

FCC SAR TEST REPORT

FCC ID : 2AJN7-TP00164A
Equipment : Notebook Computer
Brand Name : Lenovo
Model Name : TP00164A
Applicant : LC Future Center Limited Taiwan Branch
7F., No.780, Beian Rd., Zhongshan Dist., Taipei 104, Taiwan
Manufacturer : Lenovo PC HK Limited
23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry Bay,
Hong Kong, P.R. China
Standard : FCC 47 CFR Part 2 (2.1093)

Equipment: Rolling Wireless RW350R-GL, Intel AX211D2W and Intel BE201D2W tested inside of Lenovo Notebook Computer.

The product was received on Dec. 18, 2024 and testing was started from Dec. 23, 2024 and completed on Jan. 20, 2025. 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



Sporton International Inc. Wensan Laboratory

Table of Contents

1. Statement of Compliance	4
2. Guidance Applied.....	5
3. Equipment Under Test (EUT) Information.....	6
3.1 General Information	6
3.2 General LTE SAR Test and Reporting Considerations	8
3.3 General 5G NR SAR Test and Reporting Considerations	12
4. Proximity Sensor Triggering Test.....	15
5. RF Exposure Limits.....	31
5.1 Uncontrolled Environment.....	31
5.2 Controlled Environment.....	31
6. Specific Absorption Rate (SAR).....	32
6.1 Introduction	32
6.2 SAR Definition.....	32
7. System Description and Setup	33
7.1 Test Site Location.....	33
7.2 E-Field Probe	34
7.3 Data Acquisition Electronics (DAE)	34
7.4 Phantom.....	35
7.5 Device Holder.....	36
8. Measurement Procedures	37
8.1 Spatial Peak SAR Evaluation.....	37
8.2 Power Reference Measurement.....	38
8.3 Area Scan	38
8.4 Zoom Scan.....	39
8.5 Volume Scan Procedures.....	39
8.6 Power Drift Monitoring.....	39
9. Test Equipment List.....	40
10. System Verification	41
10.1 Tissue Verification	41
10.2 System Performance Check Results.....	42
11. RF Exposure Positions.....	43
11.1 SAR Testing for Tablet	43
12. UL/DL Carrier aggregation	44
13. SAR Test Results	53
13.1 Body SAR	55
13.2 Repeated SAR Measurement	72
13.3 Power Class 2 and Power Class 3 Linearity	73
14. Simultaneous Transmission Analysis.....	75
14.1 Body Exposure Conditions.....	76
14.2 SPLSR Evaluation and Analysis.....	77
15. Uncertainty Assessment	80
16. References.....	80
Appendix A. Plots of System Performance Check	
Appendix B. Plots of High SAR Measurement	
Appendix C. DASYS Calibration Certificate	
Appendix D. Output Power Measurement	
Appendix E. Test Setup Photos and Antenna Location	

History of this test report

Report No.	Version	Description	Issued Date
FA4D1633	01	Initial issue of report	Feb. 28, 2025

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for LC Future Center Limited Taiwan Branch, Notebook Computer, TP00164A, are as follows.

Equipment Class	Frequency Band		Highest SAR Summary	Highest Simultaneous Transmission 1g SAR (W/kg)	
			Body		
			1g SAR (W/kg)		
Licensed	WCDMA	WCDMA II	1.17	1.20	
		WCDMA IV	1.05		
		WCDMA V	1.13		
	LTE	LTE Band 7	1.13		
		LTE Band 12 / 17	1.13		
		LTE Band 13	1.18		
		LTE Band 14	1.11		
		LTE Band 2 / 25	1.20		
		LTE Band 5 / 26	1.12		
		LTE Band 30	1.16		
		LTE Band 38 / 41	1.20		
		LTE Band 42	0.91		
		LTE Band 43	1.17		
		LTE Band 48	1.19		
		LTE Band 4 / 66	1.05		
		LTE Band 71	1.19		
		FR1	FR1 n5		1.15
			FR1 n7		1.16
			FR1 n12		1.08
	FR1 n14		1.18		
	FR1 n2 / n25		1.15		
	FR1 n26		1.13		
	FR1 n30		0.91		
	FR1 n38		1.17		
	FR1 n41		1.17		
	FR1 n48		1.12		
	FR1 n66	1.08			
	FR1 n71	1.20			
	FR1 n77 / n78	1.19			
Date of Testing:			2024/12/23 ~ 2025/01/20		

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation and the FCC designation No. TW3786 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) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang

Report Producer: Carlie Tsai



2. 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 616217 D04 SAR for laptop and tablets v01r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02



3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Notebook Computer
Brand Name	Lenovo
Model Name	TP00164A
FCC ID	2AJN7-TP00164A
Integrated WWAN Module	Brand Name: Rolling Wireless Model Name: RW350R-GL
Integrated WLAN Module 1	Brand Name: Intel Model Name: AX211D2W
Integrated WLAN Module 2	Brand Name: Intel Model Name: BE201D2W
Integrated NFC Module	Brand Name: Foxconn Model Name: T77H747
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 42: 3550 MHz ~ 3600 MHz LTE Band 43: 3600 MHz ~ 3700 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 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 5G NR n78: 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 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 5.9 GHz Band: 5850 MHz ~ 5895 MHz WLAN 6GHz Band: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC: 13.56 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink) 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/be HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160/EHT20/EHT40/EHT80/EHT160/EHT320 Bluetooth BR/EDR/LE NFC: ASK
EUT Stage	Production Unit
Remark:	
1. This device has two antenna vendors; RF exposure evaluation selects ICT as the main test, AWAN will spot check worst case found in ICT.	



