



FCC SAR TEST REPORT

FCC ID : UZ7MC945A
Equipment : Mobile Computer
Brand Name : ZEBRA
Model Name : MC945A
Applicant : Zebra Technologies Corporation
1 Zebra Plaza, Holtsville, NY 11742
Manufacturer : Zebra Technologies Corporation
1 Zebra Plaza, Holtsville, NY 11742
Standard : FCC 47 CFR Part 2 (2.1093)

The product was received on Dec. 11, 2023 and testing was started from Dec. 11, 2023 and completed on Jan. 11, 2024. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been pass the FCC requirement.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA3N2802B	01	Initial issue of report	Feb. 05, 2024



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for Zebra Technologies Corporation, Mobile Computer, MC945A, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary			Highest Simultaneous Transmission 1g SAR (W/kg)	Highest Simultaneous Transmission 10g SAR (W/kg)
		Body-worn (Separation 0mm)	Hotspot (Separation 10mm)	Extremity (Separation 0mm)		
		1g SAR (W/kg)		10g SAR (W/kg)		
Licensed	WCDMA II	0.48	0.60	0.51	1.55	2.95
	WCDMA IV	0.60	0.59	0.64		
	WCDMA V	0.27	0.31	0.31		
	LTE Band 7	0.73	0.59	1.84		
	LTE Band 12/17	0.23	0.23	0.52		
	LTE Band 13	0.18	0.55	0.35		
	LTE Band 14	0.33	0.60	0.59		
	LTE Band 2/25	0.36	0.60	0.43		
	LTE Band 5/26	0.43	0.53	0.39		
	LTE Band 30	0.30	0.52	0.82		
	LTE Band 38/41	0.29	0.49	0.55		
	LTE Band 48	0.45	0.51	0.09		
	LTE Band 4/66	0.58	0.59	0.65		
	LTE Band 71	0.24	0.25	0.57		
	FR1 n7	0.59	0.60	1.60		
	FR1 n12	0.11	0.33	0.73		
	FR1 n13	0.30	0.48	0.64		
	FR1 n14	0.29	0.50	0.50		
	FR1 n2/n25	0.22	0.60	0.44		
	FR1 n5/n26	0.26	0.40	0.31		
	FR1 n30	0.24	0.50	0.89		
	FR1 n38/n41	0.69	0.60	1.33		
	FR1 n48	0.69	0.60	0.33		
FR1 n4/n66	0.25	0.55	0.64			
FR1 n71	0.09	0.30	0.51			
FR1 n77/n78	1.39	0.61	0.96			
DTS	2.4GHz WLAN	0.50	0.62	0.41	1.57	2.95
NII	5GHz WLAN	1.38	1.39	0.71	1.57	2.95
6XD/6CD	6GHz WLAN	0.42		0.23	1.57	2.95
DSS	Bluetooth	< 0.01	< 0.01	< 0.01	1.57	2.95
DXX	NFC			< 0.01		2.95
Equipment Class	Frequency Band	Highest Reported APD			Reported PD (mW/cm^2)	
		Body-worn (Separation 0mm)	Hotspot (Separation 10mm)	Extremity (Separation 0mm)		
6CD	6GHz WLAN	0.21		0.51	0.75	

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

Reviewed by: Jason Wang
Report Producer: Carlie Tsai



2. Equipment Under Test (EUT) Information

2.1 General Information

Product Feature & Specification	
Equipment Name	Mobile Computer
Brand Name	ZEBRA
Model Name	MC945A
FCC ID	UZ7MC945A
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2: 1850 MHz ~ 1910 MHz 5G NR n5: 824 MHz ~ 849 MHz 5G NR n7: 2500 MHz ~ 2570 MHz 5G NR n12: 699 MHz ~ 716 MHz 5G NR n13: 777 MHz ~ 787 MHz 5G NR n14: 788 MHz ~ 798 MHz 5G NR n25: 1850 MHz ~ 1915 MHz 5G NR n26: 814 MHz ~ 849 MHz 5G NR n30: 2305 MHz ~ 2315 MHz 5G NR n38: 2570 MHz ~ 2620 MHz 5G NR n41: 2496 MHz ~ 2690 MHz 5G NR n48: 3550 MHz ~ 3700 MHz 5G NR n66: 1710 MHz ~ 1780 MHz 5G NR n71: 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz, 3550 MHz ~ 3700 MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz, 3550 MHz ~ 3700 MHz WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz WLAN 6E: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC: 3.56 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC: ASK
HW Version	DV2
SW Version	13-10-31.00-TN-U00-PRD-NEM-04
FW Version	FUSION_QA_6_1.1.0.004_T
MFD	10NOV23
Remark:	<ol style="list-style-type: none"> The device implements the power management detection for SAR compliance at different exposure conditions (body-worn, hotspot, extremity) and the smart transmit will manage to ensure the power level not exceeding the associated power table. Details about the power management decision are provided in the operational description. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications. There are nine kinds of samples as below. RF exposure is selected sample 1 to evaluate and sample 2, 3, 4, 5, 6, 7, 8 and 9 spot check worst case found sample 1.



Sample List		
	Config.	Keypad
Sample 1	SE4770 +STD Premium config	58
Sample 2	SE4770 +STD Premium config	29
Sample 3	SE4770 +STD Premium config	34
Sample 4	SE4770 +STD Premium config	43
Sample 5	SE4770 +STD Premium config	53
Sample 6	SE4770 +STD Premium config +BLE Battery	58
Sample 7	SE5800 +STD Base config	58
Sample 8	SE5800 +STD Premium config	58
Sample 9	SE4770 +STD Base config	58

Specification of Accessories				
Adapter USB Wall Charger	Brand Name	Zebra	Part Number	PWR-WUA5V12W0US
Battery 1 Standard Battery (7000mAh)	Brand Name	Zebra	Model Number	BT-000370
Battery 2 Standard Battery (7000mAh)	Brand Name	Zebra	Model Number	BT-000370B
Earphone USB-C Audio Headset	Brand Name	Zebra	Part Number	HDST-USBC-PTT1-01
USB Cable (Type C to Type A)	Brand Name	Zebra	Part Number	CBL-TC2X-USBC-01
Holster	Brand Name	Zebra	Part Number	SG-MC9X-SHLSTG-01
USB Cable (CUP)	Brand Name	Zebra	Part Number	CBL-MC93-USBCHG-01



2.1 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																															
FCC ID	UZ7MC945A																																																														
Equipment Name	Mobile Computer																																																														
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz																																																														
Channel Bandwidth	LTE Band 2: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 5: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12: 1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 38: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz																																																														
uplink modulations used	QPSK / 16QAM / 64QAM / 256QAM																																																														
LTE Voice / Data requirements	Data only																																																														
LTE MPR permanently built-in by design	<p align="center">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</p> <table border="1"> <thead> <tr> <th rowspan="2">Modulation</th> <th colspan="6">Channel bandwidth / Transmission bandwidth (N_{RB})</th> <th rowspan="2">MPR (dB)</th> </tr> <tr> <th>1.4 MHz</th> <th>3.0 MHz</th> <th>5 MHz</th> <th>10 MHz</th> <th>15 MHz</th> <th>20 MHz</th> </tr> </thead> <tbody> <tr> <td>QPSK</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 1</td> </tr> <tr> <td>16 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 2</td> </tr> <tr> <td>64 QAM</td> <td>≤ 5</td> <td>≤ 4</td> <td>≤ 8</td> <td>≤ 12</td> <td>≤ 16</td> <td>≤ 18</td> <td>≤ 2</td> </tr> <tr> <td>64 QAM</td> <td>> 5</td> <td>> 4</td> <td>> 8</td> <td>> 12</td> <td>> 16</td> <td>> 18</td> <td>≤ 3</td> </tr> <tr> <td>256 QAM</td> <td colspan="6">≥ 1</td> <td>≤ 5</td> </tr> </tbody> </table>	Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3	256 QAM	≥ 1						≤ 5
Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)																																																								
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QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																																								
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																																								
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64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2																																																								
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3																																																								
256 QAM	≥ 1						≤ 5																																																								
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																														
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																														
Power reduction applied to satisfy SAR compliance	The device has several different power modes for each exposure conditions SAR compliance; power selection is determined by the device's positioning and usage scenarios. Detail refer to operational description																																																														
LTE Carrier Aggregation Combinations	Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to appendix D.																																																														
LTE Carrier Aggregation Additional Information	This device supports maximum of 4 carriers in the downlink and 3 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICl, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.																																																														



Transmission (H, M, L) channel numbers and frequencies in each LTE band													
LTE Band 2													
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860	
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900	
LTE Band 4													
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720	
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745	
LTE Band 5													
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	20407	824.7	20415	825.5	20425	826.5	20450	829	20450	829	20450	829	
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5	20525	836.5	
H	20643	848.3	20635	847.5	20625	846.5	20600	844	20600	844	20600	844	
LTE Band 7													
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	20775	2502.5	20800	2505	20825	2507.5	20850	2510	20850	2510	20850	2510	
M	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	21100	2535	
H	21425	2567.5	21400	2565	21375	2562.5	21350	2560	21350	2560	21350	2560	
LTE Band 12													
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz		
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	
L	23017	699.7	23025	700.5	23035	701.5	23060	704	23060	704	23060	704	
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5	23095	707.5	
H	23173	715.3	23165	714.5	23155	713.5	23130	711	23130	711	23130	711	
LTE Band 13													
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #
L	23205		779.5		23230		782		23255		784.5		23230
M	23230		782		23230		782		23255		784.5		23230
H	23255		784.5		23230		782		23255		784.5		23230
LTE Band 14													
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz
	Channel #		Channel #		Channel #		Freq.(MHz)		Channel #		Freq.(MHz)		Channel #
L	23305		790.5		23330		793		23355		795.5		23330
M	23330		793		23330		793		23355		795.5		23330
H	23355		795.5		23330		793		23355		795.5		23330
LTE Band 17													
	Bandwidth 5 MHz				Bandwidth 10 MHz				Bandwidth 15 MHz				Bandwidth 20 MHz
	Channel #		Freq.(MHz)		Channel #		Freq. (MHz)		Channel #		Freq. (MHz)		Channel #
L	23755		706.5		23780		709		23800		711		23780
M	23790		710		23790		710		23800		711		23790
H	23825		713.5		23800		711		23800		711		23800



LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5	26765	821.5
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5	26965	841.5
LTE Band 30												
	Bandwidth 5 MHz					Bandwidth 10 MHz						
	Channel #		Freq.(MHz)			Channel #		Freq.(MHz)				
L	27685		2307.5			27710		2310				
M	27710		2310									
H	27735		2312.5									
LTE Band 38												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580	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					
	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
H	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
LTE Band 48												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560	55340	3560	55340	3560
L	55810	3607	55815	3607.5	55820	3608	55830	3609	55830	3609	55830	3609
M	56170	3643	56165	3642.5	56160	3642	56150	3641	56150	3641	56150	3641
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690	56640	3690	56640	3690
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	133147	665.5	133172	668	133197	670.5	133222	673	133222	673	133222	673
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5	133297	680.5	133297	680.5
H	133447	695.5	133422	693	133397	690.5	133372	688	133372	688	133372	688



2.2 General 5G NR SAR Test and Reporting Considerations

5G NR Information								
FCC ID	UZ7MC945A							
Equipment Name	Mobile Computer							
Operating Frequency Range of each 5G NR transmission band	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n13: 777 MHz ~ 787 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz, 3550 MHz ~ 3700 MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz, 3550 MHz ~ 3700 MHz							
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n13: 5MHz, 10MHz 5G NR n14: 5MHz, 10MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz 5G NR n26: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n30: 5MHz, 10MHz 5G NR n38: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n41: 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n48: 10MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 80MHz, 90MHz, 100MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n78: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz							
SCS	FDD: SCS15KHz, TDD: SCS30KHz							
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM							
A-MPR (Additional MPR) disabled for SAR Testing?	Yes							
LTE Anchor Bands for n2	LTE B2/5/7/12/13/14/66/71							
LTE Anchor Bands for n5	LTE B2/5/7/30/48/66							
LTE Anchor Bands for n7	LTE B2/5/12/13/66/71							
LTE Anchor Bands for n12	LTE B2/66							
LTE Anchor Bands for n25	LTE B2/48/66							
LTE Anchor Bands for n38	LTE B2/4/5/12/66/71							
LTE Anchor Bands for n41	LTE B2/4/12/25/66							
LTE Anchor Bands for n66	LTE B5/7/12/13/14/66/71							
LTE Anchor Bands for n71	LTE B2/7/66/71							
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/30/41/66							
LTE Anchor Bands for n78	LTE B2/7/12/13/38/66/41/71							
NR Band 2								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860
M	376000	1880	376000	1880	376000	1880	376000	1880
H	381500	1907.5	381000	1905	380500	1902.5	380000	1900
NR Band 5								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	165300	826.5	165800	829	166300	831.5	166800	834
M	167300	836.5	167300	836.5	167300	836.5	167300	836.5
H	169300	846.5	168800	844	168300	841.5	167800	839



NR Band 7																		
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520				
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535				
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550				
NR Band 12																		
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 15MHz			Bandwidth 15MHz					
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)				
L	140300	701.5		140800	704		141300	706.5		141500	707.5		141700	708.5				
M	141500	707.5		141500	707.5		141500	707.5		141500	707.5		141700	708.5				
H	142700	713.5		142200	711		141700	708.5		141700	708.5		141700	708.5				
NR Band 13																		
	Bandwidth 5MHz					Bandwidth 10MHz					Bandwidth 10MHz							
	Ch. #	Freq. (MHz)				Ch. #	Freq. (MHz)				Ch. #	Freq. (MHz)						
L	155900	779.5				156400	782				156400	782						
M	156400	782					782											
H	156900	784.5					784.5											
NR Band 14																		
	Bandwidth 5MHz					Bandwidth 10MHz					Bandwidth 10MHz							
	Ch. #	Freq. (MHz)				Ch. #	Freq. (MHz)				Ch. #	Freq. (MHz)						
L	158100	790.5				158600	793				158600	793						
M	158600	793					793											
H	159100	795.5					795.5											
NR Band 25																		
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870				
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5				
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379000	1895				
NR Band 26																		
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 20MHz			Bandwidth 20MHz					
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)				
L	163300	816.5		163800	819		164300	821.5		164800	824		164800	824				
M	166300	831.5		166300	831.5		166300	831.5		166300	831.5		166300	831.5				
H	169300	846.5		168800	844		168300	841.5		167800	839		167800	839				
NR Band 30																		
	Bandwidth 5MHz					Bandwidth 10MHz					Bandwidth 10MHz							
	Ch. #	Freq. (MHz)				Ch. #	Freq. (MHz)				Ch. #	Freq. (MHz)						
L	461500	2307.5				462000	2310				462000	2310						
M	462000	2310					2310											
H	462500	2312.5					2312.5											
NR Band 38																		
	Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 40MHz					
	Ch. #	Freq. (MHz)	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	517002	2585.01	518004	2590.02	518004	2590.02	518004	2590.02				
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595				
H	522996	2614.98	522498	2612.49	522000	2610	520998	2604.99	519996	2599.98	519996	2599.98	519996	2599.98				
NR Band 41																		
	Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth70MHz		Bandwidth 80MHz		Bandwidth90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640
NR Band 48																		
	Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 20MHz			Bandwidth 30MHz			Bandwidth 40MHz					
	Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)		Ch. #	Freq. (MHz)				
L	637000	3555		637168	3557.52		637334	3560.01		637668	3565.02		638000	3570				
M	641666	3624.99		641666	3624.99		641666	3624.99		641666	3624.99		641666	3624.99				
H	646332	3694.98		646166	3692.49		646000	3690		645666	3684.99		645332	3679.98				



NR Band 66																								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz											
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)										
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	342000	1710	345000	1725	346000	1730										
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745										
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	356000	1780	353000	1765	352000	1760										
NR Band 71																								
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz											
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)										
L	133100	665.5			133600	668			13410	670.5			134600	673										
M	136100	680.5			136100	680.5			136100	680.5			136100	680.5										
H	139100	695.5			138600	693			13810	690.5			137600	688										
NR Band 77																								
	Bandwidth 10MHz		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)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750		
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930		
NR Band 78																								
	Bandwidth 10MHz		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)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02				
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	652832	3792.48	652666	3789.99	652332	3784.98	652000	3780	651666	3774.99	651332	3769.98	651000	3765	650666	3759.99	650332	3754.98				
NR Band 77/78(3450MHz ~ 3550MHz)																								
	Bandwidth 10MHz		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)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495				
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98
H	636332	3544.98	636166	3542.49	636000	3540	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99				
NR Band 77/78(3550MHz ~ 3700MHz)																								
	Bandwidth 10MHz		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)	Ch. #	Freq. (MHz)
L	637000	3555	637168	3557.52	637334	3560.01	637668	3565.02	638000	3570	638334	3575.01	638668	3580.02	639000	3585	639334	3590.01	639668	3595.02	640000	3600		
M	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99	641666	3624.99
H	646332	3694.98	646166	3692.49	646000	3690	645666	3684.99	645332	3679.98	645000	3675	644666	3669.99	644332	3664.98	644000	3660	643666	3654.99	643332	3649.98		

3. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards, the below KDB standard may not including in the TAF code without accreditation.

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01
- IEC/IEEE 62209-1528:2020
- SPEAG DASY6 System Handbook
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)



4. Smart Transmit feature for RF Exposure compliance

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit, for each characterized technology and band (refer to RF exposure part0 report)

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

<Plimit for supported technologies and bands (Plimit in EFS file)>

Band	Antenna	Duty Cycle	Pmax*	WLAN OFF (P limit)	WLAN ON (P limit)	Power Back off for WLAN ON
				Body-worn / Product Specific	Hotspot	Body-worn / Product Specific
				DSI0	DSI1	DSI3
WCDMA II	1	100.00%	24	28.6	22.9	28.6
WCDMA IV	1	100.00%	24	27.6	23	27.6
WCDMA V	1	100.00%	24	31.1	26.8	31.1
LTE B7	5	100.00%	24	26.7	22.5	23.1
LTE B12/17	1	100.00%	24	31.9	28.1	31.9
LTE B13	1	100.00%	24	32.8	24.4	32.8
LTE B14	1	100.00%	24	30.2	23.7	30.2
LTE B25/2	1	100.00%	24	29.9	23.1	29.9
LTE B26/5	1	100.00%	23.5	28.6	24.1	28.6
LTE B30	5	100.00%	21.5	27.9	22.1	27.9
LTE B66/4	1	100.00%	24	27.8	23.6	27.8
LTE B71	1	100.00%	24	31.7	27.8	31.7
LTE B41/38 PC3**	5	63.30%	22	28.8	23	28.80
LTE B41 PC2**	5	43.30%	22.4			
LTE B48	8	63.30%	18.5	23.5	19.2	23.5
n7	5	100.00%	24	27.5	22.6	27.5
n12	1	100.00%	24	30.9	26.6	30.9
n13	1	100.00%	24	30.7	25	30.7
n14	1	100.00%	24	30.8	24.7	30.8
n25/2	1	100.00%	24	32	21.7	32
n26/5	1	100.00%	23.5	30.8	25.3	30.8
n30	5	100.00%	21.5	27.5	22.3	27.5
n66	1	100.00%	24	31.4	24.4	31.4
n71	1	100.00%	24	32.4	27	32.4
n41/38 PC3	5	100.00%	24	28.9	22.2	28.9
n41 PC2**	5	50.00%	23	28.9	22.2	25.3
n41 PC3 SRS	2	100.00%	21	29.8	23.8	29.8
n41 PC3 SRS	3	100.00%	21	32.1	24.8	32.1
n41 PC3 SRS	4	100.00%	21	31.9	24.6	31.9
n48	8	100.00%	20.5	23.5	19.2	19.5
n77/78_Part 27O/27Q PC3	8	100.00%	24	21	18.8	18.5
n77/78_Part 27O/27Q PC2**	8	50.00%	23			
n77/78_Part 96 PC3	8	100.00%	21			
n77/78_Part 27O/27Q PC3	9	100.00%	24	23.4	19	18.5
n77/78_Part 27O/27Q PC2**	9	50.00%	23			
n77/78_Part 96	9	100.00%	21			
n77/78_PC3 SRS	4	100.00%	21	21	19	20
n77/78_PC3 SRS	3	100.00%	21	21	21	19

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

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

The max allowed output power is the Plimit + 1dB device uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.



5. RF Exposure Limits

5.1 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.

