

FCC SAR TEST REPORT

FCC ID : MSQAI2202
Equipment : ASUS Phone(Mobile Phone)
Brand Name : ASUS
Model Name : ASUS_AI2202
Applicant : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan
Manufacturer : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan
Standard : FCC 47 CFR Part 2 (2.1093)

The product was received on Apr. 22, 2022 and testing was started from Jun. 01, 2022 and completed on Aug. 24, 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



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1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for ASUSTeK COMPUTER INC., ASUS Phone(Mobile Phone), ASUS_AI2202, are as follows.

Equipment Class	Frequency Band		Highest SAR Summary				Highest Simultaneous Transmission 1g SAR (W/kg)		
			Head (Separation 0mm)	Body-worn (Separation 15mm)	Hotspot (Separation 10mm)	Product Specific (Separation 0mm)			
			1g SAR (W/kg)			10g SAR (W/kg)			
Licensed	GSM	GSM850	0.94	0.27	0.38		1.59		
		GSM1900	0.83	0.27	0.87				
	WCDMA	WCDMA II	0.91	0.30	0.91				
		WCDMA IV	1.08	0.27	0.76				
		WCDMA V	0.72	0.13	0.27				
	LTE	LTE Band 2	0.27		0.82				
		LTE Band 5	0.24						
		LTE Band 7	1.07	0.42	0.75				
		LTE Band 12 / 17	0.63	0.14	0.18				
		LTE Band 25	0.74	0.28	0.90				
		LTE Band 26	0.68	0.12	0.25				
		LTE Band 30	1.12	0.23	0.55				
		LTE Band 4 / 66	1.12	0.30	0.79				
		LTE Band 71	0.44	0.06	0.32				
		LTE Band 38 / 41	1.14	0.15	0.59				
		LTE Band 42	1.11	0.21	0.58				
		FR1	FR1 n2	0.21					
	FR1 n5		0.93	0.12	0.30				
	FR1 n7		1.16	0.33	0.75				
	FR1 n12		0.20	0.04	0.09				
	FR1 n25		1.16	0.19	0.89				
	FR1 n66		1.09	0.19	0.86				
	FR1 n71		0.39	0.05	0.11				
	FR1 n38 / n41		1.17	0.31	0.76				
	FR1 n77		1.17	0.50	0.23				
	FR1 n78	0.50		0.60					
	DTS	WLAN	2.4GHz WLAN	0.76	0.24	0.83			1.59
	NII		5GHz WLAN	0.80	0.56	0.58			1.59
6XD	6GHz WLAN		0.31	0.15			1.59		
DSS	2.4GHz Band	Bluetooth	0.23	0.02	0.08		1.40		
DXX	NFC	13.56MHz				0.01			
Equipment Class	Frequency Band	Head APD (W/m^2)	Body-worn APD (W/m^2)		Reported PD (W/m^2)				
6XD	6GHz WLAN	1.78	0.88		3.58				
Date of Testing:		2022/6/1 ~ 2022/8/24							

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/cm^2=10 W/m^2) 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: Paula Chen



2. Equipment Under Test (EUT) Information

2.1 General Information

Product Feature & Specification	
Equipment Name	ASUS Phone(Mobile Phone)
Brand Name	ASUS
Model Name	ASUS_AI2202
FCC ID	MSQAI2202
SN	N4AIB7N00348J7A N4AIB7N00335FBZ N4AIB7N00346FV7 N4AIB7N00331DZZ
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 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3550 MHz LTE Band 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 n25 : 1850 MHz ~ 1915 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz WLAN 2.4 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(without 5600MHz - 5650MHz) WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz WLAN 6E: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC : 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA 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: ASK
HW Version	AI2202_MB_ER2 R2.0
SW Version	Android R
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Production Unit
Remark:	
1. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.	

Accessories Information				
AC Adapter 1	Brand Name	Brand: ASUS Vendor: AOHAI	Model Name	A299-200150U-US
AC Adapter 2	Brand Name	Brand: ASUS Vendor: PI	Model Name	AD2166320
Battery	Brand Name	Brand: ASUS Vendor: CosMX	Model Name	C11P2102
USB Cable 1	Brand Name	Brand: ASUS Vendor: ASAP	Model Name	LA9U2019-CS-H
USB Cable 2	Brand Name	Brand: ASUS Vendor: WANNENG	Model Name	4CTC068
Bumper	Brand Name	Acrox	Model Name	A94A4NN

2.2 Maximum Tune-up Limit

Support transmit antenna and band
ANT1: GSM850, UMTS V, LTE B5/B7/B12/B17/B26/B71, NR n5/n12/n71 ANT2: GSM1900, UMTS II/IV, LTE B2/B4/B7/B25/B30/B66/B38/B41, NR n2/n7/n25/n66/n38/n41/n77/n78 ANT3: GSM850, UMTS V, LTE B5/B12/B17/B26/B71, NR n5/n12/n71 ANT4: GSM1900, UMTS II/IV, LTE B2/B4/B7/B25/B30/B66/B38/B41/B42, NR n2/n7/n25/n66/n38/n41/n77/n78 ANT5: LTE B42, NR n77/n78 ANT6: NR n77/n78 ANT7: WLAN/Bluetooth ANT8: WLAN/Bluetooth

Remark:

- For each cellular band, the device has several WWAN antennas, the antenna selection is based on the connection quality condition.
- The device implements the power management control different exposure conditions (head, hotspot) output power states, the device will manage to ensure the power level not exceeding the associated below power state table. Details about the power management decision are provided in the operational description.
- The following table shows maximum output power configurations for various exposure conditions (output power index) with tune-up tolerance accounted. 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.

Output Power State description:

WWAN Transmitter:

- State 0:** Default power
- State 1:** When the WWAN is transmitting on head condition in standalone mode
- State 2:** When WWAN is transmitted simultaneously on head with other radios.
- State 3:** When the WWAN is transmitting and Hotspot function is active

2.4GHz/5GHz WLAN Transmitter:

- State 0:** Default power
- State 1:** When the WLAN is transmitting on head condition in standalone mode
- State 2:** When WLAN is transmitted simultaneously on head with other radios.
- State 3:** When the WLAN is transmitting and Hotspot function is active



WWAN Output Power State

Mode			Maximum Transmit Power Level (dBm)			
Radio Tech	Band Number	Antenna name	State 1	State 2	State 3	State 0
			Head Standalone	Head Simultaneous	Hotspot Active	Body Worn
GSM/GPRS 1TX	850	ANT1	34	34	34	34
GPRS2TX	850	ANT1	34	34	34	34
EGPRS 1TX	850	ANT1	28	28	28	28
EGPRS 2TX	850	ANT1	28	28	28	28
GSM/GPRS 1TX	850	ANT3	34	33.5	34	34
GPRS2TX	850	ANT3	33	32.5	33	33
EGPRS 1TX	850	ANT3	28	27.5	28	28
EGPRS 2TX	850	ANT3	28	27.5	28	28
GSM/GPRS 1TX	1900	ANT2	31	31	31	31
GPRS2TX	1900	ANT2	31	31	31	31
EGPRS 1TX	1900	ANT2	27	27	27	27
EGPRS 2TX	1900	ANT2	27	27	27	27
GSM/GPRS 1TX	1900	ANT4	31	29	31	31
GPRS2TX	1900	ANT4	30.5	28.5	30.5	30.5
EGPRS 1TX	1900	ANT4	27	25	27	27
EGPRS 2TX	1900	ANT4	27	25	27	27
WCDMA AMR/RMC	B2	ANT2	25	25	25	25
WCDMA HSDPA/HSPA	B2	ANT2	24	24	24	24
WCDMA AMR/RMC	B2	ANT4	24	21.5	24	24
WCDMA HSDPA/HSPA	B2	ANT4	23	21.5	23	23
WCDMA AMR/RMC	B4	ANT2	25	25	25	25
WCDMA HSDPA/HSPA	B4	ANT2	24	24	24	24
WCDMA AMR/RMC	B4	ANT4	24.5	20.5	25	25
WCDMA HSDPA/HSPA	B4	ANT4	23.5	19.5	24	24
WCDMA AMR/RMC	B5	ANT1	25	25	25	25
WCDMA HSDPA/HSPA	B5	ANT1	24	24	24	24
WCDMA AMR/RMC	B5	ANT3	24	24	24	24
WCDMA HSDPA/HSPA	B5	ANT3	23.5	23.5	23.5	23.5
LTE	B2	ANT2	24.5	24.5	24.5	24.5
LTE	B2	ANT4	24	19.5	24	24
LTE	B4	ANT2	24.5	24.5	24.5	24.5
LTE	B4	ANT4	23	20	24.5	24.5
LTE	B5	ANT1	24.5	24.5	24.5	24.5
LTE	B5	ANT3	24.5	19.5	24.5	24.5
LTE	B7	ANT1	24.5	24.5	24.5	24.5
LTE	B7	ANT2	24.5	24.5	24.5	24.5
LTE	B7	ANT4	19.5	17	22	24
LTE	B12	ANT1	24.5	24.5	24.5	24.5
LTE	B12	ANT3	24.5	24.5	24.5	24.5
LTE	B17	ANT1	24.5	24.5	24.5	24.5
LTE	B17	ANT3	24.5	24.5	24.5	24.5
LTE	B25	ANT2	24.5	24.5	24.5	24.5
LTE	B25	ANT4	24	22.5	24	24
LTE	B26	ANT1	24.5	24.5	24.5	24.5
LTE	B26	ANT3	24.5	24.5	24.5	24.5
LTE	B30	ANT2	24.5	24.5	24.5	24.5
LTE	B30	ANT4	19.5	16	23.5	24.5
LTE	B66	ANT2	24.5	24.5	24.5	24.5
LTE	B66	ANT4	23	20	24.5	24.5
LTE	B71	ANT1	24.5	24.5	24.5	24.5
LTE	B71	ANT3	24	24	24	24



LTE	B38	ANT2	23.5	23.5	23.5	23.5
LTE	B38	ANT4	20	17.5	21	23
LTE	B41	ANT2	23.5	23.5	23.5	23.5
LTE	B41	ANT4	20	17.5	21	23
LTE	B42	AN5	20.5	18.5	24.5	24.5
LTE	B42	AN4	21.5	18	24.5	24.5
5G FR1	n2	ANT2	24.5	24.5	24.5	24.5
5G FR1	n2	ANT4	24	18	24.5	24.5
5G FR1	n5	ANT1	24.5	24.5	24.5	24.5
5G FR1	n5	ANT3	24.5	21	24.5	24.5
5G FR1	n7	ANT2	24.5	24.5	24.5	24.5
5G FR1	n7	ANT4	18	15	20.5	24.5
5G FR1	n12	ANT1	24.5	24.5	24.5	24.5
5G FR1	n12	ANT3	24.5	24.5	24.5	24.5
5G FR1	n25	ANT2	24.5	24.5	24.5	24.5
5G FR1	n25	ANT4	24	21	24.5	24.5
5G FR1	n66	ANT2	24.5	24.5	24.5	24.5
5G FR1	n66	ANT4	23	20	24.5	24.5
5G FR1	n71	ANT1	24.5	24.5	24.5	24.5
5G FR1	n71	ANT3	24.5	24.5	24.5	24.5
5G FR1	n38	ANT2	24.5	24.5	24.5	24.5
5G FR1	n38	ANT4	19	16	20.5	24.5
5G FR1	n41	ANT2	24.5	24.5	24.5	24.5
5G FR1	n41	ANT4	19	16	20.5	24.5
5G FR1	n77	ANT2	22	22	22	22
5G FR1	n77	ANT4	19	17.5	19.5	24.5
5G FR1	n77	ANT5	19	15.5	20.5	24.5
5G FR1	n77	ANT6	22	22	19	22
5G FR1	n78	ANT2	22	22	22	22
5G FR1	n78	ANT4	19	14	19.5	24.5
5G FR1	n78	ANT5	19	13	19.5	24.5
5G FR1	n78	ANT6	22	22	19	22

WLAN Output Power State

<Power State 0>

<2.4GHz WLAN>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
	802.11b 1Mbps	1	2412	21.00	21.00	24.00
		6	2437	21.00	21.00	24.00
		11	2462	21.00	21.00	24.00
	802.11g 6Mbps	1	2412	21.00	21.00	24.00
		6	2437	21.00	21.00	24.00
		11	2462	21.00	21.00	24.00
	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
802.11n-HT40 MCS0	3	2422	21.00	21.00	24.00	
	6	2437	21.00	21.00	24.00	
	9	2452	19.00	19.00	22.00	
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	
802.11ac-VHT40 MCS0	3	2422	21.00	21.00	24.00	
	6	2437	21.00	21.00	24.00	
	9	2452	19.00	19.00	22.00	
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	
802.11ax-HE40 MCS0	3	2422	21.00	21.00	24.00	
	6	2437	21.00	21.00	24.00	
	9	2452	19.00	19.00	22.00	



<5GHz WLAN>

	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.2GHz WLAN	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
		48	5240	20.00	20.00	23.00
	802.11n-HT40 MCS0	38	5190	18.50	18.50	21.50
		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	18.50	18.50	21.50
		46	5230	20.00	20.00	23.00
	802.11ac-VHT80 MCS0	42	5210	17.50	17.50	20.50
	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	18.50	18.50	21.50	
	46	5230	20.00	20.00	23.00	
802.11ax-HE80 MCS0	42	5210	17.50	17.50	20.50	



	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.3GHz WLAN	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
	802.11n-HT40 MCS0	54	5270	20.00	20.00	23.00
		62	5310	18.50	18.50	21.50
	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	18.50	18.50	21.50
	802.11ac-VHT80 MCS0	58	5290	18.50	18.50	21.50
	802.11ac-VHT160 MCS0	50	5250	17.50	17.50	20.50
	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	18.50	18.50	21.50	
802.11ax-HE80 MCS0	58	5290	18.50	18.50	21.50	
802.11ax-HE160 MCS0	50	5250	17.50	17.50	20.50	



5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
	802.11a 6Mbps	100	5500	20.00	20.00	23.00
		116	5580	20.00	20.00	23.00
		132	5660	20.00	20.00	23.00
		140	5700	20.00	20.00	23.00
	802.11n-HT20 MCS0	100	5500	20.00	20.00	23.00
		116	5580	20.00	20.00	23.00
		132	5660	20.00	20.00	23.00
		140	5700	20.00	20.00	23.00
	802.11n-HT40 MCS0	102	5510	20.00	20.00	23.00
		110	5550	20.00	20.00	23.00
		134	5670	20.00	20.00	23.00
	802.11ac-VHT20 MCS0	100	5500	20.00	20.00	23.00
		116	5580	20.00	20.00	23.00
		132	5660	20.00	20.00	23.00
		140	5700	20.00	20.00	23.00
802.11ac-VHT40 MCS0	102	5510	20.00	20.00	23.00	
	110	5550	20.00	20.00	23.00	
	134	5670	20.00	20.00	23.00	
802.11ac-VHT80 MCS0	106	5530	19.00	19.00	22.00	
802.11ax-HE20 MCS0	100	5500	20.00	20.00	23.00	
	116	5580	20.00	20.00	23.00	
	132	5660	20.00	20.00	23.00	
	140	5700	20.00	20.00	23.00	
802.11ax-HE40 MCS0	102	5510	20.00	20.00	23.00	
	110	5550	20.00	20.00	23.00	
	134	5670	20.00	20.00	23.00	
802.11ax-HE80 MCS0	106	5530	20.00	20.00	23.00	



	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.8GHz WLAN	802.11a 6Mbps	149	5745	20.00	20.00	23.00
		157	5785	20.00	20.00	23.00
		165	5825	20.00	20.00	23.00
	802.11n-HT20 MCS0	149	5745	20.00	20.00	23.00
		157	5785	20.00	20.00	23.00
		165	5825	20.00	20.00	23.00
	802.11n-HT40 MCS0	151	5755	20.00	20.00	23.00
		159	5795	20.00	20.00	23.00
	802.11ac-VHT20 MCS0	149	5745	20.00	20.00	23.00
		157	5785	20.00	20.00	23.00
		165	5825	20.00	20.00	23.00
	802.11ac-VHT40 MCS0	151	5755	20.00	20.00	23.00
		159	5795	20.00	20.00	23.00
	802.11ac-VHT80 MCS0	155	5775	20.00	20.00	23.00
	802.11ax-HE20 MCS0	149	5745	20.00	20.00	23.00
157		5785	20.00	20.00	23.00	
165		5825	20.00	20.00	23.00	
802.11ax-HE40 MCS0	151	5755	20.00	20.00	23.00	
	159	5795	20.00	20.00	23.00	
802.11ax-HE80 MCS0	155	5775	20.00	20.00	23.00	



<Power State 1>

<2.4GHz WLAN>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
	802.11b 1Mbps	1	2412	16.50	16.50	19.50
		6	2437	16.50	16.50	19.50
		11	2462	16.50	16.50	19.50
	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
	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
802.11n-HT40 MCS0	3	2422	16.50	16.50	19.50	
	6	2437	16.50	16.50	19.50	
	9	2452	16.50	16.50	19.50	
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	
802.11ac-VHT40 MCS0	3	2422	16.50	16.50	19.50	
	6	2437	16.50	16.50	19.50	
	9	2452	16.50	16.50	19.50	
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	
802.11ax-HE40 MCS0	3	2422	16.50	16.50	19.50	
	6	2437	16.50	16.50	19.50	
	9	2452	16.50	16.50	19.50	



<5GHz WLAN>

	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.2GHz WLAN	802.11a 6Mbps	36	5180	16.00	16.00	19.00
		40	5200	16.00	16.00	19.00
		44	5220	16.00	16.00	19.00
		48	5240	16.00	16.00	19.00
	802.11n-HT20 MCS0	36	5180	16.00	16.00	19.00
		40	5200	16.00	16.00	19.00
		44	5220	16.00	16.00	19.00
		48	5240	16.00	16.00	19.00
	802.11n-HT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	16.00	16.00	19.00
	802.11ac-VHT20 MCS0	36	5180	16.00	16.00	19.00
		40	5200	16.00	16.00	19.00
		44	5220	16.00	16.00	19.00
		48	5240	16.00	16.00	19.00
	802.11ac-VHT40 MCS0	38	5190	16.00	16.00	19.00
		46	5230	16.00	16.00	19.00
	802.11ac-VHT80 MCS0	42	5210	16.00	16.00	19.00
	802.11ax-HE20 MCS0	36	5180	16.00	16.00	19.00
		40	5200	16.00	16.00	19.00
		44	5220	16.00	16.00	19.00
48		5240	16.00	16.00	19.00	
802.11ax-HE40 MCS0	38	5190	16.00	16.00	19.00	
	46	5230	16.00	16.00	19.00	
802.11ax-HE80 MCS0	42	5210	16.00	16.00	19.00	



	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.3GHz WLAN	802.11a 6Mbps	52	5260	16.00	16.00	19.00
		56	5280	16.00	16.00	19.00
		60	5300	16.00	16.00	19.00
		64	5320	16.00	16.00	19.00
	802.11n-HT20 MCS0	52	5260	16.00	16.00	19.00
		56	5280	16.00	16.00	19.00
		60	5300	16.00	16.00	19.00
	802.11n-HT40 MCS0	54	5270	16.00	16.00	19.00
		62	5310	16.00	16.00	19.00
	802.11ac-VHT20 MCS0	52	5260	16.00	16.00	19.00
		56	5280	16.00	16.00	19.00
		60	5300	16.00	16.00	19.00
		64	5320	16.00	16.00	19.00
	802.11ac-VHT40 MCS0	54	5270	16.00	16.00	19.00
		62	5310	16.00	16.00	19.00
	802.11ac-VHT80 MCS0	58	5290	16.00	16.00	19.00
	802.11ac-VHT160 MCS0	50	5250	16.00	16.00	19.00
	802.11ax-HE20 MCS0	52	5260	16.00	16.00	19.00
		56	5280	16.00	16.00	19.00
		60	5300	16.00	16.00	19.00
64		5320	16.00	16.00	19.00	
802.11ax-HE40 MCS0	54	5270	16.00	16.00	19.00	
	62	5310	16.00	16.00	19.00	
802.11ax-HE80 MCS0	58	5290	16.00	16.00	19.00	
802.11ax-HE160 MCS0	50	5250	16.00	16.00	19.00	



5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
	802.11a 6Mbps	100	5500	16.00	16.00	19.00
		116	5580	16.00	16.00	19.00
		132	5660	16.00	16.00	19.00
		140	5700	16.00	16.00	19.00
	802.11n-HT20 MCS0	100	5500	16.00	16.00	19.00
		116	5580	16.00	16.00	19.00
		132	5660	16.00	16.00	19.00
		140	5700	16.00	16.00	19.00
	802.11n-HT40 MCS0	102	5510	16.00	16.00	19.00
		110	5550	16.00	16.00	19.00
		134	5670	16.00	16.00	19.00
	802.11ac-VHT20 MCS0	100	5500	16.00	16.00	19.00
		116	5580	16.00	16.00	19.00
		132	5660	16.00	16.00	19.00
		140	5700	16.00	16.00	19.00
802.11ac-VHT40 MCS0	102	5510	16.00	16.00	19.00	
	110	5550	16.00	16.00	19.00	
	134	5670	16.00	16.00	19.00	
802.11ac-VHT80 MCS0	106	5530	16.00	16.00	19.00	
802.11ax-HE20 MCS0	100	5500	16.00	16.00	19.00	
	116	5580	16.00	16.00	19.00	
	132	5660	16.00	16.00	19.00	
	140	5700	16.00	16.00	19.00	
802.11ax-HE40 MCS0	102	5510	16.00	16.00	19.00	
	110	5550	16.00	16.00	19.00	
	134	5670	16.00	16.00	19.00	
802.11ax-HE80 MCS0	106	5530	16.00	16.00	19.00	



	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.8GHz WLAN	802.11a 6Mbps	149	5745	15.50	15.50	18.50
		157	5785	15.50	15.50	18.50
		165	5825	15.50	15.50	18.50
	802.11n-HT20 MCS0	149	5745	15.50	15.50	18.50
		157	5785	15.50	15.50	18.50
		165	5825	15.50	15.50	18.50
	802.11n-HT40 MCS0	151	5755	15.50	15.50	18.50
		159	5795	15.50	15.50	18.50
	802.11ac-VHT20 MCS0	149	5745	15.50	15.50	18.50
		157	5785	15.50	15.50	18.50
		165	5825	15.50	15.50	18.50
	802.11ac-VHT40 MCS0	151	5755	15.50	15.50	18.50
		159	5795	15.50	15.50	18.50
	802.11ac-VHT80 MCS0	155	5775	15.50	15.50	18.50
	802.11ax-HE20 MCS0	149	5745	15.50	15.50	18.50
157		5785	15.50	15.50	18.50	
165		5825	15.50	15.50	18.50	
802.11ax-HE40 MCS0	151	5755	15.50	15.50	18.50	
	159	5795	15.50	15.50	18.50	
802.11ax-HE80 MCS0	155	5775	15.50	15.50	18.50	



<Power State 2>

<2.4GHz WLAN>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
	802.11b 1Mbps		1	2412	15.00	15.00
6			2437	15.00	15.00	18.00
11			2462	15.00	15.00	18.00
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
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
802.11n-HT40 MCS0		3	2422	15.00	15.00	18.00
		6	2437	15.00	15.00	18.00
		9	2452	15.00	15.00	18.00
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
802.11ac-VHT40 MCS0		3	2422	15.00	15.00	18.00
		6	2437	15.00	15.00	18.00
		9	2452	15.00	15.00	18.00
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
802.11ax-HE40 MCS0		3	2422	15.00	15.00	18.00
		6	2437	15.00	15.00	18.00
		9	2452	15.00	15.00	18.00



<5GHz WLAN>

	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.2GHz WLAN	802.11a 6Mbps	36	5180	12.50	12.50	15.50
		40	5200	12.50	12.50	15.50
		44	5220	12.50	12.50	15.50
		48	5240	12.50	12.50	15.50
	802.11n-HT20 MCS0	36	5180	12.50	12.50	15.50
		40	5200	12.50	12.50	15.50
		44	5220	12.50	12.50	15.50
		48	5240	12.50	12.50	15.50
	802.11n-HT40 MCS0	38	5190	12.50	12.50	15.50
		46	5230	12.50	12.50	15.50
	802.11ac-VHT20 MCS0	36	5180	12.50	12.50	15.50
		40	5200	12.50	12.50	15.50
		44	5220	12.50	12.50	15.50
		48	5240	12.50	12.50	15.50
	802.11ac-VHT40 MCS0	38	5190	12.50	12.50	15.50
		46	5230	12.50	12.50	15.50
	802.11ac-VHT80 MCS0	42	5210	12.50	12.50	15.50
	802.11ax-HE20 MCS0	36	5180	12.50	12.50	15.50
		40	5200	12.50	12.50	15.50
		44	5220	12.50	12.50	15.50
48		5240	12.50	12.50	15.50	
802.11ax-HE40 MCS0	38	5190	12.50	12.50	15.50	
	46	5230	12.50	12.50	15.50	
802.11ax-HE80 MCS0	42	5210	12.50	12.50	15.50	



5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
	802.11a 6Mbps	52	5260	12.50	12.50	15.50
		56	5280	12.50	12.50	15.50
		60	5300	12.50	12.50	15.50
		64	5320	12.50	12.50	15.50
	802.11n-HT20 MCS0	52	5260	12.50	12.50	15.50
		56	5280	12.50	12.50	15.50
		60	5300	12.50	12.50	15.50
	802.11n-HT40 MCS0	54	5270	12.50	12.50	15.50
		62	5310	12.50	12.50	15.50
	802.11ac-VHT20 MCS0	52	5260	12.50	12.50	15.50
		56	5280	12.50	12.50	15.50
		60	5300	12.50	12.50	15.50
		64	5320	12.50	12.50	15.50
	802.11ac-VHT40 MCS0	54	5270	12.50	12.50	15.50
		62	5310	12.50	12.50	15.50
802.11ac-VHT80 MCS0	58	5290	12.50	12.50	15.50	
802.11ac-VHT160 MCS0	50	5250	12.50	12.50	15.50	
802.11ax-HE20 MCS0	52	5260	12.50	12.50	15.50	
	56	5280	12.50	12.50	15.50	
	60	5300	12.50	12.50	15.50	
	64	5320	12.50	12.50	15.50	
802.11ax-HE40 MCS0	54	5270	12.50	12.50	15.50	
	62	5310	12.50	12.50	15.50	
802.11ax-HE80 MCS0	58	5290	12.50	12.50	15.50	
802.11ax-HE160 MCS0	50	5250	12.50	12.50	15.50	



5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
	802.11a 6Mbps	100	5500	13.50	13.50	16.50
		116	5580	13.50	13.50	16.50
		132	5660	13.50	13.50	16.50
		140	5700	13.50	13.50	16.50
	802.11n-HT20 MCS0	100	5500	13.50	13.50	16.50
		116	5580	13.50	13.50	16.50
		132	5660	13.50	13.50	16.50
		140	5700	13.50	13.50	16.50
	802.11n-HT40 MCS0	102	5510	13.50	13.50	16.50
		110	5550	13.50	13.50	16.50
		134	5670	13.50	13.50	16.50
	802.11ac-VHT20 MCS0	100	5500	13.50	13.50	16.50
		116	5580	13.50	13.50	16.50
		132	5660	13.50	13.50	16.50
		140	5700	13.50	13.50	16.50
	802.11ac-VHT40 MCS0	102	5510	13.50	13.50	16.50
110		5550	13.50	13.50	16.50	
134		5670	13.50	13.50	16.50	
802.11ac-VHT80 MCS0	106	5530	13.50	13.50	16.50	
802.11ax-HE20 MCS0	100	5500	13.50	13.50	16.50	
	116	5580	13.50	13.50	16.50	
	132	5660	13.50	13.50	16.50	
	140	5700	13.50	13.50	16.50	
802.11ax-HE40 MCS0	102	5510	13.50	13.50	16.50	
	110	5550	13.50	13.50	16.50	
	134	5670	13.50	13.50	16.50	
802.11ax-HE80 MCS0	106	5530	13.50	13.50	16.50	



	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.8GHz WLAN	802.11a 6Mbps	149	5745	13.50	13.50	16.50
		157	5785	13.50	13.50	16.50
		165	5825	13.50	13.50	16.50
	802.11n-HT20 MCS0	149	5745	13.50	13.50	16.50
		157	5785	13.50	13.50	16.50
		165	5825	13.50	13.50	16.50
	802.11n-HT40 MCS0	151	5755	13.50	13.50	16.50
		159	5795	13.50	13.50	16.50
	802.11ac-VHT20 MCS0	149	5745	13.50	13.50	16.50
		157	5785	13.50	13.50	16.50
		165	5825	13.50	13.50	16.50
	802.11ac-VHT40 MCS0	151	5755	13.50	13.50	16.50
		159	5795	13.50	13.50	16.50
	802.11ac-VHT80 MCS0	155	5775	13.50	13.50	16.50
	802.11ax-HE20 MCS0	149	5745	13.50	13.50	16.50
157		5785	13.50	13.50	16.50	
165		5825	13.50	13.50	16.50	
802.11ax-HE40 MCS0	151	5755	13.50	13.50	16.50	
	159	5795	13.50	13.50	16.50	
802.11ax-HE80 MCS0	155	5775	13.50	13.50	16.50	

<Power State 3>

<2.4GHz WLAN>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
	802.11b 1Mbps		1	2412	21.00	21.00
		6	2437	21.00	21.00	24.00
		11	2462	21.00	21.00	24.00
802.11g 6Mbps		1	2412	21.00	21.00	24.00
		6	2437	21.00	21.00	24.00
		11	2462	21.00	21.00	24.00
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
802.11n-HT40 MCS0		3	2422	21.00	21.00	24.00
		6	2437	21.00	21.00	24.00
		9	2452	19.00	19.00	22.00
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
802.11ac-VHT40 MCS0		3	2422	21.00	21.00	24.00
		6	2437	21.00	21.00	24.00
		9	2452	19.00	19.00	22.00
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
802.11ax-HE40 MCS0		3	2422	21.00	21.00	24.00
		6	2437	21.00	21.00	24.00
		9	2452	19.00	19.00	22.00



<5GHz WLAN>

	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.2GHz WLAN	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
		48	5240	20.00	20.00	23.00
	802.11n-HT40 MCS0	38	5190	18.50	18.50	21.50
		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	18.50	18.50	21.50
		46	5230	20.00	20.00	23.00
	802.11ac-VHT80 MCS0	42	5210	17.50	17.50	20.50
	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	18.50	18.50	21.50	
	46	5230	20.00	20.00	23.00	
802.11ax-HE80 MCS0	42	5210	17.50	17.50	20.50	



	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
5.8GHz WLAN	802.11a 6Mbps	149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
	802.11n-HT20 MCS0	149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
	802.11n-HT40 MCS0	151	5755	19.00	19.00	22.00
		159	5795	19.00	19.00	22.00
	802.11ac-VHT20 MCS0	149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
	802.11ac-VHT40 MCS0	151	5755	19.00	19.00	22.00
		159	5795	19.00	19.00	22.00
	802.11ac-VHT80 MCS0	155	5775	19.00	19.00	22.00
	802.11ax-HE20 MCS0	149	5745	19.00	19.00	22.00
		157	5785	19.00	19.00	22.00
		165	5825	19.00	19.00	22.00
	802.11ax-HE40 MCS0	151	5755	19.00	19.00	22.00
159		5795	19.00	19.00	22.00	
802.11ax-HE80 MCS0	155	5775	19.00	19.00	22.00	



WLAN 6E Output Power

	Mode	Channel	Frequency (MHz)	Ant 7 Tune-up Limit	Ant 8 Tune-up Limit	Ant 7+8 Tune-up Limit
WiFi 6E	802.11a 6Mbps	1	5955	4.00	4.00	7.00
		57	6235	4.00	4.00	7.00
		113	6515	4.00	4.00	7.00
		173	6815	4.00	4.00	7.00
		233	7115	6.00	6.00	9.00
	802.11n-HT20 MCS0	1	5955	5.00	5.00	8.00
		57	6235	5.00	5.00	8.00
		113	6515	5.00	5.00	8.00
		173	6815	5.00	5.00	8.00
		233	7115	-4.00	-4.00	-1.00
	802.11n-HT40 MCS0	3	5965	7.00	7.00	10.00
		59	6245	7.00	7.00	10.00
		107	6485	7.00	7.00	10.00
		171	6805	7.00	7.00	10.00
		227	7085	8.00	8.00	11.00
	802.11ac-VHT20 MCS0	1	5955	5.00	5.00	8.00
		57	6235	5.00	5.00	8.00
		113	6515	5.00	5.00	8.00
		173	6815	5.00	5.00	8.00
		233	7115	-4.00	-4.00	-1.00
	802.11ac-VHT40 MCS0	3	5965	7.00	7.00	10.00
		59	6245	7.00	7.00	10.00
		107	6485	7.00	7.00	10.00
		171	6805	7.00	7.00	10.00
		227	7085	8.00	8.00	11.00
	802.11ac-VHT80 MCS0	7	5985	10.00	10.00	13.00
		71	6305	10.00	10.00	13.00
		119	6545	10.00	10.00	13.00
		167	6785	10.00	10.00	13.00
		215	7025	10.00	10.00	13.00
	802.11ac-VHT160 MCS0	15	6025	13.00	13.00	16.00
		47	6185	13.00	13.00	16.00
		111	6505	13.00	13.00	16.00
		175	6825	13.00	13.00	16.00
		207	6985	13.00	13.00	16.00
	802.11ax-HE20 MCS0	1	5955	4.00	4.00	7.00
		57	6235	4.00	4.00	7.00
		113	6515	4.00	4.00	7.00
		173	6815	4.00	4.00	7.00
		233	7115	-4.00	-4.00	-1.00
	802.11ax-HE40 MCS0	3	5965	7.00	7.00	10.00
		59	6245	7.00	7.00	10.00
		107	6485	7.00	7.00	10.00
		171	6805	7.00	7.00	10.00
		227	7085	8.50	8.50	11.50
802.11ax-HE80 MCS0	7	5985	10.00	10.00	13.00	
	71	6305	10.00	10.00	13.00	
	119	6545	10.00	10.00	13.00	
	167	6785	10.00	10.00	13.00	
	215	7025	10.00	10.00	13.00	
802.11ax-HE160 MCS0	15	6025	13.00	13.00	16.00	
	47	6185	13.00	13.00	16.00	
	111	6505	13.00	13.00	16.00	
	175	6825	13.00	13.00	16.00	
	207	6985	13.00	13.00	16.00	

Bluetooth Output Power

BT 2.0

Ant 7

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	16	14.5	14.5
	CH 39	2441	17.00	14.5	14.5
	CH 78	2480	17.00	14.5	14.5

BT 2.0

Ant 8

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	16	14.5	14.5
	CH 39	2441	17.00	14.5	14.5
	CH 78	2480	17.00	14.5	14.5

BT 5.0

Ant 7

Mode	Channel	Frequency (MHz)	Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	8	8
	CH 19	2440	8	8
	CH 39	2480	8	8

BT 5.0

Ant 8

Mode	Channel	Frequency (MHz)	Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	9.5	9.5
	CH 19	2440	9.5	9.5
	CH 39	2480	9.5	9.5



2.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	MSQAI2202																																																														
Equipment Name	ASUS Phone(Mobile Phone)																																																														
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3550 MHz ~ 3600 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 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 42: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 43: 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 section13.																																																														
LTE Carrier Aggregation Additional Information	This device supports maximum of 3 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 17													
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz
	Channel #		Freq. (MHz)		Channel #		Freq. (MHz)		Channel #		Freq. (MHz)		Channel #
L	23755		706.5		23780		709		23780		709		23780
M	23790		710		23790		710		23790		710		23790
H	23825		713.5		23800		711		23800		711		23800
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		Bandwidth 20 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	26790	824	
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5	
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5	26940	839	



LTE Band 30												
Bandwidth 5 MHz						Bandwidth 10 MHz						
Channel #		Freq.(MHz)				Channel #		Freq.(MHz)				
L	27685		2307.5				27710		2310			
M	27710		2310									
H	27735		2312.5									
LTE Band 38												
Bandwidth 5 MHz			Bandwidth 10 MHz			Bandwidth 15 MHz			Bandwidth 20 MHz			
Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		
L	37775	2572.5	37800	2575		37825	2577.5		37850	2580		
M	38000	2595	38000	2595		38000	2595		38000	2595		
H	38225	2617.5	38200	2615		38175	2612.5		38150	2610		
LTE Band 41												
Bandwidth 5 MHz			Bandwidth 10 MHz			Bandwidth 15 MHz			Bandwidth 20 MHz			
Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		
L	39675	2498.5	39700	2501		39725	2503.5		39750	2506		
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 42												
Bandwidth 5 MHz			Bandwidth 10 MHz			Bandwidth 15 MHz			Bandwidth 20 MHz			
Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		
L	42115	3452.5	42140	3455		42165	3457.5		42190	3460		
M	42590	3500	42590	3500		42590	3500		42590	3500		
H	43065	3547.5	43040	3545		43015	3542.5		42990	3540		
LTE Band 66												
Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 71												
Bandwidth 5 MHz			Bandwidth 10 MHz			Bandwidth 15 MHz			Bandwidth 20 MHz			
Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		
L	133147	665.5	133172	668		133197	670.5		133222	673		
M	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		MSQAI2202													
Equipment Name		ASUS Phone(Mobile 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 n25: 1850 MHz ~ 1915 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450MHz ~ 3550MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450MHz ~ 3550MHz													
Channel Bandwidth		5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz 30MHz, 40MHz 5G NR n38: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n41: 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n78: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz													
SCS		FDD: SCS15KHz, TDD: SCS30KHz													
uplink modulations used		DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM													
A-MPR (Additional MPR) disabled for SAR Testing?		Yes													
LTE Anchor Bands for n2		LTE B5													
LTE Anchor Bands for n5		LTE B2													
LTE Anchor Bands for n78		LTE B5/7													
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	
		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
M		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
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 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 38																						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz													
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)												
L	515004	2575.02	515502	2577.51	516000	2580	517002	2585.01	518004	2590.02												
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595												
H	522996	2614.98	522498	2612.49	522000	2610	520998	2604.99	519996	2599.98												
NR Band 41																						
	Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz							
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01				
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99				
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640				
NR Band 66																						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz											
	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	345000	1725	346000	1730										
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745										
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353000	1765	352000	1760										
NR Band 71																						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz															
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)														
L	133100	665.5	133600	668	134100	670.5	134600	673														
M	136100	680.5	136100	680.5	136100	680.5	136100	680.5														
H	139100	695.5	138600	693	138100	690.5	137600	688														
NR Band 77																						
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		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)
L	647000	3705	647168	3707.52	647334	3710.01	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
H	665000	3975	664832	3972.48	664666	3969.99	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930
NR Band 78																						
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		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)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652832	3792.48	652666	3789.99	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	651000	3765	650666	3759.99	650332	3754.98	650000	3750
NR Band 77/78(3450MHz ~ 3550MHz)																						
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		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)
L	630334	3455.01	630500	3457.5	630668	3460.02	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
H	636332	3544.98	636166	3542.49	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99	-	-



3. 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
- IEC/IEEE 62209-1528:2020
- SPEAG DASY6 System Handbook
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)
- IEC TR 63170:2018
- IEC 62479:2010
- DASY System Handbook

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.

5. Specific Absorption Rate (SAR)

5.1 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.

5.2 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:

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

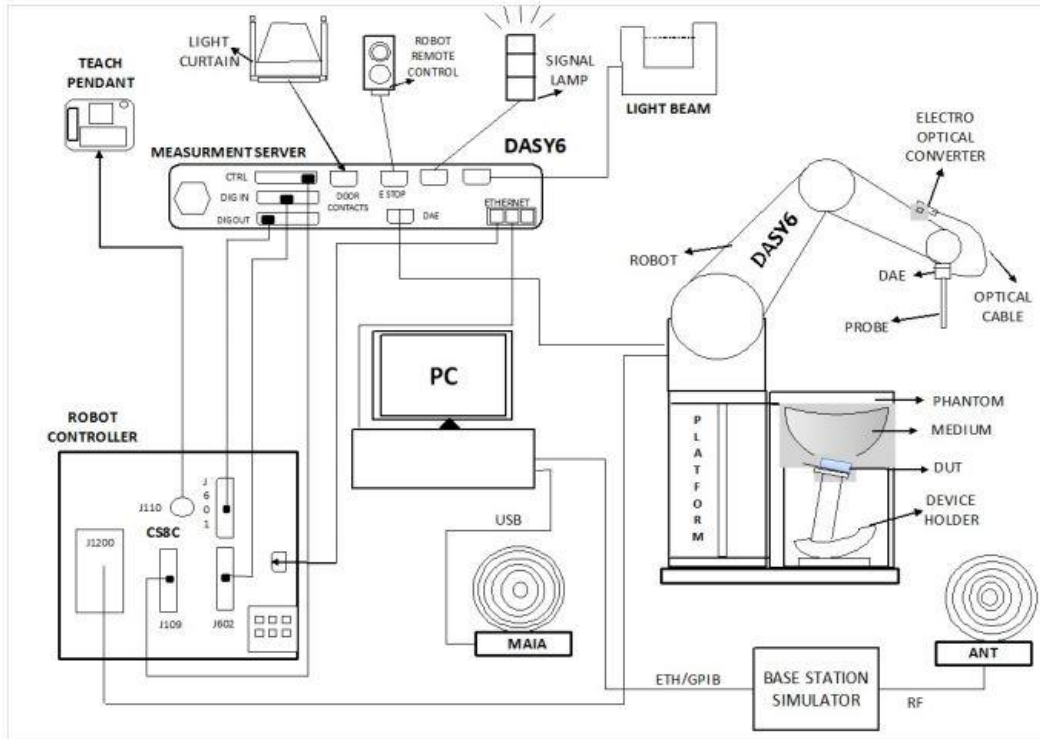
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

6. 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.

6.1 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	


6.2 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	

6.3 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

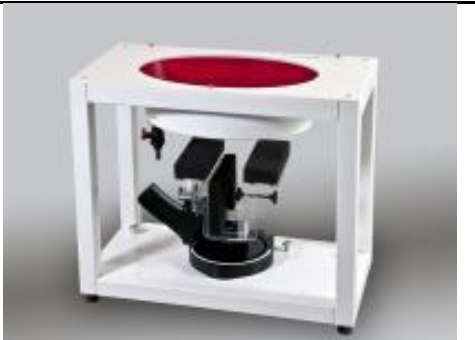
6.4 Phantom

<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.

6.5 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

7. 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 G 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

7.1 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

7.2 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.

7.3 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.	

7.4 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	
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

7.5 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.

7.6 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.



8. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1117	Mar. 24, 2022	Mar. 23, 2023
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	4d167	Nov. 25, 2019	Nov. 22, 2022
SPEAG	1750MHz System Validation Kit	D1750V2	1120	Mar. 25, 2022	Mar. 24, 2023
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	D2450V2	736	Aug. 17, 2021	Aug. 17, 2022
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 17, 2021	Aug. 16, 2022
SPEAG	3500MHz System Validation Kit	D3500V2	1036	Mar. 23, 2022	Mar. 22, 2023
SPEAG	3700MHz System Validation Kit	D3700V2	1022	Jul. 14, 2021	Jul. 13, 2022
SPEAG	3700MHz System Validation Kit	D3700V2	1006	Jun. 20, 2022	Jun. 19, 2023
SPEAG	3900MHz System Validation Kit	D3900V2	1017	Apr. 22, 2022	Apr. 21, 2023
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Sep. 15, 2021	Sep. 14, 2022
SPEAG	6500MHz System Validation Kit	D6.5GHzV2	1003	Sep. 24, 2021	Sep. 23, 2022
SPEAG	13MHz System Validation Kit ⁽²⁾	CLA13	1011	Jul. 08, 2020	Jul. 06, 2022
SPEAG	5G Verification Source	10GHz	1020	Jan. 18, 2022	Jan. 17, 2023
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9441	Nov. 24, 2021	Nov. 23, 2022
SPEAG	Data Acquisition Electronics	DAE3	528	Jul. 26, 2021	Jul. 25, 2022
SPEAG	Data Acquisition Electronics	DAE4	376	Nov. 22, 2021	Nov. 21, 2022
SPEAG	Data Acquisition Electronics	DAE4	699	Feb. 24, 2022	Feb. 23, 2023
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	1694	Nov. 03, 2021	Nov. 02, 2022
SPEAG	Dosimetric E-Field Probe	ES3DV3	3124	Nov. 23, 2021	Nov. 22, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3642	Apr. 28, 2022	Apr. 27, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	3925	Apr. 29, 2022	Apr. 28, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	3931	Oct. 21, 2021	Oct. 20, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	7590	Mar. 28, 2022	Mar. 27, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7692	Nov. 03, 2021	Nov. 02, 2022
Testo	Hygro meter	608-H1	45196600	Oct. 22, 2021	Oct. 21, 2022
Testo	Hygro meter	608-H1	45207528	Oct. 22, 2021	Oct. 21, 2022
RCPTWN	Thermometer	HTC-1	TM685-1	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	E5515C	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	Power Meter	ML2496A	2119003	Jun. 22, 2022	Jun. 21, 2023
Anritsu	Power Sensor	MA2411B	1911334	Jun. 22, 2022	Jun. 21, 2023
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Jan. 12, 2022	Jan. 11, 2023
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 19, 2021	Aug. 18, 2022
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 21, 2022	Jul. 20, 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
narda	Electric and Magnetic field Probe - Analyzer	EHP 200AC	170WX80309	Oct. 26, 2021	Oct. 25, 2022
ATM	Dual Directional Coupler	C122H-10	P610410z-02		Note 1
Warison	Directional Coupler	WCOU-10-50S-10	WR889BMC4B1		Note 1
Woken	Attenuator 1	WK0602-XX	N/A		Note 1
PE	Attenuator 2	PE7005-10	N/A		Note 1
PE	Attenuator 3	PE7005- 3	N/A		Note 1

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not



physically damaged, or repaired during the interval. The justification data in appendix E 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.

