

FCC SAR Test Report

APPLICANT : Xiaomi Communications Co., Ltd.
EQUIPMENT : Mobile Phone
BRAND NAME : POCO
MODEL NAME : 2510DPC44G
FCC ID : 2AFZZPC44G
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

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People's Republic of China



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA582814	Rev. 01	Initial issue of report.	Sep. 28, 2025

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Xiaomi Communications Co., Ltd., Mobile Phone, 2510DPC44G**, are as follows.

Frequency Band		Highest SAR Summary				Highest Simultaneous Transmission 1g SAR SAR (W/kg)	Highest Simultaneous Transmission 10g SAR SAR (W/kg)
		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 5mm)	Extremity (Separation 0mm)		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	10g SAR (W/kg)		
GSM	GSM850	0.85	0.68	1.08		1.58	
	GSM1900	1.08	0.62	0.99			
WCDMA	WCDMA II	1.08	0.63	0.97			
	WCDMA IV	0.81	0.57	0.91			
	WCDMA V	0.84	0.58	1.01			
LTE	LTE Band 2	0.98	0.76	1.04			
	LTE Band 26/5	1.09	0.79	1.00			
	LTE Band 7	0.83	0.39	0.91			
	LTE Band 41/38	0.79	0.34	0.80			
	LTE Band 48	1.09	0.39	1.04			
	LTE Band 66/4	0.96	0.71	1.08			
	LTE Band 71	0.71	0.54	0.72			
	LTE Band 42	1.09	0.43	0.98			
FR1	FR1 n2	0.97	0.79	1.09			
	FR1 n26/n5	0.86	0.78	1.09			
	FR1 n7	0.98	0.50	1.06			
	FR1 n41/n38	0.88	0.49	1.00			
	FR1 n48	1.07	0.51	1.09			
	FR1 n66	1.02	0.61	1.09			
	FR1 n71	0.86	0.59	0.75			
	FR1 n77/n78	1.06	0.41	1.02			
WLAN	2.4GHz WLAN	0.96	0.69	1.05		1.58	2.57
	5GHz WLAN	1.09	0.75	1.05	2.57	1.58	2.57
Bluetooth	Bluetooth	1.01	0.23	0.73		1.58	
Date of Testing:		2025/09/03 ~ 2025/09/21					

Remark:

- This device supports LTE B4 / B5 / B38 and B66 / B26 / B41. Since the supported frequency span for LTE B4 / B5 / B38 falls completely within the support's frequency span for LTE B66 / B26 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66 / B26 / B41.
- This device supports 5GNR n38/n5 /n78 and n41/n26 /n77. Since the supported frequency span for 5GNR n38/n5 /n78 falls completely within the support's frequency span for n41/n26 /n77, 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.

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 Human Exposure to RF Radiation Limits (1.0 mW/cm²=10 W/m²) specified in FCC 47 CFR part 1.1310 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 5145.01.

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.
	SAR06-KS	CN1257	314309

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

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

3. Guidance Applied

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

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

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Phone
Brand Name	POCO
Model Name	2510DPC44G
FCC ID	2AFZZPC44G
IMEI Code	868972080027080/868972080027098, 868972080026884/868972080026892, 868972080027189/868972080027197
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 26: 814 MHz ~ 849 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 n26: 814 MHz ~ 849 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+(16QAM uplink is not supported) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 2.4GHz 802.11ax/be HE20/HE40/EHT20/EHT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/VHT160 WLAN 5GHz 802.11ax HE20/HE40/HE80/HE160 WLAN 5GHz 802.11be EHT20/EHT40/EHT80/EHT160 Bluetooth BR/EDR/LE NFC: ASK



HW Version	1351P2502
SW Version	Xiaomi HyperOS 3.0
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).
4. The 2.4GHz/5GHz 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 33
6. For dual SIM card mobile has two SIM slots and supports supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active).
7. The device implements proximity sensor/receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the 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 5GNR n41/n77/n78 HPUE, 5GNR n41/n77/n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission.
9. This device supports HPUE mode for 5GNR n41/n77/n78 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.
10. Bluetooth BR/EDR supports Beamforming mode, and BLE don't supports Beamforming mode.
11. For 5GNR, the simultaneous transmission analysis is used standalone SAR at total power level to show compliance.
12. There are two samples. The difference between them is memory/storage capacity: sample 1 is 12+512G memory, and sample 2 is 12+256G memory. According to the difference, sample 1 was chosen to perform full SAR testing.
13. This device has NFC function and the NFC SAR report will be separately submitted.
14. This device supports 5GNR FR1 bands as following table, including NSA mode and SA mode. NSA and SA mode performed SAR separately.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
SA	n2	FDD	15	5, 10, 15, 20, 25, 30, 35, 40
	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 50
	n26	FDD	15	5, 10, 15, 20
	n66	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 45
	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
NSA	n5	FDD	15	5, 10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 50
	n66	FDD	15	5, 10, 15, 20, 25, 30, 35, 40, 45
	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	2AFZZPC44G																																																																												
Equipment Name	Mobile 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 26: 814 MHz ~ 849 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 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz 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>16 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>≤ 5</td><td>≤ 4</td><td>≤ 8</td><td>≤ 12</td><td>≤ 16</td><td>≤ 18</td><td>≤ 2</td></tr><tr><td>64 QAM</td><td>> 5</td><td>> 4</td><td>> 8</td><td>> 12</td><td>> 16</td><td>> 18</td><td>≤ 3</td></tr><tr><td>256 QAM</td><td colspan="6">≥ 1</td><td>≤ 5</td></tr></table>							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	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3	256 QAM	≥ 1						≤ 5
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16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																																																						
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256 QAM	≥ 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	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 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 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)



												(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	20450	829	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	20600	844	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	20850	2510	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	21350	2560	21350	2560
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	26765	821.5
M	26865	831.5	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	26965	841.5
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580	37850	2580	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610	38150	2610	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	39750	2506	39750	2506
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5	40185	2549.5	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5	41055	2636.5	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680	41490	2680	41490	2680
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 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)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	42115	3452.5	42140	3455	42165	3457.5	42190	3460	42190	3460	42190	3460
M	42590	3500	42590	3500	42590	3500	42590	3500	42590	3500	42590	3500
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540	42990	3540	42990	3540
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	55340	3560	55340	3560
LM	55810	3607	55815	3607.5	55820	3608	55830	3609	55830	3609	55830	3609
MH	56170	3643	56165	3642.5	56160	3642	56150	3641	56150	3641	56150	3641
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690	56640	3690	56640	3690
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	133222	673	133222	673
M	133247	675.5	133272	678	133297	680.5	133322	683	133322	683	133322	683
H	133447	695.5	133422	693	133397	690.5	133372	688	133372	688	133372	688



<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 5	Yes	Yes	Yes	Yes		
LTE Band 26	Yes	Yes	Yes	Yes	Yes	
LTE Band 4	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 66	Yes	Yes	Yes	Yes	Yes	Yes
LTE Band 38			Yes	Yes	Yes	Yes
LTE Band 41			Yes	Yes	Yes	Yes

2) LTE Bands tune up:

Band	Antenna	Full Power	DSI1	DSI5	DSI3	DSI4
			Receiver on	Hotspot	Sensor on	Sensor off
		Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit	Tune-up Limit
LTE Band 5	Ant 0	25.7	25.7	25.2	25.2	25.2
LTE Band 26	Ant 0	25.7	25.7	25.2	25.2	25.2
LTE Band 5 Other PA	Ant 0	25	25	25	25	25
LTE Band 5	Ant 1	25.7	20.2	20.2	20.2	25.7
LTE Band 26	Ant 1	25.7	20.2	20.2	20.2	25.7
LTE Band 5 Other PA	Ant 1	25.7	20.7	20.7	20.7	25.7
LTE Band 4	Ant 4	25.7	17.7	17.7	20.2	25.7
LTE Band 66	Ant 4	25.7	17.7	17.7	20.2	25.7
LTE Band 4 Other PA	Ant 4	25.7	18.2	18.2	20.7	25.7
LTE Band 4	Ant 5	25.5	16.5	16.5	19	25
LTE Band 66	Ant 5	25.5	16.5	16.5	19	25
LTE Band 4 Other PA	Ant 5	25.7	16.2	16.2	18.7	24.7
LTE Band 4	Ant 6	25.5	25.5	19.5	19.5	19.5
LTE Band 66	Ant 6	25.5	25.5	19.5	19.5	19.5
LTE Band 4 Other PA	Ant 6	25.5	25.5	19	19	19
LTE Band 4	Ant 7	25.5	19.5	19.5	21.5	21.5
LTE Band 66	Ant 7	25.5	19.5	19.5	21.5	21.5
LTE Band 4 Other PA	Ant 7	25.7	19.2	19.2	21.2	21.2
LTE Band 38	Ant 4	25.7	18.2	18.2	20.7	20.7
LTE Band 41	Ant 4	25.7	18.2	18.2	20.7	20.7
LTE Band 38	Ant 5	25.7	17.7	17.7	20.7	25.7
LTE Band 41	Ant 5	25.7	17.7	17.7	20.7	25.7
LTE Band 38	Ant 6	25.5	25.5	22	22	22
LTE Band 41	Ant 6	25.5	19.5	19.5	22	22
LTE Band 38	Ant 7	25.5	19.5	19.5	22	22
LTE Band 41	Ant 7	25.5	19.5	19.5	22	22

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

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Channel Bandwidth	The detail please refers to section 4.1 5GNR FR1 bands table.
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n5	LTE B7
LTE Anchor Bands for n7	LTE B5
LTE Anchor Bands for n66	LTE B5/7
LTE Anchor Bands for n78	LTE B2/5/7/26/38/41

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band																
NR Band 2																
	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	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895	378500	1892.5	378000	1890

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

NR Band 7																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 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	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	503500	2517.5	504000	2520
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510500	2552.5	510000	2550

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	824
M	166300	831.5	166300	831.5	166300	831.5	166300	831.5
H	169300	846.5	168800	844	168300	841.5	167800	839

NR Band 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 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	680.5
H	139100	695.5	138600	693	138100	690.5	137600	688	137100	685.5	136600	683		



	NR Band 38											
	Bandwidth10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	515000	2575	515500	2577.5	516000	2580	516500	2582.5	517000	2585	518000	2590
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	523000	2615	522500	2612.5	522000	2610	521500	2607.5	521000	2605	5120000	2600

	NR Band 41															
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz		Bandwidth 45MHz	
	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
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	535500	2677.5	534996	2674.98	534498	2672.49	534000	2670	533498	2667.48

	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	
	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
M	656000	3840	656000	3840	656000	3840	656000	3840.00	656000	3840.00	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.50	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98

	NR Band 78															
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz	
	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
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652832	3792.48	652666	3789.99	652500	3787.5	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98

For <3450 MHz ~ 3550 MHz >

	NR Band 77 SCS30KHz															
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz	
	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
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636332	3544.98	636166	3542.49	636000	3540	635832	3537.48	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99

	NR Band 78 SCS30KHz															
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz	
	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
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636332	3544.98	636166	3542.49	636000	3540	635832	3537.48	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99

<For NR Overlap Bands Description>

1) NR Bands BW

Band	5 MHz	10 MHz	15 MHz	20 MHz	25 MHz	30 MHz	35 MHz	40 MHz	45 MHz	50 MHz	60 MHz	70 MHz	80 MHz	90 MHz	100 MHz
FR1 n5	Yes	Yes	Yes	Yes											
FR1 n26	Yes	Yes	Yes	Yes											
FR1 n38		Yes	Yes	Yes	Yes	Yes	Yes		Yes						
FR1 n41		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FR1 n77		Yes	Yes	Yes	Yes	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes
FR1 n78		Yes	Yes	Yes	Yes	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes



2) NR Bands Tune up:

Band	Antenna	Full Power Tune-up Limit	DSI1	DSI5	DSI3	DSI4
			Receiver on Tune-up Limit	Hotspot Tune-up Limit	Sensor on Tune-up Limit	Sensor off Tune-up Limit
FR1 n5	Ant 0	25.7	25.7	24.7	24.7	24.7
FR1 n26	Ant 0	25.7	25.7	24.7	24.7	24.7
FR1 n5 Other PA	Ant 0	25	25	25	25	25
FR1 n5	Ant 1	25.7	19.7	19.7	20.7	25.7
FR1 n26	Ant 1	25.7	19.7	19.7	20.7	25.7
FR1 n5 Other PA	Ant 1	25.7	20.2	20.2	21.2	25.7
FR1 n38	Ant 4	25.7	16.2	16.2	18.2	24.2
FR1 n41 PC3	Ant 4	25.7	16.2	16.2	18.2	24.2
FR1 n41 PC2	Ant 4	27	19.5	19.5	21.5	27
FR1 n38	Ant 5	25.7	16.7	16.7	18.7	24.2
FR1 n41 PC3	Ant 5	25.7	16.7	16.7	18.7	24.2
FR1 n41 PC2	Ant 5	27	20	20	22	27
FR1 n38	Ant 6	25.5	25.5	19	19	19
FR1 n41 PC3	Ant 6	25.5	25.5	19	19	19
FR1 n41 PC2	Ant 6	26.5	26.5	22	22	22
FR1 n38	Ant 7	25.5	17	17	19.5	19.5
FR1 n41 PC3	Ant 7	25.5	17	17	19.5	19.5
FR1 n41 PC2	Ant 7	26.5	20	20	22.5	22.5
FR1 n77 Part27Q PC3	Ant 8	26	15	15	18	24
FR1 n77 Part27Q PC2	Ant 8	28.5	18.5	18.5	21.5	27.5
FR1 n77 Part27O PC3	Ant 8	26	15	15	18	24
FR1 n77 Part27O PC2	Ant 8	28.5	18.5	18.5	21.5	27.5
FR1 n78 Part27Q PC3	Ant 8	26	15	15	18	24
FR1 n78 Part27Q PC2	Ant 8	28.5	18.5	18.5	21.5	27.5
FR1 n78 Part27O PC3	Ant 8	26	15	15	18	24
FR1 n78 Part27O PC2	Ant 8	28.5	18.5	18.5	21.5	27.5
FR1 n77 Part27Q PC3	Ant 9	25	17.5	17.5	19	25
FR1 n77 Part27Q PC2	Ant 9	27	20.5	20.5	22	27
FR1 n77 Part27O PC3	Ant 9	25	17.5	17.5	19	25
FR1 n77 Part27O PC2	Ant 9	27	20.5	20.5	22	27
FR1 n78 Part27Q PC3	Ant 9	25	17.5	17.5	19	25
FR1 n78 Part27Q PC2	Ant 9	27	20.5	20.5	22	27
FR1 n78 Part27O PC3	Ant 9	25	17.5	17.5	19	25
FR1 n78 Part27O PC2	Ant 9	27	20.5	20.5	22	27
FR1 n77 Part27Q PC3	Ant 10	26	16	16	17.5	17.5
FR1 n77 Part27Q PC2	Ant 10	28	19	19	20.5	20.5
FR1 n77 Part27O PC3	Ant 10	26	16	16	17.5	17.5
FR1 n77 Part27O PC2	Ant 10	28	19	19	20.5	20.5
FR1 n78 Part27Q PC3	Ant 10	26	16	16	17.5	17.5
FR1 n78 Part27Q PC2	Ant 10	28	19	19	20.5	20.5
FR1 n78 Part27O PC3	Ant 10	26	16	16	17.5	17.5
FR1 n78 Part27O PC2	Ant 10	28	19	19	20.5	20.5
FR1 n77 Part27Q PC3	Ant 11	25.5	24.5	14.5	14.5	24.5
FR1 n77 Part27Q PC2	Ant 11	27.5	27.5	17.5	17.5	27.5
FR1 n77 Part27O PC3	Ant 11	25.5	24.5	14.5	14.5	24.5
FR1 n77 Part27O PC2	Ant 11	27.5	27.5	17.5	17.5	27.5
FR1 n78 Part27Q PC3	Ant 11	25.5	24.5	14.5	14.5	24.5
FR1 n78 Part27Q PC2	Ant 11	27.5	27.5	17.5	17.5	27.5
FR1 n78 Part27O PC3	Ant 11	25.5	24.5	14.5	14.5	24.5
FR1 n78 Part27O PC2	Ant 11	27.5	27.5	17.5	17.5	27.5

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

5. Smart Transmit feature for RF Exposure compliance

The Qualcomm® Smart Transmit™ 5.0 of Smart Transmit (GEN2) Feature operates based on pre-defined sub6 antenna groups (AG). This Device is enabled with the Qualcomm® Smart Transmit Gen2 feature. The RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN and WLAN/BT transmitter to ensure the product in compliance with RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.

This report describes the procedures for the SAR char generation, and the parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) version 23 to enable the Smart Transmit GEN2 Feature.

<Terminologies in this report>

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

<SAR Characterization>

SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating at WWAN and WLAN/BT bands. It will then be used as input for Smart Transmit to control and manage RF exposure for WWAN and WLAN/BT bands.

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

$$SAR_{design_target} < SAR_{regulatory_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

Antenna Group:

Antenna Group 0 (AG0)	ANT1 & ANT4 & ANT5 & ANT7 & ANT8 & ANT9 & ANT10 & ANT11& ANT12
Antenna Group 1 (AG1)	ANT0 & ANT6



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

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

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

Band	Antenna	Head DSI 1 Power	Body worn DSI3 sensor on	Body worn DSI4 sensor off	Hotspot DSI5	Pmax*	Total Uncertainty dB (k=2)
GSM850	Ant 0	28.50	25.30	24.00	26.20	24.00	1.00
GSM850	Ant 1	19.00	20.00	24.00	19.00	24.00	1.50
GSM1900	Ant 4	17.50	19.50	21.00	17.50	21.00	1.50
GSM1900	Ant 6	32.70	20.00	20.00	20.00	21.00	1.00
WCDMA II	Ant 4	17.50	19.50	24.00	17.50	24.00	1.00
WCDMA II	Ant 6	32.00	19.00	19.00	19.00	24.00	1.50
WCDMA IV	Ant 4	16.50	19.50	24.00	16.50	24.00	1.00
WCDMA IV	Ant 5	15.00	17.50	23.50	15.00	23.50	1.50
WCDMA IV	Ant 6	31.50	19.00	19.00	19.00	23.00	1.50
WCDMA IV	Ant 7	18.00	20.00	20.00	18.00	23.00	1.50
WCDMA V	Ant 0	28.80	23.00	23.00	23.00	24.00	1.00
WCDMA V	Ant 1	18.50	19.50	24.00	18.50	24.00	1.50
LTE Band 2	Ant 4	17.00	20.50	24.50	17.00	24.50	1.20
LTE Band 2	Ant 6	31.90	20.00	20.00	20.00	24.50	1.20
LTE Band 7	Ant 4	16.50	18.00	25.00	16.50	25.00	0.70
LTE Band 7	Ant 5	15.50	18.00	23.00	15.50	24.50	1.20
LTE Band 7	Ant 6	30.60	18.50	18.50	18.50	24.00	1.50
LTE Band 7	Ant 7	16.00	18.00	18.00	16.00	24.00	1.50
LTE Band 26(5)	Ant 0	29.20	24.50	24.50	24.50	25.00	0.70
LTE Band 5 Other PA	Ant 0	28.20	24.90	24.00	25.00	24.00	1.00
LTE Band 26(5)	Ant 1	19.50	19.50	25.00	19.50	25.00	0.70
LTE Band 5 Other PA	Ant 1	19.50	19.50	24.50	19.50	24.50	1.20
LTE Band 66(4)	Ant 4	17.00	19.50	25.00	17.00	25.00	0.70
LTE Band 4 Other PA	Ant 4	17.00	19.50	24.50	17.00	24.50	1.20
LTE Band 66(4)	Ant 5	15.00	17.50	23.50	15.00	24.00	1.50
LTE Band 4 Other PA	Ant 5	15.00	17.50	23.50	15.00	24.50	1.20
LTE Band 66(4)	Ant 6	31.10	18.00	18.00	18.00	24.00	1.50
LTE Band 4 Other PA	Ant 6	32.20	18.00	18.00	18.00	24.50	1.00
LTE Band 66(4)	Ant 7	18.00	20.00	20.00	18.00	24.00	1.50
LTE Band 4 Other PA	Ant 7	18.00	20.00	20.00	18.00	24.50	1.20
LTE Band 71	Ant 0	34.70	32.90	24.00	31.90	24.00	1.00
LTE Band 71	Ant 1	23.00	22.00	24.00	22.00	24.00	1.50
LTE Band 41(38)	Ant 4	15.50	18.00	23.00	15.50	23.00	0.70
LTE Band 41(38)	Ant 5	14.50	17.50	22.50	14.50	22.50	1.20
LTE Band 41(38)	Ant 6	31.50	18.50	18.50	18.50	22.00	1.50
LTE Band 41(38)	Ant 7	16.00	18.50	18.50	16.00	22.00	1.50
LTE Band 42	Ant 8	15.00	16.50	23.00	15.00	23.00	0.70
LTE Band 42	Ant 9	16.50	20.00	21.50	16.50	21.50	1.50
LTE Band 42	Ant 10	16.00	16.50	16.50	16.00	22.50	1.20
LTE Band 42	Ant 11	28.60	13.50	21.50	13.50	21.50	1.50
LTE Band 48	Ant 8	15.00	18.50	22.00	15.00	22.00	1.00
LTE Band 48	Ant 9	15.50	19.50	20.50	15.50	20.50	1.50
LTE Band 48	Ant 10	15.00	15.00	15.00	15.00	21.50	1.50
LTE Band 48	Ant 11	28.90	14.00	20.50	14.00	20.50	1.50
FR1 n2	Ant 4	16.50	19.00	24.50	16.50	24.50	1.20
FR1 n2	Ant 6	31.70	20.00	20.00	20.00	24.50	1.20



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FR1 n7	Ant 4	16.50	18.00	25.00	16.50	25.00	0.70
FR1 n7	Ant 5	15.50	18.00	23.00	15.50	24.50	1.20
FR1 n7	Ant 6	29.80	18.50	18.50	18.50	24.00	1.50
FR1 n7	Ant 7	16.50	18.50	18.50	16.50	24.00	1.50
FR1 n26(5)	Ant 0	29.30	24.00	24.00	24.00	25.00	0.70
FR1 n5 Other PA	Ant 0	28.40	24.90	26.90	26.90	24.00	1.00
FR1 n26(5)	Ant 1	19.00	20.00	25.00	19.00	25.00	0.70
FR1 n5 Other PA	Ant 1	19.00	20.00	24.50	19.00	24.50	1.20
FR1 n66	Ant 4	16.50	19.00	25.00	16.50	25.00	0.70
FR1 n66 Other PA	Ant 4	16.50	19.00	25.00	16.50	25.00	0.70
FR1 n66	Ant 5	15.00	17.50	23.50	15.00	24.50	1.20
FR1 n66 Other PA	Ant 5	15.50	18.00	24.00	15.50	25.00	0.70
FR1 n66	Ant 6	31.40	19.50	19.50	19.50	24.00	1.50
FR1 n66 Other PA	Ant 6	32.30	19.50	19.50	19.50	24.50	1.00
FR1 n66	Ant 7	18.50	19.50	19.50	18.50	24.00	1.50
FR1 n66 Other PA	Ant 7	18.50	19.50	19.50	18.50	24.50	1.20
FR1 n71	Ant 0	34.10	30.60	29.30	29.30	24.00	1.00
FR1 n71	Ant 1	22.50	22.50	24.00	22.50	24.00	1.50
FR1 n41(38) PC3	Ant 4	15.50	17.50	23.50	15.50	25.00	0.70
FR1 n41 PC2	Ant 4	15.50	17.50	23.50	15.50	23.00	1.00
FR1 n41(38) PC3	Ant 5	15.50	17.50	23.00	15.50	24.50	1.20
FR1 n41 PC2	Ant 5	15.50	17.50	23.00	15.50	22.50	1.50
FR1 n41(38) PC3	Ant 6	29.00	17.50	17.50	17.50	24.00	1.50
FR1 n41 PC2	Ant 6	29.00	17.50	17.50	17.50	22.00	1.50
FR1 n41(38) PC3	Ant 7	15.50	18.00	18.00	15.50	24.00	1.50
FR1 n41 PC2	Ant 7	15.50	18.00	18.00	15.50	22.00	1.50
FR1 n48	Ant 8	15.00	17.50	22.00	15.00	24.00	1.00
FR1 n48	Ant 9	17.00	18.50	22.50	17.00	22.50	1.50
FR1 n48	Ant 10	13.50	16.00	16.00	13.50	23.50	1.50
FR1 n48	Ant 11	20.50	11.00	20.50	11.00	22.50	1.50
FR1 n77(78) PC3	Ant 8	14.00	17.00	23.00	14.00	25.00	1.00
FR1 n77(78) PC2	Ant 8	14.00	17.00	23.00	14.00	24.00	1.50
FR1 n77(78) PC3	Ant 9	16.00	17.50	23.50	16.00	23.50	1.50
FR1 n77(78) PC2	Ant 9	16.00	17.50	23.50	16.00	22.50	1.50
FR1 n77(78) PC3	Ant 10	14.50	16.00	16.00	14.50	24.50	1.50
FR1 n77(78) PC2	Ant 10	14.50	16.00	16.00	14.50	23.50	1.50
FR1 n77(78) PC3	Ant 11	23.00	13.00	23.00	13.00	24.00	1.50
FR1 n77(78) PC2	Ant 11	23.00	13.00	23.00	13.00	23.00	1.50

Band	Antenna	Head DSI1	Bodyworn/Extremity DSI4	Hotspot DSI5	Pmax*	Total Uncertainty dB (k=2)
WLAN2.4GHz	Ant 7	13.90	15.90	15.90	17.40	2.00
WLAN2.4GHz	Ant 12	13.90	15.90	15.90	17.40	2.00
WLAN2.4GHz	Ant 7+12	13.90	15.90	15.90	20.40	2.00
Bluetooth	Ant 7	14.40	19.60	24.70	16.40	2.00
Bluetooth	Ant 12	16.10	17.50	22.50	15.40	2.00
WLAN5GHz(B1)	Ant 8	13.00	16.50	16.50	17.50	2.00
WLAN5GHz(B1)	Ant 10	13.00	16.50	16.50	17.50	2.00
WLAN5GHz(B1)	Ant 8+10	13.00	16.50	16.50	20.50	2.00
WLAN5GHz(B2)	Ant 8	13.00	16.50		17.50	2.00
WLAN5GHz(B2)	Ant 10	13.00	16.50		17.50	2.00
WLAN5GHz(B2)	Ant 8+10	13.00	16.50		20.50	2.00
WLAN5GHz(B3)	Ant 8	12.00	14.00		17.50	2.00
WLAN5GHz(B3)	Ant 10	12.00	14.00		17.50	2.00
WLAN5GHz(B3)	Ant 8+10	12.00	14.00		20.50	2.00
WLAN5GHz(B4)	Ant 8	12.00	15.50	15.50	17.50	2.00
WLAN5GHz(B4)	Ant 10	12.00	15.50	15.50	17.50	2.00
WLAN5GHz(B4)	Ant 8+10	12.00	15.50	15.50	20.50	2.00

Note: 1) *P_{max} is used for RF tune up procedure. The maximum allowed output power is equal to P_{max} + Total uncertainty.

2) All P_{limit} power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD & WLAN/BT).

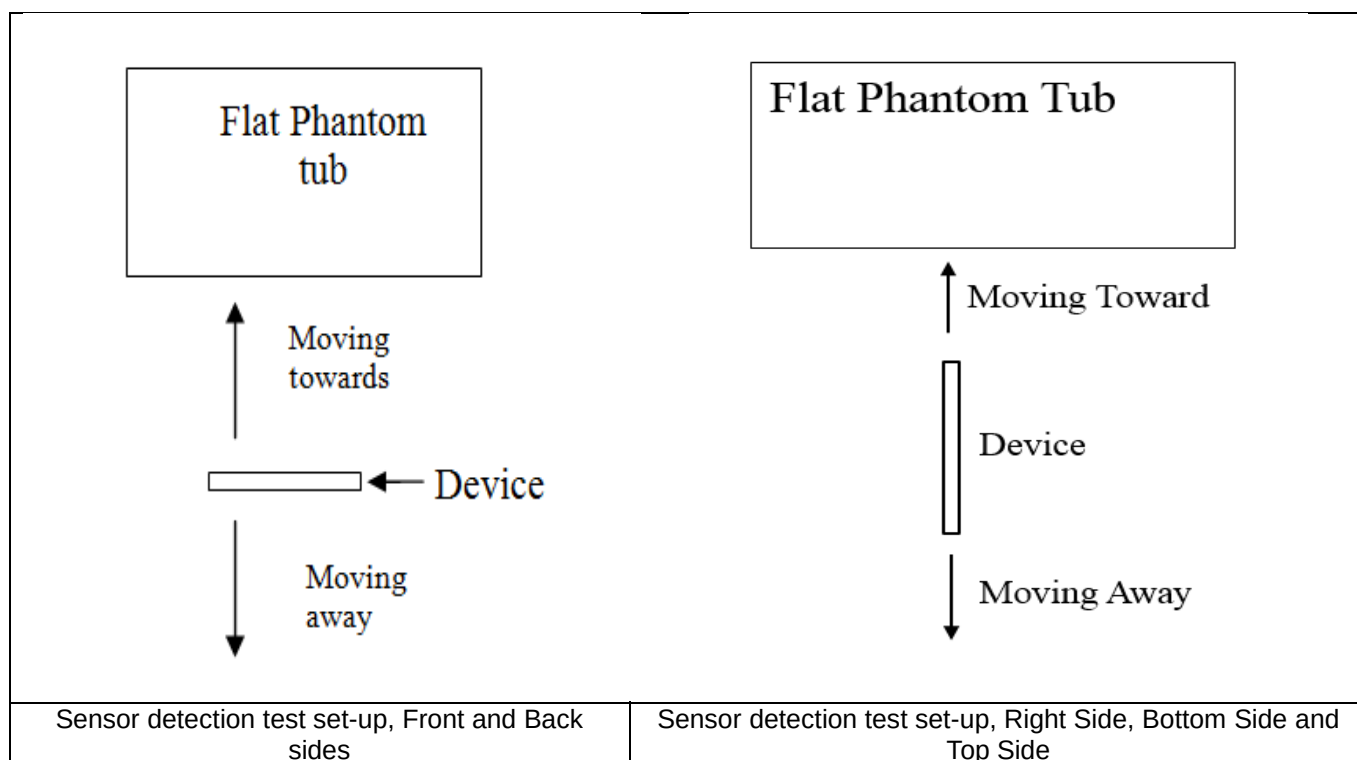
3) The max allowed output power is the P_{limit} + Total uncertainty, and if P_{limit} is higher than P_{max}, the device output power will be P_{max} instead.

4) GSM/WCDMA applies force peak method, and in single active Tx scenario, Smart Transmit can guarantee Tx power level of P_{limit} at all times.

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 (3980MHz) and lowest (750MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensors placed coincident with antenna elements at the top of left ends of the phone are utilized to determine when the device comes in proximity of the user's body or finger or hand at the front or back or bottom or right or top side of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
3. The sensors can use to detect the proximity of the user's body or handheld states at the front or back or right or bottom or top side of the device use a detection threshold distance. When front/back/top/right /bottom sides of body or handheld condition is detected reduced power will be active. The trigger distance shown in the sections below.
4. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed.



<Sensor for Ant 1&4&5&8&9&11>

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	16	16	16	16	16	16	16	16

7. RF Exposure Limits

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

8. Specific Absorption Rate (SAR)

8.1 Introduction

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

8.2 SAR Definition

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

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

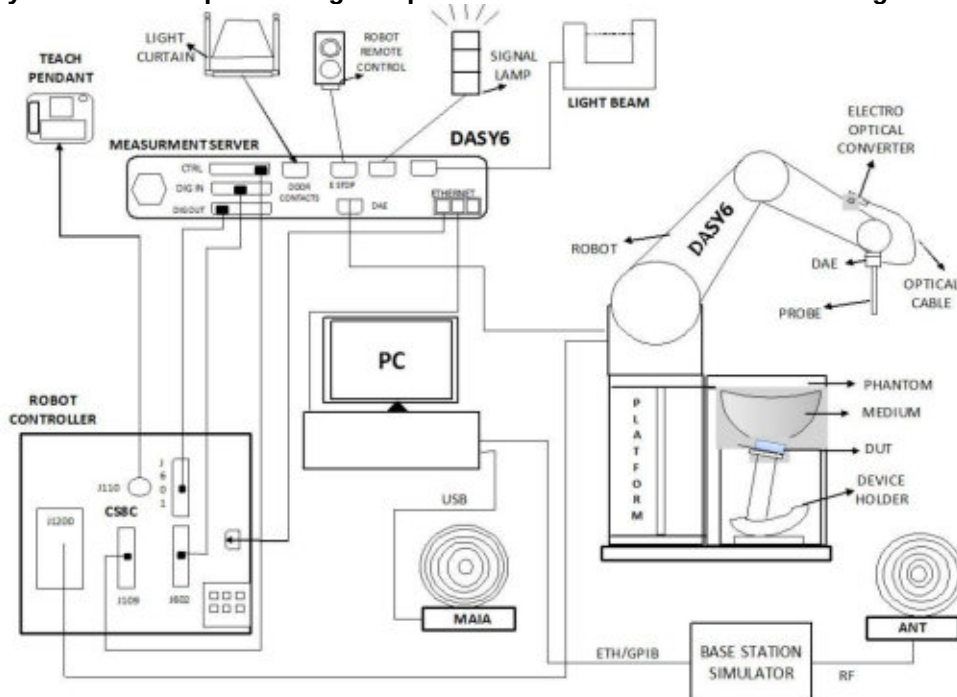
SAR is expressed in units of Watts per kilogram (W/kg)

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

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 or Win10 and the DASY5 or DASY6 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 dB0) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ 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 <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> 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	Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	Mar. 12, 2025	Mar. 11, 2026
SPEAG	835MHz System Validation Kit	D835V2	4d298	Jan. 26, 2024	Jan. 24, 2026
SPEAG	1750MHz System Validation Kit	D1750V2	1090	Mar. 12, 2025	Mar. 11, 2026
SPEAG	1900MHz System Validation Kit	D1900V2	5d170	Mar. 13, 2025	Mar. 12, 2026
SPEAG	2450MHz System Validation Kit	D2450V2	1095	Feb. 08, 2024	Feb. 06, 2026
SPEAG	2600MHz System Validation Kit	D2600V2	1112	Dec. 18, 2023	Dec. 16, 2025
SPEAG	3500MHz System Validation Kit	D3500V2	1037	Nov. 20, 2023	Nov. 18, 2025
SPEAG	3700MHz System Validation Kit	D3700V2	1008	Nov. 20, 2023	Nov. 18, 2025
SPEAG	3900MHz System Validation Kit	D3900V2	1048	Mar. 09, 2023	Mar. 06, 2026
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	Sep. 23, 2022	Sep. 21, 2025
SPEAG	Data Acquisition Electronics	DAE4	1650	Nov. 25, 2024	Nov. 24, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7706	May. 22, 2025	May. 21, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7918	Mar. 24, 2025	Mar. 23, 2026
SPEAG	SAM Twin Phantom	SAM Twin	TP-2021	None	None
Beichuang	Thermo-Hygrometer	HTC-1	1959632	May. 27, 2025	May. 26, 2026
SPEAG	Phone Positioner	N/A	N/A	None	None
Anritsu	Radio Communication Analyzer	MT8820C	6201563900	Jul. 02, 2025	Jul. 01, 2026
Agilent	ENA Series Network Analyzer	E5071C	MY46112129	Jul. 02, 2025	Jul. 01, 2026
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	Feb. 24, 2025	Feb. 23, 2026
Anritsu	Vector Signal Generator	MG3710A	6201682672	Jan. 03, 2025	Jan. 02, 2026
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	N/A	N/A
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	None	None
Agilent	Dual Directional Coupler	778D	20500	Jul. 02, 2025	Jul. 01, 2026
Agilent	Dual Directional Coupler	11691D	MY48151020	Jul. 02, 2025	Jul. 01, 2026
Rohde & Schwarz	Power Meter	NRVD	102081	Jul. 02, 2025	Jul. 01, 2026
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	Jul. 02, 2025	Jul. 01, 2026
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	Jul. 02, 2025	Jul. 01, 2026
ARRA	Power Divider	A3200-2	N/A	None	None
MCL	Attenuation1	BW-S10W5+	N/A	None	None
R&S	BLUETOOTH TESTER	CBT	101246	Jul. 03, 2025	Jul. 02, 2026
Rohde & Schwarz	Spectrum Analyzer	FSV7	101631	Oct. 11, 2024	Oct. 10, 2025
TES	DIGITAC THERMOMETER	TYPE-K	220305411	Jan. 02, 2025	Jan. 01, 2026

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.

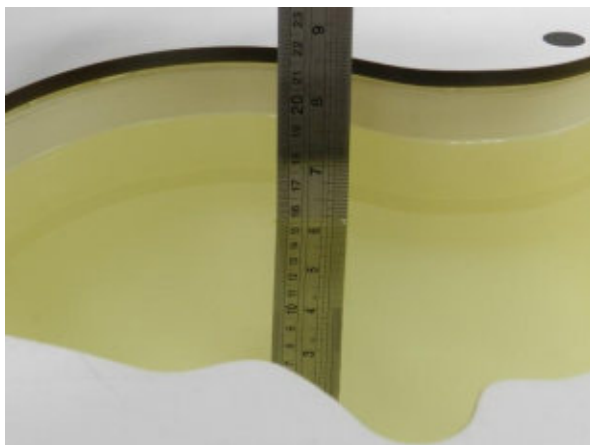


Fig 11.1 Photo of Liquid Height for Head SAR



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)	Liquid Temp (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
750	22.7	0.891	42.9	0.89	41.9	0.11	2.39	±5.0	2025-09-03
750	22.8	0.891	43.0	0.89	41.9	0.11	2.63	±5.0	2025-09-11
835	22.6	0.92	42.4	0.9	41.5	2.22	2.17	±5.0	2025-09-04
835	22.7	0.919	42.4	0.9	41.5	2.11	2.17	±5.0	2025-09-12
1750	22.8	1.37	40.7	1.37	40.1	0.00	1.50	±5.0	2025-09-05
1750	22.8	1.37	40.6	1.37	40.1	0.00	1.25	±5.0	2025-09-13
1900	22.8	1.44	39.1	1.4	40.0	2.86	-2.25	±5.0	2025-09-06
1900	22.9	1.45	39.2	1.4	40.0	3.57	-2.00	±5.0	2025-09-14
2450	22.7	1.77	39.3	1.8	39.2	-1.67	0.26	±5.0	2025-09-19
2600	22.8	1.92	38.9	1.96	39.0	-2.04	-0.26	±5.0	2025-09-07
2600	22.6	1.92	38.8	1.96	39.0	-2.04	-0.51	±5.0	2025-09-15
3500	22.7	2.97	37.8	2.91	37.9	2.06	-0.26	±5.0	2025-09-08
3500	22.6	2.97	37.6	2.91	37.9	2.06	-0.79	±5.0	2025-09-16
3700	22.8	3.19	37.5	3.12	37.7	2.24	-0.53	±5.0	2025-09-09
3700	22.8	3.16	37.5	3.12	37.7	1.28	-0.53	±5.0	2025-09-17
3900	22.7	3.38	37.4	3.33	37.51	1.50	-0.29	±5.0	2025-09-10
3900	22.7	3.39	37.4	3.33	37.51	1.80	-0.29	±5.0	2025-09-18
5250	22.8	4.68	36.3	4.71	35.95	-0.64	0.97	±5.0	2025-09-20
5600	22.6	5.06	35.8	5.07	35.5	-0.20	0.85	±5.0	2025-09-21
5750	22.6	5.2	35.7	5.22	35.35	-0.38	0.99	±5.0	2025-09-21

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.

Date	Frequency (MHz)	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 (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2025-09-03	750	50.00	D750V3 - 1087	EX3DV4 - SN7706	DAE4 Sn1650	0.417	8.680	8.340	-3.92	0.278	5.610	5.560	-0.89
2025-09-11	750	50.00	D750V3 - 1087	EX3DV4 - SN7706	DAE4 Sn1650	0.419	8.680	8.380	-3.46	0.279	5.610	5.580	-0.53
2025-09-04	835	50.00	D835V2 - 4d298	EX3DV4 - SN7706	DAE4 Sn1650	0.503	9.890	10.060	1.72	0.333	6.450	6.660	3.26
2025-09-12	835	50.00	D835V2 - 4d298	EX3DV4 - SN7706	DAE4 Sn1650	0.503	9.890	10.060	1.72	0.332	6.450	6.640	2.95
2025-09-05	1750	50.00	D1750V2 - 1090	EX3DV4 - SN7706	DAE4 Sn1650	1.960	36.600	39.200	7.10	1.070	19.500	21.400	9.74
2025-09-13	1750	50.00	D1750V2 - 1090	EX3DV4 - SN7706	DAE4 Sn1650	1.950	36.600	39.000	6.56	1.060	19.500	21.200	8.72
2025-09-06	1900	50.00	D1900V2 - 5d170	EX3DV4 - SN7706	DAE4 Sn1650	1.930	39.100	38.600	-1.28	1.020	20.600	20.400	-0.97
2025-09-14	1900	50.00	D1900V2 - 5d170	EX3DV4 - SN7706	DAE4 Sn1650	1.950	39.100	39.000	-0.26	1.030	20.600	20.600	0.00
2025-09-19	2450	50.00	D2450V2 - 1095	EX3DV4 - SN7918	DAE4 Sn1650	2.750	52.600	55.000	4.56	1.320	24.700	26.400	6.88
2025-09-07	2600	50.00	D2600V2 - 1112	EX3DV4 - SN7706	DAE4 Sn1650	2.680	55.100	53.600	-2.72	1.220	24.800	24.400	-1.61
2025-09-15	2600	50.00	D2600V2 - 1112	EX3DV4 - SN7706	DAE4 Sn1650	2.680	55.100	53.600	-2.72	1.210	24.800	24.200	-2.42
2025-09-08	3500	50.00	D3500V2 - 1037	EX3DV4 - SN7706	DAE4 Sn1650	3.360	65.400	67.200	2.75	1.300	24.700	26.000	5.26
2025-09-16	3500	50.00	D3500V2 - 1037	EX3DV4 - SN7706	DAE4 Sn1650	3.370	65.400	67.400	3.06	1.310	24.700	26.200	6.07
2025-09-09	3700	50.00	D3700V2 - 1008	EX3DV4 - SN7706	DAE4 Sn1650	3.150	67.200	63.000	-6.25	1.190	24.400	23.800	-2.46
2025-09-17	3700	50.00	D3700V2 - 1008	EX3DV4 - SN7706	DAE4 Sn1650	3.120	67.200	62.400	-7.14	1.180	24.400	23.600	-3.28
2025-09-10	3900	50.00	D3900V2 - 1048	EX3DV4 - SN7706	DAE4 Sn1650	3.330	69.100	66.600	-3.62	1.200	24.100	24.000	-0.41
2025-09-18	3900	50.00	D3900V2 - 1048	EX3DV4 - SN7706	DAE4 Sn1650	3.330	69.100	66.600	-3.62	1.200	24.100	24.000	-0.41
2025-09-20	5250	50.00	D5GHZV2 - 1113	EX3DV4 - SN7918	DAE4 Sn1650	4.010	81.500	80.200	-1.60	1.170	23.300	23.400	0.43
2025-09-21	5600	50.00	D5GHZV2 - 1113	EX3DV4 - SN7918	DAE4 Sn1650	4.240	82.600	84.800	2.66	1.220	23.700	24.400	2.95
2025-09-21	5750	50.00	D5GHZV2 - 1113	EX3DV4 - SN7918	DAE4 Sn1650	3.870	80.800	77.400	-4.21	1.120	23.000	22.400	-2.61

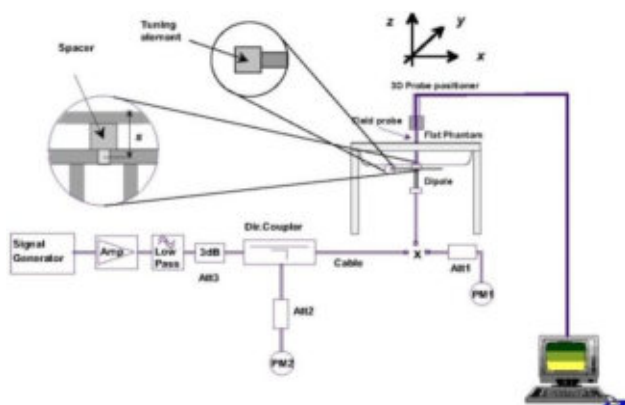


Fig 11.3.1 System Performance Check Setup



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.

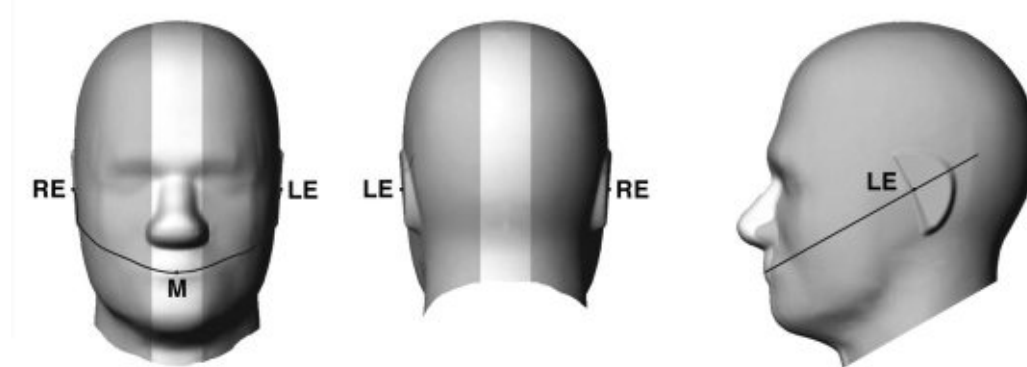


Fig 12.1.1 Front, back, and side views of SAM twin phantom

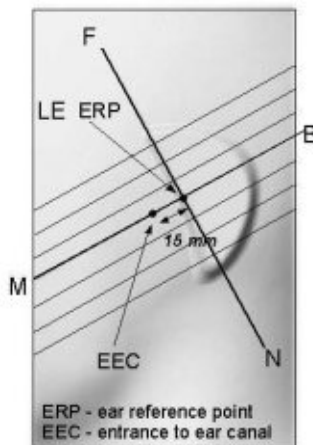


Fig 12.1.2 Close-up side view of phantom showing the ear region.

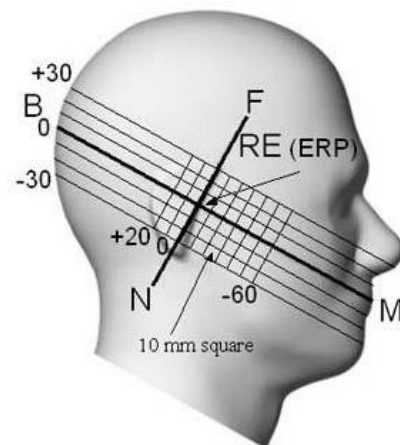


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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 horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 12.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 12.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 12.2.3. The actual rotation angles should be documented in the test report.

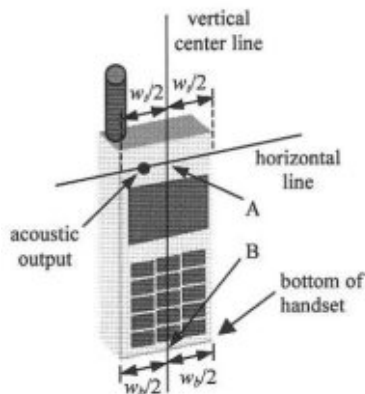


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case"

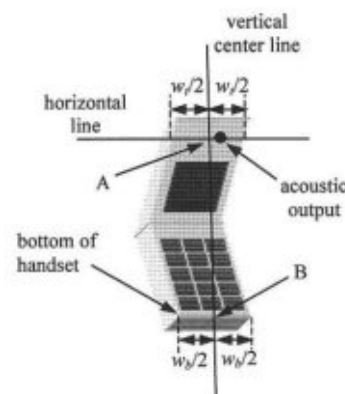


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

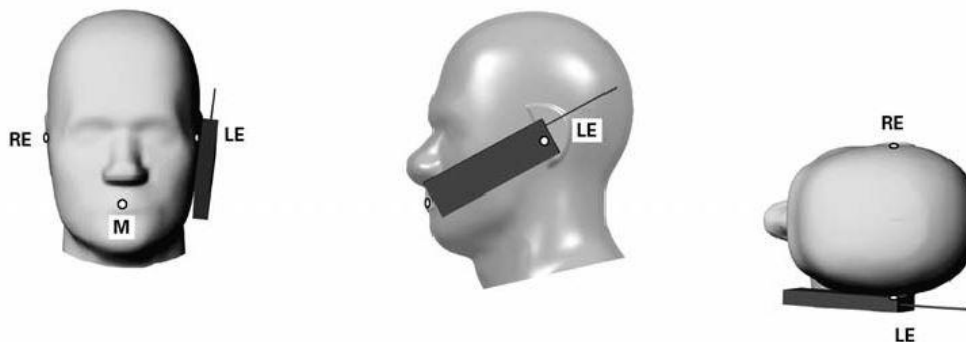


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

13.3 Definition of the tilt position

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

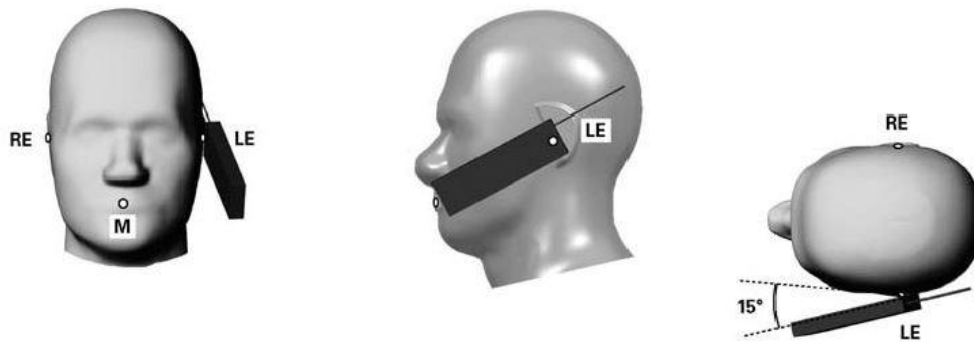


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

13.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 11.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is $> 1.2 \text{ W/kg}$, 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.

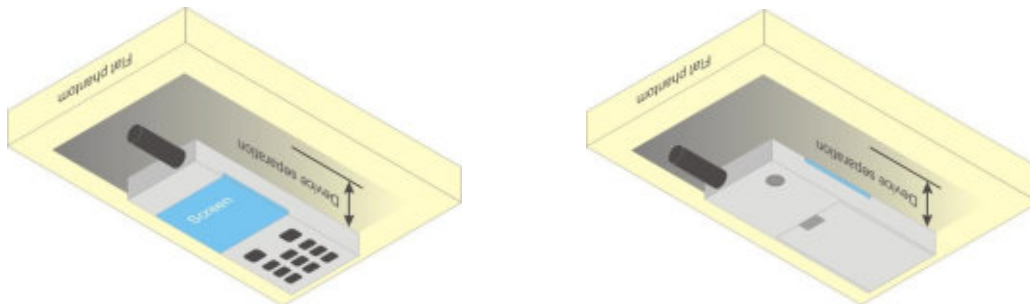


Fig 12.4 Body Worn Position

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_o/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 $\beta_o/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPCCH, 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_o/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 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.

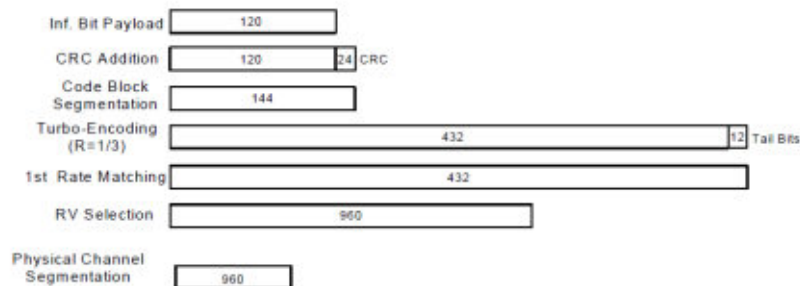
The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

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	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{DP})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK

Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.

Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.


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

<WCDMA Conducted Power>

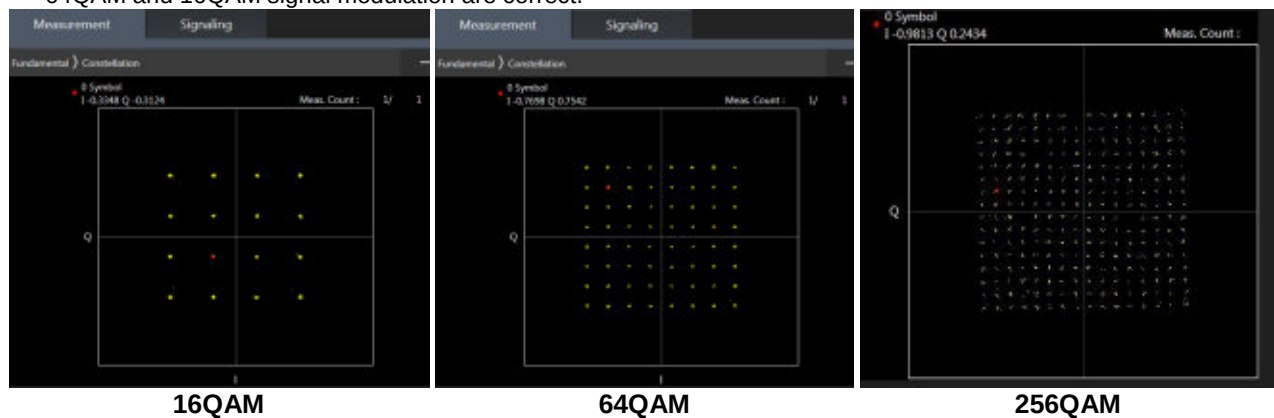
General Note:

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

<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ 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 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTEB4 / B5 / B38 SAR test was covered by 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.

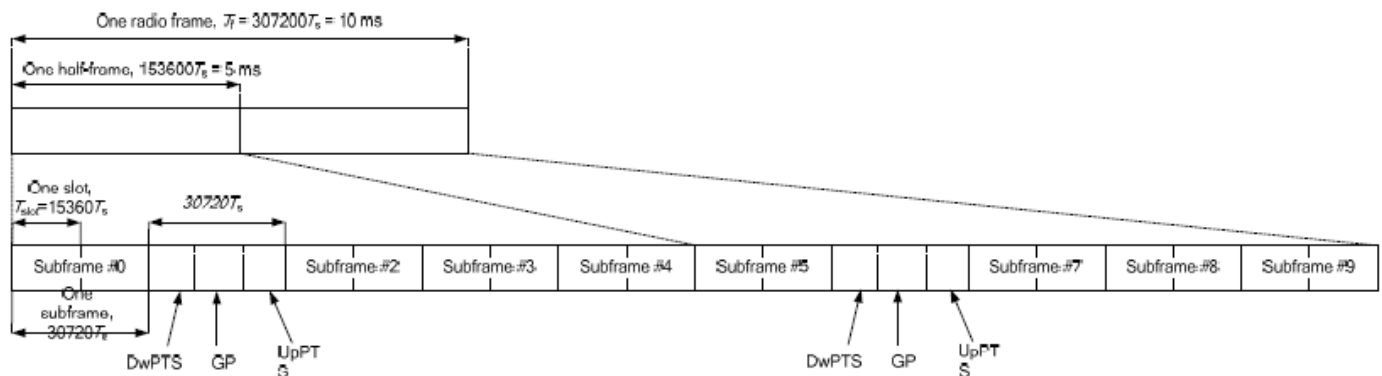


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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:

- 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.

<LTE Carrier Aggregation>

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

General Note:

1. Per Oct. 2024 TCB workshop, the downlink (DL) pertains to receiver functionality, thus it is not related to RF exposure compliance limits related to cumulative effects of different transmitters.
2. Per Oct. 2024 TCB workshop, equipment authorization applications shall refer to the worst-case UL powers resulting from all the possible modes of operations. Accordingly, CA-DL cases do not need to be analyzed separately, unless pertinent to establishing UL power setting.
3. 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.
4. This device supports LTE carrier aggregation in the downlink. All 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.

LTE Carrier Aggregation Conducted Power (Uplink)

LTE Uplink CA	2CC Uplink Carrier Aggregation
Intra-band	Antenna Tx
CA_7C	Ant4/5/6/7
CA_38C	Ant4/5/6/7

<Intra-band>
General Note:

- i. The device supports intra-band uplink carrier aggregation for LTE B7/38 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.

5G NR Output Power (Unit: dBm)

General Note:

1. 5G NR n5/n7/n66/n78 is NSA mode.
2. 5G NR n2/n5/n7/n26/n66/n71/n38/n41/n48/n77/n78 is SA mode.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-s QPSK and the reported SAR for the DFT-s QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
 - b. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
 - c. SAR testing start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel
 - d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
 - e. QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested
 - f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM SAR testing are not required.
 - g. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. For 5G NR, the simultaneous transmission analysis is used standalone SAR at total power level to show compliance.
5. 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.
6. 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.
7. 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.
8. 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.
9. For 5G NR n41/n77/n78 HPUE, 5G NR n41/n77/n78 PC2 Maximum Duty Cycle is 50%, using FTM (Factory Test Mode) with 50% duty cycle is considered during SAR testing. For 5G NR other bands, using FTM to perform SAR with default 100% transmission.
10. This device supports HPUE mode for 5G NR n41/n77/n78 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 we chose power class 3 full SAR testing and power class 2 verify the worst case of power class 3 SAR.