5.2 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)

Table with 3 columns: Whole-Body, Partial-Body, Hands, Wrists, Feet and Ankles. Values: 0.4, 8.0, 20.0

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

Table with 3 columns: Whole-Body, Partial-Body, Hands, Wrists, Feet and Ankles. Values: 0.08, 1.6, 4.0

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



5.3 RF Exposure limit for above 6GHz

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

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

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

6. Specific Absorption Rate (SAR)

6.1 Introduction

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

6.2 SAR Definition

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

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

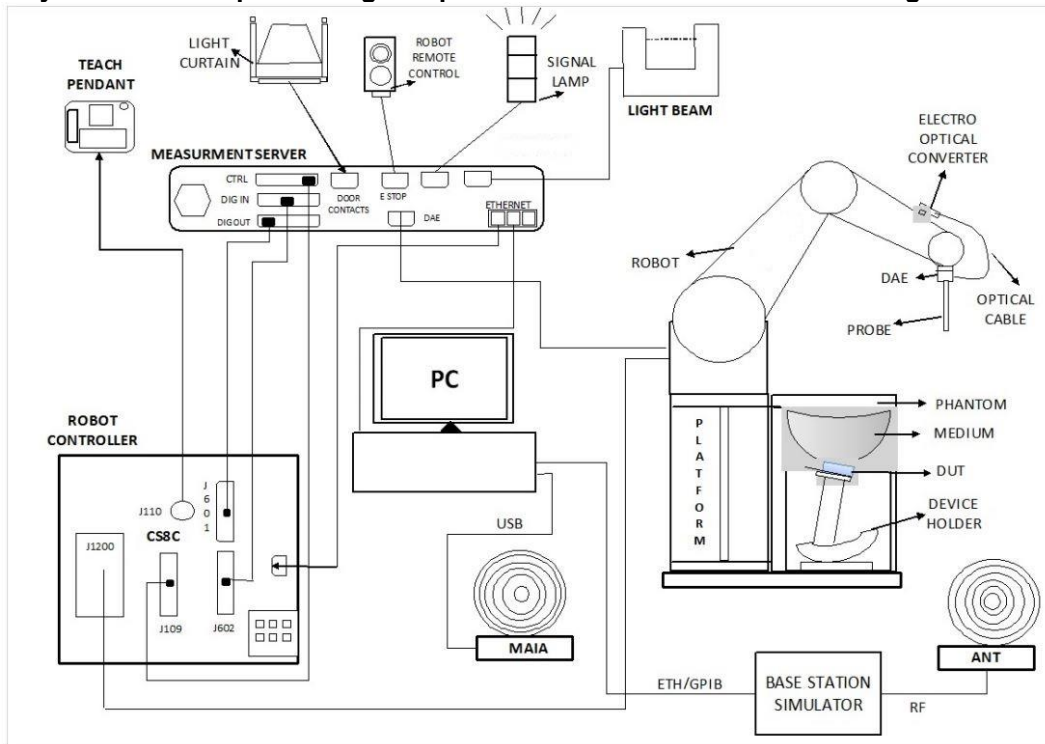
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

7. System Description and Setup

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



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

7.1 Test Site Location


The SAR measurement facilities used to collect data are within both Sporton Lab list below test site location are accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190 and 3786) and the FCC designation No. TW1190 and TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test.

Laboratory	EMC & Wireless Communications Laboratory		Wensan Laboratory				
Test Site Location	TW1190 No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan		TW3786 No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan				
Test Site No.	SAR01-HY	SAR03-HY	SAR08-HY	SAR09-HY	SAR15-HY	SAR18-HY	SAR21-HY
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	SAR16-HY	SAR19-HY	SAR22-HY
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-HY	SAR17-HY	SAR20-HY	


7.2 E-Field Probe

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

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 4 GHz; Linearity: ± 0.2 dB (30 MHz – 4 GHz)	
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 μ W/g – >100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – >6 GHz Linearity: ± 0.2 dB (30 MHz – 6 GHz)	
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 μ W/g – >100 mW/g Linearity: ± 0.2 dB (noise: typically <1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

7.3 Data Acquisition Electronics (DAE)

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


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



Fig 5.1 Photo of DAE


7.4 Phantom

<SAM Twin Phantom>

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

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

<ELI Phantom>

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

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

7.5 Device Holder

<Mounting Device for Hand-Held Transmitter>

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



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

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

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



Mounting Device for Laptops

8. Measurement Procedures

The measurement procedures are as follows:

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

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

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

8.1 Spatial Peak SAR Evaluation

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

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

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

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

8.2 Power Reference Measurement

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

8.3 Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: $\Delta x_{Area}, \Delta y_{Area}$	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

8.4 Zoom Scan

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

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

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

8.5 Volume Scan Procedures

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

8.6 Power Drift Monitoring

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



9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit ⁽²⁾	D750V3	1117	Mar. 24, 2022	Mar. 22, 2024
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	4d060	Mar. 24, 2022	Mar. 22, 2024
SPEAG	1750MHz System Validation Kit ⁽²⁾	D1750V2	1068	Nov. 21, 2022	Nov. 19, 2024
SPEAG	1900MHz System Validation Kit ⁽²⁾	D1900V2	5d093	Mar. 25, 2022	Mar. 23, 2024
SPEAG	2300MHz System Validation Kit ⁽²⁾	D2300V2	1088	Jul. 13, 2021	Jul. 10, 2024
SPEAG	2450MHz System Validation Kit ⁽²⁾	D2450V2	736	Aug. 17, 2021	Aug. 14, 2024
SPEAG	2600MHz System Validation Kit ⁽²⁾	D2600V2	1008	Aug. 17, 2021	Aug. 14, 2024
SPEAG	3500MHz System Validation Kit ⁽²⁾	D3500V2	1036	Mar. 23, 2022	Mar. 21, 2024
SPEAG	3700MHz System Validation Kit ⁽²⁾	D3700V2	1022	Jul. 14, 2021	Jul. 11, 2024
SPEAG	3900MHz System Validation Kit ⁽²⁾	D3900V2	1017	Apr. 22, 2022	Apr. 20, 2024
SPEAG	5GHz System Validation Kit ⁽²⁾	D5GHzV2	1171	Apr. 20, 2021	Apr. 17, 2024
SPEAG	6500MHz System Validation Kit	D6.5GHzV2	1003	Mar. 15, 2023	Mar. 14, 2024
SPEAG	13MHz System Validation Kit	CLA13	1011	Jul. 10, 2023	Jul. 09, 2024
SPEAG	5G Verification Source	10GHz	1020	Jan. 20, 2023	Jan. 19, 2024
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9461	Oct. 12, 2023	Oct. 11, 2024
SPEAG	Data Acquisition Electronics	DAE4	853	Jul. 14, 2023	Jul. 13, 2024
SPEAG	Data Acquisition Electronics	DAE4	854	Aug. 17, 2023	Aug. 16, 2024
SPEAG	Data Acquisition Electronics	DAE4	1512	Mar. 20, 2023	Mar. 19, 2024
SPEAG	Data Acquisition Electronics	DAE4ip	1823	Jul. 31, 2023	Jul. 30, 2024
SPEAG	Dosimetric E-Field Probe	EX3DV4	7306	Jul. 18, 2023	Jul. 17, 2024
SPEAG	Dosimetric E-Field Probe	EX3DV4	7439	Feb. 21, 2023	Feb. 20, 2024
SPEAG	Dosimetric E-Field Probe	EX3DV4	7822	Aug. 02, 2023	Aug. 01, 2024
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Nov. 13, 2023	Nov. 12, 2024
Keysight	5G Wireless Test Platform	E7515B	MY59321826	Apr. 26, 2023	Apr. 25, 2024
R&S	BT Base Station	CBT	101136	Oct. 22, 2023	Oct. 21, 2024
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Sep. 27, 2023	Sep. 26, 2024
Keysight	ENA Network Analyzer	E5071C	MY46104758	Oct. 30, 2023	Oct. 29, 2024
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 19, 2023	Sep. 18, 2024
SPEAG	Dielectric Probe Kit	DAK-12	1156	Jul. 17, 2023	Jul. 16, 2024
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3690	Aug. 09, 2023	Aug. 08, 2024
Anritsu	Power Meter	ML2495A	1419002	Aug. 17, 2023	Aug. 16, 2024
Anritsu	Power Sensor	MA2411B	1911176	Aug. 18, 2023	Aug. 17, 2024
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 10, 2023	Jul. 09, 2024
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 16, 2023	Oct. 15, 2024
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Warison	Directional Coupler	WCOU-10-50S-10	WR889BMC4B1	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005-3	N/A	Note 1	

General Note:

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



10. System Verification

10.1 Tissue Verification

The tissue dielectric parameters of tissue-equivalent media used for SAR measurements must be characterized within a temperature range of 18°C to 25°C, measured with calibrated instruments and apparatuses, such as network analyzers and temperature probes. The temperature of the tissue-equivalent medium during SAR measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.

The liquid tissue depth was at least 15cm in the phantom for all SAR testing

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
13	22.4	0.729	54.600	0.75	55.00	-2.80	-0.73	±5	2024/1/11
750	22.3	0.879	42.700	0.89	41.90	-1.24	1.91	±5	2023/12/15
750	22.6	0.890	42.800	0.89	41.90	0.00	2.15	±5	2023/12/19
750	22.2	0.885	43.500	0.89	41.90	-0.56	3.82	±5	2023/12/23
750	22.3	0.884	42.800	0.89	41.90	-0.67	2.15	±5	2023/12/24
750	22.5	0.886	43.000	0.89	41.90	-0.45	2.63	±5	2023/12/27
750	22.4	0.889	43.600	0.89	41.90	-0.11	4.06	±5	2024/1/5
750	22.5	0.887	43.100	0.89	41.90	-0.34	2.86	±5	2024/1/7
835	22.2	0.917	42.700	0.90	41.50	1.89	2.89	±5	2023/12/18
835	22.2	0.915	42.900	0.90	41.50	1.67	3.37	±5	2023/12/23
835	22.3	0.910	42.500	0.90	41.50	1.11	2.41	±5	2023/12/25
835	22.4	0.923	42.700	0.90	41.50	2.56	2.89	±5	2024/1/6
1750	22.5	1.360	40.100	1.37	40.10	-0.73	0.00	±5	2023/12/17
1750	22.8	1.350	40.000	1.37	40.10	-1.46	-0.25	±5	2023/12/22
1750	22.5	1.370	40.300	1.37	40.10	0.00	0.50	±5	2023/12/24
1750	22.7	1.370	40.000	1.37	40.10	0.00	-0.25	±5	2024/1/4
1900	22.6	1.420	40.000	1.40	40.00	1.43	0.00	±5	2023/12/16
1900	22.4	1.430	40.000	1.40	40.00	2.14	0.00	±5	2023/12/21
1900	22.5	1.390	40.200	1.40	40.00	-0.71	0.50	±5	2023/12/24
1900	22.8	1.420	40.200	1.40	40.00	1.43	0.50	±5	2024/1/3
2300	22.5	1.650	40.000	1.67	39.50	-1.20	1.27	±5	2023/12/14
2300	22.5	1.640	39.400	1.67	39.50	-1.80	-0.25	±5	2023/12/20
2300	22.5	1.670	39.400	1.67	39.50	0.00	-0.25	±5	2023/12/23
2450	22.5	1.810	40.000	1.80	39.20	0.56	2.04	±5	2023/12/20
2450	22.5	1.830	39.600	1.80	39.20	1.67	1.02	±5	2023/12/28
2450	22.7	1.820	39.500	1.80	39.20	1.11	0.77	±5	2024/1/1
2600	22.7	1.990	37.900	1.96	39.00	1.53	-2.82	±5	2023/12/11
2600	22.5	1.930	38.900	1.96	39.00	-1.53	-0.26	±5	2023/12/14
2600	22.3	2.020	39.200	1.96	39.00	3.06	0.51	±5	2023/12/21
2600	22.5	2.020	38.300	1.96	39.00	3.06	-1.79	±5	2023/12/23
2600	22.7	2.030	38.200	1.96	39.00	3.57	-2.05	±5	2023/12/26
2600	22.2	1.960	38.700	1.96	39.00	0.00	-0.77	±5	2024/1/2



Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Conductivity Target (σ)	Permittivity Target (ε _r)	Delta (σ) (%)	Delta (ε _r) (%)	Limit (%)	Date
3500	22.3	2.940	38.200	2.91	37.90	1.03	0.79	±5	2023/12/25
3500	22.5	2.980	38.200	2.91	37.90	2.41	0.79	±5	2023/12/26
3500	22.7	2.970	38.300	2.91	37.90	2.06	1.06	±5	2023/12/27
3500	22.5	2.950	38.200	2.91	37.90	1.37	0.79	±5	2023/12/29
3500	22.4	2.930	37.700	2.91	37.90	0.69	-0.53	±5	2023/12/30
3500	22.6	2.930	38.200	2.91	37.90	0.69	0.79	±5	2023/12/31
3700	22.3	3.140	38.000	3.12	37.70	0.64	0.80	±5	2023/12/25
3700	22.5	3.190	38.000	3.12	37.70	2.24	0.80	±5	2023/12/26
3700	22.7	3.180	38.100	3.12	37.70	1.92	1.06	±5	2023/12/27
3700	22.5	3.150	38.000	3.12	37.70	0.96	0.80	±5	2023/12/29
3700	22.4	3.150	37.400	3.12	37.70	0.96	-0.80	±5	2023/12/30
3700	22.6	3.140	37.900	3.12	37.70	0.64	0.53	±5	2023/12/31
3900	22.7	3.380	37.900	3.33	37.51	1.50	1.04	±5	2023/12/27
3900	22.5	3.360	37.700	3.33	37.51	0.90	0.51	±5	2023/12/29
3900	22.4	3.350	37.200	3.33	37.51	0.60	-0.83	±5	2023/12/30
3900	22.6	3.350	37.700	3.33	37.51	0.60	0.51	±5	2023/12/31
5250	22.5	4.730	36.400	4.71	35.95	0.42	1.25	±5	2023/12/22
5250	22.4	4.750	36.700	4.71	35.95	0.85	2.09	±5	2023/12/28
5600	22.5	5.090	35.900	5.07	35.50	0.39	1.13	±5	2023/12/22
5600	22.4	5.090	36.300	5.07	35.50	0.39	2.25	±5	2023/12/28
5750	22.5	5.260	35.600	5.22	35.35	0.77	0.71	±5	2023/12/22
5750	22.4	5.320	36.100	5.22	35.35	1.92	2.12	±5	2023/12/28
6500	22.5	6.160	34.700	6.07	34.50	1.48	0.58	±5	2024/1/8



10.2 System Performance Check Results

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

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR-05	2024/1/11	13	250	CLA13-1011	EX3DV4 - SN7306	DAE4 Sn853	0.148	0.544	0.592	9.63	0.092	0.340	0.368	8.24
SAR-06	2023/12/15	750	50	D750V3-1117	EX3DV4 - SN7439	DAE4 Sn1512	0.408	8.520	8.16	-4.23	0.266	5.600	5.32	-5.00
SAR-06	2023/12/19	750	50	D750V3-1117	EX3DV4 - SN7439	DAE4 Sn1512	0.419	8.520	8.38	-1.64	0.272	5.600	5.44	-2.86
SAR-04	2023/12/23	750	50	D750V3-1117	EX3DV4 - SN7822	DAE4ip Sn1823	0.419	8.520	8.38	-1.64	0.279	5.600	5.58	-0.36
SAR-06	2023/12/24	750	50	D750V3-1117	EX3DV4 - SN7439	DAE4 Sn1512	0.419	8.520	8.38	-1.64	0.273	5.600	5.46	-2.50
SAR-06	2023/12/27	750	50	D750V3-1117	EX3DV4 - SN7439	DAE4 Sn1512	0.416	8.520	8.32	-2.35	0.271	5.600	5.42	-3.21
SAR-04	2024/1/5	750	50	D750V3-1117	EX3DV4 - SN7822	DAE4ip Sn1823	0.423	8.520	8.46	-0.70	0.282	5.600	5.64	0.71
SAR-04	2024/1/7	750	50	D750V3-1117	EX3DV4 - SN7822	DAE4ip Sn1823	0.420	8.520	8.4	-1.41	0.279	5.600	5.58	-0.36
SAR-06	2023/12/18	835	50	D835V2-4d060	EX3DV4 - SN7439	DAE4 Sn1512	0.491	9.730	9.82	0.92	0.319	6.390	6.38	-0.16
SAR-04	2023/12/23	835	50	D835V2-4d060	EX3DV4 - SN7822	DAE4ip Sn1823	0.485	9.730	9.7	-0.31	0.322	6.390	6.44	0.78
SAR-06	2023/12/25	835	50	D835V2-4d060	EX3DV4 - SN7439	DAE4 Sn1512	0.479	9.730	9.58	-1.54	0.310	6.390	6.2	-2.97
SAR-04	2024/1/6	835	50	D835V2-4d060	EX3DV4 - SN7822	DAE4ip Sn1823	0.489	9.730	9.78	0.51	0.325	6.390	6.5	1.72
SAR-06	2023/12/17	1750	50	D1750V2-1068	EX3DV4 - SN7439	DAE4 Sn1512	1.850	36.700	37	0.82	0.976	19.300	19.52	1.14
SAR-06	2023/12/22	1750	50	D1750V2-1068	EX3DV4 - SN7439	DAE4 Sn1512	1.850	36.700	37	0.82	0.975	19.300	19.5	1.04
SAR-04	2023/12/24	1750	50	D1750V2-1068	EX3DV4 - SN7822	DAE4ip Sn1823	1.850	36.700	37	0.82	0.994	19.300	19.88	3.01
SAR-04	2024/1/4	1750	50	D1750V2-1068	EX3DV4 - SN7822	DAE4ip Sn1823	1.860	36.700	37.2	1.36	0.997	19.300	19.94	3.32
SAR-06	2023/12/16	1900	50	D1900V2-5d093	EX3DV4 - SN7439	DAE4 Sn1512	2.080	39.900	41.6	4.26	1.080	20.700	21.6	4.35
SAR-06	2023/12/21	1900	50	D1900V2-5d093	EX3DV4 - SN7439	DAE4 Sn1512	2.030	39.900	40.6	1.75	1.050	20.700	21	1.45
SAR-04	2023/12/24	1900	50	D1900V2-5d093	EX3DV4 - SN7822	DAE4ip Sn1823	1.960	39.900	39.2	-1.75	1.030	20.700	20.6	-0.48
SAR-04	2024/1/3	1900	50	D1900V2-5d093	EX3DV4 - SN7822	DAE4ip Sn1823	2.010	39.900	40.2	0.75	1.060	20.700	21.2	2.42
SAR-06	2023/12/14	2300	50	D2300V2-1088	EX3DV4 - SN7439	DAE4 Sn1512	2.420	49.700	48.4	-2.62	1.150	24.100	23	-4.56
SAR-04	2023/12/20	2300	50	D2300V2-1088	EX3DV4 - SN7822	DAE4ip Sn1823	2.280	49.700	45.6	-8.25	1.100	24.100	22	-8.71
SAR-06	2023/12/23	2300	50	D2300V2-1088	EX3DV4 - SN7439	DAE4 Sn1512	2.480	49.700	49.6	-0.20	1.170	24.100	23.4	-2.90
SAR-06	2023/12/20	2450	50	D2450V2-736	EX3DV4 - SN7439	DAE4 Sn1512	2.650	54.200	53	-2.21	1.220	25.300	24.4	-3.56
SAR-04	2023/12/28	2450	50	D2450V2-736	EX3DV4 - SN7822	DAE4ip Sn1823	2.480	54.200	49.6	-8.49	1.170	25.300	23.4	-7.51
SAR-04	2024/1/1	2450	50	D2450V2-736	EX3DV4 - SN7822	DAE4ip Sn1823	2.480	54.200	49.6	-8.49	1.180	25.300	23.6	-6.72
SAR-06	2023/12/11	2600	50	D2600V2-1008	EX3DV4 - SN7439	DAE4 Sn1512	3.000	58.000	60	3.45	1.330	25.800	26.6	3.10
SAR-06	2023/12/14	2600	50	D2600V2-1008	EX3DV4 - SN7439	DAE4 Sn1512	2.870	58.000	57.4	-1.03	1.270	25.800	25.4	-1.55
SAR-04	2023/12/21	2600	50	D2600V2-1008	EX3DV4 - SN7822	DAE4ip Sn1823	2.850	58.000	57	-1.72	1.300	25.800	26	0.78
SAR-06	2023/12/23	2600	50	D2600V2-1008	EX3DV4 - SN7439	DAE4 Sn1512	3.020	58.000	60.4	4.14	1.330	25.800	26.6	3.10
SAR-06	2023/12/26	2600	50	D2600V2-1008	EX3DV4 - SN7439	DAE4 Sn1512	3.040	58.000	60.8	4.83	1.340	25.800	26.8	3.88
SAR-04	2024/1/2	2600	50	D2600V2-1008	EX3DV4 - SN7822	DAE4ip Sn1823	2.740	58.000	54.8	-5.52	1.240	25.800	24.8	-3.88

