



FCC SAR TEST REPORT

FCC ID : A4RGE2AE
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 Mar. 21, 2022 and testing was started from Mar. 31, 2022 and completed on Jul. 26, 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



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1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing 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)	Extremity (Separation 0mm)		
		1g SAR (W/kg)		10g SAR (W/kg)			
Licensed	GSM850	1.03	1.02	0.80		1.53	2.89
	GSM1900	0.59	1.04	0.90			
	WCDMA II	0.73	1.14	0.90	2.87		
	WCDMA IV	0.50	1.17	0.89			
	WCDMA V	1.12	1.09	0.85			
	LTE Band 2	1.16	1.18	0.89	1.99		
	LTE Band 7	1.18	1.17	0.87	1.88		
	LTE Band 12/17	0.76	0.39	0.44			
	LTE Band 13	1.12	0.61	0.69			
	LTE Band 14	1.17	0.64	0.71			
	LTE Band 2/25	0.72	1.16	0.89	2.75		
	LTE Band 5/26	1.13	0.84	0.89			
	LTE Band 30	0.41	1.07	0.89	2.35		
	LTE Band 38/41	0.56	0.97	0.89	0.97		
	LTE Band 48	0.10	0.40	0.65			
	LTE Band 4/66	0.95	0.90	0.84			
	LTE Band 71	1.17	0.33	0.42			
	FR1 n2	1.18	1.00	0.89	2.11		
	FR1 n5	1.18	0.88	0.89			
	FR1 n7	0.97	1.00	0.89	1.47		
	FR1 n12	0.77	0.44	0.49			
	FR1 n14	0.85	0.53	0.59			
	FR1 n25	0.60	1.02	0.89	2.89		
	FR1 n30	0.57	1.07	0.87	2.34		
FR1 n38/n41	1.19	1.18	0.90	1.79			
FR1 n48	1.13	0.66	0.79				
FR1 n66	0.97	1.17	0.90	2.61			
FR1 n71	1.17	0.31	0.45				
FR1 n77	1.10	0.81	0.85				
DTS	2.4GHz WLAN	1.18	0.77	0.68		1.54	
NII	5GHz WLAN	1.20	1.07	0.64	2.55	1.54	2.89
6XD	6GHz WLAN	0.42	0.30		0.31	1.54	2.89
DSS	Bluetooth	0.20	0.35	0.41		1.53	
Equipment Class	Frequency Band	Head APD (W/m ²)	Body-worn APD (W/m ²)	Product Specific APD (W/m ²)	Reported PD (W/m ²)		
6XD	6GHz WLAN	2.63	1.52	6.21	6.28		
Date of Testing:		2022/3/31 ~ 2022/7/26					

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=10 W/m²) specified in FCC 47 CFR part 1.1310 and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

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	A4RGE2AE
S / N	22271FDH300017 22271FDH30000S 22271FDH300046 22271FDH30002N 22271FDH30001L
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: 3450MHz ~ 3550MHz, 3700 MHz ~ 3980 MHz 5G NR n258 : 24.25 GHz~24.45 GHz, 24.75GHz ~25.25GHz 5G NR n260 : 37 GHz~40 GHz 5G NR n261 : 27.5 GHz~28.35 GHz WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz WLAN 5.8G 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 WPT: 110KHz ~ 148.5KHz UWB: 6489.6 MHz, 7987.2 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/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC/WPT: ASK UWB: BPM-BPSK
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 and 2 and for its < 3GHz 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.
6. The UWB output power is -9 dBm and it is less than 1mW and exempt from power density testing.

2.2 Maximum Tune-up Limit

General Note:

1. In the report PC3 as power class3, PC2 as power class2, PC1.5 as Power class 1.5.
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.
5. The index 1 is for the mobile exposure condition, the compliance is demonstrated in Sporton's test report FA1O2919-05A.
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. The device additional support uplink MIMO on n41, n48 and n77, the TAS feature will control the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit, the uplink MIMO compliance is validated include in the TAS Part2 report No.: FA1O2919-05F.
8. n41 PC1.5 Main Tx0 Ant2 and Sub Tx0 Ant 1, n48 PC3 Sub Tx0 Ant1 of device only support uplink MIMO.
9. n41 PC1.5 Main Tx1 Ant 0, Sub Tx1 Ant 5, and n48 PC3 Sub Tx1 Ant5 of device only support uplink MIMO.
10. When the Uplink MIMO is active that per chain power is equal than standalone power back off 3dB.
11. Since the device the device support TAS feature and the 5G NR transmitter will operate in the time-averaged transmission power, therefore, for 5G NR PC3 / PC2 / PC1.5 regardless of whether support different transmission duty cycle, the 5G NR SAR was performed with PC3 as highest power and duty cycle to be tested
12. The 5G FR1 uplink MIMO only support CP-OFDM modulation. Since the CP-OFDM mode maximum power is lower than DFT-s-OFDM maximum power by 3GPP MPR requirement, uplink MIMO SAR testing was not necessary due to cover by DFT-s-OFDM SAR results. Except n48 PC3 Sub Tx0 Ant1 and Sub Tx1 Ant5, due to these transmit antenna only support uplink MIMO operation, therefore, additional standalone SAR is required.

Antenna configuration	
Transmit switching diversity configuration	Support transmit antenna and band
Main TX0	ANT 0: GSM850, UMTS B5, LTE B5/B12/B13/B14/B17/B26/B71, NR n5/n12/n14/n71 ANT 2: GSM1900, UMTS B2/B4, LTE B2/B4/B7/B25/B30/B66/B38/B41, NR n2/n7/n25/n30/n66/n38/n41 ANT 6: LTE B48, NR n48/n77
Sub TX 0	ANT 1: LTE B2/B4/B66, NR n2/n66/n38/n41/n48/n77
Main TX 1	ANT 0: GSM1900, UMTS B2/B4, LTE B2/B4/B7/B25/B30/B66/B38/B41, NR n2/n7/n25/n30/n66/n38/n41 ANT 1: GSM850, UMTS B5, LTE B5/B12/B13/B14/B17/B26/B71, NR n5/n12/n14/n71 ANT 7: LTE B48, NR n48/n77
Sub TX 1	ANT 5: LTE B2/B4/B66, NR n2/n66/n38/n41/n48/n77



Maximum Transmit Burst Average Power (dBm)									
Band	Config	Antenna	duty cycle	Mobile Condition	Head Standalone	Head Simultaneous	Hotspot Simultaneous	Body-worn Extremity Standalone	Body-worn Extremity Simultaneous
				Index 1	Index 2	Index 3	Index 4	Index 5	Index 6
GSM850 GPRS 1TX	Main TX0	0	12.50%	33.5	33.5	33.5	30.5	31.7	30.5
GSM850 GPRS 2TX	Main TX0	0	25.00%	32.5	32.5	32.5	30.0	31.2	30.0
GSM850 GPRS 3TX	Main TX0	0	37.50%	31.5	31.5	31.5	28.5	29.7	28.5
GSM850 GPRS 4TX	Main TX0	0	50.00%	30.5	30.5	30.5	27.5	28.7	27.5
GSM850 EDGE 1TX	Main TX0	0	12.50%	28.0	28.0	28.0	28.0	28.0	28.0
GSM850 EDGE 2TX	Main TX0	0	25.00%	27.5	27.5	27.5	27.5	27.5	27.5
GSM850 EDGE 3TX	Main TX0	0	37.50%	27.5	27.5	27.5	27.5	27.5	27.5
GSM850 EDGE 4TX	Main TX0	0	50.00%	25.5	25.5	25.5	25.5	25.5	25.5
GSM1900 GPRS 1TX	Main TX0	2	12.50%	31.0	31.0	31.0	31.0	31.0	31.0
GSM1900 GPRS 2TX	Main TX0	2	25.00%	29.5	29.5	29.5	28.2	29.4	28.2
GSM1900 GPRS 3TX	Main TX0	2	37.50%	29.0	29.0	29.0	26.4	27.6	26.4
GSM1900 GPRS 4TX	Main TX0	2	50.00%	28.0	28.0	28.0	25.2	26.4	25.2
GSM1900 EDGE 1TX	Main TX0	2	12.50%	26.0	26.0	26.0	26.0	26.0	26.0
GSM1900 EDGE 2TX	Main TX0	2	25.00%	25.0	25.0	25.0	25.0	25.0	25.0
GSM1900 EDGE 3TX	Main TX0	2	37.50%	25.0	25.0	25.0	25.0	25.0	25.0
GSM1900 EDGE 4TX	Main TX0	2	50.00%	24.0	24.0	24.0	24.0	24.0	24.0
WCDMA B2	Main TX0	2	100.00%	25.5	25.5	25.5	23.5	24.7	23.5
WCDMA B4	Main TX0	2	100.00%	25.5	25.5	25.5	24.1	25.3	24.1
WCDMA B5	Main TX0	0	100.00%	25.5	25.5	25.5	23.5	24.7	23.5
LTE B7	Main TX0	2	100.00%	25.5	25.3	24.1	21.5	22.7	21.5
LTE B12/17	Main TX0	0	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
LTE B13	Main TX0	0	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
LTE B14	Main TX0	0	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
LTE B25/2	Main TX0	2	100.00%	25.5	25.5	25.5	23.5	24.7	23.5
LTE B26/5	Main TX0	0	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
LTE B30	Main TX0	2	100.00%	22.9	22.9	22.9	20.9	22.1	20.9
LTE B38 PC3	Main TX0	2	63.30%	25.5	25.5	25.5	23.9	25.1	23.9
LTE B38 PC2	Main TX0	2	43.30%	26.9	26.9	26.9	25.4	26.6	25.4
LTE B41 PC3	Main TX0	2	63.30%	25.5	25.5	25.5	23.9	25.1	23.9
LTE B41 PC2	Main TX0	2	43.30%	27.5	27.5	27.5	25.5	26.7	25.5
LTE B48 PC3	Main TX0	6	63.30%	24.7	24.7	24.7	24.7	24.7	24.7
LTE B66/4	Main TX0	2	100.00%	25.5	25.5	25.5	23.7	24.9	23.7
LTE B71	Main TX0	0	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
FR1 n5	Main TX0	0	100.00%	25.5	25.5	25.5	24.2	25.5	25.5
FR1 n7	Main TX0	2	100.00%	25.5	25.5	25.1	21.0	22.2	21.0
FR1 n12	Main TX0	0	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
FR1 n14	Main TX0	0	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
FR1 n25/2	Main TX0	2	100.00%	25.5	25.5	25.5	22.1	23.3	22.1
FR1 n30	Main TX0	2	100.00%	22.9	22.9	22.9	20.8	22.0	20.8
FR1 n38 PC3	Main TX0	2	100.00%	25.5	25.5	25.5	21.2	22.7	21.5
FR1 n41 PC3	Main TX0	2	100.00%	25.5	25.5	25.5	21.2	22.7	21.5
FR1 n41 PC2	Main TX0	2	50.00%	27.5	27.5	27.5	24.2	25.7	24.5
FR1 n41 PC1.5 UL MIMO	Main TX0	2	25.00%	26.5	26.5	26.5	26.50	26.50	26.50
FR1 n48 PC3	Main TX0	6	100.00%	24.7	24.7	24.7	24.7	24.7	24.7
FR1 n66	Main TX0	2	100.00%	25.5	25.5	25.5	23.0	24.2	23.0
FR1 n71	Main TX0	0	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
FR1 n77 PC3	Main TX0	6	100.00%	24.1	24.1	24.1	22.3	23.5	22.3
FR1 n77 PC2	Main TX0	6	50.00%	27.1	27.1	27.1	25.3	26.5	25.3
LTE B2 Sub	Sub TX0	1	100.00%	25.5	16.7	15.5	21.2	24.7	23.5
LTE B66/4 Sub	Sub TX0	1	100.00%	25.5	19.2	18	23.3	24.5	23.3
FR1 n2 Sub	Sub TX0	1	100.00%	25.5	17.5	16.3	19.3	25.5	25.0
FR1 n38 PC3 Sub	Sub TX0	1	100.00%	25.5	18.7	17.5	21.2	25.5	25.5
FR1 n41PC3 Sub	Sub TX0	1	100.00%	25.5	18.7	17.5	21.2	25.5	25.5
FR1 n41 PC2 Sub	Sub TX0	1	50.00%	27.5	21.7	20.5	24.2	27.5	27.5
FR1 n41 PC1.5 Sub UL MIMO	Sub TX0	1	25.00%	26.5	24.70	23.50	26.50	26.5	26.5
FR1 n48 Sub UL MIMO	Sub TX0	1	100.00%	21.0	21.0	19.9	21.0	21.0	21.0
FR1 n66 Sub	Sub TX0	1	100.00%	25.5	17.8	16.6	22.5	23.7	22.5
FR1 n77 Sub PC3	Sub TX0	1	100.00%	25.5	20.1	18.9	20.8	22	20.8



Maximum Transmit Burst Average Power (dBm)									
Band	Config	Antenna	duty cycle	Mobile Condition	Head Standalone	Head Simultaneous	Hotspot Simultaneous	Body-worn Extremity Standalone	Body-worn Extremity Simultaneous
				Index 1	Index 2	Index 3	Index 4	Index 5	Index 6
GSM850 GPRS 1TX	Main TX1	1	12.50%	33.5	33.2	32.0	33.50	33.50	33.50
GSM850 GPRS 2TX	Main TX1	1	25.00%	32.5	30.5	29.3	32.50	32.50	32.50
GSM850 GPRS 3TX	Main TX1	1	37.50%	31.5	28.5	27.3	31.50	31.50	31.50
GSM850 GPRS 4TX	Main TX1	1	50.00%	30.5	27.5	26.3	30.5	30.5	30.5
GSM850 EDGE 1TX	Main TX1	1	12.50%	28.0	28.0	28.0	28.0	28.0	28.0
GSM850 EDGE 2TX	Main TX1	1	25.00%	27.5	27.5	27.5	27.5	27.5	27.5
GSM850 EDGE 3TX	Main TX1	1	37.50%	27.5	27.5	27.5	27.5	27.5	27.5
GSM850 EDGE 4TX	Main TX1	1	50.00%	25.5	25.5	25.5	25.5	25.5	25.5
GSM1900 GPRS 1TX	Main TX1	0	12.50%	30.8	30.8	30.8	25.2	26.4	25.2
GSM1900 GPRS 2TX	Main TX1	0	25.00%	29.3	29.3	29.3	23.7	24.9	23.7
GSM1900 GPRS 3TX	Main TX1	0	37.50%	28.8	28.8	28.8	22.7	23.9	22.7
GSM1900 GPRS 4TX	Main TX1	0	50.00%	27.8	27.8	27.8	21.7	22.9	21.7
GSM1900 EDGE 1TX	Main TX1	0	12.50%	25.8	25.8	25.8	23.3	24.5	23.3
GSM1900 EDGE 2TX	Main TX1	0	25.00%	24.8	24.8	24.8	22.3	23.5	22.3
GSM1900 EDGE 3TX	Main TX1	0	37.50%	24.8	24.8	24.8	22.3	23.5	22.3
GSM1900 EDGE 4TX	Main TX1	0	50.00%	23.8	23.8	23.8	21.3	22.5	21.3
WCDMA B2	Main TX1	0	100.00%	25.3	25.3	25.3	18.9	21.9	20.7
WCDMA B4	Main TX1	0	100.00%	25.3	25.3	25.3	19.4	20.6	19.4
WCDMA B5	Main TX1	1	100.00%	25.5	24.3	23.1	25.5	25.5	25.5
LTE B7	Main TX1	0	100.00%	25.1	25.1	25.1	19.1	22.6	21.4
LTE B12/17	Main TX1	1	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
LTE B13	Main TX1	1	100.00%	25.5	24.2	23.0	25.5	25.5	25.5
LTE B14	Main TX1	1	100.00%	25.5	24.0	22.8	25.5	25.5	25.5
LTE B25/2	Main TX1	0	100.00%	25.3	25.3	25.3	19.2	22.2	21.0
LTE B26/5	Main TX1	1	100.00%	25.5	23.7	22.5	25.5	25.5	25.5
LTE B30	Main TX1	0	100.00%	23.1	23.1	23.1	19.2	22.9	21.7
LTE B38 PC3	Main TX1	0	63.30%	25.1	25.1	25.1	22.8	24.2	23.0
LTE B38 PC2	Main TX1	0	43.30%	26.5	26.5	26.5	24.3	25.7	24.5
LTE B41 PC3	Main TX1	0	63.30%	25.1	25.1	25.1	22.8	24.3	23.1
LTE B41 PC2	Main TX1	0	43.30%	27.1	27.1	27.1	24.4	25.9	24.7
LTE B48	Main TX1	7	63.30%	24.2	24.2	24.2	24.2	24.2	24.2
LTE B66/4	Main TX1	0	100.00%	24.8	24.8	24.8	20.0	21.2	20.0
LTE B71	Main TX1	1	100.00%	25.5	25.0	23.8	25.5	25.5	25.5
FR1 n5	Main TX1	1	100.00%	25.5	25.0	23.8	25.5	25.5	25.5
FR1 n7	Main TX1	0	100.00%	25.1	25.1	25.1	19.6	22.0	20.8
FR1 n12	Main TX1	1	100.00%	25.5	25.5	25.5	25.5	25.5	25.5
FR1 n14	Main TX1	1	100.00%	25.5	24.5	23.3	25.5	25.5	25.5
FR1 n25/2	Main TX1	0	100.00%	25.3	25.3	25.3	19.0	22.0	20.8
FR1 n30	Main TX1	0	100.00%	23.1	23.1	23.1	19.5	23.1	22.2
FR1 n38 PC3	Main TX1	0	100.00%	24.5	24.5	24.5	19.4	23.6	22.4
FR1 n41 PC3	Main TX1	0	100.00%	24.5	24.5	24.5	19.4	23.6	22.4
FR1 n41 PC2	Main TX1	0	50.00%	27.5	27.5	27.5	22.4	26.6	25.4
FR1 n41 PC1.5 UL MIMO	Main TX1	0	25.00%	26.5	26.5	26.5	25.4	26.5	26.5
FR1 n48	Main TX1	7	100.00%	24.2	24.2	24.2	21.8	23.0	21.8
FR1 n66	Main TX1	0	100.00%	25.3	25.3	25.3	19.1	20.3	19.1
FR1 n71	Main TX1	1	100.00%	25.5	24.8	23.6	25.5	25.5	25.5
FR1 n77 PC3	Main TX1	7	100.00%	24.0	24.0	24.0	24.0	24.0	24.0
FR1 n77 PC2	Main TX1	7	50.00%	26.5	26.5	26.5	26.5	26.5	26.5
LTE B2 Sub	Sub TX1	5	100.00%	25.3	25.3	24.1	24.0	25.3	25.3
LTE B66/4 Sub	Sub TX1	5	100.00%	25.3	25.3	25.1	25.3	25.3	25.3
FR1 n2 Sub	Sub TX1	5	100.00%	25.3	25.3	24.3	24.3	25.3	25.3
FR1 n38 PC3 Sub	Sub TX1	5	100.00%	24.5	24.2	23.0	21.7	22.9	21.7
FR1 n41 PC3 Sub	Sub TX1	5	100.00%	24.5	24.2	23.0	21.7	22.9	21.7
FR1 n41 PC2 Sub	Sub TX1	5	50.00%	26.5	26.5	26.0	24.7	25.9	24.7
FR1 n41 Sub PC1.5 UL MIMO	Sub TX1	5	25.00%	25.5	25.5	25.5	25.50	25.50	25.50
FR1 n48 Sub UL MIMO	Sub TX1	5	100.00%	20.4	20.4	20.4	20.4	20.4	20.4
FR1 n66 Sub	Sub TX1	5	100.00%	25.3	25.3	25.3	24.8	25.3	24.8
FR1 n77 PC3 Sub	Sub TX1	5	100.00%	24.9	21.0	19.8	20.3	21.5	20.3



<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 1-4 are used; when the device is operated in the body-worn / Hotspot / Extremity condition, power index 5-9 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(4): power level on antenna 4, when device operated in MIMO mode (4+3)
3. 4+8(4): power level on antenna 4, when device operated in MIMO mode (4+8)

<Mobile Condition – Index 0>

<2.4GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 3 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	23.00	23.00	-
		6	2437	23.00	23.00	-
		11	2462	23.00	23.00	-
		12	2467	23.00	23.00	-
13		2472	20.50	20.00	-	

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11g 6Mbps	1	2412	23.00	23.00	26.00
		6	2437	23.00	23.00	26.00
		11	2462	19.50	19.50	22.50
		12	2467	15.50	15.50	18.50
		13	2472	13.00	13.00	16.00
	802.11n-HT20 MCS0	1	2412	21.00	21.00	24.00
		6	2437	23.00	23.00	26.00
		11	2462	19.00	19.00	22.00
		12	2467	14.50	14.50	17.50
	802.11ac-VHT20 MCS0	1	2412	21.00	21.00	24.00
		6	2437	23.00	23.00	26.00
		11	2462	19.00	19.00	22.00
		12	2467	14.50	14.50	17.50
	802.11ax-HE20 MCS0	1	2412	21.00	21.00	24.00
		6	2437	23.00	23.00	26.00
		11	2462	19.00	19.00	22.00
		12	2467	15.00	15.00	18.00
		13	2472	12.00	12.00	15.00



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		36	5180	21.50	21.50	24.50
		40	5200	21.50	21.50	24.50
		44	5220	21.50	21.50	24.50
		48	5240	21.50	21.50	24.50
802.11n-HT20 MCS0		36	5180	21.00	21.00	24.00
		40	5200	21.00	21.00	24.00
		44	5220	21.00	21.00	24.00
		48	5240	21.00	21.00	24.00
802.11n-HT40 MCS0		38	5190	16.00	16.00	19.00
		46	5230	21.50	21.50	24.50
802.11ac-VHT20 MCS0		36	5180	20.00	20.00	23.00
		40	5200	21.00	21.00	24.00
		44	5220	21.00	21.00	24.00
		48	5240	21.00	21.00	24.00
802.11ac-VHT40 MCS0		38	5190	16.00	16.00	19.00
		46	5230	21.50	21.50	24.50
802.11ac-VHT80 MCS0		42	5210	16.00	16.00	19.00
802.11ax-HE20 MCS0		36	5180	20.00	20.00	23.00
		40	5200	21.50	21.50	24.50
		44	5220	21.50	21.50	24.50
		48	5240	21.50	21.50	24.50
802.11ax-HE40 MCS0		38	5190	16.50	16.50	19.50
		46	5230	21.50	21.50	24.50
802.11ax-HE80 MCS0		42	5210	16.00	16.00	19.00



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		52	5260	21.50	21.50	24.50
		56	5280	21.50	21.50	24.50
		60	5300	21.50	21.50	24.50
		64	5320	21.50	21.50	24.50
802.11n-HT20 MCS0		52	5260	21.00	21.00	24.00
		56	5280	21.00	21.00	24.00
		60	5300	21.00	21.00	24.00
		64	5320	20.00	20.00	23.00
802.11n-HT40 MCS0		54	5270	21.50	21.50	24.50
		62	5310	16.50	16.50	19.50
802.11ac-VHT20 MCS0		52	5260	21.00	21.00	24.00
		56	5280	21.00	21.00	24.00
		60	5300	21.00	21.00	24.00
		64	5320	21.00	21.00	24.00
802.11ac-VHT40 MCS0		54	5270	21.00	21.00	24.00
		62	5310	16.50	16.50	19.50
802.11ac-VHT80 MCS0		58	5290	16.50	16.50	19.50
802.11ac-VHT160 MCS0		50	5250	16.50	16.50	19.50
802.11ax-HE20 MCS0		52	5260	21.00	21.00	24.00
		56	5280	21.00	21.00	24.00
		60	5300	21.00	21.00	24.00
		64	5320	21.00	21.00	24.00
802.11ax-HE40 MCS0		54	5270	21.00	21.00	24.00
		62	5310	16.50	16.50	19.50
802.11ax-HE80 MCS0		58	5290	16.50	16.50	19.50
802.11ax-HE160 MCS0		50	5250	16.50	16.50	19.50



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	21.50	21.50	24.50
		116	5580	18.00	18.00	21.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.00	16.00	19.00
		144	5720	16.00	16.00	19.00
	802.11n-HT20 MCS0	100	5500	20.50	20.50	23.50
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11n-HT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	21.00	21.00	24.00
		126	5630	19.50	19.50	22.50
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	100	5500	20.00	20.00	23.00
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11ac-VHT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	21.00	21.00	24.00
		126	5630	19.50	19.50	22.50
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	106	5530	17.00	17.00	20.00
		122	5610	20.00	20.00	23.00
		138	5690	19.00	19.00	22.00
	802.11ac-VHT160 MCS0	114	5570	16.50	16.50	19.50
	802.11ax-HE20 MCS0	100	5500	20.50	20.50	23.50
		116	5580	17.50	17.50	20.50
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
140		5700	16.50	16.50	19.50	
144		5720	16.50	16.50	19.50	
802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00	
	110	5550	21.00	21.00	24.00	
	126	5630	19.50	19.50	22.50	
	134	5670	18.00	18.00	21.00	
	142	5710	18.00	18.00	21.00	
802.11ax-HE80 MCS0	106	5530	17.50	17.50	20.50	
	122	5610	20.00	20.00	23.00	
	138	5690	19.00	19.00	22.00	
802.11ax-HE160 MCS0	114	5570	17.00	17.00	20.00	



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	149	5745	15.00	23.00	23.64
		157	5785	15.00	23.00	23.64
		165	5825	15.00	23.00	23.64
	802.11n-HT20 MCS0	149	5745	15.00	23.00	23.64
		157	5785	15.00	23.00	23.64
		165	5825	15.00	23.00	23.64
	802.11n-HT40 MCS0	151	5755	16.00	21.50	22.58
		159	5795	16.00	21.50	22.58
	802.11ac-VHT20 MCS0	149	5745	15.50	23.00	23.71
		157	5785	15.50	23.00	23.71
		165	5825	15.50	23.00	23.71
	802.11ac-VHT40 MCS0	151	5755	16.00	21.50	22.58
		159	5795	16.00	21.50	22.58
802.11ac-VHT80 MCS0	155	5775	18.00	22.00	24.21	
802.11ax-HE20 MCS0	149	5745	15.00	23.00	23.64	
	157	5785	15.00	23.00	23.64	
	165	5825	15.00	23.00	23.64	
802.11ax-HE40 MCS0	151	5755	16.00	22.00	22.97	
	159	5795	16.00	22.00	22.97	
802.11ax-HE80 MCS0	155	5775	18.00	22.00	24.21	



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
802.11n-HT20 MCS0		169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
802.11n-HT40 MCS0		167	5835	22.00	22.00	25.00
		175	5875	22.00	22.00	25.00
802.11ac-VHT20 MCS0		169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
802.11ac-VHT40 MCS0		167	5835	22.00	22.00	25.00
		175	5875	22.00	22.00	25.00
802.11ac-VHT80 MCS0		171	5855	20.50	20.50	23.50
802.11ac-VHT160 MCS0		163	5815	20.50	20.50	23.50
802.11ax-HE20 MCS0		169	5845	22.00	22.00	25.00
		173	5865	22.00	22.00	25.00
		177	5885	22.00	22.00	25.00
802.11ax-HE40 MCS0		167	5835	22.00	22.00	25.00
		175	5875	22.00	22.00	25.00
802.11ax-HE80 MCS0		171	5855	20.50	20.50	23.50
802.11ax-HE160 MCS0		163	5815	20.50	20.50	23.50



<Power Index 1>

<2.4GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 43 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	19.50	22.00	-
		6	2437	19.50	22.00	-
		11	2462	19.50	22.00	-
		12	2467	19.50	22.00	-
		13	2472	19.50	20.00	-

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11g 6Mbps	1	2412	19.00	19.00	22.00
		6	2437	19.00	19.00	22.00
		11	2462	19.00	19.00	22.00
		12	2467	15.50	15.50	18.50
		13	2472	13.00	13.00	16.00
	802.11n-HT20 MCS0	1	2412	19.00	19.00	22.00
		6	2437	19.00	19.00	22.00
		11	2462	19.00	19.00	22.00
		12	2467	14.50	14.50	17.50
	802.11ac-VHT20 MCS0	1	2412	19.00	19.00	22.00
		6	2437	19.00	19.00	22.00
		11	2462	19.00	19.00	22.00
		12	2467	14.50	14.50	17.50
	802.11ax-HE20 MCS0	1	2412	19.00	19.00	22.00
		6	2437	19.00	19.00	22.00
		11	2462	19.00	19.00	22.00
		12	2467	15.00	15.00	18.00
		13	2472	12.00	12.00	15.00



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	36	5180	20.00	20.00	23.00
		40	5200	20.00	20.00	23.00
		44	5220	20.00	20.00	23.00
		48	5240	20.00	20.00	23.00
	802.11n-HT20 MCS0	36	5180	20.00	20.00	23.00
		40	5200	20.00	20.00	23.00
		44	5220	20.00	20.00	23.00
	802.11n-HT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	20.00	20.00	23.00
	802.11ac-VHT20 MCS0	36	5180	20.00	20.00	23.00
		40	5200	20.00	20.00	23.00
		44	5220	20.00	20.00	23.00
		48	5240	20.00	20.00	23.00
	802.11ac-VHT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	20.00	20.00	23.00
	802.11ac-VHT80 MCS0	42	5210	16.00	16.00	19.00
	802.11ax-HE20 MCS0	36	5180	20.00	20.00	23.00
		40	5200	20.00	20.00	23.00
		44	5220	20.00	20.00	23.00
		48	5240	20.00	20.00	23.00
802.11ax-HE40 MCS0	38	5190	16.50	16.50	19.50	
	46	5230	20.00	20.00	23.00	
802.11ax-HE80 MCS0	42	5210	16.00	16.00	19.00	



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	52	5260	20.00	20.00	23.00
		56	5280	20.00	20.00	23.00
		60	5300	20.00	20.00	23.00
		64	5320	20.00	20.00	23.00
	802.11n-HT20 MCS0	52	5260	20.00	20.00	23.00
		56	5280	20.00	20.00	23.00
		60	5300	20.00	20.00	23.00
		64	5320	20.00	20.00	23.00
	802.11n-HT40 MCS0	54	5270	20.00	20.00	23.00
		62	5310	16.50	16.50	19.50
	802.11ac-VHT20 MCS0	52	5260	20.00	20.00	23.00
		56	5280	20.00	20.00	23.00
		60	5300	20.00	20.00	23.00
		64	5320	20.00	20.00	23.00
	802.11ac-VHT40 MCS0	54	5270	20.00	20.00	23.00
		62	5310	16.50	16.50	19.50
	802.11ac-VHT80 MCS0	58	5290	16.50	16.50	19.50
	802.11ac-VHT160 MCS0	50	5250	16.50	16.50	19.50
	802.11ax-HE20 MCS0	52	5260	20.00	20.00	23.00
		56	5280	20.00	20.00	23.00
60		5300	20.00	20.00	23.00	
64		5320	20.00	20.00	23.00	
802.11ax-HE40 MCS0	54	5270	20.00	20.00	23.00	
	62	5310	16.50	16.50	19.50	
802.11ax-HE80 MCS0	58	5290	16.50	16.50	19.50	
802.11ax-HE160 MCS0	50	5250	16.50	16.50	19.50	



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	19.50	19.50	22.50
		116	5580	18.00	18.00	21.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.00	16.00	19.00
		144	5720	16.00	16.00	19.00
	802.11n-HT20 MCS0	100	5500	19.50	19.50	22.50
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11n-HT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	19.00	19.00	22.00
		126	5630	19.50	19.50	22.50
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	100	5500	19.50	19.50	22.50
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.00	16.00	19.00
	802.11ac-VHT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	19.00	19.00	22.00
		126	5630	19.50	19.50	22.50
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	106	5530	16.50	16.50	19.50
		122	5610	19.00	19.00	22.00
		138	5690	19.00	19.00	22.00
	802.11ac-VHT160 MCS0	114	5570	16.50	16.50	19.50
	802.11ax-HE20 MCS0	100	5500	19.50	19.50	22.50
		116	5580	17.50	17.50	20.50
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00
		110	5550	19.50	19.50	22.50
126		5630	19.50	19.50	22.50	
134		5670	18.00	18.00	21.00	
142		5710	18.00	18.00	21.00	
802.11ax-HE80 MCS0	106	5530	17.50	17.50	20.50	
	122	5610	19.00	19.00	22.00	
	138	5690	19.00	19.00	22.00	
802.11ax-HE160 MCS0	114	5570	17.00	17.00	20.00	



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	149	5745	15.00	20.00	21.19
		157	5785	15.00	20.00	21.19
		165	5825	15.00	20.00	21.19
	802.11n-HT20 MCS0	149	5745	15.00	20.00	21.19
		157	5785	15.00	20.00	21.19
		165	5825	15.00	20.00	21.19
	802.11n-HT40 MCS0	151	5755	16.00	20.00	21.46
		159	5795	16.00	20.00	21.46
	802.11ac-VHT20 MCS0	149	5745	15.50	20.00	21.32
		157	5785	15.50	20.00	21.32
		165	5825	15.50	20.00	21.32
	802.11ac-VHT40 MCS0	151	5755	16.00	20.00	21.46
		159	5795	16.00	20.00	21.46
802.11ac-VHT80 MCS0	155	5775	18.00	20.00	22.12	
802.11ax-HE20 MCS0	149	5745	15.00	20.00	21.19	
	157	5785	15.00	20.00	21.19	
	165	5825	15.00	20.00	21.19	
802.11ax-HE40 MCS0	151	5755	16.00	20.00	21.46	
	159	5795	16.00	20.00	21.46	
802.11ax-HE80 MCS0	155	5775	18.00	20.00	22.12	



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.9GHz WLAN	802.11a 6Mbps	169	5845	18.50	18.50	21.50
		173	5865	18.50	18.50	21.50
		177	5885	18.50	18.50	21.50
	802.11n-HT20 MCS0	169	5845	18.50	18.50	21.50
		173	5865	18.50	18.50	21.50
		177	5885	18.50	18.50	21.50
	802.11n-HT40 MCS0	167	5835	18.50	18.50	21.50
		175	5875	18.50	18.50	21.50
	802.11ac-VHT20 MCS0	169	5845	18.50	18.50	21.50
		173	5865	18.50	18.50	21.50
		177	5885	18.50	18.50	21.50
	802.11ac-VHT40 MCS0	167	5835	18.50	18.50	21.50
		175	5875	18.50	18.50	21.50
	802.11ac-VHT80 MCS0	171	5855	18.00	18.00	21.00
	802.11ac-VHT160 MCS0	163	5815	18.00	18.00	21.00
	802.11ax-HE20 MCS0	169	5845	18.50	18.50	21.50
		173	5865	18.50	18.50	21.50
		177	5885	18.50	18.50	21.50
802.11ax-HE40 MCS0	167	5835	18.50	18.50	21.50	
	175	5875	18.50	18.50	21.50	
802.11ax-HE80 MCS0	171	5855	18.00	18.00	21.00	
802.11ax-HE160 MCS0	163	5815	18.00	18.00	21.00	



<Power Index 2>

<2.4GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 3 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	17.50	19.00	-
		6	2437	17.50	19.00	-
		11	2462	17.50	19.00	-
		12	2467	17.50	19.00	-
		13	2472	17.50	19.00	-

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11g 6Mbps	1	2412	17.50	17.50	20.50
		6	2437	17.50	17.50	20.50
		11	2462	17.50	17.50	20.50
		12	2467	15.50	15.50	18.50
		13	2472	13.00	13.00	16.00
	802.11n-HT20 MCS0	1	2412	17.50	17.50	20.50
		6	2437	17.50	17.50	20.50
		11	2462	17.50	17.50	20.50
		12	2467	14.50	14.50	17.50
	802.11ac-VHT20 MCS0	13	2472	12.00	12.00	15.00
		1	2412	17.50	17.50	20.50
		6	2437	17.50	17.50	20.50
		11	2462	17.50	17.50	20.50
	802.11ax-HE20 MCS0	12	2467	14.50	14.50	17.50
		13	2472	12.00	12.00	15.00
		1	2412	17.50	17.50	20.50
		6	2437	17.50	17.50	20.50
		11	2462	17.50	17.50	20.50
		12	2467	15.00	15.00	18.00
		13	2472	12.00	12.00	15.00



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 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	16.00	16.00	19.00
		46	5230	19.00	19.00	22.00
	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
	802.11ac-VHT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	19.00	19.00	22.00
	802.11ac-VHT80 MCS0	42	5210	16.00	16.00	19.00
	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	16.50	16.50	19.50
46		5230	19.00	19.00	22.00	
802.11ax-HE80 MCS0	42	5210	16.00	16.00	19.00	



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 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	19.00	19.00	22.00
		62	5310	16.50	16.50	19.50
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	19.00	19.00	22.00
		62	5310	16.50	16.50	19.50
802.11ac-VHT80 MCS0		58	5290	16.50	16.50	19.50
802.11ac-VHT160 MCS0		50	5250	16.50	16.50	19.50
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	19.00	19.00	22.00
		62	5310	16.50	16.50	19.50
802.11ax-HE80 MCS0		58	5290	16.50	16.50	19.50
802.11ax-HE160 MCS0		50	5250	16.50	16.50	19.50



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	17.50	17.50	20.50
		116	5580	17.50	17.50	20.50
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.00	16.00	19.00
		144	5720	16.00	16.00	19.00
	802.11n-HT20 MCS0	100	5500	17.50	17.50	20.50
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11n-HT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	17.50	17.50	20.50
		126	5630	17.50	17.50	20.50
		134	5670	17.50	17.50	20.50
		142	5710	17.50	17.50	20.50
	802.11ac-VHT20 MCS0	100	5500	17.50	17.50	20.50
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11ac-VHT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	17.50	17.50	20.50
		126	5630	17.50	17.50	20.50
		134	5670	17.50	17.50	20.50
		142	5710	17.50	17.50	20.50
	802.11ac-VHT80 MCS0	106	5530	17.00	17.00	20.00
		122	5610	17.50	17.50	20.50
		138	5690	17.50	17.50	20.50
	802.11ac-VHT160 MCS0	114	5570	16.50	16.50	19.50
	802.11ax-HE20 MCS0	100	5500	17.50	17.50	20.50
		116	5580	17.50	17.50	20.50
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
140		5700	16.50	16.50	19.50	
144		5720	16.50	16.50	19.50	
802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00	
	110	5550	17.50	17.50	20.50	
	126	5630	17.50	17.50	20.50	
	134	5670	17.50	17.50	20.50	
	142	5710	17.50	17.50	20.50	
802.11ax-HE80 MCS0	106	5530	17.50	17.50	20.50	
	122	5610	17.50	17.50	20.50	
	138	5690	17.50	17.50	20.50	
802.11ax-HE160 MCS0	114	5570	17.00	17.00	20.00	



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	149	5745	15.00	18.50	20.10
		157	5785	15.00	18.50	20.10
		165	5825	15.00	18.50	20.10
	802.11n-HT20 MCS0	149	5745	15.00	18.50	20.10
		157	5785	15.00	18.50	20.10
		165	5825	15.00	18.50	20.10
	802.11n-HT40 MCS0	151	5755	16.00	18.50	20.44
		159	5795	16.00	18.50	20.44
	802.11ac-VHT20 MCS0	149	5745	15.50	18.50	20.26
		157	5785	15.50	18.50	20.26
		165	5825	15.50	18.50	20.26
	802.11ac-VHT40 MCS0	151	5755	16.00	18.50	20.44
159		5795	16.00	18.50	20.44	
802.11ac-VHT80 MCS0	155	5775	18.00	18.50	21.27	
802.11ax-HE20 MCS0	149	5745	15.00	18.50	20.10	
	157	5785	15.00	18.50	20.10	
	165	5825	15.00	18.50	20.10	
802.11ax-HE40 MCS0	151	5755	16.00	18.50	20.44	
	159	5795	16.00	18.50	20.44	
802.11ax-HE80 MCS0	155	5775	18.00	18.50	21.27	



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		169	5845	17.00	17.00	20.00
		173	5865	17.00	17.00	20.00
		177	5885	17.00	17.00	20.00
802.11n-HT20 MCS0		169	5845	17.00	17.00	20.00
		173	5865	17.00	17.00	20.00
		177	5885	17.00	17.00	20.00
802.11n-HT40 MCS0		167	5835	17.00	17.00	20.00
		175	5875	17.00	17.00	20.00
802.11ac-VHT20 MCS0		169	5845	17.00	17.00	20.00
		173	5865	17.00	17.00	20.00
		177	5885	17.00	17.00	20.00
802.11ac-VHT40 MCS0		167	5835	17.00	17.00	20.00
		175	5875	17.00	17.00	20.00
802.11ac-VHT80 MCS0		171	5855	17.00	17.00	20.00
802.11ac-VHT160 MCS0		163	5815	17.00	17.00	20.00
802.11ax-HE20 MCS0		169	5845	17.00	17.00	20.00
		173	5865	17.00	17.00	20.00
		177	5885	17.00	17.00	20.00
802.11ax-HE40 MCS0		167	5835	17.00	17.00	20.00
		175	5875	17.00	17.00	20.00
802.11ax-HE80 MCS0		171	5855	17.00	17.00	20.00
802.11ax-HE160 MCS0		163	5815	17.00	17.00	20.00



<Power Index 3>

<2.4GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 3 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	16.50	18.00	-
		6	2437	16.50	18.00	-
		11	2462	16.50	18.00	-
		12	2467	16.50	18.00	-
		13	2472	16.50	18.00	-

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11g 6Mbps	1	2412	16.50	16.50	19.50
		6	2437	16.50	16.50	19.50
		11	2462	16.50	16.50	19.50
		12	2467	15.50	15.50	18.50
		13	2472	13.00	13.00	16.00
	802.11n-HT20 MCS0	1	2412	16.50	16.50	19.50
		6	2437	16.50	16.50	19.50
		11	2462	16.50	16.50	19.50
		12	2467	14.50	14.50	17.50
	802.11ac-VHT20 MCS0	1	2412	16.50	16.50	19.50
		6	2437	16.50	16.50	19.50
		11	2462	16.50	16.50	19.50
		12	2467	14.50	14.50	17.50
	802.11ax-HE20 MCS0	1	2412	16.50	16.50	19.50
		6	2437	16.50	16.50	19.50
		11	2462	16.50	16.50	19.50
		12	2467	15.00	15.00	18.00
	802.11ax-HE20 MCS0	1	2412	16.50	16.50	19.50
		6	2437	16.50	16.50	19.50
11		2462	16.50	16.50	19.50	
12		2467	15.00	15.00	18.00	
802.11ax-HE20 MCS0	1	2412	16.50	16.50	19.50	
	6	2437	16.50	16.50	19.50	
	11	2462	16.50	16.50	19.50	
	12	2467	15.00	15.00	18.00	
802.11ax-HE20 MCS0	1	2412	16.50	16.50	19.50	
	6	2437	16.50	16.50	19.50	
	11	2462	16.50	16.50	19.50	
	12	2467	15.00	15.00	18.00	



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	36	5180	17.50	17.50	20.50
		40	5200	17.50	17.50	20.50
		44	5220	17.50	17.50	20.50
		48	5240	17.50	17.50	20.50
	802.11n-HT20 MCS0	36	5180	17.50	17.50	20.50
		40	5200	17.50	17.50	20.50
		44	5220	17.50	17.50	20.50
	802.11n-HT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	17.50	17.50	20.50
	802.11ac-VHT20 MCS0	36	5180	17.50	17.50	20.50
		40	5200	17.50	17.50	20.50
		44	5220	17.50	17.50	20.50
	802.11ac-VHT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	17.50	17.50	20.50
	802.11ac-VHT80 MCS0	42	5210	16.00	16.00	19.00
	802.11ax-HE20 MCS0	36	5180	17.50	17.50	20.50
		40	5200	17.50	17.50	20.50
		44	5220	17.50	17.50	20.50
		48	5240	17.50	17.50	20.50
	802.11ax-HE40 MCS0	38	5190	16.50	16.50	19.50
46		5230	17.50	17.50	20.50	
802.11ax-HE80 MCS0	42	5210	16.00	16.00	19.00	



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		52	5260	17.50	17.50	20.50
		56	5280	17.50	17.50	20.50
		60	5300	17.50	17.50	20.50
		64	5320	17.50	17.50	20.50
802.11n-HT20 MCS0		52	5260	17.50	17.50	20.50
		56	5280	17.50	17.50	20.50
		60	5300	17.50	17.50	20.50
		64	5320	17.50	17.50	20.50
802.11n-HT40 MCS0		54	5270	17.50	17.50	20.50
		62	5310	16.50	16.50	19.50
802.11ac-VHT20 MCS0		52	5260	17.50	17.50	20.50
		56	5280	17.50	17.50	20.50
		60	5300	17.50	17.50	20.50
		64	5320	17.50	17.50	20.50
802.11ac-VHT40 MCS0		54	5270	17.50	17.50	20.50
		62	5310	16.50	16.50	19.50
802.11ac-VHT80 MCS0		58	5290	16.50	16.50	19.50
802.11ac-VHT160 MCS0		50	5250	16.50	16.50	19.50
802.11ax-HE20 MCS0		52	5260	17.50	17.50	20.50
		56	5280	17.50	17.50	20.50
		60	5300	17.50	17.50	20.50
		64	5320	17.50	17.50	20.50
802.11ax-HE40 MCS0		54	5270	17.50	17.50	20.50
		62	5310	16.50	16.50	19.50
802.11ax-HE80 MCS0		58	5290	16.50	16.50	19.50
802.11ax-HE160 MCS0		50	5250	16.50	16.50	19.50



Burst Average Power (dBm)							
5.5GHz WLAN	Transmit Antenna			MIMO			
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit	
802.11a 6Mbps	100	116	5500	14.50	14.50	17.50	
		124	5580	14.50	14.50	17.50	
		132	5620	14.50	14.50	17.50	
		140	5660	14.50	14.50	17.50	
		144	5700	14.50	14.50	17.50	
		144	5720	14.50	14.50	17.50	
	802.11n-HT20 MCS0	100	116	5500	14.50	14.50	17.50
			124	5580	14.50	14.50	17.50
			132	5620	14.50	14.50	17.50
			140	5660	14.50	14.50	17.50
			144	5700	14.50	14.50	17.50
			144	5720	14.50	14.50	17.50
802.11n-HT40 MCS0	102	110	5510	14.50	14.50	17.50	
		126	5550	14.50	14.50	17.50	
		134	5630	14.50	14.50	17.50	
		142	5670	14.50	14.50	17.50	
		142	5710	14.50	14.50	17.50	
802.11ac-VHT20 MCS0	100	116	5500	14.50	14.50	17.50	
		124	5580	14.50	14.50	17.50	
		132	5620	14.50	14.50	17.50	
		140	5660	14.50	14.50	17.50	
		144	5700	14.50	14.50	17.50	
		144	5720	14.50	14.50	17.50	
802.11ac-VHT40 MCS0	102	110	5510	14.50	14.50	17.50	
		126	5550	14.50	14.50	17.50	
		134	5630	14.50	14.50	17.50	
		142	5670	14.50	14.50	17.50	
		142	5710	14.50	14.50	17.50	
802.11ac-VHT80 MCS0	106	122	5530	14.00	14.00	17.00	
		138	5610	14.50	14.50	17.50	
		138	5690	14.50	14.50	17.50	
802.11ac-VHT160 MCS0	114	5570	14.50	14.50	17.50		
802.11ax-HE20 MCS0	100	116	5500	14.50	14.50	17.50	
		124	5580	14.50	14.50	17.50	
		132	5620	14.50	14.50	17.50	
		140	5660	14.50	14.50	17.50	
		144	5700	14.50	14.50	17.50	
		144	5720	14.50	14.50	17.50	
802.11ax-HE40 MCS0	102	110	5510	14.50	14.50	17.50	
		126	5550	14.50	14.50	17.50	
		134	5630	14.50	14.50	17.50	
		142	5670	14.50	14.50	17.50	
		142	5710	14.00	14.00	17.00	
802.11ax-HE80 MCS0	106	122	5530	14.50	14.50	17.50	
		138	5610	14.50	14.50	17.50	
		138	5690	14.50	14.50	17.50	
802.11ax-HE160 MCS0	114	5570	14.50	14.50	17.50		



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	149	5745	15.00	15.50	18.27
		157	5785	15.00	15.50	18.27
		165	5825	15.00	15.50	18.27
	802.11n-HT20 MCS0	149	5745	15.00	15.50	18.27
		157	5785	15.00	15.50	18.27
		165	5825	15.00	15.50	18.27
	802.11n-HT40 MCS0	151	5755	15.50	15.50	18.51
		159	5795	15.50	15.50	18.51
	802.11ac-VHT20 MCS0	149	5745	15.50	15.50	18.51
		157	5785	15.50	15.50	18.51
		165	5825	15.50	15.50	18.51
	802.11ac-VHT40 MCS0	151	5755	15.50	15.50	18.51
		159	5795	15.50	15.50	18.51
802.11ac-VHT80 MCS0	155	5775	15.50	15.50	18.51	
802.11ax-HE20 MCS0	149	5745	15.00	15.50	18.27	
	157	5785	15.00	15.50	18.27	
	165	5825	15.00	15.50	18.27	
802.11ax-HE40 MCS0	151	5755	15.50	15.50	18.51	
	159	5795	15.50	15.50	18.51	
802.11ax-HE80 MCS0	155	5775	15.50	15.50	18.51	



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		169	5845	14.00	14.00	17.00
		173	5865	14.00	14.00	17.00
		177	5885	14.00	14.00	17.00
802.11n-HT20 MCS0		169	5845	14.00	14.00	17.00
		173	5865	14.00	14.00	17.00
		177	5885	14.00	14.00	17.00
802.11n-HT40 MCS0		167	5835	14.00	14.00	17.00
		175	5875	14.00	14.00	17.00
802.11ac-VHT20 MCS0		169	5845	14.00	14.00	17.00
		173	5865	14.00	14.00	17.00
		177	5885	14.00	14.00	17.00
802.11ac-VHT40 MCS0		167	5835	14.00	14.00	17.00
		175	5875	14.00	14.00	17.00
802.11ac-VHT80 MCS0		171	5855	14.00	14.00	17.00
802.11ac-VHT160 MCS0		163	5815	14.00	14.00	17.00
802.11ax-HE20 MCS0		169	5845	14.00	14.00	17.00
		173	5865	14.00	14.00	17.00
		177	5885	14.00	14.00	17.00
802.11ax-HE40 MCS0		167	5835	14.00	14.00	17.00
		175	5875	14.00	14.00	17.00
802.11ax-HE80 MCS0		171	5855	14.00	14.00	17.00
802.11ax-HE160 MCS0		163	5815	14.00	14.00	17.00



<Power Index 4>

<2.4GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 3 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	11.00	13.00	-
		6	2437	11.00	13.00	-
		11	2462	11.00	13.00	-
		12	2467	11.00	13.00	-
		13	2472	11.00	13.00	-

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



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		36	5180	17.50	17.50	20.50
		40	5200	17.50	17.50	20.50
		44	5220	17.50	17.50	20.50
		48	5240	17.50	17.50	20.50
802.11n-HT20 MCS0		36	5180	17.50	17.50	20.50
		40	5200	17.50	17.50	20.50
		44	5220	17.50	17.50	20.50
		48	5240	17.50	17.50	20.50
802.11n-HT40 MCS0		38	5190	16.00	16.00	19.00
		46	5230	17.50	17.50	20.50
802.11ac-VHT20 MCS0		36	5180	17.50	17.50	20.50
		40	5200	17.50	17.50	20.50
		44	5220	17.50	17.50	20.50
		48	5240	17.50	17.50	20.50
802.11ac-VHT40 MCS0		38	5190	16.00	16.00	19.00
		46	5230	17.50	17.50	20.50
802.11ac-VHT80 MCS0		42	5210	16.00	16.00	19.00
802.11ax-HE20 MCS0		36	5180	17.50	17.50	20.50
		40	5200	17.50	17.50	20.50
		44	5220	17.50	17.50	20.50
		48	5240	17.50	17.50	20.50
802.11ax-HE40 MCS0		38	5190	16.50	16.50	19.50
		46	5230	17.50	17.50	20.50
802.11ax-HE80 MCS0		42	5210	16.00	16.00	19.00



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		52	5260	17.50	17.50	20.50
		56	5280	17.50	17.50	20.50
		60	5300	17.50	17.50	20.50
		64	5320	17.50	17.50	20.50
802.11n-HT20 MCS0		52	5260	17.50	17.50	20.50
		56	5280	17.50	17.50	20.50
		60	5300	17.50	17.50	20.50
		64	5320	17.50	17.50	20.50
802.11n-HT40 MCS0		54	5270	17.50	17.50	20.50
		62	5310	16.50	16.50	19.50
802.11ac-VHT20 MCS0		52	5260	17.50	17.50	20.50
		56	5280	17.50	17.50	20.50
		60	5300	17.50	17.50	20.50
		64	5320	17.50	17.50	20.50
802.11ac-VHT40 MCS0		54	5270	17.50	17.50	20.50
		62	5310	16.50	16.50	19.50
802.11ac-VHT80 MCS0		58	5290	16.50	16.50	19.50
802.11ac-VHT160 MCS0		50	5250	16.50	16.50	19.50
802.11ax-HE20 MCS0		52	5260	17.50	17.50	20.50
		56	5280	17.50	17.50	20.50
		60	5300	17.50	17.50	20.50
		64	5320	17.50	17.50	20.50
802.11ax-HE40 MCS0		54	5270	17.50	17.50	20.50
		62	5310	16.50	16.50	19.50
802.11ax-HE80 MCS0		58	5290	16.50	16.50	19.50
802.11ax-HE160 MCS0		50	5250	16.50	16.50	19.50



Burst Average Power (dBm)						
5.5GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		100	5500	14.50	14.50	17.50
		116	5580	14.50	14.50	17.50
		124	5620	14.50	14.50	17.50
		132	5660	14.50	14.50	17.50
		140	5700	14.50	14.50	17.50
802.11n-HT20 MCS0		144	5720	14.50	14.50	17.50
		100	5500	14.50	14.50	17.50
		116	5580	14.50	14.50	17.50
		124	5620	14.50	14.50	17.50
		132	5660	14.50	14.50	17.50
802.11n-HT40 MCS0		140	5700	14.50	14.50	17.50
		144	5720	14.50	14.50	17.50
		102	5510	14.50	14.50	17.50
		110	5550	14.50	14.50	17.50
		126	5630	14.50	14.50	17.50
802.11ac-VHT20 MCS0		134	5670	14.50	14.50	17.50
		142	5710	14.50	14.50	17.50
		100	5500	14.50	14.50	17.50
		116	5580	14.50	14.50	17.50
		124	5620	14.50	14.50	17.50
802.11ac-VHT40 MCS0		132	5660	14.50	14.50	17.50
		140	5700	14.50	14.50	17.50
		144	5720	14.50	14.50	17.50
		102	5510	14.50	14.50	17.50
		110	5550	14.50	14.50	17.50
802.11ac-VHT80 MCS0		126	5630	14.50	14.50	17.50
		134	5670	14.50	14.50	17.50
		142	5710	14.50	14.50	17.50
		106	5530	14.00	14.00	17.00
802.11ac-VHT160 MCS0		122	5610	14.50	14.50	17.50
		138	5690	14.50	14.50	17.50
		114	5570	14.50	14.50	17.50
802.11ax-HE20 MCS0		100	5500	14.50	14.50	17.50
		116	5580	14.50	14.50	17.50
		124	5620	14.50	14.50	17.50
		132	5660	14.50	14.50	17.50
		140	5700	14.50	14.50	17.50
		144	5720	14.50	14.50	17.50
802.11ax-HE40 MCS0		102	5510	14.50	14.50	17.50
		110	5550	14.50	14.50	17.50
		126	5630	14.50	14.50	17.50
		134	5670	14.50	14.50	17.50
		142	5710	14.00	14.00	17.00
802.11ax-HE80 MCS0		106	5530	14.50	14.50	17.50
		122	5610	14.50	14.50	17.50
		138	5690	14.50	14.50	17.50
802.11ax-HE160 MCS0		114	5570	14.50	14.50	17.50



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	149	5745	15.00	15.50	18.27
		157	5785	15.00	15.50	18.27
		165	5825	15.00	15.50	18.27
	802.11n-HT20 MCS0	149	5745	15.00	15.50	18.27
		157	5785	15.00	15.50	18.27
		165	5825	15.00	15.50	18.27
	802.11n-HT40 MCS0	151	5755	15.50	15.50	18.51
		159	5795	15.50	15.50	18.51
	802.11ac-VHT20 MCS0	149	5745	15.50	15.50	18.51
		157	5785	15.50	15.50	18.51
		165	5825	15.50	15.50	18.51
	802.11ac-VHT40 MCS0	151	5755	15.50	15.50	18.51
		159	5795	15.50	15.50	18.51
802.11ac-VHT80 MCS0	155	5775	15.50	15.50	18.51	
802.11ax-HE20 MCS0	149	5745	15.00	15.50	18.27	
	157	5785	15.00	15.50	18.27	
	165	5825	15.00	15.50	18.27	
802.11ax-HE40 MCS0	151	5755	15.50	15.50	18.51	
	159	5795	15.50	15.50	18.51	
802.11ax-HE80 MCS0	155	5775	15.50	15.50	18.51	



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		169	5845	14.00	14.00	17.00
		173	5865	14.00	14.00	17.00
		177	5885	14.00	14.00	17.00
802.11n-HT20 MCS0		169	5845	14.00	14.00	17.00
		173	5865	14.00	14.00	17.00
		177	5885	14.00	14.00	17.00
802.11n-HT40 MCS0		167	5835	14.00	14.00	17.00
		175	5875	14.00	14.00	17.00
802.11ac-VHT20 MCS0		169	5845	14.00	14.00	17.00
		173	5865	14.00	14.00	17.00
		177	5885	14.00	14.00	17.00
802.11ac-VHT40 MCS0		167	5835	14.00	14.00	17.00
		175	5875	14.00	14.00	17.00
802.11ac-VHT80 MCS0		171	5855	14.00	14.00	17.00
802.11ac-VHT160 MCS0		163	5815	14.00	14.00	17.00
802.11ax-HE20 MCS0		169	5845	14.00	14.00	17.00
		173	5865	14.00	14.00	17.00
		177	5885	14.00	14.00	17.00
802.11ax-HE40 MCS0		167	5835	14.00	14.00	17.00
		175	5875	14.00	14.00	17.00
802.11ax-HE80 MCS0		171	5855	14.00	14.00	17.00
802.11ax-HE160 MCS0		163	5815	14.00	14.00	17.00



<Power Index 5>

<2.4GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 3 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	23.00	23.00	-
		6	2437	23.00	23.00	-
		11	2462	23.00	23.00	-
		12	2467	23.00	23.00	-
		13	2472	20.50	20.00	-

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11g 6Mbps	1	2412	23.00	23.00	26.00
		6	2437	23.00	23.00	26.00
		11	2462	19.50	19.50	22.50
		12	2467	15.50	15.50	18.50
		13	2472	13.00	13.00	16.00
	802.11n-HT20 MCS0	1	2412	21.00	21.00	24.00
		6	2437	23.00	23.00	26.00
		11	2462	19.00	19.00	22.00
		12	2467	14.50	14.50	17.50
		13	2472	12.00	12.00	15.00
	802.11ac-VHT20 MCS0	1	2412	21.00	21.00	24.00
		6	2437	23.00	23.00	26.00
		11	2462	19.00	19.00	22.00
		12	2467	14.50	14.50	17.50
		13	2472	12.00	12.00	15.00
	802.11ax-HE20 MCS0	1	2412	21.00	21.00	24.00
		6	2437	23.00	23.00	26.00
		11	2462	19.00	19.00	22.00
		12	2467	15.00	15.00	18.00
		13	2472	12.00	12.00	15.00



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.2GHz WLAN	802.11a 6Mbps	36	5180	20.50	20.50	23.50
		40	5200	20.50	20.50	23.50
		44	5220	20.50	20.50	23.50
		48	5240	20.50	20.50	23.50
	802.11n-HT20 MCS0	36	5180	20.00	20.00	23.00
		40	5200	20.00	20.00	23.00
		44	5220	20.00	20.00	23.00
	802.11n-HT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	21.00	21.00	24.00
	802.11ac-VHT20 MCS0	36	5180	20.00	20.00	23.00
		40	5200	20.00	20.00	23.00
		44	5220	20.00	20.00	23.00
	802.11ac-VHT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	21.00	21.00	24.00
	802.11ac-VHT80 MCS0	42	5210	16.00	16.00	19.00
	802.11ax-HE20 MCS0	36	5180	20.00	20.00	23.00
40		5200	20.00	20.00	23.00	
44		5220	20.00	20.00	23.00	
48		5240	20.00	20.00	23.00	
802.11ax-HE40 MCS0	38	5190	16.50	16.50	19.50	
	46	5230	21.00	21.00	24.00	
802.11ax-HE80 MCS0	42	5210	16.00	16.00	19.00	



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	52	5260	20.50	20.50	23.50
		56	5280	20.50	20.50	23.50
		60	5300	20.50	20.50	23.50
		64	5320	20.50	20.50	23.50
	802.11n-HT20 MCS0	52	5260	19.50	19.50	22.50
		56	5280	21.00	21.00	24.00
		60	5300	21.00	21.00	24.00
	802.11n-HT40 MCS0	54	5270	21.00	21.00	24.00
		62	5310	16.50	16.50	19.50
	802.11ac-VHT20 MCS0	52	5260	21.00	21.00	24.00
		56	5280	21.00	21.00	24.00
		60	5300	21.00	21.00	24.00
		64	5320	21.00	21.00	24.00
	802.11ac-VHT40 MCS0	54	5270	21.00	21.00	24.00
		62	5310	16.50	16.50	19.50
	802.11ac-VHT80 MCS0	58	5290	16.50	16.50	19.50
	802.11ac-VHT160 MCS0	50	5250	16.50	16.50	19.50
	802.11ax-HE20 MCS0	52	5260	21.00	21.00	24.00
		56	5280	21.00	21.00	24.00
		60	5300	21.00	21.00	24.00
64		5320	21.00	21.00	24.00	
802.11ax-HE40 MCS0	54	5270	21.00	21.00	24.00	
	62	5310	16.50	16.50	19.50	
802.11ax-HE80 MCS0	58	5290	16.50	16.50	19.50	
802.11ax-HE160 MCS0	50	5250	16.50	16.50	19.50	



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	20.00	20.00	23.00
		116	5580	18.00	18.00	21.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.00	16.00	19.00
		144	5720	16.00	16.00	19.00
	802.11n-HT20 MCS0	100	5500	20.00	20.00	23.00
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11n-HT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	21.00	21.00	24.00
		126	5630	19.50	19.50	22.50
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	100	5500	20.00	20.00	23.00
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11ac-VHT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	21.00	21.00	24.00
		126	5630	19.50	19.50	22.50
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	106	5530	17.00	17.00	20.00
		122	5610	20.00	20.00	23.00
		138	5690	19.00	19.00	22.00
	802.11ac-VHT160 MCS0	114	5570	16.50	16.50	19.50
802.11ax-HE20 MCS0	100	5500	20.00	20.00	23.00	
	116	5580	17.50	17.50	20.50	
	124	5620	16.50	16.50	19.50	
	132	5660	16.50	16.50	19.50	
	140	5700	16.50	16.50	19.50	
	144	5720	16.50	16.50	19.50	
802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00	
	110	5550	21.00	21.00	24.00	
	126	5630	19.50	19.50	22.50	
	134	5670	18.00	18.00	21.00	
	142	5710	18.00	18.00	21.00	
802.11ax-HE80 MCS0	106	5530	17.50	17.50	20.50	
	122	5610	20.00	20.00	23.00	
	138	5690	19.00	19.00	22.00	
802.11ax-HE160 MCS0	114	5570	17.00	17.00	20.00	



