


FCC SAR TEST REPORT

FCC ID : UZ7TC78B1
Equipment : Touch Computer
Brand Name : Zebra
Model Name : TC78B1
Applicant : Zebra Technologies Corporation
1 Zebra Plaza, Holtsville, NY 11742
Manufacturer : Zebra Technologies Corporation
1 Zebra Plaza, Holtsville, NY 11742
Standard : FCC 47 CFR Part 2 (2.1093)

The product was received on Jul. 20, 2022 and testing was started from Aug. 19, 2022 and completed on Nov. 09, 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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History of this test report

Report No.	Version	Description	Issued Date
FA271545A	01	Initial issue of report	Oct. 21, 2022
FA271545A	02	Additional WiFi 6E PD exposure position result Update appendix B, E and F	Nov. 10, 2022
FA271545A	03	Update Section 13	Nov. 22, 2022



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for Zebra Technologies Corporation, Touch Computer, TC78B1, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary				Highest Simultaneous Transmission 1g SAR (W/kg)	Highest Simultaneous Transmission 10g SAR (W/kg)
		Head (Separation 0mm)	Body-worn (Separation 15mm)	Hotspot (Separation 10mm)	Product Specific (Separation 0mm)		
		1g SAR (W/kg)			10g SAR (W/kg)		
Licensed	GSM850	0.46	0.96	0.58		1.59	3.32
	GSM1900	0.03	0.62	0.51			
	WCDMA II	0.43	0.38	0.69			
	WCDMA IV	0.35	0.30	0.48			
	WCDMA V	0.39	0.97	0.66			
	LTE Band 2	0.57	0.44	0.36			
	LTE Band 5	0.49	0.72	0.56			
	LTE Band 7	0.91	0.92	0.63			
	LTE Band 17	0.28	0.44	0.43			
	LTE Band 4/66	0.58	0.69	0.69			
	LTE Band 71	0.36	0.41	0.30			
	LTE Band 38/41	0.18	0.43	0.56			
	LTE Band 42	0.38	0.96	0.79	2.51		
	FR1 n2	0.49	0.19	0.58			
	FR1 n5	0.42	0.62	0.57			
	FR1 n7	0.99	0.68	0.68			
	FR1 n66	0.47	0.59	0.52			
	FR1 n71	0.28	0.32	0.34			
FR1 n38/n41	0.79	0.72	0.69				
FR1 n77/n78	0.77	1.04	0.85	3.17			
DTS	2.4GHz WLAN	0.76	0.41	0.65		1.59	
NII	5GHz WLAN	1.19	0.53	0.87	1.00	1.59	3.32
6CD	6GHz WLAN	0.31	0.12		0.26	1.34	3.24
DSS	Bluetooth	< 0.01	< 0.01	< 0.01		1.59	
Equipment Class	Frequency Band	Head APD (mW/cm ²)	Body-worn APD (mW/cm ²)	Product Specific APD (mW/cm ²)	Reported PD (mW/cm ²)		
6CD	6GHz WLAN	0.174	0.097	0.554	0.708		
Date of Testing:		2022/8/19 ~ 2022/11/9					

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093), Human Exposure to RF Radiation Limits (1.0 mW/cm²=10 W/m²) specified in FCC 47 CFR part 1.1310 and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang
Report Producer: Paula Chen



2. Equipment Under Test (EUT) Information

2.1 General Information

Product Feature & Specification	
Equipment Name	Touch Computer
Brand Name	Zebra
Model Name	TC78B1
FCC ID	UZ7TC78B1
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 17: 704 MHz ~ 716 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 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 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 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	EV2
SW Version	athena_A11_userdebug_GMS_RelKey_2022-07-14-1733_product_SE
FW Version	FUSION_QA_4_1.2.0.001_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.
MFD	11JUN22
EUT Stage	Identical Prototype
Remark:	<ol style="list-style-type: none"> Dynamic antenna tuning mechanism is available at Ant. 0 / 4 and for its <1GHz band. The device implements the power management detection for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) and the smart transmit will manage to ensure the power level not exceeding the associated power table. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications. There are three kinds of samples as below. RF exposure is selected sample 1 to evaluate and sample 2 and 3 spot check worst case found sample 1. The device support DBS mode (Dual band simultaneous) for WLAN operation, when the DBS mode is active the device will limit different maximum power for Sim-Tx SAR compliance. This device has NFC operations, the NFC antenna is integrated into the device for this model, therefore, all SAR test were performed with the device which already incorporates the NFC antenna. According to FCC KDB publication 447498 D01v06, transmitters are consider to be operating simultaneously when there is overlapping transmission, with the exception of transmission during network hand-offs with maximum hand-off duration less than 30 seconds.



Sample list	
Sample1	SE4770 + Base config
Sample2	Lowell + Premium sku
Sample3	Lowell + Base sku

Specification of Accessories				
Adapter	Brand Name	Zebra	Model	SAWA-65-20005A
			Part Number	PWR-WUA5V12W0US
Battery 1X	Brand Name	Zebra	Model	BT-000442
			Part Number	BT-000442-0020
Battery 1.5X	Brand Name	Zebra	Model	BT-000442A
			Part Number	BT-000442-0820
Wireless Battery	Brand Name	Zebra	Model	BT-000442
			Part Number	BT-000442-002A
USB TYPE A to TYPE C cable	Brand Name	Zebra	Part Number	CBL-TC5X-USBC2A-01
USB TYPE C to 3.5mm audio connector	Brand Name	Zebra	Part Number	ADP-USBC-35MM1-01
3.5mm Earphone	Brand Name	Zebra	Part Number	HDST-35MM-PTVP-01
USB TYPE C Earphone	Brand Name	Zebra	Part Number	HPST-USBC-PTT1-01
Trigger Handle	Brand Name	Zebra	Part Number	TRG-NGTC5-ELEC-01
Soft Holster	Brand Name	Zebra	Part Number	SG-NGTC5TC7-HLSTR-01
TC53/TC58 RUGGED BOOT	Brand Name	Zebra	Part Number	SG-NGTC5EX01-01

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)



3.1 Maximum Tune-up Limit

General Note:

1. PC2 as Power class2, PC3 as Power class3 in this report.
2. For each cellular band, the device has several WWAN antennas, the antenna selection is based on the connection quality condition.
3. The device implements the power management detection for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) by DSI(Device State Index) and the smart transmit will manage to ensure the power level not exceeding the associated power table.
4. The following table shows maximum output power configurations for various exposure conditions (Device State Index) with tune-up tolerance accounted. For Smart transmit enabled bands, the values associate with Plimit plus the total uncertainty, or Pmax plus total uncertainty when the derived Plimit is higher than Pmax. In some frequency bands, for some power indexes which associate with the same power level, conducted power measurement for those only need to perform at once.
5. Ant 3 and Ant 5 are used as SRS dedicated antennas, i.e., the antenna(s) are used for receive and Sound Reference Signal transmission (SRS) only (not traffic transmission).

Band	Config	Antenna	Duty cycle	Pmax	WLAN OFF			WLAN ON		
					Head	Body-worn /Extremity	Head	Hotspot	Body-worn /Extremity	
					DSI0	DSI2	DSI1	DSI2	DSI3	DSI1
GSM850 GPRS 4TX	TX0	4	50.00%	30.5	30.5	30.5	29.9	30.5	30.5	
GSM1900 GPRS 4TX	TX0	4	50.00%	27.5	27.5	27.5	27.5	27.1	27.5	
WCDMA B2	TX0	2	100.00%	25.2	25.2	25.2	25.2	25.2	25.2	
WCDMA B4	TX0	2	100.00%	25.2	25.2	25.2	25.2	24.5	25.2	
WCDMA B5	TX0	4	100.00%	25.2	25.2	25.2	25.2	25.2	25.1	
LTE B2	TX0	2	100.00%	25.2	25.2	25.2	25.2	25.2	25.2	
LTE B4/66	TX0	2	100.00%	25.2	25.2	25.2	25.2	23.6	25.2	
LTE B5	TX0	4	100.00%	25.2	24.7	25.2	23.7	25.2	25.2	
LTE B7	TX0	12	100.00%	24.0	24.0	24.0	22.6	24.0	24.0	
LTE B7	TX1	6	100.00%	24.0	24.0	24.0	23.1	23.3	24.0	
LTE B17	TX0	0	100.00%	24.7	24.7	24.7	24.7	24.7	24.7	
LTE B38 PC3	TX1	6	63.30%	24.5	24.5	24.5	24.5	23.7	24.5	
LTE B41 PC3	TX1	6	63.30%	25.0	24.6	25.0	24.5	23.7	25.0	
LTE B41 PC2	TX1	6	43.30%	27.0	26.2	27.0	26.1	25.3	27.0	
LTE B42	TX0	12	63.30%	25.0	25.0	23.9	25.0	21.0	23.9	
LTE B42	TX1	11	63.30%	25.0	21.1	21.0	21.1	17.9	21.0	
LTE B71	TX0	0	100.00%	24.7	24.7	24.7	24.7	24.7	24.7	
FR1 n2	TX0	2	100.00%	25.2	25.2	25.2	25.2	25.2	25.2	
FR1 n5	TX1	4	100.00%	25.2	25.2	25.2	24.9	25.2	25.2	
FR1 n7	TX0	12	100.00%	24.0	23.7	24.0	22.7	24.0	24.0	
FR1 n7	TX1	6	100.00%	24.0	23.4	24.0	22.8	23.9	24.0	
FR1 n38 PC3	TX1	6	100.00%	24.5	23.8	24.5	23.8	23.3	24.5	
FR1 n41 PC3	TX1	6	100.00%	25.0	23.8	25.0	23.8	23.3	25.0	
FR1 n41 PC2	TX1	6	100.00%	27.0	23.8	27.0	23.8	23.3	26.5	
FR1 n41 PC3 SRS	TX1	12	100.00%	25.0	23.7	25.0	22.9	25.0	25.0	
FR1 n41 PC2 SRS	TX1	12	100.00%	27.0	23.7	27.0	22.9	27.0	27.0	
FR1 n41 PC3 SRS	TX1	1	100.00%	25.0	21.5	25.0	19.9	25.0	25.0	
FR1 n41 PC2 SRS	TX1	1	100.00%	27.0	21.5	27.0	19.9	27.0	27.0	
FR1 n41 PC3 SRS	TX1	7	100.00%	25.0	22.1	25.0	20.5	23.9	25.0	
FR1 n41 PC2 SRS	TX1	7	100.00%	27.0	22.1	27.0	20.5	23.9	27.0	
FR1 n66	TX0	2	100.00%	25.2	25.2	25.2	25.2	23.7	25.2	
FR1 n71	TX0	0	100.00%	24.7	24.7	24.7	24.7	24.7	24.7	
FR1 n77/78 PC3	TX0	12	100.00%	25.0	25.0	19.0	25.0	15.8	19.0	
FR1 n77/78 PC2	TX0	12	100.00%	26.5	26.5	19.0	26.3	15.8	19.0	
FR1 n77/78 PC3	TX1	11	100.00%	25.0	18.7	21.4	18.1	17.3	20.2	
FR1 n77/78 PC2	TX1	11	100.00%	26.5	18.7	21.4	18.1	17.3	20.2	
FR1 n77/78 SRS	TX1	5	100.00%	25.0	16.7	25.0	16.0	18.7	24.5	
FR1 n77/78 SRS	TX1	3	100.00%	23.0	21.0	23.0	20.5	23.0	23.0	

3.1 Smart Transmit feature for RF Exposure compliance

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target or PD_design_target, below the predefined time-averaged power limit (i.e., input.power.limit for 5G mmW NR), for each characterized technology and band (refer to RF exposure part0 report)

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

<Terminologies in this report>

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

<SAR Characterization>

SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating at 6 GHz or below. It will then be used as input for Smart Transmit to control and manage RF exposure for f < 6 GHz.



<SAR design target and uncertainty>

The detail SAR design target relate to each exposure conditions list as below

Band	Antenna	Device Uncertainty (dB)	WLAN OFF		WLAN ON		
			Head	Body-Worn /Extremity	Head	Hotspot	Body-Worn /Extremity
GSM850(4 Tx slots)	4	1.00	0.365	0.794	0.318	0.560	0.794
GSM1900(4 Tx slots)	4	1.00	0.318	0.794	0.318	0.596	0.794
WCDMA II	2	1.00	0.318	0.794	0.318	0.720	0.794
WCDMA IV	2	1.00	0.318	0.794	0.318	0.596	0.794
WCDMA V	4	1.00	0.318	0.812	0.318	0.560	0.794
LTE B2	2	1.00	0.680	0.794	0.680	0.596	0.794
LTE B4/66	2	1.00	0.680	0.935	0.680	0.596	0.935
LTE B5	4	1.00	0.400	0.794	0.318	0.560	0.794
LTE B7	6	1.00	0.391	0.935	0.318	0.715	0.935
LTE B7	12	1.00	0.939	0.935	0.680	0.720	0.935
LTE B17	0	1.00	0.318	0.794	0.318	0.596	0.794
LTE B71	0	1.00	0.318	0.794	0.318	0.560	0.794
LTE B38 (PC3)	6	1.00	0.318	0.794	0.318	0.715	0.794
LTE B41 (PC3)	6	1.00	0.318	0.794	0.318	0.715	0.794
LTE B41 (PC2)	6	1.00	0.318	0.794	0.318	0.715	0.794
LTE B42	11	1.00	0.318	2.060	0.318	0.480	2.060
LTE B42	12	1.00	0.680	0.720	0.680	0.720	0.720
FR1 n2	2	1.00	0.318	0.794	0.318	0.720	0.794
FR1 n5	4	1.00	0.341	0.794	0.318	0.560	0.794
FR1 n7	6	1.00	0.400	0.935	0.318	0.560	0.935
FR1 n7	12	1.00	0.781	0.935	0.680	0.720	0.935
FR1 n38 (PC3)	6	1.00	0.318	0.794	0.318	0.715	0.794
FR1 n41 (PC3)	6	1.00	0.318	0.794	0.318	0.715	0.794
FR1 n41 (PC2)	6	1.00	0.318	0.891	0.318	0.715	0.794
FR1 n41_SRS (PC3)	12	1.00	0.955	0.935	0.794	0.720	0.935
FR1 n41_SRS (PC2)	12	1.00	0.955	0.935	0.794	0.720	0.935
FR1 n41_SRS (PC3)	1	1.00	0.460	0.935	0.318	0.560	0.935
FR1 n41_SRS (PC2)	1	1.00	0.460	0.935	0.318	0.560	0.935
FR1 n41_SRS (PC3)	7	1.00	0.460	0.794	0.318	0.715	0.794
FR1 n41_SRS (PC2)	7	1.00	0.460	0.794	0.318	0.715	0.794
FR1 n66	2	1.00	0.794	0.935	0.794	0.596	0.935
FR1 n71	0	1.00	0.318	0.715	0.318	0.596	0.715
FR1 n77/78 (PC3)	12	1.00	0.680	0.794	0.680	0.874	0.794
FR1 n77/78 (PC2)	12	1.00	0.712	0.794	0.680	0.874	0.794
FR1 n77/78 (PC3)	11	1.00	0.365	2.930	0.318	0.480	2.220
FR1 n77/78 (PC2)	11	1.00	0.365	2.930	0.318	0.480	2.220
FR1 n77/78_SRS (PC3)	5	1.00	0.374	0.808	0.318	0.935	0.720
FR1 n77/78_SRS (PC3)	3	1.00	0.763	0.794	0.680	0.720	0.794

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

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

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

The max allowed output power is the P_{limit} + 1dB device uncertainty, and if P_{limit} is higher than P_{max}, the device output power will be P_{max} instead.

Band	Config	Antenna	Duty cycle	WLAN OFF		WLAN ON			Pmax
				Head	Body-worn /Extremity	Head	Hotspot	Body-worn /Extremity	
				DSI2	DSI1	DSI2	DSI3	DSI1	
GSM850 GPRS 4TX	TX0	4	50.00%	26.5	27.6	25.9	27.3	26.6	26.5
GSM1900 GPRS 4TX	TX0	4	50.00%	32.7	24.5	31.7	23.1	23.5	23.5
WCDMA B2	TX0	2	100.00%	28.1	27	27.1	25.4	26	24.2
WCDMA B4	TX0	2	100.00%	25.3	27.3	24.3	23.5	26.3	24.2
WCDMA B5	TX0	4	100.00%	25.3	24.2	24.3	24.4	24.1	24.2
LTE B2	TX0	2	100.00%	27.1	29	26.1	25.9	28	24.2
LTE B4/66	TX0	2	100.00%	26.8	27.4	25.8	22.6	26.4	24.2
LTE B5	TX0	4	100.00%	23.7	25.5	22.7	25.2	24.5	24.2
LTE B7	TX0	12	100.00%	23	30.7	21.6	24.3	29.7	23
LTE B7	TX1	6	100.00%	23	24.7	22.1	22.3	23.7	23
LTE B17	TX0	0	100.00%	25.8	27.6	24.8	27	26.6	23.7
LTE B38 PC3	TX1	6	63.30%	21.6	24.9	21.5	20.7	23.9	21.5
LTE B41 PC3	TX1	6	63.30%	21.6	24.9	21.5	20.7	23.9	22
LTE B41 PC2	TX1	6	43.30%	21.6	24.9	21.5	20.7	23.9	22.4
LTE B42	TX0	12	63.30%	27.3	20.9	27.3	18	20.9	22
LTE B42	TX1	11	63.30%	18.1	18	18.1	14.9	18	22
LTE B71	TX0	0	100.00%	25.4	28.3	24.4	27.3	27.3	23.7
FR1 n2	TX0	2	100.00%	25.2	29	24.2	26.1	28	24.2
FR1 n5	TX1	4	100.00%	24.2	27.2	23.9	25.1	26.2	24.2
FR1 n7	TX0	12	100.00%	22.7	28.7	21.7	24.3	27.7	23
FR1 n7	TX1	6	100.00%	22.4	26.3	21.8	22.9	25.3	23
FR1 n38 PC3	TX1	6	100.00%	22.8	26	22.8	22.3	25.5	23.5
FR1 n41 PC3	TX1	6	100.00%	22.8	26	22.8	22.3	25.5	24
FR1 n41 PC2	TX1	6	100.00%	22.8	26	22.8	22.3	25.5	26
FR1 n41 PC3 SRS	TX1	12	100.00%	22.7	29.2	21.9	27.3	28.2	24
FR1 n41 PC2 SRS	TX1	12	100.00%	22.7	29.2	21.9	27.3	28.2	26
FR1 n41 PC3 SRS	TX1	1	100.00%	20.5	28.9	18.9	26.1	27.9	24
FR1 n41 PC2 SRS	TX1	1	100.00%	20.5	28.9	18.9	26.1	27.9	26
FR1 n41 PC3 SRS	TX1	7	100.00%	21.1	32.2	19.5	22.9	31.2	24
FR1 n41 PC2 SRS	TX1	7	100.00%	21.1	32.2	19.5	22.9	31.2	26
FR1 n66	TX0	2	100.00%	26.2	28.1	25.2	22.7	27.1	24.2
FR1 n71	TX0	0	100.00%	24.7	29.4	23.7	26.7	28.4	23.7
FR1 n77/78 PC3	TX0	12	100.00%	25.5	18	25.3	14.8	18	24
FR1 n77/78 PC2	TX0	12	100.00%	25.5	18	25.3	14.8	18	25.5
FR1 n77/78 PC3	TX1	11	100.00%	17.7	19.7	17.1	16.3	18.5	24
FR1 n77/78 PC2	TX1	11	100.00%	17.7	19.7	17.1	16.3	18.5	25.5
FR1 n77/78 SRS	TX1	5	100.00%	15.7	23.5	15	17.7	23	24
FR1 n77/78 SRS	TX1	3	100.00%	20	27.3	19.5	23.4	26.3	22



3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																										
FCC ID	UZ7TC78B1																																																																									
Equipment Name	Touch Computer																																																																									
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 17: 704 MHz ~ 716 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 17: 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 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.																																																																									
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to section 12.																																																																									
LTE Carrier Aggregation Additional Information	This device supports maximum of 4 carriers in the downlink and 2 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.																																																																									
Transmission (H, M, L) channel numbers and frequencies in each LTE band																																																																										
LTE Band 2																																																																										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz																																																															
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)																																																														
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860																																																														
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880																																																														
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900																																																														
LTE Band 4																																																																										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz																																																															
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)																																																														
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720																																																														
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5																																																														
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745																																																														



LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	20407	824.7	20415	825.5	20425	826.5	20450	829				
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5				
H	20643	848.3	20635	847.5	20625	846.5	20600	844				
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510				
M	21100	2535	21100	2535	21100	2535	21100	2535				
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560				
LTE Band 17												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)					
L	23755		706.5		23780		709					
M	23790		710		23790		710					
H	23825		713.5		23800		711					
LTE Band 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	43315	3552.5	43140	3555	43165	3557.5	43190	3560				
M	43340	3575	43340	3575	43340	3575	43340	3575				
H	43565	3597.5	43540	3595	43515	3592.5	43490	3590				
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				



3.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information								
FCC ID	UZ7TC78B1							
Equipment Name	Touch Computer							
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 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: 3450MHz ~ 3550MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450MHz ~ 3550MHz, 3700 MHz ~ 3800 MHz							
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n38: 20MHz 5G NR n41: 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz,40MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n77: 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n78: 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 B7							
LTE Anchor Bands for n5	LTE B2/7							
LTE Anchor Bands for n7	LTE B2/5/66							
LTE Anchor Bands for n38	LTE B5							
LTE Anchor Bands for n66	LTE B5/12/13/14/48/71							
LTE Anchor Bands for n77	LTE B7/41							
LTE Anchor Bands for n78	LTE B2/5/7/41/66							
NR Band 2								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860
M	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900
NR Band 5								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165300	826.5	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5
H	169300	846.5	168800	844	168300	841.5	167800	839
NR Band 7								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510
M	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560
NR Band 38								
	Bandwidth 20MHz							
	Ch. #				Freq. (MHz)			
L	516000				2580			
M	519000				2595			
H	522000				2610			



NR Band 41																		
	Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		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	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		
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	529998	2649.99	528996	2644.98	528000	2640		
NR Band 66																		
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 40MHz									
	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	346000	1730								
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745								
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	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 77/78(3450MHz ~ 3550MHz)																		
	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)
L	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
H	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99		
NR Band 77 (3700MHz~3980MHz)																		
	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)
L	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
H	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 (3700MHz~3800MHz)																		
	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)
L	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	652666	3789.99	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	651000	3765	650666	3759.99	650332	3754.98		



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.



4.3 RF Exposure limit for above 6GHz

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

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

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

5. 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:

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

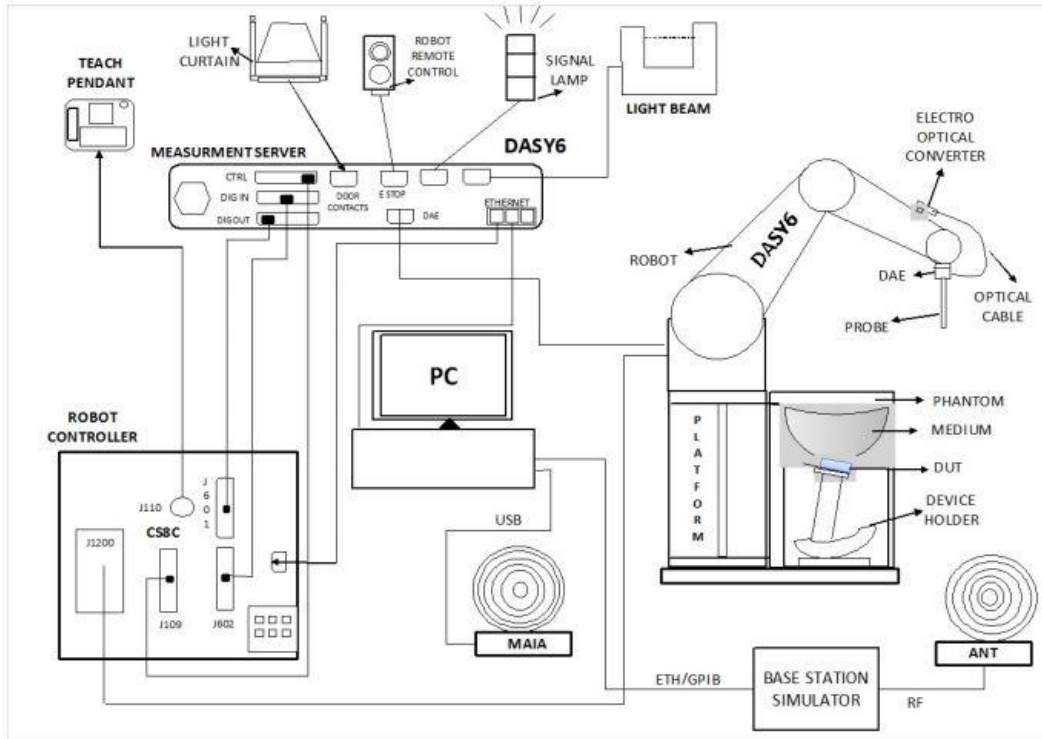
SAR is expressed in units of Watts per kilogram (W/kg)

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

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.

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.

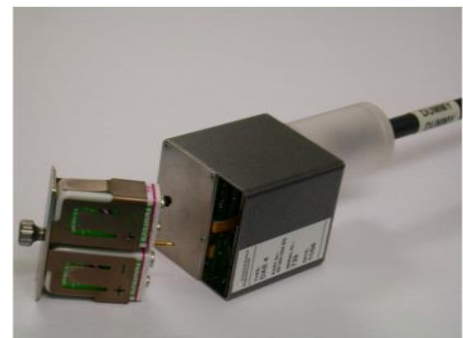



Fig 5.1 Photo of DAE

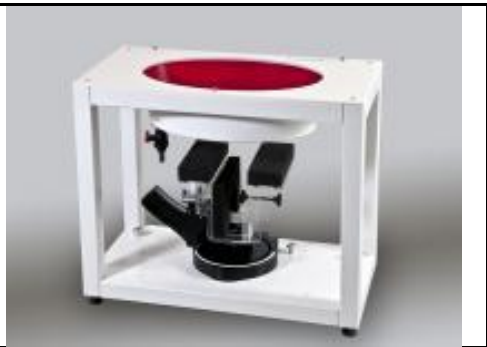
6.4 Phantom

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

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

		≤ 3 GHz	> 3 GHz	
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm	
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm	
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

7.5 Volume Scan Procedures

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

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 ⁽²⁾	D750V3	1012	Aug. 18, 2021	Aug. 16, 2023
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	4d167	Nov. 25, 2019	Nov. 22, 2022
SPEAG	1750MHz System Validation Kit	D1750V2	1068	Nov. 25, 2021	Nov. 24, 2022
SPEAG	1900MHz System Validation Kit ⁽²⁾	D1900V2	5d041	Aug. 19, 2021	Aug. 17, 2023
SPEAG	2450MHz System Validation Kit ⁽²⁾	D2450V2	929	Nov. 21, 2019	Nov. 18, 2022
SPEAG	2600MHz System Validation Kit	D2600V2	1078	Jun. 23, 2022	Jun. 22, 2023
SPEAG	3500MHz System Validation Kit	D3500V2	1036	Mar. 23, 2022	Mar. 22, 2023
SPEAG	3700MHz System Validation Kit	D3700V2	1006	Jun. 20, 2022	Jun. 19, 2023
SPEAG	3900MHz System Validation Kit	D3900V2	1017	Apr. 22, 2022	Apr. 21, 2023
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Sep. 15, 2021	Sep. 14, 2022
SPEAG	5GHz System Validation Kit ⁽²⁾	D5GHzV2	1171	Apr. 20, 2021	Apr. 18, 2023
SPEAG	6500MHz System Validation Kit	D6.5GHzV2	1003	Sep. 24, 2021	Sep. 23, 2022
SPEAG	5G Verification Source	10GHz	1020	Jan. 18, 2022	Jan. 17, 2023
SPEAG	EUmmWV Probe Tip Protection	EUmmWV3	9424	Apr. 06, 2022	Apr. 05, 2023
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9461	Oct. 22, 2021	Oct. 21, 2022
SPEAG	Data Acquisition Electronics	DAE4	316	Jan. 26, 2022	Jan. 25, 2023
SPEAG	Data Acquisition Electronics	DAE4	376	Nov. 22, 2021	Nov. 21, 2022
SPEAG	Data Acquisition Electronics	DAE4	853	Jul. 20, 2022	Jul. 19, 2023
SPEAG	Data Acquisition Electronics	DAE4	854	Aug. 24, 2022	Aug. 23, 2023
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	7306	Jul. 28, 2022	Jul. 27, 2023
RCPTWN	Thermometer	HTC-1	TM685-1	Jun. 27, 2022	Jun. 26, 2023
RCPTWN	Thermometer	HTC-1	TM560-2	Mar. 15, 2022	Mar. 14, 2023
Anritsu	Radio Communication Analyzer	MT8821C	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	MY46316648	Jul. 25, 2022	Jul. 24, 2023
SPEAG	Dielectric Probe Kit	DAK-3.5	1146	Jul. 25, 2022	Jul. 24, 2023
LINE SEIKI	Digital Thermometer	DTM3000-spezial	2942	Oct. 26, 2021	Oct. 25, 2022
Anritsu	Power Meter	ML2495A	1804003	Oct. 09, 2021	Oct. 08, 2022
Anritsu	Power Meter	ML2496A	2119003	Jun. 22, 2022	Jun. 21, 2023
Anritsu	Power Sensor	MA2411B	1726150	Oct. 09, 2021	Oct. 08, 2022
Anritsu	Power Sensor	MA2411B	1911334	Jun. 22, 2022	Jun. 21, 2023
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 21, 2022	Jul. 20, 2023
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Jan. 12, 2022	Jan. 11, 2023
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 12, 2021	Oct. 11, 2022
Mini-Circuits	Power Amplifier	ZHL-42W+	715701915	May. 12, 2022	May. 11, 2023
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005-3	N/A	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. The dipole calibration interval can be extended to 3 years with justification according to KDB 865664 D01. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

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
750	22.5	0.893	43.069	0.89	41.90	0.34	2.79	±5	2022/8/21
750	22.3	0.892	43.189	0.89	41.90	0.22	3.08	±5	2022/8/21
750	22.5	0.888	41.436	0.89	41.90	-0.22	-1.11	±5	2022/8/25
835	22.5	0.918	42.773	0.90	41.50	2.00	3.07	±5	2022/8/21
835	22.3	0.923	42.773	0.90	41.50	2.56	3.07	±5	2022/8/21
835	22.5	0.921	41.140	0.90	41.50	2.33	-0.87	±5	2022/8/25
835	22.5	0.918	42.863	0.90	41.50	2.00	3.28	±5	2022/9/1
1750	22.5	1.375	40.019	1.37	40.10	0.36	-0.20	±5	2022/8/19
1750	22.3	1.382	40.689	1.37	40.10	0.88	1.47	±5	2022/8/27
1750	22.3	1.366	41.092	1.37	40.10	-0.29	2.47	±5	2022/8/28
1900	22.5	1.391	39.766	1.40	40.00	-0.64	-0.59	±5	2022/8/19
1900	22.5	1.385	39.855	1.40	40.00	-1.07	-0.36	±5	2022/8/22
1900	22.6	1.449	39.202	1.40	40.00	3.50	-2.00	±5	2022/8/31
2450	22.5	1.811	39.442	1.80	39.20	0.61	0.62	±5	2022/8/20
2450	22.1	1.838	38.867	1.80	39.20	2.11	-0.85	±5	2022/8/23
2600	22.5	2.011	39.620	1.96	39.00	2.60	1.59	±5	2022/8/20
2600	22.3	2.036	38.141	1.96	39.00	3.88	-2.20	±5	2022/8/23
2600	22.4	2.050	38.441	1.96	39.00	4.59	-1.43	±5	2022/8/26
2600	22.4	2.008	39.057	1.96	39.00	2.45	0.15	±5	2022/8/30
2600	22.5	1.963	38.687	1.96	39.00	0.15	-0.80	±5	2022/9/2
2600	22.5	1.963	38.687	1.96	39.00	0.15	-0.80	±5	2022/9/2
2600	22.3	1.963	40.300	1.96	39.00	0.15	3.33	±5	2022/9/8
3500	22.5	2.999	38.807	2.91	37.90	3.06	2.39	±5	2022/8/24
3500	22.1	2.914	37.958	2.91	37.90	0.14	0.15	±5	2022/8/29
3500	22.5	2.981	37.812	2.91	37.90	2.44	-0.23	±5	2022/8/30
3500	22.5	2.916	38.043	2.91	37.90	0.21	0.38	±5	2022/9/3
3500	22.2	2.921	37.852	2.91	37.90	0.38	-0.13	±5	2022/9/4
3500	22.2	2.904	37.332	2.91	37.90	-0.21	-1.50	±5	2022/9/5
3500	22.2	2.994	38.417	2.91	37.90	2.89	1.36	±5	2022/9/6
3500	22.3	2.779	36.543	2.91	37.90	-4.50	-3.58	±5	2022/9/7
3700	22.5	3.187	38.508	3.12	37.70	2.15	2.14	±5	2022/8/24
3700	22.1	3.119	37.728	3.12	37.70	-0.03	0.07	±5	2022/8/29
3700	22.5	3.194	37.611	3.12	37.70	2.37	-0.24	±5	2022/8/30
3700	22.5	3.121	37.817	3.12	37.70	0.03	0.31	±5	2022/9/3
3700	22.2	3.126	37.625	3.12	37.70	0.19	-0.20	±5	2022/9/4
3700	22.2	3.108	37.105	3.12	37.70	-0.38	-1.58	±5	2022/9/5
3700	22.2	3.208	38.215	3.12	37.70	2.82	1.37	±5	2022/9/6
3700	22.3	2.977	36.317	3.12	37.70	-4.58	-3.67	±5	2022/9/7
3900	22.5	3.392	38.230	3.33	37.51	1.86	1.92	±5	2022/8/24
3900	22.1	3.324	37.497	3.33	37.51	-0.18	-0.03	±5	2022/8/29
3900	22.5	3.406	37.423	3.33	37.51	2.28	-0.23	±5	2022/8/30
3900	22.5	3.326	37.590	3.33	37.51	-0.12	0.21	±5	2022/9/3



3900	22.2	3.331	37.398	3.33	37.51	0.03	-0.30	±5	2022/9/4
3900	22.2	3.312	36.879	3.33	37.51	-0.54	-1.68	±5	2022/9/5
3900	22.2	3.421	38.027	3.33	37.51	2.73	1.38	±5	2022/9/6
3900	22.3	3.174	36.090	3.33	37.51	-4.68	-3.79	±5	2022/9/7
5250	22.3	4.814	34.929	4.71	35.95	2.21	-2.84	±5	2022/8/21
5250	22.1	4.789	36.490	4.71	35.95	1.68	1.50	±5	2022/8/24
5600	22.3	5.177	34.502	5.07	35.50	2.11	-2.81	±5	2022/8/21
5600	22.1	5.110	36.014	5.07	35.50	0.79	1.45	±5	2022/8/24
5750	22.3	5.356	34.339	5.22	35.35	2.61	-2.86	±5	2022/8/21
6500	22.5	6.110	34.130	6.07	34.50	0.66	-1.07	±5	2022/8/26

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	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR05	2022/8/21	750	50	D750V3-1012	EX3DV4 - SN7306	DAE4 Sn853	0.441	8.56	8.82	3.04	0.286	5.56	5.72	2.88
SAR03	2022/8/21	750	50	D750V3-1012	EX3DV4 - SN3925	DAE4 Sn376	0.394	8.56	7.88	-7.94	0.254	5.56	5.08	-8.63
SAR05	2022/8/25	750	50	D750V3-1012	EX3DV4 - SN7306	DAE4 Sn853	0.391	8.56	7.82	-8.64	0.263	5.56	5.26	-5.40
SAR05	2022/8/21	835	50	D835V2-4d167	EX3DV4 - SN7306	DAE4 Sn853	0.497	9.55	9.94	4.08	0.319	6.21	6.38	2.74
SAR03	2022/8/21	835	50	D835V2-4d167	EX3DV4 - SN3925	DAE4 Sn376	0.441	9.55	8.82	-7.64	0.282	6.21	5.64	-9.18
SAR05	2022/8/25	835	50	D835V2-4d167	EX3DV4 - SN7306	DAE4 Sn853	0.451	9.55	9.02	-5.55	0.293	6.21	5.86	-5.64
SAR03	2022/9/1	835	50	D835V2-4d167	EX3DV4 - SN3925	DAE4 Sn376	0.471	9.55	9.42	-1.36	0.302	6.21	6.04	-2.74
SAR05	2022/8/19	1750	50	D1750V2-1068	EX3DV4 - SN7306	DAE4 Sn853	1.79	36.6	35.8	-2.19	0.966	19.3	19.32	0.10
SAR03	2022/8/27	1750	50	D1750V2-1068	EX3DV4 - SN3925	DAE4 Sn376	1.71	36.6	34.2	-6.56	0.904	19.3	18.08	-6.32
SAR05	2022/8/28	1750	250	D1750V2-1068	EX3DV4 - SN7306	DAE4 Sn853	8.98	36.6	35.92	-1.86	4.810	19.3	19.24	-0.31
SAR05	2022/8/19	1900	50	D1900V2-5d041	EX3DV4 - SN7306	DAE4 Sn853	1.85	40.6	37	-8.87	0.961	21.1	19.22	-8.91
SAR05	2022/8/22	1900	50	D1900V2-5d041	EX3DV4 - SN7306	DAE4 Sn853	1.84	40.6	36.8	-9.36	0.957	21.1	19.14	-9.29
SAR05	2022/8/31	1900	50	D1900V2-5d041	EX3DV4 - SN7306	DAE4 Sn853	1.93	40.6	38.6	-4.93	1.000	21.1	20	-5.21
SAR05	2022/8/20	2450	50	D2450V2-929	EX3DV4 - SN7306	DAE4 Sn853	2.72	53.1	54.4	2.45	1.310	24.7	26.2	6.07
SAR03	2022/8/23	2450	50	D2450V2-929	EX3DV4 - SN3925	DAE4 Sn376	2.6	53.1	52	-2.07	1.220	24.7	24.4	-1.21
SAR05	2022/8/20	2600	250	D2600V2-1078	EX3DV4 - SN7306	DAE4 Sn853	13.2	55.4	52.8	-4.69	6.120	24.9	24.48	-1.69
SAR03	2022/8/23	2600	50	D2600V2-1078	EX3DV4 - SN3925	DAE4 Sn376	2.75	55.4	55	-0.72	1.250	24.9	25	0.40
SAR03	2022/8/26	2600	50	D2600V2-1078	EX3DV4 - SN3925	DAE4 Sn376	2.68	55.4	53.6	-3.25	1.190	24.9	23.8	-4.42
SAR03	2022/8/30	2600	50	D2600V2-1078	EX3DV4 - SN3925	DAE4 Sn376	2.72	55.4	54.4	-1.81	1.230	24.9	24.6	-1.20
SAR03	2022/9/2	2600	50	D2600V2-1078	EX3DV4 - SN3925	DAE4 Sn376	2.56	55.4	51.2	-7.58	1.140	24.9	22.8	-8.43
SAR05	2022/9/2	2600	250	D2600V2-1078	EX3DV4 - SN7306	DAE4 Sn853	13.8	55.4	55.2	-0.36	6.030	24.9	24.12	-3.13
SAR05	2022/9/8	2600	250	D2600V2-1078	EX3DV4 - SN7306	DAE4 Sn853	13.6	55.4	54.4	-1.81	5.980	24.9	23.92	-3.94