2. This device is convertible type notebook PC, and there are two mode as usage way, one is laptop mode, another is tablet mode.
3. The Intel AX211D2W (FCC ID: PD9AX211D2) may integrated into this host, the Sim-Tx compliance with WWAN operation was addressed in section 14.
4. The Intel BE201D2W (FCC ID: PD9BE201D2W) may integrated into this host, the Sim-Tx compliance with WWAN operation was addressed in section 14.
5. The FCC ID: MCLT77H747 NFC module is integrated into this host, and NFC transmitters are considered to be operating simultaneously when there is overlapping transmission with the exception of transmission during network hand-offs with maximum hand-off duration less than 30seconds.

WWAN Antenna Information				
Main Antenna	Manufacturer	Luxshare-ICT	Peak gain(dBi)	0.60
	Part number	DC330028G00	Type	PIFA
	Manufacturer	AWAN	Peak gain(dBi)	1.87
	Part number	DC330028K00	Type	PIFA
MIMO2 Antenna	Manufacturer	Luxshare-ICT	Peak gain(dBi)	0.60
	Part number	DC330028G00	Type	PIFA
	Manufacturer	AWAN	Peak gain(dBi)	1.87
	Part number	DC330028K00	Type	PIFA
Auxiliary Antenna	Manufacturer	Luxshare-ICT	Peak gain(dBi)	0.16
	Part number	DC330028G00	Type	PIFA
	Manufacturer	AWAN	Peak gain(dBi)	0.16
	Part number	DC330028K00	Type	PIFA

3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																										
FCC ID		2AJN7-TP00164A																																																																								
Equipment Name		Notebook 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 42: 3550 MHz ~ 3600 MHz LTE Band 43: 3600 MHz ~ 3700 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 42: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 43: 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		<table><tr><th colspan="8">Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3</th></tr><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><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></table>			Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3								Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3	256 QAM	≥ 1						≤ 5
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QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																																																			
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																																																			
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2																																																																			
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2																																																																			
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3																																																																			
256 QAM	≥ 1						≤ 5																																																																			
LTE A-MPR		In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																																								
Spectrum plots for RB configuration		A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																																								
Power reduction applied to satisfy SAR compliance		Yes, Proximity Sensor.																																																																								
LTE Carrier Aggregation Combinations		Intra-Band possible combinations and the detail power measurement please referred to section 12.																																																																								
LTE Carrier Aggregation Additional Information		This device supports maximum of 2 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.																																																																								

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

LTE Band 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			
	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		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		
LTE Band 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				
M	38000	2595	38000	2595	38000	2595	38000	2595				
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
L	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				
LTE Band 42												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	43315	3552.5	43140	3555	43165	3557.5	43190	3560				
M	43340	3575	43340	3575	43340	3575	43340	3575				
H	43565	3597.5	43540	3595	43515	3592.5	43490	3590				
LTE Band 43												
	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	43615	3602.5	43640	3605	43665	3607.5	43690	3610				
M	44090	3650	44090	3650	44090	3650	44090	3650				
H	44565	3697.5	44540	3695	44515	3692.5	44490	3690				
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				
L	55810	3607	55815	3607.5	55820	3608	55830	3609				
M	56170	3643	56165	3642.5	56160	3642	56150	3641				
H	56715	3697.5	56690	3695	56665	3692.5	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				
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5				
H	133447	695.5	133422	693	133397	690.5	133372	688				



3.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information	
FCC ID	2AJN7-TP00164A
Equipment Name	Notebook 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 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 5G NR n78 : 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz, 25MHz, 30MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz, 25MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz, 50MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n14: 5MHz, 10MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz, 45MHz 5G NR n26: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n30: 5MHz, 10MHz 5G NR n38: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n48: 5MHz, 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz, 45MHz 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 B2/5/12/13/14/30/66
LTE Anchor Bands for n5	LTE B2/30/48/66
LTE Anchor Bands for n25	LTE B66
LTE Anchor Bands for n41	LTE B2/66/41
LTE Anchor Bands for n48	LTE B2/66
LTE Anchor Bands for n66	LTE B5/12/13/48
LTE Anchor Bands for n71	LTE B2/66
LTE Anchor Bands for n77	LTE B2/5/12/13/14/30/41/66
LTE Anchor Bands for n78	LTE B2/5/7/38

