FCC SAR Test Report

APPLICANT	:	**Motorola Mobility, LLC**
EQUIPMENT	:	**Mobile Cellular Phone**
BRAND NAME	:	**Motorola**
MODEL NAME	:	**XT2071-4**
FCC ID	:	**IHDT56ZB2**
STANDARD	:	**FCC 47 CFR Part 2 (2.1093)** **ANSI/IEEE C95.1-1992** **IEEE 1528-2013**

We, Sporton International (Kunshan) Inc, would like to declare that the tested sample has been evaluated in accordance with the procedures and had been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Reviewed by: Rose Wang / Supervisor

Approved by: Kat Yin / Manager

ACCREDITED
Cert #5145.02

Sporton International (Kunshan) Inc.
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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA052803-05	Rev. 01	Initial issue of report.	Jan. 21, 2021

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility, LLC, Mobile Cellular Phone, XT2071-4,** are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 5mm)	Body-worn (Separation 5mm)	Highest Simultaneous Transmission 1g SAR (W/kg)
			1g SAR (W/kg)			
Licensed	GSM	GSM850	0.22	0.78	0.75	1.59
		GSM1900	0.17	**0.93**	0.90	
	WCDMA	Band II	0.30	**0.93**	0.93	
		Band IV	0.32	0.83	0.80	
		Band V	0.17	0.92	0.80	
	CDMA	CDMA2000 BC0	<0.10	0.89	0.83	
	LTE	Band 2	**0.38**	0.80	0.80	
		Band 7	0.22	**0.93**	0.82	
		Band 12/Band 17	0.10	0.52	0.52	
		Band 13	0.14	0.77	0.77	
		Band 26/Band 5	0.16	0.87	0.87	
		Band 66/Band 4	0.18	0.85	0.61	
		Band 71	<0.10	0.56	0.32	
		Band 41/Band 38	0.10	**0.93**	0.39	
	5G NR	n5	<0.10	0.79	0.79	
		n41	0.27	0.86	0.34	
DTS	WLAN	2.4GHz WLAN	0.11	0.48	0.91	1.59
NII		5GHz WLAN	<0.10	0.72	**1.15**	1.59
DSS	Bluetooth	2.4GHz Bluetooth	<0.10	0.86	0.86	1.58

Highest 10g SAR Summary				
Equipment Class	Frequency Band		Product Specific 10g SAR (W/kg) (Separation 0mm)	Highest Simultaneous Transmission 10g SAR (W/kg)
Licensed	WCDMA	Band II	1.47	3.95
		Band IV	1.64	
	LTE	Band 2	2.10	
		Band 7	1.40	
		Band 66/Band 4	2.47	
		Band 41/Band 38	1.78	
	5G NR	n41	1.54	
DTS	WLAN	2.4GHz WLAN	**3.65**	3.68
NII		5GHz WLAN	3.15	3.95
Date of Testing:			2020/6/1~ 2020/6/28 & 2021/1/2~ 2021/1/13	

Remark: This device supports LTE B4 / B5 / B17 / B38 and B66 / B26 / B12 / B41. Since the supported frequency span for LTE B4 / B5 / B17 / B38 falls completely within the supports frequency span for LTE B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66 / B26 / B12 / B41.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

2. Administration Data

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory		
Test Firm	Sporton International (Kunshan) Inc.	
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CN1257	314309

Applicant	
Company Name	Motorola Mobility, LLC
Address	222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States

Manufacturer	
Company Name	Motorola Mobility, LLC
Address	222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States

3. Guidance Applied

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

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

4. Equipment Under Test (EUT) Information

4.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2071-4
FCC ID	IHDT56ZB2
IMEI Code	SIM1: 351648110009017 SIM2: 351648110009025
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band IV: 1712.4 MHz ~ 1752.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz CDMA2000 BC0: 824.7 MHz ~ 848.31 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~695.5 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC: 13.56 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+(16QAM uplink is not supported) CDMA2000 : 1xRTT/1xEv-Do(Rel.0)/1xEv-Do(Rev.A) LTE: QPSK, 16QAM, 64QAM, 256QAM(Downlink only) 5G NR : CP-OFDM / DFT-s-OFDM, PI/2 BPSK, QPSK, 16QAM, 64QAM WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC:ASK
HW Version	DVT2
SW Version	userdebug_10_QPS30.219_dbafb_intcfg-test-keys
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.
EUT Stage	Identical Prototype
Remark: 1. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.	

2. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
3. This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only).
4. This device does not support DTM operation and supports GRPS/EGRPS mode up to multi-slot class 12.
5. For dual SIM card mobile has two SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (single active). After pre-scan two SIM cards power, we found test result of the SIM1 was the worse, so we chose SIM1 slot to perform all tests.
6. The device implements the power management and sensor detection for SAR compliance at different exposure conditions (head, body-worn, hotspot/extremity) and the Qualcomm smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description.
7. This device implements antenna tuning techniques for several WWAN (cellular) operating modes and frequencies for the purpose of improving antenna efficiency over a broad range of frequencies. Specifically, these techniques are employed in the WCDMA, CDMA and LTE modes. In this report SAR was measured according to the normally required SAR configurations with the tuner active and worst tune state (auto tune) was used for SAR testing. The detail descriptions of the antenna tuner and supplemental data for additional information on section18.
8. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
9. 5G NR supports CP-OFDM and DFT-s-OFDM modulation, for DFT-s-OFDM power is higher than CP-OFDM, so only show DFT-s-OFDM power table and chose CP-OFDM to perform SAR testing.
10. For DFT-s-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for the CP-OFDM mode will not higher than DFT-s-OFDM mode, therefore, CP-OFDM measurement is unnecessary.
11. The device has two work states, flip open and flip close, according to normal using scenario, two state have been performed to SAR testing.
12. This device supports 5GNR FR1 bands as following table.
13. This is a variant report for XT2071-4. For model change note, please refer to the product equality declaration exhibit submitted. Based on the similarity between two models, only the hotspot/body-worn retest WLAN2.4GHz/5GHz, and other Bands leverage from original report which can be referred to Sporton Report Number FA052803.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n5	FDD	15	5, 10, 15, 20
	n41	TDD	30	20, 40, 50, 60, 80, 90, 100

4.2 Maximum Tune-up Limit

General Note:

1. For each cellular band, the device has two WWAN Tx antennas, the antenna selection is based on the connection quality condition, and only one antenna will transmit at a time.
2. The device implements the power management and sensor detection for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity) by DSI and the Qualcomm Smart Transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision and sensor detection are provided in the operational description.
3. Below table shows maximum tune up output power configured for this EUT for various transmit conditions (Device State Index DSI) by manufacturer, and the detail power measurement and tune-up limit refer to appendix E.

Antenna configuration	
Config*	Support transmit antenna and band
Config 0	ANT 1: GSM850/1900, UMTS B2/B4/B5, CDMA BC0, LTE B2/B4/B5/B7B12/B13/B17/B26/B38/B41/B66/B71, NR n5
Config 1	ANT 2: LTE B2/B4/B5/B7/B12/B13/B17/B26/B38/B41/B66/B71, NR n5/ n41

*Config 0 and 1 means output ports of power measurement for different antennas and bands.

Config0			Maximum Transmit Power Level (dBm)					
Radio Tech	Band Number	Antenna name	Default	Head	Body-Worn	Hotspot		Handheld
				Flip Open	Flip Close	Flip Open	Flip Close	Flip Open
			DSI_4	DSI_2	DSI_5	DSI_3	DSI_5	DSI_6
GSM1Tx	850	ANT1	33.50	33.50	32.50	33.50	32.50	33.50
GSM2Tx	850	ANT1	32.50	32.50	29.50	30.50	29.50	32.50
GSM3Tx	850	ANT1	30.50	30.50	27.50	28.50	27.50	30.50
GSM4Tx	850	ANT1	28.50	28.50	26.00	26.50	26.00	28.50
GSM1Tx	1900	ANT1	30.50	30.50	29.50	30.50	29.50	30.50
GSM2Tx	1900	ANT1	29.50	29.50	26.50	28.50	26.50	29.50
GSM3Tx	1900	ANT1	28.00	28.00	25.00	27.20	25.00	28.00
GSM4Tx	1900	ANT1	26.00	26.00	23.50	25.20	23.50	26.00
WCDMA	B2	ANT1	24.00	24.00	22.00	21.60	22.00	24.00
WCDMA	B4	ANT1	24.00	24.00	21.60	22.20	21.60	24.00
WCDMA	B5	ANT1	24.00	24.00	22.90	22.90	22.90	24.00
CDMA	BC0	ANT1	25.00	25.00	23.40	24.60	23.40	25.00
LTE	B2	ANT1	24.00	24.00	21.00	21.30	21.00	24.00
LTE	B4	ANT1	24.00	24.00	20.60	22.00	20.60	24.00
LTE	B5	ANT1	24.00	24.00	24.00	24.00	24.00	24.00
LTE	B7	ANT1	24.00	24.00	19.90	19.50	19.90	23.00
LTE	B12	ANT1	24.00	24.00	24.00	24.00	24.00	24.00
LTE	B13	ANT1	24.00	24.00	24.00	24.00	24.00	24.00
LTE	B17	ANT1	24.00	24.00	24.00	24.00	24.00	24.00
LTE	B26	ANT1	24.00	24.00	24.00	24.00	24.00	24.00
LTE	B38	ANT1	24.00	24.00	19.10	21.10	19.10	24.00
LTE	B41	ANT1	24.00	24.00	19.10	21.10	19.10	24.00
LTE	B66	ANT1	24.00	24.00	20.60	22.00	20.60	24.00
LTE	B71	ANT1	24.00	24.00	24.00	24.00	24.00	24.00
5G FR1	n5	ANT1	24.00	24.00	24.00	24.00	24.00	24.00

Config1			Maximum Transmit Power Level (dBm)					
Radio Tech	Band Number	Antenna name	Default	Head	Body-Worn	Hotspot		Handheld
				Flip Open	Flip Close	Flip Open	Flip Close	Flip Open
			DSI_4	DSI_2	DSI_5	DSI_3	DSI_5	DSI_6
LTE	B2	ANT2	22.00	22.00	22.00	22.00	22.00	22.00
LTE	B4	ANT2	22.00	22.00	22.00	22.00	22.00	22.00
LTE	B5	ANT2	23.00	23.00	23.00	23.00	23.00	23.00
LTE	B7	ANT2	22.00	22.00	19.40	21.10	19.40	22.00
LTE	B12	ANT2	23.00	23.00	23.00	23.00	23.00	23.00
LTE	B13	ANT2	23.00	23.00	23.00	23.00	23.00	23.00
LTE	B17	ANT2	23.00	23.00	23.00	23.00	23.00	23.00
LTE	B26	ANT2	23.00	23.00	23.00	23.00	23.00	23.00
LTE	B38	ANT2	22.00	22.00	21.00	19.80	21.00	22.00
LTE	B41	ANT2	23.50	23.50	21.00	19.80	21.00	23.50
LTE	B66	ANT2	22.00	22.00	22.00	22.00	22.00	22.00
LTE	B71	ANT2	23.00	23.00	23.00	23.00	23.00	23.00
5G FR1	n5	ANT2	24.00	24.00	24.00	24.00	24.00	24.00
5G FR1	n41	ANT2	24.00	24.00	18.70	18.70	18.70	24.00

<WLAN Maximum Power>

General Note:

1. The device implements the power management for WLAN SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity). The control logic about the power management decision is provided in the operational description.
2. The WLAN power table relate to each exposure condition is description below:
   a. Power Table 1/3/4/5: Full power
   b. Power Table 3: Head SAR for standalone and simultaneously transmit.
   c. Power Table 2: Hotspot SAR for standalone and simultaneously transmit.
   d. Power Table 6: Body worn SAR for standalone transmit and Power Table 7 used for simultaneously transmit.
   e. Power Table 9: Extremity SAR for standalone transmit and Power Table 8 used for simultaneously transmit.
3. The Bluetooth power table relate to each exposure condition is description below:
   a. Power Table 1: Full power
   b. Power Table 2: For simultaneously transmit.

<2.4GHz WLAN>

Band	Mode	Channel	Ant 4						Ant 3						Ant 3+4					
			Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9
2.4GHz WLAN	802.11b 1Mbps	1	21.00	15.00	18.00	15.00	18.00	20.00	21.00	15.00	18.00	15.00	18.00	20.00	24.00	18.00	21.00	18.00	21.00	23.00
		6	21.00	15.00	18.00	15.00	18.00	20.00	21.00	15.00	18.00	15.00	18.00	20.00	24.00	18.00	21.00	18.00	21.00	23.00
		11	21.00	15.00	18.00	15.00	18.00	20.00	21.00	15.00	18.00	15.00	18.00	20.00	24.00	18.00	21.00	18.00	21.00	23.00
	802.11g 6Mbps	1	15.50	15.00	15.50	15.00	15.50	15.50	15.50	15.00	15.50	15.00	15.50	15.50	18.50	18.00	18.50	18.00	18.50	18.50
		2	18.00	15.00	18.00	15.00	18.00	18.00	18.00	15.00	18.00	15.00	18.00	18.00	21.00	18.00	21.00	18.00	21.00	21.00
		6	20.00	15.00	18.00	15.00	18.00	20.00	20.00	15.00	18.00	15.00	18.00	20.00	23.00	18.00	21.00	18.00	23.00	23.00
		10	18.00	15.00	18.00	15.00	18.00	18.00	18.00	15.00	18.00	15.00	18.00	18.00	21.00	18.00	21.00	18.00	21.00	21.00
		11	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	17.50	17.50	17.50	17.50	17.50	17.50
	802.11n-HT20 MCS0	1	15.50	15.00	15.50	15.00	15.50	15.50	15.50	15.00	15.50	15.00	15.50	15.50	18.50	18.00	18.50	18.00	18.50	18.50
		2	18.00	15.00	18.00	15.00	18.00	18.00	18.00	15.00	18.00	15.00	18.00	18.00	21.00	18.00	21.00	18.00	21.00	21.00
		6	20.00	15.00	20.00	15.00	18.00	20.00	20.00	15.00	18.00	15.00	18.00	20.00	23.00	18.00	21.00	18.00	23.00	23.00
		10	18.00	15.00	18.00	15.00	18.00	18.00	18.00	15.00	18.00	15.00	18.00	18.00	21.00	18.00	21.00	18.00	21.00	21.00
		11	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	17.50	17.50	17.50	17.50	17.50	17.50
	802.11n-HT40 MCS0	3	15.50	15.00	15.50	15.00	15.50	15.50	15.50	15.00	15.50	15.00	15.50	15.50	18.50	18.00	18.50	18.00	18.50	18.50
		6	15.50	15.00	15.50	15.00	15.50	15.50	15.50	15.00	15.50	15.00	15.50	15.50	18.50	18.00	18.50	18.00	18.50	18.50
		9	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	16.00	16.00	16.00	16.00	16.00	16.00

< Bluetooth>

Mode	Channel	Ant 4	
		Power Table 2	Power Table 1
BR / EDR (1Mbps)	CH 00	9.00	15.50
	CH 39	9.00	15.50
	CH 78	9.00	15.50

<5GHz WLAN>

Band	Mode	Channel	Ant 4						Ant 3						Ant 3+4					
			Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9
5.2GHz WLAN	802.11a 6Mbps	36	17.00	15.50	17.00	15.50	17.00	17.00	17.00	15.50	17.00	15.50	17.00	17.00	20.00	18.50	20.00	18.50	20.00	20.00
		40	17.00	15.50	17.00	15.50	17.00	17.00	17.00	15.50	17.00	15.50	17.00	17.00	20.00	18.50	20.00	18.50	20.00	20.00
		44	17.00	15.50	17.00	15.50	17.00	17.00	17.00	15.50	17.00	15.50	17.00	17.00	20.00	18.50	20.00	18.50	20.00	20.00
		48	17.00	15.50	17.00	15.50	17.00	17.00	17.00	15.50	17.00	15.50	17.00	17.00	20.00	18.50	20.00	18.50	20.00	20.00
	802.11n-HT20 MCS0	36	17.50	15.50	17.50	15.50	17.50	17.50	17.50	15.50	17.50	15.50	17.50	17.50	20.50	18.50	20.50	18.50	20.50	20.50
		40	17.50	15.50	17.50	15.50	17.50	17.50	17.50	15.50	17.50	15.50	17.50	17.50	20.50	18.50	20.50	18.50	20.50	20.50
		44	17.50	15.50	17.50	15.50	17.50	17.50	17.50	15.50	17.50	15.50	17.50	17.50	20.50	18.50	20.50	18.50	20.50	20.50
		48	17.50	15.50	17.50	15.50	17.50	17.50	17.50	15.50	17.50	15.50	17.50	17.50	20.50	18.50	20.50	18.50	20.50	20.50
	802.11n-HT40 MCS0	38	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	17.00	17.00	17.00	17.00	17.00	17.00
		46	20.00	15.50	18.50	15.50	18.50	20.00	20.00	15.50	18.50	15.50	18.50	20.00	23.00	18.50	21.50	18.50	21.50	23.00
	802.11ac-VHT20 MCS0	36	17.50	15.50	17.50	15.50	17.50	17.50	17.50	15.50	17.50	15.50	17.50	17.50	20.50	18.50	20.50	18.50	20.50	20.50
		40	17.50	15.50	17.50	15.50	17.50	17.50	17.50	15.50	17.50	15.50	17.50	17.50	20.50	18.50	20.50	18.50	20.50	20.50
		44	17.50	15.50	17.50	15.50	17.50	17.50	17.50	15.50	17.50	15.50	17.50	17.50	20.50	18.50	20.50	18.50	20.50	20.50
		48	17.50	15.50	17.50	15.50	17.50	17.50	17.50	15.50	17.50	15.50	17.50	17.50	20.50	18.50	20.50	18.50	20.50	20.50
	802.11ac-VHT40 MCS0	38	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	17.00	17.00	17.00	17.00	17.00	17.00
		46	20.00	15.50	18.50	15.50	18.50	20.00	20.00	15.50	18.50	15.50	18.50	20.00	23.00	18.50	21.50	18.50	21.50	23.00
	802.11ac-VHT80 MCS0	42	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	16.00	16.00	16.00	16.00	16.00	16.00

Band	Mode	Channel	Ant 4						Ant 3						Ant 3+4					
			Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9
5.3GHz WLAN	802.11a 6Mbps	52	17.00	-	17.00	15.50	17.00	17.00	17.00	-	17.00	15.50	17.00	17.00	20.00	-	20.00	18.50	20.00	20.00
		56	17.00	-	17.00	15.50	17.00	17.00	17.00	-	17.00	15.50	17.00	17.00	20.00	-	20.00	18.50	20.00	20.00
		60	17.00	-	17.00	15.50	17.00	17.00	17.00	-	17.00	15.50	17.00	17.00	20.00	-	20.00	18.50	20.00	20.00
		64	17.00	-	17.00	15.50	17.00	17.00	17.00	-	17.00	15.50	17.00	17.00	20.00	-	20.00	18.50	20.00	20.00
	802.11n-HT20 MCS0	52	17.50	-	17.50	15.50	17.50	17.50	17.50	-	17.50	15.50	17.50	17.50	20.50	-	20.50	18.50	20.50	20.50
		56	17.50	-	17.50	15.50	17.50	17.50	17.50	-	17.50	15.50	17.50	17.50	20.50	-	20.50	18.50	20.50	20.50
		60	17.50	-	17.50	15.50	17.50	17.50	17.50	-	17.50	15.50	17.50	17.50	20.50	-	20.50	18.50	20.50	20.50
		64	17.50	-	17.50	15.50	17.50	17.50	17.50	-	17.50	15.50	17.50	17.50	20.50	-	20.50	18.50	20.50	20.50
	802.11n-HT40 MCS0	54	20.00	-	18.50	15.50	18.00	20.00	20.00	-	18.50	15.50	18.00	20.00	23.00	-	21.50	18.50	21.00	23.00
		62	15.50	-	15.50	15.50	15.50	15.50	15.50	-	15.50	15.50	15.50	15.50	18.50	-	18.50	18.50	18.50	18.50
	802.11ac-VHT20 MCS0	52	17.50	-	17.50	15.50	17.50	17.50	17.50	-	17.50	15.50	17.50	17.50	20.50	-	20.50	18.50	20.50	20.50
		56	17.50	-	17.50	15.50	17.50	17.50	17.50	-	17.50	15.50	17.50	17.50	20.50	-	20.50	18.50	20.50	20.50
		60	17.50	-	17.50	15.50	17.50	17.50	17.50	-	17.50	15.50	17.50	17.50	20.50	-	20.50	18.50	20.50	20.50
		64	17.50	-	17.50	15.50	17.50	17.50	17.50	-	17.50	15.50	17.50	17.50	20.50	-	20.50	18.50	20.50	20.50
	802.11ac-VHT40 MCS0	54	20.00	-	18.50	15.50	18.00	20.00	20.00	-	18.50	15.50	18.00	20.00	23.00	-	21.50	18.50	21.00	23.00
		62	15.50	-	15.50	15.50	15.50	15.50	15.50	-	15.50	15.50	15.50	15.50	18.50	-	18.50	18.50	18.50	18.50
	802.11ac-VHT80 MCS0	58	15.50	-	15.50	15.50	15.50	15.50	15.50	-	15.50	15.50	15.50	15.50	18.50	-	18.50	18.50	18.50	18.50

Band	Mode	Channel	Ant 4						Ant 3						Ant 3+4					
			Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9
5.5GHz WLAN	802.11a 6Mbps	100	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		116	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		124	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		132	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		140	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		144	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
	802.11n-HT20 MCS0	100	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		116	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		124	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		132	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		140	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		144	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
	802.11n-HT40 MCS0	102	18.00	-	16.00	15.00	16.50	18.00	18.00	-	16.00	15.00	16.50	18.00	21.00	-	19.00	18.00	19.50	21.00
		110	20.00	-	16.00	15.00	16.50	20.00	20.00	-	16.00	15.00	16.50	20.00	23.00	-	19.00	18.00	19.50	23.00
		126	20.00	-	16.00	15.00	16.50	20.00	20.00	-	16.00	15.00	16.50	20.00	23.00	-	19.00	18.00	19.50	23.00
		134	20.00	-	16.00	15.00	16.50	20.00	20.00	-	16.00	15.00	16.50	20.00	23.00	-	19.00	18.00	19.50	23.00
		142	20.00	-	16.00	15.00	16.50	20.00	20.00	-	16.00	15.00	16.50	20.00	23.00	-	19.00	18.00	19.50	23.00
	802.11ac-VHT20 MCS0	100	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		116	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		124	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		132	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		140	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
		144	17.50	-	16.00	15.00	16.50	17.50	17.50	-	16.00	15.00	16.50	17.50	20.50	-	19.00	18.00	19.50	20.50
	802.11ac-VHT40 MCS0	102	18.00	-	16.00	15.00	16.50	18.00	18.00	-	16.00	15.00	16.50	18.00	21.00	-	19.00	18.00	19.50	21.00
		110	20.00	-	16.00	15.00	16.50	20.00	20.00	-	16.00	15.00	16.50	20.00	23.00	-	19.00	18.00	19.50	23.00
		126	20.00	-	16.00	15.00	16.50	20.00	20.00	-	16.00	15.00	16.50	20.00	23.00	-	19.00	18.00	19.50	23.00
		134	20.00	-	16.00	15.00	16.50	20.00	20.00	-	16.00	15.00	16.50	20.00	23.00	-	19.00	18.00	19.50	23.00
		142	20.00	-	16.00	15.00	16.50	20.00	20.00	-	16.00	15.00	16.50	20.00	23.00	-	19.00	18.00	19.50	23.00
	802.11ac-VHT80 MCS0	106	17.00	-	16.00	15.00	16.50	17.00	17.00	-	16.00	15.00	16.50	17.00	20.00	-	19.00	18.00	19.50	20.00
		122	19.00	-	16.00	15.00	16.50	19.00	19.50	-	16.00	15.00	16.50	19.50	22.50	-	19.00	18.00	19.50	22.50
		138	19.00	-	16.00	15.00	16.50	19.00	19.50	-	16.00	15.00	16.50	19.50	22.50	-	19.00	18.00	19.50	22.50

Band	Mode	Channel	Ant 4						Ant 3						Ant 3+4					
			Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9	Power Table 1/3/4/5	Power Table 2	Power Table 6	Power Table 7	Power Table 8	Power Table 9
5.8GHz WLAN	802.11a 6Mbps	149	21.00	16.00	16.00	16.00	17.50	19.50	21.00	16.00	16.00	16.00	17.50	19.50	24.00	19.00	19.00	19.00	20.50	22.50
		157	21.00	16.00	16.00	16.00	17.50	19.50	21.00	16.00	16.00	16.00	17.50	19.50	24.00	19.00	19.00	19.00	20.50	22.50
		165	21.00	16.00	16.00	16.00	17.50	19.50	21.00	16.00	16.00	16.00	17.50	19.50	24.00	19.00	19.00	19.00	20.50	22.50
	802.11n-HT20 MCS0	149	20.50	16.00	16.00	16.00	17.50	19.50	20.50	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
		157	20.50	16.00	16.00	16.00	17.50	19.50	20.50	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
		165	20.50	16.00	16.00	16.00	17.50	19.50	20.50	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
	802.11n-HT40 MCS0	151	20.50	16.00	16.00	16.00	17.50	19.50	20.50	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
		159	20.50	16.00	16.00	16.00	17.50	19.50	20.50	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
	802.11ac-VHT20 MCS0	149	20.50	16.00	16.00	16.00	17.50	19.50	20.50	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
		157	20.50	16.00	16.00	16.00	17.50	19.50	20.50	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
		165	20.50	16.00	16.00	16.00	17.50	19.50	20.50	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
	802.11ac-VHT40 MCS0	151	20.00	16.00	16.00	16.00	17.50	19.50	20.00	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
		159	20.00	16.00	16.00	16.00	17.50	19.50	20.00	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50
	802.11ac-VHT80 MCS0	155	20.00	16.00	16.00	16.00	17.50	19.50	20.00	16.00	16.00	16.00	17.50	19.50	23.00	19.00	19.00	19.00	20.50	22.50

4.3 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05	
FCC ID	IHDT56ZB2
Equipment Name	Mobile Cellular Phone
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 13: 779.5 MHz ~ 784.5 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 26: 814.7 MHz ~ 848.3 MHz LTE Band 38: 2572.5 MHz ~ 2617.5 MHz LTE Band 41: 2498.5 MHz ~ 2687.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~695.5 MHz
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz
uplink modulations used	QPSK / 16QAM / 64QAM
LTE Voice / Data requirements	Voice and Data
LTE Release Version	R15, Cat18
CA Support	Supported, Uplink and Downlink
LTE MPR permanently built-in by design	**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3** Modulation: Channel bandwidth / Transmission bandwidth (N_{RB}) 1.4 MHz, 3.0 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz; MPR (dB) 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	Yes The device has several different power modes for body-worn, hotspot/extremity conditions SAR compliance; power selection is determined by the device's positioning and usage scenarios.
LTE Carrier Aggregation Combinations	Intra/Inter Band possible combinations and the detail power verification please referred to section 14.
LTE Carrier Aggregation Additional Information	1. This device supports LTE Carrier Aggregation (CA) in the uplink for 41C with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 4 carriers in the downlink. 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 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	23017	699.7	23025	700.5	23035	701.5	23060	704				
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5				
H	23173	715.3	23165	714.5	23155	713.5	23130	711				
LTE Band 13												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	23205		779.5		23230		782					
M	23230		782									
H	23255		784.5									
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 26										
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5

LTE Band 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
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680

LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770

LTE Band 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

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n5 : 824 MHz ~ 849 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz
Channel Bandwidth	5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n41: 20MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM CP-OFDM QPSK / 16QAM / 64QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n5	LTE B7
LTE Anchor Bands for n41	LTE B41

Transmission (H, M, L) channel numbers and frequencies in each 5G NR band

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 41

	Bandwidth 20MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	501204	2506.02	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
H	535998	2679.99	534000	2670	532998	2664.99	531996	2659.98	529998	2649.99	528996	2644.98	528000	2640

5. Smart Transmit feature for RF Exposure compliance

The FCC RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with FCC RF exposure limit over a defined time window, for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.

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

<Terminologies in this report>

P_{limit}	The time-averaged RF power which corresponds to SAR_design_target.
P_{max}	Maximum target power level
SAR_design_target:	The design target for SAR compliance. It should be less than regulatory SAR limit to account for all device design related 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>

Exposure conditions	Trigger Conditions	DSI	SAR design target	W/kg
Head	Earpiece on	2	1g SAR design target	0.74
Body Worn/Hotspot	Proximity Sensor on or Hotspot on (Flip Open)	3	1g SAR design target	0.74
Body Worn/Hotspot	Proximity Sensor on or Hotspot on (Flip Close)	5	1g SAR design target	0.74
Extremity	Proximity sensor on	6	10g SAR design target	2.0

	Uncertainty dB (k=2)
Sub6 radio TxAGC	1.0
Device to device variation	1.2
Total uncertainty	1.5

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

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

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

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

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

ANT1								
Radio Tech	Band Number	Antenna name	Head Flip open (DSI2)	Flip Open body sensor on (Front/Back) /Hotspot on (DSI3)	Flip Close body sensor on/Hotspot on (DSI5)	Flip Open /Extremity sensor on (DSI6)	Proximity Sensor off (DSI4)	Pmax*
GSM2Tx	850**	ANT1	31.0	23.5	22.5	31.0	27.2	25.5
GSM3Tx	1900**	ANT1	30.0	21.9	19.7	30.0	28.1	22.7
WCDMA	B2	ANT1	29.0	20.6	21.0	23.5	26.9	23.0
WCDMA	B4	ANT1	29.0	21.2	20.6	22.8	27.9	23.0
WCDMA	B5	ANT1	30.0	21.9	21.9	30.5	24.3	23.0
CDMA	BC0	ANT1	30.5	23.6	22.4	30.5	27.7	24.0
LTE	B2	ANT1	28.5	20.3	20.0	23.5	26.8	23.0
LTE	B7	ANT1	30.5	18.5	18.9	22.0	25.4	23.0
LTE	B12/17	ANT1	32.5	26.5	24.5	32.5	32.5	23.0
LTE	B13	ANT1	31.5	25.5	24.0	31.5	31.5	23.0
LTE	B5/26	ANT1	30.5	23.0	23.0	30.5	30.5	23.0
LTE	B4/66	ANT1	28.5	21.0	19.6	23.1	28.5	23.0
LTE	B71	ANT1	33.0	24.0	26.0	33.0	33.0	23.0
LTE	B38/41**	ANT1	31.5	18.1	16.1	22.0	25.9	21.0
5G FR1	n5	ANT1	33.0	33.0	27.2	33.0	33.0	23.0

ANT2								
Radio Tech	Band Number	Antenna name	Head Flip open (DSI2)	Flip Open body sensor on (Front/Back) /Hotspot on (DSI3)	Flip Close body sensor on/Hotspot on (DSI5)	Flip Open /Extremity sensor on (DSI6)	Proximity Sensor off (DSI4)	Pmax*
LTE	B2	ANT2	30.0	21.0	21.0	30.0	30.0	21.0
LTE	B7	ANT2	27.0	20.1	18.4	22.7	25.8	21.0
LTE	B12/17	ANT2	33.0	28.5	27.5	33.0	33.0	22.0
LTE	B13	ANT2	32.5	24.5	24.5	32.5	32.5	22.0
LTE	B26/5	ANT2	33.0	24.5	22.9	33.0	33.0	22.0
LTE	B38/41**	ANT2	29.5	16.8	18.0	22.0	29.5	20.5
LTE	B4/66	ANT2	29.5	23.5	23.5	29.5	29.5	21.0
LTE	B71	ANT2	33.0	30.5	28.0	33.0	33.0	22.0
5G FR1	n5	ANT2	33.0	27.0	27.0	33.0	33.0	23.0
5G FR1	n41	ANT2	27.0	17.7	17.7	23.1	27.0	23.0

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

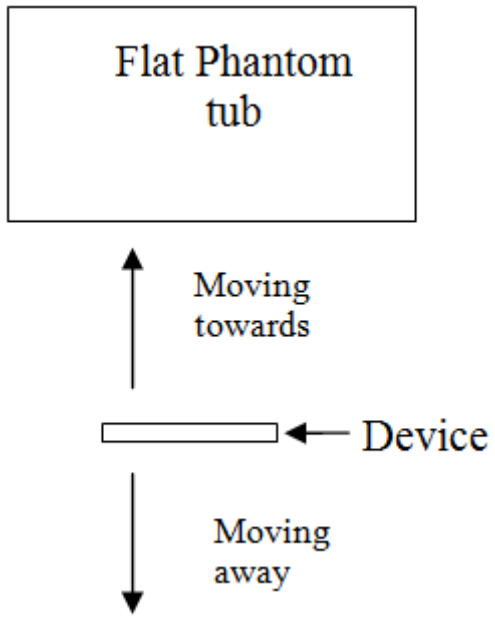
**All P_{limit} power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).

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.

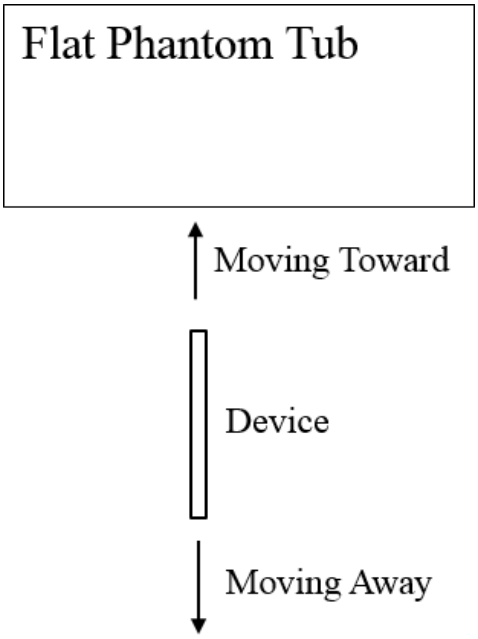
6. Proximity Sensor Triggering Test

6.1 Proximity sensor triggering distances(Per KDB616217§6.2)

1. Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed and the tissue-equivalent medium for highest frequency (5825MHz) and lowest (850MHz) frequency was used for proximity sensor triggering testing.
2. Capacitive proximity sensor placed coincident with antenna elements at the bottom end of the phone are utilized to determine when the device comes in proximity of the user's body at the front or back or bottom side surface of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.
3. When the proximity sensor is active, GSM850/1900, WCDMA band II/IV/V, CDMA BC0, LTE band 2/4/7/66/38/41, 5GNR n41 and WLAN2.4GHz / WLAN5.2GHz / 5.3GHz / 5.5GHz / 5.8GHz reduced power will be active for front or back body worn SAR.
4. P-sensor can detect handheld state, LTE band 7 and WLAN2.4GHz / WLAN5.8GHz for front/back/bottom sides of product specific 10g SAR condition reduced powers will be active for handheld SAR.
5. The proximity sensors used to detect the proximity of the user's body at the front or back or bottom side surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s).
6. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for body worn:
   WWAN:
   Front: 19 mm
   Back: 15mm
   WLAN:
   Back: 15mm
7. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for handheld:
   WWAN:
   Front: 13 mm
   Back: 11mm
   Bottom side: 13 mm
   WLAN:
   Back: 7 mm



Sensor/handheld detection test set-up, front and back faces



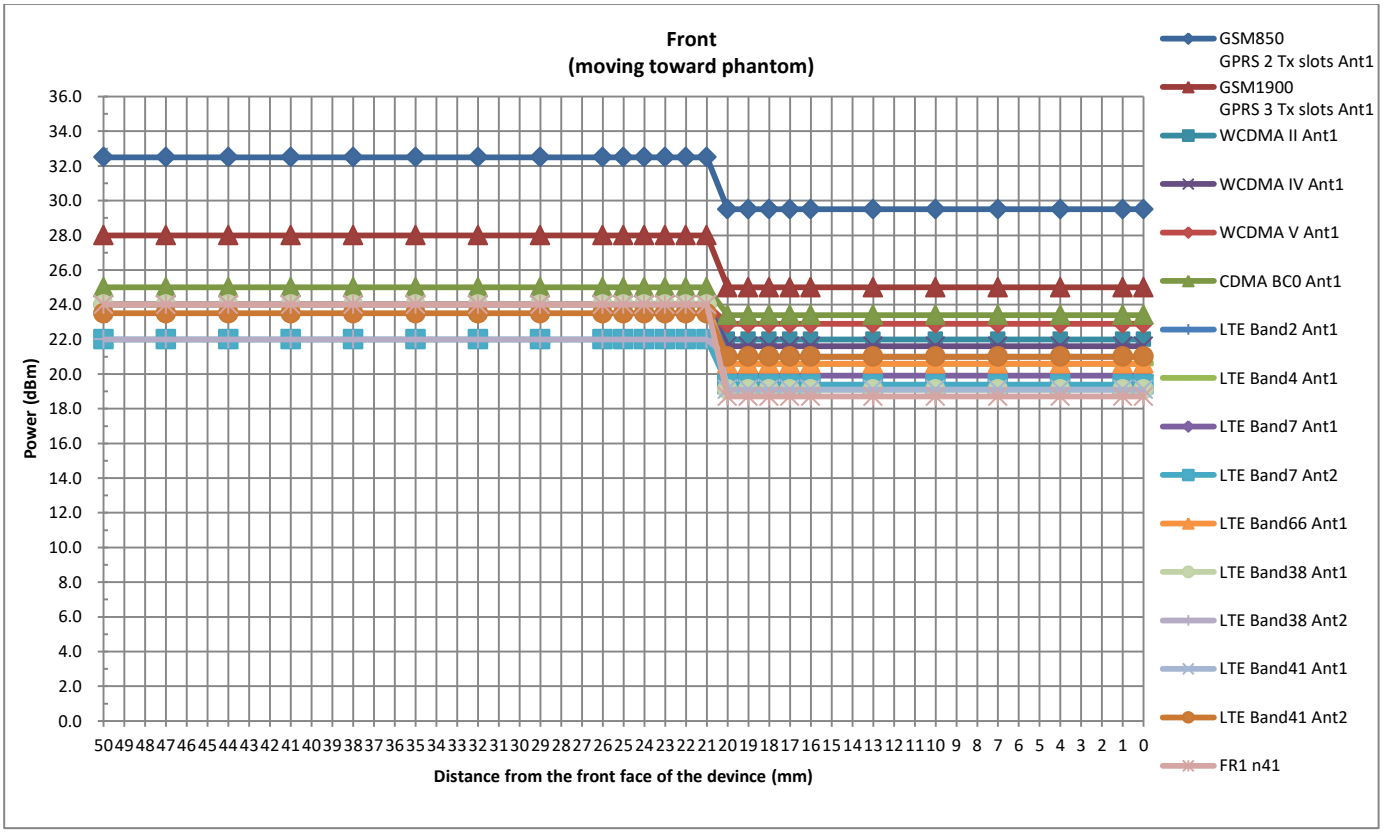
handheld detection test set-up, bottom side

<P-Sensor -- WWAN>

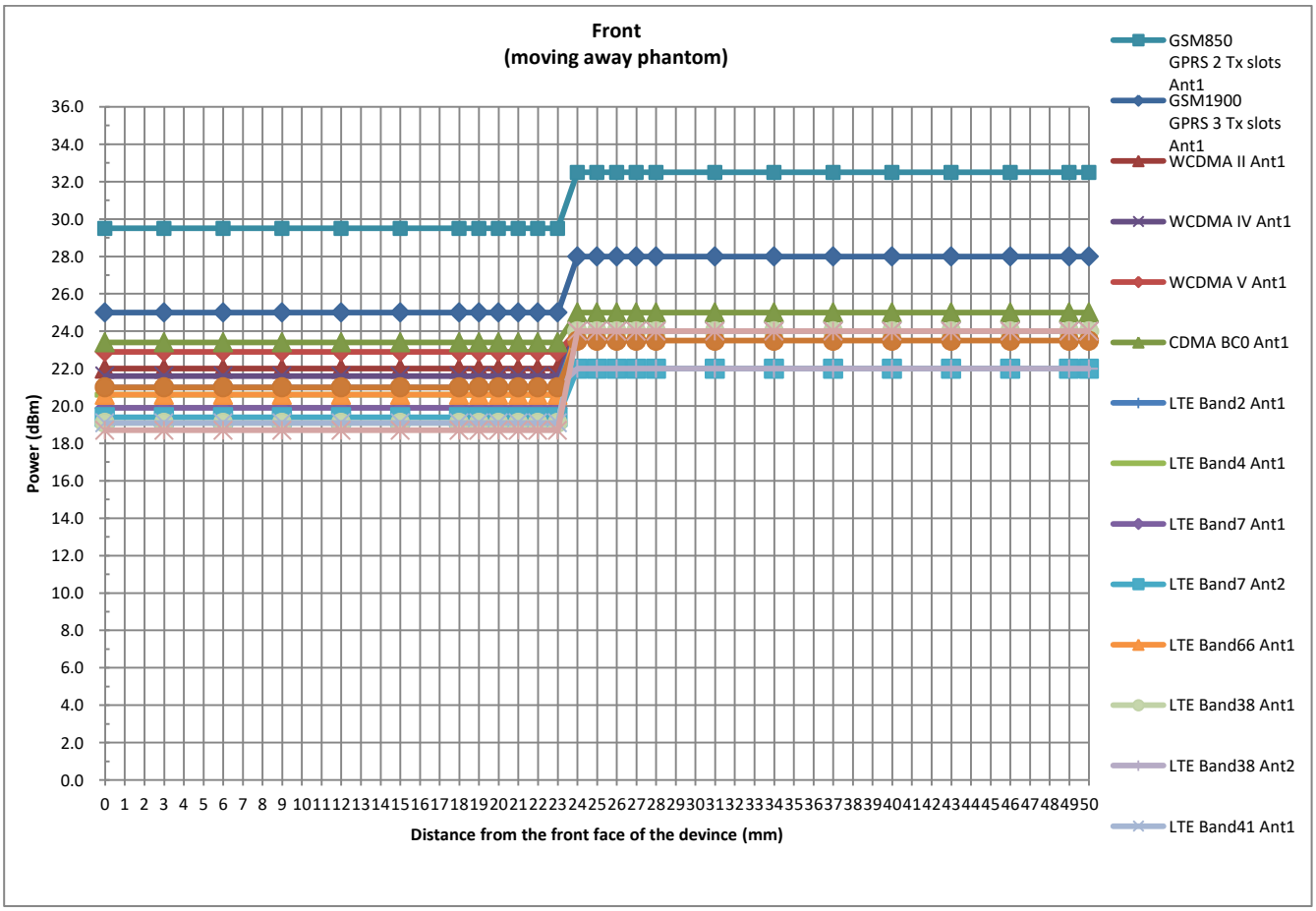
Proximity Sensor Triggering Distance (mm)				
Position	Front		Back	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	20	23	16	20

TX. Band	Proximity Sensor Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
GPRS850 2 Tx slots Ant 1	32.5	29.5	3.0
GPRS1900 3 Tx slots Ant 1	28.0	25.0	3.0
WCDMA Band II Ant 1	24.0	22.0	2.0
WCDMA Band IV Ant 1	24.0	21.6	2.4
WCDMA Band V Ant 1	24.0	22.9	1.1
CDMA BC0 Ant 1	25.0	23.4	1.6
LTE Band 2 Ant 1	24.0	21.0	3.0
LTE Band 4 Ant 1	24.0	20.6	3.4
LTE Band 7 Ant 1	24.0	19.9	4.1
LTE Band 7 Ant 2	22.0	19.4	2.6
LTE Band 66 Ant 1	24.0	20.6	3.4
LTE Band 38 Ant 1	24.0	19.1	4.9
LTE Band 38 Ant 2	23.5	21.0	2.5
LTE Band 41 Ant 1	24.0	19.1	4.9
LTE Band 41 Ant 2	23.5	21.0	2.5
FR1 n41 Ant 2	24.0	18.7	5.3

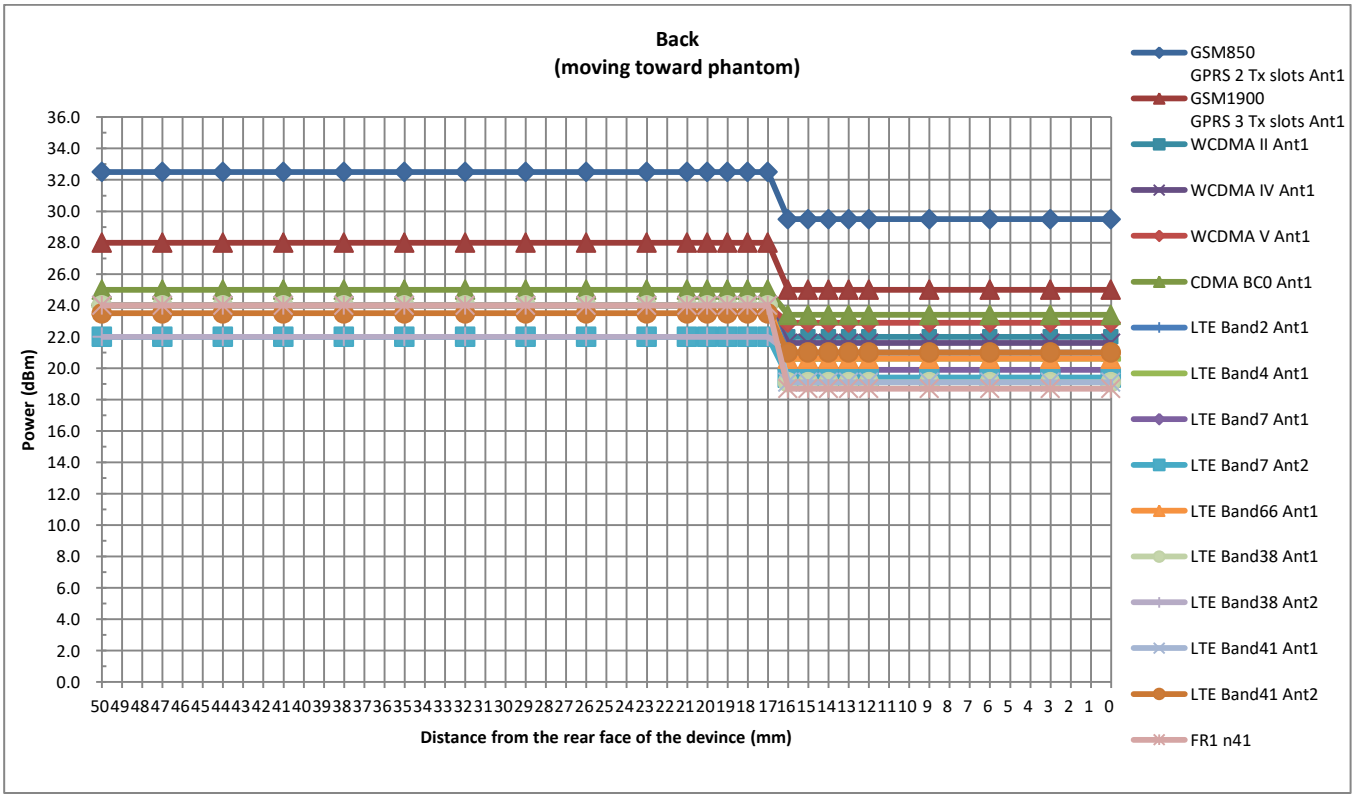
Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																									
Front																									
Distance	50	49	46	43	40	37	34	28	25	24	23	22	21	20	19	18	17	16	15	14	12	9	6	3	0
GPRS850 2 Tx slots Ant 1	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
GPRS1900 3 Tx slots Ant 1	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
WCDMA Band II Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
WCDMA Band IV Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
WCDMA Band V Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
CDMA BC0 Ant 1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9
LTE Band 7 Ant 2	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
LTE Band 66/4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
LTE Band 41/38 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
LTE Band 41/38 Ant 2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
FR1 n41 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7