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR05	2022/8/24	3500	100	D3500V2-1036	EX3DV4 - SN7306	DAE4 Sn853	6.44	67.4	64.4	-4.45	2.390	25.1	23.9	-4.78
SAR03	2022/8/29	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn376	3.4	67.4	68	0.89	1.310	25.1	26.2	4.38
SAR05	2022/8/30	3500	100	D3500V2-1036	EX3DV4 - SN7306	DAE4 Sn853	7.31	67.4	73.1	8.46	2.720	25.1	27.2	8.37
SAR03	2022/9/3	3500	50	D3500V2-1036	EX3DV4 - SN3925	DAE4 Sn376	3.4	67.4	68	0.89	1.310	25.1	26.2	4.38
SAR05	2022/9/4	3500	50	D3500V2-1036	EX3DV4 - SN7306	DAE4 Sn853	3.36	67.4	67.2	-0.30	1.290	25.1	25.8	2.79
SAR05	2022/9/5	3500	50	D3500V2-1036	EX3DV4 - SN7306	DAE4 Sn853	3.55	67.4	71	5.34	1.330	25.1	26.6	5.98
SAR05	2022/9/6	3500	100	D3500V2-1036	EX3DV4 - SN7306	DAE4 Sn853	7.35	67.4	73.5	9.05	2.730	25.1	27.3	8.76
SAR05	2022/9/7	3500	100	D3500V2-1036	EX3DV4 - SN7306	DAE4 Sn853	6.82	67.4	68.2	1.19	2.540	25.1	25.4	1.20
SAR05	2022/8/24	3700	100	D3700V2-1006	EX3DV4 - SN7306	DAE4 Sn853	6.4	65.6	64	-2.44	2.290	23.7	22.9	-3.38
SAR03	2022/8/29	3700	50	D3700V2-1006	EX3DV4 - SN3925	DAE4 Sn376	3.48	65.6	69.6	6.10	1.290	23.7	25.8	8.86
SAR05	2022/8/30	3700	100	D3700V2-1006	EX3DV4 - SN7306	DAE4 Sn853	6.41	65.6	64.1	-2.29	2.290	23.7	22.9	-3.38
SAR03	2022/9/3	3700	50	D3700V2-1006	EX3DV4 - SN3925	DAE4 Sn376	3.48	65.6	69.6	6.10	1.300	23.7	26	9.70
SAR05	2022/9/4	3700	50	D3700V2-1006	EX3DV4 - SN7306	DAE4 Sn853	3.38	65.6	67.6	3.05	1.260	23.7	25.2	6.33
SAR05	2022/9/5	3700	50	D3700V2-1006	EX3DV4 - SN7306	DAE4 Sn853	3.44	65.6	68.8	4.88	1.260	23.7	25.2	6.33
SAR05	2022/9/6	3700	100	D3700V2-1006	EX3DV4 - SN7306	DAE4 Sn853	7.06	65.6	70.6	7.62	2.530	23.7	25.3	6.75
SAR05	2022/9/7	3700	50	D3700V2-1006	EX3DV4 - SN7306	DAE4 Sn853	3.29	65.6	65.8	0.30	1.210	23.7	24.2	2.11
SAR05	2022/8/24	3900	100	D3900V2-1017-3900	EX3DV4 - SN7306	DAE4 Sn853	6.65	68.7	66.5	-3.20	2.300	23.9	23	-3.77
SAR03	2022/8/29	3900	50	D3900V2-1017-3900	EX3DV4 - SN3925	DAE4 Sn376	3.42	68.7	68.4	-0.44	1.210	23.9	24.2	1.26
SAR05	2022/8/30	3900	100	D3900V2-1017-3900	EX3DV4 - SN7306	DAE4 Sn853	6.68	68.7	66.8	-2.77	2.310	23.9	23.1	-3.35
SAR03	2022/9/3	3900	50	D3900V2-1017-3900	EX3DV4 - SN3925	DAE4 Sn376	3.45	68.7	69	0.44	1.230	23.9	24.6	2.93
SAR05	2022/9/4	3900	50	D3900V2-1017-3900	EX3DV4 - SN7306	DAE4 Sn853	3.48	68.7	69.6	1.31	1.250	23.9	25	4.60
SAR05	2022/9/5	3900	100	D3900V2-1017-3900	EX3DV4 - SN7306	DAE4 Sn853	7.26	68.7	72.6	5.68	2.510	23.9	25.1	5.02
SAR05	2022/9/6	3900	100	D3900V2-1017-3900	EX3DV4 - SN7306	DAE4 Sn853	7.31	68.7	73.1	6.40	2.550	23.9	25.5	6.69
SAR05	2022/9/7	3900	100	D3900V2-1017-3900	EX3DV4 - SN7306	DAE4 Sn853	6.82	68.7	68.2	-0.73	2.350	23.9	23.5	-1.67
SAR05	2022/8/21	5250	50	D5GHzV2-1006-5250	EX3DV4 - SN7306	DAE4 Sn853	4.28	81.7	85.6	4.77	1.200	23.2	24	3.45
SAR03	2022/8/24	5250	100	D5GHzV2-1171-5250	EX3DV4 - SN3925	DAE4 Sn376	7.94	80.3	79.4	-1.12	2.260	23.0	22.6	-1.74
SAR05	2022/8/21	5600	50	D5GHzV2-1006-5600	EX3DV4 - SN7306	DAE4 Sn853	4.54	85.1	90.8	6.70	1.270	24.0	25.4	5.83
SAR03	2022/8/24	5600	100	D5GHzV2-1171-5600	EX3DV4 - SN3925	DAE4 Sn376	8.39	83.4	83.9	0.60	2.390	23.7	23.9	0.84
SAR05	2022/8/21	5750	50	D5GHzV2-1006-5750	EX3DV4 - SN7306	DAE4 Sn853	4.26	81.4	85.2	4.67	1.200	22.9	24	4.80
SAR01	2022/8/26	6500	100	D6.5GHzV2-1003	EX3DV4 - SN3642	DAE4 Sn316	29.3	292	293	0.34	5.260	53.8	52.6	-2.23

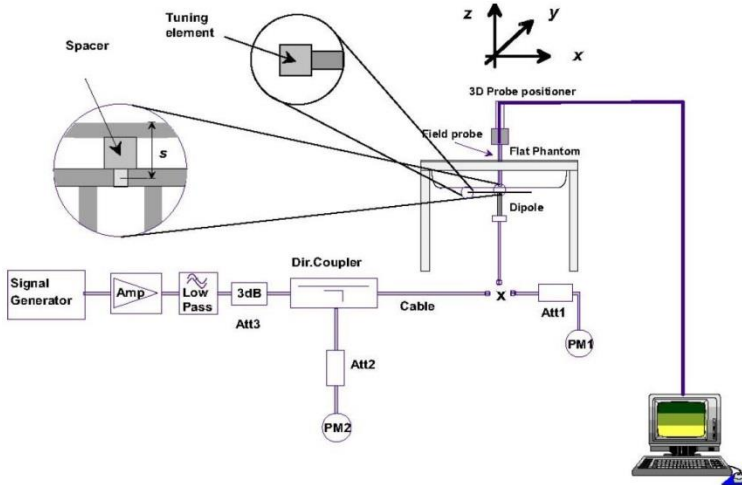


Fig 8.3.1 System Performance Check Setup

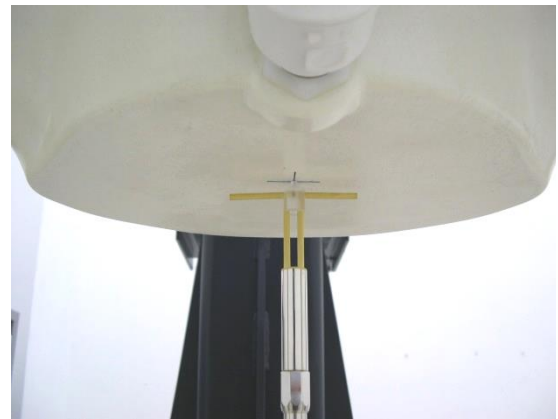


Fig 8.3.2 Setup Photo

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
SAR01-HY	10G	10GHz_1020	EUmmWV4 - SN9461	DAE4 Sn316	10	55.5	51.7	0.31	2022/8/22
SAR06-HY	10G	10GHz_1020	EUmmWV3 - SN9424	DAE4 Sn854	10	55.1	51.7	0.28	2022/11/9

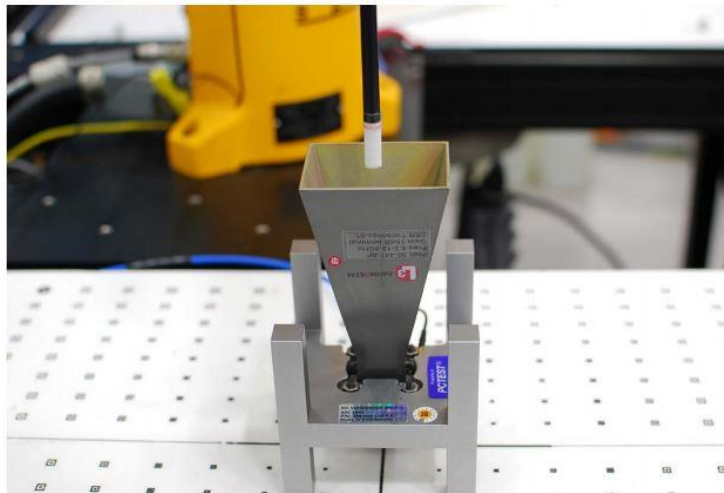


Figure 4-3
System Verification Setup Photo

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.

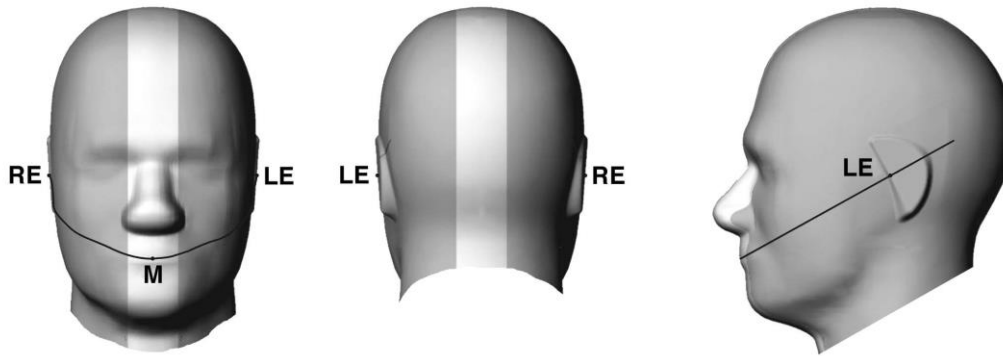


Fig 9.1.1 Front, back, and side views of SAM twin phantom



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

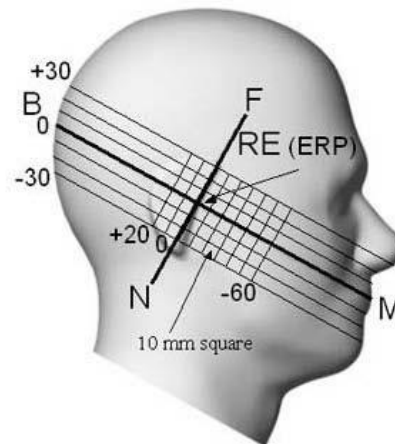


Fig 9.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

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”

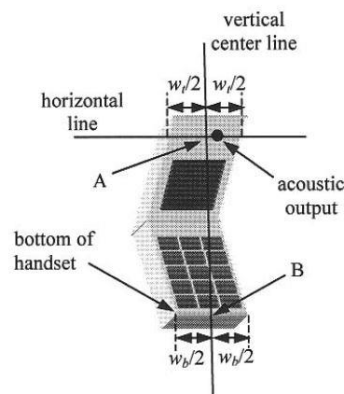


Fig 9.2.2 Handset vertical and horizontal reference lines—“clam-shell case”

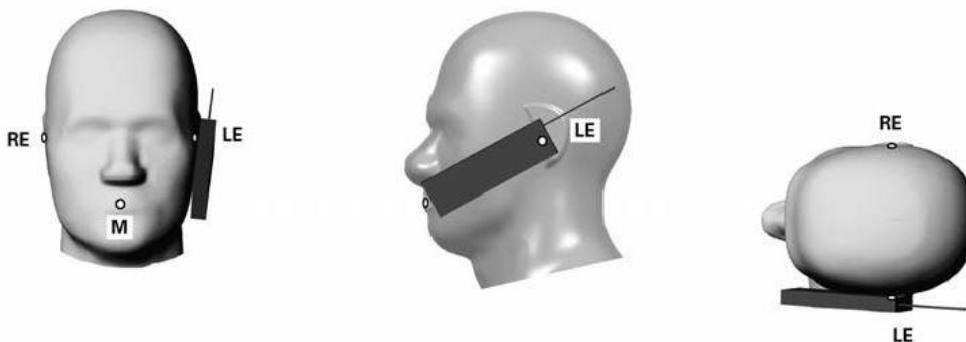
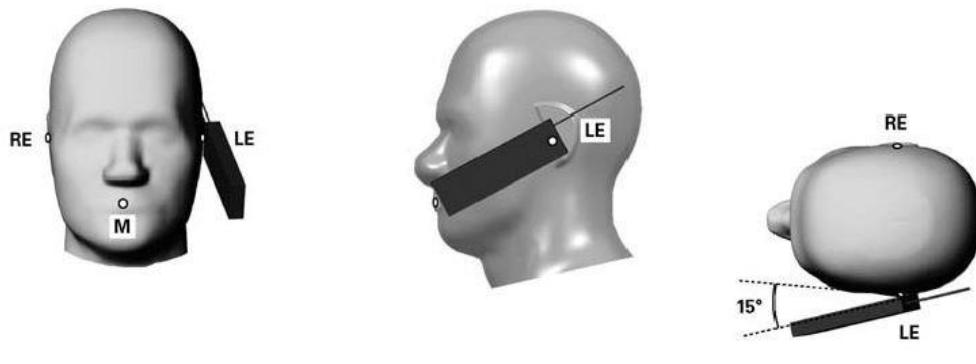


Fig 9.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

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



5.

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 handset attached to the handset.

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

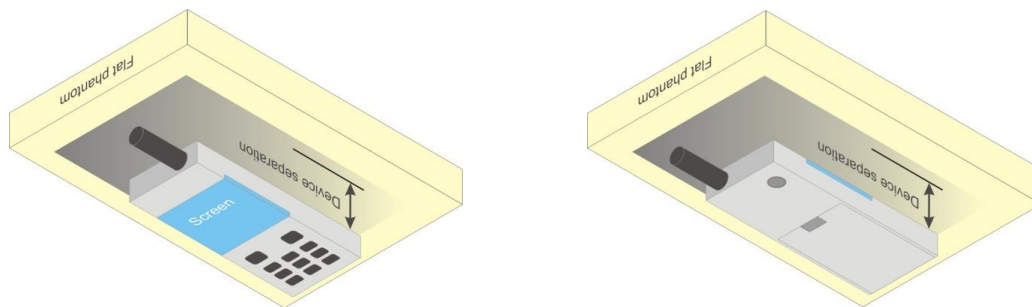


Fig 9.4 Body Worn Position

10.5 Product Specific Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.



10.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets ($L \times W \geq 9 \text{ cm} \times 5 \text{ cm}$) 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. Measurement procedure for output power and SAR

Detail output power measurement data is in the appendix G.

<GSM Conducted Power>

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode, SAR measurement is not required for the secondary mode

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For 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.		

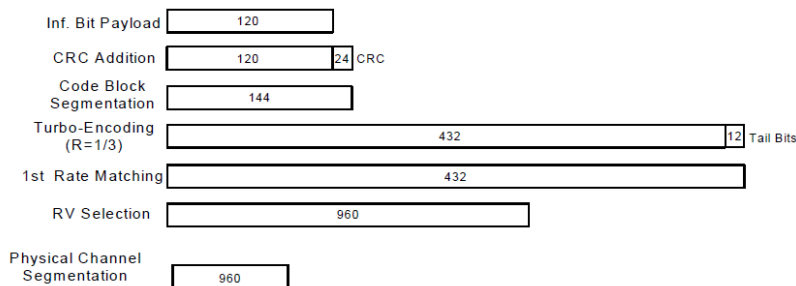


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

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/B17/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 4/38 SAR test was covered by Band 66/41; 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.

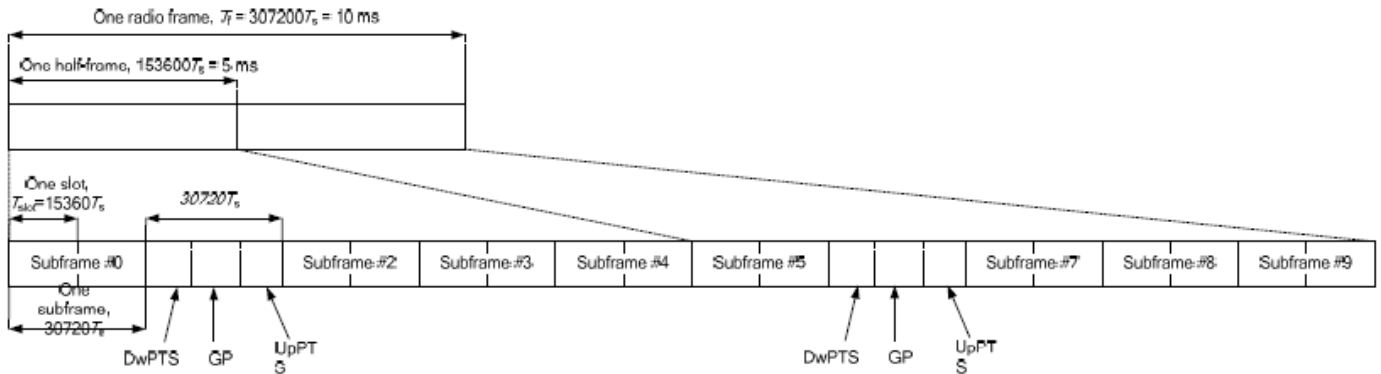


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	4384 · Ts	5120 · Ts	20480 · Ts		
6	19760 · Ts			23040 · Ts		
7	21952 · Ts			12800 · Ts		
8	24144 · Ts			-	-	-
9	13168 · Ts			-	-	-

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

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

The highest duty factor is resulted from:

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

<5G FR1 Note>

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below
 - a. For DFT-OFDM output power measurement, full measurement was done for Pi/2 BPSK and QPSK and for the largest supported bandwidth, repeat test for 16QAM/64QAM/256QAM under 1RB 1Offset configuration. For smaller bandwidth, measure conducted power for Pi/2 BPSK and 1RB 1Offset configuration.
 - b. According to the tune-up, CP-OFDM output power is not ½ dB higher than DFT-OFDM mode, and the reported SAR of DFT-OFDM mode reported SAR is ≤ 1.45 W/kg, SAR test and thus conducted power for CP-OFDM mode is not required.
 - c. To start SAR test for the largest channel bandwidth for Pi/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for Pi/2 BPSK SAR testing using 1RB Pi/2 BPSK allocation procedure
 - d. For Pi/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - e. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in Pi/2 BPSK, also reported SAR for the Pi/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - f. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
2. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.
3. Ant 3 and ant 5 dedicated is used for SRS only, different from Tx antennas, then the SAR measurement at Plimit for SRS dedicated antenna(s) can be performed using FTM mode with CW modulation with 100% duty cycle(as SRS operates at very low duty cycle in online mode).
4. Since the 5G NR TDD PC2 and PC3 are using FTM mode for SAR testing and the duty cycle are the same 100% duty cycle, therefore, the SAR testing was selected higher power mode to be tested.

<3GPP 38.101 MPR for EN-DC>

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

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5 ¹	≤ 1.2 ¹	≤ 0.2 ¹
		≤ 0.5 ²	≤ 0.5 ²	0 ²
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM		≤ 2.5	
CP-OFDM	256 QAM		≤ 4.5	
	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM		≤ 3.5	
	256 QAM		≤ 6.5	

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

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

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

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

**<WLAN Note>****General Note:**

1. The SISO operation only operate in 2.4GHz WLAN, the MIMO operation is support in 2.4GHz / 5GHz / 6GHz WLAN
2. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, additional output power measurements were not necessary.
3. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
4. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
5. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
6. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures. 18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
 - b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
7. Per 201904 TCBC workshops, General principles of FCC KDB Publication 248227 D01 can be applied to determine the SAR Initial Test Configurations and test reduction for 802.11ax SAR testing. For the table below the 802.11ax maximum power is SU (non-OFDMA), and the SU maximum power also higher than RU (OFDMA)
8. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
9. For modes with the same maximum output power, the guidance from section 5.3.2 a) of FCC KDB Publication 248227 D01 should be applied, with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency bands
10. When SAR testing for 802.11ax is required
 - a. If the maximum output power is highest 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

12. DL/UL carrier aggregation

<LTE Carrier Aggregation combinations>

General Note:

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

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation		
Number	Combination	Covered by	Number	Combination	Covered by	Number	Combination	Covered by
		Measurement Superset			Measurement Superset			Measurement Superset
1	CA_2C	3CC-27	27	CA_2A-5B		50	CA_4A-4A-5B	
2	CA_5B	3CC-27	28	CA_2C-5A	3CC-27	51	CA_5A-5A-66A-66A	4CC-58
3	CA_7B	3CC-29	29	CA_2A-7A-7A	3CC-30	52	CA_5A-5A-66B	4CC-58
4	CA_7C	3CC-29	30	CA_2A-4A-7A		53	CA_5A-5A-66C	4CC-58
5	CA_38C	2CC-23	31	CA_4A-4A-5A	3CC-34	54	CA_5A-66A-66C	4CC-58
6	CA_41C	3CC-47	32	CA_4A-4A-7A	3CC-30	55	CA_5A-66A-66B	4CC-58
7	CA_66B	3CC-42	33	CA_4A-4A-71A		56	CA_5A-66D	4CC-58
8	CA_66C	3CC-42	34	CA_4A-5B	4CC-50	57	CA_5B-66A-66A	4CC-58
9	CA_2A-2A	3CC-28	35	CA_4A-7A-7A	3CC-30	58	CA_5A-7C-66A	
10	CA_4A-4A	3CC-32	36	CA_4A-7C	3CC-30	59	CA_7C-66A-66A	4CC-58
11	CA_5A-5A	3CC-37	37	CA_5A-5A-66A	4CC-53	60	CA_41A-41A-41C	4CC-61
12	CA_7A-7A	3CC-38	38	CA_5A-7A-7A	3CC-39	61	CA_41A-41D	
13	CA_41A-41A	3CC-47	39	CA_5A-7C	3CC-44			
14	CA_66A-66A	3CC-45	40	CA_5A-66A-66A	4CC-53			
15	CA_2A-5A	3CC-27	41	CA_5A-66B	4CC-53			
16	CA_2A-7A	3CC-30	42	CA_5A-66C	4CC-53			
17	CA_2A-17A		43	CA_5B-66A	4CC-53			
18	CA_4A-5A	3CC-31	44	CA_5A-7A-66A	4CC-58			
19	CA_4A-7A	3CC-30	45	CA_7A-66A-66A	3CC-44			
20	CA_4A-17A		46	CA_7C-66A	3CC-44			
21	CA_4A-71A	3CC-33	47	CA_41A-41C	4CC-61			
22	CA_5A-7A	3CC-39	48	CA_5B-66B	4CC-58			
23	CA_5A-38A		49	CA_5B-66C	4CC-58			
24	CA_5A-41A							
25	CA_5A-66A	3CC-42						
26	CA_7A-66A	3CC-45						

<Power verification when LTE Carrier Aggregation Active>
General Note:

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

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

<Two Carrier power verification>

Configure	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	20	1880	18900	QPSK	1	0	17	10	740	5790	24.02	24.06
	4	20	1732.5	20175	QPSK	1	0	17	10	740	5790	24.50	24.63
	5	10	836.5	20525	QPSK	1	0	38	20	2595	38000	23.72	23.85
	5	10	836.5	20525	QPSK	1	0	41	20	2593	40620	23.69	23.85

<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)	
Intra-Band	2	20	1880	18900	QPSK	1	0	4	20	2132.5	2175	7	20	2655	3100	23.97	24.06	
	4	20	1732.5	20175	QPSK	1	0	4	20	2132.5	2175	71	20	634.5	68761	24.49	24.63	
Intra-Band	Contiguous	2	20	1880	18900	QPSK	1	0	5	10	881.5	2525	5	10	891.4	2624	23.87	24.06

<Four Carrier power verification>

Configure	PCC							SCC1				SCC2				SCC3				Power	
	LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)
Inter-Band	4	20	1732.5	20175	QPSK	1	0	4	20	2132.5	2175	5	10	881.5	2525	5	10	891.4	2624	24.51	24.63
	5	10	836.5	20525	QPSK	1	0	7	20	2655	3100	7	20	2675	3300	66	20	2155	66886	23.91	24.06
	41	20	2680	41490	QPSK	1	0	41	20	2593	40620	41	20	2612.8	40818	41	20	2632.6	41016	24.51	24.63

<LTE Uplink carrier aggregation>

<Intra-band>

2CC Carrier Aggregation	
UL_CA	
5B	Ant 4
7C	Ant 6
38C	Ant 6
41C	Ant 6
66B	Ant 2
66C	Ant 2

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. The device supports 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 the 3GPP requirement.
- iii. 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.
- iv. 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.
- v. 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.

DSI 0

WLAN ON/OFF										
CA_5B_Ant 4										
Combination 10MHz+10MHz (50RB+50RB)										
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				
20450	20549	QPSK	1	0	0	0	1	0	24.03	25.2
20475	20574	QPSK	1	49	1	0	2	0	24.84	25.2
20600	20501	QPSK	1	0	1	49	2	0	24.96	25.2

WLAN ON/OFF										
CA_7C_Ant 6										
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	23.03	24
21100	20902	QPSK	1	0	1	99	2	0	23.38	24
21350	21152	QPSK	1	0	1	99	2	0	23.61	24

WLAN ON/OFF										
CA_66B_Ant 2										
Combination 15MHz+5MHz (75RB+25RB)										
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				
132047	132140	QPSK	1	0	0	0	1	0	24.39	25.2
132322	132229	QPSK	1	0	1	24	2	0	24.17	25.2
132597	132504	QPSK	1	0	1	24	2	0	24.18	25.2

WLAN ON/OFF										
CA_66C_Ant 2										
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				
132072	132270	QPSK	1	0	0	0	1	0	24.15	25.2
132322	132124	QPSK	1	0	1	99	2	0	24.38	25.2
132572	132374	QPSK	1	0	1	99	2	0	24.15	25.2

WLAN ON/OFF										
CA_38C_Ant 6										
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	23.25	24.5
37901	38099	QPSK	1	0	0	0	1	0	23.18	24.5
38150	37952	QPSK	1	0	1	99	2	0	24	24.5



WLAN ON/OFF										
CA_41C_Ant 6										
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	23.72	25
40185	39987	QPSK	1	0	1	99	2	0	24.2	25
40620	40422	QPSK	1	0	1	99	2	0	24.41	25
41055	40857	QPSK	1	0	1	99	2	0	24.47	25
41490	41292	QPSK	1	0	1	99	2	0	24.58	25

WLAN ON/OFF										
CA_41C_HPUE_Ant 6										
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	25.36	27
40185	39987	QPSK	1	0	1	99	2	0	25.98	27
40620	40422	QPSK	1	0	1	99	2	0	26.12	27
41055	40857	QPSK	1	0	1	99	2	0	26.27	27
41490	41292	QPSK	1	0	1	99	2	0	26.32	27

DSI 1

WLAN ON/OFF										
CA_66B_Ant 2										
Combination 15MHz+5MHz (75RB+25RB)										
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				
132047	132140	QPSK	1	0	0	0	1	0	24.39	24.6
132322	132229	QPSK	1	0	1	24	2	0	24.17	24.6
132597	132504	QPSK	1	0	1	24	2	0	24.18	24.6

WLAN ON/OFF										
CA_66C_Ant 2										
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				
132072	132270	QPSK	1	0	0	0	1	0	24.15	24.6
132322	132124	QPSK	1	0	1	99	2	0	24.38	24.6
132572	132374	QPSK	1	0	1	99	2	0	24.15	24.6



DSI 2

WLAN ON/OFF										
CA_5B_Ant 4										
Combination 10MHz+10MHz (50RB+50RB)										
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				
20450	20549	QPSK	1	0	0	0	1	0	23.51	23.7
20475	20574	QPSK	1	49	1	0	2	0	23.24	23.7
20600	20501	QPSK	1	0	1	49	2	0	23.37	23.7

WLAN ON										
CA_7C_Ant 6										
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	22.69	23.1
21100	20902	QPSK	1	0	1	99	2	0	22.98	23.1
21350	21152	QPSK	1	0	1	99	2	0	23.08	23.1

WLAN OFF										
CA_7C_Ant 6										
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	22.69	24
21100	20902	QPSK	1	0	1	99	2	0	22.98	24
21350	21152	QPSK	1	0	1	99	2	0	23.08	24

WLAN ON/OFF										
CA_38C_Ant 6										
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	23.25	24.5
37901	38099	QPSK	1	0	0	0	1	0	23.18	24.5
38150	37952	QPSK	1	0	1	99	2	0	24	24.5



WLAN ON										
CA_41C_Ant 6										
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	23.42	24.5
40185	39987	QPSK	1	0	1	99	2	0	23.96	24.5
40620	40422	QPSK	1	0	1	99	2	0	24.11	24.5
41055	40857	QPSK	1	0	1	99	2	0	24.07	24.5
41490	41292	QPSK	1	0	1	99	2	0	24.28	24.5

WLAN OFF										
CA_41C_Ant 6										
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	23.42	24.6
40185	39987	QPSK	1	0	1	99	2	0	23.96	24.6
40620	40422	QPSK	1	0	1	99	2	0	24.11	24.6
41055	40857	QPSK	1	0	1	99	2	0	24.07	24.6
41490	41292	QPSK	1	0	1	99	2	0	24.28	24.6

WLAN ON										
CA_41C_HPUE_Ant 6										
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	24.43	26.1
40185	39987	QPSK	1	0	1	99	2	0	25.07	26.1
40620	40422	QPSK	1	0	1	99	2	0	25.21	26.1
41055	40857	QPSK	1	0	1	99	2	0	25.36	26.1
41490	41292	QPSK	1	0	1	99	2	0	25.39	26.1

WLAN OFF										
CA_41C_HPUE_Ant 6										
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	24.43	26.6
40185	39987	QPSK	1	0	1	99	2	0	25.07	26.6
40620	40422	QPSK	1	0	1	99	2	0	25.21	26.6
41055	40857	QPSK	1	0	1	99	2	0	25.36	26.6
41490	41292	QPSK	1	0	1	99	2	0	25.39	26.6

DSI 3

WLAN ON										
CA_7C_Ant 6										
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	22.69	23.1
21100	20902	QPSK	1	0	1	99	2	0	22.98	23.1
21350	21152	QPSK	1	0	1	99	2	0	23.08	23.1

WLAN OFF										
CA_7C_Ant 6										
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	22.69	24
21100	20902	QPSK	1	0	1	99	2	0	22.98	24
21350	21152	QPSK	1	0	1	99	2	0	23.08	24

WLAN ON										
CA_66B_Ant 2										
Combination 15MHz+5MHz (75RB+25RB)										
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				
132047	132140	QPSK	1	0	0	0	1	0	23.37	23.6
132322	132229	QPSK	1	0	1	24	2	0	23.08	23.6
132597	132504	QPSK	1	0	1	24	2	0	23.12	23.6

WLAN OFF										
CA_66B_Ant 2										
Combination 15MHz+5MHz (75RB+25RB)										
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				
132047	132140	QPSK	1	0	0	0	1	0	23.37	24
132322	132229	QPSK	1	0	1	24	2	0	23.08	24
132597	132504	QPSK	1	0	1	24	2	0	23.12	24

WLAN ON										
CA_66C_Ant 2										
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				
132072	132270	QPSK	1	0	0	0	1	0	23.14	23.6
132322	132124	QPSK	1	0	1	99	2	0	23.41	23.6
132572	132374	QPSK	1	0	1	99	2	0	23.2	23.6

WLAN OFF										
CA_66C_Ant 2										
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				
132072	132270	QPSK	1	0	0	0	1	0	23.14	24
132322	132124	QPSK	1	0	1	99	2	0	23.41	24
132572	132374	QPSK	1	0	1	99	2	0	23.2	24



WLAN ON/OFF										
CA_38C_Ant 6										
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	22.55	23.7
37901	38099	QPSK	1	0	0	0	1	0	22.67	23.7
38150	37952	QPSK	1	0	1	99	2	0	23.3	23.7

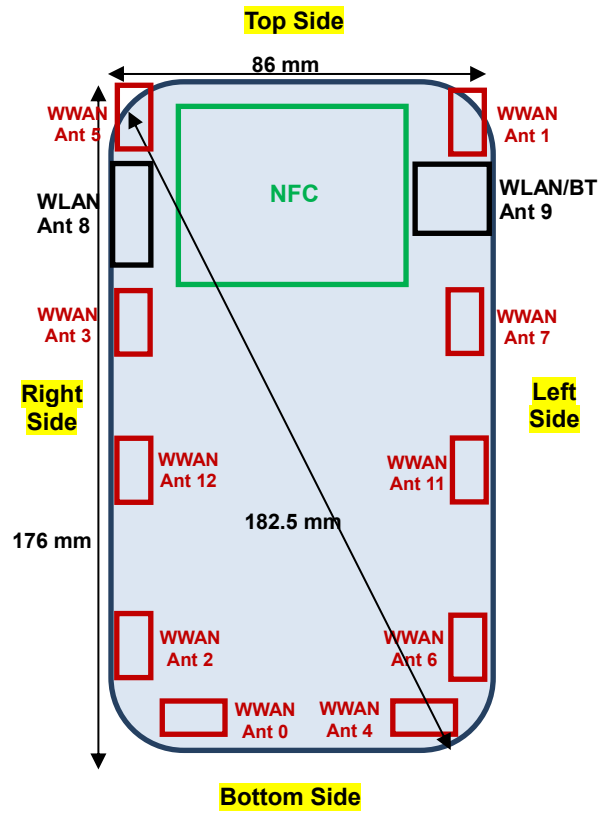
CA_41C										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	23.22	23.7
40185	39987	QPSK	1	0	1	99	2	0	23.56	23.7
40620	40422	QPSK	1	0	1	99	2	0	23.61	23.7
41055	40857	QPSK	1	0	1	99	2	0	23.67	23.7
41490	41292	QPSK	1	0	1	99	2	0	23.48	23.7

WLAN OFF										
CA_41C_Ant 6										
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	23.22	24
40185	39987	QPSK	1	0	1	99	2	0	23.56	24
40620	40422	QPSK	1	0	1	99	2	0	23.61	24
41055	40857	QPSK	1	0	1	99	2	0	23.67	24
41490	41292	QPSK	1	0	1	99	2	0	23.48	24

WLAN ON										
CA_41C_HPUE_Ant 6										
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	23.86	25.3
40185	39987	QPSK	1	0	1	99	2	0	24.66	25.3
40620	40422	QPSK	1	0	1	99	2	0	24.78	25.3
41055	40857	QPSK	1	0	1	99	2	0	24.83	25.3
41490	41292	QPSK	1	0	1	99	2	0	24.92	25.3

WLAN OFF										
CA_41C_HPUE_Ant 6										
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	23.86	26.2
40185	39987	QPSK	1	0	1	99	2	0	24.66	26.2
40620	40422	QPSK	1	0	1	99	2	0	24.78	26.2
41055	40857	QPSK	1	0	1	99	2	0	24.83	26.2
41490	41292	QPSK	1	0	1	99	2	0	24.92	26.2

13. Antenna Location



Back View

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 0	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
WWAN Ant 1	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm
WWAN Ant 2	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
WWAN Ant 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
WWAN Ant 7	≤ 25mm	≤ 25mm	≤ 25mm	≤ 25mm	≤ 25mm	≤ 25mm
WWAN Ant 11	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
WWAN Ant 12	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
BT&WLAN	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm

Positions for SAR and PD tests; Hotspot and Extremity exposure condition						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 0	Yes	Yes	No	Yes	Yes	Yes
WWAN Ant 1	Yes	Yes	Yes	No	Yes	Yes
WWAN Ant 2	Yes	Yes	No	Yes	Yes	Yes
WWAN Ant 3	Yes	Yes	Yes	Yes	Yes	Yes
WWAN Ant 4	Yes	Yes	No	Yes	Yes	Yes
WWAN Ant 5	Yes	Yes	Yes	No	Yes	Yes
WWAN Ant 6	Yes	Yes	No	Yes	Yes	Yes
WWAN Ant 7	Yes	Yes	Yes	Yes	Yes	Yes
WWAN Ant 11	Yes	Yes	No	Yes	Yes	Yes
WWAN Ant 12	Yes	Yes	No	Yes	Yes	Yes
BT&WLAN	Yes	Yes	Yes	No	Yes	Yes

General Note:

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



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 KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g product specific SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold, for this device SAR for WWAN transmitter scaled to maximum output power is higher than 1.2W/kg of LTE B42, NR n77/n77HPUE, therefore, product specific SAR is necessary.
5. For 5.3GHz / 5.5GHz / 6GHz WLAN product specific SAR is necessary too, due to an overall diagonal dimension is > 16 cm.

GSM Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS (4Tx slots) for GSM850/GSM1900 is considered as the primary mode.
2. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.
3. Power reduction which is triggered by hotspot mode is implemented in GSM1900 band, for hotspot mode SAR testing EUT was set in reduced power mode and GPRS 1 Tx slot due to its highest frame-average power.

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/B17/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 4/38 SAR test was covered by Band 66/41; 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/n41/n71/n77, the maximum channel bandwidth does not support three non-overlapping channels in the frequency band, the middle channel of the group of overlapping channels were selected for testing.
 - f. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission.
 - g. Ant 3/5 dedicated is used for SRS only, different from Tx antennas, then the SAR measurement at Plimit for SRS dedicated antenna(s) can be performed using FTM mode with CW modulation with 100% duty cycle(as SRS operates at very low duty cycle in online mode).

**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 WiFi 6E PD was performed according 2020 TCB workshop RF Exposure 5G RFX Policies Interim Procedures.
2. First, evaluate SAR using 6-7 GHz parameters per IEC/IEEE 62209-1528:2020 and using highest SAR test configurations evaluate incident PD using the mmw near-field probe and total-field/power-density reconstruction method (2 mm closest meas. plane).
3. Per Interim Procedures. The power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty $> 30\%$. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor
4. 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.
5. Absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements.
6. Power density was calculated by repeated E-field measurements on two measurement planes separated by $\lambda/4$.
7. 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.
8. The measurement procedure consists of measuring the PD_{inc} at two different distances: 2 mm (compliance distance) and $\lambda/5$. The grid extents should be large enough to fully capture the transmitted energy. The grid step should be fine enough to demonstrate that the integrated Power Density iPD_n fulfill the criterion described below. Since iPD ratio between the two distances is ≥ -1 dB, the grid step (0.0625) was sufficient for determining compliance at d=2mm.

