	3500	22.10	23.00	1.230	62.9	1.006	0.06	0.703	0.870
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 6	ECI 7	42590	3500	18.28	19.80	1.419	62.9	1.006	0.05	0.162	0.231
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 6	ECI 7	42590	3500	18.22	19.80	1.439	62.9	1.006	-0.12	0.109	0.158
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 6	ECI 7	42590	3500	18.28	19.80	1.419	62.9	1.006	-0.1	0.432	0.617
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 6	ECI 7	42190	3460	18.21	19.80	1.442	62.9	1.006	-0.08	0.429	0.622
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 6	ECI 7	42990	3540	18.21	19.80	1.442	62.9	1.006	0.18	0.314	0.456
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 6	ECI 7	42590	3500	18.22	19.80	1.439	62.9	1.006	-0.12	0.148	0.214
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Back	5mm	Ant 6	ECI 7	42590	3500	18.00	19.80	1.514	62.9	1.006	-0.09	0.145	0.221
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Left Side	5mm	Ant 6	ECI 7	42590	3500	18.28	19.80	1.419	62.9	1.006	-0.09	0.017	0.024
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Left Side	5mm	Ant 6	ECI 7	42590	3500	18.22	19.80	1.439	62.9	1.006	0.1	0.012	0.017
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 6	ECI 7	42590	3500	18.28	19.80	1.419	62.9	1.006	0.1	0.423	0.604
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 6	ECI 7	42190	3460	18.21	19.80	1.442	62.9	1.006	-0.04	0.436	0.633
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Right Side	5mm	Ant 6	ECI 7	42990	3540	18.21	19.80	1.442	62.9	1.006	-0.13	0.303	0.440
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Right Side	5mm	Ant 6	ECI 7	42590	3500	18.22	19.80	1.439	62.9	1.006	0.03	0.281	0.407
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Right Side	5mm	Ant 6	ECI 7	42590	3500	18.00	19.80	1.514	62.9	1.006	0.14	0.288	0.439
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Top Side	5mm	Ant 6	ECI 7	42590	3500	18.28	19.80	1.419	62.9	1.006	0.06	0.156	0.223
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Top Side	5mm	Ant 6	ECI 7	42590	3500	18.22	19.80	1.439	62.9	1.006	-0.1	0.121	0.175
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 4	ECI 7	55830	3609	13.38	14.70	1.355	62.9	1.006	0	0.096	0.131
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 4	ECI 7	55830	3609	13.31	14.70	1.377	62.9	1.006	0.12	0.077	0.107
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	ECI 7	55830	3609	13.38	14.70	1.355	62.9	1.006	-0.03	0.136	0.185
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 4	ECI 7	55830	3609	13.31	14.70	1.377	62.9	1.006	0.07	0.188	0.260
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	55830	3609	13.38	14.70	1.355	62.9	1.006	-0.06	0.443	0.604
	LTE Band 48C	20M	QPSK	1	99	-	Left Side	5mm	Ant 4	ECI 7	55830+ 56028	3609+ 3628.8	13.83	14.70	1.222	62.9	1.006	0.02	0.431	0.530
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	55340	3560	13.26	14.70	1.393	62.9	1.006	-0.12	0.382	0.535
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	56150	3641	13.33	14.70	1.371	62.9	1.006	0.06	0.416	0.574
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 4	ECI 7	56640	3690	13.13	14.70	1.435	62.9	1.006	-0.09	0.396	0.572
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 4	ECI 7	55830	3609	13.31	14.70	1.377	62.9	1.006	0.14	0.390	0.540
	LTE Band 48	20M	QPSK	100	0	-	Left Side	5mm	Ant 4	ECI 7	55830	3609	13.09	14.70	1.449	62.9	1.006	0.04	0.386	0.563
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 4	ECI 7	55830	3609	13.38	14.70	1.355	62.9	1.006	-0.15	0.003	0.004
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 4	ECI 7	55830	3609	13.31	14.70	1.377	62.9	1.006	0.07	0.003	0.004
	LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 4	ECI 7	55830	3609	13.38	14.70	1.355	62.9	1.006	-0.07	0.015	0.020
	LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 4	ECI 7	55830	3609	13.31	14.70	1.377	62.9	1.006	-0.16	0.013	0.018
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 7	ECI 7	55830	3609	16.32	17.70	1.374	62.9	1.006	-0.08	0.286	0.395
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 7	ECI 7	55830	3609	16.16	17.70	1.426	62.9	1.006	-0.07	0.242	0.347
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 7	ECI 7	55830	3609	16.32	17.70	1.374	62.9	1.006	-0.08	0.405	0.560
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 7	ECI 7	55830	3609	16.16	17.70	1.426	62.9	1.006	0.08	0.287	0.412
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 7	ECI 7	55830	3609	16.32	17.70	1.374	62.9	1.006	-0.14	0.032	0.044
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 7	ECI 7	55830	3609	16.16	17.70	1.426	62.9	1.006	-0.11	0.021	0.030
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 7	ECI 7	55830	3609	16.32	17.70	1.374	62.9	1.006	-0.1	0.086	0.119
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 7	ECI 7	55830	3609	16.16	17.70	1.426	62.9	1.006	0.08	0.068	0.098
	LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 7	ECI 7	55830	3609	16.32	17.70	1.374	62.9	1.006	-0.07	0.435	0.601



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	LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 7	ECI 7	55340	3560	16.43	17.70	1.340	62.9	1.006	-0.09	0.453	0.611
	LTE Band 48C	20M	QPSK	1	99	-	Top Side	5mm	Ant 7	ECI 7	55340+ 55538	3560+ 3579.8	16.42	17.70	1.343	62.9	1.006	0.01	0.432	0.584
	LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 7	ECI 7	56150	3641	16.11	17.70	1.442	62.9	1.006	-0.07	0.375	0.544
	LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 7	ECI 7	56640	3690	16.22	17.70	1.406	62.9	1.006	-0.01	0.353	0.499
	LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 7	ECI 7	55830	3609	16.16	17.70	1.426	62.9	1.006	0.16	0.375	0.538
	LTE Band 48	20M	QPSK	100	0	-	Top Side	5mm	Ant 7	ECI 7	55830	3609	15.84	17.70	1.535	62.9	1.006	0.05	0.315	0.486
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 2	ECI 7	55830	3609	20.40	21.30	1.230	62.9	1.006	-0.13	0.287	0.355
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 2	ECI 7	55830	3609	20.22	21.30	1.282	62.9	1.006	0.03	0.271	0.350