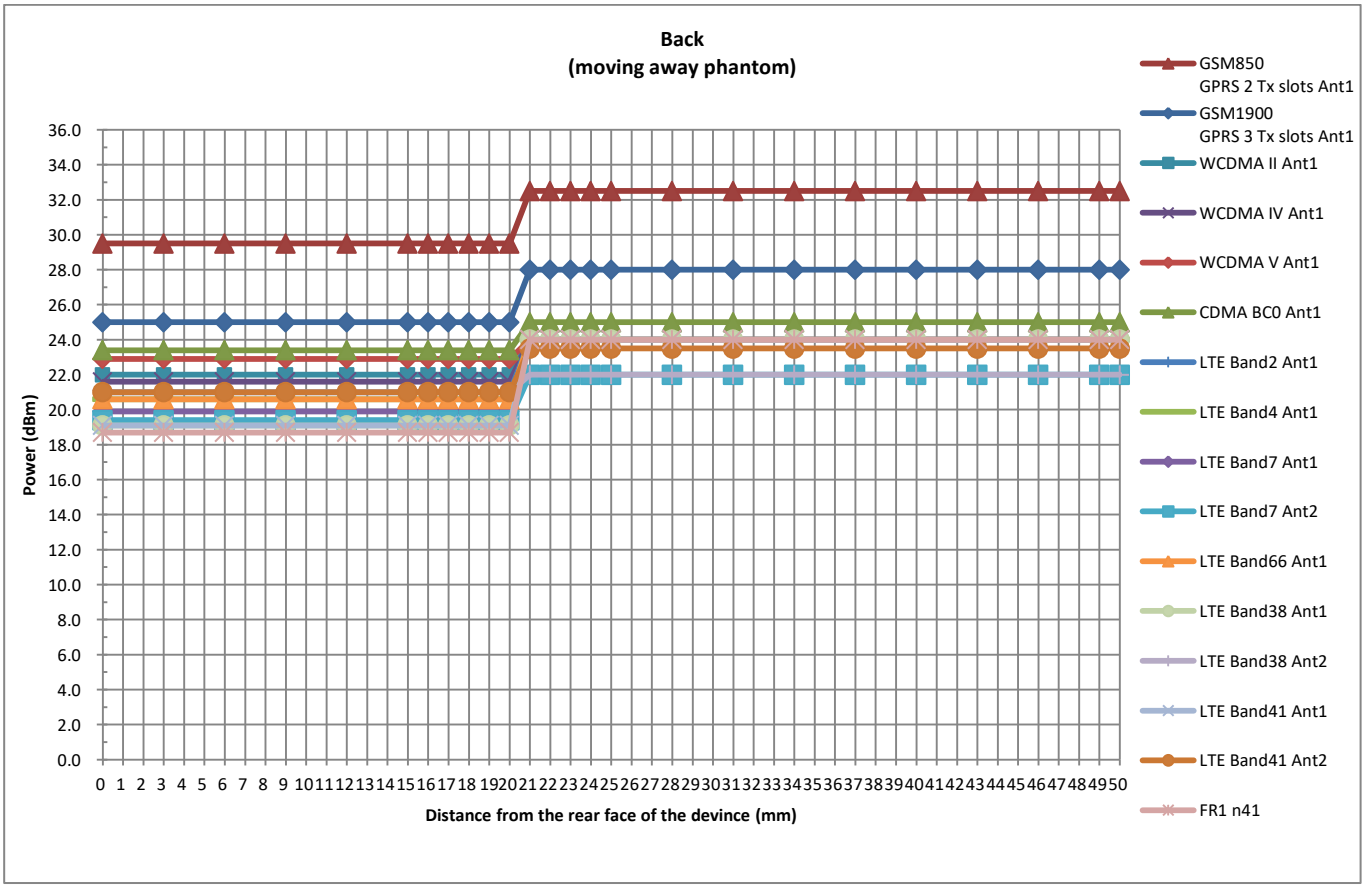
Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																									
Front																									
Distance	50	49	46	43	40	37	34	31	30	28	27	26	25	24	23	22	21	20	19	15	12	9	6	3	0
GPRS850 2 Tx slots Ant 1	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
GPRS1900 3 Tx slots Ant 1	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
WCDMA Band II Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
WCDMA Band IV Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
WCDMA Band V Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
CDMA BC0 Ant 1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9
LTE Band 7 Ant 2	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
LTE Band 66/4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
LTE Band 41/38 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
LTE Band 41/38 Ant 2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
FR1 n41 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7



Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	49	46	44	41	38	35	32	29	26	21	20	19	18	17	16	15	14	13	12	10	9	6	3	0
GPRS850 2 Tx slots Ant 1	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
GPRS1900 3 Tx slots Ant 1	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
WCDMA Band II Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
WCDMA Band IV Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
WCDMA Band V Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
CDMA BC0 Ant 1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9
LTE Band 7 Ant 2	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
LTE Band 66/4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
LTE Band 41/38 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
LTE Band 41/38 Ant 2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
FR1 n41 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7



Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	49	46	43	40	37	34	28	25	24	23	22	21	20	19	18	17	16	15	14	12	9	6	3	0
GPRS850 2 Tx slots Ant 1	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5
GPRS1900 3 Tx slots Ant 1	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
WCDMA Band II Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
WCDMA Band IV Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
WCDMA Band V Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
CDMA BC0 Ant 1	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
LTE Band 2 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
LTE Band 4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
LTE Band 7 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9
LTE Band 7 Ant 2	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
LTE Band 66/4 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
LTE Band 41/38 Ant 1	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
LTE Band 41/38 Ant 2	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
FR1 n41 Ant 2	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7

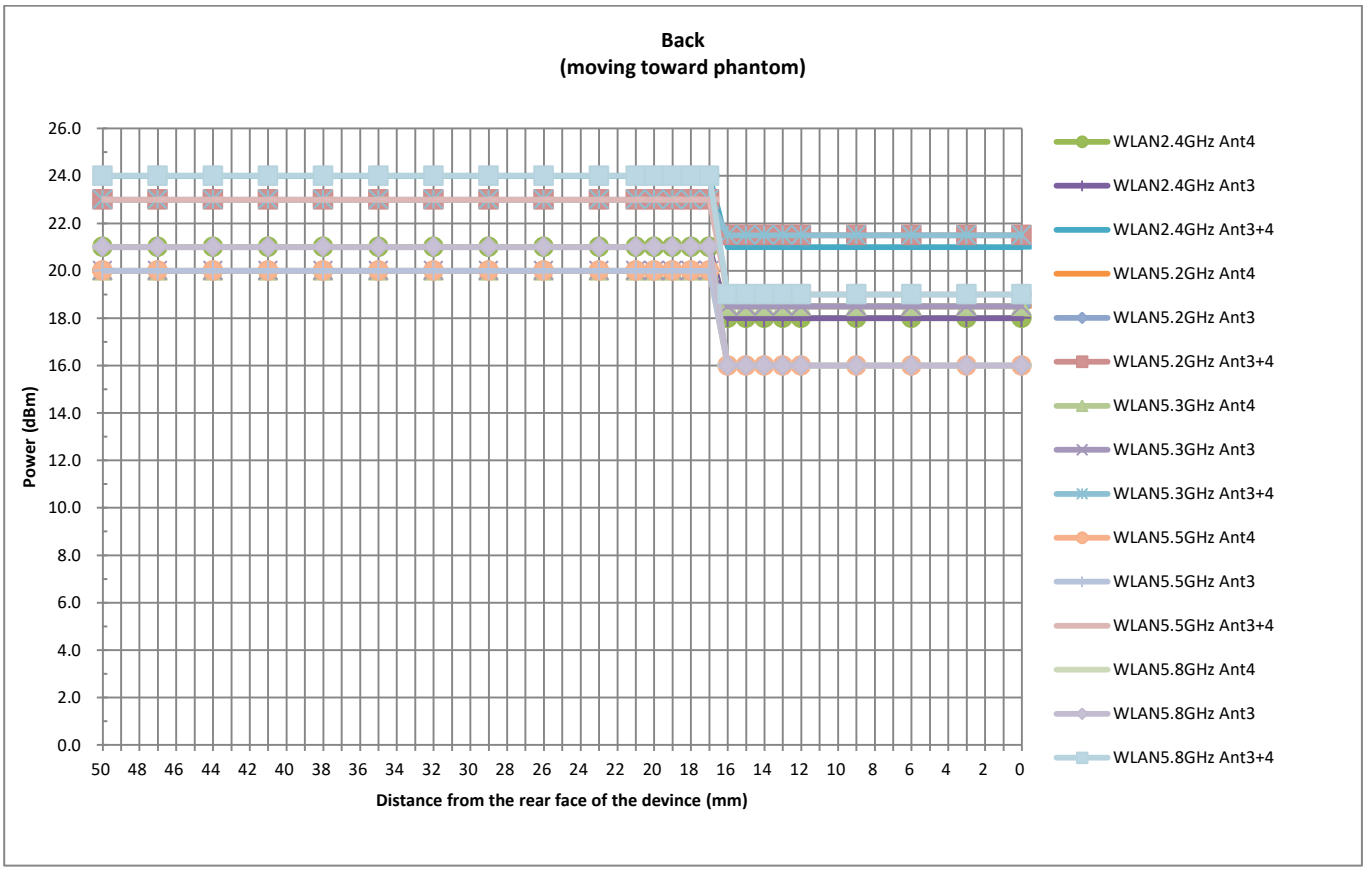


<P-Sensor -- WLAN>

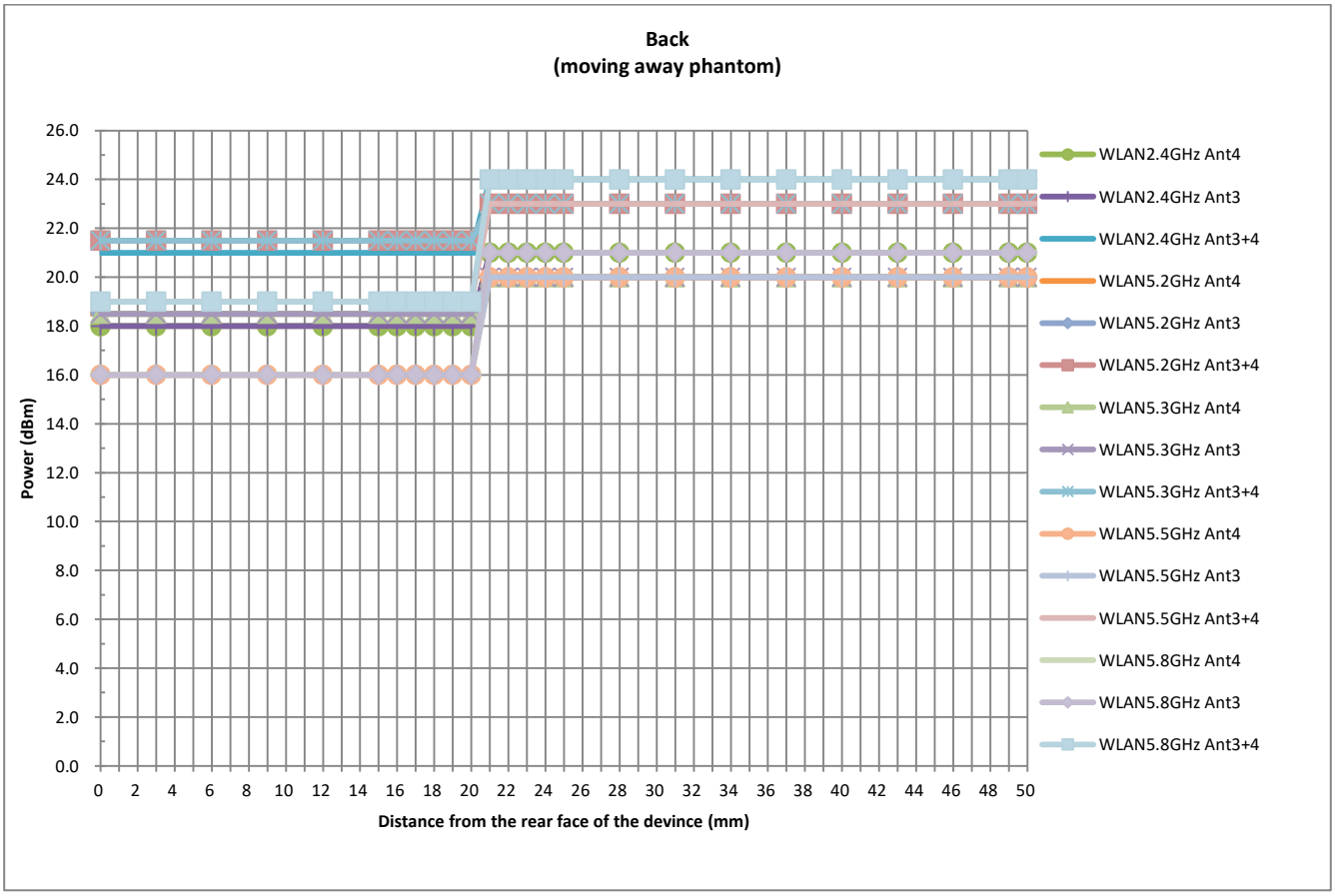
Proximity Sensor Triggering Distance (mm)		
Position	Back	
	Moving towards	Moving away
Minimum	16	20

TX. Band	Proximity Sensor Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
WLAN2.4GHz Ant 4	21.0	18.0	3.0
WLAN2.4GHz Ant 3	21.0	18.0	3.0
WLAN2.4GHz Ant 3+4	24.0	21.0	3.0
WLAN5.2GHz z Ant 4	20.0	18.5	1.5
WLAN5.2GHz Ant 3	20.0	18.5	1.5
WLAN5.2GHz Ant 3+4	23.0	21.5	1.5
WLAN5.3GHz z Ant 4	20.0	18.5	1.5
WLAN5.3GHz Ant 3	20.0	18.5	1.5
WLAN5.3GHz Ant 3+4	23.0	21.5	1.5
WLAN5.5GHz z Ant 4	20.0	16.0	4.0
WLAN5.5GHz Ant 3	20.0	16.0	4.0
WLAN5.5GHz Ant 3+4	23.0	19.0	4.0
WLAN5.8GHz z Ant 4	21.0	16.0	5.0
WLAN5.8GHz Ant 3	21.0	16.0	5.0
WLAN5.8GHz Ant 3+4	24.0	19.0	5.0

Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	49	46	43	40	37	34	31	28	25	22	21	20	19	18	17	16	15	14	13	12	9	6	3	0
WLAN2.4GHz Ant 4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WLAN2.4GHz Ant 3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WLAN2.4GHz Ant 3+4	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
WLAN5.2GHz z Ant 4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
WLAN5.2GHz Ant 3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
WLAN5.2GHz Ant 3+4	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
WLAN5.3GHz z Ant 4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
WLAN5.3GHz Ant 3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
WLAN5.3GHz Ant 3+4	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
WLAN5.5GHz z Ant 4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WLAN5.5GHz Ant 3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WLAN5.5GHz Ant 3+4	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
WLAN5.8GHz z Ant 4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WLAN5.8GHz Ant 3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WLAN5.8GHz Ant 3+4	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0



Proximity Sensor Triggering Distance (mm) and Triggering Power (dBm)																									
Back																									
Distance	50	49	46	44	41	38	35	32	29	25	24	23	22	21	20	19	18	17	16	15	12	9	6	3	0
WLAN2.4GHz Ant 4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WLAN2.4GHz Ant 3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
WLAN2.4GHz Ant 3+4	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
WLAN5.2GHz z Ant 4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
WLAN5.2GHz Ant 3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
WLAN5.2GHz Ant 3+4	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
WLAN5.3GHz z Ant 4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
WLAN5.3GHz Ant 3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
WLAN5.3GHz Ant 3+4	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
WLAN5.5GHz z Ant 4	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WLAN5.5GHz Ant 3	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WLAN5.5GHz Ant 3+4	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
WLAN5.8GHz z Ant 4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WLAN5.8GHz Ant 3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
WLAN5.8GHz Ant 3+4	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0

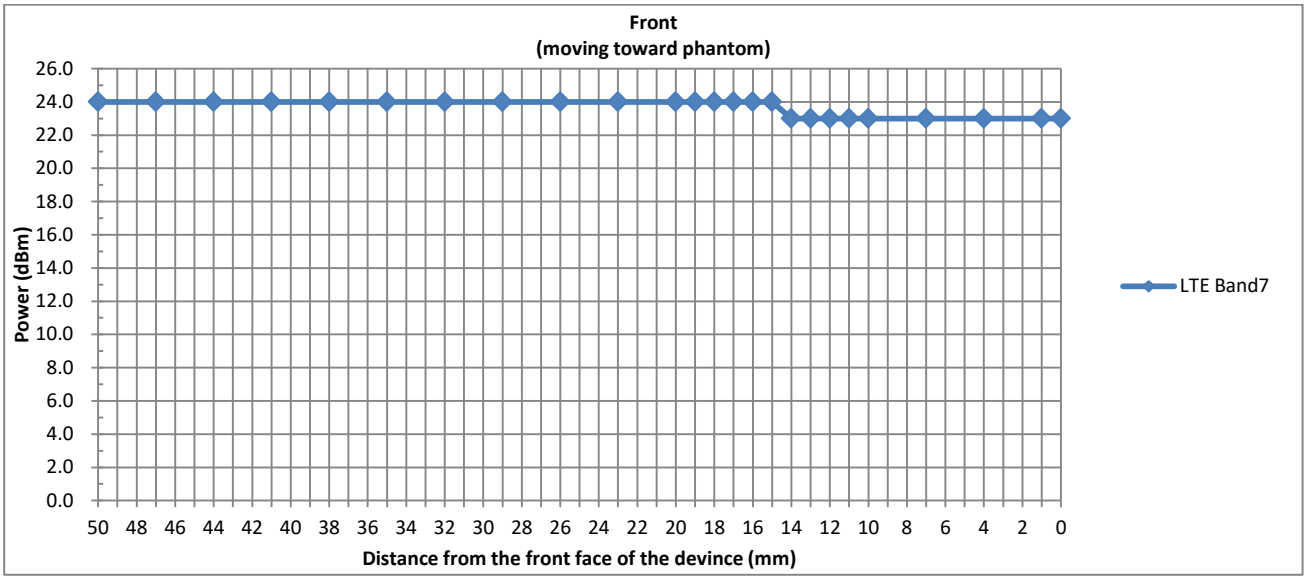


<Handheld -- WWAN>

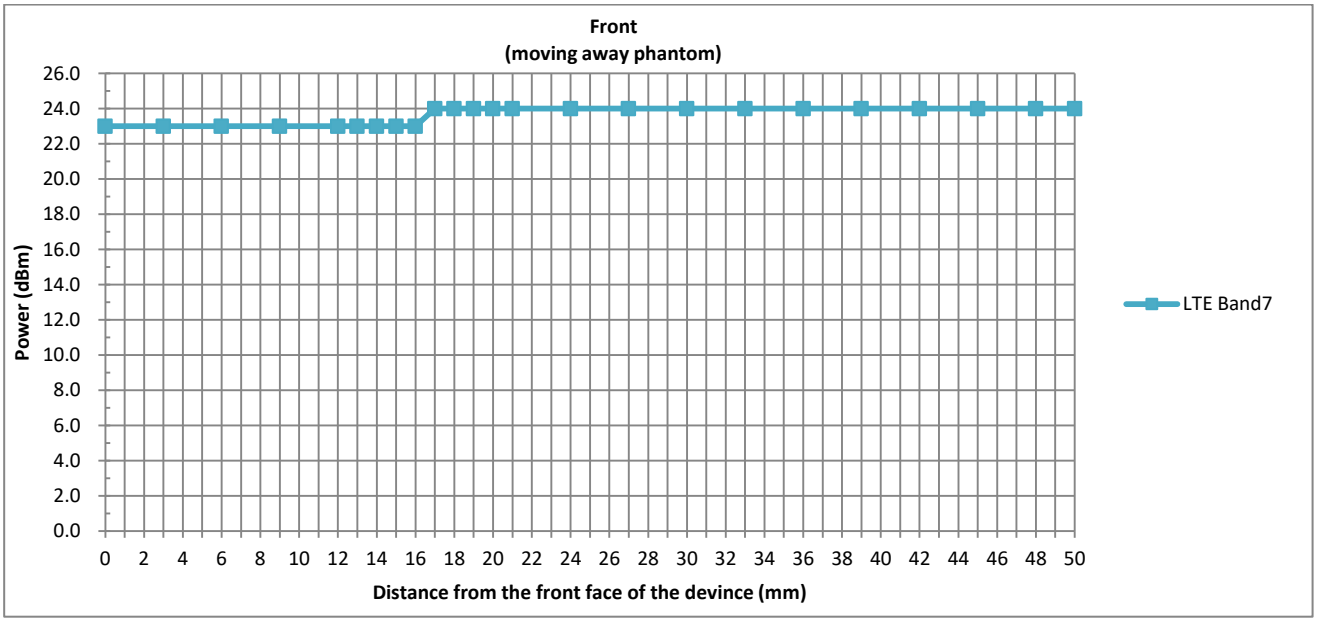
Position	Front		Back		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	14	16	12	16	14	18

TX. Band	Handheld Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
LTE Band 7 Ant 1	24.0	23.0	1.0

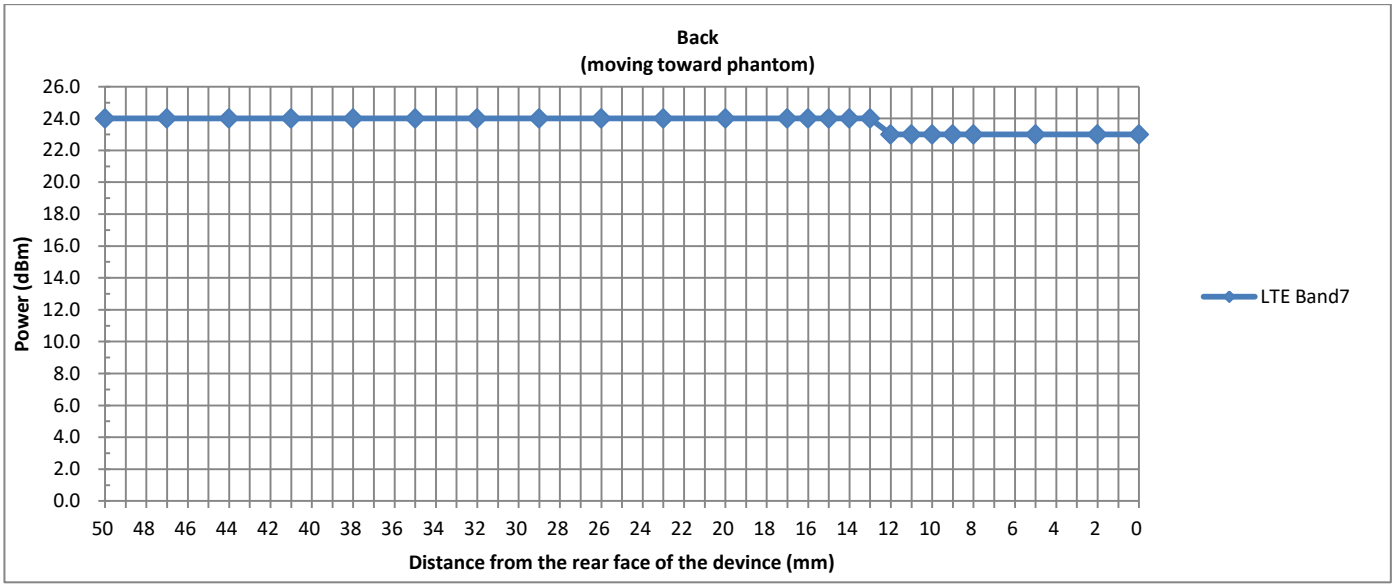
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	48	45	42	39	36	33	30	27	24	19	18	17	16	15	14	13	12	11	10	9	6	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0



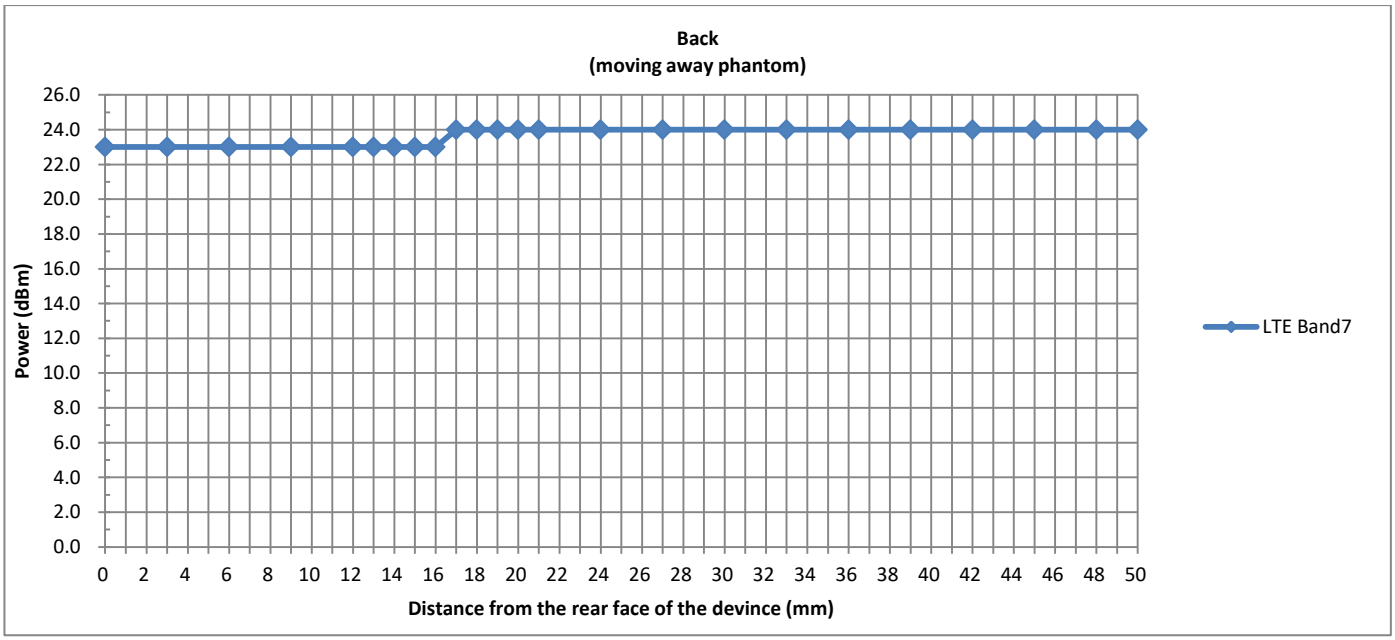
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Front																								
Distance	50	47	44	41	38	35	32	29	28	24	21	20	19	18	17	16	15	14	13	12	9	6	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0



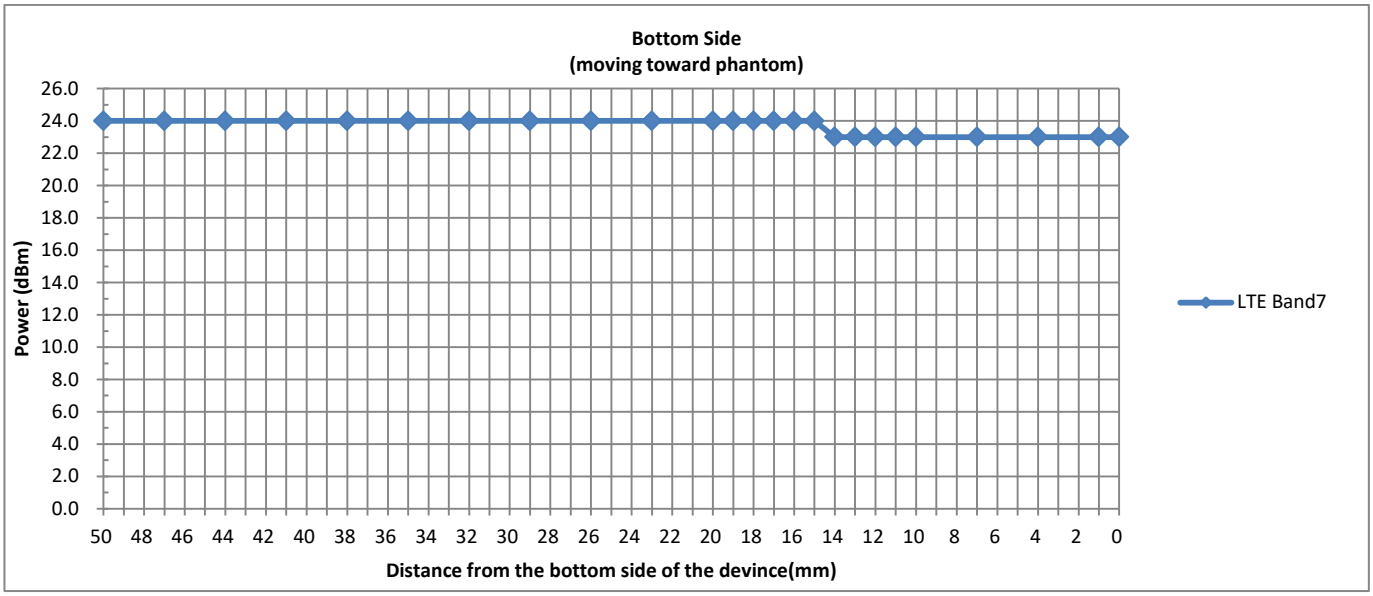
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	47	44	41	38	35	32	29	26	23	20	19	18	17	16	15	14	13	12	11	10	9	6	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0



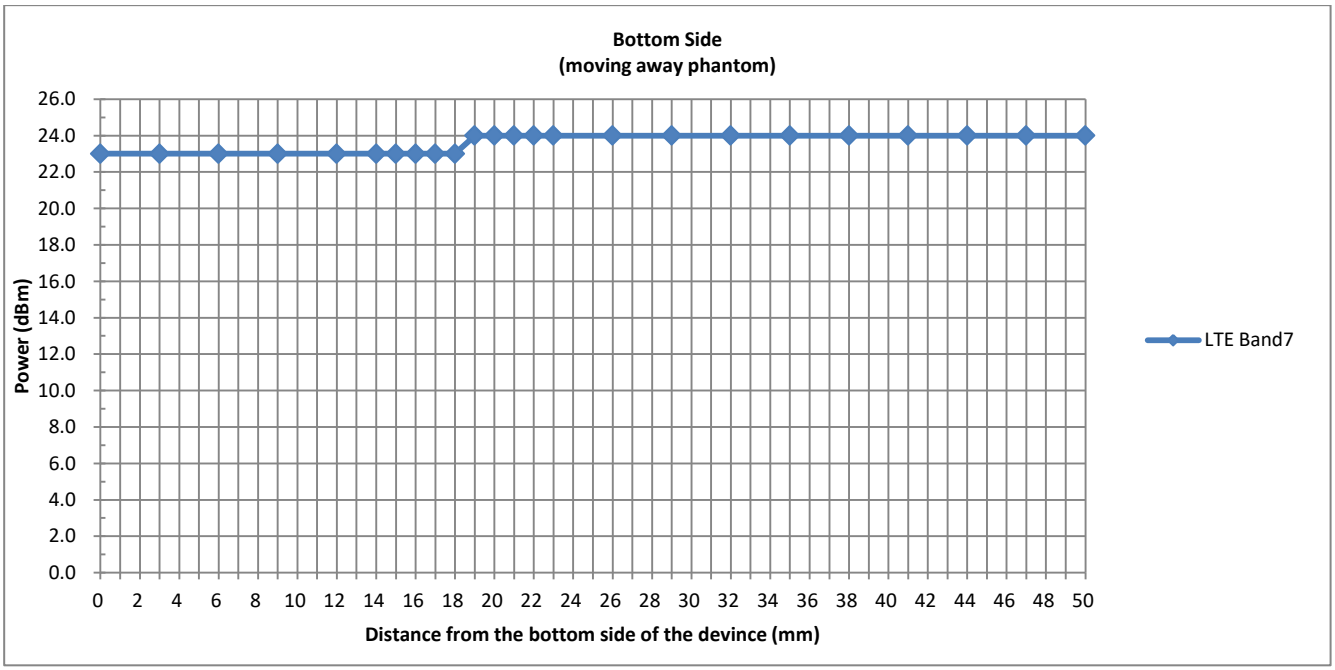
Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	47	44	41	38	35	32	29	28	24	21	20	19	18	17	16	15	14	13	12	9	6	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0



Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Bottom Side																								
Distance	50	47	44	41	38	35	32	29	26	24	19	18	17	16	15	14	13	12	11	10	9	6	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0



Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Bottom Side																								
Distance	50	48	45	42	39	36	33	29	26	23	22	21	20	19	18	17	16	15	14	12	9	6	3	0
LTE Band 7	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0

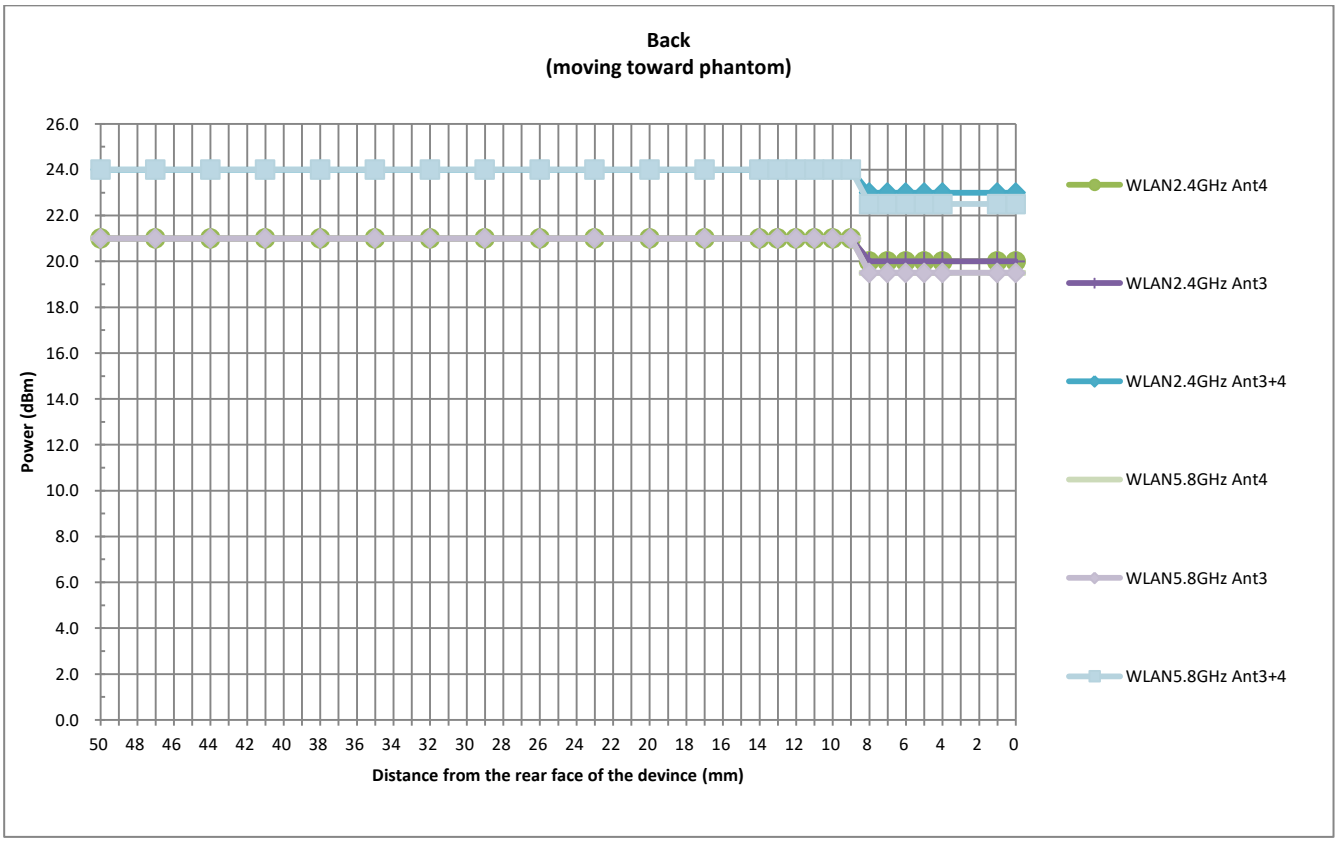


<Handheld -- WLAN>

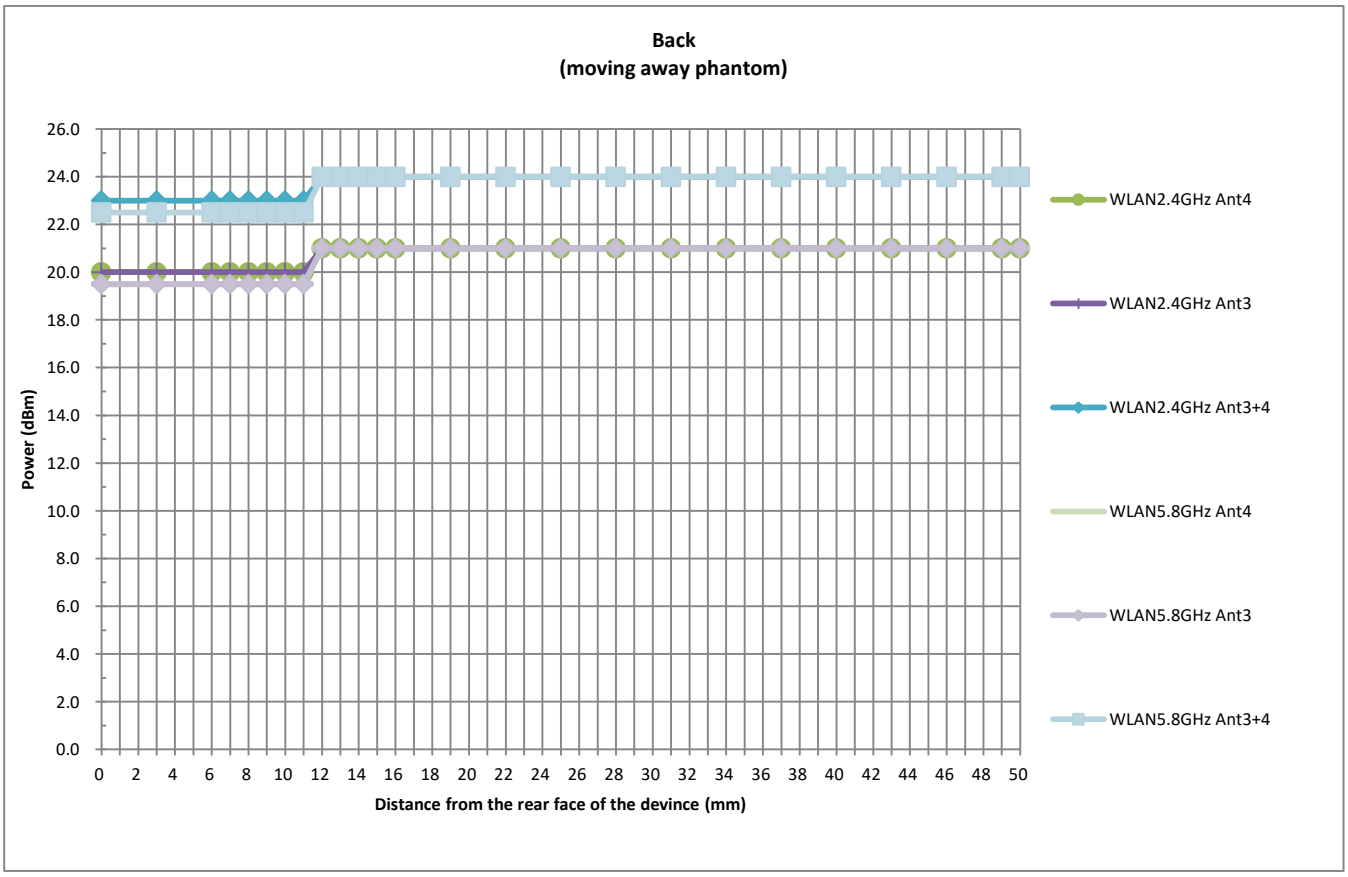
Proximity Sensor Triggering Distance (mm)		
Position	Back	
	Moving towards	Moving away
Minimum	8	11

TX. Band	Proximity Sensor Triggering Power (dBm)		
	Full	Reduced	power reduction (dB)
	max. tune up limit (dBm)	max. tune up limit(dBm)	
WLAN2.4GHz Ant 4	21.0	20.0	1.0
WLAN2.4GHz Ant 3	21.0	20.0	1.0
WLAN2.4GHz Ant 3+4	24.0	23.0	1.0
WLAN5.8GHz z Ant 4	21.0	19.5	1.5
WLAN5.8GHz Ant 3	21.0	19.5	1.5
WLAN5.8GHz Ant 3+4	24.0	22.5	1.5

Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	48	45	42	39	36	33	30	27	24	21	18	13	12	11	10	9	8	7	6	5	4	3	0
WLAN2.4GHz Ant 4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
WLAN2.4GHz Ant 3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
WLAN2.4GHz Ant 3+4	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
WLAN5.8GHz z Ant 4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WLAN5.8GHz Ant 3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WLAN5.8GHz Ant 3+4	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5



Handheld Triggering Distance (mm) and Triggering Power (dBm)																								
Back																								
Distance	50	47	44	41	38	35	32	29	28	24	21	16	15	14	13	12	11	10	9	8	7	5	2	0
WLAN2.4GHz Ant 4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
WLAN2.4GHz Ant 3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
WLAN2.4GHz Ant 3+4	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
WLAN5.8GHz z Ant 4	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WLAN5.8GHz Ant 3	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
WLAN5.8GHz Ant 3+4	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5



7. RF Exposure Limits

7.1 Uncontrolled Environment

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

7.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

8. Specific Absorption Rate (SAR)

8.1 Introduction

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

8.2 SAR Definition

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

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

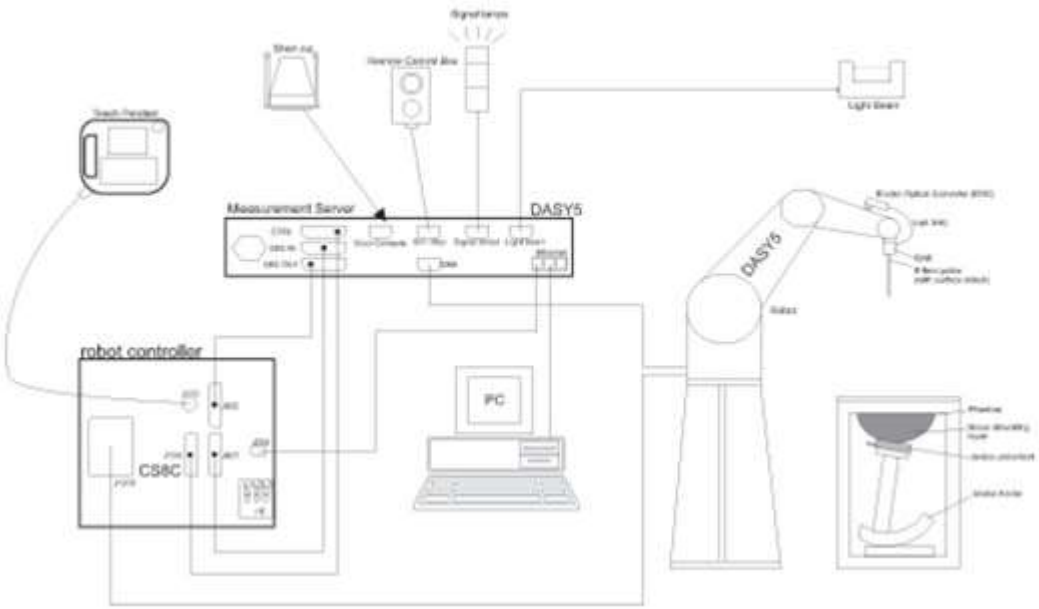
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

9. System Description and Setup

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

9.1 E-Field Probe

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

<EX3DV4 Probe>

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

9.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Photo of DAE

9.3 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)
Filling Volume	Approx. 30 liters
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

9.4 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

Mounting Device for Laptops

10. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
(b) Read the WWAN RF power level from the base station simulator.
(c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
(b) Place the EUT in the positions as Appendix D demonstrates.
(c) Set scan area, grid size and other setting on the DASY software.
(d) Measure SAR results for the highest power channel on each testing position.
(e) Find out the largest SAR result on these testing positions of each band
(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

10.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

10.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

10.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 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: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

10.4 Zoom Scan

Zoom scans are used 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: Δx_{Zoom}, Δy_{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 1st 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 *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

10.5 Volume Scan Procedures

The volume scan is used 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.