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR-04	2023/12/25	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.240	67.400	64.8	-3.86	1.250	25.100	25	-0.40
SAR-04	2023/12/26	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.270	67.400	65.4	-2.97	1.260	25.100	25.2	0.40
SAR-04	2023/12/27	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.250	67.400	65	-3.56	1.260	25.100	25.2	0.40
SAR-04	2023/12/29	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.210	67.400	64.2	-4.75	1.240	25.100	24.8	-1.20
SAR-04	2023/12/30	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.210	67.400	64.2	-4.75	1.240	25.100	24.8	-1.20
SAR-04	2023/12/31	3500	50	D3500V2-1036	EX3DV4 - SN7822	DAE4ip Sn1823	3.250	67.400	65	-3.56	1.250	25.100	25	-0.40
SAR-04	2023/12/25	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.250	68.200	65	-4.69	1.220	24.700	24.4	-1.21
SAR-04	2023/12/26	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.280	68.200	65.6	-3.81	1.240	24.700	24.8	0.40
SAR-04	2023/12/27	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.280	68.200	65.6	-3.81	1.230	24.700	24.6	-0.40
SAR-04	2023/12/29	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.220	68.200	64.4	-5.57	1.210	24.700	24.2	-2.02
SAR-04	2023/12/30	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.250	68.200	65	-4.69	1.220	24.700	24.4	-1.21
SAR-04	2023/12/31	3700	50	D3700V2-1022	EX3DV4 - SN7822	DAE4ip Sn1823	3.220	68.200	64.4	-5.57	1.210	24.700	24.2	-2.02
SAR-04	2023/12/27	3900	50	D3900V2-1017	EX3DV4 - SN7822	DAE4ip Sn1823	3.320	68.700	66.4	-3.35	1.190	23.900	23.8	-0.42
SAR-04	2023/12/29	3900	50	D3900V2-1017	EX3DV4 - SN7822	DAE4ip Sn1823	3.130	68.700	62.6	-8.88	1.120	23.900	22.4	-6.28
SAR-04	2023/12/30	3900	50	D3900V2-1017	EX3DV4 - SN7822	DAE4ip Sn1823	3.290	68.700	65.8	-4.22	1.180	23.900	23.6	-1.26
SAR-04	2023/12/31	3900	50	D3900V2-1017	EX3DV4 - SN7822	DAE4ip Sn1823	3.300	68.700	66	-3.93	1.180	23.900	23.6	-1.26
SAR-04	2023/12/22	5250	50	D5GHzV2-1171	EX3DV4 - SN7822	DAE4ip Sn1823	3.620	80.300	72.4	-9.84	1.050	23.000	21	-8.70
SAR-06	2023/12/28	5250	50	D5GHzV2-1171	EX3DV4 - SN7439	DAE4 Sn1512	4.240	80.300	84.8	5.60	1.220	23.000	24.4	6.09
SAR-04	2023/12/22	5600	50	D5GHzV2-1171	EX3DV4 - SN7822	DAE4ip Sn1823	4.070	83.400	81.4	-2.40	1.150	23.700	23	-2.95
SAR-06	2023/12/28	5600	50	D5GHzV2-1171	EX3DV4 - SN7439	DAE4 Sn1512	4.530	83.400	90.6	8.63	1.300	23.700	26	9.70
SAR-04	2023/12/22	5750	50	D5GHzV2-1171	EX3DV4 - SN7822	DAE4ip Sn1823	3.660	80.400	73.2	-8.96	1.030	22.800	20.6	-9.65
SAR-06	2023/12/28	5750	50	D5GHzV2-1171	EX3DV4 - SN7439	DAE4 Sn1512	4.110	80.400	82.2	2.24	1.160	22.800	23.2	1.75

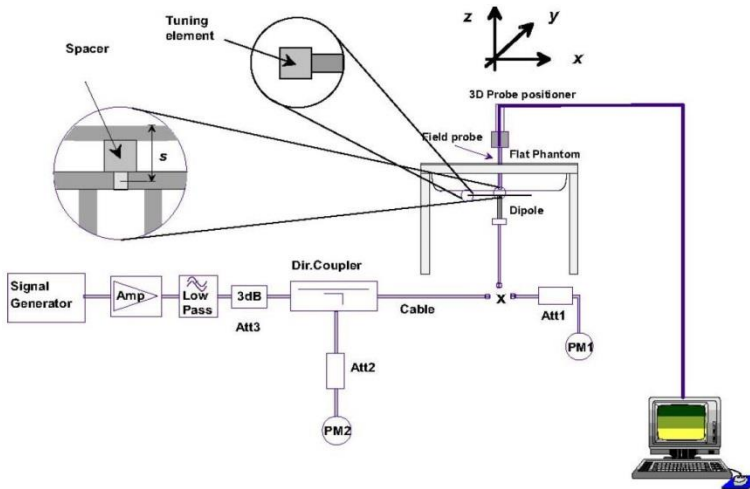


Fig 8.3.1 System Performance Check Setup



Fig 8.3.2 Setup Photo

10.3 PD System Performance Check Results

The system was verified to be within ± 0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check. The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes

Test Location	Frequency (GHz)	5G Verification Source	Probe S/N	DAE S/N	Distance (mm)	Measured 4 cm ² (W/m ²)	Targeted 4 cm ² (W/m ²)	Deviation (dB)	Date
SAR01-HY	10G	10GHz_1020	EUmmWV4 - 9461	854	10	53.1	54.9	-0.14	2023/12/18

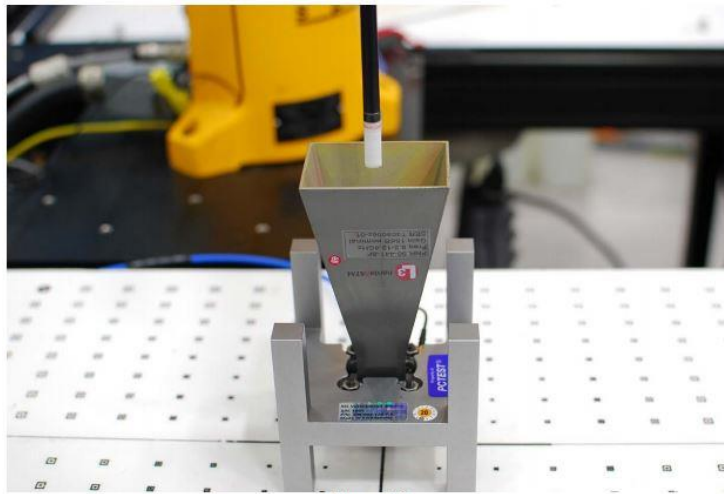


Figure 4-3
System Verification Setup Photo

System Performance Check Setup

11. RF Exposure Positions

11.1 Body Worn Accessory

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 9.4). Per KDB648474 D04v01r03, body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for body-worn accessory, measured without a headset connected to the handset is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

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

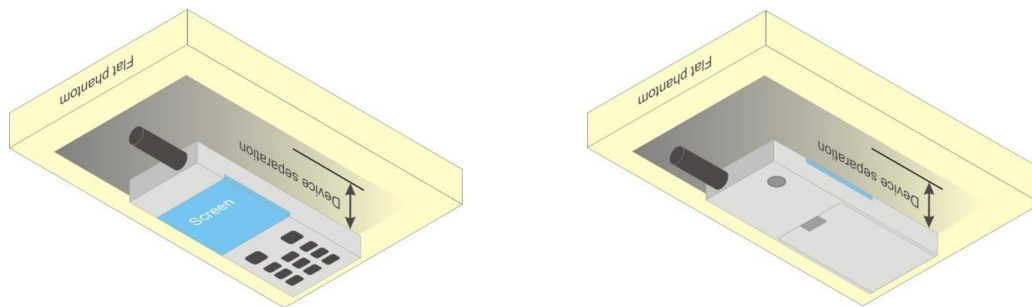


Fig 9.4 Body Worn Position

11.2 Extremity Exposure

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

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

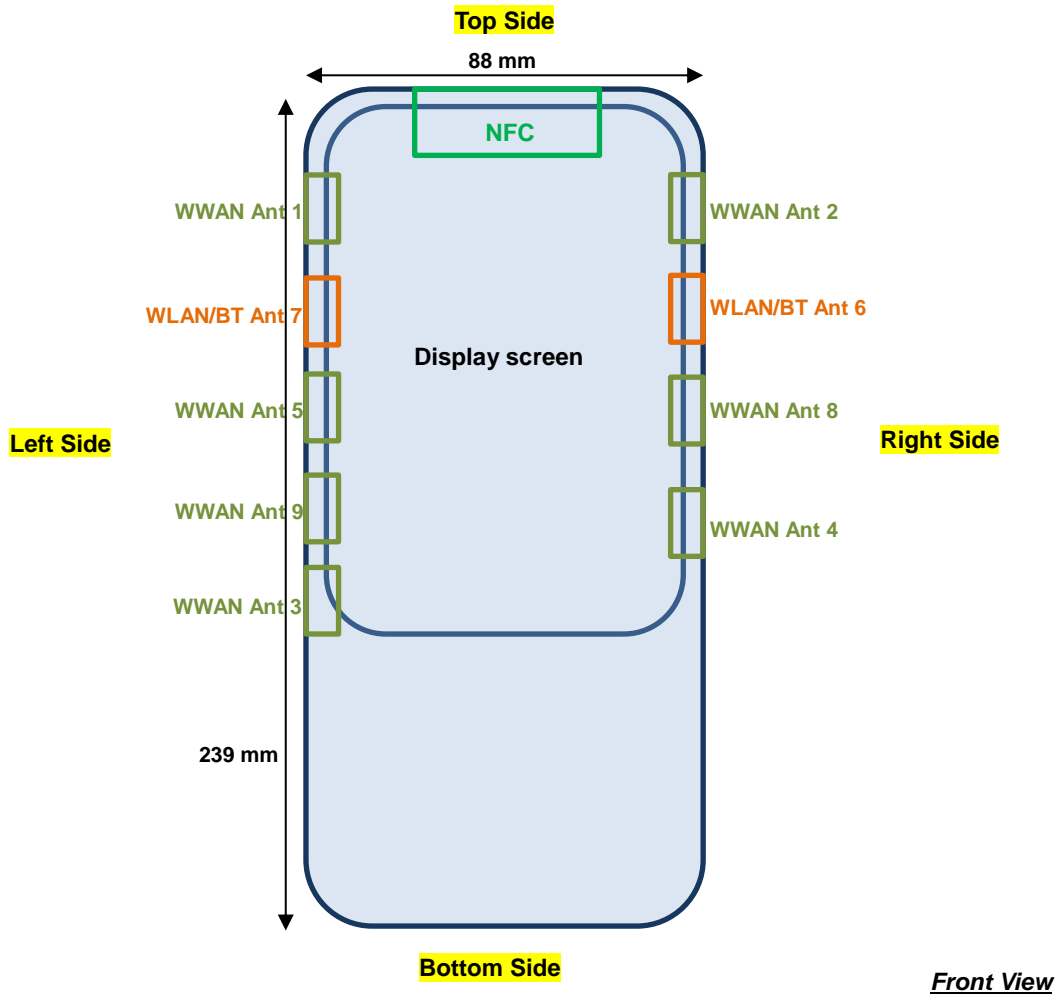


11.3 Wireless Router

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

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

12. Antenna Location



Front View

Distance of the Antenna to the EUT surface/edge						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 1	>25mm	≤ 25mm	≤ 25mm	>25mm	>25mm	≤ 25mm
WWAN Ant 2	>25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
WWAN Ant 3	>25mm	≤ 25mm	>25mm	>25mm	>25mm	≤ 25mm
WWAN Ant 4	>25mm	≤ 25mm	>25mm	>25mm	≤ 25mm	>25mm
WWAN Ant 5	>25mm	≤ 25mm	>25mm	>25mm	>25mm	≤ 25mm
WWAN Ant 8	>25mm	≤ 25mm	>25mm	>25mm	≤ 25mm	>25mm
WWAN Ant 9	>25mm	≤ 25mm	>25mm	>25mm	>25mm	≤ 25mm
BT&WLAN Ant 6	>25mm	≤ 25mm	>25mm	>25mm	≤ 25mm	>25mm
BT&WLAN Ant 7	>25mm	≤ 25mm	>25mm	>25mm	>25mm	≤ 25mm

Positions for SAR tests: Hotspot mode						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN Ant 1	No	Yes	Yes	No	No	Yes
WWAN Ant 2	No	Yes	Yes	No	Yes	No
WWAN Ant 3	No	Yes	No	No	No	Yes
WWAN Ant 4	No	Yes	No	No	Yes	No
WWAN Ant 5	No	Yes	No	No	No	Yes
WWAN Ant 8	No	Yes	No	No	Yes	No
WWAN Ant 9	No	Yes	No	No	No	Yes
BT&WLAN Ant 6	No	Yes	No	No	Yes	No
BT&WLAN Ant 7	No	Yes	No	No	No	Yes

General Note:

- Referring to KDB 941225 D06 v02r01, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

13. 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 WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - c. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
4. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g product specific SAR is required.
6. When the WiFi is on or off, the device WWAN operation will limit different output power, the RF Exposure evaluation was used higher power level perform and assessment Sim-Tx analysis, if some exposure position does not meet simultaneous transmission requirement, additional SAR at lower power level to meet Sim-Tx compliance.
7. When the WWAN is on or off, the device WLAN operation will limit different output power, the RF Exposure evaluation was used higher power level perform and assessment Sim-Tx analysis, if some exposure position does not meet simultaneous transmission requirement, additional SAR at lower power level to meet Sim-Tx compliance.
8. The device support DBS mode (Dual band simultaneous) for WLAN operation, for RF Exposure was performed at non-DBS power level to do DBS Sim-Tx analysis, if some exposure position does not meet simultaneous transmission requirement additional SAR at DBS power level to meet Sim-Tx compliance.

UMTS Note:

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

LTE Note:

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

5G NR Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below:
 - a. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
 - b. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - c. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not $\frac{1}{2}$ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - d. Smaller bandwidth output power for each RB allocation configuration for this device is not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
 - e. For 5G FR1 n5/n12/n41/n71/n77, the maximum channel bandwidth does not support three non-overlapping channels in the frequency band, the middle channel of the group of overlapping channels were selected for testing.
 - f. The NR n2/38 SAR test was covered by NR n25/41; due to SAR test for overlapping NR bands can be reduced if the maximum power including tolerance, for the smaller band is \leq the larger band to qualify for the SAR test exclusion and the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.
 - g. 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. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission.

WLAN Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, WLAN5.2GHz SAR testing is not required when the WLAN5.3GHz band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for WLAN5.2GHz band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. For determination of the scaling factor for report SAR of MIMO mode, if the hot spots are separated the scaling factors are individually determined from each transmit chain. If the hot spots are not spatially separated, the scaling factor is determined from the worst number of each transmit chain.
6. Additional SISO operation for 2.4GHz WLAN is performed Sim-Tx analysis.
7. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

WLAN PD Note:

1. The WiFi 6E PD was performed according 2020 TCB workshop RF Exposure 5G RFX Policies Interim Procedures.
2. First, evaluate SAR using 6-7 GHz parameters per IEC/IEEE 62209-1528:2020 and using highest SAR test configurations evaluate incident PD using the mmw near-field probe and total-field/power-density reconstruction method (2 mm closest meas. plane).
3. Per Interim Procedures. The power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty $> 30\%$. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor
4. The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. The WiFi 6E RF Exposure results are used for simultaneous transmission analysis with the other transmitters and total exposure ratio, the analysis can be found in this report section 15.
6. Absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements.
7. Power density was calculated by repeated E-field measurements on two measurement planes separated by $\lambda/4$.
8. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.
9. The measurement procedure consists of measuring the PD_{inc} at two different distances: 2 mm (compliance distance) and $\lambda/5$. The grid extents should be large enough to fully capture the transmitted energy. The grid step should be fine enough to demonstrate that the integrated Power Density iPD_n fulfill the criterion described below. Since iPD ratio between the two distances is ≥ -1 dB, the grid step (0.0625) was sufficient for determining compliance at d=2mm.

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

NFC Note:

1. NFC was evaluated for extremity based on hand usage conditions.
2. NFC 13.56MHz antenna port is not available on the device to support conducted power measurement, therefore the measured results are referred to as reported SAR.
3. NFC SAR test tissue-simulating liquid parameter: refer to IEC/IEEE 62209-1528 2020.



13.1 Hotspot SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
1	WCDMA II_Ant 1	RMC 12.2Kbps	Front	10mm	DSI 3	9538	1907.6	Sample 1	23.90	23.90	1.000	-0.09	0.133	0.121
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	9538	1907.6	Sample 1	23.90	23.90	1.000	-0.07	0.595	0.595
	WCDMA II_Ant 1	RMC 12.2Kbps	Top Side	10mm	DSI 3	9538	1907.6	Sample 1	23.90	23.90	1.000	0.12	0.157	0.145
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	9538	1907.6	Sample 2	23.90	23.90	1.000	0.02	0.567	0.448
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	9538	1907.6	Sample 3	23.90	23.90	1.000	-0.01	0.575	0.521
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	9538	1907.6	Sample 4	23.90	23.90	1.000	0.1	0.569	0.492
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	9538	1907.6	Sample 5	23.90	23.90	1.000	-0.18	0.568	0.492
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	9538	1907.6	Sample 6	23.90	23.90	1.000	0.02	0.590	0.492
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	9538	1907.6	Sample 7	23.90	23.90	1.000	-0.01	0.491	0.448
2	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	10mm	DSI 3	1513	1752.6	Sample 1	23.82	24.00	1.042	-0.19	0.135	0.141
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 1	23.82	24.00	1.042	0.05	0.558	0.582
	WCDMA IV_Ant 1	RMC 12.2Kbps	Top Side	10mm	DSI 3	1513	1752.6	Sample 1	23.82	24.00	1.042	0.12	0.226	0.236
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 2	23.82	24.00	1.042	-0.17	0.543	0.566
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 3	23.82	24.00	1.042	0.03	0.528	0.550
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 4	23.82	24.00	1.042	0.14	0.551	0.574
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 5	23.82	24.00	1.042	0.08	0.549	0.572
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 6	23.82	24.00	1.042	-0.05	0.550	0.573
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 7	23.82	24.00	1.042	0.04	0.523	0.545
3	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 8	23.82	24.00	1.042	-0.18	0.570	0.594
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	1513	1752.6	Sample 9	23.82	24.00	1.042	-0.08	0.472	0.492
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	10mm	DSI 3	4182	836.4	Sample 1	24.89	25.00	1.026	-0.16	0.290	0.297
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 1	24.89	25.00	1.026	0.05	0.304	0.312
	WCDMA V_Ant 1	RMC 12.2Kbps	Top Side	10mm	DSI 3	4182	836.4	Sample 1	24.89	25.00	1.026	0.12	0.109	0.112
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 2	24.89	25.00	1.026	0.01	0.289	0.296
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 3	24.89	25.00	1.026	0.14	0.283	0.290
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 4	24.89	25.00	1.026	-0.19	0.279	0.286
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 5	24.89	25.00	1.026	0.09	0.280	0.287
WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 6	24.89	25.00	1.026	-0.01	0.300	0.308	
WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 7	24.89	25.00	1.026	-0.08	0.233	0.239	
WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 8	24.89	25.00	1.026	0.09	0.262	0.269	
WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	10mm	DSI 3	4182	836.4	Sample 9	24.89	25.00	1.026	-0.19	0.246	0.252	



FCC SAR TEST REPORT

Report No. : FA3N2802B

<LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Ant 5	20M	QPSK	1	0	Front	10mm	DSI 3	21100	2535	Sample 1	23.48	23.50	1.005			-0.1	0.278	0.279
	LTE Band 7_Ant 5	20M	QPSK	50	0	Front	10mm	DSI 3	21100	2535	Sample 1	22.25	22.50	1.059			-0.1	0.211	0.224
4	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 1	23.48	23.50	1.005			-0.11	0.590	0.593
	LTE Band 7_Ant 5	20M	QPSK	50	0	Left Side	10mm	DSI 3	21100	2535	Sample 1	22.25	22.50	1.059			-0.11	0.479	0.507
	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 2	23.48	23.50	1.005			0.08	0.569	0.572
	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 3	23.48	23.50	1.005			-0.15	0.579	0.582
	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 4	23.48	23.50	1.005			0.13	0.585	0.588
	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 5	23.48	23.50	1.005			0.17	0.577	0.580
	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 6	23.48	23.50	1.005			-0.11	0.583	0.586
	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 7	23.48	23.50	1.005			0.19	0.543	0.546
	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 8	23.48	23.50	1.005			-0.14	0.363	0.364
	LTE Band 7_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	21100	2535	Sample 9	23.48	23.50	1.005			0.04	0.425	0.427
	LTE Band 7C_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	20850+21048	2510	Sample 1	23.33	23.50	1.040			-0.11	0.558	0.580
	LTE Band 12_Ant 1	10M	QPSK	1	0	Front	10mm	DSI 3	23095	707.5	Sample 1	23.99	25.00	1.262			0.18	0.114	0.144
	LTE Band 12_Ant 1	10M	QPSK	25	0	Front	10mm	DSI 3	23095	707.5	Sample 1	22.95	24.00	1.274			0.15	0.089	0.113
5	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 1	23.99	25.00	1.262			0.04	0.185	0.233
	LTE Band 12_Ant 1	10M	QPSK	25	0	Left Side	10mm	DSI 3	23095	707.5	Sample 1	22.95	24.00	1.274			-0.06	0.144	0.183
	LTE Band 12_Ant 1	10M	QPSK	1	0	Top Side	10mm	DSI 3	23095	707.5	Sample 1	23.99	25.00	1.262			-0.02	0.071	0.090
	LTE Band 12_Ant 1	10M	QPSK	25	0	Top Side	10mm	DSI 3	23095	707.5	Sample 1	22.95	24.00	1.274			0.19	0.060	0.076
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 2	23.99	25.00	1.262			-0.18	0.179	0.226
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 3	23.99	25.00	1.262			-0.06	0.180	0.227
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 4	23.99	25.00	1.262			0.05	0.175	0.221
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 5	23.99	25.00	1.262			-0.18	0.177	0.223
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 6	23.99	25.00	1.262			0.11	0.179	0.226
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 7	23.99	25.00	1.262			-0.11	0.164	0.207
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 8	23.99	25.00	1.262			-0.13	0.166	0.209
	LTE Band 12_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23095	707.5	Sample 9	23.99	25.00	1.262			0.01	0.130	0.164
	LTE Band 13_Ant 1	10M	QPSK	1	0	Front	10mm	DSI 3	23230	782	Sample 1	24.23	25.00	1.194			0.07	0.361	0.431
	LTE Band 13_Ant 1	10M	QPSK	25	25	Front	10mm	DSI 3	23230	782	Sample 1	23.37	24.00	1.156			-0.05	0.275	0.318
6	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 1	24.23	25.00	1.194			0.04	0.459	0.548
	LTE Band 13_Ant 1	10M	QPSK	25	25	Left Side	10mm	DSI 3	23230	782	Sample 1	23.37	24.00	1.156			0.07	0.315	0.364
	LTE Band 13_Ant 1	10M	QPSK	1	0	Top Side	10mm	DSI 3	23230	782	Sample 1	24.23	25.00	1.194			0.04	0.184	0.220
	LTE Band 13_Ant 1	10M	QPSK	25	25	Top Side	10mm	DSI 3	23230	782	Sample 1	23.37	24.00	1.156			0.19	0.122	0.141
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 2	24.23	25.00	1.194			0.04	0.446	0.533
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 3	24.23	25.00	1.194			0.05	0.450	0.537
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 4	24.23	25.00	1.194			-0.05	0.439	0.524
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 5	24.23	25.00	1.194			-0.19	0.444	0.530
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 6	24.23	25.00	1.194			-0.05	0.452	0.540
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 7	24.23	25.00	1.194			0.19	0.190	0.227
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 8	24.23	25.00	1.194			-0.02	0.257	0.307
	LTE Band 13_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23230	782	Sample 9	24.23	25.00	1.194			0.13	0.156	0.186
	LTE Band 14_Ant 1	10M	QPSK	1	0	Front	10mm	DSI 3	23330	793	Sample 1	23.55	24.70	1.303			0.07	0.399	0.520
	LTE Band 14_Ant 1	10M	QPSK	25	0	Front	10mm	DSI 3	23330	793	Sample 1	23.18	23.70	1.127			0.1	0.280	0.316
7	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 1	23.55	24.70	1.303			-0.06	0.457	0.596
	LTE Band 14_Ant 1	10M	QPSK	25	0	Left Side	10mm	DSI 3	23330	793	Sample 1	23.18	23.70	1.127			-0.12	0.321	0.362
	LTE Band 14_Ant 1	10M	QPSK	1	0	Top Side	10mm	DSI 3	23330	793	Sample 1	23.55	24.70	1.303			-0.1	0.168	0.219
	LTE Band 14_Ant 1	10M	QPSK	25	0	Top Side	10mm	DSI 3	23330	793	Sample 1	23.18	23.70	1.127			0.11	0.111	0.125
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 2	23.55	24.70	1.303			0.15	0.443	0.577
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 3	23.55	24.70	1.303			0.19	0.448	0.584
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 4	23.55	24.70	1.303			-0.14	0.441	0.575
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 5	23.55	24.70	1.303			0.14	0.450	0.586