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 2	ECI 7	55830	3609	20.40	21.30	1.230	62.9	1.006	0.08	0.315	0.390
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 2	ECI 7	55830	3609	20.22	21.30	1.282	62.9	1.006	0.17	0.272	0.351
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	ECI 7	55830	3609	20.40	21.30	1.230	62.9	1.006	-0.15	0.031	0.038
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	ECI 7	55830	3609	20.22	21.30	1.282	62.9	1.006	0.06	0.025	0.032
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 2	ECI 7	55830	3609	20.40	21.30	1.230	62.9	1.006	0.11	0.330	0.408
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 2	ECI 7	55830	3609	20.22	21.30	1.282	62.9	1.006	0.04	0.346	0.446
	LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	55830	3609	20.40	21.30	1.230	62.9	1.006	-0.05	0.793	0.981
61	LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	55340	3560	20.65	21.30	1.161	62.9	1.006	-0.07	1.070	1.250
	LTE Band 48C	20M	QPSK	1	99	-	Bottom Side	5mm	Ant 2	ECI 7	55340+ 55538	3560+ 3579.8	20.59	21.30	1.178	62.9	1.006	0.02	0.985	1.167
	LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	56150	3641	20.54	21.30	1.191	62.9	1.006	0.02	0.916	1.098
	LTE Band 48	20M	QPSK	1	0	-	Bottom Side	5mm	Ant 2	ECI 7	56640	3690	20.46	21.30	1.213	62.9	1.006	0.05	0.519	0.634
	LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	55830	3609	20.22	21.30	1.282	62.9	1.006	0.06	0.796	1.027
	LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	55340	3560	20.51	21.30	1.199	62.9	1.006	-0.13	0.932	1.125
	LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	56150	3641	20.44	21.30	1.219	62.9	1.006	0.07	0.749	0.919
	LTE Band 48	20M	QPSK	50	0	-	Bottom Side	5mm	Ant 2	ECI 7	56640	3690	20.39	21.30	1.233	62.9	1.006	0.17	0.428	0.531
	LTE Band 48	20M	QPSK	100	0	-	Bottom Side	5mm	Ant 2	ECI 7	55830	3609	20.04	21.30	1.337	62.9	1.006	0.1	0.818	1.100
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 6	ECI 7	55830	3609	18.90	20.00	1.288	62.9	1.006	-0.06	0.183	0.237
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 6	ECI 7	55830	3609	18.70	20.00	1.349	62.9	1.006	0.05	0.136	0.185
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 6	ECI 7	55830	3609	18.90	20.00	1.288	62.9	1.006	0.13	0.467	0.605
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 6	ECI 7	55340	3560	18.80	20.00	1.318	62.9	1.006	0.05	0.483	0.641
	LTE Band 48C	20M	QPSK	1	99	-	Back	5mm	Ant 6	ECI 7	55340+ 55538	3560+ 3579.8	18.50	20.00	1.413	62.9	1.006	-0.01	0.422	0.600
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 6	ECI 7	56150	3641	19.05	20.00	1.245	62.9	1.006	-0.02	0.346	0.433
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 6	ECI 7	56640	3690	18.91	20.00	1.285	62.9	1.006	0.05	0.304	0.393
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 6	ECI 7	55830	3609	18.70	20.00	1.349	62.9	1.006	0.07	0.289	0.392
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 6	ECI 7	55830	3609	18.60	20.00	1.380	62.9	1.006	-0.17	0.301	0.418
	LTE Band 48	20M	QPSK	1	0	-	Left Side	5mm	Ant 6	ECI 7	55830	3609	18.90	20.00	1.288	62.9	1.006	0.04	0.000	0.000
	LTE Band 48	20M	QPSK	50	0	-	Left Side	5mm	Ant 6	ECI 7	55830	3609	18.70	20.00	1.349	62.9	1.006	-0.13	0.000	0.000
	LTE Band 48	20M	QPSK	1	0	-	Right Side	5mm	Ant 6	ECI 7	55830	3609	18.90	20.00	1.288	62.9	1.006	0	0.331	0.429
	LTE Band 48	20M	QPSK	50	0	-	Right Side	5mm	Ant 6	ECI 7	55830	3609	18.70	20.00	1.349	62.9	1.006	0.04	0.299	0.406
	LTE Band 48	20M	QPSK	1	0	-	Top Side	5mm	Ant 6	ECI 7	55830	3609	18.90	20.00	1.288	62.9	1.006	-0.07	0.181	0.235
	LTE Band 48	20M	QPSK	50	0	-	Top Side	5mm	Ant 6	ECI 7	55830	3609	18.70	20.00	1.349	62.9	1.006	0.15	0.156	0.212
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	ECI 7	641666	3624.99	11.57	12.50	1.239	-	-	0.07	0.124	0.154
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Front	5mm	Ant 4	ECI 7	641666	3624.99	11.48	12.50	1.265	-	-	-0.08	0.099	0.125
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	ECI 7	641666	3624.99	11.57	12.50	1.239	-	-	0.01	0.268	0.332
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Back	5mm	Ant 4	ECI 7	641666	3624.99	11.48	12.50	1.265	-	-	-0.12	0.173	0.219
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	641666	3624.99	11.57	12.50	1.239	-	-	-0.17	0.375	0.465
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	641666	3624.99	11.48	12.50	1.265	-	-	-0.04	0.496	0.627
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 4	ECI 7	641666	3624.99	11.57	12.50	1.239	-	-	-0.17	0.002	0.002
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Right Side	5mm	Ant 4	ECI 7	641666	3624.99	11.48	12.50	1.265	-	-	-0.01	0.003	0.004
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECI 7	641666	3624.99	11.57	12.50	1.239	-	-	-0.01	0.020	0.025
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECI 7	641666	3624.99	11.48	12.50	1.265	-	-	-0.15	0.016	0.020
	FR1 n48 Other PA	40M	QPSK	108	54	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	641666	3624.99	11.39	12.50	1.291	-	-	0.07	0.475	0.613
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	ECI 7	641666	3624.99	13.26	14.70	1.393	-	-	-0.07	0.305	0.425
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Front	5mm	Ant 7	ECI 7	641666	3624.99	13.08	14.70	1.452	-	-	-0.13	0.291	0.423
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 7	641666	3624.99	13.26	14.70	1.393	-	-	-0.11	0.291	0.405
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 7	641666	3624.99	13.08	14.70	1.452	-	-	0.04	0.299	0.434
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 7	ECI 7	641666	3624.99	13.26	14.70	1.393	-	-	0.02	0.017	0.024



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	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Left Side	5mm	Ant 7	ECI 7	6416663624.99	13.08	14.70	1.452	-	-	0.18	0.014	0.020
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECI 7	6416663624.99	13.26	14.70	1.393	-	-	-0.05	0.097	0.135
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECI 7	6416663624.99	13.08	14.70	1.452	-	-	0.05	0.096	0.139