<3GPP 38.101 MPR for EN-DC>
Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
		$\leq 0.5^2$	$\leq 0.5^2$	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	
	LTE TX	NR TX
DC_2A_n78A	ANT6/4	ANT8/9/10/11
DC_38A_n78A	ANT4/5/6/7	ANT8/9/10/11
DC_41A_n78A	ANT4/5/6/7	ANT8/9/10/11
DC_5A_n78A	ANT0/1	ANT8/9/10/11
DC_7A_n78A	ANT4/5/6/7	ANT8/9/10/11
DC_7A_n5A	ANT4/5/6/7	ANT0/1
DC_5A_n7A	ANT0/1	ANT4/5/6/7
DC_5A_n66A	ANT0/1	ANT4/5/6/7
DC_7A_n66A	ANT4/5	ANT4/5/6/7
DC_26A_n78A	ANT0/1	ANT8/9/10/11

<WLAN Conducted Power>

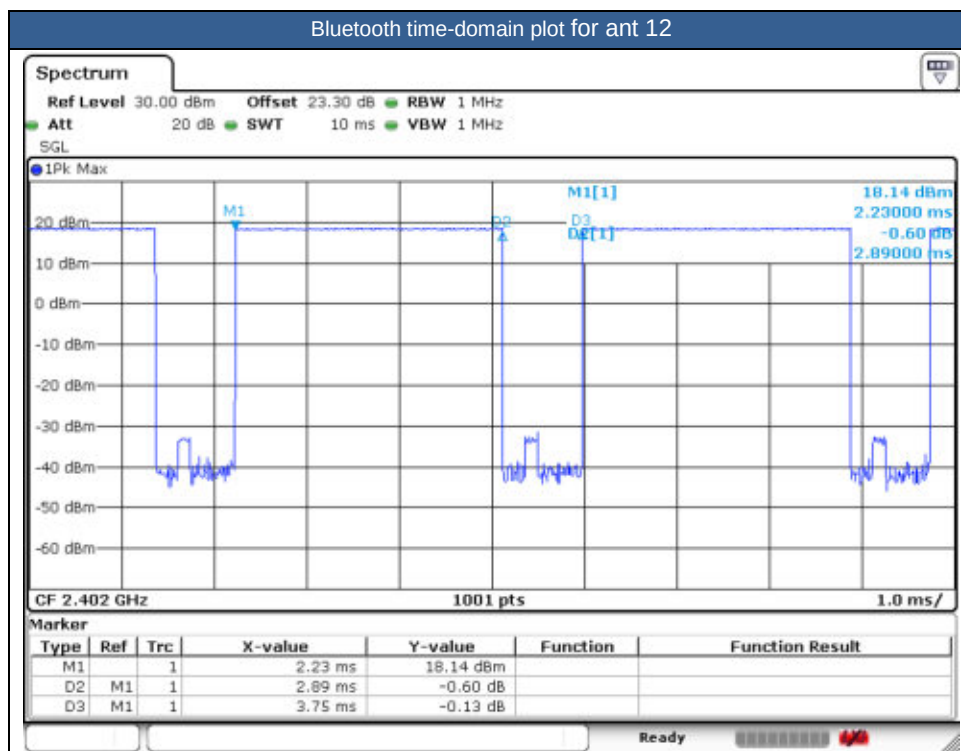
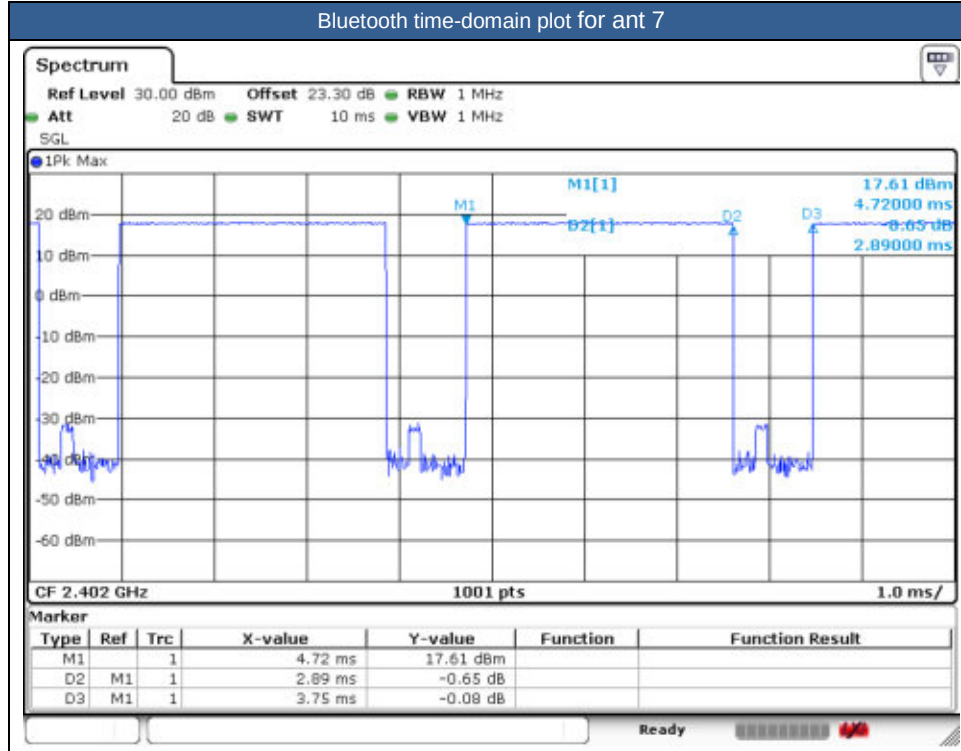
General Note:

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/be supports both full tone size mode and partial tone size mode, after verification on partial tone size mode that partial size tone mode power will not be higher than full tone size mode, therefore, full tone mode power was chosen to be measured in this report.
7. SISO and MIMO all supported by WLAN2.4GHz/WLAN5GHz, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, so only chose MIMO mode to perform SAR testing.
8. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle are 77.07% for ant 7 and 77.07% for ant 12 as following figure, Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation.





15. Antenna Location

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

16. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For SAR testing of Bluetooth signal with 83.3% theoretical duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle) *83.3%".
 - d. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - e. For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
 - f. For TDD LTE SAR measurement of power class 3, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix 63.3%/62.9% = 1.006 is applied to scale-up the measured SAR result. The reported TDD LTE SAR (W/kg) = Measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
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. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. The device implements proximity sensor/receiver detection/hotspot mode for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the 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.
6. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power (for handheld on state, the maximum full power means reduced power), including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
 - a. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
 - b. 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.
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. Based on Qualcomm Smart Transmit algorithm, the BT MIMO antennas located in same AGs and the MIMO Plimit is not populated in the EFS file, so additional verification tests need to be added, the more detail UL MIMO analysis results please referred to appendix H.
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 ≤ 25 mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.
11. LTE B4 and 5GNR n66 at ant4/5/6/7, LTE B5 and 5GNR n5 at ant0/1 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.

12. 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.

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 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 to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM/256QAM output power for each RB allocation configuration is $> \text{not } \frac{1}{2}$ 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 $> \text{not } \frac{1}{2}$ 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 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE B4 / B5 / B38 SAR test was covered by 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/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.

DSI status description:

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

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

Exposure Condition	DSI	Trigger conditions
Head SAR	DSI 1	Earpiece On
Hotspot SAR	DSI 5	Hotspot On
Body worn SAR	DSI 3	Sensor On
Body worn SAR (Sensor Trigger Distance -1mm)	DSI 4	Sensor Off/ receiver off
Extremity SAR	DSI 3	Sensor On
Extremity SAR (Sensor Trigger Distance -1mm)	DSI 4	Sensor Off/ receiver off



16.1 Head SAR

【GSM SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	GSM850	GPRS 4 Tx slots	Right Cheek	0mm	Ant 0	DSI 1	251	848.8	26.48	28.00	1.419	0.03	0.271	0.385	
	GSM850	GPRS 4 Tx slots	Right Tilted	0mm	Ant 0	DSI 1	251	848.8	26.48	28.00	1.419	0.14	0.112	0.159	
	GSM850	GPRS 4 Tx slots	Left Cheek	0mm	Ant 0	DSI 1	251	848.8	26.48	28.00	1.419	0.17	0.127	0.180	
	GSM850	GPRS 4 Tx slots	Left Tilted	0mm	Ant 0	DSI 1	251	848.8	26.48	28.00	1.419	-0.11	0.083	0.118	
	GSM850	GPRS 4 Tx slots	Right Cheek	0mm	Ant 1	DSI 1	189	836.4	22.16	23.50	1.361	-0.12	0.460	0.626	
	GSM850	GPRS 4 Tx slots	Right Tilted	0mm	Ant 1	DSI 1	189	836.4	22.16	23.50	1.361	0.07	0.075	0.102	
01	GSM850	GPRS 4 Tx slots	Left Cheek	0mm	Ant 1	DSI 1	189	836.4	22.16	23.50	1.361	0.01	0.627	0.853	
	GSM850	GPRS 4 Tx slots	Left Cheek	0mm	Ant 1	DSI 1	128	824.2	22.09	23.50	1.384	0.19	0.532	0.736	
	GSM850	GPRS 4 Tx slots	Left Cheek	0mm	Ant 1	DSI 1	251	848.8	21.93	23.50	1.435	0.10	0.569	0.817	
	GSM850	GPRS 4 Tx slots	Left Tilted	0mm	Ant 1	DSI 1	189	836.4	22.16	23.50	1.361	0.13	0.095	0.129	
	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 4	DSI 1	661	1880	20.20	22.00	1.514	-0.16	0.700	1.060	
02	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 4	DSI 1	512	1850.2	20.16	22.00	1.528	0.05	0.704	1.076	
	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 4	DSI 1	810	1909.8	20.13	22.00	1.538	0.10	0.630	0.969	
	GSM1900	GPRS 4 Tx slots	Right Tilted	0mm	Ant 4	DSI 1	661	1880	20.20	22.00	1.514	0.15	0.238	0.360	
	GSM1900	GPRS 4 Tx slots	Left Cheek	0mm	Ant 4	DSI 1	661	1880	20.20	22.00	1.514	0.11	0.232	0.351	
	GSM1900	GPRS 4 Tx slots	Left Tilted	0mm	Ant 4	DSI 1	661	1880	20.20	22.00	1.514	0.02	0.108	0.164	
	GSM1900	GPRS 4 Tx slots	Right Cheek	0mm	Ant 6	DSI 1	661	1880	23.23	25.00	1.503	-0.06	0.046	0.069	
	GSM1900	GPRS 4 Tx slots	Right Tilted	0mm	Ant 6	DSI 1	661	1880	23.23	25.00	1.503	-0.01	0.001	0.002	
	GSM1900	GPRS 4 Tx slots	Left Cheek	0mm	Ant 6	DSI 1	661	1880	23.23	25.00	1.503	0.03	0.049	0.074	
	GSM1900	GPRS 4 Tx slots	Left Tilted	0mm	Ant 6	DSI 1	661	1880	23.23	25.00	1.503	-0.14	0.001	0.002	

【WCDMA SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	WCDMA II	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	9400	1880	17.32	18.50	1.312	0.09	0.789	1.035	
03	WCDMA II	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	9262	1852.4	17.26	18.50	1.33	-0.06	0.810	1.077	
	WCDMA II	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	9538	1907.6	17.28	18.50	1.324	0.10	0.738	0.977	
	WCDMA II	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	9400	1880	17.32	18.50	1.312	0.03	0.263	0.345	
	WCDMA II	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	9400	1880	17.32	18.50	1.312	-0.06	0.253	0.332	
	WCDMA II	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	9400	1880	17.32	18.50	1.312	-0.13	0.116	0.152	
	WCDMA II	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	9400	1880	24.37	25.50	1.297	-0.17	0.129	0.167	
	WCDMA II	RMC 12.2Kbps	Right Tilted	0mm	Ant 6	DSI 1	9400	1880	24.37	25.50	1.297	0.12	0.070	0.091	
	WCDMA II	RMC 12.2Kbps	Left Cheek	0mm	Ant 6	DSI 1	9400	1880	24.37	25.50	1.297	0.03	0.135	0.175	
	WCDMA II	RMC 12.2Kbps	Left Tilted	0mm	Ant 6	DSI 1	9400	1880	24.37	25.50	1.297	0.17	0.068	0.088	
	WCDMA IV	RMC 12.2Kbps	Right Cheek	0mm	Ant 4	DSI 1	1413	1732.6	16.60	17.50	1.23	-0.03	0.589	0.724	
	WCDMA IV	RMC 12.2Kbps	Right Tilted	0mm	Ant 4	DSI 1	1413	1732.6	16.60	17.50	1.23	0.10	0.208	0.256	
	WCDMA IV	RMC 12.2Kbps	Left Cheek	0mm	Ant 4	DSI 1	1413	1732.6	16.60	17.50	1.23	-0.13	0.183	0.225	
	WCDMA IV	RMC 12.2Kbps	Left Tilted	0mm	Ant 4	DSI 1	1413	1732.6	16.60	17.50	1.23	0.04	0.120	0.148	
	WCDMA IV	RMC 12.2Kbps	Right Cheek	0mm	Ant 5	DSI 1	1413	1732.6	15.36	16.50	1.3	-0.09	0.467	0.607	
	WCDMA IV	RMC 12.2Kbps	Right Tilted	0mm	Ant 5	DSI 1	1413	1732.6	15.36	16.50	1.3	-0.01	0.585	0.760	
	WCDMA IV	RMC 12.2Kbps	Left Cheek	0mm	Ant 5	DSI 1	1413	1732.6	15.36	16.50	1.3	-0.14	0.339	0.441	
	WCDMA IV	RMC 12.2Kbps	Left Tilted	0mm	Ant 5	DSI 1	1413	1732.6	15.36	16.50	1.3	0.06	0.461	0.599	
	WCDMA IV	RMC 12.2Kbps	Right Cheek	0mm	Ant 6	DSI 1	1413	1732.6	23.96	24.50	1.132	0.01	0.138	0.156	
	WCDMA IV	RMC 12.2Kbps	Right Tilted	0mm	Ant 6	DSI 1	1413	1732.6	23.96	24.50	1.132	-0.12	0.073	0.083	
	WCDMA IV	RMC 12.2Kbps	Left Cheek	0mm	Ant 6	DSI 1	1413	1732.6	23.96	24.50	1.132	0.11	0.098	0.111	
	WCDMA IV	RMC 12.2Kbps	Left Tilted	0mm	Ant 6	DSI 1	1413	1732.6	23.96	24.50	1.132	-0.04	0.067	0.076	
	WCDMA IV	RMC 12.2Kbps	Right Cheek	0mm	Ant 7	DSI 1	1413	1732.6	18.48	19.50	1.265	-0.12	0.377	0.477	
	WCDMA IV	RMC 12.2Kbps	Right Tilted	0mm	Ant 7	DSI 1	1413	1732.6	18.48	19.50	1.265	0.02	0.072	0.091	
04	WCDMA IV	RMC 12.2Kbps	Left Cheek	0mm	Ant 7	DSI 1	1413	1732.6	18.48	19.50	1.265	0.17	0.643	0.813	
	WCDMA IV	RMC 12.2Kbps	Left Cheek	0mm	Ant 7	DSI 1	1312	1712.4	18.45	19.50	1.274	0.15	0.631	0.804	
	WCDMA IV	RMC 12.2Kbps	Left Cheek	0mm	Ant 7	DSI 1	1513	1752.6	18.47	19.50	1.268	0.17	0.639	0.810	
	WCDMA IV	RMC 12.2Kbps	Left Tilted	0mm	Ant 7	DSI 1	1413	1732.6	18.48	19.50	1.265	-0.13	0.109	0.138	
	WCDMA V	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSI 1	4182	836.4	24.55	25.00	1.109	0.03	0.328	0.364	
	WCDMA V	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSI 1	4182	836.4	24.55	25.00	1.109	-0.15	0.157	0.174	
	WCDMA V	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSI 1	4182	836.4	24.55	25.00	1.109	-0.08	0.214	0.237	
	WCDMA V	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSI 1	4182	836.4	24.55	25.00	1.109	0.10	0.125	0.139	
	WCDMA V	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSI 1	4182	836.4	18.77	20.00	1.327	0.07	0.428	0.568	
	WCDMA V	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSI 1	4182	836.4	18.77	20.00	1.327	0.03	0.075	0.100	
05	WCDMA V	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4182	836.4	18.77	20.00	1.327	0.06	0.629	0.835	
	WCDMA V	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4132	826.4	18.70	20.00	1.349	-0.09	0.555	0.749	
	WCDMA V	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSI 1	4233	846.6	18.70	20.00	1.349	-0.12	0.605	0.816	
	WCDMA V	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSI 1	4182	836.4	18.77	20.00	1.327	-0.15	0.092	0.122	



[LTE SAR]

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note
	LTE Band 2	20M	QPSK	1	0	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	16.40	18.20	1.514			0.16	0.607	0.919	
	LTE Band 2	20M	QPSK	1	0	Right Cheek	0mm	Ant 4	DSI 1	18700	1860	16.38	18.20	1.521			0.15	0.615	0.935	
	LTE Band 2	20M	QPSK	1	0	Right Cheek	0mm	Ant 4	DSI 1	19100	1900	16.34	18.20	1.535			0.15	0.563	0.864	
	LTE Band 2	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	16.39	18.20	1.517			-0.15	0.598	0.907	
06	LTE Band 2	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI 1	18700	1860	16.24	18.20	1.57			-0.03	0.623	0.978	
	LTE Band 2	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI 1	19100	1900	16.22	18.20	1.578			-0.00	0.575	0.907	
	LTE Band 2	20M	QPSK	100	0	Right Cheek	0mm	Ant 4	DSI 1	18900	1880	16.36	18.20	1.528			0.00	0.592	0.905	
	LTE Band 2	20M	QPSK	1	0	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	16.40	18.20	1.514			0.02	0.205	0.310	
	LTE Band 2	20M	QPSK	50	0	Right Tilted	0mm	Ant 4	DSI 1	18900	1880	16.39	18.20	1.517			-0.14	0.207	0.314	
	LTE Band 2	20M	QPSK	1	0	Left Cheek	0mm	Ant 4	DSI 1	18900	1880	16.40	18.20	1.514			-0.04	0.196	0.297	
	LTE Band 2	20M	QPSK	50	0	Left Cheek	0mm	Ant 4	DSI 1	18900	1880	16.39	18.20	1.517			-0.12	0.195	0.296	
	LTE Band 2	20M	QPSK	1	0	Left Tilted	0mm	Ant 4	DSI 1	18900	1880	16.40	18.20	1.514			-0.09	0.091	0.138	
	LTE Band 2	20M	QPSK	50	0	Left Tilted	0mm	Ant 4	DSI 1	18900	1880	16.39	18.20	1.517			0.02	0.090	0.137	
	LTE Band 2	20M	QPSK	1	0	Right Cheek	0mm	Ant 6	DSI 1	18900	1880	24.55	25.70	1.303			0.14	0.149	0.194	
	LTE Band 2	20M	QPSK	50	0	Right Cheek	0mm	Ant 6	DSI 1	18900	1880	23.29	24.70	1.384			-0.18	0.116	0.161	
	LTE Band 2	20M	QPSK	1	0	Right Tilted	0mm	Ant 6	DSI 1	18900	1880	24.55	25.70	1.303			-0.14	0.078	0.102	
	LTE Band 2	20M	QPSK	50	0	Right Tilted	0mm	Ant 6	DSI 1	18900	1880	23.29	24.70	1.384			0.07	0.061	0.084	
	LTE Band 2	20M	QPSK	1	0	Left Cheek	0mm	Ant 6	DSI 1	18900	1880	24.55	25.70	1.303			0.03	0.153	0.199	
	LTE Band 2	20M	QPSK	50	0	Left Cheek	0mm	Ant 6	DSI 1	18900	1880	23.29	24.70	1.384			-0.16	0.122	0.169	
	LTE Band 2	20M	QPSK	1	0	Left Tilted	0mm	Ant 6	DSI 1	18900	1880	24.55	25.70	1.303			0.09	0.073	0.095	
	LTE Band 2	20M	QPSK	50	0	Left Tilted	0mm	Ant 6	DSI 1	18900	1880	23.29	24.70	1.384			-0.05	0.060	0.083	
	LTE Band 4	20M	QPSK	1	0	Right Cheek	0mm	Ant 5	DSI1	20175	1732.5	15.61	16.20	1.146			0.06	0.507	0.581	Other PA
	LTE Band 4	20M	QPSK	50	0	Right Cheek	0mm	Ant 5	DSI1	20175	1732.5	15.59	16.20	1.151			0.01	0.505	0.581	Other PA
	LTE Band 4	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI1	20175	1732.5	15.61	16.20	1.146			-0.04	0.603	0.691	Other PA
07	LTE Band 4	20M	QPSK	50	0	Right Tilted	0mm	Ant 5	DSI1	20175	1732.5	15.59	16.20	1.151			0.03	0.591	0.680	Other PA
	LTE Band 4	20M	QPSK	1	0	Left Cheek	0mm	Ant 5	DSI1	20175	1732.5	15.61	16.20	1.146			0.02	0.357	0.409	Other PA
	LTE Band 4	20M	QPSK	50	0	Left Cheek	0mm	Ant 5	DSI1	20175	1732.5	15.59	16.20	1.151			-0.07	0.357	0.411	Other PA
	LTE Band 4	20M	QPSK	1	0	Left Tilted	0mm	Ant 5	DSI1	20175	1732.5	15.61	16.20	1.146			-0.16	0.477	0.547	Other PA
	LTE Band 4	20M	QPSK	50	0	Left Tilted	0mm	Ant 5	DSI1	20175	1732.5	15.59	16.20	1.151			-0.08	0.482	0.555	Other PA
	LTE Band 5	10M	QPSK	1	0	Right Cheek	0mm	Ant 1	DSI1	20525	836.5	20.09	20.70	1.151			-0.16	0.615	0.708	Other PA
	LTE Band 5	10M	QPSK	25	0	Right Cheek	0mm	Ant 1	DSI1	20525	836.5	20.01	20.70	1.172			0.16	0.603	0.707	Other PA
	LTE Band 5	10M	QPSK	1	0	Right Tilted	0mm	Ant 1	DSI1	20525	836.5	20.09	20.70	1.151			-0.06	0.118	0.136	Other PA
	LTE Band 5	10M	QPSK	25	0	Right Tilted	0mm	Ant 1	DSI1	20525	836.5	20.01	20.70	1.172			0.02	0.116	0.136	Other PA
	LTE Band 5	10M	QPSK	1	0	Left Cheek	0mm	Ant 1	DSI1	20525	836.5	20.09	20.70	1.151			0.04	0.946	1.089	Other PA
08	LTE Band 5	10M	QPSK	25	0	Left Cheek	0mm	Ant 1	DSI1	20525	836.5	20.01	20.70	1.172			-0.13	0.925	1.084	Other PA
	LTE Band 5	10M	QPSK	50	0	Left Cheek	0mm	Ant 1	DSI1	20525	836.5	20.06	20.70	1.159			0.03	0.910	1.055	Other PA
	LTE Band 5	10M	QPSK	1	0	Left Tilted	0mm	Ant 1	DSI1	20525	836.5	20.09	20.70	1.151			0.00	0.133	0.153	Other PA
	LTE Band 5	10M	QPSK	25	0	Left Tilted	0mm	Ant 1	DSI1	20525	836.5	20.01	20.70	1.172			0.04	0.137	0.161	Other PA
	LTE Band 7	20M	QPSK	1	0	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	16.21	17.20	1.256			-0.00	0.588	0.739	
	LTE Band 7	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI 1	21100	2535	16.12	17.20	1.282			0.02	0.573	0.735	
	LTE Band 7	20M	QPSK	1	0	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	16.21	17.20	1.256			-0.02	0.220	0.276	
	LTE Band 7	20M	QPSK	50	0	Right Tilted	0mm	Ant 4	DSI 1	21100	2535	16.12	17.20	1.282			0.09	0.216	0.277	
	LTE Band 7	20M	QPSK	1	0	Left Cheek	0mm	Ant 4	DSI 1	21100	2535	16.21	17.20	1.256			-0.04	0.209	0.263	
	LTE Band 7	20M	QPSK	50	0	Left Cheek	0mm	Ant 4	DSI 1	21100	2535	16.12	17.20	1.282			0.08	0.215	0.276	
	LTE Band 7	20M	QPSK	1	0	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	16.21	17.20	1.256			-0.12	0.092	0.116	
	LTE Band 7	20M	QPSK	50	0	Left Tilted	0mm	Ant 4	DSI 1	21100	2535	16.12	17.20	1.282			0.11	0.092	0.118	
	LTE Band 7	20M	QPSK	1	0	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	15.71	16.70	1.256			-0.11	0.488	0.613	
	LTE Band 7	20M	QPSK	50	0	Right Cheek	0mm	Ant 5	DSI 1	21100	2535	15.70	16.70	1.259			0.07	0.484	0.609	
	LTE Band 7	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	15.71	16.70	1.256			-0.14	0.588	0.739	
	LTE Band 7	20M	QPSK	50	0	Right Tilted	0mm	Ant 5	DSI 1	21100	2535	15.70	16.70	1.259			-0.10	0.580	0.730	
	LTE Band 7	20M	QPSK	1	0	Left Cheek	0mm	Ant 5	DSI 1	21100	2535	15.71	16.70	1.256			0.09	0.337	0.423	
	LTE Band 7	20M	QPSK	50	0	Left Cheek	0mm	Ant 5	DSI 1	21100	2535	15.70	16.70	1.259			-0.04	0.335	0.422	
	LTE Band 7	20M	QPSK	1	0	Left Tilted	0mm	Ant 5	DSI 1	21100	2535	15.71	16.70	1.256			0.11	0.435	0.546	
	LTE Band 7	20M	QPSK	50	0	Left Tilted	0mm	Ant 5	DSI 1	21100	2535	15.70	16.70	1.259			-0.02	0.437	0.550	
	LTE Band 7	20M	QPSK	1	0	Right Cheek	0mm	Ant 6	DSI 1	21100	2535	24.66	25.50	1.213			-0.17	0.170	0.206	
	LTE Band 7	20M	QPSK	50	0	Right Cheek	0mm	Ant 6	DSI 1	21100	2535	23.86	24.50	1.159			-0.14	0.136	0.158	
	LTE Band 7	20M	QPSK	1	0	Right Tilted	0mm	Ant 6	DSI 1	21100	2535	24.66	25.50	1.213			0.06	0.066	0.080	
	LTE Band 7	20M	QPSK	50	0	Right Tilted	0mm	Ant 6	DSI 1	21100	2535	23.86	24.50	1.159			0.04	0.052	0.060	
	LTE Band 7	20M	QPSK	1	0	Left Cheek	0mm	Ant 6	DSI 1	21100	2535	24.66	25.50	1.213			0.03	0.197	0.239	
	LTE Band 7	20M	QPSK	50	0	Left Cheek	0mm	Ant 6	DSI 1	21100	2535	23.86	24.50	1.159			0.15	0.152	0.176	
	LTE Band 7	20M	QPSK	1	0	Left Tilted	0mm	Ant 6	DSI 1											



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	LTE Band 7	20M	QPSK	100	0	Left Cheek	0mm	Ant 7	DSI 1	21100	2535	15.79	17.50	1.483			-0.18	0.521	0.773	
	LTE Band 7	20M	QPSK	1	0	Left Tilted	0mm	Ant 7	DSI 1	21100	2535	15.90	17.50	1.445			0.06	0.135	0.195	
	LTE Band 7	20M	QPSK	50	0	Left Tilted	0mm	Ant 7	DSI 1	21100	2535	15.88	17.50	1.452			-0.06	0.129	0.187	
	LTE Band 26	15M	QPSK	1	0	Right Cheek	0mm	Ant 0	DSI 1	26865	831.5	25.37	25.70	1.079			-0.07	0.385	0.415	
	LTE Band 26	15M	QPSK	36	0	Right Cheek	0mm	Ant 0	DSI 1	26865	831.5	24.29	24.70	1.099			-0.12	0.307	0.337	
	LTE Band 26	15M	QPSK	1	0	Right Tilted	0mm	Ant 0	DSI 1	26865	831.5	25.37	25.70	1.079			0.06	0.190	0.205	
	LTE Band 26	15M	QPSK	36	0	Right Tilted	0mm	Ant 0	DSI 1	26865	831.5	24.29	24.70	1.099			-0.10	0.149	0.164	
	LTE Band 26	15M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	25.37	25.70	1.079			-0.04	0.240	0.259	
	LTE Band 26	15M	QPSK	36	0	Left Cheek	0mm	Ant 0	DSI 1	26865	831.5	24.29	24.70	1.099			-0.15	0.183	0.201	
	LTE Band 26	15M	QPSK	1	0	Left Tilted	0mm	Ant 0	DSI 1	26865	831.5	25.37	25.70	1.079			0.16	0.148	0.160	
	LTE Band 26	15M	QPSK	36	0	Left Tilted	0mm	Ant 0	DSI 1	26865	831.5	24.29	24.70	1.099			0.18	0.116	0.127	
	LTE Band 5	10M	QPSK	1	0	Right Cheek	0mm	Ant 0	DSI1	20525	836.5	24.44	25.00	1.138			0.03	0.362	0.412	Other PA
	LTE Band 26	15M	QPSK	1	0	Right Cheek	0mm	Ant 1	DSI 1	26865	831.5	19.80	20.20	1.096			-0.16	0.456	0.500	
	LTE Band 26	15M	QPSK	36	0	Right Cheek	0mm	Ant 1	DSI 1	26865	831.5	19.76	20.20	1.107			-0.19	0.447	0.495	
	LTE Band 26	15M	QPSK	1	0	Right Tilted	0mm	Ant 1	DSI 1	26865	831.5	19.80	20.20	1.096			0.13	0.078	0.085	
	LTE Band 26	15M	QPSK	36	0	Right Tilted	0mm	Ant 1	DSI 1	26865	831.5	19.76	20.20	1.107			0.06	0.078	0.086	
10	LTE Band 26	15M	QPSK	1	0	Left Cheek	0mm	Ant 1	DSI 1	26865	831.5	19.80	20.20	1.096			0.02	0.677	0.742	
	LTE Band 26	15M	QPSK	36	0	Left Cheek	0mm	Ant 1	DSI 1	26865	831.5	19.76	20.20	1.107			-0.14	0.643	0.712	
	LTE Band 26	15M	QPSK	1	0	Left Tilted	0mm	Ant 1	DSI 1	26865	831.5	19.80	20.20	1.096			0.06	0.097	0.106	
	LTE Band 26	15M	QPSK	36	0	Left Tilted	0mm	Ant 1	DSI 1	26865	831.5	19.76	20.20	1.107			-0.01	0.096	0.106	
	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 4	DSI 1	132322	1745	16.68	17.70	1.265			0.14	0.671	0.849	
	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 4	DSI 1	132072	1720	16.65	17.70	1.274			0.13	0.591	0.753	
	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 4	DSI 1	132572	1770	16.60	17.70	1.288			-0.12	0.734	0.945	
	LTE Band 66	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI 1	132322	1745	16.66	17.70	1.271			-0.11	0.678	0.862	
	LTE Band 66	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI 1	132072	1720	16.60	17.70	1.288			-0.11	0.596	0.768	
11	LTE Band 66	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI 1	132572	1770	16.56	17.70	1.3			0.19	0.737	0.958	
	LTE Band 66	20M	QPSK	100	0	Right Cheek	0mm	Ant 4	DSI 1	132322	1745	16.53	17.70	1.309			0.05	0.675	0.884	
	LTE Band 66	20M	QPSK	1	0	Right Tilted	0mm	Ant 4	DSI 1	132322	1745	16.68	17.70	1.265			-0.16	0.240	0.304	
	LTE Band 66	20M	QPSK	50	0	Right Tilted	0mm	Ant 4	DSI 1	132322	1745	16.66	17.70	1.271			0.14	0.241	0.306	
	LTE Band 66	20M	QPSK	1	0	Left Cheek	0mm	Ant 4	DSI 1	132322	1745	16.68	17.70	1.265			-0.11	0.218	0.276	
	LTE Band 66	20M	QPSK	50	0	Left Cheek	0mm	Ant 4	DSI 1	132322	1745	16.66	17.70	1.271			0.04	0.219	0.278	
	LTE Band 66	20M	QPSK	1	0	Left Tilted	0mm	Ant 4	DSI 1	132322	1745	16.68	17.70	1.265			0.12	0.132	0.167	
	LTE Band 66	20M	QPSK	50	0	Left Tilted	0mm	Ant 4	DSI 1	132322	1745	16.66	17.70	1.271			0.17	0.134	0.170	
	LTE Band 4	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI1	20175	1732.5	16.72	18.20	1.406			0.03	0.636	0.894	Other PA
	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 5	DSI 1	132322	1745	15.11	16.50	1.377			0.06	0.482	0.664	
	LTE Band 66	20M	QPSK	50	0	Right Cheek	0mm	Ant 5	DSI 1	132322	1745	15.08	16.50	1.387			0.15	0.480	0.666	
	LTE Band 66	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI 1	132322	1745	15.11	16.50	1.377			0.01	0.573	0.789	
	LTE Band 66	20M	QPSK	50	0	Right Tilted	0mm	Ant 5	DSI 1	132322	1745	15.08	16.50	1.387			0.05	0.562	0.779	
	LTE Band 66	20M	QPSK	1	0	Left Cheek	0mm	Ant 5	DSI 1	132322	1745	15.11	16.50	1.377			0.07	0.340	0.468	
	LTE Band 66	20M	QPSK	50	0	Left Cheek	0mm	Ant 5	DSI 1	132322	1745	15.08	16.50	1.387			0.07	0.340	0.472	
	LTE Band 66	20M	QPSK	1	0	Left Tilted	0mm	Ant 5	DSI 1	132322	1745	15.11	16.50	1.377			-0.15	0.454	0.625	
	LTE Band 66	20M	QPSK	50	0	Left Tilted	0mm	Ant 5	DSI 1	132322	1745	15.08	16.50	1.387			0.17	0.458	0.635	
	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 6	DSI 1	132322	1745	24.38	25.50	1.294			0.03	0.165	0.214	
	LTE Band 66	20M	QPSK	50	0	Right Cheek	0mm	Ant 6	DSI 1	132322	1745	23.20	24.50	1.349			-0.02	0.131	0.177	
	LTE Band 66	20M	QPSK	1	0	Right Tilted	0mm	Ant 6	DSI 1	132322	1745	24.38	25.50	1.294			0.13	0.066	0.085	
	LTE Band 66	20M	QPSK	50	0	Right Tilted	0mm	Ant 6	DSI 1	132322	1745	23.20	24.50	1.349			0.01	0.054	0.073	
	LTE Band 66	20M	QPSK	1	0	Left Cheek	0mm	Ant 6	DSI 1	132322	1745	24.38	25.50	1.294			-0.01	0.114	0.148	
	LTE Band 66	20M	QPSK	50	0	Left Cheek	0mm	Ant 6	DSI 1	132322	1745	23.20	24.50	1.349			-0.18	0.092	0.124	
	LTE Band 66	20M	QPSK	1	0	Left Tilted	0mm	Ant 6	DSI 1	132322	1745	24.38	25.50	1.294			-0.12	0.082	0.106	
	LTE Band 66	20M	QPSK	50	0	Left Tilted	0mm	Ant 6	DSI 1	132322	1745	23.20	24.50	1.349			0.06	0.064	0.086	
	LTE Band 4	20M	QPSK	1	0	Right Cheek	0mm	Ant 6	DSI1	20175	1732.5	24.65	25.50	1.216			0.03	0.154	0.187	Other PA
	LTE Band 66	20M	QPSK	1	0	Right Cheek	0mm	Ant 7	DSI 1	132322	1745	18.40	19.50	1.288			-0.18	0.327	0.421	
	LTE Band 66	20M	QPSK	50	0	Right Cheek	0mm	Ant 7	DSI 1	132322	1745	18.37	19.50	1.297			-0.13	0.330	0.428	
	LTE Band 66	20M	QPSK	1	0	Right Tilted	0mm	Ant 7	DSI 1	132322	1745	18.40	19.50	1.288			0.15	0.051	0.066	
	LTE Band 66	20M	QPSK	50	0	Right Tilted	0mm	Ant 7	DSI 1	132322	1745	18.37	19.50	1.297			0.17	0.052	0.067	
	LTE Band 66	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI 1	132322	1745	18.40	19.50	1.288			-0.13	0.552	0.711	
	LTE Band 66	20M	QPSK	50	0	Left Cheek	0mm	Ant 7	DSI 1	132322	1745	18.37	19.50	1.297			-0.10	0.511	0.663	
	LTE Band 66	20M	QPSK	1	0	Left Tilted	0mm	Ant 7	DSI 1	132322	1745	18.40	19.50	1.288			-0.08	0.088	0.113	
	LTE Band 66	20M	QPSK	50	0	Left Tilted	0mm	Ant 7	DSI 1	132322	1745	18.37	19.50	1.297			-0.08	0.086	0.112	
	LTE Band 4	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI1	20175	1732.5	18.82	19.20	1.091			-0.18	0.643	0.702	Other PA
	LTE Band 71	20M	QPSK	1	0	Right Cheek	0mm	Ant 0	DSI 1	133297	680.5	24.36	25.00	1.159			-0.06	0.081	0.094	
	LTE Band 71	20M	QPSK	50	0	Right Cheek	0mm	Ant 0	DSI 1	133297	680.5	23.40	24.00	1.148			0.03	0.075	0.086	
	LTE Band 71	20M	QPSK	1	0	Right Tilted	0mm	Ant 0	DSI 1	133297	680.5	24.36	25.00	1.159			-0.02	0.063	0.073	
	LTE Band 71	20M	QPSK	50	0	Right Tilted	0mm	Ant 0	DSI 1	133297	680.5	23.40	24.00	1.148			-0.04	0.001	0.001	
	LTE Band 71	20M	QPSK	1	0	Left Cheek	0mm	Ant 0	DSI 1	133297	680.5	24.36	25.00	1.159			0.02	0.064	0.074	
	LTE Band 71	20M	QPSK	50	0	Left Cheek	0mm	Ant 0	DSI 1	133297	680.5	23.40	24.00	1.148			0.05	0.046	0.053	
	LTE Band 71	20M	QPSK	1	0	Left Tilted	0mm	Ant 0	DSI 1	133297	680.5	24.36	25.00	1.159			-0.13	0.044	0.051	
	LTE Band 71	20M	QPSK	50	0	Left Tilted	0mm	Ant 0	DSI 1	133297	680.5	23.40	24.00	1.148			0.07	0.001	0.001	
	LTE Band 71	20M	QPSK	1	0	Right Cheek	0mm	Ant 1	DSI 1	133297	680.5	23.33	24.50	1.309			0.02	0.357	0.467	
	LTE Band 71	20M	QPSK	50	0	Right Cheek	0mm	Ant 1	DSI 1	133297	680.5	23.31	24.50	1.315			0.10	0.417	0.548	
	LTE Band 71	20M	QPSK	1	0	Right Tilted	0mm	Ant 1	DSI 1	133297	680.5	23.33	24.50	1.309			0.05	0.057	0.075	
	LTE Band 71	20M	QPSK	50	0	Right Tilted	0mm	Ant 1	DSI 1	133297	680.5	23.31	24.50	1.315			0.01	0.070	0.	



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12	LTE Band 71	20M	QPSK	50	0	Left Cheek	0mm	Ant 1	DSI 1	133297	680.5	23.31	24.50	1.315			-0.02	0.542	0.713	
	LTE Band 71	20M	QPSK	1	0	Left Tilted	0mm	Ant 1	DSI 1	133297	680.5	23.33	24.50	1.309			-0.06	0.063	0.082	
	LTE Band 71	20M	QPSK	50	0	Left Tilted	0mm	Ant 1	DSI 1	133297	680.5	23.31	24.50	1.315			-0.01	0.075	0.099	
	LTE Band 41	20M	QPSK	1	0	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	17.78	18.20	1.102	62.9	1.006	0.09	0.496	0.550	
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 4	DSI 1	40620	2593	17.75	18.20	1.109	62.9	1.006	0.18	0.483	0.539	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	17.78	18.20	1.102	62.9	1.006	-0.08	0.176	0.195	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 4	DSI 1	40620	2593	17.75	18.20	1.109	62.9	1.006	-0.10	0.180	0.201	
	LTE Band 41	20M	QPSK	1	0	Left Cheek	0mm	Ant 4	DSI 1	40620	2593	17.78	18.20	1.102	62.9	1.006	-0.14	0.193	0.214	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 4	DSI 1	40620	2593	17.75	18.20	1.109	62.9	1.006	0.15	0.197	0.220	
	LTE Band 41	20M	QPSK	1	0	Left Tilted	0mm	Ant 4	DSI 1	40620	2593	17.78	18.20	1.102	62.9	1.006	0.00	0.072	0.080	
	LTE Band 41	20M	QPSK	50	0	Left Tilted	0mm	Ant 4	DSI 1	40620	2593	17.75	18.20	1.109	62.9	1.006	-0.09	0.072	0.080	
	LTE Band 41	20M	QPSK	1	0	Right Cheek	0mm	Ant 5	DSI 1	40620	2593	16.35	17.70	1.365	62.9	1.006	0.17	0.421	0.578	
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 5	DSI 1	40620	2593	16.33	17.70	1.371	62.9	1.006	0.06	0.422	0.582	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI 1	40620	2593	16.35	17.70	1.365	62.9	1.006	0.00	0.496	0.681	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI 1	39750	2506	16.30	17.70	1.38	62.9	1.006	-0.11	0.493	0.684	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI 1	40185	2549.5	16.23	17.70	1.403	62.9	1.006	0.19	0.496	0.700	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI 1	41055	2636.5	16.31	17.70	1.377	62.9	1.006	-0.07	0.511	0.708	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI 1	41490	2680	16.28	17.70	1.387	62.9	1.006	0.01	0.521	0.727	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 5	DSI 1	40620	2593	16.33	17.70	1.371	62.9	1.006	0.12	0.503	0.694	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 5	DSI 1	39750	2506	16.24	17.70	1.4	62.9	1.006	-0.16	0.496	0.699	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 5	DSI 1	40185	2549.5	16.17	17.70	1.422	62.9	1.006	-0.19	0.501	0.717	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 5	DSI 1	41055	2636.5	16.26	17.70	1.393	62.9	1.006	0.05	0.510	0.715	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 5	DSI 1	41490	2680	16.19	17.70	1.416	62.9	1.006	0.13	0.503	0.717	
	LTE Band 41	20M	QPSK	1	0	Left Cheek	0mm	Ant 5	DSI 1	40620	2593	16.35	17.70	1.365	62.9	1.006	-0.15	0.305	0.419	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 5	DSI 1	40620	2593	16.33	17.70	1.371	62.9	1.006	-0.00	0.304	0.419	
	LTE Band 41	20M	QPSK	1	0	Left Tilted	0mm	Ant 5	DSI 1	40620	2593	16.35	17.70	1.365	62.9	1.006	0.02	0.348	0.478	
	LTE Band 41	20M	QPSK	50	0	Left Tilted	0mm	Ant 5	DSI 1	40620	2593	16.33	17.70	1.371	62.9	1.006	-0.04	0.347	0.479	
	LTE Band 41	20M	QPSK	1	0	Right Cheek	0mm	Ant 6	DSI 1	40620	2593	24.59	25.50	1.233	62.9	1.006	-0.18	0.082	0.102	
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 6	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	-0.09	0.065	0.084	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	0mm	Ant 6	DSI 1	40620	2593	24.59	25.50	1.233	62.9	1.006	0.09	0.056	0.069	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 6	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	0.12	0.044	0.057	
	LTE Band 41	20M	QPSK	1	0	Left Cheek	0mm	Ant 6	DSI 1	40620	2593	24.59	25.50	1.233	62.9	1.006	0.03	0.101	0.125	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 6	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	-0.16	0.081	0.104	
	LTE Band 41	20M	QPSK	1	0	Left Tilted	0mm	Ant 6	DSI 1	40620	2593	24.59	25.50	1.233	62.9	1.006	-0.12	0.043	0.053	
	LTE Band 41	20M	QPSK	50	0	Left Tilted	0mm	Ant 6	DSI 1	40620	2593	23.43	24.50	1.279	62.9	1.006	0.08	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Right Cheek	0mm	Ant 7	DSI 1	40620	2593	18.53	19.50	1.25	62.9	1.006	0.05	0.207	0.260	
	LTE Band 41	20M	QPSK	50	0	Right Cheek	0mm	Ant 7	DSI 1	40620	2593	18.52	19.50	1.253	62.9	1.006	-0.11	0.209	0.263	
	LTE Band 41	20M	QPSK	1	0	Right Tilted	0mm	Ant 7	DSI 1	40620	2593	18.53	19.50	1.25	62.9	1.006	0.06	0.048	0.060	
	LTE Band 41	20M	QPSK	50	0	Right Tilted	0mm	Ant 7	DSI 1	40620	2593	18.52	19.50	1.253	62.9	1.006	0.13	0.048	0.061	
	LTE Band 41	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI 1	40620	2593	18.53	19.50	1.25	62.9	1.006	0.04	0.532	0.669	
	LTE Band 41	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI 1	39750	2506	18.40	19.50	1.288	62.9	1.006	0.02	0.518	0.671	
	LTE Band 41	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI 1	40185	2549.5	18.41	19.50	1.285	62.9	1.006	-0.08	0.612	0.791	
13	LTE Band 41	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI 1	41055	2636.5	18.48	19.50	1.265	62.9	1.006	-0.17	0.507	0.645	
	LTE Band 41	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI 1	41490	2680	18.49	19.50	1.262	62.9	1.006	0.18	0.469	0.595	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 7	DSI 1	40620	2593	18.52	19.50	1.253	62.9	1.006	-0.09	0.544	0.686	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 7	DSI 1	39750	2506	18.38	19.50	1.294	62.9	1.006	0.04	0.521	0.678	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 7	DSI 1	40185	2549.5	18.40	19.50	1.288	62.9	1.006	0.18	0.599	0.776	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 7	DSI 1	41055	2636.5	18.40	19.50	1.288	62.9	1.006	-0.17	0.510	0.661	
	LTE Band 41	20M	QPSK	50	0	Left Cheek	0mm	Ant 7	DSI 1	41490	2680	18.46	19.50	1.271	62.9	1.006	-0.03	0.480	0.614	
	LTE Band 41	20M	QPSK	1	0	Left Tilted	0mm	Ant 7	DSI 1	40620	2593	18.53	19.50	1.25	62.9	1.006	0.06	0.099	0.124	
	LTE Band 41	20M	QPSK	50	0	Left Tilted	0mm	Ant 7	DSI 1	40620	2593	18.52	19.50	1.253	62.9	1.006	-0.04	0.102	0.129	
	LTE Band 42	20M	QPSK	1	0	Right Cheek	0mm	Ant 8	DSI 1	42590	3500	16.97	17.70	1.183	62.9	1.006	-0.14	0.391	0.465	
	LTE Band 42	20M	QPSK	50	0	Right Cheek	0mm	Ant 8	DSI 1	42590	3500	16.95	17.70	1.189	62.9	1.006	0.16	0.384	0.459	
	LTE Band 42	20M	QPSK	1	0	Right Tilted	0mm	Ant 8	DSI 1	42590	3500	16.97	17.70	1.183	62.9	1.006	0.17	0.425	0.506	
	LTE Band 42	20M	QPSK	50	0	Right Tilted	0mm	Ant 8	DSI 1	42590	3500	16.95	17.70	1.189	62.9	1.006	-0.04	0.553	0.661	
	LTE Band 42	20M	QPSK	1	0	Left Cheek	0mm	Ant 8	DSI 1	42590	3500	16.97	17.70	1.183	62.9	1.006	-0.18	0.692	0.824	
	LTE Band 42	20M	QPSK	1	0	Left Cheek	0mm	Ant 8	DSI 1	42190	3460	16.86	17.70	1.213	62.9	1.006	0.11	0.689	0.841	
	LTE Band 42	20M	QPSK	1	0	Left Cheek	0mm	Ant 8	DSI 1	42990	3540	16.89	17.70	1.205	62.9	1.006	-0.12	0.701	0.850	
	LTE Band 42	20M	QPSK	50	0	Left Cheek	0mm	Ant 8	DSI 1	42590	3500	16.95	17.70	1.189	62.9	1.006	0.06	0.855	1.023	
	LTE Band 42	20M	QPSK	50	0	Left Cheek	0mm	Ant 8	DSI 1	42190	3460	16.79	17.70	1.233	62.9	1.006	-0.08	0.861	1.068	
	LTE Band 42	20M	QPSK	50	0	Left Cheek	0mm	Ant 8	DSI 1	42990	3540	16.85	17.70	1.216	62.9	1.006	-0.02	0.853	1.043	
	LTE Band 42	20M	QPSK	100	0	Left Cheek	0mm	Ant 8	DSI 1	42590	3500	16.85	17.70	1.216	62.9	1.006	-0.10	0.869	1.063	
	LTE Band 42	20M	QPSK	1	0	Left Tilted	0mm	Ant 8	DSI 1	42590	3500	16.97	17.70	1.183	62.9	1.006	-0.11	0.787	0.937	
	LTE Band 42	20M	QPSK	1	0	Left Tilted	0mm	Ant 8	DSI 1	42190	3460	16.86	17.70	1.213	62.9	1.006	0.12	0.797	0.973	
	LTE Band 42	20M	QPSK	1	0	Left Tilted	0mm	Ant 8	DSI 1	42990	3540	16.89	17.70	1.205	62.9	1.006	0.03	0.781	0.947	
	LTE Band 42	20M	QPSK	50	0	Left Tilted	0mm	Ant 8	DSI 1	42590	3500	16.95	17.70	1.189	62.9	1.006	0.00	0.902	1.079	
	LTE Band 42	20M	QPSK	50	0	Left Tilted	0mm	Ant 8	DSI 1	42190	3460	16.79	17.70	1.233	62.9	1.006	0.11	0.852	1.057	
	LTE Band 42	20M	QPSK	50	0	Left Tilted	0mm	Ant 8	DSI 1	42990	3540	16.85	17.70	1.216	62.9	1.006	0.04	0.872	1.067	
	LTE Band 42																			



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	LTE Band 42	20M	QPSK	50	0	Right Cheek	0mm	Ant 9	DSI 1	42190	3460	18.01	20.00	1.581	62.9	1.006	0.03	0.513	0.816	
	LTE Band 42	20M	QPSK	50	0	Right Cheek	0mm	Ant 9	DSI 1	42990	3540	18.06	20.00	1.563	62.9	1.006	0.05	0.518	0.814	
	LTE Band 42	20M	QPSK	100	0	Right Cheek	0mm	Ant 9	DSI 1	42590	3500	18.08	20.00	1.556	62.9	1.006	-0.14	0.521	0.816	
	LTE Band 42	20M	QPSK	1	0	Right Tilted	0mm	Ant 9	DSI 1	42590	3500	18.21	20.00	1.51	62.9	1.006	-0.07	0.160	0.243	
	LTE Band 42	20M	QPSK	50	0	Right Tilted	0mm	Ant 9	DSI 1	42590	3500	18.16	20.00	1.528	62.9	1.006	-0.14	0.165	0.254	
	LTE Band 42	20M	QPSK	1	0	Left Cheek	0mm	Ant 9	DSI 1	42590	3500	18.21	20.00	1.51	62.9	1.006	-0.03	0.189	0.287	
	LTE Band 42	20M	QPSK	50	0	Left Cheek	0mm	Ant 9	DSI 1	42590	3500	18.16	20.00	1.528	62.9	1.006	0.19	0.199	0.306	
	LTE Band 42	20M	QPSK	1	0	Left Tilted	0mm	Ant 9	DSI 1	42590	3500	18.21	20.00	1.51	62.9	1.006	-0.08	0.024	0.036	
	LTE Band 42	20M	QPSK	50	0	Left Tilted	0mm	Ant 9	DSI 1	42590	3500	18.16	20.00	1.528	62.9	1.006	-0.09	0.024	0.037	
	LTE Band 42	20M	QPSK	1	0	Right Cheek	0mm	Ant 10	DSI 1	42590	3500	18.30	19.20	1.23	62.9	1.006	0.03	0.172	0.213	
	LTE Band 42	20M	QPSK	50	0	Right Cheek	0mm	Ant 10	DSI 1	42590	3500	18.28	19.20	1.236	62.9	1.006	0.03	0.172	0.214	
	LTE Band 42	20M	QPSK	1	0	Right Tilted	0mm	Ant 10	DSI 1	42590	3500	18.30	19.20	1.23	62.9	1.006	0.04	0.130	0.161	
	LTE Band 42	20M	QPSK	50	0	Right Tilted	0mm	Ant 10	DSI 1	42590	3500	18.28	19.20	1.236	62.9	1.006	-0.14	0.131	0.163	
	LTE Band 42	20M	QPSK	1	0	Left Cheek	0mm	Ant 10	DSI 1	42590	3500	18.30	19.20	1.23	62.9	1.006	0.15	0.824	1.020	
14	LTE Band 42	20M	QPSK	1	0	Left Cheek	0mm	Ant 10	DSI 1	42190	3460	18.25	19.20	1.245	62.9	1.006	-0.08	0.870	1.090	
	LTE Band 42	20M	QPSK	1	0	Left Cheek	0mm	Ant 10	DSI 1	42990	3540	18.23	19.20	1.25	62.9	1.006	0.02	0.792	0.996	
	LTE Band 42	20M	QPSK	50	0	Left Cheek	0mm	Ant 10	DSI 1	42590	3500	18.28	19.20	1.236	62.9	1.006	0.15	0.815	1.013	
	LTE Band 42	20M	QPSK	50	0	Left Cheek	0mm	Ant 10	DSI 1	42190	3460	18.18	19.20	1.265	62.9	1.006	0.04	0.849	1.080	
	LTE Band 42	20M	QPSK	50	0	Left Cheek	0mm	Ant 10	DSI 1	42990	3540	18.16	19.20	1.271	62.9	1.006	-0.06	0.785	1.004	
	LTE Band 42	20M	QPSK	100	0	Left Cheek	0mm	Ant 10	DSI 1	42590	3500	18.13	19.20	1.279	62.9	1.006	-0.17	0.828	1.065	
	LTE Band 42	20M	QPSK	1	0	Left Tilted	0mm	Ant 10	DSI 1	42590	3500	18.30	19.20	1.23	62.9	1.006	0.09	0.330	0.408	
	LTE Band 42	20M	QPSK	50	0	Left Tilted	0mm	Ant 10	DSI 1	42590	3500	18.28	19.20	1.236	62.9	1.006	0.15	0.327	0.407	
	LTE Band 42	20M	QPSK	1	0	Right Cheek	0mm	Ant 11	DSI 1	42590	3500	23.40	25.00	1.445	62.9	1.006	0.08	0.148	0.215	
	LTE Band 42	20M	QPSK	50	0	Right Cheek	0mm	Ant 11	DSI 1	42590	3500	22.37	24.00	1.455	62.9	1.006	-0.03	0.130	0.190	
	LTE Band 42	20M	QPSK	1	0	Right Tilted	0mm	Ant 11	DSI 1	42590	3500	23.40	25.00	1.445	62.9	1.006	-0.07	0.138	0.201	
	LTE Band 42	20M	QPSK	50	0	Right Tilted	0mm	Ant 11	DSI 1	42590	3500	22.37	24.00	1.455	62.9	1.006	-0.08	0.114	0.167	
	LTE Band 42	20M	QPSK	1	0	Left Cheek	0mm	Ant 11	DSI 1	42590	3500	23.40	25.00	1.445	62.9	1.006	-0.08	0.041	0.060	
	LTE Band 42	20M	QPSK	50	0	Left Cheek	0mm	Ant 11	DSI 1	42590	3500	22.37	24.00	1.455	62.9	1.006	-0.08	0.041	0.060	
	LTE Band 42	20M	QPSK	1	0	Left Tilted	0mm	Ant 11	DSI 1	42590	3500	23.40	25.00	1.445	62.9	1.006	-0.17	0.059	0.086	
	LTE Band 42	20M	QPSK	50	0	Left Tilted	0mm	Ant 11	DSI 1	42590	3500	22.37	24.00	1.455	62.9	1.006	-0.03	0.049	0.072	
	LTE Band 48	20M	QPSK	1	0	Right Cheek	0mm	Ant 8	DSI 1	55830	3609	17.51	18.00	1.119	62.9	1.006	0.08	0.436	0.491	
	LTE Band 48	20M	QPSK	50	0	Right Cheek	0mm	Ant 8	DSI 1	55830	3609	17.49	18.00	1.125	62.9	1.006	0.10	0.463	0.524	
	LTE Band 48	20M	QPSK	1	0	Right Tilted	0mm	Ant 8	DSI 1	55830	3609	17.51	18.00	1.119	62.9	1.006	-0.02	0.518	0.583	
	LTE Band 48	20M	QPSK	50	0	Right Tilted	0mm	Ant 8	DSI 1	55830	3609	17.49	18.00	1.125	62.9	1.006	-0.15	0.525	0.594	
	LTE Band 48	20M	QPSK	1	0	Left Cheek	0mm	Ant 8	DSI 1	55830	3609	17.51	18.00	1.119	62.9	1.006	0.19	0.878	0.988	
	LTE Band 48	20M	QPSK	1	0	Left Cheek	0mm	Ant 8	DSI 1	55340	3560	17.44	18.00	1.138	62.9	1.006	0.17	0.907	1.038	
	LTE Band 48	20M	QPSK	1	0	Left Cheek	0mm	Ant 8	DSI 1	56150	3641	17.48	18.00	1.127	62.9	1.006	0.05	0.837	0.949	
	LTE Band 48	20M	QPSK	1	0	Left Cheek	0mm	Ant 8	DSI 1	56640	3690	17.45	18.00	1.135	62.9	1.006	0.09	0.763	0.871	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 8	DSI 1	55830	3609	17.49	18.00	1.125	62.9	1.006	-0.11	0.875	0.990	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 8	DSI 1	55340	3560	17.40	18.00	1.148	62.9	1.006	-0.11	0.923	1.066	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 8	DSI 1	56150	3641	17.42	18.00	1.143	62.9	1.006	0.03	0.830	0.954	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 8	DSI 1	56640	3690	17.44	18.00	1.138	62.9	1.006	-0.02	0.753	0.862	
	LTE Band 48	20M	QPSK	100	0	Left Cheek	0mm	Ant 8	DSI 1	55830	3609	17.47	18.00	1.13	62.9	1.006	0.06	0.878	0.998	
	LTE Band 48	20M	QPSK	1	0	Left Tilted	0mm	Ant 8	DSI 1	55830	3609	17.51	18.00	1.119	62.9	1.006	-0.12	0.904	1.018	
	LTE Band 48	20M	QPSK	1	0	Left Tilted	0mm	Ant 8	DSI 1	55340	3560	17.44	18.00	1.138	62.9	1.006	-0.13	0.920	1.053	
	LTE Band 48	20M	QPSK	1	0	Left Tilted	0mm	Ant 8	DSI 1	56150	3641	17.48	18.00	1.127	62.9	1.006	-0.14	0.866	0.982	
	LTE Band 48	20M	QPSK	1	0	Left Tilted	0mm	Ant 8	DSI 1	56640	3690	17.45	18.00	1.135	62.9	1.006	-0.09	0.786	0.897	
	LTE Band 48	20M	QPSK	50	0	Left Tilted	0mm	Ant 8	DSI 1	55830	3609	17.49	18.00	1.125	62.9	1.006	0.18	0.892	1.010	
15	LTE Band 48	20M	QPSK	50	0	Left Tilted	0mm	Ant 8	DSI 1	55340	3560	17.40	18.00	1.148	62.9	1.006	-0.03	0.941	1.087	
	LTE Band 48	20M	QPSK	50	0	Left Tilted	0mm	Ant 8	DSI 1	56150	3641	17.42	18.00	1.143	62.9	1.006	0.14	0.864	0.993	
	LTE Band 48	20M	QPSK	50	0	Left Tilted	0mm	Ant 8	DSI 1	56640	3690	17.44	18.00	1.138	62.9	1.006	-0.15	0.792	0.907	
	LTE Band 48	20M	QPSK	100	0	Left Tilted	0mm	Ant 8	DSI 1	55830	3609	17.47	18.00	1.13	62.9	1.006	-0.11	0.897	1.020	
	LTE Band 48	20M	QPSK	1	0	Right Cheek	0mm	Ant 9	DSI 1	55830	3609	17.41	19.00	1.442	62.9	1.006	0.04	0.489	0.709	
	LTE Band 48	20M	QPSK	1	0	Right Cheek	0mm	Ant 9	DSI 1	55340	3560	17.32	19.00	1.472	62.9	1.006	0.01	0.481	0.712	
	LTE Band 48	20M	QPSK	1	0	Right Cheek	0mm	Ant 9	DSI 1	56150	3641	17.29	19.00	1.483	62.9	1.006	0.03	0.475	0.709	
	LTE Band 48	20M	QPSK	1	0	Right Cheek	0mm	Ant 9	DSI 1	56640	3690	17.28	19.00	1.486	62.9	1.006	0.05	0.483	0.722	
	LTE Band 48	20M	QPSK	50	0	Right Cheek	0mm	Ant 9	DSI 1	55830	3609	17.38	19.00	1.452	62.9	1.006	-0.01	0.498	0.727	
	LTE Band 48	20M	QPSK	50	0	Right Cheek	0mm	Ant 9	DSI 1	55340	3560	17.28	19.00	1.486	62.9	1.006	0.04	0.467	0.698	
	LTE Band 48	20M	QPSK	50	0	Right Cheek	0mm	Ant 9	DSI 1	56150	3641	17.20	19.00	1.514	62.9	1.006	-0.06	0.470	0.716	
	LTE Band 48	20M	QPSK	50	0	Right Cheek	0mm	Ant 9	DSI 1	56640	3690	17.24	19.00	1.5	62.9	1.006	-0.18	0.481	0.726	
	LTE Band 48	20M	QPSK	1	0	Right Tilted	0mm	Ant 9	DSI 1	55830	3609	17.41	19.00	1.442	62.9	1.006	0.07	0.166	0.241	
	LTE Band 48	20M	QPSK	50	0	Right Tilted	0mm	Ant 9	DSI 1	55830	3609	17.38	19.00	1.452	62.9	1.006	0.02	0.166	0.242	
	LTE Band 48	20M	QPSK	1	0	Left Cheek	0mm	Ant 9	DSI 1	55830	3609	17.41	19.00	1.442	62.9	1.006	0.17	0.192	0.279	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 9	DSI 1	55830	3609	17.38	19.00	1.452	62.9	1.006	-0.17	0.192	0.280	
	LTE Band 48	20M	QPSK	1	0	Left Tilted	0mm	Ant 9	DSI 1	55830	3609	17.41	19.00	1.442	62.9	1.006	-0.02	0.066	0.096	
	LTE Band 48	20M	QPSK	50	0	Left Tilted	0mm	Ant 9	DSI 1	55830	3609	17.38	19.00	1.452	62.9	1.006	-0.15	0.071	0.104	
	LTE Band 48	20M	QPSK	1	0	Right Cheek	0mm	Ant 10	DSI 1	55830	3609	16.88	18.50	1.452	62.9	1.006	0.00	0.126	0.184	
	LTE Band 48	20M	QPSK	50	0	Right Cheek	0mm	Ant 10	DSI 1	55830	3609	16.87	18.50	1.455	62.9	1.006	0.10	0.131		



