

FCC SAR Test Report

APPLICANT : Xiaomi Communications Co., Ltd.
EQUIPMENT : Mobile Phone
BRAND NAME : POCO
MODEL NAME : 22041216UG
FCC ID : 2AFZZ1216U
STANDARD : FCC 47 CFR Part 2 (2.1093)

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has 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 Inc. (Kunshan), the test report shall not be reproduced except in full.



Approved by: Si Zhang



Sporton International Inc. (Kunshan)

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Report No. : FA231203

Revision History

[illegible]

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Xiaomi Communications Co., Ltd., Mobile Phone, 22041216UG**, are as follows.

Highest 1g SAR Summary						
Equipment Class	Frequency Band		Head (Separation 0mm)	Hotspot (Separation 10mm)	Body-worn (Separation 15mm)	Highest Simultaneous Transmission
			1g SAR (W/kg)			1g SAR (W/kg)
Licensed	GSM	GSM850	0.79	0.40	0.26	1.59
		GSM1900	0.71	0.55	0.31	
	WCDMA	Band II	0.79	1.04	0.62	
		Band IV	0.88	0.76	0.65	
		Band V	0.65	0.36	0.29	
	LTE	Band 2	0.75	0.78	0.54	
		Band 4	1.09	0.70	0.72	
		Band 5	0.76	0.35	0.33	
		Band 7	0.90	0.56	0.64	
		Band 38	0.90	0.56	0.54	
		Band 41	0.98	0.67	0.43	
	5G NR	n5	0.95	0.35	0.33	
		n7	0.84	0.57	0.55	
		n38	1.09	0.69	0.61	
		n41	0.83	0.66	0.94	
		n77	0.58	0.36	0.44	
		n78	0.73	0.43	0.47	
DTS	WLAN	2.4GHz WLAN	1.02	0.35	0.14	1.58
NII		5GHz WLAN	0.88	1.04	0.44	1.59
DSS	Bluetooth	2.4GHz Bluetooth	0.36	0.14	<0.10	1.59

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	2.41	3.99
		Band IV	2.05	
	LTE	Band 2	2.26	
		Band 4	2.22	
		Band 7	1.79	
	5G NR	n7	1.85	
		n38	2.05	
		n41	2.17	
		n77	2.00	
		n78	1.98	
NII	WLAN	5GHz WLAN	1.70	3.99
Date of Testing:			2022/3/26 ~ 2022/4/6	

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

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
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.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR03-KS	CN1257	314309

Applicant	
Company Name	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

Manufacturer	
Company Name	Xiaomi Communications Co., Ltd.
Address	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

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 Phone
Brand Name	POCO
Model Name	22041216UG
FCC ID	2AFZZ1216U
IMEI Code	SIM1: 867032060040651 SIM2: 867032060040669
Wireless Technology and Frequency Range	GSM850: 824 MHz ~ 849 MHz GSM1900: 1850 MHz ~ 1910 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 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) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR : CP-OFDM / DFT-s-OFDM, $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM WLAN 2.4GHz 802.11b/g/n HT20 WLAN 2.4GHz 802.11ax HE20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac/ax VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80 Bluetooth BR/EDR/LE NFC:ASK
HW Version	P2
SW Version	MIUI13
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. 802.11n-HT40 is not supported in 2.4GHz WLAN. 2. This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation. 3. This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications. 4. 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).	

5. This device does not support DTM operation and supports GPRS/EGPRS mode up to multi-slot class 33.
6. 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.
7. There are two samples. The sample 1 is memory for Micron of 8G+128GB capacity; the sample 2 is memory for Samsung or Hynix of 8G+256GB capacity. According to the differences, we choose sample 1 to perform full test.
8. 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). The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E. power table. Full power table and reduced power table (DSI 0: receiver on reduced power for head; DSI 4: hotspot on power; DSI 1: P-sensor on for Body-worn/extremity; DSI 3: receiver off/P-sensor off).
9. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head, hotspot.
10. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
11. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
12. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
13. 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 DFT-s-OFDM to perform SAR testing.
14. 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.
15. 5G NR n78 supports HPUE, HPUE power and SAR testing performed separately.
16. 5G NR n78 HPUE with higher power, n78 HPUE SAR can represent power class 3 level SAR.
17. For 5G NR EN-DC mode, standalone SAR performed for 5G NR band with the maximum power, EN-DC SAR summed 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
18. For 5G NR FDD/TDD supports SCS15KHz and SCS30KHz, chose higher power which is SCS30KHz to perform SAR testing.
19. This device supports 5G NR FR1 bands as following table, including NSA mode and SA mode.

<5G NR>

Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n5	FDD	15	5, 10, 15, 20
			30	10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40, 50
			30	10, 15, 20, 25, 30, 40, 50
	n78	TDD	15	10, 15, 20, 25, 30, 40, 50
			30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
SA	n5	FDD	15	5, 10, 15, 20
			30	10, 15, 20
	n7	FDD	15	5, 10, 15, 20, 25, 30, 40, 50
			30	10, 15, 20, 25, 30, 40, 50
	n38	TDD	15	5, 10, 15, 20, 25, 30, 40
			30	10, 15, 20, 25, 30, 40
	n41	TDD	15	10, 15, 20, 30, 40, 50
			30	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100
	n77	TDD	15	10, 15, 20, 25, 30, 40, 50
			30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100
	n78	TDD	15	10, 15, 20, 25, 30, 40, 50
			30	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100

4.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05								
FCC ID	2AFZZ1216U							
Equipment Name	Mobile Phone							
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 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 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz							
uplink modulations used	QPSK / 16QAM / 64QAM /256QAM							
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})						MPR (dB)
		1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
	256 QAM	≥ 1						≤ 5
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)							
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.							
Power reduction applied to satisfy SAR compliance	Yes, when operating in Proximity sensors/receiver detect mechanism/hotspot; head/body-worn/ hotspot/extremity will trigger reduced power for some bands applied to satisfy SAR compliance, the detail please referred to section 13.							
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power verification please referred to section 13.							
LTE Carrier Aggregation Additional Information	1. This device supports LTE Carrier Aggregation (CA) in the uplink for intra-band and inter-band with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per FCC Guidance. 2. This device supports maximum of 3 carriers in the downlink and 2 carriers in the uplink.							

Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829	20450	829	20450	829
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5
H	20643	848.3	20635	847.5	20625	846.5	20600	844	20600	844	20600	844
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 20 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510	20850	2510	20850	2510
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560	21350	2560	21350	2560
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 20 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580	37850	2580	37850	2580
M	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595	38000	2595
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610	38150	2610	38150	2610
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 20 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506	39750	2506	39750	2506
LM	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5	40185	2549.5	40185	2549.5
M	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593	40620	2593
HM	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5	41055	2636.5	41055	2636.5
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680	41490	2680	41490	2680

4.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
Operating Frequency Range of each 5G NR transmission band	5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz
Channel Bandwidth	SCS15KHz: 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz 5G NR n38: 5MHz, 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz 5G NR n78: 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz SCS30KHz: 5G NR n5: 10MHz, 15MHz, 20MHz 5G NR n7: 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz 5G NR n38: 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n78: 10MHz, 15MHz, 20MHz, 25MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz
SCS	FDD/TDD: SCS15KHz/SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n5	LTE B7
LTE Anchor Bands for n7	LTE B5/7
LTE Anchor Bands for n78	LTE B2/5/7/38/41

NR Band 5 SCS15KHz								
	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 5 SCS30KHz						
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5
H	168800	844	168300	841.5	167800	839

NR Band 7 SCS15KHz																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520	505000	2525
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550	509000	2545
NR Band 7 SCS30KHz																
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520	505000	2525		
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535		
H	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550	509000	2545		



NR Band 38 SCS15KHz														
	Bandwidth5MHz		Bandwidth10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	514500	2572.5	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595
H	523500	2617.5	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98
NR Band 38 SCS30KHz														
	Bandwidth10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02		
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595		
H	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98		

NR Band 41 SCS15KHz												
	Bandwidth10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	528000	2640

NR Band 41 SCS30KHz																						
Bandwidth10MHz			Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640

<3700 MHz ~ 3980 MHz>

NR Band 77 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.5	664334	3965.01	664000	3960	663666	3954.99

NR Band 77 SCS30KHz																								
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 50MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz		
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	648334	3725.01	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664834	3972.51	664668	3970.02	664500	3967.5	664334	3965.01	664000	3960	663668	3955.02	663334	3950.01	663666	3954.99	662668	3940.02	662334	3935.01	662000	3930

NR Band 78 SCS15KHz														
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720		
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652334	3797.5	652334	3785.01	652000	3780		

NR Band 78 SCS30KHz																								
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02		
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750
H	653000	3795	652834	3792.51	652668	3790.02	652334	3797.5	652334	3785.01	652000	3780	651668	3775.02	651334	3770.01	651000	3765	650668	3760.02	650334	3755.01		



<3450 MHz ~ 3550 MHz>

NR Band 77 SCS15KHz													
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L 630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01		
M 633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H 636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01		

NR Band 77 SCS30KHz																							
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L 630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M 633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H 636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

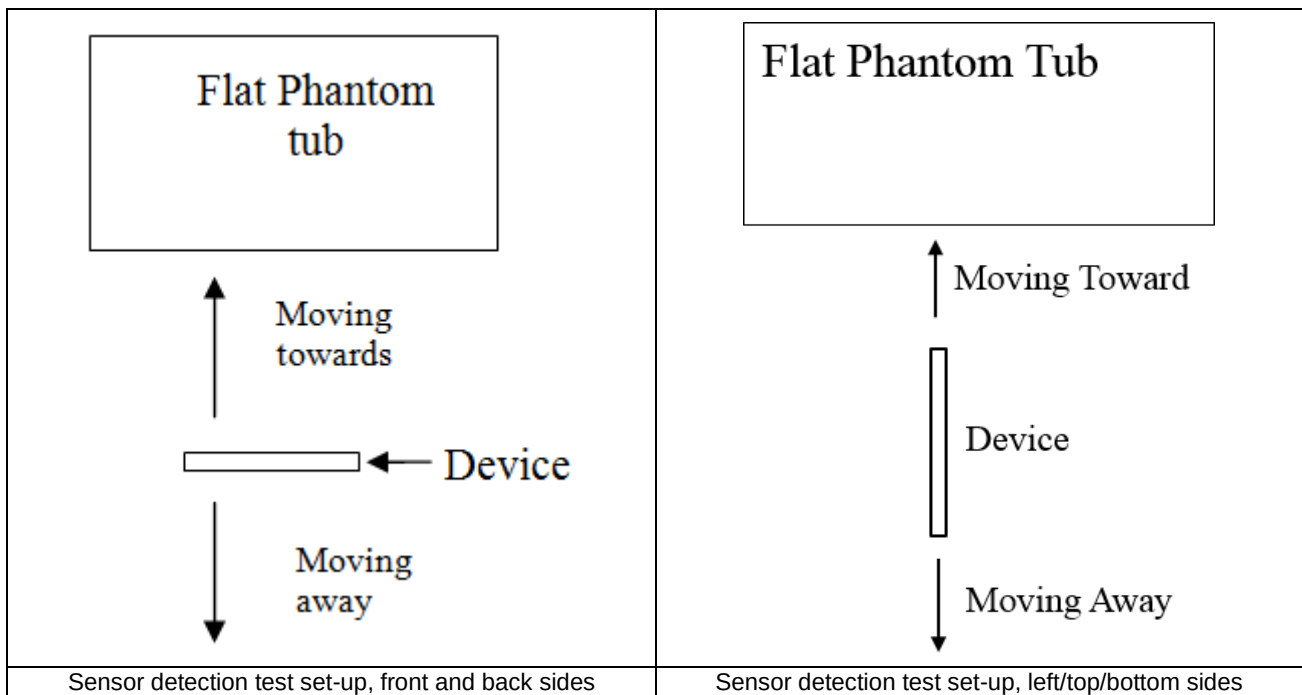
NR Band 78 SCS15KHz													
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz	
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L 630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01		
M 633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H 636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01		

NR Band 78 SCS30KHz																							
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth 100MHz	
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L 630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495		
M 633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01	633334	3500.01
H 636334	3545.01	636168	3542.52	636000	3540	635834	3537.51	635668	3535.02	635334	3530.01	635000	3525	634668	3520.02	634334	3515.01	634000	3510	633668	3505.02		

5. Proximity Sensor Triggering Test

5.1 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.
2. Proximity sensor triggering distance testing was performed according 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 (3980MHz) and lowest (1750MHz) frequency was used for proximity sensor triggering testing.
3. Capacitive proximity sensor placed coincident with antenna elements at the top/bottom end of the phone are utilized to determine when the device comes in proximity of the user's body or finger or hand at the front or back or bottom or left or top side 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.
4. The sensors can use to detect the proximity of the user's body or handheld states at the front or back or bottom or top or left side of the device use a detection threshold distance. When front/back/left/top/bottom sides of body or handheld condition is detected reduced power will be active. The trigger distance shown in the sections below. The verification test and more details please refer to sensor operation description.
5. For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance -1mm was performed.



<P-Sensor>

<Sensor on for Ant0/5 >

Proximity Sensor Triggering Distance (mm)						
Position	Front		Back		Bottom Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	16	16	16	16	16	16

<Sensor on for Ant1 >

Proximity Sensor Triggering Distance (mm)								
Position	Front		Back		Left Side		Top Side	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	6	6	6	6	6	6	6

<Sensor on for Ant2/4 >

Proximity Sensor Triggering Distance (mm)				
Position	Back		Left Side	
	Moving towards	Moving away	Moving towards	Moving away
Minimum	6	6	6	6

6. RF Exposure Limits

6.1 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.

6.2 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.

7. Specific Absorption Rate (SAR)

7.1 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.

7.2 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:

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

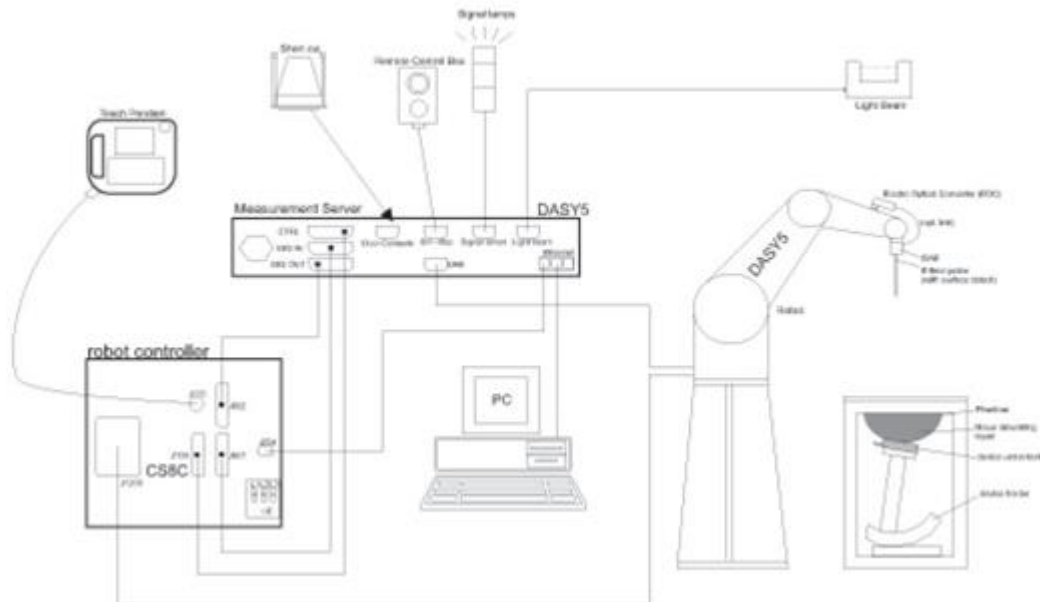
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

8. 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.

8.1 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 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

8.2 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

8.3 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.

8.4 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

9. 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

9.1 *Spatial Peak SAR Evaluation*

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

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

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

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

9.2 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.

9.3 Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	≤ 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 $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

9.4 Zoom Scan

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

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 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: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
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 <u>reported</u> SAR from the <u>area scan based 1-g SAR estimation</u> 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.				

9.5 Volume Scan Procedures

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

9.6 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.

10. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	835MHz System Validation Kit	D835V2	4d258	2020/5/7	2023/5/6
SPEAG	1750MHz System Validation Kit	D1750V2	1090	2022/2/24	2023/2/23
SPEAG	1900MHz System Validation Kit	D1900V2	5d182	2021/12/20	2022/12/19
SPEAG	2450MHz System Validation Kit	D2450V2	924	2020/9/2	2023/9/1
SPEAG	2600MHz System Validation Kit	D2600V2	1061	2020/11/26	2023/11/25
SPEAG	3500MHz System Validation Kit	D3500V2	1037	2020/11/25	2023/11/24
SPEAG	3700MHz System Validation Kit	D3700V2	1008	2020/11/25	2023/11/24
SPEAG	3900MHz System Validation Kit	D3900V2	1048	2020/5/14	2023/5/13
SPEAG	5000MHz System Validation Kit	D5GHzV2	1113	2019/9/24	2022/9/22
SPEAG	Data Acquisition Electronics	DAE4	1303	2021/6/18	2022/6/17
SPEAG	Dosimetric E-Field Probe	EX3DV4	7706	2022/1/20	2023/1/19
SPEAG	SAM Twin Phantom	SAM Twin	TP-1754	NCR	NCR
SPEAG	Phone Positioner	N/A	N/A	NCR	NCR
Rohde & Schwarz	Signal Generator	SMB100A	178155	2021/4/13	2022/4/12
Keysight	Preamplifier	83017A	MY57280111	2021/7/12	2022/7/11
Anritsu	Radio Communication Analyzer	MT8821C	6201432831	2021/4/13	2022/4/12
Agilent	ENA Series Network Analyzer	E5071C	MY46106933	2021/7/31	2022/7/30
SPEAG	Dielectric Probe Kit	DAK-3.5	1138	2021/6/9	2022/6/8
Anritsu	Vector Signal Generator	MG3710A	6201682672	2022/1/6	2023/1/5
Rohde & Schwarz	Power Meter	NRVD	102081	2021/8/12	2022/8/11
Rohde & Schwarz	Power Sensor	NRV-Z5	100538	2021/8/12	2022/8/11
Rohde & Schwarz	Power Sensor	NRV-Z5	100539	2021/8/12	2022/8/11
R&S	CBT BLUETOOTH TESTER	CBT	101246	2021/4/12	2022/4/11
EXA	Spectrum Analyzer	FSV7	101631	2021/10/14	2022/10/13
FLUKE	DIGITAC THERMOMETER	51II	97240029	2021/8/13	2022/8/12
Testo	Thermo-Hygrometer	608-H1	1241332126	2022/1/6	2023/1/5
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	
BONN	POWER AMPLIFIER	BLMA 0830-3	087193A	Note 1	
BONN	POWER AMPLIFIER	BLMA 2060-2	087193B	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.

11. System Verification

11.1 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.

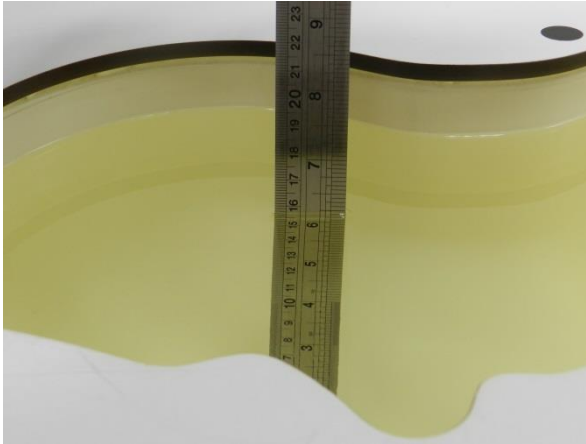


Fig 11.1 Photo of Liquid Height for Head SAR

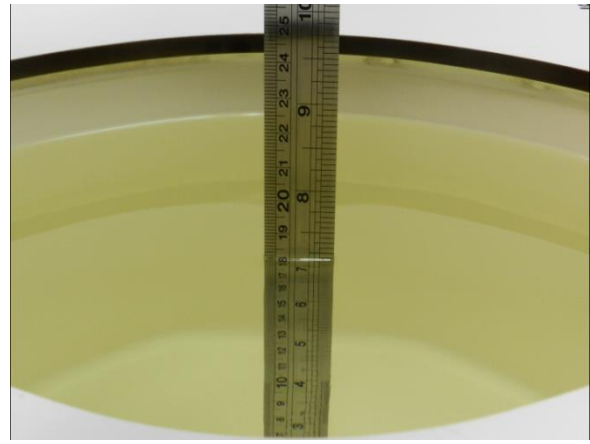


Fig 11.2 Photo of Liquid Height for Body SAR

11.2 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 (ϵ_r)
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)	Head	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
835	Head	22.8	0.930	40.910	0.90	41.50	3.33	-1.42	±5	2022/3/26
1750	Head	22.7	1.395	40.500	1.37	40.10	1.82	1.00	±5	2022/3/26
1900	Head	22.6	1.428	38.830	1.40	40.00	2.00	-2.93	±5	2022/3/27
2450	Head	22.7	1.802	40.581	1.80	39.20	0.11	3.52	±5	2022/3/27
2600	Head	22.9	1.927	39.034	1.96	39.00	-1.68	0.09	±5	2022/3/28
3500	Head	22.6	2.881	38.499	2.91	37.90	-1.00	1.58	±5	2022/3/28
3700	Head	22.7	3.078	38.038	3.12	37.70	-1.35	0.90	±5	2022/3/29
3900	Head	22.8	3.282	37.613	3.32	37.50	-1.14	0.30	±5	2022/3/29
5250	Head	22.9	4.597	35.936	4.71	35.90	-2.40	0.10	±5	2022/3/30
5600	Head	22.6	4.997	35.371	5.07	35.50	-1.44	-0.36	±5	2022/3/30
5750	Head	22.8	5.160	35.206	5.22	35.40	-1.15	-0.55	±5	2022/3/31
835	Head	22.7	0.933	43.129	0.90	41.50	3.67	3.93	±5	2022/4/1
1750	Head	22.6	1.396	40.498	1.37	40.10	1.90	0.99	±5	2022/4/1
1900	Head	22.7	1.434	39.909	1.40	40.00	2.43	-0.23	±5	2022/4/2
2450	Head	22.8	1.820	39.224	1.80	39.20	1.11	0.06	±5	2022/4/2
2600	Head	22.8	1.926	39.022	1.96	39.00	-1.73	0.06	±5	2022/4/3
3500	Head	22.7	2.798	38.957	2.91	37.90	-3.85	2.79	±5	2022/4/4
3700	Head	22.8	2.981	38.650	3.12	37.70	-4.46	2.52	±5	2022/4/4
3900	Head	22.5	3.181	38.361	3.32	37.50	-4.19	2.30	±5	2022/4/5
5250	Head	22.7	4.562	35.974	4.71	35.90	-3.14	0.21	±5	2022/4/5
5600	Head	22.6	4.960	35.422	5.07	35.50	-2.17	-0.22	±5	2022/4/6
5750	Head	22.9	5.131	35.224	5.22	35.40	-1.70	-0.50	±5	2022/4/6

11.3 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)	Head	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 (%)
2022/3/26	835	Head	50	4d258	7706	1303	0.481	9.44	9.62	1.91
2022/3/26	1750	Head	50	1090	7706	1303	1.820	37.00	36.4	-1.62
2022/3/27	1900	Head	50	5d182	7706	1303	1.960	39.60	39.2	-1.01
2022/3/27	2450	Head	50	924	7706	1303	2.420	51.40	48.4	-5.84
2022/3/28	2600	Head	50	1061	7706	1303	2.610	56.60	52.2	-7.77
2022/3/28	3500	Head	50	1037	7706	1303	3.230	68.00	64.6	-5.00
2022/3/29	3700	Head	50	1008	7706	1303	3.500	67.60	70	3.55
2022/3/29	3900	Head	50	1048	7706	1303	3.510	70.20	70.2	0.00
2022/3/30	5250	Head	50	1113	7706	1303	4.030	80.50	80.6	0.12
2022/3/30	5600	Head	50	1113	7706	1303	4.190	83.40	83.8	0.48
2022/3/31	5750	Head	50	1113	7706	1303	3.890	80.00	77.8	-2.75
2022/4/1	835	Head	50	4d258	7706	1303	0.503	9.44	10.06	6.57
2022/4/1	1750	Head	50	1090	7706	1303	1.870	37.00	37.4	1.08
2022/4/2	1900	Head	50	5d182	7706	1303	2.070	39.60	41.4	4.55
2022/4/2	2450	Head	50	924	7706	1303	2.460	51.40	49.2	-4.28
2022/4/3	2600	Head	50	1061	7706	1303	2.620	56.60	52.4	-7.42
2022/4/4	3500	Head	50	1037	7706	1303	3.140	68.00	62.8	-7.65
2022/4/4	3700	Head	50	1008	7706	1303	3.120	67.60	62.4	-7.69
2022/4/5	3900	Head	50	1048	7706	1303	3.250	70.20	65	-7.41
2022/4/5	5250	Head	50	1113	7706	1303	3.780	80.50	75.6	-6.09
2022/4/6	5600	Head	50	1113	7706	1303	3.960	83.40	79.2	-5.04
2022/4/6	5750	Head	50	1113	7706	1303	3.950	80.00	79	-1.25

<10g SAR>

Date	Frequency (MHz)	Head	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
2022/3/26	835	Head	50	4d258	7706	1303	0.315	6.13	6.3	2.77
2022/3/26	1750	Head	50	1090	7706	1303	0.958	19.50	19.16	-1.74
2022/3/27	1900	Head	50	5d182	7706	1303	1.000	20.20	20	-0.99
2022/3/27	2450	Head	50	924	7706	1303	1.130	24.00	22.6	-5.83
2022/3/28	2600	Head	50	1061	7706	1303	1.170	25.10	23.4	-6.77
2022/3/28	3500	Head	50	1037	7706	1303	1.210	25.40	24.2	-4.72
2022/3/29	3700	Head	50	1008	7706	1303	1.190	24.40	23.8	-2.46
2022/3/29	3900	Head	50	1048	7706	1303	1.250	24.40	25	2.46
2022/3/30	5250	Head	50	1113	7706	1303	1.160	23.10	23.2	0.43
2022/3/30	5600	Head	50	1113	7706	1303	1.190	23.80	23.8	0.00
2022/3/31	5750	Head	50	1113	7706	1303	1.120	22.80	22.4	-1.75
2022/4/1	835	Head	50	4d258	7706	1303	0.324	6.13	6.48	5.71
2022/4/1	1750	Head	50	1090	7706	1303	0.987	19.50	19.74	1.23
2022/4/2	1900	Head	50	5d182	7706	1303	1.070	20.20	21.4	5.94
2022/4/2	2450	Head	50	924	7706	1303	1.130	24.00	22.6	-5.83
2022/4/3	2600	Head	50	1061	7706	1303	1.160	25.10	23.2	-7.57
2022/4/4	3500	Head	50	1037	7706	1303	1.180	25.40	23.6	-7.09
2022/4/4	3700	Head	50	1008	7706	1303	1.130	24.40	22.6	-7.38
2022/4/5	3900	Head	50	1048	7706	1303	1.150	24.40	23	-5.74
2022/4/5	5250	Head	50	1113	7706	1303	1.180	23.10	23.6	2.16
2022/4/6	5600	Head	50	1113	7706	1303	1.210	23.80	24.2	1.68
2022/4/6	5750	Head	50	1113	7706	1303	1.220	22.80	24.4	7.02

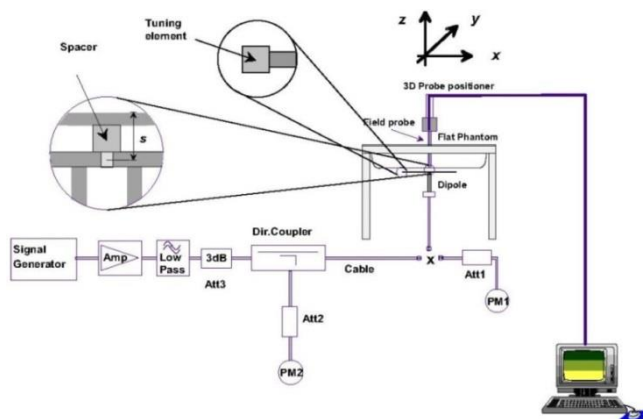


Fig 11.3.1 System Performance Check Setup



Fig 11.3.2 Setup Photo

12. RF Exposure Positions

12.1 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 15 mm 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.

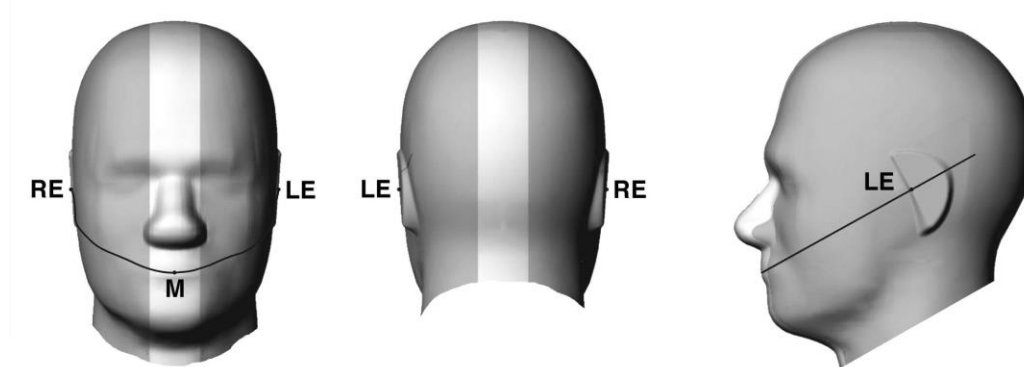


Fig 12.1.1 Front, back, and side views of SAM twin phantom

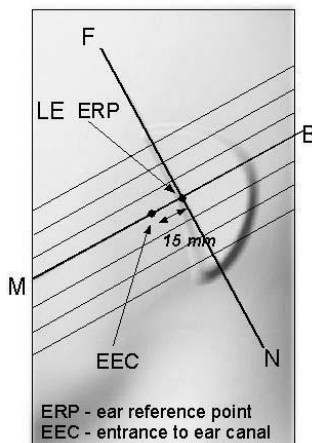


Fig 12.1.2 Close-up side view of phantom showing the ear region.

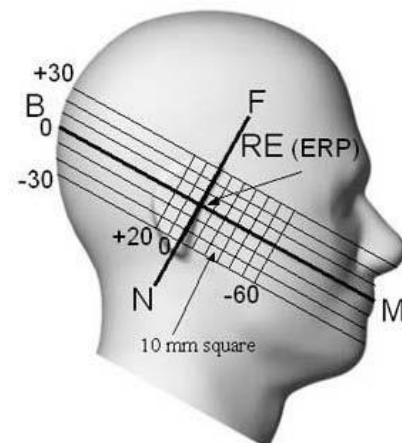


Fig 12.1.3 Side view of the phantom showing relevant markings and seven cross-sectional plane locations

12.2 Definition of the cheek position

1. Ready the handset for talk operation, if necessary. For example, for handsets with a cover piece (flip cover), open the cover. If the handset can transmit with the cover closed, both configurations must be tested.
2. Define two imaginary lines on the handset—the vertical centerline and the horizontal line. The vertical centerline passes through two points on the front side of the handset—the midpoint of the width w_t of the handset at the level of the acoustic output (point A in Figure 12.2.1 and Figure 12.2.2), and the midpoint of the width w_b of the bottom of the handset (point B). The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Figure 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 handset. 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.

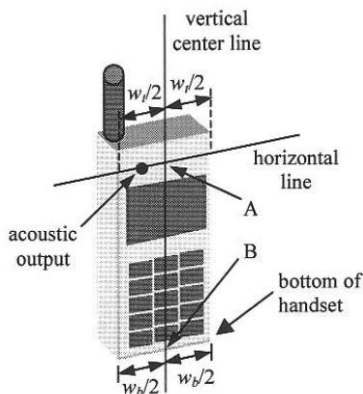


Fig 12.2.1 Handset vertical and horizontal reference lines—"fixed case"

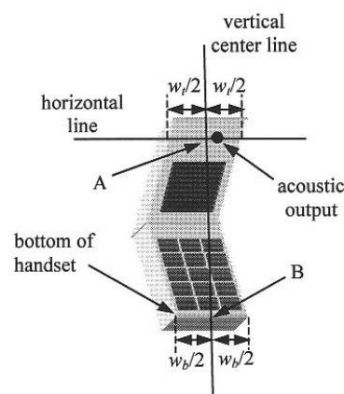


Fig 12.2.2 Handset vertical and horizontal reference lines—"clam-shell case"

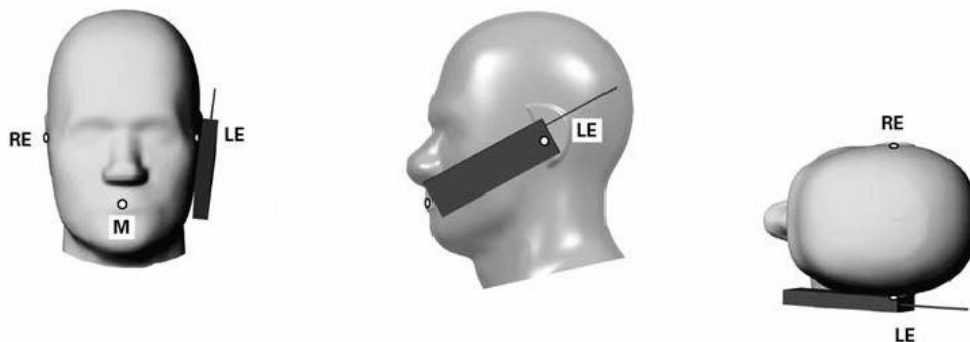


Fig 12.2.3 cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

12.3 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

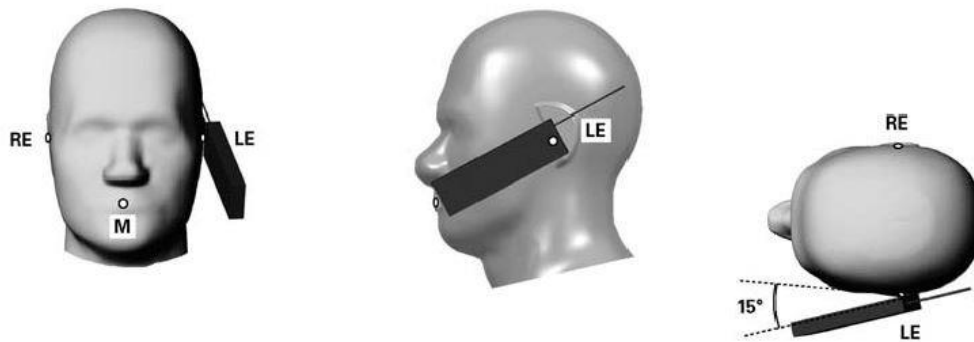


Fig 12.3.1 Tilt position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which define the Reference Plane for handset positioning, are indicated.

12.4 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 $> 1.2 \text{ W/kg}$, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a handset attached to the handset.

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

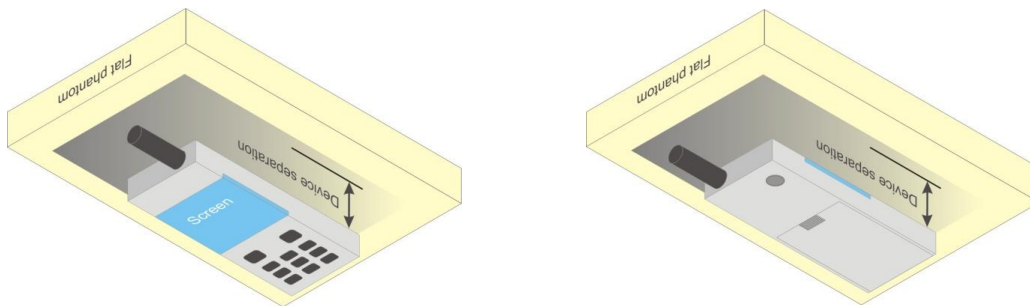


Fig 12.4 Body Worn Position

12.5 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 ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.6 The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

12.6 Wireless Router

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

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

13. 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.
3. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq 1/4$ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

<WCDMA Conducted Power>

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.
2. The procedures in KDB 941225 D01v03r01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode(s) to determine SAR test exclusion.
3. For HSPA+ devices supporting 16 QAM in the uplink, power measurements procedure is according to the configurations in Table C.11.1.4 of 3GPP TS 34.121-1.
4. 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_o/β_d	β_{HS} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5
Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$. Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{HS} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{HS} = 24/15 * \beta_c$. Note 3: CM = 1 for $\beta_o/\beta_d = 12/15$, $\beta_{HS}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases. Note 4: For subtest 2 the β_o/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.							

