

FCC SAR TEST REPORT

FCC ID : A4RG0DZQ
Equipment : Phone
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, California, 94043 USA
Standard : FCC 47 CFR Part 2 (2.1093)

The product was received on Sep. 19, 2022 and testing was started from Sep. 20, 2022 and completed on Nov. 21, 2022. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been pass the FCC requirement.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager



Sporton International Inc. EMC & Wireless Communications Laboratory
No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan



Table of Contents

1. Statement of Compliance... 4
2. Equipment Under Test (EUT) Information... 5
2.1 General Information... 5
2.2 Maximum Tune-up Limit... 6
2.3 General LTE SAR Test and Reporting Considerations... 36
2.4 General 5G NR SAR Test and Reporting Considerations... 39
3. TAS feature for RF Exposure compliance... 42
3.1 SAR Characterization – Power Table... 43
4. RF Exposure Limits... 46
4.1 Uncontrolled Environment... 46
4.2 Controlled Environment... 46
5. Guidance Applied... 47
6. Specific Absorption Rate (SAR) ... 48
6.1 Introduction... 48
6.2 SAR Definition... 48
7. System Description and Setup ... 49
7.1 Test Site Locatio... 49
7.2 E-Field Probe... 50
7.3 Data Acquisition Electronics (DAE)... 50
7.4 Phantom... 51
7.5 Device Holder... 52
8. Measurement Procedures... 53
8.1 Spatial Peak SAR Evaluation... 53
8.2 Power Reference Measurement... 54
8.3 Area Scan... 54
8.4 Zoom Scan... 55
8.5 Volume Scan Procedures... 55
8.6 Power Drift Monitoring... 55
9. Test Equipment List... 56
10. System Verification... 58
10.1 Tissue Verification... 58
10.2 System Performance Check Results... 61
10.3 PD System Performance Check Results... 64
11. RF Exposure Positions... 65
11.1 Ear and handset reference point... 65
11.2 Definition of the cheek position... 66
11.3 Definition of the tilt position... 67
11.4 Body Worn Accessory... 67
11.5 Product Specific Exposure... 68
11.6 Wireless Router... 68
12. Measurement procedure for output power and SAR... 69
13. DL/UL carrier aggregation... 77
14. RF Exposure position consideration... 89
15. SAR Test Results... 90
15.1 Head SAR... 93
15.2 Hotspot SAR... 116
15.3 Body Worn Accessory SAR... 134
15.4 Product Specific SAR... 145
15.5 6GHz PD Test Result... 148
15.6 Repeated SAR Measurement... 149
15.7 LTE Band 41 Power Class 2 and Power Class 3 Linearity... 151
16. Simultaneous Transmission Analysis... 153
16.1 5G NR + LTE + WLAN + BT Sim-Tx analysis... 154
16.2 Head Exposure Conditions... 155
16.3 Hotspot Exposure Conditions... 156
16.4 Body-Worn Accessory Exposure Conditions... 157
16.5 Product Specific Exposure Conditions... 158
17. Supplemental Antenna tuner tests results... 159
17.1 Supplemental Head SAR results... 160
17.2 Supplemental Body SAR results... 161
18. Uncertainty Assessment... 162
19. References... 165

- Appendix A. Plots of System Performance Check for SAR and PD
Appendix B. Plots of High SAR and PD Measurement
Appendix C. DASY Calibration Certificate
Appendix D. Output Power Measurement
Appendix E. Test Setup Photos and Antenna Location



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for Google LLC, Phone, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary				Highest Simultaneous Transmission 1g SAR (W/kg)	Highest Simultaneous Transmission 10g SAR (W/kg)
		Head (Separation 0mm)	Body-worn (Separation 10mm)	Hotspot (Separation 10mm)	Product Specific (Separation 0mm)		
		1g SAR (W/kg)					
Licensed	GSM850	1.11	0.81	0.85		1.59	3.46
	GSM1900	0.56	0.91	0.91			
	WCDMA II	0.66	0.67	0.83			
	WCDMA IV	0.52	0.63	0.65			
	WCDMA V	1.17	0.62	0.67			
	LTE B2	1.15	0.97	0.99	2.96		
	LTE B7	1.08	0.59	0.99			
	LTE B12/17	1.19	0.44	0.54			
	LTE B13	1.12	0.52	0.79			
	LTE B14	1.18	0.48	0.85			
	LTE B25/2	0.70	0.99	0.99			
	LTE B26/5	1.08	0.46	0.69			
	LTE B30	0.79	0.64	0.88			
	LTE B41/38	0.88	0.68	0.97			
	LTE B48	0.39	0.61	0.83			
	LTE B66/4	1.18	0.78	0.97	2.87		
	LTE B71	1.19	0.42	0.52			
	FR1 n5	1.09	0.51	0.74			
	FR1 n7	1.09	0.66	0.94			
	FR1 n12	1.18	0.45	0.62			
	FR1 n14	1.10	0.53	0.84			
	FR1 n25/2	0.68	0.87	0.90			
	FR1 n30	0.77	0.79	0.98			
	FR1 n41/38	1.17	0.78	0.99			
FR1 n48	0.99	0.46	0.80				
FR1 n66	0.52	0.78	0.86				
FR1 n71	1.10	0.42	0.54				
FR1 n77	1.19	0.48	0.68				
DTS	2.4GHz WLAN	1.17	0.55	0.51		1.52	
NII	5GHz WLAN	1.15	0.49	0.39	1.62	1.59	3.46
6XD	6GHz WLAN	0.44	0.17		0.19		
DSS	Bluetooth	0.40	0.34	0.26		1.59	
Equipment Class	Frequency Band	Head Reported APD (mW/cm ²)	Body-worn Reported APD (mW/cm ²)	Product Specific Reported APD (mW/cm ²)	Reported PD (mW/cm ²)		
6XD	6GHz WLAN	0.22	0.12	0.43	0.67		
Date of Testing:		2022/9/20 ~ 2022/11/21					

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. 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), Human Exposure to RF Radiation Limits (1.0 mW/cm²) 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.

Reviewed by: Jason Wang
Report Producer: Carlie Tsai



2. Equipment Under Test (EUT) Information

2.1 General Information

Product Feature & Specification	
Equipment Name	Phone
FCC ID	A4RG0DZQ
S/N	28291FQHN00111 28291FQHN00132 28291FQHN00129 28291FQHN00117 28291FQHN00144 28291FQHN00163 28291FQHN00160
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n260 : 37 GHz~40 GHz 5G NR n261 : 27.5 GHz~28.35 GHz WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2G Band: 5150 MHz ~ 5250 MHz WLAN 5.3G Band: 5250 MHz ~ 5350 MHz WLAN 5.5G Band: 5470 MHz ~ 5725 MHz WLAN 5.8G Band: 5725 MHz ~ 5850 MHz WLAN 5.9G UNII4 Band: 5850 MHz ~ 5895 MHz WLAN 6E: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC : 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/HE20/HE40/HE80 Bluetooth BR/EDR/LE NFC: ASK
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.
Remark:	1. Dynamic antenna tuning mechanism is available at Ant. 0 for its < 3GHz LTE and NR band, details are illustrated in the operational description



2. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
3. The device implements the power management and sensor detection for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the TAS feature will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description.
4. This device has NFC operations, the NFC antenna is integrated into the device for this model, therefore, all SAR test were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the antenna can be found in the operational description.
5. According to FCC KDB publication 447498 D01v06, transmitters are consider to be operating simultaneously when there is overlapping transmission, with the exception of transmission during network hand-offs with maximum hand-off duration less than 30 seconds

2.2 Maximum Tune-up Limit

General Note:

1. In the report PC3 as power class3, PC2 as power class2.
2. For each cellular band, the device has several WWAN antennas, the antenna selection is based on the connection quality condition.
3. The device implements the power management and sensor detection for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) by output power index and the TAS feature will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description.
4. The following table shows maximum output power configurations for various exposure conditions (output power index) with tune-up tolerance accounted. For TAS enabled bands, the values associate with Plimit plus the total uncertainty, or Pmax plus total uncertainty when the derived Plimit is higher than Pmax. In some frequency bands, for some power indexes which associate with the same power level, conducted power measurement for those only need to perform at once. Detail output power measurement refer to appendix D.
5. The index 1 is for the mobile exposure condition, the compliance is demonstrated in Sporton’s test report FA241215-02A.
6. SAR compliance for the scenario, when device in next-to-ear voice call with hotspot enabled, is justified via head SAR test at Power Index 3.
7. Since the device support TAS feature and the 5G NR transmitter will operate in the time-averaged transmission power and 5G NR TDD PC3 / PC2 support the same Plimit, therefore, the 5G NR TDD SAR was performed with highest power and 100% duty cycle to be tested.
8. Antenna 1 and 5 for n77 is used as SRS dedicated antennas, i.e., the antenna(s) are used for receive and Sound Reference Signal transmission (SRS) only (not traffic transmission), RF Exposure was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

Antenna configuration	
Transmit switching diversity configuration	Support transmit antenna and band
TX 0	ANT 0: GSM850, UMTS B5, LTE B5/B12/B13/B14/B17/B26/B71, NR n5/n12/n14/n71 ANT 1:LTE B2/B4/B66, NR n77 ANT 2: GSM1900, UMTS B2/B4, LTE B2/B4/B7/B25/B30/B38/B41/B66, NR n2/n7/n25/n30/n38/n41/n66 ANT 6: LTE B48, NR n48/n77
TX 1	ANT 0: GSM1900, UMTS B2/B4, LTE B2/B4/B7/B25/B30/B38/B41/B66, NR n2/n7/n25/n30/n38/n41/n66 ANT 1: GSM850, UMTS B5, LTE B5/B12/B13/B14/B17/B26/B71, NR n5/n12/n14/n71 ANT 2: LTE B48, NR n48/n77 ANT 5: LTE B2/B4/B66, NR n77



Band	Antenna	Duty cycle	Maximum Transmit Burst Average Power (dBm)					
			Mobile Condition	Head		Hotspot	Body-worn/Extremity	
				Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous
				Index 1	Index 2	Index 3	Index 4	Index 5
GSM850 GSM/GPRS 1TX	0	12.50%	33.50	33.50	33.50	33.50	33.50	33.50
GSM850 GPRS 2TX	0	25.00%	32.50	32.50	32.50	32.30	32.50	32.50
GSM850 GPRS 3TX	0	37.50%	31.50	31.50	31.50	30.50	31.50	30.90
GSM850 GPRS 4TX	0	50.00%	30.50	30.50	30.50	29.30	30.50	29.70
GSM850 EDGE 1TX	0	12.50%	28.00	28.00	28.00	28.00	28.00	28.00
GSM850 EDGE 2TX	0	25.00%	27.50	27.50	27.50	27.50	27.50	27.50
GSM850 EDGE 3TX	0	37.50%	27.50	27.50	27.50	27.50	27.50	27.50
GSM850 EDGE 4TX	0	50.00%	25.50	25.50	25.50	25.50	25.50	25.50
GSM1900 GSM/GPRS 1TX	2	12.50%	30.50	30.50	30.50	30.50	30.50	30.40
GSM1900 GPRS 2TX	2	25.00%	29.50	29.50	29.50	28.20	28.20	27.40
GSM1900 GPRS 3TX	2	37.50%	29.00	29.00	29.00	26.40	26.40	25.60
GSM1900 GPRS 4TX	2	50.00%	28.00	28.00	28.00	25.20	25.20	24.40
GSM1900 EDGE 1TX	2	12.50%	26.00	26.00	26.00	26.00	26.00	26.00
GSM1900 EDGE 2TX	2	25.00%	25.00	25.00	25.00	25.00	25.00	25.00
GSM1900 EDGE 3TX	2	37.50%	25.00	25.00	25.00	25.00	25.00	25.00
GSM1900 EDGE 4TX	2	50.00%	24.00	24.00	24.00	24.00	24.00	24.00
WCDMA B2	2	100.00%	25.70	25.70	25.70	21.30	21.30	21.30
WCDMA B4	2	100.00%	25.70	25.70	25.70	23.30	23.30	23.30
WCDMA B5	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
LTE B2	1	100.00%	25.70	18.00	17.20	21.40	23.30	22.50
LTE B7	2	100.00%	25.70	25.20	24.40	21.70	21.70	21.70
LTE B12/B17	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
LTE B13	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
LTE B14	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
LTE B25/B2	2	100.00%	25.70	25.70	25.70	22.40	22.40	22.40
LTE B26/B5	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
LTE B30	2	100.00%	24.80	24.80	24.80	21.50	21.50	21.50
LTE B41/B38 PC3	2	63.30%	25.70	25.70	25.70	23.60	23.80	23.80
LTE B41/B38 PC2	2	43.30%	27.50	27.50	27.50	25.20	25.40	25.40
LTE B48	6	63.30%	23.20	23.20	23.20	22.70	22.70	22.70
LTE B66/B4	2	100.00%	25.70	25.70	25.70	23.90	23.90	23.90
LTE B66/B4	1	100.00%	25.70	19.80	19.00	24.70	24.70	24.70
LTE B71	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
FR1 n5	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
FR1 n7	2	100.00%	25.70	25.30	24.50	21.40	21.60	21.60
FR1 n12	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
FR1 n14	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
FR1 n25/n2	2	100.00%	25.70	25.70	25.70	22.40	22.40	22.40
FR1 n30	2	100.00%	24.80	24.80	24.80	21.70	21.70	21.70
FR1 n41/38 PC3	2	100.00%	25.50	25.50	24.80	22.10	22.50	22.50
FR1 n41 PC2	2	50.00%	27.50	27.50	27.50	25.10	25.50	25.50
FR1 n48	6	100.00%	23.20	23.20	23.20	20.50	20.50	20.50
FR1 n66	2	100.00%	25.70	25.70	25.70	24.20	24.20	24.20
FR1 n71	0	100.00%	25.70	25.70	25.70	25.70	25.70	25.70
FR1 n77 PC3	6	100.00%	24.20	24.20	24.20	20.30	20.30	20.30
FR1 n77 PC2	6	50.00%	27.20	27.20	27.20	23.30	23.30	23.30
FR1 n77 SRS	1	100.00%	25.80	21.20	20.40	22.80	22.80	22.80



Maximum Transmit Burst Average Power (dBm)								
Band	Antenna	Duty cycle	Mobile Condition	Head	Head	Hotspot	Body-worn/Extremity	Body-worn/Extremity
				Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous
			Index 1	Index 2	Index 3	Index 4	Index 5	Index 6
GSM850 GSM/GPRS 1TX	1	12.50%	33.00	32.80	32.00	33.00	33.00	33.00
GSM850 GPRS 2TX	1	25.00%	32.50	29.80	29.00	32.50	32.50	32.50
GSM850 GPRS 3TX	1	37.50%	30.50	28.00	27.20	30.50	30.50	30.50
GSM850 GPRS 4TX	1	50.00%	29.00	26.80	26.00	29.00	29.00	29.00
GSM850 EDGE 1TX	1	12.50%	27.50	27.50	27.50	27.50	27.50	27.50
GSM850 EDGE 2TX	1	25.00%	27.00	27.00	27.00	27.00	27.00	27.00
GSM850 EDGE 3TX	1	37.50%	27.00	27.00	27.00	27.00	27.00	27.00
GSM850 EDGE 4TX	1	50.00%	24.00	24.00	24.00	24.00	24.00	24.00
GSM1900 GSM/GPRS 1TX	0	12.50%	30.00	30.00	30.00	30.00	30.00	30.00
GSM1900 GPRS 2TX	0	25.00%	29.50	29.50	29.50	29.10	29.10	28.30
GSM1900 GPRS 3TX	0	37.50%	28.50	28.50	28.50	27.30	27.30	26.50
GSM1900 GPRS 4TX	0	50.00%	27.70	27.70	27.70	26.10	26.10	25.30
GSM1900 EDGE 1TX	0	12.50%	26.00	26.00	26.00	26.00	26.00	26.00
GSM1900 EDGE 2TX	0	25.00%	24.80	24.80	24.80	24.80	24.80	24.80
GSM1900 EDGE 3TX	0	37.50%	24.80	24.80	24.80	24.80	24.80	24.80
GSM1900 EDGE 4TX	0	50.00%	23.80	23.80	23.80	23.80	23.80	23.80
WCDMA B2	0	100.00%	25.20	25.20	25.20	23.20	23.20	23.20
WCDMA B4	0	100.00%	25.20	25.20	25.20	23.60	23.60	23.60
WCDMA B5	1	100.00%	25.20	23.00	22.20	25.20	25.20	25.20
LTE B2	5	100.00%	25.20	17.80	17.00	22.20	23.40	22.60
LTE B7	0	100.00%	25.20	25.20	25.00	21.60	22.00	22.00
LTE B12/B17	1	100.00%	25.20	24.10	23.30	25.20	25.20	25.20
LTE B13	1	100.00%	25.20	23.60	22.80	25.20	25.20	25.20
LTE B14	1	100.00%	25.20	23.50	22.70	25.20	25.20	25.20
LTE B25/B2	0	100.00%	25.20	25.20	25.20	23.10	23.10	23.10
LTE B26/B5	1	100.00%	25.20	23.20	22.40	25.20	25.20	25.20
LTE B30	0	100.00%	25.10	25.10	25.10	23.90	24.20	23.40
LTE B41/B38 PC3	0	63.30%	25.20	25.20	25.20	23.40	24.10	24.10
LTE B41/B38 PC2	0	43.30%	27.00	27.00	27.00	25.00	25.70	25.70
LTE B48	2	63.30%	24.70	24.70	24.70	22.90	22.90	22.90
LTE B66/B4	0	100.00%	25.20	25.20	25.20	23.20	23.20	23.20
LTE B66/B4	5	100.00%	25.20	19.10	18.30	22.40	23.60	22.80
LTE B71	1	100.00%	25.20	23.40	22.60	25.20	25.20	25.20
FR1 n5	1	100.00%	25.20	23.50	22.70	25.20	25.20	25.20
FR1 n7	0	100.00%	25.20	25.20	25.20	22.10	22.10	22.10
FR1 n12	1	100.00%	25.20	23.50	22.70	25.20	25.20	25.20
FR1 n14	1	100.00%	25.20	23.60	22.80	25.20	25.20	25.20
FR1 n25/n2	0	100.00%	25.20	25.20	25.20	23.80	23.80	23.80
FR1 n30	0	100.00%	25.10	25.10	25.10	23.60	24.40	24.40
FR1 n41/38 PC3	0	100.00%	25.00	25.00	24.40	21.60	22.00	22.00
FR1 n41 PC2	0	50.00%	27.00	27.00	27.00	24.60	25.00	25.00
FR1 n48	2	100.00%	24.70	24.70	24.70	20.40	20.80	20.80
FR1 n66	0	100.00%	25.20	25.20	25.20	23.80	23.80	23.80
FR1 n71	1	100.00%	25.20	23.40	22.60	25.20	25.20	25.20
FR1 n77 PC3	2	100.00%	23.20	23.20	23.20	19.60	19.60	19.60
FR1 n77 PC2	2	50.00%	26.20	26.20	26.20	22.60	22.60	22.60
FR1 n77 SRS	5	100.00%	26.00	20.70	19.90	23.40	23.40	23.40



<WLAN Maximum Power>

General Note:

1. The device implements the power management for WLAN SAR compliance for different exposure conditions and user cases. When the device is operated against the user’s head, power index 1-2 are used; when the device is operated in the body-worn / Hotspot / Extremity condition, power index 3-6 are used. In each exposure condition, the power selection is determined by the user cases as tested in Section 15 of this report. Full details about the proprietary power management decision are illustrated in the operational description.
2. 4+3(3) represents the test in 2TX operation, while the SAR or power data is associated with antenna 3
3. 4+3(4) represents the test in 2TX operation, while the SAR or power data is associated with antenna 4

<Mobile Condition – Power index 0 / Power index 6>

<2.4GHz WLAN>

Burst Average Power (dBm)						
2.4GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	20.00	20.00	23.00
		6	2437	20.00	20.00	23.00
		11	2462	20.00	20.00	23.00
		12	2467	18.00	18.00	21.00
		13	2472	16.50	16.50	19.50
	802.11g 6Mbps	1	2412	18.00	18.00	21.00
		6	2437	20.00	20.00	23.00
		11	2462	20.00	20.00	23.00
		12	2467	14.00	14.00	17.00
	802.11n-HT20 MCS0	1	2412	16.00	16.00	19.00
		6	2437	19.00	19.00	22.00
		11	2462	14.50	14.50	17.50
		12	2467	13.00	13.00	16.00
		13	2472	3.50	3.50	6.50
	802.11ac-VHT20 MCS0	1	2412	16.00	16.00	19.00
		6	2437	19.00	19.00	22.00
		11	2462	14.50	14.50	17.50
		12	2467	13.00	13.00	16.00
	802.11ax-HE20 MCS0	1	2412	16.00	16.00	19.00
		6	2437	19.00	19.00	22.00
11		2462	14.50	14.50	17.50	
12		2467	13.00	13.00	16.00	
13		2472	3.50	3.50	6.50	



<5GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit	
5.2GHz WLAN	802.11a 6Mbps	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
	802.11n-HT20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
	802.11n-HT40 MCS0	38	5190	18.00	18.00	21.00
		46	5230	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
	802.11ac-VHT40 MCS0	38	5190	18.00	18.00	21.00
		46	5230	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	42	5210	17.00	17.00	20.00
	802.11ax-HE20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
48		5240	19.00	19.00	22.00	
802.11ax-HE40 MCS0	38	5190	18.00	18.00	21.00	
	46	5230	18.00	18.00	21.00	
802.11ax-HE80 MCS0	42	5210	17.00	17.00	20.00	



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11n-HT20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11n-HT40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ac-VHT20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11ac-VHT40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ac-VHT80 MCS0		58	5290	15.00	15.00	18.00
802.11ax-HE20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11ax-HE40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ax-HE80 MCS0		58	5290	15.00	15.00	18.00



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	19.00	19.00	22.00
		116	5580	19.00	19.00	22.00
		124	5620	19.00	19.00	22.00
		132	5660	19.00	19.00	22.00
		144	5720	19.00	19.00	22.00
	802.11n-HT20 MCS0	100	5500	19.00	19.00	22.00
		116	5580	19.00	19.00	22.00
		124	5620	19.00	19.00	22.00
		132	5660	19.00	19.00	22.00
		144	5720	19.00	19.00	22.00
	802.11n-HT40 MCS0	102	5510	17.00	17.00	20.00
		110	5550	18.00	18.00	21.00
		126	5630	18.00	18.00	21.00
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	100	5500	19.00	19.00	22.00
		116	5580	19.00	19.00	22.00
		124	5620	19.00	19.00	22.00
		132	5660	19.00	19.00	22.00
		144	5720	19.00	19.00	22.00
	802.11ac-VHT40 MCS0	102	5510	17.00	17.00	20.00
		110	5550	18.00	18.00	21.00
		126	5630	18.00	18.00	21.00
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	106	5530	15.00	15.00	18.00
		122	5610	17.00	17.00	20.00
		138	5690	17.00	17.00	20.00
	802.11ax-HE20 MCS0	100	5500	19.00	19.00	22.00
		116	5580	19.00	19.00	22.00
		124	5620	19.00	19.00	22.00
		132	5660	19.00	19.00	22.00
		144	5720	19.00	19.00	22.00
	802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00
		110	5550	18.00	18.00	21.00
		126	5630	18.00	18.00	21.00
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ax-HE80 MCS0	106	5530	15.00	15.00	18.00
		122	5610	17.00	17.00	20.00
138		5690	17.00	17.00	20.00	



Burst Average Power (dBm)						
5.8GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
802.11n-HT20 MCS0		149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
802.11n-HT40 MCS0		151	5755	18.00	18.00	21.00
		159	5795	18.00	18.00	21.00
802.11ac-VHT20 MCS0		149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
802.11ac-VHT40 MCS0		151	5755	18.00	18.00	21.00
		159	5795	18.00	18.00	21.00
802.11ac-VHT80 MCS0		155	5775	17.00	17.00	20.00
802.11ax-HE20 MCS0		149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
802.11ax-HE40 MCS0		151	5755	18.00	18.00	21.00
		159	5795	18.00	18.00	21.00
802.11ax-HE80 MCS0		155	5775	17.00	17.00	20.00

Burst Average Power (dBm)						
5.9GHz WLAN UNII4	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		169	5845	19.00	19.00	22.00
		173	5865	19.00	19.00	22.00
		177	5885	19.00	19.00	22.00
802.11n-HT20 MCS0		169	5845	19.00	19.00	22.00
		173	5865	19.00	19.00	22.00
		177	5885	19.00	19.00	22.00
802.11n-HT40 MCS0		167	5835	18.00	18.00	21.00
		175	5875	18.00	18.00	21.00
802.11ac-VHT20 MCS0		169	5845	19.00	19.00	22.00
		173	5865	19.00	19.00	22.00
		177	5885	19.00	19.00	22.00
802.11ac-VHT40 MCS0		167	5835	18.00	18.00	21.00
		175	5875	18.00	18.00	21.00
802.11ac-VHT80 MCS0		171	5855	17.00	17.00	20.00
802.11ax-HE20 MCS0		169	5845	19.00	19.00	22.00
		173	5865	19.00	19.00	22.00
		177	5885	19.00	19.00	22.00
802.11ax-HE40 MCS0		167	5835	18.00	18.00	21.00
		175	5875	18.00	18.00	21.00
802.11ax-HE80 MCS0		171	5855	17.00	17.00	20.00



<Power Index 1>

<2.4GHz WLAN>

Burst Average Power (dBm)						
2.4GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	12.50	13.00	15.80
		6	2437	12.50	13.00	15.80
		11	2462	12.50	13.00	15.80
		12	2467	12.50	13.00	15.80
		13	2472	12.50	13.00	15.80
	802.11g 6Mbps	1	2412	12.50	13.00	15.80
		6	2437	12.50	13.00	15.80
		11	2462	12.50	13.00	15.80
		12	2467	12.00	12.00	15.00
		13	2472	0.50	0.50	3.50
	802.11n-HT20 MCS0	1	2412	12.50	13.00	15.80
		6	2437	12.50	13.00	15.80
		11	2462	12.50	13.00	15.80
		12	2467	11.00	11.00	14.00
		13	2472	3.50	3.50	6.50
	802.11ac-VHT20 MCS0	1	2412	12.50	13.00	15.80
		6	2437	12.50	13.00	15.80
		11	2462	12.50	13.00	15.80
		12	2467	11.00	11.00	14.00
		13	2472	3.50	3.50	6.50
802.11ax-HE20 MCS0	1	2412	12.50	13.00	15.80	
	6	2437	12.50	13.00	15.80	
	11	2462	12.50	13.00	15.80	
	12	2467	11.00	11.00	14.00	
	13	2472	3.50	3.50	6.50	



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		36	5180	14.00	10.00	15.50
		40	5200	14.00	10.00	15.50
		44	5220	14.00	10.00	15.50
		48	5240	14.00	10.00	15.50
802.11n-HT20 MCS0		36	5180	14.00	10.00	15.50
		40	5200	14.00	10.00	15.50
		44	5220	14.00	10.00	15.50
		48	5240	14.00	10.00	15.50
802.11n-HT40 MCS0		38	5190	14.00	10.00	15.50
		46	5230	14.00	10.00	15.50
802.11ac-VHT20 MCS0		36	5180	14.00	10.00	15.50
		40	5200	14.00	10.00	15.50
		44	5220	14.00	10.00	15.50
		48	5240	14.00	10.00	15.50
802.11ac-VHT40 MCS0		38	5190	14.00	10.00	15.50
		46	5230	14.00	10.00	15.50
802.11ac-VHT80 MCS0		42	5210	14.00	10.00	15.50
802.11ax-HE20 MCS0		36	5180	14.00	10.00	15.50
		40	5200	14.00	10.00	15.50
		44	5220	14.00	10.00	15.50
		48	5240	14.00	10.00	15.50
802.11ax-HE40 MCS0		38	5190	14.00	10.00	15.50
		46	5230	14.00	10.00	15.50
802.11ax-HE80 MCS0		42	5210	14.00	10.00	15.50



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		52	5260	14.00	10.00	15.50
		56	5280	14.00	10.00	15.50
		60	5300	14.00	10.00	15.50
		64	5320	14.00	10.00	15.50
802.11n-HT20 MCS0		52	5260	14.00	10.00	15.50
		56	5280	14.00	10.00	15.50
		60	5300	14.00	10.00	15.50
		64	5320	14.00	10.00	15.50
802.11n-HT40 MCS0		54	5270	14.00	10.00	15.50
		62	5310	14.00	10.00	15.50
802.11ac-VHT20 MCS0		52	5260	14.00	10.00	15.50
		56	5280	14.00	10.00	15.50
		60	5300	14.00	10.00	15.50
		64	5320	14.00	10.00	15.50
802.11ac-VHT40 MCS0		54	5270	14.00	10.00	15.50
		62	5310	14.00	10.00	15.50
802.11ac-VHT80 MCS0		58	5290	14.00	10.00	15.50
802.11ax-HE20 MCS0		52	5260	14.00	10.00	15.50
		56	5280	14.00	10.00	15.50
		60	5300	14.00	10.00	15.50
		64	5320	14.00	10.00	15.50
802.11ax-HE40 MCS0		54	5270	14.00	10.00	15.50
		62	5310	14.00	10.00	15.50
802.11ax-HE80 MCS0		58	5290	14.00	10.00	15.50



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	9.00	11.50	13.40
		116	5580	9.00	11.50	13.40
		124	5620	9.00	11.50	13.40
		132	5660	9.00	11.50	13.40
		144	5720	9.00	11.50	13.40
	802.11n-HT20 MCS0	100	5500	9.00	11.50	13.40
		116	5580	9.00	11.50	13.40
		124	5620	9.00	11.50	13.40
		132	5660	9.00	11.50	13.40
		144	5720	9.00	11.50	13.40
	802.11n-HT40 MCS0	102	5510	9.00	11.50	13.40
		110	5550	9.00	11.50	13.40
		126	5630	9.00	11.50	13.40
		134	5670	9.00	11.50	13.40
		142	5710	9.00	11.50	13.40
	802.11ac-VHT20 MCS0	100	5500	9.00	11.50	13.40
		116	5580	9.00	11.50	13.40
		124	5620	9.00	11.50	13.40
		132	5660	9.00	11.50	13.40
		144	5720	9.00	11.50	13.40
	802.11ac-VHT40 MCS0	102	5510	9.00	11.50	13.40
		110	5550	9.00	11.50	13.40
		126	5630	9.00	11.50	13.40
		134	5670	9.00	11.50	13.40
		142	5710	9.00	11.50	13.40
	802.11ac-VHT80 MCS0	106	5530	9.00	11.50	13.40
		122	5610	9.00	11.50	13.40
		138	5690	9.00	11.50	13.40
	802.11ax-HE20 MCS0	100	5500	9.00	11.50	13.40
		116	5580	9.00	11.50	13.40
		124	5620	9.00	11.50	13.40
		132	5660	9.00	11.50	13.40
		144	5720	9.00	11.50	13.40
	802.11ax-HE40 MCS0	102	5510	9.00	11.50	13.40
		110	5550	9.00	11.50	13.40
		126	5630	9.00	11.50	13.40
		134	5670	9.00	11.50	13.40
		142	5710	9.00	11.50	13.40
	802.11ax-HE80 MCS0	106	5530	9.00	11.50	13.40
		122	5610	9.00	11.50	13.40
138		5690	9.00	11.50	13.40	



Burst Average Power (dBm)						
5.8GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		149	5745	12.50	16.00	17.60
		157	5785	12.50	16.00	17.60
		165	5825	12.50	16.00	17.60
802.11n-HT20 MCS0		149	5745	12.50	16.00	17.60
		157	5785	12.50	16.00	17.60
		165	5825	12.50	16.00	17.60
802.11n-HT40 MCS0		151	5755	12.50	16.00	17.60
		159	5795	12.50	16.00	17.60
802.11ac-VHT20 MCS0		149	5745	12.50	16.00	17.60
		157	5785	12.50	16.00	17.60
		165	5825	12.50	16.00	17.60
802.11ac-VHT40 MCS0		151	5755	12.50	16.00	17.60
		159	5795	12.50	16.00	17.60
802.11ac-VHT80 MCS0		155	5775	12.50	16.00	17.60
802.11ax-HE20 MCS0		149	5745	12.50	16.00	17.60
		157	5785	12.50	16.00	17.60
		165	5825	12.50	16.00	17.60
802.11ax-HE40 MCS0		151	5755	12.50	16.00	17.60
		159	5795	12.50	16.00	17.60
802.11ax-HE80 MCS0		155	5775	12.50	16.00	17.60

Burst Average Power (dBm)						
5.9GHz WLAN UNII4	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		169	5845	11.50	14.00	15.90
		173	5865	11.50	14.00	15.90
		177	5885	11.50	14.00	15.90
802.11n-HT20 MCS0		169	5845	11.50	14.00	15.90
		173	5865	11.50	14.00	15.90
		177	5885	11.50	14.00	15.90
802.11n-HT40 MCS0		167	5835	11.50	14.00	15.90
		175	5875	11.50	14.00	15.90
802.11ac-VHT20 MCS0		169	5845	11.50	14.00	15.90
		173	5865	11.50	14.00	15.90
		177	5885	11.50	14.00	15.90
802.11ac-VHT40 MCS0		167	5835	11.50	14.00	15.90
		175	5875	11.50	14.00	15.90
802.11ac-VHT80 MCS0		171	5855	11.50	14.00	15.90
802.11ax-HE20 MCS0		169	5845	11.50	14.00	15.90
		173	5865	11.50	14.00	15.90
		177	5885	11.50	14.00	15.90
802.11ax-HE40 MCS0		167	5835	11.50	14.00	15.90
		175	5875	11.50	14.00	15.90
802.11ax-HE80 MCS0		171	5855	11.50	14.00	15.90



<Power Index 2>

<2.4GHz WLAN>

Burst Average Power (dBm)						
2.4GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	15.50	16.00	18.80
		6	2437	15.50	16.00	18.80
		11	2462	15.50	16.00	18.80
		12	2467	15.50	16.00	18.80
		13	2472	15.50	16.00	18.80
	802.11g 6Mbps	1	2412	15.50	16.00	18.80
		6	2437	15.50	16.00	18.80
		11	2462	15.00	15.00	18.00
		12	2467	12.00	12.00	15.00
		13	2472	0.50	0.50	3.50
	802.11n-HT20 MCS0	1	2412	15.50	16.00	18.80
		6	2437	15.50	16.00	18.80
		11	2462	13.00	13.00	16.00
		12	2467	11.00	11.00	14.00
		13	2472	3.50	3.50	6.50
	802.11ac-VHT20 MCS0	1	2412	15.50	16.00	18.80
		6	2437	15.50	16.00	18.80
		11	2462	13.00	13.00	16.00
		12	2467	11.00	11.00	14.00
		13	2472	3.50	3.50	6.50
802.11ax-HE20 MCS0	1	2412	15.50	16.00	18.80	
	6	2437	15.50	16.00	18.80	
	11	2462	13.00	13.00	16.00	
	12	2467	11.00	11.00	14.00	
	13	2472	3.50	3.50	6.50	



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		36	5180	19.00	15.50	20.60
		40	5200	19.00	15.50	20.60
		44	5220	19.00	15.50	20.60
		48	5240	19.00	15.50	20.60
802.11n-HT20 MCS0		36	5180	19.00	15.50	20.60
		40	5200	19.00	15.50	20.60
		44	5220	19.00	15.50	20.60
		48	5240	19.00	15.50	20.60
802.11n-HT40 MCS0		38	5190	18.00	15.50	19.90
		46	5230	18.00	15.50	19.90
802.11ac-VHT20 MCS0		36	5180	19.00	15.50	20.60
		40	5200	19.00	15.50	20.60
		44	5220	19.00	15.50	20.60
		48	5240	19.00	15.50	20.60
802.11ac-VHT40 MCS0		38	5190	18.00	15.50	19.90
		46	5230	18.00	15.50	19.90
802.11ac-VHT80 MCS0		42	5210	17.00	15.50	19.30
802.11ax-HE20 MCS0		36	5180	19.00	15.50	20.60
		40	5200	19.00	15.50	20.60
		44	5220	19.00	15.50	20.60
		48	5240	19.00	15.50	20.60
802.11ax-HE40 MCS0		38	5190	18.00	15.50	19.90
		46	5230	18.00	15.50	19.90
802.11ax-HE80 MCS0		42	5210	17.00	15.50	19.30



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		52	5260	19.00	15.50	20.60
		56	5280	19.00	15.50	20.60
		60	5300	19.00	15.50	20.60
		64	5320	19.00	15.50	20.60
802.11n-HT20 MCS0		52	5260	19.00	15.50	20.60
		56	5280	19.00	15.50	20.60
		60	5300	19.00	15.50	20.60
		64	5320	19.00	15.50	20.60
802.11n-HT40 MCS0		54	5270	18.00	15.50	19.90
		62	5310	17.00	15.50	19.30
802.11ac-VHT20 MCS0		52	5260	19.00	15.50	20.60
		56	5280	19.00	15.50	20.60
		60	5300	19.00	15.50	20.60
		64	5320	19.00	15.50	20.60
802.11ac-VHT40 MCS0		54	5270	18.00	15.50	19.90
		62	5310	17.00	15.50	19.30
802.11ac-VHT80 MCS0		58	5290	15.00	15.00	18.00
802.11ax-HE20 MCS0		52	5260	19.00	15.50	20.60
		56	5280	19.00	15.50	20.60
		60	5300	19.00	15.50	20.60
		64	5320	19.00	15.50	20.60
802.11ax-HE40 MCS0		54	5270	18.00	15.50	19.90
		62	5310	17.00	15.50	19.30
802.11ax-HE80 MCS0		58	5290	15.00	15.00	18.00



Burst Average Power (dBm)						
5.5GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps	100	100	5500	15.00	19.00	20.50
		116	5580	15.00	19.00	20.50
		124	5620	15.00	19.00	20.50
		132	5660	15.00	19.00	20.50
		144	5720	15.00	19.00	20.50
	116	100	5500	15.00	19.00	20.50
		116	5580	15.00	19.00	20.50
		124	5620	15.00	19.00	20.50
		132	5660	15.00	19.00	20.50
		144	5720	15.00	19.00	20.50
124	102	5510	15.00	17.00	19.10	
	110	5550	15.00	18.00	19.80	
	126	5630	15.00	18.00	19.80	
	134	5670	15.00	18.00	19.80	
	142	5710	15.00	18.00	19.80	
132	100	5500	15.00	19.00	20.50	
	116	5580	15.00	19.00	20.50	
	124	5620	15.00	19.00	20.50	
	132	5660	15.00	19.00	20.50	
	144	5720	15.00	19.00	20.50	
144	102	5510	15.00	17.00	19.10	
	110	5550	15.00	18.00	19.80	
	126	5630	15.00	18.00	19.80	
	134	5670	15.00	18.00	19.80	
	142	5710	15.00	18.00	19.80	
802.11ac-VHT20 MCS0	106	5530	15.00	15.00	18.00	
	122	5610	15.00	17.00	19.10	
	138	5690	15.00	17.00	19.10	
802.11ac-VHT40 MCS0	100	5500	15.00	19.00	20.50	
	116	5580	15.00	19.00	20.50	
	124	5620	15.00	19.00	20.50	
	132	5660	15.00	19.00	20.50	
	144	5720	15.00	19.00	20.50	
802.11ac-VHT80 MCS0	102	5510	15.00	17.00	19.10	
	110	5550	15.00	18.00	19.80	
	126	5630	15.00	18.00	19.80	
	134	5670	15.00	18.00	19.80	
	142	5710	15.00	18.00	19.80	
802.11ax-HE20 MCS0	106	5530	15.00	15.00	18.00	
	122	5610	15.00	17.00	19.10	
	138	5690	15.00	17.00	19.10	
802.11ax-HE40 MCS0	100	5500	15.00	19.00	20.50	
	116	5580	15.00	19.00	20.50	
	124	5620	15.00	19.00	20.50	
	132	5660	15.00	19.00	20.50	
	144	5720	15.00	19.00	20.50	
802.11ax-HE80 MCS0	102	5510	15.00	17.00	19.10	
	110	5550	15.00	18.00	19.80	
	126	5630	15.00	18.00	19.80	
	134	5670	15.00	18.00	19.80	
	142	5710	15.00	18.00	19.80	



Burst Average Power (dBm)						
5.8GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		149	5745	17.00	19.00	21.10
		157	5785	17.00	19.00	21.10
		165	5825	17.00	19.00	21.10
802.11n-HT20 MCS0		149	5745	17.00	19.00	21.10
		157	5785	17.00	19.00	21.10
		165	5825	17.00	19.00	21.10
802.11n-HT40 MCS0		151	5755	17.00	18.00	20.50
		159	5795	17.00	18.00	20.50
802.11ac-VHT20 MCS0		149	5745	17.00	19.00	21.10
		157	5785	17.00	19.00	21.10
		165	5825	17.00	19.00	21.10
802.11ac-VHT40 MCS0		151	5755	17.00	18.00	20.50
		159	5795	17.00	18.00	20.50
802.11ac-VHT80 MCS0		155	5775	17.00	17.00	20.00
802.11ax-HE20 MCS0		149	5745	17.00	19.00	21.10
		157	5785	17.00	19.00	21.10
		165	5825	17.00	19.00	21.10
802.11ax-HE40 MCS0		151	5755	17.00	18.00	20.50
		159	5795	17.00	18.00	20.50
802.11ax-HE80 MCS0		155	5775	17.00	17.00	20.00

Burst Average Power (dBm)						
5.9GHz WLAN UNII4	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		169	5845	17.00	19.00	21.10
		173	5865	17.00	19.00	21.10
		177	5885	17.00	19.00	21.10
802.11n-HT20 MCS0		169	5845	17.00	19.00	21.10
		173	5865	17.00	19.00	21.10
		177	5885	17.00	19.00	21.10
802.11n-HT40 MCS0		167	5835	17.00	18.00	20.50
		175	5875	17.00	18.00	20.50
802.11ac-VHT20 MCS0		169	5845	17.00	19.00	21.10
		173	5865	17.00	19.00	21.10
		177	5885	17.00	19.00	21.10
802.11ac-VHT40 MCS0		167	5835	17.00	18.00	20.50
		175	5875	17.00	18.00	20.50
802.11ac-VHT80 MCS0		171	5855	17.00	17.00	20.00
802.11ax-HE20 MCS0		169	5845	17.00	19.00	21.10
		173	5865	17.00	19.00	21.10
		177	5885	17.00	19.00	21.10
802.11ax-HE40 MCS0		167	5835	17.00	18.00	20.50
		175	5875	17.00	18.00	20.50
802.11ax-HE80 MCS0		171	5855	17.00	17.00	20.00



<Power Index 3>

<2.4GHz WLAN>

Burst Average Power (dBm)						
2.4GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	18.50	18.00	21.30
		6	2437	18.50	18.00	21.30
		11	2462	18.50	18.00	21.30
		12	2467	18.00	18.00	21.00
		13	2472	16.50	16.50	19.50
	802.11g 6Mbps	1	2412	18.50	18.00	21.30
		6	2437	18.50	18.00	21.30
		11	2462	15.00	15.00	18.00
		12	2467	12.00	12.00	15.00
		13	2472	0.50	0.50	3.50
	802.11n-HT20 MCS0	1	2412	18.50	18.00	21.30
		6	2437	18.50	18.00	21.30
		11	2462	13.00	13.00	16.00
		12	2467	11.00	11.00	14.00
		13	2472	3.50	3.50	6.50
	802.11ac-VHT20 MCS0	1	2412	18.50	18.00	21.30
		6	2437	18.50	18.00	21.30
		11	2462	13.00	13.00	16.00
		12	2467	11.00	11.00	14.00
		13	2472	3.50	3.50	6.50
802.11ax-HE20 MCS0	1	2412	18.50	18.00	21.30	
	6	2437	18.50	18.00	21.30	
	11	2462	13.00	13.00	16.00	
	12	2467	11.00	11.00	14.00	
	13	2472	3.50	3.50	6.50	



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11a 6Mbps	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
	802.11n-HT20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
	802.11n-HT40 MCS0	38	5190	18.00	18.00	21.00
		46	5230	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
	802.11ac-VHT40 MCS0	38	5190	18.00	18.00	21.00
		46	5230	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	42	5210	17.00	17.00	20.00
	802.11ax-HE20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
802.11ax-HE40 MCS0	38	5190	18.00	18.00	21.00	
	46	5230	18.00	18.00	21.00	
802.11ax-HE80 MCS0	42	5210	17.00	17.00	20.00	



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11n-HT20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11n-HT40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ac-VHT20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11ac-VHT40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ac-VHT80 MCS0		58	5290	15.00	15.00	18.00
802.11ax-HE20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11ax-HE40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ax-HE80 MCS0		58	5290	15.00	15.00	18.00



Burst Average Power (dBm)						
5.5GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		100	5500	17.50	19.00	21.30
		116	5580	17.50	19.00	21.30
		124	5620	17.50	19.00	21.30
		132	5660	17.50	19.00	21.30
		144	5720	17.50	19.00	21.30
802.11n-HT20 MCS0		100	5500	17.50	19.00	21.30
		116	5580	17.50	19.00	21.30
		124	5620	17.50	19.00	21.30
		132	5660	17.50	19.00	21.30
		144	5720	17.50	19.00	21.30
802.11n-HT40 MCS0		102	5510	17.00	17.00	20.00
		110	5550	17.50	18.00	20.80
		126	5630	17.50	18.00	20.80
		134	5670	17.50	18.00	20.80
		142	5710	17.50	18.00	20.80
802.11ac-VHT20 MCS0		100	5500	17.50	19.00	21.30
		116	5580	17.50	19.00	21.30
		124	5620	17.50	19.00	21.30
		132	5660	17.50	19.00	21.30
		144	5720	17.50	19.00	21.30
802.11ac-VHT40 MCS0		102	5510	17.00	17.00	20.00
		110	5550	17.50	18.00	20.80
		126	5630	17.50	18.00	20.80
		134	5670	17.50	18.00	20.80
		142	5710	17.50	18.00	20.80
802.11ac-VHT80 MCS0		106	5530	15.00	15.00	18.00
		122	5610	17.00	17.00	20.00
		138	5690	17.00	17.00	20.00
802.11ax-HE20 MCS0		100	5500	17.50	19.00	21.30
		116	5580	17.50	19.00	21.30
		124	5620	17.50	19.00	21.30
		132	5660	17.50	19.00	21.30
		144	5720	17.50	19.00	21.30
802.11ax-HE40 MCS0		102	5510	17.00	17.00	20.00
		110	5550	17.50	18.00	20.80
		126	5630	17.50	18.00	20.80
		134	5670	17.50	18.00	20.80
		142	5710	17.50	18.00	20.80
802.11ax-HE80 MCS0		106	5530	15.00	15.00	18.00
		122	5610	17.00	17.00	20.00
		138	5690	17.00	17.00	20.00



Burst Average Power (dBm)						
5.8GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		149	5745	17.50	19.00	21.30
		157	5785	17.50	19.00	21.30
		165	5825	17.50	19.00	21.30
802.11n-HT20 MCS0		149	5745	17.50	19.00	21.30
		157	5785	17.50	19.00	21.30
		165	5825	17.50	19.00	21.30
802.11n-HT40 MCS0		151	5755	17.50	18.00	20.80
		159	5795	17.50	18.00	20.80
802.11ac-VHT20 MCS0		149	5745	17.50	19.00	21.30
		157	5785	17.50	19.00	21.30
		165	5825	17.50	19.00	21.30
802.11ac-VHT40 MCS0		151	5755	17.50	18.00	20.80
		159	5795	17.50	18.00	20.80
802.11ac-VHT80 MCS0		155	5775	17.00	17.00	20.00
802.11ax-HE20 MCS0		149	5745	17.50	19.00	21.30
		157	5785	17.50	19.00	21.30
		165	5825	17.50	19.00	21.30
802.11ax-HE40 MCS0		151	5755	17.50	18.00	20.80
		159	5795	17.50	18.00	20.80
802.11ax-HE80 MCS0		155	5775	17.00	17.00	20.00

Burst Average Power (dBm)						
5.9GHz WLAN UNII4	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		169	5845	17.50	19.00	21.30
		173	5865	17.50	19.00	21.30
		177	5885	17.50	19.00	21.30
802.11n-HT20 MCS0		169	5845	17.50	19.00	21.30
		173	5865	17.50	19.00	21.30
		177	5885	17.50	19.00	21.30
802.11n-HT40 MCS0		167	5835	17.50	18.00	20.80
		175	5875	17.50	18.00	20.80
802.11ac-VHT20 MCS0		169	5845	17.50	19.00	21.30
		173	5865	17.50	19.00	21.30
		177	5885	17.50	19.00	21.30
802.11ac-VHT40 MCS0		167	5835	17.50	18.00	20.80
		175	5875	17.50	18.00	20.80
802.11ac-VHT80 MCS0		171	5855	17.00	17.00	20.00
802.11ax-HE20 MCS0		169	5845	17.50	19.00	21.30
		173	5865	17.50	19.00	21.30
		177	5885	17.50	19.00	21.30
802.11ax-HE40 MCS0		167	5835	17.50	18.00	20.80
		175	5875	17.50	18.00	20.80
802.11ax-HE80 MCS0		171	5855	17.00	17.00	20.00



<Power Index 4 / Power Index 5>

<2.4GHz WLAN>

Burst Average Power (dBm)						
2.4GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	20.00	20.00	23.00
		6	2437	20.00	20.00	23.00
		11	2462	20.00	20.00	23.00
		12	2467	18.00	18.00	21.00
		13	2472	16.50	16.50	19.50
	802.11g 6Mbps	1	2412	18.00	18.00	21.00
		6	2437	20.00	20.00	23.00
		11	2462	20.00	20.00	23.00
		12	2467	14.00	14.00	17.00
		13	2472	0.50	0.50	3.50
	802.11n-HT20 MCS0	1	2412	16.00	16.00	19.00
		6	2437	19.00	19.00	22.00
		11	2462	14.50	14.50	17.50
		12	2467	13.00	13.00	16.00
		13	2472	3.50	3.50	6.50
	802.11ac-VHT20 MCS0	1	2412	16.00	16.00	19.00
		6	2437	19.00	19.00	22.00
		11	2462	14.50	14.50	17.50
		12	2467	13.00	13.00	16.00
		13	2472	3.50	3.50	6.50
802.11ax-HE20 MCS0	1	2412	16.00	16.00	19.00	
	6	2437	19.00	19.00	22.00	
	11	2462	14.50	14.50	17.50	
	12	2467	13.00	13.00	16.00	
	13	2472	3.50	3.50	6.50	



<5GHz WLAN>

Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
5.2GHz WLAN	802.11a 6Mbps	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
	802.11n-HT20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
	802.11n-HT40 MCS0	38	5190	18.00	18.00	21.00
		46	5230	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
	802.11ac-VHT40 MCS0	38	5190	18.00	18.00	21.00
		46	5230	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	42	5210	17.00	17.00	20.00
	802.11ax-HE20 MCS0	36	5180	19.00	19.00	22.00
		40	5200	19.00	19.00	22.00
		44	5220	19.00	19.00	22.00
		48	5240	19.00	19.00	22.00
802.11ax-HE40 MCS0	38	5190	18.00	18.00	21.00	
	46	5230	18.00	18.00	21.00	
802.11ax-HE80 MCS0	42	5210	17.00	17.00	20.00	



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11n-HT20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11n-HT40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ac-VHT20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11ac-VHT40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ac-VHT80 MCS0		58	5290	15.00	15.00	18.00
802.11ax-HE20 MCS0		52	5260	19.00	19.00	22.00
		56	5280	19.00	19.00	22.00
		60	5300	19.00	19.00	22.00
		64	5320	19.00	19.00	22.00
802.11ax-HE40 MCS0		54	5270	18.00	18.00	21.00
		62	5310	17.00	17.00	20.00
802.11ax-HE80 MCS0		58	5290	15.00	15.00	18.00



Burst Average Power (dBm)						
5.5GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.50	19.00	21.30
		116	5580	17.50	19.00	21.30
		124	5620	17.50	19.00	21.30
		132	5660	17.50	19.00	21.30
		144	5720	17.50	19.00	21.30
	802.11n-HT20 MCS0	100	5500	17.50	19.00	21.30
		116	5580	17.50	19.00	21.30
		124	5620	17.50	19.00	21.30
		132	5660	17.50	19.00	21.30
		144	5720	17.50	19.00	21.30
	802.11n-HT40 MCS0	102	5510	17.00	17.00	20.00
		110	5550	17.50	18.00	20.80
		126	5630	17.50	18.00	20.80
		134	5670	17.50	18.00	20.80
		142	5710	17.50	18.00	20.80
802.11ac-VHT20 MCS0	100	5500	17.50	19.00	21.30	
	116	5580	17.50	19.00	21.30	
	124	5620	17.50	19.00	21.30	
	132	5660	17.50	19.00	21.30	
	144	5720	17.50	19.00	21.30	
802.11ac-VHT40 MCS0	102	5510	17.00	17.00	20.00	
	110	5550	17.50	18.00	20.80	
	126	5630	17.50	18.00	20.80	
	134	5670	17.50	18.00	20.80	
	142	5710	17.50	18.00	20.80	
802.11ac-VHT80 MCS0	106	5530	15.00	15.00	18.00	
	122	5610	17.00	17.00	20.00	
	138	5690	17.00	17.00	20.00	
802.11ax-HE20 MCS0	100	5500	17.50	19.00	21.30	
	116	5580	17.50	19.00	21.30	
	124	5620	17.50	19.00	21.30	
	132	5660	17.50	19.00	21.30	
	144	5720	17.50	19.00	21.30	
802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00	
	110	5550	17.50	18.00	20.80	
	126	5630	17.50	18.00	20.80	
	134	5670	17.50	18.00	20.80	
	142	5710	17.50	18.00	20.80	
802.11ax-HE80 MCS0	106	5530	15.00	15.00	18.00	
	122	5610	17.00	17.00	20.00	
	138	5690	17.00	17.00	20.00	



Burst Average Power (dBm)						
5.8GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
802.11n-HT20 MCS0		149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
802.11n-HT40 MCS0		151	5755	18.00	18.00	21.00
		159	5795	18.00	18.00	21.00
802.11ac-VHT20 MCS0		149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
802.11ac-VHT40 MCS0		151	5755	18.00	18.00	21.00
		159	5795	18.00	18.00	21.00
802.11ac-VHT80 MCS0		155	5775	17.00	17.00	20.00
802.11ax-HE20 MCS0		149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
802.11ax-HE40 MCS0		151	5755	18.00	18.00	21.00
		159	5795	18.00	18.00	21.00
802.11ax-HE80 MCS0		155	5775	17.00	17.00	20.00

Burst Average Power (dBm)						
5.9GHz WLAN UNII4	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
802.11a 6Mbps		169	5845	17.50	19.00	21.30
		173	5865	17.50	19.00	21.30
		177	5885	17.50	19.00	21.30
802.11n-HT20 MCS0		169	5845	17.50	19.00	21.30
		173	5865	17.50	19.00	21.30
		177	5885	17.50	19.00	21.30
802.11n-HT40 MCS0		167	5835	17.50	18.00	20.80
		175	5875	17.50	18.00	20.80
802.11ac-VHT20 MCS0		169	5845	17.50	19.00	21.30
		173	5865	17.50	19.00	21.30
		177	5885	17.50	19.00	21.30
802.11ac-VHT40 MCS0		167	5835	17.50	18.00	20.80
		175	5875	17.50	18.00	20.80
802.11ac-VHT80 MCS0		171	5855	17.00	17.00	20.00
802.11ax-HE20 MCS0		169	5845	17.50	19.00	21.30
		173	5865	17.50	19.00	21.30
		177	5885	17.50	19.00	21.30
802.11ax-HE40 MCS0		167	5835	17.50	18.00	20.80
		175	5875	17.50	18.00	20.80
802.11ax-HE80 MCS0		171	5855	17.00	17.00	20.00



<Mobile Condition - Power Index 0 / Power Index 2 / Power Index 3 / Power Index 4 / Power Index 5 / Power Index 6>

<6GHz WLAN>

Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
WiFi 6E	802.11a 6Mbps	1	5955	3.00	3.00	6.00
		57	6235	3.00	3.00	6.00
		113	6515	3.00	3.00	6.00
		173	6815	3.00	3.00	6.00
	802.11ax-HE20 MCS0	1	5955	3.00	3.00	6.00
		57	6235	3.00	3.00	6.00
		113	6515	3.00	3.00	6.00
		173	6815	3.00	3.00	6.00
	802.11ax-HE40 MCS0	3	5965	6.00	6.00	9.00
		59	6245	6.00	6.00	9.00
		107	6485	6.00	6.00	9.00
		171	6805	6.00	6.00	9.00
		227	7085	9.00	9.00	12.00
	802.11ax-HE80 MCS0	7	5985	9.00	9.00	12.00
		71	6305	9.00	9.00	12.00
		119	6545	9.00	9.00	12.00
		167	6785	9.00	9.00	12.00
		215	7025	12.00	12.00	15.00

<Power Index 1>

Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
WiFi 6E	802.11a 6Mbps	1	5955	3.00	3.00	6.00
		57	6235	3.00	3.00	6.00
		113	6515	3.00	3.00	6.00
		173	6815	3.00	3.00	6.00
	802.11ax-HE20 MCS0	1	5955	3.00	3.00	6.00
		57	6235	3.00	3.00	6.00
		113	6515	3.00	3.00	6.00
		173	6815	3.00	3.00	6.00
	802.11ax-HE40 MCS0	3	5965	6.00	6.00	9.00
		59	6245	6.00	6.00	9.00
		107	6485	6.00	6.00	9.00
		171	6805	6.00	6.00	9.00
		227	7085	9.00	9.00	12.00
	802.11ax-HE80 MCS0	7	5985	9.00	9.00	12.00
		71	6305	9.00	9.00	12.00
		119	6545	9.00	9.00	12.00
		167	6785	9.00	9.00	12.00
		215	7025	12.00	9.00	13.80



<Bluetooth Maximum Power>

General Note:

- The device implements the power management for Bluetooth SAR compliance for different exposure conditions and user cases. When the device is operated against the user's head, power index 1 is used; when the device is operated in the body-worn or extremity condition, power index 2-4 are used. In each exposure condition, the power selection is determined by the user cases as tested in Section 15 of this report. Full details about the proprietary power management decision are illustrated in the operational description

<Mobile condition – Power Index 0 / Power Index 2 / Power Index 3>

Mode	Burst Average Power (dBm)				
	Ant 4			Ant 4	
	BR / EDR			LE	
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	20	18.5	18.5	20	20

Mode	Burst Average Power (dBm)				
	Ant 3			Ant 3	
	BR / EDR			LE	
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	20	18.5	18.5	20	20

<Power Index 1>

Mode	Burst Average Power (dBm)				
	Ant 4			Ant 4	
	BR / EDR			LE	
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	12	12	12	12	12

Mode	Burst Average Power (dBm)				
	Ant 3			Ant 3	
	BR / EDR			LE	
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	12	12	12	12	12

<Power Index 4>

Mode	Burst Average Power (dBm)				
	Ant 4			Ant 4	
	BR / EDR			LE	
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	15	15	15	15	15

Mode	Burst Average Power (dBm)				
	Ant 3			Ant 3	
	BR / EDR			LE	
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	15	15	15	15	15



2.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	A4RG0DZQ																																																														
Equipment Name	Phone																																																														
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz																																																														
Channel Bandwidth	LTE Band 2: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 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 MPR permanently built-in by design	<p>Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</p> <table border="1"> <thead> <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> </thead> <tbody> <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" style="text-align: center;">≥ 1</td> <td>≤ 5</td> </tr> </tbody> </table>	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
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																																																								
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	The device has several different power modes for each exposure conditions SAR compliance; power selection is determined by the device's positioning and usage scenarios. Detail refer to operational description.																																																														
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 13.																																																														
LTE Carrier Aggregation Additional Information	This device supports maximum of 6 carriers in the downlink and 2 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.																																																														



Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829				
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5				
H	20643	848.3	20635	847.5	20625	846.5	20600	844				
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510				
M	21100	2535	21100	2535	21100	2535	21100	2535				
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560				
LTE Band 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704				
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5				
H	23173	715.3	23165	714.5	23155	713.5	23130	711				
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		782					
M	23230		782									
H	23255		784.5									
LTE Band 14												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Channel #		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23305		790.5		23330		793					
M	23330		793									
H	23355		795.5									
LTE Band 17												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)		Channel #		Freq. (MHz)	
L	23755		706.5		23780		709					
M	23790		710		23790		710					
H	23825		713.5		23800		711					



LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5	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 30												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	27685		2307.5		27710		2310					
M	27710		2310									
H	27735		2312.5									
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580	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
L	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5	40185	2549.5	40185	2549.5
M												
M	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5	41055	2636.5	41055	2636.5
M												
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680	41490	2680	41490	2680
LTE Band 48												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560	55340	3560	55340	3560
L	55810	3607	55815	3607.5	55820	3608	55830	3609	55830	3609	55830	3609
M												
M	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 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673	133222	673	133222	673
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5	133297	680.5	133297	680.5
H	133447	695.5	133422	693	133397	690.5	133372	688	133372	688	133372	688



2.4 General 5G NR SAR Test and Reporting Considerations

5G NR Information								
FCC	A4RG0DZQ							
Equipment Name	Phone							
Operating Frequency Range of each 5G NR transmission band	5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n30: 2305 MHz ~ 2315 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3450MHz ~ 3550MHz, 3700 MHz ~ 3980 MHz							
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n14: 5MHz, 10MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz 5G NR n30: 5MHz, 10MHz 5G NR n38: 10MHz, 15MHz, 20MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n48: 10MHz, 15MHz, 20MHz, 40MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz							
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 n2	LTE B5/12/13/14/48							
LTE Anchor Bands for n5	LTE B2/7/30/48/66							
LTE Anchor Bands for n7	LTE B12/71							
LTE Anchor Bands for n12	LTE B2/7/66							
LTE Anchor Bands for n25	LTE B12/48							
LTE Anchor Bands for n30	LTE B5/12/14							
LTE Anchor Bands for n38	LTE B71							
LTE Anchor Bands for n41	LTE B2/5/12/26/66/71							
LTE Anchor Bands for n48	LTE B2/66/71							
LTE Anchor Bands for n66	LTE B5/12/13/14/48/71							
LTE Anchor Bands for n71	LTE B2/7/48/66							
LTE Anchor Bands for n77	LTE B2/5/12/13/14/30/41/66							
NR Band 2								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860
M	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900
NR Band 5								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165300	826.5	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5
H	169300	846.5	168800	844	168300	841.5	167800	839



NR Band 7																						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520	505000	2525						
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535						
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550	509000	2545						
NR Band 12																						
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz													
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)											
L	140300		701.5		140800		704		141300		706.5											
M	141500		707.5		141500		707.5		141500		707.5											
H	142700		713.5		142200		711		141700		708.5											
NR Band 14																						
	Bandwidth 5MHz				Bandwidth 10MHz																	
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)															
L	158100		790.5		158600		793															
M	158600		793																			
H	159100		795.5																			
NR Band 25																						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz									
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)								
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870								
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5								
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379000	1895								
NR Band 30																						
	Bandwidth 5MHz				Bandwidth 10MHz																	
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)															
L	461500		2307.5		462000		2310															
M	462000		2310																			
H	462500		2312.5																			
NR Band 38																						
	Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz													
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)											
L	515004		2575.02		515502		2577.51		516000		2580											
M	519000		2595		519000		2595		519000		2595											
H	522996		2614.98		522498		2612.49		522000		2610											
NR Band 41																						
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640
NR Band 48																						
	Bandwidth10MHz				Bandwidth 15MHz				Bandwidth20MHz				Bandwidth 40MHz									
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)							
L	637000		3555		637168		3557.52		637334		3560.01		638000		3570							
M	641666		3624.99		641666		3624.99		641666		3624.99		641666		3624.99							
H	646332		3694.98		646166		3692.49		646000		3690		645332		3679.98							
NR Band 66																						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz									
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)								
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	346000	1730								
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745								
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352000	1760								



NR Band 71																										
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz													
	Ch. #	Freq. (MHz)			Ch. #	Freq. (MHz)			Ch. #	Freq. (MHz)			Ch. #	Freq. (MHz)												
L	133100	665.5			133600	668			13410	670.5			134600	673												
M	136100	680.5			136100	680.5			136100	680.5			136100	680.5												
H	139100	695.5			138600	693			13810	690.5			137600	688												
NR Band 77 (3700 MHz ~ 3980 MHz)																										
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth25MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750		
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.50	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930		
NR Band 77(3450MHz ~ 3550MHz)																										
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth25MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495				
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	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	634332	3514.98	634000	3510	633666	3504.99			633332	3499.98



3. TAS feature for RF Exposure compliance

The FCC RF exposure limit is based on time-averaged RF exposure. Both SAR and PD regulatory specifications are defined over certain measurement duration allowing for time-averaging. The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm has been designed to meet the compliance limits over the required duration, while still allowing dynamic control of transmit power for meeting system performance. Under the control of TAS algorithm, the device can transmit at high power up to Pmax for certain interval, but the average power will be maintained not exceeding the pre-defined averaged level (Plimit), and thus maintain the time-averaged RF exposure compliance

The following table shows Plimit and maximum tune up output power Pmax, for all exposure and transmit transmit conditions (output power index).