NR Band 2																				
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz									
	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	370500	1852.5	371000	1855	371500	1857.5								
M	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880	376000	1880								
H	381500	1907.5	381000	1905	380500	1902.5	381500	1907.5	381000	1905	380500	1902.5								
NR Band 5																				
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz											
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	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		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		Bandwidth 50MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520	505000	2525				
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535				
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550	509000	2545				
NR Band 12																				
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz											
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)					
L	140300		701.5		140800		704		141300		706.5									
M	141500		707.5		141500		707.5		141500		707.5									
H	142700		713.5		142200		711		141700		708.5									
NR Band 14																				
	Bandwidth 5MHz						Bandwidth 10MHz													
	Ch. #			Freq. (MHz)			Ch. #			Freq. (MHz)			Ch. #			Freq. (MHz)				
L	158100			790.5			158600			793										
M	158600			793																
H	159100			795.5																
NR Band 25																				
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz		Bandwidth 45MHz			
	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	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	373500	1867.5	374000	1870	374500	1872.5		
M	376500	1882.5	376500	1882.5	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	379500	1897.5	379000	1895	378500	1892.5		
NR Band 26																				
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				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					
M	166300		831.5		166300		831.5		166300		831.5		166300		831.5					
H	169300		846.5		168800		844		168300		841.5		167800		839					
NR Band 30																				
	Bandwidth 5MHz						Bandwidth 10MHz													
	Ch. #			Freq. (MHz)			Ch. #			Freq. (MHz)			Ch. #			Freq. (MHz)				
L	461500			2307.5			462000						2310							
M	462000			2310																
H	462500			2312.5																



NR Band 38																						
	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	514500	2572.5	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02								
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595								
H	523500	2617.5	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98								
NR Band 41																						
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500202	2501.01	500700	2503.5	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99
H	537000	2685	536496	2682.48	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640
NR Band 48																						
	Bandwidth 5MHz		Bandwidth10MHz		Bandwidth 15MHz		Bandwidth20MHz		Bandwidth30MHz		Bandwidth 40MHz											
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)										
L	636834	3552.51	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	641666	3624.99										
H	646500	3697.5	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 35MHz		Bandwidth 40MHz		Bandwidth 45MHz					
	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	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	345500	1727.5	346000	1730	346500	1732.5				
M	349000	1745	349000	1745	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	353500	1767.5	353000	1765	352500	1762.5	352000	1760	351500	1757.5				
NR Band 71																						
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz									
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)							
L	133100		665.5		133600		668		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_Part 270																						
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840
H	665000	3975	664832	3972.48	664666	3969.99	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930
NR Band 78_Part 270																						
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	647000	3705	647168	3707.52	647334	3710.01	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750
M	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750	650000	3750		
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_Part 270																						
	Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	630334	3455.01	630500	3457.5	630668	3460.02	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495	633332	3499.98
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		
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		

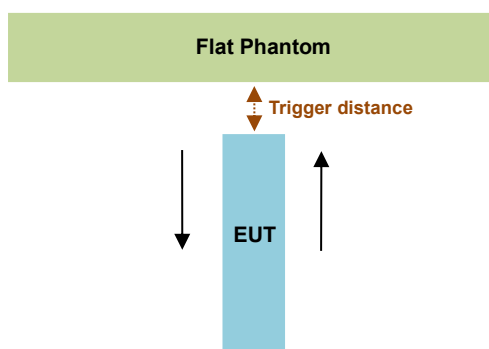
4. Proximity Sensor Triggering Test

<Proximity Sensor Triggering Distance (KDB 616217 D04 section 6.2)>:

For the device is fully integrated, touch sensing capacitive sensor. It uses a charge transfer capacitive acquisition method that is capable of near range proximity detection. In this device offers a state of the art capacitive sensing engine with an embedded sampling capacitor and voltage regulator allowing the overall solution cost to be reduced and improving system immunity in noisy environments.

Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed. The details are illustrated as following, and the shortest triggering distances were reported and used for SAR assessment.

In the preliminary triggering distance testing, the tissue-equivalent medium for different frequency bands were used for verification; no other frequency bands tissue-equivalent medium was found to result in shortest triggering distance than that for 1900MHz, and the tissue-equivalent medium for 1900MHz was used for formal proximity sensor triggering testing.



Main	Laptop Mode		Tablet Mode					
	Proximity Sensor Trigger Distance (mm)		Proximity Sensor Trigger Distance (mm)					
Position	Bottom Side		Back		Right Edge		Top Edge	
	moving toward	moving away	moving toward	moving away	moving toward	moving away	moving toward	moving away
Minimum	36	38	32	34	32	42	35	40

MIMO2	Laptop Mode		Tablet Mode					
	Proximity Sensor Trigger Distance (mm)		Proximity Sensor Trigger Distance (mm)					
Position	Bottom Side		Back		Left Edge		Top Edge	
	moving toward	moving away	moving toward	moving away	moving toward	moving away	moving toward	moving away
Minimum	30	30	27	29	33	37	25	27

Aux	Laptop Mode		Tablet Mode					
	Proximity Sensor Trigger Distance (mm)		Proximity Sensor Trigger Distance (mm)					
Position	Bottom Side		Back		Left Edge		Top Edge	
	moving toward	moving away	moving toward	moving away	moving toward	moving away	moving toward	moving away
Minimum	23	26	35	38	20	27	25	27