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	149	5745	15.00	21.00	21.97
		157	5785	15.00	21.00	21.97
		165	5825	15.00	21.00	21.97
	802.11n-HT20 MCS0	149	5745	15.00	21.00	21.97
		157	5785	15.00	21.00	21.97
		165	5825	15.00	21.00	21.97
	802.11n-HT40 MCS0	151	5755	16.00	21.00	22.19
		159	5795	16.00	21.00	22.19
	802.11ac-VHT20 MCS0	149	5745	15.50	21.00	22.08
		157	5785	15.50	21.00	22.08
		165	5825	15.50	21.00	22.08
	802.11ac-VHT40 MCS0	151	5755	16.00	21.00	22.19
		159	5795	16.00	21.00	22.19
802.11ac-VHT80 MCS0	155	5775	18.00	21.00	22.76	
802.11ax-HE20 MCS0	149	5745	15.00	21.00	21.97	
	157	5785	15.00	21.00	21.97	
	165	5825	15.00	21.00	21.97	
802.11ax-HE40 MCS0	151	5755	16.00	21.00	22.19	
	159	5795	16.00	21.00	22.19	
802.11ax-HE80 MCS0	155	5775	18.00	21.00	22.76	



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
802.11n-HT20 MCS0		169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
802.11n-HT40 MCS0		167	5835	22.00	22.00	25.00
		175	5875	22.00	22.00	25.00
802.11ac-VHT20 MCS0		169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
802.11ac-VHT40 MCS0		167	5835	22.00	22.00	25.00
		175	5875	22.00	22.00	25.00
802.11ac-VHT80 MCS0		171	5855	20.50	20.50	23.50
802.11ac-VHT160 MCS0		163	5815	20.50	20.50	23.50
802.11ax-HE20 MCS0		169	5845	22.00	22.00	25.00
		173	5865	22.00	22.00	25.00
		177	5885	22.00	22.00	25.00
802.11ax-HE40 MCS0		167	5835	22.00	22.00	25.00
		175	5875	22.00	22.00	25.00
802.11ax-HE80 MCS0		171	5855	20.50	20.50	23.50
802.11ax-HE160 MCS0		163	5815	20.50	20.50	23.50



<Power Index 6>

<2.4GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 3 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	23.00	23.00	-
		6	2437	23.00	23.00	-
		11	2462	23.00	23.00	-
		12	2467	23.00	23.00	-
		13	2472	20.50	20.00	-

Burst Average Power (dBm)							
Transmit Antenna				MIMO			
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit	
	802.11g 6Mbps	1	2412	23.00	23.00	26.00	
		6	2437	23.00	23.00	26.00	
		11	2462	19.50	19.50	22.50	
		12	2467	15.50	15.50	18.50	
		13	2472	13.00	13.00	16.00	
	802.11n-HT20 MCS0	1	2412	21.00	21.00	24.00	
		6	2437	23.00	23.00	26.00	
		11	2462	19.00	19.00	22.00	
		12	2467	14.50	14.50	17.50	
	802.11ac-VHT20 MCS0	1	2412	21.00	21.00	24.00	
		6	2437	23.00	23.00	26.00	
		11	2462	19.00	19.00	22.00	
		12	2467	14.50	14.50	17.50	
	802.11ax-HE20 MCS0	1	2412	21.00	21.00	24.00	
		6	2437	23.00	23.00	26.00	
		11	2462	19.00	19.00	22.00	
		12	2467	15.00	15.00	18.00	
			13	2472	12.00	12.00	15.00



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	36	5180	19.50	19.50	22.50
		40	5200	19.50	19.50	22.50
		44	5220	19.50	19.50	22.50
		48	5240	19.50	19.50	22.50
	802.11n-HT20 MCS0	36	5180	19.50	19.50	22.50
		40	5200	19.50	19.50	22.50
		44	5220	19.50	19.50	22.50
	802.11n-HT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	19.50	19.50	22.50
	802.11ac-VHT20 MCS0	36	5180	19.50	19.50	22.50
		40	5200	19.50	19.50	22.50
		44	5220	19.50	19.50	22.50
		48	5240	19.50	19.50	22.50
	802.11ac-VHT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	19.50	19.50	22.50
	802.11ac-VHT80 MCS0	42	5210	16.00	16.00	19.00
	802.11ax-HE20 MCS0	36	5180	19.50	19.50	22.50
		40	5200	19.50	19.50	22.50
		44	5220	19.50	19.50	22.50
48		5240	19.50	19.50	22.50	
802.11ax-HE40 MCS0	38	5190	16.50	16.50	19.50	
	46	5230	19.50	19.50	22.50	
802.11ax-HE80 MCS0	42	5210	16.00	16.00	19.00	



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	52	5260	19.50	19.50	22.50
		56	5280	19.50	19.50	22.50
		60	5300	19.50	19.50	22.50
		64	5320	19.50	19.50	22.50
	802.11n-HT20 MCS0	52	5260	19.50	19.50	22.50
		56	5280	19.50	19.50	22.50
		60	5300	19.50	19.50	22.50
	802.11n-HT40 MCS0	54	5270	19.50	19.50	22.50
		62	5310	16.50	16.50	19.50
	802.11ac-VHT20 MCS0	52	5260	19.50	19.50	22.50
		56	5280	19.50	19.50	22.50
		60	5300	19.50	19.50	22.50
		64	5320	19.50	19.50	22.50
	802.11ac-VHT40 MCS0	54	5270	19.50	19.50	22.50
		62	5310	16.50	16.50	19.50
	802.11ac-VHT80 MCS0	58	5290	16.50	16.50	19.50
	802.11ac-VHT160 MCS0	50	5250	16.50	16.50	19.50
	802.11ax-HE20 MCS0	52	5260	19.50	19.50	22.50
		56	5280	19.50	19.50	22.50
60		5300	19.50	19.50	22.50	
64		5320	19.50	19.50	22.50	
802.11ax-HE40 MCS0	54	5270	19.50	19.50	22.50	
	62	5310	16.50	16.50	19.50	
802.11ax-HE80 MCS0	58	5290	16.50	16.50	19.50	
802.11ax-HE160 MCS0	50	5250	16.50	16.50	19.50	



Burst Average Power (dBm)							
5.5GHz WLAN	Transmit Antenna			MIMO			
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit	
802.11a 6Mbps	100	100	5500	20.00	20.00	23.00	
		116	5580	18.00	18.00	21.00	
		124	5620	16.50	16.50	19.50	
		132	5660	16.50	16.50	19.50	
		140	5700	16.00	16.00	19.00	
		144	5720	16.00	16.00	19.00	
	802.11n-HT20 MCS0	100	100	5500	20.00	20.00	23.00
			116	5580	17.00	17.00	20.00
			124	5620	16.50	16.50	19.50
			132	5660	16.50	16.50	19.50
			140	5700	16.50	16.50	19.50
			144	5720	16.50	16.50	19.50
802.11n-HT40 MCS0	102	102	5510	16.50	16.50	19.50	
		110	5550	21.00	21.00	24.00	
		126	5630	19.50	19.50	22.50	
		134	5670	18.00	18.00	21.00	
		142	5710	18.00	18.00	21.00	
802.11ac-VHT20 MCS0	100	100	5500	20.00	20.00	23.00	
		116	5580	17.00	17.00	20.00	
		124	5620	16.50	16.50	19.50	
		132	5660	16.50	16.50	19.50	
		140	5700	16.50	16.50	19.50	
802.11ac-VHT40 MCS0	102	102	5510	16.50	16.50	19.50	
		110	5550	21.00	21.00	24.00	
		126	5630	19.50	19.50	22.50	
		134	5670	18.00	18.00	21.00	
		142	5710	18.00	18.00	21.00	
802.11ac-VHT80 MCS0	106	106	5530	17.00	17.00	20.00	
		122	5610	20.00	20.00	23.00	
		138	5690	19.00	19.00	22.00	
802.11ac-VHT160 MCS0	114	5570	16.50	16.50	19.50		
802.11ax-HE20 MCS0	100	100	5500	20.00	20.00	23.00	
		116	5580	17.50	17.50	20.50	
		124	5620	16.50	16.50	19.50	
		132	5660	16.50	16.50	19.50	
		140	5700	16.50	16.50	19.50	
		144	5720	16.50	16.50	19.50	
802.11ax-HE40 MCS0	102	102	5510	17.00	17.00	20.00	
		110	5550	21.00	21.00	24.00	
		126	5630	19.50	19.50	22.50	
		134	5670	18.00	18.00	21.00	
		142	5710	18.00	18.00	21.00	
802.11ax-HE80 MCS0	106	106	5530	17.50	17.50	20.50	
		122	5610	20.00	20.00	23.00	
		138	5690	19.00	19.00	22.00	
802.11ax-HE160 MCS0	114	5570	17.00	17.00	20.00		



Burst Average Power (dBm)						
5.8GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		149	5745	15.00	21.00	21.97
		157	5785	15.00	21.00	21.97
		165	5825	15.00	21.00	21.97
802.11n-HT20 MCS0		149	5745	15.00	21.00	21.97
		157	5785	15.00	21.00	21.97
		165	5825	15.00	21.00	21.97
802.11n-HT40 MCS0		151	5755	16.00	21.00	22.19
		159	5795	16.00	21.00	22.19
802.11ac-VHT20 MCS0		149	5745	15.50	21.00	22.08
		157	5785	15.50	21.00	22.08
		165	5825	15.50	21.00	22.08
802.11ac-VHT40 MCS0		151	5755	16.00	21.00	22.19
		159	5795	16.00	21.00	22.19
802.11ac-VHT80 MCS0		155	5775	18.00	21.00	22.76
802.11ax-HE20 MCS0		149	5745	15.00	21.00	21.97
		157	5785	15.00	21.00	21.97
		165	5825	15.00	21.00	21.97
802.11ax-HE40 MCS0		151	5755	16.00	21.00	22.19
		159	5795	16.00	21.00	22.19
802.11ax-HE80 MCS0		155	5775	18.00	21.00	22.76



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
	802.11n-HT20 MCS0	169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
	802.11n-HT40 MCS0	167	5835	21.50	21.50	24.50
		175	5875	21.50	21.50	24.50
	802.11ac-VHT20 MCS0	169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
	802.11ac-VHT40 MCS0	167	5835	21.50	21.50	24.50
		175	5875	21.50	21.50	24.50
	802.11ac-VHT80 MCS0	171	5855	20.50	20.50	23.50
	802.11ac-VHT160 MCS0	163	5815	20.50	20.50	23.50
	802.11ax-HE20 MCS0	169	5845	21.50	21.50	24.50
		173	5865	21.50	21.50	24.50
		177	5885	21.50	21.50	24.50
802.11ax-HE40 MCS0	167	5835	21.50	21.50	24.50	
	175	5875	21.50	21.50	24.50	
802.11ax-HE80 MCS0	171	5855	20.50	20.50	23.50	
802.11ax-HE160 MCS0	163	5815	20.50	20.50	23.50	



<Power Index 7>

<2.4GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 3 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	21.50	21.00	-
		6	2437	21.50	21.00	-
		11	2462	21.50	21.00	-
		12	2467	21.50	21.00	-
		13	2472	20.50	20.00	-

Burst Average Power (dBm)							
Transmit Antenna				MIMO			
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit	
	802.11g 6Mbps	1	2412	21.00	21.00	24.00	
		6	2437	21.00	21.00	24.00	
		11	2462	19.50	19.50	22.50	
		12	2467	15.50	15.50	18.50	
		13	2472	13.00	13.00	16.00	
	802.11n-HT20 MCS0	1	2412	21.00	21.00	24.00	
		6	2437	21.00	21.00	24.00	
		11	2462	19.00	19.00	22.00	
		12	2467	14.50	14.50	17.50	
	802.11ac-VHT20 MCS0	1	2412	21.00	21.00	24.00	
		6	2437	21.00	21.00	24.00	
		11	2462	19.00	19.00	22.00	
		12	2467	14.50	14.50	17.50	
	802.11ax-HE20 MCS0	1	2412	21.00	21.00	24.00	
		6	2437	21.00	21.00	24.00	
		11	2462	19.00	19.00	22.00	
		12	2467	15.00	15.00	18.00	
			13	2472	12.00	12.00	15.00



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	36	5180	18.00	18.00	21.00
		40	5200	18.00	18.00	21.00
		44	5220	18.00	18.00	21.00
		48	5240	18.00	18.00	21.00
	802.11n-HT20 MCS0	36	5180	18.00	18.00	21.00
		40	5200	18.00	18.00	21.00
		44	5220	18.00	18.00	21.00
	802.11n-HT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	36	5180	18.00	18.00	21.00
		40	5200	18.00	18.00	21.00
		44	5220	18.00	18.00	21.00
	802.11ac-VHT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	42	5210	16.00	16.00	19.00
		36	5180	18.00	18.00	21.00
	802.11ax-HE20 MCS0	40	5200	18.00	18.00	21.00
		44	5220	18.00	18.00	21.00
		48	5240	18.00	18.00	21.00
	802.11ax-HE40 MCS0	38	5190	16.50	16.50	19.50
46		5230	18.00	18.00	21.00	
802.11ax-HE80 MCS0	42	5210	16.00	16.00	19.00	



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	52	5260	18.00	18.00	21.00
		56	5280	18.00	18.00	21.00
		60	5300	18.00	18.00	21.00
		64	5320	18.00	18.00	21.00
	802.11n-HT20 MCS0	52	5260	18.00	18.00	21.00
		56	5280	18.00	18.00	21.00
		60	5300	18.00	18.00	21.00
	802.11n-HT40 MCS0	54	5270	18.00	18.00	21.00
		62	5310	16.50	16.50	19.50
	802.11ac-VHT20 MCS0	52	5260	18.00	18.00	21.00
		56	5280	18.00	18.00	21.00
		60	5300	18.00	18.00	21.00
		64	5320	18.00	18.00	21.00
	802.11ac-VHT40 MCS0	54	5270	18.00	18.00	21.00
		62	5310	16.50	16.50	19.50
	802.11ac-VHT80 MCS0	58	5290	16.50	16.50	19.50
	802.11ac-VHT160 MCS0	50	5250	16.50	16.50	19.50
	802.11ax-HE20 MCS0	52	5260	18.00	18.00	21.00
		56	5280	18.00	18.00	21.00
60		5300	18.00	18.00	21.00	
64		5320	18.00	18.00	21.00	
802.11ax-HE40 MCS0	54	5270	18.00	18.00	21.00	
	62	5310	16.50	16.50	19.50	
802.11ax-HE80 MCS0	58	5290	16.50	16.50	19.50	
802.11ax-HE160 MCS0	50	5250	16.50	16.50	19.50	



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	20.50	20.50	23.50
		116	5580	18.00	18.00	21.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.00	16.00	19.00
		144	5720	16.00	16.00	19.00
	802.11n-HT20 MCS0	100	5500	20.50	20.50	23.50
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11n-HT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	20.50	20.50	23.50
		126	5630	19.50	19.50	22.50
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT20 MCS0	100	5500	20.50	20.50	23.50
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11ac-VHT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	20.50	20.50	23.50
		126	5630	19.50	19.50	22.50
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	106	5530	17.00	17.00	20.00
		122	5610	20.50	20.50	23.50
		138	5690	19.00	19.00	22.00
	802.11ac-VHT160 MCS0	114	5570	16.50	16.50	19.50
	802.11ax-HE20 MCS0	100	5500	20.50	20.50	23.50
		116	5580	17.50	17.50	20.50
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
140		5700	16.50	16.50	19.50	
144		5720	16.50	16.50	19.50	
802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00	
	110	5550	20.50	20.50	23.50	
	126	5630	19.50	19.50	22.50	
	134	5670	18.00	18.00	21.00	
	142	5710	18.00	18.00	21.00	
802.11ax-HE80 MCS0	106	5530	17.50	17.50	20.50	
	122	5610	20.50	20.50	23.50	
	138	5690	19.00	19.00	22.00	
802.11ax-HE160 MCS0	114	5570	17.00	17.00	20.00	



Burst Average Power (dBm)						
5.8GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		149	5745	15.00	20.50	21.58
		157	5785	15.00	20.50	21.58
		165	5825	15.00	20.50	21.58
802.11n-HT20 MCS0		149	5745	15.00	20.50	21.58
		157	5785	15.00	20.50	21.58
		165	5825	15.00	20.50	21.58
802.11n-HT40 MCS0		151	5755	16.00	20.50	21.82
		159	5795	16.00	20.50	21.82
802.11ac-VHT20 MCS0		149	5745	15.50	20.50	21.69
		157	5785	15.50	20.50	21.69
		165	5825	15.50	20.50	21.69
802.11ac-VHT40 MCS0		151	5755	16.00	20.50	21.82
		159	5795	16.00	20.50	21.82
802.11ac-VHT80 MCS0		155	5775	18.00	20.50	22.44
802.11ax-HE20 MCS0		149	5745	15.00	20.50	21.58
		157	5785	15.00	20.50	21.58
		165	5825	15.00	20.50	21.58
802.11ax-HE40 MCS0		151	5755	16.00	20.50	21.82
		159	5795	16.00	20.50	21.82
802.11ax-HE80 MCS0		155	5775	18.00	20.50	21.82



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		169	5845	20.00	20.00	23.00
		173	5865	20.00	20.00	23.00
		177	5885	20.00	20.00	23.00
802.11n-HT20 MCS0		169	5845	20.00	20.00	23.00
		173	5865	20.00	20.00	23.00
		177	5885	20.00	20.00	23.00
802.11n-HT40 MCS0		167	5835	20.00	20.00	23.00
		175	5875	20.00	20.00	23.00
802.11ac-VHT20 MCS0		169	5845	20.00	20.00	23.00
		173	5865	20.00	20.00	23.00
		177	5885	20.00	20.00	23.00
802.11ac-VHT40 MCS0		167	5835	20.00	20.00	23.00
		175	5875	20.00	20.00	23.00
802.11ac-VHT80 MCS0		171	5855	20.00	20.00	23.00
802.11ac-VHT160 MCS0		163	5815	20.00	20.00	23.00
802.11ax-HE20 MCS0		169	5845	20.00	20.00	23.00
		173	5865	20.00	20.00	23.00
		177	5885	20.00	20.00	23.00
802.11ax-HE40 MCS0		167	5835	20.00	20.00	23.00
		175	5875	20.00	20.00	23.00
802.11ax-HE80 MCS0		171	5855	20.00	20.00	23.00
802.11ax-HE160 MCS0		163	5815	20.00	20.00	23.00



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<2.4 GHz WLAN>

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4 Tune-Up Limit	Ant 3 Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11b 1Mbps	1	2412	15.00	15.00	-
		6	2437	15.00	15.00	-
		11	2462	15.00	15.00	-
		12	2467	15.00	15.00	-
		13	2472	15.00	15.00	-

Burst Average Power (dBm)						
Transmit Antenna				MIMO		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+3(4) Tune-Up Limit	Ant 4+3(3) Tune-Up Limit	Ant 4+3 Tune-Up Limit
	802.11g 6Mbps	1	2412	15.00	15.00	18.00
		6	2437	15.00	15.00	18.00
		11	2462	15.00	15.00	18.00
		12	2467	15.00	15.00	18.00
		13	2472	13.00	13.00	16.00
	802.11n-HT20 MCS0	1	2412	15.00	15.00	18.00
		6	2437	15.00	15.00	18.00
		11	2462	15.00	15.00	18.00
		12	2467	14.50	14.50	17.50
		13	2472	12.00	12.00	15.00
	802.11ac-VHT20 MCS0	1	2412	15.00	15.00	18.00
		6	2437	15.00	15.00	18.00
		11	2462	15.00	15.00	18.00
		12	2467	14.50	14.50	17.50
		13	2472	12.00	12.00	15.00
	802.11ax-HE20 MCS0	1	2412	15.00	15.00	18.00
		6	2437	15.00	15.00	18.00
		11	2462	15.00	15.00	18.00
		12	2467	15.00	15.00	18.00
		13	2472	12.00	12.00	15.00



<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	36	5180	14.50	14.50	17.50
		40	5200	14.50	14.50	17.50
		44	5220	14.50	14.50	17.50
		48	5240	14.50	14.50	17.50
	802.11n-HT20 MCS0	36	5180	14.50	14.50	17.50
		40	5200	14.50	14.50	17.50
		44	5220	14.50	14.50	17.50
		48	5240	14.50	14.50	17.50
	802.11n-HT40 MCS0	38	5190	14.50	14.50	17.50
		46	5230	14.50	14.50	17.50
	802.11ac-VHT20 MCS0	36	5180	14.50	14.50	17.50
		40	5200	14.50	14.50	17.50
		44	5220	14.50	14.50	17.50
		48	5240	14.50	14.50	17.50
	802.11ac-VHT40 MCS0	38	5190	14.50	14.50	17.50
		46	5230	14.50	14.50	17.50
	802.11ac-VHT80 MCS0	42	5210	14.50	14.50	17.50
	802.11ax-HE20 MCS0	36	5180	14.50	14.50	17.50
		40	5200	14.50	14.50	17.50
		44	5220	14.50	14.50	17.50
48		5240	14.50	14.50	17.50	
802.11ax-HE40 MCS0	38	5190	14.50	14.50	17.50	
	46	5230	14.50	14.50	17.50	
802.11ax-HE80 MCS0	42	5210	14.50	14.50	17.50	



Burst Average Power (dBm)						
5.3GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	52	5260	16.50	16.50	19.50
		56	5280	16.50	16.50	19.50
		60	5300	16.50	16.50	19.50
		64	5320	16.50	16.50	19.50
	802.11n-HT20 MCS0	52	5260	16.50	16.50	19.50
		56	5280	16.50	16.50	19.50
		60	5300	16.50	16.50	19.50
	802.11n-HT40 MCS0	54	5270	16.50	16.50	19.50
		62	5310	16.50	16.50	19.50
	802.11ac-VHT20 MCS0	52	5260	16.50	16.50	19.50
		56	5280	16.50	16.50	19.50
		60	5300	16.50	16.50	19.50
		64	5320	16.50	16.50	19.50
	802.11ac-VHT40 MCS0	54	5270	16.50	16.50	19.50
		62	5310	16.50	16.50	19.50
	802.11ac-VHT80 MCS0	58	5290	16.50	16.50	19.50
	802.11ac-VHT160 MCS0	50	5250	16.50	16.50	19.50
	802.11ax-HE20 MCS0	52	5260	16.50	16.50	19.50
		56	5280	16.50	16.50	19.50
		60	5300	16.50	16.50	19.50
64		5320	16.50	16.50	19.50	
802.11ax-HE40 MCS0	54	5270	16.50	16.50	19.50	
	62	5310	16.50	16.50	19.50	
802.11ax-HE80 MCS0	58	5290	16.50	16.50	19.50	
802.11ax-HE160 MCS0	50	5250	16.50	16.50	19.50	



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	19.00	19.00	22.00
		116	5580	18.00	18.00	21.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	22.00
		140	5700	16.00	16.00	19.00
		144	5720	16.00	16.00	19.00
	802.11n-HT20 MCS0	100	5500	19.00	19.00	22.00
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11n-HT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	19.00	19.00	22.00
		126	5630	19.00	19.00	22.00
		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	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11ac-VHT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	19.00	19.00	22.00
		126	5630	19.00	19.00	22.00
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	106	5530	17.00	17.00	20.00
		122	5610	19.00	19.00	22.00
		138	5690	19.00	19.00	22.00
	802.11ac-VHT160 MCS0	114	5570	16.50	16.50	19.50
	802.11ax-HE20 MCS0	100	5500	19.00	19.00	22.00
		116	5580	17.50	17.50	20.50
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
140		5700	16.50	16.50	19.50	
144		5720	16.50	16.50	19.50	
802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00	
	110	5550	19.00	19.00	22.00	
	126	5630	19.00	19.00	22.00	
	134	5670	18.00	18.00	21.00	
	142	5710	18.00	18.00	21.00	
802.11ax-HE80 MCS0	106	5530	17.50	17.50	20.50	
	122	5610	19.00	19.00	22.00	
	138	5690	19.00	19.00	22.00	
802.11ax-HE160 MCS0	114	5570	17.00	17.00	20.00	



Burst Average Power (dBm)						
5.8GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		149	5745	15.00	19.00	20.46
		157	5785	15.00	19.00	20.46
		165	5825	15.00	19.00	20.46
802.11n-HT20 MCS0		149	5745	15.00	19.00	20.46
		157	5785	15.00	19.00	20.46
		165	5825	15.00	19.00	20.46
802.11n-HT40 MCS0		151	5755	16.00	19.00	20.76
		159	5795	16.00	19.00	20.76
802.11ac-VHT20 MCS0		149	5745	15.50	19.00	20.60
		157	5785	15.50	19.00	20.60
		165	5825	15.50	19.00	20.60
802.11ac-VHT40 MCS0		151	5755	16.00	19.00	20.76
		159	5795	16.00	19.00	20.76
802.11ac-VHT80 MCS0		155	5775	18.00	19.00	21.54
802.11ax-HE20 MCS0		149	5745	15.00	19.00	20.46
		157	5785	15.00	19.00	20.46
		165	5825	15.00	19.00	20.46
802.11ax-HE40 MCS0		151	5755	16.00	19.00	20.76
		159	5795	16.00	19.00	20.76
802.11ax-HE80 MCS0		155	5775	18.00	19.00	21.54



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		169	5845	18.00	18.00	21.00
		173	5865	18.00	18.00	21.00
		177	5885	18.00	18.00	21.00
802.11n-HT20 MCS0		169	5845	18.00	18.00	21.00
		173	5865	18.00	18.00	21.00
		177	5885	18.00	18.00	21.00
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	18.00	18.00	21.00
		173	5865	18.00	18.00	21.00
		177	5885	18.00	18.00	21.00
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	18.00	18.00	21.00
802.11ac-VHT160 MCS0		163	5815	18.00	18.00	21.00
802.11ax-HE20 MCS0		169	5845	18.00	18.00	21.00
		173	5865	18.00	18.00	21.00
		177	5885	18.00	18.00	21.00
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	18.00	18.00	21.00
802.11ax-HE160 MCS0		163	5815	18.00	18.00	21.00



<Power Index 9>

<5GHz WLAN>

Burst Average Power (dBm)						
5.2GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	36	5180	14.50	14.50	17.50
		40	5200	14.50	14.50	17.50
		44	5220	14.50	14.50	17.50
		48	5240	14.50	14.50	17.50
	802.11n-HT20 MCS0	36	5180	14.50	14.50	17.50
		40	5200	14.50	14.50	17.50
		44	5220	14.50	14.50	17.50
	802.11n-HT40 MCS0	38	5190	14.50	14.50	17.50
		46	5230	14.50	14.50	17.50
	802.11ac-VHT20 MCS0	36	5180	14.50	14.50	17.50
		40	5200	14.50	14.50	17.50
		44	5220	14.50	14.50	17.50
		48	5240	14.50	14.50	17.50
	802.11ac-VHT40 MCS0	38	5190	14.50	14.50	17.50
		46	5230	14.50	14.50	17.50
	802.11ac-VHT80 MCS0	42	5210	14.50	14.50	17.50
	802.11ax-HE20 MCS0	36	5180	14.50	14.50	17.50
		40	5200	14.50	14.50	17.50
		44	5220	14.50	14.50	17.50
		48	5240	14.50	14.50	17.50
802.11ax-HE40 MCS0	38	5190	14.50	14.50	17.50	
	46	5230	14.50	14.50	17.50	
802.11ax-HE80 MCS0	42	5210	14.50	14.50	17.50	



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	52	5260	16.50	16.50	19.50
		56	5280	16.50	16.50	19.50
		60	5300	16.50	16.50	19.50
		64	5320	16.50	16.50	19.50
	802.11n-HT20 MCS0	52	5260	16.50	16.50	19.50
		56	5280	16.50	16.50	19.50
		60	5300	16.50	16.50	19.50
	802.11n-HT40 MCS0	54	5270	16.50	16.50	19.50
		62	5310	16.50	16.50	19.50
	802.11ac-VHT20 MCS0	52	5260	16.50	16.50	19.50
		56	5280	16.50	16.50	19.50
		60	5300	16.50	16.50	19.50
		64	5320	16.50	16.50	19.50
	802.11ac-VHT40 MCS0	54	5270	16.50	16.50	19.50
		62	5310	16.50	16.50	19.50
	802.11ac-VHT80 MCS0	58	5290	16.50	16.50	19.50
	802.11ac-VHT160 MCS0	50	5250	16.50	16.50	19.50
	802.11ax-HE20 MCS0	52	5260	16.50	16.50	19.50
		56	5280	16.50	16.50	19.50
60		5300	16.50	16.50	19.50	
64		5320	16.50	16.50	19.50	
802.11ax-HE40 MCS0	54	5270	16.50	16.50	19.50	
	62	5310	16.50	16.50	19.50	
802.11ax-HE80 MCS0	58	5290	16.50	16.50	19.50	
802.11ax-HE160 MCS0	50	5250	16.50	16.50	19.50	



Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
5.5GHz WLAN	802.11a 6Mbps	100	5500	19.00	19.00	22.00
		116	5580	18.00	18.00	21.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	22.00
		140	5700	16.00	16.00	19.00
		144	5720	16.00	16.00	19.00
	802.11n-HT20 MCS0	100	5500	19.00	19.00	22.00
		116	5580	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	22.00
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11n-HT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	19.00	19.00	22.00
		126	5630	19.00	19.00	22.00
		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	17.00	17.00	20.00
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
		140	5700	16.50	16.50	19.50
		144	5720	16.50	16.50	19.50
	802.11ac-VHT40 MCS0	102	5510	16.50	16.50	19.50
		110	5550	19.00	19.00	22.00
		126	5630	19.00	19.00	22.00
		134	5670	18.00	18.00	21.00
		142	5710	18.00	18.00	21.00
	802.11ac-VHT80 MCS0	106	5530	17.00	17.00	20.00
		122	5610	19.00	19.00	22.00
		138	5690	19.00	19.00	22.00
	802.11ac-VHT160 MCS0	114	5570	16.50	16.50	19.50
	802.11ax-HE20 MCS0	100	5500	19.00	19.00	22.00
		116	5580	17.50	17.50	20.50
		124	5620	16.50	16.50	19.50
		132	5660	16.50	16.50	19.50
140		5700	16.50	16.50	19.50	
144		5720	16.50	16.50	19.50	
802.11ax-HE40 MCS0	102	5510	17.00	17.00	20.00	
	110	5550	19.00	19.00	22.00	
	126	5630	19.00	19.00	22.00	
	134	5670	18.00	18.00	21.00	
	142	5710	18.00	18.00	21.00	
802.11ax-HE80 MCS0	106	5530	17.50	17.50	20.50	
	122	5610	19.00	19.00	22.00	
	138	5690	19.00	19.00	22.00	
802.11ax-HE160 MCS0	114	5570	17.00	17.00	20.00	



Burst Average Power (dBm)						
Transmit Antenna				MIMO		
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
	802.11a 6Mbps	149	5745	15.00	19.00	20.46
		157	5785	15.00	19.00	20.46
		165	5825	15.00	19.00	20.46
	802.11n-HT20 MCS0	149	5745	15.00	19.00	20.46
		157	5785	15.00	19.00	20.46
		165	5825	15.00	19.00	20.46
	802.11n-HT40 MCS0	151	5755	16.00	19.00	20.76
		159	5795	16.00	19.00	20.76
	802.11ac-VHT20 MCS0	149	5745	15.50	19.00	20.60
		157	5785	15.50	19.00	20.60
		165	5825	15.50	19.00	20.60
	802.11ac-VHT40 MCS0	151	5755	16.00	19.00	20.76
		159	5795	16.00	19.00	20.76
802.11ac-VHT80 MCS0	155	5775	18.00	19.00	21.54	
802.11ax-HE20 MCS0	149	5745	15.00	19.00	20.46	
	157	5785	15.00	19.00	20.46	
	165	5825	15.00	19.00	20.46	
802.11ax-HE40 MCS0	151	5755	16.00	19.00	20.76	
	159	5795	16.00	19.00	20.76	
802.11ax-HE80 MCS0	155	5775	18.00	19.00	21.54	



Burst Average Power (dBm)						
5.9GHz WLAN	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
802.11a 6Mbps		169	5845	18.00	18.00	21.00
		173	5865	18.00	18.00	21.00
		177	5885	18.00	18.00	21.00
802.11n-HT20 MCS0		169	5845	18.00	18.00	21.00
		173	5865	18.00	18.00	21.00
		177	5885	18.00	18.00	21.00
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	18.00	18.00	21.00
		173	5865	18.00	18.00	21.00
		177	5885	18.00	18.00	21.00
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	18.00	18.00	21.00
802.11ac-VHT160 MCS0		163	5815	18.00	18.00	21.00
802.11ax-HE20 MCS0		169	5845	18.00	18.00	21.00
		173	5865	18.00	18.00	21.00
		177	5885	18.00	18.00	21.00
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	18.00	18.00	21.00
802.11ax-HE160 MCS0		163	5815	18.00	18.00	21.00



<6E WLAN>

<Mobile Condition - Power Index 0>

Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
WiFi 6 GHz	802.11a 6Mbps	1	5955	7.00	7.00	10.00
		57	6235	7.00	7.00	10.00
		113	6515	7.00	7.00	10.00
		173	6815	8.50	8.50	11.50
	802.11ax-HE20 MCS0	1	5955	7.00	7.00	10.00
		57	6235	7.00	7.00	10.00
		113	6515	7.00	7.00	10.00
		173	6815	8.50	8.50	11.50
	802.11ax-HE40 MCS0	3	5965	11.00	11.00	14.00
		59	6245	11.00	11.00	14.00
		107	6485	11.00	11.00	14.00
		171	6805	11.00	11.00	14.00
		227	7085	11.00	11.00	14.00
	802.11ax-HE80 MCS0	7	5985	13.00	13.00	16.00
		71	6305	13.00	13.00	16.00
		119	6545	13.00	13.00	16.00
		167	6785	14.00	14.00	17.00
		215	7025	13.00	13.00	16.00
	802.11ax-HE160 MCS0	15	6025	16.00	16.00	19.00
		47	6185	16.00	16.00	19.00
		111	6505	16.00	16.00	19.00
		175	6825	17.00	17.00	20.00
		207	6985	17.00	17.00	20.00



< Power Index 1/ Power Index 2 / Power Index 5/ Power Index 6/ Power Index 7/ Power Index 8/ Power Index 9>

Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
WiFi 6 GHz	802.11a 6Mbps	1	5955	7.00	7.00	10.00
		57	6235	7.00	7.00	10.00
		113	6515	7.00	7.00	10.00
		173	6815	8.50	8.50	11.50
	802.11ax-HE20 MCS0	1	5955	7.00	7.00	10.00
		57	6235	7.00	7.00	10.00
		113	6515	7.00	7.00	10.00
		173	6815	8.50	8.50	11.50
	802.11ax-HE40 MCS0	3	5965	11.00	11.00	14.00
		59	6245	11.00	11.00	14.00
		107	6485	11.00	11.00	14.00
		171	6805	11.00	11.00	14.00
		227	7085	11.00	11.00	14.00
	802.11ax-HE80 MCS0	7	5985	13.00	13.00	16.00
		71	6305	13.00	13.00	16.00
		119	6545	13.00	13.00	16.00
		167	6785	14.00	14.00	17.00
		215	7025	13.00	13.00	16.00
	802.11ax-HE160 MCS0	15	6025	16.00	16.00	19.00
		47	6185	16.00	16.00	19.00
111		6505	16.00	16.00	19.00	
175		6825	17.00	17.00	20.00	
207		6985	17.00	17.00	20.00	



<Power Index 3/ Power Index 4>

Burst Average Power (dBm)						
	Transmit Antenna			MIMO		
	Mode	Channel	Frequency (MHz)	Ant 4+8(4) Tune-Up Limit	Ant 4+8(8) Tune-Up Limit	Ant 4+8 Tune-Up Limit
WiFi 6 GHz	802.11a 6Mbps	1	5955	7.00	7.00	10.00
		57	6235	7.00	7.00	10.00
		113	6515	7.00	7.00	10.00
		173	6815	8.50	8.50	11.50
	802.11ax-HE20 MCS0	1	5955	7.00	7.00	10.00
		57	6235	7.00	7.00	10.00
		113	6515	7.00	7.00	10.00
		173	6815	8.50	8.50	11.50
	802.11ax-HE40 MCS0	3	5965	11.00	11.00	14.00
		59	6245	11.00	11.00	14.00
		107	6485	11.00	11.00	14.00
		171	6805	11.00	11.00	14.00
	802.11ax-HE80 MCS0	227	7085	11.00	11.00	14.00
		7	5985	13.00	13.00	16.00
		71	6305	13.00	13.00	16.00
		119	6545	13.00	13.00	16.00
	802.11ax-HE160 MCS0	167	6785	14.00	14.00	17.00
		215	7025	13.00	13.00	16.00
		15	6025	15.50	15.50	18.50
		47	6185	15.50	15.50	18.50
	111	6505	16.00	16.00	19.00	
	175	6825	17.00	17.00	20.00	
	207	6985	16.50	16.50	19.50	



<Bluetooth Maximum Power>

General Note:

1. 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
2. 4+3(4): power level on antenna 4, when device operated in MIMO mode (4+3)

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

Mode	Burst Average Power (dBm)					
	Ant 4			Ant 4		
	BR / EDR					
	1Mbps		2Mbps		3Mbps	
Tune-up Limit	20.5	18.5	18.5	20.5	20.5	20.5

Mode	Burst Average Power (dBm)					
	Ant 3			Ant 3		
	BR / EDR					
	1Mbps		2Mbps		3Mbps	
Tune-up Limit	20.5	18.5	18.5	20.5	20.5	20.5

Mode	BR / EDR	Burst Average Power (dBm)								
		1Mbps			2Mbps			3Mbps		
		Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3
Tune-up Limit		17.5	17.5	20.5	15.5	15.5	18.5	15.5	15.5	18.5

Mode	LE	Burst Average Power (dBm)					
		1Mbps			2Mbps		
		Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3
Tune-up Limit		17.5	17.5	20.5	15.5	15.5	18.5

<Power Index 1>

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

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

Mode	BR / EDR	Burst Average Power (dBm)								
		1Mbps			2Mbps			3Mbps		
		Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3
Tune-up Limit		12	12	15	12	12	15	12	12	15

Mode	LE	Burst Average Power (dBm)					
		1Mbps			2Mbps		
		Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3
Tune-up Limit		12	12	15	12	12	15



<Power Index 3>

Mode	Burst Average Power (dBm)				
	Ant 4			Ant 4	
	BR / EDR				
	LE				
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	19	18.5	18.5	19	18.5

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	18.5

Mode	BR / EDR	Burst Average Power (dBm)								
		1Mbps			2Mbps			3Mbps		
		Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3
Tune-up Limit		17.5	17.5	20.5	15.5	15.5	18.5	15.5	15.5	18.5

Mode	LE	Burst Average Power (dBm)					
		1Mbps			2Mbps		
		Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3
Tune-up Limit		17.5	17.5	20.5	15.5	15.5	18.5

<Power Index 4>

Mode	Burst Average Power (dBm)				
	Ant 3			Ant 4	
	BR / EDR				
	LE				
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	17	17	17	17	17

Mode	Burst Average Power (dBm)				
	Ant 3			Ant 4	
	BR / EDR				
	LE				
	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps
Tune-up Limit	17.5	17.5	17.5	17.5	17.5

Mode	BR / EDR	Burst Average Power (dBm)								
		1Mbps			2Mbps			3Mbps		
		Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3
Tune-up Limit		17	17	20	15	15	18	15	15	18

Mode	LE	Burst Average Power (dBm)					
		1Mbps			2Mbps		
		Ant 4+3(4)	Ant 4+3(3)	Ant 4+3	Ant 4+3(4)	Ant 4+3(3)	Ant 4+3
Tune-up Limit		17	17	20	15	15	18



2.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	A4RGE2AE																																																														
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">≥ 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 7 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		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	20407	824.7	20415	825.5	20425	826.5	20450	829	20450	829	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844	20600	844	20600	844
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510	20850	2510	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560	21350	2560	21350	2560
LTE Band 12												
	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	23017	699.7	23025	700.5	23035	701.5	23060	704	23060	704	23060	704
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5
H	23173	715.3	23165	714.5	23155	713.5	23130	711	23130	711	23130	711
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23205		779.5		23230		782		23230		782	
M	23230		782									
H	23255		784.5									
LTE Band 14												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Channel #		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23305		790.5		23330		793		23330		793	
M	23330		793									
H	23355		795.5									
LTE Band 17												
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 10 MHz			
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)	
L	23755		706.5		23780		709		23780		709	
M	23790		710		23790		710		23790		710	
H	23825		713.5		23800		711		23800		711	



LTE Band 25													
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860	
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905	
LTE Band 26													
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz				
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5			
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5			
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5			
LTE Band 30													
	Bandwidth 5 MHz					Bandwidth 10 MHz							
	Channel #		Freq.(MHz)			Channel #		Freq.(MHz)					
L	27685		2307.5			27710		2310					
M	27710		2310										
H	27735		2312.5										
LTE Band 38													
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz						
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580					
M	38000	2595	38000	2595	38000	2595	38000	2595					
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610					
LTE Band 41													
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz						
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506					
L	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5					
M	40620	2593	40620	2593	40620	2593	40620	2593					
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5					
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680					
LTE Band 48													
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz						
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560					
L	55810	3607	55815	3607.5	55820	3608	55830	3609					
M	56170	3643	56165	3642.5	56160	3642	56150	3641					
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690					
LTE Band 66													
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720	
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770	
LTE Band 71													
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz						
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	133147	665.5	133172	668	133197	670.5	133222	673					
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5					
H	133447	695.5	133422	693	133397	690.5	133372	688					



2.4 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
FCC ID	A4RGE2AE
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, 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 B2/4/5/7/12/13/14/30/48/66/71
LTE Anchor Bands for n5	LTE B2/7/30/48/66
LTE Anchor Bands for n7	LTE B2/5/12/13/48/71
LTE Anchor Bands for n12	LTE B2/66
LTE Anchor Bands for n25	LTE B2/12/13/26/48/66
LTE Anchor Bands for n30	LTE B2/5/12/14/66
LTE Anchor Bands for n38	LTE B2/4/5/12/66/71
LTE Anchor Bands for n41	LTE B2/4/5/12/25/26/66/71
LTE Anchor Bands for n48	LTE B2/5/13/66/71
LTE Anchor Bands for n66	LTE B2/5/7/12/13/14/30/48/66/71
LTE Anchor Bands for n71	LTE B2/7/48/66
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/41



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																				
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	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
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	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)	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	641666	3624.99	641666	3624.99	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)	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	136100	680.5	136100	680.5	680.5											
H	139100	695.5	138600	693	13810	690.5	137600	688																
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)	
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
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		
NR Band 77 (3700MHz ~ 3980MHz)																								
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)	
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
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



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:

- The P_{limit} values correspond to SAR_{design target}.
- 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)	Config	Antenna	Duty cycle	Mobile Condition	Head		Hotspot	Body-worn/Extremity		P Max Burst average power (dBm)
					Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
				Index 1	Index 2	Index 3	Index 4	Index 5	Index 6	
				P limit						
GSM850 GSM/GPRS 1TX	Main TX0	0	12.50%	32.5	35.6	34.4	29.5	30.7	29.5	32.5
GSM850 GPRS 2TX	Main TX0	0	25.00%	31.5	34.6	33.4	29	30.2	29	31.5
GSM850 GPRS 3TX	Main TX0	0	37.50%	30.5	33.6	32.4	27.5	28.7	27.5	30.5
GSM850 GPRS 4TX	Main TX0	0	50.00%	29.5	32.6	31.4	26.5	27.7	26.5	29.5
GSM850 EDGE 1TX	Main TX0	0	12.50%	27	27	27	27	27	27	27
GSM850 EDGE 2TX	Main TX0	0	25.00%	26.5	26.5	26.5	26.5	26.5	26.5	26.5
GSM850 EDGE 3TX	Main TX0	0	37.50%	26.5	26.5	26.5	26.5	26.5	26.5	26.5
GSM850 EDGE 4TX	Main TX0	0	50.00%	24.5	24.5	24.5	24.5	24.5	24.5	24.5
GSM1900 GSM/GPRS 1TX	Main TX0	2	12.50%	30	33	31.8	30	31.2	30	30
GSM1900 GPRS 2TX	Main TX0	2	25.00%	28.5	31.5	30.3	27.2	28.4	27.2	28.5
GSM1900 GPRS 3TX	Main TX0	2	37.50%	28	31	29.8	25.4	26.6	25.4	28
GSM1900 GPRS 4TX	Main TX0	2	50.00%	27	30	28.8	24.2	25.4	24.2	27
GSM1900 EDGE 1TX	Main TX0	0	12.50%	25	25	25	25	25	25	25
GSM1900 EDGE 2TX	Main TX0	0	25.00%	24	24	24	24	24	24	24
GSM1900 EDGE 3TX	Main TX0	0	37.50%	24	24	24	24	24	24	24
GSM1900 EDGE 4TX	Main TX0	0	50.00%	23	23	23	23	23	23	23
WCDMA B2	Main TX0	2	100.00%	24.6	26.7	25.5	22.6	23.8	22.6	24.6
WCDMA B4	Main TX0	2	100.00%	24.6	28.3	27.1	23.2	24.4	23.2	24.6
WCDMA B5	Main TX0	0	100.00%	24.7	30.3	29.1	22.7	23.9	22.7	24.7

Wireless technology/ band(No Accounting duty cycle)	Config	Antenna	Duty cycle	Mobile Condition	Head		Hotspot	Body-worn/Extremity		P Max Burst average power (dBm)
					Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
				Index 1	Index 2	Index 3	Index 4	Index 5	Index 6	
				P limit						
GSM850 GSM/GPRS 1TX	Main TX1	1	12.50%	32.5	32.2	31	37.7	38.9	37.7	32.5
GSM850 GPRS 2TX	Main TX1	1	25.00%	31.5	29.5	28.3	34.7	35.9	34.7	31.5
GSM850 GPRS 3TX	Main TX1	1	37.50%	30.5	27.5	26.3	32.9	34.1	32.9	30.5
GSM850 GPRS 4TX	Main TX1	1	50.00%	29.5	26.5	25.3	31.7	30.7	29.5	29.5
GSM850 EDGE 1TX	Main TX1	1	12.50%	27	27	27	27	27	27	27
GSM850 EDGE 2TX	Main TX1	1	25.00%	26.5	26.5	26.5	26.5	26.5	26.5	26.5
GSM850 EDGE 3TX	Main TX1	1	37.50%	26.5	26.5	26.5	26.5	26.5	26.5	26.5
GSM850 EDGE 4TX	Main TX1	1	50.00%	24.5	24.5	24.5	24.5	24.5	24.5	24.5
GSM1900 GSM/GPRS 1TX	Main TX1	0	12.50%	29.2	42.3	41.1	23.6	24.8	23.6	29.2
GSM1900 GPRS 2TX	Main TX1	0	25.00%	27.7	39.3	38.1	22.1	23.3	22.1	27.7
GSM1900 GPRS 3TX	Main TX1	0	37.50%	27.2	37.5	36.3	21.1	22.3	21.1	27.2
GSM1900 GPRS 4TX	Main TX1	0	50.00%	26.2	36.3	35.1	20.1	21.3	20.1	26.2
GSM1900 EDGE 1TX	Main TX1	1	12.50%	24.2	24.2	24.2	21.7	22.9	21.7	24.2
GSM1900 EDGE 2TX	Main TX1	1	25.00%	23.2	23.2	23.2	20.7	21.9	20.7	23.2
GSM1900 EDGE 3TX	Main TX1	1	37.50%	23.2	23.2	23.2	20.7	21.9	20.7	23.2
GSM1900 EDGE 4TX	Main TX1	1	50.00%	22.2	22.2	22.2	19.7	20.9	19.7	22.2
WCDMA B2	Main TX1	0	100.00%	23.8	35.5	34.3	17.4	20.4	19.2	23.8
WCDMA B4	Main TX1	0	100.00%	23.8	33.9	32.7	17.9	19.1	17.9	23.8
WCDMA B5	Main TX1	1	100.00%	24.7	23.5	22.3	27.3	28.5	27.3	24.7



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

Wireless technology/ band (Accounting duty cycle)	Config	Antenna	Duty cycle	Mobile Condition	Head		Hotspot	Body-worn/Extremity		P Max Time-average power (dBm)	
					Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous		
					Index 1	Index 2	Index 3	Index 4	Index 5		Index 6
					P limit						Time-average power (dBm)
LTE B7	Main TX0	2	100.00%	24.5	24.3	23.1	20.5	21.7	20.5	24.5	
LTE B12/B17	Main TX0	0	100.00%	24.7	33.6	32.4	27.8	29.4	28.2	24.7	
LTE B13	Main TX0	0	100.00%	24.7	29.4	28.2	25.8	27.5	26.3	24.7	
LTE B14	Main TX0	0	100.00%	24.7	28.8	27.6	25.7	27.3	26.1	24.7	
LTE B25/B2	Main TX0	2	100.00%	24.6	26.7	25.5	22.6	23.8	22.6	24.6	
LTE B26/B5	Main TX0	0	100.00%	24.7	28.7	27.5	24.7	26.1	24.9	24.7	
LTE B30	Main TX0	2	100.00%	21.9	27.4	26.2	19.9	21.1	19.9	21.9	
LTE-B38 PC3	Main TX0	2	63.30%	22.5	26.2	25	20.9	22.1	20.9	22.5	
LTE-B38 PC2	Main TX0	2	43.30%							22.4	
LTE B41 PC3	Main TX0	2	63.30%	22.9	26.2	25	20.9	22.1	20.9	22.5	
LTE B41 PC2	Main TX0	2	43.30%							22.9	
LTE B48 PC3	Main TX0	6	63.30%	22.3	32.9	31.7	23.7	27	25.8	21.5	
LTE B66/B4	Main TX0	2	100.00%	24.6	27.8	26.6	22.8	24	22.8	24.6	
LTE B71	Main TX0	0	100.00%	24.7	31.8	30.6	28	30.2	29	24.7	
FR1 n5	Main TX0	0	100.00%	24.7	30.4	29.2	23.4	25.9	24.7	24.7	
FR1 n7	Main TX0	2	100.00%	24.5	25.3	24.1	20	21.2	20	24.5	
FR1 n12	Main TX0	0	100.00%	24.7	32.6	31.4	27.3	28.9	27.7	24.7	
FR1 n14	Main TX0	0	100.00%	24.7	32.7	31.5	26.5	28.2	27	24.7	
FR1 n25/n2	Main TX0	2	100.00%	24.6	27.5	26.3	21.2	22.4	21.2	24.6	
FR1 n30	Main TX0	2	100.00%	21.9	23.1	21.9	19.8	21	19.8	21.9	
FR1 n38 PC3	Main TX0	2	100.00%	24.5	25.7	24.5	20.2	21.7	20.5	24.5	
FR1 n41 PC3	Main TX0	2	100.00%	24.5	25.7	24.5	20.2	21.7	20.5	24.5	
FR1 n41 PC2	Main TX0	2	50.00%							23.5	
FR1 n41 UL MIMO PC1.5	Main TX0	2	25.00%							19.5	
FR1 n48 PC3	Main TX0	6	100.00%	24.3	32.7	31.5	24.6	26.7	25.5	23.5	
FR1 n66	Main TX0	2	100.00%	24.6	30.2	29	22.1	23.3	22.1	24.6	
FR1 n71	Main TX0	0	100.00%	24.7	35	33.8	27.7	30.5	29.3	24.7	
FR1 n77 PC3	Main TX0	6	100.00%	23	30	28.8	21.2	22.4	21.2	23	
FR1 n77 PC2	Main TX0	6	50.00%	23						23	
LTE B2 Sub	Sub TX0	1	100.00%	24.6	15.8	14.6	20.3	23.8	22.6	24.6	
LTE B66/B4 Sub	Sub TX0	1	100.00%	24.6	18.3	17.1	22.4	23.6	22.4	24.6	
FR1 n2 Sub	Sub TX0	1	100.00%	24.6	16.6	15.4	18.4	25.3	24.1	24.6	
FR1 n38 PC3 Sub	Sub TX0	1	100.00%	24.5	17.7	16.5	20.2	25.7	24.5	24.5	
FR1 n41 PC3 Sub	Sub TX0	1	100.00%	24.5	17.7	16.5	20.2	25.7	24.5	24.5	
FR1 n41 PC2 Sub	Sub TX0	1	50.00%							23.5	
FR1 n41 PC1.5 Sub UL MIMO	Sub TX0	1	25.00%							19.5	
FR1 n48 Sub UL MIMO	Sub TX0	1	100.00%	19.8	19.9	18.7	27	29.2	28	19.8	
FR1 n66 Sub	Sub TX0	1	100.00%	24.6	16.9	15.7	21.6	22.8	21.6	24.6	
FR1 n77 PC3 Sub	Sub TX0	1	100.00%	24.3	18.9	17.7	19.6	20.8	19.6	24.3	

General Note:

1. The device additional support uplink MIMO on n41, n48 and n77.
2. n41 PC1.5 Main Tx0 Ant2 and Sub Tx0 Ant 1, n48 PC3 Sub Tx0 Ant1 of device only support uplink MIMO.
3. LTE and 5GNR TDD: P_{limit} power levels in the table correspond to the time-averaged power levels which accounts for TX duty cycle.
4. 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)	Config	Antenna	Duty cycle	Mobile Condition	Head		Hotspot	Body-worn/Extremity		P Max Time-average power (dBm)
					Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
				Index 1	Index 2	Index 3	Index 4	Index 5	Index 6	
				P limit						
LTE B7	Main TX1	0	100.00%	23.5	39.4	38.2	17.5	21	19.8	23.5
LTE B12/B17	Main TX1	1	100.00%	24.7	26.6	25.4	30.4	31.6	30.4	24.7
LTE B13	Main TX1	1	100.00%	24.7	23.4	22.2	27.7	28.9	27.7	24.7
LTE B14	Main TX1	1	100.00%	24.7	23.2	22	28.4	29.6	28.4	24.7
LTE B25/B2	Main TX1	0	100.00%	23.8	37.3	36.1	17.7	20.7	19.5	23.8
LTE B26/B5	Main TX1	1	100.00%	24.7	22.9	21.7	26.9	28.1	26.9	24.7
LTE B30	Main TX1	0	100.00%	21.5	30.6	29.4	17.6	21.3	20.1	21.5
LTE-B38 PC3	Main TX1	0	63.30%	22.5	33.2	32	20.2	21.6	20.4	22.5
LTE-B38 PC2	Main TX1	0	43.30%							22.4
LTE B41 PC3	Main TX1	0	63.30%	22.9	33.2	32	20.2	21.7	20.5	22.5
LTE B41 PC2	Main TX1	0	43.30%							22.9
LTE B48 PC3	Main TX1	7	63.30%	21.2	32	30.8	21.2	25.3	24.1	20.5
LTE B66/B4	Main TX1	0	100.00%	23.8	35.2	34	19	20.2	19	23.8
LTE B71	Main TX1	1	100.00%	24.7	24.2	23	31.2	32.6	31.4	24.7
FR1 n5	Main TX1	1	100.00%	24.7	24.2	23	28	29.2	28	24.7
FR1 n7	Main TX1	0	100.00%	23.5	30	28.8	18	20.4	19.2	23.5
FR1 n12	Main TX1	1	100.00%	24.7	26.5	25.3	30.4	31.6	30.4	24.7
FR1 n14	Main TX1	1	100.00%	24.7	23.7	22.5	30.1	31.3	30.1	24.7
FR1 n25/n2	Main TX1	0	100.00%	23.8	32.5	31.3	17.5	20.5	19.3	23.8
FR1 n30	Main TX1	0	100.00%	21.5	32.3	31.1	17.9	21.8	20.6	21.5
FR1 n38 PC3	Main TX1	0	100.00%	23.5	24.7	23.5	18.4	22.6	21.4	23.5
FR1 n41 PC3	Main TX1	0	100.00%	23.5	24.7	23.5	18.4	22.6	21.4	23.5
FR1 n41 PC2	Main TX1	0	50.00%							23.5
FR1 n41 PC1.5 UL MIMO	Main TX1	0	25.00%							19.5
FR1 n48 PC3	Main TX1	7	100.00%	23.2	30.9	29.7	20.1	21.3	20.1	22.5
FR1 n66	Main TX1	0	100.00%	23.8	35.3	34.1	17.6	18.8	30.7	23.8
FR1 n71	Main TX1	1	100.00%	24.7	24	22.8	29.5	30.7	29.5	24.7
FR1 n77 PC3	Main TX1	7	100.00%	21.9	30.2	29	22.1	23.3	22.1	21.9
FR1 n77 PC2	Main TX1	7	50.00%							21.9
LTE B2 Sub	Sub TX1	5	100.00%	23.8	23.8	22.6	22.5	25.5	24.3	23.8
LTE B66/4 Sub	Sub TX1	5	100.00%	23.8	24.8	23.6	24.2	28	26.8	23.8
FR1 n2 Sub	Sub TX1	5	100.00%	23.8	24	22.8	22.8	25.4	24.2	23.8
FR1 n38 PC3 Sub	Sub TX1	5	100.00%	23.5	23.2	22	20.7	21.9	20.7	23.5
FR1 n41 PC3 Sub	Sub TX1	5	100.00%	23.5	23.2	22	20.7	21.9	20.7	23.5
FR1 n41 PC2 Sub	Sub TX1	5	50.00%							22.5
FR1 n41 PC1.5 Sub UL MIMO	Sub TX1	5	25.00%							18.5
FR1 n48 Sub UL MIMO	Sub TX1	5	100.00%	18.7	22.4	21.2	22.2	25.7	24.5	18.7
FR1 n66 Sub	Sub TX1	5	100.00%	23.8	25	23.8	23.3	24.5	23.3	23.8
FR1 n77 Sub PC3	Sub TX1	5	100.00%	23.2	19.3	18.1	18.6	19.8	18.6	23.2

General Note:

1. The device additional support uplink MIMO on n41, n48 and n77.
2. n41 PC1.5 Main Tx1 Ant 0, Sub Tx1 Ant 5, and n48 PC3 Sub Tx1 Ant5 of device only support uplink MIMO.
3. LTE and 5GNR TDD: P_{limit} power levels in the table correspond to the time-averaged power levels which accounts for TX duty cycle.
4. 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:

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

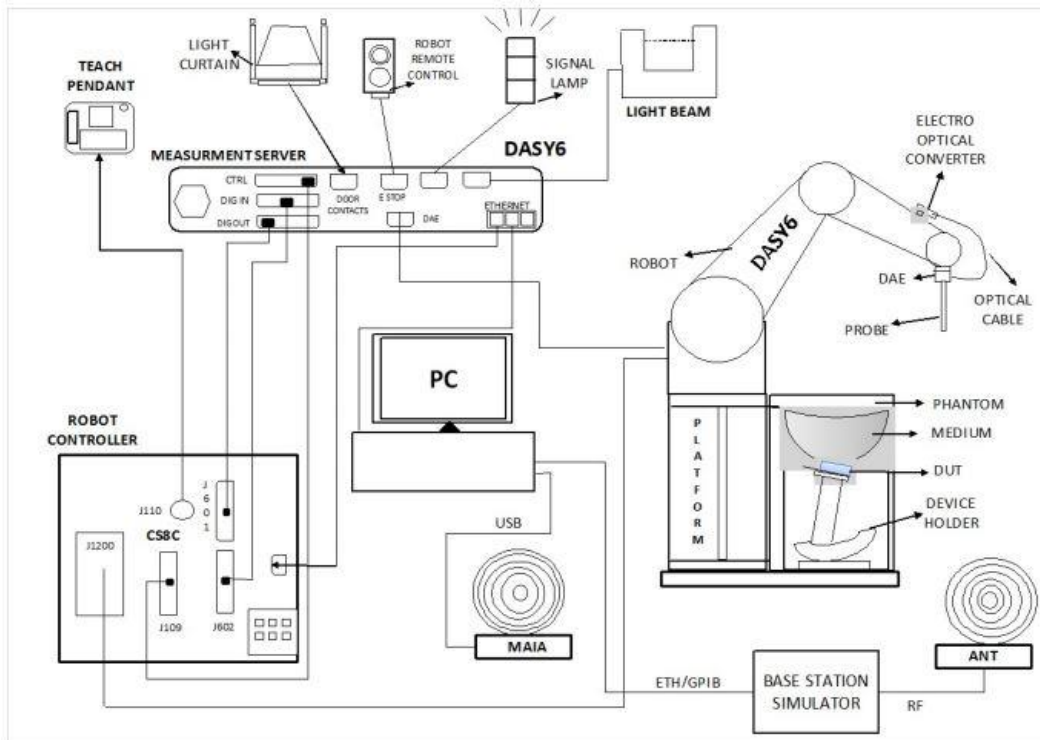
SAR is expressed in units of Watts per kilogram (W/kg)

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

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		Wensan Laboratory		
	TW1190		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	
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-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 μ W/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 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

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.