Pmax	Maximum Tx power that can be transmitted physically from RFIC for a given RAT
SAR_FCC_limit	SAR limit specified by FCC 1.6 W/kg averaged over 1-gram, for head and body exposure, and 4 W/kg averaged over 10-gram, for extremity exposure
PD_FCC_limit	PD limit specified by FCC, 10 W/m ² averaged over 4 cm ²
Plimit	The time-averaged RF power that corresponds to SAR_target or PD_target.



3.1 SAR Characterization – Power Table

General Note:

1. The P_{limit} values correspond to SAR_{design_target}.
2. GSM and WCDMA don't support time average feature of dynamic power varying, the power will be fixed at the static reduce power level at different exposure conditions for RF exposure compliance. For the GSM (TDD) P_{limit} power levels in the table correspond to the burst average power levels which don't account for TX duty cycle.

<P_{limit} for supported technologies and bands (P_{limit} corresponding to SAR design target)>

Wireless technology/ band (No Accounting duty cycle)	Antenna	Duty cycle	Mobile condition	Head		Hotspot	Body-worn/Extremity		P Max Burst average power (dBm)
			RSI 1	Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
			Index 1	Index 2	Index 3	Index 4	Index 5	Index 6	
			P limit						
Burst average power (dBm)									
GSM850 GSM/GPRS 1TX	0	12.50%	32.50	37.10	36.30	34.30	35.50	34.70	32.50
GSM850 GPRS 2TX	0	25.00%	31.50	34.10	33.30	31.30	32.50	31.70	31.50
GSM850 GPRS 3TX	0	37.50%	30.50	32.30	31.50	29.50	30.70	29.90	30.50
GSM850 GPRS 4TX	0	50.00%	29.50	31.10	30.30	28.30	29.50	28.70	29.50
GSM850 EDGE 1TX	0	12.50%	27.00	37.10	36.30	34.30	35.50	34.70	27.00
GSM850 EDGE 2TX	0	25.00%	26.50	34.10	33.30	31.30	32.50	31.70	26.50
GSM850 EDGE 3TX	0	37.50%	26.50	32.30	31.50	29.50	30.70	29.90	26.50
GSM850 EDGE 4TX	0	50.00%	24.50	31.10	30.30	28.30	29.50	28.70	24.50
GSM1900 GSM/GPRS 1TX	2	12.50%	29.50	36.40	35.60	30.20	30.20	29.40	29.50
GSM1900 GPRS 2TX	2	25.00%	28.50	33.40	32.60	27.20	27.20	26.40	28.50
GSM1900 GPRS 3TX	2	37.50%	28.00	31.60	30.80	25.40	25.40	24.60	28.00
GSM1900 GPRS 4TX	2	50.00%	27.00	30.40	29.60	24.20	24.20	23.40	27.00
GSM1900 EDGE 1TX	2	12.50%	25.00	36.40	35.60	30.20	30.20	29.40	25.00
GSM1900 EDGE 2TX	2	25.00%	24.00	33.40	32.60	27.20	27.20	26.40	24.00
GSM1900 EDGE 3TX	2	37.50%	24.00	31.60	30.80	25.40	25.40	24.60	24.00
GSM1900 EDGE 4TX	2	50.00%	23.00	30.40	29.60	24.20	24.20	23.40	23.00
WCDMA B2	2	100.00%	24.70	26.90	26.10	20.30	20.30	20.30	24.70
WCDMA B4	2	100.00%	24.70	27.20	26.40	22.30	22.30	22.30	24.70
WCDMA B5	0	100.00%	24.70	28.20	27.40	25.00	25.00	25.00	24.70

Wireless technology/ band (No Accounting duty cycle)	Antenna	Duty cycle	Mobile condition	Head		Hotspot	Body-worn/Extremity		P Max Burst average power (dBm)
			RSI 1	Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
			Index 1	Index 2	Index 3	Index 4	Index 5	Index 6	
			P limit						
Burst average power (dBm)									
GSM850 GSM/GPRS 1TX	1	12.50%	32.00	31.80	31.00	36.30	36.30	35.50	32.00
GSM850 GPRS 2TX	1	25.00%	31.50	28.80	28.00	33.30	33.30	32.50	31.50
GSM850 GPRS 3TX	1	37.50%	29.50	27.00	26.20	31.50	31.50	30.70	29.50
GSM850 GPRS 4TX	1	50.00%	28.00	25.80	25.00	30.30	30.30	29.50	28.00
GSM850 EDGE 1TX	1	12.50%	26.50	31.80	31.00	36.30	36.30	35.50	26.50
GSM850 EDGE 2TX	1	25.00%	26.00	28.80	28.00	33.30	33.30	32.50	26.00
GSM850 EDGE 3TX	1	37.50%	26.00	27.00	26.20	31.50	31.50	30.70	26.00
GSM850 EDGE 4TX	1	50.00%	23.00	25.80	25.00	30.30	30.30	29.50	23.00
GSM1900 GSM/GPRS 1TX	0	12.50%	29.00	35.70	34.90	31.10	31.10	30.30	29.00
GSM1900 GPRS 2TX	0	25.00%	28.50	32.70	31.90	28.10	28.10	27.30	28.50
GSM1900 GPRS 3TX	0	37.50%	27.50	30.90	30.10	26.30	26.30	25.50	27.50
GSM1900 GPRS 4TX	0	50.00%	26.70	29.70	28.90	25.10	25.10	24.30	26.70
GSM1900 EDGE 1TX	0	12.50%	25.00	35.70	34.90	31.10	31.10	30.30	25.00
GSM1900 EDGE 2TX	0	25.00%	23.80	32.70	31.90	28.10	28.10	27.30	23.80
GSM1900 EDGE 3TX	0	37.50%	23.80	30.90	30.10	26.30	26.30	25.50	23.80
GSM1900 EDGE 4TX	0	50.00%	22.80	29.70	28.90	25.10	25.10	24.30	22.80
WCDMA B2	0	100.00%	24.20	26.20	25.40	22.20	22.20	22.20	24.20
WCDMA B4	0	100.00%	24.20	27.20	26.40	22.60	22.60	22.60	24.20
WCDMA B5	1	100.00%	24.20	22.00	21.20	27.50	27.50	26.70	24.20

<P_{limit} for supported technologies and bands (P_{limit} corresponding to SAR design target)>

Wireless technology/ band (Accounting duty cycle)	Antenna	Duty cycle	Mobile condition	Head		Hotspot	Body-worn/Extremity		P Max Time-average power (dBm)
			Index 1	Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
				Index 2	Index 3	Index 4	Index 5	Index 6	
			P limit						
LTE B2	1	100.00%	24.70	17.00	16.20	20.40	22.30	21.50	24.70
LTE B7	2	100.00%	24.70	24.20	23.40	20.70	20.70	20.70	24.70
LTE B12/B17	0	100.00%	24.70	28.70	27.90	25.60	27.50	26.70	24.70
LTE B13	0	100.00%	24.70	28.10	27.30	25.20	26.80	26.00	24.70
LTE B14	0	100.00%	24.70	27.80	27.00	24.90	27.60	26.80	24.70
LTE B25/B2	2	100.00%	24.70	28.00	27.20	21.40	21.40	21.40	24.70
LTE B26/B5	0	100.00%	24.70	28.10	27.30	25.30	25.30	25.30	24.70
LTE B30	2	100.00%	23.80	25.70	24.90	20.50	20.50	20.50	23.80
LTE B41/B38 PC3	2	63.30%	22.70	25.20	24.40	20.60	20.80	20.80	22.70
LTE B41/B38 PC2	2	43.30%	22.90	25.20	24.40	20.60	20.80	20.80	22.90
LTE B48	6	63.30%	20.20	25.50	24.70	19.70	19.70	19.70	20.20
LTE B66/B4	2	100.00%	24.70	27.60	26.80	22.90	22.90	22.90	24.70
LTE B66/B4	1	100.00%	24.70	18.80	18.00	23.70	23.70	23.70	24.70
LTE B71	0	100.00%	24.70	29.40	28.60	26.60	28.10	27.30	24.70
FR1 n5	0	100.00%	24.70	28.70	27.90	25.50	26.10	25.30	24.70
FR1 n7	2	100.00%	24.70	24.30	23.50	20.40	20.60	20.60	24.70
FR1 n12	0	100.00%	24.70	29.30	28.50	26.30	28.50	27.70	24.70
FR1 n14	0	100.00%	24.70	28.20	27.40	24.70	27.50	26.70	24.70
FR1 n25/n2	2	100.00%	24.70	28.50	27.70	21.40	21.40	21.40	24.70
FR1 n30	2	100.00%	23.80	25.10	24.30	20.70	20.70	20.70	23.80
FR1 n41/38 PC3	2	100.00%	24.50	24.60	23.80	21.10	21.50	21.50	24.50
FR1 n41 PC2	2	50.00%	23.50	24.60	23.80	21.10	21.50	21.50	23.50
FR1 n48	6	100.00%	22.20	25.80	25.00	19.50	19.50	19.50	22.20
FR1 n66	2	100.00%	24.70	27.80	27.00	23.20	23.20	23.20	24.70
FR1 n71	0	100.00%	24.70	29.90	29.10	26.90	28.70	27.90	24.70
FR1 n77 PC3	6	100.00%	23.20	24.60	23.80	19.30	19.30	19.30	23.20
FR1 n77 PC2	6	50.00%	23.20	24.60	23.80	19.30	19.30	19.30	23.20
FR1 n77 SRS	1	100.00%	24.80	20.20	19.40	21.80	21.80	21.80	24.80

1. LTE and 5GNR TDD: P_{limit} power levels in the table correspond to the time-averaged power levels which accounts for TX duty cycle.
2. Maximum target power, P_{max}, is configured in NV settings in EUT to limit maximum transmitting power. This power is converted into peak power in NV settings for TDD schemes.



<P_{limit} for supported technologies and bands (P_{limit} corresponding to SAR design target)>

Wireless technology/ band (Accounting duty cycle)	Antenna	Duty cycle	Mobile condition	Head		Hotspot	Body-worn/Extremity		P Max Time-average power (dBm)
			Index 1	Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
				Index 2	Index 3	Index 4	Index 5	Index 6	
			P limit						
LTE B2	5	100.00%	24.20	16.80	16.00	21.20	22.40	21.60	24.20
LTE B7	0	100.00%	24.20	24.80	24.00	20.60	21.00	21.00	24.20
LTE B12/B17	1	100.00%	24.20	23.10	22.30	28.20	28.20	27.40	24.20
LTE B13	1	100.00%	24.20	22.60	21.80	28.30	28.30	27.50	24.20
LTE B14	1	100.00%	24.20	22.50	21.70	28.60	28.60	27.80	24.20
LTE B25/B2	0	100.00%	24.20	26.70	25.90	22.10	22.10	22.10	24.20
LTE B26/B5	1	100.00%	24.20	22.20	21.40	27.70	27.70	26.90	24.20
LTE B30	0	100.00%	24.10	26.20	25.40	22.90	23.20	22.40	24.10
LTE B41/B38 PC3	0	63.30%	22.20	25.10	24.30	20.40	21.10	21.10	22.20
LTE B41/B38 PC2	0	43.30%	22.40	25.10	24.30	20.40	21.10	21.10	22.40
LTE B48	2	63.30%	21.70	24.40	23.60	19.90	19.90	19.90	21.70
LTE B66/B4	0	100.00%	24.20	27.30	26.50	22.20	22.20	22.20	24.20
LTE B66/B4	5	100.00%	24.20	18.10	17.30	21.40	22.60	21.80	24.20
LTE B71	1	100.00%	24.20	22.40	21.60	27.30	27.30	26.50	24.20
FR1 n5	1	100.00%	24.20	22.50	21.70	28.00	28.00	27.20	24.20
FR1 n7	0	100.00%	24.20	26.10	25.30	21.10	21.10	21.10	24.20
FR1 n12	1	100.00%	24.20	22.50	21.70	28.80	28.80	28.00	24.20
FR1 n14	1	100.00%	24.20	22.60	21.80	28.30	28.60	27.80	24.20
FR1 n25/n2	0	100.00%	24.20	27.70	26.90	22.80	22.80	22.80	24.20
FR1 n30	0	100.00%	24.10	25.70	24.90	22.60	23.40	23.40	24.10
FR1 n41/38 PC3	0	100.00%	24.00	24.20	23.40	20.60	21.00	21.00	24.00
FR1 n41 PC2	0	50.00%	23.00	24.20	23.40	20.60	21.00	21.00	23.00
FR1 n48	2	100.00%	23.70	24.50	23.70	19.40	19.80	19.80	23.70
FR1 n66	0	100.00%	24.20	27.60	26.80	22.80	22.80	22.80	24.20
FR1 n71	1	100.00%	24.20	22.40	21.60	27.70	27.70	26.90	24.20
FR1 n77 PC3	2	100.00%	22.20	23.60	22.80	18.60	18.60	18.60	22.20
FR1 n77 PC2	2	50.00%	22.20	23.60	22.80	18.60	18.60	18.60	22.20
FR1 n77 SRS	5	100.00%	25.00	19.70	18.90	22.40	22.40	22.40	25.00

1. LTE and 5GNR TDD: P_{limit} power levels in the table correspond to the time-averaged power levels which accounts for TX duty cycle.
2. Maximum target power, P_{max}, is configured in NV settings in EUT to limit maximum transmitting power. This power is converted into peak power in NV settings for TDD schemes.



4. RF Exposure Limits

4.1 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.

4.2 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

1. 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.



According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4cm² per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

5. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards, the below KDB standard may not including in the TAF code without accreditation.

- 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 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
- FCC KDB 941225 D07 UMPC Mini Tablet v01r02
- IEC/IEEE 62209-1528:2020
- SPEAG DASY6 System Handbook
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)

6. Specific Absorption Rate (SAR)

6.1 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.

6.2 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:

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

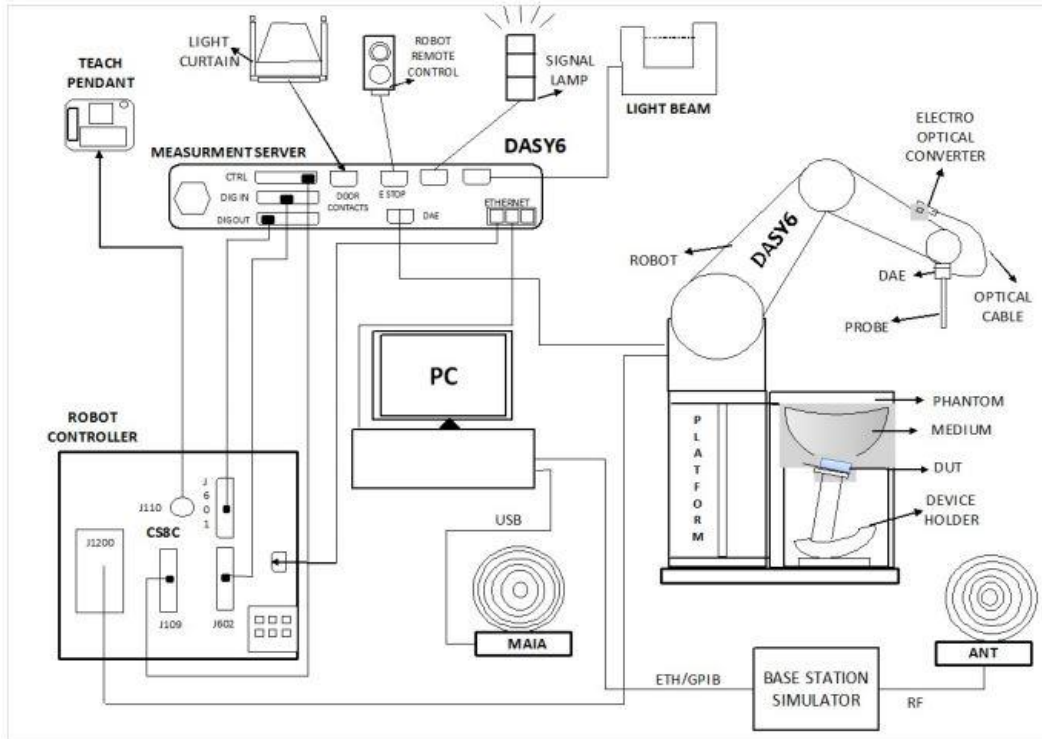
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

7. System Description and Setup

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



- The DASY system in SAR Configuration is shown above
- 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 windows software and the DASY 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.

7.1 Test Site Location


The SAR measurement facilities used to collect data are within both Sporton Lab list below test site location are accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190 and 3786) and the FCC designation No. TW1190 and TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. In system validation list test site number, if the test site number is include in the Wensan Laboratory, that's mean the test data are subcontracted to Sporton International Inc. Wensan Laboratory.

Test Site	EMC & Wireless Communications Laboratory TW1190		Wensan Laboratory TW3786		
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan		No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan		
Test Site No.	SAR01-HY	SAR03-HY	SAR08-HY	SAR09-HY	SAR15-HY
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	SAR16-HY
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-HY	SAR17-HY


7.2 E-Field Probe

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

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz – 4 GHz; Linearity: ±0.2 dB (30 MHz – 4 GHz)	
Directivity	±0.2 dB in TSL (rotation around probe axis) ±0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 µW/g – >100 mW/g; Linearity: ±0.2 dB	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

<EX3DV4 Probe>

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

7.3 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.



Fig 5.1 Photo of DAE

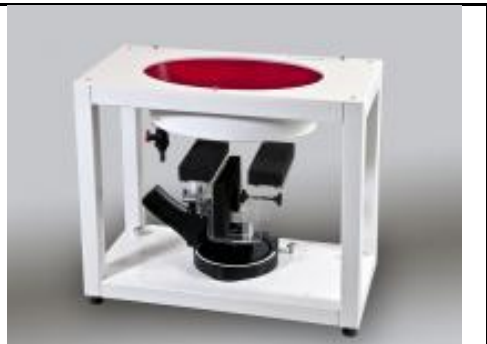
7.4 Phantom

<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 in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

7.5 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

8. Measurement Procedures

The measurement procedures are as follows:

- (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

8.1 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

8.2 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.

8.3 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° ± 1°	20° ± 1°
Maximum area scan spatial resolution: $\Delta x_{Area}, \Delta y_{Area}$	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

8.4 Zoom Scan

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

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

		≤ 3 GHz	> 3 GHz	
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm	
	graded grid	$\Delta z_{Zoom}(1)$: between 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
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm	
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <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.				

8.5 Volume Scan Procedures

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

8.6 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.



9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit ⁽²⁾	D750V3	1012	Aug. 18, 2021	Aug. 16, 2023
SPEAG	750MHz System Validation Kit	D750V3	1107	Jun. 22, 2022	Jun. 21, 2023
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	499	Aug. 18, 2021	Aug. 16, 2023
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	4d167	Nov. 25, 2019	Nov. 22, 2022
SPEAG	1750MHz System Validation Kit	D1750V2	1068	Nov. 25, 2021	Nov. 24, 2022
SPEAG	1750MHz System Validation Kit	D1750V2	1112	Jun. 22, 2022	Jun. 21, 2023
SPEAG	1900MHz System Validation Kit ⁽²⁾	D1900V2	5d041	Aug. 19, 2021	Aug. 17, 2023
SPEAG	1900MHz System Validation Kit	D1900V2	5d093	Mar. 25, 2022	Mar. 24, 2023
SPEAG	1900MHz System Validation Kit	D1900V2	5d185	Jun. 17, 2022	Jun. 16, 2023
SPEAG	2300MHz System Validation Kit	D2300V2	1006	Jan. 18, 2022	Jan. 17, 2023
SPEAG	2300MHz System Validation Kit ⁽²⁾	D2300V2	1088	Jul. 13, 2021	Jul. 11, 2023
SPEAG	2450MHz System Validation Kit ⁽²⁾	D2450V2	736	Aug. 17, 2021	Aug. 15, 2023
SPEAG	2450MHz System Validation Kit ⁽²⁾	D2450V2	929	Nov. 21, 2019	Nov. 18, 2022
SPEAG	2450MHz System Validation Kit	D2450V2	806	Mar. 24, 2022	Mar. 23, 2023
SPEAG	2600MHz System Validation Kit ⁽²⁾	D2600V2	1008	Aug. 17, 2021	Aug. 15, 2023
SPEAG	2600MHz System Validation Kit	D2600V2	1078	Jun. 23, 2022	Jun. 22, 2023
SPEAG	2600MHz System Validation Kit	D2600V2	1089	Mar. 24, 2022	Mar. 23, 2023
SPEAG	3500MHz System Validation Kit	D3500V2	1036	Mar. 23, 2022	Mar. 22, 2023
SPEAG	3700MHz System Validation Kit	D3700V2	1006	Jun. 20, 2022	Jun. 19, 2023
SPEAG	3900MHz System Validation Kit	D3900V2	1017	Apr. 22, 2022	Apr. 21, 2023
SPEAG	5GHz System Validation Kit ⁽²⁾	D5GHZV2	1128	Dec. 16, 2019	Dec. 13, 2022
SPEAG	5GHz System Validation Kit ⁽²⁾	D5GHZV2	1171	Apr. 20, 2021	Apr. 18, 2023
SPEAG	6500MHz System Validation Kit	D6.5GHZV2	1003	Sep. 24, 2021	Sep. 23, 2022
SPEAG	5G Verification Source	10 GHz	1020	Jan. 18, 2022	Jan. 17, 2023
SPEAG	Data Acquisition Electronics	DAE4	316	Jan. 26, 2022	Jan. 25, 2023
SPEAG	Data Acquisition Electronics	DAE4	656	Jan. 19, 2022	Jan. 18, 2023
SPEAG	Data Acquisition Electronics	DAE4	699	Feb. 24, 2022	Feb. 23, 2023
SPEAG	Data Acquisition Electronics	DAE4	853	Jul. 20, 2022	Jul. 19, 2023
SPEAG	Data Acquisition Electronics	DAE4	1399	Feb. 28, 2022	Feb. 27, 2023
SPEAG	Data Acquisition Electronics	DAE4	1424	Jan. 20, 2022	Jan. 19, 2023
SPEAG	Data Acquisition Electronics	DAE4	1696	Nov. 03, 2021	Nov. 02, 2022
SPEAG	Data Acquisition Electronics	DAE4	1707	Jan. 12, 2022	Jan. 11, 2023
SPEAG	Data Acquisition Electronics	DAE3	393	May. 17, 2022	May. 16, 2023
SPEAG	Data Acquisition Electronics	DAE3	577	Sep. 21, 2022	Sep. 20, 2023
SPEAG	Dosimetric E-Field Probe	ES3DV3	3115	Nov. 23, 2021	Nov. 22, 2022
SPEAG	Dosimetric E-Field Probe	ES3DV3	3124	Nov. 23, 2021	Nov. 22, 2022
SPEAG	Dosimetric E-Field Probe	ES3DV3	3184	Sep. 26, 2022	Sep. 25, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	3728	Mar. 02, 2022	Mar. 01, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	3931	Oct. 21, 2021	Oct. 20, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 27, 2022	Jan. 26, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7350	Dec. 20, 2021	Dec. 19, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	7590	Mar. 28, 2022	Mar. 27, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7625	Jan. 27, 2022	Jan. 26, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7695	Nov. 19, 2021	Nov. 18, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	7700	Jan. 11, 2022	Jan. 10, 2023
SPEAG	Dosimetric E-Field Probe	ES3DV3	3270	Sep. 26, 2022	Sep. 25, 2023
SPEAG	Dosimetric E-Field Probe	EUMMWV3	9424	Apr. 06, 2022	Apr. 05, 2023
Testo	Hygro meter	608-H1	45196600	Oct. 22, 2021	Oct. 21, 2022
Testo	Hygro meter	608-H1	45207528	Oct. 22, 2021	Oct. 21, 2022
RCPTWN	Thermometer	HTC-1	TM685-1	Jun. 27, 2022	Jun. 26, 2023
RCPTWN	Thermometer	HTC-1	TM560-2	Mar. 15, 2022	Mar. 14, 2023
Anritsu	Radio Communication Analyzer	MT8821C	6201074414	Aug. 19, 2022	Aug. 18, 2023



Keysight	Wireless Communication Test Set	E5515C	MY50266977	May. 10, 2022	May. 09, 2023
Keysight	5G Wireless Test Platform	E7515B	MY59321826	Apr. 13, 2022	Apr. 12, 2023
R&S	BT Base Station	CBT	100815	Feb. 18, 2022	Feb. 17, 2023
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Oct. 24, 2021	Oct. 23, 2022
R&S	Signal Generator	SMA100A	101091	Oct. 04, 2022	Oct. 03, 2023
Keysight	ENA Network Analyzer	E5071C	MY46316648	Jul. 25, 2022	Jul. 24, 2023
SPEAG	Dielectric Probe Kit	DAK-3.5	1146	Jul. 25, 2022	Jul. 24, 2023
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3252	Jul. 25, 2022	Jul. 24, 2023
Anritsu	Power Meter	ML2495A	1419002	Aug. 16, 2022	Aug. 15, 2023
Anritsu	Power Sensor	MA2411B	1911176	Aug. 16, 2022	Aug. 15, 2023
Anritsu	Power Meter	ML2496A	2119003	Jun. 22, 2022	Jun. 21, 2023
Anritsu	Power Sensor	MA2411B	1911334	Jun. 22, 2022	Jun. 21, 2023
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 21, 2022	Jul. 20, 2023
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 19, 2021	Aug. 17, 2023
Mini-Circuits	Power Amplifier	ZHL-42W+	715701915	May. 12, 2022	May. 11, 2023
Mini-Circuits	Power Amplifier	ZVE-3W-183+	072602118	Mar. 09, 2022	Mar. 08, 2023
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Warison	Directional Coupler	WCOU-10-50S-10	WR889BMC4B1	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005-3	N/A	Note 1	

General 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 source.
2. The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.



10. System Verification

10.1 Tissue Verification

The tissue dielectric parameters of tissue-equivalent media used for SAR measurements must be characterized within a temperature range of 18°C to 25°C, measured with calibrated instruments and apparatuses, such as network analyzers and temperature probes. The temperature of the tissue-equivalent medium during SAR measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.

The liquid tissue depth was at least 15cm in the phantom for all SAR testing

<Tissue Dielectric Parameter Check Results>

Table with 10 columns: Frequency (MHz), Liquid Temp. (°C), Conductivity (σ), Permittivity (εr), Conductivity Target (σ), Permittivity Target (εr), Delta (σ) (%), Delta (εr) (%), Limit (%), Date. It contains 40 rows of test data.



Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
2300	22.5	1.630	39.381	1.67	39.50	-2.40	-0.30	±5	2022/10/7
2300	22.4	1.614	39.258	1.67	39.50	-3.35	-0.61	±5	2022/10/8
2300	22.4	1.672	40.581	1.67	39.50	0.12	2.74	±5	2022/10/10
2300	22.3	1.676	40.691	1.67	39.50	0.36	3.02	±5	2022/10/12
2600	22.2	1.971	39.647	1.96	39.00	0.56	1.66	±5	2022/9/28
2600	22.1	1.954	39.495	1.96	39.00	-0.31	1.27	±5	2022/9/29
2600	22.5	1.993	39.458	1.96	39.00	1.68	1.17	±5	2022/10/4
2600	22.5	1.993	39.458	1.96	39.00	1.68	1.17	±5	2022/10/4
2600	22.2	1.954	39.750	1.96	39.00	-0.31	1.92	±5	2022/10/5
2600	22.7	1.986	38.461	1.96	39.00	1.33	-1.38	±5	2022/10/6
2600	22.3	1.993	39.445	1.96	39.00	1.68	1.14	±5	2022/10/12
2600	22.3	1.873	38.147	1.96	39.00	-4.44	-2.19	±5	2022/10/14
2600	22.3	1.873	38.147	1.96	39.00	-4.44	-2.19	±5	2022/10/14
2600	22.7	1.962	38.368	1.96	39.00	0.10	-1.62	±5	2022/10/23
3500	22.6	2.985	38.122	2.91	37.90	2.58	0.59	±5	2022/10/10
3500	22.3	2.961	37.998	2.91	37.90	1.75	0.26	±5	2022/10/11
3500	22.1	2.938	37.698	2.91	37.90	0.96	-0.53	±5	2022/10/12
3500	22.2	2.928	37.478	2.91	37.90	0.62	-1.11	±5	2022/10/13
3500	22.2	2.928	37.478	2.91	37.90	0.62	-1.11	±5	2022/10/13
3500	22.4	2.871	37.363	2.91	37.90	-1.34	-1.42	±5	2022/10/14
3500	22.5	2.983	38.148	2.91	37.90	2.51	0.65	±5	2022/10/15
3500	22.3	2.994	38.417	2.91	37.90	2.89	1.36	±5	2022/11/5
3700	22.3	3.118	37.761	3.12	37.70	-0.06	0.16	±5	2022/10/11
3700	22.5	3.141	37.911	3.12	37.70	0.67	0.56	±5	2022/10/15
3700	22.3	3.209	38.214	3.12	37.70	2.85	1.36	±5	2022/11/5
3900	22.6	3.318	37.639	3.33	37.51	-0.36	0.34	±5	2022/10/10
3900	22.1	3.265	37.216	3.33	37.51	-1.95	-0.78	±5	2022/10/12
3900	22.1	3.265	37.216	3.33	37.51	-1.95	-0.78	±5	2022/10/12
3900	22.2	3.254	37.086	3.33	37.51	-2.28	-1.13	±5	2022/10/13
3900	22.2	3.254	37.086	3.33	37.51	-2.28	-1.13	±5	2022/10/13



Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
2450	22.6	1.787	39.070	1.80	39.20	-0.72	-0.33	±5	2022/9/20
2450	22.3	1.798	39.656	1.80	39.20	-0.11	1.16	±5	2022/10/3
2450	22.5	1.867	39.004	1.80	39.20	3.72	-0.50	±5	2022/10/7
2450	22.1	1.805	39.424	1.80	39.20	0.28	0.57	±5	2022/10/14
2450	22.5	1.842	38.836	1.80	39.20	2.33	-0.93	±5	2022/10/25
5250	22.5	4.705	37.384	4.71	35.95	-0.11	3.99	±5	2022/10/11
5250	22.1	4.666	37.249	4.71	35.95	-0.93	3.61	±5	2022/10/12
5250	22.1	4.747	36.761	4.71	35.95	0.79	2.26	±5	2022/10/14
5250	22.2	4.720	37.307	4.71	35.95	0.21	3.77	±5	2022/10/22
5250	22.5	4.801	37.002	4.71	35.95	1.93	2.93	±5	2022/10/26
5250	22.5	4.801	37.002	4.71	35.95	1.93	2.93	±5	2022/10/26
5250	22.6	4.864	37.233	4.71	35.95	3.27	3.57	±5	2022/10/27
5600	22.5	5.084	36.849	5.07	35.50	0.28	3.80	±5	2022/10/11
5600	22.1	5.042	36.715	5.07	35.50	-0.55	3.42	±5	2022/10/12
5600	22.1	5.120	36.251	5.07	35.50	0.99	2.12	±5	2022/10/14
5600	22.2	5.056	36.853	5.07	35.50	-0.28	3.81	±5	2022/10/22
5600	22.6	5.272	36.685	5.07	35.50	3.98	3.34	±5	2022/10/27
5600	22.6	5.272	36.685	5.07	35.50	3.98	3.34	±5	2022/10/27
5600	22.3	5.026	35.644	5.07	35.50	-0.87	0.41	±5	2022/11/19
5750	22.5	5.232	36.673	5.22	35.35	0.23	3.74	±5	2022/10/11
5750	22.1	5.189	36.538	5.22	35.35	-0.59	3.36	±5	2022/10/12
5750	22.1	5.287	36.067	5.22	35.35	1.28	2.03	±5	2022/10/14
5750	22.2	5.178	36.574	5.22	35.35	-0.80	3.46	±5	2022/10/22
5750	22.2	5.313	35.763	5.22	35.35	1.78	1.17	±5	2022/10/26
5750	22.6	5.431	36.493	5.22	35.35	4.04	3.23	±5	2022/10/27
5750	22.6	5.431	36.493	5.22	35.35	4.04	3.23	±5	2022/10/27
5750	22.3	5.219	35.584	5.22	35.35	-0.02	0.66	±5	2022/11/19
5850	22.4	5.270	35.659	5.32	35.25	-0.94	1.16	±5	2022/9/22
5850	22.1	5.302	36.381	5.32	35.25	-0.34	3.21	±5	2022/10/12
5850	22.6	5.477	36.303	5.32	35.25	2.95	2.99	±5	2022/10/25
6500	22.3	6.170	34.700	6.07	34.50	1.65	0.58	±5	2022/9/21
6500	22.5	6.150	33.900	6.07	34.50	1.32	-1.74	±5	2022/11/21



10.2 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.

Test Site	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 (%)
SAR14	2022/9/23	750	50	D750V3-1012	EX3DV4 - SN7625	DAE4 Sn1424	0.395	8.560	7.9	-7.71	0.262	5.560	5.24	-5.76
SAR14	2022/9/26	750	50	D750V3-1012	EX3DV4 - SN7625	DAE4 Sn1424	0.390	8.560	7.8	-8.88	0.259	5.560	5.18	-6.83
SAR14	2022/9/27	750	50	D750V3-1107	EX3DV4 - SN7625	DAE4 Sn1424	0.436	8.540	8.72	2.11	0.286	5.570	5.72	2.69
SAR11	2022/9/29	750	50	D750V3-1012	EX3DV4 - SN3976	DAE4 Sn1707	0.388	8.560	7.76	-9.35	0.252	5.560	5.04	-9.35
SAR14	2022/9/30	750	50	D750V3-1107	EX3DV4 - SN7625	DAE4 Sn1424	0.433	8.540	8.66	1.41	0.285	5.570	5.7	2.33
SAR11	2022/9/30	750	50	D750V3-1012	EX3DV4 - SN3976	DAE4 Sn1707	0.395	8.560	7.9	-7.71	0.261	5.560	5.22	-6.12
SAR14	2022/10/1	750	50	D750V3-1107	EX3DV4 - SN7625	DAE4 Sn1424	0.430	8.540	8.6	0.70	0.282	5.570	5.64	1.26
SAR11	2022/10/1	750	50	D750V3-1012	EX3DV4 - SN3976	DAE4 Sn1707	0.389	8.560	7.78	-9.11	0.257	5.560	5.14	-7.55
SAR14	2022/10/2	750	250	D750V3-1012	EX3DV4 - SN7625	DAE4 Sn1424	2.000	8.560	8	-6.54	1.320	5.560	5.28	-5.04
SAR09	2022/11/14	750	50	D750V3-1012	ES3DV3 - SN3270	DAE3 Sn393	0.398	8.560	7.96	-7.01	0.262	5.560	5.24	-5.76
SAR12	2022/9/25	835	50	D835V2-4d167	EX3DV4 - SN3931	DAE4 Sn853	0.488	9.550	9.76	2.20	0.321	6.210	6.42	3.38
SAR14	2022/9/25	835	50	D835V2-4d167	EX3DV4 - SN7625	DAE4 Sn1424	0.460	9.550	9.2	-3.66	0.302	6.210	6.04	-2.74
SAR11	2022/9/29	835	50	D835V2-499	EX3DV4 - SN3976	DAE4 Sn1707	0.441	9.680	8.82	-8.88	0.286	6.280	5.72	-8.92
SAR11	2022/10/1	835	50	D835V2-4d167	EX3DV4 - SN3976	DAE4 Sn1707	0.446	9.550	8.92	-6.60	0.287	6.210	5.74	-7.57
SAR14	2022/10/3	835	50	D835V2-4d167	EX3DV4 - SN7625	DAE4 Sn1424	0.490	9.550	9.8	2.62	0.317	6.210	6.34	2.09
SAR11	2022/10/6	835	50	D835V2-4d167	EX3DV4 - SN3976	DAE4 Sn1707	0.443	9.550	8.86	-7.23	0.285	6.210	5.7	-8.21
SAR16	2022/10/7	835	50	D835V2-4d167	EX3DV4 - SN7350	DAE4 Sn699	0.483	9.550	9.66	1.15	0.316	6.210	6.32	1.77
SAR17	2022/10/14	835	50	D835V2-4d167	ES3DV3 - SN3184	DAE4 Sn699	0.494	9.550	9.88	3.46	0.327	6.210	6.54	5.31
SAR12	2022/9/25	1750	250	D1750V2-1112	EX3DV4 - SN3931	DAE4 Sn853	9.010	36.900	36.04	-2.33	4.740	19.400	18.96	-2.27
SAR11	2022/10/2	1750	50	D1750V2-1112	EX3DV4 - SN3976	DAE4 Sn1707	1.790	36.900	35.8	-2.98	0.972	19.400	19.44	0.21
SAR06	2022/10/3	1750	50	D1750V2-1068	ES3DV3 - SN3115	DAE4 Sn699	1.970	36.600	39.4	7.65	1.050	19.300	21	8.81
SAR11	2022/10/4	1750	50	D1750V2-1112	EX3DV4 - SN3976	DAE4 Sn1707	1.770	36.900	35.4	-4.07	0.963	19.400	19.26	-0.72
SAR16	2022/10/11	1750	250	D1750V2-1112	EX3DV4 - SN7350	DAE4 Sn699	8.750	36.900	35	-5.15	4.610	19.400	18.44	-4.95
SAR15	2022/10/16	1750	50	D1750V2-1112	EX3DV4 - SN7590	DAE4 Sn699	1.720	36.900	34.4	-6.78	0.901	19.400	18.02	-7.11
SAR15	2022/10/17	1750	50	D1750V2-1112	EX3DV4 - SN7590	DAE4 Sn699	1.740	36.900	34.8	-5.69	0.911	19.400	18.22	-6.08
SAR09	2022/10/17	1750	250	D1750V2-1112	EX3DV4 - SN7700	DAE4 Sn1399	8.620	36.900	34.48	-6.56	4.620	19.400	18.48	-4.74
SAR05	2022/10/17	1750	50	D1750V2-1112	ES3DV3 - SN3124	DAE4 Sn1696	2.010	36.900	40.2	8.94	1.010	19.400	20.2	4.12
SAR12	2022/9/25	1900	50	D1900V2-5d041	EX3DV4 - SN3931	DAE4 Sn853	1.930	40.600	38.6	-4.93	1.050	21.100	21	-0.47
SAR12	2022/9/26	1900	250	D1900V2-5d185	EX3DV4 - SN3931	DAE4 Sn853	9.990	39.000	39.96	2.46	5.150	20.400	20.6	0.98
SAR08	2022/9/28	1900	250	D1900V2-5d185	EX3DV4 - SN7695	DAE4 Sn656	9.090	39.000	36.36	-6.77	4.690	20.400	18.76	-8.04
SAR11	2022/10/3	1900	50	D1900V2-5d185	EX3DV4 - SN3976	DAE4 Sn1707	1.850	39.000	37	-5.13	0.984	20.400	19.68	-3.53
SAR11	2022/10/5	1900	50	D1900V2-5d093	EX3DV4 - SN3976	DAE4 Sn1707	1.970	39.900	39.4	-1.25	1.020	20.700	20.4	-1.45
SAR16	2022/10/6	1900	250	D1900V2-5d185	EX3DV4 - SN7350	DAE4 Sn699	10.100	39.000	40.4	3.59	5.150	20.400	20.6	0.98
SAR16	2022/10/8	1900	250	D1900V2-5d185	EX3DV4 - SN7350	DAE4 Sn699	10.200	39.000	40.8	4.62	5.160	20.400	20.64	1.18
SAR16	2022/10/11	1900	250	D1900V2-5d185	EX3DV4 - SN7350	DAE4 Sn699	10.100	39.000	40.4	3.59	5.130	20.400	20.52	0.59
SAR15	2022/10/17	1900	250	D1900V2-5d093	EX3DV4 - SN7590	DAE4 Sn699	9.940	39.900	39.76	-0.35	5.200	20.700	20.8	0.48
SAR09	2022/10/17	1900	50	D1900V2-5d093	EX3DV4 - SN7700	DAE4 Sn1399	1.920	39.900	38.4	-3.76	0.985	20.700	19.7	-4.83
SAR05	2022/10/17	1900	50	D1900V2-5d093	ES3DV3 - SN3124	DAE4 Sn1696	1.850	39.900	37	-7.27	0.939	20.700	18.78	-9.28
SAR09	2022/11/14	1900	250	D1900V2-5d093	ES3DV3 - SN3270	DAE3 Sn393	10.100	39.900	40.4	1.25	5.360	20.700	21.44	3.57



Test Site	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 (%)
SAR11	2022/10/7	2300	50	D2300V2-1006	EX3DV4 - SN3976	DAE4 Sn1707	2.340	48.300	46.8	-3.11	1.150	23.500	23	-2.13
SAR11	2022/10/8	2300	50	D2300V2-1006	EX3DV4 - SN3976	DAE4 Sn1707	2.320	48.300	46.4	-3.93	1.140	23.500	22.8	-2.98
SAR16	2022/10/10	2300	250	D2300V2-1006	EX3DV4 - SN7350	DAE4 Sn699	11.700	48.300	46.8	-3.11	5.530	23.500	22.12	-5.87
SAR16	2022/10/12	2300	50	D2300V2-1088	EX3DV4 - SN7350	DAE4 Sn699	2.690	49.700	53.8	8.25	1.300	24.100	26	7.88
SAR14	2022/9/28	2600	250	D2600V2-1008	EX3DV4 - SN7625	DAE4 Sn1424	13.600	58.000	54.4	-6.21	6.280	25.800	25.12	-2.64
SAR14	2022/9/29	2600	250	D2600V2-1008	EX3DV4 - SN7625	DAE4 Sn1424	13.400	58.000	53.6	-7.59	6.220	25.800	24.88	-3.57
SAR06	2022/10/4	2600	250	D2600V2-1078	ES3DV3 - SN3115	DAE4 Sn699	13.400	55.400	53.6	-3.25	6.050	24.900	24.2	-2.81
SAR16	2022/10/4	2600	250	D2600V2-1008	EX3DV4 - SN7350	DAE4 Sn699	14.200	58.000	56.8	-2.07	6.220	25.800	24.88	-3.57
SAR16	2022/10/5	2600	50	D2600V2-1008	EX3DV4 - SN7350	DAE4 Sn699	3.120	58.000	62.4	7.59	1.410	25.800	28.2	9.30
SAR11	2022/10/6	2600	50	D2600V2-1089	EX3DV4 - SN3976	DAE4 Sn1707	2.850	55.400	57	2.89	1.330	24.600	26.6	8.13
SAR16	2022/10/12	2600	250	D2600V2-1078	EX3DV4 - SN7350	DAE4 Sn699	12.800	55.400	51.2	-7.58	5.720	24.900	22.88	-8.11
SAR15	2022/10/14	2600	250	D2600V2-1089	EX3DV4 - SN7590	DAE4 Sn699	14.400	55.400	57.6	3.97	6.570	24.600	26.28	6.83
SAR17	2022/10/14	2600	250	D2600V2-1078	ES3DV3 - SN3184	DAE4 Sn699	13.000	55.400	52	-6.14	6.230	24.900	24.92	0.08
SAR09	2022/10/23	2600	50	D2600V2-1008	EX3DV4 - SN7700	DAE4 Sn1399	2.670	58.000	53.4	-7.93	1.210	25.800	24.2	-6.20
SAR11	2022/10/10	3500	50	D3500V2-1036	EX3DV4 - SN3976	DAE4 Sn1707	3.270	67.400	65.4	-2.97	1.250	25.100	25	-0.40
SAR12	2022/10/11	3500	100	D3500V2-1036	EX3DV4 - SN3931	DAE4 Sn1707	6.960	67.400	69.6	3.26	2.590	25.100	25.9	3.19
SAR12	2022/10/12	3500	100	D3500V2-1036	EX3DV4 - SN3931	DAE4 Sn1707	6.900	67.400	69	2.37	2.570	25.100	25.7	2.39
SAR12	2022/10/13	3500	100	D3500V2-1036	EX3DV4 - SN3931	DAE4 Sn1707	6.820	67.400	68.2	1.19	2.520	25.100	25.2	0.40
SAR11	2022/10/13	3500	50	D3500V2-1036	EX3DV4 - SN3976	DAE4 Sn1707	3.210	67.400	64.2	-4.75	1.230	25.100	24.6	-1.99
SAR11	2022/10/14	3500	50	D3500V2-1036	EX3DV4 - SN3976	DAE4 Sn1707	3.140	67.400	62.8	-6.82	1.200	25.100	24	-4.38
SAR11	2022/10/15	3500	50	D3500V2-1036	EX3DV4 - SN3976	DAE4 Sn1707	3.370	67.400	67.4	0.00	1.280	25.100	25.6	1.99
SAR15	2022/11/5	3500	50	D3500V2-1036	EX3DV4 - SN7590	DAE4 Sn853	3.380	67.400	67.6	0.30	1.280	25.100	25.6	1.99
SAR12	2022/10/11	3700	50	D3700V2-1006	EX3DV4 - SN3931	DAE4 Sn1707	3.330	65.600	66.6	1.52	1.220	23.700	24.4	2.95
SAR11	2022/10/15	3700	50	D3700V2-1006	EX3DV4 - SN3976	DAE4 Sn1707	3.010	65.600	60.2	-8.23	1.090	23.700	21.8	-8.02
SAR15	2022/11/5	3700	50	D3700V2-1006	EX3DV4 - SN7590	DAE4 Sn853	3.130	65.600	62.6	-4.57	1.140	23.700	22.8	-3.80
SAR11	2022/10/10	3900	50	D3900V2-1017	EX3DV4 - SN3976	DAE4 Sn1707	3.180	68.700	63.6	-7.42	1.130	23.900	22.6	-5.44
SAR12	2022/10/12	3900	100	D3900V2-1017	EX3DV4 - SN3931	DAE4 Sn1707	6.850	68.700	68.5	-0.29	2.480	23.900	24.8	3.77
SAR11	2022/10/12	3900	50	D3900V2-1017	EX3DV4 - SN3976	DAE4 Sn1707	3.130	68.700	62.6	-8.88	1.110	23.900	22.2	-7.11
SAR12	2022/10/13	3900	100	D3900V2-1017	EX3DV4 - SN3931	DAE4 Sn1707	6.830	68.700	68.3	-0.58	2.470	23.900	24.7	3.35
SAR11	2022/10/13	3900	50	D3900V2-1017	EX3DV4 - SN3976	DAE4 Sn1707	3.120	68.700	62.4	-9.17	1.110	23.900	22.2	-7.11

Test Site	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 (%)
SAR12	2022/9/20	2450	50	D2450V2-929	EX3DV4 - SN3931	DAE4 Sn853	2.540	53.100	50.8	-4.33	1.190	24.700	23.8	-3.64
SAR13	2022/10/3	2450	250	D2450V2-736	EX3DV4 - SN3728	DAE4 Sn316	13.700	54.200	54.8	1.11	6.340	25.300	25.36	0.24
SAR13	2022/10/7	2450	50	D2450V2-929	EX3DV4 - SN3728	DAE4 Sn316	2.690	53.100	53.8	1.32	1.250	24.700	25	1.21
SAR14	2022/10/14	2450	50	D2450V2-929	EX3DV4 - SN7625	DAE4 Sn1424	2.460	53.100	49.2	-7.34	1.150	24.700	23	-6.88
SAR09	2022/10/25	2450	250	D2450V2-806	EX3DV4 - SN7700	DAE4 Sn1399	12.400	52.700	49.6	-5.88	6.160	24.400	24.64	0.98
SAR13	2022/10/11	5250	100	D5GHzV2-1128	EX3DV4 - SN3728	DAE4 Sn316	7.580	80.000	75.8	-5.25	2.200	22.900	22	-3.93
SAR14	2022/10/12	5250	50	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	3.620	80.000	72.4	-9.50	1.040	22.900	20.8	-9.17
SAR14	2022/10/14	5250	100	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	7.520	80.000	75.2	-6.00	2.140	22.900	21.4	-6.55
SAR13	2022/10/22	5250	100	D5GHzV2-1128	EX3DV4 - SN3728	DAE4 Sn316	7.620	80.000	76.2	-4.75	2.150	22.900	21.5	-6.11
SAR14	2022/10/26	5250	50	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	3.740	80.000	74.8	-6.50	1.090	22.900	21.8	-4.80
SAR08	2022/10/26	5250	100	D5GHzV2-1128	EX3DV4 - SN7695	DAE4 Sn853	8.730	80.000	87.3	9.13	2.510	22.900	25.1	9.61
SAR14	2022/10/27	5250	100	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	8.390	80.000	83.9	4.88	2.390	22.900	23.9	4.37
SAR13	2022/10/11	5600	100	D5GHzV2-1128	EX3DV4 - SN3728	DAE4 Sn316	7.980	82.400	79.8	-3.16	2.320	23.600	23.2	-1.69
SAR14	2022/10/12	5600	50	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	4.030	82.400	80.6	-2.18	1.160	23.600	23.2	-1.69
SAR14	2022/10/14	5600	100	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	8.270	82.400	82.7	0.36	2.340	23.600	23.4	-0.85
SAR13	2022/10/22	5600	100	D5GHzV2-1128	EX3DV4 - SN3728	DAE4 Sn316	7.900	82.400	79	-4.13	2.230	23.600	22.3	-5.51
SAR08	2022/10/27	5600	50	D5GHzV2-1128	EX3DV4 - SN7695	DAE4 Sn853	4.140	82.400	82.8	0.49	1.180	23.600	23.6	0.00
SAR14	2022/10/27	5600	100	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	8.520	82.400	85.2	3.40	2.410	23.600	24.1	2.12
SAR04	2022/11/19	5600	50	D5GHzV2-1128	EX3DV4 - SN3976	DAE3 Sn577	4.400	82.400	88	6.80	1.240	23.600	24.8	5.08
SAR13	2022/10/11	5750	100	D5GHzV2-1128	EX3DV4 - SN3728	DAE4 Sn316	7.690	79.100	76.9	-2.78	2.220	22.600	22.2	-1.77
SAR14	2022/10/12	5750	50	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	3.670	79.100	73.4	-7.21	1.070	22.600	21.4	-5.31
SAR14	2022/10/14	5750	100	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	7.810	79.100	78.1	-1.26	2.210	22.600	22.1	-2.21
SAR13	2022/10/22	5750	100	D5GHzV2-1128	EX3DV4 - SN3728	DAE4 Sn316	7.610	79.100	76.1	-3.79	2.200	22.600	22	-2.65
SAR09	2022/10/26	5750	100	D5GHzV2-1128	EX3DV4 - SN7700	DAE4 Sn1399	8.220	79.100	82.2	3.92	2.350	22.600	23.5	3.98
SAR08	2022/10/27	5750	50	D5GHzV2-1128	EX3DV4 - SN7695	DAE4 Sn853	3.780	79.100	75.6	-4.42	1.080	22.600	21.6	-4.42
SAR14	2022/10/27	5750	100	D5GHzV2-1128	EX3DV4 - SN7625	DAE4 Sn1424	8.360	79.100	83.6	5.69	2.380	22.600	23.8	5.31
SAR04	2022/11/19	5750	50	D5GHzV2-1128	EX3DV4 - SN3976	DAE3 Sn577	4.210	79.100	84.2	6.45	1.170	22.600	23.4	3.54
SAR14	2022/9/22	5850	100	D5GHzV2-1171	EX3DV4 - SN7625	DAE4 Sn1424	8.300	82.300	83	0.85	2.330	23.100	23.3	0.87
SAR14	2022/10/12	5850	100	D5GHzV2-1171	EX3DV4 - SN7625	DAE4 Sn1424	8.350	82.300	83.5	1.46	2.340	23.100	23.4	1.30
SAR14	2022/10/25	5850	100	D5GHzV2-1171	EX3DV4 - SN7625	DAE4 Sn1424	8.630	82.300	86.3	4.86	2.420	23.100	24.2	4.76
SAR13	2022/9/21	6500	100	D6.5GHzV2-1003	EX3DV4 - SN3728	DAE4 Sn316	27.500	292.000	275	-5.82	5.220	53.800	52.2	-2.97
SAR13	2022/11/21	6500	100	D6.5GHzV2-1003	EX3DV4 - SN3728	DAE4 Sn316	32.100	292.000	321	9.93	5.900	53.800	59	9.67

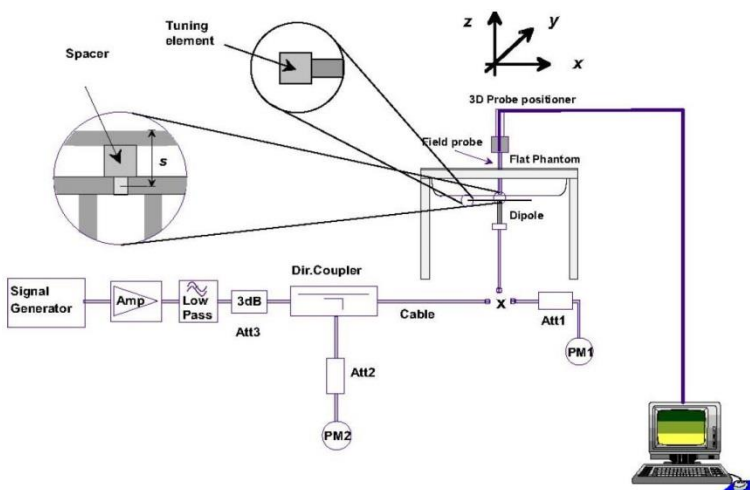


Fig 8.3.1 System Performance Check Setup



Fig 8.3.2 Setup Photo

10.3 PD System Performance Check Results

The system was verified to be within ± 0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check. The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes

Test Location	Frequency (GHz)	5G Verification Source	Probe S/N	DAE S/N	Distance (mm)	Measured 4 cm ² (W/m ²)	Targeted 4 cm ² (W/m ²)	Deviation (dB)	Date
SAR06-HY	10G	10GHz_1020	EUmmWV3 - SN9424	Sn316	10	41.4	51.7	-0.96	2022/9/20

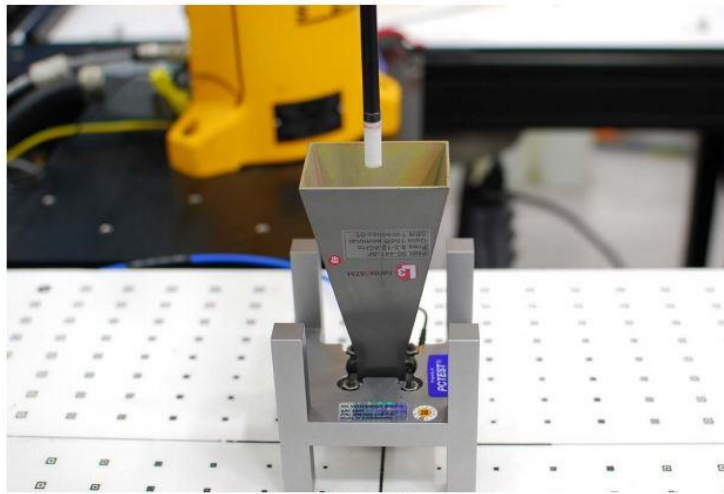


Figure 4-3
System Verification Setup Photo

System Performance Check Setup

11. RF Exposure Positions

11.1 Ear and handset reference point

Figure 9.1.1 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 9.1.2 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 9.1.3). 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 9.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

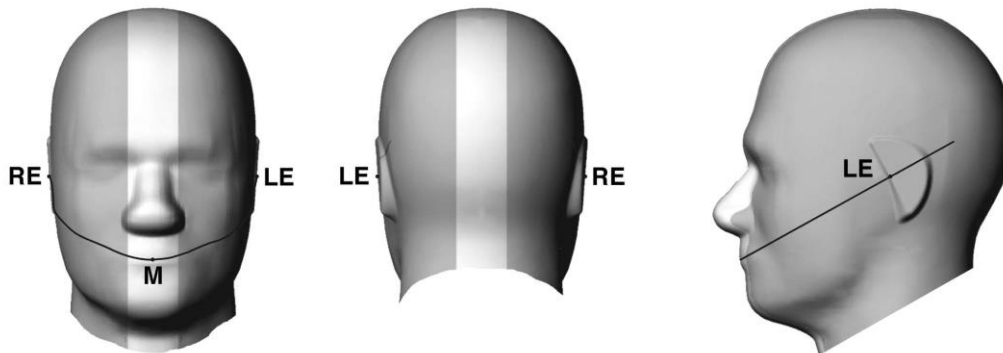


Fig 9.1.1 Front, back, and side views of SAM twin phantom

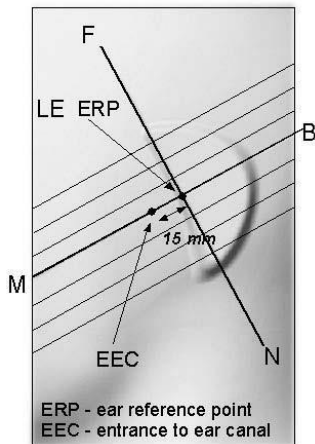


Fig 9.1.2 Close-up side view of phantom showing the ear region.

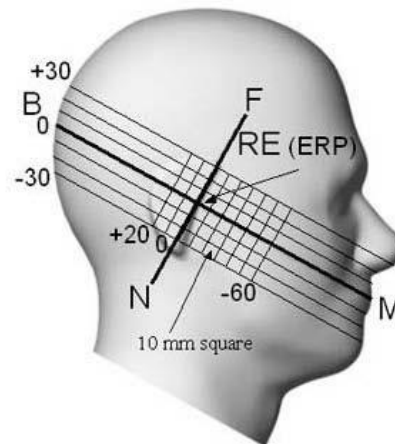


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

11.2 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 9.2.1 and Figure 9.2.2), 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 9.2.1). 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 9.2.2), 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 9.2.3), 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 9.2.3. The actual rotation angles should be documented in the test report.

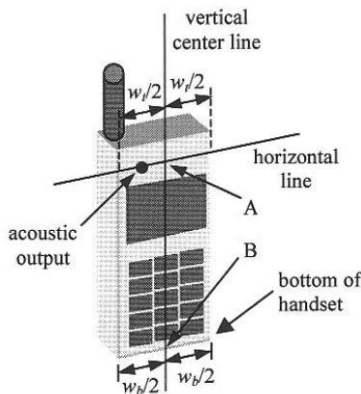


Fig 9.2.1 Handset vertical and horizontal reference lines—“fixed case”

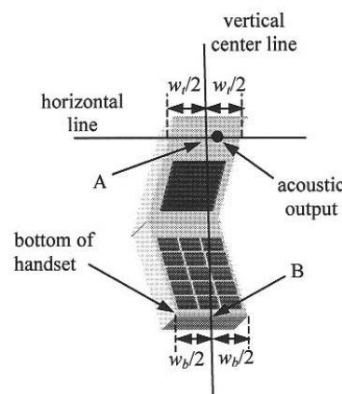


Fig 9.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

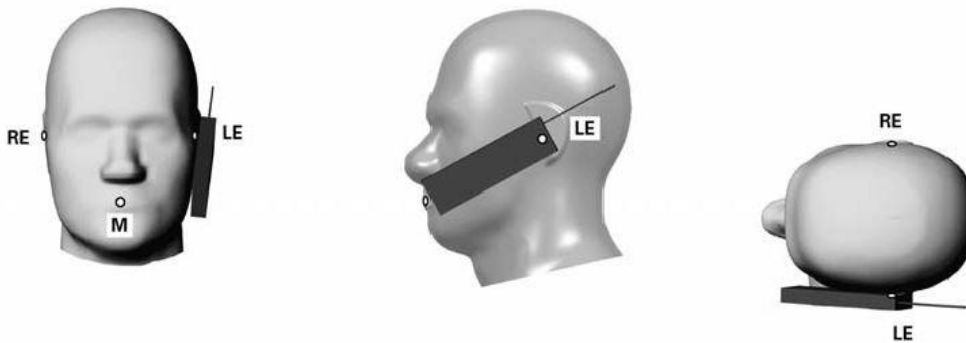


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

11.3 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 9.3.1. 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

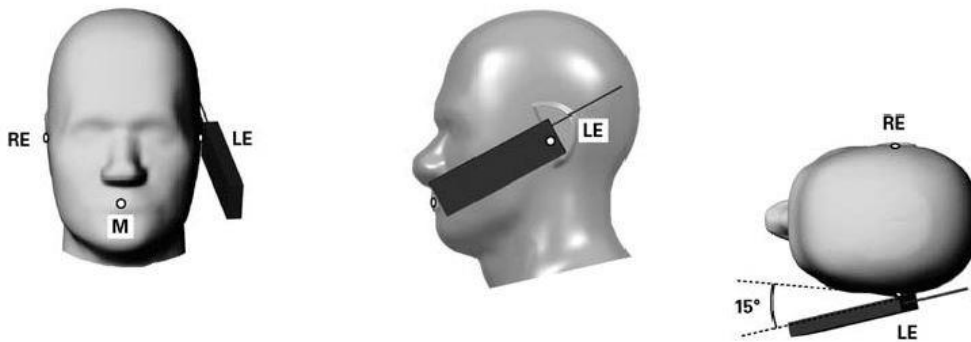


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

11.4 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 9.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.

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

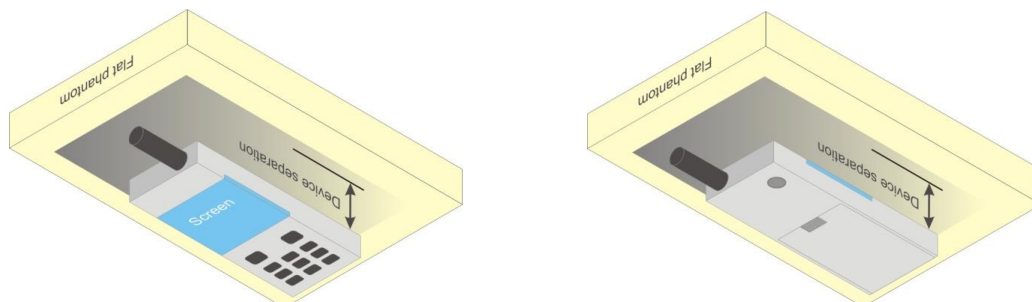


Fig 9.4 Body Worn Position

11.5 Product Specific Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that 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.

11.6 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.



12. Measurement procedure for output power and SAR

Detail output power measurement data is in the appendix D

<GSM Note>

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. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
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 $\leq \frac{1}{4}$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Note>

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

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

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

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

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

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

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

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

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ 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-TFCl
 - viii. Confirm that E-TFCl is equal to the target E-TFCl of 75 for sub-test 1, and other subtest's E-TFCl
- d. The transmitted maximum output power was recorded.

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCl
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 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

**<LTE 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 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 SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; 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

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- a. 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- b. "special subframe S" contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
- c. Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Anritsu MT8820C (firmware: #22.52#004) was used for LTE output power measurements and SAR testing.