Setup Configuration

HSUPA Setup Configuration:

- The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
- The RF path losses were compensated into the measurements.
- A call was established between EUT and Base Station with following setting * :
 - Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - 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
 - Set Cell Power = -86 dBm
 - Set Channel Type = 12.2k + HSPA
 - Set UE Target Power
 - Power Ctrl Mode= Alternating bits
 - Set and observe the E-TFCI
 - Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- 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} (Note 1)	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	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

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

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

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

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

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

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

Setup Configuration

DC-HSDPA 3GPP release 8 Setup Configuration:

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

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

C.8.1.12 Fixed Reference Channel Definition H-Set 12

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

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

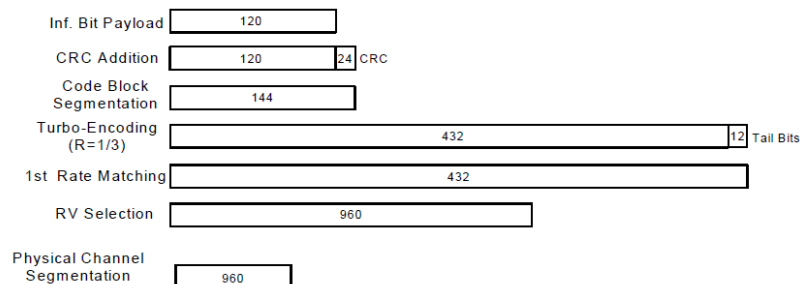


Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

Setup Configuration

HSPA+ 3GPP release 7 (uplink category 7) 16QAM, 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 = 5.2E:HSPA+:UL with 16QAM
 - 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, C11.1.4, quoted from the TS 34.121-1 s5.2E
 - iii. Set Channel Params
 - iv. Set Cell Power = -86 dBm
 - v. Set Channel Type = HSPA
 - vi. Set UE Target Power = 21 dBm
 - vii. Power Ctrl Mode= All Up Bits
 - viii. Set Manual Uplink DPCH Bc/Bd = Manual
 - ix. Set Manual Uplink DPCH Bc and Bd=15,15(for 34.121-1 v8.10.0 table C11.1.4 sub-test 1)
 - x. Set HSPA Conn DL Channel Levels
 - xi. Set HS-SCCH Configs
 - xii. Set RB Test Mode Setup
 - xiii. Set Common HSUPA Parameters
 - xiv. Set Serving Grant
 - xv. Confirm that E-TFCI is equal to the target E-TFCI of 105 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note 3)	β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105

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

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).

Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default.

Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signaled to use the extrapolation algorithm.

Setup Configuration

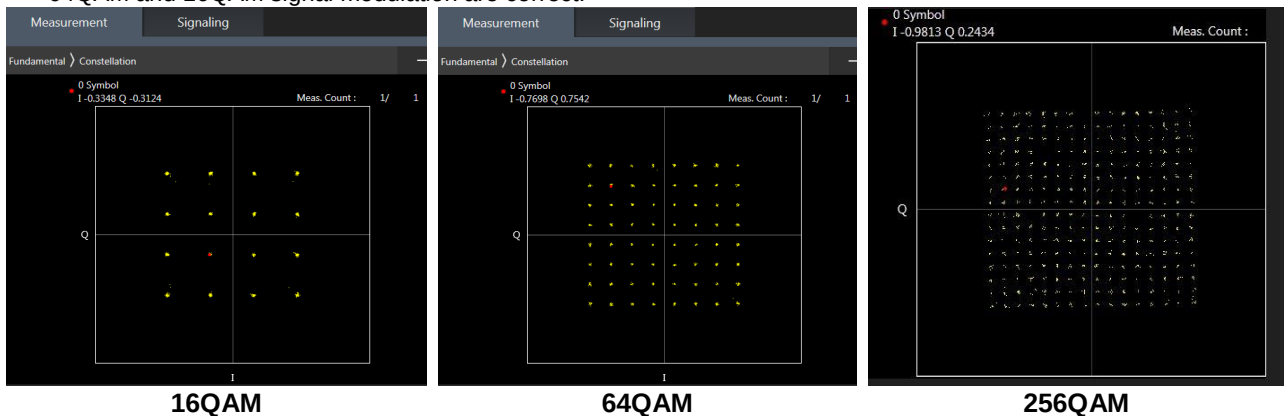
<WCDMA Conducted Power>**General Note:**

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 / HSPA+ is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

<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 $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4 / B5 / 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.
9. According to 2017 TCB workshop, for 256QAM, 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 256QAM, 64QAM and 16QAM signal modulation are correct.



<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.

- 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “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
- 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.

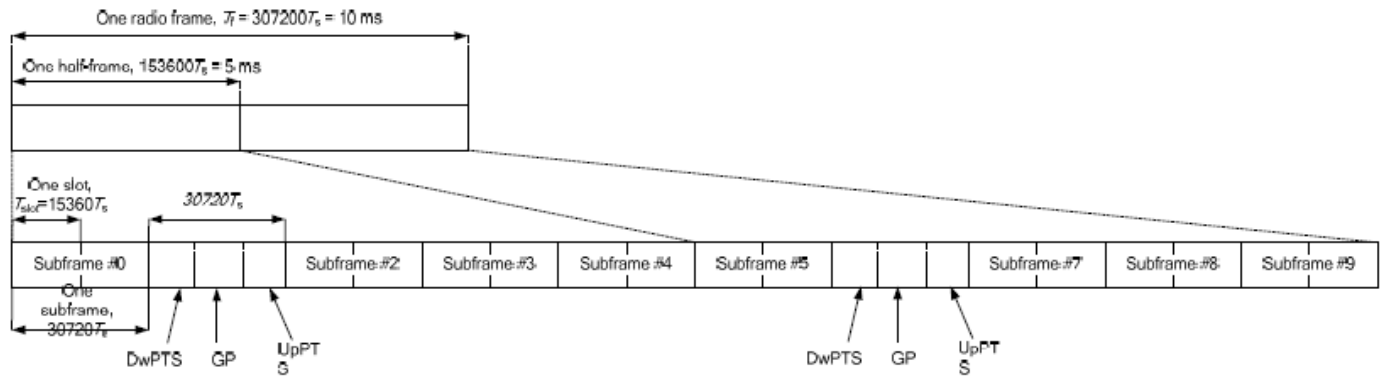


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
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:

- Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is:
 $(3+0.167)/5 = 63.3\%$
- for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is:
 $(3+0.143)/5 = 62.9\%$
- 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.
4. All permutations exist. No restrictions on Pcell & Scell combinations.

2CC Downlink Carrier Aggregation		3CC Downlink Carrier Aggregation	
Number	Combination	Number	Combination
1	CA_2C	1	CA_2A-4A-5A
2	CA_2A-4A	2	CA_2A-4A-7A
3	CA_2A-5A	3	CA_2A-7A-7A
4	CA_2A-7A	4	CA_2A-7C
5	CA_4A-5A	5	CA_4A-7C
6	CA_4A-7A	6	CA_5A-7A-7A
7	CA_5A-7A	7	CA_5A-7C
8	CA_7A-7A		
9	CA_7C		
10	CA_38C		
11	CA_41A-41A		
12	CA_41C		
13	CA_5A-41A		
14	CA_7A-38A		

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 three 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.

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

LTE 4x4 MIMO (Downlink)

This device supports downlink 4x4 MIMO operations for LTE Bands 4/7/38/41 only. Uplink transmission is limited to a single output stream. Power measurements were performed with downlink 4x4 MIMO active for the configuration with highest measured maximum conducted power with 4x4 downlink MIMO inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC Guidance, SAR for downlink 4x4 MIMO was not needed since the maximum average output power in 4x4 downlink MIMO mode was not > 0.25 dB higher than the maximum output power with downlink 4x4 MIMO inactive. When carrier aggregation is applicable, power measurements were performed with the downlink carrier aggregation and 4x4 DL MIMO active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

4X4 MIMO	WWAN Band
	LTE Band: B4/B7/B38/B41

LTE Carrier Aggregation Conducted Power (Uplink)
<Intra-band>

2CC Uplink Carrier Aggregation		
Number	Combination	Ant No.
1	7C	ANT 0/2/1/5
2	38C	ANT 0/2/1/5

General Note:

- i. The device supports intra-band uplink carrier aggregation for LTE B7/B38 with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre 3GPP requirement.
- ii. The device supports uplink carrier aggregation with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP 36.101 table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when not-contiguous RB allocation is implemented. The conducted power and MPR setting in this device are permanently implemented pre the 3GPP requirement.
- iii. According TCB workshop, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.
- iv. Additional SAR measurement for LTE UL CA with other DL CA combinations active were not required since the maximum output power for this configuration was not > 0.25dB higher than the maximum output power for UL CA active.

<Inter-band uplink carrier aggregation consideration>

LTE Uplink CA	2CC Uplink Carrier Aggregation	
Combination	Band&Ant No.	Band&Ant No.
4A-7A	LTE B4: Ant0/2	LTE B7: Ant1/5

General Note:

The single carrier of inter band CA uplink power level is the same as Non-CA standalone LTE power level. For Inter-band CA co-located SAR analysis is performed using standalone SAR summed together and they are more conservatively for inter band CA.

5G NR Output Power (Unit: dBm)**General Note:**

1. 5G NR n5, n7, n38, n41, n77, n78 supports SA operation.
2. 5G NR n5, n7, n78 supports NSA.
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. For DFT-OFDM output power measurement reduction, according to 38.101 maximum power reduction for power class2 and 3, for 16QAM/64 QAM/256QAM and smaller bandwidth output power will spot check largest channel bandwidth worst RB configuration to ensure the 16QAM/64QAM/256QAM and smaller bandwidth output power will not ½ dB higher than the same configuration in the largest supported bandwidth.
 - c. SAR testing 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
 - d. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
 - e. 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
 - f. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not ½ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK /16QAM/64QAM/256QAM AM SAR testing are not required.
 - g. 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. 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.
6. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
7. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
8. 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 DFT-s-OFDM to perform SAR testing.
9. 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.
10. 5G NR n78 supports HPUE, HPUE power and SAR testing performed separately.
11. 5G NR n78 HPUE with higher power, n78 HPUE SAR can represent power class 3 level SAR.
12. For 5G NR EN-DC mode, standalone SAR performed for 5G NR band with the maximum power, EN-DC SAR summed 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
13. For 5G NR FDD/TDD supports SCS15KHz and SCS30KHz, chose higher power which is SCS30KHz to perform SAR testing.

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

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

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

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

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

ENDC List	LTE Ant	NR Ant
DC_7A_n5A	B7 :ANT1/5/0/2	n5 :ANT0/1
DC_5A_n7A	B5 :ANT0/1	n7 :ANT1/5/0/2
DC_7A_n7A	B7:ANT0/2	n7 :ANT/1/5
DC_2A_n78A	B2 :ANT0/2	n78 :ANT4/5/3/2
DC_5A_n78A	B5 :ANT0/1	n78 :ANT4/5/3/2
DC_7A_n78A	B7 :ANT0/2/1/5	n78 :ANT4/5/3/2
DC_38A_n78A	B38 :ANT0/2/1/5	n78 :ANT4/5/3/2
DC_41A_n78A	B41 :ANT0/2/1/5	n78 :ANT4/5/3/2

Inter Band CA Configuration:

NR Uplink CA	2CC Uplink Carrier Aggregation	
Combination	Band&Ant No.	Band&Ant No.
CA_n7A-n78A	n7:ANT0/2/1/5	n78 :ANT4/5/3/2

<WLAN Conducted Power>

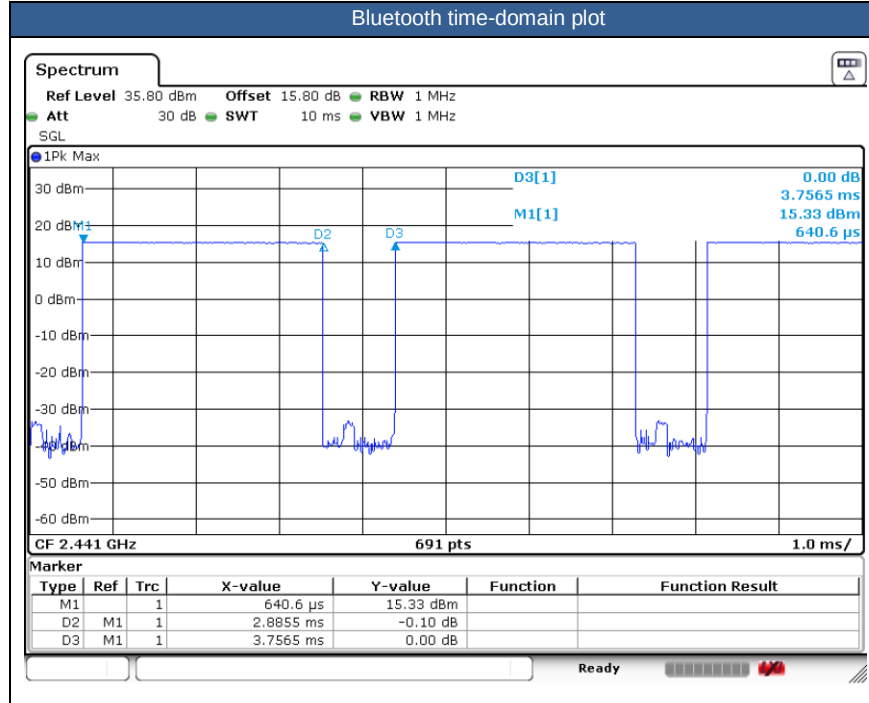
General Note:

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.
5. 802.11ax supports full tone size and partial tone size, after verification for the partial tone size mode power level will not higher than full tone size power level, so chose full tone power to be measured in this report.
6. The 2.4GHz/5GHz WLAN can transmit in SISO and MIMO antenna mode.

<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 76.83 % as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation.





14. Antenna Location

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

15. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of BT/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 ≥ 0.8 W/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. 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.
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). The device will invoke corresponding work scenarios power level base on frequency bands/antennas, which can refer to appendix E. power table. Full power table and reduced power table (DSI 0: receiver on reduced power for head; DSI 4: hotspot on power; DSI 1: P-sensor on for Body-worn/extremity; DSI 3: receiver off/P-sensor off).
6. For WLAN when transmit simultaneous with WWAN, power reduction will be activated to head, hotspot.
7. For 5G NR test, using FTM (Factory Test Mode) to perform SAR with default 100% transmission.
8. 5G NR n78 supports HPUE, HPUE power and SAR testing performed separately.
9. 5G NR n78 HPUE with higher power, n78 HPUE SAR can represent power class 3 level SAR.
10. For 5G NR EN-DC mode, standalone SAR performed for 5G NR band with the maximum power, EN-DC SAR summed 5G NR standalone SAR and LTE standalone SAR, the result of EN-DC SAR is more conservatively.
11. NSA and SA mode should perform SAR separately. For the maximum power of NSA mode is the same as SA total power level, so SA SAR can represent NSA mode SAR.
12. 5G NR NSA mode, the power level is the same as 5G NR SA mode, so 5G NR NSA mode and SA mode power table only show one time.
13. 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 DFT-s-OFDM to perform SAR testing.
14. 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.
15. 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, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold,
 - a. WCDMA B2/B4, LTE B2/B4/B7, and FR1 n7/n38/n41/n77/n78 are required to be tested.
 - 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.

16. The LTE B7 at ant 0/2, and 5G NR n7 at ant 1/2/5 support different PAs, the maximum power of Main PA is higher than and very close to the other PA, for RF exposure, after verification all PAs in a same position, we choose the main PA to perform full SAR tested to ensure the RF exposure is compliance.
17. The LTE B7 at ant 1/5 and 5G NR n7 at ant0 support different PAs, after verification all PAs in a same position, we choose the main PA to perform full SAR tested to ensure the RF exposure is compliance and other PA verify the worst case.
18. For LTE anchors in EN-DC combinations, due to the same configuration as standalone LTE Bands, always chose worse position of standalone LTE Bands to perform SAR testing.
19. For some WWAN bands, full power level higher than receiver off reduced power level, so front/back full power SAR can represent Body-worn receiver off SAR conservatively.
20. For extremity exposure conditions, WLAN 5G distance SAR test at Front/Back/Right/Top side 5mm is only for simultaneous transmission analysis with WWAN.

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

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 / HSPA+ is $\leq \frac{1}{4}$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA / HSPA+ to RMC12.2Kbps and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+, and according to the following RF output power, the output power results of the secondary modes (HSDPA / HSUPA / DC-HSDPA / HSPA+) are less than $\frac{1}{4}$ dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA / HSPA+.

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 $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM/64QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4 / B5 / 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.

5G NR Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. SAR testing 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.
 - b. 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure
 - c. 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.
 - d. PI/2 BPSK/16QAM/64QAM/256QAM output powers according to 3GPP MPR will not $\frac{1}{2}$ dB higher than the same configuration in QPSK, also reported SAR for the QPSK configuration is less than 1.45 W/kg, PI/2 BPSK/16QAM /64QAM/256QAM SAR testing are not required.
 - e. Smaller bandwidth output power for each RB allocation configuration for this device will not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device.
 - f. For 5G FR1 n5/n7/n38/n41/n77 the maximum bandwidth does not support three non-overlapping channels, 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.

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.
6. 802.11ax supports full tone size and partial tone size, after verification for the partial tone size mode power level will not higher than full tone size power level, so chose full tone power to be measured in this report.
7. SISO and MIMO all supported by WLAN2.4GHz/WLAN5GHz, for SISO mode power is less than per chain power of MIMO mode. For WLAN SISO & MIMO mode, the whole testing has assessed only MIMO mode by referring to their higher conducted power, so only chose MIMO power to perform SAR testing.
8. For the conducted power measurement is MIMO chains transmitting simultaneously and measured the separately conducted power for both chains and then based on the conducted power of two antennas respectively to calculate sum of the power for MIMO mode.
9. Only chose MIMO power to perform SAR testing.



15.1 Head SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
835MHz																		
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 0	DSIO	189	836.4	28.34	29.50	1.306	0.02	0.137	0.179
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 0	DSIO	189	836.4	28.34	29.50	1.306	0.11	0.073	0.095
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 0	DSIO	189	836.4	28.34	29.50	1.306	-0.06	0.114	0.149
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 0	DSIO	189	836.4	28.34	29.50	1.306	0.08	0.070	0.091
01	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 1	DSIO	189	836.4	28.12	30.00	1.542	-0.01	0.510	0.786
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 1	DSIO	189	836.4	28.12	30.00	1.542	-0.06	0.356	0.549
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 1	DSIO	189	836.4	28.12	30.00	1.542	0.07	0.439	0.677
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 1	DSIO	189	836.4	28.12	30.00	1.542	0.04	0.366	0.564
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSIO	4182	836.4	24.51	25.00	1.119	0.04	0.154	0.172
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSIO	4182	836.4	24.51	25.00	1.119	0.07	0.084	0.094
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSIO	4182	836.4	24.51	25.00	1.119	0.05	0.138	0.154
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSIO	4182	836.4	24.51	25.00	1.119	0.07	0.078	0.087
02	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSIO	4182	836.4	23.09	24.50	1.384	0.09	0.467	0.646
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSIO	4132	826.4	22.81	24.50	1.476	-0.12	0.389	0.574
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 1	DSIO	4233	846.6	22.71	24.50	1.510	-0.16	0.370	0.559
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 1	DSIO	4182	836.4	23.09	24.50	1.384	0.08	0.333	0.461
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 1	DSIO	4182	836.4	23.09	24.50	1.384	0.08	0.354	0.490
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 1	DSIO	4182	836.4	23.09	24.50	1.384	-0.05	0.322	0.446
	LTE Band 5	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSIO	20525	836.5	24.54	25.50	1.247	0.04	0.153	0.191
	LTE Band 5	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 0	DSIO	20525	836.5	23.53	24.50	1.250	-0.07	0.079	0.099
	LTE Band 5	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSIO	20525	836.5	24.54	25.50	1.247	0.02	0.089	0.111
	LTE Band 5	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 0	DSIO	20525	836.5	23.53	24.50	1.250	-0.15	0.071	0.089
	LTE Band 5	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSIO	20525	836.5	24.54	25.50	1.247	0.06	0.160	0.200
	LTE Band 5	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 0	DSIO	20525	836.5	23.53	24.50	1.250	0.05	0.125	0.156
	LTE Band 5	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSIO	20525	836.5	24.54	25.50	1.247	0.08	0.079	0.099
	LTE Band 5	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 0	DSIO	20525	836.5	23.53	24.50	1.250	-0.07	0.062	0.078
03	LTE Band 5	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSIO	20525	836.5	23.31	24.50	1.315	0.02	0.578	0.760
	LTE Band 5	10M	QPSK	25	0	-	Right Cheek	0mm	Ant 1	DSIO	20525	836.5	23.27	24.50	1.327	-0.05	0.464	0.616
	LTE Band 5	10M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSIO	20525	836.5	23.31	24.50	1.315	-0.19	0.413	0.543
	LTE Band 5	10M	QPSK	25	0	-	Right Tilted	0mm	Ant 1	DSIO	20525	836.5	23.27	24.50	1.327	0.05	0.327	0.434
	LTE Band 5	10M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSIO	20525	836.5	23.31	24.50	1.315	-0.01	0.497	0.654
	LTE Band 5	10M	QPSK	25	0	-	Left Cheek	0mm	Ant 1	DSIO	20525	836.5	23.27	24.50	1.327	0.06	0.392	0.520
	LTE Band 5	10M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSIO	20525	836.5	23.31	24.50	1.315	0.17	0.418	0.550
	LTE Band 5	10M	QPSK	25	0	-	Left Tilted	0mm	Ant 1	DSIO	20525	836.5	23.27	24.50	1.327	0.04	0.324	0.430
	LTE Band 5 ENDC	10M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSIO	20525	836.5	22.42	23.50	1.282	0.03	0.413	0.530
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSIO	167300	836.5	24.78	25.50	1.180	0.08	0.154	0.182
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSIO	167300	836.5	24.76	25.50	1.186	0.06	0.171	0.203
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSIO	167300	836.5	24.78	25.50	1.180	-0.1	0.075	0.089
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSIO	167300	836.5	24.76	25.50	1.186	0.13	0.082	0.097
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSIO	167300	836.5	24.78	25.50	1.180	-0.09	0.142	0.168
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSIO	167300	836.5	24.76	25.50	1.186	0.14	0.156	0.185
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSIO	167300	836.5	24.78	25.50	1.180	0.03	0.074	0.087
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSIO	167300	836.5	24.76	25.50	1.186	0.1	0.080	0.095
04	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSIO	167300	836.5	24.13	25.70	1.435	-0.05	0.661	0.949
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSIO	166800	834	24.06	25.70	1.459	0.02	0.649	0.947
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSIO	167800	839	23.99	25.70	1.483	0.03	0.630	0.934
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSIO	167300	836.5	24.12	25.70	1.439	-0.17	0.620	0.892
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSIO	166800	834	24.04	25.70	1.466	0.04	0.611	0.895
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSIO	167800	839	24.01	25.70	1.476	0.08	0.600	0.885
	FR1 n5	20M	QPSK	50	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSIO	167300	836.5	23.20	24.70	1.413	0.1	0.601	0.849



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Report No. : FA231203

	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSIO	167300	836.5	24.13	25.70	1.435	-0.05	0.449	0.645
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSIO	167300	836.5	24.12	25.70	1.439	-0.18	0.411	0.591
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSIO	167300	836.5	24.13	25.70	1.435	0.17	0.532	0.764
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSIO	167300	836.5	24.12	25.70	1.439	-0.07	0.502	0.722
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSIO	167300	836.5	24.13	25.70	1.435	-0.07	0.414	0.594
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSIO	167300	836.5	24.12	25.70	1.439	0.04	0.379	0.545
	FR1 n5 ENDC	20M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSIO	167300	836.5	21.03	22.70	1.469	0.02	0.326	0.479
1750MHz																		
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSIO	1413	1732.6	23.92	25.00	1.282	0.04	0.177	0.227
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSIO	1413	1732.6	23.92	25.00	1.282	0.06	0.113	0.145
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSIO	1413	1732.6	23.92	25.00	1.282	0.02	0.164	0.210
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSIO	1413	1732.6	23.92	25.00	1.282	0.13	0.146	0.187
05	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSIO	1413	1732.6	21.17	22.50	1.358	0.07	0.647	0.879
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSIO	1312	1712.4	20.82	22.50	1.472	0.03	0.578	0.851
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSIO	1513	1752.6	20.99	22.50	1.416	-0.01	0.611	0.865
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSIO	1413	1732.6	21.17	22.50	1.358	0.06	0.180	0.244
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSIO	1413	1732.6	21.17	22.50	1.358	-0.03	0.268	0.364
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSIO	1413	1732.6	21.17	22.50	1.358	0.19	0.188	0.255
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSIO	20175	1732.5	23.76	25.00	1.330	-0.04	0.121	0.161
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSIO	20175	1732.5	22.78	24.00	1.324	-0.19	0.098	0.130
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSIO	20175	1732.5	23.76	25.00	1.330	0.04	0.077	0.102
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSIO	20175	1732.5	22.78	24.00	1.324	0.16	0.067	0.089
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSIO	20175	1732.5	23.76	25.00	1.330	0.01	0.122	0.162
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSIO	20175	1732.5	22.78	24.00	1.324	-0.11	0.099	0.131
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSIO	20175	1732.5	23.76	25.00	1.330	-0.15	0.100	0.133
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSIO	20175	1732.5	22.78	24.00	1.324	0.02	0.076	0.101
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSIO	20175	1732.5	18.16	19.50	1.361	-0.02	0.573	0.780
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSIO	20175	1732.5	17.97	19.50	1.422	0.01	0.481	0.684
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSIO	20175	1732.5	18.16	19.50	1.361	0.05	0.769	1.047
06	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSIO	20050	1720	18.13	19.50	1.371	0.03	0.794	1.088
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSIO	20300	1745	18.10	19.50	1.380	0.09	0.760	1.049
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSIO	20175	1732.5	17.97	19.50	1.422	-0.02	0.701	0.997
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSIO	20050	1720	17.91	19.50	1.442	-0.01	0.667	0.962
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSIO	20300	1745	17.84	19.50	1.466	0.07	0.675	0.989
	LTE Band 4	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSIO	20175	1732.5	17.95	19.50	1.429	0.14	0.679	0.970
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSIO	20175	1732.5	18.16	19.50	1.361	-0.17	0.437	0.595
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSIO	20175	1732.5	17.97	19.50	1.422	0.06	0.371	0.528
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSIO	20175	1732.5	18.16	19.50	1.361	-0.14	0.548	0.746
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSIO	20175	1732.5	17.97	19.50	1.422	0.02	0.459	0.653
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSIO	20175	1732.5	20.62	22.00	1.374	0.08	0.544	0.747
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSIO	20175	1732.5	20.58	22.00	1.387	0.08	0.532	0.738
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSIO	20175	1732.5	20.62	22.00	1.374	0.02	0.170	0.234
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSIO	20175	1732.5	20.58	22.00	1.387	0.08	0.145	0.201
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSIO	20175	1732.5	20.62	22.00	1.374	0.09	0.253	0.348
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSIO	20175	1732.5	20.58	22.00	1.387	0.12	0.189	0.262
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSIO	20175	1732.5	20.62	22.00	1.374	0.03	0.177	0.243
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSIO	20175	1732.5	20.58	22.00	1.387	-0.18	0.148	0.205
	LTE Band 4	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSIO	20175	1732.5	22.64	24.00	1.368	-0.02	0.166	0.227
	LTE Band 4	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSIO	20175	1732.5	21.63	23.00	1.371	-0.19	0.134	0.184
	LTE Band 4	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSIO	20175	1732.5	22.64	24.00	1.368	0.03	0.105	0.144
	LTE Band 4	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSIO	20175	1732.5	21.63	23.00	1.371	0.11	0.092	0.126
	LTE Band 4	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSIO	20175	1732.5	22.64	24.00	1.368	0.01	0.167	0.228
	LTE Band 4	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSIO	20175	1732.5	21.63	23.00	1.371	-0.11	0.136	0.186
	LTE Band 4	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSIO	20175	1732.5	22.64	24.00	1.368	-0.11	0.137	0.187
	LTE Band 4	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSIO	20175	1732.5	21.63	23.00	1.371	0.02	0.104	0.143
1900MHz																		

Sporton International Inc. (Kunshan)

TEL : 86-512-57900158 / FAX : 86-512-57900958

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FCC SAR Test Report

Report No. : FA231203

	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 0	DSIO	661	1880	25.32	26.50	1.312	-0.06	0.053	0.070
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 0	DSIO	661	1880	25.32	26.50	1.312	-0.14	0.049	0.064
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 0	DSIO	661	1880	25.32	26.50	1.312	0.09	0.063	0.083
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 0	DSIO	661	1880	25.32	26.50	1.312	0.07	0.050	0.066
07	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Cheek	0mm	Ant 2	DSIO	661	1880	24.11	26.00	1.545	0.05	0.461	0.712
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Tilted	0mm	Ant 2	DSIO	661	1880	24.11	26.00	1.545	0.11	0.128	0.198
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Cheek	0mm	Ant 2	DSIO	661	1880	24.11	26.00	1.545	0.05	0.178	0.275
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Tilted	0mm	Ant 2	DSIO	661	1880	24.11	26.00	1.545	0.07	0.074	0.114
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 0	DSIO	9400	1880	24.16	24.50	1.081	-0.16	0.227	0.245
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 0	DSIO	9400	1880	24.16	24.50	1.081	0.04	0.178	0.192
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 0	DSIO	9400	1880	24.16	24.50	1.081	-0.04	0.233	0.252
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 0	DSIO	9400	1880	24.16	24.50	1.081	0.01	0.232	0.251
08	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Cheek	0mm	Ant 2	DSIO	9400	1880	19.92	21.50	1.439	0.09	0.549	0.790
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Tilted	0mm	Ant 2	DSIO	9400	1880	19.92	21.50	1.439	-0.15	0.186	0.268
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Cheek	0mm	Ant 2	DSIO	9400	1880	19.92	21.50	1.439	0.06	0.244	0.351
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Tilted	0mm	Ant 2	DSIO	9400	1880	19.92	21.50	1.439	-0.12	0.097	0.140
	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSIO	18900	1880	24.05	25.00	1.245	-0.14	0.139	0.173
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSIO	18900	1880	23.04	24.00	1.247	0.07	0.105	0.131
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSIO	18900	1880	24.05	25.00	1.245	0.03	0.107	0.133
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSIO	18900	1880	23.04	24.00	1.247	-0.1	0.083	0.104
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSIO	18900	1880	24.05	25.00	1.245	0.01	0.185	0.230
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSIO	18900	1880	23.04	24.00	1.247	0.01	0.146	0.182
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSIO	18900	1880	24.05	25.00	1.245	0.06	0.127	0.158
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSIO	18900	1880	23.04	24.00	1.247	-0.08	0.088	0.110
09	LTE Band 2	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSIO	18900	1880	19.62	21.00	1.374	0.01	0.545	0.749
	LTE Band 2	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSIO	18900	1880	19.57	21.00	1.390	0.04	0.424	0.589
	LTE Band 2	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSIO	18900	1880	19.62	21.00	1.374	0.02	0.177	0.243
	LTE Band 2	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSIO	18900	1880	19.57	21.00	1.390	0.04	0.151	0.210
	LTE Band 2	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSIO	18900	1880	19.62	21.00	1.374	0.02	0.222	0.305
	LTE Band 2	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSIO	18900	1880	19.57	21.00	1.390	0.18	0.182	0.253
	LTE Band 2	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSIO	18900	1880	19.62	21.00	1.374	0.18	0.148	0.203
	LTE Band 2	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSIO	18900	1880	19.57	21.00	1.390	-0.12	0.123	0.171
	LTE Band 2 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSIO	18900	1880	18.82	20.00	1.312	0.03	0.392	0.514



FCC SAR Test Report

Report No. : FA231203

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSIO	21100	2535	24.15	25.00	1.216	-	-	0.16	0.162	0.197
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSIO	21100	2535	23.23	24.00	1.194	-	-	-0.17	0.140	0.167
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSIO	21100	2535	24.15	25.00	1.216	-	-	-0.16	0.099	0.120
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSIO	21100	2535	23.23	24.00	1.194	-	-	0.02	0.084	0.100
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSIO	21100	2535	24.15	25.00	1.216	-	-	0.07	0.192	0.234
	LTE Band 7C	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSIO	21100+21298	2535+2554.8	24.16	25.00	1.213	-	-	0.04	0.176	0.214
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSIO	21100	2535	23.23	24.00	1.194	-	-	-0.19	0.191	0.228
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSIO	21100	2535	24.15	25.00	1.216	-	-	-0.04	0.173	0.210
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSIO	21100	2535	23.23	24.00	1.194	-	-	-0.15	0.139	0.166
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSIO	21100	2535	18.54	20.00	1.400	-	-	-0.16	0.408	0.571
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSIO	21100	2535	18.51	20.00	1.409	-	-	0.07	0.385	0.543
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSIO	21100	2535	18.54	20.00	1.400	-	-	0.05	0.410	0.574
	LTE Band 7C	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSIO	21100+21298	2535+2554.8	18.43	20.00	1.435	-	-	0.01	0.396	0.568
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSIO	21100	2535	18.51	20.00	1.409	-	-	-0.15	0.340	0.479
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSIO	21100	2535	18.54	20.00	1.400	-	-	0.08	0.305	0.427
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSIO	21100	2535	18.51	20.00	1.409	-	-	0.08	0.255	0.359
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSIO	21100	2535	18.54	20.00	1.400	-	-	-0.02	0.341	0.477
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSIO	21100	2535	18.51	20.00	1.409	-	-	0.05	0.295	0.416
	LTE Band 7 ENDC	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSIO	21100	2535	17.58	19.00	1.387	-	-	0.05	0.338	0.469
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSIO	21100	2535	19.95	21.00	1.274	-	-	0.09	0.375	0.478
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSIO	21100	2535	17.89	19.00	1.291	-	-	0.01	0.514	0.664
10	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSIO	21100	2535	17.85	19.00	1.303	-	-	0.04	0.692	0.902
	LTE Band 7C	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSIO	21100+21298	2535+2554.8	17.77	19.00	1.327	-	-	-0.02	0.678	0.900
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSIO	20850	2510	17.74	19.00	1.337	-	-	0.02	0.666	0.890
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSIO	21350	2560	17.76	19.00	1.330	-	-	0.1	0.658	0.875
	LTE Band 7	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSIO	21100	2535	17.81	19.00	1.315	-	-	0.03	0.661	0.869
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSIO	21100	2535	17.89	19.00	1.291	-	-	0.15	0.155	0.200
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSIO	21100	2535	17.85	19.00	1.303	-	-	-0.13	0.184	0.240
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSIO	21100	2535	17.89	19.00	1.291	-	-	0.09	0.194	0.250
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSIO	21100	2535	17.85	19.00	1.303	-	-	0.02	0.221	0.288
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSIO	21100	2535	17.89	19.00	1.291	-	-	0.09	0.090	0.116
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSIO	21100	2535	17.85	19.00	1.303	-	-	0.04	0.100	0.130
	LTE Band 7 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSIO	21100	2535	15.93	17.00	1.279	-	-	-0.01	0.402	0.514
	LTE Band 7	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSIO	21100	2535	22.54	23.50	1.247	-	-	0.06	0.181	0.226
	LTE Band 7	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSIO	21100	2535	21.57	22.50	1.239	-	-	0.08	0.144	0.178
	LTE Band 7	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSIO	21100	2535	22.54	23.50	1.247	-	-	0.18	0.097	0.121
	LTE Band 7	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSIO	21100	2535	21.57	22.50	1.239	-	-	0.16	0.078	0.097
	LTE Band 7	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSIO	21100	2535	22.54	23.50	1.247	-	-	0.08	0.232	0.289
	LTE Band 7C	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSIO	21100+21298	2535+2554.8	22.43	23.50	1.279	-	-	0.01	0.221	0.283
	LTE Band 7	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSIO	21100	2535	21.57	22.50	1.239	-	-	0.08	0.189	0.234
	LTE Band 7	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSIO	21100	2535	22.54	23.50	1.247	-	-	0.03	0.079	0.099
	LTE Band 7	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSIO	21100	2535	21.57	22.50	1.239	-	-	-0.16	0.062	0.077
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSIO	21100	2535	23.93	25.50	1.435	-	-	0.03	0.120	0.172
	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSIO	38000	2595	24.08	25.00	1.236	62.9	1.006	0.06	0.130	0.162
	LTE Band 38	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSIO	38000	2595	23.03	24.00	1.250	62.9	1.006	0.07	0.128	0.161
	LTE Band 38	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSIO	38000	2595	24.08	25.00	1.236	62.9	1.006	-0.05	0.101	0.126
	LTE Band 38	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSIO	38000	2595	23.03	24.00	1.250	62.9	1.006	0.08	0.076	0.096
	LTE Band 38	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSIO	38000	2595	24.08	25.00	1.236	62.9	1.006	0.08	0.169	0.210
	LTE Band 38C	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSIO	38000+38198	2595+2614.8	24.03	25.00	1.250	62.9	1.006	0.02	0.153	0.192
	LTE Band 38	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSIO	38000	2595	23.03	24.00	1.250	62.9	1.006	0.04	0.141	0.177

Sporton International Inc. (Kunshan)