9. System Verification

9.1 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>

Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
13	22.3	0.728	54.354	0.75	55.00	-2.93	-1.17	±5	2022/6/3
750	22.5	0.899	43.488	0.89	41.90	1.01	3.79	±5	2022/6/1
750	22.5	0.897	43.678	0.89	41.90	0.79	4.24	±5	2022/6/2
750	22.5	0.885	42.919	0.89	41.90	-0.56	2.43	±5	2022/6/18
750	22.5	0.888	42.919	0.89	41.90	-0.22	2.43	±5	2022/6/19
835	22.5	0.883	41.200	0.90	41.50	-1.89	-0.72	±5	2022/6/4
835	22.5	0.883	41.200	0.90	41.50	-1.89	-0.72	±5	2022/6/4
835	22.5	0.930	41.680	0.90	41.50	3.33	0.43	±5	2022/6/14
835	22.5	0.918	42.671	0.90	41.50	2.00	2.82	±5	2022/6/17
835	22.5	0.920	42.721	0.90	41.50	2.22	2.94	±5	2022/6/25
1750	22.5	1.405	39.251	1.37	40.10	2.55	-2.12	±5	2022/6/5
1750	22.5	1.405	39.251	1.37	40.10	2.55	-2.12	±5	2022/6/9
1750	22.5	1.405	39.251	1.37	40.10	2.55	-2.12	±5	2022/6/9
1750	22.5	1.380	40.278	1.37	40.10	0.73	0.44	±5	2022/6/10
1900	22.5	1.392	40.013	1.40	40.00	-0.57	0.03	±5	2022/6/6
1900	22.5	1.392	40.013	1.40	40.00	-0.57	0.03	±5	2022/6/6
1900	22.5	1.430	39.721	1.40	40.00	2.14	-0.70	±5	2022/6/7
1900	22.5	1.424	39.813	1.40	40.00	1.71	-0.47	±5	2022/6/8
1900	22.5	1.424	39.813	1.40	40.00	1.71	-0.47	±5	2022/6/8
1900	22.4	1.427	40.894	1.40	40.00	1.93	2.24	±5	2022/6/11
1900	22.5	1.393	39.986	1.40	40.00	-0.50	-0.04	±5	2022/8/23
2300	22.5	1.702	39.626	1.67	39.50	1.92	0.32	±5	2022/6/12
2450	22.5	1.849	39.081	1.80	39.20	2.72	-0.30	±5	2022/6/3
2450	22.5	1.828	38.928	1.80	39.20	1.56	-0.69	±5	2022/6/9
2450	22.5	1.781	38.583	1.80	39.20	-1.06	-1.57	±5	2022/6/17
2600	22.5	1.947	40.103	1.96	39.00	-0.66	2.83	±5	2022/6/11
2600	22.5	2.050	38.441	1.96	39.00	4.59	-1.43	±5	2022/6/14
2600	22.5	2.009	38.255	1.96	39.00	2.50	-1.91	±5	2022/6/15
2600	22.5	1.976	38.876	1.96	39.00	0.82	-0.32	±5	2022/6/20
2600	22.5	2.018	39.171	1.96	39.00	2.96	0.44	±5	2022/6/26
3500	22.5	2.868	37.539	2.91	37.90	-1.44	-0.95	±5	2022/6/12
3500	22.5	2.953	37.948	2.91	37.90	1.48	0.13	±5	2022/6/13
3500	22.5	2.860	37.640	2.91	37.90	-1.72	-0.69	±5	2022/6/16
3500	22.5	2.999	38.807	2.91	37.90	3.06	2.39	±5	2022/6/17
3500	22.5	2.897	37.829	2.91	37.90	-0.45	-0.19	±5	2022/6/21
3500	22.5	2.901	37.859	2.91	37.90	-0.31	-0.11	±5	2022/6/22
3500	22.5	2.914	37.958	2.91	37.90	0.14	0.15	±5	2022/6/23
3500	22.5	2.908	37.924	2.91	37.90	-0.07	0.06	±5	2022/6/27
3500	22.5	2.900	37.840	2.91	37.90	-0.34	-0.16	±5	2022/8/23
3500	22.5	2.900	37.840	2.91	37.90	-0.34	-0.16	±5	2022/8/23
3500	22.5	2.999	38.807	2.91	37.90	3.06	2.39	±5	2022/8/24
3700	22.5	3.107	36.919	3.12	37.70	-0.42	-2.07	±5	2022/6/12



3700	22.5	3.187	38.508	3.12	37.70	2.15	2.14	±5	2022/6/17
3700	22.5	3.111	37.677	3.12	37.70	-0.29	-0.06	±5	2022/6/21
3700	22.5	3.113	37.687	3.12	37.70	-0.22	-0.03	±5	2022/6/22
3700	22.5	3.119	37.728	3.12	37.70	-0.03	0.07	±5	2022/6/23
3700	22.5	3.112	37.694	3.12	37.70	-0.26	-0.02	±5	2022/6/27
3700	22.5	3.094	37.728	3.12	37.70	-0.83	0.07	±5	2022/8/23
3900	22.5	3.236	37.208	3.33	37.51	-2.82	-0.81	±5	2022/6/12
3900	22.5	3.392	38.230	3.33	37.51	1.86	1.92	±5	2022/6/17
3900	22.5	3.283	38.069	3.33	37.51	-1.41	1.49	±5	2022/6/21
3900	22.5	3.298	38.169	3.33	37.51	-0.96	1.76	±5	2022/6/22
3900	22.5	3.324	37.497	3.33	37.51	-0.18	-0.03	±5	2022/6/23
3900	22.5	3.317	37.463	3.33	37.51	-0.39	-0.13	±5	2022/6/27
3900	22.5	3.332	37.730	3.33	37.51	0.06	0.59	±5	2022/8/23
3900	22.5	3.392	38.230	3.33	37.51	1.86	1.92	±5	2022/8/24
5250	22.4	4.613	35.682	4.71	35.95	-2.06	-0.75	±5	2022/6/4
5250	22.4	4.613	35.682	4.71	35.95	-2.06	-0.75	±5	2022/6/4
5250	22.5	4.599	36.792	4.71	35.95	-2.36	2.34	±5	2022/6/14
5600	22.5	4.922	35.173	5.07	35.50	-2.92	-0.92	±5	2022/6/5
5600	22.5	5.019	35.920	5.07	35.50	-1.01	1.18	±5	2022/6/15
5600	22.5	4.954	35.275	5.07	35.50	-2.29	-0.63	±5	2022/7/26
5750	22.6	5.154	35.140	5.22	35.35	-1.26	-0.59	±5	2022/6/6
5750	22.5	5.117	35.670	5.22	35.35	-1.97	0.91	±5	2022/6/16
5750	22.5	5.179	35.217	5.22	35.35	-0.79	-0.38	±5	2022/6/18
6500	22.7	6.000	35.100	6.07	34.50	-1.15	1.74	±5	2022/6/7
6500	22.5	6.180	35.300	6.07	34.50	1.81	2.32	±5	2022/6/8

9.2 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	Power Drift (dB)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR11	2022/6/3	13	250	CLA13-1011	EX3DV4 - SN3931	DAE4 Sn699	0.17	0.088	0.343	0.352	3.53

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Power Drift (dB)	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)
SAR06	2022/6/1	750	250	D750V3-1117	EX3DV4 - SN7590	DAE4 Sn853	-0.06	2.080	8.52	8.32	-2.35
SAR06	2022/6/2	750	250	D750V3-1117	EX3DV4 - SN7590	DAE4 Sn853	-0.01	2.160	8.52	8.64	1.41
SAR06	2022/6/18	750	250	D750V3-1117	ES3DV3 - SN3124	DAE4 Sn853	-0.02	2.080	8.52	8.32	-2.35
SAR06	2022/6/19	750	50	D750V3-1117	ES3DV3 - SN3124	DAE4 Sn853	-0.03	0.390	8.52	7.8	-8.45
SAR06	2022/6/4	835	250	D835V2-4d167	ES3DV3 - SN3124	DAE4 Sn853	-0.1	2.340	9.55	9.36	-1.99
SAR06	2022/6/4	835	250	D835V2-4d167	EX3DV4 - SN7590	DAE4 Sn853	-0.01	2.340	9.55	9.36	-1.99
SAR01	2022/6/14	835	50	D835V2-4d167	EX3DV4 - SN3642	DAE4 Sn854	-0.1	0.490	9.55	9.8	2.62
SAR06	2022/6/17	835	50	D835V2-4d167	ES3DV3 - SN3124	DAE4 Sn853	0.06	0.465	9.55	9.3	-2.62
SAR06	2022/6/25	835	250	D835V2-4d167	ES3DV3 - SN3124	DAE4 Sn853	-0.09	2.250	9.55	9	-5.76
SAR06	2022/6/5	1750	250	D1750V2-1120	ES3DV3 - SN3124	DAE4 Sn853	-0.06	8.380	36.40	33.52	-7.91
SAR06	2022/6/9	1750	250	D1750V2-1120	ES3DV3 - SN3124	DAE4 Sn853	-0.03	8.540	36.40	34.16	-6.15
SAR06	2022/6/9	1750	250	D1750V2-1120	EX3DV4 - SN7590	DAE4 Sn853	-0.13	9.350	36.40	37.4	2.75
SAR06	2022/6/10	1750	50	D1750V2-1120	ES3DV3 - SN3124	DAE4 Sn853	0.04	1.790	36.40	35.8	-1.65
SAR06	2022/6/6	1900	50	D1900V2-5d041	ES3DV3 - SN3124	DAE4 Sn853	0.07	1.980	40.60	39.6	-2.46
SAR06	2022/6/6	1900	250	D1900V2-5d041	EX3DV4 - SN7590	DAE4 Sn853	0.04	9.700	40.60	38.8	-4.43
SAR06	2022/6/7	1900	250	D1900V2-5d041	ES3DV3 - SN3124	DAE4 Sn853	-0.03	9.410	40.60	37.64	-7.29
SAR06	2022/6/8	1900	50	D1900V2-5d041	ES3DV3 - SN3124	DAE4 Sn853	-0.19	2.000	40.60	40	-1.48



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SAR06	2022/6/8	1900	250	D1900V2-5d041	EX3DV4 - SN7590	DAE4 Sn853	0.04	9.920	40.60	39.68	-2.27
SAR03	2022/6/11	1900	50	D1900V2-5d041	EX3DV4 - SN3925	DAE3 Sn528	-0.08	1.960	40.60	39.2	-3.45
SAR05	2022/8/23	1900	50	D1900V2-5d041	EX3DV4 - SN3925	DAE4 Sn376	-0.08	1.880	40.600	37.6	-7.39
SAR06	2022/6/12	2300	50	D2300V2-1006	ES3DV3 - SN3124	DAE4 Sn853	0.1	2.440	48.30	48.8	1.04
SAR01	2022/6/3	2450	250	D2450V2-736	EX3DV4 - SN3642	DAE4 Sn854	0.06	12.800	54.20	51.2	-5.54
SAR01	2022/6/9	2450	250	D2450V2-736	EX3DV4 - SN3642	DAE4 Sn854	-0.15	12.600	54.20	50.4	-7.01
SAR01	2022/6/17	2450	250	D2450V2-736	EX3DV4 - SN3642	DAE4 Sn854	-0.15	12.300	54.20	49.2	-9.23
SAR06	2022/6/11	2600	50	D2600V2-1008	ES3DV3 - SN3124	DAE4 Sn853	0.14	2.890	58.00	57.8	-0.34
SAR06	2022/6/14	2600	250	D2600V2-1008	ES3DV3 - SN3124	DAE4 Sn853	-0.08	13.100	58.00	52.4	-9.66
SAR06	2022/6/15	2600	250	D2600V2-1008	ES3DV3 - SN3124	DAE4 Sn853	-0.02	13.500	58.00	54	-6.90
SAR06	2022/6/20	2600	250	D2600V2-1008	ES3DV3 - SN3124	DAE4 Sn853	-0.02	13.300	58.00	53.2	-8.28
SAR06	2022/6/26	2600	50	D2600V2-1008	ES3DV3 - SN3124	DAE4 Sn853	0.14	3.000	58.00	60	3.45
SAR01	2022/6/12	3500	100	D3500V2-1036	EX3DV4 - SN3642	DAE4 Sn854	0.08	6.550	67.40	65.5	-2.82
SAR01	2022/6/13	3500	100	D3500V2-1036	EX3DV4 - SN3642	DAE4 Sn854	0.08	6.750	67.40	67.5	0.15
SAR06	2022/6/16	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn853	-0.05	3.350	67.40	67	-0.59
SAR05	2022/6/17	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn376	-0.08	3.100	67.40	62	-8.01
SAR06	2022/6/21	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn853	0.05	3.450	67.40	69	2.37
SAR06	2022/6/22	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn853	0.05	3.460	67.40	69.2	2.67
SAR06	2022/6/23	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn853	-0.05	3.420	67.40	68.4	1.48
SAR06	2022/6/27	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn853	-0.05	3.410	67.40	68.2	1.19
SAR05	2022/8/23	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn376	-0.05	3.390	67.400	67.8	0.59
SAR01	2022/8/23	3500	100	D3500V2-1036	EX3DV4 - SN3642	DAE4 Sn376	0.08	6.600	67.400	66	-2.08
SAR05	2022/8/24	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn376	-0.08	3.100	67.400	62	-8.01
SAR01	2022/6/12	3700	100	D3700V2-1022	EX3DV4 - SN3642	DAE4 Sn854	-0.19	6.330	68.20	63.3	-7.18
SAR05	2022/6/17	3700	50	D3700V2-1022	EX3DV4 - SN3925	DAE4 Sn376	-0.01	3.560	68.20	71.2	4.40
SAR06	2022/6/21	3700	50	D3700V2-1022	EX3DV4 - SN3925	DAE4 Sn853	-0.01	3.480	68.20	69.6	2.05
SAR06	2022/6/22	3700	50	D3700V2-1022	EX3DV4 - SN3925	DAE4 Sn853	0.05	3.150	68.20	63	-7.62
SAR06	2022/6/23	3700	100	D3700V2-1022	EX3DV4 - SN3925	DAE4 Sn853	0.09	6.780	68.20	67.8	-0.59
SAR06	2022/6/27	3700	50	D3700V2-1022	EX3DV4 - SN3925	DAE4 Sn853	0.06	3.150	68.20	63	-7.62
SAR01	2022/8/23	3700	100	D3700V2-1006	EX3DV4 - SN3642	DAE4 Sn376	-0.09	6.280	65.600	62.8	-4.27
SAR01	2022/6/12	3900	100	D3900V2-1017	EX3DV4 - SN3642	DAE4 Sn854	-0.18	6.730	68.70	67.3	-2.04
SAR05	2022/6/17	3900	50	D3900V2-1017	EX3DV4 - SN3925	DAE4 Sn376	-0.19	3.290	68.70	65.8	-4.22
SAR06	2022/6/21	3900	50	D3900V2-1017	EX3DV4 - SN3925	DAE4 Sn853	-0.09	3.340	68.70	66.8	-2.77
SAR06	2022/6/22	3900	50	D3900V2-1017	EX3DV4 - SN3925	DAE4 Sn853	-0.09	3.360	68.70	67.2	-2.18
SAR06	2022/6/23	3900	50	D3900V2-1017	EX3DV4 - SN3925	DAE4 Sn853	-0.09	3.390	68.70	67.8	-1.31
SAR06	2022/6/27	3900	50	D3900V2-1017	EX3DV4 - SN3925	DAE4 Sn853	-0.07	3.450	68.70	69	0.44
SAR05	2022/8/23	3900	50	D3900V2-1017	EX3DV4 - SN3925	DAE4 Sn376	-0.17	3.460	68.700	69.2	0.73
SAR05	2022/8/24	3900	50	D3900V2-1017	EX3DV4 - SN3925	DAE4 Sn376	-0.19	3.290	68.700	65.8	-4.22
SAR01	2022/6/4	5250	100	D5GHzV2-1006	EX3DV4 - SN3642	DAE4 Sn854	0.02	8.380	81.70	83.8	2.57
SAR05	2022/6/4	5250	100	D5GHzV2-1006	EX3DV4 - SN7692	DAE4 Sn1694	0.01	7.760	81.70	77.6	-5.02
SAR01	2022/6/14	5250	100	D5GHzV2-1006	EX3DV4 - SN3642	DAE4 Sn854	-0.11	8.600	81.70	86	5.26
SAR01	2022/6/5	5600	100	D5GHzV2-1006	EX3DV4 - SN3642	DAE4 Sn854	-0.07	8.770	85.10	87.7	3.06
SAR01	2022/6/15	5600	100	D5GHzV2-1006	EX3DV4 - SN3642	DAE4 Sn854	-0.07	8.940	85.10	89.4	5.05
SAR01	2022/7/26	5600	100	D5GHzV2-1006	EX3DV4 - SN3642	DAE4 Sn854	0.02	8.790	85.10	87.9	3.29
SAR01	2022/6/6	5750	100	D5GHzV2-1006	EX3DV4 - SN3642	DAE4 Sn854	0.04	8.380	81.40	83.8	2.95
SAR01	2022/6/16	5750	100	D5GHzV2-1006	EX3DV4 - SN3642	DAE4 Sn854	-0.02	7.450	81.40	74.5	-8.48
SAR01	2022/6/18	5750	100	D5GHzV2-1006	EX3DV4 - SN3642	DAE4 Sn854	-0.05	7.730	81.40	77.3	-5.04
SAR01	2022/6/7	6500	100	D6.5GHzV2-1003	EX3DV4 - SN3642	DAE4 Sn854	0.06	28.000	292.00	280	-4.11
SAR01	2022/6/8	6500	100	D6.5GHzV2-1003	EX3DV4 - SN3642	DAE4 Sn854	0.05	29.300	292.00	293	0.34

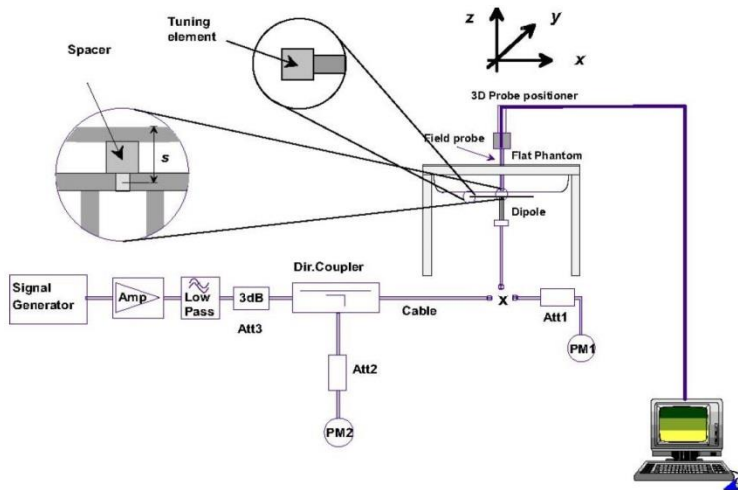


Fig 8.3.1 System Performance Check Setup

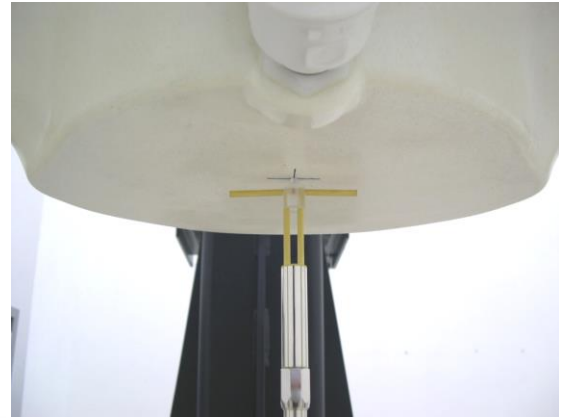


Fig 8.3.2 Setup Photo

9.3 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	10G	10GHz_1020	EUmmWV4 - SN9441	DAE3 Sn854	10mm	47.4	51.7	-0.38	2022/6/9

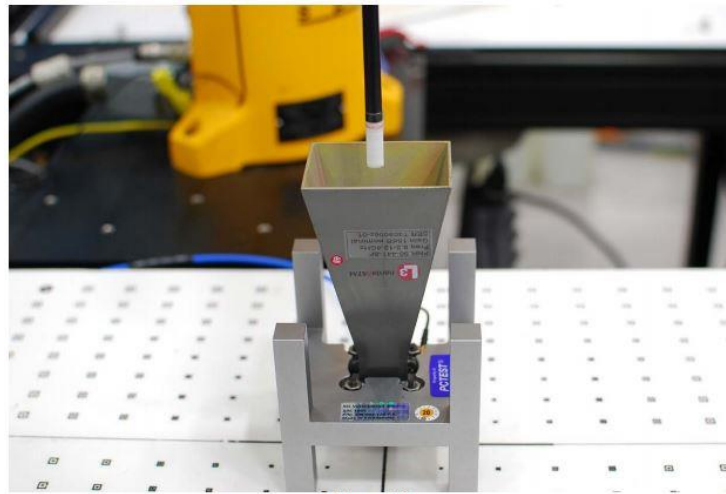


Figure 4-3
System Verification Setup Photo

System Performance Check Setup

10. RF Exposure Positions

10.1 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.

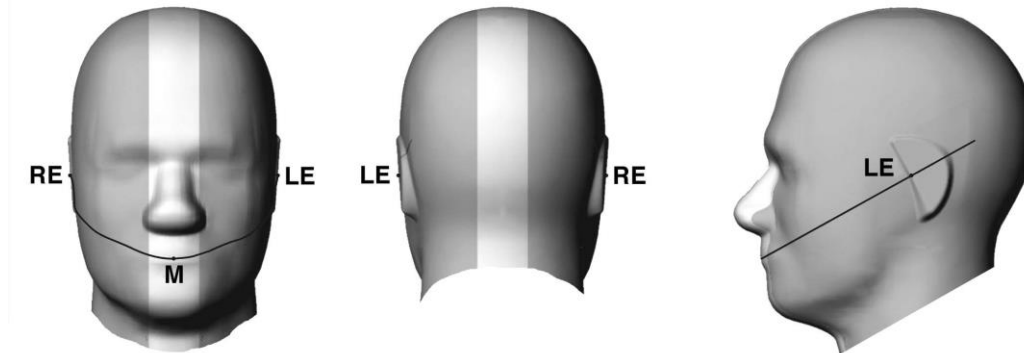


Fig 9.1.1 Front, back, and side views of SAM twin phantom

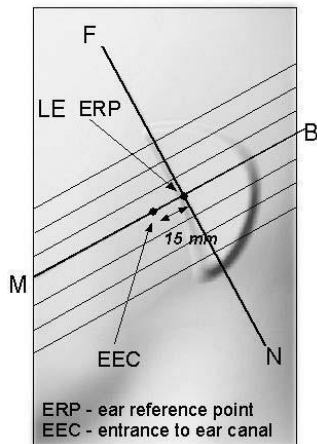


Fig 9.1.2 Close-up side view of phantom showing the ear region.

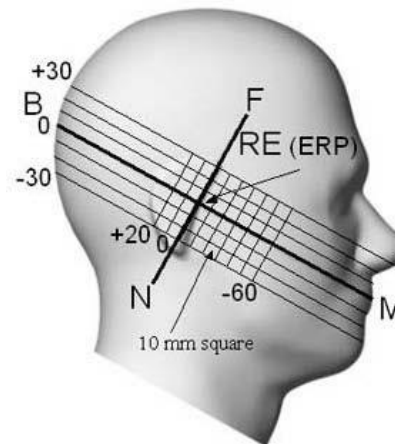


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

10.2 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.

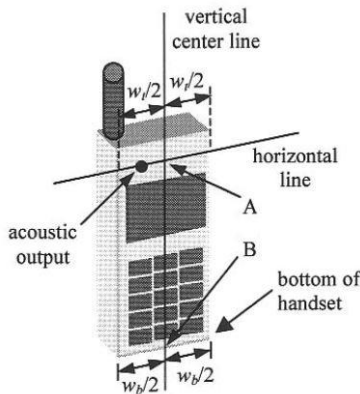


Fig 9.2.1 Handset vertical and horizontal reference lines—“fixed case”

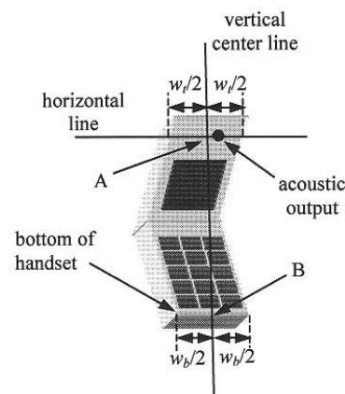


Fig 9.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

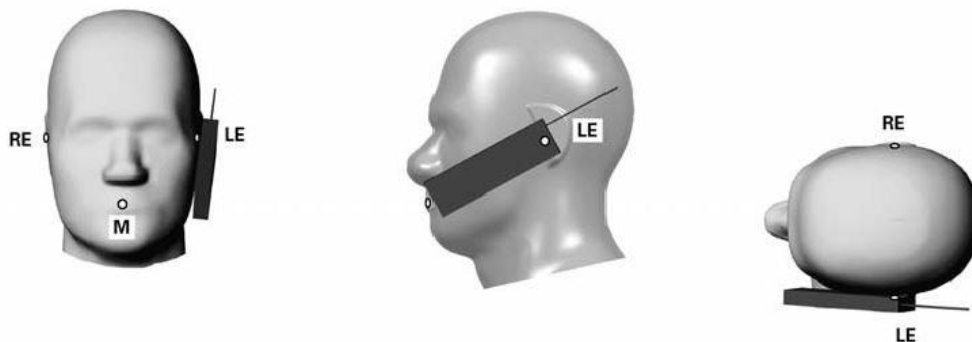


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

10.3 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

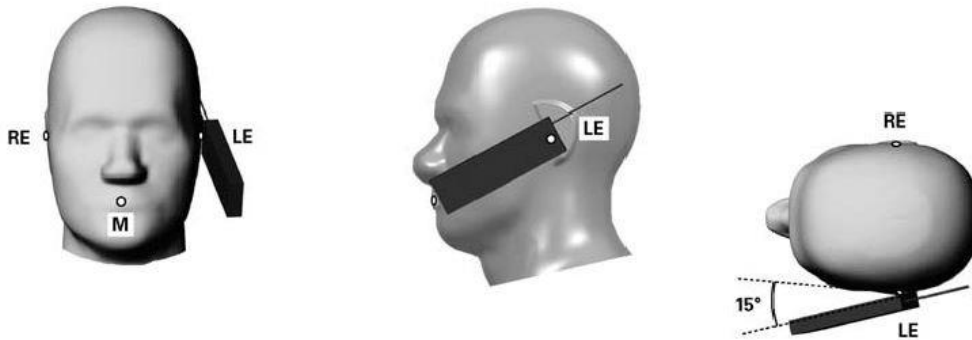


Fig 9.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

10.4 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 headset attached to the handset.

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

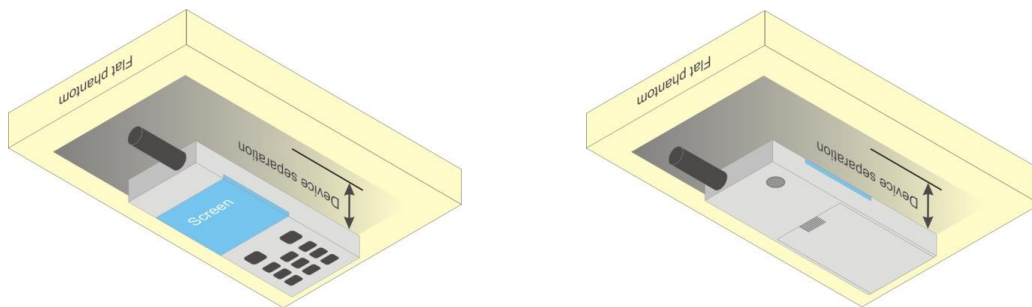


Fig 9.4 Body Worn Position

10.5 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined 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.



11. Exposure Position Consideration

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 1	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm	≤ 25mm
WWAN Ant 2	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	>25mm
WWAN Ant 3	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
WWAN Ant 4	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	>25mm	≤ 25mm
WWAN Ant 5	≤ 25mm	≤ 25mm	>25mm	>25mm	>25mm	≤ 25mm
WWAN Ant 6	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm	≤ 25mm
WLAN / BT Ant 7	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	>25mm	≤ 25mm
WLAN / BT Ant 8	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
WLAN Ant 7+8	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm

Positions for SAR tests; Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 1	Yes	Yes	No	Yes	No	Yes
WWAN Ant 2	Yes	Yes	No	Yes	Yes	No
WWAN Ant 3	Yes	Yes	Yes	No	Yes	No
WWAN Ant 4	Yes	Yes	Yes	No	No	Yes
WWAN Ant 5	Yes	Yes	No	No	No	Yes
WWAN Ant 6	Yes	Yes	No	Yes	No	Yes
WLAN / BT Ant 7	Yes	Yes	Yes	No	No	Yes
WLAN / BT Ant 8	Yes	Yes	Yes	No	Yes	No
WLAN Ant 7+8	Yes	Yes	Yes	No	Yes	Yes

General Note:

1. Detail antenna location refers to Appendix G antenna location.
2. 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.

12. Measurement procedure for output power and SAR

Detail output power measurement data is in the appendix F

<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 (2Tx 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. For DC-HSDPA, the device was configured according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1, with the primary and the secondary serving HS-DSCH Cell enabled during the power measurement.
4. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
5. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

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 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

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

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

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

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

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

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

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration below
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set RMC 12.2Kbps + HSDPA mode.
 - ii. Set Cell Power = -25 dBm
 - iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
 - iv. Select HSDPA Uplink Parameters
 - v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - a). Subtest 1: $\beta_c/\beta_d=2/15$
 - b). Subtest 2: $\beta_c/\beta_d=12/15$
 - c). Subtest 3: $\beta_c/\beta_d=15/8$
 - d). Subtest 4: $\beta_c/\beta_d=15/4$
 - vi. Set Delta ACK, Delta NACK and Delta CQI = 8
 - vii. Set Ack-Nack Repetition Factor to 3
 - viii. Set CQI Feedback Cycle (k) to 4 ms
 - ix. Set CQI Repetition Factor to 2
 - x. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

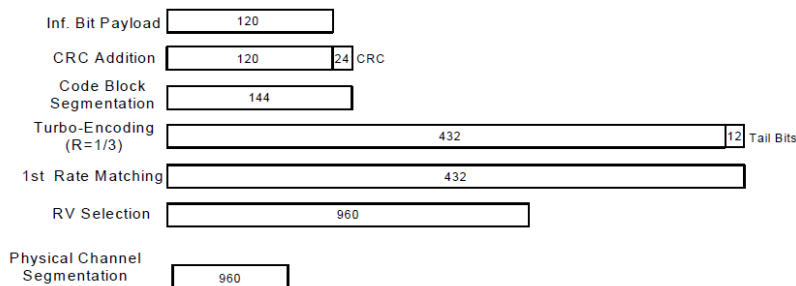


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

**<LTE Note>**

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is \leq the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

<TDD LTE SAR Measurement>

TDD LTE configuration setup for SAR measurement

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

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

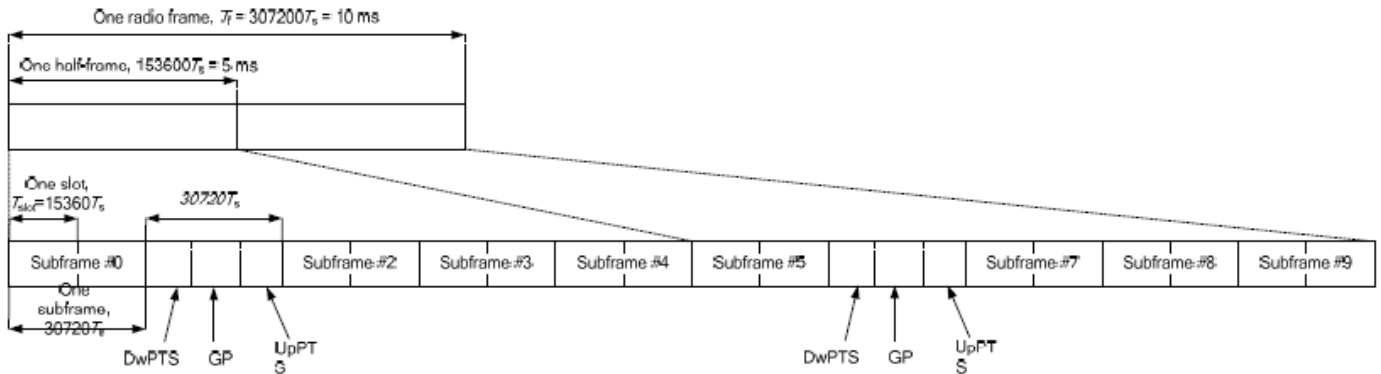


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

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

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

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

<5G FR1 Note>

General 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>

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

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
	QPSK	$\leq 0.5^2$	$\leq 0.5^2$	0 ²
	16 QAM		≤ 1	0
	64 QAM		≤ 2	≤ 1
	256 QAM		≤ 2.5	
CP-OFDM	QPSK		≤ 4.5	
	16 QAM	≤ 3		≤ 1.5
	64 QAM	≤ 3		≤ 2
	256 QAM		≤ 3.5	
NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability <i>powerBoosting-pi2BPSK</i> and if the IE <i>powerBoostPi2BPSK</i> 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 <i>powerBoostPi2BPSK</i> 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 maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, additional output power measurements were not necessary.
2. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
3. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
4. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
5. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
 - b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
6. 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)
7. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
8. 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
9. 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>

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 F.

	Antenna	Duty Cycle %
Bluetooth	Ant 7	76.83
	Ant 8	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		
Number	Combination	Covered by	Number	Combination	Covered by
		Measurement Superset			Measurement Superset
1	CA-2A-12A	22	22	CA-2A-2A-12A	
2	CA-2A-17A		23	CA-2A-2A-5A	
3	CA-2A-2A	22	24	CA-4A-4A-12A	
4	CA-2A-5A	23	25	CA-7A-7A-8A	
5	CA-41A-41A		26	CA-2C-12A	
6	CA-4A-12A	24	27	CA-41A-41C	
7	CA-4A-4A	24	28	CA-2C-12A	
8	CA-4A-5A		29	CA-41A-41C	
9	CA-5A-5A		30	CA-41D	
10	CA-5A-7A				
11	CA-5B				
12	CA-7A-7A	25			
13	CA-7A-8A	25			
14	CA-7B				
15	CA-8A-38A				
16	CA-8A-41A				
17	CA-2C				
18	CA-38C				
19	CA-41C				
20	CA-42C				
21	CA-7C				

<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 carrier aggregation. For power measurement were control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
- iv. Selected highest measured power when downlink carrier aggregation is inactive for conducted power comparison with downlink carrier aggregation is active, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.
- v. For non-contiguous intra-band CA, the SCC selected to provide maximum separation from the PCC and must remain fully within the downlink transmission band.
- vi. For Intra-band, contiguous CA, the downlink channels selected to perform the uplink power measurement must satisfy 3GPP channel spacing (5.4.1A of 3GPP TS 36.521 or equivalent) and channel bandwidth (5.4.2A) requirements.

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

<Two Carrier power verification>

Configure		PCC						SCC				Power		
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		2	10	1880	18900	QPSK	1	0	17	10	740	5790	22.85	22.97
		4	20	1732.5	20175	QPSK	1	49	5	10	881.5	2525	22.63	22.71
		5	10	836.5	20525	QPSK	1	25	5	10	881.5	2525	22.87	22.98
		5	10	836.5	20525	QPSK	1	25	7	20	2655	3100	22.86	22.98
		41	20	2549.5	40185	QPSK	1	49	41	20	2593	40620	23.15	23.30
Intra-Band	Contiguous	2	20	1880	18900	QPSK	1	0	2	20	1979.80	1098	22.92	22.97
		5	10	836.5	20525	QPSK	1	25	5	10	891.40	2624	22.79	22.98
		7	15	2507.5	20825	QPSK	1	25	7	5	2636.80	2918	23.46	23.49
		7	20	2535	21100	QPSK	1	49	7	20	2674.80	3298	23.66	23.71
		38	20	2595	38000	QPSK	1	49	38	20	2614.80	38198	23.15	23.22
		41	20	2549.5	40185	QPSK	1	49	41	20	2569.30	40383	23.13	23.30
		42	20	3460	42190	QPSK	1	49	42	20	3479.80	42388	23.40	23.45

<Three Carrier power verification>

Configure		PCC						SCC1				SCC2				Power		
		LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band		2	20	1880	18900	QPSK	1	0	2	20	1960	900	12	10	737.5	5095	22.85	22.97
		2	20	1880	18900	QPSK	1	0	2	20	1960	900	5	10	881.5	2525	22.81	22.97
		4	20	1732.5	20175	QPSK	1	49	4	20	2132.5	2175	12	10	737.5	5095	22.62	22.71
		2	20	1880	18900	QPSK	1	0	2	20	1960	900	12	10	737.5	5095	22.84	22.97
		41	20	2549.5	40185	QPSK	1	49	41	20	2593	40620	41	20	2593	40620	23.22	23.30
		2	20	1880	18900	QPSK	1	0	2	20	1960	900	12	10	737.5	5095	22.93	22.97
		41	20	2549.5	40185	QPSK	1	49	41	20	2593	40620	41	20	2593	40620	23.17	23.30
Intra-Band	Contiguous	41	20	2549.5	40185	QPSK	1	49	41	20	2593	40620	41	20	2593	40620	23.15	23.30

<LTE Uplink carrier aggregation>

2CC Uplink Carrier Aggregation	
Number	Combination
1	CA_7C
2	CA_38C
3	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.



Ant 2_State 0/1/2/3										
CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	22.54	24.5
21100	20902	QPSK	1	0	1	99	2	0	23	24.5
21350	21152	QPSK	1	0	1	99	2	0	22.93	24.5

Ant 4_State 0										
CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	22.68	24
21100	20902	QPSK	1	0	1	99	2	0	23.17	24
21350	21152	QPSK	1	0	1	99	2	0	23.18	24

Ant 4_State 1										
CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	18.47	19.5
21100	20902	QPSK	1	0	1	99	2	0	19.1	19.5
21350	21152	QPSK	1	0	1	99	2	0	18.79	19.5

Ant 4_State 2										
CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	15.2	17
21100	20902	QPSK	1	0	1	99	2	0	15.71	17
21350	21152	QPSK	1	0	1	99	2	0	15.67	17

Ant 4_State 3										
CA_7C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	20.19	22
21100	20902	QPSK	1	0	1	99	2	0	20.63	22
21350	21152	QPSK	1	0	1	99	2	0	20.58	22



Ant 2_State 0/1/2/3										
CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	22.54	24.5
37901	38099	QPSK	1	0	0	0	1	0	22.56	24.5
38150	37952	QPSK	1	0	1	99	2	0	22.89	24.5

Ant 4_State 0										
CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	22.63	24
37901	38099	QPSK	1	0	0	0	1	0	22.58	24
38150	37952	QPSK	1	0	1	99	2	0	22.66	24

Ant 4_State 1										
CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	19.02	20
37901	38099	QPSK	1	0	0	0	1	0	19.13	20
38150	37952	QPSK	1	0	1	99	2	0	19.86	20

Ant 4_State 2										
CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	16.35	17.5
37901	38099	QPSK	1	0	0	0	1	0	16.53	17.5
38150	37952	QPSK	1	0	1	99	2	0	17.38	17.5

Ant 4_State 3										
CA_38C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	19.81	21
37901	38099	QPSK	1	0	0	0	1	0	20.01	21
38150	37952	QPSK	1	0	1	99	2	0	20.74	21



Ant 2_State 0/1/2/3										
CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	22.5	24.5
40185	39987	QPSK	1	0	1	99	2	0	22.95	24.5
40620	40422	QPSK	1	0	1	99	2	0	22.93	24.5
41055	40857	QPSK	1	0	1	99	2	0	23.02	24.5
41490	41292	QPSK	1	0	1	99	2	0	22.88	24.5

Ant 4_State 0										
CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	22.88	24
40185	39987	QPSK	1	0	1	99	2	0	22.93	24
40620	40422	QPSK	1	0	1	99	2	0	23.14	24
41055	40857	QPSK	1	0	1	99	2	0	23.18	24
41490	41292	QPSK	1	0	1	99	2	0	23.28	24

Ant 4_State 1										
CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	19.59	20
40185	39987	QPSK	1	0	1	99	2	0	19.77	20
40620	40422	QPSK	1	0	1	99	2	0	19.98	20
41055	40857	QPSK	1	0	1	99	2	0	19.88	20
41490	41292	QPSK	1	0	1	99	2	0	19.99	20

Ant 4_State 2										
CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	16.5	17.5
40185	39987	QPSK	1	0	1	99	2	0	16.77	17.5
40620	40422	QPSK	1	0	1	99	2	0	16.9	17.5
41055	40857	QPSK	1	0	1	99	2	0	16.99	17.5
41490	41292	QPSK	1	0	1	99	2	0	17.35	17.5

Ant 4_State 3										
CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	19.99	21
40185	39987	QPSK	1	0	1	99	2	0	20.21	21
40620	40422	QPSK	1	0	1	99	2	0	20.33	21
41055	40857	QPSK	1	0	1	99	2	0	20.58	21
41490	41292	QPSK	1	0	1	99	2	0	20.81	21



14. 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. NFC mainly operate in hand-held extremity exposure conditions and NFC sensing distance with other device or reading tag is about 20cm, therefore Standalone 10-g extremity SAR testing for NFC will be performed with active mode and max power mode, with 100% duty cycle at 0mm separation distance.
6. NFC SAR is measured for all edges and surfaces of the device with a transmitting antenna located within 25 mm from that surface or edge.
7. NFC 13.56MHz antenna port is not available on the device to support conducted power measurement, therefore the measured results are referred to as reported SAR.
8. SAR test tissue-simulating liquid parameter: refer to IEC/IEEE 62209-1528 2020.
9. NFC SAR testing is by test software with 100% duty cycle.

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 (2Tx slots) for GSM850/GSM1900 is considered as the primary mode.
2. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

UMTS Note:

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

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. The maximum output power, including tolerance, for the smaller band is \leq the larger band to qualify for the SAR test exclusion.
 - b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

5G NR Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below:
 - a. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
 - b. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - c. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not $\frac{1}{2}$ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - d. Smaller bandwidth output power for each RB allocation configuration for this device is not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
 - e. For 5G FR1 n5/n12/n41/n71/n77, the maximum channel bandwidth does not support three non-overlapping channels in the frequency band, the middle channel of the group of overlapping channels were selected for testing.
 - f. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.

WLAN Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, WLAN5.2GHz SAR testing is not required when the WLAN5.3GHz band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for WLAN5.2GHz band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. 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
6. 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 $d=2$ mm.

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



14.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 1	GPRS (2 Tx slots)	Right Cheek	0mm	State 1/2	189	836.4	32.14	34.00	1.535	0.16	0.112	0.172
	GSM850_Ant 1	GPRS (2 Tx slots)	Right Tilted	0mm	State 1/2	189	836.4	32.14	34.00	1.535	-0.13	0.071	0.109
	GSM850_Ant 1	GPRS (2 Tx slots)	Left Cheek	0mm	State 1/2	189	836.4	32.14	34.00	1.535	0.09	0.179	0.275
	GSM850_Ant 1	GPRS (2 Tx slots)	Left Tilted	0mm	State 1/2	189	836.4	32.14	34.00	1.535	-0.04	0.101	0.155
	GSM850_Ant 3	GPRS (2 Tx slots)	Right Cheek	0mm	State 1	189	836.4	31.89	33.00	1.291	-0.17	0.317	0.409
	GSM850_Ant 3	GPRS (2 Tx slots)	Right Tilted	0mm	State 1	189	836.4	31.89	33.00	1.291	0.06	0.286	0.369
	GSM850_Ant 3	GPRS (2 Tx slots)	Left Cheek	0mm	State 1	189	836.4	31.89	33.00	1.291	0.03	0.702	0.906
	GSM850_Ant 3	GPRS (2 Tx slots)	Left Cheek	0mm	State 1	128	824.2	31.88	33.00	1.294	-0.06	0.571	0.739
01	GSM850_Ant 3	GPRS (2 Tx slots)	Left Cheek	0mm	State 1	251	848.8	31.81	33.00	1.315	0.01	0.714	0.939
	GSM850_Ant 3	GPRS (2 Tx slots)	Left Tilted	0mm	State 1	189	836.4	31.89	33.00	1.291	0.08	0.464	0.599
	GSM850_Ant 3	GPRS (2 Tx slots)	Right Cheek	0mm	State 2	189	836.4	31.89	32.50	1.151	-0.17	0.317	0.365
	GSM850_Ant 3	GPRS (2 Tx slots)	Right Tilted	0mm	State 2	189	836.4	31.89	32.50	1.151	0.06	0.286	0.329
	GSM850_Ant 3	GPRS (2 Tx slots)	Left Cheek	0mm	State 2	189	836.4	31.89	32.50	1.151	0.03	0.702	0.808
	GSM850_Ant 3	GPRS (2 Tx slots)	Left Tilted	0mm	State 2	189	836.4	31.89	32.50	1.151	-0.06	0.471	0.542
	GSM1900_Ant 2	GPRS (2 Tx slots)	Right Cheek	0mm	State 1/2	661	1880	29.20	31.00	1.514	0.1	0.079	0.120
	GSM1900_Ant 2	GPRS (2 Tx slots)	Right Tilted	0mm	State 1/2	661	1880	29.20	31.00	1.514	-0.13	0.061	0.092
	GSM1900_Ant 2	GPRS (2 Tx slots)	Left Cheek	0mm	State 1/2	661	1880	29.20	31.00	1.514	0.04	0.095	0.144
	GSM1900_Ant 2	GPRS (2 Tx slots)	Left Tilted	0mm	State 1/2	661	1880	29.20	31.00	1.514	0.16	0.068	0.103
02	GSM1900_Ant 4	GPRS (2 Tx slots)	Right Cheek	0mm	State 1	661	1880	29.34	30.50	1.306	-0.14	0.635	0.829
	GSM1900_Ant 4	GPRS (2 Tx slots)	Right Cheek	0mm	State 1	512	1850.2	29.31	30.50	1.315	0.14	0.456	0.600
	GSM1900_Ant 4	GPRS (2 Tx slots)	Right Cheek	0mm	State 1	810	1909.8	28.96	30.50	1.426	-0.19	0.549	0.783
	GSM1900_Ant 4	GPRS (2 Tx slots)	Right Tilted	0mm	State 1	661	1880	29.34	30.50	1.306	0.05	0.305	0.398
	GSM1900_Ant 4	GPRS (2 Tx slots)	Left Cheek	0mm	State 1	661	1880	29.34	30.50	1.306	0.17	0.174	0.227
	GSM1900_Ant 4	GPRS (2 Tx slots)	Left Tilted	0mm	State 1	661	1880	29.34	30.50	1.306	0.19	0.110	0.144
	GSM1900_Ant 4	GPRS (2 Tx slots)	Right Cheek	0mm	State 2	661	1880	28.33	28.50	1.040	0.18	0.412	0.428
	GSM1900_Ant 4	GPRS (2 Tx slots)	Right Tilted	0mm	State 2	661	1880	28.33	28.50	1.040	0.04	0.201	0.209
	GSM1900_Ant 4	GPRS (2 Tx slots)	Left Cheek	0mm	State 2	661	1880	28.33	28.50	1.040	-0.01	0.096	0.100
	GSM1900_Ant 4	GPRS (2 Tx slots)	Left Tilted	0mm	State 2	661	1880	28.33	28.50	1.040	-0.14	0.071	0.074



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	State 1/2	9400	1880	23.88	25.00	1.294	-0.18	0.075	0.097
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Tilted	0mm	State 1/2	9400	1880	23.88	25.00	1.294	-0.1	0.035	0.045
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Cheek	0mm	State 1/2	9400	1880	23.88	25.00	1.294	0.1	0.097	0.126
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Tilted	0mm	State 1/2	9400	1880	23.88	25.00	1.294	-0.15	0.035	0.045
	WCDMA II_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	State 1	9400	1880	23.38	24.00	1.153	-0.01	0.717	0.827
03	WCDMA II_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	State 1	9262	1852.4	23.25	24.00	1.189	-0.1	0.768	0.913
	WCDMA II_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	State 1	9538	1907.6	23.29	24.00	1.178	-0.18	0.696	0.820
	WCDMA II_Ant 4	RMC 12.2Kbps	Right Tilted	0mm	State 1	9400	1880	23.38	24.00	1.153	0.18	0.398	0.459
	WCDMA II_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	State 1	9400	1880	23.38	24.00	1.153	0.16	0.228	0.263
	WCDMA II_Ant 4	RMC 12.2Kbps	Left Tilted	0mm	State 1	9400	1880	23.38	24.00	1.153	0.07	0.227	0.262
	WCDMA II_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	State 2	9400	1880	21.41	21.50	1.021	-0.1	0.525	0.536
	WCDMA II_Ant 4	RMC 12.2Kbps	Right Tilted	0mm	State 2	9400	1880	21.41	21.50	1.021	0.17	0.341	0.348
	WCDMA II_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	State 2	9400	1880	21.41	21.50	1.021	-0.06	0.174	0.178
	WCDMA II_Ant 4	RMC 12.2Kbps	Left Tilted	0mm	State 2	9400	1880	21.41	21.50	1.021	0.14	0.167	0.170
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	State 1/2	1413	1732.6	23.75	25.00	1.334	-0.11	0.061	0.081
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Tilted	0mm	State 1/2	1413	1732.6	23.75	25.00	1.334	-0.17	0.023	0.031
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Cheek	0mm	State 1/2	1413	1732.6	23.75	25.00	1.334	0.08	0.088	0.117
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Tilted	0mm	State 1/2	1413	1732.6	23.75	25.00	1.334	0.04	0.041	0.055
	WCDMA IV_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	State 1	1413	1732.6	23.30	24.50	1.318	0.16	0.811	1.069
	WCDMA IV_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	State 1	1312	1712.4	23.25	24.50	1.334	0.01	0.779	1.039
04	WCDMA IV_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	State 1	1513	1752.6	23.27	24.50	1.327	-0.01	0.817	1.084
	WCDMA IV_Ant 4	RMC 12.2Kbps	Right Tilted	0mm	State 1	1413	1732.6	23.30	24.50	1.318	0.16	0.526	0.693
	WCDMA IV_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	State 1	1413	1732.6	23.30	24.50	1.318	0.09	0.233	0.307
	WCDMA IV_Ant 4	RMC 12.2Kbps	Left Tilted	0mm	State 1	1413	1732.6	23.30	24.50	1.318	0.05	0.213	0.281
	WCDMA IV_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	State 2	1413	1732.6	20.30	20.50	1.047	-0.17	0.517	0.541
	WCDMA IV_Ant 4	RMC 12.2Kbps	Right Tilted	0mm	State 2	1413	1732.6	20.30	20.50	1.047	-0.12	0.366	0.383
	WCDMA IV_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	State 2	1413	1732.6	20.30	20.50	1.047	-0.16	0.185	0.194
	WCDMA IV_Ant 4	RMC 12.2Kbps	Left Tilted	0mm	State 2	1413	1732.6	20.30	20.50	1.047	0.08	0.162	0.170
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	0mm	State 1/2	4182	836.4	23.77	25.00	1.327	0.13	0.062	0.082
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	0mm	State 1/2	4182	836.4	23.77	25.00	1.327	0.1	0.041	0.054
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Cheek	0mm	State 1/2	4182	836.4	23.77	25.00	1.327	0.01	0.089	0.118
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Tilted	0mm	State 1/2	4182	836.4	23.77	25.00	1.327	-0.01	0.058	0.077
	WCDMA V_Ant 3	RMC 12.2Kbps	Right Cheek	0mm	State 1/2	4182	836.4	22.63	24.00	1.371	0.03	0.311	0.426
	WCDMA V_Ant 3	RMC 12.2Kbps	Right Tilted	0mm	State 1/2	4182	836.4	22.63	24.00	1.371	0.19	0.326	0.447
05	WCDMA V_Ant 3	RMC 12.2Kbps	Left Cheek	0mm	State 1/2	4182	836.4	22.63	24.00	1.371	-0.06	0.523	0.717
	WCDMA V_Ant 3	RMC 12.2Kbps	Left Tilted	0mm	State 1/2	4182	836.4	22.63	24.00	1.371	-0.08	0.510	0.699