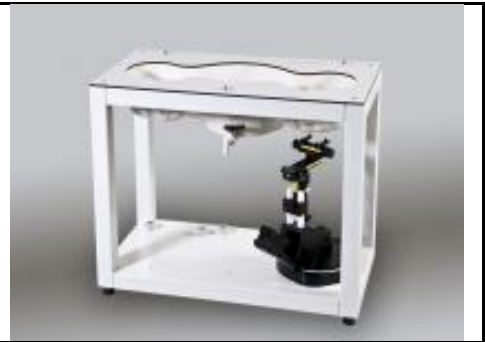


Fig 5.1 Photo of DAE

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 dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 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 to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

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

		≤ 3 GHz	> 3 GHz	
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 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	
<p>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.</p> <p>* 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.</p>				

8.5 Volume Scan Procedures

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

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	D750V3	1012	Aug. 18, 2021	Aug. 17, 2022
SPEAG	835MHz System Validation Kit	D835V2	499	Aug. 18, 2021	Aug. 17, 2022
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	1900MHz System Validation Kit	D1900V2	5d041	Aug. 19, 2021	Aug. 18, 2022
SPEAG	2300MHz System Validation Kit	D2300V2	1006	Jan. 18, 2022	Jan. 17, 2023
SPEAG	2450MHz System Validation Kit ⁽²⁾	D2450V2	929	Nov. 21, 2019	Nov. 18, 2022
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 17, 2021	Aug. 16, 2022
SPEAG	3500MHz System Validation Kit	D3500V2	1014	Jan. 17, 2022	Jan. 16, 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	3700MHz System Validation Kit	D3700V2	1022	Jul. 14, 2021	Jul. 13, 2022
SPEAG	3900MHz System Validation Kit ⁽²⁾	D3900V2	1017	Apr. 29, 2019	Apr. 26, 2022
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	10GHz	1020	Jan. 18, 2022	Jan. 17, 2023
SPEAG	Data Acquisition Electronics	DAE4	316	Jan. 26, 2022	Jan. 25, 2023
SPEAG	Data Acquisition Electronics	DAE4	376	Nov. 22, 2021	Nov. 21, 2022
SPEAG	Data Acquisition Electronics	DAE4	778	May. 21, 2021	May. 20, 2022
SPEAG	Data Acquisition Electronics	DAE4	853	Jul. 14, 2021	Jul. 13, 2022
SPEAG	Data Acquisition Electronics	DAE4	854	Aug. 19, 2021	Aug. 18, 2022
SPEAG	Data Acquisition Electronics	DAE4	1311	Aug. 20, 2021	Aug. 19, 2022
SPEAG	Dosimetric E-Field Probe	ES3DV3	3169	May. 28, 2021	May. 27, 2022
SPEAG	Dosimetric E-Field Probe	ES3DV3	3184	Sep. 23, 2021	Sep. 22, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3642	Apr. 28, 2022	Apr. 27, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7375	Dec. 20, 2021	Dec. 19, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 27, 2022	Jan. 26, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7306	Jul. 26, 2021	Jul. 25, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	7439	Mar. 02, 2022	Mar. 01, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7590	Mar. 28, 2022	Mar. 27, 2023
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9441	Nov. 24, 2021	Nov. 23, 2022
RCPTWN	Thermometer	HTC-1	TM685-1	Oct. 28, 2021	Oct. 27, 2022
RCPTWN	Thermometer	HTC-1	TM560-2	Oct. 28, 2021	Oct. 27, 2022
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Oct. 21, 2021	Oct. 20, 2022
Keysight	Wireless Communication Test Set	E5513C	MY50267236	Mar. 02, 2022	Mar. 01, 2023
R&S	BT Base Station	CBT32	101136	Oct. 17, 2021	Oct. 16, 2022
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Oct. 24, 2021	Oct. 23, 2022
Keysight	ENA Network Analyzer	E5071C	MY46104758	Sep. 19, 2021	Sep. 18, 2022
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 24, 2021	Sep. 23, 2022
LINE SEIKI	Digital Thermometer	DTM3000-spezial	2942	Oct. 26, 2021	Oct. 25, 2022
Anritsu	Power Meter	ML2495A	1419002	Aug. 18, 2021	Aug. 17, 2022
Anritsu	Power Sensor	MA2411B	1911176	Aug. 18, 2021	Aug. 17, 2022
Anritsu	Power Meter	ML2495A	1804003	Oct. 09, 2021	Oct. 08, 2022
Anritsu	Power Sensor	MA2411B	1726150	Oct. 09, 2021	Oct. 08, 2022
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 16, 2021	Jul. 15, 2022
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Jan. 12, 2022	Jan. 11, 2023
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 12, 2021	Oct. 11, 2022
Mini-Circuits	Power Amplifier	ZVE-8G+	479102029	Sep. 06, 2021	Sep. 05, 2022
ATM	Dual Directional Coupler	C122H-10	P610410z-02	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 50 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	22.3	1.670	39.382	1.67	39.50	0.00	-0.30	±5	2022/4/4
2300	22.3	1.684	39.489	1.67	39.50	0.84	-0.03	±5	2022/4/25
2300	22.6	1.627	39.971	1.67	39.50	-2.57	1.19	±5	2022/4/30
2300	22.6	1.613	39.881	1.67	39.50	-3.41	0.96	±5	2022/5/3
2600	22.2	2.049	38.541	1.96	39.00	4.54	-1.18	±5	2022/4/12
2600	22.3	1.990	38.677	1.96	39.00	1.53	-0.83	±5	2022/4/18
2600	22.6	1.976	38.876	1.96	39.00	0.82	-0.32	±5	2022/4/28
2600	22.3	2.028	38.275	1.96	39.00	3.47	-1.86	±5	2022/4/29
2600	22.3	1.940	38.373	1.96	39.00	-1.02	-1.61	±5	2022/5/1
2600	22.3	1.924	38.753	1.96	39.00	-1.84	-0.63	±5	2022/5/2
2600	22.6	1.966	38.796	1.96	39.00	0.31	-0.52	±5	2022/5/3
2600	22.3	1.940	39.271	1.96	39.00	-1.02	0.69	±5	2022/5/8
3500	22.3	2.974	38.460	2.91	37.90	2.20	1.48	±5	2022/4/20
3500	22.3	3.009	38.760	2.91	37.90	3.40	2.27	±5	2022/4/21
3500	22.3	2.961	38.695	2.91	37.90	1.75	2.10	±5	2022/4/22
3500	22.3	3.003	38.460	2.91	37.90	3.20	1.48	±5	2022/4/23
3500	22.3	2.922	38.950	2.91	37.90	0.41	2.77	±5	2022/4/30
3500	22.5	2.910	38.940	2.91	37.90	0.00	2.74	±5	2022/5/4
3500	22.5	2.994	38.417	2.91	37.90	2.89	1.36	±5	2022/7/26
3700	22.3	3.186	38.258	3.12	37.70	2.12	1.48	±5	2022/4/20
3700	22.3	3.224	38.558	3.12	37.70	3.33	2.28	±5	2022/4/21
3700	22.3	3.217	38.258	3.12	37.70	3.11	1.48	±5	2022/4/23
3700	22.3	3.131	38.748	3.12	37.70	0.35	2.78	±5	2022/4/30
3700	22.5	3.119	38.738	3.12	37.70	-0.03	2.75	±5	2022/5/4
3700	22.5	3.208	38.215	3.12	37.70	2.82	1.37	±5	2022/7/26
3900	22.3	3.398	38.070	3.33	37.51	2.04	1.49	±5	2022/4/20
3900	22.3	3.438	38.370	3.33	37.51	3.24	2.29	±5	2022/4/21
3900	22.3	3.431	38.070	3.33	37.51	3.03	1.49	±5	2022/4/23
3900	22.5	3.421	38.027	3.33	37.51	2.73	1.38	±5	2022/7/26
2450	22.5	1.814	39.172	1.80	39.20	0.78	-0.07	±5	2022/4/26
2450	22.4	1.825	38.585	1.80	39.20	1.39	-1.57	±5	2022/4/27
2450	22.5	1.818	39.539	1.80	39.20	1.00	0.86	±5	2022/4/28
2450	22.7	1.787	38.623	1.80	39.20	-0.72	-1.47	±5	2022/4/29
2450	22.5	1.814	38.823	1.80	39.20	0.78	-0.96	±5	2022/5/2
2450	22.5	1.814	38.823	1.80	39.20	0.78	-0.96	±5	2022/5/2
2450	22.5	1.814	38.823	1.80	39.20	0.78	-0.96	±5	2022/5/2
2450	22.3	1.760	38.423	1.80	39.20	-2.22	-1.98	±5	2022/5/3
5250	22.5	4.675	36.004	4.71	35.95	-0.74	0.15	±5	2022/4/21
5250	22.5	4.678	35.904	4.71	35.95	-0.68	-0.13	±5	2022/4/22
5250	22.4	4.614	35.684	4.71	35.95	-2.04	-0.74	±5	2022/4/23
5250	22.5	4.643	35.784	4.71	35.95	-1.42	-0.46	±5	2022/4/30
5600	22.5	5.007	35.446	5.07	35.50	-1.24	-0.15	±5	2022/4/22
5600	22.4	4.938	35.226	5.07	35.50	-2.60	-0.77	±5	2022/4/23
5750	22.5	5.190	35.360	5.22	35.35	-0.57	0.03	±5	2022/4/21
5750	22.2	5.193	35.260	5.22	35.35	-0.52	-0.25	±5	2022/4/22
5750	22.5	5.154	35.140	5.22	35.35	-1.26	-0.59	±5	2022/4/30
5850	22.5	5.199	36.039	5.32	35.25	-2.27	2.24	±5	2022/4/24
6500	22.5	6.120	35.300	6.07	34.50	0.82	2.32	±5	2022/4/20



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 (%)
SAR06	2022/4/1	750	250	D750V3-1012	ES3DV3 - SN3184	DAE4 Sn778	2.110	8.56	8.44	-1.40	1.400	5.56	5.6	0.72
SAR06	2022/4/2	750	250	D750V3-1012	ES3DV3 - SN3184	DAE4 Sn853	2.080	8.56	8.32	-2.80	1.380	5.56	5.52	-0.72
SAR09	2022/4/9	750	50	D750V3-1012	EX3DV4 - SN3976	DAE4 Sn316	0.389	8.56	7.78	-9.11	0.253	5.56	5.06	-8.99
SAR09	2022/4/10	750	250	D750V3-1012	EX3DV4 - SN3976	DAE4 Sn316	2.020	8.56	8.08	-5.61	1.330	5.56	5.32	-4.32
SAR05	2022/4/19	750	250	D750V3-1012	EX3DV4 - SN7306	DAE4 Sn853	2.180	8.56	8.72	1.87	1.470	5.56	5.88	5.76
SAR05	2022/4/26	750	50	D750V3-1012	EX3DV4 - SN7306	DAE4 Sn853	0.389	8.56	7.78	-9.11	0.258	5.56	5.16	-7.19
SAR04	2022/5/1	750	250	D750V3-1012	ES3DV3 - SN3169	DAE4 Sn1311	2.030	8.56	8.12	-5.14	1.350	5.56	5.4	-2.88
SAR06	2022/3/31	835	250	D835V2-4d167	ES3DV3 - SN3184	DAE4 Sn778	2.500	9.55	10	4.71	1.640	6.21	6.56	5.64
SAR08	2022/3/31	835	50	D835V2-4d167	EX3DV4 - SN7375	DAE4 Sn778	0.430	9.55	8.6	-9.95	0.288	6.21	5.76	-7.25
SAR09	2022/4/8	835	50	D835V2-4d167	EX3DV4 - SN3976	DAE4 Sn316	0.447	9.55	8.94	-6.39	0.288	6.21	5.76	-7.25
SAR09	2022/4/11	835	250	D835V2-4d167	EX3DV4 - SN3976	DAE4 Sn316	2.470	9.55	9.88	3.46	1.620	6.21	6.48	4.35
SAR05	2022/4/19	835	250	D835V2-4d167	EX3DV4 - SN7306	DAE4 Sn853	2.480	9.55	9.92	3.87	1.600	6.21	6.4	3.06
SAR04	2022/4/29	835	250	D835V2-499	ES3DV3 - SN3169	DAE4 Sn1311	2.350	9.68	9.4	-2.89	1.550	6.28	6.2	-1.27
SAR04	2022/5/1	835	250	D835V2-499	ES3DV3 - SN3169	DAE4 Sn1311	2.330	9.68	9.32	-3.72	1.530	6.28	6.12	-2.55
SAR01	2022/4/2	1750	250	D1750V2-1068	EX3DV4 - SN7439	DAE4 Sn376	8.610	36.60	34.44	-5.90	4.840	19.30	19.36	0.31
SAR01	2022/4/5	1750	50	D1750V2-1068	EX3DV4 - SN7439	DAE4 Sn376	1.790	36.60	35.8	-2.19	0.951	19.30	19.02	-1.45
SAR09	2022/4/8	1750	50	D1750V2-1068	EX3DV4 - SN3976	DAE4 Sn316	1.680	36.60	33.6	-8.20	0.877	19.30	17.54	-9.12
SAR08	2022/4/9	1750	50	D1750V2-1068	EX3DV4 - SN7375	DAE4 Sn778	1.870	36.60	37.4	2.19	1.000	19.30	20	3.63
SAR08	2022/4/10	1750	50	D1750V2-1068	EX3DV4 - SN7375	DAE4 Sn778	1.970	36.60	39.4	7.65	1.050	19.30	21	8.81
SAR06	2022/4/11	1750	250	D1750V2-1068	ES3DV3 - SN3184	DAE4 Sn778	9.490	36.60	37.96	3.72	5.090	19.30	20.36	5.49
SAR08	2022/4/14	1750	50	D1750V2-1068	EX3DV4 - SN7375	DAE4 Sn778	2.000	36.60	40	9.29	1.060	19.30	21.2	9.84
SAR05	2022/4/17	1750	50	D1750V2-1068	EX3DV4 - SN7306	DAE4 Sn853	1.790	36.60	35.8	-2.19	0.964	19.30	19.28	-0.10
SAR01	2022/4/27	1750	50	D1750V2-1068	EX3DV4 - SN7439	DAE4 Sn376	1.770	36.60	35.4	-3.28	0.939	19.30	18.78	-2.69
SAR04	2022/4/29	1750	250	D1750V2-1068	ES3DV3 - SN3169	DAE4 Sn1311	8.470	36.60	33.88	-7.43	4.550	19.30	18.2	-5.70
SAR04	2022/5/2	1750	250	D1750V2-1068	ES3DV3 - SN3169	DAE4 Sn1311	8.490	36.60	33.96	-7.21	4.560	19.30	18.24	-5.49
SAR01	2022/5/6	1750	50	D1750V2-1068	EX3DV4 - SN7439	DAE4 Sn376	1.780	36.60	35.6	-2.73	0.943	19.30	18.86	-2.28
SAR01	2022/5/11	1750	50	D1750V2-1068	EX3DV4 - SN7439	DAE4 Sn376	1.790	36.60	35.8	-2.19	0.951	19.30	19.02	-1.45
SAR01	2022/5/13	1750	50	D1750V2-1068	EX3DV4 - SN7439	DAE4 Sn376	1.780	36.60	35.6	-2.73	0.970	19.30	19.4	0.52
SAR01	2022/4/6	1900	50	D1900V2-5d041	EX3DV4 - SN7439	DAE4 Sn376	1.960	40.60	39.2	-3.45	1.030	21.10	20.6	-2.37
SAR09	2022/4/7	1900	50	D1900V2-5d041	EX3DV4 - SN3976	DAE4 Sn316	1.980	40.60	39.6	-2.46	1.020	21.10	20.4	-3.32
SAR08	2022/4/9	1900	250	D1900V2-5d041	EX3DV4 - SN7375	DAE4 Sn778	9.500	40.60	38	-6.40	4.970	21.10	19.88	-5.78
SAR08	2022/4/10	1900	50	D1900V2-5d041	EX3DV4 - SN7375	DAE4 Sn778	2.140	40.60	42.8	5.42	1.150	21.10	23	9.00
SAR06	2022/4/11	1900	250	D1900V2-5d041	ES3DV3 - SN3184	DAE4 Sn778	9.680	40.60	38.72	-4.63	5.110	21.10	20.44	-3.13
SAR08	2022/4/14	1900	250	D1900V2-5d041	EX3DV4 - SN7375	DAE4 Sn778	9.670	40.60	38.68	-4.73	5.060	21.10	20.24	-4.08
SAR05	2022/4/16	1900	50	D1900V2-5d041	EX3DV4 - SN7306	DAE4 Sn853	1.850	40.60	37	-8.87	0.973	21.10	19.46	-7.77
SAR01	2022/4/28	1900	50	D1900V2-5d041	EX3DV4 - SN7439	DAE4 Sn376	1.990	40.60	39.8	-1.97	1.030	21.10	20.6	-2.37
SAR04	2022/4/28	1900	250	D1900V2-5d041	ES3DV3 - SN3169	DAE4 Sn1311	9.540	40.60	38.16	-6.01	5.010	21.10	20.04	-5.02
SAR04	2022/5/2	1900	250	D1900V2-5d041	ES3DV3 - SN3169	DAE4 Sn1311	10.300	40.60	41.2	1.48	5.260	21.10	21.04	-0.28
SAR01	2022/5/6	1900	50	D1900V2-5d041	EX3DV4 - SN7439	DAE4 Sn376	1.900	40.60	38	-6.40	0.983	21.10	19.66	-6.82
SAR01	2022/5/8	1900	250	D1900V2-5d041	EX3DV4 - SN7439	DAE4 Sn376	9.220	40.60	36.88	-9.16	5.040	21.10	20.16	-4.45
SAR01	2022/5/11	1900	50	D1900V2-5d041	EX3DV4 - SN7439	DAE4 Sn376	1.950	40.60	39	-3.94	1.020	21.10	20.4	-3.32
SAR01	2022/5/13	1900	50	D1900V2-5d041	EX3DV4 - SN7439	DAE4 Sn376	1.840	40.60	36.8	-9.36	0.957	21.10	19.14	-9.29



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 (%)
SAR01	2022/4/4	2300	50	D2300V2-1006	EX3DV4 - SN7439	DAE4 Sn376	2.260	48.30	45.2	-6.42	1.100	23.50	22	-6.38
SAR05	2022/4/25	2300	250	D2300V2-1006	EX3DV4 - SN7306	DAE4 Sn853	11.800	48.30	47.2	-2.28	5.760	23.50	23.04	-1.96
SAR04	2022/4/30	2300	250	D2300V2-1006	ES3DV3 - SN3169	DAE4 Sn1311	11.200	48.30	44.8	-7.25	5.430	23.50	21.72	-7.57
SAR04	2022/5/3	2300	250	D2300V2-1006	ES3DV3 - SN3169	DAE4 Sn1311	12.000	48.30	48	-0.62	5.740	23.50	22.96	-2.30
SAR06	2022/4/12	2600	50	D2600V2-1008	ES3DV3 - SN3184	DAE4 Sn778	2.850	58.00	57	-1.72	1.370	25.80	27.4	6.20
SAR05	2022/4/18	2600	50	D2600V2-1008	EX3DV4 - SN7306	DAE4 Sn853	2.730	58.00	54.6	-5.86	1.250	25.80	25	-3.10
SAR04	2022/4/28	2600	250	D2600V2-1008	ES3DV3 - SN3169	DAE4 Sn1311	14.500	58.00	58	0.00	6.660	25.80	26.64	3.26
SAR05	2022/4/29	2600	250	D2600V2-1008	EX3DV4 - SN7306	DAE4 Sn853	14.900	58.00	59.6	2.76	6.500	25.80	26	0.78
SAR01	2022/5/1	2600	50	D2600V2-1008	EX3DV4 - SN7439	DAE4 Sn376	2.680	58.00	53.6	-7.59	1.230	25.80	24.6	-4.65
SAR01	2022/5/2	2600	250	D2600V2-1008	EX3DV4 - SN7439	DAE4 Sn376	13.500	58.00	54	-6.90	6.560	25.80	26.24	1.71
SAR04	2022/5/3	2600	250	D2600V2-1008	ES3DV3 - SN3169	DAE4 Sn1311	15.200	58.00	60.8	4.83	6.890	25.80	27.56	6.82
SAR01	2022/5/8	2600	250	D2600V2-1008	EX3DV4 - SN7439	DAE4 Sn376	15.400	58.00	61.6	6.21	6.690	25.80	26.76	3.72
SAR08	2022/4/20	3500	50	D3500V2-1014	EX3DV4 - SN7375	DAE4 Sn853	3.650	67.20	73	8.63	1.360	25.10	27.2	8.37
SAR08	2022/4/21	3500	50	D3500V2-1014	EX3DV4 - SN7375	DAE4 Sn853	3.670	67.20	73.4	9.23	1.360	25.10	27.2	8.37
SAR01	2022/4/22	3500	50	D3500V2-1014	EX3DV4 - SN7439	DAE4 Sn376	3.210	67.20	64.2	-4.46	1.180	25.10	23.6	-5.98
SAR08	2022/4/23	3500	50	D3500V2-1014	EX3DV4 - SN7375	DAE4 Sn853	3.690	67.20	73.8	9.82	1.370	25.10	27.4	9.16
SAR01	2022/4/30	3500	50	D3500V2-1014	EX3DV4 - SN7439	DAE4 Sn376	3.170	67.20	63.4	-5.65	1.170	25.10	23.4	-6.77
SAR01	2022/5/4	3500	50	D3500V2-1014	EX3DV4 - SN7439	DAE4 Sn376	3.160	67.20	63.2	-5.95	1.160	25.10	23.2	-7.57
SAR05	2022/7/26	3500	100	D3500V2-1036	EX3DV4 - SN3642	DAE4 Sn854	6.600	67.40	66	-2.08	2.460	25.10	24.6	-1.99
SAR08	2022/4/20	3700	50	D3700V2-1022	EX3DV4 - SN7375	DAE4 Sn853	3.500	68.20	70	2.64	1.280	24.70	25.6	3.64
SAR08	2022/4/21	3700	50	D3700V2-1022	EX3DV4 - SN7375	DAE4 Sn853	3.540	68.20	70.8	3.81	1.290	24.70	25.8	4.45
SAR08	2022/4/23	3700	50	D3700V2-1022	EX3DV4 - SN7375	DAE4 Sn853	3.550	68.20	71	4.11	1.300	24.70	26	5.26
SAR01	2022/4/30	3700	50	D3700V2-1022	EX3DV4 - SN7439	DAE4 Sn376	3.120	68.20	62.4	-8.50	1.170	24.70	23.4	-5.26
SAR01	2022/5/4	3700	50	D3700V2-1022	EX3DV4 - SN7439	DAE4 Sn376	3.170	68.20	63.4	-7.04	1.150	24.70	23	-6.88
SAR05	2022/7/26	3700	100	D3700V2-1006	EX3DV4 - SN3642	DAE4 Sn854	6.530	65.60	65.3	-0.46	2.360	23.70	23.6	-0.42
SAR08	2022/4/20	3900	50	D3900V2-1017-3900	EX3DV4 - SN7375	DAE4 Sn853	3.300	69.50	66	-5.04	1.140	24.20	22.8	-5.79
SAR08	2022/4/21	3900	50	D3900V2-1017-3900	EX3DV4 - SN7375	DAE4 Sn853	3.340	69.50	66.8	-3.88	1.160	24.20	23.2	-4.13
SAR08	2022/4/23	3900	50	D3900V2-1017-3900	EX3DV4 - SN7375	DAE4 Sn853	3.330	69.50	66.6	-4.17	1.160	24.20	23.2	-4.13
SAR05	2022/7/26	3900	100	D3900V2-1017-3900	EX3DV4 - SN3642	DAE4 Sn854	6.750	68.70	67.5	-1.75	2.290	23.90	22.9	-4.18

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 (%)
SAR10	2022/4/26	2450	250	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn854	13.300	53.10	53.2	0.19				
SAR10	2022/4/27	2450	250	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn854	13.600	53.10	54.4	2.45				
SAR10	2022/4/28	2450	250	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn854	13.400	53.10	53.6	0.94				
SAR10	2022/4/29	2450	250	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn854	13.100	53.10	52.4	-1.32				
SAR10	2022/5/2	2450	250	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn854	13.300	53.10	53.2	0.19				
SAR01	2022/5/2	2450	50	D2450V2-929	EX3DV4 - SN7439	DAE4 Sn376	2.530	53.10	50.6	-4.71				
SAR05	2022/5/2	2450	50	D2450V2-929	EX3DV4 - SN7306	DAE4 Sn853	2.730	53.10	54.6	2.82				
SAR10	2022/5/3	2450	250	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn854	12.900	53.10	51.6	-2.82				
SAR10	2022/4/21	5250	100	D5GHzV2-1128-5250	EX3DV4 - SN7590	DAE4 Sn854	7.620	80.00	76.2	-4.75	2.160	22.90	21.6	-5.68
SAR10	2022/4/22	5250	100	D5GHzV2-1128-5250	EX3DV4 - SN7590	DAE4 Sn854	7.690	80.00	76.9	-3.87	2.180	22.90	21.8	-4.80
SAR10	2022/4/23	5250	100	D5GHzV2-1128-5250	EX3DV4 - SN7590	DAE4 Sn854	7.520	80.00	75.2	-6.00	2.130	22.90	21.3	-6.99
SAR10	2022/4/30	5250	100	D5GHzV2-1128-5250	EX3DV4 - SN7590	DAE4 Sn854	7.570	80.00	75.7	-5.38	2.140	22.90	21.4	-6.55
SAR10	2022/4/22	5600	100	D5GHzV2-1128-5600	EX3DV4 - SN7590	DAE4 Sn854	8.500	82.40	85	3.16	2.390	23.60	23.9	1.27
SAR10	2022/4/23	5600	100	D5GHzV2-1128-5600	EX3DV4 - SN7590	DAE4 Sn854	8.390	82.40	83.9	1.82	2.360	23.60	23.6	0.00
SAR10	2022/4/21	5750	100	D5GHzV2-1128-5750	EX3DV4 - SN7590	DAE4 Sn854	7.680	79.10	76.8	-2.91	2.160	22.60	21.6	-4.42
SAR10	2022/4/22	5750	100	D5GHzV2-1128-5750	EX3DV4 - SN7590	DAE4 Sn854	7.690	79.10	76.9	-2.78	2.160	22.60	21.6	-4.42
SAR10	2022/4/30	5750	100	D5GHzV2-1128-5750	EX3DV4 - SN7590	DAE4 Sn854	7.630	79.10	76.3	-3.54	2.140	22.60	21.4	-5.31
SAR08	2022/4/24	5850	100	D5GHzV2-1171-5850	EX3DV4 - SN7375	DAE4 Sn854	8.100	82.30	81	-1.58	2.250	23.10	22.5	-2.60
SAR10	2022/4/20	6500	100	D6.5GHzV2-1003	EX3DV4 - SN7590	DAE4 Sn854	30.200	292.00	302	3.42	5.510	53.80	55.1	2.42

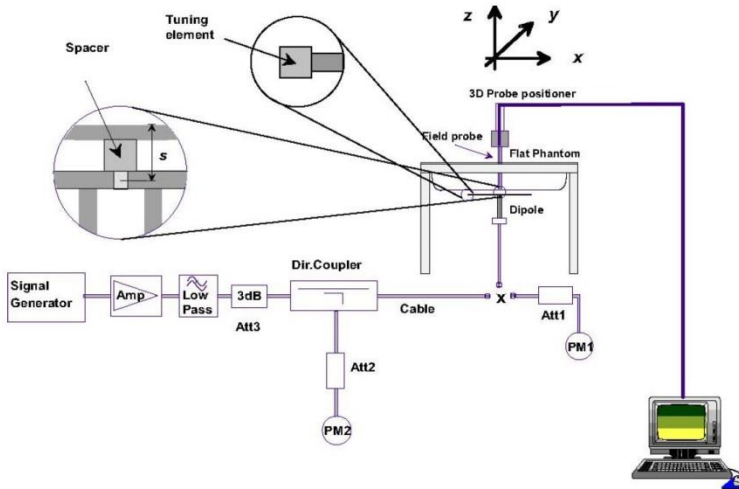


Fig 8.3.1 System Performance Check Setup



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	EUmmWV4 - SN9441	Sn778	10	50.2	51.7	-0.13	2022/4/9

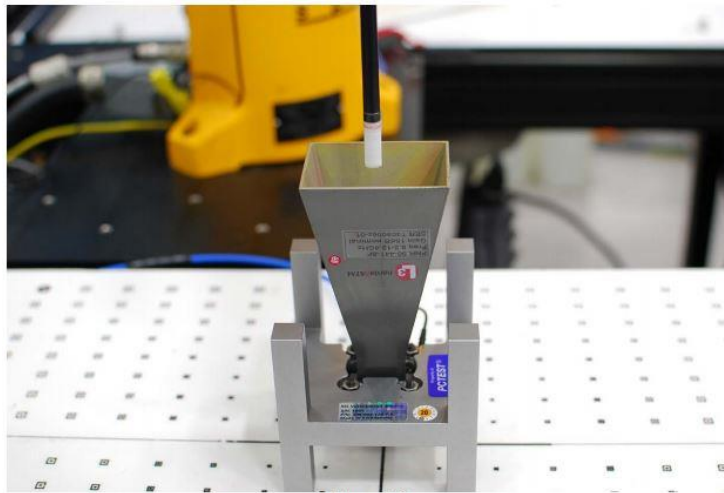


Figure 4-3
System Verification Setup Photo

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.

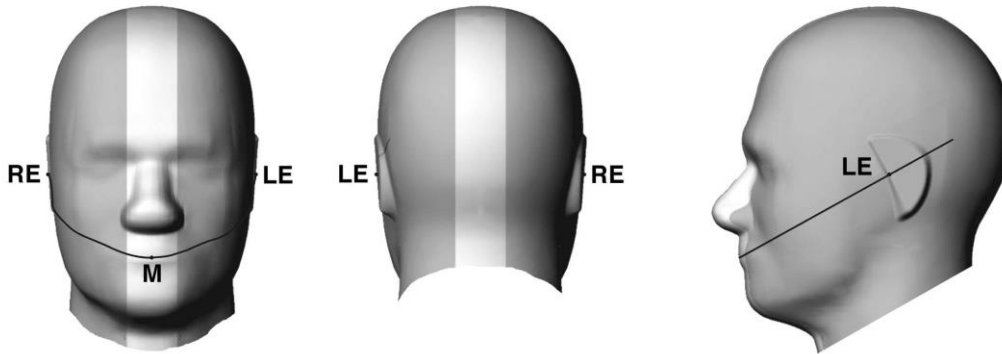


Fig 9.1.1 Front, back, and side views of SAM twin phantom

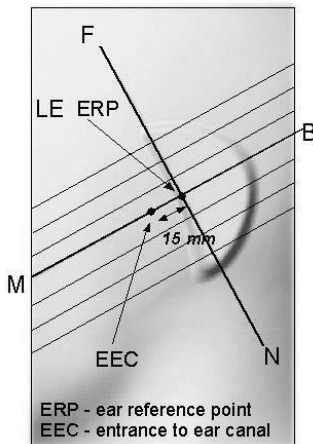


Fig 9.1.2 Close-up side view of phantom showing the ear region.

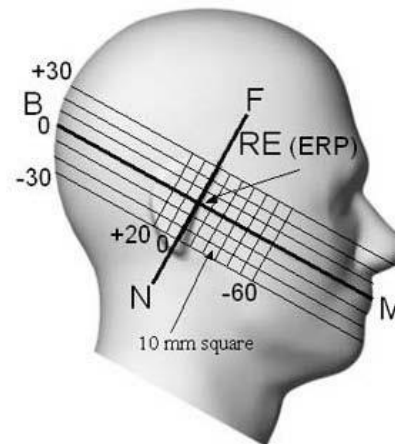


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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.

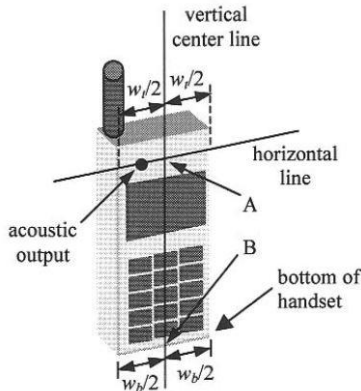


Fig 9.2.1 Handset vertical and horizontal reference lines—“fixed case”

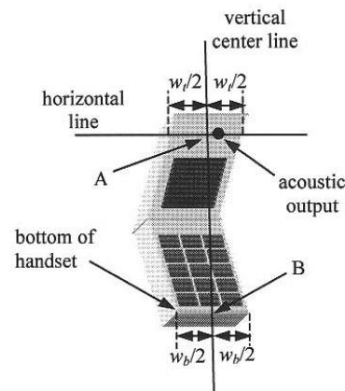


Fig 9.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

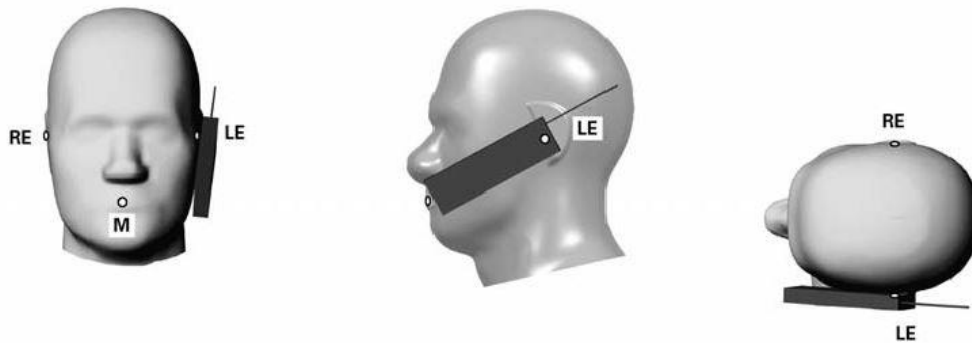


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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

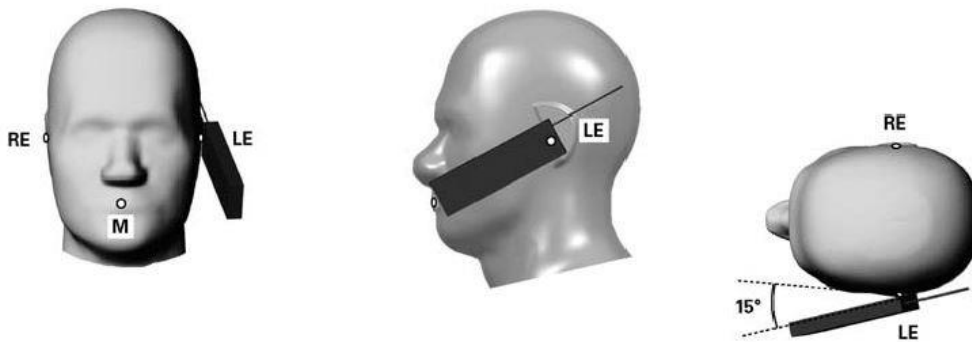


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

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.

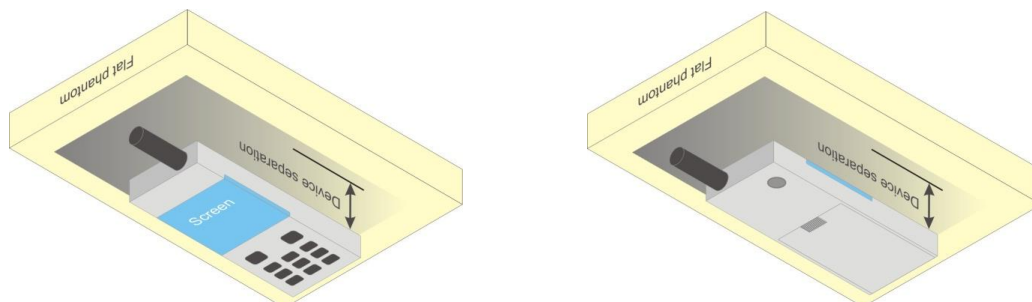


Fig 9.4 Body Worn Position



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	$\beta_{ed1}: 47/15$ $\beta_{ed2}: 47/15$	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

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

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

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

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

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

Setup Configuration

**<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, 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.

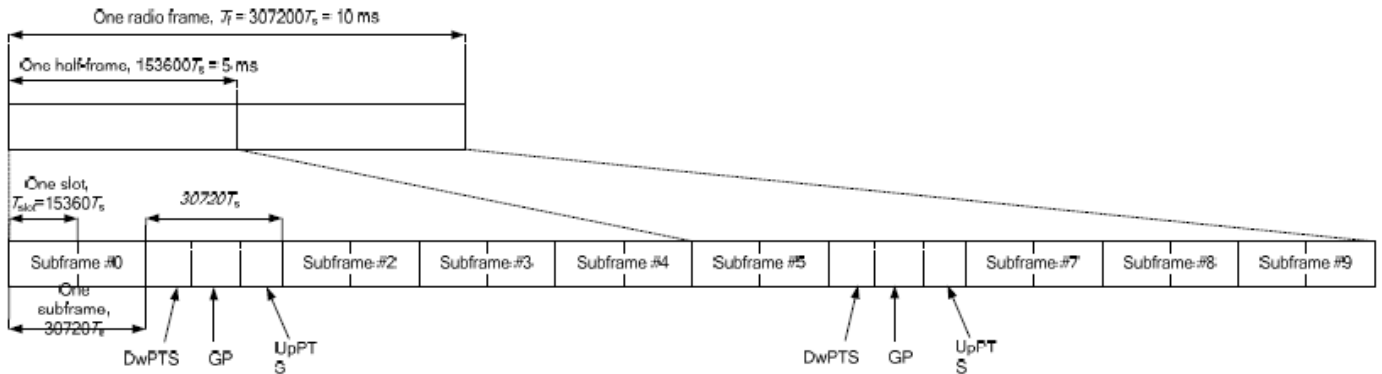


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	4384 · Ts	5120 · Ts				
5	6592 · Ts	20480 · Ts						
6	19760 · Ts	23040 · Ts						
7	21952 · Ts	4384 · Ts	5120 · Ts	12800 · Ts	4384 · Ts	5120 · 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 TDD Band.
- 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 FR1 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.

<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 ≤ 0.5 ²	≤ 1.2 ¹ ≤ 0.5 ²	≤ 0.2 ¹ 0 ²
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM	≤ 2.5		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

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

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

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

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



<WLAN Note>

1. The SISO mode support only when the Antenna 3 and 4 is transmitting on 802.11b mode, other support MIMO mode.
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 closest/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 for 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

<Bluetooth>

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps due to its highest average power and duty cycle list below are 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.

	Power Index	Antenna	Duty Cycle %
Bluetooth	1/3	Ant 4	77.10
	1/3	Ant 3	77.10
	1/3	Ant 4+3	76.83
	2	Ant 4	77.21
	2	Ant 3	77.22
	2	Ant 4+3	76.83
	4	Ant 4	77.00
	4	Ant 3	77.10
	4	Ant 4+3	76.83



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			3CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	CA_2C	3CC-3	1	CA_5A-46C	4CC-70	118	CA_12B-66A	5CC-125
2	CA_2A-2A	3CC-3	2	CA_48C-48A	7CC-4	119	CA_7A-29A-66A	4CC-126
3	CA_2A-4A	5CC-9	3	CA_2A-12A-12A	4CC-2	120	CA_7A-30A-66A	4CC-183
4	CA_2A-5A	3CC-16	4	CA_2A-12A-66A	4CC-5	121	CA_7A-46A-66A	5CC-117
5	CA_2A-7A	3CC-17	5	CA_25A-25A-41A	3CC-134	122	CA_7A-46A-46A	5CC-117
6	CA_2A-12A	3CC-3	6	CA_2A-12A-30A	4CC-41	123	CA_7A-7A-13A	5CC-129
7	CA_2A-13A	3CC-8	7	CA_2A-12B	4CC-27	124	CA_7A-7A-26A	4CC-180
8	CA_2A-14A	3CC-13	8	CA_2A-13A-46A		125	CA_7A-7A-29A	4CC-126
9	CA_2A-17A	3CC-30	9	CA_2A-13A-48A	4CC-9	126	CA_5A-5A-66A	4CC-125
10	CA_2A-29A	3CC-20	10	CA_2A-13A-66A	4CC-9	127	CA_5A-66A-66A	4CC-125
11	CA_2A-30A	3CC-13	11	CA_2A-29A-30A	4CC-30	128	CA_5A-66B	7CC-10
12	CA_2A-46A	3CC-8	12	CA_2A-29A-66A	6CC-17	129	CA_5A-66C	7CC-10
13	CA_2A-48A	3CC-9	13	CA_2A-14A-30A		130	CA_5A-7A-66A	4CC-122
14	CA_2A-66A	3CC-23	14	CA_2A-2A-2A	4CC-27	131	CA_7A-46C	7CC-1
15	CA_2A-71A	3CC-24	15	CA_2A-2A-4A	4CC-27	132	CA_12A-66C	4CC-130
16	CA_4A-4A	3CC-25	16	CA_2A-2A-5A	4CC-39	133	CA_12A-46C	4CC-124
17	CA_4A-5A	3CC-26	17	CA_2A-2A-7A	4CC-56	134	CA_25A-41C	5CC-139
18	CA_4A-7A	3CC-27	18	CA_2A-2A-12A	4CC-27	135	CA_66A-66B	6CC-8
19	CA_4A-12A	3CC-28	19	CA_2A-2A-13A	5CC-3	136	CA_66A-66C	6CC-8
20	CA_4A-13A	3CC-29	20	CA_2A-2A-29A	4CC-30	137	CA_26A-41C	
21	CA_4A-17A	3CC-30	21	CA_2A-2A-30A	4CC-30	138	CA_12A-12A-66A	6CC-10
22	CA_4A-29A	3CC-31	22	CA_2A-2A-46A	4CC-68	139	CA_12A-30A-66A	6CC-10
23	CA_4A-30A	3CC-32	23	CA_2A-2A-66A	4CC-68	140	CA_2A-2A-14A	6CC-9
24	CA_4A-41A		24	CA_2A-2A-71A	4CC-34	141	CA_12A-66A-66A	6CC-10
25	CA_4A-71A	4CC-34	25	CA_2A-4A-4A	4CC-27	142	CA_13A-46A-66A	7CC-13
26	CA_5B	3CC-26	26	CA_2A-4A-5A	5CC-9	143	CA_13A-66A-66A	7CC-13
27	CA_5C	3CC-26	27	CA_2A-4A-7A	5CC-21	144	CA_13A-48A-66A	5CC-146
28	CA_5A-5A	3CC-26	28	CA_2A-4A-12A	4CC-27	145	CA_13A-48A-48A	5CC-146
29	CA_5A-7A	3CC-42	29	CA_2A-4A-13A	5CC-11	146	CA_13A-66C	7CC-13
30	CA_5A-12A	3CC-43	30	CA_2A-4A-17A	4CC-34	147	CA_13A-66B	7CC-13
31	CA_48A-71A	2CC-182	31	CA_2A-4A-29A	5CC-20	148	CA_46A-46C-66A	5CC-117
32	CA_5A-25A		32	CA_2A-4A-30A	5CC-21	149	CA_30A-66A-66A	6CC-8
33	CA_5A-29A	4CC-62	33	CA_2A-4A-46A		150	CA_13A-48C	5CC-146
34	CA_5A-30A	4CC-39	34	CA_2A-4A-71A	4CC-34	151	CA_48D	7CC-4
35	CA_5A-38A	3CC-97	35	CA_2A-46C	7CC-10	152	CA_4A-46C	4CC-150
36	CA_5A-41A		36	CA_2A-46A-46A	7CC-10	153	CA_4A-48C	4CC-141
37	CA_5A-46A	5CC-72	37	CA_2A-46A-66A	7CC-10	154	CA_2A-48A-48A	7CC-4
38	CA_5A-48A	6CC-24	38	CA_2A-30A-66A	5CC-40	155	CA_5A-30A-66A	6CC-8
39	CA_5A-66A	4CC-93	39	CA_2A-46E-66A	7CC-10	156	CA_4A-46A-46A	5CC-93
40	CA_5A-71A		40	CA_2A-48C	7CC-4	157	CA_2A-46A-48A	7CC-4
41	CA_7B	3CC-42	41	CA_2A-5A-5A	7CC-10	158	CA_46A-48A-66A	7CC-10
42	CA_7C	3CC-42	42	CA_2A-5A-7A	5CC-30	159	CA_41D	
43	CA_7A-7A	3CC-42	43	CA_2A-5A-12A	5CC-30	160	CA_48A-66B	5CC-146
44	CA_7A-12A	3CC-54	44	CA_25A-25A-26A	3CC-207	161	CA_46A-66C	7CC-10
45	CA_7A-13A	3CC-55	45	CA_2A-5A-30A	5CC-25	162	CA_5A-46A-66A	7CC-10
46	CA_7A-25A	3CC-190	46	CA_2A-5A-46A	4CC-70	163	CA_4A-29A-30A	4CC-152
47	CA_7A-26A	3CC-124	47	CA_2A-5A-66A	4CC-67	164	CA_7A-66A-66A	6CC-23
48	CA_7A-29A	3CC-119	48	CA_2A-48A-66A	4CC-69	165	CA_7A-7A-46A	6CC-23
49	CA_7A-30A	3CC-120	49	CA_2A-5B	4CC-39	166	CA_2A-14A-66A	
50	CA_7A-32A	3CC-105	50	CA_2A-66A-66A	4CC-54	167	CA_2A-7A-26A	4CC-180



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51	CA_7A-38A	3CC-112	51	CA_2A-66A-71A	4CC-54	168	CA_2A-26A-66A	4CC-180
52	CA_46A-46A	3CC-108	52	CA_2A-66B	5CC-82	169	CA_5A-12B-66A	4CC-182
53	CA_7A-46A	3CC-63	53	CA_2A-66C	5CC-82	170	CA_5A-12A-30A	4CC-177
54	CA_7A-66A	3CC-57	54	CA_2A-7A-12A	5CC-30	171	CA_5A-7A-12A	4CC-182
55	CA_7A-71A	3CC-175	55	CA_2A-7A-13A	5CC-16	172	CA_4A-13A-46A	
56	CA_12B	3CC-58	56	CA_2A-7A-29A	5CC-20	173	CA_4A-4A-48A	5CC-94
57	CA_12A-12A	3CC-58	57	CA_2A-7A-66A	5CC-124	174	CA_4A-48A-48A	3CC-173
58	CA_12A-25A		58	CA_25A-25A-25A	5CC-49	175	CA_4A-7A-71A	
59	CA_12A-30A	3CC-66	59	CA_2C-66A	4CC-54	176	CA_7A-26A-66A	4CC-180
60	CA_12A-46A	3CC-196	60	CA_2A-5A-48A	6CC-24	177	CA_7A-13A-66A	
61	CA_12A-48A	3CC-201	61	CA_2A-7A-7A	4CC-56	178	CA_25C-41A	
62	CA_12A-66A	3CC-57	62	CA_2C-5A	3CC-42	179	CA_41C-41A	4CC-193
63	CA_12A-71A	3CC-58	63	CA_2A-7A-46A		180	CA_42C-42A	4CC-243
64	CA_13A-46A	7CC-13	64	CA_2C-12A	4CC-61	181	CA_46A-48C	7CC-4
65	CA_13A-48A	4CC-9	65	CA_2C-29A	4CC-62	182	CA_48A-48A-71A	3CC-183
66	CA_13A-66A	5CC-114	66	CA_2C-30A	4CC-63	183	CA_48C-71A	
67	CA_14A-30A	6CC-9	67	CA_2A-7C	4CC-66	184	CA_48A-48A-48A	7CC-4
68	CA_14A-66A	6CC-9	68	CA_4C-5A	4CC-63	185	CA_46C-71A	4CC-269
69	CA_42A-46A	3CC-221	69	CA_4C-7A	4CC-66	186	CA_5A-7A-7A	5CC-30
70	CA_26A-41A	3CC-137	70	CA_4C-12A	4CC-61	187	CA_5A-7A-46A	5CC-72
71	CA_26A-66A	3CC-176	71	CA_4A-5B	4CC-63	188	CA_41A-41A-41A	4CC-193
72	CA_42A-42A	4CC-164	72	CA_4A-12B	4CC-61	189	CA_5B-66A	4CC-188
73	CA_41A-46A		73	CA_4A-7C	4CC-56	190	CA_7A-7A-25A	4CC-196
74	CA_25A-66A	4CC-198	74	CA_4A-12A-12A	3CC-75	191	CA_7A-25A-25A	4CC-196
75	CA_25A-25A	3CC-207	75	CA_4A-12A-30A	4CC-41	192	CA_7A-25A-66A	4CC-197
76	CA_25A-26A	3CC-207	76	CA_4A-4A-5A	5CC-55	193	CA_41A-46C	
77	CA_25A-41A	3CC-117	77	CA_4A-4A-7A	3CC-77	194	CA_46A-46C	7CC-10
78	CA_25A-46A	3CC-206	78	CA_4A-4A-12A	4CC-66	195	CA_46A-48A-48A	7CC-4
79	CA_25A-48A	3CC-206	79	CA_4A-4A-13A	5CC-11	196	CA_46C-66A	5CC-117
80	CA_41C	3CC-137	80	CA_4A-4A-29A	5CC-20	197	CA_13A-46A-46A	4CC-209
81	CA_41A-41A	3CC-137	81	CA_4A-4A-71A	4CC-34	198	CA_29A-46A-66A	
82	CA_48C	7CC-4	82	CA_4A-5A-5A	3CC-83	199	CA_66B-66A	4CC-194
83	CA_48A-48A	7CC-4	83	CA_4A-5A-12A	4CC-61	200	CA_5A-48A-66A	6CC-24
84	CA_48A-66A	7CC-4	84	CA_4A-5A-29A	4CC-62	201	CA_12A-48C	
85	CA_66A-66A	3CC-121	85	CA_4A-5A-30A	4CC-63	202	CA_5A-48C	6CC-24
86	CA_66A-71A	3CC-210	86	CA_4A-4A-30A	4CC-158	203	CA_42D	4CC-243
87	CA_46A-66A	7CC-4	87	CA_4A-7A-7A	3CC-88	204	CA_46D	7CC-4
88	CA_46A-71A	3CC-233	88	CA_4A-7A-12A	4CC-65	205	CA_48A-66A-66A	4CC-207
89	CA_38A-46A	3CC-148	89	CA_4A-7A-29A	4CC-171	206	CA_25A-46A-48A	
90	CA_38A-38A	3CC-107	90	CA_4A-7A-30A	4CC-173	207	CA_25C-26A	
91	CA_38C	3CC-107	91	CA_7A-7A-12A	4CC-86	208	CA_25A-25C	4CC-198
92	CA_66B	3CC-121	92	CA_7A-7A-30A	5CC-82	209	CA_66D	4CC-200
93	CA_66C	3CC-121	93	CA_7A-12B	4CC-88	210	CA_66C-71A	4CC-202
94	CA_66A-46A	3CC-231	94	CA_7C-13A	5CC-114	211	CA_66A-46C	5CC-117
95	CA_26A-46A		95	CA_25A-46C		212	CA_66A-66A-66A	5CC-117
96	CA_30A-66A	3CC-225	96	CA_5B-30A	6CC-8	213	CA_66A-66A-71A	4CC-202
97	CA_4A-48A	3CC-173	97	CA_5B-38A		214	CA_46A-66A-66A	5CC-117
98	CA_4A-46A	3CC-172	98	CA_5B-46A	7CC-10	215	CA_46A-46A-66A	5CC-117
99	CA_25C	3CC-113	99	CA_5A-12A-66A	4CC-67	216	CA_48A-48A-66A	7CC-4
100	CA_2A-26A	3CC-168	100	CA_5A-12B	5CC-30	217	CA_41A-41C	3CC-218
102	CA_46C	3CC-108	101	CA_13A-48B	4CC-9	218	CA_41C-42A	4CC-243
103	CA_46A-48A	3CC-108	102	CA_48B-66A	5CC-44	219	CA_41A-42C	3CC-218
			103	CA_5A-7C	5CC-115	220	CA_42A-42C	3CC-221
			104	CA_7C-25A	5CC-49	221	CA_42A-46C	
			105	CA_5A-48A-48A	6CC-24	222	CA_48A-48C	7CC-4
			106	CA_7C-29A	5CC-20	223	CA_48A-66C	7CC-4
			107	CA_7C-38A		224	CA_7A-12A-66A	
			108	CA_7C-46A	7CC-1	225	CA_14A-30A-66A	6CC-9
			109	CA_2A-7A-71A		226	CA_14A-66A-66A	6CC-9
			110	CA_7A-66A-71A		227	CA_7A-7A-66A	6CC-23
			111	CA_25A-25A-66A	5CC-49	228	CA_46C-48A	7CC-4
			112	CA_7A-38C	3CC-107	229	CA_13A-46C	
			113	CA_25D	5CC-49	230	CA_48C-66A	7CC-4



4CC Downlink Carrier Aggregation			4CC 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_46A-48D	7CC-4	97	CA_2A-7C-66A	5CC-114	193	CA_25C-41C	5CC-139
2	CA_2A-12A-66A-66A	6CC-10	98	CA_2A-7A-7A-13A	5CC-114	194	CA_46C-46A-66A	5CC-117
3	CA_2A-12A-30A-66A	5CC-1	99	CA_2A-7A-7A-29A	5CC-33	195	CA_5A-7A-7A-66A	5CC-30
4	CA_2A-12B-66A-66A	5CC-1	100	CA_2A-7A-7A-66A	5CC-33	196	CA_7A-7A-25A-25A	4CC-197
5	CA_2A-12A-66C	5CC-1	101	CA_2A-7A-7A-46A	7CC-1	197	CA_7A-7A-25A-66A	5CC-49
6	CA_2A-13A-46C	7CC-13	102	CA_2A-5A-48A-66A	6CC-24	198	CA_7A-25A-25A-66A	4CC-197
7	CA_2A-13A-46D	7CC-13	103	CA_2A-2A-2A-5A	6CC-8	199	CA_7A-7A-13A-66A	4CC-212
8	CA_2A-13A-48A-48A	4CC-9	104	CA_2A-2A-2A-12A	6CC-10	200	CA_7A-46C-66A	5CC-117
9	CA_2A-13A-48A-66A		105	CA_2A-2A-2A-30A	6CC-8	201	CA_2A-2A-7A-71A	4CC-202
10	CA_2A-12B-66A	6CC-10	106	CA_2A-2A-2A-66A	6CC-10	202	CA_2A-7A-66A-71A	
11	CA_2A-13A-66A-66A	7CC-13	107	CA_2A-2A-5A-7A	5CC-115	203	CA_7A-66A-66A-71A	4CC-202
12	CA_2A-13A-48C	4CC-9	108	CA_2A-2A-7A-13A	5CC-112	204	CA_2A-2A-7A-66A-71A	4CC-202
13	CA_2A-13A-48D	4CC-9	109	CA_2A-2A-7A-7A	4CC-100	205	CA_2A-2A-7A-66A-66A	4CC-202
14	CA_2A-13A-66B	7CC-13	110	CA_2A-2A-7C	4CC-100	206	CA_2A-48A-66A-66A	7CC-4
15	CA_2A-13A-66C	7CC-13	111	CA_7C-25A-25A	5CC-46	207	CA_5A-48A-66A-66A	6CC-24
16	CA_2A-13A-66D	7CC-13	112	CA_7C-25A-66A	5CC-49	208	CA_2A-5A-46A-66A	7CC-10
17	CA_2A-14A-30A-66A	6CC-9	113	CA_2A-7A-7A-12A	5CC-30	209	CA_2A-13A-46A-46A	7CC-13
18	CA_2A-14A-66A-66A	4CC-17	114	CA_2A-5A-7A-7A	5CC-116	210	CA_48C-48A-66A	4CC-206
19	CA_2A-29A-30A-66A	6CC-16	115	CA_2A-5A-7C	5CC-116	211	CA_2A-46A-48A-66A	7CC-4
20	CA_2A-2A-12A-30A	6CC-10	116	CA_5A-5A-66B	7CC-10	212	CA_7C-13A-66A	
21	CA_2A-13A-66A-66A	7CC-13	117	CA_5A-5A-66C	7CC-10	213	CA_2A-46C-46A	7CC-4
22	CA_2A-2A-12A-66A	6CC-10	118	CA_5A-66A-66B	7CC-10	214	CA_5A-46A-66A-66A	7CC-10
23	CA_2A-2A-12B-66A	6CC-10	119	CA_5A-66A-66C	7CC-10	215	CA_2A-29A-66A-66A	4CC-216
24	CA_2A-2A-12B	6CC-10	120	CA_5A-5A-66A-66A	7CC-10	216	CA_2A-2A-29A-66A	6CC-16
25	CA_2A-2A-46C	7CC-1	121	CA_5A-66A-66A-66A	7CC-10	217	CA_2A-2A-14A-30A	6CC-9
26	CA_2A-2A-46D	7CC-1	122	CA_5A-7A-66A-66A	5CC-116	218	CA_14A-66A-66A-66A	6CC-9
27	CA_2A-2A-4A-12A	4CC-41	123	CA_5A-7C-66A	5CC-116	219	CA_46E	7CC-13
28	CA_2A-2A-4A-13A	5CC-11	124	CA_13A-48C-48A	4CC-9	220	CA_25A-46D	
29	CA_2A-2A-30A-66A	5CC-3	125	CA_5B-30A-66A	6CC-8	221	CA_46A-46D	7CC-13
30	CA_2A-2A-29A-30A	4CC-53	126	CA_7C-29A-66A	5CC-33	222	CA_2A-2A-2A-14A	6CC-9
31	CA_2A-2A-13A-66A	4CC-9	127	CA_7C-46C	5CC-117	223	CA_2A-2A-2A-29A	6CC-16
32	CA_2A-2A-4A-4A	5CC-11	128	CA_7C-66A	5CC-117	224	CA_29A-66A-66A-66A	6CC-16
33	CA_2A-2A-4A-5A	5CC-9	129	CA_12B-66A-66A	5CC-125	225	CA_5A-66D	7CC-10
34	CA_2A-2A-4A-71A		130	CA_12A-30A-66A-66A	6CC-10	226	CA_2A-46A-66C	7CC-4
35	CA_2A-2A-5B	7CC-10	131	CA_13A-66A-66B	7CC-13	227	CA_48C-48A-48A	7CC-4
36	CA_2A-2A-5B-66A	7CC-10	132	CA_13A-66A-66C	7CC-13	228	CA_66B-66C	6CC-16
37	CA_2A-2A-5A-66A	5CC-30	133	CA_13A-66A-66A-66A	7CC-13	229	CA_25A-41D	5CC-139
38	CA_2A-2A-5A-5A	5CC-30	134	CA_4A-46D	5CC-39	230	CA_66A-46D	6CC-23
39	CA_2A-2A-5A-30A	5CC-25	135	CA_5B-66B	6CC-24	231	CA_25A-25A-41C	5CC-139
40	CA_2A-2A-5A-12A	5CC-30	136	CA_7A-46D	7CC-1	232	CA_41A-41A-41C	4CC-231
41	CA_2A-4A-12A-30A		137	CA_13A-66D	7CC-13	233	CA_48D-66A	7CC-4
42	CA_2A-4A-12A-12A	4CC-41	138	CA_13A-48D	5CC-44	234	CA_42C-42C	4CC-243
43	CA_2A-4A-12B	4CC-41	139	CA_2A-7A-66A-66A	5CC-125	235	CA_42A-42D	4CC-243
44	CA_2A-46A-46C	7CC-10	140	CA_4A-4A-12B	4CC-41	236	CA_48A-48A-66A-66A	7CC-4
45	CA_2A-46A-46A-66A	7CC-10	141	CA_4A-48D	5CC-94	237	CA_48A-48A-66B	7CC-4
46	CA_2A-46A-66A-66A	7CC-10	142	CA_2A-5A-48C	6CC-24	238	CA_48A-48A-66C	7CC-4
47	CA_2A-2A-66A-66A	7CC-4	143	CA_2A-7A-46C	7CC-1	239	CA_46A-48A-48A-66A	7CC-4
48	CA_2A-2A-7A-12A	5CC-30	144	CA_2A-7A-30A-66A	5CC-40	240	CA_46A-66A-66A-66A	5CC-117
49	CA_2A-2A-7A-66A	5CC-82	145	CA_2A-48D	7CC-4	241	CA_46C-66A-66A	5CC-117
50	CA_2A-30A-66A-66A	6CC-10	146	CA_2A-7A-29A-66A		242	CA_48A-66A-66A-66A	6CC-24
51	CA_2A-2A-66B	7CC-4	147	CA_2A-5A-48A-48A	6CC-24	243	CA_41C-42C	
52	CA_2A-2A-66C	7CC-4	148	CA_2A-46A-48A-48A	7CC-4	244	CA_41C-41C	4CC-243
53	CA_2A-4A-29A-30A		149	CA_2A-48A-48A-66A	7CC-4	245	CA_41A-41D	4CC-243
54	CA_2A-2A-66A-71A	5CC-124	150	CA_4A-13A-46C		246	CA_41A-42D	4CC-243
55	CA_2A-4A-5B	5CC-5	151	CA_4A-4A-12A-30A		247	CA_7A-7A-29A-66A	5CC-33
56	CA_2A-4A-7A-7A	4CC-65	152	CA_4A-4A-29A-30A		248	CA_7A-7A-66A-66A	5CC-117
57	CA_2A-4A-4A-12A	4CC-41	153	CA_4A-4A-48A-48A	5CC-94	249	CA_14A-30A-66A-66A	
58	CA_2A-4A-4A-13A	5CC-11	154	CA_4A-4A-5A-30A	4CC-158	250	CA_7A-7A-46C	5CC-117
59	CA_2A-4A-4A-5A	5CC-55	155	CA_4A-4A-5A-5A	4CC-158	251	CA_7A-12B-66A	5CC-30



60	CA_2A-4A-4A-71A	4CC-34	156	CA_4A-4A-5B	4CC-157	252	CA_7A-12A-66A-66A	5CC-30
61	CA_2A-4A-5A-12A		157	CA_4A-5A-12B	4CC-61	253	CA_7C-66A-66A	5CC-117
62	CA_2A-4A-5A-29A		158	CA_4A-5B-30A	4CC-63	254	CA_13A-48A-48C	4CC-263
63	CA_2A-4A-5A-30A		159	CA_4A-7A-12B	4CC65	255	CA_46C-48A-48A	7CC-4
64	CA_2A-4A-5A-5A	4CC-63	160	CA_2A-46C-48A	7CC-4	256	CA_46C-48C	7CC-4
65	CA_2A-4A-7A-12A		161	CA_41E	5CC-139	257	CA_13A-48C-66A	4CC-263
66	CA_2A-4A-7C	4CC-65	162	CA_42E	4CC-164	258	CA_48C-48C	7CC-4
67	CA_2A-5A-12A-66A		163	CA_48E	7CC-4	259	CA_12A-46D	
68	CA_2A-46C-66A	7CC-10	164	CA_41D-42A	4CC-139	260	CA_13A-46D	7CC-13
69	CA_2A-48C-66A	7CC-4	165	CA_5A-30A-66A-66A	6CC-8	261	CA_13A-46C-66A	7CC-13
70	CA_2A-5A-46C		166	CA_4A-46A-46C	7CC-4	262	CA_13A-48A-66B	4CC-263
71	CA_2A-5B-30A	6CC-8	167	CA_2A-2A-14A-66A	6CC-9	263	CA_13A-48A-66C	4CC-9
72	CA_2A-5A-12B	4CC-67	168	CA_46C-48A-66A	7CC-4	264	CA_13A-48A-48A-66A	4CC-263
73	CA_2A-5A-66C	6CC-8	169	CA_46A-48C-66A	7CC-4	265	CA_48C-66A-66A	4CC-263
74	CA_2A-5A-66B	5CC-73	170	CA_2A-46A-48C	7CC-4	266	CA_48C-66B	4CC-263
75	CA_2A-48A-48C	7CC-4	171	CA_2A-4A-7A-29A		267	CA_48C-66C	4CC-263
76	CA_2A-5A-30A-66A	6CC-8	172	CA_4A-7A-7A-29A	4CC-171	268	CA_2A-48C-48A	7CC-4
77	CA_2A-5A-66A-66A	5CC-73	173	CA_7A-46A-46C	7CC-1	269	CA_46D-71A	
78	CA_2A-5A-5A-66A	5CC-73	174	CA_2A-7A-7A-30A	4CC-173	270	CA_46D-48A	7CC-4
79	CA_2A-66A-66B	5CC-82	175	CA_4A-7A-7A-30A	4CC-171	271	CA_46D-66A	7CC-13
80	CA_2A-66A-66C	5CC-82	176	CA_2A-5A-12A-30A	5CC-25	272	CA_46C-66C	7CC-13
81	CA_2A-66A-66A-66A	5CC-82	177	CA_5A-12A-30A-66A	5CC-25	273	CA_46A-46A-66C	7CC-13
82	CA_2A-66A-66A-71A	5CC-124	178	CA_2A-5A-7A-12A	5CC-30	274	CA_48A-48C-48A	7CC-4
83	CA_2A-5B-66A	7CC-10	179	CA_2A-5A-7A-66A	5CC-116	275	CA_12A-66A-66A-66A	6CC-10
84	CA_2A-66C-71A	5CC-124	180	CA_2A-7A-26A-66A		276	CA_30A-66A-66A-66A	6CC-9
85	CA_2A-66D	6CC-8	181	CA_2A-7A-13A-66A	5CC-114	277	CA_5A-7A-46C	
86	CA_2A-7A-12B	5CC-30	182	CA_5A-7A-12A-66A	5CC-30	278	CA_13A-46A-46C	7CC-13
87	CA_2A-46D	7CC-4	183	CA_7A-30A-66A-66A	5CC-40	279	CA_48A-48A-48C	6CC-24
88	CA_2C-5B-30A	6CC-8	184	CA_7A-7A-30A-66A	5CC-40	280	CA_5A-48D	6CC-24
89	CA_2C-66A-66A	7CC-4	185	CA_4A-46C-46A	5CC-93	281	CA_5A-48C-66A	6CC-24
90	CA_2A-7A-46A-66A		186	CA_2C-5A-30A	7CC-5	282	CA_5B-66A-66A	7CC-10
91	CA_2A-7A-12A-66A	5CC-30	187	CA_2C-5B	7CC-5	283	CA_5A-46C-66A	7CC-10
92	CA_2A-7C-29A	5CC-33	188	CA_5B-66C	5CC-30	284	CA_2A-13A-46A-66A	7CC-13
93	CA_2C-5A-66A	6CC-8	189	CA_5A-48C-48A	6CC-24	285	CA_5A-48A-48A-66A	6CC-24
94	CA_2C-29A-30A	6CC-16	190	CA_7A-46C-46A	5CC-117	286	CA_5A-48A-48C	6CC-24
95	CA_2C-12A-30A	6CC-10				287	CA_5B-46C	7CC-10
96	CA_2A-7C-13A	5CC-114				288	CA_5A-46D	7CC-10
						289	CA_48A-48C-66A	7CC-4
						290	CA_48A-48D	7CC-4