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



14.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 4	GPRS (4 Tx slots)	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	189	836.4	28.95	30.50	0.13	0.282	0.403
	GSM850_Ant 4	GPRS (4 Tx slots)	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	189	836.4	28.95	30.50	0.08	0.161	0.230
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	189	836.4	28.95	30.50	-0.02	0.303	0.433
01	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	128	824.2	28.94	30.50	-0.17	0.318	0.455
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	251	848.8	28.61	30.50	0.18	0.291	0.450
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	189	836.4	28.95	30.50	-0.1	0.192	0.274
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 2	WWAN OFF	DSI 2	128	824.2	28.94	30.50	0.03	0.291	0.417
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 3	WWAN OFF	DSI 2	128	824.2	28.94	30.50	-0.06	0.284	0.407
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 2	Battery 1	WWAN OFF	DSI 2	128	824.2	28.94	30.50	0.17	0.215	0.308
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 3	Battery 1	WWAN OFF	DSI 2	128	824.2	28.94	30.50	-0.08	0.244	0.349
	GSM850_Ant 4	GPRS (4 Tx slots)	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	189	836.4	28.95	29.90	0.13	0.282	0.351
	GSM850_Ant 4	GPRS (4 Tx slots)	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	189	836.4	28.95	29.90	0.08	0.161	0.200
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	189	836.4	28.95	29.90	-0.02	0.303	0.377
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	128	824.2	28.94	29.90	-0.17	0.318	0.397
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	251	848.8	28.61	29.90	0.18	0.291	0.392
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	189	836.4	28.95	29.90	-0.1	0.192	0.239
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	128	824.2	28.94	29.90	0.03	0.291	0.363
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	128	824.2	28.94	29.90	-0.06	0.284	0.354
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	128	824.2	28.94	29.90	0.17	0.215	0.268
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	128	824.2	28.94	29.90	-0.08	0.244	0.304
	GSM1900_Ant 4	GPRS (4 Tx slots)	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	0.13	0.021	0.030
	GSM1900_Ant 4	GPRS (4 Tx slots)	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	0.02	0.001	0.001
02	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	-0.14	0.023	0.032
	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	512	1850.2	25.60	27.50	0.09	0.017	0.026
	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	810	1909.8	26.00	27.50	-0.06	0.022	0.031
	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	-0.14	0.001	0.001
	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	0.06	0.019	0.027
	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	-0.11	0.016	0.023
	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	0.09	0.018	0.025
	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	0.15	0.013	0.018



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	9400	1880	24.39	25.20	0.15	0.267	0.322
03	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	9262	1852.4	24.38	25.20	-0.08	0.359	0.434
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	9538	1907.6	24.32	25.20	-0.19	0.145	0.178
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	9400	1880	24.39	25.20	-0.12	0.071	0.086
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	9400	1880	24.39	25.20	0.03	0.144	0.174
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	9400	1880	24.39	25.20	0.05	0.075	0.090
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	9262	1852.4	24.38	25.20	0.03	0.341	0.412
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	9262	1852.4	24.38	25.20	-0.08	0.333	0.402
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	9262	1852.4	24.38	25.20	0.19	0.271	0.327
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	9262	1852.4	24.38	25.20	-0.17	0.260	0.314
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	0.17	0.272	0.273
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	1312	1712.4	25.13	25.20	0.1	0.231	0.235
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	1513	1752.6	25.13	25.20	0.16	0.247	0.251
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	-0.02	0.084	0.084
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	-0.07	0.116	0.116
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	0.15	0.070	0.070
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	0.01	0.253	0.254
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	-0.05	0.241	0.242
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	0.07	0.256	0.257
04	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	-0.19	0.346	0.347
	WCDMA V_Ant 4	RMC 12.2Kbps	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	4182	836.4	24.26	25.20	0.03	0.257	0.319
	WCDMA V_Ant 4	RMC 12.2Kbps	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	4182	836.4	24.26	25.20	-0.18	0.163	0.202
	WCDMA V_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	4182	836.4	24.26	25.20	-0.15	0.292	0.363
05	WCDMA V_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	4132	826.4	24.18	25.20	0	0.306	0.387
	WCDMA V_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	4233	846.6	24.25	25.20	-0.15	0.291	0.362
	WCDMA V_Ant 4	RMC 12.2Kbps	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	4182	836.4	24.26	25.20	-0.1	0.234	0.291
	WCDMA V_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	4132	826.4	24.18	25.20	0.17	0.291	0.368
	WCDMA V_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	4132	826.4	24.18	25.20	-0.06	0.282	0.357
	WCDMA V_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	4132	826.4	24.18	25.20	-0.11	0.296	0.374
	WCDMA V_Ant 4	RMC 12.2Kbps	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	4132	826.4	24.18	25.20	-0.13	0.263	0.333



<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18900	1880	24.06	25.20	-0.06	0.346	0.450
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18700	1860	24.05	25.20	0	0.357	0.465
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	19100	1900	24.02	25.20	-0.15	0.209	0.274
	LTE Band 2_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18900	1880	22.31	24.20	0.11	0.218	0.337
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18900	1880	24.06	25.20	-0.08	0.110	0.143
	LTE Band 2_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18900	1880	22.31	24.20	-0.14	0.078	0.121
	LTE Band 2_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18900	1880	24.06	25.20	-0.05	0.223	0.290
	LTE Band 2_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18900	1880	22.31	24.20	-0.02	0.142	0.219
	LTE Band 2_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18900	1880	24.06	25.20	-0.01	0.099	0.129
	LTE Band 2_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	18900	1880	22.31	24.20	0.05	0.062	0.096
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	18700	1860	24.05	25.20	0.03	0.332	0.433
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	18700	1860	24.05	25.20	-0.02	0.328	0.427
06	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	18700	1860	24.05	25.20	-0.09	0.439	0.572
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	18700	1860	24.05	25.20	0.07	0.306	0.399
	LTE Band 5_Ant 4	10M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20525	836.5	23.25	24.70	-0.15	0.258	0.360
	LTE Band 5_Ant 4	10M	QPSK	25	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20525	836.5	22.37	23.70	0.02	0.213	0.289
	LTE Band 5_Ant 4	10M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20525	836.5	23.25	24.70	-0.1	0.173	0.242
	LTE Band 5_Ant 4	10M	QPSK	25	0	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20525	836.5	22.37	23.70	0.09	0.146	0.198
07	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20525	836.5	23.25	24.70	-0.11	0.350	0.489
	LTE Band 5_Ant 4	10M	QPSK	25	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20525	836.5	22.37	23.70	0.02	0.284	0.386
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20525	836.5	23.25	24.70	0.01	0.248	0.346
	LTE Band 5_Ant 4	10M	QPSK	25	0	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20525	836.5	22.37	23.70	-0.19	0.203	0.276
	LTE Band 5B_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20450	829	23.51	24.70	0.02	0.224	0.295
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 2	WWAN OFF	DSI 2	20525	836.5	23.25	24.70	-0.04	0.328	0.458
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 3	WWAN OFF	DSI 2	20525	836.5	23.25	24.70	0.06	0.319	0.445
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WWAN OFF	DSI 2	20525	836.5	23.25	24.70	-0.1	0.340	0.475
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 3	Battery 1	WWAN OFF	DSI 2	20525	836.5	23.25	24.70	-0.06	0.326	0.455
	LTE Band 5_Ant 4	10M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20525	836.5	23.25	23.70	-0.15	0.258	0.286
	LTE Band 5_Ant 4	10M	QPSK	25	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20525	836.5	22.37	22.70	0.02	0.213	0.230
	LTE Band 5_Ant 4	10M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20525	836.5	23.25	23.70	-0.1	0.173	0.192
	LTE Band 5_Ant 4	10M	QPSK	25	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20525	836.5	22.37	22.70	0.09	0.146	0.158
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20525	836.5	23.25	23.70	-0.11	0.350	0.388
	LTE Band 5_Ant 4	10M	QPSK	25	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20525	836.5	22.37	22.70	0.02	0.284	0.306
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20525	836.5	23.25	23.70	0.01	0.248	0.275
	LTE Band 5_Ant 4	10M	QPSK	25	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20525	836.5	22.37	22.70	-0.19	0.203	0.219
	LTE Band 5B_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20450	829	23.51	23.70	0.02	0.224	0.234
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	20525	836.5	23.25	23.70	-0.04	0.328	0.364
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	20525	836.5	23.25	23.70	0.06	0.319	0.354
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	20525	836.5	23.25	23.70	-0.1	0.340	0.377
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	20525	836.5	23.25	23.70	-0.06	0.326	0.362



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	22.38	24.00	0.14	0.567	0.823
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20850	2510	22.31	24.00	0.17	0.517	0.763
08	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21350	2560	22.25	24.00	-0.12	0.607	0.908
	LTE Band 7_Ant 12	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.50	23.00	0.1	0.490	0.692
	LTE Band 7_Ant 12	20M	QPSK	100	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.46	23.00	-0.05	0.482	0.687
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	22.38	24.00	-0.15	0.079	0.114
	LTE Band 7_Ant 12	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.50	23.00	0.02	0.060	0.084
	LTE Band 7_Ant 12	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	22.38	24.00	0.18	0.254	0.368
	LTE Band 7_Ant 12	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.50	23.00	0.19	0.200	0.283
	LTE Band 7_Ant 12	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	22.38	24.00	0.12	0.087	0.127
	LTE Band 7_Ant 12	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.50	23.00	0.17	0.085	0.120
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 2	WWAN OFF	DSI 2	21350	2560	22.25	24.00	0.06	0.587	0.878
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 3	WWAN OFF	DSI 2	21350	2560	22.25	24.00	0.19	0.561	0.839
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 2	Battery 1	WWAN OFF	DSI 2	21350	2560	22.25	24.00	-0.13	0.552	0.826
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 3	Battery 1	WWAN OFF	DSI 2	21350	2560	22.25	24.00	-0.15	0.473	0.707
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	22.38	22.60	0.14	0.567	0.596
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20850	2510	22.31	22.60	0.17	0.517	0.553
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21350	2560	22.25	22.60	-0.12	0.607	0.658
	LTE Band 7_Ant 12	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	21.50	21.60	0.1	0.490	0.501
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	22.38	22.60	-0.15	0.079	0.083
	LTE Band 7_Ant 12	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	21.50	21.60	0.02	0.060	0.061
	LTE Band 7_Ant 12	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	22.38	22.60	0.18	0.254	0.267
	LTE Band 7_Ant 12	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	21.50	21.60	0.19	0.200	0.205
	LTE Band 7_Ant 12	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	22.38	22.60	0.12	0.087	0.092
	LTE Band 7_Ant 12	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	21.50	21.60	0.17	0.085	0.087
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	21350	2560	22.25	22.60	0.06	0.587	0.636
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	21350	2560	22.25	22.60	0.19	0.561	0.608
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	21350	2560	22.25	22.60	-0.13	0.552	0.598
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	21350	2560	22.25	22.60	-0.15	0.473	0.512



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 6	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	22.75	24.00	-0.15	0.104	0.139
	LTE Band 7_Ant 6	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.31	23.00	0	0.071	0.105
	LTE Band 7_Ant 6	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	22.75	24.00	-0.13	0.042	0.056
	LTE Band 7_Ant 6	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.31	23.00	-0.12	0.001	0.001
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	22.75	24.00	0.03	0.154	0.205
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	20850	2510	22.58	24.00	-0.14	0.156	0.216
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21350	2560	22.67	24.00	0.12	0.166	0.225
	LTE Band 7_Ant 6	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.31	23.00	0.12	0.100	0.148
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	22.75	24.00	0.05	0.055	0.073
	LTE Band 7_Ant 6	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21100	2535	21.31	23.00	0.1	0.021	0.031
	LTE Band 7C_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	21350	2560	23.08	24.00	0.08	0.109	0.135
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 2	WWAN OFF	DSI 2	21350	2560	22.67	24.00	0.09	0.141	0.192
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 3	WWAN OFF	DSI 2	21350	2560	22.67	24.00	-0.11	0.132	0.179
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WWAN OFF	DSI 2	21350	2560	22.67	24.00	-0.07	0.178	0.242
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 3	Battery 1	WWAN OFF	DSI 2	21350	2560	22.67	24.00	-0.17	0.186	0.253
	LTE Band 7_Ant 6	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	22.75	23.10	-0.15	0.104	0.113
	LTE Band 7_Ant 6	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	21.31	22.10	0	0.071	0.085
	LTE Band 7_Ant 6	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	22.75	23.10	-0.13	0.042	0.046
	LTE Band 7_Ant 6	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	21.31	22.10	-0.12	0.001	0.001
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	22.75	23.10	0.03	0.154	0.167
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	20850	2510	22.58	23.10	-0.14	0.156	0.176
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21350	2560	22.67	23.10	0.12	0.166	0.183
	LTE Band 7_Ant 6	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	21.31	22.10	0.12	0.100	0.120
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	22.75	23.10	0.05	0.055	0.060
	LTE Band 7_Ant 6	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21100	2535	21.31	22.10	0.1	0.021	0.025
	LTE Band 7C_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	21350	2560	23.08	23.10	0.08	0.109	0.110
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	21350	2560	22.67	23.10	0.09	0.141	0.156
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	21350	2560	22.67	23.10	-0.11	0.132	0.146
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	21350	2560	22.67	23.10	-0.07	0.178	0.197
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	21350	2560	22.67	23.10	-0.17	0.186	0.205
	LTE Band 17_Ant 0	10M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.01	0.201	0.263
	LTE Band 17_Ant 0	10M	QPSK	25	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	23790	710	22.68	23.70	-0.12	0.158	0.200
	LTE Band 17_Ant 0	10M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.06	0.134	0.175
	LTE Band 17_Ant 0	10M	QPSK	25	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	23790	710	22.68	23.70	0.09	0.111	0.140
	LTE Band 17_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.06	0.204	0.267
	LTE Band 17_Ant 0	10M	QPSK	25	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	23790	710	22.68	23.70	0.05	0.164	0.207
	LTE Band 17_Ant 0	10M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.04	0.137	0.179
	LTE Band 17_Ant 0	10M	QPSK	25	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	23790	710	22.68	23.70	0.09	0.105	0.133
	LTE Band 17_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	-0.14	0.193	0.253
	LTE Band 17_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.03	0.187	0.245
	LTE Band 17_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.08	0.208	0.272
09	LTE Band 17_Ant 0	10M	QPSK	1	0	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.01	0.213	0.279



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
10	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	-0.09	0.483	0.582
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132072	1720	24.18	25.20	-0.13	0.424	0.536
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132322	1745	24.27	25.20	-0.1	0.453	0.561
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	22.34	24.20	-0.14	0.307	0.471
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	-0.12	0.120	0.145
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	22.34	24.20	0.13	0.079	0.121
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	0.01	0.303	0.365
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	22.34	24.20	0.03	0.184	0.282
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	-0.02	0.109	0.131
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	22.34	24.20	0.02	0.074	0.114
	LTE Band 66B_Ant 2	15M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132047	1717.5	24.39	25.20	0.02	0.309	0.372
	LTE Band 66C_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	132322	1745	24.38	25.20	-0.05	0.335	0.405
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	-0.01	0.458	0.552
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	0.06	0.446	0.537
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	-0.07	0.442	0.533
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	0.15	0.412	0.496
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0.02	0.215	0.283
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	22.57	23.70	-0.19	0.173	0.224
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0.04	0.103	0.135
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	22.57	23.70	-0.11	0.082	0.106
	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	-0.19	0.197	0.259
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	22.57	23.70	-0.06	0.158	0.205
	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0.13	0.183	0.241
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	22.57	23.70	-0.16	0.142	0.184
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	-0.01	0.201	0.264
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0.12	0.193	0.254
11	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	-0.02	0.276	0.363
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	-0.01	0.239	0.314



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Ant 6	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	24.07	24.60	62.9	1.006	-0.12	0.054	0.061
	LTE Band 41_Ant 6	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	23.06	23.60	62.9	1.006	0.02	0.044	0.050
	LTE Band 41_Ant 6	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	24.07	24.60	62.9	1.006	0.16	0.001	0.001
	LTE Band 41_Ant 6	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	23.06	23.60	62.9	1.006	0.19	0.001	0.001
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	24.07	24.60	62.9	1.006	0.02	0.126	0.143
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	39750	2506	23.15	24.60	62.9	1.006	0.17	0.089	0.126
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	40185	2549.5	23.22	24.60	62.9	1.006	-0.08	0.092	0.127
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	40620	2593	23.40	24.60	62.9	1.006	-0.11	0.100	0.132
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41055	2636.5	24.00	24.60	62.9	1.006	-0.06	0.099	0.114
	LTE Band 41_Ant 6	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	23.06	23.60	62.9	1.006	-0.19	0.085	0.097
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	24.07	24.60	62.9	1.006	-0.09	0.022	0.024
	LTE Band 41_Ant 6	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	23.06	23.60	62.9	1.006	0.05	0.001	0.001
	LTE Band 41_HPUE_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	25.47	26.60	42.9	1.009	0.02	0.110	0.144
	LTE Band 41C_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	24.28	24.60	62.9	1.006	0.04	0.099	0.107
	LTE Band 41C_HPUE_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WWAN OFF	DSI 2	41490	2680	25.39	26.60	42.9	1.009	0.19	0.103	0.137
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 2	WWAN OFF	DSI 2	41490	2680	24.07	24.60	62.9	1.006	0.03	0.111	0.126
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 3	WWAN OFF	DSI 2	41490	2680	24.07	24.60	62.9	1.006	-0.11	0.102	0.116
12	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WWAN OFF	DSI 2	41490	2680	24.07	24.60	62.9	1.006	0.09	0.155	0.176
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 3	Battery 1	WWAN OFF	DSI 2	41490	2680	24.07	24.60	62.9	1.006	0.05	0.133	0.152
	LTE Band 41_HPUE_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WWAN OFF	DSI 2	41490	2680	25.47	26.60	42.9	1.009	0.15	0.132	0.173
	LTE Band 41_Ant 6	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	24.07	24.50	62.9	1.006	-0.12	0.054	0.060
	LTE Band 41_Ant 6	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	23.06	23.50	62.9	1.006	0.02	0.044	0.049
	LTE Band 41_Ant 6	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	24.07	24.50	62.9	1.006	0.16	0.001	0.001
	LTE Band 41_Ant 6	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	23.06	23.50	62.9	1.006	0.19	0.001	0.001
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	24.07	24.50	62.9	1.006	0.02	0.126	0.140
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	39750	2506	23.15	24.50	62.9	1.006	0.17	0.089	0.123
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	40185	2549.5	23.22	24.50	62.9	1.006	-0.08	0.092	0.124
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	40620	2593	23.40	24.50	62.9	1.006	-0.11	0.100	0.129
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41055	2636.5	24.00	24.50	62.9	1.006	-0.06	0.099	0.112
	LTE Band 41_Ant 6	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	23.06	23.50	62.9	1.006	-0.19	0.085	0.095
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	24.07	24.50	62.9	1.006	-0.09	0.022	0.024
	LTE Band 41_Ant 6	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	23.06	23.50	62.9	1.006	0.05	0.001	0.001
	LTE Band 41_HPUE_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	25.47	26.10	42.9	1.009	0.02	0.110	0.128
	LTE Band 41C_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	24.28	24.50	62.9	1.006	0.04	0.099	0.105
	LTE Band 41C_HPUE_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	41490	2680	25.39	26.10	42.9	1.009	0.19	0.103	0.122
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	41490	2680	24.07	24.50	62.9	1.006	0.03	0.111	0.123
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	41490	2680	24.07	24.50	62.9	1.006	-0.11	0.102	0.113
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	41490	2680	24.07	24.50	62.9	1.006	0.09	0.155	0.172
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	41490	2680	24.07	24.50	62.9	1.006	0.05	0.133	0.148
	LTE Band 41_HPUE_Ant 6	20M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	41490	2680	25.47	26.10	42.9	1.009	0.15	0.132	0.154



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	23.81	25.00	62.9	1.006	0.15	0.127	0.168
	LTE Band 42_Ant 12	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	22.95	24.00	62.9	1.006	0.09	0.096	0.123
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	23.81	25.00	62.9	1.006	-0.13	0.040	0.053
	LTE Band 42_Ant 12	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	22.95	24.00	62.9	1.006	0.15	0.030	0.038
	LTE Band 42_Ant 12	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	23.81	25.00	62.9	1.006	-0.09	0.043	0.057
	LTE Band 42_Ant 12	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	22.95	24.00	62.9	1.006	0.08	0.034	0.044
	LTE Band 42_Ant 12	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	23.81	25.00	62.9	1.006	0.01	0.001	0.001
	LTE Band 42_Ant 12	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	22.95	24.00	62.9	1.006	-0.12	0.001	0.001
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	43340	3575	23.81	25.00	62.9	1.006	-0.02	0.109	0.144
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	43340	3575	23.81	25.00	62.9	1.006	0.03	0.101	0.134
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	23.81	25.00	62.9	1.006	-0.03	0.108	0.143
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	43340	3575	23.81	25.00	62.9	1.006	0	0.192	0.254
	LTE Band 42_Ant 11	20M	QPSK	1	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.48	21.10	62.9	1.006	0.05	0.078	0.091
	LTE Band 42_Ant 11	20M	QPSK	50	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.38	21.10	62.9	1.006	-0.08	0.066	0.078
	LTE Band 42_Ant 11	20M	QPSK	1	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.48	21.10	62.9	1.006	0.04	0.034	0.039
	LTE Band 42_Ant 11	20M	QPSK	50	0	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.38	21.10	62.9	1.006	-0.17	0.027	0.032
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.48	21.10	62.9	1.006	0.17	0.280	0.324
	LTE Band 42_Ant 11	20M	QPSK	50	0	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.38	21.10	62.9	1.006	-0.04	0.239	0.283
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.48	21.10	62.9	1.006	0.14	0.045	0.052
	LTE Band 42_Ant 11	20M	QPSK	50	0	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.38	21.10	62.9	1.006	-0.07	0.033	0.039
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 2	43340	3575	20.48	21.10	62.9	1.006	-0.05	0.257	0.298
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 2	43340	3575	20.48	21.10	62.9	1.006	-0.01	0.243	0.282
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.48	21.10	62.9	1.006	0	0.258	0.299
13	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 2	43340	3575	20.48	21.10	62.9	1.006	-0.11	0.329	0.382



<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2_Ant 2	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	0.16	0.240	0.253
	FR1 n2_Ant 2	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	380000	1900	24.89	25.20	-0.18	0.243	0.261
	FR1 n2_Ant 2	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	372000	1860	24.76	25.20	-0.05	0.414	0.459
	FR1 n2_Ant 2	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	376000	1880	24.88	25.20	-0.16	0.337	0.363
	FR1 n2_Ant 2	20M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	-0.16	0.093	0.098
	FR1 n2_Ant 2	20M	BPSK	50	28	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	380000	1900	24.89	25.20	0.01	0.095	0.102
	FR1 n2_Ant 2	20M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	-0.11	0.172	0.182
	FR1 n2_Ant 2	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	380000	1900	24.89	25.20	0.19	0.186	0.200
	FR1 n2_Ant 2	20M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	-0.12	0.088	0.094
	FR1 n2_Ant 2	20M	BPSK	50	28	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	380000	1900	24.89	25.20	-0.11	0.092	0.099
	FR1 n2_Ant 2	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	372000	1860	24.76	25.20	0.06	0.397	0.439
	FR1 n2_Ant 2	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	372000	1860	24.76	25.20	-0.11	0.375	0.415
14	FR1 n2_Ant 2	20M	BPSK	50	28	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	372000	1860	24.76	25.20	-0.08	0.442	0.489
	FR1 n2_Ant 2	20M	BPSK	50	28	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	372000	1860	24.76	25.20	0.12	0.390	0.431
	FR1 n5_Ant 4	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	167300	836.5	24.27	25.20	-0.04	0.236	0.292
	FR1 n5_Ant 4	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	167300	836.5	23.97	25.20	-0.14	0.249	0.331
	FR1 n5_Ant 4	20M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	167300	836.5	24.27	25.20	0.19	0.158	0.196
	FR1 n5_Ant 4	20M	BPSK	50	28	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	167300	836.5	23.97	25.20	-0.08	0.169	0.224
	FR1 n5_Ant 4	20M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	167300	836.5	24.27	25.20	0.05	0.287	0.356
15	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	167300	836.5	23.97	25.20	-0.09	0.319	0.423
	FR1 n5_Ant 4	20M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	167300	836.5	24.27	25.20	0.19	0.200	0.248
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	167300	836.5	23.97	25.20	-0.09	0.217	0.288
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	167300	836.5	23.97	25.20	0.13	0.299	0.397
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	167300	836.5	23.97	25.20	-0.06	0.288	0.382
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	167300	836.5	23.97	25.20	0.18	0.318	0.422
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	167300	836.5	23.97	25.20	0	0.305	0.405
	FR1 n5_Ant 4	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	167300	836.5	24.27	24.90	-0.04	0.236	0.273
	FR1 n5_Ant 4	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	167300	836.5	23.97	24.90	-0.14	0.249	0.308
	FR1 n5_Ant 4	20M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	167300	836.5	24.27	24.90	0.19	0.158	0.183
	FR1 n5_Ant 4	20M	BPSK	50	28	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	167300	836.5	23.97	24.90	-0.08	0.169	0.209
	FR1 n5_Ant 4	20M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	167300	836.5	24.27	24.90	0.05	0.287	0.332
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	167300	836.5	23.97	24.90	-0.09	0.319	0.395
	FR1 n5_Ant 4	20M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	167300	836.5	24.27	24.90	0.19	0.200	0.231
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	167300	836.5	23.97	24.90	-0.09	0.217	0.269
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	167300	836.5	23.97	24.90	0.13	0.299	0.370
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	167300	836.5	23.97	24.90	-0.06	0.288	0.357
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	167300	836.5	23.97	24.90	0.18	0.318	0.394
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	167300	836.5	23.97	24.90	0	0.305	0.378



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n7_Ant 12	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	22.08	23.70	0.08	0.570	0.828
	FR1 n7_Ant 12	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	502000	2510	22.04	23.70	0.05	0.551	0.808
	FR1 n7_Ant 12	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	512000	2560	22.00	23.70	0.12	0.568	0.840
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.96	23.70	0.1	0.606	0.905
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	502000	2510	21.87	23.70	0.12	0.630	0.960
16	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	512000	2560	21.95	23.70	-0.1	0.660	0.988
	FR1 n7_Ant 12	20M	BPSK	100	0	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.89	23.70	-0.04	0.601	0.912
	FR1 n7_Ant 12	20M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	22.08	23.70	0.08	0.072	0.105
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.96	23.70	0	0.065	0.098
	FR1 n7_Ant 12	20M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	22.08	23.70	0.1	0.224	0.325
	FR1 n7_Ant 12	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.96	23.70	0.04	0.212	0.317
	FR1 n7_Ant 12	20M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	22.08	23.70	0.04	0.069	0.100
	FR1 n7_Ant 12	20M	BPSK	50	28	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.96	23.70	0	0.064	0.096
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	512000	2560	21.95	23.70	0.02	0.632	0.946
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	512000	2560	21.95	23.70	0.06	0.628	0.940
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	512000	2560	21.95	23.70	0.15	0.599	0.897
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	512000	2560	21.95	23.70	0.1	0.572	0.856
	FR1 n7_Ant 12	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	22.08	22.70	0.08	0.570	0.657
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	21.96	22.70	0.1	0.606	0.719
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	502000	2510	21.87	22.70	0.12	0.630	0.763
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	512000	2560	21.95	22.70	-0.1	0.660	0.784
	FR1 n7_Ant 12	20M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	22.08	22.70	0.08	0.072	0.083
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	21.96	22.70	0	0.065	0.078
	FR1 n7_Ant 12	20M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	22.08	22.70	0.1	0.224	0.258
	FR1 n7_Ant 12	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	21.96	22.70	0.04	0.212	0.252
	FR1 n7_Ant 12	20M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	22.08	22.70	0.04	0.069	0.080
	FR1 n7_Ant 12	20M	BPSK	50	28	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	21.96	22.70	0	0.064	0.076
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	512000	2560	21.95	22.70	0.02	0.632	0.751
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	512000	2560	21.95	22.70	0.06	0.628	0.746
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	512000	2560	21.95	22.70	0.15	0.599	0.712
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	512000	2560	21.95	22.70	0.1	0.572	0.680



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n7_Ant 6	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	22.15	23.40	-0.06	0.058	0.077
	FR1 n7_Ant 6	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.99	23.40	-0.06	0.064	0.089
	FR1 n7_Ant 6	20M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	22.15	23.40	-0.05	0.024	0.032
	FR1 n7_Ant 6	20M	BPSK	50	28	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.99	23.40	0.14	0.028	0.039
	FR1 n7_Ant 6	20M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	22.15	23.40	-0.11	0.146	0.195
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.99	23.40	0.07	0.159	0.220
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	502000	2510	21.94	23.40	-0.16	0.134	0.188
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	512000	2560	21.87	23.40	0	0.166	0.236
	FR1 n7_Ant 6	20M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	22.15	23.40	-0.03	0.036	0.048
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	507000	2535	21.99	23.40	-0.06	0.045	0.062
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	512000	2560	21.87	23.40	0.12	0.152	0.216
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	512000	2560	21.87	23.40	0.01	0.144	0.205
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	512000	2560	21.87	23.40	0.12	0.117	0.166
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	512000	2560	21.87	23.40	0.01	0.133	0.189
	FR1 n7_Ant 6	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	22.15	22.80	-0.06	0.058	0.067
	FR1 n7_Ant 6	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	21.99	22.80	-0.06	0.064	0.077
	FR1 n7_Ant 6	20M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	22.15	22.80	-0.05	0.024	0.028
	FR1 n7_Ant 6	20M	BPSK	50	28	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	21.99	22.80	0.14	0.028	0.034
	FR1 n7_Ant 6	20M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	22.15	22.80	-0.11	0.146	0.170
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	21.99	22.80	0.07	0.159	0.192
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	502000	2510	21.94	22.80	-0.16	0.134	0.163
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	512000	2560	21.87	22.80	0	0.166	0.206
	FR1 n7_Ant 6	20M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	22.15	22.80	-0.03	0.036	0.042
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	507000	2535	21.99	22.80	-0.06	0.045	0.054
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	512000	2560	21.87	22.80	0.12	0.152	0.188
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	512000	2560	21.87	22.80	0.01	0.144	0.178
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	512000	2560	21.87	22.80	0.12	0.117	0.145
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	512000	2560	21.87	22.80	0.01	0.133	0.165
	FR1 n66_Ant 2	40M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	0.17	0.434	0.441
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	24.89	25.20	0.04	0.351	0.377
	FR1 n66_Ant 2	40M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.09	0.101	0.103
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	24.89	25.20	-0.01	0.089	0.096
	FR1 n66_Ant 2	40M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.13	0.212	0.215
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	24.89	25.20	-0.13	0.199	0.214
	FR1 n66_Ant 2	40M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.01	0.084	0.085
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	24.89	25.20	0.14	0.074	0.079
	FR1 n66_Ant 2	40M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	0.08	0.421	0.428
	FR1 n66_Ant 2	40M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.14	0.414	0.421
17	FR1 n66_Ant 2	40M	BPSK	1	1	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.19	0.466	0.474
	FR1 n66_Ant 2	40M	BPSK	1	1	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	0.06	0.405	0.412
18	FR1 n71_Ant 0	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	-0.03	0.235	0.279
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	0.04	0.207	0.263
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	0.09	0.140	0.166
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	0	0.128	0.163
	FR1 n71_Ant 0	20M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	-0.13	0.214	0.254
	FR1 n71_Ant 0	20M	BPSK	50	28	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	0.18	0.217	0.276
	FR1 n71_Ant 0	20M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	0.03	0.118	0.140
	FR1 n71_Ant 0	20M	BPSK	50	28	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	-0.1	0.102	0.130
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	0.03	0.211	0.251
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	-0.13	0.198	0.235
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	0.01	0.209	0.248
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	0.1	0.230	0.273



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.49	23.80	-0.13	0.071	0.076
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.29	23.80	-0.03	0.084	0.094
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.49	23.80	0.14	0.032	0.034
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.29	23.80	-0.17	0.040	0.045
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.49	23.80	-0.16	0.150	0.161
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.29	23.80	-0.05	0.195	0.219
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.49	23.80	0.03	0.043	0.046
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.29	23.80	0.1	0.059	0.066
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON/OFF	DSI 2	518598	2592.99	23.29	23.80	0.06	0.184	0.207
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON/OFF	DSI 2	518598	2592.99	23.29	23.80	-0.02	0.177	0.199
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.29	23.80	0.18	0.167	0.188
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 2	518598	2592.99	23.29	23.80	0.02	0.185	0.208
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	22.32	23.70	0.13	0.524	0.720
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	22.32	23.70	-0.05	0.068	0.093
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	22.32	23.70	-0.19	0.169	0.232
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	22.32	23.70	-0.18	0.080	0.110
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	518598	2592.99	22.32	23.70	0.09	0.481	0.661
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	518598	2592.99	22.32	23.70	-0.14	0.462	0.635
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	518598	2592.99	22.32	23.70	0.16	0.535	0.735
19	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	518598	2592.99	22.32	23.70	-0.04	0.572	0.786
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	22.32	22.90	0.13	0.524	0.599
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	22.32	22.90	-0.05	0.068	0.078
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	22.32	22.90	-0.19	0.169	0.193
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	22.32	22.90	-0.18	0.080	0.091
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	518598	2592.99	22.32	22.90	0.09	0.481	0.550
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	518598	2592.99	22.32	22.90	-0.14	0.462	0.528
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	518598	2592.99	22.32	22.90	0.16	0.535	0.611
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	518598	2592.99	22.32	22.90	-0.04	0.572	0.654



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	19.65	21.50	0.18	0.263	0.403
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	19.65	21.50	0.17	0.215	0.329
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	19.65	21.50	0.14	0.135	0.207
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	19.65	21.50	0.09	0.129	0.198
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	518598	2592.99	19.65	21.50	0.03	0.244	0.374
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	518598	2592.99	19.65	21.50	-0.14	0.231	0.354
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	518598	2592.99	19.65	21.50	0.01	0.226	0.346
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	518598	2592.99	19.65	21.50	-0.08	0.301	0.461
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	19.65	19.90	0.18	0.263	0.279
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	19.65	19.90	0.17	0.215	0.228
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	19.65	19.90	0.14	0.135	0.143
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	19.65	19.90	0.09	0.129	0.137
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	518598	2592.99	19.65	19.90	0.03	0.244	0.258
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	518598	2592.99	19.65	19.90	-0.14	0.231	0.245
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	518598	2592.99	19.65	19.90	0.01	0.226	0.239
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	518598	2592.99	19.65	19.90	-0.08	0.301	0.319
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	20.19	22.10	-0.18	0.150	0.233
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	20.19	22.10	0.09	0.030	0.047
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	20.19	22.10	0.02	0.288	0.447
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	518598	2592.99	20.19	22.10	0.15	0.033	0.051
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	518598	2592.99	20.19	22.10	0.07	0.281	0.436
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	518598	2592.99	20.19	22.10	-0.15	0.277	0.430
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	518598	2592.99	20.19	22.10	0.07	0.359	0.557
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	518598	2592.99	20.19	22.10	0.18	0.328	0.509
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	20.19	20.50	-0.18	0.150	0.161
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	20.19	20.50	0.09	0.030	0.032
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	20.19	20.50	0.02	0.288	0.309
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	518598	2592.99	20.19	20.50	0.15	0.033	0.035
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	518598	2592.99	20.19	20.50	0.07	0.281	0.302
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	518598	2592.99	20.19	20.50	-0.15	0.277	0.297
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	518598	2592.99	20.19	20.50	0.07	0.359	0.386
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	518598	2592.99	20.19	20.50	0.18	0.328	0.352



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	25.78	26.50	-0.15	0.571	0.674
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	25.71	26.50	0.17	0.505	0.606
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	25.78	26.50	-0.13	0.090	0.106
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	25.71	26.50	0.09	0.076	0.091
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	25.78	26.50	-0.16	0.130	0.153
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	25.71	26.50	0.02	0.122	0.146
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	25.78	26.50	0.13	0.028	0.033
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	25.71	26.50	-0.15	0.026	0.031
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	656000	3840	25.78	26.50	0.13	0.554	0.654
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	656000	3840	25.78	26.50	0.06	0.542	0.640
20	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	656000	3840	25.78	26.50	-0.06	0.648	0.765
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	656000	3840	25.78	26.50	-0.08	0.515	0.608
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	25.78	26.30	-0.15	0.571	0.644
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	25.71	26.30	0.17	0.505	0.578
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	25.78	26.30	-0.13	0.090	0.101
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	25.71	26.30	0.09	0.076	0.087
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	25.78	26.30	-0.16	0.130	0.147
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	25.71	26.30	0.02	0.122	0.140
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	25.78	26.30	0.13	0.028	0.032
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	25.71	26.30	-0.15	0.026	0.030
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	656000	3840	25.78	26.30	0.13	0.554	0.624
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	656000	3840	25.78	26.30	0.06	0.542	0.611
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	656000	3840	25.78	26.30	-0.06	0.648	0.730
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	656000	3840	25.78	26.30	-0.08	0.515	0.581
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.93	26.50	0.16	0.432	0.493
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.86	26.50	0.12	0.370	0.429
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.93	26.50	-0.09	0.071	0.081
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.86	26.50	0.01	0.059	0.068
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.93	26.50	0.03	0.099	0.113
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.86	26.50	-0.16	0.084	0.097
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.93	26.50	-0.05	0.031	0.035
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.86	26.50	0.11	0.037	0.043
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	633332	3499.98	25.93	26.50	0.06	0.412	0.470
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	633332	3499.98	25.93	26.50	-0.14	0.396	0.452
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.93	26.50	-0.18	0.453	0.517
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	633332	3499.98	25.93	26.50	-0.05	0.531	0.605
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.93	26.30	0.16	0.432	0.470
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.86	26.30	0.12	0.370	0.409
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.93	26.30	-0.09	0.071	0.077
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.86	26.30	0.01	0.059	0.065
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.93	26.30	0.03	0.099	0.108
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.86	26.30	-0.16	0.084	0.093
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.93	26.30	-0.05	0.031	0.034
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.86	26.30	0.11	0.037	0.041
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	633332	3499.98	25.93	26.30	0.06	0.412	0.449
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	633332	3499.98	25.93	26.30	-0.14	0.396	0.431
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.93	26.30	-0.18	0.453	0.493
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	633332	3499.98	25.93	26.30	-0.05	0.531	0.578



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	17.36	18.70	0.07	0.078	0.106	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	17.32	18.70	-0.19	0.087	0.120	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	17.36	18.70	-0.14	0.026	0.035	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	17.32	18.70	0.17	0.030	0.041	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	17.36	18.70	-0.11	0.263	0.358	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	17.32	18.70	0.01	0.289	0.397	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	17.36	18.70	-0.16	0.030	0.041	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	17.32	18.70	-0.12	0.032	0.044	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	656000	3840	17.32	18.70	0.13	0.261	0.359	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	656000	3840	17.32	18.70	-0.05	0.254	0.349	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	656000	3840	17.32	18.70	-0.02	0.330	0.453	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	656000	3840	17.32	18.70	0.04	0.202	0.278	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	17.36	18.10	0.07	0.078	0.092	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	17.32	18.10	-0.19	0.087	0.104	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	17.36	18.10	-0.14	0.026	0.030	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	17.32	18.10	0.17	0.030	0.036	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	17.36	18.10	-0.11	0.263	0.312	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	17.32	18.10	0.01	0.289	0.346	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	17.36	18.10	-0.16	0.030	0.036	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	17.32	18.10	-0.12	0.032	0.038	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	656000	3840	17.32	18.10	0.13	0.261	0.312	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	656000	3840	17.32	18.10	-0.05	0.254	0.304	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	656000	3840	17.32	18.10	-0.02	0.330	0.395	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	656000	3840	17.32	18.10	0.04	0.202	0.242	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.25	18.70	0	0.056	0.079	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.20	18.70	-0.07	0.059	0.083	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.25	18.70	0.04	0.018	0.025	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.20	18.70	0.07	0.020	0.028	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.25	18.70	-0.01	0.191	0.266	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.20	18.70	-0.04	0.203	0.287	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.25	18.70	-0.18	0.022	0.031	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.20	18.70	0.08	0.026	0.036	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	633332	3499.98	17.20	18.70	-0.12	0.185	0.261	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	633332	3499.98	17.20	18.70	0.07	0.177	0.250	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.20	18.70	-0.11	0.229	0.324	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	633332	3499.98	17.20	18.70	0.09	0.296	0.418	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.25	18.10	0	0.056	0.068	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.20	18.10	-0.07	0.059	0.072	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.25	18.10	0.04	0.018	0.022	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.20	18.10	0.07	0.020	0.025	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.25	18.10	-0.01	0.191	0.232	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.20	18.10	-0.04	0.203	0.250	
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.25	18.10	-0.18	0.022	0.027	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.20	18.10	0.08	0.026	0.032	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	633332	3499.98	17.20	18.10	-0.12	0.185	0.228	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	633332	3499.98	17.20	18.10	0.07	0.177	0.218	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.20	18.10	-0.11	0.229	0.282	
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	633332	3499.98	17.20	18.10	0.09	0.296	0.364	



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	20.06	21.00	-0.11	0.569	0.707
	FR1 n77_Ant 3	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	20.06	21.00	-0.12	0.057	0.071
	FR1 n77_Ant 3	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	20.06	21.00	0.17	0.280	0.348
	FR1 n77_Ant 3	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	20.06	21.00	0.01	0.086	0.107
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	656000	3840	20.06	21.00	-0.13	0.513	0.637
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	656000	3840	20.06	21.00	0	0.509	0.632
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	656000	3840	20.06	21.00	0.15	0.220	0.273
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	656000	3840	20.06	21.00	-0.16	0.428	0.532
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	20.06	20.50	-0.11	0.569	0.630
	FR1 n77_Ant 3	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	20.06	20.50	-0.12	0.057	0.063
	FR1 n77_Ant 3	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	20.06	20.50	0.17	0.280	0.310
	FR1 n77_Ant 3	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	20.06	20.50	0.01	0.086	0.095
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	656000	3840	20.06	20.50	-0.13	0.513	0.568
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	656000	3840	20.06	20.50	0	0.509	0.563
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	656000	3840	20.06	20.50	0.15	0.220	0.243
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	656000	3840	20.06	20.50	-0.16	0.428	0.474
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	19.95	21.00	0.02	0.329	0.419
	FR1 n77_Ant 3	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	19.95	21.00	-0.01	0.031	0.040
	FR1 n77_Ant 3	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	19.95	21.00	-0.02	0.134	0.171
	FR1 n77_Ant 3	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	19.95	21.00	0.15	0.050	0.064
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	633332	3499.98	19.95	21.00	0.03	0.314	0.400
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	633332	3499.98	19.95	21.00	0.01	0.301	0.383
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	633332	3499.98	19.95	21.00	0.17	0.274	0.349
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	633332	3499.98	19.95	21.00	0.18	0.185	0.236
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	19.95	20.50	0.02	0.329	0.373
	FR1 n77_Ant 3	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	19.95	20.50	-0.01	0.031	0.035
	FR1 n77_Ant 3	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	19.95	20.50	-0.02	0.134	0.153
	FR1 n77_Ant 3	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	19.95	20.50	0.15	0.050	0.057
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	633332	3499.98	19.95	20.50	0.03	0.314	0.356
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	633332	3499.98	19.95	20.50	0.01	0.301	0.342
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	633332	3499.98	19.95	20.50	0.17	0.274	0.311
	FR1 n77_Ant 3	100M	CW	-	-	Right Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	633332	3499.98	19.95	20.50	0.18	0.185	0.210