10.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

11. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1087	2019/3/27	2022/3/26
SPEAG	835MHz System Validation Kit	D835V2	4d151	2019/3/27	2022/3/26
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2019/3/27	2022/3/26
SPEAG	1900MHz System Validation Kit	D1900V2	5d170	2019/3/26	2022/3/25
SPEAG	2450MHz System Validation Kit	D2450V2	908	2019/3/25	2022/3/24
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2018/12/7	2020/11/26
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2021/11/25
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2019/9/24	2022/9/23
SPEAG	Data Acquisition Electronics	DAE4	1338	2019/11/20	2020/11/19
SPEAG	Data Acquisition Electronics	DAE4	1358	2020/4/28	2021/4/27
SPEAG	Data Acquisition Electronics	DAE4	1279	2020/8/25	2021/8/24
SPEAG	Dosimetric E-Field Probe	EX3DV4	3843	2019/9/26	2020/9/25
SPEAG	Dosimetric E-Field Probe	EX3DV4	7592	2020/5/22	2021/5/21
SPEAG	Dosimetric E-Field Probe	EX3DV4	3935	2020/5/27	2021/5/26
SPEAG	SAM Twin Phantom	QD 000 P40 CB	TP-1753	NCR	NCR
SPEAG	SAM Twin Phantom	QD 000 P40 CB	TP-1503	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Anritsu	Radio Communication Analyzer	MT8821C	6201432831	2019/4/17	2020/4/16
Anritsu	Radio Communication Analyzer	MT8821C	6201432831	2020/4/16	2021/4/15
Agilent	Wireless Communication Test Set	E5515C	MY52102706	2019/4/17	2020/4/16
Agilent	Wireless Communication Test Set	E5515C	MY52102706	2020/4/16	2021/4/15
Agilent	ENA Series Network Analyzer	E5071C	MY46111157	2019/4/17	2020/4/16
Agilent	ENA Series Network Analyzer	E5071C	MY46111157	2020/4/16	2021/4/15
SPEAG	Dielectric Probe Kit	DAK-3.5	1071	2019/10/28	2020/10/27
SPEAG	Dielectric Probe Kit	DAK-3.5	1144	2020/12/2	2021/12/1
Anritsu	Vector Signal Generator	MG3710A	6201682672	2020/1/8	2021/1/7
Anritsu	Vector Signal Generator	MG3710A	6201682672	2021/1/8	2022/1/7
Rohde & Schwarz	Power Meter	NRVD	102081	2019/8/15	2020/8/14
Rohde & Schwarz	Power Meter	NRVD	102081	2020/8/13	2021/8/12
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2019/8/14	2020/8/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2020/8/13	2021/8/12
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2019/8/14	2020/8/13
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2020/8/13	2021/8/12
R&S	CBT BLUETOOTH TESTER	CBT	101641	2020/1/8	2021/1/7
R&S	CBT BLUETOOTH TESTER	CBT	101246	2020/4/14	2021/4/13
EXA	Spectrum Analyzer	FSV7	101631	2020/1/8	2021/1/7
EXA	Spectrum Analyzer	FSV7	101631	2021/1/8	2022/1/7
Testo	Hygrometer	608-H1	1241332088	2020/1/8	2021/1/7
Testo	Hygrometer	608-H1	1241332088	2021/1/8	2022/1/7
FLUKE	DIGITAC THERMOMETER	51II	97240029	2019/8/15	2020/8/14
FLUKE	DIGITAC THERMOMETER	51II	97240029	2020/8/14	2021/8/13
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	Note 1	
ARRA	Power Divider	A3200-2	N/A	Note 1	
MCL	Attenuation1	BW-S10W5+	N/A	Note 1	

MCL	Attenuation2	BW-S10W5+	N/A	Note 1
MCL	Attenuation3	BW-S10W5+	N/A	Note 1
Agilent	Dual Directional Coupler	778D	20500	Note 1
Agilent	Dual Directional Coupler	11691D	MY48151020	Note 1

Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

12. System Verification

12.1 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 11.2.

Fig 11.1 Photo of Liquid Height for Head SAR

Fig 11.2 Photo of Liquid Height for Body SAR

12.2 Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (εr)
For Head								
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0

Simulating Liquid for 5GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Tissue Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	Head	22.9	0.914	41.085	0.89	41.90	2.70	-1.95	±5	2020/6/7
835	Head	22.9	0.944	41.256	0.90	41.50	4.89	-0.59	±5	2020/6/8
1750	Head	22.8	1.324	41.075	1.37	40.10	-3.36	2.43	±5	2020/6/10
1900	Head	22.7	1.459	40.032	1.40	40.00	4.21	0.08	±5	2020/6/9
2450	Head	22.8	1.856	39.104	1.80	39.20	3.11	-0.24	±5	2020/6/12
2600	Head	22.7	1.981	39.070	1.96	39.00	1.07	0.18	±5	2020/6/11
5250	Head	22.8	4.667	35.173	4.71	35.90	-0.91	-2.03	±5	2020/6/15
5600	Head	22.6	5.012	34.639	5.07	35.50	-1.14	-2.43	±5	2020/6/16
5750	Head	22.7	5.174	34.396	5.22	35.40	-0.88	-2.84	±5	2020/6/17
750	Head	22.6	0.924	42.063	0.89	41.90	3.82	0.39	±5	2020/6/4
835	Head	22.9	0.942	41.096	0.90	41.50	4.67	-0.97	±5	2020/6/1
1750	Head	22.7	1.351	40.380	1.37	40.10	-1.39	0.70	±5	2020/6/9
1900	Head	22.6	1.451	39.635	1.40	40.00	3.64	-0.91	±5	2020/6/3
2450	Head	22.8	1.853	39.080	1.80	39.20	2.94	-0.31	±5	2020/6/8
2600	Head	22.7	1.978	39.039	1.96	39.00	0.92	0.10	±5	2020/6/12
5250	Head	22.7	4.630	36.956	4.71	35.90	-1.70	2.94	±5	2020/6/12
5600	Head	22.9	4.986	36.471	5.07	35.50	-1.66	2.74	±5	2020/6/15
5750	Head	22.8	5.149	36.303	5.22	35.40	-1.36	2.55	±5	2020/6/17
750	Head	22.6	0.897	41.465	0.89	41.90	0.79	-1.04	±5	2020/6/20
835	Head	22.7	0.925	41.889	0.90	41.50	2.78	0.94	±5	2020/6/21
1750	Head	22.9	1.346	40.238	1.37	40.10	-1.75	0.34	±5	2020/6/22
1900	Head	22.7	1.373	39.730	1.40	40.00	-1.93	-0.68	±5	2020/6/23
2450	Head	22.7	1.865	38.665	1.80	39.20	3.61	-1.36	±5	2020/6/24
2600	Head	22.8	2.035	38.063	1.96	39.00	3.83	-2.40	±5	2020/6/25
5250	Head	22.6	4.530	36.364	4.71	35.90	-3.82	1.29	±5	2020/6/26
5600	Head	22.9	4.860	35.894	5.07	35.50	-4.14	1.11	±5	2020/6/27
5750	Head	22.6	5.006	35.700	5.22	35.40	-4.10	0.85	±5	2020/6/28
750	Head	22.8	0.906	42.216	0.89	41.90	1.80	0.75	±5	2021/1/2
835	Head	22.6	0.908	41.890	0.90	41.50	0.89	0.94	±5	2021/1/3
1750	Head	22.9	1.351	39.436	1.37	40.10	-1.39	-1.66	±5	2021/1/4
1900	Head	22.6	1.416	39.868	1.40	40.00	1.14	-0.33	±5	2021/1/5
2450	Head	22.6	1.885	40.794	1.80	39.20	4.72	4.07	±5	2021/1/6
2600	Head	22.7	2.028	38.274	1.96	39.00	3.47	-1.86	±5	2021/1/8
5250	Head	22.9	4.734	35.988	4.71	35.90	0.51	0.25	±5	2021/1/9
5600	Head	22.9	5.162	35.333	5.07	35.50	1.81	-0.47	±5	2021/1/10
5750	Head	22.8	5.329	35.057	5.22	35.40	2.09	-0.97	±5	2021/1/13

12.3 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

<1g SAR>

Date	Frequency (MHz)	Tissue Type	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 (%)
2020/6/7	750	Head	250	1087	7592	1338	2.10	8.36	8.4	0.48
2020/6/8	835	Head	250	4d151	7592	1338	2.44	9.30	9.76	4.95
2020/6/10	1750	Head	250	1090	7592	1338	8.76	36.40	35.04	-3.74
2020/6/9	1900	Head	250	5d170	7592	1338	9.48	39.00	37.92	-2.77
2020/6/12	2450	Head	250	908	7592	1338	13.60	52.80	54.4	3.03
2020/6/11	2600	Head	250	1061	7592	1338	14.70	57.70	58.8	1.91
2020/6/15	5250	Head	100	1113	7592	1338	7.90	80.50	79	-1.86
2020/6/16	5600	Head	100	1113	7592	1338	7.98	83.40	79.8	-4.32
2020/6/17	5750	Head	100	1113	7592	1338	7.34	80.00	73.4	-8.25
2020/6/4	750	Head	250	1087	3843	1358	1.96	8.36	7.84	-6.22
2020/6/1	835	Head	250	4d151	3843	1358	2.44	9.30	9.76	4.95
2020/6/9	1750	Head	250	1090	3843	1358	8.94	36.40	35.76	-1.76
2020/6/3	1900	Head	250	5d170	3843	1358	9.43	39.00	37.72	-3.28
2020/6/8	2450	Head	250	908	3843	1358	13.60	52.80	54.4	3.03
2020/6/12	2600	Head	250	1061	3843	1358	14.70	57.70	58.8	1.91
2020/6/12	5250	Head	100	1113	3843	1358	7.84	80.50	78.4	-2.61
2020/6/15	5600	Head	100	1113	3843	1358	7.94	83.40	79.4	-4.80
2020/6/17	5750	Head	100	1113	3843	1358	7.31	80.00	73.1	-8.63
2020/6/20	750	Head	250	1087	7592	1338	2.05	8.36	8.2	-1.91
2020/6/21	835	Head	250	4d151	7592	1338	2.44	9.30	9.76	4.95
2020/6/22	1750	Head	250	1090	7592	1338	8.85	36.40	35.4	-2.75
2020/6/23	1900	Head	250	5d170	7592	1338	9.69	39.00	38.76	-0.62
2020/6/24	2450	Head	250	908	7592	1338	14.00	52.80	56	6.06
2020/6/25	2600	Head	250	1061	7592	1338	14.80	57.70	59.2	2.60
2020/6/26	5250	Head	100	1113	7592	1338	7.80	80.50	78	-3.11
2020/6/27	5600	Head	100	1113	7592	1338	7.66	83.40	76.6	-8.15
2020/6/28	5750	Head	100	1113	7592	1338	7.68	80.00	76.8	-4.00
2021/1/2	750	Head	250	1087	3935	1279	2.18	8.36	8.72	4.31
2021/1/3	835	Head	250	4d151	3935	1279	2.45	9.30	9.8	5.38
2021/1/4	1750	Head	250	1090	3935	1279	8.79	36.40	35.16	-3.41
2021/1/5	1900	Head	250	5d170	3935	1279	9.57	39.00	38.28	-1.85
2021/1/6	2450	Head	250	908	3935	1279	13.60	52.80	54.4	3.03
2021/1/8	2600	Head	250	1061	3935	1279	15.80	57.70	63.2	9.53
2021/1/9	5250	Head	100	1113	3935	1279	8.21	80.50	82.1	1.99
2021/1/10	5600	Head	100	1113	3935	1279	7.83	83.40	78.3	-6.12
2021/1/13	5750	Head	100	1113	3935	1279	7.32	80.00	73.2	-8.50

<10g SAR>

Date	Frequency (MHz)	Tissue Type	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 (%)
2020/6/10	1750	Head	250	1090	7592	1338	8.76	36.40	35.04	-3.74
2020/6/9	1900	Head	250	5d170	7592	1338	9.48	39.00	37.92	-2.77
2020/6/12	2450	Head	250	908	7592	1338	13.60	52.80	54.4	3.03
2020/6/11	2600	Head	250	1061	7592	1338	14.70	57.70	58.8	1.91
2020/6/15	5250	Head	100	1113	7592	1338	7.90	80.50	79	-1.86
2020/6/16	5600	Head	100	1113	7592	1338	7.98	83.40	79.8	-4.32
2020/6/17	5750	Head	100	1113	7592	1338	7.34	80.00	73.4	-8.25
2020/6/9	1750	Head	250	1090	3843	1358	8.94	36.40	35.76	-1.76
2020/6/3	1900	Head	250	5d170	3843	1358	9.43	39.00	37.72	-3.28
2020/6/8	2450	Head	250	908	3843	1358	13.60	52.80	54.4	3.03
2020/6/12	2600	Head	250	1061	3843	1358	14.70	57.70	58.8	1.91
2020/6/12	5250	Head	100	1113	3843	1358	7.84	80.50	78.4	-2.61
2020/6/15	5600	Head	100	1113	3843	1358	7.94	83.40	79.4	-4.80
2020/6/17	5750	Head	100	1113	3843	1358	7.31	80.00	73.1	-8.63
2020/6/22	1750	Head	250	1090	7592	1338	8.85	36.40	35.4	-2.75
2020/6/23	1900	Head	250	5d170	7592	1338	9.69	39.00	38.76	-0.62
2020/6/24	2450	Head	250	908	7592	1338	14.00	52.80	56	6.06
2020/6/25	2600	Head	250	1061	7592	1338	14.80	57.70	59.2	2.60
2020/6/26	5250	Head	100	1113	7592	1338	7.80	80.50	78	-3.11
2020/6/27	5600	Head	100	1113	7592	1338	7.66	83.40	76.6	-8.15
2020/6/28	5750	Head	100	1113	7592	1338	7.68	80.00	76.8	-4.00
2021/1/2	750	Head	250	1087	3935	1279	1.46	5.65	5.84	3.36
2021/1/3	835	Head	250	4d151	3935	1279	1.63	6.16	6.52	5.84
2021/1/4	1750	Head	250	1090	3935	1279	4.69	19.20	18.76	-2.29
2021/1/5	1900	Head	250	5d170	3935	1279	4.98	20.30	19.92	-1.87
2021/1/6	2450	Head	250	908	3935	1279	6.54	24.20	26.16	8.10
2021/1/8	2600	Head	250	1061	3935	1279	6.84	25.90	27.36	5.64
2021/1/9	5250	Head	100	1113	3935	1279	2.34	23.10	23.4	1.30
2021/1/10	5600	Head	100	1113	3935	1279	2.22	23.80	22.2	-6.72
2021/1/13	5750	Head	100	1113	3935	1279	2.06	22.80	20.6	-9.65

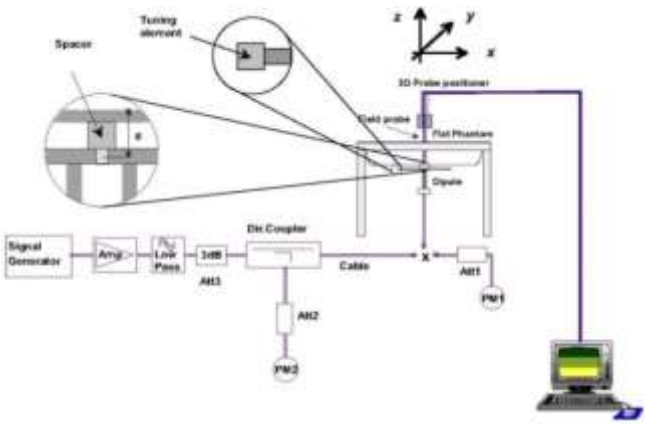


Fig 11.3.1 System Performance Check Setup

Fig 11.3.2 Setup Photo

13. RF Exposure Positions

13.1 Ear and handset reference point

Figure 12.1.1 shows the front, back, and side views of the SAM phantom. The center-of-mouth reference point is labeled “M,” the left ear reference point (ERP) is marked “LE,” and the right ERP is marked “RE.” Each ERP is 15mm along the B-M (back-mouth) line behind the entrance-to-ear-canal (EEC) point, as shown in Figure 12.1.2 The Reference Plane is defined as passing through the two ear reference points and point M. The line N-F (neck-front), also called the reference pivoting line, is normal to the Reference Plane and perpendicular to both a line passing through RE and LE and the B-M line (see Figure 12.1.3). Both N-F and B-M lines should be marked on the exterior of the phantom shell to facilitate handset positioning. Posterior to the N-F line the ear shape is a flat surface with 6 mm thickness at each ERP, and forward of the N-F line the ear is truncated, as illustrated in Figure 12.1.2. The ear truncation is introduced to preclude the ear lobe from interfering with handset tilt, which could lead to unstable positioning at the cheek.

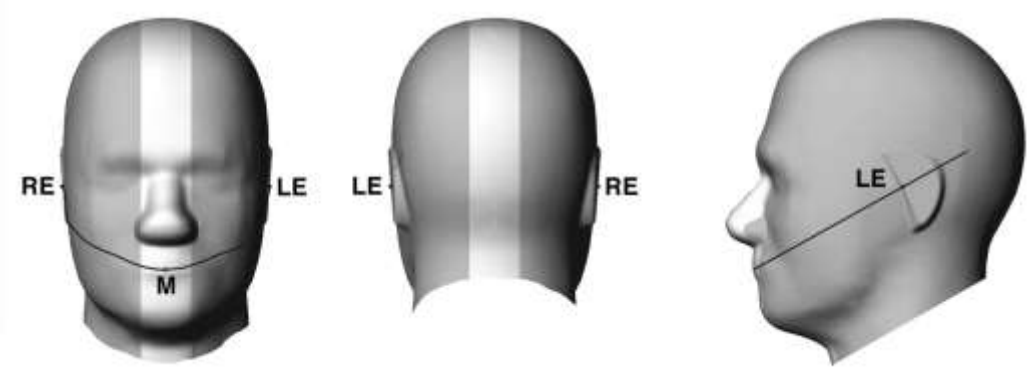


Fig 12.1.1 Front, back, and side views of SAM twin phantom

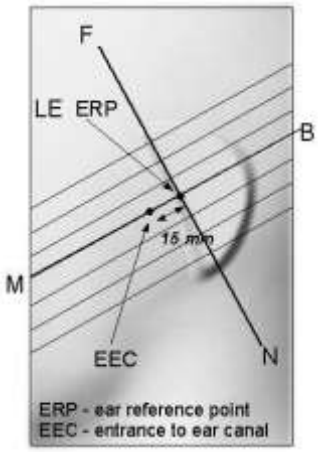


Fig 12.1.2 Close-up side view of phantom showing the ear region.

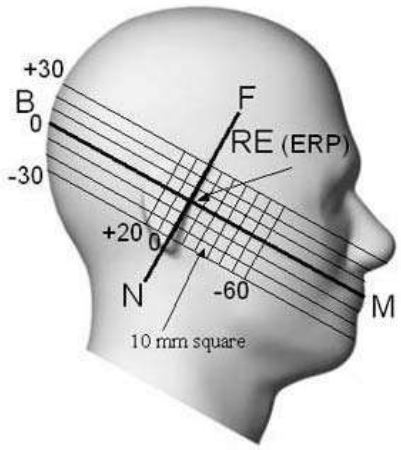


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

13.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width wt of the handset at the level of the acoustic output (point A in Figure 12.2.1 and Figure 12.2.2), and the midpoint of the width wb of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 12.2.1). The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset (see Figure 12.2.2), especially for clamshell handsets, handsets with flip covers, and other irregularly-shaped handsets.
3. Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 12.2.3), such that the plane defined by the vertical centerline and the horizontal line of the handset is approximately parallel to the sagittal plane of the phantom.
4. Translate the handset towards the phantom along the line passing through RE and LE until handset point A touches the pinna at the ERP.
5. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to the plane containing B-M and N-F lines, i.e., the Reference Plane.
6. Rotate the handset around the vertical centerline until the handset (horizontal line) is parallel to the N-F line.
7. While maintaining the vertical centerline in the Reference Plane, keeping point A on the line passing through RE and LE, and maintaining the handset contact with the pinna, rotate the handset about the N-F line until any point on the handset is in contact with a phantom point below the pinna on the cheek. See Figure 12.2.3. The actual rotation angles should be documented in the test report.

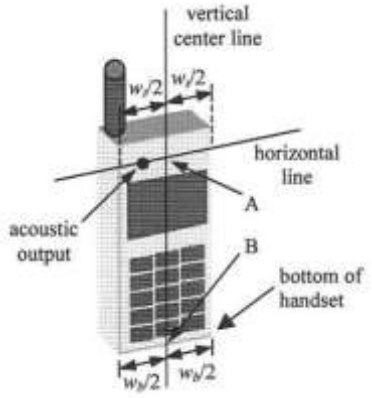


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case

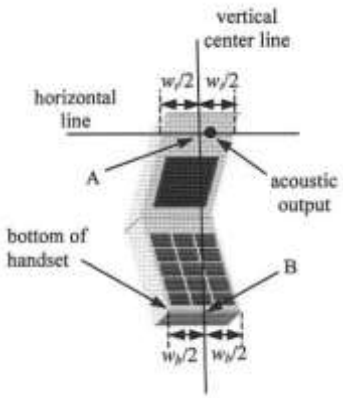


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

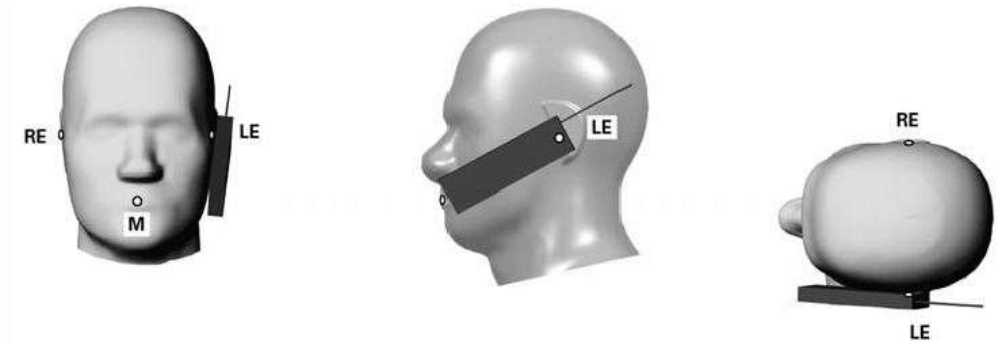


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

13.3 Definition of the tilt position

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

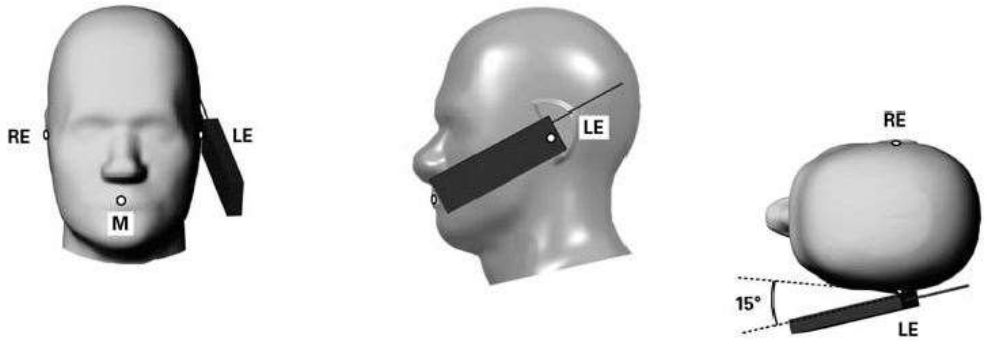


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

13.4 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 12.4). 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 and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are test with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-chip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

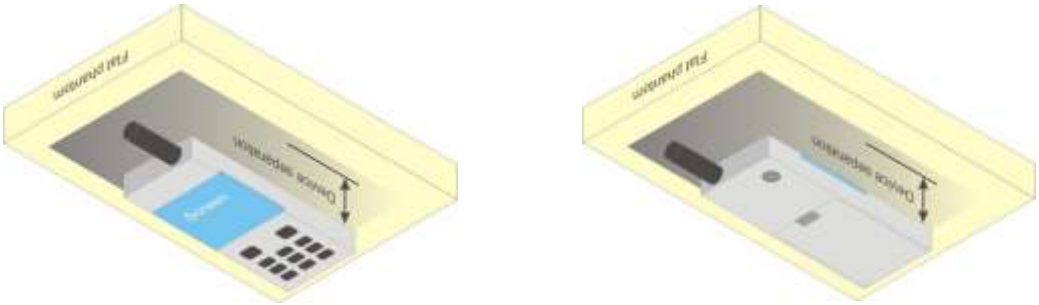


Fig 12.4 Body Worn Position

13.5 Product Specific 10g SAR Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that 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 ≤ 25mm 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 5mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

13.6 Wireless Router

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

14. Conducted RF Output Power (Unit: dBm)

The detailed conducted power table can refer to Appendix E.

<GSM Conducted Power>

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS 2Tx slots for GSM850 and GPRS 3Tx slots for GSM1900 are 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 ≤ ¼ 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.

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} (Note1, 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 Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_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 Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c , and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c .

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c = 11/15 and β_d = 15/15.

Setup Configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (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-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed}1: 47/15 β_{ed}2: 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 Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c . For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c .

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c = 10/15 and β_d = 15/15.

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

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

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

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

a. The EUT was connected to Base Station referred to the Setup Configuration below
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set RMC 12.2Kbps + HSDPA mode.
   ii. Set Cell Power = -25 dBm
   iii. Set HS-DSCH Configuration Type to FRC (H-set 12, QPSK)
   iv. Select HSDPA Uplink Parameters
   v. Set Gain Factors (β_c and β_d) and parameters were set according to each Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
      a). Subtest 1: β_c/β_d=2/15
      b). Subtest 2: β_c/β_d=12/15
      c). Subtest 3: β_c/β_d=15/8
      d). Subtest 4: β_c/β_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.		

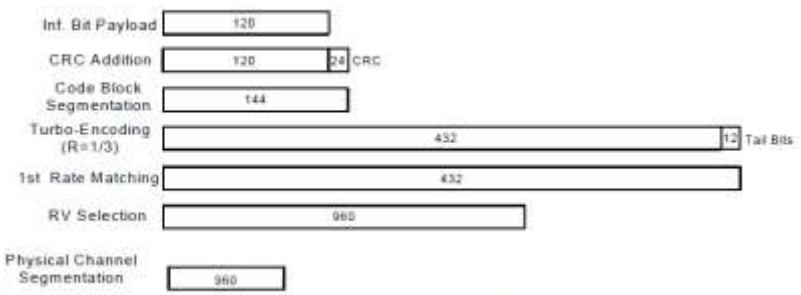


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

<WCDMA Conducted Power>

General Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA

<CDMA2000 Conducted Power>

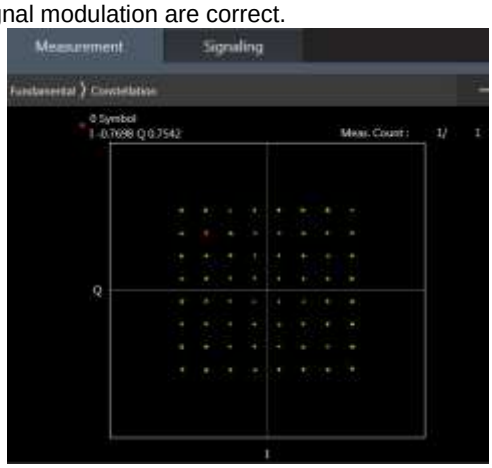
General Note:

1. Per KDB 941225 D01v03r01, SAR for head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55.
2. Per KDB 941225 D01v03r01, in Hotspot mode EUT is treated as data device and SAR is tested with Ev-Do Rev 0 (RTAP 153.6kbps) as the primary mode.
3. Per KDB 941225 D01v03r01, for Body-worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The body-worn accessory procedures in KDB Publication 447498 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCH), with FCH only as the primary mode.

<LTE Conducted Power>

General Note:

1. Anritsu MT8820C base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration 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; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / B12 / B17 / B26 / B38 / B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE B4 / B5 / B17 / B38 SAR test was covered by B66 / B26 / B12 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
   a. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
   b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
10. According to 2017 TCB workshop, for 64 QAM and 16 QAM should be verified by checking the signal constellation with a call box to avoid incorrect maximum power levels due to MPR and other requirements associated with signal modulation, and the following figure is taken from the "Fundamental Measurement >> Modulation Analysis >> constellation" mode of the device connect to the MT8821C base station, therefore, the device 64QAM and 16QAM signal modulation are correct.



64QAM

16QAM

<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.

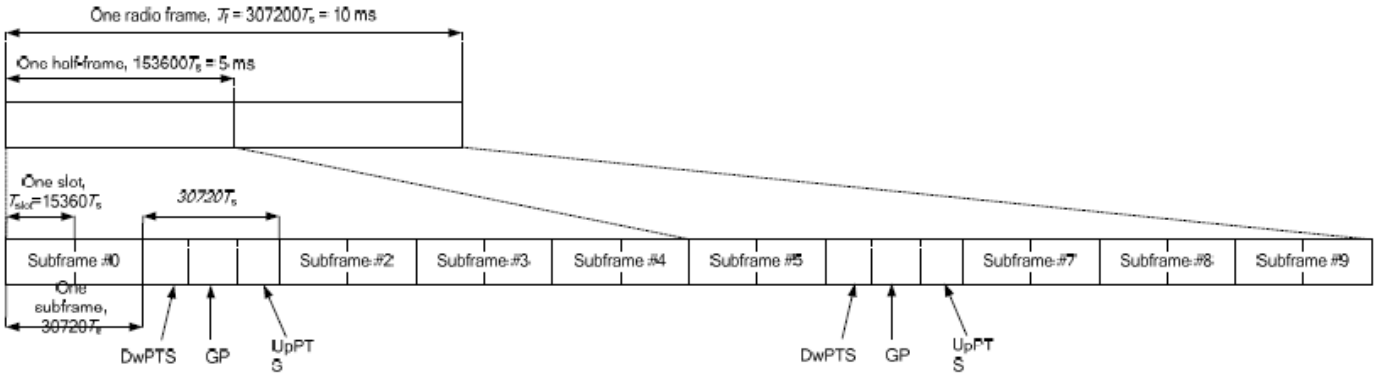


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

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

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

The highest duty factor is resulted from:

For LTE Band 41 Power class 3

i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subfames, 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.

<LTE Carrier Aggregation>

General Note:

1. This device supports Carrier Aggregation on downlink for inter and intra band. For the device supports bands and bandwidths and configurations are provided as follow table was according to 3GPP.
2. In applying the existing power measurement procedures of KDB 941225 D05A for DL CA SAR test exclusion, only the subset with the largest number of combinations of frequency bands and CCs in each row need combination, and for this device that all the configurations were choose to power measurement.
3. The gray color table is covered by other combinations and no need to verify power.

2CC Downlink Carrier Aggregation			3CC Downlink Carrier Aggregation			4CC Downlink Carrier Aggregation		
Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset	Number	Combination	Covered by Measurement Superset
2CC #1	7B	2CC #2	3CC #1	7A-46C	4CC #1	4CC #1	7A-46D	
2CC #2	7C		3CC #2	41D				
2CC #3	7A-7A		3CC #3	41A-41C				
2CC #4	7A-46A	3CC #1	3CC #4	41A-41A-41A				
2CC #5	41C	3CC #2	3CC #5					
2CC #6	41A-41A	3CC #4	3CC #6					
2CC #7	66B	2CC #10						
2CC #8	66C							
2CC #9	66A-66A							

4X4 MIMO	Band
	LTE Band7/41

LTE Carrier Aggregation Conducted Power (Downlink)

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 inter-band CA, the SCC selected highest bandwidth and near the middle of its transmission band. For SCC DL RB size and offset will base on the PCC corresponding RB allocation.

vi. 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.

vii. 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.

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

LTE Carrier Aggregation Conducted Power (Uplink)

1. This device supports uplink carrier aggregation for LTE CA_41C 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. For the non-contiguously allocated resource blocks which the MPR level is determined by various RB separation and RB sizes requirement, and the allowed MPR levels, settings and the conducted powers are permanently implemented in this device per the 3GPP 36.36.101 section 6.2.3A.1.3 requirements.
2. According to FCC guidance, the output power with uplink CA active was measured for the high / middle / low channel configuration with the highest reported SAR for each exposure condition, the power was measured with wideband signal integration over both component carriers.
3. In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs
4. Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05. The required test channel should be associated with the UL PCC. For channels at the ends of a frequency band, the SCC and subsequent CCs are added to the side within the transmission band. Otherwise, the CCs should be added alternatively to either side of the PCC.

<Power Measurement Setup>

5G NR Output Power (Unit: dBm)

General Note:

1. Following 5G NR n5 support SCS 15KHz DFT/CP-OFDM, PI/2 BPSK/QPSK/16QAM/64QAM, Bandwidth 5M/10M/15M/20M.
2. Following 5G NR n41 support SCS 30KHz DFT/CP-OFDM, PI/2 BPSK/QPSK/16QAM/64QAM, Bandwidth 20M/40M/50M/60M/80M/90M/100M.
3. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
   a. For DFT-OFDM and CP-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, the CP-OFDM mode will not higher than DFT-OFDM mode, therefore, similar FCC KDB 941225 D05 procedure for other modulation output power for each RB allocation configuration is > not ½ dB higher than the same configuration in DFT-QPSK and the reported SAR for the DFT-QPSK configuration is ≤ 1.45 W/kg; CP-OFDM testing is not required.
   b. SAR testing start with the largest channel bandwidth and measure SAR 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
   c. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
   d. PI/2 BPSK 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
   e. QPSK/16QAM/64QAM output powers according to 3GPP MPR will 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 SAR testing are not required.
   f. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
4. 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.
5. The device implanted DPS (Dynamic Power Share) function to achieve higher uplink data rate keeping the total power unchanged in 5G NR NSA EN-DC mode according to 3GPP 38.213, when the equipment has a dynamic power sharing capability, it adjusts the LTE or NR transmission power so that the instantaneous total power does not exceed the specified value, when the maximum transmission power of NR (P LTE, P NR) and the specified total power (P total) have been set and the instantaneous calculated total transmission power exceeds P total, the NR transmission power is reduced so that the actual transmission power of the user equipment will not exceed Ptotal power.

<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		
	256 QAM	≤ 4.5		
CP-OFDM	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM	≤ 3.5		
	256 QAM	≤ 6.5		

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

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

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

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

<WLAN Conducted Power>

General Note:

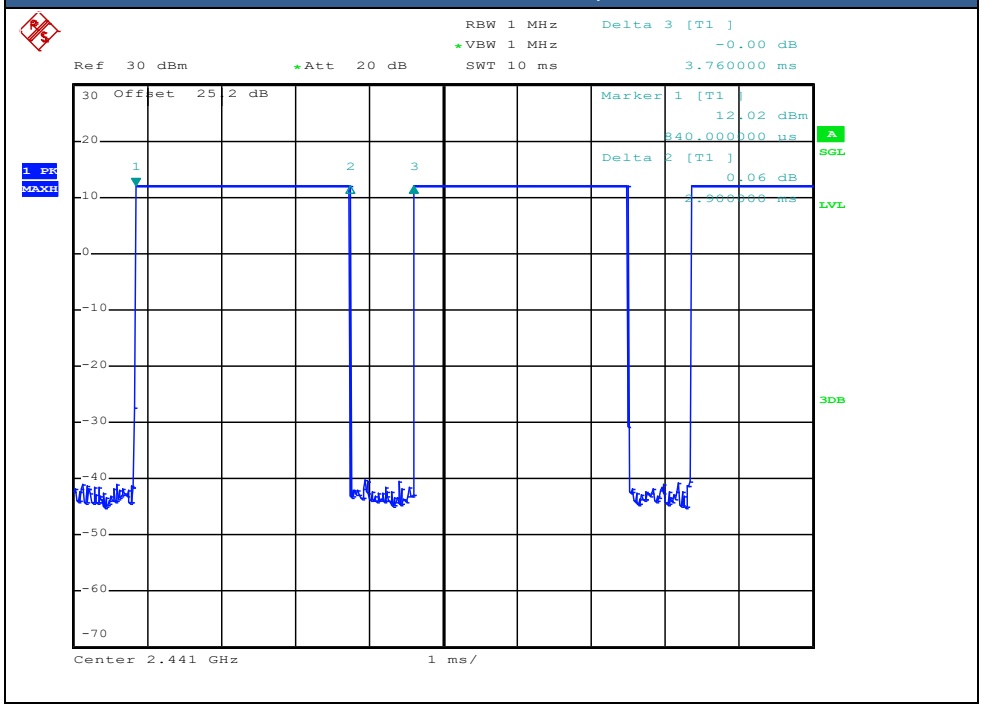
1. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. 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.
2. 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).
3. 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.
4. 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.

<2.4GHz Bluetooth>

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps, due to its highest average power.
2. The Bluetooth duty cycle is 77.13 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the theoretical duty cycle is 83.3%, therefore the actual duty cycle will be scaled up to the theoretical value of Bluetooth reported SAR calculation

Bluetooth time-domain plot



15. Antenna Location

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

16. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
   d. For BT/WLAN: 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 when the measured SAR is ≥ 0.8W/kg. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. Pre KDB648474 D04v01r03, when the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset. When headset SAR is less than or equal than without headset SAR, no need to verify the remaining channels for headset SAR.
5. The device implements Proximity sensors/receiver detect mechanism/hotspot trigger reduced power for the power management for SAR compliance at different exposure conditions (head, body-worn, hotspot, extremity).
6. The device will invoke corresponding work scenarios power level, which are provided in the operational description.
7. The device has two work states, flip open and flip close, according to normal using scenario, two states have been performed to SAR testing.
8. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power (for handheld on state, the maximum full power means reduced power), including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
   a. For this device SAR for WWAN/WLAN transmitter scaled to maximum output power mode for product specific 10g SAR is higher than 1.2W/kg of WCDMA Band II/IV, LTE Band 2/4/7/38/41/66, 5GNR n41 and WLAN 2.4GHz /WLAN 5.8GHz therefore product specific 10g SAR is necessary.
   b. WLAN 5.3/5.5GHz tested the product specific 10g SAR since it has no hotspot mode.
   c. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.
9. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for body worn:
   WWAN:
   Front: 19 mm
   Back: 15mm
   WLAN:
   Back: 15mm

10. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed for handheld:
    WWAN:
    Front: 13 mm
    Back: 11mm
    Bottom side: 13 mm
    WLAN:
    Back: 7 mm

GSM Note:

1. Per KDB 941225 D01v03r01, for SAR test reduction for GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Therefore, the GPRS 2Tx slots for GSM850 and GPRS 3Tx slots for GSM1900 are 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 ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

WCDMA Note:

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”.
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is ≤ ¼ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA) are less than ¼ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, for QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM/64QAM output power for each RB allocation configuration is > not ½ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration 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; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. This device supports HPUE for LTE band 41 with class 2 level, so HPUE SAR has been performed.
7. For LTE B4 / B5 / B12 / B17 / B26 / B38 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
8. LTE B4 / B5 / B17 / B38 SAR test was covered by LTE B66 / B26 / B12 / B41; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
    c. the maximum output power, including tolerance, for the smaller band is ≤ the larger band to qualify for the SAR test exclusion
    d. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band

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, U-NII-1 SAR testing is not required when the U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

16.1 Head SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 1	GPRS (2 Tx slots)	Right Cheek	DSI 2	128	824.2	Open	30.81	32.50	1.476	0.01	0.128	0.189
	GSM850_Ant 1	GPRS (2 Tx slots)	Right Tilted	DSI 2	128	824.2	Open	30.81	32.50	1.476	0.02	0.087	0.128
01	GSM850_Ant 1	GPRS (2 Tx slots)	Left Cheek	DSI 2	128	824.2	Open	30.81	32.50	1.476	-0.14	0.148	**0.218**
	GSM850_Ant 1	GPRS (2 Tx slots)	Left Tilted	DSI 2	128	824.2	Open	30.81	32.50	1.476	-0.02	0.040	0.059
02	GSM1900_Ant 1	GPRS (3 Tx slots)	Right Cheek	DSI 2	661	1880	Open	26.61	28.00	1.377	0.05	0.123	**0.169**
	GSM1900_Ant 1	GPRS (3 Tx slots)	Right Tilted	DSI 2	661	1880	Open	26.61	28.00	1.377	0.03	0.082	0.113
	GSM1900_Ant 1	GPRS (3 Tx slots)	Left Cheek	DSI 2	661	1880	Open	26.61	28.00	1.377	0.11	0.085	0.117
	GSM1900_Ant 1	GPRS (3 Tx slots)	Left Tilted	DSI 2	661	1880	Open	26.61	28.00	1.377	0.16	0.042	0.058

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 1	RMC 12.2Kbps	Right Cheek	DSI 2	9262	1852.4	Open	23.23	24.00	1.194	0.12	0.181	0.216
	WCDMA II_Ant 1	RMC 12.2Kbps	Right Tilted	DSI 2	9262	1852.4	Open	23.23	24.00	1.194	0.05	0.115	0.137
03	WCDMA II_Ant 1	RMC 12.2Kbps	Left Cheek	DSI 2	9262	1852.4	Open	23.23	24.00	1.194	0.02	0.249	**0.297**
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Tilted	DSI 2	9262	1852.4	Open	23.23	24.00	1.194	0.06	0.180	0.215
	WCDMA IV_Ant 1	RMC 12.2Kbps	Right Cheek	DSI 2	1413	1732.6	Open	23.12	24.00	1.225	0.04	0.216	0.265
	WCDMA IV_Ant 1	RMC 12.2Kbps	Right Tilted	DSI 2	1413	1732.6	Open	23.12	24.00	1.225	0.11	0.112	0.137
04	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Cheek	DSI 2	1413	1732.6	Open	23.12	24.00	1.225	0.01	0.262	**0.321**
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Tilted	DSI 2	1413	1732.6	Open	23.12	24.00	1.225	0.13	0.182	0.223
05	WCDMA V_Ant 1	RMC 12.2Kbps	Right Cheek	DSI 2	4182	836.4	Open	23.06	24.00	1.242	0.09	0.135	**0.168**
	WCDMA V_Ant 1	RMC 12.2Kbps	Right Tilted	DSI 2	4182	836.4	Open	23.06	24.00	1.242	0.08	0.051	0.063
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Cheek	DSI 2	4182	836.4	Open	23.06	24.00	1.242	0.07	0.068	0.084
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Tilted	DSI 2	4182	836.4	Open	23.06	24.00	1.242	0.11	0.051	0.063

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA2000 BC0_Ant 1	RC3 SO55	Right Cheek	DSI 2	384	836.52	Open	23.98	25.00	1.265	0.16	0.038	0.048
	CDMA2000 BC0_Ant 1	RC3 SO55	Right Tilted	DSI 2	384	836.52	Open	23.98	25.00	1.265	0.18	0.030	0.038
06	CDMA2000 BC0_Ant 1	RC3 SO55	Left Cheek	DSI 2	384	836.52	Open	23.98	25.00	1.265	-0.05	0.058	**0.073**
	CDMA2000 BC0_Ant 1	RC3 SO55	Left Tilted	DSI 2	384	836.52	Open	23.98	25.00	1.265	0.11	0.027	0.034

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Cheek	DSI 2	18700	1860	Open	23.02	24.00	1.253	0.01	0.212	0.266
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Cheek	DSI 2	18700	1860	Open	22.08	23.00	1.236	-0.08	0.188	0.232
	LTE Band 2_Ant 1	20M	QPSK	1	0	Right Tilted	DSI 2	18700	1860	Open	23.02	24.00	1.253	-0.15	0.098	0.123
	LTE Band 2_Ant 1	20M	QPSK	50	0	Right Tilted	DSI 2	18700	1860	Open	22.08	23.00	1.236	0.04	0.071	0.088
07	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Cheek	DSI 2	18700	1860	Open	23.02	24.00	1.253	0.05	0.304	**0.381**
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Cheek	DSI 2	18700	1860	Open	22.08	23.00	1.236	0.06	0.286	0.353
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Tilted	DSI 2	18700	1860	Open	23.02	24.00	1.253	0.07	0.156	0.195
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Tilted	DSI 2	18700	1860	Open	22.08	23.00	1.236	0.02	0.132	0.163
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Cheek	DSI 2	18700	1860	Open	20.94	22.00	1.276	-0.11	0.048	0.061
	LTE Band 2_Ant 2	20M	QPSK	50	0	Right Cheek	DSI 2	18700	1860	Open	19.94	21.00	1.276	0.16	0.036	0.046
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Tilted	DSI 2	18700	1860	Open	20.94	22.00	1.276	0.11	0.039	0.050
	LTE Band 2_Ant 2	20M	QPSK	50	0	Right Tilted	DSI 2	18700	1860	Open	19.94	21.00	1.276	0.07	0.031	0.040
	LTE Band 2_Ant 2	20M	QPSK	1	0	Left Cheek	DSI 2	18700	1860	Open	20.94	22.00	1.276	0.01	0.054	0.069
	LTE Band 2_Ant 2	20M	QPSK	50	0	Left Cheek	DSI 2	18700	1860	Open	19.94	21.00	1.276	0.08	0.047	0.060
	LTE Band 2_Ant 2	20M	QPSK	1	0	Left Tilted	DSI 2	18700	1860	Open	20.94	22.00	1.276	0.09	0.031	0.040
	LTE Band 2_Ant 2	20M	QPSK	50	0	Left Tilted	DSI 2	18700	1860	Open	19.94	21.00	1.276	0.11	0.028	0.036
	LTE Band 7_Ant 1	20M	QPSK	1	0	Right Cheek	DSI 2	21100	2535	Open	23.22	24.00	1.197	-0.11	0.070	0.084
	LTE Band 7_Ant 1	20M	QPSK	50	0	Right Cheek	DSI 2	21100	2535	Open	22.28	23.00	1.180	0.12	0.066	0.078
	LTE Band 7_Ant 1	20M	QPSK	1	0	Right Tilted	DSI 2	21100	2535	Open	23.22	24.00	1.197	0.05	0.103	0.123
	LTE Band 7_Ant 1	20M	QPSK	50	0	Right Tilted	DSI 2	21100	2535	Open	22.28	23.00	1.180	0.07	0.086	0.102
08	LTE Band 7_Ant 1	20M	QPSK	1	0	Left Cheek	DSI 2	21100	2535	Open	23.22	24.00	1.197	0.06	0.186	**0.223**
	LTE Band 7_Ant 1	20M	QPSK	50	0	Left Cheek	DSI 2	21100	2535	Open	22.28	23.00	1.180	-0.04	0.130	0.153
	LTE Band 7_Ant 1	20M	QPSK	1	0	Left Tilted	DSI 2	21100	2535	Open	23.22	24.00	1.197	0.15	0.057	0.068
	LTE Band 7_Ant 1	20M	QPSK	50	0	Left Tilted	DSI 2	21100	2535	Open	22.28	23.00	1.180	-0.18	0.047	0.055
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Cheek	DSI 2	21100	2535	Open	21.17	22.00	1.211	0.09	0.116	0.139
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Cheek	DSI 2	21100	2535	Open	20.21	21.00	1.199	0.09	0.088	0.106
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Tilted	DSI 2	21100	2535	Open	21.17	22.00	1.211	0.06	0.053	0.064
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Tilted	DSI 2	21100	2535	Open	20.21	21.00	1.199	0.08	0.037	0.044
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Cheek	DSI 2	21100	2535	Open	21.17	22.00	1.211	-0.16	0.075	0.091
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Cheek	DSI 2	21100	2535	Open	20.21	21.00	1.199	0.11	0.063	0.076
	LTE Band 7_Ant 2	20M	QPSK	1	0	Left Tilted	DSI 2	21100	2535	Open	21.17	22.00	1.211	0.03	0.076	0.092
	LTE Band 7_Ant 2	20M	QPSK	50	0	Left Tilted	DSI 2	21100	2535	Open	20.21	21.00	1.199	0.08	0.062	0.074
	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Cheek	DSI 2	23095	707.5	Open	22.73	24.00	1.340	-0.06	0.057	0.076
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Cheek	DSI 2	23095	707.5	Open	21.83	23.00	1.309	0.08	0.050	0.065
	LTE Band 12_Ant 1	10M	QPSK	1	0	Right Tilted	DSI 2	23095	707.5	Open	22.73	24.00	1.340	0.07	0.032	0.043
	LTE Band 12_Ant 1	10M	QPSK	25	0	Right Tilted	DSI 2	23095	707.5	Open	21.83	23.00	1.309	0.06	0.027	0.035
09	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Cheek	DSI 2	23095	707.5	Open	22.73	24.00	1.340	0.04	0.071	**0.096**
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Cheek	DSI 2	23095	707.5	Open	21.83	23.00	1.309	0.11	0.052	0.068
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Tilted	DSI 2	23095	707.5	Open	22.73	24.00	1.340	0.06	0.034	0.046
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Tilted	DSI 2	23095	707.5	Open	21.83	23.00	1.309	0.07	0.027	0.035
	LTE Band 12_Ant 2	10M	QPSK	1	0	Right Cheek	DSI 2	23095	707.5	Open	22.08	23.00	1.236	0.07	0.029	0.036
	LTE Band 12_Ant 2	10M	QPSK	25	0	Right Cheek	DSI 2	23095	707.5	Open	21.16	22.00	1.213	0.06	0.023	0.028
	LTE Band 12_Ant 2	10M	QPSK	1	0	Right Tilted	DSI 2	23095	707.5	Open	22.08	23.00	1.236	0.08	0.022	0.027
	LTE Band 12_Ant 2	10M	QPSK	25	0	Right Tilted	DSI 2	23095	707.5	Open	21.16	22.00	1.213	0.04	0.019	0.023
	LTE Band 12_Ant 2	10M	QPSK	1	0	Left Cheek	DSI 2	23095	707.5	Open	22.08	23.00	1.236	0.09	0.033	0.041
	LTE Band 12_Ant 2	10M	QPSK	25	0	Left Cheek	DSI 2	23095	707.5	Open	21.16	22.00	1.213	0.06	0.026	0.032
	LTE Band 12_Ant 2	10M	QPSK	1	0	Left Tilted	DSI 2	23095	707.5	Open	22.08	23.00	1.236	-0.12	0.018	0.022
	LTE Band 12_Ant 2	10M	QPSK	25	0	Left Tilted	DSI 2	23095	707.5	Open	21.16	22.00	1.213	0.11	0.014	0.017