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	LTE Band 48	20M	QPSK	1	0	Left Cheek	0mm	Ant 10	DSI 1	56640	3690	16.81	18.50	1.476	62.9	1.006	0.02	0.611	0.907	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 10	DSI 1	55830	3609	16.87	18.50	1.455	62.9	1.006	0.16	0.622	0.910	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 10	DSI 1	55340	3560	16.65	18.50	1.531	62.9	1.006	0.13	0.657	1.012	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 10	DSI 1	56150	3641	16.73	18.50	1.503	62.9	1.006	0.05	0.627	0.948	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 10	DSI 1	56640	3690	16.79	18.50	1.483	62.9	1.006	-0.11	0.620	0.925	
	LTE Band 48	20M	QPSK	100	0	Left Cheek	0mm	Ant 10	DSI 1	55830	3609	16.85	18.50	1.462	62.9	1.006	-0.19	0.616	0.906	
	LTE Band 48	20M	QPSK	1	0	Left Tilted	0mm	Ant 10	DSI 1	55830	3609	16.88	18.50	1.452	62.9	1.006	0.05	0.226	0.330	
	LTE Band 48	20M	QPSK	50	0	Left Tilted	0mm	Ant 10	DSI 1	55830	3609	16.87	18.50	1.455	62.9	1.006	0.13	0.234	0.343	
	LTE Band 48	20M	QPSK	1	0	Right Cheek	0mm	Ant 11	DSI 1	55830	3609	22.47	24.00	1.422	62.9	1.006	0.04	0.113	0.162	
	LTE Band 48	20M	QPSK	50	0	Right Cheek	0mm	Ant 11	DSI 1	55830	3609	21.34	23.00	1.466	62.9	1.006	0.05	0.084	0.124	
	LTE Band 48	20M	QPSK	1	0	Right Tilted	0mm	Ant 11	DSI 1	55830	3609	22.47	24.00	1.422	62.9	1.006	-0.12	0.088	0.126	
	LTE Band 48	20M	QPSK	50	0	Right Tilted	0mm	Ant 11	DSI 1	55830	3609	21.34	23.00	1.466	62.9	1.006	-0.19	0.069	0.102	
	LTE Band 48	20M	QPSK	1	0	Left Cheek	0mm	Ant 11	DSI 1	55830	3609	22.47	24.00	1.422	62.9	1.006	-0.00	0.092	0.132	
	LTE Band 48	20M	QPSK	50	0	Left Cheek	0mm	Ant 11	DSI 1	55830	3609	21.34	23.00	1.466	62.9	1.006	0.19	0.076	0.112	
	LTE Band 48	20M	QPSK	1	0	Left Tilted	0mm	Ant 11	DSI 1	55830	3609	22.47	24.00	1.422	62.9	1.006	-0.07	0.079	0.113	
	LTE Band 48	20M	QPSK	50	0	Left Tilted	0mm	Ant 11	DSI 1	55830	3609	21.34	23.00	1.466	62.9	1.006	0.03	0.066	0.097	

【ULCA SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note2
	LTE Band 7	20M	QPSK	1	99	Right Cheek	0mm	Ant 4	DSI 1	21100+20920	2535+2517	16.18	17.2	1.265	100.000	1	0.010	0.573	0.725	
	LTE Band 7	20M	QPSK	1	99	Right Tilted	0mm	Ant 5	DSI 1	21100+20920	2535+2517	15.63	16.7	1.279	100.000	1	-0.010	0.569	0.728	
	LTE Band 7	20M	QPSK	1	99	Left Cheek	0mm	Ant 6	DSI 1	21100+20920	2535+2517	23.58	24.5	1.236	100.000	1	0.010	0.181	0.224	
	LTE Band 7	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI 1	21350+21152	2560+2540.2	15.99	17.5	1.416	100.000	1	0.070	0.553	0.783	
	LTE Band 38	20M	QPSK	1	99	Right Cheek	0mm	Ant 4	DSI 1	37901+38099	2585.1+2604.9	17.85	18.2	1.084	62.900	1.006	0.130	0.481	0.525	
	LTE Band 38	20M	QPSK	1	0	Right Tilted	0mm	Ant 5	DSI 1	38150+37952	2610+2590.2	16.97	17.7	1.183	62.900	1.006	0.030	0.512	0.609	
	LTE Band 38	20M	QPSK	1	99	Left Cheek	0mm	Ant 6	DSI 1	37901+38099	2585.1+2604.9	24.59	25.5	1.233	62.900	1.006	0.010	0.098	0.122	
	LTE Band 38	20M	QPSK	1	0	Left Cheek	0mm	Ant 7	DSI 1	38150+37952	2610+2590.2	18.41	19.5	1.285	62.900	1.006	0.010	0.61	0.789	

【FR1 SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note
16	FR1 n2	40M	BPSK	1	1	Right Cheek	0mm	Ant 4	DSI 1	376000	1880	16.60	17.70	1.288			0.12	0.749	0.965	
	FR1 n2	40M	BPSK	108	54	Right Cheek	0mm	Ant 4	DSI 1	376000	1880	16.58	17.70	1.294			0.15	0.712	0.921	
	FR1 n2	40M	BPSK	216	0	Right Cheek	0mm	Ant 4	DSI 1	376000	1880	16.48	17.70	1.324			0.02	0.718	0.951	
	FR1 n2	40M	BPSK	1	1	Right Tilted	0mm	Ant 4	DSI 1	376000	1880	16.60	17.70	1.288			0.08	0.264	0.340	
	FR1 n2	40M	BPSK	108	54	Right Tilted	0mm	Ant 4	DSI 1	376000	1880	16.58	17.70	1.294			0.03	0.247	0.320	
	FR1 n2	40M	BPSK	1	1	Left Cheek	0mm	Ant 4	DSI 1	376000	1880	16.60	17.70	1.288			-0.08	0.252	0.325	
	FR1 n2	40M	BPSK	108	54	Left Cheek	0mm	Ant 4	DSI 1	376000	1880	16.58	17.70	1.294			0.13	0.228	0.295	
	FR1 n2	40M	BPSK	1	1	Left Tilted	0mm	Ant 4	DSI 1	376000	1880	16.60	17.70	1.288			-0.09	0.113	0.146	
	FR1 n2	40M	BPSK	108	54	Left Tilted	0mm	Ant 4	DSI 1	376000	1880	16.58	17.70	1.294			-0.01	0.107	0.138	
	FR1 n2	40M	BPSK	1	1	Right Cheek	0mm	Ant 6	DSI 1	376000	1880	24.75	25.70	1.245			-0.12	0.149	0.186	
	FR1 n2	40M	BPSK	108	54	Right Cheek	0mm	Ant 6	DSI 1	376000	1880	24.47	25.70	1.327			-0.01	0.120	0.159	
	FR1 n2	40M	BPSK	1	1	Right Tilted	0mm	Ant 6	DSI 1	376000	1880	24.75	25.70	1.245			-0.15	0.064	0.080	
	FR1 n2	40M	BPSK	108	54	Right Tilted	0mm	Ant 6	DSI 1	376000	1880	24.47	25.70	1.327			0.10	0.067	0.089	
	FR1 n2	40M	BPSK	1	1	Left Cheek	0mm	Ant 6	DSI 1	376000	1880	24.75	25.70	1.245			0.01	0.169	0.210	
	FR1 n2	40M	BPSK	108	54	Left Cheek	0mm	Ant 6	DSI 1	376000	1880	24.47	25.70	1.327			-0.12	0.151	0.200	
	FR1 n2	40M	BPSK	1	1	Left Tilted	0mm	Ant 6	DSI 1	376000	1880	24.75	25.70	1.245			-0.01	0.079	0.098	
	FR1 n2	40M	BPSK	108	54	Left Tilted	0mm	Ant 6	DSI 1	376000	1880	24.47	25.70	1.327			0.15	0.067	0.089	
	FR1 n5	20M	BPSK	1	1	Right Cheek	0mm	Ant 1	DSI1	167300	836.5	19.86	20.20	1.081			-0.06	0.478	0.517	Other PA
	FR1 n5	20M	BPSK	50	28	Right Cheek	0mm	Ant 1	DSI1	167300	836.5	19.84	20.20	1.086			-0.03	0.552	0.599	Other PA
	FR1 n5	20M	BPSK	1	1	Right Tilted	0mm	Ant 1	DSI1	167300	836.5	19.86	20.20	1.081			0.01	0.085	0.092	Other PA
	FR1 n5	20M	BPSK	50	28	Right Tilted	0mm	Ant 1	DSI1	167300	836.5	19.84	20.20	1.086			-0.10	0.100	0.109	Other PA
	FR1 n5	20M	BPSK	1	1	Left Cheek	0mm	Ant 1	DSI1	167300	836.5	19.86	20.20	1.081			-0.07	0.674	0.729	Other PA
17	FR1 n5	20M	BPSK	50	28	Left Cheek	0mm	Ant 1	DSI1	167300	836.5	19.84	20.20	1.086			-0.12	0.787	0.855	Other PA
	FR1 n5	20M	BPSK	100	0	Left Cheek	0mm	Ant 1	DSI1	167300	836.5	19.83	20.20	1.089			-0.11	0.779	0.848	Other PA
	FR1 n5	20M	BPSK	1	1	Left Tilted	0mm	Ant 1	DSI1	167300	836.5	19.86	20.20	1.081			0.08	0.104	0.112	Other PA
	FR1 n5	20M	BPSK	50	28	Left Tilted	0mm	Ant 1	DSI1	167300	836.5	19.84	20.20	1.086			-0.16	0.123	0.134	Other PA
	FR1 n7	50M	BPSK	1	1	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	16.68	17.20	1.127			-0.08	0.809	0.912	
	FR1 n7	50M	BPSK	135	68	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	16.65	17.20	1.135			0.18	0.773	0.877	
	FR1 n7	50M	BPSK	270	0	Right Cheek	0mm	Ant 4	DSI 1	507000	2535	16.63	17.20	1.14			0.02	0.768	0.876	
	FR1 n7	50M	BPSK	1	1	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	16.68	17.20	1.127			0.08	0.289	0.326	
	FR1 n7	50M	BPSK	135	68	Right Tilted	0mm	Ant 4	DSI 1	507000	2535	16.65	17.20	1.135			-0.05	0.283	0.321	
	FR1 n7	50M	BPSK	1	1	Left Cheek	0mm	Ant 4	DSI 1	507000	2535	16.68	17.20	1.127			-0.03	0.381	0.429	
	FR1 n7	50M	BPSK	135	68	Left Cheek	0mm	Ant 4	DSI 1	507000	2535	16.65	17.20	1.135			-0.04	0.403	0.457	
	FR1 n7	50M	BPSK	1	1	Left Tilted	0mm	Ant 4	DSI 1	507000	2535	16.68	17.20	1.127			-0.06	0.128	0.144	
	FR1 n7	50M	BPSK	135	68	Left Tilted	0mm	Ant 4	DSI 1	507000	2535	16.65	17.20	1.135			-0.08	0.119	0.135	



FCC SAR Test Report

Report No. : FA582814

	FR1 n7	50M	BPSK	1	1	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	15.21	16.70	1.409			0.02	0.597	0.841	
	FR1 n7	50M	BPSK	135	68	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	15.19	16.70	1.416			0.17	0.594	0.841	
	FR1 n7	50M	BPSK	270	0	Right Cheek	0mm	Ant 5	DSI 1	507000	2535	15.09	16.70	1.449			0.03	0.581	0.842	
18	FR1 n7	50M	BPSK	1	1	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	15.21	16.70	1.409			-0.02	0.697	0.982	
	FR1 n7	50M	BPSK	135	68	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	15.19	16.70	1.416			0.18	0.680	0.963	
	FR1 n7	50M	BPSK	270	0	Right Tilted	0mm	Ant 5	DSI 1	507000	2535	15.09	16.70	1.449			-0.16	0.651	0.943	
	FR1 n7	50M	BPSK	1	1	Left Cheek	0mm	Ant 5	DSI 1	507000	2535	15.21	16.70	1.409			-0.10	0.449	0.633	
	FR1 n7	50M	BPSK	135	68	Left Cheek	0mm	Ant 5	DSI 1	507000	2535	15.19	16.70	1.416			-0.14	0.405	0.573	
	FR1 n7	50M	BPSK	1	1	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	15.21	16.70	1.409			0.04	0.574	0.809	
	FR1 n7	50M	BPSK	135	68	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	15.19	16.70	1.416			-0.07	0.502	0.711	
	FR1 n7	50M	BPSK	270	0	Left Tilted	0mm	Ant 5	DSI 1	507000	2535	15.09	16.70	1.449			0.03	0.501	0.726	
	FR1 n7	50M	BPSK	1	1	Right Cheek	0mm	Ant 6	DSI 1	507000	2535	24.93	25.50	1.14			0.06	0.165	0.188	
	FR1 n7	50M	BPSK	135	68	Right Cheek	0mm	Ant 6	DSI 1	507000	2535	24.90	25.50	1.148			-0.10	0.141	0.162	
	FR1 n7	50M	BPSK	1	1	Right Tilted	0mm	Ant 6	DSI 1	507000	2535	24.93	25.50	1.14			0.02	0.083	0.095	
	FR1 n7	50M	BPSK	135	68	Right Tilted	0mm	Ant 6	DSI 1	507000	2535	24.90	25.50	1.148			-0.13	0.078	0.090	
	FR1 n7	50M	BPSK	1	1	Left Cheek	0mm	Ant 6	DSI 1	507000	2535	24.93	25.50	1.14			-0.16	0.257	0.293	
	FR1 n7	50M	BPSK	135	68	Left Cheek	0mm	Ant 6	DSI 1	507000	2535	24.90	25.50	1.148			0.12	0.234	0.269	
	FR1 n7	50M	BPSK	1	1	Left Tilted	0mm	Ant 6	DSI 1	507000	2535	24.93	25.50	1.14			-0.18	0.078	0.089	
	FR1 n7	50M	BPSK	135	68	Left Tilted	0mm	Ant 6	DSI 1	507000	2535	24.90	25.50	1.148			0.06	0.070	0.080	
	FR1 n7	50M	BPSK	1	1	Right Cheek	0mm	Ant 7	DSI 1	507000	2535	17.37	18.00	1.156			0.07	0.300	0.347	
	FR1 n7	50M	BPSK	135	68	Right Cheek	0mm	Ant 7	DSI 1	507000	2535	17.39	18.00	1.151			0.01	0.335	0.386	
	FR1 n7	50M	BPSK	1	1	Right Tilted	0mm	Ant 7	DSI 1	507000	2535	17.37	18.00	1.156			0.15	0.071	0.082	
	FR1 n7	50M	BPSK	135	68	Right Tilted	0mm	Ant 7	DSI 1	507000	2535	17.39	18.00	1.151			-0.14	0.079	0.091	
	FR1 n7	50M	BPSK	1	1	Left Cheek	0mm	Ant 7	DSI 1	507000	2535	17.37	18.00	1.156			0.13	0.716	0.828	
	FR1 n7	50M	BPSK	135	68	Left Cheek	0mm	Ant 7	DSI 1	507000	2535	17.39	18.00	1.151			-0.02	0.817	0.940	
	FR1 n7	50M	BPSK	270	0	Left Cheek	0mm	Ant 7	DSI 1	507000	2535	17.28	18.00	1.18			-0.05	0.715	0.844	
	FR1 n7	50M	BPSK	1	1	Left Tilted	0mm	Ant 7	DSI 1	507000	2535	17.37	18.00	1.156			-0.12	0.179	0.207	
	FR1 n7	50M	BPSK	135	68	Left Tilted	0mm	Ant 7	DSI 1	507000	2535	17.39	18.00	1.151			-0.04	0.208	0.239	
	FR1 n26	20M	BPSK	1	1	Right Cheek	0mm	Ant 0	DSI 1	166300	831.5	25.56	25.70	1.033			0.05	0.353	0.365	
	FR1 n26	20M	BPSK	50	28	Right Cheek	0mm	Ant 0	DSI 1	166300	831.5	25.43	25.70	1.064			-0.09	0.383	0.408	
	FR1 n26	20M	BPSK	1	1	Right Tilted	0mm	Ant 0	DSI 1	166300	831.5	25.56	25.70	1.033			0.05	0.177	0.183	
	FR1 n26	20M	BPSK	50	28	Right Tilted	0mm	Ant 0	DSI 1	166300	831.5	25.43	25.70	1.064			-0.04	0.185	0.197	
	FR1 n26	20M	BPSK	1	1	Left Cheek	0mm	Ant 0	DSI 1	166300	831.5	25.56	25.70	1.033			0.04	0.215	0.222	
	FR1 n26	20M	BPSK	50	28	Left Cheek	0mm	Ant 0	DSI 1	166300	831.5	25.43	25.70	1.064			0.14	0.221	0.235	
	FR1 n26	20M	BPSK	1	1	Left Tilted	0mm	Ant 0	DSI 1	166300	831.5	25.56	25.70	1.033			0.10	0.127	0.131	
	FR1 n26	20M	BPSK	50	28	Left Tilted	0mm	Ant 0	DSI 1	166300	831.5	25.43	25.70	1.064			-0.08	0.136	0.145	
	FR1 n5	20M	BPSK	50	28	Right Cheek	0mm	Ant 0	DSI1	167300	836.5	24.68	25.00	1.076			-0.11	0.372	0.400	Other PA
	FR1 n26	20M	BPSK	1	1	Right Cheek	0mm	Ant 1	DSI 1	166300	831.5	19.33	19.70	1.089			0.11	0.366	0.399	
	FR1 n26	20M	BPSK	50	28	Right Cheek	0mm	Ant 1	DSI 1	166300	831.5	19.31	19.70	1.094			0.02	0.422	0.462	
	FR1 n26	20M	BPSK	1	1	Right Tilted	0mm	Ant 1	DSI 1	166300	831.5	19.33	19.70	1.089			-0.03	0.065	0.071	
	FR1 n26	20M	BPSK	50	28	Right Tilted	0mm	Ant 1	DSI 1	166300	831.5	19.31	19.70	1.094			0.05	0.076	0.083	
	FR1 n26	20M	BPSK	1	1	Left Cheek	0mm	Ant 1	DSI 1	166300	831.5	19.33	19.70	1.089			-0.05	0.516	0.562	
19	FR1 n26	20M	BPSK	50	28	Left Cheek	0mm	Ant 1	DSI 1	166300	831.5	19.31	19.70	1.094			0.09	0.613	0.671	
	FR1 n26	20M	BPSK	1	1	Left Tilted	0mm	Ant 1	DSI 1	166300	831.5	19.33	19.70	1.089			-0.15	0.079	0.086	
	FR1 n26	20M	BPSK	50	28	Left Tilted	0mm	Ant 1	DSI 1	166300	831.5	19.31	19.70	1.094			-0.04	0.094	0.103	
	FR1 n66	45M	BPSK	120	60	Right Cheek	0mm	Ant 4	DSI 1	349000	1745	16.86	17.20	1.081			-0.14	0.764	0.826	
	FR1 n66	45M	BPSK	1	1	Right Cheek	0mm	Ant 4	DSI1	349000	1745	16.55	17.20	1.161			0.04	0.669	0.777	Other PA
	FR1 n66	45M	BPSK	120	60	Right Cheek	0mm	Ant 4	DSI1	349000	1745	16.46	17.20	1.186			-0.14	0.811	0.962	Other PA
	FR1 n66	45M	BPSK	240	0	Right Cheek	0mm	Ant 4	DSI1	349000	1745	16.41	17.20	1.199			-0.12	0.797	0.956	Other PA
	FR1 n66	45M	BPSK	1	1	Right Tilted	0mm	Ant 4	DSI1	349000	1745	16.55	17.20	1.161			0.04	0.243	0.282	Other PA
	FR1 n66	45M	BPSK	120	60	Right Tilted	0mm	Ant 4	DSI1	349000	1745	16.46	17.20	1.186			-0.18	0.266	0.315	Other PA
	FR1 n66	45M	BPSK	1	1	Left Cheek	0mm	Ant 4	DSI1	349000	1745	16.55	17.20	1.161			-0.08	0.222	0.258	Other PA
	FR1 n66	45M	BPSK	120	60	Left Cheek	0mm	Ant 4	DSI1	349000	1745	16.46	17.20	1.186			-0.13	0.243	0.288	Other PA
	FR1 n66	45M	BPSK	1	1	Left Tilted	0mm	Ant 4	DSI1	349000	1745	16.55	17.20	1.161			0.00	0.144	0.167	Other PA
	FR1 n66	45M	BPSK	120	60	Left Tilted	0mm	Ant 4	DSI1	349000	1745	16.46	17.20	1.186			-0.17	0.148	0.176	Other PA
	FR1 n66	45M	BPSK	1	1	Right Cheek	0mm	Ant 5	DSI1	349000	1745	15.12	16.20	1.282			0.13	0.593	0.760	Other PA
	FR1 n66	45M	BPSK	120	60	Right Cheek	0mm	Ant 5	DSI1	349000	1745	15.10	16.20	1.288			-0.01	0.593	0.764	Other PA
	FR1 n66	45M	BPSK	1	1	Right Tilted	0mm	Ant 5	DSI 1	349000	1745	14.95	16.20	1.334			-0.14	0.709	0.946	
20	FR1 n66	45M	BPSK	1	1	Right Tilted	0mm	Ant 5	DSI1	349000	1745	15.12	16.20	1.282			-0.03	0.796	1.020	Other PA
	FR1 n66	45M	BPSK	120	60	Right Tilted	0mm	Ant 5	DSI1	349000	1745	15.10	16.20	1.288			-0.19	0.682	0.878	Other PA
	FR1 n66	45M	BPSK	240	0	Right Tilted	0mm	Ant 5	DSI1	349000	1745	15.03	16.20	1.309			0.17	0.691	0.905	Other PA
	FR1 n66	45M	BPSK	1	1	Left Cheek	0mm	Ant 5	DSI1	349000	1745	15.12	16.20	1.282			-0.17	0.431	0.553	Other PA
	FR1 n66	45M	BPSK	120	60	Left Cheek	0mm	Ant 5	DSI1	349000	1745	15.10	16.20	1.288			0.09	0.443	0.571	Other PA
	FR1 n66	45M	BPSK	1	1	Left Tilted	0mm	Ant 5	DSI1	349000	1745	15.12	16.20	1.282			-0.17	0.549	0.704	Other PA
	FR1 n66	45M	BPSK	120	60	Left Tilted	0mm	Ant 5	DSI1	349000	1745	15.10	16.20	1.288			0.10	0.571	0.735	Other PA
	FR1 n66	45M	BPSK	1	1	Right Cheek	0mm	Ant 6	DSI 1	349000	1745	24.86	25.50	1.159			-0.02	0.151	0.175	
	FR1 n66	45M	BPSK	120	60	Right Cheek	0mm	Ant 6	DSI 1	349000	1745	24.79	25.50	1.178			0.06	0.172	0.203	
	FR1 n66	45M	BPSK	120	60	Right Cheek	0mm	Ant 6	DSI1	349000	1745	25.06	25.50	1.107			0.01	0.163	0.180	Other PA
	FR1 n66	45M	BPSK	1	1	Right Tilted	0mm	Ant 6	DSI 1	349000	1745	24.86	25.50	1.159			0.02	0.107	0.124	
	FR1 n66	45M	BPSK	120	60	Right Tilted	0mm	Ant 6	DSI 1	349000	1745	24.79	25.50	1.178			0.13	0.118	0.139	
	FR1 n66	45M	BPSK	1	1	Left Cheek	0mm	Ant 6	DSI 1	349000	1745	24.86	25.50	1.159			0.08	0.164	0.190	
	FR1 n66	45M	BPSK	120	60	Left Cheek	0mm	Ant 6	DSI 1	349000	1745	24.79	25.50	1.178			-0.01			



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	FR1 n66	45M	BPSK	120	60	Left Tilted	0mm	Ant 6	DSI 1	349000	1745	24.79	25.50	1.178			0.15	0.096	0.113	
	FR1 n66	45M	BPSK	1	1	Right Cheek	0mm	Ant 7	DSI 1	349000	1745	18.29	20.00	1.483			0.05	0.349	0.518	
	FR1 n66	45M	BPSK	120	60	Right Cheek	0mm	Ant 7	DSI 1	349000	1745	18.28	20.00	1.486			-0.15	0.365	0.542	
	FR1 n66	45M	BPSK	1	1	Right Tilted	0mm	Ant 7	DSI 1	349000	1745	18.29	20.00	1.483			-0.11	0.069	0.102	
	FR1 n66	45M	BPSK	120	60	Right Tilted	0mm	Ant 7	DSI 1	349000	1745	18.28	20.00	1.486			0.14	0.069	0.103	
	FR1 n66	45M	BPSK	1	1	Left Cheek	0mm	Ant 7	DSI 1	349000	1745	18.29	20.00	1.483			-0.18	0.623	0.924	
	FR1 n66	45M	BPSK	120	60	Left Cheek	0mm	Ant 7	DSI 1	349000	1745	18.28	20.00	1.486			0.00	0.606	0.901	
	FR1 n66	45M	BPSK	240	0	Left Cheek	0mm	Ant 7	DSI 1	349000	1745	18.22	20.00	1.507			0.01	0.601	0.906	
	FR1 n66	45M	BPSK	1	1	Left Cheek	0mm	Ant 7	DSI 1	349000	1745	18.68	19.70	1.265			-0.08	0.566	0.716	Other PA
	FR1 n66	45M	BPSK	1	1	Left Tilted	0mm	Ant 7	DSI 1	349000	1745	18.29	20.00	1.483			0.15	0.112	0.166	
	FR1 n66	45M	BPSK	120	60	Left Tilted	0mm	Ant 7	DSI 1	349000	1745	18.28	20.00	1.486			0.06	0.111	0.165	
	FR1 n71	35M	BPSK	1	1	Right Cheek	0mm	Ant 0	DSI 1	136100	680.5	24.62	25.00	1.091			0.01	0.098	0.107	
	FR1 n71	35M	BPSK	90	45	Right Cheek	0mm	Ant 0	DSI 1	136100	680.5	24.44	25.00	1.138			-0.03	0.063	0.072	
	FR1 n71	35M	BPSK	1	1	Right Tilted	0mm	Ant 0	DSI 1	136100	680.5	24.62	25.00	1.091			0.06	0.058	0.063	
	FR1 n71	35M	BPSK	90	45	Right Tilted	0mm	Ant 0	DSI 1	136100	680.5	24.44	25.00	1.138			0.04	0.001	0.001	
	FR1 n71	35M	BPSK	1	1	Left Cheek	0mm	Ant 0	DSI 1	136100	680.5	24.62	25.00	1.091			0.02	0.085	0.093	
	FR1 n71	35M	BPSK	90	45	Left Cheek	0mm	Ant 0	DSI 1	136100	680.5	24.44	25.00	1.138			-0.02	0.052	0.059	
	FR1 n71	35M	BPSK	1	1	Left Tilted	0mm	Ant 0	DSI 1	136100	680.5	24.62	25.00	1.091			-0.09	0.047	0.051	
	FR1 n71	35M	BPSK	90	45	Left Tilted	0mm	Ant 0	DSI 1	136100	680.5	24.44	25.00	1.138			0.05	0.001	0.001	
	FR1 n71	35M	BPSK	1	1	Right Cheek	0mm	Ant 1	DSI 1	136100	680.5	23.31	24.00	1.172			0.16	0.274	0.321	
	FR1 n71	35M	BPSK	90	45	Right Cheek	0mm	Ant 1	DSI 1	136100	680.5	23.28	24.00	1.18			0.05	0.523	0.617	
	FR1 n71	35M	BPSK	1	1	Right Tilted	0mm	Ant 1	DSI 1	136100	680.5	23.31	24.00	1.172			0.01	0.047	0.055	
	FR1 n71	35M	BPSK	90	45	Right Tilted	0mm	Ant 1	DSI 1	136100	680.5	23.28	24.00	1.18			0.11	0.094	0.111	
	FR1 n71	35M	BPSK	1	1	Left Cheek	0mm	Ant 1	DSI 1	136100	680.5	23.31	24.00	1.172			-0.07	0.404	0.473	
21	FR1 n71	35M	BPSK	90	45	Left Cheek	0mm	Ant 1	DSI 1	136100	680.5	23.28	24.00	1.18			0.04	0.730	0.861	
	FR1 n71	35M	BPSK	180	0	Left Cheek	0mm	Ant 1	DSI 1	136100	680.5	23.21	24.00	1.199			0.06	0.618	0.741	
	FR1 n71	35M	BPSK	1	1	Left Tilted	0mm	Ant 1	DSI 1	136100	680.5	23.31	24.00	1.172			-0.11	0.057	0.067	
	FR1 n71	35M	BPSK	90	45	Left Tilted	0mm	Ant 1	DSI 1	136100	680.5	23.28	24.00	1.18			0.10	0.113	0.133	
	FR1 n41	100M	BPSK	1	1	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	16.07	16.20	1.03			0.03	0.619	0.638	
	FR1 n41	100M	BPSK	135	69	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	16.01	16.20	1.045			0.15	0.628	0.656	
	FR1 n41	100M	BPSK	1	1	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	16.07	16.20	1.03			0.13	0.225	0.232	
	FR1 n41	100M	BPSK	135	69	Right Tilted	0mm	Ant 4	DSI 1	518598	2592.99	16.01	16.20	1.045			0.14	0.218	0.228	
	FR1 n41	100M	BPSK	1	1	Left Cheek	0mm	Ant 4	DSI 1	518598	2592.99	16.07	16.20	1.03			-0.19	0.240	0.247	
	FR1 n41	100M	BPSK	135	69	Left Cheek	0mm	Ant 4	DSI 1	518598	2592.99	16.01	16.20	1.045			0.04	0.256	0.268	
	FR1 n41	100M	BPSK	1	1	Left Tilted	0mm	Ant 4	DSI 1	518598	2592.99	16.07	16.20	1.03			0.11	0.093	0.096	
	FR1 n41	100M	BPSK	135	69	Left Tilted	0mm	Ant 4	DSI 1	518598	2592.99	16.01	16.20	1.045			-0.06	0.092	0.096	
	FR1 n41_HPUE	100M	BPSK	135	69	Right Cheek	0mm	Ant 4	DSI 1	518598	2592.99	18.99	19.50	1.125	50.0	1.0	0.03	0.658	0.740	
	FR1 n41	100M	BPSK	1	1	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	15.56	16.70	1.3			0.14	0.454	0.590	
	FR1 n41	100M	BPSK	135	69	Right Cheek	0mm	Ant 5	DSI 1	518598	2592.99	15.54	16.70	1.306			0.15	0.487	0.636	
	FR1 n41	100M	BPSK	1	1	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	15.56	16.70	1.3			-0.11	0.567	0.737	
	FR1 n41	100M	BPSK	135	69	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	15.54	16.70	1.306			0.09	0.587	0.767	
	FR1 n41	100M	BPSK	1	1	Left Cheek	0mm	Ant 5	DSI 1	518598	2592.99	15.56	16.70	1.3			0.19	0.337	0.438	
	FR1 n41	100M	BPSK	135	69	Left Cheek	0mm	Ant 5	DSI 1	518598	2592.99	15.54	16.70	1.306			-0.15	0.358	0.468	
	FR1 n41	100M	BPSK	1	1	Left Tilted	0mm	Ant 5	DSI 1	518598	2592.99	15.56	16.70	1.3			0.17	0.431	0.560	
	FR1 n41	100M	BPSK	135	69	Left Tilted	0mm	Ant 5	DSI 1	518598	2592.99	15.54	16.70	1.306			-0.19	0.418	0.546	
22	FR1 n41_HPUE	100M	BPSK	135	69	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	18.46	20.00	1.426	50.0	1.0	0.00	0.616	0.878	
	FR1 n41_HPUE	100M	BPSK	270	0	Right Tilted	0mm	Ant 5	DSI 1	518598	2592.99	18.37	20	1.455	50.000	1	0.03	0.598	0.87	
	FR1 n41	100M	BPSK	1	1	Right Cheek	0mm	Ant 6	DSI 1	518598	2592.99	25.05	25.50	1.109			0.15	0.186	0.206	
	FR1 n41	100M	BPSK	135	69	Right Cheek	0mm	Ant 6	DSI 1	518598	2592.99	25.03	25.50	1.114			0.03	0.143	0.159	
	FR1 n41	100M	BPSK	1	1	Right Tilted	0mm	Ant 6	DSI 1	518598	2592.99	25.05	25.50	1.109			-0.08	0.108	0.120	
	FR1 n41	100M	BPSK	135	69	Right Tilted	0mm	Ant 6	DSI 1	518598	2592.99	25.03	25.50	1.114			0.00	0.116	0.129	
	FR1 n41	100M	BPSK	1	1	Left Cheek	0mm	Ant 6	DSI 1	518598	2592.99	25.05	25.50	1.109			0.01	0.313	0.347	
	FR1 n41	100M	BPSK	135	69	Left Cheek	0mm	Ant 6	DSI 1	518598	2592.99	25.03	25.50	1.114			0.06	0.269	0.300	
	FR1 n41	100M	BPSK	1	1	Left Tilted	0mm	Ant 6	DSI 1	518598	2592.99	25.05	25.50	1.109			-0.14	0.136	0.151	
	FR1 n41	100M	BPSK	135	69	Left Tilted	0mm	Ant 6	DSI 1	518598	2592.99	25.03	25.50	1.114			0.13	0.119	0.133	
	FR1 n41_HPUE	100M	BPSK	1	1	Left Cheek	0mm	Ant 6	DSI 1	518598	2592.99	25.89	26.50	1.151	50.0	1.0	0.09	0.182	0.209	
	FR1 n41	100M	BPSK	1	1	Right Cheek	0mm	Ant 7	DSI 1	518598	2592.99	16.60	17.00	1.096			-0.06	0.266	0.292	
	FR1 n41	100M	BPSK	135	69	Right Cheek	0mm	Ant 7	DSI 1	518598	2592.99	16.58	17.00	1.102			-0.04	0.221	0.244	
	FR1 n41	100M	BPSK	1	1	Right Tilted	0mm	Ant 7	DSI 1	518598	2592.99	16.60	17.00	1.096			-0.18	0.055	0.060	
	FR1 n41	100M	BPSK	135	69	Right Tilted	0mm	Ant 7	DSI 1	518598	2592.99	16.58	17.00	1.102			-0.04	0.048	0.053	
	FR1 n41	100M	BPSK	1	1	Left Cheek	0mm	Ant 7	DSI 1	518598	2592.99	16.60	17.00	1.096			-0.08	0.589	0.646	
	FR1 n41	100M	BPSK	135	69	Left Cheek	0mm	Ant 7	DSI 1	518598	2592.99	16.58	17.00	1.102			-0.06	0.518	0.571	
	FR1 n41	100M	BPSK	1	1	Left Tilted	0mm	Ant 7	DSI 1	518598	2592.99	16.60	17.00	1.096			-0.18	0.135	0.148	
	FR1 n41	100M	BPSK	135	69	Left Tilted	0mm	Ant 7	DSI 1	518598	2592.99	16.58	17.00	1.102			0.04	0.114	0.126	
	FR1 n41_HPUE	100M	BPSK	1	1	Left Cheek	0mm	Ant 7	DSI 1	518598	2592.99	19.62	20.00	1.091	50.0	1.0	-0.04	0.630	0.687	
	FR1 n48	40M	BPSK	1	1	Right Cheek	0mm	Ant 8	DSI 1	641666	3624.99	15.24	16.00	1.191			-0.02	0.306	0.364	
	FR1 n48	40M	BPSK	50	28	Right Cheek	0mm	Ant 8	DSI 1	641666	3624.99	15.21	16.00	1.199			-0.16	0.294	0.353	
	FR1 n48	40M	BPSK	1	1	Right Tilted	0mm	Ant 8	DSI 1	641666	3624.99	15.24	16.00	1.191			0.14	0.337	0.401	
	FR1 n48	40M	BPSK	50	28	Right Tilted	0mm	Ant 8	DSI 1	641666	3624.99	15.21	16.00	1.199			-0.13	0.337	0.404	
	FR1 n48	40M	BPSK	1	1	Left Cheek	0mm	Ant 8	DSI 1	641666	3624.99	15.24	16.00	1.191			0.18	0.660	0.786	
	FR1 n48	40M	BPSK	1	1	Left Cheek	0mm	Ant 8	DSI 1	638000	3570	15.22	16.00	1.197		</				



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	FR1 n48	40M	BPSK	50	0	Left Cheek	0mm	Ant 8	DSI 1	638000	3570	15.12	16.00	1.225			0.03	0.631	0.773	
	FR1 n48	40M	BPSK	50	28	Left Cheek	0mm	Ant 8	DSI 1	645332	3679.98	15.11	16.00	1.227			0.09	0.599	0.735	
	FR1 n48	40M	BPSK	100	0	Left Cheek	0mm	Ant 8	DSI 1	641666	3624.99	15.10	16.00	1.23			-0.14	0.642	0.790	
	FR1 n48	40M	BPSK	1	1	Left Tilted	0mm	Ant 8	DSI 1	641666	3624.99	15.24	16.00	1.191			0.12	0.687	0.818	
	FR1 n48	40M	BPSK	1	1	Left Tilted	0mm	Ant 8	DSI 1	638000	3570	15.22	16.00	1.197			0.06	0.704	0.843	
	FR1 n48	40M	BPSK	1	1	Left Tilted	0mm	Ant 8	DSI 1	645332	3679.98	15.18	16.00	1.208			-0.01	0.676	0.817	
	FR1 n48	40M	BPSK	50	28	Left Tilted	0mm	Ant 8	DSI 1	641666	3624.99	15.21	16.00	1.199			0.02	0.679	0.814	
	FR1 n48	40M	BPSK	50	0	Left Tilted	0mm	Ant 8	DSI 1	638000	3570	15.12	16.00	1.225			0.03	0.665	0.815	
	FR1 n48	40M	BPSK	50	28	Left Tilted	0mm	Ant 8	DSI 1	645332	3679.98	15.11	16.00	1.227			0.03	0.615	0.755	
	FR1 n48	40M	BPSK	100	0	Left Tilted	0mm	Ant 8	DSI 1	641666	3624.99	15.10	16.00	1.23			-0.16	0.668	0.822	
	FR1 n48	40M	BPSK	1	1	Right Cheek	0mm	Ant 9	DSI 1	641666	3624.99	17.36	18.50	1.3			0.12	0.633	0.823	
	FR1 n48	40M	BPSK	1	1	Right Cheek	0mm	Ant 9	DSI 1	638000	3570	17.33	18.50	1.309			-0.11	0.594	0.778	
	FR1 n48	40M	BPSK	1	1	Right Cheek	0mm	Ant 9	DSI 1	645332	3679.98	17.31	18.50	1.315			-0.01	0.726	0.955	
	FR1 n48	40M	BPSK	50	28	Right Cheek	0mm	Ant 9	DSI 1	641666	3624.99	17.32	18.50	1.312			0.18	0.681	0.893	
	FR1 n48	40M	BPSK	50	28	Right Cheek	0mm	Ant 9	DSI 1	638000	3570	17.26	18.50	1.33			0.05	0.643	0.855	
	FR1 n48	40M	BPSK	50	0	Right Cheek	0mm	Ant 9	DSI 1	645332	3679.98	17.18	18.50	1.355			0.03	0.633	0.858	
	FR1 n48	40M	BPSK	100	0	Right Cheek	0mm	Ant 9	DSI 1	641666	3624.99	17.30	18.50	1.318			-0.10	0.709	0.934	
	FR1 n48	40M	BPSK	1	1	Right Tilted	0mm	Ant 9	DSI 1	641666	3624.99	17.36	18.50	1.3			0.14	0.193	0.251	
	FR1 n48	40M	BPSK	50	28	Right Tilted	0mm	Ant 9	DSI 1	641666	3624.99	17.32	18.50	1.312			0.18	0.208	0.273	
	FR1 n48	40M	BPSK	1	1	Left Cheek	0mm	Ant 9	DSI 1	641666	3624.99	17.36	18.50	1.3			-0.12	0.250	0.325	
	FR1 n48	40M	BPSK	50	28	Left Cheek	0mm	Ant 9	DSI 1	641666	3624.99	17.32	18.50	1.312			-0.02	0.233	0.306	
	FR1 n48	40M	BPSK	1	1	Left Tilted	0mm	Ant 9	DSI 1	641666	3624.99	17.36	18.50	1.3			0.17	0.079	0.103	
	FR1 n48	40M	BPSK	50	28	Left Tilted	0mm	Ant 9	DSI 1	641666	3624.99	17.32	18.50	1.312			-0.08	0.084	0.110	
	FR1 n48	40M	BPSK	1	1	Right Cheek	0mm	Ant 10	DSI 1	641666	3624.99	13.63	15.00	1.371			-0.07	0.071	0.097	
	FR1 n48	40M	BPSK	50	28	Right Cheek	0mm	Ant 10	DSI 1	641666	3624.99	13.61	15.00	1.377			-0.02	0.071	0.098	
	FR1 n48	40M	BPSK	1	1	Right Tilted	0mm	Ant 10	DSI 1	641666	3624.99	13.63	15.00	1.371			0.07	0.044	0.060	
	FR1 n48	40M	BPSK	50	28	Right Tilted	0mm	Ant 10	DSI 1	641666	3624.99	13.61	15.00	1.377			-0.18	0.047	0.065	
	FR1 n48	40M	BPSK	1	1	Left Cheek	0mm	Ant 10	DSI 1	641666	3624.99	13.63	15.00	1.371			-0.09	0.387	0.531	
	FR1 n48	40M	BPSK	50	28	Left Cheek	0mm	Ant 10	DSI 1	641666	3624.99	13.61	15.00	1.377			-0.03	0.428	0.589	
	FR1 n48	40M	BPSK	1	1	Left Tilted	0mm	Ant 10	DSI 1	641666	3624.99	13.63	15.00	1.371			0.07	0.130	0.178	
	FR1 n48	40M	BPSK	50	28	Left Tilted	0mm	Ant 10	DSI 1	641666	3624.99	13.61	15.00	1.377			-0.04	0.141	0.194	
	FR1 n48	40M	BPSK	1	1	Right Cheek	0mm	Ant 11	DSI 1	641666	3624.99	20.77	22.00	1.327			0.07	0.476	0.632	
	FR1 n48	40M	BPSK	1	1	Right Cheek	0mm	Ant 11	DSI 1	638000	3570	20.43	22.00	1.435			0.05	0.475	0.682	
	FR1 n48	40M	BPSK	1	1	Right Cheek	0mm	Ant 11	DSI 1	645332	3679.98	20.66	22.00	1.361			0.01	0.462	0.629	
	FR1 n48	40M	BPSK	50	28	Right Cheek	0mm	Ant 11	DSI 1	641666	3624.99	20.76	22.00	1.33			-0.13	0.562	0.747	
	FR1 n48	40M	BPSK	50	28	Right Cheek	0mm	Ant 11	DSI 1	638000	3570	20.42	22.00	1.439			-0.07	0.285	0.410	
23	FR1 n48	40M	BPSK	50	28	Right Cheek	0mm	Ant 11	DSI 1	645332	3679.98	20.75	22.00	1.334			-0.01	0.804	1.073	
	FR1 n48	40M	BPSK	100	0	Right Cheek	0mm	Ant 11	DSI 1	641666	3624.99	20.37	22.00	1.455			0.06	0.585	0.851	
	FR1 n48	40M	BPSK	1	1	Right Tilted	0mm	Ant 11	DSI 1	641666	3624.99	20.77	22.00	1.327			-0.14	0.115	0.153	
	FR1 n48	40M	BPSK	50	28	Right Tilted	0mm	Ant 11	DSI 1	641666	3624.99	20.76	22.00	1.33			0.08	0.129	0.172	
	FR1 n48	40M	BPSK	1	1	Left Cheek	0mm	Ant 11	DSI 1	641666	3624.99	20.77	22.00	1.327			0.01	0.292	0.387	
	FR1 n48	40M	BPSK	50	28	Left Cheek	0mm	Ant 11	DSI 1	641666	3624.99	20.76	22.00	1.33			0.04	0.337	0.448	
	FR1 n48	40M	BPSK	1	1	Left Tilted	0mm	Ant 11	DSI 1	641666	3624.99	20.77	22.00	1.327			-0.05	0.076	0.101	
	FR1 n48	40M	BPSK	50	28	Left Tilted	0mm	Ant 11	DSI 1	641666	3624.99	20.76	22.00	1.33			-0.13	0.073	0.097	
	FR1 n77	100M	BPSK	1	1	Right Cheek	0mm	Ant 8	DSI 1	633332	3499.98	14.28	15.00	1.18			0.06	0.379	0.447	
	FR1 n77	100M	BPSK	135	69	Right Cheek	0mm	Ant 8	DSI 1	633332	3499.98	14.22	15.00	1.197			-0.16	0.386	0.462	
	FR1 n77	100M	BPSK	1	1	Right Tilted	0mm	Ant 8	DSI 1	633332	3499.98	14.28	15.00	1.18			0.15	0.396	0.467	
	FR1 n77	100M	BPSK	135	69	Right Tilted	0mm	Ant 8	DSI 1	633332	3499.98	14.22	15.00	1.197			-0.13	0.427	0.511	
	FR1 n77	100M	BPSK	1	1	Left Cheek	0mm	Ant 8	DSI 1	633332	3499.98	14.28	15.00	1.18			0.17	0.675	0.796	
	FR1 n77	100M	BPSK	135	69	Left Cheek	0mm	Ant 8	DSI 1	633332	3499.98	14.22	15.00	1.197			-0.00	0.694	0.831	
	FR1 n77	100M	BPSK	270	0	Left Cheek	0mm	Ant 8	DSI 1	633332	3499.98	14.14	15.00	1.219			-0.00	0.675	0.823	
	FR1 n77	100M	BPSK	1	1	Left Tilted	0mm	Ant 8	DSI 1	633332	3499.98	14.28	15.00	1.18			0.18	0.646	0.762	
	FR1 n77	100M	BPSK	135	69	Left Tilted	0mm	Ant 8	DSI 1	633332	3499.98	14.22	15.00	1.197			0.04	0.714	0.855	
	FR1 n77	100M	BPSK	270	0	Left Tilted	0mm	Ant 8	DSI 1	633332	3499.98	14.14	15.00	1.219			0.13	0.734	0.895	
24	FR1 n77_HPUE	100M	BPSK	270	0	Left Tilted	0mm	Ant 8	DSI 1	633332	3499.98	17.06	18.50	1.393	50.0	1.0	-0.01	0.760	1.059	
	FR1 n77	100M	BPSK	1	1	Right Cheek	0mm	Ant 9	DSI 1	633332	3499.98	16.35	17.50	1.303			-0.02	0.527	0.687	
	FR1 n77	100M	BPSK	135	69	Right Cheek	0mm	Ant 9	DSI 1	633332	3499.98	16.34	17.50	1.306			-0.19	0.465	0.607	
	FR1 n77	100M	BPSK	1	1	Right Tilted	0mm	Ant 9	DSI 1	633332	3499.98	16.35	17.50	1.303			0.01	0.121	0.158	
	FR1 n77	100M	BPSK	135	69	Right Tilted	0mm	Ant 9	DSI 1	633332	3499.98	16.34	17.50	1.306			-0.16	0.117	0.153	
	FR1 n77	100M	BPSK	1	1	Left Cheek	0mm	Ant 9	DSI 1	633332	3499.98	16.35	17.50	1.303			0.02	0.228	0.297	
	FR1 n77	100M	BPSK	135	69	Left Cheek	0mm	Ant 9	DSI 1	633332	3499.98	16.34	17.50	1.306			-0.01	0.183	0.239	
	FR1 n77	100M	BPSK	1	1	Left Tilted	0mm	Ant 9	DSI 1	633332	3499.98	16.35	17.50	1.303			-0.14	0.048	0.063	
	FR1 n77	100M	BPSK	135	69	Left Tilted	0mm	Ant 9	DSI 1	633332	3499.98	16.34	17.50	1.306			0.13	0.047	0.061	
1	FR1 n77_HPUE	100M	BPSK	1	1	Right Cheek	0mm	Ant 9	DSI 1	633332	3499.98	19.38	20.50	1.294	50.0	1.0	0.12	0.535	0.692	
	FR1 n77	100M	BPSK	1	1	Right Cheek	0mm	Ant 10	DSI 1	633332	3499.98	14.96	16.00	1.271			0.13	0.090	0.114	
	FR1 n77	100M	BPSK	135	69	Right Cheek	0mm	Ant 10	DSI 1	633332	3499.98	14.94	16.00	1.276			-0.18	0.091	0.116	
	FR1 n77	100M	BPSK	1	1	Right Tilted	0mm	Ant 10	DSI 1	633332	3499.98	14.96	16.00	1.271			0.02	0.052	0.066	
	FR1 n77	100M	BPSK	135	69	Right Tilted	0mm	Ant 10	DSI 1	633332	3499.98	14.94	16.00	1.276			0.16	0.056	0.071	
	FR1 n77	100M	BPSK	1	1	Left Cheek	0mm	Ant 10	DSI 1	633332	3499.98	14.96	16.00	1.271			-0.05	0.507	0.644	
	FR1 n77	100M	BPSK	135	69	Left Cheek	0mm	Ant 10	DSI 1	633332	3499.98	14.94	16.00	1.276			-0.14	0.525	0.670	
	FR1 n77	100M	BPSK	1	1	Left Tilted	0mm	Ant 10	DSI 1	633332	3499.98	14.96								



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	FR1 n77	100M	BPSK	1	1	Right Cheek	0mm	Ant 11	DSI 1	633332	3499.98	22.61	24.50	1.545			0.08	0.314	0.485	
	FR1 n77	100M	BPSK	135	69	Right Cheek	0mm	Ant 11	DSI 1	633332	3499.98	22.57	24.50	1.56			0.17	0.197	0.307	
	FR1 n77	100M	BPSK	1	1	Right Tilted	0mm	Ant 11	DSI 1	633332	3499.98	22.61	24.50	1.545			-0.19	0.237	0.366	
	FR1 n77	100M	BPSK	135	69	Right Tilted	0mm	Ant 11	DSI 1	633332	3499.98	22.57	24.50	1.56			0.06	0.161	0.251	
	FR1 n77	100M	BPSK	1	1	Left Cheek	0mm	Ant 11	DSI 1	633332	3499.98	22.61	24.50	1.545			-0.00	0.137	0.212	
	FR1 n77	100M	BPSK	135	69	Left Cheek	0mm	Ant 11	DSI 1	633332	3499.98	22.57	24.50	1.56			0.09	0.103	0.161	
	FR1 n77	100M	BPSK	1	1	Left Tilted	0mm	Ant 11	DSI 1	633332	3499.98	22.61	24.50	1.545			0.08	0.151	0.233	
	FR1 n77	100M	BPSK	135	69	Left Tilted	0mm	Ant 11	DSI 1	633332	3499.98	22.57	24.50	1.56			-0.04	0.111	0.173	
	FR1 n77_HPUE	100M	BPSK	1	1	Right Cheek	0mm	Ant 11	DSI 1	633332	3499.98	25.72	27.50	1.507	50.0	1.0	-0.11	0.309	0.466	
	FR1 n77	100M	BPSK	1	1	Right Cheek	0mm	Ant 8	DSI 1	656000	3840	14.69	15.00	1.074			0.06	0.277	0.297	
	FR1 n77	100M	BPSK	135	69	Right Cheek	0mm	Ant 8	DSI 1	656000	3840	14.67	15.00	1.079			0.12	0.268	0.289	
	FR1 n77	100M	BPSK	1	1	Right Tilted	0mm	Ant 8	DSI 1	656000	3840	14.69	15.00	1.074			-0.19	0.323	0.347	
	FR1 n77	100M	BPSK	135	69	Right Tilted	0mm	Ant 8	DSI 1	656000	3840	14.67	15.00	1.079			0.19	0.292	0.315	
	FR1 n77	100M	BPSK	1	1	Left Cheek	0mm	Ant 8	DSI 1	656000	3840	14.69	15.00	1.074			-0.12	0.560	0.601	
	FR1 n77	100M	BPSK	135	69	Left Cheek	0mm	Ant 8	DSI 1	656000	3840	14.67	15.00	1.079			-0.10	0.497	0.536	
	FR1 n77	100M	BPSK	1	1	Left Tilted	0mm	Ant 8	DSI 1	656000	3840	14.69	15.00	1.074			-0.11	0.623	0.669	
	FR1 n77	100M	BPSK	135	69	Left Tilted	0mm	Ant 8	DSI 1	656000	3840	14.67	15.00	1.079			-0.04	0.542	0.585	
	FR1 n77_HPUE	100M	BPSK	1	1	Left Tilted	0mm	Ant 8	DSI 1	656000	3840	17.77	18.50	1.183	50.0	1.0	0.01	0.615	0.728	
	FR1 n77	100M	BPSK	1	1	Right Cheek	0mm	Ant 9	DSI 1	656000	3840	17.09	17.50	1.099			0.07	0.570	0.626	
	FR1 n77	100M	BPSK	135	69	Right Cheek	0mm	Ant 9	DSI 1	656000	3840	16.98	17.50	1.127			0.08	0.671	0.756	
	FR1 n77	100M	BPSK	1	1	Right Tilted	0mm	Ant 9	DSI 1	656000	3840	17.09	17.50	1.099			-0.00	0.187	0.206	
	FR1 n77	100M	BPSK	135	69	Right Tilted	0mm	Ant 9	DSI 1	656000	3840	16.98	17.50	1.127			-0.02	0.208	0.234	
	FR1 n77	100M	BPSK	1	1	Left Cheek	0mm	Ant 9	DSI 1	656000	3840	17.09	17.50	1.099			-0.16	0.175	0.192	
	FR1 n77	100M	BPSK	135	69	Left Cheek	0mm	Ant 9	DSI 1	656000	3840	16.98	17.50	1.127			0.03	0.207	0.233	
	FR1 n77	100M	BPSK	1	1	Left Tilted	0mm	Ant 9	DSI 1	656000	3840	17.09	17.50	1.099			-0.08	0.083	0.091	
	FR1 n77	100M	BPSK	135	69	Left Tilted	0mm	Ant 9	DSI 1	656000	3840	16.98	17.50	1.127			-0.18	0.094	0.106	
	FR1 n77_HPUE	100M	BPSK	135	69	Right Cheek	0mm	Ant 9	DSI 1	656000	3840	20.10	20.50	1.096	50.0	1.0	-0.04	0.674	0.739	
	FR1 n77	100M	BPSK	1	1	Right Cheek	0mm	Ant 10	DSI 1	656000	3840	14.79	16.00	1.321			0.12	0.149	0.197	
	FR1 n77	100M	BPSK	135	69	Right Cheek	0mm	Ant 10	DSI 1	656000	3840	14.77	16.00	1.327			-0.06	0.153	0.203	
	FR1 n77	100M	BPSK	1	1	Right Tilted	0mm	Ant 10	DSI 1	656000	3840	14.79	16.00	1.321			0.14	0.082	0.108	
	FR1 n77	100M	BPSK	135	69	Right Tilted	0mm	Ant 10	DSI 1	656000	3840	14.77	16.00	1.327			0.01	0.082	0.109	
	FR1 n77	100M	BPSK	1	1	Left Cheek	0mm	Ant 10	DSI 1	656000	3840	14.79	16.00	1.321			-0.10	0.645	0.852	
	FR1 n77	100M	BPSK	135	69	Left Cheek	0mm	Ant 10	DSI 1	656000	3840	14.77	16.00	1.327			-0.03	0.624	0.828	
	FR1 n77	100M	BPSK	270	0	Left Cheek	0mm	Ant 10	DSI 1	656000	3840	14.72	16.00	1.343			0.01	0.621	0.834	
	FR1 n77	100M	BPSK	1	1	Left Tilted	0mm	Ant 10	DSI 1	656000	3840	14.79	16.00	1.321			-0.01	0.232	0.306	
	FR1 n77	100M	BPSK	135	69	Left Tilted	0mm	Ant 10	DSI 1	656000	3840	14.77	16.00	1.327			-0.05	0.219	0.291	
	FR1 n77_HPUE	100M	BPSK	1	1	Left Cheek	0mm	Ant 10	DSI 1	656000	3840	17.78	19.00	1.324	50.0	1.0	0.04	0.655	0.867	
	FR1 n77	100M	BPSK	1	1	Right Cheek	0mm	Ant 11	DSI 1	656000	3840	23.04	24.50	1.4			-0.04	0.470	0.658	
	FR1 n77	100M	BPSK	135	69	Right Cheek	0mm	Ant 11	DSI 1	656000	3840	23.22	24.50	1.343			0.00	0.282	0.379	
	FR1 n77	100M	BPSK	1	1	Right Tilted	0mm	Ant 11	DSI 1	656000	3840	23.04	24.50	1.4			0.10	0.159	0.223	
	FR1 n77	100M	BPSK	135	69	Right Tilted	0mm	Ant 11	DSI 1	656000	3840	23.22	24.50	1.343			0.02	0.116	0.156	
	FR1 n77	100M	BPSK	1	1	Left Cheek	0mm	Ant 11	DSI 1	656000	3840	23.04	24.50	1.4			0.14	0.245	0.343	
	FR1 n77	100M	BPSK	135	69	Left Cheek	0mm	Ant 11	DSI 1	656000	3840	23.22	24.50	1.343			-0.17	0.161	0.216	
	FR1 n77	100M	BPSK	1	1	Left Tilted	0mm	Ant 11	DSI 1	656000	3840	23.04	24.50	1.4			0.17	0.074	0.104	
	FR1 n77	100M	BPSK	135	69	Left Tilted	0mm	Ant 11	DSI 1	656000	3840	23.22	24.50	1.343			0.01	0.060	0.081	
	FR1 n77_HPUE	100M	BPSK	1	1	Right Cheek	0mm	Ant 11	DSI 1	656000	3840	25.97	27.50	1.422	50.0	1.0	-0.04	0.453	0.644	