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	6416663624.99	13.26	14.70	1.393	-	-	0.09	0.433	0.603
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	6416663624.99	13.08	14.70	1.452	-	-	-0.08	0.437	0.635
	FR1 n48 Main PA	40M	QPSK	108	54	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	6416663624.99	13.22	14.70	1.406	-	-	0.05	0.422	0.593
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	6416663624.99	16.06	16.90	1.213	-	-	-0.15	0.275	0.334
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	6416663624.99	15.95	16.90	1.245	-	-	0.17	0.341	0.424
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	6416663624.99	16.06	16.90	1.213	-	-	0.14	0.309	0.375
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	6416663624.99	15.95	16.90	1.245	-	-	-0.04	0.357	0.444
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	6416663624.99	16.06	16.90	1.213	-	-	-0.11	0.037	0.045
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	6416663624.99	15.95	16.90	1.245	-	-	0.14	0.030	0.037
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	6416663624.99	16.06	16.90	1.213	-	-	-0.11	0.361	0.438
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	6416663624.99	15.95	16.90	1.245	-	-	-0.07	0.281	0.350
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	6416663624.99	16.06	16.90	1.213	-	-	-0.02	0.847	1.028
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	638000 3570	15.99	16.90	1.233	-	-	-0.07	0.833	1.027
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	6453323679.98	15.92	16.90	1.253	-	-	0.08	0.816	1.023
62	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	6416663624.99	15.95	16.90	1.245	-	-	-0.06	1.040	1.294
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	638000 3570	15.79	16.90	1.291	-	-	0.15	0.987	1.274
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	6453323679.98	15.84	16.90	1.276	-	-	-0.09	0.974	1.243
	FR1 n48	40M	QPSK	216	0	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	6416663624.99	15.74	16.90	1.306	-	-	-0.06	0.811	1.059
	FR1 n48 Other PA	40M	QPSK	108	54	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	6416663624.99	15.87	16.90	1.268	-	-	0.02	0.994	1.260
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 6	ECI 7	6416663624.99	17.05	18.30	1.334	-	-	-0.01	0.189	0.252
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Front	5mm	Ant 6	ECI 7	6416663624.99	16.98	18.30	1.355	-	-	-0.07	0.161	0.218
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	6416663624.99	17.05	18.30	1.334	-	-	-0.04	0.464	0.619
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	6416663624.99	16.98	18.30	1.355	-	-	-0.17	0.294	0.398
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	6416663624.99	17.05	18.30	1.334	-	-	0.08	0.022	0.029
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	6416663624.99	16.98	18.30	1.355	-	-	-0.11	0.017	0.023
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 6	ECI 7	6416663624.99	17.05	18.30	1.334	-	-	-0.05	0.354	0.472
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Right Side	5mm	Ant 6	ECI 7	6416663624.99	16.98	18.30	1.355	-	-	0.1	0.239	0.324
	FR1 n48	40M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 6	ECI 7	6416663624.99	17.05	18.30	1.334	-	-	-0.06	0.160	0.213
	FR1 n48	40M	QPSK	108	54	DFT-SCS-30KHz	Top Side	5mm	Ant 6	ECI 7	6416663624.99	16.98	18.30	1.355	-	-	-0.08	0.149	0.202
	FR1 n48 Other PA	40M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	6416663624.99	17.01	18.30	1.346	-	-	0.1	0.442	0.595
	FR1 n77 Part 270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	ECI 7	656000 3840	11.76	13.00	1.330	-	-	-0.01	0.079	0.105
	FR1 n77 Part 270 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	ECI 7	656000 3840	11.68	13.00	1.355	-	-	-0.06	0.084	0.114
	FR1 n77 Part 270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	ECI 7	656000 3840	11.76	13.00	1.330	-	-	-0.08	0.260	0.346
	FR1 n77 Part 270 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	ECI 7	656000 3840	11.68	13.00	1.355	-	-	0.04	0.242	0.328
	FR1 n77 Part 270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	656000 3840	11.76	13.00	1.330	-	-	-0.02	0.468	0.623
	FR1 n77 Part 270 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	656000 3840	11.68	13.00	1.355	-	-	-0.18	0.379	0.514
	FR1 n77 Part 270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 4	ECI 7	656000 3840	11.76	13.00	1.330	-	-	-0.02	0.003	0.004
	FR1 n77 Part 270 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 4	ECI 7	656000 3840	11.68	13.00	1.355	-	-	0.03	0.003	0.004
	FR1 n77 Part 270 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECI 7	656000 3840	11.76	13.00	1.330	-	-	-0.13	0.002	0.003
	FR1 n77 Part 270 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECI 7	656000 3840	11.68	13.00	1.355	-	-	-0.12	0.002	0.003
	FR1 n77 Part 270 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	656000 3840	11.66	13.00	1.361	-	-	0.19	0.444	0.604
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 4	ECI 7	6333323499.98	11.84	13.00	1.306	-	-	0.03	0.080	0.104
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 4	ECI 7	6333323499.98	11.72	13.00	1.343	-	-	-0.06	0.113	0.152
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 4	ECI 7	6333323499.98	11.84	13.00	1.306	-	-	0.02	0.176	0.230
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 4	ECI 7	6333323499.98	11.72	13.00	1.343	-	-	-0.15	0.211	0.283
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	6333323499.98	11.84	13.00	1.306	-	-	-0.02	0.247	0.323
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	6333323499.98	11.72	13.00	1.343	-	-	-0.04	0.437	0.587
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 4	ECI 7	6333323499.98	11.84	13.00	1.306	-	-	-0.05	0.002	0.003



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	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 4	ECI 7	633332	3499.98	11.72	13.00	1.343	-	-	0.18	0.001	0.001
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECI 7	633332	3499.98	11.84	13.00	1.306	-	-	-0.06	0.022	0.029