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
06	LTE Band 2_Ant 4	20M	QPSK	1	0	Right Cheek	0mm	State 2	19100	1900	18.63	19.50	1.222	-0.07	0.221	0.270
	LTE Band 2_Ant 4	20M	QPSK	1	0	Right Tilted	0mm	State 2	19100	1900	18.63	19.50	1.222	-0.02	0.125	0.153
	LTE Band 2_Ant 4	20M	QPSK	1	0	Left Cheek	0mm	State 2	19100	1900	18.63	19.50	1.222	-0.05	0.062	0.076
	LTE Band 2_Ant 4	20M	QPSK	1	0	Left Tilted	0mm	State 2	19100	1900	18.63	19.50	1.222	0	0.058	0.071
	LTE Band 2_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 2	19100	1900	17.30	18.50	1.318	-0.08	0.183	0.241
	LTE Band 2_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 2	19100	1900	17.30	18.50	1.318	0.06	0.102	0.134
	LTE Band 2_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 2	19100	1900	17.30	18.50	1.318	-0.17	0.045	0.059
	LTE Band 2_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 2	19100	1900	17.30	18.50	1.318	-0.06	0.042	0.055



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 5_Ant 3	10M	QPSK	1	0	Right Cheek	0mm	State 2	20525	836.5	17.79	19.50	1.483	-0.11	0.058	0.086
	LTE Band 5_Ant 3	10M	QPSK	1	0	Right Tilted	0mm	State 2	20525	836.5	17.79	19.50	1.483	-0.03	0.060	0.089
	LTE Band 5_Ant 3	10M	QPSK	1	0	Left Cheek	0mm	State 2	20525	836.5	17.79	19.50	1.483	-0.03	0.145	0.215
07	LTE Band 5_Ant 3	10M	QPSK	1	0	Left Tilted	0mm	State 2	20525	836.5	17.79	19.50	1.483	0.06	0.160	0.237
	LTE Band 5_Ant 3	10M	QPSK	25	0	Right Cheek	0mm	State 2	20525	836.5	17.77	18.50	1.183	0.09	0.055	0.065
	LTE Band 5_Ant 3	10M	QPSK	25	0	Right Tilted	0mm	State 2	20525	836.5	17.77	18.50	1.183	-0.11	0.059	0.070
	LTE Band 5_Ant 3	10M	QPSK	25	0	Left Cheek	0mm	State 2	20525	836.5	17.77	18.50	1.183	0.13	0.120	0.142
	LTE Band 5_Ant 3	10M	QPSK	25	0	Left Tilted	0mm	State 2	20525	836.5	17.77	18.50	1.183	-0.12	0.132	0.156
	LTE Band 7_Ant 1	20M	QPSK	1	49	Right Cheek	0mm	State 1/2	21350	2560	23.65	24.50	1.216	0.07	0.001	0.001
	LTE Band 7_Ant 1	20M	QPSK	1	49	Right Tilted	0mm	State 1/2	21350	2560	23.65	24.50	1.216	-0.19	0.001	0.001
	LTE Band 7_Ant 1	20M	QPSK	1	49	Left Cheek	0mm	State 1/2	21350	2560	23.65	24.50	1.216	-0.05	0.163	0.198
	LTE Band 7_Ant 1	20M	QPSK	1	49	Left Tilted	0mm	State 1/2	21350	2560	23.65	24.50	1.216	-0.18	0.111	0.135
	LTE Band 7_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	State 1/2	21350	2560	22.71	23.50	1.199	0.12	0.001	0.001
	LTE Band 7_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	State 1/2	21350	2560	22.71	23.50	1.199	-0.02	0.001	0.001
	LTE Band 7_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	State 1/2	21350	2560	22.71	23.50	1.199	-0.01	0.113	0.136
	LTE Band 7_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	State 1/2	21350	2560	22.71	23.50	1.199	0.11	0.101	0.121
	LTE Band 7_Ant 2	20M	QPSK	1	49	Right Cheek	0mm	State 1/2	21100	2535	23.71	24.50	1.199	0.18	0.117	0.140
	LTE Band 7_Ant 2	20M	QPSK	1	49	Right Tilted	0mm	State 1/2	21100	2535	23.71	24.50	1.199	-0.04	0.046	0.055
	LTE Band 7_Ant 2	20M	QPSK	1	49	Left Cheek	0mm	State 1/2	21100	2535	23.71	24.50	1.199	-0.03	0.137	0.164
	LTE Band 7_Ant 2	20M	QPSK	1	49	Left Tilted	0mm	State 1/2	21100	2535	23.71	24.50	1.199	0.12	0.086	0.103
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	State 1/2	21100	2535	22.64	23.50	1.219	0.19	0.102	0.124
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	State 1/2	21100	2535	22.64	23.50	1.219	-0.07	0.015	0.018
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	State 1/2	21100	2535	22.64	23.50	1.219	0.13	0.116	0.141
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	State 1/2	21100	2535	22.64	23.50	1.219	0.07	0.071	0.087
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	State 1/2	21100	2535	23.00	24.50	1.413	0.05	0.079	0.112
08	LTE Band 7_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	21100	2535	18.77	19.50	1.183	0.01	0.906	1.072
	LTE Band 7_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	20850	2510	18.56	19.50	1.242	0.19	0.856	1.063
	LTE Band 7_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	21350	2560	18.59	19.50	1.233	-0.06	0.858	1.058
	LTE Band 7_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 1	21100	2535	18.77	19.50	1.183	-0.14	0.641	0.758
	LTE Band 7_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 1	21100	2535	18.77	19.50	1.183	0.12	0.287	0.340
	LTE Band 7_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 1	21100	2535	18.77	19.50	1.183	-0.01	0.305	0.361
	LTE Band 7_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	21100	2535	17.98	18.50	1.127	0.09	0.776	0.875
	LTE Band 7_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	20850	2510	17.82	18.50	1.169	0.03	0.712	0.833
	LTE Band 7_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	21350	2560	17.73	18.50	1.194	-0.13	0.707	0.844
	LTE Band 7_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 1	21100	2535	17.98	18.50	1.127	-0.01	0.542	0.611
	LTE Band 7_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 1	21100	2535	17.98	18.50	1.127	-0.07	0.210	0.237
	LTE Band 7_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 1	21100	2535	17.98	18.50	1.127	-0.04	0.229	0.258
	LTE Band 7_Ant 4	20M	QPSK	100	0	Right Cheek	0mm	State 1	21100	2535	17.90	18.50	1.148	0.06	0.685	0.786
	LTE Band 7C_Ant 4	20M	QPSK	1	0	Right Cheek	0mm	State 1	21100	2535	19.10	19.50	1.096	0.01	0.662	0.726
	LTE Band 7_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 2	20850	2510	16.74	17.00	1.062	0	0.513	0.545
	LTE Band 7_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 2	20850	2510	16.74	17.00	1.062	0.07	0.285	0.303
	LTE Band 7_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 2	20850	2510	16.74	17.00	1.062	-0.14	0.122	0.130
	LTE Band 7_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 2	20850	2510	16.74	17.00	1.062	0	0.107	0.114
	LTE Band 7_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 2	20850	2510	15.89	16.00	1.026	0.14	0.404	0.414
	LTE Band 7_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 2	20850	2510	15.89	16.00	1.026	0.07	0.219	0.225



FCC SAR TEST REPORT

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	LTE Band 7_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 2	20850	2510	15.89	16.00	1.026	0.04	0.091	0.093
	LTE Band 7_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 2	20850	2510	15.89	16.00	1.026	0.03	0.081	0.083
	LTE Band 7C_Ant 4	20M	QPSK	1	0	Right Cheek	0mm	State 2	21100	2560	15.71	17.00	1.346	0.05	0.361	0.486



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Ant 1	10M	QPSK	1	25	Right Cheek	0mm	State 1/2	23095	707.5	23.09	24.50	1.384	0.04	0.037	0.051
	LTE Band 12_Ant 1	10M	QPSK	1	25	Right Tilted	0mm	State 1/2	23095	707.5	23.09	24.50	1.384	-0.08	0.028	0.039
	LTE Band 12_Ant 1	10M	QPSK	1	25	Left Cheek	0mm	State 1/2	23095	707.5	23.09	24.50	1.384	0.09	0.045	0.062
	LTE Band 12_Ant 1	10M	QPSK	1	25	Left Tilted	0mm	State 1/2	23095	707.5	23.09	24.50	1.384	0.12	0.035	0.048
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Cheek	0mm	State 1/2	23095	707.5	22.15	23.50	1.365	-0.06	0.029	0.040
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Tilted	0mm	State 1/2	23095	707.5	22.15	23.50	1.365	-0.01	0.011	0.015
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Cheek	0mm	State 1/2	23095	707.5	22.15	23.50	1.365	0.18	0.037	0.050
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Tilted	0mm	State 1/2	23095	707.5	22.15	23.50	1.365	0.02	0.029	0.040
	LTE Band 12_Ant 3	10M	QPSK	1	25	Right Cheek	0mm	State 1/2	23095	707.5	22.65	24.50	1.531	0.07	0.196	0.300
	LTE Band 12_Ant 3	10M	QPSK	1	25	Right Tilted	0mm	State 1/2	23095	707.5	22.65	24.50	1.531	0.18	0.188	0.288
09	LTE Band 12_Ant 3	10M	QPSK	1	25	Left Cheek	0mm	State 1/2	23095	707.5	22.65	24.50	1.531	-0.03	0.413	0.632
	LTE Band 12_Ant 3	10M	QPSK	1	25	Left Tilted	0mm	State 1/2	23095	707.5	22.65	24.50	1.531	0.04	0.373	0.571
	LTE Band 12_Ant 3	10M	QPSK	25	0	Right Cheek	0mm	State 1/2	23095	707.5	21.76	23.50	1.493	0	0.148	0.221
	LTE Band 12_Ant 3	10M	QPSK	25	0	Right Tilted	0mm	State 1/2	23095	707.5	21.76	23.50	1.493	-0.02	0.146	0.218
	LTE Band 12_Ant 3	10M	QPSK	25	0	Left Cheek	0mm	State 1/2	23095	707.5	21.76	23.50	1.493	0	0.320	0.478
	LTE Band 12_Ant 3	10M	QPSK	25	0	Left Tilted	0mm	State 1/2	23095	707.5	21.76	23.50	1.493	-0.05	0.289	0.431
	LTE Band 25_Ant 2	20M	QPSK	1	49	Right Cheek	0mm	State 1/2	26340	1880	23.28	24.50	1.324	-0.19	0.071	0.094
	LTE Band 25_Ant 2	20M	QPSK	1	49	Right Tilted	0mm	State 1/2	26340	1880	23.28	24.50	1.324	0.01	0.032	0.042
	LTE Band 25_Ant 2	20M	QPSK	1	49	Left Cheek	0mm	State 1/2	26340	1880	23.28	24.50	1.324	-0.07	0.089	0.118
	LTE Band 25_Ant 2	20M	QPSK	1	49	Left Tilted	0mm	State 1/2	26340	1880	23.28	24.50	1.324	-0.06	0.041	0.054
	LTE Band 25_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	State 1/2	26340	1880	22.39	23.50	1.291	0.03	0.055	0.071
	LTE Band 25_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	State 1/2	26340	1880	22.39	23.50	1.291	0.03	0.021	0.027
	LTE Band 25_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	State 1/2	26340	1880	22.39	23.50	1.291	0.13	0.071	0.092
	LTE Band 25_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	State 1/2	26340	1880	22.39	23.50	1.291	-0.07	0.032	0.041
10	LTE Band 25_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	26340	1880	22.66	24.00	1.361	0.05	0.544	0.741
	LTE Band 25_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 1	26340	1880	22.66	24.00	1.361	0.15	0.294	0.400
	LTE Band 25_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 1	26340	1880	22.66	24.00	1.361	0.13	0.176	0.240
	LTE Band 25_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 1	26340	1880	22.66	24.00	1.361	-0.13	0.148	0.201
	LTE Band 25_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	26340	1880	21.71	23.00	1.346	0.04	0.436	0.587
	LTE Band 25_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 1	26340	1880	21.71	23.00	1.346	-0.1	0.251	0.338
	LTE Band 25_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 1	26340	1880	21.71	23.00	1.346	0.1	0.140	0.188
	LTE Band 25_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 1	26340	1880	21.71	23.00	1.346	0.14	0.114	0.153
	LTE Band 25_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 2	26340	1880	21.39	22.50	1.291	0.08	0.391	0.505
	LTE Band 25_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 2	26340	1880	21.39	22.50	1.291	0.02	0.284	0.367
	LTE Band 25_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 2	26340	1880	21.39	22.50	1.291	0	0.094	0.121
	LTE Band 25_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 2	26340	1880	21.39	22.50	1.291	-0.05	0.115	0.148
	LTE Band 25_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 2	26340	1880	20.21	21.50	1.346	0.09	0.335	0.451
	LTE Band 25_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 2	26340	1880	20.21	21.50	1.346	0.03	0.230	0.310
	LTE Band 25_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 2	26340	1880	20.21	21.50	1.346	0.17	0.094	0.127
	LTE Band 25_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 2	26340	1880	20.21	21.50	1.346	0.11	0.102	0.137



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 1	15M	QPSK	1	37	Right Cheek	0mm	State 1/2	26865	831.5	22.99	24.50	1.416	0.14	0.063	0.089
	LTE Band 26_Ant 1	15M	QPSK	1	37	Right Tilted	0mm	State 1/2	26865	831.5	22.99	24.50	1.416	-0.06	0.040	0.057
	LTE Band 26_Ant 1	15M	QPSK	1	37	Left Cheek	0mm	State 1/2	26865	831.5	22.99	24.50	1.416	-0.09	0.080	0.113
	LTE Band 26_Ant 1	15M	QPSK	1	37	Left Tilted	0mm	State 1/2	26865	831.5	22.99	24.50	1.416	0.11	0.057	0.081
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Cheek	0mm	State 1/2	26865	831.5	22.00	23.50	1.413	-0.18	0.049	0.069
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Tilted	0mm	State 1/2	26865	831.5	22.00	23.50	1.413	0.13	0.033	0.047
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Cheek	0mm	State 1/2	26865	831.5	22.00	23.50	1.413	0.19	0.061	0.086
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Tilted	0mm	State 1/2	26865	831.5	22.00	23.50	1.413	0.06	0.044	0.062
	LTE Band 26_Ant 3	15M	QPSK	1	37	Right Cheek	0mm	State 1/2	26865	831.5	22.60	24.50	1.549	-0.1	0.204	0.316
	LTE Band 26_Ant 3	15M	QPSK	1	37	Right Tilted	0mm	State 1/2	26865	831.5	22.60	24.50	1.549	0.14	0.215	0.333
11	LTE Band 26_Ant 3	15M	QPSK	1	37	Left Cheek	0mm	State 1/2	26865	831.5	22.60	24.50	1.549	0.01	0.439	0.680
	LTE Band 26_Ant 3	15M	QPSK	1	37	Left Tilted	0mm	State 1/2	26865	831.5	22.60	24.50	1.549	0.01	0.393	0.609
	LTE Band 26_Ant 3	15M	QPSK	36	0	Right Cheek	0mm	State 1/2	26865	831.5	21.75	23.50	1.496	-0.09	0.167	0.250
	LTE Band 26_Ant 3	15M	QPSK	36	0	Right Tilted	0mm	State 1/2	26865	831.5	21.75	23.50	1.496	-0.13	0.177	0.265
	LTE Band 26_Ant 3	15M	QPSK	36	0	Left Cheek	0mm	State 1/2	26865	831.5	21.75	23.50	1.496	-0.18	0.322	0.482
	LTE Band 26_Ant 3	15M	QPSK	36	0	Left Tilted	0mm	State 1/2	26865	831.5	21.75	23.50	1.496	0.15	0.351	0.525
	LTE Band 30_Ant 2	10M	QPSK	1	25	Right Cheek	0mm	State 1/2	27710	2310	24.36	24.50	1.033	-0.07	0.078	0.081
	LTE Band 30_Ant 2	10M	QPSK	1	25	Right Tilted	0mm	State 1/2	27710	2310	24.36	24.50	1.033	-0.15	0.032	0.033
	LTE Band 30_Ant 2	10M	QPSK	1	25	Left Cheek	0mm	State 1/2	27710	2310	24.36	24.50	1.033	-0.02	0.098	0.101
	LTE Band 30_Ant 2	10M	QPSK	1	25	Left Tilted	0mm	State 1/2	27710	2310	24.36	24.50	1.033	-0.19	0.044	0.045
	LTE Band 30_Ant 2	10M	QPSK	25	0	Right Cheek	0mm	State 1/2	27710	2310	23.32	23.50	1.042	-0.01	0.065	0.068
	LTE Band 30_Ant 2	10M	QPSK	25	0	Right Tilted	0mm	State 1/2	27710	2310	23.32	23.50	1.042	0.15	0.026	0.027
	LTE Band 30_Ant 2	10M	QPSK	25	0	Left Cheek	0mm	State 1/2	27710	2310	23.32	23.50	1.042	0.16	0.080	0.083
	LTE Band 30_Ant 2	10M	QPSK	25	0	Left Tilted	0mm	State 1/2	27710	2310	23.32	23.50	1.042	-0.11	0.031	0.032
12	LTE Band 30_Ant 4	10M	QPSK	1	25	Right Cheek	0mm	State 1	27710	2310	18.68	19.50	1.208	-0.01	0.924	1.116
	LTE Band 30_Ant 4	10M	QPSK	1	25	Right Tilted	0mm	State 1	27710	2310	18.68	19.50	1.208	0.06	0.612	0.739
	LTE Band 30_Ant 4	10M	QPSK	1	25	Left Cheek	0mm	State 1	27710	2310	18.68	19.50	1.208	-0.14	0.163	0.197
	LTE Band 30_Ant 4	10M	QPSK	1	25	Left Tilted	0mm	State 1	27710	2310	18.68	19.50	1.208	-0.01	0.144	0.174
	LTE Band 30_Ant 4	10M	QPSK	25	0	Right Cheek	0mm	State 1	27710	2310	17.33	18.50	1.309	-0.18	0.711	0.931
	LTE Band 30_Ant 4	10M	QPSK	25	0	Right Tilted	0mm	State 1	27710	2310	17.33	18.50	1.309	-0.16	0.482	0.631
	LTE Band 30_Ant 4	10M	QPSK	25	0	Left Cheek	0mm	State 1	27710	2310	17.33	18.50	1.309	-0.04	0.078	0.102
	LTE Band 30_Ant 4	10M	QPSK	25	0	Left Tilted	0mm	State 1	27710	2310	17.33	18.50	1.309	-0.09	0.130	0.170
	LTE Band 30_Ant 4	10M	QPSK	50	0	Right Cheek	0mm	State 1	27710	2310	18.33	18.50	1.040	0.09	0.648	0.674
	LTE Band 30_Ant 4	10M	QPSK	1	25	Right Cheek	0mm	State 2	27710	2310	15.75	16.00	1.059	0.09	0.515	0.546
	LTE Band 30_Ant 4	10M	QPSK	1	25	Right Tilted	0mm	State 2	27710	2310	15.75	16.00	1.059	0.11	0.309	0.327
	LTE Band 30_Ant 4	10M	QPSK	1	25	Left Cheek	0mm	State 2	27710	2310	15.75	16.00	1.059	-0.16	0.105	0.111
	LTE Band 30_Ant 4	10M	QPSK	1	25	Left Tilted	0mm	State 2	27710	2310	15.75	16.00	1.059	0.18	0.090	0.095
	LTE Band 30_Ant 4	10M	QPSK	25	0	Right Cheek	0mm	State 2	27710	2310	14.73	15.00	1.064	0.1	0.394	0.419
	LTE Band 30_Ant 4	10M	QPSK	25	0	Right Tilted	0mm	State 2	27710	2310	14.73	15.00	1.064	0.14	0.238	0.253
	LTE Band 30_Ant 4	10M	QPSK	25	0	Left Cheek	0mm	State 2	27710	2310	14.73	15.00	1.064	0.12	0.081	0.086
	LTE Band 30_Ant 4	10M	QPSK	25	0	Left Tilted	0mm	State 2	27710	2310	14.73	15.00	1.064	0	0.067	0.071



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 2	20M	QPSK	1	49	Right Cheek	0mm	State 1/2	132322	1745	22.83	24.50	1.469	0.01	0.064	0.094
	LTE Band 66_Ant 2	20M	QPSK	1	49	Right Tilted	0mm	State 1/2	132322	1745	22.83	24.50	1.469	0.06	0.001	0.001
	LTE Band 66_Ant 2	20M	QPSK	1	49	Left Cheek	0mm	State 1/2	132322	1745	22.83	24.50	1.469	0.02	0.092	0.135
	LTE Band 66_Ant 2	20M	QPSK	1	49	Left Tilted	0mm	State 1/2	132322	1745	22.83	24.50	1.469	-0.03	0.050	0.073
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	State 1/2	132322	1745	21.76	23.50	1.493	0.12	0.048	0.072
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	State 1/2	132322	1745	21.76	23.50	1.493	-0.09	0.001	0.001
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	State 1/2	132322	1745	21.76	23.50	1.493	-0.11	0.071	0.106
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	State 1/2	132322	1745	21.76	23.50	1.493	0.05	0.032	0.048
	LTE Band 66_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	132322	1745	22.80	23.00	1.047	0.18	1.020	1.068
	LTE Band 66_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	132072	1720	22.75	23.00	1.059	0.18	0.956	1.013
13	LTE Band 66_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	132572	1770	22.69	23.00	1.074	-0.02	1.040	1.117
	LTE Band 66_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 1	132322	1745	22.80	23.00	1.047	0.08	0.623	0.652
	LTE Band 66_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 1	132322	1745	22.80	23.00	1.047	0.13	0.382	0.400
	LTE Band 66_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 1	132322	1745	22.80	23.00	1.047	-0.03	0.311	0.326
	LTE Band 66_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	132322	1745	21.97	22.00	1.007	0.06	0.790	0.795
	LTE Band 66_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	132072	1720	21.86	22.00	1.033	0.06	0.759	0.784
	LTE Band 66_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	132572	1770	21.73	22.00	1.064	0.12	0.744	0.792
	LTE Band 66_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 1	132322	1745	21.97	22.00	1.007	0.09	0.523	0.527
	LTE Band 66_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 1	132322	1745	21.97	22.00	1.007	0.14	0.309	0.311
	LTE Band 66_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 1	132322	1745	21.97	22.00	1.007	-0.07	0.256	0.258
	LTE Band 66_Ant 4	20M	QPSK	100	0	Right Cheek	0mm	State 1	132322	1745	22.21	22.00	0.953	0.01	0.743	0.708
	LTE Band 66_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 2	132072	1720	18.88	20.00	1.294	0.02	0.356	0.461
	LTE Band 66_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 2	132072	1720	18.88	20.00	1.294	-0.07	0.283	0.366
	LTE Band 66_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 2	132072	1720	18.88	20.00	1.294	0.06	0.103	0.133
	LTE Band 66_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 2	132072	1720	18.88	20.00	1.294	0.11	0.100	0.129
	LTE Band 66_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 2	132072	1720	17.45	19.00	1.429	-0.05	0.280	0.400
	LTE Band 66_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 2	132072	1720	17.45	19.00	1.429	0	0.220	0.314
	LTE Band 66_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 2	132072	1720	17.45	19.00	1.429	0.04	0.082	0.117
	LTE Band 66_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 2	132072	1720	17.45	19.00	1.429	-0.16	0.080	0.114
	LTE Band 71_Ant 1	20M	QPSK	1	49	Right Cheek	0mm	State 1/2	133297	680.5	23.05	24.50	1.396	0.07	0.027	0.038
	LTE Band 71_Ant 1	20M	QPSK	1	49	Right Tilted	0mm	State 1/2	133297	680.5	23.05	24.50	1.396	-0.11	0.001	0.001
	LTE Band 71_Ant 1	20M	QPSK	1	49	Left Cheek	0mm	State 1/2	133297	680.5	23.05	24.50	1.396	0.06	0.038	0.053
	LTE Band 71_Ant 1	20M	QPSK	1	49	Left Tilted	0mm	State 1/2	133297	680.5	23.05	24.50	1.396	0.11	0.021	0.029
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Cheek	0mm	State 1/2	133297	680.5	22.10	23.50	1.380	-0.03	0.012	0.017
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Tilted	0mm	State 1/2	133297	680.5	22.10	23.50	1.380	0.09	0.001	0.001
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Cheek	0mm	State 1/2	133297	680.5	22.10	23.50	1.380	0.12	0.028	0.039
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Tilted	0mm	State 1/2	133297	680.5	22.10	23.50	1.380	0.11	0.011	0.015
	LTE Band 71_Ant 3	20M	QPSK	1	49	Right Cheek	0mm	State 1/2	133297	680.5	22.60	24.00	1.380	0.09	0.157	0.217
	LTE Band 71_Ant 3	20M	QPSK	1	49	Right Tilted	0mm	State 1/2	133297	680.5	22.60	24.00	1.380	0.12	0.155	0.214
14	LTE Band 71_Ant 3	20M	QPSK	1	49	Left Cheek	0mm	State 1/2	133297	680.5	22.60	24.00	1.380	-0.01	0.320	0.442
	LTE Band 71_Ant 3	20M	QPSK	1	49	Left Tilted	0mm	State 1/2	133297	680.5	22.60	24.00	1.380	0.05	0.302	0.417
	LTE Band 71_Ant 3	20M	QPSK	50	0	Right Cheek	0mm	State 1/2	133297	680.5	21.78	23.00	1.324	-0.03	0.116	0.154
	LTE Band 71_Ant 3	20M	QPSK	50	0	Right Tilted	0mm	State 1/2	133297	680.5	21.78	23.00	1.324	-0.13	0.116	0.154



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	LTE Band 71_Ant 3	20M	QPSK	50	0	Left Cheek	0mm	State 1/2	133297	680.5	21.78	23.00	1.324	0.05	0.242	0.320
	LTE Band 71_Ant 3	20M	QPSK	50	0	Left Tilted	0mm	State 1/2	133297	680.5	21.78	23.00	1.324	0.01	0.232	0.307



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Ant 2	20M	QPSK	1	49	Right Cheek	0mm	State 1/2	40185	2549.5	23.30	23.50	1.047	62.9	1.006	0.06	0.052	0.055
	LTE Band 41_Ant 2	20M	QPSK	1	49	Right Tilted	0mm	State 1/2	40185	2549.5	23.30	23.50	1.047	62.9	1.006	-0.06	0.026	0.027
	LTE Band 41_Ant 2	20M	QPSK	1	49	Left Cheek	0mm	State 1/2	40185	2549.5	23.30	23.50	1.047	62.9	1.006	-0.09	0.047	0.050
	LTE Band 41_Ant 2	20M	QPSK	1	49	Left Tilted	0mm	State 1/2	40185	2549.5	23.30	23.50	1.047	62.9	1.006	-0.16	0.016	0.017
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	State 1/2	40185	2549.5	22.25	22.50	1.059	62.9	1.006	-0.06	0.043	0.046
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	State 1/2	40185	2549.5	22.25	22.50	1.059	62.9	1.006	-0.05	0.021	0.022
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	State 1/2	40185	2549.5	22.25	22.50	1.059	62.9	1.006	0.16	0.036	0.038
	LTE Band 41_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	State 1/2	40185	2549.5	22.25	22.50	1.059	62.9	1.006	0.07	0.011	0.012
	LTE Band 41C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	State 1/2	41055	2636.5	23.02	24.50	1.406	62.9	1.006	-0.05	0.035	0.050
	LTE Band 41_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	41490	2680	19.46	20.00	1.132	62.9	1.006	0.16	0.912	1.039
	LTE Band 41_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	39750	2506	18.99	20.00	1.262	62.9	1.006	0.12	0.703	0.892
	LTE Band 41_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	40185	2549.5	18.74	20.00	1.337	62.9	1.006	-0.01	0.752	1.011
	LTE Band 41_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	40620	2593	19.05	20.00	1.245	62.9	1.006	-0.15	0.858	1.074
15	LTE Band 41_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	41055	2636.5	19.11	20.00	1.227	62.9	1.006	0.06	0.922	1.138
	LTE Band 41_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 1	41490	2680	19.46	20.00	1.132	62.9	1.006	-0.09	0.472	0.538
	LTE Band 41_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 1	41490	2680	19.46	20.00	1.132	62.9	1.006	-0.1	0.187	0.213
	LTE Band 41_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 1	41490	2680	19.46	20.00	1.132	62.9	1.006	-0.14	0.197	0.224
	LTE Band 41_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	41490	2680	18.44	19.00	1.138	62.9	1.006	-0.11	0.698	0.799
	LTE Band 41_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	39750	2506	18.03	19.00	1.250	62.9	1.006	-0.12	0.688	0.865
	LTE Band 41_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	40185	2549.5	17.81	19.00	1.315	62.9	1.006	0.07	0.712	0.942
	LTE Band 41_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	40620	2593	18.01	19.00	1.256	62.9	1.006	0.01	0.689	0.871
	LTE Band 41_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	41055	2636.5	18.06	19.00	1.242	62.9	1.006	0.05	0.720	0.899
	LTE Band 41_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 1	41490	2680	18.44	19.00	1.138	62.9	1.006	-0.19	0.411	0.470
	LTE Band 41_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 1	41490	2680	18.44	19.00	1.138	62.9	1.006	-0.05	0.212	0.243
	LTE Band 41_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 1	41490	2680	18.44	19.00	1.138	62.9	1.006	0	0.203	0.232
	LTE Band 41_Ant 4	20M	QPSK	100	0	Right Cheek	0mm	State 1	41490	2680	18.37	19.00	1.156	62.9	1.006	0.04	0.814	0.947
	LTE Band 41C_Ant 4	20M	QPSK	1	0	Right Cheek	0mm	State 1	41490	2680	19.99	20.00	1.002	62.9	1.006	0.07	0.791	0.798
	LTE Band 41_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 2	41490	2680	15.83	17.50	1.469	62.9	1.006	0.06	0.349	0.516
	LTE Band 41_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 2	41490	2680	15.83	17.50	1.469	62.9	1.006	0.08	0.245	0.362
	LTE Band 41_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 2	41490	2680	15.83	17.50	1.469	62.9	1.006	-0.1	0.106	0.157
	LTE Band 41_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 2	41490	2680	15.83	17.50	1.469	62.9	1.006	0.04	0.121	0.179
	LTE Band 41_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 2	41490	2680	14.91	16.50	1.442	62.9	1.006	-0.04	0.278	0.403
	LTE Band 41_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 2	41490	2680	14.91	16.50	1.442	62.9	1.006	-0.07	0.196	0.284
	LTE Band 41_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 2	41490	2680	14.91	16.50	1.442	62.9	1.006	-0.14	0.089	0.129
	LTE Band 41_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 2	41490	2680	14.91	16.50	1.442	62.9	1.006	0.04	0.095	0.138
	LTE Band 41C_Ant 4	20M	QPSK	1	0	Right Cheek	0mm	State 2	41490	2636.5	17.35	17.50	1.035	62.9	1.006	-0.05	0.035	0.036



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 42_Ant 5	20M	QPSK	1	49	Right Cheek	0mm	State 1	42590	3500	20.38	20.50	1.028	62.9	1.006	-0.01	0.967	1.000
	LTE Band 42_Ant 5	20M	QPSK	1	49	Right Tilted	0mm	State 1	42590	3500	20.38	20.50	1.028	62.9	1.006	0.07	0.230	0.238
	LTE Band 42_Ant 5	20M	QPSK	1	49	Left Cheek	0mm	State 1	42590	3500	20.38	20.50	1.028	62.9	1.006	0.14	0.529	0.547
	LTE Band 42_Ant 5	20M	QPSK	1	49	Left Tilted	0mm	State 1	42590	3500	20.38	20.50	1.028	62.9	1.006	0.1	0.144	0.149
	LTE Band 42_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	State 1	42590	3500	19.48	19.50	1.005	62.9	1.006	-0.15	0.756	0.764
	LTE Band 42_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	State 1	42590	3500	19.48	19.50	1.005	62.9	1.006	0.02	0.191	0.193
	LTE Band 42_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	State 1	42590	3500	19.48	19.50	1.005	62.9	1.006	-0.06	0.421	0.425
	LTE Band 42_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	State 1	42590	3500	19.48	19.50	1.005	62.9	1.006	-0.01	0.124	0.125
	LTE Band 42_Ant 5	20M	QPSK	100	0	Right Cheek	0mm	State 1	42590	3500	19.40	19.50	1.023	62.9	1.006	0.11	0.722	0.743
	LTE Band 42_Ant 5	20M	QPSK	1	49	Right Cheek	0mm	State 2	42590	3500	18.36	18.50	1.033	62.9	1.006	0	0.530	0.551
	LTE Band 42_Ant 5	20M	QPSK	1	49	Right Tilted	0mm	State 2	42590	3500	18.36	18.50	1.033	62.9	1.006	-0.1	0.090	0.094
	LTE Band 42_Ant 5	20M	QPSK	1	49	Left Cheek	0mm	State 2	42590	3500	18.36	18.50	1.033	62.9	1.006	0.08	0.213	0.221
	LTE Band 42_Ant 5	20M	QPSK	1	49	Left Tilted	0mm	State 2	42590	3500	18.36	18.50	1.033	62.9	1.006	-0.15	0.056	0.058
	LTE Band 42_Ant 5	20M	QPSK	50	0	Right Cheek	0mm	State 2	42590	3500	17.36	17.50	1.033	62.9	1.006	0.19	0.295	0.306
	LTE Band 42_Ant 5	20M	QPSK	50	0	Right Tilted	0mm	State 2	42590	3500	17.36	17.50	1.033	62.9	1.006	0.1	0.065	0.068
	LTE Band 42_Ant 5	20M	QPSK	50	0	Left Cheek	0mm	State 2	42590	3500	17.36	17.50	1.033	62.9	1.006	0.08	0.165	0.171
	LTE Band 42_Ant 5	20M	QPSK	50	0	Left Tilted	0mm	State 2	42590	3500	17.36	17.50	1.033	62.9	1.006	0.19	0.042	0.044
16	LTE Band 42_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	42590	3500	21.10	21.50	1.096	62.9	1.006	0	1.010	1.114
	LTE Band 42_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 1	42590	3500	21.10	21.50	1.096	62.9	1.006	-0.03	0.468	0.516
	LTE Band 42_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 1	42590	3500	21.10	21.50	1.096	62.9	1.006	0.07	0.146	0.161
	LTE Band 42_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 1	42590	3500	21.10	21.50	1.096	62.9	1.006	-0.08	0.138	0.152
	LTE Band 42_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 1	42590	3500	20.05	20.50	1.109	62.9	1.006	-0.06	0.783	0.874
	LTE Band 42_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 1	42590	3500	20.05	20.50	1.109	62.9	1.006	0.12	0.372	0.415
	LTE Band 42_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 1	42590	3500	20.05	20.50	1.109	62.9	1.006	0.12	0.117	0.131
	LTE Band 42_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 1	42590	3500	20.05	20.50	1.109	62.9	1.006	0.08	0.115	0.128
	LTE Band 42_Ant 4	20M	QPSK	100	0	Right Cheek	0mm	State 1	42590	3500	19.98	20.50	1.127	62.9	1.006	0.03	0.766	0.869
	LTE Band 42_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 2	42590	3500	17.76	18.00	1.057	62.9	1.006	0	0.515	0.548
	LTE Band 42_Ant 4	20M	QPSK	1	49	Right Tilted	0mm	State 2	42590	3500	17.76	18.00	1.057	62.9	1.006	0.07	0.281	0.299
	LTE Band 42_Ant 4	20M	QPSK	1	49	Left Cheek	0mm	State 2	42590	3500	17.76	18.00	1.057	62.9	1.006	-0.06	0.099	0.105
	LTE Band 42_Ant 4	20M	QPSK	1	49	Left Tilted	0mm	State 2	42590	3500	17.76	18.00	1.057	62.9	1.006	0.05	0.088	0.094
	LTE Band 42_Ant 4	20M	QPSK	50	0	Right Cheek	0mm	State 2	42590	3500	16.48	17.00	1.127	62.9	1.006	-0.15	0.397	0.450
	LTE Band 42_Ant 4	20M	QPSK	50	0	Right Tilted	0mm	State 2	42590	3500	16.48	17.00	1.127	62.9	1.006	-0.16	0.231	0.262
	LTE Band 42_Ant 4	20M	QPSK	50	0	Left Cheek	0mm	State 2	42590	3500	16.48	17.00	1.127	62.9	1.006	0.06	0.082	0.093
	LTE Band 42_Ant 4	20M	QPSK	50	0	Left Tilted	0mm	State 2	42590	3500	16.48	17.00	1.127	62.9	1.006	0.19	0.071	0.081



<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2_Ant 4	20M	BPSK	1	1	Right Cheek	0mm	State 2	376000	1880	17.49	18.00	1.125	0.04	0.172	0.193
	FR1 n2_Ant 4	20M	BPSK	1	1	Right Tilted	0mm	State 2	376000	1880	17.49	18.00	1.125	-0.13	0.089	0.100
	FR1 n2_Ant 4	20M	BPSK	1	1	Left Cheek	0mm	State 2	376000	1880	17.49	18.00	1.125	0.01	0.046	0.052
	FR1 n2_Ant 4	20M	BPSK	1	1	Left Tilted	0mm	State 2	376000	1880	17.49	18.00	1.125	0.09	0.032	0.036
17	FR1 n2_Ant 4	20M	BPSK	50	0	Right Cheek	0mm	State 2	376000	1880	17.28	18.00	1.180	-0.05	0.177	0.209
	FR1 n2_Ant 4	20M	BPSK	50	0	Right Tilted	0mm	State 2	376000	1880	17.28	18.00	1.180	-0.07	0.096	0.113
	FR1 n2_Ant 4	20M	BPSK	50	0	Left Cheek	0mm	State 2	376000	1880	17.28	18.00	1.180	-0.11	0.053	0.063
	FR1 n2_Ant 4	20M	BPSK	50	0	Left Tilted	0mm	State 2	376000	1880	17.28	18.00	1.180	0.06	0.037	0.044
	FR1 n5_Ant 1	20M	BPSK	1	53	Right Cheek	0mm	State 1/2	167300	836.5	23.69	24.50	1.205	0.19	0.051	0.061
	FR1 n5_Ant 1	20M	BPSK	1	53	Right Tilted	0mm	State 1/2	167300	836.5	23.69	24.50	1.205	0.06	0.038	0.046
	FR1 n5_Ant 1	20M	BPSK	1	53	Left Cheek	0mm	State 1/2	167300	836.5	23.69	24.50	1.205	0.12	0.071	0.086
	FR1 n5_Ant 1	20M	BPSK	1	53	Left Tilted	0mm	State 1/2	167300	836.5	23.69	24.50	1.205	-0.06	0.049	0.059
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	State 1/2	167300	836.5	23.56	24.50	1.242	0.18	0.053	0.066
	FR1 n5_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	State 1/2	167300	836.5	23.56	24.50	1.242	-0.1	0.041	0.051
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	State 1/2	167300	836.5	23.56	24.50	1.242	-0.16	0.070	0.087
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	State 1/2	167300	836.5	23.56	24.50	1.242	-0.09	0.051	0.063
	FR1 n5_Ant 3	20M	BPSK	1	53	Right Cheek	0mm	State 1	167300	836.5	22.77	24.50	1.489	-0.13	0.351	0.523
	FR1 n5_Ant 3	20M	BPSK	1	53	Right Tilted	0mm	State 1	167300	836.5	22.77	24.50	1.489	0.07	0.323	0.481
	FR1 n5_Ant 3	20M	BPSK	1	53	Left Cheek	0mm	State 1	167300	836.5	22.77	24.50	1.489	0.19	0.572	0.852
	FR1 n5_Ant 3	20M	BPSK	1	53	Left Tilted	0mm	State 1	167300	836.5	22.77	24.50	1.489	0.12	0.571	0.850
	FR1 n5_Ant 3	20M	BPSK	50	28	Right Cheek	0mm	State 1	167300	836.5	22.60	24.50	1.549	-0.04	0.358	0.554
	FR1 n5_Ant 3	20M	BPSK	50	28	Right Tilted	0mm	State 1	167300	836.5	22.60	24.50	1.549	-0.17	0.353	0.547
18	FR1 n5_Ant 3	20M	BPSK	50	28	Left Cheek	0mm	State 1	167300	836.5	22.60	24.50	1.549	0.1	0.602	0.932
	FR1 n5_Ant 3	20M	BPSK	50	28	Left Tilted	0mm	State 1	167300	836.5	22.60	24.50	1.549	-0.09	0.585	0.906
	FR1 n5_Ant 3	20M	BPSK	100	0	Left Cheek	0mm	State 1	167300	836.5	22.03	24.00	1.574	0.07	0.512	0.806
	FR1 n5_Ant 3	20M	BPSK	1	1	Right Cheek	0mm	State 2	167300	836.5	20.83	21.00	1.040	0.06	0.158	0.164
	FR1 n5_Ant 3	20M	BPSK	1	1	Right Tilted	0mm	State 2	167300	836.5	20.83	21.00	1.040	-0.12	0.148	0.154
	FR1 n5_Ant 3	20M	BPSK	1	1	Left Cheek	0mm	State 2	167300	836.5	20.83	21.00	1.040	-0.19	0.286	0.297
	FR1 n5_Ant 3	20M	BPSK	1	1	Left Tilted	0mm	State 2	167300	836.5	20.83	21.00	1.040	0.13	0.250	0.260
	FR1 n5_Ant 3	20M	BPSK	50	0	Right Cheek	0mm	State 2	167300	836.5	20.56	21.00	1.107	0.06	0.150	0.166
	FR1 n5_Ant 3	20M	BPSK	50	0	Right Tilted	0mm	State 2	167300	836.5	20.56	21.00	1.107	0.05	0.141	0.156
	FR1 n5_Ant 3	20M	BPSK	50	0	Left Cheek	0mm	State 2	167300	836.5	20.56	21.00	1.107	0.08	0.274	0.303
	FR1 n5_Ant 3	20M	BPSK	50	0	Left Tilted	0mm	State 2	167300	836.5	20.56	21.00	1.107	0.05	0.237	0.262



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n7_Ant 2	40M	BPSK	1	108	Right Cheek	0mm	State 1/2	507000	2535	23.59	24.50	1.233	0.12	0.077	0.095
	FR1 n7_Ant 2	40M	BPSK	1	108	Right Tilted	0mm	State 1/2	507000	2535	23.59	24.50	1.233	-0.17	0.032	0.039
	FR1 n7_Ant 2	40M	BPSK	1	108	Left Cheek	0mm	State 1/2	507000	2535	23.59	24.50	1.233	-0.17	0.086	0.106
	FR1 n7_Ant 2	40M	BPSK	1	108	Left Tilted	0mm	State 1/2	507000	2535	23.59	24.50	1.233	-0.16	0.035	0.043
	FR1 n7_Ant 2	40M	BPSK	108	54	Right Cheek	0mm	State 1/2	507000	2535	23.44	24.50	1.276	0.03	0.075	0.096
	FR1 n7_Ant 2	40M	BPSK	108	54	Right Tilted	0mm	State 1/2	507000	2535	23.44	24.50	1.276	0	0.028	0.036
	FR1 n7_Ant 2	40M	BPSK	108	54	Left Cheek	0mm	State 1/2	507000	2535	23.44	24.50	1.276	-0.07	0.114	0.146
	FR1 n7_Ant 2	40M	BPSK	108	54	Left Tilted	0mm	State 1/2	507000	2535	23.44	24.50	1.276	-0.05	0.035	0.045
19	FR1 n7_Ant 4	40M	BPSK	1	1	Right Cheek	0mm	State 1	507000	2535	17.03	18.00	1.250	-0.05	0.926	1.158
	FR1 n7_Ant 4	40M	BPSK	1	1	Right Tilted	0mm	State 1	507000	2535	17.03	18.00	1.250	0.04	0.537	0.671
	FR1 n7_Ant 4	40M	BPSK	1	1	Left Cheek	0mm	State 1	507000	2535	17.03	18.00	1.250	0.11	0.235	0.294
	FR1 n7_Ant 4	40M	BPSK	1	1	Left Tilted	0mm	State 1	507000	2535	17.03	18.00	1.250	0.09	0.228	0.285
	FR1 n7_Ant 4	40M	BPSK	108	0	Right Cheek	0mm	State 1	507000	2535	16.74	18.00	1.337	0.07	0.732	0.978
	FR1 n7_Ant 4	40M	BPSK	108	0	Right Tilted	0mm	State 1	507000	2535	16.74	18.00	1.337	-0.07	0.570	0.762
	FR1 n7_Ant 4	40M	BPSK	108	0	Left Cheek	0mm	State 1	507000	2535	16.74	18.00	1.337	-0.07	0.216	0.289
	FR1 n7_Ant 4	40M	BPSK	108	0	Left Tilted	0mm	State 1	507000	2535	16.74	18.00	1.337	-0.17	0.210	0.281
	FR1 n7_Ant 4	40M	BPSK	216	0	Right Cheek	0mm	State 1	507000	2535	16.77	18.00	1.327	0.03	0.711	0.944
	FR1 n7_Ant 4	40M	BPSK	1	1	Right Cheek	0mm	State 2	507000	2535	14.32	15.00	1.169	0.03	0.436	0.510
	FR1 n7_Ant 4	40M	BPSK	1	1	Right Tilted	0mm	State 2	507000	2535	14.32	15.00	1.169	0.13	0.253	0.296
	FR1 n7_Ant 4	40M	BPSK	1	1	Left Cheek	0mm	State 2	507000	2535	14.32	15.00	1.169	-0.06	0.094	0.110
	FR1 n7_Ant 4	40M	BPSK	1	1	Left Tilted	0mm	State 2	507000	2535	14.32	15.00	1.169	-0.1	0.084	0.098
	FR1 n7_Ant 4	40M	BPSK	108	0	Right Cheek	0mm	State 2	507000	2535	14.10	15.00	1.230	-0.11	0.399	0.491
	FR1 n7_Ant 4	40M	BPSK	108	0	Right Tilted	0mm	State 2	507000	2535	14.10	15.00	1.230	0.06	0.229	0.282
	FR1 n7_Ant 4	40M	BPSK	108	0	Left Cheek	0mm	State 2	507000	2535	14.10	15.00	1.230	-0.17	0.088	0.108
	FR1 n7_Ant 4	40M	BPSK	108	0	Left Tilted	0mm	State 2	507000	2535	14.10	15.00	1.230	-0.06	0.073	0.090
	FR1 n12_Ant 1	15M	BPSK	1	40	Right Cheek	0mm	State 1/2	141500	707.5	23.92	24.50	1.143	-0.04	0.032	0.037
	FR1 n12_Ant 1	15M	BPSK	1	40	Right Tilted	0mm	State 1/2	141500	707.5	23.92	24.50	1.143	-0.18	0.028	0.032
	FR1 n12_Ant 1	15M	BPSK	1	40	Left Cheek	0mm	State 1/2	141500	707.5	23.92	24.50	1.143	0.13	0.042	0.048
	FR1 n12_Ant 1	15M	BPSK	1	40	Left Tilted	0mm	State 1/2	141500	707.5	23.92	24.50	1.143	-0.16	0.031	0.035
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Cheek	0mm	State 1/2	141500	707.5	23.93	24.50	1.140	0.19	0.033	0.038
	FR1 n12_Ant 1	15M	BPSK	36	22	Right Tilted	0mm	State 1/2	141500	707.5	23.93	24.50	1.140	0	0.028	0.032
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Cheek	0mm	State 1/2	141500	707.5	23.93	24.50	1.140	0.09	0.041	0.047
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Tilted	0mm	State 1/2	141500	707.5	23.93	24.50	1.140	-0.19	0.031	0.035
	FR1 n12_Ant 3	15M	BPSK	1	40	Right Cheek	0mm	State 1/2	141500	707.5	23.69	24.50	1.205	0.11	0.079	0.095
	FR1 n12_Ant 3	15M	BPSK	1	40	Right Tilted	0mm	State 1/2	141500	707.5	23.69	24.50	1.205	-0.19	0.083	0.100
20	FR1 n12_Ant 3	15M	QPSK	1	40	Left Cheek	0mm	State 1/2	141500	707.5	23.66	24.50	1.213	0.1	0.164	0.199
	FR1 n12_Ant 3	15M	BPSK	1	40	Left Tilted	0mm	State 1/2	141500	707.5	23.69	24.50	1.205	-0.12	0.154	0.186
	FR1 n12_Ant 3	15M	BPSK	36	22	Right Cheek	0mm	State 1/2	141500	707.5	23.64	24.50	1.219	0.14	0.081	0.099
	FR1 n12_Ant 3	15M	BPSK	36	22	Right Tilted	0mm	State 1/2	141500	707.5	23.64	24.50	1.219	-0.12	0.078	0.095
	FR1 n12_Ant 3	15M	BPSK	36	22	Left Cheek	0mm	State 1/2	141500	707.5	23.64	24.50	1.219	0.19	0.152	0.185
	FR1 n12_Ant 3	15M	BPSK	36	22	Left Tilted	0mm	State 1/2	141500	707.5	23.64	24.50	1.219	-0.05	0.148	0.180