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Ant 5	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	15.41	16.70	-0.07	0.283	0.381
	FR1 n77_Ant 5	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	15.41	16.70	0.11	0.308	0.415
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	15.41	16.70	-0.02	0.333	0.448
	FR1 n77_Ant 5	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	656000	3840	15.41	16.70	0.17	0.318	0.428
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	656000	3840	15.41	16.70	0.14	0.316	0.425
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	656000	3840	15.41	16.70	-0.05	0.311	0.419
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	656000	3840	15.41	16.70	0.06	0.321	0.431
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	656000	3840	15.41	16.70	-0.03	0.270	0.364
	FR1 n77_Ant 5	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	15.41	16.00	-0.07	0.283	0.324
	FR1 n77_Ant 5	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	15.41	16.00	0.11	0.308	0.353
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	15.41	16.00	-0.02	0.333	0.381
	FR1 n77_Ant 5	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	656000	3840	15.41	16.00	0.17	0.318	0.364
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	656000	3840	15.41	16.00	0.14	0.316	0.362
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	656000	3840	15.41	16.00	-0.05	0.311	0.356
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	656000	3840	15.41	16.00	0.06	0.321	0.367
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	656000	3840	15.41	16.00	-0.03	0.270	0.310
	FR1 n77_Ant 5	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	15.45	16.70	0.11	0.133	0.177
	FR1 n77_Ant 5	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	15.45	16.70	0.13	0.140	0.186
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	15.45	16.70	0.05	0.187	0.249
	FR1 n77_Ant 5	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN OFF	DSI 2	633332	3499.98	15.45	16.70	-0.16	0.162	0.216
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 2	WLAN OFF	DSI 2	633332	3499.98	15.45	16.70	0.16	0.181	0.241
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 3	WLAN OFF	DSI 2	633332	3499.98	15.45	16.70	-0.03	0.179	0.239
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 2	Battery 1	WLAN OFF	DSI 2	633332	3499.98	15.45	16.70	-0.04	0.165	0.220
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 3	Battery 1	WLAN OFF	DSI 2	633332	3499.98	15.45	16.70	-0.07	0.150	0.200
	FR1 n77_Ant 5	100M	CW	-	-	Right Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	15.45	16.00	0.11	0.133	0.151
	FR1 n77_Ant 5	100M	CW	-	-	Right Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	15.45	16.00	0.13	0.140	0.159
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	15.45	16.00	0.05	0.187	0.212
	FR1 n77_Ant 5	100M	CW	-	-	Left Tilted	0mm	Sample 1	Battery 1	WLAN ON	DSI 2	633332	3499.98	15.45	16.00	-0.16	0.162	0.184
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 2	WLAN ON	DSI 2	633332	3499.98	15.45	16.00	0.16	0.181	0.205
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 1	Battery 3	WLAN ON	DSI 2	633332	3499.98	15.45	16.00	-0.03	0.179	0.203
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 2	Battery 1	WLAN ON	DSI 2	633332	3499.98	15.45	16.00	-0.04	0.165	0.187
	FR1 n77_Ant 5	100M	CW	-	-	Left Cheek	0mm	Sample 3	Battery 1	WLAN ON	DSI 2	633332	3499.98	15.45	16.00	-0.07	0.150	0.170



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	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	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	-0.17	0.295	0.347
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	-0.07	0.198	0.233
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	0.03	0.517	0.608
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	6	2437	20.20	21.00	99.9	1.001	0.08	0.549	0.661
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	0.08	0.592	0.712
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	-0.1	0.240	0.282
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 2	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	-0.18	0.581	0.699
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 3	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	-0.12	0.559	0.673
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 2	Battery 1	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	-0.03	0.626	0.753
21	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	-0.16	0.634	0.763
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	0.09	0.208	0.274
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	-0.07	0.140	0.185
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	0.1	0.365	0.482
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	6	2437	18.80	20.00	99.9	1.001	-0.06	0.388	0.512
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	-0.19	0.388	0.524
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	-0.09	0.169	0.223
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 2	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	0.07	0.375	0.506
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 3	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	0.13	0.365	0.493
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 2	Battery 1	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	0.04	0.412	0.556
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	-0.03	0.418	0.564
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	-0.17	0.257	0.276
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	-0.05	0.124	0.133
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	0.09	0.537	0.577
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 8	non-DBS	6	2437	20.70	21.00	99.7	1.003	0.08	0.554	0.595
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.16	0.569	0.626
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	-0.17	0.293	0.315
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 2	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	0.02	0.555	0.610
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 3	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.03	0.537	0.591
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 2	Battery 1	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.12	0.608	0.669
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 3	Battery 1	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.06	0.645	0.709
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	-0.09	0.206	0.248
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	-0.06	0.100	0.121
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	-0.03	0.430	0.519
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 8	DBS	6	2437	19.20	20.00	99.7	1.003	-0.14	0.443	0.534
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	0.05	0.455	0.575
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	-0.13	0.235	0.283
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 2	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.12	0.430	0.543
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 1	Battery 3	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	0.01	0.412	0.520
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 2	Battery 1	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.18	0.486	0.614
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Sample 3	Battery 1	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.04	0.491	0.620



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	0.11	0.401	0.462
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	-0.15	0.405	0.466
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	-0.1	0.893	1.028
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	54	5270	15.60	16.50	99.7	1.003	-0.03	0.810	1.000
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	0.02	0.821	0.945
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	54	5270	15.60	16.50	99.7	1.003	0.12	0.742	0.916
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 2	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	0.09	0.826	0.951
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 3	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	-0.12	0.866	0.997
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 2	Battery 1	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	-0.08	0.900	1.036
22	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	0.01	0.984	1.133
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	0.02	0.056	0.072
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	-0.17	0.049	0.063
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	-0.04	0.112	0.145
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	-0.01	0.103	0.133
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 2	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	0.08	0.104	0.134
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 3	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	-0.14	0.099	0.128
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 2	Battery 1	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	0.1	0.111	0.143
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	-0.02	0.122	0.158
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	-0.04	0.549	0.647
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	0.03	0.534	0.629
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	-0.01	0.936	1.103
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	126	5630	15.90	16.50	99.7	1.003	-0.04	0.826	0.951
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	-0.03	0.659	0.777
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 2	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	0.08	0.866	1.021
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 3	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	-0.1	0.884	1.042
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 2	Battery 1	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	-0.03	0.905	1.066
23	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	0.11	1.010	1.190
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	-0.14	0.250	0.310
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	-0.04	0.243	0.301
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	-0.06	0.426	0.528
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	-0.18	0.300	0.372
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Sample 1	Battery 2	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	0.04	0.411	0.509
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Sample 1	Battery 3	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	0.14	0.402	0.498
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Sample 2	Battery 1	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	-0.07	0.412	0.510
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	0.15	0.457	0.566
	WLAN5GHz	802.11a 6Mbps	Right Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.12	0.357	0.442
	WLAN5GHz	802.11a 6Mbps	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.11	0.345	0.428
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.1	0.665	0.824
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	157	5785	16.70	17.50	99.2	1.008	0.04	0.651	0.789
	WLAN5GHz	802.11a 6Mbps	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0.06	0.587	0.728
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Sample 1	Battery 2	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0.02	0.638	0.791
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Sample 1	Battery 3	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.03	0.627	0.777
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Sample 2	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0.1	0.662	0.820
24	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0.1	0.729	0.904
	WLAN5GHz	802.11a 6Mbps	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	non-DBS	157	5785	16.70	17.50	99.2	1.008	0.04	0.696	0.843
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.04	0.193	0.267
	WLAN5GHz	802.11n-HT40 MCS0	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.04	0.186	0.258
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.09	0.359	0.497
	WLAN5GHz	802.11n-HT40 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.11	0.317	0.439
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 2	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.09	0.341	0.472
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 1	Battery 3	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.12	0.332	0.460
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 2	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.01	0.357	0.494
	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 3	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.15	0.394	0.546



Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	APD (W/m ²)
	WLAN6GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS / DBS	111	6505	14.10	14.50	98.8	1.012	-0.11	0.114	0.126	0.719
	WLAN6GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS / DBS	111	6505	14.10	14.50	98.8	1.012	0.13	0.136	0.151	0.812
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS / DBS	111	6505	14.10	14.50	98.8	1.012	-0.18	0.220	0.244	1.390
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS / DBS	111	6505	14.10	14.50	98.8	1.012	-0.18	0.236	0.262	1.490
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS / DBS	15	6025	13.30	13.50	98.8	1.012	-0.09	0.078	0.083	0.626
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS / DBS	47	6185	13.30	13.50	98.8	1.012	0.15	0.123	0.130	0.812
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS / DBS	175	6825	13.80	14.50	98.8	1.012	0.04	0.185	0.220	1.110
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS / DBS	207	6985	13.80	14.00	98.8	1.012	0.15	0.244	0.259	1.390
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 1	Battery 2	Ant 9+8(8)	non-DBS / DBS	111	6505	14.10	14.50	98.8	1.012	-0.06	0.220	0.244	1.490
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 1	Battery 3	Ant 9+8(8)	non-DBS / DBS	111	6505	14.10	14.50	98.8	1.012	-0.03	0.217	0.241	1.490
25	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 2	Battery 1	Ant 9+8(8)	non-DBS / DBS	111	6505	14.10	14.50	98.8	1.012	0.13	0.280	0.311	1.740
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Sample 3	Battery 1	Ant 9+8(8)	non-DBS / DBS	111	6505	14.10	14.50	98.8	1.012	-0.14	0.227	0.252	1.280

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Right Cheek	0mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0	< 0.001	< 0.001
	Bluetooth	1Mbps	Right Tilted	0mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0	< 0.001	< 0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0	< 0.001	< 0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9	non-DBS	39	2441	4.25	5.00	76.8	1.085	0	< 0.001	< 0.001
26	Bluetooth	1Mbps	Left Cheek	0mm	Sample 1	Battery 1	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0	< 0.001	< 0.001
	Bluetooth	1Mbps	Left Tilted	0mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0	< 0.001	< 0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Sample 1	Battery 2	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0	< 0.001	< 0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Sample 1	Battery 3	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0	< 0.001	< 0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Sample 2	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0	< 0.001	< 0.001
	Bluetooth	1Mbps	Left Cheek	0mm	Sample 3	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0	< 0.001	< 0.001



14.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 4	GPRS (4 Tx slots)	Front	10mm	Sample 1	Battery 1	DSI 0	189	836.4	28.95	30.50	-0.11	0.125	0.179
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 1	DSI 0	189	836.4	28.95	30.50	-0.1	0.244	0.349
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 1	DSI 0	128	824.2	28.94	30.50	0.18	0.259	0.371
27	GSM850_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 1	DSI 0	251	848.8	28.61	30.50	-0.09	0.373	0.576
	GSM850_Ant 4	GPRS (4 Tx slots)	Left Side	10mm	Sample 1	Battery 1	DSI 0	189	836.4	28.95	30.50	0.04	0.051	0.073
	GSM850_Ant 4	GPRS (4 Tx slots)	Right Side	10mm	Sample 1	Battery 1	DSI 0	189	836.4	28.95	30.50	0.14	0.059	0.084
	GSM850_Ant 4	GPRS (4 Tx slots)	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	189	836.4	28.95	30.50	0.02	0.167	0.239
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 2	DSI 0	251	848.8	28.61	30.50	-0.16	0.353	0.545
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 3	DSI 0	251	848.8	28.61	30.50	0.16	0.344	0.532
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 2	Battery 1	DSI 0	251	848.8	28.61	30.50	-0.16	0.225	0.348
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 3	Battery 1	DSI 0	251	848.8	28.61	30.50	-0.16	0.259	0.400
	GSM1900_Ant 4	GPRS (4 Tx slots)	Front	10mm	Sample 1	Battery 1	DSI 3	661	1880	26.01	27.10	0.04	0.056	0.072
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 1	DSI 3	661	1880	26.01	27.10	-0.15	0.279	0.359
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 1	DSI 3	512	1850.2	25.60	27.10	-0.18	0.356	0.503
28	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 1	DSI 3	810	1909.8	26.00	27.10	0.1	0.398	0.513
	GSM1900_Ant 4	GPRS (4 Tx slots)	Left Side	10mm	Sample 1	Battery 1	DSI 3	661	1880	26.01	27.10	0.17	0.046	0.059
	GSM1900_Ant 4	GPRS (4 Tx slots)	Right Side	10mm	Sample 1	Battery 1	DSI 3	661	1880	26.01	27.10	-0.03	0.037	0.048
	GSM1900_Ant 4	GPRS (4 Tx slots)	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	661	1880	26.01	27.10	-0.08	0.183	0.235
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 2	DSI 3	810	1909.8	26.00	27.10	0.11	0.364	0.469
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 1	Battery 3	DSI 3	810	1909.8	26.00	27.10	0.13	0.352	0.453
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 2	Battery 1	DSI 3	810	1909.8	26.00	27.10	-0.09	0.320	0.412
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	10mm	Sample 3	Battery 1	DSI 3	810	1909.8	26.00	27.10	0.13	0.302	0.389



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 2	RMC 12.2Kbps	Front	10mm	Sample 1	Battery 1	DSI 0	9400	1880	24.39	25.20	0.11	0.223	0.269
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 1	DSI 0	9400	1880	24.39	25.20	-0.17	0.284	0.342
	WCDMA II_Ant 2	RMC 12.2Kbps	Left Side	10mm	Sample 1	Battery 1	DSI 0	9400	1880	24.39	25.20	-0.05	0.124	0.149
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	Sample 1	Battery 1	DSI 0	9400	1880	24.39	25.20	-0.13	0.434	0.523
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	Sample 1	Battery 1	DSI 0	9262	1852.4	24.38	25.20	-0.02	0.433	0.523
29	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	Sample 1	Battery 1	DSI 0	9538	1907.6	24.32	25.20	0.08	0.560	0.686
	WCDMA II_Ant 2	RMC 12.2Kbps	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	9400	1880	24.39	25.20	-0.1	0.164	0.198
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	Sample 1	Battery 2	DSI 0	9538	1907.6	24.32	25.20	0.17	0.544	0.666
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	Sample 1	Battery 3	DSI 0	9538	1907.6	24.32	25.20	-0.15	0.531	0.650
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	Sample 2	Battery 1	DSI 0	9538	1907.6	24.32	25.20	-0.11	0.516	0.632
	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	Sample 3	Battery 1	DSI 0	9538	1907.6	24.32	25.20	-0.03	0.310	0.380
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	10mm	Sample 1	Battery 1	DSI 3	1413	1732.6	23.76	24.50	-0.17	0.138	0.163
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 1	DSI 3	1413	1732.6	23.76	24.50	-0.14	0.305	0.362
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 1	DSI 3	1312	1712.4	23.72	24.50	0.09	0.303	0.362
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 1	DSI 3	1513	1752.6	23.71	24.50	0.03	0.219	0.263
	WCDMA IV_Ant 2	RMC 12.2Kbps	Left Side	10mm	Sample 1	Battery 1	DSI 3	1413	1732.6	23.76	24.50	-0.17	0.067	0.080
	WCDMA IV_Ant 2	RMC 12.2Kbps	Right Side	10mm	Sample 1	Battery 1	DSI 3	1413	1732.6	23.76	24.50	0.01	0.211	0.250
	WCDMA IV_Ant 2	RMC 12.2Kbps	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	1413	1732.6	23.76	24.50	-0.02	0.055	0.066
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 2	DSI 3	1413	1732.6	23.76	24.50	0.04	0.299	0.355
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 3	DSI 3	1413	1732.6	23.76	24.50	0.08	0.291	0.345
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	Sample 2	Battery 1	DSI 3	1312	1712.4	23.72	24.50	0.1	0.361	0.432
30	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	10mm	Sample 3	Battery 1	DSI 3	1312	1712.4	23.72	24.50	-0.03	0.400	0.479
	WCDMA V_Ant 4	RMC 12.2Kbps	Front	10mm	Sample 1	Battery 1	DSI 0	4182	836.4	24.26	25.20	-0.18	0.268	0.333
31	WCDMA V_Ant 4	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 1	DSI 0	4182	836.4	24.26	25.20	-0.03	0.535	0.664
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 1	DSI 0	4132	826.4	24.18	25.20	0.02	0.486	0.615
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 1	DSI 0	4233	846.6	24.25	25.20	-0.06	0.445	0.554
	WCDMA V_Ant 4	RMC 12.2Kbps	Left Side	10mm	Sample 1	Battery 1	DSI 0	4182	836.4	24.26	25.20	-0.07	0.157	0.195
	WCDMA V_Ant 4	RMC 12.2Kbps	Right Side	10mm	Sample 1	Battery 1	DSI 0	4182	836.4	24.26	25.20	-0.08	0.130	0.161
	WCDMA V_Ant 4	RMC 12.2Kbps	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	4182	836.4	24.26	25.20	-0.12	0.496	0.616
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 2	DSI 0	4182	836.4	24.26	25.20	0.17	0.525	0.652
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	10mm	Sample 1	Battery 3	DSI 0	4182	836.4	24.26	25.20	-0.15	0.519	0.644
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	10mm	Sample 2	Battery 1	DSI 0	4182	836.4	24.26	25.20	0.1	0.481	0.597
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	10mm	Sample 3	Battery 1	DSI 0	4182	836.4	24.26	25.20	-0.12	0.440	0.546



<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_Ant 2	20M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 0	18900	1880	24.06	25.20	0.07	0.156	0.203
	LTE Band 2_Ant 2	20M	QPSK	50	0	Front	10mm	Sample 1	Battery 1	DSI 0	18900	1880	22.31	24.20	0.08	0.105	0.162
	LTE Band 2_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 0	18900	1880	24.06	25.20	-0.08	0.195	0.254
	LTE Band 2_Ant 2	20M	QPSK	50	0	Back	10mm	Sample 1	Battery 1	DSI 0	18900	1880	22.31	24.20	0.09	0.125	0.193
	LTE Band 2_Ant 2	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	18900	1880	24.06	25.20	0.17	0.093	0.121
	LTE Band 2_Ant 2	20M	QPSK	50	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	18900	1880	22.31	24.20	-0.15	0.061	0.094
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	18900	1880	24.06	25.20	-0.15	0.269	0.350
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	18700	1860	24.05	25.20	-0.14	0.249	0.324
32	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	19100	1900	24.02	25.20	0.03	0.277	0.363
	LTE Band 2_Ant 2	20M	QPSK	50	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	18900	1880	22.31	24.20	0.04	0.178	0.275
	LTE Band 2_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	18900	1880	24.06	25.20	-0.11	0.124	0.161
	LTE Band 2_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	18900	1880	22.31	24.20	-0.06	0.078	0.121
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 2	DSI 0	19100	1900	24.02	25.20	0.11	0.266	0.349
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 3	DSI 0	19100	1900	24.02	25.20	0.13	0.261	0.342
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	10mm	Sample 2	Battery 1	DSI 0	19100	1900	24.02	25.20	0.05	0.235	0.308
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	10mm	Sample 3	Battery 1	DSI 0	19100	1900	24.02	25.20	0.05	0.265	0.348
	LTE Band 5_Ant 4	10M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	23.85	25.20	0.05	0.252	0.344
	LTE Band 5_Ant 4	10M	QPSK	25	0	Front	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	22.95	24.20	-0.11	0.207	0.276
33	LTE Band 5_Ant 4	10M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	23.85	25.20	-0.07	0.408	0.557
	LTE Band 5_Ant 4	10M	QPSK	25	0	Back	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	22.95	24.20	0.18	0.341	0.455
	LTE Band 5_Ant 4	10M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	23.85	25.20	-0.19	0.169	0.231
	LTE Band 5_Ant 4	10M	QPSK	25	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	22.95	24.20	0.02	0.134	0.179
	LTE Band 5_Ant 4	10M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	23.85	25.20	-0.15	0.171	0.233
	LTE Band 5_Ant 4	10M	QPSK	25	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	22.95	24.20	0.09	0.136	0.181
	LTE Band 5_Ant 4	10M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	23.85	25.20	0.19	0.194	0.265
	LTE Band 5_Ant 4	10M	QPSK	25	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	20525	836.5	22.95	24.20	-0.07	0.160	0.213
	LTE Band 5B_Ant 4	10M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 0	20600	844	24.96	25.20	0.09	0.281	0.297
	LTE Band 5_Ant 4	10M	QPSK	1	0	Back	10mm	Sample 1	Battery 2	DSI 0	20525	836.5	23.85	25.20	0.09	0.388	0.529
	LTE Band 5_Ant 4	10M	QPSK	1	0	Back	10mm	Sample 1	Battery 3	DSI 0	20525	836.5	23.85	25.20	0.17	0.392	0.535
	LTE Band 5_Ant 4	10M	QPSK	1	0	Back	10mm	Sample 2	Battery 1	DSI 0	20525	836.5	23.85	25.20	-0.04	0.399	0.544
	LTE Band 5_Ant 4	10M	QPSK	1	0	Back	10mm	Sample 3	Battery 1	DSI 0	20525	836.5	23.85	25.20	0.01	0.379	0.517



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 12	20M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 0	21100	2535	23.55	24.00	0.18	0.227	0.252
	LTE Band 7_Ant 12	20M	QPSK	50	0	Front	10mm	Sample 1	Battery 1	DSI 0	21100	2535	21.47	23.00	-0.19	0.140	0.199
	LTE Band 7_Ant 12	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 0	21100	2535	23.55	24.00	-0.19	0.324	0.359
	LTE Band 7_Ant 12	20M	QPSK	50	0	Back	10mm	Sample 1	Battery 1	DSI 0	21100	2535	21.47	23.00	-0.01	0.229	0.326
	LTE Band 7_Ant 12	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	21100	2535	23.55	24.00	-0.08	0.083	0.092
	LTE Band 7_Ant 12	20M	QPSK	50	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	21100	2535	21.47	23.00	-0.15	0.057	0.081
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	21100	2535	23.55	24.00	0.06	0.534	0.592
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	20850	2510	23.47	24.00	-0.09	0.496	0.560
34	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	21350	2560	23.44	24.00	0.06	0.551	0.627
	LTE Band 7_Ant 12	20M	QPSK	50	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	21100	2535	21.47	23.00	-0.01	0.328	0.467
	LTE Band 7_Ant 12	20M	QPSK	1	0	Top Side	10mm	Sample 1	Battery 1	DSI 0	21100	2535	23.55	24.00	-0.08	0.074	0.082
	LTE Band 7_Ant 12	20M	QPSK	50	0	Top Side	10mm	Sample 1	Battery 1	DSI 0	21100	2535	21.47	23.00	-0.06	0.049	0.070
	LTE Band 7_Ant 12	20M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	21100	2535	23.55	24.00	0.16	0.056	0.062
	LTE Band 7_Ant 12	20M	QPSK	50	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	21100	2535	21.47	23.00	-0.04	0.038	0.054
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 2	DSI 0	21350	2560	23.44	24.00	-0.11	0.544	0.619
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 3	DSI 0	21350	2560	23.44	24.00	-0.1	0.532	0.605
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 2	Battery 1	DSI 0	21350	2560	23.44	24.00	-0.05	0.536	0.610
	LTE Band 7_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 3	Battery 1	DSI 0	21350	2560	23.44	24.00	0.05	0.490	0.557
	LTE Band 7_Ant 6	20M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 3	21100	2535	22.75	23.30	0.08	0.162	0.184
	LTE Band 7_Ant 6	20M	QPSK	50	0	Front	10mm	Sample 1	Battery 1	DSI 3	21100	2535	21.31	22.30	-0.16	0.107	0.134
	LTE Band 7_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	21100	2535	22.75	23.30	0.08	0.462	0.524
	LTE Band 7_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	20850	2510	22.58	23.30	0.05	0.441	0.521
	LTE Band 7_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	21350	2560	22.67	23.30	-0.16	0.356	0.412
	LTE Band 7_Ant 6	20M	QPSK	50	0	Back	10mm	Sample 1	Battery 1	DSI 3	21100	2535	21.31	22.30	-0.17	0.299	0.376
	LTE Band 7_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	21100	2535	22.75	23.30	-0.12	0.437	0.496
	LTE Band 7_Ant 6	20M	QPSK	50	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	21100	2535	21.31	22.30	0.06	0.284	0.357
	LTE Band 7_Ant 6	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	21100	2535	22.75	23.30	-0.15	0.043	0.049
	LTE Band 7_Ant 6	20M	QPSK	50	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	21100	2535	21.31	22.30	0.01	0.013	0.016
	LTE Band 7_Ant 6	20M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	21100	2535	22.75	23.30	0.18	0.276	0.313
	LTE Band 7_Ant 6	20M	QPSK	50	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	21100	2535	21.31	22.30	0.02	0.183	0.230
	LTE Band 7C_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	21350	2560	23.08	23.30	0.12	0.487	0.512
	LTE Band 7_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 2	DSI 3	21100	2535	22.75	23.30	0.04	0.452	0.513
	LTE Band 7_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 3	DSI 3	21100	2535	22.75	23.30	0.08	0.441	0.501
	LTE Band 7_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 2	Battery 1	DSI 3	21100	2535	22.75	23.30	0	0.467	0.530
	LTE Band 7_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 3	Battery 1	DSI 3	21100	2535	22.75	23.30	-0.04	0.516	0.586



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 17_Ant 0	10M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 0	23790	710	23.53	24.70	0.11	0.205	0.268
	LTE Band 17_Ant 0	10M	QPSK	25	0	Front	10mm	Sample 1	Battery 1	DSI 0	23790	710	22.68	23.70	-0.15	0.162	0.205
	LTE Band 17_Ant 0	10M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 0	23790	710	23.53	24.70	0.16	0.218	0.285
	LTE Band 17_Ant 0	10M	QPSK	25	0	Back	10mm	Sample 1	Battery 1	DSI 0	23790	710	22.68	23.70	0.11	0.179	0.226
	LTE Band 17_Ant 0	10M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	23790	710	23.53	24.70	-0.04	0.065	0.085
	LTE Band 17_Ant 0	10M	QPSK	25	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	23790	710	22.68	23.70	0.02	0.053	0.067
	LTE Band 17_Ant 0	10M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	23790	710	23.53	24.70	0.03	0.176	0.230
	LTE Band 17_Ant 0	10M	QPSK	25	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	23790	710	22.68	23.70	-0.18	0.143	0.181
	LTE Band 17_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	23790	710	23.53	24.70	-0.03	0.273	0.357
	LTE Band 17_Ant 0	10M	QPSK	25	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	23790	710	22.68	23.70	0.1	0.226	0.286
	LTE Band 17_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 2	DSI 0	23790	710	23.53	24.70	-0.02	0.269	0.352
	LTE Band 17_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 3	DSI 0	23790	710	23.53	24.70	-0.08	0.248	0.325
	LTE Band 17_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	Sample 2	Battery 1	DSI 0	23790	710	23.53	24.70	0.17	0.247	0.323
35	LTE Band 17_Ant 0	10M	QPSK	1	0	Bottom Side	10mm	Sample 3	Battery 1	DSI 0	23790	710	23.53	24.70	-0.1	0.325	0.425
	LTE Band 66_Ant 2	20M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 3	132572	1770	23.38	23.60	-0.02	0.198	0.208
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	10mm	Sample 1	Battery 1	DSI 3	132572	1770	21.30	22.60	0.01	0.129	0.175
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	132572	1770	23.38	23.60	-0.08	0.305	0.321
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	132072	1720	23.13	23.60	-0.06	0.547	0.610
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	132322	1745	23.22	23.60	0.14	0.383	0.418
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	10mm	Sample 1	Battery 1	DSI 3	132572	1770	21.30	22.60	0.07	0.214	0.288
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	132572	1770	23.38	23.60	0.02	0.085	0.090
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	132572	1770	21.30	22.60	0.04	0.057	0.077
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	132572	1770	23.38	23.60	-0.18	0.242	0.255
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	132572	1770	21.30	22.60	-0.13	0.160	0.216
	LTE Band 66_Ant 2	20M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	132572	1770	23.38	23.60	-0.02	0.125	0.131
	LTE Band 66_Ant 2	20M	QPSK	50	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	132572	1770	21.30	22.60	-0.01	0.070	0.094
	LTE Band 66B_Ant 2	15M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	132047	1717.5	23.37	23.60	0.08	0.543	0.573
	LTE Band 66C_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	132322	1745	23.41	23.60	0.12	0.571	0.597
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 2	DSI 3	132072	1720	23.13	23.60	0.04	0.532	0.593
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 3	DSI 3	132072	1720	23.13	23.60	0.08	0.522	0.582
36	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 2	Battery 1	DSI 3	132072	1720	23.13	23.60	-0.09	0.619	0.690
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	10mm	Sample 3	Battery 1	DSI 3	132072	1720	23.13	23.60	0.11	0.590	0.657
	LTE Band 71_Ant 0	20M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	23.51	24.70	-0.14	0.221	0.291
	LTE Band 71_Ant 0	20M	QPSK	50	0	Front	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	22.57	23.70	0.17	0.164	0.213
37	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	23.51	24.70	-0.1	0.228	0.300
	LTE Band 71_Ant 0	20M	QPSK	50	0	Back	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	22.57	23.70	0.15	0.170	0.221
	LTE Band 71_Ant 0	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	23.51	24.70	0.02	0.112	0.147
	LTE Band 71_Ant 0	20M	QPSK	50	0	Left Side	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	22.57	23.70	-0.17	0.083	0.108
	LTE Band 71_Ant 0	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	23.51	24.70	0.04	0.196	0.258
	LTE Band 71_Ant 0	20M	QPSK	50	0	Right Side	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	22.57	23.70	0	0.148	0.192
	LTE Band 71_Ant 0	20M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	23.51	24.70	0.02	0.206	0.271
	LTE Band 71_Ant 0	20M	QPSK	50	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	133297	680.5	22.57	23.70	-0.03	0.170	0.221
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 2	DSI 0	133297	680.5	23.51	24.70	-0.11	0.215	0.283
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 3	DSI 0	133297	680.5	23.51	24.70	-0.1	0.221	0.291
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	10mm	Sample 2	Battery 1	DSI 0	133297	680.5	23.51	24.70	0.14	0.216	0.284
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	10mm	Sample 3	Battery 1	DSI 0	133297	680.5	23.51	24.70	-0.17	0.227	0.299



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Ant 6	20M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 3	41490	2680	23.51	23.70	62.9	1.006	0.11	0.098	0.103
	LTE Band 41_Ant 6	20M	QPSK	50	0	Front	10mm	Sample 1	Battery 1	DSI 3	41490	2680	22.50	22.70	62.9	1.006	-0.01	0.079	0.083
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	41490	2680	23.51	23.70	62.9	1.006	-0.08	0.378	0.397
	LTE Band 41_Ant 6	20M	QPSK	50	0	Back	10mm	Sample 1	Battery 1	DSI 3	41490	2680	22.50	22.70	62.9	1.006	0.09	0.314	0.331
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	41490	2680	23.51	23.70	62.9	1.006	-0.19	0.452	0.475
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	39750	2506	22.59	23.70	62.9	1.006	-0.09	0.339	0.440
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	40185	2549.5	22.65	23.70	62.9	1.006	0.04	0.311	0.398
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	40620	2593	22.84	23.70	62.9	1.006	0.08	0.326	0.400
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	41055	2636.5	23.41	23.70	62.9	1.006	-0.12	0.374	0.402
	LTE Band 41_Ant 6	20M	QPSK	50	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	41490	2680	22.50	22.70	62.9	1.006	0.08	0.361	0.380
	LTE Band 41_Ant 6	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	41490	2680	23.51	23.70	62.9	1.006	-0.03	0.046	0.048
	LTE Band 41_Ant 6	20M	QPSK	50	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	41490	2680	22.50	22.70	62.9	1.006	-0.18	0.040	0.042
	LTE Band 41_Ant 6	20M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	41490	2680	23.51	23.70	62.9	1.006	-0.14	0.244	0.256
	LTE Band 41_Ant 6	20M	QPSK	50	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	41490	2680	22.50	22.70	62.9	1.006	-0.09	0.192	0.202
	LTE Band 41_HPUE_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	41490	2680	25.12	25.30	42.9	1.009	0.01	0.411	0.432
	LTE Band 41C_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	41055	2636.5	23.67	23.70	62.9	1.006	0.18	0.407	0.412
	LTE Band 41C_HPUE_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	41490	2680	24.92	25.30	42.9	1.009	0.04	0.389	0.428
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 2	DSI 3	41490	2680	23.51	23.70	62.9	1.006	0.09	0.442	0.465
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 3	DSI 3	41490	2680	23.51	23.70	62.9	1.006	0.17	0.435	0.457
38	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 2	Battery 1	DSI 3	41490	2680	23.51	23.70	62.9	1.006	-0.08	0.537	0.564
	LTE Band 41_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 3	Battery 1	DSI 3	41490	2680	23.51	23.70	62.9	1.006	0.09	0.484	0.509
	LTE Band 41_HPUE_Ant 6	20M	QPSK	1	0	Left Side	10mm	Sample 2	Battery 1	DSI 3	41490	2680	25.12	25.30	42.9	1.009	-0.04	0.502	0.528
	LTE Band 42_Ant 12	20M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 3	43340	3575	20.64	21.00	62.9	1.006	0.07	0.078	0.085
	LTE Band 42_Ant 12	20M	QPSK	50	0	Front	10mm	Sample 1	Battery 1	DSI 3	43340	3575	19.49	20.50	62.9	1.006	-0.02	0.061	0.077
	LTE Band 42_Ant 12	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	43340	3575	20.64	21.00	62.9	1.006	0.04	0.468	0.511
	LTE Band 42_Ant 12	20M	QPSK	50	0	Back	10mm	Sample 1	Battery 1	DSI 3	43340	3575	19.49	20.50	62.9	1.006	0.02	0.394	0.500
	LTE Band 42_Ant 12	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	20.64	21.00	62.9	1.006	-0.15	0.021	0.023
	LTE Band 42_Ant 12	20M	QPSK	50	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	19.49	20.50	62.9	1.006	-0.14	0.018	0.023
39	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	20.64	21.00	62.9	1.006	-0.04	0.726	0.793
	LTE Band 42_Ant 12	20M	QPSK	50	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	19.49	20.50	62.9	1.006	0.06	0.613	0.778
	LTE Band 42_Ant 12	20M	QPSK	100	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	19.47	20.50	62.9	1.006	0.04	0.601	0.766
	LTE Band 42_Ant 12	20M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	20.64	21.00	62.9	1.006	-0.19	0.033	0.036
	LTE Band 42_Ant 12	20M	QPSK	50	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	19.49	20.50	62.9	1.006	-0.19	0.028	0.036
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 2	DSI 3	43340	3575	20.64	21.00	62.9	1.006	0.07	0.686	0.750
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 3	DSI 3	43340	3575	20.64	21.00	62.9	1.006	0.04	0.697	0.762
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 2	Battery 1	DSI 3	43340	3575	20.64	21.00	62.9	1.006	0.06	0.687	0.751
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Side	10mm	Sample 3	Battery 1	DSI 3	43340	3575	20.64	21.00	62.9	1.006	0.04	0.652	0.713
	LTE Band 42_Ant 11	20M	QPSK	1	0	Front	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.58	17.90	62.9	1.006	-0.11	0.096	0.104
	LTE Band 42_Ant 11	20M	QPSK	50	0	Front	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.47	17.90	62.9	1.006	-0.02	0.075	0.083
	LTE Band 42_Ant 11	20M	QPSK	1	0	Back	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.58	17.90	62.9	1.006	-0.02	0.253	0.274
	LTE Band 42_Ant 11	20M	QPSK	50	0	Back	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.47	17.90	62.9	1.006	0.04	0.198	0.220
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.58	17.90	62.9	1.006	0.14	0.551	0.597
	LTE Band 42_Ant 11	20M	QPSK	50	0	Left Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.47	17.90	62.9	1.006	-0.13	0.477	0.530
	LTE Band 42_Ant 11	20M	QPSK	1	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.58	17.90	62.9	1.006	-0.03	0.032	0.035
	LTE Band 42_Ant 11	20M	QPSK	50	0	Right Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.47	17.90	62.9	1.006	0.09	0.027	0.030
	LTE Band 42_Ant 11	20M	QPSK	1	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.58	17.90	62.9	1.006	0.05	0.019	0.021
	LTE Band 42_Ant 11	20M	QPSK	50	0	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	43340	3575	17.47	17.90	62.9	1.006	-0.18	0.017	0.019
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 2	DSI 3	43340	3575	17.58	17.90	62.9	1.006	-0.05	0.532	0.576
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	10mm	Sample 1	Battery 3	DSI 3	43340	3575	17.58	17.90	62.9	1.006	0.09	0.516	0.559
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	10mm	Sample 2	Battery 1	DSI 3	43340	3575	17.58	17.90	62.9	1.006	0.07	0.500	0.541
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	10mm	Sample 3	Battery 1	DSI 3	43340	3575	17.58	17.90	62.9	1.006	0.13	0.486	0.526



<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Cap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2_Ant 2	20M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.96	25.20	0.14	0.307	0.324
	FR1 n2_Ant 2	20M	BPSK	50	28	Front	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.89	25.20	0.01	0.313	0.336
	FR1 n2_Ant 2	20M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.96	25.20	-0.05	0.353	0.373
	FR1 n2_Ant 2	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.89	25.20	-0.1	0.315	0.338
	FR1 n2_Ant 2	20M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.96	25.20	0.17	0.186	0.197
	FR1 n2_Ant 2	20M	BPSK	50	28	Left Side	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.89	25.20	-0.16	0.168	0.180
40	FR1 n2_Ant 2	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.96	25.20	-0.12	0.545	0.576
	FR1 n2_Ant 2	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 0	372000	1860	24.90	25.20	-0.15	0.479	0.513
	FR1 n2_Ant 2	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 0	376000	1880	24.89	25.20	-0.03	0.516	0.554
	FR1 n2_Ant 2	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.89	25.20	-0.15	0.519	0.557
	FR1 n2_Ant 2	20M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.96	25.20	0.08	0.197	0.208
	FR1 n2_Ant 2	20M	BPSK	50	28	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	380000	1900	24.89	25.20	-0.11	0.160	0.172
	FR1 n2_Ant 2	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 2	DSI 0	380000	1900	24.96	25.20	-0.12	0.533	0.563
	FR1 n2_Ant 2	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 3	DSI 0	380000	1900	24.96	25.20	-0.01	0.529	0.559
	FR1 n2_Ant 2	20M	BPSK	1	1	Right Side	10mm	Sample 2	Battery 1	DSI 0	380000	1900	24.96	25.20	-0.12	0.478	0.505
	FR1 n2_Ant 2	20M	BPSK	1	1	Right Side	10mm	Sample 3	Battery 1	DSI 0	380000	1900	24.96	25.20	-0.18	0.402	0.425
	FR1 n5_Ant 4	20M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	24.27	25.20	0.02	0.251	0.311
	FR1 n5_Ant 4	20M	BPSK	50	28	Front	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	23.97	25.20	-0.02	0.272	0.361
41	FR1 n5_Ant 4	20M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	24.27	25.20	-0.06	0.459	0.569
	FR1 n5_Ant 4	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	23.97	25.20	-0.03	0.404	0.536
	FR1 n5_Ant 4	20M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	24.27	25.20	-0.1	0.207	0.256
	FR1 n5_Ant 4	20M	BPSK	50	28	Left Side	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	23.97	25.20	0.11	0.186	0.247
	FR1 n5_Ant 4	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	24.27	25.20	0.19	0.183	0.227
	FR1 n5_Ant 4	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	23.97	25.20	-0.15	0.220	0.292
	FR1 n5_Ant 4	20M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	24.27	25.20	-0.06	0.211	0.261
	FR1 n5_Ant 4	20M	BPSK	50	28	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	167300	836.5	23.97	25.20	-0.04	0.261	0.346
	FR1 n5_Ant 4	20M	BPSK	1	1	Back	10mm	Sample 1	Battery 2	DSI 0	167300	836.5	24.27	25.20	-0.02	0.441	0.546
	FR1 n5_Ant 4	20M	BPSK	1	1	Back	10mm	Sample 1	Battery 3	DSI 0	167300	836.5	24.27	25.20	-0.08	0.429	0.531
	FR1 n5_Ant 4	20M	BPSK	1	1	Back	10mm	Sample 2	Battery 1	DSI 0	167300	836.5	24.27	25.20	-0.14	0.417	0.517
	FR1 n5_Ant 4	20M	BPSK	1	1	Back	10mm	Sample 3	Battery 1	DSI 0	167300	836.5	24.27	25.20	0.13	0.289	0.358



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n7_Ant 12	20M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.32	24.00	-0.1	0.208	0.243
	FR1 n7_Ant 12	20M	BPSK	50	28	Front	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.22	24.00	0.15	0.221	0.264
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.32	24.00	0.08	0.279	0.326
	FR1 n7_Ant 12	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.22	24.00	-0.15	0.283	0.339
	FR1 n7_Ant 12	20M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.32	24.00	-0.05	0.083	0.097
	FR1 n7_Ant 12	20M	BPSK	50	28	Left Side	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.22	24.00	0.12	0.093	0.111
	FR1 n7_Ant 12	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.32	24.00	-0.01	0.476	0.557
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.22	24.00	-0.12	0.498	0.596
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 1	DSI 0	507000	2535	23.21	24.00	-0.01	0.533	0.639
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 1	DSI 0	512000	2560	23.11	24.00	0.15	0.512	0.628
	FR1 n7_Ant 12	20M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.32	24.00	-0.01	0.048	0.056
	FR1 n7_Ant 12	20M	BPSK	50	28	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	502000	2510	23.22	24.00	-0.01	0.046	0.055
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 2	DSI 0	507000	2535	23.21	24.00	0.06	0.522	0.626
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 3	DSI 0	507000	2535	23.21	24.00	0.09	0.527	0.632
42	FR1 n7_Ant 12	20M	BPSK	50	28	Right Side	10mm	Sample 2	Battery 1	DSI 0	507000	2535	23.21	24.00	-0.04	0.567	0.680
	FR1 n7_Ant 12	20M	BPSK	50	28	Right Side	10mm	Sample 3	Battery 1	DSI 0	507000	2535	23.21	24.00	-0.08	0.437	0.524
	FR1 n7_Ant 6	20M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.65	23.90	-0.19	0.178	0.189
	FR1 n7_Ant 6	20M	BPSK	50	28	Front	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.57	23.90	-0.05	0.188	0.203
	FR1 n7_Ant 6	20M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.65	23.90	0.17	0.555	0.588
	FR1 n7_Ant 6	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.57	23.90	-0.12	0.578	0.624
	FR1 n7_Ant 6	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 1	DSI 3	502000	2510	23.32	23.90	0.13	0.580	0.663
	FR1 n7_Ant 6	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 1	DSI 3	512000	2560	23.41	23.90	0	0.504	0.564
	FR1 n7_Ant 6	20M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.65	23.90	-0.05	0.528	0.559
	FR1 n7_Ant 6	20M	BPSK	50	28	Left Side	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.57	23.90	0.04	0.524	0.565
	FR1 n7_Ant 6	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.65	23.90	-0.17	0.051	0.054
	FR1 n7_Ant 6	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.57	23.90	-0.02	0.056	0.060
	FR1 n7_Ant 6	20M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.65	23.90	0.05	0.327	0.346
	FR1 n7_Ant 6	20M	BPSK	50	28	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	507000	2535	23.57	23.90	0.18	0.319	0.344
	FR1 n7_Ant 6	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 2	DSI 3	502000	2510	23.32	23.90	-0.12	0.558	0.638
	FR1 n7_Ant 6	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 3	DSI 3	502000	2510	23.32	23.90	-0.01	0.569	0.650
	FR1 n7_Ant 6	20M	BPSK	50	28	Back	10mm	Sample 2	Battery 1	DSI 3	502000	2510	23.32	23.90	0.14	0.589	0.673
	FR1 n7_Ant 6	20M	BPSK	50	28	Back	10mm	Sample 3	Battery 1	DSI 3	502000	2510	23.32	23.90	-0.16	0.579	0.662