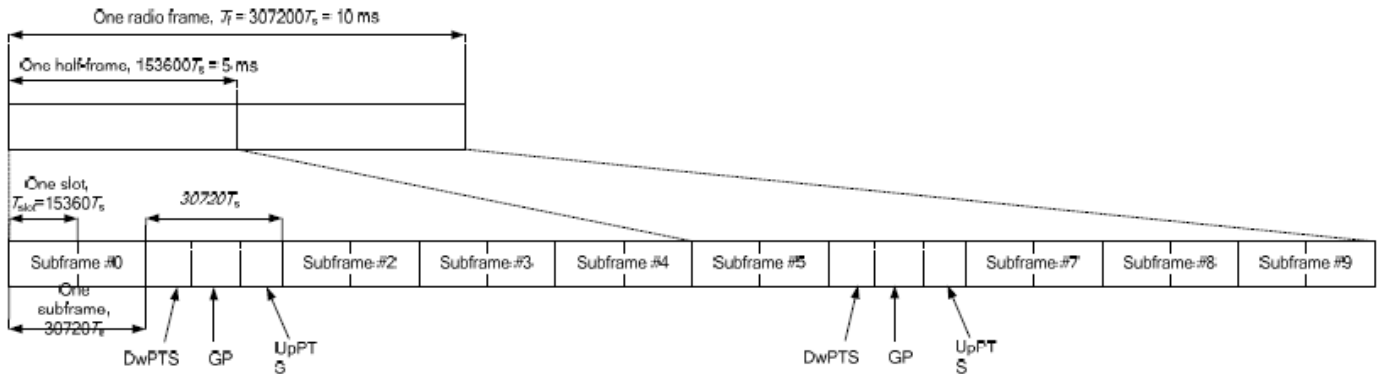


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink				
	DwPTS	UpPTS		DwPTS	UpPTS			
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		
0	6592 · Ts	2192 · Ts	2560 · Ts	7680 · Ts	2192 · Ts	2560 · Ts		
1	19760 · Ts			20480 · Ts				
2	21952 · Ts			23040 · Ts				
3	24144 · Ts			25600 · Ts				
4	26336 · Ts			7680 · Ts				
5	6592 · Ts	4384 · Ts	5120 · Ts	20480 · Ts	4384 · Ts	5120 · Ts		
6	19760 · Ts			23040 · Ts				
7	21952 · Ts			12800 · Ts				
8	24144 · Ts			-			-	-
9	13168 · Ts			-			-	-

Special subframe (30720·T_s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~4	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T_s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~3	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

- i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
- vi. The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE Band 41.
- vii. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1, for Power Class 3 operation is 63.3% using UL-DL configuration 0. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR among all exposure condition.

<5G NR Note>

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below
 - a. For DFT-OFDM output power measurement, full measurement was done for Pi/2 BPSK and QPSK and for the largest supported bandwidth, repeat test for 16QAM/64QAM/256QAM under 1RB 1Offset configuration. For smaller bandwidth, measure conducted power for Pi/2 BPSK and 1RB 1Offset configuration.
 - b. According to the tune-up, CP-OFDM output power is not ½ dB higher than DFT-OFDM mode, and the reported SAR of DFT-OFDM mode reported SAR is ≤ 1.45 W/kg, SAR test and thus conducted power for CP-OFDM mode is not required.
 - c. To start SAR test for the largest channel bandwidth for Pi/2 BPSK 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. Also do SAR test for 50% RB allocation for Pi/2 BPSK SAR testing using 1RB Pi/2 BPSK allocation procedure
 - d. For Pi/2 BPSK with 100% RB allocation, SAR test 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.
 - e. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in Pi/2 BPSK, also reported SAR for the Pi/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - f. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
2. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.
3. Antenna 1 and 5 for n77 is used as SRS dedicated antennas, i.e., the antenna(s) are used for receive and Sound Reference Signal transmission (SRS) only (not traffic transmission), RF Exposure was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

<3GPP 38.101 MPR for EN-DC>

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

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5 ¹	≤ 1.2 ¹	≤ 0.2 ¹
		≤ 0.5 ²	≤ 0.5 ²	0 ²
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM			≤ 2.5
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



<WLAN Note>

1. All of the wireless technology of this device only supports MIMO mode operation.
2. 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.
3. 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.
4. 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).
5. 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.
6. 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.
7. Per 201904 TCBC workshops, General principles of FCC KDB Publication 248227 D01 can be applied to determine the SAR Initial Test Configurations and test reduction for 802.11ax SAR testing. For the table below the 802.11ax maximum power is SU (non-OFDMA), and the SU maximum power also higher than RU (OFDMA)
8. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
9. For modes with the same maximum output power, the guidance from section 5.3.2 a) of FCC KDB Publication 248227 D01 should be applied, with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency bands
10. When SAR testing for 802.11ax is required
 - a. If the maximum output power is highest of OFDMA scenarios, choose the tone size with the maximum number of tones and the highest maximum output power
 - b. Otherwise, consider the fully allocated channel for SAR testing
 - c. When SAR testing is required on RU sizes less than the fully allocated channel, use the RU number closest to the middle of the channel, choosing the higher RU number when two RUs are equidistant to the middle of the channel
11. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of antenna 4 and antenna 3 respectively to calculate sum of the power for MIMO mode
12. The duty cycle was using for WLAN SAR testing and the duty cycle figure include in the Appendix D.

Operation Mode	Duty cycle %
802.11b 1Mbps	98.2
802.11a 6Mbps	100
802.11ac-VHT80	99.3
802.11ax-HE80	98.87

<Bluetooth>

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps due to its highest average power and duty cycle is 76.83 considered in SAR testing, and the duty cycle would be scaled to theoretical 83.3% in reported SAR calculation, for the duty cycle figure and output power include in appendix D.

13. DL/UL carrier aggregation

<LTE Carrier Aggregation combinations>

General Note:

1. This device supports Carrier Aggregation on downlink only for inter and intra band. For the device supports combination bands and configurations are according to 3GPP.
2. In applying the existing power measurement procedure of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of the frequency band and CCs in each row need consideration, and that configurations require power measurement should be highlighted in the below table.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	CA_2A-12A	3CC-82	82	CA_2A-12A-30A	4CC-257	248	CA_2A-12A-66A-66A	5CC-432
2	CA_2A-13A	3CC-86	83	CA_2A-12A-66A	4CC-248	249	CA_2A-12A-66C	4CC-248
3	CA_2A-14A	3CC-88	84	CA_2A-12A-12A	3CC-82	250	CA_2A-12B-66A	4CC-248
4	CA_2A-17A	3CC-106	85	CA_2A-12B	3CC-82	251	CA_2A-13A-48A-48A	4CC-252
5	CA_2A-29A	3CC-89	86	CA_2A-13A-48A	4CC-252	252	CA_2A-13A-48C	5CC-429
6	CA_2A-2A	3CC-82	87	CA_2A-13A-66A	4CC-253	253	CA_2A-13A-66A-66A	4CC-260
7	CA_2A-30A	3CC-82	88	CA_2A-14A-30A	4CC-393	254	CA_2A-13A-66B	4CC-253
8	CA_2A-48A	3CC-86	89	CA_2A-29A-30A	4CC-261	255	CA_2A-13A-66C	4CC-253
9	CA_2A-4A	3CC-104	90	CA_2A-29A-66A	4CC-394	256	CA_2A-14A-66A-66A	4CC-390
10	CA_2A-5A	3CC-110	91	CA_2A-2A-12A	3CC-82	257	CA_2A-2A-12A-30A	5CC-491
11	CA_2A-66A	3CC-83	92	CA_2A-2A-13A	3CC-86	258	CA_2A-2A-12A-66A	4CC-248
12	CA_2A-71A	3CC-111	93	CA_2A-2A-29A	3CC-89	259	CA_2A-2A-12B	4CC-248
13	CA_2A-7A	3CC-112	94	CA_2A-2A-30A	3CC-82	260	CA_2A-2A-13A-66A	5CC-434
14	CA_2C	3CC-82	95	CA_2A-2A-4A	3CC-104	261	CA_2A-2A-29A-30A	5CC-498
15	CA_4A-12A	3CC-104	96	CA_2A-2A-5A	3CC-113	262	CA_2A-2A-30A-66A	5CC-489
16	CA_4A-13A	3CC-105	97	CA_2A-2A-66A	3CC-83	263	CA_2A-2A-4A-12A	
17	CA_4A-17A	3CC-106	98	CA_2A-2A-71A	3CC-111	264	CA_2A-2A-4A-13A	
18	CA_4A-29A	3CC-107	99	CA_2A-2A-7A	3CC-112	265	CA_2A-2A-4A-4A	4CC-263
19	CA_4A-30A	3CC-108	100	CA_2A-30A-66A	4CC-262	266	CA_2A-2A-4A-5A	5CC-438
20	CA_4A-48A	3CC-230	101	CA_2A-48A-48A	3CC-86	267	CA_2A-2A-4A-71A	
21	CA_4A-4A	3CC-104	102	CA_2A-48A-66A	4CC-281	268	CA_2A-2A-5A-30A	5CC-494
22	CA_4A-5A	3CC-110	103	CA_2A-48C	3CC-86	269	CA_2A-2A-5A-5A	4CC-270
23	CA_4A-71A	3CC-111	104	CA_2A-4A-12A	4CC-285	270	CA_2A-2A-5A-66A	5CC-440
24	CA_4A-7A	3CC-112	105	CA_2A-4A-13A	4CC-264	271	CA_2A-2A-5B	4CC-270
25	CA_5A-25A		106	CA_2A-4A-17A	4CC-288	272	CA_2A-2A-66A-66A	4CC-273
26	CA_5A-30A	3CC-113	107	CA_2A-4A-29A		273	CA_2A-2A-66A-71A	5CC-505
27	CA_5A-38A	3CC-165	108	CA_2A-4A-30A		274	CA_2A-2A-66B	4CC-273
28	CA_5A-41A		109	CA_2A-4A-4A	3CC-104	275	CA_2A-2A-66C	4CC-273
29	CA_5A-48A	3CC-114	110	CA_2A-4A-5A	4CC-287	276	CA_2A-2A-7A-12A	
30	CA_5A-5A	3CC-110	111	CA_2A-4A-71A	4CC-267	277	CA_2A-2A-7A-66A	5CC-504
31	CA_5A-66A	3CC-115	112	CA_2A-4A-7A	4CC-291	278	CA_2A-30A-66A-66A	4CC-262
32	CA_5A-7A	3CC-116	113	CA_2A-5A-30A	4CC-268	279	CA_2A-48A-48A-66A	4CC-281
33	CA_5B	3CC-113	114	CA_2A-5A-48A	4CC-394	280	CA_2A-48A-48C	4CC-281
34	CA_5C	3CC-113	115	CA_2A-5A-66A	4CC-270	281	CA_2A-48C-66A	5CC-449
35	CA_7A-12A	3CC-122	116	CA_2A-5A-7A	4CC-426	282	CA_2A-48D	4CC-281
36	CA_7A-13A	3CC-123	117	CA_2A-5B	3CC-113	283	CA_2A-4A-12A-12A	4CC-285
37	CA_7A-26A	3CC-222	118	CA_2A-66A-66A	3CC-83	284	CA_2A-4A-12B	4CC-285
38	CA_7A-29A	3CC-124	119	CA_2A-66A-71A	4CC-273	285	CA_2A-4A-4A-12A	4CC-263
39	CA_7A-66A	3CC-125	120	CA_2A-66B	3CC-83	286	CA_2A-4A-4A-13A	4CC-264
40	CA_7A-7A	3CC-112	121	CA_2A-66C	3CC-83	287	CA_2A-4A-4A-5A	4CC-266
41	CA_7B	3CC-112	122	CA_2A-7A-12A	4CC-276	288	CA_2A-4A-4A-71A	4CC-267
42	CA_7C	3CC-112	123	CA_2A-7A-13A	4CC-311	289	CA_2A-4A-5A-5A	4CC-287
43	CA_12A-12A	3CC-82	124	CA_2A-7A-29A	4CC-309	290	CA_2A-4A-5B	4CC-287
44	CA_12A-25A		125	CA_2A-7A-66A	4CC-277	291	CA_2A-4A-7A-7A	



FCC SAR TEST REPORT

Report No. : FA241215-02D

45	CA_12A-30A	3CC-82	126	CA_2A-7A-7A	3CC-112	292	CA_2A-4A-7C	4CC-291
46	CA_12A-66A	3CC-83	127	CA_2A-7C	3CC-112	293	CA_2A-5A-48A-48A	4CC-394
47	CA_12B	3CC-82	128	CA_2C-12A	3CC-82	294	CA_2A-5A-48C	5CC-453
48	CA_13A-48A	3CC-86	129	CA_2C-29A	3CC-89	295	CA_2A-5A-5A-66A	4CC-296
49	CA_13A-66A	3CC-87	130	CA_2C-30A	3CC-82	296	CA_2A-5A-66A-66A	4CC-270
50	CA_14A-30A	3CC-88	131	CA_2C-5A	3CC-110	297	CA_2A-5A-66B	4CC-296
51	CA_14A-66A	3CC-189	132	CA_2C-66A	3CC-83	298	CA_2A-5A-66C	4CC-296
52	CA_25A-25A	3CC-246	133	CA_4A-12A-12A	3CC-104	299	CA_2A-5B-30A	4CC-268
53	CA_25A-26A	3CC-192	134	CA_4A-12A-30A	4CC-320	300	CA_2A-5B-66A	4CC-296
54	CA_25A-41A	3CC-195	135	CA_4A-12B	3CC-104	301	CA_2A-66A-66A-66A	4CC-296
55	CA_25A-48A		136	CA_4A-29A-30A	4CC-322	302	CA_2A-66A-66A-71A	4CC-273
56	CA_26A-41A	3CC-198	137	CA_4A-48C	4CC-319	303	CA_2A-66A-66B	4CC-296
57	CA_29A-30A	3CC-89	138	CA_4A-4A-12A	3CC-104	304	CA_2A-66A-66C	4CC-296
58	CA_29A-66A	3CC-90	139	CA_4A-4A-13A	3CC-105	305	CA_2A-66C-71A	4CC-302
59	CA_30A-66A	3CC-100	140	CA_4A-4A-29A	3CC-107	306	CA_2A-66D	4CC-296
60	CA_38A-38A	3CC-165	141	CA_4A-4A-30A	3CC-108	307	CA_2A-7A-12B	4CC-276
61	CA_38C	3CC-165	142	CA_4A-4A-5A	3CC-110	308	CA_2A-7A-66A-66A	4CC-277
62	CA_41A-41A	3CC-195	143	CA_4A-4A-71A	3CC-111	309	CA_2A-7A-7A-29A	
63	CA_41C	3CC-195	144	CA_4A-4A-7A	3CC-112	310	CA_2A-7A-7A-66A	4CC-308
64	CA_48A-48A	3CC-86	145	CA_4A-5A-30A	4CC-324	311	CA_2A-7A-7A-13A	4CC-421
65	CA_48A-66A	3CC-102	146	CA_4A-5B	3CC-110	312	CA_2A-7C-66A	4CC-308
66	CA_48C	3CC-86	147	CA_4A-7A-12A	4CC-328	313	CA_2A-7C-13A	4CC-313
67	CA_66A-66A	3CC-83	148	CA_4A-7A-7A	3CC-112	314	CA_2A-7C-29A	4CC-309
68	CA_66A-71A	3CC-119	149	CA_4A-7C	3CC-112	315	CA_2C-12A-30A	4CC-257
69	CA_66B	3CC-83	150	CA_4C-12A	3CC-104	316	CA_2C-29A-30A	4CC-261
70	CA_66C	3CC-83	151	CA_4C-5A	3CC-110	317	CA_2C-5A-66A	4CC-296
71	CA_48A-71A	3CC-221	152	CA_4C-7A	3CC-112	318	CA_2C-66A-66A	4CC-296
72	CA_2A-26A	3CC-222	153	CA_5A-30A-66A	4CC-329	319	CA_4A-48D	5CC-460
73	CA_4A-41A		154	CA_5A-48A-48A	3CC-114	320	CA_4A-4A-12A-30A	
74	CA_25C	3CC-246	155	CA_5A-48A-66A	4CC-332	321	CA_4A-4A-12B	4CC-320
75	CA_26A-66A	3CC-223	156	CA_5A-48C	3CC-114	322	CA_4A-4A-29A-30A	
76	CA_13A-4A	3CC-105	157	CA_5A-5A-66A	3CC-115	323	CA_4A-4A-48A-48A	4CC-319
77	CA_13A-2A	3CC-86	158	CA_5A-66A-66A	3CC-115	324	CA_4A-4A-5A-30A	
78	CA_7A-71A	3CC-235	159	CA_5A-66B	3CC-115	325	CA_4A-4A-5A-5A	4CC-324
79	CA_12A-48A	3CC-236	160	CA_5A-66C	3CC-115	326	CA_4A-4A-5B	4CC-324
80	CA_25A-66A	3CC-246	161	CA_5A-7A-7A	3CC-116	327	CA_4A-5B-30A	4CC-324
81	CA_7A-25A	3CC-246	162	CA_5A-7A-66A	4CC-341	328	CA_4A-7A-12B	
			163	CA_5A-7C	3CC-116	329	CA_5A-30A-66A-66A	5CC-467
			164	CA_5B-30A	3CC-113	330	CA_5A-48A-48A-66A	4CC-332
			165	CA_5B-38A		331	CA_5A-48A-48C	4CC-332
			166	CA_5B-66A	3CC-115	332	CA_5A-48C-66A	5CC-464
			167	CA_7A-12A-66A	4CC-347	333	CA_5A-48D	4CC-332
			168	CA_7A-12B	3CC-168	334	CA_5A-5A-66A-66A	4CC-332
			169	CA_7A-29A-66A	4CC-349	335	CA_5A-5A-66B	4CC-332
			170	CA_7A-66A-66A	3CC-167	336	CA_5A-5A-66C	4CC-332
			171	CA_7A-7A-13A	3CC-123	337	CA_5A-66A-66A-66A	4CC-332
			172	CA_7A-7A-26A	3CC-222	338	CA_5A-66A-66B	4CC-332
			173	CA_7A-7A-29A	3CC-124	339	CA_5A-66A-66C	4CC-332
			174	CA_7A-7A-66A	3CC-167	340	CA_5A-66D	4CC-332
			175	CA_7C-29A	3CC-124	341	CA_5A-7A-66A-66A	4CC-416
			176	CA_7C-66A	3CC-125	342	CA_5A-7C-66A	4CC-341
			177	CA_7C-13A	3CC-123	343	CA_5B-30A-66A	4CC-329
			178	CA_12A-12A-66A	3CC-83	344	CA_5B-66A-66A	4CC-332
			179	CA_12A-30A-66A	4CC-353	345	CA_5B-66B	4CC-332
			180	CA_12A-66A-66A	3CC-83	346	CA_5B-66C	4CC-332
			181	CA_12A-66C	3CC-83	347	CA_7A-12A-66A-66A	
			182	CA_12B-66A	3CC-83	348	CA_7A-12B-66A	4CC-347
			183	CA_13A-48A-48A	3CC-86	349	CA_7A-7A-29A-66A	



			184	CA_13A-48A-66A	4CC-359	350	CA_7A-7A-66A-66A	4CC-349
			185	CA_13A-48C	3CC-86	351	CA_7C-29A-66A	4CC-349
			186	CA_13A-66A-66A	3CC-87	352	CA_7C-66A-66A	4CC-349
			187	CA_13A-66B	3CC-87	353	CA_12A-30A-66A-66A	
			188	CA_13A-66C	3CC-87	354	CA_12B-66A-66A	4CC-353
			189	CA_14A-30A-66A	4CC-365	355	CA_13A-48A-48A-66A	4CC-359
			190	CA_14A-66A-66A	3CC-189	356	CA_13A-48A-48C	4CC-252
			191	CA_25A-25A-25A	3CC-246	357	CA_13A-48A-66B	4CC-359
			192	CA_25A-25A-26A		358	CA_13A-48A-66C	4CC-359
			193	CA_25A-25A-41A	3CC-195	359	CA_13A-48C-66A	5CC-474
			194	CA_25A-25C	3CC-246	360	CA_13A-48D	4CC-252
			195	CA_25A-41C	4CC-367	361	CA_13A-66A-66A-66A	4CC-359
			196	CA_25C-26A	3CC-192	362	CA_13A-66A-66B	4CC-359
			197	CA_25D	3CC-246	363	CA_13A-66A-66C	4CC-359
			198	CA_26A-41C		364	CA_13A-66D	4CC-359
			199	CA_29A-30A-66A	4CC-368	365	CA_14A-30A-66A-66A	
			200	CA_29A-66A-66A	3CC-90	366	CA_25A-25A-41C	4CC-367
			201	CA_30A-66A-66A	3CC-100	367	CA_25A-41D	5CC-476
			202	CA_41A-41C	3CC-195	368	CA_29A-30A-66A-66A	
			203	CA_41D	3CC-195	369	CA_41A-41A-41C	4CC-367
			204	CA_48A-48A-66A	3CC-102	370	CA_41A-41D	4CC-367
			205	CA_48A-48C	3CC-86	371	CA_41C-41C	4CC-367
			206	CA_48A-66A-66A	3CC-102	372	CA_41E	4CC-367
			207	CA_48A-66B	3CC-102	373	CA_48A-48A-66A-66A	4CC-332
			208	CA_48A-66C	3CC-102	374	CA_48A-48A-66B	4CC-332
			209	CA_48C-66A	3CC-102	375	CA_48A-48A-66C	4CC-332
			210	CA_48D	3CC-86	376	CA_48A-48D	4CC-252
			211	CA_66A-66A-66A	3CC-83	377	CA_48A-48C-66A	4CC-332
			212	CA_66A-66A-71A	3CC-119	378	CA_48A-66A-66A-66A	4CC-332
			213	CA_66A-66B	3CC-83	379	CA_48C-48C	4CC-252
			214	CA_66A-66C	3CC-83	380	CA_48C-66A-66A	4CC-332
			215	CA_66C-71A	3CC-119	381	CA_48C-66B	4CC-332
			216	CA_66D	3CC-83	382	CA_48C-66C	4CC-332
			217	CA_2A-14A-66A	4CC-390	383	CA_48D-66A	4CC-332
			218	CA_2A-2A-14A	3CC-88	384	CA_48E	4CC-252
			219	CA_48C-48A	3CC-86	385	CA_66B-66C	4CC-332
			220	CA_48A-48A-71A	3CC-221	386	CA_2A-2A-2A-12A	4CC-248
			221	CA_48C-71A		387	CA_2A-2A-2A-5A	4CC-268
			222	CA_2A-7A-26A		388	CA_2A-2A-2A-30A	4CC-262
			223	CA_2A-26A-66A		389	CA_2A-2A-2A-66A	4CC-262
			224	CA_7A-26A-66A		390	CA_2A-2A-14A-66A	5CC-435
			225	CA_7A-13A-66A	4CC-391	391	CA_7C-13A-66A	4CC-417
			226	CA_2A-5A-5A	3CC-110	392	CA_14A-66A-66A-66A	4CC-256
			227	CA_4A-5A-5A	3CC-110	393	CA_2A-2A-14A-30A	5CC-496
			228	CA_4A-7A-29A	4CC-397	394	CA_2A-2A-29A-66A	5CC-436
			229	CA_4A-4A-48A	3CC-137	395	CA_2A-29A-66A-66A	4CC-394
			230	CA_4A-48A-48A	3CC-137	396	CA_2A-48C-48A	4CC-281
			231	CA_25C-41A	3CC-195	397	CA_4A-7A-7A-29A	
			232	CA_41A-41A-41A	3CC-195	398	CA_2C-5A-30A	4CC-268
			233	CA_41C-41A	3CC-195	399	CA_2C-5B	4CC-268
			234	CA_66B-66A	3CC-83	400	CA_5A-48C-48A	4CC-252
			235	CA_4A-7A-71A		401	CA_13A-48C-48A	4CC-359
			236	CA_12A-48C		402	CA_25C-41C	4CC-367
			237	CA_2A-2A-2A	3CC-82	403	CA_48C-48A-66A	4CC-409
			238	CA_2A-7A-71A	4CC-411	404	CA_12A-66A-66A-66A	4CC-248
			239	CA_7A-66A-71A	4CC-415	405	CA_30A-66A-66A-66A	4CC-368
			240	CA_7A-7A-12A	3CC-122	406	CA_2A-2A-2A-14A	4CC-256
			241	CA_13A-48B	3CC-86	407	CA_2A-2A-2A-29A	4CC-261



			242	CA_48B-66A	3CC-102	408	CA_29A-66A-66A-66A	4CC-394
			243	CA_25A-25A-66A	3CC-246	409	CA_5A-48A-66A-66A	4CC-332
			244	CA_7A-7A-25A	3CC-246	410	CA_2A-48A-66A-66A	4CC-281
			245	CA_7A-25A-25A	3CC-246	411	CA_2A-2A-7A-71A	
			246	CA_7A-25A-66A	4CC-419	412	CA_2A-5A-7A-7A	4CC-426
			247	CA_7C-25A	3CC-246	413	CA_2A-5A-7C	4CC-426
						414	CA_2A-7A-7A-12A	4CC-276
						415	CA_7A-66A-66A-71A	
						416	CA_5A-7A-7A-66A	5CC-466
						417	CA_7A-7A-13A-66A	
						418	CA_7A-7A-25A-25A	4CC-419
						419	CA_7A-7A-25A-66A	5CC-506
						420	CA_7A-25A-25A-66A	4CC-419
						421	CA_2A-2A-7A-13A	5CC-507
						422	CA_2A-2A-7A-7A	4CC-426
						423	CA_2A-2A-7C	4CC-426
						424	CA_7C-25A-25A	4CC-419
						425	CA_7C-25A-66A	4CC-419
						426	CA_2A-2A-5A-7A	
						437	CA_2A-7A-66A-66A	5CC-504

5CC Downlink Carrier Aggregation			6CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
427	CA_2A-12B-66A-66A	5CC-432	511	CA_2A-48E-66A	
428	CA_2A-13A-48A-48C	5CC-429			
429	CA_2A-13A-48D				
430	CA_2A-13A-66A-66C	5CC-434			
431	CA_2A-13A-66D	5CC-434			
432	CA_2A-2A-12A-66A-66A				
433	CA_2A-2A-12B-66A	5CC-432			
434	CA_2A-2A-13A-66A-66A				
435	CA_2A-2A-14A-66A-66A				
436	CA_2A-2A-29A-66A-66A				
438	CA_2A-2A-4A-4A-5A				
439	CA_2A-2A-4A-5B	5CC-438			
440	CA_2A-2A-5A-66A-66A				
441	CA_2A-2A-5A-66B	5CC-440			
442	CA_2A-2A-5A-66C	5CC-440			
443	CA_2A-2A-5B-66A	5CC-440			
444	CA_2A-2A-66A-66B	5CC-432			
445	CA_2A-2A-66A-66C	5CC-432			
446	CA_2A-48A-48C-66A	5CC-449			
447	CA_2A-48A-48D	5CC-429			
448	CA_2A-48C-48C	5CC-429			
449	CA_2A-48D-66A	6CC-511			
450	CA_2A-48E	5CC-429			
451	CA_2A-4A-4A-5B	5CC-438			
452	CA_2A-5A-48A-48C	5CC-453			
453	CA_2A-5A-48D				
454	CA_2A-5B-66A-66A	5CC-440			
455	CA_2A-5B-66B	5CC-440			
456	CA_2A-5B-66C	5CC-440			
457	CA_2A-7A-7A-66A-66A	5CC-504			
458	CA_2A-7C-66A-66A	5CC-504			
459	CA_2C-5B-30A	5CC-494			



FCC SAR TEST REPORT

Report No. : FA241215-02D

460	CA_4A-48E			
461	CA_5A-48A-48C-66A	5CC-464		
462	CA_5A-48A-48D	5CC-464		
463	CA_5A-48C-48C	5CC-464		
464	CA_5A-48D-66A			
465	CA_5A-48E	5CC-464		
466	CA_5A-7C-66A-66A			
467	CA_5B-30A-66A-66A			
468	CA_5B-66A-66B	5CC-464		
469	CA_13A-48A-48D	5CC-429		
470	CA_13A-48A-48C-66A	5CC-474		
471	CA_13A-48C-48C	5CC-429		
472	CA_13A-48C-66B	5CC-474		
473	CA_13A-48C-66C	5CC-474		
474	CA_13A-48D-66A			
475	CA_13A-48E	5CC-429		
476	CA_25A-25A-41D			
477	CA_25C-41D	5CC-476		
478	CA_41C-41D	5CC-476		
479	CA_41F	5CC-476		
480	CA_48A-48E	5CC-429		
481	CA_48A-48C-66B	5CC-474		
482	CA_48A-48C-66C	5CC-474		
483	CA_48A-48D-66A	5CC-474		
484	CA_48C-48D	5CC-429		
485	CA_48C-48C-66A	5CC-474		
486	CA_48C-66A-66A-66A	5CC-474		
487	CA_48E-66A	5CC-474		
488	CA_48F	5CC-429		
489	CA_2A-2A-30A-66A-66A			
490	CA_2A-30A-66A-66A-66A	5CC-489		
491	CA_2A-2A-2A-12A-30A			
492	CA_2A-2A-2A-12A-66A	5CC-432		
493	CA_2A-2A-2A-30A-66A	5CC-489		
494	CA_2A-2A-2A-5A-30A			
495	CA_2A-2A-2A-5A-66A	5CC-440		
496	CA_2A-2A-2A-14A-30A			
497	CA_2A-2A-2A-14A-66A	5CC-435		
498	CA_2A-2A-2A-29A-30A			
499	CA_2A-2A-2A-29A-66A	5CC-436		
500	CA_2A-2A-5B-30A	5CC-494		
501	CA_2A-5A-5A-66A-66A	5CC-440		
502	CA_2A-48C-66A-66A	5CC-449		
503	CA_5A-48C-66A-66A	5CC-464		
504	CA_2A-2A-7A-66A-66A			
505	CA_2A-2A-66A-66A-71A			
506	CA_7A-7A-25A-25A-66A			
507	CA_2A-2A-7A-7A-13A			
508	CA_2A-2A-7C-13A	5CC-507		
509	CA_7C-25A-25A-66A	5CC-506		
510	CA_2A-13A-66A-66B	5CC-434		

<Power verification when LTE Carrier Aggregation Active>

General Note:

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

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

<Two Carrier power verification>

Configure	CA Configuration (BCS)	PCC							SCC				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	CA_4A-41A	4	20	1732.5	20175	QPSK	1	0	41	20	2636.5	41055	24.72	24.76
	CA_5A-25A	5	10	836.5	20525	QPSK	1	0	25	20	1985	8590	24.50	24.56
	CA_5A-41A	5	10	836.5	20525	QPSK	1	0	41	20	2636.5	41055	24.48	24.56
	CA_12A-25A	12	10	707.5	23095	QPSK	1	0	25	20	1985	8590	24.32	24.34
	CA_25A-48A	25	20	1880	26340	QPSK	1	0	48	20	3641	56150	24.43	24.48

<Three Carrier power verification>

Configure	CA Configuration (BCS)	PCC							SCC1				SCC2				Power	
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	CA_2A-4A-29A	2	20	1880	18900	QPSK	1	0	4	20	2132.5	2175	29	10	722.5	9715	24.56	24.76
	CA_2A-4A-30A	2	20	1880	18900	QPSK	1	0	4	20	2132.5	2175	30	10	2355	9820	24.60	24.76
	CA_2A-7A-26A	2	20	1880	18900	QPSK	1	0	7	20	2655	3100	26	15	876.5	8865	24.63	24.76
	CA_2A-26A-66A	2	20	1880	18900	QPSK	1	0	26	15	876.5	8865	66	20	2155	66886	24.63	24.76
	CA_4A-7A-71A	4	20	1732.5	20175	QPSK	1	0	7	20	2655	3100	71	20	634.5	68761	24.59	24.76
	CA_5B-38A	5	10	831.6	20476	QPSK	1	0	5	10	886.5	2575	38	20	2595	38000	24.36	24.56
	CA_7A-26A-66A	7	20	2535	21100	QPSK	1	0	26	15	876.5	8865	66	20	2155	66886	24.80	24.86
	CA_12A-48C	12	10	707.5	23095	QPSK	1	0	48	20	3641	56150	48	20	3621.2	55952	24.21	24.34
	CA_25A-25A-26A	25	20	1880	26340	QPSK	1	0	25	5	1932.5	8065	26	5	876.5	8865	24.40	24.48
	CA_26A-41C	26	15	831.5	26865	QPSK	1	0	41	20	2593	40620	41	20	2612.8	40818	24.35	24.49
CA_48C-71A	48	20	3641	56150	QPSK	1	0	48	20	3641	56150	71	20	634.5	68761	22.46	22.66	



<Four Carrier power verification>

Configure	CA Configuration (BCS)	PCC						SCC1				SCC2				SCC3				Power		
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	CA_2A-2A-4A-12A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	4	20	2132.5	2175	12	10	737.5	5095	24.73	24.76
	CA_2A-2A-4A-13A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	4	20	2132.5	2175	13	10	751	5230	24.69	24.76
	CA_2A-2A-4A-71A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	4	20	2132.5	2175	71	20	634.5	68761	24.59	24.76
	CA_2A-2A-5A-7A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	5	10	881.5	2525	7	20	2655	3100	24.68	24.76
	CA_2A-2A-7A-12A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	7	20	2655	3100	12	10	737.5	5095	24.73	24.76
	CA_2A-2A-7A-71A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	7	20	2655	3100	71	20	634.5	68761	24.61	24.76
	CA_2A-4A-7A-7A	2	20	1880	18900	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	7	5	2622.5	2775	24.65	24.76
	CA_2A-7A-7A-29A	2	20	1880	18900	QPSK	1	0	7	20	2655	3100	7	5	2622.5	2775	29	10	722.5	9715	24.65	24.76
	CA_4A-4A-5A-30A	4	20	1732.5	20175	QPSK	1	0	4	5	2112.5	1975	5	10	881.5	2525	30	10	2355	9820	24.75	24.76
	CA_4A-4A-12A-30A	4	20	1732.5	20175	QPSK	1	0	4	5	2112.5	1975	12	10	737.5	5095	30	10	2355	9820	24.57	24.76
	CA_4A-4A-29A-30A	4	20	1732.5	20175	QPSK	1	0	4	5	2112.5	1975	29	10	722.5	9715	30	10	2355	9820	24.67	24.76
	CA_4A-7A-12B	4	20	1732.5	20175	QPSK	1	0	7	20	2655	3100	12	10	740	5120	12	5	732.8	5048	24.67	24.76
	CA_4A-7A-7A-29A	4	20	1732.5	20175	QPSK	1	0	7	20	2655	3100	7	5	2622.5	2775	29	10	722.5	9715	24.66	24.76
	CA_7A-7A-13A-66A	7	20	2535	21100	QPSK	1	0	7	5	2622.5	2775	13	10	751	5230	66	20	2155	66886	24.67	24.86
	CA_7A-7A-29A-66A	7	20	2535	21100	QPSK	1	0	7	5	2622.5	2775	29	10	722.5	9715	66	20	2155	66886	24.85	24.86
	CA_7A-12A-66A-66A	7	20	2535	21100	QPSK	1	0	12	10	737.5	5095	66	20	2155	66886	66	5	2112.5	66461	24.74	24.86
	CA_7A-66A-66A-71A	7	20	2535	21100	QPSK	1	0	66	20	2155	66886	66	5	2112.5	66461	71	20	634.5	68761	24.79	24.86
	CA_12A-30A-66A-66A	12	10	707.5	23095	QPSK	1	0	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	24.25	24.34
CA_14A-30A-66A-66A	14	10	793	23330	QPSK	1	0	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	24.23	24.43	
CA_29A-30A-66A-66A	30	10	2310	27710	QPSK	1	0	29	10	722.5	9715	66	20	2155	66886	66	5	2112.5	66461	23.33	23.41	

<Five Carrier power verification>

Configure	CA Configuration (BCS)	PCC						SCC1				SCC2				SCC3				SCC4				Power				
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel
Inter-Band	CA_2A-2A-2A-5A-30A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	2	5	1987.5	1175	5	10	881.5	2525	30	10	2355	9820	24.58	24.76		
	CA_2A-2A-2A-12A-30A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	2	5	1987.5	1175	12	10	737.5	5095	30	10	2355	9820	24.61	24.76		
	CA_2A-2A-2A-14A-30A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	2	5	1987.5	1175	14	10	763	5330	30	10	2355	9820	24.60	24.76		
	CA_2A-2A-2A-29A-30A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	2	5	1987.5	1175	29	10	722.5	9715	30	10	2355	9820	24.59	24.76		
	CA_2A-2A-4A-4A-5A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	4	20	2132.5	2175	4	5	2112.5	1975	5	10	881.5	2525	24.63	24.76		
	CA_2A-2A-5A-66A-66A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	5	10	881.5	2525	66	20	2155	66886	66	5	2112.5	66461	24.58	24.76		
	CA_2A-2A-7A-7A-13A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	7	20	2655	3100	7	5	2622.5	2775	13	10	751	5230	24.61	24.76		
	CA_2A-2A-7A-66A-66A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	7	20	2655	3100	66	20	2155	66886	66	5	2112.5	66461	24.63	24.76		
	CA_2A-2A-12A-66A-66A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	12	10	737.5	5095	66	20	2155	66886	66	5	2112.5	66461	24.75	24.76		
	CA_2A-2A-13A-66A-66A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	13	10	751	5230	66	20	2155	66886	66	5	2112.5	66461	24.66	24.76		
	CA_2A-2A-14A-66A-66A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	14	10	763	5330	66	20	2155	66886	66	5	2112.5	66461	24.70	24.76		
	CA_2A-2A-29A-66A-66A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	29	10	722.5	9715	66	20	2155	66886	66	5	2112.5	66461	24.72	24.76		
	CA_2A-2A-30A-66A-66A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	24.75	24.76		
	CA_2A-2A-66A-66A-71A	2	20	1880	18900	QPSK	1	0	2	5	1932.5	625	66	20	2155	66886	66	5	2112.5	66461	71	20	634.5	68761	24.75	24.76		
	CA_2A-5A-48D	2	20	1880	18900	QPSK	1	0	5	10	881.5	2525	48	20	3641	56150	48	20	3621.2	55952	48	20	3601.4	55754	24.69	24.76		
	CA_2A-13A-48D	2	20	1880	18900	QPSK	1	0	13	10	751	5230	48	20	3641	56150	48	20	3621.2	55952	48	20	3601.4	55754	24.66	24.76		
	CA_4A-48E	4	20	1732.5	20175	QPSK	1	0	48	20	3641	56150	48	20	3621.2	55952	48	20	3601.4	55754	48	20	3581.6	55754	24.59	24.76		
	CA_5B-30A-66A-66A	5	10	831.6	20476	QPSK	1	0	5	10	886.5	2575	30	10	2355	9820	66	20	2155	66886	66	5	2112.5	66461	24.41	24.56		
	CA_5A-7C-66A-66A	5	10	836.5	20525	QPSK	1	0	7	20	2655	3100	7	20	2674.8	3298	66	20	2155	66886	66	5	2112.5	66461	24.41	24.56		
	CA_5A-48D-66A	5	10	836.5	20525	QPSK	1	0	48	20	3641	56150	48	20	3621.2	55952	48	20	3601.4	55754	66	20	2155	66886	24.39	24.56		
CA_7A-7A-25A-25A-66A	7	20	2535	21100	QPSK	1	0	7	5	2622.5	2775	25	20	1960	8340	25	5	1932.5	8065	66	20	2155	66886	24.73	24.86			
CA_13A-48D-66A	13	10	782	23230	QPSK	1	0	48	20	3641	56150	48	20	3621.2	55952	48	20	3601.4	55754	66	20	2155	66886	24.18	24.33			
CA_25A-25A-41D	25	20	1880	26340	QPSK	1	0	25	5	1932.5	8065	41	20	2593	40620	41	20	2612.8	40818	41	20	2632.6	41016	24.33	24.48			

<Six Carrier power verification>

Configure	CA Configuration (BCS)	PCC						SCC1				SCC2				SCC3				SCC4				SCC5				Power				
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel
Inter-Band	CA_2A-48E-66A	2	20	1880	18900	QPSK	1	0	48	20	3641	56150	48	20	3621.2	55952	48	20	3601.4	55754	48	20	3581.6	55556	66	20	2155	66886	24.72	24.76		



<LTE Uplink carrier aggregation>

2CC Uplink Carrier Aggregation	
Number	Combination
1	CA_5B
2	CA_7C
3	CA_66B
4	CA_66C
5	CA_41C

<Intra-band>

General Note:

- i. The device supports intra-band uplink carrier aggregation with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.
- ii. According 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. Uplink CA is only operating with power class3, and additional SAR measurement for LTE UL CA whit other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.
- iv. For Intra-band, contiguous CA, the channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

TX 0

Index 2/3/4/5/6								
CA_5B_Ant 0								
Combination 10MHz+10MHz (50RB+50RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20450	20549	QPSK	1	49	1	0	22.79	24.00
20525	20426	QPSK	1	0	1	49	22.62	24.00
20600	20501	QPSK	1	0	1	49	22.86	24.00

Index 2								
CA_7C_Ant 2								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	22.47	23.50
21100	20902	QPSK	1	0	1	99	22.7	23.50
21350	21152	QPSK	1	0	1	99	22.67	23.50



Index 3								
CA_7C_Ant 2								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	22.47	22.70
21100	20902	QPSK	1	0	1	99	22.7	22.70
21350	21152	QPSK	1	0	1	99	22.67	22.70

Index 4/5/6								
CA_7C_Ant 2								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	18.91	20.00
21100	20902	QPSK	1	0	1	99	19.11	20.00
21350	21152	QPSK	1	0	1	99	19.09	20.00

Index 2/3								
CA_66B_Ant 2								
Combination 15MHz+5MHz (75RB+25RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
132047	132140	QPSK	1	74	1	0	22.71	24.00
132322	132229	QPSK	1	0	1	24	22.67	24.00
132597	132504	QPSK	1	0	1	24	22.73	24.00

Index 4/5/6								
CA_66B_Ant 2								
Combination 15MHz+5MHz (75RB+25RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
132047	132140	QPSK	1	74	1	0	21.03	22.20
132322	132229	QPSK	1	0	1	24	21.01	22.20
132597	132504	QPSK	1	0	1	24	21.05	22.20

Index 2/3								
CA_66C_Ant 2								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
132072	132270	QPSK	1	99	1	0	22.75	24.00
132322	132124	QPSK	1	0	1	99	22.63	24.00
132572	132374	QPSK	1	0	1	99	22.67	24.00



Index 4/5/6								
CA_66C_Ant 2								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
132072	132270	QPSK	1	99	1	0	20.97	22.20
132322	132124	QPSK	1	0	1	99	20.95	22.20
132572	132374	QPSK	1	0	1	99	20.96	22.20

Index 2/3/4/5/6								
CA_41C_Ant 2								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	11.57	12.80
40185	39987	QPSK	1	0	1	99	11.81	12.80
40620	40422	QPSK	1	0	1	99	11.88	12.80
41055	40857	QPSK	1	0	1	99	11.93	12.80
41490	41292	QPSK	1	0	1	99	12.07	12.80

TX 1

Index 2								
CA_5B_Ant 1								
Combination 10MHz+10MHz (50RB+50RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20450	20549	QPSK	1	49	1	0	19.73	21.50
20525	20426	QPSK	1	0	1	49	19.87	21.50
20600	20501	QPSK	1	0	1	49	19.88	21.50

Index 3								
CA_5B_Ant 1								
Combination 10MHz+10MHz (50RB+50RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20450	20549	QPSK	1	49	1	0	19.73	20.70
20525	20426	QPSK	1	0	1	49	19.87	20.70
20600	20501	QPSK	1	0	1	49	19.88	20.70

Index 4/5/6								
CA_5B_Ant 1								
Combination 10MHz+10MHz (50RB+50RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20450	20549	QPSK	1	49	1	0	22.18	23.50
20525	20426	QPSK	1	0	1	49	22.22	23.50
20600	20501	QPSK	1	0	1	49	22.32	23.50



Index 2								
CA_7C_Ant 0								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	22.31	23.50
21100	20902	QPSK	1	0	1	99	22.25	23.50
21350	21152	QPSK	1	0	1	99	22.48	23.50

Index 3								
CA_7C_Ant 0								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	22.31	23.30
21100	20902	QPSK	1	0	1	99	22.25	23.30
21350	21152	QPSK	1	0	1	99	22.48	23.30

Index 4								
CA_7C_Ant 0								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	18.65	19.90
21100	20902	QPSK	1	0	1	99	18.92	19.90
21350	21152	QPSK	1	0	1	99	18.71	19.90

Index 5/6								
CA_7C_Ant 0								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	18.65	20.30
21100	20902	QPSK	1	0	1	99	18.92	20.30
21350	21152	QPSK	1	0	1	99	18.71	20.30

Index 2/3								
CA_66B_Ant 0								
Combination 15MHz+5MHz (75RB+25RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
132047	132140	QPSK	1	74	1	0	22.34	23.50
132322	132229	QPSK	1	0	1	24	22.26	23.50
132597	132504	QPSK	1	0	1	24	22.40	23.50



Index 4/5/6								
CA_66B_Ant 0								
Combination 15MHz+5MHz (75RB+25RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
132047	132140	QPSK	1	74	1	0	19.97	21.50
132322	132229	QPSK	1	0	1	24	20.05	21.50
132597	132504	QPSK	1	0	1	24	20.08	21.50

Index 2/3								
CA_66C_Ant 0								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
132072	132270	QPSK	1	99	1	0	22.37	23.50
132322	132124	QPSK	1	0	1	99	22.21	23.50
132572	132374	QPSK	1	0	1	99	22.35	23.50

Index 4/5/6								
CA_66C_Ant 0								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
132072	132270	QPSK	1	99	1	0	20.11	21.50
132322	132124	QPSK	1	0	1	99	20.08	21.50
132572	132374	QPSK	1	0	1	99	20.10	21.50

Index 2/3/4/5/6								
CA_41C_Ant 0								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	11.16	12.30
40185	39987	QPSK	1	0	1	99	11.32	12.30
40620	40422	QPSK	1	0	1	99	11.21	12.30
41055	40857	QPSK	1	0	1	99	11.27	12.30
41490	41292	QPSK	1	0	1	99	11.44	12.30

14. RF Exposure position consideration

Distance of the Antenna to the EUT surface/edge						
Antennas	Front	Back	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 0	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm	≤ 25mm
WWAN Ant 1	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm
WWAN Ant 2	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm	≤ 25mm
WWAN Ant 5	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm
WWAN Ant 6	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm	≤ 25mm
WLAN Ant 4+3	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm
BT Ant 4	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm
BT Ant 3	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm

Positions for SAR / PD tests						
Antennas	Front	Back	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 0	Yes	Yes	No	Yes	Yes	Yes
WWAN Ant 1	Yes	Yes	Yes	No	Yes	Yes
WWAN Ant 2	Yes	Yes	No	Yes	Yes	Yes
WWAN Ant 5	Yes	Yes	Yes	No	Yes	Yes
WWAN Ant 6	Yes	Yes	No	Yes	Yes	Yes
WLAN Ant 4+3	Yes	Yes	Yes	No	Yes	Yes
BT Ant 4	Yes	Yes	Yes	No	Yes	Yes
BT Ant 3	Yes	Yes	Yes	No	Yes	Yes

General Note:

- Referring to KDB 941225 D06 v02r01 , when the overall device length and width are ≥ 9cm*5cm. RF Exposure must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge
- The antenna location is illustrated in the Appendix E.



15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - d. For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
 - e. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
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. 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 product specific SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold, for this device the LTE 2 Top Side, LTE B2/66 Right Side.
6. For 5.3GHz, 5.5GHz, UNII-4 and 6GHz WLAN product specific SAR is necessary too, due to an overall diagonal dimension is > 16 cm.

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. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
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 $\leq 1/4$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

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

**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 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 SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to 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. Referencing the procedure in KDB 941225, the test procedures are outlined as below:
 - a. To start SAR test for the largest channel bandwidth for PI/2 BPSK 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. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
 - b. For PI/2 BPSK with 100% RB allocation, SAR test 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.
 - c. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not $\frac{1}{2}$ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - d. Smaller bandwidth output power for each RB allocation configuration for this device 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, smaller bandwidth SAR testing is not required for this device
 - e. For 5G FR1 n5/n12/n41/n71/n77, the maximum channel bandwidth does not support three non-overlapping channels in the frequency band, the middle channel of the group of overlapping channels were selected for testing.
 - f. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.
 - g. Antenna 1 and 5 for n77 is used as SRS dedicated antennas, i.e., the antenna(s) are used for receive and Sound Reference Signal transmission (SRS) only (not traffic transmission), RF Exposure was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

WLAN Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, WLAN5.2GHz SAR testing is not required when the WLAN5.3GHz band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for WLAN5.2GHz 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. WiFi 2.4/5/6GHz does not support SISO mode, so standalone SAR was only tested in MIMO mode operation
6. For determination of the scaling factor for report SAR of MIMO mode, if the hot spots are separated the scaling factors are individually determined from each transmit chain. If the hot spots are not spatially separated, the scaling factor is determined from the worst number of each transmit chain
7. 4+3(3) represents the test in 2TX operation, while the SAR or power data is associated with antenna 3
8. 4+3(4) represents the test in 2TX operation, while the SAR or power data is associated with antenna 4
9. During SAR testing the WLAN transmission was verified using a spectrum analyzer.
10. 0.001 represents SAR is very low and can't base on area scan measurement to find out SAR peak location to determine zoom scan measurement of 1g or 10g SAR.

WLAN PD Note:

1. The WiFi 6E PD was performed according 2020 TCB workshop RF Exposure 5G RFX Policies Interim Procedures.
2. First, evaluate SAR using 6-7 GHz parameters per IEC/IEEE 62209-1528:2020 and using highest SAR test configurations evaluate incident PD using the mmw near-field probe and total-field/power-density reconstruction method (2 mm closest meas. plane).
3. The highest WiFi 6E SAR at 0mm according to head condition in section15.1 and extremity condition in section15.4 is front and back exposure position. So only these exposure positions are tested for WiFi 6E PD
4. Per Interim Procedures. The power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty $> 30\%$. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor
5. The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
6. The WiFi 6E RF Exposure results are used for simultaneous transmission analysis with the other transmitters and total exposure ratio, the analysis can be found in this report section 16 and part1 PD report section12
7. Absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements.
8. Power density was calculated by repeated E-field measurements on two measurement planes separated by $\lambda/4$.
9. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.
10. The measurement procedure consists of measuring the PD_{inc} at two different distances: 2 mm (compliance distance) and $\lambda/5$. The grid extents should be large enough to fully capture the transmitted energy. The grid step should be fine enough to demonstrate that the integrated Power Density iPD_n fulfill the criterion described below. Since iPD ratio between the two distances is ≥ -1 dB, the grid step (0.0625) was sufficient for determining compliance at d=2mm.

$$10 \cdot \log_{10} \frac{iPD_n(2mm)}{iPD_n(\lambda/5)} \geq -1$$



15.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Index	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)
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	251	848.8	29.19	30.50	1.352	-0.01	0.355	0.480
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Tilted	0mm	2/3	251	848.8	29.19	30.50	1.352	0.09	0.182	0.246
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	251	848.8	29.19	30.50	1.352	-0.14	0.511	0.691
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	128	824.2	29.15	30.50	1.365	0	0.502	0.685
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	189	836.4	29.18	30.50	1.355	-0.12	0.515	0.698
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Tilted	0mm	2/3	251	848.8	29.19	30.50	1.352	-0.01	0.205	0.277
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	2	128	824.2	25.69	26.80	1.291	0.04	0.847	1.094
01	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	2	189	836.4	25.45	26.80	1.365	0	0.811	1.107
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	2	251	848.8	25.27	26.80	1.422	-0.01	0.752	1.070
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Tilted	0mm	2	128	824.2	25.69	26.80	1.291	-0.17	0.787	1.016
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Tilted	0mm	2	189	836.4	25.45	26.80	1.365	-0.08	0.730	0.996
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Tilted	0mm	2	251	848.8	25.27	26.80	1.422	-0.05	0.664	0.944
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Cheek	0mm	2	128	824.2	25.69	26.80	1.291	-0.04	0.601	0.776
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Tilted	0mm	2	128	824.2	25.69	26.80	1.291	-0.17	0.553	0.714
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	3	128	824.2	25.69	26.00	1.074	0.04	0.847	0.910
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	3	189	836.4	25.45	26.00	1.135	0	0.811	0.920
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	3	251	848.8	25.27	26.00	1.183	-0.01	0.752	0.890
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Tilted	0mm	3	128	824.2	25.69	26.00	1.074	-0.17	0.787	0.845
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Tilted	0mm	3	189	836.4	25.45	26.00	1.135	-0.08	0.730	0.829
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Tilted	0mm	3	251	848.8	25.27	26.00	1.183	-0.05	0.664	0.786
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Cheek	0mm	3	128	824.2	25.69	26.00	1.074	-0.04	0.601	0.645
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Tilted	0mm	3	128	824.2	25.69	26.00	1.074	-0.17	0.553	0.594
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	661	1880	26.89	28.00	1.291	0.06	0.406	0.524
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	512	1850.2	26.82	28.00	1.312	0.04	0.414	0.543
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	810	1909.8	26.89	28.00	1.291	0.1	0.392	0.506
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Tilted	0mm	2/3	661	1880	26.89	28.00	1.291	0.02	0.146	0.189
	GSM1900_Ant 2	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	661	1880	26.89	28.00	1.291	-0.11	0.216	0.279
	GSM1900_Ant 2	GPRS (4 Tx slots)	Left Tilted	0mm	2/3	661	1880	26.89	28.00	1.291	-0.1	0.171	0.221
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	810	1909.8	26.44	27.70	1.337	-0.16	0.221	0.295
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Tilted	0mm	2/3	810	1909.8	26.44	27.70	1.337	-0.12	0.168	0.225
02	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	810	1909.8	26.44	27.70	1.337	-0.06	0.422	0.564
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	661	1880	26.28	27.70	1.387	-0.05	0.391	0.542
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	512	1850.2	26.14	27.70	1.432	0.11	0.388	0.556
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Tilted	0mm	2/3	810	1909.8	26.44	27.70	1.337	-0.1	0.145	0.194



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Index	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)
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	9400	1880	24.86	25.70	1.213	-0.14	0.482	0.585
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	9262	1852.4	24.77	25.70	1.239	-0.04	0.427	0.529
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	9538	1907.6	24.85	25.70	1.216	-0.12	0.423	0.514
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Tilted	0mm	2/3	9400	1880	24.86	25.70	1.213	-0.09	0.156	0.189
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Cheek	0mm	2/3	9400	1880	24.86	25.70	1.213	-0.08	0.277	0.336
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Tilted	0mm	2/3	9400	1880	24.86	25.70	1.213	-0.1	0.173	0.210
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	2/3	9400	1880	24.77	25.20	1.104	-0.11	0.313	0.346
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	2/3	9400	1880	24.77	25.20	1.104	-0.06	0.229	0.253
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	9400	1880	24.77	25.20	1.104	-0.04	0.450	0.497
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	9262	1852.4	24.76	25.20	1.107	0.02	0.492	0.544
03	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	9538	1907.6	24.76	25.20	1.107	0.04	0.597	0.661
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	2/3	9400	1880	24.77	25.20	1.104	-0.13	0.164	0.181
04	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	1413	1732.6	24.95	25.70	1.189	-0.01	0.440	0.523
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	1312	1712.4	24.93	25.70	1.194	-0.01	0.382	0.456
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	1513	1752.6	24.79	25.70	1.233	0.13	0.316	0.390
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Tilted	0mm	2/3	1413	1732.6	24.95	25.70	1.189	-0.11	0.177	0.210
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Cheek	0mm	2/3	1413	1732.6	24.95	25.70	1.189	-0.08	0.233	0.277
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Tilted	0mm	2/3	1413	1732.6	24.95	25.70	1.189	-0.07	0.172	0.204
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	2/3	1413	1732.6	24.82	25.20	1.091	-0.04	0.207	0.226
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	2/3	1413	1732.6	24.82	25.20	1.091	0.04	0.174	0.190
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	1413	1732.6	24.82	25.20	1.091	0.12	0.457	0.499
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	1312	1712.4	24.79	25.20	1.099	-0.04	0.461	0.507
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	1513	1752.6	24.61	25.20	1.146	-0.02	0.372	0.426
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	2/3	1413	1732.6	24.82	25.20	1.091	-0.13	0.173	0.189
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	2/3	4182	836.4	24.16	25.70	1.426	-0.01	0.245	0.349
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	2/3	4182	836.4	24.16	25.70	1.426	-0.07	0.157	0.224
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	4182	836.4	24.16	25.70	1.426	-0.04	0.317	0.452
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	4132	826.4	24.06	25.70	1.459	-0.05	0.300	0.438
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	4233	846.6	24.11	25.70	1.442	-0.06	0.313	0.451
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	2/3	4182	836.4	24.16	25.70	1.426	-0.03	0.133	0.190
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	2	4182	836.4	21.15	23.00	1.531	0.12	0.706	1.081
05	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	2	4132	826.4	21.11	23.00	1.545	-0.08	0.756	1.168
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	2	4233	846.6	21.08	23.00	1.556	-0.04	0.735	1.144
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	2	4182	836.4	21.15	23.00	1.531	0.03	0.583	0.893
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	2	4132	826.4	21.11	23.00	1.545	0.15	0.569	0.879
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	2	4233	846.6	21.08	23.00	1.556	-0.1	0.570	0.887
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Cheek	0mm	2	4182	836.4	21.15	23.00	1.531	0.02	0.457	0.700
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Tilted	0mm	2	4182	836.4	21.15	23.00	1.531	-0.06	0.428	0.655
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	3	4182	836.4	21.15	22.20	1.274	0.12	0.706	0.899
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	3	4132	826.4	21.11	22.20	1.285	-0.08	0.756	0.972
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	3	4233	846.6	21.08	22.20	1.294	-0.04	0.735	0.951
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	3	4182	836.4	21.15	22.20	1.274	0.03	0.583	0.742
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Cheek	0mm	3	4182	836.4	21.15	22.20	1.274	0.02	0.457	0.582
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Tilted	0mm	3	4182	836.4	21.15	22.20	1.274	-0.06	0.428	0.545



<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
06	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	18900	1880	16.71	18.00	1.346	0.05	0.852	1.147
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	18700	1860	16.67	18.00	1.358	0	0.801	1.088
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	19100	1900	16.52	18.00	1.406	0.02	0.814	1.145
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	18900	1880	16.65	18.00	1.365	-0.01	0.837	1.142
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	18700	1860	16.64	18.00	1.368	-0.04	0.814	1.113
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	19100	1900	16.56	18.00	1.393	0.1	0.819	1.141
	LTE Band 2_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	2	18900	1880	16.60	18.00	1.380	0.06	0.822	1.135
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	18900	1880	16.71	18.00	1.346	-0.02	0.807	1.086
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	18700	1860	16.67	18.00	1.358	0.08	0.737	1.001
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	19100	1900	16.52	18.00	1.406	0.02	0.811	1.140
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	18900	1880	16.65	18.00	1.365	0.01	0.804	1.097
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	18700	1860	16.64	18.00	1.368	0	0.751	1.027
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	19100	1900	16.56	18.00	1.393	0.04	0.820	1.142
	LTE Band 2_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	2	18900	1880	16.60	18.00	1.380	-0.03	0.804	1.110
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	2	18900	1880	16.71	18.00	1.346	-0.05	0.485	0.653
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	2	18900	1880	16.65	18.00	1.365	0.1	0.474	0.647
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	2	18900	1880	16.71	18.00	1.346	-0.08	0.544	0.732
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	2	18900	1880	16.65	18.00	1.365	0.04	0.541	0.738
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	3	18900	1880	16.71	17.20	1.119	0.05	0.852	0.954
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	3	18700	1860	16.67	17.20	1.130	0	0.801	0.905
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	3	19100	1900	16.52	17.20	1.169	0.02	0.814	0.952
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	18900	1880	16.65	17.20	1.135	-0.01	0.837	0.950
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	18700	1860	16.64	17.20	1.138	-0.04	0.814	0.926
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	19100	1900	16.56	17.20	1.159	0.1	0.819	0.949
	LTE Band 2_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	3	18900	1880	16.60	17.20	1.148	0.06	0.822	0.944
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	18900	1880	16.71	17.20	1.119	-0.02	0.807	0.903
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	18700	1860	16.67	17.20	1.130	0.08	0.737	0.833
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	19100	1900	16.52	17.20	1.169	0.02	0.811	0.948
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	18900	1880	16.65	17.20	1.135	0.01	0.804	0.913
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	18700	1860	16.64	17.20	1.138	0	0.751	0.854
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	19100	1900	16.56	17.20	1.159	0.04	0.820	0.950
	LTE Band 2_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	3	18900	1880	16.60	17.20	1.148	-0.03	0.804	0.923
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	3	18900	1880	16.71	17.20	1.119	-0.05	0.485	0.543
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	3	18900	1880	16.65	17.20	1.135	0.1	0.474	0.538
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	3	18900	1880	16.71	17.20	1.119	-0.08	0.544	0.609
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	3	18900	1880	16.65	17.20	1.135	0.04	0.541	0.614
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Cheek	0mm	2	18900	1880	16.15	17.80	1.462	0.01	0.481	0.703
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	2	18900	1880	16.12	17.80	1.472	-0.03	0.427	0.629
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Tilted	0mm	2	18900	1880	16.15	17.80	1.462	0.06	0.088	0.129
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	2	18900	1880	16.12	17.80	1.472	0.09	0.086	0.127
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	18900	1880	16.15	17.80	1.462	0.15	0.752	1.100
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	18700	1860	16.13	17.80	1.469	-0.13	0.696	1.022
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	19100	1900	16.14	17.80	1.466	0.01	0.646	0.947
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	18900	1880	16.12	17.80	1.472	0.09	0.752	1.107
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	18700	1860	16.08	17.80	1.486	-0.15	0.700	1.040
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	19100	1900	16.08	17.80	1.486	-0.19	0.636	0.945
	LTE Band 2_Ant 5	20M	QPSK	100	0	Left Cheek	0mm	2	18900	1880	16.00	17.80	1.514	0.05	0.729	1.103
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Tilted	0mm	2	18900	1880	16.15	17.80	1.462	0.03	0.142	0.208
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	2	18900	1880	16.12	17.80	1.472	0.01	0.137	0.202
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Cheek	0mm	3	18900	1880	16.15	17.00	1.216	0.01	0.481	0.585
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	3	18900	1880	16.12	17.00	1.225	-0.03	0.427	0.523
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Tilted	0mm	3	18900	1880	16.15	17.00	1.216	0.06	0.088	0.107
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	3	18900	1880	16.12	17.00	1.225	0.09	0.086	0.105
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	18900	1880	16.15	17.00	1.216	0.15	0.752	0.915
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	18700	1860	16.13	17.00	1.222	-0.13	0.696	0.850