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FCC SAR Test Report

Report No. : FA231203

	LTE Band 38	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSiO	38000	2595	24.08	25.00	1.236	62.9	1.006	0.08	0.141	0.175
	LTE Band 38	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSiO	38000	2595	23.03	24.00	1.250	62.9	1.006	0.16	0.105	0.132
11	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	38000	2595	22.94	24.00	1.276	62.9	1.006	-0.04	0.697	0.895
	LTE Band 38C	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	38000+ 38198	2595+ 2614.8	22.77	24.00	1.327	62.9	1.006	0.01	0.653	0.872
	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	37850	2580	22.85	24.00	1.303	62.9	1.006	0.01	0.666	0.873
	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	38150	2610	22.69	24.00	1.352	62.9	1.006	0.02	0.652	0.887
	LTE Band 38	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSiO	38000	2595	21.88	23.00	1.294	62.9	1.006	-0.02	0.560	0.729
	LTE Band 38	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSiO	38000	2595	21.86	23.00	1.300	62.9	1.006	0.02	0.659	0.862
	LTE Band 38	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSiO	38000	2595	22.94	24.00	1.276	62.9	1.006	-0.07	0.665	0.854
	LTE Band 38	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSiO	37850	2580	22.85	24.00	1.303	62.9	1.006	0.07	0.642	0.842
	LTE Band 38	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSiO	38150	2610	22.69	24.00	1.352	62.9	1.006	0.1	0.629	0.856
	LTE Band 38	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSiO	38000	2595	21.88	23.00	1.294	62.9	1.006	-0.07	0.537	0.699
	LTE Band 38	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSiO	38000	2595	21.86	23.00	1.300	62.9	1.006	0.03	0.635	0.831
	LTE Band 38	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSiO	38000	2595	22.94	24.00	1.276	62.9	1.006	-0.16	0.474	0.609
	LTE Band 38	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSiO	38000	2595	21.88	23.00	1.294	62.9	1.006	0.05	0.374	0.487
	LTE Band 38	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSiO	38000	2595	22.94	24.00	1.276	62.9	1.006	0.06	0.556	0.714
	LTE Band 38	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSiO	38000	2595	21.88	23.00	1.294	62.9	1.006	0.08	0.451	0.587
	LTE Band 38 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	38000	2595	20.99	22.00	1.262	62.9	1.006	-0.01	0.416	0.528
	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSiO	38000	2595	20.36	21.50	1.300	62.9	1.006	-0.15	0.596	0.780
	LTE Band 38	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSiO	38000	2595	20.31	21.50	1.315	62.9	1.006	0.05	0.602	0.797
	LTE Band 38C	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSiO	38000+ 38198	2595+ 2614.8	20.20	21.50	1.349	62.9	1.006	0.03	0.586	0.795
	LTE Band 38	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSiO	38000	2595	20.36	21.50	1.300	62.9	1.006	-0.1	0.212	0.277
	LTE Band 38	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSiO	38000	2595	20.31	21.50	1.315	62.9	1.006	0.07	0.216	0.286
	LTE Band 38	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSiO	38000	2595	20.36	21.50	1.300	62.9	1.006	0.07	0.250	0.327
	LTE Band 38	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSiO	38000	2595	20.31	21.50	1.315	62.9	1.006	-0.11	0.247	0.327
	LTE Band 38	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSiO	38000	2595	20.36	21.50	1.300	62.9	1.006	0.18	0.112	0.146
	LTE Band 38	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSiO	38000	2595	20.31	21.50	1.315	62.9	1.006	-0.17	0.109	0.144
	LTE Band 38 ENDC	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSiO	38000	2595	18.25	19.50	1.334	62.9	1.006	0.02	0.384	0.515
	LTE Band 38	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSiO	38000	2595	22.86	24.00	1.300	62.9	1.006	-0.04	0.136	0.178
	LTE Band 38	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSiO	38000	2595	21.82	23.00	1.312	62.9	1.006	-0.14	0.109	0.144
	LTE Band 38	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSiO	38000	2595	22.86	24.00	1.300	62.9	1.006	-0.09	0.082	0.107
	LTE Band 38	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSiO	38000	2595	21.82	23.00	1.312	62.9	1.006	-0.05	0.061	0.081
	LTE Band 38	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSiO	38000	2595	22.86	24.00	1.300	62.9	1.006	0.01	0.167	0.218
	LTE Band 38C	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSiO	38000+ 38198	2595+ 2614.8	22.78	24.00	1.324	62.9	1.006	0.03	0.155	0.207
	LTE Band 38	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSiO	38000	2595	21.82	23.00	1.312	62.9	1.006	0.03	0.133	0.176
	LTE Band 38	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSiO	38000	2595	22.86	24.00	1.300	62.9	1.006	0.1	0.058	0.076
	LTE Band 38	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSiO	38000	2595	21.82	23.00	1.312	62.9	1.006	0.18	0.000	0.000
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 0	DSiO	40620	2593	24.19	25.00	1.205	62.9	1.006	0.13	0.132	0.160
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 0	DSiO	40620	2593	23.11	24.00	1.227	62.9	1.006	0.04	0.133	0.164
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 0	DSiO	40620	2593	24.19	25.00	1.205	62.9	1.006	-0.15	0.102	0.124
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 0	DSiO	40620	2593	23.11	24.00	1.227	62.9	1.006	0.09	0.080	0.099
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 0	DSiO	40620	2593	24.19	25.00	1.205	62.9	1.006	0.02	0.177	0.215
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 0	DSiO	40620	2593	23.11	24.00	1.227	62.9	1.006	-0.09	0.143	0.177
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 0	DSiO	40620	2593	24.19	25.00	1.205	62.9	1.006	-0.11	0.136	0.165
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 0	DSiO	40620	2593	23.11	24.00	1.227	62.9	1.006	-0.13	0.108	0.133
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	40620	2593	22.94	24.00	1.276	62.9	1.006	0.02	0.719	0.923
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	39750	2506	22.88	24.00	1.294	62.9	1.006	0.07	0.699	0.910
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	40185	2549.5	22.69	24.00	1.352	62.9	1.006	0.1	0.674	0.917
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	41055	2636.5	22.79	24.00	1.321	62.9	1.006	-0.07	0.680	0.904
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	41490	2680	22.80	24.00	1.318	62.9	1.006	0.02	0.692	0.918
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSiO	40620	2593	21.90	23.00	1.288	62.9	1.006	-0.19	0.526	0.682
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSiO	39750	2506	21.78	23.00	1.324	62.9	1.006	0.01	0.512	0.682
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSiO	40185	2549.5	21.81	23.00	1.315	62.9	1.006	0.05	0.487	0.644
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSiO	41055	2636.5	21.77	23.00	1.327	62.9	1.006	-0.01	0.500	0.668

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	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 1	DSiO	41490	2680	21.83	23.00	1.309	62.9	1.006	0.07	0.498	0.656
	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 1	DSiO	40620	2593	21.88	23.00	1.294	62.9	1.006	0.01	0.700	0.911
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSiO	40620	2593	22.94	24.00	1.276	62.9	1.006	0.15	0.651	0.836
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSiO	39750	2506	22.88	24.00	1.294	62.9	1.006	0.03	0.640	0.833
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSiO	40185	2549.5	22.69	24.00	1.352	62.9	1.006	0.09	0.603	0.820
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSiO	41055	2636.5	22.79	24.00	1.321	62.9	1.006	0.09	0.622	0.827
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 1	DSiO	41490	2680	22.80	24.00	1.318	62.9	1.006	0.1	0.630	0.835
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSiO	40620	2593	21.90	23.00	1.288	62.9	1.006	0.19	0.513	0.665
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSiO	39750	2506	21.78	23.00	1.324	62.9	1.006	0.07	0.523	0.697
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSiO	40185	2549.5	21.81	23.00	1.315	62.9	1.006	0.01	0.546	0.722
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSiO	41055	2636.5	21.77	23.00	1.327	62.9	1.006	-0.04	0.568	0.758
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 1	DSiO	41490	2680	21.83	23.00	1.309	62.9	1.006	0.05	0.578	0.761
	LTE Band 41	20M	QPSK	100	0	-	Right Tilted	0mm	Ant 1	DSiO	40620	2593	21.88	23.00	1.294	62.9	1.006	0.06	0.622	0.810
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 1	DSiO	40620	2593	22.94	24.00	1.276	62.9	1.006	0.1	0.457	0.587
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 1	DSiO	40620	2593	21.90	23.00	1.288	62.9	1.006	0.16	0.363	0.470
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 1	DSiO	40620	2593	22.94	24.00	1.276	62.9	1.006	0.05	0.466	0.598
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 1	DSiO	40620	2593	21.90	23.00	1.288	62.9	1.006	-0.07	0.403	0.522
	LTE Band 41 ENDC	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 1	DSiO	40620	2593	21.08	22.00	1.236	62.9	1.006	0.03	0.420	0.522
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSiO	41490	2680	21.50	22.00	1.122	62.9	1.006	0.02	0.821	0.927
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSiO	39750	2506	20.19	22.00	1.517	62.9	1.006	-0.08	0.415	0.633
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSiO	40185	2549.5	20.12	22.00	1.542	62.9	1.006	0.04	0.382	0.592
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSiO	40620	2593	20.56	22.00	1.393	62.9	1.006	-0.12	0.676	0.947
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 2	DSiO	41055	2636.5	20.61	22.00	1.377	62.9	1.006	-0.16	0.684	0.948
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSiO	41490	2680	21.41	22.00	1.146	62.9	1.006	-0.06	0.749	0.863
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSiO	39750	2506	20.00	22.00	1.585	62.9	1.006	0.04	0.603	0.961
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSiO	40185	2549.5	20.04	22.00	1.570	62.9	1.006	0.04	0.382	0.603
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSiO	40620	2593	20.56	22.00	1.393	62.9	1.006	0.17	0.669	0.938
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 2	DSiO	41055	2636.5	20.39	22.00	1.449	62.9	1.006	-0.09	0.655	0.955
12	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSiO	41490	2680	21.36	22.00	1.159	62.9	1.006	0.06	0.844	0.984
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 2	DSiO	41490	2680	21.50	22.00	1.122	62.9	1.006	0.07	0.294	0.332
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 2	DSiO	41490	2680	21.41	22.00	1.146	62.9	1.006	-0.15	0.294	0.339
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 2	DSiO	41490	2680	21.50	22.00	1.122	62.9	1.006	-0.07	0.336	0.379
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 2	DSiO	41490	2680	21.41	22.00	1.146	62.9	1.006	0.07	0.336	0.387
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 2	DSiO	41490	2680	21.50	22.00	1.122	62.9	1.006	-0.14	0.151	0.170
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 2	DSiO	41490	2680	21.41	22.00	1.146	62.9	1.006	-0.09	0.146	0.168
	LTE Band 41 ENDC	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DSiO	41490	2680	18.88	19.50	1.153	62.9	1.006	-0.01	0.437	0.507
	LTE Band 41	20M	QPSK	1	0	-	Right Cheek	0mm	Ant 5	DSiO	40620	2593	22.79	24.00	1.321	62.9	1.006	0.09	0.116	0.154
	LTE Band 41	20M	QPSK	50	0	-	Right Cheek	0mm	Ant 5	DSiO	40620	2593	21.69	23.00	1.352	62.9	1.006	0.08	0.094	0.128
	LTE Band 41	20M	QPSK	1	0	-	Right Tilted	0mm	Ant 5	DSiO	40620	2593	22.79	24.00	1.321	62.9	1.006	0.15	0.068	0.090
	LTE Band 41	20M	QPSK	50	0	-	Right Tilted	0mm	Ant 5	DSiO	40620	2593	21.69	23.00	1.352	62.9	1.006	0.03	0.054	0.073
	LTE Band 41	20M	QPSK	1	0	-	Left Cheek	0mm	Ant 5	DSiO	40620	2593	22.79	24.00	1.321	62.9	1.006	0.09	0.163	0.217
	LTE Band 41	20M	QPSK	50	0	-	Left Cheek	0mm	Ant 5	DSiO	40620	2593	21.69	23.00	1.352	62.9	1.006	0.09	0.116	0.158
	LTE Band 41	20M	QPSK	1	0	-	Left Tilted	0mm	Ant 5	DSiO	40620	2593	22.79	24.00	1.321	62.9	1.006	-0.16	0.051	0.068
	LTE Band 41	20M	QPSK	50	0	-	Left Tilted	0mm	Ant 5	DSiO	40620	2593	21.69	23.00	1.352	62.9	1.006	0.02	0.000	0.000
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSiO	507000	2535	23.05	24.50	1.396	-	-	0.06	0.111	0.155
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSiO	507000	2535	22.97	24.50	1.422	-	-	0.09	0.108	0.154
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSiO	507000	2535	23.05	24.50	1.396	-	-	0.07	0.068	0.095
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSiO	507000	2535	22.97	24.50	1.422	-	-	0.03	0.076	0.108
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSiO	507000	2535	23.05	24.50	1.396	-	-	-0.04	0.186	0.260
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSiO	507000	2535	22.97	24.50	1.422	-	-	-0.12	0.172	0.245
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSiO	507000	2535	23.05	24.50	1.396	-	-	-0.18	0.114	0.159
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSiO	507000	2535	22.97	24.50	1.422	-	-	0.03	0.129	0.183
	FR1 n7 Other PA	50M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSiO	507000	2535	24.19	25.00	1.205	-	-	0.03	0.184	0.222
13	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSiO	507000	2535	20.06	21.00	1.242	-	-	-0.15	0.674	0.837
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSiO	505000	2525	19.88	21.00	1.294	-	-	0.01	0.644	0.833

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	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	509000	2545	19.80	21.00	1.318	-	-	0.07	0.629	0.829
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	507000	2535	19.94	21.00	1.276	-	-	-0.16	0.518	0.661
	FR1 n7	50M	QPSK	128	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	507000	2535	20.03	21.00	1.250	-	-	0.05	0.660	0.825
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSi0	507000	2535	20.06	21.00	1.242	-	-	0.09	0.410	0.509
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSi0	507000	2535	19.94	21.00	1.276	-	-	0.05	0.391	0.499
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSi0	507000	2535	20.06	21.00	1.242	-	-	0.01	0.337	0.418
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSi0	507000	2535	19.94	21.00	1.276	-	-	-0.11	0.328	0.419
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSi0	507000	2535	20.06	21.00	1.242	-	-	-0.03	0.371	0.461
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSi0	507000	2535	19.94	21.00	1.276	-	-	-0.08	0.380	0.485
	FR1 n7 ENDC&UL CA	50M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	507000	2535	18.10	19.00	1.230	-	-	-0.01	0.391	0.481
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	507000	2535	17.80	19.00	1.318	-	-	0.08	0.366	0.482
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	507000	2535	17.75	19.00	1.334	-	-	0.04	0.413	0.551
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSi0	507000	2535	17.80	19.00	1.318	-	-	-0.19	0.120	0.158
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSi0	507000	2535	17.75	19.00	1.334	-	-	0.06	0.134	0.179
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSi0	507000	2535	17.80	19.00	1.318	-	-	0.05	0.118	0.156
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSi0	507000	2535	17.75	19.00	1.334	-	-	0.03	0.144	0.192
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSi0	507000	2535	17.80	19.00	1.318	-	-	0.07	0.084	0.111
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSi0	507000	2535	17.75	19.00	1.334	-	-	0.07	0.093	0.124
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSi0	507000	2535	23.95	25.00	1.274	-	-	-0.06	0.165	0.210
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSi0	507000	2535	23.91	25.00	1.285	-	-	0.16	0.217	0.279
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSi0	507000	2535	23.95	25.00	1.274	-	-	-0.11	0.085	0.108
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSi0	507000	2535	23.91	25.00	1.285	-	-	0.02	0.108	0.139
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSi0	507000	2535	23.95	25.00	1.274	-	-	0.03	0.151	0.192
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSi0	507000	2535	23.91	25.00	1.285	-	-	0.09	0.247	0.317
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSi0	507000	2535	23.95	25.00	1.274	-	-	0.07	0.056	0.071
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSi0	507000	2535	23.91	25.00	1.285	-	-	-0.1	0.078	0.100
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSi0	519000	2595	23.02	24.50	1.406	-	-	0.03	0.095	0.134
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSi0	519000	2595	22.98	24.50	1.419	-	-	0.09	0.100	0.142
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSi0	519000	2595	23.02	24.50	1.406	-	-	-0.12	0.079	0.111
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSi0	519000	2595	22.98	24.50	1.419	-	-	-0.18	0.089	0.126
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSi0	519000	2595	23.02	24.50	1.406	-	-	0.02	0.098	0.138
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSi0	519000	2595	22.98	24.50	1.419	-	-	0.05	0.138	0.196
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSi0	519000	2595	23.02	24.50	1.406	-	-	-0.17	0.118	0.166
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSi0	519000	2595	22.98	24.50	1.419	-	-	0.05	0.140	0.199
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	519000	2595	20.40	21.50	1.288	-	-	0.03	0.518	0.667
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	519000	2595	20.35	21.50	1.303	-	-	0.03	0.655	0.854
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	518004	2590.02	20.33	21.50	1.309	-	-	0.02	0.649	0.850
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	519996	2599.98	20.17	21.50	1.358	-	-	0.01	0.624	0.848
	FR1 n38	40M	QPSK	100	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSi0	519000	2595	20.37	21.50	1.297	-	-	0.03	0.640	0.830
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSi0	519000	2595	20.40	21.50	1.288	-	-	0.15	0.459	0.591
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSi0	519000	2595	20.35	21.50	1.303	-	-	-0.15	0.456	0.594
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSi0	519000	2595	20.40	21.50	1.288	-	-	0.12	0.402	0.518
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSi0	519000	2595	20.35	21.50	1.303	-	-	0.03	0.406	0.529
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSi0	519000	2595	20.40	21.50	1.288	-	-	-0.06	0.404	0.520
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSi0	519000	2595	20.35	21.50	1.303	-	-	-0.06	0.470	0.612
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	519000	2595	19.35	21.00	1.462	-	-	0.05	0.677	0.990
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	518004	2590.02	19.14	21.00	1.535	-	-	0.02	0.636	0.976
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	519996	2599.98	19.19	21.00	1.517	-	-	0.07	0.630	0.956
14	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	519000	2595	19.30	21.00	1.479	-	-	0.09	0.735	1.087
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	518004	2590.02	19.04	21.00	1.570	-	-	0.16	0.666	1.046
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	519996	2599.98	19.02	21.00	1.578	-	-	0.02	0.654	1.032
	FR1 n38	40M	QPSK	100	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSi0	519000	2595	19.25	21.00	1.496	-	-	0.03	0.700	1.047
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSi0	519000	2595	19.35	21.00	1.462	-	-	0.02	0.278	0.406
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSi0	519000	2595	19.30	21.00	1.479	-	-	0.14	0.256	0.379
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSi0	519000	2595	19.35	21.00	1.462	-	-	-0.07	0.222	0.325
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSi0	519000	2595	19.30	21.00	1.479	-	-	0.05	0.232	0.343

Sporton International Inc. (Kunshan)

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	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSiO	519000	2595	19.35	21.00	1.462	-	-	-0.1	0.171	0.250
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSiO	519000	2595	19.30	21.00	1.479	-	-	0.07	0.170	0.251
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSiO	519000	2595	24.12	25.50	1.374	-	-	0.01	0.369	0.507
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSiO	519000	2595	24.04	25.50	1.400	-	-	-0.15	0.376	0.526
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSiO	519000	2595	24.12	25.50	1.374	-	-	0.09	0.230	0.316
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSiO	519000	2595	24.04	25.50	1.400	-	-	-0.02	0.175	0.245
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSiO	519000	2595	24.12	25.50	1.374	-	-	0.13	0.376	0.517
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSiO	519000	2595	24.04	25.50	1.400	-	-	0.06	0.390	0.546
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSiO	519000	2595	24.12	25.50	1.374	-	-	0.07	0.133	0.183
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSiO	519000	2595	24.04	25.50	1.400	-	-	0.09	0.147	0.206
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSiO	518598	2592.99	23.11	24.50	1.377	-	-	-0.15	0.076	0.105
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 0	DSiO	518598	2592.99	23.08	24.50	1.387	-	-	0.04	0.082	0.114
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSiO	518598	2592.99	23.11	24.50	1.377	-	-	-0.09	0.064	0.088
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 0	DSiO	518598	2592.99	23.08	24.50	1.387	-	-	0.05	0.066	0.092
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSiO	518598	2592.99	23.11	24.50	1.377	-	-	0.06	0.133	0.183
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 0	DSiO	518598	2592.99	23.08	24.50	1.387	-	-	0.06	0.132	0.183
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSiO	518598	2592.99	23.11	24.50	1.377	-	-	-0.19	0.098	0.135
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 0	DSiO	518598	2592.99	23.08	24.50	1.387	-	-	-0.03	0.125	0.173
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSiO	518598	2592.99	19.50	20.50	1.259	-	-	-0.04	0.324	0.408
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 1	DSiO	518598	2592.99	19.44	20.50	1.276	-	-	-0.18	0.228	0.291
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSiO	518598	2592.99	19.50	20.50	1.259	-	-	-0.17	0.285	0.359
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 1	DSiO	518598	2592.99	19.44	20.50	1.276	-	-	0.07	0.249	0.318
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSiO	518598	2592.99	19.50	20.50	1.259	-	-	0.1	0.219	0.276
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 1	DSiO	518598	2592.99	19.44	20.50	1.276	-	-	0.11	0.349	0.445
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSiO	518598	2592.99	19.50	20.50	1.259	-	-	0.04	0.254	0.320
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 1	DSiO	518598	2592.99	19.44	20.50	1.276	-	-	0.07	0.309	0.394
15	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSiO	518598	2592.99	18.41	19.50	1.285	-	-	0.09	0.645	0.829
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSiO	509202	2546.01	18.22	19.50	1.343	-	-	0.08	0.601	0.807
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSiO	528000	2640	18.07	19.50	1.390	-	-	0.1	0.587	0.816
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSiO	518598	2592.99	18.42	19.50	1.282	-	-	0.13	0.613	0.786
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSiO	518598	2592.99	18.38	19.50	1.294	-	-	0.02	0.600	0.777
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSiO	518598	2592.99	18.41	19.50	1.285	-	-	0.11	0.239	0.307
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSiO	518598	2592.99	18.42	19.50	1.282	-	-	-0.17	0.269	0.345
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSiO	518598	2592.99	18.41	19.50	1.285	-	-	0.02	0.248	0.319
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSiO	518598	2592.99	18.42	19.50	1.282	-	-	0.09	0.273	0.350
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSiO	518598	2592.99	18.41	19.50	1.285	-	-	0.1	0.128	0.165
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSiO	518598	2592.99	18.42	19.50	1.282	-	-	0.05	0.139	0.178
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSiO	518598	2592.99	24.17	25.50	1.358	-	-	-0.02	0.118	0.160
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSiO	518598	2592.99	24.14	25.50	1.368	-	-	0.04	0.209	0.286
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSiO	518598	2592.99	24.17	25.50	1.358	-	-	0.07	0.211	0.287
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSiO	518598	2592.99	24.14	25.50	1.368	-	-	0.06	0.142	0.194
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSiO	518598	2592.99	24.17	25.50	1.358	-	-	0.04	0.313	0.425
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSiO	518598	2592.99	24.14	25.50	1.368	-	-	0.02	0.280	0.383
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSiO	518598	2592.99	24.17	25.50	1.358	-	-	-0.17	0.113	0.153
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSiO	518598	2592.99	24.14	25.50	1.368	-	-	0.07	0.102	0.140



FCC SAR Test Report

Report No. : FA231203

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
3500MHz																		
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSIO	656000	3840	15.07	16.00	1.239	0.01	0.201	0.249
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSIO	656000	3840	14.85	16.00	1.303	0.13	0.192	0.250
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSIO	656000	3840	15.07	16.00	1.239	0.01	0.057	0.071
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSIO	656000	3840	14.85	16.00	1.303	-0.12	0.068	0.089
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSIO	656000	3840	15.07	16.00	1.239	-0.04	0.029	0.036
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSIO	656000	3840	14.85	16.00	1.303	-0.15	0.078	0.102
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSIO	656000	3840	15.07	16.00	1.239	0.09	0.094	0.116
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSIO	656000	3840	14.85	16.00	1.303	0.07	0.045	0.059
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSIO	633334	3500.01	15.45	16.00	1.135	-0.03	0.488	0.554
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSIO	633334	3500.01	15.41	16.00	1.146	0.01	0.489	0.560
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSIO	633334	3500.01	15.45	16.00	1.135	-0.12	0.098	0.111
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSIO	633334	3500.01	15.41	16.00	1.146	0.07	0.098	0.112
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSIO	633334	3500.01	15.45	16.00	1.135	-0.02	0.208	0.236
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSIO	633334	3500.01	15.41	16.00	1.146	0.06	0.227	0.260
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSIO	633334	3500.01	15.45	16.00	1.135	-0.09	0.057	0.065
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSIO	633334	3500.01	15.41	16.00	1.146	0.16	0.051	0.058
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSIO	656000	3840	15.45	16.00	1.135	0.13	0.087	0.099
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSIO	656000	3840	15.43	16.00	1.140	0.07	0.081	0.092
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSIO	656000	3840	15.45	16.00	1.135	0.02	0.075	0.085
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSIO	656000	3840	15.43	16.00	1.140	0.01	0.095	0.108
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	656000	3840	15.45	16.00	1.135	-0.08	0.193	0.219
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	656000	3840	15.43	16.00	1.140	0.02	0.283	0.323
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSIO	656000	3840	15.45	16.00	1.135	-0.07	0.250	0.284
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSIO	656000	3840	15.43	16.00	1.140	0.02	0.151	0.172
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSIO	633334	3500.01	15.45	16.00	1.135	0.04	0.153	0.174
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSIO	633334	3500.01	15.35	16.00	1.161	-0.16	0.160	0.186
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSIO	633334	3500.01	15.45	16.00	1.135	0.06	0.131	0.149
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSIO	633334	3500.01	15.35	16.00	1.161	-0.03	0.131	0.152
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	633334	3500.01	15.45	16.00	1.135	-0.05	0.512	0.581
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	633334	3500.01	15.35	16.00	1.161	0.09	0.499	0.580
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSIO	633334	3500.01	15.45	16.00	1.135	0.12	0.233	0.264
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSIO	633334	3500.01	15.35	16.00	1.161	0.06	0.246	0.286
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSIO	656000	3840	15.61	15.70	1.021	0.18	0.331	0.338
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSIO	656000	3840	15.56	15.70	1.033	-0.01	0.441	0.455
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSIO	656000	3840	15.61	15.70	1.021	0.04	0.412	0.421
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSIO	656000	3840	15.56	15.70	1.033	0.09	0.361	0.373
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSIO	656000	3840	15.61	15.70	1.021	-0.09	0.192	0.196
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSIO	656000	3840	15.56	15.70	1.033	-0.15	0.225	0.232
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSIO	656000	3840	15.61	15.70	1.021	-0.01	0.279	0.285
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSIO	656000	3840	15.56	15.70	1.033	-0.15	0.260	0.269
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSIO	633334	3500.01	15.65	15.70	1.012	0.17	0.567	0.574
16	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSIO	633334	3500.01	15.61	15.70	1.021	0.01	0.572	0.584
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSIO	633334	3500.01	15.65	15.70	1.012	0.17	0.450	0.455
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSIO	633334	3500.01	15.61	15.70	1.021	0.03	0.449	0.458
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSIO	633334	3500.01	15.65	15.70	1.012	-0.03	0.257	0.260
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSIO	633334	3500.01	15.61	15.70	1.021	0.02	0.256	0.261
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSIO	633334	3500.01	15.65	15.70	1.012	-0.08	0.276	0.279
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSIO	633334	3500.01	15.61	15.70	1.021	-0.06	0.274	0.280
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSIO	656000	3840	23.43	24.00	1.140	0.1	0.032	0.036
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSIO	656000	3840	23.37	24.00	1.156	0.04	0.023	0.027
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	656000	3840	23.43	24.00	1.140	0.06	0.042	0.048
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	656000	3840	23.37	24.00	1.156	0.07	0.044	0.051
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	656000	3840	23.43	24.00	1.140	-0.11	0.050	0.057

Sporton International Inc. (Kunshan)

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	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	656000	3840	23.37	24.00	1.156	-0.01	0.051	0.059
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSIO	656000	3840	23.43	24.00	1.140	0.04	0.021	0.024
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSIO	656000	3840	23.37	24.00	1.156	0.07	0.020	0.023
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSIO	633334	3500.01	23.51	24.00	1.119	0.11	0.192	0.215
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSIO	633334	3500.01	23.45	24.00	1.135	0.03	0.178	0.202
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	633334	3500.01	23.51	24.00	1.119	-0.14	0.336	0.376
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	633334	3500.01	23.45	24.00	1.135	0.05	0.338	0.384
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	633334	3500.01	23.51	24.00	1.119	0.03	0.320	0.358
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	633334	3500.01	23.45	24.00	1.135	0.03	0.320	0.363
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSIO	633334	3500.01	23.51	24.00	1.119	-0.09	0.201	0.225
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSIO	633334	3500.01	23.45	24.00	1.135	0.12	0.202	0.229
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSIO	650000	3750	16.30	17.00	1.175	0.01	0.288	0.338
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSIO	650000	3750	16.21	17.00	1.199	0.14	0.280	0.336
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSIO	650000	3750	16.30	17.00	1.175	0.16	0.061	0.072
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSIO	650000	3750	16.21	17.00	1.199	-0.06	0.060	0.072
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSIO	650000	3750	16.30	17.00	1.175	0.01	0.133	0.156
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSIO	650000	3750	16.21	17.00	1.199	0.06	0.109	0.131
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSIO	650000	3750	16.30	17.00	1.175	-0.11	0.037	0.043
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSIO	650000	3750	16.21	17.00	1.199	0.02	0.037	0.044
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSIO	633334	3500.01	16.46	17.00	1.132	-0.09	0.561	0.635
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 2	DSIO	633334	3500.01	16.43	17.00	1.140	-0.01	0.564	0.643
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSIO	633334	3500.01	16.46	17.00	1.132	-0.18	0.104	0.118
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 2	DSIO	633334	3500.01	16.43	17.00	1.140	-0.02	0.104	0.119
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSIO	633334	3500.01	16.46	17.00	1.132	0.04	0.262	0.297
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 2	DSIO	633334	3500.01	16.43	17.00	1.140	-0.08	0.231	0.263
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSIO	633334	3500.01	16.46	17.00	1.132	0.05	0.063	0.071
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 2	DSIO	633334	3500.01	16.43	17.00	1.140	0.06	0.062	0.071
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSIO	650000	3750	16.02	17.00	1.253	0.08	0.141	0.177
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSIO	650000	3750	16.00	17.00	1.259	0.09	0.141	0.178
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSIO	650000	3750	16.02	17.00	1.253	0.12	0.149	0.187
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSIO	650000	3750	16.00	17.00	1.259	0.08	0.147	0.185
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	650000	3750	16.02	17.00	1.253	0.09	0.434	0.544
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	650000	3750	16.00	17.00	1.259	-0.02	0.450	0.567
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSIO	650000	3750	16.02	17.00	1.253	0.04	0.216	0.271
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSIO	650000	3750	16.00	17.00	1.259	0.03	0.218	0.274
	FR1 n78 ENDC&UL CA	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	650000	3750	14.03	15.00	1.250	0.01	0.311	0.389
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSIO	633334	3500.01	16.31	17.00	1.172	0.08	0.212	0.249
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 3	DSIO	633334	3500.01	16.30	17.00	1.175	0.01	0.213	0.250
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSIO	633334	3500.01	16.31	17.00	1.172	0.11	0.219	0.257
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 3	DSIO	633334	3500.01	16.30	17.00	1.175	0.08	0.229	0.269
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	633334	3500.01	16.31	17.00	1.172	-0.09	0.624	0.731
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	633334	3500.01	16.30	17.00	1.175	0.14	0.618	0.726
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSIO	633334	3500.01	16.31	17.00	1.172	0.15	0.329	0.386
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 3	DSIO	633334	3500.01	16.30	17.00	1.175	0.13	0.341	0.401
	FR1 n78 ENDC&UL CA	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 3	DSIO	633334	3500.01	14.31	15.00	1.172	-0.01	0.388	0.455
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSIO	650000	3750	16.65	17.00	1.084	0.18	0.629	0.682
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSIO	650000	3750	16.60	17.00	1.096	0.01	0.644	0.706
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSIO	650000	3750	16.65	17.00	1.084	-0.17	0.509	0.552
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSIO	650000	3750	16.60	17.00	1.096	0.08	0.523	0.573
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSIO	650000	3750	16.65	17.00	1.084	-0.03	0.296	0.321
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSIO	650000	3750	16.60	17.00	1.096	0.02	0.299	0.328
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSIO	650000	3750	16.65	17.00	1.084	-0.15	0.376	0.408
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSIO	650000	3750	16.60	17.00	1.096	0.07	0.361	0.396
17	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSIO	633334	3500.01	16.75	17.00	1.059	0.01	0.691	0.732
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 4	DSIO	633334	3500.01	16.72	17.00	1.067	0.06	0.685	0.731



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FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSIO	633334	3500.01	16.75	17.00	1.059	-0.16	0.549	0.582
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 4	DSIO	633334	3500.01	16.72	17.00	1.067	0.06	0.546	0.582
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSIO	633334	3500.01	16.75	17.00	1.059	0.04	0.305	0.323
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 4	DSIO	633334	3500.01	16.72	17.00	1.067	-0.09	0.305	0.325
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSIO	633334	3500.01	16.75	17.00	1.059	0.05	0.319	0.338
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 4	DSIO	633334	3500.01	16.72	17.00	1.067	0.05	0.326	0.348
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSIO	650000	3750	25.25	26.00	1.189	-0.13	0.141	0.168
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSIO	650000	3750	25.18	26.00	1.208	-0.05	0.146	0.176
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	650000	3750	25.25	26.00	1.189	0.05	0.138	0.164
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	650000	3750	25.18	26.00	1.208	-0.12	0.141	0.170
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	650000	3750	25.25	26.00	1.189	0.01	0.194	0.231
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	650000	3750	25.18	26.00	1.208	0.18	0.183	0.221
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSIO	650000	3750	25.25	26.00	1.189	-0.1	0.088	0.105
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSIO	650000	3750	25.18	26.00	1.208	-0.15	0.092	0.111
FR1 n78 ENDC&UL CA	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	650000	3750	24.27	25.00	1.183	0.02	0.156	0.185
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSIO	633334	3500.01	25.27	26.00	1.183	0.07	0.302	0.357
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Cheek	0mm	Ant 5	DSIO	633334	3500.01	25.18	26.00	1.208	-0.02	0.302	0.365
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	633334	3500.01	25.27	26.00	1.183	-0.08	0.548	0.648
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	633334	3500.01	25.18	26.00	1.208	0.19	0.544	0.657
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	633334	3500.01	25.27	26.00	1.183	0.07	0.535	0.633
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Cheek	0mm	Ant 5	DSIO	633334	3500.01	25.18	26.00	1.208	0.04	0.533	0.644
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSIO	633334	3500.01	25.27	26.00	1.183	0.03	0.333	0.394
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Tilted	0mm	Ant 5	DSIO	633334	3500.01	25.18	26.00	1.208	0.05	0.336	0.406
FR1 n78 ENDC&UL CA	100M	QPSK	135	69	DFT-SCS-30KHz	Right Tilted	0mm	Ant 5	DSIO	633334	3500.01	24.21	25.00	1.199	0.03	0.388	0.465



FCC SAR Test Report

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Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 8+9	Standalone	1	2412	20.09	21.50	1.384	99.31	1.007	-0.07	0.300	0.418
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8+9	Standalone	1	2412	20.09	21.50	1.384	99.31	1.007	-0.08	0.311	0.433
18	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8+9	Standalone	1	2412	20.09	21.50	1.384	99.31	1.007	-0.03	0.731	1.018
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8+9	Standalone	1	2412	20.09	21.50	1.384	99.31	1.007	0.09	0.553	0.770
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8+9	Standalone	11	2462	19.94	21.50	1.432	99.31	1.007	0.01	0.705	1.017
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 8+9	Simultaneous	1	2412	14.13	15.50	1.371	99.31	1.007	-0.03	0.077	0.106
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 8+9	Simultaneous	1	2412	14.13	15.50	1.371	99.31	1.007	0.01	0.082	0.113
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 8+9	Simultaneous	1	2412	14.13	15.50	1.371	99.31	1.007	-0.01	0.188	0.260
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 8+9	Simultaneous	1	2412	14.13	15.50	1.371	99.31	1.007	0.02	0.152	0.210
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 8	Full	78	2480	15.78	17.00	1.324	76.83	1.302	0.01	0.092	0.159
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 8	Full	78	2480	15.78	17.00	1.324	76.83	1.302	-0.02	0.109	0.188
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 8	Full	78	2480	15.78	17.00	1.324	76.83	1.302	0.06	0.169	0.291
19	Bluetooth	1Mbps	Left Tilted	0mm	Ant 8	Full	78	2480	15.78	17.00	1.324	76.83	1.302	0.01	0.208	0.359
5000MHz																
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8+9	Standalone	58	5290	16.93	18.00	1.279	88.19	1.134	0.18	0.227	0.329
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8+9	Standalone	58	5290	16.93	18.00	1.279	88.19	1.134	0.17	0.322	0.467
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8+9	Standalone	58	5290	16.93	18.00	1.279	88.19	1.134	0.05	0.421	0.611
20	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8+9	Standalone	58	5290	16.93	18.00	1.279	88.19	1.134	0.02	0.604	0.876
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8+9	Simultaneous	58	5290	11.23	12.00	1.194	88.19	1.134	-0.01	0.066	0.089
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8+9	Simultaneous	58	5290	11.23	12.00	1.194	88.19	1.134	0.01	0.103	0.139
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8+9	Simultaneous	58	5290	11.23	12.00	1.194	88.19	1.134	0.05	0.125	0.169
	WLAN5.3GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8+9	Simultaneous	58	5290	11.23	12.00	1.194	88.19	1.134	0.01	0.175	0.237
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8+9	Standalone	138	5690	15.57	17.00	1.390	88.19	1.134	0.09	0.168	0.265
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8+9	Standalone	138	5690	15.57	17.00	1.390	88.19	1.134	0.1	0.236	0.372
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8+9	Standalone	138	5690	15.57	17.00	1.390	88.19	1.134	0.01	0.338	0.533
21	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8+9	Standalone	138	5690	15.57	17.00	1.390	88.19	1.134	-0.08	0.517	0.815
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8+9	Standalone	122	5610	15.38	17.00	1.452	88.19	1.134	0.02	0.484	0.797
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8+9	Simultaneous	138	5690	9.67	11.00	1.358	88.19	1.134	0.02	0.057	0.088
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8+9	Simultaneous	138	5690	9.67	11.00	1.358	88.19	1.134	0.03	0.080	0.123
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8+9	Simultaneous	138	5690	9.67	11.00	1.358	88.19	1.134	-0.01	0.103	0.159
	WLAN5.5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8+9	Simultaneous	138	5690	9.67	11.00	1.358	88.19	1.134	0.05	0.154	0.237
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8+9	Standalone	155	5775	14.74	16.50	1.500	88.19	1.134	0.03	0.221	0.376
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8+9	Standalone	155	5775	14.74	16.50	1.500	88.19	1.134	0.03	0.244	0.415
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8+9	Standalone	155	5775	14.74	16.50	1.500	88.19	1.134	-0.04	0.309	0.525
22	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8+9	Standalone	155	5775	14.74	16.50	1.500	88.19	1.134	-0.07	0.465	0.791
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 8+9	Simultaneous	155	5775	8.93	10.50	1.435	88.19	1.134	0.04	0.067	0.109
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 8+9	Simultaneous	155	5775	8.93	10.50	1.435	88.19	1.134	-0.01	0.081	0.132
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 8+9	Simultaneous	155	5775	8.93	10.50	1.435	88.19	1.134	0.02	0.095	0.155
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 8+9	Simultaneous	155	5775	8.93	10.50	1.435	88.19	1.134	-0.01	0.142	0.231