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	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 6	23.55	24.70	1.303		0.13	0.451	0.588	
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 7	23.55	24.70	1.303		-0.05	0.296	0.386	
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 8	23.55	24.70	1.303		0.14	0.324	0.422	
	LTE Band 14_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	23330	793	Sample 9	23.55	24.70	1.303		-0.06	0.273	0.356	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Front	10mm	DSI 3	26590	1905	Sample 1	23.90	24.10	1.047		0.09	0.122	0.128	
	LTE Band 25_Ant 1	20M	QPSK	50	0	Front	10mm	DSI 3	26590	1905	Sample 1	23.10	24.00	1.230		0.04	0.090	0.111	
8	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 1	23.90	24.10	1.047		0	0.573	0.600	
	LTE Band 25_Ant 1	20M	QPSK	50	0	Left Side	10mm	DSI 3	26590	1905	Sample 1	23.10	24.00	1.230		0.03	0.422	0.519	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Top Side	10mm	DSI 3	26590	1905	Sample 1	23.90	24.10	1.047		-0.19	0.122	0.128	
	LTE Band 25_Ant 1	20M	QPSK	50	0	Top Side	10mm	DSI 3	26590	1905	Sample 1	23.10	24.00	1.230		0.17	0.095	0.117	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 2	23.90	24.10	1.047		-0.19	0.565	0.592	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 3	23.90	24.10	1.047		0.19	0.566	0.593	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 4	23.90	24.10	1.047		-0.03	0.570	0.597	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 5	23.90	24.10	1.047		-0.1	0.558	0.584	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 6	23.90	24.10	1.047		0.03	0.564	0.591	
	LTE Band 2C_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	19100+18902	1900	Sample 1	23.77	24.10	1.079		0.01	0.542	0.585	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 7	23.90	24.10	1.047		-0.02	0.413	0.432	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 8	23.90	24.10	1.047		0.06	0.500	0.524	
	LTE Band 25_Ant 1	20M	QPSK	1	0	Left Side	10mm	DSI 3	26590	1905	Sample 9	23.90	24.10	1.047		0.19	0.412	0.431	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Front	10mm	DSI 3	26865	831.5	Sample 1	24.01	24.50	1.119		0.09	0.422	0.472	
	LTE Band 26_Ant 1	15M	QPSK	36	0	Front	10mm	DSI 3	26865	831.5	Sample 1	22.99	23.50	1.125		-0.13	0.295	0.332	
9	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 1	24.01	24.50	1.119		0.03	0.469	0.525	
	LTE Band 26_Ant 1	15M	QPSK	36	0	Left Side	10mm	DSI 3	26865	831.5	Sample 1	22.99	23.50	1.125		-0.19	0.323	0.363	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Top Side	10mm	DSI 3	26865	831.5	Sample 1	24.01	24.50	1.119		0.18	0.177	0.198	
	LTE Band 26_Ant 1	15M	QPSK	36	0	Top Side	10mm	DSI 3	26865	831.5	Sample 1	22.99	23.50	1.125		-0.16	0.125	0.141	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 2	24.01	24.50	1.119		0.04	0.455	0.509	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 3	24.01	24.50	1.119		0.05	0.463	0.518	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 4	24.01	24.50	1.119		-0.03	0.459	0.514	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 5	24.01	24.50	1.119		-0.15	0.458	0.513	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 6	24.01	24.50	1.119		0.13	0.458	0.513	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 7	24.01	24.50	1.119		-0.17	0.283	0.317	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 8	24.01	24.50	1.119		-0.12	0.329	0.368	
	LTE Band 26_Ant 1	15M	QPSK	1	0	Left Side	10mm	DSI 3	26865	831.5	Sample 9	24.01	24.50	1.119		-0.07	0.258	0.289	
	LTE Band 5B_Ant 1	10M	QPSK	1	0	Left Side	10mm	DSI 3	20600+20501	844	Sample 1	24.00	24.50	1.122		0.11	0.423	0.475	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Front	10mm	DSI 3	27710	2310	Sample 1	22.25	22.50	1.059		0.06	0.203	0.215	
	LTE Band 30_Ant 5	10M	QPSK	25	12	Front	10mm	DSI 3	27710	2310	Sample 1	21.27	21.50	1.054		-0.02	0.144	0.152	
10	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 1	22.25	22.50	1.059		0.07	0.489	0.518	
	LTE Band 30_Ant 5	10M	QPSK	25	12	Left Side	10mm	DSI 3	27710	2310	Sample 1	21.27	21.50	1.054		0.03	0.333	0.351	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 2	22.25	22.50	1.059		-0.1	0.477	0.505	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 3	22.25	22.50	1.059		-0.14	0.480	0.508	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 4	22.25	22.50	1.059		-0.03	0.475	0.503	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 5	22.25	22.50	1.059		-0.09	0.482	0.511	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 6	22.25	22.50	1.059		0.12	0.481	0.510	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 7	22.25	22.50	1.059		0.01	0.397	0.421	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 8	22.25	22.50	1.059		-0.1	0.451	0.478	
	LTE Band 30_Ant 5	10M	QPSK	1	0	Left Side	10mm	DSI 3	27710	2310	Sample 9	22.25	22.50	1.059		-0.18	0.406	0.430	
	LTE Band 41_Ant 5	20M	QPSK	1	0	Front	10mm	DSI 3	41490	2680	Sample 1	23.74	25.00	1.337	62.9	1.006	-0.03	0.116	0.156
	LTE Band 41_Ant 5	20M	QPSK	50	0	Front	10mm	DSI 3	41490	2680	Sample 1	22.79	24.00	1.321	62.9	1.006	0.05	0.088	0.117
	LTE Band 41_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	41490	2680	Sample 1	23.74	25.00	1.337	62.9	1.006	0.1	0.359	0.483
	LTE Band 41_Ant 5	20M	QPSK	50	0	Left Side	10mm	DSI 3	41490	2680	Sample 1	22.79	24.00	1.321	62.9	1.006	0.13	0.245	0.326
	LTE Band 41_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	41490	2680	Sample 2	23.74	25.00	1.337	62.9	1.006	0.17	0.339	0.456
	LTE Band 41_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	41490	2680	Sample 3	23.74	25.00	1.337	62.9	1.006	0.13	0.346	0.465
	LTE Band 41_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	41490	2680	Sample 4	23.74	25.00	1.337	62.9	1.006	0.15	0.345	0.464
	LTE Band 41_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	41490	2680	Sample 5	23.74	25.00	1.337	62.9	1.006	-0.02	0.341	0.459
	LTE Band 41_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	41490	2680	Sample 6	23.74	25.00	1.337	62.9	1.006	0.15	0.353	0.475
	LTE Band 41C_Ant 5	20M	QPSK	1	0	Left Side	10mm	DSI 3	41490+41292	2680	Sample 1	23.68	25.00	1.355	62.9	1.006	-0.15	0.293	0.399



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Table with columns: LTE Band, Ant, Mod, Power, Pol, Side, Dist, Freq, Power, Power, Sample, E1, E2, E3, E4, E5, E6, E7, E8, E9, E10. Includes rows for bands 41, 48, 66, and 71 with various antenna configurations and exposure values.



<5G NR SAR>

Table with 17 columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Power Index, Ch., Freq. (MHz), Sample, Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Rows include test data for bands FR1 n7_Ant 5, FR1 n12_Ant 1, FR1 n13_Ant 1, and FR1 n14_Ant 1.



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	FR1 n14_Ant 1	10M	BPSK	1	1	Left Side	10mm	DSI 3	158600	793	Sample 9	23.61	25.00	1.377	-0.13	0.255	0.351
	FR1 n25_Ant 1	40M	BPSK	1	1	Front	10mm	DSI 3	379000	1895	Sample 1	21.79	22.70	1.233	-0.11	0.100	0.123
	FR1 n25_Ant 1	40M	BPSK	108	54	Front	10mm	DSI 3	379000	1895	Sample 1	21.77	22.70	1.239	-0.13	0.096	0.119
	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 1	21.79	22.70	1.233	-0.01	0.360	0.444
	FR1 n25_Ant 1	40M	BPSK	108	54	Left Side	10mm	DSI 3	379000	1895	Sample 1	21.77	22.70	1.239	0.11	0.349	0.432
	FR1 n25_Ant 1	40M	BPSK	1	1	Top Side	10mm	DSI 3	379000	1895	Sample 1	21.79	22.70	1.233	-0.13	0.114	0.141
	FR1 n25_Ant 1	40M	BPSK	108	54	Top Side	10mm	DSI 3	379000	1895	Sample 1	21.77	22.70	1.239	-0.11	0.108	0.134
	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 2	21.79	22.70	1.233	-0.01	0.348	0.429
	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 3	21.79	22.70	1.233	-0.12	0.352	0.434
	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 4	21.79	22.70	1.233	-0.13	0.358	0.441
	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 5	21.79	22.70	1.233	0.11	0.350	0.432
	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 6	21.79	22.70	1.233	-0.13	0.352	0.434
	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 7	21.79	22.70	1.233	-0.19	0.320	0.395
19	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 8	21.79	22.70	1.233	0.17	0.488	0.602
	FR1 n25_Ant 1	40M	BPSK	1	1	Left Side	10mm	DSI 3	379000	1895	Sample 9	21.79	22.70	1.233	-0.01	0.350	0.432
	FR1 n26_Ant 1	20M	BPSK	1	1	Front	10mm	DSI 3	166300	831.5	Sample 1	24.39	24.50	1.026	0.16	0.308	0.316
	FR1 n26_Ant 1	20M	BPSK	50	28	Front	10mm	DSI 3	166300	831.5	Sample 1	24.35	24.50	1.035	0.04	0.199	0.206
20	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 1	24.39	24.50	1.026	-0.07	0.385	0.395
	FR1 n26_Ant 1	20M	BPSK	50	28	Left Side	10mm	DSI 3	166300	831.5	Sample 1	24.35	24.50	1.035	-0.09	0.241	0.249
	FR1 n26_Ant 1	20M	BPSK	1	1	Top Side	10mm	DSI 3	166300	831.5	Sample 1	24.39	24.50	1.026	0.17	0.174	0.178
	FR1 n26_Ant 1	20M	BPSK	50	28	Top Side	10mm	DSI 3	166300	831.5	Sample 1	24.35	24.50	1.035	0.13	0.110	0.114
	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 2	24.39	24.50	1.026	-0.01	0.377	0.387
	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 3	24.39	24.50	1.026	0.09	0.372	0.382
	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 4	24.39	24.50	1.026	0.1	0.379	0.389
	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 5	24.39	24.50	1.026	-0.15	0.380	0.390
	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 6	24.39	24.50	1.026	-0.1	0.379	0.389
	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 7	24.39	24.50	1.026	0.19	0.266	0.273
	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 8	24.39	24.50	1.026	0.06	0.246	0.252
	FR1 n26_Ant 1	20M	BPSK	1	1	Left Side	10mm	DSI 3	166300	831.5	Sample 9	24.39	24.50	1.026	-0.19	0.257	0.264
	FR1 n30_Ant 5	10M	BPSK	1	1	Front	10mm	DSI 3	462000	2310	Sample 1	22.20	22.50	1.072	-0.1	0.147	0.158
	FR1 n30_Ant 5	10M	BPSK	25	0	Front	10mm	DSI 3	462000	2310	Sample 1	22.00	22.50	1.122	0.17	0.128	0.144
21	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 1	22.20	22.50	1.072	0	0.467	0.500
	FR1 n30_Ant 5	10M	BPSK	25	0	Left Side	10mm	DSI 3	462000	2310	Sample 1	22.00	22.50	1.122	0.14	0.443	0.497
	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 2	22.20	22.50	1.072	0.15	0.458	0.491
	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 3	22.20	22.50	1.072	0.05	0.460	0.493
	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 4	22.20	22.50	1.072	0.14	0.462	0.495
	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 5	22.20	22.50	1.072	0.07	0.456	0.489
	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 6	22.20	22.50	1.072	0.13	0.459	0.492
	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 7	22.20	22.50	1.072	-0.14	0.359	0.385
	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 8	22.20	22.50	1.072	-0.01	0.465	0.498
	FR1 n30_Ant 5	10M	BPSK	1	1	Left Side	10mm	DSI 3	462000	2310	Sample 9	22.20	22.50	1.072	-0.14	0.340	0.364
	FR1 n41_Ant 5	100M	BPSK	1	271	Front	10mm	DSI 3	518598	2592.99	Sample 1	22.55	23.20	1.161	0.02	0.226	0.262
	FR1 n41_Ant 5	100M	BPSK	135	0	Front	10mm	DSI 3	518598	2592.99	Sample 1	22.40	23.20	1.202	-0.18	0.212	0.255
	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 1	22.55	23.20	1.161	-0.04	0.500	0.581
	FR1 n41_Ant 5	100M	BPSK	135	0	Left Side	10mm	DSI 3	518598	2592.99	Sample 1	22.40	23.20	1.202	-0.12	0.463	0.557
	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 2	22.55	23.20	1.161	-0.14	0.482	0.560
	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 3	22.55	23.20	1.161	-0.15	0.495	0.575
	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 4	22.55	23.20	1.161	-0.09	0.492	0.571
	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 5	22.55	23.20	1.161	-0.19	0.496	0.576
	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 6	22.55	23.20	1.161	0.05	0.489	0.568
22	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 7	22.55	23.20	1.161	0.03	0.515	0.598
	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 8	22.55	23.20	1.161	0.02	0.376	0.436
	FR1 n41_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 9	22.55	23.20	1.161	-0.01	0.334	0.388
	FR1 n41_HPUE_Ant 5	100M	BPSK	1	271	Left Side	10mm	DSI 3	518598	2592.99	Sample 7	25.54	26.20	1.164	0.03	0.470	0.547
	FR1 n41_Ant 2	100M	BPSK	1	271	Front	10mm	DSI 3	518598	2592.99	Sample 1	21.24	22.00	1.191	0.1	0.070	0.083
	FR1 n41_Ant 2	100M	BPSK	135	69	Front	10mm	DSI 3	518598	2592.99	Sample 1	20.42	22.00	1.439	0.14	0.052	0.075
	FR1 n41_Ant 2	100M	BPSK	1	271	Right Side	10mm	DSI 3	518598	2592.99	Sample 1	21.24	22.00	1.191	-0.19	0.266	0.317



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns for antenna ID, power, modulation, frequency, polarization, distance, DSI, E1, E2, sample, and SAR values. Includes rows for antennas FR1 n41_Ant 2, FR1 n41_Ant 3, FR1 n41_Ant 4, FR1 n48_Ant 8, and FR1 n66_Ant 1.



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns: Antenna ID, Power, Modulation, Polarity, Azimuth, Elevation, Distance, Frequency, Power Density, Sample No., E1, E2, E3, E4, E5, E6. Includes rows for n66, n71, n77, and n78 antennas.



FCC SAR TEST REPORT

Report No. : FA3N2802B

	FR1 n77_Ant 9	100M	BPSK	135	0	Front	10mm	DSI 3	656000	3840	Sample 1	19.13	20.00	1.222	-0.11	0.056	0.068
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 1	19.16	20.00	1.213	-0.06	0.354	0.430
	FR1 n77_Ant 9	100M	BPSK	135	0	Left Side	10mm	DSI 3	656000	3840	Sample 1	19.13	20.00	1.222	0.17	0.331	0.404
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 2	19.16	20.00	1.213	-0.19	0.342	0.415
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 3	19.16	20.00	1.213	0.07	0.345	0.419
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 4	19.16	20.00	1.213	-0.1	0.348	0.422
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 5	19.16	20.00	1.213	-0.19	0.338	0.410
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 6	19.16	20.00	1.213	0.01	0.343	0.416
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 7	19.16	20.00	1.213	-0.01	0.365	0.443
26	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 8	19.16	20.00	1.213	0.07	0.506	0.614
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 9	19.16	20.00	1.213	0.04	0.301	0.365
	FR1 n77_HPUE_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	656000	3840	Sample 8	22.56	23.00	1.107	0.02	0.500	0.553
	FR1 n77_Ant 9	100M	BPSK	1	1	Front	10mm	DSI 3	633332	3499.98	Sample 1	18.89	20.00	1.291	0.04	0.043	0.056
	FR1 n77_Ant 9	100M	BPSK	135	0	Front	10mm	DSI 3	633332	3499.98	Sample 1	18.76	20.00	1.330	-0.19	0.038	0.051
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 1	18.89	20.00	1.291	-0.02	0.195	0.252
	FR1 n77_Ant 9	100M	BPSK	135	0	Left Side	10mm	DSI 3	633332	3499.98	Sample 1	18.76	20.00	1.330	0.03	0.188	0.250
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 2	18.89	20.00	1.291	-0.03	0.192	0.248
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 3	18.89	20.00	1.291	0.15	0.189	0.244
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 4	18.89	20.00	1.291	-0.15	0.193	0.249
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 5	18.89	20.00	1.291	0.17	0.185	0.239
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 6	18.89	20.00	1.291	0.13	0.188	0.243
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 7	18.89	20.00	1.291	0.01	0.289	0.373
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 8	18.89	20.00	1.291	-0.03	0.313	0.404
	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 9	18.89	20.00	1.291	0.16	0.302	0.390
	FR1 n77_HPUE_Ant 9	100M	BPSK	1	1	Left Side	10mm	DSI 3	633332	3499.98	Sample 8	21.96	23.00	1.271	-0.03	0.299	0.380
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Front	10mm	DSI 3	641666	3624.99	Sample 1	19.52	20.00	1.117	-0.11	0.063	0.070
	FR1 n77/n78_Ant 9	40M	BPSK	50	28	Front	10mm	DSI 3	641666	3624.99	Sample 1	19.06	20.00	1.242	0.13	0.042	0.052
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 1	19.52	20.00	1.117	-0.01	0.276	0.308
	FR1 n77/n78_Ant 9	40M	BPSK	50	28	Left Side	10mm	DSI 3	641666	3624.99	Sample 1	19.06	20.00	1.242	-0.15	0.245	0.304
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 2	19.52	20.00	1.117	0.11	0.268	0.299
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 3	19.52	20.00	1.117	0.15	0.265	0.296
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 4	19.52	20.00	1.117	-0.13	0.273	0.305
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 5	19.52	20.00	1.117	-0.15	0.271	0.303
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 6	19.52	20.00	1.117	0.02	0.270	0.302
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 7	19.52	20.00	1.117	0.03	0.300	0.335
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 8	19.52	20.00	1.117	-0.02	0.471	0.526
	FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	10mm	DSI 3	641666	3624.99	Sample 9	19.52	20.00	1.117	0.02	0.244	0.273
	FR1 n77_Ant 4	100M	BPSK	1	271	Front	10mm	DSI 3	656000	3840	Sample 1	19.35	20.00	1.161	-0.18	0.059	0.069
	FR1 n77_Ant 4	100M	BPSK	135	138	Front	10mm	DSI 3	656000	3840	Sample 1	19.28	20.00	1.180	0.07	0.052	0.061
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 1	19.35	20.00	1.161	0.14	0.228	0.265
	FR1 n77_Ant 4	100M	BPSK	135	138	Right Side	10mm	DSI 3	656000	3840	Sample 1	19.28	20.00	1.180	0.12	0.221	0.261
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 2	19.35	20.00	1.161	0.11	0.222	0.258
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 3	19.35	20.00	1.161	0	0.219	0.254
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 4	19.35	20.00	1.161	-0.02	0.222	0.258
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 5	19.35	20.00	1.161	0.06	0.226	0.262
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 6	19.35	20.00	1.161	-0.15	0.225	0.261
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 7	19.35	20.00	1.161	0.13	0.350	0.407
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 8	19.35	20.00	1.161	-0.08	0.464	0.539
	FR1 n77_Ant 4	100M	BPSK	1	271	Right Side	10mm	DSI 3	656000	3840	Sample 9	19.35	20.00	1.161	-0.14	0.431	0.501
	FR1 n77_Ant 4	100M	BPSK	1	1	Front	10mm	DSI 3	633332	3499.98	Sample 1	18.89	20.00	1.291	-0.01	0.062	0.080
	FR1 n77_Ant 4	100M	BPSK	135	69	Front	10mm	DSI 3	633332	3499.98	Sample 1	18.75	20.00	1.334	-0.11	0.050	0.067
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Side	10mm	DSI 3	633332	3499.98	Sample 1	18.89	20.00	1.291	0.12	0.081	0.105
	FR1 n77_Ant 4	100M	BPSK	135	69	Right Side	10mm	DSI 3	633332	3499.98	Sample 1	18.75	20.00	1.334	0.07	0.070	0.093
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Side	10mm	DSI 3	633332	3499.98	Sample 2	18.89	20.00	1.291	0.08	0.075	0.097
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Side	10mm	DSI 3	633332	3499.98	Sample 3	18.89	20.00	1.291	0.17	0.073	0.094
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Side	10mm	DSI 3	633332	3499.98	Sample 4	18.89	20.00	1.291	0.06	0.080	0.103
	FR1 n77_Ant 4	100M	BPSK	1	1	Right Side	10mm	DSI 3	633332	3499.98	Sample 5	18.89	20.00	1.291	-0.02	0.076	0.098



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns: Antenna ID, Power, Modulation, Channels, Position, Distance, Frequency, Power Density, Sample, and SAR values. Rows include FR1 n77_Ant 4, FR1 n77/n78_Ant 4, FR1 n77_Ant 3, and FR1 n77/n78_Ant 3.