FCC SAR TEST REPORT

Report No. : FA241215-02D

	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	19100	1900	16.14	17.00	1.219	0.01	0.646	0.787
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	18900	1880	16.12	17.00	1.225	0.09	0.752	0.921
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	18700	1860	16.08	17.00	1.236	-0.15	0.700	0.865
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	19100	1900	16.08	17.00	1.236	-0.19	0.636	0.786
	LTE Band 2_Ant 5	20M	QPSK	100	0	Left Cheek	0mm	3	18900	1880	16.00	17.00	1.259	0.05	0.729	0.918
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Tilted	0mm	3	18900	1880	16.15	17.00	1.216	0.03	0.142	0.173
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	3	18900	1880	16.12	17.00	1.225	0.01	0.137	0.168
07	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2	21100	2535	24.11	25.20	1.285	-0.08	0.837	1.076
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2	20850	2510	24.06	25.20	1.300	-0.15	0.797	1.036
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2	21350	2560	24.09	25.20	1.291	-0.02	0.815	1.052
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2	21100	2535	23.88	24.70	1.208	-0.13	0.721	0.871
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2	20850	2510	23.87	24.70	1.211	-0.18	0.711	0.861
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2	21350	2560	23.87	24.70	1.211	-0.1	0.737	0.892
	LTE Band 7_Ant 2	20M	QPSK	100	0	Right Cheek	0mm	2	21100	2535	23.86	24.70	1.213	-0.16	0.707	0.858
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2	21100	2535	24.11	25.20	1.285	-0.18	0.255	0.328
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	2	21100	2535	23.88	24.70	1.208	-0.16	0.237	0.286
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2	21100	2535	24.11	25.20	1.285	-0.19	0.375	0.482
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	2	21100	2535	23.88	24.70	1.208	-0.17	0.358	0.432
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2	21100	2535	24.11	25.20	1.285	-0.15	0.297	0.382
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	2	21100	2535	23.88	24.70	1.208	-0.14	0.281	0.339
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2	21100+20902	2535	22.70	23.50	1.202	0.05	0.732	0.880
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	3	21100	2535	24.11	24.40	1.069	-0.08	0.837	0.895
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	3	20850	2510	24.06	24.40	1.081	-0.15	0.797	0.862
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	3	21350	2560	24.09	24.40	1.074	-0.02	0.815	0.875
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	3	21100	2535	23.88	24.40	1.127	-0.13	0.721	0.813
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	3	20850	2510	23.87	24.40	1.130	-0.18	0.711	0.803
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	3	21350	2560	23.87	24.40	1.130	-0.1	0.737	0.833
	LTE Band 7_Ant 2	20M	QPSK	100	0	Right Cheek	0mm	3	21100	2535	23.86	24.40	1.132	-0.16	0.707	0.801
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	3	21100	2535	24.11	24.40	1.069	-0.18	0.255	0.273
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	3	21100	2535	23.88	24.40	1.127	-0.16	0.237	0.267
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	3	21100	2535	24.11	24.40	1.069	-0.19	0.375	0.401
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	3	21100	2535	23.88	24.40	1.127	-0.17	0.358	0.404
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	3	21100	2535	24.11	24.40	1.069	-0.15	0.297	0.318
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	3	21100	2535	23.88	24.40	1.127	-0.14	0.281	0.317
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	3	21100+20902	2535	22.70	22.70	1.000	0.05	0.732	0.732
	LTE Band 7_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2	21100	2535	24.49	25.20	1.178	-0.16	0.289	0.340
	LTE Band 7_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2	21100	2535	23.53	24.20	1.167	-0.16	0.234	0.273
	LTE Band 7_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2	21100	2535	24.49	25.20	1.178	-0.13	0.319	0.376
	LTE Band 7_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2	21100	2535	23.53	24.20	1.167	-0.08	0.243	0.284
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2	21100	2535	24.49	25.20	1.178	0	0.627	0.738
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2	20850	2510	24.37	25.20	1.211	-0.12	0.581	0.703
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2	21350	2560	24.40	25.20	1.202	0.17	0.685	0.824
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2	21100	2535	23.53	24.20	1.167	-0.11	0.518	0.604
	LTE Band 7_Ant 0	20M	QPSK	100	0	Left Cheek	0mm	2	21100	2535	23.49	24.20	1.178	-0.18	0.480	0.565
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2	21100	2535	24.49	25.20	1.178	-0.15	0.202	0.238
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2	21100	2535	23.53	24.20	1.167	-0.1	0.156	0.182
	LTE Band 7C_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2	21350+21152	2560	22.48	23.50	1.265	0.18	0.568	0.718
	LTE Band 7_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	3	21100	2535	24.49	25.00	1.125	-0.16	0.289	0.325
	LTE Band 7_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	3	21100	2535	23.53	24.00	1.114	-0.16	0.234	0.261
	LTE Band 7_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	3	21100	2535	24.49	25.00	1.125	-0.13	0.319	0.359
	LTE Band 7_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	3	21100	2535	23.53	24.00	1.114	-0.08	0.243	0.271
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	3	21100	2535	24.49	25.00	1.125	0	0.627	0.705
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	3	20850	2510	24.37	25.00	1.156	-0.12	0.581	0.672
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	3	21350	2560	24.40	25.00	1.148	0.17	0.685	0.786
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	3	21100	2535	23.53	24.00	1.114	-0.11	0.518	0.577
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	3	21100	2535	24.49	25.00	1.125	-0.15	0.202	0.227
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	3	21100	2535	23.53	24.00	1.114	-0.1	0.156	0.174
	LTE Band 7C_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	3	21350+21152	2560	22.48	23.30	1.208	0.18	0.568	0.686



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 12_Ant 0	10M	QPSK	1	0	Right Cheek	0mm	2/3	23095	707.5	24.34	25.70	1.368	-0.1	0.195	0.267
	LTE Band 12_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	2/3	23095	707.5	23.34	24.70	1.368	-0.11	0.139	0.190
	LTE Band 12_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	2/3	23095	707.5	24.34	25.70	1.368	-0.16	0.094	0.129
	LTE Band 12_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	2/3	23095	707.5	23.34	24.70	1.368	-0.16	0.079	0.108
	LTE Band 12_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	23095	707.5	24.34	25.70	1.368	-0.18	0.291	0.398
	LTE Band 12_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	2/3	23095	707.5	23.34	24.70	1.368	-0.07	0.221	0.302
	LTE Band 12_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	2/3	23095	707.5	24.34	25.70	1.368	-0.11	0.118	0.161
	LTE Band 12_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	2/3	23095	707.5	23.34	24.70	1.368	-0.17	0.099	0.135
08	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	2	23095	707.5	22.63	24.10	1.403	-0.15	0.849	1.191
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	2	23095	707.5	22.67	24.10	1.390	-0.18	0.850	1.181
	LTE Band 12_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	2	23095	707.5	22.63	24.10	1.403	-0.19	0.820	1.150
	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	2	23095	707.5	22.63	24.10	1.403	-0.13	0.814	1.142
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	2	23095	707.5	22.67	24.10	1.390	-0.11	0.800	1.112
	LTE Band 12_Ant 1	10M	QPSK	50	0	Right Tilted	0mm	2	23095	707.5	22.63	24.10	1.403	-0.14	0.735	1.031
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	2	23095	707.5	22.63	24.10	1.403	-0.08	0.495	0.694
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	2	23095	707.5	22.67	24.10	1.390	-0.12	0.484	0.673
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	2	23095	707.5	22.63	24.10	1.403	-0.16	0.522	0.732
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	2	23095	707.5	22.67	24.10	1.390	-0.18	0.516	0.717
	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	3	23095	707.5	22.63	23.30	1.167	-0.15	0.849	0.991
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	3	23095	707.5	22.67	23.30	1.156	-0.18	0.850	0.983
	LTE Band 12_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	3	23095	707.5	22.63	23.30	1.167	-0.19	0.820	0.957
	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	3	23095	707.5	22.63	23.30	1.167	-0.13	0.814	0.950
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	3	23095	707.5	22.67	23.30	1.156	-0.11	0.800	0.925
	LTE Band 12_Ant 1	10M	QPSK	50	0	Right Tilted	0mm	3	23095	707.5	22.63	23.30	1.167	-0.14	0.735	0.858
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	3	23095	707.5	22.63	23.30	1.167	-0.08	0.495	0.578
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	3	23095	707.5	22.67	23.30	1.156	-0.12	0.484	0.560
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	3	23095	707.5	22.63	23.30	1.167	-0.16	0.522	0.609
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	3	23095	707.5	22.67	23.30	1.156	-0.18	0.516	0.597
	LTE Band 13_Ant 0	10M	QPSK	1	0	Right Cheek	0mm	2/3	23230	782	24.33	25.70	1.371	-0.14	0.243	0.333
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	2/3	23230	782	23.41	24.70	1.346	-0.12	0.197	0.265
	LTE Band 13_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	2/3	23230	782	24.33	25.70	1.371	-0.15	0.130	0.178
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	2/3	23230	782	23.41	24.70	1.346	-0.13	0.106	0.143
	LTE Band 13_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	23230	782	24.33	25.70	1.371	-0.13	0.333	0.457
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	2/3	23230	782	23.41	24.70	1.346	-0.15	0.275	0.370
	LTE Band 13_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	2/3	23230	782	24.33	25.70	1.371	-0.13	0.172	0.236
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	2/3	23230	782	23.41	24.70	1.346	-0.13	0.145	0.195
09	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	2	23230	782	22.18	23.60	1.387	-0.19	0.804	1.115
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	2	23230	782	22.17	23.60	1.390	-0.14	0.767	1.066
	LTE Band 13_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	2	23230	782	22.13	23.60	1.403	-0.13	0.772	1.083
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	2	23230	782	22.18	23.60	1.387	-0.15	0.688	0.954
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	2	23230	782	22.17	23.60	1.390	-0.04	0.684	0.951
	LTE Band 13_Ant 1	10M	QPSK	50	0	Right Tilted	0mm	2	23230	782	22.13	23.60	1.403	-0.18	0.725	1.017
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	2	23230	782	22.18	23.60	1.387	-0.04	0.535	0.742
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	2	23230	782	22.17	23.60	1.390	-0.15	0.534	0.742
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	2	23230	782	22.18	23.60	1.387	-0.13	0.526	0.729
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	2	23230	782	22.17	23.60	1.390	-0.19	0.517	0.719
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	3	23230	782	22.18	22.80	1.153	-0.19	0.804	0.927
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	3	23230	782	22.17	22.80	1.156	-0.14	0.767	0.887
	LTE Band 13_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	3	23230	782	22.13	22.80	1.167	-0.13	0.772	0.901
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	3	23230	782	22.18	22.80	1.153	-0.15	0.688	0.794
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	3	23230	782	22.17	22.80	1.156	-0.04	0.684	0.791
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	3	23230	782	22.18	22.80	1.153	-0.04	0.535	0.617
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	3	23230	782	22.17	22.80	1.156	-0.15	0.534	0.617
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	3	23230	782	22.18	22.80	1.153	-0.13	0.526	0.607
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	3	23230	782	22.17	22.80	1.156	-0.19	0.517	0.598



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 14_Ant 0	10M	QPSK	1	0	Right Cheek	0mm	2/3	23330	793	24.43	25.70	1.340	-0.11	0.262	0.351
	LTE Band 14_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	2/3	23330	793	23.45	24.70	1.334	-0.11	0.202	0.269
	LTE Band 14_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	2/3	23330	793	24.43	25.70	1.340	-0.1	0.165	0.221
	LTE Band 14_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	2/3	23330	793	23.45	24.70	1.334	-0.1	0.134	0.179
	LTE Band 14_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	23330	793	24.43	25.70	1.340	-0.1	0.354	0.474
	LTE Band 14_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	2/3	23330	793	23.45	24.70	1.334	-0.11	0.281	0.375
	LTE Band 14_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	2/3	23330	793	24.43	25.70	1.340	-0.11	0.186	0.249
	LTE Band 14_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	2/3	23330	793	23.45	24.70	1.334	-0.18	0.148	0.197
10	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	2	23330	793	22.14	23.50	1.368	-0.15	0.863	1.180
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	2	23330	793	22.15	23.50	1.365	-0.13	0.817	1.115
	LTE Band 14_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	2	23330	793	22.14	23.50	1.368	-0.14	0.809	1.106
	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	2	23330	793	22.14	23.50	1.368	-0.12	0.732	1.001
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	2	23330	793	22.15	23.50	1.365	-0.12	0.722	0.985
	LTE Band 14_Ant 1	10M	QPSK	50	0	Right Tilted	0mm	2	23330	793	22.14	23.50	1.368	-0.19	0.711	0.972
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	2	23330	793	22.14	23.50	1.368	-0.17	0.565	0.773
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	2	23330	793	22.15	23.50	1.365	-0.12	0.566	0.772
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	2	23330	793	22.14	23.50	1.368	-0.14	0.545	0.745
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	2	23330	793	22.15	23.50	1.365	-0.13	0.538	0.734
	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	3	23330	793	22.14	22.70	1.138	-0.15	0.863	0.982
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	3	23330	793	22.15	22.70	1.135	-0.13	0.817	0.927
	LTE Band 14_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	3	23330	793	22.14	22.70	1.138	-0.14	0.809	0.920
	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	3	23330	793	22.14	22.70	1.138	-0.12	0.732	0.833
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	3	23330	793	22.15	22.70	1.135	-0.12	0.722	0.819
	LTE Band 14_Ant 1	10M	QPSK	50	0	Right Tilted	0mm	3	23330	793	22.14	22.70	1.138	-0.19	0.711	0.809
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	3	23330	793	22.14	22.70	1.138	-0.17	0.565	0.643
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	3	23330	793	22.15	22.70	1.135	-0.12	0.566	0.642
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	3	23330	793	22.14	22.70	1.138	-0.14	0.545	0.620
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	3	23330	793	22.15	22.70	1.135	-0.13	0.538	0.611
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	26340	1880	24.48	25.70	1.324	-0.02	0.494	0.654
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	26140	1860	24.32	25.70	1.374	0.11	0.420	0.577
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	26590	1905	24.34	25.70	1.368	0.02	0.476	0.651
	LTE Band 25_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2/3	26340	1880	22.91	24.20	1.346	0.11	0.353	0.475
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2/3	26340	1880	24.48	25.70	1.324	0.15	0.173	0.229
	LTE Band 25_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	2/3	26340	1880	22.91	24.20	1.346	-0.09	0.123	0.166
	LTE Band 25_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2/3	26340	1880	24.48	25.70	1.324	-0.1	0.259	0.343
	LTE Band 25_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	2/3	26340	1880	22.91	24.20	1.346	-0.11	0.184	0.248
	LTE Band 25_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2/3	26340	1880	24.48	25.70	1.324	-0.01	0.213	0.282
	LTE Band 25_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	2/3	26340	1880	22.91	24.20	1.346	-0.13	0.145	0.195
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	26340	1880	23.94	25.20	1.337	-0.01	0.255	0.341
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	26340	1880	22.30	23.70	1.380	-0.11	0.185	0.255
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	26340	1880	23.94	25.20	1.337	-0.04	0.188	0.251
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	26340	1880	22.30	23.70	1.380	-0.1	0.136	0.188
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	26340	1880	23.94	25.20	1.337	-0.07	0.442	0.591
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	26140	1860	23.69	25.20	1.416	-0.03	0.449	0.636
11	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	26590	1905	23.74	25.20	1.400	0.02	0.502	0.703
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	26340	1880	22.30	23.70	1.380	0.16	0.314	0.433
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	26340	1880	23.94	25.20	1.337	0.07	0.206	0.275
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	26340	1880	22.30	23.70	1.380	-0.12	0.141	0.195



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Cheek	0mm	2/3	26865	831.5	24.49	25.70	1.321	-0.13	0.272	0.359
	LTE Band 26_Ant 0	15M	QPSK	36	0	Right Cheek	0mm	2/3	26865	831.5	23.41	24.70	1.346	-0.14	0.211	0.284
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Tilted	0mm	2/3	26865	831.5	24.49	25.70	1.321	-0.1	0.136	0.180
	LTE Band 26_Ant 0	15M	QPSK	36	0	Right Tilted	0mm	2/3	26865	831.5	23.41	24.70	1.346	-0.15	0.111	0.149
	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Cheek	0mm	2/3	26865	831.5	24.49	25.70	1.321	-0.14	0.353	0.466
	LTE Band 26_Ant 0	15M	QPSK	36	0	Left Cheek	0mm	2/3	26865	831.5	23.41	24.70	1.346	-0.12	0.281	0.378
	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Tilted	0mm	2/3	26865	831.5	24.49	25.70	1.321	-0.19	0.152	0.201
	LTE Band 26_Ant 0	15M	QPSK	36	0	Left Tilted	0mm	2/3	26865	831.5	23.41	24.70	1.346	-0.18	0.125	0.168
	LTE Band 5B_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	20600+20501	844	22.86	24.00	1.300	0.08	0.342	0.445
12	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Cheek	0mm	2	26865	831.5	21.66	23.20	1.426	-0.13	0.755	1.076
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Cheek	0mm	2	26865	831.5	21.60	23.20	1.445	-0.1	0.743	1.074
	LTE Band 26_Ant 1	15M	QPSK	75	0	Right Cheek	0mm	2	26865	831.5	21.53	23.20	1.469	-0.16	0.728	1.069
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Tilted	0mm	2	26865	831.5	21.66	23.20	1.426	-0.1	0.511	0.728
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Tilted	0mm	2	26865	831.5	21.60	23.20	1.445	-0.13	0.517	0.747
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Cheek	0mm	2	26865	831.5	21.66	23.20	1.426	-0.17	0.491	0.700
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Cheek	0mm	2	26865	831.5	21.60	23.20	1.445	-0.14	0.508	0.734
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Tilted	0mm	2	26865	831.5	21.66	23.20	1.426	-0.1	0.369	0.526
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Tilted	0mm	2	26865	831.5	21.60	23.20	1.445	-0.16	0.379	0.548
	LTE Band 5B_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	2	20600+20501	844	19.88	21.50	1.452	0.02	0.616	0.895
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Cheek	0mm	3	26865	831.5	21.66	22.40	1.186	-0.13	0.755	0.895
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Cheek	0mm	3	26865	831.5	21.60	22.40	1.202	-0.1	0.743	0.893
	LTE Band 26_Ant 1	15M	QPSK	75	0	Right Cheek	0mm	3	26865	831.5	21.53	22.40	1.222	-0.16	0.728	0.889
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Tilted	0mm	3	26865	831.5	21.66	22.40	1.186	-0.1	0.511	0.606
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Tilted	0mm	3	26865	831.5	21.60	22.40	1.202	-0.13	0.517	0.622
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Cheek	0mm	3	26865	831.5	21.66	22.40	1.186	-0.17	0.491	0.582
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Cheek	0mm	3	26865	831.5	21.60	22.40	1.202	-0.14	0.508	0.611
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Tilted	0mm	3	26865	831.5	21.66	22.40	1.186	-0.1	0.369	0.438
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Tilted	0mm	3	26865	831.5	21.60	22.40	1.202	-0.16	0.379	0.456
	LTE Band 5B_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	3	20600+20501	844	19.88	20.70	1.208	0.02	0.616	0.744
	LTE Band 30_Ant 2	10M	QPSK	1	0	Right Cheek	0mm	2/3	27710	2310	23.41	24.80	1.377	-0.14	0.471	0.649
	LTE Band 30_Ant 2	10M	QPSK	25	0	Right Cheek	0mm	2/3	27710	2310	21.47	22.80	1.358	-0.16	0.298	0.405
	LTE Band 30_Ant 2	10M	QPSK	1	0	Right Tilted	0mm	2/3	27710	2310	23.41	24.80	1.377	-0.18	0.207	0.285
	LTE Band 30_Ant 2	10M	QPSK	25	0	Right Tilted	0mm	2/3	27710	2310	21.47	22.80	1.358	-0.17	0.136	0.185
	LTE Band 30_Ant 2	10M	QPSK	1	0	Left Cheek	0mm	2/3	27710	2310	23.41	24.80	1.377	-0.15	0.221	0.304
	LTE Band 30_Ant 2	10M	QPSK	25	0	Left Cheek	0mm	2/3	27710	2310	21.47	22.80	1.358	-0.1	0.145	0.197
	LTE Band 30_Ant 2	10M	QPSK	1	0	Left Tilted	0mm	2/3	27710	2310	23.41	24.80	1.377	0.15	0.224	0.308
	LTE Band 30_Ant 2	10M	QPSK	25	0	Left Tilted	0mm	2/3	27710	2310	21.47	22.80	1.358	-0.14	0.142	0.193
	LTE Band 30_Ant 0	10M	QPSK	1	0	Right Cheek	0mm	2/3	27710	2310	23.95	25.10	1.303	-0.1	0.287	0.374
	LTE Band 30_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	2/3	27710	2310	21.98	23.10	1.294	-0.13	0.186	0.241
	LTE Band 30_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	2/3	27710	2310	23.95	25.10	1.303	-0.17	0.180	0.235
	LTE Band 30_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	2/3	27710	2310	21.98	23.10	1.294	-0.16	0.119	0.154
13	LTE Band 30_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	27710	2310	23.95	25.10	1.303	0.1	0.607	0.791
	LTE Band 30_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	2/3	27710	2310	21.98	23.10	1.294	0.03	0.395	0.511
	LTE Band 30_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	2/3	27710	2310	23.95	25.10	1.303	-0.13	0.178	0.232
	LTE Band 30_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	2/3	27710	2310	21.98	23.10	1.294	-0.13	0.113	0.146



FCC SAR TEST REPORT

Report No. : FA241215-02D

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	132322	1745	24.77	25.70	1.239	-0.14	0.379	0.470
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	132072	1720	24.52	25.70	1.312	0.17	0.412	0.541
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	132572	1770	24.76	25.70	1.242	-0.06	0.360	0.447
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2/3	132322	1745	23.70	24.70	1.259	-0.18	0.285	0.359
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2/3	132322	1745	24.77	25.70	1.239	-0.15	0.189	0.234
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	2/3	132322	1745	23.70	24.70	1.259	-0.17	0.142	0.179
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2/3	132322	1745	24.77	25.70	1.239	-0.13	0.247	0.306
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	2/3	132322	1745	23.70	24.70	1.259	-0.1	0.197	0.248
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2/3	132322	1745	24.77	25.70	1.239	-0.07	0.198	0.245
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	2/3	132322	1745	23.70	24.70	1.259	-0.15	0.155	0.195
	LTE Band 66B_Ant 2	15M	QPSK	1	0	Right Cheek	0mm	2/3	132597+132504	1772.5	22.73	24.00	1.340	0.1	0.319	0.427
	LTE Band 66C_Ant 2	20M	QPSK	1	99	Right Cheek	0mm	2/3	132072+132270	1720	22.75	24.00	1.334	-0.12	0.351	0.468
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	132322	1745	24.13	25.20	1.279	-0.13	0.201	0.257
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	132322	1745	22.99	24.20	1.321	-0.07	0.162	0.214
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	132322	1745	24.13	25.20	1.279	-0.11	0.165	0.211
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	132322	1745	22.99	24.20	1.321	-0.13	0.132	0.174
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	132322	1745	24.13	25.20	1.279	0	0.342	0.438
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	132072	1720	23.97	25.20	1.327	-0.16	0.362	0.481
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	132572	1770	24.12	25.20	1.282	-0.15	0.366	0.469
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	132322	1745	22.99	24.20	1.321	-0.11	0.282	0.373
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	132322	1745	24.13	25.20	1.279	-0.16	0.155	0.198
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	132322	1745	22.99	24.20	1.321	-0.17	0.123	0.163
	LTE Band 66B_Ant 0	15M	QPSK	1	0	Left Cheek	0mm	2/3	132597+132504	1772.5	22.40	23.50	1.288	-0.03	0.278	0.358
	LTE Band 66C_Ant 0	20M	QPSK	1	99	Left Cheek	0mm	2/3	132072+132270	1720	22.37	23.50	1.297	0.15	0.274	0.355
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	132322	1745	18.15	19.80	1.462	0.01	0.326	0.477
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	132322	1745	18.14	19.80	1.466	-0.02	0.328	0.481
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	132072	1720	18.13	19.80	1.469	0	0.320	0.470
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	132572	1770	17.98	19.80	1.521	-0.08	0.663	1.008
	LTE Band 66_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	2	132322	1745	18.07	19.80	1.489	0.05	0.337	0.502
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	132322	1745	18.15	19.80	1.462	-0.04	0.295	0.431
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	132322	1745	18.14	19.80	1.466	0.01	0.319	0.468
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	2	132322	1745	18.15	19.80	1.462	-0.03	0.168	0.246
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	2	132322	1745	18.14	19.80	1.466	0.06	0.194	0.284
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	2	132322	1745	18.15	19.80	1.462	-0.1	0.191	0.279
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	2	132322	1745	18.14	19.80	1.466	0.08	0.207	0.303
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	3	132322	1745	18.15	19.00	1.216	0.01	0.326	0.396
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	132322	1745	18.14	19.00	1.219	-0.02	0.328	0.400
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	132072	1720	18.13	19.00	1.222	0	0.320	0.391
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	132572	1770	17.98	19.00	1.265	-0.08	0.663	0.839
	LTE Band 66_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	3	132322	1745	18.07	19.00	1.239	0.05	0.337	0.417
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	132322	1745	18.15	19.00	1.216	-0.04	0.295	0.359
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	132322	1745	18.14	19.00	1.219	0.01	0.319	0.389
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	3	132322	1745	18.15	19.00	1.216	-0.03	0.168	0.204
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	3	132322	1745	18.14	19.00	1.219	0.06	0.194	0.236
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	3	132322	1745	18.15	19.00	1.216	-0.1	0.191	0.232
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	3	132322	1745	18.14	19.00	1.219	0.08	0.207	0.252
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Cheek	0mm	2	132322	1745	17.43	19.10	1.469	0.01	0.435	0.639
	LTE Band 66_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	2	132322	1745	17.38	19.10	1.486	-0.11	0.434	0.645
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Tilted	0mm	2	132322	1745	17.43	19.10	1.469	-0.15	0.075	0.110
	LTE Band 66_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	2	132322	1745	17.38	19.10	1.486	-0.19	0.076	0.113
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	132322	1745	17.43	19.10	1.469	0.02	0.782	1.149
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	132072	1720	17.41	19.10	1.476	0.03	0.683	1.008
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	132572	1770	17.42	19.10	1.472	0.09	0.730	1.075
14	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	132322	1745	17.38	19.10	1.486	0.03	0.793	1.178
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	132072	1720	17.36	19.10	1.493	0.11	0.714	1.066
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	132572	1770	17.35	19.10	1.496	0.15	0.733	1.097
	LTE Band 66_Ant 5	20M	QPSK	100	0	Left Cheek	0mm	2	132322	1745	17.36	19.10	1.493	-0.06	0.782	1.167



FCC SAR TEST REPORT

Report No. : FA241215-02D

	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Tilted	0mm	2	132322	1745	17.43	19.10	1.469	-0.09	0.137	0.201
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	2	132322	1745	17.38	19.10	1.486	-0.08	0.138	0.205
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Cheek	0mm	3	132322	1745	17.43	18.30	1.222	0.01	0.435	0.531
	LTE Band 66_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	3	132322	1745	17.38	18.30	1.236	-0.11	0.434	0.536
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Tilted	0mm	3	132322	1745	17.43	18.30	1.222	-0.15	0.075	0.092
	LTE Band 66_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	3	132322	1745	17.38	18.30	1.236	-0.19	0.076	0.094
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	132322	1745	17.43	18.30	1.222	0.02	0.782	0.955
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	132072	1720	17.41	18.30	1.227	0.03	0.683	0.838
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	132572	1770	17.42	18.30	1.225	0.09	0.730	0.894
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	132322	1745	17.38	18.30	1.236	0.03	0.793	0.980
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	132072	1720	17.36	18.30	1.242	0.11	0.714	0.887
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	132572	1770	17.35	18.30	1.245	0.15	0.733	0.912
	LTE Band 66_Ant 5	20M	QPSK	100	0	Left Cheek	0mm	3	132322	1745	17.36	18.30	1.242	-0.06	0.782	0.971
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Tilted	0mm	3	132322	1745	17.43	18.30	1.222	-0.09	0.137	0.167
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	3	132322	1745	17.38	18.30	1.236	-0.08	0.138	0.171
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	133297	680.5	24.57	25.70	1.297	-0.13	0.169	0.219
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	133297	680.5	23.52	24.70	1.312	-0.17	0.134	0.176
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	133297	680.5	24.57	25.70	1.297	-0.12	0.090	0.117
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	133297	680.5	23.52	24.70	1.312	-0.11	0.074	0.097
	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	133297	680.5	24.57	25.70	1.297	-0.18	0.238	0.309
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	133297	680.5	23.52	24.70	1.312	-0.16	0.195	0.256
	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	133297	680.5	24.57	25.70	1.297	-0.15	0.092	0.119
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	133297	680.5	23.52	24.70	1.312	-0.14	0.079	0.104
15	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	133297	680.5	22.22	23.40	1.312	-0.12	0.909	1.193
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	133297	680.5	22.20	23.40	1.318	-0.18	0.892	1.176
	LTE Band 71_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	2	133297	680.5	22.11	23.40	1.346	-0.17	0.858	1.155
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	133297	680.5	22.22	23.40	1.312	-0.13	0.832	1.092
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	133297	680.5	22.20	23.40	1.318	-0.19	0.811	1.069
	LTE Band 71_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	2	133297	680.5	22.11	23.40	1.346	-0.15	0.777	1.046
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	2	133297	680.5	22.22	23.40	1.312	-0.16	0.475	0.623
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	2	133297	680.5	22.20	23.40	1.318	-0.11	0.487	0.642
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	2	133297	680.5	22.22	23.40	1.312	-0.16	0.576	0.756
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	2	133297	680.5	22.20	23.40	1.318	-0.12	0.566	0.746
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	3	133297	680.5	22.22	22.60	1.091	-0.12	0.909	0.992
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	133297	680.5	22.20	22.60	1.096	-0.18	0.892	0.978
	LTE Band 71_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	3	133297	680.5	22.11	22.60	1.119	-0.17	0.858	0.960
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	133297	680.5	22.22	22.60	1.091	-0.13	0.832	0.908
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	133297	680.5	22.20	22.60	1.096	-0.19	0.811	0.889
	LTE Band 71_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	3	133297	680.5	22.11	22.60	1.119	-0.15	0.777	0.870
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	3	133297	680.5	22.22	22.60	1.091	-0.16	0.475	0.518
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	3	133297	680.5	22.20	22.60	1.096	-0.11	0.487	0.534
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	3	133297	680.5	22.22	22.60	1.091	-0.16	0.576	0.629
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	3	133297	680.5	22.20	22.60	1.096	-0.12	0.566	0.621



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	40185	2549.5	24.66	25.70	1.271	62.9	1.006	-0.01	0.552	0.706
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	39750	2506	24.54	25.70	1.306	62.9	1.006	-0.11	0.598	0.786
16	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	40620	2593	24.59	25.70	1.291	62.9	1.006	0.1	0.679	0.882
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	41055	2636.5	24.60	25.70	1.288	62.9	1.006	0.04	0.600	0.778
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	41490	2680	24.63	25.70	1.279	62.9	1.006	0.06	0.641	0.825
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2/3	40185	2549.5	22.63	23.70	1.279	62.9	1.006	-0.13	0.346	0.445
	LTE Band 41_Ant 2	20M	QPSK	100	0	Right Cheek	0mm	2/3	40185	2549.5	22.58	23.70	1.294	62.9	1.006	0.04	0.362	0.471
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2/3	40185	2549.5	24.66	25.70	1.271	62.9	1.006	-0.11	0.153	0.196
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	2/3	40185	2549.5	22.63	23.70	1.279	62.9	1.006	-0.13	0.097	0.125
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2/3	40185	2549.5	24.66	25.70	1.271	62.9	1.006	-0.14	0.255	0.326
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	2/3	40185	2549.5	22.63	23.70	1.279	62.9	1.006	-0.16	0.159	0.205
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2/3	40185	2549.5	24.66	25.70	1.271	62.9	1.006	-0.14	0.146	0.187
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	2/3	40185	2549.5	22.63	23.70	1.279	62.9	1.006	-0.01	0.097	0.125
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	40185	2549.5	26.25	27.50	1.334	42.9	1.009	-0.05	0.611	0.822
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	39750	2506	26.21	27.50	1.346	42.9	1.009	-0.04	0.576	0.782
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	40620	2593	26.22	27.50	1.343	42.9	1.009	-0.02	0.647	0.877
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	41055	2636.5	26.22	27.50	1.343	42.9	1.009	-0.04	0.605	0.820
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	41490	2680	26.24	27.50	1.337	42.9	1.009	-0.04	0.631	0.851
	LTE Band 41C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	41490+41292	2680	12.07	12.80	1.183	62.9	1.006	0.12	0.041	0.049
	LTE Band 41_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	40185	2549.5	24.26	25.20	1.242	62.9	1.006	0.02	0.188	0.235
	LTE Band 41_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	40185	2549.5	22.20	23.20	1.259	62.9	1.006	-0.13	0.127	0.161
	LTE Band 41_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	40185	2549.5	24.26	25.20	1.242	62.9	1.006	-0.13	0.196	0.245
	LTE Band 41_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	40185	2549.5	22.20	23.20	1.259	62.9	1.006	-0.09	0.116	0.147
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	40185	2549.5	24.26	25.20	1.242	62.9	1.006	0.05	0.441	0.551
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	39750	2506	24.19	25.20	1.262	62.9	1.006	-0.18	0.410	0.520
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	40620	2593	24.02	25.20	1.312	62.9	1.006	0.07	0.469	0.619
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	41055	2636.5	24.01	25.20	1.315	62.9	1.006	-0.03	0.499	0.660
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	41490	2680	24.15	25.20	1.274	62.9	1.006	-0.17	0.538	0.689
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	40185	2549.5	22.20	23.20	1.259	62.9	1.006	-0.05	0.274	0.347
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	40185	2549.5	24.26	25.20	1.242	62.9	1.006	-0.11	0.122	0.152
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	40185	2549.5	22.20	23.20	1.259	62.9	1.006	-0.04	0.066	0.084
	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	40185	2549.5	25.83	27.00	1.309	42.9	1.009	-0.16	0.493	0.651
	LTE Band 41C_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	41490+41292	2680	11.44	12.30	1.219	62.9	1.006	0.04	0.026	0.032
	LTE Band 48_Ant 6	20M	QPSK	1	0	Right Cheek	0mm	2/3	56150	3641	22.66	23.20	1.132	62.9	1.006	0.11	0.153	0.174
	LTE Band 48_Ant 6	20M	QPSK	50	0	Right Cheek	0mm	2/3	56150	3641	21.57	22.20	1.156	62.9	1.006	0.03	0.125	0.145
	LTE Band 48_Ant 6	20M	QPSK	1	0	Right Tilted	0mm	2/3	56150	3641	22.66	23.20	1.132	62.9	1.006	-0.08	0.113	0.129
	LTE Band 48_Ant 6	20M	QPSK	50	0	Right Tilted	0mm	2/3	56150	3641	21.57	22.20	1.156	62.9	1.006	0.15	0.090	0.105
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	2/3	56150	3641	22.66	23.20	1.132	62.9	1.006	-0.05	0.245	0.279
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	2/3	55340	3560	22.43	23.20	1.194	62.9	1.006	-0.09	0.167	0.201
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	2/3	55830	3609	22.52	23.20	1.169	62.9	1.006	0.17	0.216	0.254
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	2/3	56640	3690	22.56	23.20	1.159	62.9	1.006	0.03	0.210	0.245
	LTE Band 48_Ant 6	20M	QPSK	50	0	Left Cheek	0mm	2/3	56150	3641	21.57	22.20	1.156	62.9	1.006	-0.07	0.202	0.235
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Tilted	0mm	2/3	56150	3641	22.66	23.20	1.132	62.9	1.006	0.06	0.001	0.001
	LTE Band 48_Ant 6	20M	QPSK	50	0	Left Tilted	0mm	2/3	56150	3641	21.57	22.20	1.156	62.9	1.006	0.16	0.001	0.001
17	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	56640	3690	24.02	24.70	1.169	62.9	1.006	-0.19	0.332	0.391
	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	56150	3641	23.81	24.70	1.227	62.9	1.006	0.12	0.267	0.330
	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	55340	3560	23.92	24.70	1.197	62.9	1.006	-0.09	0.233	0.281
	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	55830	3609	23.80	24.70	1.230	62.9	1.006	0.16	0.224	0.277
	LTE Band 48_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2/3	56640	3690	23.05	23.70	1.161	62.9	1.006	0.05	0.248	0.290
	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2/3	56640	3690	24.02	24.70	1.169	62.9	1.006	0.09	0.169	0.199
	LTE Band 48_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	2/3	56640	3690	23.05	23.70	1.161	62.9	1.006	0.14	0.129	0.151
	LTE Band 48_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2/3	56640	3690	24.02	24.70	1.169	62.9	1.006	0.02	0.197	0.232
	LTE Band 48_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	2/3	56640	3690	23.05	23.70	1.161	62.9	1.006	-0.09	0.158	0.185
	LTE Band 48_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2/3	56640	3690	24.02	24.70	1.169	62.9	1.006	0.02	0.268	0.315
	LTE Band 48_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	2/3	56640	3690	23.05	23.70	1.161	62.9	1.006	0.09	0.193	0.226



<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n5_Ant 0	20M	BPSK	1	1	Right Cheek	0mm	2/3	167300	836.5	24.86	25.70	1.213	-0.15	0.204	0.248
	FR1 n5_Ant 0	20M	BPSK	50	28	Right Cheek	0mm	2/3	167300	836.5	24.70	25.70	1.259	-0.14	0.222	0.279
	FR1 n5_Ant 0	20M	BPSK	1	1	Right Tilted	0mm	2/3	167300	836.5	24.86	25.70	1.213	-0.17	0.115	0.140
	FR1 n5_Ant 0	20M	BPSK	50	28	Right Tilted	0mm	2/3	167300	836.5	24.70	25.70	1.259	-0.17	0.124	0.156
	FR1 n5_Ant 0	20M	BPSK	1	1	Left Cheek	0mm	2/3	167300	836.5	24.86	25.70	1.213	-0.15	0.312	0.379
	FR1 n5_Ant 0	20M	BPSK	50	28	Left Cheek	0mm	2/3	167300	836.5	24.70	25.70	1.259	-0.1	0.330	0.415
	FR1 n5_Ant 0	20M	BPSK	1	1	Left Tilted	0mm	2/3	167300	836.5	24.86	25.70	1.213	-0.18	0.136	0.165
	FR1 n5_Ant 0	20M	BPSK	50	28	Left Tilted	0mm	2/3	167300	836.5	24.70	25.70	1.259	-0.15	0.138	0.174
	FR1 n5_Ant 1	20M	BPSK	1	1	Right Cheek	0mm	2	167300	836.5	22.08	23.50	1.387	-0.17	0.768	1.065
18	FR1 n5_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	2	167300	836.5	21.93	23.50	1.435	-0.12	0.762	1.094
	FR1 n5_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	2	167300	836.5	21.95	23.50	1.429	-0.08	0.758	1.083
	FR1 n5_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	2	167300	836.5	22.08	23.50	1.387	-0.15	0.691	0.958
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	2	167300	836.5	21.93	23.50	1.435	-0.03	0.745	1.069
	FR1 n5_Ant 1	20M	BPSK	100	0	Right Tilted	0mm	2	167300	836.5	21.95	23.50	1.429	-0.1	0.757	1.082
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Cheek	0mm	2	167300	836.5	22.08	23.50	1.387	-0.17	0.551	0.764
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	2	167300	836.5	21.93	23.50	1.435	-0.07	0.516	0.741
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Tilted	0mm	2	167300	836.5	22.08	23.50	1.387	-0.12	0.555	0.770
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	2	167300	836.5	21.93	23.50	1.435	-0.16	0.408	0.586
	FR1 n5_Ant 1	20M	BPSK	1	1	Right Cheek	0mm	3	167300	836.5	22.08	22.70	1.153	-0.17	0.768	0.886
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	3	167300	836.5	21.93	22.70	1.194	-0.12	0.762	0.910
	FR1 n5_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	3	167300	836.5	21.95	22.70	1.189	-0.08	0.758	0.901
	FR1 n5_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	3	167300	836.5	22.08	22.70	1.153	-0.15	0.691	0.797
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	3	167300	836.5	21.93	22.70	1.194	-0.03	0.745	0.890
	FR1 n5_Ant 1	20M	BPSK	100	0	Right Tilted	0mm	3	167300	836.5	21.95	22.70	1.189	-0.1	0.757	0.900
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Cheek	0mm	3	167300	836.5	22.08	22.70	1.153	-0.17	0.551	0.636
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	3	167300	836.5	21.93	22.70	1.194	-0.07	0.516	0.616
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Tilted	0mm	3	167300	836.5	22.08	22.70	1.153	-0.12	0.555	0.640
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	3	167300	836.5	21.93	22.70	1.194	-0.16	0.408	0.487
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Cheek	0mm	2	507000	2535	24.46	25.30	1.213	-0.13	0.758	0.920
19	FR1 n7_Ant 2	50M	BPSK	135	68	Right Cheek	0mm	2	507000	2535	24.33	25.30	1.250	-0.09	0.868	1.085
	FR1 n7_Ant 2	50M	BPSK	270	0	Right Cheek	0mm	2	507000	2535	24.36	25.30	1.242	-0.17	0.722	0.896
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Tilted	0mm	2	507000	2535	24.46	25.30	1.213	-0.1	0.262	0.318
	FR1 n7_Ant 2	50M	BPSK	135	68	Right Tilted	0mm	2	507000	2535	24.33	25.30	1.250	-0.13	0.255	0.319
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Cheek	0mm	2	507000	2535	24.46	25.30	1.213	-0.13	0.352	0.427
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Cheek	0mm	2	507000	2535	24.33	25.30	1.250	-0.18	0.361	0.451
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Tilted	0mm	2	507000	2535	24.46	25.30	1.213	-0.12	0.322	0.391
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Tilted	0mm	2	507000	2535	24.33	25.30	1.250	-0.15	0.298	0.373
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Cheek	0mm	3	507000	2535	24.46	24.50	1.009	-0.13	0.758	0.765
	FR1 n7_Ant 2	50M	BPSK	135	68	Right Cheek	0mm	3	507000	2535	24.33	24.50	1.040	-0.09	0.868	0.903
	FR1 n7_Ant 2	50M	BPSK	270	0	Right Cheek	0mm	3	507000	2535	24.36	24.50	1.033	-0.17	0.722	0.746
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Tilted	0mm	3	507000	2535	24.46	24.50	1.009	-0.1	0.262	0.264
	FR1 n7_Ant 2	50M	BPSK	135	68	Right Tilted	0mm	3	507000	2535	24.33	24.50	1.040	-0.13	0.255	0.265
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Cheek	0mm	3	507000	2535	24.46	24.50	1.009	-0.13	0.352	0.355
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Cheek	0mm	3	507000	2535	24.33	24.50	1.040	-0.18	0.361	0.375
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Tilted	0mm	3	507000	2535	24.46	24.50	1.009	-0.12	0.322	0.325
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Tilted	0mm	3	507000	2535	24.33	24.50	1.040	-0.15	0.298	0.310
	FR1 n7_Ant 0	50M	BPSK	1	1	Right Cheek	0mm	2/3	507000	2535	24.72	25.20	1.117	-0.11	0.252	0.281
	FR1 n7_Ant 0	50M	BPSK	135	68	Right Cheek	0mm	2/3	507000	2535	24.50	25.20	1.175	-0.14	0.270	0.317
	FR1 n7_Ant 0	50M	BPSK	1	1	Right Tilted	0mm	2/3	507000	2535	24.72	25.20	1.117	-0.14	0.331	0.370
	FR1 n7_Ant 0	50M	BPSK	135	68	Right Tilted	0mm	2/3	507000	2535	24.50	25.20	1.175	-0.14	0.276	0.324
	FR1 n7_Ant 0	50M	BPSK	1	1	Left Cheek	0mm	2/3	507000	2535	24.72	25.20	1.117	-0.18	0.615	0.687
	FR1 n7_Ant 0	50M	BPSK	135	68	Left Cheek	0mm	2/3	507000	2535	24.50	25.20	1.175	-0.07	0.720	0.846
	FR1 n7_Ant 0	50M	BPSK	270	0	Left Cheek	0mm	2/3	507000	2535	24.08	24.70	1.153	-0.02	0.683	0.788
	FR1 n7_Ant 0	50M	BPSK	1	1	Left Tilted	0mm	2/3	507000	2535	24.72	25.20	1.117	-0.15	0.217	0.242
	FR1 n7_Ant 0	50M	BPSK	135	68	Left Tilted	0mm	2/3	507000	2535	24.50	25.20	1.175	-0.09	0.176	0.207



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n12_Ant 0	15M	BPSK	1	1	Right Cheek	0mm	2/3	141500	707.5	24.66	25.70	1.271	-0.15	0.170	0.216
	FR1 n12_Ant 0	15M	BPSK	36	22	Right Cheek	0mm	2/3	141500	707.5	24.59	25.70	1.291	-0.1	0.179	0.231
	FR1 n12_Ant 0	15M	BPSK	1	1	Right Tilted	0mm	2/3	141500	707.5	24.66	25.70	1.271	-0.15	0.159	0.202
	FR1 n12_Ant 0	15M	BPSK	36	22	Right Tilted	0mm	2/3	141500	707.5	24.59	25.70	1.291	-0.19	0.097	0.125
	FR1 n12_Ant 0	15M	BPSK	1	1	Left Cheek	0mm	2/3	141500	707.5	24.66	25.70	1.271	-0.1	0.264	0.335
	FR1 n12_Ant 0	15M	BPSK	36	22	Left Cheek	0mm	2/3	141500	707.5	24.59	25.70	1.291	-0.13	0.271	0.350
	FR1 n12_Ant 0	15M	BPSK	1	1	Left Tilted	0mm	2/3	141500	707.5	24.66	25.70	1.271	-0.13	0.099	0.126
	FR1 n12_Ant 0	15M	BPSK	36	22	Left Tilted	0mm	2/3	141500	707.5	24.59	25.70	1.291	-0.14	0.109	0.141
20	FR1 n12_Ant 1	15M	BPSK	1	1	Right Cheek	0mm	2	141500	707.5	21.63	23.50	1.538	-0.15	0.770	1.184
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Cheek	0mm	2	141500	707.5	21.66	23.50	1.528	-0.15	0.721	1.101
	FR1 n12_Ant 1	15M	BPSK	75	0	Right Cheek	0mm	2	141500	707.5	21.65	23.50	1.531	-0.15	0.703	1.076
	FR1 n12_Ant 1	15M	BPSK	1	1	Right Tilted	0mm	2	141500	707.5	21.63	23.50	1.538	-0.11	0.679	1.044
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Tilted	0mm	2	141500	707.5	21.66	23.50	1.528	-0.11	0.704	1.075
	FR1 n12_Ant 1	15M	BPSK	75	0	Right Tilted	0mm	2	141500	707.5	21.65	23.50	1.531	-0.13	0.601	0.920
	FR1 n12_Ant 1	15M	BPSK	1	1	Left Cheek	0mm	2	141500	707.5	21.63	23.50	1.538	-0.11	0.442	0.675
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Cheek	0mm	2	141500	707.5	21.66	23.50	1.528	-0.11	0.442	0.675
	FR1 n12_Ant 1	15M	BPSK	1	1	Left Tilted	0mm	2	141500	707.5	21.63	23.50	1.538	-0.01	0.422	0.649
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Tilted	0mm	2	141500	707.5	21.66	23.50	1.528	-0.08	0.413	0.631
	FR1 n12_Ant 1	15M	BPSK	1	1	Right Cheek	0mm	3	141500	707.5	21.63	22.70	1.279	-0.15	0.770	0.985
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Cheek	0mm	3	141500	707.5	21.66	22.70	1.271	-0.15	0.721	0.916
	FR1 n12_Ant 1	15M	BPSK	75	0	Right Cheek	0mm	3	141500	707.5	21.65	22.70	1.274	-0.15	0.703	0.895
	FR1 n12_Ant 1	15M	BPSK	1	1	Right Tilted	0mm	3	141500	707.5	21.63	22.70	1.279	-0.11	0.679	0.869
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Tilted	0mm	3	141500	707.5	21.66	22.70	1.271	-0.11	0.704	0.894
	FR1 n12_Ant 1	15M	BPSK	75	0	Right Tilted	0mm	3	141500	707.5	21.65	22.70	1.274	-0.13	0.601	0.765
	FR1 n12_Ant 1	15M	BPSK	1	1	Left Cheek	0mm	3	141500	707.5	21.63	22.70	1.279	-0.11	0.444	0.568
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Cheek	0mm	3	141500	707.5	21.66	22.70	1.271	-0.11	0.442	0.562
	FR1 n12_Ant 1	15M	BPSK	1	1	Left Tilted	0mm	3	141500	707.5	21.63	22.70	1.279	-0.01	0.422	0.540
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Tilted	0mm	3	141500	707.5	21.66	22.70	1.271	-0.08	0.413	0.525
	FR1 n14_Ant 0	10M	BPSK	1	1	Right Cheek	0mm	2/3	158600	793	24.89	25.70	1.205	-0.1	0.232	0.280
	FR1 n14_Ant 0	10M	BPSK	25	14	Right Cheek	0mm	2/3	158600	793	24.74	25.70	1.247	-0.13	0.229	0.286
	FR1 n14_Ant 0	10M	BPSK	1	1	Right Tilted	0mm	2/3	158600	793	24.89	25.70	1.205	-0.1	0.133	0.160
	FR1 n14_Ant 0	10M	BPSK	25	14	Right Tilted	0mm	2/3	158600	793	24.74	25.70	1.247	-0.11	0.138	0.172
	FR1 n14_Ant 0	10M	BPSK	1	1	Left Cheek	0mm	2/3	158600	793	24.89	25.70	1.205	-0.13	0.325	0.392
	FR1 n14_Ant 0	10M	BPSK	25	14	Left Cheek	0mm	2/3	158600	793	24.74	25.70	1.247	-0.15	0.335	0.418
	FR1 n14_Ant 0	10M	BPSK	1	1	Left Tilted	0mm	2/3	158600	793	24.89	25.70	1.205	-0.14	0.160	0.193
	FR1 n14_Ant 0	10M	BPSK	25	14	Left Tilted	0mm	2/3	158600	793	24.74	25.70	1.247	-0.12	0.173	0.216
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Cheek	0mm	2	158600	793	22.61	23.60	1.256	-0.03	0.827	1.039
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Cheek	0mm	2	158600	793	22.55	23.60	1.274	-0.08	0.807	1.028
21	FR1 n14_Ant 1	10M	BPSK	50	0	Right Cheek	0mm	2	158600	793	22.52	23.60	1.282	-0.18	0.857	1.099
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Tilted	0mm	2	158600	793	22.61	23.60	1.256	-0.02	0.703	0.883
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Tilted	0mm	2	158600	793	22.55	23.60	1.274	-0.1	0.660	0.841
	FR1 n14_Ant 1	10M	BPSK	50	0	Right Tilted	0mm	2	158600	793	22.52	23.60	1.282	-0.19	0.725	0.930
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Cheek	0mm	2	158600	793	22.61	23.60	1.256	-0.15	0.608	0.764
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Cheek	0mm	2	158600	793	22.55	23.60	1.274	-0.16	0.589	0.750
	FR1 n14_Ant 1	10M	BPSK	50	0	Left Cheek	0mm	2	158600	793	22.52	23.60	1.282	-0.1	0.546	0.700
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Tilted	0mm	2	158600	793	22.61	23.60	1.256	-0.1	0.611	0.767
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Tilted	0mm	2	158600	793	22.55	23.60	1.274	-0.13	0.582	0.741
	FR1 n14_Ant 1	10M	BPSK	50	0	Left Tilted	0mm	2	158600	793	22.52	23.60	1.282	-0.16	0.581	0.745
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Cheek	0mm	3	158600	793	22.61	22.80	1.045	-0.03	0.827	0.864
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Cheek	0mm	3	158600	793	22.55	22.80	1.059	-0.08	0.807	0.855
	FR1 n14_Ant 1	10M	BPSK	50	0	Right Cheek	0mm	3	158600	793	22.52	22.80	1.067	-0.18	0.857	0.914
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Tilted	0mm	3	158600	793	22.61	22.80	1.045	-0.02	0.703	0.734
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Tilted	0mm	3	158600	793	22.55	22.80	1.059	-0.1	0.660	0.699
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Cheek	0mm	3	158600	793	22.61	22.80	1.045	-0.15	0.608	0.635
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Cheek	0mm	3	158600	793	22.55	22.80	1.059	-0.16	0.589	0.624
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Tilted	0mm	3	158600	793	22.61	22.80	1.045	-0.1	0.611	0.638
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Tilted	0mm	3	158600	793	22.55	22.80	1.059	-0.13	0.582	0.616



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
22	FR1 n25_Ant 2	40M	BPSK	1	1	Right Cheek	0mm	2/3	376500	1882.5	24.51	25.70	1.315	-0.16	0.478	0.629
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Cheek	0mm	2/3	376500	1882.5	24.38	25.70	1.355	0.12	0.498	0.675
	FR1 n25_Ant 2	40M	BPSK	1	1	Right Tilted	0mm	2/3	376500	1882.5	24.51	25.70	1.315	-0.13	0.194	0.255
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Tilted	0mm	2/3	376500	1882.5	24.38	25.70	1.355	-0.16	0.193	0.262
	FR1 n25_Ant 2	40M	BPSK	1	1	Left Cheek	0mm	2/3	376500	1882.5	24.51	25.70	1.315	-0.18	0.315	0.414
	FR1 n25_Ant 2	40M	BPSK	108	54	Left Cheek	0mm	2/3	376500	1882.5	24.38	25.70	1.355	-0.11	0.326	0.442
	FR1 n25_Ant 2	40M	BPSK	1	1	Left Tilted	0mm	2/3	376500	1882.5	24.51	25.70	1.315	-0.11	0.219	0.288
	FR1 n25_Ant 2	40M	BPSK	108	54	Left Tilted	0mm	2/3	376500	1882.5	24.38	25.70	1.355	-0.1	0.227	0.308
	FR1 n25_Ant 0	40M	BPSK	1	1	Right Cheek	0mm	2/3	376500	1882.5	23.87	25.20	1.358	-0.17	0.229	0.311
	FR1 n25_Ant 0	40M	BPSK	108	54	Right Cheek	0mm	2/3	376500	1882.5	23.70	25.20	1.413	-0.17	0.252	0.356
	FR1 n25_Ant 0	40M	BPSK	1	1	Right Tilted	0mm	2/3	376500	1882.5	23.87	25.20	1.358	-0.15	0.181	0.246
	FR1 n25_Ant 0	40M	BPSK	108	54	Right Tilted	0mm	2/3	376500	1882.5	23.70	25.20	1.413	-0.18	0.192	0.271
	FR1 n25_Ant 0	40M	BPSK	1	1	Left Cheek	0mm	2/3	376500	1882.5	23.87	25.20	1.358	0.03	0.364	0.494
	FR1 n25_Ant 0	40M	BPSK	108	54	Left Cheek	0mm	2/3	376500	1882.5	23.70	25.20	1.413	0.04	0.407	0.575
	FR1 n25_Ant 0	40M	BPSK	1	1	Left Tilted	0mm	2/3	376500	1882.5	23.87	25.20	1.358	-0.1	0.137	0.186
	FR1 n25_Ant 0	40M	BPSK	108	54	Left Tilted	0mm	2/3	376500	1882.5	23.70	25.20	1.413	-0.1	0.147	0.208
	FR1 n30_Ant 2	10M	BPSK	1	1	Right Cheek	0mm	2/3	462000	2310	23.78	24.80	1.265	-0.11	0.490	0.620
	FR1 n30_Ant 2	10M	BPSK	25	14	Right Cheek	0mm	2/3	462000	2310	23.64	24.80	1.306	-0.02	0.489	0.639
	FR1 n30_Ant 2	10M	BPSK	1	1	Right Tilted	0mm	2/3	462000	2310	23.78	24.80	1.265	-0.14	0.237	0.300
	FR1 n30_Ant 2	10M	BPSK	25	14	Right Tilted	0mm	2/3	462000	2310	23.64	24.80	1.306	-0.03	0.210	0.274
	FR1 n30_Ant 2	10M	BPSK	1	1	Left Cheek	0mm	2/3	462000	2310	23.78	24.80	1.265	-0.07	0.306	0.387
	FR1 n30_Ant 2	10M	BPSK	25	14	Left Cheek	0mm	2/3	462000	2310	23.64	24.80	1.306	-0.1	0.294	0.384
	FR1 n30_Ant 2	10M	BPSK	1	1	Left Tilted	0mm	2/3	462000	2310	23.78	24.80	1.265	0.03	0.219	0.277
	FR1 n30_Ant 2	10M	BPSK	25	14	Left Tilted	0mm	2/3	462000	2310	23.64	24.80	1.306	-0.02	0.207	0.270
	FR1 n30_Ant 0	10M	BPSK	1	1	Right Cheek	0mm	2/3	462000	2310	24.15	25.10	1.245	-0.08	0.302	0.376
	FR1 n30_Ant 0	10M	BPSK	25	14	Right Cheek	0mm	2/3	462000	2310	24.01	25.10	1.285	0.07	0.289	0.371
	FR1 n30_Ant 0	10M	BPSK	1	1	Right Tilted	0mm	2/3	462000	2310	24.15	25.10	1.245	-0.07	0.199	0.248
	FR1 n30_Ant 0	10M	BPSK	25	14	Right Tilted	0mm	2/3	462000	2310	24.01	25.10	1.285	-0.01	0.181	0.233
	FR1 n30_Ant 0	10M	BPSK	1	1	Left Cheek	0mm	2/3	462000	2310	24.15	25.10	1.245	0.13	0.562	0.699
	23	FR1 n30_Ant 0	10M	BPSK	25	14	Left Cheek	0mm	2/3	462000	2310	24.01	25.10	1.285	0.14	0.602
	FR1 n30_Ant 0	10M	BPSK	1	1	Left Tilted	0mm	2/3	462000	2310	24.15	25.10	1.245	-0.11	0.160	0.199
	FR1 n30_Ant 0	10M	BPSK	25	14	Left Tilted	0mm	2/3	462000	2310	24.01	25.10	1.285	-0.1	0.154	0.198



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
24	FR1 n41_Ant 2	100M	BPSK	1	1	Right Cheek	0mm	2	518598	2592.99	24.80	25.50	1.175	-0.18	0.868	1.020
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Cheek	0mm	2	518598	2592.99	24.70	25.50	1.202	-0.16	0.971	1.167
	FR1 n41_Ant 2	100M	BPSK	270	0	Right Cheek	0mm	2	518598	2592.99	24.06	25.00	1.242	-0.18	0.786	0.976
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Tilted	0mm	2	518598	2592.99	24.80	25.50	1.175	-0.18	0.279	0.328
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Tilted	0mm	2	518598	2592.99	24.70	25.50	1.202	-0.19	0.158	0.190
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Cheek	0mm	2	518598	2592.99	24.80	25.50	1.175	-0.07	0.334	0.392
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Cheek	0mm	2	518598	2592.99	24.70	25.50	1.202	-0.13	0.344	0.414
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Tilted	0mm	2	518598	2592.99	24.80	25.50	1.175	-0.15	0.247	0.290
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Tilted	0mm	2	518598	2592.99	24.70	25.50	1.202	-0.12	0.212	0.255
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Cheek	0mm	3	518598	2592.99	24.80	24.80	1.000	-0.18	0.868	0.868
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Cheek	0mm	3	518598	2592.99	24.70	24.80	1.023	-0.16	0.971	0.994
	FR1 n41_Ant 2	100M	BPSK	270	0	Right Cheek	0mm	3	518598	2592.99	24.06	24.80	1.186	-0.18	0.786	0.932
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Tilted	0mm	3	518598	2592.99	24.80	24.80	1.000	-0.18	0.279	0.279
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Tilted	0mm	3	518598	2592.99	24.70	24.80	1.023	-0.19	0.158	0.162
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Cheek	0mm	3	518598	2592.99	24.80	24.80	1.000	-0.07	0.334	0.334
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Cheek	0mm	3	518598	2592.99	24.70	24.80	1.023	-0.13	0.344	0.352
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Tilted	0mm	3	518598	2592.99	24.80	24.80	1.000	-0.15	0.247	0.247
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Tilted	0mm	3	518598	2592.99	24.70	24.80	1.023	-0.12	0.212	0.217
	FR1 n41_Ant 0	100M	BPSK	1	1	Right Cheek	0mm	2	518598	2592.99	24.00	25.00	1.259	-0.1	0.296	0.373
	FR1 n41_Ant 0	100M	BPSK	135	69	Right Cheek	0mm	2	518598	2592.99	23.68	25.00	1.355	-0.15	0.251	0.340
	FR1 n41_Ant 0	100M	BPSK	1	1	Right Tilted	0mm	2	518598	2592.99	24.00	25.00	1.259	-0.1	0.271	0.341
	FR1 n41_Ant 0	100M	BPSK	135	69	Right Tilted	0mm	2	518598	2592.99	23.68	25.00	1.355	-0.15	0.210	0.285
	FR1 n41_Ant 0	100M	BPSK	1	1	Left Cheek	0mm	2	518598	2592.99	24.00	25.00	1.259	-0.09	0.642	0.808
	FR1 n41_Ant 0	100M	BPSK	135	69	Left Cheek	0mm	2	518598	2592.99	23.68	25.00	1.355	-0.13	0.639	0.866
FR1 n41_Ant 0	100M	BPSK	270	0	Left Cheek	0mm	2	518598	2592.99	23.19	24.50	1.352	-0.07	0.570	0.771	
FR1 n41_Ant 0	100M	BPSK	1	1	Left Tilted	0mm	2	518598	2592.99	24.00	25.00	1.259	-0.19	0.161	0.203	
FR1 n41_Ant 0	100M	BPSK	135	69	Left Tilted	0mm	2	518598	2592.99	23.68	25.00	1.355	-0.14	0.105	0.142	
FR1 n41_Ant 0	100M	BPSK	1	1	Right Cheek	0mm	3	518598	2592.99	24.00	24.40	1.096	-0.1	0.296	0.325	
FR1 n41_Ant 0	100M	BPSK	135	69	Right Cheek	0mm	3	518598	2592.99	23.68	24.40	1.180	-0.15	0.251	0.296	
FR1 n41_Ant 0	100M	BPSK	1	1	Right Tilted	0mm	3	518598	2592.99	24.00	24.40	1.096	-0.1	0.271	0.297	
FR1 n41_Ant 0	100M	BPSK	135	69	Right Tilted	0mm	3	518598	2592.99	23.68	24.40	1.180	-0.15	0.210	0.248	
FR1 n41_Ant 0	100M	BPSK	1	1	Left Cheek	0mm	3	518598	2592.99	24.00	24.40	1.096	-0.09	0.642	0.704	
FR1 n41_Ant 0	100M	BPSK	135	69	Left Cheek	0mm	3	518598	2592.99	23.68	24.40	1.180	-0.13	0.639	0.754	
FR1 n41_Ant 0	100M	BPSK	1	1	Left Tilted	0mm	3	518598	2592.99	24.00	24.40	1.096	-0.19	0.161	0.177	
FR1 n41_Ant 0	100M	BPSK	135	69	Left Tilted	0mm	3	518598	2592.99	23.68	24.40	1.180	-0.14	0.105	0.124	