15.2 Hotspot SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
835MHz																		
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 0	DSI4	189	836.4	28.34	29.50	1.306	0.02	0.113	0.148
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 0	DSI4	189	836.4	28.34	29.50	1.306	0.07	0.199	0.260
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 0	DSI4	189	836.4	28.34	29.50	1.306	0.03	0.068	0.089
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Side	10mm	Ant 0	DSI4	189	836.4	28.34	29.50	1.306	0.09	0.147	0.192
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	10mm	Ant 0	DSI4	189	836.4	28.34	29.50	1.306	-0.07	0.197	0.257
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 1	DSI4	189	836.4	28.12	30.00	1.542	-0.18	0.148	0.228
23	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 1	DSI4	189	836.4	28.12	30.00	1.542	-0.02	0.261	0.402
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 1	DSI4	189	836.4	28.12	30.00	1.542	0.03	0.114	0.176
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Right Side	10mm	Ant 1	DSI4	189	836.4	28.12	30.00	1.542	0.16	0.120	0.185
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Top Side	10mm	Ant 1	DSI4	189	836.4	28.12	30.00	1.542	0.11	0.189	0.291
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI4	4182	836.4	24.51	25.00	1.119	0.11	0.160	0.179
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI4	4182	836.4	24.51	25.00	1.119	-0.09	0.279	0.312
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI4	4182	836.4	24.51	25.00	1.119	0.08	0.087	0.097
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI4	4182	836.4	24.51	25.00	1.119	0.09	0.161	0.180
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI4	4182	836.4	24.51	25.00	1.119	0.04	0.278	0.311
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 1	DSI4	4182	836.4	23.09	24.50	1.384	0.05	0.143	0.198
24	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 1	DSI4	4182	836.4	23.09	24.50	1.384	-0.02	0.262	0.362
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 1	DSI4	4182	836.4	23.09	24.50	1.384	-0.03	0.105	0.145
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 1	DSI4	4182	836.4	23.09	24.50	1.384	0.18	0.109	0.151
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 1	DSI4	4182	836.4	23.09	24.50	1.384	-0.08	0.157	0.217
	LTE Band 5	10M	QPSK	1	0	-	Front	10mm	Ant 0	DSI4	20525	836.5	22.51	23.50	1.256	0.12	0.070	0.088
	LTE Band 5	10M	QPSK	25	0	-	Front	10mm	Ant 0	DSI4	20525	836.5	22.46	23.50	1.271	0.06	0.072	0.091
	LTE Band 5	10M	QPSK	1	0	-	Back	10mm	Ant 0	DSI4	20525	836.5	22.51	23.50	1.256	0.16	0.129	0.162
	LTE Band 5	10M	QPSK	25	0	-	Back	10mm	Ant 0	DSI4	20525	836.5	22.46	23.50	1.271	-0.11	0.137	0.174
	LTE Band 5	10M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI4	20525	836.5	22.51	23.50	1.256	-0.07	0.043	0.054
	LTE Band 5	10M	QPSK	25	0	-	Left Side	10mm	Ant 0	DSI4	20525	836.5	22.46	23.50	1.271	-0.04	0.044	0.056
	LTE Band 5	10M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI4	20525	836.5	22.51	23.50	1.256	-0.07	0.075	0.094
	LTE Band 5	10M	QPSK	25	0	-	Right Side	10mm	Ant 0	DSI4	20525	836.5	22.46	23.50	1.271	0.14	0.077	0.098
	LTE Band 5	10M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI4	20525	836.5	22.51	23.50	1.256	0.03	0.139	0.175
	LTE Band 5	10M	QPSK	25	0	-	Bottom Side	10mm	Ant 0	DSI4	20525	836.5	22.46	23.50	1.271	-0.03	0.144	0.183
	LTE Band 5	10M	QPSK	1	0	-	Front	10mm	Ant 1	DSI4	20525	836.5	23.31	24.50	1.315	0.07	0.159	0.209
	LTE Band 5	10M	QPSK	25	0	-	Front	10mm	Ant 1	DSI4	20525	836.5	23.27	24.50	1.327	0.16	0.162	0.215
25	LTE Band 5	10M	QPSK	1	0	-	Back	10mm	Ant 1	DSI4	20525	836.5	23.31	24.50	1.315	0.01	0.262	0.345
	LTE Band 5	10M	QPSK	25	0	-	Back	10mm	Ant 1	DSI4	20525	836.5	23.27	24.50	1.327	0.14	0.252	0.335
	LTE Band 5	10M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI4	20525	836.5	23.31	24.50	1.315	0.09	0.116	0.153
	LTE Band 5	10M	QPSK	25	0	-	Left Side	10mm	Ant 1	DSI4	20525	836.5	23.27	24.50	1.327	0.15	0.114	0.151
	LTE Band 5	10M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI4	20525	836.5	23.31	24.50	1.315	0.04	0.124	0.163
	LTE Band 5	10M	QPSK	25	0	-	Right Side	10mm	Ant 1	DSI4	20525	836.5	23.27	24.50	1.327	-0.09	0.125	0.166
	LTE Band 5	10M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI4	20525	836.5	23.31	24.50	1.315	-0.07	0.198	0.260
	LTE Band 5	10M	QPSK	25	0	-	Top Side	10mm	Ant 1	DSI4	20525	836.5	23.27	24.50	1.327	0.01	0.199	0.264
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI4	167300	836.5	23.93	24.50	1.140	0.06	0.096	0.109
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI4	167300	836.5	23.89	24.50	1.151	0.14	0.108	0.124
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	167300	836.5	23.93	24.50	1.140	0.08	0.164	0.187
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	167300	836.5	23.89	24.50	1.151	0.02	0.209	0.241
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI4	167300	836.5	23.93	24.50	1.140	0.04	0.067	0.076
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI4	167300	836.5	23.89	24.50	1.151	0.03	0.067	0.077
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI4	167300	836.5	23.93	24.50	1.140	0.18	0.132	0.151
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI4	167300	836.5	23.89	24.50	1.151	0.09	0.136	0.157
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI4	167300	836.5	23.93	24.50	1.140	0.05	0.126	0.144
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI4	167300	836.5	23.89	24.50	1.151	0.06	0.166	0.191
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI4	167300	836.5	24.13	25.70	1.435	0.05	0.125	0.179



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	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI4	167300	836.5	24.12	25.70	1.439	0.02	0.118	0.170
26	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI4	167300	836.5	24.13	25.70	1.435	0.08	0.246	0.353
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI4	167300	836.5	24.12	25.70	1.439	0.07	0.224	0.322
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI4	167300	836.5	24.13	25.70	1.435	0.16	0.138	0.198
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI4	167300	836.5	24.12	25.70	1.439	0.06	0.125	0.180
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI4	167300	836.5	24.13	25.70	1.435	-0.07	0.114	0.164
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI4	167300	836.5	24.12	25.70	1.439	-0.11	0.111	0.160
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI4	167300	836.5	24.13	25.70	1.435	-0.19	0.133	0.191
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI4	167300	836.5	24.12	25.70	1.439	0.06	0.126	0.181
1750MHz																		
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI4	1413	1732.6	19.04	20.00	1.247	-0.04	0.185	0.231
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI4	1413	1732.6	19.04	20.00	1.247	0.06	0.422	0.526
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI4	1413	1732.6	19.04	20.00	1.247	0.01	0.000	0.000
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI4	1413	1732.6	19.04	20.00	1.247	0.03	0.055	0.069
27	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI4	1413	1732.6	19.04	20.00	1.247	-0.09	0.609	0.760
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI4	1413	1732.6	19.28	20.50	1.324	0.06	0.089	0.118
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI4	1413	1732.6	19.28	20.50	1.324	0.02	0.237	0.314
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI4	1413	1732.6	19.28	20.50	1.324	0.09	0.253	0.335
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 2	DSI4	1413	1732.6	19.28	20.50	1.324	0.04	0.000	0.000
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI4	20175	1732.5	18.74	20.00	1.337	0.08	0.132	0.176
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI4	20175	1732.5	18.65	20.00	1.365	0.1	0.142	0.194
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI4	20175	1732.5	18.74	20.00	1.337	0.06	0.324	0.433
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI4	20175	1732.5	18.65	20.00	1.365	0.08	0.347	0.474
	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI4	20175	1732.5	18.74	20.00	1.337	-0.1	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 0	DSI4	20175	1732.5	18.65	20.00	1.365	-0.09	0.000	0.000
	LTE Band 4	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI4	20175	1732.5	18.74	20.00	1.337	-0.15	0.041	0.055
	LTE Band 4	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI4	20175	1732.5	18.65	20.00	1.365	-0.01	0.043	0.059
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI4	20175	1732.5	18.74	20.00	1.337	0.07	0.488	0.652
28	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI4	20175	1732.5	18.65	20.00	1.365	-0.08	0.511	0.697
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI4	20175	1732.5	18.16	19.50	1.361	0.04	0.162	0.221
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI4	20175	1732.5	17.97	19.50	1.422	0.13	0.157	0.223
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI4	20175	1732.5	18.16	19.50	1.361	0.15	0.330	0.449
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI4	20175	1732.5	17.97	19.50	1.422	0.14	0.342	0.486
	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI4	20175	1732.5	18.16	19.50	1.361	0.02	0.010	0.014
	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI4	20175	1732.5	17.97	19.50	1.422	-0.04	0.005	0.007
	LTE Band 4	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI4	20175	1732.5	18.16	19.50	1.361	-0.15	0.007	0.010
	LTE Band 4	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI4	20175	1732.5	17.97	19.50	1.422	0.06	0.003	0.004
	LTE Band 4	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI4	20175	1732.5	18.16	19.50	1.361	-0.06	0.379	0.516
	LTE Band 4	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI4	20175	1732.5	17.97	19.50	1.422	0.06	0.385	0.548
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI4	20175	1732.5	19.72	21.00	1.343	0.05	0.093	0.125
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI4	20175	1732.5	19.63	21.00	1.371	0.02	0.094	0.129
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	20175	1732.5	19.72	21.00	1.343	-0.13	0.251	0.337
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	20175	1732.5	19.63	21.00	1.371	0.16	0.256	0.351
	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI4	20175	1732.5	19.72	21.00	1.343	-0.02	0.264	0.354
	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI4	20175	1732.5	19.63	21.00	1.371	-0.07	0.270	0.370
	LTE Band 4	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI4	20175	1732.5	19.72	21.00	1.343	0.02	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI4	20175	1732.5	19.63	21.00	1.371	0.06	0.000	0.000
	LTE Band 4	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI4	20175	1732.5	19.57	21.00	1.390	-0.03	0.080	0.111
	LTE Band 4	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI4	20175	1732.5	19.52	21.00	1.406	-0.04	0.081	0.114
	LTE Band 4	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI4	20175	1732.5	19.57	21.00	1.390	0.08	0.185	0.257
	LTE Band 4	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI4	20175	1732.5	19.52	21.00	1.406	-0.03	0.189	0.266
	LTE Band 4	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI4	20175	1732.5	19.57	21.00	1.390	0.04	0.165	0.229
	LTE Band 4	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI4	20175	1732.5	19.52	21.00	1.406	-0.18	0.173	0.243
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI4	20175	1732.5	19.57	21.00	1.390	-0.17	0.000	0.000
	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI4	20175	1732.5	19.52	21.00	1.406	-0.03	0.000	0.000
1900MHz																		

Sporton International Inc. (Kunshan)

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	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 0	DSI4	661	1880	22.29	23.50	1.321	0.05	0.139	0.184
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 0	DSI4	661	1880	22.29	23.50	1.321	-0.15	0.259	0.342
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 0	DSI4	661	1880	22.29	23.50	1.321	0.04	0.081	0.107
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Right Side	10mm	Ant 0	DSI4	661	1880	22.29	23.50	1.321	0.11	0.000	0.000
29	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Bottom Side	10mm	Ant 0	DSI4	661	1880	22.29	23.50	1.321	0.07	0.413	0.546
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	10mm	Ant 2	DSI4	661	1880	23.12	25.00	1.542	0.08	0.083	0.128
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	10mm	Ant 2	DSI4	661	1880	23.12	25.00	1.542	0.06	0.224	0.345
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Left Side	10mm	Ant 2	DSI4	661	1880	23.12	25.00	1.542	0.03	0.223	0.344
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Top Side	10mm	Ant 2	DSI4	661	1880	23.12	25.00	1.542	0.09	0.000	0.000
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 0	DSI4	9400	1880	21.18	21.50	1.076	0.02	0.320	0.344
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 0	DSI4	9400	1880	21.18	21.50	1.076	-0.03	0.590	0.635
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 0	DSI4	9400	1880	21.18	21.50	1.076	0.03	0.165	0.178
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Right Side	10mm	Ant 0	DSI4	9400	1880	21.18	21.50	1.076	0.05	0.053	0.057
30	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI4	9400	1880	21.18	21.50	1.076	-0.08	0.968	1.042
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI4	9262	1852.4	20.95	21.50	1.135	0.02	0.910	1.033
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DSI4	9538	1907.6	21.06	21.50	1.107	0.07	0.923	1.021
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	10mm	Ant 2	DSI4	9400	1880	19.92	21.50	1.439	-0.07	0.143	0.206
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	10mm	Ant 2	DSI4	9400	1880	19.92	21.50	1.439	0.03	0.405	0.583
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	10mm	Ant 2	DSI4	9400	1880	19.92	21.50	1.439	0.1	0.393	0.565
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Top Side	10mm	Ant 2	DSI4	9400	1880	19.92	21.50	1.439	0.02	0.000	0.000
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI4	18900	1880	19.99	21.00	1.262	0.05	0.197	0.249
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI4	18900	1880	19.94	21.00	1.276	-0.1	0.194	0.248
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI4	18900	1880	19.99	21.00	1.262	-0.09	0.462	0.583
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI4	18900	1880	19.94	21.00	1.276	0.11	0.454	0.580
	LTE Band 2	20M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI4	18900	1880	19.99	21.00	1.262	-0.15	0.110	0.139
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 0	DSI4	18900	1880	19.94	21.00	1.276	0.11	0.106	0.135
	LTE Band 2	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI4	18900	1880	19.99	21.00	1.262	0.09	0.044	0.056
	LTE Band 2	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI4	18900	1880	19.94	21.00	1.276	0.04	0.000	0.000
31	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI4	18900	1880	19.99	21.00	1.262	-0.05	0.620	0.782
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI4	18900	1880	19.94	21.00	1.276	-0.09	0.570	0.728
	LTE Band 2	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI4	18900	1880	19.62	21.00	1.374	0.18	0.083	0.114
	LTE Band 2	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI4	18900	1880	19.57	21.00	1.390	-0.03	0.084	0.117
	LTE Band 2	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	18900	1880	19.62	21.00	1.374	-0.16	0.232	0.319
	LTE Band 2	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	18900	1880	19.57	21.00	1.390	0.1	0.237	0.329
	LTE Band 2	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI4	18900	1880	19.62	21.00	1.374	0.08	0.240	0.330
	LTE Band 2	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI4	18900	1880	19.57	21.00	1.390	0.03	0.245	0.341
	LTE Band 2	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI4	18900	1880	19.62	21.00	1.374	0.15	0.033	0.045
	LTE Band 2	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI4	18900	1880	19.57	21.00	1.390	0.16	0.032	0.044



FCC SAR Test Report

Report No. : FA231203

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI4	21100	2535	20.16	21.00	1.213	-	-	-0.05	0.153	0.186
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI4	21100	2535	20.10	21.00	1.230	-	-	0.08	0.156	0.192
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI4	21100	2535	20.16	21.00	1.213	-	-	0.03	0.231	0.280
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI4	21100	2535	20.10	21.00	1.230	-	-	-0.14	0.246	0.303
	LTE Band 7C	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI4	21100+21298	2535+2554.8	19.95	21.00	1.274	-	-	-0.01	0.232	0.295
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI4	21100	2535	20.16	21.00	1.213	-	-	0.15	0.062	0.075
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 0	DSI4	21100	2535	20.10	21.00	1.230	-	-	0.02	0.065	0.080
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI4	21100	2535	20.16	21.00	1.213	-	-	-0.17	0.034	0.041
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI4	21100	2535	20.10	21.00	1.230	-	-	0.16	0.033	0.041
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI4	21100	2535	20.16	21.00	1.213	-	-	-0.04	0.214	0.260
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI4	21100	2535	20.10	21.00	1.230	-	-	-0.04	0.227	0.279
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI4	21100	2535	17.61	19.00	1.377	-	-	0.03	0.072	0.099
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI4	21100	2535	17.55	19.00	1.396	-	-	0.06	0.072	0.101
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI4	21100	2535	17.61	19.00	1.377	-	-	-0.15	0.290	0.399
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI4	21100	2535	17.55	19.00	1.396	-	-	-0.01	0.292	0.408
	LTE Band 7C	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI4	21100+21298	2535+2554.8	17.47	19.00	1.422	-	-	-0.01	0.285	0.405
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI4	21100	2535	17.61	19.00	1.377	-	-	-0.17	0.039	0.054
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI4	21100	2535	17.55	19.00	1.396	-	-	0.09	0.029	0.040
	LTE Band 7	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI4	21100	2535	17.61	19.00	1.377	-	-	0.04	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI4	21100	2535	17.55	19.00	1.396	-	-	0.09	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI4	21100	2535	17.61	19.00	1.377	-	-	0.03	0.261	0.359
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI4	21100	2535	17.55	19.00	1.396	-	-	0.06	0.261	0.364
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI4	21100	2535	18.93	20.00	1.279	-	-	0.09	0.240	0.307
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI4	21100	2535	17.89	19.00	1.291	-	-	-0.03	0.163	0.210
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI4	21100	2535	17.85	19.00	1.303	-	-	-0.18	0.161	0.210
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	21100	2535	17.89	19.00	1.291	-	-	0.05	0.428	0.553
32	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	21100	2535	17.85	19.00	1.303	-	-	0.06	0.430	0.560
	LTE Band 7C	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	21100+21298	2535+2554.8	17.77	19.00	1.327	-	-	0.02	0.421	0.559
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI4	21100	2535	17.89	19.00	1.291	-	-	0.05	0.304	0.393
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI4	21100	2535	17.85	19.00	1.303	-	-	0.06	0.332	0.433
	LTE Band 7	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI4	21100	2535	17.89	19.00	1.291	-	-	0.02	0.000	0.000
	LTE Band 7	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI4	21100	2535	17.85	19.00	1.303	-	-	-0.11	0.000	0.000
	LTE Band 7	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI4	21100	2535	18.39	19.50	1.291	-	-	0.06	0.119	0.154
	LTE Band 7	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI4	21100	2535	18.36	19.50	1.300	-	-	-0.16	0.128	0.166
	LTE Band 7	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI4	21100	2535	18.39	19.50	1.291	-	-	-0.11	0.319	0.412
	LTE Band 7	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI4	21100	2535	18.36	19.50	1.300	-	-	-0.03	0.335	0.436
	LTE Band 7C	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI4	21100+21298	2535+2554.8	18.31	19.50	1.315	-	-	-0.01	0.321	0.422
	LTE Band 7	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI4	21100	2535	18.39	19.50	1.291	-	-	0.06	0.278	0.359
	LTE Band 7	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI4	21100	2535	18.36	19.50	1.300	-	-	-0.07	0.300	0.390
	LTE Band 7	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI4	21100	2535	18.39	19.50	1.291	-	-	0.02	0.082	0.106
	LTE Band 7	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI4	21100	2535	18.36	19.50	1.300	-	-	0.01	0.088	0.114
	LTE Band 7 Other PA	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI4	21100	2535	19.88	21.50	1.452	-	-	0.05	0.136	0.197
	LTE Band 38	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI4	38000	2595	22.14	23.00	1.219	62.9	1.006	0.07	0.143	0.175
	LTE Band 38	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI4	38000	2595	22.03	23.00	1.250	62.9	1.006	0.05	0.146	0.184
	LTE Band 38	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI4	38000	2595	22.14	23.00	1.219	62.9	1.006	0.03	0.218	0.267
	LTE Band 38	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI4	38000	2595	22.03	23.00	1.250	62.9	1.006	0.03	0.216	0.272
	LTE Band 38	20M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI4	38000	2595	22.14	23.00	1.219	62.9	1.006	0.05	0.061	0.075
	LTE Band 38	20M	QPSK	50	0	-	Left Side	10mm	Ant 0	DSI4	38000	2595	22.03	23.00	1.250	62.9	1.006	-0.17	0.065	0.082
	LTE Band 38	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI4	38000	2595	22.14	23.00	1.219	62.9	1.006	-0.16	0.037	0.045
	LTE Band 38	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI4	38000	2595	22.03	23.00	1.250	62.9	1.006	0.06	0.036	0.045
	LTE Band 38	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI4	38000	2595	22.14	23.00	1.219	62.9	1.006	0.18	0.242	0.297

Sporton International Inc. (Kunshan)

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FCC SAR Test Report

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	LTE Band 38	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI4	38000	2595	22.03	23.00	1.250	62.9	1.006	-0.03	0.239	0.301
	LTE Band 38C	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI4	38000+38198	2595+2614.8	21.96	23.00	1.271	62.9	1.006	0.01	0.225	0.288
	LTE Band 38	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI4	38000	2595	22.94	24.00	1.276	62.9	1.006	-0.15	0.125	0.161
	LTE Band 38	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI4	38000	2595	21.88	23.00	1.294	62.9	1.006	0.02	0.132	0.172
33	LTE Band 38	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI4	38000	2595	22.94	24.00	1.276	62.9	1.006	0.07	0.436	0.560
	LTE Band 38C	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI4	38000+38198	2595+2614.8	22.77	24.00	1.327	62.9	1.006	0.01	0.417	0.557
	LTE Band 38	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI4	38000	2595	21.88	23.00	1.294	62.9	1.006	-0.06	0.425	0.553
	LTE Band 38	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI4	38000	2595	22.94	24.00	1.276	62.9	1.006	0.03	0.082	0.105
	LTE Band 38	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI4	38000	2595	21.88	23.00	1.294	62.9	1.006	0.02	0.077	0.100
	LTE Band 38	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI4	38000	2595	22.94	24.00	1.276	62.9	1.006	0.13	0.038	0.049
	LTE Band 38	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI4	38000	2595	21.88	23.00	1.294	62.9	1.006	0.13	0.029	0.038
	LTE Band 38	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI4	38000	2595	22.94	24.00	1.276	62.9	1.006	0.05	0.412	0.529
	LTE Band 38	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI4	38000	2595	21.88	23.00	1.294	62.9	1.006	0.14	0.423	0.551
	LTE Band 38	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI4	38000	2595	19.40	20.50	1.288	62.9	1.006	-0.14	0.114	0.148
	LTE Band 38	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI4	38000	2595	19.35	20.50	1.303	62.9	1.006	0.06	0.113	0.148
	LTE Band 38	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	38000	2595	19.40	20.50	1.288	62.9	1.006	-0.03	0.340	0.441
	LTE Band 38	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	38000	2595	19.35	20.50	1.303	62.9	1.006	-0.08	0.342	0.448
	LTE Band 38C	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	38000+38198	2595+2614.8	19.26	20.50	1.330	62.9	1.006	0.01	0.332	0.444
	LTE Band 38	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI4	38000	2595	19.40	20.50	1.288	62.9	1.006	0.16	0.242	0.314
	LTE Band 38	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI4	38000	2595	19.35	20.50	1.303	62.9	1.006	0.05	0.233	0.305
	LTE Band 38	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI4	38000	2595	19.40	20.50	1.288	62.9	1.006	0.15	0.022	0.029
	LTE Band 38	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI4	38000	2595	19.35	20.50	1.303	62.9	1.006	0.17	0.026	0.034
	LTE Band 38	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI4	38000	2595	20.90	22.00	1.288	62.9	1.006	-0.18	0.116	0.150
	LTE Band 38	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI4	38000	2595	20.73	22.00	1.340	62.9	1.006	0.07	0.114	0.154
	LTE Band 38	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI4	38000	2595	20.90	22.00	1.288	62.9	1.006	0.05	0.297	0.385
	LTE Band 38	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI4	38000	2595	20.73	22.00	1.340	62.9	1.006	0.08	0.303	0.408
	LTE Band 38	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI4	38000	2595	20.90	22.00	1.288	62.9	1.006	0.07	0.303	0.393
	LTE Band 38	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI4	38000	2595	20.73	22.00	1.340	62.9	1.006	0.03	0.308	0.415
	LTE Band 38	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI4	38000+38198	2595+2614.8	20.61	22.00	1.377	62.9	1.006	-0.01	0.287	0.398
	LTE Band 38	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI4	38000	2595	20.90	22.00	1.288	62.9	1.006	0.05	0.083	0.108
	LTE Band 38	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI4	38000	2595	20.73	22.00	1.340	62.9	1.006	0.04	0.082	0.111
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 0	DSI4	40620	2593	22.25	23.00	1.189	62.9	1.006	-0.06	0.154	0.184
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 0	DSI4	40620	2593	22.15	23.00	1.216	62.9	1.006	0.07	0.161	0.197
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 0	DSI4	40620	2593	22.25	23.00	1.189	62.9	1.006	-0.08	0.222	0.265
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 0	DSI4	40620	2593	22.15	23.00	1.216	62.9	1.006	-0.08	0.212	0.259
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 0	DSI4	40620	2593	22.25	23.00	1.189	62.9	1.006	0.05	0.066	0.079
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 0	DSI4	40620	2593	22.15	23.00	1.216	62.9	1.006	-0.07	0.081	0.099
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 0	DSI4	40620	2593	22.25	23.00	1.189	62.9	1.006	0.03	0.051	0.061
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 0	DSI4	40620	2593	22.15	23.00	1.216	62.9	1.006	-0.09	0.060	0.073
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 0	DSI4	40620	2593	22.25	23.00	1.189	62.9	1.006	0.07	0.244	0.292
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 0	DSI4	40620	2593	22.15	23.00	1.216	62.9	1.006	0.01	0.248	0.303
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 1	DSI4	40620	2593	21.97	23.00	1.268	62.9	1.006	0.06	0.101	0.129
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 1	DSI4	40620	2593	21.86	23.00	1.300	62.9	1.006	-0.02	0.109	0.143
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 1	DSI4	40620	2593	21.97	23.00	1.268	62.9	1.006	0.09	0.355	0.453
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 1	DSI4	40620	2593	21.86	23.00	1.300	62.9	1.006	0.13	0.347	0.454
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 1	DSI4	40620	2593	21.97	23.00	1.268	62.9	1.006	-0.16	0.067	0.085
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 1	DSI4	40620	2593	21.86	23.00	1.300	62.9	1.006	0.05	0.067	0.088
	LTE Band 41	20M	QPSK	1	0	-	Right Side	10mm	Ant 1	DSI4	40620	2593	21.97	23.00	1.268	62.9	1.006	0.05	0.026	0.033
	LTE Band 41	20M	QPSK	50	0	-	Right Side	10mm	Ant 1	DSI4	40620	2593	21.86	23.00	1.300	62.9	1.006	-0.15	0.028	0.037
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 1	DSI4	40620	2593	21.97	23.00	1.268	62.9	1.006	-0.16	0.323	0.412
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 1	DSI4	40620	2593	21.86	23.00	1.300	62.9	1.006	-0.01	0.318	0.416
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 2	DSI4	41490	2680	21.50	22.00	1.122	62.9	1.006	-0.13	0.194	0.219
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 2	DSI4	41490	2680	21.41	22.00	1.146	62.9	1.006	0.11	0.191	0.220
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	41490	2680	21.50	22.00	1.122	62.9	1.006	0.07	0.577	0.651
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	39750	2506	20.19	22.00	1.517	62.9	1.006	-0.02	0.412	0.629

Sporton International Inc. (Kunshan)

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FCC SAR Test Report

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	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	40185	2549.5	20.12	22.00	1.542	62.9	1.006	-0.05	0.423	0.656
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	40620	2593	20.56	22.00	1.393	62.9	1.006	0.01	0.440	0.617
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 2	DSI4	41055	2636.5	20.61	22.00	1.377	62.9	1.006	-0.06	0.473	0.655
34	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	41490	2680	21.41	22.00	1.146	62.9	1.006	-0.07	0.577	0.665
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	39750	2506	20.00	22.00	1.585	62.9	1.006	0.04	0.413	0.658
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	40185	2549.5	20.04	22.00	1.570	62.9	1.006	-0.02	0.400	0.632
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	40620	2593	20.56	22.00	1.393	62.9	1.006	0.01	0.427	0.598
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 2	DSI4	41055	2636.5	20.39	22.00	1.449	62.9	1.006	-0.06	0.450	0.656
	LTE Band 41	20M	QPSK	100	0	-	Back	10mm	Ant 2	DSI4	41490	2680	21.36	22.00	1.159	62.9	1.006	0.02	0.532	0.620
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 2	DSI4	41490	2680	21.50	22.00	1.122	62.9	1.006	-0.05	0.299	0.337
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 2	DSI4	41490	2680	21.41	22.00	1.146	62.9	1.006	0.18	0.306	0.353
	LTE Band 41	20M	QPSK	1	0	-	Top Side	10mm	Ant 2	DSI4	41490	2680	21.50	22.00	1.122	62.9	1.006	0.14	0.000	0.000
	LTE Band 41	20M	QPSK	50	0	-	Top Side	10mm	Ant 2	DSI4	41490	2680	21.41	22.00	1.146	62.9	1.006	0.18	0.027	0.031
	LTE Band 41	20M	QPSK	1	0	-	Front	10mm	Ant 5	DSI4	40620	2593	20.81	22.00	1.315	62.9	1.006	-0.01	0.131	0.173
	LTE Band 41	20M	QPSK	50	0	-	Front	10mm	Ant 5	DSI4	40620	2593	20.70	22.00	1.349	62.9	1.006	0.08	0.134	0.182
	LTE Band 41	20M	QPSK	1	0	-	Back	10mm	Ant 5	DSI4	40620	2593	20.81	22.00	1.315	62.9	1.006	0.15	0.327	0.433
	LTE Band 41	20M	QPSK	50	0	-	Back	10mm	Ant 5	DSI4	40620	2593	20.70	22.00	1.349	62.9	1.006	-0.04	0.339	0.460
	LTE Band 41	20M	QPSK	1	0	-	Left Side	10mm	Ant 5	DSI4	40620	2593	20.81	22.00	1.315	62.9	1.006	0.08	0.329	0.435
	LTE Band 41	20M	QPSK	50	0	-	Left Side	10mm	Ant 5	DSI4	40620	2593	20.70	22.00	1.349	62.9	1.006	-0.09	0.337	0.457
	LTE Band 41	20M	QPSK	1	0	-	Bottom Side	10mm	Ant 5	DSI4	40620	2593	20.81	22.00	1.315	62.9	1.006	-0.07	0.081	0.107
	LTE Band 41	20M	QPSK	50	0	-	Bottom Side	10mm	Ant 5	DSI4	40620	2593	20.70	22.00	1.349	62.9	1.006	-0.02	0.088	0.119
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI4	507000	2535	17.06	18.50	1.393	-	-	0.03	0.091	0.127
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI4	507000	2535	17.04	18.50	1.400	-	-	0.11	0.087	0.122
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	507000	2535	17.06	18.50	1.393	-	-	0.08	0.160	0.223
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	507000	2535	17.04	18.50	1.400	-	-	0.01	0.171	0.239
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI4	507000	2535	17.06	18.50	1.393	-	-	0.06	0.035	0.049
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI4	507000	2535	17.04	18.50	1.400	-	-	0.04	0.047	0.066
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI4	507000	2535	17.06	18.50	1.393	-	-	0.04	0.024	0.033
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI4	507000	2535	17.04	18.50	1.400	-	-	-0.12	0.018	0.025
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI4	507000	2535	17.06	18.50	1.393	-	-	0.02	0.115	0.160
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI4	507000	2535	17.04	18.50	1.400	-	-	-0.03	0.123	0.172
	FR1 n7 Other PA	50M	QPSK	64	35	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	507000	2535	18.24	19.00	1.191	-	-	0.09	0.170	0.203
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI4	507000	2535	20.06	21.00	1.242	-	-	-0.12	0.121	0.150
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI4	507000	2535	19.94	21.00	1.276	-	-	-0.08	0.104	0.133
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI4	507000	2535	20.06	21.00	1.242	-	-	-0.19	0.433	0.538
35	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI4	507000	2535	19.94	21.00	1.276	-	-	-0.03	0.446	0.569
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI4	507000	2535	20.06	21.00	1.242	-	-	0.14	0.071	0.088
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI4	507000	2535	19.94	21.00	1.276	-	-	0.03	0.082	0.105
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI4	507000	2535	20.06	21.00	1.242	-	-	0.17	0.032	0.040
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI4	507000	2535	19.94	21.00	1.276	-	-	0.06	0.001	0.001
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI4	507000	2535	20.06	21.00	1.242	-	-	0.02	0.364	0.452
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI4	507000	2535	19.94	21.00	1.276	-	-	0.06	0.372	0.475
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	507000	2535	17.80	19.00	1.318	-	-	0.09	0.123	0.162
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	507000	2535	17.75	19.00	1.334	-	-	-0.12	0.150	0.200
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	507000	2535	17.80	19.00	1.318	-	-	-0.1	0.287	0.378
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	507000	2535	17.75	19.00	1.334	-	-	0.06	0.373	0.497
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	507000	2535	17.80	19.00	1.318	-	-	0.08	0.200	0.264
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	507000	2535	17.75	19.00	1.334	-	-	0.04	0.265	0.353
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	507000	2535	17.80	19.00	1.318	-	-	0.17	0.000	0.000
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	507000	2535	17.75	19.00	1.334	-	-	0.17	0.000	0.000
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI4	507000	2535	18.06	19.00	1.242	-	-	0.02	0.090	0.112
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI4	507000	2535	18.05	19.00	1.245	-	-	0.1	0.127	0.158
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI4	507000	2535	18.06	19.00	1.242	-	-	0.13	0.246	0.305
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI4	507000	2535	18.05	19.00	1.245	-	-	0.01	0.300	0.373
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	507000	2535	18.06	19.00	1.242	-	-	-0.1	0.245	0.304
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	507000	2535	18.05	19.00	1.245	-	-	0.08	0.289	0.360

Sporton International Inc. (Kunshan)

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	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	507000	2535	18.06	19.00	1.242	-	-	0.07	0.059	0.073
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	507000	2535	18.05	19.00	1.245	-	-	0.07	0.082	0.102
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI4	519000	2595	20.15	21.50	1.365	-	-	0.08	0.155	0.212
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI4	519000	2595	20.10	21.50	1.380	-	-	0.09	0.154	0.213
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	519000	2595	20.15	21.50	1.365	-	-	0.07	0.237	0.323
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	519000	2595	20.10	21.50	1.380	-	-	0.05	0.226	0.312
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI4	519000	2595	20.15	21.50	1.365	-	-	0.17	0.072	0.098
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI4	519000	2595	20.10	21.50	1.380	-	-	-0.17	0.068	0.094
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI4	519000	2595	20.15	21.50	1.365	-	-	-0.18	0.040	0.055
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI4	519000	2595	20.10	21.50	1.380	-	-	-0.11	0.043	0.059
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI4	519000	2595	20.15	21.50	1.365	-	-	0.08	0.238	0.325
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI4	519000	2595	20.10	21.50	1.380	-	-	0.06	0.240	0.331
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI4	519000	2595	20.40	21.50	1.288	-	-	0.06	0.129	0.166
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI4	519000	2595	20.35	21.50	1.303	-	-	-0.04	0.132	0.172
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI4	519000	2595	20.40	21.50	1.288	-	-	-0.09	0.454	0.585
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI4	519000	2595	20.35	21.50	1.303	-	-	0.06	0.430	0.560
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI4	519000	2595	20.40	21.50	1.288	-	-	0.06	0.075	0.097
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI4	519000	2595	20.35	21.50	1.303	-	-	-0.15	0.079	0.103
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI4	519000	2595	20.40	21.50	1.288	-	-	0.01	0.041	0.053
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI4	519000	2595	20.35	21.50	1.303	-	-	0.04	0.045	0.059
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI4	519000	2595	20.40	21.50	1.288	-	-	0.07	0.374	0.482
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI4	519000	2595	20.35	21.50	1.303	-	-	-0.04	0.367	0.478
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	519000	2595	18.33	20.00	1.469	-	-	0.06	0.167	0.245
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	519000	2595	18.30	20.00	1.479	-	-	0.08	0.170	0.251
36	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	519000	2595	18.33	20.00	1.469	-	-	-0.05	0.472	0.693
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	519000	2595	18.30	20.00	1.479	-	-	0.06	0.456	0.674
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	519000	2595	18.33	20.00	1.469	-	-	-0.02	0.333	0.489
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	519000	2595	18.30	20.00	1.479	-	-	-0.14	0.325	0.481
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	519000	2595	18.33	20.00	1.469	-	-	-0.18	0.040	0.059
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	519000	2595	18.30	20.00	1.479	-	-	0.1	0.041	0.061
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI4	519000	2595	18.19	19.50	1.352	-	-	-0.11	0.098	0.133
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI4	519000	2595	18.17	19.50	1.358	-	-	0.09	0.107	0.145
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI4	519000	2595	18.19	19.50	1.352	-	-	-0.09	0.272	0.368
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI4	519000	2595	18.17	19.50	1.358	-	-	-0.11	0.282	0.383
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	519000	2595	18.19	19.50	1.352	-	-	-0.08	0.251	0.339
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	519000	2595	18.17	19.50	1.358	-	-	-0.03	0.265	0.360
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	519000	2595	18.19	19.50	1.352	-	-	-0.02	0.077	0.104
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	519000	2595	18.17	19.50	1.358	-	-	0.04	0.079	0.107
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI4	518598	2592.99	19.20	20.50	1.349	-	-	0.06	0.110	0.148
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 0	DSI4	518598	2592.99	19.12	20.50	1.374	-	-	-0.08	0.111	0.153
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	518598	2592.99	19.20	20.50	1.349	-	-	0.07	0.166	0.224
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 0	DSI4	518598	2592.99	19.12	20.50	1.374	-	-	0.09	0.171	0.235
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI4	518598	2592.99	19.20	20.50	1.349	-	-	-0.18	0.051	0.069
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 0	DSI4	518598	2592.99	19.12	20.50	1.374	-	-	-0.03	0.055	0.076
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI4	518598	2592.99	19.20	20.50	1.349	-	-	0.02	0.031	0.042
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 0	DSI4	518598	2592.99	19.12	20.50	1.374	-	-	0.11	0.033	0.045
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI4	518598	2592.99	19.20	20.50	1.349	-	-	0.18	0.179	0.241
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 0	DSI4	518598	2592.99	19.12	20.50	1.374	-	-	-0.01	0.181	0.249
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI4	518598	2592.99	19.50	20.50	1.259	-	-	0.08	0.106	0.133
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 1	DSI4	518598	2592.99	19.44	20.50	1.276	-	-	0.09	0.108	0.138
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI4	518598	2592.99	19.50	20.50	1.259	-	-	0.09	0.351	0.442
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 1	DSI4	518598	2592.99	19.44	20.50	1.276	-	-	0.11	0.364	0.465
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI4	518598	2592.99	19.50	20.50	1.259	-	-	0.08	0.071	0.089
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 1	DSI4	518598	2592.99	19.44	20.50	1.276	-	-	-0.14	0.074	0.094
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI4	518598	2592.99	19.50	20.50	1.259	-	-	-0.05	0.031	0.039
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 1	DSI4	518598	2592.99	19.44	20.50	1.276	-	-	0.02	0.000	0.000