5CC Downlink Carrier Aggregation			5CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	CA_2A-2A-12A-30A-66A	6CC-20	93	CA_4A-46E	
2	CA_2A-2A-12A-66A-66A	6CC-7	94	CA_4A-48E	
3	CA_2A-2A-13A-66A-66A	7CC-13	95	CA_7A-46E	7CC-1
4	CA_2A-2A-29A-66A-66A	6CC-17	96	CA_13A-48E	
5	CA_2A-2A-29A-30A-66A	6CC-17	97	CA_41F	5CC-139
6	CA_2A-2A-66A-66B	6CC-7	98	CA_42F	
7	CA_2A-2A-14A-66A-66A	6CC-9	99	CA_48F	7CC-4
8	CA_2A-2A-14A-30A-66A	6CC-9	100	CA_7A-7A-46D	7CC-1
9	CA_2A-2A-4A-5B		101	CA_2A-46A-48D	7CC-4
10	CA_2A-2A-4A-4A-5A	5CC-9	102	CA_46C-48D	7CC-4
11	CA_2A-2A-4A-4A-13A		103	CA_46D-48A-66A	7CC-4
12	CA_2A-2A-5A-66B	6CC-8	104	CA_46A-48D-66A	7CC-4
13	CA_2A-2A-5A-66C	6CC-8	105	CA_2A-46C-48C	7CC-4
14	CA_2A-2A-5A-12A-66A	5CC-30	106	CA_48A-48C-48C	7CC-4
15	CA_2A-2A-7A-12A-66A	5CC-30	107	CA_48A-48C-66C	7CC-4
16	CA_2A-2A-7C-13A		108	CA_4A-46A-46D	5CC-93
17	CA_2A-2A-66A-66C	6CC-7	109	CA_4A-46C-46C	5CC-93
18	CA_2A-2A-5A-66A-66A	6CC-8	110	CA_2A-46D-66C	7CC-4
19	CA_2A-2A-5A-30A-66A	6CC-8	111	CA_2A-2A-5B-30A	5CC-107
20	CA_2A-4A-7A-7A-29A		112	CA_2A-2A-7A-7A-13A	5CC-114
21	CA_2A-4A-7A-7A-30A		113	CA_7A-7A-25A-25A-66A	5CC-49
22	CA_2A-4A-4A-5B	5CC-9	114	CA_2A-7A-7A-13A-66A	
23	CA_2A-48C-48C	6CC-22	115	CA_2A-5A-7A-7A-66A	5CC-116
24	CA_2A-5B-30A-66A	6CC-11	116	CA_2A-5A-7C-66A	
25	CA_2A-5A-12A-30A-66A		117	CA_7A-46D-66A	
26	CA_2A-48E-66A	6CC-13	118	CA_13A-46A-46A-46A	7CC-13
27	CA_2A-5B-66A-66A	6CC-8	119	CA_13A-48A-48A-48A	5CC-73
28	CA_2A-5A-12B-66A	5CC-30	120	CA_2A-46A-46A-46A	7CC-4
29	CA_2A-5A-30A-66A-66A	6CC-21	121	CA_2A-48A-48A-48A	7CC-4
30	CA_2A-5A-7A-12A-66A		122	CA_46A-46A-46A-66A	7CC-4
31	CA_2A-5B-66B	5CC-28	123	CA_48A-48A-48A-66A	7CC-4
32	CA_2A-5B-66C	5CC-28	124	CA_2A-7A-66A-66A-71A	
33	CA_2A-7C-29A-66A		125	CA_2A-7A-12A-66A-66A	5CC-30
34	CA_2A-7A-12B-66A	5CC-30	126	CA_2A-5A-7A-66A-66A	5CC-116
35	CA_2A-7C-66A-66A	5CC-34	127	CA_2A-2A-66A-66A-71A	5CC-124
36	CA_2A-46A-46C-66A	7CC-10	128	CA_2A-5A-48A-66A-66A	6CC-24
37	CA_2A-7A-7A-46C	6CC-1	129	CA_2A-7C-13A-66A	5CC-114
38	CA_2A-7A-7A-66A-66A	5CC-30	130	CA_5A-48C-66A-66A	6CC-24
39	CA_2A-7A-7A-29A-66A	5CC-33	131	CA_5A-12A-46D	
40	CA_2A-7A-7A-30A-66A		132	CA_46A-48E	7CC-4
41	CA_2A-12A-30A-66A-66A	6CC-10	133	CA_46E-66A	7CC-4
42	CA_2A-13A-48A-48A-66A	5CC-44	134	CA_48E-66A	7CC-4
43	CA_2A-13A-48A-48C	5CC-44	135	CA_2A-5A-5A-66A-66A	6CC-24
44	CA_2A-13A-48C-66A		136	CA_2A-5A-46A-66A-66A	7CC-10
45	CA_2A-14A-66A-66A-66A	6CC-9	137	CA_46C-48C-66A	7CC-4
46	CA_2A-14A-30A-66A-66A	6CC-9	138	CA_5A-48C-48C	6CC-24
47	CA_2A-13A-66A-66B	6CC-48	139	CA_25C-41D	
48	CA_2A-13A-66A-66C	6CC-48	140	CA_25A-25A-41D	5CC-139
49	CA_7C-25A-25A-66A		141	CA_48A-48A-48D	7CC-4
50	CA_2A-2A-2A-12A-30A	6CC-7	142	CA_41C-41D	5CC-139
51	CA_2A-2A-2A-12A-66A	6CC-7	143	CA_12A-46E	



52	CA_2A-2A-2A-30A-66A	6CC-7	144	CA_13A-46E	7CC-13
53	CA_2A-2A-30A-66A-66A	6CC-7	145	CA_7A-46C-46C	7CC-1
54	CA_2A-2A-2A-5A-30A	6CC-11	146	CA_13A-48A-48C-66A	
55	CA_2A-5A-66A-66A-66A	6CC-11	147	CA_13A-48C-48C	5CC-146
56	CA_2A-12A-66A-66A-66A	6CC-20	148	CA_13A-48C-66C	5CC-146
57	CA_2A-30A-66A-66A-66A	6CC-19	149	CA_13A-48C-66B	5CC-146
58	CA_5A-30A-66A-66A-66A	6CC-19	150	CA_13A-48A-48D	5CC-146
59	CA_14A-30A-66A-66A-66A	6CC-9	151	CA_13A-46D-66A	7CC-13
60	CA_12A-30A-66A-66A-66A	6CC-7	152	CA_13A-46A-46D	7CC-13
61	CA_2A-2A-2A-5A-66A	6CC-19	153	CA_48C-66A-66A-66A	7CC-4
62	CA_2A-2A-2A-14A-30A	6CC-9	154	CA_46D-66A-66A	7CC-4
63	CA_2A-2A-2A-14A-66A	6CC-9	155	CA_46A-46C-66C	7CC-4
64	CA_2A-2A-2A-29A-30A	6CC-16	156	CA_2A-46A-46A-66C	7CC-4
65	CA_2A-2A-2A-29A-66A	6CC-16	157	CA_2A-46C-46A-66A	7CC-4
66	CA_2A-29A-30A-66A-66A	6CC-16	158	CA_46C-46A-66C	7CC-4
67	CA_2A-29A-66A-66A-66A	6CC-16	159	CA_46D-48A-48A	7CC-4
68	CA_29A-30A-66A-66A-66A	6CC-16	160	CA_46D-48C	7CC-4
69	CA_2A-46A-48A-48A-66A	7CC-4	161	CA_46E-48A	7CC-4
70	CA_5A-7C-66A-66A	5CC-30	162	CA_48C-48C-48A	7CC-4
71	CA_5B-30A-66A-66A	6CC-8	163	CA_48C-48A-48C	7CC-4
72	CA_5A-7A-46D		164	CA_46D-66C	7CC-4
73	CA_13A-48D-66A		165	CA_5B-46D	7CC-10
74	CA_2A-46A-46D	7CC-4	166	CA_5A-48D-66A	6CC-24
75	CA_2A-7A-46D	7CC-1	167	CA_2A-13A-46A-46C	7CC-13
76	CA_2A-46D-48A	7CC-4	168	CA_2A-5A-46C-66A	7CC-10
77	CA_2A-46D-66A	7CC-4	169	CA_2A-13A-46C-66A	7CC-10
78	CA_2A-48A-48D	7CC-4	170	CA_2A-46C-48A-66A	7CC-4
79	CA_2A-48D-66A	7CC-4	171	CA_2A-46A-48C-66A	7CC-4
80	CA_2A-46C-46C	7CC-4	172	CA_5B-66A-66B	6CC-24
81	CA_2A-5A-48D	6CC-24	173	CA_5A-46E	7CC-10
82	CA_2A-7A-30A-66A-66A	5CC-40	174	CA_5A-48E	6CC-24
83	CA_2A-5A-48C-66A	6CC-24	175	CA_48A-48E	7CC-4
84	CA_2A-5A-48A-48A-66A	6CC-24	176	CA_48A-48C-66B	7CC-4
85	CA_2A-5A-48A-48C	6CC-24	177	CA_46C-48A-48A-66A	7CC-4
86	CA_2A-5A-46D	7CC-10	178	CA_48C-48C-66A	7CC-4
87	CA_2A-46E	7CC-4	179	CA_5A-46D-66A	7CC-10
88	CA_2A-48E	7CC-4	180	CA_5A-48A-48D	6CC-24
89	CA_2A-46C-66A-66A	7CC-4	181	CA_48C-48D	7CC-4
90	CA_2A-46C-66C	7CC-4	182	CA_7C-46D	7CC-1
91	CA_2A-48A-48C-66A	7CC-4	183	CA_46A-46D-66A	7CC-4
92	CA_2A-46C-48A-48A	7CC-4	184	CA_48A-48D-66A	7CC-4



6CC Downlink Carrier Aggregation			6CC Downlink Carrier Aggregation			7CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
1	CA_2A-7A-46E	7CC-1	34	CA_5A-46D-66A-66A	7CC-10	1	CA_2A-7A-7A-46E	
2	CA_2A-7A-7A-46D	6CC-1	35	CA_46D-48A-48A-66A	7CC-4	2	CA_2A-46E-66A-66A	7CC-4
3	CA_2A-46A-48E	7CC-3	36	CA_2A-46E-48A	7CC-4	3	CA_2A-46C-48E	7CC-4
4	CA_2A-46D-66A-66A	7CC-4	37	CA_46A-46E-66A	7CC-4	4	CA_2A-46D-48C-66A	
5	CA_2A-46C-48C-66A	6CC-3	38	CA_2A-46A-46E	7CC-4	5	CA_2A-46C-48D-66A	7CC-4
6	CA_7A-7A-46E	6CC-1	39	CA_2A-46C-46D	7CC-4	6	CA_2A-46D-48A-48A-66A	7CC-4
7	CA_2A-2A-12A-30A-66A-66A	6CC-10	40	CA_46E-48C	7CC-4	7	CA_2A-46E-66C	7CC-4
8	CA_2A-2A-5A-30A-66A-66A		41	CA_46E-66A-66A	7CC-4	8	CA_2A-46E-48A-66A	7CC-4
9	CA_2A-2A-14A-30A-66A-66A		42	CA_2A-46C-46C-66A	7CC-4	9	CA_2A-46C-46C-66C	7CC-4
10	CA_2A-12A-30A-66A-66A-66A		43	CA_46A-46D-66C	7CC-4	10	CA_2A-5A-46E-66A	
11	CA_2A-5A-30A-66A-66A-66A	6CC-8	44	CA_46E-48A-66A	7CC-4	11	CA_2A-5A-46D-66A-66A	7CC-10
12	CA_2A-14A-30A-66A-66A-66A	6CC-9	45	CA_46A-48E-66A	7CC-4	12	CA_46C-48E-66A	7CC-4
13	CA_2A-46D-48A-66A	7CC-4	46	CA_2A-13A-46A-46D	6CC-48	13	CA_2A-13A-46E-66A	
14	CA_2A-2A-46E	7CC-4	47	CA_2A-5A-46D-66A	7CC-10	14	CA_2A-46A-46E-66A	7CC-4
15	CA_2A-46C-48A-48A-66A	6CC-13	48	CA_2A-13A-46D-66A	7CC-13	15	CA_2A-46C-46D-66A	7CC-4
16	CA_2A-29A-30A-66A-66A-66A		49	CA_2A-46A-46D-66A	6CC-48	16	CA_2A-46A-46D-66C	7CC-4
17	CA_2A-2A-2A-29A-30A-66A	6CC-16	50	CA_46C-48E	6CC-45	17	CA_46E-48C-66A	7CC-4
18	CA_2A-2A-2A-14A-30A-66A	6CC-12	51	CA_5A-46E-66A	6CC-47			
19	CA_2A-2A-2A-5A-30A-66A	6CC-8	52	CA_13A-46E-66A	6CC-48			
20	CA_2A-2A-2A-12A-30A-66A	6CC-10	53	CA_2A-5A-46E	6CC-47			
21	CA_2A-5B-30A-66A-66A	6CC-8	54	CA_2A-13A-46E	6CC-48			
22	CA_2A-46E-48C	7CC-4	55	CA_2A-46C-46A-66C	6CC-48			
23	CA_7A-46E-66A		56	CA_46C-46D-66A	6CC-48			
24	CA_2A-5A-48C-66A-66A		57	CA_5A-48A-48C-66A	6CC-24			
25	CA_46D-48D	6CC-13	58	CA_48C-48C-48C	6CC-3			
26	CA_2A-46A-46C-66C	7CC-4	59	CA_7C-46E	7CC-1			
27	CA_46E-66C	7CC-4	60	CA_46C-48D-66A	7CC-4			
28	CA_46C-46C-66C	7CC-4	61	CA_46C-46C-66A	6CC-48			
29	CA_2A-48C-66A-66A	7CC-4	62	CA_2A-46C-48D	7CC-4			
30	CA_5A-46C-66A-66A	7CC-10	63	CA_2A-46D-48C	7CC-4			
31	CA_2A-5A-46C-66A-66A	7CC-10	64	CA_46D-48C-66A	7CC-4			
32	CA_46C-66A-66A-66A	7CC-10	65	CA_2A-46A-48D-66A	7CC-4			
33	CA_2A-46D-48A-48A	7CC-4	66	CA_2A-2A-5B-30A-66A	6CC-8			



<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>

CA Configuration	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)
CA_4A-41A	Band 4	20	1732.5	20175	QPSK	1	0	Band 41	20	2593	40620	23.28	23.36
CA_5A-25A	Band 5	10	836.5	20525	QPSK	1	0	Band 25	20	1960	8340	24.47	24.60
CA_5A-41A	Band 5	10	836.5	20525	QPSK	1	0	Band 41	20	2593	40620	24.43	24.60
CA_12A-25A	Band 12	10	707.5	23095	QPSK	1	0	Band 25	20	1960	8340	24.71	24.87
CA_41A-46A	Band 41	20	2549.5	40185	QPSK	1	0	Band 46	20	5160	46800	23.76	23.87
CA_26A-46A	Band 26	15	831.5	26865	QPSK	1	0	Band 46	20	5160	46800	24.65	24.76



<Three Carrier power verification>

CA Configuration	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)
CA_2A-13A-46A	Band 2	20	1860	18700	QPSK	1	0	Band 13	10	751	5230	Band 46	20	5160	46800	23.25	23.45
CA_2A-14A-30A	Band 2	20	1860	18700	QPSK	1	0	Band 25	10	763	5330	Band 30	10	2355	9820	23.26	23.45
CA_2A-4A-46A	Band 2	20	1860	18700	QPSK	1	0	Band 4	20	2132.5	2175	Band 46	20	5160	46800	23.30	23.45
CA_2A-7A-46A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 46	20	5160	46800	23.26	23.45
CA_5B-38A	Band 5	10	836.5	20525	QPSK	1	0	Band 5	5	888.7	2597	Band 38	20	2595	38000	24.52	24.60
CA_7C-38A	Band 7	20	2560	21350	QPSK	1	99	Band 7	20	2660.4	3154	Band 38	20	2595	38000	21.23	21.42
CA_2A-7A-71A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 71	20	634.5	68761	23.16	23.45
CA_7A-66A-71A	Band 7	20	2560	21350	QPSK	1	99	Band 66	20	2155	66886	Band 71	20	634.5	68761	21.35	21.42
CA_25A-46C	Band 26	15	831.5	26865	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	23.32	23.44
CA_26A-41C	Band 26	15	831.5	26865	QPSK	1	0	Band 41	20	2593	40620	Band 41	20	2612.8	40818	24.51	24.76
CA_2A-14A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 14	10	763	5330	Band 66	20	2155	66886	23.36	23.45
CA_4A-13A-46A	Band 4	20	1732.5	20175	QPSK	1	0	Band 13	10	751	5230	Band 46	20	5160	46800	23.21	23.36
CA_4A-7A-71A	Band 4	20	1732.5	20175	QPSK	1	0	Band 7	20	2655	3100	Band 71	20	634.5	68761	23.26	23.36
CA_7A-13A-66A	Band 7	20	2560	21350	QPSK	1	99	Band 13	10	751	5230	Band 66	20	2155	66886	21.22	21.42
CA_25C-41A	Band 25	20	1880	26340	QPSK	1	0	Band 25	20	1979.8	8538	Band 41	20	2593	40620	23.24	23.44
CA_48C-71A	Band 71	20	673	133222	QPSK	1	0	Band 48	20	3560	55340	Band 48	20	3579.8	55538	24.95	25.00
CA_41A-46C	Band 41	20	2549.5	40185	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	23.80	23.87
CA_29A-46A-66A	Band 66	20	1745	132322	QPSK	1	0	Band 46	20	5160	46800	Band 29	10	722.5	9715	23.45	23.49
CA_12A-48C	Band 12	10	707.5	23095	QPSK	1	0	Band 48	20	3560	55340	Band 48	20	3579.8	55538	24.69	24.87
CA_25A-46A-48A	Band 25	20	1880	26340	QPSK	1	0	Band 46	20	5160	46800	Band 48	20	3560	55340	23.24	23.44
CA_25C-26A	Band 25	20	1880	26340	QPSK	1	0	Band 25	20	1979.8	8538	Band 26	15	876.5	8865	23.23	23.44
CA_7A-12A-66A	Band 7	20	2560	21350	QPSK	1	99	Band 12	10	737.5	5095	Band 66	20	2155	66886	21.29	21.42
CA_13A-46C	Band 13	10	782	23230	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	24.64	24.73

<Four Carrier power verification>

CA Configuration	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)
CA_2A-13A-48A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 13	10	751	5230	Band 48	20	3690	56640	Band 66	20	2120	66536	23.39	23.45
CA_2A-2A-4A-71A	Band 2	20	1860	18700	QPSK	1	0	Band 2	20	1960	900	Band 4	20	2132.5	2175	Band 71	20	634.5	68761	23.38	23.45
CA_2A-4A-12A-30A	Band 2	20	1860	18700	QPSK	1	0	Band 4	20	2132.5	2175	Band 12	10	737.5	5095	Band 30	10	2355	9820	23.40	23.45
CA_2A-4A-29A-30A	Band 2	20	1860	18700	QPSK	1	0	Band 4	20	2132.5	2175	Band 29	10	722.5	9715	Band 30	10	2355	9820	23.33	23.45
CA_2A-4A-5A-30A	Band 2	20	1860	18700	QPSK	1	0	Band 4	20	2132.5	2175	Band 5	10	881.5	2525	Band 30	10	2355	9820	23.35	23.45
CA_2A-4A-7A-12A	Band 2	20	1860	18700	QPSK	1	0	Band 4	20	2132.5	2175	Band 7	20	2655	3100	Band 12	10	737.5	5095	23.40	23.45
CA_2A-4A-7A-29A	Band 2	20	1860	18700	QPSK	1	0	Band 4	20	2132.5	2175	Band 7	20	2655	3100	Band 29	10	722.5	9715	23.42	23.45
CA_2A-5A-46C	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 46	20	5160	46800	Band 46	20	5179.8	46998	23.35	23.45
CA_2A-7A-46A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 46	20	5160	46800	Band 66	20	2120	66536	23.41	23.45
CA_2A-7A-29A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 29	10	722.5	9715	Band 66	20	2120	66536	23.40	23.45
CA_2A-7A-26A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 26	15	876.5	8865	Band 66	20	2120	66536	23.39	23.45
CA_2A-7A-66A-71A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 66	20	2155	66886	Band 71	20	634.5	68761	23.37	23.45
CA_4A-13A-46C	Band 4	20	1732.5	20175	QPSK	1	0	Band 13	10	751	5230	Band 46	20	5160	46800	Band 46	20	5179.8	46998	23.25	23.36



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CA_4A-4A-12A-30A	Band 4	20	1732.5	20175	QPSK	1	0	Band 4	5	2152.5	2375	Band 12	10	737.5	5095	Band 30	10	2355	9820	23.30	23.36
CA_4A-4A-29A-30A	Band 4	20	1732.5	20175	QPSK	1	0	Band 4	5	2152.5	2375	Band 29	10	722.5	9715	Band 30	10	2355	9820	23.35	23.36
CA_7C-13A-66A	Band 7	20	2560	21350	QPSK	1	99	Band 7	20	2660.2	3152	Band 13	10	751	5230	Band 66	20	2120	66536	21.38	21.42
CA_25A-46D	Band 25	20	1880	26340	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	23.42	23.44
CA_14A-30A-66A-66A	Band 14	10	793	23230	QPSK	1	0	Band 30	10	2355	9820	Band 66	20	2120	66536	Band 66	5	2197.5	67311	24.63	24.77
CA_12A-46D	Band 12	10	707.5	23095	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	24.75	24.87
CA_46D-71A	Band 71	20	673	133222	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	24.95	25.00
CA_5A-7A-46C	Band 5	10	836.5	20525	QPSK	1	0	Band 7	20	2655	3100	Band 46	20	5160	46800	Band 46	20	5179.8	46998	24.48	24.60



<Five Carrier power verification>

CA Configuration	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	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
CA_2A-2A-4A-5B	Band 2	20	1860	18700	QPSK	1	0	Band 2	5	1987.5	1175	Band 4	20	2132.5	2175	Band 5	10	874	2450	Band 5	5	883.9	2549	Band 5	5	883.9	2549	23.34	23.45
CA_2A-2A-4A-4A-13A	Band 2	20	1860	18700	QPSK	1	0	Band 2	5	1987.5	1175	Band 4	20	2120	2050	Band 4	5	2152.5	2375	Band 13	10	751	5230	Band 13	10	751	5230	23.32	23.45
CA_2A-2A-7C-13A	Band 2	20	1860	18700	QPSK	1	0	Band 2	5	1987.5	1175	Band 7	20	2655	3100	Band 4	20	2674.8	3298	Band 13	10	751	5230	Band 13	10	751	5230	23.31	23.45
CA_2A-4A-7A-7A-29A	Band 2	20	1860	18700	QPSK	1	0	Band 4	20	2132.5	2175	Band 7	20	2655	3100	Band 7	5	2687.5	3425	Band 13	10	722.5	9715	Band 29	10	722.5	9715	23.35	23.45
CA_2A-7C-29A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 7	20	2674.8	3298	Band 29	10	722.5	9715	Band 66	20	2120	66536	Band 66	20	2120	66536	23.28	23.45
CA_2A-7A-66A-66A-71A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 66	20	2120	66536	Band 66	5	2197.5	67311	Band 71	20	634.5	68761	Band 71	20	634.5	68761	23.30	23.45
CA_2A-7A-7A-13A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2655	3100	Band 7	5	2687.5	3425	Band 13	10	751	5230	Band 66	20	2120	66536	Band 66	20	2120	66536	23.21	23.45
CA_2A-13A-48C-66A	Band 2	20	1860	18700	QPSK	1	0	Band 13	10	751	5230	Band 48	20	3560	55340	Band 48	20	3579.8	55538	Band 66	20	2120	66536	Band 66	20	2120	66536	23.25	23.45
CA_2A-5A-7C-66A	Band 2	20	1860	18700	QPSK	1	0	Band 5	10	881.5	2525	Band 7	20	2655	3100	Band 7	20	2674.8	3298	Band 66	20	2120	66536	Band 66	20	2120	66536	23.26	23.45
CA_4A-4E	Band 4	20	1732.5	20175	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 46	20	5219.4	47394	Band 46	20	5219.4	47394	23.31	23.36
CA_4A-4E	Band 4	20	1732.5	20175	QPSK	1	0	Band 48	20	3560	55340	Band 48	20	3579.8	55538	Band 48	20	3599.6	55736	Band 48	20	3619.4	55934	Band 48	20	3619.4	55934	23.31	23.36
CA_5A-7A-4E	Band 5	10	836.5	20525	QPSK	1	0	Band 7	20	2655	3100	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 46	20	5199.6	47196	24.51	24.60
CA_7C-25A-25A-66A	Band 7	20	2560	21350	QPSK	1	99	Band 7	20	2660.2	3152	Band 25	20	1960	8340	Band 25	5	1992.5	8865	Band 66	20	2120	66536	Band 66	20	2120	66536	21.28	21.42
CA_7A-4E-66A	Band 7	20	2560	21350	QPSK	1	99	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 66	20	2120	66536	Band 66	20	2120	66536	21.30	21.42
CA_13A-48D-66A	Band 13	10	782	23230	QPSK	1	0	Band 48	20	3560	55340	Band 48	20	3579.8	55538	Band 48	20	3599.6	55736	Band 66	20	2120	66536	Band 66	20	2120	66536	24.60	24.73
CA_13A-48E	Band 13	10	782	23230	QPSK	1	0	Band 48	20	3560	55340	Band 48	20	3579.8	55538	Band 48	20	3599.6	55736	Band 48	20	3619.4	55934	Band 48	20	3619.4	55934	24.62	24.73
CA_25C-41D	Band 25	20	1880	26340	QPSK	1	0	Band 25	20	1979.8	8538	Band 41	20	2593	40620	Band 41	20	2612.8	40818	Band 41	20	2632.6	41016	Band 41	20	2632.6	41016	23.38	23.44
CA_12A-4E	Band 12	10	707.5	23095	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 46	20	5219.4	47394	Band 46	20	5219.4	47394	24.68	24.87
CA_13A-48A-48C-66A	Band 13	10	782	23230	QPSK	1	0	Band 48	20	3690	56640	Band 48	20	3560	55340	Band 48	20	3579.8	55538	Band 66	20	2120	66536	Band 66	20	2120	66536	24.65	24.73

<Six Carrier power verification>

CA Configuration	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	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
CA_2A-2A-5A-30A-66A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 2	5	1987.5	1175	Band 5	10	881.5	2525	Band 30	10	2355	9820	Band 66	20	2120	66536	Band 66	5	2197.5	67311	Band 66	5	2197.5	67311	23.22	23.45
CA_2A-2A-14A-30A-66A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 2	5	1987.5	1175	Band 14	10	763	5330	Band 30	10	2355	9820	Band 66	20	2120	66536	Band 66	5	2197.5	67311	Band 66	5	2197.5	67311	23.27	23.45
CA_2A-12A-30A-66A-66A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 12	10	737.5	5095	Band 30	10	2355	9820	Band 66	20	2120	66536	Band 66	20	2155	66886	Band 66	5	2197.5	67311	Band 66	5	2197.5	67311	23.27	23.45
CA_2A-29A-30A-66A-66A-66A	Band 2	20	1860	18700	QPSK	1	0	Band 29	15	722.5	9715	Band 30	10	2355	9820	Band 66	20	2120	66536	Band 66	20	2155	66886	Band 66	5	2197.5	67311	Band 66	5	2197.5	67311	23.25	23.45
CA_7A-4E-66A	Band 7	20	2560	21350	QPSK	1	99	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 46	20	5219.4	47394	Band 66	20	2155	66886	Band 66	20	2155	66886	21.30	21.42
CA_2A-5A-48C-66A-66A	Band 4	20	1860	18700	QPSK	1	0	Band 5	10	881.5	2525	Band 48	20	3560	55340	Band 48	20	3579.8	55538	Band 66	20	2120	66536	Band 66	5	2197.5	67311	Band 66	5	2197.5	67311	23.32	23.45

<Seven Carrier power verification>

CA Configuration	PCC							SCC1				SCC2				SCC3				SCC4				SCC5				SCC7				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	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
CA_2A-7A-7A-4E	Band 2	20	1860	18700	QPSK	1	0	Band 7	20	2680	3350	Band 7	5	2622.5	2775	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 46	20	5199.6	47196	Band 46	20	5199.6	47196	23.35	23.45
CA_2A-4E-48C-66A	Band 2	20	1860	18700	QPSK	1	0	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 48	20	3560	55340	Band 48	20	3579.8	55538	Band 66	20	2155	66886	Band 66	20	2155	66886	23.23	23.45
CA_2A-5A-4E-66A	Band 2	20	1860	18700	QPSK	1	0	Band 5	10	881.5	2525	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 46	20	5219.4	47394	Band 66	20	2155	66886	Band 66	20	2155	66886	23.26	23.45
CA_2A-13A-4E-66A	Band 2	20	1860	18700	QPSK	1	0	Band 13	10	751	5230	Band 46	20	5160	46800	Band 46	20	5179.8	46998	Band 46	20	5199.6	47196	Band 46	20	5219.4	47394	Band 66	20	2155	66886	Band 66	20	2155	66886	23.30	23.45



<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	23.50	24.5
20575	20476	QPSK	1	0	1	49	23.51	24.5
20600	20501	QPSK	1	0	1	49	23.52	24.5

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	23.33	25.3
21100	20902	QPSK	1	0	1	99	23.33	25.3
21350	21152	QPSK	1	0	1	99	23.34	25.3

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	23.33	24.1
21100	20902	QPSK	1	0	1	99	23.33	24.1
21350	21152	QPSK	1	0	1	99	23.34	24.1



Index 4								
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	20.75	21.5
21100	20902	QPSK	1	0	1	99	20.78	21.5
21350	21152	QPSK	1	0	1	99	20.74	21.5

Index 5								
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	20.70	22.7
21100	20902	QPSK	1	0	1	99	20.71	22.7
21350	21152	QPSK	1	0	1	99	20.74	22.7

Index 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	20.70	21.5
21100	20902	QPSK	1	0	1	99	20.71	21.5
21350	21152	QPSK	1	0	1	99	20.74	21.5

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	23.08	24.5
132322	132229	QPSK	1	0	1	24	23.11	24.5
132597	132504	QPSK	1	0	1	24	23.09	24.5

Index 4								
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	23.07	23.7
132322	132229	QPSK	1	0	1	24	23.01	23.7
132597	132504	QPSK	1	0	1	24	23.03	23.7

Index 5								
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	23.07	24.5
132322	132229	QPSK	1	0	1	24	23.01	24.5
132597	132504	QPSK	1	0	1	24	23.03	24.5



Index 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	23.07	23.7
132322	132229	QPSK	1	0	1	24	23.01	23.7
132597	132504	QPSK	1	0	1	24	23.03	23.7

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	23.84	24.5
132322	132124	QPSK	1	0	1	99	23.83	24.5
132572	132374	QPSK	1	0	1	99	23.87	24.5

Index 4								
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	22.94	23.7
132322	132124	QPSK	1	0	1	99	22.84	23.7
132572	132374	QPSK	1	0	1	99	22.91	23.7

Index 5								
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	22.94	24.5
132322	132124	QPSK	1	0	1	99	22.84	24.5
132572	132374	QPSK	1	0	1	99	22.91	24.5

Index 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	22.94	23.7
132322	132124	QPSK	1	0	1	99	22.84	23.7
132572	132374	QPSK	1	0	1	99	22.91	23.7



Index 2/3								
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	23.51	24.5
40185	39987	QPSK	1	0	1	99	23.50	24.5
40620	40422	QPSK	1	0	1	99	23.57	24.5
41055	40857	QPSK	1	0	1	99	23.51	24.5
41490	41292	QPSK	1	0	1	99	23.54	24.5

Index 4								
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	23.24	23.9
40185	39987	QPSK	1	0	1	99	23.32	23.9
40620	40422	QPSK	1	0	1	99	23.37	23.9
41055	40857	QPSK	1	0	1	99	23.34	23.9
41490	41292	QPSK	1	0	1	99	23.40	23.9

Index 5								
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	23.24	25.1
40185	39987	QPSK	1	0	1	99	23.32	25.1
40620	40422	QPSK	1	0	1	99	23.37	25.1
41055	40857	QPSK	1	0	1	99	23.34	25.1
41490	41292	QPSK	1	0	1	99	23.4	25.1

Index 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	23.24	23.9
40185	39987	QPSK	1	0	1	99	23.32	23.9
40620	40422	QPSK	1	0	1	99	23.37	23.9
41055	40857	QPSK	1	0	1	99	23.34	23.9
41490	41292	QPSK	1	0	1	99	23.4	23.9



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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	22.04	23.7
20575	20476	QPSK	1	0	1	49	22.05	23.7
20600	20501	QPSK	1	0	1	49	22.02	23.7

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	22.04	22.5
20575	20476	QPSK	1	0	1	49	22.05	22.5
20600	20501	QPSK	1	0	1	49	22.02	22.5

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	23.54	24.5
20575	20476	QPSK	1	0	1	49	23.55	24.5
20600	20501	QPSK	1	0	1	49	23.52	24.5

Index 2/3								
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	23.15	24
21100	20902	QPSK	1	0	1	99	23.16	24
21350	21152	QPSK	1	0	1	99	23.11	24

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	17.47	19.1
21100	20902	QPSK	1	0	1	99	17.49	19.1
21350	21152	QPSK	1	0	1	99	17.26	19.1

Index 5								
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	20.66	22.6
21100	20902	QPSK	1	0	1	99	20.62	22.6
21350	21152	QPSK	1	0	1	99	20.65	22.6



Index 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	20.66	21.4
21100	20902	QPSK	1	0	1	99	20.62	21.4
21350	21152	QPSK	1	0	1	99	20.65	21.4

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	23.07	24
132322	132229	QPSK	1	0	1	24	22.98	24
132597	132504	QPSK	1	0	1	24	23.05	24

Index 4								
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	18.59	20
132322	132229	QPSK	1	0	1	24	18.38	20
132597	132504	QPSK	1	0	1	24	18.35	20

Index 5								
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	19.39	21.2
132322	132229	QPSK	1	0	1	24	19.38	21.2
132597	132504	QPSK	1	0	1	24	19.35	21.2

Index 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	19.39	20
132322	132229	QPSK	1	0	1	24	19.38	20
132597	132504	QPSK	1	0	1	24	19.35	20

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	23.19	24
132322	132124	QPSK	1	0	1	99	23.09	24
132572	132374	QPSK	1	0	1	99	23.07	24



Index 4								
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	18.53	20
132322	132124	QPSK	1	0	1	99	18.32	20
132572	132374	QPSK	1	0	1	99	18.34	20

Index 5								
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	19.33	21.2
132322	132124	QPSK	1	0	1	99	19.32	21.2
132572	132374	QPSK	1	0	1	99	19.34	21.2

Index 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	19.33	20
132322	132124	QPSK	1	0	1	99	19.32	20
132572	132374	QPSK	1	0	1	99	19.31	20

Index 2/3/5								
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	22.48	24
40185	39987	QPSK	1	0	1	99	22.74	24
40620	40422	QPSK	1	0	1	99	22.81	24
41055	40857	QPSK	1	0	1	99	22.64	24
41490	41292	QPSK	1	0	1	99	22.59	24

Index 4								
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	22.05	22.8
40185	39987	QPSK	1	0	1	99	22.01	22.8
40620	40422	QPSK	1	0	1	99	22.04	22.8
41055	40857	QPSK	1	0	1	99	22.05	22.8
41490	41292	QPSK	1	0	1	99	22.08	22.8



Index 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	22.48	23.1
40185	39987	QPSK	1	0	1	99	22.74	23.1
40620	40422	QPSK	1	0	1	99	22.81	23.1
41055	40857	QPSK	1	0	1	99	22.64	23.1
41490	41292	QPSK	1	0	1	99	22.59	23.1

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
WWAN Ant 7	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm	≤ 25mm
2.4GHz WLAN Ant 4	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm
2.4GHz WLAN Ant 3	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm
2.4GHz WLAN/BT Ant 4+3	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm
5/6GHz WLAN Ant 4+8	≤ 25mm	≤ 25mm	≤ 25mm	> 25mm	≤ 25mm	≤ 25mm

Positions for SAR tests; Hotspot mode						
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
WWAN Ant 7	Yes	Yes	No	Yes	Yes	Yes
2.4GHz WLAN Ant 4	Yes	Yes	Yes	No	Yes	Yes
2.4GHz WLAN Ant 3	Yes	Yes	Yes	No	Yes	Yes
2.4GHz WLAN/BT Ant 4+3	Yes	Yes	Yes	No	Yes	Yes
5/6GHz WLAN Ant 4+8	Yes	Yes	Yes	No	Yes	Yes

General Note:

- Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 9cm*5cm, the test distance is 10 mm. SAR 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 WCDMA B2, LTE 7/25/30/41, FR1 n7/25/30/41 Bottom Side, LTE B2, FR1 n2/41 Top Side.
6. For WLAN 5.3GHz, 5.5GHz, UNII-4 and 6GHz 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 $\leq \frac{1}{4}$ 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 $\leq \frac{1}{4}$ 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.

**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; 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. NR n2 and n38 SAR test was covered by NR n25 and n41; SAR test for overlapping bands can be reduced if the maximum output power, including tolerance, for the smaller band is \leq the larger band and the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band to qualify for the SAR test exclusion.

**WLAN Note:**

1. The SISO mode support only when the Antenna 3 and 4 is transmitting on 802.11b mode, other support MIMO mode.
2. Per KDB 248227 D01v02r02, For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test position when 802.11 DSS mode is active at transmit antenna 3 and 4
3. Per KDB 248227 D01v02r02, for 2.4GHz WLAN MIMO operation for 802.11g/n, when the same highest maximum output power specification applies to multiple transmission modes, the largest channel bandwidth configuration with the lowest order modulation and lowest data rate is measured, so 802.11g mode is selected to be tested.
4. 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.
5. 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.
6. 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. 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
8. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

WLAN PD Note:

1. 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.
2. Absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements.
3. Power density was calculated by repeated E-field measurements on two measurement planes separated by $\lambda/4$.
4. 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.
5. Per FCC guidance and equipment manufacturer guidance, 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.
6. 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	128	824.2	28.85	30.50	1.462	-0.04	0.170	0.249
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Tilted	0mm	2/3	128	824.2	28.85	30.50	1.462	0.09	0.090	0.132
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	128	824.2	28.85	30.50	1.462	-0.07	0.230	0.336
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	189	836.4	28.54	30.50	1.570	-0.11	0.361	0.567
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	251	848.8	28.52	30.50	1.578	-0.18	0.235	0.371
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Tilted	0mm	2/3	128	824.2	28.85	30.50	1.462	-0.14	0.105	0.154
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	2	128	824.2	25.99	27.50	1.416	-0.16	0.701	0.992
01	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	2	189	836.4	25.91	27.50	1.442	-0.18	0.711	1.025
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	2	251	848.8	25.83	27.50	1.469	0.12	0.651	0.956
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Tilted	0mm	2	128	824.2	25.99	27.50	1.416	0.1	0.521	0.738
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Cheek	0mm	2	128	824.2	25.99	27.50	1.416	-0.08	0.625	0.885
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Cheek	0mm	2	189	836.4	25.91	27.50	1.442	0.04	0.606	0.874
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Cheek	0mm	2	251	848.8	25.83	27.50	1.469	0.15	0.571	0.839
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Tilted	0mm	2	128	824.2	25.99	27.50	1.416	0.04	0.673	0.953
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Tilted	0mm	2	189	836.4	25.91	27.50	1.442	0.09	0.652	0.940
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Tilted	0mm	2	251	848.8	25.83	27.50	1.469	0.11	0.605	0.889
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	3	128	824.2	25.99	26.30	1.074	-0.16	0.701	0.753
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	3	189	836.4	25.91	26.30	1.094	-0.18	0.711	0.778
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Cheek	0mm	3	251	848.8	25.83	26.30	1.114	0.12	0.651	0.725
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Tilted	0mm	3	128	824.2	25.99	26.30	1.074	0.1	0.521	0.560
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Cheek	0mm	3	128	824.2	25.99	26.30	1.074	-0.08	0.625	0.671
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Tilted	0mm	3	128	824.2	25.99	26.30	1.074	0.04	0.673	0.723
02	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	512	1850.2	26.76	28.00	1.330	-0.14	0.445	0.592
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	661	1880	26.47	28.00	1.422	0.12	0.326	0.464
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	810	1909.8	26.38	28.00	1.452	0.04	0.312	0.453
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Tilted	0mm	2/3	512	1850.2	26.76	28.00	1.330	-0.02	0.164	0.218
	GSM1900_Ant 2	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	512	1850.2	26.76	28.00	1.330	-0.14	0.206	0.274
	GSM1900_Ant 2	GPRS (4 Tx slots)	Left Tilted	0mm	2/3	512	1850.2	26.76	28.00	1.330	-0.04	0.119	0.158
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Cheek	0mm	2/3	661	1880	26.06	27.80	1.493	0.15	0.038	0.057
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Tilted	0mm	2/3	661	1880	26.06	27.80	1.493	-0.1	0.032	0.048
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	661	1880	26.06	27.80	1.493	-0.04	0.057	0.085
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	512	1850.2	26.02	27.80	1.507	0	0.049	0.074
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Cheek	0mm	2/3	810	1909.8	26.03	27.80	1.503	0.02	0.076	0.114
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Tilted	0mm	2/3	661	1880	26.06	27.80	1.493	0.01	0.026	0.039



<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	9262	1852.4	24.93	25.50	1.140	-0.11	0.460	0.525
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	9400	1880	24.83	25.50	1.167	0.05	0.558	0.651
03	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	9538	1907.6	24.84	25.50	1.164	-0.06	0.623	0.725
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Tilted	0mm	2/3	9262	1852.4	24.93	25.50	1.140	-0.09	0.262	0.299
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Cheek	0mm	2/3	9262	1852.4	24.93	25.50	1.140	-0.18	0.240	0.274
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Tilted	0mm	2/3	9262	1852.4	24.93	25.50	1.140	0.17	0.157	0.179
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	2/3	9400	1880	24.17	25.30	1.297	0.11	0.036	0.047
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	2/3	9400	1880	24.17	25.30	1.297	0.19	0.028	0.036
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	9400	1880	24.17	25.30	1.297	0.03	0.051	0.066
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	9262	1852.4	24.05	25.30	1.334	0.03	0.050	0.067
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	9538	1907.6	24.16	25.30	1.300	0	0.061	0.079
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	2/3	9400	1880	24.17	25.30	1.297	0.15	0.020	0.026
04	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	1513	1752.6	24.60	25.50	1.230	0.13	0.403	0.496
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	1312	1712.4	24.52	25.50	1.253	0.13	0.290	0.363
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2/3	1413	1732.6	24.55	25.50	1.245	0.15	0.348	0.433
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Tilted	0mm	2/3	1513	1752.6	24.60	25.50	1.230	-0.02	0.271	0.333
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Cheek	0mm	2/3	1513	1752.6	24.60	25.50	1.230	0.09	0.207	0.255
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Tilted	0mm	2/3	1513	1752.6	24.60	25.50	1.230	0.07	0.211	0.260
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	2/3	1513	1752.6	23.80	25.30	1.413	-0.02	0.081	0.114
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	2/3	1312	1712.4	23.65	25.30	1.462	-0.02	0.079	0.116
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	2/3	1413	1732.6	23.64	25.30	1.466	-0.17	0.068	0.100
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	2/3	1513	1752.6	23.80	25.30	1.413	0.025	0.031	0.044
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	1513	1752.6	23.80	25.30	1.413	0	0.050	0.071
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	2/3	1513	1752.6	23.80	25.30	1.413	0.17	0.042	0.059
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Cheek	0mm	2/3	4233	846.6	24.56	25.50	1.242	0.19	0.191	0.237
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Tilted	0mm	2/3	4233	846.6	24.56	25.50	1.242	0.05	0.091	0.113
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	4233	846.6	24.56	25.50	1.242	-0.16	0.251	0.312
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	4132	826.4	24.52	25.50	1.253	-0.13	0.216	0.271
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Cheek	0mm	2/3	4182	836.4	24.54	25.50	1.247	-0.12	0.259	0.323
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Tilted	0mm	2/3	4233	846.6	24.56	25.50	1.242	-0.06	0.119	0.148
05	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	2	4132	826.4	22.66	24.30	1.459	-0.09	0.766	1.117
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	2	4182	836.4	22.56	24.30	1.493	0.01	0.630	0.940
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	2	4233	846.6	22.61	24.30	1.476	-0.12	0.557	0.822
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	2	4132	826.4	22.66	24.30	1.459	0.07	0.651	0.950
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	2	4182	836.4	22.56	24.30	1.493	0.09	0.581	0.867
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	2	4233	846.6	22.61	24.30	1.476	0.05	0.522	0.770
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Cheek	0mm	2	4132	826.4	22.66	24.30	1.459	-0.09	0.639	0.932
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Cheek	0mm	2	4182	836.4	22.56	24.30	1.493	0.14	0.560	0.836
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Cheek	0mm	2	4233	846.6	22.61	24.30	1.476	0	0.501	0.739
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Tilted	0mm	2	4132	826.4	22.66	24.30	1.459	0.12	0.586	0.855
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Tilted	0mm	2	4182	836.4	22.56	24.30	1.493	0.01	0.514	0.767
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Tilted	0mm	2	4233	846.6	22.61	24.30	1.476	-0.12	0.492	0.726
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	3	4132	826.4	22.66	23.10	1.107	-0.09	0.766	0.848
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	3	4182	836.4	22.56	23.10	1.132	0.01	0.630	0.713
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	3	4233	846.6	22.61	23.10	1.119	-0.12	0.557	0.624
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	3	4132	826.4	22.66	23.10	1.107	0.07	0.651	0.720
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Cheek	0mm	3	4132	826.4	22.66	23.10	1.107	-0.09	0.639	0.707
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Tilted	0mm	3	4132	826.4	22.66	23.10	1.107	0.12	0.586	0.648



<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	Right Cheek	0mm	2	18900	1880	15.44	16.70	1.337	0.02	0.733	0.980
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	18700	1860	15.40	16.70	1.349	0.01	0.712	0.960
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	19100	1900	15.28	16.70	1.387	0.12	0.695	0.964
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	18900	1880	15.35	16.70	1.365	0.05	0.710	0.969
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	18700	1860	15.16	16.70	1.426	-0.14	0.671	0.957
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	19100	1900	15.33	16.70	1.371	0.03	0.688	0.943
	LTE Band 2_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	2	18900	1880	15.27	16.70	1.390	0.12	0.674	0.937
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	18900	1880	15.44	16.70	1.337	0.13	0.813	1.087
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	18700	1860	15.40	16.70	1.349	0.08	0.804	1.085
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	19100	1900	15.28	16.70	1.387	-0.02	0.775	1.075
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	18900	1880	15.35	16.70	1.365	-0.15	0.790	1.078
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	18700	1860	15.16	16.70	1.426	-0.01	0.741	1.056
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	19100	1900	15.33	16.70	1.371	0.08	0.758	1.039
	LTE Band 2_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	2	18900	1880	15.27	16.70	1.390	-0.01	0.760	1.056
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	2	18900	1880	15.44	16.70	1.337	-0.08	0.365	0.488
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	2	18900	1880	15.35	16.70	1.365	0.13	0.335	0.457
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	2	18900	1880	15.44	16.70	1.337	-0.09	0.411	0.549
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	2	18900	1880	15.35	16.70	1.365	-0.05	0.391	0.534
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	3	18900	1880	15.44	15.50	1.014	0.02	0.733	0.743
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	18900	1880	15.35	15.50	1.035	0.05	0.710	0.735
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	18900	1880	15.44	15.50	1.014	0.13	0.813	0.824
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	18700	1860	15.40	15.50	1.023	0.08	0.804	0.823
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	19100	1900	15.28	15.50	1.052	-0.02	0.775	0.815
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	18900	1880	15.35	15.50	1.035	-0.15	0.790	0.818
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	18700	1860	15.16	15.50	1.081	-0.01	0.741	0.801
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	19100	1900	15.33	15.50	1.040	0.08	0.758	0.788
	LTE Band 2_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	3	18900	1880	15.27	15.50	1.054	-0.01	0.760	0.801
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	3	18900	1880	15.44	15.50	1.014	-0.08	0.365	0.370
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	3	18900	1880	15.35	15.50	1.035	0.13	0.335	0.347
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	3	18900	1880	15.44	15.50	1.014	-0.09	0.411	0.417
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	3	18900	1880	15.35	15.50	1.035	-0.05	0.391	0.405
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Cheek	0mm	2	18700	1860	23.42	25.30	1.542	-0.09	0.505	0.779
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	2	18700	1860	22.75	24.30	1.429	0.05	0.442	0.632
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Tilted	0mm	2	18700	1860	23.42	25.30	1.542	0.07	0.086	0.133
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	2	18700	1860	22.75	24.30	1.429	-0.04	0.067	0.096
06	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	18700	1860	23.42	25.30	1.542	-0.11	0.755	1.164
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	18900	1880	23.40	25.30	1.549	0.05	0.721	1.117
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	19100	1900	23.40	25.30	1.549	-0.06	0.712	1.103
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	18700	1860	22.75	24.30	1.429	0.08	0.628	0.897
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	18900	1880	22.71	24.30	1.442	0.05	0.588	0.848
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	19100	1900	22.74	24.30	1.432	-0.04	0.576	0.825
	LTE Band 2_Ant 5	20M	QPSK	100	0	Left Cheek	0mm	2	18700	1860	22.88	24.30	1.387	0.08	0.635	0.881
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Tilted	0mm	2	18700	1860	23.42	25.30	1.542	0.12	0.115	0.177
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	2	18700	1860	22.75	24.30	1.429	0.04	0.087	0.124
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Cheek	0mm	3	18700	1860	23.42	24.10	1.169	-0.09	0.505	0.591
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	3	18700	1860	22.75	24.10	1.365	0.05	0.442	0.603
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right Tilted	0mm	3	18700	1860	23.42	24.10	1.169	0.07	0.086	0.101
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	3	18700	1860	22.75	24.10	1.365	-0.04	0.067	0.091
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	18700	1860	23.42	24.10	1.169	-0.11	0.755	0.883
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	18900	1880	23.40	24.10	1.175	0.05	0.721	0.847
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	19100	1900	23.40	24.10	1.175	-0.06	0.712	0.837
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	18700	1860	22.75	24.10	1.365	0.08	0.628	0.857
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	18900	1880	22.71	24.10	1.377	0.05	0.588	0.810
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	19100	1900	22.74	24.10	1.368	-0.04	0.576	0.788
	LTE Band 2_Ant 5	20M	QPSK	100	0	Left Cheek	0mm	3	18700	1860	22.88	24.10	1.324	0.08	0.635	0.841
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left Tilted	0mm	3	18700	1860	23.42	24.10	1.169	0.12	0.115	0.134
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	3	18700	1860	22.75	24.10	1.365	0.04	0.087	0.119



FCC SAR TEST REPORT

Report No. : FA102919-05E

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)
07	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2	21350	2560	23.78	25.30	1.419	-0.19	0.830	1.178
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2	20850	2510	23.72	25.30	1.439	0.1	0.677	0.974
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2	21100	2535	23.74	25.30	1.432	-0.12	0.781	1.119
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2	21350	2560	23.88	24.50	1.153	0	0.688	0.794
	LTE Band 7_Ant 2	20M	QPSK	100	0	Right Cheek	0mm	2	21350	2560	23.86	24.50	1.159	-0.12	0.702	0.813
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2	21350	2560	23.78	25.30	1.419	-0.09	0.223	0.316
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	2	21350	2560	23.88	24.50	1.153	0.17	0.235	0.271
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2	21350	2560	23.78	25.30	1.419	0.15	0.399	0.566
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	2	21350	2560	23.88	24.50	1.153	-0.14	0.427	0.493
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2	21350	2560	23.78	25.30	1.419	-0.13	0.308	0.437
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	2	21350	2560	23.88	24.50	1.153	0.12	0.303	0.349
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2	21350	2560	23.34	25.30	1.570	0.03	0.721	1.132
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	3	21350	2560	23.78	24.10	1.076	-0.19	0.830	0.893
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	3	20850	2510	23.72	24.10	1.091	0.1	0.677	0.739
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	3	21100	2535	23.74	24.10	1.086	-0.12	0.781	0.848
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	3	21350	2560	23.88	24.10	1.052	0	0.688	0.724
	LTE Band 7_Ant 2	20M	QPSK	100	0	Right Cheek	0mm	3	21350	2560	23.86	24.10	1.057	-0.12	0.702	0.742
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	3	21350	2560	23.78	24.10	1.076	-0.09	0.223	0.240
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	3	21350	2560	23.88	24.10	1.052	0.17	0.235	0.247
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	3	21350	2560	23.78	24.10	1.076	0.15	0.399	0.430
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	3	21350	2560	23.88	24.10	1.052	-0.14	0.427	0.449
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	3	21350	2560	23.78	24.10	1.076	-0.13	0.308	0.332
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	3	21350	2560	23.88	24.10	1.052	0.12	0.303	0.319
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	3	21350	2560	23.34	24.10	1.191	0.03	0.721	0.859
	LTE Band 7_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	20850	2510	23.82	25.10	1.343	0.1	0.019	0.026
	LTE Band 7_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	20850	2510	22.82	24.10	1.343	-0.14	0.017	0.023
	LTE Band 7_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	20850	2510	23.82	25.10	1.343	0.1	0.019	0.026
	LTE Band 7_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	20850	2510	22.82	24.10	1.343	-0.14	0.018	0.024
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	20850	2510	23.82	25.10	1.343	0.12	0.020	0.027
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	21100	2535	23.74	25.10	1.368	0.14	0.021	0.029
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	21350	2560	23.81	25.10	1.346	0.11	0.026	0.035
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	20850	2510	22.82	24.10	1.343	-0.17	0.019	0.026
	LTE Band 7_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	20850	2510	23.82	25.10	1.343	0.11	0.012	0.016
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	20850	2510	22.82	24.10	1.343	0.15	0.011	0.015
	LTE Band 7C_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	21100	2535	23.16	24.00	1.213	0.07	0.022	0.027
	LTE Band 12_Ant 0	10M	QPSK	1	0	Right Cheek	0mm	2/3	23095	707.5	24.81	25.50	1.172	-0.09	0.098	0.115
	LTE Band 12_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	2/3	23095	707.5	23.84	24.50	1.164	0.08	0.078	0.091
	LTE Band 12_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	2/3	23095	707.5	24.81	25.50	1.172	0.04	0.065	0.076
	LTE Band 12_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	2/3	23095	707.5	23.84	24.50	1.164	0.06	0.053	0.062
	LTE Band 12_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	23095	707.5	24.81	25.50	1.172	-0.02	0.130	0.152
	LTE Band 12_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	2/3	23095	707.5	23.84	24.50	1.164	-0.09	0.104	0.121
	LTE Band 12_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	2/3	23095	707.5	24.81	25.50	1.172	-0.04	0.056	0.066
	LTE Band 12_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	2/3	23095	707.5	23.84	24.50	1.164	-0.12	0.044	0.051
08	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	2/3	23095	707.5	24.96	25.50	1.132	0.1	0.672	0.761
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	2/3	23095	707.5	23.98	24.50	1.127	0.06	0.536	0.604
	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	2/3	23095	707.5	24.96	25.50	1.132	-0.11	0.531	0.601
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	2/3	23095	707.5	23.98	24.50	1.127	0.01	0.425	0.479
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	2/3	23095	707.5	24.96	25.50	1.132	-0.14	0.456	0.516
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	2/3	23095	707.5	23.98	24.50	1.127	-0.08	0.363	0.409
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	2/3	23095	707.5	24.96	25.50	1.132	-0.14	0.406	0.460
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	2/3	23095	707.5	23.98	24.50	1.127	0.09	0.323	0.364



FCC SAR TEST REPORT

Report No. : FA102919-05E

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	Right Cheek	0mm	2/3	23230	782	24.73	25.50	1.194	-0.09	0.248	0.296
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	2/3	23230	782	23.80	24.50	1.175	0.04	0.200	0.235
	LTE Band 13_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	2/3	23230	782	24.73	25.50	1.194	-0.02	0.136	0.162
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	2/3	23230	782	23.80	24.50	1.175	0.01	0.110	0.129
	LTE Band 13_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	23230	782	24.73	25.50	1.194	-0.19	0.332	0.396
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	2/3	23230	782	23.80	24.50	1.175	-0.04	0.270	0.317
	LTE Band 13_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	2/3	23230	782	24.73	25.50	1.194	-0.03	0.160	0.191
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	2/3	23230	782	23.80	24.50	1.175	0.06	0.129	0.152
09	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	2	23230	782	22.86	24.20	1.361	-0.05	0.821	1.118
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	2	23230	782	22.86	24.20	1.361	-0.11	0.820	1.116
	LTE Band 13_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	2	23230	782	22.84	24.20	1.368	0.05	0.814	1.113
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	2	23230	782	22.86	24.20	1.361	0.13	0.753	1.025
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	2	23230	782	22.86	24.20	1.361	-0.13	0.734	0.999
	LTE Band 13_Ant 1	10M	QPSK	50	0	Right Tilted	0mm	2	23230	782	22.84	24.20	1.368	0.02	0.712	0.974
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	2	23230	782	22.86	24.20	1.361	-0.14	0.668	0.909
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	2	23230	782	22.86	24.20	1.361	0.11	0.644	0.877
	LTE Band 13_Ant 1	10M	QPSK	50	0	Left Cheek	0mm	2	23230	782	22.84	24.20	1.368	0.05	0.814	1.113
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	2	23230	782	22.86	24.20	1.361	0.09	0.633	0.862
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	2	23230	782	22.86	24.20	1.361	0.07	0.618	0.841
	LTE Band 13_Ant 1	10M	QPSK	50	0	Left Tilted	0mm	2	23230	782	22.84	24.20	1.368	0.03	0.606	0.829
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	3	23230	782	22.86	23.00	1.033	-0.05	0.821	0.848
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	3	23230	782	22.86	23.00	1.033	-0.11	0.820	0.847
	LTE Band 13_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	3	23230	782	22.84	23.00	1.038	0.05	0.814	0.845
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	3	23230	782	22.86	23.00	1.033	0.13	0.753	0.778
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	3	23230	782	22.86	23.00	1.033	-0.13	0.734	0.758
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	3	23230	782	22.86	23.00	1.033	-0.14	0.668	0.690
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	3	23230	782	22.86	23.00	1.033	0.11	0.644	0.665
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	3	23230	782	22.86	23.00	1.033	0.09	0.633	0.654
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	3	23230	782	22.86	23.00	1.033	0.07	0.618	0.638
	LTE Band 14_Ant 0	10M	QPSK	1	0	Right Cheek	0mm	2/3	23330	793	24.77	25.50	1.183	-0.07	0.309	0.366
	LTE Band 14_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	2/3	23330	793	23.84	24.50	1.164	0.01	0.250	0.291
	LTE Band 14_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	2/3	23330	793	24.77	25.50	1.183	-0.08	0.185	0.219
	LTE Band 14_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	2/3	23330	793	23.84	24.50	1.164	0.06	0.150	0.175
	LTE Band 14_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	23330	793	24.77	25.50	1.183	-0.03	0.385	0.455
	LTE Band 14_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	2/3	23330	793	23.84	24.50	1.164	-0.12	0.310	0.361
	LTE Band 14_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	2/3	23330	793	24.77	25.50	1.183	-0.04	0.191	0.226
	LTE Band 14_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	2/3	23330	793	23.84	24.50	1.164	-0.07	0.152	0.177
10	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	2	23330	793	22.21	24.00	1.510	-0.14	0.774	1.169
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	2	23330	793	22.07	24.00	1.560	0.04	0.736	1.148
	LTE Band 14_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	2	23330	793	22.09	24.00	1.552	-0.06	0.724	1.124
	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	2	23330	793	22.21	24.00	1.510	0.05	0.673	1.016
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	2	23330	793	22.07	24.00	1.560	0.04	0.654	1.020
	LTE Band 14_Ant 1	10M	QPSK	50	0	Right Tilted	0mm	2	23330	793	22.09	24.00	1.552	0.03	0.628	0.975
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	2	23330	793	22.21	24.00	1.510	-0.08	0.645	0.974
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	2	23330	793	22.07	24.00	1.560	0.02	0.621	0.968
	LTE Band 14_Ant 1	10M	QPSK	50	0	Left Cheek	0mm	2	23330	793	22.09	24.00	1.552	0.06	0.601	0.933
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	2	23330	793	22.21	24.00	1.510	-0.1	0.619	0.935
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	2	23330	793	22.07	24.00	1.560	-0.04	0.589	0.919
	LTE Band 14_Ant 1	10M	QPSK	50	0	Left Tilted	0mm	2	23330	793	22.09	24.00	1.552	0.03	0.548	0.851
	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	3	23330	793	22.21	22.80	1.146	-0.14	0.774	0.887
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	3	23330	793	22.07	22.80	1.183	0.04	0.736	0.871
	LTE Band 14_Ant 1	10M	QPSK	50	0	Right Cheek	0mm	3	23330	793	22.09	22.80	1.178	-0.06	0.724	0.853
	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Tilted	0mm	3	23330	793	22.21	22.80	1.146	0.05	0.673	0.771
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	3	23330	793	22.07	22.80	1.183	0.04	0.654	0.774
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Cheek	0mm	3	23330	793	22.21	22.80	1.146	-0.08	0.645	0.739
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	3	23330	793	22.07	22.80	1.183	0.02	0.621	0.735
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Tilted	0mm	3	23330	793	22.21	22.80	1.146	-0.1	0.619	0.709
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	3	23330	793	22.07	22.80	1.183	-0.04	0.589	0.697



FCC SAR TEST REPORT

Report No. : FA102919-05E

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)
11	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	26340	1880	24.43	25.50	1.279	0.12	0.463	0.592
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	26140	1860	24.37	25.50	1.297	-0.11	0.552	0.716
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	26590	1905	24.28	25.50	1.324	-0.06	0.532	0.705
	LTE Band 25_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2/3	26340	1880	23.41	24.50	1.285	0.17	0.383	0.492
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2/3	26340	1880	24.43	25.50	1.279	-0.14	0.216	0.276
	LTE Band 25_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	2/3	26340	1880	23.41	24.50	1.285	0.02	0.180	0.231
	LTE Band 25_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2/3	26340	1880	24.43	25.50	1.279	-0.15	0.264	0.338
	LTE Band 25_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	2/3	26340	1880	23.41	24.50	1.285	-0.12	0.204	0.262
	LTE Band 25_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2/3	26340	1880	24.43	25.50	1.279	0.05	0.131	0.168
	LTE Band 25_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	2/3	26340	1880	23.41	24.50	1.285	0.01	0.111	0.143
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	26140	1860	23.95	25.30	1.365	0.02	0.034	0.046
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	26340	1880	23.82	25.30	1.406	-0.07	0.042	0.059
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	26590	1905	23.59	25.30	1.483	-0.11	0.035	0.052
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	26140	1860	22.91	24.30	1.377	0.08	0.010	0.014
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	26140	1860	23.95	25.30	1.365	-0.03	0.016	0.022
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	26140	1860	22.91	24.30	1.377	0.03	0.015	0.021
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	26140	1860	23.95	25.30	1.365	0.09	0.028	0.038
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	26140	1860	22.91	24.30	1.377	0.16	0.022	0.030
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	26140	1860	23.95	25.30	1.365	0.08	0.011	0.015
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	26140	1860	22.91	24.30	1.377	0.07	0.009	0.012
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Cheek	0mm	2/3	26865	831.5	24.76	25.50	1.186	-0.11	0.285	0.338
	LTE Band 26_Ant 0	15M	QPSK	36	0	Right Cheek	0mm	2/3	26865	831.5	23.62	24.50	1.225	0.06	0.220	0.269
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Tilted	0mm	2/3	26865	831.5	24.76	25.50	1.186	-0.08	0.148	0.175
	LTE Band 26_Ant 0	15M	QPSK	36	0	Right Tilted	0mm	2/3	26865	831.5	23.62	24.50	1.225	-0.11	0.117	0.143
	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Cheek	0mm	2/3	26865	831.5	24.76	25.50	1.186	0.02	0.397	0.471
	LTE Band 26_Ant 0	15M	QPSK	36	0	Left Cheek	0mm	2/3	26865	831.5	23.62	24.50	1.225	0.07	0.307	0.376
	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Tilted	0mm	2/3	26865	831.5	24.76	25.50	1.186	-0.11	0.200	0.237
	LTE Band 26_Ant 0	15M	QPSK	36	0	Left Tilted	0mm	2/3	26865	831.5	23.62	24.50	1.225	0.04	0.154	0.189
	LTE Band 5B_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	20600	844	23.52	24.50	1.253	0.03	0.167	0.209
	12	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Cheek	0mm	2	26865	831.5	22.10	23.70	1.445	-0.06	0.778
LTE Band 26_Ant 1		15M	QPSK	36	0	Right Cheek	0mm	2	26865	831.5	22.10	23.70	1.445	-0.1	0.772	1.116
LTE Band 26_Ant 1		15M	QPSK	75	0	Right Cheek	0mm	2	26865	831.5	22.11	23.70	1.442	0.03	0.761	1.097
LTE Band 26_Ant 1		15M	QPSK	1	0	Right Tilted	0mm	2	26865	831.5	22.10	23.70	1.445	-0.07	0.713	1.031
LTE Band 26_Ant 1		15M	QPSK	36	0	Right Tilted	0mm	2	26865	831.5	22.10	23.70	1.445	-0.02	0.683	0.987
LTE Band 26_Ant 1		15M	QPSK	75	0	Right Tilted	0mm	2	26865	831.5	22.11	23.70	1.442	0.09	0.668	0.963
LTE Band 26_Ant 1		15M	QPSK	1	0	Left Cheek	0mm	2	26865	831.5	22.10	23.70	1.445	-0.1	0.633	0.915
LTE Band 26_Ant 1		15M	QPSK	36	0	Left Cheek	0mm	2	26865	831.5	22.10	23.70	1.445	0.02	0.614	0.888
LTE Band 26_Ant 1		15M	QPSK	75	0	Left Cheek	0mm	2	26865	831.5	22.11	23.70	1.442	0.16	0.601	0.867
LTE Band 26_Ant 1		15M	QPSK	1	0	Left Tilted	0mm	2	26865	831.5	22.10	23.70	1.445	-0.13	0.600	0.867
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Tilted	0mm	2	26865	831.5	22.10	23.70	1.445	0.18	0.573	0.828
	LTE Band 26_Ant 1	15M	QPSK	75	0	Left Tilted	0mm	2	26865	831.5	22.11	23.70	1.442	0.08	0.549	0.792
	LTE Band 5B_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	2	20575	841.5	22.05	23.70	1.462	0.08	0.683	0.999
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Cheek	0mm	3	26865	831.5	22.10	22.50	1.096	-0.06	0.778	0.853
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Cheek	0mm	3	26865	831.5	22.10	22.50	1.096	-0.1	0.772	0.846
	LTE Band 26_Ant 1	15M	QPSK	75	0	Right Cheek	0mm	3	26865	831.5	22.11	22.50	1.094	0.03	0.761	0.833
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Tilted	0mm	3	26865	831.5	22.10	22.50	1.096	-0.07	0.713	0.782
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Tilted	0mm	3	26865	831.5	22.10	22.50	1.096	-0.02	0.683	0.749
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Cheek	0mm	3	26865	831.5	22.10	22.50	1.096	-0.1	0.633	0.694
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Cheek	0mm	3	26865	831.5	22.10	22.50	1.096	0.02	0.614	0.673
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Tilted	0mm	3	26865	831.5	22.10	22.50	1.096	-0.13	0.600	0.658
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Tilted	0mm	3	26865	831.5	22.10	22.50	1.096	0.18	0.573	0.628
	LTE Band 5B_Ant 1	10M	QPSK	1	0	Right Cheek	0mm	3	20575	841.5	22.05	22.50	1.109	0.08	0.683	0.758