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
10	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Cheek	DSI 2	23230	782	Open	22.43	24.00	1.435	0.04	0.100	**0.144**
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Cheek	DSI 2	23230	782	Open	21.52	23.00	1.406	0.16	0.073	0.103
	LTE Band 13_Ant 1	10M	QPSK	1	0	Right Tilted	DSI 2	23230	782	Open	22.43	24.00	1.435	0.07	0.021	0.030
	LTE Band 13_Ant 1	10M	QPSK	25	0	Right Tilted	DSI 2	23230	782	Open	21.52	23.00	1.406	-0.01	0.017	0.024
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Cheek	DSI 2	23230	782	Open	22.43	24.00	1.435	-0.17	0.040	0.057
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Cheek	DSI 2	23230	782	Open	21.52	23.00	1.406	0.06	0.026	0.037
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Tilted	DSI 2	23230	782	Open	22.43	24.00	1.435	0.08	0.021	0.030
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Tilted	DSI 2	23230	782	Open	21.52	23.00	1.406	0.09	0.016	0.022
	LTE Band 13_Ant 2	10M	QPSK	1	0	Right Cheek	DSI 2	23230	782	Open	21.66	23.00	1.361	0.05	0.055	0.075
	LTE Band 13_Ant 2	10M	QPSK	25	0	Right Cheek	DSI 2	23230	782	Open	20.84	22.00	1.306	-0.16	0.045	0.059
	LTE Band 13_Ant 2	10M	QPSK	1	0	Right Tilted	DSI 2	23230	782	Open	21.66	23.00	1.361	0.04	0.034	0.046
	LTE Band 13_Ant 2	10M	QPSK	25	0	Right Tilted	DSI 2	23230	782	Open	20.84	22.00	1.306	0.01	0.036	0.047
	LTE Band 13_Ant 2	10M	QPSK	1	0	Left Cheek	DSI 2	23230	782	Open	21.66	23.00	1.361	0.06	0.044	0.060
	LTE Band 13_Ant 2	10M	QPSK	25	0	Left Cheek	DSI 2	23230	782	Open	20.84	22.00	1.306	-0.11	0.046	0.060
	LTE Band 13_Ant 2	10M	QPSK	1	0	Left Tilted	DSI 2	23230	782	Open	21.66	23.00	1.361	0.08	0.026	0.035
	LTE Band 13_Ant 2	10M	QPSK	25	0	Left Tilted	DSI 2	23230	782	Open	20.84	22.00	1.306	0.17	0.027	0.035
11	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Cheek	DSI 2	26865	831.5	Open	22.65	24.00	1.365	0.03	0.120	**0.164**
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Cheek	DSI 2	26865	831.5	Open	21.76	23.00	1.330	0.16	0.100	0.133
	LTE Band 26_Ant 1	15M	QPSK	1	0	Right Tilted	DSI 2	26865	831.5	Open	22.65	24.00	1.365	0.15	0.055	0.075
	LTE Band 26_Ant 1	15M	QPSK	36	0	Right Tilted	DSI 2	26865	831.5	Open	21.76	23.00	1.330	0.08	0.044	0.059
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Cheek	DSI 2	26865	831.5	Open	22.65	24.00	1.365	0.07	0.091	0.124
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Cheek	DSI 2	26865	831.5	Open	21.76	23.00	1.330	0.06	0.070	0.093
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Tilted	DSI 2	26865	831.5	Open	22.65	24.00	1.365	0.08	0.050	0.068
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Tilted	DSI 2	26865	831.5	Open	21.76	23.00	1.330	0.07	0.039	0.052
	LTE Band 26_Ant 2	15M	QPSK	1	0	Right Cheek	DSI 2	26865	831.5	Open	21.71	23.00	1.346	0.07	0.047	0.064
	LTE Band 26_Ant 2	15M	QPSK	36	0	Right Cheek	DSI 2	26865	831.5	Open	20.82	22.00	1.312	0.02	0.026	0.034
	LTE Band 26_Ant 2	15M	QPSK	1	0	Right Tilted	DSI 2	26865	831.5	Open	21.71	23.00	1.346	0.06	0.022	0.030
	LTE Band 26_Ant 2	15M	QPSK	36	0	Right Tilted	DSI 2	26865	831.5	Open	20.82	22.00	1.312	0.08	0.018	0.024
	LTE Band 26_Ant 2	15M	QPSK	1	0	Left Cheek	DSI 2	26865	831.5	Open	21.71	23.00	1.346	0.01	0.025	0.033
	LTE Band 26_Ant 2	15M	QPSK	36	0	Left Cheek	DSI 2	26865	831.5	Open	20.82	22.00	1.312	0.09	0.021	0.027
	LTE Band 26_Ant 2	15M	QPSK	1	0	Left Tilted	DSI 2	26865	831.5	Open	21.71	23.00	1.346	0.07	0.018	0.024
	LTE Band 26_Ant 2	15M	QPSK	36	0	Left Tilted	DSI 2	26865	831.5	Open	20.82	22.00	1.312	0.01	0.014	0.018
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Cheek	DSI 2	132072	1720	Open	22.88	24.00	1.294	-0.11	0.134	0.173
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Cheek	DSI 2	132072	1720	Open	21.99	23.00	1.262	0.18	0.109	0.138
	LTE Band 66_Ant 1	20M	QPSK	1	0	Right Tilted	DSI 2	132072	1720	Open	22.88	24.00	1.294	0.02	0.096	0.124
	LTE Band 66_Ant 1	20M	QPSK	50	0	Right Tilted	DSI 2	132072	1720	Open	21.99	23.00	1.262	0.06	0.073	0.092
12	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Cheek	DSI 2	132072	1720	Open	22.88	24.00	1.294	0.08	0.137	**0.177**
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Cheek	DSI 2	132072	1720	Open	21.99	23.00	1.262	-0.16	0.101	0.127
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Tilted	DSI 2	132072	1720	Open	22.88	24.00	1.294	0.08	0.084	0.109
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Tilted	DSI 2	132072	1720	Open	21.99	23.00	1.262	0.08	0.065	0.082
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Cheek	DSI 2	132072	1720	Open	20.92	22.00	1.282	0.11	0.060	0.077
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Cheek	DSI 2	132072	1720	Open	20.06	21.00	1.242	0.06	0.044	0.055
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Tilted	DSI 2	132072	1720	Open	20.92	22.00	1.282	0.08	0.052	0.067
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Tilted	DSI 2	132072	1720	Open	20.06	21.00	1.242	0.07	0.048	0.060
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Cheek	DSI 2	132072	1720	Open	20.92	22.00	1.282	0.09	0.069	0.088
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Cheek	DSI 2	132072	1720	Open	20.06	21.00	1.242	0.06	0.051	0.063
	LTE Band 66_Ant 2	20M	QPSK	1	0	Left Tilted	DSI 2	132072	1720	Open	20.92	22.00	1.282	0.07	0.039	0.050
	LTE Band 66_Ant 2	20M	QPSK	50	0	Left Tilted	DSI 2	132072	1720	Open	20.06	21.00	1.242	0.11	0.025	0.031

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Cheek	DSI 2	133322	683	Open	22.85	24.00	1.303	0.12	0.052	0.068
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Cheek	DSI 2	133322	683	Open	22.38	23.00	1.153	-0.06	0.044	0.051
	LTE Band 71_Ant 1	20M	QPSK	1	0	Right Tilted	DSI 2	133322	683	Open	22.85	24.00	1.303	0.07	0.027	0.035
	LTE Band 71_Ant 1	20M	QPSK	50	0	Right Tilted	DSI 2	133322	683	Open	22.38	23.00	1.153	0.06	0.022	0.025
13	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Cheek	DSI 2	133322	683	Open	22.85	24.00	1.303	0.08	0.055	**0.071**
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Cheek	DSI 2	133322	683	Open	22.38	23.00	1.153	0.12	0.045	0.052
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Tilted	DSI 2	133322	683	Open	22.85	24.00	1.303	0.17	0.029	0.038
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Tilted	DSI 2	133322	683	Open	22.38	23.00	1.153	-0.19	0.025	0.029
	LTE Band 71_Ant 2	20M	QPSK	1	0	Right Cheek	DSI 2	133322	683	Open	21.89	23.00	1.291	-0.11	0.023	0.030
	LTE Band 71_Ant 2	20M	QPSK	50	24	Right Cheek	DSI 2	133322	683	Open	20.94	22.00	1.276	0.08	0.016	0.020
	LTE Band 71_Ant 2	20M	QPSK	1	0	Right Tilted	DSI 2	133322	683	Open	21.89	23.00	1.291	-0.09	0.015	0.019
	LTE Band 71_Ant 2	20M	QPSK	50	24	Right Tilted	DSI 2	133322	683	Open	20.94	22.00	1.276	0.08	0.011	0.014
	LTE Band 71_Ant 2	20M	QPSK	1	0	Left Cheek	DSI 2	133322	683	Open	21.89	23.00	1.291	0.01	0.033	0.042
	LTE Band 71_Ant 2	20M	QPSK	50	24	Left Cheek	DSI 2	133322	683	Open	20.94	22.00	1.276	0.04	0.027	0.034
	LTE Band 71_Ant 2	20M	QPSK	1	0	Left Tilted	DSI 2	133322	683	Open	21.89	23.00	1.291	-0.16	0.015	0.019
	LTE Band 71_Ant 2	20M	QPSK	50	24	Left Tilted	DSI 2	133322	683	Open	20.94	22.00	1.276	0.11	0.011	0.014

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Ant 1	20M	QPSK	1	0	Right Cheek	DSI 2	40620	2593	Open	22.99	24.00	1.262	62.9	1.006	0.01	0.041	0.052
	LTE Band 41_Ant 1	20M	QPSK	50	0	Right Cheek	DSI 2	40620	2593	Open	22.18	23.00	1.208	62.9	1.006	0.01	0.026	0.032
	LTE Band 41_Ant 1	20M	QPSK	1	0	Right Tilted	DSI 2	40620	2593	Open	22.99	24.00	1.262	62.9	1.006	0.03	0.047	0.059
	LTE Band 41_Ant 1	20M	QPSK	50	0	Right Tilted	DSI 2	40620	2593	Open	22.18	23.00	1.208	62.9	1.006	0.05	0.056	0.068
14	LTE Band 41_Ant 1	20M	QPSK	1	0	Left Cheek	DSI 2	40620	2593	Open	22.99	24.00	1.262	62.9	1.006	-0.02	0.077	**0.098**
	LTE Band 41_Ant 1	20M	QPSK	1	0	Left Cheek	DSI 2	40620+ 40422	2593+ 2573.2	Open	23.85	24.00	1.035	62.9	1.006	0.01	0.058	0.060
	LTE Band 41_Ant 1	20M	QPSK	50	0	Left Cheek	DSI 2	40620	2593	Open	22.18	23.00	1.208	62.9	1.006	0.06	0.045	0.055
	LTE Band 41_Ant 1	20M	QPSK	1	0	Left Tilted	DSI 2	40620	2593	Open	22.99	24.00	1.262	62.9	1.006	0.08	0.029	0.037
	LTE Band 41_Ant 1	20M	QPSK	50	0	Left Tilted	DSI 2	40620	2593	Open	22.18	23.00	1.208	62.9	1.006	0.09	0.022	0.027
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Cheek	DSI 2	39750	2506	Open	22.61	23.50	1.227	62.9	1.006	-0.19	0.074	0.091
	LTE Band 41_Ant 2	20M	QPSK	50	24	Right Cheek	DSI 2	39750	2506	Open	21.78	22.50	1.180	62.9	1.006	0.08	0.053	0.063
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Tilted	DSI 2	39750	2506	Open	22.61	23.50	1.227	62.9	1.006	-0.08	0.076	0.094
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Tilted	DSI 2	39750+ 39948	2506+ 2525.8	Open	23.01	23.50	1.119	62.9	1.006	0.02	0.064	0.072
	LTE Band 41_Ant 2	20M	QPSK	50	24	Right Tilted	DSI 2	39750	2506	Open	21.78	22.50	1.180	62.9	1.006	0.06	0.043	0.051
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Cheek	DSI 2	39750	2506	Open	22.61	23.50	1.227	62.9	1.006	0.08	0.063	0.078
	LTE Band 41_Ant 2	20M	QPSK	50	24	Left Cheek	DSI 2	39750	2506	Open	21.78	22.50	1.180	62.9	1.006	0.07	0.052	0.062
	LTE Band 41_Ant 2	20M	QPSK	1	0	Left Tilted	DSI 2	39750	2506	Open	22.61	23.50	1.227	62.9	1.006	0.06	0.062	0.077
	LTE Band 41_Ant 2	20M	QPSK	50	24	Left Tilted	DSI 2	39750	2506	Open	21.78	22.50	1.180	62.9	1.006	0.04	0.049	0.058

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
15	FR1 n5_Ant 1	20M	BPSK	1	1	Right Cheek	DSI 2	167300	836.5	Open	23.21	24.00	1.199	0.02	0.049	**0.059**
	FR1 n5_Ant 1	20M	BPSK	50	0	Right Cheek	DSI 2	167300	836.5	Open	23.09	24.00	1.233	-0.06	0.040	0.049
	FR1 n5_Ant 1	20M	BPSK	1	1	Right Tilted	DSI 2	167300	836.5	Open	23.21	24.00	1.199	0.08	0.029	0.035
	FR1 n5_Ant 1	20M	BPSK	50	0	Right Tilted	DSI 2	167300	836.5	Open	23.09	24.00	1.233	-0.01	0.020	0.025
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Cheek	DSI 2	167300	836.5	Open	23.21	24.00	1.199	0.05	0.020	0.024
	FR1 n5_Ant 1	20M	BPSK	50	0	Left Cheek	DSI 2	167300	836.5	Open	23.09	24.00	1.233	0.09	0.018	0.022
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Tilted	DSI 2	167300	836.5	Open	23.21	24.00	1.199	0.08	0.020	0.024
	FR1 n5_Ant 1	20M	BPSK	50	0	Left Tilted	DSI 2	167300	836.5	Open	23.09	24.00	1.233	0.07	0.016	0.020
	FR1 n5_Ant 2	20M	BPSK	1	1	Right Cheek	DSI 2	167300	836.5	Open	23.92	24.00	1.019	-0.05	0.027	0.028
	FR1 n5_Ant 2	20M	BPSK	50	0	Right Cheek	DSI 2	167300	836.5	Open	23.77	24.00	1.054	-0.06	0.024	0.025
	FR1 n5_Ant 2	20M	BPSK	1	1	Right Tilted	DSI 2	167300	836.5	Open	23.92	24.00	1.019	0.04	0.014	0.014
	FR1 n5_Ant 2	20M	BPSK	50	0	Right Tilted	DSI 2	167300	836.5	Open	23.77	24.00	1.054	0.05	0.009	0.009
	FR1 n5_Ant 2	20M	BPSK	1	1	Left Cheek	DSI 2	167300	836.5	Open	23.92	24.00	1.019	0.08	0.022	0.022
	FR1 n5_Ant 2	20M	BPSK	50	0	Left Cheek	DSI 2	167300	836.5	Open	23.77	24.00	1.054	0.06	0.020	0.021
	FR1 n5_Ant 2	20M	BPSK	1	1	Left Tilted	DSI 2	167300	836.5	Open	23.92	24.00	1.019	0.08	0.014	0.014
	FR1 n5_Ant 2	20M	BPSK	50	0	Left Tilted	DSI 2	167300	836.5	Open	23.77	24.00	1.054	0.07	0.010	0.011
16	FR1 n41_Ant 2	100M	BPSK	1	1	Right Cheek	DSI 2	518598	2592.99	Open	23.80	24.00	1.047	0.07	0.261	**0.273**
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Cheek	DSI 2	518598	2592.99	Open	23.73	24.00	1.064	0.06	0.248	0.264
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Tilted	DSI 2	518598	2592.99	Open	23.80	24.00	1.047	0.08	0.131	0.137
	FR1 n41_Ant 2	100M	BPSK	135	69	Right Tilted	DSI 2	518598	2592.99	Open	23.73	24.00	1.064	0.07	0.121	0.129
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Cheek	DSI 2	518598	2592.99	Open	23.80	24.00	1.047	-0.06	0.132	0.138
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Cheek	DSI 2	518598	2592.99	Open	23.73	24.00	1.064	0.04	0.112	0.119
	FR1 n41_Ant 2	100M	BPSK	1	1	Left Tilted	DSI 2	518598	2592.99	Open	23.80	24.00	1.047	0.08	0.152	0.159
	FR1 n41_Ant 2	100M	BPSK	135	69	Left Tilted	DSI 2	518598	2592.99	Open	23.73	24.00	1.064	0.06	0.126	0.134

<WLAN 2.4GHz SAR>

Plot No.	Band	Mode	Test Position	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	Ant 4	3	1	2412	Open	20.70	21.00	1.072	100	1.000	0.08	0.081	0.087
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	Ant 4	3	1	2412	Open	20.70	21.00	1.072	100	1.000	0.06	0.013	0.014
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 4	3	1	2412	Open	20.70	21.00	1.072	100	1.000	0.08	0.024	0.026
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Ant 4	3	1	2412	Open	20.70	21.00	1.072	100	1.000	0.07	0.016	0.017
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	Ant 3	3	1	2412	Open	20.70	21.00	1.072	100	1.000	0.06	0.007	0.008
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	Ant 3	3	1	2412	Open	20.70	21.00	1.072	100	1.000	0.09	0.007	0.007
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 3	3	1	2412	Open	20.70	21.00	1.072	100	1.000	-0.01	0.039	0.042
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Ant 3	3	1	2412	Open	20.70	21.00	1.072	100	1.000	0.01	0.005	0.005
17	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	Ant 3+4	3	6	2437	Open	23.98	24.00	1.005	100	1.000	-0.01	0.113	**0.114**
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	Ant 3+4	3	6	2437	Open	23.98	24.00	1.005	100	1.000	0.06	0.031	0.031
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	Ant 3+4	3	6	2437	Open	23.98	24.00	1.005	100	1.000	0.05	0.027	0.027
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	Ant 3+4	3	6	2437	Open	23.98	24.00	1.005	100	1.000	0.09	0.020	0.020

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Right Cheek	Ant 4	2	0	2402	Open	7.99	9.00	1.262	77.13	1.080	0	0.001	0.001
	Bluetooth	1Mbps	Right Tilted	Ant 4	2	0	2402	Open	7.99	9.00	1.262	77.13	1.080	0	0.001	0.001
18	Bluetooth	1Mbps	Left Cheek	Ant 4	2	0	2402	Open	7.99	9.00	1.262	77.13	1.080	-0.05	0.00115	**0.002**
	Bluetooth	1Mbps	Left Tilted	Ant 4	2	0	2402	Open	7.99	9.00	1.262	77.13	1.080	0	0.001	0.001
	Bluetooth	1Mbps	Right Cheek	Ant 4	1	78	2480	Open	15.28	15.50	1.052	77.13	1.080	0	0.001	0.001
	Bluetooth	1Mbps	Right Tilted	Ant 4	1	78	2480	Open	15.28	15.50	1.052	77.13	1.080	0	0.001	0.001
	Bluetooth	1Mbps	Left Cheek	Ant 4	1	78	2480	Open	15.28	15.50	1.052	77.13	1.080	0	0.001	0.001
	Bluetooth	1Mbps	Left Tilted	Ant 4	1	78	2480	Open	15.28	15.50	1.052	77.13	1.080	0	0.001	0.001

<WLAN 5GHz SAR>

Plot No.	Band	Mode	Test Position	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	Ant 4	3	54	5270	Open	19.20	20.00	1.202	95.88	1.043	0.11	0.002	0.003
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	Ant 4	3	54	5270	Open	19.20	20.00	1.202	95.88	1.043	0.09	0.009	0.011
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Ant 4	3	54	5270	Open	19.20	20.00	1.202	95.88	1.043	-0.03	0.016	0.020
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	Ant 4	3	54	5270	Open	19.20	20.00	1.202	95.88	1.043	0.05	0.007	0.009
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	Ant 3	3	54	5270	Open	19.20	20.00	1.202	95.85	1.043	0.11	0.006	0.008
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	Ant 3	3	54	5270	Open	19.20	20.00	1.202	95.85	1.043	0.16	0.003	0.004
19	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Ant 3	3	54	5270	Open	19.20	20.00	1.202	95.85	1.043	0.04	0.020	**0.025**
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	Ant 3	3	54	5270	Open	19.20	20.00	1.202	95.85	1.043	0.04	0.004	0.005
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Cheek	Ant 3+4	3	54	5270	Open	22.52	23.00	1.117	95.85	1.043	0.09	0.010	0.012
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Tilted	Ant 3+4	3	54	5270	Open	22.52	23.00	1.117	95.85	1.043	0.11	0.008	0.009
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Cheek	Ant 3+4	3	54	5270	Open	22.52	23.00	1.117	95.85	1.043	0.16	0.007	0.009
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Tilted	Ant 3+4	3	54	5270	Open	22.52	23.00	1.117	95.85	1.043	0.02	0.017	0.020
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	Ant 4	3	110	5550	Open	19.50	20.00	1.122	95.88	1.043	0.03	0.038	0.045
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	Ant 4	3	110	5550	Open	19.50	20.00	1.122	95.88	1.043	0.14	0.008	0.010
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Ant 4	3	110	5550	Open	19.50	20.00	1.122	95.88	1.043	0.16	0.003	0.004
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	Ant 4	3	110	5550	Open	19.50	20.00	1.122	95.88	1.043	0.08	0.007	0.008
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	Ant 3	3	126	5630	Open	19.63	20.00	1.089	95.85	1.043	0.07	0.006	0.006
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	Ant 3	3	126	5630	Open	19.63	20.00	1.089	95.85	1.043	0.05	0.042	0.048
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Ant 3	3	126	5630	Open	19.63	20.00	1.089	95.85	1.043	0.09	0.012	0.014
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	Ant 3	3	126	5630	Open	19.63	20.00	1.089	95.85	1.043	0.14	0.003	0.003
20	WLAN5.5GHz	802.11n-HT40 MCS0	Right Cheek	Ant 3+4	3	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.09	0.064	**0.074**
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Tilted	Ant 3+4	3	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.16	0.006	0.007
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Cheek	Ant 3+4	3	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.05	0.014	0.016
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Tilted	Ant 3+4	3	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.02	0.002	0.003
21	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	Ant 4	3	149	5745	Open	20.20	21.00	1.202	98.06	1.020	-0.08	0.037	**0.045**
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	Ant 4	3	149	5745	Open	20.20	21.00	1.202	98.06	1.020	0.04	0.001	0.002
	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	Ant 4	3	149	5745	Open	20.20	21.00	1.202	98.06	1.020	0.16	0.007	0.009
	WLAN5.8GHz	802.11a 6Mbps	Left Tilted	Ant 4	3	149	5745	Open	20.20	21.00	1.202	98.06	1.020	0.19	0.001	0.002
	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	Ant 3	3	165	5825	Open	20.50	21.00	1.122	97.09	1.030	0.09	0.001	0.001
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	Ant 3	3	165	5825	Open	20.50	21.00	1.122	97.09	1.030	0.08	0.001	0.001
	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	Ant 3	3	165	5825	Open	20.50	21.00	1.122	97.09	1.030	0.09	0.018	0.021
	WLAN5.8GHz	802.11a 6Mbps	Left Tilted	Ant 3	3	165	5825	Open	20.50	21.00	1.122	97.09	1.030	0.04	0.005	0.006
	WLAN5.8GHz	802.11a 6Mbps	Right Cheek	Ant 3+4	3	157	5785	Open	23.38	24.00	1.153	97.35	1.027	0.06	0.002	0.003
	WLAN5.8GHz	802.11a 6Mbps	Right Tilted	Ant 3+4	3	157	5785	Open	23.38	24.00	1.153	97.35	1.027	0.08	0.001	0.001
	WLAN5.8GHz	802.11a 6Mbps	Left Cheek	Ant 3+4	3	157	5785	Open	23.38	24.00	1.153	97.35	1.027	0.09	0.018	0.022
	WLAN5.8GHz	802.11a 6Mbps	Left Tilted	Ant 3+4	3	157	5785	Open	23.38	24.00	1.153	97.35	1.027	0.04	0.002	0.002

16.2 Hotspot SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 1	GPRS (2 Tx slots)	Front	5mm	DSI 3	128	824.2	Open	29.39	30.50	1.291	0.05	0.191	0.247
22	GSM850_Ant 1	GPRS (2 Tx slots)	Back	5mm	DSI 3	128	824.2	Open	29.39	30.50	1.291	-0.04	0.603	**0.779**
	GSM850_Ant 1	GPRS (2 Tx slots)	Left Side	5mm	DSI 3	128	824.2	Open	29.39	30.50	1.291	0.06	0.085	0.110
	GSM850_Ant 1	GPRS (2 Tx slots)	Bottom Side	5mm	DSI 3	128	824.2	Open	29.39	30.50	1.291	0.05	0.196	0.253
	GSM850_Ant 1	GPRS (2 Tx slots)	Front	5mm	DSI 5	128	824.2	Close	28.44	29.50	1.276	-0.11	0.138	0.176
	GSM850_Ant 1	GPRS (2 Tx slots)	Back	5mm	DSI 5	128	824.2	Close	28.44	29.50	1.276	-0.05	0.587	0.749
	GSM850_Ant 1	GPRS (2 Tx slots)	Left Side	5mm	DSI 5	128	824.2	Close	28.44	29.50	1.276	0.01	0.145	0.185
	GSM850_Ant 1	GPRS (2 Tx slots)	Bottom Side	5mm	DSI 5	128	824.2	Close	28.44	29.50	1.276	0.03	0.210	0.268
	GSM1900_Ant 1	GPRS (3 Tx slots)	Front	5mm	DSI 3	661	1880	Open	26.53	27.20	1.167	0.06	0.536	0.625
	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	DSI 3	661	1880	Open	26.53	27.20	1.167	0.08	0.671	0.783
	GSM1900_Ant 1	GPRS (3 Tx slots)	Left Side	5mm	DSI 3	661	1880	Open	26.53	27.20	1.167	0.15	0.473	0.552
23	GSM1900_Ant 1	GPRS (3 Tx slots)	Bottom Side	5mm	DSI 3	661	1880	Open	26.53	27.20	1.167	-0.05	0.798	**0.931**
	GSM1900_Ant 1	GPRS (3 Tx slots)	Bottom Side	5mm	DSI 3	512	1850.2	Open	26.51	27.20	1.172	-0.11	0.674	0.790
	GSM1900_Ant 1	GPRS (3 Tx slots)	Bottom Side	5mm	DSI 3	810	1909.8	Open	26.32	27.20	1.225	0.08	0.580	0.710
	GSM1900_Ant 1	GPRS (3 Tx slots)	Front	5mm	DSI 5	661	1880	Close	24.71	25.00	1.069	-0.09	0.480	0.513
	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	DSI 5	661	1880	Close	24.71	25.00	1.069	0.08	0.767	0.820
	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	DSI 5	512	1850.2	Close	24.70	25.00	1.072	0.06	0.843	0.903
	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	DSI 5	810	1909.8	Close	23.54	25.00	1.400	0.04	0.639	0.894
	GSM1900_Ant 1	GPRS (3 Tx slots)	Left Side	5mm	DSI 5	661	1880	Close	24.71	25.00	1.069	-0.16	0.557	0.595
	GSM1900_Ant 1	GPRS (3 Tx slots)	Bottom Side	5mm	DSI 5	661	1880	Close	24.71	25.00	1.069	0.11	0.582	0.622

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 3	9262	1852.4	Open	20.57	21.60	1.268	0.09	0.412	0.522
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	9262	1852.4	Open	20.57	21.60	1.268	0.07	0.634	0.804
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	9400	1880	Open	20.51	21.60	1.285	0.03	0.627	0.806
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	9538	1907.6	Open	20.56	21.60	1.271	0.01	0.599	0.761
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	5mm	DSI 3	9262	1852.4	Open	20.57	21.60	1.268	0.01	0.310	0.393
	WCDMA II_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 3	9262	1852.4	Open	20.57	21.60	1.268	0.03	0.577	0.731
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	9262	1852.4	Close	21.10	22.00	1.230	0.01	0.746	0.918
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	9400	1880	Close	21.09	22.00	1.233	0.05	0.653	0.805
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	9538	1907.6	Close	20.86	22.00	1.300	0.06	0.623	0.810
24	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	9262	1852.4	Close	21.10	22.00	1.230	0.01	0.756	**0.930**
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	9400	1880	Close	21.09	22.00	1.233	0.09	0.727	0.896
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	9538	1907.6	Close	20.86	22.00	1.300	0.08	0.638	0.830
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	5mm	DSI 5	9262	1852.4	Close	21.10	22.00	1.230	0.07	0.654	0.805
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	5mm	DSI 5	9400	1880	Close	21.09	22.00	1.233	0.09	0.722	0.890
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	5mm	DSI 5	9538	1907.6	Close	20.86	22.00	1.300	0.11	0.614	0.798
	WCDMA II_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 5	9262	1852.4	Close	21.10	22.00	1.230	0.16	0.743	0.914
	WCDMA II_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 5	9400	1880	Close	21.09	22.00	1.233	0.08	0.722	0.890
	WCDMA II_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 5	9538	1907.6	Close	20.86	22.00	1.300	0.07	0.713	0.927
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 3	1413	1732.6	Open	21.24	22.20	1.247	0.06	0.643	0.802
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 3	1312	1712.4	Open	21.24	22.20	1.247	0.11	0.652	0.813
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 3	1513	1752.6	Open	21.23	22.20	1.250	-0.03	0.603	0.754
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	1413	1732.6	Open	21.24	22.20	1.247	-0.11	0.662	0.826
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	1312	1712.4	Open	21.24	22.20	1.247	0.08	0.643	0.802
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	1513	1752.6	Open	21.23	22.20	1.250	-0.09	0.648	0.810
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	5mm	DSI 3	1413	1732.6	Open	21.24	22.20	1.247	0.08	0.467	0.583
	WCDMA IV_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 3	1413	1732.6	Open	21.24	22.20	1.247	0.01	0.651	0.812
	WCDMA IV_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 3	1312	1712.4	Open	21.24	22.20	1.247	0.04	0.611	0.762
	WCDMA IV_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 3	1513	1752.6	Open	21.23	22.20	1.250	-0.16	0.608	0.760
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	1413	1732.6	Close	20.67	21.60	1.239	0.11	0.546	0.676
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	1413	1732.6	Close	20.67	21.60	1.239	0.06	0.647	0.802
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	1312	1712.4	Close	20.66	21.60	1.242	0.05	0.624	0.775
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	1513	1752.6	Close	20.48	21.60	1.294	0.01	0.621	0.804
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	5mm	DSI 5	1413	1732.6	Close	20.67	21.60	1.239	0.11	0.334	0.414
	WCDMA IV_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 5	1413	1732.6	Close	20.67	21.60	1.239	0.16	0.650	0.805
	WCDMA IV_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 5	1312	1712.4	Close	20.66	21.60	1.242	0.19	0.590	0.733
25	WCDMA IV_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 5	1513	1752.6	Close	20.48	21.60	1.294	0.05	0.638	**0.826**
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 3	4182	836.4	Open	21.91	22.90	1.256	0.06	0.342	0.430
26	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	4182	836.4	Open	21.91	22.90	1.256	0.02	0.735	**0.923**
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	4132	826.4	Open	21.81	22.90	1.285	0.06	0.712	0.915
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 3	4233	846.6	Open	21.88	22.90	1.265	0.08	0.698	0.883
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	5mm	DSI 3	4182	836.4	Open	21.91	22.90	1.256	0.07	0.192	0.241
	WCDMA V_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 3	4182	836.4	Open	21.91	22.90	1.256	0.09	0.420	0.528
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	4182	836.4	Close	22.26	22.90	1.159	0.06	0.421	0.488
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	4182	836.4	Close	22.26	22.90	1.159	-0.06	0.694	0.804
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	4132	826.4	Close	22.23	22.90	1.167	0.11	0.669	0.781
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	4233	846.6	Close	22.03	22.90	1.222	0.19	0.612	0.748
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	5mm	DSI 5	4182	836.4	Close	22.26	22.90	1.159	0.16	0.336	0.389
	WCDMA V_Ant 1	RMC 12.2Kbps	Bottom Side	5mm	DSI 5	4182	836.4	Close	22.26	22.90	1.159	0.05	0.445	0.516

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Front	5mm	DSI 3	384	836.52	Open	23.52	24.60	1.282	0.06	0.345	0.442
27	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Back	5mm	DSI 3	384	836.52	Open	23.52	24.60	1.282	0.11	0.694	**0.890**
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Back	5mm	DSI 3	1013	824.7	Open	23.28	24.60	1.355	0.04	0.584	0.791
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Back	5mm	DSI 3	777	848.31	Open	23.50	24.60	1.288	0.06	0.575	0.741
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Left Side	5mm	DSI 3	384	836.52	Open	23.52	24.60	1.282	0.09	0.274	0.351
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Bottom Side	5mm	DSI 3	384	836.52	Open	23.52	24.60	1.282	0.11	0.567	0.727
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Front	5mm	DSI 5	384	836.52	Close	22.43	23.40	1.250	0.01	0.242	0.303
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Back	5mm	DSI 5	384	836.52	Close	22.43	23.40	1.250	-0.01	0.644	0.805
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Back	5mm	DSI 5	1013	824.7	Close	22.40	23.40	1.259	0.16	0.635	0.799
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Back	5mm	DSI 5	777	848.31	Close	22.38	23.40	1.265	0.14	0.613	0.775
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Left Side	5mm	DSI 5	384	836.52	Close	22.43	23.40	1.250	0.02	0.136	0.170
	CDMA2000 BC0_Ant 1	RTAP 153.6bpsk	Bottom Side	5mm	DSI 5	384	836.52	Close	22.43	23.40	1.250	0.16	0.299	0.374

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 3	18700	1860	Open	20.55	21.30	1.189	-0.06	0.456	0.542
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 3	18700	1860	Open	20.51	21.30	1.199	0.08	0.512	0.614
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 3	18700	1860	Open	20.55	21.30	1.189	0.07	0.461	0.548
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 3	18700	1860	Open	20.51	21.30	1.199	0.06	0.439	0.527
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 3	18700	1860	Open	20.55	21.30	1.189	0.04	0.258	0.307
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 3	18700	1860	Open	20.51	21.30	1.199	-0.11	0.222	0.266
	LTE Band 2_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	18700	1860	Open	20.55	21.30	1.189	0.06	0.616	0.732
	LTE Band 2_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	18700	1860	Open	20.51	21.30	1.199	0.07	0.602	0.722
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	18700	1860	Close	20.12	21.00	1.225	0.06	0.631	0.773
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 5	18700	1860	Close	20.17	21.00	1.211	0.08	0.611	0.740
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	18700	1860	Close	20.12	21.00	1.225	0.09	0.636	0.779
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	18900	1880	Close	19.90	21.00	1.288	0.07	0.603	0.777
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	19100	1900	Close	19.92	21.00	1.282	0.08	0.586	0.751
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	18700	1860	Close	20.17	21.00	1.211	0.05	0.658	0.797
28	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	18900	1880	Close	19.96	21.00	1.271	-0.04	0.628	**0.798**
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	19100	1900	Close	19.92	21.00	1.282	0.11	0.563	0.722
	LTE Band 2_Ant 1	20M	QPSK	100	0	Back	5mm	DSI 5	18700	1860	Close	20.15	21.00	1.216	0.06	0.587	0.714
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 5	18700	1860	Close	20.12	21.00	1.225	0.18	0.614	0.752
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 5	18700	1860	Close	20.17	21.00	1.211	0.05	0.536	0.649
	LTE Band 2_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	18700	1860	Close	20.12	21.00	1.225	0.06	0.518	0.634
	LTE Band 2_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	18900	1880	Close	19.90	21.00	1.288	0.08	0.604	0.778
	LTE Band 2_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	19100	1900	Close	19.92	21.00	1.282	0.01	0.587	0.753
	LTE Band 2_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	18700	1860	Close	20.17	21.00	1.211	0.16	0.614	0.743
	LTE Band 2_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	18900	1880	Close	19.96	21.00	1.271	0.15	0.536	0.681
	LTE Band 2_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	19100	1900	Close	19.92	21.00	1.282	0.18	0.518	0.664
	LTE Band 2_Ant 1	20M	QPSK	100	0	Bottom Side	5mm	DSI 5	18700	1860	Close	20.15	21.00	1.216	0.11	0.604	0.735
	LTE Band 2_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 3	18700	1860	Open	20.94	22.00	1.276	0.03	0.576	0.735
	LTE Band 2_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 3	18700	1860	Open	19.94	21.00	1.276	0.09	0.445	0.568
	LTE Band 2_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 3	18700	1860	Open	20.94	22.00	1.276	-0.14	0.360	0.460
	LTE Band 2_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 3	18700	1860	Open	19.94	21.00	1.276	0.09	0.304	0.388
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 3	18700	1860	Open	20.94	22.00	1.276	0.06	0.181	0.231
	LTE Band 2_Ant 2	20M	QPSK	50	0	Right Side	5mm	DSI 3	18700	1860	Open	19.94	21.00	1.276	0.08	0.165	0.211
	LTE Band 2_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	18700	1860	Open	20.94	22.00	1.276	0.04	0.209	0.267
	LTE Band 2_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	18700	1860	Open	19.94	21.00	1.276	0.02	0.200	0.255
	LTE Band 2_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	18700	1860	Close	20.94	22.00	1.276	-0.09	0.509	0.650
	LTE Band 2_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 5	18700	1860	Close	19.94	21.00	1.276	0.07	0.440	0.562
	LTE Band 2_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	18700	1860	Close	20.94	22.00	1.276	0.06	0.368	0.470
	LTE Band 2_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 5	18700	1860	Close	19.94	21.00	1.276	0.08	0.325	0.415
	LTE Band 2_Ant 2	20M	QPSK	1	0	Left Side	5mm	DSI 5	18700	1860	Close	20.94	22.00	1.276	0.09	0.074	0.094
	LTE Band 2_Ant 2	20M	QPSK	50	0	Left Side	5mm	DSI 5	18700	1860	Close	19.94	21.00	1.276	0.07	0.065	0.083
	LTE Band 2_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 5	18700	1860	Close	20.94	22.00	1.276	0.08	0.229	0.292
	LTE Band 2_Ant 2	20M	QPSK	50	0	Right Side	5mm	DSI 5	18700	1860	Close	19.94	21.00	1.276	0.05	0.190	0.243
	LTE Band 2_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	18700	1860	Close	20.94	22.00	1.276	-0.04	0.215	0.274
	LTE Band 2_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	18700	1860	Close	19.94	21.00	1.276	0.11	0.200	0.255

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 3	21100	2535	Open	17.96	19.5	1.426	-0.09	0.450	0.642
	LTE Band 7_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 3	21100	2535	Open	18.09	19.5	1.384	0.06	0.420	0.581
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 3	21100	2535	Open	17.96	19.5	1.426	0.06	0.390	0.556
	LTE Band 7_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 3	21100	2535	Open	18.09	19.5	1.384	0.08	0.365	0.505
	LTE Band 7_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 3	21100	2535	Open	17.96	19.5	1.426	0.07	0.207	0.295
	LTE Band 7_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 3	21100	2535	Open	18.09	19.5	1.384	0.009	0.232	0.321
	LTE Band 7_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	21100	2535	Open	17.96	19.5	1.426	0.17	0.620	0.884
	LTE Band 7_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	20850	2510	Open	17.56	19.5	1.563	0.11	0.563	0.880
	LTE Band 7_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	21350	2560	Open	17.78	19.5	1.486	0.06	0.571	0.848
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	21100	2535	Open	18.09	19.5	1.384	0.08	0.585	0.809
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	20850	2510	Open	17.67	19.5	1.524	0.11	0.522	0.796
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	21350	2560	Open	17.97	19.5	1.422	0.16	0.535	0.761
	LTE Band 7_Ant 1	20M	QPSK	100	0	Bottom Side	5mm	DSI 3	21100	2535	Open	18.02	19.5	1.406	0.09	0.563	0.792
	LTE Band 7_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	21100	2535	Close	18.70	19.9	1.318	0.18	0.203	0.268
	LTE Band 7_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	0.17	0.187	0.243
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	21100	2535	Close	18.70	19.9	1.318	0.08	0.620	0.817
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	20850	2510	Close	18.29	19.9	1.449	-0.02	0.543	0.787
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	21350	2560	Close	18.56	19.9	1.361	0.01	0.561	0.764
	LTE Band 7_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	0.16	0.539	0.701
	LTE Band 7_Ant 1	20M	QPSK	100	0	Back	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	-0.03	0.528	0.686
	LTE Band 7_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 5	21100	2535	Close	18.70	19.9	1.318	0.08	0.273	0.360
	LTE Band 7_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	0.07	0.251	0.326
	LTE Band 7_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	21100	2535	Close	18.70	19.9	1.318	0.05	0.673	0.887
	LTE Band 7_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	20850	2510	Close	18.29	19.9	1.449	-0.02	0.603	0.874
	LTE Band 7_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	21350	2560	Close	18.56	19.9	1.361	0.01	0.538	0.732
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	0.06	0.653	0.849
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	20850	2510	Close	18.42	19.9	1.406	0.04	0.611	0.859
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	21350	2560	Close	18.69	19.9	1.321	0.01	0.620	0.819
	LTE Band 7_Ant 1	20M	QPSK	100	0	Bottom Side	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	-0.03	0.616	0.801
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 3	21100	2535	Open	19.48	21.10	1.452	0.06	0.355	0.515
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 3	21100	2535	Open	19.54	21.10	1.432	0.08	0.344	0.493
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 3	21100	2535	Open	19.48	21.10	1.452	0.09	0.396	0.575
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 3	21100	2535	Open	19.54	21.10	1.432	0.06	0.382	0.547
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 3	21100	2535	Open	19.48	21.10	1.452	0.08	0.299	0.434
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Side	5mm	DSI 3	21100	2535	Open	19.54	21.10	1.432	0.07	0.290	0.415
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	21100	2535	Open	19.48	21.10	1.452	-0.07	0.604	0.877
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	20850	2510	Open	19.10	21.10	1.585	0.06	0.552	0.875
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	21350	2560	Open	19.23	21.10	1.538	0.08	0.568	0.874
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	21100	2535	Open	19.54	21.10	1.432	0.11	0.585	0.838
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	20850	2510	Open	19.20	21.10	1.549	0.16	0.546	0.846
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	21350	2560	Open	19.38	21.10	1.486	0.09	0.573	0.851
	LTE Band 7_Ant 2	20M	QPSK	100	0	Bottom Side	5mm	DSI 3	21100	2535	Open	19.51	21.10	1.442	0.18	0.585	0.844
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	21100	2535	Close	18.44	19.40	1.247	0.17	0.246	0.307
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 5	21100	2535	Close	18.51	19.40	1.227	0.08	0.278	0.341
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	21100	2535	Close	18.44	19.40	1.247	0.16	0.533	0.665
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 5	21100	2535	Close	18.51	19.40	1.227	0.05	0.573	0.703
	LTE Band 7_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 5	21100	2535	Close	18.44	19.40	1.247	0.07	0.545	0.680
	LTE Band 7_Ant 2	20M	QPSK	50	0	Right Side	5mm	DSI 5	21100	2535	Close	18.51	19.40	1.227	0.06	0.536	0.658
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	21100	2535	Close	18.44	19.40	1.247	0.08	0.709	0.884
	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	20850	2510	Close	18.06	19.40	1.361	0.09	0.624	0.850
29	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	21350	2560	Close	18.24	19.40	1.306	0.07	0.711	**0.929**
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	21100	2535	Close	18.51	19.40	1.227	0.09	0.631	0.775
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	20850	2510	Close	18.18	19.40	1.324	0.07	0.611	0.809
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	21350	2560	Close	18.35	19.40	1.274	0.08	0.579	0.737
	LTE Band 7_Ant 2	20M	QPSK	100	0	Bottom Side	5mm	DSI 5	21100	2535	Close	18.50	19.40	1.230	0.12	0.603	0.742