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n48_Ant 6	10M	BPSK	1	1	Right Cheek	0mm	2/3	641666	3624.99	22.94	23.20	1.062	0.11	0.172	0.183
	FR1 n48_Ant 6	10M	BPSK	12	6	Right Cheek	0mm	2/3	641666	3624.99	22.89	23.20	1.074	0.02	0.141	0.151
	FR1 n48_Ant 6	10M	BPSK	1	1	Right Tilted	0mm	2/3	641666	3624.99	22.94	23.20	1.062	-0.01	0.102	0.108
	FR1 n48_Ant 6	10M	BPSK	12	6	Right Tilted	0mm	2/3	641666	3624.99	22.89	23.20	1.074	-0.06	0.099	0.106
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Cheek	0mm	2/3	641666	3624.99	22.94	23.20	1.062	-0.15	0.264	0.280
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Cheek	0mm	2/3	637000	3555	22.70	23.20	1.122	-0.11	0.306	0.343
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Cheek	0mm	2/3	646332	3694.98	22.81	23.20	1.094	0.18	0.291	0.318
	FR1 n48_Ant 6	10M	BPSK	12	6	Left Cheek	0mm	2/3	641666	3624.99	22.89	23.20	1.074	0.12	0.224	0.241
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Tilted	0mm	2/3	641666	3624.99	22.94	23.20	1.062	0.03	0.077	0.082
	FR1 n48_Ant 6	10M	BPSK	12	6	Left Tilted	0mm	2/3	641666	3624.99	22.89	23.20	1.074	0.09	0.074	0.079
	FR1 n48_Ant 6	40M	BPSK	50	25	Left Cheek	0mm	2/3	641666	3624.99	22.87	23.20	1.079	0.08	0.256	0.276
	FR1 n48_Ant 2	10M	BPSK	1	1	Right Cheek	0mm	2/3	641666	3624.99	23.96	24.70	1.186	0.03	0.796	0.944
	FR1 n48_Ant 2	10M	BPSK	1	1	Right Cheek	0mm	2/3	637000	3555	23.90	24.70	1.202	0.09	0.815	0.980
	FR1 n48_Ant 2	10M	BPSK	1	1	Right Cheek	0mm	2/3	646332	3694.98	23.10	24.70	1.445	-0.11	0.660	0.954
	FR1 n48_Ant 2	10M	BPSK	12	6	Right Cheek	0mm	2/3	641666	3624.99	23.80	24.70	1.230	-0.12	0.733	0.902
25	FR1 n48_Ant 2	10M	BPSK	12	6	Right Cheek	0mm	2/3	637000	3555	23.54	24.70	1.306	0.12	0.754	0.985
	FR1 n48_Ant 2	10M	BPSK	12	6	Right Cheek	0mm	2/3	646332	3694.98	22.74	24.70	1.570	-0.06	0.593	0.931
	FR1 n48_Ant 2	10M	BPSK	24	0	Right Cheek	0mm	2/3	641666	3624.99	23.34	24.70	1.368	-0.16	0.710	0.971
	FR1 n48_Ant 2	10M	BPSK	1	1	Right Tilted	0mm	2/3	641666	3624.99	23.96	24.70	1.186	-0.19	0.367	0.435
	FR1 n48_Ant 2	10M	BPSK	12	6	Right Tilted	0mm	2/3	641666	3624.99	23.80	24.70	1.230	-0.06	0.331	0.407
	FR1 n48_Ant 2	10M	BPSK	1	1	Left Cheek	0mm	2/3	641666	3624.99	23.96	24.70	1.186	-0.07	0.458	0.543
	FR1 n48_Ant 2	10M	BPSK	12	6	Left Cheek	0mm	2/3	641666	3624.99	23.80	24.70	1.230	-0.11	0.463	0.570
	FR1 n48_Ant 2	10M	BPSK	1	1	Left Tilted	0mm	2/3	641666	3624.99	23.96	24.70	1.186	-0.06	0.571	0.677
	FR1 n48_Ant 2	10M	BPSK	12	6	Left Tilted	0mm	2/3	641666	3624.99	23.80	24.70	1.230	0.03	0.574	0.706
	FR1 n48_Ant 2	40M	BPSK	50	25	Right Cheek	0mm	2/3	641666	3624.99	23.94	24.70	1.191	0.08	0.799	0.952
	FR1 n66_Ant 2	40M	BPSK	1	1	Right Cheek	0mm	2/3	349000	1745	24.65	25.70	1.274	-0.08	0.384	0.489
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Cheek	0mm	2/3	349000	1745	24.53	25.70	1.309	-0.06	0.337	0.441
	FR1 n66_Ant 2	40M	BPSK	1	1	Right Tilted	0mm	2/3	349000	1745	24.65	25.70	1.274	-0.12	0.215	0.274
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Tilted	0mm	2/3	349000	1745	24.53	25.70	1.309	-0.18	0.150	0.196
	FR1 n66_Ant 2	40M	BPSK	1	1	Left Cheek	0mm	2/3	349000	1745	24.65	25.70	1.274	-0.05	0.261	0.332
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Cheek	0mm	2/3	349000	1745	24.53	25.70	1.309	-0.11	0.242	0.317
	FR1 n66_Ant 2	40M	BPSK	1	1	Left Tilted	0mm	2/3	349000	1745	24.65	25.70	1.274	-0.08	0.203	0.259
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Tilted	0mm	2/3	349000	1745	24.53	25.70	1.309	-0.07	0.159	0.208
	FR1 n66_Ant 0	40M	BPSK	1	1	Right Cheek	0mm	2/3	349000	1745	23.87	25.20	1.358	-0.18	0.192	0.261
	FR1 n66_Ant 0	40M	BPSK	108	54	Right Cheek	0mm	2/3	349000	1745	23.70	25.20	1.413	-0.14	0.190	0.268
	FR1 n66_Ant 0	40M	BPSK	1	1	Right Tilted	0mm	2/3	349000	1745	23.87	25.20	1.358	-0.12	0.165	0.224
	FR1 n66_Ant 0	40M	BPSK	108	54	Right Tilted	0mm	2/3	349000	1745	23.70	25.20	1.413	-0.12	0.153	0.216
26	FR1 n66_Ant 0	40M	BPSK	1	1	Left Cheek	0mm	2/3	349000	1745	23.87	25.20	1.358	0.05	0.383	0.520
	FR1 n66_Ant 0	40M	BPSK	108	54	Left Cheek	0mm	2/3	349000	1745	23.70	25.20	1.413	-0.13	0.339	0.479
	FR1 n66_Ant 0	40M	BPSK	1	1	Left Tilted	0mm	2/3	349000	1745	23.87	25.20	1.358	-0.14	0.155	0.211
	FR1 n66_Ant 0	40M	BPSK	108	54	Left Tilted	0mm	2/3	349000	1745	23.70	25.20	1.413	-0.07	0.141	0.199



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Cheek	0mm	2/3	136100	680.5	25.09	25.70	1.151	-0.17	0.170	0.196
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Cheek	0mm	2/3	136100	680.5	24.92	25.70	1.197	-0.16	0.178	0.213
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Tilted	0mm	2/3	136100	680.5	25.09	25.70	1.151	-0.1	0.079	0.091
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Tilted	0mm	2/3	136100	680.5	24.92	25.70	1.197	-0.15	0.089	0.107
	FR1 n71_Ant 0	20M	BPSK	1	1	Left Cheek	0mm	2/3	136100	680.5	25.09	25.70	1.151	-0.1	0.249	0.287
	FR1 n71_Ant 0	20M	BPSK	50	28	Left Cheek	0mm	2/3	136100	680.5	24.92	25.70	1.197	-0.17	0.257	0.308
	FR1 n71_Ant 0	20M	BPSK	1	1	Left Tilted	0mm	2/3	136100	680.5	25.09	25.70	1.151	-0.15	0.103	0.119
	FR1 n71_Ant 0	20M	BPSK	50	28	Left Tilted	0mm	2/3	136100	680.5	24.92	25.70	1.197	-0.09	0.112	0.134
27	FR1 n71_Ant 1	20M	BPSK	1	1	Right Cheek	0mm	2	136100	680.5	21.45	23.40	1.567	-0.02	0.699	1.095
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	2	136100	680.5	21.50	23.40	1.549	-0.14	0.698	1.081
	FR1 n71_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	2	136100	680.5	21.46	23.40	1.563	-0.13	0.661	1.033
	FR1 n71_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	2	136100	680.5	21.45	23.40	1.567	-0.12	0.659	1.032
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	2	136100	680.5	21.50	23.40	1.549	-0.15	0.687	1.064
	FR1 n71_Ant 1	20M	BPSK	100	0	Right Tilted	0mm	2	136100	680.5	21.46	23.40	1.563	-0.11	0.613	0.958
	FR1 n71_Ant 1	20M	BPSK	1	1	Left Cheek	0mm	2	136100	680.5	21.45	23.40	1.567	-0.19	0.631	0.989
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	2	136100	680.5	21.50	23.40	1.549	-0.12	0.416	0.644
	FR1 n71_Ant 1	20M	BPSK	100	0	Left Cheek	0mm	2	136100	680.5	21.46	23.40	1.563	0.02	0.389	0.608
	FR1 n71_Ant 1	20M	BPSK	1	1	Left Tilted	0mm	2	136100	680.5	21.45	23.40	1.567	-0.17	0.399	0.625
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	2	136100	680.5	21.50	23.40	1.549	-0.16	0.492	0.762
	FR1 n71_Ant 1	20M	BPSK	1	1	Right Cheek	0mm	3	136100	680.5	21.45	22.60	1.303	-0.02	0.699	0.911
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	3	136100	680.5	21.50	22.60	1.288	-0.14	0.698	0.899
	FR1 n71_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	3	136100	680.5	21.46	22.60	1.300	-0.13	0.661	0.859
	FR1 n71_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	3	136100	680.5	21.45	22.60	1.303	-0.12	0.659	0.859
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	3	136100	680.5	21.50	22.60	1.288	-0.15	0.687	0.885
	FR1 n71_Ant 1	20M	BPSK	100	0	Right Tilted	0mm	3	136100	680.5	21.46	22.60	1.300	-0.11	0.613	0.797
	FR1 n71_Ant 1	20M	BPSK	1	1	Left Cheek	0mm	3	136100	680.5	21.45	22.60	1.303	-0.19	0.631	0.822
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	3	136100	680.5	21.50	22.60	1.288	-0.12	0.416	0.536
	FR1 n71_Ant 1	20M	BPSK	100	0	Left Cheek	0mm	3	136100	680.5	21.46	22.60	1.300	0.02	0.389	0.506
	FR1 n71_Ant 1	20M	BPSK	1	1	Left Tilted	0mm	3	136100	680.5	21.45	22.60	1.303	-0.17	0.399	0.520
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	3	136100	680.5	21.50	22.60	1.288	-0.16	0.492	0.634



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Cheek	0mm	2/3	656000	3840	23.70	24.20	1.122	0.02	0.365	0.410
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Cheek	0mm	2/3	656000	3840	23.22	24.20	1.253	0.15	0.318	0.398
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Tilted	0mm	2/3	656000	3840	23.70	24.20	1.122	-0.11	0.269	0.302
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Tilted	0mm	2/3	656000	3840	23.22	24.20	1.253	0.08	0.249	0.312
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Cheek	0mm	2/3	656000	3840	23.70	24.20	1.122	-0.02	0.605	0.679
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	2/3	656000	3840	23.22	24.20	1.253	-0.04	0.601	0.753
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Tilted	0mm	2/3	656000	3840	23.70	24.20	1.122	0.06	0.182	0.204
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Tilted	0mm	2/3	656000	3840	23.22	24.20	1.253	0.09	0.189	0.237
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Cheek	0mm	2/3	633332	3499.98	23.60	24.20	1.148	0.12	0.284	0.326
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Cheek	0mm	2/3	633332	3499.98	23.45	24.20	1.189	0.07	0.255	0.303
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Tilted	0mm	2/3	633332	3499.98	23.60	24.20	1.148	-0.11	0.182	0.209
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Tilted	0mm	2/3	633332	3499.98	23.45	24.20	1.189	-0.03	0.170	0.202
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Cheek	0mm	2/3	633332	3499.98	23.60	24.20	1.148	0.05	0.466	0.535
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	2/3	633332	3499.98	23.45	24.20	1.189	0.08	0.439	0.522
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Tilted	0mm	2/3	633332	3499.98	23.60	24.20	1.148	0.15	0.132	0.152
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Tilted	0mm	2/3	633332	3499.98	23.45	24.20	1.189	-0.09	0.121	0.144
	FR1 n77_Ant 2	100M	BPSK	1	1	Right Cheek	0mm	2/3	656000	3840	22.41	23.20	1.199	-0.07	0.459	0.551
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Cheek	0mm	2/3	656000	3840	22.25	23.20	1.245	0.11	0.300	0.373
	FR1 n77_Ant 2	100M	BPSK	1	1	Right Tilted	0mm	2/3	656000	3840	22.41	23.20	1.199	0.02	0.169	0.203
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Tilted	0mm	2/3	656000	3840	22.25	23.20	1.245	-0.05	0.136	0.169
	FR1 n77_Ant 2	100M	BPSK	1	1	Left Cheek	0mm	2/3	656000	3840	22.41	23.20	1.199	-0.16	0.267	0.320
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Cheek	0mm	2/3	656000	3840	22.25	23.20	1.245	0.08	0.225	0.280
	FR1 n77_Ant 2	100M	BPSK	1	1	Left Tilted	0mm	2/3	656000	3840	22.41	23.20	1.199	-0.15	0.329	0.395
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Tilted	0mm	2/3	656000	3840	22.25	23.20	1.245	0.08	0.255	0.317
	FR1 n77_Ant 2	100M	BPSK	1	1	Right Cheek	0mm	2/3	633332	3499.98	22.29	23.20	1.233	0.11	0.354	0.437
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Cheek	0mm	2/3	633332	3499.98	21.97	23.20	1.327	-0.08	0.358	0.475
	FR1 n77_Ant 2	100M	BPSK	1	1	Right Tilted	0mm	2/3	633332	3499.98	22.29	23.20	1.233	-0.08	0.162	0.200
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Tilted	0mm	2/3	633332	3499.98	21.97	23.20	1.327	0.06	0.174	0.231
	FR1 n77_Ant 2	100M	BPSK	1	1	Left Cheek	0mm	2/3	633332	3499.98	22.29	23.20	1.233	0.12	0.240	0.296
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Cheek	0mm	2/3	633332	3499.98	21.97	23.20	1.327	-0.04	0.270	0.358
	FR1 n77_Ant 2	100M	BPSK	1	1	Left Tilted	0mm	2/3	633332	3499.98	22.29	23.20	1.233	0.06	0.276	0.340
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Tilted	0mm	2/3	633332	3499.98	21.97	23.20	1.327	0.02	0.306	0.406
28	FR1 n77_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	2	656000	3840	19.65	21.20	1.429	-0.12	0.834	1.192
	FR1 n77_Ant 1	100M	BPSK	135	69	Right Cheek	0mm	2	656000	3840	19.63	21.20	1.435	0.11	0.672	0.965
	FR1 n77_Ant 1	100M	BPSK	270	0	Right Cheek	0mm	2	656000	3840	19.64	21.20	1.432	-0.08	0.662	0.948
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	2	656000	3840	19.65	21.20	1.429	0.03	0.414	0.592
	FR1 n77_Ant 1	100M	BPSK	135	69	Right Tilted	0mm	2	656000	3840	19.63	21.20	1.435	0.05	0.322	0.462
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	2	656000	3840	19.65	21.20	1.429	0.09	0.176	0.251
	FR1 n77_Ant 1	100M	BPSK	135	69	Left Cheek	0mm	2	656000	3840	19.63	21.20	1.435	0.12	0.142	0.204
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	2	656000	3840	19.65	21.20	1.429	-0.04	0.144	0.206
	FR1 n77_Ant 1	100M	BPSK	135	69	Left Tilted	0mm	2	656000	3840	19.63	21.20	1.435	0.02	0.115	0.165
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	3	656000	3840	19.65	20.40	1.189	-0.12	0.834	0.991
	FR1 n77_Ant 1	100M	BPSK	135	69	Right Cheek	0mm	3	656000	3840	19.63	20.40	1.194	0.11	0.672	0.802
	FR1 n77_Ant 1	100M	BPSK	270	0	Right Cheek	0mm	3	656000	3840	19.64	20.40	1.191	-0.08	0.662	0.789
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	3	656000	3840	19.65	20.40	1.189	0.03	0.414	0.492
	FR1 n77_Ant 1	100M	BPSK	135	69	Right Tilted	0mm	3	656000	3840	19.63	20.40	1.194	0.05	0.322	0.384
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	3	656000	3840	19.65	20.40	1.189	0.09	0.176	0.209
	FR1 n77_Ant 1	100M	BPSK	135	69	Left Cheek	0mm	3	656000	3840	19.63	20.40	1.194	0.12	0.142	0.170
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	3	656000	3840	19.65	20.40	1.189	-0.04	0.144	0.171
	FR1 n77_Ant 1	100M	BPSK	135	69	Left Tilted	0mm	3	656000	3840	19.63	20.40	1.194	0.02	0.115	0.137
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	2	633332	3499.98	19.81	21.20	1.377	0.12	0.649	0.894
	FR1 n77_Ant 1	100M	BPSK	135	69	Right Cheek	0mm	2	633332	3499.98	19.83	21.20	1.371	-0.08	0.610	0.836



FCC SAR TEST REPORT

Report No. : FA241215-02D

FR1 n77_Ant 1	100M	BPSK	270	0	Right Cheek	0mm	2	633332	3499.98	19.86	21.20	1.361	-0.02	0.695	0.946
FR1 n77_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	2	633332	3499.98	19.81	21.20	1.377	0.15	0.490	0.675
FR1 n77_Ant 1	100M	BPSK	135	69	Right Tilted	0mm	2	633332	3499.98	19.83	21.20	1.371	-0.02	0.465	0.637
FR1 n77_Ant 1	100M	BPSK	270	0	Right Tilted	0mm	2	633332	3499.98	19.86	21.20	1.361	0.12	0.469	0.639
FR1 n77_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	2	633332	3499.98	19.81	21.20	1.377	-0.09	0.173	0.238
FR1 n77_Ant 1	100M	BPSK	135	69	Left Cheek	0mm	2	633332	3499.98	19.83	21.20	1.371	0.13	0.189	0.259
FR1 n77_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	2	633332	3499.98	19.81	21.20	1.377	0.05	0.218	0.300
FR1 n77_Ant 1	100M	BPSK	135	69	Left Tilted	0mm	2	633332	3499.98	19.83	21.20	1.371	0.15	0.219	0.300
FR1 n77_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	3	633332	3499.98	19.81	20.40	1.146	-0.02	0.695	0.796
FR1 n77_Ant 1	100M	BPSK	135	69	Right Cheek	0mm	3	633332	3499.98	19.83	20.40	1.140	-0.08	0.610	0.696
FR1 n77_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	3	633332	3499.98	19.81	20.40	1.146	0.15	0.490	0.561
FR1 n77_Ant 1	100M	BPSK	135	69	Right Tilted	0mm	3	633332	3499.98	19.83	20.40	1.140	-0.02	0.465	0.530
FR1 n77_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	3	633332	3499.98	19.81	20.40	1.146	-0.09	0.173	0.198
FR1 n77_Ant 1	100M	BPSK	135	69	Left Cheek	0mm	3	633332	3499.98	19.83	20.40	1.140	0.13	0.189	0.216
FR1 n77_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	3	633332	3499.98	19.81	20.40	1.146	0.05	0.218	0.250
FR1 n77_Ant 1	100M	BPSK	135	69	Left Tilted	0mm	3	633332	3499.98	19.83	20.40	1.140	0.15	0.219	0.250
FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	2	656000	3840	19.29	20.70	1.384	0.02	0.212	0.293
FR1 n77_Ant 5	100M	BPSK	135	69	Right Cheek	0mm	2	656000	3840	19.16	20.70	1.426	0.09	0.189	0.269
FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	2	656000	3840	19.29	20.70	1.384	0.15	0.081	0.112
FR1 n77_Ant 5	100M	BPSK	135	69	Right Tilted	0mm	2	656000	3840	19.16	20.70	1.426	0.11	0.062	0.088
FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	2	656000	3840	19.29	20.70	1.384	-0.1	0.467	0.646
FR1 n77_Ant 5	100M	BPSK	135	69	Left Cheek	0mm	2	656000	3840	19.16	20.70	1.426	-0.18	0.410	0.584
FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	2	656000	3840	19.29	20.70	1.384	0.12	0.204	0.282
FR1 n77_Ant 5	100M	BPSK	135	69	Left Tilted	0mm	2	656000	3840	19.16	20.70	1.426	0.06	0.156	0.222
FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	3	656000	3840	19.29	19.90	1.151	0.02	0.212	0.244
FR1 n77_Ant 5	100M	BPSK	135	69	Right Cheek	0mm	3	656000	3840	19.16	19.90	1.186	0.09	0.189	0.224
FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	3	656000	3840	19.29	19.90	1.151	0.15	0.081	0.093
FR1 n77_Ant 5	100M	BPSK	135	69	Right Tilted	0mm	3	656000	3840	19.16	19.90	1.186	0.11	0.062	0.074
FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	3	656000	3840	19.29	19.90	1.151	-0.1	0.467	0.537
FR1 n77_Ant 5	100M	BPSK	135	69	Left Cheek	0mm	3	656000	3840	19.16	19.90	1.186	-0.18	0.410	0.486
FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	3	656000	3840	19.29	19.90	1.151	0.12	0.204	0.235
FR1 n77_Ant 5	100M	BPSK	135	69	Left Tilted	0mm	3	656000	3840	19.16	19.90	1.186	0.06	0.156	0.185
FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	2	633332	3499.98	19.30	20.70	1.380	0.15	0.342	0.472
FR1 n77_Ant 5	100M	BPSK	135	69	Right Cheek	0mm	2	633332	3499.98	19.13	20.70	1.435	0.02	0.391	0.561
FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	2	633332	3499.98	19.30	20.70	1.380	-0.13	0.091	0.126
FR1 n77_Ant 5	100M	BPSK	135	69	Right Tilted	0mm	2	633332	3499.98	19.13	20.70	1.435	0.02	0.094	0.135
FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	2	633332	3499.98	19.30	20.70	1.380	-0.15	0.749	1.034
FR1 n77_Ant 5	100M	BPSK	135	69	Left Cheek	0mm	2	633332	3499.98	19.13	20.70	1.435	-0.17	0.611	0.877
FR1 n77_Ant 5	100M	BPSK	270	0	Left Cheek	0mm	2	633332	3499.98	19.09	20.70	1.449	0.01	0.612	0.887
FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	2	633332	3499.98	19.30	20.70	1.380	0.09	0.244	0.337
FR1 n77_Ant 5	100M	BPSK	135	69	Left Tilted	0mm	2	633332	3499.98	19.13	20.70	1.435	0.12	0.241	0.346
FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	3	633332	3499.98	19.30	19.90	1.148	0.15	0.342	0.393
FR1 n77_Ant 5	100M	BPSK	135	69	Right Cheek	0mm	3	633332	3499.98	19.13	19.90	1.194	0.02	0.391	0.467
FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	3	633332	3499.98	19.30	19.90	1.148	-0.13	0.091	0.104
FR1 n77_Ant 5	100M	BPSK	135	69	Right Tilted	0mm	3	633332	3499.98	19.13	19.90	1.194	0.02	0.094	0.112
FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	3	633332	3499.98	19.30	19.90	1.148	-0.15	0.749	0.860
FR1 n77_Ant 5	100M	BPSK	135	69	Left Cheek	0mm	3	633332	3499.98	19.13	19.90	1.194	-0.17	0.611	0.730
FR1 n77_Ant 5	100M	BPSK	270	0	Left Cheek	0mm	3	633332	3499.98	19.09	19.90	1.205	0.01	0.612	0.737
FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	3	633332	3499.98	19.30	19.90	1.148	0.09	0.244	0.280
FR1 n77_Ant 5	100M	BPSK	135	69	Left Tilted	0mm	3	633332	3499.98	19.13	19.90	1.194	0.12	0.241	0.288



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	1	13	2472	12.00	12.50	1.122	98.2	1.018	-0.01	0.043	0.049
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	1	13	2472	13.00	13.00	1.000	98.2	1.018	-0.01	0.475	0.484
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	1	1	2412	12.20	12.50	1.072	98.2	1.018	-0.18	0.070	0.076
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	1	1	2412	12.50	13.00	1.122	98.2	1.018	-0.18	0.345	0.394
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	1	6	2437	12.00	12.50	1.122	98.2	1.018	-0.12	0.098	0.112
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	1	6	2437	12.80	13.00	1.047	98.2	1.018	-0.12	0.491	0.523
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	1	11	2462	12.20	12.50	1.072	98.2	1.018	-0.05	0.129	0.141
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	1	11	2462	12.60	13.00	1.096	98.2	1.018	-0.05	0.462	0.516
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	1	12	2467	12.30	12.50	1.047	98.2	1.018	0.02	0.136	0.145
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	1	12	2467	12.70	13.00	1.072	98.2	1.018	0.02	0.450	0.491
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4+3(4)	1	13	2472	12.00	12.50	1.122	98.2	1.018	-0.12	0.100	0.114
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4+3(3)	1	13	2472	13.00	13.00	1.000	98.2	1.018	-0.12	0.101	0.103
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(4)	1	13	2472	12.00	12.50	1.122	98.2	1.018	0.14	0.333	0.380
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(3)	1	13	2472	13.00	13.00	1.000	98.2	1.018	0.14	0.204	0.208
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(4)	1	13	2472	12.00	12.50	1.122	98.2	1.018	0.12	0.315	0.360
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(3)	1	13	2472	13.00	13.00	1.000	98.2	1.018	0.12	0.026	0.026
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	2	12	2467	15.10	15.50	1.096	98.2	1.018	-0.18	0.227	0.253
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	2	12	2467	15.80	16.00	1.047	98.2	1.018	-0.18	1.010	1.077
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	2	1	2412	15.20	15.50	1.072	98.2	1.018	0.05	0.165	0.180
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	2	1	2412	15.60	16.00	1.096	98.2	1.018	0.05	1.010	1.127
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	2	6	2437	15.00	15.50	1.122	98.2	1.018	0.09	0.209	0.239
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	2	6	2437	15.80	16.00	1.047	98.2	1.018	0.09	0.933	0.995
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	2	11	2462	15.10	15.50	1.096	98.2	1.018	-0.1	0.198	0.221
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	2	11	2462	15.50	16.00	1.122	98.2	1.018	-0.1	0.869	0.993
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	2	13	2472	15.10	15.50	1.096	98.2	1.018	0.12	0.212	0.237
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	2	13	2472	15.70	16.00	1.072	98.2	1.018	0.12	1.060	1.156
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4+3(4)	2	12	2467	15.10	15.50	1.096	98.2	1.018	-0.05	0.303	0.338
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4+3(3)	2	12	2467	15.80	16.00	1.047	98.2	1.018	-0.05	0.186	0.198
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(4)	2	12	2467	15.10	15.50	1.096	98.2	1.018	0.01	0.771	0.861
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(3)	2	12	2467	15.80	16.00	1.047	98.2	1.018	0.01	0.519	0.553
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(4)	2	1	2412	15.20	15.50	1.072	98.2	1.018	-0.09	0.534	0.582
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(3)	2	1	2412	15.60	16.00	1.096	98.2	1.018	-0.09	0.280	0.313
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(4)	2	6	2437	15.00	15.50	1.122	98.2	1.018	-0.12	0.654	0.747
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(3)	2	6	2437	15.80	16.00	1.047	98.2	1.018	-0.12	0.443	0.472
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(3)	2	11	2462	15.50	16.00	1.122	98.2	1.018	-0.06	0.652	0.745
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(3)	2	11	2462	15.50	16.00	1.122	98.2	1.018	-0.06	0.386	0.441
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(4)	2	13	2472	15.10	15.50	1.096	98.2	1.018	-0.14	1.040	1.161
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4+3(3)	2	13	2472	15.70	16.00	1.072	98.2	1.018	-0.14	0.445	0.485
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(4)	2	12	2467	15.10	15.50	1.096	98.2	1.018	-0.14	0.826	0.922
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(3)	2	12	2467	15.80	16.00	1.047	98.2	1.018	-0.14	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(4)	2	1	2412	15.20	15.50	1.072	98.2	1.018	-0.15	0.546	0.596
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(3)	2	1	2412	15.60	16.00	1.096	98.2	1.018	-0.15	0.056	0.063
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(3)	2	6	2437	15.80	16.00	1.047	98.2	1.018	-0.05	0.665	0.709
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(3)	2	6	2437	15.80	16.00	1.047	98.2	1.018	-0.05	0.063	0.067
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(3)	2	11	2462	15.50	16.00	1.122	98.2	1.018	-0.05	0.665	0.760
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(3)	2	11	2462	15.50	16.00	1.122	98.2	1.018	-0.05	0.067	0.077
29	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(4)	2	13	2472	15.10	15.50	1.096	98.2	1.018	-0.15	1.050	1.172
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4+3(3)	2	13	2472	15.70	16.00	1.072	98.2	1.018	-0.15	0.081	0.088



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	58	5290	13.70	14.00	1.072	99.3	1.007	0.14	0.111	0.120
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	58	5290	9.80	10.00	1.047	99.3	1.007	0.14	0.176	0.186
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(4)	1	58	5290	13.70	14.00	1.072	99.3	1.007	-0.09	0.070	0.076
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(3)	1	58	5290	9.80	10.00	1.047	99.3	1.007	-0.09	0.016	0.017
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(4)	1	58	5290	13.70	14.00	1.072	99.3	1.007	-0.09	0.257	0.277
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(3)	1	58	5290	9.80	10.00	1.047	99.3	1.007	-0.09	0.130	0.137
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(4)	1	58	5290	13.70	14.00	1.072	99.3	1.007	0.04	0.201	0.217
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(3)	1	58	5290	9.80	10.00	1.047	99.3	1.007	0.04	0.014	0.015
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	56	5280	18.80	19.00	1.047	100	1.000	0.17	0.435	0.456
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	56	5280	15.50	15.50	1.000	100	1.000	0.17	0.707	0.707
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	56	5280	18.80	19.00	1.047	100	1.000	-0.1	0.449	0.470
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	56	5280	15.50	15.50	1.000	100	1.000	-0.1	0.081	0.081
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	56	5280	18.80	19.00	1.047	100	1.000	0.07	0.828	0.867
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	56	5280	15.50	15.50	1.000	100	1.000	0.07	0.475	0.475
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	52	5260	18.70	19.00	1.072	100	1.000	0.02	0.651	0.698
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	52	5260	15.00	15.50	1.122	100	1.000	0.02	0.330	0.370
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	60	5300	18.60	19.00	1.096	100	1.000	0.06	0.745	0.817
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	60	5300	15.50	15.50	1.000	100	1.000	0.06	0.416	0.416
30	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	64	5320	18.80	19.00	1.047	100	1.000	0.17	0.450	0.471
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	64	5320	15.30	15.50	1.047	100	1.000	0.17	0.995	1.042
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	56	5280	18.80	19.00	1.047	100	1.000	-0.06	0.718	0.752
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	56	5280	15.50	15.50	1.000	100	1.000	-0.06	0.070	0.070
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	106	5530	8.50	9.00	1.122	99.3	1.007	-0.12	0.069	0.078
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	106	5530	11.50	11.50	1.000	99.3	1.007	-0.12	0.130	0.131
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	106	5530	8.50	9.00	1.122	99.3	1.007	-0.11	0.053	0.060
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	106	5530	11.50	11.50	1.000	99.3	1.007	-0.11	0.001	0.001
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	106	5530	8.50	9.00	1.122	99.3	1.007	0.15	0.135	0.153
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	106	5530	11.50	11.50	1.000	99.3	1.007	0.15	0.007	0.007
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(4)	1	122	5610	8.80	9.00	1.047	99.3	1.007	-0.19	0.094	0.099
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(3)	1	122	5610	11.10	11.50	1.096	99.3	1.007	-0.19	0.001	0.001
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(4)	1	138	5690	8.60	9.00	1.096	99.3	1.007	-0.07	0.052	0.057
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(3)	1	138	5690	11.30	11.50	1.047	99.3	1.007	-0.07	0.001	0.001
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(4)	1	106	5530	8.50	9.00	1.122	99.3	1.007	0.16	0.127	0.143
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(3)	1	106	5530	11.50	11.50	1.000	99.3	1.007	0.16	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	124	5620	15.00	15.00	1.000	100	1.000	-0.05	0.456	0.456
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	124	5620	18.90	19.00	1.023	100	1.000	-0.05	0.773	0.791
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	124	5620	15.00	15.00	1.000	100	1.000	-0.02	0.466	0.466
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	124	5620	18.90	19.00	1.023	100	1.000	-0.02	0.097	0.099
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	124	5620	15.00	15.00	1.000	100	1.000	-0.1	0.652	0.652
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	124	5620	18.90	19.00	1.023	100	1.000	-0.1	0.249	0.255
31	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	100	5500	15.00	15.00	1.000	100	1.000	0.16	1.040	1.040
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	100	5500	18.80	19.00	1.047	100	1.000	0.16	0.616	0.645
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	116	5580	15.00	15.00	1.000	100	1.000	-0.07	0.677	0.677
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	116	5580	18.50	19.00	1.122	100	1.000	-0.07	0.256	0.287
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	132	5660	14.80	15.00	1.047	100	1.000	-0.04	0.521	0.546
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	132	5660	18.70	19.00	1.072	100	1.000	-0.04	0.162	0.174
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	144	5720	14.80	15.00	1.047	100	1.000	-0.09	0.490	0.513
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	144	5720	18.80	19.00	1.047	100	1.000	-0.09	0.170	0.178
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	124	5620	15.00	15.00	1.000	100	1.000	0.01	0.577	0.577
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	124	5620	18.90	19.00	1.023	100	1.000	0.01	0.044	0.045



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	155	5775	12.40	12.50	1.023	99.3	1.007	-0.04	0.235	0.242
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	155	5775	15.50	16.00	1.122	99.3	1.007	-0.04	0.201	0.227
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(4)	1	155	5775	12.40	12.50	1.023	99.3	1.007	-0.15	0.201	0.207
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(3)	1	155	5775	15.50	16.00	1.122	99.3	1.007	-0.15	0.201	0.227
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(4)	1	155	5775	12.40	12.50	1.023	99.3	1.007	-0.01	0.294	0.303
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(3)	1	155	5775	15.50	16.00	1.122	99.3	1.007	-0.01	0.112	0.127
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(4)	1	155	5775	12.40	12.50	1.023	99.3	1.007	-0.02	0.260	0.268
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(3)	1	155	5775	15.50	16.00	1.122	99.3	1.007	-0.02	0.002	0.002
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	165	5825	16.80	17.00	1.047	100	1.000	-0.12	0.803	0.841
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	165	5825	19.00	19.00	1.000	100	1.000	-0.12	0.793	0.793
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	149	5745	17.00	17.00	1.000	100	1.000	-0.19	0.609	0.609
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	149	5745	18.80	19.00	1.047	100	1.000	-0.19	0.336	0.352
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	157	5785	16.90	17.00	1.023	100	1.000	-0.1	0.604	0.618
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	157	5785	18.80	19.00	1.047	100	1.000	-0.1	0.449	0.470
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	165	5825	16.80	17.00	1.047	100	1.000	-0.11	0.895	0.937
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	165	5825	19.00	19.00	1.000	100	1.000	-0.11	0.108	0.108
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	149	5745	17.00	17.00	1.000	100	1.000	-0.03	0.439	0.439
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	149	5745	18.80	19.00	1.047	100	1.000	-0.03	0.089	0.093
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	157	5785	16.90	17.00	1.023	100	1.000	-0.05	0.575	0.588
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	157	5785	18.80	19.00	1.047	100	1.000	-0.05	0.034	0.036
32	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	165	5825	16.80	17.00	1.047	100	1.000	0.13	1.030	1.079
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	165	5825	19.00	19.00	1.000	100	1.000	0.13	0.586	0.586
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	149	5745	17.00	17.00	1.000	100	1.000	-0.15	0.893	0.893
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	149	5745	18.80	19.00	1.047	100	1.000	-0.15	0.330	0.346
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	157	5785	16.90	17.00	1.023	100	1.000	-0.19	1.010	1.034
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	157	5785	18.80	19.00	1.047	100	1.000	-0.19	0.438	0.459
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	165	5825	16.80	17.00	1.047	100	1.000	-0.18	0.908	0.951
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	165	5825	19.00	19.00	1.000	100	1.000	-0.18	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	149	5745	17.00	17.00	1.000	100	1.000	-0.04	0.631	0.631
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	149	5745	18.80	19.00	1.047	100	1.000	-0.04	0.030	0.031
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	157	5785	16.90	17.00	1.023	100	1.000	-0.08	0.837	0.856
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	157	5785	18.80	19.00	1.047	100	1.000	-0.08	0.032	0.034



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	171	5855	11.30	11.50	1.047	99.3	1.007	-0.15	0.229	0.241
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	171	5855	13.70	14.00	1.072	99.3	1.007	-0.15	0.249	0.269
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(4)	1	171	5855	11.30	11.50	1.047	99.3	1.007	-0.15	0.216	0.228
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(3)	1	171	5855	13.70	14.00	1.072	99.3	1.007	-0.15	0.030	0.032
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(4)	1	171	5855	11.30	11.50	1.047	99.3	1.007	-0.16	0.267	0.282
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(3)	1	171	5855	13.70	14.00	1.072	99.3	1.007	-0.16	0.112	0.121
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(4)	1	171	5855	11.30	11.50	1.047	99.3	1.007	-0.15	0.236	0.249
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(3)	1	171	5855	13.70	14.00	1.072	99.3	1.007	-0.15	0.011	0.012
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	169	5845	16.90	17.00	1.023	100	1.000	-0.07	0.851	0.871
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	169	5845	19.00	19.00	1.000	100	1.000	-0.07	0.923	0.923
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	173	5865	17.00	17.00	1.000	100	1.000	0.05	0.852	0.852
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	173	5865	18.80	19.00	1.047	100	1.000	0.05	0.958	1.003
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	177	5885	17.00	17.00	1.000	100	1.000	-0.11	0.743	0.743
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	177	5885	18.90	19.00	1.023	100	1.000	-0.11	0.974	0.997
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	169	5845	16.90	17.00	1.023	100	1.000	-0.05	0.808	0.827
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	169	5845	19.00	19.00	1.000	100	1.000	-0.05	0.111	0.111
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	173	5865	17.00	17.00	1.000	100	1.000	-0.1	0.784	0.784
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	173	5865	18.80	19.00	1.047	100	1.000	-0.1	0.212	0.222
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	177	5885	17.00	17.00	1.000	100	1.000	0.04	0.854	0.854
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	177	5885	18.90	19.00	1.023	100	1.000	0.04	0.122	0.125
33	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	169	5845	16.90	17.00	1.023	100	1.000	-0.07	1.120	1.146
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	169	5845	19.00	19.00	1.000	100	1.000	-0.07	0.635	0.635
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	173	5865	17.00	17.00	1.000	100	1.000	0.16	1.090	1.090
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	173	5865	18.80	19.00	1.047	100	1.000	0.16	0.591	0.619
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	177	5885	17.00	17.00	1.000	100	1.000	-0.07	1.090	1.090
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	177	5885	18.90	19.00	1.023	100	1.000	-0.07	0.594	0.608
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	169	5845	16.90	17.00	1.023	100	1.000	-0.06	0.880	0.900
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	169	5845	19.00	19.00	1.000	100	1.000	-0.06	0.050	0.050
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	173	5865	17.00	17.00	1.000	100	1.000	-0.06	0.877	0.877
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	173	5865	18.80	19.00	1.047	100	1.000	-0.06	0.061	0.064
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	177	5885	17.00	17.00	1.000	100	1.000	-0.19	0.815	0.815
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	177	5885	18.90	19.00	1.023	100	1.000	-0.19	0.097	0.099



<6GHZ WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)	Measured APD (W/m^2)	Reported APD (W/m^2)
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	215	7025	11.90	12.00	1.023	98.87	1.011	0.08	0.024	0.025	0.113	0.117
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	215	7025	8.40	9.00	1.148	98.87	1.011	0.08	0.148	0.172	0.634	0.736
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	7	5985	8.20	9.00	1.202	98.87	1.011	-0.02	0.062	0.075	0.115	0.140
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	7	5985	7.80	9.00	1.318	98.87	1.011	-0.02	0.039	0.052	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	71	6305	8.70	9.00	1.072	98.87	1.011	-0.11	0.135	0.146	0.741	0.803
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	71	6305	7.80	9.00	1.318	98.87	1.011	-0.11	0.030	0.040	0.122	0.163
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	119	6545	7.20	9.00	1.514	98.87	1.011	0.09	0.001	0.002	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	119	6545	9.00	9.00	1.000	98.87	1.011	0.09	0.171	0.173	0.792	0.801
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1	167	6785	7.90	9.00	1.288	98.87	1.011	-0.06	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1	167	6785	8.20	9.00	1.202	98.87	1.011	-0.06	0.119	0.145	0.458	0.557
	WLAN6GHz	802.11ax-HE80 MCS0	Right Tilted	0mm	Ant 4+3(4)	1	215	7025	11.90	12.00	1.023	98.87	1.011	-0.01	0.018	0.019	0.084	0.087
	WLAN6GHz	802.11ax-HE80 MCS0	Right Tilted	0mm	Ant 4+3(3)	1	215	7025	8.40	9.00	1.148	98.87	1.011	-0.01	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Left Cheek	0mm	Ant 4+3(4)	1	215	7025	11.90	12.00	1.023	98.87	1.011	0.06	0.081	0.084	0.439	0.454
	WLAN6GHz	802.11ax-HE80 MCS0	Left Cheek	0mm	Ant 4+3(3)	1	215	7025	8.40	9.00	1.148	98.87	1.011	0.06	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Left Tilted	0mm	Ant 4+3(4)	1	215	7025	11.90	12.00	1.023	98.87	1.011	0.01	0.057	0.059	0.347	0.359
	WLAN6GHz	802.11ax-HE80 MCS0	Left Tilted	0mm	Ant 4+3(3)	1	215	7025	8.40	9.00	1.148	98.87	1.011	0.01	0.001	0.001	0.000	0.000

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)	Measured APD (W/m^2)	Reported APD (W/m^2)
34	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	2	215	7025	11.40	12.00	1.148	98.87	1.011	0.11	0.025	0.029	0.134	0.156
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	2	215	7025	11.50	12.00	1.122	98.87	1.011	0.11	0.389	0.441	1.970	2.235
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	2	7	5985	8.20	9.00	1.202	98.87	1.011	-0.02	0.062	0.075	0.115	0.140
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	2	7	5985	7.80	9.00	1.318	98.87	1.011	-0.02	0.039	0.052	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	2	71	6305	8.70	9.00	1.072	98.87	1.011	-0.11	0.135	0.146	0.897	0.972
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	2	71	6305	7.80	9.00	1.318	98.87	1.011	-0.11	0.030	0.040	0.122	0.163
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	2	119	6545	7.20	9.00	1.514	98.87	1.011	0.09	0.001	0.002	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	2	119	6545	9.00	9.00	1.000	98.87	1.011	0.09	0.171	0.173	0.792	0.801
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(4)	2	167	6785	7.90	9.00	1.288	98.87	1.011	-0.06	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Right Cheek	0mm	Ant 4+3(3)	2	167	6785	8.20	9.00	1.202	98.87	1.011	-0.06	0.119	0.145	0.458	0.557
	WLAN6GHz	802.11ax-HE80 MCS0	Right Tilted	0mm	Ant 4+3(4)	2	215	7025	11.40	12.00	1.148	98.87	1.011	0.17	0.024	0.028	0.135	0.157
	WLAN6GHz	802.11ax-HE80 MCS0	Right Tilted	0mm	Ant 4+3(3)	2	215	7025	11.50	12.00	1.122	98.87	1.011	0.17	0.041	0.047	0.257	0.292
	WLAN6GHz	802.11ax-HE80 MCS0	Left Cheek	0mm	Ant 4+3(4)	2	215	7025	11.40	12.00	1.148	98.87	1.011	-0.12	0.099	0.115	0.487	0.565
	WLAN6GHz	802.11ax-HE80 MCS0	Left Cheek	0mm	Ant 4+3(3)	2	215	7025	11.50	12.00	1.122	98.87	1.011	-0.12	0.092	0.104	0.515	0.584
	WLAN6GHz	802.11ax-HE80 MCS0	Left Tilted	0mm	Ant 4+3(4)	2	215	7025	11.40	12.00	1.148	98.87	1.011	0.01	0.058	0.067	0.360	0.418
	WLAN6GHz	802.11ax-HE80 MCS0	Left Tilted	0mm	Ant 4+3(3)	2	215	7025	11.50	12.00	1.122	98.87	1.011	0.01	0.024	0.027	0.200	0.227



<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 4	1	78	2480	12.00	12.00	1.000	76.83	1.084	0.04	0.086	0.093
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4	1	78	2480	12.00	12.00	1.000	76.83	1.084	-0.17	0.092	0.100
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4	1	78	2480	12.00	12.00	1.000	76.83	1.084	-0.06	0.264	0.286
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	1	78	2480	12.00	12.00	1.000	76.83	1.084	-0.18	0.304	0.330
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	1	0	2402	11.60	12.00	1.096	76.83	1.084	-0.14	0.332	0.395
35	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	1	39	2441	11.99	12.00	1.002	76.83	1.084	-0.15	0.367	0.399
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 3	1	78	2480	11.97	12.00	1.007	76.83	1.084	-0.12	0.213	0.232
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 3	1	0	2402	11.06	12.00	1.242	76.83	1.084	-0.15	0.190	0.256
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 3	1	39	2441	11.34	12.00	1.164	76.83	1.084	-0.16	0.249	0.314
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 3	1	78	2480	11.97	12.00	1.007	76.83	1.084	0.1	0.031	0.034
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	1	78	2480	11.97	12.00	1.007	76.83	1.084	0.19	0.123	0.134
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 3	1	78	2480	11.97	12.00	1.007	76.83	1.084	0.13	0.008	0.009

15.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Index	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)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	4	251	848.8	29.19	29.30	1.026	-0.19	0.527	0.541
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	4	251	848.8	29.19	29.30	1.026	-0.11	0.557	0.571
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	4	251	848.8	29.19	29.30	1.026	-0.03	0.711	0.729
36	GSM850_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	4	128	824.2	29.15	29.30	1.035	0.03	0.824	0.853
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	4	189	836.4	29.18	29.30	1.028	-0.13	0.743	0.764
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	4	251	848.8	29.19	29.30	1.026	-0.05	0.266	0.273
	GSM850_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	251	848.8	29.19	29.30	1.026	0.1	0.625	0.641
	GSM850_Ant 1	GPRS (2 Tx slots)	Front	10mm	4	128	824.2	30.93	32.50	1.435	-0.07	0.226	0.324
	GSM850_Ant 1	GPRS (2 Tx slots)	Back	10mm	4	128	824.2	30.93	32.50	1.435	-0.1	0.267	0.383
	GSM850_Ant 1	GPRS (2 Tx slots)	Back	10mm	4	189	836.4	30.76	32.50	1.493	-0.1	0.314	0.469
	GSM850_Ant 1	GPRS (2 Tx slots)	Back	10mm	4	251	848.8	30.69	32.50	1.517	-0.19	0.394	0.598
	GSM850_Ant 1	GPRS (2 Tx slots)	Left Side	10mm	4	128	824.2	30.93	32.50	1.435	-0.05	0.167	0.240
	GSM850_Ant 1	GPRS (2 Tx slots)	Right Side	10mm	4	128	824.2	30.93	32.50	1.435	0.06	0.167	0.240
	GSM850_Ant 1	GPRS (2 Tx slots)	Top Side	10mm	4	128	824.2	30.93	32.50	1.435	0.04	0.167	0.240
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	4	661	1880	24.40	25.20	1.202	-0.06	0.742	0.892
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	4	512	1850.2	24.39	25.20	1.205	0.05	0.622	0.750
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	4	810	1909.8	24.39	25.20	1.205	-0.02	0.711	0.857
37	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	4	661	1880	24.40	25.20	1.202	-0.11	0.759	0.913
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	4	512	1850.2	24.39	25.20	1.205	-0.12	0.655	0.789
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	4	810	1909.8	24.39	25.20	1.205	-0.11	0.706	0.851
	GSM1900_Ant 2	GPRS (4 Tx slots)	Left Side	10mm	4	661	1880	24.40	25.20	1.202	0.05	0.025	0.030
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Side	10mm	4	661	1880	24.40	25.20	1.202	0.09	0.570	0.685
	GSM1900_Ant 2	GPRS (4 Tx slots)	Bottom Side	10mm	4	661	1880	24.40	25.20	1.202	0.1	0.532	0.640
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	4	810	1909.8	25.27	26.10	1.211	-0.08	0.297	0.360
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	4	810	1909.8	25.27	26.10	1.211	-0.16	0.416	0.504
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	4	810	1909.8	25.27	26.10	1.211	-0.05	0.689	0.834
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	4	512	1850.2	25.20	26.10	1.230	-0.15	0.598	0.736
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	4	661	1880	25.21	26.10	1.227	0.01	0.657	0.806
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	4	810	1909.8	25.27	26.10	1.211	0.01	0.050	0.061
	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	810	1909.8	25.27	26.10	1.211	0.15	0.208	0.252



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Index	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)
	WCDMA II_Ant 2	RMC 12.2Kbps	Front	10mm	4	9400	1880	20.50	21.30	1.202	-0.15	0.558	0.671
	WCDMA II_Ant 2	RMC 12.2Kbps	Front	10mm	4	9262	1852.4	20.49	21.30	1.205	-0.16	0.477	0.575
	WCDMA II_Ant 2	RMC 12.2Kbps	Front	10mm	4	9538	1907.6	20.49	21.30	1.205	-0.18	0.520	0.627
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	4	9400	1880	20.50	21.30	1.202	-0.01	0.456	0.548
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Side	10mm	4	9400	1880	20.50	21.30	1.202	-0.07	0.025	0.030
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	4	9400	1880	20.50	21.30	1.202	0.11	0.464	0.558
	WCDMA II_Ant 2	RMC 12.2Kbps	Bottom Side	10mm	4	9400	1880	20.50	21.30	1.202	0.11	0.412	0.495
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	4	9400	1880	22.03	23.20	1.309	-0.11	0.280	0.367
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	4	9400	1880	22.03	23.20	1.309	-0.1	0.320	0.419
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	9400	1880	22.03	23.20	1.309	0.19	0.579	0.758
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	9262	1852.4	21.95	23.20	1.334	0.12	0.547	0.729
38	WCDMA II_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	9538	1907.6	22.02	23.20	1.312	0.12	0.630	0.827
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Side	10mm	4	9400	1880	22.03	23.20	1.309	-0.16	0.045	0.059
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	9400	1880	22.03	23.20	1.309	0.18	0.147	0.192
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	10mm	4	1413	1732.6	22.33	23.30	1.250	-0.02	0.443	0.554
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	4	1413	1732.6	22.33	23.30	1.250	-0.19	0.427	0.534
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Side	10mm	4	1413	1732.6	22.33	23.30	1.250	-0.04	0.085	0.106
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Side	10mm	4	1413	1732.6	22.33	23.30	1.250	-0.02	0.479	0.599
39	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Side	10mm	4	1312	1712.4	22.32	23.30	1.253	-0.03	0.522	0.654
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Side	10mm	4	1513	1752.6	22.13	23.30	1.309	-0.08	0.465	0.609
	WCDMA IV_Ant 2	RMC 12.2Kbps	Bottom Side	10mm	4	1413	1732.6	22.33	23.30	1.250	0.18	0.276	0.345
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	4	1413	1732.6	22.14	23.60	1.400	-0.19	0.259	0.362
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	4	1413	1732.6	22.14	23.60	1.400	-0.14	0.260	0.364
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	4	1312	1712.4	22.13	23.60	1.403	-0.07	0.230	0.323
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	4	1513	1752.6	21.95	23.60	1.462	-0.08	0.283	0.414
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	1413	1732.6	22.14	23.60	1.400	0.1	0.252	0.353
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Side	10mm	4	1413	1732.6	22.14	23.60	1.400	0.07	0.032	0.045
	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	1413	1732.6	22.14	23.60	1.400	0.17	0.259	0.362
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	4	4182	836.4	24.16	25.70	1.426	0.02	0.340	0.485
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4	4182	836.4	24.16	25.70	1.426	-0.09	0.436	0.622
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	4182	836.4	24.16	25.70	1.426	0.16	0.437	0.623
40	WCDMA V_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	4132	826.4	24.06	25.70	1.459	-0.08	0.456	0.665
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	4233	846.6	24.11	25.70	1.442	-0.15	0.431	0.622
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Side	10mm	4	4182	836.4	24.16	25.70	1.426	-0.15	0.192	0.274
	WCDMA V_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	4182	836.4	24.16	25.70	1.426	-0.02	0.387	0.552
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	10mm	4	4182	836.4	24.06	25.20	1.300	0.12	0.285	0.371
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	4	4182	836.4	24.06	25.20	1.300	-0.05	0.337	0.438
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	4	4132	826.4	24.01	25.20	1.315	0.06	0.302	0.397
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	4	4233	846.6	23.94	25.20	1.337	-0.01	0.342	0.457
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	4	4182	836.4	24.06	25.20	1.300	0.12	0.166	0.216
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Side	10mm	4	4182	836.4	24.06	25.20	1.300	0.03	0.161	0.209
	WCDMA V_Ant 1	RMC 12.2Kbps	Top Side	10mm	4	4182	836.4	24.06	25.20	1.300	0.09	0.236	0.307



<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	4	18900	1880	20.81	21.40	1.146	-0.03	0.539	0.617
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	4	18900	1880	20.72	21.40	1.169	0.02	0.523	0.612
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	4	18900	1880	20.81	21.40	1.146	0.01	0.495	0.567
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	4	18900	1880	20.72	21.40	1.169	0.06	0.494	0.578
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Side	10mm	4	18900	1880	20.81	21.40	1.146	-0.04	0.042	0.048
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Side	10mm	4	18900	1880	20.72	21.40	1.169	0.03	0.041	0.048
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Side	10mm	4	18900	1880	20.81	21.40	1.146	0	0.218	0.250
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Side	10mm	4	18900	1880	20.72	21.40	1.169	0.01	0.217	0.254
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	18900	1880	20.81	21.40	1.146	0.08	0.779	0.892
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	18700	1860	20.80	21.40	1.148	-0.1	0.716	0.822
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	19100	1900	20.66	21.40	1.186	0.08	0.818	0.970
	LTE Band 2_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	18900	1880	20.72	21.40	1.169	0.05	0.786	0.919
	LTE Band 2_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	18700	1860	20.71	21.40	1.172	-0.04	0.715	0.838
41	LTE Band 2_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	19100	1900	20.68	21.40	1.180	0	0.837	0.988
	LTE Band 2_Ant 1	20M	QPSK	100	0	Top Side	10mm	4	18900	1880	20.66	21.40	1.186	0.03	0.793	0.940
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	4	18900	1880	22.18	22.20	1.005	0.01	0.604	0.607
	LTE Band 2_Ant 5	20M	QPSK	50	0	Front	10mm	4	18900	1880	22.18	22.20	1.005	-0.11	0.588	0.591
	LTE Band 2_Ant 5	20M	QPSK	1	0	Back	10mm	4	18900	1880	22.18	22.20	1.005	0.01	0.479	0.481
	LTE Band 2_Ant 5	20M	QPSK	50	0	Back	10mm	4	18900	1880	22.18	22.20	1.005	0.02	0.465	0.467
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Side	10mm	4	18900	1880	22.18	22.20	1.005	0.15	0.001	0.001
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Side	10mm	4	18900	1880	22.18	22.20	1.005	0.19	0.001	0.001
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	18900	1880	22.18	22.20	1.005	0.02	0.943	0.947
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	18700	1860	22.16	22.20	1.009	0.19	0.975	0.984
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	19100	1900	22.17	22.20	1.007	-0.15	0.847	0.853
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Side	10mm	4	18900	1880	22.18	22.20	1.005	0.03	0.926	0.930
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Side	10mm	4	18700	1860	22.15	22.20	1.012	0.02	0.964	0.975
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Side	10mm	4	19100	1900	22.15	22.20	1.012	-0.14	0.836	0.846
	LTE Band 2_Ant 5	20M	QPSK	100	0	Right Side	10mm	4	18900	1880	22.11	22.20	1.021	-0.11	0.885	0.904
	LTE Band 2_Ant 5	20M	QPSK	1	0	Top Side	10mm	4	18900	1880	22.18	22.20	1.005	-0.19	0.231	0.232
	LTE Band 2_Ant 5	20M	QPSK	50	0	Top Side	10mm	4	18900	1880	22.18	22.20	1.005	0.01	0.225	0.226



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	4	21100	2535	20.61	21.70	1.285	-0.17	0.424	0.545
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	10mm	4	21100	2535	20.67	21.70	1.268	-0.09	0.421	0.534
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	4	21100	2535	20.61	21.70	1.285	-0.06	0.426	0.548
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	4	21100	2535	20.67	21.70	1.268	-0.08	0.425	0.539
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Side	10mm	4	21100	2535	20.61	21.70	1.285	0.13	0.036	0.046
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Side	10mm	4	21100	2535	20.67	21.70	1.268	0.11	0.037	0.047
42	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	21100	2535	20.61	21.70	1.285	0.17	0.766	0.985
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	20850	2510	20.60	21.70	1.288	0.13	0.762	0.982
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	21350	2560	20.58	21.70	1.294	0.15	0.714	0.924
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	21100	2535	20.67	21.70	1.268	0.16	0.765	0.970
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	20850	2510	20.63	21.70	1.279	0.12	0.769	0.984
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	21350	2560	20.66	21.70	1.271	0.16	0.708	0.900
	LTE Band 7_Ant 2	20M	QPSK	100	0	Right Side	10mm	4	21100	2535	20.64	21.70	1.276	0.16	0.719	0.918
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	4	21100	2535	20.61	21.70	1.285	0.1	0.353	0.454
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	4	21100	2535	20.67	21.70	1.268	0.17	0.345	0.437
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	21100+20902	2535	19.11	20.00	1.227	0.02	0.737	0.905
	LTE Band 7_Ant 0	20M	QPSK	1	0	Front	10mm	4	21100	2535	20.43	21.60	1.309	0	0.296	0.388
	LTE Band 7_Ant 0	20M	QPSK	50	0	Front	10mm	4	21100	2535	20.47	21.60	1.297	0.02	0.306	0.397
	LTE Band 7_Ant 0	20M	QPSK	1	0	Back	10mm	4	21100	2535	20.43	21.60	1.309	-0.16	0.278	0.364
	LTE Band 7_Ant 0	20M	QPSK	50	0	Back	10mm	4	21100	2535	20.47	21.60	1.297	-0.14	0.286	0.371
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	21100	2535	20.43	21.60	1.309	0.02	0.580	0.759
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	21100	2535	20.47	21.60	1.297	0.07	0.597	0.774
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	20850	2510	20.42	21.60	1.312	0.15	0.581	0.762
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	21350	2560	20.30	21.60	1.349	-0.1	0.570	0.769
	LTE Band 7_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	21100	2535	20.43	21.60	1.309	0.11	0.030	0.039
	LTE Band 7_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	21100	2535	20.47	21.60	1.297	0.06	0.030	0.039
	LTE Band 7_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	21100	2535	20.43	21.60	1.309	0.02	0.068	0.089
	LTE Band 7_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	21100	2535	20.47	21.60	1.297	0.04	0.070	0.091
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Left Side	10mm	4	21100+20902	2535	18.92	19.90	1.253	0.06	0.537	0.673
	LTE Band 12_Ant 0	10M	QPSK	1	0	Front	10mm	4	23095	707.5	24.34	25.70	1.368	-0.14	0.322	0.440
	LTE Band 12_Ant 0	10M	QPSK	25	0	Front	10mm	4	23095	707.5	23.34	24.70	1.368	-0.05	0.254	0.347
	LTE Band 12_Ant 0	10M	QPSK	1	0	Back	10mm	4	23095	707.5	24.34	25.70	1.368	-0.03	0.251	0.343
	LTE Band 12_Ant 0	10M	QPSK	25	0	Back	10mm	4	23095	707.5	23.34	24.70	1.368	-0.04	0.202	0.276
43	LTE Band 12_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	23095	707.5	24.34	25.70	1.368	-0.02	0.398	0.544
	LTE Band 12_Ant 0	10M	QPSK	25	0	Left Side	10mm	4	23095	707.5	23.34	24.70	1.368	-0.06	0.308	0.421
	LTE Band 12_Ant 0	10M	QPSK	1	0	Right Side	10mm	4	23095	707.5	24.34	25.70	1.368	-0.02	0.217	0.297
	LTE Band 12_Ant 0	10M	QPSK	25	0	Right Side	10mm	4	23095	707.5	23.34	24.70	1.368	-0.05	0.172	0.235
	LTE Band 12_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	23095	707.5	24.34	25.70	1.368	-0.09	0.213	0.291
	LTE Band 12_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	4	23095	707.5	23.34	24.70	1.368	-0.06	0.172	0.235
	LTE Band 12_Ant 1	10M	QPSK	1	0	Front	10mm	4	23095	707.5	24.17	25.20	1.268	-0.02	0.179	0.227
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	10mm	4	23095	707.5	23.17	24.20	1.268	-0.08	0.143	0.181
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	10mm	4	23095	707.5	24.17	25.20	1.268	-0.01	0.200	0.254
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	10mm	4	23095	707.5	23.17	24.20	1.268	-0.08	0.161	0.204
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	4	23095	707.5	24.17	25.20	1.268	-0.09	0.105	0.133
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Side	10mm	4	23095	707.5	23.17	24.20	1.268	-0.07	0.087	0.110
	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Side	10mm	4	23095	707.5	24.17	25.20	1.268	-0.11	0.099	0.125
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Side	10mm	4	23095	707.5	23.17	24.20	1.268	-0.14	0.075	0.095
	LTE Band 12_Ant 1	10M	QPSK	1	0	Top Side	10mm	4	23095	707.5	24.17	25.20	1.268	-0.14	0.116	0.147
	LTE Band 12_Ant 1	10M	QPSK	25	0	Top Side	10mm	4	23095	707.5	23.17	24.20	1.268	-0.19	0.092	0.117



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 13_Ant 0	10M	QPSK	1	0	Front	10mm	4	23230	782	24.33	25.70	1.371	-0.13	0.381	0.522
	LTE Band 13_Ant 0	10M	QPSK	25	0	Front	10mm	4	23230	782	23.41	24.70	1.346	-0.17	0.283	0.381
	LTE Band 13_Ant 0	10M	QPSK	1	0	Back	10mm	4	23230	782	24.33	25.70	1.371	-0.13	0.345	0.473
	LTE Band 13_Ant 0	10M	QPSK	25	0	Back	10mm	4	23230	782	23.41	24.70	1.346	-0.13	0.281	0.378
44	LTE Band 13_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	23230	782	24.33	25.70	1.371	-0.14	0.577	0.791
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Side	10mm	4	23230	782	23.41	24.70	1.346	-0.11	0.449	0.604
	LTE Band 13_Ant 0	10M	QPSK	1	0	Right Side	10mm	4	23230	782	24.33	25.70	1.371	-0.18	0.281	0.385
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Side	10mm	4	23230	782	23.41	24.70	1.346	-0.19	0.238	0.320
	LTE Band 13_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	23230	782	24.33	25.70	1.371	-0.13	0.353	0.484
	LTE Band 13_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	4	23230	782	23.41	24.70	1.346	-0.17	0.290	0.390
	LTE Band 13_Ant 1	10M	QPSK	1	0	Front	10mm	4	23230	782	24.20	25.20	1.259	-0.14	0.227	0.286
	LTE Band 13_Ant 1	10M	QPSK	25	0	Front	10mm	4	23230	782	23.25	24.20	1.245	-0.17	0.183	0.228
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	10mm	4	23230	782	24.20	25.20	1.259	-0.19	0.247	0.311
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	10mm	4	23230	782	23.25	24.20	1.245	-0.11	0.195	0.243
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	4	23230	782	24.20	25.20	1.259	0.01	0.246	0.310
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Side	10mm	4	23230	782	23.25	24.20	1.245	-0.04	0.205	0.255
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Side	10mm	4	23230	782	24.20	25.20	1.259	-0.15	0.141	0.178
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Side	10mm	4	23230	782	23.25	24.20	1.245	-0.17	0.119	0.148
	LTE Band 13_Ant 1	10M	QPSK	1	0	Top Side	10mm	4	23230	782	24.20	25.20	1.259	-0.16	0.119	0.150
	LTE Band 13_Ant 1	10M	QPSK	25	0	Top Side	10mm	4	23230	782	23.25	24.20	1.245	-0.1	0.096	0.119
	LTE Band 14_Ant 0	10M	QPSK	1	0	Front	10mm	4	23330	793	24.43	25.70	1.340	-0.15	0.360	0.482
	LTE Band 14_Ant 0	10M	QPSK	25	0	Front	10mm	4	23330	793	23.45	24.70	1.334	-0.13	0.275	0.367
	LTE Band 14_Ant 0	10M	QPSK	1	0	Back	10mm	4	23330	793	24.43	25.70	1.340	-0.1	0.353	0.473
	LTE Band 14_Ant 0	10M	QPSK	25	0	Back	10mm	4	23330	793	23.45	24.70	1.334	-0.11	0.283	0.377
45	LTE Band 14_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	23330	793	24.43	25.70	1.340	-0.18	0.634	0.849
	LTE Band 14_Ant 0	10M	QPSK	25	0	Left Side	10mm	4	23330	793	23.45	24.70	1.334	-0.17	0.520	0.693
	LTE Band 14_Ant 0	10M	QPSK	50	0	Left Side	10mm	4	23330	793	23.40	24.70	1.349	0.12	0.556	0.750
	LTE Band 14_Ant 0	10M	QPSK	1	0	Right Side	10mm	4	23330	793	24.43	25.70	1.340	-0.11	0.340	0.455
	LTE Band 14_Ant 0	10M	QPSK	25	0	Right Side	10mm	4	23330	793	23.45	24.70	1.334	-0.11	0.273	0.364
	LTE Band 14_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	23330	793	24.43	25.70	1.340	0.13	0.369	0.494
	LTE Band 14_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	4	23330	793	23.45	24.70	1.334	-0.19	0.298	0.397
	LTE Band 14_Ant 1	10M	QPSK	1	0	Front	10mm	4	23330	793	24.22	25.20	1.253	-0.16	0.216	0.271
	LTE Band 14_Ant 1	10M	QPSK	25	0	Front	10mm	4	23330	793	23.22	24.20	1.253	-0.18	0.173	0.217
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	10mm	4	23330	793	24.22	25.20	1.253	-0.19	0.261	0.327
	LTE Band 14_Ant 1	10M	QPSK	25	0	Back	10mm	4	23330	793	23.22	24.20	1.253	-0.18	0.209	0.262
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	4	23330	793	24.22	25.20	1.253	-0.14	0.281	0.352
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Side	10mm	4	23330	793	23.22	24.20	1.253	-0.13	0.222	0.278
	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Side	10mm	4	23330	793	24.22	25.20	1.253	-0.15	0.176	0.221
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Side	10mm	4	23330	793	23.22	24.20	1.253	-0.1	0.140	0.175
	LTE Band 14_Ant 1	10M	QPSK	1	0	Top Side	10mm	4	23330	793	24.22	25.20	1.253	0.08	0.132	0.165
	LTE Band 14_Ant 1	10M	QPSK	25	0	Top Side	10mm	4	23330	793	23.22	24.20	1.253	-0.19	0.106	0.133