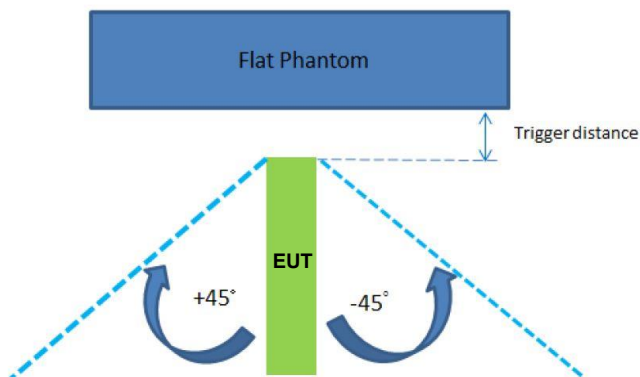
<Proximity Sensor Triggering Coverage (KDB 616217 D04 section 6.3)>:

Since the antenna and sensor are collocated and all of the peak SAR location is overlapping with the sensor pad for this device, therefore, According to KDB 616217 section 6.3, these procedures do not apply and are not required for this device. due to the antenna and sensor are collocated and the peak SAR location is overlapping with the sensor on this device.

<Tablet Tilt angle influences to proximity sensor triggering (KDB 616217 D04 section 6.4)>:

The influence of table tilt angles to proximity sensor triggering was determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom, at above separation distance.

Rotating the tablet around the edge next to the phantom in $\leq 10^\circ$ increments until the tablet is $\pm 45^\circ$ from the vertical position at 0° , and the maximum output power remains in the reduced mode.



Main	Tablet Mode			
	Proximity Sensor Trigger Distance (mm)			
Position	Right Edge		Top Edge	
	+45	-45	+45	-45
Minimum	15	15	43	40

MIMO2	Tablet Mode	
	Proximity Sensor Trigger Distance (mm)	
Position	Left Edge	
	+45	-45
Minimum	22	22

Aux	Tablet Mode			
	Proximity Sensor Trigger Distance (mm)			
Position	Left Edge		Top Edge	
	+45	-45	+45	-45
Minimum	16	16	36	33

Proximity sensor power reduction

Exposure Position / wireless mode	Antenna	Bottom Side/ Back/ Top Edge/ Left Edge/ Right Edge
WCDMA V	Main	8.5 dB
LTE Band 5	Main	7.0 dB
LTE Band 12	Main	8.0 dB
LTE Band 13	Main	8.5 dB
LTE Band 14	Main	8.0 dB
LTE Band 17	Main	8.0 dB
LTE Band 26	Main	7.0 dB
LTE Band 41	Main	9.5 dB
LTE Band 42	Main	9.0 dB
LTE Band 48	Main	10.0 dB
LTE Band 71	Main	7.5 dB
FR1 n2	Main	8.0 dB
FR1 n5	Main	6.5 dB
FR1 n12	Main	7.0 dB
FR1 n14	Main	7.0 dB
FR1 n25	Main	8.0 dB
FR1 n26	Main	6.5 dB
FR1 n41	Main	10.5 dB
FR1 n41 HPUE	Main	10.5 dB
FR1 n48	Main	11.0 dB
FR1 n71	Main	7.0 dB
FR1 n77	Main	14.0 dB
FR1 n77_HPUE	Main	14.0 dB
FR1 n78	Main	14.0 dB
FR1 n78_HPUE	Main	14.0 dB
WCDMA II	MIMO2	9.0 dB
WCDMA IV	MIMO2	10.0 dB
LTE Band 2	MIMO2	8.0 dB
LTE Band 4	MIMO2	11.5 dB
LTE Band 7	MIMO2	13.0 dB
LTE Band 25	MIMO2	8.0 dB
LTE Band 30	MIMO2	10.0 dB
LTE Band 38	MIMO2	11.5 dB
LTE Band 41	MIMO2	11.5 dB
LTE Band 42	MIMO2	9.0 dB
LTE Band 43	MIMO2	7.0 dB
LTE Band 48	MIMO2	7.5 dB
LTE Band 66	MIMO2	11.5 dB
FR1 n2	MIMO2	8.0 dB
FR1 n7	MIMO2	12.0 dB
FR1 n25	MIMO2	8.0 dB
FR1 n30	MIMO2	9.5 dB
FR1 n38	MIMO2	12.0 dB
FR1 n41	MIMO2	12.5 dB
FR1 n41 HPUE	MIMO2	12.5 dB
FR1 n48	MIMO2	10.0 dB
FR1 n66	MIMO2	10.0 dB
FR1 n77	MIMO2	13.0 dB
FR1 n77_HPUE	MIMO2	13.0 dB
FR1 n78	MIMO2	13.0 dB
FR1 n78_HPUE	MIMO2	13.0 dB

FR1 n41	AUX	11.5 dB
FR1 n41 HPUE	AUX	11.5 dB
FR1 n77	AUX	14.0 dB
FR1 n77_HPUE	AUX	14.0 dB
FR1 n78	AUX	14.0 dB
FR1 n78_HPUE	AUX	14.0 dB