【WLAN 2.4GHz_5GHz SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7+12(12)	Head-Standalone	6	2437	15.30	16.00	1.175	97.08	1.03	-0.10	0.463	0.560	
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+12(12)	Head-Standalone	6	2437	15.30	16.00	1.175	97.08	1.03	0.05	0.529	0.640	
25	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7+12(12)	Head-Standalone	6	2437	15.30	16.00	1.175	97.08	1.03	0.01	0.794	0.961	
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7+12(12)	Head-Standalone	1	2412	15.10	16.00	1.23	97.08	1.03	-0.12	0.709	0.898	
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7+12(12)	Head-Standalone	11	2462	15.10	16.00	1.23	97.08	1.03	0.12	0.628	0.796	
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7+12(12)	Head-Standalone	6	2437	15.30	16.00	1.175	97.08	1.03	-0.01	0.745	0.902	
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7+12(12)	Head-Standalone	1	2412	15.10	16.00	1.23	97.08	1.03	0.09	0.615	0.779	
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7+12(12)	Head-Standalone	11	2462	15.10	16.00	1.23	97.08	1.03	-0.15	0.615	0.779	
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 8+10(10)	Head-Standalone	50	5250	14.17	15.00	1.211	100.0	1.0	0.04	0.449	0.544	
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 8+10(10)	Head-Standalone	50	5250	14.17	15.00	1.211	100.0	1.0	0.07	0.536	0.649	
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 8+10(10)	Head-Standalone	50	5250	14.17	15.00	1.211	100.0	1.0	0.04	0.816	0.988	
26	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8+10(10)	Head-Standalone	50	5250	14.17	15.00	1.211	100.0	1.0	0.06	0.902	1.092	
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 8+10(8)	Head-Standalone	114	5570	13.31	14.00	1.172	100.0	1.0	0.02	0.420	0.492	
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 8+10(8)	Head-Standalone	114	5570	13.31	14.00	1.172	100.0	1.0	-0.14	0.535	0.627	
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 8+10(8)	Head-Standalone	114	5570	13.31	14.00	1.172	100.0	1.0	-0.03	0.730	0.856	
27	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8+10(8)	Head-Standalone	114	5570	13.31	14.00	1.172	100.0	1.0	-0.00	0.856	1.003	
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8+10(10)	Head-Standalone	155	5775	13.03	14.00	1.25	100.0	1.0	0.16	0.428	0.535	
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8+10(10)	Head-Standalone	155	5775	13.03	14.00	1.25	100.0	1.0	-0.07	0.488	0.610	
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8+10(10)	Head-Standalone	155	5775	13.03	14.00	1.25	100.0	1.0	0.10	0.710	0.887	
28	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8+10(10)	Head-Standalone	155	5775	13.03	14.00	1.25	100.0	1.0	-0.03	0.826	1.032	

【Bluetooth SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 7	Head Standalone	39	2441	16.30	17.50	1.318	77.07	1.081	0.04	0.220	0.313	
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 7	Head Standalone	39	2441	16.30	17.50	1.318	77.07	1.081	0.08	0.045	0.064	
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 7	Head Standalone	39	2441	16.30	17.50	1.318	77.07	1.081	0.13	0.583	0.830	
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 7	Head Standalone	0	2402	15.00	16.50	1.413	77.07	1.081	0.14	0.534	0.816	
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 7	Head Standalone	78	2480	16.00	17.00	1.259	77.07	1.081	-0.06	0.730	0.994	
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 7	Head Standalone	39	2441	16.30	17.50	1.318	77.07	1.081	-0.10	0.121	0.173	
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 12	Head Standalone	39	2441	16.90	18.50	1.445	77.07	1.081	0.05	0.378	0.590	
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 12	Head Standalone	39	2441	16.90	18.50	1.445	77.07	1.081	0.05	0.469	0.733	
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 12	Head Standalone	39	2441	16.90	18.50	1.445	77.07	1.081	-0.19	0.591	0.924	
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 12	Head Standalone	0	2402	16.80	18.50	1.479	77.07	1.081	0.03	0.580	0.927	
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 12	Head Standalone	78	2480	16.30	18.00	1.479	77.07	1.081	0.04	0.571	0.913	
29	Bluetooth	1Mbps	Left Tilted	0mm	Ant 12	Head Standalone	39	2441	16.90	18.50	1.445	77.07	1.081	0.02	0.644	1.006	
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 12	Head Standalone	0	2402	16.80	18.50	1.479	77.07	1.081	0.05	0.622	0.994	
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 12	Head Standalone	78	2480	16.30	18.00	1.479	77.07	1.081	0.02	0.615	0.983	



16.2 Hotspot SAR

【GSM SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	GSM850	GPRS 4 Tx slots	Front	10mm	Ant 0	DSI 5	189	836.4	26.30	28.00	1.479	0.03	0.246	0.364	
	GSM850	GPRS 4 Tx slots	Back	10mm	Ant 0	DSI 5	189	836.4	26.30	28.00	1.479	-0.14	0.338	0.500	
	GSM850	GPRS 4 Tx slots	Left Side	10mm	Ant 0	DSI 5	189	836.4	26.30	28.00	1.479	0.01	0.123	0.182	
	GSM850	GPRS 4 Tx slots	Right Side	10mm	Ant 0	DSI 5	189	836.4	26.30	28.00	1.479	-0.02	0.447	0.661	
	GSM850	GPRS 4 Tx slots	Top Side	10mm	Ant 0	DSI 5	189	836.4	26.30	28.00	1.479	-0.16	0.001	0.001	
	GSM850	GPRS 4 Tx slots	Bottom Side	10mm	Ant 0	DSI 5	189	836.4	26.30	28.00	1.479	-0.03	0.244	0.361	
	GSM850	GPRS 4 Tx slots	Front	10mm	Ant 1	DSI 5	189	836.4	22.16	23.50	1.361	0.11	0.372	0.506	
	GSM850	GPRS 4 Tx slots	Back	10mm	Ant 1	DSI 5	189	836.4	22.16	23.50	1.361	0.10	0.415	0.565	
30	GSM850	GPRS 4 Tx slots	Left Side	10mm	Ant 1	DSI 5	189	836.4	22.16	23.50	1.361	0.00	0.500	0.680	
	GSM850	GPRS 4 Tx slots	Right Side	10mm	Ant 1	DSI 5	189	836.4	22.16	23.50	1.361	-0.13	0.001	0.001	
	GSM850	GPRS 4 Tx slots	Top Side	10mm	Ant 1	DSI 5	189	836.4	22.16	23.50	1.361	0.14	0.001	0.001	
	GSM850	GPRS 4 Tx slots	Bottom Side	10mm	Ant 1	DSI 5	189	836.4	22.16	23.50	1.361	0.12	0.001	0.001	
	GSM1900	GPRS 4 Tx slots	Front	10mm	Ant 4	DSI 5	661	1880	20.20	22.00	1.514	0.05	0.097	0.147	
	GSM1900	GPRS 4 Tx slots	Back	10mm	Ant 4	DSI 5	661	1880	20.20	22.00	1.514	0.10	0.119	0.180	
	GSM1900	GPRS 4 Tx slots	Left Side	10mm	Ant 4	DSI 5	661	1880	20.20	22.00	1.514	-0.05	0.233	0.353	
	GSM1900	GPRS 4 Tx slots	Right Side	10mm	Ant 4	DSI 5	661	1880	20.20	22.00	1.514	-0.07	0.001	0.002	
	GSM1900	GPRS 4 Tx slots	Top Side	10mm	Ant 4	DSI 5	661	1880	20.20	22.00	1.514	0.07	0.001	0.002	
	GSM1900	GPRS 4 Tx slots	Bottom Side	10mm	Ant 4	DSI 5	661	1880	20.20	22.00	1.514	-0.02	0.001	0.002	
	GSM1900	GPRS 4 Tx slots	Front	10mm	Ant 6	DSI 5	661	1880	22.32	24.00	1.472	0.11	0.195	0.287	
	GSM1900	GPRS 4 Tx slots	Back	10mm	Ant 6	DSI 5	661	1880	22.32	24.00	1.472	0.17	0.256	0.377	
	GSM1900	GPRS 4 Tx slots	Left Side	10mm	Ant 6	DSI 5	661	1880	22.32	24.00	1.472	0.10	0.079	0.116	
	GSM1900	GPRS 4 Tx slots	Right Side	10mm	Ant 6	DSI 5	661	1880	22.32	24.00	1.472	0.14	0.080	0.118	
	GSM1900	GPRS 4 Tx slots	Top Side	10mm	Ant 6	DSI 5	661	1880	22.32	24.00	1.472	0.13	0.001	0.001	
31	GSM1900	GPRS 4 Tx slots	Bottom Side	10mm	Ant 6	DSI 5	661	1880	22.32	24.00	1.472	-0.02	0.424	0.624	

【WCDMA SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	WCDMA II	RMC 12.2Kbps	Front	10mm	Ant 4	DSI 5	9400	1880	17.32	18.50	1.312	0.14	0.154	0.202	
	WCDMA II	RMC 12.2Kbps	Back	10mm	Ant 4	DSI 5	9400	1880	17.32	18.50	1.312	0.17	0.193	0.253	
	WCDMA II	RMC 12.2Kbps	Left Side	10mm	Ant 4	DSI 5	9400	1880	17.32	18.50	1.312	-0.14	0.315	0.413	
	WCDMA II	RMC 12.2Kbps	Right Side	10mm	Ant 4	DSI 5	9400	1880	17.32	18.50	1.312	-0.04	0.001	0.001	
	WCDMA II	RMC 12.2Kbps	Top Side	10mm	Ant 4	DSI 5	9400	1880	17.32	18.50	1.312	0.17	0.001	0.001	
	WCDMA II	RMC 12.2Kbps	Bottom Side	10mm	Ant 4	DSI 5	9400	1880	17.32	18.50	1.312	0.13	0.001	0.001	
	WCDMA II	RMC 12.2Kbps	Front	10mm	Ant 6	DSI 5	9400	1880	19.45	20.50	1.274	0.07	0.237	0.302	
	WCDMA II	RMC 12.2Kbps	Back	10mm	Ant 6	DSI 5	9400	1880	19.45	20.50	1.274	0.08	0.311	0.396	
	WCDMA II	RMC 12.2Kbps	Left Side	10mm	Ant 6	DSI 5	9400	1880	19.45	20.50	1.274	-0.15	0.117	0.149	
	WCDMA II	RMC 12.2Kbps	Right Side	10mm	Ant 6	DSI 5	9400	1880	19.45	20.50	1.274	0.18	0.085	0.108	
	WCDMA II	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 5	9400	1880	19.45	20.50	1.274	0.12	0.001	0.001	
32	WCDMA II	RMC 12.2Kbps	Bottom Side	10mm	Ant 6	DSI 5	9400	1880	19.45	20.50	1.274	0.01	0.496	0.632	
	WCDMA IV	RMC 12.2Kbps	Front	10mm	Ant 4	DSI 5	1413	1732.6	16.60	17.50	1.23	-0.07	0.092	0.113	
	WCDMA IV	RMC 12.2Kbps	Back	10mm	Ant 4	DSI 5	1413	1732.6	16.60	17.50	1.23	0.02	0.112	0.138	
	WCDMA IV	RMC 12.2Kbps	Left Side	10mm	Ant 4	DSI 5	1413	1732.6	16.60	17.50	1.23	0.01	0.173	0.213	
	WCDMA IV	RMC 12.2Kbps	Right Side	10mm	Ant 4	DSI 5	1413	1732.6	16.60	17.50	1.23	-0.02	0.001	0.001	
	WCDMA IV	RMC 12.2Kbps	Top Side	10mm	Ant 4	DSI 5	1413	1732.6	16.60	17.50	1.23	0.16	0.041	0.050	
	WCDMA IV	RMC 12.2Kbps	Bottom Side	10mm	Ant 4	DSI 5	1413	1732.6	16.60	17.50	1.23	0.03	0.001	0.001	
	WCDMA IV	RMC 12.2Kbps	Front	10mm	Ant 5	DSI 5	1413	1732.6	15.36	16.50	1.3	0.01	0.117	0.152	
	WCDMA IV	RMC 12.2Kbps	Back	10mm	Ant 5	DSI 5	1413	1732.6	15.36	16.50	1.3	-0.01	0.149	0.194	
	WCDMA IV	RMC 12.2Kbps	Left Side	10mm	Ant 5	DSI 5	1413	1732.6	15.36	16.50	1.3	0.12	0.001	0.001	
	WCDMA IV	RMC 12.2Kbps	Right Side	10mm	Ant 5	DSI 5	1413	1732.6	15.36	16.50	1.3	0.05	0.001	0.001	
	WCDMA IV	RMC 12.2Kbps	Top Side	10mm	Ant 5	DSI 5	1413	1732.6	15.36	16.50	1.3	-0.04	0.240	0.312	
	WCDMA IV	RMC 12.2Kbps	Bottom Side	10mm	Ant 5	DSI 5	1413	1732.6	15.36	16.50	1.3	0.17	0.001	0.001	
	WCDMA IV	RMC 12.2Kbps	Front	10mm	Ant 6	DSI 5	1413	1732.6	19.88	20.50	1.153	-0.13	0.273	0.315	
	WCDMA IV	RMC 12.2Kbps	Back	10mm	Ant 6	DSI 5	1413	1732.6	19.88	20.50	1.153	-0.13	0.340	0.392	
	WCDMA IV	RMC 12.2Kbps	Left Side	10mm	Ant 6	DSI 5	1413	1732.6	19.88	20.50	1.153	-0.09	0.087	0.100	
	WCDMA IV	RMC 12.2Kbps	Right Side	10mm	Ant 6	DSI 5	1413	1732.6	19.88	20.50	1.153	0.10	0.068	0.078	
	WCDMA IV	RMC 12.2Kbps	Top Side	10mm	Ant 6	DSI 5	1413	1732.6	19.88	20.50	1.153	-0.11	0.001	0.001	
33	WCDMA IV	RMC 12.2Kbps	Bottom Side	10mm	Ant 6	DSI 5	1413	1732.6	19.88	20.50	1.153	-0.02	0.494	0.570	
	WCDMA IV	RMC 12.2Kbps	Front	10mm	Ant 7	DSI 5	1413	1732.6	18.48	19.50	1.265	-0.19	0.177	0.224	
	WCDMA IV	RMC 12.2Kbps	Back	10mm	Ant 7	DSI 5	1413	1732.6	18.48	19.50	1.265	0.15	0.214	0.271	
	WCDMA IV	RMC 12.2Kbps	Left Side	10mm	Ant 7	DSI 5	1413	1732.6	18.48	19.50	1.265	0.13	0.001	0.001	
	WCDMA IV	RMC 12.2Kbps	Right Side	10mm	Ant 7	DSI 5	1413	1732.6	18.48	19.50	1.265	-0.03	0.336	0.425	
	WCDMA IV	RMC 12.2Kbps	Top Side	10mm	Ant 7	DSI 5	1413	1732.6	18.48	19.50	1.265	-0.04	0.001	0.001	
	WCDMA IV	RMC 12.2Kbps	Bottom Side	10mm	Ant 7	DSI 5	1413	1732.6	18.48	19.50	1.265	0.11	0.001	0.001	



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	WCDMA V	RMC 12.2Kbps	Front	10mm	Ant 0	DSI 5	4182	836.4	23.57	24.00	1.104	0.15	0.096	0.106	
	WCDMA V	RMC 12.2Kbps	Back	10mm	Ant 0	DSI 5	4182	836.4	23.57	24.00	1.104	-0.13	0.102	0.113	
	WCDMA V	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI 5	4182	836.4	23.57	24.00	1.104	0.10	0.127	0.140	
	WCDMA V	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI 5	4182	836.4	23.57	24.00	1.104	-0.07	0.001	0.001	
	WCDMA V	RMC 12.2Kbps	Top Side	10mm	Ant 0	DSI 5	4182	836.4	23.57	24.00	1.104	-0.08	0.001	0.001	
	WCDMA V	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI 5	4182	836.4	23.57	24.00	1.104	-0.16	0.001	0.001	
	WCDMA V	RMC 12.2Kbps	Front	10mm	Ant 1	DSI 5	4182	836.4	18.77	20.00	1.327	-0.14	0.249	0.330	
	WCDMA V	RMC 12.2Kbps	Back	10mm	Ant 1	DSI 5	4182	836.4	18.77	20.00	1.327	0.18	0.314	0.417	
34	WCDMA V	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI 5	4182	836.4	18.77	20.00	1.327	-0.02	0.439	0.583	
	WCDMA V	RMC 12.2Kbps	Right Side	10mm	Ant 1	DSI 5	4182	836.4	18.77	20.00	1.327	0.12	0.109	0.145	
	WCDMA V	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI 5	4182	836.4	18.77	20.00	1.327	-0.19	0.001	0.001	
	WCDMA V	RMC 12.2Kbps	Bottom Side	10mm	Ant 1	DSI 5	4182	836.4	18.77	20.00	1.327	0.10	0.232	0.308	

【LTE SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note
	LTE Band 2	20M	QPSK	1	0	Front	10mm	Ant 4	DSI 5	18900	1880	16.40	18.20	1.514			0.17	0.132	0.200	
	LTE Band 2	20M	QPSK	50	0	Front	10mm	Ant 4	DSI 5	18900	1880	16.39	18.20	1.517			-0.13	0.132	0.200	
	LTE Band 2	20M	QPSK	1	0	Back	10mm	Ant 4	DSI 5	18900	1880	16.40	18.20	1.514			-0.01	0.169	0.256	
	LTE Band 2	20M	QPSK	50	0	Back	10mm	Ant 4	DSI 5	18900	1880	16.39	18.20	1.517			0.10	0.170	0.258	
	LTE Band 2	20M	QPSK	1	0	Left Side	10mm	Ant 4	DSI 5	18900	1880	16.40	18.20	1.514			-0.07	0.289	0.438	
	LTE Band 2	20M	QPSK	50	0	Left Side	10mm	Ant 4	DSI 5	18900	1880	16.39	18.20	1.517			-0.05	0.294	0.446	
	LTE Band 2	20M	QPSK	1	0	Right Side	10mm	Ant 4	DSI 5	18900	1880	16.40	18.20	1.514			0.16	0.001	0.002	
	LTE Band 2	20M	QPSK	50	0	Right Side	10mm	Ant 4	DSI 5	18900	1880	16.39	18.20	1.517			-0.09	0.001	0.002	
	LTE Band 2	20M	QPSK	1	0	Top Side	10mm	Ant 4	DSI 5	18900	1880	16.40	18.20	1.514			-0.06	0.001	0.002	
	LTE Band 2	20M	QPSK	50	0	Top Side	10mm	Ant 4	DSI 5	18900	1880	16.39	18.20	1.517			0.04	0.001	0.002	
	LTE Band 2	20M	QPSK	1	0	Bottom Side	10mm	Ant 4	DSI 5	18900	1880	16.40	18.20	1.514			-0.15	0.001	0.002	
	LTE Band 2	20M	QPSK	50	0	Bottom Side	10mm	Ant 4	DSI 5	18900	1880	16.39	18.20	1.517			0.12	0.001	0.002	
	LTE Band 2	20M	QPSK	1	0	Front	10mm	Ant 6	DSI 5	18900	1880	20.01	21.20	1.315			0.08	0.283	0.372	
	LTE Band 2	20M	QPSK	50	0	Front	10mm	Ant 6	DSI 5	18900	1880	19.97	21.20	1.327			0.16	0.278	0.369	
	LTE Band 2	20M	QPSK	1	0	Back	10mm	Ant 6	DSI 5	18900	1880	20.01	21.20	1.315			-0.17	0.373	0.490	
	LTE Band 2	20M	QPSK	50	0	Back	10mm	Ant 6	DSI 5	18900	1880	19.97	21.20	1.327			-0.10	0.360	0.478	
	LTE Band 2	20M	QPSK	1	0	Left Side	10mm	Ant 6	DSI 5	18900	1880	20.01	21.20	1.315			0.00	0.141	0.185	
	LTE Band 2	20M	QPSK	50	0	Left Side	10mm	Ant 6	DSI 5	18900	1880	19.97	21.20	1.327			0.15	0.139	0.184	
	LTE Band 2	20M	QPSK	1	0	Right Side	10mm	Ant 6	DSI 5	18900	1880	20.01	21.20	1.315			-0.16	0.100	0.132	
	LTE Band 2	20M	QPSK	50	0	Right Side	10mm	Ant 6	DSI 5	18900	1880	19.97	21.20	1.327			0.10	0.100	0.133	
	LTE Band 2	20M	QPSK	1	0	Top Side	10mm	Ant 6	DSI 5	18900	1880	20.01	21.20	1.315			-0.06	0.001	0.001	
	LTE Band 2	20M	QPSK	50	0	Top Side	10mm	Ant 6	DSI 5	18900	1880	19.97	21.20	1.327			0.16	0.001	0.001	
	LTE Band 2	20M	QPSK	1	0	Bottom Side	10mm	Ant 6	DSI 5	18900	1880	20.01	21.20	1.315			-0.10	0.568	0.747	
35	LTE Band 2	20M	QPSK	50	0	Bottom Side	10mm	Ant 6	DSI 5	18900	1880	19.97	21.20	1.327			-0.12	0.570	0.756	
	LTE Band 5	10M	QPSK	1	0	Front	10mm	Ant 1	DSI5	20525	836.5	20.09	20.70	1.151			-0.18	0.358	0.412	Other PA
	LTE Band 5	10M	QPSK	25	0	Front	10mm	Ant 1	DSI5	20525	836.5	20.01	20.70	1.172			-0.18	0.366	0.429	Other PA
	LTE Band 5	10M	QPSK	1	0	Back	10mm	Ant 1	DSI5	20525	836.5	20.09	20.70	1.151			-0.02	0.404	0.465	Other PA
	LTE Band 5	10M	QPSK	25	0	Back	10mm	Ant 1	DSI5	20525	836.5	20.01	20.70	1.172			-0.10	0.395	0.463	Other PA
	LTE Band 5	10M	QPSK	1	0	Left Side	10mm	Ant 1	DSI5	20525	836.5	20.09	20.70	1.151			0.04	0.476	0.548	Other PA
36	LTE Band 5	10M	QPSK	25	0	Left Side	10mm	Ant 1	DSI5	20525	836.5	20.01	20.70	1.172			0.02	0.677	0.793	Other PA
	LTE Band 5	10M	QPSK	1	0	Right Side	10mm	Ant 1	DSI5	20525	836.5	20.09	20.70	1.151			-0.13	0.001	0.001	Other PA
	LTE Band 5	10M	QPSK	25	0	Right Side	10mm	Ant 1	DSI5	20525	836.5	20.01	20.70	1.172			-0.08	0.001	0.001	Other PA
	LTE Band 5	10M	QPSK	1	0	Top Side	10mm	Ant 1	DSI5	20525	836.5	20.09	20.70	1.151			0.01	0.001	0.001	Other PA
	LTE Band 5	10M	QPSK	25	0	Top Side	10mm	Ant 1	DSI5	20525	836.5	20.01	20.70	1.172			-0.05	0.001	0.001	Other PA
	LTE Band 5	10M	QPSK	1	0	Bottom Side	10mm	Ant 1	DSI5	20525	836.5	20.09	20.70	1.151			-0.13	0.001	0.001	Other PA
	LTE Band 5	10M	QPSK	25	0	Bottom Side	10mm	Ant 1	DSI5	20525	836.5	20.01	20.70	1.172			0.07	0.001	0.001	Other PA
	LTE Band 7	20M	QPSK	1	0	Front	10mm	Ant 4	DSI 5	21100	2535	16.21	17.20	1.256			-0.15	0.152	0.191	
	LTE Band 7	20M	QPSK	50	0	Front	10mm	Ant 4	DSI 5	21100	2535	16.12	17.20	1.282			-0.01	0.154	0.197	
	LTE Band 7	20M	QPSK	1	0	Back	10mm	Ant 4	DSI 5	21100	2535	16.21	17.20	1.256			-0.00	0.219	0.275	
	LTE Band 7	20M	QPSK	50	0	Back	10mm	Ant 4	DSI 5	21100	2535	16.12	17.20	1.282			-0.16	0.219	0.281	
	LTE Band 7	20M	QPSK	1	0	Left Side	10mm	Ant 4	DSI 5	21100	2535	16.21	17.20	1.256			0.00	0.311	0.391	
	LTE Band 7	20M	QPSK	50	0	Left Side	10mm	Ant 4	DSI 5	21100	2535	16.12	17.20	1.282			0.03	0.303	0.388	
	LTE Band 7	20M	QPSK	1	0	Right Side	10mm	Ant 4	DSI 5	21100	2535	16.21	17.20	1.256			0.14	0.001	0.001	
	LTE Band 7	20M	QPSK	50	0	Right Side	10mm	Ant 4	DSI 5	21100	2535	16.12	17.20	1.282			0.15	0.001	0.001	
	LTE Band 7	20M	QPSK	1	0	Top Side	10mm	Ant 4	DSI 5	21100	2535	16.21	17.20	1.256			0.16	0.001	0.001	
	LTE Band 7	20M	QPSK	50	0	Top Side	10mm	Ant 4	DSI 5	21100	2535	16.12	17.20	1.282			0.18	0.001	0.001	
	LTE Band 7	20M	QPSK	1	0	Bottom Side	10mm	Ant 4	DSI 5	21100	2535	16.21	17.20	1.256			-0.17	0.001	0.001	
	LTE Band 7	20M	QPSK	50	0	Bottom Side	10mm	Ant 4	DSI 5	21100	2535	16.12	17.20	1.282			0.09	0.001	0.001	
	LTE Band 7	20M	QPSK	1	0	Front	10mm	Ant 5	DSI 5	21100	2535	15.71	16.70	1.256			-0.02	0.110	0.138	
	LTE Band 7	20M	QPSK	50	0	Front	10mm	Ant 5	DSI 5	21100	2535	15.70	16.70	1.259			0.14	0.114	0.144	
	LTE Band 7	20M	QPSK	1	0	Back	10mm	Ant 5	DSI 5	21100	2535	15.71	16.70	1.256			-0.04	0.136	0.171	
	LTE Band 7	20M	QPSK	50	0	Back	10mm	Ant 5	DSI 5	21100	2535	15.70	16.70	1.259			0.06	0.134	0.169	
	LTE Band 7	20M	QPSK	1	0	Left Side	10mm	Ant 5	DSI 5	21100	2535	15.71	16.70	1.256			-0.06	0.057	0.072	
	LTE Band 7	20M	QPSK	50	0	Left Side	10mm	Ant 5	DSI 5	21100	2535	15.70	16.70	1.259			0.01	0.057	0.072	
	LTE Band 7	20M	QPSK	1	0	Right Side	10mm	Ant 5	DSI 5	21100	2535	15.71	16.70	1.256			-0.13	0.001	0.001	
	LTE Band 7	20M	QPSK	50	0	Right Side	10mm	Ant 5	DSI 5	21100	2535	15.70	16.70	1.259			-0.11	0.001	0.001	



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	LTE Band 7	20M	QPSK	1	0	Top Side	10mm	Ant 5	DSI 5	21100	2535	15.71	16.70	1.256			0.19	0.253	0.318	
	LTE Band 7	20M	QPSK	50	0	Top Side	10mm	Ant 5	DSI 5	21100	2535	15.70	16.70	1.259			-0.08	0.251	0.316	
	LTE Band 7	20M	QPSK	1	0	Bottom Side	10mm	Ant 5	DSI 5	21100	2535	15.71	16.70	1.256			0.06	0.001	0.001	
	LTE Band 7	20M	QPSK	50	0	Bottom Side	10mm	Ant 5	DSI 5	21100	2535	15.70	16.70	1.259			0.04	0.010	0.013	
	LTE Band 7	20M	QPSK	1	0	Front	10mm	Ant 6	DSI 5	21100	2535	18.95	20.00	1.274			0.18	0.167	0.213	
	LTE Band 7	20M	QPSK	50	0	Front	10mm	Ant 6	DSI 5	21100	2535	18.87	20.00	1.297			-0.03	0.171	0.222	
	LTE Band 7	20M	QPSK	1	0	Back	10mm	Ant 6	DSI 5	21100	2535	18.95	20.00	1.274			-0.12	0.238	0.303	
	LTE Band 7	20M	QPSK	50	0	Back	10mm	Ant 6	DSI 5	21100	2535	18.87	20.00	1.297			0.16	0.237	0.307	
	LTE Band 7	20M	QPSK	1	0	Left Side	10mm	Ant 6	DSI 5	21100	2535	18.95	20.00	1.274			-0.01	0.046	0.059	
	LTE Band 7	20M	QPSK	50	0	Left Side	10mm	Ant 6	DSI 5	21100	2535	18.87	20.00	1.297			0.05	0.055	0.071	
	LTE Band 7	20M	QPSK	1	0	Right Side	10mm	Ant 6	DSI 5	21100	2535	18.95	20.00	1.274			0.13	0.061	0.078	
	LTE Band 7	20M	QPSK	50	0	Right Side	10mm	Ant 6	DSI 5	21100	2535	18.87	20.00	1.297			-0.09	0.059	0.077	
	LTE Band 7	20M	QPSK	1	0	Top Side	10mm	Ant 6	DSI 5	21100	2535	18.95	20.00	1.274			-0.07	0.001	0.001	
	LTE Band 7	20M	QPSK	50	0	Top Side	10mm	Ant 6	DSI 5	21100	2535	18.87	20.00	1.297			0.17	0.001	0.001	
37	LTE Band 7	20M	QPSK	1	0	Bottom Side	10mm	Ant 6	DSI 5	21100	2535	18.95	20.00	1.274			0.01	0.309	0.394	
	LTE Band 7	20M	QPSK	50	0	Bottom Side	10mm	Ant 6	DSI 5	21100	2535	18.87	20.00	1.297			-0.07	0.302	0.392	
	LTE Band 7	20M	QPSK	1	0	Front	10mm	Ant 7	DSI 5	21100	2535	15.90	17.50	1.445			0.07	0.093	0.134	
	LTE Band 7	20M	QPSK	50	0	Front	10mm	Ant 7	DSI 5	21100	2535	15.88	17.50	1.452			-0.07	0.093	0.135	
	LTE Band 7	20M	QPSK	1	0	Back	10mm	Ant 7	DSI 5	21100	2535	15.90	17.50	1.445			0.11	0.127	0.184	
	LTE Band 7	20M	QPSK	50	0	Back	10mm	Ant 7	DSI 5	21100	2535	15.88	17.50	1.452			-0.11	0.123	0.179	
	LTE Band 7	20M	QPSK	1	0	Left Side	10mm	Ant 7	DSI 5	21100	2535	15.90	17.50	1.445			0.10	0.001	0.001	
	LTE Band 7	20M	QPSK	50	0	Left Side	10mm	Ant 7	DSI 5	21100	2535	15.88	17.50	1.452			-0.19	0.001	0.001	
	LTE Band 7	20M	QPSK	1	0	Right Side	10mm	Ant 7	DSI 5	21100	2535	15.90	17.50	1.445			-0.13	0.202	0.292	
	LTE Band 7	20M	QPSK	50	0	Right Side	10mm	Ant 7	DSI 5	21100	2535	15.88	17.50	1.452			0.12	0.200	0.290	
	LTE Band 7	20M	QPSK	1	0	Top Side	10mm	Ant 7	DSI 5	21100	2535	15.90	17.50	1.445			-0.00	0.039	0.056	
	LTE Band 7	20M	QPSK	50	0	Top Side	10mm	Ant 7	DSI 5	21100	2535	15.88	17.50	1.452			0.09	0.039	0.057	
	LTE Band 7	20M	QPSK	1	0	Bottom Side	10mm	Ant 7	DSI 5	21100	2535	15.90	17.50	1.445			-0.05	0.024	0.035	
	LTE Band 7	20M	QPSK	50	0	Bottom Side	10mm	Ant 7	DSI 5	21100	2535	15.88	17.50	1.452			0.07	0.016	0.023	
	LTE Band 26	15M	QPSK	1	0	Front	10mm	Ant 0	DSI 5	26865	831.5	24.71	25.20	1.119			-0.06	0.278	0.311	
	LTE Band 26	15M	QPSK	36	0	Front	10mm	Ant 0	DSI 5	26865	831.5	24.35	24.70	1.084			0.14	0.246	0.267	
	LTE Band 26	15M	QPSK	1	0	Back	10mm	Ant 0	DSI 5	26865	831.5	24.71	25.20	1.119			-0.04	0.425	0.476	
	LTE Band 26	15M	QPSK	36	0	Back	10mm	Ant 0	DSI 5	26865	831.5	24.35	24.70	1.084			-0.00	0.370	0.401	
	LTE Band 26	15M	QPSK	1	0	Left Side	10mm	Ant 0	DSI 5	26865	831.5	24.71	25.20	1.119			0.02	0.059	0.066	
	LTE Band 26	15M	QPSK	36	0	Left Side	10mm	Ant 0	DSI 5	26865	831.5	24.35	24.70	1.084			0.15	0.052	0.056	
	LTE Band 26	15M	QPSK	1	0	Right Side	10mm	Ant 0	DSI 5	26865	831.5	24.71	25.20	1.119			0.13	0.416	0.466	
	LTE Band 26	15M	QPSK	36	0	Right Side	10mm	Ant 0	DSI 5	26865	831.5	24.35	24.70	1.084			-0.14	0.360	0.390	
	LTE Band 26	15M	QPSK	1	0	Top Side	10mm	Ant 0	DSI 5	26865	831.5	24.71	25.20	1.119			0.09	0.001	0.001	
	LTE Band 26	15M	QPSK	36	0	Top Side	10mm	Ant 0	DSI 5	26865	831.5	24.35	24.70	1.084			0.06	0.001	0.001	
	LTE Band 26	15M	QPSK	1	0	Bottom Side	10mm	Ant 0	DSI 5	26865	831.5	24.71	25.20	1.119			-0.13	0.273	0.305	
	LTE Band 26	15M	QPSK	36	0	Bottom Side	10mm	Ant 0	DSI 5	26865	831.5	24.35	24.70	1.084			0.16	0.245	0.266	
	LTE Band 5	10M	QPSK	1	0	Back	10mm	Ant 0	DSI 5	20525	836.5	24.44	25.00	1.138			0.03	0.355	0.404	Other PA
	LTE Band 26	15M	QPSK	1	0	Front	10mm	Ant 1	DSI 5	26865	831.5	19.80	20.20	1.096			0.14	0.399	0.437	
	LTE Band 26	15M	QPSK	36	0	Front	10mm	Ant 1	DSI 5	26865	831.5	19.76	20.20	1.107			-0.06	0.407	0.451	
	LTE Band 26	15M	QPSK	1	0	Back	10mm	Ant 1	DSI 5	26865	831.5	19.80	20.20	1.096			0.10	0.450	0.493	
	LTE Band 26	15M	QPSK	36	0	Back	10mm	Ant 1	DSI 5	26865	831.5	19.76	20.20	1.107			0.01	0.440	0.487	
	LTE Band 26	15M	QPSK	1	0	Left Side	10mm	Ant 1	DSI 5	26865	831.5	19.80	20.20	1.096			0.15	0.530	0.581	
38	LTE Band 26	15M	QPSK	36	0	Left Side	10mm	Ant 1	DSI 5	26865	831.5	19.76	20.20	1.107			-0.03	0.534	0.591	
	LTE Band 26	15M	QPSK	1	0	Right Side	10mm	Ant 1	DSI 5	26865	831.5	19.80	20.20	1.096			0.08	0.001	0.001	
	LTE Band 26	15M	QPSK	36	0	Right Side	10mm	Ant 1	DSI 5	26865	831.5	19.76	20.20	1.107			-0.04	0.001	0.001	
	LTE Band 26	15M	QPSK	1	0	Top Side	10mm	Ant 1	DSI 5	26865	831.5	19.80	20.20	1.096			0.06	0.001	0.001	
	LTE Band 26	15M	QPSK	36	0	Top Side	10mm	Ant 1	DSI 5	26865	831.5	19.76	20.20	1.107			-0.17	0.001	0.001	
	LTE Band 26	15M	QPSK	1	0	Bottom Side	10mm	Ant 1	DSI 5	26865	831.5	19.80	20.20	1.096			0.15	0.001	0.001	
	LTE Band 26	15M	QPSK	36	0	Bottom Side	10mm	Ant 1	DSI 5	26865	831.5	19.76	20.20	1.107			0.11	0.001	0.001	
	LTE Band 66	20M	QPSK	1	0	Front	10mm	Ant 4	DSI 5	132322	1745	16.68	17.70	1.265			-0.18	0.100	0.127	
	LTE Band 66	20M	QPSK	50	0	Front	10mm	Ant 4	DSI 5	132322	1745	16.66	17.70	1.271			0.11	0.103	0.131	
	LTE Band 66	20M	QPSK	1	0	Back	10mm	Ant 4	DSI 5	132322	1745	16.68	17.70	1.265			-0.11	0.122	0.154	
	LTE Band 66	20M	QPSK	50	0	Back	10mm	Ant 4	DSI 5	132322	1745	16.66	17.70	1.271			-0.06	0.123	0.156	
	LTE Band 66	20M	QPSK	1	0	Left Side	10mm	Ant 4	DSI 5	132322	1745	16.68	17.70	1.265			0.13	0.194	0.245	
	LTE Band 66	20M	QPSK	50	0	Left Side	10mm	Ant 4	DSI 5	132322	1745	16.66	17.70	1.271			-0.01	0.195	0.248	
	LTE Band 66	20M	QPSK	1	0	Right Side	10mm	Ant 4	DSI 5	132322	1745	16.68	17.70	1.265			-0.00	0.001	0.001	
	LTE Band 66	20M	QPSK	50	0	Right Side	10mm	Ant 4	DSI 5	132322	1745	16.66	17.70	1.271			-0.08	0.001	0.001	
	LTE Band 66	20M	QPSK	1	0	Top Side	10mm	Ant 4	DSI 5	132322	1745	16.68	17.70	1.265			-0.04	0.054	0.068	
	LTE Band 66	20M	QPSK	50	0	Top Side	10mm	Ant 4	DSI 5	132322	1745	16.66	17.70	1.271			0.10	0.055	0.070	
	LTE Band 66	20M	QPSK	1	0	Bottom Side	10mm	Ant 4	DSI 5	132322	1745	16.68	17.70	1.265			0.15	0.001	0.001	
	LTE Band 66	20M	QPSK	50	0	Bottom Side	10mm	Ant 4	DSI 5	132322	1745	16.66	17.70	1.271			0.10	0.001	0.001	
	LTE Band 4	20M	QPSK	50	0	Left Side	10mm	Ant 4	DSI 5	20175	1732.5	16.72	17.70	1.253			-0.05	0.197	0.247	Other PA
	LTE Band 66	20M	QPSK	1	0	Front	10mm	Ant 5	DSI 5	132322	1745	15.11	16.50	1.377			-0.00	0.113	0.156	
	LTE Band 66	20M	QPSK	50	0	Front	10mm	Ant 5	DSI 5	132322	1745	15.08	16.50	1.387			0.04	0.115	0.160	
	LTE Band 66	20M	QPSK	1	0	Back	10mm	Ant 5	DSI 5	132322	1745	15.11	16.50	1.377			0.07	0.148	0.204	
	LTE Band 66	20M	QPSK	50	0	Back	10mm	Ant 5	DSI 5	132322	1745	15.08	16.50	1.387			-0.14	0.152	0.211	
	LTE Band 66	20M	QPSK	1	0	Left Side	10mm	Ant 5	DSI 5	132322	1745	15.11	16.50	1.377			-0.11	0.001	0.001	
	LTE Band 66	20M	QPSK	50	0	Left Side	10mm	Ant 5	DSI 5	132322	1745	15.08	16.50	1.387			0.18	0.001	0.001	
	LTE Band 66	20M	QPSK	1	0	Right Side	10mm	Ant 5	DSI 5	132322	1745	15.11	1							



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	LTE Band 66	20M	QPSK	50	0	Right Side	10mm	Ant 5	DSI 5	132322	1745	15.08	16.50	1.387			-0.18	0.001	0.001	
	LTE Band 66	20M	QPSK	1	0	Top Side	10mm	Ant 5	DSI 5	132322	1745	15.11	16.50	1.377			0.11	0.224	0.308	
	LTE Band 66	20M	QPSK	50	0	Top Side	10mm	Ant 5	DSI 5	132322	1745	15.08	16.50	1.387			-0.11	0.232	0.322	
	LTE Band 66	20M	QPSK	1	0	Bottom Side	10mm	Ant 5	DSI 5	132322	1745	15.11	16.50	1.377			-0.11	0.001	0.001	
	LTE Band 66	20M	QPSK	50	0	Bottom Side	10mm	Ant 5	DSI 5	132322	1745	15.08	16.50	1.387			0.07	0.001	0.001	
	LTE Band 4	20M	QPSK	50	0	Top Side	10mm	Ant 5	DSI5	20175	1732.5	15.59	16.20	1.151			-0.02	0.232	0.267	Other PA
	LTE Band 66	20M	QPSK	1	0	Front	10mm	Ant 6	DSI 5	132322	1745	18.36	19.50	1.3			0.01	0.312	0.406	
	LTE Band 66	20M	QPSK	50	0	Front	10mm	Ant 6	DSI 5	132322	1745	18.33	19.50	1.309			0.18	0.310	0.406	
	LTE Band 66	20M	QPSK	1	0	Back	10mm	Ant 6	DSI 5	132322	1745	18.36	19.50	1.3			0.08	0.372	0.484	
	LTE Band 66	20M	QPSK	50	0	Back	10mm	Ant 6	DSI 5	132322	1745	18.33	19.50	1.309			-0.16	0.372	0.487	
	LTE Band 66	20M	QPSK	1	0	Left Side	10mm	Ant 6	DSI 5	132322	1745	18.36	19.50	1.3			0.18	0.110	0.143	
	LTE Band 66	20M	QPSK	50	0	Left Side	10mm	Ant 6	DSI 5	132322	1745	18.33	19.50	1.309			-0.02	0.108	0.141	
	LTE Band 66	20M	QPSK	1	0	Right Side	10mm	Ant 6	DSI 5	132322	1745	18.36	19.50	1.3			-0.11	0.080	0.104	
	LTE Band 66	20M	QPSK	50	0	Right Side	10mm	Ant 6	DSI 5	132322	1745	18.33	19.50	1.309			0.10	0.079	0.103	
	LTE Band 66	20M	QPSK	1	0	Top Side	10mm	Ant 6	DSI 5	132322	1745	18.36	19.50	1.3			0.18	0.001	0.001	
	LTE Band 66	20M	QPSK	50	0	Top Side	10mm	Ant 6	DSI 5	132322	1745	18.33	19.50	1.309			-0.09	0.001	0.001	
	LTE Band 66	20M	QPSK	1	0	Bottom Side	10mm	Ant 6	DSI 5	132322	1745	18.36	19.50	1.3			0.05	0.533	0.693	
39	LTE Band 66	20M	QPSK	50	0	Bottom Side	10mm	Ant 6	DSI 5	132322	1745	18.33	19.50	1.309			-0.02	0.542	0.709	
	LTE Band 4	20M	QPSK	50	0	Bottom Side	10mm	Ant 6	DSI5	20175	1732.5	18.59	19.00	1.099			-0.04	0.433	0.476	Other PA
	LTE Band 66	20M	QPSK	1	0	Front	10mm	Ant 7	DSI 5	132322	1745	18.40	19.50	1.288			0.03	0.142	0.183	
	LTE Band 66	20M	QPSK	50	0	Front	10mm	Ant 7	DSI 5	132322	1745	18.37	19.50	1.297			-0.02	0.142	0.184	
	LTE Band 66	20M	QPSK	1	0	Back	10mm	Ant 7	DSI 5	132322	1745	18.40	19.50	1.288			-0.14	0.166	0.214	
	LTE Band 66	20M	QPSK	50	0	Back	10mm	Ant 7	DSI 5	132322	1745	18.37	19.50	1.297			0.06	0.167	0.217	
	LTE Band 66	20M	QPSK	1	0	Left Side	10mm	Ant 7	DSI 5	132322	1745	18.40	19.50	1.288			0.05	0.001	0.001	
	LTE Band 66	20M	QPSK	50	0	Left Side	10mm	Ant 7	DSI 5	132322	1745	18.37	19.50	1.297			0.04	0.001	0.001	
	LTE Band 66	20M	QPSK	1	0	Right Side	10mm	Ant 7	DSI 5	132322	1745	18.40	19.50	1.288			0.03	0.282	0.363	
	LTE Band 66	20M	QPSK	50	0	Right Side	10mm	Ant 7	DSI 5	132322	1745	18.37	19.50	1.297			-0.03	0.289	0.375	
	LTE Band 66	20M	QPSK	1	0	Top Side	10mm	Ant 7	DSI 5	132322	1745	18.40	19.50	1.288			-0.02	0.001	0.001	
	LTE Band 66	20M	QPSK	50	0	Top Side	10mm	Ant 7	DSI 5	132322	1745	18.37	19.50	1.297			0.08	0.001	0.001	
	LTE Band 66	20M	QPSK	1	0	Bottom Side	10mm	Ant 7	DSI 5	132322	1745	18.40	19.50	1.288			-0.10	0.001	0.001	
	LTE Band 66	20M	QPSK	50	0	Bottom Side	10mm	Ant 7	DSI 5	132322	1745	18.37	19.50	1.297			-0.07	0.001	0.001	
	LTE Band 4	20M	QPSK	50	0	Right Side	10mm	Ant 7	DSI5	20175	1732.5	18.78	19.20	1.102			0.03	0.144	0.159	Other PA
	LTE Band 71	20M	QPSK	1	0	Front	10mm	Ant 0	DSI 5	133297	680.5	24.36	25.00	1.159			-0.14	0.082	0.095	
	LTE Band 71	20M	QPSK	50	0	Front	10mm	Ant 0	DSI 5	133297	680.5	23.40	24.00	1.148			0.06	0.067	0.077	
	LTE Band 71	20M	QPSK	1	0	Back	10mm	Ant 0	DSI 5	133297	680.5	24.36	25.00	1.159			0.05	0.089	0.103	
	LTE Band 71	20M	QPSK	50	0	Back	10mm	Ant 0	DSI 5	133297	680.5	23.40	24.00	1.148			0.04	0.072	0.083	
	LTE Band 71	20M	QPSK	1	0	Left Side	10mm	Ant 0	DSI 5	133297	680.5	24.36	25.00	1.159			0.03	0.065	0.075	
	LTE Band 71	20M	QPSK	50	0	Left Side	10mm	Ant 0	DSI 5	133297	680.5	23.40	24.00	1.148			-0.03	0.051	0.059	
	LTE Band 71	20M	QPSK	1	0	Right Side	10mm	Ant 0	DSI 5	133297	680.5	24.36	25.00	1.159			-0.02	0.153	0.177	
	LTE Band 71	20M	QPSK	50	0	Right Side	10mm	Ant 0	DSI 5	133297	680.5	23.40	24.00	1.148			0.08	0.121	0.139	
	LTE Band 71	20M	QPSK	1	0	Top Side	10mm	Ant 0	DSI 5	133297	680.5	24.36	25.00	1.159			-0.10	0.001	0.001	
	LTE Band 71	20M	QPSK	50	0	Top Side	10mm	Ant 0	DSI 5	133297	680.5	23.40	24.00	1.148			-0.07	0.001	0.001	
	LTE Band 71	20M	QPSK	1	0	Bottom Side	10mm	Ant 0	DSI 5	133297	680.5	24.36	25.00	1.159			0.02	0.047	0.054	
	LTE Band 71	20M	QPSK	50	0	Bottom Side	10mm	Ant 0	DSI 5	133297	680.5	23.40	24.00	1.148			-0.04	0.001	0.001	
	LTE Band 71	20M	QPSK	1	0	Front	10mm	Ant 1	DSI 5	133297	680.5	22.33	23.50	1.309			0.02	0.273	0.357	
	LTE Band 71	20M	QPSK	50	0	Front	10mm	Ant 1	DSI 5	133297	680.5	22.30	23.50	1.318			-0.17	0.282	0.372	
	LTE Band 71	20M	QPSK	1	0	Back	10mm	Ant 1	DSI 5	133297	680.5	22.33	23.50	1.309			0.01	0.308	0.403	
	LTE Band 71	20M	QPSK	50	0	Back	10mm	Ant 1	DSI 5	133297	680.5	22.30	23.50	1.318			0.03	0.320	0.422	
	LTE Band 71	20M	QPSK	1	0	Left Side	10mm	Ant 1	DSI 5	133297	680.5	22.33	23.50	1.309			0.18	0.406	0.531	
40	LTE Band 71	20M	QPSK	50	0	Left Side	10mm	Ant 1	DSI 5	133297	680.5	22.30	23.50	1.318			-0.02	0.406	0.535	
	LTE Band 71	20M	QPSK	1	0	Right Side	10mm	Ant 1	DSI 5	133297	680.5	22.33	23.50	1.309			0.03	0.001	0.001	
	LTE Band 71	20M	QPSK	50	0	Right Side	10mm	Ant 1	DSI 5	133297	680.5	22.30	23.50	1.318			-0.02	0.001	0.001	
	LTE Band 71	20M	QPSK	1	0	Top Side	10mm	Ant 1	DSI 5	133297	680.5	22.33	23.50	1.309			0.11	0.001	0.001	
	LTE Band 71	20M	QPSK	50	0	Top Side	10mm	Ant 1	DSI 5	133297	680.5	22.30	23.50	1.318			-0.18	0.001	0.001	
	LTE Band 71	20M	QPSK	1	0	Bottom Side	10mm	Ant 1	DSI 5	133297	680.5	22.33	23.50	1.309			-0.08	0.001	0.001	
	LTE Band 71	20M	QPSK	50	0	Bottom Side	10mm	Ant 1	DSI 5	133297	680.5	22.30	23.50	1.318			-0.15	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Front	10mm	Ant 4	DSI 5	40620	2593	17.78	18.20	1.102	62.9	1.006	0.18	0.117	0.130	
	LTE Band 41	20M	QPSK	50	0	Front	10mm	Ant 4	DSI 5	40620	2593	17.75	18.20	1.109	62.9	1.006	-0.13	0.119	0.133	
	LTE Band 41	20M	QPSK	1	0	Back	10mm	Ant 4	DSI 5	40620	2593	17.78	18.20	1.102	62.9	1.006	-0.15	0.179	0.198	
	LTE Band 41	20M	QPSK	50	0	Back	10mm	Ant 4	DSI 5	40620	2593	17.75	18.20	1.109	62.9	1.006	0.12	0.175	0.195	
	LTE Band 41	20M	QPSK	1	0	Left Side	10mm	Ant 4	DSI 5	40620	2593	17.78	18.20	1.102	62.9	1.006	0.09	0.255	0.283	
	LTE Band 41	20M	QPSK	50	0	Left Side	10mm	Ant 4	DSI 5	40620	2593	17.75	18.20	1.109	62.9	1.006	-0.09	0.250	0.279	
	LTE Band 41	20M	QPSK	1	0	Right Side	10mm	Ant 4	DSI 5	40620	2593	17.78	18.20	1.102	62.9	1.006	0.15	0.001	0.001	
	LTE Band 41	20M	QPSK	50	0	Right Side	10mm	Ant 4	DSI 5	40620	2593	17.75	18.20	1.109	62.9	1.006	-0.14	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Top Side	10mm	Ant 4	DSI 5	40620	2593	17.78	18.20	1.102	62.9	1.006	-0.17	0.001	0.001	
	LTE Band 41	20M	QPSK	50	0	Top Side	10mm	Ant 4	DSI 5	40620	2593	17.75	18.20	1.109	62.9	1.006	0.18	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Bottom Side	10mm	Ant 4	DSI 5	40620	2593	17.78	18.20	1.102	62.9	1.006	-0.09	0.001	0.001	
	LTE Band 41	20M	QPSK	50	0	Bottom Side	10mm	Ant 4	DSI 5	40620	2593	17.75	18.20	1.109	62.9	1.006	-0.11	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Front	10mm	Ant 5	DSI 5	40620	2593	16.35	17.70	1.365	62.9	1.006	0.17	0.082	0.113	
	LTE Band 41	20M	QPSK	50	0	Front	10mm	Ant 5	DSI 5	40620	2593	16.33	17.70	1.371	62.9	1.006	-0.04	0.084	0.116	
	LTE Band 41	20M	QPSK	1	0	Back	10mm	Ant 5	DSI 5	40620	2593	16.35	17.70	1.365	62.9	1.006	0.17	0.103	0.141	
	LTE Band 41	20M	QPSK	50	0	Back	10mm													



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	LTE Band 41	20M	QPSK	50	0	Left Side	10mm	Ant 5	DSI 5	40620	2593	16.33	17.70	1.371	62.9	1.006	0.12	0.082	0.113	
	LTE Band 41	20M	QPSK	1	0	Right Side	10mm	Ant 5	DSI 5	40620	2593	16.35	17.70	1.365	62.9	1.006	0.19	0.001	0.001	
	LTE Band 41	20M	QPSK	50	0	Right Side	10mm	Ant 5	DSI 5	40620	2593	16.33	17.70	1.371	62.9	1.006	0.17	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Top Side	10mm	Ant 5	DSI 5	40620	2593	16.35	17.70	1.365	62.9	1.006	-0.00	0.188	0.258	
	LTE Band 41	20M	QPSK	50	0	Top Side	10mm	Ant 5	DSI 5	40620	2593	16.33	17.70	1.371	62.9	1.006	-0.03	0.184	0.254	
	LTE Band 41	20M	QPSK	1	0	Bottom Side	10mm	Ant 5	DSI 5	40620	2593	16.35	17.70	1.365	62.9	1.006	-0.15	0.038	0.052	
	LTE Band 41	20M	QPSK	50	0	Bottom Side	10mm	Ant 5	DSI 5	40620	2593	16.33	17.70	1.371	62.9	1.006	-0.05	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Front	10mm	Ant 6	DSI 5	40620	2593	21.21	22.00	1.199	62.9	1.006	-0.06	0.143	0.172	
	LTE Band 41	20M	QPSK	50	0	Front	10mm	Ant 6	DSI 5	40620	2593	21.20	22.00	1.202	62.9	1.006	0.16	0.141	0.170	
	LTE Band 41	20M	QPSK	1	0	Back	10mm	Ant 6	DSI 5	40620	2593	21.21	22.00	1.199	62.9	1.006	-0.05	0.193	0.233	
	LTE Band 41	20M	QPSK	50	0	Back	10mm	Ant 6	DSI 5	40620	2593	21.20	22.00	1.202	62.9	1.006	-0.13	0.192	0.232	
	LTE Band 41	20M	QPSK	1	0	Left Side	10mm	Ant 6	DSI 5	40620	2593	21.21	22.00	1.199	62.9	1.006	0.18	0.045	0.054	
	LTE Band 41	20M	QPSK	50	0	Left Side	10mm	Ant 6	DSI 5	40620	2593	21.20	22.00	1.202	62.9	1.006	0.08	0.044	0.053	
	LTE Band 41	20M	QPSK	1	0	Right Side	10mm	Ant 6	DSI 5	40620	2593	21.21	22.00	1.199	62.9	1.006	0.14	0.048	0.058	
	LTE Band 41	20M	QPSK	50	0	Right Side	10mm	Ant 6	DSI 5	40620	2593	21.20	22.00	1.202	62.9	1.006	0.08	0.050	0.060	
	LTE Band 41	20M	QPSK	1	0	Top Side	10mm	Ant 6	DSI 5	40620	2593	21.21	22.00	1.199	62.9	1.006	0.03	0.001	0.001	
	LTE Band 41	20M	QPSK	50	0	Top Side	10mm	Ant 6	DSI 5	40620	2593	21.20	22.00	1.202	62.9	1.006	-0.19	0.001	0.001	
41	LTE Band 41	20M	QPSK	1	0	Bottom Side	10mm	Ant 6	DSI 5	40620	2593	21.21	22.00	1.199	62.9	1.006	-0.11	0.279	0.337	
	LTE Band 41	20M	QPSK	50	0	Bottom Side	10mm	Ant 6	DSI 5	40620	2593	21.20	22.00	1.202	62.9	1.006	0.12	0.276	0.334	
	LTE Band 41	20M	QPSK	1	0	Front	10mm	Ant 7	DSI 5	40620	2593	18.53	19.50	1.25	62.9	1.006	0.07	0.109	0.137	
	LTE Band 41	20M	QPSK	50	0	Front	10mm	Ant 7	DSI 5	40620	2593	18.52	19.50	1.253	62.9	1.006	-0.10	0.105	0.132	
	LTE Band 41	20M	QPSK	1	0	Back	10mm	Ant 7	DSI 5	40620	2593	18.53	19.50	1.25	62.9	1.006	-0.00	0.146	0.184	
	LTE Band 41	20M	QPSK	50	0	Back	10mm	Ant 7	DSI 5	40620	2593	18.52	19.50	1.253	62.9	1.006	0.12	0.143	0.180	
	LTE Band 41	20M	QPSK	1	0	Left Side	10mm	Ant 7	DSI 5	40620	2593	18.53	19.50	1.25	62.9	1.006	-0.04	0.001	0.001	
	LTE Band 41	20M	QPSK	50	0	Left Side	10mm	Ant 7	DSI 5	40620	2593	18.52	19.50	1.253	62.9	1.006	0.13	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Right Side	10mm	Ant 7	DSI 5	40620	2593	18.53	19.50	1.25	62.9	1.006	-0.04	0.237	0.298	
	LTE Band 41	20M	QPSK	50	0	Right Side	10mm	Ant 7	DSI 5	40620	2593	18.52	19.50	1.253	62.9	1.006	-0.16	0.234	0.295	
	LTE Band 41	20M	QPSK	1	0	Top Side	10mm	Ant 7	DSI 5	40620	2593	18.53	19.50	1.25	62.9	1.006	0.12	0.001	0.001	
	LTE Band 41	20M	QPSK	50	0	Top Side	10mm	Ant 7	DSI 5	40620	2593	18.52	19.50	1.253	62.9	1.006	-0.17	0.001	0.001	
	LTE Band 41	20M	QPSK	1	0	Bottom Side	10mm	Ant 7	DSI 5	40620	2593	18.53	19.50	1.25	62.9	1.006	-0.04	0.001	0.001	
	LTE Band 41	20M	QPSK	50	0	Bottom Side	10mm	Ant 7	DSI 5	40620	2593	18.52	19.50	1.253	62.9	1.006	0.04	0.015	0.019	
	LTE Band 42	20M	QPSK	1	0	Front	10mm	Ant 8	DSI 5	42590	3500	16.90	17.70	1.202	62.9	1.006	-0.14	0.114	0.138	
	LTE Band 42	20M	QPSK	50	0	Front	10mm	Ant 8	DSI 5	42590	3500	16.88	17.70	1.208	62.9	1.006	0.11	0.090	0.109	
	LTE Band 42	20M	QPSK	1	0	Back	10mm	Ant 8	DSI 5	42590	3500	16.90	17.70	1.202	62.9	1.006	-0.15	0.138	0.167	
	LTE Band 42	20M	QPSK	50	0	Back	10mm	Ant 8	DSI 5	42590	3500	16.88	17.70	1.208	62.9	1.006	-0.07	0.156	0.190	
	LTE Band 42	20M	QPSK	1	0	Left Side	10mm	Ant 8	DSI 5	42590	3500	16.90	17.70	1.202	62.9	1.006	-0.09	0.001	0.001	
	LTE Band 42	20M	QPSK	50	0	Left Side	10mm	Ant 8	DSI 5	42590	3500	16.88	17.70	1.208	62.9	1.006	0.14	0.001	0.001	
	LTE Band 42	20M	QPSK	1	0	Right Side	10mm	Ant 8	DSI 5	42590	3500	16.90	17.70	1.202	62.9	1.006	-0.13	0.001	0.001	
	LTE Band 42	20M	QPSK	50	0	Right Side	10mm	Ant 8	DSI 5	42590	3500	16.88	17.70	1.208	62.9	1.006	-0.19	0.001	0.001	
	LTE Band 42	20M	QPSK	1	0	Top Side	10mm	Ant 8	DSI 5	42590	3500	16.90	17.70	1.202	62.9	1.006	-0.03	0.271	0.328	
	LTE Band 42	20M	QPSK	50	0	Top Side	10mm	Ant 8	DSI 5	42590	3500	16.88	17.70	1.208	62.9	1.006	0.16	0.264	0.321	
	LTE Band 42	20M	QPSK	1	0	Bottom Side	10mm	Ant 8	DSI 5	42590	3500	16.90	17.70	1.202	62.9	1.006	0.18	0.001	0.001	
	LTE Band 42	20M	QPSK	50	0	Bottom Side	10mm	Ant 8	DSI 5	42590	3500	16.88	17.70	1.208	62.9	1.006	-0.17	0.042	0.051	
	LTE Band 42	20M	QPSK	1	0	Front	10mm	Ant 9	DSI 5	42590	3500	18.21	20.00	1.51	62.9	1.006	0.11	0.075	0.114	
	LTE Band 42	20M	QPSK	50	0	Front	10mm	Ant 9	DSI 5	42590	3500	18.16	20.00	1.528	62.9	1.006	0.09	0.072	0.111	
	LTE Band 42	20M	QPSK	1	0	Back	10mm	Ant 9	DSI 5	42590	3500	18.21	20.00	1.51	62.9	1.006	0.13	0.096	0.146	
	LTE Band 42	20M	QPSK	50	0	Back	10mm	Ant 9	DSI 5	42590	3500	18.16	20.00	1.528	62.9	1.006	0.05	0.095	0.146	
	LTE Band 42	20M	QPSK	1	0	Left Side	10mm	Ant 9	DSI 5	42590	3500	18.21	20.00	1.51	62.9	1.006	0.08	0.124	0.188	
	LTE Band 42	20M	QPSK	50	0	Left Side	10mm	Ant 9	DSI 5	42590	3500	18.16	20.00	1.528	62.9	1.006	0.07	0.122	0.188	
	LTE Band 42	20M	QPSK	1	0	Right Side	10mm	Ant 9	DSI 5	42590	3500	18.21	20.00	1.51	62.9	1.006	0.05	0.002	0.003	
	LTE Band 42	20M	QPSK	50	0	Right Side	10mm	Ant 9	DSI 5	42590	3500	18.16	20.00	1.528	62.9	1.006	-0.06	0.002	0.003	
	LTE Band 42	20M	QPSK	1	0	Top Side	10mm	Ant 9	DSI 5	42590	3500	18.21	20.00	1.51	62.9	1.006	-0.18	0.058	0.088	
	LTE Band 42	20M	QPSK	50	0	Top Side	10mm	Ant 9	DSI 5	42590	3500	18.16	20.00	1.528	62.9	1.006	-0.13	0.035	0.054	
	LTE Band 42	20M	QPSK	1	0	Bottom Side	10mm	Ant 9	DSI 5	42590	3500	18.21	20.00	1.51	62.9	1.006	0.03	0.002	0.003	
	LTE Band 42	20M	QPSK	50	0	Bottom Side	10mm	Ant 9	DSI 5	42590	3500	18.16	20.00	1.528	62.9	1.006	-0.12	0.002	0.003	
	LTE Band 42	20M	QPSK	1	0	Front	10mm	Ant 10	DSI 5	42590	3500	18.30	19.20	1.23	62.9	1.006	0.00	0.152	0.188	
	LTE Band 42	20M	QPSK	50	0	Front	10mm	Ant 10	DSI 5	42590	3500	18.28	19.20	1.236	62.9	1.006	-0.01	0.150	0.187	
	LTE Band 42	20M	QPSK	1	0	Back	10mm	Ant 10	DSI 5	42590	3500	18.30	19.20	1.23	62.9	1.006	0.02	0.265	0.328	
	LTE Band 42	20M	QPSK	50	0	Back	10mm	Ant 10	DSI 5	42590	3500	18.28	19.20	1.236	62.9	1.006	0.03	0.273	0.339	
	LTE Band 42	20M	QPSK	1	0	Left Side	10mm	Ant 10	DSI 5	42590	3500	18.30	19.20	1.23	62.9	1.006	0.03	0.040	0.049	
	LTE Band 42	20M	QPSK	50	0	Left Side	10mm	Ant 10	DSI 5	42590	3500	18.28	19.20	1.236	62.9	1.006	0.13	0.001	0.001	
	LTE Band 42	20M	QPSK	1	0	Right Side	10mm	Ant 10	DSI 5	42590	3500	18.30	19.20	1.23	62.9	1.006	-0.18	0.342	0.423	
42	LTE Band 42	20M	QPSK	50	0	Right Side	10mm	Ant 10	DSI 5	42590	3500	18.28	19.20	1.236	62.9	1.006	-0.10	0.343	0.426	
	LTE Band 42	20M	QPSK	1	0	Top Side	10mm	Ant 10	DSI 5	42590	3500	18.30	19.20	1.23	62.9	1.006	-0.12	0.066	0.082	
	LTE Band 42	20M	QPSK	50	0	Top Side	10mm	Ant 10	DSI 5	42590	3500	18.28	19.20	1.236	62.9	1.006	0.08	0.071	0.088	
	LTE Band 42	20M	QPSK	1	0	Bottom Side	10mm	Ant 10	DSI 5	42590	3500	18.30	19.20	1.23	62.9	1.006	0.16	0.001	0.001	
	LTE Band 42	20M	QPSK	50	0	Bottom Side	10mm	Ant 10	DSI 5	42590	3500	18.28	19.20	1.236	62.9	1.006	0.08	0.001	0.001	
	LTE Band 42	20M	QPSK	1	0	Front	10mm	Ant 11	DSI 5	42590	3500	15.51	17.00	1.409	62.9	1.006	-0.18	0.001	0.001	
	LTE Band 42	20M	QPSK	50	0	Front	10mm</													