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 25_Ant 2	20M	QPSK	1	0	Front	10mm	4	26340	1880	21.59	22.40	1.205	-0.12	0.750	0.904
	LTE Band 25_Ant 2	20M	QPSK	1	0	Front	10mm	4	26140	1860	21.50	22.40	1.230	-0.15	0.625	0.769
	LTE Band 25_Ant 2	20M	QPSK	1	0	Front	10mm	4	26590	1905	21.51	22.40	1.227	-0.17	0.725	0.890
46	LTE Band 25_Ant 2	20M	QPSK	50	0	Front	10mm	4	26340	1880	21.54	22.40	1.219	-0.14	0.813	0.991
	LTE Band 25_Ant 2	20M	QPSK	50	0	Front	10mm	4	26140	1860	21.48	22.40	1.236	-0.09	0.653	0.807
	LTE Band 25_Ant 2	20M	QPSK	50	0	Front	10mm	4	26590	1905	21.39	22.40	1.262	-0.17	0.711	0.897
	LTE Band 25_Ant 2	20M	QPSK	100	0	Front	10mm	4	26340	1880	21.49	22.40	1.233	-0.14	0.747	0.921
	LTE Band 25_Ant 2	20M	QPSK	1	0	Back	10mm	4	26340	1880	21.59	22.40	1.205	0.04	0.626	0.754
	LTE Band 25_Ant 2	20M	QPSK	50	0	Back	10mm	4	26340	1880	21.54	22.40	1.219	0	0.624	0.761
	LTE Band 25_Ant 2	20M	QPSK	1	0	Left Side	10mm	4	26340	1880	21.59	22.40	1.205	-0.08	0.038	0.046
	LTE Band 25_Ant 2	20M	QPSK	50	0	Left Side	10mm	4	26340	1880	21.54	22.40	1.219	0.1	0.037	0.045
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	26340	1880	21.59	22.40	1.205	0.14	0.615	0.741
	LTE Band 25_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	26340	1880	21.54	22.40	1.219	0.11	0.622	0.758
	LTE Band 25_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	4	26340	1880	21.59	22.40	1.205	0.12	0.532	0.641
	LTE Band 25_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	4	26340	1880	21.54	22.40	1.219	0.15	0.540	0.658
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	4	26340	1880	21.53	23.10	1.435	-0.17	0.271	0.389
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	4	26340	1880	21.49	23.10	1.449	-0.13	0.271	0.393
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	4	26340	1880	21.53	23.10	1.435	-0.09	0.302	0.434
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	4	26340	1880	21.49	23.10	1.449	-0.15	0.303	0.439
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	26340	1880	21.53	23.10	1.435	0.13	0.476	0.683
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	26140	1860	21.34	23.10	1.500	0.15	0.468	0.702
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	26590	1905	21.40	23.10	1.479	0.18	0.550	0.814
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	26340	1880	21.49	23.10	1.449	0.15	0.469	0.679
	LTE Band 25_Ant 0	20M	QPSK	100	0	Left Side	10mm	4	26340	1880	21.41	23.10	1.476	0.06	0.486	0.717
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	26340	1880	21.53	23.10	1.435	0.15	0.032	0.046
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	26340	1880	21.49	23.10	1.449	0.08	0.033	0.048
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	26340	1880	21.53	23.10	1.435	0.19	0.139	0.200
	LTE Band 25_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	26340	1880	21.49	23.10	1.449	0.03	0.144	0.209
	LTE Band 26_Ant 0	15M	QPSK	1	0	Front	10mm	4	26865	831.5	24.49	25.70	1.321	-0.13	0.345	0.456
	LTE Band 26_Ant 0	15M	QPSK	36	0	Front	10mm	4	26865	831.5	23.41	24.70	1.346	-0.09	0.273	0.367
	LTE Band 26_Ant 0	15M	QPSK	1	0	Back	10mm	4	26865	831.5	24.49	25.70	1.321	-0.15	0.346	0.457
	LTE Band 26_Ant 0	15M	QPSK	36	0	Back	10mm	4	26865	831.5	23.41	24.70	1.346	-0.11	0.276	0.371
47	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Side	10mm	4	26865	831.5	24.49	25.70	1.321	-0.17	0.521	0.688
	LTE Band 26_Ant 0	15M	QPSK	36	0	Left Side	10mm	4	26865	831.5	23.41	24.70	1.346	-0.13	0.413	0.556
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Side	10mm	4	26865	831.5	24.49	25.70	1.321	-0.14	0.215	0.284
	LTE Band 26_Ant 0	15M	QPSK	36	0	Right Side	10mm	4	26865	831.5	23.41	24.70	1.346	-0.13	0.168	0.226
	LTE Band 26_Ant 0	15M	QPSK	1	0	Bottom Side	10mm	4	26865	831.5	24.49	25.70	1.321	-0.01	0.380	0.502
	LTE Band 26_Ant 0	15M	QPSK	36	0	Bottom Side	10mm	4	26865	831.5	23.41	24.70	1.346	-0.17	0.311	0.419
	LTE Band 5B_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	20600+20501	844	22.86	24.00	1.300	0.04	0.414	0.538
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	10mm	4	26865	831.5	24.00	25.20	1.318	-0.09	0.209	0.276
	LTE Band 26_Ant 1	15M	QPSK	36	0	Front	10mm	4	26865	831.5	23.06	24.20	1.300	-0.15	0.172	0.224
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	10mm	4	26865	831.5	24.00	25.20	1.318	-0.17	0.290	0.382
	LTE Band 26_Ant 1	15M	QPSK	36	0	Back	10mm	4	26865	831.5	23.06	24.20	1.300	-0.12	0.215	0.280
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	4	26865	831.5	24.00	25.20	1.318	-0.1	0.104	0.137
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Side	10mm	4	26865	831.5	23.06	24.20	1.300	-0.1	0.079	0.103
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Side	10mm	4	26865	831.5	24.00	25.20	1.318	-0.14	0.151	0.199
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Side	10mm	4	26865	831.5	23.06	24.20	1.300	-0.13	0.120	0.156
	LTE Band 26_Ant 1	15M	QPSK	1	0	Top Side	10mm	4	26865	831.5	24.00	25.20	1.318	-0.03	0.187	0.247
	LTE Band 26_Ant 1	15M	QPSK	36	0	Top Side	10mm	4	26865	831.5	23.06	24.20	1.300	-0.17	0.153	0.199
	LTE Band 5B_Ant 1	10M	QPSK	1	0	Back	10mm	4	20600+20501	844	22.32	23.50	1.312	0.1	0.250	0.328



FCC SAR TEST REPORT

Report No. : FA241215-02D

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 30_Ant 2	10M	QPSK	1	0	Front	10mm	4	27710	2310	20.50	21.50	1.259	0.16	0.489	0.616
	LTE Band 30_Ant 2	10M	QPSK	25	0	Front	10mm	4	27710	2310	20.52	21.50	1.253	0.08	0.489	0.613
	LTE Band 30_Ant 2	10M	QPSK	1	0	Back	10mm	4	27710	2310	20.50	21.50	1.259	-0.12	0.474	0.597
	LTE Band 30_Ant 2	10M	QPSK	25	0	Back	10mm	4	27710	2310	20.52	21.50	1.253	-0.14	0.480	0.602
	LTE Band 30_Ant 2	10M	QPSK	1	0	Left Side	10mm	4	27710	2310	20.50	21.50	1.259	0.02	0.026	0.033
	LTE Band 30_Ant 2	10M	QPSK	25	0	Left Side	10mm	4	27710	2310	20.52	21.50	1.253	0.14	0.026	0.033
	LTE Band 30_Ant 2	10M	QPSK	1	0	Right Side	10mm	4	27710	2310	20.50	21.50	1.259	0.19	0.612	0.770
	LTE Band 30_Ant 2	10M	QPSK	25	0	Right Side	10mm	4	27710	2310	20.52	21.50	1.253	0.16	0.624	0.782
	LTE Band 30_Ant 2	10M	QPSK	1	0	Bottom Side	10mm	4	27710	2310	20.50	21.50	1.259	0.14	0.512	0.645
	LTE Band 30_Ant 2	10M	QPSK	25	0	Bottom Side	10mm	4	27710	2310	20.52	21.50	1.253	0.17	0.521	0.653
	LTE Band 30_Ant 0	10M	QPSK	1	0	Front	10mm	4	27710	2310	23.14	23.90	1.191	0.18	0.502	0.598
	LTE Band 30_Ant 0	10M	QPSK	25	0	Front	10mm	4	27710	2310	21.99	22.90	1.233	-0.11	0.433	0.534
	LTE Band 30_Ant 0	10M	QPSK	1	0	Back	10mm	4	27710	2310	23.14	23.90	1.191	-0.14	0.464	0.553
	LTE Band 30_Ant 0	10M	QPSK	25	0	Back	10mm	4	27710	2310	21.99	22.90	1.233	-0.04	0.372	0.459
48	LTE Band 30_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	27710	2310	23.14	23.90	1.191	0.05	0.740	0.882
	LTE Band 30_Ant 0	10M	QPSK	25	0	Left Side	10mm	4	27710	2310	21.99	22.90	1.233	-0.01	0.597	0.736
	LTE Band 30_Ant 0	10M	QPSK	50	0	Left Side	10mm	4	27710	2310	22.00	22.90	1.230	0.02	0.606	0.746
	LTE Band 30_Ant 0	10M	QPSK	1	0	Right Side	10mm	4	27710	2310	23.14	23.90	1.191	0.11	0.050	0.060
	LTE Band 30_Ant 0	10M	QPSK	25	0	Right Side	10mm	4	27710	2310	21.99	22.90	1.233	-0.07	0.049	0.060
	LTE Band 30_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	27710	2310	23.14	23.90	1.191	0.03	0.265	0.316
	LTE Band 30_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	4	27710	2310	21.99	22.90	1.233	0.08	0.216	0.266
	LTE Band 66_Ant 2	20M	QPSK	1	0	Front	10mm	4	132322	1745	22.81	23.90	1.285	-0.13	0.533	0.685
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	10mm	4	132322	1745	22.74	23.90	1.306	-0.16	0.542	0.708
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	4	132322	1745	22.81	23.90	1.285	-0.11	0.503	0.646
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	10mm	4	132322	1745	22.74	23.90	1.306	-0.08	0.503	0.657
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Side	10mm	4	132322	1745	22.81	23.90	1.285	-0.09	0.116	0.149
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Side	10mm	4	132322	1745	22.74	23.90	1.306	-0.03	0.116	0.152
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	132322	1745	22.81	23.90	1.285	0.19	0.621	0.798
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	132322	1745	22.74	23.90	1.306	0.12	0.625	0.816
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	132072	1720	22.62	23.90	1.343	0.19	0.615	0.826
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	132572	1770	22.71	23.90	1.315	0.16	0.609	0.801
	LTE Band 66_Ant 2	20M	QPSK	100	0	Right Side	10mm	4	132322	1745	22.62	23.90	1.343	0.09	0.598	0.803
	LTE Band 66_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	4	132322	1745	22.81	23.90	1.285	-0.03	0.309	0.397
	LTE Band 66_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	4	132322	1745	22.74	23.90	1.306	0.06	0.310	0.405
	LTE Band 66B_Ant 2	15M	QPSK	1	0	Right Side	10mm	4	132597+132504	1772.5	21.05	22.20	1.303	-0.08	0.392	0.511
	LTE Band 66C_Ant 2	20M	QPSK	1	99	Right Side	10mm	4	132072+132270	1720	20.97	22.20	1.327	-0.15	0.374	0.496
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	4	132322	1745	21.86	23.20	1.361	-0.07	0.283	0.385
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	4	132322	1745	21.72	23.20	1.406	-0.1	0.281	0.395
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	4	132322	1745	21.86	23.20	1.361	-0.17	0.256	0.349
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	4	132322	1745	21.72	23.20	1.406	-0.18	0.263	0.370
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	132322	1745	21.86	23.20	1.361	0.07	0.254	0.346
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	132322	1745	21.72	23.20	1.406	0.13	0.263	0.370
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	132322	1745	21.86	23.20	1.361	-0.18	0.036	0.049
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	132322	1745	21.72	23.20	1.406	-0.18	0.037	0.052
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	132322	1745	21.86	23.20	1.361	0.17	0.280	0.381
	LTE Band 66_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	132322	1745	21.72	23.20	1.406	0.09	0.292	0.411
	LTE Band 66_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	132072	1720	21.71	23.20	1.409	0.15	0.206	0.290
	LTE Band 66_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	132572	1770	21.69	23.20	1.416	0.17	0.324	0.459
	LTE Band 66B_Ant 0	15M	QPSK	1	0	Bottom Side	10mm	4	132597+132504	1772.5	20.80	21.50	1.175	0.13	0.305	0.358
	LTE Band 66C_Ant 0	20M	QPSK	1	99	Bottom Side	10mm	4	132072+132270	1720	20.11	21.50	1.377	-0.12	0.289	0.398
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	10mm	4	132322	1745	24.28	24.70	1.102	-0.03	0.316	0.348
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	10mm	4	132322	1745	24.27	24.70	1.104	0.02	0.350	0.386
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	4	132322	1745	24.28	24.70	1.102	-0.02	0.279	0.307



FCC SAR TEST REPORT

Report No. : FA241215-02D

	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	10mm	4	132322	1745	24.27	24.70	1.104	-0.1	0.308	0.340
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	10mm	4	132322	1745	24.28	24.70	1.102	0.03	0.172	0.189
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Side	10mm	4	132322	1745	24.27	24.70	1.104	-0.02	0.190	0.210
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Side	10mm	4	132322	1745	24.28	24.70	1.102	0.05	0.001	0.001
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Side	10mm	4	132322	1745	24.27	24.70	1.104	0	0.001	0.001
	LTE Band 66_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	132322	1745	24.28	24.70	1.102	0.01	0.366	0.403
	LTE Band 66_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	132322	1745	24.27	24.70	1.104	-0.08	0.404	0.446
	LTE Band 66_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	132072	1720	24.26	24.70	1.107	0.07	0.340	0.376
	LTE Band 66_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	132572	1770	24.11	24.70	1.146	0.11	0.815	0.934
	LTE Band 66_Ant 1	20M	QPSK	100	0	Top Side	10mm	4	132322	1745	24.21	24.70	1.119	0.02	0.393	0.440
	LTE Band 66_Ant 5	20M	QPSK	1	0	Front	10mm	4	132322	1745	21.48	22.40	1.236	0.01	0.543	0.671
	LTE Band 66_Ant 5	20M	QPSK	50	0	Front	10mm	4	132322	1745	21.47	22.40	1.239	0.11	0.555	0.688
	LTE Band 66_Ant 5	20M	QPSK	1	0	Back	10mm	4	132322	1745	21.48	22.40	1.236	0.16	0.487	0.602
	LTE Band 66_Ant 5	20M	QPSK	50	0	Back	10mm	4	132322	1745	21.47	22.40	1.239	-0.12	0.495	0.613
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Side	10mm	4	132322	1745	21.48	22.40	1.236	-0.02	0.062	0.077
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Side	10mm	4	132322	1745	21.47	22.40	1.239	-0.16	0.061	0.076
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	132322	1745	21.48	22.40	1.236	-0.12	0.713	0.881
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	132072	1720	21.47	22.40	1.239	0.03	0.613	0.759
49	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	132572	1770	21.46	22.40	1.242	-0.13	0.782	0.971
	LTE Band 66_Ant 5	20M	QPSK	50	0	Right Side	10mm	4	132322	1745	21.47	22.40	1.239	-0.11	0.729	0.903
	LTE Band 66_Ant 5	20M	QPSK	50	0	Right Side	10mm	4	132072	1720	21.40	22.40	1.259	-0.15	0.641	0.807
	LTE Band 66_Ant 5	20M	QPSK	50	0	Right Side	10mm	4	132572	1770	21.45	22.40	1.245	0.19	0.778	0.968
	LTE Band 66_Ant 5	20M	QPSK	100	0	Right Side	10mm	4	132322	1745	21.41	22.40	1.256	-0.15	0.715	0.898
	LTE Band 66_Ant 5	20M	QPSK	1	0	Top Side	10mm	4	132322	1745	21.48	22.40	1.236	-0.11	0.047	0.058
	LTE Band 66_Ant 5	20M	QPSK	50	0	Top Side	10mm	4	132322	1745	21.47	22.40	1.239	0.03	0.047	0.058
	LTE Band 71_Ant 0	20M	QPSK	1	0	Front	10mm	4	133297	680.5	24.57	25.70	1.297	-0.13	0.320	0.415
	LTE Band 71_Ant 0	20M	QPSK	50	0	Front	10mm	4	133297	680.5	23.52	24.70	1.312	-0.11	0.259	0.340
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	10mm	4	133297	680.5	24.57	25.70	1.297	-0.1	0.309	0.401
	LTE Band 71_Ant 0	20M	QPSK	50	0	Back	10mm	4	133297	680.5	23.52	24.70	1.312	-0.12	0.252	0.331
50	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	133297	680.5	24.57	25.70	1.297	-0.14	0.404	0.524
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	133297	680.5	23.52	24.70	1.312	-0.15	0.333	0.437
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	133297	680.5	24.57	25.70	1.297	-0.12	0.203	0.263
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	133297	680.5	23.52	24.70	1.312	-0.13	0.172	0.226
	LTE Band 71_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	133297	680.5	24.57	25.70	1.297	-0.12	0.196	0.254
	LTE Band 71_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	133297	680.5	23.52	24.70	1.312	-0.15	0.155	0.203
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	10mm	4	133297	680.5	23.98	25.20	1.324	-0.11	0.187	0.248
	LTE Band 71_Ant 1	20M	QPSK	50	0	Front	10mm	4	133297	680.5	23.14	24.20	1.276	-0.15	0.156	0.199
	LTE Band 71_Ant 1	20M	QPSK	1	0	Back	10mm	4	133297	680.5	23.98	25.20	1.324	-0.12	0.207	0.274
	LTE Band 71_Ant 1	20M	QPSK	50	0	Back	10mm	4	133297	680.5	23.14	24.20	1.276	-0.11	0.170	0.217
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Side	10mm	4	133297	680.5	23.98	25.20	1.324	-0.1	0.184	0.244
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Side	10mm	4	133297	680.5	23.14	24.20	1.276	-0.15	0.154	0.197
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Side	10mm	4	133297	680.5	23.98	25.20	1.324	-0.15	0.080	0.106
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Side	10mm	4	133297	680.5	23.14	24.20	1.276	-0.11	0.072	0.092
	LTE Band 71_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	133297	680.5	23.98	25.20	1.324	-0.06	0.104	0.138
	LTE Band 71_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	133297	680.5	23.14	24.20	1.276	-0.12	0.085	0.108



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	0.01	0.349	0.451
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	0.05	0.392	0.506
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	-0.14	0.503	0.649
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	4	39750	2506	22.37	23.60	1.327	62.9	1.006	-0.05	0.443	0.591
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	4	40620	2593	22.44	23.60	1.306	62.9	1.006	-0.09	0.465	0.610
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	4	41055	2636.5	22.42	23.60	1.312	62.9	1.006	-0.1	0.388	0.513
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	4	41490	2680	22.51	23.60	1.285	62.9	1.006	-0.11	0.434	0.562
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	-0.15	0.481	0.620
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	4	39750	2506	22.36	23.60	1.330	62.9	1.006	-0.17	0.440	0.589
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	4	40620	2593	22.42	23.60	1.312	62.9	1.006	-0.15	0.469	0.619
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	4	41055	2636.5	22.44	23.60	1.306	62.9	1.006	-0.11	0.393	0.516
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	4	41490	2680	22.51	23.60	1.285	62.9	1.006	-0.12	0.438	0.567
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Side	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	-0.13	0.001	0.001
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Side	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	-0.08	0.001	0.001
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	-0.09	0.674	0.870
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	39750	2506	22.37	23.60	1.327	62.9	1.006	-0.17	0.654	0.873
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	40620	2593	22.44	23.60	1.306	62.9	1.006	-0.11	0.600	0.788
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	41055	2636.5	22.42	23.60	1.312	62.9	1.006	0.01	0.588	0.776
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	41490	2680	22.51	23.60	1.285	62.9	1.006	-0.02	0.688	0.890
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	-0.13	0.667	0.860
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	39750	2506	22.36	23.60	1.330	62.9	1.006	-0.15	0.682	0.913
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	40620	2593	22.42	23.60	1.312	62.9	1.006	-0.09	0.615	0.812
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	41055	2636.5	22.44	23.60	1.306	62.9	1.006	-0.07	0.602	0.791
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	41490	2680	22.51	23.60	1.285	62.9	1.006	-0.05	0.697	0.901
	LTE Band 41_Ant 2	20M	QPSK	100	0	Right Side	10mm	4	40185	2549.5	22.43	23.60	1.309	62.9	1.006	-0.04	0.653	0.859
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	-0.17	0.380	0.490
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	4	40185	2549.5	22.52	23.60	1.282	62.9	1.006	-0.15	0.375	0.484
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	40185	2549.5	24.02	25.20	1.312	42.9	1.009	0.01	0.624	0.826
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	39750	2506	23.98	25.20	1.324	42.9	1.009	-0.04	0.643	0.859
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	40620	2593	24.01	25.20	1.315	42.9	1.009	0.07	0.617	0.819
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	41055	2636.5	24.00	25.20	1.318	42.9	1.009	-0.18	0.523	0.696
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	41490	2680	24.00	25.20	1.318	42.9	1.009	-0.19	0.663	0.882
	LTE Band 41C_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	41490+41292	2680	12.07	12.80	1.183	62.9	1.006	0.15	0.071	0.084
	LTE Band 41_Ant 0	20M	QPSK	1	0	Front	10mm	4	40185	2549.5	23.14	23.40	1.062	62.9	1.006	0.12	0.394	0.421
	LTE Band 41_Ant 0	20M	QPSK	50	0	Front	10mm	4	40185	2549.5	22.13	22.90	1.194	62.9	1.006	0.14	0.313	0.376
	LTE Band 41_Ant 0	20M	QPSK	1	0	Back	10mm	4	40185	2549.5	23.14	23.40	1.062	62.9	1.006	-0.14	0.367	0.392
	LTE Band 41_Ant 0	20M	QPSK	50	0	Back	10mm	4	40185	2549.5	22.13	22.90	1.194	62.9	1.006	0.06	0.288	0.346
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	40185	2549.5	23.14	23.40	1.062	62.9	1.006	0.11	0.793	0.847
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	39750	2506	23.10	23.40	1.072	62.9	1.006	-0.06	0.599	0.646
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	40620	2593	22.98	23.40	1.102	62.9	1.006	0.15	0.811	0.899
51	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	41055	2636.5	22.93	23.40	1.114	62.9	1.006	-0.19	0.866	0.971
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	41490	2680	23.12	23.40	1.067	62.9	1.006	-0.11	0.863	0.926
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	40185	2549.5	22.13	22.90	1.194	62.9	1.006	0.12	0.631	0.758
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	39750	2506	22.08	22.90	1.208	62.9	1.006	0.08	0.494	0.600
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	40620	2593	21.87	22.90	1.268	62.9	1.006	-0.14	0.645	0.823
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	41055	2636.5	21.96	22.90	1.242	62.9	1.006	0.06	0.695	0.868
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	41490	2680	22.08	22.90	1.208	62.9	1.006	0.16	0.676	0.821
	LTE Band 41_Ant 0	20M	QPSK	100	0	Left Side	10mm	4	40185	2549.5	22.10	22.90	1.202	62.9	1.006	0.02	0.625	0.756
	LTE Band 41_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	40185	2549.5	23.14	23.40	1.062	62.9	1.006	-0.06	0.001	0.001
	LTE Band 41_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	40185	2549.5	22.13	22.90	1.194	62.9	1.006	0.19	0.001	0.001
	LTE Band 41_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	40185	2549.5	23.14	23.40	1.062	62.9	1.006	0.14	0.091	0.097



FCC SAR TEST REPORT

Report No. : FA241215-02D

	LTE Band 41_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	40185	2549.5	22.13	22.90	1.194	62.9	1.006	0.11	0.074	0.089
	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	40185	2549.5	24.29	25.00	1.178	42.9	1.009	-0.05	0.713	0.847
	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	39750	2506	24.23	25.00	1.194	42.9	1.009	0.16	0.620	0.747
	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	40620	2593	24.08	25.00	1.236	42.9	1.009	-0.09	0.757	0.944
	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	41055	2636.5	24.08	25.00	1.236	42.9	1.009	-0.04	0.761	0.949
	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	41490	2680	24.10	25.00	1.230	42.9	1.009	0.02	0.725	0.900
	LTE Band 41C_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	41490+41292	2680	11.44	12.30	1.219	62.9	1.006	0.13	0.068	0.083
	LTE Band 48_Ant 6	20M	QPSK	1	0	Front	10mm	4	56150	3641	22.66	22.70	1.009	62.9	1.006	0.17	0.599	0.608
	LTE Band 48_Ant 6	20M	QPSK	1	0	Front	10mm	4	55340	3560	22.43	22.70	1.064	62.9	1.006	-0.15	0.491	0.526
	LTE Band 48_Ant 6	20M	QPSK	1	0	Front	10mm	4	55830	3609	22.52	22.70	1.042	62.9	1.006	-0.11	0.564	0.591
	LTE Band 48_Ant 6	20M	QPSK	1	0	Front	10mm	4	56640	3690	22.56	22.70	1.033	62.9	1.006	-0.1	0.283	0.294
	LTE Band 48_Ant 6	20M	QPSK	50	0	Front	10mm	4	56150	3641	21.57	22.20	1.156	62.9	1.006	0.08	0.475	0.552
	LTE Band 48_Ant 6	20M	QPSK	1	0	Back	10mm	4	56150	3641	22.66	22.70	1.009	62.9	1.006	0.16	0.424	0.430
	LTE Band 48_Ant 6	20M	QPSK	50	0	Back	10mm	4	56150	3641	21.57	22.20	1.156	62.9	1.006	-0.17	0.334	0.388
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Side	10mm	4	56150	3641	22.66	22.70	1.009	62.9	1.006	0.08	0.505	0.513
	LTE Band 48_Ant 6	20M	QPSK	50	0	Left Side	10mm	4	56150	3641	21.57	22.20	1.156	62.9	1.006	-0.11	0.405	0.471
	LTE Band 48_Ant 6	20M	QPSK	1	0	Right Side	10mm	4	56150	3641	22.66	22.70	1.009	62.9	1.006	-0.02	0.001	0.001
	LTE Band 48_Ant 6	20M	QPSK	50	0	Right Side	10mm	4	56150	3641	21.57	22.20	1.156	62.9	1.006	0	0.001	0.001
	LTE Band 48_Ant 6	20M	QPSK	1	0	Bottom Side	10mm	4	56150	3641	22.66	22.70	1.009	62.9	1.006	-0.18	0.339	0.344
	LTE Band 48_Ant 6	20M	QPSK	50	0	Bottom Side	10mm	4	56150	3641	21.57	22.20	1.156	62.9	1.006	0.06	0.265	0.308
	LTE Band 48_Ant 2	20M	QPSK	1	0	Front	10mm	4	56640	3690	22.07	22.90	1.211	62.9	1.006	-0.06	0.251	0.306
	LTE Band 48_Ant 2	20M	QPSK	50	0	Front	10mm	4	56640	3690	22.05	22.90	1.216	62.9	1.006	0.01	0.222	0.272
	LTE Band 48_Ant 2	20M	QPSK	1	0	Back	10mm	4	56640	3690	22.07	22.90	1.211	62.9	1.006	-0.13	0.374	0.455
	LTE Band 48_Ant 2	20M	QPSK	50	0	Back	10mm	4	56640	3690	22.05	22.90	1.216	62.9	1.006	0.08	0.331	0.405
	LTE Band 48_Ant 2	20M	QPSK	1	0	Left Side	10mm	4	56640	3690	22.07	22.90	1.211	62.9	1.006	-0.06	0.001	0.001
	LTE Band 48_Ant 2	20M	QPSK	50	0	Left Side	10mm	4	56640	3690	22.05	22.90	1.216	62.9	1.006	0.11	0.001	0.001
	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	56640	3690	22.07	22.90	1.211	62.9	1.006	-0.01	0.512	0.624
52	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	55340	3560	22.00	22.90	1.230	62.9	1.006	0.13	0.672	0.832
	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	55830	3609	21.81	22.90	1.285	62.9	1.006	0.15	0.616	0.796
	LTE Band 48_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	56150	3641	21.83	22.90	1.279	62.9	1.006	-0.13	0.566	0.728
	LTE Band 48_Ant 2	20M	QPSK	50	0	Right Side	10mm	4	56640	3690	22.05	22.90	1.216	62.9	1.006	0.01	0.453	0.554
	LTE Band 48_Ant 2	20M	QPSK	100	0	Right Side	10mm	4	56640	3690	21.99	22.90	1.233	62.9	1.006	-0.03	0.426	0.528
	LTE Band 48_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	4	56640	3690	22.07	22.90	1.211	62.9	1.006	0.09	0.095	0.116
	LTE Band 48_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	4	56640	3690	22.05	22.90	1.216	62.9	1.006	0.14	0.081	0.099



<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n5_Ant 0	20M	BPSK	1	1	Front	10mm	4	167300	836.5	24.86	25.70	1.213	-0.1	0.408	0.495
	FR1 n5_Ant 0	20M	BPSK	50	28	Front	10mm	4	167300	836.5	24.70	25.70	1.259	0	0.407	0.512
	FR1 n5_Ant 0	20M	BPSK	1	1	Back	10mm	4	167300	836.5	24.86	25.70	1.213	-0.06	0.402	0.488
	FR1 n5_Ant 0	20M	BPSK	50	28	Back	10mm	4	167300	836.5	24.70	25.70	1.259	-0.04	0.404	0.509
	FR1 n5_Ant 0	20M	BPSK	1	1	Left Side	10mm	4	167300	836.5	24.86	25.70	1.213	-0.01	0.584	0.709
53	FR1 n5_Ant 0	20M	BPSK	50	28	Left Side	10mm	4	167300	836.5	24.70	25.70	1.259	0.03	0.588	0.740
	FR1 n5_Ant 0	20M	BPSK	1	1	Right Side	10mm	4	167300	836.5	24.86	25.70	1.213	-0.01	0.237	0.288
	FR1 n5_Ant 0	20M	BPSK	50	28	Right Side	10mm	4	167300	836.5	24.70	25.70	1.259	0.04	0.229	0.288
	FR1 n5_Ant 0	20M	BPSK	1	1	Bottom Side	10mm	4	167300	836.5	24.86	25.70	1.213	0.13	0.393	0.477
	FR1 n5_Ant 0	20M	BPSK	50	28	Bottom Side	10mm	4	167300	836.5	24.70	25.70	1.259	0.11	0.411	0.517
	FR1 n5_Ant 1	20M	BPSK	1	1	Front	10mm	4	167300	836.5	24.53	25.20	1.167	-0.09	0.203	0.237
	FR1 n5_Ant 1	20M	BPSK	50	28	Front	10mm	4	167300	836.5	24.35	25.20	1.216	-0.03	0.214	0.260
	FR1 n5_Ant 1	20M	BPSK	1	1	Back	10mm	4	167300	836.5	24.53	25.20	1.167	-0.17	0.261	0.305
	FR1 n5_Ant 1	20M	BPSK	50	28	Back	10mm	4	167300	836.5	24.35	25.20	1.216	0.04	0.301	0.366
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Side	10mm	4	167300	836.5	24.53	25.20	1.167	-0.08	0.101	0.118
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Side	10mm	4	167300	836.5	24.35	25.20	1.216	-0.08	0.080	0.097
	FR1 n5_Ant 1	20M	BPSK	1	1	Right Side	10mm	4	167300	836.5	24.53	25.20	1.167	-0.02	0.133	0.155
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Side	10mm	4	167300	836.5	24.35	25.20	1.216	-0.07	0.128	0.156
	FR1 n5_Ant 1	20M	BPSK	1	1	Top Side	10mm	4	167300	836.5	24.53	25.20	1.167	-0.07	0.145	0.169
	FR1 n5_Ant 1	20M	BPSK	50	28	Top Side	10mm	4	167300	836.5	24.35	25.20	1.216	-0.08	0.163	0.198
	FR1 n7_Ant 2	50M	BPSK	1	1	Front	10mm	4	507000	2535	20.61	21.40	1.199	-0.07	0.476	0.571
	FR1 n7_Ant 2	50M	BPSK	135	68	Front	10mm	4	507000	2535	20.45	21.40	1.245	-0.04	0.412	0.513
	FR1 n7_Ant 2	50M	BPSK	1	1	Back	10mm	4	507000	2535	20.61	21.40	1.199	-0.05	0.527	0.632
	FR1 n7_Ant 2	50M	BPSK	135	68	Back	10mm	4	507000	2535	20.45	21.40	1.245	-0.14	0.441	0.549
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Side	10mm	4	507000	2535	20.61	21.40	1.199	-0.19	0.033	0.040
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Side	10mm	4	507000	2535	20.45	21.40	1.245	-0.03	0.036	0.045
54	FR1 n7_Ant 2	50M	BPSK	1	1	Right Side	10mm	4	507000	2535	20.61	21.40	1.199	-0.04	0.782	0.938
	FR1 n7_Ant 2	50M	BPSK	135	68	Right Side	10mm	4	507000	2535	20.45	21.40	1.245	-0.1	0.742	0.923
	FR1 n7_Ant 2	50M	BPSK	270	0	Right Side	10mm	4	507000	2535	20.48	21.40	1.236	-0.09	0.741	0.916
	FR1 n7_Ant 2	50M	BPSK	1	1	Bottom Side	10mm	4	507000	2535	20.61	21.40	1.199	-0.06	0.371	0.445
	FR1 n7_Ant 2	50M	BPSK	135	68	Bottom Side	10mm	4	507000	2535	20.45	21.40	1.245	-0.19	0.371	0.462
	FR1 n7_Ant 0	50M	BPSK	1	1	Front	10mm	4	507000	2535	21.05	22.10	1.274	0.04	0.351	0.447
	FR1 n7_Ant 0	50M	BPSK	135	68	Front	10mm	4	507000	2535	21.04	22.10	1.276	0.02	0.385	0.491
	FR1 n7_Ant 0	50M	BPSK	1	1	Back	10mm	4	507000	2535	21.05	22.10	1.274	-0.13	0.335	0.427
	FR1 n7_Ant 0	50M	BPSK	135	68	Back	10mm	4	507000	2535	21.04	22.10	1.276	-0.18	0.314	0.401
	FR1 n7_Ant 0	50M	BPSK	1	1	Left Side	10mm	4	507000	2535	21.05	22.10	1.274	0	0.675	0.860
	FR1 n7_Ant 0	50M	BPSK	135	68	Left Side	10mm	4	507000	2535	21.04	22.10	1.276	-0.19	0.681	0.869
	FR1 n7_Ant 0	50M	BPSK	270	0	Left Side	10mm	4	507000	2535	21.06	22.10	1.271	0.09	0.711	0.903
	FR1 n7_Ant 0	50M	BPSK	1	1	Right Side	10mm	4	507000	2535	21.05	22.10	1.274	-0.13	0.041	0.052
	FR1 n7_Ant 0	50M	BPSK	135	68	Right Side	10mm	4	507000	2535	21.04	22.10	1.276	0.16	0.033	0.042
	FR1 n7_Ant 0	50M	BPSK	1	1	Bottom Side	10mm	4	507000	2535	21.05	22.10	1.274	-0.1	0.077	0.098
	FR1 n7_Ant 0	50M	BPSK	135	68	Bottom Side	10mm	4	507000	2535	21.04	22.10	1.276	-0.1	0.087	0.111



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n12_Ant 0	15M	BPSK	1	1	Front	10mm	4	141500	707.5	24.66	25.70	1.271	-0.08	0.325	0.413
	FR1 n12_Ant 0	15M	BPSK	36	22	Front	10mm	4	141500	707.5	24.59	25.70	1.291	-0.09	0.320	0.413
	FR1 n12_Ant 0	15M	BPSK	1	1	Back	10mm	4	141500	707.5	24.66	25.70	1.271	-0.11	0.353	0.449
	FR1 n12_Ant 0	15M	BPSK	36	22	Back	10mm	4	141500	707.5	24.59	25.70	1.291	-0.04	0.321	0.414
55	FR1 n12_Ant 0	15M	BPSK	1	1	Left Side	10mm	4	141500	707.5	24.66	25.70	1.271	-0.1	0.488	0.620
	FR1 n12_Ant 0	15M	BPSK	36	22	Left Side	10mm	4	141500	707.5	24.59	25.70	1.291	0.06	0.470	0.607
	FR1 n12_Ant 0	15M	BPSK	1	1	Right Side	10mm	4	141500	707.5	24.66	25.70	1.271	0.03	0.246	0.313
	FR1 n12_Ant 0	15M	BPSK	36	22	Right Side	10mm	4	141500	707.5	24.59	25.70	1.291	0	0.243	0.314
	FR1 n12_Ant 0	15M	BPSK	1	1	Bottom Side	10mm	4	141500	707.5	24.66	25.70	1.271	0.16	0.232	0.295
	FR1 n12_Ant 0	15M	BPSK	36	22	Bottom Side	10mm	4	141500	707.5	24.59	25.70	1.291	0.06	0.237	0.306
	FR1 n12_Ant 1	15M	BPSK	1	1	Front	10mm	4	141500	707.5	24.32	25.20	1.225	-0.03	0.192	0.235
	FR1 n12_Ant 1	15M	BPSK	36	22	Front	10mm	4	141500	707.5	24.27	25.20	1.239	-0.03	0.200	0.248
	FR1 n12_Ant 1	15M	BPSK	1	1	Back	10mm	4	141500	707.5	24.32	25.20	1.225	-0.14	0.216	0.265
	FR1 n12_Ant 1	15M	BPSK	36	22	Back	10mm	4	141500	707.5	24.27	25.20	1.239	-0.1	0.225	0.279
	FR1 n12_Ant 1	15M	BPSK	1	1	Left Side	10mm	4	141500	707.5	24.32	25.20	1.225	-0.08	0.109	0.133
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Side	10mm	4	141500	707.5	24.27	25.20	1.239	-0.08	0.126	0.156
	FR1 n12_Ant 1	15M	BPSK	1	1	Right Side	10mm	4	141500	707.5	24.32	25.20	1.225	-0.01	0.093	0.114
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Side	10mm	4	141500	707.5	24.27	25.20	1.239	-0.04	0.089	0.110
	FR1 n12_Ant 1	15M	BPSK	1	1	Top Side	10mm	4	141500	707.5	24.32	25.20	1.225	-0.03	0.102	0.125
	FR1 n12_Ant 1	15M	BPSK	36	22	Top Side	10mm	4	141500	707.5	24.27	25.20	1.239	-0.16	0.101	0.125
	FR1 n14_Ant 0	10M	BPSK	1	1	Front	10mm	4	158600	793	24.89	25.70	1.205	-0.08	0.397	0.478
	FR1 n14_Ant 0	10M	BPSK	25	14	Front	10mm	4	158600	793	24.74	25.70	1.247	-0.06	0.406	0.506
	FR1 n14_Ant 0	10M	BPSK	1	1	Back	10mm	4	158600	793	24.89	25.70	1.205	-0.07	0.397	0.478
	FR1 n14_Ant 0	10M	BPSK	25	14	Back	10mm	4	158600	793	24.74	25.70	1.247	-0.05	0.393	0.490
	FR1 n14_Ant 0	10M	BPSK	1	1	Left Side	10mm	4	158600	793	24.89	25.70	1.205	0.08	0.608	0.733
56	FR1 n14_Ant 0	10M	BPSK	25	14	Left Side	10mm	4	158600	793	24.74	25.70	1.247	0.05	0.671	0.837
	FR1 n14_Ant 0	10M	BPSK	50	0	Left Side	10mm	4	158600	793	24.26	25.20	1.242	0.11	0.653	0.811
	FR1 n14_Ant 0	10M	BPSK	1	1	Right Side	10mm	4	158600	793	24.89	25.70	1.205	0.06	0.345	0.416
	FR1 n14_Ant 0	10M	BPSK	25	14	Right Side	10mm	4	158600	793	24.74	25.70	1.247	0.11	0.325	0.405
	FR1 n14_Ant 0	10M	BPSK	1	1	Bottom Side	10mm	4	158600	793	24.89	25.70	1.205	0.05	0.416	0.501
	FR1 n14_Ant 0	10M	BPSK	25	14	Bottom Side	10mm	4	158600	793	24.74	25.70	1.247	0.18	0.421	0.525
	FR1 n14_Ant 1	10M	BPSK	1	1	Front	10mm	4	158600	793	24.46	25.20	1.186	-0.17	0.246	0.292
	FR1 n14_Ant 1	10M	BPSK	25	14	Front	10mm	4	158600	793	24.34	25.20	1.219	0.03	0.237	0.289
	FR1 n14_Ant 1	10M	BPSK	1	1	Back	10mm	4	158600	793	24.46	25.20	1.186	-0.11	0.266	0.315
	FR1 n14_Ant 1	10M	BPSK	25	14	Back	10mm	4	158600	793	24.34	25.20	1.219	-0.1	0.270	0.329
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Side	10mm	4	158600	793	24.46	25.20	1.186	-0.15	0.263	0.312
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Side	10mm	4	158600	793	24.34	25.20	1.219	-0.15	0.258	0.314
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Side	10mm	4	158600	793	24.46	25.20	1.186	-0.17	0.175	0.208
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Side	10mm	4	158600	793	24.34	25.20	1.219	-0.17	0.177	0.216
	FR1 n14_Ant 1	10M	BPSK	1	1	Top Side	10mm	4	158600	793	24.46	25.20	1.186	-0.18	0.123	0.146
	FR1 n14_Ant 1	10M	BPSK	25	14	Top Side	10mm	4	158600	793	24.34	25.20	1.219	-0.14	0.125	0.152



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n25_Ant 2	40M	BPSK	1	1	Front	10mm	4	376500	1882.5	21.08	22.40	1.355	-0.08	0.557	0.755
	FR1 n25_Ant 2	40M	BPSK	108	54	Front	10mm	4	376500	1882.5	21.02	22.40	1.374	-0.05	0.631	0.867
	FR1 n25_Ant 2	40M	BPSK	216	0	Front	10mm	4	376500	1882.5	20.91	22.40	1.409	-0.12	0.617	0.870
	FR1 n25_Ant 2	40M	BPSK	1	1	Back	10mm	4	376500	1882.5	21.08	22.40	1.355	-0.04	0.535	0.725
	FR1 n25_Ant 2	40M	BPSK	108	54	Back	10mm	4	376500	1882.5	21.02	22.40	1.374	-0.09	0.566	0.778
	FR1 n25_Ant 2	40M	BPSK	1	1	Left Side	10mm	4	376500	1882.5	21.08	22.40	1.355	-0.18	0.035	0.047
	FR1 n25_Ant 2	40M	BPSK	108	54	Left Side	10mm	4	376500	1882.5	21.02	22.40	1.374	-0.04	0.027	0.037
	FR1 n25_Ant 2	40M	BPSK	1	1	Right Side	10mm	4	376500	1882.5	21.08	22.40	1.355	-0.16	0.513	0.695
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Side	10mm	4	376500	1882.5	21.02	22.40	1.374	-0.09	0.480	0.660
	FR1 n25_Ant 2	40M	BPSK	1	1	Bottom Side	10mm	4	376500	1882.5	21.08	22.40	1.355	0.04	0.418	0.566
	FR1 n25_Ant 2	40M	BPSK	108	54	Bottom Side	10mm	4	376500	1882.5	21.02	22.40	1.374	0.03	0.445	0.611
	FR1 n25_Ant 0	40M	BPSK	1	1	Front	10mm	4	376500	1882.5	22.58	23.80	1.324	-0.05	0.270	0.358
	FR1 n25_Ant 0	40M	BPSK	108	54	Front	10mm	4	376500	1882.5	22.53	23.80	1.340	0.02	0.280	0.375
	FR1 n25_Ant 0	40M	BPSK	1	1	Back	10mm	4	376500	1882.5	22.58	23.80	1.324	-0.18	0.315	0.417
	FR1 n25_Ant 0	40M	BPSK	108	54	Back	10mm	4	376500	1882.5	22.53	23.80	1.340	-0.17	0.377	0.505
	FR1 n25_Ant 0	40M	BPSK	1	1	Left Side	10mm	4	376500	1882.5	22.58	23.80	1.324	0.13	0.597	0.791
57	FR1 n25_Ant 0	40M	BPSK	108	54	Left Side	10mm	4	376500	1882.5	22.53	23.80	1.340	0.12	0.668	0.895
	FR1 n25_Ant 0	40M	BPSK	216	0	Left Side	10mm	4	376500	1882.5	22.38	23.80	1.387	0.14	0.608	0.843
	FR1 n25_Ant 0	40M	BPSK	1	1	Right Side	10mm	4	376500	1882.5	22.58	23.80	1.324	0.05	0.047	0.062
	FR1 n25_Ant 0	40M	BPSK	108	54	Right Side	10mm	4	376500	1882.5	22.53	23.80	1.340	0.01	0.045	0.060
	FR1 n25_Ant 0	40M	BPSK	1	1	Bottom Side	10mm	4	376500	1882.5	22.58	23.80	1.324	0.12	0.159	0.211
	FR1 n25_Ant 0	40M	BPSK	108	54	Bottom Side	10mm	4	376500	1882.5	22.53	23.80	1.340	-0.16	0.171	0.229
	FR1 n30_Ant 2	10M	BPSK	1	1	Front	10mm	4	462000	2310	19.93	21.70	1.503	0.16	0.419	0.630
	FR1 n30_Ant 2	10M	BPSK	25	14	Front	10mm	4	462000	2310	19.87	21.70	1.524	0.16	0.420	0.640
	FR1 n30_Ant 2	10M	BPSK	1	1	Back	10mm	4	462000	2310	19.93	21.70	1.503	-0.12	0.447	0.672
	FR1 n30_Ant 2	10M	BPSK	25	14	Back	10mm	4	462000	2310	19.87	21.70	1.524	-0.13	0.469	0.715
	FR1 n30_Ant 2	10M	BPSK	1	1	Left Side	10mm	4	462000	2310	19.93	21.70	1.503	-0.17	0.027	0.041
	FR1 n30_Ant 2	10M	BPSK	25	14	Left Side	10mm	4	462000	2310	19.87	21.70	1.524	-0.08	0.024	0.037
	FR1 n30_Ant 2	10M	BPSK	1	1	Right Side	10mm	4	462000	2310	19.93	21.70	1.503	0.04	0.612	0.920
	FR1 n30_Ant 2	10M	BPSK	25	14	Right Side	10mm	4	462000	2310	19.87	21.70	1.524	-0.01	0.576	0.878
	FR1 n30_Ant 2	10M	BPSK	50	0	Right Side	10mm	4	462000	2310	19.76	21.70	1.563	-0.03	0.601	0.939
	FR1 n30_Ant 2	10M	BPSK	1	1	Bottom Side	10mm	4	462000	2310	19.93	21.70	1.503	0.12	0.455	0.684
	FR1 n30_Ant 2	10M	BPSK	25	14	Bottom Side	10mm	4	462000	2310	19.87	21.70	1.524	-0.09	0.429	0.654
	FR1 n30_Ant 0	10M	BPSK	1	1	Front	10mm	4	462000	2310	23.60	23.60	1.000	0.11	0.650	0.650
	FR1 n30_Ant 0	10M	BPSK	25	14	Front	10mm	4	462000	2310	23.60	23.60	1.000	0.1	0.648	0.648
	FR1 n30_Ant 0	10M	BPSK	1	1	Back	10mm	4	462000	2310	23.60	23.60	1.000	-0.12	0.584	0.584
	FR1 n30_Ant 0	10M	BPSK	25	14	Back	10mm	4	462000	2310	23.60	23.60	1.000	-0.11	0.654	0.654
58	FR1 n30_Ant 0	10M	BPSK	1	1	Left Side	10mm	4	462000	2310	23.60	23.60	1.000	-0.06	0.984	0.984
	FR1 n30_Ant 0	10M	BPSK	25	14	Left Side	10mm	4	462000	2310	23.60	23.60	1.000	-0.06	0.968	0.968
	FR1 n30_Ant 0	10M	BPSK	50	0	Left Side	10mm	4	462000	2310	23.53	23.60	1.016	-0.08	0.852	0.866
	FR1 n30_Ant 0	10M	BPSK	1	1	Right Side	10mm	4	462000	2310	23.60	23.60	1.000	-0.04	0.085	0.085
	FR1 n30_Ant 0	10M	BPSK	25	14	Right Side	10mm	4	462000	2310	23.60	23.60	1.000	-0.09	0.076	0.076
	FR1 n30_Ant 0	10M	BPSK	1	1	Bottom Side	10mm	4	462000	2310	23.60	23.60	1.000	0.06	0.364	0.364
	FR1 n30_Ant 0	10M	BPSK	25	14	Bottom Side	10mm	4	462000	2310	23.60	23.60	1.000	0.12	0.354	0.354



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n41_Ant 2	100M	BPSK	1	1	Front	10mm	4	518598	2592.99	21.27	22.10	1.211	-0.12	0.437	0.529
	FR1 n41_Ant 2	100M	BPSK	135	69	Front	10mm	4	518598	2592.99	21.22	22.10	1.225	-0.01	0.418	0.512
	FR1 n41_Ant 2	100M	BPSK	1	1	Back	10mm	4	518598	2592.99	21.27	22.10	1.211	-0.13	0.518	0.627
	FR1 n41_Ant 2	100M	BPSK	135	69	Back	10mm	4	518598	2592.99	21.22	22.10	1.225	-0.04	0.581	0.712
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Side	10mm	4	518598	2592.99	21.27	22.10	1.211	-0.09	0.038	0.046
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Side	10mm	4	518598	2592.99	21.22	22.10	1.225	-0.06	0.039	0.048
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Side	10mm	4	518598	2592.99	21.27	22.10	1.211	-0.03	0.769	0.931
59	FR1 n41_Ant 2	100M	BPSK	135	69	Right Side	10mm	4	518598	2592.99	21.22	22.10	1.225	-0.01	0.810	0.992
	FR1 n41_Ant 2	100M	BPSK	270	0	Right Side	10mm	4	518598	2592.99	21.04	22.10	1.276	-0.05	0.743	0.948
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom Side	10mm	4	518598	2592.99	21.27	22.10	1.211	0.1	0.395	0.478
	FR1 n41_Ant 2	100M	BPSK	135	69	Bottom Side	10mm	4	518598	2592.99	21.22	22.10	1.225	0.03	0.385	0.471
	FR1 n41_Ant 0	100M	BPSK	1	1	Front	10mm	4	518598	2592.99	20.44	21.60	1.306	-0.03	0.325	0.425
	FR1 n41_Ant 0	100M	BPSK	135	69	Front	10mm	4	518598	2592.99	20.07	21.60	1.422	0.03	0.340	0.484
	FR1 n41_Ant 0	100M	BPSK	1	1	Back	10mm	4	518598	2592.99	20.44	21.60	1.306	-0.17	0.306	0.400
	FR1 n41_Ant 0	100M	BPSK	135	69	Back	10mm	4	518598	2592.99	20.07	21.60	1.422	-0.17	0.315	0.448
	FR1 n41_Ant 0	100M	BPSK	1	1	Left Side	10mm	4	518598	2592.99	20.44	21.60	1.306	-0.09	0.650	0.849
	FR1 n41_Ant 0	100M	BPSK	135	69	Left Side	10mm	4	518598	2592.99	20.07	21.60	1.422	-0.07	0.568	0.808
	FR1 n41_Ant 0	100M	BPSK	270	0	Left Side	10mm	4	518598	2592.99	20.08	21.60	1.419	-0.07	0.617	0.876
	FR1 n41_Ant 0	100M	BPSK	1	1	Right Side	10mm	4	518598	2592.99	20.44	21.60	1.306	-0.09	0.023	0.030
	FR1 n41_Ant 0	100M	BPSK	135	69	Right Side	10mm	4	518598	2592.99	20.07	21.60	1.422	-0.06	0.017	0.024
	FR1 n41_Ant 0	100M	BPSK	1	1	Bottom Side	10mm	4	518598	2592.99	20.44	21.60	1.306	-0.09	0.073	0.095
	FR1 n41_Ant 0	100M	BPSK	135	69	Bottom Side	10mm	4	518598	2592.99	20.07	21.60	1.422	-0.07	0.079	0.112
	FR1 n48_Ant 6	10M	BPSK	1	1	Front	10mm	4	641666	3624.99	19.37	20.50	1.297	0.12	0.155	0.201
	FR1 n48_Ant 6	10M	BPSK	12	6	Front	10mm	4	641666	3624.99	19.32	20.50	1.312	0.09	0.162	0.213
	FR1 n48_Ant 6	10M	BPSK	1	1	Back	10mm	4	641666	3624.99	19.37	20.50	1.297	0.12	0.206	0.267
	FR1 n48_Ant 6	10M	BPSK	12	6	Back	10mm	4	641666	3624.99	19.32	20.50	1.312	0.13	0.211	0.277
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Side	10mm	4	641666	3624.99	19.37	20.50	1.297	-0.04	0.444	0.576
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Side	10mm	4	637000	3555	19.32	20.50	1.312	0.13	0.494	0.648
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Side	10mm	4	646332	3694.98	19.36	20.50	1.300	0.06	0.455	0.592
	FR1 n48_Ant 6	10M	BPSK	12	6	Left Side	10mm	4	641666	3624.99	19.32	20.50	1.312	0.02	0.438	0.575
	FR1 n48_Ant 6	10M	BPSK	1	1	Right Side	10mm	4	641666	3624.99	19.37	20.50	1.297	0.01	0.017	0.022
	FR1 n48_Ant 6	10M	BPSK	12	6	Right Side	10mm	4	641666	3624.99	19.32	20.50	1.312	0.01	0.021	0.028
	FR1 n48_Ant 6	10M	BPSK	1	1	Bottom Side	10mm	4	641666	3624.99	19.37	20.50	1.297	0.12	0.056	0.073
	FR1 n48_Ant 6	10M	BPSK	12	6	Bottom Side	10mm	4	641666	3624.99	19.32	20.50	1.312	-0.04	0.058	0.076
	FR1 n48_Ant 6	40M	BPSK	50	25	Left Side	10mm	4	641666	3624.99	19.29	20.50	1.321	0.09	0.469	0.620
	FR1 n48_Ant 2	10M	BPSK	1	1	Front	10mm	4	641666	3624.99	19.54	20.40	1.219	0.12	0.254	0.310
	FR1 n48_Ant 2	10M	BPSK	12	6	Front	10mm	4	641666	3624.99	19.53	20.40	1.222	-0.05	0.210	0.257
	FR1 n48_Ant 2	10M	BPSK	1	1	Back	10mm	4	641666	3624.99	19.54	20.40	1.219	0.03	0.291	0.355
	FR1 n48_Ant 2	10M	BPSK	12	6	Back	10mm	4	641666	3624.99	19.53	20.40	1.222	-0.01	0.285	0.348
	FR1 n48_Ant 2	10M	BPSK	1	1	Left Side	10mm	4	641666	3624.99	19.54	20.40	1.219	0.01	0.008	0.010
	FR1 n48_Ant 2	10M	BPSK	12	6	Left Side	10mm	4	641666	3624.99	19.53	20.40	1.222	0.01	0.008	0.010
	FR1 n48_Ant 2	10M	BPSK	1	1	Right Side	10mm	4	641666	3624.99	19.54	20.40	1.219	0.12	0.561	0.684
60	FR1 n48_Ant 2	10M	BPSK	1	1	Right Side	10mm	4	637000	3555	19.32	20.40	1.282	0.05	0.624	0.800
	FR1 n48_Ant 2	10M	BPSK	1	1	Right Side	10mm	4	646332	3694.98	19.34	20.40	1.276	-0.04	0.597	0.762
	FR1 n48_Ant 2	10M	BPSK	12	6	Right Side	10mm	4	641666	3624.99	19.53	20.40	1.222	0.13	0.591	0.722
	FR1 n48_Ant 2	10M	BPSK	12	6	Right Side	10mm	4	637000	3555	19.29	20.40	1.291	-0.04	0.587	0.758
	FR1 n48_Ant 2	10M	BPSK	12	6	Right Side	10mm	4	646332	3694.98	18.86	20.40	1.426	0.03	0.518	0.738
	FR1 n48_Ant 2	10M	BPSK	24	0	Right Side	10mm	4	641666	3624.99	19.53	20.40	1.222	0.13	0.593	0.725
	FR1 n48_Ant 2	10M	BPSK	1	1	Bottom Side	10mm	4	641666	3624.99	19.54	20.40	1.219	0.02	0.116	0.141
	FR1 n48_Ant 2	10M	BPSK	12	6	Bottom Side	10mm	4	641666	3624.99	19.53	20.40	1.222	0.09	0.110	0.134
	FR1 n48_Ant 2	40M	BPSK	50	25	Right Side	10mm	4	641666	3624.99	19.53	20.40	1.222	0.06	0.555	0.678



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n66_Ant 2	40M	BPSK	1	1	Front	10mm	4	349000	1745	23.17	24.20	1.268	-0.03	0.558	0.707
	FR1 n66_Ant 2	40M	BPSK	108	54	Front	10mm	4	349000	1745	23.12	24.20	1.282	0	0.607	0.778
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	10mm	4	349000	1745	23.17	24.20	1.268	0	0.618	0.783
	FR1 n66_Ant 2	40M	BPSK	108	54	Back	10mm	4	349000	1745	23.12	24.20	1.282	-0.17	0.575	0.737
	FR1 n66_Ant 2	40M	BPSK	1	1	Left Side	10mm	4	349000	1745	23.17	24.20	1.268	-0.09	0.134	0.170
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Side	10mm	4	349000	1745	23.12	24.20	1.282	-0.04	0.123	0.158
61	FR1 n66_Ant 2	40M	BPSK	1	1	Right Side	10mm	4	349000	1745	23.17	24.20	1.268	0.09	0.680	0.862
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Side	10mm	4	349000	1745	23.12	24.20	1.282	0.1	0.620	0.795
	FR1 n66_Ant 2	40M	BPSK	216	0	Right Side	10mm	4	349000	1745	23.05	24.20	1.303	0.11	0.654	0.852
	FR1 n66_Ant 2	40M	BPSK	1	1	Bottom Side	10mm	4	349000	1745	23.17	24.20	1.268	0.06	0.369	0.468
	FR1 n66_Ant 2	40M	QPSK	108	54	Bottom Side	10mm	4	349000	1745	23.12	24.20	1.282	-0.01	0.354	0.454
	FR1 n66_Ant 0	40M	BPSK	1	1	Front	10mm	4	349000	1745	22.67	23.80	1.297	-0.06	0.352	0.457
	FR1 n66_Ant 0	40M	BPSK	108	54	Front	10mm	4	349000	1745	22.57	23.80	1.327	-0.04	0.316	0.419
	FR1 n66_Ant 0	40M	BPSK	1	1	Back	10mm	4	349000	1745	22.67	23.80	1.297	-0.1	0.341	0.442
	FR1 n66_Ant 0	40M	BPSK	108	54	Back	10mm	4	349000	1745	22.57	23.80	1.327	-0.09	0.330	0.438
	FR1 n66_Ant 0	40M	BPSK	1	1	Left Side	10mm	4	349000	1745	22.67	23.80	1.297	-0.05	0.324	0.420
	FR1 n66_Ant 0	40M	BPSK	108	54	Left Side	10mm	4	349000	1745	22.57	23.80	1.327	-0.04	0.332	0.441
	FR1 n66_Ant 0	40M	BPSK	1	1	Right Side	10mm	4	349000	1745	22.67	23.80	1.297	0.07	0.041	0.053
	FR1 n66_Ant 0	40M	BPSK	108	54	Right Side	10mm	4	349000	1745	22.57	23.80	1.327	0.11	0.044	0.058
	FR1 n66_Ant 0	40M	BPSK	1	1	Bottom Side	10mm	4	349000	1745	22.67	23.80	1.297	0.03	0.350	0.454
	FR1 n66_Ant 0	40M	BPSK	108	54	Bottom Side	10mm	4	349000	1745	22.57	23.80	1.327	-0.05	0.334	0.443
	FR1 n71_Ant 0	20M	BPSK	1	1	Front	10mm	4	136100	680.5	25.09	25.70	1.151	-0.12	0.316	0.364
	FR1 n71_Ant 0	20M	BPSK	50	28	Front	10mm	4	136100	680.5	24.92	25.70	1.197	-0.11	0.330	0.395
	FR1 n71_Ant 0	20M	BPSK	1	1	Back	10mm	4	136100	680.5	25.09	25.70	1.151	-0.1	0.325	0.374
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	10mm	4	136100	680.5	24.92	25.70	1.197	-0.04	0.354	0.424
	FR1 n71_Ant 0	20M	BPSK	1	1	Left Side	10mm	4	136100	680.5	25.09	25.70	1.151	-0.01	0.418	0.481
62	FR1 n71_Ant 0	20M	BPSK	50	28	Left Side	10mm	4	136100	680.5	24.92	25.70	1.197	0.02	0.452	0.541
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Side	10mm	4	136100	680.5	25.09	25.70	1.151	0	0.205	0.236
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Side	10mm	4	136100	680.5	24.92	25.70	1.197	0.02	0.226	0.270
	FR1 n71_Ant 0	20M	BPSK	1	1	Bottom Side	10mm	4	136100	680.5	25.09	25.70	1.151	0.17	0.212	0.244
	FR1 n71_Ant 0	20M	BPSK	50	28	Bottom Side	10mm	4	136100	680.5	24.92	25.70	1.197	0.11	0.203	0.243
	FR1 n71_Ant 1	20M	BPSK	1	1	Front	10mm	4	136100	680.5	24.45	25.20	1.189	-0.12	0.191	0.227
	FR1 n71_Ant 1	20M	BPSK	50	28	Front	10mm	4	136100	680.5	24.31	25.20	1.227	-0.11	0.209	0.257
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	10mm	4	136100	680.5	24.45	25.20	1.189	-0.09	0.210	0.250
	FR1 n71_Ant 1	20M	BPSK	50	28	Back	10mm	4	136100	680.5	24.31	25.20	1.227	-0.11	0.229	0.281
	FR1 n71_Ant 1	20M	BPSK	1	1	Left Side	10mm	4	136100	680.5	24.45	25.20	1.189	-0.19	0.166	0.197
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Side	10mm	4	136100	680.5	24.31	25.20	1.227	-0.11	0.209	0.257
	FR1 n71_Ant 1	20M	BPSK	1	1	Right Side	10mm	4	136100	680.5	24.45	25.20	1.189	-0.17	0.083	0.099
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Side	10mm	4	136100	680.5	24.31	25.20	1.227	-0.1	0.106	0.130
	FR1 n71_Ant 1	20M	BPSK	1	1	Top Side	10mm	4	136100	680.5	24.45	25.20	1.189	-0.17	0.081	0.096
	FR1 n71_Ant 1	20M	BPSK	50	28	Top Side	10mm	4	136100	680.5	24.31	25.20	1.227	-0.13	0.090	0.110