Remark:

- (1): Reduced maximum limit applied by activation of proximity sensor.
- Tests were performed in accordance with KDB 616217 D04 section 6.1, 6.2, 6.3, 6.4 and 6.5 and compliant results are shown as below.
- For verification of compliance of power reduction scheme, additional SAR testing with EUT transmitting at full RF power at a conservative trigger distance was performed:

<Main>

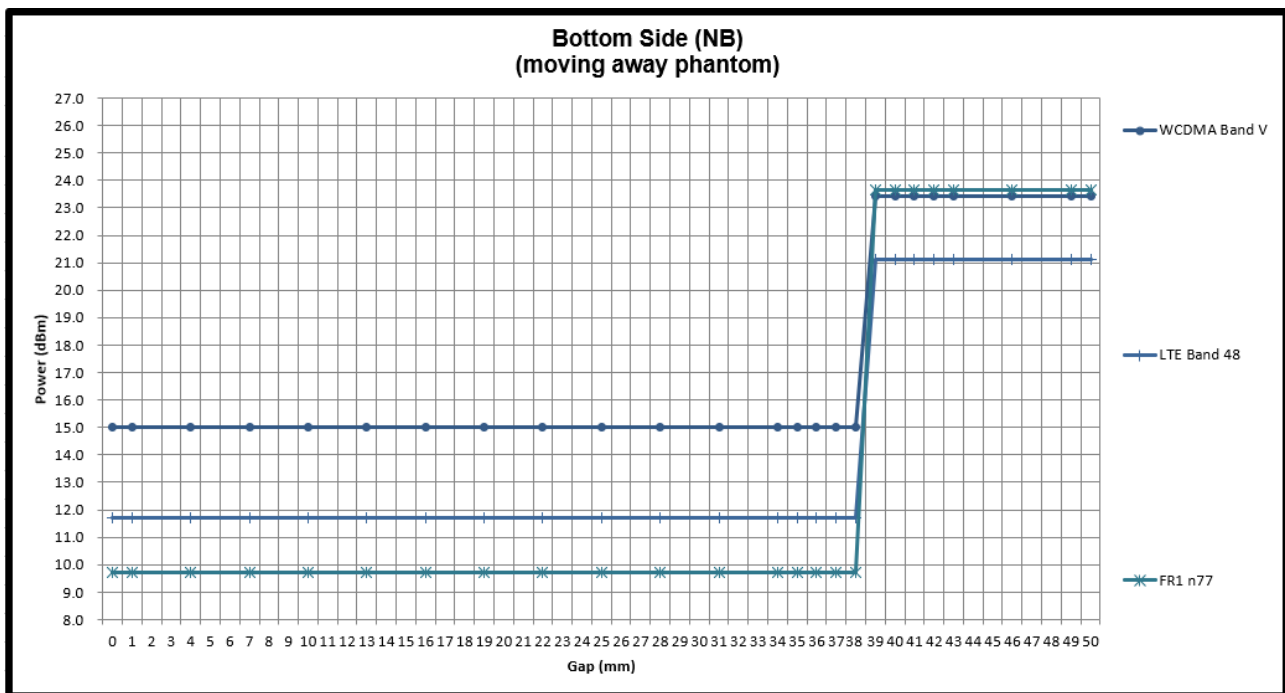
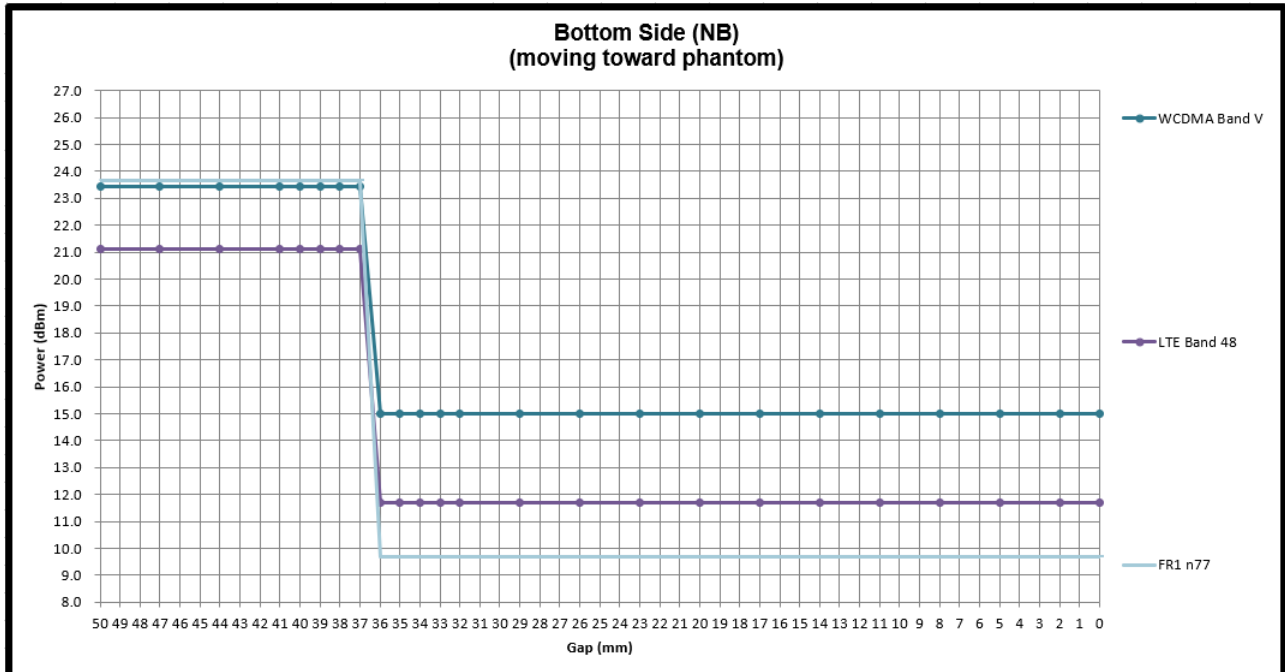
- Bottom Side: [35 mm](#)
- Back: [31 mm](#)
- Top Edge: [34 mm](#)
- Right Edge: [14 mm](#)