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n66_Ant 2	40M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.52	23.70	-0.02	0.183	0.190
	FR1 n66_Ant 2	40M	BPSK	108	54	Front	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.43	23.70	0	0.177	0.188
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.52	23.70	0.06	0.374	0.390
	FR1 n66_Ant 2	40M	BPSK	108	54	Back	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.43	23.70	0.03	0.275	0.292
	FR1 n66_Ant 2	40M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.52	23.70	-0.15	0.093	0.097
	FR1 n66_Ant 2	40M	BPSK	108	54	Left Side	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.43	23.70	-0.14	0.079	0.084
	FR1 n66_Ant 2	40M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.52	23.70	-0.04	0.277	0.289
	FR1 n66_Ant 2	40M	BPSK	108	54	Right Side	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.43	23.70	0.1	0.254	0.271
	FR1 n66_Ant 2	40M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.52	23.70	-0.04	0.105	0.109
	FR1 n66_Ant 2	40M	BPSK	108	54	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	349000	1745	23.43	23.70	-0.09	0.116	0.124
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	10mm	Sample 1	Battery 2	DSI 3	349000	1745	23.52	23.70	0.06	0.348	0.363
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	10mm	Sample 1	Battery 3	DSI 3	349000	1745	23.52	23.70	0.09	0.355	0.370
43	FR1 n66_Ant 2	40M	BPSK	1	1	Back	10mm	Sample 2	Battery 1	DSI 3	349000	1745	23.52	23.70	-0.03	0.499	0.520
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	10mm	Sample 3	Battery 1	DSI 3	349000	1745	23.52	23.70	0.09	0.475	0.495
	FR1 n71_Ant 0	20M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.95	24.70	0.04	0.216	0.257
	FR1 n71_Ant 0	20M	BPSK	50	28	Front	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.66	24.70	-0.18	0.257	0.327
	FR1 n71_Ant 0	20M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.95	24.70	-0.03	0.264	0.314
44	FR1 n71_Ant 0	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.66	24.70	0.09	0.271	0.344
	FR1 n71_Ant 0	20M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.95	24.70	-0.08	0.123	0.146
	FR1 n71_Ant 0	20M	BPSK	50	28	Left Side	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.66	24.70	-0.03	0.142	0.180
	FR1 n71_Ant 0	20M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.95	24.70	-0.16	0.242	0.288
	FR1 n71_Ant 0	20M	BPSK	50	28	Right Side	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.66	24.70	-0.18	0.247	0.314
	FR1 n71_Ant 0	20M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.95	24.70	0.02	0.259	0.308
	FR1 n71_Ant 0	20M	BPSK	50	28	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	136100	680.5	23.66	24.70	-0.06	0.266	0.338
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 2	DSI 0	136100	680.5	23.66	24.70	-0.11	0.261	0.332
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	10mm	Sample 1	Battery 3	DSI 0	136100	680.5	23.66	24.70	-0.1	0.255	0.324
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	10mm	Sample 2	Battery 1	DSI 0	136100	680.5	23.66	24.70	-0.05	0.243	0.309
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	10mm	Sample 3	Battery 1	DSI 0	136100	680.5	23.66	24.70	0	0.250	0.318



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.90	23.30	0.19	0.104	0.114
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Front	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.69	23.30	-0.06	0.122	0.140
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.90	23.30	0.05	0.307	0.337
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.69	23.30	-0.06	0.380	0.437
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.90	23.30	-0.02	0.275	0.302
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.69	23.30	-0.07	0.444	0.511
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.90	23.30	-0.09	0.030	0.033
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.69	23.30	0.11	0.036	0.041
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.90	23.30	-0.06	0.179	0.196
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	22.69	23.30	0.01	0.238	0.274
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 2	DSI 3	518598	2592.99	22.69	23.30	0.04	0.432	0.497
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 3	DSI 3	518598	2592.99	22.69	23.30	0.08	0.418	0.481
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Side	10mm	Sample 2	Battery 1	DSI 3	518598	2592.99	22.69	23.30	0.17	0.432	0.497
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Left Side	10mm	Sample 3	Battery 1	DSI 3	518598	2592.99	22.69	23.30	-0.08	0.395	0.455
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Front	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	25.70	27.00	0	0.214	0.289
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Back	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	25.70	27.00	-0.09	0.317	0.428
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	25.70	27.00	0.15	0.103	0.139
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	25.70	27.00	-0.06	0.398	0.537
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	25.70	27.00	-0.1	0.079	0.107
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 2	DSI 0	518598	2592.99	25.70	27.00	-0.02	0.396	0.534
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 3	DSI 0	518598	2592.99	25.70	27.00	-0.08	0.384	0.518
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Side	10mm	Sample 2	Battery 1	DSI 0	518598	2592.99	25.70	27.00	0.1	0.418	0.564
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Right Side	10mm	Sample 3	Battery 1	DSI 0	518598	2592.99	25.70	27.00	-0.07	0.487	0.657
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Front	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	26.42	27.00	-0.08	0.352	0.402
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	26.42	27.00	0.15	0.481	0.550
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	26.42	27.00	-0.06	0.240	0.274
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	26.42	27.00	0.02	0.093	0.106
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 1	DSI 0	518598	2592.99	26.42	27.00	-0.02	0.422	0.482
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	10mm	Sample 1	Battery 2	DSI 0	518598	2592.99	26.42	27.00	0.06	0.471	0.538
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	10mm	Sample 1	Battery 3	DSI 0	518598	2592.99	26.42	27.00	0.09	0.462	0.528
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	10mm	Sample 2	Battery 1	DSI 0	518598	2592.99	26.42	27.00	0	0.570	0.651
45	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	10mm	Sample 3	Battery 1	DSI 0	518598	2592.99	26.42	27.00	-0.05	0.599	0.685
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Front	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	23.21	23.90	0.07	0.134	0.157
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Back	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	23.21	23.90	-0.07	0.156	0.183
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	23.21	23.90	0.09	0.197	0.231
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	23.21	23.90	-0.11	0.040	0.047
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	23.21	23.90	-0.18	0.026	0.030
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	518598	2592.99	23.21	23.90	0.08	0.021	0.025
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 2	DSI 3	518598	2592.99	23.21	23.90	0.08	0.191	0.224
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 3	DSI 3	518598	2592.99	23.21	23.90	-0.1	0.188	0.220
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Side	10mm	Sample 2	Battery 1	DSI 3	518598	2592.99	23.21	23.90	-0.1	0.275	0.322
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Left Side	10mm	Sample 3	Battery 1	DSI 3	518598	2592.99	23.21	23.90	-0.13	0.250	0.293



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.59	15.80	0.03	0.079	0.083
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Front	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.54	15.80	0.02	0.084	0.089
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.59	15.80	-0.19	0.324	0.340
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.54	15.80	0.16	0.335	0.356
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.59	15.80	-0.07	0.023	0.024
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.54	15.80	-0.11	0.026	0.028
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.59	15.80	0.15	0.617	0.648
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.54	15.80	0.17	0.630	0.669
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.59	15.80	0.06	0.027	0.028
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.54	15.80	-0.18	0.031	0.033
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 2	DSI 3	656000	3840	15.54	15.80	-0.02	0.622	0.660
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 3	DSI 3	656000	3840	15.54	15.80	-0.08	0.615	0.653
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 2	Battery 1	DSI 3	656000	3840	15.54	15.80	-0.05	0.704	0.747
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 3	Battery 1	DSI 3	656000	3840	15.54	15.80	-0.16	0.793	0.842
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Side	10mm	Sample 3	Battery 1	DSI 3	656000	3840	15.59	15.80	0.13	0.742	0.779
	FR1 n77_HPUE_Ant 12	100M	BPSK	270	0	Right Side	10mm	Sample 3	Battery 1	DSI 3	656000	3840	15.48	15.80	0.04	0.757	0.815
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.73	15.80	0	0.068	0.069
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Front	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.70	15.80	-0.02	0.093	0.095
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.73	15.80	0.08	0.161	0.164
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.70	15.80	-0.07	0.234	0.239
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.73	15.80	-0.11	0.012	0.012
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.70	15.80	0.01	0.025	0.026
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.73	15.80	0.01	0.278	0.283
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.70	15.80	0	0.348	0.356
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.73	15.80	0.03	0.013	0.013
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	15.70	15.80	-0.05	0.027	0.028
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 2	DSI 3	633332	3499.98	15.70	15.80	0.02	0.329	0.337
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 3	DSI 3	633332	3499.98	15.70	15.80	-0.03	0.333	0.341
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 2	Battery 1	DSI 3	633332	3499.98	15.70	15.80	0.1	0.363	0.371
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Right Side	10mm	Sample 3	Battery 1	DSI 3	633332	3499.98	15.70	15.80	0.05	0.380	0.389



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 3	656000	3840	16.09	17.30	-0.18	0.094	0.124
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Front	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.97	17.30	-0.07	0.109	0.148
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 3	656000	3840	16.09	17.30	0.08	0.248	0.328
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.97	17.30	-0.19	0.268	0.364
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	16.09	17.30	0	0.424	0.560
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.97	17.30	-0.17	0.422	0.573
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	16.09	17.30	-0.16	0.036	0.048
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.97	17.30	0.09	0.039	0.053
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	16.09	17.30	0	0.018	0.024
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	15.97	17.30	-0.18	0.021	0.029
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 2	DSI 3	656000	3840	15.97	17.30	0.08	0.415	0.564
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 3	DSI 3	656000	3840	15.97	17.30	-0.1	0.407	0.553
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 2	Battery 1	DSI 3	656000	3840	15.97	17.30	-0.01	0.432	0.587
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 3	Battery 1	DSI 3	656000	3840	15.97	17.30	-0.08	0.435	0.591
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Front	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.30	17.30	-0.09	0.075	0.094
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Front	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.24	17.30	0.06	0.081	0.103
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Back	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.30	17.30	-0.18	0.231	0.291
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.24	17.30	-0.15	0.242	0.309
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Left Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.30	17.30	-0.02	0.433	0.545
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.24	17.30	0.01	0.461	0.588
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Right Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.30	17.30	-0.04	0.022	0.028
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Right Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.24	17.30	-0.1	0.025	0.032
	FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.30	17.30	0.01	0.018	0.023
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Bottom Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	16.24	17.30	0	0.020	0.026
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 2	DSI 3	633332	3499.98	16.24	17.30	0.06	0.452	0.577
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 1	Battery 3	DSI 3	633332	3499.98	16.24	17.30	0.09	0.441	0.563
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 2	Battery 1	DSI 3	633332	3499.98	16.24	17.30	-0.01	0.327	0.417
	FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Left Side	10mm	Sample 3	Battery 1	DSI 3	633332	3499.98	16.24	17.30	-0.09	0.458	0.585



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Ant 3	100M	CW	-	-	Front	10mm	Sample 1	Battery 1	DSI 0	656000	3840	22.70	23.00	-0.19	0.157	0.168
	FR1 n77_Ant 3	100M	CW	-	-	Back	10mm	Sample 1	Battery 1	DSI 0	656000	3840	22.70	23.00	0.04	0.353	0.378
	FR1 n77_Ant 3	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 1	DSI 0	656000	3840	22.70	23.00	-0.04	0.048	0.051
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 1	DSI 0	656000	3840	22.70	23.00	0.14	0.536	0.574
	FR1 n77_Ant 3	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 1	DSI 0	656000	3840	22.70	23.00	0.17	0.110	0.118
	FR1 n77_Ant 3	100M	CW	-	-	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	656000	3840	22.70	23.00	-0.16	0.095	0.102
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 2	DSI 0	656000	3840	22.70	23.00	0.02	0.528	0.566
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 3	DSI 0	656000	3840	22.70	23.00	-0.03	0.520	0.557
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 2	Battery 1	DSI 0	656000	3840	22.70	23.00	-0.01	0.604	0.647
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 3	Battery 1	DSI 0	656000	3840	22.70	23.00	-0.09	0.575	0.616
	FR1 n77_Ant 3	100M	CW	-	-	Front	10mm	Sample 1	Battery 1	DSI 0	633332	3499.98	21.29	23.00	0.01	0.125	0.185
	FR1 n77_Ant 3	100M	CW	-	-	Back	10mm	Sample 1	Battery 1	DSI 0	633332	3499.98	21.29	23.00	0.16	0.266	0.394
	FR1 n77_Ant 3	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 1	DSI 0	633332	3499.98	21.29	23.00	0.03	0.050	0.074
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 1	DSI 0	633332	3499.98	21.29	23.00	-0.17	0.355	0.526
	FR1 n77_Ant 3	100M	CW	-	-	Bottom Side	10mm	Sample 1	Battery 1	DSI 0	633332	3499.98	21.29	23.00	-0.14	0.085	0.126
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 2	DSI 0	633332	3499.98	21.29	23.00	-0.11	0.341	0.506
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 3	DSI 0	633332	3499.98	21.29	23.00	0.15	0.338	0.501
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 2	Battery 1	DSI 0	633332	3499.98	21.29	23.00	-0.11	0.316	0.468
	FR1 n77_Ant 3	100M	CW	-	-	Right Side	10mm	Sample 3	Battery 1	DSI 0	633332	3499.98	21.29	23.00	0.12	0.266	0.394
	FR1 n77_Ant 5	100M	CW	-	-	Front	10mm	Sample 1	Battery 1	DSI 3	656000	3840	18.31	18.70	0.01	0.213	0.233
	FR1 n77_Ant 5	100M	CW	-	-	Back	10mm	Sample 1	Battery 1	DSI 3	656000	3840	18.31	18.70	-0.13	0.350	0.383
	FR1 n77_Ant 5	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	18.31	18.70	-0.09	0.046	0.050
	FR1 n77_Ant 5	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	18.31	18.70	0.06	0.077	0.084
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 1	DSI 3	656000	3840	18.31	18.70	0.09	0.629	0.688
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 2	DSI 3	656000	3840	18.31	18.70	-0.02	0.615	0.673
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 3	DSI 3	656000	3840	18.31	18.70	-0.08	0.605	0.662
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 2	Battery 1	DSI 3	656000	3840	18.31	18.70	0.05	0.663	0.725
46	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 3	Battery 1	DSI 3	656000	3840	18.31	18.70	-0.17	0.780	0.853
	FR1 n77_Ant 5	100M	CW	-	-	Front	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	18.60	18.70	0.04	0.205	0.210
	FR1 n77_Ant 5	100M	CW	-	-	Back	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	18.60	18.70	0.15	0.319	0.326
	FR1 n77_Ant 5	100M	CW	-	-	Left Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	18.60	18.70	-0.07	0.024	0.025
	FR1 n77_Ant 5	100M	CW	-	-	Right Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	18.60	18.70	0.19	0.079	0.081
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 1	DSI 3	633332	3499.98	18.60	18.70	-0.06	0.575	0.588
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 2	DSI 3	633332	3499.98	18.60	18.70	-0.11	0.558	0.571
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 1	Battery 3	DSI 3	633332	3499.98	18.60	18.70	-0.1	0.562	0.575
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 2	Battery 1	DSI 3	633332	3499.98	18.60	18.70	0.05	0.355	0.363
	FR1 n77_Ant 5	100M	CW	-	-	Top Side	10mm	Sample 3	Battery 1	DSI 3	633332	3499.98	18.60	18.70	0.05	0.586	0.600



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	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	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	-0.11	0.145	0.171
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	-0.18	0.461	0.542
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	non-DBS	1	2412	20.40	21.00	99.9	1.001	-0.01	0.523	0.601
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	non-DBS	6	2437	20.20	21.00	99.9	1.001	0.11	0.524	0.631
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	non-DBS	11	2462	20.30	21.00	99.9	1.001	-0.02	0.541	0.636
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	-0.01	0.234	0.275
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	0.04	0.142	0.167
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 2	Ant 9+8(9)	non-DBS	11	2462	20.30	21.00	99.9	1.001	0.07	0.518	0.609
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 3	Ant 9+8(9)	non-DBS	11	2462	20.30	21.00	99.9	1.001	0.13	0.529	0.622
47	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 2	Battery 1	Ant 9+8(9)	non-DBS	11	2462	20.30	21.00	99.9	1.001	-0.06	0.550	0.647
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 3	Battery 1	Ant 9+8(9)	non-DBS	11	2462	20.30	21.00	99.9	1.001	-0.01	0.486	0.572
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	0.04	0.102	0.135
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	0.11	0.324	0.428
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	DBS	1	2412	19.10	20.00	99.9	1.001	0.1	0.367	0.452
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	DBS	6	2437	18.80	20.00	99.9	1.001	-0.04	0.368	0.486
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	DBS	11	2462	18.90	20.00	99.9	1.001	-0.17	0.380	0.490
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	-0.01	0.164	0.216
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	0.04	0.099	0.131
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 2	Ant 9+8(9)	DBS	11	2462	18.90	20.00	99.9	1.001	-0.06	0.352	0.454
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 3	Ant 9+8(9)	DBS	11	2462	18.90	20.00	99.9	1.001	-0.03	0.367	0.473
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 2	Battery 1	Ant 9+8(9)	DBS	11	2462	18.90	20.00	99.9	1.001	-0.14	0.386	0.498
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 3	Battery 1	Ant 9+8(9)	DBS	11	2462	18.90	20.00	99.9	1.001	0.11	0.341	0.440
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	0.08	0.163	0.175
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	0.01	0.212	0.228
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	-0.01	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	0.05	0.260	0.279
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 8	non-DBS	6	2437	20.70	21.00	99.7	1.003	-0.14	0.277	0.298
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.02	0.284	0.312
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Sample 1	Battery 1	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	-0.07	0.119	0.128
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 2	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	0.08	0.262	0.288
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 3	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.14	0.251	0.276
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 2	Battery 1	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.14	0.289	0.318
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 3	Battery 1	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	0.01	0.230	0.253
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	0.04	0.087	0.105
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	0.11	0.113	0.136
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	0	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	0.03	0.138	0.166
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 8	DBS	6	2437	19.20	20.00	99.7	1.003	0	0.147	0.177
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.17	0.151	0.191
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Sample 1	Battery 1	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	0.11	0.063	0.076
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 2	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	0.11	0.132	0.167
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 1	Battery 3	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.02	0.119	0.150
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 2	Battery 1	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	0.06	0.154	0.194
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Sample 3	Battery 1	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	0.02	0.122	0.154



Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	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	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	46	5230	15.70	16.50	99.7	1.003	-0.03	0.190	0.229
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	46	5230	15.70	16.50	99.7	1.003	-0.11	0.441	0.532
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	non-DBS	46	5230	16.10	16.50	99.7	1.003	0.08	0.486	0.534
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	46	5230	15.70	16.50	99.7	1.003	-0.13	0.193	0.233
	WLAN5GHz	802.11n-HT40 MCS0	Top side	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	46	5230	15.70	16.50	99.7	1.003	-0.18	0.102	0.123
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 2	Ant 9+8(9)	non-DBS	46	5230	16.10	16.50	99.7	1.003	-0.12	0.443	0.487
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 3	Ant 9+8(9)	non-DBS	46	5230	16.10	16.50	99.7	1.003	0.01	0.430	0.473
48	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 2	Battery 1	Ant 9+8(9)	non-DBS	46	5230	16.10	16.50	99.7	1.003	-0.18	0.629	0.692
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 3	Battery 1	Ant 9+8(9)	non-DBS	46	5230	16.10	16.50	99.7	1.003	0.05	0.402	0.442
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	46	5230	14.00	15.00	99.7	1.003	0.03	0.121	0.153
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	46	5230	14.00	15.00	99.7	1.003	-0.14	0.289	0.365
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	DBS	46	5230	14.50	15.00	99.7	1.003	-0.16	0.329	0.370
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	46	5230	14.00	15.00	99.7	1.003	0.01	0.123	0.155
	WLAN5GHz	802.11n-HT40 MCS0	Top side	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	46	5230	14.00	15.00	99.7	1.003	0.09	0.065	0.082
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 2	Ant 9+8(8)	DBS	46	5230	14.00	15.00	99.7	1.003	0.09	0.262	0.331
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 3	Ant 9+8(8)	DBS	46	5230	14.00	15.00	99.7	1.003	-0.12	0.243	0.307
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 2	Battery 1	Ant 9+8(9)	DBS	46	5230	14.50	15.00	99.7	1.003	-0.17	0.400	0.450
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 3	Battery 1	Ant 9+8(9)	DBS	46	5230	14.50	15.00	99.7	1.003	0.11	0.256	0.288
	WLAN5GHz	802.11a 6Mbps	Front	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0.05	0.219	0.271
	WLAN5GHz	802.11a 6Mbps	Back	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.19	0.594	0.736
	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	non-DBS	165	5825	17.40	17.50	99.2	1.008	-0.04	0.745	0.768
	WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0	0.416	0.516
	WLAN5GHz	802.11a 6Mbps	Top side	10mm	Sample 1	Battery 1	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.18	0.253	0.314
	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Sample 1	Battery 2	Ant 9+8(9)	non-DBS	165	5825	17.40	17.50	99.2	1.008	0.02	0.715	0.738
	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Sample 1	Battery 3	Ant 9+8(9)	non-DBS	165	5825	17.40	17.50	99.2	1.008	-0.03	0.702	0.724
	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Sample 2	Battery 1	Ant 9+8(9)	non-DBS	165	5825	17.40	17.50	99.2	1.008	-0.04	0.781	0.806
49	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Sample 2	Battery 1	Ant 9+8(9)	non-DBS	157	5785	17.30	17.50	99.2	1.008	-0.16	0.820	0.866
	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Sample 3	Battery 1	Ant 9+8(9)	non-DBS	165	5825	17.40	17.50	99.2	1.008	0.03	0.730	0.753
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.15	0.120	0.166
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.03	0.307	0.425
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 1	Ant 9+8(9)	DBS	151	5755	14.80	15.50	99.7	1.003	-0.01	0.374	0.441
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.03	0.228	0.316
	WLAN5GHz	802.11n-HT40 MCS0	Top side	10mm	Sample 1	Battery 1	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.06	0.138	0.191
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 2	Ant 9+8(9)	DBS	151	5755	14.80	15.50	99.7	1.003	-0.01	0.326	0.384
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 1	Battery 3	Ant 9+8(9)	DBS	151	5755	14.80	15.50	99.7	1.003	0.05	0.335	0.395
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 2	Battery 1	Ant 9+8(9)	DBS	151	5755	14.80	15.50	99.7	1.003	0	0.418	0.493
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Sample 3	Battery 1	Ant 9+8(9)	DBS	151	5755	14.80	15.50	99.7	1.003	0.09	0.390	0.460

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	10mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	-0.11	0.001	0.001
	Bluetooth	1Mbps	Back	10mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	-0.05	0.001	0.001
	Bluetooth	1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	-0.06	0.001	0.001
	Bluetooth	1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9	non-DBS	39	2441	4.25	5.00	76.8	1.085	-0.07	0.001	0.001
50	Bluetooth	1Mbps	Left Side	10mm	Sample 1	Battery 1	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0.1	0.012	0.018
	Bluetooth	1Mbps	Right Side	10mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0.07	0.001	0.001
	Bluetooth	1Mbps	Top Side	10mm	Sample 1	Battery 1	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0.01	0.001	0.001
	Bluetooth	1Mbps	Left Side	10mm	Sample 1	Battery 2	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0.11	0.009	0.014
	Bluetooth	1Mbps	Left Side	10mm	Sample 1	Battery 3	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	-0.02	0.007	0.011
	Bluetooth	1Mbps	Left Side	10mm	Sample 2	Battery 1	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0.07	0.001	0.002
	Bluetooth	1Mbps	Left Side	10mm	Sample 3	Battery 1	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0.08	0.001	0.002



14.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 4	GPRS (4 Tx slots)	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	189	836.4	28.95	30.50	0.18	0.099	0.141
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	189	836.4	28.95	30.50	-0.02	0.198	0.283
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	128	824.2	28.94	30.50	-0.08	0.204	0.292
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	251	848.8	28.61	30.50	-0.13	0.272	0.420
51	GSM850_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	251	848.8	28.61	30.50	0.14	0.619	0.957
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	128	824.2	28.94	30.50	0.01	0.576	0.825
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	189	836.4	28.95	30.50	-0.05	0.533	0.762
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	251	848.8	28.61	30.50	-0.11	0.606	0.936
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	251	848.8	28.61	30.50	0.15	0.600	0.927
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	251	848.8	28.61	30.50	-0.06	0.556	0.859
	GSM850_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	251	848.8	28.61	30.50	-0.19	0.554	0.856
	GSM1900_Ant 4	GPRS (4 Tx slots)	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	-0.01	0.038	0.054
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	661	1880	26.01	27.50	-0.13	0.174	0.245
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	512	1850.2	25.60	27.50	0.11	0.185	0.287
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	810	1909.8	26.00	27.50	-0.07	0.244	0.345
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	810	1909.8	26.00	27.50	0.11	0.383	0.541
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	810	1909.8	26.00	27.50	-0.02	0.371	0.524
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	810	1909.8	26.00	27.50	-0.08	0.366	0.517
	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	810	1909.8	26.00	27.50	-0.03	0.413	0.583
52	GSM1900_Ant 4	GPRS (4 Tx slots)	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	810	1909.8	26.00	27.50	0.01	0.440	0.622



<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 2	RMC 12.2Kbps	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	9400	1880	24.39	25.20	0.16	0.144	0.174
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	9400	1880	24.39	25.20	0.08	0.217	0.261
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	9262	1852.4	24.38	25.20	0	0.234	0.283
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	9538	1907.6	24.32	25.20	0.09	0.236	0.289
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	9538	1907.6	24.32	25.20	-0.03	0.268	0.328
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	9538	1907.6	24.32	25.20	-0.12	0.254	0.311
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	9538	1907.6	24.32	25.20	0.01	0.241	0.295
	WCDMA II_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	9538	1907.6	24.32	25.20	0.03	0.222	0.272
53	WCDMA II_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	9538	1907.6	24.32	25.20	0.09	0.306	0.375
	WCDMA IV_Ant 2	RMC 12.2Kbps	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	0.11	0.081	0.081
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	1413	1732.6	25.19	25.20	0.09	0.195	0.195
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	1312	1712.4	25.13	25.20	0.19	0.209	0.212
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	1513	1752.6	25.13	25.20	-0.14	0.149	0.151
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	1312	1712.4	25.13	25.20	0.09	0.232	0.236
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	1312	1712.4	25.13	25.20	-0.1	0.221	0.225
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	1312	1712.4	25.13	25.20	0.08	0.215	0.218
54	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	1312	1712.4	25.13	25.20	0.16	0.299	0.304
	WCDMA IV_Ant 2	RMC 12.2Kbps	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	1312	1712.4	25.13	25.20	0.03	0.276	0.280
	WCDMA V_Ant 4	RMC 12.2Kbps	Front	15mm	Sample 1	Battery 1	-	WLAN OFF	DSI 1	4182	836.4	24.26	25.20	0.17	0.210	0.261
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN OFF	DSI 1	4182	836.4	24.26	25.20	0.16	0.394	0.489
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN OFF	DSI 1	4132	826.4	24.18	25.20	0.01	0.324	0.410
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN OFF	DSI 1	4233	846.6	24.25	25.20	-0.1	0.275	0.342
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN OFF	DSI 1	4182	836.4	24.26	25.20	-0.09	0.776	0.964
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN OFF	DSI 1	4182	836.4	24.26	25.20	0.02	0.761	0.945
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN OFF	DSI 1	4182	836.4	24.26	25.20	-0.03	0.752	0.934
55	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN OFF	DSI 1	4182	836.4	24.26	25.20	-0.01	0.780	0.968
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN OFF	DSI 1	4132	826.4	24.18	25.20	0.02	0.652	0.825
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN OFF	DSI 1	4233	846.6	24.25	25.20	-0.04	0.557	0.693
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN OFF	DSI 1	4182	836.4	24.26	25.20	0.09	0.715	0.888
	WCDMA V_Ant 4	RMC 12.2Kbps	Front	15mm	Sample 1	Battery 1	-	WLAN ON	DSI 1	4182	836.4	24.26	25.10	0.17	0.210	0.255
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON	DSI 1	4182	836.4	24.26	25.10	0.16	0.394	0.478
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON	DSI 1	4132	826.4	24.18	25.10	0.01	0.324	0.400
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	15mm	Sample 1	Battery 1	-	WLAN ON	DSI 1	4233	846.6	24.25	25.10	-0.1	0.275	0.334
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON	DSI 1	4182	836.4	24.26	25.10	-0.09	0.776	0.942
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON	DSI 1	4182	836.4	24.26	25.10	0.02	0.761	0.923
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON	DSI 1	4182	836.4	24.26	25.10	-0.03	0.752	0.912
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON	DSI 1	4182	836.4	24.26	25.10	-0.01	0.780	0.946
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON	DSI 1	4132	826.4	24.18	25.10	0.02	0.652	0.806
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON	DSI 1	4233	846.6	24.25	25.10	-0.04	0.557	0.677
	WCDMA V_Ant 4	RMC 12.2Kbps	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON	DSI 1	4182	836.4	24.26	25.10	0.09	0.715	0.868



<FDD LTE SAR>

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Sample, Battery, Holster, WLAN ON / OFF, Output Power State, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Rows include LTE Band 2_Ant 2, LTE Band 5_Ant 4, LTE Band 7_Ant 12, and LTE Band 7_Ant 6.



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Cap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 17_Ant 0	10M	QPSK	1	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.07	0.133	0.174
	LTE Band 17_Ant 0	10M	QPSK	25	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	23790	710	22.68	23.70	-0.11	0.112	0.142
	LTE Band 17_Ant 0	10M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	-0.16	0.178	0.233
	LTE Band 17_Ant 0	10M	QPSK	25	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	23790	710	22.68	23.70	-0.04	0.140	0.177
59	LTE Band 17_Ant 0	10M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	-0.1	0.335	0.439
	LTE Band 17_Ant 0	10M	QPSK	1	0	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	-0.11	0.326	0.427
	LTE Band 17_Ant 0	10M	QPSK	1	0	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	-0.1	0.315	0.412
	LTE Band 17_Ant 0	10M	QPSK	1	0	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	0.13	0.242	0.317
	LTE Band 17_Ant 0	10M	QPSK	1	0	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	23790	710	23.53	24.70	-0.11	0.276	0.361
	LTE Band 66_Ant 2	20M	QPSK	1	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	-0.14	0.132	0.159
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	132572	1770	22.34	24.20	0.08	0.090	0.138
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	132572	1770	24.39	25.20	-0.15	0.241	0.290
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	132072	1720	24.18	25.20	0.08	0.360	0.455
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	132322	1745	24.27	25.20	-0.16	0.291	0.360
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	132572	1770	22.34	24.20	0.19	0.162	0.249
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	132072	1720	24.18	25.20	-0.13	0.430	0.544
	LTE Band 66B_Ant 2	15M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	132047	1717.5	24.39	25.20	0.12	0.343	0.413
	LTE Band 66C_Ant 2	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	132322	1745	24.38	25.20	-0.09	0.456	0.551
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	132072	1720	24.18	25.20	-0.14	0.422	0.534
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	132072	1720	24.18	25.20	-0.04	0.415	0.525
60	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	132072	1720	24.18	25.20	-0.09	0.546	0.691
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	132072	1720	24.18	25.20	0.1	0.445	0.563
	LTE Band 71_Ant 0	20M	QPSK	1	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0.09	0.206	0.271
	LTE Band 71_Ant 0	20M	QPSK	50	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	133297	680.5	22.57	23.70	-0.14	0.147	0.191
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	-0.1	0.217	0.285
	LTE Band 71_Ant 0	20M	QPSK	50	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	133297	680.5	22.57	23.70	-0.04	0.151	0.196
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0	0.298	0.392
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0.11	0.291	0.383
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0.16	0.284	0.374
	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	0.06	0.289	0.380
61	LTE Band 71_Ant 0	20M	QPSK	1	0	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	133297	680.5	23.51	24.70	-0.07	0.311	0.409



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Ant 6	20M	QPSK	1	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	41490	2680	24.63	25.00	62.9	1.006	0.12	0.056	0.061
	LTE Band 41_Ant 6	20M	QPSK	50	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	41490	2680	23.75	24.00	62.9	1.006	-0.12	0.043	0.046
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	41490	2680	24.63	25.00	62.9	1.006	0.02	0.187	0.205
	LTE Band 41_Ant 6	20M	QPSK	50	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	41490	2680	23.75	24.00	62.9	1.006	0	0.145	0.155
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	39750	2506	24.28	25.00	62.9	1.006	-0.1	0.245	0.291
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	40185	2549.5	24.31	25.00	62.9	1.006	-0.15	0.213	0.251
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	40620	2593	24.45	25.00	62.9	1.006	-0.11	0.186	0.212
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	41055	2636.5	24.59	25.00	62.9	1.006	0.08	0.187	0.207
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	39750	2506	24.28	25.00	62.9	1.006	0.02	0.322	0.382
	LTE Band 41C_Ant 6	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	41490	2680	24.58	25.00	62.9	1.006	-0.08	0.248	0.275
	LTE Band 41C_HPUE_Ant 6	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	41490	2680	26.32	27.00	42.9	1.009	0.19	0.289	0.341
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	39750	2506	24.28	25.00	62.9	1.006	-0.02	0.315	0.374
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	39750	2506	24.28	25.00	62.9	1.006	-0.08	0.309	0.367
62	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	39750	2506	24.28	25.00	62.9	1.006	-0.12	0.358	0.425
	LTE Band 41_Ant 6	20M	QPSK	1	0	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	39750	2506	24.28	25.00	62.9	1.006	0.06	0.331	0.393
	LTE Band 41_HPUE_Ant 6	20M	QPSK	1	0	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	39750	2506	25.81	27.00	42.9	1.009	-0.03	0.317	0.421
	LTE Band 42_Ant 12	20M	QPSK	1	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.01	0.137	0.141
	LTE Band 42_Ant 12	20M	QPSK	50	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	22.95	23.40	62.9	1.006	0.1	0.112	0.125
	LTE Band 42_Ant 12	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.03	0.784	0.805
	LTE Band 42_Ant 12	20M	QPSK	50	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	22.95	23.40	62.9	1.006	-0.1	0.588	0.656
	LTE Band 42_Ant 12	20M	QPSK	100	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	22.91	23.40	62.9	1.006	0.03	0.633	0.713
63	LTE Band 42_Ant 12	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.05	0.937	0.962
	LTE Band 42_Ant 12	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.05	0.909	0.934
	LTE Band 42_Ant 12	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.12	0.911	0.936
	LTE Band 42_Ant 12	20M	QPSK	1	0	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.03	0.721	0.741
	LTE Band 42_Ant 12	20M	QPSK	1	0	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.12	0.777	0.798
	LTE Band 42_Ant 11	20M	QPSK	1	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	-0.08	0.171	0.194
	LTE Band 42_Ant 11	20M	QPSK	50	0	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	20.33	21.00	62.9	1.006	-0.06	0.132	0.155
	LTE Band 42_Ant 11	20M	QPSK	1	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	0.03	0.402	0.457
	LTE Band 42_Ant 11	20M	QPSK	50	0	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 1	43340	3575	20.33	21.00	62.9	1.006	-0.1	0.346	0.406
	LTE Band 42_Ant 11	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	0.02	0.519	0.590
	LTE Band 42_Ant 11	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	-0.11	0.453	0.515
	LTE Band 42_Ant 11	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	0.01	0.477	0.542
	LTE Band 42_Ant 11	20M	QPSK	1	0	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	-0.14	0.464	0.527
	LTE Band 42_Ant 11	20M	QPSK	1	0	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	-0.04	0.484	0.550



<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n2_Ant 2	20M	BPSK	1	1	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	0.01	0.127	0.134
	FR1 n2_Ant 2	20M	BPSK	50	28	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	380000	1900	24.89	25.20	0.18	0.138	0.148
64	FR1 n2_Ant 2	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	-0.03	0.177	0.187
	FR1 n2_Ant 2	20M	BPSK	50	28	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	380000	1900	24.89	25.20	-0.03	0.162	0.174
	FR1 n2_Ant 2	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	372000	1860	24.90	25.20	-0.02	0.155	0.166
	FR1 n2_Ant 2	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	376000	1880	24.89	25.20	0.04	0.160	0.172
	FR1 n2_Ant 2	20M	BPSK	1	1	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	-0.06	0.174	0.184
	FR1 n2_Ant 2	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 2	-	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	0.16	0.171	0.181
	FR1 n2_Ant 2	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 3	-	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	0.07	0.158	0.167
	FR1 n2_Ant 2	20M	BPSK	1	1	Back	15mm	Sample 2	Battery 1	-	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	0.01	0.166	0.175
	FR1 n2_Ant 2	20M	BPSK	1	1	Back	15mm	Sample 3	Battery 1	-	WLAN ON/OFF	DSI 0	380000	1900	24.96	25.20	-0.03	0.157	0.166
	FR1 n5_Ant 4	20M	BPSK	1	1	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	167300	836.5	24.27	25.20	-0.01	0.206	0.255
	FR1 n5_Ant 4	20M	BPSK	50	28	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	167300	836.5	23.97	25.20	-0.14	0.217	0.288
	FR1 n5_Ant 4	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	167300	836.5	24.27	25.20	-0.02	0.224	0.277
	FR1 n5_Ant 4	20M	BPSK	50	28	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	167300	836.5	23.97	25.20	0.09	0.230	0.305
	FR1 n5_Ant 4	20M	BPSK	50	28	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	167300	836.5	23.97	25.20	-0.15	0.448	0.595
	FR1 n5_Ant 4	20M	BPSK	50	28	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	167300	836.5	23.97	25.20	0.04	0.441	0.585
	FR1 n5_Ant 4	20M	BPSK	50	28	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	167300	836.5	23.97	25.20	0.14	0.432	0.573
65	FR1 n5_Ant 4	20M	BPSK	50	28	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	167300	836.5	23.97	25.20	0.04	0.465	0.617
	FR1 n5_Ant 4	20M	BPSK	50	28	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	167300	836.5	23.97	25.20	0.01	0.363	0.482
	FR1 n7_Ant 12	20M	BPSK	1	1	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	502000	2510	23.32	24.00	-0.18	0.137	0.160
	FR1 n7_Ant 12	20M	BPSK	50	28	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	502000	2510	23.22	24.00	-0.18	0.145	0.174
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	502000	2510	23.32	24.00	0	0.205	0.240
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	507000	2535	23.31	24.00	-0.11	0.213	0.250
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	512000	2560	23.25	24.00	0.12	0.232	0.276
	FR1 n7_Ant 12	20M	BPSK	50	28	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	502000	2510	23.22	24.00	-0.12	0.192	0.230
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	512000	2560	23.25	24.00	-0.09	0.333	0.396
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	512000	2560	23.25	24.00	0.08	0.325	0.386
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	512000	2560	23.25	24.00	-0.1	0.318	0.378
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	512000	2560	23.25	24.00	0.05	0.290	0.345
	FR1 n7_Ant 12	20M	BPSK	1	1	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	512000	2560	23.25	24.00	-0.05	0.280	0.333
	FR1 n7_Ant 6	20M	BPSK	1	1	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	507000	2535	23.65	24.00	-0.01	0.119	0.129
	FR1 n7_Ant 6	20M	BPSK	50	28	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	507000	2535	23.57	24.00	-0.01	0.116	0.128
	FR1 n7_Ant 6	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	507000	2535	23.65	24.00	-0.12	0.400	0.434
	FR1 n7_Ant 6	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	502000	2510	23.59	24.00	0.02	0.427	0.469
	FR1 n7_Ant 6	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	512000	2560	23.57	24.00	0	0.370	0.409
	FR1 n7_Ant 6	20M	BPSK	50	28	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	507000	2535	23.57	24.00	-0.11	0.388	0.428
	FR1 n7_Ant 6	20M	BPSK	1	1	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	502000	2510	23.59	24.00	-0.19	0.530	0.582
	FR1 n7_Ant 6	20M	BPSK	1	1	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	502000	2510	23.59	24.00	0.11	0.514	0.565
	FR1 n7_Ant 6	20M	BPSK	1	1	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	502000	2510	23.59	24.00	0.16	0.506	0.556
	FR1 n7_Ant 6	20M	BPSK	1	1	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	502000	2510	23.59	24.00	-0.17	0.505	0.555
66	FR1 n7_Ant 6	20M	BPSK	1	1	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	502000	2510	23.59	24.00	-0.07	0.619	0.680