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 4	ECI 7	633332	3499.98	11.72	13.00	1.343	-	-	-0.05	0.028	0.038
	FR1 n77 Part 27Q Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 4	ECI 7	633332	3499.98	11.61	13.00	1.377	-	-	-0.09	0.321	0.442
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	ECI 7	656000	3840	12.72	14.10	1.374	-	-	-0.15	0.241	0.331
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 7	ECI 7	656000	3840	12.63	14.10	1.403	-	-	-0.04	0.303	0.425
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 7	656000	3840	12.72	14.10	1.374	-	-	-0.14	0.249	0.342
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 7	656000	3840	12.63	14.10	1.403	-	-	-0.13	0.287	0.403
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 7	ECI 7	656000	3840	12.72	14.10	1.374	-	-	0.07	0.021	0.029
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 7	ECI 7	656000	3840	12.63	14.10	1.403	-	-	0.1	0.020	0.028
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECI 7	656000	3840	12.72	14.10	1.374	-	-	-0.17	0.078	0.107
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECI 7	656000	3840	12.63	14.10	1.403	-	-	-0.1	0.093	0.130
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	656000	3840	12.72	14.10	1.374	-	-	0.19	0.387	0.532
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	656000	3840	12.63	14.10	1.403	-	-	0.11	0.490	0.687
PA	FR1 n77 Part 27Q HPUE Other	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	656000	3840	12.70	14.10	1.380	-	-	0.06	0.409	0.565
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 7	ECI 7	633332	3499.98	12.41	14.10	1.476	-	-	0.18	0.315	0.465
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 7	ECI 7	633332	3499.98	12.25	14.10	1.531	-	-	-0.04	0.302	0.462
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 7	633332	3499.98	12.41	14.10	1.476	-	-	0.03	0.328	0.484
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 7	ECI 7	633332	3499.98	12.25	14.10	1.531	-	-	-0.08	0.426	0.652
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 7	ECI 7	633332	3499.98	12.41	14.10	1.476	-	-	0.09	0.021	0.031
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 7	ECI 7	633332	3499.98	12.25	14.10	1.531	-	-	0.07	0.020	0.031
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECI 7	633332	3499.98	12.41	14.10	1.476	-	-	0.01	0.105	0.155
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 7	ECI 7	633332	3499.98	12.25	14.10	1.531	-	-	-0.19	0.097	0.149
	FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	633332	3499.98	12.41	14.10	1.476	-	-	0.15	0.347	0.512
	FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	633332	3499.98	12.25	14.10	1.531	-	-	-0.01	0.449	0.687
	FR1 n77 Part 27Q HPUE Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 7	ECI 7	633332	3499.98	12.32	14.10	1.507	-	-	0.01	0.381	0.574
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	656000	3840	17.95	19.30	1.365	-	-	0.05	0.350	0.478
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	656000	3840	17.86	19.30	1.393	-	-	0.13	0.387	0.539
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	656000	3840	17.95	19.30	1.365	-	-	-0.09	0.419	0.572
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	656000	3840	17.86	19.30	1.393	-	-	-0.06	0.454	0.632
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	656000	3840	17.95	19.30	1.365	-	-	-0.05	0.033	0.045
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	656000	3840	17.86	19.30	1.393	-	-	0.03	0.049	0.068
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	656000	3840	17.95	19.30	1.365	-	-	-0.09	0.108	0.147
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	656000	3840	17.86	19.30	1.393	-	-	-0.04	0.115	0.160
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	656000	3840	17.95	19.30	1.365	-	-	-0.08	0.573	0.782
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	656000	3840	17.86	19.30	1.393	-	-	0.15	0.470	0.655
	FR1 n77 Part 27Q Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	656000	3840	17.88	19.30	1.387	-	-	-0.07	0.439	0.609
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	633332	3499.98	18.06	19.30	1.330	-	-	0	0.385	0.512
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	ECI 7	633332	3499.98	17.90	19.30	1.380	-	-	0.06	0.309	0.427
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	633332	3499.98	18.06	19.30	1.330	-	-	-0.08	0.435	0.579
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	ECI 7	633332	3499.98	17.90	19.30	1.380	-	-	-0.01	0.363	0.501
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	633332	3499.98	18.06	19.30	1.330	-	-	0.19	0.046	0.061
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	ECI 7	633332	3499.98	17.90	19.30	1.380	-	-	-0.01	0.044	0.061
63	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	633332	3499.98	18.06	19.30	1.330	-	-	0.1	0.814	1.083
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	633332	3499.98	17.90	19.30	1.380	-	-	-0.12	0.703	0.970
	FR1 n77 Part 27Q HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	633332	3499.98	17.73	19.30	1.435	-	-	0.11	0.584	0.838
	FR1 n77 Part 27Q HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	633332	3499.98	18.06	19.30	1.330	-	-	-0.12	0.388	0.516
	FR1 n77 Part 27Q HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	5mm	Ant 2	ECI 7	633332	3499.98	17.90	19.30	1.380	-	-	-0.13	0.404	0.558



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FR1 n77 Part 27Q Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 2	ECI 7	633332	3499.98	18.00	19.30	1.349	-	-	-0.01	0.640	0.863
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 6	ECI 7	656000	3840	15.41	16.50	1.285	-	-	0.19	0.162	0.208
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 6	ECI 7	656000	3840	15.36	16.50	1.300	-	-	-0.06	0.205	0.267
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	656000	3840	15.41	16.50	1.285	-	-	-0.01	0.221	0.284
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	656000	3840	15.36	16.50	1.300	-	-	0.16	0.207	0.269
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	656000	3840	15.41	16.50	1.285	-	-	-0.14	0.011	0.014