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Ant 1	10M	QPSK	1	0	Front	5mm	DSI 3	23095	707.5	Open	22.73	24.00	1.340	0.16	0.175	0.234
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	5mm	DSI 3	23095	707.5	Open	21.83	23.00	1.309	0.14	0.172	0.225
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	5mm	DSI 3	23095	707.5	Open	22.73	24.00	1.340	-0.01	0.306	0.410
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	5mm	DSI 3	23095	707.5	Open	21.83	23.00	1.309	0.16	0.259	0.339
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	5mm	DSI 3	23095	707.5	Open	22.73	24.00	1.340	0.02	0.097	0.130
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Side	5mm	DSI 3	23095	707.5	Open	21.83	23.00	1.309	0.09	0.110	0.144
	LTE Band 12_Ant 1	10M	QPSK	1	0	Bottom Side	5mm	DSI 3	23095	707.5	Open	22.73	24.00	1.340	0.08	0.246	0.330
	LTE Band 12_Ant 1	10M	QPSK	25	0	Bottom Side	5mm	DSI 3	23095	707.5	Open	21.83	23.00	1.309	0.07	0.225	0.295
	LTE Band 12_Ant 1	10M	QPSK	1	0	Front	5mm	DSI 5	23095	707.5	Close	22.73	24.00	1.340	0.09	0.157	0.210
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	5mm	DSI 5	23095	707.5	Close	21.83	23.00	1.309	0.08	0.142	0.186
30	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	5mm	DSI 5	23095	707.5	Close	22.73	24.00	1.340	-0.01	0.386	**0.517**
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	5mm	DSI 5	23095	707.5	Close	21.83	23.00	1.309	0.12	0.316	0.414
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	5mm	DSI 5	23095	707.5	Close	22.73	24.00	1.340	0.06	0.168	0.225
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Side	5mm	DSI 5	23095	707.5	Close	21.83	23.00	1.309	0.08	0.140	0.183
	LTE Band 12_Ant 1	10M	QPSK	1	0	Bottom Side	5mm	DSI 5	23095	707.5	Close	22.73	24.00	1.340	0.09	0.267	0.358
	LTE Band 12_Ant 1	10M	QPSK	25	0	Bottom Side	5mm	DSI 5	23095	707.5	Close	21.83	23.00	1.309	0.07	0.208	0.272
	LTE Band 12_Ant 2	10M	QPSK	1	0	Front	5mm	DSI 3	23095	707.5	Open	22.08	23.00	1.236	0.09	0.100	0.124
	LTE Band 12_Ant 2	10M	QPSK	25	0	Front	5mm	DSI 3	23095	707.5	Open	21.16	22.00	1.213	0.06	0.094	0.114
	LTE Band 12_Ant 2	10M	QPSK	1	0	Back	5mm	DSI 3	23095	707.5	Open	22.08	23.00	1.236	0.1	0.113	0.140
	LTE Band 12_Ant 2	10M	QPSK	25	0	Back	5mm	DSI 3	23095	707.5	Open	21.16	22.00	1.213	0.06	0.111	0.135
	LTE Band 12_Ant 2	10M	QPSK	1	0	Right Side	5mm	DSI 3	23095	707.5	Open	22.08	23.00	1.236	0.07	0.063	0.078
	LTE Band 12_Ant 2	10M	QPSK	25	0	Right Side	5mm	DSI 3	23095	707.5	Open	21.16	22.00	1.213	0.08	0.070	0.085
	LTE Band 12_Ant 2	10M	QPSK	1	0	Bottom Side	5mm	DSI 3	23095	707.5	Open	22.08	23.00	1.236	-0.03	0.206	0.255
	LTE Band 12_Ant 2	10M	QPSK	25	0	Bottom Side	5mm	DSI 3	23095	707.5	Open	21.16	22.00	1.213	0.01	0.201	0.244
	LTE Band 12_Ant 2	10M	QPSK	1	0	Front	5mm	DSI 5	23095	707.5	Close	22.08	23.00	1.236	-0.16	0.103	0.127
	LTE Band 12_Ant 2	10M	QPSK	25	0	Front	5mm	DSI 5	23095	707.5	Close	21.16	22.00	1.213	0.11	0.087	0.106
	LTE Band 12_Ant 2	10M	QPSK	1	0	Back	5mm	DSI 5	23095	707.5	Close	22.08	23.00	1.236	0.05	0.227	0.281
	LTE Band 12_Ant 2	10M	QPSK	25	0	Back	5mm	DSI 5	23095	707.5	Close	21.16	22.00	1.213	0.08	0.135	0.164
	LTE Band 12_Ant 2	10M	QPSK	1	0	Right Side	5mm	DSI 5	23095	707.5	Close	22.08	23.00	1.236	0.07	0.089	0.110
	LTE Band 12_Ant 2	10M	QPSK	25	0	Right Side	5mm	DSI 5	23095	707.5	Close	21.16	22.00	1.213	0.09	0.068	0.083
	LTE Band 12_Ant 2	10M	QPSK	1	0	Bottom Side	5mm	DSI 5	23095	707.5	Close	22.08	23.00	1.236	-0.05	0.233	0.288
	LTE Band 12_Ant 2	10M	QPSK	25	0	Bottom Side	5mm	DSI 5	23095	707.5	Close	21.16	22.00	1.213	0.11	0.222	0.269

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 13_Ant 1	10M	QPSK	1	0	Front	5mm	DSI 3	23230	782	Open	22.43	24.00	1.435	0.11	0.212	0.304
	LTE Band 13_Ant 1	10M	QPSK	25	0	Front	5mm	DSI 3	23230	782	Open	21.52	23.00	1.406	0.16	0.196	0.276
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	5mm	DSI 3	23230	782	Open	22.43	24.00	1.435	-0.11	0.403	0.579
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	5mm	DSI 3	23230	782	Open	21.52	23.00	1.406	0.11	0.341	0.479
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	5mm	DSI 3	23230	782	Open	22.43	24.00	1.435	0.05	0.116	0.167
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Side	5mm	DSI 3	23230	782	Open	21.52	23.00	1.406	0.08	0.087	0.122
	LTE Band 13_Ant 1	10M	QPSK	1	0	Bottom Side	5mm	DSI 3	23230	782	Open	22.43	24.00	1.435	0.06	0.290	0.416
	LTE Band 13_Ant 1	10M	QPSK	25	0	Bottom Side	5mm	DSI 3	23230	782	Open	21.52	23.00	1.406	0.08	0.289	0.406
	LTE Band 13_Ant 1	10M	QPSK	1	0	Front	5mm	DSI 5	23230	782	Close	22.43	24.00	1.435	0.07	0.212	0.304
	LTE Band 13_Ant 1	10M	QPSK	25	0	Front	5mm	DSI 5	23230	782	Close	21.52	23.00	1.406	0.09	0.170	0.239
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	5mm	DSI 5	23230	782	Close	22.43	24.00	1.435	-0.11	0.502	0.721
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	5mm	DSI 5	23230	782	Close	21.52	23.00	1.406	0.06	0.354	0.498
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	5mm	DSI 5	23230	782	Close	22.43	24.00	1.435	0.1	0.196	0.281
	LTE Band 13_Ant 1	10M	QPSK	25	0	Left Side	5mm	DSI 5	23230	782	Close	21.52	23.00	1.406	0.06	0.181	0.254
	LTE Band 13_Ant 1	10M	QPSK	1	0	Bottom Side	5mm	DSI 5	23230	782	Close	22.43	24.00	1.435	0.08	0.373	0.535
	LTE Band 13_Ant 1	10M	QPSK	25	0	Bottom Side	5mm	DSI 5	23230	782	Close	21.52	23.00	1.406	0.09	0.310	0.436
	LTE Band 13_Ant 2	10M	QPSK	1	0	Front	5mm	DSI 3	23230	782	Open	21.66	23.00	1.361	-0.06	0.266	0.362
	LTE Band 13_Ant 2	10M	QPSK	25	0	Front	5mm	DSI 3	23230	782	Open	20.84	22.00	1.306	0.08	0.201	0.263
	LTE Band 13_Ant 2	10M	QPSK	1	0	Back	5mm	DSI 3	23230	782	Open	21.66	23.00	1.361	-0.15	0.266	0.362
	LTE Band 13_Ant 2	10M	QPSK	25	0	Back	5mm	DSI 3	23230	782	Open	20.84	22.00	1.306	0.06	0.233	0.304
	LTE Band 13_Ant 2	10M	QPSK	1	0	Right Side	5mm	DSI 3	23230	782	Open	21.66	23.00	1.361	0.07	0.104	0.142
	LTE Band 13_Ant 2	10M	QPSK	25	0	Right Side	5mm	DSI 3	23230	782	Open	20.84	22.00	1.306	0.09	0.100	0.131
	LTE Band 13_Ant 2	10M	QPSK	1	0	Bottom Side	5mm	DSI 3	23230	782	Open	21.66	23.00	1.361	-0.08	0.361	0.491
	LTE Band 13_Ant 2	10M	QPSK	25	0	Bottom Side	5mm	DSI 3	23230	782	Open	20.84	22.00	1.306	0.04	0.306	0.400
	LTE Band 13_Ant 2	10M	QPSK	1	0	Front	5mm	DSI 5	23230	782	Close	21.66	23.00	1.361	0.05	0.218	0.297
	LTE Band 13_Ant 2	10M	QPSK	25	0	Front	5mm	DSI 5	23230	782	Close	20.84	22.00	1.306	0.06	0.181	0.236
31	LTE Band 13_Ant 2	10M	QPSK	1	0	Back	5mm	DSI 5	23230	782	Close	21.66	23.00	1.361	0.01	0.566	**0.771**
	LTE Band 13_Ant 2	10M	QPSK	25	0	Back	5mm	DSI 5	23230	782	Close	20.84	22.00	1.306	0.08	0.408	0.533
	LTE Band 13_Ant 2	10M	QPSK	1	0	Right Side	5mm	DSI 5	23230	782	Close	21.66	23.00	1.361	0.16	0.184	0.251
	LTE Band 13_Ant 2	10M	QPSK	25	0	Right Side	5mm	DSI 5	23230	782	Close	20.84	22.00	1.306	0.06	0.156	0.204
	LTE Band 13_Ant 2	10M	QPSK	1	0	Bottom Side	5mm	DSI 5	23230	782	Close	21.66	23.00	1.361	0.05	0.434	0.591
	LTE Band 13_Ant 2	10M	QPSK	25	0	Bottom Side	5mm	DSI 5	23230	782	Close	20.84	22.00	1.306	0.16	0.271	0.354

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	5mm	DSI 3	26865	831.5	Open	22.65	24.00	1.365	0.01	0.277	0.378
	LTE Band 26_Ant 1	15M	QPSK	36	0	Front	5mm	DSI 3	26865	831.5	Open	21.76	23.00	1.330	0.06	0.267	0.355
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	5mm	DSI 3	26865	831.5	Open	22.65	24.00	1.365	-0.05	0.507	0.692
	LTE Band 26_Ant 1	15M	QPSK	36	0	Back	5mm	DSI 3	26865	831.5	Open	21.76	23.00	1.330	0.03	0.418	0.556
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	5mm	DSI 3	26865	831.5	Open	22.65	24.00	1.365	0.05	0.117	0.160
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Side	5mm	DSI 3	26865	831.5	Open	21.76	23.00	1.330	0.09	0.103	0.137
	LTE Band 26_Ant 1	15M	QPSK	1	0	Bottom Side	5mm	DSI 3	26865	831.5	Open	22.65	24.00	1.365	0.06	0.308	0.420
	LTE Band 26_Ant 1	15M	QPSK	36	0	Bottom Side	5mm	DSI 3	26865	831.5	Open	21.76	23.00	1.330	0.08	0.286	0.381
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	5mm	DSI 5	26865	831.5	Close	22.65	24.00	1.365	0.04	0.271	0.370
	LTE Band 26_Ant 1	15M	QPSK	36	0	Front	5mm	DSI 5	26865	831.5	Close	21.76	23.00	1.330	0.06	0.253	0.337
32	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	5mm	DSI 5	26865	831.5	Close	22.65	24.00	1.365	-0.09	0.636	**0.868**
	LTE Band 26_Ant 1	15M	QPSK	36	0	Back	5mm	DSI 5	26865	831.5	Close	21.76	23.00	1.330	0.07	0.509	0.677
	LTE Band 26_Ant 1	15M	QPSK	75	0	Back	5mm	DSI 5	26865	831.5	Close	21.70	23.00	1.349	0.09	0.501	0.676
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	5mm	DSI 5	26865	831.5	Close	22.65	24.00	1.365	0.04	0.231	0.315
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Side	5mm	DSI 5	26865	831.5	Close	21.76	23.00	1.330	0.06	0.244	0.325
	LTE Band 26_Ant 1	15M	QPSK	1	0	Bottom Side	5mm	DSI 5	26865	831.5	Close	22.65	24.00	1.365	0.04	0.351	0.479
	LTE Band 26_Ant 1	15M	QPSK	36	0	Bottom Side	5mm	DSI 5	26865	831.5	Close	21.76	23.00	1.330	0.02	0.305	0.406
	LTE Band 26_Ant 2	15M	QPSK	1	0	Front	5mm	DSI 3	26865	831.5	Open	21.71	23.00	1.346	0.06	0.275	0.370
	LTE Band 26_Ant 2	15M	QPSK	36	0	Front	5mm	DSI 3	26865	831.5	Open	20.82	22.00	1.312	0.08	0.216	0.283
	LTE Band 26_Ant 2	15M	QPSK	1	0	Back	5mm	DSI 3	26865	831.5	Open	21.71	23.00	1.346	0.07	0.267	0.359
	LTE Band 26_Ant 2	15M	QPSK	36	0	Back	5mm	DSI 3	26865	831.5	Open	20.82	22.00	1.312	0.06	0.241	0.316
	LTE Band 26_Ant 2	15M	QPSK	1	0	Right Side	5mm	DSI 3	26865	831.5	Open	21.71	23.00	1.346	0.08	0.131	0.176
	LTE Band 26_Ant 2	15M	QPSK	36	0	Right Side	5mm	DSI 3	26865	831.5	Open	20.82	22.00	1.312	0.07	0.101	0.133
	LTE Band 26_Ant 2	15M	QPSK	1	0	Bottom Side	5mm	DSI 3	26865	831.5	Open	21.71	23.00	1.346	-0.06	0.409	0.550
	LTE Band 26_Ant 2	15M	QPSK	36	0	Bottom Side	5mm	DSI 3	26865	831.5	Open	20.82	22.00	1.312	0.06	0.309	0.405
	LTE Band 26_Ant 2	15M	QPSK	1	0	Front	5mm	DSI 5	26865	831.5	Close	21.71	23.00	1.346	0.07	0.210	0.283
	LTE Band 26_Ant 2	15M	QPSK	36	0	Front	5mm	DSI 5	26865	831.5	Close	20.82	22.00	1.312	0.09	0.165	0.217
	LTE Band 26_Ant 2	15M	QPSK	1	0	Back	5mm	DSI 5	26865	831.5	Close	21.71	23.00	1.346	0.02	0.565	0.760
	LTE Band 26_Ant 2	15M	QPSK	36	0	Back	5mm	DSI 5	26865	831.5	Close	20.82	22.00	1.312	0.06	0.253	0.332
	LTE Band 26_Ant 2	15M	QPSK	1	0	Right Side	5mm	DSI 5	26865	831.5	Close	21.71	23.00	1.346	0.08	0.175	0.236
	LTE Band 26_Ant 2	15M	QPSK	36	0	Right Side	5mm	DSI 5	26865	831.5	Close	20.82	22.00	1.312	0.07	0.145	0.190
	LTE Band 26_Ant 2	15M	QPSK	1	0	Bottom Side	5mm	DSI 5	26865	831.5	Close	21.71	23.00	1.346	-0.11	0.351	0.472
	LTE Band 26_Ant 2	15M	QPSK	36	0	Bottom Side	5mm	DSI 5	26865	831.5	Close	20.82	22.00	1.312	0.16	0.322	0.423
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 3	132072	1720	Open	21.14	22.00	1.219	0.01	0.388	0.473
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 3	132072	1720	Open	21.15	22.00	1.216	0.06	0.311	0.378
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 3	132072	1720	Open	21.14	22.00	1.219	-0.01	0.552	0.673
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 3	132072	1720	Open	21.15	22.00	1.216	-0.01	0.503	0.612
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 3	132072	1720	Open	21.14	22.00	1.219	0.03	0.240	0.293
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 3	132072	1720	Open	21.15	22.00	1.216	0.05	0.199	0.242
	LTE Band 66_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	132072	1720	Open	21.14	22.00	1.219	0.06	0.681	0.830
	LTE Band 66_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	132322	1745	Open	21.12	22.00	1.225	0.06	0.650	0.796
33	LTE Band 66_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	132572	1770	Open	21.05	22.00	1.245	0.07	0.679	**0.845**
	LTE Band 66_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	132072	1720	Open	21.15	22.00	1.216	0.06	0.653	0.794
	LTE Band 66_Ant 1	20M	QPSK	100	0	Bottom Side	5mm	DSI 3	132072	1720	Open	21.18	22.00	1.208	0.07	0.649	0.784
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	132072	1720	Close	19.43	20.60	1.309	0.08	0.223	0.292
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 5	132072	1720	Close	19.48	20.60	1.294	0.05	0.213	0.276
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	132072	1720	Close	19.43	20.60	1.309	-0.01	0.401	0.525
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	132072	1720	Close	19.48	20.60	1.294	0.08	0.373	0.483
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 5	132072	1720	Close	19.43	20.60	1.309	0.12	0.285	0.373
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 5	132072	1720	Close	19.48	20.60	1.294	0.11	0.267	0.346
	LTE Band 66_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	132072	1720	Close	19.43	20.60	1.309	0.02	0.506	0.662
	LTE Band 66_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	132072	1720	Close	19.48	20.60	1.294	0.16	0.492	0.637
	LTE Band 66_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 3	132072	1720	Open	20.92	22.00	1.282	0.06	0.391	0.501

	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 3	132072	1720	Open	20.06	21.00	1.242	0.07	0.321	0.399
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 3	132072	1720	Open	20.92	22.00	1.282	0.08	0.411	0.527
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 3	132072	1720	Open	20.06	21.00	1.242	0.05	0.366	0.454
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 3	132072	1720	Open	20.92	22.00	1.282	0.07	0.220	0.282
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Side	5mm	DSI 3	132072	1720	Open	20.06	21.00	1.242	0.06	0.170	0.211
	LTE Band 66_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	132072	1720	Open	20.92	22.00	1.282	0.07	0.250	0.321
	LTE Band 66_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	132072	1720	Open	20.06	21.00	1.242	0.08	0.220	0.273
	LTE Band 66_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	132072	1720	Close	20.92	22.00	1.282	0.05	0.343	0.440
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 5	132072	1720	Close	20.06	21.00	1.242	-0.01	0.262	0.325
	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	132072	1720	Close	20.92	22.00	1.282	0.01	0.477	0.612
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 5	132072	1720	Close	20.06	21.00	1.242	0.06	0.307	0.381
	LTE Band 66_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 5	132072	1720	Close	20.92	22.00	1.282	0.09	0.229	0.294
	LTE Band 66_Ant 2	20M	QPSK	50	0	Right Side	5mm	DSI 5	132072	1720	Close	20.06	21.00	1.242	0.11	0.208	0.258
	LTE Band 66_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	132072	1720	Close	20.92	22.00	1.282	0.12	0.328	0.421
	LTE Band 66_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	132072	1720	Close	20.06	21.00	1.242	0.16	0.300	0.372
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 3	133322	683	Open	22.85	24.00	1.303	0.12	0.151	0.197
	LTE Band 71_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 3	133322	683	Open	22.42	23.00	1.143	0.13	0.118	0.135
	LTE Band 71_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 3	133322	683	Open	22.85	24.00	1.303	0.05	0.215	0.280
	LTE Band 71_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 3	133322	683	Open	22.42	23.00	1.143	0.06	0.202	0.231
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 3	133322	683	Open	22.85	24.00	1.303	0.07	0.131	0.171
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 3	133322	683	Open	22.42	23.00	1.143	0.08	0.101	0.115
	LTE Band 71_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	133322	683	Open	22.85	24.00	1.303	-0.01	0.273	0.356
	LTE Band 71_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	133322	683	Open	22.42	23.00	1.143	0.09	0.242	0.277
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	133322	683	Close	22.85	24.00	1.303	0.07	0.090	0.117
	LTE Band 71_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 5	133322	683	Close	22.42	23.00	1.143	0.08	0.085	0.097
	LTE Band 71_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	133322	683	Close	22.85	24.00	1.303	-0.05	0.248	0.323
	LTE Band 71_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	133322	683	Close	22.42	23.00	1.143	0.06	0.226	0.258
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 5	133322	683	Close	22.85	24.00	1.303	0.04	0.097	0.126
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 5	133322	683	Close	22.42	23.00	1.143	0.08	0.092	0.105
34	LTE Band 71_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	133322	683	Close	22.85	24.00	1.303	-0.01	0.432	**0.563**
	LTE Band 71_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	133322	683	Close	22.42	23.00	1.143	0.02	0.356	0.407
	LTE Band 71_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 3	133322	683	Open	21.89	23.00	1.291	0.02	0.057	0.074
	LTE Band 71_Ant 2	20M	QPSK	50	24	Front	5mm	DSI 3	133322	683	Open	20.94	22.00	1.276	0.06	0.045	0.057
	LTE Band 71_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 3	133322	683	Open	21.89	23.00	1.291	-0.12	0.083	0.107
	LTE Band 71_Ant 2	20M	QPSK	50	24	Back	5mm	DSI 3	133322	683	Open	20.94	22.00	1.276	0.01	0.060	0.077
	LTE Band 71_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 3	133322	683	Open	21.89	23.00	1.291	0.08	0.000	0.000
	LTE Band 71_Ant 2	20M	QPSK	50	24	Right Side	5mm	DSI 3	133322	683	Open	20.94	22.00	1.276	0.01	0.000	0.000
	LTE Band 71_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	133322	683	Open	21.89	23.00	1.291	-0.07	0.094	0.122
	LTE Band 71_Ant 2	20M	QPSK	50	24	Bottom Side	5mm	DSI 3	133322	683	Open	20.94	22.00	1.276	0.06	0.090	0.115
	LTE Band 71_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	133322	683	Close	21.89	23.00	1.291	0.05	0.057	0.074
	LTE Band 71_Ant 2	20M	QPSK	50	24	Front	5mm	DSI 5	133322	683	Close	20.94	22.00	1.276	0.12	0.055	0.070
	LTE Band 71_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	133322	683	Close	21.89	23.00	1.291	0.03	0.116	0.150
	LTE Band 71_Ant 2	20M	QPSK	50	24	Back	5mm	DSI 5	133322	683	Close	20.94	22.00	1.276	0.06	0.084	0.107
	LTE Band 71_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 5	133322	683	Close	21.89	23.00	1.291	0.08	0.000	0.000
	LTE Band 71_Ant 2	20M	QPSK	50	24	Right Side	5mm	DSI 5	133322	683	Close	20.94	22.00	1.276	0.06	0.000	0.000
	LTE Band 71_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	133322	683	Close	21.89	23.00	1.291	-0.09	0.180	0.232
	LTE Band 71_Ant 2	20M	QPSK	50	24	Bottom Side	5mm	DSI 5	133322	683	Close	20.94	22.00	1.276	0.07	0.149	0.190

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 3	40620	2593	Open	20.44	21.10	1.164	62.9	1.006	0.06	0.213	0.249
	LTE Band 41_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 3	40620	2593	Open	20.53	21.10	1.140	62.9	1.006	0.03	0.192	0.220
	LTE Band 41_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 3	40620	2593	Open	20.44	21.10	1.164	62.9	1.006	0.05	0.295	0.345
	LTE Band 41_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 3	40620	2593	Open	20.53	21.10	1.140	62.9	1.006	0.01	0.198	0.227
	LTE Band 41_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 3	40620	2593	Open	20.44	21.10	1.164	62.9	1.006	0.02	0.046	0.054
	LTE Band 41_Ant 1	20M	QPSK	50	0	Left Side	5mm	DSI 3	40620	2593	Open	20.53	21.10	1.140	62.9	1.006	0.09	0.039	0.045
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	40620	2593	Open	20.44	21.10	1.164	62.9	1.006	0.09	0.692	0.810
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	40620+40818	2593+2612.8	Open	21.00	21.10	1.023	62.9	1.006	0.01	0.580	0.597
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	39750	2506	Open	20.32	21.10	1.197	62.9	1.006	0.04	0.621	0.748
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	40185	2549.5	Open	20.41	21.10	1.172	62.9	1.006	-0.01	0.650	0.766
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	41055	2636.5	Open	20.38	21.10	1.180	62.9	1.006	0.01	0.618	0.734
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	41490	2680	Open	20.32	21.10	1.197	62.9	1.006	0.05	0.620	0.746
	LTE Band 41_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	40620	2593	Open	20.53	21.10	1.140	62.9	1.006	0.01	0.628	0.720
	LTE Band 41_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	39750	2506	Open	20.38	21.10	1.180	62.9	1.006	-0.06	0.661	0.785
	LTE Band 41_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	40185	2549.5	Open	20.47	21.10	1.156	62.9	1.006	0.05	0.620	0.721
	LTE Band 41_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	41055	2636.5	Open	20.40	21.10	1.175	62.9	1.006	0.01	0.618	0.730
	LTE Band 41_Ant 1	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	41490	2680	Open	20.42	21.10	1.169	62.9	1.006	0.09	0.638	0.751
	LTE Band 41_Ant 1	20M	QPSK	100	0	Bottom Side	5mm	DSI 3	40620	2593	Open	20.56	21.10	1.132	62.9	1.006	0.08	0.661	0.753
	LTE Band 41_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	40620	2593	Close	18.31	19.10	1.199	62.9	1.006	0.11	0.313	0.378
	LTE Band 41_Ant 1	20M	QPSK	50	24	Front	5mm	DSI 5	40620	2593	Close	18.47	19.10	1.156	62.9	1.006	0.16	0.308	0.358
	LTE Band 41_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	40620	2593	Close	18.31	19.10	1.199	62.9	1.006	-0.02	0.322	0.389
	LTE Band 41_Ant 1	20M	QPSK	50	24	Back	5mm	DSI 5	40620	2593	Close	18.47	19.10	1.156	62.9	1.006	0.06	0.308	0.358
	LTE Band 41_Ant 1	20M	QPSK	1	0	Left Side	5mm	DSI 5	40620	2593	Close	18.31	19.10	1.199	62.9	1.006	0.09	0.066	0.080
	LTE Band 41_Ant 1	20M	QPSK	50	24	Left Side	5mm	DSI 5	40620	2593	Close	18.47	19.10	1.156	62.9	1.006	0.07	0.065	0.076
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	40620	2593	Close	18.31	19.10	1.199	62.9	1.006	0.04	0.759	0.916
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	40620+40818	2593+2612.8	Close	17.89	19.10	1.321	62.9	1.006	-0.02	0.628	0.835
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	39750	2506	Close	17.95	19.10	1.303	62.9	1.006	0.06	0.687	0.901
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	40185	2549.5	Close	18.08	19.10	1.265	62.9	1.006	0.07	0.705	0.897
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	41055	2636.5	Close	18.10	19.10	1.259	62.9	1.006	0.01	0.702	0.889
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	41490	2680	Close	18.20	19.10	1.230	62.9	1.006	0.03	0.699	0.865
	LTE Band 41_Ant 1	20M	QPSK	50	24	Bottom Side	5mm	DSI 5	40620	2593	Close	18.47	19.10	1.156	62.9	1.006	-0.02	0.665	0.773
	LTE Band 41_Ant 1	20M	QPSK	50	24	Bottom Side	5mm	DSI 5	39750	2506	Close	18.13	19.10	1.250	62.9	1.006	0.04	0.632	0.795
	LTE Band 41_Ant 1	20M	QPSK	50	24	Bottom Side	5mm	DSI 5	40185	2549.5	Close	18.33	19.10	1.194	62.9	1.006	0.06	0.683	0.820
	LTE Band 41_Ant 1	20M	QPSK	50	24	Bottom Side	5mm	DSI 5	41055	2636.5	Close	18.22	19.10	1.225	62.9	1.006	0.07	0.688	0.848
	LTE Band 41_Ant 1	20M	QPSK	50	24	Bottom Side	5mm	DSI 5	41490	2680	Close	18.24	19.10	1.219	62.9	1.006	0.06	0.691	0.847
	LTE Band 41_Ant 1	20M	QPSK	100	0	Bottom Side	5mm	DSI 5	40620	2593	Close	18.42	19.10	1.169	62.9	1.006	0.03	0.722	0.849
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 3	39750	2506	Open	18.03	19.80	1.503	62.9	1.006	0.01	0.364	0.550
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 3	39750	2506	Open	18.02	19.80	1.507	62.9	1.006	0.02	0.338	0.512
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 3	39750	2506	Open	18.03	19.80	1.503	62.9	1.006	0.03	0.252	0.381
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 3	39750	2506	Open	18.02	19.80	1.507	62.9	1.006	0.08	0.249	0.377
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 3	39750	2506	Open	18.03	19.80	1.503	62.9	1.006	0.06	0.134	0.203
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	5mm	DSI 3	39750	2506	Open	18.02	19.80	1.507	62.9	1.006	0.04	0.118	0.179
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	39750	2506	Open	18.03	19.80	1.503	62.9	1.006	0.06	0.585	0.885
35	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	40620	2593	Open	17.97	19.80	1.524	62.9	1.006	0.04	0.607	**0.931**
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	40620+40818	2593+2612.8	Open	19.55	19.80	1.059	62.9	1.006	-0.02	0.605	0.645
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	40185	2549.5	Open	18.01	19.80	1.510	62.9	1.006	0.05	0.591	0.898
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	41055	2636.5	Open	17.97	19.80	1.524	62.9	1.006	0.06	0.573	0.879
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 3	41490	2680	Open	17.99	19.80	1.517	62.9	1.006	0.08	0.571	0.871
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	39750	2506	Open	18.02	19.80	1.507	62.9	1.006	0.09	0.601	0.911
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	40620	2593	Open	17.97	19.80	1.524	62.9	1.006	0.07	0.528	0.810
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	40185	2549.5	Open	18.01	19.80	1.510	62.9	1.006	0.09	0.553	0.840

	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	41055	2636.5	Open	17.98	19.80	1.521	62.9	1.006	0.06	0.594	0.909
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 3	41490	2680	Open	17.96	19.80	1.528	62.9	1.006	0.01	0.528	0.811
	LTE Band 41_Ant 2	20M	QPSK	100	0	Bottom Side	5mm	DSI 3	39750	2506	Open	18.03	19.80	1.503	62.9	1.006	-0.11	0.578	0.874
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	39750	2506	Close	19.23	21.00	1.503	62.9	1.006	0.15	0.178	0.269
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 5	39750	2506	Close	19.33	21.00	1.469	62.9	1.006	0.16	0.173	0.256
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	39750	2506	Close	19.23	21.00	1.503	62.9	1.006	0.06	0.202	0.305
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 5	39750	2506	Close	19.33	21.00	1.469	62.9	1.006	0.03	0.201	0.297
	LTE Band 41_Ant 2	20M	QPSK	1	0	Right Side	5mm	DSI 5	39750	2506	Close	19.23	21.00	1.503	62.9	1.006	0.06	0.301	0.455
	LTE Band 41_Ant 2	20M	QPSK	50	0	Right Side	5mm	DSI 5	39750	2506	Close	19.33	21.00	1.469	62.9	1.006	0.09	0.295	0.436
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	39750	2506	Close	19.23	21.00	1.503	62.9	1.006	-0.12	0.613	0.927
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	39750+39948	2506+2525.8	Close	20.70	21.00	1.072	62.9	1.006	0.01	0.612	0.660
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	40185	2549.5	Close	19.22	21.00	1.507	62.9	1.006	0.11	0.585	0.887
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	40620	2593	Close	19.14	21.00	1.535	62.9	1.006	0.16	0.571	0.882
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	41055	2636.5	Close	19.02	21.00	1.578	62.9	1.006	0.05	0.581	0.922
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	5mm	DSI 5	41490	2680	Close	19.01	21.00	1.581	62.9	1.006	0.06	0.583	0.927
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	40620	2593	Close	19.09	21.00	1.552	62.9	1.006	0.08	0.581	0.907
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	39750	2506	Close	19.33	21.00	1.469	62.9	1.006	0.07	0.563	0.832
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	40185	2549.5	Close	19.08	21.00	1.556	62.9	1.006	0.08	0.569	0.891
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	41055	2636.5	Close	19.04	21.00	1.570	62.9	1.006	0.04	0.582	0.919
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	5mm	DSI 5	41490	2680	Close	19.07	21.00	1.560	62.9	1.006	0.06	0.591	0.927
	LTE Band 41_Ant 2	20M	QPSK	100	0	Bottom Side	5mm	DSI 5	40620	2593	Close	19.19	21.00	1.517	62.9	1.006	0.04	0.572	0.873

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n5_Ant 1	20M	BPSK	1	1	Front	5mm	DSI 3	167300	836.5	Open	23.21	24.00	1.199	0.06	0.334	0.401
	FR1 n5_Ant 1	20M	BPSK	50	0	Front	5mm	DSI 3	167300	836.5	Open	23.09	24.00	1.233	0.02	0.309	0.381
	FR1 n5_Ant 1	20M	BPSK	1	1	Back	5mm	DSI 3	167300	836.5	Open	23.21	24.00	1.199	0.03	0.482	0.578
	FR1 n5_Ant 1	20M	BPSK	50	0	Back	5mm	DSI 3	167300	836.5	Open	23.09	24.00	1.233	0.05	0.465	0.573
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Side	5mm	DSI 3	167300	836.5	Open	23.21	24.00	1.199	0.07	0.203	0.243
	FR1 n5_Ant 1	20M	BPSK	50	0	Left Side	5mm	DSI 3	167300	836.5	Open	23.09	24.00	1.233	0.09	0.188	0.232
	FR1 n5_Ant 1	20M	BPSK	1	1	Bottom Side	5mm	DSI 3	167300	836.5	Open	23.21	24.00	1.199	-0.06	0.570	0.684
	FR1 n5_Ant 1	20M	BPSK	50	0	Bottom Side	5mm	DSI 3	167300	836.5	Open	23.09	24.00	1.233	0.07	0.525	0.647
	FR1 n5_Ant 1	20M	BPSK	100	0	Bottom Side	5mm	DSI 3	167300	836.5	Open	22.99	23.50	1.125	0.08	0.508	0.571
	FR1 n5_Ant 1	20M	BPSK	1	1	Front	5mm	DSI 5	167300	836.5	Close	23.21	24.00	1.199	0.05	0.264	0.317
	FR1 n5_Ant 1	20M	BPSK	50	0	Front	5mm	DSI 5	167300	836.5	Close	23.09	24.00	1.233	-0.01	0.234	0.289
36	FR1 n5_Ant 1	20M	BPSK	1	1	Back	5mm	DSI 5	167300	836.5	Close	23.21	24.00	1.199	-0.04	0.662	**0.794**
	FR1 n5_Ant 1	20M	BPSK	50	0	Back	5mm	DSI 5	167300	836.5	Close	23.09	24.00	1.233	0.12	0.604	0.745
	FR1 n5_Ant 1	20M	BPSK	100	0	Back	5mm	DSI 5	167300	836.5	Close	22.99	24.00	1.262	0.11	0.608	0.767
	FR1 n5_Ant 1	20M	BPSK	1	1	Left Side	5mm	DSI 5	167300	836.5	Close	23.21	24.00	1.199	0.02	0.278	0.333
	FR1 n5_Ant 1	20M	BPSK	50	0	Left Side	5mm	DSI 5	167300	836.5	Close	23.09	24.00	1.233	0.16	0.196	0.242
	FR1 n5_Ant 1	20M	BPSK	1	1	Bottom Side	5mm	DSI 5	167300	836.5	Close	23.21	24.00	1.199	0.05	0.577	0.692
	FR1 n5_Ant 1	20M	BPSK	50	0	Bottom Side	5mm	DSI 5	167300	836.5	Close	23.09	24.00	1.233	-0.11	0.537	0.662
	FR1 n5_Ant 1	20M	BPSK	100	0	Bottom Side	5mm	DSI 5	167300	836.5	Close	22.99	23.50	1.125	0.01	0.508	0.571
	FR1 n5_Ant 2	20M	BPSK	1	1	Front	5mm	DSI 3	167300	836.5	Open	23.92	24.00	1.019	0.06	0.260	0.265
	FR1 n5_Ant 2	20M	BPSK	50	0	Front	5mm	DSI 3	167300	836.5	Open	23.77	24.00	1.054	0.15	0.007	0.007
	FR1 n5_Ant 2	20M	BPSK	1	1	Back	5mm	DSI 3	167300	836.5	Open	23.92	24.00	1.019	0.16	0.327	0.333
	FR1 n5_Ant 2	20M	BPSK	50	0	Back	5mm	DSI 3	167300	836.5	Open	23.77	24.00	1.054	0.08	0.448	0.472
	FR1 n5_Ant 2	20M	BPSK	1	1	Right Side	5mm	DSI 3	167300	836.5	Open	23.92	24.00	1.019	0.09	0.072	0.073
	FR1 n5_Ant 2	20M	BPSK	50	0	Right Side	5mm	DSI 3	167300	836.5	Open	23.77	24.00	1.054	0.06	0.114	0.120
	FR1 n5_Ant 2	20M	BPSK	1	1	Bottom Side	5mm	DSI 3	167300	836.5	Open	23.92	24.00	1.019	-0.05	0.471	0.480
	FR1 n5_Ant 2	20M	BPSK	50	0	Bottom Side	5mm	DSI 3	167300	836.5	Open	23.77	24.00	1.054	0.04	0.014	0.015
	FR1 n5_Ant 2	20M	BPSK	1	1	Front	5mm	DSI 5	167300	836.5	Close	23.92	24.00	1.019	0.08	0.248	0.253
	FR1 n5_Ant 2	20M	BPSK	50	0	Front	5mm	DSI 5	167300	836.5	Close	23.77	24.00	1.054	0.06	0.005	0.005
	FR1 n5_Ant 2	20M	BPSK	1	1	Back	5mm	DSI 5	167300	836.5	Close	23.92	24.00	1.019	0.03	0.266	0.271
	FR1 n5_Ant 2	20M	BPSK	50	0	Back	5mm	DSI 5	167300	836.5	Close	23.77	24.00	1.054	0.08	0.015	0.016
	FR1 n5_Ant 2	20M	BPSK	1	1	Right Side	5mm	DSI 5	167300	836.5	Close	23.92	24.00	1.019	0.07	0.029	0.029
	FR1 n5_Ant 2	20M	BPSK	50	0	Right Side	5mm	DSI 5	167300	836.5	Close	23.77	24.00	1.054	0.089	0.005	0.006
	FR1 n5_Ant 2	20M	BPSK	1	1	Bottom Side	5mm	DSI 5	167300	836.5	Close	23.92	24.00	1.019	-0.08	0.286	0.291
	FR1 n5_Ant 2	20M	BPSK	50	0	Bottom Side	5mm	DSI 5	167300	836.5	Close	23.77	24.00	1.054	0.01	0.015	0.016
	FR1 n41_Ant 2	100M	BPSK	1	1	Front	5mm	DSI 3	518598	2592.99	Open	18.37	18.70	1.079	0.05	0.170	0.183
	FR1 n41_Ant 2	100M	BPSK	135	0	Front	5mm	DSI 3	518598	2592.99	Open	18.32	18.70	1.091	0.09	0.070	0.077
	FR1 n41_Ant 2	100M	BPSK	1	1	Back	5mm	DSI 3	518598	2592.99	Open	18.37	18.70	1.079	0.08	0.176	0.190
	FR1 n41_Ant 2	100M	BPSK	135	0	Back	5mm	DSI 3	518598	2592.99	Open	18.32	18.70	1.091	0.06	0.049	0.053
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Side	5mm	DSI 3	518598	2592.99	Open	18.37	18.70	1.079	0.08	0.127	0.137
	FR1 n41_Ant 2	100M	BPSK	135	0	Right Side	5mm	DSI 3	518598	2592.99	Open	18.32	18.70	1.091	0.01	0.012	0.013
37	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom Side	5mm	DSI 3	518598	2592.99	Open	18.37	18.70	1.079	-0.01	0.792	**0.855**
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom Side	5mm	DSI 3	518598	2592.99	Open	18.32	18.70	1.091	-0.11	0.747	0.815
	FR1 n41_Ant 2	100M	BPSK	1	1	Front	5mm	DSI 5	518598	2592.99	Close	18.37	18.70	1.079	0.13	0.186	0.201
	FR1 n41_Ant 2	100M	BPSK	135	0	Front	5mm	DSI 5	518598	2592.99	Close	18.32	18.70	1.091	0.16	0.022	0.024
	FR1 n41_Ant 2	100M	BPSK	1	1	Back	5mm	DSI 5	518598	2592.99	Close	18.37	18.70	1.079	0.06	0.314	0.339
	FR1 n41_Ant 2	100M	BPSK	135	0	Back	5mm	DSI 5	518598	2592.99	Close	18.32	18.70	1.091	0.08	0.311	0.339
	FR1 n41_Ant 2	100M	BPSK	1	1	Right Side	5mm	DSI 5	518598	2592.99	Close	18.37	18.70	1.079	0.19	0.023	0.025
	FR1 n41_Ant 2	100M	BPSK	135	0	Right Side	5mm	DSI 5	518598	2592.99	Close	18.32	18.70	1.091	0.02	0.022	0.024
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom Side	5mm	DSI 5	518598	2592.99	Close	18.37	18.70	1.079	-0.09	0.774	0.835
	FR1 n41_Ant 2	100M	BPSK	135	0	Bottom Side	5mm	DSI 5	518598	2592.99	Close	18.32	18.70	1.091	0.03	0.649	0.708

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 4	2	1	2412	Open	14.38	15.00	1.153	100	1.000	0.02	0.014	0.016
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 4	2	1	2412	Open	14.38	15.00	1.153	100	1.000	-0.01	0.164	0.189
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 4	2	1	2412	Open	14.38	15.00	1.153	100	1.000	0.02	0.026	0.030
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	5mm	Ant 4	2	1	2412	Open	14.38	15.00	1.153	100	1.000	0.03	0.003	0.003
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 4	2	1	2412	Close	14.38	15.00	1.153	100	1.000	0.1	0.018	0.021
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 4	2	1	2412	Close	14.38	15.00	1.153	100	1.000	0.13	0.257	0.296
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant 4	2	1	2412	Close	14.38	15.00	1.153	100	1.000	0.01	0.018	0.021
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	5mm	Ant 4	2	1	2412	Close	14.38	15.00	1.153	100	1.000	0.01	0.002	0.002
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 3	2	1	2412	Open	14.75	15.00	1.059	100	1.000	0.02	0.020	0.021
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	2	1	2412	Open	14.75	15.00	1.059	100	1.000	-0.01	0.138	0.146
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 3	2	1	2412	Open	14.75	15.00	1.059	100	1.000	0.04	0.086	0.091
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	5mm	Ant 3	2	1	2412	Open	14.75	15.00	1.059	100	1.000	0.16	0.037	0.039
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant 3	2	1	2412	Close	14.75	15.00	1.059	100	1.000	0.03	0.015	0.016
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant 3	2	1	2412	Close	14.75	15.00	1.059	100	1.000	-0.01	0.331	0.351
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant 3	2	1	2412	Close	14.75	15.00	1.059	100	1.000	0.09	0.068	0.072
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	5mm	Ant 3	2	1	2412	Close	14.75	15.00	1.059	100	1.000	0.04	0.034	0.036
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant3+4	2	11	2462	Open	17.23	18.00	1.194	100	1.000	-0.01	0.039	0.047
	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant3+4	2	11	2462	Open	17.23	18.00	1.194	100	1.000	-0.07	0.168	0.201
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant3+4	2	11	2462	Open	17.23	18.00	1.194	100	1.000	0.04	0.108	0.129
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant3+4	2	11	2462	Open	17.23	18.00	1.194	100	1.000	0.16	0.394	0.470
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	5mm	Ant3+4	2	11	2462	Open	17.23	18.00	1.194	100	1.000	-0.01	0.082	0.098
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Ant3+4	2	11	2462	Close	17.23	18.00	1.194	100	1.000	0.01	0.024	0.029
38	WLAN2.4GHz	802.11b 1Mbps	Back	5mm	Ant3+4	2	11	2462	Close	17.23	18.00	1.194	100	1.000	0.19	0.403	**0.481**
	WLAN2.4GHz	802.11b 1Mbps	Left Side	5mm	Ant3+4	2	11	2462	Close	17.23	18.00	1.194	100	1.000	0.16	0.104	0.124
	WLAN2.4GHz	802.11b 1Mbps	Right Side	5mm	Ant3+4	2	11	2462	Close	17.23	18.00	1.194	100	1.000	0.16	0.316	0.377
	WLAN2.4GHz	802.11b 1Mbps	Bottom Side	5mm	Ant3+4	2	11	2462	Close	17.23	18.00	1.194	100	1.000	0.16	0.078	0.093

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	DH5 1Mbps	Front	5mm	Ant 4	2	0	2402	Open	7.99	9.00	1.262	77.13	1.080	0.03	0.019	0.026
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	2	0	2402	Open	7.99	9.00	1.262	77.13	1.080	0.09	0.113	0.154
	Bluetooth	DH5 1Mbps	Right Side	5mm	Ant 4	2	0	2402	Open	7.99	9.00	1.262	77.13	1.080	0.08	0.047	0.064
	Bluetooth	DH5 1Mbps	Bottom Side	5mm	Ant 4	2	0	2402	Open	7.99	9.00	1.262	77.13	1.080	0.02	0.000	0.000
	Bluetooth	DH5 1Mbps	Front	5mm	Ant 4	2	0	2402	Close	7.99	9.00	1.262	77.13	1.080	0.03	0.027	0.037
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	2	0	2402	Close	7.99	9.00	1.262	77.13	1.080	0.06	0.114	0.155
	Bluetooth	DH5 1Mbps	Right Side	5mm	Ant 4	2	0	2402	Close	7.99	9.00	1.262	77.13	1.080	0.06	0.056	0.076
	Bluetooth	DH5 1Mbps	Bottom Side	5mm	Ant 4	2	0	2402	Close	7.99	9.00	1.262	77.13	1.080	0.03	0.000	0.000
	Bluetooth	DH5 1Mbps	Front	5mm	Ant 4	1	78	2480	Open	15.28	15.50	1.052	77.13	1.080	0.09	0.043	0.049
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	78	2480	Open	15.28	15.50	1.052	77.13	1.080	0.01	0.750	0.852
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	0	2402	Open	14.69	15.50	1.205	77.13	1.080	0.07	0.415	0.540
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	39	2441	Open	15.23	15.50	1.064	77.13	1.080	-0.02	0.680	0.782
	Bluetooth	DH5 1Mbps	Right Side	5mm	Ant 4	1	78	2480	Open	15.28	15.50	1.052	77.13	1.080	0.09	0.441	0.501
	Bluetooth	DH5 1Mbps	Bottom Side	5mm	Ant 4	1	78	2480	Open	15.28	15.50	1.052	77.13	1.080	0.05	0.015	0.017
	Bluetooth	DH5 1Mbps	Front	5mm	Ant 4	1	78	2480	Close	15.28	15.50	1.052	77.13	1.080	-0.01	0.038	0.043
39	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	78	2480	Close	15.28	15.50	1.052	77.13	1.080	-0.14	0.760	**0.863**
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	0	2402	Close	14.69	15.50	1.205	77.13	1.080	0.01	0.423	0.551
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	39	2441	Close	15.23	15.50	1.064	77.13	1.080	0.08	0.671	0.771
	Bluetooth	DH5 1Mbps	Right Side	5mm	Ant 4	1	78	2480	Close	15.28	15.50	1.052	77.13	1.080	0.07	0.359	0.408
	Bluetooth	DH5 1Mbps	Bottom Side	5mm	Ant 4	1	78	2480	Close	15.28	15.50	1.052	77.13	1.080	0.01	0.023	0.026