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n66_Ant 2	40M	BPSK	1	1	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.19	0.157	0.160
	FR1 n66_Ant 2	40M	BPSK	108	54	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	349000	1745	24.89	25.20	0.08	0.142	0.153
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.03	0.358	0.364
	FR1 n66_Ant 2	40M	BPSK	108	54	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	349000	1745	24.89	25.20	0.09	0.250	0.268
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	0.14	0.527	0.536
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	0.11	0.502	0.510
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	0.16	0.511	0.519
67	FR1 n66_Ant 2	40M	BPSK	1	1	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.1	0.583	0.592
	FR1 n66_Ant 2	40M	BPSK	1	1	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	349000	1745	25.13	25.20	-0.03	0.489	0.497
	FR1 n71_Ant 0	20M	BPSK	1	1	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	0.01	0.191	0.227
	FR1 n71_Ant 0	20M	BPSK	50	28	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	0.14	0.192	0.244
	FR1 n71_Ant 0	20M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	136100	680.5	23.95	24.70	0.18	0.203	0.241
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	0.01	0.210	0.267
68	FR1 n71_Ant 0	20M	BPSK	50	28	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	0.15	0.249	0.316
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	-0.12	0.229	0.291
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	0.01	0.237	0.301
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	-0.12	0.211	0.268
	FR1 n71_Ant 0	20M	BPSK	50	28	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	136100	680.5	23.66	24.70	0.15	0.221	0.281



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Front	15mm	Sample 1	Battery 1	-	WLAN OFF	DSI 1	518598	2592.99	26.04	27.00	0.19	0.096	0.120
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Front	15mm	Sample 1	Battery 1	-	WLAN OFF	DSI 1	518598	2592.99	25.86	27.00	-0.03	0.111	0.144
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN OFF	DSI 1	518598	2592.99	26.04	27.00	0.07	0.298	0.372
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	15mm	Sample 1	Battery 1	-	WLAN OFF	DSI 1	518598	2592.99	25.86	27.00	-0.14	0.362	0.471
69	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN OFF	DSI 1	518598	2592.99	25.86	27.00	-0.15	0.550	0.715
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN OFF	DSI 1	518598	2592.99	25.86	27.00	0.16	0.533	0.693
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN OFF	DSI 1	518598	2592.99	25.86	27.00	0.07	0.529	0.688
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN OFF	DSI 1	518598	2592.99	25.86	27.00	-0.01	0.524	0.681
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN OFF	DSI 1	518598	2592.99	25.86	27.00	0.17	0.544	0.707
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Front	15mm	Sample 1	Battery 1	-	WLAN ON	DSI 1	518598	2592.99	26.04	26.50	0.19	0.096	0.107
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Front	15mm	Sample 1	Battery 1	-	WLAN ON	DSI 1	518598	2592.99	25.86	26.50	-0.03	0.111	0.129
	FR1 n41_HPUE_Ant 6	100M	BPSK	1	1	Back	15mm	Sample 1	Battery 1	-	WLAN ON	DSI 1	518598	2592.99	26.04	26.50	0.07	0.298	0.331
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	15mm	Sample 1	Battery 1	-	WLAN ON	DSI 1	518598	2592.99	25.86	26.50	-0.14	0.362	0.419
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON	DSI 1	518598	2592.99	25.86	26.50	-0.15	0.550	0.637
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON	DSI 1	518598	2592.99	25.86	26.50	0.16	0.533	0.618
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON	DSI 1	518598	2592.99	25.86	26.50	0.07	0.529	0.613
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON	DSI 1	518598	2592.99	25.86	26.50	-0.01	0.524	0.607
	FR1 n41_HPUE_Ant 6	100M	BPSK	135	69	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON	DSI 1	518598	2592.99	25.86	26.50	0.17	0.544	0.630
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	518598	2592.99	25.70	27.00	-0.18	0.209	0.282
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	518598	2592.99	25.70	27.00	-0.12	0.275	0.371
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	25.70	27.00	-0.09	0.410	0.553
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	25.70	27.00	0.08	0.401	0.541
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	25.70	27.00	-0.14	0.395	0.533
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	25.70	27.00	-0.12	0.523	0.706
	FR1 n41_HPUE_Ant 12	100M	CW	-	-	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	25.70	27.00	0.09	0.426	0.575
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	518598	2592.99	26.42	27.00	0.02	0.188	0.215
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	518598	2592.99	26.42	27.00	0.05	0.227	0.259
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	26.42	27.00	-0.08	0.159	0.182
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	15mm	Sample 1	Battery 2	-	WLAN ON/OFF	DSI 0	518598	2592.99	26.42	27.00	-0.02	0.215	0.246
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	15mm	Sample 1	Battery 3	-	WLAN ON/OFF	DSI 0	518598	2592.99	26.42	27.00	-0.08	0.202	0.231
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	15mm	Sample 2	Battery 1	-	WLAN ON/OFF	DSI 0	518598	2592.99	26.42	27.00	-0.09	0.243	0.278
	FR1 n41_HPUE_Ant 1	100M	CW	-	-	Back	15mm	Sample 3	Battery 1	-	WLAN ON/OFF	DSI 0	518598	2592.99	26.42	27.00	-0.09	0.255	0.291
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Front	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	518598	2592.99	26.12	27.00	-0.14	0.132	0.162
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Back	15mm	Sample 1	Battery 1	-	WLAN ON/OFF	DSI 0	518598	2592.99	26.12	27.00	0.15	0.148	0.181
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	26.12	27.00	0.04	0.248	0.304
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	26.12	27.00	0.02	0.233	0.285
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	26.12	27.00	-0.03	0.218	0.267
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	26.12	27.00	-0.02	0.272	0.333
	FR1 n41_HPUE_Ant 7	100M	CW	-	-	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	518598	2592.99	26.12	27.00	0.15	0.224	0.274



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Front	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	656000	3840	18.93	19.00	-0.05	0.128	0.130
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Front	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00	0.01	0.129	0.132
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Back	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	656000	3840	18.93	19.00	0.11	0.506	0.514
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00	-0.09	0.512	0.525
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00	-0.12	0.857	0.879
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00	0.16	0.851	0.873
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00	0.07	0.829	0.851
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00	-0.02	0.920	0.944
70	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00	-0.13	1.010	1.036
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	656000	3840	18.93	19.00	0.12	0.904	0.919
	FR1 n77_HPUE_Ant 12	100M	BPSK	270	0	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	656000	3840	18.66	19.00	0.05	0.943	1.020
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Front	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	633332	3499.98	18.88	19.00	-0.08	0.065	0.067
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Front	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	633332	3499.98	18.82	19.00	0.02	0.079	0.082
	FR1 n77_HPUE_Ant 12	100M	BPSK	1	1	Back	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	633332	3499.98	18.88	19.00	-0.07	0.293	0.301
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	633332	3499.98	18.82	19.00	-0.15	0.421	0.439
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	633332	3499.98	18.82	19.00	0.05	0.551	0.574
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 1	633332	3499.98	18.82	19.00	-0.18	0.526	0.548
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 1	633332	3499.98	18.82	19.00	-0.12	0.540	0.563
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	633332	3499.98	18.82	19.00	0.03	0.536	0.559
	FR1 n77_HPUE_Ant 12	100M	BPSK	135	69	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	633332	3499.98	18.82	19.00	-0.11	0.567	0.591



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Front	15mm	Sample 1	Battery 1			WLAN OFF	DSI 1	656000	3840	20.12	20.70	0.1	0.134	0.153
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Front	15mm	Sample 1	Battery 1			WLAN OFF	DSI 1	656000	3840	20.10	20.70	0.09	0.149	0.171
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Back	15mm	Sample 1	Battery 1			WLAN OFF	DSI 1	656000	3840	20.12	20.70	-0.18	0.336	0.384
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	15mm	Sample 1	Battery 1			WLAN OFF	DSI 1	656000	3840	20.10	20.70	-0.09	0.355	0.408
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 1	Soft Holster		WLAN OFF	DSI 1	656000	3840	20.10	20.70	-0.06	0.372	0.427
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 2	Soft Holster		WLAN OFF	DSI 1	656000	3840	20.10	20.70	-0.14	0.352	0.404
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 3	Soft Holster		WLAN OFF	DSI 1	656000	3840	20.10	20.70	-0.04	0.339	0.389
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 2	Battery 1	Soft Holster		WLAN OFF	DSI 1	656000	3840	20.10	20.70	0.09	0.362	0.416
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 3	Battery 1	Soft Holster		WLAN OFF	DSI 1	656000	3840	20.10	20.70	-0.02	0.386	0.443
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Front	15mm	Sample 1	Battery 1			WLAN ON	DSI 1	656000	3840	20.12	20.20	0.1	0.134	0.136
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Front	15mm	Sample 1	Battery 1			WLAN ON	DSI 1	656000	3840	20.10	20.20	0.09	0.149	0.152
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Back	15mm	Sample 1	Battery 1			WLAN ON	DSI 1	656000	3840	20.12	20.20	-0.18	0.336	0.342
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	15mm	Sample 1	Battery 1			WLAN ON	DSI 1	656000	3840	20.10	20.20	-0.09	0.355	0.363
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 1	Soft Holster		WLAN ON	DSI 1	656000	3840	20.10	20.20	-0.06	0.372	0.381
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 2	Soft Holster		WLAN ON	DSI 1	656000	3840	20.10	20.20	-0.14	0.352	0.360
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 3	Soft Holster		WLAN ON	DSI 1	656000	3840	20.10	20.20	-0.04	0.339	0.347
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 2	Battery 1	Soft Holster		WLAN ON	DSI 1	656000	3840	20.10	20.20	0.09	0.362	0.370
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 3	Battery 1	Soft Holster		WLAN ON	DSI 1	656000	3840	20.10	20.20	-0.02	0.386	0.395
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Front	15mm	Sample 1	Battery 1			WLAN OFF	DSI 1	633332	3499.98	20.05	20.70	-0.11	0.131	0.152
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Front	15mm	Sample 1	Battery 1			WLAN OFF	DSI 1	633332	3499.98	20.00	20.70	0.07	0.140	0.164
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Back	15mm	Sample 1	Battery 1			WLAN OFF	DSI 1	633332	3499.98	20.05	20.70	0.06	0.243	0.282
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	15mm	Sample 1	Battery 1			WLAN OFF	DSI 1	633332	3499.98	20.00	20.70	-0.11	0.262	0.308
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 1	Soft Holster		WLAN OFF	DSI 1	633332	3499.98	20.00	20.70	0.03	0.318	0.374
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 2	Soft Holster		WLAN OFF	DSI 1	633332	3499.98	20.00	20.70	0.08	0.308	0.362
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 3	Soft Holster		WLAN OFF	DSI 1	633332	3499.98	20.00	20.70	-0.1	0.302	0.355
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 2	Battery 1	Soft Holster		WLAN OFF	DSI 1	633332	3499.98	20.00	20.70	-0.11	0.250	0.294
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 3	Battery 1	Soft Holster		WLAN OFF	DSI 1	633332	3499.98	20.00	20.70	-0.07	0.324	0.381
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Front	15mm	Sample 1	Battery 1			WLAN ON	DSI 1	633332	3499.98	20.05	20.20	-0.11	0.131	0.136
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Front	15mm	Sample 1	Battery 1			WLAN ON	DSI 1	633332	3499.98	20.00	20.20	0.07	0.140	0.147
FR1 n77_HPUE_Ant 11	100M	BPSK	1	1	Back	15mm	Sample 1	Battery 1			WLAN ON	DSI 1	633332	3499.98	20.05	20.20	0.06	0.243	0.252
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	15mm	Sample 1	Battery 1			WLAN ON	DSI 1	633332	3499.98	20.00	20.20	-0.11	0.262	0.274
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 1	Soft Holster		WLAN ON	DSI 1	633332	3499.98	20.00	20.20	0.03	0.318	0.333
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 2	Soft Holster		WLAN ON	DSI 1	633332	3499.98	20.00	20.20	0.08	0.308	0.323
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 1	Battery 3	Soft Holster		WLAN ON	DSI 1	633332	3499.98	20.00	20.20	-0.1	0.302	0.316
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 2	Battery 1	Soft Holster		WLAN ON	DSI 1	633332	3499.98	20.00	20.20	-0.11	0.250	0.262
FR1 n77_HPUE_Ant 11	100M	BPSK	135	69	Back	0mm	Sample 3	Battery 1	Soft Holster		WLAN ON	DSI 1	633332	3499.98	20.00	20.20	-0.07	0.324	0.339



FCC SAR TEST REPORT

Report No. : FA271545A

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Battery	Holster	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Ant 3	100M	CW	-	-	Front	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 0	656000	3840	22.70	23.00	0.12	0.148	0.159
	FR1 n77_Ant 3	100M	CW	-	-	Back	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 0	656000	3840	22.70	23.00	-0.04	0.337	0.361
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	656000	3840	22.70	23.00	0.03	0.363	0.389
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	656000	3840	22.70	23.00	0.09	0.352	0.377
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	656000	3840	22.70	23.00	-0.12	0.344	0.369
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	656000	3840	22.70	23.00	-0.04	0.425	0.455
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	656000	3840	22.70	23.00	-0.03	0.410	0.439
	FR1 n77_Ant 3	100M	CW	-	-	Front	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 0	633332	3499.98	21.29	23.00	0.14	0.077	0.114
	FR1 n77_Ant 3	100M	CW	-	-	Back	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 0	633332	3499.98	21.29	23.00	0.11	0.155	0.230
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	633332	3499.98	21.29	23.00	0.16	0.180	0.267
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 1	Battery 2	Soft Holster	WLAN ON/OFF	DSI 0	633332	3499.98	21.29	23.00	0.07	0.172	0.255
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 1	Battery 3	Soft Holster	WLAN ON/OFF	DSI 0	633332	3499.98	21.29	23.00	0.13	0.156	0.231
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 2	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	633332	3499.98	21.29	23.00	-0.16	0.150	0.222
	FR1 n77_Ant 3	100M	CW	-	-	Back	0mm	Sample 3	Battery 1	Soft Holster	WLAN ON/OFF	DSI 0	633332	3499.98	21.29	23.00	-0.06	0.148	0.219
	FR1 n77_Ant 5	100M	CW	-	-	Front	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50	0.12	0.465	0.560
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50	0.13	0.655	0.789
	FR1 n77_Ant 5	100M	CW	-	-	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50	0.13	0.587	0.707
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 1	Battery 2		WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50	0.16	0.625	0.753
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 1	Battery 3		WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50	0.07	0.638	0.769
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 2	Battery 1		WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50	-0.1	0.741	0.893
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 3	Battery 1		WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50	-0.13	0.561	0.676
	FR1 n77_Ant 5	100M	CW	-	-	Front	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	633332	3499.98	23.29	24.50	0.11	0.296	0.391
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 1	Battery 1		WLAN ON/OFF	DSI 1	633332	3499.98	23.29	24.50	-0.08	0.396	0.523
	FR1 n77_Ant 5	100M	CW	-	-	Back	0mm	Sample 1	Battery 1	Soft Holster	WLAN ON/OFF	DSI 1	633332	3499.98	23.29	24.50	0.02	0.291	0.384
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 1	Battery 2		WLAN ON/OFF	DSI 1	633332	3499.98	23.29	24.50	0.08	0.382	0.505
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 1	Battery 3		WLAN ON/OFF	DSI 1	633332	3499.98	23.29	24.50	-0.14	0.371	0.490
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 2	Battery 1		WLAN ON/OFF	DSI 1	633332	3499.98	23.29	24.50	-0.04	0.227	0.300
	FR1 n77_Ant 5	100M	CW	-	-	Back	15mm	Sample 3	Battery 1		WLAN ON/OFF	DSI 1	633332	3499.98	23.29	24.50	-0.17	0.342	0.452



<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Holster	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	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	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	-0.16	0.114	0.134
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	1	2412	20.30	21.00	99.9	1.001	-0.02	0.300	0.353
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	6	2437	20.20	21.00	99.9	1.001	-0.09	0.307	0.369
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	-0.14	0.317	0.381
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	-0.02	0.252	0.303
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	0.07	0.309	0.372
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	0.13	0.291	0.350
71	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	-0.08	0.339	0.408
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	non-DBS	11	2462	20.20	21.00	99.9	1.001	0.06	0.304	0.366
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	-0.12	0.081	0.107
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	1	2412	18.80	20.00	99.9	1.001	-0.13	0.211	0.278
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	6	2437	18.80	20.00	99.9	1.001	-0.13	0.217	0.286
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	-0.12	0.224	0.302
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	0.05	0.178	0.240
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	0.09	0.213	0.288
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	-0.12	0.206	0.278
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	0.02	0.239	0.323
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	DBS	11	2462	18.70	20.00	99.9	1.001	-0.15	0.214	0.289
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Sample 1	Battery 1	-	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	0.03	0.096	0.103
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 8	non-DBS	1	2412	20.70	21.00	99.7	1.003	0.09	0.125	0.134
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 8	non-DBS	6	2437	20.70	21.00	99.7	1.003	-0.18	0.124	0.133
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	0.05	0.131	0.144
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.1	0.121	0.133
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 2	-	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	0.11	0.125	0.137
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 3	-	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.02	0.112	0.123
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 2	Battery 1	-	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.07	0.134	0.147
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 3	Battery 1	-	Ant 8	non-DBS	11	2462	20.60	21.00	99.7	1.003	-0.18	0.117	0.129
	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Sample 1	Battery 1	-	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	-0.18	0.049	0.059
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 8	DBS	1	2412	19.20	20.00	99.7	1.003	0.06	0.063	0.076
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 8	DBS	6	2437	19.20	20.00	99.7	1.003	-0.12	0.063	0.076
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	0.04	0.067	0.085
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.11	0.062	0.078
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 2	-	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	0.08	0.063	0.080
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 1	Battery 3	-	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.1	0.058	0.073
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 2	Battery 1	-	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.19	0.068	0.086
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Sample 3	Battery 1	-	Ant 8	DBS	11	2462	19.00	20.00	99.7	1.003	-0.13	0.059	0.074



Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Holster	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	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	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	0	0.182	0.210
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	0.09	0.407	0.469
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	0	0.319	0.367
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	0.06	0.397	0.457
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	-0.12	0.378	0.435
72	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	-0.02	0.431	0.496
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	non-DBS	62	5310	15.90	16.50	99.7	1.003	-0.02	0.366	0.421
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	-0.07	0.103	0.133
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	0.03	0.231	0.298
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	0.02	0.180	0.233
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	0.04	0.201	0.260
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	0.14	0.207	0.267
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	-0.11	0.244	0.315
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	DBS	62	5310	13.90	15.00	99.7	1.003	0.09	0.207	0.267
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	-0.05	0.164	0.193
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	-0.12	0.249	0.293
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	0.01	0.181	0.213
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	0.07	0.246	0.290
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	0.13	0.242	0.285
73	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	-0.03	0.257	0.303
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	non-DBS	110	5550	15.80	16.50	99.7	1.003	0.09	0.208	0.245
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	0.04	0.075	0.093
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	-0.13	0.113	0.140
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	0.05	0.082	0.102
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	0.06	0.105	0.130
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	-0.12	0.101	0.125
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	0.04	0.117	0.145
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	DBS	114	5570	12.60	13.50	99.3	1.007	-0.01	0.095	0.118
	WLAN5GHz	802.11a 6Mbps	Front	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0.03	0.131	0.162
	WLAN5GHz	802.11a 6Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.09	0.389	0.482
	WLAN5GHz	802.11a 6Mbps	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0	0.253	0.314
	WLAN5GHz	802.11a 6Mbps	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0.09	0.352	0.436
	WLAN5GHz	802.11a 6Mbps	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.12	0.324	0.401
74	WLAN5GHz	802.11a 6Mbps	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	-0.09	0.426	0.528
	WLAN5GHz	802.11a 6Mbps	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	non-DBS	165	5825	16.60	17.50	99.2	1.008	0.08	0.364	0.451
	WLAN5GHz	802.11n-HT40 MCS0	Front	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.08	0.082	0.114
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.04	0.244	0.338
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.05	0.159	0.220
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.01	0.206	0.285
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.05	0.217	0.300
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	-0.16	0.267	0.370
	WLAN5GHz	802.11n-HT40 MCS0	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	DBS	151	5755	14.10	15.50	99.7	1.003	0.05	0.228	0.316



Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Holster	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	APD (W/m ²)
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	0.06	0.021	0.023	0.200
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	-0.14	0.087	0.097	0.756
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	Non-DBS/DBS	15	6025	13.30	13.50	98.8	1.012	-0.12	0.077	0.082	0.734
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	Non-DBS/DBS	47	6185	13.30	13.50	98.8	1.012	0.09	0.060	0.064	0.556
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	Non-DBS/DBS	175	6825	13.80	14.50	98.8	1.012	0.1	0.078	0.093	0.712
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 1	-	Ant 9+8(8)	Non-DBS/DBS	207	6985	13.80	14.00	98.8	1.012	-0.01	0.079	0.084	0.731
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	0.06	0.057	0.063	0.512
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 2	-	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	0.04	0.075	0.083	0.756
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 1	Battery 3	-	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	0.14	0.083	0.092	0.756
75	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 2	Battery 1	-	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	0.11	0.110	0.122	0.967
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	15mm	Sample 3	Battery 1	-	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	-0.18	0.083	0.092	0.716

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Holster	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Front	15mm	Sample 1	Battery 1	-	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0	0.001	0.001
	Bluetooth	1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9	non-DBS	0	2402	4.49	5.00	76.8	1.085	0.01	0.001	0.001
	Bluetooth	1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9	non-DBS	39	2441	4.25	5.00	76.8	1.085	-0.14	0.001	0.001
76	Bluetooth	1Mbps	Back	15mm	Sample 1	Battery 1	-	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	-0.09	0.003	0.005
	Bluetooth	1Mbps	Back	0mm	Sample 1	Battery 1	Soft Holster	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0.05	0.001	0.002
	Bluetooth	1Mbps	Back	15mm	Sample 1	Battery 2	-	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0.02	0.001	0.002
	Bluetooth	1Mbps	Back	15mm	Sample 1	Battery 3	-	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	-0.03	0.001	0.002
	Bluetooth	1Mbps	Back	15mm	Sample 2	Battery 1	-	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	-0.04	0.001	0.002
	Bluetooth	1Mbps	Back	15mm	Sample 3	Battery 1	-	Ant 9	non-DBS	78	2480	3.51	5.00	76.8	1.085	0.05	0.001	0.002

14.4 Product Specific SAR

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Sample	Holster	WLAN ON/OFF	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 42_Ant 12	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	-0.14	1.010	1.037
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Side	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.03	2.090	2.147
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Side	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.16	1.760	1.808
	LTE Band 42_Ant 12	20M	QPSK	1	0	Right Side	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	-0.12	1.890	1.941
	LTE Band 42_Ant 11	20M	QPSK	1	0	Back	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	0.02	0.956	1.087
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	-0.11	2.130	2.421
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	0mm	Sample 2	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	-0.18	2.170	2.466
77	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	-0.17	2.210	2.512
	LTE Band 42_Ant 11	20M	QPSK	1	0	Left Side	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	0.03	2.050	2.330



<5G NR SAR>

Table with 18 columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Sample, Holster, WLAN ON/OFF, Power State, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Power Drift (dB), Measured 10g SAR (W/kg), Reported 10g SAR (W/kg). Rows include FR1 n77_HPUE_Ant 12 and FR1 n77_Ant 5.

<WLAN SAR>

Table with 18 columns: Plot No., Band, Mode, Test Position, Gap (mm), Sample, Battery, Antenna, Output Power State, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Duty Cycle %, Duty Cycle Scaling Factor, Power Drift (dB), Measured 10g SAR (W/kg), Reported 10g SAR (W/kg). Rows include WLAN5GHz tests at 5310 MHz and 5550 MHz.



Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Antenna	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	Measured APD (W/m ²)
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	0mm	Sample 1	Battery 1	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	0.1	0.021	0.023	0.493
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	0mm	Sample 1	Battery 1	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	-0.1	0.114	0.126	2.670
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 1	Battery 1	Ant 9+8(9)	Non-DBS/DBS	111	6505	14.00	14.50	98.8	1.012	0.07	0.143	0.162	3.360
	WLAN6GHz	802.11ac-VHT160 MCS0	Right Side	0mm	Sample 1	Battery 1	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	0.13	0.105	0.117	2.460
	WLAN6GHz	802.11ac-VHT160 MCS0	Top Side	0mm	Sample 1	Battery 1	Ant 9+8(8)	Non-DBS/DBS	111	6505	14.10	14.50	98.8	1.012	0.15	0.064	0.071	1.500
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 1	Battery 1	Ant 9+8(9)	Non-DBS/DBS	15	6025	13.20	13.50	98.8	1.012	-0.04	0.122	0.132	2.860
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 1	Battery 1	Ant 9+8(9)	Non-DBS/DBS	47	6185	13.30	13.50	98.8	1.012	-0.19	0.128	0.136	3.000
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 1	Battery 1	Ant 9+8(9)	Non-DBS/DBS	175	6825	13.90	14.50	98.8	1.012	-0.17	0.096	0.112	2.250
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 1	Battery 1	Ant 9+8(9)	Non-DBS/DBS	207	6985	14.00	14.00	98.8	1.012	-0.09	0.105	0.106	2.460
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 1	Battery 2	Ant 9+8(9)	Non-DBS/DBS	111	6505	14.00	14.50	98.8	1.012	-0.01	0.134	0.152	3.360
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 1	Battery 3	Ant 9+8(9)	Non-DBS/DBS	111	6505	14.00	14.50	98.8	1.012	0.05	0.122	0.139	3.360
81	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 2	Battery 1	Ant 9+8(9)	Non-DBS/DBS	111	6505	14.00	14.50	98.8	1.012	-0.19	0.232	0.263	5.540
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Sample 3	Battery 1	Ant 9+8(9)	Non-DBS/DBS	111	6505	14.00	14.50	98.8	1.012	0.08	0.162	0.184	3.800

14.5 6GHz PD Test Result

Band	Mode	Test Position	Gap (mm)	Antenna	Sample	Battery	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	Back	2mm	Ant 9+8(8)	Sample 1	Battery 1	15	6025	13.30	0.0625	4.78	-0.14299052	2.88	3.26
WLAN6GHz	802.11ac-VHT160 MCS0	Back	10mm	Ant 9+8(8)	Sample 1	Battery 1	15	6025	13.30	0.25	4.94		2.06	2.26
WLAN6GHz	802.11ac-VHT160 MCS0	Back	2mm	Ant 9+8(8)	Sample 1	Battery 1	207	6985	13.80	0.0625	6.19	0.028155332	3.38	4.25
WLAN6GHz	802.11ac-VHT160 MCS0	Back	8.59mm	Ant 9+8(8)	Sample 1	Battery 1	207	6985	13.80	0.25	6.15		2.28	2.57

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Sample	Battery	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	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	2mm	Ant 9+8(8)	Sample 1	Battery 1	15	6025	13.30	13.50	1.047	98.80	1.012	0.0625	1.5535	2.96	4.87	3.42	5.63
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	2mm	Ant 9+8(8)	Sample 1	Battery 1	47	6185	13.30	13.50	1.047	98.80	1.012	0.0625	1.5535	2.13	3.51	2.68	4.41
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	2mm	Ant 9+8(8)	Sample 1	Battery 1	111	6505	14.10	14.50	1.096	98.80	1.012	0.0625	1.5535	2.51	4.33	2.73	4.71
01	WLAN6GHz	802.11ac-VHT160 MCS0	Back	2mm	Ant 9+8(8)	Sample 1	Battery 1	175	6825	13.80	14.00	1.047	98.80	1.012	0.0625	1.5535	3.46	5.70	4.3	7.08
	WLAN6GHz	802.11ac-VHT160 MCS0	Back	2mm	Ant 9+8(8)	Sample 1	Battery 1	207	6985	13.80	14.00	1.047	98.80	1.012	0.0625	1.5535	3.72	6.12	3.97	6.54
	WLAN6GHz	802.11ac-VHT160 MCS0	Front	2mm	Ant 9+8(8)	Sample 1	Battery 1	111	6505	14.10	14.50	1.096	98.80	1.012	0.0625	1.5535	0.772	1.33	0.882	1.52
	WLAN6GHz	802.11ac-VHT160 MCS0	Left Side	2mm	Ant 9+8(8)	Sample 1	Battery 1	111	6505	14.10	14.50	1.096	98.80	1.012	0.0625	1.5535	2.44	4.21	2.55	4.40
	WLAN6GHz	802.11ac-VHT160 MCS0	Right Side	2mm	Ant 9+8(8)	Sample 1	Battery 1	111	6505	14.10	14.50	1.096	98.80	1.012	0.0625	1.5535	1.69	2.91	2.17	3.74
	WLAN6GHz	802.11ac-VHT160 MCS0	Top Side	2mm	Ant 9+8(8)	Sample 1	Battery 1	111	6505	14.10	14.50	1.096	98.80	1.012	0.0625	1.5535	1.57	2.71	1.72	2.96



14.6 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	Holster	Antenna	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1 st	LTE Band 42_Ant 12	20M_QPSK_1_0	Back	0mm	Sample 1	Battery 1	Soft Holster		WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	0.05	0.937	-	0.962
2nd	LTE Band 42_Ant 12	20M_QPSK_1_0	Back	0mm	Sample 1	Battery 1	Soft Holster		WLAN ON/OFF	DSI 1	43340	3575	23.81	23.90	62.9	1.006	-0.16	0.915	1.024	0.940
1 st	FR1 n77_HPUE_Ant 12	100M_BPSK_135_69	Back	0mm	Sample 3	Battery 1	Soft Holster		WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00			-0.13	1.010	-	1.036
2nd	FR1 n77_HPUE_Ant 12	100M_BPSK_135_69	Back	0mm	Sample 3	Battery 1	Soft Holster		WLAN ON/OFF	DSI 1	656000	3840	18.89	19.00			0.04	0.974	1.037	0.999
1 st	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 3	Battery 1		Ant 9+8(8)		Don-DBS	62	5310	15.90	16.50	99.7	1.003	0.01	0.984	-	1.133
2nd	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 3	Battery 1	-	Ant 9+8(8)		Don-DBS	62	5310	15.90	16.50	99.7	1.003	0.02	0.977	1.007	1.125
1 st	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 3	Battery 1		Ant 9+8(8)		Don-DBS	110	5550	15.80	16.50	99.7	1.003	0.11	1.010	-	1.190
2nd	WLAN5GHz	802.11n-HT40 MCS0	Left Cheek	0mm	Sample 3	Battery 1	-	Ant 9+8(8)		Don-DBS	110	5550	15.80	16.50	99.7	1.003	0.11	0.994	1.016	1.171
1 st	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Sample 2	Battery 1		Ant 9+8(9)		Don-DBS	157	5785	17.30	17.50	99.2	1.008	-0.16	0.820	-	0.866
2nd	WLAN5GHz	802.11a 6Mbps	Left Side	10mm	Sample 2	Battery 1	-	Ant 9+8(9)		Don-DBS	157	5785	17.30	17.50	99.2	1.008	0.14	0.806	1.017	0.851

Plot No.	Band	Mode	Test Position	Gap (mm)	Sample	Battery	WLAN ON / OFF	Output Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1 st	LTE Band 42_Ant 11	20M_QPSK_1_0	Left Side	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	-0.17	2.210	-	2.512
2nd	LTE Band 42_Ant 11	20M_QPSK_1_0	Left Side	0mm	Sample 3	Battery 1	WLAN ON/OFF	DSI 1	43340	3575	20.47	21.00	62.9	1.006	0.12	2.040	1.083	2.319
1 st	FR1 n77_Ant 5	100M_CW	Top Side	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50			-0.17	2.630	-	3.169
2nd	FR1 n77_Ant 5	100M_CW	Top Side	0mm	Sample 1	Battery 1	WLAN ON/OFF	DSI 1	656000	3840	23.69	24.50			0.01	2.490	1.056	3.001

General Note:

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



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

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required

Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is <10%

Head_Ant 6	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	24.6	26.6
Reported 1g SAR (W/kg)	0.176	0.173
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	182.56	197.92
Linearity SAR(W/kg)	0.19	
% deviation from expected linearity		-9.33%

Hotspot_Ant 6	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23.7	25.3
Reported 1g SAR (W/kg)	0.564	0.528
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	148.39	146.72
Linearity SAR(W/kg)	0.56	
% deviation from expected linearity		-5.32%

Body-worn_Ant 6	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 1g SAR (W/kg)	0.425	0.421
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR(W/kg)	0.46	
% deviation from expected linearity		-8.63%

15. Simultaneous Transmission Analysis

Non-DBS					
NO.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product Specific
1.	WWAN + WLAN2.4GHz Ant 8 + Bluetooth Ant 9	Yes	Yes	Yes	
2.	WWAN + WLAN2.4GHz Ant 9+8	Yes	Yes	Yes	
3.	WWAN + WLAN6GHz Ant 9+8 + Bluetooth Ant 9	Yes	Yes	Yes	
4.	WWAN + WLAN5GHz Ant 9+8 + Bluetooth Ant 9	Yes	Yes	Yes	
5.	WWAN + WLAN6GHz Ant 9+8				Yes
6.	WWAN + WLAN5GHz Ant 9+8				Yes

DBS					
NO.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product Specific
7.	WWAN + WLAN2.4GHz Ant 9+8+ WLAN5GHz Ant 9+8	Yes	Yes	Yes	
8.	WWAN + WLAN2.4GHz Ant 9+8+ WLAN6GHz Ant 9+8	Yes	Yes	Yes	
9.	WWAN + WLAN2.4GHz Ant 8 + WLAN5GHz Ant 9+8 + Bluetooth Ant 9	Yes	Yes	Yes	
10.	WWAN + WLAN2.4GHz Ant 8 + WLAN6GHz Ant 9+8 + Bluetooth Ant 9	Yes	Yes	Yes	
11.	WWAN + WLAN6GHz Ant 9+8				Yes
12.	WWAN + WLAN5GHz Ant 9+8				Yes

General Note:

1. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
2. The worst case WWAN from each transmit antenna regardless of the EN-DC combination are using for Sim-Tx analysis Therefore, the following summations represent the absolute worst cases for Sim-Tx analysis
3. The worst case WLAN reported SAR for each configuration was used for SAR summation. Therefore, the following summations represent the absolute worst cases for simultaneous transmission with WLAN.
4. The Scaled SAR summation is calculated based on the same configuration and test position.
5. 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.



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15.1 Head Exposure Conditions

<Non-DBS>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	7	1+4 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)	1+3+7 Summed 1g SAR (W/kg)	2+4 Summed 1g SAR (W/kg)	2+5+7 Summed 1g SAR (W/kg)	2+6+7 Summed 1g SAR (W/kg)	2+3+7 Summed 1g SAR (W/kg)
			WWAN	FR1	WLAN 2.4GHz Ant 8	WLAN 2.4GHz Ant 9+8	WLAN 5GHz Ant 9+8	WLAN 6GHz Ant 9+8	Bluetooth Ant 9								
			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)								
GSM850_Ant 4		Right Cheek	0.351		0.276	0.347	0.647	0.126	0.001	0.698	0.999	0.478	0.628	0.347	0.648	0.127	0.277
		Right Tilted	0.200		0.133	0.233	0.629	0.151	0.001	0.433	0.830	0.352	0.334	0.233	0.630	0.152	0.134
		Left Cheek	0.397		0.709	0.763	1.190	0.244	0.001	1.160	1.588	0.642	1.107	0.763	1.191	0.245	0.710
		Left Tilted	0.239		0.315	0.282	0.945	0.311	0.001	0.521	1.185	0.551	0.555	0.282	0.946	0.312	0.316
GSM1900_Ant 4		Right Cheek	0.030		0.276	0.347	0.647	0.126	0.001	0.377	0.678	0.157	0.307	0.347	0.648	0.127	0.277
		Right Tilted	0.001		0.133	0.233	0.629	0.151	0.001	0.234	0.631	0.153	0.135	0.233	0.630	0.152	0.134
		Left Cheek	0.032		0.709	0.763	1.190	0.244	0.001	0.795	1.223	0.277	0.742	0.763	1.191	0.245	0.710
		Left Tilted	0.001		0.315	0.282	0.945	0.311	0.001	0.283	0.947	0.313	0.317	0.282	0.946	0.312	0.316
WCDMA II_Ant 2		Right Cheek	0.434		0.276	0.347	0.647	0.126	0.001	0.781	1.082	0.561	0.711	0.347	0.648	0.127	0.277
		Right Tilted	0.086		0.133	0.233	0.629	0.151	0.001	0.319	0.716	0.238	0.220	0.233	0.630	0.152	0.134
		Left Cheek	0.174		0.709	0.763	1.190	0.244	0.001	0.937	1.365	0.419	0.884	0.763	1.191	0.245	0.710
		Left Tilted	0.090		0.315	0.282	0.945	0.311	0.001	0.372	1.036	0.402	0.406	0.282	0.946	0.312	0.316
WCDMA IV_Ant 2		Right Cheek	0.347		0.276	0.347	0.647	0.126	0.001	0.694	0.995	0.474	0.624	0.347	0.648	0.127	0.277
		Right Tilted	0.084		0.133	0.233	0.629	0.151	0.001	0.317	0.714	0.236	0.218	0.233	0.630	0.152	0.134
		Left Cheek	0.116		0.709	0.763	1.190	0.244	0.001	0.879	1.307	0.361	0.826	0.763	1.191	0.245	0.710
		Left Tilted	0.070		0.315	0.282	0.945	0.311	0.001	0.352	1.016	0.382	0.386	0.282	0.946	0.312	0.316
WCDMA V_Ant 4		Right Cheek	0.319		0.276	0.347	0.647	0.126	0.001	0.666	0.967	0.446	0.596	0.347	0.648	0.127	0.277
		Right Tilted	0.202		0.133	0.233	0.629	0.151	0.001	0.435	0.832	0.354	0.336	0.233	0.630	0.152	0.134
		Left Cheek	0.387		0.709	0.763	1.190	0.244	0.001	1.150	1.578	0.632	1.097	0.763	1.191	0.245	0.710
		Left Tilted	0.291		0.315	0.282	0.945	0.311	0.001	0.573	1.237	0.603	0.607	0.282	0.946	0.312	0.316
LTE Band 2_Ant 2	FR1 n2_Ant 2	Right Cheek	0.572	0.489	0.276	0.347	0.647	0.126	0.001	0.919	1.220	0.699	0.849	0.836	1.137	0.616	0.766
		Right Tilted	0.143	0.102	0.133	0.233	0.629	0.151	0.001	0.376	0.773	0.295	0.277	0.335	0.732	0.254	0.236
		Left Cheek	0.290	0.200	0.709	0.763	1.190	0.244	0.001	1.053	1.481	0.535	1.000	0.963	1.391	0.445	0.910
		Left Tilted	0.129	0.099	0.315	0.282	0.945	0.311	0.001	0.411	1.075	0.441	0.445	0.381	1.045	0.411	0.415
LTE Band 5_Ant 4	FR1 n5_Ant 4	Right Cheek	0.286	0.308	0.276	0.347	0.647	0.126	0.001	0.633	0.934	0.413	0.563	0.655	0.956	0.435	0.585
		Right Tilted	0.192	0.209	0.133	0.233	0.629	0.151	0.001	0.425	0.822	0.344	0.326	0.442	0.839	0.361	0.343
		Left Cheek	0.388	0.395	0.709	0.763	1.190	0.244	0.001	1.151	1.579	0.633	1.098	1.158	1.586	0.640	1.105
		Left Tilted	0.275	0.269	0.315	0.282	0.945	0.311	0.001	0.557	1.221	0.587	0.591	0.551	1.215	0.581	0.585
LTE Band 7_Ant 12	FR1 n7_Ant 12	Right Cheek	0.658	0.784	0.276	0.347	0.647	0.126	0.001	1.005	1.306	0.785	0.935	1.131	1.432	0.911	1.061
		Right Tilted	0.083	0.083	0.133	0.233	0.629	0.151	0.001	0.316	0.713	0.235	0.217	0.316	0.713	0.235	0.217
		Left Cheek	0.267	0.258	0.709	0.763	1.190	0.244	0.001	1.030	1.458	0.512	0.977	1.021	1.449	0.503	0.968
		Left Tilted	0.092	0.080	0.315	0.282	0.945	0.311	0.001	0.374	1.038	0.404	0.408	0.362	1.026	0.392	0.396
LTE Band 7_Ant 6	FR1 n7_Ant 6	Right Cheek	0.113	0.077	0.276	0.347	0.647	0.126	0.001	0.460	0.761	0.240	0.390	0.424	0.725	0.204	0.354
		Right Tilted	0.046	0.034	0.133	0.233	0.629	0.151	0.001	0.279	0.676	0.198	0.180	0.267	0.664	0.186	0.168
		Left Cheek	0.205	0.206	0.709	0.763	1.190	0.244	0.001	0.968	1.396	0.450	0.915	0.969	1.397	0.451	0.916
		Left Tilted	0.060	0.054	0.315	0.282	0.945	0.311	0.001	0.342	1.006	0.372	0.376	0.336	1.000	0.366	0.370
LTE Band 17_Ant 0	FR1 n66_Ant 2	Right Cheek	0.263	0.474	0.276	0.347	0.647	0.126	0.001	0.610	0.911	0.390	0.540	0.821	1.122	0.601	0.751
		Right Tilted	0.175	0.103	0.133	0.233	0.629	0.151	0.001	0.408	0.805	0.327	0.309	0.336	0.733	0.255	0.237
		Left Cheek	0.279	0.215	0.709	0.763	1.190	0.244	0.001	1.042	1.470	0.524	0.989	0.978	1.406	0.460	0.925
		Left Tilted	0.179	0.085	0.315	0.282	0.945	0.311	0.001	0.461	1.125	0.491	0.495	0.367	1.031	0.397	0.401
LTE Band 66_Ant 2	FR1 n71_Ant 0	Right Cheek	0.582	0.279	0.276	0.347	0.647	0.126	0.001	0.929	1.230	0.709	0.859	0.626	0.927	0.406	0.556
		Right Tilted	0.145	0.166	0.133	0.233	0.629	0.151	0.001	0.378	0.775	0.297	0.279	0.399	0.796	0.318	0.300
		Left Cheek	0.365	0.276	0.709	0.763	1.190	0.244	0.001	1.128	1.556	0.610	1.075	1.039	1.467	0.521	0.986
		Left Tilted	0.131	0.140	0.315	0.282	0.945	0.311	0.001	0.413	1.077	0.443	0.447	0.422	1.086	0.452	0.456
LTE Band 71_Ant 0	FR1 n41_Ant 6	Right Cheek	0.363	0.094	0.276	0.347	0.647	0.126	0.001	0.710	1.011	0.490	0.640	0.441	0.742	0.221	0.371
		Right Tilted	0.135	0.045	0.133	0.233	0.629	0.151	0.001	0.368	0.765	0.287	0.269	0.278	0.675	0.197	0.179
		Left Cheek	0.259	0.219	0.709	0.763	1.190	0.244	0.001	1.022	1.450	0.504	0.969	0.982	1.410	0.464	0.929
		Left Tilted	0.241	0.066	0.315	0.282	0.945	0.311	0.001	0.523	1.187	0.553	0.557	0.348	1.012	0.378	0.382