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n25_Ant 2	40M	BPSK	1	108	Right Cheek	0mm	State 1/2	376500	1882.5	23.61	24.50	1.227	0.1	0.107	0.131
	FR1 n25_Ant 2	40M	BPSK	1	108	Right Tilted	0mm	State 1/2	376500	1882.5	23.61	24.50	1.227	-0.07	0.059	0.072
	FR1 n25_Ant 2	40M	BPSK	1	108	Left Cheek	0mm	State 1/2	376500	1882.5	23.61	24.50	1.227	0.1	0.116	0.142
	FR1 n25_Ant 2	40M	BPSK	1	108	Left Tilted	0mm	State 1/2	376500	1882.5	23.61	24.50	1.227	0.16	0.041	0.050
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Cheek	0mm	State 1/2	376500	1882.5	23.46	24.50	1.271	-0.15	0.101	0.128
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Tilted	0mm	State 1/2	376500	1882.5	23.46	24.50	1.271	-0.08	0.036	0.046
	FR1 n25_Ant 2	40M	BPSK	108	54	Left Cheek	0mm	State 1/2	376500	1882.5	23.46	24.50	1.271	-0.02	0.111	0.141
	FR1 n25_Ant 2	40M	BPSK	108	54	Left Tilted	0mm	State 1/2	376500	1882.5	23.46	24.50	1.271	0.03	0.032	0.041
	FR1 n25_Ant 4	40M	BPSK	1	108	Right Cheek	0mm	State 1	376500	1882.5	22.71	24.00	1.346	-0.01	0.809	1.089
	FR1 n25_Ant 4	40M	BPSK	1	108	Right Tilted	0mm	State 1	376500	1882.5	22.71	24.00	1.346	0.11	0.435	0.585
	FR1 n25_Ant 4	40M	BPSK	1	108	Left Cheek	0mm	State 1	376500	1882.5	22.71	24.00	1.346	-0.03	0.200	0.269
	FR1 n25_Ant 4	40M	BPSK	1	108	Left Tilted	0mm	State 1	376500	1882.5	22.71	24.00	1.346	-0.1	0.123	0.166
21	FR1 n25_Ant 4	40M	BPSK	108	54	Right Cheek	0mm	State 1	376500	1882.5	22.53	24.00	1.403	0.07	0.829	1.163
	FR1 n25_Ant 4	40M	BPSK	108	54	Right Tilted	0mm	State 1	376500	1882.5	22.53	24.00	1.403	0.04	0.439	0.616
	FR1 n25_Ant 4	40M	BPSK	108	54	Left Cheek	0mm	State 1	376500	1882.5	22.53	24.00	1.403	-0.11	0.213	0.299
	FR1 n25_Ant 4	40M	BPSK	108	54	Left Tilted	0mm	State 1	376500	1882.5	22.53	24.00	1.403	-0.14	0.127	0.178
	FR1 n25_Ant 4	40M	BPSK	216	0	Right Cheek	0mm	State 1	376500	1882.5	22.07	24.00	1.560	0.07	0.711	1.109
	FR1 n25_Ant 4	40M	BPSK	1	1	Right Cheek	0mm	State 2	376500	1882.5	19.70	21.00	1.349	0.05	0.292	0.394
	FR1 n25_Ant 4	40M	BPSK	1	1	Right Tilted	0mm	State 2	376500	1882.5	19.70	21.00	1.349	0	0.156	0.210
	FR1 n25_Ant 4	40M	BPSK	1	1	Left Cheek	0mm	State 2	376500	1882.5	19.70	21.00	1.349	-0.01	0.063	0.085
	FR1 n25_Ant 4	40M	BPSK	1	1	Left Tilted	0mm	State 2	376500	1882.5	19.70	21.00	1.349	-0.16	0.061	0.082
	FR1 n25_Ant 4	40M	QPSK	108	0	Right Cheek	0mm	State 2	376500	1882.5	19.44	21.00	1.432	0.09	0.314	0.450
	FR1 n25_Ant 4	40M	BPSK	108	0	Right Tilted	0mm	State 2	376500	1882.5	19.44	21.00	1.432	0.15	0.163	0.233
	FR1 n25_Ant 4	40M	BPSK	108	0	Left Cheek	0mm	State 2	376500	1882.5	19.44	21.00	1.432	0.13	0.077	0.110
	FR1 n25_Ant 4	40M	BPSK	108	0	Left Tilted	0mm	State 2	376500	1882.5	19.44	21.00	1.432	0.04	0.072	0.103
	FR1 n66_Ant 2	40M	BPSK	1	108	Right Cheek	0mm	State 1/2	349000	1745	23.10	24.50	1.380	0.06	0.098	0.135
	FR1 n66_Ant 2	40M	BPSK	1	108	Right Tilted	0mm	State 1/2	349000	1745	23.10	24.50	1.380	0.13	0.032	0.044
	FR1 n66_Ant 2	40M	BPSK	1	108	Left Cheek	0mm	State 1/2	349000	1745	23.10	24.50	1.380	-0.13	0.101	0.139
	FR1 n66_Ant 2	40M	BPSK	1	108	Left Tilted	0mm	State 1/2	349000	1745	23.10	24.50	1.380	0.12	0.041	0.057
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Cheek	0mm	State 1/2	349000	1745	23.06	24.50	1.393	-0.08	0.096	0.134
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Tilted	0mm	State 1/2	349000	1745	23.06	24.50	1.393	-0.03	0.031	0.043
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Cheek	0mm	State 1/2	349000	1745	23.06	24.50	1.393	0.09	0.102	0.142
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Tilted	0mm	State 1/2	349000	1745	23.06	24.50	1.393	-0.04	0.044	0.061
22	FR1 n66_Ant 4	40M	BPSK	1	1	Right Cheek	0mm	State 1	349000	1745	22.60	23.00	1.096	0.06	0.994	1.090
	FR1 n66_Ant 4	40M	BPSK	1	1	Right Tilted	0mm	State 1	349000	1745	22.60	23.00	1.096	0.18	0.569	0.624
	FR1 n66_Ant 4	40M	BPSK	1	1	Left Cheek	0mm	State 1	349000	1745	22.60	23.00	1.096	0.02	0.313	0.343
	FR1 n66_Ant 4	40M	BPSK	1	1	Left Tilted	0mm	State 1	349000	1745	22.60	23.00	1.096	-0.07	0.299	0.328
	FR1 n66_Ant 4	40M	BPSK	108	0	Right Cheek	0mm	State 1	349000	1745	22.52	22.00	0.887	0.03	0.939	0.833
	FR1 n66_Ant 4	40M	BPSK	108	0	Right Tilted	0mm	State 1	349000	1745	22.52	22.00	0.887	-0.17	0.556	0.493
	FR1 n66_Ant 4	40M	BPSK	108	0	Left Cheek	0mm	State 1	349000	1745	22.52	22.00	0.887	0.12	0.303	0.269
	FR1 n66_Ant 4	40M	BPSK	108	0	Left Tilted	0mm	State 1	349000	1745	22.52	22.00	0.887	-0.1	0.292	0.259
	FR1 n66_Ant 4	40M	BPSK	216	0	Right Cheek	0mm	State 1	349000	1745	22.02	22.00	0.995	0.05	0.865	0.861
	FR1 n66_Ant 4	40M	BPSK	1	1	Right Cheek	0mm	State 2	349000	1745	19.04	20.00	1.247	0.07	0.349	0.435
	FR1 n66_Ant 4	40M	BPSK	1	1	Right Tilted	0mm	State 2	349000	1745	19.04	20.00	1.247	0.06	0.223	0.278
	FR1 n66_Ant 4	40M	BPSK	1	1	Left Cheek	0mm	State 2	349000	1745	19.04	20.00	1.247	-0.03	0.110	0.137



FCC SAR TEST REPORT

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	FR1 n66_Ant 4	40M	BPSK	1	1	Left Tilted	0mm	State 2	349000	1745	19.04	20.00	1.247	0.05	0.119	0.148
	FR1 n66_Ant 4	40M	BPSK	108	0	Right Cheek	0mm	State 2	349000	1745	19.00	20.00	1.259	-0.04	0.339	0.427
	FR1 n66_Ant 4	40M	BPSK	108	0	Right Tilted	0mm	State 2	349000	1745	19.00	20.00	1.259	-0.04	0.203	0.256
	FR1 n66_Ant 4	40M	BPSK	108	0	Left Cheek	0mm	State 2	349000	1745	19.00	20.00	1.259	-0.04	0.094	0.118
	FR1 n66_Ant 4	40M	BPSK	108	0	Left Tilted	0mm	State 2	349000	1745	19.00	20.00	1.259	0.11	0.074	0.093



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n71_Ant 1	20M	BPSK	1	53	Right Cheek	0mm	State 1/2	136100	680.5	23.52	24.50	1.253	0.13	0.027	0.034
	FR1 n71_Ant 1	20M	BPSK	1	53	Right Tilted	0mm	State 1/2	136100	680.5	23.52	24.50	1.253	0	0.018	0.023
	FR1 n71_Ant 1	20M	BPSK	1	53	Left Cheek	0mm	State 1/2	136100	680.5	23.52	24.50	1.253	0.16	0.038	0.048
	FR1 n71_Ant 1	20M	BPSK	1	53	Left Tilted	0mm	State 1/2	136100	680.5	23.52	24.50	1.253	0.15	0.021	0.026
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Cheek	0mm	State 1/2	136100	680.5	22.74	24.50	1.500	-0.08	0.025	0.037
	FR1 n71_Ant 1	20M	BPSK	50	28	Right Tilted	0mm	State 1/2	136100	680.5	22.74	24.50	1.500	0.08	0.019	0.028
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Cheek	0mm	State 1/2	136100	680.5	22.74	24.50	1.500	0.07	0.037	0.055
	FR1 n71_Ant 1	20M	BPSK	50	28	Left Tilted	0mm	State 1/2	136100	680.5	22.74	24.50	1.500	-0.15	0.023	0.034
	FR1 n71_Ant 3	20M	BPSK	1	53	Right Cheek	0mm	State 1/2	136100	680.5	22.81	24.50	1.476	0.13	0.111	0.164
	FR1 n71_Ant 3	20M	BPSK	1	53	Right Tilted	0mm	State 1/2	136100	680.5	22.81	24.50	1.476	-0.11	0.123	0.182
	FR1 n71_Ant 3	20M	BPSK	1	53	Left Cheek	0mm	State 1/2	136100	680.5	22.81	24.50	1.476	-0.11	0.247	0.364
	FR1 n71_Ant 3	20M	BPSK	1	53	Left Tilted	0mm	State 1/2	136100	680.5	22.81	24.50	1.476	0.17	0.241	0.356
	FR1 n71_Ant 3	20M	BPSK	50	28	Right Cheek	0mm	State 1/2	136100	680.5	22.64	24.50	1.535	0.04	0.118	0.181
	FR1 n71_Ant 3	20M	BPSK	50	28	Right Tilted	0mm	State 1/2	136100	680.5	22.64	24.50	1.535	0.05	0.117	0.180
23	FR1 n71_Ant 3	20M	BPSK	50	28	Left Cheek	0mm	State 1/2	136100	680.5	22.64	24.50	1.535	-0.01	0.252	0.387
	FR1 n71_Ant 3	20M	BPSK	50	28	Left Tilted	0mm	State 1/2	136100	680.5	22.64	24.50	1.535	-0.12	0.243	0.373
	FR1 n41_Ant 2	100M	BPSK	1	137	Right Cheek	0mm	State 1/2	518598	2592.99	23.77	24.50	1.183	0.17	0.085	0.101
	FR1 n41_Ant 2	100M	BPSK	1	137	Right Tilted	0mm	State 1/2	518598	2592.99	23.77	24.50	1.183	-0.12	0.034	0.040
	FR1 n41_Ant 2	100M	BPSK	1	137	Left Cheek	0mm	State 1/2	518598	2592.99	23.77	24.50	1.183	-0.02	0.086	0.102
	FR1 n41_Ant 2	100M	BPSK	1	137	Left Tilted	0mm	State 1/2	518598	2592.99	23.77	24.50	1.183	0.02	0.043	0.051
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Cheek	0mm	State 1/2	518598	2592.99	23.60	24.50	1.230	0.17	0.080	0.098
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Tilted	0mm	State 1/2	518598	2592.99	23.60	24.50	1.230	0.1	0.030	0.037
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Cheek	0mm	State 1/2	518598	2592.99	23.60	24.50	1.230	0.03	0.083	0.102
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Tilted	0mm	State 1/2	518598	2592.99	23.60	24.50	1.230	0.19	0.047	0.058
24	FR1 n41_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 1	518598	2592.99	18.28	19.00	1.180	-0.04	0.990	1.169
	FR1 n41_Ant 4	100M	BPSK	1	1	Right Tilted	0mm	State 1	518598	2592.99	18.28	19.00	1.180	-0.13	0.756	0.892
	FR1 n41_Ant 4	100M	BPSK	1	1	Left Cheek	0mm	State 1	518598	2592.99	18.28	19.00	1.180	0.15	0.320	0.378
	FR1 n41_Ant 4	100M	BPSK	1	1	Left Tilted	0mm	State 1	518598	2592.99	18.28	19.00	1.180	-0.02	0.319	0.377
	FR1 n41_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 1	518598	2592.99	18.20	19.00	1.202	0.18	0.886	1.065
	FR1 n41_Ant 4	100M	BPSK	135	0	Right Tilted	0mm	State 1	518598	2592.99	18.20	19.00	1.202	0.16	0.728	0.875
	FR1 n41_Ant 4	100M	BPSK	135	0	Left Cheek	0mm	State 1	518598	2592.99	18.20	19.00	1.202	0.15	0.285	0.343
	FR1 n41_Ant 4	100M	BPSK	135	0	Left Tilted	0mm	State 1	518598	2592.99	18.20	19.00	1.202	-0.11	0.281	0.338
	FR1 n41_Ant 4	100M	BPSK	270	0	Right Cheek	0mm	State 1	518598	2592.99	18.06	19.00	1.242	0.07	0.812	1.008
	FR1 n41_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 2	518598	2592.99	15.96	16.00	1.009	0	0.554	0.559
	FR1 n41_Ant 4	100M	BPSK	1	1	Right Tilted	0mm	State 2	518598	2592.99	15.96	16.00	1.009	-0.18	0.361	0.364
	FR1 n41_Ant 4	100M	BPSK	1	1	Left Cheek	0mm	State 2	518598	2592.99	15.96	16.00	1.009	0.01	0.168	0.170
	FR1 n41_Ant 4	100M	BPSK	1	1	Left Tilted	0mm	State 2	518598	2592.99	15.96	16.00	1.009	-0.03	0.183	0.185
	FR1 n41_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 2	518598	2592.99	15.88	16.00	1.028	-0.06	0.530	0.545
	FR1 n41_Ant 4	100M	BPSK	135	0	Right Tilted	0mm	State 2	518598	2592.99	15.88	16.00	1.028	-0.19	0.350	0.360
	FR1 n41_Ant 4	100M	BPSK	135	0	Left Cheek	0mm	State 2	518598	2592.99	15.88	16.00	1.028	0.15	0.169	0.174
	FR1 n41_Ant 4	100M	BPSK	135	0	Left Tilted	0mm	State 2	518598	2592.99	15.88	16.00	1.028	0.16	0.173	0.178



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Ant 2	100M	BPSK	1	137	Right Cheek	0mm	State 1/2	656000	3840	21.21	22.00	1.199	0.14	0.022	0.026
	FR1 n77_Ant 2	100M	BPSK	1	137	Right Tilted	0mm	State 1/2	656000	3840	21.21	22.00	1.199	0.02	0.011	0.013
	FR1 n77_Ant 2	100M	BPSK	1	137	Left Cheek	0mm	State 1/2	656000	3840	21.21	22.00	1.199	-0.11	0.009	0.011
	FR1 n77_Ant 2	100M	BPSK	1	137	Left Tilted	0mm	State 1/2	656000	3840	21.21	22.00	1.199	-0.04	0.014	0.017
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Cheek	0mm	State 1/2	656000	3840	21.16	22.00	1.213	0.15	0.020	0.024
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Tilted	0mm	State 1/2	656000	3840	21.16	22.00	1.213	-0.03	0.009	0.011
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Cheek	0mm	State 1/2	656000	3840	21.16	22.00	1.213	0.16	0.010	0.012
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Tilted	0mm	State 1/2	656000	3840	21.16	22.00	1.213	0.15	0.012	0.015
	FR1 n77_Ant 2	100M	BPSK	1	137	Right Cheek	0mm	State 1/2	633332	3499.98	20.53	22.00	1.403	-0.04	0.051	0.072
	FR1 n77_Ant 2	100M	BPSK	1	137	Right Tilted	0mm	State 1/2	633332	3499.98	20.53	22.00	1.403	0.11	0.027	0.038
	FR1 n77_Ant 2	100M	BPSK	1	137	Left Cheek	0mm	State 1/2	633332	3499.98	20.53	22.00	1.403	-0.16	0.022	0.031
	FR1 n77_Ant 2	100M	BPSK	1	137	Left Tilted	0mm	State 1/2	633332	3499.98	20.53	22.00	1.403	0.07	0.035	0.049
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Cheek	0mm	State 1/2	633332	3499.98	20.38	22.00	1.452	0.11	0.049	0.071
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Tilted	0mm	State 1/2	633332	3499.98	20.38	22.00	1.452	0.12	0.023	0.033
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Cheek	0mm	State 1/2	633332	3499.98	20.38	22.00	1.452	0.03	0.019	0.028
	FR1 n77_Ant 2	100M	BPSK	135	69	Left Tilted	0mm	State 1/2	633332	3499.98	20.38	22.00	1.452	0	0.032	0.046
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 1	656000	3840	18.43	19.00	1.140	0.08	0.757	0.863
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Tilted	0mm	State 1	656000	3840	18.43	19.00	1.140	-0.14	0.518	0.591
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Cheek	0mm	State 1	656000	3840	18.43	19.00	1.140	-0.17	0.260	0.296
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Tilted	0mm	State 1	656000	3840	18.43	19.00	1.140	0.03	0.230	0.262
25	FR1 n77_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 1	656000	3840	18.31	19.00	1.172	0.16	0.997	1.169
	FR1 n77_Ant 4	100M	BPSK	135	0	Right Tilted	0mm	State 1	656000	3840	18.31	19.00	1.172	-0.1	0.646	0.757
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Cheek	0mm	State 1	656000	3840	18.31	19.00	1.172	-0.18	0.286	0.335
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Tilted	0mm	State 1	656000	3840	18.31	19.00	1.172	-0.07	0.256	0.300
	FR1 n77_Ant 4	100M	BPSK	270	0	Right Cheek	0mm	State 1	656000	3840	18.18	19.00	1.208	0.01	0.712	0.860
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 1	633332	3499.98	18.64	19.00	1.086	0	0.662	0.719
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Tilted	0mm	State 1	633332	3499.98	18.64	19.00	1.086	-0.19	0.369	0.401
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Cheek	0mm	State 1	633332	3499.98	18.64	19.00	1.086	0.13	0.136	0.148
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Tilted	0mm	State 1	633332	3499.98	18.64	19.00	1.086	0.07	0.132	0.143
	FR1 n77_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 1	633332	3499.98	18.50	19.00	1.122	-0.11	0.777	0.872
	FR1 n77_Ant 4	100M	BPSK	135	0	Right Tilted	0mm	State 1	633332	3499.98	18.50	19.00	1.122	-0.13	0.390	0.438
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Cheek	0mm	State 1	633332	3499.98	18.50	19.00	1.122	0.01	0.191	0.214
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Tilted	0mm	State 1	633332	3499.98	18.50	19.00	1.122	0.05	0.155	0.174
	FR1 n77_Ant 4	100M	BPSK	270	0	Right Cheek	0mm	State 1	633332	3499.98	18.31	19.00	1.172	0.01	0.589	0.690
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 2	656000	3840	16.96	17.00	1.009	-0.01	0.273	0.276
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Tilted	0mm	State 2	656000	3840	16.96	17.00	1.009	-0.15	0.174	0.176
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Cheek	0mm	State 2	656000	3840	16.96	17.00	1.009	0.15	0.061	0.062
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Tilted	0mm	State 2	656000	3840	16.96	17.00	1.009	0.12	0.060	0.061
	FR1 n77_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 2	656000	3840	16.91	17.00	1.021	0.07	0.278	0.284
	FR1 n77_Ant 4	100M	BPSK	135	0	Right Tilted	0mm	State 2	656000	3840	16.91	17.00	1.021	-0.1	0.180	0.184
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Cheek	0mm	State 2	656000	3840	16.91	17.00	1.021	0.15	0.066	0.067
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Tilted	0mm	State 2	656000	3840	16.91	17.00	1.021	-0.12	0.066	0.067
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 2	633334	3500.01	16.98	17.00	1.005	-0.17	0.172	0.173
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Tilted	0mm	State 2	633334	3500.01	16.98	17.00	1.005	-0.19	0.106	0.106
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Cheek	0mm	State 2	633334	3500.01	16.98	17.00	1.005	0.15	0.054	0.054
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Tilted	0mm	State 2	633334	3500.01	16.98	17.00	1.005	0.06	0.046	0.046
	FR1 n77_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 2	633334	3500.01	16.91	17.00	1.021	-0.18	0.265	0.271
	FR1 n77_Ant 4	100M	BPSK	135	0	Right Tilted	0mm	State 2	633334	3500.01	16.91	17.00	1.021	-0.11	0.133	0.136
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Cheek	0mm	State 2	633334	3500.01	16.91	17.00	1.021	-0.08	0.052	0.053
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Tilted	0mm	State 2	633334	3500.01	16.91	17.00	1.021	-0.18	0.047	0.048



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	State 1	656000	3840	18.93	19.00	1.016	-0.17	1.010	1.026
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	State 1	656000	3840	18.93	19.00	1.016	0.05	0.199	0.202
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	State 1	656000	3840	18.93	19.00	1.016	-0.04	0.808	0.821
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	State 1	656000	3840	18.93	19.00	1.016	0.12	0.095	0.097
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	State 1	656000	3840	18.68	19.00	1.076	0.11	0.752	0.810
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	State 1	656000	3840	18.68	19.00	1.076	0.03	0.181	0.195
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	State 1	656000	3840	18.68	19.00	1.076	-0.07	0.725	0.780
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	State 1	656000	3840	18.68	19.00	1.076	0.01	0.090	0.097
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	State 1	633332	3499.98	18.59	19.00	1.099	0.12	0.808	0.888
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	State 1	633332	3499.98	18.59	19.00	1.099	0.12	0.147	0.162
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	State 1	633332	3499.98	18.59	19.00	1.099	0.17	0.426	0.468
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	State 1	633332	3499.98	18.59	19.00	1.099	-0.17	0.078	0.086
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	State 1	633332	3499.98	18.56	19.00	1.107	0.04	0.796	0.881
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	State 1	633332	3499.98	18.56	19.00	1.107	0.18	0.158	0.175
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	State 1	633332	3499.98	18.56	19.00	1.107	0.01	0.504	0.558
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	State 1	633332	3499.98	18.56	19.00	1.107	0.09	0.088	0.097
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	State 2	656000	3840	12.35	13.00	1.161	0.15	0.100	0.116
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	State 2	656000	3840	12.35	13.00	1.161	-0.06	0.019	0.022
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	State 2	656000	3840	12.35	13.00	1.161	-0.07	0.073	0.085
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	State 2	656000	3840	12.35	13.00	1.161	0.05	0.013	0.015
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	State 2	656000	3840	12.34	13.00	1.164	0.06	0.095	0.111
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	State 2	656000	3840	12.34	13.00	1.164	-0.15	0.019	0.022
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	State 2	656000	3840	12.34	13.00	1.164	0.12	0.061	0.071
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	State 2	656000	3840	12.34	13.00	1.164	0.06	0.011	0.013
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	State 2	633334	3500.01	12.59	13.00	1.099	-0.14	0.087	0.096
	FR1 n77_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	State 2	633334	3500.01	12.59	13.00	1.099	-0.07	0.013	0.014
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	State 2	633334	3500.01	12.59	13.00	1.099	0.07	0.047	0.052
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	State 2	633334	3500.01	12.59	13.00	1.099	-0.19	0.010	0.011
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	State 2	633334	3500.01	12.58	13.00	1.102	0.16	0.113	0.124
	FR1 n77_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	State 2	633334	3500.01	12.58	13.00	1.102	0.07	0.015	0.017
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	State 2	633334	3500.01	12.58	13.00	1.102	0.13	0.050	0.055
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	State 2	633334	3500.01	12.58	13.00	1.102	0.05	0.007	0.008
	FR1 n77_Ant 6	100M	BPSK	1	137	Right Cheek	0mm	State 1/2	656000	3840	20.15	22.00	1.531	0.13	0.012	0.018
	FR1 n77_Ant 6	100M	BPSK	1	137	Right Tilted	0mm	State 1/2	656000	3840	20.15	22.00	1.531	-0.03	0.009	0.014
	FR1 n77_Ant 6	100M	BPSK	1	137	Left Cheek	0mm	State 1/2	656000	3840	20.15	22.00	1.531	0.15	0.047	0.072
	FR1 n77_Ant 6	100M	BPSK	1	137	Left Tilted	0mm	State 1/2	656000	3840	20.15	22.00	1.531	-0.06	0.040	0.061
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Cheek	0mm	State 1/2	656000	3840	20.04	22.00	1.570	-0.03	0.019	0.030
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Tilted	0mm	State 1/2	656000	3840	20.04	22.00	1.570	-0.12	0.015	0.024
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	State 1/2	656000	3840	20.04	22.00	1.570	-0.16	0.060	0.094
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Tilted	0mm	State 1/2	656000	3840	20.04	22.00	1.570	-0.02	0.046	0.072
	FR1 n77_Ant 6	100M	BPSK	1	137	Right Cheek	0mm	State 1/2	633332	3499.98	21.20	22.00	1.202	-0.02	0.007	0.008
	FR1 n77_Ant 6	100M	BPSK	1	137	Right Tilted	0mm	State 1/2	633332	3499.98	21.20	22.00	1.202	-0.06	0.004	0.005
	FR1 n77_Ant 6	100M	BPSK	1	137	Left Cheek	0mm	State 1/2	633332	3499.98	21.20	22.00	1.202	-0.13	0.032	0.038
	FR1 n77_Ant 6	100M	BPSK	1	137	Left Tilted	0mm	State 1/2	633332	3499.98	21.20	22.00	1.202	-0.15	0.020	0.024
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Cheek	0mm	State 1/2	633332	3499.98	21.08	22.00	1.236	-0.08	0.009	0.011
	FR1 n77_Ant 6	100M	BPSK	135	69	Right Tilted	0mm	State 1/2	633332	3499.98	21.08	22.00	1.236	-0.19	0.007	0.009
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	State 1/2	633332	3499.98	21.08	22.00	1.236	-0.12	0.026	0.032
	FR1 n77_Ant 6	100M	BPSK	135	69	Left Tilted	0mm	State 1/2	633332	3499.98	21.08	22.00	1.236	0.15	0.015	0.019



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n78_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 2	650000	3750	13.41	14.00	1.146	0.01	0.323	0.370
	FR1 n78_Ant 4	100M	BPSK	1	1	Right Tilted	0mm	State 2	650000	3750	13.41	14.00	1.146	-0.13	0.206	0.236
	FR1 n78_Ant 4	100M	BPSK	1	1	Left Cheek	0mm	State 2	650000	3750	13.41	14.00	1.146	-0.09	0.111	0.127
	FR1 n78_Ant 4	100M	BPSK	1	1	Left Tilted	0mm	State 2	650000	3750	13.41	14.00	1.146	0.14	0.072	0.082
	FR1 n78_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 2	650000	3750	13.14	14.00	1.219	-0.01	0.328	0.400
	FR1 n78_Ant 4	100M	BPSK	135	0	Right Tilted	0mm	State 2	650000	3750	13.14	14.00	1.219	0.18	0.213	0.260
	FR1 n78_Ant 4	100M	BPSK	135	0	Left Cheek	0mm	State 2	650000	3750	13.14	14.00	1.219	0.11	0.121	0.147
	FR1 n78_Ant 4	100M	BPSK	135	0	Left Tilted	0mm	State 2	650000	3750	13.14	14.00	1.219	-0.19	0.078	0.095
	FR1 n78_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 2	633332	3499.98	13.98	14.00	1.005	0	0.239	0.240
	FR1 n78_Ant 4	100M	BPSK	1	1	Right Tilted	0mm	State 2	633332	3499.98	13.98	14.00	1.005	-0.18	0.133	0.134
	FR1 n78_Ant 4	100M	BPSK	1	1	Left Cheek	0mm	State 2	633332	3499.98	13.98	14.00	1.005	-0.11	0.057	0.057
	FR1 n78_Ant 4	100M	BPSK	1	1	Left Tilted	0mm	State 2	633332	3499.98	13.98	14.00	1.005	-0.03	0.043	0.043
	FR1 n78_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 2	633332	3499.98	13.71	14.00	1.069	-0.06	0.280	0.299
	FR1 n78_Ant 4	100M	BPSK	135	0	Right Tilted	0mm	State 2	633332	3499.98	13.71	14.00	1.069	-0.19	0.141	0.151
	FR1 n78_Ant 4	100M	BPSK	135	0	Left Cheek	0mm	State 2	633332	3499.98	13.71	14.00	1.069	0.18	0.073	0.078
	FR1 n78_Ant 4	100M	BPSK	135	0	Left Tilted	0mm	State 2	633332	3499.98	13.71	14.00	1.069	-0.11	0.056	0.060
	FR1 n78_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	State 2	650000	3750	12.32	13.00	1.169	0.18	0.288	0.337
	FR1 n78_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	State 2	650000	3750	12.32	13.00	1.169	-0.02	0.078	0.091
	FR1 n78_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	State 2	650000	3750	12.32	13.00	1.169	0.18	0.296	0.346
	FR1 n78_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	State 2	650000	3750	12.32	13.00	1.169	0.01	0.045	0.053
26	FR1 n78_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	State 2	650000	3750	12.16	13.00	1.213	-0.1	0.410	0.497
	FR1 n78_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	State 2	650000	3750	12.16	13.00	1.213	0.06	0.081	0.098
	FR1 n78_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	State 2	650000	3750	12.16	13.00	1.213	0.02	0.292	0.354
	FR1 n78_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	State 2	650000	3750	12.16	13.00	1.213	-0.03	0.059	0.072
	FR1 n78_Ant 5	100M	BPSK	1	1	Right Cheek	0mm	State 2	633332	3499.98	12.65	13.00	1.084	-0.04	0.254	0.275
	FR1 n78_Ant 5	100M	BPSK	1	1	Right Tilted	0mm	State 2	633332	3499.98	12.65	13.00	1.084	0.08	0.053	0.057
	FR1 n78_Ant 5	100M	BPSK	1	1	Left Cheek	0mm	State 2	633332	3499.98	12.65	13.00	1.084	-0.19	0.184	0.199
	FR1 n78_Ant 5	100M	BPSK	1	1	Left Tilted	0mm	State 2	633332	3499.98	12.65	13.00	1.084	-0.17	0.030	0.033
	FR1 n78_Ant 5	100M	BPSK	135	0	Right Cheek	0mm	State 2	633332	3499.98	12.14	13.00	1.219	-0.05	0.349	0.425
	FR1 n78_Ant 5	100M	BPSK	135	0	Right Tilted	0mm	State 2	633332	3499.98	12.14	13.00	1.219	-0.04	0.066	0.080
	FR1 n78_Ant 5	100M	BPSK	135	0	Left Cheek	0mm	State 2	633332	3499.98	12.14	13.00	1.219	0.04	0.168	0.205
	FR1 n78_Ant 5	100M	BPSK	135	0	Left Tilted	0mm	State 2	633332	3499.98	12.14	13.00	1.219	-0.09	0.029	0.035



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7	State 1	1	2412	16.38	16.50	1.028	98.20	1.018	0.13	0.609	0.637
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7	State 1	6	2437	16.09	16.50	1.099	98.20	1.018	-0.02	0.546	0.611
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7	State 1	11	2462	16.15	16.50	1.084	98.20	1.018	0.03	0.575	0.634
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7	State 1	1	2412	16.38	16.50	1.028	98.20	1.018	0.14	0.158	0.165
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7	State 1	1	2412	16.38	16.50	1.028	98.20	1.018	0.02	0.231	0.242
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7	State 1	1	2412	16.38	16.50	1.028	98.20	1.018	-0.14	0.093	0.097
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7	State 2	1	2412	14.37	15	1.156	98.20	1.018	-0.04	0.377	0.444
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7	State 2	6	2437	14.11	15	1.227	98.20	1.018	-0.08	0.379	0.474
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7	State 2	11	2462	14.07	15	1.239	98.20	1.018	0.09	0.413	0.521
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7	State 2	1	2412	14.37	15	1.156	98.20	1.018	0.18	0.109	0.128
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7	State 2	1	2412	14.37	15	1.156	98.20	1.018	0	0.126	0.148
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7	State 2	1	2412	14.37	15	1.156	98.20	1.018	-0.18	0.061	0.072
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 8	State 1	1	2412	16.16	16.50	1.081	98.20	1.018	-0.15	0.335	0.369
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	State 1	1	2412	16.16	16.50	1.081	98.20	1.018	-0.17	0.418	0.460
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	State 1	6	2437	16.02	16.50	1.117	98.20	1.018	0.18	0.416	0.473
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	State 1	11	2462	16.02	16.50	1.117	98.20	1.018	0.08	0.307	0.349
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8	State 1	1	2412	16.16	16.50	1.081	98.20	1.018	0.1	0.286	0.315
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8	State 1	1	2412	16.16	16.50	1.081	98.20	1.018	0.08	0.365	0.402
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 8	State 2	1	2412	14.28	15	1.180	98.20	1.018	0.18	0.149	0.179
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	State 2	1	2412	14.28	15	1.180	98.20	1.018	0.05	0.232	0.279
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	State 2	6	2437	14.12	15	1.225	98.20	1.018	-0.03	0.243	0.303
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8	State 2	11	2462	14.23	15	1.194	98.20	1.018	0.13	0.226	0.275
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8	State 2	1	2412	14.28	15	1.180	98.20	1.018	-0.12	0.140	0.168
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8	State 2	1	2412	14.28	15	1.180	98.20	1.018	0.05	0.193	0.232
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7+8(7)	State 1	1	2412	16.43	16.50	1.016	98.20	1.018	0.02	0.643	0.665
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7+8(8)	State 1	1	2412	15.68	16.50	1.208	98.20	1.018	0.02	0.392	0.482
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(7)	State 1	1	2412	16.43	16.50	1.016	98.20	1.018	0.06	0.120	0.124
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(8)	State 1	1	2412	15.68	16.50	1.208	98.20	1.018	0.06	0.589	0.724
27	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(7)	State 1	6	2437	16.12	16.50	1.091	98.20	1.018	0.18	0.153	0.170
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(8)	State 1	6	2437	15.54	16.50	1.247	98.20	1.018	0.18	0.598	0.759
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(7)	State 1	11	2462	16.15	16.50	1.084	98.20	1.018	-0.01	0.101	0.111
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(8)	State 1	11	2462	15.51	16.50	1.256	98.20	1.018	-0.01	0.593	0.758
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7+8(7)	State 1	1	2412	16.43	16.50	1.016	98.20	1.018	-0.15	0.219	0.227
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7+8(8)	State 1	1	2412	15.68	16.50	1.208	98.20	1.018	-0.15	0.357	0.439
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7+8(7)	State 1	1	2412	16.43	16.50	1.016	98.20	1.018	0.04	0.063	0.065
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7+8(8)	State 1	1	2412	15.68	16.50	1.208	98.20	1.018	0.04	0.500	0.615
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7+8(7)	State 2	1	2412	14.89	15	1.026	98.20	1.018	0.12	0.401	0.419
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 7+8(8)	State 2	1	2412	14.3	15	1.175	98.20	1.018	0.12	0.202	0.242
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(7)	State 2	1	2412	14.89	15	1.026	98.20	1.018	-0.01	0.088	0.092
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(8)	State 2	1	2412	14.3	15	1.175	98.20	1.018	-0.01	0.358	0.428
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(7)	State 2	6	2437	14.71	15	1.069	98.20	1.018	0.15	0.077	0.084
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(8)	State 2	6	2437	14.12	15	1.225	98.20	1.018	0.15	0.390	0.486
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(7)	State 2	11	2462	14.73	15	1.064	98.20	1.018	0.16	0.076	0.082
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 7+8(8)	State 2	11	2462	14.26	15	1.186	98.20	1.018	0.16	0.402	0.485
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7+8(7)	State 2	1	2412	14.89	15	1.026	98.20	1.018	-0.01	0.173	0.181
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 7+8(8)	State 2	1	2412	14.3	15	1.175	98.20	1.018	-0.01	0.245	0.293
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7+8(7)	State 2	1	2412	14.89	15	1.026	98.20	1.018	-0.18	0.046	0.048
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 7+8(8)	State 2	1	2412	14.3	15	1.175	98.20	1.018	-0.18	0.340	0.407



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7	State 1	50	5250	16.00	16.00	1.000	99.2	1.008	0.07	0.711	0.717
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7	State 1	50	5250	16.00	16.00	1.000	99.2	1.008	-0.08	0.085	0.086
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7	State 1	50	5250	16.00	16.00	1.000	99.2	1.008	-0.03	0.158	0.159
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7	State 1	50	5250	16.00	16.00	1.000	99.2	1.008	0.07	0.058	0.058
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7	State 2	50	5250	12.5	12.5	1.000	99.2	1.008	0.06	0.402	0.405
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7	State 2	50	5250	12.5	12.5	1.000	99.2	1.008	0.04	0.049	0.049
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7	State 2	50	5250	12.5	12.5	1.000	99.2	1.008	0.17	0.056	0.056
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7	State 2	50	5250	12.5	12.5	1.000	99.2	1.008	0.01	0.033	0.033
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 8	State 1	50	5250	14.69	16.00	1.352	99.2	1.008	-0.13	0.065	0.089
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 8	State 1	50	5250	14.69	16.00	1.352	99.2	1.008	0.03	0.058	0.079
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 8	State 1	50	5250	14.69	16.00	1.352	99.2	1.008	0.04	0.076	0.104
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8	State 1	50	5250	14.69	16.00	1.352	99.2	1.008	0.11	0.083	0.113
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 8	State 2	50	5250	12.5	12.5	1.000	99.2	1.008	-0.16	0.025	0.025
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 8	State 2	50	5250	12.5	12.5	1.000	99.2	1.008	0.06	0.023	0.023
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 8	State 2	50	5250	12.5	12.5	1.000	99.2	1.008	-0.18	0.029	0.029
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8	State 2	50	5250	12.5	12.5	1.000	99.2	1.008	-0.08	0.038	0.038
28	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(7)	State 1	50	5250	15.43	16.00	1.140	99.2	1.008	0.15	0.659	0.757
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(8)	State 1	50	5250	14.45	16.00	1.429	99.2	1.008	0.15	0.089	0.128
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7+8(7)	State 1	50	5250	15.43	16.00	1.140	99.2	1.008	-0.18	0.070	0.080
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7+8(8)	State 1	50	5250	14.45	16.00	1.429	99.2	1.008	-0.18	0.077	0.111
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7+8(7)	State 1	50	5250	15.43	16.00	1.140	99.2	1.008	0.02	0.184	0.211
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7+8(8)	State 1	50	5250	14.45	16.00	1.429	99.2	1.008	0.02	0.065	0.094
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7+8(7)	State 1	50	5250	15.43	16.00	1.140	99.2	1.008	0.11	0.107	0.123
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7+8(8)	State 1	50	5250	14.45	16.00	1.429	99.2	1.008	0.11	0.100	0.144
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(7)	State 2	50	5250	12.36	12.5	1.033	99.2	1.008	-0.03	0.395	0.411
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(8)	State 2	50	5250	11.9	12.5	1.148	99.2	1.008	-0.03	0.031	0.036
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7+8(7)	State 2	50	5250	12.36	12.5	1.033	99.2	1.008	-0.11	0.054	0.056
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7+8(8)	State 2	50	5250	11.9	12.5	1.148	99.2	1.008	-0.11	0.038	0.044
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7+8(7)	State 2	50	5250	12.36	12.5	1.033	99.2	1.008	-0.01	0.124	0.129
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7+8(8)	State 2	50	5250	11.9	12.5	1.148	99.2	1.008	-0.01	0.026	0.030
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7+8(7)	State 2	50	5250	12.36	12.5	1.033	99.2	1.008	0.05	0.071	0.074
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7+8(8)	State 2	50	5250	11.9	12.5	1.148	99.2	1.008	0.05	0.043	0.050



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	State 1	106	5530	15.86	16.00	1.033	99.20	1.008	0.16	0.759	0.790
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	State 1	106	5530	15.86	16.00	1.033	99.20	1.008	-0.14	0.097	0.101
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	State 1	106	5530	15.86	16.00	1.033	99.20	1.008	-0.15	0.260	0.271
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	State 1	106	5530	15.86	16.00	1.033	99.20	1.008	-0.05	0.064	0.067
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	State 2	106	5530	13.32	13.5	1.042	99.20	1.008	0.07	0.319	0.335
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	State 2	106	5530	13.32	13.5	1.042	99.20	1.008	0.18	0.080	0.084
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	State 2	106	5530	13.32	13.5	1.042	99.20	1.008	0.06	0.099	0.104
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	State 2	106	5530	13.32	13.5	1.042	99.20	1.008	-0.05	0.058	0.061
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8	State 1	106	5530	15.52	16.00	1.117	99.20	1.008	0.07	0.079	0.089
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8	State 1	106	5530	15.52	16.00	1.117	99.20	1.008	-0.15	0.110	0.124
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8	State 1	106	5530	15.52	16.00	1.117	99.20	1.008	0.06	0.161	0.181
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8	State 1	106	5530	15.52	16.00	1.117	99.20	1.008	-0.08	0.164	0.185
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8	State 2	106	5530	13.22	13.5	1.067	99.20	1.008	0.14	0.036	0.039
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8	State 2	106	5530	13.22	13.5	1.067	99.20	1.008	-0.02	0.039	0.042
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8	State 2	106	5530	13.22	13.5	1.067	99.20	1.008	0.08	0.056	0.060
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8	State 2	106	5530	13.22	13.5	1.067	99.20	1.008	0.02	0.086	0.092
29	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7+8(7)	State 1	106	5530	15.85	16.00	1.035	99.20	1.008	0.02	0.759	0.792
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7+8(8)	State 1	106	5530	14.00	16.00	1.585	99.20	1.008	0.02	0.087	0.139
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7+8(7)	State 1	106	5530	15.85	16.00	1.035	99.20	1.008	0.05	0.092	0.096
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7+8(8)	State 1	106	5530	14.00	16.00	1.585	99.20	1.008	0.05	0.142	0.227
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7+8(7)	State 1	106	5530	15.85	16.00	1.035	99.20	1.008	-0.15	0.234	0.244
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7+8(8)	State 1	106	5530	14.00	16.00	1.585	99.20	1.008	-0.15	0.128	0.204
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7+8(7)	State 1	106	5530	15.85	16.00	1.035	99.20	1.008	-0.07	0.079	0.082
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7+8(8)	State 1	106	5530	14.00	16.00	1.585	99.20	1.008	-0.07	0.190	0.304
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7+8(7)	State 2	106	5530	13.47	13.5	1.007	99.20	1.008	0	0.477	0.484
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7+8(8)	State 2	106	5530	11.5	13.5	1.585	99.20	1.008	0	0.032	0.051
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7+8(7)	State 2	106	5530	13.47	13.5	1.007	99.20	1.008	-0.02	0.070	0.071
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7+8(8)	State 2	106	5530	11.5	13.5	1.585	99.20	1.008	-0.02	0.063	0.101
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7+8(7)	State 2	106	5530	13.47	13.5	1.007	99.20	1.008	0.19	0.164	0.166
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7+8(8)	State 2	106	5530	11.5	13.5	1.585	99.20	1.008	0.19	0.053	0.085
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7+8(7)	State 2	106	5530	13.47	13.5	1.007	99.20	1.008	0.14	0.048	0.049
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7+8(8)	State 2	106	5530	11.5	13.5	1.585	99.20	1.008	0.14	0.078	0.125