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n77_Ant 6	100M	BPSK	1	1	Front	10mm	4	656000	3840	19.35	20.30	1.245	-0.11	0.383	0.477
	FR1 n77_Ant 6	100M	BPSK	135	69	Front	10mm	4	656000	3840	19.01	20.30	1.346	-0.15	0.327	0.440
	FR1 n77_Ant 6	100M	BPSK	1	1	Back	10mm	4	656000	3840	19.35	20.30	1.245	0.02	0.290	0.361
	FR1 n77_Ant 6	100M	BPSK	135	69	Back	10mm	4	656000	3840	19.01	20.30	1.346	-0.07	0.260	0.350
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Side	10mm	4	656000	3840	19.35	20.30	1.245	0.16	0.444	0.553
63	FR1 n77_Ant 6	100M	BPSK	135	69	Left Side	10mm	4	656000	3840	19.01	20.30	1.346	0.1	0.505	0.680
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Side	10mm	4	656000	3840	19.35	20.30	1.245	-0.01	0.013	0.016
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Side	10mm	4	656000	3840	19.01	20.30	1.346	-0.02	0.013	0.017
	FR1 n77_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	4	656000	3840	19.35	20.30	1.245	0.13	0.224	0.279
	FR1 n77_Ant 6	100M	BPSK	135	69	Bottom Side	10mm	4	656000	3840	19.01	20.30	1.346	0.07	0.192	0.258
	FR1 n77_Ant 6	100M	BPSK	1	1	Front	10mm	4	633332	3499.98	19.30	20.30	1.259	-0.18	0.263	0.331
	FR1 n77_Ant 6	100M	BPSK	135	69	Front	10mm	4	633332	3499.98	19.35	20.30	1.245	-0.12	0.240	0.299
	FR1 n77_Ant 6	100M	BPSK	1	1	Back	10mm	4	633332	3499.98	19.30	20.30	1.259	-0.08	0.252	0.317
	FR1 n77_Ant 6	100M	BPSK	135	69	Back	10mm	4	633332	3499.98	19.35	20.30	1.245	0.03	0.244	0.304
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Side	10mm	4	633332	3499.98	19.30	20.30	1.259	0.15	0.489	0.616
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Side	10mm	4	633332	3499.98	19.35	20.30	1.245	0.15	0.492	0.612
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Side	10mm	4	633332	3499.98	19.30	20.30	1.259	-0.09	0.006	0.007
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Side	10mm	4	633332	3499.98	19.35	20.30	1.245	0.03	0.011	0.014
	FR1 n77_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	4	633332	3499.98	19.30	20.30	1.259	-0.08	0.064	0.081
	FR1 n77_Ant 6	100M	BPSK	135	69	Bottom Side	10mm	4	633332	3499.98	19.35	20.30	1.245	0.07	0.072	0.090
	FR1 n77_Ant 2	100M	BPSK	1	1	Front	10mm	4	656000	3840	18.59	19.60	1.262	0.12	0.223	0.281
	FR1 n77_Ant 2	100M	BPSK	135	69	Front	10mm	4	656000	3840	18.48	19.60	1.294	0.03	0.202	0.261
	FR1 n77_Ant 2	100M	BPSK	1	1	Back	10mm	4	656000	3840	18.59	19.60	1.262	-0.1	0.302	0.381
	FR1 n77_Ant 2	100M	BPSK	135	69	Back	10mm	4	656000	3840	18.48	19.60	1.294	-0.11	0.289	0.374
	FR1 n77_Ant 2	100M	BPSK	1	1	Left Side	10mm	4	656000	3840	18.59	19.60	1.262	0.18	0.036	0.045
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Side	10mm	4	656000	3840	18.48	19.60	1.294	-0.12	0.032	0.041
	FR1 n77_Ant 2	100M	BPSK	1	1	Right Side	10mm	4	656000	3840	18.59	19.60	1.262	0.1	0.468	0.591
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Side	10mm	4	656000	3840	18.48	19.60	1.294	0.05	0.438	0.567
	FR1 n77_Ant 2	100M	BPSK	1	1	Bottom Side	10mm	4	656000	3840	18.59	19.60	1.262	0.03	0.065	0.082
	FR1 n77_Ant 2	100M	BPSK	135	69	Bottom Side	10mm	4	656000	3840	18.48	19.60	1.294	0.17	0.077	0.100
	FR1 n77_Ant 2	100M	BPSK	1	1	Front	10mm	4	633332	3499.98	18.23	19.60	1.371	-0.17	0.153	0.210
	FR1 n77_Ant 2	100M	BPSK	135	69	Front	10mm	4	633332	3499.98	18.22	19.60	1.374	-0.04	0.163	0.224
	FR1 n77_Ant 2	100M	BPSK	1	1	Back	10mm	4	633332	3499.98	18.23	19.60	1.371	-0.18	0.199	0.273
	FR1 n77_Ant 2	100M	BPSK	135	69	Back	10mm	4	633332	3499.98	18.22	19.60	1.374	-0.14	0.213	0.293
	FR1 n77_Ant 2	100M	BPSK	1	1	Left Side	10mm	4	633332	3499.98	18.23	19.60	1.371	-0.09	0.009	0.012
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Side	10mm	4	633332	3499.98	18.22	19.60	1.374	0.12	0.017	0.023
	FR1 n77_Ant 2	100M	BPSK	1	1	Right Side	10mm	7	633332	3499.98	18.23	19.60	1.371	0.01	0.388	0.532
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Side	10mm	4	633332	3499.98	18.22	19.60	1.374	0.15	0.394	0.541
	FR1 n77_Ant 2	100M	BPSK	1	1	Bottom Side	10mm	4	633332	3499.98	18.23	19.60	1.371	0.09	0.067	0.092
	FR1 n77_Ant 2	100M	BPSK	135	69	Bottom Side	10mm	4	633332	3499.98	18.22	19.60	1.374	0.12	0.070	0.096
	FR1 n77_Ant 1	100M	BPSK	1	1	Front	10mm	4	656000	3840	21.97	22.80	1.211	0.12	0.142	0.172
	FR1 n77_Ant 1	100M	BPSK	135	69	Front	10mm	4	656000	3840	21.67	22.80	1.297	-0.09	0.123	0.160
	FR1 n77_Ant 1	100M	BPSK	1	1	Back	10mm	4	656000	3840	21.97	22.80	1.211	-0.19	0.153	0.185
	FR1 n77_Ant 1	100M	BPSK	135	69	Back	10mm	4	656000	3840	21.67	22.80	1.297	0.12	0.127	0.165
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Side	10mm	4	656000	3840	21.97	22.80	1.211	0.18	0.336	0.407
	FR1 n77_Ant 1	100M	BPSK	135	69	Left Side	10mm	4	656000	3840	21.67	22.80	1.297	-0.06	0.277	0.359
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Side	10mm	4	656000	3840	21.97	22.80	1.211	0.01	0.001	0.001
	FR1 n77_Ant 1	100M	BPSK	135	69	Right Side	10mm	4	656000	3840	21.67	22.80	1.297	0.01	0.001	0.001
	FR1 n77_Ant 1	100M	BPSK	1	1	Top Side	10mm	4	656000	3840	21.97	22.80	1.211	0.06	0.131	0.159
	FR1 n77_Ant 1	100M	BPSK	135	69	Top Side	10mm	4	656000	3840	21.67	22.80	1.297	0.05	0.082	0.106
	FR1 n77_Ant 1	100M	BPSK	1	1	Front	10mm	4	633332	3499.98	21.86	22.80	1.242	0.12	0.161	0.200
	FR1 n77_Ant 1	100M	BPSK	135	69	Front	10mm	4	633332	3499.98	21.95	22.80	1.216	-0.16	0.191	0.232



FR1 n77_Ant 1	100M	BPSK	1	1	Back	10mm	4	633332	3499.98	21.86	22.80	1.242	-0.05	0.152	0.189
FR1 n77_Ant 1	100M	BPSK	135	69	Back	10mm	4	633332	3499.98	21.95	22.80	1.216	0.06	0.156	0.190
FR1 n77_Ant 1	100M	BPSK	1	1	Left Side	10mm	4	633332	3499.98	21.86	22.80	1.242	0.11	0.264	0.328
FR1 n77_Ant 1	100M	BPSK	135	69	Left Side	10mm	4	633332	3499.98	21.95	22.80	1.216	-0.03	0.282	0.343
FR1 n77_Ant 1	100M	BPSK	1	1	Right Side	10mm	4	633332	3499.98	21.86	22.80	1.242	0.01	0.001	0.001
FR1 n77_Ant 1	100M	BPSK	135	69	Right Side	10mm	4	633332	3499.98	21.95	22.80	1.216	0.01	0.001	0.001
FR1 n77_Ant 1	100M	BPSK	1	1	Top Side	10mm	4	633332	3499.98	21.86	22.80	1.242	-0.08	0.220	0.273
FR1 n77_Ant 1	100M	BPSK	135	69	Top Side	10mm	4	633332	3499.98	21.95	22.80	1.216	0.13	0.244	0.297
FR1 n77_Ant 5	100M	BPSK	1	1	Front	10mm	4	656000	3840	23.37	23.40	1.007	0.12	0.231	0.233
FR1 n77_Ant 5	100M	BPSK	135	69	Front	10mm	4	656000	3840	23.27	23.40	1.030	0.13	0.208	0.214
FR1 n77_Ant 5	100M	BPSK	1	1	Back	10mm	4	656000	3840	23.37	23.40	1.007	-0.03	0.264	0.266
FR1 n77_Ant 5	100M	BPSK	135	69	Back	10mm	4	656000	3840	23.27	23.40	1.030	-0.08	0.229	0.236
FR1 n77_Ant 5	100M	BPSK	1	1	Left Side	10mm	4	656000	3840	23.37	23.40	1.007	0.01	0.001	0.001
FR1 n77_Ant 5	100M	BPSK	135	69	Left Side	10mm	4	656000	3840	23.27	23.40	1.030	0.01	0.001	0.001
FR1 n77_Ant 5	100M	BPSK	1	1	Right Side	10mm	4	656000	3840	23.37	23.40	1.007	0.15	0.572	0.576
FR1 n77_Ant 5	100M	BPSK	135	69	Right Side	10mm	4	656000	3840	23.27	23.40	1.030	0.01	0.481	0.496
FR1 n77_Ant 5	100M	BPSK	1	1	Top Side	10mm	4	656000	3840	23.37	23.40	1.007	0.02	0.067	0.067
FR1 n77_Ant 5	100M	BPSK	135	69	Top Side	10mm	4	656000	3840	23.27	23.40	1.030	0.05	0.060	0.062
FR1 n77_Ant 5	100M	BPSK	1	1	Front	10mm	4	633332	3499.98	23.40	23.40	1.000	-0.14	0.313	0.313
FR1 n77_Ant 5	100M	BPSK	135	69	Front	10mm	4	633332	3499.98	23.36	23.40	1.009	0.06	0.253	0.255
FR1 n77_Ant 5	100M	BPSK	1	1	Back	10mm	4	633332	3499.98	23.40	23.40	1.000	0.01	0.247	0.247
FR1 n77_Ant 5	100M	BPSK	135	69	Back	10mm	4	633332	3499.98	23.36	23.40	1.009	-0.01	0.231	0.233
FR1 n77_Ant 5	100M	BPSK	1	1	Left Side	10mm	4	633332	3499.98	23.40	23.40	1.000	0.01	0.001	0.001
FR1 n77_Ant 5	100M	BPSK	135	69	Left Side	10mm	4	633332	3499.98	23.36	23.40	1.009	0.01	0.001	0.001
FR1 n77_Ant 5	100M	BPSK	1	1	Right Side	10mm	4	633332	3499.98	23.40	23.40	1.000	0.15	0.483	0.483
FR1 n77_Ant 5	100M	BPSK	135	69	Right Side	10mm	4	633332	3499.98	23.36	23.40	1.009	0.07	0.486	0.490
FR1 n77_Ant 5	100M	BPSK	1	1	Top Side	10mm	4	633332	3499.98	23.40	23.40	1.000	0.03	0.054	0.054
FR1 n77_Ant 5	100M	BPSK	135	69	Top Side	10mm	4	633332	3499.98	23.36	23.40	1.009	0.01	0.076	0.077

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4+3(4)	3	11	2462	18.50	18.50	1.000	98.2	1.018	-0.19	0.252	0.257
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4+3(3)	3	11	2462	17.90	18.00	1.023	98.2	1.018	-0.19	0.362	0.377
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(4)	3	11	2462	18.50	18.50	1.000	98.2	1.018	-0.15	0.217	0.221
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(3)	3	11	2462	17.90	18.00	1.023	98.2	1.018	-0.15	0.308	0.321
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(4)	3	11	2462	18.50	18.50	1.000	98.2	1.018	-0.15	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(3)	3	11	2462	17.90	18.00	1.023	98.2	1.018	-0.15	0.420	0.438
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(4)	3	1	2412	18.40	18.50	1.023	98.2	1.018	-0.16	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(3)	3	1	2412	18.00	18.00	1.000	98.2	1.018	-0.16	0.434	0.442
64	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(4)	3	6	2437	18.30	18.50	1.047	98.2	1.018	-0.09	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(3)	3	6	2437	17.90	18.00	1.023	98.2	1.018	-0.09	0.487	0.507
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(4)	3	12	2467	16.80	18.00	1.318	98.2	1.018	-0.16	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(3)	3	12	2467	17.40	18.00	1.148	98.2	1.018	-0.16	0.409	0.478
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(4)	3	13	2472	15.00	16.50	1.413	98.2	1.018	-0.08	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4+3(3)	3	13	2472	16.10	16.50	1.096	98.2	1.018	-0.08	0.302	0.337
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4+3(4)	3	11	2462	18.50	18.50	1.000	98.2	1.018	-0.08	0.419	0.427
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4+3(3)	3	11	2462	17.90	18.00	1.023	98.2	1.018	-0.08	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 4+3(4)	3	11	2462	18.50	18.50	1.000	98.2	1.018	-0.1	0.419	0.427
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 4+3(3)	3	11	2462	17.90	18.00	1.023	98.2	1.018	-0.1	0.001	0.001

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)	
65	WLAN5GHz	802.11a 6Mbps	Front	10mm	Ant 4+3(4)	3	36	5180	18.70	19.00	1.072	100	1.000	-0.02	0.070	0.075	
	WLAN5GHz	802.11a 6Mbps	Front	10mm	Ant 4+3(3)	3	36	5180	18.90	19.00	1.023	100	1.000	-0.02	0.202	0.207	
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	3	36	5180	18.70	19.00	1.072	100	1.000	-0.16	0.114	0.122	
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	3	36	5180	18.90	19.00	1.023	100	1.000	-0.16	0.261	0.267	
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	3	40	5200	18.70	19.00	1.072	100	1.000	-0.04	0.111	0.119	
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	3	40	5200	18.80	19.00	1.047	100	1.000	-0.04	0.220	0.230	
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	3	44	5220	18.70	19.00	1.072	100	1.000	-0.15	0.035	0.038	
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	3	44	5220	18.80	19.00	1.047	100	1.000	-0.15	0.218	0.228	
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	3	48	5240	18.50	19.00	1.122	100	1.000	-0.13	0.111	0.125	
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	3	48	5240	18.50	19.00	1.122	100	1.000	-0.13	0.263	0.295	
	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Ant 4+3(4)	3	36	5180	18.70	19.00	1.072	100	1.000	-0.04	0.001	0.001	
	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Ant 4+3(3)	3	36	5180	18.90	19.00	1.023	100	1.000	-0.04	0.218	0.223	
	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 4+3(4)	3	36	5180	18.70	19.00	1.072	100	1.000	-0.09	0.176	0.189	
	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 4+3(3)	3	36	5180	18.90	19.00	1.023	100	1.000	-0.09	0.001	0.001	
	WLAN5GHz	802.11a 6Mbps	Top Side	10mm	Ant 4+3(4)	3	36	5180	18.70	19.00	1.072	100	1.000	-0.04	0.152	0.163	
	WLAN5GHz	802.11a 6Mbps	Top Side	10mm	Ant 4+3(3)	3	36	5180	18.90	19.00	1.023	100	1.000	-0.04	0.001	0.001	
	66	WLAN5GHz	802.11a 6Mbps	Front	10mm	Ant 4+3(4)	3	165	5825	17.30	17.50	1.047	100	1.000	-0.16	0.159	0.166
		WLAN5GHz	802.11a 6Mbps	Front	10mm	Ant 4+3(3)	3	165	5825	19.00	19.00	1.000	100	1.000	-0.16	0.091	0.091
WLAN5GHz		802.11a 6Mbps	Back	10mm	Ant 4+3(4)	3	165	5825	17.30	17.50	1.047	100	1.000	-0.18	0.262	0.274	
WLAN5GHz		802.11a 6Mbps	Back	10mm	Ant 4+3(3)	3	165	5825	19.00	19.00	1.000	100	1.000	-0.18	0.061	0.061	
WLAN5GHz		802.11a 6Mbps	Left Side	10mm	Ant 4+3(4)	3	165	5825	17.30	17.50	1.047	100	1.000	-0.15	0.001	0.001	
WLAN5GHz		802.11a 6Mbps	Left Side	10mm	Ant 4+3(3)	3	165	5825	19.00	19.00	1.000	100	1.000	-0.15	0.152	0.152	
WLAN5GHz		802.11a 6Mbps	Right Side	10mm	Ant 4+3(4)	3	165	5825	17.30	17.50	1.047	100	1.000	0.09	0.121	0.127	
WLAN5GHz		802.11a 6Mbps	Right Side	10mm	Ant 4+3(3)	3	165	5825	19.00	19.00	1.000	100	1.000	0.09	0.001	0.001	
WLAN5GHz		802.11a 6Mbps	Top Side	10mm	Ant 4+3(4)	3	165	5825	17.30	17.50	1.047	100	1.000	-0.12	0.370	0.387	
WLAN5GHz		802.11a 6Mbps	Top Side	10mm	Ant 4+3(3)	3	165	5825	19.00	19.00	1.000	100	1.000	-0.12	0.107	0.107	
WLAN5GHz		802.11a 6Mbps	Top Side	10mm	Ant 4+3(4)	3	149	5745	17.50	17.50	1.000	100	1.000	-0.09	0.342	0.342	
WLAN5GHz		802.11a 6Mbps	Top Side	10mm	Ant 4+3(3)	3	149	5745	18.80	19.00	1.047	100	1.000	-0.09	0.081	0.085	
WLAN5GHz	802.11a 6Mbps	Top Side	10mm	Ant 4+3(4)	3	157	5785	17.40	17.50	1.023	100	1.000	-0.17	0.379	0.388		
WLAN5GHz	802.11a 6Mbps	Top Side	10mm	Ant 4+3(3)	3	157	5785	18.80	19.00	1.047	100	1.000	-0.17	0.098	0.103		

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	Bluetooth	1Mbps	Front	10mm	Ant 4	4	78	2480	14.80	15.00	1.047	76.83	1.084	-0.01	0.062	0.070
	Bluetooth	1Mbps	Back	10mm	Ant 4	4	78	2480	14.80	15.00	1.047	76.83	1.084	0.03	0.066	0.075
	Bluetooth	1Mbps	Left Side	10mm	Ant 4	4	78	2480	14.80	15.00	1.047	76.83	1.084	-0.05	0.001	0.001
	Bluetooth	1Mbps	Right Side	10mm	Ant 4	4	78	2480	14.80	15.00	1.047	76.83	1.084	-0.16	0.087	0.099
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	4	78	2480	14.80	15.00	1.047	76.83	1.084	-0.05	0.088	0.100
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	4	0	2402	14.30	15.00	1.175	76.83	1.084	-0.05	0.168	0.214
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	4	39	2441	14.30	15.00	1.175	76.83	1.084	-0.01	0.147	0.187
	Bluetooth	1Mbps	Front	10mm	Ant 3	4	78	2480	14.60	15.00	1.096	76.83	1.084	-0.16	0.104	0.124
	Bluetooth	1Mbps	Back	10mm	Ant 3	4	78	2480	14.60	15.00	1.096	76.83	1.084	0.15	0.082	0.097
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	4	78	2480	14.60	15.00	1.096	76.83	1.084	0.15	0.163	0.194
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	4	0	2402	14.10	15.00	1.230	76.83	1.084	-0.15	0.159	0.212
67	Bluetooth	1Mbps	Left Side	10mm	Ant 3	4	39	2441	14.10	15.00	1.230	76.83	1.084	-0.01	0.191	0.255
	Bluetooth	1Mbps	Right Side	10mm	Ant 3	4	78	2480	14.60	15.00	1.096	76.83	1.084	0.02	0.001	0.001
	Bluetooth	1Mbps	Top Side	10mm	Ant 3	4	78	2480	14.60	15.00	1.096	76.83	1.084	0.09	0.014	0.017



15.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Index	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)
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	5	251	848.8	29.19	30.50	1.352	-0.19	0.527	0.713
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	251	848.8	29.19	30.50	1.352	-0.11	0.557	0.753
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	128	824.2	29.15	30.50	1.365	-0.1	0.564	0.770
68	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	189	836.4	29.18	30.50	1.355	-0.12	0.599	0.812
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	6	251	848.8	29.19	29.70	1.125	-0.19	0.527	0.593
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	251	848.8	29.19	29.70	1.125	-0.11	0.557	0.626
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	128	824.2	29.15	29.70	1.135	-0.1	0.564	0.640
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	189	836.4	29.18	29.70	1.127	-0.12	0.599	0.675
	GSM850_Ant 1	GPRS (2 Tx slots)	Front	10mm	5/6	128	824.2	30.93	32.50	1.435	-0.07	0.226	0.324
	GSM850_Ant 1	GPRS (2 Tx slots)	Back	10mm	5/6	128	824.2	30.93	32.50	1.435	-0.1	0.267	0.383
	GSM850_Ant 1	GPRS (2 Tx slots)	Back	10mm	5/6	189	836.4	30.76	32.50	1.493	-0.1	0.314	0.469
	GSM850_Ant 1	GPRS (2 Tx slots)	Back	10mm	5/6	251	848.8	30.69	32.50	1.517	-0.19	0.394	0.598
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	5	661	1880	24.40	25.20	1.202	-0.06	0.742	0.892
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	5	512	1850.2	24.39	25.20	1.205	0.05	0.622	0.750
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	5	810	1909.8	24.39	25.20	1.205	-0.02	0.711	0.857
69	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	5	661	1880	24.40	25.20	1.202	-0.11	0.759	0.913
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	5	512	1850.2	24.39	25.20	1.205	-0.12	0.655	0.789
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	5	810	1909.8	24.39	25.20	1.205	-0.11	0.706	0.851
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	6	661	1880	24.40	24.40	1.000	-0.06	0.742	0.742
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	6	661	1880	24.40	24.40	1.000	-0.11	0.759	0.759
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	6	512	1850.2	24.39	24.40	1.002	-0.12	0.655	0.657
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	6	810	1909.8	24.39	24.40	1.002	-0.11	0.706	0.708
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	5	810	1909.8	25.27	26.10	1.211	-0.08	0.297	0.360
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	810	1909.8	25.27	26.10	1.211	-0.16	0.416	0.504
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	512	1850.2	25.20	26.10	1.230	-0.17	0.320	0.394
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	661	1880	25.21	26.10	1.227	-0.13	0.351	0.431
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	6	810	1909.8	25.27	25.30	1.007	-0.08	0.297	0.299
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	810	1909.8	25.27	25.30	1.007	-0.16	0.416	0.419
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	512	1850.2	25.20	25.30	1.023	-0.17	0.320	0.327
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	661	1880	25.21	25.30	1.021	-0.13	0.351	0.358



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Index	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)
70	WCDMA II_Ant 2	RMC 12.2Kbps	Front	10mm	5/6	9400	1880	20.50	21.30	1.202	-0.15	0.558	0.671
	WCDMA II_Ant 2	RMC 12.2Kbps	Front	10mm	5/6	9262	1852.4	20.49	21.30	1.205	-0.16	0.477	0.575
	WCDMA II_Ant 2	RMC 12.2Kbps	Front	10mm	5/6	9538	1907.6	20.49	21.30	1.205	-0.18	0.520	0.627
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	5/6	9400	1880	20.50	21.30	1.202	-0.01	0.456	0.548
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	5/6	9400	1880	22.03	23.20	1.309	-0.11	0.280	0.367
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	9400	1880	22.03	23.20	1.309	-0.1	0.320	0.419
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	9262	1852.4	21.95	23.20	1.334	-0.13	0.317	0.423
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	9538	1907.6	22.02	23.20	1.312	0	0.399	0.524
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	10mm	5/6	1413	1732.6	22.33	23.30	1.250	-0.02	0.443	0.554
71	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	10mm	5/6	1312	1712.4	22.32	23.30	1.253	-0.19	0.503	0.630
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	10mm	5/6	1513	1752.6	22.13	23.30	1.309	-0.02	0.430	0.563
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	5/6	1413	1732.6	22.33	23.30	1.250	-0.19	0.427	0.534
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	5/6	1413	1732.6	22.14	23.60	1.400	-0.19	0.259	0.362
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	1413	1732.6	22.14	23.60	1.400	-0.14	0.260	0.364
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	1312	1712.4	22.13	23.60	1.403	-0.07	0.230	0.323
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	1513	1752.6	21.95	23.60	1.462	-0.08	0.283	0.414
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	5/6	4182	836.4	24.16	25.70	1.426	0.02	0.340	0.485
72	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	4182	836.4	24.16	25.70	1.426	-0.09	0.436	0.622
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	4132	826.4	24.06	25.70	1.459	-0.17	0.322	0.470
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	5/6	4233	846.6	24.11	25.70	1.442	-0.03	0.324	0.467
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	10mm	5/6	4182	836.4	24.06	25.20	1.300	0.12	0.285	0.371
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	5/6	4182	836.4	24.06	25.20	1.300	-0.05	0.337	0.438
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	5/6	4132	826.4	24.01	25.20	1.315	0.06	0.302	0.397
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	5/6	4233	846.6	23.94	25.20	1.337	-0.01	0.342	0.457



<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	5	18900	1880	22.77	23.30	1.130	0.05	0.782	0.884
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	5	18700	1860	22.76	23.30	1.132	-0.04	0.846	0.958
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	5	19100	1900	22.63	23.30	1.167	0.02	0.747	0.872
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	5	18900	1880	22.76	23.30	1.132	0	0.799	0.905
73	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	5	18700	1860	22.75	23.30	1.135	-0.02	0.850	0.965
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	5	19100	1900	22.68	23.30	1.153	0.03	0.758	0.874
	LTE Band 2_Ant 1	20M	QPSK	100	0	Front	10mm	5	18900	1880	22.65	23.30	1.161	-0.08	0.796	0.925
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	5	18900	1880	22.77	23.30	1.130	0.1	0.765	0.864
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	5	18700	1860	22.76	23.30	1.132	0.04	0.742	0.840
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	5	19100	1900	22.63	23.30	1.167	-0.02	0.745	0.869
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	5	18900	1880	22.76	23.30	1.132	-0.07	0.778	0.881
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	5	18700	1860	22.75	23.30	1.135	0.01	0.735	0.834
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	5	19100	1900	22.68	23.30	1.153	0.02	0.755	0.871
	LTE Band 2_Ant 1	20M	QPSK	100	0	Back	10mm	5	18900	1880	22.65	23.30	1.161	-0.03	0.738	0.857
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	6	18900	1880	21.77	22.50	1.183	0.02	0.621	0.735
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	6	18900	1880	21.75	22.50	1.189	0.03	0.635	0.755
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	6	18700	1860	21.74	22.50	1.191	-0.07	0.675	0.804
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	6	19100	1900	21.63	22.50	1.222	-0.05	0.602	0.736
	LTE Band 2_Ant 1	20M	QPSK	100	0	Front	10mm	6	18900	1880	21.57	22.50	1.239	0.07	0.632	0.783
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	6	18900	1880	21.77	22.50	1.183	-0.1	0.608	0.719
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	6	18900	1880	21.75	22.50	1.189	0.01	0.618	0.734
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	5	18900	1880	22.18	23.40	1.324	0.01	0.604	0.800
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	5	18700	1860	22.16	23.40	1.330	-0.13	0.646	0.859
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	5	19100	1900	22.17	23.40	1.327	-0.15	0.547	0.726
	LTE Band 2_Ant 5	20M	QPSK	50	0	Front	10mm	5	18900	1880	22.18	23.40	1.324	-0.11	0.588	0.779
	LTE Band 2_Ant 5	20M	QPSK	1	0	Back	10mm	5	18900	1880	22.18	23.40	1.324	0.01	0.479	0.634
	LTE Band 2_Ant 5	20M	QPSK	50	0	Back	10mm	5	18900	1880	22.18	23.40	1.324	0.02	0.465	0.616
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	6	18900	1880	22.18	22.60	1.102	0.01	0.604	0.665
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	6	18700	1860	22.16	22.60	1.107	-0.13	0.646	0.715
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	6	19100	1900	22.17	22.60	1.104	-0.15	0.547	0.604
	LTE Band 2_Ant 5	20M	QPSK	50	0	Front	10mm	6	18900	1880	22.18	22.60	1.102	-0.11	0.588	0.648
	LTE Band 2_Ant 5	20M	QPSK	1	0	Back	10mm	6	18900	1880	22.18	22.60	1.102	0.01	0.479	0.528
	LTE Band 2_Ant 5	20M	QPSK	50	0	Back	10mm	6	18900	1880	22.18	22.60	1.102	0.02	0.465	0.512
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	10mm	5/6	21100	2535	20.61	21.70	1.285	-0.17	0.424	0.545
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	21100	2535	20.67	21.70	1.268	-0.09	0.421	0.534
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	21100	2535	20.61	21.70	1.285	-0.06	0.426	0.548
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	20850	2510	20.60	21.70	1.288	-0.11	0.415	0.535
74	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	21350	2560	20.58	21.70	1.294	-0.1	0.459	0.594
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	5/6	21100	2535	20.67	21.70	1.268	-0.08	0.425	0.539
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	21100+20902	2535	19.11	20.00	1.227	0.03	0.451	0.554
	LTE Band 7_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	21100	2535	20.43	22.00	1.435	0	0.296	0.425
	LTE Band 7_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	21100	2535	20.47	22.00	1.422	0.02	0.306	0.435
	LTE Band 7_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	20850	2510	20.42	22.00	1.439	0	0.285	0.410
	LTE Band 7_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	21350	2560	20.30	22.00	1.479	-0.02	0.323	0.478
	LTE Band 7_Ant 0	20M	QPSK	1	0	Back	10mm	5/6	21100	2535	20.43	22.00	1.435	-0.16	0.278	0.399
	LTE Band 7_Ant 0	20M	QPSK	50	0	Back	10mm	5/6	21100	2535	20.47	22.00	1.422	-0.14	0.286	0.407
	LTE Band 7C_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	21100+20902	2535	18.92	20.30	1.374	-0.06	0.262	0.360



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
75	LTE Band 12_Ant 0	10M	QPSK	1	0	Front	10mm	5/6	23095	707.5	24.34	25.70	1.368	-0.14	0.322	0.440
	LTE Band 12_Ant 0	10M	QPSK	25	0	Front	10mm	5/6	23095	707.5	23.34	24.70	1.368	-0.05	0.254	0.347
	LTE Band 12_Ant 0	10M	QPSK	1	0	Back	10mm	5/6	23095	707.5	24.34	25.70	1.368	-0.03	0.251	0.343
	LTE Band 12_Ant 0	10M	QPSK	25	0	Back	10mm	5/6	23095	707.5	23.34	24.70	1.368	-0.04	0.202	0.276
	LTE Band 12_Ant 1	10M	QPSK	1	0	Front	10mm	5/6	23095	707.5	24.17	25.20	1.268	-0.02	0.179	0.227
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	10mm	5/6	23095	707.5	23.17	24.20	1.268	-0.08	0.143	0.181
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	10mm	5/6	23095	707.5	24.17	25.20	1.268	-0.01	0.200	0.254
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	10mm	5/6	23095	707.5	23.17	24.20	1.268	-0.08	0.161	0.204
76	LTE Band 13_Ant 0	10M	QPSK	1	0	Front	10mm	5/6	23230	782	24.33	25.70	1.371	-0.14	0.381	0.522
	LTE Band 13_Ant 0	10M	QPSK	25	0	Front	10mm	5/6	23230	782	23.41	24.70	1.346	-0.17	0.283	0.381
	LTE Band 13_Ant 0	10M	QPSK	1	0	Back	10mm	5/6	23230	782	24.33	25.70	1.371	-0.13	0.345	0.473
	LTE Band 13_Ant 0	10M	QPSK	25	0	Back	10mm	5/6	23230	782	23.41	24.70	1.346	-0.13	0.281	0.378
	LTE Band 13_Ant 1	10M	QPSK	1	0	Front	10mm	5/6	23230	782	24.20	25.20	1.259	-0.14	0.227	0.286
	LTE Band 13_Ant 1	10M	QPSK	25	0	Front	10mm	5/6	23230	782	23.25	24.20	1.245	-0.17	0.183	0.228
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	10mm	5/6	23230	782	24.20	25.20	1.259	-0.19	0.247	0.311
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	10mm	5/6	23230	782	23.25	24.20	1.245	-0.11	0.195	0.243
77	LTE Band 14_Ant 0	10M	QPSK	1	0	Front	10mm	5/6	23330	793	24.43	25.70	1.340	-0.15	0.360	0.482
	LTE Band 14_Ant 0	10M	QPSK	25	0	Front	10mm	5/6	23330	793	23.45	24.70	1.334	-0.13	0.275	0.367
	LTE Band 14_Ant 0	10M	QPSK	1	0	Back	10mm	5/6	23330	793	24.43	25.70	1.340	-0.1	0.353	0.473
	LTE Band 14_Ant 0	10M	QPSK	25	0	Back	10mm	5/6	23330	793	23.45	24.70	1.334	-0.11	0.283	0.377
	LTE Band 14_Ant 1	10M	QPSK	1	0	Front	10mm	5/6	23330	793	24.22	25.20	1.253	-0.16	0.216	0.271
	LTE Band 14_Ant 1	10M	QPSK	25	0	Front	10mm	5/6	23330	793	23.22	24.20	1.253	-0.18	0.173	0.217
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	10mm	5/6	23330	793	24.22	25.20	1.253	-0.19	0.261	0.327
	LTE Band 14_Ant 1	10M	QPSK	25	0	Back	10mm	5/6	23330	793	23.22	24.20	1.253	-0.18	0.209	0.262
	LTE Band 25_Ant 2	20M	QPSK	1	0	Front	10mm	5/6	26340	1880	21.59	22.40	1.205	-0.12	0.750	0.904
	LTE Band 25_Ant 2	20M	QPSK	1	0	Front	10mm	5/6	26140	1860	21.50	22.40	1.230	-0.15	0.625	0.769
	LTE Band 25_Ant 2	20M	QPSK	1	0	Front	10mm	5/6	26590	1905	21.51	22.40	1.227	-0.17	0.725	0.890
78	LTE Band 25_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	26340	1880	21.54	22.40	1.219	-0.14	0.813	0.991
	LTE Band 25_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	26140	1860	21.48	22.40	1.236	-0.09	0.653	0.807
	LTE Band 25_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	26590	1905	21.39	22.40	1.262	-0.17	0.711	0.897
	LTE Band 25_Ant 2	20M	QPSK	100	0	Front	10mm	5/6	26340	1880	21.49	22.40	1.233	-0.14	0.747	0.921
	LTE Band 25_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	26340	1880	21.59	22.40	1.205	0.04	0.626	0.754
	LTE Band 25_Ant 2	20M	QPSK	50	0	Back	10mm	5/6	26340	1880	21.54	22.40	1.219	0	0.624	0.761
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	26340	1880	21.53	23.10	1.435	-0.17	0.271	0.389
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	26340	1880	21.49	23.10	1.449	-0.13	0.271	0.393
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	5/6	26340	1880	21.53	23.10	1.435	-0.09	0.302	0.434
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	5/6	26340	1880	21.49	23.10	1.449	-0.15	0.303	0.439
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	5/6	26140	1860	21.44	23.10	1.466	-0.04	0.298	0.437
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	5/6	26590	1905	21.33	23.10	1.503	-0.04	0.321	0.483
	LTE Band 26_Ant 0	15M	QPSK	1	0	Front	10mm	5/6	26865	831.5	24.49	25.70	1.321	-0.13	0.345	0.456
	LTE Band 26_Ant 0	15M	QPSK	36	0	Front	10mm	5/6	26865	831.5	23.41	24.70	1.346	-0.09	0.273	0.367
79	LTE Band 26_Ant 0	15M	QPSK	1	0	Back	10mm	5/6	26865	831.5	24.49	25.70	1.321	-0.15	0.346	0.457
	LTE Band 26_Ant 0	15M	QPSK	36	0	Back	10mm	5/6	26865	831.5	23.41	24.70	1.346	-0.11	0.276	0.371
	LTE Band 5B_Ant 0	10M	QPSK	1	0	Back	10mm	5/6	20600+20501	844	22.86	24.00	1.300	-0.13	0.301	0.391
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	10mm	5/6	26865	831.5	24.00	25.20	1.318	-0.09	0.209	0.276
	LTE Band 26_Ant 1	15M	QPSK	36	0	Front	10mm	5/6	26865	831.5	23.06	24.20	1.300	-0.15	0.172	0.224
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	10mm	5/6	26865	831.5	24.00	25.20	1.318	-0.17	0.290	0.382
	LTE Band 26_Ant 1	15M	QPSK	36	0	Back	10mm	5/6	26865	831.5	23.06	24.20	1.300	-0.12	0.215	0.280
	LTE Band 5B_Ant 1	10M	QPSK	1	0	Back	10mm	5/6	20600+20501	844	22.32	23.50	1.312	0.1	0.250	0.328



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 30_Ant 2	10M	QPSK	1	0	Front	10mm	5/6	27710	2310	20.50	21.50	1.259	-0.17	0.507	0.638
	LTE Band 30_Ant 2	10M	QPSK	25	0	Front	10mm	5/6	27710	2310	20.52	21.50	1.253	0.08	0.489	0.613
	LTE Band 30_Ant 2	10M	QPSK	1	0	Back	10mm	5/6	27710	2310	20.50	21.50	1.259	-0.12	0.474	0.597
	LTE Band 30_Ant 2	10M	QPSK	25	0	Back	10mm	5/6	27710	2310	20.52	21.50	1.253	-0.14	0.480	0.602
80	LTE Band 30_Ant 0	10M	QPSK	1	0	Front	10mm	5	27710	2310	23.14	24.20	1.276	0.18	0.502	0.641
	LTE Band 30_Ant 0	10M	QPSK	25	0	Front	10mm	5	27710	2310	21.99	22.90	1.233	-0.11	0.433	0.534
	LTE Band 30_Ant 0	10M	QPSK	1	0	Back	10mm	5	27710	2310	23.14	24.20	1.276	-0.14	0.464	0.592
	LTE Band 30_Ant 0	10M	QPSK	25	0	Back	10mm	5	27710	2310	21.99	22.90	1.233	-0.04	0.372	0.459
	LTE Band 30_Ant 0	10M	QPSK	1	0	Front	10mm	6	27710	2310	23.14	23.40	1.062	0.18	0.502	0.533
	LTE Band 30_Ant 0	10M	QPSK	25	0	Front	10mm	6	27710	2310	21.99	22.90	1.233	-0.11	0.433	0.534
	LTE Band 30_Ant 0	10M	QPSK	1	0	Back	10mm	6	27710	2310	23.14	23.40	1.062	-0.14	0.464	0.493
	LTE Band 30_Ant 0	10M	QPSK	25	0	Back	10mm	6	27710	2310	21.99	22.90	1.233	-0.04	0.372	0.459
	LTE Band 66_Ant 2	20M	QPSK	1	0	Front	10mm	5/6	132322	1745	22.81	23.90	1.285	-0.13	0.533	0.685
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	132322	1745	22.74	23.90	1.306	-0.16	0.542	0.708
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	132072	1720	22.62	23.90	1.343	-0.17	0.539	0.724
81	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	132572	1770	22.71	23.90	1.315	-0.1	0.590	0.776
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	132322	1745	22.81	23.90	1.285	-0.11	0.503	0.646
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	10mm	5/6	132322	1745	22.74	23.90	1.306	-0.08	0.503	0.657
	LTE Band 66C_Ant 2	15M	QPSK	1	0	Front	10mm	5/6	132597+132504	1772.5	21.05	22.20	1.303	-0.11	0.444	0.579
	LTE Band 66C_Ant 2	20M	QPSK	1	99	Front	10mm	5/6	132072+132270	1720	20.97	22.20	1.327	0.08	0.403	0.535
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	132322	1745	21.86	23.20	1.361	-0.07	0.283	0.385
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	132322	1745	21.72	23.20	1.406	-0.1	0.281	0.395
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	132072	1720	21.71	23.20	1.409	-0.09	0.265	0.373
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	132572	1770	21.69	23.20	1.416	-0.09	0.251	0.355
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	5/6	132322	1745	21.86	23.20	1.361	-0.17	0.256	0.349
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	5/6	132322	1745	21.72	23.20	1.406	-0.18	0.263	0.370
	LTE Band 66B_Ant 0	15M	QPSK	1	0	Front	10mm	5/6	132597+132504	1772.5	20.80	21.50	1.175	-0.12	0.327	0.384
	LTE Band 66C_Ant 0	20M	QPSK	1	99	Front	10mm	5/6	132072+132270	1720	20.11	21.50	1.377	0.1	0.280	0.386
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	10mm	5/6	132322	1745	24.28	24.70	1.102	-0.03	0.316	0.348
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	10mm	5/6	132322	1745	24.27	24.70	1.104	0.02	0.350	0.386
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	10mm	5/6	132072	1720	24.26	24.70	1.107	0.05	0.185	0.205
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	10mm	5/6	132572	1770	24.11	24.70	1.146	0.16	0.594	0.680
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	5/6	132322	1745	24.28	24.70	1.102	-0.02	0.279	0.307
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	10mm	5/6	132322	1745	24.27	24.70	1.104	-0.1	0.308	0.340
	LTE Band 66_Ant 5	20M	QPSK	1	0	Front	10mm	5	132322	1745	22.68	23.60	1.236	0.06	0.577	0.713
	LTE Band 66_Ant 5	20M	QPSK	50	0	Front	10mm	5	132322	1745	22.65	23.60	1.245	0.01	0.586	0.729
	LTE Band 66_Ant 5	20M	QPSK	50	0	Front	10mm	5	132072	1720	22.56	23.60	1.271	-0.15	0.523	0.665
	LTE Band 66_Ant 5	20M	QPSK	50	0	Front	10mm	5	132572	1770	22.62	23.60	1.253	-0.11	0.560	0.702
	LTE Band 66_Ant 5	20M	QPSK	1	0	Back	10mm	5	132322	1745	22.68	23.60	1.236	-0.16	0.476	0.588
	LTE Band 66_Ant 5	20M	QPSK	50	0	Back	10mm	5	132322	1745	22.65	23.60	1.245	-0.11	0.478	0.595
	LTE Band 66_Ant 5	20M	QPSK	1	0	Front	10mm	6	132322	1745	22.68	22.80	1.028	0.06	0.577	0.593
	LTE Band 66_Ant 5	20M	QPSK	50	0	Front	10mm	6	132322	1745	22.65	22.80	1.035	0.01	0.586	0.607
	LTE Band 66_Ant 5	20M	QPSK	50	0	Front	10mm	6	132072	1720	22.56	22.80	1.057	-0.15	0.523	0.553
	LTE Band 66_Ant 5	20M	QPSK	50	0	Front	10mm	6	132572	1770	22.62	22.80	1.042	-0.11	0.560	0.584
	LTE Band 66_Ant 5	20M	QPSK	1	0	Back	10mm	6	132322	1745	22.68	22.80	1.028	-0.16	0.476	0.489
	LTE Band 66_Ant 5	20M	QPSK	50	0	Back	10mm	6	132322	1745	22.65	22.80	1.035	-0.11	0.478	0.495
82	LTE Band 71_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	133297	680.5	24.57	25.70	1.297	-0.13	0.320	0.415
	LTE Band 71_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	133297	680.5	23.52	24.70	1.312	-0.11	0.259	0.340
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	10mm	5/6	133297	680.5	24.57	25.70	1.297	-0.1	0.309	0.401
	LTE Band 71_Ant 0	20M	QPSK	50	0	Back	10mm	5/6	133297	680.5	23.52	24.70	1.312	-0.12	0.252	0.331
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	10mm	5/6	133297	680.5	23.98	25.20	1.324	-0.11	0.187	0.248
	LTE Band 71_Ant 1	20M	QPSK	50	0	Front	10mm	5/6	133297	680.5	23.14	24.20	1.276	-0.15	0.156	0.199
	LTE Band 71_Ant 1	20M	QPSK	1	0	Back	10mm	5/6	133297	680.5	23.98	25.20	1.324	-0.12	0.207	0.274
	LTE Band 71_Ant 1	20M	QPSK	50	0	Back	10mm	5/6	133297	680.5	23.14	24.20	1.276	-0.11	0.170	0.217



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	10mm	5/6	40185	2549.5	22.52	23.80	1.343	62.9	1.006	0.01	0.349	0.472
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	40185	2549.5	22.52	23.30	1.197	62.9	1.006	0.05	0.392	0.472
83	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	40185	2549.5	22.52	23.80	1.343	62.9	1.006	-0.14	0.503	0.679
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	39750	2506	22.37	23.80	1.390	62.9	1.006	-0.05	0.443	0.619
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	40620	2593	22.44	23.80	1.368	62.9	1.006	-0.09	0.465	0.639
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	41055	2636.5	22.42	23.80	1.374	62.9	1.006	-0.1	0.388	0.537
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	41490	2680	22.51	23.80	1.346	62.9	1.006	-0.11	0.434	0.588
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	5/6	40185	2549.5	22.52	23.30	1.197	62.9	1.006	-0.15	0.481	0.579
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	40185	2549.5	24.02	25.40	1.374	42.9	1.009	-0.16	0.477	0.661
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	39750	2506	23.98	25.40	1.387	42.9	1.009	-0.02	0.416	0.582
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	40620	2593	24.01	25.40	1.377	42.9	1.009	-0.06	0.404	0.561
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	41055	2636.5	24.00	25.40	1.380	42.9	1.009	-0.18	0.349	0.486
	LTE Band 41_HPUE_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	41490	2680	24.00	25.40	1.380	42.9	1.009	-0.05	0.414	0.577
	LTE Band 41C_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	41490+41292	2680	12.07	12.80	1.183	62.9	1.006	0.05	0.053	0.063
	LTE Band 41_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	40185	2549.5	23.14	24.10	1.247	62.9	1.006	0.12	0.394	0.494
	LTE Band 41_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	39750	2506	23.10	24.10	1.259	62.9	1.006	0.19	0.386	0.489
	LTE Band 41_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	40620	2593	22.98	24.10	1.294	62.9	1.006	-0.05	0.433	0.564
	LTE Band 41_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	41055	2636.5	22.93	24.10	1.309	62.9	1.006	-0.17	0.474	0.624
	LTE Band 41_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	41490	2680	23.12	24.10	1.253	62.9	1.006	0.02	0.494	0.623
	LTE Band 41_Ant 0	20M	QPSK	50	0	Front	10mm	5/6	40185	2549.5	22.13	23.10	1.250	62.9	1.006	0.14	0.313	0.394
	LTE Band 41_Ant 0	20M	QPSK	1	0	Back	10mm	5/6	40185	2549.5	23.14	24.10	1.247	62.9	1.006	-0.14	0.367	0.461
	LTE Band 41_Ant 0	20M	QPSK	50	0	Back	10mm	5/6	40185	2549.5	22.13	23.10	1.250	62.9	1.006	0.06	0.288	0.362
	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	40185	2549.5	24.29	25.70	1.384	42.9	1.009	-0.02	0.400	0.558
	LTE Band 41C_Ant 0	20M	QPSK	1	0	Front	10mm	5/6	41490+41292	2680	11.44	12.30	1.219	62.9	1.006	0.06	0.039	0.048
84	LTE Band 48_Ant 6	20M	QPSK	1	0	Front	10mm	5/6	56150	3641	22.66	22.70	1.009	62.9	1.006	0.17	0.599	0.608
	LTE Band 48_Ant 6	20M	QPSK	1	0	Front	10mm	5/6	55340	3560	22.43	22.70	1.064	62.9	1.006	-0.15	0.491	0.526
	LTE Band 48_Ant 6	20M	QPSK	1	0	Front	10mm	5/6	55830	3609	22.52	22.70	1.042	62.9	1.006	-0.11	0.564	0.591
	LTE Band 48_Ant 6	20M	QPSK	1	0	Front	10mm	5/6	56640	3690	22.56	22.70	1.033	62.9	1.006	-0.1	0.283	0.294
	LTE Band 48_Ant 6	20M	QPSK	50	0	Front	10mm	5/6	56150	3641	21.57	22.20	1.156	62.9	1.006	0.08	0.475	0.552
	LTE Band 48_Ant 6	20M	QPSK	1	0	Back	10mm	5/6	56150	3641	22.66	22.70	1.009	62.9	1.006	0.16	0.424	0.430
	LTE Band 48_Ant 6	20M	QPSK	50	0	Back	10mm	5/6	56150	3641	21.57	22.20	1.156	62.9	1.006	-0.17	0.334	0.388
	LTE Band 48_Ant 2	20M	QPSK	1	0	Front	10mm	5/6	56640	3690	22.07	22.90	1.211	62.9	1.006	-0.06	0.251	0.306
	LTE Band 48_Ant 2	20M	QPSK	50	0	Front	10mm	5/6	56640	3690	22.05	22.90	1.216	62.9	1.006	0.01	0.222	0.272
	LTE Band 48_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	56640	3690	22.07	22.90	1.211	62.9	1.006	-0.13	0.374	0.455
	LTE Band 48_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	55340	3560	22.00	22.90	1.230	62.9	1.006	-0.18	0.394	0.488
	LTE Band 48_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	55830	3609	21.81	22.90	1.285	62.9	1.006	0.07	0.359	0.464
	LTE Band 48_Ant 2	20M	QPSK	1	0	Back	10mm	5/6	56150	3641	21.83	22.90	1.279	62.9	1.006	-0.12	0.359	0.462
	LTE Band 48_Ant 2	20M	QPSK	50	0	Back	10mm	5/6	56640	3690	22.05	22.90	1.216	62.9	1.006	0.08	0.331	0.405



<5G NR SAR>

Table with 17 columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Power Index, 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). Rows include antenna configurations for bands n5, n7, n12, n14, n25, and n30.



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
	FR1 n41_Ant 2	100M	BPSK	1	1	Front	10mm	5/6	518598	2592.99	21.27	22.50	1.327	-0.12	0.437	0.580
	FR1 n41_Ant 2	100M	BPSK	135	69	Front	10mm	5/6	518598	2592.99	21.22	22.50	1.343	-0.01	0.418	0.561
	FR1 n41_Ant 2	100M	BPSK	1	1	Back	10mm	5/6	518598	2592.99	21.27	22.50	1.327	-0.13	0.518	0.688
91	FR1 n41_Ant 2	100M	BPSK	135	69	Back	10mm	5/6	518598	2592.99	21.22	22.50	1.343	-0.04	0.581	0.780
	FR1 n41_Ant 0	100M	BPSK	1	1	Front	10mm	5/6	518598	2592.99	20.44	22.00	1.432	-0.03	0.325	0.465
	FR1 n41_Ant 0	100M	BPSK	135	69	Front	10mm	5/6	518598	2592.99	20.07	22.00	1.560	0.03	0.340	0.530
	FR1 n41_Ant 0	100M	BPSK	1	1	Back	10mm	5/6	518598	2592.99	20.44	22.00	1.432	-0.17	0.306	0.438
	FR1 n41_Ant 0	100M	BPSK	135	69	Back	10mm	5/6	518598	2592.99	20.07	22.00	1.560	-0.17	0.315	0.491
	FR1 n48_Ant 6	10M	BPSK	1	1	Front	10mm	5/6	641666	3624.99	19.37	20.50	1.297	0.12	0.155	0.201
	FR1 n48_Ant 6	10M	BPSK	12	6	Front	10mm	5/6	641666	3624.99	19.32	20.50	1.312	0.09	0.162	0.213
	FR1 n48_Ant 6	10M	BPSK	1	1	Back	10mm	5/6	641666	3624.99	19.37	20.50	1.297	0.12	0.206	0.267
	FR1 n48_Ant 6	10M	BPSK	12	6	Back	10mm	5/6	641666	3624.99	19.32	20.50	1.312	0.13	0.211	0.277
	FR1 n48_Ant 6	10M	BPSK	12	6	Back	10mm	5/6	637000	3555	19.21	20.50	1.346	-0.12	0.207	0.279
	FR1 n48_Ant 6	10M	BPSK	12	6	Back	10mm	5/6	646332	3694.98	19.31	20.50	1.315	0.12	0.195	0.256
	FR1 n48_Ant 6	40M	BPSK	50	25	Back	10mm	5/6	641666	3624.99	19.29	20.50	1.321	-0.16	0.203	0.268
	FR1 n48_Ant 2	10M	BPSK	1	1	Front	10mm	5/6	641666	3624.99	19.54	20.80	1.337	0.12	0.254	0.339
	FR1 n48_Ant 2	10M	BPSK	12	6	Front	10mm	5/6	641666	3624.99	19.53	20.80	1.340	-0.05	0.210	0.281
	FR1 n48_Ant 2	10M	BPSK	1	1	Back	10mm	5/6	641666	3624.99	19.54	20.80	1.337	0.03	0.291	0.389
92	FR1 n48_Ant 2	10M	BPSK	1	1	Back	10mm	5/6	637000	3555	19.32	20.80	1.406	-0.08	0.324	0.456
	FR1 n48_Ant 2	10M	BPSK	1	1	Back	10mm	5/6	646332	3694.98	19.34	20.80	1.400	-0.04	0.307	0.430
	FR1 n48_Ant 2	10M	BPSK	12	6	Back	10mm	5/6	641666	3624.99	19.53	20.80	1.340	-0.01	0.285	0.382
	FR1 n48_Ant 2	40M	BPSK	50	25	Back	10mm	5/6	641666	3624.99	19.53	20.80	1.340	-0.15	0.315	0.422
	FR1 n66_Ant 2	40M	BPSK	1	1	Front	10mm	5/6	349000	1745	23.17	24.20	1.268	-0.03	0.558	0.707
	FR1 n66_Ant 2	40M	BPSK	108	54	Front	10mm	5/6	349000	1745	23.12	24.20	1.282	0	0.607	0.778
93	FR1 n66_Ant 2	40M	BPSK	1	1	Back	10mm	5/6	349000	1745	23.17	24.20	1.268	0	0.618	0.783
	FR1 n66_Ant 2	40M	BPSK	108	54	Back	10mm	5/6	349000	1745	23.12	24.20	1.282	-0.17	0.575	0.737
	FR1 n66_Ant 0	40M	BPSK	1	1	Front	10mm	5/6	349000	1745	22.67	23.80	1.297	-0.06	0.352	0.457
	FR1 n66_Ant 0	40M	BPSK	108	54	Front	10mm	5/6	349000	1745	22.57	23.80	1.327	-0.04	0.316	0.419
	FR1 n66_Ant 0	40M	BPSK	1	1	Back	10mm	5/6	349000	1745	22.67	23.80	1.297	-0.1	0.341	0.442
	FR1 n66_Ant 0	40M	BPSK	108	54	Back	10mm	5/6	349000	1745	22.57	23.80	1.327	-0.09	0.330	0.438
	FR1 n71_Ant 0	20M	BPSK	1	1	Front	10mm	5/6	136100	680.5	25.09	25.70	1.151	-0.12	0.316	0.364
	FR1 n71_Ant 0	20M	BPSK	50	28	Front	10mm	5/6	136100	680.5	24.92	25.70	1.197	-0.11	0.330	0.395
	FR1 n71_Ant 0	20M	BPSK	1	1	Back	10mm	5/6	136100	680.5	25.09	25.70	1.151	-0.1	0.325	0.374
94	FR1 n71_Ant 0	20M	BPSK	50	28	Back	10mm	5/6	136100	680.5	24.92	25.70	1.197	-0.04	0.354	0.424
	FR1 n71_Ant 1	20M	BPSK	1	1	Front	10mm	5/6	136100	680.5	24.45	25.20	1.189	-0.12	0.191	0.227
	FR1 n71_Ant 1	20M	BPSK	50	28	Front	10mm	5/6	136100	680.5	24.31	25.20	1.227	-0.11	0.209	0.257
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	10mm	5/6	136100	680.5	24.45	25.20	1.189	-0.09	0.210	0.250
	FR1 n71_Ant 1	20M	BPSK	50	28	Back	10mm	5/6	136100	680.5	24.31	25.20	1.227	-0.11	0.229	0.281



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	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)
95	FR1 n77_Ant 6	100M	BPSK	1	1	Front	10mm	5/6	656000	3840	19.35	20.30	1.245	-0.11	0.383	0.477
	FR1 n77_Ant 6	100M	BPSK	135	69	Front	10mm	5/6	656000	3840	19.01	20.30	1.346	-0.15	0.327	0.440
	FR1 n77_Ant 6	100M	BPSK	1	1	Back	10mm	5/6	656000	3840	19.35	20.30	1.245	0.02	0.290	0.361
	FR1 n77_Ant 6	100M	BPSK	135	69	Back	10mm	5/6	656000	3840	19.01	20.30	1.346	-0.07	0.260	0.350
	FR1 n77_Ant 6	100M	BPSK	1	1	Front	10mm	5/6	633332	3499.98	19.30	20.30	1.259	-0.18	0.263	0.331
	FR1 n77_Ant 6	100M	BPSK	135	69	Front	10mm	5/6	633332	3499.98	19.35	20.30	1.245	-0.12	0.240	0.299
	FR1 n77_Ant 6	100M	BPSK	1	1	Back	10mm	5/6	633332	3499.98	19.30	20.30	1.259	-0.08	0.252	0.317
	FR1 n77_Ant 6	100M	BPSK	135	69	Back	10mm	5/6	633332	3499.98	19.35	20.30	1.245	0.03	0.244	0.304
	FR1 n77_Ant 2	100M	BPSK	1	1	Front	10mm	5/6	633332	3499.98	18.23	19.60	1.371	-0.17	0.153	0.210
	FR1 n77_Ant 2	100M	BPSK	135	69	Front	10mm	5/6	633332	3499.98	18.22	19.60	1.374	-0.04	0.163	0.224
	FR1 n77_Ant 2	100M	BPSK	1	1	Back	10mm	5/6	633332	3499.98	18.23	19.60	1.371	-0.18	0.199	0.273
	FR1 n77_Ant 2	100M	BPSK	135	69	Back	10mm	5/6	633332	3499.98	18.22	19.60	1.374	-0.14	0.213	0.293
	FR1 n77_Ant 2	100M	BPSK	1	1	Front	10mm	5/6	656000	3840	18.59	19.60	1.262	0.12	0.223	0.281
	FR1 n77_Ant 2	100M	BPSK	135	69	Front	10mm	5/6	656000	3840	18.48	19.60	1.294	0.03	0.202	0.261
	FR1 n77_Ant 2	100M	BPSK	1	1	Back	10mm	5/6	656000	3840	18.59	19.60	1.262	-0.1	0.302	0.381
	FR1 n77_Ant 2	100M	BPSK	135	69	Back	10mm	5/6	656000	3840	18.48	19.60	1.294	-0.11	0.289	0.374
	FR1 n77_Ant 1	100M	BPSK	1	1	Front	10mm	5/6	656000	3840	21.97	22.80	1.211	0.12	0.142	0.172
	FR1 n77_Ant 1	100M	BPSK	135	69	Front	10mm	5/6	656000	3840	21.67	22.80	1.297	-0.09	0.123	0.160
	FR1 n77_Ant 1	100M	BPSK	1	1	Back	10mm	5/6	656000	3840	21.97	22.80	1.211	-0.19	0.153	0.185
	FR1 n77_Ant 1	100M	BPSK	135	69	Back	10mm	5/6	656000	3840	21.67	22.80	1.297	0.12	0.127	0.165
	FR1 n77_Ant 1	100M	BPSK	1	1	Front	10mm	5/6	633332	3499.98	21.86	22.80	1.242	0.12	0.161	0.200
	FR1 n77_Ant 1	100M	BPSK	135	69	Front	10mm	5/6	633332	3499.98	21.95	22.80	1.216	-0.16	0.191	0.232
	FR1 n77_Ant 1	100M	BPSK	1	1	Back	10mm	5/6	633332	3499.98	21.86	22.80	1.242	-0.05	0.152	0.189
	FR1 n77_Ant 1	100M	BPSK	135	69	Back	10mm	5/6	633332	3499.98	21.95	22.80	1.216	0.06	0.156	0.190
	FR1 n77_Ant 5	100M	BPSK	1	1	Front	10mm	5/6	656000	3840	23.37	23.40	1.007	0.12	0.231	0.233
	FR1 n77_Ant 5	100M	BPSK	135	69	Front	10mm	5/6	656000	3840	23.27	23.40	1.030	0.13	0.208	0.214
	FR1 n77_Ant 5	100M	BPSK	1	1	Back	10mm	5/6	656000	3840	23.37	23.40	1.007	-0.03	0.264	0.266
	FR1 n77_Ant 5	100M	BPSK	135	69	Back	10mm	5/6	656000	3840	23.27	23.40	1.030	-0.08	0.229	0.236
	FR1 n77_Ant 5	100M	BPSK	1	1	Front	10mm	5/6	633332	3499.98	23.40	23.40	1.000	-0.14	0.313	0.313
	FR1 n77_Ant 5	100M	BPSK	135	69	Front	10mm	5/6	633332	3499.98	23.36	23.40	1.009	0.06	0.253	0.255
	FR1 n77_Ant 5	100M	BPSK	1	1	Back	10mm	5/6	633332	3499.98	23.40	23.40	1.000	0.01	0.247	0.247
	FR1 n77_Ant 5	100M	BPSK	135	69	Back	10mm	5/6	633332	3499.98	23.36	23.40	1.009	-0.01	0.231	0.233

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4+3(4)	4/5/6	11	2462	19.90	20.00	1.023	98.2	1.018	-0.05	0.333	0.347
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4+3(3)	4/5/6	11	2462	20.00	20.00	1.000	98.2	1.018	-0.05	0.475	0.484
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(4)	4/5/6	11	2462	19.90	20.00	1.023	98.2	1.018	-0.14	0.452	0.471
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(3)	4/5/6	11	2462	20.00	20.00	1.000	98.2	1.018	-0.14	0.489	0.498
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(4)	4/5/6	1	2412	19.70	20.00	1.072	98.2	1.018	-0.03	0.386	0.421
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(3)	4/5/6	1	2412	19.60	20.00	1.096	98.2	1.018	-0.03	0.375	0.419
96	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(4)	4/5/6	6	2437	19.60	20.00	1.096	98.2	1.018	-0.06	0.491	0.548
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(3)	4/5/6	6	2437	20.00	20.00	1.000	98.2	1.018	-0.06	0.462	0.470
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(3)	4/5/6	12	2467	17.40	18.00	1.148	98.2	1.018	-0.04	0.228	0.266
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(3)	4/5/6	12	2467	17.40	18.00	1.148	98.2	1.018	-0.04	0.205	0.240
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(3)	4/5/6	13	2472	16.10	16.50	1.096	98.2	1.018	0.08	0.123	0.137
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4+3(3)	4/5/6	13	2472	16.10	16.50	1.096	98.2	1.018	0.08	0.127	0.142