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	656000	3840	15.36	16.50	1.300	-	-	-0.1	0.008	0.010
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 6	ECI 7	656000	3840	15.41	16.50	1.285	-	-	0.12	0.194	0.249
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 6	ECI 7	656000	3840	15.36	16.50	1.300	-	-	-0.16	0.203	0.264
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 6	ECI 7	656000	3840	15.41	16.50	1.285	-	-	-0.17	0.130	0.167
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 6	ECI 7	656000	3840	15.36	16.50	1.300	-	-	-0.1	0.146	0.190
FR1 n77 Part 27Q HPUE Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	656000	3840	15.31	16.50	1.315	-	-	0.04	0.215	0.283
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 6	ECI 7	633332	3499.98	15.17	16.50	1.358	-	-	-0.06	0.208	0.283
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 6	ECI 7	633332	3499.98	15.06	16.50	1.393	-	-	0.16	0.185	0.258
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	633332	3499.98	15.17	16.50	1.358	-	-	-0.11	0.388	0.527
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 6	ECI 7	633332	3499.98	15.06	16.50	1.393	-	-	-0.02	0.458	0.638
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	633332	3499.98	15.17	16.50	1.358	-	-	0.1	0.010	0.014
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 6	ECI 7	633332	3499.98	15.06	16.50	1.393	-	-	0.18	0.009	0.013
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Right Side	5mm	Ant 6	ECI 7	633332	3499.98	15.17	16.50	1.358	-	-	0.06	0.432	0.587
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 6	ECI 7	633332	3499.98	15.06	16.50	1.393	-	-	-0.01	0.474	0.660
FR1 n77 Part 27Q	100M	QPSK	1	1	DFT-SCS-30KHz	Top Side	5mm	Ant 6	ECI 7	633332	3499.98	15.17	16.50	1.358	-	-	-0.1	0.221	0.300
FR1 n77 Part 27Q	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 6	ECI 7	633332	3499.98	15.06	16.50	1.393	-	-	0.09	0.225	0.313
FR1 n77 Part 27Q HPUE Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	5mm	Ant 6	ECI 7	633332	3499.98	14.92	16.50	1.439	-	-	-0.13	0.434	0.624

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)
WLAN/BT																
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 3+5(3)	Simultaneous	6	2437	15.82	17.00	1.312	99.52	1.005	0.02	0.164	0.216
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3+5(3)	Simultaneous	6	2437	15.82	17.00	1.312	99.52	1.005	0.07	0.362	0.477
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 3+5(3)	Simultaneous	6	2437	15.82	17.00	1.312	99.52	1.005	0.01	0.000	0.000
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 3+5(3)	Simultaneous	6	2437	15.82	17.00	1.312	99.52	1.005	-0.14	0.192	0.253
	WLAN2.4GHz	802.11b 1Mbps	Top Side	5mm	Ant 3+5(3)	Simultaneous	6	2437	15.82	17.00	1.312	99.52	1.005	0.17	0.312	0.411
64	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3+5(3)	Simultaneous	1	2412	15.53	17.00	1.403	99.52	1.005	-0.15	0.477	0.672
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3+5(3)	Simultaneous	11	2462	15.38	17.00	1.452	99.52	1.005	-0.05	0.378	0.552
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3+5(3)	DBS Simultaneous	1	2412	12.51	14.00	1.409	99.52	1.005	0.08	0.185	0.262
	Bluetooth	1Mbps	Front	5mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	0.09	0.043	0.064
	Bluetooth	1Mbps	Back	5mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	-0.02	0.049	0.073
	Bluetooth	1Mbps	Left Side	5mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	-0.08	0.000	0.000
	Bluetooth	1Mbps	Right Side	5mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	-0.02	0.029	0.043
65	Bluetooth	1Mbps	Top Side	5mm	Ant3	Full power	39	2441	16.65	18.00	1.365	76.8	1.085	0.08	0.090	0.133
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Ant 6+7(6)	Simultaneous	46	5230	11.81	13.00	1.315	94.2	1.062	0.18	0.141	0.197
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Ant 6+7(6)	Simultaneous	46	5230	11.81	13.00	1.315	94.2	1.062	0.16	0.256	0.358
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	5mm	Ant 6+7(6)	Simultaneous	46	5230	11.81	13.00	1.315	94.2	1.062	-0.1	0.015	0.021
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	5mm	Ant 6+7(6)	Simultaneous	46	5230	11.81	13.00	1.315	94.2	1.062	0.07	0.166	0.232
66	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	5mm	Ant 6+7(6)	Simultaneous	46	5230	11.81	13.00	1.315	94.2	1.062	-0.09	0.436	0.609
	WLAN5.2GHz	802.11n-HT40 MCS0	Top Side	5mm	Ant 6+7(6)	Simultaneous	38	5190	11.47	13.00	1.422	94.2	1.062	0.18	0.355	0.536
	WLAN5.2GHz	802.11ac-VHT80 MCS0	Top Side	5mm	Ant 6+7(6)	DBS Simultaneous	42	5210	8.55	10.00	1.396	86.49	1.156	-0.1	0.225	0.363
	WLAN5.8GHz	802.11ac VHT80 MCS0	Front	5mm	Ant 6+7(6)	Simultaneous	155	5775	11.67	13.00	1.358	86.49	1.156	0.05	0.108	0.170
	WLAN5.8GHz	802.11ac VHT80 MCS0	Back	5mm	Ant 6+7(6)	Simultaneous	155	5775	11.67	13.00	1.358	86.49	1.156	-0.03	0.135	0.212
	WLAN5.8GHz	802.11ac VHT80 MCS0	Left Side	5mm	Ant 6+7(6)	Simultaneous	155	5775	11.67	13.00	1.358	86.49	1.156	-0.15	0.026	0.041
	WLAN5.8GHz	802.11ac VHT80 MCS0	Right Side	5mm	Ant 6+7(6)	Simultaneous	155	5775	11.67	13.00	1.358	86.49	1.156	0.02	0.106	0.166
67	WLAN5.8GHz	802.11ac VHT80 MCS0	Top Side	5mm	Ant 6+7(6)	Simultaneous	155	5775	11.67	13.00	1.358	86.49	1.156	0.02	0.378	0.594
	WLAN5.8GHz	802.11ac VHT80 MCS0	Top Side	5mm	Ant 6+7(7)	DBS Simultaneous	155	5775	8.48	10.00	1.419	86.49	1.156	0.07	0.215	0.353



16.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Headset	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																					
68	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI 3	133297	680.5	23.60	24.00	1.096	-	-	0.08	0.132	0.145
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 0	-	ECI 3	133297	680.5	22.68	23.00	1.076	-	-	0.01	0.090	0.097
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI 3	133297	680.5	23.60	24.00	1.096	-	-	-0.05	0.770	0.844
	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI 3	133297	680.5	22.68	23.00	1.076	-	-	0.03	0.523	0.563