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	State 1	155	5775	15.18	15.50	1.076	99.6	1.004	-0.07	0.715	0.773
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	State 1	155	5775	15.18	15.50	1.076	99.6	1.004	-0.13	0.158	0.171
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	State 1	155	5775	15.18	15.50	1.076	99.6	1.004	-0.05	0.188	0.203
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	State 1	155	5775	15.18	15.50	1.076	99.6	1.004	-0.19	0.085	0.092
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7	State 2	155	5775	13.14	13.5	1.086	99.6	1.004	0.11	0.256	0.279
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7	State 2	155	5775	13.14	13.5	1.086	99.6	1.004	-0.17	0.042	0.046
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7	State 2	155	5775	13.14	13.5	1.086	99.6	1.004	-0.05	0.064	0.070
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7	State 2	155	5775	13.14	13.5	1.086	99.6	1.004	0.08	0.054	0.059
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8	State 1	155	5775	15.19	15.50	1.074	99.6	1.004	0.04	0.200	0.216
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8	State 1	155	5775	15.19	15.50	1.074	99.6	1.004	0.12	0.222	0.239
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8	State 1	155	5775	15.19	15.50	1.074	99.6	1.004	-0.12	0.239	0.258
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8	State 1	155	5775	15.19	15.50	1.074	99.6	1.004	-0.03	0.283	0.305
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8	State 2	155	5775	13.22	13.5	1.067	99.6	1.004	0.04	0.085	0.091
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8	State 2	155	5775	13.22	13.5	1.067	99.6	1.004	-0.07	0.087	0.093
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8	State 2	155	5775	13.22	13.5	1.067	99.6	1.004	-0.09	0.122	0.131
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8	State 2	155	5775	13.22	13.5	1.067	99.6	1.004	-0.02	0.131	0.140
30	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7+8(7)	State 1	155	5775	15.01	15.50	1.119	99.6	1.004	0.1	0.707	0.795
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7+8(8)	State 1	155	5775	14.08	15.50	1.387	99.6	1.004	0.1	0.163	0.227
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7+8(7)	State 1	155	5775	15.01	15.50	1.119	99.6	1.004	-0.03	0.072	0.081
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7+8(8)	State 1	155	5775	14.08	15.50	1.387	99.6	1.004	-0.03	0.184	0.256
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7+8(7)	State 1	155	5775	15.01	15.50	1.119	99.6	1.004	0	0.209	0.235
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7+8(8)	State 1	155	5775	14.08	15.50	1.387	99.6	1.004	0	0.145	0.202
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7+8(7)	State 1	155	5775	15.01	15.50	1.119	99.6	1.004	0.09	0.080	0.090
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7+8(8)	State 1	155	5775	14.08	15.50	1.387	99.6	1.004	0.09	0.233	0.324
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7+8(7)	State 2	155	5775	13.35	13.5	1.035	99.6	1.004	0.05	0.420	0.436
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 7+8(8)	State 2	155	5775	12.18	13.5	1.355	99.6	1.004	0.05	0.094	0.128
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7+8(7)	State 2	155	5775	13.35	13.5	1.035	99.6	1.004	-0.14	0.054	0.056
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 7+8(8)	State 2	155	5775	12.18	13.5	1.355	99.6	1.004	-0.14	0.105	0.143
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7+8(7)	State 2	155	5775	13.35	13.5	1.035	99.6	1.004	-0.03	0.185	0.192
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 7+8(8)	State 2	155	5775	12.18	13.5	1.355	99.6	1.004	-0.03	0.099	0.135
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7+8(7)	State 2	155	5775	13.35	13.5	1.035	99.6	1.004	-0.06	0.071	0.074
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 7+8(8)	State 2	155	5775	12.18	13.5	1.355	99.6	1.004	-0.06	0.158	0.215



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Measured APD (W/m ²)
31	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7	15	6025	12.77	13.00	1.054	100	1.000	0.19	0.296	0.312	1.780
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7	47	6185	12.75	13.00	1.059	100	1.000	0.03	0.240	0.254	1.380
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7	111	6505	12.51	13.00	1.119	100	1.000	-0.16	0.112	0.125	0.545
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7	175	6825	12.54	13.00	1.112	100	1.000	0.14	0.083	0.092	0.459
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7	207	6985	12.38	13.00	1.153	100	1.000	-0.07	0.102	0.118	0.574
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7	15	6025	12.77	13.00	1.054	100	1.000	-0.06	0.025	0.026	0.144
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7	15	6025	12.77	13.00	1.054	100	1.000	-0.09	0.138	0.146	0.947
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7	15	6025	12.77	13.00	1.054	100	1.000	-0.04	0.018	0.019	0.086
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 8	207	6985	12.76	13.00	1.057	100	1.000	-0.15	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 8	207	6985	12.76	13.00	1.057	100	1.000	-0.02	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 8	207	6985	12.76	13.00	1.057	100	1.000	-0.18	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8	207	6985	12.76	13.00	1.057	100	1.000	0.01	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8	15	6025	12.31	13.00	1.172	100	1.000	-0.11	0.032	0.038	0.241
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8	47	6185	12.52	13.00	1.117	100	1.000	-0.14	0.009	0.010	0.060
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8	111	6505	12.69	13.00	1.074	100	1.000	0.18	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 8	175	6825	12.70	13.00	1.072	100	1.000	0.02	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(7)	15	6025	12.74	13.00	1.062	100	1.000	-0.17	0.202	0.214	1.280
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(8)	15	6025	11.62	13.00	1.374	100	1.000	-0.17	0.018	0.025	0.112
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(7)	47	6185	12.82	13.00	1.042	100	1.000	-0.04	0.216	0.225	1.280
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(8)	47	6185	11.13	13.00	1.538	100	1.000	-0.04	0.001	0.002	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(7)	111	6505	12.15	13.00	1.216	100	1.000	-0.12	0.077	0.094	0.540
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(8)	111	6505	11.62	13.00	1.374	100	1.000	-0.12	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(7)	175	6825	12.74	13.00	1.062	100	1.000	-0.14	0.097	0.103	0.569
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(8)	175	6825	11.50	13.00	1.413	100	1.000	-0.14	0.001	0.001	0.028
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(7)	207	6985	12.43	13.00	1.140	100	1.000	0.06	0.123	0.140	0.683
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 7+8(8)	207	6985	11.63	13.00	1.371	100	1.000	0.06	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7+8(7)	15	6025	12.74	13.00	1.062	100	1.000	0.08	0.001	0.001	<0.001
	WLAN6GHZ	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 7+8(8)	15	6025	11.62	13.00	1.374	100	1.000	0.08	0.035	0.048	0.308
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7+8(7)	15	6025	12.74	13.00	1.062	100	1.000	0.07	0.075	0.080	0.398
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 7+8(8)	15	6025	11.62	13.00	1.374	100	1.000	0.07	0.024	0.033	0.168
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7+8(7)	15	6025	12.74	13.00	1.062	100	1.000	0.01	0.038	0.040	0.171
	WLAN6GHZ	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 7+8(8)	15	6025	11.62	13.00	1.374	100	1.000	0.01	0.001	0.001	<0.001

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
32	Bluetooth	1Mbps	Right Cheek	0mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	0.08	0.181	0.230
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 7	0	2402	15.59	16.00	1.099	76.83	1.084	0.06	0.110	0.131
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 7	78	2480	16.16	17.00	1.213	76.83	1.084	0.14	0.171	0.225
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	0.14	0.001	0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	-0.17	0.076	0.097
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	-0.13	0.001	0.001
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	0.1	0.126	0.147
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	0.02	0.141	0.165
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	0.09	0.114	0.133
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	-0.08	0.150	0.175
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 8	0	2402	14.63	16.00	1.372	76.83	1.084	0.13	0.105	0.156
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 8	78	2480	15.24	17.00	1.501	76.83	1.084	0.03	0.097	0.158



14.2 Hotspot SAR

<GSM SAR>

Table with 14 columns: Plot No., Band, Mode, Test Position, Gap (mm), Output Power State, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Rows include GSM850 and GSM1900 bands across various test positions.

<WCDMA SAR>

Table with 14 columns: Plot No., Band, Mode, Test Position, Gap (mm), Output Power State, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Rows include WCDMA II and WCDMA IV bands across various test positions.



FCC SAR TEST REPORT

Report No. : FA210409

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_Ant 2	20M	QPSK	1	49	Front	10mm	State 3	19100	1900	22.77	24	1.327	0.19	0.240	0.319
	LTE Band 2_Ant 2	20M	QPSK	1	49	Back	10mm	State 3	19100	1900	22.77	24	1.327	0.13	0.222	0.295
	LTE Band 2_Ant 2	20M	QPSK	1	49	Right Side	10mm	State 3	19100	1900	22.77	24	1.327	-0.16	0.150	0.199
38	LTE Band 2_Ant 2	20M	QPSK	1	49	Bottom Side	10mm	State 3	19100	1900	22.77	24	1.327	0.02	0.621	0.824
	LTE Band 2_Ant 2	20M	QPSK	1	49	Bottom Side	10mm	State 3	18700	1860	22.75	24.00	1.334	-0.17	0.443	0.591
	LTE Band 2_Ant 2	20M	QPSK	1	49	Bottom Side	10mm	State 3	18900	1880	22.76	24.00	1.330	-0.09	0.431	0.573
	LTE Band 2_Ant 2	20M	QPSK	50	0	Front	10mm	State 3	19100	1900	21.88	23	1.294	0.1	0.193	0.250
	LTE Band 2_Ant 2	20M	QPSK	50	0	Back	10mm	State 3	19100	1900	21.88	23	1.294	-0.06	0.181	0.234
	LTE Band 2_Ant 2	20M	QPSK	50	0	Right Side	10mm	State 3	19100	1900	21.88	23	1.294	-0.01	0.114	0.148
	LTE Band 2_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	State 3	19100	1900	21.88	23	1.294	0.19	0.362	0.468
	LTE Band 2_Ant 2	20M	QPSK	100	0	Bottom Side	10mm	State 3	19100	1900	21.83	23	1.309	-0.15	0.362	0.474
	LTE Band 7_Ant 1	20M	QPSK	1	49	Front	10mm	State 3	21350	2560	23.65	24.50	1.216	0.04	0.048	0.058
	LTE Band 7_Ant 1	20M	QPSK	1	49	Back	10mm	State 3	21350	2560	23.65	24.50	1.216	-0.14	0.062	0.075
	LTE Band 7_Ant 1	20M	QPSK	1	49	Left Side	10mm	State 3	21350	2560	23.65	24.50	1.216	0.1	0.125	0.152
	LTE Band 7_Ant 1	20M	QPSK	1	49	Bottom Side	10mm	State 3	21350	2560	23.65	24.50	1.216	-0.09	0.054	0.066
	LTE Band 7_Ant 1	20M	QPSK	50	0	Front	10mm	State 3	21350	2560	22.71	23.50	1.199	0.14	0.039	0.047
	LTE Band 7_Ant 1	20M	QPSK	50	0	Back	10mm	State 3	21350	2560	22.71	23.50	1.199	0.19	0.050	0.060
	LTE Band 7_Ant 1	20M	QPSK	50	0	Left Side	10mm	State 3	21350	2560	22.71	23.50	1.199	0.06	0.078	0.094
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	10mm	State 3	21350	2560	22.71	23.50	1.199	0.01	0.043	0.052
	LTE Band 7_Ant 2	20M	QPSK	1	49	Front	10mm	State 3	21100	2535	23.71	24.50	1.199	-0.19	0.420	0.504
	LTE Band 7_Ant 2	20M	QPSK	1	49	Back	10mm	State 3	21100	2535	23.71	24.50	1.199	-0.12	0.286	0.343
	LTE Band 7_Ant 2	20M	QPSK	1	49	Right Side	10mm	State 3	21100	2535	23.71	24.50	1.199	0.14	0.160	0.192
39	LTE Band 7_Ant 2	20M	QPSK	1	49	Bottom Side	10mm	State 3	21100	2535	23.71	24.50	1.199	-0.03	0.627	0.752
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	10mm	State 3	21100	2535	22.64	23.50	1.219	-0.04	0.370	0.451
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	10mm	State 3	21100	2535	22.64	23.50	1.219	-0.14	0.248	0.302
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Side	10mm	State 3	21100	2535	22.64	23.50	1.219	-0.13	0.096	0.117
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	State 3	21100	2535	22.64	23.50	1.219	0.08	0.480	0.585
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	State 3	21100	2535	23.00	24.50	1.413	0.03	0.466	0.658
	LTE Band 7_Ant 4	20M	QPSK	1	49	Front	10mm	State 3	20850	2510	21.70	22.00	1.072	-0.17	0.200	0.214
	LTE Band 7_Ant 4	20M	QPSK	1	49	Back	10mm	State 3	20850	2510	21.70	22.00	1.072	-0.17	0.123	0.132
	LTE Band 7_Ant 4	20M	QPSK	1	49	Left Side	10mm	State 3	20850	2510	21.70	22.00	1.072	-0.04	0.487	0.522
	LTE Band 7_Ant 4	20M	QPSK	1	49	Top Side	10mm	State 3	20850	2510	21.70	22.00	1.072	0.1	0.128	0.137
	LTE Band 7_Ant 4	20M	QPSK	50	0	Front	10mm	State 3	20850	2510	20.37	21.00	1.156	-0.16	0.160	0.185
	LTE Band 7_Ant 4	20M	QPSK	50	0	Back	10mm	State 3	20850	2510	20.37	21.00	1.156	-0.12	0.092	0.106
	LTE Band 7_Ant 4	20M	QPSK	50	0	Left Side	10mm	State 3	20850	2510	20.37	21.00	1.156	-0.06	0.368	0.425
	LTE Band 7_Ant 4	20M	QPSK	50	0	Top Side	10mm	State 3	20850	2510	20.37	21.00	1.156	-0.11	0.097	0.112
	LTE Band 7C_Ant 4	20M	QPSK	1	0	Left Side	10mm	State 3	21100	2535	20.63	22.00	1.371	0.01	0.355	0.487
	LTE Band 12_Ant 1	10M	QPSK	1	25	Front	10mm	State 3	23095	707.5	23.09	24.50	1.384	-0.07	0.080	0.111
	LTE Band 12_Ant 1	10M	QPSK	1	25	Back	10mm	State 3	23095	707.5	23.09	24.50	1.384	-0.12	0.113	0.156
40	LTE Band 12_Ant 1	10M	QPSK	1	25	Left Side	10mm	State 3	23095	707.5	23.09	24.50	1.384	0.1	0.129	0.178
	LTE Band 12_Ant 1	10M	QPSK	1	25	Bottom Side	10mm	State 3	23095	707.5	23.09	24.50	1.384	-0.1	0.038	0.053
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	10mm	State 3	23095	707.5	22.15	23.50	1.365	-0.1	0.069	0.094
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	10mm	State 3	23095	707.5	22.15	23.50	1.365	-0.12	0.091	0.124
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Side	10mm	State 3	23095	707.5	22.15	23.50	1.365	0	0.103	0.141
	LTE Band 12_Ant 1	10M	QPSK	25	0	Bottom Side	10mm	State 3	23095	707.5	22.15	23.50	1.365	-0.05	0.026	0.035
	LTE Band 12_Ant 3	10M	QPSK	1	25	Front	10mm	State 3	23095	707.5	22.65	24.50	1.531	-0.06	0.031	0.047
	LTE Band 12_Ant 3	10M	QPSK	1	25	Back	10mm	State 3	23095	707.5	22.65	24.50	1.531	-0.16	0.036	0.055
	LTE Band 12_Ant 3	10M	QPSK	1	25	Right Side	10mm	State 3	23095	707.5	22.65	24.50	1.531	-0.06	0.084	0.129
	LTE Band 12_Ant 3	10M	QPSK	1	25	Top Side	10mm	State 3	23095	707.5	22.65	24.50	1.531	-0.05	0.031	0.047
	LTE Band 12_Ant 3	10M	QPSK	25	0	Front	10mm	State 3	23095	707.5	21.76	23.50	1.493	0.03	0.024	0.036
	LTE Band 12_Ant 3	10M	QPSK	25	0	Back	10mm	State 3	23095	707.5	21.76	23.50	1.493	0.18	0.028	0.042
	LTE Band 12_Ant 3	10M	QPSK	25	0	Right Side	10mm	State 3	23095	707.5	21.76	23.50	1.493	-0.01	0.067	0.100
	LTE Band 12_Ant 3	10M	QPSK	25	0	Top Side	10mm	State 3	23095	707.5	21.76	23.50	1.493	-0.04	0.027	0.040



<FDD LTE SAR>

Table with 17 columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Output Power State, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Rows include various LTE bands (25, 26, 30) and antenna configurations.



FCC SAR TEST REPORT

Report No. : FA210409

	LTE Band 30_Ant 4	10M	QPSK	25	0	Top Side	10mm	State 3	27710	2310	21.74	22.50	1.191	-0.13	0.095	0.113
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Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Ant 2	20M	QPSK	1	49	Front	10mm	State 3	132322	1745	22.83	24.50	1.469	-0.19	0.276	0.405
	LTE Band 66_Ant 2	20M	QPSK	1	49	Back	10mm	State 3	132322	1745	22.83	24.50	1.469	0.15	0.255	0.375
	LTE Band 66_Ant 2	20M	QPSK	1	49	Right Side	10mm	State 3	132322	1745	22.83	24.50	1.469	0.09	0.130	0.191
44	LTE Band 66_Ant 2	20M	QPSK	1	49	Bottom Side	10mm	State 3	132322	1745	22.83	24.50	1.469	0.05	0.540	0.793
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	10mm	State 3	132322	1745	21.76	23.50	1.493	0.13	0.209	0.312
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	10mm	State 3	132322	1745	21.76	23.50	1.493	-0.16	0.192	0.287
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Side	10mm	State 3	132322	1745	21.76	23.50	1.493	-0.14	0.095	0.142
	LTE Band 66_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	State 3	132322	1745	21.76	23.50	1.493	0.12	0.406	0.606
	LTE Band 66_Ant 4	20M	QPSK	1	49	Front	10mm	State 3	132322	1745	22.80	24.50	1.479	0.09	0.131	0.194
	LTE Band 66_Ant 4	20M	QPSK	1	49	Back	10mm	State 3	132322	1745	22.80	24.50	1.479	-0.15	0.104	0.154
	LTE Band 66_Ant 4	20M	QPSK	1	49	Left Side	10mm	State 3	132322	1745	22.80	24.50	1.479	0.05	0.228	0.337
	LTE Band 66_Ant 4	20M	QPSK	1	49	Top Side	10mm	State 3	132322	1745	22.80	24.50	1.479	-0.1	0.150	0.222
	LTE Band 66_Ant 4	20M	QPSK	50	0	Front	10mm	State 3	132322	1745	21.97	23.50	1.422	-0.05	0.107	0.152
	LTE Band 66_Ant 4	20M	QPSK	50	0	Back	10mm	State 3	132322	1745	21.97	23.50	1.422	-0.04	0.086	0.122
	LTE Band 66_Ant 4	20M	QPSK	50	0	Left Side	10mm	State 3	132322	1745	21.97	23.50	1.422	0.04	0.186	0.265
	LTE Band 66_Ant 4	20M	QPSK	50	0	Top Side	10mm	State 3	132322	1745	21.97	23.50	1.422	-0.15	0.121	0.172
	LTE Band 71_Ant 1	20M	QPSK	1	49	Front	10mm	State 3	133297	680.5	23.05	24.50	1.396	0.19	0.127	0.177
	LTE Band 71_Ant 1	20M	QPSK	1	49	Back	10mm	State 3	133297	680.5	23.05	24.50	1.396	0	0.174	0.243
45	LTE Band 71_Ant 1	20M	QPSK	1	49	Left Side	10mm	State 3	133297	680.5	23.05	24.50	1.396	0.09	0.228	0.318
	LTE Band 71_Ant 1	20M	QPSK	1	49	Bottom Side	10mm	State 3	133297	680.5	23.05	24.50	1.396	-0.01	0.048	0.067
	LTE Band 71_Ant 1	20M	QPSK	50	0	Front	10mm	State 3	133297	680.5	22.10	23.50	1.380	-0.11	0.095	0.131
	LTE Band 71_Ant 1	20M	QPSK	50	0	Back	10mm	State 3	133297	680.5	22.10	23.50	1.380	0.03	0.132	0.182
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Side	10mm	State 3	133297	680.5	22.10	23.50	1.380	-0.14	0.173	0.239
	LTE Band 71_Ant 1	20M	QPSK	50	0	Bottom Side	10mm	State 3	133297	680.5	22.10	23.50	1.380	0.07	0.026	0.036
	LTE Band 71_Ant 3	20M	QPSK	1	49	Front	10mm	State 3	133297	680.5	22.60	24.00	1.380	0.06	0.045	0.062
	LTE Band 71_Ant 3	20M	QPSK	1	49	Back	10mm	State 3	133297	680.5	22.60	24.00	1.380	-0.18	0.048	0.066
	LTE Band 71_Ant 3	20M	QPSK	1	49	Right Side	10mm	State 3	133297	680.5	22.60	24.00	1.380	-0.08	0.101	0.139
	LTE Band 71_Ant 3	20M	QPSK	1	49	Top Side	10mm	State 3	133297	680.5	22.60	24.00	1.380	-0.1	0.037	0.051
	LTE Band 71_Ant 3	20M	QPSK	50	0	Front	10mm	State 3	133297	680.5	21.78	23.00	1.324	0.01	0.033	0.044
	LTE Band 71_Ant 3	20M	QPSK	50	0	Back	10mm	State 3	133297	680.5	21.78	23.00	1.324	0.16	0.035	0.046
	LTE Band 71_Ant 3	20M	QPSK	50	0	Right Side	10mm	State 3	133297	680.5	21.78	23.00	1.324	0.16	0.076	0.101
	LTE Band 71_Ant 3	20M	QPSK	50	0	Top Side	10mm	State 3	133297	680.5	21.78	23.00	1.324	-0.17	0.001	0.001



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Ant 2	20M	QPSK	1	49	Front	10mm	State 3	40185	2549.5	23.30	23.50	1.047	62.9	1.006	0.19	0.170	0.179
	LTE Band 41_Ant 2	20M	QPSK	1	49	Back	10mm	State 3	40185	2549.5	23.30	23.50	1.047	62.9	1.006	-0.05	0.120	0.126
	LTE Band 41_Ant 2	20M	QPSK	1	49	Right Side	10mm	State 3	40185	2549.5	23.30	23.50	1.047	62.9	1.006	0.17	0.065	0.068
	LTE Band 41_Ant 2	20M	QPSK	1	49	Bottom Side	10mm	State 3	40185	2549.5	23.30	23.50	1.047	62.9	1.006	0.07	0.253	0.267
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	10mm	State 3	40185	2549.5	22.25	22.50	1.059	62.9	1.006	0.04	0.134	0.143
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	10mm	State 3	40185	2549.5	22.25	22.50	1.059	62.9	1.006	-0.09	0.098	0.104
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	10mm	State 3	40185	2549.5	22.25	22.50	1.059	62.9	1.006	0.19	0.049	0.052
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	State 3	40185	2549.5	22.25	22.50	1.059	62.9	1.006	-0.05	0.203	0.216
	LTE Band 41C_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	State 3	41055	2636.5	23.02	24.50	1.406	62.9	1.006	0.01	0.226	0.320
	LTE Band 41_Ant 4	20M	QPSK	1	49	Front	10mm	State 3	41490	2680	20.81	21.00	1.045	62.9	1.006	0	0.172	0.181
	LTE Band 41_Ant 4	20M	QPSK	1	49	Back	10mm	State 3	41490	2680	20.81	21.00	1.045	62.9	1.006	-0.07	0.161	0.169
46	LTE Band 41_Ant 4	20M	QPSK	1	49	Left Side	10mm	State 3	41490	2680	20.81	21.00	1.045	62.9	1.006	0.09	0.564	0.593
	LTE Band 41_Ant 4	20M	QPSK	1	49	Top Side	10mm	State 3	41490	2680	20.81	21.00	1.045	62.9	1.006	-0.17	0.093	0.098
	LTE Band 41_Ant 4	20M	QPSK	50	0	Front	10mm	State 3	41490	2680	19.99	20.00	1.002	62.9	1.006	0.14	0.119	0.120
	LTE Band 41_Ant 4	20M	QPSK	50	0	Back	10mm	State 3	41490	2680	19.99	20.00	1.002	62.9	1.006	0.14	0.115	0.116
	LTE Band 41_Ant 4	20M	QPSK	50	0	Left Side	10mm	State 3	41490	2680	19.99	20.00	1.002	62.9	1.006	0.01	0.378	0.381
	LTE Band 41_Ant 4	20M	QPSK	50	0	Top Side	10mm	State 3	41490	2680	19.99	20.00	1.002	62.9	1.006	0.04	0.089	0.090
	LTE Band 41C_Ant 4	20M	QPSK	1	0	Left Side	10mm	State 3	41490	2636.5	20.81	21.00	1.045	62.9	1.006	0.09	0.511	0.537
	LTE Band 42_Ant 5	20M	QPSK	1	49	Front	10mm	State 3	42190	3460	23.45	24.50	1.274	62.9	1.006	-0.05	0.373	0.478
	LTE Band 42_Ant 5	20M	QPSK	1	49	Back	10mm	State 3	42190	3460	23.45	24.50	1.274	62.9	1.006	0.18	0.373	0.478
47	LTE Band 42_Ant 5	20M	QPSK	1	49	Left Side	10mm	State 3	42190	3460	23.45	24.50	1.274	62.9	1.006	0.16	0.452	0.579
	LTE Band 42_Ant 5	20M	QPSK	50	0	Front	10mm	State 3	42190	3460	22.40	23.50	1.288	62.9	1.006	0.13	0.310	0.402
	LTE Band 42_Ant 5	20M	QPSK	50	0	Back	10mm	State 3	42190	3460	22.40	23.50	1.288	62.9	1.006	0.07	0.295	0.382
	LTE Band 42_Ant 5	20M	QPSK	50	0	Left Side	10mm	State 3	42190	3460	22.40	23.50	1.288	62.9	1.006	-0.16	0.377	0.489
	LTE Band 42_Ant 4	20M	QPSK	1	49	Front	10mm	State 3	42190	3460	24.17	24.50	1.079	62.9	1.006	-0.14	0.191	0.207
	LTE Band 42_Ant 4	20M	QPSK	1	49	Back	10mm	State 3	42190	3460	24.17	24.50	1.079	62.9	1.006	0.16	0.286	0.310
	LTE Band 42_Ant 4	20M	QPSK	1	49	Left Side	10mm	State 3	42190	3460	24.17	24.50	1.079	62.9	1.006	0.1	0.470	0.510
	LTE Band 42_Ant 4	20M	QPSK	1	49	Top Side	10mm	State 3	42190	3460	24.17	24.50	1.079	62.9	1.006	-0.1	0.122	0.132
	LTE Band 42_Ant 4	20M	QPSK	50	0	Front	10mm	State 3	42190	3460	23.15	23.50	1.084	62.9	1.006	0.1	0.151	0.165
	LTE Band 42_Ant 4	20M	QPSK	50	0	Back	10mm	State 3	42190	3460	23.15	23.50	1.084	62.9	1.006	0.14	0.230	0.251
	LTE Band 42_Ant 4	20M	QPSK	50	0	Left Side	10mm	State 3	42190	3460	23.15	23.50	1.084	62.9	1.006	-0.14	0.387	0.422
	LTE Band 42_Ant 4	20M	QPSK	50	0	Top Side	10mm	State 3	42190	3460	23.15	23.50	1.084	62.9	1.006	-0.02	0.101	0.110



<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n5_Ant 1	20M	BPSK	1	53	Front	10mm	State 3	167300	836.5	23.69	24.50	1.205	0.08	0.083	0.100
	FR1 n5_Ant 1	20M	BPSK	1	53	Back	10mm	State 3	167300	836.5	23.69	24.50	1.205	-0.06	0.098	0.118
	FR1 n5_Ant 1	20M	BPSK	1	53	Left Side	10mm	State 3	167300	836.5	23.69	24.50	1.205	-0.02	0.079	0.095
	FR1 n5_Ant 1	20M	BPSK	1	53	Bottom Side	10mm	State 3	167300	836.5	23.69	24.50	1.205	-0.02	0.023	0.028
	FR1 n5_Ant 1	20M	BPSK	50	28	Front	10mm	State 3	167300	836.5	23.56	24.50	1.242	0.08	0.078	0.097
	FR1 n5_Ant 1	20M	BPSK	50	28	Back	10mm	State 3	167300	836.5	23.56	24.50	1.242	0.09	0.079	0.098
	FR1 n5_Ant 1	20M	BPSK	50	28	Left Side	10mm	State 3	167300	836.5	23.56	24.50	1.242	0.15	0.066	0.082
	FR1 n5_Ant 1	20M	BPSK	50	28	Bottom Side	10mm	State 3	167300	836.5	23.56	24.50	1.242	-0.07	0.001	0.001
	FR1 n5_Ant 3	20M	BPSK	1	53	Front	10mm	State 3	167300	836.5	22.77	24.50	1.489	-0.05	0.125	0.186
	FR1 n5_Ant 3	20M	BPSK	1	53	Back	10mm	State 3	167300	836.5	22.77	24.50	1.489	0.17	0.097	0.144
	FR1 n5_Ant 3	20M	BPSK	1	53	Right Side	10mm	State 3	167300	836.5	22.77	24.50	1.489	0.13	0.174	0.259
	FR1 n5_Ant 3	20M	BPSK	1	53	Top Side	10mm	State 3	167300	836.5	22.77	24.50	1.489	0.04	0.141	0.210
	FR1 n5_Ant 3	20M	BPSK	50	28	Front	10mm	State 3	167300	836.5	22.60	24.50	1.549	0.05	0.140	0.217
	FR1 n5_Ant 3	20M	BPSK	50	28	Back	10mm	State 3	167300	836.5	22.60	24.50	1.549	-0.13	0.103	0.160
48	FR1 n5_Ant 3	20M	BPSK	50	28	Right Side	10mm	State 3	167300	836.5	22.60	24.50	1.549	-0.02	0.192	0.297
	FR1 n5_Ant 3	20M	BPSK	50	28	Top Side	10mm	State 3	167300	836.5	22.60	24.50	1.549	0.09	0.148	0.229
	FR1 n7_Ant 2	40M	BPSK	1	108	Front	10mm	State 3	507000	2535	23.59	24.50	1.233	-0.14	0.387	0.477
	FR1 n7_Ant 2	40M	BPSK	1	108	Back	10mm	State 3	507000	2535	23.59	24.50	1.233	-0.13	0.249	0.307
	FR1 n7_Ant 2	40M	BPSK	1	108	Right Side	10mm	State 3	507000	2535	23.59	24.50	1.233	0.05	0.123	0.152
	FR1 n7_Ant 2	40M	BPSK	1	108	Bottom Side	10mm	State 3	507000	2535	23.59	24.50	1.233	0.02	0.590	0.728
	FR1 n7_Ant 2	40M	BPSK	108	54	Front	10mm	State 3	507000	2535	23.44	24.50	1.276	0.13	0.331	0.423
	FR1 n7_Ant 2	40M	BPSK	108	54	Back	10mm	State 3	507000	2535	23.44	24.50	1.276	0.08	0.242	0.309
	FR1 n7_Ant 2	40M	BPSK	108	54	Right Side	10mm	State 3	507000	2535	23.44	24.50	1.276	-0.13	0.131	0.167
49	FR1 n7_Ant 2	40M	BPSK	108	54	Bottom Side	10mm	State 3	507000	2535	23.44	24.50	1.276	-0.02	0.591	0.754
	FR1 n7_Ant 4	40M	BPSK	1	1	Front	10mm	State 3	507000	2535	19.41	20.50	1.285	0.18	0.192	0.247
	FR1 n7_Ant 4	40M	BPSK	1	1	Back	10mm	State 3	507000	2535	19.41	20.50	1.285	0.12	0.164	0.211
	FR1 n7_Ant 4	40M	BPSK	1	1	Left Side	10mm	State 3	507000	2535	19.41	20.50	1.285	-0.01	0.443	0.569
	FR1 n7_Ant 4	40M	BPSK	1	1	Top Side	10mm	State 3	507000	2535	19.41	20.50	1.285	-0.08	0.112	0.144
	FR1 n7_Ant 4	40M	BPSK	108	0	Front	10mm	State 3	507000	2535	19.15	20.50	1.365	0.17	0.214	0.292
	FR1 n7_Ant 4	40M	BPSK	108	0	Back	10mm	State 3	507000	2535	19.15	20.50	1.365	0.11	0.177	0.242
	FR1 n7_Ant 4	40M	BPSK	108	0	Left Side	10mm	State 3	507000	2535	19.15	20.50	1.365	0.17	0.407	0.555
	FR1 n7_Ant 4	40M	BPSK	108	0	Top Side	10mm	State 3	507000	2535	19.15	20.50	1.365	-0.08	0.098	0.134
	FR1 n12_Ant 1	15M	BPSK	1	40	Front	10mm	State 3	141500	707.5	23.92	24.50	1.143	0.14	0.046	0.053
	FR1 n12_Ant 1	15M	BPSK	1	40	Back	10mm	State 3	141500	707.5	23.92	24.50	1.143	-0.12	0.064	0.073
50	FR1 n12_Ant 1	15M	BPSK	1	40	Left Side	10mm	State 3	141500	707.5	23.92	24.50	1.143	-0.1	0.081	0.093
	FR1 n12_Ant 1	15M	BPSK	1	40	Bottom Side	10mm	State 3	141500	707.5	23.92	24.50	1.143	-0.04	0.001	0.001
	FR1 n12_Ant 1	15M	BPSK	36	22	Front	10mm	State 3	141500	707.5	23.93	24.50	1.140	0.02	0.045	0.051
	FR1 n12_Ant 1	15M	BPSK	36	22	Back	10mm	State 3	141500	707.5	23.93	24.50	1.140	0.01	0.065	0.074
	FR1 n12_Ant 1	15M	BPSK	36	22	Left Side	10mm	State 3	141500	707.5	23.93	24.50	1.140	0.16	0.081	0.092
	FR1 n12_Ant 1	15M	BPSK	36	22	Bottom Side	10mm	State 3	141500	707.5	23.93	24.50	1.140	-0.05	0.001	0.001
	FR1 n12_Ant 3	15M	BPSK	1	40	Front	10mm	State 3	141500	707.5	23.69	24.50	1.205	-0.03	0.029	0.035
	FR1 n12_Ant 3	15M	BPSK	1	40	Back	10mm	State 3	141500	707.5	23.69	24.50	1.205	-0.09	0.029	0.035
	FR1 n12_Ant 3	15M	BPSK	1	40	Right Side	10mm	State 3	141500	707.5	23.69	24.50	1.205	-0.09	0.075	0.090
	FR1 n12_Ant 3	15M	BPSK	1	40	Top Side	10mm	State 3	141500	707.5	23.69	24.50	1.205	0.03	0.027	0.033
	FR1 n12_Ant 3	15M	BPSK	36	22	Front	10mm	State 3	141500	707.5	23.64	24.50	1.219	0.09	0.029	0.035
	FR1 n12_Ant 3	15M	BPSK	36	22	Back	10mm	State 3	141500	707.5	23.64	24.50	1.219	-0.16	0.029	0.035
	FR1 n12_Ant 3	15M	BPSK	36	22	Right Side	10mm	State 3	141500	707.5	23.64	24.50	1.219	0.11	0.074	0.090
	FR1 n12_Ant 3	15M	BPSK	36	22	Top Side	10mm	State 3	141500	707.5	23.64	24.50	1.219	0.16	0.030	0.037



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n25_Ant 2	40M	BPSK	1	108	Front	10mm	State 3	376500	1882.5	23.61	24.50	1.227	0.03	0.301	0.369
	FR1 n25_Ant 2	40M	BPSK	1	108	Back	10mm	State 3	376500	1882.5	23.61	24.50	1.227	-0.14	0.267	0.328
	FR1 n25_Ant 2	40M	BPSK	1	108	Right Side	10mm	State 3	376500	1882.5	23.61	24.50	1.227	-0.13	0.261	0.320
	FR1 n25_Ant 2	40M	BPSK	1	108	Bottom Side	10mm	State 3	376500	1882.5	23.61	24.50	1.227	-0.04	0.689	0.846
	FR1 n25_Ant 2	40M	BPSK	108	54	Front	10mm	State 3	376500	1882.5	23.46	24.50	1.271	-0.04	0.321	0.408
	FR1 n25_Ant 2	40M	BPSK	108	54	Back	10mm	State 3	376500	1882.5	23.46	24.50	1.271	-0.14	0.301	0.382
	FR1 n25_Ant 2	40M	BPSK	108	54	Right Side	10mm	State 3	376500	1882.5	23.46	24.50	1.271	0.16	0.266	0.338
51	FR1 n25_Ant 2	40M	BPSK	108	54	Bottom Side	10mm	State 3	376500	1882.5	23.46	24.50	1.271	0.05	0.701	0.891
	FR1 n25_Ant 2	40M	BPSK	216	0	Bottom Side	10mm	State 3	376500	1882.5	23.04	24.00	1.247	0.05	0.666	0.831
	FR1 n25_Ant 4	40M	BPSK	1	108	Front	10mm	State 3	376500	1882.5	22.71	24.50	1.510	-0.03	0.144	0.217
	FR1 n25_Ant 4	40M	BPSK	1	108	Back	10mm	State 3	376500	1882.5	22.71	24.50	1.510	0.05	0.169	0.255
	FR1 n25_Ant 4	40M	BPSK	1	108	Left Side	10mm	State 3	376500	1882.5	22.71	24.50	1.510	0.19	0.236	0.356
	FR1 n25_Ant 4	40M	BPSK	1	108	Top Side	10mm	State 3	376500	1882.5	22.71	24.50	1.510	-0.01	0.109	0.165
	FR1 n25_Ant 4	40M	BPSK	108	54	Front	10mm	State 3	376500	1882.5	22.53	24.50	1.574	0.06	0.130	0.205
	FR1 n25_Ant 4	40M	BPSK	108	54	Back	10mm	State 3	376500	1882.5	22.53	24.50	1.574	0.15	0.157	0.247
	FR1 n25_Ant 4	40M	BPSK	108	54	Left Side	10mm	State 3	376500	1882.5	22.53	24.50	1.574	0.15	0.222	0.349
	FR1 n25_Ant 4	40M	BPSK	108	54	Top Side	10mm	State 3	376500	1882.5	22.53	24.50	1.574	-0.09	0.103	0.162
	FR1 n66_Ant 2	40M	BPSK	1	108	Front	10mm	State 3	349000	1745	23.10	24.50	1.380	0.01	0.264	0.364
	FR1 n66_Ant 2	40M	BPSK	1	108	Back	10mm	State 3	349000	1745	23.10	24.50	1.380	0.16	0.253	0.349
	FR1 n66_Ant 2	40M	BPSK	1	108	Right Side	10mm	State 3	349000	1745	23.10	24.50	1.380	0.17	0.119	0.164
52	FR1 n66_Ant 2	40M	BPSK	1	108	Bottom Side	10mm	State 3	349000	1745	23.10	24.50	1.380	0.19	0.626	0.864
	FR1 n66_Ant 2	40M	BPSK	108	54	Front	10mm	State 3	349000	1745	23.06	24.50	1.393	0.03	0.276	0.385
	FR1 n66_Ant 2	40M	BPSK	108	54	Back	10mm	State 3	349000	1745	23.06	24.50	1.393	0.16	0.256	0.357
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Side	10mm	State 3	349000	1745	23.06	24.50	1.393	0.05	0.116	0.162
	FR1 n66_Ant 2	40M	BPSK	108	54	Bottom Side	10mm	State 3	349000	1745	23.06	24.50	1.393	-0.07	0.552	0.769
	FR1 n66_Ant 2	40M	BPSK	216	0	Bottom Side	10mm	State 3	349000	1745	22.62	24.00	1.374	0.01	0.532	0.731
	FR1 n66_Ant 4	40M	BPSK	1	108	Front	10mm	State 3	349000	1745	22.60	24.50	1.549	-0.1	0.128	0.198
	FR1 n66_Ant 4	40M	BPSK	1	108	Back	10mm	State 3	349000	1745	22.60	24.50	1.549	-0.04	0.141	0.218
	FR1 n66_Ant 4	40M	BPSK	1	108	Left Side	10mm	State 3	349000	1745	22.60	24.50	1.549	-0.14	0.274	0.424
	FR1 n66_Ant 4	40M	BPSK	1	108	Top Side	10mm	State 3	349000	1745	22.60	24.50	1.549	-0.12	0.186	0.288
	FR1 n66_Ant 4	40M	BPSK	108	54	Front	10mm	State 3	349000	1745	22.52	24.50	1.578	0.07	0.127	0.200
	FR1 n66_Ant 4	40M	BPSK	108	54	Back	10mm	State 3	349000	1745	22.52	24.50	1.578	0.09	0.126	0.199
	FR1 n66_Ant 4	40M	BPSK	108	54	Left Side	10mm	State 3	349000	1745	22.52	24.50	1.578	0.14	0.270	0.426
	FR1 n66_Ant 4	40M	BPSK	108	54	Top Side	10mm	State 3	349000	1745	22.52	24.50	1.578	-0.08	0.185	0.292
	FR1 n71_Ant 1	20M	BPSK	1	53	Front	10mm	State 3	136100	680.5	23.52	24.50	1.253	0.18	0.046	0.058
	FR1 n71_Ant 1	20M	BPSK	1	53	Back	10mm	State 3	136100	680.5	23.52	24.50	1.253	-0.13	0.064	0.080
	FR1 n71_Ant 1	20M	BPSK	1	53	Left Side	10mm	State 3	136100	680.5	23.52	24.50	1.253	-0.1	0.086	0.108
	FR1 n71_Ant 1	20M	BPSK	1	53	Bottom Side	10mm	State 3	136100	680.5	23.52	24.50	1.253	-0.18	0.001	0.001
	FR1 n71_Ant 1	20M	BPSK	50	28	Front	10mm	State 3	136100	680.5	22.74	24.50	1.500	-0.13	0.044	0.066
	FR1 n71_Ant 1	20M	BPSK	50	28	Back	10mm	State 3	136100	680.5	22.74	24.50	1.500	-0.04	0.060	0.090
53	FR1 n71_Ant 1	20M	BPSK	50	28	Left Side	10mm	State 3	136100	680.5	22.74	24.50	1.500	0.07	0.073	0.109
	FR1 n71_Ant 1	20M	BPSK	50	28	Bottom Side	10mm	State 3	136100	680.5	22.74	24.50	1.500	0.09	0.001	0.001
	FR1 n71_Ant 3	20M	BPSK	1	53	Front	10mm	State 3	136100	680.5	22.81	24.50	1.476	-0.02	0.033	0.049
	FR1 n71_Ant 3	20M	BPSK	1	53	Back	10mm	State 3	136100	680.5	22.81	24.50	1.476	-0.02	0.043	0.063
	FR1 n71_Ant 3	20M	BPSK	1	53	Right Side	10mm	State 3	136100	680.5	22.81	24.50	1.476	-0.02	0.062	0.091
	FR1 n71_Ant 3	20M	BPSK	1	53	Top Side	10mm	State 3	136100	680.5	22.81	24.50	1.476	0.19	0.001	0.001
	FR1 n71_Ant 3	20M	BPSK	50	28	Front	10mm	State 3	136100	680.5	22.64	24.50	1.535	0.09	0.033	0.051
	FR1 n71_Ant 3	20M	BPSK	50	28	Back	10mm	State 3	136100	680.5	22.64	24.50	1.535	-0.02	0.042	0.064
	FR1 n71_Ant 3	20M	BPSK	50	28	Right Side	10mm	State 3	136100	680.5	22.64	24.50	1.535	0.19	0.058	0.089
	FR1 n71_Ant 3	20M	BPSK	50	28	Top Side	10mm	State 3	136100	680.5	22.64	24.50	1.535	-0.07	0.001	0.002



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n41_Ant 2	100M	BPSK	1	137	Front	10mm	State 3	518598	2592.99	23.77	24.50	1.183	-0.05	0.315	0.373
	FR1 n41_Ant 2	100M	BPSK	1	137	Back	10mm	State 3	518598	2592.99	23.77	24.50	1.183	-0.13	0.230	0.272
	FR1 n41_Ant 2	100M	BPSK	1	137	Right Side	10mm	State 3	518598	2592.99	23.77	24.50	1.183	0.11	0.129	0.153
54	FR1 n41_Ant 2	100M	BPSK	1	137	Bottom Side	10mm	State 3	518598	2592.99	23.77	24.50	1.183	0.09	0.639	0.756
	FR1 n41_Ant 2	100M	BPSK	135	69	Front	10mm	State 3	518598	2592.99	23.60	24.50	1.230	-0.02	0.301	0.370
	FR1 n41_Ant 2	100M	BPSK	135	69	Back	10mm	State 3	518598	2592.99	23.60	24.50	1.230	-0.15	0.201	0.247
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Side	10mm	State 3	518598	2592.99	23.60	24.50	1.230	-0.03	0.122	0.150
	FR1 n41_Ant 2	100M	BPSK	135	69	Bottom Side	10mm	State 3	518598	2592.99	23.60	24.50	1.230	0.08	0.572	0.704
	FR1 n41_Ant 4	100M	BPSK	1	1	Front	10mm	State 3	518598	2592.99	19.33	20.50	1.309	0.14	0.229	0.300
	FR1 n41_Ant 4	100M	BPSK	1	1	Back	10mm	State 3	518598	2592.99	19.33	20.50	1.309	-0.09	0.207	0.271
	FR1 n41_Ant 4	100M	BPSK	1	1	Left Side	10mm	State 3	518598	2592.99	19.33	20.50	1.309	-0.17	0.535	0.700
	FR1 n41_Ant 4	100M	BPSK	1	1	Top Side	10mm	State 3	518598	2592.99	19.33	20.50	1.309	0.15	0.178	0.233
	FR1 n41_Ant 4	100M	BPSK	135	0	Front	10mm	State 3	518598	2592.99	19.40	20.50	1.288	-0.1	0.224	0.289
	FR1 n41_Ant 4	100M	BPSK	135	0	Back	10mm	State 3	518598	2592.99	19.40	20.50	1.288	0.05	0.194	0.250
	FR1 n41_Ant 4	100M	BPSK	135	0	Left Side	10mm	State 3	518598	2592.99	19.40	20.50	1.288	-0.01	0.528	0.680
	FR1 n41_Ant 4	100M	BPSK	135	0	Top Side	10mm	State 3	518598	2592.99	19.40	20.50	1.288	0.04	0.184	0.237
	FR1 n77_Ant 2	100M	BPSK	1	137	Front	10mm	State 3	656000	3840	21.21	22.00	1.199	0.1	0.085	0.102
	FR1 n77_Ant 2	100M	BPSK	1	137	Back	10mm	State 3	656000	3840	21.21	22.00	1.199	0	0.092	0.110
	FR1 n77_Ant 2	100M	BPSK	1	137	Right Side	10mm	State 3	656000	3840	21.21	22.00	1.199	0.11	0.030	0.036
	FR1 n77_Ant 2	100M	BPSK	1	137	Bottom Side	10mm	State 3	656000	3840	21.21	22.00	1.199	0.04	0.011	0.013
	FR1 n77_Ant 2	100M	BPSK	135	69	Front	10mm	State 3	656000	3840	21.16	22.00	1.213	-0.11	0.090	0.109
	FR1 n77_Ant 2	100M	BPSK	135	69	Back	10mm	State 3	656000	3840	21.16	22.00	1.213	0.15	0.103	0.125
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Side	10mm	State 3	656000	3840	21.16	22.00	1.213	-0.15	0.028	0.034
	FR1 n77_Ant 2	100M	BPSK	135	69	Bottom Side	10mm	State 3	656000	3840	21.16	22.00	1.213	-0.03	0.001	0.001
	FR1 n77_Ant 2	100M	BPSK	1	137	Front	10mm	State 3	633332	3499.98	20.53	22.00	1.403	-0.05	0.129	0.181
	FR1 n77_Ant 2	100M	BPSK	1	137	Back	10mm	State 3	633332	3499.98	20.53	22.00	1.403	-0.1	0.126	0.177
	FR1 n77_Ant 2	100M	BPSK	1	137	Right Side	10mm	State 3	633332	3499.98	20.53	22.00	1.403	0.06	0.040	0.056
	FR1 n77_Ant 2	100M	BPSK	1	137	Bottom Side	10mm	State 3	633332	3499.98	20.53	22.00	1.403	-0.13	0.021	0.029
	FR1 n77_Ant 2	100M	BPSK	135	69	Front	10mm	State 3	633332	3499.98	20.38	22.00	1.452	-0.07	0.139	0.202
	FR1 n77_Ant 2	100M	BPSK	135	69	Back	10mm	State 3	633332	3499.98	20.38	22.00	1.452	0.05	0.133	0.193
	FR1 n77_Ant 2	100M	BPSK	135	69	Right Side	10mm	State 3	633332	3499.98	20.38	22.00	1.452	0.12	0.046	0.067
	FR1 n77_Ant 2	100M	BPSK	135	69	Bottom Side	10mm	State 3	633332	3499.98	20.38	22.00	1.452	0.09	0.050	0.073
	FR1 n77_Ant 4	100M	BPSK	1	1	Front	10mm	State 3	656000	3840	17.41	17.5	1.021	0.07	0.069	0.070
	FR1 n77_Ant 4	100M	BPSK	1	1	Back	10mm	State 3	656000	3840	17.41	17.5	1.021	-0.17	0.121	0.124
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Side	10mm	State 3	656000	3840	17.41	17.5	1.021	0.14	0.178	0.182
	FR1 n77_Ant 4	100M	BPSK	1	1	Top Side	10mm	State 3	656000	3840	17.41	17.5	1.021	0.1	0.041	0.042
	FR1 n77_Ant 4	100M	BPSK	135	0	Front	10mm	State 3	656000	3840	17.02	17.5	1.117	0.11	0.060	0.067
	FR1 n77_Ant 4	100M	BPSK	135	0	Back	10mm	State 3	656000	3840	17.02	17.5	1.117	0.14	0.135	0.151
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Side	10mm	State 3	656000	3840	17.02	17.5	1.117	-0.19	0.191	0.213
	FR1 n77_Ant 4	100M	BPSK	135	0	Top Side	10mm	State 3	656000	3840	17.02	17.5	1.117	0	0.045	0.050
	FR1 n77_Ant 4	100M	BPSK	1	1	Front	10mm	State 3	633334	3500.01	17.4	17.5	1.023	-0.07	0.044	0.045
	FR1 n77_Ant 4	100M	BPSK	1	1	Back	10mm	State 3	633334	3500.01	17.4	17.5	1.023	0.02	0.061	0.062
	FR1 n77_Ant 4	100M	BPSK	1	1	Left Side	10mm	State 3	633334	3500.01	17.4	17.5	1.023	0.13	0.102	0.104
	FR1 n77_Ant 4	100M	BPSK	1	1	Top Side	10mm	State 3	633334	3500.01	17.4	17.5	1.023	0.05	0.027	0.028
	FR1 n77_Ant 4	100M	BPSK	135	0	Front	10mm	State 3	633334	3500.01	16.89	17.5	1.151	-0.06	0.048	0.055
	FR1 n77_Ant 4	100M	BPSK	135	0	Back	10mm	State 3	633334	3500.01	16.89	17.5	1.151	0.17	0.066	0.076
	FR1 n77_Ant 4	100M	BPSK	135	0	Left Side	10mm	State 3	633334	3500.01	16.89	17.5	1.151	0.15	0.106	0.122
	FR1 n77_Ant 4	100M	BPSK	135	0	Top Side	10mm	State 3	633334	3500.01	16.89	17.5	1.151	0.01	0.028	0.032