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	LTE Band 42	20M	QPSK	1	0	Right Side	10mm	Ant 11	DSI 5	42590	3500	15.51	17.00	1.409	62.9	1.006	-0.13	0.001	0.001	
	LTE Band 42	20M	QPSK	50	0	Right Side	10mm	Ant 11	DSI 5	42590	3500	15.50	17.00	1.413	62.9	1.006	-0.15	0.001	0.001	
	LTE Band 42	20M	QPSK	1	0	Top Side	10mm	Ant 11	DSI 5	42590	3500	15.51	17.00	1.409	62.9	1.006	0.19	0.001	0.001	
	LTE Band 42	20M	QPSK	50	0	Top Side	10mm	Ant 11	DSI 5	42590	3500	15.50	17.00	1.413	62.9	1.006	0.03	0.001	0.001	
	LTE Band 42	20M	QPSK	1	0	Bottom Side	10mm	Ant 11	DSI 5	42590	3500	15.51	17.00	1.409	62.9	1.006	-0.01	0.018	0.026	
	LTE Band 42	20M	QPSK	50	0	Bottom Side	10mm	Ant 11	DSI 5	42590	3500	15.50	17.00	1.413	62.9	1.006	0.12	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Front	10mm	Ant 8	DSI 5	55830	3609	17.51	18.00	1.119	62.9	1.006	0.19	0.095	0.107	
	LTE Band 48	20M	QPSK	50	0	Front	10mm	Ant 8	DSI 5	55830	3609	17.49	18.00	1.125	62.9	1.006	0.09	0.090	0.102	
	LTE Band 48	20M	QPSK	1	0	Back	10mm	Ant 8	DSI 5	55830	3609	17.51	18.00	1.119	62.9	1.006	-0.11	0.125	0.141	
	LTE Band 48	20M	QPSK	50	0	Back	10mm	Ant 8	DSI 5	55830	3609	17.49	18.00	1.125	62.9	1.006	0.08	0.137	0.155	
	LTE Band 48	20M	QPSK	1	0	Left Side	10mm	Ant 8	DSI 5	55830	3609	17.51	18.00	1.119	62.9	1.006	-0.01	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Left Side	10mm	Ant 8	DSI 5	55830	3609	17.49	18.00	1.125	62.9	1.006	-0.11	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Right Side	10mm	Ant 8	DSI 5	55830	3609	17.51	18.00	1.119	62.9	1.006	-0.09	0.051	0.057	
	LTE Band 48	20M	QPSK	50	0	Right Side	10mm	Ant 8	DSI 5	55830	3609	17.49	18.00	1.125	62.9	1.006	0.16	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Top Side	10mm	Ant 8	DSI 5	55830	3609	17.51	18.00	1.119	62.9	1.006	0.01	0.270	0.304	
	LTE Band 48	20M	QPSK	50	0	Top Side	10mm	Ant 8	DSI 5	55830	3609	17.49	18.00	1.125	62.9	1.006	-0.03	0.241	0.273	
	LTE Band 48	20M	QPSK	1	0	Bottom Side	10mm	Ant 8	DSI 5	55830	3609	17.51	18.00	1.119	62.9	1.006	0.19	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Bottom Side	10mm	Ant 8	DSI 5	55830	3609	17.49	18.00	1.125	62.9	1.006	0.10	0.034	0.038	
	LTE Band 48	20M	QPSK	1	0	Front	10mm	Ant 9	DSI 5	55830	3609	17.41	19.00	1.442	62.9	1.006	-0.06	0.065	0.094	
	LTE Band 48	20M	QPSK	50	0	Front	10mm	Ant 9	DSI 5	55830	3609	17.38	19.00	1.452	62.9	1.006	0.10	0.064	0.093	
	LTE Band 48	20M	QPSK	1	0	Back	10mm	Ant 9	DSI 5	55830	3609	17.41	19.00	1.442	62.9	1.006	0.07	0.063	0.091	
	LTE Band 48	20M	QPSK	50	0	Back	10mm	Ant 9	DSI 5	55830	3609	17.38	19.00	1.452	62.9	1.006	0.01	0.059	0.086	
	LTE Band 48	20M	QPSK	1	0	Left Side	10mm	Ant 9	DSI 5	55830	3609	17.41	19.00	1.442	62.9	1.006	-0.05	0.109	0.158	
	LTE Band 48	20M	QPSK	50	0	Left Side	10mm	Ant 9	DSI 5	55830	3609	17.38	19.00	1.452	62.9	1.006	0.13	0.105	0.153	
	LTE Band 48	20M	QPSK	1	0	Right Side	10mm	Ant 9	DSI 5	55830	3609	17.41	19.00	1.442	62.9	1.006	-0.06	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Right Side	10mm	Ant 9	DSI 5	55830	3609	17.38	19.00	1.452	62.9	1.006	-0.14	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Top Side	10mm	Ant 9	DSI 5	55830	3609	17.41	19.00	1.442	62.9	1.006	-0.08	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Top Side	10mm	Ant 9	DSI 5	55830	3609	17.38	19.00	1.452	62.9	1.006	0.06	0.034	0.050	
	LTE Band 48	20M	QPSK	1	0	Bottom Side	10mm	Ant 9	DSI 5	55830	3609	17.41	19.00	1.442	62.9	1.006	0.09	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Bottom Side	10mm	Ant 9	DSI 5	55830	3609	17.38	19.00	1.452	62.9	1.006	0.13	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Front	10mm	Ant 10	DSI 5	55830	3609	16.88	18.50	1.452	62.9	1.006	0.05	0.116	0.169	
	LTE Band 48	20M	QPSK	50	0	Front	10mm	Ant 10	DSI 5	55830	3609	16.87	18.50	1.455	62.9	1.006	0.06	0.115	0.168	
	LTE Band 48	20M	QPSK	1	0	Back	10mm	Ant 10	DSI 5	55830	3609	16.88	18.50	1.452	62.9	1.006	-0.02	0.206	0.301	
	LTE Band 48	20M	QPSK	50	0	Back	10mm	Ant 10	DSI 5	55830	3609	16.87	18.50	1.455	62.9	1.006	0.01	0.211	0.309	
	LTE Band 48	20M	QPSK	1	0	Left Side	10mm	Ant 10	DSI 5	55830	3609	16.88	18.50	1.452	62.9	1.006	0.14	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Left Side	10mm	Ant 10	DSI 5	55830	3609	16.87	18.50	1.455	62.9	1.006	-0.19	0.047	0.069	
	LTE Band 48	20M	QPSK	1	0	Right Side	10mm	Ant 10	DSI 5	55830	3609	16.88	18.50	1.452	62.9	1.006	0.03	0.249	0.364	
43	LTE Band 48	20M	QPSK	50	0	Right Side	10mm	Ant 10	DSI 5	55830	3609	16.87	18.50	1.455	62.9	1.006	0.17	0.263	0.385	
	LTE Band 48	20M	QPSK	1	0	Top Side	10mm	Ant 10	DSI 5	55830	3609	16.88	18.50	1.452	62.9	1.006	-0.14	0.053	0.077	
	LTE Band 48	20M	QPSK	50	0	Top Side	10mm	Ant 10	DSI 5	55830	3609	16.87	18.50	1.455	62.9	1.006	0.04	0.051	0.075	
	LTE Band 48	20M	QPSK	1	0	Bottom Side	10mm	Ant 10	DSI 5	55830	3609	16.88	18.50	1.452	62.9	1.006	0.10	0.036	0.053	
	LTE Band 48	20M	QPSK	50	0	Bottom Side	10mm	Ant 10	DSI 5	55830	3609	16.87	18.50	1.455	62.9	1.006	0.09	0.032	0.047	
	LTE Band 48	20M	QPSK	1	0	Front	10mm	Ant 11	DSI 5	55830	3609	15.89	17.50	1.449	62.9	1.006	-0.01	0.038	0.055	
	LTE Band 48	20M	QPSK	50	0	Front	10mm	Ant 11	DSI 5	55830	3609	15.88	17.50	1.452	62.9	1.006	-0.07	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Back	10mm	Ant 11	DSI 5	55830	3609	15.89	17.50	1.449	62.9	1.006	0.01	0.194	0.283	
	LTE Band 48	20M	QPSK	50	0	Back	10mm	Ant 11	DSI 5	55830	3609	15.88	17.50	1.452	62.9	1.006	0.12	0.178	0.260	
	LTE Band 48	20M	QPSK	1	0	Left Side	10mm	Ant 11	DSI 5	55830	3609	15.89	17.50	1.449	62.9	1.006	-0.07	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Left Side	10mm	Ant 11	DSI 5	55830	3609	15.88	17.50	1.452	62.9	1.006	-0.11	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Right Side	10mm	Ant 11	DSI 5	55830	3609	15.89	17.50	1.449	62.9	1.006	0.00	0.022	0.032	
	LTE Band 48	20M	QPSK	50	0	Right Side	10mm	Ant 11	DSI 5	55830	3609	15.88	17.50	1.452	62.9	1.006	-0.07	0.032	0.047	
	LTE Band 48	20M	QPSK	1	0	Top Side	10mm	Ant 11	DSI 5	55830	3609	15.89	17.50	1.449	62.9	1.006	0.16	0.024	0.035	
	LTE Band 48	20M	QPSK	50	0	Top Side	10mm	Ant 11	DSI 5	55830	3609	15.88	17.50	1.452	62.9	1.006	-0.04	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Bottom Side	10mm	Ant 11	DSI 5	55830	3609	15.89	17.50	1.449	62.9	1.006	-0.19	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Bottom Side	10mm	Ant 11	DSI 5	55830	3609	15.88	17.50	1.452	62.9	1.006	0.18	0.032	0.047	

【ULCA SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note2
	LTE Band 7	20M	QPSK	1	99	Left Side	10mm	Ant 4	DSI 5	21100+20920	2535+2517	16.18	17.2	1.265	100.000	1	0.010	0.304	0.385	
	LTE Band 7	20M	QPSK	1	99	Top Side	10mm	Ant 5	DSI 5	21100+20920	2535+2517	15.63	16.7	1.279	100.000	1	0.010	0.246	0.315	
	LTE Band 7	20M	QPSK	1	99	Bottom Side	10mm	Ant 6	DSI 5	21100+20920	2535+2517	19.08	20	1.236	100.000	1	0.070	0.3	0.371	
	LTE Band 7	20M	QPSK	1	99	Right Side	10mm	Ant 7	DSI 5	21100+20920	2535+2517	15.96	17.5	1.426	100.000	1	0.010	0.191	0.272	
	LTE Band 38	20M	QPSK	1	99	Left Side	10mm	Ant 4	DSI 5	37901+38099	2585.1+2604.9	17.85	18.2	1.084	62.900	1.006	0.010	0.253	0.276	
	LTE Band 38	20M	QPSK	1	99	Top Side	10mm	Ant 5	DSI 5	37901+38099	2585.1+2604.9	17.05	17.7	1.161	62.900	1.006	0.010	0.183	0.214	
	LTE Band 38	20M	QPSK	1	99	Bottom Side	10mm	Ant 6	DSI 5	37901+38099	2585.1+2604.9	21.53	22	1.114	62.900	1.006	0.070	0.27	0.303	
	LTE Band 38	20M	QPSK	1	99	Right Side	10mm	Ant 7	DSI 5	37901+38099	2585.1+2604.9	18.31	19.5	1.315	62.900	1.006	0.010	0.231	0.306	



【FR1 SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note
	FR1 n2	40M	BPSK	1	1	Front	10mm	Ant 4	DSI 5	376000	1880	16.60	17.70	1.288			-0.12	0.156	0.201	
	FR1 n2	40M	BPSK	108	54	Front	10mm	Ant 4	DSI 5	376000	1880	16.58	17.70	1.294			-0.17	0.154	0.199	
	FR1 n2	40M	BPSK	1	1	Back	10mm	Ant 4	DSI 5	376000	1880	16.60	17.70	1.288			-0.04	0.205	0.264	
	FR1 n2	40M	BPSK	108	54	Back	10mm	Ant 4	DSI 5	376000	1880	16.58	17.70	1.294			0.12	0.195	0.252	
	FR1 n2	40M	BPSK	1	1	Left Side	10mm	Ant 4	DSI 5	376000	1880	16.60	17.70	1.288			0.02	0.343	0.442	
	FR1 n2	40M	BPSK	108	54	Left Side	10mm	Ant 4	DSI 5	376000	1880	16.58	17.70	1.294			-0.10	0.309	0.400	
	FR1 n2	40M	BPSK	1	1	Right Side	10mm	Ant 4	DSI 5	376000	1880	16.60	17.70	1.288			0.14	0.001	0.001	
	FR1 n2	40M	BPSK	108	54	Right Side	10mm	Ant 4	DSI 5	376000	1880	16.58	17.70	1.294			0.02	0.001	0.001	
	FR1 n2	40M	BPSK	1	1	Top Side	10mm	Ant 4	DSI 5	376000	1880	16.60	17.70	1.288			0.15	0.001	0.001	
	FR1 n2	40M	BPSK	108	54	Top Side	10mm	Ant 4	DSI 5	376000	1880	16.58	17.70	1.294			0.08	0.001	0.001	
	FR1 n2	40M	BPSK	1	1	Bottom Side	10mm	Ant 4	DSI 5	376000	1880	16.60	17.70	1.288			-0.18	0.001	0.001	
	FR1 n2	40M	BPSK	108	54	Bottom Side	10mm	Ant 4	DSI 5	376000	1880	16.58	17.70	1.294			0.11	0.001	0.001	
	FR1 n2	40M	BPSK	1	1	Front	10mm	Ant 6	DSI 5	376000	1880	20.21	21.20	1.256			0.08	0.287	0.360	
	FR1 n2	40M	BPSK	108	54	Front	10mm	Ant 6	DSI 5	376000	1880	20.19	21.20	1.262			-0.01	0.268	0.338	
	FR1 n2	40M	BPSK	1	1	Back	10mm	Ant 6	DSI 5	376000	1880	20.21	21.20	1.256			-0.14	0.367	0.461	
	FR1 n2	40M	BPSK	108	54	Back	10mm	Ant 6	DSI 5	376000	1880	20.19	21.20	1.262			-0.03	0.353	0.445	
	FR1 n2	40M	BPSK	1	1	Left Side	10mm	Ant 6	DSI 5	376000	1880	20.21	21.20	1.256			-0.15	0.116	0.146	
	FR1 n2	40M	BPSK	108	54	Left Side	10mm	Ant 6	DSI 5	376000	1880	20.19	21.20	1.262			-0.01	0.105	0.133	
	FR1 n2	40M	BPSK	1	1	Right Side	10mm	Ant 6	DSI 5	376000	1880	20.21	21.20	1.256			-0.14	0.088	0.111	
	FR1 n2	40M	BPSK	108	54	Right Side	10mm	Ant 6	DSI 5	376000	1880	20.19	21.20	1.262			-0.15	0.087	0.110	
	FR1 n2	40M	BPSK	1	1	Top Side	10mm	Ant 6	DSI 5	376000	1880	20.21	21.20	1.256			0.11	0.001	0.001	
	FR1 n2	40M	BPSK	108	54	Top Side	10mm	Ant 6	DSI 5	376000	1880	20.19	21.20	1.262			-0.05	0.001	0.001	
44	FR1 n2	40M	BPSK	1	1	Bottom Side	10mm	Ant 6	DSI 5	376000	1880	20.21	21.20	1.256			0.00	0.631	0.793	
	FR1 n2	40M	BPSK	108	54	Bottom Side	10mm	Ant 6	DSI 5	376000	1880	20.19	21.20	1.262			-0.00	0.553	0.698	
	FR1 n5	20M	BPSK	1	1	Front	10mm	Ant 1	DSI5	167300	836.5	19.86	20.20	1.081			-0.05	0.470	0.508	Other PA
	FR1 n5	20M	BPSK	50	28	Front	10mm	Ant 1	DSI5	167300	836.5	19.84	20.20	1.086			-0.04	0.506	0.550	Other PA
	FR1 n5	20M	BPSK	1	1	Back	10mm	Ant 1	DSI5	167300	836.5	19.86	20.20	1.081			0.10	0.487	0.526	Other PA
	FR1 n5	20M	BPSK	50	28	Back	10mm	Ant 1	DSI5	167300	836.5	19.84	20.20	1.086			-0.04	0.499	0.542	Other PA
	FR1 n5	20M	BPSK	1	1	Left Side	10mm	Ant 1	DSI5	167300	836.5	19.86	20.20	1.081			-0.07	0.680	0.735	Other PA
45	FR1 n5	20M	BPSK	50	28	Left Side	10mm	Ant 1	DSI5	167300	836.5	19.84	20.20	1.086			-0.03	0.715	0.776	Other PA
	FR1 n5	20M	BPSK	1	1	Right Side	10mm	Ant 1	DSI5	167300	836.5	19.86	20.20	1.081			0.16	0.001	0.001	Other PA
	FR1 n5	20M	BPSK	50	28	Right Side	10mm	Ant 1	DSI5	167300	836.5	19.84	20.20	1.086			0.11	0.001	0.001	Other PA
	FR1 n5	20M	BPSK	1	1	Top Side	10mm	Ant 1	DSI5	167300	836.5	19.86	20.20	1.081			-0.17	0.001	0.001	Other PA
	FR1 n5	20M	BPSK	50	28	Top Side	10mm	Ant 1	DSI5	167300	836.5	19.84	20.20	1.086			0.12	0.001	0.001	Other PA
	FR1 n5	20M	BPSK	1	1	Bottom Side	10mm	Ant 1	DSI5	167300	836.5	19.86	20.20	1.081			0.01	0.001	0.001	Other PA
	FR1 n5	20M	BPSK	50	28	Bottom Side	10mm	Ant 1	DSI5	167300	836.5	19.84	20.20	1.086			0.04	0.001	0.001	Other PA
	FR1 n7	50M	BPSK	1	1	Front	10mm	Ant 4	DSI 5	507000	2535	16.68	17.20	1.127			0.05	0.192	0.216	
	FR1 n7	50M	BPSK	135	68	Front	10mm	Ant 4	DSI 5	507000	2535	16.65	17.20	1.135			0.04	0.174	0.197	
	FR1 n7	50M	BPSK	1	1	Back	10mm	Ant 4	DSI 5	507000	2535	16.68	17.20	1.127			0.18	0.260	0.293	
	FR1 n7	50M	BPSK	135	68	Back	10mm	Ant 4	DSI 5	507000	2535	16.65	17.20	1.135			-0.15	0.251	0.285	
	FR1 n7	50M	BPSK	1	1	Left Side	10mm	Ant 4	DSI 5	507000	2535	16.68	17.20	1.127			-0.05	0.374	0.421	
	FR1 n7	50M	BPSK	135	68	Left Side	10mm	Ant 4	DSI 5	507000	2535	16.65	17.20	1.135			0.14	0.366	0.415	
	FR1 n7	50M	BPSK	1	1	Right Side	10mm	Ant 4	DSI 5	507000	2535	16.68	17.20	1.127			-0.15	0.001	0.001	
	FR1 n7	50M	BPSK	135	68	Right Side	10mm	Ant 4	DSI 5	507000	2535	16.65	17.20	1.135			0.10	0.001	0.001	
	FR1 n7	50M	BPSK	1	1	Top Side	10mm	Ant 4	DSI 5	507000	2535	16.68	17.20	1.127			0.13	0.049	0.055	
	FR1 n7	50M	BPSK	135	68	Top Side	10mm	Ant 4	DSI 5	507000	2535	16.65	17.20	1.135			-0.03	0.001	0.001	
	FR1 n7	50M	BPSK	1	1	Bottom Side	10mm	Ant 4	DSI 5	507000	2535	16.68	17.20	1.127			0.14	0.001	0.001	
	FR1 n7	50M	BPSK	135	68	Bottom Side	10mm	Ant 4	DSI 5	507000	2535	16.65	17.20	1.135			-0.05	0.001	0.001	
	FR1 n7	50M	BPSK	1	1	Front	10mm	Ant 5	DSI 5	507000	2535	15.21	16.70	1.409			-0.14	0.155	0.218	
	FR1 n7	50M	BPSK	135	68	Front	10mm	Ant 5	DSI 5	507000	2535	15.19	16.70	1.416			0.11	0.131	0.185	
	FR1 n7	50M	BPSK	1	1	Back	10mm	Ant 5	DSI 5	507000	2535	15.21	16.70	1.409			-0.01	0.199	0.280	
	FR1 n7	50M	BPSK	135	68	Back	10mm	Ant 5	DSI 5	507000	2535	15.19	16.70	1.416			-0.19	0.168	0.238	
	FR1 n7	50M	BPSK	1	1	Left Side	10mm	Ant 5	DSI 5	507000	2535	15.21	16.70	1.409			0.18	0.062	0.087	
	FR1 n7	50M	BPSK	135	68	Left Side	10mm	Ant 5	DSI 5	507000	2535	15.19	16.70	1.416			-0.17	0.083	0.118	
	FR1 n7	50M	BPSK	1	1	Right Side	10mm	Ant 5	DSI 5	507000	2535	15.21	16.70	1.409			0.08	0.001	0.001	
	FR1 n7	50M	BPSK	135	68	Right Side	10mm	Ant 5	DSI 5	507000	2535	15.19	16.70	1.416			0.09	0.001	0.001	
46	FR1 n7	50M	BPSK	1	1	Top Side	10mm	Ant 5	DSI 5	507000	2535	15.21	16.70	1.409			-0.02	0.358	0.504	
	FR1 n7	50M	BPSK	135	68	Top Side	10mm	Ant 5	DSI 5	507000	2535	15.19	16.70	1.416			0.09	0.308	0.436	
	FR1 n7	50M	BPSK	1	1	Bottom Side	10mm	Ant 5	DSI 5	507000	2535	15.21	16.70	1.409			0.02	0.001	0.001	
	FR1 n7	50M	BPSK	135	68	Bottom Side	10mm	Ant 5	DSI 5	507000	2535	15.19	16.70	1.416			-0.18	0.001	0.001	
	FR1 n7	50M	BPSK	1	1	Front	10mm	Ant 6	DSI 5	507000	2535	19.50	20.00	1.122			0.01	0.232	0.260	
	FR1 n7	50M	BPSK	135	68	Front	10mm	Ant 6	DSI 5	507000	2535	19.48	20.00	1.127			-0.18	0.227	0.256	
	FR1 n7	50M	BPSK	1	1	Back	10mm	Ant 6	DSI 5	507000	2535	19.50	20.00	1.122			-0.06	0.333	0.374	
	FR1 n7	50M	BPSK	135	68	Back	10mm	Ant 6	DSI 5	507000	2535	19.48	20.00	1.127			-0.18	0.300	0.338	
	FR1 n7	50M	BPSK	1	1	Left Side	10mm	Ant 6	DSI 5	507000	2535	19.50	20.00	1.122			-0.15	0.066	0.074	
	FR1 n7	50M	BPSK	135	68	Left Side	10mm	Ant 6	DSI 5	507000	2535	19.48	20.00	1.127			0.12	0.067	0.076	
	FR1 n7	50M	BPSK	1	1	Right Side	10mm	Ant 6	DSI 5	507000	2535	19.50	20.00	1.122			-0.17	0.064	0.072	
	FR1 n7	50M	BPSK	135	68	Right Side	10mm	Ant 6	DSI 5	507000	2535	19.48	20.00	1.127			-0.03	0.061	0.069	



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	FR1 n7	50M	BPSK	1	1	Top Side	10mm	Ant 6	DSI 5	507000	2535	19.50	20.00	1.122			-0.19	0.001	0.001	
	FR1 n7	50M	BPSK	135	68	Top Side	10mm	Ant 6	DSI 5	507000	2535	19.48	20.00	1.127			0.02	0.001	0.001	
1	FR1 n7	50M	BPSK	1	1	Bottom Side	10mm	Ant 6	DSI 5	507000	2535	19.50	20.00	1.122			-0.00	0.412	0.462	
	FR1 n7	50M	BPSK	135	68	Bottom Side	10mm	Ant 6	DSI 5	507000	2535	19.48	20.00	1.127			-0.03	0.400	0.451	
	FR1 n7	50M	BPSK	1	1	Front	10mm	Ant 7	DSI 5	507000	2535	17.37	18.00	1.156			0.06	0.150	0.173	
	FR1 n7	50M	BPSK	135	68	Front	10mm	Ant 7	DSI 5	507000	2535	17.39	18.00	1.151			-0.02	0.165	0.190	
	FR1 n7	50M	BPSK	1	1	Back	10mm	Ant 7	DSI 5	507000	2535	17.37	18.00	1.156			0.02	0.188	0.217	
	FR1 n7	50M	BPSK	135	68	Back	10mm	Ant 7	DSI 5	507000	2535	17.39	18.00	1.151			0.09	0.212	0.244	
	FR1 n7	50M	BPSK	1	1	Left Side	10mm	Ant 7	DSI 5	507000	2535	17.37	18.00	1.156			0.05	0.001	0.001	
	FR1 n7	50M	BPSK	135	68	Left Side	10mm	Ant 7	DSI 5	507000	2535	17.39	18.00	1.151			0.11	0.001	0.001	
	FR1 n7	50M	BPSK	1	1	Right Side	10mm	Ant 7	DSI 5	507000	2535	17.37	18.00	1.156			0.11	0.258	0.298	
	FR1 n7	50M	BPSK	135	68	Right Side	10mm	Ant 7	DSI 5	507000	2535	17.39	18.00	1.151			-0.07	0.298	0.343	
	FR1 n7	50M	BPSK	1	1	Top Side	10mm	Ant 7	DSI 5	507000	2535	17.37	18.00	1.156			0.14	0.050	0.058	
	FR1 n7	50M	BPSK	135	68	Top Side	10mm	Ant 7	DSI 5	507000	2535	17.39	18.00	1.151			0.19	0.061	0.070	
	FR1 n7	50M	BPSK	1	1	Bottom Side	10mm	Ant 7	DSI 5	507000	2535	17.37	18.00	1.156			-0.13	0.001	0.001	
	FR1 n7	50M	BPSK	135	68	Bottom Side	10mm	Ant 7	DSI 5	507000	2535	17.39	18.00	1.151			-0.05	0.001	0.001	
	FR1 n26	20M	BPSK	1	1	Front	10mm	Ant 0	DSI 5	166300	831.5	24.40	24.70	1.072			0.06	0.342	0.367	
	FR1 n26	20M	BPSK	50	28	Front	10mm	Ant 0	DSI 5	166300	831.5	24.38	24.70	1.076			-0.17	0.366	0.394	
	FR1 n26	20M	BPSK	1	1	Back	10mm	Ant 0	DSI 5	166300	831.5	24.40	24.70	1.072			-0.03	0.463	0.496	
	FR1 n26	20M	BPSK	50	28	Back	10mm	Ant 0	DSI 5	166300	831.5	24.38	24.70	1.076			-0.16	0.505	0.543	
	FR1 n26	20M	BPSK	1	1	Left Side	10mm	Ant 0	DSI 5	166300	831.5	24.40	24.70	1.072			-0.06	0.101	0.108	
	FR1 n26	20M	BPSK	50	28	Left Side	10mm	Ant 0	DSI 5	166300	831.5	24.38	24.70	1.076			-0.08	0.084	0.090	
47	FR1 n26	20M	BPSK	1	1	Right Side	10mm	Ant 0	DSI 5	166300	831.5	24.40	24.70	1.072			-0.02	0.659	0.706	
	FR1 n26	20M	BPSK	50	28	Right Side	10mm	Ant 0	DSI 5	166300	831.5	24.38	24.70	1.076			-0.03	0.599	0.645	
	FR1 n26	20M	BPSK	1	1	Top Side	10mm	Ant 0	DSI 5	166300	831.5	24.40	24.70	1.072			0.18	0.001	0.001	
	FR1 n26	20M	BPSK	50	28	Top Side	10mm	Ant 0	DSI 5	166300	831.5	24.38	24.70	1.076			0.07	0.001	0.001	
	FR1 n26	20M	BPSK	1	1	Bottom Side	10mm	Ant 0	DSI 5	166300	831.5	24.40	24.70	1.072			-0.02	0.334	0.358	
	FR1 n26	20M	BPSK	50	28	Bottom Side	10mm	Ant 0	DSI 5	166300	831.5	24.38	24.70	1.076			-0.03	0.367	0.395	
	FR1 n5	20M	BPSK	1	1	Right Side	10mm	Ant 0	DSI 5	167300	836.5	24.71	25.00	1.069			-0.01	0.528	0.564	Other PA
	FR1 n26	20M	BPSK	1	1	Front	10mm	Ant 1	DSI 5	166300	831.5	19.33	19.70	1.089			-0.13	0.403	0.439	
	FR1 n26	20M	BPSK	50	28	Front	10mm	Ant 1	DSI 5	166300	831.5	19.31	19.70	1.094			-0.14	0.470	0.514	
	FR1 n26	20M	BPSK	1	1	Back	10mm	Ant 1	DSI 5	166300	831.5	19.33	19.70	1.089			0.01	0.435	0.474	
	FR1 n26	20M	BPSK	50	28	Back	10mm	Ant 1	DSI 5	166300	831.5	19.31	19.70	1.094			-0.04	0.516	0.565	
	FR1 n26	20M	BPSK	1	1	Left Side	10mm	Ant 1	DSI 5	166300	831.5	19.33	19.70	1.089			-0.13	0.573	0.624	
	FR1 n26	20M	BPSK	50	28	Left Side	10mm	Ant 1	DSI 5	166300	831.5	19.31	19.70	1.094			0.09	0.636	0.696	
	FR1 n26	20M	BPSK	1	1	Right Side	10mm	Ant 1	DSI 5	166300	831.5	19.33	19.70	1.089			-0.11	0.001	0.001	
	FR1 n26	20M	BPSK	50	28	Right Side	10mm	Ant 1	DSI 5	166300	831.5	19.31	19.70	1.094			-0.10	0.001	0.001	
	FR1 n26	20M	BPSK	1	1	Top Side	10mm	Ant 1	DSI 5	166300	831.5	19.33	19.70	1.089			-0.13	0.001	0.001	
	FR1 n26	20M	BPSK	50	28	Top Side	10mm	Ant 1	DSI 5	166300	831.5	19.31	19.70	1.094			0.01	0.001	0.001	
	FR1 n26	20M	BPSK	1	1	Bottom Side	10mm	Ant 1	DSI 5	166300	831.5	19.33	19.70	1.089			-0.11	0.001	0.001	
	FR1 n26	20M	BPSK	50	28	Bottom Side	10mm	Ant 1	DSI 5	166300	831.5	19.31	19.70	1.094			0.11	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Front	10mm	Ant 4	DSI 5	349000	1745	16.88	17.20	1.076			0.15	0.130	0.140	
	FR1 n66	45M	BPSK	120	60	Front	10mm	Ant 4	DSI 5	349000	1745	16.86	17.20	1.081			0.14	0.130	0.141	
	FR1 n66	45M	BPSK	1	1	Back	10mm	Ant 4	DSI 5	349000	1745	16.88	17.20	1.076			0.03	0.144	0.155	
	FR1 n66	45M	BPSK	120	60	Back	10mm	Ant 4	DSI 5	349000	1745	16.86	17.20	1.081			0.02	0.159	0.172	
	FR1 n66	45M	BPSK	1	1	Left Side	10mm	Ant 4	DSI 5	349000	1745	16.88	17.20	1.076			-0.19	0.268	0.288	
	FR1 n66	45M	BPSK	120	60	Left Side	10mm	Ant 4	DSI 5	349000	1745	16.86	17.20	1.081			0.03	0.268	0.290	
	FR1 n66	45M	BPSK	1	1	Left Side	10mm	Ant 4	DSI 5	349000	1745	16.55	17.20	1.161			-0.01	0.246	0.286	Other PA
	FR1 n66	45M	BPSK	1	1	Right Side	10mm	Ant 4	DSI 5	349000	1745	16.88	17.20	1.076			-0.11	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Right Side	10mm	Ant 4	DSI 5	349000	1745	16.86	17.20	1.081			0.06	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Top Side	10mm	Ant 4	DSI 5	349000	1745	16.88	17.20	1.076			0.02	0.079	0.085	
	FR1 n66	45M	BPSK	120	60	Top Side	10mm	Ant 4	DSI 5	349000	1745	16.86	17.20	1.081			0.09	0.073	0.079	
	FR1 n66	45M	BPSK	1	1	Bottom Side	10mm	Ant 4	DSI 5	349000	1745	16.88	17.20	1.076			0.00	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Bottom Side	10mm	Ant 4	DSI 5	349000	1745	16.86	17.20	1.081			0.10	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Front	10mm	Ant 5	DSI 5	349000	1745	14.95	16.20	1.334			0.02	0.144	0.192	
	FR1 n66	45M	BPSK	120	60	Front	10mm	Ant 5	DSI 5	349000	1745	14.94	16.20	1.337			0.08	0.145	0.194	
	FR1 n66	45M	BPSK	1	1	Back	10mm	Ant 5	DSI 5	349000	1745	14.95	16.20	1.334			-0.06	0.195	0.260	
	FR1 n66	45M	BPSK	120	60	Back	10mm	Ant 5	DSI 5	349000	1745	14.94	16.20	1.337			0.06	0.187	0.250	
	FR1 n66	45M	BPSK	1	1	Left Side	10mm	Ant 5	DSI 5	349000	1745	14.95	16.20	1.334			-0.02	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Left Side	10mm	Ant 5	DSI 5	349000	1745	14.94	16.20	1.337			-0.07	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Right Side	10mm	Ant 5	DSI 5	349000	1745	14.95	16.20	1.334			0.18	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Right Side	10mm	Ant 5	DSI 5	349000	1745	14.94	16.20	1.337			0.10	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Top Side	10mm	Ant 5	DSI 5	349000	1745	14.95	16.20	1.334			-0.11	0.273	0.364	
	FR1 n66	45M	BPSK	120	60	Top Side	10mm	Ant 5	DSI 5	349000	1745	14.94	16.20	1.337			-0.02	0.300	0.401	
	FR1 n66	45M	BPSK	120	60	Top Side	10mm	Ant 5	DSI 5	349000	1745	15.10	16.20	1.288			0.09	0.295	0.380	Other PA
	FR1 n66	45M	BPSK	1	1	Bottom Side	10mm	Ant 5	DSI 5	349000	1745	14.95	16.20	1.334			0.17	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Bottom Side	10mm	Ant 5	DSI 5	349000	1745	14.94	16.20	1.337			0.09	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Front	10mm	Ant 6	DSI 5	349000	1745	19.36	21.00	1.459			0.07	0.220	0.321	
	FR1 n66	45M	BPSK	120	60	Front	10mm	Ant 6	DSI 5	349000	1745	19.34	21.00	1.466			-0.17	0.240	0.352	
	FR1 n66	45M	BPSK	1	1	Back	10mm	Ant 6	DSI 5	349000	1745	19.36	21.00	1.459			-0.16	0.257	0.375	
	FR1 n66	45M	BPSK	120	60	Back	10mm	Ant 6	DSI 5	349000	1745	19.34	21.00	1.466			0.03	0.275	0.403	
	FR1 n66	45M	BPSK	1	1	Left Side	10mm	Ant 6	DSI 5	349000	1745	19.36	21.00	1.459			0.16	0.085	0.124	
	FR1 n66	45M	BPSK	120	60	Left Side	1													



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	FR1 n66	45M	BPSK	1	1	Right Side	10mm	Ant 6	DSI 5	349000	1745	19.36	21.00	1.459			0.01	0.055	0.080	
	FR1 n66	45M	BPSK	120	60	Right Side	10mm	Ant 6	DSI 5	349000	1745	19.34	21.00	1.466			0.04	0.063	0.092	
	FR1 n66	45M	BPSK	1	1	Top Side	10mm	Ant 6	DSI 5	349000	1745	19.36	21.00	1.459			-0.14	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Top Side	10mm	Ant 6	DSI 5	349000	1745	19.34	21.00	1.466			-0.13	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Bottom Side	10mm	Ant 6	DSI 5	349000	1745	19.36	21.00	1.459			0.04	0.402	0.587	
48	FR1 n66	45M	BPSK	120	60	Bottom Side	10mm	Ant 6	DSI 5	349000	1745	19.34	21.00	1.466			-0.01	0.415	0.608	
	FR1 n66	45M	BPSK	120	60	Bottom Side	10mm	Ant 6	DSI 5	349000	1745	19.63	20.50	1.222			0.06	0.496	0.606	Other PA
	FR1 n66	45M	BPSK	1	1	Front	10mm	Ant 7	DSI 5	349000	1745	18.29	20.00	1.483			0.18	0.057	0.085	
	FR1 n66	45M	BPSK	120	60	Front	10mm	Ant 7	DSI 5	349000	1745	18.28	20.00	1.486			-0.15	0.067	0.100	
	FR1 n66	45M	BPSK	1	1	Back	10mm	Ant 7	DSI 5	349000	1745	18.29	20.00	1.483			0.09	0.067	0.099	
	FR1 n66	45M	BPSK	120	60	Back	10mm	Ant 7	DSI 5	349000	1745	18.28	20.00	1.486			0.15	0.075	0.111	
	FR1 n66	45M	BPSK	1	1	Left Side	10mm	Ant 7	DSI 5	349000	1745	18.29	20.00	1.483			-0.11	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Left Side	10mm	Ant 7	DSI 5	349000	1745	18.28	20.00	1.486			0.17	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Right Side	10mm	Ant 7	DSI 5	349000	1745	18.29	20.00	1.483			0.08	0.120	0.178	
	FR1 n66	45M	BPSK	120	60	Right Side	10mm	Ant 7	DSI 5	349000	1745	18.28	20.00	1.486			-0.12	0.310	0.461	
	FR1 n66	45M	BPSK	120	60	Right Side	10mm	Ant 7	DSI 5	349000	1745	18.63	19.70	1.279			-0.13	0.138	0.177	Other PA
	FR1 n66	45M	BPSK	1	1	Top Side	10mm	Ant 7	DSI 5	349000	1745	18.29	20.00	1.483			0.08	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Top Side	10mm	Ant 7	DSI 5	349000	1745	18.28	20.00	1.486			-0.07	0.001	0.001	
	FR1 n66	45M	BPSK	1	1	Bottom Side	10mm	Ant 7	DSI 5	349000	1745	18.29	20.00	1.483			-0.13	0.001	0.001	
	FR1 n66	45M	BPSK	120	60	Bottom Side	10mm	Ant 7	DSI 5	349000	1745	18.28	20.00	1.486			-0.03	0.001	0.001	
	FR1 n71	35M	BPSK	1	1	Front	10mm	Ant 0	DSI 5	136100	680.5	24.62	25.00	1.091			-0.15	0.186	0.203	
	FR1 n71	35M	BPSK	90	45	Front	10mm	Ant 0	DSI 5	136100	680.5	24.44	25.00	1.138			-0.05	0.115	0.131	
	FR1 n71	35M	BPSK	1	1	Back	10mm	Ant 0	DSI 5	136100	680.5	24.62	25.00	1.091			-0.17	0.203	0.221	
	FR1 n71	35M	BPSK	90	45	Back	10mm	Ant 0	DSI 5	136100	680.5	24.44	25.00	1.138			0.16	0.130	0.148	
	FR1 n71	35M	BPSK	1	1	Left Side	10mm	Ant 0	DSI 5	136100	680.5	24.62	25.00	1.091			-0.13	0.137	0.149	
	FR1 n71	35M	BPSK	90	45	Left Side	10mm	Ant 0	DSI 5	136100	680.5	24.44	25.00	1.138			0.18	0.090	0.102	
	FR1 n71	35M	BPSK	1	1	Right Side	10mm	Ant 0	DSI 5	136100	680.5	24.62	25.00	1.091			0.06	0.297	0.324	
	FR1 n71	35M	BPSK	90	45	Right Side	10mm	Ant 0	DSI 5	136100	680.5	24.44	25.00	1.138			-0.06	0.218	0.248	
	FR1 n71	35M	BPSK	1	1	Top Side	10mm	Ant 0	DSI 5	136100	680.5	24.62	25.00	1.091			-0.01	0.001	0.001	
	FR1 n71	35M	BPSK	90	45	Top Side	10mm	Ant 0	DSI 5	136100	680.5	24.44	25.00	1.138			0.10	0.001	0.001	
	FR1 n71	35M	BPSK	1	1	Bottom Side	10mm	Ant 0	DSI 5	136100	680.5	24.62	25.00	1.091			0.07	0.123	0.134	
	FR1 n71	35M	BPSK	90	45	Bottom Side	10mm	Ant 0	DSI 5	136100	680.5	24.44	25.00	1.138			0.14	0.076	0.086	
	FR1 n71	35M	BPSK	1	1	Front	10mm	Ant 1	DSI 5	136100	680.5	23.31	24.00	1.172			0.11	0.156	0.183	
	FR1 n71	35M	BPSK	90	45	Front	10mm	Ant 1	DSI 5	136100	680.5	23.28	24.00	1.18			0.11	0.331	0.391	
	FR1 n71	35M	BPSK	1	1	Back	10mm	Ant 1	DSI 5	136100	680.5	23.31	24.00	1.172			0.11	0.185	0.217	
	FR1 n71	35M	BPSK	90	45	Back	10mm	Ant 1	DSI 5	136100	680.5	23.28	24.00	1.18			0.08	0.369	0.435	
	FR1 n71	35M	BPSK	1	1	Left Side	10mm	Ant 1	DSI 5	136100	680.5	23.31	24.00	1.172			-0.01	0.271	0.318	
49	FR1 n71	35M	BPSK	90	45	Left Side	10mm	Ant 1	DSI 5	136100	680.5	23.28	24.00	1.18			0.01	0.502	0.592	
	FR1 n71	35M	BPSK	1	1	Right Side	10mm	Ant 1	DSI 5	136100	680.5	23.31	24.00	1.172			-0.10	0.001	0.001	
	FR1 n71	35M	BPSK	90	45	Right Side	10mm	Ant 1	DSI 5	136100	680.5	23.28	24.00	1.18			0.14	0.001	0.001	
	FR1 n71	35M	BPSK	1	1	Top Side	10mm	Ant 1	DSI 5	136100	680.5	23.31	24.00	1.172			0.15	0.001	0.001	
	FR1 n71	35M	BPSK	90	45	Top Side	10mm	Ant 1	DSI 5	136100	680.5	23.28	24.00	1.18			-0.06	0.001	0.001	
	FR1 n71	35M	BPSK	1	1	Bottom Side	10mm	Ant 1	DSI 5	136100	680.5	23.31	24.00	1.172			-0.15	0.001	0.001	
	FR1 n71	35M	BPSK	90	45	Bottom Side	10mm	Ant 1	DSI 5	136100	680.5	23.28	24.00	1.18			-0.05	0.001	0.001	
	FR1 n41	100M	BPSK	1	1	Front	10mm	Ant 4	DSI 5	518598	2592.99	16.07	16.20	1.03			0.08	0.127	0.131	
	FR1 n41	100M	BPSK	135	69	Front	10mm	Ant 4	DSI 5	518598	2592.99	16.01	16.20	1.045			-0.01	0.123	0.129	
	FR1 n41	100M	BPSK	1	1	Back	10mm	Ant 4	DSI 5	518598	2592.99	16.07	16.20	1.03			0.03	0.182	0.187	
	FR1 n41	100M	BPSK	135	69	Back	10mm	Ant 4	DSI 5	518598	2592.99	16.01	16.20	1.045			-0.13	0.187	0.195	
	FR1 n41	100M	BPSK	1	1	Left Side	10mm	Ant 4	DSI 5	518598	2592.99	16.07	16.20	1.03			0.06	0.275	0.283	
	FR1 n41	100M	BPSK	135	69	Left Side	10mm	Ant 4	DSI 5	518598	2592.99	16.01	16.20	1.045			-0.06	0.305	0.319	
	FR1 n41	100M	BPSK	1	1	Right Side	10mm	Ant 4	DSI 5	518598	2592.99	16.07	16.20	1.03			0.14	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Right Side	10mm	Ant 4	DSI 5	518598	2592.99	16.01	16.20	1.045			-0.03	0.001	0.001	
	FR1 n41	100M	BPSK	1	1	Top Side	10mm	Ant 4	DSI 5	518598	2592.99	16.07	16.20	1.03			0.09	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Top Side	10mm	Ant 4	DSI 5	518598	2592.99	16.01	16.20	1.045			0.02	0.001	0.001	
	FR1 n41	100M	BPSK	1	1	Bottom Side	10mm	Ant 4	DSI 5	518598	2592.99	16.07	16.20	1.03			0.10	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Bottom Side	10mm	Ant 4	DSI 5	518598	2592.99	16.01	16.20	1.045			-0.13	0.001	0.001	
	FR1 n41_HPUE	100M	BPSK	1	1	Left Side	10mm	Ant 4	DSI 5	518598	2592.99	19.05	19.50	1.109	50.0	1.0	-0.13	0.277	0.307	
	FR1 n41	100M	BPSK	1	1	Front	10mm	Ant 5	DSI 5	518598	2592.99	15.56	16.70	1.3			-0.18	0.145	0.189	
	FR1 n41	100M	BPSK	135	69	Front	10mm	Ant 5	DSI 5	518598	2592.99	15.54	16.70	1.306			0.10	0.114	0.149	
	FR1 n41	100M	BPSK	1	1	Back	10mm	Ant 5	DSI 5	518598	2592.99	15.56	16.70	1.3			0.17	0.181	0.235	
	FR1 n41	100M	BPSK	135	69	Back	10mm	Ant 5	DSI 5	518598	2592.99	15.54	16.70	1.306			0.08	0.154	0.201	
	FR1 n41	100M	BPSK	1	1	Left Side	10mm	Ant 5	DSI 5	518598	2592.99	15.56	16.70	1.3			-0.12	0.074	0.096	
	FR1 n41	100M	BPSK	135	69	Left Side	10mm	Ant 5	DSI 5	518598	2592.99	15.54	16.70	1.306			0.05	0.097	0.127	
	FR1 n41	100M	BPSK	1	1	Right Side	10mm	Ant 5	DSI 5	518598	2592.99	15.56	16.70	1.3			0.15	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Right Side	10mm	Ant 5	DSI 5	518598	2592.99	15.54	16.70	1.306			0.13	0.001	0.001	
	FR1 n41	100M	BPSK	1	1	Top Side	10mm	Ant 5	DSI 5	518598	2592.99	15.56	16.70	1.3			-0.05	0.340	0.442	
	FR1 n41	100M	BPSK	135	69	Top Side	10mm	Ant 5	DSI 5	518598	2592.99	15.54	16.70	1.306			0.07	0.277	0.362	
	FR1 n41	100M	BPSK	1	1	Bottom Side	10mm	Ant 5	DSI 5	518598	2592.99	15.56	16.70	1.3			-0.12	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Bottom Side	10mm	Ant 5	DSI 5	518598	2592.99	15.54	16.70	1.306			0.02	0.001	0.001	
50	FR1 n41_HPUE	100M	BPSK	1	1	Top Side	10mm	Ant 5	DSI 5	518598	2592.99	18.48	20.00	1.419	50.0	1.0	0.03	0.343	0.487	
	FR1 n41	100M	BPSK	1	1	Front	10mm	Ant 6	DSI 5	518598	2592.99	18.46	19.00	1.132			0.12	0.169	0.191	
	FR1 n41	100M	BPSK	135	69	Front	10mm	Ant 6	DSI 5	518598	2592.99									



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	FR1 n41	100M	BPSK	135	69	Back	10mm	Ant 6	DSI 5	518598	2592.99	18.45	19.00	1.135			-0.16	0.189	0.215	
	FR1 n41	100M	BPSK	1	1	Left Side	10mm	Ant 6	DSI 5	518598	2592.99	18.46	19.00	1.132			0.10	0.045	0.051	
	FR1 n41	100M	BPSK	135	69	Left Side	10mm	Ant 6	DSI 5	518598	2592.99	18.45	19.00	1.135			0.16	0.045	0.051	
	FR1 n41	100M	BPSK	1	1	Right Side	10mm	Ant 6	DSI 5	518598	2592.99	18.46	19.00	1.132			-0.18	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Right Side	10mm	Ant 6	DSI 5	518598	2592.99	18.45	19.00	1.135			0.08	0.001	0.001	
	FR1 n41	100M	BPSK	1	1	Top Side	10mm	Ant 6	DSI 5	518598	2592.99	18.46	19.00	1.132			-0.01	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Top Side	10mm	Ant 6	DSI 5	518598	2592.99	18.45	19.00	1.135			0.03	0.001	0.001	
	FR1 n41	100M	BPSK	1	1	Bottom Side	10mm	Ant 6	DSI 5	518598	2592.99	18.46	19.00	1.132			-0.03	0.305	0.345	
	FR1 n41	100M	BPSK	135	69	Bottom Side	10mm	Ant 6	DSI 5	518598	2592.99	18.45	19.00	1.135			0.00	0.240	0.272	
	FR1 n41_HPUE	100M	BPSK	1	1	Bottom Side	10mm	Ant 6	DSI 5	518598	2592.99	21.48	22.00	1.127	50.0	1.0	-0.06	0.313	0.353	
	FR1 n41	100M	BPSK	1	1	Front	10mm	Ant 7	DSI 5	518598	2592.99	16.60	17.00	1.096			0.09	0.133	0.146	
	FR1 n41	100M	BPSK	135	69	Front	10mm	Ant 7	DSI 5	518598	2592.99	16.58	17.00	1.102			-0.07	0.121	0.133	
	FR1 n41	100M	BPSK	1	1	Back	10mm	Ant 7	DSI 5	518598	2592.99	16.60	17.00	1.096			0.08	0.181	0.198	
	FR1 n41	100M	BPSK	135	69	Back	10mm	Ant 7	DSI 5	518598	2592.99	16.58	17.00	1.102			0.19	0.160	0.176	
	FR1 n41	100M	BPSK	1	1	Left Side	10mm	Ant 7	DSI 5	518598	2592.99	16.60	17.00	1.096			-0.02	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Left Side	10mm	Ant 7	DSI 5	518598	2592.99	16.58	17.00	1.102			-0.10	0.001	0.001	
	FR1 n41	100M	BPSK	1	1	Right Side	10mm	Ant 7	DSI 5	518598	2592.99	16.60	17.00	1.096			-0.09	0.264	0.289	
	FR1 n41	100M	BPSK	135	69	Right Side	10mm	Ant 7	DSI 5	518598	2592.99	16.58	17.00	1.102			-0.04	0.262	0.289	
	FR1 n41	100M	BPSK	1	1	Top Side	10mm	Ant 7	DSI 5	518598	2592.99	16.60	17.00	1.096			0.15	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Top Side	10mm	Ant 7	DSI 5	518598	2592.99	16.58	17.00	1.102			0.07	0.001	0.001	
	FR1 n41	100M	BPSK	1	1	Bottom Side	10mm	Ant 7	DSI 5	518598	2592.99	16.60	17.00	1.096			-0.11	0.001	0.001	
	FR1 n41	100M	BPSK	135	69	Bottom Side	10mm	Ant 7	DSI 5	518598	2592.99	16.58	17.00	1.102			0.07	0.001	0.001	
	FR1 n41_HPUE	100M	BPSK	1	1	Right Side	10mm	Ant 7	DSI 5	518598	2592.99	19.62	20.00	1.091	50.0	1.0	0.08	0.261	0.285	
	FR1 n48	40M	BPSK	1	1	Front	10mm	Ant 8	DSI 5	641666	3624.99	15.24	16.00	1.191			0.02	0.144	0.172	
	FR1 n48	40M	BPSK	50	28	Front	10mm	Ant 8	DSI 5	641666	3624.99	15.21	16.00	1.199			0.05	0.125	0.150	
	FR1 n48	40M	BPSK	1	1	Back	10mm	Ant 8	DSI 5	641666	3624.99	15.24	16.00	1.191			0.01	0.186	0.222	
	FR1 n48	40M	BPSK	50	28	Back	10mm	Ant 8	DSI 5	641666	3624.99	15.21	16.00	1.199			0.10	0.176	0.211	
	FR1 n48	40M	BPSK	1	1	Left Side	10mm	Ant 8	DSI 5	641666	3624.99	15.24	16.00	1.191			-0.01	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Left Side	10mm	Ant 8	DSI 5	641666	3624.99	15.21	16.00	1.199			-0.07	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Right Side	10mm	Ant 8	DSI 5	641666	3624.99	15.24	16.00	1.191			0.13	0.056	0.067	
	FR1 n48	40M	BPSK	50	28	Right Side	10mm	Ant 8	DSI 5	641666	3624.99	15.21	16.00	1.199			0.02	0.063	0.076	
	FR1 n48	40M	BPSK	1	1	Top Side	10mm	Ant 8	DSI 5	641666	3624.99	15.24	16.00	1.191			-0.02	0.291	0.347	
	FR1 n48	40M	BPSK	50	28	Top Side	10mm	Ant 8	DSI 5	641666	3624.99	15.21	16.00	1.199			-0.03	0.248	0.297	
	FR1 n48	40M	BPSK	1	1	Bottom Side	10mm	Ant 8	DSI 5	641666	3624.99	15.24	16.00	1.191			0.05	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Bottom Side	10mm	Ant 8	DSI 5	641666	3624.99	15.21	16.00	1.199			0.13	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Front	10mm	Ant 9	DSI 5	641666	3624.99	17.36	18.50	1.3			-0.11	0.131	0.170	
	FR1 n48	40M	BPSK	50	28	Front	10mm	Ant 9	DSI 5	641666	3624.99	17.32	18.50	1.312			-0.09	0.134	0.176	
	FR1 n48	40M	BPSK	1	1	Back	10mm	Ant 9	DSI 5	641666	3624.99	17.36	18.50	1.3			0.12	0.179	0.233	
	FR1 n48	40M	BPSK	50	28	Back	10mm	Ant 9	DSI 5	641666	3624.99	17.32	18.50	1.312			0.03	0.189	0.248	
	FR1 n48	40M	BPSK	1	1	Left Side	10mm	Ant 9	DSI 5	641666	3624.99	17.36	18.50	1.3			-0.03	0.220	0.286	
	FR1 n48	40M	BPSK	50	28	Left Side	10mm	Ant 9	DSI 5	641666	3624.99	17.32	18.50	1.312			-0.18	0.249	0.327	
	FR1 n48	40M	BPSK	1	1	Right Side	10mm	Ant 9	DSI 5	641666	3624.99	17.36	18.50	1.3			0.14	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Right Side	10mm	Ant 9	DSI 5	641666	3624.99	17.32	18.50	1.312			0.07	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Top Side	10mm	Ant 9	DSI 5	641666	3624.99	17.36	18.50	1.3			0.14	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Top Side	10mm	Ant 9	DSI 5	641666	3624.99	17.32	18.50	1.312			-0.05	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Bottom Side	10mm	Ant 9	DSI 5	641666	3624.99	17.36	18.50	1.3			0.17	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Bottom Side	10mm	Ant 9	DSI 5	641666	3624.99	17.32	18.50	1.312			0.01	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Front	10mm	Ant 10	DSI 5	641666	3624.99	13.63	15.00	1.371			0.13	0.096	0.132	
	FR1 n48	40M	BPSK	50	28	Front	10mm	Ant 10	DSI 5	641666	3624.99	13.61	15.00	1.377			0.06	0.101	0.139	
	FR1 n48	40M	BPSK	1	1	Back	10mm	Ant 10	DSI 5	641666	3624.99	13.63	15.00	1.371			0.15	0.166	0.228	
	FR1 n48	40M	BPSK	50	28	Back	10mm	Ant 10	DSI 5	641666	3624.99	13.61	15.00	1.377			-0.12	0.157	0.216	
	FR1 n48	40M	BPSK	1	1	Left Side	10mm	Ant 10	DSI 5	641666	3624.99	13.63	15.00	1.371			0.03	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Left Side	10mm	Ant 10	DSI 5	641666	3624.99	13.61	15.00	1.377			-0.06	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Right Side	10mm	Ant 10	DSI 5	641666	3624.99	13.63	15.00	1.371			0.08	0.208	0.285	
	FR1 n48	40M	BPSK	50	28	Right Side	10mm	Ant 10	DSI 5	641666	3624.99	13.61	15.00	1.377			0.02	0.198	0.273	
	FR1 n48	40M	BPSK	1	1	Top Side	10mm	Ant 10	DSI 5	641666	3624.99	13.63	15.00	1.371			-0.15	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Top Side	10mm	Ant 10	DSI 5	641666	3624.99	13.61	15.00	1.377			0.16	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Bottom Side	10mm	Ant 10	DSI 5	641666	3624.99	13.63	15.00	1.371			-0.07	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Bottom Side	10mm	Ant 10	DSI 5	641666	3624.99	13.61	15.00	1.377			0.15	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Front	10mm	Ant 11	DSI 5	641666	3624.99	10.99	12.50	1.416			0.16	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Front	10mm	Ant 11	DSI 5	641666	3624.99	10.97	12.50	1.422			0.04	0.001	0.001	
51	FR1 n48	40M	BPSK	1	1	Back	10mm	Ant 11	DSI 5	641666	3624.99	10.99	12.50	1.416			0.02	0.357	0.506	
	FR1 n48	40M	BPSK	50	28	Back	10mm	Ant 11	DSI 5	641666	3624.99	10.97	12.50	1.422			0.01	0.345	0.491	
	FR1 n48	40M	BPSK	1	1	Left Side	10mm	Ant 11	DSI 5	641666	3624.99	10.99	12.50	1.416			0.03	0.086	0.122	
	FR1 n48	40M	BPSK	50	28	Left Side	10mm	Ant 11	DSI 5	641666	3624.99	10.97	12.50	1.422			-0.09	0.086	0.122	
	FR1 n48	40M	BPSK	1	1	Right Side	10mm	Ant 11	DSI 5	641666	3624.99	10.99	12.50	1.416			-0.10	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Right Side	10mm	Ant 11	DSI 5	641666	3624.99	10.97	12.50	1.422			0.03	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Top Side	10mm	Ant 11	DSI 5	641666	3624.99	10.99	12.50	1.416			0.06	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Top Side	10mm	Ant 11	DSI 5	641666	3624.99	10.97	12.50	1.422			0.03	0.001	0.001	
	FR1 n48	40M	BPSK	1	1	Bottom Side	10mm	Ant 11	DSI 5	641666	3624.99	10.99	12.50	1.416			0.03	0.001	0.001	
	FR1 n48	40M	BPSK	50	28	Bottom Side	10mm	Ant 11	DSI 5	641666	3624.99	10.97	12.50	1.422			0.12	0.001</		