	LTE Band 71	20M	QPSK	100	0	-	Back	5mm	Ant 0	-	ECI 3	133297	680.5	22.66	23.00	1.081	-	-	-0.08	0.246	0.266
	LTE Band 71	20M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	133297	680.5	22.61	24.00	1.377	-	-	0.11	0.235	0.324
	LTE Band 71	20M	QPSK	50	0	-	Front	5mm	Ant 1	-	ECI 3	133297	680.5	21.65	23.00	1.365	-	-	-0.05	0.146	0.199
	LTE Band 71	20M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	133297	680.5	22.61	24.00	1.377	-	-	-0.1	0.480	0.661
69	LTE Band 71	20M	QPSK	50	0	-	Back	5mm	Ant 1	-	ECI 3	133297	680.5	21.65	23.00	1.365	-	-	0.18	0.263	0.359
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI 3	23095	707.5	23.09	24.00	1.233	-	-	-0.01	0.267	0.329
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	ECI 3	23095	707.5	22.10	23.00	1.230	-	-	-0.08	0.189	0.233
	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI 3	23095	707.5	23.09	24.00	1.233	-	-	-0.02	0.844	1.041
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	ECI 3	23095	707.5	22.10	23.00	1.230	-	-	0.05	0.545	0.670
	LTE Band 12	10M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI 3	23095	707.5	22.12	23.00	1.225	-	-	0.06	0.553	0.677
	LTE Band 12	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	23095	707.5	22.88	24.00	1.294	-	-	-0.1	0.145	0.188
	LTE Band 12	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	ECI 3	23095	707.5	21.95	23.00	1.274	-	-	0.01	0.092	0.117
70	LTE Band 12	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	23095	707.5	22.88	24.00	1.294	-	-	-0.05	0.231	0.299
	LTE Band 12	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	ECI 3	23095	707.5	21.95	23.00	1.274	-	-	-0.15	0.189	0.241
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI 3	23230	782	22.96	24.00	1.271	-	-	0.11	0.276	0.351
	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	ECI 3	23230	782	22.00	23.00	1.259	-	-	-0.08	0.163	0.205
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI 3	23230	782	22.96	24.00	1.271	-	-	-0.05	0.704	0.894
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	ECI 3	23230	782	22.00	23.00	1.259	-	-	-0.17	0.473	0.595
	LTE Band 13	10M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI 3	23230	782	21.93	23.00	1.279	-	-	-0.08	0.386	0.494
	LTE Band 13	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	23230	782	22.85	24.00	1.303	-	-	-0.13	0.260	0.339
71	LTE Band 13	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	ECI 3	23230	782	21.84	23.00	1.306	-	-	0.06	0.147	0.192
	LTE Band 13	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	23230	782	22.85	24.00	1.303	-	-	-0.02	0.376	0.490
	LTE Band 13	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	ECI 3	23230	782	21.84	23.00	1.306	-	-	-0.03	0.300	0.392
	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 0	-	ECI 3	23330	793	22.74	24.00	1.337	-	-	-0.16	0.343	0.458
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 0	-	ECI 3	23330	793	21.79	23.00	1.321	-	-	-0.02	0.192	0.254
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 0	-	ECI 3	23330	793	22.74	24.00	1.337	-	-	-0.02	0.828	1.107
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 0	-	ECI 3	23330	793	21.79	23.00	1.321	-	-	0.15	0.514	0.679
	LTE Band 14	10M	QPSK	50	0	-	Back	5mm	Ant 0	-	ECI 3	23330	793	21.73	23.00	1.340	-	-	-0.09	0.459	0.615
72	LTE Band 14	10M	QPSK	1	0	-	Front	5mm	Ant 1	-	ECI 3	23330	793	22.69	24.00	1.352	-	-	-0.15	0.242	0.327
	LTE Band 14	10M	QPSK	25	0	-	Front	5mm	Ant 1	-	ECI 3	23330	793	21.72	23.00	1.343	-	-	0.02	0.143	0.192
	LTE Band 14	10M	QPSK	1	0	-	Back	5mm	Ant 1	-	ECI 3	23330	793	22.69	24.00	1.352	-	-	-0.01	0.409	0.553
	LTE Band 14	10M	QPSK	25	0	-	Back	5mm	Ant 1	-	ECI 3	23330	793	21.72	23.00	1.343	-	-	0.07	0.245	0.329
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	ECI 3	136100	680.5	23.21	24.00	1.199	-	-	0	0.189	0.227
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Front	5mm	Ant 0	-	ECI 3	136100	680.5	23.16	24.00	1.213	-	-	0.01	0.171	0.207
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	ECI 3	136100	680.5	23.21	24.00	1.199	-	-	0.01	0.582	0.698
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Back	5mm	Ant 0	-	ECI 3	136100	680.5	23.16	24.00	1.213	-	-	-0.01	0.496	0.602
73	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	-	ECI 3	136100	680.5	23.29	24.00	1.178	-	-	-0.01	0.179	0.211
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Front	5mm	Ant 1	-	ECI 3	136100	680.5	23.23	24.00	1.194	-	-	-0.09	0.180	0.215
	FR1 n71	35M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	-	ECI 3	136100	680.5	23.29	24.00	1.178	-	-	0.05	0.322	0.379
	FR1 n71	35M	QPSK	94	47	DFT-SCS-15KHz	Back	5mm	Ant 1	-	ECI 3	136100	680.5	23.23	24.00	1.194	-	-	-0.07	0.379	0.453
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 0	-	ECI 3	141500	707.5	23.00	24.00	1.259	-	-	-0.02	0.211	0.266
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Front	5mm	Ant 0	-	ECI 3	141500	707.5	22.94	24.00	1.276	-	-	0.1	0.194	0.248
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 0	-	ECI 3	141500	707.5	23.00	24.00	1.259	-	-	-0.09	0.554	0.697
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Back	5mm	Ant 0	-	ECI 3	141500	707.5	22.94	24.00	1.276	-	-	0.04	0.542	0.692
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Front	5mm	Ant 1	-	ECI 3	141500	707.5	23.16	24.00	1.213	-	-	0.12	0.125	0.152
	FR1 n12	15M	QPSK	36	22	DFT-SCS-15KHz	Front	5mm	Ant 1	-	ECI 3	141500	707.5	22.99	24.00	1.262	-	-	-0.16	0.101	0.127
	FR1 n12	15M	QPSK	1	1	DFT-SCS-15KHz	Back	5mm	Ant 1	-	ECI 3	141500	707.5	23.16	24.00	1.213	-	-	0.06	0.268	0.325



FCC SAR Test Report

Report No. : FA510740

	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 2	-	ECI 3	518598	2592.99	20.25	21.50	1.334	-	-	-0.04	0.734	0.979
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 2	-	ECI 3	518598	2592.99	20.20	21.50	1.349	-	-	0.18	0.609	0.822
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Front	5mm	Ant 2	-	ECI 3	518598	2592.99	20.01	21.50	1.409	-	-	0	0.600	0.846
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	-	ECI 3	518598	2592.99	20.25	21.50	1.334	-	-	0.02	0.953	1.271