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Ant 5	100M	BPSK	1	1	Front	10mm	State 3	656000	3840	17.79	18	1.050	0.1	0.093	0.098
	FR1 n77_Ant 5	100M	BPSK	1	1	Back	10mm	State 3	656000	3840	17.79	18	1.050	-0.01	0.091	0.096
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Side	10mm	State 3	656000	3840	17.79	18	1.050	-0.04	0.208	0.218
	FR1 n77_Ant 5	100M	BPSK	135	0	Front	10mm	State 3	656000	3840	17.69	18	1.074	0.07	0.108	0.116
	FR1 n77_Ant 5	100M	BPSK	135	0	Back	10mm	State 3	656000	3840	17.69	18	1.074	0.15	0.089	0.096
55	FR1 n77_Ant 5	100M	BPSK	135	0	Left Side	10mm	State 3	656000	3840	17.69	18	1.074	-0.04	0.216	0.232
	FR1 n77_Ant 5	100M	BPSK	1	1	Front	10mm	State 3	633334	3500.01	18	18	1.000	-0.09	0.061	0.061
	FR1 n77_Ant 5	100M	BPSK	1	1	Back	10mm	State 3	633334	3500.01	18	18	1.000	0.09	0.063	0.063
	FR1 n77_Ant 5	100M	BPSK	1	1	Left Side	10mm	State 3	633334	3500.01	18	18	1.000	0.05	0.116	0.116
	FR1 n77_Ant 5	100M	BPSK	135	0	Front	10mm	State 3	633334	3500.01	17.76	18	1.057	0.04	0.054	0.057
	FR1 n77_Ant 5	100M	BPSK	135	0	Back	10mm	State 3	633334	3500.01	17.76	18	1.057	-0.13	0.063	0.067
	FR1 n77_Ant 5	100M	BPSK	135	0	Left Side	10mm	State 3	633334	3500.01	17.76	18	1.057	-0.01	0.107	0.113
	FR1 n77_Ant 6	100M	BPSK	1	1	Front	10mm	State 3	656000	3840	14.22	16	1.507	-0.15	0.027	0.041
	FR1 n77_Ant 6	100M	BPSK	1	1	Back	10mm	State 3	656000	3840	14.22	16	1.507	-0.15	0.120	0.181
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Side	10mm	State 3	656000	3840	14.22	16	1.507	-0.03	0.041	0.062
	FR1 n77_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	State 3	656000	3840	14.22	16	1.507	0.15	0.001	0.002
	FR1 n77_Ant 6	100M	BPSK	135	0	Front	10mm	State 3	656000	3840	14.1	16	1.549	0.07	0.031	0.048
	FR1 n77_Ant 6	100M	BPSK	135	0	Back	10mm	State 3	656000	3840	14.1	16	1.549	-0.06	0.111	0.172
	FR1 n77_Ant 6	100M	BPSK	135	0	Left Side	10mm	State 3	656000	3840	14.1	16	1.549	0.16	0.035	0.054
	FR1 n77_Ant 6	100M	BPSK	135	0	Bottom Side	10mm	State 3	656000	3840	14.1	16	1.549	-0.05	0.001	0.002
	FR1 n77_Ant 6	100M	BPSK	1	1	Front	10mm	State 3	633334	3500.01	15.17	16	1.211	-0.05	0.029	0.035
	FR1 n77_Ant 6	100M	BPSK	1	1	Back	10mm	State 3	633334	3500.01	15.17	16	1.211	0.02	0.095	0.115
	FR1 n77_Ant 6	100M	BPSK	1	1	Left Side	10mm	State 3	633334	3500.01	15.17	16	1.211	0.12	0.037	0.045
	FR1 n77_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	State 3	633334	3500.01	15.17	16	1.211	0.06	0.001	0.001
	FR1 n77_Ant 6	100M	BPSK	135	0	Front	10mm	State 3	633334	3500.01	14.87	15.5	1.156	-0.03	0.026	0.030
	FR1 n77_Ant 6	100M	BPSK	135	0	Back	10mm	State 3	633334	3500.01	14.87	15.5	1.156	-0.08	0.098	0.113
	FR1 n77_Ant 6	100M	BPSK	135	0	Left Side	10mm	State 3	633334	3500.01	14.87	15.5	1.156	0.12	0.037	0.043
	FR1 n77_Ant 6	100M	BPSK	135	0	Bottom Side	10mm	State 3	633334	3500.01	14.87	15.5	1.156	0.16	0.001	0.001



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n78_Ant 4	100M	BPSK	1	1	Front	10mm	State 3	650000	3750	19.48	19.50	1.005	-0.09	0.134	0.135
	FR1 n78_Ant 4	100M	BPSK	1	1	Back	10mm	State 3	650000	3750	19.48	19.50	1.005	0.08	0.273	0.274
	FR1 n78_Ant 4	100M	BPSK	1	1	Left Side	10mm	State 3	650000	3750	19.48	19.50	1.005	-0.1	0.464	0.466
	FR1 n78_Ant 4	100M	BPSK	1	1	Top Side	10mm	State 3	650000	3750	19.48	19.50	1.005	-0.19	0.098	0.098
	FR1 n78_Ant 4	100M	BPSK	135	0	Front	10mm	State 3	650000	3750	18.60	19.50	1.230	0.16	0.146	0.180
	FR1 n78_Ant 4	100M	BPSK	135	0	Back	10mm	State 3	650000	3750	18.60	19.50	1.230	0.04	0.324	0.399
	FR1 n78_Ant 4	100M	BPSK	135	0	Left Side	10mm	State 3	650000	3750	18.60	19.50	1.230	-0.06	0.341	0.420
	FR1 n78_Ant 4	100M	BPSK	135	0	Top Side	10mm	State 3	650000	3750	18.60	19.50	1.230	-0.16	0.114	0.140
	FR1 n78_Ant 4	100M	BPSK	1	1	Front	10mm	State 3	633332	3499.98	19.46	19.50	1.009	0.18	0.073	0.074
	FR1 n78_Ant 4	100M	BPSK	1	1	Back	10mm	State 3	633332	3499.98	19.46	19.50	1.009	0.09	0.098	0.099
	FR1 n78_Ant 4	100M	BPSK	1	1	Left Side	10mm	State 3	633332	3499.98	19.46	19.50	1.009	-0.04	0.220	0.222
	FR1 n78_Ant 4	100M	BPSK	1	1	Top Side	10mm	State 3	633332	3499.98	19.46	19.50	1.009	0.1	0.051	0.051
	FR1 n78_Ant 4	100M	BPSK	135	0	Front	10mm	State 3	633332	3499.98	19.27	19.50	1.054	0	0.111	0.117
	FR1 n78_Ant 4	100M	BPSK	135	0	Back	10mm	State 3	633332	3499.98	19.27	19.50	1.054	-0.16	0.184	0.194
	FR1 n78_Ant 4	100M	BPSK	135	0	Left Side	10mm	State 3	633332	3499.98	19.27	19.50	1.054	-0.03	0.333	0.351
	FR1 n78_Ant 4	100M	BPSK	135	0	Top Side	10mm	State 3	633332	3499.98	19.27	19.50	1.054	-0.01	0.069	0.073
	FR1 n78_Ant 5	100M	BPSK	1	1	Front	10mm	State 3	650000	3750	18.95	19.5	1.135	-0.19	0.258	0.293
	FR1 n78_Ant 5	100M	BPSK	1	1	Back	10mm	State 3	650000	3750	18.95	19.50	1.135	0.11	0.233	0.264
	FR1 n78_Ant 5	100M	BPSK	1	1	Left Side	10mm	State 3	650000	3750	18.95	19.50	1.135	-0.04	0.482	0.547
	FR1 n78_Ant 5	100M	BPSK	135	0	Front	10mm	State 3	650000	3750	18.77	19.50	1.183	-0.15	0.239	0.283
	FR1 n78_Ant 5	100M	BPSK	135	0	Back	10mm	State 3	650000	3750	18.77	19.50	1.183	-0.05	0.218	0.258
	FR1 n78_Ant 5	100M	BPSK	135	0	Left Side	10mm	State 3	650000	3750	18.77	19.50	1.183	0.14	0.459	0.543
	FR1 n78_Ant 5	100M	BPSK	1	1	Front	10mm	State 3	633332	3499.98	19.29	19.50	1.050	-0.09	0.111	0.116
	FR1 n78_Ant 5	100M	BPSK	1	1	Back	10mm	State 3	633332	3499.98	19.29	19.50	1.050	-0.15	0.096	0.101
	FR1 n78_Ant 5	100M	BPSK	1	1	Left Side	10mm	State 3	633332	3499.98	19.29	19.50	1.050	-0.11	0.208	0.218
	FR1 n78_Ant 5	100M	BPSK	135	0	Front	10mm	State 3	633332	3499.98	19.08	19.50	1.102	0.17	0.103	0.113
	FR1 n78_Ant 5	100M	BPSK	135	0	Back	10mm	State 3	633332	3499.98	19.08	19.50	1.102	0.03	0.094	0.104
	FR1 n78_Ant 5	100M	BPSK	135	0	Left Side	10mm	State 3	633332	3499.98	19.08	19.50	1.102	-0.18	0.198	0.218
	FR1 n78_Ant 6	100M	BPSK	1	1	Front	10mm	State 3	650000	3750	17.56	19	1.393	0.17	0.097	0.135
56	FR1 n78_Ant 6	100M	BPSK	1	1	Back	10mm	State 3	650000	3750	17.56	19	1.393	-0.05	0.433	0.603
	FR1 n78_Ant 6	100M	BPSK	1	1	Left Side	10mm	State 3	650000	3750	17.56	19	1.393	0.15	0.148	0.206
	FR1 n78_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	State 3	650000	3750	17.56	19	1.393	0.18	0.001	0.001
	FR1 n78_Ant 6	100M	BPSK	135	0	Front	10mm	State 3	650000	3750	16.91	18.5	1.442	-0.08	0.112	0.162
	FR1 n78_Ant 6	100M	BPSK	135	0	Back	10mm	State 3	650000	3750	16.91	18.5	1.442	0.19	0.401	0.578
	FR1 n78_Ant 6	100M	BPSK	135	0	Left Side	10mm	State 3	650000	3750	16.91	18.5	1.442	0	0.125	0.180
	FR1 n78_Ant 6	100M	BPSK	135	0	Bottom Side	10mm	State 3	650000	3750	16.91	18.5	1.442	0.16	0.001	0.001
	FR1 n78_Ant 6	100M	BPSK	1	1	Front	10mm	State 3	633332	3499.98	18	19	1.259	0.15	0.105	0.132
	FR1 n78_Ant 6	100M	BPSK	1	1	Back	10mm	State 3	633332	3499.98	18	19	1.259	-0.05	0.344	0.433
	FR1 n78_Ant 6	100M	BPSK	1	1	Left Side	10mm	State 3	633332	3499.98	18	19	1.259	-0.01	0.133	0.167
	FR1 n78_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	State 3	633332	3499.98	18	19	1.259	0.14	0.001	0.001
	FR1 n78_Ant 6	100M	BPSK	135	0	Front	10mm	State 3	633332	3499.98	17.68	18.5	1.208	-0.18	0.094	0.114
	FR1 n78_Ant 6	100M	BPSK	135	0	Back	10mm	State 3	633332	3499.98	17.68	18.5	1.208	0.12	0.355	0.429
	FR1 n78_Ant 6	100M	BPSK	135	0	Left Side	10mm	State 3	633332	3499.98	17.68	18.5	1.208	0.07	0.132	0.159
	FR1 n78_Ant 6	100M	BPSK	135	0	Bottom Side	10mm	State 3	633332	3499.98	17.68	18.5	1.208	0.07	0.001	0.001



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 7	State 3	1	2412	20.51	21.00	1.119	98.20	1.018	0.16	0.232	0.264
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 7	State 3	1	2412	20.51	21.00	1.119	98.20	1.018	0.08	0.178	0.203
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 7	State 3	1	2412	20.51	21.00	1.119	98.20	1.018	0.02	0.390	0.444
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 7	State 3	6	2437	20.22	21.00	1.197	98.20	1.018	0.18	0.407	0.496
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 7	State 3	11	2462	20.42	21.00	1.143	98.20	1.018	-0.1	0.436	0.507
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 7	State 3	1	2412	20.51	21.00	1.119	98.20	1.018	0.17	0.007	0.008
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 8	State 3	1	2412	20.37	21.00	1.156	98.20	1.018	-0.16	0.183	0.215
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 8	State 3	1	2412	20.37	21.00	1.156	98.20	1.018	-0.1	0.109	0.128
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 8	State 3	1	2412	20.37	21.00	1.156	98.20	1.018	0.04	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 8	State 3	1	2412	20.37	21.00	1.156	98.20	1.018	-0.08	0.327	0.385
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 8	State 3	6	2437	20.12	21.00	1.225	98.20	1.018	-0.16	0.329	0.410
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 8	State 3	11	2462	20.23	21.00	1.194	98.20	1.018	-0.07	0.305	0.371
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 7+8(7)	State 3	1	2412	20.90	21.00	1.023	98.20	1.018	-0.17	0.245	0.255
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 7+8(8)	State 3	1	2412	20.40	21.00	1.148	98.20	1.018	-0.17	0.320	0.374
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 7+8(7)	State 3	1	2412	20.90	21.00	1.023	98.20	1.018	-0.18	0.224	0.233
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 7+8(8)	State 3	1	2412	20.40	21.00	1.148	98.20	1.018	-0.18	0.303	0.354
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 7+8(7)	State 3	1	2412	20.90	21.00	1.023	98.20	1.018	0.01	0.549	0.572
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 7+8(8)	State 3	1	2412	20.40	21.00	1.148	98.20	1.018	0.11	0.014	0.016
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 7+8(8)	State 3	1	2412	20.40	21.00	1.148	98.20	1.018	0.05	0.593	0.693
57	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 7+8(8)	State 3	6	2437	20.20	21.00	1.202	98.20	1.018	-0.02	0.681	0.833
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 7+8(8)	State 3	11	2462	20.10	21.00	1.230	98.20	1.018	-0.03	0.606	0.759



Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 7	State 3	46	5230	19.50	20.00	1.122	99.6	1.004	0.19	0.146	0.164
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 7	State 3	46	5230	19.50	20.00	1.122	99.6	1.004	-0.01	0.218	0.246
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 7	State 3	46	5230	19.50	20.00	1.122	99.6	1.004	-0.09	0.107	0.121
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 7	State 3	46	5230	19.50	20.00	1.122	99.6	1.004	0.15	0.043	0.048
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 8	State 3	46	5230	19.30	20.00	1.175	99.6	1.004	0.04	0.045	0.053
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 8	State 3	46	5230	19.30	20.00	1.175	99.6	1.004	0.11	0.162	0.191
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 8	State 3	46	5230	19.30	20.00	1.175	99.6	1.004	-0.18	0.065	0.077
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 8	State 3	46	5230	19.30	20.00	1.175	99.6	1.004	-0.11	0.106	0.125
58	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 7+8(7)	State 3	46	5230	19.60	20.00	1.096	99.6	1.004	0.19	0.179	0.197
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 7+8(8)	State 3	46	5230	19.50	20.00	1.122	99.6	1.004	0.19	0.012	0.014
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 7+8(7)	State 3	46	5230	19.60	20.00	1.096	99.6	1.004	0.08	0.321	0.353
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 7+8(8)	State 3	46	5230	19.50	20.00	1.122	99.6	1.004	0.08	0.236	0.266
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 7+8(7)	State 3	46	5230	19.60	20.00	1.096	99.6	1.004	-0.15	0.210	0.231
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 7+8(8)	State 3	46	5230	19.50	20.00	1.122	99.6	1.004	0.03	0.088	0.099
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 7+8(7)	State 3	46	5230	19.60	20.00	1.096	99.6	1.004	-0.06	0.009	0.010
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 7+8(8)	State 3	46	5230	19.50	20.00	1.122	99.6	1.004	-0.06	0.129	0.145
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 7	State 3	155	5775	18.85	19.00	1.035	99.6	1.004	0.02	0.179	0.186
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 7	State 3	155	5775	18.85	19.00	1.035	99.6	1.004	0.06	0.331	0.344
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 7	State 3	155	5775	18.85	19.00	1.035	99.6	1.004	-0.08	0.286	0.297
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 7	State 3	155	5775	18.85	19.00	1.035	99.6	1.004	0.04	0.030	0.031
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 8	State 3	155	5775	18.92	19.00	1.019	99.6	1.004	-0.03	0.107	0.109
59	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 8	State 3	155	5775	18.92	19.00	1.019	99.6	1.004	0.08	0.563	0.576
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 8	State 3	155	5775	18.92	19.00	1.019	99.6	1.004	0.16	0.164	0.168
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 8	State 3	155	5775	18.92	19.00	1.019	99.6	1.004	0.01	0.232	0.237
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 7+8(7)	State 3	155	5775	18.96	19.00	1.009	99.6	1.004	0.02	0.215	0.218
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 7+8(8)	State 3	155	5775	18.58	19.00	1.102	99.6	1.004	0.02	0.090	0.100
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 7+8(7)	State 3	155	5775	18.96	19.00	1.009	99.6	1.004	-0.09	0.287	0.291
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 7+8(8)	State 3	155	5775	18.58	19.00	1.102	99.6	1.004	-0.09	0.477	0.528
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 7+8(7)	State 3	155	5775	18.96	19.00	1.009	99.6	1.004	0.05	0.281	0.285
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 7+8(8)	State 3	155	5775	18.58	19.00	1.102	99.6	1.004	-0.01	0.165	0.182
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 7+8(7)	State 3	155	5775	18.96	19.00	1.009	99.6	1.004	0.06	0.025	0.025
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 7+8(8)	State 3	155	5775	18.58	19.00	1.102	99.6	1.004	0.06	0.206	0.228

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	10mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	0.12	0.036	0.046
	Bluetooth	1Mbps	Back	10mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	0.11	0.028	0.036
	Bluetooth	1Mbps	Left Side	10mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	-0.01	0.059	0.075
	Bluetooth	1Mbps	Left Side	10mm	Ant 7	0	2402	15.59	17.00	1.384	76.83	1.084	0.13	0.028	0.042
	Bluetooth	1Mbps	Left Side	10mm	Ant 7	78	2480	16.16	17.00	1.213	76.83	1.084	0.01	0.046	0.061
	Bluetooth	1Mbps	Top Side	10mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	-0.15	0.001	0.001
	Bluetooth	1Mbps	Front	10mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	-0.11	0.042	0.049
	Bluetooth	1Mbps	Back	10mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	0.04	0.029	0.034
	Bluetooth	1Mbps	Right Side	10mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	0.1	0.001	0.001
60	Bluetooth	1Mbps	Top Side	10mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	0.09	0.064	0.075
	Bluetooth	1Mbps	Top Side	10mm	Ant 8	0	2402	14.63	16.00	1.372	76.83	1.084	-0.15	0.025	0.037
	Bluetooth	1Mbps	Top Side	10mm	Ant 8	78	2480	15.24	17.00	1.501	76.83	1.084	0.06	0.042	0.068

14.3 Body-Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 1	GPRS (2 Tx slots)	Front	15mm	State 0	189	836.4	32.14	34.00	1.535	0.06	0.122	0.187
61	GSM850_Ant 1	GPRS (2 Tx slots)	Back	15mm	State 0	189	836.4	32.14	34.00	1.535	0.01	0.177	0.272
	GSM850_Ant 3	GPRS (2 Tx slots)	Front	15mm	State 0	189	836.4	31.89	33.00	1.291	-0.1	0.128	0.165
	GSM850_Ant 3	GPRS (2 Tx slots)	Back	15mm	State 0	189	836.4	31.89	33.00	1.291	-0.05	0.145	0.187
62	GSM1900_Ant 2	GPRS (2 Tx slots)	Front	15mm	State 0	661	1880	29.20	31.00	1.514	0.03	0.178	0.269
	GSM1900_Ant 2	GPRS (2 Tx slots)	Back	15mm	State 0	661	1880	29.20	31.00	1.514	0.14	0.166	0.251
	GSM1900_Ant 4	GPRS (2 Tx slots)	Front	15mm	State 0	661	1880	29.34	30.50	1.306	0.11	0.121	0.158
	GSM1900_Ant 4	GPRS (2 Tx slots)	Back	15mm	State 0	661	1880	29.34	30.50	1.306	0.05	0.154	0.201

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
63	WCDMA II_Ant 2	RMC 12.2Kbps	Front	15mm	State 0	9400	1880	23.88	25.00	1.294	0.02	0.232	0.300
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	15mm	State 0	9400	1880	23.88	25.00	1.294	-0.08	0.211	0.273
	WCDMA II_Ant 4	RMC 12.2Kbps	Front	15mm	State 0	9400	1880	23.38	24.00	1.153	-0.05	0.051	0.059
	WCDMA II_Ant 4	RMC 12.2Kbps	Back	15mm	State 0	9400	1880	23.38	24.00	1.153	0.01	0.057	0.066
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	15mm	State 0	1413	1732.6	23.75	25.00	1.334	-0.05	0.191	0.255
64	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	15mm	State 0	1413	1732.6	23.75	25.00	1.334	0.06	0.200	0.267
	WCDMA IV_Ant 4	RMC 12.2Kbps	Front	15mm	State 0	1413	1732.6	23.30	25.00	1.479	-0.07	0.074	0.109
	WCDMA IV_Ant 4	RMC 12.2Kbps	Back	15mm	State 0	1413	1732.6	23.30	25.00	1.479	0.13	0.066	0.098
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	15mm	State 0	4182	836.4	23.77	25.00	1.327	0.18	0.074	0.098
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	10mm	State 0	4182	836.4	23.77	25.00	1.327	0.03	0.086	0.114
	WCDMA V_Ant 3	RMC 12.2Kbps	Front	15mm	State 0	4182	836.4	22.63	24.00	1.371	0.02	0.081	0.111
65	WCDMA V_Ant 3	RMC 12.2Kbps	Back	15mm	State 0	4182	836.4	22.63	24.00	1.371	0.07	0.095	0.130

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 1	20M	QPSK	1	49	Front	15mm	State 0	21350	2560	23.65	24.50	1.216	-0.03	0.101	0.123
	LTE Band 7_Ant 1	20M	QPSK	1	49	Back	15mm	State 0	21350	2560	23.65	24.50	1.216	-0.05	0.163	0.198
	LTE Band 7_Ant 1	20M	QPSK	50	0	Front	15mm	State 0	21350	2560	22.71	23.50	1.199	0.05	0.089	0.107
	LTE Band 7_Ant 1	20M	QPSK	50	0	Back	15mm	State 0	21350	2560	22.71	23.50	1.199	0.14	0.112	0.134
66	LTE Band 7_Ant 2	20M	QPSK	1	49	Front	15mm	State 0	21100	2535	23.71	24.50	1.199	0.08	0.349	0.419
	LTE Band 7_Ant 2	20M	QPSK	1	49	Back	15mm	State 0	21100	2535	23.71	24.50	1.199	-0.05	0.201	0.241
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	15mm	State 0	21100	2535	22.64	23.50	1.219	0.14	0.220	0.268
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	15mm	State 0	21100	2535	22.64	23.50	1.219	0.11	0.189	0.230
	LTE Band 7C_Ant 2	20M	QPSK	1	0	Front	15mm	State 0	21100	2535	23.00	24.50	1.413	0.09	0.212	0.299
	LTE Band 7_Ant 4	20M	QPSK	1	49	Front	15mm	State 0	21100	2535	22.55	24.00	1.396	0.05	0.136	0.190
	LTE Band 7_Ant 4	20M	QPSK	1	49	Back	15mm	State 0	21100	2535	22.55	24.00	1.396	-0.11	0.121	0.169
	LTE Band 7_Ant 4	20M	QPSK	50	0	Front	15mm	State 0	21100	2535	21.65	23.00	1.365	0.02	0.105	0.143
	LTE Band 7_Ant 4	20M	QPSK	50	0	Back	15mm	State 0	21100	2535	21.65	23.00	1.365	0.18	0.096	0.131
	LTE Band 7C_Ant 4	20M	QPSK	1	0	Front	15mm	State 0	21350	2560	23.18	24.00	1.208	0.05	0.101	0.122



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
67	LTE Band 12_Ant 1	10M	QPSK	1	25	Front	15mm	State 0	23095	707.5	23.09	24.50	1.384	0.1	0.081	0.112
	LTE Band 12_Ant 1	10M	QPSK	1	25	Back	15mm	State 0	23095	707.5	23.09	24.50	1.384	-0.05	0.098	0.136
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	15mm	State 0	23095	707.5	22.15	23.50	1.365	0.07	0.069	0.094
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	15mm	State 0	23095	707.5	22.15	23.50	1.365	0.02	0.079	0.108
	LTE Band 12_Ant 3	10M	QPSK	1	25	Front	15mm	State 0	23095	707.5	22.65	24.50	1.531	-0.15	0.051	0.078
	LTE Band 12_Ant 3	10M	QPSK	1	25	Back	15mm	State 0	23095	707.5	22.65	24.50	1.531	-0.03	0.057	0.087
	LTE Band 12_Ant 3	10M	QPSK	25	0	Front	15mm	State 0	23095	707.5	21.76	23.50	1.493	0.05	0.032	0.048
	LTE Band 12_Ant 3	10M	QPSK	25	0	Back	15mm	State 0	23095	707.5	21.76	23.50	1.493	-0.05	0.036	0.054
68	LTE Band 25_Ant 2	20M	QPSK	1	49	Front	15mm	State 0	26340	1880	23.28	24.50	1.324	-0.17	0.214	0.283
	LTE Band 25_Ant 2	20M	QPSK	1	49	Back	15mm	State 0	26340	1880	23.28	24.50	1.324	0.05	0.199	0.264
	LTE Band 25_Ant 2	20M	QPSK	50	0	Front	15mm	State 0	26340	1880	22.39	23.50	1.291	-0.1	0.175	0.226
	LTE Band 25_Ant 2	20M	QPSK	50	0	Back	15mm	State 0	26340	1880	22.39	23.50	1.291	-0.04	0.166	0.214
	LTE Band 25_Ant 4	20M	QPSK	1	49	Front	15mm	State 0	26340	1880	22.66	24.00	1.361	0.03	0.049	0.067
	LTE Band 25_Ant 4	20M	QPSK	1	49	Back	15mm	State 0	26340	1880	22.66	24.00	1.361	0.06	0.053	0.072
	LTE Band 25_Ant 4	20M	QPSK	50	0	Front	15mm	State 0	26340	1880	21.71	23.00	1.346	0.16	0.041	0.055
	LTE Band 25_Ant 4	20M	QPSK	50	0	Back	15mm	State 0	26340	1880	21.71	23.00	1.346	-0.16	0.038	0.051
69	LTE Band 26_Ant 1	15M	QPSK	1	37	Front	15mm	State 0	26865	831.5	22.99	24.50	1.416	0.1	0.078	0.110
	LTE Band 26_Ant 1	15M	QPSK	1	37	Back	15mm	State 0	26865	831.5	22.99	24.50	1.416	-0.05	0.081	0.115
	LTE Band 26_Ant 1	15M	QPSK	36	0	Front	15mm	State 0	26865	831.5	22.00	23.50	1.413	-0.03	0.066	0.093
	LTE Band 26_Ant 1	15M	QPSK	36	0	Back	15mm	State 0	26865	831.5	22.00	23.50	1.413	-0.02	0.071	0.100
	LTE Band 26_Ant 3	15M	QPSK	1	37	Front	15mm	State 0	26865	831.5	22.60	24.50	1.549	0.03	0.066	0.102
	LTE Band 26_Ant 3	15M	QPSK	1	37	Back	15mm	State 0	26865	831.5	22.60	24.50	1.549	0.18	0.071	0.110
	LTE Band 26_Ant 3	15M	QPSK	36	0	Front	15mm	State 0	26865	831.5	21.75	23.50	1.496	0.06	0.051	0.076
	LTE Band 26_Ant 3	15M	QPSK	36	0	Back	15mm	State 0	26865	831.5	21.75	23.50	1.496	0.02	0.043	0.064
70	LTE Band 30_Ant 2	10M	QPSK	1	25	Front	15mm	State 0	27710	2310	24.36	24.50	1.033	0.08	0.227	0.234
	LTE Band 30_Ant 2	10M	QPSK	1	25	Back	15mm	State 0	27710	2310	24.36	24.50	1.033	0.19	0.201	0.208
	LTE Band 30_Ant 2	10M	QPSK	25	0	Front	15mm	State 0	27710	2310	23.32	23.50	1.042	0.06	0.184	0.192
	LTE Band 30_Ant 2	10M	QPSK	25	0	Back	15mm	State 0	27710	2310	23.32	23.50	1.042	0.12	0.166	0.173
	LTE Band 30_Ant 4	10M	QPSK	1	25	Front	15mm	State 0	27710	2310	22.80	24.50	1.479	0.07	0.141	0.209
	LTE Band 30_Ant 4	10M	QPSK	1	25	Back	15mm	State 0	27710	2310	22.80	24.50	1.479	0.03	0.154	0.228
	LTE Band 30_Ant 4	10M	QPSK	25	0	Front	15mm	State 0	27710	2310	21.74	23.50	1.500	-0.14	0.120	0.180
	LTE Band 30_Ant 4	10M	QPSK	25	0	Back	15mm	State 0	27710	2310	21.74	23.50	1.500	0.09	0.116	0.174
71	LTE Band 66_Ant 2	20M	QPSK	1	49	Front	15mm	State 0	132322	1745	22.83	24.50	1.469	0.06	0.207	0.304
	LTE Band 66_Ant 2	20M	QPSK	1	49	Back	15mm	State 0	132322	1745	22.83	24.50	1.469	0.08	0.196	0.288
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	15mm	State 0	132322	1745	21.76	23.50	1.493	-0.17	0.164	0.245
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	15mm	State 0	132322	1745	21.76	23.50	1.493	-0.13	0.155	0.231
	LTE Band 66_Ant 4	20M	QPSK	1	49	Front	15mm	State 0	132322	1745	22.80	24.50	1.479	0.19	0.046	0.068
	LTE Band 66_Ant 4	20M	QPSK	1	49	Back	15mm	State 0	132322	1745	22.80	24.50	1.479	0.02	0.039	0.058
	LTE Band 66_Ant 4	20M	QPSK	50	0	Front	15mm	State 0	132322	1745	21.97	23.50	1.422	0.14	0.032	0.046
	LTE Band 66_Ant 4	20M	QPSK	50	0	Back	15mm	State 0	132322	1745	21.97	23.50	1.422	0.06	0.026	0.037
72	LTE Band 71_ant 1	20M	QPSK	1	49	Front	15mm	State 0	133297	680.5	23.05	24.50	1.396	-0.06	0.031	0.043
	LTE Band 71_ant 1	20M	QPSK	1	49	Back	15mm	State 0	133297	680.5	23.05	24.50	1.396	-0.04	0.037	0.052
	LTE Band 71_ant 1	20M	QPSK	50	0	Front	15mm	State 0	133297	680.5	22.10	23.50	1.380	-0.05	0.026	0.036
	LTE Band 71_ant 1	20M	QPSK	50	0	Back	15mm	State 0	133297	680.5	22.10	23.50	1.380	0.12	0.021	0.029
	LTE Band 71_Ant 3	20M	QPSK	1	49	Front	15mm	State 0	133297	680.5	22.60	24.00	1.380	-0.13	0.039	0.054
	LTE Band 71_Ant 3	20M	QPSK	1	49	Back	15mm	State 0	133297	680.5	22.60	24.00	1.380	-0.01	0.046	0.063
	LTE Band 71_Ant 3	20M	QPSK	50	0	Front	15mm	State 0	133297	680.5	21.78	23.00	1.324	0.19	0.036	0.048
	LTE Band 71_Ant 3	20M	QPSK	50	0	Back	15mm	State 0	133297	680.5	21.78	23.00	1.324	-0.14	0.031	0.041



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
73	LTE Band 41_Ant 2	20M	QPSK	1	49	Front	15mm	State 0	40185	2549.5	23.30	23.50	1.047	62.9	1.006	0.11	0.142	0.150
	LTE Band 41_Ant 2	20M	QPSK	1	49	Back	15mm	State 0	40185	2549.5	23.30	23.50	1.047	62.9	1.006	0.03	0.099	0.104
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	15mm	State 0	40185	2549.5	22.25	22.50	1.059	62.9	1.006	0.09	0.106	0.113
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	15mm	State 0	40185	2549.5	22.25	22.50	1.059	62.9	1.006	0.04	0.078	0.083
	LTE Band 41C_Ant 2	20M	QPSK	50	0	Front	15mm	State 0	41055	2636.5	23.02	24.50	1.406	62.9	1.006	0.09	0.105	0.149
	LTE Band 41_Ant 4	20M	QPSK	1	49	Front	15mm	State 0	40185	2549.5	22.71	23.00	1.069	62.9	1.006	0.14	0.084	0.090
	LTE Band 41_Ant 4	20M	QPSK	1	49	Back	15mm	State 0	40185	2549.5	22.71	23.00	1.069	62.9	1.006	-0.1	0.080	0.086
	LTE Band 41_Ant 4	20M	QPSK	50	0	Front	15mm	State 0	40185	2549.5	21.76	22.00	1.057	62.9	1.006	0.16	0.066	0.070
	LTE Band 41_Ant 4	20M	QPSK	50	0	Back	15mm	State 0	40185	2549.5	21.76	22.00	1.057	62.9	1.006	0.18	0.061	0.065
	LTE Band 41C_Ant 4	20M	QPSK	50	0	Front	15mm	State 0	41490	2636.5	23.28	24.00	1.180	62.9	1.006	0.01	0.072	0.085
	LTE Band 42_Ant 4	20M	QPSK	1	49	Front	15mm	State 0	42190	3460	24.17	24.50	1.079	62.9	1.006	0.19	0.142	0.154
74	LTE Band 42_Ant 4	20M	QPSK	1	49	Back	15mm	State 0	42190	3460	24.17	24.50	1.079	62.9	1.006	-0.11	0.191	0.207
	LTE Band 42_Ant 4	20M	QPSK	50	0	Front	15mm	State 0	42190	3460	23.15	23.50	1.084	62.9	1.006	0.03	0.133	0.145
	LTE Band 42_Ant 4	20M	QPSK	50	0	Back	15mm	State 0	42190	3460	23.15	23.50	1.084	62.9	1.006	-0.16	0.178	0.194
	LTE Band 42_Ant 5	20M	QPSK	1	49	Front	15mm	State 0	42190	3460	23.45	24.50	1.274	62.9	1.006	0.03	0.096	0.123
	LTE Band 42_Ant 5	20M	QPSK	1	49	Back	15mm	State 0	42190	3460	23.45	24.50	1.274	62.9	1.006	-0.12	0.111	0.142
	LTE Band 42_Ant 5	20M	QPSK	50	0	Front	15mm	State 0	42190	3460	22.40	23.50	1.288	62.9	1.006	-0.07	0.084	0.109
	LTE Band 42_Ant 5	20M	QPSK	50	0	Back	15mm	State 0	42190	3460	22.40	23.50	1.288	62.9	1.006	-0.17	0.091	0.118

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n5_Ant 1	20M	BPSK	1	53	Front	15mm	State 0	167300	836.5	23.69	24.50	1.205	-0.17	0.038	0.046
	FR1 n5_Ant 1	20M	BPSK	1	53	Back	15mm	State 0	167300	836.5	23.69	24.50	1.205	-0.06	0.048	0.058
	FR1 n5_Ant 1	20M	BPSK	50	28	Front	15mm	State 0	167300	836.5	23.56	24.50	1.242	0.04	0.029	0.036
	FR1 n5_Ant 1	20M	BPSK	50	28	Back	15mm	State 0	167300	836.5	23.56	24.50	1.242	0.13	0.036	0.045
	FR1 n5_Ant 3	20M	BPSK	1	53	Front	15mm	State 0	167300	836.5	22.77	24.50	1.489	0.09	0.065	0.097
	FR1 n5_Ant 3	20M	BPSK	1	53	Back	15mm	State 0	167300	836.5	22.77	24.50	1.489	-0.1	0.076	0.113
	FR1 n5_Ant 3	20M	BPSK	50	28	Front	15mm	State 0	167300	836.5	22.60	24.50	1.549	-0.15	0.071	0.110
75	FR1 n5_Ant 3	20M	BPSK	50	28	Back	15mm	State 0	167300	836.5	22.60	24.50	1.549	-0.02	0.079	0.122
	FR1 n7_Ant 2	40M	BPSK	1	108	Back	15mm	State 0	507000	2535	23.59	24.50	1.233	0.15	0.122	0.150
	FR1 n7_Ant 2	40M	BPSK	1	108	Back	15mm	State 0	507000	2535	23.59	24.50	1.233	-0.01	0.063	0.078
	FR1 n7_Ant 2	40M	BPSK	108	54	Back	15mm	State 0	507000	2535	23.44	24.50	1.276	-0.09	0.191	0.244
	FR1 n7_Ant 2	40M	BPSK	108	54	Back	15mm	State 0	507000	2535	23.44	24.50	1.276	-0.14	0.064	0.082
76	FR1 n7_Ant 4	40M	BPSK	1	108	Front	15mm	State 0	507000	2535	22.55	24.50	1.567	0.07	0.213	0.334
	FR1 n7_Ant 4	40M	BPSK	1	108	Back	15mm	State 0	507000	2535	22.55	24.50	1.567	-0.12	0.196	0.307
	FR1 n7_Ant 4	40M	BPSK	108	54	Front	15mm	State 0	507000	2535	22.58	24.50	1.556	0.09	0.199	0.310
	FR1 n7_Ant 4	40M	BPSK	108	54	Back	15mm	State 0	507000	2535	22.58	24.50	1.556	-0.03	0.180	0.280
	FR1 n12_Ant 1	15M	BPSK	1	40	Front	15mm	State 0	141500	707.5	23.92	24.50	1.143	0.17	0.016	0.018
	FR1 n12_Ant 1	15M	BPSK	1	40	Back	15mm	State 0	141500	707.5	23.92	24.50	1.143	-0.02	0.029	0.033
	FR1 n12_Ant 1	15M	BPSK	36	22	Front	15mm	State 0	141500	707.5	23.93	24.50	1.140	-0.09	0.021	0.024
77	FR1 n12_Ant 1	15M	BPSK	36	22	Back	15mm	State 0	141500	707.5	23.93	24.50	1.140	-0.02	0.035	0.040
	FR1 n12_Ant 3	15M	BPSK	1	40	Front	15mm	State 0	141500	707.5	23.69	24.50	1.205	0.07	0.021	0.025
	FR1 n12_Ant 3	15M	BPSK	1	40	Back	15mm	State 0	141500	707.5	23.69	24.50	1.205	-0.04	0.029	0.035
	FR1 n12_Ant 3	15M	BPSK	36	22	Front	15mm	State 0	141500	707.5	23.64	24.50	1.219	-0.18	0.026	0.032
	FR1 n12_Ant 3	15M	BPSK	36	22	Back	15mm	State 0	141500	707.5	23.64	24.50	1.219	-0.07	0.030	0.037



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n25_Ant 2	40M	BPSK	1	108	Front	15mm	State 0	376500	1882.5	23.61	24.50	1.227	-0.13	0.141	0.173
	FR1 n25_Ant 2	40M	BPSK	1	108	Back	15mm	State 0	376500	1882.5	23.61	24.50	1.227	0.12	0.132	0.162
78	FR1 n25_Ant 2	40M	BPSK	108	54	Front	15mm	State 0	376500	1882.5	23.46	24.50	1.271	0.03	0.148	0.188
	FR1 n25_Ant 2	40M	BPSK	108	54	Back	15mm	State 0	376500	1882.5	23.46	24.50	1.271	0.04	0.133	0.169
	FR1 n25_Ant 4	40M	BPSK	1	108	Front	15mm	State 0	376500	1882.5	22.71	24.50	1.510	-0.03	0.046	0.069
	FR1 n25_Ant 4	40M	BPSK	1	108	Back	15mm	State 0	376500	1882.5	22.71	24.50	1.510	0.14	0.031	0.047
	FR1 n25_Ant 4	40M	BPSK	108	54	Front	15mm	State 0	376500	1882.5	22.53	24.50	1.574	0.15	0.036	0.057
	FR1 n25_Ant 4	40M	BPSK	108	54	Back	15mm	State 0	376500	1882.5	22.53	24.50	1.574	0.07	0.049	0.077
	FR1 n66_Ant 2	40M	BPSK	1	108	Front	15mm	State 0	349000	1745	23.10	24.50	1.380	-0.02	0.128	0.177
	FR1 n66_Ant 2	40M	BPSK	1	108	Back	15mm	State 0	349000	1745	23.10	24.50	1.380	0.17	0.131	0.181
	FR1 n66_Ant 2	40M	BPSK	108	54	Front	15mm	State 0	349000	1745	23.06	24.50	1.393	-0.07	0.129	0.180
79	FR1 n66_Ant 2	40M	BPSK	108	54	Back	15mm	State 0	349000	1745	23.06	24.50	1.393	0.04	0.139	0.194
	FR1 n66_Ant 4	40M	BPSK	1	108	Front	15mm	State 0	349000	1745	22.60	24.50	1.549	0.12	0.051	0.079
	FR1 n66_Ant 4	40M	BPSK	1	108	Back	15mm	State 0	349000	1745	22.60	24.50	1.549	0.13	0.061	0.094
	FR1 n66_Ant 4	40M	BPSK	108	54	Front	15mm	State 0	349000	1745	22.52	24.50	1.578	0.02	0.054	0.085
	FR1 n66_Ant 4	40M	BPSK	108	54	Back	15mm	State 0	349000	1745	22.52	24.50	1.578	-0.02	0.063	0.099
	FR1 n71_Ant 1	20M	BPSK	1	53	Front	15mm	State 0	136100	680.5	23.52	24.50	1.253	-0.17	0.018	0.023
	FR1 n71_Ant 1	20M	BPSK	1	53	Back	15mm	State 0	136100	680.5	23.52	24.50	1.253	-0.16	0.026	0.033
	FR1 n71_Ant 1	20M	BPSK	50	28	Front	15mm	State 0	136100	680.5	22.74	24.50	1.500	-0.13	0.020	0.030
80	FR1 n71_Ant 1	20M	BPSK	50	28	Back	15mm	State 0	136100	680.5	22.74	24.50	1.500	-0.1	0.033	0.049
	FR1 n71_Ant 3	20M	BPSK	1	53	Front	15mm	State 0	136100	680.5	22.81	24.50	1.476	0.1	0.012	0.018
	FR1 n71_Ant 3	20M	BPSK	1	53	Back	15mm	State 0	136100	680.5	22.81	24.50	1.476	0.01	0.014	0.021
	FR1 n71_Ant 3	20M	BPSK	50	28	Front	15mm	State 0	136100	680.5	22.64	24.50	1.535	-0.02	0.011	0.017
	FR1 n71_Ant 3	20M	BPSK	50	28	Back	15mm	State 0	136100	680.5	22.64	24.50	1.535	0.07	0.015	0.023
	FR1 n41_Ant 2	100M	BPSK	1	137	Front	15mm	State 0	518598	2592.99	23.77	24.50	1.183	-0.18	0.170	0.201
	FR1 n41_Ant 2	100M	BPSK	1	137	Back	15mm	State 0	518598	2592.99	23.77	24.50	1.183	0.01	0.122	0.144
	FR1 n41_Ant 2	100M	BPSK	135	69	Front	15mm	State 0	518598	2592.99	23.60	24.50	1.230	-0.06	0.187	0.230
	FR1 n41_Ant 2	100M	BPSK	135	69	Back	15mm	State 0	518598	2592.99	23.60	24.50	1.230	0.18	0.132	0.162
	FR1 n41_Ant 4	100M	BPSK	1	137	Front	15mm	State 0	518598	2592.99	22.69	24.50	1.517	0.13	0.199	0.302
	FR1 n41_Ant 4	100M	BPSK	1	137	Back	15mm	State 0	518598	2592.99	22.69	24.50	1.517	0.02	0.189	0.287
81	FR1 n41_Ant 4	100M	BPSK	135	69	Back	15mm	State 0	518598	2592.99	22.58	24.50	1.556	-0.01	0.202	0.314
	FR1 n41_Ant 4	100M	BPSK	135	69	Back	15mm	State 0	518598	2592.99	22.58	24.50	1.556	0.17	0.184	0.286