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	FR1 n77	100M	BPSK	1	1	Back	10mm	Ant 8	DSI 5	633332	3499.98	14.28	15.00	1.18			-0.12	0.292	0.345	
	FR1 n77	100M	BPSK	135	69	Back	10mm	Ant 8	DSI 5	633332	3499.98	14.22	15.00	1.197			-0.12	0.287	0.344	
	FR1 n77	100M	BPSK	1	1	Left Side	10mm	Ant 8	DSI 5	633332	3499.98	14.28	15.00	1.18			0.12	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Left Side	10mm	Ant 8	DSI 5	633332	3499.98	14.22	15.00	1.197			0.19	0.048	0.057	
	FR1 n77	100M	BPSK	1	1	Right Side	10mm	Ant 8	DSI 5	633332	3499.98	14.28	15.00	1.18			-0.08	0.059	0.070	
	FR1 n77	100M	BPSK	135	69	Right Side	10mm	Ant 8	DSI 5	633332	3499.98	14.22	15.00	1.197			0.06	0.062	0.074	
	FR1 n77	100M	BPSK	1	1	Top Side	10mm	Ant 8	DSI 5	633332	3499.98	14.28	15.00	1.18			0.13	0.307	0.362	
	FR1 n77	100M	BPSK	135	69	Top Side	10mm	Ant 8	DSI 5	633332	3499.98	14.22	15.00	1.197			-0.13	0.296	0.354	
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	Ant 8	DSI 5	633332	3499.98	14.28	15.00	1.18			0.12	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	Ant 8	DSI 5	633332	3499.98	14.22	15.00	1.197			-0.17	0.001	0.001	
52	FR1 n77_HPUE	100M	BPSK	1	1	Top Side	10mm	Ant 8	DSI 5	633332	3499.98	17.36	18.50	1.3	50.0	1.0	0.09	0.314	0.408	
	FR1 n77	100M	BPSK	1	1	Front	10mm	Ant 9	DSI 5	633332	3499.98	16.35	17.50	1.303			0.04	0.100	0.130	
	FR1 n77	100M	BPSK	135	69	Front	10mm	Ant 9	DSI 5	633332	3499.98	16.34	17.50	1.306			0.15	0.091	0.119	
	FR1 n77	100M	BPSK	1	1	Back	10mm	Ant 9	DSI 5	633332	3499.98	16.35	17.50	1.303			0.16	0.127	0.165	
	FR1 n77	100M	BPSK	135	69	Back	10mm	Ant 9	DSI 5	633332	3499.98	16.34	17.50	1.306			0.01	0.116	0.151	
	FR1 n77	100M	BPSK	1	1	Left Side	10mm	Ant 9	DSI 5	633332	3499.98	16.35	17.50	1.303			-0.02	0.191	0.249	
	FR1 n77	100M	BPSK	135	69	Left Side	10mm	Ant 9	DSI 5	633332	3499.98	16.34	17.50	1.306			0.07	0.164	0.214	
	FR1 n77	100M	BPSK	1	1	Right Side	10mm	Ant 9	DSI 5	633332	3499.98	16.35	17.50	1.303			0.13	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Right Side	10mm	Ant 9	DSI 5	633332	3499.98	16.34	17.50	1.306			-0.08	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Top Side	10mm	Ant 9	DSI 5	633332	3499.98	16.35	17.50	1.303			-0.13	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Top Side	10mm	Ant 9	DSI 5	633332	3499.98	16.34	17.50	1.306			-0.06	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	Ant 9	DSI 5	633332	3499.98	16.35	17.50	1.303			-0.02	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	Ant 9	DSI 5	633332	3499.98	16.34	17.50	1.306			-0.04	0.001	0.001	
	FR1 n77_HPUE	100M	BPSK	1	1	Left Side	10mm	Ant 9	DSI 5	633332	3499.98	19.38	20.50	1.294	50.0	1.0	0.05	0.186	0.241	
	FR1 n77	100M	BPSK	1	1	Front	10mm	Ant 10	DSI 5	633332	3499.98	14.96	16.00	1.271			0.16	0.084	0.107	
	FR1 n77	100M	BPSK	135	69	Front	10mm	Ant 10	DSI 5	633332	3499.98	14.94	16.00	1.276			-0.10	0.083	0.106	
	FR1 n77	100M	BPSK	1	1	Back	10mm	Ant 10	DSI 5	633332	3499.98	14.96	16.00	1.271			0.12	0.149	0.189	
	FR1 n77	100M	BPSK	135	69	Back	10mm	Ant 10	DSI 5	633332	3499.98	14.94	16.00	1.276			-0.04	0.188	0.240	
	FR1 n77	100M	BPSK	1	1	Left Side	10mm	Ant 10	DSI 5	633332	3499.98	14.96	16.00	1.271			0.03	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Left Side	10mm	Ant 10	DSI 5	633332	3499.98	14.94	16.00	1.276			-0.10	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Right Side	10mm	Ant 10	DSI 5	633332	3499.98	14.96	16.00	1.271			0.08	0.138	0.175	
	FR1 n77	100M	BPSK	135	69	Right Side	10mm	Ant 10	DSI 5	633332	3499.98	14.94	16.00	1.276			0.11	0.138	0.176	
	FR1 n77	100M	BPSK	1	1	Top Side	10mm	Ant 10	DSI 5	633332	3499.98	14.96	16.00	1.271			0.02	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Top Side	10mm	Ant 10	DSI 5	633332	3499.98	14.94	16.00	1.276			0.07	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	Ant 10	DSI 5	633332	3499.98	14.96	16.00	1.271			-0.12	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	Ant 10	DSI 5	633332	3499.98	14.94	16.00	1.276			0.04	0.001	0.001	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	10mm	Ant 10	DSI 5	633332	3499.98	17.91	19.00	1.285	50.0	1.0	0.11	0.181	0.233	
	FR1 n77	100M	BPSK	1	1	Front	10mm	Ant 11	DSI 5	633332	3499.98	12.81	14.50	1.476			-0.17	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Front	10mm	Ant 11	DSI 5	633332	3499.98	12.79	14.50	1.483			-0.01	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Back	10mm	Ant 11	DSI 5	633332	3499.98	12.81	14.50	1.476			0.01	0.214	0.316	
	FR1 n77	100M	BPSK	135	69	Back	10mm	Ant 11	DSI 5	633332	3499.98	12.79	14.50	1.483			-0.02	0.227	0.337	
	FR1 n77	100M	BPSK	1	1	Left Side	10mm	Ant 11	DSI 5	633332	3499.98	12.81	14.50	1.476			-0.11	0.042	0.062	
	FR1 n77	100M	BPSK	135	69	Left Side	10mm	Ant 11	DSI 5	633332	3499.98	12.79	14.50	1.483			0.14	0.048	0.071	
	FR1 n77	100M	BPSK	1	1	Right Side	10mm	Ant 11	DSI 5	633332	3499.98	12.81	14.50	1.476			0.08	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Right Side	10mm	Ant 11	DSI 5	633332	3499.98	12.79	14.50	1.483			0.14	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Top Side	10mm	Ant 11	DSI 5	633332	3499.98	12.81	14.50	1.476			0.11	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Top Side	10mm	Ant 11	DSI 5	633332	3499.98	12.79	14.50	1.483			0.07	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	Ant 11	DSI 5	633332	3499.98	12.81	14.50	1.476			0.18	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	Ant 11	DSI 5	633332	3499.98	12.79	14.50	1.483			0.12	0.001	0.001	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	10mm	Ant 11	DSI 5	633332	3499.98	15.88	17.50	1.452	50.0	1.0	-0.17	0.212	0.308	
	FR1 n77	100M	BPSK	1	1	Front	10mm	Ant 8	DSI 5	656000	3840	14.69	15.00	1.074			-0.07	0.054	0.058	
	FR1 n77	100M	BPSK	135	69	Front	10mm	Ant 8	DSI 5	656000	3840	14.67	15.00	1.079			-0.15	0.054	0.058	
	FR1 n77	100M	BPSK	1	1	Back	10mm	Ant 8	DSI 5	656000	3840	14.69	15.00	1.074			0.17	0.071	0.076	
	FR1 n77	100M	BPSK	135	69	Back	10mm	Ant 8	DSI 5	656000	3840	14.67	15.00	1.079			-0.12	0.056	0.060	
	FR1 n77	100M	BPSK	1	1	Left Side	10mm	Ant 8	DSI 5	656000	3840	14.69	15.00	1.074			0.11	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Left Side	10mm	Ant 8	DSI 5	656000	3840	14.67	15.00	1.079			-0.17	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Right Side	10mm	Ant 8	DSI 5	656000	3840	14.69	15.00	1.074			-0.12	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Right Side	10mm	Ant 8	DSI 5	656000	3840	14.67	15.00	1.079			-0.09	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Top Side	10mm	Ant 8	DSI 5	656000	3840	14.69	15.00	1.074			0.06	0.126	0.135	
	FR1 n77	100M	BPSK	135	69	Top Side	10mm	Ant 8	DSI 5	656000	3840	14.67	15.00	1.079			-0.00	0.100	0.108	
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	Ant 8	DSI 5	656000	3840	14.69	15.00	1.074			-0.08	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	Ant 8	DSI 5	656000	3840	14.67	15.00	1.079			-0.07	0.001	0.001	
	FR1 n77_HPUE	100M	BPSK	1	1	Top Side	10mm	Ant 8	DSI 5	656000	3840	17.77	18.50	1.183	50.0	1.0	-0.07	0.120	0.142	
	FR1 n77	100M	BPSK	1	1	Front	10mm	Ant 9	DSI 5	656000	3840	17.09	17.50	1.099			0.12	0.101	0.111	
	FR1 n77	100M	BPSK	135	69	Front	10mm	Ant 9	DSI 5	656000	3840	16.98	17.50	1.127			-0.02	0.120	0.135	
	FR1 n77	100M	BPSK	1	1	Back	10mm	Ant 9	DSI 5	656000	3840	17.09	17.50	1.099			0.04	0.142	0.156	
	FR1 n77	100M	BPSK	135	69	Back	10mm	Ant 9	DSI 5	656000	3840	16.98	17.50	1.127			-0.04	0.110	0.124	
	FR1 n77	100M	BPSK	1	1	Left Side	10mm	Ant 9	DSI 5	656000	3840	17.09	17.50	1.099			0.18	0.167	0.184	
	FR1 n77	100M	BPSK	135	69	Left Side	10mm	Ant 9	DSI 5	656000	3840	16.98	17.50	1.127			0.09	0.228	0.257	
	FR1 n77	100M	BPSK	1	1	Right Side	10mm	Ant 9	DSI 5	656000	3840	17.09	17.50	1.099			-0.06	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Right Side	10mm	Ant 9	DSI 5	656000	3840	16.98	17.							



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	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	Ant 9	DSI 5	656000	3840	17.09	17.50	1.099			-0.07	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	Ant 9	DSI 5	656000	3840	16.98	17.50	1.127			-0.18	0.001	0.001	
	FR1 n77_HPUE	100M	BPSK	1	1	Left Side	10mm	Ant 9	DSI 5	656000	3840	20.15	20.50	1.084	50.0	1.0	0.01	0.232	0.251	
	FR1 n77	100M	BPSK	1	1	Front	10mm	Ant 10	DSI 5	656000	3840	14.79	16.00	1.321			-0.03	0.090	0.119	
	FR1 n77	100M	BPSK	135	69	Front	10mm	Ant 10	DSI 5	656000	3840	14.77	16.00	1.327			0.07	0.102	0.135	
	FR1 n77	100M	BPSK	1	1	Back	10mm	Ant 10	DSI 5	656000	3840	14.79	16.00	1.321			-0.11	0.148	0.196	
	FR1 n77	100M	BPSK	135	69	Back	10mm	Ant 10	DSI 5	656000	3840	14.77	16.00	1.327			0.05	0.126	0.167	
	FR1 n77	100M	BPSK	1	1	Left Side	10mm	Ant 10	DSI 5	656000	3840	14.79	16.00	1.321			-0.01	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Left Side	10mm	Ant 10	DSI 5	656000	3840	14.77	16.00	1.327			-0.09	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Right Side	10mm	Ant 10	DSI 5	656000	3840	14.79	16.00	1.321			0.16	0.174	0.230	
	FR1 n77	100M	BPSK	135	69	Right Side	10mm	Ant 10	DSI 5	656000	3840	14.77	16.00	1.327			-0.00	0.217	0.288	
	FR1 n77	100M	BPSK	1	1	Top Side	10mm	Ant 10	DSI 5	656000	3840	14.79	16.00	1.321			0.16	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Top Side	10mm	Ant 10	DSI 5	656000	3840	14.77	16.00	1.327			0.17	0.043	0.057	
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	Ant 10	DSI 5	656000	3840	14.79	16.00	1.321			-0.16	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	Ant 10	DSI 5	656000	3840	14.77	16.00	1.327			0.12	0.001	0.001	
	FR1 n77_HPUE	100M	BPSK	1	1	Right Side	10mm	Ant 10	DSI 5	656000	3840	17.78	19.00	1.324	50.0	1.0	-0.06	0.197	0.261	
	FR1 n77	100M	BPSK	1	1	Front	10mm	Ant 11	DSI 5	656000	3840	13.11	14.50	1.377			-0.00	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Front	10mm	Ant 11	DSI 5	656000	3840	13.10	14.50	1.38			0.16	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Back	10mm	Ant 11	DSI 5	656000	3840	13.11	14.50	1.377			0.05	0.127	0.175	
	FR1 n77	100M	BPSK	135	69	Back	10mm	Ant 11	DSI 5	656000	3840	13.10	14.50	1.38			0.12	0.106	0.146	
	FR1 n77	100M	BPSK	1	1	Left Side	10mm	Ant 11	DSI 5	656000	3840	13.11	14.50	1.377			-0.08	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Left Side	10mm	Ant 11	DSI 5	656000	3840	13.10	14.50	1.38			-0.08	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Right Side	10mm	Ant 11	DSI 5	656000	3840	13.11	14.50	1.377			-0.10	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Right Side	10mm	Ant 11	DSI 5	656000	3840	13.10	14.50	1.38			-0.07	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Top Side	10mm	Ant 11	DSI 5	656000	3840	13.11	14.50	1.377			-0.18	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Top Side	10mm	Ant 11	DSI 5	656000	3840	13.10	14.50	1.38			-0.07	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Bottom Side	10mm	Ant 11	DSI 5	656000	3840	13.11	14.50	1.377			0.06	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Bottom Side	10mm	Ant 11	DSI 5	656000	3840	13.10	14.50	1.38			-0.08	0.001	0.001	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	10mm	Ant 11	DSI 5	656000	3840	16.09	17.50	1.384	50.0	1.0	0.05	0.125	0.173	

【WLAN 2.4GHz_5GHz SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 7+12(12)	Hotspot	6	2437	17.30	18.00	1.175	97.08	1.03	0.15	0.327	0.395	
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 7+12(12)	Hotspot	6	2437	17.30	18.00	1.175	97.08	1.03	-0.06	0.433	0.525	
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 7+12(12)	Hotspot	6	2437	17.30	18.00	1.175	97.08	1.03	0.10	0.096	0.116	
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 7+12(12)	Hotspot	6	2437	17.30	18.00	1.175	97.08	1.03	-0.05	0.499	0.604	
53	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 7+12(12)	Hotspot	6	2437	17.30	18.00	1.175	97.08	1.03	0.02	0.566	0.685	
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	10mm	Ant 7+12(12)	Hotspot	6	2437	17.30	18.00	1.175	97.08	1.03	0.09	0.036	0.044	
	WLAN5GHz	802.11ac-VHT40 MCS0	Front	10mm	Ant 8+10(8)	Hotspot	46	5230	17.71	18.50	1.199	100.0	1.0	0.08	0.291	0.348	
	WLAN5GHz	802.11ac-VHT40 MCS0	Back	10mm	Ant 8+10(8)	Hotspot	46	5230	17.71	18.50	1.199	100.0	1.0	0.02	0.321	0.385	
	WLAN5GHz	802.11ac-VHT40 MCS0	Left Side	10mm	Ant 8+10(8)	Hotspot	46	5230	17.71	18.50	1.199	100.0	1.0	-0.03	0.067	0.080	
	WLAN5GHz	802.11ac-VHT40 MCS0	Right Side	10mm	Ant 8+10(8)	Hotspot	46	5230	17.71	18.50	1.199	100.0	1.0	-0.04	0.297	0.356	
54	WLAN5GHz	802.11ac-VHT40 MCS0	Top Side	10mm	Ant 8+10(8)	Hotspot	46	5230	17.71	18.50	1.199	100.0	1.0	0.01	0.625	0.749	
	WLAN5GHz	802.11ac-VHT40 MCS0	Bottom Side	10mm	Ant 8+10(8)	Hotspot	46	5230	17.71	18.50	1.199	100.0	1.0	-0.16	0.056	0.067	
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 8+10(8)	Hotspot	155	5775	16.72	17.50	1.197	100.0	1.0	0.17	0.190	0.227	
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 8+10(8)	Hotspot	155	5775	16.72	17.50	1.197	100.0	1.0	-0.05	0.274	0.328	
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 8+10(8)	Hotspot	155	5775	16.72	17.50	1.197	100.0	1.0	-0.01	0.055	0.066	
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 8+10(8)	Hotspot	155	5775	16.72	17.50	1.197	100.0	1.0	-0.02	0.120	0.144	
55	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 8+10(8)	Hotspot	155	5775	16.72	17.50	1.197	100.0	1.0	-0.12	0.507	0.607	
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Side	10mm	Ant 8+10(8)	Hotspot	155	5775	16.72	17.50	1.197	100.0	1.0	0.08	0.043	0.051	

【Bluetooth SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	Bluetooth	1Mbps	Front	10mm	Ant 7	Full Power	39	2441	18.00	19.50	1.413	77.07	1.081	0.03	0.059	0.090	
	Bluetooth	1Mbps	Back	10mm	Ant 7	Full Power	39	2441	18.00	19.50	1.413	77.07	1.081	0.00	0.060	0.092	
	Bluetooth	1Mbps	Left Side	10mm	Ant 7	Full Power	39	2441	18.00	19.50	1.413	77.07	1.081	0.07	0.001	0.002	
	Bluetooth	1Mbps	Right Side	10mm	Ant 7	Full Power	39	2441	18.00	19.50	1.413	77.07	1.081	0.01	0.114	0.174	
	Bluetooth	1Mbps	Top Side	10mm	Ant 7	Full Power	39	2441	18.00	19.50	1.413	77.07	1.081	0.08	0.001	0.002	
	Bluetooth	1Mbps	Bottom Side	10mm	Ant 7	Full Power	39	2441	18.00	19.50	1.413	77.07	1.081	-0.02	0.001	0.002	
	Bluetooth	1Mbps	Front	10mm	Ant 12	Full Power	39	2441	16.90	18.50	1.445	77.07	1.081	-0.16	0.058	0.091	
56	Bluetooth	1Mbps	Back	10mm	Ant 12	Full Power	39	2441	16.90	18.50	1.445	77.07	1.081	-0.07	0.146	0.228	
	Bluetooth	1Mbps	Left Side	10mm	Ant 12	Full Power	39	2441	16.90	18.50	1.445	77.07	1.081	0.07	0.001	0.002	
	Bluetooth	1Mbps	Right Side	10mm	Ant 12	Full Power	39	2441	16.90	18.50	1.445	77.07	1.081	-0.00	0.065	0.102	
	Bluetooth	1Mbps	Top Side	10mm	Ant 12	Full Power	39	2441	16.90	18.50	1.445	77.07	1.081	0.07	0.088	0.137	
	Bluetooth	1Mbps	Bottom Side	10mm	Ant 12	Full Power	39	2441	16.90	18.50	1.445	77.07	1.081	0.14	0.001	0.002	



16.3 Body Worn Accessory SAR

【GSM SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 0	DSI 4	189	836.4	26.30	28.00	1.479	0.14	0.380	0.562	
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 0	DSI 4	189	836.4	26.30	28.00	1.479	-0.01	0.547	0.809	
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 0	DSI 4	128	824.2	26.15	28.00	1.531	0.05	0.522	0.799	
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 0	DSI 4	251	848.8	26.28	28.00	1.486	-0.16	0.538	0.799	
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 1	DSI 3	189	836.4	22.93	24.50	1.435	-0.14	0.732	1.050	
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 1	DSI 3	128	824.2	22.86	24.50	1.459	-0.03	0.650	0.948	
	GSM850	GPRS 4 Tx slots	Front	5mm	Ant 1	DSI 3	251	848.8	22.92	24.50	1.439	-0.01	0.718	1.033	
57	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	DSI 3	189	836.4	22.93	24.50	1.435	-0.06	0.753	1.081	
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	DSI 3	128	824.2	22.86	24.50	1.459	0.17	0.704	1.027	
	GSM850	GPRS 4 Tx slots	Back	5mm	Ant 1	DSI 3	251	848.8	22.92	24.50	1.439	-0.06	0.726	1.045	
	GSM850	GPRS 4 Tx slots	Front	15mm	Ant 1	DSI 4	189	836.4	26.77	28.50	1.489	0.00	0.447	0.666	
	GSM850	GPRS 4 Tx slots	Back	15mm	Ant 1	DSI 4	189	836.4	26.77	28.50	1.489	-0.09	0.505	0.752	
	GSM1900	GPRS 4 Tx slots	Front	5mm	Ant 4	DSI 3	661	1880	22.11	24.00	1.545	0.14	0.459	0.709	
58	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 4	DSI 3	661	1880	22.11	24.00	1.545	0.04	0.642	0.992	
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 4	DSI 3	512	1850.2	22.05	24.00	1.567	-0.13	0.632	0.990	
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 4	DSI 3	810	1909.8	22.03	24.00	1.574	0.07	0.628	0.988	
	GSM1900	GPRS 4 Tx slots	Front	15mm	Ant 4	DSI 4	661	1880	23.59	25.50	1.552	-0.15	0.098	0.152	
	GSM1900	GPRS 4 Tx slots	Back	15mm	Ant 4	DSI 4	661	1880	23.59	25.50	1.552	0.02	0.124	0.192	
	GSM1900	GPRS 4 Tx slots	Front	5mm	Ant 6	DSI 4	661	1880	22.32	24.00	1.472	0.12	0.476	0.701	
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 6	DSI 4	661	1880	22.32	24.00	1.472	-0.03	0.592	0.871	
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 6	DSI 4	512	1850.2	22.28	24.00	1.486	0.02	0.574	0.853	
	GSM1900	GPRS 4 Tx slots	Back	5mm	Ant 6	DSI 4	810	1909.8	22.23	24.00	1.503	0.10	0.569	0.855	

【WCDMA SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	WCDMA II	RMC 12.2Kbps	Front	5mm	Ant 4	DSI 3	9400	1880	19.35	20.50	1.303	-0.15	0.538	0.701	
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 4	DSI 3	9400	1880	19.35	20.50	1.303	-0.03	0.740	0.964	
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 4	DSI 3	9262	1852.4	19.31	20.50	1.315	0.05	0.725	0.953	
59	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 4	DSI 3	9538	1907.6	19.21	20.50	1.346	-0.19	0.718	0.966	
	WCDMA II	RMC 12.2Kbps	Front	15mm	Ant 4	DSI 4	9400	1880	23.82	25.00	1.312	0.00	0.244	0.320	
	WCDMA II	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 4	9400	1880	23.82	25.00	1.312	-0.01	0.316	0.415	
	WCDMA II	RMC 12.2Kbps	Front	5mm	Ant 6	DSI 4	9400	1880	19.45	20.50	1.274	0.14	0.518	0.660	
	WCDMA II	RMC 12.2Kbps	Back	5mm	Ant 6	DSI 4	9400	1880	19.45	20.50	1.274	0.18	0.625	0.796	
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Ant 4	DSI 3	1413	1732.6	19.56	20.50	1.242	0.05	0.581	0.722	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 4	DSI 3	1413	1732.6	19.56	20.50	1.242	-0.13	0.707	0.878	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 4	DSI 3	1312	1712.4	19.55	20.50	1.245	0.16	0.691	0.860	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 4	DSI 3	1513	1752.6	19.50	20.50	1.259	-0.06	0.705	0.888	
	WCDMA IV	RMC 12.2Kbps	Front	15mm	Ant 4	DSI 4	1413	1732.6	24.05	25.00	1.245	-0.14	0.304	0.378	
	WCDMA IV	RMC 12.2Kbps	Back	15mm	Ant 4	DSI 4	1413	1732.6	24.05	25.00	1.245	0.06	0.371	0.462	
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Ant 5	DSI 3	1413	1732.6	17.83	19.00	1.309	-0.10	0.520	0.681	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 5	DSI 3	1413	1732.6	17.83	19.00	1.309	-0.07	0.668	0.874	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 5	DSI 3	1312	1712.4	17.80	19.00	1.318	-0.18	0.640	0.844	
60	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 5	DSI 3	1513	1752.6	17.76	19.00	1.33	0.03	0.681	0.906	
	WCDMA IV	RMC 12.2Kbps	Front	15mm	Ant 5	DSI 4	1413	1732.6	23.82	25.00	1.312	-0.11	0.404	0.530	
	WCDMA IV	RMC 12.2Kbps	Back	15mm	Ant 5	DSI 4	1413	1732.6	23.82	25.00	1.312	0.06	0.505	0.663	
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Ant 6	DSI 4	1413	1732.6	19.88	20.50	1.153	-0.18	0.526	0.606	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 6	DSI 4	1413	1732.6	19.88	20.50	1.153	-0.16	0.681	0.785	
	WCDMA IV	RMC 12.2Kbps	Front	5mm	Ant 7	DSI 4	1413	1732.6	20.47	21.50	1.268	-0.17	0.553	0.701	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 7	DSI 4	1413	1732.6	20.47	21.50	1.268	-0.10	0.660	0.837	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 7	DSI 4	1312	1712.4	20.40	21.50	1.288	0.10	0.654	0.842	
	WCDMA IV	RMC 12.2Kbps	Back	5mm	Ant 7	DSI 4	1513	1752.6	20.44	21.50	1.276	-0.04	0.643	0.820	
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 0	DSI 4	4182	836.4	23.57	24.00	1.104	-0.06	0.410	0.453	
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 0	DSI 4	4182	836.4	23.57	24.00	1.104	-0.04	0.585	0.646	
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 1	DSI 3	4182	836.4	19.70	21.00	1.349	-0.02	0.714	0.963	
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 1	DSI 3	4132	826.4	19.64	21.00	1.368	-0.16	0.652	0.892	
	WCDMA V	RMC 12.2Kbps	Front	5mm	Ant 1	DSI 3	4233	846.6	19.59	21.00	1.384	0.09	0.674	0.933	
61	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	4182	836.4	19.70	21.00	1.349	-0.16	0.746	1.006	
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	4132	826.4	19.64	21.00	1.368	0.13	0.696	0.952	
	WCDMA V	RMC 12.2Kbps	Back	5mm	Ant 1	DSI 3	4233	846.6	19.59	21.00	1.384	-0.13	0.694	0.960	
	WCDMA V	RMC 12.2Kbps	Front	15mm	Ant 1	DSI 4	4182	836.4	24.21	25.50	1.346	-0.18	0.593	0.798	
	WCDMA V	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 4	4182	836.4	24.21	25.50	1.346	0.01	0.666	0.896	
	WCDMA V	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 4	4132	826.4	24.17	25.50	1.358	-0.07	0.657	0.892	
	WCDMA V	RMC 12.2Kbps	Back	15mm	Ant 1	DSI 4	4233	846.6	24.13	25.50	1.371	-0.02	0.661	0.906	



【LTE SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note
	LTE Band 2	20M	QPSK	1	0	Front	5mm	Ant 4	DSI 3	18900	1880	19.96	21.70	1.493			0.08	0.530	0.791	
	LTE Band 2	20M	QPSK	50	0	Front	5mm	Ant 4	DSI 3	18900	1880	19.88	21.70	1.521			-0.09	0.536	0.815	
	LTE Band 2	20M	QPSK	50	0	Front	5mm	Ant 4	DSI 3	18700	1860	19.80	21.70	1.549			-0.16	0.534	0.827	
	LTE Band 2	20M	QPSK	50	0	Front	5mm	Ant 4	DSI 3	19100	1900	19.72	21.70	1.578			0.10	0.518	0.817	
	LTE Band 2	20M	QPSK	100	0	Front	5mm	Ant 4	DSI 3	18900	1880	19.82	21.70	1.542			-0.00	0.573	0.884	
	LTE Band 2	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	18900	1880	19.96	21.70	1.493			0.10	0.688	1.027	
62	LTE Band 2	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	18700	1860	19.93	21.70	1.503			0.02	0.692	1.040	
	LTE Band 2	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	19100	1900	19.90	21.70	1.514			0.10	0.681	1.031	
	LTE Band 2	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	18900	1880	19.88	21.70	1.521			-0.11	0.682	1.037	
	LTE Band 2	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	18700	1860	19.80	21.70	1.549			0.18	0.664	1.029	
	LTE Band 2	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	19100	1900	19.72	21.70	1.578			-0.13	0.658	1.038	
	LTE Band 2	20M	QPSK	100	0	Back	5mm	Ant 4	DSI 3	18900	1880	19.82	21.70	1.542			0.14	0.666	1.027	
	LTE Band 2	20M	QPSK	1	0	Front	15mm	Ant 4	DSI 4	18900	1880	23.89	25.70	1.517			0.05	0.219	0.332	
	LTE Band 2	20M	QPSK	50	0	Front	15mm	Ant 4	DSI 4	18900	1880	22.93	24.70	1.503			0.08	0.184	0.277	
	LTE Band 2	20M	QPSK	1	0	Back	15mm	Ant 4	DSI 4	18900	1880	23.89	25.70	1.517			-0.18	0.276	0.419	
	LTE Band 2	20M	QPSK	50	0	Back	15mm	Ant 4	DSI 4	18900	1880	22.93	24.70	1.503			0.16	0.224	0.337	
	LTE Band 2	20M	QPSK	1	0	Front	5mm	Ant 6	DSI 4	18900	1880	20.01	21.20	1.315			-0.03	0.119	0.156	
	LTE Band 2	20M	QPSK	50	0	Front	5mm	Ant 6	DSI 4	18900	1880	19.97	21.20	1.327			0.17	0.117	0.155	
	LTE Band 2	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	18900	1880	20.01	21.20	1.315			0.03	0.164	0.216	
	LTE Band 2	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	18900	1880	19.97	21.20	1.327			0.07	0.160	0.212	
	LTE Band 5	10M	QPSK	1	0	Front	5mm	Ant 0	DSI4	20525	836.5	24.44	25.00	1.138			0.09	0.565	0.643	Other PA
	LTE Band 5	10M	QPSK	25	0	Front	5mm	Ant 0	DSI4	20525	836.5	23.42	24.00	1.143			0.06	0.429	0.490	Other PA
	LTE Band 5	10M	QPSK	1	0	Back	5mm	Ant 0	DSI4	20525	836.5	24.44	25.00	1.138			0.01	0.789	0.898	Other PA
	LTE Band 5	10M	QPSK	25	0	Back	5mm	Ant 0	DSI4	20525	836.5	23.42	24.00	1.143			0.05	0.607	0.694	Other PA
	LTE Band 5	10M	QPSK	50	0	Back	5mm	Ant 0	DSI4	20525	836.5	23.38	24.00	1.153			0.03	0.591	0.681	Other PA
	LTE Band 5	10M	QPSK	1	0	Front	5mm	Ant 1	DSI3	20525	836.5	20.09	20.70	1.151			0.16	0.823	0.947	Other PA
	LTE Band 5	10M	QPSK	25	0	Front	5mm	Ant 1	DSI3	20525	836.5	20.01	20.70	1.172			0.16	0.800	0.938	Other PA
	LTE Band 5	10M	QPSK	50	0	Front	5mm	Ant 1	DSI3	20525	836.5	20.06	20.70	1.159			0.03	0.793	0.919	Other PA
63	LTE Band 5	10M	QPSK	1	0	Back	5mm	Ant 1	DSI3	20525	836.5	20.09	20.70	1.151			-0.02	0.871	1.003	Other PA
	LTE Band 5	10M	QPSK	25	0	Back	5mm	Ant 1	DSI3	20525	836.5	20.01	20.70	1.172			-0.19	0.823	0.965	Other PA
	LTE Band 5	10M	QPSK	50	0	Back	5mm	Ant 1	DSI3	20525	836.5	20.06	20.70	1.159			0.01	0.850	0.985	Other PA
	LTE Band 5	10M	QPSK	1	0	Front	15mm	Ant 1	DSI4	20525	836.5	25.37	25.70	1.079			0.04	0.433	0.467	Other PA
	LTE Band 5	10M	QPSK	25	0	Front	15mm	Ant 1	DSI4	20525	836.5	24.45	24.70	1.059			0.17	0.555	0.588	Other PA
	LTE Band 5	10M	QPSK	1	0	Back	15mm	Ant 1	DSI4	20525	836.5	25.37	25.70	1.079			-0.15	0.464	0.501	Other PA
	LTE Band 5	10M	QPSK	25	0	Back	15mm	Ant 1	DSI4	20525	836.5	24.45	24.70	1.059			0.05	0.458	0.485	Other PA
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 4	DSI 3	21100	2535	17.79	18.70	1.233			-0.10	0.427	0.526	
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Ant 4	DSI 3	21100	2535	17.75	18.70	1.245			0.02	0.458	0.570	
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	21100	2535	17.79	18.70	1.233			0.13	0.603	0.743	
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	21100	2535	17.75	18.70	1.245			-0.05	0.578	0.720	
	LTE Band 7	20M	QPSK	1	0	Front	15mm	Ant 4	DSI 4	21100	2535	25.06	25.70	1.159			-0.18	0.367	0.425	
	LTE Band 7	20M	QPSK	50	0	Front	15mm	Ant 4	DSI 4	21100	2535	24.06	24.70	1.159			-0.03	0.296	0.343	
	LTE Band 7	20M	QPSK	1	0	Back	15mm	Ant 4	DSI 4	21100	2535	25.06	25.70	1.159			0.17	0.555	0.643	
	LTE Band 7	20M	QPSK	50	0	Back	15mm	Ant 4	DSI 4	21100	2535	24.06	24.70	1.159			0.14	0.438	0.508	
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 5	DSI 3	21100	2535	18.15	19.20	1.274			-0.16	0.399	0.508	
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Ant 5	DSI 3	21100	2535	18.11	19.20	1.285			0.13	0.402	0.517	
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 5	DSI 3	21100	2535	18.15	19.20	1.274			0.04	0.522	0.665	
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Ant 5	DSI 3	21100	2535	18.11	19.20	1.285			0.09	0.517	0.664	
	LTE Band 7	20M	QPSK	1	0	Front	15mm	Ant 5	DSI 4	21100	2535	23.22	24.20	1.253			0.18	0.244	0.306	
	LTE Band 7	20M	QPSK	50	0	Front	15mm	Ant 5	DSI 4	21100	2535	23.18	24.20	1.265			-0.09	0.238	0.301	
	LTE Band 7	20M	QPSK	1	0	Back	15mm	Ant 5	DSI 4	21100	2535	23.22	24.20	1.253			0.09	0.304	0.381	
	LTE Band 7	20M	QPSK	50	0	Back	15mm	Ant 5	DSI 4	21100	2535	23.18	24.20	1.265			-0.09	0.301	0.381	
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 6	DSI 4	21100	2535	18.95	20.00	1.274			-0.06	0.461	0.587	
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Ant 6	DSI 4	21100	2535	18.87	20.00	1.297			0.10	0.440	0.571	
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	21100	2535	18.95	20.00	1.274			-0.16	0.675	0.860	
64	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	20850	2510	18.91	20.00	1.285			0.01	0.705	0.906	
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	21350	2560	18.93	20.00	1.279			-0.00	0.588	0.752	
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	21100	2535	18.87	20.00	1.297			-0.13	0.675	0.875	
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	20850	2510	18.69	20.00	1.352			0.08	0.657	0.888	
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	21350	2560	18.76	20.00	1.33			0.16	0.605	0.805	
	LTE Band 7	20M	QPSK	100	0	Back	5mm	Ant 6	DSI 4	21100	2535	18.91	20.00	1.285			-0.17	0.644	0.828	
	LTE Band 7	20M	QPSK	1	0	Front	5mm	Ant 7	DSI 4	21100	2535	18.02	19.50	1.406			-0.04	0.300	0.422	
	LTE Band 7	20M	QPSK	50	0	Front	5mm	Ant 7	DSI 4	21100	2535	17.98	19.50	1.419			-0.15	0.305	0.433	
	LTE Band 7	20M	QPSK	1	0	Back	5mm	Ant 7	DSI 4	21100	2535	18.02	19.50	1.406			-0.16	0.454	0.638	
	LTE Band 7	20M	QPSK	50	0	Back	5mm	Ant 7	DSI 4	21100	2535	17.98	19.50	1.419			-0.18	0.447	0.634	
	LTE Band 26	15M	QPSK	1	0	Front	5mm	Ant 0	DSI 4	26865	831.5	24.71	25.20	1.119			0.01	0.226	0.253	
	LTE Band 26	15M	QPSK	36	0	Front	5mm	Ant 0	DSI 4	26865	831.5	24.35	24.70	1.084			-0.02	0.197	0.214	
	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 0	DSI 4	26865	831.5	24.71	25.20	1.119			0.12	0.239	0.267	
	LTE Band 26	15M	QPSK	36	0	Back	5mm	Ant 0	DSI 4	26865	831.5	24.35	24.70	1.084			0.04	0.214	0.232	



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	LTE Band 26	15M	QPSK	1	0	Front	5mm	Ant 1	DSI 3	26865	831.5	19.80	20.20	1.096			-0.07	0.782	0.857	
	LTE Band 26	15M	QPSK	36	0	Front	5mm	Ant 1	DSI 3	26865	831.5	19.76	20.20	1.107			0.06	0.787	0.871	
	LTE Band 26	15M	QPSK	75	0	Front	5mm	Ant 1	DSI 3	26865	831.5	19.75	20.20	1.109			0.17	0.774	0.858	
65	LTE Band 26	15M	QPSK	1	0	Back	5mm	Ant 1	DSI 3	26865	831.5	19.80	20.20	1.096			-0.06	0.835	0.915	
	LTE Band 26	15M	QPSK	36	0	Back	5mm	Ant 1	DSI 3	26865	831.5	19.76	20.20	1.107			0.15	0.823	0.911	
	LTE Band 26	15M	QPSK	75	0	Back	5mm	Ant 1	DSI 3	26865	831.5	19.75	20.20	1.109			-0.08	0.823	0.913	
	LTE Band 26	15M	QPSK	1	0	Front	15mm	Ant 1	DSI 4	26865	831.5	25.20	25.70	1.122			0.03	0.678	0.761	
	LTE Band 26	15M	QPSK	36	0	Front	15mm	Ant 1	DSI 4	26865	831.5	24.26	24.70	1.107			-0.15	0.567	0.628	
	LTE Band 26	15M	QPSK	1	0	Back	15mm	Ant 1	DSI 4	26865	831.5	25.20	25.70	1.122			-0.10	0.727	0.816	
	LTE Band 26	15M	QPSK	36	0	Back	15mm	Ant 1	DSI 4	26865	831.5	24.26	24.70	1.107			-0.16	0.608	0.673	
	LTE Band 26	15M	QPSK	75	0	Back	15mm	Ant 1	DSI 4	26865	831.5	24.14	24.70	1.138			0.03	0.605	0.688	
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Ant 4	DSI 3	132322	1745	19.36	20.20	1.213			-0.01	0.428	0.519	
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Ant 4	DSI 3	132322	1745	19.35	20.20	1.216			0.05	0.443	0.539	
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	132322	1745	19.36	20.20	1.213			0.13	0.505	0.613	
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	132322	1745	19.35	20.20	1.216			0.19	0.528	0.642	
	LTE Band 66	20M	QPSK	1	0	Front	15mm	Ant 4	DSI 4	132322	1745	24.77	25.70	1.239			-0.10	0.291	0.361	
	LTE Band 66	20M	QPSK	50	0	Front	15mm	Ant 4	DSI 4	132322	1745	23.50	24.70	1.318			0.10	0.238	0.314	
	LTE Band 66	20M	QPSK	1	0	Back	15mm	Ant 4	DSI 4	132322	1745	24.77	25.70	1.239			-0.09	0.365	0.452	
	LTE Band 66	20M	QPSK	50	0	Back	15mm	Ant 4	DSI 4	132322	1745	23.50	24.70	1.318			0.08	0.289	0.381	
	LTE Band 4	20M	QPSK	1	0	Front	5mm	Ant 4	DSI3	20175	1732.5	19.22	20.70	1.406			0.06	0.404	0.568	Other PA
	LTE Band 4	20M	QPSK	50	0	Front	5mm	Ant 4	DSI3	20175	1732.5	19.18	20.70	1.419			-0.07	0.418	0.593	Other PA
	LTE Band 4	20M	QPSK	1	0	Back	5mm	Ant 4	DSI3	20175	1732.5	19.22	20.70	1.406			0.02	0.476	0.669	Other PA
	LTE Band 4	20M	QPSK	50	0	Back	5mm	Ant 4	DSI3	20175	1732.5	19.18	20.70	1.419			-0.13	0.504	0.715	Other PA
	LTE Band 4	20M	QPSK	1	0	Front	15mm	Ant 4	DSI4	20175	1732.5	24.61	25.70	1.285			0.16	0.274	0.352	Other PA
	LTE Band 4	20M	QPSK	50	0	Front	15mm	Ant 4	DSI4	20175	1732.5	23.73	24.70	1.25			-0.10	0.224	0.280	Other PA
	LTE Band 4	20M	QPSK	1	0	Back	15mm	Ant 4	DSI4	20175	1732.5	24.61	25.70	1.285			0.08	0.344	0.442	Other PA
	LTE Band 4	20M	QPSK	50	0	Front	15mm	Ant 4	DSI4	20175	1732.5	23.73	24.70	1.25			0.03	0.272	0.340	Other PA
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Ant 5	DSI 3	132322	1745	17.82	19.00	1.312			-0.18	0.609	0.799	
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Ant 5	DSI 3	132322	1745	17.78	19.00	1.324			-0.17	0.603	0.798	
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 5	DSI 3	132322	1745	17.82	19.00	1.312			0.18	0.763	1.001	
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 5	DSI 3	132072	1720	17.79	19.00	1.321			-0.04	0.753	0.995	
66	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 5	DSI 3	132572	1770	17.80	19.00	1.318			-0.07	0.817	1.077	
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Ant 5	DSI 3	132322	1745	17.78	19.00	1.324			-0.10	0.796	1.054	
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Ant 5	DSI 3	132072	1720	17.65	19.00	1.365			0.15	0.764	1.043	
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Ant 5	DSI 3	132572	1770	17.63	19.00	1.371			0.02	0.783	1.073	
	LTE Band 66	20M	QPSK	100	0	Back	5mm	Ant 5	DSI 3	132322	1745	17.88	19.00	1.294			0.00	0.791	1.024	
	LTE Band 66	20M	QPSK	1	0	Front	15mm	Ant 5	DSI 4	132322	1745	23.54	25.00	1.4			-0.07	0.441	0.617	
	LTE Band 66	20M	QPSK	50	0	Front	15mm	Ant 5	DSI 4	132322	1745	23.49	25.00	1.416			-0.11	0.429	0.607	
	LTE Band 66	20M	QPSK	1	0	Back	15mm	Ant 5	DSI 4	132322	1745	23.54	25.00	1.4			0.06	0.560	0.784	
	LTE Band 66	20M	QPSK	50	0	Back	15mm	Ant 5	DSI 4	132322	1745	23.49	25.00	1.416			0.09	0.550	0.779	
	LTE Band 4	20M	QPSK	1	0	Back	5mm	Ant 5	DSI3	20175	1732.5	17.87	18.70	1.211			-0.01	0.742	0.899	Other PA
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Ant 6	DSI 4	132322	1745	18.36	19.50	1.3			-0.08	0.541	0.703	
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Ant 6	DSI 4	132322	1745	18.33	19.50	1.309			-0.14	0.553	0.724	
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	132322	1745	18.36	19.50	1.3			0.14	0.665	0.865	
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	132072	1720	18.32	19.50	1.312			-0.09	0.562	0.737	
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	132572	1770	18.34	19.50	1.306			0.14	0.718	0.938	
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	132322	1745	18.33	19.50	1.309			-0.14	0.678	0.888	
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	132072	1720	18.20	19.50	1.349			-0.04	0.567	0.765	
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	132572	1770	18.24	19.50	1.337			-0.16	0.722	0.965	
	LTE Band 66	20M	QPSK	100	0	Back	5mm	Ant 6	DSI 4	132322	1745	18.29	19.50	1.321			-0.15	0.656	0.867	
	LTE Band 4	20M	QPSK	50	0	Back	5mm	Ant 6	DSI4	20175	1732.5	18.59	19.00	1.099			-0.03	0.647	0.711	Other PA
	LTE Band 66	20M	QPSK	1	0	Front	5mm	Ant 7	DSI 4	132322	1745	20.47	21.50	1.268			-0.18	0.378	0.479	
	LTE Band 66	20M	QPSK	50	0	Front	5mm	Ant 7	DSI 4	132322	1745	20.40	21.50	1.288			-0.18	0.385	0.496	
	LTE Band 66	20M	QPSK	1	0	Back	5mm	Ant 7	DSI 4	132322	1745	20.47	21.50	1.268			0.03	0.489	0.620	
	LTE Band 66	20M	QPSK	50	0	Back	5mm	Ant 7	DSI 4	132322	1745	20.40	21.50	1.288			-0.13	0.494	0.636	
	LTE Band 4	20M	QPSK	50	0	Back	5mm	Ant 7	DSI4	20175	1732.5	20.73	21.20	1.114			0.03	0.356	0.397	Other PA
	LTE Band 71	20M	QPSK	1	0	Front	5mm	Ant 0	DSI 4	133297	680.5	24.36	25.00	1.159			-0.03	0.086	0.100	
	LTE Band 71	20M	QPSK	50	0	Front	5mm	Ant 0	DSI 4	133297	680.5	23.40	24.00	1.148			0.01	0.067	0.077	
	LTE Band 71	20M	QPSK	1	0	Back	5mm	Ant 0	DSI 4	133297	680.5	24.36	25.00	1.159			0.06	0.122	0.141	
	LTE Band 71	20M	QPSK	50	0	Back	5mm	Ant 0	DSI 4	133297	680.5	23.40	24.00	1.148			-0.13	0.094	0.108	
	LTE Band 71	20M	QPSK	1	0	Front	5mm	Ant 1	DSI 3	133297	680.5	22.33	23.50	1.309			-0.06	0.452	0.592	
	LTE Band 71	20M	QPSK	50	0	Front	5mm	Ant 1	DSI 3	133297	680.5	22.30	23.50	1.318			-0.11	0.470	0.619	
	LTE Band 71	20M	QPSK	1	0	Back	5mm	Ant 1	DSI 3	133297	680.5	22.33	23.50	1.309			-0.01	0.523	0.685	
67	LTE Band 71	20M	QPSK	50	0	Back	5mm	Ant 1	DSI 3	133297	680.5	22.30	23.50	1.318			-0.10	0.546	0.720	
	LTE Band 71	20M	QPSK	1	0	Front	15mm	Ant 1	DSI 4	133297	680.5	24.30	25.50	1.318			0.08	0.184	0.243	
	LTE Band 71	20M	QPSK	50	0	Front	15mm	Ant 1	DSI 4	133297	680.5	23.42	24.50	1.282			0.11	0.157	0.201	
	LTE Band 71	20M	QPSK	1	0	Back	15mm	Ant 1	DSI 4	133297	680.5	24.30	25.50	1.318			-0.01	0.202	0.266	
	LTE Band 71	20M	QPSK	50	0	Back	15mm	Ant 1	DSI 4	133297	680.5	23.42	24.50	1.282			0.07	0.171	0.219	
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Ant 4	DSI 3	40620	2593	20.35	20.70	1.084	62.9	1.006	-0.01	0.389	0.424	
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Ant 4	DSI 3	40620	2593	20.30	20.70	1.096	62.9	1.006	-0.09	0.407	0.449	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	40620	2593	20.35	20.70	1.084	62.9	1.006	0.05	0.551	0.601	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	39750	2506	20.30	20.70	1.096	62.9	1.006	0.04	0.595	0.656	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	40185										



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	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	41055	2636.5	20.34	20.70	1.086	62.9	1.006	-0.11	0.534	0.583	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 4	DSI 3	41490	2680	20.28	20.70	1.102	62.9	1.006	-0.10	0.578	0.641	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	40620	2593	20.30	20.70	1.096	62.9	1.006	0.12	0.570	0.628	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	39750	2506	20.25	20.70	1.109	62.9	1.006	0.10	0.565	0.630	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	40185	2549.5	20.16	20.70	1.132	62.9	1.006	-0.12	0.575	0.655	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	41055	2636.5	20.26	20.70	1.107	62.9	1.006	0.16	0.549	0.611	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 4	DSI 3	41490	2680	20.21	20.70	1.119	62.9	1.006	0.01	0.573	0.645	
	LTE Band 41	20M	QPSK	1	0	Front	15mm	Ant 4	DSI 4	40620	2593	25.25	25.70	1.109	62.9	1.006	-0.17	0.194	0.216	
	LTE Band 41	20M	QPSK	50	0	Front	15mm	Ant 4	DSI 4	40620	2593	24.09	24.70	1.151	62.9	1.006	0.08	0.160	0.185	
	LTE Band 41	20M	QPSK	1	0	Back	15mm	Ant 4	DSI 4	40620	2593	25.25	25.70	1.109	62.9	1.006	0.05	0.290	0.324	
	LTE Band 41	20M	QPSK	50	0	Back	15mm	Ant 4	DSI 4	40620	2593	24.09	24.70	1.151	62.9	1.006	-0.08	0.235	0.272	
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Ant 5	DSI 3	40620	2593	19.37	20.70	1.358	62.9	1.006	-0.18	0.278	0.380	
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Ant 5	DSI 3	40620	2593	19.35	20.70	1.365	62.9	1.006	-0.09	0.287	0.394	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 5	DSI 3	40620	2593	19.37	20.70	1.358	62.9	1.006	0.16	0.397	0.542	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 5	DSI 3	40620	2593	19.35	20.70	1.365	62.9	1.006	-0.14	0.394	0.541	
	LTE Band 41	20M	QPSK	1	0	Front	15mm	Ant 5	DSI 4	40620	2593	24.27	25.70	1.39	62.9	1.006	-0.18	0.150	0.210	
	LTE Band 41	20M	QPSK	50	0	Front	15mm	Ant 5	DSI 4	40620	2593	23.20	24.70	1.413	62.9	1.006	0.15	0.120	0.171	
	LTE Band 41	20M	QPSK	1	0	Back	15mm	Ant 5	DSI 4	40620	2593	24.27	25.70	1.39	62.9	1.006	-0.05	0.189	0.264	
	LTE Band 41	20M	QPSK	50	0	Back	15mm	Ant 5	DSI 4	40620	2593	23.20	24.70	1.413	62.9	1.006	-0.02	0.151	0.215	
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Ant 6	DSI 4	40620	2593	21.21	22.00	1.199	62.9	1.006	0.14	0.424	0.511	
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Ant 6	DSI 4	40620	2593	21.20	22.00	1.202	62.9	1.006	0.02	0.388	0.469	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	40620	2593	21.21	22.00	1.199	62.9	1.006	-0.13	0.577	0.696	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	39750	2506	21.20	22.00	1.202	62.9	1.006	0.02	0.579	0.700	
68	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	40185	2549.5	21.18	22.00	1.208	62.9	1.006	-0.03	0.654	0.795	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	41055	2636.5	21.05	22.00	1.245	62.9	1.006	0.06	0.504	0.631	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	41490	2680	21.08	22.00	1.236	62.9	1.006	0.09	0.481	0.598	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	40620	2593	21.20	22.00	1.202	62.9	1.006	-0.10	0.604	0.730	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	39750	2506	21.06	22.00	1.242	62.9	1.006	0.08	0.608	0.760	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	40185	2549.5	21.11	22.00	1.227	62.9	1.006	0.15	0.596	0.736	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	41055	2636.5	21.01	22.00	1.256	62.9	1.006	-0.11	0.551	0.696	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 6	DSI 4	41490	2680	20.98	22.00	1.265	62.9	1.006	0.07	0.527	0.671	
	LTE Band 41	20M	QPSK	1	0	Front	5mm	Ant 7	DSI 4	40620	2593	21.10	22.00	1.23	62.9	1.006	-0.17	0.343	0.424	
	LTE Band 41	20M	QPSK	50	0	Front	5mm	Ant 7	DSI 4	40620	2593	21.08	22.00	1.236	62.9	1.006	0.09	0.365	0.454	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 7	DSI 4	40620	2593	21.10	22.00	1.23	62.9	1.006	0.06	0.524	0.648	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 7	DSI 4	39750	2506	21.03	22.00	1.25	62.9	1.006	0.04	0.528	0.664	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 7	DSI 4	40185	2549.5	20.99	22.00	1.262	62.9	1.006	0.06	0.578	0.734	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 7	DSI 4	41055	2636.5	21.07	22.00	1.239	62.9	1.006	-0.05	0.490	0.611	
	LTE Band 41	20M	QPSK	1	0	Back	5mm	Ant 7	DSI 4	41490	2680	20.94	22.00	1.276	62.9	1.006	-0.18	0.449	0.576	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 7	DSI 4	40620	2593	21.08	22.00	1.236	62.9	1.006	-0.09	0.497	0.618	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 7	DSI 4	39750	2506	20.90	22.00	1.288	62.9	1.006	-0.09	0.510	0.661	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 7	DSI 4	40185	2549.5	20.91	22.00	1.285	62.9	1.006	-0.08	0.544	0.703	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 7	DSI 4	41055	2636.5	21.01	22.00	1.256	62.9	1.006	0.06	0.462	0.584	
	LTE Band 41	20M	QPSK	50	0	Back	5mm	Ant 7	DSI 4	41490	2680	20.89	22.00	1.291	62.9	1.006	-0.15	0.424	0.551	
	LTE Band 42	20M	QPSK	1	0	Front	5mm	Ant 8	DSI 3	42590	3500	18.12	19.20	1.282	62.9	1.006	0.01	0.415	0.535	
	LTE Band 42	20M	QPSK	50	0	Front	5mm	Ant 8	DSI 3	42590	3500	18.10	19.20	1.288	62.9	1.006	0.05	0.461	0.597	
	LTE Band 42	20M	QPSK	1	0	Back	5mm	Ant 8	DSI 3	42590	3500	18.12	19.20	1.282	62.9	1.006	0.12	0.527	0.680	
	LTE Band 42	20M	QPSK	50	0	Back	5mm	Ant 8	DSI 3	42590	3500	18.10	19.20	1.288	62.9	1.006	-0.05	0.562	0.728	
	LTE Band 42	20M	QPSK	1	0	Front	15mm	Ant 8	DSI 4	42590	3500	24.66	25.70	1.271	62.9	1.006	-0.03	0.160	0.205	
	LTE Band 42	20M	QPSK	50	0	Front	15mm	Ant 8	DSI 4	42590	3500	23.67	24.70	1.268	62.9	1.006	-0.14	0.162	0.207	
	LTE Band 42	20M	QPSK	1	0	Back	15mm	Ant 8	DSI 4	42590	3500	24.66	25.70	1.271	62.9	1.006	0.18	0.402	0.514	
	LTE Band 42	20M	QPSK	50	0	Back	15mm	Ant 8	DSI 4	42590	3500	23.67	24.70	1.268	62.9	1.006	-0.12	0.297	0.379	
	LTE Band 42	20M	QPSK	1	0	Front	5mm	Ant 9	DSI 3	42590	3500	21.78	23.50	1.486	62.9	1.006	-0.14	0.381	0.570	
	LTE Band 42	20M	QPSK	50	0	Front	5mm	Ant 9	DSI 3	42590	3500	21.74	23.50	1.5	62.9	1.006	0.13	0.379	0.572	
	LTE Band 42	20M	QPSK	1	0	Back	5mm	Ant 9	DSI 3	42590	3500	21.78	23.50	1.486	62.9	1.006	-0.02	0.493	0.737	
	LTE Band 42	20M	QPSK	50	0	Back	5mm	Ant 9	DSI 3	42590	3500	21.74	23.50	1.5	62.9	1.006	-0.02	0.486	0.733	
	LTE Band 42	20M	QPSK	1	0	Front	15mm	Ant 9	DSI 4	42590	3500	23.36	25.00	1.459	62.9	1.006	-0.12	0.123	0.181	
	LTE Band 42	20M	QPSK	50	0	Front	15mm	Ant 9	DSI 4	42590	3500	22.19	24.00	1.517	62.9	1.006	-0.06	0.124	0.189	
	LTE Band 42	20M	QPSK	1	0	Back	15mm	Ant 9	DSI 4	42590	3500	23.36	25.00	1.459	62.9	1.006	0.12	0.151	0.222	
	LTE Band 42	20M	QPSK	50	0	Back	15mm	Ant 9	DSI 4	42590	3500	22.19	24.00	1.517	62.9	1.006	0.10	0.158	0.241	
	LTE Band 42	20M	QPSK	1	0	Front	5mm	Ant 10	DSI 4	42590	3500	18.54	19.70	1.306	62.9	1.006	-0.11	0.299	0.393	
	LTE Band 42	20M	QPSK	50	0	Front	5mm	Ant 10	DSI 4	42590	3500	18.53	19.70	1.309	62.9	1.006	0.10	0.271	0.357	
	LTE Band 42	20M	QPSK	1	0	Back	5mm	Ant 10	DSI 4	42590	3500	18.54	19.70	1.306	62.9	1.006	-0.13	0.461	0.606	
	LTE Band 42	20M	QPSK	50	0	Back	5mm	Ant 10	DSI 4	42590	3500	18.53	19.70	1.309	62.9	1.006	0.17	0.449	0.591	
	LTE Band 42	20M	QPSK	1	0	Front	5mm	Ant 11	DSI 3	42590	3500	15.51	17.00	1.409	62.9	1.006	0.03	0.031	0.044	
	LTE Band 42	20M	QPSK	50	0	Front	5mm	Ant 11	DSI 3	42590	3500	15.50	17.00	1.413	62.9	1.006	-0.12	0.038	0.054	
69	LTE Band 42	20M	QPSK	1	0	Back	5mm	Ant 11	DSI 3	42590	3500	15.51	17.00	1.409	62.9	1.006	-0.02	0.689	0.977	
	LTE Band 42	20M	QPSK	1	0	Back	5mm	Ant 11	DSI 3	42190	3460	15.48	17.00	1.419	62.9	1.006	-0.03	0.609	0.869	
	LTE Band 42	20M	QPSK	1	0	Back	5mm	Ant 11	DSI 3	42990	3540	15.45	17.00	1.429	62.9	1.006	0.02	0.606	0.871	
	LTE Band 42	20M	QPSK	50	0	Back	5mm	Ant 11	DSI 3	42590	3500	15.50	17.00	1.413	62					