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)
13	LTE Band 30_Ant 2	10M	QPSK	1	0	Right Cheek	0mm	2/3	27710	2310	22.28	22.90	1.153	-0.14	0.358	0.413
	LTE Band 30_Ant 2	10M	QPSK	25	0	Right Cheek	0mm	2/3	27710	2310	22.23	22.90	1.167	0	0.346	0.404
	LTE Band 30_Ant 2	10M	QPSK	1	0	Right Tilted	0mm	2/3	27710	2310	22.28	22.90	1.153	-0.08	0.127	0.146
	LTE Band 30_Ant 2	10M	QPSK	25	0	Right Tilted	0mm	2/3	27710	2310	22.23	22.90	1.167	0.06	0.130	0.152
	LTE Band 30_Ant 2	10M	QPSK	1	0	Left Cheek	0mm	2/3	27710	2310	22.28	22.90	1.153	0.04	0.198	0.228
	LTE Band 30_Ant 2	10M	QPSK	25	0	Left Cheek	0mm	2/3	27710	2310	22.23	22.90	1.167	0.03	0.203	0.237
	LTE Band 30_Ant 2	10M	QPSK	1	0	Left Tilted	0mm	2/3	27710	2310	22.28	22.90	1.153	0.17	0.160	0.185
	LTE Band 30_Ant 2	10M	QPSK	25	0	Left Tilted	0mm	2/3	27710	2310	22.23	22.90	1.167	-0.19	0.205	0.239
	LTE Band 30_Ant 0	10M	QPSK	1	0	Right Cheek	0mm	2/3	27710	2310	22.99	23.10	1.026	-0.03	0.076	0.078
	LTE Band 30_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	2/3	27710	2310	22.64	23.00	1.086	0.17	0.063	0.068
	LTE Band 30_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	2/3	27710	2310	22.99	23.10	1.026	0.18	0.059	0.061
	LTE Band 30_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	2/3	27710	2310	22.64	23.00	1.086	-0.15	0.048	0.052
	LTE Band 30_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	2/3	27710	2310	22.99	23.10	1.026	-0.01	0.140	0.144
	LTE Band 30_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	2/3	27710	2310	22.64	23.00	1.086	0.05	0.113	0.123
	LTE Band 30_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	2/3	27710	2310	22.99	23.10	1.026	-0.17	0.037	0.038
	LTE Band 30_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	2/3	27710	2310	22.64	23.00	1.086	0.12	0.030	0.033
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	132322	1745	24.63	25.50	1.222	0.02	0.383	0.468
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	132072	1720	24.57	25.50	1.239	0.01	0.304	0.377
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	132572	1770	24.60	25.50	1.230	-0.02	0.454	0.559
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	2/3	132322	1745	23.66	24.50	1.213	0.14	0.312	0.379
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2/3	132322	1745	24.63	25.50	1.222	0.04	0.188	0.230
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	2/3	132322	1745	23.66	24.50	1.213	0.02	0.155	0.188
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2/3	132322	1745	24.63	25.50	1.222	0.07	0.181	0.221
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	2/3	132322	1745	23.66	24.50	1.213	0.11	0.099	0.120
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2/3	132322	1745	24.63	25.50	1.222	-0.12	0.200	0.244
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	2/3	132322	1745	23.66	24.50	1.213	0.02	0.163	0.198
	LTE Band 66B_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	132322	1745	23.11	24.50	1.377	0.02	0.401	0.552
	LTE Band 66C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	132572	1770	23.87	24.50	1.156	0.06	0.458	0.529
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	132072	1720	23.88	24.80	1.236	0.07	0.061	0.075
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	132322	1745	23.81	24.80	1.256	0.06	0.038	0.048
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	132572	1770	23.58	24.80	1.324	0.08	0.042	0.056
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	132072	1720	22.88	23.80	1.236	0.01	0.050	0.062
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	132072	1720	23.88	24.80	1.236	0.15	0.039	0.048
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	132072	1720	22.88	23.80	1.236	0.04	0.030	0.037
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	132072	1720	23.88	24.80	1.236	-0.17	0.025	0.031
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	132072	1720	22.88	23.80	1.236	-0.01	0.017	0.021
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	132072	1720	23.88	24.80	1.236	-0.09	0.012	0.015
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	132072	1720	22.88	23.80	1.236	0.06	0.009	0.011
	LTE Band 66B_Ant 0	15M	QPSK	1	74	Right Cheek	0mm	2/3	132047	1717.5	23.07	24.00	1.239	-0.03	0.035	0.043
	LTE Band 66C_Ant 0	20M	QPSK	1	99	Right Cheek	0mm	2/3	132072	1720	23.19	24.00	1.205	0.02	0.034	0.041
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	132322	1745	17.91	19.20	1.346	0.05	0.538	0.724
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	132322	1745	17.78	19.20	1.387	-0.08	0.530	0.735
14	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	132322	1745	17.91	19.20	1.346	0.13	0.708	0.953
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	132072	1720	17.86	19.20	1.361	-0.04	0.654	0.890
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	132572	1770	17.85	19.20	1.365	0.08	0.665	0.907
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	132322	1745	17.78	19.20	1.387	-0.01	0.658	0.912
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	132072	1720	17.71	19.20	1.409	0.03	0.643	0.906
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	132572	1770	17.75	19.20	1.396	0.07	0.651	0.909
	LTE Band 66_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	2	132322	1745	17.70	19.20	1.413	0.05	0.658	0.929
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	2	132322	1745	17.91	19.20	1.346	0.02	0.247	0.332
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	2	132322	1745	17.78	19.20	1.387	-0.06	0.230	0.319
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	2	132322	1745	17.91	19.20	1.346	0.14	0.315	0.424



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LTE Band 66_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	2	132322	1745	17.78	19.20	1.387	0.01	0.299	0.415
LTE Band 66_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	3	132322	1745	17.91	18.00	1.021	0.05	0.538	0.549
LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	132322	1745	17.78	18.00	1.052	-0.08	0.530	0.558
LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	132322	1745	17.91	18.00	1.021	0.13	0.708	0.723
LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	132072	1720	17.86	18.00	1.033	-0.04	0.654	0.675
LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	132572	1770	17.85	18.00	1.035	0.08	0.665	0.688
LTE Band 66_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	132322	1745	17.78	18.00	1.052	-0.01	0.658	0.692
LTE Band 66_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	3	132322	1745	17.91	18.00	1.021	0.02	0.247	0.252
LTE Band 66_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	3	132322	1745	17.78	18.00	1.052	-0.06	0.230	0.242
LTE Band 66_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	3	132322	1745	17.91	18.00	1.021	0.14	0.315	0.322
LTE Band 66_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	3	132322	1745	17.78	18.00	1.052	0.01	0.299	0.315
LTE Band 66_Ant 5	20M	QPSK	1	0	Right Cheek	0mm	2	132072	1720	25.08	25.30	1.052	0.01	0.390	0.410
LTE Band 66_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	2	132072	1720	24.02	24.30	1.067	-0.07	0.252	0.269
LTE Band 66_Ant 5	20M	QPSK	1	0	Right Tilted	0mm	2	132072	1720	25.08	25.30	1.052	0.06	0.216	0.227
LTE Band 66_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	2	132072	1720	24.02	24.30	1.067	0.1	0.144	0.154
LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	132072	1720	25.08	25.30	1.052	-0.12	0.778	0.818
LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	132322	1745	25.02	25.30	1.067	0.03	0.757	0.807
LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	2	132572	1770	24.78	25.30	1.127	-0.05	0.831	0.937
LTE Band 66_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	2	132072	1720	24.02	24.30	1.067	-0.05	0.623	0.664
LTE Band 66_Ant 5	20M	QPSK	1	0	Left Tilted	0mm	2	132072	1720	25.08	25.30	1.052	-0.05	0.459	0.483
LTE Band 66_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	2	132072	1720	24.02	24.30	1.067	0.08	0.325	0.347
LTE Band 66_Ant 5	20M	QPSK	1	0	Right Cheek	0mm	3	132072	1720	25.08	25.10	1.005	0.01	0.390	0.392
LTE Band 66_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	3	132072	1720	24.02	24.30	1.067	-0.07	0.252	0.269
LTE Band 66_Ant 5	20M	QPSK	1	0	Right Tilted	0mm	3	132072	1720	25.08	25.10	1.005	0.06	0.216	0.217
LTE Band 66_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	3	132072	1720	24.02	24.30	1.067	0.1	0.144	0.154
LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	132072	1720	25.08	25.10	1.005	-0.12	0.778	0.782
LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	132322	1745	25.02	25.10	1.019	0.03	0.757	0.771
LTE Band 66_Ant 5	20M	QPSK	1	0	Left Cheek	0mm	3	132572	1770	24.78	25.10	1.076	-0.05	0.831	0.895
LTE Band 66_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	3	132072	1720	24.02	24.30	1.067	-0.05	0.623	0.664
LTE Band 66_Ant 5	20M	QPSK	1	0	Left Tilted	0mm	3	132072	1720	25.08	25.10	1.005	-0.05	0.459	0.461
LTE Band 66_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	3	132072	1720	24.02	24.30	1.067	0.08	0.325	0.347



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 71_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	133297	680.5	24.96	25.50	1.132	-0.17	0.126	0.143
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	133297	680.5	23.82	24.50	1.169	0.06	0.100	0.117
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	133297	680.5	24.96	25.50	1.132	-0.06	0.065	0.074
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	133297	680.5	23.82	24.50	1.169	0.08	0.050	0.058
	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	133297	680.5	24.96	25.50	1.132	-0.1	0.202	0.229
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	133297	680.5	23.82	24.50	1.169	-0.15	0.157	0.184
	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	133297	680.5	24.96	25.50	1.132	-0.08	0.090	0.102
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	133297	680.5	23.82	24.50	1.169	0.06	0.071	0.083
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	2	133297	680.5	23.37	25.00	1.455	-0.13	0.767	1.116
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	2	133297	680.5	23.32	24.50	1.312	-0.13	0.741	0.972
	LTE Band 71_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	2	133297	680.5	23.10	24.50	1.380	0.07	0.726	1.002
15	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	2	133297	680.5	23.37	25.00	1.455	0.08	0.802	1.167
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	2	133297	680.5	23.32	24.50	1.312	-0.09	0.785	1.030
	LTE Band 71_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	2	133297	680.5	23.10	24.50	1.380	0.07	0.710	0.980
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	2	133297	680.5	23.37	25.00	1.455	-0.02	0.687	1.000
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	2	133297	680.5	23.32	24.50	1.312	0.1	0.694	0.911
	LTE Band 71_Ant 1	20M	QPSK	100	0	Left Cheek	0mm	2	133297	680.5	23.10	24.50	1.380	0.04	0.671	0.926
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	2	133297	680.5	23.37	25.00	1.455	0.11	0.752	1.095
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	2	133297	680.5	23.32	24.50	1.312	0.19	0.720	0.945
	LTE Band 71_Ant 1	20M	QPSK	100	0	Left Tilted	0mm	2	133297	680.5	23.10	24.50	1.380	0.01	0.698	0.964
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Cheek	0mm	3	133297	680.5	23.37	23.80	1.104	-0.13	0.767	0.847
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	3	133297	680.5	23.32	23.80	1.117	-0.13	0.741	0.828
	LTE Band 71_Ant 1	20M	QPSK	100	0	Right Cheek	0mm	3	133297	680.5	23.10	23.80	1.175	0.07	0.726	0.853
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Tilted	0mm	3	133297	680.5	23.37	23.80	1.104	0.08	0.802	0.885
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	3	133297	680.5	23.32	23.80	1.117	-0.09	0.785	0.877
	LTE Band 71_Ant 1	20M	QPSK	100	0	Right Tilted	0mm	3	133297	680.5	23.10	23.80	1.175	0.07	0.710	0.834
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Cheek	0mm	3	133297	680.5	23.37	23.80	1.104	-0.02	0.687	0.759
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	3	133297	680.5	23.32	23.80	1.117	0.1	0.694	0.775
	LTE Band 71_Ant 1	20M	QPSK	100	0	Left Cheek	0mm	3	133297	680.5	23.10	23.80	1.175	0.04	0.671	0.788
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Tilted	0mm	3	133297	680.5	23.37	23.80	1.104	0.11	0.752	0.830
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	3	133297	680.5	23.32	23.80	1.117	0.19	0.720	0.804
	LTE Band 71_Ant 1	20M	QPSK	100	0	Left Tilted	0mm	3	133297	680.5	23.10	23.80	1.175	0.01	0.698	0.820



<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	24.60	25.50	1.230	62.9	1.006	-0.12	0.313	0.387
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	39750	2506	24.19	25.50	1.352	62.9	1.006	-0.05	0.267	0.363
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	40620	2593	24.32	25.50	1.312	62.9	1.006	0.18	0.271	0.358
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	41055	2636.5	24.45	25.50	1.274	62.9	1.006	-0.04	0.375	0.480
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	41490	2680	24.55	25.50	1.245	62.9	1.006	0	0.363	0.454
	LTE Band 41_Ant 2	20M	QPSK	50	50	Right Cheek	0mm	2/3	40185	2549.5	22.57	23.50	1.239	62.9	1.006	-0.03	0.227	0.283
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	2/3	40185	2549.5	24.60	25.50	1.230	62.9	1.006	0.19	0.088	0.109
	LTE Band 41_Ant 2	20M	QPSK	50	50	Right Tilted	0mm	2/3	40185	2549.5	22.57	23.50	1.239	62.9	1.006	0.09	0.054	0.067
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	2/3	40185	2549.5	24.60	25.50	1.230	62.9	1.006	0.03	0.171	0.212
	LTE Band 41_Ant 2	20M	QPSK	50	50	Left Cheek	0mm	2/3	40185	2549.5	22.57	23.50	1.239	62.9	1.006	-0.02	0.106	0.132
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	2/3	40185	2549.5	24.60	25.50	1.230	62.9	1.006	0.18	0.147	0.182
	LTE Band 41_Ant 2	20M	QPSK	50	50	Left Tilted	0mm	2/3	40185	2549.5	22.57	23.50	1.239	62.9	1.006	0.11	0.090	0.112
16	LTE Band 41_Ant 2_HPUE	20M	QPSK	1	0	Right Cheek	0mm	2/3	40185	2549.5	26.66	27.50	1.213	42.9	1.009	0.11	0.453	0.555
	LTE Band 41C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	2/3	40620	2593	23.57	24.50	1.239	62.9	1.006	0.03	0.303	0.378
	LTE Band 41_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	2/3	41490	2680	24.99	25.10	1.026	62.9	1.006	0.06	0.013	0.013
	LTE Band 41_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	2/3	41490	2680	22.93	24.10	1.309	62.9	1.006	-0.18	0.011	0.014
	LTE Band 41_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	2/3	41490	2680	24.99	25.10	1.026	62.9	1.006	-0.01	0.008	0.008
	LTE Band 41_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	2/3	41490	2680	22.93	24.10	1.309	62.9	1.006	0.01	0.007	0.009
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	41490	2680	24.99	25.10	1.026	62.9	1.006	0.02	0.075	0.077
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	39750	2506	24.29	25.10	1.205	62.9	1.006	-0.02	0.050	0.061
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	40185	2549.5	24.88	25.10	1.052	62.9	1.006	-0.07	0.038	0.040
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	40620	2593	24.67	25.10	1.104	62.9	1.006	0.02	0.040	0.044
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	41055	2636.5	24.38	25.10	1.180	62.9	1.006	0.08	0.039	0.046
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	2/3	41490	2680	22.93	24.10	1.309	62.9	1.006	-0.07	0.030	0.040
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	2/3	41490	2680	24.99	25.10	1.026	62.9	1.006	-0.15	0.012	0.012
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	2/3	41490	2680	22.93	24.10	1.309	62.9	1.006	0.12	0.008	0.011
	LTE Band 41_Ant 0_HPUE	20M	QPSK	1	0	Left Cheek	0mm	2/3	41490	2680	27.00	27.10	1.023	42.9	1.009	-0.14	0.085	0.088
	LTE Band 41C_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	2/3	40620	2593	22.81	24.00	1.315	62.9	1.006	0.03	0.044	0.058
	LTE Band 48_Ant 6	20M	QPSK	1	0	Right Cheek	0mm	2/3	55830	3609	24.59	24.70	1.026	62.9	1.006	0.05	0.063	0.065
	LTE Band 48_Ant 6	20M	QPSK	50	0	Right Cheek	0mm	2/3	56150	3641	23.79	24.50	1.178	62.9	1.006	0.05	0.046	0.054
	LTE Band 48_Ant 6	20M	QPSK	1	0	Right Tilted	0mm	2/3	55830	3609	24.59	24.70	1.026	62.9	1.006	0.06	0.079	0.082
	LTE Band 48_Ant 6	20M	QPSK	50	0	Right Tilted	0mm	2/3	56150	3641	23.79	24.50	1.178	62.9	1.006	0.05	0.043	0.051
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	2/3	55830	3609	24.59	24.70	1.026	62.9	1.006	-0.13	0.072	0.074
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	2/3	55340	3560	24.30	24.70	1.096	62.9	1.006	0.15	0.054	0.060
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	2/3	56150	3641	24.58	24.70	1.028	62.9	1.006	-0.06	0.064	0.066
17	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	2/3	56640	3690	24.42	24.70	1.067	62.9	1.006	-0.04	0.095	0.102
	LTE Band 48_Ant 6	20M	QPSK	50	0	Left Cheek	0mm	2/3	56150	3641	23.79	24.50	1.178	62.9	1.006	0.18	0.046	0.054
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Tilted	0mm	2/3	55830	3609	24.59	24.70	1.026	62.9	1.006	-0.17	0.048	0.050
	LTE Band 48_Ant 6	20M	QPSK	50	0	Left Tilted	0mm	2/3	56150	3641	23.79	24.50	1.178	62.9	1.006	-0.01	0.030	0.036
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Cheek	0mm	2/3	56640	3690	23.46	24.20	1.186	62.9	1.006	-0.1	0.082	0.098
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Cheek	0mm	2/3	55340	3560	22.96	24.20	1.330	62.9	1.006	-0.09	0.059	0.079
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Cheek	0mm	2/3	55830	3609	23.17	24.20	1.268	62.9	1.006	0.01	0.064	0.082
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Cheek	0mm	2/3	56150	3641	23.36	24.20	1.213	62.9	1.006	0.16	0.058	0.071
	LTE Band 48_Ant 7	20M	QPSK	50	0	Right Cheek	0mm	2/3	56640	3690	22.55	23.20	1.161	62.9	1.006	0.14	0.058	0.068
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Tilted	0mm	2/3	56640	3690	23.46	24.20	1.186	62.9	1.006	0.08	0.065	0.078
	LTE Band 48_Ant 7	20M	QPSK	50	0	Right Tilted	0mm	2/3	56640	3690	22.55	23.20	1.161	62.9	1.006	0.15	0.046	0.054
	LTE Band 48_Ant 7	20M	QPSK	1	0	Left Cheek	0mm	2/3	56640	3690	23.46	24.20	1.186	62.9	1.006	0.19	0.054	0.064
	LTE Band 48_Ant 7	20M	QPSK	50	0	Left Cheek	0mm	2/3	56640	3690	22.55	23.20	1.161	62.9	1.006	0.07	0.038	0.044
	LTE Band 48_Ant 7	20M	QPSK	1	0	Left Tilted	0mm	2/3	56640	3690	23.46	24.20	1.186	62.9	1.006	0.18	0.047	0.056
	LTE Band 48_Ant 7	20M	QPSK	50	0	Left Tilted	0mm	2/3	56640	3690	22.55	23.20	1.161	62.9	1.006	0.1	0.032	0.037



<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 n2_Ant 1	20M	BPSK	1	1	Right Cheek	0mm	2	376000	1880	15.95	17.50	1.429	-0.1	0.719	1.027
	FR1 n2_Ant 1	20M	BPSK	1	1	Right Cheek	0mm	2	372000	1860	15.93	17.50	1.435	0.04	0.692	0.993
	FR1 n2_Ant 1	20M	BPSK	1	1	Right Cheek	0mm	2	380000	1900	15.94	17.50	1.432	0.09	0.637	0.912
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	2	376000	1880	15.88	17.50	1.452	-0.07	0.697	1.012
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	2	372000	1860	15.82	17.50	1.472	0.18	0.662	0.975
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	2	380000	1900	15.87	17.50	1.455	0.06	0.601	0.875
	FR1 n2_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	2	376000	1880	15.94	17.50	1.432	0.04	0.681	0.975
	FR1 n2_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	2	376000	1880	15.95	17.50	1.429	-0.11	0.791	1.130
18	FR1 n2_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	2	372000	1860	15.93	17.50	1.435	-0.09	0.819	1.176
	FR1 n2_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	2	380000	1900	15.94	17.50	1.432	-0.08	0.692	0.991
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	2	376000	1880	15.88	17.50	1.452	-0.08	0.691	1.003
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	2	372000	1860	15.82	17.50	1.472	0.04	0.679	1.000
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	2	380000	1900	15.87	17.50	1.455	0.11	0.613	0.892
	FR1 n2_Ant 1	20M	BPSK	100	0	Right Tilted	0mm	2	376000	1880	15.94	17.50	1.432	-0.01	0.750	1.074
	FR1 n2_Ant 1	20M	BPSK	1	1	Left Cheek	0mm	2	376000	1880	15.95	17.50	1.429	-0.04	0.358	0.512
	FR1 n2_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	2	376000	1880	15.88	17.50	1.452	-0.09	0.349	0.507
	FR1 n2_Ant 1	20M	BPSK	1	1	Left Tilted	0mm	2	376000	1880	15.95	17.50	1.429	-0.03	0.403	0.576
	FR1 n2_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	2	376000	1880	15.88	17.50	1.452	-0.1	0.383	0.556
	FR1 n2_Ant 1	20M	BPSK	1	1	Right Cheek	0mm	3	376000	1880	15.95	16.30	1.084	-0.1	0.719	0.779
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	3	376000	1880	15.88	16.30	1.102	-0.07	0.697	0.768
	FR1 n2_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	3	376000	1880	15.95	16.30	1.084	-0.11	0.791	0.857
	FR1 n2_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	3	372000	1860	15.93	16.30	1.089	-0.09	0.819	0.892
	FR1 n2_Ant 1	20M	BPSK	1	1	Right Tilted	0mm	3	380000	1900	15.94	16.30	1.086	-0.08	0.692	0.752
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	3	376000	1880	15.88	16.30	1.102	-0.08	0.691	0.761
	FR1 n2_Ant 1	20M	BPSK	100	0	Right Tilted	0mm	3	376000	1880	15.94	16.30	1.086	-0.01	0.750	0.815
	FR1 n2_Ant 1	20M	BPSK	1	1	Left Cheek	0mm	3	376000	1880	15.95	16.30	1.084	-0.04	0.358	0.388
	FR1 n2_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	3	376000	1880	15.88	16.30	1.102	-0.09	0.349	0.384
	FR1 n2_Ant 1	20M	BPSK	1	1	Left Tilted	0mm	3	376000	1880	15.95	16.30	1.084	-0.03	0.403	0.437
	FR1 n2_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	3	376000	1880	15.88	16.30	1.102	-0.1	0.383	0.422
	FR1 n2_Ant 5	20M	BPSK	1	1	Right Cheek	0mm	2	376000	1880	23.44	25.30	1.535	0.05	0.538	0.826
	FR1 n2_Ant 5	20M	BPSK	50	56	Right Cheek	0mm	2	376000	1880	23.38	24.80	1.387	-0.1	0.465	0.645
	FR1 n2_Ant 5	20M	BPSK	100	0	Right Cheek	0mm	2	376000	1880	23.22	24.80	1.439	0.03	0.426	0.613
	FR1 n2_Ant 5	20M	BPSK	1	1	Right Tilted	0mm	2	376000	1880	23.44	25.30	1.535	0.06	0.096	0.147
	FR1 n2_Ant 5	20M	BPSK	50	56	Right Tilted	0mm	2	376000	1880	23.38	24.80	1.387	0.02	0.075	0.104
	FR1 n2_Ant 5	20M	BPSK	1	1	Left Cheek	0mm	2	376000	1880	23.44	25.30	1.535	-0.11	0.715	1.097
	FR1 n2_Ant 5	20M	BPSK	1	1	Left Cheek	0mm	2	372000	1860	23.42	25.30	1.542	0.1	0.619	0.954
	FR1 n2_Ant 5	20M	BPSK	1	1	Left Cheek	0mm	2	380000	1900	23.41	25.30	1.545	0.11	0.640	0.989
	FR1 n2_Ant 5	20M	BPSK	50	56	Left Cheek	0mm	2	376000	1880	23.38	24.80	1.387	0.16	0.615	0.853
	FR1 n2_Ant 5	20M	BPSK	50	56	Left Cheek	0mm	2	372000	1860	23.30	24.80	1.413	-0.06	0.588	0.831
	FR1 n2_Ant 5	20M	BPSK	50	56	Left Cheek	0mm	2	380000	1900	23.30	24.80	1.413	0.04	0.579	0.818
	FR1 n2_Ant 5	20M	BPSK	100	0	Left Cheek	0mm	2	376000	1880	23.22	24.80	1.439	-0.12	0.625	0.899
	FR1 n2_Ant 5	20M	BPSK	1	1	Left Tilted	0mm	2	376000	1880	23.44	25.30	1.535	-0.12	0.118	0.181
	FR1 n2_Ant 5	20M	BPSK	50	56	Left Tilted	0mm	2	376000	1880	23.38	24.80	1.387	0	0.088	0.122
	FR1 n2_Ant 5	20M	BPSK	1	1	Right Cheek	0mm	3	376000	1880	23.44	24.30	1.219	0.05	0.538	0.656
	FR1 n2_Ant 5	20M	BPSK	50	56	Right Cheek	0mm	3	376000	1880	23.38	24.30	1.236	-0.1	0.465	0.575
	FR1 n2_Ant 5	20M	BPSK	1	1	Right Tilted	0mm	3	376000	1880	23.44	24.30	1.219	0.06	0.096	0.117
	FR1 n2_Ant 5	20M	BPSK	50	56	Right Tilted	0mm	3	376000	1880	23.38	24.30	1.236	0.02	0.075	0.093
	FR1 n2_Ant 5	20M	BPSK	1	1	Left Cheek	0mm	3	376000	1880	23.44	24.30	1.219	-0.11	0.715	0.872
	FR1 n2_Ant 5	20M	BPSK	1	1	Left Cheek	0mm	3	372000	1860	23.42	24.30	1.225	0.1	0.619	0.758
	FR1 n2_Ant 5	20M	BPSK	1	1	Left Cheek	0mm	3	380000	1900	23.41	24.30	1.227	0.11	0.640	0.786
	FR1 n2_Ant 5	20M	BPSK	50	56	Left Cheek	0mm	3	376000	1880	23.38	24.30	1.236	0.16	0.615	0.760
	FR1 n2_Ant 5	20M	BPSK	100	0	Left Cheek	0mm	3	376000	1880	23.22	24.30	1.282	-0.12	0.625	0.801
	FR1 n2_Ant 5	20M	BPSK	1	1	Left Tilted	0mm	3	376000	1880	23.44	24.30	1.219	-0.12	0.118	0.144
	FR1 n2_Ant 5	20M	BPSK	50	56	Left Tilted	0mm	3	376000	1880	23.38	24.30	1.236	0	0.088	0.109



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	53	Right Cheek	0mm	2/3	167300	836.5	24.67	25.50	1.211	-0.11	0.259	0.314
	FR1 n5_Ant 0	20M	BPSK	50	28	Right Cheek	0mm	2/3	167300	836.5	24.48	25.50	1.265	0.06	0.241	0.305
	FR1 n5_Ant 0	20M	BPSK	1	53	Right Tilted	0mm	2/3	167300	836.5	24.67	25.50	1.211	-0.07	0.106	0.128
	FR1 n5_Ant 0	20M	BPSK	50	28	Right Tilted	0mm	2/3	167300	836.5	24.48	25.50	1.265	0.01	0.094	0.119
	FR1 n5_Ant 0	20M	BPSK	1	53	Left Cheek	0mm	2/3	167300	836.5	24.67	25.50	1.211	-0.01	0.154	0.186
	FR1 n5_Ant 0	20M	BPSK	50	28	Left Cheek	0mm	2/3	167300	836.5	24.48	25.50	1.265	-0.14	0.139	0.176
	FR1 n5_Ant 0	20M	BPSK	1	53	Left Tilted	0mm	2/3	167300	836.5	24.67	25.50	1.211	0.05	0.122	0.148
	FR1 n5_Ant 0	20M	BPSK	50	28	Left Tilted	0mm	2/3	167300	836.5	24.48	25.50	1.265	-0.09	0.108	0.137
19	FR1 n5_Ant 1	20M	BPSK	1	53	Right Cheek	0mm	2	167300	836.5	23.28	25.00	1.486	-0.11	0.791	1.175
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	2	167300	836.5	23.16	25.00	1.528	-0.19	0.612	0.935
	FR1 n5_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	2	167300	836.5	22.62	24.50	1.542	0.12	0.602	0.928
	FR1 n5_Ant 1	20M	BPSK	1	53	Right Tilted	0mm	2	167300	836.5	23.28	25.00	1.486	0.18	0.693	1.030
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	2	167300	836.5	23.16	25.00	1.528	0.12	0.512	0.782
	FR1 n5_Ant 1	20M	BPSK	100	0	Right Tilted	0mm	2	167300	836.5	22.62	24.50	1.542	0.14	0.488	0.752
	FR1 n5_Ant 1	20M	BPSK	1	53	Left Cheek	0mm	2	167300	836.5	23.28	25.00	1.486	-0.13	0.510	0.758
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	2	167300	836.5	23.16	25.00	1.528	0.14	0.372	0.568
	FR1 n5_Ant 1	20M	BPSK	1	53	Left Tilted	0mm	2	167300	836.5	23.28	25.00	1.486	-0.13	0.474	0.704
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	2	167300	836.5	23.16	25.00	1.528	0.12	0.322	0.492
	FR1 n5_Ant 1	20M	BPSK	1	53	Right Cheek	0mm	3	167300	836.5	23.28	23.80	1.127	-0.11	0.791	0.892
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	3	167300	836.5	23.16	23.80	1.159	-0.19	0.612	0.709
	FR1 n5_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	3	167300	836.5	22.62	23.80	1.312	0.12	0.602	0.790
	FR1 n5_Ant 1	20M	BPSK	1	53	Right Tilted	0mm	3	167300	836.5	23.28	23.80	1.127	0.18	0.693	0.781
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	3	167300	836.5	23.16	23.80	1.159	0.12	0.512	0.593
	FR1 n5_Ant 1	20M	BPSK	1	53	Left Cheek	0mm	3	167300	836.5	23.28	23.80	1.127	-0.13	0.510	0.575
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	3	167300	836.5	23.16	23.80	1.159	0.14	0.372	0.431
	FR1 n5_Ant 1	20M	BPSK	1	53	Left Tilted	0mm	3	167300	836.5	23.28	23.80	1.127	-0.13	0.474	0.534
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	3	167300	836.5	23.16	23.80	1.159	0.12	0.322	0.373
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Cheek	0mm	2	507000	2535	25.06	25.50	1.107	0.09	0.799	0.884
20	FR1 n7_Ant 2	50M	BPSK	135	68	Right Cheek	0mm	2	507000	2535	24.69	25.50	1.205	-0.19	0.802	0.966
	FR1 n7_Ant 2	50M	BPSK	270	0	Right Cheek	0mm	2	507000	2535	24.35	25.00	1.161	0.09	0.725	0.842
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Tilted	0mm	2	507000	2535	25.06	25.50	1.107	-0.12	0.216	0.239
	FR1 n7_Ant 2	50M	BPSK	135	68	Right Tilted	0mm	2	507000	2535	24.69	25.50	1.205	0.1	0.295	0.355
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Cheek	0mm	2	507000	2535	25.06	25.50	1.107	-0.08	0.466	0.516
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Cheek	0mm	2	507000	2535	24.69	25.50	1.205	0.13	0.414	0.499
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Tilted	0mm	2	507000	2535	25.06	25.50	1.107	0.07	0.298	0.330
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Tilted	0mm	2	507000	2535	24.69	25.50	1.205	0.07	0.208	0.251
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Cheek	0mm	3	507000	2535	25.06	25.10	1.009	0.09	0.799	0.806
	FR1 n7_Ant 2	50M	BPSK	135	68	Right Cheek	0mm	3	507000	2535	24.69	25.10	1.099	-0.19	0.802	0.881
	FR1 n7_Ant 2	50M	BPSK	270	0	Right Cheek	0mm	3	507000	2535	24.35	25.00	1.161	0.09	0.725	0.842
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Tilted	0mm	3	507000	2535	25.06	25.10	1.009	-0.12	0.216	0.218
	FR1 n7_Ant 2	50M	BPSK	135	68	Right Tilted	0mm	3	507000	2535	24.69	25.10	1.099	0.1	0.295	0.324
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Cheek	0mm	3	507000	2535	25.06	25.10	1.009	-0.08	0.466	0.470
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Cheek	0mm	3	507000	2535	24.69	25.10	1.099	0.13	0.414	0.455
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Tilted	0mm	3	507000	2535	25.06	25.10	1.009	0.07	0.298	0.301
	FR1 n7_Ant 2	50M	BPSK	135	68	Left Tilted	0mm	3	507000	2535	24.69	25.10	1.099	0.07	0.208	0.229
	FR1 n7_Ant 0	50M	BPSK	1	1	Right Cheek	0mm	2/3	507000	2535	24.04	25.10	1.276	-0.16	0.048	0.061
	FR1 n7_Ant 0	50M	BPSK	135	68	Right Cheek	0mm	2/3	507000	2535	23.96	25.10	1.300	0.04	0.045	0.059
	FR1 n7_Ant 0	50M	BPSK	1	1	Right Tilted	0mm	2/3	507000	2535	24.04	25.10	1.276	-0.04	0.038	0.049
	FR1 n7_Ant 0	50M	BPSK	135	68	Right Tilted	0mm	2/3	507000	2535	23.96	25.10	1.300	-0.17	0.039	0.051
	FR1 n7_Ant 0	50M	BPSK	1	1	Left Cheek	0mm	2/3	507000	2535	24.04	25.10	1.276	0.04	0.205	0.262
	FR1 n7_Ant 0	50M	BPSK	135	68	Left Cheek	0mm	2/3	507000	2535	23.96	25.10	1.300	-0.08	0.135	0.176
	FR1 n7_Ant 0	50M	BPSK	1	1	Left Tilted	0mm	2/3	507000	2535	24.04	25.10	1.276	0.02	0.049	0.063
	FR1 n7_Ant 0	50M	BPSK	135	68	Left Tilted	0mm	2/3	507000	2535	23.96	25.10	1.300	0.01	0.001	0.001



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	24.57	25.50	1.239	-0.12	0.119	0.147
	FR1 n12_Ant 0	15M	BPSK	36	22	Right Cheek	0mm	2/3	141500	707.5	24.51	25.50	1.256	-0.07	0.094	0.118
	FR1 n12_Ant 0	15M	BPSK	1	1	Right Tilted	0mm	2/3	141500	707.5	24.57	25.50	1.239	0.18	0.054	0.067
	FR1 n12_Ant 0	15M	BPSK	36	22	Right Tilted	0mm	2/3	141500	707.5	24.51	25.50	1.256	0.06	0.050	0.063
	FR1 n12_Ant 0	15M	BPSK	1	1	Left Cheek	0mm	2/3	141500	707.5	24.57	25.50	1.239	-0.16	0.154	0.191
	FR1 n12_Ant 0	15M	BPSK	36	22	Left Cheek	0mm	2/3	141500	707.5	24.51	25.50	1.256	0.11	0.148	0.186
	FR1 n12_Ant 0	15M	BPSK	1	1	Left Tilted	0mm	2/3	141500	707.5	24.57	25.50	1.239	-0.18	0.059	0.073
	FR1 n12_Ant 0	15M	BPSK	36	22	Left Tilted	0mm	2/3	141500	707.5	24.51	25.50	1.256	0.19	0.052	0.065
21	FR1 n12_Ant 1	15M	BPSK	1	1	Right Cheek	0mm	2/3	141500	707.5	24.68	25.50	1.208	-0.11	0.640	0.773
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Cheek	0mm	2/3	141500	707.5	24.55	25.50	1.245	-0.04	0.613	0.763
	FR1 n12_Ant 1	15M	BPSK	1	1	Right Tilted	0mm	2/3	141500	707.5	24.68	25.50	1.208	-0.03	0.632	0.763
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Tilted	0mm	2/3	141500	707.5	24.55	25.50	1.245	-0.07	0.615	0.765
	FR1 n12_Ant 1	15M	BPSK	1	1	Left Cheek	0mm	2/3	141500	707.5	24.68	25.50	1.208	0.19	0.434	0.524
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Cheek	0mm	2/3	141500	707.5	24.55	25.50	1.245	0.07	0.422	0.525
	FR1 n12_Ant 1	15M	BPSK	1	1	Left Tilted	0mm	2/3	141500	707.5	24.68	25.50	1.208	0.19	0.467	0.564
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Tilted	0mm	2/3	141500	707.5	24.55	25.50	1.245	-0.14	0.454	0.565
	FR1 n14_Ant 0	10M	BPSK	1	1	Right Cheek	0mm	2/3	158600	793	25.10	25.50	1.096	0.01	0.099	0.109
	FR1 n14_Ant 0	10M	BPSK	25	14	Right Cheek	0mm	2/3	158600	793	24.95	25.50	1.135	-0.06	0.087	0.099
	FR1 n14_Ant 0	10M	BPSK	1	1	Right Tilted	0mm	2/3	158600	793	25.10	25.50	1.096	-0.17	0.074	0.081
	FR1 n14_Ant 0	10M	BPSK	25	14	Right Tilted	0mm	2/3	158600	793	24.95	25.50	1.135	-0.15	0.066	0.075
	FR1 n14_Ant 0	10M	BPSK	1	1	Left Cheek	0mm	2/3	158600	793	25.10	25.50	1.096	-0.08	0.168	0.184
	FR1 n14_Ant 0	10M	BPSK	25	14	Left Cheek	0mm	2/3	158600	793	24.95	25.50	1.135	-0.12	0.151	0.171
	FR1 n14_Ant 0	10M	BPSK	1	1	Left Tilted	0mm	2/3	158600	793	25.10	25.50	1.096	-0.1	0.099	0.109
	FR1 n14_Ant 0	10M	BPSK	25	14	Left Tilted	0mm	2/3	158600	793	24.95	25.50	1.135	-0.05	0.084	0.095
22	FR1 n14_Ant 1	10M	BPSK	1	1	Right Cheek	0mm	2	158600	793	22.97	24.50	1.422	-0.17	0.600	0.853
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Cheek	0mm	2	158600	793	22.84	24.50	1.466	0.11	0.574	0.841
	FR1 n14_Ant 1	10M	BPSK	50	0	Right Cheek	0mm	2	158600	793	22.73	24.00	1.340	0.04	0.541	0.725
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Tilted	0mm	2	158600	793	22.97	24.50	1.422	0.13	0.550	0.782
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Tilted	0mm	2	158600	793	22.84	24.50	1.466	0.07	0.529	0.775
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Cheek	0mm	2	158600	793	22.97	24.50	1.422	0.11	0.488	0.694
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Cheek	0mm	2	158600	793	22.84	24.50	1.466	-0.05	0.475	0.696
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Tilted	0mm	2	158600	793	22.97	24.50	1.422	-0.18	0.462	0.657
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Tilted	0mm	2	158600	793	22.84	24.50	1.466	0.05	0.443	0.649
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Cheek	0mm	3	158600	793	22.97	23.30	1.079	-0.17	0.600	0.647
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Cheek	0mm	3	158600	793	22.84	23.30	1.112	0.11	0.574	0.638
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Tilted	0mm	3	158600	793	22.97	23.30	1.079	0.13	0.550	0.593
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Tilted	0mm	3	158600	793	22.84	23.30	1.112	0.07	0.529	0.588
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Cheek	0mm	3	158600	793	22.97	23.30	1.079	0.11	0.488	0.527
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Cheek	0mm	3	158600	793	22.84	23.30	1.112	-0.05	0.475	0.528
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Tilted	0mm	3	158600	793	22.97	23.30	1.079	-0.18	0.462	0.498
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Tilted	0mm	3	158600	793	22.84	23.30	1.112	0.05	0.443	0.492



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)
23	FR1 n25_Ant 2	40M	BPSK	1	108	Right Cheek	0mm	2/3	376500	1882.5	24.99	25.50	1.125	0.06	0.531	0.597
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Cheek	0mm	2/3	376500	1882.5	24.85	25.50	1.161	0.05	0.499	0.580
	FR1 n25_Ant 2	40M	BPSK	1	108	Right Tilted	0mm	2/3	376500	1882.5	24.99	25.50	1.125	0.18	0.290	0.326
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Tilted	0mm	2/3	376500	1882.5	24.85	25.50	1.161	-0.08	0.289	0.336
	FR1 n25_Ant 2	40M	BPSK	1	108	Left Cheek	0mm	2/3	376500	1882.5	24.99	25.50	1.125	0.02	0.290	0.326
	FR1 n25_Ant 2	40M	BPSK	108	54	Left Cheek	0mm	2/3	376500	1882.5	24.85	25.50	1.161	-0.01	0.281	0.326
	FR1 n25_Ant 2	40M	BPSK	1	108	Left Tilted	0mm	2/3	376500	1882.5	24.99	25.50	1.125	-0.03	0.269	0.303
	FR1 n25_Ant 2	40M	BPSK	108	54	Left Tilted	0mm	2/3	376500	1882.5	24.85	25.50	1.161	0.09	0.260	0.302
	FR1 n25_Ant 0	40M	BPSK	1	108	Right Cheek	0mm	2/3	376500	1882.5	24.37	25.30	1.239	-0.01	0.038	0.047
	FR1 n25_Ant 0	40M	BPSK	108	54	Right Cheek	0mm	2/3	376500	1882.5	24.12	25.30	1.312	-0.14	0.041	0.054
	FR1 n25_Ant 0	40M	BPSK	1	108	Right Tilted	0mm	2/3	376500	1882.5	24.37	25.30	1.239	-0.18	0.041	0.051
	FR1 n25_Ant 0	40M	BPSK	108	54	Right Tilted	0mm	2/3	376500	1882.5	24.12	25.30	1.312	0.01	0.063	0.083
	FR1 n25_Ant 0	40M	BPSK	1	108	Left Cheek	0mm	2/3	376500	1882.5	24.37	25.30	1.239	-0.1	0.088	0.109
	FR1 n25_Ant 0	40M	BPSK	108	54	Left Cheek	0mm	2/3	376500	1882.5	24.12	25.30	1.312	-0.07	0.120	0.157
	FR1 n25_Ant 0	40M	BPSK	1	108	Left Tilted	0mm	2/3	376500	1882.5	24.37	25.30	1.239	-0.11	0.036	0.045
	FR1 n25_Ant 0	40M	BPSK	108	54	Left Tilted	0mm	2/3	376500	1882.5	24.12	25.30	1.312	-0.04	0.039	0.051
24	FR1 n30_Ant 2	10M	BPSK	1	26	Right Cheek	0mm	2/3	462000	2310	22.32	22.90	1.143	-0.17	0.500	0.571
	FR1 n30_Ant 2	10M	BPSK	25	14	Right Cheek	0mm	2/3	462000	2310	22.26	22.90	1.159	0	0.486	0.563
	FR1 n30_Ant 2	10M	BPSK	1	26	Right Tilted	0mm	2/3	462000	2310	22.32	22.90	1.143	0.04	0.169	0.193
	FR1 n30_Ant 2	10M	BPSK	25	14	Right Tilted	0mm	2/3	462000	2310	22.26	22.90	1.159	0.15	0.158	0.183
	FR1 n30_Ant 2	10M	BPSK	1	26	Left Cheek	0mm	2/3	462000	2310	22.32	22.90	1.143	0.09	0.265	0.303
	FR1 n30_Ant 2	10M	BPSK	25	14	Left Cheek	0mm	2/3	462000	2310	22.26	22.90	1.159	0.18	0.247	0.286
	FR1 n30_Ant 2	10M	BPSK	1	26	Left Tilted	0mm	2/3	462000	2310	22.32	22.90	1.143	0.1	0.258	0.295
	FR1 n30_Ant 2	10M	BPSK	25	14	Left Tilted	0mm	2/3	462000	2310	22.26	22.90	1.159	-0.13	0.244	0.283
	FR1 n30_Ant 0	10M	BPSK	1	26	Right Cheek	0mm	2/3	462000	2310	22.80	23.10	1.072	0.03	0.018	0.019
	FR1 n30_Ant 0	10M	BPSK	25	14	Right Cheek	0mm	2/3	462000	2310	22.69	23.10	1.099	-0.19	0.022	0.024
	FR1 n30_Ant 0	10M	BPSK	1	26	Right Tilted	0mm	2/3	462000	2310	22.80	23.10	1.072	0.19	0.004	0.004
	FR1 n30_Ant 0	10M	BPSK	25	14	Right Tilted	0mm	2/3	462000	2310	22.69	23.10	1.099	-0.01	0.007	0.008
	FR1 n30_Ant 0	10M	BPSK	1	26	Left Cheek	0mm	2/3	462000	2310	22.80	23.10	1.072	0.18	0.085	0.091
	FR1 n30_Ant 0	10M	BPSK	25	14	Left Cheek	0mm	2/3	462000	2310	22.69	23.10	1.099	-0.07	0.088	0.097
	FR1 n30_Ant 0	10M	BPSK	1	26	Left Tilted	0mm	2/3	462000	2310	22.80	23.10	1.072	0.11	0.012	0.013
	FR1 n30_Ant 0	10M	BPSK	25	14	Left Tilted	0mm	2/3	462000	2310	22.69	23.10	1.099	-0.07	0.014	0.015



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	Right Cheek	0mm	2/3	518598	2592.99	24.63	25.50	1.222	-0.08	0.636	0.777
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Cheek	0mm	2/3	518598	2592.99	23.88	25.50	1.452	-0.09	0.554	0.804
	FR1 n41_Ant 2	100M	BPSK	270	0	Right Cheek	0mm	2/3	518598	2592.99	23.92	25.00	1.282	0.01	0.540	0.692
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Tilted	0mm	2/3	518598	2592.99	24.63	25.50	1.222	0.11	0.170	0.208
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Tilted	0mm	2/3	518598	2592.99	23.88	25.50	1.452	-0.12	0.148	0.215
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Cheek	0mm	2/3	518598	2592.99	24.63	25.50	1.222	0.01	0.313	0.382
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Cheek	0mm	2/3	518598	2592.99	23.88	25.50	1.452	0.19	0.271	0.394
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Tilted	0mm	2/3	518598	2592.99	24.63	25.50	1.222	-0.15	0.252	0.308
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Tilted	0mm	2/3	518598	2592.99	23.88	25.50	1.452	-0.08	0.234	0.340
	FR1 n41_Ant 0	100M	BPSK	1	1	Right Cheek	0mm	2/3	518598	2592.99	23.30	24.50	1.318	-0.12	0.015	0.020
	FR1 n41_Ant 0	100M	BPSK	135	0	Right Cheek	0mm	2/3	518598	2592.99	22.43	24.00	1.435	-0.11	0.013	0.019
	FR1 n41_Ant 0	100M	BPSK	1	1	Right Tilted	0mm	2/3	518598	2592.99	23.30	24.50	1.318	-0.11	0.004	0.005
	FR1 n41_Ant 0	100M	BPSK	135	0	Right Tilted	0mm	2/3	518598	2592.99	22.43	24.00	1.435	0.15	0.003	0.004
	FR1 n41_Ant 0	100M	BPSK	1	1	Left Cheek	0mm	2/3	518598	2592.99	23.30	24.50	1.318	-0.01	0.072	0.095
	FR1 n41_Ant 0	100M	BPSK	135	0	Left Cheek	0mm	2/3	518598	2592.99	22.43	24.00	1.435	0.08	0.049	0.070
	FR1 n41_Ant 0	100M	BPSK	1	1	Left Tilted	0mm	2/3	518598	2592.99	23.30	24.50	1.318	-0.01	0.008	0.011
	FR1 n41_Ant 0	100M	BPSK	135	0	Left Tilted	0mm	2/3	518598	2592.99	22.43	24.00	1.435	0.12	0.006	0.009
	FR1 n41_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	2	518598	2592.99	17.37	18.70	1.358	-0.02	0.521	0.708
	FR1 n41_Ant 1	100M	BPSK	135	0	Right Cheek	0mm	2	518598	2592.99	16.90	18.70	1.514	-0.15	0.536	0.811
	FR1 n41_Ant 1	100M	BPSK	270	0	Right Cheek	0mm	2	518598	2592.99	16.81	18.70	1.545	0.01	0.488	0.754
	FR1 n41_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	2	518598	2592.99	17.37	18.70	1.358	-0.02	0.732	0.994
	FR1 n41_Ant 1	100M	BPSK	135	0	Right Tilted	0mm	2	518598	2592.99	16.90	18.70	1.514	-0.12	0.614	0.929
	FR1 n41_Ant 1	100M	BPSK	270	0	Right Tilted	0mm	2	518598	2592.99	16.81	18.70	1.545	0.16	0.588	0.909
	FR1 n41_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	2	518598	2592.99	17.37	18.70	1.358	-0.1	0.254	0.345
	FR1 n41_Ant 1	100M	BPSK	135	0	Left Cheek	0mm	2	518598	2592.99	16.90	18.70	1.514	-0.18	0.243	0.368
	FR1 n41_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	2	518598	2592.99	17.37	18.70	1.358	-0.17	0.286	0.388
	FR1 n41_Ant 1	100M	BPSK	135	0	Left Tilted	0mm	2	518598	2592.99	16.90	18.70	1.514	0	0.308	0.466
	FR1 n41_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	3	518598	2592.99	17.37	17.50	1.030	-0.02	0.521	0.537
	FR1 n41_Ant 1	100M	BPSK	135	0	Right Cheek	0mm	3	518598	2592.99	16.90	17.50	1.148	-0.15	0.536	0.615
	FR1 n41_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	3	518598	2592.99	17.37	17.50	1.030	-0.02	0.732	0.754
	FR1 n41_Ant 1	100M	BPSK	135	0	Right Tilted	0mm	3	518598	2592.99	16.90	17.50	1.148	-0.12	0.614	0.705
	FR1 n41_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	3	518598	2592.99	17.37	17.50	1.030	-0.1	0.254	0.262
	FR1 n41_Ant 1	100M	BPSK	135	0	Left Cheek	0mm	3	518598	2592.99	16.90	17.50	1.148	-0.18	0.243	0.279
	FR1 n41_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	3	518598	2592.99	17.37	17.50	1.030	-0.17	0.286	0.295
	FR1 n41_Ant 1	100M	BPSK	135	0	Left Tilted	0mm	3	518598	2592.99	16.90	17.50	1.148	0	0.308	0.354
	FR1 n41_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	2	518598	2592.99	22.89	24.20	1.352	-0.15	0.470	0.635
	FR1 n41_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	2	518598	2592.99	22.40	24.20	1.514	-0.16	0.498	0.754
	FR1 n41_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	2	518598	2592.99	22.89	24.20	1.352	-0.07	0.071	0.096
	FR1 n41_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	2	518598	2592.99	22.40	24.20	1.514	0.14	0.078	0.118
	FR1 n41_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	2	518598	2592.99	22.89	24.20	1.352	-0.03	0.621	0.840
25	FR1 n41_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	2	518598	2592.99	22.40	24.20	1.514	-0.11	0.784	1.187
	FR1 n41_Ant 5	100M	BPSK	270	0	Left Cheek	0mm	2	518598	2592.99	22.34	24.20	1.535	0.05	0.688	1.056
	FR1 n41_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	2	518598	2592.99	22.89	24.20	1.352	0.14	0.142	0.192
	FR1 n41_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	2	518598	2592.99	22.40	24.20	1.514	0.05	0.158	0.239
	FR1 n41_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	3	518598	2592.99	22.89	23.00	1.026	-0.15	0.470	0.482
	FR1 n41_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	3	518598	2592.99	22.40	23.00	1.148	-0.16	0.498	0.572
	FR1 n41_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	3	518598	2592.99	22.89	23.00	1.026	-0.07	0.071	0.073
	FR1 n41_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	3	518598	2592.99	22.40	23.00	1.148	0.14	0.078	0.090
	FR1 n41_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	3	518598	2592.99	22.89	23.00	1.026	-0.03	0.621	0.637
	FR1 n41_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	3	518598	2592.99	22.40	23.00	1.148	-0.11	0.784	0.900
	FR1 n41_Ant 5	100M	BPSK	270	0	Left Cheek	0mm	3	518598	2592.99	22.34	23.00	1.164	0.05	0.688	0.801
	FR1 n41_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	3	518598	2592.99	22.89	23.00	1.026	0.14	0.142	0.146
	FR1 n41_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	3	518598	2592.99	22.40	23.00	1.148	0.05	0.158	0.181



FCC SAR TEST REPORT

Report No. : FA102919-05E

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	24.68	24.70	1.005	0.15	0.124	0.125
	FR1 n48_Ant 6	10M	BPSK	12	6	Right Cheek	0mm	2/3	637000	3555	24.69	24.70	1.002	-0.08	0.088	0.088
	FR1 n48_Ant 6	10M	BPSK	1	1	Right Tilted	0mm	2/3	641666	3624.99	24.68	24.70	1.005	-0.14	0.124	0.125
	FR1 n48_Ant 6	10M	BPSK	12	6	Right Tilted	0mm	2/3	637000	3555	24.69	24.70	1.002	-0.04	0.115	0.115
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Cheek	0mm	2/3	641666	3624.99	24.68	24.70	1.005	-0.04	0.160	0.161
	FR1 n48_Ant 6	10M	BPSK	12	6	Left Cheek	0mm	2/3	637000	3555	24.68	24.70	1.005	0.05	0.128	0.129
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Tilted	0mm	2/3	641666	3624.99	24.68	24.70	1.005	0	0.071	0.071
	FR1 n48_Ant 6	10M	BPSK	12	6	Left Tilted	0mm	2/3	637000	3555	24.68	24.70	1.005	-0.12	0.064	0.064
	FR1 n48_Ant 6	40M	BPSK	50	25	Left Cheek	0mm	2/3	641666	3624.99	24.67	24.70	1.007	0.01	0.140	0.141
	FR1 n48_Ant 7	10M	BPSK	1	1	Right Cheek	0mm	2/3	641666	3624.99	23.00	24.20	1.318	-0.01	0.150	0.198
	FR1 n48_Ant 7	10M	BPSK	12	6	Right Cheek	0mm	2/3	641666	3624.99	22.73	24.20	1.403	-0.07	0.106	0.149
	FR1 n48_Ant 7	10M	BPSK	1	1	Right Tilted	0mm	2/3	641666	3624.99	23.00	24.20	1.318	0.11	0.006	0.008
	FR1 n48_Ant 7	10M	BPSK	12	6	Right Tilted	0mm	2/3	641666	3624.99	22.73	24.20	1.403	-0.19	0.072	0.101
	FR1 n48_Ant 7	10M	BPSK	1	1	Left Cheek	0mm	2/3	641666	3624.99	23.00	24.20	1.318	0.13	0.112	0.148
	FR1 n48_Ant 7	10M	BPSK	12	6	Left Cheek	0mm	2/3	641666	3624.99	22.73	24.20	1.403	0.05	0.125	0.175
	FR1 n48_Ant 7	10M	BPSK	1	1	Left Tilted	0mm	2/3	641666	3624.99	23.00	24.20	1.318	0.11	0.136	0.179
	FR1 n48_Ant 7	10M	BPSK	12	6	Left Tilted	0mm	2/3	641666	3624.99	22.73	24.20	1.403	-0.07	0.141	0.197
	FR1 n48_Ant 7	40M	BPSK	50	25	Left Tilted	0mm	2/3	641666	3624.99	22.73	24.20	1.403	0.04	0.122	0.171
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Cheek	0mm	2	641666	3624.99	19.90	21.10	1.318	-0.04	0.773	1.019
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Cheek	0mm	2	637000	3555	19.82	21.10	1.343	0.03	0.745	1.000
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Cheek	0mm	2	646332	3694.98	19.84	21.10	1.337	-0.08	0.759	1.014
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Cheek	0mm	2	641666	3624.99	19.90	21.10	1.318	-0.15	0.603	0.795
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Cheek	0mm	2	637000	3555	19.81	21.10	1.346	0.02	0.557	0.750
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Cheek	0mm	2	646332	3694.98	19.86	21.10	1.330	-0.07	0.567	0.754
	FR1 n48_Ant 1	10M	QPSK	24	0	Right Cheek	0mm	2	641666	3624.99	18.56	19.50	1.242	0.05	0.588	0.730
26	FR1 n48_Ant 1	10M	QPSK	1	1	Right Tilted	0mm	2	641666	3624.99	19.90	21.10	1.318	0.03	0.854	1.126
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Tilted	0mm	2	637000	3555	19.82	21.10	1.343	0.02	0.836	1.123
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Tilted	0mm	2	646332	3694.98	19.84	21.10	1.337	0.04	0.831	1.111
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Tilted	0mm	2	641666	3624.99	19.90	21.10	1.318	0.04	0.722	0.952
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Tilted	0mm	2	637000	3555	19.81	21.10	1.346	0.11	0.701	0.943
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Tilted	0mm	2	646332	3694.98	19.86	21.10	1.330	0.05	0.707	0.941
	FR1 n48_Ant 1	10M	QPSK	24	0	Right Tilted	0mm	2	641666	3624.99	18.56	19.50	1.242	0.05	0.713	0.885
	FR1 n48_Ant 1	10M	QPSK	1	1	Left Cheek	0mm	2	641666	3624.99	19.90	21.10	1.318	0.03	0.549	0.724
	FR1 n48_Ant 1	10M	QPSK	12	6	Left Cheek	0mm	2	641666	3624.99	19.90	21.10	1.318	-0.06	0.532	0.701
	FR1 n48_Ant 1	10M	QPSK	1	1	Left Tilted	0mm	2	641666	3624.99	19.90	21.10	1.318	-0.11	0.482	0.635
	FR1 n48_Ant 1	10M	QPSK	12	6	Left Tilted	0mm	2	641666	3624.99	19.90	21.10	1.318	-0.15	0.341	0.450
	FR1 n48_Ant 1	40M	QPSK	50	25	Right Tilted	0mm	2	641666	3624.99	19.80	21.10	1.349	0.01	0.770	1.039
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Cheek	0mm	3	641666	3624.99	19.90	19.90	1.000	-0.04	0.773	0.773
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Cheek	0mm	3	637168	3557.52	19.90	19.90	1.000	-0.15	0.603	0.603
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Tilted	0mm	3	641666	3624.99	19.90	19.90	1.000	0.03	0.860	0.860
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Tilted	0mm	3	637000	3555	19.82	19.90	1.019	0.02	0.836	0.852
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Tilted	0mm	3	646332	3694.98	19.84	19.90	1.014	0.04	0.845	0.857
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Tilted	0mm	3	641666	3624.99	19.90	19.90	1.000	0.04	0.722	0.722
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Tilted	0mm	3	637000	3555	18.81	19.90	1.285	0.11	0.694	0.892
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Tilted	0mm	3	646332	3694.98	19.86	19.90	1.009	0.05	0.707	0.714
	FR1 n48_Ant 1	10M	QPSK	24	0	Right Tilted	0mm	3	641666	3624.99	18.56	19.50	1.242	0.05	0.713	0.885
	FR1 n48_Ant 1	10M	QPSK	24	0	Left Cheek	0mm	3	641666	3624.99	19.90	19.90	1.000	0.03	0.549	0.549
	FR1 n48_Ant 1	10M	QPSK	12	6	Left Cheek	0mm	3	637168	3557.52	19.90	19.90	1.000	-0.06	0.532	0.532
	FR1 n48_Ant 1	10M	QPSK	1	1	Left Tilted	0mm	3	641666	3624.99	19.90	19.90	1.000	-0.11	0.482	0.482
	FR1 n48_Ant 1	10M	QPSK	12	6	Left Tilted	0mm	3	637168	3557.52	19.90	19.90	1.000	-0.15	0.341	0.341
	FR1 n48_Ant 1	40M	QPSK	50	25	Right Tilted	0mm	3	641666	3624.99	19.80	19.90	1.023	0.01	0.770	0.788
	FR1 n48_Ant 5	10M	QPSK	1	1	Right Cheek	0mm	2/3	641666	3624.99	20.15	20.40	1.059	0.03	0.367	0.389
	FR1 n48_Ant 5	10M	QPSK	12	6	Right Cheek	0mm	2/3	641666	3624.99	20.16	20.40	1.057	0.19	0.350	0.370
	FR1 n48_Ant 5	10M	QPSK	1	1	Right Tilted	0mm	2/3	641666	3624.99	20.15	20.40	1.059	0.14	0.171	0.181
	FR1 n48_Ant 5	10M	QPSK	12	6	Right Tilted	0mm	2/3	641666	3624.99	20.16	20.40	1.057	-0.01	0.127	0.134
	FR1 n48_Ant 5	10M	QPSK	1	1	Left Cheek	0mm	2/3	641666	3624.99	20.15	20.40	1.059	-0.15	0.560	0.593
	FR1 n48_Ant 5	10M	QPSK	1	1	Left Cheek	0mm	2/3	637000	3555	20.10	20.40	1.072	0.09	0.521	0.558
	FR1 n48_Ant 5	10M	QPSK	1	1	Left Cheek	0mm	2/3	646332	3694.98	20.03	20.40	1.089	0.05	0.518	0.564
	FR1 n48_Ant 5	10M	QPSK	12	6	Left Cheek	0mm	2/3	641666	3624.99	20.16	20.40	1.057	0.05	0.396	0.418
	FR1 n48_Ant 5	10M	QPSK	1	1	Left Tilted	0mm	2/3	641666	3624.99	20.15	20.40	1.059	-0.01	0.258	0.273
	FR1 n48_Ant 5	10M	QPSK	12	6	Left Tilted	0mm	2/3	641666	3624.99	20.16	20.40	1.057	-0.08	0.176	0.186
	FR1 n48_Ant 5	40M	QPSK	53	26	Left Cheek	0mm	2/3	641666	3624.99	20.01	20.40	1.094	0.02	0.430	0.470