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Ant 2	100M	BPSK	1	137	Front	15mm	State 0	656000	3840	21.21	22.00	1.199	0.02	0.101	0.121
	FR1 n77_Ant 2	100M	BPSK	1	137	Back	15mm	State 0	656000	3840	21.21	22.00	1.199	0	0.137	0.164
	FR1 n77_Ant 2	100M	BPSK	135	69	Front	15mm	State 0	656000	3840	21.16	22.00	1.213	0	0.096	0.116
	FR1 n77_Ant 2	100M	BPSK	135	69	Back	15mm	State 0	656000	3840	21.16	22.00	1.213	-0.03	0.126	0.153
	FR1 n77_Ant 2	100M	BPSK	1	137	Front	15mm	State 0	633332	3499.98	20.53	22.00	1.403	-0.06	0.102	0.143
	FR1 n77_Ant 2	100M	BPSK	1	137	Back	15mm	State 0	633332	3499.98	20.53	22.00	1.403	0.19	0.135	0.189
	FR1 n77_Ant 2	100M	BPSK	135	69	Front	15mm	State 0	633332	3499.98	20.38	22.00	1.452	-0.16	0.111	0.161
	FR1 n77_Ant 2	100M	BPSK	135	69	Back	15mm	State 0	633332	3499.98	20.38	22.00	1.452	0.01	0.145	0.211
	FR1 n77_Ant 4	100M	BPSK	1	137	Front	15mm	State 0	656000	3840	23.36	24.50	1.300	-0.08	0.175	0.228
	FR1 n77_Ant 4	100M	BPSK	1	137	Back	15mm	State 0	656000	3840	23.36	24.50	1.300	0.17	0.346	0.450
	FR1 n77_Ant 4	100M	BPSK	135	69	Front	15mm	State 0	656000	3840	23.22	24.50	1.343	0.19	0.189	0.254
82	FR1 n77_Ant 4	100M	BPSK	135	69	Back	15mm	State 0	656000	3840	23.22	24.50	1.343	0.06	0.370	0.497
	FR1 n77_Ant 4	100M	BPSK	1	137	Front	15mm	State 0	633332	3499.98	23.67	24.50	1.211	0.01	0.115	0.139
	FR1 n77_Ant 4	100M	BPSK	1	137	Back	15mm	State 0	633332	3499.98	23.67	24.50	1.211	0	0.170	0.206
	FR1 n77_Ant 4	100M	BPSK	135	69	Front	15mm	State 0	633332	3499.98	23.49	24.50	1.262	0.1	0.121	0.153
	FR1 n77_Ant 4	100M	BPSK	135	69	Back	15mm	State 0	633332	3499.98	23.49	24.50	1.262	-0.08	0.185	0.233
	FR1 n77_Ant 5	100M	BPSK	1	137	Front	15mm	State 0	656000	3840	23.53	24.50	1.250	0.07	0.243	0.304
	FR1 n77_Ant 5	100M	BPSK	1	137	Back	15mm	State 0	656000	3840	23.53	24.50	1.250	0.07	0.211	0.264
	FR1 n77_Ant 5	100M	BPSK	135	69	Front	15mm	State 0	656000	3840	23.36	24.50	1.300	0.18	0.207	0.269
	FR1 n77_Ant 5	100M	BPSK	135	69	Back	15mm	State 0	656000	3840	23.36	24.50	1.300	0.18	0.199	0.259
	FR1 n77_Ant 5	100M	BPSK	1	137	Front	15mm	State 0	633332	3499.98	23.51	24.50	1.256	0.17	0.132	0.166
	FR1 n77_Ant 5	100M	BPSK	1	137	Back	15mm	State 0	633332	3499.98	23.51	24.50	1.256	-0.03	0.136	0.171
	FR1 n77_Ant 5	100M	BPSK	135	69	Front	15mm	State 0	633332	3499.98	23.41	24.50	1.285	-0.14	0.120	0.154
	FR1 n77_Ant 5	100M	BPSK	135	69	Back	15mm	State 0	633332	3499.98	23.41	24.50	1.285	0.1	0.129	0.166
	FR1 n77_Ant 6	100M	BPSK	1	137	Front	15mm	State 0	656000	3840	20.15	22.00	1.531	-0.02	0.053	0.081
	FR1 n77_Ant 6	100M	BPSK	1	137	Back	15mm	State 0	656000	3840	20.15	22.00	1.531	0.03	0.136	0.208
	FR1 n77_Ant 6	100M	BPSK	135	69	Front	15mm	State 0	656000	3840	20.04	22.00	1.570	-0.16	0.065	0.102
	FR1 n77_Ant 6	100M	BPSK	135	69	Back	15mm	State 0	656000	3840	20.04	22.00	1.570	0.02	0.135	0.212
	FR1 n77_Ant 6	100M	BPSK	1	137	Front	15mm	State 0	633332	3499.98	21.20	22.00	1.202	0.11	0.068	0.082
	FR1 n77_Ant 6	100M	BPSK	1	137	Back	15mm	State 0	633332	3499.98	21.20	22.00	1.202	0.01	0.211	0.254
	FR1 n77_Ant 6	100M	BPSK	135	69	Front	15mm	State 0	633332	3499.98	21.08	22.00	1.236	-0.09	0.076	0.094
	FR1 n77_Ant 6	100M	BPSK	135	69	Back	15mm	State 0	633332	3499.98	21.08	22.00	1.236	0.02	0.264	0.326



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7	State 0	1	2412	20.51	21.00	1.119	98.2	1.018	-0.02	0.130	0.148
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7	State 0	6	2437	20.22	21.00	1.197	98.2	1.018	0.09	0.129	0.157
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7	State 0	11	2462	20.42	21.00	1.143	98.2	1.018	-0.17	0.145	0.169
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 7	State 0	1	2412	20.51	21.00	1.119	98.2	1.018	-0.09	0.076	0.087
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 8	State 0	1	2412	20.37	21.00	1.156	98.2	1.018	-0.01	0.077	0.091
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 8	State 0	6	2437	20.12	21.00	1.225	98.2	1.018	0.02	0.104	0.130
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 8	State 0	11	2462	20.23	21.00	1.194	98.2	1.018	-0.09	0.093	0.113
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 8	State 0	1	2412	20.37	21.00	1.156	98.2	1.018	0	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7+8(7)	State 0	1	2412	20.90	21.00	1.023	98.2	1.018	-0.09	0.169	0.176
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7+8(8)	State 0	1	2412	20.40	21.00	1.148	98.2	1.018	-0.09	0.195	0.228
83	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7+8(7)	State 0	6	2437	21.00	21.00	1.000	98.2	1.018	-0.19	0.171	0.174
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7+8(8)	State 0	6	2437	20.20	21.00	1.202	98.2	1.018	-0.19	0.197	0.241
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7+8(7)	State 0	11	2462	20.90	21.00	1.023	98.2	1.018	-0.17	0.147	0.153
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 7+8(8)	State 0	11	2462	20.10	21.00	1.230	98.2	1.018	-0.17	0.139	0.174
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 7+8(7)	State 0	1	2412	20.90	21.00	1.023	98.2	1.018	-0.06	0.144	0.150
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 7+8(8)	State 0	1	2412	20.40	21.00	1.148	98.2	1.018	-0.06	0.189	0.221
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 7	State 0	54	5270	19.20	20.00	1.202	99.6	1.004	-0.12	0.109	0.132
84	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 7	State 0	54	5270	19.20	20.00	1.202	99.6	1.004	0.03	0.172	0.207
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 8	State 0	54	5270	19.40	20.00	1.148	99.6	1.004	-0.18	0.047	0.054
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 8	State 0	54	5270	19.40	20.00	1.148	99.6	1.004	0.05	0.138	0.159
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 7+8(7)	State 0	54	5270	19.50	20.00	1.122	99.6	1.004	0.09	0.114	0.128
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 7+8(8)	State 0	54	5270	19.50	20.00	1.122	99.6	1.004	0.09	0.033	0.037
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 7+8(7)	State 0	54	5270	19.50	20.00	1.122	99.6	1.004	-0.16	0.169	0.190
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 7+8(8)	State 0	54	5270	19.50	20.00	1.122	99.6	1.004	-0.16	0.138	0.155
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 7	State 0	110	5550	19.70	20.00	1.072	99.6	1.004	0.03	0.129	0.139
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 7	State 0	110	5550	19.70	20.00	1.072	99.6	1.004	0.1	0.218	0.235
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 8	State 0	134	5670	18.40	20.00	1.445	99.6	1.004	0.05	0.056	0.081
85	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 8	State 0	134	5670	18.40	20.00	1.445	99.6	1.004	0.08	0.236	0.342
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 7+8(7)	State 0	110	5550	19.80	20.00	1.047	99.6	1.004	0.09	0.118	0.124
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Ant 7+8(8)	State 0	110	5550	18.30	20.00	1.479	99.6	1.004	0.09	0.004	0.006
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 7+8(7)	State 0	110	5550	19.80	20.00	1.047	99.6	1.004	-0.1	0.222	0.233
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 7+8(8)	State 0	110	5550	18.30	20.00	1.479	99.6	1.004	-0.1	0.170	0.252
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 7	State 0	155	5775	19.58	20.00	1.102	99.6	1.004	-0.19	0.109	0.121
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 7	State 0	155	5775	19.58	20.00	1.102	99.6	1.004	0.07	0.240	0.265
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 8	State 0	155	5775	19.29	20.00	1.178	99.6	1.004	0.07	0.092	0.109
86	WLAN5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 8	State 0	155	5775	19.29	20.00	1.178	99.6	1.004	-0.16	0.471	0.557
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 7+8(7)	State 0	155	5775	19.80	20.00	1.047	99.6	1.004	-0.04	0.135	0.142
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 7+8(8)	State 0	155	5775	20.00	20.00	1.000	99.6	1.004	-0.04	0.082	0.082
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 7+8(7)	State 0	155	5775	19.80	20.00	1.047	99.6	1.004	-0.01	0.304	0.320
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 7+8(8)	State 0	155	5775	20.00	20.00	1.000	99.6	1.004	-0.01	0.390	0.392



<6GHz WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Measured APD (W/m^2)
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	15mm	Ant 7	15	6025	12.77	13.00	1.054	100	1.000	-0.1	0.001	0.001	<0.001
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	15	6025	12.77	13.00	1.054	100	1.000	-0.05	0.046	0.049	0.373
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	47	6185	12.75	13.00	1.059	100	1.000	-0.14	0.042	0.044	0.329
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	111	6505	12.51	13.00	1.119	100	1.000	-0.11	0.033	0.037	0.285
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	175	6825	12.54	13.00	1.112	100	1.000	0.02	0.060	0.067	0.527
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	207	6985	12.38	13.00	1.153	100	1.000	0.05	0.051	0.059	0.439
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	15mm	Ant 8	207	6985	12.76	13.00	1.057	100	1.000	0.07	0.001	0.001	<0.001
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	207	6985	12.76	13.00	1.057	100	1.000	0.15	0.059	0.062	0.435
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	15	6025	12.31	13.00	1.172	100	1.000	-0.16	0.100	0.117	0.823
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	47	6185	12.52	13.00	1.117	100	1.000	0.15	0.087	0.097	0.709
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	111	6505	12.69	13.00	1.074	100	1.000	0.03	0.115	0.124	0.869
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	175	6825	12.70	13.00	1.072	100	1.000	-0.13	0.067	0.072	0.503
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	15mm	Ant 7+8(7)	15	6025	12.74	13.00	1.062	100	1.000	0.07	0.001	0.001	<0.001
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	15mm	Ant 7+8(8)	15	6025	11.62	13.00	1.374	100	1.000	0.07	0.001	0.001	<0.001
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(7)	15	6025	12.74	13.00	1.062	100	1.000	-0.08	0.027	0.029	0.220
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(8)	15	6025	11.62	13.00	1.374	100	1.000	-0.08	0.068	0.093	0.787
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(7)	47	6185	12.82	13.00	1.042	100	1.000	0.03	0.023	0.024	0.220
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(8)	47	6185	11.13	13.00	1.538	100	1.000	0.03	0.048	0.074	0.607
87	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(7)	111	6505	12.15	13.00	1.216	100	1.000	-0.05	0.028	0.034	0.232
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(8)	111	6505	11.62	13.00	1.374	100	1.000	-0.05	0.111	0.153	0.877
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(7)	175	6825	12.74	13.00	1.062	100	1.000	-0.19	0.050	0.053	0.550
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(8)	175	6825	11.50	13.00	1.413	100	1.000	-0.19	0.061	0.086	0.660
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(7)	207	6985	12.43	13.00	1.140	100	1.000	-0.03	0.046	0.052	0.506
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7+8(8)	207	6985	11.63	13.00	1.371	100	1.000	-0.03	0.058	0.080	0.616

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	15mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	0.07	0.004	0.005
	Bluetooth	1Mbps	Back	15mm	Ant 7	39	2441	16.31	17.00	1.172	76.83	1.084	0	0.005	0.006
	Bluetooth	1Mbps	Back	15mm	Ant 7	0	2402	15.59	16.00	1.099	76.83	1.084	-0.1	0.005	0.006
	Bluetooth	1Mbps	Back	15mm	Ant 7	78	2480	16.16	17.00	1.213	76.83	1.084	-0.15	0.009	0.012
88	Bluetooth	1Mbps	Front	15mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	0.17	0.015	0.018
	Bluetooth	1Mbps	Front	15mm	Ant 8	0	2402	14.63	16.00	1.372	76.83	1.084	-0.03	0.007	0.010
	Bluetooth	1Mbps	Front	15mm	Ant 8	78	2480	15.24	17.00	1.501	76.83	1.084	0.03	0.001	0.002
	Bluetooth	1Mbps	Back	15mm	Ant 8	39	2441	16.68	17.00	1.078	76.83	1.084	-0.12	0.013	0.015

14.4 Product Specific SAR

<NFC SAR>

Plot No.	Band	Test Position	Gap (mm)	Freq. (MHz)	Power Drift (dB)	Measured 10g SAR (W/kg)
	NFC	Front	0mm	13.56	0	0.001
89	NFC	Back	0mm	13.56	-0.19	0.012
	NFC	Left Side	0mm	13.56	0	0.001
	NFC	Top Side	0mm	13.56	0	0.001

Remark: 0.001 W/kg SAR value means that can't find out the SAR peak location from Area scan SAR measurement, the reason is NFC signal of front surface is very low.

14.5 6GHz PD Test result

<Head>

Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Grid Step (λ)	iPDn	iPD ratio (≥ -1)	Normal psPD (W/m ²)	Total psPD (W/m ²)
WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 7	15	6025	12.77	0.0625	2.11	-0.97321472	1.15	1.41
WLAN6GHz	802.11ac-VHT160 MCS0	Front	10mm	Ant 7	15	6025	12.77	0.25	2.64		1.04	1.07
WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 7	207	6985	12.38	0.0625	3.01	-0.66740621	1.64	1.85
WLAN6GHz	802.11ac-VHT160 MCS0	Front	8.59mm	Ant 7	207	6985	12.38	0.25	3.51		0.919	0.958

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Grid Step (λ)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m ²)	Scaled Normal psPD (W/m ²)	Total psPD (W/m ²)	Scaled Total psPD (W/m ²)
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 7	15	6025	12.77	13.00	1.054	100.00	1.000	0.0625	1.5535	0.11	1.15	1.88	1.41	2.31
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 7	47	6185	12.75	13.00	1.059	100.00	1.000	0.0625	1.5535	-0.09	0.726	1.19	0.97	1.60
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 7	111	6505	12.51	13.00	1.119	100.00	1.000	0.0625	1.5535	0.03	1.26	2.19	1.55	2.70
01	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 7	175	6825	12.54	13.00	1.112	100.00	1.000	0.0625	1.5535	-0.05	1.89	3.26	2.07	3.58
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 7	207	6985	12.38	13.00	1.153	100.00	1.000	0.0625	1.5535	0.13	1.64	2.94	1.85	3.31
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 8	15	6025	12.31	13.00	1.172	100.00	1.000	0.0625	1.5535	0.08	1.45	2.64	1.72	3.13
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 8	47	6185	12.52	13.00	1.117	100.00	1.000	0.0625	1.5535	-0.15	1.18	2.05	1.24	2.15
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 8	111	6505	12.69	13.00	1.074	100.00	1.000	0.0625	1.5535	0.04	0.701	1.17	0.745	1.24
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 8	175	6825	12.70	13.00	1.072	100.00	1.000	0.0625	1.5535	0.05	0.728	1.21	0.763	1.27
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 8	207	6985	12.76	13.00	1.057	100.00	1.000	0.0625	1.5535	0.01	0.829	1.36	0.846	1.39

<Body-Worn>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Grid Step (λ)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m ²)	Scaled Normal psPD (W/m ²)	Total psPD (W/m ²)	Scaled Total psPD (W/m ²)
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	15	6025	12.77	13.00	1.054	100.00	1.000	0.25	1.5535	-0.12	1.03	1.69	1.07	1.75
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	47	6185	12.75	13.00	1.059	100.00	1.000	0.25	1.5535	0.07	0.775	1.28	0.79	1.30
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	111	6505	12.51	13.00	1.119	100.00	1.000	0.25	1.5535	0.16	0.762	1.33	0.776	1.35
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	175	6825	12.54	13.00	1.112	100.00	1.000	0.25	1.5535	0.04	1.08	1.87	1.1	1.90
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 7	207	6985	12.38	13.00	1.153	100.00	1.000	0.25	1.5535	0.08	0.88	1.58	0.912	1.63
02	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	15	6025	12.31	13.00	1.172	100.00	1.000	0.25	1.5535	0.19	1.59	2.90	1.75	3.19
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	47	6185	12.52	13.00	1.117	100.00	1.000	0.25	1.5535	-0.05	1.22	2.12	1.27	2.20
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	111	6505	12.69	13.00	1.074	100.00	1.000	0.25	1.5535	-0.05	1.22	2.04	1.29	2.15
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	175	6825	12.70	13.00	1.072	100.00	1.000	0.25	1.5535	0.01	1.09	1.81	1.13	1.88
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Ant 8	207	6985	12.76	13.00	1.057	100.00	1.000	0.25	1.5535	0.04	0.872	1.43	0.941	1.54



14.6 Repeated SAR Measurement

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 30_Ant 4	10M	QPSK	1	25	Right Cheek	0mm	State 1	27710	2310	18.68	19.50	1.208			-0.01	0.924	-	1.116
2nd	LTE Band 30_Ant 4	10M	QPSK	1	25	Right Cheek	0mm	State 1	27710	2310	18.68	19.50	1.208			0.05	0.881	1.049	1.064
1st	LTE Band 66_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	132572	1770	22.69	23.00	1.074			-0.02	1.040	-	1.117
2nd	LTE Band 66_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	132572	1770	22.69	23.00	1.074			0.05	1.010	1.03	1.085
1st	LTE Band 42_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	42590	3500	21.10	21.50	1.096	62.9	1.006	0	1.010	-	1.114
2nd	LTE Band 42_Ant 4	20M	QPSK	1	49	Right Cheek	0mm	State 1	42590	3500	21.10	21.50	1.096	62.9	1.006	0.05	1.000	1.01	1.103
1st	FR1 n25_Ant 4	40M	BPSK	108	54	Right Cheek	0mm	State 1	376500	1882.5	22.53	24.00	1.403			0.07	0.829	-	1.163
2nd	FR1 n25_Ant 4	40M	BPSK	108	54	Right Cheek	0mm	State 1	376500	1882.5	22.53	24.00	1.403			0.01	0.803	1.032	1.126
1st	FR1 n41_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 1	518598	2592.99	18.28	19.00	1.180			-0.04	0.990	-	1.169
2nd	FR1 n41_Ant 4	100M	BPSK	1	1	Right Cheek	0mm	State 1	518598	2592.99	18.28	19.00	1.180			0.01	0.965	1.026	1.139
1st	FR1 n77_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 1	656000	3840	18.31	19.00	1.172			0.16	0.997	-	1.169
2nd	FR1 n77_Ant 4	100M	BPSK	135	0	Right Cheek	0mm	State 1	656000	3840	18.31	19.00	1.172			0.05	0.984	1.013	1.153

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8W/kg$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45W/kg$, only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured SAR*.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.



15. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset		
		Head	Body-worn	Hotspot
1.	WWAN+BT 7	Yes	Yes	Yes
2.	WWAN+BT 8	Yes	Yes	Yes
3.	WWAN+WIFI 2.4G SISO	Yes	Yes	Yes
4.	WWAN+WIFI 2.4G MIMO	Yes	Yes	Yes
5.	WWAN+WIFI 5G SISO	Yes	Yes	Yes
6.	WWAN+WIFI 5G MIMO	Yes	Yes	Yes
7.	WWAN+WIFI 2.4G SISO+WIFI 5G MIMO	Yes	Yes	Yes
8.	WWAN+WIFI 2.4G MIMO+WIFI 5G SISO	Yes	Yes	Yes
9.	WWAN+WIFI 2.4G MIMO+WIFI 5G MIMO	Yes	Yes	Yes
10.	WWAN+BT 7+WIFI 5G SISO	Yes	Yes	Yes
11.	WWAN+BT 7+WIFI 5G MIMO	Yes	Yes	Yes
12.	WWAN+BT 8+WIFI 5G SISO	Yes	Yes	Yes
13.	WWAN+BT 8+WIFI 5G MIMO	Yes	Yes	Yes
14.	WIFI 2.4G SISO+WIFI 5G MIMO	Yes	Yes	No
15.	WIFI 2.4G MIMO+WIFI 5G SISO	Yes	Yes	No
16.	WIFI 2.4G MIMO+WIFI 5G MIMO	Yes	Yes	No
17.	BT 7+WIFI 5G SISO	Yes	Yes	No
18.	BT 7+WIFI 5G MIMO	Yes	Yes	No
19.	BT 8+WIFI 5G SISO	Yes	Yes	No
20.	BT 8+WIFI 5G MIMO	Yes	Yes	No
21.	WWAN+WIFI 5G 7 + WIFI 2.4G 8 +BT 7	Yes	Yes	Yes
22.	WWAN+WIFI 5G 8 + WIFI 2.4G 7	Yes	Yes	Yes
23.	WWAN+WIFI 6G SISO	Yes	Yes	No
24.	WWAN+WIFI 6G MIMO	Yes	Yes	No
25.	WWAN+WIFI 2.4G SISO+WIFI 6G MIMO	Yes	Yes	No
26.	WWAN+WIFI 2.4G MIMO+WIFI 6G SISO	Yes	Yes	No
27.	WWAN+WIFI 2.4G MIMO+WIFI 6G MIMO	Yes	Yes	No
28.	WWAN+BT 7+WIFI 6G SISO	Yes	Yes	No
29.	WWAN+BT 7+WIFI 6G MIMO	Yes	Yes	No
30.	WWAN+BT 8+WIFI 6G SISO	Yes	Yes	No
31.	WWAN+BT 8+WIFI 6G MIMO	Yes	Yes	No
32.	WIFI 2.4G SISO+WIFI 6G MIMO	Yes	Yes	No
33.	WIFI 2.4G MIMO+WIFI 6G SISO	Yes	Yes	No
34.	WIFI 2.4G MIMO+WIFI 6G MIMO	Yes	Yes	No
35.	BT 7+WIFI 6G SISO	Yes	Yes	No
36.	BT 7+WIFI 6G MIMO	Yes	Yes	No
37.	BT 8+WIFI 6G SISO	Yes	Yes	No
38.	BT 8+WIFI 6G MIMO	Yes	Yes	No
39.	WWAN+WIFI 6G 7 + WIFI 2.4G 8 +BT 7	Yes	Yes	No
40.	WWAN+WIFI 6G 8 + WIFI 2.4G 7	Yes	Yes	No

General Note:

1. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
2. The Sim-Tx configuration combination include in operation description will be match the title in the below Sum-Tx evaluation table.
3. The worst case reported SAR from each transmit antennas were using for SAR summation. Therefore, the following summations represent the absolute worst cases for simultaneous transmission configuration.
4. The SAR summation is calculated based on the same exposure configuration and test position from each transmit antenna worst case reported SAR results.
5. The Scaled SAR summation is calculated based on the same configuration and test position.
6. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.



15.1 Head Exposure Conditions

<WWAN State 2, WLAN State 2>

WWAN_Ant	Exposure Position	1	3	4	5	6	7	8	9	10	1+3+8	1+4+8	1+5+6	1+5+7	1+5+8	1+7+9	1+8+9	1+6+10	1+7+10	1+8+10	1+4+6+9	1+3+7
		Maximum WWAN 1g SAR (W/kg)	WLAN 2.4GHz Ant 7 1g SAR (W/kg)	WLAN 2.4GHz Ant 8 1g SAR (W/kg)	WLAN 2.4GHz Ant 7+8 1g SAR (W/kg)	WLAN 5G/6GHz Ant 7 1g SAR (W/kg)	WLAN 5G/6GHz Ant 8 1g SAR (W/kg)	WLAN 5G/6GHz Ant 7+8 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)	Bluetooth Ant 8 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
WWAN_Ant 1	Right Cheek at 0mm	0.172	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.177	0.835	0.996	0.682	1.075	0.493	0.886	0.724	0.410	0.803	0.986	0.784
	Right Tilted at 0mm	0.109	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.380	0.555	0.679	0.688	0.738	0.203	0.253	0.358	0.367	0.417	0.497	0.330
	Left Cheek at 0mm	0.275	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.615	0.635	0.714	0.699	0.760	0.503	0.564	0.554	0.539	0.600	0.686	0.554
	Left Tilted at 0mm	0.155	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.442	0.602	0.623	0.702	0.777	0.296	0.371	0.391	0.470	0.545	0.449	0.367
WWAN_Ant 2	Right Cheek at 0mm	0.140	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.145	0.803	0.964	0.650	1.043	0.461	0.854	0.692	0.378	0.771	0.954	0.752
	Right Tilted at 0mm	0.092	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.363	0.538	0.662	0.671	0.721	0.186	0.236	0.341	0.350	0.400	0.480	0.313
	Left Cheek at 0mm	0.164	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.504	0.524	0.603	0.588	0.649	0.392	0.453	0.443	0.428	0.489	0.575	0.443
	Left Tilted at 0mm	0.103	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.390	0.550	0.571	0.650	0.725	0.244	0.319	0.339	0.418	0.493	0.397	0.315
WWAN_Ant 3	Right Cheek at 0mm	0.426	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.431	1.089	1.250	0.936	1.329	0.747	1.140	0.978	0.664	1.057	1.240	1.038
	Right Tilted at 0mm	0.447	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.718	0.893	1.017	1.026	1.076	0.541	0.591	0.696	0.705	0.755	0.835	0.668
	Left Cheek at 0mm	0.808	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	1.148	1.168	1.247	1.232	1.293	1.036	1.097	1.087	1.072	1.133	1.219	1.087
	Left Tilted at 0mm	0.699	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.986	1.146	1.167	1.246	1.321	0.840	0.915	0.935	1.014	1.089	0.993	0.911
WWAN_Ant 4	Right Cheek at 0mm	0.560	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.565	1.223	1.384	1.070	1.463	0.881	1.274	1.112	0.798	1.191	1.374	1.172
	Right Tilted at 0mm	0.383	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.654	0.829	0.953	0.962	1.012	0.477	0.527	0.632	0.641	0.691	0.771	0.604
	Left Cheek at 0mm	0.194	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.534	0.554	0.633	0.618	0.679	0.422	0.483	0.473	0.458	0.519	0.605	0.473
	Left Tilted at 0mm	0.185	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.472	0.632	0.653	0.732	0.807	0.326	0.401	0.421	0.500	0.575	0.479	0.397
WWAN_Ant 5	Right Cheek at 0mm	0.556	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.561	1.219	1.380	1.066	1.459	0.877	1.270	1.108	0.794	1.187	1.370	1.168
	Right Tilted at 0mm	0.114	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.385	0.560	0.684	0.693	0.743	0.208	0.258	0.363	0.372	0.422	0.502	0.335
	Left Cheek at 0mm	0.409	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.749	0.769	0.848	0.833	0.894	0.637	0.698	0.688	0.673	0.734	0.820	0.688
	Left Tilted at 0mm	0.077	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.364	0.524	0.545	0.624	0.699	0.218	0.293	0.313	0.392	0.467	0.371	0.289
WWAN_Ant 6	Right Cheek at 0mm	0.030	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.035	0.693	0.854	0.540	0.933	0.351	0.744	0.582	0.268	0.661	0.844	0.642
	Right Tilted at 0mm	0.024	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.295	0.470	0.594	0.603	0.653	0.118	0.168	0.273	0.282	0.332	0.412	0.245
	Left Cheek at 0mm	0.094	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.434	0.454	0.533	0.518	0.579	0.322	0.383	0.373	0.358	0.419	0.505	0.373
	Left Tilted at 0mm	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.359	0.519	0.540	0.619	0.694	0.213	0.288	0.308	0.387	0.462	0.366	0.284

<WLAN State 1>

Exposure Position	3	4	5	6	7	8	9	10	3+8	4+8	5+6	5+7	5+8	6+9	7+9	8+9	6+10	7+10	8+10
	WLAN 2.4GHz Ant 7 1g SAR (W/kg)	WLAN 2.4GHz Ant 8 1g SAR (W/kg)	WLAN 2.4GHz Ant 7+8 1g SAR (W/kg)	WLAN 5/6GHz Ant 7 1g SAR (W/kg)	WLAN 5/6GHz Ant 8 1g SAR (W/kg)	WLAN 5/6GHz Ant 7+8 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)	Bluetooth Ant 8 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
Right Cheek at 0mm	0.637	0.369	0.665	0.790	0.216	0.795	0.230	0.147	1.432	1.164	1.006	0.881	1.460	1.020	0.446	1.025	0.937	0.363	0.942
Right Tilted at 0mm	0.165	0.473	0.759	0.171	0.239	0.256	0.001	0.165	0.421	0.729	0.410	0.998	1.015	0.172	0.240	0.257	0.336	0.404	0.421
Left Cheek at 0mm	0.242	0.315	0.439	0.271	0.258	0.244	0.097	0.133	0.486	0.559	0.529	0.697	0.683	0.368	0.355	0.341	0.404	0.391	0.377
Left Tilted at 0mm	0.097	0.402	0.615	0.092	0.305	0.324	0.001	0.175	0.421	0.726	0.397	0.920	0.939	0.093	0.306	0.325	0.267	0.480	0.499



<ENDC Active, WWAN State 1>

LTE Band_Ant	FR1 Band_Ant	Exposure Position	1	2	1+2 Summed 1g SAR (W/kg)
			LTE 1g SAR (W/kg)	FR1 1g SAR (W/kg)	
LTE Band 2_Ant 2 cover by LTE Band 25_Ant 2	FR1 n5_Ant 1	Right Cheek at 0mm	0.094	0.066	0.160
		Right Tilted at 0mm	0.042	0.051	0.093
		Left Cheek at 0mm	0.118	0.087	0.205
		Left Tilted at 0mm	0.054	0.063	0.117
LTE Band 2_Ant 4 cover by LTE Band 25_Ant 4	FR1 n5_Ant 3	Right Cheek at 0mm	0.741	0.554	1.295
		Right Tilted at 0mm	0.400	0.547	0.947
		Left Cheek at 0mm	0.240	0.932	1.172
		Left Tilted at 0mm	0.201	0.906	1.107
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n2_Ant 2 cover by FR1 n25_Ant 2	Right Cheek at 0mm	0.089	0.131	0.220
		Right Tilted at 0mm	0.057	0.072	0.129
		Left Cheek at 0mm	0.113	0.142	0.255
		Left Tilted at 0mm	0.081	0.050	0.131
LTE Band 5_Ant 3 cover by LTE Band 26_Ant 3	FR1 n2_Ant 4 cover by FR1 n25_Ant 4	Right Cheek at 0mm	0.316	1.163	1.479
		Right Tilted at 0mm	0.333	0.616	0.949
		Left Cheek at 0mm	0.680	0.299	0.979
		Left Tilted at 0mm	0.609	0.178	0.787
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n78_Ant 5 cover by FR1 n77_Ant 5	Right Cheek at 0mm	0.089	1.026	1.115
		Right Tilted at 0mm	0.057	0.202	0.259
		Left Cheek at 0mm	0.113	0.821	0.934
		Left Tilted at 0mm	0.081	0.097	0.178
LTE Band 5_Ant 3 cover by LTE Band 26_Ant 3	FR1 n78_Ant 4 cover by FR1 n77_Ant 4	Right Cheek at 0mm	0.316	1.169	1.485
		Right Tilted at 0mm	0.333	0.757	1.090
		Left Cheek at 0mm	0.680	0.335	1.015
		Left Tilted at 0mm	0.609	0.300	0.909
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n78_Ant 2 cover by FR1 n77_Ant 2	Right Cheek at 0mm	0.089	0.072	0.161
		Right Tilted at 0mm	0.057	0.038	0.095
		Left Cheek at 0mm	0.113	0.031	0.144
		Left Tilted at 0mm	0.081	0.049	0.130
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n78_Ant 6 cover by FR1 n77_Ant 6	Right Cheek at 0mm	0.089	0.030	0.119
		Right Tilted at 0mm	0.057	0.024	0.081
		Left Cheek at 0mm	0.113	0.094	0.207
		Left Tilted at 0mm	0.081	0.072	0.153
LTE Band 5_Ant 3 cover by LTE Band 26_Ant 3	FR1 n78_Ant 5 cover by FR1 n77_Ant 5	Right Cheek at 0mm	0.316	1.026	1.342
		Right Tilted at 0mm	0.333	0.202	0.535
		Left Cheek at 0mm	0.680	0.821	1.501
		Left Tilted at 0mm	0.609	0.097	0.706
LTE Band 7_Ant 1	FR1 n78_Ant 5 cover by FR1 n77_Ant 5	Right Cheek at 0mm	0.001	1.026	1.027
		Right Tilted at 0mm	0.001	0.202	0.203
		Left Cheek at 0mm	0.198	0.821	1.019
		Left Tilted at 0mm	0.135	0.097	0.232
LTE Band 7_Ant 1	FR1 n78_Ant 2 cover by FR1 n77_Ant 2	Right Cheek at 0mm	0.001	0.072	0.073
		Right Tilted at 0mm	0.001	0.038	0.039
		Left Cheek at 0mm	0.198	0.031	0.229
		Left Tilted at 0mm	0.135	0.049	0.184
LTE Band 7_Ant 1	FR1 n78_Ant 6 cover by FR1 n77_Ant 6	Right Cheek at 0mm	0.001	0.030	0.031
		Right Tilted at 0mm	0.001	0.024	0.025
		Left Cheek at 0mm	0.198	0.094	0.292
		Left Tilted at 0mm	0.135	0.072	0.207



<ENDC Active, WWAN State 2, WLAN state 2>

LTE Band_Ant	FR1 Band_Ant	Exposure Position	1	2	3	4	5	6	7	8	9	10	1+2+3+8 Summed 1g SAR (W/kg)	1+2+4+8 Summed 1g SAR (W/kg)	1+2+5+6 Summed 1g SAR (W/kg)	1+2+5+7 Summed 1g SAR (W/kg)	1+2+5+8 Summed 1g SAR (W/kg)	1+2+7+9 Summed 1g SAR (W/kg)	1+2+8+9 Summed 1g SAR (W/kg)	1+2+6+10 Summed 1g SAR (W/kg)	1+2+7+10 Summed 1g SAR (W/kg)	1+2+8+10 Summed 1g SAR (W/kg)	1+2+4+6+9 Summed 1g SAR (W/kg)	1+2+3+7 Summed 1g SAR (W/kg)
			LTE	FR1	WLAN 2.4GHz Ant 7	WLAN 2.4GHz Ant 8	WLAN 2.4GHz Ant 7+8	WLAN 5G/6GHz Ant 7	WLAN 5G/6GHz Ant 8	WLAN 5G/6GHz Ant 7+8	Bluetooth Ant 7	Bluetooth Ant 8												
LTE Band 2_Ant 2 cover by LTE Band 25_Ant 2	FR1 n5_Ant 1	Right Cheek at 0mm	0.094	0.066	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.165	0.823	0.984	0.670	1.063	0.481	0.874	0.712	0.398	0.791	0.974	0.772
		Right Tilted at 0mm	0.042	0.051	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.364	0.539	0.663	0.672	0.722	0.187	0.237	0.342	0.351	0.401	0.481	0.314
		Left Cheek at 0mm	0.118	0.087	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.545	0.565	0.644	0.629	0.690	0.433	0.494	0.484	0.469	0.530	0.616	0.484
		Left Tilted at 0mm	0.054	0.063	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.404	0.564	0.585	0.664	0.739	0.258	0.333	0.353	0.432	0.507	0.411	0.329
LTE Band 2_Ant 4	FR1 n5_Ant 3	Right Cheek at 0mm	0.270	0.166	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.441	1.099	1.260	0.946	1.339	0.757	1.150	0.988	0.674	1.067	1.250	1.048
		Right Tilted at 0mm	0.153	0.156	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.580	0.755	0.879	0.888	0.938	0.403	0.453	0.558	0.567	0.617	0.697	0.530
		Left Cheek at 0mm	0.076	0.303	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.719	0.739	0.818	0.803	0.864	0.607	0.668	0.658	0.643	0.704	0.790	0.658
		Left Tilted at 0mm	0.071	0.262	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.620	0.780	0.801	0.880	0.955	0.474	0.549	0.569	0.648	0.723	0.627	0.545
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n2_Ant 2 cover by FR1 n25_Ant 2	Right Cheek at 0mm	0.089	0.131	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.225	0.883	1.044	0.730	1.123	0.541	0.934	0.772	0.458	0.851	1.034	0.832
		Right Tilted at 0mm	0.057	0.072	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.400	0.575	0.699	0.708	0.758	0.223	0.273	0.378	0.387	0.437	0.517	0.350
		Left Cheek at 0mm	0.113	0.142	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.595	0.615	0.694	0.679	0.740	0.483	0.544	0.534	0.519	0.580	0.666	0.534
		Left Tilted at 0mm	0.081	0.050	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.418	0.578	0.599	0.678	0.753	0.272	0.347	0.367	0.446	0.521	0.425	0.343
LTE Band 5_Ant 3	FR1 n2_Ant 4	Right Cheek at 0mm	0.101	0.209	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.315	0.973	1.134	0.820	1.213	0.631	1.024	0.862	0.548	0.941	1.124	0.922
		Right Tilted at 0mm	0.104	0.113	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.488	0.663	0.787	0.796	0.846	0.311	0.361	0.466	0.475	0.525	0.605	0.438
		Left Cheek at 0mm	0.215	0.063	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.618	0.638	0.717	0.702	0.763	0.506	0.567	0.557	0.542	0.603	0.689	0.557
		Left Tilted at 0mm	0.237	0.044	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.568	0.728	0.749	0.828	0.903	0.422	0.497	0.517	0.596	0.671	0.575	0.493
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n78_Ant 5	Right Cheek at 0mm	0.089	0.497	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.591	1.249	1.410	1.096	1.489	0.907	1.300	1.138	0.824	1.217	1.400	1.198
		Right Tilted at 0mm	0.057	0.098	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.426	0.601	0.725	0.734	0.784	0.249	0.299	0.404	0.413	0.463	0.543	0.376
		Left Cheek at 0mm	0.113	0.354	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.807	0.827	0.906	0.891	0.952	0.695	0.756	0.746	0.731	0.792	0.878	0.746
		Left Tilted at 0mm	0.081	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.440	0.600	0.621	0.700	0.775	0.294	0.369	0.389	0.468	0.543	0.447	0.365
LTE Band 5_Ant 3	FR1 n78_Ant 4	Right Cheek at 0mm	0.101	0.400	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.506	1.164	1.325	1.011	1.404	0.822	1.215	1.053	0.739	1.132	1.315	1.113
		Right Tilted at 0mm	0.104	0.260	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.635	0.810	0.934	0.943	0.993	0.458	0.508	0.613	0.622	0.672	0.752	0.585
		Left Cheek at 0mm	0.215	0.147	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.702	0.722	0.801	0.786	0.847	0.590	0.651	0.641	0.626	0.687	0.773	0.641
		Left Tilted at 0mm	0.237	0.095	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.619	0.779	0.800	0.879	0.954	0.473	0.548	0.568	0.647	0.722	0.626	0.544
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n78_Ant 2 cover by FR1 n77_Ant 2	Right Cheek at 0mm	0.089	0.072	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.166	0.824	0.985	0.671	1.064	0.482	0.875	0.713	0.399	0.792	0.975	0.773
		Right Tilted at 0mm	0.057	0.038	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.366	0.541	0.665	0.674	0.724	0.189	0.239	0.344	0.353	0.403	0.483	0.316
		Left Cheek at 0mm	0.113	0.031	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.484	0.504	0.583	0.568	0.629	0.372	0.433	0.423	0.408	0.469	0.555	0.423
		Left Tilted at 0mm	0.081	0.049	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.417	0.577	0.598	0.677	0.752	0.271	0.346	0.366	0.445	0.520	0.424	0.342
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n78_Ant 6 cover by FR1 n77_Ant 6	Right Cheek at 0mm	0.089	0.030	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.124	0.782	0.943	0.629	1.022	0.440	0.833	0.671	0.357	0.750	0.933	0.731
		Right Tilted at 0mm	0.057	0.024	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.352	0.527	0.651	0.660	0.710	0.175	0.225	0.330	0.339	0.389	0.469	0.302
		Left Cheek at 0mm	0.113	0.094	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.547	0.567	0.646	0.631	0.692	0.435	0.496	0.486	0.471	0.532	0.618	0.486
		Left Tilted at 0mm	0.081	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.440	0.600	0.621	0.700	0.775	0.294	0.369	0.389	0.468	0.543	0.447	0.365
LTE Band 5_Ant 3	FR1 n78_Ant 5	Right Cheek at 0mm	0.089	0.497	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.591	1.249	1.410	1.096	1.489	0.907	1.300	1.138	0.824	1.217	1.400	1.198
		Right Tilted at 0mm	0.104	0.098	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.473	0.648	0.772	0.781	0.831	0.296	0.346	0.451	0.460	0.510	0.590	0.423
		Left Cheek at 0mm	0.215	0.354	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.909	0.929	1.008	0.993	1.054	0.797	0.858	0.848	0.833	0.894	0.980	0.848
		Left Tilted at 0mm	0.237	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.596	0.756	0.777	0.856	0.931	0.450	0.525	0.545	0.624	0.699	0.603	0.521
LTE Band 7_Ant 1	FR1 n78_Ant 5	Right Cheek at 0mm	0.001	0.497	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.503	1.161	1.322	1.008	1.401	0.819	1.212	1.050	0.736	1.129	1.312	1.110
		Right Tilted at 0mm	0.001	0.098	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.370	0.545	0.669	0.678	0.728	0.193	0.243	0.348	0.357	0.407	0.487	0.320
		Left Cheek at 0mm	0.198	0.354	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.892	0.912	0.991	0.976	1.037	0.780	0.841	0.831	0.816	0.877	0.963	0.831
		Left Tilted at 0mm	0.135	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.494	0.654	0.675	0.754	0.829	0.348	0.423	0.443	0.522	0.597	0.501	0.419
LTE Band 7_Ant 1	FR1 n78_Ant 2 cover by FR1 n77_Ant 2	Right Cheek at 0mm	0.001	0.072	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.078	0.736	0.897	0.583	0.976	0.394	0.787	0.625	0.311	0.704	0.887	0.685
		Right Tilted at 0mm	0.001	0.038	0.128</																			



FCC SAR TEST REPORT

Report No. : FA210409

LTE Band_Ant	FR1 Band_Ant	Exposure Position	1	2	3	4	5	6	7	8	9	10	1+2+3+8 Summed 1g SAR (W/kg)	1+2+4+8 Summed 1g SAR (W/kg)	1+2+5+6 Summed 1g SAR (W/kg)	1+2+5+7 Summed 1g SAR (W/kg)	1+2+5+8 Summed 1g SAR (W/kg)	1+2+7+9 Summed 1g SAR (W/kg)	1+2+8+9 Summed 1g SAR (W/kg)	1+2+5+10 Summed 1g SAR (W/kg)	1+2+7+10 Summed 1g SAR (W/kg)	1+2+8+10 Summed 1g SAR (W/kg)	1+2+4+6+9 Summed 1g SAR (W/kg)	1+2+3+7 Summed 1g SAR (W/kg)
			LTE	FR1	WLAN 2.4GHz Ant 7	WLAN 2.4GHz Ant 8	WLAN 2.4GHz Ant 7+8	WLAN 5G/6GHz Ant 7	WLAN 5G/6GHz Ant 8	WLAN 5G/6GHz Ant 7+8	Bluetooth Ant 7	Bluetooth Ant 8												
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)												
LTE Band 12_Ant 1	FR1 n2_Ant 2 cover by FR1 n25_Ant 2	Right Cheek at 0mm	0.051	0.131	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.187	0.845	1.006	0.692	1.085	0.503	0.896	0.734	0.420	0.813	0.996	0.794
		Right Tilted at 0mm	0.039	0.072	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.382	0.557	0.681	0.690	0.740	0.205	0.255	0.360	0.369	0.419	0.499	0.332
		Left Cheek at 0mm	0.062	0.142	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.544	0.564	0.643	0.628	0.689	0.432	0.493	0.483	0.468	0.529	0.615	0.483
		Left Tilted at 0mm	0.048	0.050	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.385	0.545	0.566	0.645	0.720	0.239	0.314	0.334	0.413	0.488	0.392	0.310
LTE Band 66_Ant 2	FR1 n77_Ant 5	Right Cheek at 0mm	0.094	0.124	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.223	0.881	1.042	0.728	1.121	0.539	0.932	0.770	0.456	0.849	1.032	0.830
		Right Tilted at 0mm	0.001	0.017	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.289	0.464	0.588	0.597	0.647	0.112	0.162	0.267	0.276	0.326	0.406	0.239
		Left Cheek at 0mm	0.135	0.055	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.530	0.550	0.629	0.614	0.675	0.418	0.479	0.469	0.454	0.515	0.601	0.469
		Left Tilted at 0mm	0.073	0.008	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.368	0.528	0.549	0.628	0.703	0.222	0.297	0.317	0.396	0.471	0.375	0.293
LTE Band 12_Ant 1	FR1 n77_Ant 5	Right Cheek at 0mm	0.051	0.124	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.180	0.838	0.999	0.685	1.078	0.496	0.889	0.727	0.413	0.806	0.989	0.787
		Right Tilted at 0mm	0.039	0.017	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.327	0.502	0.626	0.635	0.685	0.150	0.200	0.305	0.314	0.364	0.444	0.277
		Left Cheek at 0mm	0.062	0.055	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.457	0.477	0.556	0.541	0.602	0.345	0.406	0.396	0.381	0.442	0.528	0.396
		Left Tilted at 0mm	0.048	0.008	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.343	0.503	0.524	0.603	0.678	0.197	0.272	0.292	0.371	0.446	0.350	0.268
LTE Band 2_Ant 2 cover by LTE Band 25_Ant 2	FR1 n77_Ant 5	Right Cheek at 0mm	0.094	0.124	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.223	0.881	1.042	0.728	1.121	0.539	0.932	0.770	0.456	0.849	1.032	0.830
		Right Tilted at 0mm	0.042	0.017	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.330	0.505	0.629	0.638	0.688	0.153	0.203	0.308	0.317	0.367	0.447	0.280
		Left Cheek at 0mm	0.118	0.055	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.513	0.533	0.612	0.597	0.658	0.401	0.462	0.452	0.437	0.498	0.584	0.452
		Left Tilted at 0mm	0.054	0.008	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.349	0.509	0.530	0.609	0.684	0.203	0.278	0.298	0.377	0.452	0.356	0.274
LTE Band 12_Ant 1	FR1 n2_Ant 4 cover by FR1 n25_Ant 4	Right Cheek at 0mm	0.051	0.209	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.265	0.923	1.084	0.770	1.163	0.581	0.974	0.812	0.498	0.891	1.074	0.872
		Right Tilted at 0mm	0.039	0.113	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.423	0.598	0.722	0.731	0.781	0.246	0.296	0.401	0.410	0.460	0.540	0.373
		Left Cheek at 0mm	0.062	0.063	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.465	0.485	0.564	0.549	0.610	0.353	0.414	0.404	0.389	0.450	0.536	0.404
		Left Tilted at 0mm	0.048	0.044	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.379	0.539	0.560	0.639	0.714	0.233	0.308	0.328	0.407	0.482	0.386	0.304
LTE Band 12_Ant 3	FR1 n2_Ant 2 cover by FR1 n25_Ant 2	Right Cheek at 0mm	0.300	0.131	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.436	1.094	1.255	0.941	1.334	0.752	1.145	0.983	0.669	1.062	1.245	1.043
		Right Tilted at 0mm	0.288	0.072	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.631	0.806	0.930	0.939	0.989	0.454	0.504	0.609	0.618	0.668	0.748	0.581
		Left Cheek at 0mm	0.632	0.142	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	1.114	1.134	1.213	1.198	1.259	1.002	1.063	1.053	1.038	1.099	1.185	1.053
		Left Tilted at 0mm	0.571	0.050	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.908	1.068	1.089	1.168	1.243	0.762	0.837	0.857	0.936	1.011	0.915	0.833
LTE Band 12_Ant 3	FR1 n2_Ant 4 cover by FR1 n25_Ant 4	Right Cheek at 0mm	0.300	0.209	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.514	1.172	1.333	1.019	1.412	0.830	1.223	1.061	0.747	1.140	1.323	1.121
		Right Tilted at 0mm	0.288	0.113	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.672	0.847	0.971	0.980	1.030	0.495	0.545	0.650	0.659	0.709	0.789	0.622
		Left Cheek at 0mm	0.632	0.063	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	1.035	1.055	1.134	1.119	1.180	0.923	0.984	0.974	0.959	1.020	1.106	0.974
		Left Tilted at 0mm	0.571	0.044	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.902	1.062	1.083	1.162	1.237	0.756	0.831	0.851	0.930	1.005	0.909	0.827
LTE Band 66_Ant 2	FR1 n77_Ant 4	Right Cheek at 0mm	0.094	0.284	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.383	1.041	1.202	0.888	1.281	0.699	1.092	0.930	0.616	1.009	1.192	0.990
		Right Tilted at 0mm	0.001	0.184	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.456	0.631	0.755	0.764	0.814	0.279	0.329	0.434	0.443	0.493	0.573	0.406
		Left Cheek at 0mm	0.135	0.068	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.543	0.563	0.642	0.627	0.688	0.431	0.492	0.482	0.467	0.528	0.614	0.482
		Left Tilted at 0mm	0.073	0.067	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.427	0.587	0.608	0.687	0.762	0.281	0.356	0.376	0.455	0.530	0.434	0.352
LTE Band 66_Ant 2	FR1 n77_Ant 6	Right Cheek at 0mm	0.094	0.030	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.129	0.787	0.948	0.634	1.027	0.445	0.838	0.676	0.362	0.755	0.938	0.736
		Right Tilted at 0mm	0.001	0.024	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.296	0.471	0.595	0.604	0.654	0.119	0.169	0.274	0.283	0.333	0.413	0.246
		Left Cheek at 0mm	0.135	0.094	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.569	0.589	0.668	0.653	0.714	0.457	0.518	0.508	0.493	0.554	0.640	0.508
		Left Tilted at 0mm	0.073	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.432	0.592	0.613	0.692	0.767	0.286	0.361	0.381	0.460	0.535	0.439	0.357
LTE Band 66_Ant 4	FR1 n77_Ant 5	Right Cheek at 0mm	0.461	0.124	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.590	1.248	1.409	1.095	1.488	0.906	1.299	1.137	0.823	1.216	1.399	1.197
		Right Tilted at 0mm	0.366	0.017	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.654	0.829	0.953	0.962	1.012	0.477	0.527	0.632	0.641	0.691	0.771	0.604
		Left Cheek at 0mm	0.133	0.055	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.528	0.548	0.627	0.612	0.673	0.416	0.477	0.467	0.452	0.513	0.599	0.467
		Left Tilted at 0mm	0.129	0.008	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.424	0.584	0.605	0.684	0.759	0.278	0.353	0.373	0.452	0.527	0.431	0.349
LTE Band 66_Ant 4	FR1 n77_Ant 2	Right Cheek at 0mm	0.461	0.072	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.538	1.196	1.357	1.043	1.436	0.854	1.247	1.085	0.771	1.164	1.347	1.145
		Right Tilted at 0mm	0.366	0.038	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.675	0.850	0.974	0.983	1.033	0.498	0.548	0.653	0.662	0.712	0.792	0.625
		Left Cheek at 0mm	0.133	0.031	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.504	0.524	0.603	0.588	0.649	0.392	0.453	0.443	0.428	0.489	0.575	0.443
		Left Tilted at 0mm	0.129	0.049	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.465	0.625	0.646	0.725	0.800	0.319	0.394	0.414	0.493	0.568	0.472	0.390
LTE Band 66_Ant 4	FR1 n77_Ant 6	Right Cheek at 0mm	0.461	0.030	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.496	1.154	1.315	1.001	1.394	0.812	1.205	1.043	0.729	1.122	1.305	1.103
		Right Tilted at 0mm	0.366	0.024	0.128	0.303	0.486	0.084	0.093	0.143	0.													