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	-	ECI 3	518598	2592.99	20.20	21.50	1.349	-	-	0.18	0.730	0.985
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 2	-	ECI 3	518598	2592.99	20.01	21.50	1.409	-	-	-0.02	0.688	0.970
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	Headset	ECI 3	518598	2592.99	20.25	21.50	1.334	-	-	-0.09	0.914	1.219
	FR1 n41 Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	-	ECI 3	518598	2592.99	20.25	21.50	1.334	-	-	0.05	0.888	1.184
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 2	-	ECI 4	518598	2592.99	26.22	27.00	1.197	-	-	0.05	0.076	0.091
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 2	-	ECI 4	518598	2592.99	26.22	27.00	1.197	-	-	-0.11	0.077	0.092
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 1	-	ECI 3	518598	2592.99	17.95	18.70	1.189	-	-	-0.13	0.356	0.423
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 1	-	ECI 3	518598	2592.99	17.73	18.70	1.250	-	-	0	0.356	0.445
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	-	ECI 3	518598	2592.99	17.95	18.70	1.189	-	-	0.03	0.713	0.847
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 1	-	ECI 3	518598	2592.99	17.73	18.70	1.250	-	-	-0.15	0.651	0.814
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 1	-	ECI 3	518598	2592.99	17.61	18.70	1.285	-	-	-0.09	0.587	0.754
	FR1 n41 HPUE Other PA	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	-	ECI 3	518598	2592.99	17.95	18.70	1.189	-	-	-0.06	0.674	0.801
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	-	ECI 4	518598	2592.99	25.31	26.00	1.172	-	-	0.05	0.425	0.498
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	18mm	Ant 1	-	ECI 4	518598	2592.99	25.31	26.00	1.172	-	-	0.13	0.458	0.537
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 0	-	ECI 3	518598	2592.99	16.72	17.40	1.169	-	-	-0.04	0.197	0.230
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 0	-	ECI 3	518598	2592.99	16.56	17.40	1.213	-	-	0.16	0.235	0.285
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 0	-	ECI 3	518598	2592.99	16.72	17.40	1.169	-	-	0.02	0.823	0.962
92	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	-	ECI 3	518598	2592.99	16.56	17.40	1.213	-	-	0.04	1.050	1.274
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 0	-	ECI 3	518598	2592.99	16.42	17.40	1.253	-	-	-0.17	1.010	1.266
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	Headset	ECI 3	518598	2592.99	16.56	17.40	1.213	-	-	-0.07	0.962	1.167
	FR1 n41 HPUE Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 0	-	ECI 3	518598	2592.99	16.56	17.40	1.213	-	-	0.07	0.969	1.176
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 0	-	ECI 4	518598	2592.99	16.56	17.40	1.213	-	-	-0.17	0.122	0.148
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	18mm	Ant 0	-	ECI 4	518598	2592.99	16.56	17.40	1.213	-	-	0.04	0.237	0.288
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Front	5mm	Ant 10	-	ECI 3	518598	2592.99	17.14	18.00	1.219	-	-	0.1	0.011	0.013
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	5mm	Ant 10	-	ECI 3	518598	2592.99	16.99	18.00	1.262	-	-	-0.11	0.012	0.015
	FR1 n41 HPUE	100M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 10	-	ECI 3	518598	2592.99	17.14	18.00	1.219	-	-	-0.02	0.515	0.628
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 10	-	ECI 3	518598	2592.99	16.99	18.00	1.262	-	-	0.06	0.699	0.882
	FR1 n41 HPUE	100M	QPSK	270	0	DFT-SCS-30KHz	Back	5mm	Ant 10	-	ECI 3	518598	2592.99	16.76	18.00	1.330	-	-	-0.1	0.461	0.613
	FR1 n41 HPUE Other PA	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 10	-	ECI 3	518598	2592.99	16.94	18.00	1.276	-	-	-0.03	0.675	0.862
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 10	-	ECI 4	518598	2592.99	25.39	27.00	1.449	-	-	-0.01	0.221	0.320
	FR1 n41 HPUE	100M	QPSK	135	69	DFT-SCS-30KHz	Back	18mm	Ant 10	-	ECI 4	518598	2592.99	25.39	27.00	1.449	-	-	-0.08	0.242	0.351
3500MHz																					
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	ECI 3	42590	3500	17.74	18.80	1.276	62.9	1.006	0.14	0.259	0.333
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	ECI 3	42590	3500	17.59	18.80	1.321	62.9	1.006	-0.04	0.217	0.288
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	42590	3500	17.74	18.80	1.276	62.9	1.006	0.01	0.478	0.614
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	42190	3460	17.69	18.80	1.291	62.9	1.006	-0.06	0.361	0.469
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	42990	3540	17.54	18.80	1.337	62.9	1.006	-0.09	0.658	0.885
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	42590	3500	17.59	18.80	1.321	62.9	1.006	0.14	0.486	0.646
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	42190	3460	17.56	18.80	1.330	62.9	1.006	-0.09	0.382	0.511
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	42990	3540	17.53	18.80	1.340	62.9	1.006	-0.09	0.593	0.799
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	ECI 3	42590	3500	17.58	18.80	1.324	62.9	1.006	-0.12	0.476	0.634
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	15mm	Ant 4	-	ECI 4	42590	3500	23.04	24.00	1.247	62.9	1.006	0.05	0.305	0.383
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	18mm	Ant 4	-	ECI 4	42990	3540	22.89	24.00	1.291	62.9	1.006	0.06	0.552	0.717
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 7	-	ECI 3	42590	3500	19.71	20.60	1.227	62.9	1.006	-0.06	0.496	0.612
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 7	-	ECI 3	42190	3460	19.48	20.60	1.294	62.9	1.006	-0.19	0.465	0.605
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 7	-	ECI 3	42990	3540	19.40	20.60	1.318	62.9	1.006	0.09	0.488	0.647
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 7	-	ECI 3	42590	3500	19.57	20.60	1.268	62.9	1.006	0.13	0.379	0.483
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Front	5mm	Ant 7	-	ECI 3	42590	3500	19.47	20.60	1.297	62.9	1.006	-0.04	0.431	0.562
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 7	-	ECI 3	42590	3500	19.71	20.60	1.227	62.9	1.006	0.12	0.514	0.635



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	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 7	-	ECI 3	42190	3460	19.48	20.60	1.294	62.9	1.006	0.09	0.610	0.794