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FCC SAR Test Report

Report No. : FA231203

	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI4	518598	2592.99	19.50	20.50	1.259	-	-	0.08	0.308	0.388
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 1	DSI4	518598	2592.99	19.44	20.50	1.276	-	-	0.14	0.313	0.400
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	518598	2592.99	18.44	19.50	1.276	-	-	-0.15	0.160	0.204
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	518598	2592.99	18.42	19.50	1.282	-	-	0.02	0.171	0.219
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	518598	2592.99	18.44	19.50	1.276	-	-	0.18	0.469	0.599
37	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	518598	2592.99	18.42	19.50	1.282	-	-	-0.09	0.518	0.664
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	518598	2592.99	18.44	19.50	1.276	-	-	0.02	0.325	0.415
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	518598	2592.99	18.42	19.50	1.282	-	-	0.04	0.333	0.427
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	518598	2592.99	18.44	19.50	1.276	-	-	0.06	0.039	0.050
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	518598	2592.99	18.42	19.50	1.282	-	-	-0.18	0.042	0.054
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI4	518598	2592.99	18.20	19.50	1.349	-	-	-0.05	0.128	0.173
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI4	518598	2592.99	18.13	19.50	1.371	-	-	-0.08	0.124	0.170
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI4	518598	2592.99	18.20	19.50	1.349	-	-	-0.13	0.334	0.451
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI4	518598	2592.99	18.13	19.50	1.371	-	-	0.08	0.308	0.422
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	518598	2592.99	18.20	19.50	1.349	-	-	0.03	0.346	0.467
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	518598	2592.99	18.13	19.50	1.371	-	-	0.08	0.328	0.450
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	518598	2592.99	18.20	19.50	1.349	-	-	-0.19	0.097	0.131
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	518598	2592.99	18.13	19.50	1.371	-	-	0.02	0.092	0.126



FCC SAR Test Report

Report No. : FA231203

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
3500MHz																		
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 2	DS14	656000	3840	15.07	16.00	1.239	0.02	0.062	0.077
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DS14	656000	3840	14.85	16.00	1.303	0.11	0.061	0.079
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 2	DS14	656000	3840	15.07	16.00	1.239	0.13	0.089	0.110
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DS14	656000	3840	14.85	16.00	1.303	-0.14	0.097	0.126
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DS14	656000	3840	15.07	16.00	1.239	0.09	0.141	0.175
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DS14	656000	3840	14.85	16.00	1.303	0.03	0.139	0.181
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DS14	656000	3840	15.07	16.00	1.239	0.02	0.030	0.037
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DS14	656000	3840	14.85	16.00	1.303	0.07	0.031	0.040
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 2	DS14	633334	3500.01	15.45	16.00	1.135	-0.09	0.098	0.111
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DS14	633334	3500.01	15.41	16.00	1.146	0.01	0.096	0.110
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 2	DS14	633334	3500.01	15.45	16.00	1.135	0.04	0.194	0.220
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DS14	633334	3500.01	15.41	16.00	1.146	0.08	0.191	0.219
38	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DS14	633334	3500.01	15.45	16.00	1.135	0.07	0.314	0.356
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DS14	633334	3500.01	15.41	16.00	1.146	0.03	0.308	0.353
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DS14	633334	3500.01	15.45	16.00	1.135	0.03	0.022	0.025
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DS14	633334	3500.01	15.41	16.00	1.146	0.08	0.030	0.034
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 3	DS14	656000	3840	15.45	16.00	1.135	-0.01	0.061	0.069
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DS14	656000	3840	15.43	16.00	1.140	-0.1	0.065	0.074
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 3	DS14	656000	3840	15.45	16.00	1.135	-0.17	0.063	0.072
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DS14	656000	3840	15.43	16.00	1.140	-0.04	0.069	0.079
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DS14	656000	3840	15.45	16.00	1.135	0.12	0.073	0.083
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DS14	656000	3840	15.43	16.00	1.140	-0.02	0.083	0.095
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DS14	656000	3840	15.45	16.00	1.135	-0.1	0.052	0.059
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DS14	656000	3840	15.43	16.00	1.140	0.07	0.046	0.052
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 3	DS14	633334	3500.01	15.45	16.00	1.135	0.02	0.101	0.115
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DS14	633334	3500.01	15.35	16.00	1.161	0.13	0.110	0.128
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 3	DS14	633334	3500.01	15.45	16.00	1.135	0.09	0.132	0.150
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DS14	633334	3500.01	15.35	16.00	1.161	-0.03	0.134	0.156
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DS14	633334	3500.01	15.45	16.00	1.135	0.07	0.092	0.104
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DS14	633334	3500.01	15.35	16.00	1.161	-0.01	0.087	0.101
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DS14	633334	3500.01	15.45	16.00	1.135	-0.03	0.059	0.067
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DS14	633334	3500.01	15.35	16.00	1.161	-0.16	0.063	0.073
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 4	DS14	656000	3840	15.61	15.70	1.021	0.03	0.147	0.150
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DS14	656000	3840	15.56	15.70	1.033	-0.13	0.142	0.147
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 4	DS14	656000	3840	15.61	15.70	1.021	0.03	0.168	0.172
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DS14	656000	3840	15.56	15.70	1.033	0.18	0.163	0.168
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DS14	656000	3840	15.61	15.70	1.021	-0.15	0.066	0.067
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DS14	656000	3840	15.56	15.70	1.033	-0.06	0.062	0.064
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DS14	656000	3840	15.61	15.70	1.021	0.02	0.281	0.287
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DS14	656000	3840	15.56	15.70	1.033	0.06	0.267	0.276
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 4	DS14	633334	3500.01	15.65	15.70	1.012	-0.13	0.160	0.162
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DS14	633334	3500.01	15.61	15.70	1.021	0.14	0.165	0.168
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 4	DS14	633334	3500.01	15.65	15.70	1.012	0.11	0.197	0.199
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DS14	633334	3500.01	15.61	15.70	1.021	0.01	0.199	0.203
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DS14	633334	3500.01	15.65	15.70	1.012	0.04	0.079	0.080
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DS14	633334	3500.01	15.61	15.70	1.021	-0.12	0.092	0.094
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DS14	633334	3500.01	15.65	15.70	1.012	-0.15	0.148	0.150
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DS14	633334	3500.01	15.61	15.70	1.021	0.17	0.179	0.183
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 5	DS14	656000	3840	17.52	18.00	1.117	0.1	0.049	0.055
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DS14	656000	3840	17.46	18.00	1.132	0.18	0.053	0.060
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 5	DS14	656000	3840	17.52	18.00	1.117	0.07	0.061	0.068
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DS14	656000	3840	17.46	18.00	1.132	0.02	0.068	0.077
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DS14	656000	3840	17.52	18.00	1.117	0.07	0.076	0.085

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	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	656000	3840	17.46	18.00	1.132	-0.07	0.106	0.120
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	656000	3840	17.52	18.00	1.117	0.1	0.061	0.068
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	656000	3840	17.46	18.00	1.132	0.08	0.059	0.067
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI4	633334	3500.01	17.51	18.00	1.119	0.08	0.116	0.130
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DSI4	633334	3500.01	17.36	18.00	1.159	0.02	0.109	0.126
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI4	633334	3500.01	17.51	18.00	1.119	0.19	0.196	0.219
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DSI4	633334	3500.01	17.36	18.00	1.159	-0.12	0.203	0.235
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	633334	3500.01	17.51	18.00	1.119	0.08	0.257	0.288
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DSI4	633334	3500.01	17.36	18.00	1.159	-0.16	0.259	0.300
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	633334	3500.01	17.51	18.00	1.119	0.13	0.107	0.120
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DSI4	633334	3500.01	17.36	18.00	1.159	0.07	0.110	0.127
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	650000	3750	16.30	17.00	1.175	-0.14	0.088	0.103
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	650000	3750	16.21	17.00	1.199	0.14	0.090	0.108
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	650000	3750	16.30	17.00	1.175	0.06	0.146	0.172
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	650000	3750	16.21	17.00	1.199	-0.08	0.158	0.190
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	650000	3750	16.30	17.00	1.175	0.02	0.249	0.293
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	650000	3750	16.21	17.00	1.199	0.09	0.239	0.287
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	650000	3750	16.30	17.00	1.175	-0.09	0.033	0.039
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	650000	3750	16.21	17.00	1.199	0.01	0.045	0.054
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	633334	3500.01	16.46	17.00	1.132	0.08	0.103	0.117
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 2	DSI4	633334	3500.01	16.43	17.00	1.140	-0.16	0.107	0.122
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	633334	3500.01	16.46	17.00	1.132	0.13	0.198	0.224
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 2	DSI4	633334	3500.01	16.43	17.00	1.140	0.01	0.203	0.231
39	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	633334	3500.01	16.46	17.00	1.132	-0.06	0.382	0.433
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 2	DSI4	633334	3500.01	16.43	17.00	1.140	0.1	0.370	0.422
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	633334	3500.01	16.46	17.00	1.132	0.07	0.022	0.025
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 2	DSI4	633334	3500.01	16.43	17.00	1.140	0.09	0.024	0.027
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI4	650000	3750	16.02	17.00	1.253	0.05	0.089	0.112
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI4	650000	3750	16.00	17.00	1.259	0.09	0.083	0.104
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI4	650000	3750	16.02	17.00	1.253	0.04	0.099	0.124
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI4	650000	3750	16.00	17.00	1.259	0.06	0.092	0.116
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DSI4	650000	3750	16.02	17.00	1.253	-0.1	0.106	0.133
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DSI4	650000	3750	16.00	17.00	1.259	-0.07	0.108	0.136
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI4	650000	3750	16.02	17.00	1.253	0.09	0.064	0.080
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI4	650000	3750	16.00	17.00	1.259	0.03	0.062	0.078
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI4	633334	3500.01	16.31	17.00	1.172	0.1	0.128	0.150
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 3	DSI4	633334	3500.01	16.30	17.00	1.175	-0.14	0.133	0.156
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI4	633334	3500.01	16.31	17.00	1.172	-0.16	0.164	0.192
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 3	DSI4	633334	3500.01	16.30	17.00	1.175	0.09	0.165	0.194
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DSI4	633334	3500.01	16.31	17.00	1.172	0.01	0.141	0.165
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Right Side	10mm	Ant 3	DSI4	633334	3500.01	16.30	17.00	1.175	0.07	0.162	0.190
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI4	633334	3500.01	16.31	17.00	1.172	0.06	0.076	0.089
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 3	DSI4	633334	3500.01	16.30	17.00	1.175	-0.18	0.074	0.087
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI4	650000	3750	16.65	17.00	1.084	0.17	0.199	0.216
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI4	650000	3750	16.60	17.00	1.096	-0.16	0.200	0.219
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI4	650000	3750	16.65	17.00	1.084	-0.05	0.284	0.308
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI4	650000	3750	16.60	17.00	1.096	0.02	0.282	0.309
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI4	650000	3750	16.65	17.00	1.084	0.06	0.095	0.103
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI4	650000	3750	16.60	17.00	1.096	0.04	0.096	0.105
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI4	650000	3750	16.65	17.00	1.084	0.05	0.331	0.359
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DSI4	650000	3750	16.60	17.00	1.096	0.03	0.362	0.397
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI4	633334	3500.01	16.75	17.00	1.059	0.02	0.223	0.236
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 4	DSI4	633334	3500.01	16.72	17.00	1.067	0.06	0.218	0.233
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI4	633334	3500.01	16.75	17.00	1.059	-0.04	0.275	0.291
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 4	DSI4	633334	3500.01	16.72	17.00	1.067	0.17	0.270	0.288
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DSI4	633334	3500.01	16.75	17.00	1.059	-0.05	0.123	0.130

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FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 4	DS14	633334	3500.01	16.72	17.00	1.067	0.07	0.116	0.124
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DS14	633334	3500.01	16.75	17.00	1.059	0.15	0.242	0.256
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	10mm	Ant 4	DS14	633334	3500.01	16.72	17.00	1.067	0.05	0.230	0.245
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 5	DS14	650000	3750	18.32	19.00	1.169	0.04	0.101	0.118
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DS14	650000	3750	18.29	19.00	1.178	0.06	0.097	0.114
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 5	DS14	650000	3750	18.32	19.00	1.169	0.06	0.143	0.167
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DS14	650000	3750	18.29	19.00	1.178	0.07	0.130	0.153
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DS14	650000	3750	18.32	19.00	1.169	-0.02	0.135	0.158
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DS14	650000	3750	18.29	19.00	1.178	0.07	0.132	0.155
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DS14	650000	3750	18.32	19.00	1.169	0.02	0.131	0.153
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DS14	650000	3750	18.29	19.00	1.178	0.19	0.127	0.150
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	10mm	Ant 5	DS14	633334	3500.01	18.25	19.00	1.189	0.05	0.110	0.131
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	10mm	Ant 5	DS14	633334	3500.01	18.15	19.00	1.216	0.18	0.116	0.141
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	10mm	Ant 5	DS14	633334	3500.01	18.25	19.00	1.189	0.02	0.208	0.247
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	10mm	Ant 5	DS14	633334	3500.01	18.15	19.00	1.216	0.06	0.209	0.254
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DS14	633334	3500.01	18.25	19.00	1.189	-0.08	0.214	0.254
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	10mm	Ant 5	DS14	633334	3500.01	18.15	19.00	1.216	-0.09	0.249	0.303
FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DS14	633334	3500.01	18.25	19.00	1.189	0.08	0.120	0.143
FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Bottom Side	10mm	Ant 5	DS14	633334	3500.01	18.15	19.00	1.216	-0.13	0.123	0.150



FCC SAR Test Report

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Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 8+9	Full	1	2412	20.84	22.50	1.467	99.31	1.007	-0.07	0.178	0.263
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 8+9	Full	1	2412	20.84	22.50	1.467	99.31	1.007	0.03	0.136	0.201
40	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 8+9	Full	1	2412	20.84	22.50	1.467	99.31	1.007	0.02	0.236	0.349
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 8+9	Full	1	2412	20.84	22.50	1.467	99.31	1.007	0.04	0.089	0.131
	Bluetooth	1Mbps	Front	10mm	Ant 8	Full	78	2480	15.78	17.00	1.323	76.83	1.302	-0.03	0.065	0.112
	Bluetooth	1Mbps	Back	10mm	Ant 8	Full	78	2480	15.78	17.00	1.323	76.83	1.302	0.03	0.050	0.086
41	Bluetooth	1Mbps	Right Side	10mm	Ant 8	Full	78	2480	15.78	17.00	1.323	76.83	1.302	0.01	0.081	0.140
	Bluetooth	1Mbps	Top Side	10mm	Ant 8	Full	78	2480	15.78	17.00	1.323	76.83	1.302	-0.02	0.057	0.098
5000MHz																
	WLAN5.2GHz	802.11a 6Mbps	Front	10mm	Ant 8+9	Full	36	5180	16.58	17.50	1.236	96.97	1.031	0.06	0.102	0.130
	WLAN5.2GHz	802.11a 6Mbps	Back	10mm	Ant 8+9	Full	36	5180	16.58	17.50	1.236	96.97	1.031	0.06	0.154	0.196
	WLAN5.2GHz	802.11a 6Mbps	Right Side	10mm	Ant 8+9	Full	36	5180	16.58	17.50	1.236	96.97	1.031	0.08	0.186	0.237
42	WLAN5.2GHz	802.11a 6Mbps	Top Side	10mm	Ant 8+9	Full	36	5180	16.58	17.50	1.236	96.97	1.031	-0.04	0.369	0.470
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 8+9	Full	155	5775	18.01	19.50	1.409	88.19	1.134	0.04	0.244	0.390
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 8+9	Full	155	5775	18.01	19.50	1.409	88.19	1.134	0.01	0.563	0.900
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 8+9	Full	155	5775	18.01	19.50	1.409	88.19	1.134	0.07	0.472	0.754
43	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 8+9	Full	155	5775	18.01	19.50	1.409	88.19	1.134	-0.02	0.650	1.039
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 8+9	Simultaneous	155	5775	11.68	13.50	1.521	88.19	1.134	0.02	0.079	0.136
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 8+9	Simultaneous	155	5775	11.68	13.50	1.521	88.19	1.134	-0.03	0.135	0.233
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 8+9	Simultaneous	155	5775	11.68	13.50	1.521	88.19	1.134	0.04	0.120	0.207
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 8+9	Simultaneous	155	5775	11.68	13.50	1.521	88.19	1.134	0.03	0.185	0.319



15.3 Body Worn Accessory SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
835MHz																		
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 0	DS13	189	836.4	28.34	29.50	1.306	0.06	0.114	0.149
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 0	DS13	189	836.4	28.34	29.50	1.306	0.06	0.137	0.179
	GSM850	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 1	DS13	189	836.4	28.12	30.00	1.542	0.01	0.120	0.185
44	GSM850	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 1	DS13	189	836.4	28.12	30.00	1.542	0.04	0.166	0.256
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DS13	4182	836.4	24.51	25.00	1.119	-0.01	0.119	0.133
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DS13	4182	836.4	24.51	25.00	1.119	-0.1	0.139	0.156
	WCDMA V	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 1	DS13	4182	836.4	24.12	25.50	1.374	-0.01	0.156	0.214
45	WCDMA V	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 1	DS13	4182	836.4	24.12	25.50	1.374	0.11	0.211	0.290
	LTE Band 5	10M	QPSK	1	0	-	Front	15mm	Ant 0	DS13	20525	836.5	24.54	25.50	1.247	0.11	0.162	0.202
	LTE Band 5	10M	QPSK	25	0	-	Front	15mm	Ant 0	DS13	20525	836.5	23.53	24.50	1.250	0.03	0.115	0.144
	LTE Band 5	10M	QPSK	1	0	-	Back	15mm	Ant 0	DS13	20525	836.5	24.54	25.50	1.247	0.06	0.177	0.221
	LTE Band 5	10M	QPSK	25	0	-	Back	15mm	Ant 0	DS13	20525	836.5	23.53	24.50	1.250	0.05	0.142	0.178
	LTE Band 5	10M	QPSK	1	0	-	Front	15mm	Ant 1	DS13	20525	836.5	24.22	25.50	1.343	0.05	0.188	0.252
	LTE Band 5	10M	QPSK	25	0	-	Front	15mm	Ant 1	DS13	20525	836.5	23.36	24.50	1.300	0.06	0.142	0.185
46	LTE Band 5	10M	QPSK	1	0	-	Back	15mm	Ant 1	DS13	20525	836.5	24.22	25.50	1.343	-0.03	0.247	0.332
	LTE Band 5	10M	QPSK	25	0	-	Back	15mm	Ant 1	DS13	20525	836.5	23.36	24.50	1.300	0.02	0.189	0.246
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 0	DS13	167300	836.5	24.78	25.50	1.180	-0.12	0.117	0.138
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Front	15mm	Ant 0	DS13	167300	836.5	24.76	25.50	1.186	0.03	0.139	0.165
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 0	DS13	167300	836.5	24.78	25.50	1.180	0.08	0.174	0.205
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Back	15mm	Ant 0	DS13	167300	836.5	24.76	25.50	1.186	0.02	0.172	0.204
	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DS13	167300	836.5	24.13	25.70	1.435	-0.17	0.170	0.244
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Front	15mm	Ant 1	DS13	167300	836.5	24.12	25.70	1.439	0.1	0.158	0.227
47	FR1 n5	20M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DS13	167300	836.5	24.13	25.70	1.435	0.09	0.231	0.332
	FR1 n5	20M	QPSK	25	13	DFT-SCS-30KHz	Back	15mm	Ant 1	DS13	167300	836.5	24.12	25.70	1.439	-0.09	0.220	0.317
1750MHz																		
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DS13	1413	1732.6	23.92	25.00	1.282	-0.09	0.246	0.315
48	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DS13	1413	1732.6	23.92	25.00	1.282	-0.06	0.509	0.653
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 2	DS13	1413	1732.6	24.06	25.50	1.393	0.06	0.242	0.337
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 2	DS13	1413	1732.6	24.06	25.50	1.393	-0.14	0.344	0.479
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 0	DS13	20175	1732.5	23.76	25.00	1.330	0.06	0.199	0.265
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 0	DS13	20175	1732.5	22.78	24.00	1.324	0.02	0.157	0.208
	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 0	DS13	20175	1732.5	23.76	25.00	1.330	-0.13	0.400	0.532
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 0	DS13	20175	1732.5	22.78	24.00	1.324	0.04	0.369	0.489
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 1	DS13	20175	1732.5	22.90	24.50	1.445	-0.04	0.329	0.476
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 1	DS13	20175	1732.5	21.93	23.50	1.435	0.17	0.269	0.386
49	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 1	DS13	20175	1732.5	22.90	24.50	1.445	-0.08	0.499	0.721
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 1	DS13	20175	1732.5	21.93	23.50	1.435	0.13	0.401	0.576
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 2	DS13	20175	1732.5	23.65	25.00	1.365	-0.03	0.255	0.348
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 2	DS13	20175	1732.5	22.76	24.00	1.330	0.18	0.166	0.221
	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 2	DS13	20175	1732.5	23.65	25.00	1.365	-0.05	0.296	0.404
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 2	DS13	20175	1732.5	22.76	24.00	1.330	0.02	0.246	0.327
	LTE Band 4	20M	QPSK	1	0	-	Front	15mm	Ant 5	DS13	20175	1732.5	19.57	21.00	1.390	0.05	0.033	0.046
	LTE Band 4	20M	QPSK	50	0	-	Front	15mm	Ant 5	DS13	20175	1732.5	19.52	21.00	1.406	0.16	0.026	0.037
	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 5	DS13	20175	1732.5	19.57	21.00	1.390	0.09	0.049	0.068
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 5	DS13	20175	1732.5	19.52	21.00	1.406	0.08	0.041	0.058
1900MHz																		
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 0	DS13	661	1880	25.32	26.50	1.312	-0.13	0.132	0.173
50	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 0	DS13	661	1880	25.32	26.50	1.312	0.11	0.238	0.312
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Front	15mm	Ant 2	DS13	661	1880	25.12	27.00	1.542	0.06	0.102	0.157
	GSM1900	-	-	-	-	GPRS (3 Tx slots)	Back	15mm	Ant 2	DS13	661	1880	25.12	27.00	1.542	0.16	0.188	0.290



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	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 0	DSI3	9400	1880	24.16	24.50	1.081	-0.01	0.339	0.367
51	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DSI3	9400	1880	24.16	24.50	1.081	-0.02	0.577	0.624
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Front	15mm	Ant 2	DSI3	9400	1880	23.82	25.50	1.472	0.07	0.150	0.221
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 2	DSI3	9400	1880	23.82	25.50	1.472	-0.05	0.292	0.430
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 0	DSI3	18900	1880	24.05	25.00	1.245	-0.08	0.262	0.326
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI3	18900	1880	23.04	24.00	1.247	0.07	0.204	0.254
52	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI3	18900	1880	24.05	25.00	1.245	-0.04	0.432	0.538
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI3	18900	1880	23.04	24.00	1.247	-0.15	0.395	0.493
	LTE Band 2	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI3	18900	1880	23.58	25.00	1.387	0.13	0.191	0.265
	LTE Band 2	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI3	18900	1880	22.60	24.00	1.380	0.11	0.156	0.215
	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI3	18900	1880	23.58	25.00	1.387	-0.02	0.352	0.488
	LTE Band 2	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI3	18900	1880	22.60	24.00	1.380	-0.09	0.296	0.409

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2600MHz																				
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 0	DSI3	21100	2535	24.15	25.00	1.216	-	-	0.1	0.191	0.232
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI3	21100	2535	23.23	24.00	1.194	-	-	0.01	0.158	0.189
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI3	21100	2535	24.15	25.00	1.216	-	-	0.08	0.317	0.386
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI3	21100+21298	2535+2554.8	24.16	25.00	1.213	-	-	0.01	0.302	0.366
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI3	21100	2535	23.23	24.00	1.194	-	-	-0.07	0.266	0.318
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI3	21100	2535	22.66	24.00	1.361	-	-	-0.17	0.141	0.192
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI3	21100	2535	21.74	23.00	1.337	-	-	0.06	0.120	0.160
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI3	21100	2535	22.66	24.00	1.361	-	-	0.09	0.352	0.479
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI3	21100+21298	2535+2554.8	22.49	24.00	1.416	-	-	0.02	0.337	0.477
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI3	21100	2535	21.74	23.00	1.337	-	-	0.1	0.293	0.392
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI3	21100	2535	23.84	25.00	1.306	-	-	0.05	0.281	0.367
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI3	21100	2535	22.78	24.00	1.324	-	-	0.14	0.409	0.542
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI3	21100	2535	21.80	23.00	1.318	-	-	0.13	0.275	0.363
53	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI3	21100	2535	22.78	24.00	1.324	-	-	-0.06	0.481	0.637
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI3	21100+21298	2535+2554.8	22.77	24.00	1.327	-	-	-0.01	0.472	0.627
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI3	21100	2535	21.80	23.00	1.318	-	-	0.09	0.442	0.583
	LTE Band 7	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI3	21100	2535	19.67	20.50	1.211	-	-	0.07	0.064	0.077
	LTE Band 7	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI3	21100	2535	19.65	20.50	1.216	-	-	0.04	0.053	0.064
	LTE Band 7	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI3	21100	2535	19.67	20.50	1.211	-	-	0.02	0.146	0.177
	LTE Band 7C	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI3	21100+21298	2535+2554.8	19.61	20.50	1.227	-	-	0.01	0.132	0.162
	LTE Band 7	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI3	21100	2535	19.65	20.50	1.216	-	-	-0.13	0.118	0.144
	LTE Band 7 Other PA	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI3	21100	2535	21.02	22.50	1.406	-	-	0.02	0.058	0.082
	LTE Band 38	20M	QPSK	1	0	-	Front	15mm	Ant 0	DSI3	38000	2595	24.08	25.00	1.236	62.9	1.006	0.05	0.125	0.155
	LTE Band 38	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI3	38000	2595	23.03	24.00	1.250	62.9	1.006	-0.16	0.097	0.122
	LTE Band 38	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI3	38000	2595	24.08	25.00	1.236	62.9	1.006	-0.04	0.184	0.229
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI3	38000+38198	2595+2614.8	24.03	25.00	1.250	62.9	1.006	0.01	0.172	0.216
	LTE Band 38	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI3	38000	2595	23.03	24.00	1.250	62.9	1.006	0.04	0.145	0.182
	LTE Band 38	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI3	38000	2595	22.94	24.00	1.276	62.9	1.006	0.02	0.065	0.083
	LTE Band 38	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI3	38000	2595	21.88	23.00	1.294	62.9	1.006	-0.02	0.052	0.068
	LTE Band 38	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI3	38000	2595	22.94	24.00	1.276	62.9	1.006	-0.09	0.194	0.249
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI3	38000+38198	2595+2614.8	22.77	24.00	1.327	62.9	1.006	0.02	0.180	0.240
	LTE Band 38	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI3	38000	2595	21.88	23.00	1.294	62.9	1.006	0.12	0.154	0.201
	LTE Band 38	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI3	38000	2595	23.57	24.50	1.239	62.9	1.006	-0.12	0.183	0.228
	LTE Band 38	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI3	38000	2595	22.58	23.50	1.236	62.9	1.006	-0.12	0.136	0.169
54	LTE Band 38	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI3	38000	2595	23.57	24.50	1.239	62.9	1.006	-0.04	0.434	0.541
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI3	38000+38198	2595+2614.8	23.48	24.50	1.265	62.9	1.006	0.03	0.425	0.541
	LTE Band 38	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI3	38000	2595	22.58	23.50	1.236	62.9	1.006	0.05	0.338	0.420

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	LTE Band 38	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI3	38000	2595	20.90	22.00	1.288	62.9	1.006	-0.16	0.059	0.076
	LTE Band 38	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI3	38000	2595	20.73	22.00	1.340	62.9	1.006	-0.16	0.043	0.058
	LTE Band 38	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI3	38000	2595	20.90	22.00	1.288	62.9	1.006	-0.03	0.126	0.163
	LTE Band 38C	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI3	38000+ 38198	2595+ 2614.8	20.85	22.00	1.303	62.9	1.006	0.04	0.120	0.157
	LTE Band 38	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI3	38000	2595	20.73	22.00	1.340	62.9	1.006	0.14	0.102	0.137
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 0	DSI3	40620	2593	24.19	25.00	1.205	62.9	1.006	0.06	0.109	0.132
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 0	DSI3	40620	2593	23.11	24.00	1.227	62.9	1.006	0.06	0.089	0.110
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 0	DSI3	40620	2593	24.19	25.00	1.205	62.9	1.006	-0.02	0.178	0.216
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 0	DSI3	40620	2593	23.11	24.00	1.227	62.9	1.006	0.09	0.140	0.173
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 1	DSI3	40620	2593	22.94	24.00	1.276	62.9	1.006	0.1	0.082	0.105
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 1	DSI3	40620	2593	21.90	23.00	1.288	62.9	1.006	0.05	0.065	0.084
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 1	DSI3	40620	2593	22.94	24.00	1.276	62.9	1.006	-0.05	0.193	0.248
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 1	DSI3	40620	2593	21.90	23.00	1.288	62.9	1.006	0.01	0.157	0.203
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 2	DSI3	41490	2680	23.96	24.50	1.132	62.9	1.006	0.06	0.309	0.352
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 2	DSI3	41490	2680	22.78	23.50	1.180	62.9	1.006	0.08	0.190	0.226
55	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 2	DSI3	41490	2680	23.96	24.50	1.132	62.9	1.006	-0.03	0.377	0.429
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 2	DSI3	41490	2680	22.78	23.50	1.180	62.9	1.006	0.06	0.313	0.372
	LTE Band 41	20M	QPSK	1	0	-	Front	15mm	Ant 5	DSI3	40620	2593	20.81	22.00	1.315	62.9	1.006	-0.06	0.056	0.074
	LTE Band 41	20M	QPSK	50	0	-	Front	15mm	Ant 5	DSI3	40620	2593	20.70	22.00	1.349	62.9	1.006	-0.02	0.050	0.068
	LTE Band 41	20M	QPSK	1	0	-	Back	15mm	Ant 5	DSI3	40620	2593	20.81	22.00	1.315	62.9	1.006	-0.1	0.126	0.167
	LTE Band 41	20M	QPSK	50	0	-	Back	15mm	Ant 5	DSI3	40620	2593	20.70	22.00	1.349	62.9	1.006	0.08	0.102	0.138
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI3	507000	2535	23.05	24.50	1.396	-	-	-0.09	0.145	0.202
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI3	507000	2535	22.97	24.50	1.422	-	-	0.06	0.156	0.222
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI3	507000	2535	23.05	24.50	1.396	-	-	0.08	0.243	0.339
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI3	507000	2535	22.97	24.50	1.422	-	-	0.05	0.266	0.378
	FR1 n7 Other PA	50M	QPSK	64	35	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI3	507000	2535	24.12	25.00	1.225	-	-	0.01	0.284	0.348
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI3	507000	2535	23.97	25.00	1.268	-	-	-0.14	0.121	0.153
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI3	507000	2535	23.85	25.00	1.303	-	-	0.1	0.138	0.180
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	507000	2535	23.97	25.00	1.268	-	-	-0.03	0.341	0.432
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	507000	2535	23.85	25.00	1.303	-	-	0.02	0.344	0.448
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	507000	2535	21.65	23.00	1.365	-	-	-0.05	0.146	0.199
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	507000	2535	21.62	23.00	1.374	-	-	-0.03	0.192	0.264
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	507000	2535	21.65	23.00	1.365	-	-	-0.02	0.319	0.435
56	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	507000	2535	21.62	23.00	1.374	-	-	0.08	0.400	0.550
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	507000	2535	20.05	21.00	1.245	-	-	-0.16	0.048	0.060
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	507000	2535	19.95	21.00	1.274	-	-	0.1	0.064	0.082
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	507000	2535	20.05	21.00	1.245	-	-	0.06	0.128	0.159
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	507000	2535	19.95	21.00	1.274	-	-	-0.08	0.179	0.228
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI3	519000	2595	23.02	24.50	1.406	-	-	0.08	0.166	0.233
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI3	519000	2595	22.98	24.50	1.419	-	-	0.14	0.173	0.245
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI3	519000	2595	23.02	24.50	1.406	-	-	-0.17	0.236	0.332
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI3	519000	2595	22.98	24.50	1.419	-	-	0.03	0.238	0.338
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI3	519000	2595	24.45	25.50	1.274	-	-	-0.09	0.168	0.214
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI3	519000	2595	24.35	25.50	1.303	-	-	-0.02	0.164	0.214
57	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	519000	2595	24.45	25.50	1.274	-	-	0.06	0.475	0.605
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	519000	2595	24.35	25.50	1.303	-	-	0.09	0.460	0.599
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	519000	2595	22.34	24.00	1.466	-	-	0.01	0.214	0.314
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	519000	2595	22.33	24.00	1.469	-	-	0.04	0.223	0.328
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	519000	2595	22.34	24.00	1.466	-	-	-0.01	0.411	0.602
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	519000	2595	22.33	24.00	1.469	-	-	0.16	0.386	0.567
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	519000	2595	19.20	20.50	1.349	-	-	-0.04	0.060	0.081
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	519000	2595	19.14	20.50	1.368	-	-	0.11	0.062	0.085
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	519000	2595	19.20	20.50	1.349	-	-	-0.03	0.150	0.202
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	519000	2595	19.14	20.50	1.368	-	-	-0.02	0.149	0.204
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI3	518598	2592.99	23.11	24.50	1.377	-	-	0.17	0.144	0.198

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	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 0	DSI3	518598	2592.99	23.08	24.50	1.387	-	-	-0.06	0.163	0.226
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI3	518598	2592.99	23.11	24.50	1.377	-	-	-0.15	0.222	0.306
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 0	DSI3	518598	2592.99	23.08	24.50	1.387	-	-	-0.04	0.233	0.323
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI3	518598	2592.99	24.39	25.50	1.291	-	-	0.1	0.185	0.239
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 1	DSI3	518598	2592.99	24.34	25.50	1.306	-	-	0.04	0.182	0.238
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	518598	2592.99	24.39	25.50	1.291	-	-	0.06	0.505	0.652
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 1	DSI3	518598	2592.99	24.34	25.50	1.306	-	-	0.15	0.518	0.677
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	518598	2592.99	23.31	24.50	1.315	-	-	0.07	0.258	0.339
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	518598	2592.99	23.25	24.50	1.334	-	-	0.09	0.265	0.353
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	518598	2592.99	23.31	24.50	1.315	-	-	0.01	0.597	0.785
58	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	518598	2592.99	23.25	24.50	1.334	-	-	-0.04	0.701	0.935
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	509202	2546.01	23.22	24.50	1.343	-	-	0.02	0.599	0.804
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	528000	2640	23.16	24.50	1.361	-	-	0.03	0.580	0.790
	FR1 n41	100M	QPSK	270	0	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	518598	2592.99	22.26	23.50	1.330	-	-	0.07	0.600	0.798
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	518598	2592.99	18.29	19.50	1.321	-	-	-0.17	0.050	0.066
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	518598	2592.99	18.31	19.50	1.315	-	-	0.03	0.057	0.075
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	518598	2592.99	18.29	19.50	1.321	-	-	0.03	0.117	0.155
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	518598	2592.99	18.31	19.50	1.315	-	-	-0.09	0.122	0.160