<WLAN SAR>

Table with 18 columns: Plot No., Band, Mode, Test Position, Gap (mm), Antenna, WWAN Power State, Power Index, Ch., Freq. (MHz), Sample, 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). Rows include test results for 27 and 28 plots across various frequencies and modes.



FCC SAR TEST REPORT

Report No. : FA3N2802B

WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 6+7(7)	Off	Non-DBS	40	5200	Sample 8	18.50	18.50	1.000	85.66	1.167	-0.16	0.844	0.985	
WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 6+7(7)	Off	Non-DBS	46	5230	Sample 9	17.60	18.50	1.230	85.51	1.169	0.08	0.868	1.248	
WLAN5GHz	802.11a 6Mbps	Right Side	10mm	Ant 6+7(7)	Off	Non-DBS	40	5200	Sample 9	18.50	18.50	1.000	85.66	1.167	-0.17	0.851	0.993	
WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 6+7(7)	Off	DBS	46	5230	Sample 1	16.90	17.50	1.148	85.51	1.169	-0.02	0.823	1.105	
WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 6+7(7)	On	Non-DBS	42	5210	Sample 1	16.00	17.00	1.259	85.71	1.167	0.03	0.626	0.920	
WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 6+7(7)	On	DBS	42	5210	Sample 1	14.40	15.00	1.148	85.71	1.167	-0.06	0.380	0.509	
WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 1	18.30	18.50	1.047	85.71	1.167	-0.15	0.203	0.248	
WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 1	18.30	18.50	1.047	85.71	1.167	0.11	0.483	0.590	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 1	18.30	18.50	1.047	85.71	1.167	-0.18	0.977	1.194	
WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 1	18.40	18.50	1.023	85.51	1.169	-0.1	0.923	1.104	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 2	18.30	18.50	1.047	85.71	1.167	-0.1	0.944	1.154	
WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 2	18.40	18.50	1.023	85.51	1.169	-0.05	0.922	1.103	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 3	18.30	18.50	1.047	85.71	1.167	0.05	0.973	1.189	
WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 3	18.40	18.50	1.023	85.51	1.169	-0.04	0.935	1.118	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 4	18.30	18.50	1.047	85.71	1.167	-0.15	0.952	1.163	
WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 4	18.40	18.50	1.023	85.51	1.169	0.12	0.955	1.142	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 5	18.30	18.50	1.047	85.71	1.167	0.11	0.963	1.177	
WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 5	18.40	18.50	1.023	85.51	1.169	0.04	0.956	1.144	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 6	18.30	18.50	1.047	85.71	1.167	0.03	0.971	1.187	
WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 6	18.40	18.50	1.023	85.51	1.169	-0.19	0.949	1.135	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 7	18.30	18.50	1.047	85.71	1.167	0.07	0.898	1.097	
29	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 7	18.40	18.50	1.023	85.51	1.169	0.06	0.843	1.008
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 8	18.30	18.50	1.047	85.71	1.167	0.05	1.100	1.344	
WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 8	18.40	18.50	1.023	85.51	1.169	-0.07	0.999	1.195	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	155	5775	Sample 9	18.30	18.50	1.047	85.71	1.167	-0.05	1.000	1.222	
WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 6+7(6)	Off	Non-DBS	151	5755	Sample 9	18.40	18.50	1.023	85.51	1.169	0.01	0.978	1.170	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(7)	Off	DBS	155	5775	Sample 8	17.30	18.00	1.175	85.71	1.167	0.03	0.860	1.179	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(6)	On	Non-DBS	155	5775	Sample 8	15.70	17.00	1.349	85.71	1.167	0.01	0.590	0.929	
WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(7)	On	DBS	155	5775	Sample 8	14.50	14.50	1.000	85.71	1.167	0.01	0.473	0.552	

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	3Mbps	Front	10mm	78	2480	Sample 1	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
30	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 1	3.20	3.50	1.072	77.03	1.081	0.02	0.003	0.003
	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 2	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 3	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 4	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 5	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 6	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 7	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 8	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	10mm	78	2480	Sample 9	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Front	10mm	0	2402	Sample 1	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 1	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 2	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 3	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 4	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 5	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 6	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 7	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 8	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	10mm	0	2402	Sample 9	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001



13.2 Body Worn Accessory SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Holster	WiFi Power State	Power Index	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	9538	1907.6	Sample 1	24.48	25.00	1.127	-0.15	0.132	0.149
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 1	24.48	25.00	1.127	-0.02	0.294	0.331
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 2	24.48	25.00	1.127	-0.13	0.282	0.318
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 3	24.48	25.00	1.127	-0.14	0.285	0.321
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 4	24.48	25.00	1.127	0.04	0.291	0.328
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 5	24.48	25.00	1.127	0.19	0.280	0.316
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 6	24.48	25.00	1.127	0.04	0.289	0.326
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 7	24.48	25.00	1.127	0.15	0.310	0.349
31	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 8	24.48	25.00	1.127	-0.06	0.423	0.477
	WCDMA II_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	9538	1907.6	Sample 9	24.48	25.00	1.127	0.14	0.375	0.423
	WCDMA IV_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	1513	1752.6	Sample 1	24.26	25.00	1.186	0.01	0.144	0.171
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 1	24.26	25.00	1.186	0.06	0.318	0.377
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 2	24.26	25.00	1.186	0.19	0.312	0.370
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 3	24.26	25.00	1.186	0.14	0.315	0.374
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 4	24.26	25.00	1.186	0.17	0.311	0.369
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 5	24.26	25.00	1.186	-0.09	0.316	0.375
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 6	24.26	25.00	1.186	-0.02	0.314	0.372
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 7	24.26	25.00	1.186	0.03	0.465	0.551
32	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 8	24.26	25.00	1.186	0.01	0.504	0.598
	WCDMA IV_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	1513	1752.6	Sample 9	24.26	25.00	1.186	0.11	0.390	0.462
33	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 1	24.89	25.00	1.026	0.19	0.261	0.268
	WCDMA V_Ant 1	RMC 12.2Kbps	Left Side	0mm	Holster	off	DSI 1	4182	836.4	Sample 1	24.89	25.00	1.026	0.02	0.120	0.123
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 2	24.89	25.00	1.026	-0.09	0.255	0.262
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 3	24.89	25.00	1.026	0.08	0.258	0.265
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 4	24.89	25.00	1.026	-0.13	0.251	0.257
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 5	24.89	25.00	1.026	0.15	0.260	0.267
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 6	24.89	25.00	1.026	0.04	0.255	0.262
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 7	24.89	25.00	1.026	-0.01	0.251	0.257
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 8	24.89	25.00	1.026	-0.05	0.239	0.245
	WCDMA V_Ant 1	RMC 12.2Kbps	Front	0mm	Holster	off	DSI 1	4182	836.4	Sample 9	24.89	25.00	1.026	-0.05	0.215	0.221



<LTE SAR>

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Holster, WiFi Power State, Power Index, Ch., Freq. (MHz), Sample, 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)



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns for Band, Power, Modulation, Frequency, Location, and SAR values. Includes rows 38-41 with highlighted SAR values.



FCC SAR TEST REPORT

Report No. : FA3N2802B

	LTE Band 48_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	56150	3641	Sample 2	21.11	21.50	1.094	62.9	1.006	-0.04	0.300	0.330
	LTE Band 48_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	56150	3641	Sample 3	21.11	21.50	1.094	62.9	1.006	0.04	0.305	0.336
	LTE Band 48_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	56150	3641	Sample 4	21.11	21.50	1.094	62.9	1.006	0.03	0.302	0.332
	LTE Band 48_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	56150	3641	Sample 5	21.11	21.50	1.094	62.9	1.006	0.05	0.301	0.331
	LTE Band 48_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	56150	3641	Sample 6	21.11	21.50	1.094	62.9	1.006	-0.15	0.308	0.339
	LTE Band 48C_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	55340+55538	3560	Sample 1	20.99	21.50	1.125	62.9	1.006	-0.13	0.289	0.327
	LTE Band 48_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	56150	3641	Sample 7	21.11	21.50	1.094	62.9	1.006	-0.14	0.394	0.434
	LTE Band 48_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	56150	3641	Sample 8	21.11	21.50	1.094	62.9	1.006	-0.19	0.343	0.377
42	LTE Band 48_Ant 8	20M	QPSK	1	0	Right Side	0mm	Holster	off	DSI 1	56150	3641	Sample 9	21.11	21.50	1.094	62.9	1.006	0.03	0.404	0.445
	LTE Band 66_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	132572	1770	Sample 1	23.91	25.00	1.285			-0.03	0.132	0.170
	LTE Band 66_Ant 1	20M	QPSK	50	0	Front	0mm	Holster	off	DSI 1	132572	1770	Sample 1	22.97	24.00	1.268			-0.11	0.108	0.137
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 1	23.91	25.00	1.285			0.12	0.292	0.375
	LTE Band 66_Ant 1	20M	QPSK	50	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 1	22.97	24.00	1.268			0.07	0.233	0.295
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 2	23.91	25.00	1.285			0	0.285	0.366
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 3	23.91	25.00	1.285			0.09	0.281	0.361
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 4	23.91	25.00	1.285			0	0.290	0.373
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 5	23.91	25.00	1.285			-0.02	0.280	0.360
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 6	23.91	25.00	1.285			-0.11	0.283	0.364
	LTE Band 66B_Ant 1	15M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132047+132140	1717.5	Sample 1	23.50	25.00	1.413			0.05	0.252	0.356
	LTE Band 66C_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132072+132270	1720	Sample 1	23.56	25.00	1.393			0.08	0.259	0.361
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 7	23.91	25.00	1.285			0.02	0.395	0.508
43	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 8	23.91	25.00	1.285			0.01	0.447	0.575
	LTE Band 66_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	132572	1770	Sample 9	23.91	25.00	1.285			0	0.357	0.459
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 1	23.86	25.00	1.300			0.15	0.139	0.181
	LTE Band 71_Ant 1	20M	QPSK	50	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 1	22.95	24.00	1.274			0	0.112	0.143
	LTE Band 71_Ant 1	20M	QPSK	1	0	Left Side	0mm	Holster	off	DSI 1	133297	680.5	Sample 1	23.86	25.00	1.300			-0.19	0.057	0.074
	LTE Band 71_Ant 1	20M	QPSK	50	0	Left Side	0mm	Holster	off	DSI 1	133297	680.5	Sample 1	22.95	24.00	1.274			-0.1	0.045	0.057
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 2	23.86	25.00	1.300			-0.02	0.128	0.166
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 3	23.86	25.00	1.300			-0.18	0.135	0.176
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 4	23.86	25.00	1.300			0	0.128	0.166
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 5	23.86	25.00	1.300			-0.07	0.133	0.173
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 6	23.86	25.00	1.300			0.03	0.138	0.179
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 7	23.86	25.00	1.300			-0.1	0.162	0.211
44	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 8	23.86	25.00	1.300			0.05	0.181	0.235
	LTE Band 71_Ant 1	20M	QPSK	1	0	Front	0mm	Holster	off	DSI 1	133297	680.5	Sample 9	23.86	25.00	1.300			0.17	0.166	0.216



<5G NR SAR>

Table with 19 columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Holster, WiFi Power State, Power Index, Ch., Freq. (MHz), Sample, Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Rows include test data for bands FR1 n7_Ant 5, FR1 n12_Ant 1, FR1 n13_Ant 1, FR1 n14_Ant 1, and FR1 n25_Ant 1.



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns for antenna ID, frequency, modulation, power, distance, side, antenna type, distance, SAR, sample, and SAR values. Includes rows for antennas FR1 n25, FR1 n26, FR1 n30, FR1 n41, and FR1 n41_HPUE.



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns for antenna ID, power, modulation, frequency, location, distance, orientation, polarization, SAR value, sample ID, and various SAR metrics. Includes rows for antennas FR1 n41_Ant 2-4, FR1 n48_Ant 8, and FR1 n66_Ant 1.



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns for device ID, frequency, modulation, power, antenna, side, distance, orientation, SAR value, and sample ID. Rows include various configurations for FR1 n71_Ant 1, FR1 n77_Ant 8, and FR1 n77/n78_Ant 8.



FCC SAR TEST REPORT

Report No. : FA3N2802B

FR1 n77/n78_Ant 8	40M	BPSK	1	1	Right Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 8	22.00	22.00	1.000	0.05	1.140	1.140	
FR1 n77/n78_Ant 8	40M	BPSK	1	1	Right Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 8	22.00	22.00	1.000	-0.12	1.110	1.110	
FR1 n77/n78_Ant 8	40M	BPSK	1	1	Right Side	0mm	Holster	off	DSI 1	638000	3570	Sample 8	21.77	22.00	1.054	-0.01	0.999	1.053	
FR1 n77/n78_Ant 8	40M	BPSK	1	1	Right Side	0mm	Holster	off	DSI 1	645332	3679.98	Sample 8	21.98	22.00	1.005	-0.08	1.100	1.105	
FR1 n77/n78_Ant 8	40M	BPSK	1	1	Right Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 9	22.00	22.00	1.000	0.13	0.730	0.730	
FR1 n77/n78_Ant 8	40M	BPSK	1	1	Right Side	0mm	Holster	off	DSI 1	638000	3570	Sample 9	21.77	22.00	1.054	0.03	0.683	0.720	
FR1 n77/n78_Ant 8	40M	BPSK	1	1	Right Side	0mm	Holster	off	DSI 1	645332	3679.98	Sample 9	21.98	22.00	1.005	-0.01	0.679	0.682	
FR1 n77/n78_Ant 8	40M	BPSK	1	1	Right Side	0mm	Holster	On	DSI 1	641666	3624.99	Sample 8	19.00	19.50	1.122	0.05	0.500	0.561	
FR1 n77_Ant 9	100M	BPSK	1	1	Front	0mm	Holster	off	DSI 1	656000	3840	Sample 1	23.46	24.40	1.242	-0.13	0.138	0.171	
FR1 n77_Ant 9	100M	BPSK	135	0	Front	0mm	Holster	off	DSI 1	656000	3840	Sample 1	23.36	24.40	1.271	0.01	0.126	0.160	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 1	23.46	24.40	1.242	0.04	0.768	0.954	
FR1 n77_Ant 9	100M	BPSK	135	0	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 1	23.36	24.40	1.271	-0.01	0.746	0.948	
FR1 n77_Ant 9	100M	BPSK	270	0	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 1	23.30	24.40	1.288	0.11	0.699	0.900	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 2	23.46	24.40	1.242	0.04	0.758	0.941	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 3	23.46	24.40	1.242	-0.13	0.763	0.947	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 4	23.46	24.40	1.242	-0.14	0.757	0.940	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 5	23.46	24.40	1.242	-0.18	0.762	0.946	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 6	23.46	24.40	1.242	0.09	0.756	0.939	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 7	23.46	24.40	1.242	0.18	0.697	0.865	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 8	23.46	24.40	1.242	-0.02	0.889	1.104	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 9	23.46	24.40	1.242	0.02	0.555	0.689	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	On	DSI 1	656000	3840	Sample 8	18.25	19.50	1.334	-0.09	0.286	0.381	
FR1 n77_HPUE_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	656000	3840	Sample 1	26.30	27.00	1.175	0.11	0.902	1.060	
FR1 n77_Ant 9	100M	BPSK	1	1	Front	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	24.13	24.40	1.064	0.06	0.095	0.101	
FR1 n77_Ant 9	100M	BPSK	135	69	Front	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	24.08	24.40	1.076	0.13	0.086	0.093	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	24.13	24.40	1.064	0	0.791	0.842	
FR1 n77_Ant 9	100M	BPSK	135	69	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	24.08	24.40	1.076	0.04	0.741	0.798	
FR1 n77_Ant 9	100M	BPSK	270	0	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	23.54	24.40	1.219	-0.05	0.689	0.840	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 2	24.13	24.40	1.064	0.06	0.768	0.817	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 3	24.13	24.40	1.064	0.09	0.776	0.826	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 4	24.13	24.40	1.064	0.16	0.782	0.832	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 5	24.13	24.40	1.064	0.07	0.772	0.822	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 6	24.13	24.40	1.064	0.05	0.780	0.830	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 7	24.13	24.40	1.064	-0.04	0.760	0.809	
56	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 8	24.13	24.40	1.064	-0.08	1.310	1.394
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 8+Headset	24.13	24.40	1.064	0.02	1.280	1.362	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 9	24.13	24.40	1.064	0.04	0.865	0.920	
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	On	DSI 1	633332	3499.98	Sample 8	18.29	19.50	1.321	-0.01	0.366	0.484	
FR1 n77_HPUE_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 8	25.31	27.00	1.476	0.09	0.850	1.254	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Front	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.69	22.00	1.074	0.07	0.121	0.130	
FR1 n77/n78_Ant 9	40M	BPSK	50	0	Front	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.55	22.00	1.109	0.16	0.100	0.111	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.69	22.00	1.074	-0.03	0.793	0.852	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	638000	3570	Sample 1	21.59	22.00	1.099	0.03	0.700	0.769	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	645332	3679.98	Sample 1	21.58	22.00	1.102	-0.01	0.693	0.763	
FR1 n77/n78_Ant 9	40M	BPSK	50	0	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.55	22.00	1.109	-0.17	0.762	0.845	
FR1 n77/n78_Ant 9	40M	BPSK	50	0	Left Side	0mm	Holster	off	DSI 1	638000	3570	Sample 1	21.45	22.00	1.135	0.18	0.735	0.834	
FR1 n77/n78_Ant 9	40M	BPSK	50	0	Left Side	0mm	Holster	off	DSI 1	645332	3679.98	Sample 1	21.47	22.00	1.130	0.11	0.722	0.816	
FR1 n77/n78_Ant 9	40M	BPSK	100	0	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.54	22.00	1.112	-0.16	0.685	0.762	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 2	21.69	22.00	1.074	-0.17	0.704	0.756	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 3	21.69	22.00	1.074	0.05	0.741	0.796	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 4	21.69	22.00	1.074	-0.04	0.735	0.789	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 5	21.69	22.00	1.074	0.14	0.728	0.782	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 6	21.69	22.00	1.074	0.18	0.739	0.794	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 7	21.69	22.00	1.074	-0.11	0.600	0.644	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	638000	3570	Sample 7	21.59	22.00	1.099	0.08	0.572	0.629	
FR1 n77/n78_Ant 9	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	645332	3679.98	Sample 7	21.58	22.00	1.102	0.11	0.580	0.639	



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns: ID, Frequency, Modulation, Power, Duty Cycle, Side, Distance, Device, Status, SAR1, SAR2, SAR3, SAR4, SAR5, SAR6, SAR7, SAR8, SAR9, SAR10, SAR11, SAR12. Rows include various antenna configurations (FR1 n77/n78_Ant 9, FR1 n77_Ant 4) and their corresponding SAR test results.