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 7	-	ECI 3	42990	3540	19.40	20.60	1.318	62.9	1.006	-0.09	0.663	0.879
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 7	-	ECI 3	42590	3500	19.57	20.60	1.268	62.9	1.006	-0.02	0.412	0.525
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Back	5mm	Ant 7	-	ECI 3	42590	3500	19.47	20.60	1.297	62.9	1.006	-0.06	0.408	0.532
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	15mm	Ant 7	-	ECI 4	42990	3540	19.40	20.60	1.318	62.9	1.006	0.13	0.191	0.253
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	18mm	Ant 7	-	ECI 4	42990	3540	19.40	20.60	1.318	62.9	1.006	0.12	0.162	0.215
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	ECI 3	42590	3500	23.15	24.00	1.216	62.9	1.006	0.08	0.959	1.173
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	ECI 3	42190	3460	23.13	24.00	1.222	62.9	1.006	-0.07	0.880	1.082
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 2	-	ECI 3	42990	3540	23.00	24.00	1.259	62.9	1.006	0.11	0.942	1.193
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	ECI 3	42590	3500	22.19	23.00	1.205	62.9	1.006	-0.13	0.810	0.982
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	ECI 3	42190	3460	22.16	23.00	1.213	62.9	1.006	0.04	0.778	0.950
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 2	-	ECI 3	42990	3540	22.11	23.00	1.227	62.9	1.006	0.17	0.801	0.989
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Front	5mm	Ant 2	-	ECI 3	42590	3500	22.18	23.00	1.208	62.9	1.006	-0.1	0.794	0.965
93	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	ECI 3	42590	3500	23.15	24.00	1.216	62.9	1.006	0.1	0.977	1.195
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	ECI 3	42190	3460	23.13	24.00	1.222	62.9	1.006	0.17	0.693	0.852
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 2	-	ECI 3	42990	3540	23.00	24.00	1.259	62.9	1.006	-0.15	0.753	0.954
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	ECI 3	42590	3500	22.19	23.00	1.205	62.9	1.006	0.18	0.959	1.163
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	ECI 3	42190	3460	22.16	23.00	1.213	62.9	1.006	0.05	0.747	0.912
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 2	-	ECI 3	42990	3540	22.11	23.00	1.227	62.9	1.006	0.04	0.790	0.975
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Back	5mm	Ant 2	-	ECI 3	42590	3500	22.18	23.00	1.208	62.9	1.006	0.15	0.818	0.994
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	5mm	Ant 6	-	ECI 3	42590	3500	19.62	20.90	1.343	62.9	1.006	0.03	0.245	0.331
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Front	5mm	Ant 6	-	ECI 3	42590	3500	19.59	20.90	1.352	62.9	1.006	-0.16	0.166	0.226
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Front	5mm	Ant 6	-	ECI 3	42590	3500	19.57	20.90	1.358	62.9	1.006	-0.02	0.169	0.231
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 6	-	ECI 3	42590	3500	19.62	20.90	1.343	62.9	1.006	0.1	0.550	0.743
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 6	-	ECI 3	42190	3460	19.59	20.90	1.352	62.9	1.006	-0.08	0.651	0.885
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	5mm	Ant 6	-	ECI 3	42990	3540	19.50	20.90	1.380	62.9	1.006	-0.1	0.477	0.662
	LTE Band 42 Part 27Q	20M	QPSK	50	0	-	Back	5mm	Ant 6	-	ECI 3	42590	3500	19.59	20.90	1.352	62.9	1.006	-0.05	0.224	0.305
	LTE Band 42 Part 27Q	20M	QPSK	100	0	-	Back	5mm	Ant 6	-	ECI 3	42590	3500	19.57	20.90	1.358	62.9	1.006	-0.09	0.220	0.301
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Front	15mm	Ant 6	-	ECI 4	42590	3500	21.96	23.00	1.271	62.9	1.006	0.16	0.119	0.152
	LTE Band 42 Part 27Q	20M	QPSK	1	0	-	Back	18mm	Ant 6	-	ECI 4	42190	3460	21.94	23.00	1.276	62.9	1.006	-0.1	0.160	0.205
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 4	-	ECI 3	55830	3609	17.34	18.60	1.337	62.9	1.006	0.03	0.289	0.389
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 4	-	ECI 3	55830	3609	17.29	18.60	1.352	62.9	1.006	-0.15	0.231	0.314
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	55830	3609	17.34	18.60	1.337	62.9	1.006	-0.03	0.651	0.875
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	55340	3560	17.53	18.60	1.279	62.9	1.006	0.13	0.594	0.765
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	56150	3641	17.31	18.60	1.346	62.9	1.006	-0.02	0.649	0.879
	LTE Band 48C	20M	QPSK	1	99	-	Back	5mm	Ant 4	-	ECI 3	56150+56348	3641+3660.8	17.46	18.60	1.300	62.9	1.006	0.08	0.621	0.812
	LTE Band 48	20M	QPSK	1	0	-	Back	5mm	Ant 4	-	ECI 3	56640	3690	17.31	18.60	1.346	62.9	1.006	0	0.570	0.772
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	55830	3609	17.29	18.60	1.352	62.9	1.006	0.1	0.566	0.770
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	55340	3560	17.39	18.60	1.321	62.9	1.006	0.13	0.530	0.704
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	56150	3641	17.32	18.60	1.343	62.9	1.006	-0.04	0.561	0.758
	LTE Band 48	20M	QPSK	50	0	-	Back	5mm	Ant 4	-	ECI 3	56640	3690	17.38	18.60	1.324	62.9	1.006	-0.12	0.492	0.655
	LTE Band 48	20M	QPSK	100	0	-	Back	5mm	Ant 4	-	ECI 3	55830	3609	17.32	18.60	1.343	62.9	1.006	-0.07	0.636	0.859
	LTE Band 48	20M	QPSK	1	0	-	Front	15mm	Ant 4	-	ECI 4	55830	3609	23.33	24.00	1.167	62.9	1.006	0.01	0.221	0.259
	LTE Band 48	20M	QPSK	1	0	-	Back	18mm	Ant 4	-	ECI 4	56150	3641	23.29	24.00	1.178	62.9	1.006	-0.15	0.389	0.461
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 7	-	ECI 3	55830	3609	18.92	20.30	1.374	62.9	1.006	-0.03	0.449	0.621
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 7	-	ECI 3	55340	3560	19.25	20.30	1.274	62.9	1.006	-0.13	0.549	0.703
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 7	-	ECI 3	56150	3641	18.95	20.30	1.365	62.9	1.006	0.05	0.434	0.596
	LTE Band 48	20M	QPSK	1	0	-	Front	5mm	Ant 7	-	ECI 3	56640	3690	19.06	20.30	1.330	62.9	1.006	-0.15	0.374	0.501
	LTE Band 48	20M	QPSK	50	0	-	Front	5mm	Ant 7	-	ECI 3	55830	3609	18.91	20.30	1.377	62.9	1.006	-0.11	0.379	0.525
	LTE Band 48	20M	QPSK	100	0	-	Front	5mm	Ant 7	-	ECI 3	55830	3609	19.06	20.30	1.330	62.9	1.006	0.19	0.371	0.497