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	LTE Band 42	20M	QPSK	50	0	Front	15mm	Ant 11	DSI 4	42590	3500	22.37	24.00	1.455	62.9	1.006	0.13	0.001	0.001	
	LTE Band 42	20M	QPSK	1	0	Back	15mm	Ant 11	DSI 4	42590	3500	23.40	25.00	1.445	62.9	1.006	-0.07	0.609	0.885	
	LTE Band 42	20M	QPSK	1	0	Back	15mm	Ant 11	DSI 4	42190	3460	23.20	25.00	1.514	62.9	1.006	0.10	0.564	0.859	
	LTE Band 42	20M	QPSK	1	0	Back	15mm	Ant 11	DSI 4	42990	3540	23.27	25.00	1.489	62.9	1.006	0.17	0.596	0.893	
	LTE Band 42	20M	QPSK	50	0	Back	15mm	Ant 11	DSI 4	42590	3500	22.37	24.00	1.455	62.9	1.006	0.03	0.591	0.865	
	LTE Band 42	20M	QPSK	50	0	Back	15mm	Ant 11	DSI 4	42190	3460	22.13	24.00	1.538	62.9	1.006	0.06	0.581	0.899	
	LTE Band 42	20M	QPSK	50	0	Back	15mm	Ant 11	DSI 4	42990	3540	22.23	24.00	1.503	62.9	1.006	-0.04	0.537	0.812	
	LTE Band 42	20M	QPSK	100	0	Back	15mm	Ant 11	DSI 4	42590	3500	22.40	24.00	1.445	62.9	1.006	-0.13	0.571	0.830	
	LTE Band 48	20M	QPSK	1	0	Front	5mm	Ant 8	DSI 3	55830	3609	20.94	21.50	1.138	62.9	1.006	-0.14	0.425	0.487	
	LTE Band 48	20M	QPSK	50	0	Front	5mm	Ant 8	DSI 3	55830	3609	20.93	21.50	1.14	62.9	1.006	-0.14	0.467	0.536	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 8	DSI 3	55830	3609	20.94	21.50	1.138	62.9	1.006	-0.14	0.663	0.759	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 8	DSI 3	55340	3560	20.79	21.50	1.178	62.9	1.006	0.01	0.708	0.839	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 8	DSI 3	56150	3641	20.83	21.50	1.167	62.9	1.006	0.06	0.606	0.711	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 8	DSI 3	56640	3690	20.81	21.50	1.172	62.9	1.006	-0.03	0.497	0.586	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 8	DSI 3	55830	3609	20.93	21.50	1.14	62.9	1.006	0.06	0.682	0.782	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 8	DSI 3	55340	3560	20.77	21.50	1.183	62.9	1.006	0.16	0.684	0.814	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 8	DSI 3	56150	3641	20.86	21.50	1.159	62.9	1.006	0.10	0.576	0.672	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 8	DSI 3	56640	3690	20.83	21.50	1.167	62.9	1.006	-0.13	0.485	0.569	
	LTE Band 48	20M	QPSK	100	0	Back	5mm	Ant 8	DSI 3	55830	3609	20.89	21.50	1.151	62.9	1.006	0.04	0.620	0.718	
	LTE Band 48	20M	QPSK	1	0	Front	15mm	Ant 8	DSI 4	55830	3609	24.53	25.00	1.114	62.9	1.006	0.07	0.112	0.126	
	LTE Band 48	20M	QPSK	50	0	Front	15mm	Ant 8	DSI 4	55830	3609	23.40	24.00	1.148	62.9	1.006	0.13	0.105	0.121	
	LTE Band 48	20M	QPSK	1	0	Back	15mm	Ant 8	DSI 4	55830	3609	24.53	25.00	1.114	62.9	1.006	0.16	0.225	0.252	
	LTE Band 48	20M	QPSK	50	0	Back	15mm	Ant 8	DSI 4	55830	3609	23.40	24.00	1.148	62.9	1.006	-0.15	0.187	0.216	
	LTE Band 48	20M	QPSK	1	0	Front	5mm	Ant 9	DSI 3	55830	3609	21.58	23.00	1.387	62.9	1.006	0.12	0.279	0.389	
	LTE Band 48	20M	QPSK	50	0	Front	5mm	Ant 9	DSI 3	55830	3609	21.51	23.00	1.409	62.9	1.006	-0.11	0.285	0.404	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 9	DSI 3	55830	3609	21.58	23.00	1.387	62.9	1.006	0.05	0.341	0.476	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 9	DSI 3	55830	3609	21.51	23.00	1.409	62.9	1.006	0.16	0.282	0.400	
	LTE Band 48	20M	QPSK	1	0	Front	15mm	Ant 9	DSI 4	55830	3609	22.46	24.00	1.426	62.9	1.006	-0.05	0.062	0.089	
	LTE Band 48	20M	QPSK	50	0	Front	15mm	Ant 9	DSI 4	55830	3609	21.58	23.00	1.387	62.9	1.006	-0.12	0.058	0.081	
	LTE Band 48	20M	QPSK	1	0	Back	15mm	Ant 9	DSI 4	55830	3609	22.46	24.00	1.426	62.9	1.006	-0.07	0.050	0.072	
	LTE Band 48	20M	QPSK	50	0	Back	15mm	Ant 9	DSI 4	55830	3609	21.58	23.00	1.387	62.9	1.006	0.07	0.048	0.067	
	LTE Band 48	20M	QPSK	1	0	Front	5mm	Ant 10	DSI 4	55830	3609	16.88	18.50	1.452	62.9	1.006	0.09	0.183	0.267	
	LTE Band 48	20M	QPSK	50	0	Front	5mm	Ant 10	DSI 4	55830	3609	16.87	18.50	1.455	62.9	1.006	-0.15	0.193	0.282	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 10	DSI 4	55830	3609	16.88	18.50	1.452	62.9	1.006	-0.16	0.334	0.488	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 10	DSI 4	55830	3609	16.87	18.50	1.455	62.9	1.006	0.16	0.350	0.512	
	LTE Band 48	20M	QPSK	1	0	Front	5mm	Ant 11	DSI 3	55830	3609	15.89	17.50	1.449	62.9	1.006	-0.02	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Front	5mm	Ant 11	DSI 3	55830	3609	15.88	17.50	1.452	62.9	1.006	0.03	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 11	DSI 3	55830	3609	15.89	17.50	1.449	62.9	1.006	0.01	0.582	0.848	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 11	DSI 3	55340	3560	15.79	17.50	1.483	62.9	1.006	-0.15	0.412	0.615	
70	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 11	DSI 3	56150	3641	15.82	17.50	1.472	62.9	1.006	0.01	0.701	1.038	
	LTE Band 48	20M	QPSK	1	0	Back	5mm	Ant 11	DSI 3	56640	3690	15.86	17.50	1.459	62.9	1.006	-0.05	0.614	0.901	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 11	DSI 3	55830	3609	15.88	17.50	1.452	62.9	1.006	0.16	0.500	0.730	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 11	DSI 3	55340	3560	15.65	17.50	1.531	62.9	1.006	0.09	0.371	0.571	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 11	DSI 3	56150	3641	15.80	17.50	1.479	62.9	1.006	0.11	0.577	0.859	
	LTE Band 48	20M	QPSK	50	0	Back	5mm	Ant 11	DSI 3	56640	3690	15.83	17.50	1.469	62.9	1.006	0.11	0.522	0.771	
	LTE Band 48	20M	QPSK	100	0	Back	5mm	Ant 11	DSI 3	55830	3609	15.86	17.50	1.459	62.9	1.006	-0.02	0.504	0.740	
	LTE Band 48	20M	QPSK	1	0	Front	15mm	Ant 11	DSI 4	55830	3609	22.47	24.00	1.422	62.9	1.006	0.04	0.001	0.001	
	LTE Band 48	20M	QPSK	50	0	Front	15mm	Ant 11	DSI 4	55830	3609	21.34	23.00	1.466	62.9	1.006	0.11	0.001	0.001	
	LTE Band 48	20M	QPSK	1	0	Back	15mm	Ant 11	DSI 4	55830	3609	22.47	24.00	1.422	62.9	1.006	0.14	0.274	0.392	
	LTE Band 48	20M	QPSK	50	0	Back	15mm	Ant 11	DSI 4	55830	3609	21.34	23.00	1.466	62.9	1.006	0.05	0.232	0.342	

【ULCA SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note2
	LTE Band 7	20M	QPSK	1	99	Back	5mm	Ant 4	DSI 3	21100+20920	2535+2517	17.83	18.7	1.222	100.000	1	0.110	0.591	0.722	
	LTE Band 7	20M	QPSK	1	99	Back	5mm	Ant 5	DSI 3	21100+20920	2535+2517	18.01	19.2	1.315	100.000	1	0.010	0.514	0.676	
	LTE Band 7	20M	QPSK	1	99	Back	5mm	Ant 6	DSI 4	20850+21048	2510+2529.8	19.05	20	1.245	100.000	1	0.090	0.683	0.85	
	LTE Band 7	20M	QPSK	1	99	Back	5mm	Ant 7	DSI 4	21100+20920	2535+2517	18.05	19.5	1.396	100.000	1	-0.010	0.447	0.624	
	LTE Band 38	20M	QPSK	1	99	Back	5mm	Ant 4	DSI 3	37850+38048	2580+2599.8	20.01	20.7	1.172	62.900	1.006	0.030	0.589	0.694	
	LTE Band 38	20M	QPSK	1	99	Back	5mm	Ant 5	DSI 3	37901+38099	2585.1+2604.9	20.01	20.7	1.172	62.900	1.006	0.010	0.383	0.452	
	LTE Band 38	20M	QPSK	1	0	Back	5mm	Ant 6	DSI 4	38150+37952	2610+2590.2	21.52	22	1.117	62.900	1.006	-0.050	0.637	0.716	
	LTE Band 38	20M	QPSK	1	0	Back	5mm	Ant 7	DSI 4	38150+37952	2610+2590.2	21.02	22	1.253	62.900	1.006	0.060	0.569	0.717	



【FR1 SAR】

Plot No	Band	BW	Modulation	RB Size	RB Offset	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)	Note
	FR1 n2	40M	BPSK	1	1	Front	5mm	Ant 4	DSI 3	376000	1880	19.28	20.20	1.236			0.01	0.678	0.838	
	FR1 n2	40M	BPSK	108	54	Front	5mm	Ant 4	DSI 3	376000	1880	19.24	20.20	1.247			-0.05	0.644	0.803	
	FR1 n2	40M	BPSK	216	0	Front	5mm	Ant 4	DSI 3	376000	1880	19.22	20.20	1.253			0.01	0.631	0.791	
	FR1 n2	40M	BPSK	1	1	Back	5mm	Ant 4	DSI 3	376000	1880	19.28	20.20	1.236			-0.00	0.842	1.041	
	FR1 n2	40M	BPSK	108	54	Back	5mm	Ant 4	DSI 3	376000	1880	19.24	20.20	1.247			-0.06	0.857	1.069	
	FR1 n2	40M	BPSK	216	0	Back	5mm	Ant 4	DSI 3	376000	1880	19.22	20.20	1.253			-0.05	0.843	1.056	
	FR1 n2	40M	BPSK	1	1	Front	15mm	Ant 4	DSI 4	376000	1880	24.38	25.70	1.355			-0.04	0.417	0.565	
	FR1 n2	40M	BPSK	108	54	Front	15mm	Ant 4	DSI 4	376000	1880	23.95	25.70	1.496			0.10	0.363	0.543	
	FR1 n2	40M	BPSK	1	1	Back	15mm	Ant 4	DSI 4	376000	1880	24.38	25.70	1.355			-0.07	0.526	0.713	
	FR1 n2	40M	BPSK	108	54	Back	15mm	Ant 4	DSI 4	376000	1880	23.95	25.70	1.496			0.12	0.483	0.723	
	FR1 n2	40M	BPSK	1	1	Front	5mm	Ant 6	DSI 4	376000	1880	20.21	21.20	1.256			0.13	0.685	0.860	
	FR1 n2	40M	BPSK	108	54	Front	5mm	Ant 6	DSI 4	376000	1880	20.19	21.20	1.262			-0.18	0.611	0.771	
	FR1 n2	40M	BPSK	216	0	Front	5mm	Ant 6	DSI 4	376000	1880	20.14	21.20	1.276			-0.08	0.630	0.804	
71	FR1 n2	40M	BPSK	1	1	Back	5mm	Ant 6	DSI 4	376000	1880	20.21	21.20	1.256			-0.13	0.869	1.091	
	FR1 n2	40M	BPSK	108	54	Back	5mm	Ant 6	DSI 4	376000	1880	20.19	21.20	1.262			-0.14	0.756	0.954	
	FR1 n2	40M	BPSK	216	0	Back	5mm	Ant 6	DSI 4	376000	1880	20.14	21.20	1.276			-0.14	0.812	1.036	
	FR1 n5	20M	BPSK	1	1	Front	5mm	Ant 0	DSI3	167300	836.5	24.71	25.00	1.069			-0.15	0.587	0.628	Other PA
	FR1 n5	20M	BPSK	50	28	Front	5mm	Ant 0	DSI3	167300	836.5	24.68	25.00	1.076			0.12	0.603	0.649	Other PA
	FR1 n5	20M	BPSK	1	1	Back	5mm	Ant 0	DSI3	167300	836.5	24.71	25.00	1.069			0.10	0.822	0.879	Other PA
	FR1 n5	20M	BPSK	50	28	Back	5mm	Ant 0	DSI3	167300	836.5	24.68	25.00	1.076			-0.02	0.825	0.888	Other PA
	FR1 n5	20M	BPSK	100	0	Back	5mm	Ant 0	DSI3	167300	836.5	24.23	24.50	1.064			0.03	0.817	0.869	
	FR1 n5	20M	BPSK	1	1	Front	5mm	Ant 1	DSI3	167300	836.5	20.80	21.20	1.096			0.06	0.868	0.951	Other PA
	FR1 n5	20M	BPSK	50	28	Front	5mm	Ant 1	DSI3	167300	836.5	20.79	21.20	1.099			0.18	0.912	1.002	Other PA
	FR1 n5	20M	BPSK	100	0	Front	5mm	Ant 1	DSI3	167300	836.5	20.68	21.20	1.127			-0.13	0.904	1.019	Other PA
	FR1 n5	20M	BPSK	1	1	Back	5mm	Ant 1	DSI3	167300	836.5	20.80	21.20	1.096			0.10	0.960	1.052	Other PA
72	FR1 n5	20M	BPSK	50	28	Back	5mm	Ant 1	DSI3	167300	836.5	20.79	21.20	1.099			-0.14	0.995	1.094	Other PA
	FR1 n5	20M	BPSK	100	0	Back	5mm	Ant 1	DSI3	167300	836.5	20.68	21.20	1.127			0.08	0.952	1.073	Other PA
	FR1 n5	20M	BPSK	1	1	Front	15mm	Ant 1	DSI4	167300	836.5	25.29	25.70	1.099			0.16	0.638	0.701	Other PA
	FR1 n5	20M	BPSK	50	28	Front	15mm	Ant 1	DSI4	167300	836.5	25.28	25.70	1.102			0.17	0.691	0.761	Other PA
	FR1 n5	20M	BPSK	1	1	Back	15mm	Ant 1	DSI4	167300	836.5	25.29	25.70	1.099			0.11	0.716	0.787	Other PA
	FR1 n5	20M	BPSK	50	28	Back	15mm	Ant 1	DSI4	167300	836.5	25.28	25.70	1.102			-0.04	0.777	0.856	Other PA
	FR1 n5	20M	BPSK	100	0	Back	15mm	Ant 1	DSI4	167300	836.5	24.81	25.20	1.094			0.02	0.718	0.785	Other PA
	FR1 n7	50M	BPSK	1	1	Front	5mm	Ant 4	DSI 3	507000	2535	18.10	18.70	1.148			0.02	0.646	0.742	
	FR1 n7	50M	BPSK	135	68	Front	5mm	Ant 4	DSI 3	507000	2535	18.07	18.70	1.156			0.10	0.618	0.714	
	FR1 n7	50M	BPSK	1	1	Back	5mm	Ant 4	DSI 3	507000	2535	18.10	18.70	1.148			-0.10	0.867	0.995	
	FR1 n7	50M	BPSK	135	68	Back	5mm	Ant 4	DSI 3	507000	2535	18.07	18.70	1.156			0.07	0.840	0.971	
	FR1 n7	50M	BPSK	270	0	Back	5mm	Ant 4	DSI 3	507000	2535	17.92	18.70	1.197			-0.07	0.828	0.991	
	FR1 n7	50M	BPSK	1	1	Front	15mm	Ant 4	DSI 4	507000	2535	25.09	25.70	1.151			0.04	0.565	0.650	
	FR1 n7	50M	BPSK	135	68	Front	15mm	Ant 4	DSI 4	507000	2535	24.89	25.70	1.205			-0.12	0.533	0.642	
	FR1 n7	50M	BPSK	1	1	Back	15mm	Ant 4	DSI 4	507000	2535	25.09	25.70	1.151			-0.06	0.788	0.907	
	FR1 n7	50M	BPSK	135	68	Back	15mm	Ant 4	DSI 4	507000	2535	24.89	25.70	1.205			0.06	0.761	0.917	
	FR1 n7	50M	BPSK	270	0	Back	15mm	Ant 4	DSI 4	507000	2535	24.16	25.20	1.271			-0.10	0.593	0.754	
	FR1 n7	50M	BPSK	1	1	Front	5mm	Ant 5	DSI 3	507000	2535	17.66	19.20	1.426			-0.13	0.434	0.619	
	FR1 n7	50M	BPSK	135	68	Front	5mm	Ant 5	DSI 3	507000	2535	17.65	19.20	1.429			0.14	0.436	0.623	
	FR1 n7	50M	BPSK	1	1	Back	5mm	Ant 5	DSI 3	507000	2535	17.66	19.20	1.426			-0.04	0.612	0.873	
	FR1 n7	50M	BPSK	135	68	Back	5mm	Ant 5	DSI 3	507000	2535	17.65	19.20	1.429			0.10	0.530	0.757	
	FR1 n7	50M	BPSK	270	0	Back	5mm	Ant 5	DSI 3	507000	2535	17.72	19.20	1.406			-0.09	0.517	0.727	
	FR1 n7	50M	BPSK	1	1	Front	15mm	Ant 5	DSI 4	507000	2535	23.68	24.20	1.127			0.18	0.266	0.300	
	FR1 n7	50M	BPSK	135	68	Front	15mm	Ant 5	DSI 4	507000	2535	23.68	24.20	1.127			-0.15	0.257	0.290	
	FR1 n7	50M	BPSK	1	1	Back	15mm	Ant 5	DSI 4	507000	2535	23.68	24.20	1.127			-0.14	0.364	0.410	
	FR1 n7	50M	BPSK	135	68	Back	15mm	Ant 5	DSI 4	507000	2535	23.68	24.20	1.127			0.00	0.320	0.361	
	FR1 n7	50M	BPSK	1	1	Front	5mm	Ant 6	DSI 4	507000	2535	19.50	20.00	1.122			0.02	0.727	0.816	
	FR1 n7	50M	BPSK	135	68	Front	5mm	Ant 6	DSI 4	507000	2535	19.48	20.00	1.127			0.14	0.655	0.738	
	FR1 n7	50M	BPSK	270	0	Front	5mm	Ant 6	DSI 4	507000	2535	19.40	20.00	1.148			0.03	0.647	0.743	
73	FR1 n7	50M	BPSK	1	1	Back	5mm	Ant 6	DSI 4	507000	2535	19.50	20.00	1.122			-0.07	0.948	1.064	
	FR1 n7	50M	BPSK	135	68	Back	5mm	Ant 6	DSI 4	507000	2535	19.48	20.00	1.127			0.04	0.898	1.012	
	FR1 n7	50M	BPSK	270	0	Back	5mm	Ant 6	DSI 4	507000	2535	19.40	20.00	1.148			-0.07	0.611	0.701	
	FR1 n7	50M	BPSK	1	1	Front	5mm	Ant 7	DSI 4	507000	2535	19.48	20.00	1.127			-0.01	0.472	0.532	
	FR1 n7	50M	BPSK	135	68	Front	5mm	Ant 7	DSI 4	507000	2535	19.46	20.00	1.132			-0.17	0.492	0.557	
	FR1 n7	50M	BPSK	1	1	Back	5mm	Ant 7	DSI 4	507000	2535	19.48	20.00	1.127			-0.05	0.560	0.631	
	FR1 n7	50M	BPSK	135	68	Back	5mm	Ant 7	DSI 4	507000	2535	19.46	20.00	1.132			0.03	0.641	0.726	
	FR1 n26	20M	BPSK	1	1	Front	5mm	Ant 0	DSI 4	166300	831.5	24.63	24.70	1.016			-0.05	0.464	0.471	
	FR1 n26	20M	BPSK	50	28	Front	5mm	Ant 0	DSI 4	166300	831.5	24.61	24.70	1.021			0.06	0.476	0.486	
	FR1 n26	20M	BPSK	1	1	Back	5mm	Ant 0	DSI 4	166300	831.5	24.63	24.70	1.016			-0.05	0.649	0.659	
	FR1 n26	20M	BPSK	50	28	Back	5mm	Ant 0	DSI 4	166300	831.5	24.61	24.70	1.021			-0.09	0.693	0.708	
	FR1 n26	20M	BPSK	1	1	Front	5mm	Ant 1	DSI 3	166300	831.5	20.43	20.70	1.064			-0.00	0.601	0.639	
	FR1 n26	20M	BPSK	50	28	Front	5mm	Ant 1	DSI 3	166300	831.5	20.36	20.70	1.081			0.02	0.677	0.732	
	FR1 n26	20M	BPSK	1	1	Back	5mm	Ant 1	DSI 3	166300	831.5	20.43	20.70	1.064			0.09	0.640	0.681	



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74	FR1 n26	20M	BPSK	50	28	Back	5mm	Ant 1	DSI 3	166300	831.5	20.36	20.70	1.081			0.04	0.718	0.776	
	FR1 n26	20M	BPSK	1	1	Front	15mm	Ant 1	DSI 4	166300	831.5	25.38	25.70	1.076			-0.12	0.536	0.577	
	FR1 n26	20M	BPSK	50	28	Front	15mm	Ant 1	DSI 4	166300	831.5	25.34	25.70	1.086			0.01	0.619	0.672	
	FR1 n26	20M	BPSK	1	1	Back	15mm	Ant 1	DSI 4	166300	831.5	25.38	25.70	1.076			0.06	0.594	0.639	
	FR1 n26	20M	BPSK	50	28	Back	15mm	Ant 1	DSI 4	166300	831.5	25.34	25.70	1.086			0.01	0.678	0.736	
	FR1 n66	45M	BPSK	1	1	Front	5mm	Ant 4	DSI 3	349000	1745	19.38	19.70	1.076			0.15	0.475	0.511	
	FR1 n66	45M	BPSK	120	60	Front	5mm	Ant 4	DSI 3	349000	1745	19.37	19.70	1.079			-0.06	0.492	0.531	
	FR1 n66	45M	BPSK	1	1	Back	5mm	Ant 4	DSI 3	349000	1745	19.38	19.70	1.076			0.15	0.560	0.603	
	FR1 n66	45M	BPSK	120	60	Back	5mm	Ant 4	DSI 3	349000	1745	19.37	19.70	1.079			-0.07	0.567	0.612	
	FR1 n66	45M	BPSK	120	60	Back	5mm	Ant 4	DSI3	349000	1745	19.07	19.70	1.156			-0.08	0.517	0.598	Other PA
	FR1 n66	45M	BPSK	1	1	Front	15mm	Ant 4	DSI 4	349000	1745	25.35	25.70	1.084			0.10	0.324	0.351	
	FR1 n66	45M	BPSK	120	60	Front	15mm	Ant 4	DSI 4	349000	1745	25.25	25.70	1.109			0.13	0.354	0.393	
	FR1 n66	45M	BPSK	1	1	Back	15mm	Ant 4	DSI 4	349000	1745	25.35	25.70	1.084			-0.09	0.397	0.430	
	FR1 n66	45M	BPSK	120	60	Back	15mm	Ant 4	DSI 4	349000	1745	25.25	25.70	1.109			0.18	0.444	0.492	
	FR1 n66	45M	BPSK	1	1	Front	5mm	Ant 5	DSI 3	349000	1745	17.57	18.70	1.297			0.15	0.604	0.783	
	FR1 n66	45M	BPSK	120	60	Front	5mm	Ant 5	DSI 3	349000	1745	17.56	18.70	1.3			0.13	0.665	0.865	
	FR1 n66	45M	BPSK	240	0	Front	5mm	Ant 5	DSI 3	349000	1745	17.53	18.70	1.309			-0.15	0.629	0.823	
	FR1 n66	45M	BPSK	1	1	Back	5mm	Ant 5	DSI 3	349000	1745	17.57	18.70	1.297			0.19	0.641	0.831	
	FR1 n66	45M	BPSK	120	60	Back	5mm	Ant 5	DSI 3	349000	1745	17.56	18.70	1.3			0.04	0.822	1.069	
75	FR1 n66	45M	BPSK	240	0	Back	5mm	Ant 5	DSI 3	349000	1745	17.53	18.70	1.309			-0.01	0.836	1.094	
	FR1 n66	45M	BPSK	1	1	Front	15mm	Ant 5	DSI 4	349000	1745	23.41	24.70	1.346			0.18	0.452	0.608	
	FR1 n66	45M	BPSK	120	60	Front	15mm	Ant 5	DSI 4	349000	1745	23.38	24.70	1.355			-0.00	0.469	0.635	
	FR1 n66	45M	BPSK	1	1	Back	15mm	Ant 5	DSI 4	349000	1745	23.41	24.70	1.346			-0.15	0.561	0.755	
	FR1 n66	45M	BPSK	120	60	Back	15mm	Ant 5	DSI 4	349000	1745	23.38	24.70	1.355			-0.10	0.591	0.801	
	FR1 n66	45M	BPSK	240	0	Back	15mm	Ant 5	DSI 4	349000	1745	23.36	24.70	1.361			0.08	0.582	0.792	
	FR1 n66	45M	BPSK	240	0	Back	5mm	Ant 5	DSI3	349000	1745	17.60	18.70	1.288			-0.02	0.648	0.835	Other PA
	FR1 n66	45M	BPSK	1	1	Front	5mm	Ant 6	DSI 4	349000	1745	19.36	21.00	1.459			-0.03	0.482	0.703	
	FR1 n66	45M	BPSK	120	60	Front	5mm	Ant 6	DSI 4	349000	1745	19.34	21.00	1.466			-0.14	0.514	0.754	
	FR1 n66	45M	BPSK	1	1	Back	5mm	Ant 6	DSI 4	349000	1745	19.36	21.00	1.459			-0.17	0.568	0.829	
	FR1 n66	45M	BPSK	120	60	Back	5mm	Ant 6	DSI 4	349000	1745	19.34	21.00	1.466			-0.14	0.611	0.896	
	FR1 n66	45M	BPSK	240	0	Back	5mm	Ant 6	DSI 4	349000	1745	19.20	21.00	1.514			-0.17	0.620	0.939	
	FR1 n66	45M	BPSK	240	0	Back	5mm	Ant 6	DSI4	349000	1745	19.61	20.50	1.227			0.09	0.749	0.919	Other PA
	FR1 n66	45M	BPSK	1	1	Front	5mm	Ant 7	DSI 4	349000	1745	19.32	21.00	1.472			-0.13	0.326	0.480	
	FR1 n66	45M	BPSK	120	60	Front	5mm	Ant 7	DSI 4	349000	1745	19.30	21.00	1.479			0.11	0.386	0.571	
	FR1 n66	45M	BPSK	1	1	Back	5mm	Ant 7	DSI 4	349000	1745	19.32	21.00	1.472			0.05	0.438	0.645	
	FR1 n66	45M	BPSK	120	60	Back	5mm	Ant 7	DSI 4	349000	1745	19.30	21.00	1.479			-0.06	0.464	0.686	
	FR1 n66	45M	BPSK	120	60	Back	5mm	Ant 7	DSI4	349000	1745	20.05	20.70	1.161			-0.06	0.496	0.576	Other PA
	FR1 n71	35M	BPSK	1	1	Front	5mm	Ant 0	DSI 4	136100	680.5	24.62	25.00	1.091			-0.17	0.189	0.206	
	FR1 n71	35M	BPSK	90	45	Front	5mm	Ant 0	DSI 4	136100	680.5	24.44	25.00	1.138			-0.04	0.116	0.132	
	FR1 n71	35M	BPSK	1	1	Back	5mm	Ant 0	DSI 4	136100	680.5	24.62	25.00	1.091			0.03	0.218	0.238	
	FR1 n71	35M	BPSK	90	45	Back	5mm	Ant 0	DSI 4	136100	680.5	24.44	25.00	1.138			-0.10	0.143	0.163	
	FR1 n71	35M	BPSK	1	1	Front	5mm	Ant 1	DSI 3	136100	680.5	23.31	24.00	1.172			0.15	0.294	0.345	
	FR1 n71	35M	BPSK	90	45	Front	5mm	Ant 1	DSI 3	136100	680.5	23.28	24.00	1.18			-0.00	0.535	0.631	
	FR1 n71	35M	BPSK	1	1	Back	5mm	Ant 1	DSI 3	136100	680.5	23.31	24.00	1.172			-0.19	0.335	0.393	
76	FR1 n71	35M	BPSK	90	45	Back	5mm	Ant 1	DSI 3	136100	680.5	23.28	24.00	1.18			-0.06	0.636	0.750	
	FR1 n71	35M	BPSK	1	1	Front	15mm	Ant 1	DSI 4	136100	680.5	24.67	25.50	1.211			0.17	0.094	0.114	
	FR1 n71	35M	BPSK	90	45	Front	15mm	Ant 1	DSI 4	136100	680.5	24.53	25.50	1.25			0.12	0.193	0.241	
	FR1 n71	35M	BPSK	1	1	Back	15mm	Ant 1	DSI 4	136100	680.5	24.67	25.50	1.211			-0.19	0.107	0.130	
	FR1 n71	35M	BPSK	90	45	Back	15mm	Ant 1	DSI 4	136100	680.5	24.53	25.50	1.25			-0.13	0.222	0.278	
	FR1 n41	100M	BPSK	1	1	Front	5mm	Ant 4	DSI 3	518598	2592.99	17.84	18.20	1.086			-0.02	0.530	0.576	
	FR1 n41	100M	BPSK	135	69	Front	5mm	Ant 4	DSI 3	518598	2592.99	17.83	18.20	1.089			0.13	0.522	0.568	
	FR1 n41	100M	BPSK	1	1	Back	5mm	Ant 4	DSI 3	518598	2592.99	17.84	18.20	1.086			-0.09	0.792	0.860	
	FR1 n41	100M	BPSK	135	69	Back	5mm	Ant 4	DSI 3	518598	2592.99	17.83	18.20	1.089			-0.08	0.758	0.825	
	FR1 n41	100M	BPSK	270	0	Back	5mm	Ant 4	DSI 3	518598	2592.99	17.82	18.20	1.091			-0.16	0.760	0.829	
	FR1 n41_HPUE	100M	BPSK	1	1	Back	5mm	Ant 4	DSI 3	518598	2592.99	20.86	21.50	1.159	50.0	1.0	-0.01	0.722	0.837	
	FR1 n41	100M	BPSK	1	1	Front	15mm	Ant 4	DSI 4	518598	2592.99	23.91	24.20	1.069			-0.09	0.362	0.387	
	FR1 n41	100M	BPSK	135	69	Front	15mm	Ant 4	DSI 4	518598	2592.99	23.89	24.20	1.074			-0.01	0.378	0.406	
	FR1 n41	100M	BPSK	1	1	Back	15mm	Ant 4	DSI 4	518598	2592.99	23.91	24.20	1.069			0.17	0.591	0.632	
	FR1 n41	100M	BPSK	135	69	Back	15mm	Ant 4	DSI 4	518598	2592.99	23.89	24.20	1.074			-0.09	0.532	0.571	
	FR1 n41_HPUE	100M	BPSK	1	1	Back	15mm	Ant 4	DSI 4	518598	2592.99	26.25	27.00	1.189	50.0	1.0	-0.09	0.548	0.652	
	FR1 n41	100M	BPSK	1	1	Front	5mm	Ant 5	DSI 3	518598	2592.99	17.58	18.70	1.294			0.04	0.529	0.685	
	FR1 n41	100M	BPSK	135	69	Front	5mm	Ant 5	DSI 3	518598	2592.99	17.54	18.70	1.306			0.06	0.472	0.616	
	FR1 n41	100M	BPSK	1	1	Back	5mm	Ant 5	DSI 3	518598	2592.99	17.58	18.70	1.294			-0.16	0.677	0.876	
	FR1 n41	100M	BPSK	135	69	Back	5mm	Ant 5	DSI 3	518598	2592.99	17.54	18.70	1.306			-0.15	0.634	0.828	
	FR1 n41	100M	BPSK	270	0	Back	5mm	Ant 5	DSI 3	518598	2592.99	17.45	18.70	1.334			-0.00	0.638	0.851	
77	FR1 n41_HPUE	100M	BPSK	1	1	Back	5mm	Ant 5	DSI 3	518598	2592.99	20.48	22.00	1.419	50.0	1.0	-0.05	0.706	1.002	
	FR1 n41	100M	BPSK	1	1	Front	15mm	Ant 5	DSI 4	518598	2592.99	22.95	24.20	1.334			-0.14	0.391	0.522	
	FR1 n41	100M	BPSK	135	69	Front	15mm	Ant 5	DSI 4	518598	2592.99	22.93	24.20	1.34			0.13	0.293	0.393	
	FR1 n41	100M	BPSK	1	1	Back	15mm	Ant 5	DSI 4	518598	2592.99	22.95	24.20	1.334			-0.14	0.494	0.659	
	FR1 n41	100M	BPSK	135	69	Back	15mm	Ant 5	DSI 4	518598	2592.99	22.93	24.20	1.34			-0.19	0.400	0.536	
	FR1 n41_HPUE	100M	BPSK	1	1	Back	15mm	Ant 5	DSI 4	518598	2592.99	25.59	27.00	1.384	50.0	1.0	-0.13	0.481	0.666	
	FR1 n41	100M	BPSK	1	1	Front	5mm	Ant 6	DSI 4	518598	2592.99	18.46	19.00	1.132			0.09	0.351	0.397	



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	FR1 n41	100M	BPSK	1	1	Back	5mm	Ant 6	DSI 4	518598	2592.99	18.46	19.00	1.132			0.17	0.457	0.517	
	FR1 n41	100M	BPSK	135	69	Back	5mm	Ant 6	DSI 4	518598	2592.99	18.45	19.00	1.135			-0.09	0.348	0.395	
	FR1 n41_HPUE	100M	BPSK	1	1	Back	5mm	Ant 6	DSI 4	518598	2592.99	21.48	22.00	1.127	50.0	1.0	-0.04	0.498	0.561	
	FR1 n41	100M	BPSK	1	1	Front	5mm	Ant 7	DSI 4	518598	2592.99	19.12	19.50	1.091			0.09	0.364	0.397	
	FR1 n41	100M	BPSK	135	69	Front	5mm	Ant 7	DSI 4	518598	2592.99	19.10	19.50	1.096			-0.09	0.336	0.368	
	FR1 n41	100M	BPSK	1	1	Back	5mm	Ant 7	DSI 4	518598	2592.99	19.12	19.50	1.091			-0.01	0.509	0.555	
	FR1 n41	100M	BPSK	135	69	Back	5mm	Ant 7	DSI 4	518598	2592.99	19.10	19.50	1.096			0.01	0.418	0.458	
	FR1 n41_HPUE	100M	BPSK	1	1	Back	5mm	Ant 7	DSI 4	518598	2592.99	22.19	22.50	1.074	50.0	1.0	0.09	0.508	0.546	
	FR1 n48	40M	BPSK	1	1	Front	5mm	Ant 8	DSI 3	641666	3624.99	17.69	18.50	1.205			0.08	0.564	0.680	
	FR1 n48	40M	BPSK	1	1	Front	5mm	Ant 8	DSI 3	638000	3570	17.68	18.50	1.208			0.14	0.675	0.815	
	FR1 n48	40M	BPSK	1	1	Front	5mm	Ant 8	DSI 3	645332	3679.98	17.63	18.50	1.222			0.07	0.519	0.634	
	FR1 n48	40M	BPSK	50	28	Front	5mm	Ant 8	DSI 3	641666	3624.99	17.66	18.50	1.213			-0.07	0.554	0.672	
	FR1 n48	40M	BPSK	50	28	Front	5mm	Ant 8	DSI 3	638000	3570	17.59	18.50	1.233			-0.05	0.628	0.774	
	FR1 n48	40M	BPSK	50	28	Front	5mm	Ant 8	DSI 3	645332	3679.98	17.47	18.50	1.268			-0.19	0.557	0.706	
	FR1 n48	40M	BPSK	100	0	Front	5mm	Ant 8	DSI 3	641666	3624.99	17.65	18.00	1.084			0.03	0.551	0.597	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 8	DSI 3	641666	3624.99	17.69	18.50	1.205			-0.12	0.748	0.901	
78	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 8	DSI 3	638000	3570	17.68	18.50	1.208			-0.08	0.904	1.092	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 8	DSI 3	645332	3679.98	17.63	18.50	1.222			0.15	0.701	0.857	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 8	DSI 3	641666	3624.99	17.66	18.50	1.213			0.06	0.785	0.952	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 8	DSI 3	638000	3570	17.59	18.50	1.233			0.14	0.869	1.071	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 8	DSI 3	645332	3679.98	17.47	18.50	1.268			-0.14	0.672	0.852	
	FR1 n48	40M	BPSK	100	0	Back	5mm	Ant 8	DSI 3	641666	3624.99	17.65	18.00	1.084			0.15	0.766	0.830	
	FR1 n48	40M	BPSK	1	1	Front	15mm	Ant 8	DSI 4	641666	3624.99	22.24	23.00	1.191			-0.09	0.232	0.276	
	FR1 n48	40M	BPSK	50	28	Front	15mm	Ant 8	DSI 4	641666	3624.99	22.21	23.00	1.199			0.03	0.229	0.275	
	FR1 n48	40M	BPSK	1	1	Back	15mm	Ant 8	DSI 4	641666	3624.99	22.24	23.00	1.191			-0.03	0.380	0.453	
	FR1 n48	40M	BPSK	50	28	Back	15mm	Ant 8	DSI 4	641666	3624.99	22.21	23.00	1.199			-0.09	0.342	0.410	
	FR1 n48	40M	BPSK	1	1	Front	5mm	Ant 9	DSI 3	641666	3624.99	18.78	20.00	1.324			-0.18	0.451	0.597	
	FR1 n48	40M	BPSK	50	28	Front	5mm	Ant 9	DSI 3	641666	3624.99	18.76	20.00	1.33			-0.16	0.449	0.597	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 9	DSI 3	641666	3624.99	18.78	20.00	1.324			0.02	0.613	0.812	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 9	DSI 3	638000	3570	18.73	20.00	1.34			0.06	0.612	0.820	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 9	DSI 3	645332	3679.98	18.74	20.00	1.337			0.11	0.700	0.936	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 9	DSI 3	641666	3624.99	18.76	20.00	1.33			-0.06	0.586	0.779	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 9	DSI 3	638000	3570	18.67	20.00	1.358			0.12	0.543	0.737	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 9	DSI 3	645332	3679.98	18.70	20.00	1.349			-0.03	0.725	0.978	
	FR1 n48	40M	BPSK	100	0	Back	5mm	Ant 9	DSI 3	641666	3624.99	18.72	20.00	1.343			-0.06	0.716	0.962	
	FR1 n48	40M	BPSK	1	1	Front	15mm	Ant 9	DSI 4	641666	3624.99	22.75	24.00	1.334			-0.08	0.175	0.233	
	FR1 n48	40M	BPSK	50	28	Front	15mm	Ant 9	DSI 4	641666	3624.99	22.61	24.00	1.377			0.03	0.186	0.256	
	FR1 n48	40M	BPSK	1	1	Back	15mm	Ant 9	DSI 4	641666	3624.99	22.75	24.00	1.334			0.03	0.267	0.356	
	FR1 n48	40M	BPSK	50	28	Back	15mm	Ant 9	DSI 4	641666	3624.99	22.61	24.00	1.377			0.14	0.298	0.410	
	FR1 n48	40M	BPSK	1	1	Front	5mm	Ant 10	DSI 4	641666	3624.99	16.13	17.50	1.371			0.16	0.324	0.444	
	FR1 n48	40M	BPSK	50	28	Front	5mm	Ant 10	DSI 4	641666	3624.99	16.09	17.50	1.384			-0.02	0.341	0.472	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 10	DSI 4	641666	3624.99	16.13	17.50	1.371			-0.18	0.541	0.742	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 10	DSI 4	638000	3570	16.09	17.50	1.384			0.08	0.558	0.772	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 10	DSI 4	645332	3679.98	16.07	17.50	1.39			-0.17	0.516	0.717	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 10	DSI 4	641666	3624.99	16.09	17.50	1.384			-0.16	0.561	0.776	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 10	DSI 4	638000	3570	15.97	17.50	1.422			-0.08	0.616	0.876	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 10	DSI 4	645332	3679.98	16.02	17.50	1.406			0.06	0.509	0.716	
	FR1 n48	40M	BPSK	100	0	Back	5mm	Ant 10	DSI 4	641666	3624.99	16.03	17.50	1.403			0.12	0.568	0.797	
	FR1 n48	40M	BPSK	1	1	Front	5mm	Ant 11	DSI 3	641666	3624.99	10.99	12.50	1.416			0.18	0.022	0.031	
	FR1 n48	40M	BPSK	50	28	Front	5mm	Ant 11	DSI 3	641666	3624.99	10.97	12.50	1.422			0.00	0.026	0.037	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 11	DSI 3	641666	3624.99	10.99	12.50	1.416			-0.09	0.515	0.729	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 11	DSI 3	638000	3570	10.89	12.50	1.449			-0.17	0.506	0.733	
	FR1 n48	40M	BPSK	1	1	Back	5mm	Ant 11	DSI 3	645332	3679.98	10.91	12.50	1.442			0.01	0.665	0.959	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 11	DSI 3	641666	3624.99	10.97	12.50	1.422			-0.09	0.707	1.005	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 11	DSI 3	638000	3570	10.80	12.50	1.479			-0.04	0.618	0.914	
	FR1 n48	40M	BPSK	50	28	Back	5mm	Ant 11	DSI 3	645332	3679.98	10.84	12.50	1.466			0.04	0.562	0.824	
	FR1 n48	40M	BPSK	100	0	Back	5mm	Ant 11	DSI 3	641666	3624.99	10.92	12.50	1.439			0.15	0.571	0.822	
	FR1 n48	40M	BPSK	1	1	Front	15mm	Ant 11	DSI 4	641666	3624.99	20.67	22.00	1.358			0.07	0.022	0.030	
	FR1 n48	40M	BPSK	50	28	Front	15mm	Ant 11	DSI 4	641666	3624.99	20.66	22.00	1.361			0.10	0.025	0.034	
	FR1 n48	40M	BPSK	1	1	Back	15mm	Ant 11	DSI 4	641666	3624.99	20.67	22.00	1.358			0.03	0.298	0.405	
	FR1 n48	40M	BPSK	50	28	Back	15mm	Ant 11	DSI 4	641666	3624.99	20.66	22.00	1.361			-0.10	0.281	0.382	
	FR1 n77	100M	BPSK	1	1	Front	5mm	Ant 8	DSI 3	633332	3499.98	17.19	18.00	1.205			0.19	0.546	0.658	
	FR1 n77	100M	BPSK	135	69	Front	5mm	Ant 8	DSI 3	633332	3499.98	17.16	18.00	1.213			-0.10	0.516	0.626	
	FR1 n77	100M	BPSK	1	1	Back	5mm	Ant 8	DSI 3	633332	3499.98	17.19	18.00	1.205			-0.02	0.739	0.890	
	FR1 n77	100M	BPSK	135	69	Back	5mm	Ant 8	DSI 3	633332	3499.98	17.16	18.00	1.213			-0.09	0.689	0.836	
	FR1 n77	100M	BPSK	270	0	Back	5mm	Ant 8	DSI 3	633332	3499.98	17.15	18.00	1.216			-0.11	0.723	0.879	
79	FR1 n77_HPUE	100M	BPSK	1	1	Back	5mm	Ant 8	DSI 3	633332	3499.98	20.13	21.50	1.371	50.0	1.0	-0.03	0.746	1.023	
	FR1 n77	100M	BPSK	1	1	Front	15mm	Ant 8	DSI 4	633332	3499.98	23.28	24.00	1.18			-0.04	0.288	0.340	
	FR1 n77	100M	BPSK	135	69	Front	15mm	Ant 8	DSI 4	633332	3499.98	23.22	24.00	1.197			-0.12	0.280	0.335	
	FR1 n77	100M	BPSK	1	1	Back	15mm	Ant 8	DSI 4	633332	3499.98	23.28	24.00	1.18			-0.08	0.503	0.594	
	FR1 n77	100M	BPSK	135	69	Back	15mm	Ant 8	DSI 4	633332	3499.98	23.22	24.00	1.197			0.01	0.513	0.614	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	15mm	Ant 8	DSI 4	633332	3499.98	26								



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	FR1 n77	100M	BPSK	135	69	Front	5mm	Ant 9	DSI 3	633332	3499.98	17.80	19.00	1.318			0.07	0.388	0.511	
	FR1 n77	100M	BPSK	1	1	Back	5mm	Ant 9	DSI 3	633332	3499.98	17.84	19.00	1.306			-0.07	0.465	0.607	
	FR1 n77	100M	BPSK	135	69	Back	5mm	Ant 9	DSI 3	633332	3499.98	17.80	19.00	1.318			0.03	0.407	0.536	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	5mm	Ant 9	DSI 3	633332	3499.98	20.85	22.00	1.303	50.0	1.0	-0.06	0.434	0.566	
	FR1 n77	100M	BPSK	1	1	Front	15mm	Ant 9	DSI 4	633332	3499.98	23.73	25.00	1.34			-0.10	0.217	0.291	
	FR1 n77	100M	BPSK	135	69	Front	15mm	Ant 9	DSI 4	633332	3499.98	23.69	25.00	1.352			-0.09	0.172	0.233	
	FR1 n77	100M	BPSK	1	1	Back	15mm	Ant 9	DSI 4	633332	3499.98	23.73	25.00	1.34			-0.16	0.311	0.417	
	FR1 n77	100M	BPSK	135	69	Back	15mm	Ant 9	DSI 4	633332	3499.98	23.69	25.00	1.352			-0.07	0.228	0.308	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	15mm	Ant 9	DSI 4	633332	3499.98	25.71	27.00	1.346	50.0	1.0	0.00	0.264	0.355	
	FR1 n77	100M	BPSK	1	1	Front	5mm	Ant 10	DSI 4	633332	3499.98	16.45	17.50	1.274			-0.19	0.319	0.406	
	FR1 n77	100M	BPSK	135	69	Front	5mm	Ant 10	DSI 4	633332	3499.98	16.44	17.50	1.276			0.08	0.357	0.456	
	FR1 n77	100M	BPSK	1	1	Back	5mm	Ant 10	DSI 4	633332	3499.98	16.45	17.50	1.274			-0.15	0.703	0.896	
	FR1 n77	100M	BPSK	135	69	Back	5mm	Ant 10	DSI 4	633332	3499.98	16.44	17.50	1.276			-0.07	0.681	0.869	
	FR1 n77	100M	BPSK	270	0	Back	5mm	Ant 10	DSI 4	633332	3499.98	16.39	17.50	1.291			0.02	0.693	0.895	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	5mm	Ant 10	DSI 4	633332	3499.98	19.39	20.50	1.291	50.0	1.0	-0.06	0.750	0.968	
	FR1 n77	100M	BPSK	1	1	Front	5mm	Ant 11	DSI 3	633332	3499.98	12.81	14.50	1.476			0.08	0.001	0.001	
	FR1 n77	100M	BPSK	135	69	Front	5mm	Ant 11	DSI 3	633332	3499.98	12.79	14.50	1.483			0.04	0.001	0.001	
	FR1 n77	100M	BPSK	1	1	Back	5mm	Ant 11	DSI 3	633332	3499.98	12.81	14.50	1.476			0.01	0.690	1.018	
	FR1 n77	100M	BPSK	135	69	Back	5mm	Ant 11	DSI 3	633332	3499.98	12.79	14.50	1.483			0.10	0.539	0.799	
	FR1 n77	100M	BPSK	270	0	Back	5mm	Ant 11	DSI 3	633332	3499.98	12.78	14.50	1.486			-0.15	0.479	0.712	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	5mm	Ant 11	DSI 3	633332	3499.98	15.88	17.50	1.452	50.0	1.0	-0.07	0.647	0.939	
	FR1 n77	100M	BPSK	1	1	Front	15mm	Ant 11	DSI 4	633332	3499.98	22.61	24.50	1.545			0.17	0.037	0.057	
	FR1 n77	100M	BPSK	135	69	Front	15mm	Ant 11	DSI 4	633332	3499.98	22.57	24.50	1.56			-0.17	0.022	0.034	
	FR1 n77	100M	BPSK	1	1	Back	15mm	Ant 11	DSI 4	633332	3499.98	22.61	24.50	1.545			-0.07	0.465	0.718	
	FR1 n77	100M	BPSK	135	69	Back	15mm	Ant 11	DSI 4	633332	3499.98	22.57	24.50	1.56			0.12	0.460	0.718	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	15mm	Ant 11	DSI 4	633332	3499.98	25.72	27.50	1.507	50.0	1.0	0.18	0.462	0.696	
	FR1 n77	100M	BPSK	1	1	Front	5mm	Ant 8	DSI 3	656000	3840	17.61	18.00	1.094			0.10	0.361	0.395	
	FR1 n77	100M	BPSK	135	69	Front	5mm	Ant 8	DSI 3	656000	3840	17.60	18.00	1.096			0.03	0.288	0.316	
	FR1 n77	100M	BPSK	1	1	Back	5mm	Ant 8	DSI 3	656000	3840	17.61	18.00	1.094			-0.03	0.417	0.456	
	FR1 n77	100M	BPSK	135	69	Back	5mm	Ant 8	DSI 3	656000	3840	17.60	18.00	1.096			0.18	0.328	0.359	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	5mm	Ant 8	DSI 3	656000	3840	20.67	21.50	1.211	50.0	1.0	0.03	0.418	0.506	
	FR1 n77	100M	BPSK	1	1	Front	15mm	Ant 8	DSI 4	656000	3840	23.69	24.00	1.074			-0.08	0.197	0.212	
	FR1 n77	100M	BPSK	135	69	Front	15mm	Ant 8	DSI 4	656000	3840	23.67	24.00	1.079			0.09	0.180	0.194	
	FR1 n77	100M	BPSK	1	1	Back	15mm	Ant 8	DSI 4	656000	3840	23.69	24.00	1.074			0.13	0.261	0.280	
	FR1 n77	100M	BPSK	135	69	Back	15mm	Ant 8	DSI 4	656000	3840	23.67	24.00	1.079			0.01	0.201	0.217	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	15mm	Ant 8	DSI 4	656000	3840	26.60	27.50	1.23	50.0	1.0	0.12	0.248	0.305	
	FR1 n77	100M	BPSK	1	1	Front	5mm	Ant 9	DSI 3	656000	3840	18.58	19.00	1.102			0.10	0.582	0.641	
	FR1 n77	100M	BPSK	135	69	Front	5mm	Ant 9	DSI 3	656000	3840	18.57	19.00	1.104			0.07	0.638	0.704	
	FR1 n77	100M	BPSK	1	1	Back	5mm	Ant 9	DSI 3	656000	3840	18.58	19.00	1.102			0.05	0.655	0.722	
	FR1 n77	100M	BPSK	135	69	Back	5mm	Ant 9	DSI 3	656000	3840	18.57	19.00	1.104			-0.12	0.610	0.673	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	5mm	Ant 9	DSI 3	656000	3840	21.47	22.00	1.113	50.0	1.0	0.08	0.630	0.712	
	FR1 n77	100M	BPSK	1	1	Front	15mm	Ant 9	DSI 4	656000	3840	24.48	25.00	1.127			-0.18	0.352	0.397	
	FR1 n77	100M	BPSK	135	69	Front	15mm	Ant 9	DSI 4	656000	3840	24.47	25.00	1.113			0.19	0.434	0.490	
	FR1 n77	100M	BPSK	1	1	Back	15mm	Ant 9	DSI 4	656000	3840	24.48	25.00	1.127			0.12	0.481	0.542	
	FR1 n77	100M	BPSK	135	69	Back	15mm	Ant 9	DSI 4	656000	3840	24.47	25.00	1.113			0.12	0.321	0.363	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	15mm	Ant 9	DSI 4	656000	3840	26.23	27.00	1.194	50.0	1.0	0.09	0.390	0.466	
	FR1 n77	100M	BPSK	1	1	Front	5mm	Ant 10	DSI 4	656000	3840	16.29	17.50	1.321			0.07	0.338	0.446	
	FR1 n77	100M	BPSK	135	69	Front	5mm	Ant 10	DSI 4	656000	3840	16.18	17.50	1.355			0.15	0.368	0.499	
	FR1 n77	100M	BPSK	1	1	Back	5mm	Ant 10	DSI 4	656000	3840	16.29	17.50	1.321			-0.08	0.554	0.732	
	FR1 n77	100M	BPSK	135	69	Back	5mm	Ant 10	DSI 4	656000	3840	16.18	17.50	1.355			-0.11	0.540	0.732	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	5mm	Ant 10	DSI 4	656000	3840	19.29	20.50	1.321	50.0	1.0	0.10	0.542	0.716	
	FR1 n77	100M	BPSK	1	1	Front	5mm	Ant 11	DSI 3	656000	3840	13.11	14.50	1.377			0.06	0.032	0.044	
	FR1 n77	100M	BPSK	135	69	Front	5mm	Ant 11	DSI 3	656000	3840	13.10	14.50	1.38			0.02	0.022	0.030	
	FR1 n77	100M	BPSK	1	1	Back	5mm	Ant 11	DSI 3	656000	3840	13.11	14.50	1.377			0.01	0.693	0.954	
	FR1 n77	100M	BPSK	135	69	Back	5mm	Ant 11	DSI 3	656000	3840	13.10	14.50	1.38			0.18	0.556	0.767	
	FR1 n77	100M	BPSK	270	0	Back	5mm	Ant 11	DSI 3	656000	3840	12.98	14.50	1.419			-0.13	0.514	0.729	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	5mm	Ant 11	DSI 3	656000	3840	16.09	17.50	1.384	50.0	1.0	0.06	0.643	0.890	
	FR1 n77	100M	BPSK	1	1	Front	15mm	Ant 11	DSI 4	656000	3840	23.04	24.50	1.4			-0.07	0.035	0.049	
	FR1 n77	100M	BPSK	135	69	Front	15mm	Ant 11	DSI 4	656000	3840	23.22	24.50	1.343			-0.07	0.027	0.036	
	FR1 n77	100M	BPSK	1	1	Back	15mm	Ant 11	DSI 4	656000	3840	23.04	24.50	1.4			0.17	0.317	0.444	
	FR1 n77	100M	BPSK	135	69	Back	15mm	Ant 11	DSI 4	656000	3840	23.22	24.50	1.343			-0.07	0.270	0.363	
	FR1 n77_HPUE	100M	BPSK	1	1	Back	15mm	Ant 11	DSI 4	656000	3840	25.97	27.50	1.422	50.0	1.0	0.18	0.311	0.442	



【WLAN 2.4GHz_5GHz SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 7+12(12)	Body-worn-Standalone	6	2437	17.30	18.00	1.175	97.08	1.03	-0.15	0.527	0.638	
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 7+12(7)	Body-worn-Standalone	1	2412	17.21	18.00	1.199	97.08	1.03	-0.14	0.581	0.717	
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 7+12(12)	Body-worn-Standalone	11	2462	17.10	18.00	1.23	97.08	1.03	0.06	0.517	0.655	
80	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 7+12(12)	Body-worn-Standalone	6	2437	17.30	18.00	1.175	97.08	1.03	-0.10	0.865	1.047	
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 7+12(7)	Body-worn-Standalone	1	2412	17.21	18.00	1.199	97.08	1.03	-0.13	0.738	0.912	
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 7+12(12)	Body-worn-Standalone	11	2462	17.10	18.00	1.23	97.08	1.03	-0.06	0.825	1.045	
81	WLAN5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 8+10(10)	Body-worn-Standalone	54	5270	17.34	18.00	1.164	100.0	1.0	-0.05	0.734	0.854	
	WLAN5GHz	802.11n-HT40 MCS0	Front	5mm	Ant 8+10(10)	Body-worn-Standalone	62	5310	17.48	18.50	1.265	100.0	1.0	0.03	0.615	0.778	
	WLAN5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 8+10(10)	Body-worn-Standalone	54	5270	17.34	18.00	1.164	100.0	1.0	0.14	0.726	0.845	
	WLAN5GHz	802.11n-HT40 MCS0	Back	5mm	Ant 8+10(10)	Body-worn-Standalone	62	5310	17.48	18.50	1.265	100.0	1.0	0.01	0.602	0.762	
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	5mm	Ant 8+10(10)	Body-worn-Standalone	114	5570	15.51	16.50	1.256	100.0	1.0	-0.08	0.624	0.783	
82	WLAN5GHz	802.11ac-VHT160 MCS0	Back	5mm	Ant 8+10(10)	Body-worn-Standalone	114	5570	15.51	16.50	1.256	100.0	1.0	-0.03	0.833	1.046	
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 8+10(8)	Body-worn-Standalone	155	5775	16.72	17.50	1.197	100.0	1.0	0.15	0.628	0.751	
83	WLAN5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 8+10(8)	Body-worn-Standalone	155	5775	16.72	17.50	1.197	100.0	1.0	-0.03	0.861	1.031	

【Bluetooth SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Note
	Bluetooth	1Mbps	Front	5mm	Ant 7	Full Power	39	2441	18.00	19.50	1.413	77.07	1.081	0.06	0.365	0.558	
	Bluetooth	1Mbps	Back	5mm	Ant 7	Full Power	39	2441	18.00	19.50	1.413	77.07	1.081	0.04	0.306	0.467	
	Bluetooth	1Mbps	Front	5mm	Ant 12	Full Power	39	2441	16.90	18.50	1.445	77.07	1.081	-0.14	0.279	0.436	
84	Bluetooth	1Mbps	Back	5mm	Ant 12	Full Power	39	2441	16.90	18.50	1.445	77.07	1.081	-0.05	0.468	0.731	



16.4 Product specific 10g SAR

【WLAN 2.4GHz_5GHz SAR】

Plot No	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-Up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	Note
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 8+10(10)	Extremity-Standalone	54	5270	17.34	18.00	1.164	100.0	1.0	0.07	1.414	1.646	
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 8+10(10)	Extremity-Standalone	54	5270	17.34	18.00	1.164	100.0	1.0	-0.09	0.571	0.664	
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 8+10(10)	Extremity-Standalone	54	5270	17.34	18.00	1.164	100.0	1.0	-0.07	0.091	0.106	
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 8+10(10)	Extremity-Standalone	54	5270	17.34	18.00	1.164	100.0	1.0	0.14	1.424	1.658	
85	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 8+10(10)	Extremity-Standalone	54	5270	17.34	18.00	1.164	100.0	1.0	0.02	2.210	2.572	
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 8+10(10)	Extremity-Standalone	62	5310	17.48	18.50	1.265	100.0	1.0	0.17	1.980	2.505	
	WLAN5GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 8+10(10)	Extremity-Standalone	54	5270	17.34	18.00	1.164	100.0	1.0	-0.02	0.032	0.038	
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	0mm	Ant 8+10(10)	Extremity-Standalone	114	5570	15.51	16.50	1.256	100.0	1.0	-0.17	0.798	1.002	
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	0mm	Ant 8+10(10)	Extremity-Standalone	114	5570	15.51	16.50	1.256	100.0	1.0	-0.13	0.467	0.587	
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Ant 8+10(10)	Extremity-Standalone	114	5570	15.51	16.50	1.256	100.0	1.0	0.12	0.062	0.078	
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Side	0mm	Ant 8+10(10)	Extremity-Standalone	114	5570	15.51	16.50	1.256	100.0	1.0	-0.07	1.040	1.306	
86	WLAN5GHz	802.11ac-VHT160 MCS0	Top Side	0mm	Ant 8+10(10)	Extremity-Standalone	114	5570	15.51	16.50	1.256	100.0	1.0	-0.13	1.870	2.349	
	WLAN5GHz	802.11ac-VHT160 MCS0	Bottom Side	0mm	Ant 8+10(10)	Extremity-Standalone	114	5570	15.51	16.50	1.256	100.0	1.0	-0.13	0.041	0.051	



16.5 Repeated SAR Measurement

【Repeat SAR 1g - FCC】

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)	Ratio
1st	FR1 n5	20M_BPSK_50_28	Back	5.0	Ant 1	DSI3	167300	836.5	20.79	21.20	1.099			-0.14	0.995	1.094	-
2nd	FR1 n5	20M_BPSK_50_28	Back	5.0	Ant 1	DSI3	167300	836.5	20.79	21.20	1.099			-0.03	0.973	1.069	1.02
1st	FR1 n66	45M_BPSK_240_0	Back	5.0	Ant 5	DSI 3	349000	1745	17.53	18.70	1.309			-0.01	0.836	1.094	-
2nd	FR1 n66	45M_BPSK_240_0	Back	5.0	Ant 5	DSI 3	349000	1745	17.53	18.70	1.309			0.01	0.834	1.092	1.00
1st	FR1 n2	40M_BPSK_1_1	Back	5.0	Ant 6	DSI 4	376000	1880	20.21	21.20	1.256			-0.13	0.869	1.091	-
2nd	FR1 n2	40M_BPSK_1_1	Back	5.0	Ant 6	DSI 4	376000	1880	20.21	21.20	1.256			0.05	0.857	1.076	1.01
1st	WLAN2.4GHz	802.11b 1Mbps	Back	5.0	Ant 7+12(12)	Body-worn-Standalone	6	2437	17.30	18.00	1.175	97.08	1.03	-0.10	0.865	1.047	-
2nd	WLAN2.4GHz	802.11b 1Mbps	Back	5.0	Ant 7+12(12)	Body-worn-Standalone	6	2437	17.30	18.00	1.175	97.08	1.03	0.06	0.849	1.028	1.02
1st	FR1 n7	50M_BPSK_1_1	Back	5.0	Ant 6	DSI 4	507000	2535	19.50	20.00	1.122			-0.07	0.948	1.064	-
2nd	FR1 n7	50M_BPSK_1_1	Back	5.0	Ant 6	DSI 4	507000	2535	19.50	20.00	1.122			0.03	0.932	1.046	1.02
1st	LTE Band 48	20M_QPSK_50_0	Left Tilted	0.0	Ant 8	DSI 1	55340	3560	17.40	18.00	1.148	62.9	1.006	-0.03	0.941	1.087	-
2nd	LTE Band 48	20M_QPSK_50_0	Left Tilted	0.0	Ant 8	DSI 1	55340	3560	17.40	18.00	1.148	62.9	1.006	0.01	0.929	1.073	1.01
1st	LTE Band 48	20M_QPSK_1_0	Left Tilted	0.0	Ant 8	DSI 1	55830	3609	17.51	18.00	1.119	62.9	1.006	-0.12	0.904	1.018	-
2nd	LTE Band 48	20M_QPSK_1_0	Left Tilted	0.0	Ant 8	DSI 1	55830	3609	17.51	18.00	1.119	62.9	1.006	0.05	0.901	1.014	1.00
1st	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0.0	Ant 8+10(10)	Head-Standalone	50	5250	14.17	15.00	1.211			0.06	0.902	1.092	-
2nd	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0.0	Ant 8+10(10)	Head-Standalone	50	5250	14.17	15.00	1.211			0.09	0.883	1.069	1.02
1st	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0.0	Ant 8+10(8)	Head-Standalone	114	5570	13.31	14.00	1.172			-0.00	0.856	1.003	-
2nd	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0.0	Ant 8+10(8)	Head-Standalone	114	5570	13.31	14.00	1.172			0.03	0.837	0.981	1.02
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Back	5.0	Ant 8+10(8)	Body-worn-Standalone	155	5775	16.72	17.50	1.197			-0.03	0.861	1.031	-
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Back	5.0	Ant 8+10(8)	Body-worn-Standalone	155	5775	16.72	17.50	1.197			0.01	0.855	1.023	1.01

【Repeat SAR 10g - FCC】

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	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	Ratio
1st	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0.0	Ant 8+10(10)	Extremity-Standalone	54	5270	17.34	18.00	1.164			2.210	2.572	-
2nd	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0.0	Ant 8+10(10)	Extremity-Standalone	54	5270	17.34	18.00	1.164			2.130	2.479	1.04

General Note:

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

16.6 TDD 5G NR Linearity Data Analysis

General Note:

This device support Power Class 2 and Power Class 3 operations for 5G NR n41/n77/n78. The highest available duty cycle for Power Class 2 operation is 50% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each 5G NR configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are <1.4 W/kg for 1g and < 3.5 W/kg for 10g, Separate SAR testing for Power Class 2 is not required.