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Ant 4	2	46	5230	Open	15.08	15.50	1.102	95.88	1.043	0.05	0.028	0.032
40	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Ant 4	2	46	5230	Open	15.08	15.50	1.102	95.88	1.043	0.01	0.244	**0.280**
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	5mm	Ant 4	2	46	5230	Open	15.08	15.50	1.102	95.88	1.043	0.03	0.065	0.075
	WLAN5.2GHz	802.11n-HT40 MCS0	Bottom Side	5mm	Ant 4	2	46	5230	Open	15.08	15.50	1.102	95.88	1.043	0.05	0.029	0.033
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Ant 4	2	46	5230	Close	15.08	15.50	1.102	95.88	1.043	-0.11	0.018	0.021
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Ant 4	2	46	5230	Close	15.08	15.50	1.102	95.88	1.043	0.03	0.176	0.202
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	5mm	Ant 4	2	46	5230	Close	15.08	15.50	1.102	95.88	1.043	0.06	0.056	0.064
	WLAN5.2GHz	802.11n-HT40 MCS0	Bottom Side	5mm	Ant 4	2	46	5230	Close	15.08	15.50	1.102	95.88	1.043	0.06	0.019	0.022
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Ant 3	2	46	5230	Open	14.91	15.50	1.146	95.85	1.043	0.12	0.052	0.062
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Ant 3	2	46	5230	Open	14.91	15.50	1.146	95.85	1.043	0.02	0.219	0.262
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	5mm	Ant 3	2	46	5230	Open	14.91	15.50	1.146	95.85	1.043	0.07	0.024	0.029
	WLAN5.2GHz	802.11n-HT40 MCS0	Bottom Side	5mm	Ant 3	2	46	5230	Open	14.91	15.50	1.146	95.85	1.043	-0.11	0.019	0.023
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Ant 3	2	46	5230	Close	14.91	15.50	1.146	95.85	1.043	-0.06	0.037	0.044
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Ant 3	2	46	5230	Close	14.91	15.50	1.146	95.85	1.043	-0.09	0.128	0.153
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	5mm	Ant 3	2	46	5230	Close	14.91	15.50	1.146	95.85	1.043	0.05	0.017	0.020
	WLAN5.2GHz	802.11n-HT40 MCS0	Bottom Side	5mm	Ant 3	2	46	5230	Close	14.91	15.50	1.146	95.85	1.043	0.08	0.009	0.011
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Ant 3+4	2	46	5230	Open	17.92	18.50	1.143	95.85	1.043	0.09	0.025	0.030
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Ant 3+4	2	46	5230	Open	17.92	18.50	1.143	95.85	1.043	-0.09	0.233	0.278
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	5mm	Ant 3+4	2	46	5230	Open	17.92	18.50	1.143	95.85	1.043	-0.11	0.042	0.050
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	5mm	Ant 3+4	2	46	5230	Open	17.92	18.50	1.143	95.85	1.043	-0.08	0.071	0.085
	WLAN5.2GHz	802.11n-HT40 MCS0	Bottom Side	5mm	Ant 3+4	2	46	5230	Open	17.92	18.50	1.143	95.85	1.043	0.01	0.020	0.024
	WLAN5.2GHz	802.11n-HT40 MCS0	Front	5mm	Ant 3+4	2	46	5230	Close	17.92	18.50	1.143	95.85	1.043	0.03	0.015	0.018
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	5mm	Ant 3+4	2	46	5230	Close	17.92	18.50	1.143	95.85	1.043	0.04	0.199	0.237
	WLAN5.2GHz	802.11n-HT40 MCS0	Left Side	5mm	Ant 3+4	2	46	5230	Close	17.92	18.50	1.143	95.85	1.043	0.05	0.041	0.049
	WLAN5.2GHz	802.11n-HT40 MCS0	Right Side	5mm	Ant 3+4	2	46	5230	Close	17.92	18.50	1.143	95.85	1.043	0.02	0.061	0.073
	WLAN5.2GHz	802.11n-HT40 MCS0	Bottom Side	5mm	Ant 3+4	2	46	5230	Close	17.92	18.50	1.143	95.85	1.043	0.01	0.018	0.021
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	2	155	5775	Open	15.68	16.00	1.076	91.84	1.089	0.07	0.027	0.032
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	2	155	5775	Open	15.68	16.00	1.076	91.84	1.089	-0.06	0.198	0.232
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4	2	155	5775	Open	15.68	16.00	1.076	91.84	1.089	0.12	0.028	0.033
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 4	2	155	5775	Open	15.68	16.00	1.076	91.84	1.089	0.02	0.020	0.023
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	2	155	5775	Close	15.68	16.00	1.076	91.84	1.089	0.17	0.029	0.034
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	2	155	5775	Close	15.68	16.00	1.076	91.84	1.089	-0.04	0.550	0.645
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 4	2	155	5775	Close	15.68	16.00	1.076	91.84	1.089	0.04	0.023	0.027
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 4	2	155	5775	Close	15.68	16.00	1.076	91.84	1.089	0.07	0.028	0.033
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3	2	155	5775	Open	15.98	16.00	1.005	92	1.087	0.01	0.012	0.013
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3	2	155	5775	Open	15.98	16.00	1.005	92	1.087	-0.08	0.110	0.120
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 3	2	155	5775	Open	15.98	16.00	1.005	92	1.087	0.13	0.018	0.020
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 3	2	155	5775	Open	15.98	16.00	1.005	92	1.087	0.15	0.058	0.063
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3	2	155	5775	Close	15.98	16.00	1.005	92	1.087	0.14	0.019	0.021
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3	2	155	5775	Close	15.98	16.00	1.005	92	1.087	-0.09	0.425	0.464
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 3	2	155	5775	Close	15.98	16.00	1.005	92	1.087	0.05	0.028	0.031
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 3	2	155	5775	Close	15.98	16.00	1.005	92	1.087	0.07	0.072	0.079
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3+4	2	155	5775	Open	18.38	19.00	1.153	91.84	1.089	0.02	0.016	0.020
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	2	155	5775	Open	18.38	19.00	1.153	91.84	1.089	0.01	0.272	0.342
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 3+4	2	155	5775	Open	18.38	19.00	1.153	91.84	1.089	0.05	0.045	0.057
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 3+4	2	155	5775	Open	18.38	19.00	1.153	91.84	1.089	-0.11	0.154	0.193
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 3+4	2	155	5775	Open	18.38	19.00	1.153	91.84	1.089	-0.06	0.063	0.079
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3+4	2	155	5775	Close	18.38	19.00	1.153	91.84	1.089	0.04	0.051	0.064
41	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	2	155	5775	Close	18.38	19.00	1.153	91.84	1.089	-0.01	0.575	**0.722**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Side	5mm	Ant 3+4	2	155	5775	Close	18.38	19.00	1.153	91.84	1.089	0.01	0.060	0.075
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	5mm	Ant 3+4	2	155	5775	Close	18.38	19.00	1.153	91.84	1.089	0.02	0.164	0.206
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Bottom Side	5mm	Ant 3+4	2	155	5775	Close	18.38	19.00	1.153	91.84	1.089	0.01	0.053	0.067

16.3 Body Worn Accessory SAR

<GSM SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	GSM850_Ant 1	GPRS (2 Tx slots)	Front	5mm	DSI 5	128	824.2	Close	28.44	29.50	1.276	-0.11	0.138	0.176
42	GSM850_Ant 1	GPRS (2 Tx slots)	Back	5mm	DSI 5	128	824.2	Close	28.44	29.50	1.276	-0.05	0.587	**0.749**
	GSM850_Ant 1	GPRS (2 Tx slots)	Front	19mm	DSI 4	128	824.2	Close	30.81	32.50	1.476	-0.11	0.043	0.063
	GSM850_Ant 1	GPRS (2 Tx slots)	Back	15mm	DSI 4	128	824.2	Close	30.81	32.50	1.476	-0.05	0.091	0.134
	GSM1900_Ant 1	GPRS (3 Tx slots)	Front	5mm	DSI 5	661	1880	Close	24.71	25.00	1.069	-0.09	0.480	0.513
	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	DSI 5	661	1880	Close	24.71	25.00	1.069	0.08	0.767	0.820
43	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	DSI 5	512	1850.2	Close	24.70	25.00	1.072	0.06	0.843	**0.903**
	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	DSI 5	810	1909.8	Close	23.54	25.00	1.400	0.04	0.639	0.894
	GSM1900_Ant 1	GPRS (3 Tx slots)	Front	19mm	DSI 4	661	1880	Close	26.61	28.00	1.377	0.01	0.055	0.076
	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	15mm	DSI 4	661	1880	Close	26.61	28.00	1.377	-0.01	0.064	0.088

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	9262	1852.4	Close	21.10	22.00	1.230	0.05	0.653	0.803
44	WCDMA II_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	9400	1880	Close	21.09	22.00	1.233	0.01	0.756	**0.932**
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	9538	1907.6	Close	20.86	22.00	1.300	0.06	0.623	0.810
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	9262	1852.4	Close	21.10	22.00	1.230	0.08	0.690	0.849
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	9400	1880	Close	21.09	22.00	1.233	0.09	0.727	0.896
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	9538	1907.6	Close	20.86	22.00	1.300	0.08	0.638	0.830
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	19mm	DSI 4	9262	1852.4	Close	23.23	24.00	1.194	0.06	0.072	0.086
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	15mm	DSI 4	9262	1852.4	Close	23.23	24.00	1.194	0.03	0.093	0.111
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	1413	1732.6	Close	20.67	21.60	1.239	0.11	0.546	0.676
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	1413	1732.6	Close	20.67	21.60	1.239	0.06	0.647	0.802
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	1312	1712.4	Close	20.66	21.60	1.242	0.05	0.624	0.775
45	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	1513	1752.6	Close	20.48	21.60	1.294	0.01	0.621	**0.804**
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	19mm	DSI 4	1413	1732.6	Close	23.12	24.00	1.225	-0.02	0.056	0.069
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	15mm	DSI 4	1413	1732.6	Close	23.12	24.00	1.225	0.07	0.086	0.105
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	5mm	DSI 5	4182	836.4	Close	22.26	22.90	1.159	0.06	0.421	0.488
46	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	4182	836.4	Close	22.26	22.90	1.159	-0.06	0.694	**0.804**
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	4132	826.4	Close	22.23	22.90	1.167	0.11	0.669	0.781
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	5mm	DSI 5	4233	846.6	Close	22.03	22.90	1.222	0.19	0.612	0.748
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	19mm	DSI 4	4182	836.4	Close	23.06	24.00	1.242	0.01	0.069	0.086
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	15mm	DSI 4	4182	836.4	Close	23.06	24.00	1.242	-0.03	0.091	0.113

<CDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	CDMA2000 BC0_Ant 1	RC3 SO32 (F+SCH)	Front	5mm	DSI 5	384	836.52	Close	22.39	23.40	1.262	0.01	0.349	0.440
47	CDMA2000 BC0_Ant 1	RC3 SO32 (F+SCH)	Back	5mm	DSI 5	384	836.52	Close	22.39	23.40	1.262	0.11	0.660	**0.833**
	CDMA2000 BC0_Ant 1	RC3 SO32 (F+SCH)	Front	5mm	DSI 5	1013	824.7	Close	22.17	23.40	1.327	0.03	0.620	0.823
	CDMA2000 BC0_Ant 1	RC3 SO32 (F+SCH)	Back	5mm	DSI 5	777	848.31	Close	22.36	23.40	1.271	0.06	0.644	0.818
	CDMA2000 BC0_Ant 1	RC3 SO32 (F+SCH)	Front	19mm	DSI 4	384	836.52	Close	23.94	25.00	1.276	0.01	0.055	0.070
	CDMA2000 BC0_Ant 1	RC3 SO32 (F+SCH)	Back	15mm	DSI 4	384	836.52	Close	23.94	25.00	1.276	-0.01	0.064	0.082

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	18700	1860	Close	20.12	21.00	1.225	0.06	0.631	0.773
	LTE Band 2_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 5	18700	1860	Close	20.17	21.00	1.211	0.08	0.611	0.740
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	18700	1860	Close	20.12	21.00	1.225	0.09	0.636	0.779
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	18900	1880	Close	19.90	21.00	1.288	0.07	0.603	0.777
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	19100	1900	Close	19.92	21.00	1.282	0.08	0.586	0.751
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	18700	1860	Close	20.17	21.00	1.211	0.05	0.658	0.797
48	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	18900	1880	Close	19.96	21.00	1.271	-0.04	0.628	**0.798**
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	19100	1900	Close	19.92	21.00	1.282	0.11	0.563	0.722
	LTE Band 2_Ant 1	20M	QPSK	100	0	Back	5mm	DSI 5	18700	1860	Close	20.15	21.00	1.216	0.06	0.587	0.714
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	19mm	DSI 4	18700	1860	Close	23.02	24.00	1.253	-0.06	0.082	0.103
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	15mm	DSI 4	18700	1860	Close	23.02	24.00	1.253	0.05	0.072	0.090
	LTE Band 2_Ant 1	20M	QPSK	1	0	Front	19mm	DSI 4	18700	1860	Close	22.08	23.00	1.236	0.01	0.070	0.087
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	15mm	DSI 4	18700	1860	Close	22.08	23.00	1.236	0.03	0.065	0.080
	LTE Band 2_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	18700	1860	Close	20.94	22.00	1.276	-0.09	0.509	0.650
	LTE Band 2_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 5	18700	1860	Close	19.94	21.00	1.276	0.07	0.440	0.562
	LTE Band 2_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	18700	1860	Close	20.94	22.00	1.276	0.06	0.368	0.470
	LTE Band 2_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 5	18700	1860	Close	19.94	21.00	1.276	0.08	0.325	0.415
	LTE Band 7_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	21100	2535	Close	18.70	19.9	1.318	0.18	0.203	0.268
	LTE Band 7_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	0.17	0.187	0.243
49	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	21100	2535	Close	18.70	19.9	1.318	0.08	0.620	**0.817**
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	20850	2510	Close	18.29	19.9	1.449	-0.02	0.543	0.787
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	21350	2560	Close	18.56	19.9	1.361	0.01	0.561	0.764
	LTE Band 7_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	0.16	0.539	0.701
	LTE Band 7_Ant 1	20M	QPSK	100	0	Back	5mm	DSI 5	21100	2535	Close	18.76	19.9	1.300	-0.03	0.528	0.686
	LTE Band 7_Ant 1	20M	QPSK	1	0	Front	19mm	DSI 4	21350	2560	Close	23.22	24	1.20	-0.05	0.053	0.063
	LTE Band 7_Ant 1	20M	QPSK	50	0	Front	19mm	DSI 4	21350	2560	Close	22.28	23	1.180	0.01	0.044	0.052
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	15mm	DSI 4	21350	2560	Close	23.22	24	1.20	0.05	0.151	0.181
	LTE Band 7_Ant 1	20M	QPSK	50	0	Back	15mm	DSI 4	21350	2560	Close	22.28	23	1.180	0.06	0.152	0.179
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	21100	2535	Close	18.44	19.40	1.247	0.17	0.246	0.307
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 5	21100	2535	Close	18.51	19.40	1.227	0.08	0.278	0.341
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	21100	2535	Close	18.44	19.40	1.247	0.16	0.533	0.665
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 5	21100	2535	Close	18.51	19.40	1.227	0.05	0.573	0.703
	LTE Band 7_Ant 2	20M	QPSK	1	0	Front	19mm	DSI 4	21100	2535	Close	21.17	22.00	1.211	-0.01	0.092	0.111
	LTE Band 7_Ant 2	20M	QPSK	50	0	Front	19mm	DSI 4	21100	2535	Close	20.21	21.00	1.199	-0.03	0.080	0.096
	LTE Band 7_Ant 2	20M	QPSK	1	0	Back	15mm	DSI 4	21100	2535	Close	21.17	22.00	1.211	0.05	0.252	0.305
	LTE Band 7_Ant 2	20M	QPSK	50	0	Back	15mm	DSI 4	21100	2535	Close	20.21	21.00	1.199	-0.01	0.224	0.269
	LTE Band 12_Ant 1	10M	QPSK	1	0	Front	5mm	DSI 5	23095	707.5	Close	22.73	24.00	1.340	0.09	0.157	0.210
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	5mm	DSI 5	23095	707.5	Close	21.83	23.00	1.309	0.08	0.142	0.186
50	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	5mm	DSI 5	23095	707.5	Close	22.73	24.00	1.340	-0.01	0.386	**0.517**
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	5mm	DSI 5	23095	707.5	Close	21.83	23.00	1.309	0.12	0.316	0.414
	LTE Band 12_Ant 2	10M	QPSK	1	0	Front	5mm	DSI 5	23095	707.5	Close	22.08	23.00	1.236	-0.16	0.103	0.127
	LTE Band 12_Ant 2	10M	QPSK	25	0	Front	5mm	DSI 5	23095	707.5	Close	21.16	22.00	1.213	0.11	0.087	0.106
	LTE Band 12_Ant 2	10M	QPSK	1	0	Back	5mm	DSI 5	23095	707.5	Close	22.08	23.00	1.236	0.05	0.227	0.281
	LTE Band 12_Ant 2	10M	QPSK	25	0	Back	5mm	DSI 5	23095	707.5	Close	21.16	22.00	1.213	0.08	0.135	0.164
	LTE Band 13_Ant 1	10M	QPSK	1	0	Front	5mm	DSI 5	23230	782	Close	22.43	24.00	1.435	0.07	0.212	0.304
	LTE Band 13_Ant 1	10M	QPSK	25	0	Front	5mm	DSI 5	23230	782	Close	21.52	23.00	1.406	0.09	0.170	0.239
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	5mm	DSI 5	23230	782	Close	22.43	24.00	1.435	-0.11	0.502	0.721
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	5mm	DSI 5	23230	782	Close	21.52	23.00	1.406	0.06	0.354	0.498
	LTE Band 13_Ant 2	10M	QPSK	1	0	Front	5mm	DSI 5	23230	782	Close	21.66	23.00	1.361	0.05	0.218	0.297
	LTE Band 13_Ant 2	10M	QPSK	25	0	Front	5mm	DSI 5	23230	782	Close	20.84	22.00	1.306	0.06	0.181	0.236
51	LTE Band 13_Ant 2	10M	QPSK	1	0	Back	5mm	DSI 5	23230	782	Close	21.66	23.00	1.361	0.01	0.566	**0.771**
	LTE Band 13_Ant 2	10M	QPSK	25	0	Back	5mm	DSI 5	23230	782	Close	20.84	22.00	1.306	0.08	0.408	0.533

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	5mm	DSI 5	26865	831.5	Close	22.65	24.00	1.365	0.04	0.271	0.370
	LTE Band 26_Ant 1	15M	QPSK	36	0	Front	5mm	DSI 5	26865	831.5	Close	21.76	23.00	1.330	0.06	0.253	0.337
52	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	5mm	DSI 5	26865	831.5	Close	22.65	24.00	1.365	-0.09	0.636	**0.868**
	LTE Band 26_Ant 1	15M	QPSK	36	0	Back	5mm	DSI 5	26865	831.5	Close	21.76	23.00	1.330	0.07	0.509	0.677
	LTE Band 26_Ant 1	15M	QPSK	75	0	Back	5mm	DSI 5	26865	831.5	Close	21.70	23.00	1.349	0.09	0.501	0.676
	LTE Band 26_Ant 2	15M	QPSK	1	0	Front	5mm	DSI 5	26865	831.5	Close	21.71	23.00	1.346	0.07	0.210	0.283
	LTE Band 26_Ant 2	15M	QPSK	36	0	Front	5mm	DSI 5	26865	831.5	Close	20.82	22.00	1.312	0.09	0.165	0.217
	LTE Band 26_Ant 2	15M	QPSK	1	0	Back	5mm	DSI 5	26865	831.5	Close	21.71	23.00	1.346	0.02	0.565	0.760
	LTE Band 26_Ant 2	15M	QPSK	36	0	Back	5mm	DSI 5	26865	831.5	Close	20.82	22.00	1.312	0.06	0.253	0.332
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	132072	1720	Close	19.43	20.60	1.309	0.08	0.223	0.292
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 5	132072	1720	Close	19.48	20.60	1.294	0.05	0.213	0.276
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	132072	1720	Close	19.43	20.60	1.309	-0.01	0.401	0.525
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	132072	1720	Close	19.48	20.60	1.294	0.08	0.373	0.483
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	19mm	DSI 4	132072	1720	Close	22.88	24.00	1.294	-0.05	0.057	0.074
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	19mm	DSI 4	132072	1720	Close	21.99	23.00	1.262	-0.01	0.046	0.058
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	15mm	DSI 4	132072	1720	Close	22.88	24.00	1.294	0.07	0.069	0.089
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	15mm	DSI 4	132072	1720	Close	21.99	23.00	1.262	-0.08	0.067	0.085
	LTE Band 66_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	132072	1720	Close	20.92	22.00	1.282	0.05	0.343	0.440
	LTE Band 66_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 5	132072	1720	Close	20.06	21.00	1.242	-0.01	0.262	0.325
53	LTE Band 66_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	132072	1720	Close	20.92	22.00	1.282	0.01	0.477	**0.612**
	LTE Band 66_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 5	132072	1720	Close	20.06	21.00	1.242	0.06	0.307	0.381
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	133322	683	Close	22.85	24.00	1.303	0.07	0.090	0.117
	LTE Band 71_Ant 1	20M	QPSK	50	0	Front	5mm	DSI 5	133322	683	Close	22.42	23.00	1.143	0.08	0.085	0.097
54	LTE Band 71_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	133322	683	Close	22.85	24.00	1.303	-0.05	0.248	**0.323**
	LTE Band 71_Ant 1	20M	QPSK	50	0	Back	5mm	DSI 5	133322	683	Close	22.42	23.00	1.143	0.06	0.226	0.258
	LTE Band 71_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	133322	683	Close	21.89	23.00	1.291	0.05	0.057	0.074
	LTE Band 71_Ant 2	20M	QPSK	50	24	Front	5mm	DSI 5	133322	683	Close	20.94	22.00	1.276	0.12	0.055	0.070
	LTE Band 71_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	133322	683	Close	21.89	23.00	1.291	0.03	0.116	0.150
	LTE Band 71_Ant 2	20M	QPSK	50	24	Back	5mm	DSI 5	133322	683	Close	20.94	22.00	1.276	0.06	0.084	0.107

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_Ant 1	20M	QPSK	1	0	Front	5mm	DSI 5	40620	2593	Close	18.31	19.10	1.199	62.9	1.006	0.11	0.313	0.378
	LTE Band 41_Ant 1	20M	QPSK	50	24	Front	5mm	DSI 5	40620	2593	Close	18.47	19.10	1.156	62.9	1.006	0.16	0.308	0.358
55	LTE Band 41_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	40620	2593	Close	18.31	19.10	1.199	62.9	1.006	-0.02	0.322	**0.389**
	LTE Band 41_Ant 1	20M	QPSK	1	0	Back	5mm	DSI 5	40620+ 40818	2593+ 2612.8	Close	17.89	19.10	1.321	62.9	1.006	0.01	0.273	0.363
	LTE Band 41_Ant 1	20M	QPSK	50	24	Back	5mm	DSI 5	40620	2593	Close	18.47	19.10	1.156	62.9	1.006	0.06	0.308	0.358
	LTE Band 41_Ant 1	20M	QPSK	1	0	Front	19mm	DSI 4	40620	2593	Close	22.99	24.00	1.262	62.9	1.006	-0.06	0.069	0.088
	LTE Band 41_Ant 1	20M	QPSK	50	0	Front	19mm	DSI 4	40620	2593	Close	22.18	23.00	1.208	62.9	1.006	-0.01	0.073	0.089
	LTE Band 41_Ant 1	20M	QPSK	1	0	Back	15mm	DSI 4	40620	2593	Close	22.99	24.00	1.262	62.9	1.006	0.08	0.236	0.300
	LTE Band 41_Ant 1	20M	QPSK	50	0	Back	15mm	DSI 4	40620	2593	Close	22.18	23.00	1.208	62.9	1.006	0.09	0.200	0.243
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	5mm	DSI 5	39750	2506	Close	19.23	21.00	1.503	62.9	1.006	0.15	0.178	0.269
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	5mm	DSI 5	39750	2506	Close	19.33	21.00	1.469	62.9	1.006	0.16	0.173	0.256
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	39750	2506	Close	19.23	21.00	1.503	62.9	1.006	0.06	0.202	0.305
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	5mm	DSI 5	39750+ 39948	2506+ 2525.8	Close	20.70	21.00	1.072	62.9	1.006	0.01	0.182	0.196
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	5mm	DSI 5	39750	2506	Close	19.33	21.00	1.469	62.9	1.006	0.03	0.201	0.297
	LTE Band 41_Ant 2	20M	QPSK	1	0	Front	19mm	DSI 4	39750	2506	Close	22.61	23.50	1.227	62.9	1.006	-0.02	0.049	0.061
	LTE Band 41_Ant 2	20M	QPSK	50	0	Front	19mm	DSI 4	39750	2506	Close	21.78	22.50	1.180	62.9	1.006	0.06	0.043	0.051
	LTE Band 41_Ant 2	20M	QPSK	1	0	Back	15mm	DSI 4	39750	2506	Close	22.61	23.50	1.227	62.9	1.006	0.08	0.121	0.149
	LTE Band 41_Ant 2	20M	QPSK	50	0	Back	15mm	DSI 4	39750	2506	Close	21.78	22.50	1.180	62.9	1.006	-0.03	0.098	0.116

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n5_Ant 1	20M	BPSK	1	0	Front	5mm	DSI 5	167300	836.5	Close	23.21	24.00	1.199	0.05	0.264	0.317
	FR1 n5_Ant 1	20M	BPSK	50	0	Front	5mm	DSI 5	167300	836.5	Close	23.09	24.00	1.233	-0.01	0.234	0.289
56	FR1 n5_Ant 1	20M	BPSK	1	0	Back	5mm	DSI 5	167300	836.5	Close	23.21	24.00	1.199	-0.04	0.662	**0.794**
	FR1 n5_Ant 1	20M	BPSK	50	0	Back	5mm	DSI 5	167300	836.5	Close	23.09	24.00	1.233	0.12	0.604	0.745
	FR1 n5_Ant 2	20M	BPSK	1	1	Front	5mm	DSI 5	167300	836.5	Close	23.92	24.00	1.019	0.08	0.248	0.253
	FR1 n5_Ant 2	20M	BPSK	50	0	Front	5mm	DSI 5	167300	836.5	Close	23.77	24.00	1.054	0.06	0.005	0.005
	FR1 n5_Ant 2	20M	BPSK	1	1	Back	5mm	DSI 5	167300	836.5	Close	23.92	24.00	1.019	-0.08	0.286	0.291
	FR1 n5_Ant 2	20M	BPSK	50	0	Back	5mm	DSI 5	167300	836.5	Close	23.77	24.00	1.054	0.08	0.015	0.016
	FR1 n41_Ant 2	100M	BPSK	1	1	Front	5mm	DSI 5	518598	2592.99	Close	18.37	18.70	1.079	0.13	0.186	0.201
	FR1 n41_Ant 2	100M	BPSK	135	0	Front	5mm	DSI 5	518598	2592.99	Close	18.32	18.70	1.091	0.16	0.022	0.024
57	FR1 n41_Ant 2	100M	BPSK	1	1	Back	5mm	DSI 5	518598	2592.99	Close	18.37	18.70	1.079	0.06	0.314	**0.339**
	FR1 n41_Ant 2	100M	BPSK	135	0	Back	5mm	DSI 5	518598	2592.99	Close	18.32	18.70	1.091	0.08	0.311	0.339
	FR1 n41_Ant 2	100M	BPSK	1	1	Front	19mm	DSI 4	518598	2592.99	Close	23.80	24.00	1.047	0.07	0.038	0.040
	FR1 n41_Ant 2	100M	BPSK	135	69	Front	19mm	DSI 4	518598	2592.99	Close	23.73	24.00	1.064	-0.03	0.030	0.032
	FR1 n41_Ant 2	100M	BPSK	1	1	Back	15mm	DSI 4	518598	2592.99	Close	23.80	24.00	1.047	0.01	0.098	0.103
	FR1 n41_Ant 2	100M	BPSK	135	69	Back	15mm	DSI 4	518598	2592.99	Close	23.73	24.00	1.064	0.09	0.085	0.090

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz-	802.11b 1Mbps	Front	5mm	Ant 4	7	1	2412	Close	14.38	15.00	1.153	100	1.000	0.1	0.018	0.021
	WLAN2.4GHz-	802.11b 1Mbps	Back	5mm	Ant 4	7	1	2412	Close	14.38	15.00	1.153	100	1.000	0.13	0.257	0.296
	WLAN2.4GHz-	802.11b 1Mbps	Front	5mm	Ant 4	6	1	2412	Close	17.30	18.00	1.175	100	1.000	-0.08	0.052	0.061
	WLAN2.4GHz-	802.11b 1Mbps	Back	5mm	Ant 4	6	1	2412	Close	17.30	18.00	1.175	100	1.000	-0.03	0.652	0.766
58	WLAN2.4GHz-	802.11b 1Mbps	Back	5mm	Ant 4	6	11	2462	Close	17.28	18.00	1.180	100	1.000	0.05	0.774	**0.914**
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 4	3	1	2412	Close	20.70	21.00	1.072	100	1.000	0.04	0.173	0.185
	WLAN2.4GHz-	802.11b 1Mbps	Front	5mm	Ant 3	7	1	2412	Close	14.75	15.00	1.059	100	1.000	0.03	0.015	0.016
	WLAN2.4GHz-	802.11b 1Mbps	Back	5mm	Ant 3	7	1	2412	Close	14.75	15.00	1.059	100	1.000	-0.01	0.331	0.351
	WLAN2.4GHz-	802.11b 1Mbps	Front	5mm	Ant 3	6	1	2412	Close	17.38	18.00	1.153	100	1.000	-0.15	0.067	0.077
	WLAN2.4GHz-	802.11b 1Mbps	Back	5mm	Ant 3	6	1	2412	Close	17.38	18.00	1.153	100	1.000	-0.02	0.647	0.746
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 3	3	1	2412	Close	20.70	21.00	1.072	100	1.000	0.09	0.171	0.183
	WLAN2.4GHz-	802.11b 1Mbps	Front	5mm	Ant 3+4	7	11	2462	Close	17.23	18.00	1.194	100	1.000	0.01	0.024	0.029
	WLAN2.4GHz-	802.11b 1Mbps	Back	5mm	Ant 3+4	7	11	2462	Close	17.23	18.00	1.194	100	1.000	0.02	0.403	0.481
	WLAN2.4GHz-	802.11b 1Mbps	Front	5mm	Ant 3+4	6	11	2462	Close	20.75	21.00	1.059	100	1.000	-0.12	0.042	0.044
	WLAN2.4GHz-	802.11b 1Mbps	Back	5mm	Ant 3+4	6	11	2462	Close	20.75	21.00	1.059	100	1.000	0.19	0.720	0.763
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 3+4	3	6	2437	Close	23.98	24.00	1.005	100	1.000	-0.05	0.334	0.336

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	DH5 1Mbps	Front	5mm	Ant 4	2	0	2402	Close	7.99	9.00	1.262	77.13	1.080	0.03	0.027	0.037
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	2	0	2402	Close	7.99	9.00	1.262	77.13	1.080	0.06	0.114	0.155
	Bluetooth	DH5 1Mbps	Front	5mm	Ant 4	1	78	2480	Close	15.28	15.50	1.052	77.13	1.080	-0.01	0.038	0.043
59	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	78	2480	Close	15.28	15.50	1.052	77.13	1.080	-0.14	0.760	**0.863**
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	0	2402	Close	15.23	15.50	1.064	77.13	1.080	0.01	0.423	0.486
	Bluetooth	DH5 1Mbps	Back	5mm	Ant 4	1	39	2441	Close	15.28	15.50	1.052	77.13	1.080	0.08	0.671	0.762

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	7	58	5290	Close	15.13	15.50	1.089	91.84	1.089	-0.04	0.017	0.020
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	7	58	5290	Close	15.13	15.50	1.089	91.84	1.089	0.14	0.327	0.388
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	5mm	Ant 4	6	54	5270	Close	17.68	18.50	1.208	95.88	1.043	-0.01	0.045	0.057
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 4	6	54	5270	Close	17.68	18.50	1.208	95.88	1.043	0.02	0.477	0.601
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 4	3	54	5270	Close	19.20	20.00	1.202	95.88	1.043	0.04	0.142	0.178
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3	7	58	5290	Close	14.89	15.50	1.151	92	1.087	0.02	0.081	0.101
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3	7	58	5290	Close	14.89	15.50	1.151	92	1.087	0.07	0.370	0.463
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	5mm	Ant 3	6	54	5270	Close	17.22	18.50	1.343	95.85	1.043	-0.07	0.018	0.025
60	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 3	6	54	5270	Close	17.22	18.50	1.343	95.85	1.043	-0.01	0.809	**1.133**
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 3	6	62	5310	Close	14.80	15.50	1.175	95.85	1.043	0.02	0.441	0.540
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 3	3	54	5270	Close	19.20	20.00	1.202	95.85	1.043	0.06	0.300	0.376
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3+4	7	58	5290	Close	17.87	18.50	1.156	91.84	1.089	0.06	0.013	0.016
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	7	58	5290	Close	17.87	18.50	1.156	91.84	1.089	0.02	0.476	0.599
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	5mm	Ant 3+4	6	54	5270	Close	20.92	21.50	1.143	95.85	1.043	-0.03	0.055	0.066
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 3+4	6	54	5270	Close	20.92	21.50	1.143	95.85	1.043	-0.07	0.829	0.988
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	5mm	Ant 3+4	6	62	5310	Close	17.91	18.50	1.146	95.85	1.043	0.01	0.391	0.467
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	15mm	Ant 3+4	3	54	5270	Close	22.52	23.00	1.117	95.85	1.043	-0.04	0.364	0.424
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	7	106	5530	Close	14.93	15.00	1.016	91.84	1.089	0.04	0.039	0.043
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	7	106	5530	Close	14.93	15.00	1.016	91.84	1.089	-0.03	0.582	0.644
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	6	106	5530	Close	15.94	16.00	1.014	91.84	1.089	0.01	0.046	0.051
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	6	106	5530	Close	15.94	16.00	1.014	91.84	1.089	-0.07	0.829	0.915
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	6	138	5690	Close	15.85	16.00	1.035	91.84	1.089	0.02	0.568	0.640
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 4	3	110	5550	Close	19.50	20.00	1.122	95.88	1.043	0.08	0.265	0.310
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3	7	106	5530	Close	14.20	15.00	1.202	92	1.087	0.02	0.035	0.046
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3	7	106	5530	Close	14.20	15.00	1.202	92	1.087	-0.05	0.353	0.461
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3	6	106	5530	Close	15.56	16.00	1.107	92	1.087	-0.09	0.080	0.096
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3	6	106	5530	Close	15.56	16.00	1.107	92	1.087	0.05	0.583	0.701
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 3	3	126	5630	Close	19.63	20.00	1.089	95.85	1.043	0.04	0.601	0.683
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3+4	7	106	5530	Close	17.72	18.00	1.067	91.84	1.089	0.15	0.065	0.075
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	7	106	5530	Close	17.72	18.00	1.067	91.84	1.089	0.14	0.565	0.656
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3+4	6	106	5530	Close	18.69	19.00	1.074	91.84	1.089	-0.02	0.024	0.028
61	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	6	106	5530	Close	18.69	19.00	1.074	91.84	1.089	-0.11	0.838	**0.980**
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	6	138	5690	Close	18.71	19.00	1.069	91.84	1.089	0.02	0.777	0.905
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	15mm	Ant 3+4	3	110	5550	Close	22.57	23.00	1.104	95.85	1.043	0.09	0.558	0.643
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	7	155	5775	Close	15.68	16.00	1.076	91.84	1.089	0.17	0.029	0.034
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	7	155	5775	Close	15.68	16.00	1.076	91.84	1.089	-0.04	0.550	0.645
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 4	6	155	5775	Close	15.68	16.00	1.076	91.84	1.089	0.17	0.069	0.081
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 4	6	155	5775	Close	15.68	16.00	1.076	91.84	1.089	-0.04	0.838	0.982
	WLAN5.8GHz	802.11a 6Mbps	Back	15mm	Ant 4	3	149	5775	Close	20.20	21.00	1.202	98.06	1.020	0.14	0.299	0.367
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3	7	155	5775	Close	15.98	16.00	1.005	92	1.087	0.14	0.019	0.021
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3	7	155	5775	Close	15.98	16.00	1.005	92	1.087	-0.09	0.425	0.464
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3	6	155	5775	Close	15.98	16.00	1.005	92	1.087	0.14	0.057	0.062
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3	6	155	5775	Close	15.98	16.00	1.005	92	1.087	-0.09	0.786	0.858
	WLAN5.8GHz	802.11a 6Mbps	Back	15mm	Ant 3	3	165	5825	Close	20.50	21.00	1.122	97.09	1.030	0.05	0.394	0.455
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3+4	7	155	5775	Close	18.38	19.00	1.153	91.84	1.089	0.04	0.051	0.064
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	7	155	5775	Close	18.38	19.00	1.153	91.84	1.089	-0.01	0.575	0.722
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	5mm	Ant 3+4	6	155	5775	Close	18.38	19.00	1.153	91.84	1.089	0.04	0.083	0.104
62	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	6	155	5775	Close	18.38	19.00	1.153	91.84	1.089	-0.1	0.918	**1.153**
	WLAN5.8GHz	802.11a 6Mbps	Back	15mm	Ant 3+4	3	157	5785	Close	23.38	24.00	1.153	97.35	1.027	0.06	0.492	0.583

16.4 Product Specific SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
63	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	DSI 6	9262	1852.4	Open	23.23	24.00	1.194	0.04	1.230	**1.469**
	WCDMA II_Ant 1	RMC 12.2Kbps	Bottom Side	0mm	DSI 6	9262	1852.4	Open	23.23	24.00	1.194	0.04	0.885	1.057
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	0mm	DSI 6	1413	1732.6	Open	23.12	24.00	1.225	-0.11	1.310	1.604
64	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	DSI 6	1413	1732.6	Open	23.12	24.00	1.225	-0.14	1.340	**1.641**
	WCDMA IV_Ant 1	RMC 12.2Kbps	Bottom Side	0mm	DSI 6	1413	1732.6	Open	23.12	24.00	1.225	0.04	0.872	1.068

<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	0mm	DSI 6	18700	1860	Open	23.02	24.00	1.253	0.09	1.650	2.068
65	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	0mm	DSI 6	18900	1880	Open	22.73	24.00	1.340	-0.14	1.570	**2.103**
	LTE Band 2_Ant 1	20M	QPSK	1	0	Back	0mm	DSI 6	19100	1900	Open	22.81	24.00	1.315	0.09	1.550	2.039
	LTE Band 2_Ant 1	20M	QPSK	50	0	Back	0mm	DSI 6	18700	1860	Open	22.08	23.00	1.236	0.08	1.490	1.842
	LTE Band 2_Ant 1	20M	QPSK	100	0	Back	0mm	DSI 6	18700	1860	Open	22.06	23.00	1.242	0.07	1.430	1.776
	LTE Band 2_Ant 1	20M	QPSK	1	0	Left Side	0mm	DSI 6	18700	1860	Open	23.02	24.00	1.253	0.06	1.460	1.830
	LTE Band 2_Ant 1	20M	QPSK	50	0	Left Side	0mm	DSI 6	18700	1860	Open	22.08	23.00	1.236	0.08	1.040	1.285
	LTE Band 2_Ant 1	20M	QPSK	1	0	Bottom Side	0mm	DSI 6	18700	1860	Open	23.02	24.00	1.253	0.04	1.110	1.391
	LTE Band 2_Ant 1	20M	QPSK	50	0	Bottom Side	0mm	DSI 6	18700	1860	Open	22.08	23.00	1.236	0.02	0.969	1.198
	LTE Band 7_Ant 1	20M	QPSK	1	0	Front	0mm	DSI 6	21100	2535	Open	22.02	23	1.25	0.07	0.665	0.833
	LTE Band 7_Ant 1	20M	QPSK	50	0	Front	0mm	DSI 6	21100	2535	Open	22.21	23	1.20	0.04	0.687	0.824
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	0mm	DSI 6	21100	2535	Open	22.02	23	1.25	0.16	0.537	0.673
	LTE Band 7_Ant 1	20M	QPSK	50	0	Back	0mm	DSI 6	21100	2535	Open	22.21	23	1.20	0.01	0.572	0.686
	LTE Band 7_Ant 1	20M	QPSK	1	0	Bottom Side	0mm	DSI 6	21100	2535	Open	22.02	23	1.25	0.04	0.919	1.152
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	0mm	DSI 6	21100	2535	Open	22.21	23	1.199	0.09	0.766	0.919
	LTE Band 7_Ant 1	20M	QPSK	1	0	Front	13mm	DSI 4	21350	2560	Open	23.22	24	1.197	0.07	0.089	0.107
	LTE Band 7_Ant 1	20M	QPSK	50	0	Front	13mm	DSI 4	21350	2560	Open	22.28	23	1.180	0.08	0.079	0.093
	LTE Band 7_Ant 1	20M	QPSK	1	0	Back	11mm	DSI 4	21350	2560	Open	23.22	24	1.197	0.07	0.141	0.169
	LTE Band 7_Ant 1	20M	QPSK	50	0	Back	11mm	DSI 4	21350	2560	Open	22.28	23	1.180	0.08	0.127	0.15
	LTE Band 7_Ant 1	20M	QPSK	1	0	Bottom Side	13mm	DSI 4	21350	2560	Open	23.22	24	1.197	0.06	0.154	0.184
	LTE Band 7_Ant 1	20M	QPSK	50	0	Bottom Side	13mm	DSI 4	21350	2560	Open	22.28	23	1.180	0.073	0.138	0.163
66	LTE Band 7_Ant 2	20M	QPSK	1	0	Bottom Side	0mm	DSI 6	21100	2535	Open	21.17	22.00	1.211	-0.03	1.16	**1.404**
	LTE Band 7_Ant 2	20M	QPSK	50	0	Bottom Side	0mm	DSI 6	21100	2535	Open	20.21	21.00	1.199	0.16	1.03	1.235
67	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	0mm	DSI 6	132072	1720	Open	22.88	24.00	1.294	0.05	1.910	**2.472**
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	0mm	DSI 6	132322	1745	Open	22.87	24.00	1.297	0.16	1.810	2.348
	LTE Band 66_Ant 1	20M	QPSK	1	0	Back	0mm	DSI 6	132572	1770	Open	22.82	24.00	1.312	0.07	1.840	2.414
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	0mm	DSI 6	132072	1720	Open	21.99	23.00	1.262	0.09	1.910	2.410
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	0mm	DSI 6	132322	1745	Open	21.89	23.00	1.291	0.11	1.810	2.337
	LTE Band 66_Ant 1	20M	QPSK	50	0	Back	0mm	DSI 6	132572	1770	Open	21.81	23.00	1.315	0.08	1.840	2.420
	LTE Band 66_Ant 1	20M	QPSK	100	0	Back	0mm	DSI 6	132572	1770	Open	21.98	23.00	1.265	-0.02	1.730	2.188
	LTE Band 66_Ant 1	20M	QPSK	1	0	Bottom Side	0mm	DSI 6	132072	1720	Open	22.88	24.00	1.294	0.06	1.100	1.424
	LTE Band 66_Ant 1	20M	QPSK	50	0	Bottom Side	0mm	DSI 6	132072	1720	Open	21.99	23.00	1.262	0.07	1.100	1.388

<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 41_Ant 1	20M	QPSK	1	0	Back	0mm	DSI 6	40620	2593	Open	22.99	24.00	1.262	62.9	1.006	0.11	1.080	1.371
	LTE Band 41_Ant 1	20M	QPSK	50	0	Back	0mm	DSI 6	40620	2593	Open	22.18	23.00	1.208	62.9	1.006	0.12	0.910	1.106
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	0mm	DSI 6	40620	2593	Open	22.99	24.00	1.262	62.9	1.006	-0.02	1.330	1.688
	LTE Band 41_Ant 1	20M	QPSK	1	0	Bottom Side	0mm	DSI 6	40620+ 40818	2593+ 2612.8	Open	23.85	24.00	1.035	62.9	1.006	0.06	1.260	1.312
	LTE Band 41_Ant 1	20M	QPSK	50	0	Bottom Side	0mm	DSI 6	40620	2593	Open	22.18	23.00	1.208	62.9	1.006	0.11	1.020	1.239
68	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	0mm	DSI 6	40620	2593	Open	22.49	23.50	1.262	62.9	1.006	-0.09	1.400	**1.777**
	LTE Band 41_Ant 2	20M	QPSK	1	0	Bottom Side	0mm	DSI 6	40620+ 40818	2593+ 2612.8	Open	22.95	23.50	1.135	62.9	1.006	0.06	1.120	1.279
	LTE Band 41_Ant 2	20M	QPSK	50	0	Bottom Side	0mm	DSI 6	40620	2593	Open	21.58	22.50	1.236	62.9	1.006	0.01	1.120	1.393

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
69	FR1 n41_Ant 2	100M	BPSK	1	1	Back	0mm	DSI 6	518598	2592.99	Open	23.80	24.00	1.047	-0.01	1.470	**1.539**
	FR1 n41_Ant 2	100M	BPSK	135	69	Back	0mm	DSI 6	518598	2592.99	Open	23.73	24.00	1.064	0.02	1.380	1.469

<WLAN2.4G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
70	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3+4	9	11	2462	Open	21.25	23.00	1.496	100	1.000	-0.13	2.440	**3.651**
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3+4	9	1	2412	Open	21.81	23.00	1.315	100	1.000	-0.02	1.840	2.420
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3+4	8	11	2462	Open	20.72	21.00	1.067	100	1.000	-0.02	1.480	1.579
	WLAN2.4GHz	802.11b 1Mbps	Back	7mm	Ant 3+4	3	6	2437	Open	23.98	24.00	1.005	100	1.000	0.08	0.589	0.592