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	1g SAR (W/kg)	Reported 1g SAR (W/kg)
3500MHz																		
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	656000	3840	21.05	22.00	1.245	-0.06	0.205	0.255
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	656000	3840	21.02	22.00	1.253	0.18	0.216	0.271
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	656000	3840	21.05	22.00	1.245	-0.01	0.342	0.426
59	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	656000	3840	21.02	22.00	1.253	-0.01	0.349	0.437
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	633334	3500.01	21.30	22.00	1.175	0.18	0.166	0.195
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	633334	3500.01	21.15	22.00	1.216	0.15	0.158	0.192
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	633334	3500.01	21.30	22.00	1.175	-0.06	0.285	0.335
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	633334	3500.01	21.15	22.00	1.216	0.01	0.300	0.365
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI3	656000	3840	19.50	20.00	1.122	0.13	0.069	0.077
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI3	656000	3840	19.46	20.00	1.132	-0.09	0.074	0.084
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI3	656000	3840	19.50	20.00	1.122	0.13	0.063	0.071
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI3	656000	3840	19.46	20.00	1.132	-0.1	0.065	0.074
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI3	633334	3500.01	19.52	20.00	1.117	0.03	0.110	0.123
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI3	633334	3500.01	19.48	20.00	1.127	-0.18	0.106	0.119
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI3	633334	3500.01	19.52	20.00	1.117	0.01	0.120	0.134
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI3	633334	3500.01	19.48	20.00	1.127	-0.06	0.129	0.145
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI3	656000	3840	19.66	19.70	1.009	-0.12	0.140	0.141
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI3	656000	3840	19.61	19.70	1.021	0.08	0.138	0.141
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI3	656000	3840	19.66	19.70	1.009	0.13	0.143	0.144
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI3	656000	3840	19.61	19.70	1.021	0.01	0.148	0.151
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI3	633334	3500.01	19.63	19.70	1.016	-0.05	0.187	0.187
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI3	633334	3500.01	19.55	19.70	1.035	-0.11	0.189	0.189
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI3	633334	3500.01	19.63	19.70	1.016	0.02	0.217	0.217
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI3	633334	3500.01	19.55	19.70	1.035	-0.09	0.218	0.218
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	656000	3840	17.50	18.00	1.122	-0.13	0.016	0.018
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	656000	3840	17.48	18.00	1.127	0.01	0.017	0.019
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	656000	3840	17.50	18.00	1.122	-0.17	0.013	0.015
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	656000	3840	17.48	18.00	1.127	-0.1	0.014	0.016
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	633334	3500.01	17.54	18.00	1.112	0.18	0.046	0.051
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	633334	3500.01	17.50	18.00	1.122	0.02	0.044	0.049
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	633334	3500.01	17.54	18.00	1.112	-0.05	0.066	0.073
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	633334	3500.01	17.50	18.00	1.122	0.19	0.065	0.073
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	650000	3750	22.31	23.00	1.172	0.01	0.167	0.196
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	650000	3750	22.26	23.00	1.186	0.05	0.181	0.215

Sporton International Inc. (Kunshan)

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	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	650000	3750	22.31	23.00	1.172	-0.01	0.290	0.340
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	650000	3750	22.26	23.00	1.186	0.03	0.289	0.343
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	633334	3500.01	22.44	23.00	1.138	-0.11	0.219	0.249
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 2	DSI3	633334	3500.01	22.41	23.00	1.146	0.04	0.216	0.247
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	633334	3500.01	22.44	23.00	1.138	0.05	0.371	0.422
60	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 2	DSI3	633334	3500.01	22.41	23.00	1.146	-0.01	0.411	0.471
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI3	650000	3750	19.05	20.00	1.245	-0.03	0.077	0.096
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI3	650000	3750	19.00	20.00	1.259	0.02	0.073	0.092
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI3	650000	3750	19.05	20.00	1.245	0.05	0.064	0.080
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI3	650000	3750	19.00	20.00	1.259	0.05	0.065	0.082
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI3	633334	3500.01	19.48	20.00	1.127	0.08	0.127	0.143
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 3	DSI3	633334	3500.01	19.42	20.00	1.143	0.04	0.131	0.150
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI3	633334	3500.01	19.48	20.00	1.127	-0.13	0.142	0.160
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 3	DSI3	633334	3500.01	19.42	20.00	1.143	-0.08	0.151	0.173
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI3	650000	3750	19.63	20.00	1.089	-0.13	0.186	0.203
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI3	650000	3750	19.50	20.00	1.122	0.15	0.183	0.205
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI3	650000	3750	19.63	20.00	1.089	-0.07	0.253	0.275
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI3	650000	3750	19.50	20.00	1.122	-0.09	0.256	0.287
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI3	633334	3500.01	19.74	20.00	1.062	-0.11	0.188	0.200
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 4	DSI3	633334	3500.01	19.72	20.00	1.067	0.1	0.199	0.212
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI3	633334	3500.01	19.74	20.00	1.062	-0.12	0.212	0.225
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 4	DSI3	633334	3500.01	19.72	20.00	1.067	-0.01	0.221	0.236
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	650000	3750	19.30	20.00	1.175	0.05	0.063	0.074
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	650000	3750	19.25	20.00	1.189	0.04	0.059	0.070
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	650000	3750	19.30	20.00	1.175	-0.06	0.080	0.094
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	650000	3750	19.25	20.00	1.189	-0.03	0.094	0.112
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	633334	3500.01	19.43	20.00	1.140	0.08	0.074	0.084
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	15mm	Ant 5	DSI3	633334	3500.01	19.31	20.00	1.172	-0.17	0.071	0.083
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	633334	3500.01	19.43	20.00	1.140	-0.02	0.115	0.131
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	633334	3500.01	19.31	20.00	1.172	0.02	0.110	0.129

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
2450MHz																
61	WLAN2.4GHz	802.11b 1Mbps	Front	15mm	Ant 8+9	Full	1	2412	20.84	22.50	1.467	99.31	1.007	-0.06	0.093	0.137
	WLAN2.4GHz	802.11b 1Mbps	Back	15mm	Ant 8+9	Full	1	2412	20.84	22.50	1.467	99.31	1.007	-0.17	0.079	0.117
62	Bluetooth	1Mbps	Front	15mm	Ant 8	Full	78	2480	15.78	17.00	1.323	76.83	1.302	-0.09	0.037	0.064
	Bluetooth	1Mbps	Back	15mm	Ant 8	Full	78	2480	15.78	17.00	1.323	76.83	1.302	-0.02	0.012	0.021
5000MHz																
	WLAN5.3GHz	802.11a 6Mbps	Front	15mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	-0.13	0.108	0.138
63	WLAN5.3GHz	802.11a 6Mbps	Back	15mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.04	0.259	0.332
	WLAN5.5GHz	802.11a 6Mbps	Front	15mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	0.04	0.172	0.245
64	WLAN5.5GHz	802.11a 6Mbps	Back	15mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	-0.17	0.197	0.281
	WLAN5.8GHz	802.11ac-VHT80 MCS0	Front	15mm	Ant 8+9	Full	155	5775	18.01	19.50	1.409	88.19	1.134	0.01	0.126	0.201
65	WLAN5.8GHz	802.11ac-VHT80 MCS0	Back	15mm	Ant 8+9	Full	155	5775	18.01	19.50	1.409	88.19	1.134	-0.05	0.274	0.438



15.4 Product Specific SAR

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
1750MHz																		
66	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	DS11	1413	1732.6	19.04	20.00	1.247	0.05	1.00	1.247
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DS11	1413	1732.6	19.04	20.00	1.247	-0.15	1.64	2.046
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DS11	1312	1712.4	18.83	20.00	1.309	0.03	1.49	1.951
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DS11	1513	1752.6	18.96	20.00	1.271	-0.02	1.42	1.804
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DS13	1413	1732.6	23.92	25.00	1.282	0.01	0.260	0.333
	WCDMA IV	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 0	DS13	1413	1732.6	23.92	25.00	1.282	0.03	0.473	0.607
67	LTE Band 4	20M	QPSK	1	0	-	Back	0mm	Ant 0	DS11	20175	1732.5	18.74	20.00	1.337	0.02	0.912	1.219
	LTE Band 4	20M	QPSK	50	0	-	Back	0mm	Ant 0	DS11	20175	1732.5	18.65	20.00	1.365	0.03	0.897	1.224
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	DS11	20175	1732.5	18.74	20.00	1.337	0.09	1.52	2.032
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	DS11	20050	1720	18.67	20.00	1.358	-0.04	1.41	1.915
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	DS11	20300	1745	18.63	20.00	1.371	0.12	1.47	2.015
	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	DS11	20175	1732.5	18.65	20.00	1.365	-0.04	1.63	2.224
	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	DS11	20050	1720	18.57	20.00	1.390	0.02	1.52	2.113
	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	DS11	20300	1745	18.64	20.00	1.368	-0.04	1.48	2.024
	LTE Band 4	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 0	DS11	20175	1732.5	18.67	20.00	1.358	-0.06	1.56	2.119
	LTE Band 4	20M	QPSK	1	0	-	Back	15mm	Ant 0	DS13	20175	1732.5	23.76	25.00	1.330	0.03	0.290	0.386
	LTE Band 4	20M	QPSK	50	0	-	Back	15mm	Ant 0	DS13	20175	1732.5	22.78	24.00	1.324	-0.04	0.238	0.315
	LTE Band 4	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 0	DS13	20175	1732.5	23.76	25.00	1.330	0.02	0.441	0.587
	LTE Band 4	20M	QPSK	50	0	-	Bottom Side	15mm	Ant 0	DS13	20175	1732.5	22.78	24.00	1.324	-0.04	0.367	0.486
	LTE Band 4	20M	QPSK	1	0	-	Back	0mm	Ant 1	DS11	20175	1732.5	18.95	20.50	1.429	-0.03	0.633	0.904
	LTE Band 4	20M	QPSK	50	0	-	Back	0mm	Ant 1	DS11	20175	1732.5	18.90	20.50	1.445	0.02	0.638	0.922
	LTE Band 4	20M	QPSK	1	0	-	Top Side	0mm	Ant 1	DS11	20175	1732.5	18.95	20.50	1.429	-0.04	1.24	1.772
	LTE Band 4	20M	QPSK	50	0	-	Top Side	0mm	Ant 1	DS11	20175	1732.5	18.90	20.50	1.445	-0.1	1.32	1.908
	LTE Band 4	20M	QPSK	1	0	-	Back	5mm	Ant 1	DS13	20175	1732.5	22.90	24.50	1.445	-0.03	1.10	1.590
	LTE Band 4	20M	QPSK	50	0	-	Back	5mm	Ant 1	DS13	20175	1732.5	21.93	23.50	1.435	0.02	0.860	1.235
	LTE Band 4	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DS13	20175	1732.5	22.90	24.50	1.445	-0.04	1.52	2.197
	LTE Band 4	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DS13	20050	1720	22.78	24.50	1.486	0.02	1.34	1.991
	LTE Band 4	20M	QPSK	1	0	-	Top Side	5mm	Ant 1	DS13	20300	1745	22.85	24.50	1.462	-0.03	1.40	2.047
	LTE Band 4	20M	QPSK	50	0	-	Top Side	5mm	Ant 1	DS13	20175	1732.5	21.93	23.50	1.435	-0.1	1.22	1.751
	LTE Band 4	20M	QPSK	100	0	-	Top Side	5mm	Ant 1	DS13	20175	1732.5	21.87	23.50	1.455	0.03	1.23	1.790
1900MHz																		
68	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 0	DS11	9400	1880	21.18	21.50	1.076	-0.02	1.27	1.367
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DS11	9400	1880	21.18	21.50	1.076	0.08	2.24	2.411
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DS11	9262	1852.4	20.95	21.50	1.135	0.06	2.08	2.361
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DS11	9538	1907.6	21.06	21.50	1.107	-0.03	2.09	2.313
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	15mm	Ant 0	DS13	9400	1880	24.16	24.50	1.081	0.04	0.302	0.327
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	15mm	Ant 0	DS13	9400	1880	24.16	24.50	1.081	0.04	0.531	0.574
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	0mm	Ant 2	DS11	9400	1880	19.92	21.50	1.439	0.01	0.902	1.298
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	0mm	Ant 2	DS11	9400	1880	19.92	21.50	1.439	0.06	1.15	1.655
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Back	5mm	Ant 2	DS13	9400	1880	23.82	25.50	1.472	-0.03	0.600	0.883
	WCDMA II	-	-	-	-	RMC 12.2Kbps	Left Side	5mm	Ant 2	DS13	9400	1880	23.82	25.50	1.472	0.01	0.642	0.945
69	LTE Band 2	20M	QPSK	1	0	-	Back	0mm	Ant 0	DS11	18900	1880	19.99	21.00	1.262	0.02	1.04	1.312
	LTE Band 2	20M	QPSK	50	0	-	Back	0mm	Ant 0	DS11	18900	1880	19.94	21.00	1.276	-0.03	0.987	1.260
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	DS11	18900	1880	19.99	21.00	1.262	-0.01	1.79	2.259
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	DS11	18700	1860	19.81	21.00	1.315	0.06	1.64	2.157
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	0mm	Ant 0	DS11	19100	1900	19.89	21.00	1.291	0.03	1.58	2.040
	LTE Band 2	20M	QPSK	50	0	-	Bottom Side	0mm	Ant 0	DS11	18900	1880	19.94	21.00	1.276	-0.04	1.56	1.991
	LTE Band 2	20M	QPSK	100	0	-	Bottom Side	0mm	Ant 0	DS11	18900	1880	19.88	21.00	1.294	-0.05	1.52	1.967
	LTE Band 2	20M	QPSK	1	0	-	Back	15mm	Ant 0	DS13	18900	1880	24.05	25.00	1.245	0.03	0.311	0.387
	LTE Band 2	20M	QPSK	1	0	-	Bottom Side	15mm	Ant 0	DS13	18900	1880	24.05	25.00	1.245	0.02	0.555	0.691



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
2600MHz																		
	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 1	DSI1	21100	2535	17.61	19.00	1.377	0.07	0.443	0.610
	LTE Band 7	20M	QPSK	50	0	-	Back	0mm	Ant 1	DSI1	21100	2535	17.55	19.00	1.396	0.04	0.451	0.630
	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 1	DSI3	21100	2535	22.66	24.00	1.361	0.07	0.794	1.081
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 1	DSI3	21100	2535	21.74	23.00	1.337	0.04	0.643	0.859
	LTE Band 7	20M	QPSK	1	0	-	Back	0mm	Ant 2	DSI1	21100	2535	17.89	19.00	1.291	0.03	0.664	0.857
	LTE Band 7	20M	QPSK	50	0	-	Back	0mm	Ant 2	DSI1	21100	2535	17.85	19.00	1.303	-0.06	0.673	0.877
	LTE Band 7	20M	QPSK	1	0	-	Left Side	0mm	Ant 2	DSI1	21100	2535	17.89	19.00	1.291	0.02	0.620	0.801
	LTE Band 7	20M	QPSK	50	0	-	Left Side	0mm	Ant 2	DSI1	21100	2535	17.85	19.00	1.303	0.01	0.634	0.826
70	LTE Band 7	20M	QPSK	1	0	-	Back	5mm	Ant 2	DSI3	21100	2535	22.78	24.00	1.324	-0.04	1.35	1.788
	LTE Band 7	20M	QPSK	50	0	-	Back	5mm	Ant 2	DSI3	21100	2535	21.80	23.00	1.318	-0.05	0.996	1.313
	LTE Band 7	20M	QPSK	1	0	-	Left Side	5mm	Ant 2	DSI3	21100	2535	22.78	24.00	1.324	-0.01	0.998	1.322
	LTE Band 7	20M	QPSK	50	0	-	Left Side	5mm	Ant 2	DSI3	21100	2535	21.80	23.00	1.318	0.03	0.866	1.142
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 1	DSI1	507000	2535	20.06	21.00	1.242	0.04	0.715	0.888
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	0mm	Ant 1	DSI1	507000	2535	19.94	21.00	1.276	0.03	0.707	0.902
71	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	507000	2535	23.97	25.00	1.268	0.09	1.46	1.851
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	507000	2535	23.85	25.00	1.303	-0.04	1.41	1.837
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 2	DSI1	507000	2535	17.80	19.00	1.318	-0.01	0.704	0.928
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	0mm	Ant 2	DSI1	507000	2535	17.75	19.00	1.334	0.02	0.698	0.931
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI3	507000	2535	21.65	23.00	1.365	0.01	0.756	1.032
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI3	507000	2535	21.62	23.00	1.374	0.05	0.982	1.349
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	0mm	Ant 5	DSI1	507000	2535	18.06	19.00	1.242	-0.02	0.761	0.945
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	0mm	Ant 5	DSI1	507000	2535	18.05	19.00	1.245	-0.04	0.822	1.023
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Left Side	0mm	Ant 5	DSI3	507000	2535	20.05	21.00	1.245	-0.04	1.320	1.643
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Left Side	0mm	Ant 5	DSI3	507000	2535	19.95	21.00	1.274	0.01	1.340	1.706
	FR1 n7	50M	QPSK	1	1	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	507000	2535	20.05	21.00	1.245	0.03	0.064	0.080
	FR1 n7	50M	QPSK	64	35	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	507000	2535	19.95	21.00	1.274	0.01	0.089	0.113
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	0mm	Ant 1	DSI1	519000	2595	20.40	21.50	1.288	-0.01	0.715	0.921
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	0mm	Ant 1	DSI1	519000	2595	20.35	21.50	1.303	0.06	0.700	0.912
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Top Side	0mm	Ant 1	DSI1	519000	2595	20.40	21.50	1.288	0.07	0.684	0.881
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Top Side	0mm	Ant 1	DSI1	519000	2595	20.35	21.50	1.303	-0.04	0.652	0.850
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	519000	2595	24.45	25.50	1.274	-0.05	1.53	1.948
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Top Side	5mm	Ant 1	DSI3	519000	2595	24.45	25.50	1.274	0.02	1.07	1.363
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	0mm	Ant 2	DSI1	519000	2595	18.33	20.00	1.469	0.09	0.943	1.385
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	0mm	Ant 2	DSI1	519000	2595	18.30	20.00	1.479	0.04	0.903	1.336
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DSI1	519000	2595	18.33	20.00	1.469	-0.02	0.766	1.125
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DSI1	519000	2595	18.30	20.00	1.479	0.02	0.724	1.071
72	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	5mm	Ant 2	DSI3	519000	2595	22.34	24.00	1.466	0.03	1.40	2.052
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DSI3	519000	2595	22.34	24.00	1.466	-0.02	0.877	1.285
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	0mm	Ant 5	DSI1	519000	2595	18.19	19.50	1.352	0.04	0.956	1.293
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	0mm	Ant 5	DSI1	519000	2595	18.17	19.50	1.358	0.04	0.975	1.324
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Left Side	0mm	Ant 5	DSI3	519000	2595	19.20	20.50	1.349	0.06	1.080	1.457
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Left Side	0mm	Ant 5	DSI3	519000	2595	19.14	20.50	1.368	0.06	1.110	1.518
	FR1 n38	40M	QPSK	1	53	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	519000	2595	19.20	20.50	1.349	0.03	0.083	0.112
	FR1 n38	40M	QPSK	50	28	DFT-SCS-30KHz	Back	15mm	Ant 5	DSI3	519000	2595	19.14	20.50	1.368	-0.01	0.084	0.115
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 1	DSI1	518598	2592.99	20.54	21.50	1.247	-0.02	0.721	0.899
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 1	DSI1	518598	2592.99	20.45	21.50	1.274	0.03	0.741	0.944
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	0mm	Ant 1	DSI1	518598	2592.99	20.54	21.50	1.247	0.01	1.000	1.247
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 1	DSI1	518598	2592.99	20.45	21.50	1.274	-0.12	1.030	1.312
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	518598	2592.99	24.39	25.50	1.291	0.03	1.29	1.666
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 1	DSI3	518598	2592.99	24.34	25.50	1.306	-0.05	1.51	1.972
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	5mm	Ant 1	DSI3	518598	2592.99	24.39	25.50	1.291	0.02	0.997	1.287
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	5mm	Ant 1	DSI3	518598	2592.99	24.34	25.50	1.306	0.07	1.03	1.345



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	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 2	DS11	518598	2592.99	18.44	19.50	1.276	0.06	0.879	1.122
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 2	DS11	518598	2592.99	18.42	19.50	1.282	0.05	0.901	1.155
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DS11	518598	2592.99	18.44	19.50	1.276	-0.02	0.910	1.162
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DS11	518598	2592.99	18.42	19.50	1.282	0.03	0.917	1.176
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	5mm	Ant 2	DS13	518598	2592.99	23.31	24.50	1.315	-0.09	1.53	2.012
73	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DS13	518598	2592.99	23.25	24.50	1.334	0.02	1.63	2.174
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DS13	518598	2592.99	23.31	24.50	1.315	0.06	0.986	1.297
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DS13	518598	2592.99	23.25	24.50	1.334	0.09	1.07	1.427
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 5	DS11	518598	2592.99	18.20	19.50	1.349	0.02	0.876	1.182
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 5	DS11	518598	2592.99	18.13	19.50	1.371	0.02	0.854	1.171
	FR1 n41	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	0mm	Ant 5	DS13	518598	2592.99	18.20	19.50	1.349	0.01	0.973	1.313
	FR1 n41	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 5	DS13	518598	2592.99	18.13	19.50	1.371	0.01	0.952	1.305
3500MHz																		
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 2	DS11	633334	3500.01	16.50	17.00	1.122	0.02	0.451	0.506
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 2	DS11	633334	3500.01	16.47	17.00	1.130	-0.03	0.440	0.497
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DS11	633334	3500.01	16.50	17.00	1.122	0.01	1.160	1.302
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DS11	633334	3500.01	16.47	17.00	1.130	0.04	1.120	1.265
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	5mm	Ant 2	DS13	633334	3500.01	21.30	22.00	1.175	0.05	0.935	1.099
74	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DS13	633334	3500.01	21.30	22.00	1.175	0.07	1.70	1.997
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	0mm	Ant 4	DS11	656000	3840	19.66	19.70	1.009	-0.02	0.679	0.685
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 4	DS11	656000	3840	19.61	19.70	1.021	0.01	0.654	0.668
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 4	DS11	656000	3840	19.66	19.70	1.009	-0.01	0.714	0.721
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 4	DS11	656000	3840	19.61	19.70	1.021	0.06	0.702	0.717
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DS11	656000	3840	19.66	19.70	1.009	0.02	1.430	1.443
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DS11	656000	3840	19.61	19.70	1.021	-0.03	1.340	1.368
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Front	0mm	Ant 4	DS11	633334	3500.01	19.63	19.70	1.016	0.02	1.030	1.047
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 4	DS11	633334	3500.01	19.55	19.70	1.035	0.02	1.110	1.149
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 4	DS11	633334	3500.01	19.63	19.70	1.016	0.06	0.870	0.884
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 4	DS11	633334	3500.01	19.55	19.70	1.035	0.06	0.872	0.903
	FR1 n77	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DS11	633334	3500.01	19.63	19.70	1.016	0.04	0.962	0.978
	FR1 n77	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DS11	633334	3500.01	19.55	19.70	1.035	0.04	0.975	1.009
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 2	DS11	650000	3750	16.30	17.00	1.175	-0.01	0.243	0.286
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 2	DS11	650000	3750	16.21	17.00	1.199	0.03	0.255	0.306
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DS11	650000	3750	16.30	17.00	1.175	-0.04	0.536	0.630
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DS11	650000	3750	16.21	17.00	1.199	-0.02	0.510	0.612
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	5mm	Ant 2	DS13	650000	3750	22.31	23.00	1.172	-0.01	0.476	0.558
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DS13	650000	3750	22.26	23.00	1.186	0.03	0.473	0.561
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DS13	650000	3750	22.31	23.00	1.172	0.03	0.724	0.849
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 2	DS11	633334	3500.01	16.46	17.00	1.132	-0.03	0.420	0.476
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 2	DS11	633334	3500.01	16.43	17.00	1.140	0.01	0.445	0.507
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DS11	633334	3500.01	16.46	17.00	1.132	-0.05	0.923	1.045
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 2	DS11	633334	3500.01	16.43	17.00	1.140	-0.05	0.911	1.039
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	5mm	Ant 2	DS13	633334	3500.01	22.44	23.00	1.138	-0.03	0.886	1.008
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	5mm	Ant 2	DS13	633334	3500.01	22.41	23.00	1.146	0.01	0.888	1.017
75	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	5mm	Ant 2	DS13	633334	3500.01	22.44	23.00	1.138	0.16	1.74	1.979
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	0mm	Ant 4	DS11	650000	3750	19.63	20.00	1.089	-0.04	0.772	0.841
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 4	DS11	650000	3750	19.50	20.00	1.122	-0.01	0.775	0.870
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 4	DS11	650000	3750	19.63	20.00	1.089	0.02	0.723	0.787
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 4	DS11	650000	3750	19.50	20.00	1.122	0.06	0.747	0.838
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DS11	650000	3750	19.63	20.00	1.089	-0.01	0.467	0.509
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DS11	650000	3750	19.50	20.00	1.122	0.05	0.497	0.558
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DS11	650000	3750	19.63	20.00	1.089	-0.04	1.330	1.448
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DS11	650000	3750	19.50	20.00	1.122	0.09	1.450	1.627
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Front	0mm	Ant 4	DS11	633334	3500.01	19.74	20.00	1.062	0.02	1.010	1.072
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Front	0mm	Ant 4	DS11	633334	3500.01	19.72	20.00	1.067	0.01	0.890	0.949
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 4	DS11	633334	3500.01	19.74	20.00	1.062	0.05	0.842	0.894

Sporton International Inc. (Kunshan)

TEL : 86-512-57900158 / FAX : 86-512-57900958

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	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 4	DS11	633334	3500.01	19.72	20.00	1.067	-0.03	0.823	0.878
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DS11	633334	3500.01	19.74	20.00	1.062	-0.02	0.774	0.822
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 4	DS11	633334	3500.01	19.72	20.00	1.067	0.04	0.755	0.805
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DS11	633334	3500.01	19.74	20.00	1.062	-0.01	0.946	1.004
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Top Side	0mm	Ant 4	DS11	633334	3500.01	19.72	20.00	1.067	0.01	0.920	0.981
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	0mm	Ant 5	DS11	633334	3500.01	18.25	19.00	1.189	-0.03	1.000	1.189
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	0mm	Ant 5	DS11	633334	3500.01	18.15	19.00	1.216	0.02	1.160	1.411
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Left Side	0mm	Ant 5	DS13	633334	3500.01	19.43	20.00	1.140	0.01	1.570	1.790
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Left Side	0mm	Ant 5	DS13	633334	3500.01	19.31	20.00	1.172	0.06	1.630	1.911
	FR1 n78	100M	QPSK	1	137	DFT-SCS-30KHz	Back	15mm	Ant 5	DS13	633334	3500.01	19.43	20.00	1.140	-0.03	0.063	0.072
	FR1 n78	100M	QPSK	135	69	DFT-SCS-30KHz	Back	15mm	Ant 5	DS13	633334	3500.01	19.31	20.00	1.172	0.02	0.061	0.072

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
5000MHz																
	WLAN5.3GHz	802.11a 6Mbps	Front	0mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.05	0.386	0.494
	WLAN5.3GHz	802.11a 6Mbps	Back	0mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.02	0.345	0.442
	WLAN5.3GHz	802.11a 6Mbps	Right Side	0mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.02	0.751	0.961
76	WLAN5.3GHz	802.11a 6Mbps	Top Side	0mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.01	1.040	1.331
	WLAN5.3GHz	802.11a 6Mbps	Front	5mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.05	0.175	0.224
	WLAN5.3GHz	802.11a 6Mbps	Back	5mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.02	0.157	0.201
	WLAN5.3GHz	802.11a 6Mbps	Right Side	5mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.02	0.343	0.439
	WLAN5.3GHz	802.11a 6Mbps	Top Side	5mm	Ant 8+9	Full	56	5280	18.56	19.50	1.242	96.97	1.031	0.01	0.441	0.565
	WLAN5.5GHz	802.11a 6Mbps	Front	0mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	0.15	0.503	0.718
	WLAN5.5GHz	802.11a 6Mbps	Back	0mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	0.08	0.615	0.877
	WLAN5.5GHz	802.11a 6Mbps	Right Side	0mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	0.04	0.893	1.274
77	WLAN5.5GHz	802.11a 6Mbps	Top Side	0mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	-0.05	1.190	1.697
	WLAN5.5GHz	802.11a 6Mbps	Front	5mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	0.15	0.189	0.270
	WLAN5.5GHz	802.11a 6Mbps	Back	5mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	0.08	0.243	0.347
	WLAN5.5GHz	802.11a 6Mbps	Right Side	5mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	0.04	0.363	0.518
	WLAN5.5GHz	802.11a 6Mbps	Top Side	5mm	Ant 8+9	Full	144	5720	18.09	19.50	1.384	96.97	1.031	-0.05	0.468	0.668



15.5 Repeated SAR Measurement

<1g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DS10	41490	2680	21.36	22.00	1.159	62.9	1.006	0.06	0.844	1	0.984
2nd	LTE Band 41	20M	QPSK	100	0	-	Right Cheek	0mm	Ant 2	DS10	41490	2680	21.36	22.00	1.159	62.9	1.006	0.02	0.825	1.023	0.962
1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DS14	9400	1880	21.18	21.50	1.076	-	-	-0.08	0.968	1	1.042
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	10mm	Ant 0	DS14	9400	1880	21.18	21.50	1.076	-	-	0.01	0.964	1.004	1.038

<10g>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Mode	Test Position	Gap (mm)	Antenna	Power State	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DS11	9400	1880	21.18	21.50	1.076	-	-	0.08	2.24	1	2.411
2nd	WCDMA II	-	-	-	-	RMC 12.2Kbps	Bottom Side	0mm	Ant 0	DS11	9400	1880	21.18	21.50	1.076	-	-	0.01	2.12	1.057	2.282

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{W/kg}$.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR $< 1.45\text{W/kg}$, 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.

16. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Portable Handset			
		Head	Body-worn	Hotspot	Product Specific
1.	WWAN + WLAN2.4GHz SISO/MIMO	Yes	Yes	Yes	Yes
2.	WWAN + WLAN5GHz SISO/MIMO	Yes	Yes	Yes	Yes
3.	WWAN + Bluetooth	Yes	Yes	Yes	Yes
4.	Bluetooth + WLAN5GHz SISO/MIMO	Yes	Yes	Yes	Yes
5.	WWAN + Bluetooth + WLAN5GHz SISO/MIMO	Yes	Yes	Yes	Yes
6.	Bluetooth + WLAN2.4GHz SISO 2	Yes	Yes	Yes	Yes
7.	WWAN + Bluetooth + WLAN2.4GHz SISO 2	Yes	Yes	Yes	Yes

General Note:

- This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP) and LTE supports VoLTE operation.
- WWAN above includes 5G NR bands.
- EN-DC SAR summed the standalone 5G NR SAR and LTE standalone SAR more conservatively.
- EUT will choose each GSM, WCDMA, LTE and 5G NR according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.
- This device 2.4GHz WLAN/ 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).
- WLAN 2.4GHz ANT8 and Bluetooth share the same antenna, and they cannot transmit simultaneously each other.
- According to the EUT characteristic, WLAN 5GHz and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 2.4GHz ANT9 and Bluetooth can transmit simultaneously.
- According to the EUT characteristic, WLAN 5GHz and WLAN 2.4GHz cannot transmit simultaneously.
- 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.
- The worst case 5 GHz WLAN SAR for each configuration was used for SAR summation.
- Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
- The reported SAR summation is calculated based on the same configuration and test position.
- For standalone WWAN, always choose the highest SAR among all WWAN bands for each exposure position to perform simultaneous transmission analysis with WLAN/BT. This is the worst co-located analysis and can represent each bands.
- For Inter Band CA and EN-DC, always choose the highest SAR among same antenna of all WWAN bands to perform simultaneous transmission analysis with WLAN/BT. The worst co-located analysis and can represent each LTE/NR bands.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - 1g Scalar SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$ for 1g SAR and $SPLSR \leq 0.10$ for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.



16.1 Head Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2+4	1+3+4
		WWAN	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN All Bands	Right Cheek	1.087	0.106	0.109	0.159	1.35	1.36
	Right Tilted	1.088	0.113	0.139	0.188	1.39	1.42
	Left Cheek	0.764	0.260	0.169	0.291	1.32	1.22
	Left Tilted	0.746	0.210	0.237	0.359	1.32	1.34

<Inter UL CA Mode>

WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			WWAN	WWAN	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 4 Ant 0	LTE Band 7 Ant 1	Right Cheek	0.161	0.571	0.106	0.109	0.159	1.00	1.00
		Right Tilted	0.102	0.574	0.113	0.139	0.188	0.98	1.00
		Left Cheek	0.162	0.427	0.260	0.169	0.291	1.14	1.05
		Left Tilted	0.133	0.477	0.210	0.237	0.359	1.18	1.21
LTE Band 4 Ant 0	LTE Band 7 Ant 5	Right Cheek	0.161	0.226	0.106	0.109	0.159	0.65	0.66
		Right Tilted	0.102	0.121	0.113	0.139	0.188	0.52	0.55
		Left Cheek	0.162	0.289	0.260	0.169	0.291	1.00	0.91
		Left Tilted	0.133	0.099	0.210	0.237	0.359	0.80	0.83
LTE Band 4 Ant 2	LTE Band 7 Ant 1	Right Cheek	0.747	0.571	0.106	0.109	0.159	1.58	1.59
		Right Tilted	0.234	0.574	0.113	0.139	0.188	1.11	1.14
		Left Cheek	0.348	0.427	0.260	0.169	0.291	1.33	1.24
		Left Tilted	0.243	0.477	0.210	0.237	0.359	1.29	1.32
LTE Band 4 Ant 2	LTE Band 7 Ant 5	Right Cheek	0.747	0.226	0.106	0.109	0.159	1.24	1.24
		Right Tilted	0.234	0.121	0.113	0.139	0.188	0.66	0.68
		Left Cheek	0.348	0.289	0.260	0.169	0.291	1.19	1.10
		Left Tilted	0.243	0.099	0.210	0.237	0.359	0.91	0.94



<5GNR UL CA Mode>

FR1 Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			FR1	FR1	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
FR1 n7 Ant 0	FR1 n78 Ant 2	Right Cheek	0.155	0.643	0.106	0.109	0.159	1.06	1.07
		Right Tilted	0.108	0.119	0.113	0.139	0.188	0.53	0.55
		Left Cheek	0.260	0.297	0.260	0.169	0.291	1.11	1.02
		Left Tilted	0.183	0.071	0.210	0.237	0.359	0.82	0.85
FR1 n7 Ant 0	FR1 n78 Ant 3	Right Cheek	0.155	0.455	0.106	0.109	0.159	0.88	0.88
		Right Tilted	0.108	0.455	0.113	0.139	0.188	0.86	0.89
		Left Cheek	0.260	0.455	0.260	0.169	0.291	1.27	1.18
		Left Tilted	0.183	0.455	0.210	0.237	0.359	1.21	1.23
FR1 n7 Ant 0	FR1 n78 Ant 4	Right Cheek	0.155	0.732	0.106	0.109	0.159	1.15	1.16
		Right Tilted	0.108	0.582	0.113	0.139	0.188	0.99	1.02
		Left Cheek	0.260	0.328	0.260	0.169	0.291	1.14	1.05
		Left Tilted	0.183	0.408	0.210	0.237	0.359	1.16	1.19
FR1 n7 Ant 0	FR1 n78 Ant 5	Right Cheek	0.155	0.465	0.106	0.109	0.159	0.89	0.89
		Right Tilted	0.108	0.465	0.113	0.139	0.188	0.87	0.90
		Left Cheek	0.260	0.465	0.260	0.169	0.291	1.28	1.19
		Left Tilted	0.183	0.465	0.210	0.237	0.359	1.22	1.24
FR1 n7 Ant 1	FR1 n78 Ant 2	Right Cheek	0.481	0.643	0.106	0.109	0.159	1.39	1.39
		Right Tilted	0.481	0.119	0.113	0.139	0.188	0.90	0.93
		Left Cheek	0.481	0.297	0.260	0.169	0.291	1.33	1.24
		Left Tilted	0.481	0.071	0.210	0.237	0.359	1.12	1.15
FR1 n7 Ant 1	FR1 n78 Ant 3	Right Cheek	0.481	0.455	0.106	0.109	0.159	1.20	1.20
		Right Tilted	0.481	0.455	0.113	0.139	0.188	1.24	1.26
		Left Cheek	0.481	0.455	0.260	0.169	0.291	1.49	1.40
		Left Tilted	0.481	0.455	0.210	0.237	0.359	1.51	1.53
FR1 n7 Ant 1	FR1 n78 Ant 4	Right Cheek	0.481	0.732	0.106	0.109	0.159	1.48	1.48
		Right Tilted	0.481	0.582	0.113	0.139	0.188	1.36	1.39
		Left Cheek	0.481	0.328	0.260	0.169	0.291	1.36	1.27
		Left Tilted	0.481	0.408	0.210	0.237	0.359	1.46	1.49
FR1 n7 Ant 1	FR1 n78 Ant 5	Right Cheek	0.481	0.465	0.106	0.109	0.159	1.21	1.21
		Right Tilted	0.481	0.465	0.113	0.139	0.188	1.25	1.27
		Left Cheek	0.481	0.465	0.260	0.169	0.291	1.50	1.41
		Left Tilted	0.481	0.465	0.210	0.237	0.359	1.52	1.54
FR1 n7 Ant 2	FR1 n78 Ant 3	Right Cheek	0.551	0.455	0.106	0.109	0.159	1.27	1.27
		Right Tilted	0.179	0.455	0.113	0.139	0.188	0.94	0.96
		Left Cheek	0.192	0.455	0.260	0.169	0.291	1.20	1.11
		Left Tilted	0.124	0.455	0.210	0.237	0.359	1.15	1.18
FR1 n7 Ant 2	FR1 n78 Ant 4	Right Cheek	0.551	0.732	0.106	0.109	0.159	1.55	1.55
		Right Tilted	0.179	0.582	0.113	0.139	0.188	1.06	1.09
		Left Cheek	0.192	0.328	0.260	0.169	0.291	1.07	0.98
		Left Tilted	0.124	0.408	0.210	0.237	0.359	1.10	1.13
FR1 n7 Ant 2	FR1 n78 Ant 5	Right Cheek	0.551	0.465	0.106	0.109	0.159	1.28	1.28
		Right Tilted	0.179	0.465	0.113	0.139	0.188	0.95	0.97
		Left Cheek	0.192	0.465	0.260	0.169	0.291	1.21	1.12
		Left Tilted	0.124	0.465	0.210	0.237	0.359	1.16	1.19
FR1 n7 Ant 5	FR1 n78 Ant 2	Right Cheek	0.279	0.643	0.106	0.109	0.159	1.19	1.19
		Right Tilted	0.139	0.119	0.113	0.139	0.188	0.56	0.59
		Left Cheek	0.317	0.297	0.260	0.169	0.291	1.17	1.07
		Left Tilted	0.100	0.071	0.210	0.237	0.359	0.74	0.77
FR1 n7 Ant 5	FR1 n78 Ant 3	Right Cheek	0.279	0.455	0.106	0.109	0.159	1.00	1.00
		Right Tilted	0.139	0.455	0.113	0.139	0.188	0.90	0.92
		Left Cheek	0.317	0.455	0.260	0.169	0.291	1.32	1.23
		Left Tilted	0.100	0.455	0.210	0.237	0.359	1.12	1.15