NR n77 Part27Q (HPUE)-Linearity Data for Head Ant8			NR n77 Part27O (HPUE)-Linearity Data for Head Ant8		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	15.00	18.50	Maximum Tune up Power (dBm)	15.00	18.50
Reported 1g SAR (W/kg)	0.895	1.059	Reported 1g SAR (W/kg)	0.669	0.728
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	31.62	35.40	Frame Averaged (mW)	31.62	35.40
Linearity SAR (W/kg)	1.002		Linearity SAR (W/kg)	0.749	
% deviation from expected linearity		5.71%	% deviation from expected linearity		-2.78%
NR n77 Part27Q (HPUE)-Linearity Data for Body-worn Ant8			NR n77 Part27O (HPUE)-Linearity Data for Body-worn Ant8		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	18.00	21.50	Maximum Tune up Power (dBm)	18.00	21.50
Reported 1g SAR (W/kg)	0.890	1.023	Reported 1g SAR (W/kg)	0.456	0.506
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	63.10	70.63	Frame Averaged (mW)	63.10	70.63
Linearity SAR (W/kg)	0.996		Linearity SAR (W/kg)	0.510	
% deviation from expected linearity		2.69%	% deviation from expected linearity		-0.87%
NR n77 Part27Q (HPUE)-Linearity Data for Hotspot Ant8			NR n77 Part27O (HPUE)-Linearity Data for Hotspot Ant8		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	15.00	18.50	Maximum Tune up Power (dBm)	15.00	18.50
Reported 1g SAR (W/kg)	0.362	0.408	Reported 1g SAR (W/kg)	0.135	0.142
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	31.62	35.40	Frame Averaged (mW)	31.62	35.40
Linearity SAR (W/kg)	0.405		Linearity SAR (W/kg)	0.151	
% deviation from expected linearity		0.69%	% deviation from expected linearity		-6.03%
NR n41(HPUE)-Linearity Data for Head Ant4			NR n41(HPUE)-Linearity Data for Head Ant5		
	NR n41 (Power Class 3)	NR n41 (Power Class 2)		NR n41 (Power Class 3)	NR n41 (Power Class 2)
Maximum Tune up Power (dBm)	16.20	19.50	Maximum Tune up Power (dBm)	16.70	20.00
Reported 1g SAR (W/kg)	0.656	0.740	Reported 1g SAR (W/kg)	0.767	0.878
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	41.69	44.56	Frame Averaged (mW)	46.77	50.00
Linearity SAR (W/kg)	0.701		Linearity SAR (W/kg)	0.820	
% deviation from expected linearity		5.53%	% deviation from expected linearity		7.09%
NR n41(HPUE)-Linearity Data for Body worn Ant4			NR n41(HPUE)-Linearity Data for Body worn Ant5		
	NR n41 (Power Class 3)	NR n41 (Power Class 2)		NR n41 (Power Class 3)	NR n41 (Power Class 2)
Maximum Tune up Power (dBm)	18.20	21.50	Maximum Tune up Power (dBm)	18.70	22.00
Reported 1g SAR (W/kg)	0.860	0.837	Reported 1g SAR (W/kg)	0.876	1.002



Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	66.07	70.63	Frame Averaged (mW)	74.13	79.24
Linearity SAR (W/kg)	0.919		Linearity SAR (W/kg)	0.936	
% deviation from expected linearity		-8.95%	% deviation from expected linearity		7.00%
NR n41(HPUE)-Linearity Data for Hotspot Ant4			NR n41(HPUE)-Linearity Data for Hotspot Ant5		
	NR n41 (Power Class 3)	NR n41 (Power Class 2)		NR n41 (Power Class 3)	NR n41 (Power Class 2)
Maximum Tune up Power (dBm)	16.20	19.50	Maximum Tune up Power (dBm)	16.70	20.00
Reported 1g SAR (W/kg)	0.319	0.307	Reported 1g SAR (W/kg)	0.442	0.487
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	41.69	44.56	Frame Averaged (mW)	46.77	50.00
Linearity SAR (W/kg)	0.341		Linearity SAR (W/kg)	0.472	
% deviation from expected linearity		-9.97%	% deviation from expected linearity		3.07%

NR n77 Part27Q (HPUE)-Linearity Data for Head Ant9			NR n77 Part27O (HPUE)-Linearity Data for Head Ant9		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	17.50	20.50	Maximum Tune up Power (dBm)	17.50	20.50
Reported 1g SAR (W/kg)	0.687	0.692	Reported 1g SAR (W/kg)	0.756	0.739
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	56.23	56.10	Frame Averaged (mW)	56.23	56.10
Linearity SAR (W/kg)	0.685		Linearity SAR (W/kg)	0.754	
% deviation from expected linearity		0.97%	% deviation from expected linearity		-2.02%
NR n77 Part27Q (HPUE)-Linearity Data for Body-worn Ant9			NR n77 Part27O (HPUE)-Linearity Data for Body-worn Ant9		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	19.00	22.00	Maximum Tune up Power (dBm)	19.00	22.00
Reported 1g SAR (W/kg)	0.607	0.566	Reported 1g SAR (W/kg)	0.722	0.712
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	79.43	79.24	Frame Averaged (mW)	79.43	79.24
Linearity SAR (W/kg)	0.606		Linearity SAR (W/kg)	0.720	
% deviation from expected linearity		-6.53%	% deviation from expected linearity		-1.15%
NR n77 Part27Q (HPUE)-Linearity Data for Hotspot Ant9			NR n77 Part27O (HPUE)-Linearity Data for Hotspot Ant9		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	17.50	20.50	Maximum Tune up Power (dBm)	17.50	20.50
Reported 1g SAR (W/kg)	0.249	0.241	Reported 1g SAR (W/kg)	0.257	0.251
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	56.23	56.10	Frame Averaged (mW)	56.23	56.10
Linearity SAR (W/kg)	0.248		Linearity SAR (W/kg)	0.256	
% deviation from expected linearity		-2.98%	% deviation from expected linearity		-2.10%
NR n41(HPUE)-Linearity Data for Head Ant6			NR n41(HPUE)-Linearity Data for Head Ant7		
	NR n41 (Power Class 3)	NR n41 (Power Class 2)		NR n41 (Power Class 3)	NR n41 (Power Class 2)
Maximum Tune up Power (dBm)	25.50	26.50	Maximum Tune up Power (dBm)	17.00	20.00
Reported 1g SAR (W/kg)	0.347	0.209	Reported 1g SAR (W/kg)	0.646	0.687
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	354.81	223.34	Frame Averaged (mW)	50.12	50.00
Linearity SAR (W/kg)	0.218		Linearity SAR (W/kg)	0.644	



% deviation from expected linearity		-4.31%	% deviation from expected linearity		6.60%
NR n41(HPUE)-Linearity Data for Body worn Ant6			NR n41(HPUE)-Linearity Data for Body worn Ant7		
	NR n41 (Power Class 3)	NR n41 (Power Class 2)		NR n41 (Power Class 3)	NR n41 (Power Class 2)
Maximum Tune up Power (dBm)	19.00	22.00	Maximum Tune up Power (dBm)	19.50	22.50
Reported 1g SAR (W/kg)	0.517	0.561	Reported 1g SAR (W/kg)	0.555	0.546
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	79.43	79.24	Frame Averaged (mW)	89.13	88.91
Linearity SAR (W/kg)	0.516		Linearity SAR (W/kg)	0.554	
% deviation from expected linearity		8.77%	% deviation from expected linearity		-1.39%
NR n41(HPUE)-Linearity Data for Hotspot Ant6			NR n41(HPUE)-Linearity Data for Hotspot Ant7		
	NR n41 (Power Class 3)	NR n41 (Power Class 2)		NR n41 (Power Class 3)	NR n41 (Power Class 2)
Maximum Tune up Power (dBm)	19.00	22.00	Maximum Tune up Power (dBm)	17.00	20.00
Reported 1g SAR (W/kg)	0.345	0.353	Reported 1g SAR (W/kg)	0.289	0.285
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	79.43	79.24	Frame Averaged (mW)	50.12	50.00
Linearity SAR (W/kg)	0.344		Linearity SAR (W/kg)	0.288	
% deviation from expected linearity		2.56%	% deviation from expected linearity		-1.15%

NR n77 Part27Q (HPUE)-Linearity Data for Head Ant10			NR n77 Part27O (HPUE)-Linearity Data for Head Ant10		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	16.00	19.00	Maximum Tune up Power (dBm)	16.00	19.00
Reported 1g SAR (W/kg)	0.670	0.680	Reported 1g SAR (W/kg)	0.852	0.867
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	39.81	39.72	Frame Averaged (mW)	39.81	39.72
Linearity SAR (W/kg)	0.668		Linearity SAR (W/kg)	0.850	
% deviation from expected linearity		1.73%	% deviation from expected linearity		2.00%
NR n77 Part27Q (HPUE)-Linearity Data for Body-worn Ant10			NR n77 Part27O (HPUE)-Linearity Data for Body-worn Ant10		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	17.50	20.50	Maximum Tune up Power (dBm)	17.50	20.50
Reported 1g SAR (W/kg)	0.896	0.968	Reported 1g SAR (W/kg)	0.732	0.716
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	56.23	56.10	Frame Averaged (mW)	56.23	56.10
Linearity SAR (W/kg)	0.894		Linearity SAR (W/kg)	0.730	
% deviation from expected linearity		8.29%	% deviation from expected linearity		-1.95%
NR n77 Part27Q (HPUE)-Linearity Data for Hotspot Ant10			NR n77 Part27O (HPUE)-Linearity Data for Hotspot Ant10		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	16.00	19.00	Maximum Tune up Power (dBm)	16.00	19.00
Reported 1g SAR (W/kg)	0.240	0.233	Reported 1g SAR (W/kg)	0.288	0.261
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	39.81	39.72	Frame Averaged (mW)	39.81	39.72
Linearity SAR (W/kg)	0.239		Linearity SAR (W/kg)	0.287	
% deviation from expected linearity		-2.69%	% deviation from expected linearity		-9.16%



NR n77 Part27Q (HPUE)-Linearity Data for Head Ant11			NR n77 Part27O (HPUE)-Linearity Data for Head Ant11		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	27.50	Maximum Tune up Power (dBm)	24.50	27.50
Reported 1g SAR (W/kg)	0.485	0.466	Reported 1g SAR (W/kg)	0.658	0.644
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	281.84	281.17	Frame Averaged (mW)	281.84	281.17
Linearity SAR (W/kg)	0.484		Linearity SAR (W/kg)	0.656	
% deviation from expected linearity		-3.69%	% deviation from expected linearity		-1.90%
NR n77 Part27Q (HPUE)-Linearity Data for Body-worn Ant11			NR n77 Part27O (HPUE)-Linearity Data for Body-worn Ant11		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	14.50	17.50	Maximum Tune up Power (dBm)	14.50	17.50
Reported 1g SAR (W/kg)	1.018	0.939	Reported 1g SAR (W/kg)	0.954	0.890
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	28.18	28.12	Frame Averaged (mW)	28.18	28.12
Linearity SAR (W/kg)	1.016		Linearity SAR (W/kg)	0.952	
% deviation from expected linearity		-7.54%	% deviation from expected linearity		-6.49%
NR n77 Part27Q (HPUE)-Linearity Data for Hotspot Ant11			NR n77 Part27O (HPUE)-Linearity Data for Hotspot Ant11		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	14.50	17.50	Maximum Tune up Power (dBm)	14.50	17.50
Reported 1g SAR (W/kg)	0.337	0.308	Reported 1g SAR (W/kg)	0.175	0.173
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	28.18	28.12	Frame Averaged (mW)	28.18	28.12
Linearity SAR (W/kg)	0.336		Linearity SAR (W/kg)	0.175	
% deviation from expected linearity		-8.39%	% deviation from expected linearity		-0.91%

Sensor off

NR n77 Part27Q (HPUE)-Linearity Data for Body-worn Ant8			NR n77 Part27O (HPUE)-Linearity Data for Body-worn Ant8		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.00	27.50	Maximum Tune up Power (dBm)	24.00	27.50
Reported 1g SAR (W/kg)	0.614	0.662	Reported 1g SAR (W/kg)	0.280	0.305
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	281.17	Frame Averaged (mW)	251.19	281.17
Linearity SAR (W/kg)	0.687		Linearity SAR (W/kg)	0.313	
% deviation from expected linearity		-3.68%	% deviation from expected linearity		-2.69%
NR n41(HPUE)-Linearity Data for Body worn Ant4			NR n41(HPUE)-Linearity Data for Body worn Ant5		
	NR n41 (Power Class 3)	NR n41 (Power Class 2)		NR n41 (Power Class 3)	NR n41 (Power Class 2)
Maximum Tune up Power (dBm)	24.20	27.00	Maximum Tune up Power (dBm)	24.20	27.00
Reported 1g SAR (W/kg)	0.632	0.652	Reported 1g SAR (W/kg)	0.659	0.666
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	263.03	250.59	Frame Averaged (mW)	263.03	250.59
Linearity SAR (W/kg)	0.602		Linearity SAR (W/kg)	0.628	
% deviation from expected linearity		8.28%	% deviation from expected linearity		6.08%



NR n77 Part27Q (HPUE)-Linearity Data for Body-worn Ant9			NR n77 Part27O (HPUE)-Linearity Data for Body-worn Ant9		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	25.00	27.00	Maximum Tune up Power (dBm)	25.00	27.00
Reported 1g SAR (W/kg)	0.417	0.355	Reported 1g SAR (W/kg)	0.542	0.466
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	316.23	250.59	Frame Averaged (mW)	316.23	250.59
Linearity SAR (W/kg)	0.330		Linearity SAR (W/kg)	0.430	
% deviation from expected linearity		7.43%	% deviation from expected linearity		8.50%

NR n77 Part27Q (HPUE)-Linearity Data for Body-worn Ant11			NR n77 Part27O (HPUE)-Linearity Data for Body-worn Ant11		
	NR n77 (Power Class 3)	NR n77 (Power Class 2)		NR n77 (Power Class 3)	NR n77 (Power Class 2)
Maximum Tune up Power (dBm)	24.50	27.50	Maximum Tune up Power (dBm)	24.50	27.50
Reported 1g SAR (W/kg)	0.718	0.696	Reported 1g SAR (W/kg)	0.444	0.442
Duty Cycle	100.00%	50.00%	Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	281.84	281.17	Frame Averaged (mW)	281.84	281.17
Linearity SAR (W/kg)	0.716		Linearity SAR (W/kg)	0.443	
% deviation from expected linearity		-2.83%	% deviation from expected linearity		-0.21%

17. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN + WLAN 2.4GHz	Yes	Yes	Yes	Yes
2.	WWAN + WLAN 5GHz	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
5.	5GHz WLAN + 2.4GHz WLAN	Yes	Yes	Yes	Yes
6.	WWAN +5GHz WLAN + Bluetooth	Yes	Yes	Yes	Yes
7.	WWAN +5GHz WLAN + 2.4GHz WLAN	Yes	Yes	Yes	Yes
8.	WWAN + WLAN 2.4GHz+ NFC				Yes
9.	WWAN + WLAN 5GHz+ NFC				Yes
10.	WWAN + Bluetooth+ NFC				Yes
11.	5GHz WLAN + Bluetooth+ NFC				Yes
12.	5GHz WLAN + 2.4GHz WLAN+ NFC				Yes
13.	WWAN +5GHz WLAN + Bluetooth+ NFC				Yes
14.	WWAN +5GHz WLAN + 2.4GHz WLAN+ NFC				Yes

General Note:

- This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- WWAN above includes 5G NR bands and EN-DC combination.
- WLAN2.4GHz/WLAN5GHz MIMO SAR can represent SISO SAR to do co-located SAR analysis.
- EUT will choose each GSM, WCDMA, LTE and 5GNR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- For EN-DC mode, Qualcomm Smart Transmit algorithm in WWAN adds directly the time-averaged RF exposure from 4G(LTE) and time-averaged RF exposure from 5G NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G NR to not exceed SAR exposure limit. Therefore, simultaneous transmission compliance between 4G+5G NR operations within an antenna group is demonstrated in the Part 2 Report during algorithm validation.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
- According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz can transmit simultaneously.
- According to the EUT characteristic, when WLAN 2.4GHz and Bluetooth share the same antenna and cannot transmit simultaneously.
- Bluetooth BR/EDR supports Beamforming mode, so Bluetooth BR/EDR standalone SAR summed together as Bluetooth BR/EDR Beamforming SAR.
- NFC can transmit simultaneously with other Radios in extremity exposure condition.
- For distance SAR and non-distance SAR always chose higher SAR to do co-located analysis.
- The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
- When stand-alone SAR is not required for a transmitter or antenna, its SAR is considered zero in the SAR summing process to assess Multi-band transmission SAR compliance.
- For standalone WWAN, always choose the highest SAR among all WWAN bands within the selected antenna for each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each band.
- The equipment under test (EUT) contains the Qualcomm modems supporting 2G/3G/4G/5G technologies and WLAN/BT technologies. these modems are always enabled with Qualcomm Smart Transmit feature to control and manage transmitting power in real time and to ensure the time-averaged RF exposure follows the FCC requirement. Smart Transmit algorithm controls the total RF exposure from all WWAN/WLAN/BT to not exceed FCC limit and each antenna group has controlled the total RF exposure from all transmitter to not exceed FCC limit. Therefore, in Part.1 report, it is evaluated whether the sum of the groups of each antenna does not exceed FCC limit or spatial separation is applied. In addition, each antenna needs to satisfy simultaneous transmission analysis with External radios (NFC) in this report at extremity exposure condition.
- The maximum SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,

- i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
- ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
- iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR ≤ 0.10 for 10g SAR, simultaneously transmission SAR measurement is not necessary.
- iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR 4.0W/kg.
- v) The SPLSR calculated results please refer to section 17.7.

17.1 MIMO SAR Test condition and verification

General Note:

1. Smart Transmit EFS v24 (or lower) uses SISO Plimit to calculate RF exposure from MIMO transmission scenario. Therefore, if MIMO is supported for WWAN technologies (including 5G sub6 NR), below procedure should be performed for validity of Smart Transmit operation:
 - 1) Below procedure should also be performed for Smart Transmit EFS v24 (or higher) if MIMO Plimit is not populated in the EFS but MIMO operation is supported for antennas belonging to the same antenna group (refer to Section 4.2.5 of Qualcomm's document 80-W2112-4).
2. Measure SAR for supported MIMO scenarios in FTM mode with each of the MIMO antennas set to transmit continuously at $P_{test} = \text{minimum } \{P_{limit}(i), P_{max}(i); i=1 \text{ to } n \text{ MIMO antennas}\}$, where $P_{limit}(i)$ is the power level entered in the Smart Transmit EFS for antenna i under the corresponding tech/band/DSI. For Smart Transmit to ensure the compliance in MIMO transmission scenario, the below criteria should be met for measured MIMO SAR (i.e., highest peak spatial-average SAR from the measurement):

$$\text{reported } SAR_{MIMO} = \text{Measured MIMO } SAR_{MIMO} \text{ at } (P_{test} + \text{device total uncertainty}) \leq \text{calc. SAR}$$

$$\text{Where } \text{calc. SAR} = \sum_{i=1}^n \left[SAR_design_target * 10^{\left(\frac{\text{total uncertainty} + P_{test} - P_{limit}(i) - \text{backoff}(i)}{10} \right)} \right]$$

Here,

- n is number of MIMO antennas (in case of 2x2MIMO, $n=2$).
 - $P_{limit}(i)$ is EFS P_{limit} for antenna $i \in$ MIMO for a given tech/band/DSI. P_{limit} corresponds to SAR_design_target .
 - $\text{backoff}(i)$ is backoff from SAR_design_target used for the i th antenna's P_{limit} to meet TER with external radios (i.e., radios outside of Smart Transmit control). If EFS P_{limit} of antenna i corresponds to SAR_design_target , then $\text{backoff}(i) = 0$ in the above equation.
 - P_{test} (i.e., power level used for MIMO SAR measurement, $MIMO.SAR @ P_{test}$) = $\min \{P_{limit}(i), P_{max}(i), i = 1 \text{ to } n \text{ MIMO antenna}\}$. To further clarify, $P_{test} = \min \{P_{limit}(i), SISO.P_{max}(i), MIMO.P_{max}, i = 1 \text{ to } n \text{ antenna} \in MIMO\}$, where, P_{limit} corresponds to SAR_design_target ; $SISO.P_{max}$ and $MIMO.P_{max}$ correspond to the maximum output power (nominal levels without device uncertainty) that device is capable; here, P_{test} is nominal power level, not measured level.
3. If the $\text{reported } SAR_{MIMO}$ does not meet the above condition, then $P_{limit}(i)$ for each of the MIMO antenna in the Smart Transmit EFS should be reduced by $10 \cdot \log_{10}[\text{reported } SAR_{MIMO} / \text{calc. SAR}]$ dB.
 4. Per Qualcomm's document guideline, WLAN MIMO Plimit is configured in the EFS and WLAN MIMO antennas belong to the same antenna group, then SAR measurement results at MIMO Plimit for the corresponding WLAN MIMO transmission scenario can be referred to section 16 in this report.
 5. Per Qualcomm's document guideline, BT MIMO Plimit is not populated in the EFS, but MIMO operation is supported for antennas belonging to the same antenna group, the detail BT MIMO analysis results please referred to appendix H.

17.2 Sub6 Antenna Groups

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

- 1) Case 1: Demonstrate that Sum of maximum reported SAR from each of the sub6 AGs and the reported normalized SAR values from radios outside Smart Transmit should be less than regulatory limits for each supported DSI. This condition must be demonstrated for all antenna combinations of sub6 AGs.
 - i. For a given DSI, obtain the highest *reported* SAR for each antenna out of all supported technologies and frequency bands. Obtain the maximum *reported* SAR for each AG by taking the maximum out of *reported* SAR for all antennas belonging to each AG.
 - ii. Demonstrate that the sum of maximum reported SAR (normalized to regulatory limit) from each of the sub6 AGs and the sum of reported SAR (normalized to regulatory limit) from all supported radios outside of Smart Transmit should be less than 1.0
- 2) Case 2: If the Case 1 is NOT met, then for a given antenna grouping scheme plus external radios/antennas (ERs) (referred to as 'configuration'), demonstrate all AG pairs, all ER pairs and all (AG, ER) pairs in the configuration meet SPLSR criteria (Section 4.3.2 (c) in FCC KDB 447498 D01 v06) for each exposure position under each supported DSI. For a given exposure position under a given DSI, prove all AG pairs, all ER pairs and all (AG, ER) pairs (if there are external radios outside Smart Transmit) in the configuration meet SPLSR.

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

Antenna Group 0 (AG0)	ANT1 & ANT4 & ANT5 & ANT7 & ANT8 & ANT9 & ANT10 & ANT11& ANT12
Antenna Group 1 (AG1)	ANT0 & ANT6

- 3) This model's multi_Tx_factor is 1.0.

The conditions are verified through the following criterias:

- i) (SAR1 + SAR2 criteria): If SPLSR criteria is not used, then the highest reported SAR at *Plimit* for each antenna should be obtained out of all supported technologies and frequency bands for each DSI. Demonstrate that the sum of reported SAR of one antenna from each of the sub6 AGs and the sum of RF exposure from all supported radios outside of Smart Transmit should be less than the regulatory limit as given below for each DSI.
 1. Obtain the worst-case reported SAR for each antenna group (i.e., maximum *reported* SAR at *Plimit* out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and obtain the worst-case RF exposure for each external radio, and demonstrate that the sum of these RF exposures meets: $\{ [\text{max.SAR.AG0} + \text{max.SAR.AG1}] + \text{each external radio worst-case reported SAR (ex: NFC)} \} \leq 1.6$ (for 1g, or 4.0 for 10g). (each external radio worst-case reported SAR is the worst SAR in all combinations of each external radio simultaneous transmission).
- ii) (SPLSR criteria): For each antenna, obtain the highest reported SAR value at *Plimit* out of all supported technologies for each frequency band. Using these values, demonstrate for a given DSI that every antenna from one sub6 AG meets SPLSR criteria with every antenna in another sub6 AG for all frequency bands. This criteria must be demonstrated for all antenna pair combinations irrespective of supported simultaneous transmission scenarios as given below for each DSI:
 - a. SPLSR criteria should be met for all antenna pair combinations of AG0 and AG1. As it can be seen, these include all combinations of antenna groups, antennas, and frequency bands.
 - b. Obtain combined SAR per AG: Obtain the worst-case conservative combined SAR and its peak location for each AG.
 - c. Use the 'closest' peak location out of all antennas of AGj to evaluate SPLSR with other AGs in the configuration. Note, by 'closest', select the peak location out of all antennas (ε AGj) that is closest to the peak location of other AG where SPLSR is evaluated.
- iii) (combination of SPLSR SAR1+SAR2 criteria): If SPLSR criteria for all the combinations of sub6g antenna groups in (i) is demonstrated to show that each AG is mutually exclusive from other AGs, and if the WIFI/BT antennas supported outside of Smart Transmit do not meet SPLSR criteria, then the condition in (ii) reduces to: $\{\text{max.SAR.AG0} + \text{worst-case reported SAR}\} \leq 1.6$ and $\{\text{max.SAR.AG1} + \text{worst-case reported SAR}\} \leq 1.6$ for compliance demonstration (for 1g, or 4.0 for 10g).
- iv) Obtain the worst-case reported SAR for each antenna group, (i.e., maximum *reported* SAR at *Plimit* out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and WIFI/BT antennas supported Smart Transmit technology and there is no other radios in this report, and demonstrate that the sum of these RF exposures meets: $\{ [\text{max.SAR.AG0} + \text{max.SAR.AG1}] \} \leq 1.6$ (for 1g, or 4.0 for 10g).

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

17.3 Head Exposure Conditions

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

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant8	Ant9	Ant10	Ant11	WLAN2.4GHz Ant7+12	WLAN5GHz Ant8+10	BT Ant7	BT Ant12	MAX
Right Cheek	0.708	1.077	0.842	0.542	0.524	0.955	0.214	1.073	0.560	0.544	0.313	0.590	1.077
Right Tilted	0.136	0.360	1.020	0.103	0.661	0.273	0.163	0.366	0.640	0.649	0.064	0.733	1.020
Left Cheek	1.089	0.457	0.633	0.940	1.068	0.325	1.090	0.448	0.961	0.988	0.994	0.927	1.090
Left Tilted	0.161	0.176	0.809	0.239	1.087	0.110	0.408	0.233	0.902	1.092	0.173	1.006	1.092

<AG1 maximum reported SAR>:

Test Position	Ant0	Ant6	MAX
Right Cheek	0.415	0.214	0.415
Right Tilted	0.205	0.139	0.205
Left Cheek	0.259	0.347	0.347
Left Tilted	0.160	0.151	0.160

<Simultaneous Transmission analysis of AG0 + AG1 Worse-case>:

Test Position	AG0	AG1	AG0+AG1
Right Cheek	1.077	0.415	1.49
Right Tilted	1.020	0.205	1.23
Left Cheek	1.090	0.347	1.44
Left Tilted	1.092	0.160	1.25

17.4 Hotspot Exposure Conditions

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

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant8	Ant9	Ant10	Ant11	WLAN2.4GHz Ant7+12	WLAN5GHz Ant8+10	BT Ant7	BT Ant12	MAX
Front	0.550	0.216	0.218	0.224	0.225	0.176	0.188	0.055	0.395	0.348	0.090	0.091	0.550
Back	0.565	0.293	0.280	0.271	0.345	0.248	0.339	0.506	0.525	0.385	0.092	0.228	0.565
Left Edge	0.793	0.446	0.127	0.001	0.057	0.327	0.069	0.122	0.116	0.080	0.002	0.002	0.793
Right Edge	0.145	0.002	0.001	0.461	0.076	0.003	0.426	0.047	0.604	0.356	0.174	0.102	0.604
Top Edge	0.001	0.085	0.504	0.070	0.408	0.088	0.088	0.035	0.685	0.749	0.002	0.137	0.749
Bottom Edge	0.308	0.002	0.052	0.035	0.051	0.003	0.053	0.047	0.044	0.067	0.002	0.002	0.308

<AG1 maximum reported SAR>:

Test Position	Ant0	Ant6	MAX
Front	0.394	0.406	0.406
Back	0.543	0.490	0.543
Left Edge	0.182	0.185	0.185
Right Edge	0.706	0.133	0.706
Top Edge	0.001	0.001	0.001
Bottom Edge	0.395	0.793	0.793

<Simultaneous Transmission analysis of AG0 + AG1 Worse-case>:

Test Position	AG0	AG1	AG0+AG1
Front	0.550	0.406	0.96
Back	0.565	0.543	1.11
Left Edge	0.793	0.185	0.98
Right Edge	0.604	0.706	1.31
Top Edge	0.749	0.001	0.75
Bottom Edge	0.308	0.793	1.10

17.5 Body-Worn Accessory Exposure Conditions

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

Simultaneous Transmission Evaluation of WWAN+WLAN+BT:

<AG0 maximum reported SAR>:

Test Position	Ant1	Ant4	Ant5	Ant7	Ant8	Ant9	Ant10	Ant11	WLAN2.4GHz Ant7+12	WLAN5GHz Ant8+10	BT Ant7	BT Ant12	MAX
Front	1.050	0.884	0.865	0.701	0.815	0.704	0.499	0.054	0.717	0.854	0.558	0.436	1.050
Back	1.094	1.069	1.094	0.842	1.092	0.978	0.968	1.038	1.047	1.046	0.467	0.731	1.094

<AG1 maximum reported SAR>:

Test Position	Ant0	Ant6	MAX
Front	0.649	0.860	0.860
Back	0.898	1.091	1.091

<Simultaneous Transmission analysis of AG0 + AG1 Worse-case>:

Test Position	AG0	AG1	AG0+AG1
Front 5mm	1.050	0.860	1.91
Back 5mm	1.094	1.091	2.19

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

Front 5mm				
Ant combination	AG1	AG0	AG0+AG1	SPLSR
	SAR	SAR		
Ant0-Ant1	0.649	1.050	1.70	1
Ant0-Ant4	0.649	0.884	1.53	
Ant0-Ant5	0.649	0.865	1.51	
Ant0-Ant7	0.649	0.701	1.35	
Ant0-Ant8	0.649	0.815	1.46	
Ant0-Ant9	0.649	0.704	1.35	
Ant0-Ant10	0.649	0.499	1.15	
Ant0-Ant11	0.649	0.054	0.70	
Ant0-WLAN2.4GHz Ant7+12	0.649	0.717	1.37	
Ant0-WLAN5GHz Ant8+10	0.649	0.854	1.50	
Ant0-BT Ant7	0.649	0.558	1.21	
Ant0-BT Ant12	0.649	0.436	1.09	
Ant6-Ant1	0.860	1.050	1.91	2
Ant6-Ant4	0.860	0.884	1.74	3
Ant6-Ant5	0.860	0.865	1.73	4
Ant6-Ant7	0.860	0.701	1.56	
Ant6-Ant8	0.860	0.815	1.68	5
Ant6-Ant9	0.860	0.704	1.56	



Ant6-Ant10	0.860	0.499	1.36	
Ant6-Ant11	0.860	0.054	0.91	
Ant0-WLAN2.4GHz Ant7+12	0.860	0.717	1.58	
Ant0-WLAN5GHz Ant8+10	0.860	0.854	1.71	6
Ant6-BT Ant7	0.860	0.558	1.42	
Ant6-BT Ant12	0.860	0.436	1.30	

Back 5mm				
Ant combination	AG1	AG0	AG0+AG1	SPLSR
	SAR	SAR		
Ant0-Ant1	0.898	1.094	1.99	7
Ant0-Ant4	0.898	1.069	1.97	8
Ant0-Ant5	0.898	1.094	1.99	9
Ant0-Ant7	0.898	0.842	1.74	10
Ant0-Ant8	0.898	1.092	1.99	11
Ant0-Ant9	0.898	0.978	1.88	12
Ant0-Ant10	0.898	0.968	1.87	13
Ant0-Ant11	0.898	1.038	1.94	14
Ant0-WLAN2.4GHz Ant7+12	0.898	1.047	1.95	15
Ant0-WLAN5GHz Ant8+10	0.898	1.046	1.94	16
Ant0-BT Ant7	0.898	0.467	1.37	
Ant0-BT Ant12	0.898	0.731	1.63	17
Ant6-Ant1	1.091	1.094	2.19	18
Ant6-Ant4	1.091	1.069	2.16	19
Ant6-Ant5	1.091	1.094	2.19	20
Ant6-Ant7	1.091	0.842	1.93	21
Ant6-Ant8	1.091	1.092	2.18	22
Ant6-Ant9	1.091	0.978	2.07	23
Ant6-Ant10	1.091	0.968	2.06	24
Ant6-Ant11	1.091	1.038	2.13	25
Ant6-WLAN2.4GHz Ant7+12	1.091	1.047	2.14	26
Ant6-WLAN5GHz Ant8+10	1.091	1.046	2.14	27
Ant6-BT Ant7	1.091	0.467	1.56	
Ant6-BT Ant12	1.091	0.731	1.82	28

17.6 Product specific 10g SAR Exposure Conditions

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

Simultaneous Transmission Evaluation of WWAN+WLAN+BT + NFC:

<AG0 maximum reported SAR>:

Test Position	WLAN5GHz Ant8+10	MAX
Front	1.646	1.646
Back	0.664	0.664
Left Edge	0.106	0.106
Right Edge	1.658	1.658
Top Edge	2.572	2.572
Bottom Edge	0.051	0.051

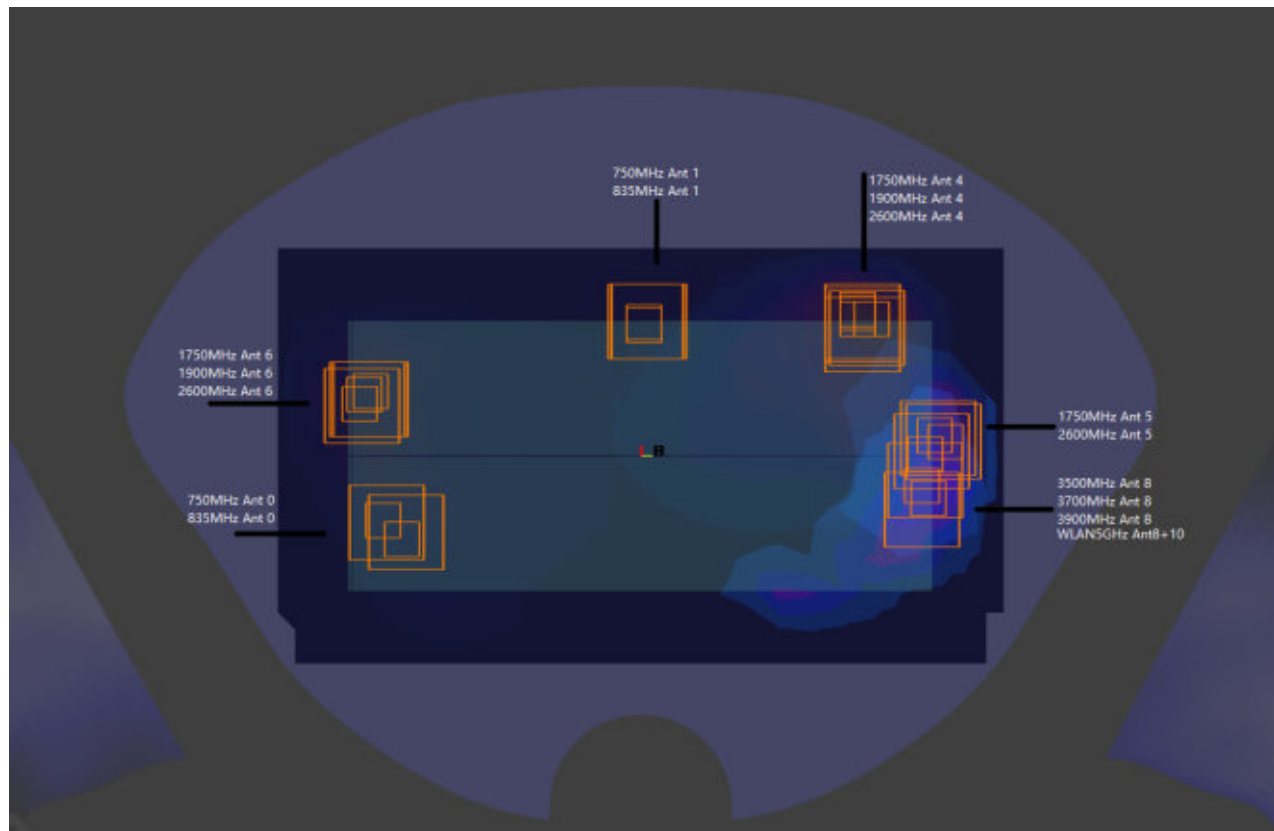
<Simultaneous Transmission analysis of AG0 + AG1 + NFC Worse-case>:

Test Position	AG0	AG1	NFC	AG0+AG1+NFC
Front	1.646		0.001	1.65
Back	0.664		0.020	0.68
Left Edge	0.106		0.001	0.11
Right Edge	1.658		0.001	1.66
Top Edge	2.572		0.001	2.57
Bottom Edge	0.051		0.001	0.05

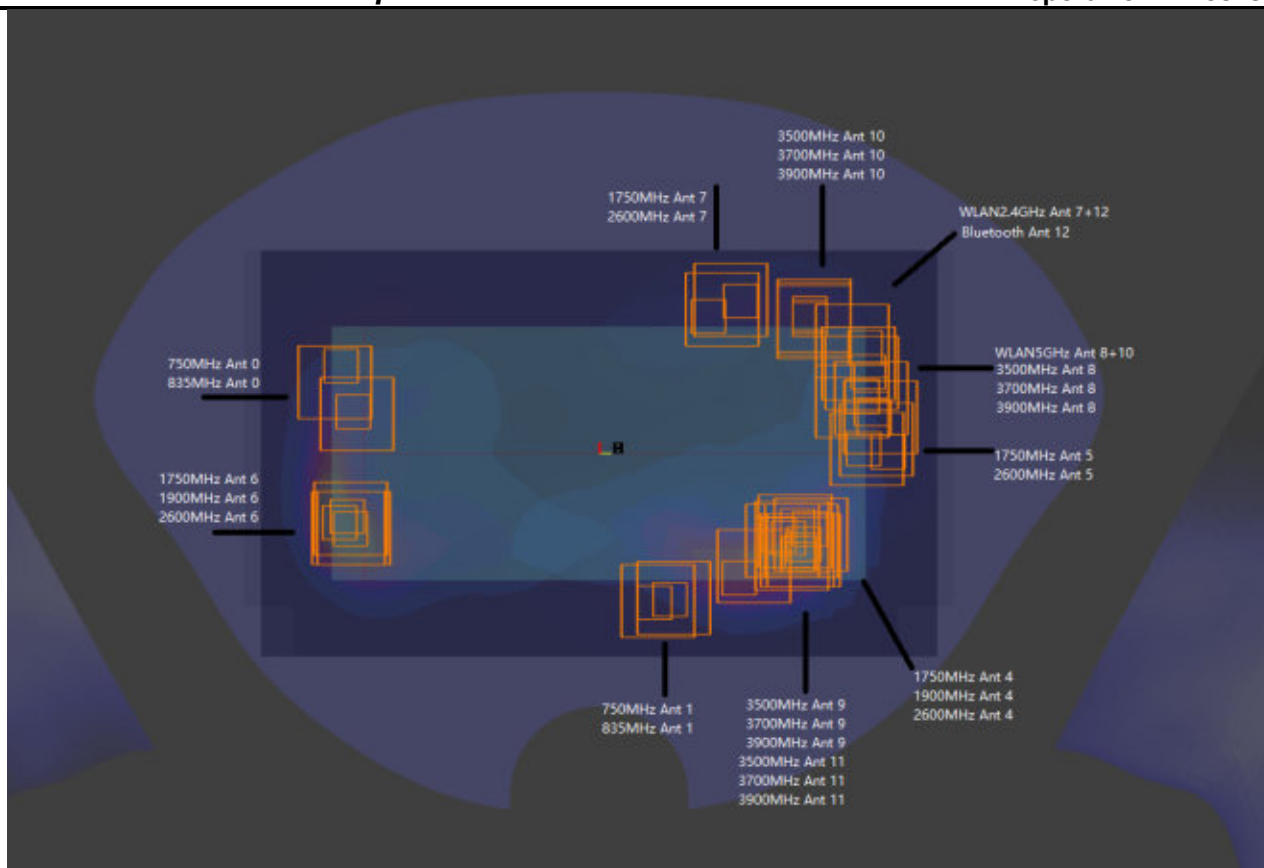
17.7 SPLSR Evaluation and Analysis

General Note:

1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where $(x1, y1, z1)$ and $(x2, y2, z2)$ are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. $SPLSR = (SAR1 + SAR2)1.5 / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$ for 1g SAR, simultaneously transmission SAR measurement is not necessary.
3. Per April 2022 TCB Workshop Notes, AG0 was summed algebraically with the WIFI Antenna 10/12/7/8 for the purposes of hybrid SPLSR combination and they are located at the top of the device.
4. Per April 2022 TCB Workshop, instead of doing a small volume scan over a co-located antenna pair, used summing the SAR values of the co-located pair and using that value in SPLSR calculation. In the calculation used the minimum distance between the spatially separated antenna and the closest antenna of the co-located antenna pair to be conservative.
5. The detail hotspot point for each transmitter in each exposure condition are showing as below figure and the minimum 3D distance for each sum combination is used for SPLSR analysis.
6. The axis peak locations refer to Section 17.8.



Body-worn WWAN+WWAN Front 5mm



Body-worn WWAN+WWAN+BT Back 5mm

<Body-worn>

No.1	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Front	0.649	1.70	5mm	-8.5	-73.5	-204	88.6	1.70	0.03	Not required
Ant1		1.050		5mm	-58	0	-204				
No.2	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Front	0.860	1.91	5mm	-49	-76.5	-204	77.0	1.91	0.03	Not required
Ant1		1.050		5mm	-58	0	-204				
No.3	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Front	0.860	1.74	5mm	-49	-76.5	-204	137.7	1.74	0.02	Not required
Ant4		0.884		5mm	-67	60	-204				
No.4	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Front	0.860	1.73	5mm	-49	-76.5	-204	163.4	1.73	0.01	Not required
Ant5		0.865		5mm	-32	86	-204				
No.5	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Front	0.860	1.68	5mm	-49	-76.5	-204	159.3	1.68	0.01	Not required
Ant8		0.815		5mm	-25	81	-204				
No.6	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Front	0.860	1.71	5mm	-1	-69	-204	154.9	1.71	0.01	Not required
WLAN5GHz Ant8+10		0.854		5mm	-12.4	85.5	-207				



No.7	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.99	5mm	-38.5	-72	-204	101.3	1.99	0.03	Not required
Ant1		1.094		5mm	10.8	16.5	-207				
No.8	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.97	5mm	-38.5	-72	-204	136.4	1.97	0.02	Not required
Ant4		1.069		5mm	7	56.5	-207				
No.9	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.99	5mm	-38.5	-72	-204	153.5	1.99	0.02	Not required
Ant5		1.094		5mm	-21.5	80.5	-207				
No.10	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.74	5mm	-38.5	-72	-204	105.8	1.74	0.02	Not required
Ant7		0.842		5mm	-66.5	30	-207				
No.11	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.99	5mm	-38.5	-72	-204	152.0	1.99	0.02	Not required
Ant8		1.092		5mm	-40.5	80	-207				
No.12	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.88	5mm	-38.5	-72	-204	124.3	1.88	0.02	Not required
Ant9		0.978		5mm	12	41.5	-207				
No.13	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.87	5mm	-38.5	-72	-204	135.2	1.87	0.02	Not required
Ant10		0.968		5mm	-65	60.5	-207				
No.14	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.94	5mm	-38.5	-72	-204	133.4	1.94	0.02	Not required
Ant11		1.038		5mm	1.7	55.2	-207				
No.15	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.95	5mm	-38.5	-72	-204	111.8	1.95	0.02	Not required
WLAN2.4GHz Ant7+12		1.047		5mm	-63	37	-207				
No.16	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.94	5mm	-38.5	-72	-204	125.3	1.94	0.02	Not required
WLAN5GHz Ant8+10		1.046		5mm	-65.1	50.4	-207				
No.17	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant0	Back	0.898	1.63	5mm	-38.5	-72	-204	152.8	1.63	0.01	Not required
BT Ant12		0.731		5mm	-48	80.5	-207				
No.18	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.19	5mm	-4.5	-73	-207	90.8	2.19	0.04	Not required
Ant1		1.094		5mm	10.8	16.5	-207				
No.19	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.16	5mm	-4.5	-73	-207	130.0	2.16	0.02	Not required



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Ant4		1.069		5mm	7	56.5	-207				
No.20	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.19	5mm	-4.5	-73	-207	154.4	2.19	0.02	Not required
Ant5		1.094		5mm	-21.5	80.5	-207				
No.21	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	1.93	5mm	-10	-75	-207	119.2	1.93	0.02	Not required
Ant7		0.842		5mm	-66.5	30	-207				
No.22	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.18	5mm	-4.5	-73	-207	156.2	2.18	0.02	Not required
Ant8		1.092		5mm	-36	80	-207				
No.23	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.07	5mm	-4.5	-73	-207	115.7	2.07	0.03	Not required
Ant9		0.978		5mm	12	41.5	-207				
No.24	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.06	5mm	-10	-75	-207	146.2	2.06	0.02	Not required
Ant10		0.968		5mm	-65	60.5	-207				
No.25	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.13	5mm	-4.5	-73	-207	128.3	2.13	0.02	Not required
Ant11		1.038		5mm	1.7	55.2	-207				
No.26	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.14	5mm	-10	-75	-207	123.9	2.14	0.03	Not required
WLAN2.4GHz Ant7+12		1.047		5mm	-63	37	-207				
No.27	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	2.14	5mm	-10	-75	-207	137.0	2.14	0.02	Not required
WLAN5GHz Ant8+10		1.046		5mm	-65.1	50.4	-207				
No.28	Position	SAR 1g SAR (W/kg)	Summed	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Ant6	Back	1.091	1.82	5mm	-4.5	-73	-207	159.5	1.82	0.02	Not required
BT Ant12		0.731		5mm	-48	80.5	-207				

17.8 Maximum Reported SAR and SAR Peak Locations

General Note:

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

Front 5mm																			
Band		Ant0			Ant1			Ant4			Ant5			Ant6			Ant8		
GSM850	SAR	0.562			1.050														
	Axis	0.5	-82.5	-204.0	-64.0	3.0	-204.0												
GSM1900	SAR							0.709						0.701					
	Axis							-67.0	60.0	-204.0				-41.5	-85.5	-204.0			
WCDMA II	SAR							0.701						0.660					
	Axis							-67.0	61.5	-204.0				-40.0	-87.0	-204.0			
WCDMA IV	SAR							0.722			0.681		0.606						
	Axis							-67.0	60.0	-204.0	-38.5	88.5	-204.0	-40.0	-87.0	-204.0			
WCDMA V	SAR	0.453			0.963														
	Axis	0.5	-82.5	-204.0	-64.0	1.5	-204.0												
LTE Band 2	SAR							0.884						0.156					
	Axis							-64.0	61.5	-204.0				-49.0	-76.5	-204.0			
LTE Band 26	SAR	0.253			0.858														
	Axis	-8.5	-73.5	-204.0	-67.0	10.5	-204.0												
LTE Band 5 Other PA	SAR	0.643			0.947														
	Axis	0.5	-84.0	-204.0	-64.0	1.5	-204.0												
LTE Band 7	SAR							0.570			0.517		0.587						
	Axis							-64.0	68.0	-204.0	-34.0	88.0	-204.0	-43.0	-80.0	-204.0			
LTE Band 66	SAR							0.539			0.798		0.724						
	Axis							-67.0	61.5	-204.0	-38.5	88.5	-204.0	-40.0	-82.5	-204.0			
LTE Band 4 Other PA	SAR							0.593											
	Axis							-67.0	60.0	-204.0									
LTE Band 71	SAR	0.100			0.619														
	Axis	-1.0	-70.5	-204.0	-58.0	0.0	-204.0												
LTE Band 41	SAR							0.449			0.394		0.511						
	Axis							-64.0	68.0	-204.0	-34.0	88.0	-204.0	-43.0	-80.0	-204.0			
LTE Band 42	SAR																0.597		
	Axis															-16.0	81.0		
LTE Band 48	SAR																0.536		
	Axis															-25.0	81.0		
FR1 n2	SAR							0.838						0.860					
	Axis							-67.0	60.0	-204.0				-40.0	-82.5	-204.0			
FR1 n26	SAR	0.486			0.531														
	Axis	2.0	-75.0	-204.0	-65.5	1.5	-204.0												
FR1 n5 Other PA	SAR	0.649			1.019														
	Axis	-1.0	-82.5	-204.0	-67.0	0.0	-204.0												
FR1 n7	SAR							0.742			0.623		0.816						
	Axis							-64.0	61.0	-204.0	-32.0	86.0	-204.0	-43.0	-80.0	-204.0			
FR1 n66	SAR							0.531			0.865		0.754						
	Axis							-67.0	60.0	-204.0	-26.5	87.0	-204.0	-40.0	-82.5	-204.0			



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FR1 n71	SAR	0.206			0.631														
	Axis	-1.0	-69.0	-204.0	-58.0	0.0	-204.0												
FR1 n41	SAR							0.576			0.685			0.397					
	Axis							-64.0	61.0	-204.0	-32.0	86.0	-204.0	-43.0	-80.0	-204.0			
FR1 n48	SAR																0.815		
	Axis																-25.0	81.0	-204.0
FR1 n77	SAR																0.658		
	Axis																-25.0	81.0	-204.0
WLAN5GHz Ant8+10	SAR	0.854																	
	Axis	-12.4	85.5	-207.0															

Back 5mm

Band		Ant0			Ant1			Ant4			Ant5			Ant6			Ant7			Ant8			Ant9			Ant10			Ant11		
GSM850	SAR	0.809			1.081																										
	Axis	-35.4	-75.5	-207.0	10.8	16.5	-207.0																								
GSM1900	SAR							0.992						0.871																	
	Axis							8.4	63.8	-207.0				-2.9	-77.9	-207.0															
WCDMA II	SAR							0.966						0.796																	
	Axis							8.9	63.3	-207.0				-2.4	-79.6	-207.0															
WCDMA IV	SAR							0.888			0.906			0.785			0.842														
	Axis							10.0	62.5	-207.0	-26.2	82.6	-207.0	-1.4	-77.4	-207.0	-68.6	82.1	-207.0												
WCDMA V	SAR	0.646			1.006																										
	Axis	-48.9	-79.4	-207.0	13.4	19.6	-207.0																								
LTE Band 2	SAR							1.040						0.216																	
	Axis							10.5	61.5	-207.0				-10.0	-75.0	-207.0															
LTE Band 26	SAR	0.267			0.915																										
	Axis	-41.5	-82.5	-204.0	15.5	17.1	-207.0																								
LTE Band 5 Other PA	SAR	0.898			1.003																										
	Axis	-31.2	-77.0	-207.0	15.5	17.0	-207.0																								
LTE Band 7	SAR							0.743			0.666			0.906			0.638														
	Axis							7.5	58.5	-207.0	-25.5	83.5	-207.0	-5.0	-78.0	-207.0	-66.0	88.0	-207.0												
LTE Band 66	SAR							0.642			1.077			0.965			0.636														
	Axis							11.1	63.3	-207.0	-24.9	81.0	-207.0	-0.2	-77.9	-207.0	-66.5	80.0	-207.0												
LTE Band 4 Other PA	SAR							0.715																							
	Axis							10.1	62.3	-207.0																					
LTE Band 71	SAR	0.141			0.720																										
	Axis	-38.5	-72.0	-204.0	15.0	22.0	-207.0																								
LTE Band 41	SAR							0.656			0.542			0.795			0.734														
	Axis							8.5	58.5	-207.0	-21.5	80.5	-207.0	-6.0	-78.5	-207.0	-65.0	41.0	-207.0												
LTE Band 42	SAR																			0.728			0.737			0.606			0.977		
	Axis																			-37.0	81.5	-207.0	12.0	41.5	-207.0	-65.0	62.0	-207.0	1.7	55.2	-207.0
LTE Band 48	SAR																			0.839			0.476			0.488			1.038		
	Axis																			-36.0	80.0	-207.0	12.0	42.0	-207.0	-64.0	61.5	-207.0	2.5	58.0	-207.0
FR1 n2	SAR							1.069						1.091																	
	Axis							9.1	61.3	-207.0				-5.4	-77.9	-207.0															
FR1 n26	SAR	0.708			0.776																										
	Axis	-35.2	-77.0	-207.0	13.4	19.1	-207.0																								
FR1 n5 Other PA	SAR	0.888			1.094																										
	Axis	-39.5	-75.5	-207.0	14.9	20.8	-207.0																								
FR1 n7	SAR							0.995			0.873			1.064			0.726														



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18. Uncertainty Assessment

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

19. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [6] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.
- [7] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [8] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [9] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [10] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [11] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [12] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [13] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.
- [14] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015

Appendixes

Please refer to separated files for the following appendixes

Appendix A. Plots of System Performance Check

Appendix B. Plots of High SAR Measurement

Appendix C. DASY Calibration Certificate

Appendix D. Test Setup Photos

Appendix E. Conducted RF Output Power Table

Appendix F. Power measurement connection diagram and CA Conducted RF Output Power Table

Appendix G. Power reduction mechanism verification

Appendix H. Verify MIMO SAR analysis results

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