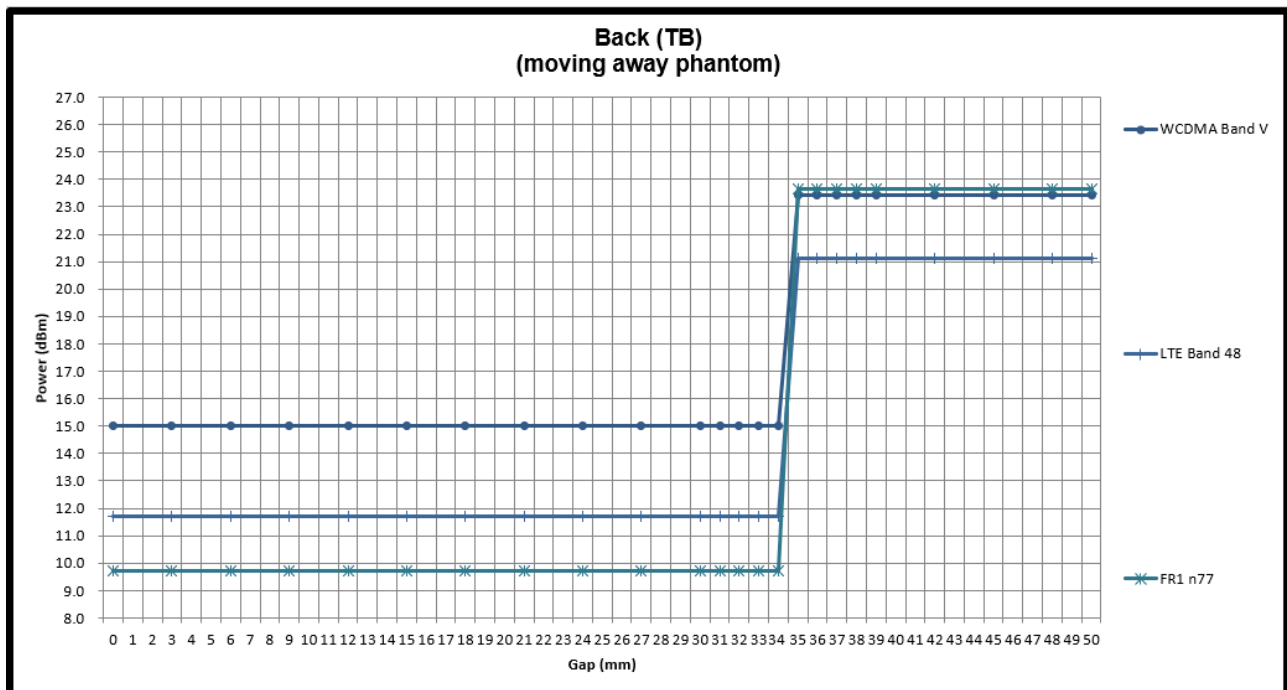
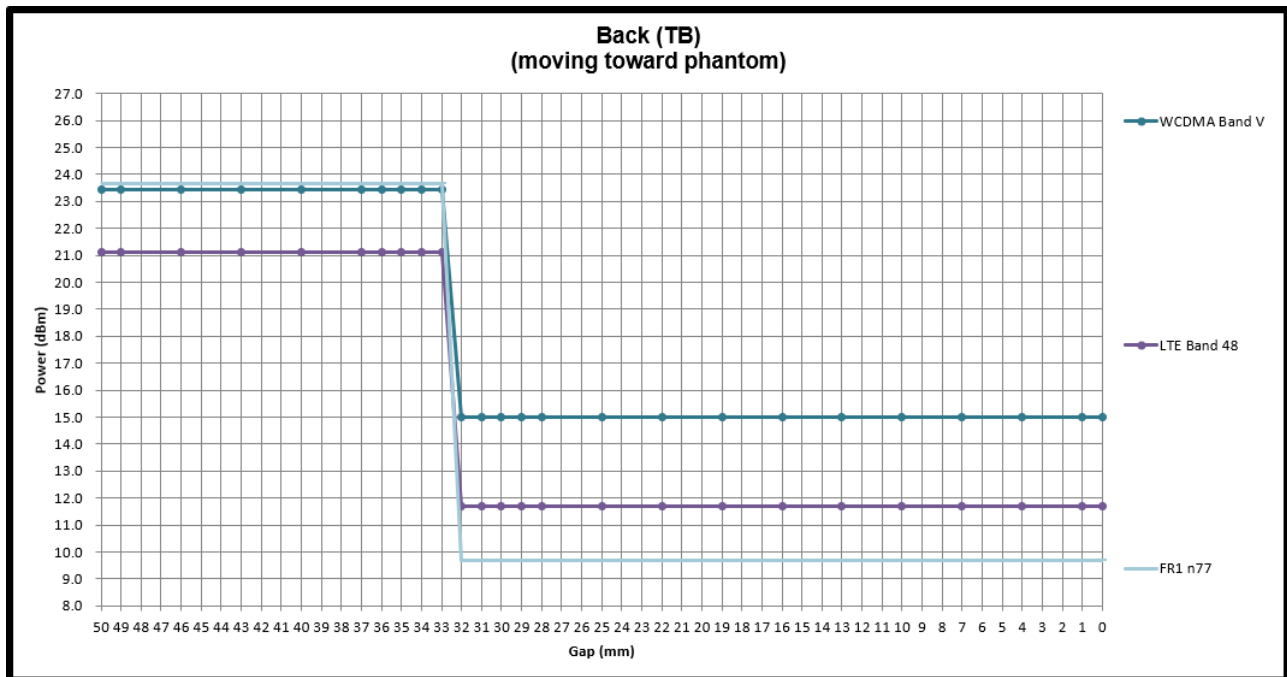
<MIMO2>