FR1 n7 Ant 5	FR1 n78 Ant 4	Right Cheek	0.279	0.732	0.106	0.109	0.159	1.28	1.28
		Right Tilted	0.139	0.582	0.113	0.139	0.188	1.02	1.05
		Left Cheek	0.317	0.328	0.260	0.169	0.291	1.20	1.11
		Left Tilted	0.100	0.408	0.210	0.237	0.359	1.08	1.10

<5G NR EN-DC Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			WWAN	FR1	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Right Cheek	0.197	0.481	0.106	0.109	0.159	0.94	0.95
		Right Tilted	0.133	0.481	0.113	0.139	0.188	0.92	0.94
		Left Cheek	0.234	0.481	0.260	0.169	0.291	1.27	1.18
		Left Tilted	0.210	0.481	0.210	0.237	0.359	1.26	1.29
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Right Cheek	0.197	0.643	0.106	0.109	0.159	1.11	1.11
		Right Tilted	0.133	0.179	0.113	0.139	0.188	0.61	0.64
		Left Cheek	0.234	0.297	0.260	0.169	0.291	1.08	0.99
		Left Tilted	0.210	0.124	0.210	0.237	0.359	0.90	0.93
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant3 (78A)	Right Cheek	0.197	0.455	0.106	0.109	0.159	0.92	0.92
		Right Tilted	0.133	0.455	0.113	0.139	0.188	0.89	0.92
		Left Cheek	0.234	0.455	0.260	0.169	0.291	1.24	1.15
		Left Tilted	0.210	0.455	0.210	0.237	0.359	1.23	1.26
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant4 (78A)	Right Cheek	0.197	0.732	0.106	0.109	0.159	1.19	1.20
		Right Tilted	0.133	0.582	0.113	0.139	0.188	1.02	1.04
		Left Cheek	0.234	0.328	0.260	0.169	0.291	1.11	1.02
		Left Tilted	0.210	0.408	0.210	0.237	0.359	1.19	1.21
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Right Cheek	0.197	0.465	0.106	0.109	0.159	0.93	0.93
		Right Tilted	0.133	0.465	0.113	0.139	0.188	0.90	0.93
		Left Cheek	0.234	0.465	0.260	0.169	0.291	1.25	1.16
		Left Tilted	0.210	0.465	0.210	0.237	0.359	1.24	1.27
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Right Cheek	0.530	0.203	0.106	0.109	0.159	1.00	1.00
		Right Tilted	0.530	0.108	0.113	0.139	0.188	0.94	0.97
		Left Cheek	0.530	0.260	0.260	0.169	0.291	1.34	1.25
		Left Tilted	0.530	0.183	0.210	0.237	0.359	1.28	1.31
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Right Cheek	0.530	0.643	0.106	0.109	0.159	1.44	1.44
		Right Tilted	0.530	0.179	0.113	0.139	0.188	1.01	1.04
		Left Cheek	0.530	0.297	0.260	0.169	0.291	1.38	1.29
		Left Tilted	0.530	0.124	0.210	0.237	0.359	1.22	1.25
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant3 (78A)	Right Cheek	0.530	0.455	0.106	0.109	0.159	1.25	1.25
		Right Tilted	0.530	0.455	0.113	0.139	0.188	1.29	1.31
		Left Cheek	0.530	0.455	0.260	0.169	0.291	1.54	1.45
		Left Tilted	0.530	0.455	0.210	0.237	0.359	1.55	1.58
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant4 (78A)	Right Cheek	0.530	0.732	0.106	0.109	0.159	1.53	1.53
		Right Tilted	0.530	0.582	0.113	0.139	0.188	1.41	1.44
		Left Cheek	0.530	0.328	0.260	0.169	0.291	1.41	1.32
		Left Tilted	0.530	0.408	0.210	0.237	0.359	1.51	1.53
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Right Cheek	0.530	0.465	0.106	0.109	0.159	1.26	1.26
		Right Tilted	0.530	0.465	0.113	0.139	0.188	1.30	1.32
		Left Cheek	0.530	0.465	0.260	0.169	0.291	1.55	1.46
		Left Tilted	0.530	0.465	0.210	0.237	0.359	1.56	1.59
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Right Cheek	0.515	0.203	0.106	0.109	0.159	0.98	0.99
		Right Tilted	0.515	0.108	0.113	0.139	0.188	0.92	0.95
		Left Cheek	0.515	0.260	0.260	0.169	0.291	1.33	1.24
		Left Tilted	0.515	0.183	0.210	0.237	0.359	1.27	1.29
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Right Cheek	0.515	0.481	0.106	0.109	0.159	1.26	1.26
		Right Tilted	0.515	0.481	0.113	0.139	0.188	1.30	1.32



		Left Cheek	0.515	0.481	0.260	0.169	0.291	1.55	1.46
		Left Tilted	0.515	0.481	0.210	0.237	0.359	1.57	1.59
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant3 (78A)	Right Cheek	0.515	0.455	0.106	0.109	0.159	1.24	1.24
		Right Tilted	0.515	0.455	0.113	0.139	0.188	1.27	1.30
		Left Cheek	0.515	0.455	0.260	0.169	0.291	1.52	1.43
		Left Tilted	0.515	0.455	0.210	0.237	0.359	1.54	1.57
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant4 (78A)	Right Cheek	0.515	0.732	0.106	0.109	0.159	1.51	1.52
		Right Tilted	0.515	0.582	0.113	0.139	0.188	1.40	1.42
		Left Cheek	0.515	0.328	0.260	0.169	0.291	1.39	1.30
		Left Tilted	0.515	0.408	0.210	0.237	0.359	1.49	1.52
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Right Cheek	0.515	0.465	0.106	0.109	0.159	1.25	1.25
		Right Tilted	0.515	0.465	0.113	0.139	0.188	1.28	1.31
		Left Cheek	0.515	0.465	0.260	0.169	0.291	1.53	1.44
		Left Tilted	0.515	0.465	0.210	0.237	0.359	1.55	1.58
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Right Cheek	0.226	0.203	0.106	0.109	0.159	0.69	0.70
		Right Tilted	0.121	0.108	0.113	0.139	0.188	0.53	0.56
		Left Cheek	0.289	0.260	0.260	0.169	0.291	1.10	1.01
		Left Tilted	0.099	0.183	0.210	0.237	0.359	0.85	0.88
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Right Cheek	0.226	0.481	0.106	0.109	0.159	0.97	0.98
		Right Tilted	0.121	0.481	0.113	0.139	0.188	0.90	0.93
		Left Cheek	0.289	0.481	0.260	0.169	0.291	1.32	1.23
		Left Tilted	0.099	0.481	0.210	0.237	0.359	1.15	1.18
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Right Cheek	0.226	0.643	0.106	0.109	0.159	1.13	1.14
		Right Tilted	0.121	0.179	0.113	0.139	0.188	0.60	0.63
		Left Cheek	0.289	0.297	0.260	0.169	0.291	1.14	1.05
		Left Tilted	0.099	0.124	0.210	0.237	0.359	0.79	0.82
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant3 (78A)	Right Cheek	0.226	0.455	0.106	0.109	0.159	0.95	0.95
		Right Tilted	0.121	0.455	0.113	0.139	0.188	0.88	0.90
		Left Cheek	0.289	0.455	0.260	0.169	0.291	1.30	1.20
		Left Tilted	0.099	0.455	0.210	0.237	0.359	1.12	1.15
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant4 (78A)	Right Cheek	0.226	0.732	0.106	0.109	0.159	1.22	1.23
		Right Tilted	0.121	0.582	0.113	0.139	0.188	1.00	1.03
		Left Cheek	0.289	0.328	0.260	0.169	0.291	1.17	1.08
		Left Tilted	0.099	0.408	0.210	0.237	0.359	1.08	1.10

16.2 Hotspot Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2+4	1+3+4
		WWAN	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN All Bands	Front	0.344	0.263	0.136	0.112	0.72	0.59
	Back	0.693	0.201	0.233	0.086	0.98	1.01
	Left side	0.565				0.57	0.57
	Right side	0.192	0.349	0.237	0.140	0.68	0.57
	Top side	0.551	0.131	0.470	0.098	0.78	1.12
	Bottom side	1.042				1.04	1.04

<Inter UL CA Mode>

WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			WWAN	WWAN	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 4 Ant 0	LTE Band 7 Ant 1	Front	0.194	0.101	0.263	0.136	0.112	0.67	0.54
		Back	0.474	0.408	0.201	0.233	0.086	1.17	1.20
		Left side		0.054				0.05	0.05
		Right side	0.059		0.349	0.237	0.140	0.55	0.44
		Top side		0.364	0.131	0.470	0.098	0.59	0.93
		Bottom side	0.697					0.70	0.70
LTE Band 4 Ant 0	LTE Band 7 Ant 5	Front	0.194	0.166	0.263	0.136	0.112	0.74	0.61
		Back	0.474	0.436	0.201	0.233	0.086	1.20	1.23
		Left side		0.390				0.39	0.39
		Right side	0.059		0.349	0.237	0.140	0.55	0.44
		Top side			0.131	0.470	0.098	0.23	0.57
		Bottom side	0.697	0.114				0.81	0.81
LTE Band 4 Ant 2	LTE Band 7 Ant 1	Front	0.129	0.101	0.263	0.136	0.112	0.61	0.48
		Back	0.351	0.408	0.201	0.233	0.086	1.05	1.08
		Left side	0.370	0.054				0.42	0.42
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side		0.364	0.131	0.470	0.098	0.59	0.93
		Bottom side							
LTE Band 4 Ant 2	LTE Band 7 Ant 5	Front	0.129	0.166	0.263	0.136	0.112	0.67	0.54
		Back	0.351	0.436	0.201	0.233	0.086	1.07	1.11
		Left side	0.370	0.390				0.76	0.76
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side			0.131	0.470	0.098	0.23	0.57
		Bottom side		0.114				0.11	0.11



<5GNR UL CA Mode>

FR1 Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			FR1	FR1	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
FR1 n7 Ant 0	FR1 n78 Ant 2	Front	0.127	0.122	0.263	0.136	0.112	0.62	0.50
		Back	0.239	0.231	0.201	0.233	0.086	0.76	0.79
		Left side	0.066	0.433				0.50	0.50
		Right side	0.033		0.349	0.237	0.140	0.52	0.41
		Top side		0.054	0.131	0.470	0.098	0.28	0.62
		Bottom side	0.172					0.17	0.17
FR1 n7 Ant 0	FR1 n78 Ant 3	Front	0.127	0.156	0.263	0.136	0.112	0.66	0.53
		Back	0.239	0.194	0.201	0.233	0.086	0.72	0.75
		Left side	0.066					0.07	0.07
		Right side	0.033	0.190	0.349	0.237	0.140	0.71	0.60
		Top side		0.089	0.131	0.470	0.098	0.32	0.66
		Bottom side	0.172					0.17	0.17
FR1 n7 Ant 0	FR1 n78 Ant 4	Front	0.127	0.236	0.263	0.136	0.112	0.74	0.61
		Back	0.239	0.309	0.201	0.233	0.086	0.84	0.87
		Left side	0.066	0.130				0.20	0.20
		Right side	0.033		0.349	0.237	0.140	0.52	0.41
		Top side		0.397	0.131	0.470	0.098	0.63	0.97
		Bottom side	0.172					0.17	0.17
FR1 n7 Ant 0	FR1 n78 Ant 5	Front	0.127	0.141	0.263	0.136	0.112	0.64	0.52
		Back	0.239	0.254	0.201	0.233	0.086	0.78	0.81
		Left side	0.066	0.303				0.37	0.37
		Right side	0.033		0.349	0.237	0.140	0.52	0.41
		Top side			0.131	0.470	0.098	0.23	0.57
		Bottom side	0.172	0.153				0.33	0.33
FR1 n7 Ant 1	FR1 n78 Ant 2	Front	0.150	0.122	0.263	0.136	0.112	0.65	0.52
		Back	0.569	0.231	0.201	0.233	0.086	1.09	1.12
		Left side	0.105	0.433				0.54	0.54
		Right side	0.040		0.349	0.237	0.140	0.53	0.42
		Top side	0.475	0.054	0.131	0.470	0.098	0.76	1.10
		Bottom side							
FR1 n7 Ant 1	FR1 n78 Ant 3	Front	0.150	0.156	0.263	0.136	0.112	0.68	0.55
		Back	0.569	0.194	0.201	0.233	0.086	1.05	1.08
		Left side	0.105					0.11	0.11
		Right side	0.040	0.190	0.349	0.237	0.140	0.72	0.61
		Top side	0.475	0.089	0.131	0.470	0.098	0.79	1.13
		Bottom side							
FR1 n7 Ant 1	FR1 n78 Ant 4	Front	0.150	0.236	0.263	0.136	0.112	0.76	0.63
		Back	0.569	0.309	0.201	0.233	0.086	1.17	1.20
		Left side	0.105	0.130				0.24	0.24
		Right side	0.040		0.349	0.237	0.140	0.53	0.42
		Top side	0.475	0.397	0.131	0.470	0.098	1.10	1.44
		Bottom side							
FR1 n7 Ant 1	FR1 n78 Ant 5	Front	0.150	0.141	0.263	0.136	0.112	0.67	0.54
		Back	0.569	0.254	0.201	0.233	0.086	1.11	1.14
		Left side	0.105	0.303				0.41	0.41
		Right side	0.040		0.349	0.237	0.140	0.53	0.42
		Top side	0.475		0.131	0.470	0.098	0.70	1.04
		Bottom side		0.153				0.15	0.15
FR1 n7 Ant 2	FR1 n78 Ant 3	Front	0.200	0.156	0.263	0.136	0.112	0.73	0.60
		Back	0.497	0.194	0.201	0.233	0.086	0.98	1.01
		Left side	0.353					0.35	0.35
		Right side		0.190	0.349	0.237	0.140	0.68	0.57



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		Top side		0.089	0.131	0.470	0.098	0.32	0.66
		Bottom side							
FR1 n7 Ant 2	FR1 n78 Ant 4	Front	0.200	0.236	0.263	0.136	0.112	0.81	0.68
		Back	0.497	0.309	0.201	0.233	0.086	1.09	1.13
		Left side	0.353	0.130				0.48	0.48
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side		0.397	0.131	0.470	0.098	0.63	0.97
		Bottom side							
FR1 n7 Ant 2	FR1 n78 Ant 5	Front	0.200	0.141	0.263	0.136	0.112	0.72	0.59
		Back	0.497	0.254	0.201	0.233	0.086	1.04	1.07
		Left side	0.353	0.303				0.66	0.66
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side			0.131	0.470	0.098	0.23	0.57
		Bottom side		0.153				0.15	0.15
FR1 n7 Ant 5	FR1 n78 Ant 2	Front	0.158	0.122	0.263	0.136	0.112	0.66	0.53
		Back	0.373	0.231	0.201	0.233	0.086	0.89	0.92
		Left side	0.360	0.433				0.79	0.79
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side		0.054	0.131	0.470	0.098	0.28	0.62
		Bottom side	0.102					0.10	0.10
FR1 n7 Ant 5	FR1 n78 Ant 3	Front	0.158	0.156	0.263	0.136	0.112	0.69	0.56
		Back	0.373	0.194	0.201	0.233	0.086	0.85	0.89
		Left side	0.360					0.36	0.36
		Right side		0.190	0.349	0.237	0.140	0.68	0.57
		Top side		0.089	0.131	0.470	0.098	0.32	0.66
		Bottom side	0.102					0.10	0.10
FR1 n7 Ant 5	FR1 n78 Ant 4	Front	0.158	0.236	0.263	0.136	0.112	0.77	0.64
		Back	0.373	0.309	0.201	0.233	0.086	0.97	1.00
		Left side	0.360	0.130				0.49	0.49
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side		0.397	0.131	0.470	0.098	0.63	0.97
		Bottom side	0.102					0.10	0.10



<5G NR EN-DC Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			WWAN	FR1	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front	0.249	0.179	0.263	0.136	0.112	0.80	0.68
		Back	0.583	0.569	0.201	0.233	0.086	1.44	1.47
		Left side	0.139	0.198				0.34	0.34
		Right side	0.098	0.164	0.349	0.237	0.140	0.75	0.64
		Top side		0.475	0.131	0.470	0.098	0.70	1.04
		Bottom side	0.782					0.78	0.78
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front	0.249	0.200	0.263	0.136	0.112	0.82	0.70
		Back	0.583	0.497	0.201	0.233	0.086	1.37	1.40
		Left side	0.139	0.433				0.57	0.57
		Right side	0.098		0.349	0.237	0.140	0.59	0.48
		Top side		0.054	0.131	0.470	0.098	0.28	0.62
		Bottom side	0.782					0.78	0.78
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant3 (78A)	Front	0.249	0.156	0.263	0.136	0.112	0.78	0.65
		Back	0.583	0.194	0.201	0.233	0.086	1.06	1.10
		Left side	0.139					0.14	0.14
		Right side	0.098	0.190	0.349	0.237	0.140	0.78	0.67
		Top side		0.089	0.131	0.470	0.098	0.32	0.66
		Bottom side	0.782					0.78	0.78
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front	0.249	0.236	0.263	0.136	0.112	0.86	0.73
		Back	0.583	0.309	0.201	0.233	0.086	1.18	1.21
		Left side	0.139	0.130				0.27	0.27
		Right side	0.098		0.349	0.237	0.140	0.59	0.48
		Top side		0.397	0.131	0.470	0.098	0.63	0.97
		Bottom side	0.782					0.78	0.78
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front	0.249	0.158	0.263	0.136	0.112	0.78	0.66
		Back	0.583	0.373	0.201	0.233	0.086	1.24	1.28
		Left side	0.139	0.360				0.50	0.50
		Right side	0.098		0.349	0.237	0.140	0.59	0.48
		Top side			0.131	0.470	0.098	0.23	0.57
		Bottom side	0.782	0.153				0.94	0.94
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Front	0.215	0.127	0.263	0.136	0.112	0.72	0.59
		Back	0.560	0.241	0.201	0.233	0.086	1.09	1.12
		Left side	0.153	0.077				0.23	0.23
		Right side	0.166	0.157	0.349	0.237	0.140	0.81	0.70
		Top side	0.512		0.131	0.470	0.098	0.74	1.08
		Bottom side		0.191				0.19	0.19
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front	0.215	0.200	0.263	0.136	0.112	0.79	0.66
		Back	0.560	0.497	0.201	0.233	0.086	1.34	1.38
		Left side	0.153	0.433				0.59	0.59
		Right side	0.166		0.349	0.237	0.140	0.66	0.54
		Top side	0.512	0.054	0.131	0.470	0.098	0.80	1.13
		Bottom side							
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant3 (78A)	Front	0.215	0.156	0.263	0.136	0.112	0.75	0.62
		Back	0.560	0.194	0.201	0.233	0.086	1.04	1.07
		Left side	0.153					0.15	0.15
		Right side	0.166	0.190	0.349	0.237	0.140	0.85	0.73
		Top side	0.512	0.089	0.131	0.470	0.098	0.83	1.17
		Bottom side							
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front	0.215	0.236	0.263	0.136	0.112	0.83	0.70
		Back	0.560	0.309	0.201	0.233	0.086	1.16	1.19
		Left side	0.153	0.130				0.28	0.28
		Right side	0.166		0.349	0.237	0.140	0.66	0.54



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		Top side	0.512	0.397	0.131	0.470	0.098	1.14	1.48
		Bottom side							
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front	0.215	0.158	0.263	0.136	0.112	0.75	0.62
		Back	0.560	0.373	0.201	0.233	0.086	1.22	1.25
		Left side	0.153	0.360				0.51	0.51
		Right side	0.166		0.349	0.237	0.140	0.66	0.54
		Top side	0.512		0.131	0.470	0.098	0.74	1.08
		Bottom side		0.153				0.15	0.15
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Front	0.220	0.127	0.263	0.136	0.112	0.72	0.60
		Back	0.665	0.241	0.201	0.233	0.086	1.19	1.23
		Left side	0.433	0.077				0.51	0.51
		Right side		0.157	0.349	0.237	0.140	0.65	0.53
		Top side	0.045		0.131	0.470	0.098	0.27	0.61
		Bottom side		0.191				0.19	0.19
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front	0.220	0.179	0.263	0.136	0.112	0.77	0.65
		Back	0.665	0.569	0.201	0.233	0.086	1.52	1.55
		Left side	0.433	0.198				0.63	0.63
		Right side		0.164	0.349	0.237	0.140	0.65	0.54
		Top side	0.045	0.475	0.131	0.470	0.098	0.75	1.09
		Bottom side							
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant3 (78A)	Front	0.220	0.156	0.263	0.136	0.112	0.75	0.62
		Back	0.665	0.194	0.201	0.233	0.086	1.15	1.18
		Left side	0.433					0.43	0.43
		Right side		0.190	0.349	0.237	0.140	0.68	0.57
		Top side	0.045	0.089	0.131	0.470	0.098	0.36	0.70
		Bottom side							
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front	0.220	0.236	0.263	0.136	0.112	0.83	0.70
		Back	0.665	0.309	0.201	0.233	0.086	1.26	1.29
		Left side	0.433	0.130				0.56	0.56
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side	0.045	0.397	0.131	0.470	0.098	0.67	1.01
		Bottom side							
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front	0.220	0.158	0.263	0.136	0.112	0.75	0.63
		Back	0.665	0.373	0.201	0.233	0.086	1.33	1.36
		Left side	0.433	0.360				0.79	0.79
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side	0.045		0.131	0.470	0.098	0.27	0.61
		Bottom side		0.153				0.15	0.15
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Front	0.182	0.127	0.263	0.136	0.112	0.68	0.56
		Back	0.460	0.241	0.201	0.233	0.086	0.99	1.02
		Left side	0.457	0.077				0.53	0.53
		Right side		0.157	0.349	0.237	0.140	0.65	0.53
		Top side			0.131	0.470	0.098	0.23	0.57
		Bottom side	0.119	0.191				0.31	0.31
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front	0.182	0.179	0.263	0.136	0.112	0.74	0.61
		Back	0.460	0.569	0.201	0.233	0.086	1.32	1.35
		Left side	0.457	0.198				0.66	0.66
		Right side		0.164	0.349	0.237	0.140	0.65	0.54
		Top side		0.475	0.131	0.470	0.098	0.70	1.04
		Bottom side	0.119					0.12	0.12
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front	0.182	0.200	0.263	0.136	0.112	0.76	0.63
		Back	0.460	0.497	0.201	0.233	0.086	1.24	1.28
		Left side	0.457	0.433				0.89	0.89
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side		0.054	0.131	0.470	0.098	0.28	0.62
		Bottom side	0.119					0.12	0.12

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LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant3 (78A)	Front	0.182	0.156	0.263	0.136	0.112	0.71	0.59
		Back	0.460	0.194	0.201	0.233	0.086	0.94	0.97
		Left side	0.457					0.46	0.46
		Right side		0.190	0.349	0.237	0.140	0.68	0.57
		Top side		0.089	0.131	0.470	0.098	0.32	0.66
		Bottom side	0.119					0.12	0.12
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant4 (78A)	Front	0.182	0.236	0.263	0.136	0.112	0.79	0.67
		Back	0.460	0.309	0.201	0.233	0.086	1.06	1.09
		Left side	0.457	0.130				0.59	0.59
		Right side			0.349	0.237	0.140	0.49	0.38
		Top side		0.397	0.131	0.470	0.098	0.63	0.97
		Bottom side	0.119					0.12	0.12

16.3 Body-Worn Accessory Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	1+2+4	1+3+4
		WWAN	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
WWAN All Bands	Front	0.542	0.137	0.245	0.064	0.74	0.85
	Back	0.935	0.117	0.438	0.021	1.07	1.39

<Inter UL CA Mode>

WWAN Band	WWAN Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			WWAN	WWAN	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band 4 Ant 0	LTE Band 7 Ant 1	Front	0.265	0.192	0.137	0.245	0.064	0.66	0.77
		Back	0.532	0.479	0.117	0.438	0.021	1.15	1.47
LTE Band 4 Ant 0	LTE Band 7 Ant 5	Front	0.265	0.077	0.137	0.245	0.064	0.54	0.65
		Back	0.532	0.177	0.117	0.438	0.021	0.85	1.17
LTE Band 4 Ant 2	LTE Band 7 Ant 1	Front	0.348	0.192	0.137	0.245	0.064	0.74	0.85
		Back	0.404	0.479	0.117	0.438	0.021	1.02	1.34
LTE Band 4 Ant 2	LTE Band 7 Ant 5	Front	0.348	0.077	0.137	0.245	0.064	0.63	0.73
		Back	0.404	0.177	0.117	0.438	0.021	0.72	1.04

<5GNR UL CA Mode>

FR1 Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			FR1	FR1	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
FR1 n7 Ant 0	FR1 n78 Ant 2	Front	0.222	0.249	0.137	0.245	0.064	0.67	0.78
		Back	0.378	0.471	0.117	0.438	0.021	0.99	1.31
FR1 n7 Ant 0	FR1 n78 Ant 3	Front	0.222	0.150	0.137	0.245	0.064	0.57	0.68
		Back	0.378	0.173	0.117	0.438	0.021	0.69	1.01
FR1 n7 Ant 0	FR1 n78 Ant 4	Front	0.222	0.212	0.137	0.245	0.064	0.64	0.74
		Back	0.378	0.287	0.117	0.438	0.021	0.80	1.12
FR1 n7 Ant 0	FR1 n78 Ant 5	Front	0.222	0.084	0.137	0.245	0.064	0.51	0.62
		Back	0.378	0.131	0.117	0.438	0.021	0.65	0.97
FR1 n7 Ant 1	FR1 n78 Ant 2	Front	0.180	0.249	0.137	0.245	0.064	0.63	0.74
		Back	0.448	0.471	0.117	0.438	0.021	1.06	1.38
FR1 n7 Ant 1	FR1 n78 Ant 3	Front	0.180	0.150	0.137	0.245	0.064	0.53	0.64
		Back	0.448	0.173	0.117	0.438	0.021	0.76	1.08
FR1 n7 Ant 1	FR1 n78 Ant 4	Front	0.180	0.212	0.137	0.245	0.064	0.59	0.70
		Back	0.448	0.287	0.117	0.438	0.021	0.87	1.19
FR1 n7 Ant 1	FR1 n78 Ant 5	Front	0.180	0.084	0.137	0.245	0.064	0.47	0.57
		Back	0.448	0.131	0.117	0.438	0.021	0.72	1.04
FR1 n7 Ant 2	FR1 n78 Ant 3	Front	0.264	0.150	0.137	0.245	0.064	0.62	0.72
		Back	0.550	0.173	0.117	0.438	0.021	0.86	1.18
FR1 n7 Ant 2	FR1 n78 Ant 4	Front	0.264	0.212	0.137	0.245	0.064	0.68	0.79
		Back	0.550	0.287	0.117	0.438	0.021	0.98	1.30
FR1 n7 Ant 2	FR1 n78 Ant 5	Front	0.264	0.084	0.137	0.245	0.064	0.55	0.66
		Back	0.550	0.131	0.117	0.438	0.021	0.82	1.14
FR1 n7 Ant 5	FR1 n78 Ant 2	Front	0.082	0.249	0.137	0.245	0.064	0.53	0.64
		Back	0.228	0.471	0.117	0.438	0.021	0.84	1.16
FR1 n7 Ant 5	FR1 n78 Ant 3	Front	0.082	0.150	0.137	0.245	0.064	0.43	0.54
		Back	0.228	0.173	0.117	0.438	0.021	0.54	0.86
FR1 n7 Ant 5	FR1 n78 Ant 4	Front	0.082	0.212	0.137	0.245	0.064	0.50	0.60
		Back	0.228	0.287	0.117	0.438	0.021	0.65	0.97



<5G NR EN-DC Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	4	5	1+2+3+5	1+2+4+5
			WWAN	FR1	WLAN2.4GHz Ant 8+9	WLAN5GHz Ant 8+9	Bluetooth Ant 8	Summed	Summed
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front	0.326	0.244	0.137	0.245	0.064	0.77	0.88
		Back	0.538	0.448	0.117	0.438	0.021	1.12	1.45
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front	0.326	0.264	0.137	0.245	0.064	0.79	0.90
		Back	0.538	0.550	0.117	0.438	0.021	1.23	1.55
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant3 (78A)	Front	0.326	0.150	0.137	0.245	0.064	0.68	0.79
		Back	0.538	0.173	0.117	0.438	0.021	0.85	1.17
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front	0.326	0.212	0.137	0.245	0.064	0.74	0.85
		Back	0.538	0.287	0.117	0.438	0.021	0.96	1.28
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front	0.326	0.084	0.137	0.245	0.064	0.61	0.72
		Back	0.625	0.228	0.117	0.438	0.021	0.99	1.31
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Front	0.252	0.222	0.137	0.245	0.064	0.68	0.78
		Back	0.497	0.378	0.117	0.438	0.021	1.01	1.33
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front	0.252	0.264	0.137	0.245	0.064	0.72	0.83
		Back	0.479	0.550	0.117	0.438	0.021	1.17	1.49
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant3 (78A)	Front	0.252	0.150	0.137	0.245	0.064	0.60	0.71
		Back	0.479	0.173	0.117	0.438	0.021	0.79	1.11
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front	0.252	0.212	0.137	0.245	0.064	0.67	0.77
		Back	0.479	0.287	0.117	0.438	0.021	0.90	1.23
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front	0.252	0.084	0.137	0.245	0.064	0.54	0.65
		Back	0.479	0.228	0.117	0.438	0.021	0.85	1.17
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Front	0.542	0.222	0.137	0.245	0.064	0.97	1.07
		Back	0.637	0.378	0.117	0.438	0.021	1.15	1.47
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front	0.542	0.244	0.137	0.245	0.064	0.99	1.10
		Back	0.637	0.448	0.117	0.438	0.021	1.22	1.54
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant3 (78A)	Front	0.542	0.150	0.137	0.245	0.064	0.89	1.00
		Back	0.637	0.173	0.117	0.438	0.021	0.95	1.27
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front	0.542	0.212	0.137	0.245	0.064	0.96	1.06
		Back	0.637	0.287	0.117	0.438	0.021	1.06	1.38
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front	0.542	0.084	0.137	0.245	0.064	0.83	0.94
		Back	0.637	0.228	0.117	0.438	0.021	1.00	1.32
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant0 (5A&7A)	Front	0.077	0.222	0.137	0.245	0.064	0.50	0.61
		Back	0.177	0.378	0.117	0.438	0.021	0.69	1.01
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front	0.077	0.244	0.137	0.245	0.064	0.52	0.63
		Back	0.177	0.448	0.117	0.438	0.021	0.76	1.08
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front	0.077	0.264	0.137	0.245	0.064	0.54	0.65
		Back	0.177	0.550	0.117	0.438	0.021	0.87	1.19
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant3 (78A)	Front	0.077	0.150	0.137	0.245	0.064	0.43	0.54
		Back	0.177	0.173	0.117	0.438	0.021	0.49	0.81
LTE Band Ant5 (7A&38A&41A)	FR1 Band Ant4 (78A)	Front	0.077	0.212	0.137	0.245	0.064	0.49	0.60
		Back	0.177	0.287	0.117	0.438	0.021	0.60	0.92

16.4 Product specific 10g SAR Exposure Conditions

Remark:

1. For Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

WWAN Band	Exposure Position	1	2	1+2
		WWAN	WLAN5GHz Ant 8+9	Summed
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
WWAN All Bands	Front	1.149	0.718	1.87
	Back	1.411	0.877	2.29
	Left side	1.911		1.91
	Right side		1.274	1.27
	Top side	1.908	1.697	3.61
	Bottom side	2.411		2.41

<Inter UL CA Mode>

WWAN Band	WWAN Band	Exposure Position	1	2	3	1+2+3
			WWAN	WWAN	WLAN5GHz Ant 8+9	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band 4 Ant 0	LTE Band 7 Ant 1	Front			0.718	0.72
		Back	1.224	0.630	0.877	2.73
		Left side				
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side	2.224			2.22

<5G NR UL CA Mode>

FR1 Band	FR1 Band	Exposure Position	1	2	3	1+2+3
			FR1	FR1	WLAN5GHz Ant 8+9	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
FR1 n7 Ant 1	FR1 n78 Ant 2	Front			0.718	0.72
		Back	0.902	0.507	0.877	2.29
		Left side		1.045		1.05
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side				
FR1 n7 Ant 1	FR1 n78 Ant 4	Front		1.072	0.718	1.79
		Back	0.902	0.894	0.877	2.67
		Left side		0.822		0.82
		Right side			1.274	1.27
		Top side		1.627	1.697	3.32
		Bottom side				
FR1 n7 Ant 1	FR1 n78 Ant 5	Front			0.718	0.72
		Back	0.902	1.411	0.877	3.19
		Left side		1.911		1.91
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side				
FR1 n7 Ant 2	FR1 n78 Ant 4	Front		1.072	0.718	1.79
		Back	0.931	0.894	0.877	2.70
		Left side		0.822		0.82
		Right side			1.274	1.27
		Top side		1.627	1.697	3.32
		Bottom side				
FR1 n7 Ant 2	FR1 n78 Ant 5	Front			0.718	0.72



		Back	0.931	1.411	0.877	3.22
		Left side		1.911		1.91
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side				
FR1 n7 Ant 5	FR1 n78 Ant 2	Front			0.718	0.72
		Back	1.023	0.507	0.877	2.41
		Left side	1.706	1.045		2.75
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side				
FR1 n7 Ant 5	FR1 n78 Ant 4	Front		1.072	0.718	1.79
		Back	1.023	0.894	0.877	2.79
		Left side	1.706	0.822		2.53
		Right side			1.274	1.27
		Top side		1.627	1.697	3.32
		Bottom side				

<5G NR EN-DC Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	1+2+3
			WWAN	FR1	WLAN5GHz Ant 8+9	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front			0.718	0.72
		Back	1.312	0.902	0.877	3.09
		Left side				
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side	2.259			2.26
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front			0.718	0.72
		Back	1.312	0.931	0.877	3.12
		Left side		1.045		1.05
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side	2.259			2.26
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front		1.072	0.718	1.79
		Back	1.312	0.894	0.877	3.08
		Left side		0.822		0.82
		Right side			1.274	1.27
		Top side		1.627	1.697	3.32
		Bottom side	2.259			2.26
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front			0.718	0.72
		Back	1.312	1.411	0.877	3.60
		Left side		1.911		1.91
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side	2.259			2.26
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front			0.718	0.72
		Back	0.630	0.931	0.877	2.44
		Left side		1.045		1.05
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side				
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front		1.072	0.718	1.79
		Back	0.630	0.894	0.877	2.40
		Left side		0.822		0.82



		Right side			1.274	1.27
		Top side		1.627	1.697	3.32
		Bottom side				
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front			0.718	0.72
		Back	0.630	1.411	0.877	2.92
		Left side		1.911		1.91
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side				
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front			0.718	0.72
		Back	0.877	0.902	0.877	2.66
		Left side	0.826			0.83
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side				
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant4 (78A)	Front		1.072	0.718	1.79
		Back	0.877	0.894	0.877	2.65
		Left side	0.826	0.822		1.65
		Right side			1.274	1.27
		Top side		1.627	1.697	3.32
		Bottom side				
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front			0.718	0.72
		Back	0.877	1.411	0.877	3.17
		Left side	0.826	1.911		2.74
		Right side			1.274	1.27
		Top side			1.697	1.70
		Bottom side				

<Sensor off>

<Inter UL CA Mode>

WWAN Band	WWAN Band	Exposure Position	1	2	3	1+2+3
			WWAN	WWAN	WLAN5GHz Ant 8+9	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band 4 Ant 0	LTE Band 7 Ant 1	Front			0.270	0.27
		Back	0.386	1.081	0.347	1.81
		Left side				
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side	0.587			0.59

<5G NR UL CA Mode>

FR1 Band	FR1 Band	Exposure Position	1	2	3	1+2+3
			FR1	FR1	WLAN5GHz Ant 8+9	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
FR1 n7 Ant 1	FR1 n78 Ant 2	Front			0.270	0.27
		Back	1.851	1.017	0.347	3.22
		Left side		1.979		1.98
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side				
FR1 n7 Ant 1	FR1 n78 Ant 5	Front			0.270	0.27
		Back	1.851	0.072	0.347	2.27
		Left side				
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side				
FR1 n7 Ant 2	FR1 n78 Ant 5	Front			0.270	0.27
		Back	1.349	0.072	0.347	1.77
		Left side				
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side				
FR1 n7 Ant 5	FR1 n78 Ant 2	Front			0.270	0.27
		Back	0.113	1.017	0.347	1.48
		Left side		1.979		1.98
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side				



<5G NR EN-DC Mode>

WWAN Band	FR1 Band	Exposure Position	1	2	3	1+2+3
			WWAN	FR1	WLAN5GHz Ant 8+9	Summed
			10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front			0.270	0.27
		Back	0.387	1.851	0.347	2.59
		Left side				
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side	0.691			0.69
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front			0.270	0.27
		Back	0.387	1.349	0.347	2.08
		Left side		1.979		1.98
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side	0.691			0.69
LTE Band Ant0 (2A&5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front			0.270	0.27
		Back	0.387	0.113	0.347	0.85
		Left side				
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side	0.691			0.69
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant2 (7A&78A)	Front			0.270	0.27
		Back	1.081	1.349	0.347	2.78
		Left side		1.979		1.98
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side				
LTE Band Ant1 (5A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front			0.270	0.27
		Back	1.081	0.113	0.347	1.54
		Left side				
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side				
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant1 (5A&7A)	Front			0.270	0.27
		Back	1.788	1.851	0.347	3.99
		Left side	1.322			1.32
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side				
LTE Band Ant2 (2A&7A&38A&41A)	FR1 Band Ant5 (7A&78A)	Front			0.270	0.27
		Back	1.788	0.113	0.347	2.25
		Left side	1.322			1.32
		Right side			0.518	0.52
		Top side			0.668	0.67
		Bottom side				

Test Engineer : Martin Li, Varus Wang, Light Wang, Ricky Gu, Damon Zhu

17. 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 $\leq 30\%$, 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.