FCC SAR TEST REPORT

Report No. : FA3N2802B

FR1 n77_Ant 3	100M	BPSK	1	271	Front	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	20.69	22.00	1.352	-0.09	0.019	0.026
FR1 n77_Ant 3	100M	BPSK	135	69	Front	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	20.63	22.00	1.371	-0.14	0.010	0.014
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	20.69	22.00	1.352	0.07	0.071	0.096
FR1 n77_Ant 3	100M	BPSK	135	69	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 1	20.63	22.00	1.371	-0.15	0.050	0.069
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 2	20.69	22.00	1.352	0.16	0.062	0.084
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 3	20.69	22.00	1.352	0.07	0.060	0.081
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 4	20.69	22.00	1.352	0.18	0.058	0.078
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 5	20.69	22.00	1.352	0.13	0.060	0.081
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 6	20.69	22.00	1.352	0.04	0.067	0.091
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 7	20.69	22.00	1.352	0.15	0.080	0.108
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 8	20.69	22.00	1.352	0.05	0.221	0.299
FR1 n77_Ant 3	100M	BPSK	1	271	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 9	20.69	22.00	1.352	0.11	0.052	0.070
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Front	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.41	22.00	1.146	-0.05	0.045	0.052
FR1 n77/n78_Ant 3	40M	BPSK	50	0	Front	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.27	22.00	1.183	0.04	0.035	0.041
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.41	22.00	1.146	-0.03	0.187	0.214
FR1 n77/n78_Ant 3	40M	BPSK	50	0	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 1	21.27	22.00	1.183	0.19	0.171	0.202
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 2	21.41	22.00	1.146	0.06	0.180	0.206
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 3	21.41	22.00	1.146	0.11	0.185	0.212
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 4	21.41	22.00	1.146	-0.06	0.179	0.205
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 5	21.41	22.00	1.146	-0.1	0.175	0.200
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 6	21.41	22.00	1.146	-0.14	0.174	0.199
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 7	21.41	22.00	1.146	0.11	0.176	0.202
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 8	21.41	22.00	1.146	0.09	0.091	0.104
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	641666	3624.99	Sample 9	21.41	22.00	1.146	0.16	0.190	0.218



<WLAN SAR>

Table with columns: Plot No., Band, Mode, Test Position, Gap (mm), Antenna, Holster, WWAN Power State, Power Index, Ch., Freq. (MHz), Sample, 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). Rows include WLAN2.4GHz and WLAN5GHz configurations.



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns: Frequency, Power, Side, Antenna, Modulation, Power Density, SAR, etc. Includes rows for various test conditions and SAR values.



FCC SAR TEST REPORT

Report No. : FA3N2802B

	WLAN5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 6+7(7)	Holster	Off	Non-DBS	126	5630	Sample 9	18.80	19.00	1.047	85.51	1.169	-0.18	0.759	0.929
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	DBS	138	5690	Sample 8	17.50	18.00	1.122	85.71	1.167	-0.01	0.824	1.079
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On	Non-DBS	138	5690	Sample 8	16.60	17.50	1.230	85.71	1.167	0.15	0.652	0.936
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On	DBS	138	5690	Sample 8	14.40	14.50	1.023	85.71	1.167	0	0.414	0.494
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 1	18.30	18.50	1.047	85.71	1.167	0.02	0.068	0.083
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 1	18.30	18.50	1.047	85.71	1.167	-0.17	0.645	0.788
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 1	18.30	18.50	1.047	85.71	1.167	-0.12	0.477	0.583
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 2	18.30	18.50	1.047	85.71	1.167	-0.01	0.616	0.753
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 3	18.30	18.50	1.047	85.71	1.167	-0.03	0.607	0.742
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 4	18.30	18.50	1.047	85.71	1.167	-0.08	0.628	0.767
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 5	18.30	18.50	1.047	85.71	1.167	-0.03	0.633	0.774
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 6	18.30	18.50	1.047	85.71	1.167	0.12	0.637	0.778
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 7	18.30	18.50	1.047	85.71	1.167	-0.09	0.464	0.567
61	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 8	18.30	18.50	1.047	85.71	1.167	-0.11	0.963	1.177
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 6+7(7)	Holster	Off	Non-DBS	151	5755	Sample 8	18.30	18.50	1.047	85.51	1.169	0.03	0.900	1.102
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	155	5775	Sample 9	18.30	18.50	1.047	85.71	1.167	-0.05	0.554	0.677
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On	Non-DBS	155	5775	Sample 8	15.70	17.00	1.349	85.71	1.167	-0.08	0.573	0.902
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On	DBS	155	5775	Sample 8	14.40	14.50	1.023	85.71	1.167	0.02	0.464	0.554

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Holster	WWAN Power State	Power Index	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Measured APD (W/m^2)	Reported APD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Front	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 1	15.10	15.50	1.096	86.05	1.162	-0.17	0.064	0.082	0.243	0.310
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 1	15.10	15.50	1.096	86.05	1.162	0.14	0.317	0.404	1.4	1.784
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	15	6025	Sample 1	13.90	15.50	1.445	86.05	1.162	0.09	0.199	0.334	1.01	1.696
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(7)	Holster	On/Off	Non-DBS/DBS	111	6505	Sample 1	12.50	13.00	1.122	86.05	1.162	0.05	0.105	0.137	0.355	0.463
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(7)	Holster	On/Off	Non-DBS/DBS	143	6665	Sample 1	14.40	15.00	1.148	86.05	1.162	0.03	0.228	0.304	0.761	1.015
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(7)	Holster	On/Off	Non-DBS/DBS	207	6985	Sample 1	13.00	13.50	1.122	86.05	1.162	0.01	0.143	0.186	0.662	0.863
	WLAN6GHz	802.11ax-HE160 MCS0	Right Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 1	15.10	15.50	1.096	86.05	1.162	-0.17	0.233	0.297	0.989	1.260
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 2	15.10	15.50	1.096	86.05	1.162	0.15	0.300	0.382	1.46	1.860
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 3	15.10	15.50	1.096	86.05	1.162	-0.03	0.310	0.395	1.55	1.975
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 4	15.10	15.50	1.096	86.05	1.162	0.13	0.305	0.389	1.49	1.898
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 5	15.10	15.50	1.096	86.05	1.162	0.07	0.312	0.398	0.158	0.201
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 6	15.10	15.50	1.096	86.05	1.162	-0.04	0.313	0.399	1.53	1.949
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 7	15.10	15.50	1.096	86.05	1.162	-0.1	0.284	0.362	1.59	2.026
62	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 8	15.10	15.50	1.096	86.05	1.162	-0.14	0.329	0.419	1.61	2.051
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	On/Off	Non-DBS/DBS	47	6185	Sample 9	15.10	15.50	1.096	86.05	1.162	0.14	0.279	0.355	1.58	2.013



<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Holster	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	3Mbps	Front	0mm	Ant 6	Holster	78	2480	Sample 1	3.20	3.50	1.072	77.03	1.081	0.09	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 6	Holster	78	2480	Sample 1	3.20	3.50	1.072	77.03	1.081	0.15	< 0.001	< 0.001
63	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 1	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 2	3.20	3.50	1.072	77.03	1.081	0.13	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 3	3.20	3.50	1.072	77.03	1.081	0.15	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 4	3.20	3.50	1.072	77.03	1.081	-0.1	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 5	3.20	3.50	1.072	77.03	1.081	-0.15	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 6	3.20	3.50	1.072	77.03	1.081	-0.1	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 7	3.20	3.50	1.072	77.03	1.081	-0.16	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 8	3.20	3.50	1.072	77.03	1.081	-0.17	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 6	Holster	78	2480	Sample 9	3.20	3.50	1.072	77.03	1.081	0.01	< 0.001	< 0.001
	Bluetooth	3Mbps	Front	0mm	Ant 7	Holster	0	2402	Sample 1	2.59	3.00	1.099	77.01	1.082	-0.18	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 1	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Right Side	0mm	Ant 7	Holster	0	2402	Sample 1	2.59	3.00	1.099	77.01	1.082	-0.15	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 2	2.59	3.00	1.099	77.01	1.082	0.17	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 3	2.59	3.00	1.099	77.01	1.082	-0.14	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 4	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 5	2.59	3.00	1.099	77.01	1.082	0.02	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 6	2.59	3.00	1.099	77.01	1.082	-0.13	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 7	2.59	3.00	1.099	77.01	1.082	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 8	2.59	3.00	1.099	77.01	1.082	-0.05	< 0.001	< 0.001
	Bluetooth	3Mbps	Left Side	0mm	Ant 7	Holster	0	2402	Sample 9	2.59	3.00	1.099	77.01	1.082	0.02	< 0.001	< 0.001



13.3 Extremity SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	WiFi Power State	Power Index	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 1	24.48	25.00	1.127	-0.03	0.416	0.469
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 2	24.48	25.00	1.127	0.15	0.400	0.451
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 3	24.48	25.00	1.127	0.06	0.402	0.453
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 4	24.48	25.00	1.127	-0.08	0.410	0.462
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 5	24.48	25.00	1.127	-0.05	0.405	0.457
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 6	24.48	25.00	1.127	0.04	0.408	0.460
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 7	24.48	25.00	1.127	0.14	0.288	0.325
	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 8	24.48	25.00	1.127	-0.14	0.330	0.372
64	WCDMA II_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	9538	1907.6	Sample 9	24.48	25.00	1.127	0	0.449	0.506
65	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 1	24.26	25.00	1.186	0.03	0.540	0.640
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 2	24.26	25.00	1.186	-0.17	0.523	0.620
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 3	24.26	25.00	1.186	-0.01	0.538	0.638
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 4	24.26	25.00	1.186	0.08	0.522	0.619
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 5	24.26	25.00	1.186	-0.16	0.519	0.615
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 6	24.26	25.00	1.186	0.17	0.535	0.634
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 7	24.26	25.00	1.186	-0.08	0.302	0.358
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 8	24.26	25.00	1.186	0.04	0.436	0.517
	WCDMA IV_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	1513	1752.6	Sample 9	24.26	25.00	1.186	0.05	0.514	0.609
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 1	24.89	25.00	1.026	-0.18	0.259	0.266
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 2	24.89	25.00	1.026	0	0.235	0.241
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 3	24.89	25.00	1.026	-0.1	0.222	0.228
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 4	24.89	25.00	1.026	0.07	0.256	0.263
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 5	24.89	25.00	1.026	-0.02	0.248	0.254
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 6	24.89	25.00	1.026	0.1	0.244	0.250
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 7	24.89	25.00	1.026	-0.16	0.171	0.175
	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 8	24.89	25.00	1.026	-0.02	0.217	0.223
66	WCDMA V_Ant 1	RMC 12.2Kbps	Back	0mm	off	DSI 1	4182	836.4	Sample 9	24.89	25.00	1.026	-0.03	0.304	0.312



<LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	WiFi Power State	Power Index	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 1	23.47	25.00	1.422			-0.02	0.891	1.267
	LTE Band 7_Ant 5	20M	QPSK	50	0	Back	0mm	off	DSI 1	21100	2535	Sample 1	22.62	24.00	1.374			0.18	0.722	0.992
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 2	23.47	25.00	1.422			-0.05	0.888	1.263
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 3	23.47	25.00	1.422			-0.01	0.878	1.249
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 4	23.47	25.00	1.422			0.08	0.890	1.266
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 5	23.47	25.00	1.422			0.08	0.870	1.237
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 6	23.47	25.00	1.422			-0.16	0.873	1.242
	LTE Band 7C_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	20850+21048	2510	Sample 1	23.33	25.00	1.469			0.08	0.859	1.262
67	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 7	23.47	25.00	1.422			0	1.290	1.835
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	20850	2510	Sample 7	23.37	25.00	1.455			0	1.200	1.747
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21350	2560	Sample 7	23.36	25.00	1.459			0	1.230	1.794
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 8	23.47	25.00	1.422			0.08	0.892	1.269
	LTE Band 7_Ant 5	20M	QPSK	1	0	Back	0mm	off	DSI 1	21100	2535	Sample 9	23.47	25.00	1.422			-0.05	0.767	1.091
68	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 1	23.99	25.00	1.262			-0.02	0.410	0.517
	LTE Band 12_Ant 1	10M	QPSK	25	0	Back	0mm	off	DSI 1	23095	707.5	Sample 1	22.95	24.00	1.274			0.01	0.333	0.424
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 2	23.99	25.00	1.262			-0.1	0.393	0.496
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 3	23.99	25.00	1.262			0.06	0.395	0.498
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 4	23.99	25.00	1.262			0.11	0.400	0.505
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 5	23.99	25.00	1.262			-0.07	0.408	0.515
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 6	23.99	25.00	1.262			-0.1	0.389	0.491
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 7	23.99	25.00	1.262			0.19	0.294	0.371
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 8	23.99	25.00	1.262			0.14	0.408	0.515
	LTE Band 12_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23095	707.5	Sample 9	23.99	25.00	1.262			-0.05	0.367	0.463
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 1	24.23	25.00	1.194			-0.12	0.203	0.242
	LTE Band 13_Ant 1	10M	QPSK	25	0	Back	0mm	off	DSI 1	23230	782	Sample 1	23.30	24.00	1.175			-0.17	0.163	0.192
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 2	24.23	25.00	1.194			0.17	0.188	0.224
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 3	24.23	25.00	1.194			0.18	0.193	0.230
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 4	24.23	25.00	1.194			-0.08	0.189	0.226
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 5	24.23	25.00	1.194			-0.01	0.200	0.239
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 6	24.23	25.00	1.194			0	0.193	0.230
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 7	24.23	25.00	1.194			0.15	0.215	0.257
69	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 8	24.23	25.00	1.194			-0.07	0.291	0.347
	LTE Band 13_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23230	782	Sample 9	24.23	25.00	1.194			0.12	0.207	0.247
70	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 1	23.55	25.00	1.396			-0.01	0.422	0.589
	LTE Band 14_Ant 1	10M	QPSK	25	0	Back	0mm	off	DSI 1	23330	793	Sample 1	23.18	24.00	1.208			-0.12	0.383	0.463
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 2	23.55	25.00	1.396			-0.02	0.415	0.579
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 3	23.55	25.00	1.396			-0.15	0.411	0.574
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 4	23.55	25.00	1.396			0.1	0.419	0.585
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 5	23.55	25.00	1.396			0.17	0.413	0.577
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 6	23.55	25.00	1.396			0.15	0.410	0.573
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 7	23.55	25.00	1.396			-0.01	0.339	0.473
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 8	23.55	25.00	1.396			0.14	0.408	0.570
	LTE Band 14_Ant 1	10M	QPSK	1	0	Back	0mm	off	DSI 1	23330	793	Sample 9	23.55	25.00	1.396			-0.04	0.355	0.496
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 1	23.90	25.00	1.288			0.13	0.284	0.366
	LTE Band 25_Ant 1	20M	QPSK	50	0	Back	0mm	off	DSI 1	26590	1905	Sample 1	23.10	24.00	1.230			0.1	0.245	0.301
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 2	23.90	25.00	1.288			0.12	0.269	0.347
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 3	23.90	25.00	1.288			0.09	0.282	0.363
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 4	23.90	25.00	1.288			0.08	0.259	0.334
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 5	23.90	25.00	1.288			0.02	0.266	0.343
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 6	23.90	25.00	1.288			-0.08	0.280	0.361
	LTE Band 2C_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	19100+18902	1900	Sample 1	23.77	25.00	1.327			0.18	0.252	0.335
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 7	23.90	25.00	1.288			-0.04	0.295	0.380
71	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 8	23.90	25.00	1.288			0.01	0.331	0.426
	LTE Band 25_Ant 1	20M	QPSK	1	0	Back	0mm	off	DSI 1	26590	1905	Sample 9	23.90	25.00	1.288			0.05	0.322	0.415
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	0mm	off	DSI 1	26865	831.5	Sample 1	24.01	24.50	1.119			-0.17	0.338	0.378
	LTE Band 26_Ant 1	15M	QPSK	36	0	Back	0mm	off	DSI 1	26865	831.5	Sample 1	22.99	23.50	1.125			-0.13	0.271	0.305
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	0mm	off	DSI 1	26865	831.5	Sample 2	24.01	24.50	1.119			-0.01	0.318	0.356
	LTE Band 26_Ant 1	15M	QPSK	1	0	Back	0mm	off	DSI 1	26865	831.5	Sample 3	24.01	24.50	1.119			-0.09	0.333	0.373



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns for LTE Band, Antenna, Power, Modulation, and SAR values. Includes rows for bands 26, 30, 41, 48, and 71 across various antenna configurations.



<5G NR SAR>

Table with columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), WiFi Power State, Power Index, Ch., Freq. (MHz), Sample, Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Power Drift (dB), Measured 10g SAR (W/kg), Reported 10g SAR (W/kg). Rows include test data for Plot No. 78, 79, 80, and 81.



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns for antenna ID, frequency, modulation, power, distance, and SAR values. Includes rows 83 and 84 with highlighted results.



FCC SAR TEST REPORT

Report No. : FA3N2802B

	FR1 n41_Ant 4	100M	BPSK	1	271	Back	0mm	off	DSI 1	518598	2592.99	Sample 5	21.00	22.00	1.259	0.03	0.046	0.058
	FR1 n41_Ant 4	100M	BPSK	1	271	Back	0mm	off	DSI 1	518598	2592.99	Sample 6	21.00	22.00	1.259	-0.06	0.058	0.073
	FR1 n41_Ant 4	100M	BPSK	1	271	Back	0mm	off	DSI 1	518598	2592.99	Sample 7	21.00	22.00	1.259	0.12	0.031	0.039
	FR1 n41_Ant 4	100M	BPSK	1	271	Back	0mm	off	DSI 1	518598	2592.99	Sample 8	21.00	22.00	1.259	0.06	0.032	0.040
	FR1 n41_Ant 4	100M	BPSK	1	271	Back	0mm	off	DSI 1	518598	2592.99	Sample 9	21.00	22.00	1.259	0.08	0.046	0.058
86	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 1	21.26	21.50	1.057	0.01	0.312	0.330
	FR1 n48_Ant 8	40M	BPSK	50	0	Back	0mm	off	DSI 1	645332	3679.98	Sample 1	21.06	21.50	1.107	0.14	0.289	0.320
	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 2	21.26	21.50	1.057	0	0.293	0.310
	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 3	21.26	21.50	1.057	-0.02	0.299	0.316
	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 4	21.26	21.50	1.057	-0.11	0.292	0.309
	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 5	21.26	21.50	1.057	0.17	0.291	0.308
	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 6	21.26	21.50	1.057	0.14	0.305	0.322
	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 7	21.26	21.50	1.057	0.15	0.151	0.160
	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 8	21.26	21.50	1.057	0.03	0.296	0.313
	FR1 n48_Ant 8	40M	BPSK	1	1	Back	0mm	off	DSI 1	645332	3679.98	Sample 9	21.26	21.50	1.057	0.07	0.217	0.229
87	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 1	23.61	25.00	1.377	-0.07	0.465	0.640
	FR1 n66_Ant 1	40M	BPSK	108	54	Back	0mm	off	DSI 1	349000	1745	Sample 1	23.56	25.00	1.393	0.15	0.445	0.620
	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 2	23.61	25.00	1.377	-0.11	0.450	0.620
	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 3	23.61	25.00	1.377	-0.12	0.456	0.628
	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 4	23.61	25.00	1.377	0.01	0.439	0.605
	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 5	23.61	25.00	1.377	0.13	0.433	0.596
	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 6	23.61	25.00	1.377	-0.15	0.452	0.622
	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 7	23.61	25.00	1.377	0.04	0.392	0.540
	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 8	23.61	25.00	1.377	-0.1	0.424	0.584
	FR1 n66_Ant 1	40M	BPSK	1	1	Back	0mm	off	DSI 1	349000	1745	Sample 9	23.61	25.00	1.377	0.08	0.351	0.483
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 1	23.51	25.00	1.409	0.13	0.313	0.441
	FR1 n71_Ant 1	20M	BPSK	50	28	Back	0mm	off	DSI 1	136100	680.5	Sample 1	23.46	25.00	1.426	-0.1	0.276	0.393
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 2	23.51	25.00	1.409	-0.03	0.285	0.402
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 3	23.51	25.00	1.409	-0.12	0.289	0.407
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 4	23.51	25.00	1.409	-0.07	0.300	0.423
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 5	23.51	25.00	1.409	-0.19	0.303	0.427
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 6	23.51	25.00	1.409	0.13	0.283	0.399
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 7	23.51	25.00	1.409	0.16	0.282	0.397
88	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 8	23.51	25.00	1.409	-0.06	0.365	0.514
	FR1 n71_Ant 1	20M	BPSK	1	1	Back	0mm	off	DSI 1	136100	680.5	Sample 9	23.51	25.00	1.409	0.03	0.222	0.313
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 1	21.79	22.00	1.050	0.05	0.880	0.924
	FR1 n77_Ant 8	100M	BPSK	135	138	Back	0mm	off	DSI 1	656000	3840	Sample 1	21.78	22.00	1.052	-0.02	0.869	0.914
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 2	21.79	22.00	1.050	-0.04	0.873	0.916
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 3	21.79	22.00	1.050	-0.06	0.870	0.913
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 4	21.79	22.00	1.050	-0.19	0.871	0.914
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 5	21.79	22.00	1.050	0.08	0.868	0.911
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 6	21.79	22.00	1.050	-0.1	0.876	0.919
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 7	21.79	22.00	1.050	-0.02	0.666	0.699
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 8	21.79	22.00	1.050	-0.07	0.854	0.896
	FR1 n77_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 9	21.79	22.00	1.050	-0.18	0.761	0.799
	FR1 n77_HPUE_Ant 8	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 1	24.72	25.00	1.067	0.11	0.820	0.875
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 1	21.53	22.00	1.114	0.09	0.471	0.525
	FR1 n77_Ant 8	100M	BPSK	135	138	Back	0mm	off	DSI 1	633332	3499.98	Sample 1	21.48	22.00	1.127	0.09	0.456	0.514
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 2	21.53	22.00	1.114	0.15	0.465	0.518
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 3	21.53	22.00	1.114	0.18	0.462	0.515
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 4	21.53	22.00	1.114	0.17	0.458	0.510
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 5	21.53	22.00	1.114	0.05	0.463	0.516
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 6	21.53	22.00	1.114	-0.08	0.468	0.521
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 7	21.53	22.00	1.114	0.04	0.263	0.293
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 8	21.53	22.00	1.114	-0.15	0.288	0.321
	FR1 n77_Ant 8	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 9	21.53	22.00	1.114	0.03	0.285	0.318



FCC SAR TEST REPORT

Report No. : FA3N2802B

Table with columns: Antenna ID, Power, Modulation, Frequency, Duty Cycle, Polarization, Distance, Status, DSI, E1, E2, Sample, T1, T2, P1, P2, P3, P4, P5. Includes rows for FR1 n77_HPUE_Ant 8, FR1 n77/n78_Ant 8, FR1 n77_Ant 9, and FR1 n77_HPUE_Ant 9.