<WLAN5G SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
71	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3+4	9	46	5230	Open	22.56	23.00	1.107	95.85	1.043	0.01	1.240	**1.431**
	WLAN5.2GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3+4	8	46	5230	Open	20.98	21.50	1.127	95.85	1.043	0.02	0.792	0.931
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 4	9	54	5270	Open	19.20	20.00	1.202	95.88	1.043	-0.09	0.040	0.050
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4	9	54	5270	Open	19.20	20.00	1.202	95.88	1.043	0.03	1.060	1.329
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 4	9	54	5270	Open	19.20	20.00	1.202	95.88	1.043	0.05	0.038	0.048
	WLAN5.3GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 4	9	54	5270	Open	19.20	20.00	1.202	95.88	1.043	-0.11	0.066	0.083
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 4	8	54	5270	Open	16.98	18.00	1.265	95.88	1.043	-0.08	0.025	0.033
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4	8	54	5270	Open	16.98	18.00	1.265	95.88	1.043	0.01	0.709	0.935
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 4	8	54	5270	Open	16.98	18.00	1.265	95.88	1.043	0.03	0.028	0.037
	WLAN5.3GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 4	8	54	5270	Open	16.98	18.00	1.265	95.88	1.043	0.04	0.034	0.045
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 3	9	54	5270	Open	19.20	20.00	1.202	95.85	1.043	-0.06	0.100	0.125
72	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3	9	54	5270	Open	19.20	20.00	1.202	95.85	1.043	-0.01	2.430	**3.047**
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3	9	62	5310	Open	14.48	15.50	1.265	95.85	1.043	0.02	0.632	0.834
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 3	9	54	5270	Open	19.20	20.00	1.202	95.85	1.043	0.08	0.081	0.102
	WLAN5.3GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 3	9	54	5270	Open	19.20	20.00	1.202	95.85	1.043	0.06	0.021	0.026
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 3	8	54	5270	Open	17.12	18.00	1.225	95.85	1.043	-0.06	0.063	0.080
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3	8	54	5270	Open	17.12	18.00	1.225	95.85	1.043	0.01	1.440	1.839
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 3	8	54	5270	Open	17.12	18.00	1.225	95.85	1.043	-0.04	0.140	0.179
	WLAN5.3GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 3	8	54	5270	Open	17.12	18.00	1.225	95.85	1.043	0.02	0.078	0.100
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 3+4	9	54	5270	Open	22.52	23.00	1.117	95.85	1.043	-0.08	0.146	0.170
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3+4	9	54	5290	Open	22.52	23.00	1.117	95.85	1.043	-0.02	2.370	2.761
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3+4	9	62	5310	Open	17.91	18.50	1.146	95.85	1.043	0.03	0.559	0.668
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 3+4	9	54	5270	Open	22.52	23.00	1.117	95.85	1.043	0.06	0.102	0.119
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 3+4	9	54	5270	Open	22.52	23.00	1.117	95.85	1.043	0.04	0.374	0.436
	WLAN5.3GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 3+4	9	54	5270	Open	22.52	23.00	1.117	95.85	1.043	0.02	0.036	0.042
	WLAN5.3GHz	802.11n-HT40 MCS0	Front	0mm	Ant 3+4	8	54	5270	Open	19.91	21.00	1.285	95.85	1.043	0.11	0.076	0.102
	WLAN5.3GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3+4	8	54	5270	Open	19.91	21.00	1.285	95.85	1.043	-0.09	1.400	1.877
	WLAN5.3GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 3+4	8	54	5270	Open	19.91	21.00	1.285	95.85	1.043	0.01	0.060	0.080
	WLAN5.3GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 3+4	8	54	5270	Open	19.91	21.00	1.285	95.85	1.043	-0.07	0.211	0.283
	WLAN5.3GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 3+4	8	54	5270	Open	19.91	21.00	1.285	95.85	1.043	0.06	0.021	0.028
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 4	9	110	5550	Open	19.50	20.00	1.122	95.88	1.043	0.01	0.049	0.057
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4	9	110	5550	Open	19.50	20.00	1.122	95.88	1.043	-0.02	1.830	2.142
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4	9	134	5670	Open	19.20	20.00	1.202	95.88	1.043	0.12	1.690	2.119
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 4	9	110	5550	Open	19.50	20.00	1.122	95.88	1.043	0.08	0.630	0.737
	WLAN5.5GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 4	9	110	5550	Open	19.50	20.00	1.122	95.88	1.043	0.08	0.066	0.077
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4	8	106	5530	Open	16.43	16.50	1.016	91.84	1.089	0.06	0.062	0.069
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4	8	106	5530	Open	16.43	16.50	1.016	91.84	1.089	-0.07	1.670	1.848
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4	8	106	5530	Open	16.43	16.50	1.016	91.84	1.089	-0.01	0.315	0.349
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Bottom Side	0mm	Ant 4	8	106	5530	Open	16.43	16.50	1.016	91.84	1.089	0.06	0.054	0.060
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 3	9	126	5630	Open	19.63	20.00	1.089	95.85	1.043	0.02	0.240	0.273
	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3	9	126	5630	Open	19.63	20.00	1.089	95.85	1.043	-0.03	2.700	3.067
73	WLAN5.5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 3	9	110	5550	Open	19.50	20.00	1.122	95.85	1.043	0.01	2.680	**3.136**
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 3	9	126	5630	Open	19.63	20.00	1.089	95.85	1.043	0.05	0.398	0.452
	WLAN5.5GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 3	9	126	5630	Open	19.63	20.00	1.089	95.85	1.043	0.09	0.370	0.420
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 3	8	106	5530	Open	16.27	16.50	1.054	92	1.087	-0.06	0.055	0.063
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 3	8	106	5530	Open	16.27	16.50	1.054	92	1.087	0.06	1.550	1.776
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 3	8	106	5530	Open	16.27	16.50	1.054	92	1.087	0.08	0.071	0.081
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Bottom Side	0mm	Ant 3	8	106	5530	Open	16.27	16.50	1.054	92	1.087	0.02	0.053	0.061

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WLAN5.5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 3+4	9	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.11	0.299	0.344
	WLAN5.5GHz	802.11n-HT40 MCS1	Back	0mm	Ant 3+4	9	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.01	2.420	2.787
	WLAN5.5GHz	802.11n-HT40 MCS1	Back	0mm	Ant 3+4	9	134	5670	Open	22.57	23.00	1.104	95.85	1.043	0.01	2.290	2.637
	WLAN5.5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 3+4	9	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.15	0.524	0.603
	WLAN5.5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 3+4	9	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.08	0.761	0.876
	WLAN5.5GHz	802.11n-HT40 MCS0	Bottom Side	0mm	Ant 3+4	9	110	5550	Open	22.57	23.00	1.104	95.85	1.043	0.19	0.371	0.427
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 3+4	8	106	5530	Open	18.77	19.50	1.183	91.84	1.089	0.04	0.019	0.024
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 3+4	8	106	5530	Open	18.77	19.50	1.183	91.84	1.089	-0.01	1.530	1.971
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 3+4	8	106	5530	Open	18.77	19.50	1.183	91.84	1.089	0.08	0.033	0.043
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 3+4	8	106	5530	Open	18.77	19.50	1.183	91.84	1.089	0.02	0.128	0.165
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Bottom Side	0mm	Ant 3+4	8	106	5530	Open	18.77	19.50	1.183	91.84	1.089	0.13	0.032	0.041
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4	9	155	5775	Open	18.88	19.50	1.153	91.84	1.089	0.03	1.962	2.464
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4	9	155	5775	Open	18.88	19.50	1.153	91.84	1.089	-0.11	1.480	1.859
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4	8	155	5775	Open	17.30	17.50	1.047	91.84	1.089	-0.06	1.623	1.851
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4	8	155	5775	Open	17.30	17.50	1.047	91.84	1.089	-0.09	1.270	1.448
	WLAN5.8GHz	802.11a 6Mbps	Back	7mm	Ant 4	3	149	5745	Open	20.20	21.00	1.202	98.06	1.020	0.09	0.319	0.391
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 3	9	155	5775	Open	18.85	19.50	1.161	92	1.087	0.02	1.810	2.285
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 3	8	155	5775	Open	17.43	17.50	1.016	92	1.087	0.01	1.240	1.370
	WLAN5.8GHz	802.11a 6Mbps	Back	7mm	Ant 3	3	165	5825	Open	20.50	21.00	1.122	97.09	1.030	0.06	0.262	0.303
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 3+4	9	155	5785	Open	22.01	22.50	1.119	91.84	1.089	0.01	0.695	0.847
74	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 3+4	9	155	5785	Open	22.01	22.50	1.119	91.84	1.089	-0.11	2.580	**3.145**
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 3+4	8	155	5785	Open	19.98	20.50	1.127	91.84	1.089	0.01	1.530	1.878
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 3+4	8	155	5775	Open	19.98	20.50	1.127	91.84	1.089	0.06	0.436	0.535
	WLAN5.8GHz	802.11a 6Mbps	Back	7mm	Ant 3+4	3	157	5785	Open	23.38	24.00	1.153	97.35	1.027	-0.17	0.315	0.373

16.5 Repeated SAR Measurement

<1g>

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Output Power State	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	-	DSI 5	512	1850.2	Close	24.70	25.00	1.072	-	-	0.06	0.843	1	0.903
2nd	GSM1900_Ant 1	GPRS (3 Tx slots)	Back	5mm	-	DSI 5	512	1850.2	Close	24.70	25.00	1.072	-	-	-0.03	0.831	1.014	0.890
1st	WLAN5GHz-	802.11n-HT40 MCS0	Back	5mm	Ant 3+4	6	54	5270	Close	20.92	21.50	1.143	95.85	1.043	-0.07	0.829	1	0.988
2nd	WLAN5GHz-	802.11n-HT40 MCS0	Back	5mm	Ant 3+4	6	54	5270	Close	20.92	21.50	1.143	95.85	1.043	-0.07	0.792	1.047	0.944
1st	WLAN5GHz-	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	6	106	5530	Close	18.69	19.00	1.074	91.84	1.089	-0.11	0.838	1	0.980
2nd	WLAN5GHz-	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	6	106	5530	Close	18.69	19.00	1.074	91.84	1.089	-0.11	0.838	1.000	0.980
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	6	155	5775	Close	18.38	19.00	1.153	91.84	1.089	-0.1	0.918	1	1.153
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Back	5mm	Ant 3+4	6	155	5775	Close	18.38	19.00	1.153	91.84	1.089	-0.1	0.853	1.076	1.071

<10g>

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Table	Ch.	Freq. (MHz)	EUT Flip State	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3+4	9	11	2462	Open	21.25	23.00	1.496	100	1.000	-0.13	2.440	1	3.651
2nd	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Ant 3+4	9	11	2462	Open	21.25	23.00	1.496	100	1.000	-0.13	2.240	1.089	3.352
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 3+4	9	155	5785	Open	22.01	22.50	1.119	91.84	1.089	-0.11	2.580	1	3.145
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 3+4	9	155	5785	Open	22.01	22.50	1.119	91.84	1.089	-0.11	2.384	1.082	2.906
1st	WLAN5GHz-	802.11n-HT40 MCS0	Back	0mm	Ant 3	9	54	5270	Open	19.20	20.00	1.202	95.85	1.043	-0.01	2.430	1	3.047
2nd	WLAN5GHz-	802.11n-HT40 MCS0	Back	0mm	Ant 3	9	54	5270	Open	19.20	20.00	1.202	95.85	1.043	-0.01	2.240	1.085	2.809
1st	WLAN5GHz-	802.11n-HT40 MCS0	Back	0mm	Ant 3	9	126	5630	Open	19.63	20.00	1.089	95.85	1.043	-0.03	2.700	1	3.067
2nd	WLAN5GHz-	802.11n-HT40 MCS0	Back	0mm	Ant 3	9	126	5630	Open	19.63	20.00	1.089	95.85	1.043	-0.03	2.532	1.066	2.876

General Note:

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

17. Simultaneous Transmission Analysis

No.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product specific 10g SAR
1.	WWAN+ WLAN2.4GHz Ant 3	Yes	Yes	Yes	Yes
2.	5GNR + WLAN2.4GHz Ant 3	Yes	Yes	Yes	Yes
3.	WWAN + WLAN2.4GHz Ant 4	Yes	Yes	Yes	Yes
4.	5GNR + WLAN2.4GHz Ant 4	Yes	Yes	Yes	Yes
5.	WWAN + WLAN2.4GHz Ant 3+4	Yes	Yes	Yes	Yes
6.	5GNR + WLAN2.4GHz Ant 3+4	Yes	Yes	Yes	Yes
7.	WWAN + WLAN5.3/5.5GHz Ant 3	Yes	Yes		Yes
8.	5GNR + WLAN5.3/5.5GHz Ant 3	Yes	Yes		Yes
9.	WWAN + WLAN5.3/5.5GHz Ant 4	Yes	Yes		Yes
10.	5GNR + WLAN5.3/5.5GHz Ant 4	Yes	Yes		Yes
11.	WWAN + WLAN5.3/5.5GHz Ant 3+4	Yes	Yes		Yes
12.	5GNR + WLAN5.3/5.5GHz Ant 3+4	Yes	Yes		Yes
13.	WWAN + WLAN5.2/5.8GHz Ant 3	Yes	Yes	Yes	Yes
14.	5GNR + WLAN5.2/5.8GHz Ant 3	Yes	Yes	Yes	Yes
15.	WWAN + WLAN5.2/5.8GHz Ant 4	Yes	Yes	Yes	Yes
16.	5GNR + WLAN5.2/5.8GHz Ant 4	Yes	Yes	Yes	Yes
17.	WWAN + WLAN5.2/5.8GHz Ant 3+4	Yes	Yes	Yes	Yes
18.	5GNR + WLAN5.2/5.8GHz Ant 3+4	Yes	Yes	Yes	Yes
19.	WWAN + Bluetooth Ant 4	Yes	Yes	Yes	Yes
20.	5GNR + Bluetooth Ant 4	Yes	Yes	Yes	Yes
21.	WWAN+ WLAN2.4GHz Ant 3+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
22.	5GNR + WLAN2.4GHz Ant 3+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
23.	WWAN + WLAN5.3/5.5GHz Ant 3+ Bluetooth Ant 4	Yes	Yes		Yes
24.	5GNR + WLAN5.3/5.5GHz Ant 3+ Bluetooth Ant 4	Yes	Yes		Yes
25.	WWAN + WLAN5.2/5.8GHz Ant 3+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
26.	5GNR + WLAN5.2/5.8GHz Ant 3+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
27.	WWAN + WLAN5.3/5.5GHz Ant 4+ Bluetooth Ant 4	Yes	Yes		Yes
28.	5GNR + WLAN5.3/5.5GHz Ant 4+ Bluetooth Ant 4	Yes	Yes		Yes
29.	WWAN + WLAN5.2/5.8GHz Ant 4+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
30.	5GNR + WLAN5.2/5.8GHz Ant 4+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
31.	WWAN + WLAN5.3/5.5GHz Ant 3+4 + Bluetooth Ant 4	Yes	Yes		Yes
32.	5GNR + WLAN5.3/5.5GHz Ant 3+4+ Bluetooth Ant 4	Yes	Yes		Yes
33.	WWAN + WLAN5.2/5.8GHz Ant 3+4+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
34.	5GNR + WLAN5.2/5.8GHz Ant 3+4+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
35.	WWAN + WLAN2.4GHz Ant 4+ WLAN5.3/5.5GHz Ant 3	Yes	Yes		Yes
36.	5GNR + WLAN2.4GHz Ant 4+ WLAN5.3/5.5GHz Ant 3	Yes	Yes		Yes
37.	WWAN + WLAN2.4GHz Ant 4+ WLAN5.2/5.8GHz Ant 3	Yes	Yes	Yes	Yes
38.	5GNR + WLAN2.4GHz Ant 4+ WLAN5.2/5.8GHz Ant 3	Yes	Yes	Yes	Yes
39.	WWAN + WLAN2.4GHz Ant 3+ WLAN5.3/5.5GHz Ant4	Yes	Yes		Yes
40.	5GNR + WLAN2.4GHz Ant 3+ WLAN5.3/5.5GHz Ant 4	Yes	Yes		Yes
41.	WWAN + WLAN2.4GHz Ant 3+ WLAN5.2/5.8GHz Ant 4	Yes	Yes	Yes	Yes
42.	5GNR + WLAN2.4GHz Ant 3+ WLAN5.2/5.8GHz Ant 4	Yes	Yes	Yes	Yes
43.	WLAN2.4GHz Ant 4+ WLAN5.3/5.5GHz Ant 3	Yes	Yes		Yes
44.	WLAN2.4GHz Ant 4+ WLAN5.2/5.8GHz Ant 3	Yes	Yes	Yes	Yes

45.	WLAN2.4GHz Ant 3+ WLAN5.3/5.5GHz Ant 4	Yes	Yes		Yes
46.	WLAN2.4GHz Ant 3+ WLAN5.2/5.8GHz Ant 4	Yes	Yes	Yes	Yes
47.	WLAN2.4GHz Ant 3+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
48.	WLAN5.3/5.5GHz Ant 3+ Bluetooth Ant 4	Yes	Yes		Yes
49.	WLAN5.2/5.8GHz Ant 3+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
50.	WLAN5.3/5.5GHz Ant 4+ Bluetooth Ant 4	Yes	Yes		Yes
51.	WLAN5.2/5.8GHz Ant 4+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
52.	WLAN5.3/5.5GHz Ant 3+4+ Bluetooth Ant 4	Yes	Yes		Yes
53.	WLAN5.2/5.8GHz Ant 3+4+ Bluetooth Ant 4	Yes	Yes	Yes	Yes
54.	WWAN + WLAN2.4GHz Ant 3 + WLAN5.3/5.5GHz Ant 4 + Bluetooth Ant 4	Yes	Yes		Yes
55.	5GNR + WLAN2.4GHz Ant 3 + WLAN5.3/5.5GHz Ant 4+ Bluetooth Ant 4	Yes	Yes		Yes
56.	WWAN + WLAN2.4GHz Ant 3 + WLAN5.2/5.8GHz Ant 4 + Bluetooth Ant 4	Yes	Yes	Yes	Yes
57.	5GNR + WLAN2.4GHz Ant 3 + WLAN5.2/5.8GHz Ant 4+ Bluetooth Ant 4	Yes	Yes	Yes	Yes

General Note:

1. This device supports VoIP in GPRS, EGPRS, WCDMA, CDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
2. EUT will choose each GSM, WCDMA, CDMA and LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
3. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
4. This device 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
5. EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment though they have independent antenna.
6. According to the EUT character, WLAN 5GHz and Bluetooth can transmit simultaneously.
7. According to the EUT character, WLAN 2.4GHz Ant3 and Bluetooth Ant4 can transmit simultaneously.
8. According to the EUT character, WLAN 2.4GHz Ant4 or WLAN 2.4GHz Ant3+4 and Bluetooth Ant4 cannot transmit simultaneously.
9. According to the EUT character, WLAN 2.4GHz Ant4 and WLAN 5GHz Ant3 can transmit simultaneously.
10. According to the EUT character, WLAN 2.4GHz Ant3 and WLAN 5GHz Ant4 can transmit simultaneously.
11. According to the EUT character, WLAN 2.4GHz Ant3 and WLAN 5GHz Ant3/Ant3+4 cannot transmit simultaneously.
12. According to the EUT character, WLAN 2.4GHz Ant4 and WLAN 5GHz Ant4/Ant3+4 cannot transmit simultaneously.
13. For simultaneously analysis, since the SAR summation of 3 transmitters can cover others combination of 2 transmitters, therefore in this section did not additional to evaluate 2TX combination of simultaneously transmission.
14. For simultaneously analysis, since the SAR summation of 4 transmitters can cover others combination of 3 transmitters, therefore in this section did not additional to evaluate 3TX combination of simultaneously transmission.
15. Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
16. The reported SAR summation is calculated based on the same configuration and test position.
17. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    i) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
    ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
    iii) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.
    iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
    v) The SPLSR calculated results please refer to section 17.7.
    vi) If SPLSR > 0.04, volume scan measurement is required, volume scan measured SAR please refer to 17.8.

17.1 5G NR + LTE + WLAN + BT Sim-Tx analysis

In 5G NR + LTE + WLAN + BT simultaneous transmission, 5G NR and LTE transmission are managed and controlled by Qualcomm® Smart Transmit, while the RF exposure from WLAN and BT radios is managed using legacy approach, i.e., through a fixed power back-off if needed.

Since WLAN and BT do not employ time-averaging, 1gSAR and 10gSAR measurement for WLAN and BT need to be conducted at their corresponding rated power following current FCC test procedures to determine reported SAR values.

Smart Transmit current implementation assumes hotspots from 5G NR and LTE are collocated. Therefore, for a total of 100% exposure margin, if LTE uses x%, then the exposure margin left for 5G NR is capped to (100-x)%. Thus, the compliance equation for LTE + 5G NR is

$$x\% * A + (100-x)\% * B \leq 1.0,$$

Where, A is normalized reported time-averaged SAR exposure ratio from LTE, and A ≤ 1.0; B is normalized reported time-averaged exposure ratio from 5G NR (i.e., PD exposure for 5G FR2 or SAR exposure for 5G FR1), and B ≤1.0.

Let C = normalized reported SAR exposure ratio from WLAN+BT, then for compliance,

$$x\% * A + (100-x)\% * B + C \leq 1.0 \qquad (1)$$

$$x\% * A + (100-x)\% * B \leq x\% * \max(A, B) + (100-x)\% * \max(A, B) \leq \max(A, B)$$

$$x\% * A + (100-x)\% * B + C \leq \max(A, B) + C \leq 1.0 \qquad (2)$$

if A + C ≤ 1.0 and B + C ≤ 1.0 can be proven, then “x% * A + (100-x)% * B + C ≤ 1.0”. Therefore simultaneous transmission analysis for 5G NR + LTE + WLAN + BT can be performed in two steps

Step 1: Prove total exposure ratio (TER) of LTE + WLAN + BT < 1
Step 2: Prove total exposure ratio (TER) of 5G NR + WLAN + BT < 1

17.2 SPLSR and Volume SAR description

1. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
   vii) 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
   viii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of [(x1-x2)2 + (y1-y2)2 + (z1-z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
   ix) If SPLSR ≤ 0.04 for 1g SAR and SPLSR≤ 0.10 for 10g SAR , simultaneously transmission SAR measurement is not necessary.
   x) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
   xi) The SPLSR calculated results please refer to section 17.7.
   xii) If SPLSR > 0.04, volume scan measurement is required, volume scan measured SAR please refer to 17.8.
2. Section 17.7 SPLSR results are complied with SPLSR ≤ 0.04 for 1g SAR.
3. Section 17.8 Volume SAR test results are complied 1g SAR <1.6W/kg and 10g SAR<4.0W/kg.
4. Volume scan procedure followed with KDB865664D01,the detail volume SAR plots can refter to Appendix B.
5. The following table shading with light green corlor means the co-locate SAR need to perform SPLSR analysis and can refer the case number for detail traced to section 17.7.
6. The following table shading with yellow corlor means the co-locate SAR need to perform Volume scan and can refer the case number for detail traced to section 17.8.

17.3 Head Exposure Conditions

<Flip open>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	1+3+5+8 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 4	5GHz WLAN Ant 3	5GHz WLAN Ant 3+4	Bluetooth Ant 4					
		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 1	Right Cheek	0.189	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.30	0.28	0.20	0.26	0.24
	Right Tilted	0.128	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.16	0.19	0.18	0.14	0.15
	Left Cheek	0.218	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.25	0.27	0.25	0.24	0.28
	Left Tilted	0.059	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.08	0.08	0.07	0.08	0.07
GSM1900_Ant 1	Right Cheek	0.169	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.28	0.26	0.18	0.24	0.22
	Right Tilted	0.113	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.14	0.18	0.16	0.12	0.13
	Left Cheek	0.117	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.14	0.17	0.14	0.14	0.18
	Left Tilted	0.058	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.08	0.08	0.07	0.08	0.07
WCDMA II_Ant 1	Right Cheek	0.216	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.33	0.31	0.23	0.29	0.27
	Right Tilted	0.137	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.17	0.20	0.19	0.15	0.16
	Left Cheek	0.297	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.32	0.35	0.32	0.32	0.36
	Left Tilted	0.215	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.24	0.24	0.22	0.24	0.23
WCDMA IV_Ant 1	Right Cheek	0.265	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.38	0.36	0.27	0.34	0.32
	Right Tilted	0.137	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.17	0.20	0.19	0.15	0.16
	Left Cheek	0.321	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.35	0.37	0.35	0.34	0.39
	Left Tilted	0.223	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.24	0.25	0.23	0.24	0.24
WCDMA V_Ant 1	Right Cheek	0.168	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.28	0.26	0.18	0.24	0.22
	Right Tilted	0.063	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.09	0.13	0.11	0.07	0.08
	Left Cheek	0.084	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.11	0.14	0.11	0.10	0.15
	Left Tilted	0.063	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.08	0.09	0.07	0.08	0.08
CDMA2000 BC0_Ant 1	Right Cheek	0.048	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.16	0.14	0.06	0.12	0.10
	Right Tilted	0.038	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.07	0.10	0.09	0.05	0.06
	Left Cheek	0.073	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.10	0.12	0.10	0.09	0.14
	Left Tilted	0.034	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.05	0.06	0.04	0.06	0.05
LTE Band 2_Ant 1	Right Cheek	0.266	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.38	0.36	0.28	0.34	0.32
	Right Tilted	0.123	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.15	0.19	0.17	0.13	0.14
	Left Cheek	0.381	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.41	0.43	0.41	0.40	0.45
	Left Tilted	0.195	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.22	0.22	0.20	0.22	0.21
LTE Band 2_Ant 2	Right Cheek	0.061	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.18	0.16	0.07	0.14	0.12
	Right Tilted	0.05	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.08	0.11	0.10	0.06	0.07
	Left Cheek	0.069	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.10	0.12	0.10	0.09	0.13
	Left Tilted	0.04	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.06	0.06	0.05	0.06	0.06
LTE Band 7_Ant 1	Right Cheek	0.084	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.20	0.18	0.09	0.16	0.14
	Right Tilted	0.123	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.15	0.19	0.17	0.13	0.14
	Left Cheek	0.223	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.25	0.27	0.25	0.24	0.29
	Left Tilted	0.068	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.09	0.09	0.08	0.09	0.08
LTE Band 7_Ant 2	Right Cheek	0.139	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.25	0.23	0.15	0.21	0.19
	Right Tilted	0.064	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.10	0.13	0.11	0.07	0.08
	Left Cheek	0.091	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.12	0.14	0.12	0.11	0.16
	Left Tilted	0.092	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.11	0.12	0.10	0.11	0.11
LTE Band 12_Ant 1	Right Cheek	0.076	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.19	0.17	0.09	0.15	0.13
	Right Tilted	0.043	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.07	0.11	0.09	0.05	0.06
	Left Cheek	0.096	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.12	0.15	0.12	0.11	0.16
	Left Tilted	0.046	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.07	0.07	0.05	0.07	0.06
LTE Band 12_Ant 2	Right Cheek	0.036	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.15	0.13	0.05	0.11	0.09
	Right Tilted	0.027	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.06	0.09	0.08	0.04	0.05
	Left Cheek	0.041	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.07	0.09	0.07	0.06	0.11
	Left Tilted	0.022	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.04	0.05	0.03	0.04	0.04

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 2.4GHz WLAN Ant 3+4 1g SAR (W/kg)	5 5GHz WLAN Ant 4 1g SAR (W/kg)	6 5GHz WLAN Ant 3 1g SAR (W/kg)	7 5GHz WLAN Ant 3+4 1g SAR (W/kg)	8 Bluetooth Ant 4 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	1+3+5+8 Summed 1g SAR (W/kg)
LTE Band 13_Ant 1	Right Cheek	0.144	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.26	0.24	0.15	0.22	0.20
	Right Tilted	0.03	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.06	0.09	0.08	0.04	0.05
	Left Cheek	0.057	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.08	0.11	0.08	0.08	0.12
	Left Tilted	0.03	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.05	0.05	0.04	0.05	0.05
LTE Band 13_Ant 2	Right Cheek	0.075	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.19	0.17	0.08	0.15	0.13
	Right Tilted	0.047	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.08	0.11	0.10	0.06	0.07
	Left Cheek	0.06	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.09	0.11	0.09	0.08	0.12
	Left Tilted	0.035	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.06	0.06	0.04	0.06	0.05
LTE Band 26_Ant 1	Right Cheek	0.164	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.28	0.26	0.17	0.24	0.22
	Right Tilted	0.075	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.11	0.14	0.12	0.09	0.09
	Left Cheek	0.124	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.15	0.18	0.15	0.14	0.19
	Left Tilted	0.068	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.09	0.09	0.08	0.09	0.08
LTE Band 26_Ant 2	Right Cheek	0.064	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.18	0.16	0.07	0.14	0.12
	Right Tilted	0.03	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.06	0.09	0.08	0.04	0.05
	Left Cheek	0.033	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.06	0.08	0.06	0.05	0.10
	Left Tilted	0.024	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.04	0.05	0.03	0.05	0.04
LTE Band 66_Ant 1	Right Cheek	0.173	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.29	0.27	0.18	0.25	0.23
	Right Tilted	0.124	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.16	0.19	0.17	0.13	0.14
	Left Cheek	0.177	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.20	0.23	0.20	0.20	0.24
	Left Tilted	0.109	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.13	0.13	0.12	0.13	0.12
LTE Band 66_Ant 2	Right Cheek	0.077	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.19	0.17	0.09	0.15	0.13
	Right Tilted	0.067	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.10	0.13	0.12	0.08	0.09
	Left Cheek	0.088	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.12	0.14	0.12	0.11	0.15
	Left Tilted	0.05	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.07	0.07	0.06	0.07	0.07
LTE Band 71_Ant 1	Right Cheek	0.068	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.18	0.16	0.08	0.14	0.12
	Right Tilted	0.035	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.07	0.10	0.08	0.05	0.05
	Left Cheek	0.071	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.10	0.12	0.10	0.09	0.14
	Left Tilted	0.038	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.06	0.06	0.05	0.06	0.05
LTE Band 71_Ant 2	Right Cheek	0.03	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.14	0.13	0.04	0.11	0.08
	Right Tilted	0.019	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.05	0.08	0.07	0.03	0.04
	Left Cheek	0.042	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.07	0.09	0.07	0.06	0.11
	Left Tilted	0.019	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.04	0.04	0.03	0.04	0.03
LTE Band 41_Ant 1	Right Cheek	0.052	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.17	0.15	0.06	0.13	0.11
	Right Tilted	0.068	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.10	0.13	0.12	0.08	0.09
	Left Cheek	0.098	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.13	0.15	0.13	0.12	0.16
	Left Tilted	0.037	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.06	0.06	0.04	0.06	0.05
LTE Band 41_Ant 2	Right Cheek	0.091	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.21	0.19	0.10	0.17	0.15
	Right Tilted	0.094	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.13	0.16	0.14	0.10	0.11
	Left Cheek	0.078	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.11	0.13	0.11	0.10	0.14
	Left Tilted	0.077	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.10	0.10	0.08	0.10	0.09

<Flip open---5G NR>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	1+3+5+8 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 4	5GHz WLAN Ant 3	5GHz WLAN Ant 3+4	Bluetooth Ant 4					
		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)					
FR1 n5_Ant 1	Right Cheek	0.059	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.02	0.08	0.01	0.01	0.13
	Right Tilted	0.035	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.06	0.02	0.01	0.01	0.03
	Left Cheek	0.024	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.07	0.06	0.04	0.04	0.08
	Left Tilted	0.024	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.01	0.03	0.01	0.01	0.03
FR1 n5_Ant 2	Right Cheek	0.028	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.02	0.08	0.01	0.01	0.13
	Right Tilted	0.014	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.06	0.02	0.01	0.01	0.03
	Left Cheek	0.022	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.07	0.06	0.04	0.04	0.08
	Left Tilted	0.014	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.01	0.03	0.01	0.01	0.03
FR1 n41	Right Cheek	0.273	0.087	0.008	0.114	0.045	0.008	0.074	0.001	0.02	0.08	0.01	0.01	0.13
	Right Tilted	0.137	0.014	0.007	0.031	0.011	0.048	0.009	0.001	0.06	0.02	0.01	0.01	0.03
	Left Cheek	0.138	0.026	0.042	0.027	0.02	0.025	0.016	0.002	0.07	0.06	0.04	0.04	0.08
	Left Tilted	0.159	0.017	0.005	0.02	0.009	0.006	0.02	0.001	0.01	0.03	0.01	0.01	0.03

17.4 Hotspot Exposure Conditions

<Flip open>

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 2.4GHz WLAN Ant 3+4 1g SAR (W/kg)	5 5GHz WLAN Ant 4 1g SAR (W/kg)	6 5GHz WLAN Ant 3 1g SAR (W/kg)	7 5GHz WLAN Ant 3+4 1g SAR (W/kg)	8 Bluetooth Ant 4 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	1+3+5+8 Summed 1g SAR (W/kg)
GSM850_Ant 1	Front	0.247	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.29	0.33	0.34	0.30	0.33
	Back	0.779	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.98	1.23	1.20	1.28	1.36
	Left side	0.11		0.091	0.129		0.029	0.057		0.24	0.14	0.14	0.17	0.20
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.253	0.003	0.039	0.098	0.033	0.063	0.079		0.35	0.32	0.32	0.33	0.33
GSM1900_Ant 1	Front	0.625	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.67	0.70	0.71	0.68	0.70
	Back	0.783	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.98	1.23	1.20	1.28	1.36
	Left side	0.552		0.091	0.129		0.029	0.057		0.68	0.58	0.58	0.61	0.64
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.931	0.003	0.039	0.098	0.033	0.063	0.079		1.03	1.00	0.99	1.01	1.00
WCDMA II_Ant 1	Front	0.522	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.57	0.60	0.61	0.58	0.60
	Back	0.806	0.189	0.146	0.201	0.28	0.262	0.342	0.154	1.01	1.26	1.22	1.30	1.39
	Left side	0.393		0.091	0.129		0.029	0.057		0.52	0.42	0.42	0.45	0.48
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.731	0.003	0.039	0.098	0.033	0.063	0.079		0.83	0.80	0.79	0.81	0.80
WCDMA IV_Ant 1	Front	0.813	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.86	0.89	0.90	0.87	0.89
	Back	0.826	0.189	0.146	0.201	0.28	0.262	0.342	0.154	1.03	1.28	1.24	1.32	1.41
	Left side	0.583		0.091	0.129		0.029	0.057		0.71	0.61	0.61	0.64	0.67
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.812	0.003	0.039	0.098	0.033	0.063	0.079		0.91	0.88	0.88	0.89	0.88
WCDMA V_Ant 1	Front	0.43	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.48	0.51	0.52	0.49	0.51
	Back	0.923	0.189	0.146	0.201	0.28	0.262	0.342	0.154	1.12	1.37	1.34	1.42	1.50
	Left side	0.241		0.091	0.129		0.029	0.057		0.37	0.27	0.27	0.30	0.33
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.528	0.003	0.039	0.098	0.033	0.063	0.079		0.63	0.59	0.59	0.61	0.60
CDMA2000 BC0_Ant 1	Front	0.442	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.49	0.52	0.53	0.50	0.52
	Back	0.89	0.189	0.146	0.201	0.28	0.262	0.342	0.154	1.09	1.34	1.31	1.39	1.47
	Left side	0.351		0.091	0.129		0.029	0.057		0.48	0.38	0.38	0.41	0.44
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.727	0.003	0.039	0.098	0.033	0.063	0.079		0.83	0.79	0.79	0.81	0.80
LTE Band 2_Ant 1	Front	0.614	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.66	0.69	0.70	0.67	0.69
	Back	0.548	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.75	1.00	0.96	1.04	1.13
	Left side	0.307		0.091	0.129		0.029	0.057		0.44	0.34	0.34	0.36	0.40
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.732	0.003	0.039	0.098	0.033	0.063	0.079		0.83	0.80	0.80	0.81	0.80
LTE Band 2_Ant 2	Front	0.735	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.78	0.81	0.82	0.79	0.81
	Back	0.46	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.66	0.91	0.88	0.96	1.04
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side	0.231	0.03		0.47	0.075		0.193	0.064	0.70	0.26	0.30	0.49	0.37
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.267	0.003	0.039	0.098	0.033	0.063	0.079		0.37	0.33	0.33	0.35	0.34

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 2.4GHz WLAN Ant 3+4 1g SAR (W/kg)	5 5GHz WLAN Ant 4 1g SAR (W/kg)	6 5GHz WLAN Ant 3 1g SAR (W/kg)	7 5GHz WLAN Ant 3+4 1g SAR (W/kg)	8 Bluetooth Ant 4 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	1+3+5+8 Summed 1g SAR (W/kg)
LTE Band 7_Ant 1	Front	0.642	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.69	0.72	0.73	0.70	0.72
	Back	0.556	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.76	1.01	0.97	1.05	1.14
	Left side	0.321		0.091	0.129		0.029	0.057		0.45	0.35	0.35	0.38	0.41
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.884	0.003	0.039	0.098	0.033	0.063	0.079		0.98	0.95	0.95	0.96	0.96
LTE Band 7_Ant 2	Front	0.515	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.56	0.59	0.60	0.57	0.59
	Back	0.575	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.78	1.03	0.99	1.07	1.16
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side	0.434	0.03		0.47	0.075		0.193	0.064	0.90	0.46	0.50	0.69	0.57
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.877	0.003	0.039	0.098	0.033	0.063	0.079		0.98	0.94	0.94	0.96	0.95
LTE Band 12_Ant 1	Front	0.234	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.28	0.31	0.32	0.29	0.31
	Back	0.41	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.61	0.86	0.83	0.91	0.99
	Left side	0.144		0.091	0.129		0.029	0.057		0.27	0.17	0.17	0.20	0.24
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.33	0.003	0.039	0.098	0.033	0.063	0.079		0.43	0.40	0.39	0.41	0.40
LTE Band 12_Ant 2	Front	0.124	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.17	0.20	0.21	0.18	0.20
	Back	0.14	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.34	0.59	0.56	0.64	0.72
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side	0.085	0.03		0.47	0.075		0.193	0.064	0.56	0.12	0.15	0.34	0.22
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.255	0.003	0.039	0.098	0.033	0.063	0.079		0.35	0.32	0.32	0.33	0.33
LTE Band 13_Ant 1	Front	0.304	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.35	0.38	0.39	0.36	0.38
	Back	0.579	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.78	1.03	1.00	1.08	1.16
	Left side	0.167		0.091	0.129		0.029	0.057		0.30	0.20	0.20	0.22	0.26
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.416	0.003	0.039	0.098	0.033	0.063	0.079		0.51	0.48	0.48	0.50	0.49
LTE Band 13_Ant 2	Front	0.362	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.41	0.44	0.45	0.42	0.44
	Back	0.362	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.56	0.81	0.78	0.86	0.94
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side	0.142	0.03		0.47	0.075		0.193	0.064	0.61	0.17	0.21	0.40	0.28
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.491	0.003	0.039	0.098	0.033	0.063	0.079		0.59	0.56	0.55	0.57	0.56
LTE Band 26_Ant 1	Front	0.378	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.43	0.46	0.47	0.43	0.46
	Back	0.692	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.89	1.14	1.11	1.19	1.27
	Left side	0.16		0.091	0.129		0.029	0.057		0.29	0.19	0.19	0.22	0.25
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.42	0.003	0.039	0.098	0.033	0.063	0.079		0.52	0.49	0.48	0.50	0.49
LTE Band 26_Ant 2	Front	0.37	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.42	0.45	0.46	0.43	0.45
	Back	0.359	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.56	0.81	0.78	0.86	0.94
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side	0.176	0.03		0.47	0.075		0.193	0.064	0.65	0.21	0.24	0.43	0.32
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.55	0.003	0.039	0.098	0.033	0.063	0.079		0.65	0.62	0.61	0.63	0.62

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 2.4GHz WLAN Ant 3+4 1g SAR (W/kg)	5 5GHz WLAN Ant 4 1g SAR (W/kg)	6 5GHz WLAN Ant 3 1g SAR (W/kg)	7 5GHz WLAN Ant 3+4 1g SAR (W/kg)	8 Bluetooth Ant 4 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	1+3+5+8 Summed 1g SAR (W/kg)
LTE Band 66_Ant 1	Front	0.473	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.52	0.55	0.56	0.53	0.55
	Back	0.673	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.87	1.12	1.09	1.17	1.25
	Left side	0.293		0.091	0.129		0.029	0.057		0.42	0.32	0.32	0.35	0.38
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.845	0.003	0.039	0.098	0.033	0.063	0.079		0.94	0.91	0.91	0.92	0.92
LTE Band 66_Ant 2	Front	0.501	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.55	0.58	0.59	0.56	0.58
	Back	0.527	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.73	0.98	0.94	1.02	1.11
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side	0.282	0.03		0.47	0.075		0.193	0.064	0.75	0.31	0.35	0.54	0.42
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.321	0.003	0.039	0.098	0.033	0.063	0.079		0.42	0.39	0.38	0.40	0.39
LTE Band 71_Ant 1	Front	0.197	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.24	0.28	0.29	0.25	0.28
	Back	0.28	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.48	0.73	0.70	0.78	0.86
	Left side	0.171		0.091	0.129		0.029	0.057		0.30	0.20	0.20	0.23	0.26
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.356	0.003	0.039	0.098	0.033	0.063	0.079		0.45	0.42	0.42	0.44	0.43
LTE Band 71_Ant 2	Front	0.074	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.12	0.15	0.16	0.13	0.15
	Back	0.107	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.31	0.56	0.52	0.60	0.69
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.122	0.003	0.039	0.098	0.033	0.063	0.079		0.22	0.19	0.19	0.20	0.19
LTE Band 41_Ant 1	Front	0.249	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.30	0.33	0.34	0.31	0.33
	Back	0.345	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.55	0.80	0.76	0.84	0.93
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side		0.03		0.47	0.075		0.193	0.064	0.47	0.03	0.06	0.26	0.14
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.81	0.003	0.039	0.098	0.033	0.063	0.079		0.91	0.88	0.87	0.89	0.88
LTE Band 41_Ant 2	Front	0.55	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.60	0.63	0.64	0.61	0.63
	Back	0.381	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.58	0.83	0.80	0.88	0.96
	Left side			0.091	0.129		0.029	0.057		0.13	0.03	0.03	0.06	0.09
	Right side	0.203	0.03		0.47	0.075		0.193	0.064	0.67	0.23	0.27	0.46	0.34
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.931	0.003	0.039	0.098	0.033	0.063	0.079		1.03	1.00	0.99	1.01	1.00

<Flip Open---5G NR>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	1+3+5+8 Summed 1g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 4	5GHz WLAN Ant 3	5GHz WLAN Ant 3+4	Bluetooth Ant 4					
		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)					
FR1 n5_Ant 1	Front	0.401	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.08	0.08	0.05	0.02	0.08
	Back	0.578	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.41	0.64	0.30	0.15	0.77
	Left side	0.243		0.091	0.129		0.029	0.057		0.12	0.15	0.09	0.09	0.15
	Right side		0.03		0.47	0.075		0.193	0.064	0.00	0.26	0.06	0.00	0.27
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.684	0.003	0.039	0.098	0.033	0.063	0.079		0.10	0.12	0.04	0.04	0.15
FR1 n5_Ant 2	Front	0.265	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.08	0.08	0.05	0.02	0.08
	Back	0.472	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.41	0.64	0.30	0.15	0.77
	Left side			0.091	0.129		0.029	0.057		0.12	0.15	0.09	0.09	0.15
	Right side		0.03		0.47	0.075		0.193	0.064	0.00	0.26	0.06	0.00	0.27
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.48	0.003	0.039	0.098	0.033	0.063	0.079		0.10	0.12	0.04	0.04	0.15
FR1 n41	Front	0.183	0.016	0.021	0.047	0.032	0.062	0.03	0.026	0.08	0.08	0.05	0.02	0.08
	Back	0.19	0.189	0.146	0.201	0.28	0.262	0.342	0.154	0.41	0.64	0.30	0.15	0.77
	Left side			0.091	0.129		0.029	0.057		0.12	0.15	0.09	0.09	0.15
	Right side		0.03		0.47	0.075		0.193	0.064	0.00	0.26	0.06	0.00	0.27
	Top side									0.00	0.00	0.00	0.00	0.00
	Bottom side	0.855	0.003	0.039	0.098	0.033	0.063	0.079		0.10	0.12	0.04	0.04	0.15

<Flip Close>

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 2.4GHz WLAN Ant 3+4 1g SAR (W/kg)	5 5GHz WLAN Ant 4 1g SAR (W/kg)	6 5GHz WLAN Ant 3 1g SAR (W/kg)	7 5GHz WLAN Ant 3+4 1g SAR (W/kg)	8 Bluetooth Ant 4 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	Case No	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	Case No	1+3+5+8 Summed 1g SAR (W/kg)	Case No
GSM850_Ant 1	Front	0.176	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.21	0.24		0.26	0.28		0.26	
	Back	0.749	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.23	1.51		1.37	**1.63**	**#01**	**1.90**	**#02**
	Left side	0.185		0.072	0.124		0.02	0.075		0.31	0.21		0.21	0.26		0.26	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.268	0.002	0.036	0.093	0.033	0.079	0.067		0.36	0.35		0.35	0.34		0.34	
GSM1900_Ant 1	Front	0.513	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.54	0.58		0.59	0.61		0.60	
	Back	0.903	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.38	**1.66**	**#03**	1.52	**1.78**	**#04**	**2.05**	**#05**
	Left side	0.595		0.072	0.124		0.02	0.075		0.72	0.62		0.62	0.67		0.67	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.622	0.002	0.036	0.093	0.033	0.079	0.067		0.72	0.70		0.70	0.69		0.69	
WCDMA II_Ant 1	Front	0.918	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.95	0.98		1.00	1.02		1.01	
	Back	0.93	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.41	**1.69**	**#06**	1.55	**1.81**	**#07**	**2.08**	**#08**
	Left side	0.89		0.072	0.124		0.02	0.075		1.01	0.91		0.91	0.97		0.96	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.927	0.002	0.036	0.093	0.033	0.079	0.067		1.02	1.01		1.01	0.99		1.00	
WCDMA IV_Ant 1	Front	0.676	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.71	0.74		0.76	0.78		0.76	
	Back	0.804	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.29	1.56		1.42	**1.68**	**#09**	**1.96**	**#10**
	Left side	0.414		0.072	0.124		0.02	0.075		0.54	0.43		0.43	0.49		0.49	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.826	0.002	0.036	0.093	0.033	0.079	0.067		0.92	0.91		0.91	0.89		0.90	
WCDMA V_Ant 1	Front	0.488	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.52	0.55		0.57	0.59		0.58	
	Back	0.804	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.29	1.56		1.42	**1.68**	**#11**	**1.96**	**#12**
	Left side	0.389		0.072	0.124		0.02	0.075		0.51	0.41		0.41	0.46		0.46	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.516	0.002	0.036	0.093	0.033	0.079	0.067		0.61	0.60		0.60	0.58		0.59	
CDMA2000 BC0_Ant 1	Front	0.303	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.33	0.37		0.38	0.40		0.39	
	Back	0.805	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.29	1.57		1.42	**1.68**	**#13**	**1.96**	**#14**
	Left side	0.17		0.072	0.124		0.02	0.075		0.29	0.19		0.19	0.25		0.24	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.374	0.002	0.036	0.093	0.033	0.079	0.067		0.47	0.46		0.45	0.44		0.44	
LTE Band 2_Ant 1	Front	0.773	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.80	0.84		0.85	0.87		0.86	
	Back	0.798	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.28	1.56		1.42	**1.68**	**#15**	**1.95**	**#16**
	Left side	0.752		0.072	0.124		0.02	0.075		0.88	0.77		0.77	0.83		0.82	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.778	0.002	0.036	0.093	0.033	0.079	0.067		0.87	0.86		0.86	0.85		0.85	
LTE Band 2_Ant 2	Front	0.65	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.68	0.72		0.73	0.75		0.74	
	Back	0.47	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.95	1.23		1.09	1.35		**1.62**	**#17**
	Left side	0.094		0.072	0.124		0.02	0.075		0.22	0.11		0.11	0.17		0.17	
	Right side	0.292	0.021		0.377	0.064	0.031	0.206	0.076	0.67	0.34		0.40	0.57		0.43	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.274	0.002	0.036	0.093	0.033	0.079	0.067		0.37	0.36		0.35	0.34		0.34	