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LTE Band 12_Ant 1	FR1 n77_Ant 4	Right Cheek at 0mm	0.051	0.284	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.340	0.998	1.159	0.845	1.238	0.656	1.049	0.887	0.573	0.966	1.149	0.947
		Right Tilted at 0mm	0.039	0.184	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.494	0.669	0.793	0.802	0.852	0.317	0.367	0.472	0.481	0.531	0.611	0.444
		Left Cheek at 0mm	0.062	0.068	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.470	0.490	0.569	0.554	0.615	0.358	0.419	0.409	0.394	0.455	0.541	0.409
		Left Tilted at 0mm	0.048	0.067	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.402	0.562	0.583	0.662	0.737	0.256	0.331	0.351	0.430	0.505	0.409	0.327
LTE Band 12_Ant 1	FR1 n77_Ant 6	Right Cheek at 0mm	0.051	0.030	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.086	0.744	0.905	0.591	0.984	0.402	0.795	0.633	0.319	0.712	0.895	0.693
		Right Tilted at 0mm	0.039	0.024	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.334	0.509	0.633	0.642	0.692	0.157	0.207	0.312	0.321	0.371	0.451	0.284
		Left Cheek at 0mm	0.062	0.094	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.496	0.516	0.595	0.580	0.641	0.384	0.445	0.435	0.420	0.481	0.567	0.435
		Left Tilted at 0mm	0.048	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.407	0.567	0.588	0.667	0.742	0.261	0.336	0.356	0.435	0.510	0.414	0.332
LTE Band 12_Ant 3	FR1 n77_Ant 5	Right Cheek at 0mm	0.300	0.124	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.429	1.087	1.248	0.934	1.327	0.745	1.138	0.976	0.662	1.055	1.238	1.036
		Right Tilted at 0mm	0.288	0.017	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.576	0.751	0.875	0.884	0.934	0.399	0.449	0.554	0.563	0.613	0.693	0.526
		Left Cheek at 0mm	0.632	0.055	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	1.027	1.047	1.126	1.111	1.172	0.915	0.976	0.966	0.951	1.012	1.098	0.966
		Left Tilted at 0mm	0.571	0.008	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.866	1.026	1.047	1.126	1.201	0.720	0.795	0.815	0.894	0.969	0.873	0.791
LTE Band 12_Ant 3	FR1 n77_Ant 2	Right Cheek at 0mm	0.300	0.072	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.377	1.035	1.196	0.882	1.275	0.693	1.086	0.924	0.610	1.003	1.186	0.984
		Right Tilted at 0mm	0.288	0.038	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.597	0.772	0.896	0.905	0.955	0.420	0.470	0.575	0.584	0.634	0.714	0.547
		Left Cheek at 0mm	0.632	0.031	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	1.003	1.023	1.102	1.087	1.148	0.891	0.952	0.942	0.927	0.988	1.074	0.942
		Left Tilted at 0mm	0.571	0.049	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.907	1.067	1.088	1.167	1.242	0.761	0.836	0.856	0.935	1.010	0.914	0.832
LTE Band 12_Ant 3	FR1 n77_Ant 4	Right Cheek at 0mm	0.300	0.284	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.589	1.247	1.408	1.094	1.487	0.905	1.298	1.136	0.822	1.215	1.398	1.196
		Right Tilted at 0mm	0.288	0.184	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.743	0.918	1.042	1.051	1.101	0.566	0.616	0.721	0.730	0.780	0.860	0.693
		Left Cheek at 0mm	0.632	0.068	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	1.040	1.060	1.139	1.124	1.185	0.928	0.989	0.979	0.964	1.025	1.111	0.979
		Left Tilted at 0mm	0.571	0.067	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.925	1.085	1.106	1.185	1.260	0.779	0.854	0.874	0.953	1.028	0.932	0.850
LTE Band 12_Ant 3	FR1 n77_Ant 6	Right Cheek at 0mm	0.300	0.030	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.335	0.993	1.154	0.840	1.233	0.651	1.044	0.882	0.568	0.961	1.144	0.942
		Right Tilted at 0mm	0.288	0.024	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.583	0.758	0.882	0.891	0.941	0.406	0.456	0.561	0.570	0.620	0.700	0.533
		Left Cheek at 0mm	0.632	0.094	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	1.066	1.086	1.165	1.150	1.211	0.954	1.015	1.005	0.990	1.051	1.137	1.005
		Left Tilted at 0mm	0.571	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.930	1.090	1.111	1.190	1.265	0.784	0.859	0.879	0.958	1.033	0.937	0.855
LTE Band 2_Ant 2 cover by LTE Band 25_Ant 2	FR1 n77_Ant 4	Right Cheek at 0mm	0.094	0.284	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.383	1.041	1.202	0.888	1.281	0.699	1.092	0.930	0.616	1.009	1.192	0.990
		Right Tilted at 0mm	0.042	0.184	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.497	0.672	0.796	0.805	0.855	0.320	0.370	0.475	0.484	0.534	0.614	0.447
		Left Cheek at 0mm	0.118	0.068	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.526	0.546	0.625	0.610	0.671	0.414	0.475	0.465	0.450	0.511	0.597	0.465
		Left Tilted at 0mm	0.054	0.067	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.408	0.568	0.589	0.668	0.743	0.262	0.337	0.357	0.436	0.511	0.415	0.333
LTE Band 2_Ant 2 cover by LTE Band 25_Ant 2	FR1 n77_Ant 6	Right Cheek at 0mm	0.094	0.030	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.129	0.787	0.948	0.634	1.027	0.445	0.838	0.676	0.362	0.755	0.938	0.736
		Right Tilted at 0mm	0.042	0.024	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.337	0.512	0.636	0.645	0.695	0.160	0.210	0.315	0.324	0.374	0.454	0.287
		Left Cheek at 0mm	0.118	0.094	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.552	0.572	0.651	0.636	0.697	0.440	0.501	0.491	0.476	0.537	0.623	0.491
		Left Tilted at 0mm	0.054	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.413	0.573	0.594	0.673	0.748	0.267	0.342	0.362	0.441	0.516	0.420	0.338
LTE Band 2_Ant 4	FR1 n77_Ant 5	Right Cheek at 0mm	0.094	0.124	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.223	0.881	1.042	0.728	1.121	0.539	0.932	0.770	0.456	0.849	1.032	0.830
		Right Tilted at 0mm	0.042	0.017	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.330	0.505	0.629	0.638	0.688	0.153	0.203	0.308	0.317	0.367	0.447	0.280
		Left Cheek at 0mm	0.118	0.055	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.513	0.533	0.612	0.597	0.658	0.401	0.462	0.452	0.437	0.498	0.584	0.452
		Left Tilted at 0mm	0.054	0.008	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.349	0.509	0.530	0.609	0.684	0.203	0.278	0.298	0.377	0.452	0.356	0.274
LTE Band 2_Ant 4	FR1 n77_Ant 2	Right Cheek at 0mm	0.270	0.072	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.347	1.005	1.166	0.852	1.245	0.663	1.056	0.894	0.580	0.973	1.156	0.954
		Right Tilted at 0mm	0.153	0.038	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.462	0.637	0.761	0.770	0.820	0.285	0.335	0.440	0.449	0.499	0.579	0.412
		Left Cheek at 0mm	0.076	0.031	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.447	0.467	0.546	0.531	0.592	0.335	0.396	0.386	0.371	0.432	0.518	0.386
		Left Tilted at 0mm	0.071	0.049	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.407	0.567	0.588	0.667	0.742	0.261	0.336	0.356	0.435	0.510	0.414	0.332
LTE Band 2_Ant 4	FR1 n77_Ant 6	Right Cheek at 0mm	0.270	0.030	0.521	0.179	0.419	0.405	0.091	0.484	0.230	0.147	1.305	0.963	1.124	0.810	1.203	0.621	1.014	0.852	0.538	0.931	1.114	0.912
		Right Tilted at 0mm	0.153	0.024	0.128	0.303	0.486	0.084	0.093	0.143	0.001	0.165	0.448	0.623	0.747	0.756	0.806	0.271	0.321	0.426	0.435	0.485	0.565	0.398
		Left Cheek at 0mm	0.076	0.094	0.148	0.168	0.293	0.146	0.131	0.192	0.097	0.133	0.510	0.530	0.609	0.594	0.655	0.398	0.459	0.449	0.434	0.495	0.581	0.449
		Left Tilted at 0mm	0.071	0.072	0.072	0.232	0.407	0.061	0.140	0.215	0.001	0.175	0.430	0.590	0.611	0.690	0.765	0.284	0.359	0.379	0.458	0.533	0.437	0.355



15.2 Hotspot Exposure Conditions

WWAN_Ant	Exposure Position	1	3	4	5	6	7	8	9	10	1+3+8	1+4+8	1+5+8	1+5+7	1+5+8	1+7+9	1+8+9	1+6+10	1+7+10	1+8+10	1+4+6+9	1+3+7	
		Maximum WWAN	WLAN2.4GHz Ant 7	WLAN2.4GHz Ant 8	WLAN2.4GHz Ant 7+8	WLAN5GHz Ant 7	WLAN5GHz Ant 8	WLAN5GHz Ant 7+8	Bluetooth Ant 7	Bluetooth Ant 8	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)	Summed 1g SAR (W/kg)
WWAN_Ant 1	Front at 10mm	0.278	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.760	0.711	0.838	0.761	0.870	0.433	0.542	0.513	0.436	0.545	0.725	0.651	
	Back at 10mm	0.367	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.098	1.023	1.065	1.297	1.249	0.979	0.931	0.745	0.977	0.929	0.875	1.146	
	Left side at 10mm	0.379	0.507		0.572	0.297		0.285	0.075		1.171	0.664	1.248	0.951	1.236	0.454	0.739	0.676	0.379	0.664	0.751	0.886	
	Right side at 10mm			0.001	0.016		0.168	0.182		0.001	0.182	0.183	0.016	0.184	0.198	0.168	0.182	0.001	0.169	0.183	0.001	0.168	
	Top side at 10mm		0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245	
	Bottom side at 10mm	0.241									0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241	0.241
	WWAN_Ant 2	Front at 10mm	0.504	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.986	0.937	1.064	0.987	1.096	0.659	0.768	0.739	0.662	0.771	0.951	0.877
Back at 10mm	0.445	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.176	1.101	1.143	1.375	1.327	1.057	1.009	0.823	1.055	1.007	0.953	1.224		
Left side at 10mm		0.507		0.572	0.297		0.285	0.075		0.792	0.285	0.869	0.572	0.857	0.075	0.360	0.297	0.000	0.285	0.372	0.507		
Right side at 10mm	0.338		0.001	0.016		0.168	0.182		0.001	0.520	0.521	0.354	0.522	0.536	0.506	0.520	0.339	0.507	0.521	0.339	0.506		
Top side at 10mm		0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245		
Bottom side at 10mm	0.908									0.908	0.908	0.908	0.908	0.908	0.908	0.908	0.908	0.908	0.908	0.908	0.908	0.908	
WWAN_Ant 3	Front at 10mm	0.257	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.739	0.690	0.817	0.740	0.849	0.412	0.521	0.492	0.415	0.524	0.704	0.630	
	Back at 10mm	0.186	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	0.917	0.842	0.884	1.116	1.068	0.798	0.750	0.564	0.796	0.748	0.694	0.965	
	Left side at 10mm		0.507		0.572	0.297		0.285	0.075		0.792	0.285	0.869	0.572	0.857	0.075	0.360	0.297	0.000	0.285	0.372	0.507	
	Right side at 10mm	0.341		0.001	0.016		0.168	0.182		0.001	0.523	0.524	0.357	0.525	0.539	0.509	0.523	0.342	0.510	0.524	0.342	0.509	
	Top side at 10mm	0.229	0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.465	0.867	1.093	1.299	1.290	0.467	0.458	0.335	0.541	0.532	0.671	0.474	
	WWAN_Ant 4	Front at 10mm	0.300	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.782	0.733	0.860	0.783	0.892	0.455	0.564	0.535	0.458	0.567	0.747	0.673
	Back at 10mm	0.430	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.161	1.086	1.128	1.360	1.312	1.042	0.994	0.808	1.040	0.992	0.938	1.209	
Left side at 10mm	0.700	0.507		0.572	0.297		0.285	0.075		1.492	0.985	1.569	1.272	1.557	0.775	1.060	0.997	0.700	0.985	1.072	1.207		
Right side at 10mm			0.001	0.016		0.168	0.182		0.001	0.182	0.183	0.016	0.184	0.198	0.168	0.182	0.001	0.169	0.183	0.001	0.168		
Top side at 10mm	0.293	0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.529	0.931	1.157	1.363	1.354	0.531	0.522	0.399	0.605	0.596	0.735	0.538		
WWAN_Ant 5	Front at 10mm	0.478	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.960	0.911	1.038	0.961	1.070	0.633	0.742	0.713	0.636	0.745	0.925	0.851	
	Back at 10mm	0.478	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.209	1.134	1.176	1.408	1.360	1.090	1.042	0.856	1.088	1.040	0.986	1.257	
	Left side at 10mm	0.579	0.507		0.572	0.297		0.285	0.075		1.371	0.864	1.448	1.151	1.436	0.654	0.939	0.876	0.579	0.864	0.951	1.086	
	Right side at 10mm			0.001	0.016		0.168	0.182		0.001	0.182	0.183	0.016	0.184	0.198	0.168	0.182	0.001	0.169	0.183	0.001	0.168	
	Top side at 10mm		0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245	
	WWAN_Ant 6	Front at 10mm	0.162	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.644	0.595	0.722	0.645	0.754	0.317	0.426	0.397	0.320	0.429	0.609	0.535
	Back at 10mm	0.603	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.334	1.259	1.301	1.533	1.485	1.215	1.167	0.981	1.213	1.165	1.111	1.382	
Left side at 10mm	0.206	0.507		0.572	0.297		0.285	0.075		0.998	0.491	1.075	0.778	1.063	0.281	0.566	0.503	0.206	0.491	0.578	0.713		
Right side at 10mm			0.001	0.016		0.168	0.182		0.001	0.182	0.183	0.016	0.184	0.198	0.168	0.182	0.001	0.169	0.183	0.001	0.168		
Top side at 10mm		0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245		
Bottom side at 10mm	0.002									0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	



<ENDC Active>

LTE Band_Ant	FR1 Band_Ant	Exposure Position	1		2		3		4		5		6		7		8		9		10		1+2+3+8 Summed 1g SAR (W/kg)	1+2+4+8 Summed 1g SAR (W/kg)	1+2+5+6 Summed 1g SAR (W/kg)	1+2+5+7 Summed 1g SAR (W/kg)	1+2+5+8 Summed 1g SAR (W/kg)	1+2+7+9 Summed 1g SAR (W/kg)	1+2+8+9 Summed 1g SAR (W/kg)	1+2+6+10 Summed 1g SAR (W/kg)	1+2+7+10 Summed 1g SAR (W/kg)	1+2+8+10 Summed 1g SAR (W/kg)	1+2+4+6+9 Summed 1g SAR (W/kg)	1+2+3+7 Summed 1g SAR (W/kg)										
			LTE	FR1	WLAN 2.4GHz Ant 7	WLAN 2.4GHz Ant 6	WLAN 2.4GHz Ant 7+8	WLAN 5GHz Ant 7	WLAN 5GHz Ant 8	WLAN 5GHz Ant 7+8	WLAN 5GHz Ant 8	WLAN 5GHz Ant 7+8	Bluetooth Ant 7	Bluetooth Ant 8																														
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)																														
LTE Band 2_Ant 2	FR1 n5_Ant 1	Front at 10mm	0.319	0.100	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.901	0.852	0.979	0.902	1.011	0.574	0.683	0.654	0.577	0.686	0.866	0.792																				
		Back at 10mm	0.295	0.118	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.144	1.069	1.111	1.343	1.295	1.025	0.977	0.791	1.023	0.975	0.921	1.192																				
		Left side at 10mm		0.095	0.507		0.572	0.297		0.285	0.075		0.887	0.380	0.964	0.667	0.952	0.170	0.455	0.392	0.095	0.380	0.467	0.602																				
		Right side at 10mm	0.199			0.001	0.016		0.168	0.182		0.001	0.381	0.382	0.215	0.383	0.397	0.367	0.381	0.200	0.368	0.382	0.200	0.367																				
		Top side at 10mm			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245																				
		Bottom side at 10mm	0.824	0.028									0.852	0.852	0.852	0.852	0.852	0.852	0.852	0.852	0.852	0.852	0.852	0.852																				
LTE Band 2_Ant 4 cover by LTE Band 25_Ant 4	FR1 n5_Ant 3	Front at 10mm	0.181	0.217	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.880	0.831	0.958	0.881	0.990	0.553	0.662	0.633	0.556	0.665	0.845	0.771																				
		Back at 10mm	0.166	0.160	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.057	0.982	1.024	1.256	1.208	0.938	0.890	0.704	0.936	0.888	0.834	1.105																				
		Left side at 10mm	0.221		0.507		0.572	0.297		0.285	0.075		1.013	0.506	1.090	0.793	1.078	0.296	0.581	0.518	0.221	0.506	0.593	0.728																				
		Right side at 10mm		0.297		0.001	0.016		0.168	0.182		0.001	0.479	0.480	0.313	0.481	0.495	0.465	0.479	0.298	0.466	0.480	0.298	0.465																				
		Top side at 10mm	0.197	0.229	0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.662	1.064	1.290	1.496	1.487	0.664	0.655	0.532	0.738	0.729	0.868	0.671																				
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n2_Ant 2 cover by FR1 n25_Ant 2	Front at 10mm	0.101	0.408	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.991	0.942	1.069	0.992	1.101	0.664	0.773	0.744	0.667	0.776	0.956	0.882																				
		Back at 10mm	0.137	0.382	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.250	1.175	1.217	1.449	1.401	1.131	1.083	0.897	1.129	1.081	1.027	1.298																				
		Left side at 10mm	0.116		0.507		0.572	0.297		0.285	0.075		0.908	0.401	0.985	0.688	0.973	0.191	0.476	0.413	0.116	0.401	0.488	0.623																				
		Right side at 10mm		0.338		0.001	0.016		0.168	0.182		0.001	0.520	0.521	0.354	0.522	0.536	0.506	0.520	0.339	0.507	0.521	0.339	0.506																				
		Top side at 10mm			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245																				
LTE Band 5_Ant 3 cover by LTE Band 26_Ant 3	FR1 n2_Ant 4 cover by FR1 n25_Ant 4	Front at 10mm	0.173	0.217	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.872	0.823	0.950	0.873	0.982	0.545	0.654	0.625	0.548	0.657	0.837	0.763																				
		Back at 10mm	0.135	0.255	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.121	1.046	1.088	1.320	1.272	1.002	0.954	0.768	1.000	0.952	0.898	1.169																				
		Left side at 10mm		0.356	0.507		0.572	0.297		0.285	0.075		1.148	0.641	1.225	0.928	1.213	0.431	0.716	0.653	0.356	0.641	0.728	0.863																				
		Right side at 10mm	0.249			0.001	0.016		0.168	0.182		0.001	0.431	0.432	0.265	0.433	0.447	0.417	0.431	0.250	0.418	0.432	0.250	0.417																				
		Top side at 10mm	0.200	0.165	0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.601	1.003	1.229	1.435	1.426	0.603	0.594	0.471	0.677	0.668	0.807	0.610																				
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n78_Ant 5	Front at 10mm	0.101	0.293	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.876	0.827	0.954	0.877	0.986	0.549	0.658	0.629	0.552	0.661	0.841	0.767																				
		Back at 10mm	0.137	0.264	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.132	1.057	1.099	1.331	1.283	1.013	0.965	0.779	1.011	0.963	0.909	1.180																				
		Left side at 10mm	0.116	0.547	0.507		0.572	0.297		0.285	0.075		1.455	0.948	1.532	1.235	1.520	0.738	1.023	0.960	0.663	0.948	1.035	1.170																				
		Right side at 10mm				0.001	0.016		0.168	0.182		0.001	0.182	0.183	0.016	0.184	0.198	0.168	0.182	0.001	0.169	0.183	0.001	0.168																				
		Top side at 10mm			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245																				
LTE Band 5_Ant 3 cover by LTE Band 26_Ant 3	FR1 n78_Ant 4	Front at 10mm	0.173	0.180	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.835	0.786	0.913	0.836	0.945	0.508	0.617	0.588	0.511	0.620	0.800	0.726																				
		Back at 10mm	0.135	0.399	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.265	1.190	1.232	1.464	1.416	1.146	1.098	0.912	1.144	1.096	1.042	1.313																				
		Left side at 10mm		0.466	0.507		0.572	0.297		0.285	0.075		1.258	0.751	1.335	1.038	1.323	0.541	0.826	0.763	0.466	0.751	0.838	0.973																				
		Right side at 10mm	0.249			0.001	0.016		0.168	0.182		0.001	0.431	0.432	0.265	0.433	0.447	0.417	0.431	0.250	0.418	0.432	0.250	0.417																				
		Top side at 10mm	0.200	0.140	0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.576	0.978	1.204	1.410	1.401	0.578	0.569	0.446	0.652	0.643	0.782	0.585																				
LTE Band 5_Ant 1 cover by LTE Band 26_Ant 1	FR1 n78_Ant 2 cover by FR1 n77_Ant 2	Front at 10mm	0.101	0.202	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.785	0.736	0.863	0.786	0.895	0.458	0.567	0.538	0.461	0.570	0.750	0.676																				
		Back at 10mm	0.137	0.193	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.061	0.986	1.028	1.260	1.212	0.942	0.894	0.708	0.940	0.892	0.838	1.109																				
		Left side at 10mm	0.116		0.507		0.572	0.297		0.285	0.075		0.908	0.401	0.985	0.688	0.973	0.191	0.476	0.413	0.116	0.401	0.488	0.623																				
		Right side at 10mm		0.067		0.001	0.016		0.168	0.182		0.001	0.249	0.250	0.083	0.251	0.265	0.235	0.249	0.068	0.236	0.250	0.068	0.235																				
		Top side at 10mm			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442																					



FCC SAR TEST REPORT

Report No. : FA210409

LTE Band	Antenna	Exposure Position	Frequency Bands										Summed SAR												
			FR1	FR1	FR1	FR1	FR1	FR1	FR1	FR1	FR1	FR1	1+2+3+8	1+2+4+8	1+2+5+6	1+2+5+7	1+2+5+8	1+2+7+9	1+2+8+9	1+2+6+10	1+2+7+10	1+2+8+10	1+2+4+6+9	1+2+3+7	
LTE Band 7_Ant 1	FR1 n78_Ant 2 cover by FR1 n77_Ant 2	Back at 10mm	0.090	0.264	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.085	1.010	1.052	1.284	1.236	0.966	0.918	0.732	0.964	0.916	0.862	1.133	
		Left side at 10mm	0.152	0.547	0.507		0.572	0.297		0.285	0.075		1.491	0.984	1.568	1.271	1.556	0.774	1.059	0.996	0.699	0.984	1.071	1.206	
		Right side at 10mm				0.001	0.016	0.168	0.182		0.001	0.182	0.183	0.016	0.184	0.198	0.168	0.182	0.001	0.169	0.183	0.001	0.168	0.001	0.168
		Top side at 10mm			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245	0.245
		Bottom side at 10mm	0.066											0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066

LTE Band_Ant	FR1_Band_Ant	Exposure Position	Frequency Bands										Summed SAR												
			LTE	FR1	WLAN 2.4GHz Ant 7	WLAN 2.4GHz Ant 8	WLAN 2.4GHz Ant 7+8	WLAN 5GHz Ant 7	WLAN 5GHz Ant 8	WLAN 5GHz Ant 7+8	Bluetooth Ant 7	Bluetooth Ant 8	1+2+3+8	1+2+4+8	1+2+5+6	1+2+5+7	1+2+5+8	1+2+7+9	1+2+8+9	1+2+6+10	1+2+7+10	1+2+8+10	1+2+4+6+9	1+2+3+7	
LTE Band 12_Ant 1	FR1 n2_Ant 2 cover by FR1 n25_Ant 2	Front at 10mm -	0.111	0.408	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	1.001	0.952	1.079	1.002	1.111	0.674	0.783	0.754	0.677	0.786	0.966	0.892	
		Back at 10mm -	0.156	0.382	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.269	1.194	1.236	1.468	1.420	1.150	1.102	0.916	1.148	1.100	1.046	1.317	
		Left side at 10mm -	0.178		0.507		0.572	0.297		0.285	0.075		0.970	0.463	1.047	0.750	1.035	0.253	0.538	0.475	0.178	0.463	0.550	0.685	
		Right side at 10mm -		0.338		0.001	0.016	0.168	0.182		0.001	0.520	0.521	0.354	0.522	0.536	0.506	0.520	0.339	0.507	0.521	0.339	0.506	0.506	
		Top side at 10mm -			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245	0.245
		Bottom side at 10mm -	0.053	0.891										0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944
LTE Band 66_Ant 2	FR1 n77_Ant 5	Front at 10mm -	0.405	0.116	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	1.003	0.954	1.081	1.004	1.113	0.676	0.785	0.756	0.679	0.788	0.968	0.894	
		Back at 10mm -	0.375	0.096	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.202	1.127	1.169	1.401	1.353	1.083	1.035	0.849	1.081	1.033	0.979	1.250	
		Left side at 10mm -		0.232	0.507		0.572	0.297		0.285	0.075		1.024	0.517	1.101	0.804	1.089	0.307	0.592	0.529	0.232	0.517	0.604	0.739	
		Right side at 10mm -	0.191			0.001	0.016	0.168	0.182		0.001	0.373	0.374	0.207	0.375	0.389	0.359	0.373	0.192	0.360	0.374	0.192	0.359	0.359	
		Top side at 10mm -			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245	0.245
		Bottom side at 10mm -	0.793											0.793	0.793	0.793	0.793	0.793	0.793	0.793	0.793	0.793	0.793	0.793	0.793
LTE Band 12_Ant 1	FR1 n77_Ant 5	Front at 10mm -	0.111	0.116	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.709	0.660	0.787	0.710	0.819	0.382	0.491	0.462	0.385	0.494	0.674	0.600	
		Back at 10mm -	0.156	0.096	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	0.983	0.908	0.950	1.182	1.134	0.864	0.816	0.630	0.862	0.814	0.760	1.031	
		Left side at 10mm -	0.178	0.232	0.507		0.572	0.297		0.285	0.075		1.202	0.695	1.279	0.982	1.267	0.485	0.770	0.707	0.410	0.695	0.782	0.917	
		Right side at 10mm -				0.001	0.016	0.168	0.182		0.001	0.182	0.183	0.016	0.184	0.198	0.168	0.182	0.001	0.169	0.183	0.001	0.168	0.001	0.168
		Top side at 10mm -			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245	0.245
		Bottom side at 10mm -	0.053											0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053
LTE Band 2_Ant 2	FR1 n77_Ant 5	Front at 10mm -	0.319	0.116	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.917	0.868	0.995	0.918	1.027	0.590	0.699	0.670	0.593	0.702	0.882	0.808	
		Back at 10mm -	0.295	0.096	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.122	1.047	1.089	1.321	1.273	1.003	0.955	0.769	1.001	0.953	0.899	1.170	
		Left side at 10mm -		0.232	0.507		0.572	0.297		0.285	0.075		1.024	0.517	1.101	0.804	1.089	0.307	0.592	0.529	0.232	0.517	0.604	0.739	
		Right side at 10mm -	0.199			0.001	0.016	0.168	0.182		0.001	0.381	0.382	0.215	0.383	0.397	0.367	0.381	0.200	0.368	0.382	0.200	0.367	0.367	
		Top side at 10mm -			0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.236	0.638	0.864	1.070	1.061	0.238	0.229	0.106	0.312	0.303	0.442	0.245	0.245
		Bottom side at 10mm -	0.824											0.824	0.824	0.824	0.824	0.824	0.824	0.824	0.824	0.824	0.824	0.824	0.824
LTE Band 12_Ant 3	FR1 n2_Ant 4 cover by FR1 n25_Ant 4	Front at 10mm -	0.047	0.217	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.746	0.697	0.824	0.747	0.856	0.419	0.528	0.499	0.422	0.531	0.711	0.637	
		Back at 10mm -	0.055	0.255	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.041	0.966	1.008	1.240	1.192	0.922	0.874	0.688	0.920	0.872	0.818	1.089	
		Left side at 10mm -		0.356	0.507		0.572	0.297		0.285	0.075		1.148	0.641	1.225	0.928	1.213	0.431	0.716	0.653	0.356	0.641	0.728	0.863	
		Right side at 10mm -	0.129			0.001	0.016	0.168	0.182		0.001	0.311	0.312	0.145	0.313	0.327	0.297	0.311	0.130	0.298	0.312	0.130	0.297	0.297	
		Top side at 10mm -	0.047	0.165	0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.448	0.850	1.076	1.282	1.273	0.450	0.441	0.318	0.524	0.515	0.654	0.457	0.457
		Bottom side at 10mm -											0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE Band 12_Ant 3	FR1 n2_Ant 2 cover by FR1 n25_Ant 2	Front at 10mm -	0.047	0.408	0.264	0.215	0.374	0.186	0.109	0.218	0.046	0.049	0.937	0.888	1.015	0.938	1.047	0.610	0.719	0.690	0.613	0.722	0.902	0.828	
		Back at 10mm -	0.055	0.382	0.203	0.128	0.354	0.344	0.576	0.528	0.036	0.034	1.168	1.093	1.135	1.367	1.319	1.049	1.001	0.815	1.047	0.999	0.945	1.216	
		Left side at 10mm -			0.507		0.572	0.297		0.285	0.075		0.792	0.285	0.869	0.572	0.857	0.075	0.360	0.297	0.000	0.285	0.372	0.507	
		Right side at 10mm -	0.129	0.338		0.001	0.016	0.168	0.182		0.001	0.649	0.650	0.483	0.651	0.665	0.635	0.649	0.468	0.636	0.650	0.468	0.635	0.635	
		Top side at 10mm -	0.047		0.008	0.410	0.833	0.031	0.237	0.228	0.001	0.075	0.283	0.685	0.911	1.117	1.108	0.285	0.276	0.153	0.359	0.350	0.489	0.292	0.292
		Bottom side at 10mm -																							



15.3 Body-Worn Accessory Exposure Conditions

WWAN_Ant	Exposure Position	1	3	4	5	6	7	8	9	10	1+3+8 Summed 1g SAR (W/kg)	1+4+8 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	1+5+8 Summed 1g SAR (W/kg)	1+7+9 Summed 1g SAR (W/kg)	1+8+9 Summed 1g SAR (W/kg)	1+6+10 Summed 1g SAR (W/kg)	1+7+10 Summed 1g SAR (W/kg)	1+8+10 Summed 1g SAR (W/kg)	1+4+6+9 Summed 1g SAR (W/kg)	1+3+7 Summed 1g SAR (W/kg)
		Maximum WWAN	WLAN 2.4GHz Ant 7	WLAN 2.4GHz Ant 8	WLAN 2.4GHz Ant 7+8	WLAN 5/6GHz Ant 7	WLAN 5/6GHz Ant 8	WLAN 5/6GHz Ant 7+8	Bluetooth Ant 7	Bluetooth Ant 8												
WWAN_Ant 1	Front at 15mm	0.187	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.498	0.459	0.567	0.537	0.570	0.301	0.334	0.344	0.314	0.347	0.461	0.465
	Back at 15mm	0.272	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.751	0.665	0.758	1.050	0.885	0.841	0.676	0.552	0.844	0.679	0.550	0.916
WWAN_Ant 2	Front at 15mm	0.419	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.730	0.691	0.799	0.769	0.802	0.533	0.566	0.576	0.546	0.579	0.693	0.697
	Back at 15mm	0.288	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.767	0.681	0.774	1.066	0.901	0.857	0.692	0.568	0.860	0.695	0.566	0.932
WWAN_Ant 3	Front at 15mm	0.165	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.476	0.437	0.545	0.515	0.548	0.279	0.312	0.322	0.292	0.325	0.439	0.443
	Back at 15mm	0.187	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.666	0.580	0.673	0.965	0.800	0.756	0.591	0.467	0.759	0.594	0.465	0.831
WWAN_Ant 4	Front at 15mm	0.334	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.645	0.606	0.714	0.684	0.717	0.448	0.481	0.491	0.461	0.494	0.608	0.612
	Back at 15mm	0.497	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.976	0.890	0.983	1.275	1.110	1.066	0.901	0.777	1.069	0.904	0.775	1.141
WWAN_Ant 5	Front at 15mm	0.304	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.615	0.576	0.684	0.654	0.687	0.418	0.451	0.461	0.431	0.464	0.578	0.582
	Back at 15mm	0.264	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.743	0.657	0.750	1.042	0.877	0.833	0.668	0.544	0.836	0.671	0.542	0.908
WWAN_Ant 6	Front at 15mm	0.102	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.413	0.374	0.482	0.452	0.485	0.216	0.249	0.259	0.229	0.262	0.376	0.380
	Back at 15mm	0.326	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.805	0.719	0.812	1.104	0.939	0.895	0.730	0.606	0.898	0.733	0.604	0.970

Exposure Position	1	2	3	4	5	6	7	8	3+8 Summed 1g SAR (W/kg)	4+8 Summed 1g SAR (W/kg)	5+6 Summed 1g SAR (W/kg)	5+7 Summed 1g SAR (W/kg)	5+8 Summed 1g SAR (W/kg)	6+9 Summed 1g SAR (W/kg)	7+9 Summed 1g SAR (W/kg)	8+9 Summed 1g SAR (W/kg)	6+10 Summed 1g SAR (W/kg)	7+10 Summed 1g SAR (W/kg)	8+10 Summed 1g SAR (W/kg)
	WLAN 2.4GHz Ant 7	WLAN 2.4GHz Ant 8	WLAN 2.4GHz Ant 7+8	WLAN 5/6GHz Ant 7	WLAN 5/6GHz Ant 8	WLAN 5/6GHz Ant 7+8	Bluetooth Ant 7	Bluetooth Ant 8											
Front at 15mm	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.311	0.272	0.248	0.350	0.383	0.144	0.114	0.147	0.157	0.127	0.160
Back at 15mm	0.087	0.001	0.221	0.265	0.557	0.320	0.012	0.015	0.407	0.321	0.822	0.778	0.541	0.277	0.569	0.332	0.280	0.572	0.335



<ENDC Active>

Table with 24 columns: LTE Band_Ant, FR1 Band_Ant, Exposure Position, LTE, FR1, WLAN 2.4GHz Ant 7, WLAN 2.4GHz Ant 8, WLAN 2.4GHz Ant 7+8, WLAN 5G/6GHz Ant 7, WLAN 5G/6GHz Ant 8, WLAN 5G/6GHz Ant 7+8, Bluetooth Ant 7, Bluetooth Ant 8, 1+2+3+8 Summed 1g SAR (W/kg), 1+2+4+8 Summed 1g SAR (W/kg), 1+2+5+6 Summed 1g SAR (W/kg), 1+2+5+7 Summed 1g SAR (W/kg), 1+2+5+8 Summed 1g SAR (W/kg), 1+2+7+9 Summed 1g SAR (W/kg), 1+2+8+9 Summed 1g SAR (W/kg), 1+2+6+10 Summed 1g SAR (W/kg), 1+2+7+10 Summed 1g SAR (W/kg), 1+2+8+10 Summed 1g SAR (W/kg), 1+2+4+6+9 Summed 1g SAR (W/kg), 1+2+3+7 Summed 1g SAR (W/kg). Rows include LTE Band 2, 4, 5, 7 and LTE Band 26, 66.

Table with 24 columns: LTE Band_Ant, FR1 Band_Ant, Exposure Position, LTE, FR1, WLAN 2.4GHz Ant 7, WLAN 2.4GHz Ant 8, WLAN 2.4GHz Ant 7+8, WLAN 5G/6GHz Ant 7, WLAN 5G/6GHz Ant 8, WLAN 5G/6GHz Ant 7+8, Bluetooth Ant 7, Bluetooth Ant 8, 1+2+3+8 Summed 1g SAR (W/kg), 1+2+4+8 Summed 1g SAR (W/kg), 1+2+5+6 Summed 1g SAR (W/kg), 1+2+5+7 Summed 1g SAR (W/kg), 1+2+5+8 Summed 1g SAR (W/kg), 1+2+7+9 Summed 1g SAR (W/kg), 1+2+8+9 Summed 1g SAR (W/kg), 1+2+6+10 Summed 1g SAR (W/kg), 1+2+7+10 Summed 1g SAR (W/kg), 1+2+8+10 Summed 1g SAR (W/kg), 1+2+4+6+9 Summed 1g SAR (W/kg), 1+2+3+7 Summed 1g SAR (W/kg). Rows include LTE Band 12, 66, and LTE Band 25.



FCC SAR TEST REPORT

Report No. : FA210409

		Back at 15mm -	0.058	0.326	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.863	0.777	0.870	1.162	0.997	0.953	0.788	0.664	0.956	0.791	0.662	1.028
LTE Band 12_Ant 1	FR1 n77_Ant 2	Front at 15mm -	0.112	0.161	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.584	0.545	0.653	0.623	0.656	0.387	0.420	0.430	0.400	0.433	0.547	0.551
		Back at 15mm -	0.136	0.211	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.826	0.740	0.833	1.125	0.960	0.916	0.751	0.627	0.919	0.754	0.625	0.991
LTE Band 12_Ant 1	FR1 n77_Ant 4	Front at 15mm -	0.112	0.254	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.677	0.638	0.746	0.716	0.749	0.480	0.513	0.523	0.493	0.526	0.640	0.644
		Back at 15mm -	0.136	0.497	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	1.112	1.026	1.119	1.411	1.246	1.202	1.037	0.913	1.205	1.040	0.911	1.277
LTE Band 12_Ant 1	FR1 n77_Ant 6	Front at 15mm -	0.112	0.094	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.517	0.478	0.586	0.556	0.589	0.320	0.353	0.363	0.333	0.366	0.480	0.484
		Back at 15mm -	0.136	0.326	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.941	0.855	0.948	1.240	1.075	1.031	0.866	0.742	1.034	0.869	0.740	1.106
LTE Band 12_Ant 3	FR1 n77_Ant 5	Front at 15mm -	0.078	0.304	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.693	0.654	0.762	0.732	0.765	0.496	0.529	0.539	0.509	0.542	0.656	0.660
		Back at 15mm -	0.087	0.264	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.830	0.744	0.837	1.129	0.964	0.920	0.755	0.631	0.923	0.758	0.629	0.995
LTE Band 12_Ant 3	FR1 n77_Ant 2	Front at 15mm -	0.078	0.161	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.550	0.511	0.619	0.589	0.622	0.353	0.386	0.396	0.366	0.399	0.513	0.517
		Back at 15mm -	0.087	0.211	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.777	0.691	0.784	1.076	0.911	0.867	0.702	0.578	0.870	0.705	0.576	0.942
LTE Band 12_Ant 3	FR1 n77_Ant 4	Front at 15mm -	0.078	0.254	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.643	0.604	0.712	0.682	0.715	0.446	0.479	0.489	0.459	0.492	0.606	0.610
		Back at 15mm -	0.087	0.497	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	1.063	0.977	1.070	1.362	1.197	1.153	0.988	0.864	1.156	0.991	0.862	1.228
LTE Band 12_Ant 3	FR1 n77_Ant 6	Front at 15mm -	0.078	0.094	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.483	0.444	0.552	0.522	0.555	0.286	0.319	0.329	0.299	0.332	0.446	0.450
		Back at 15mm -	0.087	0.326	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.892	0.806	0.899	1.191	1.026	0.982	0.817	0.693	0.985	0.820	0.691	1.057
LTE Band 2_Ant 2	FR1 n77_Ant 4	Front at 15mm -	0.283	0.254	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.848	0.809	0.917	0.887	0.920	0.651	0.684	0.694	0.664	0.697	0.811	0.815
		Back at 15mm -	0.264	0.497	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	1.240	1.154	1.247	1.539	1.374	1.330	1.165	1.041	1.333	1.168	1.039	1.405
LTE Band 2_Ant 2	FR1 n77_Ant 6	Front at 15mm -	0.283	0.094	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.688	0.649	0.757	0.727	0.760	0.491	0.524	0.534	0.504	0.537	0.651	0.655
		Back at 15mm -	0.264	0.326	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	1.069	0.983	1.076	1.368	1.203	1.159	0.994	0.870	1.162	0.997	0.868	1.234
LTE Band 2_Ant 4	FR1 n77_Ant 5	Front at 15mm -	0.067	0.304	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.682	0.643	0.751	0.721	0.754	0.485	0.518	0.528	0.498	0.531	0.645	0.649
		Back at 15mm -	0.072	0.264	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.815	0.729	0.822	1.114	0.949	0.905	0.740	0.616	0.908	0.743	0.614	0.980
LTE Band 2_Ant 4	FR1 n77_Ant 2	Front at 15mm -	0.067	0.161	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.539	0.500	0.608	0.578	0.611	0.342	0.375	0.385	0.355	0.388	0.502	0.506
		Back at 15mm -	0.072	0.211	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.762	0.676	0.769	1.061	0.896	0.852	0.687	0.563	0.855	0.690	0.561	0.927
LTE Band 2_Ant 4	FR1 n77_Ant 6	Front at 15mm -	0.067	0.094	0.169	0.130	0.241	0.139	0.109	0.142	0.005	0.018	0.472	0.433	0.541	0.511	0.544	0.275	0.308	0.318	0.288	0.321	0.435	0.439
		Back at 15mm -	0.072	0.326	0.087	0.001	0.221	0.265	0.557	0.392	0.012	0.015	0.877	0.791	0.884	1.176	1.011	0.967	0.802	0.678	0.970	0.805	0.676	1.042

Test Engineer : Dennis Hsieh and Jimmy Lu

16. Uncertainty Assessment

Declaration of Conformity:

The test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

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

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

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

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

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

Standard Uncertainty for Assumed Distribution

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

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

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



Applicable for SAR Measurements:

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

Applicable for Power Density Measurements according to Dasy System Handbook :

Uncertainty Budget for PD (avg $\geq 1 \text{ cm}^2$) Evaluation Distances to the Antennas $\geq \lambda/5$					
Error Description	Uncertainty Value (\pm dB)	Probability	Divisor	(Ci)	Standard Uncertainty (\pm dB)
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response (BW ≤ 1 GHz)	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance dependance	0.00	R	1.732	1	0.00
Amplitude and phase drift	0.00	R	1.732	1	0.00
Amplitude and phase noise	0.04	R	1.732	1	0.02
Measurement area truncation	0.00	R	1.732	1	0.00
Data acquisition	0.03	N	1	1	0.03
Sampling	0.00	R	1.732	1	0.00
Field reconstruction	2.00	R	1.732	1	1.15
Forward transformation	0.00	R	1.732	1	0.00
Power density scaling	0.00	R	1.732	1	0.00
Spatial averaging	0.10	R	1.732	1	0.06
System detection limit	0.04	R	1.732	1	0.02
Uncertainty terms dependent on the DUT and environmental factors					
Probe coupling with DUT	0.00	R	1.732	1	0.0
Modulation response	0.40	R	1.732	1	0.2
Integration time	0.00	R	1.732	1	0.0
Response time	0.00	R	1.732	1	0.0
Device holder influence	0.10	R	1.732	1	0.1
DUT alignment	0.00	R	1.732	1	0.0
RF ambient conditions	0.04	R	1.732	1	0.0
Ambient reflections	0.04	R	1.732	1	0.0
Immunity / secondary reception	0.00	R	1.732	1	0.0
Drift of the DUT		R	1.732	1	
Combined Std. Uncertainty					1.34
Expanded STD Uncertainty (95%)					2.68



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