FCC SAR TEST REPORT

Report No. : FA3N2802B

FR1 n77_Ant 4	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 3	20.97	22.00	1.268	-0.06	0.056	0.071
FR1 n77_Ant 4	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 4	20.97	22.00	1.268	-0.18	0.053	0.067
FR1 n77_Ant 4	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 5	20.97	22.00	1.268	-0.02	0.055	0.070
FR1 n77_Ant 4	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 6	20.97	22.00	1.268	-0.09	0.047	0.060
FR1 n77_Ant 4	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 7	20.97	22.00	1.268	0.19	0.049	0.062
FR1 n77_Ant 4	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 8	20.97	22.00	1.268	-0.18	0.061	0.077
FR1 n77_Ant 4	100M	BPSK	1	1	Back	0mm	off	DSI 1	633332	3499.98	Sample 9	20.97	22.00	1.268	-0.13	0.048	0.061
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 1	21.45	22.00	1.135	0.01	0.074	0.084
FR1 n77/n78_Ant 4	40M	BPSK	50	0	Back	0mm	off	DSI 1	641666	3624.99	Sample 1	21.33	22.00	1.167	0.07	0.058	0.068
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 2	21.45	22.00	1.135	0.15	0.069	0.078
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 3	21.45	22.00	1.135	0.14	0.063	0.072
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 4	21.45	22.00	1.135	0.18	0.055	0.062
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 5	21.45	22.00	1.135	0.13	0.059	0.067
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 6	21.45	22.00	1.135	0.02	0.065	0.074
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 7	21.45	22.00	1.135	0.04	0.081	0.092
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 8	21.45	22.00	1.135	0	0.059	0.067
FR1 n77/n78_Ant 4	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 9	21.45	22.00	1.135	-0.09	0.078	0.089
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 1	21.24	22.00	1.191	0.17	0.057	0.068
FR1 n77_Ant 3	100M	BPSK	135	69	Back	0mm	off	DSI 1	656000	3840	Sample 1	21.16	22.00	1.213	0.16	0.039	0.047
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 2	21.24	22.00	1.191	0.04	0.045	0.054
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 3	21.24	22.00	1.191	-0.15	0.039	0.046
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 4	21.24	22.00	1.191	0.04	0.048	0.057
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 5	21.24	22.00	1.191	0.01	0.052	0.062
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 6	21.24	22.00	1.191	0.08	0.041	0.049
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 7	21.24	22.00	1.191	-0.1	0.077	0.092
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 8	21.24	22.00	1.191	-0.02	0.116	0.138
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	656000	3840	Sample 9	21.24	22.00	1.191	0.08	0.073	0.087
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 1	20.69	22.00	1.352	0.19	0.065	0.088
FR1 n77_Ant 3	100M	BPSK	135	69	Back	0mm	off	DSI 1	633332	3499.98	Sample 1	20.63	22.00	1.371	0.19	0.046	0.063
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 2	20.69	22.00	1.352	0.01	0.055	0.074
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 3	20.69	22.00	1.352	0.04	0.051	0.069
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 4	20.69	22.00	1.352	-0.13	0.063	0.085
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 5	20.69	22.00	1.352	0.06	0.048	0.065
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 6	20.69	22.00	1.352	0.05	0.054	0.073
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 7	20.69	22.00	1.352	0.05	0.062	0.084
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 8	20.69	22.00	1.352	-0.03	0.081	0.110
FR1 n77_Ant 3	100M	BPSK	1	271	Back	0mm	off	DSI 1	633332	3499.98	Sample 9	20.69	22.00	1.352	0.09	0.063	0.085
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 1	21.41	22.00	1.146	0.03	0.062	0.071
FR1 n77/n78_Ant 3	40M	BPSK	50	0	Back	0mm	off	DSI 1	641666	3624.99	Sample 1	21.27	22.00	1.183	0	0.049	0.058
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 2	21.41	22.00	1.146	-0.09	0.050	0.057
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 3	21.41	22.00	1.146	0.09	0.058	0.066
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 4	21.41	22.00	1.146	0.08	0.057	0.065
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 5	21.41	22.00	1.146	0.05	0.052	0.060
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 6	21.41	22.00	1.146	0.12	0.056	0.064
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 7	21.41	22.00	1.146	0.11	0.114	0.131
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 8	21.41	22.00	1.146	0.15	0.079	0.090
FR1 n77/n78_Ant 3	40M	BPSK	1	1	Back	0mm	off	DSI 1	641666	3624.99	Sample 9	21.41	22.00	1.146	-0.04	0.077	0.088



<WLAN SAR>

Table with columns: Plot No., Band, Mode, Test Position, Gap (mm), Antenna, WWAN Power State, Power Index, Ch., Freq. (MHz), Sample, 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). Rows include WLAN2.4GHz and WLAN5GHz tests for various samples and antennas.

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	WWAN/WiFi Power State	Power Index	Ch.	Freq. (MHz)	Sample	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)	Measured APD (W/m ²)	Reported APD (W/m ²)
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(6)	On/Off	Non-DBS/DBS	47	6185	Sample 1	15.10	15.50	1.096	86.05	1.162	-0.04	0.138	0.176	3.11	3.962
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(6)	On/Off	Non-DBS/DBS	15	6025	Sample 1	13.90	15.50	1.445	86.05	1.162	0.01	0.115	0.193	2.58	4.333
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	111	6505	Sample 1	12.50	13.00	1.122	86.05	1.162	-0.16	0.078	0.102	1.53	1.995
94	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 1	14.40	15.00	1.148	86.05	1.162	0.03	0.172	0.229	3.83	5.110
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	207	6985	Sample 1	13.00	13.50	1.122	86.05	1.162	0.18	0.128	0.167	2.87	3.742
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 2	14.40	15.00	1.148	86.05	1.162	-0.11	0.150	0.200	3.36	4.483
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 3	14.40	15.00	1.148	86.05	1.162	-0.09	0.162	0.216	3.63	4.843
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 4	14.40	15.00	1.148	86.05	1.162	0.04	0.158	0.211	3.54	4.723
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 5	14.40	15.00	1.148	86.05	1.162	0	0.169	0.225	3.79	5.056
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 6	14.40	15.00	1.148	86.05	1.162	-0.17	0.166	0.221	3.72	4.963
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 7	14.40	15.00	1.148	86.05	1.162	-0.03	0.148	0.197	3.79	5.056
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 8	14.40	15.00	1.148	86.05	1.162	0.04	0.141	0.188	3.11	4.149
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 6+7(7)	On/Off	Non-DBS/DBS	143	6665	Sample 9	14.40	15.00	1.148	86.05	1.162	0.1	0.119	0.159	2.43	3.242

<Bluetooth SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Sample	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)
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 1	3.20	3.50	1.072	77.03	1.081	0	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 2	3.20	3.50	1.072	77.03	1.081	0.07	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 3	3.20	3.50	1.072	77.03	1.081	0.17	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 4	3.20	3.50	1.072	77.03	1.081	-0.06	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 5	3.20	3.50	1.072	77.03	1.081	0.14	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 6	3.20	3.50	1.072	77.03	1.081	-0.02	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 7	3.20	3.50	1.072	77.03	1.081	-0.12	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 8	3.20	3.50	1.072	77.03	1.081	0.14	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 6	78	2480	Sample 9	3.20	3.50	1.072	77.03	1.081	0.02	< 0.001	< 0.001
95	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 1	2.59	3.00	1.099	77.01	1.082	0.05	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 2	2.59	3.00	1.099	77.01	1.082	0.06	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 3	2.59	3.00	1.099	77.01	1.082	0.01	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 4	2.59	3.00	1.099	77.01	1.082	-0.18	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 5	2.59	3.00	1.099	77.01	1.082	0.04	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 6	2.59	3.00	1.099	77.01	1.082	-0.08	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 7	2.59	3.00	1.099	77.01	1.082	0.13	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 8	2.59	3.00	1.099	77.01	1.082	-0.19	< 0.001	< 0.001
	Bluetooth	3Mbps	Back	0mm	Ant 7	0	2402	Sample 9	2.59	3.00	1.099	77.01	1.082	0.01	< 0.001	< 0.001

<NFC SAR>

Plot No.	Band	Test Position	Gap (mm)	Freq. (MHz)	Sample	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)
96	NFC	Back	0mm	13.56	Sample 1	1.000	0	< 0.001
	NFC	Back	0mm	13.56	Sample 2	1.000	0	< 0.001
	NFC	Back	0mm	13.56	Sample 3	1.000	0	< 0.001
	NFC	Back	0mm	13.56	Sample 4	1.000	0	< 0.001
	NFC	Back	0mm	13.56	Sample 5	1.000	0	< 0.001
	NFC	Back	0mm	13.56	Sample 6	1.000	0	< 0.001
	NFC	Back	0mm	13.56	Sample 7	1.000	0	< 0.001
	NFC	Back	0mm	13.56	Sample 8	1.000	0	< 0.001
	NFC	Back	0mm	13.56	Sample 9	1.000	0	< 0.001



13.4 6GHz PD Test Result

Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Grid Step (λ)	iPDn	iPD ratio (≥ -1)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m ²)	Total psPD (W/m ²)
WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	15	6025	0.0625	4.82	-0.26222923	1.5535	0.15	2.82	2.86
WLAN6GHz	802.11ax-HE160 MCS0	Back	10mm	Ant 6+7(6)	15	6025	0.25	5.12		1.5535	0.01	2.36	2.4
WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	207	6985	0.0625	6.81	0.734792672	1.5535	-0.14	3.03	3.11
WLAN6GHz	802.11ax-HE160 MCS0	Back	8.59mm	Ant 6+7(6)	207	6985	0.25	5.75		1.5535	0.03	1.82	1.98

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Holster	Sample	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Grid Step (λ)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m ²)	Scaled Normal psPD (W/m ²)	Total psPD (W/m ²)	Scaled Total psPD (W/m ²)
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 6+7(6)	Holster	sample 1	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	0.1	0.711	1.41	0.792	1.57
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 1	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	-0.02	1.62	3.21	1.63	3.23
	WLAN6GHz	802.11ax-HE160 MCS0	Right Side	2mm	Ant 6+7(6)	Holster	sample 1	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	-0.05	1.18	2.34	1.39	2.75
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 1	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	0.05	0.736	1.92	0.757	1.98
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(7)	Holster	sample 1	111	6505	12.50	13.00	1.122	86.05	1.162	0.0625	1.5535	0.02	0.578	1.17	0.583	1.18
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(7)	Holster	sample 1	143	6665	14.40	15.00	1.148	86.05	1.162	0.0625	1.5535	0.11	0.957	1.98	0.979	2.03
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(7)	Holster	sample 1	207	6985	13.00	13.50	1.122	86.05	1.162	0.0625	1.5535	-0.02	0.701	1.42	0.713	1.44
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 2	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	-0.08	1.52	3.01	1.55	3.07
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 3	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	-0.02	1.45	2.87	1.49	2.95
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 4	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	-0.06	1.35	2.67	1.39	2.75
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 5	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	0.16	1.46	2.89	1.48	2.93
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 6	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	0.08	1.49	2.95	1.52	3.01
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 8	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	-0.01	1.14	2.26	1.33	2.63
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 9	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	0.11	1.02	2.02	1.26	2.49
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 6+7(6)	Holster	sample 7	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	0.07	1.27	2.51	1.45	2.87
97	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 1	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	0.15	2.82	7.36	2.86	7.46
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 1	47	6185	15.10	15.50	1.096	86.05	1.162	0.0625	1.5535	0.04	3.44	6.81	3.54	7.01
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(7)	-	sample 1	111	6505	12.50	13.00	1.122	86.05	1.162	0.0625	1.5535	-0.17	2.43	4.92	2.51	5.08
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(7)	-	sample 1	143	6665	14.40	15.00	1.148	86.05	1.162	0.0625	1.5535	0.06	3.45	7.15	3.6	7.46
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(7)	-	sample 1	207	6985	13.00	13.50	1.122	86.05	1.162	0.0625	1.5535	-0.14	3.03	6.14	3.11	6.30
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 2	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	-0.18	2.7	7.05	2.75	7.18
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 3	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	-0.07	2.73	7.12	2.8	7.31
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 4	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	-0.02	2.71	7.07	2.76	7.20
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 5	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	0.14	2.8	7.31	2.83	7.38
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 6	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	-0.15	2.75	7.18	2.79	7.28
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 7	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	-0.06	2.57	6.71	2.64	6.89
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 8	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	-0.1	2.29	5.98	2.43	6.34
	WLAN6GHz	802.11ax-HE160 MCS0	Back	2mm	Ant 6+7(6)	-	sample 9	15	6025	13.90	15.50	1.445	86.05	1.162	0.0625	1.5535	-0.13	2.36	6.16	2.52	6.58



13.5 Supplemental SAR Results

General Note:

- Guidance is here provided in regard to RF devices that use sensors to detect a "on-body" use conditions, in order to control the RF conducted power to maintain RF exposure compliance. For these cases, it is also necessary to address "off-body, but close" use condition, such as the device on a stationary surface (e.g., a table), thus with the sensors not triggered and therefore operating at maximum power, but close enough to a person's body to pose RF exposure compliance concerns.
- Accordingly, it is possible to consider that, if the particular device under test (DUT) is shown to be RF-exposure-compliant at 25 mm without any power reduction, then any off-body use will also lead to an exposure that, on average, is within the compliance threshold. This argument is based on the fact that, for this particular DUT under consideration, operations at distances closer than 25 mm will likely lead to contact with the DUT, even temporary or accidental, thus triggering the sensor-based power reduction feature.

Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
FR1 n77_Ant 8	100M	BPSK	1	271	Front	25mm	DSI 0	656000	3840	Sample 1	24.56	25.00	1.107	0.05	0.292	0.323
FR1 n77_Ant 8	100M	BPSK	1	271	Right Side	25mm	DSI 0	656000	3840	Sample 8	24.56	25.00	1.107	0.05	0.772	0.854
FR1 n77_Ant 9	100M	BPSK	1	1	Front	25mm	DSI 0	656000	3840	Sample 1	24.46	25.00	1.132	0.02	0.161	0.182
FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	25mm	DSI 0	656000	3840	Sample 8	24.46	25.00	1.132	0.05	0.659	0.746

13.6 Repeated SAR Measurement

General Note:

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

No.	Band	Mode	Test Position	Gap (mm)	Antenna	WWAN Power State	Power Index	Ch.	Freq. (MHz)	Sample	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)
1 st	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 6+7(7)	Off	Non-DBS	46	5230	Sample 1	17.60	18.50	1.230	85.51	1.169	0.01	0.967	-	1.391
2 nd	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 6+7(7)	Off	Non-DBS	46	5230	Sample 1	17.60	18.50	1.230	85.51	1.169	0.08	0.945	1.02	1.359
1 st	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(7)	Off	Non-DBS	155	5775	Sample 8	18.30	18.50	1.047	85.71	1.167	0.05	1.100	-	1.344
2 nd	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 6+7(7)	Off	Non-DBS	155	5775	Sample 8	18.30	18.50	1.047	85.71	1.167	-0.17	1.050	1.02	1.283

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Holster	WWAN Power State	Power Index	Ch.	Freq. (MHz)	Sample	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)
1 st	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 6+7(7)	Holster	Off	Non-DBS	60	5300	Sample 1	18.20	19.00	1.202	85.66	1.167	0.05	0.980	-	1.375
2 nd	WLAN5GHz	802.11a 6Mbps	Right Side	0mm	Ant 6+7(7)	Holster	Off	Non-DBS	60	5300	Sample 1	18.20	19.00	1.202	85.66	1.167	-0.11	0.968	1.01	1.358
1 st	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	138	5690	Sample 8	18.60	19.00	1.096	85.71	1.167	-0.04	1.050	-	1.344
2 nd	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 6+7(6)	Holster	Off	Non-DBS	138	5690	Sample 8	18.60	19.00	1.096	85.71	1.167	0.08	1.000	1.01	1.280

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Holster	WiFi Power State	Power Index	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1 st	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 8	24.13	24.40	1.064	-0.08	1.310	-	1.394
2 nd	FR1 n77_Ant 9	100M	BPSK	1	1	Left Side	0mm	Holster	off	DSI 1	633332	3499.98	Sample 8	24.13	24.40	1.064	0.05	1.290	1.02	1.373



13.7 Power Class 2 and Power Class 3 Linearity

General Note:

This device support Power Class 2 and Power Class 3 operations. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE and FR1 configuration and exposure condition combination, according to the highest time averaged power for Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required. Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is <10%

<Hotspot condition>

Ant 5	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 1g SAR (W/kg)	0.483	0.504
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR(W/kg)	0.52	
% deviation from expected linearity		-3.75%
Ant 5	FR1 n41	FR1 n41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23.2	26.2
Reported 1g SAR (W/kg)	0.598	0.547
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	208.93	208.43
Linearity SAR(W/kg)	0.60	
% deviation from expected linearity		-8.31%
Ant 8	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	19.8	22.8
Reported 1g SAR (W/kg)	0.485	0.447
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	95.50	95.27
Linearity SAR(W/kg)	0.48	
% deviation from expected linearity		-7.62%
Ant 9	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	20	23
Reported 1g SAR (W/kg)	0.614	0.553
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	100.00	99.76
Linearity SAR(W/kg)	0.61	
% deviation from expected linearity		-9.72%

<Body-worn condition>

Ant 5	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 1g SAR (W/kg)	0.293	0.298
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR(W/kg)	0.32	
% deviation from expected linearity		-6.19%
Ant 5	FR1 n41	FR1 n41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 1g SAR (W/kg)	0.686	0.543
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	316.23	250.59
Linearity SAR(W/kg)	0.54	
% deviation from expected linearity		-0.11%
Ant 8	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	22	25
Reported 1g SAR (W/kg)	1.343	1.248
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	158.49	158.11
Linearity SAR(W/kg)	1.34	
% deviation from expected linearity		-6.85%
Ant 9	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	24.4	27
Reported 1g SAR (W/kg)	1.394	1.254
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	275.42	250.59
Linearity SAR(W/kg)	1.27	
% deviation from expected linearity		-1.13%

<Extremity condition>

Ant 5	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 10g SAR (W/kg)	0.524	0.557
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	200.17	217.01
Linearity SAR(W/kg)	0.57	
% deviation from expected linearity		-1.95%
Ant 5	FR1 n41	FR1 n41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	25	27
Reported 10g SAR (W/kg)	1.331	1.066
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	316.23	250.59
Linearity SAR(W/kg)	1.05	
% deviation from expected linearity		1.07%
Ant 8	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	22	25
Reported 10g SAR (W/kg)	0.924	0.875
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	158.49	158.11
Linearity SAR(W/kg)	0.92	
% deviation from expected linearity		-5.08%
Ant 9	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	24.4	27
Reported 10g SAR (W/kg)	0.956	0.822
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	275.42	250.59
Linearity SAR(W/kg)	0.87	
% deviation from expected linearity		-5.50%

14. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Hotspot	Body-Worn	Product Specific
Non-DBS				
1.	2.4G/5G/6E WLAN Ant 6 + Bluetooth Ant 7 + NFC	Yes	Yes	Yes
2.	2.4G/5G/6E WLAN Ant 7 + Bluetooth Ant 6 + NFC	Yes	Yes	Yes
3.	5G/6E WLAN Ant 6+7 MIMO + Bluetooth Ant 6/2 + NFC	Yes	Yes	Yes
4.	WWAN + 2.4G/5G/6E WLAN Ant 6 + Bluetooth Ant 7 + NFC	Yes	Yes	Yes
5.	WWAN + 2.4G/5G/6E WLAN Ant 7 + Bluetooth Ant 6 + NFC	Yes	Yes	Yes
6.	WWAN + 5G/6E WLAN Ant 6+7 MIMO + Bluetooth Ant 6/2 + NFC	Yes	Yes	Yes
DBS				
7.	2.4G WLAN Ant 6 + 5G/6E WLAN Ant 6 + NFC	Yes	Yes	Yes
8.	2.4G WLAN Ant 7 + 5G/6E WLAN Ant 7 + NFC	Yes	Yes	Yes
9.	2.4G WLAN MIMO Ant 6+7 + 5G/6E WLAN Ant 6+7 MIMO + NFC	Yes	Yes	Yes
10.	2.4G WLAN Ant 6 + 5G/6E WLAN Ant 6+7 MIMO + NFC	Yes	Yes	Yes
11.	2.4G WLAN Ant 7 + 5G/6E WLAN Ant 6+7 MIMO + NFC	Yes	Yes	Yes
12.	2.4G WLAN Ant 6 + 5G/6E WLAN Ant 6+7 MIMO + Bluetooth Ant 7 + NFC	Yes	Yes	Yes
13.	2.4G WLAN Ant 7 + 5G/6E WLAN Ant 6+7 MIMO + Bluetooth Ant 6 + NFC	Yes	Yes	Yes
14.	2.4G WLAN MIMO Ant 6+7 + 5G/6E WLAN Ant 6 + NFC	Yes	Yes	Yes
15.	2.4G WLAN MIMO Ant 6+7 + 5G/6E WLAN Ant 7 + NFC	Yes	Yes	Yes
16.	WWAN + 2.4G WLAN Ant 6 + 5G/6E WLAN Ant 6 + NFC	Yes	Yes	Yes
17.	WWAN + 2.4G WLAN Ant 7 + 5G/6E WLAN Ant 7 + NFC	Yes	Yes	Yes
18.	WWAN + 2.4G WLAN MIMO Ant 6+7 + 5G/6E WLAN Ant 6+7 MIMO + NFC	Yes	Yes	Yes
19.	WWAN + 2.4G WLAN Ant 6 + 5G/6E WLAN Ant 6+7 MIMO + NFC	Yes	Yes	Yes
20.	WWAN + 2.4G WLAN Ant 7 + 5G/6E WLAN Ant 6+7 MIMO + NFC	Yes	Yes	Yes
21.	WWAN + 2.4G WLAN Ant 6 + 5G/6E WLAN Ant 6+7 MIMO + Bluetooth Ant 7 + NFC	Yes	Yes	Yes
22.	WWAN + 2.4G WLAN Ant 7 + 5G/6E WLAN Ant 6+7 MIMO + Bluetooth Ant 6 + NFC	Yes	Yes	Yes
23.	WWAN + 2.4G WLAN MIMO Ant 6+7 + 5G/6E WLAN Ant 6 + NFC	Yes	Yes	Yes
24.	WWAN + 2.4G WLAN MIMO Ant 6+7 + 5G/6E WLAN Ant 7 + NFC	Yes	Yes	Yes

General Note:

1. The worst case reported SAR for each configuration was used for SAR summation. Therefore, the following summations represent the absolute worst cases for simultaneous transmission.
2. The Scaled SAR summation is calculated based on the same configuration and test position.
3. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.