WWAN Band	Exposure Position	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN Ant 4 1g SAR (W/kg)	3 2.4GHz WLAN Ant 3 1g SAR (W/kg)	4 2.4GHz WLAN Ant 3+4 1g SAR (W/kg)	5 5GHz WLAN Ant 4 1g SAR (W/kg)	6 5GHz WLAN Ant 3 1g SAR (W/kg)	7 5GHz WLAN Ant 3+4 1g SAR (W/kg)	8 Bluetooth Ant 4 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	Case No	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	Case No	1+3+5+8 Summed 1g SAR (W/kg)	Case No
LTE Band 7_Ant 1	Front	0.268	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.30	0.33		0.35	0.37		0.36	
	Back	0.817	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.30	1.58		1.44	**1.69**	**#18**	**1.97**	**#19**
	Left side	0.36		0.072	0.124		0.02	0.075		0.48	0.38		0.38	0.44		0.43	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.887	0.002	0.036	0.093	0.033	0.079	0.067		0.98	0.97		0.97	0.95		0.96	
LTE Band 7_Ant 2	Front	0.341	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.37	0.41		0.42	0.44		0.43	
	Back	0.703	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.18	1.46		1.32	**1.58**		**1.85**	**#20**
	Left side			0.072	0.124		0.02	0.075		0.12	0.02		0.02	0.08		0.07	
	Right side	0.68	0.021		0.377	0.064	0.031	0.206	0.076	1.06	0.73		0.79	0.96		0.82	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.929	0.002	0.036	0.093	0.033	0.079	0.067		1.02	1.01		1.01	1.00		1.00	
LTE Band 12_Ant 1	Front	0.21	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.24	0.28		0.29	0.31		0.30	
	Back	0.517	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.00	1.28		1.14	1.39		**1.67**	**#21**
	Left side	0.225		0.072	0.124		0.02	0.075		0.35	0.25		0.25	0.30		0.30	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.358	0.002	0.036	0.093	0.033	0.079	0.067		0.45	0.44		0.44	0.43		0.43	
LTE Band 12_Ant 2	Front	0.127	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.16	0.19		0.21	0.23		0.21	
	Back	0.281	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.76	1.04		0.90	1.16		1.43	
	Left side			0.072	0.124		0.02	0.075		0.12	0.02		0.02	0.08		0.07	
	Right side	0.11	0.021		0.377	0.064	0.031	0.206	0.076	0.49	0.16		0.22	0.39		0.25	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.288	0.002	0.036	0.093	0.033	0.079	0.067		0.38	0.37		0.37	0.36		0.36	
LTE Band 13_Ant 1	Front	0.304	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.33	0.37		0.39	0.41		0.39	
	Back	0.721	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.20	1.48		1.34	**1.60**	**#22**	**1.87**	**#23**
	Left side	0.281		0.072	0.124		0.02	0.075		0.41	0.30		0.30	0.36		0.35	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.535	0.002	0.036	0.093	0.033	0.079	0.067		0.63	0.62		0.61	0.60		0.60	
LTE Band 13_Ant 2	Front	0.297	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.33	0.36		0.38	0.40		0.38	
	Back	0.771	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.25	1.53		1.39	**1.65**	**#24**	**1.92**	**#25**
	Left side			0.072	0.124		0.02	0.075		0.12	0.02		0.02	0.08		0.07	
	Right side	0.251	0.021		0.377	0.064	0.031	0.206	0.076	0.63	0.30		0.36	0.53		0.39	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.591	0.002	0.036	0.093	0.033	0.079	0.067		0.68	0.67		0.67	0.66		0.66	
LTE Band 26_Ant 1	Front	0.37	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.40	0.44		0.45	0.47		0.46	
	Back	0.868	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.35	**1.63**	**#26**	1.49	**1.75**	**#27**	**2.02**	**#28**
	Left side	0.325		0.072	0.124		0.02	0.075		0.45	0.35		0.35	0.40		0.40	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05		0.11	0.28		0.14	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.479	0.002	0.036	0.093	0.033	0.079	0.067		0.57	0.56		0.56	0.55		0.55	
LTE Band 26_Ant 2	Front	0.283	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.31	0.35		0.36	0.38		0.37	
	Back	0.76	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.24	1.52		1.38	**1.64**	**#29**	**1.91**	**#30**
	Left side			0.072	0.124		0.02	0.075		0.12	0.02		0.02	0.08		0.07	
	Right side	0.236	0.021		0.377	0.064	0.031	0.206	0.076	0.61	0.29		0.34	0.52		0.38	
	Top side									0.00	0.00		0.00	0.00		0.00	
	Bottom side	0.472	0.002	0.036	0.093	0.033	0.079	0.067		0.57	0.55		0.55	0.54		0.54	

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	1+3+5+8 Summed 1g SAR (W/kg)	Case No
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 4	5GHz WLAN Ant 3	5GHz WLAN Ant 3+4	Bluetooth Ant 4						
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)						
LTE Band 66_Ant 1	Front	0.292	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.32	0.36	0.37	0.39	0.38	
	Back	0.525	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.01	1.29	1.14	1.40	**1.68**	**#31**
	Left side	0.373		0.072	0.124		0.02	0.075		0.50	0.39	0.39	0.45	0.45	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05	0.11	0.28	0.14	
	Top side									0.00	0.00	0.00	0.00	0.00	
	Bottom side	0.662	0.002	0.036	0.093	0.033	0.079	0.067		0.76	0.74	0.74	0.73	0.73	
LTE Band 66_Ant 2	Front	0.44	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.47	0.51	0.52	0.54	0.53	
	Back	0.612	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.09	1.37	1.23	1.49	**1.76**	**#32**
	Left side			0.072	0.124		0.02	0.075		0.12	0.02	0.02	0.08	0.07	
	Right side	0.294	0.021		0.377	0.064	0.031	0.206	0.076	0.67	0.35	0.40	0.58	0.43	
	Top side									0.00	0.00	0.00	0.00	0.00	
	Bottom side	0.421	0.002	0.036	0.093	0.033	0.079	0.067		0.51	0.50	0.50	0.49	0.49	
LTE Band 71_Ant 1	Front	0.117	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.15	0.18	0.20	0.22	0.20	
	Back	0.323	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.80	1.08	0.94	1.20	1.47	
	Left side	0.126		0.072	0.124		0.02	0.075		0.25	0.15	0.15	0.20	0.20	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05	0.11	0.28	0.14	
	Top side									0.00	0.00	0.00	0.00	0.00	
	Bottom side	0.563	0.002	0.036	0.093	0.033	0.079	0.067		0.66	0.64	0.64	0.63	0.63	
LTE Band 71_Ant 2	Front	0.074	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.10	0.14	0.16	0.18	0.16	
	Back	0.15	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.63	0.91	0.77	1.03	1.30	
	Left side			0.072	0.124		0.02	0.075		0.12	0.02	0.02	0.08	0.07	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05	0.11	0.28	0.14	
	Top side									0.00	0.00	0.00	0.00	0.00	
	Bottom side	0.232	0.002	0.036	0.093	0.033	0.079	0.067		0.33	0.31	0.31	0.30	0.30	
LTE Band 41_Ant 1	Front	0.378	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.41	0.44	0.46	0.48	0.47	
	Back	0.389	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.87	1.15	1.01	1.27	1.54	
	Left side	0.08		0.072	0.124		0.02	0.075		0.20	0.10	0.10	0.16	0.15	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05	0.11	0.28	0.14	
	Top side									0.00	0.00	0.00	0.00	0.00	
	Bottom side	0.916	0.002	0.036	0.093	0.033	0.079	0.067		1.01	1.00	1.00	0.98	0.99	
LTE Band 41_Ant 2	Front	0.269	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.30	0.33	0.35	0.37	0.36	
	Back	0.305	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.79	1.07	0.92	1.18	1.46	
	Left side			0.072	0.124		0.02	0.075		0.12	0.02	0.02	0.08	0.07	
	Right side	0.455	0.021		0.377	0.064	0.031	0.206	0.076	0.83	0.51	0.56	0.74	0.60	
	Top side									0.00	0.00	0.00	0.00	0.00	
	Bottom side	0.927	0.002	0.036	0.093	0.033	0.079	0.067		1.02	1.01	1.01	0.99	1.00	

<Flip Close---5G NR>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	Case No	1+3+5+8 Summed 1g SAR (W/kg)	Case No
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 4	5GHz WLAN Ant 3	5GHz WLAN Ant 3+4	Bluetooth Ant 4							
		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)							
FR1 n5_Ant 1	Front	0.317	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.35	0.38	0.40	0.42		0.40	
	Back	0.794	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.28	1.55	1.41	**1.67**	**#33**	**1.95**	**#34**
	Left side	0.333		0.072	0.124		0.02	0.075		0.46	0.35	0.35	0.41		0.41	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05	0.11	0.28		0.14	
	Top side									0.00	0.00	0.00	0.00		0.00	
	Bottom side	0.692	0.002	0.036	0.093	0.033	0.079	0.067		0.79	0.77	0.77	0.76		0.76	
FR1 n5_Ant 2	Front	0.253	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.28	0.32	0.33	0.35		0.34	
	Back	0.291	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.77	1.05	0.91	1.17		1.44	
	Left side			0.072	0.124		0.02	0.075		0.12	0.02	0.02	0.08		0.07	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05	0.11	0.28		0.14	
	Top side									0.00	0.00	0.00	0.00		0.00	
	Bottom side	0.291	0.002	0.036	0.093	0.033	0.079	0.067		0.38	0.37	0.37	0.36		0.36	
FR1 n41	Front	0.201	0.021	0.016	0.029	0.034	0.044	0.064	0.037	0.23	0.27	0.28	0.30		0.29	
	Back	0.339	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.82	1.10	0.96	1.22		1.49	
	Left side			0.072	0.124		0.02	0.075		0.12	0.02	0.02	0.08		0.07	
	Right side		0.021		0.377	0.064	0.031	0.206	0.076	0.38	0.05	0.11	0.28		0.14	
	Top side									0.00	0.00	0.00	0.00		0.00	
	Bottom side	0.835	0.002	0.036	0.093	0.033	0.079	0.067		0.93	0.92	0.91	0.90		0.90	

17.5 Body-Worn Accessory Exposure Conditions

<Flip Close>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	Case No	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	Case No	1+3+5+8 Summed 1g SAR (W/kg)	Case No
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 4	5GHz WLAN Ant 3	5GHz WLAN Ant 3+4	Bluetooth Ant 4								
		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 1	Front at 5mm	0.176	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.21	0.30		0.31	0.29		0.27	
	Back at 5mm	0.749	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.23	1.51		1.37	**1.63**	**#01**	**1.90**	**#02**
	Front at 19mm	0.063	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.09	0.19		0.20	0.18		0.16	
	Back at 15mm	0.134	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.47	1.00		0.97	0.93		0.84	
GSM1900_Ant 1	Front at 5mm	0.513	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.54	0.64		0.65	0.63		0.61	
	Back at 5mm	0.903	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.38	**1.66**	**#03**	1.52	**1.78**	**#04**	**2.05**	**#05**
	Front at 19mm	0.076	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.11	0.20		0.21	0.19		0.17	
	Back at 15mm	0.088	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.42	0.96		0.93	0.89		0.79	
WCDMA II_Ant 1	Front at 5mm	0.918	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.95	1.04		1.06	1.03		1.01	
	Back at 5mm	0.93	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.41	**1.69**	**#06**	1.55	**1.81**	**#07**	**2.08**	**#08**
	Front at 19mm	0.086	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.12	0.21		0.22	0.20		0.18	
	Back at 15mm	0.111	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.45	0.98		0.95	0.91		0.82	
WCDMA IV_Ant 1	Front at 5mm	0.676	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.71	0.80		0.81	0.79		0.77	
	Back at 5mm	0.804	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.29	1.56		1.42	**1.68**	**#09**	**1.96**	**#10**
	Front at 19mm	0.069	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.10	0.19		0.21	0.18		0.17	
	Back at 15mm	0.105	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.44	0.97		0.94	0.90		0.81	
WCDMA V_Ant 1	Front at 5mm	0.488	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.52	0.61		0.63	0.60		0.58	
	Back at 5mm	0.804	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.29	1.56		1.42	**1.68**	**#11**	**1.96**	**#12**
	Front at 19mm	0.086	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.12	0.21		0.22	0.20		0.18	
	Back at 15mm	0.113	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.45	0.98		0.95	0.91		0.82	
CDMA2000 BC0_Ant 1	Front at 5mm	0.823	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.85	0.95		0.96	0.94		0.92	
	Back at 5mm	0.833	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.31	**1.59**		1.45	**1.71**	**#35**	**1.98**	**#36**
	Front at 19mm	0.07	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.10	0.19		0.21	0.18		0.17	
	Back at 15mm	0.082	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.42	0.95		0.92	0.88		0.79	
LTE Band 2_Ant 1	Front at 5mm	0.773	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.80	0.90		0.91	0.89		0.87	
	Back at 5mm	0.798	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.28	1.56		1.42	**1.68**	**#15**	**1.95**	**#16**
	Front at 19mm	0.103	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.13	0.23		0.24	0.22		0.20	
	Back at 15mm	0.09	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.43	0.96		0.93	0.89		0.80	
LTE Band 2_Ant 2	Front at 5mm	0.65	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.68	0.77		0.79	0.76		0.75	
	Back at 5mm	0.47	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.95	1.23		1.09	1.35		**1.62**	**#17**
	Front at 19mm		0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.03	0.12		0.14	0.11		0.10	
	Back at 15mm		0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.34	0.87		0.84	0.80		0.71	
LTE Band 7_Ant 1	Front at 5mm	0.268	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.30	0.39		0.41	0.38		0.36	
	Back at 5mm	0.817	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.30	1.58		1.44	**1.69**	**#18**	**1.97**	**#19**
	Front at 19mm	0.063	0.021	0.016	0.029	0.367	0.101	0.075	0.037	0.09	0.19		0.20	0.18		0.48	
	Back at 15mm	0.181	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.52	1.05		1.02	0.98		0.89	
LTE Band 7_Ant 2	Front at 5mm	0.341	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.37	0.46		0.48	0.45		0.44	
	Back at 5mm	0.703	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.18	1.46		1.32	1.58		**1.85**	**#20**
	Front at 19mm	0.111	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.14	0.23		0.25	0.22		0.21	
	Back at 15mm	0.305	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.64	1.17		1.14	1.10		1.01	
LTE Band 12_Ant 1	Front at 5mm	0.21	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.24	0.33		0.35	0.32		0.31	
	Back at 5mm	0.517	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.00	1.28		1.14	1.39		**1.67**	**#21**
LTE Band 12_Ant 2	Front at 5mm	0.127	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.16	0.25		0.27	0.24		0.22	
	Back at 5mm	0.281	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.76	1.04		0.90	1.16		1.43	
LTE Band 13_Ant 1	Front at 5mm	0.304	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.33	0.43		0.44	0.42		0.40	
	Back at 5mm	0.721	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.20	1.48		1.34	**1.60**	**#22**	**1.87**	**#23**
LTE Band 13_Ant 2	Front at 5mm	0.297	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.33	0.42		0.44	0.41		0.39	
	Back at 5mm	0.771	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.25	1.53		1.39	**1.65**	**#24**	**1.92**	**#25**

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	Case No	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	Case No	1+3+5+8 Summed 1g SAR (W/kg)	Case No
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 4	5GHz WLAN Ant 3	5GHz WLAN Ant 3+4	Bluetooth Ant 4								
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)								
LTE Band 26_Ant 1	Front at 5mm	0.37	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.40	0.49		0.51	0.48		0.47	
	Back at 5mm	0.868	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.35	**1.63**	**#26**	1.49	**1.75**	**#27**	**2.02**	**#28**
LTE Band 26_Ant 2	Front at 5mm	0.283	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.31	0.41		0.42	0.40		0.38	
	Back at 5mm	0.76	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.24	1.52		1.38	**1.64**	**#29**	**1.91**	**#30**
LTE Band 66_Ant 1	Front at 5mm	0.292	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.32	0.41		0.43	0.40		0.39	
	Back at 5mm	0.525	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.01	1.29		1.14	1.40		**1.68**	**#31**
	Front at 19mm	0.074	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.10	0.20		0.21	0.19		0.17	
	Back at 15mm	0.089	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.43	0.96		0.93	0.89		0.79	
LTE Band 66_Ant 2	Front at 5mm	0.44	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.47	0.56		0.58	0.55		0.54	
	Back at 5mm	0.612	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.09	1.37		1.23	1.49		**1.76**	**#32**
LTE Band 71_Ant 1	Front at 5mm	0.117	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.15	0.24		0.26	0.23		0.21	
	Back at 5mm	0.323	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.80	1.08		0.94	1.20		1.47	
LTE Band 71_Ant 2	Front at 5mm	0.074	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.10	0.20		0.21	0.19		0.17	
	Back at 5mm	0.15	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.63	0.91		0.77	1.03		1.30	
LTE Band 41_Ant 1	Front at 5mm	0.378	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.41	0.50		0.52	0.49		0.47	
	Back at 5mm	0.389	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.87	1.15		1.01	1.27		1.54	
	Front at 19mm	0.089	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.12	0.21		0.23	0.20		0.19	
	Back at 15mm	0.3	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.64	1.17		1.14	1.10		1.01	
LTE Band 41_Ant 2	Front at 5mm	0.269	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.30	0.39		0.41	0.38		0.37	
	Back at 5mm	0.305	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.79	1.07		0.92	1.18		1.46	
	Front at 19mm	0.061	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.09	0.18		0.20	0.17		0.16	
	Back at 15mm	0.149	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.49	1.02		0.99	0.95		0.85	

<Flip Close---5G NR>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+4 Summed 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+6+8 Summed 1g SAR (W/kg)	1+7+8 Summed 1g SAR (W/kg)	Case No	1+3+5+8 Summed 1g SAR (W/kg)	Case No
		WWAN	2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 4	5GHz WLAN Ant 3	5GHz WLAN Ant 3+4	Bluetooth Ant 4							
		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)							
FR1 n5_Ant 1	Front at 5mm	0.317	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.35	0.44	0.46	0.43		0.41	
	Back at 5mm	0.794	0.296	0.351	0.481	0.645	0.464	0.722	0.155	1.28	1.55	1.41	**1.67**	**#33**	**1.95**	**#34**
FR1 n5_Ant 2	Front at 5mm	0.253	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.28	0.38	0.39	0.37		0.35	
	Back at 5mm	0.291	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.77	1.05	0.91	1.17		1.44	
FR1 n41	Front at 5mm	0.201	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.23	0.32	0.34	0.31		0.30	
	Back at 5mm	0.339	0.296	0.351	0.481	0.645	0.464	0.722	0.155	0.82	1.10	0.96	1.22		1.49	
	Front at 19mm	0.04	0.021	0.016	0.029	0.043	0.101	0.075	0.037	0.07	0.16	0.18	0.15		0.14	
	Back at 15mm	0.103	0.185	0.183	0.336	0.367	0.683	0.643	0.155	0.44	0.97	0.94	0.90		0.81	

WWAN Band	Exposure Position	1	2	3	4	1+4 Summed 1g SAR (W/kg)	Case No	2+3 Summed 1g SAR (W/kg)	Case No
		2.4GHz WLAN Ant 4	2.4GHz WLAN Ant 3	5GHz WLAN Ant 4	5GHz WLAN Ant 3				
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)				
DBS	Front	0.061	0.077	0.081	0.096	0.16		0.16	
	Back	0.914	0.746	0.982	1.133	**2.05**	**#40**	**1.73**	**#41**

17.6 Product specific 10g SAR Exposure Conditions

WWAN Band	Exposure Position	1 WWAN 10g SAR (W/kg)	2 2.4GHz WLAN Ant 3+4 10g SAR (W/kg)	3 5GHz WLAN Ant 4 10g SAR (W/kg)	4 5GHz WLAN Ant 3 10g SAR (W/kg)	5 5GHz WLAN Ant 3+4 10g SAR (W/kg)	1+2 Summed 10g SAR (W/kg)	Case No	1+3 Summed 10g SAR (W/kg)	Case No	1+4 Summed 10g SAR (W/kg)	Case No	1+5 Summed 10g SAR (W/kg)	Case No
WCDMA II_Ant 1	Front			0.069	0.08	0.102	0.00		0.07		0.08		0.10	
	Back	1.469	1.579	1.851	1.839	1.971	3.05		3.32		3.31		3.44	
	Left side				0.179	0.08	0.00		0.00		0.18		0.08	
	Right side			1.448		0.535	0.00		1.45		0.00		0.54	
	Top side						0.00		0.00		0.00		0.00	
	Bottom side	1.057		0.06	0.1	0.041	1.06		1.12		1.16		1.10	
WCDMA IV_Ant 1	Front	1.604		0.069	0.08	0.102	1.60		1.67		1.68		1.71	
	Back	1.641	1.579	1.851	1.839	1.971	3.22		3.49		3.48		3.61	
	Left side				0.179	0.08	0.00		0.00		0.18		0.08	
	Right side			1.448		0.535	0.00		1.45		0.00		0.54	
	Top side						0.00		0.00		0.00		0.00	
	Bottom side	1.068		0.06	0.1	0.041	1.07		1.13		1.17		1.11	
LTE Band 2_Ant 1	Front			0.069	0.08	0.102	0.00		0.07		0.08		0.10	
	Back	2.103	1.579	1.851	1.839	1.971	**3.68**		**3.95**		3.94		**4.07**	**#42**
	Left side	1.83			0.179	0.08	1.83		1.83		2.01		1.91	
	Right side			1.448		0.535	0.00		1.45		0.00		0.54	
	Top side						0.00		0.00		0.00		0.00	
	Bottom side	1.391		0.06	0.1	0.041	1.39		1.45		1.49		1.43	
LTE Band 7_Ant 1	Front	0.833		0.069	0.08	0.102	0.83		0.90		0.91		0.94	
	Back	0.686	1.579	1.851	1.839	1.971	2.27		2.54		2.53		2.66	
	Left side				0.179	0.08	0.00		0.00		0.18		0.08	
	Right side			1.448		0.535	0.00		1.45		0.00		0.54	
	Top side						0.00		0.00		0.00		0.00	
	Bottom side	1.152		0.06	0.1	0.041	1.19		1.25		1.29		1.23	
LTE Band 7_Ant 2	Front			0.069	0.08	0.102	0.00		0.07		0.08		0.10	
	Back		1.579	1.851	1.839	1.971	1.58		1.85		1.84		1.97	
	Left side				0.179	0.08	0.00		0.00		0.18		0.08	
	Right side			1.448		0.535	0.00		1.45		0.00		0.54	
	Top side						0.00		0.00		0.00		0.00	
	Bottom side	1.404		0.06	0.1	0.041	1.40		1.46		1.50		1.45	
LTE Band 66_Ant 1	Front			0.069	0.08	0.102	0.00		0.07		0.08		0.10	
	Back	2.472	1.579	1.851	1.839	1.971	**4.05**	**#43**	**4.32**	**#45**	**4.31**	**#44**	**4.44**	**#46**
	Left side				0.179	0.08	0.00		0.00		0.18		0.08	
	Right side			1.448		0.535	0.00		1.45		0.00		0.54	
	Top side						0.00		0.00		0.00		0.00	
	Bottom side	1.424		0.06	0.1	0.041	1.42		1.48		1.52		1.47	
LTE Band 41_Ant 1	Front			0.069	0.08	0.102	0.00		0.07		0.08		0.10	
	Back	1.371	1.579	1.851	1.839	1.971	2.95		3.22		3.21		3.34	
	Left side				0.179	0.08	0.00		0.00		0.18		0.08	
	Right side			1.448		0.535	0.00		1.45		0.00		0.54	
	Top side						0.00		0.00		0.00		0.00	
	Bottom side	1.688		0.06	0.1	0.041	1.69		1.75		1.79		1.73	
LTE Band 41_Ant 2	Front			0.069	0.08	0.102	0.00		0.07		0.08		0.10	
	Back		1.579	1.851	1.839	1.971	1.58		1.85		1.84		1.97	
	Left side				0.179	0.08	0.00		0.00		0.18		0.08	
	Right side			1.448		0.535	0.00		1.45		0.00		0.54	
	Top side						0.00		0.00		0.00		0.00	
	Bottom side	1.777		0.06	0.1	0.041	1.78		1.84		1.88		1.82	

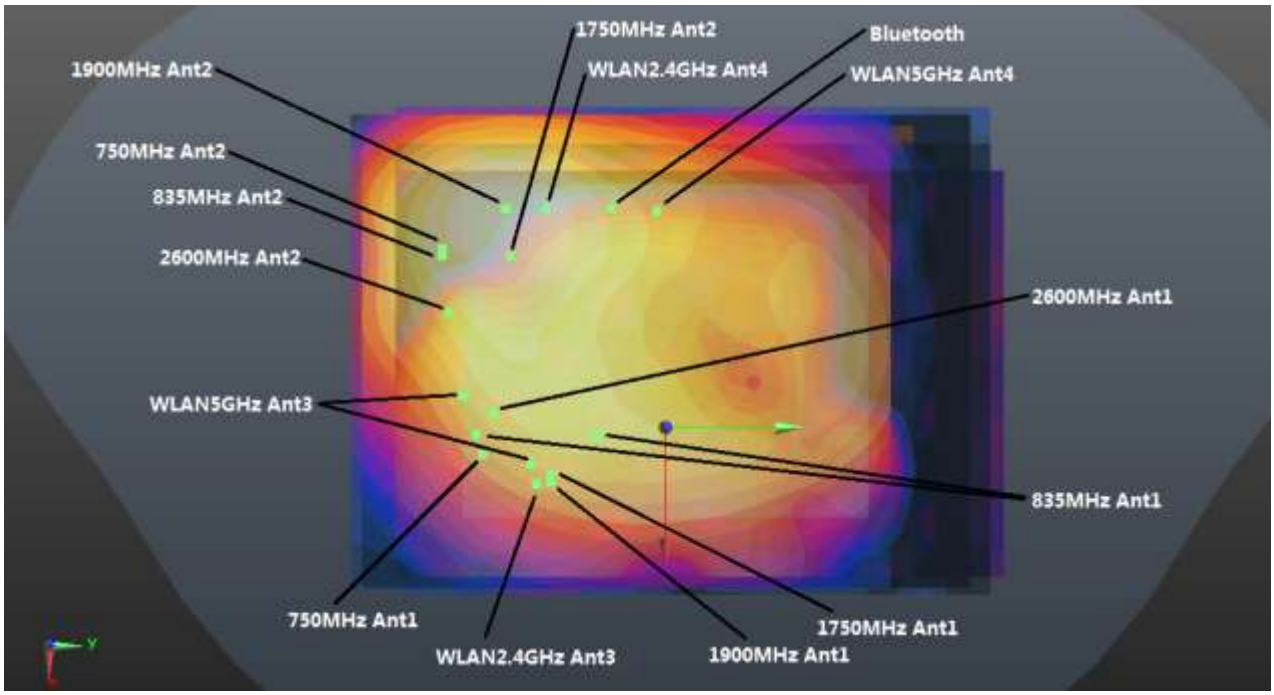
<5G NR>

WWAN Band	Exposure Position	1	2	3	4	5	1+2 Summed 10g SAR (W/kg)	1+3 Summed 10g SAR (W/kg)	1+4 Summed 10g SAR (W/kg)	1+5 Summed 10g SAR (W/kg)
		WWAN	2.4GHz WLAN Ant 3+4	5GHz WLAN Ant 3	5GHz WLAN Ant 4	5GHz WLAN Ant 3+4				
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)				
FR1 n41	Front			0.069	0.08	0.102	0.00	0.07	0.08	0.10
	Back	1.539	1.579	1.851	1.839	1.971	3.12	3.39	3.38	3.51
	Left side				0.179	0.08	0.00	0.00	0.18	0.08
	Right side			1.448		0.535	0.00	1.45	0.00	0.54
	Top side						0.00	0.00	0.00	0.00
	Bottom side			0.06	0.1	0.041	0.00	0.06	0.10	0.04

17.7 SPLSR Evaluation and Analysis

General Note:

1. When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of [(x1−x2)2 + (y1−y2)2 + (z1−z2)2], where (x1, y1, z1) and (x2, y2, z2) are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
2. SPLSR = (SAR1 + SAR2)1.5 / (min. separation distance, mm). If SPLSR ≤ 0.04 for 1g SAR, simultaneously transmission SAR measurement is not necessary.



<Flip Close> Back for WWAN+WLAN+BT_5mm

<Flip Close>

Hotspot/Body-worn

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 17	LTE Band 2_Ant 2	Back	0.47	5mm	-34.7	-35.5	-3.12	61.0	0.82	0.01	Not required
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64				
	LTE Band 2_Ant 2	Back	0.47	5mm	-34.7	-35.5	-3.12	30.8	1.12	0.04	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	LTE Band 2_Ant 2	Back	0.47	5mm	-34.7	-35.5	-3.12	22.1	0.63	0.02	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
Case 20	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 7_Ant 2	Back	0.703	5mm	-6.4	-45	-2.82	35.3	1.05	0.03	Not required
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64				
	LTE Band 7_Ant 2	Back	0.703	5mm	-6.4	-45	-2.82	48.9	1.35	0.03	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	LTE Band 7_Ant 2	Back	0.703	5mm	-6.4	-45	-2.82	38.1	0.86	0.02	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
Case 24	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13_Ant 2	Back	0.771	5mm	-24.2	-49.5	-2.1	49.2	1.49	0.04	Not required
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53				
	LTE Band 13_Ant 2	Back	0.771	5mm	-24.2	-49.5	-2.1	35.6	0.93	0.03	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
Case 25	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 13_Ant 2	Back	0.771	5mm	-24.2	-49.5	-2.1	53.4	1.12	0.02	Not required
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64				
	LTE Band 13_Ant 2	Back	0.771	5mm	-24.2	-49.5	-2.1	45.7	1.42	0.04	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	LTE Band 13_Ant 2	Back	0.771	5mm	-24.2	-49.5	-2.1	35.6	0.93	0.03	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
Case 29	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 26_Ant 2	Back	0.76	5mm	-25.8	-49.5	-2.05	50.6	1.48	0.04	Not required
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53				
	LTE Band 26_Ant 2	Back	0.76	5mm	-25.8	-49.5	-2.05	35.4	0.92	0.02	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 30	LTE Band 26_Ant 2	Back	0.76	5mm	-25.8	-49.5	-2.05	54.9	1.11	0.02	Not required
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64				
	LTE Band 26_Ant 2	Back	0.76	5mm	-25.8	-49.5	-2.05	45.4	1.41	0.04	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	LTE Band 26_Ant 2	Back	0.76	5mm	-25.8	-49.5	-2.05	35.4	0.92	0.02	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
Case 32	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 66_Ant 2	Back	0.612	5mm	-27.4	-36.1	-2.81	53.8	0.96	0.02	Not required
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64				
	LTE Band 66_Ant 2	Back	0.612	5mm	-27.4	-36.1	-2.81	32.1	1.26	0.04	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	LTE Band 66_Ant 2	Back	0.612	5mm	-27.4	-36.1	-2.81	22.0	0.77	0.03	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02	Not required
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35				
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01	Not required
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97				

DBS

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 41	WLAN2.4GHz_Ant 3	Back	0.746	5mm	26	-31.6	1.64	63.1	1.73	0.04	Not required
	WLAN5GHz_Ant 4		0.982	5mm	-31	-5.2	-4.21				

17.8 Volume Scan Result

General Note:

1. During multi-band SAR combination, the SAR scaling factors were input into the SEMCAD X software to account for tune-up tolerance.

<Flip Close--5mm>

Hotspot/Body-worn

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
Case 01	GSM850_Ant 1	Back	0.749	5mm	30.4	-36	2.19	11.3	1.47	0.16	Required	1.36
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	GSM850_Ant 1	Back	0.749	5mm	30.4	-36	2.19	63.2	0.90	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 02	GSM850_Ant 1	Back	0.749	5mm	30.4	-36	2.19	6.2	1.10	0.18	Required	1.04
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	GSM850_Ant 1	Back	0.749	5mm	30.4	-36	2.19	71.7	1.39	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	GSM850_Ant 1	Back	0.749	5mm	30.4	-36	2.19	63.2	0.90	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 03	GSM1900_Ant 1	Back	0.903	5mm	24.3	-36.2	1.92	6.7	1.37	0.24	Required	1.49
	WLAN5GHz_Ant 3		0.464	5mm	21.8	-30	1.52					
	GSM1900_Ant 1	Back	0.903	5mm	24.3	-36.2	1.92	65.9	1.20	0.02		
	WLAN2.4GHz_Ant 4		0.296	5mm	-38.2	-15.4	1.46					
	WLAN5GHz_Ant 3	Back	0.464	5mm	21.8	-30	1.52	61.8	0.76	0.01		
	WLAN2.4GHz_Ant 4		0.296	5mm	-38.2	-15.4	1.46					
Case 04	GSM1900_Ant 1	Back	0.903	5mm	24.3	-36.2	1.92	7.1	1.63	0.29	Required	1.53
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	GSM1900_Ant 1	Back	0.903	5mm	24.3	-36.2	1.92	57.6	1.06	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 05	GSM1900_Ant 1	Back	0.903	5mm	24.3	-36.2	1.92	4.9	1.25	0.29	Required	1.31
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	GSM1900_Ant 1	Back	0.903	5mm	24.3	-36.2	1.92	66.3	1.55	0.03		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	GSM1900_Ant 1	Back	0.903	5mm	24.3	-36.2	1.92	57.6	1.06	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
Case 06	WCDMA II_Ant 1	Back	0.93	5mm	25.8	-33.3	1.83	5.2	1.39	0.32	Required	1.11
	WLAN5GHz_Ant 3		0.464	5mm	21.8	-30	1.52					
	WCDMA II_Ant 1	Back	0.93	5mm	25.8	-33.3	1.83	66.5	1.23	0.02		
	WLAN2.4GHz_Ant 4		0.296	5mm	-38.2	-15.4	1.46					
	WLAN5GHz_Ant 3	Back	0.464	5mm	21.8	-30	1.52	61.8	0.76	0.01		
	WLAN2.4GHz_Ant 4		0.296	5mm	-38.2	-15.4	1.46					
Case 07	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	WCDMA II_Ant 1	Back	0.93	5mm	25.8	-33.3	1.83	6.0	1.65	0.35	Required	1.09
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	WCDMA II_Ant 1	Back	0.93	5mm	25.8	-33.3	1.83	58.0	1.09	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 08	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	WCDMA II_Ant 1	Back	0.93	5mm	25.8	-33.3	1.83	1.7	1.28	0.84	Required	1.13
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	WCDMA II_Ant 1	Back	0.93	5mm	25.8	-33.3	1.83	66.3	1.58	0.03		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WCDMA II_Ant 1	Back	0.93	5mm	25.8	-33.3	1.83	58.0	1.09	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 09	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	WCDMA IV_Ant 1	Back	0.804	5mm	22.7	-30.2	-2.4	4.4	1.53	0.43	Required	1.18
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	WCDMA IV_Ant 1	Back	0.804	5mm	22.7	-30.2	-2.4	53.9	0.96	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 10	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	WCDMA IV_Ant 1	Back	0.804	5mm	22.7	-30.2	-2.4	5.4	1.16	0.23	Required	1.08
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	WCDMA IV_Ant 1	Back	0.804	5mm	22.7	-30.2	-2.4	62.3	1.45	0.03		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WCDMA IV_Ant 1	Back	0.804	5mm	22.7	-30.2	-2.4	53.9	0.96	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 11	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	WCDMA V_Ant 1	Back	0.804	5mm	25.5	-40.4	-2.62	12.1	1.53	0.16	Required	0.861
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	WCDMA V_Ant 1	Back	0.804	5mm	25.5	-40.4	-2.62	60.3	0.96	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
Case 12	WCDMA V_Ant 1	Back	0.804	5mm	25.5	-40.4	-2.62	9.8	1.16	0.13	Required	0.981
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	WCDMA V_Ant 1	Back	0.804	5mm	25.5	-40.4	-2.62	69.5	1.45	0.03		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WCDMA V_Ant 1	Back	0.804	5mm	25.5	-40.4	-2.62	60.3	0.96	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 13	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	CDMA2000 BC0_Ant 1	Back	0.805	5mm	-22.4	-4	-4.31	50.8	1.53	0.04	Required	1.33
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	CDMA2000 BC0_Ant 1	Back	0.805	5mm	-22.4	-4	-4.31	12.3	0.96	0.08		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 14	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	CDMA2000 BC0_Ant 1	Back	0.805	5mm	-22.4	-4	-4.31	56.0	1.16	0.02	Required	1.27
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	CDMA2000 BC0_Ant 1	Back	0.805	5mm	-22.4	-4	-4.31	13.1	1.45	0.13		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	CDMA2000 BC0_Ant 1	Back	0.805	5mm	-22.4	-4	-4.31	12.3	0.96	0.08		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 15	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	LTE Band 2_Ant 1	Back	0.798	5mm	27.3	-26.8	-2.86	8.5	1.52	0.22	Required	0.899
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	LTE Band 2_Ant 1	Back	0.798	5mm	27.3	-26.8	-2.86	57.5	0.95	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 16	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	LTE Band 2_Ant 1	Back	0.798	5mm	27.3	-26.8	-2.86	6.7	1.15	0.18	Required	0.805
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	LTE Band 2_Ant 1	Back	0.798	5mm	27.3	-26.8	-2.86	65.4	1.44	0.03		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	LTE Band 2_Ant 1	Back	0.798	5mm	27.3	-26.8	-2.86	57.5	0.95	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
Case 18	LTE Band 7_Ant 1	Back	0.817	5mm	20.2	-48.8	1.89	18.8	1.54	0.10	Required	0.869
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	LTE Band 7_Ant 1	Back	0.817	5mm	20.2	-48.8	1.89	60.1	0.97	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 19	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	LTE Band 7_Ant 1	Back	0.817	5mm	20.2	-48.8	1.89	18.2	1.17	0.07	Required	0.922
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	LTE Band 7_Ant 1	Back	0.817	5mm	20.2	-48.8	1.89	69.8	1.46	0.03		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	LTE Band 7_Ant 1	Back	0.817	5mm	20.2	-48.8	1.89	60.1	0.97	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 21	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	LTE Band 12_Ant 1	Back	0.517	5mm	22.1	-42.1	-2.02	11.8	0.87	0.07	Required	0.942
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	LTE Band 12_Ant 1	Back	0.517	5mm	22.1	-42.1	-2.02	67.5	1.16	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	LTE Band 12_Ant 1	Back	0.517	5mm	22.1	-42.1	-2.02	58.0	0.67	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 22	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Simultaneous SAR
	LTE Band 13_Ant 1	Back	0.721	5mm	28.4	-37.4	-2.02	11.2	1.44	0.15	Required	0.79
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	LTE Band 13_Ant 1	Back	0.721	5mm	28.4	-37.4	-2.02	61.7	0.88	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 23	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	LTE Band 13_Ant 1	Back	0.721	5mm	28.4	-37.4	-2.02	7.3	1.07	0.15	Required	0.922
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	LTE Band 13_Ant 1	Back	0.721	5mm	28.4	-37.4	-2.02	70.6	1.37	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	LTE Band 13_Ant 1	Back	0.721	5mm	28.4	-37.4	-2.02	61.7	0.88	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
Case 26	LTE Band 26_Ant 1	Back	0.868	5mm	25.2	-40.6	-2.01	11.7	1.33	0.13	Required	1.07
	WLAN5GHz_Ant 3		0.464	5mm	21.8	-30	1.52					
	LTE Band 26_Ant 1	Back	0.868	5mm	25.2	-40.6	-2.01	68.3	1.16	0.02		
	WLAN2.4GHz_Ant 4		0.296	5mm	-38.2	-15.4	1.46					
	WLAN5GHz_Ant 3	Back	0.464	5mm	21.8	-30	1.52	61.8	0.76	0.01		
	WLAN2.4GHz_Ant 4		0.296	5mm	-38.2	-15.4	1.46					
Case 27	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	LTE Band 26_Ant 1	Back	0.868	5mm	25.2	-40.6	-2.01	12.0	1.59	0.17	Required	0.997
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	LTE Band 26_Ant 1	Back	0.868	5mm	25.2	-40.6	-2.01	60.1	1.02	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 28	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	LTE Band 26_Ant 1	Back	0.868	5mm	25.2	-40.6	-2.01	9.7	1.22	0.14	Required	1.07
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	LTE Band 26_Ant 1	Back	0.868	5mm	25.2	-40.6	-2.01	69.3	1.51	0.03		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	LTE Band 26_Ant 1	Back	0.868	5mm	25.2	-40.6	-2.01	60.1	1.02	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 31	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	LTE Band 66_Ant 1	Back	0.525	5mm	28.8	-33.3	1.97	3.3	0.88	0.25	Required	0.682
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	LTE Band 66_Ant 1	Back	0.525	5mm	28.8	-33.3	1.97	69.1	1.17	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	LTE Band 66_Ant 1	Back	0.525	5mm	28.8	-33.3	1.97	60.8	0.68	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 33	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
	FR1 N5_Ant 1	Back	0.794	5mm	28.9	-47.5	1.98	19.3	1.52	0.10	Required	1.29
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	FR1 N5_Ant 1	Back	0.794	5mm	28.9	-47.5	1.98	66.7	0.95	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
Case 34	FR1 N5_Ant 1	Back	0.794	5mm	28.9	-47.5	1.98	16.2	1.15	0.08	Required	1.23
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	FR1 N5_Ant 1	Back	0.794	5mm	28.9	-47.5	1.98	76.1	1.44	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	FR1 N5_Ant 1	Back	0.794	5mm	28.9	-47.5	1.98	66.7	0.95	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					

Body-worn

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
Case 35	CDMA2000 BC0	Back	0.833	5mm	25.7	-25.5	-2.45	7.8	1.56	0.25	Required	1.57
	WLAN5GHz_Ant 3+4		0.722	5mm	20.8	-30	1.53					
	CDMA2000 BC0	Back	0.833	5mm	25.7	-25.5	-2.45	55.7	0.99	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN5GHz_Ant 3+4	Back	0.722	5mm	20.8	-30	1.53	52.2	0.88	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
Case 36	CDMA2000 BC0	Back	0.833	5mm	25.7	-25.5	-2.45	7.4	1.18	0.18	Required	1.52
	WLAN2.4GHz_Ant 3		0.351	5mm	26	-31.6	1.64					
	CDMA2000 BC0	Back	0.833	5mm	25.7	-25.5	-2.45	63.4	1.48	0.03		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	CDMA2000 BC0	Back	0.833	5mm	25.7	-25.5	-2.45	55.7	0.99	0.02		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	65.8	1.00	0.02		
	WLAN5GHz_Ant 4		0.645	5mm	-34.2	-5	1.35					
	WLAN2.4GHz_Ant 3	Back	0.351	5mm	26	-31.6	1.64	57.6	0.51	0.01		
	Bluetooth_Ant4		0.155	5mm	-28.8	-14.2	-1.97					

DBS

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Simultaneous SAR
Case 40	WLAN2.4GHz_Ant 4	Back	0.914	5mm	-31.4	-15.8	-4.62	12.7	2.05	0.23	Required	1.59
	WLAN5GHz_Ant 3		1.133	5mm	-27.8	-28	-3.97					

<Flip open--0mm>

	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR	Multi Band SAR
Case 42	LTE Band 2_Ant 1	Back	2.103	0mm	28.8	-69	-1.69	8.9	4.07	0.92	**Required**	2.52
	WLAN5GHz_Ant 3+4		1.971	0mm	21.8	-73.2	1.97					
Case 43	LTE Band 66_Ant 1	Back	2.472	0mm	27.3	-70.3	-1.65	63.1	4.05	0.13	**Required**	3.16
	WLAN2.4GHz_Ant 3+4		1.579	0mm	-33.6	-53.8	-3.71					
Case 44	LTE Band 66_Ant 1	Back	2.472	0mm	27.3	-70.3	-1.65	63.3	4.31	0.14	**Required**	2.71
	WLAN5GHz_Ant 3		1.839	0mm	-29.8	-43	-3.77					
Case 45	LTE Band 66_Ant 1	Back	2.472	0mm	27.3	-70.3	-1.65	6.6	4.32	1.36	**Required**	2.59
	WLAN5GHz_Ant 4		1.851	0mm	22.6	-73.2	1.96					
Case 46	LTE Band 66_Ant 1	Back	2.472	0mm	27.3	-70.3	-1.65	7.2	4.44	1.30	**Required**	3.12
	WLAN5GHz_Ant 3+4		1.971	0mm	21.8	-73.2	1.97					

18. Supplemental Tuner Tests Results

General Note:

1. 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. The additional tuner hardware has no influence to the antenna characteristics, other than impedance matching.
2. To evaluate all of the tuner states, the 144 tuner states are divided evenly among 2G/3G/4G all bands, mode and exposure combinations so that at least one single point SAR measurement is measured in each configuration. Single point time-sweep measurements will be performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state will be established remotely so that the device is not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe will remain stationary at the same position throughout the entire series of single point measurements for each combination.
3. This device supports LTE B4 / B5 / B17 / B38 and B66 / B26 / B12 / B41. Since the supported frequency span for LTE B4 / B5 / B17/ B38 falls completely within the supports frequency span for LTE B66 / B26 / B12 / B41, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, chose LTE B66 / B26 / B12 / B41 for dynamic antenna analysis.
4. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

18.1 Supplemental Tuner Head & Body SAR Results

Please refer to Appendix F.

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19. Uncertainty Assessment

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

20. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[6] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.

[7] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[8] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[9] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[10] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015

[11] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[12] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[13] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[14] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

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