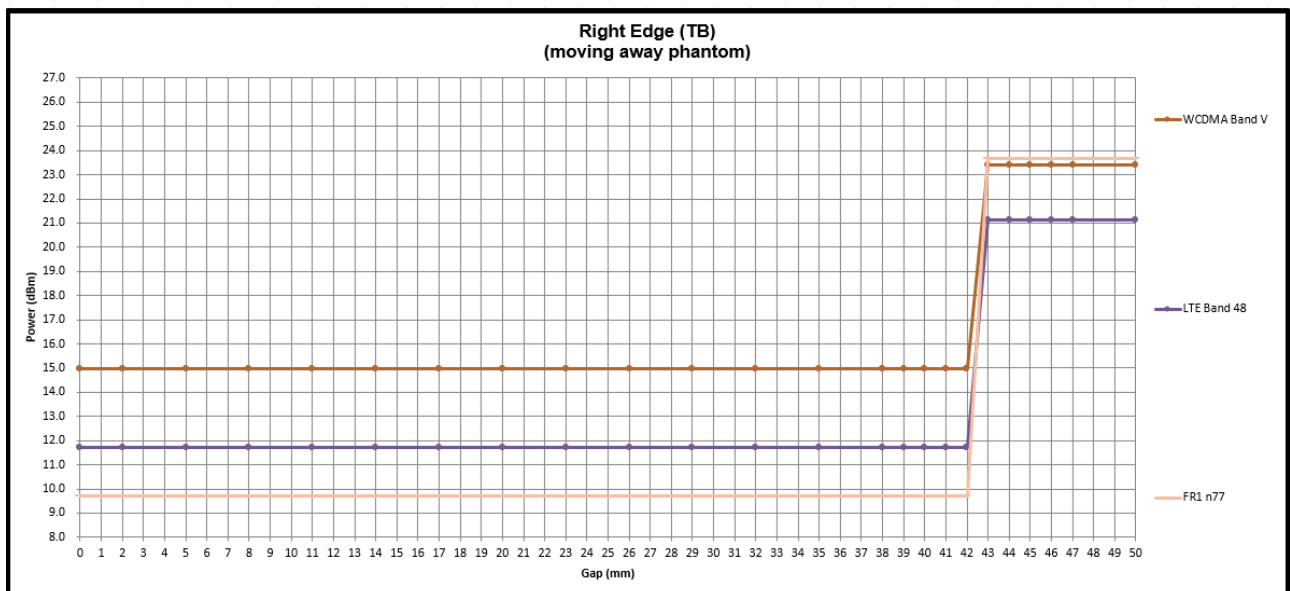
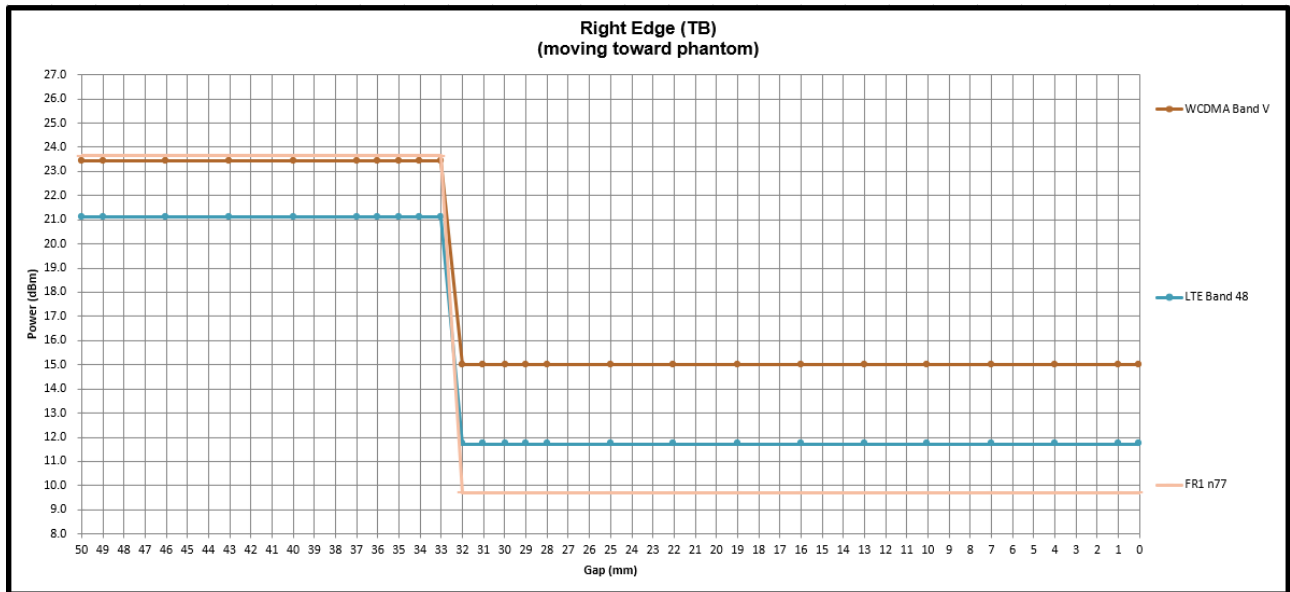
- Bottom Side: [29 mm](#)
- Back: [26 mm](#)
- Top Edge: [24 mm](#)
- Left Edge: [21 mm](#)