18. 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.

-----THE END-----



Appendix A. Plots of System Performance Check

The plots are shown as follows.

System Check_Head_835MHz**DUT: D835V2 - SN:4d258**

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL_835 Medium parameters used: $f = 835$ MHz; $\sigma = 0.93$ S/m; $\epsilon_r = 40.91$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(10.57, 10.57, 10.57); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.641 W/kg

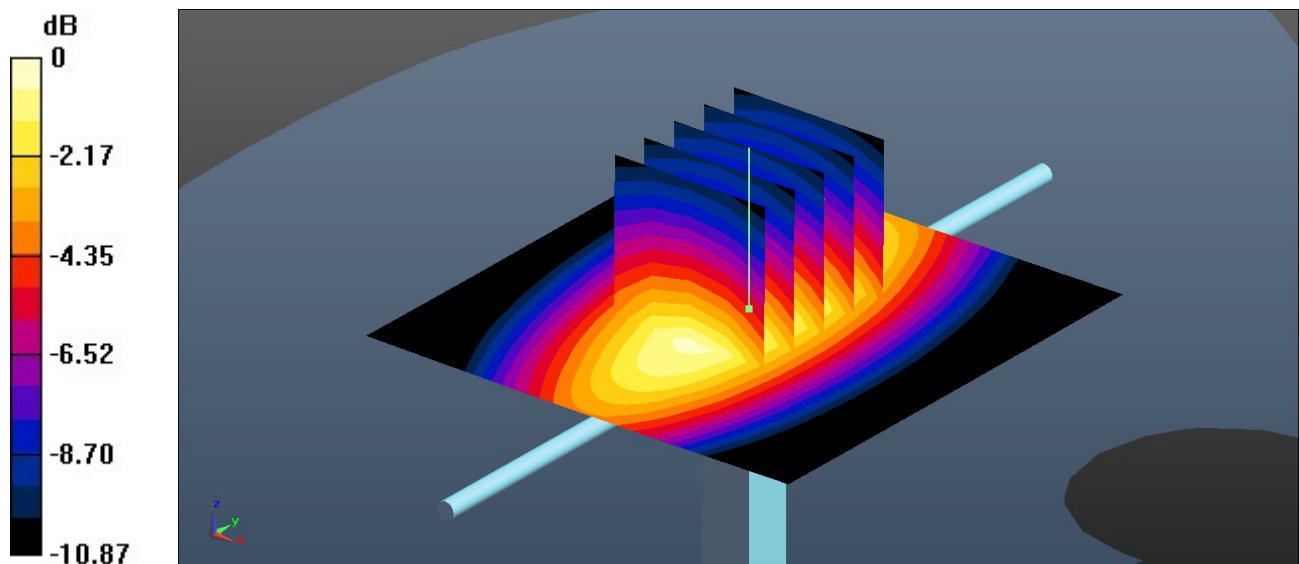
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 34.55 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.447 W/kg

SAR(1 g) = 0.481 W/kg; SAR(10 g) = 0.315 W/kg

Maximum value of SAR (measured) = 0.649 W/kg



0 dB = 0.649 W/kg = -1.88 dBW/kg

System Check_Head_1750MHz**DUT: D1750V2 - SN:1090**

Communication System: UID 0, CW (0); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: HSL_1750 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.395$ S/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(9.22, 9.22, 9.22); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.81 W/kg

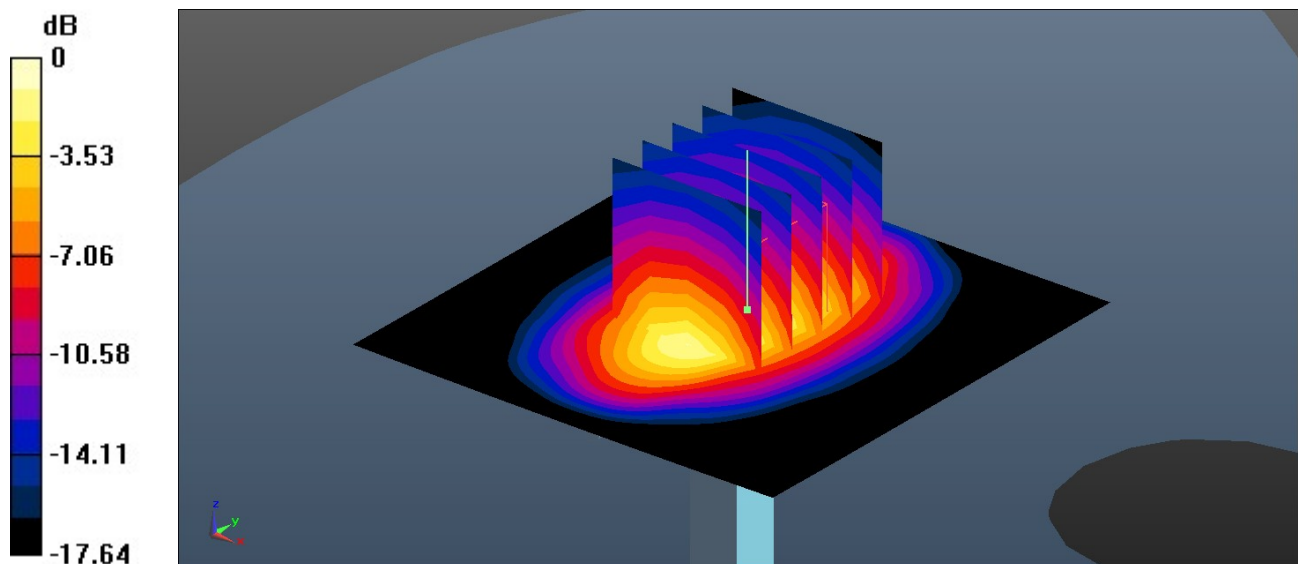
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 38.32 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 4.79 W/kg

SAR(1 g) = 1.82 W/kg; SAR(10 g) = 0.958 W/kg

Maximum value of SAR (measured) = 2.80 W/kg



0 dB = 2.80 W/kg = 4.47 dBW/kg

System Check_Head_1900MHz**DUT: D1900V2 - SN:5d182**

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL_1900 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.428$ S/m; $\epsilon_r = 38.83$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.1 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(8.8, 8.8, 8.8); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.09 W/kg

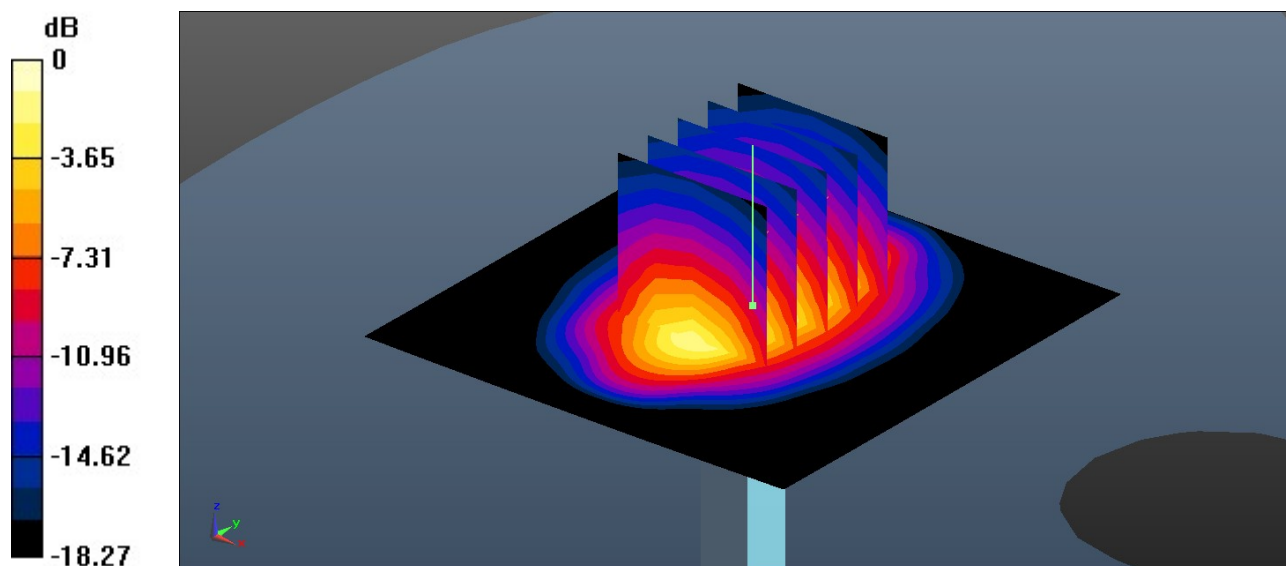
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 47.23 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.66 W/kg

SAR(1 g) = 1.96 W/kg; SAR(10 g) = 1 W/kg

Maximum value of SAR (measured) = 3.05 W/kg



0 dB = 3.05 W/kg = 4.84 dBW/kg

System Check_Head_2450MHz**DUT: D2450V2 - SN:924**

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL_2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.802$ S/m; $\epsilon_r = 40.581$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(8.29, 8.29, 8.29); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.13 W/kg

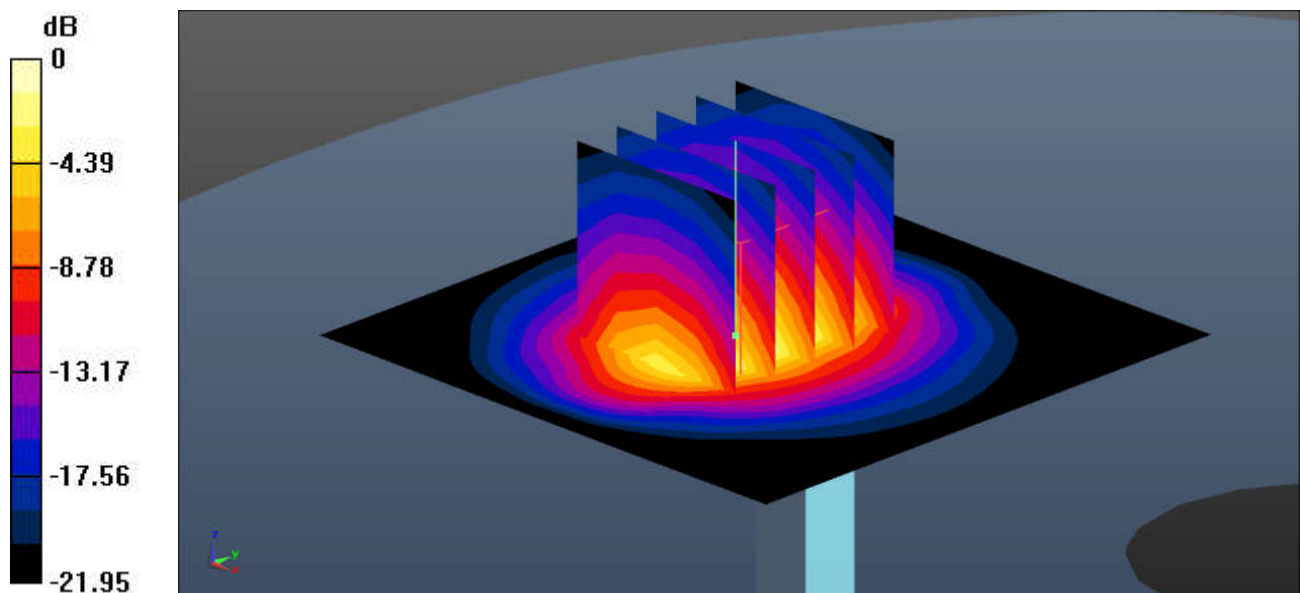
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 41.13 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 4.01 W/kg

SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.13 W/kg

Maximum value of SAR (measured) = 3.20 W/kg



0 dB = 3.20 W/kg = 5.05 dBW/kg

System Check_Head_2600MHz**DUT: D2600V2 - SN:1061**

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: HSL_2600 Medium parameters used: $f = 2600$ MHz; $\sigma = 1.927$ S/m; $\epsilon_r = 39.034$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C; Liquid Temperature : 22.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(8.02, 8.02, 8.02); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 4.48 W/kg

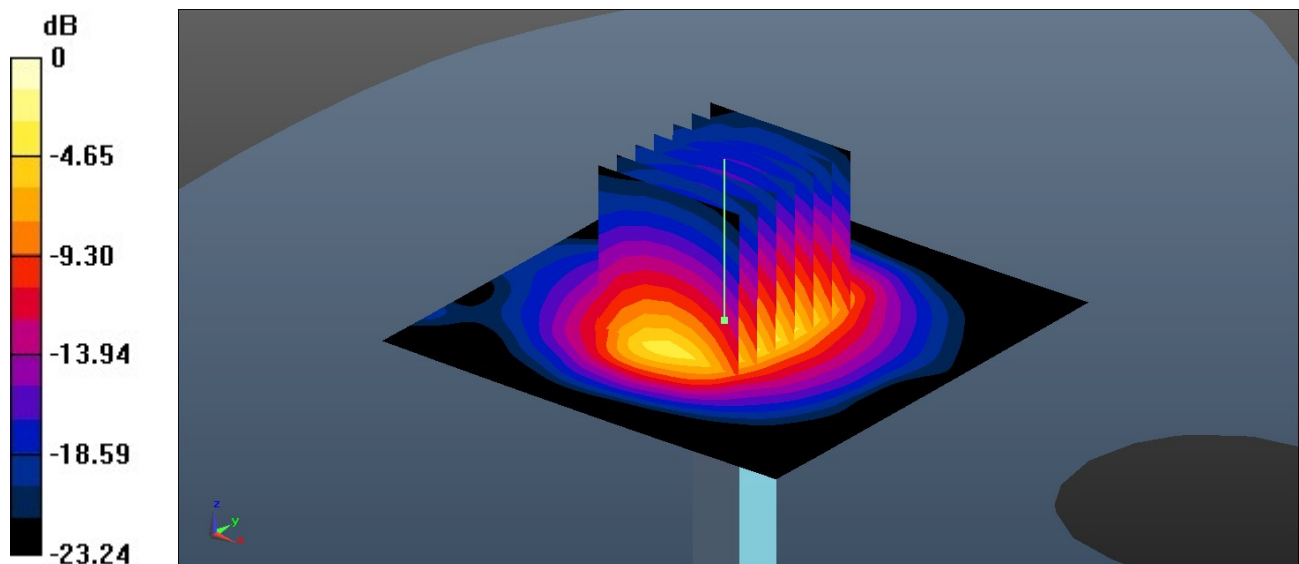
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 49.11 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 5.81 W/kg

SAR(1 g) = 2.61 W/kg; SAR(10 g) = 1.17 W/kg

Maximum value of SAR (measured) = 4.55 W/kg



0 dB = 4.55 W/kg = 6.58 dBW/kg

System Check_Head_3500MHz**DUT: D3500V2 - SN:1037**

Communication System: UID 0, CW (0); Frequency: 3500 MHz; Duty Cycle: 1:1

Medium: HSL_3500 Medium parameters used: $f = 3500$ MHz; $\sigma = 2.881$ S/m; $\epsilon_r = 38.499$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.1 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(7.55, 7.55, 7.55); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 7.32 W/kg

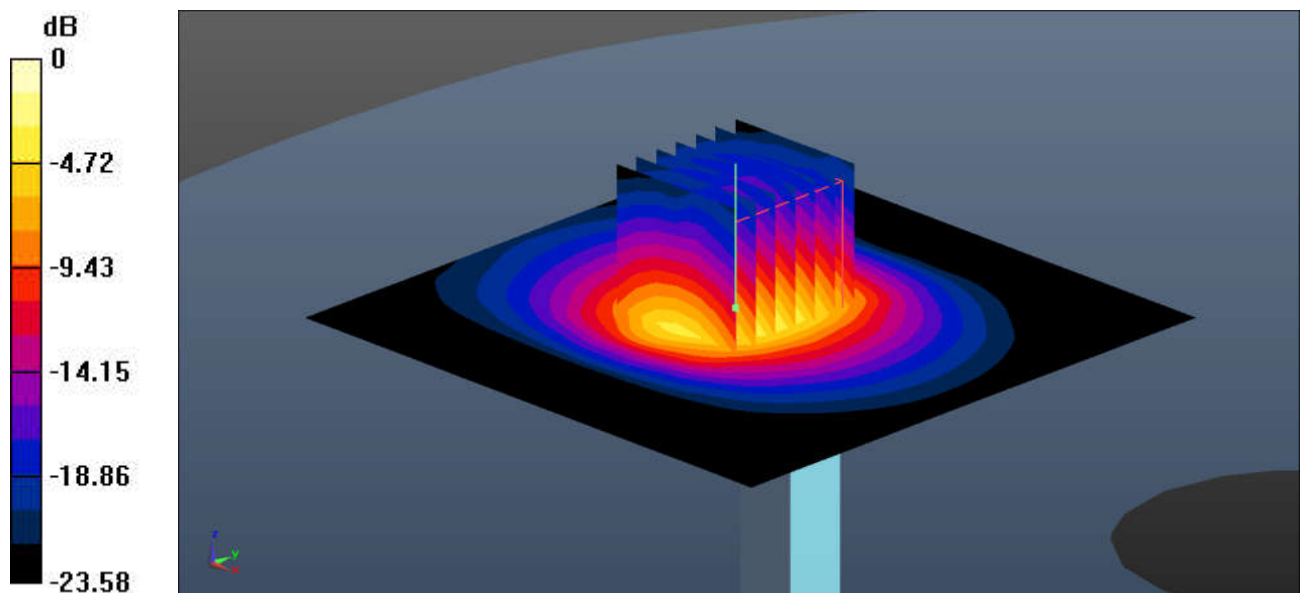
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 29.96 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 7.52 W/kg

SAR(1 g) = 3.23 W/kg; SAR(10 g) = 1.21 W/kg

Maximum value of SAR (measured) = 6.78 W/kg



0 dB = 6.78 W/kg = 8.39 dBW/kg

System Check_Head_3700MHz**DUT: D3700V2 - SN:1008**

Communication System: UID 0, CW (0); Frequency: 3700 MHz; Duty Cycle: 1:1

Medium: HSL_3700 Medium parameters used: $f = 3700$ MHz; $\sigma = 3.078$ S/m; $\epsilon_r = 38.038$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.1 °C; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(7.5, 7.5, 7.5); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 6.80 W/kg

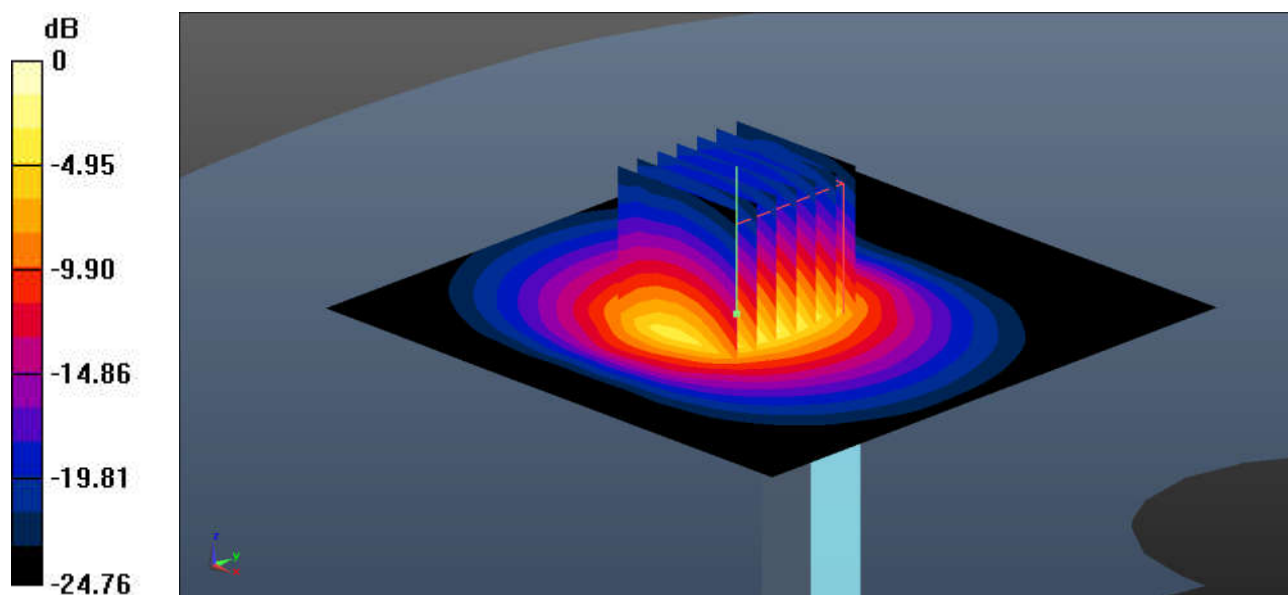
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 45.73 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 9.83 W/kg

SAR(1 g) = 3.5 W/kg; SAR(10 g) = 1.19 W/kg

Maximum value of SAR (measured) = 7.06 W/kg



0 dB = 7.06 W/kg = 8.49 dBW/kg

System Check_Head_3900MHz**DUT: D3900V2 - SN:1048**

Communication System: UID 0, CW (0); Frequency: 3900 MHz; Duty Cycle: 1:1

Medium: HSL_3900 Medium parameters used: $f = 3900$ MHz; $\sigma = 3.282$ S/m; $\epsilon_r = 37.613$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(7.2, 7.2, 7.2); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 7.22 W/kg

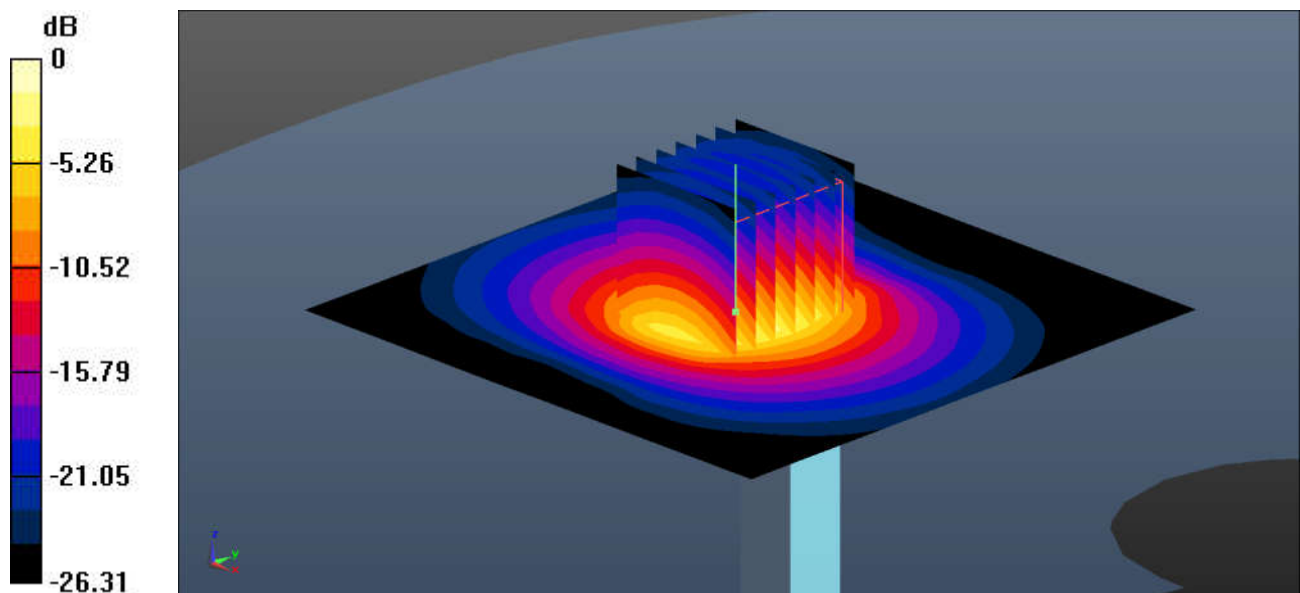
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 48.68 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 10.5 W/kg

SAR(1 g) = 3.51 W/kg; SAR(10 g) = 1.25 W/kg

Maximum value of SAR (measured) = 7.33 W/kg



0 dB = 7.33 W/kg = 8.65 dBW/kg

System Check_Head_5250MHz**DUT: D5GHzV2 - SN:1113**

Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: HSL_5000 Medium parameters used: $f = 5250$ MHz; $\sigma = 4.597$ S/m; $\epsilon_r = 35.936$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(6.07, 6.07, 6.07); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.19 W/kg

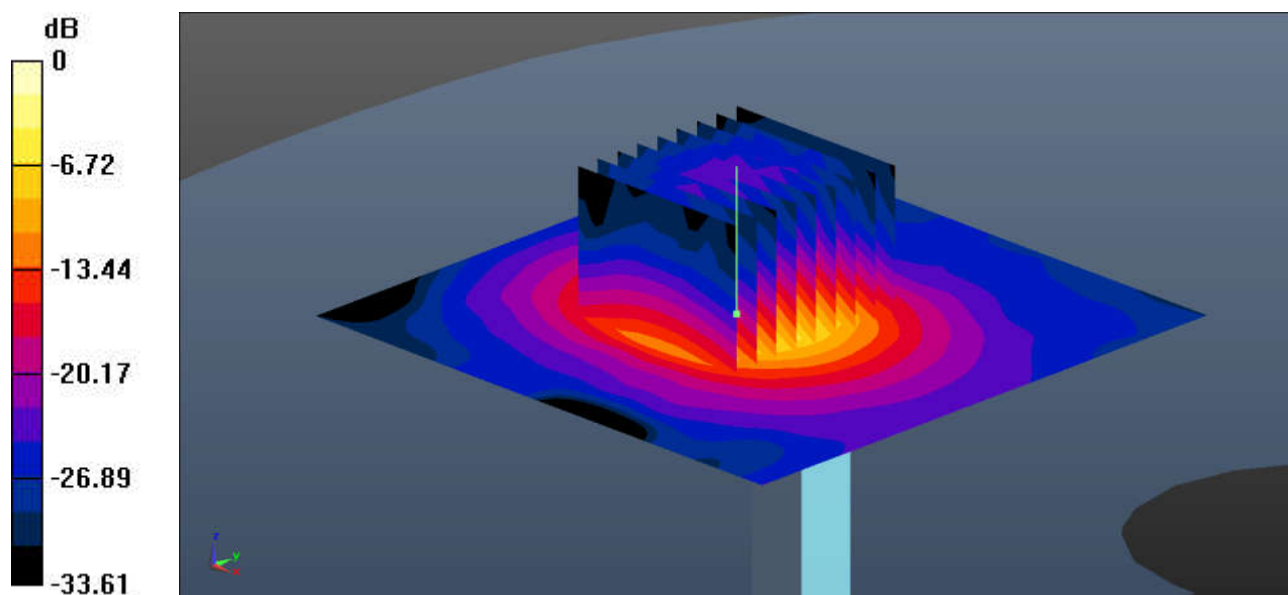
Pin=50mW/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 49.32 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 16.0 W/kg

SAR(1 g) = 4.03 W/kg; SAR(10 g) = 1.16 W/kg

Maximum value of SAR (measured) = 9.95 W/kg



0 dB = 9.95 W/kg = 9.98 dBW/kg

System Check_Head_5600MHz**DUT: D5GHzV2 - SN:1113**

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: HSL_5000 Medium parameters used: $f = 5600$ MHz; $\sigma = 4.997$ S/m; $\epsilon_r = 35.371$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(5.3, 5.3, 5.3); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 10.2 W/kg

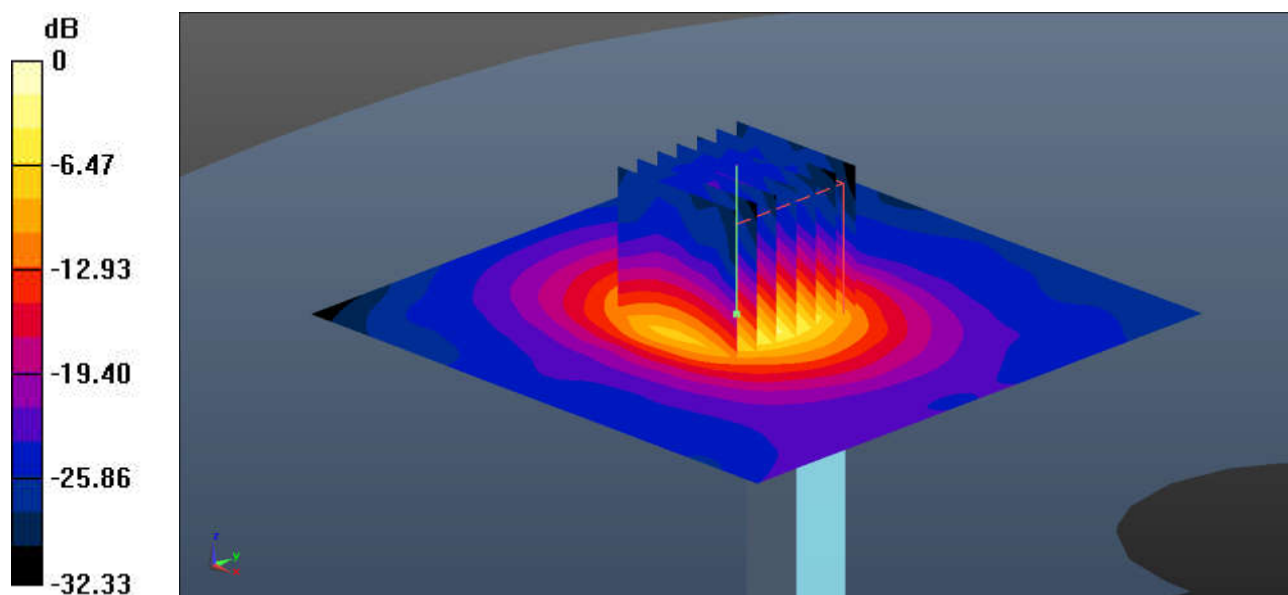
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 49.01 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 18.3 W/kg

SAR(1 g) = 4.19 W/kg; SAR(10 g) = 1.19 W/kg

Maximum value of SAR (measured) = 10.8 W/kg



System Check_Head_5750MHz**DUT: D5GHzV2 - SN:1113**

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: HSL_5000 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.16$ S/m; $\epsilon_r = 35.206$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(5.49, 5.49, 5.49); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.50 W/kg

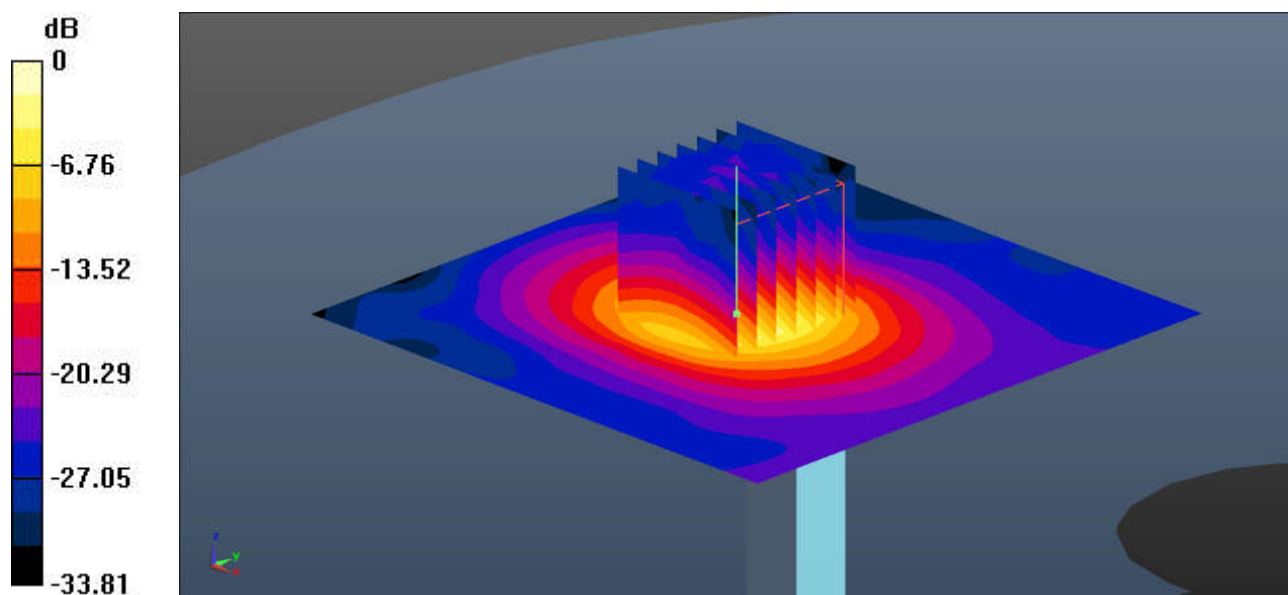
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.04 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 3.89 W/kg; SAR(10 g) = 1.12 W/kg

Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 10.2 W/kg = 10.09 dBW/kg

System Check_Head_835MHz**DUT: D835V2 - SN:4d258**

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL_835 Medium parameters used: $f = 835$ MHz; $\sigma = 0.933$ S/m; $\epsilon_r = 43.129$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7706; ConvF(10.57, 10.57, 10.57); Calibrated: 2022/1/20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2021/6/18
- Phantom: SAM Twin Phantom; Type: SAM Twin; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.687 W/kg

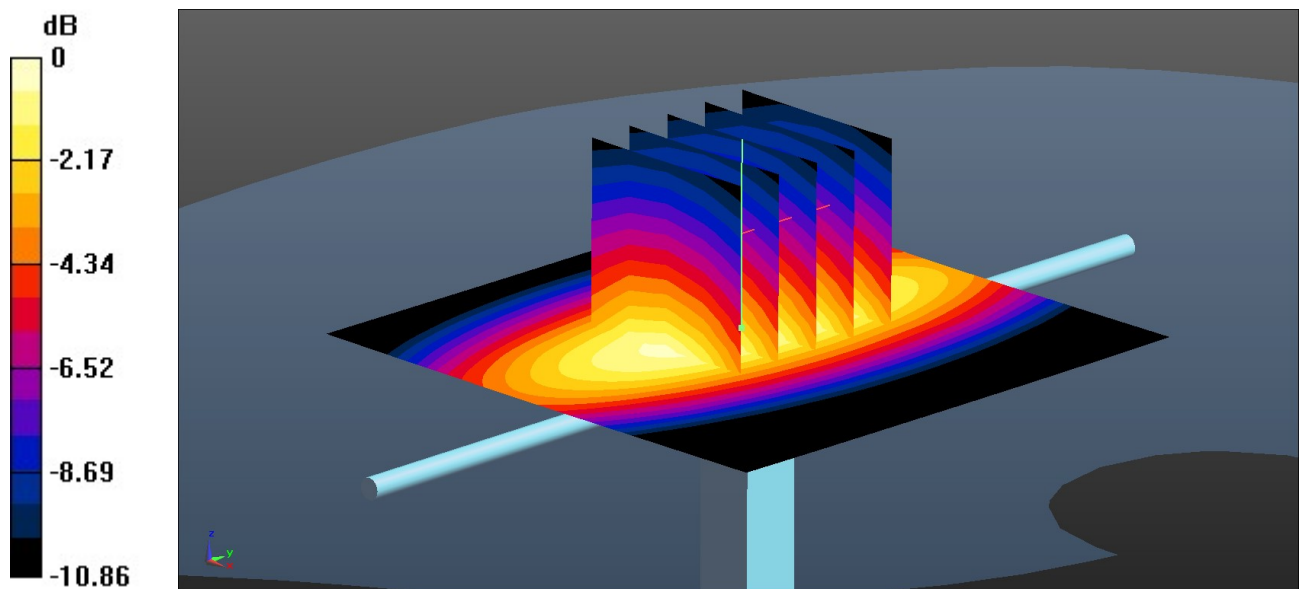
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.00 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.811 W/kg

SAR(1 g) = 0.503 W/kg; SAR(10 g) = 0.324 W/kg

Maximum value of SAR (measured) = 0.703 W/kg



0 dB = 0.703 W/kg = -1.53 dBW/kg