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	108	Right Cheek	0mm	2/3	349000	1745	25.07	25.50	1.104	0.03	0.295	0.326
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Cheek	0mm	2/3	349000	1745	24.89	25.50	1.151	-0.05	0.247	0.284
	FR1 n66_Ant 2	40M	BPSK	1	108	Right Tilted	0mm	2/3	349000	1745	25.07	25.50	1.104	0.18	0.161	0.178
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Tilted	0mm	2/3	349000	1745	24.89	25.50	1.151	0.09	0.129	0.148
	FR1 n66_Ant 2	40M	BPSK	1	108	Left Cheek	0mm	2/3	349000	1745	25.07	25.50	1.104	-0.12	0.169	0.187
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Cheek	0mm	2/3	349000	1745	24.89	25.50	1.151	0.19	0.141	0.162
	FR1 n66_Ant 2	40M	BPSK	1	108	Left Tilted	0mm	2/3	349000	1745	25.07	25.50	1.104	-0.06	0.141	0.156
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Tilted	0mm	2/3	349000	1745	24.89	25.50	1.151	-0.16	0.126	0.145
	FR1 n66_Ant 0	40M	BPSK	1	108	Right Cheek	0mm	2/3	349000	1745	24.29	25.30	1.262	-0.19	0.031	0.039
	FR1 n66_Ant 0	40M	BPSK	108	54	Right Cheek	0mm	2/3	349000	1745	24.20	25.30	1.288	-0.19	0.056	0.072
	FR1 n66_Ant 0	40M	BPSK	1	108	Right Tilted	0mm	2/3	349000	1745	24.29	25.30	1.262	-0.03	0.043	0.054
	FR1 n66_Ant 0	40M	BPSK	108	54	Right Tilted	0mm	2/3	349000	1745	24.20	25.30	1.288	0.12	0.047	0.061
	FR1 n66_Ant 0	40M	BPSK	1	108	Left Cheek	0mm	2/3	349000	1745	24.29	25.30	1.262	0.01	0.052	0.066
	FR1 n66_Ant 0	40M	BPSK	108	54	Left Cheek	0mm	2/3	349000	1745	24.20	25.30	1.288	-0.14	0.064	0.082
	FR1 n66_Ant 0	40M	BPSK	1	108	Left Tilted	0mm	2/3	349000	1745	24.29	25.30	1.262	-0.07	0.042	0.053
	FR1 n66_Ant 0	40M	BPSK	108	54	Left Tilted	0mm	2/3	349000	1745	24.20	25.30	1.288	-0.01	0.048	0.062
	FR1 n66_Ant 1	40M	BPSK	1	1	Right Cheek	0mm	2	349000	1745	16.50	17.80	1.349	-0.01	0.585	0.789
	FR1 n66_Ant 1	40M	BPSK	108	0	Right Cheek	0mm	2	349000	1745	16.46	17.80	1.361	-0.04	0.576	0.784
27	FR1 n66_Ant 1	40M	BPSK	1	1	Right Tilted	0mm	2	349000	1745	16.50	17.80	1.349	-0.02	0.721	0.973
	FR1 n66_Ant 1	40M	BPSK	108	0	Right Tilted	0mm	2	349000	1745	16.46	17.80	1.361	-0.05	0.711	0.968
	FR1 n66_Ant 1	40M	BPSK	216	0	Right Tilted	0mm	2	349000	1745	16.41	17.80	1.377	-0.12	0.692	0.953
	FR1 n66_Ant 1	40M	BPSK	1	1	Left Cheek	0mm	2	349000	1745	16.50	17.80	1.349	-0.09	0.269	0.363
	FR1 n66_Ant 1	40M	BPSK	108	0	Left Cheek	0mm	2	349000	1745	16.46	17.80	1.361	-0.09	0.252	0.343
	FR1 n66_Ant 1	40M	BPSK	1	1	Left Tilted	0mm	2	349000	1745	16.50	17.80	1.349	-0.07	0.342	0.461
	FR1 n66_Ant 1	40M	BPSK	108	0	Left Tilted	0mm	2	349000	1745	16.46	17.80	1.361	-0.06	0.323	0.440
	FR1 n66_Ant 1	40M	BPSK	1	1	Right Cheek	0mm	3	349000	1745	16.50	16.60	1.023	-0.01	0.585	0.599
	FR1 n66_Ant 1	40M	BPSK	108	0	Right Cheek	0mm	3	349000	1745	16.46	16.60	1.033	-0.04	0.576	0.595
	FR1 n66_Ant 1	40M	BPSK	1	1	Right Tilted	0mm	3	349000	1745	16.50	16.60	1.023	-0.02	0.721	0.738
	FR1 n66_Ant 1	40M	BPSK	108	0	Right Tilted	0mm	3	349000	1745	16.46	16.60	1.033	-0.05	0.711	0.734
	FR1 n66_Ant 1	40M	BPSK	1	1	Left Cheek	0mm	3	349000	1745	16.50	16.60	1.023	-0.09	0.269	0.275
	FR1 n66_Ant 1	40M	BPSK	108	0	Left Cheek	0mm	3	349000	1745	16.46	16.60	1.033	-0.09	0.252	0.260
	FR1 n66_Ant 1	40M	BPSK	1	1	Left Tilted	0mm	3	349000	1745	16.50	16.60	1.023	-0.07	0.342	0.350
	FR1 n66_Ant 1	40M	BPSK	108	0	Left Tilted	0mm	3	349000	1745	16.46	16.60	1.033	-0.06	0.323	0.334
	FR1 n66_Ant 5	40M	BPSK	1	1	Right Cheek	0mm	2/3	349000	1745	24.30	25.30	1.259	0	0.489	0.616
	FR1 n66_Ant 5	40M	BPSK	108	0	Right Cheek	0mm	2/3	349000	1745	24.26	24.80	1.132	-0.01	0.460	0.521
	FR1 n66_Ant 5	40M	BPSK	1	1	Right Tilted	0mm	2/3	349000	1745	24.30	25.30	1.259	-0.13	0.077	0.097
	FR1 n66_Ant 5	40M	BPSK	108	0	Right Tilted	0mm	2/3	349000	1745	24.26	24.80	1.132	-0.16	0.067	0.076
	FR1 n66_Ant 5	40M	BPSK	1	1	Left Cheek	0mm	2/3	349000	1745	24.30	25.30	1.259	-0.05	0.712	0.896
	FR1 n66_Ant 5	40M	BPSK	108	0	Left Cheek	0mm	2/3	349000	1745	24.26	24.80	1.132	-0.05	0.633	0.717
	FR1 n66_Ant 5	40M	BPSK	216	0	Left Cheek	0mm	2/3	349000	1745	24.14	24.80	1.164	-0.16	0.579	0.674
	FR1 n66_Ant 5	40M	BPSK	1	1	Left Tilted	0mm	2/3	349000	1745	24.30	25.30	1.259	-0.1	0.101	0.127
	FR1 n66_Ant 5	40M	BPSK	108	0	Left Tilted	0mm	2/3	349000	1745	24.26	24.80	1.132	0.17	0.086	0.097



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	53	Right Cheek	0mm	2/3	136100	680.5	24.62	25.50	1.225	0.02	0.069	0.084
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Cheek	0mm	2/3	136100	680.5	24.45	25.50	1.274	-0.03	0.065	0.083
	FR1 n71_Ant 0	20M	BPSK	1	53	Right Titled	0mm	2/3	136100	680.5	24.62	25.50	1.225	0.14	0.030	0.037
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Tilted	0mm	2/3	136100	680.5	24.45	25.50	1.274	-0.18	0.027	0.034
	FR1 n71_Ant 0	20M	BPSK	1	53	Left Cheek	0mm	2/3	136100	680.5	24.62	25.50	1.225	0.03	0.090	0.110
	FR1 n71_Ant 0	20M	BPSK	50	28	Left Cheek	0mm	2/3	136100	680.5	24.45	25.50	1.274	-0.1	0.085	0.108
	FR1 n71_Ant 0	20M	BPSK	1	53	Left Tilted	0mm	2/3	136100	680.5	24.62	25.50	1.225	-0.14	0.040	0.049
	FR1 n71_Ant 0	20M	BPSK	50	28	Left Tilted	0mm	2/3	136100	680.5	24.45	25.50	1.274	-0.19	0.037	0.047
28	FR1 n71_Ant 1	20M	BPSK	1	53	Right Cheek	0mm	2	136100	680.5	23.25	24.80	1.429	-0.01	0.820	1.172
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	2	136100	680.5	23.16	24.80	1.459	-0.1	0.787	1.148
	FR1 n71_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	2	136100	680.5	23.07	24.80	1.489	0.03	0.774	1.153
	FR1 n71_Ant 1	20M	BPSK	1	53	Right Tilted	0mm	2	136100	680.5	23.25	24.80	1.429	-0.02	0.716	1.023
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	2	136100	680.5	23.16	24.80	1.459	-0.13	0.690	1.007
	FR1 n71_Ant 1	20M	BPSK	100	0	Right Tilted	0mm	2	136100	680.5	23.07	24.80	1.489	0.06	0.651	0.970
	FR1 n71_Ant 1	20M	BPSK	1	53	Left Cheek	0mm	2	136100	680.5	23.25	24.80	1.429	0.06	0.744	1.063
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	2	136100	680.5	23.16	24.80	1.459	0.11	0.729	1.063
	FR1 n71_Ant 1	20M	BPSK	100	0	Left Cheek	0mm	2	136100	680.5	23.07	24.80	1.489	0.04	0.703	1.047
	FR1 n71_Ant 1	20M	BPSK	1	53	Left Tilted	0mm	2	136100	680.5	23.25	24.80	1.429	0.13	0.788	1.126
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	2	136100	680.5	23.16	24.80	1.459	-0.13	0.768	1.120
	FR1 n71_Ant 1	20M	BPSK	100	0	Left Tilted	0mm	2	136100	680.5	23.07	24.80	1.489	-0.05	0.729	1.086
	FR1 n71_Ant 1	20M	BPSK	1	53	Right Cheek	0mm	3	136100	680.5	23.25	23.60	1.084	-0.01	0.820	0.889
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	3	136100	680.5	23.16	23.60	1.107	-0.1	0.787	0.871
	FR1 n71_Ant 1	20M	BPSK	100	0	Right Cheek	0mm	3	136100	680.5	23.07	23.60	1.130	0.03	0.774	0.874
	FR1 n71_Ant 1	20M	BPSK	1	53	Right Tilted	0mm	3	136100	680.5	23.25	23.60	1.084	-0.02	0.716	0.776
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	3	136100	680.5	23.16	23.60	1.107	-0.13	0.690	0.764
	FR1 n71_Ant 1	20M	BPSK	1	53	Left Cheek	0mm	3	136100	680.5	23.25	23.60	1.084	0.06	0.744	0.806
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	3	136100	680.5	23.16	23.60	1.107	0.11	0.729	0.807
	FR1 n71_Ant 1	20M	BPSK	100	0	Left Cheek	0mm	3	136100	680.5	23.07	23.60	1.130	0.04	0.703	0.794
	FR1 n71_Ant 1	20M	BPSK	1	53	Left Tilted	0mm	3	136100	680.5	23.25	23.60	1.084	0.13	0.788	0.854
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	3	136100	680.5	23.16	23.60	1.107	-0.13	0.768	0.850
	FR1 n71_Ant 1	20M	BPSK	100	0	Left Tilted	0mm	3	136100	680.5	23.07	23.60	1.130	-0.05	0.729	0.824



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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	23.99	24.10	1.026	0.11	0.154	0.158
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Cheek	0mm	2/3	656000	3840	23.43	24.10	1.167	0.04	0.134	0.156
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Tilted	0mm	2/3	656000	3840	23.99	24.10	1.026	-0.01	0.127	0.130
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Tilted	0mm	2/3	656000	3840	23.43	24.10	1.167	0.19	0.121	0.141
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Cheek	0mm	2/3	656000	3840	23.99	24.10	1.026	-0.08	0.227	0.233
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	2/3	656000	3840	23.43	24.10	1.167	0.08	0.178	0.208
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Tilted	0mm	2/3	656000	3840	23.99	24.10	1.026	-0.01	0.174	0.178
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Tilted	0mm	2/3	656000	3840	23.43	24.10	1.167	-0.03	0.105	0.123
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Cheek	0mm	2/3	633332	3499.98	23.37	24.10	1.183	-0.03	0.081	0.096
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Cheek	0mm	2/3	633332	3499.98	23.22	24.10	1.225	-0.11	0.061	0.075
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Tilted	0mm	2/3	633332	3499.98	23.37	24.10	1.183	-0.1	0.033	0.039
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Tilted	0mm	2/3	633332	3499.98	23.22	24.10	1.225	-0.1	0.035	0.043
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Cheek	0mm	2/3	633332	3499.98	23.37	24.10	1.183	-0.06	0.098	0.116
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	2/3	633332	3499.98	23.22	24.10	1.225	0.05	0.078	0.096
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Tilted	0mm	2/3	633332	3499.98	23.37	24.10	1.183	-0.19	0.024	0.028
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Tilted	0mm	2/3	633332	3499.98	23.22	24.10	1.225	-0.11	0.015	0.018
	FR1 n77_Ant 7	100M	BPSK	1	1	Right Cheek	0mm	2/3	656000	3840	22.68	24.00	1.355	-0.11	0.084	0.114
	FR1 n77_Ant 7	100M	BPSK	1	1	Right Cheek	0mm	2/3	656000	3840	22.68	24.00	1.355	-0.06	0.106	0.144
	FR1 n77_Ant 7	100M	BPSK	1	1	Right Tilted	0mm	2/3	656000	3840	22.68	24.00	1.355	0.08	0.033	0.045
	FR1 n77_Ant 7	100M	BPSK	135	69	Right Tilted	0mm	2/3	656000	3840	22.10	24.00	1.549	-0.09	0.065	0.101
	FR1 n77_Ant 7	100M	BPSK	1	1	Left Cheek	0mm	2/3	656000	3840	22.68	24.00	1.355	-0.01	0.058	0.079
	FR1 n77_Ant 7	100M	BPSK	135	69	Left Cheek	0mm	2/3	656000	3840	22.10	24.00	1.549	0.08	0.078	0.121
	FR1 n77_Ant 7	100M	BPSK	1	1	Left Tilted	0mm	2/3	656000	3840	22.68	24.00	1.355	0.08	0.054	0.073
	FR1 n77_Ant 7	100M	BPSK	135	69	Left Tilted	0mm	2/3	656000	3840	22.10	24.00	1.549	0.09	0.078	0.121
	FR1 n77_Ant 7	100M	BPSK	1	1	Right Cheek	0mm	2/3	633332	3499.98	23.10	24.00	1.230	0.07	0.052	0.064
	FR1 n77_Ant 7	100M	BPSK	1	1	Right Cheek	0mm	2/3	633332	3499.98	23.10	24.00	1.230	0.07	0.057	0.070
	FR1 n77_Ant 7	100M	BPSK	1	1	Right Tilted	0mm	2/3	633332	3499.98	23.10	24.00	1.230	0.08	0.040	0.049
	FR1 n77_Ant 7	100M	BPSK	135	69	Right Tilted	0mm	2/3	633332	3499.98	22.35	24.00	1.462	-0.15	0.045	0.066
	FR1 n77_Ant 7	100M	BPSK	1	1	Left Cheek	0mm	2/3	633332	3499.98	23.10	24.00	1.230	-0.13	0.033	0.041
	FR1 n77_Ant 7	100M	BPSK	135	69	Left Cheek	0mm	2/3	633332	3499.98	22.35	24.00	1.462	0.03	0.038	0.056
	FR1 n77_Ant 7	100M	BPSK	1	1	Left Tilted	0mm	2/3	633332	3499.98	23.10	24.00	1.230	-0.01	0.047	0.058
	FR1 n77_Ant 7	100M	BPSK	135	69	Left Tilted	0mm	2/3	633332	3499.98	22.35	24.00	1.462	0.07	0.044	0.064
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	2	656000	3840	18.65	20.10	1.396	0.05	0.723	1.010
	FR1 n77_Ant 1	100M	BPSK	135	0	Right Cheek	0mm	2	656000	3840	18.21	20.10	1.545	0.04	0.484	0.748
	FR1 n77_Ant 1	100M	BPSK	270	0	Right Cheek	0mm	2	656000	3840	18.20	20.10	1.549	0.06	0.535	0.829
29	FR1 n77_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	2	656000	3840	18.65	20.10	1.396	0.15	0.786	1.098
	FR1 n77_Ant 1	100M	BPSK	135	0	Right Tilted	0mm	2	656000	3840	18.21	20.10	1.545	0.19	0.611	0.944
	FR1 n77_Ant 1	100M	BPSK	270	0	Right Tilted	0mm	2	656000	3840	18.20	20.10	1.549	0.01	0.667	1.033
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	2	656000	3840	18.65	20.10	1.396	-0.02	0.384	0.536
	FR1 n77_Ant 1	100M	BPSK	135	0	Left Cheek	0mm	2	656000	3840	18.21	20.10	1.545	0.04	0.280	0.433
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	2	656000	3840	18.65	20.10	1.396	-0.05	0.493	0.688
	FR1 n77_Ant 1	100M	BPSK	135	0	Left Tilted	0mm	2	656000	3840	18.21	20.10	1.545	-0.06	0.351	0.542
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	3	656000	3840	18.65	18.90	1.059	0.05	0.723	0.766
	FR1 n77_Ant 1	100M	BPSK	135	0	Right Cheek	0mm	3	656000	3840	18.21	18.90	1.172	0.04	0.484	0.567
	FR1 n77_Ant 1	100M	BPSK	270	0	Right Cheek	0mm	3	656000	3840	18.20	18.90	1.175	0.06	0.535	0.629
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	3	656000	3840	18.65	18.90	1.059	0.15	0.786	0.833
	FR1 n77_Ant 1	100M	BPSK	135	0	Right Tilted	0mm	3	656000	3840	18.21	18.90	1.172	0.19	0.611	0.716
	FR1 n77_Ant 1	100M	BPSK	270	0	Right Tilted	0mm	3	656000	3840	18.20	18.90	1.175	0.01	0.667	0.784
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	3	656000	3840	18.65	18.90	1.059	-0.02	0.384	0.407
	FR1 n77_Ant 1	100M	BPSK	135	0	Left Cheek	0mm	3	656000	3840	18.21	18.90	1.172	0.04	0.280	0.328
	FR1 n77_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	3	656000	3840	18.65	18.90	1.059	-0.05	0.493	0.522
	FR1 n77_Ant 1	100M	BPSK	135	0	Left Tilted	0mm	3	656000	3840	18.21	18.90	1.172	-0.06	0.351	0.411
	FR1 n77_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	2	633332	3499.98	18.82	20.10	1.343	-0.02	0.587	0.788



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FR1 n77_Ant 1	100M	BPSK	135	0	Right Cheek	0mm	2	633332	3499.98	18.57	20.10	1.422	-0.03	0.430	0.612
FR1 n77_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	2	633332	3499.98	18.82	20.10	1.343	-0.01	0.596	0.800
FR1 n77_Ant 1	100M	BPSK	135	0	Right Tilted	0mm	2	633332	3499.98	18.57	20.10	1.422	0.1	0.427	0.607
FR1 n77_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	2	633332	3499.98	18.82	20.10	1.343	-0.16	0.258	0.346
FR1 n77_Ant 1	100M	BPSK	135	0	Left Cheek	0mm	2	633332	3499.98	18.57	20.10	1.422	-0.1	0.254	0.361
FR1 n77_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	2	633332	3499.98	18.82	20.10	1.343	-0.06	0.431	0.579
FR1 n77_Ant 1	100M	BPSK	135	0	Left Tilted	0mm	2	633332	3499.98	18.57	20.10	1.422	0.07	0.331	0.471
FR1 n77_Ant 1	100M	BPSK	1	1	Right Cheek	0mm	3	633332	3499.98	18.82	18.90	1.019	-0.02	0.587	0.598
FR1 n77_Ant 1	100M	BPSK	135	0	Right Cheek	0mm	3	633332	3499.98	18.57	18.90	1.079	-0.03	0.430	0.464
FR1 n77_Ant 1	100M	BPSK	1	1	Right Tilted	0mm	3	633332	3499.98	18.82	18.90	1.019	-0.01	0.595	0.606
FR1 n77_Ant 1	100M	BPSK	135	0	Right Tilted	0mm	3	633332	3499.98	18.57	18.90	1.079	0.1	0.427	0.461
FR1 n77_Ant 1	100M	BPSK	1	1	Left Cheek	0mm	3	633332	3499.98	18.82	18.90	1.019	-0.16	0.258	0.263
FR1 n77_Ant 1	100M	BPSK	135	0	Left Cheek	0mm	3	633332	3499.98	18.57	18.90	1.079	-0.1	0.254	0.274
FR1 n77_Ant 1	100M	BPSK	1	1	Left Tilted	0mm	3	633332	3499.98	18.82	18.90	1.019	-0.06	0.431	0.439
FR1 n77_Ant 1	100M	BPSK	135	0	Left Tilted	0mm	3	633332	3499.98	18.57	18.90	1.079	0.07	0.331	0.357
FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	2	656000	3840	19.69	21.00	1.352	-0.06	0.514	0.695
FR1 n77_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	2	656000	3840	19.71	21.00	1.346	-0.04	0.371	0.499
FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	2	656000	3840	19.69	21.00	1.352	0.08	0.142	0.192
FR1 n77_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	2	656000	3840	19.71	21.00	1.346	-0.01	0.079	0.106
FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	2	656000	3840	19.69	21.00	1.352	-0.07	0.783	1.059
FR1 n77_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	2	656000	3840	19.71	21.00	1.346	0.03	0.525	0.707
FR1 n77_Ant 5	100M	BPSK	270	0	Left Cheek	0mm	2	656000	3840	19.63	21.00	1.371	0.02	0.519	0.711
FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	2	656000	3840	19.69	21.00	1.352	-0.02	0.199	0.269
FR1 n77_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	2	656000	3840	19.71	21.00	1.346	0.04	0.132	0.178
FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	3	656000	3840	19.69	19.80	1.026	-0.06	0.514	0.527
FR1 n77_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	3	656000	3840	19.71	19.80	1.021	-0.04	0.371	0.379
FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	3	656000	3840	19.69	19.80	1.026	0.08	0.142	0.146
FR1 n77_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	3	656000	3840	19.71	19.80	1.021	-0.01	0.079	0.081
FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	3	656000	3840	19.69	19.80	1.026	-0.07	0.783	0.803
FR1 n77_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	3	656000	3840	19.71	19.80	1.021	0.03	0.525	0.536
FR1 n77_Ant 5	100M	BPSK	270	0	Left Cheek	0mm	3	656000	3840	19.63	19.80	1.040	0.02	0.519	0.540
FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	3	656000	3840	19.69	19.80	1.026	-0.02	0.199	0.204
FR1 n77_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	3	656000	3840	19.71	19.80	1.021	0.04	0.132	0.135
FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	2	633332	3499.98	19.56	21.00	1.393	0.05	0.391	0.545
FR1 n77_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	2	633332	3499.98	19.12	21.00	1.542	0.01	0.311	0.479
FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	2	633332	3499.98	19.56	21.00	1.393	0.02	0.280	0.390
FR1 n77_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	2	633332	3499.98	19.12	21.00	1.542	-0.09	0.233	0.359
FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	2	633332	3499.98	19.56	21.00	1.393	0.06	0.596	0.830
FR1 n77_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	2	633332	3499.98	19.12	21.00	1.542	-0.05	0.520	0.802
FR1 n77_Ant 5	100M	BPSK	270	0	Left Cheek	0mm	2	633332	3499.98	19.14	21.00	1.535	0.03	0.499	0.766
FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	2	633332	3499.98	19.56	21.00	1.393	0.11	0.411	0.573
FR1 n77_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	2	633332	3499.98	19.12	21.00	1.542	0.18	0.331	0.510
FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	3	633332	3499.98	19.56	19.80	1.057	0.05	0.492	0.520
FR1 n77_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	3	633332	3499.98	19.12	19.80	1.169	0.01	0.391	0.457
FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	3	633332	3499.98	19.56	19.80	1.057	0.02	0.352	0.372
FR1 n77_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	3	633332	3499.98	19.12	19.80	1.169	-0.09	0.293	0.343
FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	3	633332	3499.98	19.56	19.80	1.057	0.06	0.750	0.793
FR1 n77_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	3	633332	3499.98	19.12	19.80	1.169	-0.05	0.654	0.765
FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	3	633332	3499.98	19.56	19.80	1.057	0.11	0.517	0.546
FR1 n77_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	3	633332	3499.98	19.12	19.80	1.169	0.18	0.416	0.487



<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	1	6	2437	18.45	19.50	1.274	98.9	1.011	0.04	0.284	0.366
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	1	6	2437	18.45	19.50	1.274	98.9	1.011	0.09	0.304	0.391
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	1	6	2437	18.45	19.50	1.274	98.9	1.011	0.11	0.847	1.091
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	1	1	2412	18.35	19.50	1.303	98.9	1.011	0.03	0.678	0.893
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	1	11	2462	18.35	19.50	1.303	98.9	1.011	-0.06	0.702	0.925
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	6	2437	18.45	19.50	1.274	98.9	1.011	0.1	0.873	1.124
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	1	2412	18.35	19.50	1.303	98.9	1.011	0.05	0.709	0.934
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	11	2462	18.35	19.50	1.303	98.9	1.011	0.03	0.784	1.033
30	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	1	11	2462	20.95	22.00	1.274	98.9	1.011	-0.05	0.916	1.179
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	1	1	2412	20.85	22.00	1.303	98.9	1.011	-0.09	0.890	1.173
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	1	6	2437	20.85	22.00	1.303	98.9	1.011	-0.02	0.782	1.030
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	1	11	2462	20.95	22.00	1.274	98.9	1.011	-0.04	0.121	0.156
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	1	11	2462	20.95	22.00	1.274	98.9	1.011	-0.02	0.805	1.036
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	1	1	2412	20.85	22.00	1.303	98.9	1.011	0.08	0.722	0.951
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	1	6	2437	20.85	22.00	1.303	98.9	1.011	0.01	0.664	0.875
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	1	11	2462	20.95	22.00	1.274	98.9	1.011	-0.03	0.122	0.157
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(4)	1	6	2437	18.65	19.00	1.084	93.4	1.071	0.03	0.321	0.373
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(3)	1	6	2437	18.25	19.00	1.189	93.4	1.071	0.03	0.477	0.607
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(4)	1	6	2437	18.65	19.00	1.084	93.4	1.071	0.01	0.376	0.436
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(3)	1	6	2437	18.25	19.00	1.189	93.4	1.071	0.01	0.146	0.186
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	1	6	2437	18.65	19.00	1.084	93.4	1.071	0.07	0.986	1.145
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	1	6	2437	18.25	19.00	1.189	93.4	1.071	0.07	0.472	0.601
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	1	1	2412	18.25	19.00	1.189	93.4	1.071	-0.03	0.809	1.030
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	1	1	2412	18.25	19.00	1.189	93.4	1.071	-0.03	0.432	0.550
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	1	11	2462	18.15	19.00	1.216	93.4	1.071	-0.02	0.874	1.138
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	1	11	2462	18.65	19.00	1.084	93.4	1.071	-0.06	0.523	0.607
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	1	6	2437	18.65	19.00	1.084	93.4	1.071	-0.03	0.949	1.102
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	1	6	2437	18.25	19.00	1.189	93.4	1.071	-0.03	0.064	0.081
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	1	1	2412	18.25	19.00	1.189	93.4	1.071	0.11	0.728	0.927
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	1	1	2412	18.25	19.00	1.189	93.4	1.071	0.11	0.061	0.078
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	1	11	2462	18.15	19.00	1.216	93.4	1.071	-0.04	0.699	0.910
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	1	11	2462	18.65	19.00	1.084	93.4	1.071	-0.04	0.074	0.086
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4	2	1	2412	16.15	17.50	1.365	98.9	1.011	0.03	0.157	0.217
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	2	1	2412	16.15	17.50	1.365	98.9	1.011	0.02	0.234	0.323
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	2	1	2412	16.15	17.50	1.365	98.9	1.011	0.16	0.475	0.655
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	2	1	2412	16.15	17.50	1.365	98.9	1.011	0.07	0.540	0.745
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	2	11	2462	18.65	19.00	1.084	98.9	1.011	0.02	0.651	0.713
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	2	11	2462	18.65	19.00	1.084	98.9	1.011	-0.08	0.089	0.098
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	2	11	2462	18.65	19.00	1.084	98.9	1.011	-0.01	0.610	0.668
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	2	11	2462	18.65	19.00	1.084	98.9	1.011	0.06	0.067	0.073
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	11	2462	15.75	17.50	1.496	93.4	1.071	0.11	0.147	0.236
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	11	2462	16.45	17.50	1.274	93.4	1.071	0.11	0.362	0.494
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	11	2462	15.75	17.50	1.496	93.4	1.071	0.07	0.172	0.276
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	11	2462	16.45	17.50	1.274	93.4	1.071	0.07	0.111	0.151
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	11	2462	15.75	17.50	1.496	93.4	1.071	-0.12	0.451	0.723
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	11	2462	16.45	17.50	1.274	93.4	1.071	-0.12	0.358	0.488
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	11	2462	15.75	17.50	1.496	93.4	1.071	0.08	0.370	0.593
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	11	2462	16.45	17.50	1.274	93.4	1.071	0.08	0.328	0.447



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	1	2412	14.95	16.50	1.429	98.9	1.011	0.03	0.094	0.136
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	3	1	2412	14.95	16.50	1.429	98.9	1.011	0.02	0.141	0.204
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	3	1	2412	14.95	16.50	1.429	98.9	1.011	0.16	0.355	0.513
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	3	1	2412	14.95	16.50	1.429	98.9	1.011	0.07	0.366	0.529
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	3	11	2462	17.55	18.00	1.109	98.9	1.011	-0.04	0.461	0.517
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	3	11	2462	17.55	18.00	1.109	98.9	1.011	-0.08	0.063	0.071
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	3	11	2462	17.55	18.00	1.109	98.9	1.011	-0.01	0.326	0.366
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	3	11	2462	17.55	18.00	1.109	98.9	1.011	0.06	0.047	0.053
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(4)	3	11	2462	15.75	16.50	1.189	93.4	1.071	0.11	0.138	0.176
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(3)	3	11	2462	16.45	16.50	1.012	93.4	1.071	0.11	0.358	0.388
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(4)	3	11	2462	15.75	16.50	1.189	93.4	1.071	0.07	0.172	0.219
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(3)	3	11	2462	16.45	16.50	1.012	93.4	1.071	0.07	0.110	0.119
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	3	11	2462	15.75	16.50	1.189	93.4	1.071	-0.12	0.451	0.574
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	3	11	2462	16.45	16.50	1.012	93.4	1.071	-0.12	0.358	0.388
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	3	11	2462	15.75	16.50	1.189	93.4	1.071	0.08	0.398	0.507
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	3	11	2462	16.45	16.50	1.012	93.4	1.071	0.08	0.328	0.355
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4	4	6	2437	9.75	11.00	1.334	98.9	1.011	-0.15	0.046	0.062
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	4	6	2437	9.75	11.00	1.334	98.9	1.011	-0.04	0.050	0.067
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	4	6	2437	10.05	11.00	1.245	98.9	1.011	-0.09	0.146	0.184
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	4	6	2437	9.75	11.00	1.334	98.9	1.011	-0.1	0.131	0.177
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	4	11	2462	12.25	13.00	1.189	98.9	1.011	-0.17	0.139	0.167
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	4	11	2462	12.25	13.00	1.189	98.9	1.011	0.05	0.025	0.030
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	4	11	2462	12.25	13.00	1.189	98.9	1.011	-0.02	0.153	0.184
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	4	11	2462	12.25	13.00	1.189	98.9	1.011	-0.1	0.021	0.025
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(4)	4	11	2462	10.55	11.00	1.109	93.4	1.071	0.04	0.034	0.040
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(3)	4	11	2462	11.00	11.00	1.000	93.4	1.071	0.04	0.104	0.111
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(4)	4	11	2462	10.55	11.00	1.109	93.4	1.071	0.19	0.049	0.058
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(3)	4	11	2462	11.00	11.00	1.000	93.4	1.071	0.19	0.036	0.039
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	4	11	2462	10.55	11.00	1.109	93.4	1.071	-0.06	0.128	0.152
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	4	11	2462	11.00	11.00	1.000	93.4	1.071	-0.06	0.119	0.127
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	4	11	2462	10.55	11.00	1.109	93.4	1.071	-0.13	0.092	0.109
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	4	11	2462	11.00	11.00	1.000	93.4	1.071	-0.13	0.089	0.095



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	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(4)	1	54	5270	19.60	20.00	1.096	86.84	1.152	-0.16	0.243	0.307
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(8)	1	54	5270	19.25	20.00	1.189	86.84	1.152	-0.16	0.453	0.620
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(4)	1	54	5270	19.60	20.00	1.096	86.84	1.152	-0.01	0.163	0.206
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(8)	1	54	5270	19.25	20.00	1.189	86.84	1.152	-0.01	0.518	0.709
31	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(4)	1	54	5270	19.60	20.00	1.096	86.84	1.152	-0.04	0.946	1.195
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(8)	1	54	5270	19.25	20.00	1.189	86.84	1.152	-0.04	0.676	0.926
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+8(4)	1	52	5260	19.45	20.00	1.135	93.5	1.070	0.02	0.848	1.030
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+8(8)	1	52	5260	19.35	20.00	1.161	93.5	1.070	0.02	0.631	0.784
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(4)	1	54	5270	19.60	20.00	1.096	86.84	1.152	-0.12	0.548	0.692
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(8)	1	54	5270	19.25	20.00	1.189	86.84	1.152	-0.12	0.394	0.539
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(4)	2	54	5270	18.00	19.00	1.259	86.84	1.152	-0.16	0.145	0.210
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(8)	2	54	5270	17.75	19.00	1.334	86.84	1.152	-0.16	0.172	0.264
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(4)	2	54	5270	18.00	19.00	1.259	86.84	1.152	-0.09	0.104	0.151
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(8)	2	54	5270	17.75	19.00	1.334	86.84	1.152	-0.09	0.186	0.286
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(4)	2	54	5270	18.00	19.00	1.259	86.84	1.152	-0.05	0.503	0.729
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(8)	2	54	5270	17.75	19.00	1.334	86.84	1.152	-0.05	0.249	0.383
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(4)	2	54	5270	18.00	19.00	1.259	86.84	1.152	-0.03	0.456	0.661
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(8)	2	54	5270	17.75	19.00	1.334	86.84	1.152	-0.03	0.231	0.355
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(4)	3	54	5270	16.40	17.50	1.288	86.84	1.152	0.08	0.066	0.098
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(8)	3	54	5270	16.35	17.50	1.303	86.84	1.152	0.08	0.109	0.164
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(4)	3	54	5270	16.40	17.50	1.288	86.84	1.152	-0.05	0.051	0.076
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(8)	3	54	5270	16.35	17.50	1.303	86.84	1.152	-0.05	0.131	0.197
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(4)	3	54	5270	16.40	17.50	1.288	86.84	1.152	0.05	0.267	0.396
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(8)	3	54	5270	16.35	17.50	1.303	86.84	1.152	0.05	0.180	0.270
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(4)	3	54	5270	16.40	17.50	1.288	86.84	1.152	0.18	0.148	0.220
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(8)	3	54	5270	16.35	17.50	1.303	86.84	1.152	0.18	0.109	0.164
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(4)	4	54	5270	16.40	17.50	1.288	86.84	1.152	0.08	0.066	0.098
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(8)	4	54	5270	16.35	17.50	1.303	86.84	1.152	0.08	0.109	0.164
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(4)	4	54	5270	16.40	17.50	1.288	86.84	1.152	-0.05	0.051	0.076
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(8)	4	54	5270	16.35	17.50	1.303	86.84	1.152	-0.05	0.131	0.197
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(4)	4	54	5270	16.40	17.50	1.288	86.84	1.152	0.05	0.267	0.396
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(8)	4	54	5270	16.35	17.50	1.303	86.84	1.152	0.05	0.180	0.270
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(4)	4	54	5270	16.40	17.50	1.288	86.84	1.152	0.18	0.148	0.220
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(8)	4	54	5270	16.35	17.50	1.303	86.84	1.152	0.18	0.109	0.164



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	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(4)	1	126	5630	18.60	19.50	1.230	86.84	1.152	0.03	0.148	0.210
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(8)	1	126	5630	19.50	19.50	1.000	86.84	1.152	0.03	0.628	0.723
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(4)	1	126	5630	18.60	19.50	1.230	86.84	1.152	-0.01	0.093	0.132
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(8)	1	126	5630	19.50	19.50	1.000	86.84	1.152	-0.01	0.664	0.765
32	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(4)	1	126	5630	18.60	19.50	1.230	86.84	1.152	-0.01	0.782	1.108
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(8)	1	126	5630	19.50	19.50	1.000	86.84	1.152	-0.01	0.162	0.187
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+8(4)	1	100	5500	19.00	19.50	1.122	93.5	1.070	-0.11	0.757	0.909
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Ant 4+8(8)	1	100	5660	19.15	19.50	1.084	93.5	1.070	-0.11	0.146	0.169
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(4)	1	126	5630	18.60	19.50	1.230	86.84	1.152	0.14	0.523	0.741
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(8)	1	126	5630	19.50	19.50	1.000	86.84	1.152	0.14	0.196	0.226
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(4)	2	138	5690	16.65	17.50	1.216	88.1	1.135	-0.18	0.134	0.185
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(8)	2	138	5690	16.95	17.50	1.135	88.1	1.135	-0.18	0.269	0.347
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(4)	2	138	5690	16.65	17.50	1.216	88.1	1.135	-0.14	0.067	0.092
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(8)	2	138	5690	16.95	17.50	1.135	88.1	1.135	-0.18	0.330	0.425
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(4)	2	138	5690	16.65	17.50	1.216	88.1	1.135	-0.16	0.468	0.646
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(8)	2	138	5690	16.95	17.50	1.135	88.1	1.135	-0.18	0.088	0.113
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(4)	2	138	5690	16.65	17.50	1.216	88.1	1.135	0.16	0.575	0.794
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(8)	2	138	5690	16.95	17.50	1.135	88.1	1.135	0.16	0.110	0.142
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(4)	3	138	5690	13.10	14.50	1.380	88.1	1.135	0.03	0.042	0.066
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(8)	3	138	5690	13.50	14.50	1.259	88.1	1.135	0.03	0.098	0.140
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(4)	3	138	5690	13.10	14.50	1.380	88.1	1.135	-0.14	0.026	0.041
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(8)	3	138	5690	13.50	14.50	1.259	88.1	1.135	-0.14	0.104	0.149
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(4)	3	138	5690	13.10	14.50	1.380	88.1	1.135	0.04	0.224	0.351
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(8)	3	138	5690	13.50	14.50	1.259	88.1	1.135	0.04	0.098	0.140
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(4)	3	138	5690	13.10	14.50	1.380	88.1	1.135	0.05	0.141	0.221
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(8)	3	138	5690	13.50	14.50	1.259	88.1	1.135	0.05	0.029	0.041
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(4)	4	138	5690	13.10	14.50	1.380	88.1	1.135	0.03	0.042	0.066
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(8)	4	138	5690	13.50	14.50	1.259	88.1	1.135	0.03	0.098	0.140
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(4)	4	138	5690	13.10	14.50	1.380	88.1	1.135	-0.14	0.026	0.041
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(8)	4	138	5690	13.50	14.50	1.259	88.1	1.135	-0.14	0.104	0.149
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(4)	4	138	5690	13.10	14.50	1.380	88.1	1.135	0.04	0.224	0.351
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(8)	4	138	5690	13.50	14.50	1.259	88.1	1.135	0.04	0.098	0.140
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(4)	4	138	5690	13.10	14.50	1.380	88.1	1.135	0.05	0.141	0.221
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(8)	4	138	5690	13.50	14.50	1.259	88.1	1.135	0.05	0.029	0.041



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+8(4)	1	155	5775	17.10	18.00	1.230	88.1	1.135	0	0.356	0.497
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(8)	1	155	5775	20.00	20.00	1.000	88.1	1.135	0	0.505	0.573
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(4)	1	155	5775	17.10	18.00	1.230	88.1	1.135	-0.04	0.452	0.631
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(8)	1	155	5775	20.00	20.00	1.000	88.1	1.135	-0.04	0.476	0.540
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(4)	1	155	5775	17.10	18.00	1.230	88.1	1.135	-0.03	0.363	0.507
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(8)	1	155	5775	20.00	20.00	1.000	88.1	1.135	-0.03	0.836	0.949
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(4)	1	159	5795	15.60	16.00	1.096	88.1	1.135	0.03	0.301	0.375
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(8)	1	159	5795	20.00	20.00	1.000	88.1	1.135	0.03	0.642	0.729
33	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(4)	1	155	5775	17.10	18.00	1.230	88.1	1.135	-0.09	0.475	0.663
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(8)	1	155	5775	20.00	20.00	1.000	88.1	1.135	-0.09	0.886	1.006
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(4)	1	159	5795	15.60	16.00	1.096	88.1	1.135	-0.13	0.416	0.518
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(8)	1	159	5795	20.00	20.00	1.000	88.1	1.135	-0.13	0.592	0.672
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(4)	2	155	5775	17.90	18.00	1.023	88.1	1.135	-0.12	0.204	0.237
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(8)	2	155	5775	18.05	18.50	1.109	88.1	1.135	-0.12	0.324	0.408
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(4)	2	155	5775	17.90	18.00	1.023	88.1	1.135	0.04	0.278	0.323
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(8)	2	155	5775	18.05	18.50	1.109	88.1	1.135	0.04	0.315	0.397
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(4)	2	155	5775	17.90	18.00	1.023	88.1	1.135	0.02	0.378	0.439
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(8)	2	155	5775	18.05	18.50	1.109	88.1	1.135	0.02	0.541	0.681
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(4)	2	155	5775	17.90	18.00	1.023	88.1	1.135	-0.05	0.396	0.460
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(8)	2	155	5775	18.05	18.50	1.109	88.1	1.135	-0.05	0.575	0.724
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(4)	3	155	5775	14.20	15.50	1.349	88.1	1.135	-0.1	0.135	0.207
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(8)	3	155	5775	14.50	15.50	1.259	88.1	1.135	-0.1	0.061	0.087
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(4)	3	155	5775	14.20	15.50	1.349	88.1	1.135	0.17	0.173	0.265
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(8)	3	155	5775	14.50	15.50	1.259	88.1	1.135	0.17	0.061	0.087
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(4)	3	155	5775	14.20	15.50	1.349	88.1	1.135	0.07	0.214	0.328
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(8)	3	155	5775	14.50	15.50	1.259	88.1	1.135	0.07	0.158	0.226
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(4)	3	155	5775	14.20	15.50	1.349	88.1	1.135	-0.1	0.247	0.378
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(8)	3	155	5775	14.50	15.50	1.259	88.1	1.135	-0.1	0.066	0.094
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(4)	4	155	5775	14.20	15.50	1.349	88.1	1.135	-0.1	0.135	0.207
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+8(8)	4	155	5775	14.50	15.50	1.259	88.1	1.135	-0.1	0.061	0.087
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(4)	4	155	5775	14.20	15.50	1.349	88.1	1.135	0.17	0.173	0.265
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+8(8)	4	155	5775	14.50	15.50	1.259	88.1	1.135	0.17	0.061	0.087
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(4)	4	155	5775	14.20	15.50	1.349	88.1	1.135	0.07	0.214	0.328
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+8(8)	4	155	5775	14.50	15.50	1.259	88.1	1.135	0.07	0.158	0.226
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(4)	4	155	5775	14.20	15.50	1.349	88.1	1.135	-0.1	0.247	0.378
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+8(8)	4	155	5775	14.50	15.50	1.259	88.1	1.135	-0.1	0.066	0.094



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	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(4)	1	167	5835	17.70	18.50	1.202	96.79	1.033	-0.14	0.715	0.888
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(8)	1	167	5835	18.20	18.50	1.072	96.79	1.033	-0.14	0.611	0.676
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(4)	1	175	5875	17.60	18.50	1.230	96.79	1.033	0.02	0.634	0.806
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+8(8)	1	175	5875	18.10	18.50	1.096	96.79	1.033	0.02	0.527	0.597
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(4)	1	167	5835	17.70	18.50	1.202	96.79	1.033	0.05	0.634	0.787
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Ant 4+8(8)	1	167	5835	18.20	18.50	1.072	96.79	1.033	0.05	0.644	0.713
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(4)	1	167	5835	17.70	18.50	1.202	96.79	1.033	0.06	0.578	0.718
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Ant 4+8(8)	1	167	5835	18.20	18.50	1.072	96.79	1.033	0.06	0.404	0.447
34	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(4)	1	167	5835	17.70	18.50	1.202	96.79	1.033	-0.08	0.837	1.040
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(8)	1	167	5835	18.20	18.50	1.072	96.79	1.033	-0.08	0.346	0.383
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(4)	1	175	5875	17.60	18.50	1.230	96.79	1.033	-0.04	0.674	0.857
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Ant 4+8(8)	1	175	5875	18.10	18.50	1.096	96.79	1.033	-0.04	0.261	0.296
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+8(4)	2	163	5815	15.40	17.00	1.445	88.1	1.135	0.12	0.410	0.673
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+8(8)	2	163	5815	15.50	17.00	1.413	88.1	1.135	0.12	0.365	0.585
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+8(4)	2	163	5815	15.40	17.00	1.445	88.1	1.135	0.01	0.370	0.607
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+8(8)	2	163	5815	15.50	17.00	1.413	88.1	1.135	0.01	0.390	0.625
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+8(4)	2	163	5815	15.40	17.00	1.445	88.1	1.135	0.07	0.485	0.796
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+8(8)	2	163	5815	15.50	17.00	1.413	88.1	1.135	0.07	0.209	0.335
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+8(4)	2	163	5815	15.40	17.00	1.445	88.1	1.135	0.03	0.344	0.564
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+8(8)	2	163	5815	15.50	17.00	1.413	88.1	1.135	0.03	0.248	0.398
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+8(4)	3	163	5815	12.00	14.00	1.585	88.1	1.135	0.04	0.153	0.275
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+8(8)	3	163	5815	12.90	14.00	1.288	88.1	1.135	0.04	0.109	0.159
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+8(4)	3	163	5815	12.00	14.00	1.585	88.1	1.135	0.1	0.135	0.243
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+8(8)	3	163	5815	12.90	14.00	1.288	88.1	1.135	0.1	0.115	0.168
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+8(4)	3	163	5815	12.00	14.00	1.585	88.1	1.135	0.05	0.179	0.322
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+8(8)	3	163	5815	12.90	14.00	1.288	88.1	1.135	0.05	0.062	0.091
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+8(4)	3	163	5815	12.00	14.00	1.585	88.1	1.135	0.18	0.123	0.221
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+8(8)	3	163	5815	12.90	14.00	1.288	88.1	1.135	0.18	0.072	0.105
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+8(4)	4	163	5815	12.00	14.00	1.585	88.1	1.135	0.04	0.153	0.275
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+8(8)	4	163	5815	12.90	14.00	1.288	88.1	1.135	0.04	0.109	0.159
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+8(4)	4	163	5815	12.00	14.00	1.585	88.1	1.135	0.1	0.135	0.243
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+8(8)	4	163	5815	12.90	14.00	1.288	88.1	1.135	0.1	0.115	0.168
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+8(4)	4	163	5815	12.00	14.00	1.585	88.1	1.135	0.05	0.179	0.322
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+8(8)	4	163	5815	12.90	14.00	1.288	88.1	1.135	0.05	0.062	0.091
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+8(4)	4	163	5815	12.00	14.00	1.585	88.1	1.135	0.18	0.123	0.221
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+8(8)	4	163	5815	12.90	14.00	1.288	88.1	1.135	0.18	0.072	0.105



<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)
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+8(4)	1/2	175	6825	15.10	17.00	1.549	92.19	1.085	-0.1	0.232	0.390	2.080
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+8(8)	1/2	175	6825	16.60	17.00	1.096	92.19	1.085	-0.1	0.215	0.256	1.930
	WLAN6GHz	802.11ax-HE160 MCS0	Right Tilted	0mm	Ant 4+8(4)	1/2	175	6825	15.10	17.00	1.549	92.19	1.085	0.12	0.211	0.355	1.890
	WLAN6GHz	802.11ax-HE160 MCS0	Left Cheek	0mm	Ant 4+8(4)	1/2	175	6825	15.10	17.00	1.549	92.19	1.085	-0.11	0.234	0.393	2.170
	WLAN6GHz	802.11ax-HE160 MCS0	Left Cheek	0mm	Ant 4+8(8)	1/2	175	6825	16.60	17.00	1.096	92.19	1.085	-0.11	0.229	0.272	2.060
35	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	1/2	175	6825	15.10	17.00	1.549	92.19	1.085	0.08	0.248	0.417	2.250
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	1/2	15	6025	14.70	16.00	1.349	92.19	1.085	0.01	0.270	0.395	2.630
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	1/2	47	6185	14.60	16.00	1.380	92.19	1.085	0.11	0.190	0.285	1.660
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	1/2	111	6505	15.00	16.00	1.259	92.19	1.085	0.16	0.219	0.299	1.970
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	1/2	207	6985	15.40	17.00	1.445	92.19	1.085	-0.11	0.260	0.408	2.330
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+8(4)	3/4	175	6825	15.10	17.00	1.549	92.19	1.085	-0.1	0.232	0.390	2.080
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+8(8)	3/4	175	6825	16.60	17.00	1.096	92.19	1.085	-0.1	0.215	0.256	1.930
	WLAN6GHz	802.11ax-HE160 MCS0	Right Tilted	0mm	Ant 4+8(4)	3/4	175	6825	15.10	17.00	1.549	92.19	1.085	0.12	0.211	0.355	1.890
	WLAN6GHz	802.11ax-HE160 MCS0	Left Cheek	0mm	Ant 4+8(4)	3/4	175	6825	15.10	17.00	1.549	92.19	1.085	-0.11	0.234	0.393	2.170
	WLAN6GHz	802.11ax-HE160 MCS0	Left Cheek	0mm	Ant 4+8(8)	3/4	175	6825	16.60	17.00	1.096	92.19	1.085	-0.11	0.229	0.272	2.060
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	3/4	175	6825	15.10	17.00	1.549	92.19	1.085	0.08	0.248	0.417	2.250
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	3/4	15	6025	14.70	15.50	1.202	92.19	1.085	0.01	0.270	0.352	2.630
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	3/4	47	6185	14.60	15.50	1.230	92.19	1.085	0.11	0.190	0.254	1.660
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	3/4	111	6505	15.00	16.00	1.259	92.19	1.085	0.16	0.219	0.299	1.970
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+8(4)	3/4	207	6985	15.40	16.50	1.288	92.19	1.085	-0.11	0.260	0.363	2.330

<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	11.45	12.00	1.135	77.1	1.080	-0.08	0.003	0.004
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4	1	78	2480	11.45	12.00	1.135	77.1	1.080	0	0.001	0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4	1	78	2480	11.45	12.00	1.135	77.1	1.080	-0.17	0.093	0.114
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	1	78	2480	11.45	12.00	1.135	77.1	1.080	-0.08	0.160	0.196
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 3	1	39	2441	14.75	15.00	1.059	77.1	1.080	0.04	0.115	0.132
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 3	1	39	2441	14.75	15.00	1.059	77.1	1.080	-0.1	0.003	0.003
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	1	39	2441	14.75	15.00	1.059	77.1	1.080	-0.03	0.170	0.194
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 3	1	39	2441	14.75	15.00	1.059	77.1	1.080	-0.04	0.003	0.003
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 4+3(4)	1	78	2480	11.48	12.00	1.127	76.83	1.084	-0.05	0.057	0.070
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 4+3(3)	1	78	2480	10.13	12.00	1.538	76.83	1.084	-0.05	0.041	0.068
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4+3(4)	1	78	2480	11.48	12.00	1.127	76.83	1.084	-0.02	0.075	0.092
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4+3(4)	1	78	2480	11.48	12.00	1.127	76.83	1.084	-0.08	0.076	0.093
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4+3(3)	1	78	2480	10.13	12.00	1.538	76.83	1.084	-0.08	0.022	0.037
36	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4+3(4)	1	78	2480	11.48	12.00	1.127	76.83	1.084	-0.03	0.162	0.198



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	128	824.2	27.05	27.50	1.109	-0.16	0.493	0.547
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	4	128	824.2	27.05	27.50	1.109	-0.09	0.546	0.606
	GSM850_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	4	128	824.2	27.05	27.50	1.109	-0.13	0.238	0.264
	GSM850_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	4	128	824.2	27.05	27.50	1.109	-0.09	0.001	0.001
	GSM850_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	128	824.2	27.05	27.50	1.109	-0.14	0.611	0.678
37	GSM850_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	189	836.4	26.74	27.50	1.191	-0.14	0.673	0.802
	GSM850_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	251	848.8	26.72	27.50	1.197	-0.06	0.623	0.746
	GSM850_Ant 1	GPRS (4 Tx slots)	Front	10mm	4	128	824.2	28.96	30.50	1.426	-0.02	0.236	0.336
	GSM850_Ant 1	GPRS (4 Tx slots)	Back	10mm	4	128	824.2	28.96	30.50	1.426	-0.16	0.300	0.428
	GSM850_Ant 1	GPRS (4 Tx slots)	Back	10mm	4	189	836.4	28.73	30.50	1.503	-0.12	0.333	0.501
	GSM850_Ant 1	GPRS (4 Tx slots)	Back	10mm	4	251	848.8	28.56	30.50	1.563	-0.11	0.345	0.539
	GSM850_Ant 1	GPRS (4 Tx slots)	Left Side	10mm	4	128	824.2	28.96	30.50	1.426	-0.03	0.113	0.161
	GSM850_Ant 1	GPRS (4 Tx slots)	Right Side	10mm	4	128	824.2	28.96	30.50	1.426	-0.02	0.091	0.130
	GSM850_Ant 1	GPRS (4 Tx slots)	Top Side	10mm	4	128	824.2	28.96	30.50	1.426	-0.17	0.173	0.247
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	4	661	1880	25.07	25.20	1.030	-0.06	0.453	0.467
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	4	661	1880	25.07	25.20	1.030	-0.09	0.728	0.750
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	4	512	1850.2	24.84	25.20	1.086	-0.19	0.726	0.789
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	4	810	1909.8	24.81	25.20	1.094	-0.14	0.700	0.766
	GSM1900_Ant 2	GPRS (4 Tx slots)	Left Side	10mm	4	661	1880	25.07	25.20	1.030	-0.09	0.050	0.052
	GSM1900_Ant 2	GPRS (4 Tx slots)	Right Side	10mm	4	661	1880	25.07	25.20	1.030	-0.11	0.724	0.746
	GSM1900_Ant 2	GPRS (4 Tx slots)	Bottom Side	10mm	4	661	1880	25.07	25.20	1.030	-0.06	0.212	0.218
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	4	661	1880	21.54	21.70	1.038	0.08	0.449	0.466
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	4	661	1880	21.54	21.70	1.038	-0.02	0.460	0.477
	GSM1900_Ant 0	GPRS (4 Tx slots)	Left Side	10mm	4	661	1880	21.54	21.70	1.038	-0.12	0.050	0.052
	GSM1900_Ant 0	GPRS (4 Tx slots)	Right Side	10mm	4	661	1880	21.54	21.70	1.038	-0.12	0.024	0.025
38	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	661	1880	21.54	21.70	1.038	-0.17	0.864	0.896
	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	512	1850.2	21.50	21.70	1.047	-0.02	0.790	0.827
	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	810	1909.8	21.48	21.70	1.052	0.07	0.817	0.859



<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	23.39	23.50	1.026	-0.04	0.676	0.693
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	4	9400	1880	23.39	23.50	1.026	-0.12	0.778	0.798
	WCDMA II_Ant 2	RMC 12.2Kbps	Left side	10mm	4	9400	1880	23.39	23.50	1.026	-0.02	0.040	0.041
	WCDMA II_Ant 2	RMC 12.2Kbps	Right side	10mm	4	9400	1880	23.39	23.50	1.026	-0.06	0.848	0.870
	WCDMA II_Ant 2	RMC 12.2Kbps	Right side	10mm	4	9262	1852.4	23.21	23.50	1.069	-0.07	0.836	0.894
	WCDMA II_Ant 2	RMC 12.2Kbps	Right side	10mm	4	9538	1907.6	23.34	23.50	1.038	-0.08	0.798	0.828
	WCDMA II_Ant 2	RMC 12.2Kbps	Bottom Side	10mm	4	9400	1880	23.39	23.50	1.026	0	0.182	0.187
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	4	9538	1907.6	18.55	18.90	1.084	0.02	0.371	0.402
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	4	9538	1907.6	18.55	18.90	1.084	-0.05	0.345	0.374
	WCDMA II_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	9538	1907.6	18.55	18.90	1.084	-0.01	0.038	0.041
	WCDMA II_Ant 0	RMC 12.2Kbps	Right Side	10mm	4	9538	1907.6	18.55	18.90	1.084	0.02	0.002	0.002
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	9538	1907.6	18.55	18.90	1.084	-0.03	0.817	0.886
39	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	9262	1852.4	18.52	18.90	1.091	-0.04	0.820	0.895
	WCDMA II_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	9400	1880	18.54	18.90	1.086	-0.03	0.774	0.841
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	10mm	4	1513	1752.6	23.70	24.10	1.096	-0.02	0.519	0.569
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	4	1513	1752.6	23.70	24.10	1.096	0	0.725	0.795
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Side	10mm	4	1513	1752.6	23.70	24.10	1.096	-0.05	0.048	0.053
40	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Side	10mm	4	1513	1752.6	23.70	24.10	1.096	-0.01	0.812	0.890
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Side	10mm	4	1312	1712.4	23.49	24.10	1.151	-0.08	0.613	0.705
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Side	10mm	4	1413	1732.6	23.61	24.10	1.119	-0.16	0.704	0.788
	WCDMA IV_Ant 2	RMC 12.2Kbps	Bottom Side	10mm	4	1513	1752.6	23.70	24.10	1.096	-0.03	0.403	0.442
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	4	1513	1752.6	19.23	19.40	1.040	0.08	0.382	0.397
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	4	1513	1752.6	19.23	19.40	1.040	-0.03	0.354	0.368
	WCDMA IV_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	1513	1752.6	19.23	19.40	1.040	0.06	0.080	0.083
	WCDMA IV_Ant 0	RMC 12.2Kbps	Right Side	10mm	4	1513	1752.6	19.23	19.40	1.040	0.05	0.035	0.036
	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	1513	1752.6	19.23	19.40	1.040	0.02	0.823	0.856
	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	1312	1712.4	19.20	19.40	1.047	-0.03	0.752	0.787
	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	1413	1732.6	19.19	19.40	1.050	-0.01	0.765	0.803
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	4	4132	826.4	23.18	23.50	1.076	-0.01	0.511	0.550
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4	4132	826.4	23.18	23.50	1.076	0.04	0.752	0.810
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4	4182	836.4	23.04	23.50	1.112	0.09	0.666	0.740
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	4	4233	846.6	23.02	23.50	1.117	0.05	0.720	0.804
	WCDMA V_Ant 0	RMC 12.2Kbps	Left Side	10mm	4	4132	826.4	23.18	23.50	1.076	-0.02	0.294	0.316
	WCDMA V_Ant 0	RMC 12.2Kbps	Right Side	10mm	4	4132	826.4	23.18	23.50	1.076	-0.03	0.001	0.001
41	WCDMA V_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	4132	826.4	23.18	23.50	1.076	-0.18	0.788	0.848
	WCDMA V_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	4182	836.4	23.04	23.50	1.112	0.09	0.735	0.817
	WCDMA V_Ant 0	RMC 12.2Kbps	Bottom Side	10mm	4	4233	846.6	23.02	23.50	1.117	-0.05	0.675	0.754
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	10mm	4	4132	826.4	24.58	25.50	1.236	0	0.241	0.298
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	4	4132	826.4	24.58	25.50	1.236	-0.1	0.381	0.471
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	4	4182	836.4	24.57	25.50	1.239	-0.16	0.391	0.484
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	4	4233	846.6	24.49	25.50	1.262	-0.11	0.356	0.449
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	4	4132	826.4	24.58	25.50	1.236	-0.06	0.156	0.193
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Side	10mm	4	4132	826.4	24.58	25.50	1.236	-0.02	0.144	0.178
	WCDMA V_Ant 1	RMC 12.2Kbps	Top Side	10mm	4	4132	826.4	24.58	25.50	1.236	-0.14	0.179	0.221



<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	20.51	21.20	1.172	-0.11	0.363	0.426
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	4	18900	1880	20.42	21.20	1.197	0.03	0.358	0.428
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	4	18900	1880	20.51	21.20	1.172	0.06	0.344	0.403
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	4	18900	1880	20.42	21.20	1.197	0.05	0.339	0.406
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Side	10mm	4	18900	1880	20.51	21.20	1.172	-0.09	0.063	0.074
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Side	10mm	4	18900	1880	20.42	21.20	1.197	-0.18	0.059	0.071
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Side	10mm	4	18900	1880	20.51	21.20	1.172	-0.14	0.008	0.009
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Side	10mm	4	18900	1880	20.42	21.20	1.197	0.07	0.008	0.010
42	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	18900	1880	20.51	21.20	1.172	-0.15	0.758	0.889
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	18700	1860	20.36	21.20	1.213	0.04	0.710	0.862
	LTE Band 2_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	19100	1900	20.43	21.20	1.194	-0.06	0.701	0.837
	LTE Band 2_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	18900	1880	20.42	21.20	1.197	0.01	0.711	0.851
	LTE Band 2_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	18700	1860	20.34	21.20	1.219	0.04	0.698	0.851
	LTE Band 2_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	19100	1900	20.41	21.20	1.199	0.01	0.712	0.854
	LTE Band 2_Ant 1	20M	QPSK	100	0	Top Side	10mm	4	18900	1880	20.35	21.20	1.216	0.04	0.708	0.861
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	4	18700	1860	23.85	24.00	1.035	-0.05	0.263	0.272
	LTE Band 2_Ant 5	20M	QPSK	50	0	Front	10mm	4	18700	1860	23.44	24.00	1.138	-0.07	0.200	0.228
	LTE Band 2_Ant 5	20M	QPSK	1	0	Back	10mm	4	18700	1860	23.85	24.00	1.035	0.03	0.527	0.546
	LTE Band 2_Ant 5	20M	QPSK	50	0	Back	10mm	4	18700	1860	23.44	24.00	1.138	0.09	0.381	0.433
	LTE Band 2_Ant 5	20M	QPSK	1	0	Left side	10mm	4	18700	1860	23.85	24.00	1.035	0.04	0.001	0.001
	LTE Band 2_Ant 5	20M	QPSK	50	0	Left side	10mm	4	18700	1860	23.44	24.00	1.138	-0.02	0.001	0.001
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right side	10mm	4	18700	1860	23.85	24.00	1.035	-0.16	0.855	0.885
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right side	10mm	4	18900	1880	23.83	24.00	1.040	-0.12	0.823	0.856
	LTE Band 2_Ant 5	20M	QPSK	1	0	Right side	10mm	4	19100	1900	23.80	24.00	1.047	0.05	0.817	0.856
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right side	10mm	4	18700	1860	23.44	24.00	1.138	0.06	0.735	0.836
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right side	10mm	4	18900	1880	23.38	24.00	1.153	0.01	0.704	0.812
	LTE Band 2_Ant 5	20M	QPSK	50	0	Right side	10mm	4	19100	1900	23.33	24.00	1.167	-0.02	0.698	0.814
	LTE Band 2_Ant 5	20M	QPSK	100	0	Right side	10mm	4	18700	1860	23.38	24.00	1.153	0.01	0.724	0.835
	LTE Band 2_Ant 5	20M	QPSK	1	0	Top Side	10mm	4	18700	1860	23.85	24.00	1.035	0.05	0.071	0.073
	LTE Band 2_Ant 5	20M	QPSK	50	0	Top Side	10mm	4	18700	1860	23.44	24.00	1.138	-0.06	0.063	0.072