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LTE Band 41_Ant 6	FR1 n41_Ant 12	Right Cheek	0.060	0.654	0.276	0.347	0.647	0.126	0.001	0.407	0.708	0.187	0.337	1.001	1.302	0.781	0.931
		Right Tilted	0.001	0.078	0.133	0.233	0.629	0.151	0.001	0.234	0.631	0.153	0.135	0.311	0.708	0.230	0.212
		Left Cheek	0.172	0.193	0.709	0.763	1.190	0.244	0.001	0.935	1.363	0.417	0.882	0.956	1.384	0.438	0.903
		Left Tilted	0.024	0.091	0.315	0.282	0.945	0.311	0.001	0.306	0.970	0.336	0.340	0.373	1.037	0.403	0.407
LTE Band 42_Ant 12	FR1 n41_Ant 1	Right Cheek	0.254	0.319	0.276	0.347	0.647	0.126	0.001	0.601	0.902	0.381	0.531	0.666	0.967	0.446	0.596
		Right Tilted	0.053	0.228	0.133	0.233	0.629	0.151	0.001	0.286	0.683	0.205	0.187	0.461	0.858	0.380	0.362
		Left Cheek	0.057	0.143	0.709	0.763	1.190	0.244	0.001	0.820	1.248	0.302	0.767	0.906	1.334	0.388	0.853
		Left Tilted	0.001	0.137	0.315	0.282	0.945	0.311	0.001	0.283	0.947	0.313	0.317	0.419	1.083	0.449	0.453
LTE Band 42_Ant 11	FR1 n41_Ant 7	Right Cheek	0.091	0.161	0.276	0.347	0.647	0.126	0.001	0.438	0.739	0.218	0.368	0.508	0.809	0.288	0.438
		Right Tilted	0.039	0.032	0.133	0.233	0.629	0.151	0.001	0.272	0.669	0.191	0.173	0.265	0.662	0.184	0.166
		Left Cheek	0.382	0.386	0.709	0.763	1.190	0.244	0.001	1.145	1.573	0.627	1.092	1.149	1.577	0.631	1.096
		Left Tilted	0.052	0.035	0.315	0.282	0.945	0.311	0.001	0.334	0.998	0.364	0.368	0.317	0.981	0.347	0.351
	FR1 n77_Ant 12	Right Cheek		0.730	0.276	0.347	0.647	0.126	0.001	0.347	0.648	0.127	0.277	1.077	1.378	0.857	1.007
		Right Tilted		0.101	0.133	0.233	0.629	0.151	0.001	0.233	0.630	0.152	0.134	0.334	0.731	0.253	0.235
		Left Cheek		0.147	0.709	0.763	1.190	0.244	0.001	0.763	1.191	0.245	0.710	0.910	1.338	0.392	0.857
		Left Tilted		0.041	0.315	0.282	0.945	0.311	0.001	0.282	0.946	0.312	0.316	0.323	0.987	0.353	0.357
	FR1 n77_Ant 11	Right Cheek		0.104	0.276	0.347	0.647	0.126	0.001	0.347	0.648	0.127	0.277	0.451	0.752	0.231	0.381
		Right Tilted		0.036	0.133	0.233	0.629	0.151	0.001	0.233	0.630	0.152	0.134	0.269	0.666	0.188	0.170
		Left Cheek		0.395	0.709	0.763	1.190	0.244	0.001	0.763	1.191	0.245	0.710	1.158	1.586	0.640	1.105
		Left Tilted		0.038	0.315	0.282	0.945	0.311	0.001	0.282	0.946	0.312	0.316	0.320	0.984	0.350	0.354
	FR1 n77_Ant 3	Right Cheek		0.630	0.276	0.347	0.647	0.126	0.001	0.347	0.648	0.127	0.277	0.977	1.278	0.757	0.907
		Right Tilted		0.063	0.133	0.233	0.629	0.151	0.001	0.233	0.630	0.152	0.134	0.296	0.693	0.215	0.197
		Left Cheek		0.310	0.709	0.763	1.190	0.244	0.001	0.763	1.191	0.245	0.710	1.073	1.501	0.555	1.020
		Left Tilted		0.095	0.315	0.282	0.945	0.311	0.001	0.282	0.946	0.312	0.316	0.377	1.041	0.407	0.411
	FR1 n77_Ant 5	Right Cheek		0.324	0.276	0.347	0.647	0.126	0.001	0.347	0.648	0.127	0.277	0.671	0.972	0.451	0.601
		Right Tilted		0.353	0.133	0.233	0.629	0.151	0.001	0.233	0.630	0.152	0.134	0.586	0.983	0.505	0.487
		Left Cheek		0.381	0.709	0.763	1.190	0.244	0.001	0.763	1.191	0.245	0.710	1.144	1.572	0.626	1.091
		Left Tilted		0.364	0.315	0.282	0.945	0.311	0.001	0.282	0.946	0.312	0.316	0.646	1.310	0.676	0.680



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<DBS>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	7	1+4+5 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+3+5+7 Summed 1g SAR (W/kg)	1+3+6+7 Summed 1g SAR (W/kg)	2+4+5 Summed 1g SAR (W/kg)	2+4+6 Summed 1g SAR (W/kg)	2+3+5+7 Summed 1g SAR (W/kg)	2+3+6+7 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	FR1 1g SAR (W/kg)	WLAN 2.4GHz Ant 8 1g SAR (W/kg)	WLAN 2.4GHz Ant 9+8 1g SAR (W/kg)	WLAN 5GHz Ant 9+8 1g SAR (W/kg)	WLAN 6GHz Ant 9+8 1g SAR (W/kg)	Bluetooth Ant 9 1g SAR (W/kg)								
GSM850_Ant 4		Right Cheek	0.351		0.248	0.274	0.310	0.126		0.935	0.751	0.909	0.725	0.584	0.400	0.558	0.374
		Right Tilted	0.200		0.121	0.185	0.301	0.151		0.686	0.536	0.622	0.472	0.486	0.336	0.422	0.272
		Left Cheek	0.397		0.620	0.564	0.566	0.244		1.527	1.205	1.583	1.261	1.130	0.808	1.186	0.864
		Left Tilted	0.239		0.283	0.223	0.439	0.311		0.901	0.773	0.961	0.833	0.662	0.534	0.722	0.594
GSM1900_Ant 4		Right Cheek	0.030		0.248	0.274	0.310	0.126		0.614	0.430	0.588	0.404	0.584	0.400	0.558	0.374
		Right Tilted	0.001		0.121	0.185	0.301	0.151		0.487	0.337	0.423	0.273	0.486	0.336	0.422	0.272
		Left Cheek	0.032		0.620	0.564	0.566	0.244		1.162	0.840	1.218	0.896	1.130	0.808	1.186	0.864
		Left Tilted	0.001		0.283	0.223	0.439	0.311		0.663	0.535	0.723	0.595	0.662	0.534	0.722	0.594
WCDMA II_Ant 2		Right Cheek	0.434		0.248	0.274	0.310	0.126		1.018	0.834	0.992	0.808	0.584	0.400	0.558	0.374
		Right Tilted	0.086		0.121	0.185	0.301	0.151		0.572	0.422	0.508	0.358	0.486	0.336	0.422	0.272
		Left Cheek	0.174		0.620	0.564	0.566	0.244		1.304	0.982	1.360	1.038	1.130	0.808	1.186	0.864
		Left Tilted	0.090		0.283	0.223	0.439	0.311		0.752	0.624	0.812	0.684	0.662	0.534	0.722	0.594
WCDMA IV_Ant 2		Right Cheek	0.347		0.248	0.274	0.310	0.126		0.931	0.747	0.905	0.721	0.584	0.400	0.558	0.374
		Right Tilted	0.084		0.121	0.185	0.301	0.151		0.570	0.420	0.506	0.356	0.486	0.336	0.422	0.272
		Left Cheek	0.116		0.620	0.564	0.566	0.244		1.246	0.924	1.302	0.980	1.130	0.808	1.186	0.864
		Left Tilted	0.070		0.283	0.223	0.439	0.311		0.732	0.604	0.792	0.664	0.662	0.534	0.722	0.594
WCDMA V_Ant 4		Right Cheek	0.319		0.248	0.274	0.310	0.126		0.903	0.719	0.877	0.693	0.584	0.400	0.558	0.374
		Right Tilted	0.202		0.121	0.185	0.301	0.151		0.688	0.538	0.624	0.474	0.486	0.336	0.422	0.272
		Left Cheek	0.387		0.620	0.564	0.566	0.244		1.517	1.195	1.573	1.251	1.130	0.808	1.186	0.864
		Left Tilted	0.291		0.283	0.223	0.439	0.311		0.953	0.825	1.013	0.885	0.662	0.534	0.722	0.594
LTE Band 2_Ant 2	FR1 n2_Ant 2	Right Cheek	0.572	0.489	0.248	0.274	0.310	0.126		1.156	0.972	1.130	0.946	1.073	0.889	1.047	0.863
		Right Tilted	0.143	0.102	0.121	0.185	0.301	0.151		0.629	0.479	0.565	0.415	0.588	0.438	0.524	0.374
		Left Cheek	0.290	0.200	0.620	0.564	0.566	0.244		1.420	1.098	1.476	1.154	1.330	1.008	1.386	1.064
		Left Tilted	0.129	0.099	0.283	0.223	0.439	0.311		0.791	0.663	0.851	0.723	0.761	0.633	0.821	0.693
LTE Band 5_Ant 4	FR1 n5_Ant 4	Right Cheek	0.286	0.308	0.248	0.274	0.310	0.126		0.870	0.686	0.844	0.660	0.892	0.708	0.866	0.682
		Right Tilted	0.192	0.209	0.121	0.185	0.301	0.151		0.678	0.528	0.614	0.464	0.695	0.545	0.631	0.481
		Left Cheek	0.388	0.395	0.620	0.564	0.566	0.244		1.518	1.196	1.574	1.252	1.525	1.203	1.581	1.259
		Left Tilted	0.275	0.269	0.283	0.223	0.439	0.311		0.937	0.809	0.997	0.869	0.931	0.803	0.991	0.863
LTE Band 7_Ant 12	FR1 n7_Ant 12	Right Cheek	0.658	0.784	0.248	0.274	0.310	0.126		1.242	1.058	1.216	1.032	1.368	1.184	1.342	1.158
		Right Tilted	0.083	0.083	0.121	0.185	0.301	0.151		0.569	0.419	0.505	0.355	0.569	0.419	0.505	0.355
		Left Cheek	0.267	0.258	0.620	0.564	0.566	0.244		1.397	1.075	1.453	1.131	1.388	1.066	1.444	1.122
		Left Tilted	0.092	0.080	0.283	0.223	0.439	0.311		0.754	0.626	0.814	0.686	0.742	0.614	0.802	0.674
LTE Band 7_Ant 6	FR1 n7_Ant 6	Right Cheek	0.113	0.077	0.248	0.274	0.310	0.126		0.697	0.513	0.671	0.487	0.661	0.477	0.635	0.451
		Right Tilted	0.046	0.034	0.121	0.185	0.301	0.151		0.532	0.382	0.468	0.318	0.520	0.370	0.456	0.306
		Left Cheek	0.205	0.206	0.620	0.564	0.566	0.244		1.335	1.013	1.391	1.069	1.336	1.014	1.392	1.070
		Left Tilted	0.060	0.054	0.283	0.223	0.439	0.311		0.722	0.594	0.782	0.654	0.716	0.588	0.776	0.648
LTE Band 17_Ant 0	FR1 n66_Ant 2	Right Cheek	0.263	0.474	0.248	0.274	0.310	0.126		0.847	0.663	0.821	0.637	1.058	0.874	1.032	0.848
		Right Tilted	0.175	0.103	0.121	0.185	0.301	0.151		0.661	0.511	0.597	0.447	0.589	0.439	0.525	0.375
		Left Cheek	0.279	0.215	0.620	0.564	0.566	0.244		1.409	1.087	1.465	1.143	1.345	1.023	1.401	1.079
		Left Tilted	0.179	0.085	0.283	0.223	0.439	0.311		0.841	0.713	0.901	0.773	0.747	0.619	0.807	0.679
LTE Band 66_Ant 2	FR1 n71_Ant 0	Right Cheek	0.582	0.279	0.248	0.274	0.310	0.126		1.166	0.982	1.140	0.956	0.863	0.679	0.837	0.653
		Right Tilted	0.145	0.166	0.121	0.185	0.301	0.151		0.631	0.481	0.567	0.417	0.652	0.502	0.588	0.438
		Left Cheek	0.365	0.276	0.620	0.564	0.566	0.244		1.495	1.173	1.551	1.229	1.406	1.084	1.462	1.140
		Left Tilted	0.131	0.140	0.283	0.223	0.439	0.311		0.793	0.665	0.853	0.725	0.802	0.674	0.862	0.734
LTE Band 71_Ant 0	FR1 n41_Ant 6	Right Cheek	0.363	0.094	0.248	0.274	0.310	0.126		0.947	0.763	0.921	0.737	0.678	0.494	0.652	0.468
		Right Tilted	0.135	0.045	0.121	0.185	0.301	0.151		0.621	0.471	0.557	0.407	0.531	0.381	0.467	0.317
		Left Cheek	0.259	0.219	0.620	0.564	0.566	0.244		1.389	1.067	1.445	1.123	1.349	1.027	1.405	1.083
		Left Tilted	0.241	0.066	0.283	0.223	0.439	0.311		0.903	0.775	0.963	0.835	0.728	0.600	0.788	0.660
LTE Band 41_Ant 6	FR1 n41_Ant 12	Right Cheek	0.060	0.654	0.248	0.274	0.310	0.126		0.644	0.460	0.618	0.434	1.238	1.054	1.212	1.028
		Right Tilted	0.001	0.078	0.121	0.185	0.301	0.151		0.487	0.337	0.423	0.273	0.564	0.414	0.500	0.350
		Left Cheek	0.172	0.193	0.620	0.564	0.566	0.244		1.302	0.980	1.358	1.036	1.323	1.001	1.379	1.057



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		Left Tilted	0.024	0.091	0.283	0.223	0.439	0.311		0.686	0.558	0.746	0.618	0.753	0.625	0.813	0.685
LTE Band 42_Ant 12	FR1 n41_Ant 1	Right Cheek	0.254	0.319	0.248	0.274	0.310	0.126		0.838	0.654	0.812	0.628	0.903	0.719	0.877	0.693
		Right Tilted	0.053	0.228	0.121	0.185	0.301	0.151		0.539	0.389	0.475	0.325	0.714	0.564	0.650	0.500
		Left Cheek	0.057	0.143	0.620	0.564	0.566	0.244		1.187	0.865	1.243	0.921	1.273	0.951	1.329	1.007
		Left Tilted	0.001	0.137	0.283	0.223	0.439	0.311		0.663	0.535	0.723	0.595	0.799	0.671	0.859	0.731
LTE Band 42_Ant 11	FR1 n41_Ant 7	Right Cheek	0.091	0.161	0.248	0.274	0.310	0.126		0.675	0.491	0.649	0.465	0.745	0.561	0.719	0.535
		Right Tilted	0.039	0.032	0.121	0.185	0.301	0.151		0.525	0.375	0.461	0.311	0.518	0.368	0.454	0.304
		Left Cheek	0.382	0.386	0.620	0.564	0.566	0.244		1.512	1.190	1.568	1.246	1.516	1.194	1.572	1.250
		Left Tilted	0.052	0.035	0.283	0.223	0.439	0.311		0.714	0.586	0.774	0.646	0.697	0.569	0.757	0.629
	FR1 n77_Ant 12	Right Cheek		0.730	0.248	0.274	0.310	0.126		0.584	0.400	0.558	0.374	1.314	1.130	1.288	1.104
		Right Tilted		0.101	0.121	0.185	0.301	0.151		0.486	0.336	0.422	0.272	0.587	0.437	0.523	0.373
		Left Cheek		0.147	0.620	0.564	0.566	0.244		1.130	0.808	1.186	0.864	1.277	0.955	1.333	1.011
		Left Tilted		0.041	0.283	0.223	0.439	0.311		0.662	0.534	0.722	0.594	0.703	0.575	0.763	0.635
	FR1 n77_Ant 11	Right Cheek		0.104	0.248	0.274	0.310	0.126		0.584	0.400	0.558	0.374	0.688	0.504	0.662	0.478
		Right Tilted		0.036	0.121	0.185	0.301	0.151		0.486	0.336	0.422	0.272	0.522	0.372	0.458	0.308
		Left Cheek		0.395	0.620	0.564	0.566	0.244		1.130	0.808	1.186	0.864	1.525	1.203	1.581	1.259
		Left Tilted		0.038	0.283	0.223	0.439	0.311		0.662	0.534	0.722	0.594	0.700	0.572	0.760	0.632
	FR1 n77_Ant 3	Right Cheek		0.630	0.248	0.274	0.310	0.126		0.584	0.400	0.558	0.374	1.214	1.030	1.188	1.004
		Right Tilted		0.063	0.121	0.185	0.301	0.151		0.486	0.336	0.422	0.272	0.549	0.399	0.485	0.335
		Left Cheek		0.310	0.620	0.564	0.566	0.244		1.130	0.808	1.186	0.864	1.440	1.118	1.496	1.174
		Left Tilted		0.095	0.283	0.223	0.439	0.311		0.662	0.534	0.722	0.594	0.757	0.629	0.817	0.689
	FR1 n77_Ant 5	Right Cheek		0.324	0.248	0.274	0.310	0.126		0.584	0.400	0.558	0.374	0.908	0.724	0.882	0.698
		Right Tilted		0.353	0.121	0.185	0.301	0.151		0.486	0.336	0.422	0.272	0.839	0.689	0.775	0.625
		Left Cheek		0.381	0.620	0.564	0.566	0.244		1.130	0.808	1.186	0.864	1.511	1.189	1.567	1.245
		Left Tilted		0.364	0.283	0.223	0.439	0.311		0.662	0.534	0.722	0.594	1.026	0.898	1.086	0.958



15.2 Hotspot Exposure Conditions

<Non-DBS>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	7	1+4 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)	1+3+7 Summed 1g SAR (W/kg)	2+4 Summed 1g SAR (W/kg)	2+5+7 Summed 1g SAR (W/kg)	2+6+7 Summed 1g SAR (W/kg)	2+3+7 Summed 1g SAR (W/kg)
			WWAN	FR1	WLAN 2.4GHz Ant 8	WLAN 2.4GHz Ant 9+8	WLAN 5GHz Ant 9+8	WLAN 6GHz Ant 9+8	Bluetooth Ant 9								
			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)								
GSM850_Ant 4		Front	0.179		0.175	0.171	0.271		0.001	0.350	0.451	0.180	0.355	0.171	0.272	0.001	0.176
		Back	0.576		0.228	0.542	0.736		0.001	1.118	1.313	0.577	0.805	0.542	0.737	0.001	0.229
		Left side	0.073		0.001	0.647	0.866		0.018	0.720	0.957	0.091	0.092	0.647	0.884	0.018	0.019
		Right side	0.084		0.318	0.275	0.516		0.001	0.359	0.601	0.085	0.403	0.275	0.517	0.001	0.319
		Top side			0.128	0.167	0.314		0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.239								0.239	0.239	0.239	0.239	0.000	0.000	0.000
GSM1900_Ant 4		Front	0.072		0.175	0.171	0.271		0.001	0.243	0.344	0.073	0.248	0.171	0.272	0.001	0.176
		Back	0.513		0.228	0.542	0.736		0.001	1.055	1.250	0.514	0.742	0.542	0.737	0.001	0.229
		Left side	0.059		0.001	0.647	0.866		0.018	0.706	0.943	0.077	0.078	0.647	0.884	0.018	0.019
		Right side	0.048		0.318	0.275	0.516		0.001	0.323	0.565	0.049	0.367	0.275	0.517	0.001	0.319
		Top side			0.128	0.167	0.314		0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.235								0.235	0.235	0.235	0.235	0.000	0.000	0.000
WCDMA II_Ant 2		Front	0.269		0.175	0.171	0.271		0.001	0.440	0.541	0.270	0.445	0.171	0.272	0.001	0.176
		Back	0.342		0.228	0.542	0.736		0.001	0.884	1.079	0.343	0.571	0.542	0.737	0.001	0.229
		Left side	0.149		0.001	0.647	0.866		0.018	0.796	1.033	0.167	0.168	0.647	0.884	0.018	0.019
		Right side	0.686		0.318	0.275	0.516		0.001	0.961	1.203	0.687	1.005	0.275	0.517	0.001	0.319
		Top side			0.128	0.167	0.314		0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.198								0.198	0.198	0.198	0.198	0.000	0.000	0.000
WCDMA IV_Ant 2		Front	0.163		0.175	0.171	0.271		0.001	0.334	0.435	0.164	0.339	0.171	0.272	0.001	0.176
		Back	0.479		0.228	0.542	0.736		0.001	1.021	1.216	0.480	0.708	0.542	0.737	0.001	0.229
		Left side	0.080		0.001	0.647	0.866		0.018	0.727	0.964	0.098	0.099	0.647	0.884	0.018	0.019
		Right side	0.250		0.318	0.275	0.516		0.001	0.525	0.767	0.251	0.569	0.275	0.517	0.001	0.319
		Top side			0.128	0.167	0.314		0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.066								0.066	0.066	0.066	0.066	0.000	0.000	0.000
WCDMA V_Ant 4		Front	0.333		0.175	0.171	0.271		0.001	0.504	0.605	0.334	0.509	0.171	0.272	0.001	0.176
		Back	0.664		0.228	0.542	0.736		0.001	1.206	1.401	0.665	0.893	0.542	0.737	0.001	0.229
		Left side	0.195		0.001	0.647	0.866		0.018	0.842	1.079	0.213	0.214	0.647	0.884	0.018	0.019
		Right side	0.161		0.318	0.275	0.516		0.001	0.436	0.678	0.162	0.480	0.275	0.517	0.001	0.319
		Top side			0.128	0.167	0.314		0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.616								0.616	0.616	0.616	0.616	0.000	0.000	0.000
LTE Band 2_Ant 2	FR1 n2_Ant 2	Front	0.203	0.336	0.175	0.171	0.271		0.001	0.374	0.475	0.204	0.379	0.507	0.608	0.337	0.512
		Back	0.254	0.373	0.228	0.542	0.736		0.001	0.796	0.991	0.255	0.483	0.915	1.110	0.374	0.602
		Left side	0.121	0.197	0.001	0.647	0.866		0.018	0.768	1.005	0.139	0.140	0.844	1.081	0.215	0.216
		Right side	0.363	0.576	0.318	0.275	0.516		0.001	0.638	0.880	0.364	0.682	0.851	1.093	0.577	0.895
		Top side			0.128	0.167	0.314		0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.161	0.208							0.161	0.161	0.161	0.161	0.208	0.208	0.208
LTE Band 5_Ant 4	FR1 n5_Ant 4	Front	0.344	0.361	0.175	0.171	0.271		0.001	0.515	0.616	0.345	0.520	0.532	0.633	0.362	0.537
		Back	0.557	0.569	0.228	0.542	0.736		0.001	1.099	1.294	0.558	0.786	1.111	1.306	0.570	0.798
		Left side	0.231	0.256	0.001	0.647	0.866		0.018	0.878	1.115	0.249	0.250	0.903	1.140	0.274	0.275
		Right side	0.233	0.292	0.318	0.275	0.516		0.001	0.508	0.750	0.234	0.552	0.567	0.809	0.293	0.611
		Top side			0.128	0.167	0.314		0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.265	0.346							0.265	0.265	0.265	0.265	0.346	0.346	0.346
LTE Band 7_Ant 12	FR1 n7_Ant 12	Front	0.252	0.264	0.175	0.171	0.271		0.001	0.423	0.524	0.253	0.428	0.435	0.536	0.265	0.440
		Back	0.359	0.339	0.228	0.542	0.736		0.001	0.901	1.096	0.360	0.588	0.881	1.076	0.340	0.568
		Left side	0.092	0.111	0.001	0.647	0.866		0.018	0.739	0.976	0.110	0.111	0.758	0.995	0.129	0.130
		Right side	0.627	0.680	0.318	0.275	0.516		0.001	0.902	1.144	0.628	0.946	0.955	1.197	0.681	0.999
		Top side	0.082		0.128	0.167	0.314		0.001	0.249	0.397	0.083	0.211	0.167	0.315	0.001	0.129
		Bottom side	0.062	0.056							0.062	0.062	0.062	0.062	0.056	0.056	0.056



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LTE Band 7_Ant 6	FR1 n7_Ant 6	Front	0.184	0.203	0.175	0.171	0.271	0.001	0.355	0.456	0.185	0.360	0.374	0.475	0.204	0.379
		Back	0.586	0.673	0.228	0.542	0.736	0.001	1.128	1.323	0.587	0.815	1.215	1.410	0.674	0.902
		Left side	0.496	0.565	0.001	0.647	0.866	0.018	1.143	1.380	0.514	0.515	1.212	1.449	0.583	0.584
		Right side	0.049	0.060	0.318	0.275	0.516	0.001	0.324	0.566	0.050	0.368	0.335	0.577	0.061	0.379
		Top side			0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.313	0.346					0.313	0.313	0.313	0.313	0.346	0.346	0.346	0.346
LTE Band 17_Ant 0	FR1 n66_Ant 2	Front	0.268	0.190	0.175	0.171	0.271	0.001	0.439	0.540	0.269	0.444	0.361	0.462	0.191	0.366
		Back	0.285	0.520	0.228	0.542	0.736	0.001	0.827	1.022	0.286	0.514	1.062	1.257	0.521	0.749
		Left side	0.085	0.097	0.001	0.647	0.866	0.018	0.732	0.969	0.103	0.104	0.744	0.981	0.115	0.116
		Right side	0.230	0.289	0.318	0.275	0.516	0.001	0.505	0.747	0.231	0.549	0.564	0.806	0.290	0.608
		Top side			0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.425	0.124					0.425	0.425	0.425	0.425	0.124	0.124	0.124	0.124
LTE Band 66_Ant 2	FR1 n71_Ant 0	Front	0.208	0.327	0.175	0.171	0.271	0.001	0.379	0.480	0.209	0.384	0.498	0.599	0.328	0.503
		Back	0.690	0.344	0.228	0.542	0.736	0.001	1.232	1.427	0.691	0.919	0.886	1.081	0.345	0.573
		Left side	0.090	0.180	0.001	0.647	0.866	0.018	0.737	0.974	0.108	0.109	0.827	1.064	0.198	0.199
		Right side	0.255	0.314	0.318	0.275	0.516	0.001	0.530	0.772	0.256	0.574	0.589	0.831	0.315	0.633
		Top side			0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.131	0.338					0.131	0.131	0.131	0.131	0.338	0.338	0.338	0.338
LTE Band 71_Ant 0	FR1 n41_Ant 6	Front	0.291	0.140	0.175	0.171	0.271	0.001	0.462	0.563	0.292	0.467	0.311	0.412	0.141	0.316
		Back	0.300	0.437	0.228	0.542	0.736	0.001	0.842	1.037	0.301	0.529	0.979	1.174	0.438	0.666
		Left side	0.147	0.511	0.001	0.647	0.866	0.018	0.794	1.031	0.165	0.166	1.158	1.395	0.529	0.530
		Right side	0.258	0.041	0.318	0.275	0.516	0.001	0.533	0.775	0.259	0.577	0.316	0.558	0.042	0.360
		Top side			0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.271	0.274					0.271	0.271	0.271	0.271	0.274	0.274	0.274	0.274
LTE Band 41_Ant 6	FR1 n41_Ant 12	Front	0.103	0.289	0.175	0.171	0.271	0.001	0.274	0.375	0.104	0.279	0.460	0.561	0.290	0.465
		Back	0.397	0.428	0.228	0.542	0.736	0.001	0.939	1.134	0.398	0.626	0.970	1.165	0.429	0.657
		Left side	0.564	0.139	0.001	0.647	0.866	0.018	1.211	1.448	0.582	0.583	0.786	1.023	0.157	0.158
		Right side	0.048	0.657	0.318	0.275	0.516	0.001	0.323	0.565	0.049	0.367	0.932	1.174	0.658	0.976
		Top side			0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side	0.256	0.107					0.256	0.256	0.256	0.256	0.107	0.107	0.107	0.107
LTE Band 42_Ant 12	FR1 n41_Ant 1	Front	0.085	0.402	0.175	0.171	0.271	0.001	0.256	0.357	0.086	0.261	0.573	0.674	0.403	0.578
		Back	0.511	0.685	0.228	0.542	0.736	0.001	1.053	1.248	0.512	0.740	1.227	1.422	0.686	0.914
		Left side	0.023	0.274	0.001	0.647	0.866	0.018	0.670	0.907	0.041	0.042	0.921	1.158	0.292	0.293
		Right side	0.793	0.106	0.318	0.275	0.516	0.001	1.068	1.310	0.794	1.112	0.381	0.623	0.107	0.425
		Top side		0.482	0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.649	0.797	0.483	0.611
		Bottom side	0.036						0.036	0.036	0.036	0.036	0.000	0.000	0.000	0.000
LTE Band 42_Ant 11	FR1 n41_Ant 7	Front	0.104	0.157	0.175	0.171	0.271	0.001	0.275	0.376	0.105	0.280	0.328	0.429	0.158	0.333
		Back	0.274	0.183	0.228	0.542	0.736	0.001	0.816	1.011	0.275	0.503	0.725	0.920	0.184	0.412
		Left side	0.597	0.322	0.001	0.647	0.866	0.018	1.244	1.481	0.615	0.616	0.969	1.206	0.340	0.341
		Right side	0.035	0.047	0.318	0.275	0.516	0.001	0.310	0.552	0.036	0.354	0.322	0.564	0.048	0.366
		Top side		0.030	0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.197	0.345	0.031	0.159
		Bottom side	0.021	0.025					0.021	0.021	0.021	0.021	0.025	0.025	0.025	0.025
FR1 n77_Ant 12	FR1 n77_Ant 12	Front		0.095	0.175	0.171	0.271	0.001	0.171	0.272	0.001	0.176	0.266	0.367	0.096	0.271
		Back		0.356	0.228	0.542	0.736	0.001	0.542	0.737	0.001	0.229	0.898	1.093	0.357	0.585
		Left side		0.028	0.001	0.647	0.866	0.018	0.647	0.884	0.018	0.019	0.675	0.912	0.046	0.047
		Right side		0.842	0.318	0.275	0.516	0.001	0.275	0.517	0.001	0.319	1.117	1.359	0.843	1.161
		Top side			0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side		0.033					0.000	0.000	0.000	0.000	0.033	0.033	0.033	0.033
FR1 n77_Ant 11	FR1 n77_Ant 11	Front		0.148	0.175	0.171	0.271	0.001	0.171	0.272	0.001	0.176	0.319	0.420	0.149	0.324
		Back		0.364	0.228	0.542	0.736	0.001	0.542	0.737	0.001	0.229	0.906	1.101	0.365	0.593
		Left side		0.591	0.001	0.647	0.866	0.018	0.647	0.884	0.018	0.019	1.238	1.475	0.609	0.610
		Right side		0.053	0.318	0.275	0.516	0.001	0.275	0.517	0.001	0.319	0.328	0.570	0.054	0.372
		Top side			0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.167	0.315	0.001	0.129
		Bottom side		0.029					0.000	0.000	0.000	0.000	0.029	0.029	0.029	0.029
FR1 n77_Ant 3	FR1 n77_Ant 3	Front		0.185	0.175	0.171	0.271	0.001	0.171	0.272	0.001	0.176	0.356	0.457	0.186	0.361
		Back		0.394	0.228	0.542	0.736	0.001	0.542	0.737	0.001	0.229	0.936	1.131	0.395	0.623



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		Left side	0.074	0.001	0.647	0.866	0.018	0.647	0.884	0.018	0.019	0.721	0.958	0.092	0.093
		Right side	0.647	0.318	0.275	0.516	0.001	0.275	0.517	0.001	0.319	0.922	1.164	0.648	0.966
		Top side	0.118	0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	0.285	0.433	0.119	0.247
		Bottom side	0.126					0.000	0.000	0.000	0.000	0.126	0.126	0.126	0.126
FR1 n77_Ant 5		Front	0.233	0.175	0.171	0.271	0.001	0.171	0.272	0.001	0.176	0.404	0.505	0.234	0.409
		Back	0.383	0.228	0.542	0.736	0.001	0.542	0.737	0.001	0.229	0.925	1.120	0.384	0.612
		Left side	0.050	0.001	0.647	0.866	0.018	0.647	0.884	0.018	0.019	0.697	0.934	0.068	0.069
		Right side	0.084	0.318	0.275	0.516	0.001	0.275	0.517	0.001	0.319	0.359	0.601	0.085	0.403
		Top side	0.853	0.128	0.167	0.314	0.001	0.167	0.315	0.001	0.129	1.020	1.168	0.854	0.982
		Bottom side						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

<DBS>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	7	1+4+5 Summed 1g SAR (W/kg)	1+4+6 Summed 1g SAR (W/kg)	1+3+5+7 Summed 1g SAR (W/kg)	1+3+6+7 Summed 1g SAR (W/kg)	2+4+5 Summed 1g SAR (W/kg)	2+4+6 Summed 1g SAR (W/kg)	2+3+5+7 Summed 1g SAR (W/kg)	2+3+6+7 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	FR1 1g SAR (W/kg)	WLAN2.4GHz Ant 8 1g SAR (W/kg)	WLAN2.4GHz Ant 9+8 1g SAR (W/kg)	WLAN5GHz Ant 9+8 1g SAR (W/kg)	WLAN6GHz Ant 9+8 1g SAR (W/kg)	Bluetooth Ant 9 1g SAR (W/kg)								
GSM850_Ant 4		Front	0.179		0.105	0.135	0.166		0.001	0.480	0.314	0.451	0.285	0.301	0.135	0.272	0.106
		Back	0.576		0.136	0.428	0.425		0.001	1.429	1.004	1.138	0.713	0.853	0.428	0.562	0.137
		Left side	0.073		0.001	0.498	0.493		0.018	1.064	0.571	0.585	0.092	0.991	0.498	0.512	0.019
		Right side	0.084		0.194	0.216	0.316		0.001	0.616	0.300	0.595	0.279	0.532	0.216	0.511	0.195
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.239								0.239	0.239	0.239	0.239	0.000	0.000	0.000
GSM1900_Ant 4		Front	0.072		0.105	0.135	0.166		0.001	0.373	0.207	0.344	0.178	0.301	0.135	0.272	0.106
		Back	0.513		0.136	0.428	0.425		0.001	1.366	0.941	1.075	0.650	0.853	0.428	0.562	0.137
		Left side	0.059		0.001	0.498	0.493		0.018	1.050	0.557	0.571	0.078	0.991	0.498	0.512	0.019
		Right side	0.048		0.194	0.216	0.316		0.001	0.580	0.264	0.559	0.243	0.532	0.216	0.511	0.195
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.235								0.235	0.235	0.235	0.235	0.000	0.000	0.000
WCDMA II_Ant 2		Front	0.269		0.105	0.135	0.166		0.001	0.570	0.404	0.541	0.375	0.301	0.135	0.272	0.106
		Back	0.342		0.136	0.428	0.425		0.001	1.195	0.770	0.904	0.479	0.853	0.428	0.562	0.137
		Left side	0.149		0.001	0.498	0.493		0.018	1.140	0.647	0.661	0.168	0.991	0.498	0.512	0.019
		Right side	0.686		0.194	0.216	0.316		0.001	1.218	0.902	1.197	0.881	0.532	0.216	0.511	0.195
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.198								0.198	0.198	0.198	0.198	0.000	0.000	0.000
WCDMA IV_Ant 2		Front	0.163		0.105	0.135	0.166		0.001	0.464	0.298	0.435	0.269	0.301	0.135	0.272	0.106
		Back	0.479		0.136	0.428	0.425		0.001	1.332	0.907	1.041	0.616	0.853	0.428	0.562	0.137
		Left side	0.080		0.001	0.498	0.493		0.018	1.071	0.578	0.592	0.099	0.991	0.498	0.512	0.019
		Right side	0.250		0.194	0.216	0.316		0.001	0.782	0.466	0.761	0.445	0.532	0.216	0.511	0.195
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.066								0.066	0.066	0.066	0.066	0.000	0.000	0.000
WCDMA V_Ant 4		Front	0.333		0.105	0.135	0.166		0.001	0.634	0.468	0.605	0.439	0.301	0.135	0.272	0.106
		Back	0.664		0.136	0.428	0.425		0.001	1.517	1.092	1.226	0.801	0.853	0.428	0.562	0.137
		Left side	0.195		0.001	0.498	0.493		0.018	1.186	0.693	0.707	0.214	0.991	0.498	0.512	0.019
		Right side	0.161		0.194	0.216	0.316		0.001	0.693	0.377	0.672	0.356	0.532	0.216	0.511	0.195
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.616								0.616	0.616	0.616	0.616	0.000	0.000	0.000
LTE Band 2_Ant 2	FR1 n2_Ant 2	Front	0.203	0.336	0.105	0.135	0.166		0.001	0.504	0.338	0.475	0.309	0.637	0.471	0.608	0.442
		Back	0.254	0.373	0.136	0.428	0.425		0.001	1.107	0.682	0.816	0.391	1.226	0.801	0.935	0.510
		Left side	0.121	0.197	0.001	0.498	0.493		0.018	1.112	0.619	0.633	0.140	1.188	0.695	0.709	0.216
		Right side	0.363	0.576	0.194	0.216	0.316		0.001	0.895	0.579	0.874	0.558	1.108	0.792	1.087	0.771
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.161	0.208							0.161	0.161	0.161	0.161	0.208	0.208	0.208
LTE Band 5_Ant 4	FR1 n5_Ant 4	Front	0.344	0.361	0.105	0.135	0.166		0.001	0.645	0.479	0.616	0.450	0.662	0.496	0.633	0.467
		Back	0.557	0.569	0.136	0.428	0.425		0.001	1.410	0.985	1.119	0.694	1.422	0.997	1.131	0.706
		Left side	0.231	0.256	0.001	0.498	0.493		0.018	1.222	0.729	0.743	0.250	1.247	0.754	0.768	0.275
		Right side	0.233	0.292	0.194	0.216	0.316		0.001	0.765	0.449	0.744	0.428	0.824	0.508	0.803	0.487