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(4)	4/5/6	56	5280	18.60	19.00	1.096	100	1.000	-0.12	0.064	0.070
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(3)	4/5/6	56	5280	18.70	19.00	1.072	100	1.000	-0.12	0.111	0.119
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5/6	56	5280	18.60	19.00	1.096	100	1.000	-0.12	0.044	0.048
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5/6	56	5280	18.70	19.00	1.072	100	1.000	-0.12	0.250	0.268
97	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5/6	52	5260	18.50	19.00	1.122	100	1.000	-0.09	0.164	0.184
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5/6	52	5260	18.50	19.00	1.122	100	1.000	-0.09	0.434	0.487
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5/6	60	5300	18.80	19.00	1.047	100	1.000	-0.14	0.051	0.053
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5/6	60	5300	18.50	19.00	1.122	100	1.000	-0.14	0.279	0.313
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5/6	64	5320	18.40	19.00	1.148	100	1.000	-0.17	0.119	0.137
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5/6	64	5320	18.20	19.00	1.202	100	1.000	-0.17	0.291	0.350
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(4)	4/5	144	5720	17.00	17.50	1.122	100	1.000	-0.13	0.076	0.085
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(3)	4/5	144	5720	18.70	19.00	1.072	100	1.000	-0.13	0.047	0.050
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5	144	5720	17.00	17.50	1.122	100	1.000	-0.14	0.123	0.138
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5	144	5720	18.70	19.00	1.072	100	1.000	-0.14	0.032	0.034
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5	100	5500	16.50	17.50	1.259	100	1.000	-0.15	0.128	0.161
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5	100	5500	18.90	19.00	1.023	100	1.000	-0.15	0.213	0.218
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5	116	5580	18.60	19.00	1.096	100	1.000	-0.18	0.115	0.126
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5	124	5620	16.50	17.50	1.259	100	1.000	-0.19	0.131	0.165
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5	124	5620	18.50	19.00	1.122	100	1.000	-0.19	0.089	0.100
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5	132	5660	17.00	17.50	1.122	100	1.000	-0.04	0.127	0.142
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5	132	5660	18.50	19.00	1.122	100	1.000	-0.04	0.052	0.058
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(4)	6	144	5720	18.60	19.00	1.096	100	1.000	-0.15	0.160	0.175
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(3)	6	144	5720	19.00	19.00	1.000	100	1.000	-0.15	0.077	0.077
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	6	144	5720	18.60	19.00	1.096	100	1.000	-0.18	0.230	0.252
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	6	144	5720	19.00	19.00	1.000	100	1.000	-0.18	0.060	0.060
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	6	100	5500	17.90	19.00	1.288	100	1.000	-0.1	0.185	0.238
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	6	100	5500	19.00	19.00	1.000	100	1.000	-0.1	0.225	0.225
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	6	116	5580	18.40	19.00	1.148	100	1.000	-0.17	0.167	0.192
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	6	116	5580	18.90	19.00	1.023	100	1.000	-0.17	0.127	0.130
98	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	6	124	5620	17.60	19.00	1.380	100	1.000	-0.14	0.187	0.258
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	6	124	5620	18.90	19.00	1.023	100	1.000	-0.14	0.106	0.108
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	6	132	5660	18.10	19.00	1.230	100	1.000	-0.13	0.170	0.209
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	6	132	5660	18.80	19.00	1.047	100	1.000	-0.13	0.064	0.067
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(4)	4/5/6	165	5825	18.30	19.00	1.175	100	1.000	-0.01	0.156	0.183
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(3)	4/5/6	165	5825	18.90	19.00	1.023	100	1.000	-0.01	0.079	0.081
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5/6	165	5825	18.30	19.00	1.175	100	1.000	-0.07	0.284	0.334
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5/6	165	5825	18.90	19.00	1.023	100	1.000	-0.07	0.044	0.045
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5/6	149	5745	18.30	19.00	1.175	100	1.000	-0.12	0.180	0.211
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5/6	149	5745	18.60	19.00	1.096	100	1.000	-0.12	0.026	0.029
99	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5/6	157	5785	18.30	19.00	1.175	100	1.000	-0.12	0.304	0.357
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5/6	157	5785	18.70	19.00	1.072	100	1.000	-0.12	0.038	0.041
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(4)	4/5	173	5865	17.40	17.50	1.023	100	1.000	0.1	0.155	0.159
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(3)	4/5	173	5865	19.00	19.00	1.000	100	1.000	0.1	0.125	0.125
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5	173	5865	17.40	17.50	1.023	100	1.000	-0.08	0.283	0.290
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5	173	5865	19.00	19.00	1.000	100	1.000	-0.08	0.113	0.113
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5	169	5845	17.20	17.50	1.072	100	1.000	-0.07	0.273	0.293
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5	169	5845	18.90	19.00	1.023	100	1.000	-0.07	0.111	0.114
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	4/5	177	5885	17.30	17.50	1.047	100	1.000	-0.02	0.244	0.255
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	4/5	177	5885	18.90	19.00	1.023	100	1.000	-0.02	0.110	0.113
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(4)	6	177	5885	18.20	19.00	1.202	100	1.000	-0.17	0.089	0.107
	WLAN5GHZ	802.11a 6Mbps	Front	10mm	Ant 4+3(3)	6	177	5885	18.70	19.00	1.072	100	1.000	-0.17	0.062	0.066
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	6	177	5885	18.20	19.00	1.202	100	1.000	-0.14	0.195	0.234
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	6	177	5885	18.70	19.00	1.072	100	1.000	-0.14	0.063	0.068
100	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	6	169	5845	17.60	19.00	1.380	100	1.000	-0.02	0.226	0.312
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	6	169	5845	18.40	19.00	1.148	100	1.000	-0.02	0.069	0.079
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(4)	6	173	5865	17.70	19.00	1.349	100	1.000	-0.01	0.229	0.309
	WLAN5GHZ	802.11a 6Mbps	Back	10mm	Ant 4+3(3)	6	173	5865	18.30	19.00	1.175	100	1.000	-0.01	0.080	0.094



<6GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)	Measured APD (W/m^2)	Reported APD (W/m^2)
	WLAN6GHz	802.11ax-HE80 MCS0	Front	10mm	Ant 4+3(4)	4/5/6	215	7025	11.70	12.00	1.072	98.87	1.011	0.1	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Front	10mm	Ant 4+3(3)	4/5/6	215	7025	11.90	12.00	1.023	98.87	1.011	0.1	0.040	0.041	0.253	0.262
101	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(4)	4/5/6	215	7025	11.70	12.00	1.072	98.87	1.011	0.19	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(3)	4/5/6	215	7025	11.90	12.00	1.023	98.87	1.011	0.19	0.160	0.166	1.190	1.231
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(4)	4/5/6	7	5985	8.20	9.00	1.202	98.87	1.011	0.06	0.006	0.007	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(3)	4/5/6	7	5985	7.80	9.00	1.318	98.87	1.011	0.06	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(4)	4/5/6	71	6305	8.70	9.00	1.072	98.87	1.011	0.07	0.051	0.055	0.423	0.458
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(3)	4/5/6	71	6305	7.80	9.00	1.318	98.87	1.011	0.07	0.029	0.039	0.259	0.345
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(4)	4/5/6	119	6545	7.20	9.00	1.514	98.87	1.011	-0.08	0.001	0.002	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(3)	4/5/6	119	6545	9.00	9.00	1.000	98.87	1.011	-0.08	0.078	0.079	0.616	0.623
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(4)	4/5/6	167	6785	7.90	9.00	1.288	98.87	1.011	0.01	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(3)	4/5/6	167	6785	8.20	9.00	1.202	98.87	1.011	0.01	0.097	0.118	0.768	0.933

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	Bluetooth	1Mbps	Front	10mm	Ant 4	2/3	78	2480	19.74	20.00	1.062	76.83	1.084	-0.16	0.216	0.249
	Bluetooth	1Mbps	Back	10mm	Ant 4	2/3	78	2480	19.74	20.00	1.062	76.83	1.084	-0.16	0.272	0.313
	Bluetooth	1Mbps	Back	10mm	Ant 4	2/3	0	2402	19.44	20.00	1.138	76.83	1.084	-0.12	0.259	0.319
	Bluetooth	1Mbps	Back	10mm	Ant 4	2/3	39	2441	19.63	20.00	1.089	76.83	1.084	-0.13	0.279	0.329
	Bluetooth	1Mbps	Front	10mm	Ant 3	2/3	78	2480	19.59	20.00	1.099	76.83	1.084	-0.1	0.257	0.306
	Bluetooth	1Mbps	Back	10mm	Ant 3	2/3	78	2480	19.59	20.00	1.099	76.83	1.084	-0.09	0.263	0.313
	Bluetooth	1Mbps	Back	10mm	Ant 3	2/3	0	2402	19.07	20.00	1.239	76.83	1.084	-0.11	0.231	0.310
102	Bluetooth	1Mbps	Back	10mm	Ant 3	2/3	39	2441	19.47	20.00	1.130	76.83	1.084	-0.16	0.276	0.338
	Bluetooth	1Mbps	Front	10mm	Ant 4	4	78	2480	14.80	15.00	1.047	76.83	1.084	-0.01	0.062	0.070
	Bluetooth	1Mbps	Back	10mm	Ant 4	4	78	2480	14.80	15.00	1.047	76.83	1.084	0.03	0.066	0.075
	Bluetooth	1Mbps	Back	10mm	Ant 4	4	0	2402	14.30	15.00	1.175	76.83	1.084	0.18	0.077	0.098
	Bluetooth	1Mbps	Back	10mm	Ant 4	4	39	2441	14.30	15.00	1.175	76.83	1.084	-0.15	0.069	0.088
	Bluetooth	1Mbps	Front	10mm	Ant 3	4	78	2480	14.60	15.00	1.096	76.83	1.084	-0.16	0.104	0.124
	Bluetooth	1Mbps	Front	10mm	Ant 3	4	0	2402	14.10	15.00	1.230	76.83	1.084	0.1	0.094	0.125
	Bluetooth	1Mbps	Front	10mm	Ant 3	4	39	2441	14.10	15.00	1.230	76.83	1.084	0.05	0.106	0.141
	Bluetooth	1Mbps	Back	10mm	Ant 3	4	78	2480	14.60	15.00	1.096	76.83	1.084	0.15	0.082	0.097



15.4 Product Specific SAR

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	0mm	5	18900	1880	22.77	23.30	1.130	0.02	2.130	2.406
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	0mm	5	18700	1860	22.76	23.30	1.132	0	1.890	2.140
103	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	0mm	5	19100	1900	22.63	23.30	1.167	0.06	2.540	2.964
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	0mm	6	18900	1880	21.77	22.50	1.183	0.03	1.700	2.011
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	0mm	6	18700	1860	21.76	22.50	1.186	-0.15	1.510	1.791
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	0mm	6	19100	1900	21.59	22.50	1.233	-0.04	2.050	2.528
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	0mm	5	18900	1880	22.18	23.40	1.324	-0.11	2.160	2.861
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	0mm	5	18700	1860	22.16	23.40	1.330	-0.02	2.220	2.954
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	0mm	5	19100	1900	22.17	23.40	1.327	-0.03	2.070	2.748
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	0mm	6	18900	1880	22.18	22.60	1.102	-0.11	2.160	2.379
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	0mm	6	18700	1860	22.16	22.60	1.107	-0.02	2.220	2.457
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Side	0mm	6	19100	1900	22.17	22.60	1.104	-0.03	2.070	2.285
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	0mm	5	132322	1745	22.68	23.60	1.236	0.03	2.250	2.781
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	0mm	5	132072	1720	22.60	23.60	1.259	-0.11	1.980	2.493
104	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	0mm	5	132572	1770	22.57	23.60	1.268	-0.19	2.260	2.865
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	0mm	6	132322	1745	22.68	22.80	1.028	0.03	2.250	2.313
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	0mm	6	132072	1720	22.60	22.80	1.047	-0.11	1.980	2.073
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	0mm	6	132572	1770	22.57	22.80	1.054	-0.19	2.260	2.383



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(4)	4/5/6	56	5280	18.60	19.00	1.096	100	1.000	0.05	0.481	0.527
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(3)	4/5/6	56	5280	18.70	19.00	1.072	100	1.000	0.05	0.908	0.973
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(4)	4/5/6	56	5280	18.60	19.00	1.096	100	1.000	-0.06	0.298	0.327
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(3)	4/5/6	56	5280	18.70	19.00	1.072	100	1.000	-0.06	0.603	0.646
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(4)	4/5/6	56	5280	18.60	19.00	1.096	100	1.000	-0.17	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	4/5/6	56	5280	18.70	19.00	1.072	100	1.000	-0.17	1.220	1.307
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(4)	4/5/6	52	5260	18.50	19.00	1.122	100	1.000	-0.11	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	4/5/6	52	5260	18.50	19.00	1.122	100	1.000	-0.11	1.240	1.391
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(4)	4/5/6	60	5300	18.80	19.00	1.047	100	1.000	-0.11	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	4/5/6	60	5300	18.50	19.00	1.122	100	1.000	-0.11	1.300	1.459
105	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(4)	4/5/6	64	5320	18.40	19.00	1.148	100	1.000	-0.12	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	4/5/6	64	5320	18.20	19.00	1.202	100	1.000	-0.12	1.350	1.623
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(4)	4/5/6	56	5280	18.60	19.00	1.096	100	1.000	-0.14	0.599	0.657
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(3)	4/5/6	56	5280	18.70	19.00	1.072	100	1.000	-0.14	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5/6	56	5280	18.60	19.00	1.096	100	1.000	-0.09	0.575	0.630
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5/6	56	5280	18.70	19.00	1.072	100	1.000	-0.09	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(4)	4/5	144	5720	17.00	17.50	1.122	100	1.000	-0.07	0.381	0.427
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(3)	4/5	144	5720	18.70	19.00	1.072	100	1.000	-0.07	0.232	0.249
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(4)	4/5	144	5720	17.00	17.50	1.122	100	1.000	-0.09	0.195	0.219
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(3)	4/5	144	5720	18.70	19.00	1.072	100	1.000	-0.09	0.177	0.190
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(4)	4/5	144	5720	17.00	17.50	1.122	100	1.000	-0.05	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	4/5	144	5720	18.70	19.00	1.072	100	1.000	-0.05	0.381	0.408
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(4)	4/5	144	5720	17.00	17.50	1.122	100	1.000	-0.02	0.182	0.204
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(3)	4/5	144	5720	18.70	19.00	1.072	100	1.000	-0.02	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5	144	5720	17.00	17.50	1.122	100	1.000	-0.04	0.442	0.496
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5	144	5720	18.70	19.00	1.072	100	1.000	-0.04	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5	100	5500	16.50	17.50	1.259	100	1.000	-0.06	0.652	0.821
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5	100	5500	18.90	19.00	1.023	100	1.000	-0.06	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5	116	5580	17.00	17.50	1.122	100	1.000	0.09	0.483	0.542
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5	116	5580	18.60	19.00	1.096	100	1.000	0.09	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5	124	5620	16.50	17.50	1.259	100	1.000	-0.01	0.469	0.590
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5	124	5620	18.50	19.00	1.122	100	1.000	-0.01	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5	132	5660	17.00	17.50	1.122	100	1.000	-0.04	0.448	0.503
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5	132	5660	18.50	19.00	1.122	100	1.000	-0.04	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(4)	6	144	5720	18.60	19.00	1.096	100	1.000	-0.06	0.580	0.636
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(3)	6	144	5720	19.00	19.00	1.000	100	1.000	-0.06	0.328	0.328
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(4)	6	144	5720	18.60	19.00	1.096	100	1.000	-0.13	0.341	0.374
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(3)	6	144	5720	19.00	19.00	1.000	100	1.000	-0.13	0.223	0.223
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(4)	6	144	5720	18.60	19.00	1.096	100	1.000	-0.06	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	6	144	5720	19.00	19.00	1.000	100	1.000	-0.06	0.498	0.498
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(4)	6	144	5720	18.60	19.00	1.096	100	1.000	0.06	0.389	0.427
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(3)	6	144	5720	19.00	19.00	1.000	100	1.000	0.06	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	6	144	5720	18.60	19.00	1.096	100	1.000	-0.11	0.853	0.935
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	6	144	5720	19.00	19.00	1.000	100	1.000	-0.11	0.001	0.001
106	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	6	100	5500	17.90	19.00	1.288	100	1.000	-0.07	0.854	1.100
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	6	100	5500	19.00	19.00	1.000	100	1.000	-0.07	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	6	116	5580	18.40	19.00	1.148	100	1.000	0.06	0.725	0.832
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	6	116	5580	18.90	19.00	1.023	100	1.000	0.06	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	6	124	5620	17.60	19.00	1.380	100	1.000	-0.04	0.742	1.024
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	6	124	5620	18.90	19.00	1.023	100	1.000	-0.04	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	6	132	5660	18.10	19.00	1.230	100	1.000	-0.04	0.695	0.855
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	6	132	5660	18.80	19.00	1.047	100	1.000	-0.04	0.001	0.001



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(4)	4/5	173	5865	17.40	17.50	1.023	100	1.000	-0.02	0.758	0.776
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(3)	4/5	173	5865	19.00	19.00	1.000	100	1.000	-0.02	0.697	0.697
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(4)	4/5	173	5865	17.40	17.50	1.023	100	1.000	-0.17	0.404	0.413
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(3)	4/5	173	5865	19.00	19.00	1.000	100	1.000	-0.17	0.494	0.494
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(4)	4/5	173	5865	17.40	17.50	1.023	100	1.000	-0.19	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	4/5	173	5865	19.00	19.00	1.000	100	1.000	-0.19	0.911	0.911
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(4)	4/5	173	5865	17.40	17.50	1.023	100	1.000	-0.12	0.354	0.362
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(3)	4/5	173	5865	19.00	19.00	1.000	100	1.000	-0.12	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5	173	5865	17.40	17.50	1.023	100	1.000	-0.13	0.913	0.934
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5	173	5865	19.00	19.00	1.000	100	1.000	-0.13	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5	169	5845	17.20	17.50	1.072	100	1.000	-0.04	0.683	0.732
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5	169	5845	18.90	19.00	1.023	100	1.000	-0.04	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	4/5	177	5885	17.30	17.50	1.047	100	1.000	-0.05	0.645	0.675
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	4/5	177	5885	18.90	19.00	1.023	100	1.000	-0.05	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(4)	6	177	5885	18.20	19.00	1.202	100	1.000	-0.18	0.797	0.958
	WLAN5GHz	802.11a 6Mbps	Front	0mm	Ant 4+3(3)	6	177	5885	18.70	19.00	1.072	100	1.000	-0.18	0.652	0.699
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(4)	6	177	5885	18.20	19.00	1.202	100	1.000	-0.13	0.374	0.450
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Ant 4+3(3)	6	177	5885	18.70	19.00	1.072	100	1.000	-0.13	0.374	0.401
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(4)	6	177	5885	18.20	19.00	1.202	100	1.000	0.11	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	6	177	5885	18.70	19.00	1.072	100	1.000	0.11	0.906	0.971
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(4)	6	177	5885	18.20	19.00	1.202	100	1.000	0.17	0.609	0.732
	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 4+3(3)	6	177	5885	18.70	19.00	1.072	100	1.000	0.17	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	6	177	5885	18.20	19.00	1.202	100	1.000	0.04	0.860	1.034
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	6	177	5885	18.70	19.00	1.072	100	1.000	0.04	0.001	0.001
107	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	6	169	5845	17.60	19.00	1.380	100	1.000	0.09	0.888	1.226
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	6	169	5845	18.40	19.00	1.148	100	1.000	0.09	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(4)	6	173	5865	17.70	19.00	1.349	100	1.000	0.09	0.877	1.183
	WLAN5GHz	802.11a 6Mbps	Top Side	0mm	Ant 4+3(3)	6	173	5865	18.30	19.00	1.175	100	1.000	0.09	0.001	0.001

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	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)	Measured APD (W/m^2)	Reported APD (W/m^2)
	WLAN6GHz	802.11ax-HE80 MCS0	Front	0mm	Ant 4+3(4)	4/5/6	215	7025	11.70	12.00	1.072	98.87	1.011	0.1	0.076	0.082	1.850	2.005
	WLAN6GHz	802.11ax-HE80 MCS0	Front	0mm	Ant 4+3(3)	4/5/6	215	7025	11.90	12.00	1.023	98.87	1.011	0.1	0.121	0.125	2.940	3.041
108	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(4)	4/5/6	215	7025	11.70	12.00	1.072	98.87	1.011	0.17	0.046	0.050	1.050	1.138
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(3)	4/5/6	215	7025	11.90	12.00	1.023	98.87	1.011	0.17	0.180	0.186	4.200	4.344
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(4)	4/5/6	7	5985	8.20	9.00	1.202	98.87	1.011	0.1	0.023	0.028	0.608	0.739
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(3)	4/5/6	7	5985	7.80	9.00	1.318	98.87	1.011	0.1	0.024	0.032	0.626	0.834
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(4)	4/5/6	71	6305	8.70	9.00	1.072	98.87	1.011	0.1	0.067	0.073	1.030	1.116
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(3)	4/5/6	71	6305	7.80	9.00	1.318	98.87	1.011	0.1	0.050	0.067	1.180	1.572
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(4)	4/5/6	119	6545	7.20	9.00	1.514	98.87	1.011	0.04	0.011	0.017	0.257	0.393
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(3)	4/5/6	119	6545	9.00	9.00	1.000	98.87	1.011	0.04	0.130	0.131	3.010	3.043
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(4)	4/5/6	167	6785	7.90	9.00	1.288	98.87	1.011	0.08	0.012	0.016	0.290	0.378
	WLAN6GHz	802.11ax-HE80 MCS0	Back	0mm	Ant 4+3(3)	4/5/6	167	6785	8.20	9.00	1.202	98.87	1.011	0.08	0.145	0.176	3.390	4.120
	WLAN6GHz	802.11ax-HE80 MCS0	Left Side	0mm	Ant 4+3(4)	4/5/6	215	7025	11.70	12.00	1.072	98.87	1.011	0.17	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Left Side	0mm	Ant 4+3(3)	4/5/6	215	7025	11.90	12.00	1.023	98.87	1.011	0.17	0.173	0.179	3.470	3.589
	WLAN6GHz	802.11ax-HE80 MCS0	Right Side	0mm	Ant 4+3(4)	4/5/6	215	7025	11.70	12.00	1.072	98.87	1.011	0.14	0.029	0.031	0.690	0.748
	WLAN6GHz	802.11ax-HE80 MCS0	Right Side	0mm	Ant 4+3(3)	4/5/6	215	7025	11.90	12.00	1.023	98.87	1.011	0.14	0.001	0.001	0.000	0.000
	WLAN6GHz	802.11ax-HE80 MCS0	Top Side	0mm	Ant 4+3(4)	4/5/6	215	7025	11.70	12.00	1.072	98.87	1.011	0.09	0.022	0.024	0.534	0.579
	WLAN6GHz	802.11ax-HE80 MCS0	Top Side	0mm	Ant 4+3(3)	4/5/6	215	7025	11.90	12.00	1.023	98.87	1.011	0.09	0.009	0.009	0.190	0.197



15.5 6GHz PD Test Result

Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Grid Step (λ)	iPDn	iPD ratio (≥ -1)	Normal psPD (W/m ²)	Total psPD (W/m ²)
WLAN6GHz	802.11ax-HE80 MCS0	Back	2mm	Ant 4+3(3)	7	5985	7.80	0.0625	2.85	-0.76634057	1.38	1.45
WLAN6GHz	802.11ax-HE80 MCS0	Back	10mm	Ant 4+3(3)	7	5985	7.80	0.25	3.4		1.94	2.06
WLAN6GHz	802.11ax-HE80 MCS0	Back	2mm	Ant 4+3(3)	215	7025	11.90	0.0625	1.82	-0.84320886	3.04	3.73
WLAN6GHz	802.11ax-HE80 MCS0	Back	8.59mm	Ant 4+3(3)	215	7025	11.90	0.25	2.21		1.65	1.73

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Grid Step (λ)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m ²)	Scaled Normal psPD (W/m ²)	Total psPD (W/m ²)	Scaled Total psPD (W/m ²)
	WLAN6GHz	802.11ax-HE80 MCS0	Front	2mm	Ant 4+3(4)	7	5985	8.20	9.00	1.202	98.87	1.011	0.0625	1.5535	0.11	2.03	3.83	2.13	4.02
	WLAN6GHz	802.11ax-HE80 MCS0	Front	2mm	Ant 4+3(4)	71	6305	8.70	9.00	1.072	98.87	1.011	0.0625	1.5535	-0.09	1.95	3.28	2.09	3.52
	WLAN6GHz	802.11ax-HE80 MCS0	Front	2mm	Ant 4+3(3)	119	6545	9.00	9.00	1.000	98.87	1.011	0.0625	1.5535	-0.15	2.07	3.25	2.14	3.36
	WLAN6GHz	802.11ax-HE80 MCS0	Front	2mm	Ant 4+3(3)	167	6785	8.20	9.00	1.202	98.87	1.011	0.0625	1.5535	-0.17	1.68	3.17	1.72	3.25
	WLAN6GHz	802.11ax-HE80 MCS0	Front	2mm	Ant 4+3(3)	215	7025	11.90	12.00	1.023	98.87	1.011	0.0625	1.5535	0.16	2.33	3.74	2.80	4.50
	WLAN6GHz	802.11ax-HE80 MCS0	Back	2mm	Ant 4+3(3)	7	5985	7.80	9.00	1.318	98.87	1.011	0.0625	1.5535	0.17	1.38	2.86	1.45	3.00
	WLAN6GHz	802.11ax-HE80 MCS0	Back	2mm	Ant 4+3(4)	71	6305	8.70	9.00	1.072	98.87	1.011	0.0625	1.5535	0.16	1.64	2.76	1.73	2.91
109	WLAN6GHz	802.11ax-HE80 MCS0	Back	2mm	Ant 4+3(3)	119	6545	9.00	9.00	1.000	98.87	1.011	0.0625	1.5535	-0.18	3.65	5.73	4.28	6.72
	WLAN6GHz	802.11ax-HE80 MCS0	Back	2mm	Ant 4+3(3)	167	6785	8.20	9.00	1.202	98.87	1.011	0.0625	1.5535	-0.15	1.54	2.91	1.98	3.74
	WLAN6GHz	802.11ax-HE80 MCS0	Back	2mm	Ant 4+3(3)	215	7025	11.90	12.00	1.023	98.87	1.011	0.0625	1.5535	-0.18	3.04	4.89	3.73	5.99
	WLAN6GHz	802.11ax-HE80 MCS0	Left Side	2mm	Ant 4+3(3)	215	7025	11.90	12.00	1.023	98.87	1.011	0.0625	1.5535	0.1	2.37	3.81	2.38	3.83
	WLAN6GHz	802.11ax-HE80 MCS0	Right Side	2mm	Ant 4+3(4)	215	7025	11.70	12.00	1.072	98.87	1.011	0.0625	1.5535	0.1	3.03	5.10	3.04	5.12
	WLAN6GHz	802.11ax-HE80 MCS0	Top Side	2mm	Ant 4+3(4)	215	7025	11.70	12.00	1.072	98.87	1.011	0.0625	1.5535	0.13	0.411	0.69	0.405	0.68



15.6 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	2	128	824.2	25.69	26.80	1.291	0.04	0.847	-	1.094
2nd	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	2	128	824.2	25.69	26.80	1.291	0.03	0.825	1.03	1.065
1st	LTE Band 71_Ant 1	20M_QPSK_1_0	Right Cheek	0mm	2	133297	680.5	22.22	23.40	1.312	-0.12	0.909	-	1.193
2nd	LTE Band 71_Ant 1	20M_QPSK_1_0	Right Cheek	0mm	2	133297	680.5	22.22	23.40	1.312	0.03	0.899	1.01	1.180
1st	FR1 n41_Ant 2	100M_BPSK_135_69	Right Cheek	0mm	2	518598	2592.99	24.70	25.50	1.202	-0.16	0.971	-	1.167
2nd	FR1 n41_Ant 2	100M_BPSK_135_69	Right Cheek	0mm	2	518598	2592.99	24.70	25.50	1.202	-0.06	0.964	1.01	1.159
1st	FR1 n48_Ant 2	10M_BPSK_1_1	Right Cheek	0mm	2/3	637000	3555	23.90	24.70	1.202	0.09	0.815	-	0.980
2nd	FR1 n48_Ant 2	10M_BPSK_1_1	Right Cheek	0mm	2/3	637000	3555	23.90	24.70	1.202	0.01	0.801	1.02	0.963
1st	FR1 n77_Ant 1	100M_BPSK_1_1	Right Cheek	0mm	2	656000	3840	19.65	21.20	1.429	-0.12	0.834	-	1.192
2nd	FR1 n77_Ant 1	100M_BPSK_1_1	Right Cheek	0mm	2	656000	3840	19.65	21.20	1.429	-0.05	0.759	1.10	1.085
1st	LTE Band 2_Ant 5	20M_QPSK_1_0	Right Side	10mm	4	18700	1860	22.16	22.20	1.009	0.19	0.975	-	0.984
2nd	LTE Band 2_Ant 5	20M_QPSK_1_0	Right Side	10mm	4	18700	1860	22.16	22.20	1.009	0.06	0.962	1.01	0.971
1st	LTE Band 66_Ant 1	20M_QPSK_50_0	Top Side	10mm	4	132572	1770	24.11	24.70	1.146	0.11	0.815	-	0.934
2nd	LTE Band 66_Ant 1	20M_QPSK_50_0	Top Side	10mm	4	132572	1770	24.11	24.70	1.146	-0.03	0.801	1.02	0.918
1st	FR1 n30_Ant 0	10M_BPSK_1_1	Left Side	10mm	4	462000	2310	23.60	23.60	1.000	-0.06	0.984	-	0.984
2nd	FR1 n30_Ant 0	10M_BPSK_1_1	Left Side	10mm	4	462000	2310	23.60	23.60	1.000	-0.01	0.976	1.01	0.976

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	0mm	5	19100	1900	22.63	23.30	1.167	0.06	2.540	-	2.964
2nd	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	0mm	5	19100	1900	22.63	23.30	1.167	0.03	2.510	1.01	2.929
1st	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	0mm	5	132572	1770	22.57	23.60	1.268	-0.19	2.260	-	2.865
2nd	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	0mm	5	132572	1770	22.57	23.60	1.268	-0.05	2.150	1.05	2.725



No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	2	13	2472	15.10	15.50	1.096	98.2	1.018	0.12	0.212	-	0.237
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	2	13	2472	15.70	16.00	1.072	98.2	1.018	0.12	1.060		1.156
2nd	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(4)	2	13	2472	15.10	15.50	1.096	98.2	1.018	-0.1	0.324	1.17	0.362
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4+3(3)	2	13	2472	15.70	16.00	1.072	98.2	1.018	-0.1	0.904		0.986
1st	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	64	5320	18.80	19.00	1.047	100	1.000	0.17	0.450	-	0.471
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	64	5320	15.30	15.50	1.047	100	1.000	0.17	0.995		1.042
2nd	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	64	5320	18.80	19.00	1.047	100	1.000	0.06	0.436	1.01	0.457
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	64	5320	15.30	15.50	1.047	100	1.000	0.06	0.990		1.037
1st	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	100	5500	15.00	15.00	1.000	100	1.000	0.16	1.040	-	1.040
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	100	5500	18.80	19.00	1.047	100	1.000	0.16	0.616		0.645
2nd	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	100	5500	15.00	15.00	1.000	100	1.000	0.03	1.020	1.02	1.020
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	100	5500	18.80	19.00	1.047	100	1.000	0.03	0.610		0.639
1st	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	165	5825	16.80	17.00	1.047	100	1.000	0.13	1.030	-	1.079
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	165	5825	19.00	19.00	1.000	100	1.000	0.13	0.586		0.586
2nd	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	165	5825	16.80	17.00	1.047	100	1.000	0.1	1.000	1.03	1.047
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	165	5825	19.00	19.00	1.000	100	1.000	0.1	0.570		0.570
1st	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	169	5845	16.90	17.00	1.023	100	1.000	-0.07	1.120	-	1.146
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	169	5845	19.00	19.00	1.000	100	1.000	-0.07	0.635		0.635
2nd	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	169	5845	16.90	17.00	1.023	100	1.000	0.04	1.100	1.02	1.126
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	169	5845	19.00	19.00	1.000	100	1.000	0.04	0.624		0.624

General Note:

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



15.7 LTE Band 41 Power Class 2 and Power Class 3 Linearity

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% 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 LTE 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, Separate SAR testing for Power Class 2 is not required
 Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is <10%

<LTE Band 41 Linearity Data for Head>

Ant 2	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25.70	27.50
Reported 1g SAR (W/kg)	0.882	0.877
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	235.18	243.49
Linearity SAR(W/kg)	0.91	
% deviation from expected linearity		-3.96%

Ant 0	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25.20	27.00
Reported 1g SAR (W/kg)	0.689	0.651
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	209.61	217.01
Linearity SAR(W/kg)	0.71	
% deviation from expected linearity		-8.74%

<LTE Band 41 Linearity Data for Hotspot>

Ant 2	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23.60	25.20
Reported 1g SAR (W/kg)	0.913	0.882
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	145.01	143.38
Linearity SAR(W/kg)	0.90	
% deviation from expected linearity		-2.30%
Ant 0	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23.40	25.00
Reported 1g SAR (W/kg)	0.971	0.949
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	138.49	136.93
Linearity SAR(W/kg)	0.96	
% deviation from expected linearity		-1.15%

<LTE Band 41 Linearity Data for Body-worn>

Ant 2	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23.80	25.40
Reported 1g SAR (W/kg)	0.679	0.661
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	151.85	150.14
Linearity SAR(W/kg)	0.67	
% deviation from expected linearity		-1.54%
Ant 0	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	24.10	25.70
Reported 1g SAR (W/kg)	0.624	0.558
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	162.71	160.87
Linearity SAR(W/kg)	0.62	
% deviation from expected linearity		-9.56%

16. Simultaneous Transmission Analysis

Exposure Condition	Tx mode	Capable TX Configurations	WWAN Power	WiFi Power	BT Power
Head	WWAN standalone	WWAN	Index 2		
	WiFi standalone	WiFi 2.4G MIMO/CDD (Ant4+3)		Index 2	
		WiFi 5G MIMO (Ant4+3)			
		WiFi 6E MIMO (Ant4+3)			
	WiFi +BT	WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4)		Index 2	Index 1
		WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant3)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant3)			
	WWAN + WiFi	WWAN + WiFi 2.4G MIMO/CDD (Ant4+3)		Index 3	Index 1
		WWAN + WiFi 5G MIMO (Ant4+3)			
		WWAN + WiFi 6E MIMO (Ant4+3)			
	WWAN + BT	WWAN + Bluetooth (Ant4)		Index 3	Index 1
		WWAN + Bluetooth (Ant3)			
	WWAN + WiFi +BT	WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4)		Index 3	Index 1
WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant3)					
WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4)					
WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant3)					
Body	WWAN standalone	WWAN	Index 5		
	WiFi standalone	WiFi 2.4G MIMO/CDD (Ant4+3)		Index 6	
		WiFi 5G MIMO (Ant4+3)			
		WiFi 6E MIMO (Ant4+3)			
	BT standalone	Bluetooth (Ant4)			Index 2
		Bluetooth (Ant3)			
	WiFi +BT	WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4)		Index 6	Index 3
		WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant3)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant3)			
	WWAN + WiFi	WWAN + WiFi 2.4G MIMO/CDD (Ant4+3)		Index 6 / Index 4 (Hotspot)	Index 4
		WWAN + WiFi 5G MIMO (Ant4+3)			
		WWAN + WiFi 6E MIMO (Ant4+3)			
	WWAN + BT	WWAN + Bluetooth (Ant4)		Index 6	Index 3
WWAN + Bluetooth (Ant3)					
WWAN + WiFi +BT	WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4)		Index 6 / Index 4 (Hotspot)	Index 5 / Index 3 (Hotspot)	
	WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant3)				
	WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4)				
	WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant3)				

General Note:

- Simultaneous operation at maximum power levels when the device is neither against the body nor the head (i.e. in a mobile RF exposure condition) is addressed in Sporton's RF Exposure report no.: FA241215-02A
- The Sim-Tx configuration combination include in operation description will be match the title in the below Sum-Tx evaluation table.
- This device only WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
- The worst case reported SAR from each transmit antennas were using for SAR summation. Therefore, the following summations represent the absolute worst cases for simultaneous transmission configuration.
- The SAR summation is calculated based on the same exposure configuration and test position from each transmit antenna worst case reported SAR results.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - Scalar SAR summation < 1.6W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, 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.
 - If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
- For WWAN power, when the device is in head mode and hotspot function is enabled, the device will select power index 7 which is further lower than power index 3, as described in the operational description. In this report, standalone and simultaneous SAR compliance for the mentioned scenario was justified at power index 3 conservatively.

**16.1 5G NR + LTE + WLAN + BT Sim-Tx analysis**

Samsung proprietary TAS feature manages transmitting power effectively in real time and ensures that overall average RF exposure from 4G/5G NR WWAN including 5G NR EN-DC, and LTE intra-band/inter-band uplink CA are in compliance with FCC requirements, while the RF exposure from 2G, 3G and WLAN/BT radios is managed using the legacy approach, i.e., through a fixed power back-off if needed. The test device features a TAS function to keep average RF exposure below the given limit for all cases while allowing temporarily high power transmission for better performance.

For the 5G NR EN-DC, the power ratio factors are g_1 and g_2 for LTE and NR respectively. The main purpose of these power ratio factors is to split the available SAR budget among different RATs, so $g_1 + g_2 \leq 1$. The value of g_1 is computed based on the need of the anchor (LTE) and can be changed if the anchor changes its power request. Based on the SAR Budget portion allocated to the anchor, the value of g_2 will be computed. At steady state (where all RATs are being on for a while), the allocated power ratio factors will guarantee that the total exposure ratio never exceeds the highest exposure of either one.

$$g_1 * LTE_{exposure} + g_2 * NR_{exposure} \leq 1.0,$$
$$then, g_1 * LTE_{exposure} + g_2 * NR_{exposure} \leq \max (LTE_{exposure} , NR_{exposure})$$

Compliance of simultaneous transmission of LTE+5G NR+WiFi+BT can be justified from the compliance of LTE+WiFi +BT and 5G NR+WiFi+BT

16.2 Head Exposure Conditions

<WWAN Index 3, WLAN Index 1, BT Index 1>

WWAN Band	Exposure Position	1	2	3	4	5	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	WLAN2.4GHz Ant 4+3 1g SAR (W/kg)	WLAN5/6GHz Ant 4+3 1g SAR (W/kg)	Bluetooth Ant 4 1g SAR (W/kg)	Bluetooth Ant 3 1g SAR (W/kg)				
WWAN Ant 0	Right Cheek	0.480	0.523	0.269	0.093	0.314	1.003	0.749	0.842	1.063
	Right Tilted	0.370	0.114	0.228	0.100	0.034	0.484	0.598	0.698	0.632
	Left Cheek	0.846	0.380	0.303	0.286	0.134	1.226	1.149	1.435	1.283
	Left Tilted	0.277	0.360	0.268	0.399	0.009	0.637	0.545	0.944	0.554
WWAN Ant 1	Right Cheek	0.992	0.523	0.269	0.093	0.314	1.515	1.261	1.354	1.575
	Right Tilted	0.950	0.114	0.228	0.100	0.034	1.064	1.178	1.278	1.212
	Left Cheek	0.822	0.380	0.303	0.286	0.134	1.202	1.125	1.411	1.259
	Left Tilted	0.640	0.360	0.268	0.399	0.009	1.000	0.908	1.307	0.917
WWAN Ant 2	Right Cheek	0.994	0.523	0.269	0.093	0.314	1.517	1.263	1.356	1.577
	Right Tilted	0.435	0.114	0.228	0.100	0.034	0.549	0.663	0.763	0.697
	Left Cheek	0.570	0.380	0.303	0.286	0.134	0.950	0.873	1.159	1.007
	Left Tilted	0.706	0.360	0.268	0.399	0.009	1.066	0.974	1.373	0.983
WWAN Ant 5	Right Cheek	0.585	0.523	0.269	0.093	0.314	1.108	0.854	0.947	1.168
	Right Tilted	0.112	0.114	0.228	0.100	0.034	0.226	0.340	0.440	0.374
	Left Cheek	0.980	0.380	0.303	0.286	0.134	1.360	1.283	1.569	1.417
	Left Tilted	0.288	0.360	0.268	0.399	0.009	0.648	0.556	0.955	0.565
WWAN Ant 6	Right Cheek	0.410	0.523	0.269	0.093	0.314	0.933	0.679	0.772	0.993
	Right Tilted	0.312	0.114	0.228	0.100	0.034	0.426	0.540	0.640	0.574
	Left Cheek	0.753	0.380	0.303	0.286	0.134	1.133	1.056	1.342	1.190
	Left Tilted	0.237	0.360	0.268	0.399	0.009	0.597	0.505	0.904	0.514

<WLAN Index 2, BT Index 1>

Exposure Position	1	2	3	4	2+3 Summed 1g SAR (W/kg)	2+4 Summed 1g SAR (W/kg)
	WLAN2.4GHz Ant 4+3 1g SAR (W/kg)	WLAN5/6GHz Ant 4+3 1g SAR (W/kg)	Bluetooth Ant 4 1g SAR (W/kg)	Bluetooth Ant 3 1g SAR (W/kg)		
Right Cheek	1.156	1.003	0.093	0.314	1.096	1.317
Right Tilted	0.338	0.937	0.100	0.034	1.037	0.971
Left Cheek	1.161	1.146	0.286	0.134	1.432	1.280
Left Tilted	1.172	0.951	0.399	0.009	1.350	0.960

16.3 Hotspot Exposure Conditions

<WWAN Index 4, WLAN Index 3, BT Index 4>

WWAN Band	Exposure Position	1	2	3	4	5	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	WLAN2.4GHz Ant 4+3 1g SAR (W/kg)	WLAN5GHz Ant 4+3 1g SAR (W/kg)	Bluetooth Ant 4 1g SAR (W/kg)	Bluetooth Ant 3 1g SAR (W/kg)				
WWAN Ant 0	Front	0.650	0.377	0.207	0.070	0.124	1.027	0.857	0.927	0.981
	Back	0.654	0.321	0.295	0.075	0.097	0.975	0.949	1.024	1.046
	Left side	0.984	0.507	0.223	0.001	0.255	1.491	1.207	1.208	1.462
	Right side	0.455	0.427	0.189	0.099	0.001	0.882	0.644	0.743	0.645
	Top side		0.427	0.388	0.214	0.017	0.427	0.388	0.602	0.405
	Bottom side	0.641					0.641	0.641	0.641	0.641
WWAN Ant 1	Front	0.617	0.377	0.207	0.070	0.124	0.994	0.824	0.894	0.948
	Back	0.598	0.321	0.295	0.075	0.097	0.919	0.893	0.968	0.990
	Left side	0.407	0.507	0.223	0.001	0.255	0.914	0.630	0.631	0.885
	Right side	0.254	0.427	0.189	0.099	0.001	0.681	0.443	0.542	0.444
	Top side	0.988	0.427	0.388	0.214	0.017	1.415	1.376	1.590	1.393
	Bottom side						0.000	0.000	0.000	0.000
WWAN Ant 2	Front	0.991	0.377	0.207	0.070	0.124	1.368	1.198	1.268	1.322
	Back	0.913	0.321	0.295	0.075	0.097	1.234	1.208	1.283	1.305
	Left side	0.170	0.507	0.223	0.001	0.255	0.677	0.393	0.394	0.648
	Right side	0.992	0.427	0.189	0.099	0.001	1.419	1.181	1.280	1.182
	Top side		0.427	0.388	0.214	0.017	0.427	0.388	0.602	0.405
	Bottom side	0.684					0.684	0.684	0.684	0.684
WWAN Ant 5	Front	0.688	0.377	0.207	0.070	0.124	1.065	0.895	0.965	1.019
	Back	0.613	0.321	0.295	0.075	0.097	0.934	0.908	0.983	1.005
	Left side	0.077	0.507	0.223	0.001	0.255	0.584	0.300	0.301	0.555
	Right side	0.984	0.427	0.189	0.099	0.001	1.411	1.173	1.272	1.174
	Top side	0.232	0.427	0.388	0.214	0.017	0.659	0.620	0.834	0.637
	Bottom side						0.000	0.000	0.000	0.000
WWAN Ant 6	Front	0.608	0.377	0.207	0.070	0.124	0.985	0.815	0.885	0.939
	Back	0.430	0.321	0.295	0.075	0.097	0.751	0.725	0.800	0.822
	Left side	0.680	0.507	0.223	0.001	0.255	1.187	0.903	0.904	1.158
	Right side	0.028	0.427	0.189	0.099	0.001	0.455	0.217	0.316	0.218
	Top side		0.427	0.388	0.214	0.017	0.427	0.388	0.602	0.405
	Bottom side	0.344					0.344	0.344	0.344	0.344

16.4 Body-Worn Accessory Exposure Conditions

<WWAN Index 6, WLAN Index 4,5, BT Index 4>

WWAN Band	Exposure Position	1	2	3	4	5	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	WLAN2.4GHz Ant 4+3 1g SAR (W/kg)	WLAN5/6GHz Ant 4+3 1g SAR (W/kg)	Bluetooth Ant 4 1g SAR (W/kg)	Bluetooth Ant 3 1g SAR (W/kg)				
WWAN Ant 0	Front	0.781	0.484	0.183	0.070	0.141	1.265	0.964	1.034	1.105
	Back	0.786	0.548	0.487	0.098	0.097	1.334	1.273	1.371	1.370
WWAN Ant 1	Front	0.804	0.484	0.183	0.070	0.141	1.288	0.987	1.057	1.128
	Back	0.734	0.548	0.487	0.098	0.097	1.282	1.221	1.319	1.318
WWAN Ant 2	Front	0.991	0.484	0.183	0.070	0.141	1.475	1.174	1.244	1.315
	Back	0.783	0.548	0.487	0.098	0.097	1.331	1.270	1.368	1.367
WWAN Ant 5	Front	0.715	0.484	0.183	0.070	0.141	1.199	0.898	0.968	1.039
	Back	0.528	0.548	0.487	0.098	0.097	1.076	1.015	1.113	1.112
WWAN Ant 6	Front	0.608	0.484	0.183	0.070	0.141	1.092	0.791	0.861	0.932
	Back	0.430	0.548	0.487	0.098	0.097	0.978	0.917	1.015	1.014

<WLAN Index 6, BT Index 3>

Exposure Position	1	2	3	4	2+3 Summed 1g SAR (W/kg)	2+4 Summed 1g SAR (W/kg)
	WLAN2.4GHz Ant 4+3 1g SAR (W/kg)	WLAN5/6GHz Ant 4+3 1g SAR (W/kg)	Bluetooth Ant 4 1g SAR (W/kg)	Bluetooth Ant 3 1g SAR (W/kg)		
Front	0.484	0.183	0.249	0.306	0.432	0.489
Back	0.548	0.487	0.329	0.338	0.816	0.825

<WWAN Index 6, BT Index 3>

WWAN Band	Exposure Position	1	2	3	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	Bluetooth Ant 4 1g SAR (W/kg)	Bluetooth Ant 3 1g SAR (W/kg)		
WWAN Ant 0	Front	0.781	0.249	0.306	1.030	1.087
	Back	0.786	0.329	0.338	1.115	1.124
WWAN Ant 1	Front	0.804	0.249	0.306	1.053	1.110
	Back	0.734	0.329	0.338	1.063	1.072
WWAN Ant 2	Front	0.991	0.249	0.306	1.240	1.297
	Back	0.783	0.329	0.338	1.112	1.121
WWAN Ant 5	Front	0.715	0.249	0.306	0.964	1.021
	Back	0.528	0.329	0.338	0.857	0.866
WWAN Ant 6	Front	0.608	0.249	0.306	0.857	0.914
	Back	0.430	0.329	0.338	0.759	0.768



16.5 Product Specific Exposure Conditions

<WWAN Index 6, WLAN Index 4>

WWAN Band	Exposure Position	1	2	1+2 Summed 10g SAR (W/kg)
		WWAN 10g SAR (W/kg)	WLAN5/6GHz Ant 4+3 10g SAR (W/kg)	
WWAN Ant 0	Front		0.973	0.973
	Back		0.646	0.646
	Left side		1.623	1.623
	Right side		0.657	0.657
	Top side		0.934	0.934
	Bottom side			0.000
WWAN Ant 1	Front		0.973	0.973
	Back		0.646	0.646
	Left side		1.623	1.623
	Right side		0.657	0.657
	Top side	2.528	0.934	3.462
	Bottom side			0.000
WWAN Ant 2	Front		0.973	0.973
	Back		0.646	0.646
	Left side		1.623	1.623
	Right side		0.657	0.657
	Top side		0.934	0.934
	Bottom side			0.000
WWAN Ant 5	Front		0.973	0.973
	Back		0.646	0.646
	Left side		1.623	1.623
	Right side	2.457	0.657	3.114
	Top side		0.934	0.934
	Bottom side			0.000
WWAN Ant 6	Front		0.973	0.973
	Back		0.646	0.646
	Left side		1.623	1.623
	Right side		0.657	0.657
	Top side		0.934	0.934
	Bottom side			0.000



17. Supplemental Antenna tuner tests results

General Note:

1. This device implements antenna tuning techniques in the several frequency band and list as below. SAR test proposal was measured according to the normally required SAR configurations with the tuner active and worst tune state (auto tune) was used for SAR testing and this design will provide the highest power at different user scenarios and would not influence to the antenna characteristics other than impedance matching.
2. The following test procedure was followed to demonstrate that the SAR results in this report represent the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR will be measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements will be evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values.
3. The number of supported tune codes is different for each frequency band as shown in the following table.
4. Dynamic antenna tuning mechanism is available at Ant. 0 and for its < 3GHz LTE and NR band, details are illustrated in the operational description. In this section, all supported tuning states for each band are tested and it's verified that auto-tune state results in the highest SAR configuration.
5. The tuner state was established remotely through Wi-Fi so that the device is not moved for the entire series of single point SAR for the tuner states in each combination (band, mode, exposure conditions).

Antenna configuration	
Transmit switching diversity configuration	Support transmit antenna and band
TX0	ANT 0: LTE B5/B12/B13/B14/B17/B26/B71, FR1 n5/12/14/71

Antenna	Band	Number of tuning states
Ant0(LB)	LTE B5/26, FR1 n5	40
	LTE B12/17, FR1 n12	49
	LTE B13	21
	LTE B14, FR1 n14	20
	LTE B71, FR1 n71	48



17.1 Supplemental Head SAR results

RF exposure position											Average Value of Time Sweep Single Point SAR (W/kg)																					
Band	Mode	Channel		Test Position	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Default-Tuner (State)	Default-Tuner Single Point SAR (W/kg)	Auto-Tuner (State)	Auto-Tuner Single Point SAR (W/kg)																						
Head (Ant0)	LTE Band 12/17	10M_QPSK_1_0	Middle	23095	Left Cheek	0.291	0.398	13	0.312	13	0.315	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
												0.242	0.180	0.241	0.193	0.182	0.304	0.236	0.154	0.177	0.052	0.069	0.183	0.312	0.284	0.179	0.053	0.053	0.044	0.098	0.047	0.180
												22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
												0.179	0.309	0.271	0.171	0.051	0.303	0.050	0.051	0.123	0.001	0.188	0.124	0.185	0.151	0.239	0.267	0.001	0.044	0.125	0.273	0.001
												43	44	45	46	47	48	49														
	0.001	0.070	0.243	0.207	0.165	0.168	0.001																									
	LTE Band 13	10M_QPSK_1_0	Middle	23230	Left Cheek	0.333	0.457	17	0.405	17	0.406	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
												0.298	0.225	0.305	0.210	0.226	0.301	0.386	0.369	0.127	0.070	0.071	0.227	0.401	0.075	0.071	0.404	0.405	0.396	0.154	0.208	0.069
												1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
												0.360	0.280	0.303	0.281	0.353	0.433	0.397	0.130	0.221	0.091	0.091	0.114	0.452	0.090	0.092	0.281	0.159	0.078	0.074	0.104	
1												2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
0.392	0.388	0.419	0.388	0.402	0.378	0.130	0.214	0.393	0.381	0.389	0.173	0.171	0.405	0.372	0.150	0.151	0.215	0.385	0.128	0.172												
LTE Band 14	10M_QPSK_1_0	Middle	23330	Left Cheek	0.354	0.474	13	0.452	13	0.454	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
											0.216	0.392	0.318	0.213	0.193	0.170	0.141	0.235	0.399	0.387	0.392	0.279	0.219	0.173	0.171	0.174	0.206	0.182	0.180			
											1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
											0.198	0.129	0.193	0.163	0.129	0.257	0.212	0.190	0.181	0.001	0.058	0.196	0.213	0.282	0.279	0.001	0.001	0.129	0.061	0.271	0.284	
											22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
0.001	0.001	0.001	0.047	0.129	0.204	0.168	0.257	0.186	0.134	0.001	0.045	0.074	0.301	0.001	0.001	0.001	0.070	0.131	0.215	0.046												
LTE Band 5/26	15M_QPSK_1_0	Middle	26865	Left Cheek	0.353	0.466	3	0.419	3	0.421	43	44	45	46	47	48																
											0.049	0.214	0.001	0.001	0.297	0.001																
											1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
											0.198	0.129	0.193	0.163	0.129	0.257	0.212	0.190	0.181	0.001	0.058	0.196	0.213	0.282	0.279	0.001	0.001	0.129	0.061	0.271	0.284	
											22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
0.001	0.001	0.001	0.047	0.129	0.204	0.168	0.257	0.186	0.134	0.001	0.045	0.074	0.301	0.001	0.001	0.001	0.070	0.131	0.215	0.046												
LTE Band 71	20M_QPSK_1_0	Middle	133297	Left Cheek	0.238	0.309	35	0.301	35	0.305	43	44	45	46	47	48																
											0.062	0.259	0.043	0.035	0.244	0.035																
											1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
											0.223	0.156	0.225	0.188	0.155	0.275	0.226	0.176	0.183	0.046	0.072	0.224	0.259	0.284	0.242	0.043	0.043	0.157	0.078	0.274	0.247	
											22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
0.043	0.028	0.039	0.060	0.157	0.226	0.190	0.274	0.184	0.157	0.043	0.056	0.091	0.285	0.043	0.043	0.039	0.265	0.156	0.220	0.057												
FR1 n5_Ant 0	20M_BPSK_50_28	Middle	167300	Left Cheek	0.330	0.415	4	0.374	4	0.375	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
											0.370	0.322	0.288	0.375	0.240	0.198	0.097	0.191	0.253	0.309	0.191	0.216	0.190	0.373	0.218	0.229	0.225	0.213	0.134	0.218	0.228	
											22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40			
											0.220	0.353	0.370	0.240	0.279	0.219	0.279	0.194	0.192	0.373	0.332	0.356	0.371	0.369	0.169	0.219	0.217	0.251	0.193			
											1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
0.256	0.215	0.255	0.226	0.215	0.276	0.242	0.145	0.176	0.065	0.086	0.212	0.277	0.227	0.175	0.066	0.065	0.057	0.118	0.060	0.210												
FR1 n12_Ant 0	15M_BPSK_36_22	Middle	141500	Left Cheek	0.271	0.350	13	0.275	13	0.277	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
											0.212	0.276	0.236	0.173	0.065	0.270	0.065	0.067	0.120	0.048	0.213	0.149	0.213	0.168	0.271	0.273	0.041	0.053	0.148	0.276	0.041	
											1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
											0.038	0.083	0.268	0.248	0.168	0.167	0.027															
											43	44	45	46	47	48	49															
FR1 n14_Ant 0	10M_BPSK_25_14	Middle	158600	Left Cheek	0.335	0.418	13	0.339	13	0.342	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
											0.339	0.304	0.311	0.296	0.328	0.331	0.289	0.102	0.190	0.105	0.106	0.139	0.342	0.105	0.117	0.297	0.137	0.101	0.097	0.135		
											1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
											0.223	0.156	0.225	0.188	0.155	0.275	0.226	0.176	0.183	0.046	0.072	0.224	0.259	0.284	0.242	0.043	0.043	0.157	0.078	0.274	0.247	
											22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
0.043	0.028	0.039	0.060	0.157	0.226	0.190	0.274	0.184	0.157	0.043	0.056	0.091	0.285	0.043	0.043	0.039	0.265	0.156	0.220	0.057												
FR1 n71_Ant 0	20M_BPSK_50_28	Middle	136100	Left Cheek	0.257	0.308	35	0.275	35	0.278	43	44	45	46	47	48																
											0.062	0.259	0.043	0.035	0.244	0.035																
											1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
											0.223	0.156	0.225	0.188	0.155	0.275	0.226	0.176	0.183	0.046	0.072	0.224	0.259	0.284	0.242	0.043	0.043	0.157	0.078	0.274	0.247	
											22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
0.043	0.028	0.039	0.060	0.157	0.226	0.190	0.274	0.184	0.157	0.043	0.056	0.091	0.285	0.043	0.043	0.039	0.265	0.156	0.220	0.057												



17.2 Supplemental Body SAR results

RF exposure position											Average Value of Time Sweep Single Point SAR (W/kg)																					
Band	Mode	Channel	Test Position	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Default-Tuner (State)	Default-Tuner Single Point SAR (W/kg)	Auto-Tuner (State)	Auto-Tuner Single Point SAR (W/kg)																							
Body (Ant0)	LTE Band 12/17	10M_QPSK_1_0	Middle	23095	Left Side 10mm	0.398	0.544	37	0.614	37	0.615	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
												0.524	0.418	0.523	0.448	0.421	0.575	0.518	0.344	0.410	0.134	0.173	0.426	0.533	0.505	0.408	0.135	0.137	0.111	0.216	0.119	0.425
		22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42										
		0.431	0.582	0.554	0.417	0.137	0.548	0.136	0.131	0.311	0.096	0.483	0.343	0.492	0.434	0.564	0.614	0.103	0.136	0.340	0.605	0.101										
		43	44	45	46	47	48	49																								
		0.100	0.184	0.526	0.473	0.437	0.440	0.066																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21										
		0.486	0.372	0.488	0.352	0.369	0.481	0.570	0.553	0.203	0.124	0.132	0.378	0.549	0.137	0.130	0.550	0.563	0.542	0.267	0.346	0.126										
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21										
		0.572	0.466	0.497	0.469	0.568	0.649	0.604	0.219	0.379	0.167	0.165	0.212	0.622	0.167	0.167	0.465	0.291	0.147	0.136	0.194											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21											
	0.528	0.518	0.559	0.548	0.534	0.529	0.177	0.321	0.545	0.487	0.516	0.241	0.244	0.526	0.480	0.223	0.193	0.272	0.520	0.171	0.251											
	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40													
	0.274	0.525	0.435	0.318	0.262	0.241	0.188	0.300	0.529	0.539	0.540	0.389	0.320	0.244	0.248	0.247	0.266	0.232	0.227													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21											
	0.412	0.277	0.396	0.339	0.272	0.462	0.411	0.362	0.354	0.084	0.132	0.406	0.402	0.504	0.472	0.080	0.085	0.273	0.138	0.471	0.478											
	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42											
	0.081	0.055	0.077	0.110	0.305	0.427	0.359	0.506	0.373	0.296	0.088	0.115	0.173	0.511	0.087	0.089	0.081	0.438	0.284	0.430	0.111											
	43	44	45	46	47	48																										
	0.120	0.412	0.082	0.069	0.470	0.070																										

RF exposure position											Average Value of Time Sweep Single Point SAR (W/kg)																					
Band	Mode	Channel	Test Position	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Default-Tuner (State)	Default-Tuner Single Point SAR (W/kg)	Auto-Tuner (State)	Auto-Tuner Single Point SAR (W/kg)																							
Body (Ant0)	FR1 n5_Ant 0	20M_BPSK_50_28	Middle	167300	Left Side 10mm	0.588	0.740	3	0.511	3	0.519	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
												0.518	0.516	0.519	0.511	0.466	0.384	0.146	0.297	0.250	0.321	0.415	0.445	0.297	0.519	0.249	0.253	0.294	0.416	0.209	0.244	0.252
		22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40												
		0.245	0.513	0.519	0.448	0.326	0.246	0.329	0.302	0.209	0.515	0.515	0.510	0.515	0.513	0.339	0.255	0.255	0.291	0.214												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21										
		0.449	0.352	0.450	0.378	0.353	0.503	0.446	0.307	0.352	0.108	0.139	0.354	0.463	0.446	0.353	0.108	0.108	0.085	0.164	0.092	0.359										
		22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42										
		0.359	0.505	0.488	0.361	0.110	0.471	0.110	0.104	0.272	0.075	0.403	0.280	0.404	0.366	0.464	0.511	0.082	0.103	0.280	0.504	0.082										
		43	44	45	46	47	48	49																								
		0.071	0.141	0.441	0.381	0.367	0.367	0.051																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21											
	0.607	0.487	0.526	0.487	0.607	0.684	0.637	0.207	0.402	0.148	0.148	0.199	0.656	0.148	0.148	0.489	0.298	0.122	0.110	0.175												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21											
	0.361	0.251	0.361	0.303	0.252	0.433	0.369	0.297	0.304	0.078	0.126	0.362	0.378	0.445	0.395	0.073	0.077	0.253	0.131	0.421	0.394											
	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42											
	0.073	0.052	0.071	0.103	0.271	0.391	0.328	0.460	0.326	0.272	0.079	0.106	0.163	0.464	0.079	0.079	0.075	0.404	0.255	0.364	0.101											
	43	44	45	46	47	48																										
	0.110	0.383	0.074	0.064	0.385	0.064																										

Test Engineer : David Lin, Wilson Lin, White Huang, Jordar Jhuang, Willie Huang, Ray Sun, Chris Yang, Charles Shen, Iran Wang, Jerry Hsu, Ryan Lee and Tommy Chen

18. Uncertainty Assessment

Declaration of Conformity:

The test results with all measurement uncertainty excluded is 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.

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture’s specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	1/k ^(b)	1/√3	1/√6	1/√2

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) κ is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual “root-sum-squares” (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.



Applicable for SAR Measurements:

Uncertainty Budget (4 MHz - 10 GHz range)							
Error Description	Uncertainty Value (±%)	Probability	Divisor	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System							
Probe Calibration	18.60	N	2	1	1	9.3	9.3
Axial Isotropy	4.70	R	1.732	0.7	0.7	1.9	1.9
Hemispherical Isotropy	9.60	R	1.732	0.7	0.7	3.9	3.9
Linearity	4.70	R	1.732	1	1	2.7	2.7
Modulation Response	4.68	R	1.732	1	1	2.7	2.7
System Detection Limits	1.00	R	1.732	1	1	0.6	0.6
Boundary Effects	2.00	R	1.732	1	1	1.2	1.2
Readout Electronics	0.30	N	1	1	1	0.3	0.3
Response Time	0.00	R	1.732	1	1	0.0	0.0
Integration Time	2.60	R	1.732	1	1	1.5	1.5
RF Ambient Noise	3.00	R	1.732	1	1	1.7	1.7
RF Ambient Reflections	3.00	R	1.732	1	1	1.7	1.7
Probe Positioner	0.40	R	1.732	1	1	0.2	0.2
Probe Positioning	6.70	R	1.732	1	1	3.9	3.9
Post-processing	4.00	R	1.732	1	1	2.3	2.3
Test Sample Related							
Device Holder	3.60	N	1	1	1	3.6	3.6
Test sample Positioning	3.03	N	1	1	1	3.0	3.0
Power Scaling	0.00	R	1.732	1	1	0.0	0.0
Power Drift	5.00	R	1.732	1	1	2.9	2.9
Phantom and Setup							
Phantom Uncertainty	7.60	R	1.732	1	1	4.4	4.4
SAR correction	0.00	R	1.732	1	0.84	0.0	0.0
Liquid Conductivity Repeatability	0.03	N	1	0.78	0.77	0.0	0.0
Liquid Conductivity (target)	5.00	R	1.732	0.78	0.77	2.3	2.2
Liquid Conductivity (mea.)	2.50	R	1.732	0.78	0.77	1.1	1.1
Temp. unc. - Conductivity	3.68	R	1.732	0.78	0.77	1.7	1.6
Liquid Permittivity Repeatability	0.02	N	1	0.23	0.26	0.0	0.0
Liquid Permittivity (target)	5.00	R	1.732	0.23	0.26	0.7	0.8
Liquid Permittivity (mea.)	2.50	R	1.732	0.23	0.26	0.3	0.4
Temp. unc. - Permittivity	0.84	R	1.732	0.23	0.26	0.1	0.1
Combined Std. Uncertainty						14.5%	14.2%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.4%



Applicable for Power Density Measurements:

Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response (BW ≤ 1 GHz)	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance dependence	0.00	R	1.732	1	0.00
Amplitude and phase drift	0.00	R	1.732	1	0.00
Amplitude and phase noise	0.04	R	1.732	1	0.02
Measurement area truncation	0.00	R	1.732	1	0.00
Data acquisition	0.03	N	1	1	0.03
Sampling	0.00	R	1.732	1	0.00
Field reconstruction	2.00	R	1.732	1	1.15
Forward transformation	0.00	R	1.732	1	0.00
Power density scaling	0.00	R	1.732	1	0.00
Spatial averaging	0.10	R	1.732	1	0.06
System detection limit	0.04	R	1.732	1	0.02
Uncertainty terms dependent on the DUT and environmental factors					
Probe coupling with DUT	0.00	R	1.732	1	0.0
Modulation response	0.40	R	1.732	1	0.2
Integration time	0.00	R	1.732	1	0.0
Response time	0.00	R	1.732	1	0.0
Device holder influence	0.10	R	1.732	1	0.1
DUT alignment	0.00	R	1.732	1	0.0
RF ambient conditions	0.04	R	1.732	1	0.0
Ambient reflections	0.04	R	1.732	1	0.0
Immunity / secondary reception	0.00	R	1.732	1	0.0
Drift of the DUT		R	1.732	1	
Combined Std. Uncertainty					1.34
Expanded STD Uncertainty (95%)					2.68



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 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [6] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [7] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [8] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [9] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [10] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [11] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.
- [12] FCC KDB 941225 D07 v01r02, " SAR Evaluation Procedures for UMPC Mini-Tablet Devices", Oct 2015.
- [13] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [14] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.
- [15] IEC/IEEE 62209-1528:2020, "Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)", Oct. 2020
- [16] SPEAG DASY6 System Handbook
- [17] SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)