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	99	Front	10mm	4	21350	2560	21.42	21.50	1.019	-0.14	0.425	0.433
	LTE Band 7_Ant 2	20M	QPSK	50	24	Front	10mm	4	21350	2560	21.44	21.50	1.014	-0.18	0.424	0.430
	LTE Band 7_Ant 2	20M	QPSK	1	99	Back	10mm	4	21350	2560	21.42	21.50	1.019	-0.03	0.503	0.512
	LTE Band 7_Ant 2	20M	QPSK	50	24	Back	10mm	4	21350	2560	21.44	21.50	1.014	-0.01	0.444	0.450
	LTE Band 7_Ant 2	20M	QPSK	1	99	Left side	10mm	4	21350	2560	21.42	21.50	1.019	-0.1	0.027	0.028
	LTE Band 7_Ant 2	20M	QPSK	50	24	Left side	10mm	4	21350	2560	21.44	21.50	1.014	-0.1	0.026	0.026
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Side	10mm	4	21350	2560	21.42	21.50	1.019	-0.18	0.848	0.864
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Side	10mm	4	20850	2510	21.35	21.50	1.035	-0.08	0.691	0.715
	LTE Band 7_Ant 2	20M	QPSK	1	99	Right Side	10mm	4	21100	2535	21.27	21.50	1.054	-0.06	0.780	0.822
	LTE Band 7_Ant 2	20M	QPSK	50	24	Right Side	10mm	4	21350	2560	21.44	21.50	1.014	-0.01	0.700	0.710
	LTE Band 7_Ant 2	20M	QPSK	100	0	Right Side	10mm	4	21350	2560	21.48	21.50	1.005	-0.04	0.720	0.723
	LTE Band 7_Ant 2	20M	QPSK	1	99	Bottom Side	10mm	4	21350	2560	21.42	21.50	1.019	-0.05	0.213	0.217
	LTE Band 7_Ant 2	20M	QPSK	50	24	Bottom Side	10mm	4	21350	2560	21.44	21.50	1.014	0.16	0.222	0.225
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	21100	2535	20.78	21.50	1.180	0.03	0.708	0.836
	LTE Band 7_Ant 0	20M	QPSK	1	99	Front	10mm	4	20850	2510	18.59	19.10	1.125	0.02	0.396	0.445
	LTE Band 7_Ant 0	20M	QPSK	50	0	Front	10mm	4	20850	2510	18.50	19.10	1.148	0.04	0.363	0.417
	LTE Band 7_Ant 0	20M	QPSK	1	99	Back	10mm	4	20850	2510	18.59	19.10	1.125	-0.08	0.342	0.385
	LTE Band 7_Ant 0	20M	QPSK	50	0	Back	10mm	4	20850	2510	18.50	19.10	1.148	0.02	0.314	0.361
	LTE Band 7_Ant 0	20M	QPSK	1	99	Left Side	10mm	4	20850	2510	18.59	19.10	1.125	-0.01	0.022	0.025
	LTE Band 7_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	20850	2510	18.50	19.10	1.148	0.1	0.020	0.023
	LTE Band 7_Ant 0	20M	QPSK	1	99	Right Side	10mm	4	20850	2510	18.59	19.10	1.125	-0.07	0.006	0.007
	LTE Band 7_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	20850	2510	18.50	19.10	1.148	0.12	0.008	0.009
	LTE Band 7_Ant 0	20M	QPSK	1	99	Bottom Side	10mm	4	20850	2510	18.59	19.10	1.125	-0.17	0.619	0.696
	LTE Band 7_Ant 0	20M	QPSK	1	99	Bottom Side	10mm	4	21100	2535	18.47	19.10	1.156	0.09	0.708	0.819
	LTE Band 7_Ant 0	20M	QPSK	1	99	Bottom Side	10mm	4	21350	2560	18.44	19.10	1.164	-0.17	0.706	0.822
	LTE Band 7_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	20850	2510	18.50	19.10	1.148	-0.04	0.568	0.652
	LTE Band 7_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	21100	2535	18.49	19.10	1.151	0	0.737	0.848
43	LTE Band 7_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	21350	2560	18.49	19.10	1.151	0	0.755	0.869
	LTE Band 7_Ant 0	20M	QPSK	100	0	Bottom Side	10mm	4	20850	2510	18.48	19.10	1.153	0.04	0.544	0.627
	LTE Band 7C_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	21100	2535	17.49	19.10	1.449	0.08	0.551	0.798
	LTE Band 12_Ant 0	10M	QPSK	1	0	Front	10mm	4	23095	707.5	24.87	25.50	1.156	0.09	0.341	0.394
	LTE Band 12_Ant 0	10M	QPSK	25	0	Front	10mm	4	23095	707.5	23.84	24.50	1.164	0	0.270	0.314
	LTE Band 12_Ant 0	10M	QPSK	1	0	Back	10mm	4	23095	707.5	24.87	25.50	1.156	-0.18	0.196	0.227
	LTE Band 12_Ant 0	10M	QPSK	25	0	Back	10mm	4	23095	707.5	23.84	24.50	1.164	-0.18	0.158	0.184
	LTE Band 12_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	23095	707.5	24.87	25.50	1.156	-0.02	0.226	0.261
	LTE Band 12_Ant 0	10M	QPSK	25	0	Left Side	10mm	4	23095	707.5	23.84	24.50	1.164	0.1	0.180	0.210
	LTE Band 12_Ant 0	10M	QPSK	1	0	Right Side	10mm	4	23095	707.5	24.87	25.50	1.156	-0.18	0.161	0.186
	LTE Band 12_Ant 0	10M	QPSK	25	0	Right Side	10mm	4	23095	707.5	23.84	24.50	1.164	-0.19	0.120	0.140
44	LTE Band 12_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	23095	707.5	24.87	25.50	1.156	0.03	0.378	0.437
	LTE Band 12_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	4	23095	707.5	23.84	24.50	1.164	-0.03	0.298	0.347
	LTE Band 12_Ant 1	10M	QPSK	1	0	Front	10mm	4	23095	707.5	24.96	25.50	1.132	-0.19	0.159	0.180
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	10mm	4	23095	707.5	23.98	24.50	1.127	-0.02	0.125	0.141
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	10mm	4	23095	707.5	24.96	25.50	1.132	-0.1	0.212	0.240
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	10mm	4	23095	707.5	23.98	24.50	1.127	-0.06	0.175	0.197
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	4	23095	707.5	24.96	25.50	1.132	0.01	0.103	0.117
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Side	10mm	4	23095	707.5	23.98	24.50	1.127	-0.16	0.082	0.092
	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Side	10mm	4	23095	707.5	24.96	25.50	1.132	-0.04	0.163	0.185
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Side	10mm	4	23095	707.5	23.98	24.50	1.127	0.02	0.131	0.148
	LTE Band 12_Ant 1	10M	QPSK	1	0	Top Side	10mm	4	23095	707.5	24.96	25.50	1.132	-0.12	0.113	0.128
	LTE Band 12_Ant 1	10M	QPSK	25	0	Top Side	10mm	4	23095	707.5	23.98	24.50	1.127	0.18	0.090	0.101



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	24.73	25.50	1.194	-0.14	0.456	0.544
	LTE Band 13_Ant 0	10M	QPSK	25	0	Front	10mm	4	23230	782	23.80	24.50	1.175	-0.1	0.368	0.432
	LTE Band 13_Ant 0	10M	QPSK	1	0	Back	10mm	4	23230	782	24.73	25.50	1.194	-0.17	0.513	0.613
	LTE Band 13_Ant 0	10M	QPSK	25	0	Back	10mm	4	23230	782	23.80	24.50	1.175	-0.12	0.415	0.488
45	LTE Band 13_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	23230	782	24.73	25.50	1.194	-0.03	0.579	0.691
	LTE Band 13_Ant 0	10M	QPSK	25	0	Left Side	10mm	4	23230	782	23.80	24.50	1.175	0.17	0.460	0.540
	LTE Band 13_Ant 0	10M	QPSK	1	0	Right Side	10mm	4	23230	782	24.73	25.50	1.194	0.08	0.286	0.341
	LTE Band 13_Ant 0	10M	QPSK	25	0	Right Side	10mm	4	23230	782	23.80	24.50	1.175	-0.01	0.310	0.364
	LTE Band 13_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	23230	782	24.73	25.50	1.194	-0.07	0.569	0.679
	LTE Band 13_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	4	23230	782	23.80	24.50	1.175	0.01	0.450	0.529
	LTE Band 13_Ant 1	10M	QPSK	1	0	Front	10mm	4	23230	782	24.77	25.50	1.183	-0.1	0.278	0.329
	LTE Band 13_Ant 1	10M	QPSK	25	0	Front	10mm	4	23230	782	23.89	24.50	1.151	-0.02	0.220	0.253
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	10mm	4	23230	782	24.77	25.50	1.183	-0.15	0.379	0.448
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	10mm	4	23230	782	23.89	24.50	1.151	0.09	0.318	0.366
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	4	23230	782	24.77	25.50	1.183	0	0.211	0.250
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Side	10mm	4	23230	782	23.89	24.50	1.151	-0.07	0.171	0.197
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Side	10mm	4	23230	782	24.77	25.50	1.183	-0.02	0.202	0.239
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Side	10mm	4	23230	782	23.89	24.50	1.151	0.1	0.160	0.184
	LTE Band 13_Ant 1	10M	QPSK	1	0	Top Side	10mm	4	23230	782	24.77	25.50	1.183	0.08	0.202	0.239
	LTE Band 13_Ant 1	10M	QPSK	25	0	Top Side	10mm	4	23230	782	23.89	24.50	1.151	-0.08	0.161	0.185
	LTE Band 14_Ant 0	10M	QPSK	1	0	Front	10mm	4	23330	793	24.77	25.50	1.183	-0.02	0.525	0.621
	LTE Band 14_Ant 0	10M	QPSK	25	0	Front	10mm	4	23330	793	23.84	24.50	1.164	0.02	0.420	0.489
	LTE Band 14_Ant 0	10M	QPSK	1	0	Back	10mm	4	23330	793	24.77	25.50	1.183	0.07	0.542	0.641
	LTE Band 14_Ant 0	10M	QPSK	25	0	Back	10mm	4	23330	793	23.84	24.50	1.164	0.03	0.442	0.515
	LTE Band 14_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	23330	793	24.77	25.50	1.183	-0.06	0.543	0.642
	LTE Band 14_Ant 0	10M	QPSK	25	0	Left Side	10mm	4	23330	793	23.84	24.50	1.164	0.03	0.448	0.522
	LTE Band 14_Ant 0	10M	QPSK	1	0	Right Side	10mm	4	23330	793	24.77	25.50	1.183	-0.07	0.286	0.338
	LTE Band 14_Ant 0	10M	QPSK	25	0	Right Side	10mm	4	23330	793	23.84	24.50	1.164	0.11	0.220	0.256
46	LTE Band 14_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	23330	793	24.77	25.50	1.183	-0.17	0.599	0.709
	LTE Band 14_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	4	23330	793	23.84	24.50	1.164	0.04	0.496	0.577
	LTE Band 14_Ant 1	10M	QPSK	1	0	Front	10mm	4	23330	793	24.91	25.50	1.146	-0.19	0.246	0.282
	LTE Band 14_Ant 1	10M	QPSK	25	0	Front	10mm	4	23330	793	23.97	24.50	1.130	0.08	0.193	0.218
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	10mm	4	23330	793	24.91	25.50	1.146	-0.03	0.333	0.381
	LTE Band 14_Ant 1	10M	QPSK	25	0	Back	10mm	4	23330	793	23.97	24.50	1.130	0.03	0.262	0.296
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	4	23330	793	24.91	25.50	1.146	0	0.139	0.159
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Side	10mm	4	23330	793	23.97	24.50	1.130	0.16	0.111	0.125
	LTE Band 14_Ant 1	10M	QPSK	1	0	Right Side	10mm	4	23330	793	24.91	25.50	1.146	-0.17	0.181	0.207
	LTE Band 14_Ant 1	10M	QPSK	25	0	Right Side	10mm	4	23330	793	23.97	24.50	1.130	-0.06	0.146	0.165
	LTE Band 14_Ant 1	10M	QPSK	1	0	Top Side	10mm	4	23330	793	24.91	25.50	1.146	-0.04	0.193	0.221
	LTE Band 14_Ant 1	10M	QPSK	25	0	Top Side	10mm	4	23330	793	23.97	24.50	1.130	-0.17	0.157	0.177



FCC SAR TEST REPORT

Report No. : FA102919-05E

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	23.44	23.50	1.014	-0.07	0.720	0.730
	LTE Band 25_Ant 2	20M	QPSK	50	0	Front	10mm	4	26340	1880	23.46	23.50	1.009	-0.08	0.712	0.719
	LTE Band 25_Ant 2	20M	QPSK	1	0	Back	10mm	4	26340	1880	23.44	23.50	1.014	-0.11	0.850	0.862
	LTE Band 25_Ant 2	20M	QPSK	1	0	Back	10mm	4	26140	1860	23.41	23.50	1.021	-0.08	0.859	0.877
	LTE Band 25_Ant 2	20M	QPSK	1	0	Back	10mm	4	26590	1905	23.39	23.50	1.026	-0.13	0.788	0.808
	LTE Band 25_Ant 2	20M	QPSK	50	0	Back	10mm	4	26340	1880	23.46	23.50	1.009	-0.08	0.700	0.706
	LTE Band 25_Ant 2	20M	QPSK	100	0	Back	10mm	4	26340	1880	23.41	23.50	1.021	-0.01	0.710	0.725
	LTE Band 25_Ant 2	20M	QPSK	1	0	Left side	10mm	4	26340	1880	23.44	23.50	1.014	-0.16	0.074	0.075
	LTE Band 25_Ant 2	20M	QPSK	50	0	Left side	10mm	4	26340	1880	23.46	23.50	1.009	-0.14	0.080	0.081
	LTE Band 25_Ant 2	20M	QPSK	1	0	Right side	10mm	4	26340	1880	23.44	23.50	1.014	-0.16	0.664	0.673
	LTE Band 25_Ant 2	20M	QPSK	50	0	Right side	10mm	4	26340	1880	23.46	23.50	1.009	-0.16	0.591	0.596
	LTE Band 25_Ant 2	20M	QPSK	1	0	Bottom side	10mm	4	26340	1880	23.44	23.50	1.014	0.07	0.170	0.172
	LTE Band 25_Ant 2	20M	QPSK	50	0	Bottom side	10mm	4	26340	1880	23.46	23.50	1.009	-0.08	0.151	0.152
	LTE Band 25_Ant 0	20M	QPSK	1	0	Front	10mm	4	26340	1880	18.51	19.20	1.172	-0.12	0.353	0.414
	LTE Band 25_Ant 0	20M	QPSK	50	0	Front	10mm	4	26340	1880	18.45	19.20	1.189	-0.07	0.358	0.425
	LTE Band 25_Ant 0	20M	QPSK	1	0	Back	10mm	4	26340	1880	18.51	19.20	1.172	-0.09	0.339	0.397
	LTE Band 25_Ant 0	20M	QPSK	50	0	Back	10mm	4	26340	1880	18.45	19.20	1.189	-0.02	0.349	0.415
	LTE Band 25_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	26340	1880	18.51	19.20	1.172	0	0.074	0.087
	LTE Band 25_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	26340	1880	18.45	19.20	1.189	-0.03	0.074	0.088
	LTE Band 25_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	26340	1880	18.51	19.20	1.172	-0.06	0.018	0.021
	LTE Band 25_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	26340	1880	18.45	19.20	1.189	-0.1	0.018	0.021
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	26340	1880	18.51	19.20	1.172	-0.17	0.729	0.855
47	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	26140	1860	18.49	19.20	1.178	-0.05	0.759	0.894
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	26590	1905	18.32	19.20	1.225	-0.11	0.670	0.820
	LTE Band 25_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	26340	1880	18.45	19.20	1.189	-0.08	0.727	0.864
	LTE Band 25_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	26140	1860	18.44	19.20	1.191	0.05	0.748	0.891
	LTE Band 25_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	26590	1905	18.29	19.20	1.233	-0.06	0.666	0.821
	LTE Band 25_Ant 0	20M	QPSK	100	0	Bottom Side	10mm	4	26340	1880	18.36	19.20	1.213	0.05	0.722	0.876
	LTE Band 26_Ant 0	15M	QPSK	1	0	Front	10mm	4	26865	831.5	24.76	25.50	1.186	-0.06	0.684	0.811
	LTE Band 26_Ant 0	15M	QPSK	36	0	Front	10mm	4	26865	831.5	23.62	24.50	1.225	-0.16	0.528	0.647
	LTE Band 26_Ant 0	15M	QPSK	75	0	Front	10mm	4	26865	831.5	23.57	24.50	1.239	0.05	0.519	0.643
	LTE Band 26_Ant 0	15M	QPSK	1	0	Back	10mm	4	26865	831.5	24.76	25.50	1.186	-0.05	0.712	0.844
	LTE Band 26_Ant 0	15M	QPSK	36	0	Back	10mm	4	26865	831.5	23.62	24.50	1.225	0.16	0.547	0.670
	LTE Band 26_Ant 0	15M	QPSK	75	0	Back	10mm	4	26865	831.5	23.57	24.50	1.239	-0.09	0.533	0.660
	LTE Band 26_Ant 0	15M	QPSK	1	0	Left Side	10mm	4	26865	831.5	24.76	25.50	1.186	-0.09	0.559	0.663
	LTE Band 26_Ant 0	15M	QPSK	36	0	Left Side	10mm	4	26865	831.5	23.62	24.50	1.225	0.02	0.430	0.527
	LTE Band 26_Ant 0	15M	QPSK	1	0	Right Side	10mm	4	26865	831.5	24.76	25.50	1.186	-0.13	0.163	0.193
	LTE Band 26_Ant 0	15M	QPSK	36	0	Right Side	10mm	4	26865	831.5	23.62	24.50	1.225	0	0.126	0.154
48	LTE Band 26_Ant 0	15M	QPSK	1	0	Bottom Side	10mm	4	26865	831.5	24.76	25.50	1.186	-0.07	0.748	0.887
	LTE Band 26_Ant 0	15M	QPSK	36	0	Bottom Side	10mm	4	26865	831.5	23.62	24.50	1.225	0.02	0.569	0.697
	LTE Band 26_Ant 0	15M	QPSK	75	0	Bottom Side	10mm	4	26865	831.5	23.57	24.50	1.239	-0.01	0.564	0.699
	LTE Band 5B_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	20600	844	23.52	24.50	1.253	0.07	0.701	0.878
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	10mm	4	26865	831.5	24.54	25.50	1.247	-0.07	0.298	0.372
	LTE Band 26_Ant 1	15M	QPSK	36	0	Front	10mm	4	26865	831.5	23.69	24.50	1.205	-0.01	0.240	0.289
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	10mm	4	26865	831.5	24.54	25.50	1.247	-0.09	0.433	0.540
	LTE Band 26_Ant 1	15M	QPSK	36	0	Back	10mm	4	26865	831.5	23.69	24.50	1.205	0	0.356	0.429
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	4	26865	831.5	24.54	25.50	1.247	-0.08	0.148	0.185
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Side	10mm	4	26865	831.5	23.69	24.50	1.205	-0.09	0.120	0.145
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Side	10mm	4	26865	831.5	24.54	25.50	1.247	-0.05	0.212	0.264
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Side	10mm	4	26865	831.5	23.69	24.50	1.205	0.19	0.173	0.208
	LTE Band 26_Ant 1	15M	QPSK	1	0	Top Side	10mm	4	26865	831.5	24.54	25.50	1.247	0.02	0.273	0.341
	LTE Band 26_Ant 1	15M	QPSK	36	0	Top Side	10mm	4	26865	831.5	23.69	24.50	1.205	-0.17	0.225	0.271
	LTE Band 5B_Ant 1	10M	QPSK	1	0	Back	10mm	4	20575	841.5	23.55	24.50	1.245	0.12	0.412	0.513



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	20.78	20.90	1.028	-0.04	0.482	0.496
	LTE Band 30_Ant 2	10M	QPSK	25	0	Front	10mm	4	27710	2310	20.73	20.90	1.040	0.15	0.556	0.578
	LTE Band 30_Ant 2	10M	QPSK	1	0	Back	10mm	4	27710	2310	20.78	20.90	1.028	-0.08	0.511	0.525
	LTE Band 30_Ant 2	10M	QPSK	25	0	Back	10mm	4	27710	2310	20.73	20.90	1.040	0.01	0.626	0.651
	LTE Band 30_Ant 2	10M	QPSK	1	0	Left Side	10mm	4	27710	2310	20.78	20.90	1.028	0.17	0.011	0.011
	LTE Band 30_Ant 2	10M	QPSK	25	0	Left Side	10mm	4	27710	2310	20.73	20.90	1.040	0.14	0.006	0.006
	LTE Band 30_Ant 2	10M	QPSK	1	0	Right Side	10mm	4	27710	2310	20.78	20.90	1.028	-0.02	0.841	0.865
49	LTE Band 30_Ant 2	10M	QPSK	25	0	Right Side	10mm	4	27710	2310	20.73	20.90	1.040	0.02	0.855	0.889
	LTE Band 30_Ant 2	10M	QPSK	50	0	Right Side	10mm	4	27710	2310	20.64	20.90	1.062	0.06	0.832	0.883
	LTE Band 30_Ant 2	10M	QPSK	1	0	Bottom Side	10mm	4	27710	2310	20.78	20.90	1.028	-0.06	0.214	0.220
	LTE Band 30_Ant 2	10M	QPSK	25	0	Bottom Side	10mm	4	27710	2310	20.73	20.90	1.040	-0.05	0.235	0.244
	LTE Band 30_Ant 0	10M	QPSK	1	0	Front	10mm	4	27710	2310	19.01	19.20	1.045	-0.13	0.474	0.495
	LTE Band 30_Ant 0	10M	QPSK	25	12	Front	10mm	4	27710	2310	18.87	19.20	1.079	0.11	0.451	0.487
	LTE Band 30_Ant 0	10M	QPSK	1	0	Back	10mm	4	27710	2310	19.01	19.20	1.045	0.04	0.431	0.450
	LTE Band 30_Ant 0	10M	QPSK	25	12	Back	10mm	4	27710	2310	18.87	19.20	1.079	-0.07	0.399	0.430
	LTE Band 30_Ant 0	10M	QPSK	1	0	Left Side	10mm	4	27710	2310	19.01	19.20	1.045	-0.01	0.063	0.066
	LTE Band 30_Ant 0	10M	QPSK	25	12	Left Side	10mm	4	27710	2310	18.87	19.20	1.079	-0.04	0.058	0.063
	LTE Band 30_Ant 0	10M	QPSK	1	0	Right Side	10mm	4	27710	2310	19.01	19.20	1.045	0.1	0.031	0.032
	LTE Band 30_Ant 0	10M	QPSK	25	12	Right Side	10mm	4	27710	2310	18.87	19.20	1.079	0.18	0.043	0.046
	LTE Band 30_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	4	27710	2310	19.01	19.20	1.045	0.01	0.842	0.880
	LTE Band 30_Ant 0	10M	QPSK	25	12	Bottom Side	10mm	4	27710	2310	18.87	19.20	1.079	0.17	0.813	0.877
	LTE Band 30_Ant 0	10M	QPSK	50	0	Bottom Side	10mm	4	27710	2310	18.86	19.20	1.081	-0.13	0.804	0.869



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	Front	10mm	4	132322	1745	23.49	23.70	1.050	0.07	0.446	0.468
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	10mm	4	132322	1745	23.52	23.70	1.042	-0.16	0.438	0.457
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	4	132322	1745	23.49	23.70	1.050	0.1	0.653	0.685
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	10mm	4	132322	1745	23.52	23.70	1.042	0.14	0.585	0.610
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left side	10mm	4	132322	1745	23.49	23.70	1.050	-0.11	0.049	0.051
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left side	10mm	4	132322	1745	23.52	23.70	1.042	-0.05	0.049	0.051
50	LTE Band 66_Ant 2	20M	QPSK	1	0	Right side	10mm	4	132322	1745	23.49	23.70	1.050	-0.08	0.804	0.844
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right side	10mm	4	132072	1720	23.47	23.70	1.054	-0.09	0.658	0.694
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right side	10mm	4	132572	1770	23.47	23.70	1.054	-0.05	0.720	0.759
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right side	10mm	4	132322	1745	23.52	23.70	1.042	-0.14	0.633	0.660
	LTE Band 66_Ant 2	20M	QPSK	100	0	Right side	10mm	4	132322	1745	23.40	23.70	1.072	-0.11	0.637	0.683
	LTE Band 66_Ant 2	20M	QPSK	1	0	Bottom side	10mm	4	132322	1745	23.49	23.70	1.050	-0.05	0.253	0.266
	LTE Band 66_Ant 2	20M	QPSK	50	0	Bottom side	10mm	4	132322	1745	23.52	23.70	1.042	-0.05	0.261	0.272
	LTE Band 66B_Ant 2	15M	QPSK	1	74	Right side	10mm	4	132047	1717.5	23.07	23.70	1.156	0.14	0.709	0.820
	LTE Band 66C_Ant 2	20M	QPSK	1	99	Right side	10mm	4	132072	1720	22.94	23.70	1.191	0.08	0.694	0.827
	LTE Band 66_Ant 0	20M	QPSK	1	0	Front	10mm	4	132072	1720	19.47	20.00	1.130	0.01	0.385	0.435
	LTE Band 66_Ant 0	20M	QPSK	50	0	Front	10mm	4	132072	1720	19.50	20.00	1.122	-0.15	0.451	0.506
	LTE Band 66_Ant 0	20M	QPSK	1	0	Back	10mm	4	132072	1720	19.47	20.00	1.130	-0.12	0.337	0.381
	LTE Band 66_Ant 0	20M	QPSK	50	0	Back	10mm	4	132072	1720	19.50	20.00	1.122	0.11	0.311	0.349
	LTE Band 66_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	132072	1720	19.47	20.00	1.130	-0.17	0.058	0.066
	LTE Band 66_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	132072	1720	19.50	20.00	1.122	-0.08	0.061	0.068
	LTE Band 66_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	132072	1720	19.47	20.00	1.130	0.05	0.012	0.014
	LTE Band 66_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	132072	1720	19.50	20.00	1.122	0.02	0.008	0.009
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	132072	1720	19.47	20.00	1.130	-0.15	0.735	0.830
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	132322	1745	19.38	20.00	1.153	0.06	0.659	0.760
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	132572	1770	19.26	20.00	1.186	0	0.638	0.757
	LTE Band 66_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	132072	1720	19.50	20.00	1.122	0.16	0.678	0.761
	LTE Band 66_Ant 0	20M	QPSK	100	0	Bottom Side	10mm	4	132072	1720	19.45	20.00	1.135	0.04	0.681	0.773
	LTE Band 66B_Ant 0	15M	QPSK	1	74	Bottom Side	10mm	4	132047	1717.5	18.59	20.00	1.384	0.08	0.581	0.804
	LTE Band 66C_Ant 0	20M	QPSK	1	99	Bottom Side	10mm	4	132072	1720	18.53	20.00	1.403	-0.16	0.575	0.807
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	10mm	4	132322	1745	23.23	23.30	1.016	-0.06	0.378	0.384
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	10mm	4	132322	1745	23.12	23.30	1.042	0.08	0.348	0.363
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	10mm	4	132322	1745	23.23	23.30	1.016	-0.01	0.355	0.361
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	10mm	4	132322	1745	23.12	23.30	1.042	0.08	0.320	0.334
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	10mm	4	132322	1745	23.23	23.30	1.016	0.07	0.141	0.143
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Side	10mm	4	132322	1745	23.12	23.30	1.042	-0.04	0.142	0.148
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Side	10mm	4	132322	1745	23.23	23.30	1.016	0.07	0.019	0.019
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Side	10mm	4	132322	1745	23.12	23.30	1.042	-0.11	0.015	0.016
	LTE Band 66_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	132322	1745	23.23	23.30	1.016	-0.02	0.751	0.763
	LTE Band 66_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	132072	1720	23.07	23.30	1.054	0.03	0.721	0.760
	LTE Band 66_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	132572	1770	23.11	23.30	1.045	-0.05	0.716	0.748
	LTE Band 66_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	132322	1745	23.12	23.30	1.042	0.08	0.710	0.740
	LTE Band 66_Ant 5	20M	QPSK	1	0	Front	10mm	4	132072	1720	25.08	25.30	1.052	0.11	0.216	0.227
	LTE Band 66_Ant 5	20M	QPSK	50	0	Front	10mm	4	132072	1720	24.02	24.30	1.067	0.16	0.164	0.175
	LTE Band 66_Ant 5	20M	QPSK	1	0	Back	10mm	4	132072	1720	25.08	25.30	1.052	0.14	0.422	0.444
	LTE Band 66_Ant 5	20M	QPSK	50	0	Back	10mm	4	132072	1720	24.02	24.30	1.067	0.17	0.273	0.291
	LTE Band 66_Ant 5	20M	QPSK	1	0	Left Side	10mm	4	132072	1720	25.08	25.30	1.052	0.01	0.001	0.001
	LTE Band 66_Ant 5	20M	QPSK	50	0	Left Side	10mm	4	132072	1720	24.02	24.30	1.067	0.08	0.001	0.001
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	132072	1720	25.08	25.30	1.052	-0.07	0.773	0.813
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	132322	1745	25.02	25.30	1.067	-0.01	0.721	0.769
	LTE Band 66_Ant 5	20M	QPSK	1	0	Right Side	10mm	4	132572	1770	24.78	25.30	1.127	-0.11	0.520	0.586
	LTE Band 66_Ant 5	20M	QPSK	50	0	Right Side	10mm	4	132072	1720	24.02	24.30	1.067	-0.03	0.731	0.780
	LTE Band 66_Ant 5	20M	QPSK	1	0	Top Side	10mm	4	132072	1720	25.08	25.30	1.052	-0.16	0.001	0.001
	LTE Band 66_Ant 5	20M	QPSK	50	0	Top Side	10mm	4	132072	1720	24.02	24.30	1.067	0.13	0.001	0.001



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 71_Ant 0	20M	QPSK	1	0	Front	10mm	4	133297	680.5	24.96	25.50	1.132	-0.02	0.260	0.294
	LTE Band 71_Ant 0	20M	QPSK	50	0	Front	10mm	4	133297	680.5	23.82	24.50	1.169	-0.09	0.200	0.234
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	10mm	4	133297	680.5	24.96	25.50	1.132	-0.1	0.290	0.328
	LTE Band 71_Ant 0	20M	QPSK	50	0	Back	10mm	4	133297	680.5	23.82	24.50	1.169	-0.09	0.222	0.260
51	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	133297	680.5	24.96	25.50	1.132	-0.19	0.370	0.419
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	133297	680.5	23.82	24.50	1.169	0.18	0.282	0.330
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	133297	680.5	24.96	25.50	1.132	-0.18	0.200	0.226
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	133297	680.5	23.82	24.50	1.169	0.02	0.160	0.187
	LTE Band 71_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	133297	680.5	24.96	25.50	1.132	0.09	0.286	0.324
	LTE Band 71_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	133297	680.5	23.82	24.50	1.169	0.14	0.221	0.258
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	10mm	4	133297	680.5	24.98	25.50	1.127	-0.14	0.151	0.170
	LTE Band 71_Ant 1	20M	QPSK	50	0	Front	10mm	4	133297	680.5	23.98	24.50	1.127	-0.04	0.121	0.136
	LTE Band 71_Ant 1	20M	QPSK	1	0	Back	10mm	4	133297	680.5	24.98	25.50	1.127	-0.12	0.170	0.192
	LTE Band 71_Ant 1	20M	QPSK	50	0	Back	10mm	4	133297	680.5	23.98	24.50	1.127	0.14	0.134	0.151
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Side	10mm	4	133297	680.5	24.98	25.50	1.127	0.17	0.176	0.198
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Side	10mm	4	133297	680.5	23.98	24.50	1.127	-0.04	0.143	0.161
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Side	10mm	4	133297	680.5	24.98	25.50	1.127	-0.17	0.108	0.122
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Side	10mm	4	133297	680.5	23.98	24.50	1.127	0.04	0.087	0.098
	LTE Band 71_Ant 1	20M	QPSK	1	0	Top Side	10mm	4	133297	680.5	24.98	25.50	1.127	0.15	0.091	0.103
	LTE Band 71_Ant 1	20M	QPSK	50	0	Top Side	10mm	4	133297	680.5	23.98	24.50	1.127	-0.04	0.081	0.091



<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	23.87	23.90	1.007	62.9	1.006	-0.17	0.441	0.447
	LTE Band 41_Ant 2	20M	QPSK	50	50	Front	10mm	4	40185	2549.5	21.75	21.90	1.035	62.9	1.006	0.04	0.288	0.300
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	10mm	4	40185	2549.5	23.87	23.90	1.007	62.9	1.006	-0.18	0.409	0.414
	LTE Band 41_Ant 2	20M	QPSK	50	50	Back	10mm	4	40185	2549.5	21.75	21.90	1.035	62.9	1.006	-0.11	0.254	0.265
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Side	10mm	4	40185	2549.5	23.87	23.90	1.007	62.9	1.006	-0.11	0.008	0.008
	LTE Band 41_Ant 2	20M	QPSK	50	50	Left Side	10mm	4	40185	2549.5	21.75	21.90	1.035	62.9	1.006	-0.02	0.005	0.005
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	40185	2549.5	23.87	23.90	1.007	62.9	1.006	-0.07	0.758	0.768
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	39750	2506	23.70	23.90	1.047	62.9	1.006	-0.06	0.827	0.871
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	40620	2593	23.86	23.90	1.009	62.9	1.006	0.06	0.868	0.881
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	41055	2636.5	23.85	23.90	1.012	62.9	1.006	0.14	0.867	0.882
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	41490	2680	23.86	23.90	1.009	62.9	1.006	-0.03	0.870	0.883
	LTE Band 41_Ant 2	20M	QPSK	50	50	Right Side	10mm	4	40185	2549.5	21.75	21.90	1.035	62.9	1.006	0.07	0.482	0.502
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	4	40185	2549.5	23.87	23.90	1.007	62.9	1.006	-0.16	0.184	0.186
	LTE Band 41_Ant 2	20M	QPSK	50	50	Bottom Side	10mm	4	40185	2549.5	21.75	21.90	1.035	62.9	1.006	-0.09	0.140	0.146
	LTE Band 41_Ant 2_HPUE	20M	QPSK	1	0	Right Side	10mm	4	40185	2549.5	25.24	25.50	1.062	42.9	1.009	-0.19	0.823	0.882
	LTE Band 41C_Ant 2	20M	QPSK	1	0	Right Side	10mm	4	41490	2680	23.40	23.90	1.122	62.9	1.006	-0.03	0.767	0.866
	LTE Band 41_Ant 0	20M	QPSK	1	0	Front	10mm	4	40620	2593	22.72	22.80	1.019	62.9	1.006	0.18	0.443	0.454
	LTE Band 41_Ant 0	20M	QPSK	50	0	Front	10mm	4	40620	2593	20.65	21.80	1.303	62.9	1.006	-0.02	0.290	0.380
	LTE Band 41_Ant 0	20M	QPSK	1	0	Back	10mm	4	40620	2593	22.72	22.80	1.019	62.9	1.006	-0.02	0.404	0.414
	LTE Band 41_Ant 0	20M	QPSK	50	0	Back	10mm	4	40620	2593	20.65	21.80	1.303	62.9	1.006	0.11	0.254	0.333
	LTE Band 41_Ant 0	20M	QPSK	1	0	Left Side	10mm	4	40620	2593	22.72	22.80	1.019	62.9	1.006	0.19	0.064	0.066
	LTE Band 41_Ant 0	20M	QPSK	50	0	Left Side	10mm	4	40620	2593	20.65	21.80	1.303	62.9	1.006	0.02	0.040	0.052
	LTE Band 41_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	40620	2593	22.72	22.80	1.019	62.9	1.006	0.04	0.042	0.043
	LTE Band 41_Ant 0	20M	QPSK	50	0	Right Side	10mm	4	40620	2593	20.65	21.80	1.303	62.9	1.006	-0.12	0.022	0.029
	LTE Band 41_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	40620	2593	22.72	22.80	1.019	62.9	1.006	-0.02	0.750	0.769
	LTE Band 41_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	39750	2506	22.70	22.80	1.023	62.9	1.006	-0.03	0.528	0.544
	LTE Band 41_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	40185	2549.5	22.70	22.80	1.023	62.9	1.006	-0.07	0.796	0.819
	LTE Band 41_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	41055	2636.5	22.55	22.80	1.059	62.9	1.006	-0.09	0.621	0.662
	LTE Band 41_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	4	41490	2680	22.43	22.80	1.089	62.9	1.006	0.13	0.638	0.699
	LTE Band 41_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	4	40620	2593	20.65	21.80	1.303	62.9	1.006	-0.03	0.456	0.598
52	LTE Band 41_Ant 0_HPUE	20M	QPSK	1	0	Bottom Side	10mm	4	40185	2549.5	24.10	24.40	1.072	42.9	1.009	-0.06	0.820	0.887
	LTE Band 41C_Ant 0	20M	QPSK	1	0	Right Side	10mm	4	41490	2680	22.08	22.80	1.180	62.9	1.006	-0.03	0.680	0.807



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 48_Ant 6	20M	QPSK	1	0	Front	10mm	4	55830	3609	24.59	24.70	1.026	62.9	1.006	-0.1	0.194	0.200
	LTE Band 48_Ant 6	20M	QPSK	50	0	Front	10mm	4	55830	3609	23.79	24.50	1.178	62.9	1.006	-0.15	0.144	0.171
	LTE Band 48_Ant 6	20M	QPSK	1	0	Back	10mm	4	55830	3609	24.59	24.70	1.026	62.9	1.006	-0.18	0.376	0.388
	LTE Band 48_Ant 6	20M	QPSK	50	0	Back	10mm	4	55830	3609	23.79	24.50	1.178	62.9	1.006	0.01	0.291	0.345
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Side	10mm	4	55830	3609	24.59	24.70	1.026	62.9	1.006	-0.17	0.499	0.515
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Side	10mm	4	55340	3560	24.30	24.70	1.096	62.9	1.006	-0.07	0.522	0.576
	LTE Band 48_Ant 6	20M	QPSK	1	0	Left Side	10mm	4	56150	3641	24.58	24.70	1.028	62.9	1.006	0.08	0.548	0.567
53	LTE Band 48_Ant 6	20M	QPSK	1	0	Left side	10mm	4	56640	3690	24.42	24.70	1.067	62.9	1.006	-0.05	0.609	0.653
	LTE Band 48_Ant 6	20M	QPSK	50	0	Left Side	10mm	4	55830	3609	23.79	24.50	1.178	62.9	1.006	-0.14	0.421	0.499
	LTE Band 48_Ant 6	20M	QPSK	1	0	Right Side	10mm	4	55830	3609	24.59	24.70	1.026	62.9	1.006	0.07	0.015	0.015
	LTE Band 48_Ant 6	20M	QPSK	50	0	Right Side	10mm	4	55830	3609	23.79	24.50	1.178	62.9	1.006	0.19	0.006	0.007
	LTE Band 48_Ant 6	20M	QPSK	1	0	Bottom Side	10mm	4	55830	3609	24.59	24.70	1.026	62.9	1.006	0.09	0.111	0.114
	LTE Band 48_Ant 6	20M	QPSK	50	0	Bottom Side	10mm	4	55830	3609	23.79	24.50	1.178	62.9	1.006	0.09	0.061	0.072
	LTE Band 48_Ant 7	20M	QPSK	1	0	Front	10mm	4	56640	3690	23.46	24.20	1.186	62.9	1.006	-0.01	0.163	0.194
	LTE Band 48_Ant 7	20M	QPSK	50	0	Front	10mm	4	56640	3690	22.55	23.20	1.161	62.9	1.006	-0.06	0.135	0.158
	LTE Band 48_Ant 7	20M	QPSK	1	0	Back	10mm	4	56640	3690	23.46	24.20	1.186	62.9	1.006	0.05	0.310	0.370
	LTE Band 48_Ant 7	20M	QPSK	50	0	Back	10mm	4	56640	3690	22.55	23.20	1.161	62.9	1.006	-0.06	0.251	0.293
	LTE Band 48_Ant 7	20M	QPSK	1	0	Left Side	10mm	4	56640	3690	23.46	24.20	1.186	62.9	1.006	0.15	0.033	0.039
	LTE Band 48_Ant 7	20M	QPSK	50	0	Left Side	10mm	4	56640	3690	22.55	23.20	1.161	62.9	1.006	0.13	0.022	0.026
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Side	10mm	4	56640	3690	23.46	24.20	1.186	62.9	1.006	0.12	0.427	0.509
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Side	10mm	4	55340	3560	22.96	24.20	1.330	62.9	1.006	-0.09	0.416	0.557
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Side	10mm	4	55830	3609	23.17	24.20	1.268	62.9	1.006	0.05	0.476	0.607
	LTE Band 48_Ant 7	20M	QPSK	1	0	Right Side	10mm	4	56150	3641	23.36	24.20	1.213	62.9	1.006	-0.1	0.490	0.598
	LTE Band 48_Ant 7	20M	QPSK	50	0	Right Side	10mm	4	56640	3690	22.55	23.20	1.161	62.9	1.006	-0.16	0.384	0.449
	LTE Band 48_Ant 7	20M	QPSK	1	0	Bottom Side	10mm	4	56640	3690	23.46	24.20	1.186	62.9	1.006	-0.03	0.068	0.081
	LTE Band 48_Ant 7	20M	QPSK	50	0	Bottom Side	10mm	4	56640	3690	22.55	23.20	1.161	62.9	1.006	0.14	0.044	0.051



<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 n2_Ant 1	20M	BPSK	1	53	Front	10mm	4	376000	1880	19.25	19.30	1.012	-0.01	0.272	0.275
	FR1 n2_Ant 1	20M	BPSK	50	28	Front	10mm	4	376000	1880	19.12	19.30	1.042	-0.06	0.256	0.267
	FR1 n2_Ant 1	20M	BPSK	1	53	Back	10mm	4	376000	1880	19.25	19.30	1.012	0.11	0.274	0.277
	FR1 n2_Ant 1	20M	BPSK	50	28	Back	10mm	4	376000	1880	19.12	19.30	1.042	0.08	0.257	0.268
	FR1 n2_Ant 1	20M	BPSK	1	53	Left Side	10mm	4	376000	1880	19.25	19.30	1.012	0.03	0.059	0.060
	FR1 n2_Ant 1	20M	BPSK	50	28	Left Side	10mm	4	376000	1880	19.12	19.30	1.042	0	0.051	0.053
	FR1 n2_Ant 1	20M	BPSK	1	53	Right Side	10mm	4	376000	1880	19.25	19.30	1.012	-0.09	0.009	0.009
	FR1 n2_Ant 1	20M	BPSK	50	28	Right Side	10mm	4	376000	1880	19.12	19.30	1.042	-0.1	0.007	0.007
	FR1 n2_Ant 1	20M	BPSK	1	53	Top Side	10mm	4	376000	1880	19.25	19.30	1.012	-0.17	0.739	0.748
	FR1 n2_Ant 1	20M	BPSK	1	53	Top Side	10mm	4	372000	1860	18.86	19.30	1.107	0.08	0.665	0.736
	FR1 n2_Ant 1	20M	BPSK	1	53	Top Side	10mm	4	380000	1900	18.98	19.30	1.076	-0.13	0.609	0.656
	FR1 n2_Ant 1	20M	BPSK	50	28	Top Side	10mm	4	376000	1880	19.12	19.30	1.042	-0.08	0.674	0.703
	FR1 n2_Ant 5	20M	BPSK	1	53	Front	10mm	4	376000	1880	23.79	24.30	1.125	0.04	0.247	0.278
	FR1 n2_Ant 5	20M	BPSK	50	28	Front	10mm	4	376000	1880	23.75	24.30	1.135	-0.15	0.234	0.266
	FR1 n2_Ant 5	20M	BPSK	1	53	Back	10mm	4	376000	1880	23.79	24.30	1.125	-0.01	0.458	0.515
	FR1 n2_Ant 5	20M	BPSK	50	28	Back	10mm	4	376000	1880	23.75	24.30	1.135	0.13	0.465	0.528
	FR1 n2_Ant 5	20M	BPSK	1	53	Left Side	10mm	4	376000	1880	23.79	24.30	1.125	0.14	0.011	0.012
	FR1 n2_Ant 5	20M	BPSK	50	28	Left Side	10mm	4	376000	1880	23.75	24.30	1.135	0.16	0.009	0.010
54	FR1 n2_Ant 5	20M	BPSK	1	53	Right Side	10mm	4	376000	1880	23.79	24.30	1.125	-0.14	0.789	0.887
	FR1 n2_Ant 5	20M	BPSK	1	53	Right Side	10mm	4	372000	1860	23.68	24.30	1.153	-0.03	0.735	0.848
	FR1 n2_Ant 5	20M	BPSK	1	53	Right Side	10mm	4	380000	1900	23.59	24.30	1.178	-0.05	0.716	0.843
	FR1 n2_Ant 5	20M	BPSK	50	28	Right Side	10mm	4	376000	1880	23.75	24.30	1.135	-0.11	0.664	0.754
	FR1 n2_Ant 5	20M	BPSK	100	0	Right Side	10mm	4	376000	1880	23.70	24.30	1.148	0.14	0.648	0.744
	FR1 n2_Ant 5	20M	BPSK	1	53	Top Side	10mm	4	376000	1880	23.79	24.30	1.125	0.05	0.019	0.021
	FR1 n2_Ant 5	20M	BPSK	50	28	Top Side	10mm	4	376000	1880	23.75	24.30	1.135	0.09	0.016	0.018
	FR1 n5_Ant 0	20M	BPSK	1	53	Front	10mm	4	167300	836.5	23.56	24.20	1.159	0.08	0.620	0.719
	FR1 n5_Ant 0	20M	BPSK	50	28	Front	10mm	4	167300	836.5	23.22	24.20	1.253	-0.12	0.584	0.732
	FR1 n5_Ant 0	20M	BPSK	1	53	Back	10mm	4	167300	836.5	23.56	24.20	1.159	-0.06	0.673	0.780
	FR1 n5_Ant 0	20M	BPSK	50	28	Back	10mm	4	167300	836.5	23.22	24.20	1.253	-0.19	0.619	0.776
	FR1 n5_Ant 0	20M	BPSK	1	53	Left Side	10mm	4	167300	836.5	23.56	24.20	1.159	-0.12	0.496	0.574
	FR1 n5_Ant 0	20M	BPSK	50	28	Left Side	10mm	4	167300	836.5	23.22	24.20	1.253	-0.07	0.465	0.583
	FR1 n5_Ant 0	20M	BPSK	1	53	Right Side	10mm	4	167300	836.5	23.56	24.20	1.159	0	0.163	0.189
	FR1 n5_Ant 0	20M	BPSK	50	28	Right Side	10mm	4	167300	836.5	23.22	24.20	1.253	0.07	0.157	0.197
55	FR1 n5_Ant 0	20M	BPSK	1	53	Bottom Side	10mm	4	167300	836.5	23.56	24.20	1.159	0.04	0.767	0.889
	FR1 n5_Ant 0	20M	BPSK	50	28	Bottom Side	10mm	4	167300	836.5	23.22	24.20	1.253	0.19	0.704	0.882
	FR1 n5_Ant 0	20M	BPSK	100	0	Bottom Side	10mm	4	167300	836.5	22.75	24.20	1.396	-0.15	0.588	0.821
	FR1 n5_Ant 1	20M	BPSK	1	53	Front	10mm	4	167300	836.5	24.68	25.50	1.208	-0.05	0.233	0.281
	FR1 n5_Ant 1	20M	BPSK	50	28	Front	10mm	4	167300	836.5	24.56	25.50	1.242	0.07	0.214	0.266
	FR1 n5_Ant 1	20M	BPSK	1	53	Back	10mm	4	167300	836.5	24.68	25.50	1.208	-0.09	0.343	0.414
	FR1 n5_Ant 1	20M	BPSK	50	28	Back	10mm	4	167300	836.5	24.56	25.50	1.242	0.04	0.307	0.381
	FR1 n5_Ant 1	20M	BPSK	1	53	Left Side	10mm	4	167300	836.5	24.68	25.50	1.208	0.09	0.151	0.182
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Side	10mm	4	167300	836.5	24.56	25.50	1.242	0.02	0.133	0.165
	FR1 n5_Ant 1	20M	BPSK	1	53	Right Side	10mm	4	167300	836.5	24.68	25.50	1.208	0.11	0.148	0.179
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Side	10mm	4	167300	836.5	24.56	25.50	1.242	0.09	0.125	0.155
	FR1 n5_Ant 1	20M	BPSK	1	53	Top Side	10mm	4	167300	836.5	24.68	25.50	1.208	-0.06	0.242	0.292
	FR1 n5_Ant 1	20M	BPSK	50	28	Top Side	10mm	4	167300	836.5	24.56	25.50	1.242	-0.01	0.226	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)
	FR1 n7_Ant 2	50M	BPSK	1	1	Front	10mm	4	507000	2535	20.75	21.00	1.059	0.07	0.292	0.309
	FR1 n7_Ant 2	50M	BPSK	135	0	Front	10mm	4	507000	2535	20.59	21.00	1.099	0.13	0.273	0.300
	FR1 n7_Ant 2	50M	BPSK	1	1	Back	10mm	4	507000	2535	20.75	21.00	1.059	0.05	0.403	0.427
	FR1 n7_Ant 2	50M	BPSK	135	0	Back	10mm	4	507000	2535	20.59	21.00	1.099	0.06	0.355	0.390
	FR1 n7_Ant 2	50M	BPSK	1	1	Left Side	10mm	4	507000	2535	20.75	21.00	1.059	-0.1	0.018	0.019
	FR1 n7_Ant 2	50M	BPSK	135	0	Left Side	10mm	4	507000	2535	20.59	21.00	1.099	-0.1	0.018	0.020
	FR1 n7_Ant 2	50M	BPSK	1	1	Right Side	10mm	4	507000	2535	20.75	21.00	1.059	-0.03	0.624	0.661
	FR1 n7_Ant 2	50M	BPSK	135	0	Right Side	10mm	4	507000	2535	20.59	21.00	1.099	-0.01	0.637	0.700
	FR1 n7_Ant 2	50M	BPSK	1	1	Bottom Side	10mm	4	507000	2535	20.75	21.00	1.059	-0.06	0.175	0.185
	FR1 n7_Ant 2	50M	BPSK	135	0	Bottom Side	10mm	4	507000	2535	20.59	21.00	1.099	-0.05	0.179	0.197
	FR1 n7_Ant 0	50M	BPSK	1	1	Front	10mm	4	507000	2535	18.86	19.60	1.186	0.01	0.480	0.569
	FR1 n7_Ant 0	50M	BPSK	135	0	Front	10mm	4	507000	2535	18.65	19.60	1.245	0.09	0.433	0.539
	FR1 n7_Ant 0	50M	BPSK	1	1	Back	10mm	4	507000	2535	18.86	19.60	1.186	-0.03	0.410	0.486
	FR1 n7_Ant 0	50M	BPSK	135	0	Back	10mm	4	507000	2535	18.65	19.60	1.245	0.12	0.380	0.473
	FR1 n7_Ant 0	50M	BPSK	1	1	Left Side	10mm	4	507000	2535	18.86	19.60	1.186	-0.06	0.018	0.021
	FR1 n7_Ant 0	50M	BPSK	135	0	Left Side	10mm	4	507000	2535	18.65	19.60	1.245	0.1	0.015	0.019
	FR1 n7_Ant 0	50M	BPSK	1	1	Right Side	10mm	4	507000	2535	18.86	19.60	1.186	-0.08	0.011	0.013
	FR1 n7_Ant 0	50M	BPSK	135	0	Right Side	10mm	4	507000	2535	18.65	19.60	1.245	-0.07	0.008	0.010
56	FR1 n7_Ant 0	50M	BPSK	1	1	Bottom Side	10mm	4	507000	2535	18.86	19.60	1.186	-0.01	0.752	0.892
	FR1 n7_Ant 0	50M	BPSK	135	0	Bottom Side	10mm	4	507000	2535	18.65	19.60	1.245	0.19	0.702	0.874
	FR1 n7_Ant 0	50M	BPSK	270	0	Bottom Side	10mm	4	507000	2535	18.45	19.60	1.303	0.01	0.642	0.837
	FR1 n12_Ant 0	15M	BPSK	1	1	Front	10mm	4	141500	707.5	24.57	25.50	1.239	-0.03	0.331	0.410
	FR1 n12_Ant 0	15M	BPSK	36	22	Front	10mm	4	141500	707.5	24.51	25.50	1.256	-0.12	0.257	0.323
	FR1 n12_Ant 0	15M	BPSK	1	1	Back	10mm	4	141500	707.5	24.57	25.50	1.239	0	0.356	0.441
	FR1 n12_Ant 0	15M	BPSK	36	22	Back	10mm	4	141500	707.5	24.51	25.50	1.256	0.11	0.262	0.329
	FR1 n12_Ant 0	15M	BPSK	1	1	Left Side	10mm	4	141500	707.5	24.57	25.50	1.239	0.07	0.370	0.458
	FR1 n12_Ant 0	15M	BPSK	36	22	Left Side	10mm	4	141500	707.5	24.51	25.50	1.256	-0.13	0.277	0.348
	FR1 n12_Ant 0	15M	BPSK	1	1	Right Side	10mm	4	141500	707.5	24.57	25.50	1.239	0	0.167	0.207
	FR1 n12_Ant 0	15M	BPSK	36	22	Right Side	10mm	4	141500	707.5	24.51	25.50	1.256	0.12	0.085	0.107
57	FR1 n12_Ant 0	15M	BPSK	1	1	Bottom Side	10mm	4	141500	707.5	24.57	25.50	1.239	0.15	0.393	0.487
	FR1 n12_Ant 0	15M	BPSK	36	22	Bottom Side	10mm	4	141500	707.5	24.51	25.50	1.256	-0.11	0.282	0.354
	FR1 n12_Ant 1	15M	BPSK	1	1	Front	10mm	4	141500	707.5	24.68	25.50	1.208	0	0.164	0.198
	FR1 n12_Ant 1	15M	BPSK	36	22	Front	10mm	4	141500	707.5	24.55	25.50	1.245	0.03	0.145	0.180
	FR1 n12_Ant 1	15M	BPSK	1	1	Back	10mm	4	141500	707.5	24.68	25.50	1.208	-0.05	0.196	0.237
	FR1 n12_Ant 1	15M	BPSK	36	22	Back	10mm	4	141500	707.5	24.55	25.50	1.245	-0.07	0.152	0.189
	FR1 n12_Ant 1	15M	BPSK	1	1	Left Side	10mm	4	141500	707.5	24.68	25.50	1.208	0.06	0.112	0.135
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Side	10mm	4	141500	707.5	24.55	25.50	1.245	0.05	0.100	0.124
	FR1 n12_Ant 1	15M	BPSK	1	1	Right Side	10mm	4	141500	707.5	24.68	25.50	1.208	0.02	0.047	0.056
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Side	10mm	4	141500	707.5	24.55	25.50	1.245	-0.08	0.031	0.039
	FR1 n12_Ant 1	15M	BPSK	1	1	Top Side	10mm	4	141500	707.5	24.68	25.50	1.208	0.01	0.116	0.140
	FR1 n12_Ant 1	15M	BPSK	36	22	Top Side	10mm	4	141500	707.5	24.55	25.50	1.245	-0.14	0.097	0.121



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 n14_Ant 0	10M	BPSK	1	1	Front	10mm	4	158600	793	25.10	25.50	1.096	0.14	0.413	0.453
	FR1 n14_Ant 0	10M	BPSK	25	14	Front	10mm	4	158600	793	24.95	25.50	1.135	0.05	0.389	0.442
	FR1 n14_Ant 0	10M	BPSK	1	1	Back	10mm	4	158600	793	25.10	25.50	1.096	-0.18	0.479	0.525
	FR1 n14_Ant 0	10M	BPSK	25	14	Back	10mm	4	158600	793	24.95	25.50	1.135	0.09	0.456	0.518
	FR1 n14_Ant 0	10M	BPSK	1	1	Left Side	10mm	4	158600	793	25.10	25.50	1.096	-0.04	0.252	0.276
	FR1 n14_Ant 0	10M	BPSK	25	14	Left Side	10mm	4	158600	793	24.95	25.50	1.135	-0.19	0.228	0.259
	FR1 n14_Ant 0	10M	BPSK	1	1	Right Side	10mm	4	158600	793	25.10	25.50	1.096	-0.04	0.213	0.234
	FR1 n14_Ant 0	10M	BPSK	25	14	Right Side	10mm	4	158600	793	24.95	25.50	1.135	0.08	0.201	0.228
58	FR1 n14_Ant 0	10M	BPSK	1	1	Bottom Side	10mm	4	158600	793	25.10	25.50	1.096	0.17	0.541	0.593
	FR1 n14_Ant 0	10M	BPSK	25	14	Bottom Side	10mm	4	158600	793	24.95	25.50	1.135	0.06	0.514	0.583
	FR1 n14_Ant 1	10M	BPSK	1	1	Front	10mm	4	158600	793	25.17	25.50	1.079	0.03	0.175	0.189
	FR1 n14_Ant 1	10M	BPSK	25	14	Front	10mm	4	158600	793	25.04	25.50	1.112	0.02	0.158	0.176
	FR1 n14_Ant 1	10M	BPSK	1	1	Back	10mm	4	158600	793	25.17	25.50	1.079	-0.12	0.240	0.259
	FR1 n14_Ant 1	10M	BPSK	25	14	Back	10mm	4	158600	793	25.04	25.50	1.112	0.07	0.226	0.251
	FR1 n14_Ant 1	10M	BPSK	1	1	Left Side	10mm	4	158600	793	25.17	25.50	1.079	0.19	0.104	0.112
	FR1 n14_Ant 1	10M	BPSK	25	14	Left Side	10mm	4	158600	793	25.04	25.50	1.112	0.16	0.088	0.098
	FR1 n14_Ant 1	10M	BPSK	1	1	Right Side	10mm	4	158600	793	25.17	25.50	1.079	-0.11	0.095	0.102
	FR1 n14_Ant 1	10M	BPSK	25	14	Right Side	10mm	4	158600	793	25.04	25.50	1.112	-0.14	0.081	0.090
	FR1 n14_Ant 1	10M	BPSK	1	1	Top Side	10mm	4	158600	793	25.17	25.50	1.079	-0.02	0.170	0.183
	FR1 n14_Ant 1	10M	BPSK	25	14	Top Side	10mm	4	158600	793	25.04	25.50	1.112	-0.18	0.158	0.176
	FR1 n25_Ant 2	40M	BPSK	1	1	Front	10mm	4	376500	1882.5	22.01	22.10	1.021	0.15	0.522	0.533
	FR1 n25_Ant 2	40M	BPSK	108	54	Front	10mm	4	376500	1882.5	21.96	22.10	1.033	-0.1	0.465	0.480
	FR1 n25_Ant 2	40M	BPSK	1	1	Back	10mm	4	376500	1882.5	22.01	22.10	1.021	-0.11	0.742	0.758
	FR1 n25_Ant 2	40M	BPSK	108	54	Back	10mm	4	376500	1882.5	21.96	22.10	1.033	-0.14	0.655	0.676
	FR1 n25_Ant 2	40M	BPSK	1	1	Left Side	10mm	4	376500	1882.5	22.01	22.10	1.021	0.1	0.001	0.001
	FR1 n25_Ant 2	40M	BPSK	108	54	Left Side	10mm	4	376500	1882.5	21.96	22.10	1.033	-0.17	0.001	0.001
	FR1 n25_Ant 2	40M	BPSK	1	1	Right Side	10mm	4	376500	1882.5	22.01	22.10	1.021	-0.17	0.710	0.725
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Side	10mm	4	376500	1882.5	21.96	22.10	1.033	-0.04	0.686	0.708
	FR1 n25_Ant 2	40M	BPSK	1	1	Bottom Side	10mm	4	376500	1882.5	22.01	22.10	1.021	0.03	0.128	0.131
	FR1 n25_Ant 2	40M	BPSK	108	54	Bottom Side	10mm	4	376500	1882.5	21.96	22.10	1.033	0.02	0.119	0.123
	FR1 n25_Ant 0	40M	BPSK	1	108	Front	10mm	4	376500	1882.5	17.73	19.00	1.340	-0.18	0.333	0.446
	FR1 n25_Ant 0	40M	BPSK	108	54	Front	10mm	4	376500	1882.5	17.61	19.00	1.377	-0.13	0.312	0.430
	FR1 n25_Ant 0	40M	BPSK	1	108	Back	10mm	4	376500	1882.5	17.73	19.00	1.340	0.08	0.314	0.421
	FR1 n25_Ant 0	40M	BPSK	108	54	Back	10mm	4	376500	1882.5	17.61	19.00	1.377	0.18	0.282	0.388
	FR1 n25_Ant 0	40M	BPSK	1	108	Left Side	10mm	4	376500	1882.5	17.73	19.00	1.340	-0.18	0.060	0.080
	FR1 n25_Ant 0	40M	BPSK	108	54	Left Side	10mm	4	376500	1882.5	17.61	19.00	1.377	-0.19	0.051	0.070
	FR1 n25_Ant 0	40M	BPSK	1	108	Right Side	10mm	4	376500	1882.5	17.73	19.00	1.340	0.14	0.012	0.016
	FR1 n25_Ant 0	40M	BPSK	108	54	Right Side	10mm	4	376500	1882.5	17.61	19.00	1.377	-0.13	0.008	0.011
	FR1 n25_Ant 0	40M	BPSK	1	108	Bottom Side	10mm	4	376500	1882.5	17.73	19.00	1.340	0.17	0.635	0.851
59	FR1 n25_Ant 0	40M	BPSK	108	54	Bottom Side	10mm	4	376500	1882.5	17.61	19.00	1.377	-0.07	0.643	0.886
	FR1 n25_Ant 0	40M	BPSK	216	0	Bottom Side	10mm	4	376500	1882.5	17.59	19.00	1.384	0.05	0.633	0.876



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 n30_Ant 2	10M	BPSK	1	26	Front	10mm	4	462000	2310	20.35	20.80	1.109	-0.14	0.575	0.638
	FR1 n30_Ant 2	10M	BPSK	25	14	Front	10mm	4	462000	2310	20.32	20.80	1.117	0.02	0.581	0.649
	FR1 n30_Ant 2	10M	BPSK	1	26	Back	10mm	4	462000	2310	20.35	20.80	1.109	-0.03	0.583	0.647
	FR1 n30_Ant 2	10M	BPSK	25	14	Back	10mm	4	462000	2310	20.32	20.80	1.117	-0.07	0.597	0.667
	FR1 n30_Ant 2	10M	BPSK	1	26	Left Side	10mm	4	462000	2310	20.35	20.80	1.109	-0.15	0.052	0.058
	FR1 n30_Ant 2	10M	BPSK	25	14	Left Side	10mm	4	462000	2310	20.32	20.80	1.117	0.05	0.047	0.052
	FR1 n30_Ant 2	10M	BPSK	1	26	Right Side	10mm	4	462000	2310	20.35	20.80	1.109	0.14	0.749	0.831
	FR1 n30_Ant 2	10M	BPSK	25	14	Right Side	10mm	4	462000	2310	20.32	20.80	1.117	-0.02	0.731	0.816
	FR1 n30_Ant 2	10M	BPSK	50	0	Right Side	10mm	4	462000	2310	20.30	20.80	1.122	0.01	0.720	0.808
	FR1 n30_Ant 2	10M	BPSK	1	26	Bottom Side	10mm	4	462000	2310	20.35	20.80	1.109	-0.16	0.203	0.225
	FR1 n30_Ant 2	10M	BPSK	25	14	Bottom Side	10mm	4	462000	2310	20.32	20.80	1.117	0.09	0.197	0.220
	FR1 n30_Ant 0	10M	BPSK	1	26	Front	10mm	4	462000	2310	19.32	19.50	1.042	0.01	0.413	0.430
	FR1 n30_Ant 0	10M	BPSK	25	14	Front	10mm	4	462000	2310	19.30	19.50	1.047	0.05	0.401	0.420
	FR1 n30_Ant 0	10M	BPSK	1	26	Back	10mm	4	462000	2310	19.32	19.50	1.042	0.18	0.437	0.455
	FR1 n30_Ant 0	10M	BPSK	25	14	Back	10mm	4	462000	2310	19.30	19.50	1.047	-0.02	0.428	0.448
	FR1 n30_Ant 0	10M	BPSK	1	26	Left Side	10mm	4	462000	2310	19.32	19.50	1.042	-0.04	0.048	0.050
	FR1 n30_Ant 0	10M	BPSK	25	14	Left Side	10mm	4	462000	2310	19.30	19.50	1.047	0.11	0.037	0.039
	FR1 n30_Ant 0	10M	BPSK	1	26	Right Side	10mm	4	462000	2310	19.32	19.50	1.042	0.1	0.021	0.022
	FR1 n30_Ant 0	10M	BPSK	25	14	Right Side	10mm	4	462000	2310	19.30	19.50	1.047	-0.14	0.016	0.017
	FR1 n30_Ant 0	10M	BPSK	1	26	Bottom Side	10mm	4	462000	2310	19.32	19.50	1.042	-0.02	0.817	0.852
60	FR1 n30_Ant 0	10M	BPSK	25	14	Bottom Side	10mm	4	462000	2310	19.30	19.50	1.047	-0.16	0.834	0.873
	FR1 n30_Ant 0	10M	BPSK	50	0	Bottom Side	10mm	4	462000	2310	19.21	19.50	1.069	0.18	0.812	0.868