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		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.265	0.346							0.265	0.265	0.265	0.265	0.346	0.346	0.346
LTE Band 7_Ant 12	FR1 n7_Ant 12	Front	0.252	0.264	0.105	0.135	0.166		0.001	0.553	0.387	0.524	0.358	0.565	0.399	0.536	0.370
		Back	0.359	0.339	0.136	0.428	0.425		0.001	1.212	0.787	0.921	0.496	1.192	0.767	0.901	0.476
		Left side	0.092	0.111	0.001	0.498	0.493		0.018	1.083	0.590	0.604	0.111	1.102	0.609	0.623	0.130
		Right side	0.627	0.680	0.194	0.216	0.316		0.001	1.159	0.843	1.138	0.822	1.212	0.896	1.191	0.875
		Top side	0.082		0.076	0.131	0.191		0.001	0.404	0.213	0.350	0.159	0.322	0.131	0.268	0.077
		Bottom side	0.062	0.056							0.062	0.062	0.062	0.062	0.056	0.056	0.056
LTE Band 7_Ant 6	FR1 n7_Ant 6	Front	0.184	0.203	0.105	0.135	0.166		0.001	0.485	0.319	0.456	0.290	0.504	0.338	0.475	0.309
		Back	0.586	0.673	0.136	0.428	0.425		0.001	1.439	1.014	1.148	0.723	1.526	1.101	1.235	0.810
		Left side	0.496	0.565	0.001	0.498	0.493		0.018	1.487	0.994	1.008	0.515	1.556	1.063	1.077	0.584
		Right side	0.049	0.060	0.194	0.216	0.316		0.001	0.581	0.265	0.560	0.244	0.592	0.276	0.571	0.255
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.313	0.346							0.313	0.313	0.313	0.313	0.346	0.346	0.346
LTE Band 17_Ant 0	FR1 n66_Ant 2	Front	0.268	0.190	0.105	0.135	0.166		0.001	0.569	0.403	0.540	0.374	0.491	0.325	0.462	0.296
		Back	0.285	0.520	0.136	0.428	0.425		0.001	1.138	0.713	0.847	0.422	1.373	0.948	1.082	0.657
		Left side	0.085	0.097	0.001	0.498	0.493		0.018	1.076	0.583	0.597	0.104	1.088	0.595	0.609	0.116
		Right side	0.230	0.289	0.194	0.216	0.316		0.001	0.762	0.446	0.741	0.425	0.821	0.505	0.800	0.484
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.425	0.124							0.425	0.425	0.425	0.425	0.124	0.124	0.124
LTE Band 66_Ant 2	FR1 n71_Ant 0	Front	0.208	0.327	0.105	0.135	0.166		0.001	0.509	0.343	0.480	0.314	0.628	0.462	0.599	0.433
		Back	0.690	0.344	0.136	0.428	0.425		0.001	1.543	1.118	1.252	0.827	1.197	0.772	0.906	0.481
		Left side	0.090	0.180	0.001	0.498	0.493		0.018	1.081	0.588	0.602	0.109	1.171	0.678	0.692	0.199
		Right side	0.255	0.314	0.194	0.216	0.316		0.001	0.787	0.471	0.766	0.450	0.846	0.530	0.825	0.509
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.131	0.338							0.131	0.131	0.131	0.131	0.338	0.338	0.338
LTE Band 71_Ant 0	FR1 n41_Ant 6	Front	0.291	0.140	0.105	0.135	0.166		0.001	0.592	0.426	0.563	0.397	0.441	0.275	0.412	0.246
		Back	0.300	0.437	0.136	0.428	0.425		0.001	1.153	0.728	0.862	0.437	1.290	0.865	0.999	0.574
		Left side	0.147	0.511	0.001	0.498	0.493		0.018	1.138	0.645	0.659	0.166	1.502	1.009	1.023	0.530
		Right side	0.258	0.041	0.194	0.216	0.316		0.001	0.790	0.474	0.769	0.453	0.573	0.257	0.552	0.236
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.271	0.274							0.271	0.271	0.271	0.271	0.274	0.274	0.274
LTE Band 41_Ant 6	FR1 n41_Ant 12	Front	0.103	0.289	0.105	0.135	0.166		0.001	0.404	0.238	0.375	0.209	0.590	0.424	0.561	0.395
		Back	0.397	0.428	0.136	0.428	0.425		0.001	1.250	0.825	0.959	0.534	1.281	0.856	0.990	0.565
		Left side	0.564	0.139	0.001	0.498	0.493		0.018	1.555	1.062	1.076	0.583	1.130	0.637	0.651	0.158
		Right side	0.048	0.657	0.194	0.216	0.316		0.001	0.580	0.264	0.559	0.243	1.189	0.873	1.168	0.852
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side	0.256	0.107							0.256	0.256	0.256	0.256	0.107	0.107	0.107
LTE Band 42_Ant 12	FR1 n41_Ant 1	Front	0.085	0.402	0.105	0.135	0.166		0.001	0.386	0.220	0.357	0.191	0.703	0.537	0.674	0.508
		Back	0.511	0.685	0.136	0.428	0.425		0.001	1.364	0.939	1.073	0.648	1.538	1.113	1.247	0.822
		Left side	0.023	0.274	0.001	0.498	0.493		0.018	1.014	0.521	0.535	0.042	1.265	0.772	0.786	0.293
		Right side	0.793	0.106	0.194	0.216	0.316		0.001	1.325	1.009	1.304	0.988	0.638	0.322	0.617	0.301
		Top side		0.482	0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.804	0.613	0.750	0.559
		Bottom side	0.036								0.036	0.036	0.036	0.036	0.000	0.000	0.000
LTE Band 42_Ant 11	FR1 n41_Ant 7	Front	0.104	0.157	0.105	0.135	0.166		0.001	0.405	0.239	0.376	0.210	0.458	0.292	0.429	0.263
		Back	0.274	0.183	0.136	0.428	0.425		0.001	1.127	0.702	0.836	0.411	1.036	0.611	0.745	0.320
		Left side	0.597	0.322	0.001	0.498	0.493		0.018	1.588	1.095	1.109	0.616	1.313	0.820	0.834	0.341
		Right side	0.035	0.047	0.194	0.216	0.316		0.001	0.567	0.251	0.546	0.230	0.579	0.263	0.558	0.242
		Top side		0.030	0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.352	0.161	0.298	0.107
		Bottom side	0.021	0.025							0.021	0.021	0.021	0.021	0.025	0.025	0.025
	FR1 n77_Ant 12	Front		0.095	0.105	0.135	0.166		0.001	0.301	0.135	0.272	0.106	0.396	0.230	0.367	0.201
		Back		0.356	0.136	0.428	0.425		0.001	0.853	0.428	0.562	0.137	1.209	0.784	0.918	0.493
		Left side		0.028	0.001	0.498	0.493		0.018	0.991	0.498	0.512	0.019	1.019	0.526	0.540	0.047
		Right side		0.842	0.194	0.216	0.316		0.001	0.532	0.216	0.511	0.195	1.374	1.058	1.353	1.037
		Top side			0.076	0.131	0.191		0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
		Bottom side		0.033							0.000	0.000	0.000	0.000	0.033	0.033	0.033



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FR1 n77_Ant 11	Front	0.148	0.105	0.135	0.166	0.001	0.301	0.135	0.272	0.106	0.449	0.283	0.420	0.254
	Back	0.364	0.136	0.428	0.425	0.001	0.853	0.428	0.562	0.137	1.217	0.792	0.926	0.501
	Left side	0.591	0.001	0.498	0.493	0.018	0.991	0.498	0.512	0.019	1.582	1.089	1.103	0.610
	Right side	0.053	0.194	0.216	0.316	0.001	0.532	0.216	0.511	0.195	0.585	0.269	0.564	0.248
	Top side		0.076	0.131	0.191	0.001	0.322	0.131	0.268	0.077	0.322	0.131	0.268	0.077
	Bottom side	0.029					0.000	0.000	0.000	0.000	0.000	0.029	0.029	0.029
FR1 n77_Ant 3	Front	0.185	0.105	0.135	0.166	0.001	0.301	0.135	0.272	0.106	0.486	0.320	0.457	0.291
	Back	0.394	0.136	0.428	0.425	0.001	0.853	0.428	0.562	0.137	1.247	0.822	0.956	0.531
	Left side	0.074	0.001	0.498	0.493	0.018	0.991	0.498	0.512	0.019	1.065	0.572	0.586	0.093
	Right side	0.647	0.194	0.216	0.316	0.001	0.532	0.216	0.511	0.195	1.179	0.863	1.158	0.842
	Top side	0.118	0.076	0.131	0.191	0.001	0.322	0.131	0.268	0.077	0.440	0.249	0.386	0.195
	Bottom side	0.126					0.000	0.000	0.000	0.000	0.126	0.126	0.126	0.126
FR1 n77_Ant 5	Front	0.233	0.105	0.135	0.166	0.001	0.301	0.135	0.272	0.106	0.534	0.368	0.505	0.339
	Back	0.383	0.136	0.428	0.425	0.001	0.853	0.428	0.562	0.137	1.236	0.811	0.945	0.520
	Left side	0.050	0.001	0.498	0.493	0.018	0.991	0.498	0.512	0.019	1.041	0.548	0.562	0.069
	Right side	0.084	0.194	0.216	0.316	0.001	0.532	0.216	0.511	0.195	0.616	0.300	0.595	0.279
	Top side	0.853	0.076	0.131	0.191	0.001	0.322	0.131	0.268	0.077	1.175	0.984	1.121	0.930
	Bottom side						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



15.3 Body-Worn Accessory Exposure Conditions

<Non-DBS>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	7	1+4 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	1+6+7 Summed 1g SAR (W/kg)	1+3+7 Summed 1g SAR (W/kg)	2+4 Summed 1g SAR (W/kg)	2+5+7 Summed 1g SAR (W/kg)	2+6+7 Summed 1g SAR (W/kg)	2+3+7 Summed 1g SAR (W/kg)
			WWAN 1g SAR (W/kg)	FR1 1g SAR (W/kg)	WLAN2.4GHz Ant 8 1g SAR (W/kg)	WLAN2.4GHz Ant 9+8 1g SAR (W/kg)	WLAN5GHz Ant 9+8 1g SAR (W/kg)	WLAN6GHz Ant 9+8 1g SAR (W/kg)	Bluetooth Ant 9 1g SAR (W/kg)								
GSM850_Ant 4		Front	0.141		0.103	0.134	0.210	0.023	0.001	0.275	0.352	0.165	0.245	0.134	0.211	0.024	0.104
		Back	0.420		0.147	0.408	0.528	0.122	0.005	0.828	0.953	0.547	0.572	0.408	0.533	0.127	0.152
		Back with Headset	0.957		0.133	0.303	0.367	0.063	0.002	1.260	1.326	1.022	1.092	0.303	0.369	0.065	0.135
GSM1900_Ant 4		Front	0.054		0.103	0.134	0.210	0.023	0.001	0.188	0.265	0.078	0.158	0.134	0.211	0.024	0.104
		Back	0.345		0.147	0.408	0.528	0.122	0.005	0.753	0.878	0.472	0.497	0.408	0.533	0.127	0.152
		Back with Headset	0.622		0.133	0.303	0.367	0.063	0.002	0.925	0.991	0.687	0.757	0.303	0.369	0.065	0.135
WCDMA II_Ant 2		Front	0.174		0.103	0.134	0.210	0.023	0.001	0.308	0.385	0.198	0.278	0.134	0.211	0.024	0.104
		Back	0.289		0.147	0.408	0.528	0.122	0.005	0.697	0.822	0.416	0.441	0.408	0.533	0.127	0.152
		Back with Headset	0.375		0.133	0.303	0.367	0.063	0.002	0.678	0.744	0.440	0.510	0.303	0.369	0.065	0.135
WCDMA IV_Ant 2		Front	0.081		0.103	0.134	0.210	0.023	0.001	0.215	0.292	0.105	0.185	0.134	0.211	0.024	0.104
		Back	0.212		0.147	0.408	0.528	0.122	0.005	0.620	0.745	0.339	0.364	0.408	0.533	0.127	0.152
		Back with Headset	0.304		0.133	0.303	0.367	0.063	0.002	0.607	0.673	0.369	0.439	0.303	0.369	0.065	0.135
WCDMA V_Ant 4		Front	0.255		0.103	0.134	0.210	0.023	0.001	0.389	0.466	0.279	0.359	0.134	0.211	0.024	0.104
		Back	0.478		0.147	0.408	0.528	0.122	0.005	0.886	1.011	0.605	0.630	0.408	0.533	0.127	0.152
		Back with Headset	0.946		0.133	0.303	0.367	0.063	0.002	1.249	1.315	1.011	1.081	0.303	0.369	0.065	0.135
LTE Band 2_Ant 2	FR1 n2_Ant 2	Front	0.146	0.148	0.103	0.134	0.210	0.023	0.001	0.280	0.357	0.170	0.250	0.282	0.359	0.172	0.252
		Back	0.230	0.187	0.147	0.408	0.528	0.122	0.005	0.638	0.763	0.357	0.382	0.595	0.720	0.314	0.339
		Back with Headset	0.438	0.184	0.133	0.303	0.367	0.063	0.002	0.741	0.807	0.503	0.573	0.487	0.553	0.249	0.319
LTE Band 5_Ant 4	FR1 n5_Ant 4	Front	0.277	0.288	0.103	0.134	0.210	0.023	0.001	0.411	0.488	0.301	0.381	0.422	0.499	0.312	0.392
		Back	0.412	0.305	0.147	0.408	0.528	0.122	0.005	0.820	0.945	0.539	0.564	0.713	0.838	0.432	0.457
		Back with Headset	0.722	0.617	0.133	0.303	0.367	0.063	0.002	1.025	1.091	0.787	0.857	0.920	0.986	0.682	0.752
LTE Band 7_Ant 12	FR1 n7_Ant 12	Front	0.118	0.174	0.103	0.134	0.210	0.023	0.001	0.252	0.329	0.142	0.222	0.308	0.385	0.198	0.278
		Back	0.172	0.276	0.147	0.408	0.528	0.122	0.005	0.580	0.705	0.299	0.324	0.684	0.809	0.403	0.428
		Back with Headset	0.235	0.396	0.133	0.303	0.367	0.063	0.002	0.538	0.604	0.300	0.370	0.699	0.765	0.461	0.531
LTE Band 7_Ant 6	FR1 n7_Ant 6	Front	0.165	0.129	0.103	0.134	0.210	0.023	0.001	0.299	0.376	0.189	0.269	0.263	0.340	0.153	0.233
		Back	0.465	0.469	0.147	0.408	0.528	0.122	0.005	0.873	0.998	0.592	0.617	0.877	1.002	0.596	0.621
		Back with Headset	0.917	0.680	0.133	0.303	0.367	0.063	0.002	1.220	1.286	0.982	1.052	0.983	1.049	0.745	0.815
LTE Band 17_Ant 0	FR1 n66_Ant 2	Front	0.174	0.160	0.103	0.134	0.210	0.023	0.001	0.308	0.385	0.198	0.278	0.294	0.371	0.184	0.264
		Back	0.233	0.364	0.147	0.408	0.528	0.122	0.005	0.641	0.766	0.360	0.385	0.772	0.897	0.491	0.516
		Back with Headset	0.439	0.592	0.133	0.303	0.367	0.063	0.002	0.742	0.808	0.504	0.574	0.895	0.961	0.657	0.727
LTE Band 66_Ant 2	FR1 n71_Ant 0	Front	0.159	0.244	0.103	0.134	0.210	0.023	0.001	0.293	0.370	0.183	0.263	0.378	0.455	0.268	0.348
		Back	0.455	0.267	0.147	0.408	0.528	0.122	0.005	0.863	0.988	0.582	0.607	0.675	0.800	0.394	0.419
		Back with Headset	0.691	0.316	0.133	0.303	0.367	0.063	0.002	0.994	1.060	0.756	0.826	0.619	0.685	0.381	0.451
LTE Band 71_Ant 0	FR1 n41_Ant 6	Front	0.271	0.129	0.103	0.134	0.210	0.023	0.001	0.405	0.482	0.295	0.375	0.263	0.340	0.153	0.233
		Back	0.285	0.419	0.147	0.408	0.528	0.122	0.005	0.693	0.818	0.412	0.437	0.827	0.952	0.546	0.571
		Back with Headset	0.409	0.637	0.133	0.303	0.367	0.063	0.002	0.712	0.778	0.474	0.544	0.940	1.006	0.702	0.772
LTE Band 41_Ant 6	FR1 n41_Ant 12	Front	0.061	0.282	0.103	0.134	0.210	0.023	0.001	0.195	0.272	0.085	0.165	0.416	0.493	0.306	0.386
		Back	0.291	0.371	0.147	0.408	0.528	0.122	0.005	0.699	0.824	0.418	0.443	0.779	0.904	0.498	0.523
		Back with Headset	0.425	0.706	0.133	0.303	0.367	0.063	0.002	0.728	0.794	0.490	0.560	1.009	1.075	0.771	0.841
LTE Band 42_Ant 12	FR1 n41_Ant 1	Front	0.141	0.215	0.103	0.134	0.210	0.023	0.001	0.275	0.352	0.165	0.245	0.349	0.426	0.239	0.319
		Back	0.805	0.291	0.147	0.408	0.528	0.122	0.005	1.213	1.338	0.932	0.957	0.699	0.824	0.418	0.443
		Back with Headset	0.962	0.182	0.133	0.303	0.367	0.063	0.002	1.265	1.331	1.027	1.097	0.485	0.551	0.247	0.317
LTE Band 42_Ant 11	FR1 n41_Ant 7	Front	0.194	0.162	0.103	0.134	0.210	0.023	0.001	0.328	0.405	0.218	0.298	0.296	0.373	0.186	0.266
		Back	0.457	0.181	0.147	0.408	0.528	0.122	0.005	0.865	0.990	0.584	0.609	0.589	0.714	0.308	0.333
		Back with Headset	0.590	0.333	0.133	0.303	0.367	0.063	0.002	0.893	0.959	0.655	0.725	0.636	0.702	0.398	0.468
	FR1 n77_Ant 12	Front		0.132	0.103	0.134	0.210	0.023	0.001	0.134	0.211	0.024	0.104	0.266	0.343	0.156	0.236
		Back		0.525	0.147	0.408	0.528	0.122	0.005	0.408	0.533	0.127	0.152	0.933	1.058	0.652	0.677
		Back with Headset		1.036	0.133	0.303	0.367	0.063	0.002	0.303	0.369	0.065	0.135	1.339	1.405	1.101	1.171



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FR1	FR1 n77_Ant 11	Front	0.152	0.103	0.134	0.210	0.023	0.001	0.134	0.211	0.024	0.104	0.286	0.363	0.176	0.256
		Back	0.363	0.147	0.408	0.528	0.122	0.005	0.408	0.533	0.127	0.152	0.771	0.896	0.490	0.515
Back with Headset	0.395	0.133	0.303	0.367	0.063	0.002	0.303	0.369	0.065	0.135	0.698	0.764	0.460	0.530		
FR1	FR1 n77_Ant 3	Front	0.159	0.103	0.134	0.210	0.023	0.001	0.134	0.211	0.024	0.104	0.293	0.370	0.183	0.263
		Back	0.361	0.147	0.408	0.528	0.122	0.005	0.408	0.533	0.127	0.152	0.769	0.894	0.488	0.513
		Back with Headset	0.455	0.133	0.303	0.367	0.063	0.002	0.303	0.369	0.065	0.135	0.758	0.824	0.520	0.590
FR1	FR1 n77_Ant 5	Front	0.560	0.103	0.134	0.210	0.023	0.001	0.134	0.211	0.024	0.104	0.694	0.771	0.584	0.664
		Back	0.893	0.147	0.408	0.528	0.122	0.005	0.408	0.533	0.127	0.152	1.301	1.426	1.020	1.045
		Back with Headset	0.707	0.133	0.303	0.367	0.063	0.002	0.303	0.369	0.065	0.135	1.010	1.076	0.772	0.842

<DBS>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	6	7	1+4+5	1+4+6	1+3+5+7	1+3+6+7	2+4+5	2+4+6	2+3+5+7	2+3+6+7	
			WWAN	FR1	WLAN 2.4GHz Ant 8	WLAN 2.4GHz Ant 9+8	WLAN 5GHz Ant 9+8	WLAN 6GHz Ant 9+8	Bluetooth Ant 9	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)
			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)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
GSM850_Ant 4		Front	0.141		0.059	0.107	0.133	0.023	0.001	0.381	0.271	0.334	0.224	0.240	0.130	0.193	0.083	
		Back	0.420		0.086	0.323	0.370	0.122	0.005	1.113	0.865	0.881	0.633	0.693	0.445	0.461	0.213	
		Back with Headset	0.957		0.078	0.240	0.233	0.063	0.002	1.430	1.260	1.270	1.100	0.473	0.303	0.313	0.143	
GSM1900_Ant 4		Front	0.054		0.059	0.107	0.133	0.023	0.001	0.294	0.184	0.247	0.137	0.240	0.130	0.193	0.083	
		Back	0.345		0.086	0.323	0.370	0.122	0.005	1.038	0.790	0.806	0.558	0.693	0.445	0.461	0.213	
		Back with Headset	0.622		0.078	0.240	0.233	0.063	0.002	1.095	0.925	0.935	0.765	0.473	0.303	0.313	0.143	
WCDMA II_Ant 2		Front	0.174		0.059	0.107	0.133	0.023	0.001	0.414	0.304	0.367	0.257	0.240	0.130	0.193	0.083	
		Back	0.289		0.086	0.323	0.370	0.122	0.005	0.982	0.734	0.750	0.502	0.693	0.445	0.461	0.213	
		Back with Headset	0.375		0.078	0.240	0.233	0.063	0.002	0.848	0.678	0.688	0.518	0.473	0.303	0.313	0.143	
WCDMA IV_Ant 2		Front	0.081		0.059	0.107	0.133	0.023	0.001	0.321	0.211	0.274	0.164	0.240	0.130	0.193	0.083	
		Back	0.212		0.086	0.323	0.370	0.122	0.005	0.905	0.657	0.673	0.425	0.693	0.445	0.461	0.213	
		Back with Headset	0.304		0.078	0.240	0.233	0.063	0.002	0.777	0.607	0.617	0.447	0.473	0.303	0.313	0.143	
WCDMA V_Ant 4		Front	0.255		0.059	0.107	0.133	0.023	0.001	0.495	0.385	0.448	0.338	0.240	0.130	0.193	0.083	
		Back	0.478		0.086	0.323	0.370	0.122	0.005	1.171	0.923	0.939	0.691	0.693	0.445	0.461	0.213	
		Back with Headset	0.946		0.078	0.240	0.233	0.063	0.002	1.419	1.249	1.259	1.089	0.473	0.303	0.313	0.143	
LTE Band 2_Ant 2	FR1 n2_Ant 2	Front	0.146	0.148	0.059	0.107	0.133	0.023	0.001	0.386	0.276	0.339	0.229	0.388	0.278	0.341	0.231	
		Back	0.230	0.187	0.086	0.323	0.370	0.122	0.005	0.923	0.675	0.691	0.443	0.880	0.632	0.648	0.400	
		Back with Headset	0.438	0.184	0.078	0.240	0.233	0.063	0.002	0.911	0.741	0.751	0.581	0.657	0.487	0.497	0.327	
LTE Band 5_Ant 4	FR1 n5_Ant 4	Front	0.277	0.288	0.059	0.107	0.133	0.023	0.001	0.517	0.407	0.470	0.360	0.528	0.418	0.481	0.371	
		Back	0.412	0.305	0.086	0.323	0.370	0.122	0.005	1.105	0.857	0.873	0.625	0.998	0.750	0.766	0.518	
		Back with Headset	0.722	0.617	0.078	0.240	0.233	0.063	0.002	1.195	1.025	1.035	0.865	1.090	0.920	0.930	0.760	
LTE Band 7_Ant 12	FR1 n7_Ant 12	Front	0.118	0.174	0.059	0.107	0.133	0.023	0.001	0.358	0.248	0.311	0.201	0.414	0.304	0.367	0.257	
		Back	0.172	0.276	0.086	0.323	0.370	0.122	0.005	0.865	0.617	0.633	0.385	0.969	0.721	0.737	0.489	
		Back with Headset	0.235	0.396	0.078	0.240	0.233	0.063	0.002	0.708	0.538	0.548	0.378	0.869	0.699	0.709	0.539	
LTE Band 7_Ant 6	FR1 n7_Ant 6	Front	0.165	0.129	0.059	0.107	0.133	0.023	0.001	0.405	0.295	0.358	0.248	0.369	0.259	0.322	0.212	
		Back	0.465	0.469	0.086	0.323	0.370	0.122	0.005	1.158	0.910	0.926	0.678	1.162	0.914	0.930	0.682	
		Back with Headset	0.917	0.680	0.078	0.240	0.233	0.063	0.002	1.390	1.220	1.230	1.060	1.153	0.983	0.993	0.823	
LTE Band 17_Ant 0	FR1 n66_Ant 2	Front	0.174	0.160	0.059	0.107	0.133	0.023	0.001	0.414	0.304	0.367	0.257	0.400	0.290	0.353	0.243	
		Back	0.233	0.364	0.086	0.323	0.370	0.122	0.005	0.926	0.678	0.694	0.446	1.057	0.809	0.825	0.577	
		Back with Headset	0.439	0.592	0.078	0.240	0.233	0.063	0.002	0.912	0.742	0.752	0.582	1.065	0.895	0.905	0.735	
LTE Band 66_Ant 2	FR1 n71_Ant 0	Front	0.159	0.244	0.059	0.107	0.133	0.023	0.001	0.399	0.289	0.352	0.242	0.484	0.374	0.437	0.327	
		Back	0.455	0.267	0.086	0.323	0.370	0.122	0.005	1.148	0.900	0.916	0.668	0.960	0.712	0.728	0.480	
		Back with Headset	0.691	0.316	0.078	0.240	0.233	0.063	0.002	1.164	0.994	1.004	0.834	0.789	0.619	0.629	0.459	
LTE Band 71_Ant 0	FR1 n41_Ant 6	Front	0.271	0.129	0.059	0.107	0.133	0.023	0.001	0.511	0.401	0.464	0.354	0.369	0.259	0.322	0.212	
		Back	0.285	0.419	0.086	0.323	0.370	0.122	0.005	0.978	0.730	0.746	0.498	1.112	0.864	0.880	0.632	
		Back with Headset	0.409	0.637	0.078	0.240	0.233	0.063	0.002	0.882	0.712	0.722	0.552	1.110	0.940	0.950	0.780	
LTE Band 41_Ant 6	FR1 n41_Ant 12	Front	0.061	0.282	0.059	0.107	0.133	0.023	0.001	0.301	0.191	0.254	0.144	0.522	0.412	0.475	0.365	
		Back	0.291	0.371	0.086	0.323	0.370	0.122	0.005	0.984	0.736	0.752	0.504	1.064	0.816	0.832	0.584	
		Back with Headset	0.425	0.706	0.078	0.240	0.233	0.063	0.002	0.898	0.728	0.738	0.568	1.179	1.009	1.019	0.849	
LTE Band 42_Ant 12	FR1 n41_Ant 1	Front	0.141	0.215	0.059	0.107	0.133	0.023	0.001	0.381	0.271	0.334	0.224	0.455	0.345	0.408	0.298	
		Back	0.805	0.291	0.086	0.323	0.370	0.122	0.005	1.498	1.250	1.266	1.018	0.984	0.736	0.752	0.504	
		Back with Headset	0.962	0.182	0.078	0.240	0.233	0.063	0.002	1.435	1.265	1.275	1.105	0.655	0.485	0.495	0.325	



LTE Band 42_Ant 11	FR1 n41_Ant 7	Front	0.194	0.162	0.059	0.107	0.133	0.023	0.001	0.434	0.324	0.387	0.277	0.402	0.292	0.355	0.245
		Back	0.457	0.181	0.086	0.323	0.370	0.122	0.005	1.150	0.902	0.918	0.670	0.874	0.626	0.642	0.394
		Back with Headset	0.590	0.333	0.078	0.240	0.233	0.063	0.002	1.063	0.893	0.903	0.733	0.806	0.636	0.646	0.476
	FR1 n77_Ant 12	Front		0.132	0.059	0.107	0.133	0.023	0.001	0.240	0.130	0.193	0.083	0.372	0.262	0.325	0.215
		Back		0.525	0.086	0.323	0.370	0.122	0.005	0.693	0.445	0.461	0.213	1.218	0.970	0.986	0.738
		Back with Headset		1.036	0.078	0.240	0.233	0.063	0.002	0.473	0.303	0.313	0.143	1.509	1.339	1.349	1.179
	FR1 n77_Ant 11	Front		0.152	0.059	0.107	0.133	0.023	0.001	0.240	0.130	0.193	0.083	0.392	0.282	0.345	0.235
		Back		0.363	0.086	0.323	0.370	0.122	0.005	0.693	0.445	0.461	0.213	1.056	0.808	0.824	0.576
		Back with Headset		0.395	0.078	0.240	0.233	0.063	0.002	0.473	0.303	0.313	0.143	0.868	0.698	0.708	0.538
	FR1 n77_Ant 3	Front		0.159	0.059	0.107	0.133	0.023	0.001	0.240	0.130	0.193	0.083	0.399	0.289	0.352	0.242
		Back		0.361	0.086	0.323	0.370	0.122	0.005	0.693	0.445	0.461	0.213	1.054	0.806	0.822	0.574
		Back with Headset		0.455	0.078	0.240	0.233	0.063	0.002	0.473	0.303	0.313	0.143	0.928	0.758	0.768	0.598
	FR1 n77_Ant 5	Front		0.560	0.059	0.107	0.133	0.023	0.001	0.240	0.130	0.193	0.083	0.800	0.690	0.753	0.643
		Back		0.893	0.086	0.323	0.370	0.122	0.005	0.693	0.445	0.461	0.213	1.586	1.338	1.354	1.106
		Back with Headset		0.707	0.078	0.240	0.233	0.063	0.002	0.473	0.303	0.313	0.143	1.180	1.010	1.020	0.850

15.4 Product Specific Exposure Conditions

<Non-DBS>

FR1 Band	Exposure Position	1	2	3	1+2 Summed 10g SAR (W/kg)	1+3 Summed 10g SAR (W/kg)
		FR1 10g SAR (W/kg)	WLAN5GHz Ant 9+8 10g SAR (W/kg)	WLAN6GHz Ant 9+8 10g SAR (W/kg)		
LTE Band 42_Ant 12	Front		0.412	0.023	0.412	0.023
	Back	1.037	0.572	0.126	1.609	1.163
	Left side		0.996	0.263	0.996	0.263
	Right side	2.147	0.358	0.117	2.505	2.264
	Top side		0.153	0.071	0.153	0.071
	Bottom side				0.000	0.000
LTE Band 42_Ant 11	Front		0.412	0.023	0.412	0.023
	Back	1.087	0.572	0.126	1.659	1.213
	Left side		0.996	0.263	0.996	0.263
	Right side	2.512	0.358	0.117	2.870	2.629
	Top side		0.153	0.071	0.153	0.071
	Bottom side				0.000	0.000
FR1 n77_Ant 12	Front		0.412	0.023	0.412	0.023
	Back		0.572	0.126	0.572	0.126
	Left side		0.996	0.263	0.996	0.263
	Right side	1.991	0.358	0.117	2.349	2.108
	Top side		0.153	0.071	0.153	0.071
	Bottom side				0.000	0.000
FR1 n77_Ant 5	Front		0.412	0.023	0.412	0.023
	Back	2.555	0.572	0.126	3.127	2.681
	Left side		0.996	0.263	0.996	0.263
	Right side		0.358	0.117	0.358	0.117
	Top side	3.169	0.153	0.071	3.322	3.240
	Bottom side				0.000	0.000

<DBS>

FR1 Band	Exposure Position	1	2	3	1+2 Summed 10g SAR (W/kg)	1+3 Summed 10g SAR (W/kg)
		FR1 10g SAR (W/kg)	WLAN5GHz Ant 9+8 10g SAR (W/kg)	WLAN6GHz Ant 9+8 10g SAR (W/kg)		
LTE Band 42_Ant 12	Front		0.284	0.023	0.284	0.023
	Back	1.037	0.394	0.126	1.431	1.163
	Left side		0.669	0.263	0.669	0.263
	Right side	2.147	0.247	0.117	2.394	2.264
	Top side		0.106	0.071	0.106	0.071
	Bottom side				0.000	0.000
LTE Band 42_Ant 11	Front		0.284	0.023	0.284	0.023
	Back	1.087	0.394	0.126	1.481	1.213
	Left side		0.669	0.263	0.669	0.263
	Right side	2.512	0.247	0.117	2.759	2.629
	Top side		0.106	0.071	0.106	0.071
	Bottom side				0.000	0.000
FR1 n77_Ant 12	Front		0.284	0.023	0.284	0.023
	Back		0.394	0.126	0.394	0.126
	Left side		0.669	0.263	0.669	0.263
	Right side	1.991	0.247	0.117	2.238	2.108
	Top side		0.106	0.071	0.106	0.071
	Bottom side				0.000	0.000
FR1 n77_Ant 5	Front		0.284	0.023	0.284	0.023
	Back	2.555	0.394	0.126	2.949	2.681
	Left side		0.669	0.263	0.669	0.263
	Right side		0.247	0.117	0.247	0.117
	Top side	3.169	0.106	0.071	3.275	3.240
	Bottom side				0.000	0.000

16. Supplemental Antenna tuner tests results

General Note:

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

16.1 Supplemental Head SAR results

Head (Ant0)	RF exposure position							Average Value of Time Sweep (W/kg)																
	Band	Mode	Channel	Test Position	Measured 1g SAR (W/kg)	Auto-Tune (State)																		
							0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
LTE Band 17	10M_QPSK_1_0	M	23790	Left Cheek	0.213	111	0.053	0.161	0.128	0.153	0.126	0.176	0.138	0.151	0.061	0.044	0.132	0.159	0.156	0.172	0.197	0.168	0.118	0.001
							1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129	137
LTE Band 71	20M_QPSK_1_0	M	133297	Right Cheek	0.276	116	0.067	0.001	0.081	0.087	0.098	0.119	0.142	0.148	0.086	0.001	0.001	0.076	0.085	0.122	0.112	0.124	0.117	0.001
							2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122	130	138
FR1 n71	20M_BPSK_1_1	M	136100	Right Cheek	0.235	8	0.125	0.065	0.085	0.060	0.069	0.082	0.102	0.094	0.129	0.077	0.001	0.001	0.044	0.088	0.073	0.112	0.092	0.099

Head (Ant4)	RF exposure position							Average Value of Time Sweep (W/kg)																
	Band	Mode	Channel	Test Position	Measured 1g SAR (W/kg)	Auto-Tune (State)																		
							3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123	131	139
GSM850	GPRS (4 Tx slots)	L	128	Left Cheek	0.318	0	0.114	0.128	0.047	0.045	0.196	0.112	0.351	0.216	0.397	0.282	0.194	0.083	0.062	0.388	0.324	0.469	0.323	0.241
							4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124	132	140
GSM1900	GPRS (4 Tx slots)	M	661	Left Cheek	0.023	0	0.080	0.064	0.078	0.063	0.060	0.053	0.065	0.076	0.051	0.070	0.048	0.065	0.065	0.071	0.053	0.042	0.062	0.046
							5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125	133	141
WCDMA Band 5	RMC 12.2Kbps	L	4132	Left Cheek	0.387	108	0.142	0.210	0.120	0.055	0.001	0.001	0.311	0.225	0.261	0.204	0.245	0.188	0.084	0.074	0.044	0.241	0.274	0.195
							6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126	134	142
LTE Band 5	10M_QPSK_1_0	M	20525	Left Cheek	0.388	34	0.281	0.285	0.270	0.137	0.120	0.046	0.001	0.382	0.317	0.362	0.312	0.331	0.197	0.186	0.066	0.060	0.367	0.300
							7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127	135	143
FR1 n5	20M_BPSK_50_28	M	167300	Left Cheek	0.319	139	0.092	0.150	0.097	0.119	0.060	0.001	0.001	0.001	0.166	0.122	0.173	0.126	0.139	0.083	0.049	0.001	0.001	0.178

16.2 Supplemental Body SAR results

Body (Ant0)	RF exposure position						Average Value of Time Sweep (W/kg)																	
	Band	Mode	Channel	Test Position	Measured 1g SAR (W/kg)	Auto-Tune (State)																		
							0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136
LTE Band 17	10M_QPSK_1_0	M	23790	Bottom Side_10mm	0.325	111	0.063	0.320	0.187	0.283	0.217	0.272	0.204	0.235	0.097	0.075	0.200	0.224	0.321	0.257	0.414	0.309	0.231	0.078
							1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129	137
LTE Band 71	20M_QPSK_1_0	M	133297	Back_10mm	0.228	116	0.217	0.068	0.133	0.155	0.162	0.204	0.236	0.250	0.177	0.060	0.001	0.001	0.167	0.221	0.208	0.261	0.234	0.063
							2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122	130	138
FR1 n71	20M_BPSK_50_28	M	136100	Back_10mm	0.271	8	0.166	0.070	0.101	0.162	0.163	0.199	0.204	0.212	0.234	0.202	0.049	0.050	0.124	0.203	0.185	0.253	0.218	0.218

Body (Ant4)	RF exposure position						Average Value of Time Sweep (W/kg)																	
	Band	Mode	Channel	Test Position	Measured 1g SAR (W/kg)	Auto-Tune (State)																		
							3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123	131	139
GSM850	GPRS (4 Tx slots)	H	251	Back_10mm	0.373/0.688	0	0.102	0.095	0.038	0.033	0.404	0.227	0.340	0.217	0.326	0.123	0.104	0.045	0.031	0.418	0.280	0.377	0.222	0.357
							4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124	132	140
GSM1900	GPRS (4 Tx slots)	H	810	Back_10mm	0.398	0	0.175	0.288	0.097	0.058	0.001	0.554	0.537	0.483	0.498	0.307	0.247	0.072	0.445	0.001	0.468	0.474	0.448	0.409
							5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125	133	141
WCDMA Band 5	RMC 12.2Kbps	M	4182	Back_10mm	0.535	108	0.262	0.366	0.227	0.087	0.067	0.001	0.430	0.383	0.451	0.328	0.415	0.286	0.110	0.091	0.001	0.433	0.432	0.465
							6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126	134	142
LTE Band 5	10M_QPSK_1_0	M	20525	Back_10mm	0.408	34	0.291	0.328	0.283	0.160	0.112	0.001	0.001	0.404	0.405	0.369	0.378	0.343	0.202	0.150	0.050	0.044	0.408	0.411
							7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127	135	143
FR1 n5	20M_BPSK_1_1	M	167300	Back_10mm	0.459	139	0.198	0.265	0.168	0.223	0.104	0.083	0.001	0.001	0.337	0.255	0.317	0.226	0.273	0.144	0.111	0.050	0.001	0.305

Test Engineer : Mood Huang, Hank Chiang, Jay Jian, Lu Chen and Jocelyn Huang

17. 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	(C1) 1g	(C1) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System							
Probe Calibration	18.60	N	2	1	1	9.3	9.3
Axial Isotropy	4.70	R	1.732	0.7	0.7	1.9	1.9
Hemispherical Isotropy	9.60	R	1.732	0.7	0.7	3.9	3.9
Linearity	4.70	R	1.732	1	1	2.7	2.7
Modulation Response	4.68	R	1.732	1	1	2.7	2.7
System Detection Limits	1.00	R	1.732	1	1	0.6	0.6
Boundary Effects	2.00	R	1.732	1	1	1.2	1.2
Readout Electronics	0.30	N	1	1	1	0.3	0.3
Response Time	0.00	R	1.732	1	1	0.0	0.0
Integration Time	2.60	R	1.732	1	1	1.5	1.5
RF Ambient Noise	3.00	R	1.732	1	1	1.7	1.7
RF Ambient Reflections	3.00	R	1.732	1	1	1.7	1.7
Probe Positioner	0.40	R	1.732	1	1	0.2	0.2
Probe Positioning	6.70	R	1.732	1	1	3.9	3.9
Post-processing	4.00	R	1.732	1	1	2.3	2.3
Test Sample Related							
Device Holder	3.60	N	1	1	1	3.6	3.6
Test sample Positioning	3.03	N	1	1	1	3.0	3.0
Power Scaling	0.00	R	1.732	1	1	0.0	0.0
Power Drift	5.00	R	1.732	1	1	2.9	2.9
Phantom and Setup							
Phantom Uncertainty	7.60	R	1.732	1	1	4.4	4.4
SAR correction	0.00	R	1.732	1	0.84	0.0	0.0
Liquid Conductivity Repeatability	0.03	N	1	0.78	0.77	0.0	0.0
Liquid Conductivity (target)	5.00	R	1.732	0.78	0.77	2.3	2.2
Liquid Conductivity (mea.)	2.50	R	1.732	0.78	0.77	1.1	1.1
Temp. unc. - Conductivity	3.68	R	1.732	0.78	0.77	1.7	1.6
Liquid Permittivity Repeatability	0.02	N	1	0.23	0.26	0.0	0.0
Liquid Permittivity (target)	5.00	R	1.732	0.23	0.26	0.7	0.8
Liquid Permittivity (mea.)	2.50	R	1.732	0.23	0.26	0.3	0.4
Temp. unc. - Permittivity	0.84	R	1.732	0.23	0.26	0.1	0.1
Combined Std. Uncertainty						14.5%	14.2%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.4%



Applicable for Power Density Measurements:

Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response (BW ≤ 1 GHz)	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance 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 dep endent 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

**18. References**

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