14.1 Hotspot Exposure Conditions

<WWAN off, non-DBS mode>

Exposure Position	2	3	4	5	6	7	2+7 Summed 1g SAR (W/kg)	3+6 Summed 1g SAR (W/kg)	5+6 Summed 1g SAR (W/kg)	5+7 Summed 1g SAR (W/kg)
	WLAN2.4GHz Ant 6 1g SAR (W/kg)	WLAN2.4GHz Ant 7 1g SAR (W/kg)	WLAN2.4GHz Ant 6+7 1g SAR (W/kg)	WLAN5GHz Ant 6+7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)				
Front at 10mm	0.137	0.124	0.141	0.626	0.001	0.001	0.138	0.125	0.627	0.627
Left Side at 10mm		0.542	0.325	1.391	0.001	0.001	0.001	0.543	1.392	1.392
Right Side at 10mm	0.618		0.448	1.344	0.003	0.001	0.619	0.003	1.347	1.345

<WWAN off, DBS mode>

Exposure Position	2	3	4	5	6	7	2+5+7 Summed 1g SAR (W/kg)	3+5+6 Summed 1g SAR (W/kg)	4+5 Summed 1g SAR (W/kg)
	WLAN2.4GHz Ant 6 1g SAR (W/kg)	WLAN2.4GHz Ant 7 1g SAR (W/kg)	WLAN2.4GHz Ant 6+7 1g SAR (W/kg)	WLAN5GHz Ant 6+7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)			
Front at 10mm	0.137	0.124	0.141	0.626	0.001	0.001	0.764	0.751	0.767
Left Side at 10mm		0.401	0.325	1.105	0.001	0.001	1.106	1.507	1.430
Right Side at 10mm	0.389		0.307	1.179	0.003	0.001	1.569	1.182	1.486

<WWAN on, non-DBS mode>

WWAN Band	Exposure Position	1	2	3	5	6	7	1+2+7 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	WLAN2.4GHz Ant 6 1g SAR (W/kg)	WLAN2.4GHz Ant 7 1g SAR (W/kg)	WLAN5GHz Ant 6+7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)				
Ant 1	Front at 10mm	0.520	0.137	0.124	0.626	0.001	0.001	0.658	0.645	1.147	1.147
	Left Side at 10mm	0.602		0.542	0.920	0.001	0.001	0.603	1.145	1.523	1.523
	Right Side at 10mm		0.618		0.929	0.003	0.001	0.619	0.003	0.932	0.930
	Top Side at 10mm	0.236						0.236	0.236	0.236	0.236
Ant 2	Front at 10mm	0.083	0.137	0.124	0.626	0.001	0.001	0.221	0.208	0.710	0.710
	Left Side at 10mm			0.542	0.920	0.001	0.001	0.001	0.543	0.921	0.921
	Right Side at 10mm	0.317	0.618		0.929	0.003	0.001	0.936	0.320	1.249	1.247
	Top Side at 10mm	0.088						0.088	0.088	0.088	0.088
Ant 3	Front at 10mm	0.127	0.137	0.124	0.626	0.001	0.001	0.265	0.252	0.754	0.754
	Left Side at 10mm	0.395		0.542	0.920	0.001	0.001	0.396	0.938	1.316	1.316
	Right Side at 10mm		0.618		0.929	0.003	0.001	0.619	0.003	0.932	0.930
Ant 4	Front at 10mm	0.124	0.137	0.124	0.626	0.001	0.001	0.262	0.249	0.751	0.751
	Left Side at 10mm			0.542	0.920	0.001	0.001	0.001	0.543	0.921	0.921
	Right Side at 10mm	0.539	0.618		0.929	0.003	0.001	1.158	0.542	1.471	1.469
Ant 5	Front at 10mm	0.348	0.137	0.124	0.626	0.001	0.001	0.486	0.473	0.975	0.975
	Left Side at 10mm	0.598		0.542	0.920	0.001	0.001	0.599	1.141	1.519	1.519
	Right Side at 10mm		0.618		0.929	0.003	0.001	0.619	0.003	0.932	0.930
Ant 8	Front at 10mm	0.139	0.137	0.124	0.626	0.001	0.001	0.277	0.264	0.766	0.766
	Left Side at 10mm			0.542	0.920	0.001	0.001	0.001	0.543	0.921	0.921
	Right Side at 10mm	0.604	0.618		0.929	0.003	0.001	1.223	0.607	1.536	1.534
Ant 9	Front at 10mm	0.108	0.137	0.124	0.626	0.001	0.001	0.246	0.233	0.735	0.735
	Left Side at 10mm	0.614		0.542	0.920	0.001	0.001	0.615	1.157	1.535	1.535
	Right Side at 10mm		0.618		0.929	0.003	0.001	0.619	0.003	0.932	0.930



<WWAN on, DBS mode>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+5+7 Summed 1g SAR (W/kg)	1+3+5+6 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	WLAN2.4GHz Ant 6 1g SAR (W/kg)	WLAN2.4GHz Ant 7 1g SAR (W/kg)	WLAN2.4GHz Ant 6+7 1g SAR (W/kg)	WLAN5GHz Ant 6+7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)			
Ant 1	Front at 10mm	0.520	0.137	0.124	0.141	0.626	0.001	0.001	1.284	1.271	1.287
	Left Side at 10mm	0.602		0.401	0.325	0.509	0.001	0.001	1.112	1.513	1.436
	Right Side at 10mm		0.389		0.307	0.552	0.003	0.001	0.942	0.555	0.859
	Top Side at 10mm	0.236							0.236	0.236	0.236
Ant 2	Front at 10mm	0.083	0.137	0.124	0.141	0.626	0.001	0.001	0.847	0.834	0.850
	Left Side at 10mm			0.401	0.325	0.509	0.001	0.001	0.510	0.911	0.834
	Right Side at 10mm	0.317	0.389		0.307	0.552	0.003	0.001	1.259	0.872	1.176
	Top Side at 10mm	0.088							0.088	0.088	0.088
Ant 3	Front at 10mm	0.127	0.137	0.124	0.141	0.626	0.001	0.001	0.891	0.878	0.894
	Left Side at 10mm	0.395		0.401	0.325	0.509	0.001	0.001	0.905	1.306	1.229
	Right Side at 10mm		0.389		0.307	0.552	0.003	0.001	0.942	0.555	0.859
Ant 4	Front at 10mm	0.124	0.137	0.124	0.141	0.626	0.001	0.001	0.888	0.875	0.891
	Left Side at 10mm			0.401	0.325	0.509	0.001	0.001	0.510	0.911	0.834
	Right Side at 10mm	0.539	0.389		0.307	0.552	0.003	0.001	1.481	1.094	1.398
Ant 5	Front at 10mm	0.348	0.137	0.124	0.141	0.626	0.001	0.001	1.112	1.099	1.115
	Left Side at 10mm	0.598		0.401	0.325	0.509	0.001	0.001	1.108	1.509	1.432
	Right Side at 10mm		0.389		0.307	0.552	0.003	0.001	0.942	0.555	0.859
Ant 8	Front at 10mm	0.139	0.137	0.124	0.141	0.626	0.001	0.001	0.903	0.890	0.906
	Left Side at 10mm			0.401	0.325	0.509	0.001	0.001	0.510	0.911	0.834
	Right Side at 10mm	0.604	0.389		0.307	0.552	0.003	0.001	1.546	1.159	1.463
Ant 9	Front at 10mm	0.108	0.137	0.124	0.141	0.626	0.001	0.001	0.872	0.859	0.875
	Left Side at 10mm	0.614		0.401	0.325	0.509	0.001	0.001	1.124	1.525	1.448
	Right Side at 10mm		0.389		0.307	0.552	0.003	0.001	0.942	0.555	0.859

14.2 Body-Worn Exposure Conditions

<WWAN off, non-DBS mode>

Exposure Position	2	3	4	5	6	7	2+7 Summed 1g SAR (W/kg)	3+6 Summed 1g SAR (W/kg)	5+6 Summed 1g SAR (W/kg)	5+7 Summed 1g SAR (W/kg)
	WLAN2.4GHz Ant 6 1g SAR (W/kg)	WLAN2.4GHz Ant 7 1g SAR (W/kg)	WLAN2.4GHz Ant 6+7 1g SAR (W/kg)	WLAN5/6GHz Ant 6+7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)				
Front at 0mm Holster	0.062	0.096	0.129	0.440	0.001	0.001	0.063	0.097	0.441	0.441
Left Side at 0mm Holster		0.496	0.461	1.344	0.001	0.001	0.001	0.497	1.345	1.345
Right Side at 0mm Holster	0.248		0.233	1.375	0.001	0.001	0.249	0.001	1.376	1.376

<WWAN off, DBS mode>

Exposure Position	2	3	4	5	6	7	2+5+7 Summed 1g SAR (W/kg)	3+5+6 Summed 1g SAR (W/kg)	4+5 Summed 1g SAR (W/kg)
	WLAN2.4GHz Ant 6 1g SAR (W/kg)	WLAN2.4GHz Ant 7 1g SAR (W/kg)	WLAN2.4GHz Ant 6+7 1g SAR (W/kg)	WLAN5/6GHz Ant 6+7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)			
Front at 0mm Holster	0.062	0.096	0.129	0.440	0.001	0.001	0.503	0.537	0.569
Left Side at 0mm Holster		0.496	0.461	1.079	0.001	0.001	1.080	1.576	1.540
Right Side at 0mm Holster	0.248		0.233	1.182	0.001	0.001	1.431	1.183	1.415



<WWAN on, non-DBS mode>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+7 Summed 1g SAR (W/kg)	1+3+6 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	WLAN2.4GHz Ant 6 1g SAR (W/kg)	WLAN2.4GHz Ant 7 1g SAR (W/kg)	WLAN2.4GHz Ant 6+7 1g SAR (W/kg)	WLAN5/6GHz Ant 6+7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)				
Ant 1	Front at 0mm Holster	0.431	0.062	0.096	0.129	0.440	0.001	0.001	0.494	0.528	0.872	0.872
	Left Side at 0mm Holster	0.598		0.496	0.461	0.936	0.001	0.001	0.599	1.095	1.535	1.535
	Right Side at 0mm Holster		0.248		0.233	0.978	0.001	0.001	0.249	0.001	0.979	0.979
Ant 2	Front at 0mm Holster	0.089	0.062	0.096	0.129	0.440	0.001	0.001	0.152	0.186	0.530	0.530
	Left Side at 0mm Holster			0.496	0.461	0.936	0.001	0.001	0.001	0.497	0.937	0.937
	Right Side at 0mm Holster	0.183	0.248		0.233	0.978	0.001	0.001	0.432	0.184	1.162	1.162
Ant 3	Front at 0mm Holster	0.054	0.062	0.096	0.129	0.440	0.001	0.001	0.117	0.151	0.495	0.495
	Left Side at 0mm Holster	0.424		0.496	0.461	0.936	0.001	0.001	0.425	0.921	1.361	1.361
	Right Side at 0mm Holster		0.248		0.233	0.978	0.001	0.001	0.249	0.001	0.979	0.979
Ant 4	Front at 0mm Holster	0.084	0.062	0.096	0.129	0.440	0.001	0.001	0.147	0.181	0.525	0.525
	Left Side at 0mm Holster			0.496	0.461	0.936	0.001	0.001	0.001	0.497	0.937	0.937
	Right Side at 0mm Holster	0.587	0.248		0.233	0.978	0.001	0.001	0.836	0.588	1.566	1.566
Ant 5	Front at 0mm Holster	0.521	0.062	0.096	0.129	0.440	0.001	0.001	0.584	0.618	0.962	0.962
	Left Side at 0mm Holster	0.597		0.496	0.461	0.936	0.001	0.001	0.598	1.094	1.534	1.534
	Right Side at 0mm Holster		0.248		0.233	0.978	0.001	0.001	0.249	0.001	0.979	0.979
Ant 8	Front at 0mm Holster	0.212	0.062	0.096	0.129	0.440	0.001	0.001	0.275	0.309	0.653	0.653
	Left Side at 0mm Holster			0.496	0.461	0.936	0.001	0.001	0.001	0.497	0.937	0.937
	Right Side at 0mm Holster	0.600	0.248		0.233	0.978	0.001	0.001	0.849	0.601	1.579	1.579
Ant 9	Front at 0mm Holster	0.171	0.062	0.096	0.129	0.440	0.001	0.001	0.234	0.268	0.612	0.612
	Left Side at 0mm Holster	0.489		0.496	0.461	0.936	0.001	0.001	0.490	0.986	1.426	1.426
	Right Side at 0mm Holster		0.248				0.001	0.001	0.249	0.001	0.001	0.001



<WWAN on, DBS mode>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	1+2+5+7 Summed 1g SAR (W/kg)	1+3+5+6 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN 1g SAR (W/kg)	WLAN2.4GHz Ant 6 1g SAR (W/kg)	WLAN2.4GHz Ant 7 1g SAR (W/kg)	WLAN2.4GHz Ant 6+7 1g SAR (W/kg)	WLAN5/6GHz Ant 6+7 1g SAR (W/kg)	Bluetooth Ant 6 1g SAR (W/kg)	Bluetooth Ant 7 1g SAR (W/kg)			
Ant 1	Front at 0mm Holster	0.431	0.062	0.096	0.129	0.440	0.001	0.001	0.934	0.968	1.000
	Left Side at 0mm Holster	0.598				0.554	0.001	0.001	1.153	1.153	1.152
	Right Side at 0mm Holster		0.248		0.233	0.614	0.001	0.001	0.863	0.615	0.847
Ant 2	Front at 0mm Holster	0.089	0.062	0.096	0.129	0.440	0.001	0.001	0.592	0.626	0.658
	Left Side at 0mm Holster					0.554	0.001	0.001	0.555	0.555	0.554
	Right Side at 0mm Holster	0.183	0.248		0.233	0.614	0.001	0.001	1.046	0.798	1.030
Ant 3	Front at 0mm Holster	0.054	0.062	0.096	0.129	0.440	0.001	0.001	0.557	0.591	0.623
	Left Side at 0mm Holster	0.424				0.554	0.001	0.001	0.979	0.979	0.978
	Right Side at 0mm Holster		0.248		0.233	0.614	0.001	0.001	0.863	0.615	0.847
Ant 4	Front at 0mm Holster	0.084	0.062	0.096	0.129	0.440	0.001	0.001	0.587	0.621	0.653
	Left Side at 0mm Holster					0.554	0.001	0.001	0.555	0.555	0.554
	Right Side at 0mm Holster	0.587	0.248		0.233	0.614	0.001	0.001	1.450	1.202	1.434
Ant 5	Front at 0mm Holster	0.521	0.062	0.096	0.129	0.440	0.001	0.001	1.024	1.058	1.090
	Left Side at 0mm Holster	0.734				0.554	0.001	0.001	1.289	1.289	1.288
	Right Side at 0mm Holster		0.248		0.233	0.614	0.001	0.001	0.863	0.615	0.847
Ant 8	Front at 0mm Holster	0.212	0.062	0.096	0.129	0.440	0.001	0.001	0.715	0.749	0.781
	Left Side at 0mm Holster					0.554	0.001	0.001	0.555	0.555	0.554
	Right Side at 0mm Holster	0.600	0.248		0.233	0.614	0.001	0.001	1.463	1.215	1.447
Ant 9	Front at 0mm Holster	0.171	0.062	0.096	0.129	0.440	0.001	0.001	0.674	0.708	0.740
	Left Side at 0mm Holster	0.489				0.554	0.001	0.001	1.044	1.044	1.043
	Right Side at 0mm Holster		0.248				0.001	0.001	0.249	0.001	0.000

14.3 Extremity Exposure Conditions

<WWAN off, non-DBS mode>

Exposure Position	2	3	4	5	6	7	8	2+7+8 Summed 10g SAR (W/kg)	3+6+8 Summed 10g SAR (W/kg)	5+6+8 Summed 10g SAR (W/kg)	5+7+8 Summed 10g SAR (W/kg)
	WLAN2.4GHz Ant 6	WLAN2.4GHz Ant 7	WLAN2.4GHz Ant 6+7	WLAN5/6GHz Ant 6+7	Bluetooth Ant 6	Bluetooth Ant 7	NFC				
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)				
Back at 0mm	0.409	0.381	0.384	0.706	0.001	0.001	0.001	0.410	0.383	0.708	0.708

<WWAN off, DBS mode>

Exposure Position	2	3	4	5	6	7	8	2+5+7+8 Summed 10g SAR (W/kg)	3+5+6+8 Summed 10g SAR (W/kg)	4+5+8 Summed 10g SAR (W/kg)
	WLAN2.4GHz Ant 6	WLAN2.4GHz Ant 7	WLAN2.4GHz Ant 6+7	WLAN5/6GHz Ant 6+7	Bluetooth Ant 6	Bluetooth Ant 7	NFC			
	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)			
Back at 0mm	0.409	0.381	0.384	0.706	0.001	0.001	0.001	1.117	1.089	1.091

<WWAN on, non-DBS mode>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+2+7+8 Summed 10g SAR (W/kg)	1+3+6+8 Summed 10g SAR (W/kg)	1+5+6+8 Summed 10g SAR (W/kg)	1+5+7+8 Summed 10g SAR (W/kg)
		WWAN	WLAN2.4GHz Ant 6	WLAN2.4GHz Ant 7	WLAN2.4GHz Ant 6+7	WLAN5/6GHz Ant 6+7	Bluetooth Ant 6	Bluetooth Ant 7	NFC				
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)				
Ant 1	Back at 0mm	0.728	0.409	0.381	0.384	0.706	0.001	0.001	0.001	1.139	1.111	1.436	1.436
Ant 2	Back at 0mm	0.216	0.409	0.381	0.384	0.706	0.001	0.001	0.001	0.627	0.599	0.924	0.924
Ant 3	Back at 0mm	0.141	0.409	0.381	0.384	0.706	0.001	0.001	0.001	0.552	0.524	0.849	0.849
Ant 4	Back at 0mm	0.300	0.409	0.381	0.384	0.706	0.001	0.001	0.001	0.711	0.683	1.008	1.008
Ant 5	Back at 0mm	1.835	0.409	0.381	0.384	0.706	0.001	0.001	0.001	2.246	2.218	2.543	2.543
Ant 8	Back at 0mm	0.924	0.409	0.381	0.384	0.706	0.001	0.001	0.001	1.335	1.307	1.632	1.632
Ant 9	Back at 0mm	1.133	0.409	0.381	0.384	0.706	0.001	0.001	0.001	1.544	1.516	1.841	1.841

<WWAN on, DBS mode>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+2+5+7+8 Summed 10g SAR (W/kg)	1+3+5+6+8 Summed 10g SAR (W/kg)	1+4+5+8 Summed 10g SAR (W/kg)
		WWAN	WLAN2.4GHz Ant 6	WLAN2.4GHz Ant 7	WLAN2.4GHz Ant 6+7	WLAN5/6GHz Ant 6+7	Bluetooth Ant 6	Bluetooth Ant 7	NFC			
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)			
Ant 1	Back at 0mm	0.728	0.409	0.381	0.384	0.706	0.001	0.001	0.001	1.845	1.817	1.819
Ant 2	Back at 0mm	0.216	0.409	0.381	0.384	0.706	0.001	0.001	0.001	1.333	1.305	1.307
Ant 3	Back at 0mm	0.141	0.409	0.381	0.384	0.706	0.001	0.001	0.001	1.258	1.230	1.232
Ant 4	Back at 0mm	0.300	0.409	0.381	0.384	0.706	0.001	0.001	0.001	1.417	1.389	1.391
Ant 5	Back at 0mm	1.835	0.409	0.381	0.384	0.706	0.001	0.001	0.001	2.952	2.924	2.926
Ant 8	Back at 0mm	0.924	0.409	0.381	0.384	0.706	0.001	0.001	0.001	2.041	2.013	2.015
Ant 9	Back at 0mm	1.133	0.409	0.381	0.384	0.706	0.001	0.001	0.001	2.250	2.222	2.224

Test Engineer : Dennis Hsieh, EN Liu and Jay Chien

15. Uncertainty Assessment

Declaration of Conformity:

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

Comments and Explanations:

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

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

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

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

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

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

(b) κ is the coverage factor

Standard Uncertainty for Assumed Distribution

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

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

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



Applicable for SAR Measurements:

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

Applicable for Power Density Measurements:

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



16. References

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