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	21.08	21.20	1.028	-0.16	0.462	0.475
	FR1 n41_Ant 2	100M	BPSK	135	0	Front	10mm	4	518598	2592.99	20.65	21.20	1.135	0.08	0.412	0.468
	FR1 n41_Ant 2	100M	BPSK	1	1	Back	10mm	4	518598	2592.99	21.08	21.20	1.028	-0.03	0.426	0.438
	FR1 n41_Ant 2	100M	BPSK	135	0	Back	10mm	4	518598	2592.99	20.65	21.20	1.135	0.02	0.352	0.400
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Side	10mm	4	518598	2592.99	21.08	21.20	1.028	-0.05	0.001	0.001
	FR1 n41_Ant 2	100M	BPSK	135	0	Left Side	10mm	4	518598	2592.99	20.65	21.20	1.135	0.08	0.001	0.001
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Side	10mm	4	518598	2592.99	21.08	21.20	1.028	0.03	0.813	0.836
	FR1 n41_Ant 2	100M	BPSK	135	0	Right Side	10mm	4	518598	2592.99	20.65	21.20	1.135	0.05	0.625	0.709
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom Side	10mm	4	518598	2592.99	21.08	21.20	1.028	-0.11	0.212	0.218
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom Side	10mm	4	518598	2592.99	20.65	21.20	1.135	-0.03	0.156	0.177
	FR1 n41_Ant 0	100M	BPSK	1	1	Front	10mm	4	518598	2592.99	18.85	19.40	1.135	0.02	0.288	0.327
	FR1 n41_Ant 0	100M	BPSK	135	69	Front	10mm	4	518598	2592.99	18.42	19.40	1.253	0.05	0.299	0.375
	FR1 n41_Ant 0	100M	BPSK	1	1	Back	10mm	4	518598	2592.99	18.85	19.40	1.135	-0.06	0.246	0.279
	FR1 n41_Ant 0	100M	BPSK	135	69	Back	10mm	4	518598	2592.99	18.42	19.40	1.253	0.08	0.230	0.288
	FR1 n41_Ant 0	100M	BPSK	1	1	Left Side	10mm	4	518598	2592.99	18.85	19.40	1.135	-0.01	0.053	0.060
	FR1 n41_Ant 0	100M	BPSK	135	69	Left Side	10mm	4	518598	2592.99	18.42	19.40	1.253	0.05	0.066	0.083
	FR1 n41_Ant 0	100M	BPSK	1	1	Right Side	10mm	4	518598	2592.99	18.85	19.40	1.135	0.03	0.023	0.026
	FR1 n41_Ant 0	100M	BPSK	135	69	Right Side	10mm	4	518598	2592.99	18.42	19.40	1.253	0.01	0.024	0.030
	FR1 n41_Ant 0	100M	BPSK	1	1	Bottom Side	10mm	4	518598	2592.99	18.85	19.40	1.135	0.02	0.758	0.860
61	FR1 n41_Ant 0	100M	BPSK	135	69	Bottom Side	10mm	4	518598	2592.99	18.42	19.40	1.253	-0.05	0.716	0.897
	FR1 n41_Ant 0	100M	BPSK	270	0	Bottom Side	10mm	4	518598	2592.99	18.27	19.40	1.297	0.06	0.659	0.855
	FR1 n41_Ant 1	100M	BPSK	1	1	Front	10mm	4	518598	2592.99	21.16	21.20	1.009	0.02	0.311	0.314
	FR1 n41_Ant 1	100M	BPSK	135	0	Front	10mm	4	518598	2592.99	20.77	21.20	1.104	-0.08	0.236	0.261
	FR1 n41_Ant 1	100M	BPSK	1	1	Back	10mm	4	518598	2592.99	21.16	21.20	1.009	-0.05	0.250	0.252
	FR1 n41_Ant 1	100M	BPSK	135	0	Back	10mm	4	518598	2592.99	20.77	21.20	1.104	0.11	0.189	0.209
	FR1 n41_Ant 1	100M	BPSK	1	1	Left Side	10mm	4	518598	2592.99	21.16	21.20	1.009	0.02	0.314	0.317
	FR1 n41_Ant 1	100M	BPSK	135	0	Left Side	10mm	4	518598	2592.99	20.77	21.20	1.104	0.03	0.224	0.247
	FR1 n41_Ant 1	100M	BPSK	1	1	Right Side	10mm	4	518598	2592.99	21.16	21.20	1.009	0.09	0.012	0.012
	FR1 n41_Ant 1	100M	BPSK	135	0	Right Side	10mm	4	518598	2592.99	20.77	21.20	1.104	0.01	0.011	0.012
	FR1 n41_Ant 1	100M	BPSK	1	1	Top Side	10mm	4	518598	2592.99	21.16	21.20	1.009	-0.18	0.704	0.711
	FR1 n41_Ant 1	100M	BPSK	135	0	Top Side	10mm	4	518598	2592.99	20.77	21.20	1.104	-0.02	0.584	0.645
	FR1 n41_Ant 1	100M	BPSK	270	0	Top Side	10mm	4	518598	2592.99	20.65	21.20	1.135	0.04	0.573	0.650
	FR1 n41_Ant 5	100M	BPSK	1	1	Front	10mm	4	518598	2592.99	21.49	21.70	1.050	0.08	0.278	0.292
	FR1 n41_Ant 5	100M	BPSK	135	0	Front	10mm	4	518598	2592.99	21.18	21.70	1.127	-0.12	0.239	0.269
	FR1 n41_Ant 5	100M	BPSK	1	1	Back	10mm	4	518598	2592.99	21.49	21.70	1.050	0.06	0.492	0.516
	FR1 n41_Ant 5	100M	BPSK	135	0	Back	10mm	4	518598	2592.99	21.18	21.70	1.127	-0.01	0.445	0.502
	FR1 n41_Ant 5	100M	BPSK	1	1	Left Side	10mm	4	518598	2592.99	21.49	21.70	1.050	0.02	0.013	0.014
	FR1 n41_Ant 5	100M	BPSK	135	0	Left Side	10mm	4	518598	2592.99	21.18	21.70	1.127	0.08	0.008	0.009
	FR1 n41_Ant 5	100M	BPSK	1	1	Right Side	10mm	4	518598	2592.99	21.49	21.70	1.050	-0.19	0.854	0.896
	FR1 n41_Ant 5	100M	BPSK	135	0	Right Side	10mm	4	518598	2592.99	21.18	21.70	1.127	0.07	0.751	0.847
	FR1 n41_Ant 5	100M	BPSK	270	0	Right Side	10mm	4	518598	2592.99	20.96	21.70	1.186	-0.02	0.624	0.740
	FR1 n41_Ant 5	100M	BPSK	1	1	Top Side	10mm	4	518598	2592.99	21.49	21.70	1.050	-0.16	0.043	0.045
	FR1 n41_Ant 5	100M	BPSK	135	0	Top Side	10mm	4	518598	2592.99	21.18	21.70	1.127	0.04	0.039	0.044



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	Front	10mm	4	641666	3624.99	24.68	24.70	1.005	-0.01	0.379	0.381
	FR1 n48_Ant 6	10M	BPSK	12	6	Front	10mm	4	637000	3555	24.69	24.70	1.002	0.16	0.281	0.282
	FR1 n48_Ant 6	10M	BPSK	1	1	Back	10mm	4	641666	3624.99	24.68	24.70	1.005	0.01	0.636	0.638
	FR1 n48_Ant 6	10M	BPSK	12	6	Back	10mm	4	637000	3555	24.69	24.70	1.002	-0.03	0.477	0.478
62	FR1 n48_Ant 6	10M	BPSK	1	1	Left Side	10mm	4	641666	3624.99	24.68	24.70	1.005	0.1	0.790	0.794
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Side	10mm	4	637000	3555	24.65	24.70	1.012	0.08	0.755	0.764
	FR1 n48_Ant 6	10M	BPSK	1	1	Left Side	10mm	4	646332	3694.98	24.57	24.70	1.030	0.01	0.769	0.792
	FR1 n48_Ant 6	10M	BPSK	12	6	Left Side	10mm	4	637000	3555	24.69	24.70	1.002	-0.06	0.678	0.680
	FR1 n48_Ant 6	10M	BPSK	24	0	Left Side	10mm	4	641666	3624.99	24.53	24.70	1.040	-0.04	0.661	0.687
	FR1 n48_Ant 6	10M	BPSK	1	1	Right Side	10mm	4	641666	3624.99	24.68	24.70	1.005	-0.02	0.026	0.026
	FR1 n48_Ant 6	10M	BPSK	12	6	Right Side	10mm	4	637000	3555	24.69	24.70	1.002	0.18	0.024	0.024
	FR1 n48_Ant 6	10M	BPSK	1	1	Bottom Side	10mm	4	641666	3624.99	24.68	24.70	1.005	0.02	0.163	0.164
	FR1 n48_Ant 6	10M	BPSK	12	6	Bottom Side	10mm	4	637000	3555	24.69	24.70	1.002	-0.18	0.118	0.118
	FR1 n48_Ant 6	40M	BPSK	50	25	Left Side	10mm	4	641666	3624.99	24.67	24.70	1.007	0.01	0.720	0.725
	FR1 n48_Ant 7	10M	BPSK	1	1	Front	10mm	4	641666	3624.99	21.78	21.80	1.005	0.12	0.319	0.320
	FR1 n48_Ant 7	10M	BPSK	12	6	Front	10mm	4	641666	3624.99	21.74	21.80	1.014	0.16	0.302	0.306
	FR1 n48_Ant 7	10M	BPSK	1	1	Back	10mm	4	641666	3624.99	21.78	21.80	1.005	0	0.363	0.365
	FR1 n48_Ant 7	10M	BPSK	1	1	Back	10mm	4	637000	3555	21.76	21.80	1.009	0.14	0.342	0.345
	FR1 n48_Ant 7	10M	BPSK	1	1	Back	10mm	4	646332	3694.98	21.75	21.80	1.012	0.11	0.338	0.342
	FR1 n48_Ant 7	10M	BPSK	12	6	Back	10mm	4	641666	3624.99	21.74	21.80	1.014	-0.16	0.341	0.346
	FR1 n48_Ant 7	10M	BPSK	1	1	Left Side	10mm	4	641666	3624.99	21.78	21.80	1.005	0.18	0.044	0.044
	FR1 n48_Ant 7	10M	BPSK	12	6	Left Side	10mm	4	641666	3624.99	21.74	21.80	1.014	0.19	0.038	0.039
	FR1 n48_Ant 7	10M	BPSK	1	1	Right Side	10mm	4	641666	3624.99	21.78	21.80	1.005	0	0.503	0.505
	FR1 n48_Ant 7	10M	BPSK	1	1	Right Side	10mm	4	637000	3555	21.76	21.80	1.009	-0.05	0.479	0.483
	FR1 n48_Ant 7	10M	BPSK	1	1	Right Side	10mm	4	646332	3694.98	21.75	21.80	1.012	0.08	0.472	0.477
	FR1 n48_Ant 7	10M	BPSK	12	6	Right Side	10mm	4	641666	3624.99	21.74	21.80	1.014	0.07	0.467	0.473
	FR1 n48_Ant 7	10M	BPSK	1	1	Bottom Side	10mm	4	641666	3624.99	21.78	21.80	1.005	-0.08	0.212	0.213
	FR1 n48_Ant 7	10M	BPSK	12	6	Bottom Side	10mm	4	641666	3624.99	21.74	21.80	1.014	-0.07	0.198	0.201
	FR1 n48_Ant 7	40M	QPSK	50	25	Right Side	10mm	4	641666	3624.99	21.70	21.80	1.023	0.03	0.462	0.473
	FR1 n48_Ant 1	10M	QPSK	1	1	Front	10mm	4	641666	3624.99	19.90	21.10	1.318	0.11	0.137	0.181
	FR1 n48_Ant 1	10M	QPSK	12	6	Front	10mm	4	641666	3624.99	19.90	21.10	1.318	0.01	0.098	0.129
	FR1 n48_Ant 1	10M	QPSK	1	1	Back	10mm	4	641666	3624.99	19.90	21.10	1.318	0.19	0.113	0.149
	FR1 n48_Ant 1	10M	QPSK	12	6	Back	10mm	4	641666	3624.99	19.90	21.10	1.318	-0.14	0.099	0.131
	FR1 n48_Ant 1	10M	QPSK	1	1	Left Side	10mm	4	641666	3624.99	19.90	21.10	1.318	-0.09	0.172	0.227
	FR1 n48_Ant 1	10M	QPSK	12	6	Left Side	10mm	4	641666	3624.99	19.90	21.10	1.318	0.15	0.142	0.187
	FR1 n48_Ant 1	10M	QPSK	1	1	Right Side	10mm	4	641666	3624.99	19.90	21.10	1.318	0.01	0.008	0.011
	FR1 n48_Ant 1	10M	QPSK	12	6	Right Side	10mm	4	641666	3624.99	19.90	21.10	1.318	0.03	0.006	0.008
	FR1 n48_Ant 1	10M	QPSK	1	1	Top Side	10mm	4	641666	3624.99	19.90	21.10	1.318	0.05	0.134	0.177
	FR1 n48_Ant 1	10M	QPSK	12	6	Top Side	10mm	4	641666	3624.99	19.90	21.10	1.318	-0.12	0.115	0.152
	FR1 n48_Ant 1	10M	QPSK	50	25	Left Side	10mm	4	641666	3624.99	19.90	21.10	1.318	-0.02	0.151	0.199
	FR1 n48_Ant 5	10M	QPSK	1	1	Front	10mm	4	646000	3690	20.15	20.40	1.059	-0.06	0.196	0.208
	FR1 n48_Ant 5	10M	QPSK	12	6	Front	10mm	4	646000	3690	20.16	20.40	1.057	-0.13	0.167	0.176
	FR1 n48_Ant 5	10M	QPSK	1	1	Back	10mm	4	646000	3690	20.15	20.40	1.059	0.04	0.266	0.282
	FR1 n48_Ant 5	10M	QPSK	12	6	Back	10mm	4	646000	3690	20.16	20.40	1.057	0.15	0.218	0.230
	FR1 n48_Ant 5	10M	QPSK	1	1	Left Side	10mm	4	646000	3690	20.15	20.40	1.059	-0.15	0.013	0.014
	FR1 n48_Ant 5	10M	QPSK	12	6	Left Side	10mm	4	646000	3690	20.16	20.40	1.057	-0.15	0.008	0.008
	FR1 n48_Ant 5	10M	QPSK	1	1	Right Side	10mm	4	646000	3690	20.15	20.40	1.059	-0.05	0.453	0.480
	FR1 n48_Ant 5	10M	QPSK	12	6	Right Side	10mm	4	646000	3690	20.16	20.40	1.057	0.02	0.372	0.393
	FR1 n48_Ant 5	10M	QPSK	1	1	Top Side	10mm	4	646000	3690	20.15	20.40	1.059	0.18	0.090	0.095
	FR1 n48_Ant 5	10M	QPSK	12	6	Top Side	10mm	4	646000	3690	20.16	20.40	1.057	0.01	0.066	0.070
	FR1 n48_Ant 5	10M	QPSK	53	26	Right Side	10mm	4	646000	3690	20.15	20.40	1.059	0.002	0.421	0.446



FCC SAR TEST REPORT

Report No. : FA102919-05E

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	108	Front	10mm	4	349000	1745	22.92	23.00	1.019	-0.06	0.488	0.497
	FR1 n66_Ant 2	40M	BPSK	108	54	Front	10mm	4	349000	1745	22.82	23.00	1.042	0.06	0.455	0.474
	FR1 n66_Ant 2	40M	BPSK	1	108	Back	10mm	4	349000	1745	22.92	23.00	1.019	0.03	0.871	0.887
	FR1 n66_Ant 2	40M	BPSK	108	54	Back	10mm	4	349000	1745	22.82	23.00	1.042	0.07	0.744	0.775
	FR1 n66_Ant 2	40M	BPSK	216	0	Back	10mm	4	349000	1745	22.79	23.00	1.050	-0.12	0.721	0.757
	FR1 n66_Ant 2	40M	BPSK	1	108	Left Side	10mm	4	349000	1745	22.92	23.00	1.019	-0.02	0.008	0.008
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Side	10mm	4	349000	1745	22.82	23.00	1.042	0.04	0.009	0.009
	FR1 n66_Ant 2	40M	BPSK	1	108	Right Side	10mm	4	349000	1745	22.92	23.00	1.019	-0.06	0.757	0.771
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Side	10mm	4	349000	1745	22.82	23.00	1.042	-0.09	0.688	0.717
	FR1 n66_Ant 2	40M	BPSK	1	108	Bottom Side	10mm	4	349000	1745	22.92	23.00	1.019	-0.16	0.209	0.213
	FR1 n66_Ant 2	40M	BPSK	108	54	Bottom Side	10mm	4	349000	1745	22.82	23.00	1.042	-0.08	0.203	0.212
	FR1 n66_Ant 0	40M	BPSK	1	108	Front	10mm	4	349000	1745	18.39	19.10	1.178	-0.03	0.325	0.383
	FR1 n66_Ant 0	40M	BPSK	108	54	Front	10mm	4	349000	1745	18.35	19.10	1.189	-0.04	0.311	0.370
	FR1 n66_Ant 0	40M	BPSK	1	108	Back	10mm	4	349000	1745	18.39	19.10	1.178	-0.09	0.308	0.363
	FR1 n66_Ant 0	40M	BPSK	108	54	Back	10mm	4	349000	1745	18.35	19.10	1.189	-0.01	0.283	0.336
	FR1 n66_Ant 0	40M	BPSK	1	108	Left Side	10mm	4	349000	1745	18.39	19.10	1.178	-0.06	0.057	0.067
	FR1 n66_Ant 0	40M	BPSK	108	54	Left Side	10mm	4	349000	1745	18.35	19.10	1.189	-0.03	0.053	0.063
	FR1 n66_Ant 0	40M	BPSK	1	108	Right Side	10mm	4	349000	1745	18.39	19.10	1.178	-0.12	0.009	0.010
	FR1 n66_Ant 0	40M	BPSK	108	54	Right Side	10mm	4	349000	1745	18.35	19.10	1.189	-0.17	0.009	0.011
63	FR1 n66_Ant 0	40M	BPSK	1	108	Bottom Side	10mm	4	349000	1745	18.39	19.10	1.178	-0.18	0.763	0.899
	FR1 n66_Ant 0	40M	BPSK	108	54	Bottom Side	10mm	4	349000	1745	18.35	19.10	1.189	-0.07	0.688	0.818
	FR1 n66_Ant 0	40M	BPSK	216	0	Bottom Side	10mm	4	349000	1745	18.30	19.10	1.202	0.03	0.664	0.798
	FR1 n66_Ant 1	40M	BPSK	1	108	Front	10mm	4	349000	1745	21.78	22.50	1.180	0.18	0.440	0.519
	FR1 n66_Ant 1	40M	BPSK	108	0	Front	10mm	4	349000	1745	21.61	22.50	1.227	-0.02	0.418	0.513
	FR1 n66_Ant 1	40M	BPSK	1	108	Back	10mm	4	349000	1745	21.78	22.50	1.180	-0.17	0.328	0.387
	FR1 n66_Ant 1	40M	BPSK	108	0	Back	10mm	4	349000	1745	21.61	22.50	1.227	-0.03	0.330	0.405
	FR1 n66_Ant 1	40M	BPSK	1	108	Left Side	10mm	4	349000	1745	21.78	22.50	1.180	0.06	0.144	0.170
	FR1 n66_Ant 1	40M	BPSK	108	0	Left Side	10mm	4	349000	1745	21.61	22.50	1.227	-0.19	0.140	0.172
	FR1 n66_Ant 1	40M	BPSK	1	108	Right Side	10mm	4	349000	1745	21.78	22.50	1.180	-0.15	0.017	0.020
	FR1 n66_Ant 1	40M	BPSK	108	0	Right Side	10mm	4	349000	1745	21.61	22.50	1.227	-0.04	0.012	0.015
	FR1 n66_Ant 1	40M	BPSK	1	108	Top Side	10mm	4	349000	1745	21.78	22.50	1.180	-0.14	0.733	0.865
	FR1 n66_Ant 1	40M	BPSK	108	0	Top Side	10mm	4	349000	1745	21.61	22.50	1.227	0.18	0.664	0.815
	FR1 n66_Ant 1	40M	BPSK	216	0	Top Side	10mm	4	349000	1745	21.46	22.50	1.271	0.05	0.633	0.804
	FR1 n66_Ant 5	40M	BPSK	1	1	Front	10mm	4	349000	1745	24.30	24.80	1.122	-0.18	0.214	0.240
	FR1 n66_Ant 5	40M	BPSK	108	0	Front	10mm	4	349000	1745	24.26	24.80	1.132	-0.17	0.222	0.251
	FR1 n66_Ant 5	40M	BPSK	1	1	Back	10mm	4	349000	1745	24.30	24.80	1.122	0.03	0.449	0.504
	FR1 n66_Ant 5	40M	BPSK	108	0	Back	10mm	4	349000	1745	24.26	24.80	1.132	0.12	0.441	0.499
	FR1 n66_Ant 5	40M	BPSK	1	1	Left Side	10mm	4	349000	1745	24.30	24.80	1.122	-0.01	0.032	0.036
	FR1 n66_Ant 5	40M	BPSK	108	0	Left Side	10mm	4	349000	1745	24.26	24.80	1.132	-0.06	0.024	0.027
	FR1 n66_Ant 5	40M	BPSK	1	1	Right Side	10mm	4	349000	1745	24.30	24.80	1.122	-0.07	0.796	0.893
	FR1 n66_Ant 5	40M	BPSK	108	0	Right Side	10mm	4	349000	1745	24.26	24.80	1.132	0.06	0.713	0.807
	FR1 n66_Ant 5	40M	BPSK	216	0	Right Side	10mm	4	349000	1745	24.14	24.80	1.164	0.04	0.688	0.801
	FR1 n66_Ant 5	40M	BPSK	1	1	Top Side	10mm	4	349000	1745	24.30	24.80	1.122	0.11	0.061	0.068
	FR1 n66_Ant 5	40M	BPSK	108	0	Top Side	10mm	4	349000	1745	24.26	24.80	1.132	-0.12	0.037	0.042



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	53	Front	10mm	4	136100	680.5	24.62	25.50	1.225	-0.07	0.226	0.277
	FR1 n71_Ant 0	20M	BPSK	50	28	Front	10mm	4	136100	680.5	24.45	25.50	1.274	-0.1	0.215	0.274
	FR1 n71_Ant 0	20M	BPSK	1	53	Back	10mm	4	136100	680.5	24.62	25.50	1.225	-0.02	0.254	0.311
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	10mm	4	136100	680.5	24.45	25.50	1.274	-0.17	0.240	0.306
64	FR1 n71_Ant 0	20M	BPSK	1	53	Left Side	10mm	4	136100	680.5	24.62	25.50	1.225	-0.09	0.366	0.448
	FR1 n71_Ant 0	20M	BPSK	50	28	Left Side	10mm	4	136100	680.5	24.45	25.50	1.274	0.13	0.247	0.315
	FR1 n71_Ant 0	20M	BPSK	1	53	Right Side	10mm	4	136100	680.5	24.62	25.50	1.225	0.11	0.201	0.246
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Side	10mm	4	136100	680.5	24.45	25.50	1.274	-0.16	0.193	0.246
	FR1 n71_Ant 0	20M	BPSK	1	53	Bottom Side	10mm	4	136100	680.5	24.62	25.50	1.225	0.12	0.291	0.356
	FR1 n71_Ant 0	20M	BPSK	50	28	Bottom Side	10mm	4	136100	680.5	24.45	25.50	1.274	0.06	0.188	0.239
	FR1 n71_Ant 1	20M	BPSK	1	53	Front	10mm	4	136100	680.5	24.67	25.50	1.211	-0.06	0.190	0.230
	FR1 n71_Ant 1	20M	BPSK	50	28	Front	10mm	4	136100	680.5	24.52	25.50	1.253	0.07	0.177	0.222
	FR1 n71_Ant 1	20M	BPSK	1	53	Back	10mm	4	136100	680.5	24.67	25.50	1.211	-0.04	0.242	0.293
	FR1 n71_Ant 1	20M	BPSK	50	28	Back	10mm	4	136100	680.5	24.52	25.50	1.253	-0.05	0.219	0.274
	FR1 n71_Ant 1	20M	BPSK	1	53	Left Side	10mm	4	136100	680.5	24.67	25.50	1.211	-0.1	0.235	0.284
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Side	10mm	4	136100	680.5	24.52	25.50	1.253	0.07	0.221	0.277
	FR1 n71_Ant 1	20M	BPSK	1	53	Right Side	10mm	4	136100	680.5	24.67	25.50	1.211	0.08	0.158	0.191
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Side	10mm	4	136100	680.5	24.52	25.50	1.253	0.04	0.139	0.174
	FR1 n71_Ant 1	20M	BPSK	1	53	Top Side	10mm	4	136100	680.5	24.67	25.50	1.211	0.03	0.125	0.151
	FR1 n71_Ant 1	20M	BPSK	50	28	Top Side	10mm	4	136100	680.5	24.52	25.50	1.253	-0.05	0.108	0.135
	FR1 n77_Ant 6	100M	BPSK	1	1	Front	10mm	4	656000	3840	22.13	22.30	1.040	-0.18	0.510	0.530
	FR1 n77_Ant 6	100M	BPSK	135	0	Front	10mm	4	656000	3840	21.80	22.30	1.122	0	0.451	0.506
	FR1 n77_Ant 6	100M	BPSK	1	1	Back	10mm	4	656000	3840	22.13	22.30	1.040	0.13	0.579	0.602
	FR1 n77_Ant 6	100M	BPSK	135	0	Back	10mm	4	656000	3840	21.80	22.30	1.122	0.17	0.408	0.458
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Side	10mm	4	656000	3840	22.13	22.30	1.040	-0.02	0.806	0.838
	FR1 n77_Ant 6	100M	BPSK	135	0	Left Side	10mm	4	656000	3840	21.80	22.30	1.122	0.02	0.677	0.760
	FR1 n77_Ant 6	100M	BPSK	270	0	Left Side	10mm	4	656000	3840	21.46	22.30	1.213	0.06	0.633	0.768
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Side	10mm	4	656000	3840	22.13	22.30	1.040	-0.05	0.043	0.045
	FR1 n77_Ant 6	100M	BPSK	135	0	Right Side	10mm	4	656000	3840	21.80	22.30	1.122	0.11	0.065	0.073
	FR1 n77_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	4	656000	3840	22.13	22.30	1.040	0.13	0.612	0.636
	FR1 n77_Ant 6	100M	BPSK	135	0	Bottom Side	10mm	4	656000	3840	21.80	22.30	1.122	-0.12	0.551	0.618
	FR1 n77_Ant 6	100M	BPSK	1	1	Front	10mm	4	633332	3499.98	21.98	22.30	1.076	-0.09	0.258	0.278
	FR1 n77_Ant 6	100M	BPSK	135	0	Front	10mm	4	633332	3499.98	21.41	22.30	1.227	-0.13	0.176	0.216
	FR1 n77_Ant 6	100M	BPSK	1	1	Back	10mm	4	633332	3499.98	21.98	22.30	1.076	-0.05	0.421	0.453
	FR1 n77_Ant 6	100M	BPSK	135	0	Back	10mm	4	633332	3499.98	21.41	22.30	1.227	-0.07	0.330	0.405
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Side	10mm	4	633332	3499.98	21.98	22.30	1.076	-0.05	0.440	0.474
	FR1 n77_Ant 6	100M	BPSK	135	0	Left Side	10mm	4	633332	3499.98	21.41	22.30	1.227	0.08	0.338	0.415
	FR1 n77_Ant 6	100M	BPSK	1	1	Right Side	10mm	4	633332	3499.98	21.98	22.30	1.076	0.09	0.006	0.006
	FR1 n77_Ant 6	100M	BPSK	135	0	Right Side	10mm	4	633332	3499.98	21.41	22.30	1.227	0.19	0.004	0.005
	FR1 n77_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	4	633332	3499.98	21.98	22.30	1.076	-0.02	0.116	0.125
	FR1 n77_Ant 6	100M	BPSK	135	0	Bottom Side	10mm	4	633332	3499.98	21.41	22.30	1.227	-0.02	0.084	0.103
	FR1 n77_Ant 7	100M	BPSK	1	1	Front	10mm	4	656000	3840	22.68	24.00	1.355	0.08	0.337	0.457
	FR1 n77_Ant 7	100M	BPSK	135	69	Front	10mm	4	656000	3840	22.10	24.00	1.549	-0.05	0.275	0.426
	FR1 n77_Ant 7	100M	BPSK	1	1	Back	10mm	4	656000	3840	22.68	24.00	1.355	0.02	0.501	0.679
	FR1 n77_Ant 7	100M	BPSK	135	69	Back	10mm	4	656000	3840	22.10	24.00	1.549	0.04	0.428	0.663
	FR1 n77_Ant 7	100M	BPSK	1	1	Left Side	10mm	4	656000	3840	22.68	24.00	1.355	0.03	0.049	0.066
	FR1 n77_Ant 7	100M	BPSK	135	69	Left Side	10mm	4	656000	3840	22.10	24.00	1.549	0.07	0.046	0.071
65	FR1 n77_Ant 7	100M	BPSK	1	1	Right side	10mm	4	656000	3840	22.68	24.00	1.355	0.02	0.625	0.847
	FR1 n77_Ant 7	100M	BPSK	135	69	Right Side	10mm	4	656000	3840	22.10	24.00	1.549	0.01	0.520	0.805
	FR1 n77_Ant 7	100M	BPSK	270	0	Right side	10mm	4	656000	3840	21.56	23.50	1.563	0.04	0.512	0.800
	FR1 n77_Ant 7	100M	BPSK	1	1	Bottom Side	10mm	4	656000	3840	22.68	24.00	1.355	-0.12	0.190	0.257
	FR1 n77_Ant 7	100M	BPSK	135	69	Bottom Side	10mm	4	656000	3840	22.10	24.00	1.549	-0.09	0.159	0.246



FCC SAR TEST REPORT

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FR1 n77_Ant 7	100M	BPSK	1	1	Front	10mm	4	633332	3499.98	23.10	24.00	1.230	-0.08	0.316	0.389
FR1 n77_Ant 7	100M	BPSK	135	69	Front	10mm	4	633332	3499.98	22.35	24.00	1.462	0.03	0.259	0.379
FR1 n77_Ant 7	100M	BPSK	1	1	Back	10mm	4	633332	3499.98	23.10	24.00	1.230	0.01	0.292	0.359
FR1 n77_Ant 7	100M	BPSK	135	69	Back	10mm	4	633332	3499.98	22.35	24.00	1.462	-0.03	0.304	0.445
FR1 n77_Ant 7	100M	BPSK	1	1	Left Side	10mm	4	633332	3499.98	23.10	24.00	1.230	0.07	0.037	0.046
FR1 n77_Ant 7	100M	BPSK	135	69	Left Side	10mm	4	633332	3499.98	22.35	24.00	1.462	-0.01	0.035	0.051
FR1 n77_Ant 7	100M	BPSK	1	1	Right Side	10mm	4	633332	3499.98	23.10	24.00	1.230	0.05	0.531	0.653
FR1 n77_Ant 7	100M	BPSK	135	69	Right side	10mm	4	633332	3499.98	22.35	24.00	1.462	-0.08	0.537	0.785
FR1 n77_Ant 7	100M	BPSK	1	1	Bottom Side	10mm	4	633332	3499.98	23.10	24.00	1.230	0.01	0.196	0.241
FR1 n77_Ant 7	100M	BPSK	135	69	Bottom Side	10mm	4	633332	3499.98	22.35	24.00	1.462	-0.02	0.152	0.222
FR1 n77_Ant 1	100M	BPSK	1	1	Front	10mm	4	656000	3840	20.38	20.80	1.102	-0.06	0.058	0.064
FR1 n77_Ant 1	100M	BPSK	135	0	Front	10mm	4	656000	3840	20.60	20.80	1.047	-0.09	0.076	0.080
FR1 n77_Ant 1	100M	BPSK	1	1	Back	10mm	4	656000	3840	20.38	20.80	1.102	0	0.151	0.166
FR1 n77_Ant 1	100M	BPSK	135	0	Back	10mm	4	656000	3840	20.60	20.80	1.047	0.01	0.181	0.190
FR1 n77_Ant 1	100M	BPSK	1	1	Left Side	10mm	4	656000	3840	20.38	20.80	1.102	0.16	0.305	0.336
FR1 n77_Ant 1	100M	BPSK	135	0	Left Side	10mm	4	656000	3840	20.60	20.80	1.047	-0.05	0.344	0.360
FR1 n77_Ant 1	100M	BPSK	1	1	Right Side	10mm	4	656000	3840	20.38	20.80	1.102	-0.18	0.001	0.001
FR1 n77_Ant 1	100M	BPSK	135	0	Right Side	10mm	4	656000	3840	20.60	20.80	1.047	0.08	0.001	0.001
FR1 n77_Ant 1	100M	BPSK	1	1	Top Side	10mm	4	656000	3840	20.38	20.80	1.102	0.12	0.128	0.141
FR1 n77_Ant 1	100M	BPSK	135	0	Top Side	10mm	4	656000	3840	20.60	20.80	1.047	0.04	0.140	0.147
FR1 n77_Ant 1	100M	BPSK	1	1	Front	10mm	4	633332	3499.98	20.51	20.80	1.069	-0.16	0.138	0.148
FR1 n77_Ant 1	100M	BPSK	135	0	Front	10mm	4	633332	3499.98	20.62	20.80	1.042	-0.06	0.140	0.146
FR1 n77_Ant 1	100M	BPSK	1	1	Back	10mm	4	633332	3499.98	20.51	20.80	1.069	-0.17	0.066	0.071
FR1 n77_Ant 1	100M	BPSK	135	0	Back	10mm	4	633332	3499.98	20.62	20.80	1.042	-0.19	0.059	0.061
FR1 n77_Ant 1	100M	BPSK	1	1	Left Side	10mm	4	633332	3499.98	20.51	20.80	1.069	0.13	0.008	0.009
FR1 n77_Ant 1	100M	BPSK	135	0	Left Side	10mm	4	633332	3499.98	20.62	20.80	1.042	0.18	0.009	0.009
FR1 n77_Ant 1	100M	BPSK	1	1	Right Side	10mm	4	633332	3499.98	20.51	20.80	1.069	-0.11	0.001	0.001
FR1 n77_Ant 1	100M	BPSK	135	0	Right Side	10mm	4	633332	3499.98	20.62	20.80	1.042	-0.19	0.001	0.001
FR1 n77_Ant 1	100M	BPSK	1	1	Top Side	10mm	4	633332	3499.98	20.51	20.80	1.069	-0.12	0.008	0.009
FR1 n77_Ant 1	100M	BPSK	135	0	Top Side	10mm	4	633332	3499.98	20.62	20.80	1.042	0.13	0.007	0.007



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 5	100M	BPSK	1	1	Front	10mm	4	656000	3840	19.75	20.30	1.135	0.17	0.143	0.162
	FR1 n77_Ant 5	100M	BPSK	135	0	Front	10mm	4	656000	3840	20.09	20.30	1.050	-0.18	0.157	0.165
	FR1 n77_Ant 5	100M	BPSK	1	1	Back	10mm	4	656000	3840	19.75	20.30	1.135	-0.09	0.210	0.238
	FR1 n77_Ant 5	100M	BPSK	135	0	Back	10mm	4	656000	3840	20.09	20.30	1.050	-0.1	0.217	0.228
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Side	10mm	4	656000	3840	19.75	20.30	1.135	0.12	0.001	0.001
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Side	10mm	4	656000	3840	20.09	20.30	1.050	0.19	0.001	0.001
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Side	10mm	4	656000	3840	19.75	20.30	1.135	0.06	0.362	0.411
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Side	10mm	4	656000	3840	20.09	20.30	1.050	-0.03	0.372	0.390
	FR1 n77_Ant 5	100M	BPSK	1	1	Top Side	10mm	4	656000	3840	19.75	20.30	1.135	-0.04	0.055	0.062
	FR1 n77_Ant 5	100M	BPSK	135	0	Top Side	10mm	4	656000	3840	20.09	20.30	1.050	0.02	0.057	0.060
	FR1 n77_Ant 5	100M	BPSK	1	1	Front	10mm	4	633332	3499.98	19.67	20.30	1.156	0.06	0.091	0.105
	FR1 n77_Ant 5	100M	BPSK	135	0	Front	10mm	4	633332	3499.98	20.22	20.30	1.019	0.08	0.089	0.091
	FR1 n77_Ant 5	100M	BPSK	1	1	Back	10mm	4	633332	3499.98	19.67	20.30	1.156	-0.01	0.154	0.178
	FR1 n77_Ant 5	100M	BPSK	135	0	Back	10mm	4	633332	3499.98	20.22	20.30	1.019	0.09	0.147	0.150
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Side	10mm	4	633332	3499.98	19.67	20.30	1.156	0.14	0.001	0.001
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Side	10mm	4	633332	3499.98	20.22	20.30	1.019	0	0.001	0.001
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Side	10mm	4	633332	3499.98	19.67	20.30	1.156	-0.03	0.220	0.254
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Side	10mm	4	633332	3499.98	20.22	20.30	1.019	0.1	0.201	0.205
	FR1 n77_Ant 5	100M	BPSK	1	1	Top Side	10mm	4	633332	3499.98	19.67	20.30	1.156	0.19	0.051	0.059
	FR1 n77_Ant 5	100M	BPSK	135	0	Top Side	10mm	4	633332	3499.98	20.22	20.30	1.019	0.11	0.045	0.046



<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	7	1	2412	20.55	21.50	1.245	98.9	1.011	0.13	0.244	0.307
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	7	1	2412	20.55	21.50	1.245	98.9	1.011	-0.07	0.421	0.530
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4	7	1	2412	20.55	21.50	1.245	98.9	1.011	0.11	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4	7	1	2412	20.55	21.50	1.245	98.9	1.011	-0.04	0.419	0.527
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 4	7	1	2412	20.55	21.50	1.245	98.9	1.011	0.11	0.326	0.410
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 3	7	11	2462	19.75	21.00	1.334	98.9	1.011	-0.08	0.274	0.369
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 3	7	11	2462	19.75	21.00	1.334	98.9	1.011	0.02	0.366	0.493
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 3	7	11	2412	19.75	21.00	1.334	98.9	1.011	0.06	0.499	0.673
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 3	7	11	2462	19.75	21.00	1.334	98.9	1.011	-0.01	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 3	7	11	2462	19.75	21.00	1.334	98.9	1.011	0.06	0.001	0.001
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(4)	7	6	2437	19.25	21.00	1.496	93.4	1.071	-0.11	0.142	0.228
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(3)	7	6	2437	19.00	21.00	1.585	93.4	1.071	-0.11	0.188	0.319
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	7	6	2437	19.25	21.00	1.496	93.4	1.071	0.16	0.222	0.356
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	7	6	2437	19.00	21.00	1.585	93.4	1.071	0.16	0.351	0.596
66	WLAN2.4GHz	802.11g 6Mbps	Left Side	10mm	Ant 4+3(3)	7	6	2437	19.00	21.00	1.585	93.4	1.071	-0.09	0.400	0.679
	WLAN2.4GHz	802.11g 6Mbps	Left Side	10mm	Ant 4+3(3)	7	1	2412	19.00	21.00	1.585	93.4	1.071	-0.17	0.379	0.643
	WLAN2.4GHz	802.11g 6Mbps	Left Side	10mm	Ant 4+3(3)	7	11	2462	19.25	19.50	1.059	93.4	1.071	-0.17	0.371	0.421
	WLAN2.4GHz	802.11g 6Mbps	Right Side	10mm	Ant 4+3(4)	7	6	2437	19.25	21.00	1.496	93.4	1.071	0.05	0.275	0.441
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(4)	7	6	2437	19.25	21.00	1.496	93.4	1.071	-0.03	0.359	0.575
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(3)	7	6	2437	19.00	21.00	1.585	93.4	1.071	-0.03	0.083	0.141
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4	8	6	2437	14.20	15.00	1.202	98.9	1.011	-0.17	0.060	0.073
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	8	6	2437	14.20	15.00	1.202	98.9	1.011	-0.14	0.079	0.096
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4	8	6	2437	14.20	15.00	1.202	98.9	1.011	-0.17	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4	8	6	2437	14.20	15.00	1.202	98.9	1.011	0.05	0.118	0.143
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4	8	1	2412	14.00	15.00	1.259	98.9	1.011	0.04	0.096	0.122
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4	8	11	2462	14.10	15.00	1.230	98.9	1.011	-0.05	0.102	0.127
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 4	8	6	2437	14.20	15.00	1.202	98.9	1.011	-0.18	0.096	0.117
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 3	8	6	2437	14.00	15.00	1.259	98.9	1.011	-0.02	0.038	0.048
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 3	8	6	2437	14.00	15.00	1.259	98.9	1.011	0	0.097	0.123
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 3	8	6	2437	14.00	15.00	1.259	98.9	1.011	-0.12	0.124	0.158
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 3	8	6	2437	13.90	15.00	1.288	98.9	1.011	0.03	0.115	0.150
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 3	8	1	2412	13.90	15.00	1.288	98.9	1.011	0.09	0.116	0.151
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 3	8	11	2462	14.00	15.00	1.259	98.9	1.011	-0.13	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 3	8	6	2437	14.00	15.00	1.259	98.9	1.011	0.02	0.001	0.001
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(4)	8	11	2462	13.95	15.00	1.274	93.4	1.071	0.06	0.043	0.059
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(3)	8	11	2462	14.45	15.00	1.135	93.4	1.071	0.06	0.072	0.088
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	8	11	2462	13.95	15.00	1.274	93.4	1.071	0.02	0.079	0.108
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	8	11	2462	14.45	15.00	1.135	93.4	1.071	0.02	0.129	0.157
	WLAN2.4GHz	802.11g 6Mbps	Left Side	10mm	Ant 4+3(3)	8	11	2462	14.45	15.00	1.135	93.4	1.071	-0.01	0.142	0.173
	WLAN2.4GHz	802.11g 6Mbps	Right Side	10mm	Ant 4+3(4)	8	11	2462	13.95	15.00	1.274	93.4	1.071	-0.11	0.090	0.123
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(4)	8	11	2462	13.95	15.00	1.274	93.4	1.071	0.15	0.091	0.124
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(3)	8	11	2462	14.45	15.00	1.135	93.4	1.071	0.15	0.014	0.017



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	802.11n-HT40 MCS0	Front	10mm	Ant 4+8(4)	7	46	5230	17.40	18.00	1.148	86.84	1.152	-0.03	0.129	0.171
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+8(8)	7	46	5230	17.25	18.00	1.189	86.84	1.152	-0.03	0.016	0.022
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+8(4)	7	46	5230	17.40	18.00	1.148	86.84	1.152	0.01	0.147	0.194
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+8(8)	7	46	5230	17.25	18.00	1.189	86.84	1.152	0.01	0.330	0.452
67	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 4+8(8)	7	46	5230	17.25	18.00	1.189	86.84	1.152	0.02	0.036	0.049
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 4+8(4)	7	46	5230	17.40	18.00	1.148	86.84	1.152	0.13	0.482	0.638
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+8(4)	7	46	5230	17.40	18.00	1.148	86.84	1.152	-0.09	0.092	0.122
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+8(8)	7	46	5230	17.25	18.00	1.189	86.84	1.152	-0.09	0.166	0.227
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+8(4)	8/9	42	5210	13.10	14.50	1.380	88.1	1.135	0.02	0.045	0.071
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+8(8)	8/9	42	5210	13.20	14.50	1.349	88.1	1.135	0.02	0.003	0.005
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+8(4)	8/9	42	5210	13.10	14.50	1.380	88.1	1.135	0.09	0.070	0.110
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+8(8)	8/9	42	5210	13.20	14.50	1.349	88.1	1.135	0.09	0.115	0.176
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 4+8(8)	8/9	42	5210	13.20	14.50	1.349	88.1	1.135	0.01	0.016	0.024
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+8(4)	8/9	42	5210	13.10	14.50	1.380	88.1	1.135	0.03	0.275	0.430
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+8(4)	8/9	42	5210	13.10	14.50	1.380	88.1	1.135	0.11	0.030	0.047
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+8(8)	8/9	42	5210	13.20	14.50	1.349	88.1	1.135	0.11	0.058	0.089
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+8(4)	7	155	5775	18.00	18.00	1.000	88.1	1.135	-0.02	0.102	0.116
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+8(8)	7	155	5775	19.55	20.50	1.245	88.1	1.135	-0.02	0.061	0.086
68	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+8(4)	7	155	5775	18.00	18.00	1.000	88.1	1.135	-0.02	0.207	0.235
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+8(8)	7	155	5775	19.55	20.50	1.245	88.1	1.135	-0.02	0.338	0.477
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 4+8(8)	7	155	5775	19.55	20.50	1.245	88.1	1.135	-0.07	0.080	0.113
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+8(4)	7	155	5775	18.00	18.00	1.000	88.1	1.135	-0.12	0.310	0.352
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+8(4)	7	155	5775	18.00	18.00	1.000	88.1	1.135	-0.03	0.199	0.226
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+8(8)	7	155	5775	19.55	20.50	1.245	88.1	1.135	-0.03	0.092	0.130
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+8(4)	8/9	155	5775	18.00	18.00	1.000	88.1	1.135	-0.15	0.088	0.100
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+8(8)	8/9	155	5775	18.90	19.00	1.023	88.1	1.135	-0.15	0.049	0.057
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+8(4)	8/9	155	5775	18.00	18.00	1.000	88.1	1.135	-0.02	0.166	0.188
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+8(8)	8/9	155	5775	18.90	19.00	1.023	88.1	1.135	-0.02	0.266	0.309
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 4+8(8)	8/9	155	5775	18.00	19.00	1.259	88.1	1.135	-0.14	0.085	0.121
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+8(4)	8/9	155	5775	18.90	18.00	0.813	88.1	1.135	-0.11	0.223	0.206
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+8(4)	8/9	155	5775	18.00	18.00	1.000	88.1	1.135	-0.02	0.182	0.207
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+8(8)	8/9	155	5775	18.90	19.00	1.023	88.1	1.135	-0.02	0.077	0.089



<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	3	78	2480	18.15	19.00	1.216	77.1	1.080	-0.11	0.126	0.165
	Bluetooth	1Mbps	Back	10mm	Ant 4	3	78	2480	18.15	19.00	1.216	77.1	1.080	-0.01	0.223	0.293
	Bluetooth	1Mbps	Left Side	10mm	Ant 4	3	78	2480	18.15	19.00	1.216	77.1	1.080	0.05	0.001	0.001
69	Bluetooth	1Mbps	Right Side	10mm	Ant 4	3	78	2480	18.15	19.00	1.216	77.1	1.080	-0.03	0.309	0.406
	Bluetooth	1Mbps	Right Side	10mm	Ant 4	3	0	2402	18.05	19.00	1.245	77.1	1.080	-0.01	0.223	0.300
	Bluetooth	1Mbps	Right Side	10mm	Ant 4	3	39	2441	18.05	19.00	1.245	77.1	1.080	-0.16	0.219	0.294
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	3	78	2480	18.15	19.00	1.216	77.1	1.080	0.05	0.193	0.254
	Bluetooth	1Mbps	Front	10mm	Ant 3	3	39	2441	18.35	20.00	1.462	77.1	1.080	0.06	0.146	0.231
	Bluetooth	1Mbps	Back	10mm	Ant 3	3	39	2441	18.35	20.00	1.462	77.1	1.080	-0.1	0.185	0.292
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	3	39	2441	18.35	20.00	1.462	77.1	1.080	-0.14	0.238	0.376
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	3	0	2402	18.05	20.00	1.567	77.1	1.080	0	0.218	0.369
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	3	78	2480	18.15	20.00	1.531	77.1	1.080	-0.15	0.214	0.354
	Bluetooth	1Mbps	Right Side	10mm	Ant 3	3	39	2441	18.35	20.00	1.462	77.1	1.080	0.17	0.001	0.002
	Bluetooth	1Mbps	Top Side	10mm	Ant 3	3	39	2441	18.35	20.00	1.462	77.1	1.080	-0.07	0.053	0.084
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(4)	3	78	2480	16.13	17.50	1.371	76.83	1.084	-0.09	0.083	0.123
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(3)	3	78	2480	16.69	17.50	1.205	76.83	1.084	-0.09	0.098	0.128
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(4)	3	78	2480	16.13	17.50	1.371	76.83	1.084	-0.03	0.127	0.189
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(3)	3	78	2480	16.69	17.50	1.205	76.83	1.084	-0.03	0.146	0.191
	Bluetooth	1Mbps	Left Side	10mm	Ant 4+3(3)	3	78	2480	16.13	17.50	1.371	76.83	1.084	-0.03	0.177	0.263
	Bluetooth	1Mbps	Left Side	10mm	Ant 4+3(4)	3	78	2480	16.69	17.50	1.205	76.83	1.084	-0.11	0.092	0.120
	Bluetooth	1Mbps	Left Side	10mm	Ant 4+3(4)	3	0	2402	16.69	17.50	1.205	76.83	1.084	-0.13	0.100	0.131
	Bluetooth	1Mbps	Right Side	10mm	Ant 4+3(4)	3	39	2441	16.69	17.50	1.205	76.83	1.084	0.17	0.095	0.124
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(4)	3	78	2480	16.69	17.50	1.205	76.83	1.084	-0.15	0.053	0.069
	Bluetooth	1Mbps	Front	10mm	Ant 4	4	78	2480	16.15	17.00	1.216	77	1.082	0.17	0.002	0.003
	Bluetooth	1Mbps	Back	10mm	Ant 4	4	78	2480	16.15	17.00	1.216	77	1.082	-0.06	0.103	0.136
	Bluetooth	1Mbps	Left Side	10mm	Ant 4	4	78	2480	16.15	17.00	1.216	77	1.082	-0.01	0.002	0.003
	Bluetooth	1Mbps	Right Side	10mm	Ant 4	4	78	2480	16.15	17.00	1.216	77	1.082	-0.1	0.158	0.208
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	4	78	2480	16.15	17.00	1.216	77	1.082	0.08	0.081	0.107
	Bluetooth	1Mbps	Front	10mm	Ant 3	4	78	2480	15.95	17.50	1.429	77.1	1.080	0.17	0.091	0.140
	Bluetooth	1Mbps	Back	10mm	Ant 3	4	78	2480	15.95	17.50	1.429	77.1	1.080	-0.13	0.104	0.160
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	4	78	2480	15.95	17.50	1.429	77.1	1.080	-0.11	0.148	0.228
	Bluetooth	1Mbps	Right Side	10mm	Ant 3	4	78	2480	15.95	17.50	1.429	77.1	1.080	-0.14	0.003	0.005
	Bluetooth	1Mbps	Top Side	10mm	Ant 3	4	78	2480	15.95	17.50	1.429	77.1	1.080	0.04	0.004	0.006
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(4)	4	78	2480	15.13	17.00	1.538	76.83	1.084	-0.05	0.079	0.132
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(3)	4	78	2480	15.94	17.00	1.276	76.83	1.084	-0.05	0.098	0.136
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(4)	4	78	2480	15.13	17.00	1.538	76.83	1.084	-0.04	0.111	0.185
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(3)	4	78	2480	15.94	17.00	1.276	76.83	1.084	-0.04	0.097	0.134
	Bluetooth	1Mbps	Left Side	10mm	Ant 4+3(3)	4	78	2480	15.94	17.00	1.276	76.83	1.084	0.01	0.163	0.226
	Bluetooth	1Mbps	Right Side	10mm	Ant 4+3(4)	4	78	2480	15.13	17.00	1.538	76.83	1.084	0.04	0.121	0.202
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(4)	4	78	2480	15.13	17.00	1.538	76.83	1.084	-0.1	0.059	0.098



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	128	824.2	27.05	28.70	1.462	-0.16	0.493	0.721
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	128	824.2	27.05	28.70	1.462	-0.09	0.546	0.798
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	189	836.4	26.74	28.70	1.570	-0.15	0.629	0.988
70	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	251	848.8	26.72	28.70	1.578	-0.05	0.645	1.018
	GSM850_Ant 0	GPRS (4 Tx slots)	Front	10mm	6	128	824.2	27.05	27.50	1.109	-0.16	0.493	0.547
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	128	824.2	27.05	27.50	1.109	-0.09	0.546	0.606
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	189	836.4	26.74	27.50	1.191	-0.15	0.629	0.749
	GSM850_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	251	848.8	26.72	27.50	1.197	-0.05	0.645	0.772
	GSM850_Ant 1	GPRS (4 Tx slots)	Front	10mm	5/6	128	824.2	28.96	30.50	1.426	-0.02	0.236	0.336
	GSM850_Ant 1	GPRS (4 Tx slots)	Back	10mm	5/6	128	824.2	28.96	30.50	1.426	-0.16	0.300	0.428
	GSM850_Ant 1	GPRS (4 Tx slots)	Back	10mm	5/6	189	836.4	28.73	30.50	1.503	-0.12	0.333	0.501
	GSM850_Ant 1	GPRS (4 Tx slots)	Back	10mm	5/6	251	848.8	28.56	30.50	1.563	-0.11	0.345	0.539
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	5	661	1880	25.07	26.40	1.358	-0.06	0.453	0.615
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	5	661	1880	25.07	26.40	1.358	-0.09	0.728	0.989
71	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	5	512	1850.2	24.84	26.40	1.432	-0.19	0.726	1.040
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	5	810	1909.8	24.81	26.40	1.442	-0.14	0.700	1.009
	GSM1900_Ant 2	GPRS (4 Tx slots)	Front	10mm	6	661	1880	25.07	25.20	1.030	-0.06	0.453	0.467
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	6	661	1880	25.07	25.20	1.030	-0.09	0.728	0.750
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	6	512	1850.2	24.84	25.20	1.086	-0.19	0.726	0.789
	GSM1900_Ant 2	GPRS (4 Tx slots)	Back	10mm	6	810	1909.8	24.81	25.20	1.094	-0.14	0.700	0.766
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	5	661	1880	21.54	22.90	1.368	0.08	0.449	0.614
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	661	1880	21.54	22.90	1.368	-0.02	0.460	0.629
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	512	1850.2	21.50	22.90	1.380	0.08	0.409	0.565
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	5	810	1909.8	21.48	22.90	1.387	-0.17	0.490	0.680
	GSM1900_Ant 0	GPRS (4 Tx slots)	Front	10mm	6	661	1880	21.54	21.70	1.038	0.08	0.449	0.466
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	661	1880	21.54	21.70	1.038	-0.02	0.460	0.477
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	512	1850.2	21.50	21.70	1.047	0.08	0.409	0.428
	GSM1900_Ant 0	GPRS (4 Tx slots)	Back	10mm	6	810	1909.8	21.48	21.70	1.052	-0.17	0.490	0.515

<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	5	9400	1880	23.39	24.70	1.352	-0.04	0.676	0.914
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	5	9400	1880	23.39	24.70	1.352	-0.12	0.790	1.068
72	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	5	9262	1852.4	23.21	24.70	1.409	-0.02	0.809	1.140
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	5	9538	1907.6	23.34	24.70	1.368	-0.1	0.803	1.098
	WCDMA II_Ant 2	RMC 12.2Kbps	Front	10mm	6	9400	1880	23.39	23.50	1.026	-0.04	0.676	0.693
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	6	9400	1880	23.39	23.50	1.026	-0.12	0.790	0.810
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	6	9262	1852.4	23.21	23.50	1.069	-0.02	0.809	0.865
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	6	9538	1907.6	23.34	23.50	1.038	-0.1	0.803	0.833
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	5	9400	1880	20.62	21.90	1.343	-0.01	0.592	0.795
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	5	9262	1852.4	20.45	21.90	1.396	-0.01	0.591	0.825
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	5	9538	1907.6	20.54	21.90	1.368	-0.12	0.662	0.905
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	5	9400	1880	20.62	21.90	1.343	-0.02	0.550	0.739
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	6	9400	1880	20.62	20.70	1.019	-0.01	0.592	0.603
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	6	9262	1852.4	20.45	20.70	1.059	-0.01	0.591	0.626
	WCDMA II_Ant 0	RMC 12.2Kbps	Front	10mm	6	9538	1907.6	20.54	20.70	1.038	-0.12	0.662	0.687
	WCDMA II_Ant 0	RMC 12.2Kbps	Back	10mm	6	9400	1880	20.62	20.70	1.019	-0.02	0.550	0.560
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	10mm	5	1513	1752.6	24.03	25.30	1.340	-0.18	0.601	0.805
73	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	5	1513	1752.6	24.03	25.30	1.340	0.13	0.876	1.174
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	5	1312	1712.4	24.01	25.30	1.346	-0.16	0.698	0.939
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	5	1413	1732.6	24.00	25.30	1.349	-0.09	0.749	1.010
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	10mm	6	1513	1752.6	24.03	24.10	1.016	-0.18	0.601	0.611
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	6	1513	1752.6	24.03	24.10	1.016	0.13	0.876	0.890
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	6	1312	1712.4	24.01	24.10	1.021	-0.16	0.698	0.713
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	6	1413	1732.6	24.00	24.10	1.023	-0.09	0.749	0.766
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	5	1513	1752.6	19.23	20.60	1.371	0.08	0.382	0.524
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	5	1312	1712.4	19.20	20.60	1.380	-0.1	0.405	0.559
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	5	1413	1732.6	19.19	20.60	1.384	0.13	0.358	0.495
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	5	1513	1752.6	19.23	20.60	1.371	-0.03	0.354	0.485
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	6	1513	1752.6	19.23	19.40	1.040	0.08	0.382	0.397
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	6	1312	1712.4	19.20	19.40	1.047	-0.1	0.405	0.424
	WCDMA IV_Ant 0	RMC 12.2Kbps	Front	10mm	6	1413	1732.6	19.19	19.40	1.050	0.13	0.358	0.376
	WCDMA IV_Ant 0	RMC 12.2Kbps	Back	10mm	6	1513	1752.6	19.23	19.40	1.040	-0.03	0.354	0.368
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	5	4132	826.4	23.48	24.70	1.324	-0.01	0.602	0.797
74	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	5	4132	826.4	23.48	24.70	1.324	-0.07	0.819	1.085
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	5	4182	836.4	23.47	24.70	1.327	-0.14	0.773	1.026
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	5	4233	846.6	23.44	24.70	1.337	0.05	0.778	1.040
	WCDMA V_Ant 0	RMC 12.2Kbps	Front	10mm	6	4132	826.4	23.48	23.50	1.005	-0.01	0.602	0.605
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	6	4132	826.4	23.48	23.50	1.005	-0.07	0.819	0.823
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	6	4182	836.4	23.47	23.50	1.007	-0.14	0.773	0.778
	WCDMA V_Ant 0	RMC 12.2Kbps	Back	10mm	6	4233	846.6	23.44	23.50	1.014	0.05	0.778	0.789
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	10mm	5/6	4132	826.4	24.58	25.50	1.236	0	0.241	0.298
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	5/6	4132	826.4	24.58	25.50	1.236	-0.1	0.381	0.471
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	5/6	4182	836.4	24.57	25.50	1.239	-0.16	0.391	0.484
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	5/6	4233	846.6	24.49	25.50	1.262	-0.11	0.356	0.449



<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)
75	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	5	18900	1880	23.47	24.70	1.327	-0.16	0.886	1.176
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	5	18700	1860	23.46	24.70	1.330	0.03	0.857	1.140
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	5	19100	1900	23.45	24.70	1.334	-0.05	0.863	1.151
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	5	18900	1880	23.43	24.50	1.279	-0.01	0.871	1.114
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	5	18700	1860	23.40	24.50	1.288	0.03	0.863	1.112
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	5	19100	1900	23.39	24.50	1.291	-0.11	0.848	1.095
	LTE Band 2_Ant 1	20M	QPSK	100	0	Front	10mm	5	18900	1880	23.37	24.50	1.297	0.07	0.862	1.118
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	5	18900	1880	23.47	24.70	1.327	0.01	0.838	1.112
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	5	18700	1860	23.46	24.70	1.330	0.04	0.821	1.092
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	5	19100	1900	23.45	24.70	1.334	0.08	0.815	1.087
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	5	18900	1880	23.43	24.50	1.279	0.02	0.801	1.025
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	5	18700	1860	23.40	24.50	1.288	0.06	0.811	1.045
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	5	19100	1900	23.39	24.50	1.291	-0.07	0.805	1.039
	LTE Band 2_Ant 1	20M	QPSK	100	0	Back	10mm	5	18900	1880	23.37	24.50	1.297	0.02	0.798	1.035
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	6	18900	1880	23.47	23.50	1.007	-0.16	0.886	0.892
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	6	18700	1860	23.46	23.50	1.009	0.03	0.857	0.865
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	10mm	6	19100	1900	23.45	23.50	1.012	-0.05	0.863	0.873
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	6	18900	1880	23.43	23.50	1.016	-0.01	0.871	0.885
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	6	18700	1860	23.40	23.50	1.023	0.03	0.863	0.883
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	10mm	6	19100	1900	23.39	23.50	1.026	-0.11	0.848	0.870
	LTE Band 2_Ant 1	20M	QPSK	100	0	Front	10mm	6	18900	1880	23.37	23.50	1.030	0.07	0.862	0.888
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	6	18900	1880	23.47	23.50	1.007	0.01	0.838	0.844
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	6	18700	1860	23.46	23.50	1.009	0.04	0.821	0.829
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	10mm	6	19100	1900	23.45	23.50	1.012	0.08	0.815	0.824
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	6	18900	1880	23.43	23.50	1.016	0.02	0.801	0.814
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	6	18700	1860	23.40	23.50	1.023	0.06	0.811	0.830
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	10mm	6	19100	1900	23.39	23.50	1.026	-0.07	0.805	0.826
	LTE Band 2_Ant 1	20M	QPSK	100	0	Back	10mm	6	18900	1880	23.37	23.50	1.030	0.02	0.798	0.822
	LTE Band 2_Ant 5	20M	QPSK	1	0	Front	10mm	5/6	18700	1860	24.62	25.30	1.169	0.02	0.318	0.372
	LTE Band 2_Ant 5	20M	QPSK	50	0	Front	10mm	5/6	18700	1860	23.54	24.30	1.191	0.03	0.245	0.292
	LTE Band 2_Ant 5	20M	QPSK	1	0	Back	10mm	5/6	18700	1860	24.62	25.30	1.169	0.05	0.628	0.734
	LTE Band 2_Ant 5	20M	QPSK	1	0	Back	10mm	5/6	18900	1880	24.45	25.30	1.216	-0.14	0.603	0.733
	LTE Band 2_Ant 5	20M	QPSK	1	0	Back	10mm	5/6	19100	1900	24.20	25.30	1.288	0.03	0.561	0.723
	LTE Band 2_Ant 5	20M	QPSK	50	0	Back	10mm	5/6	18700	1860	23.54	24.30	1.191	-0.07	0.460	0.548