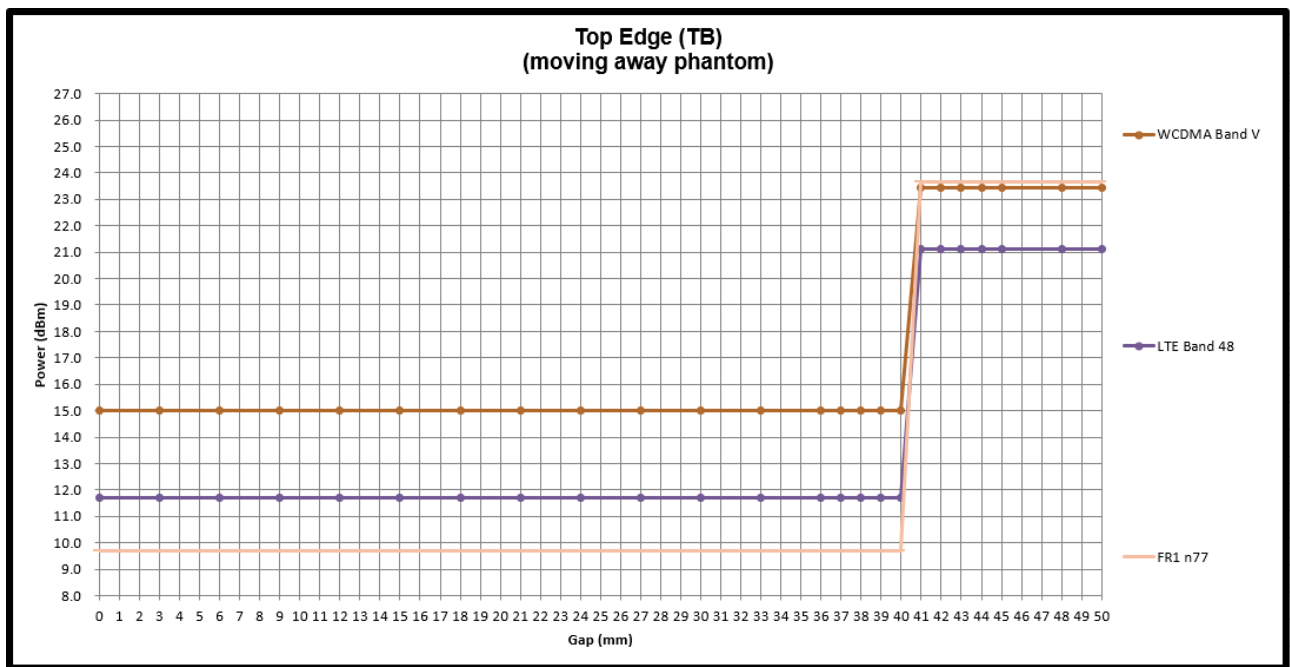
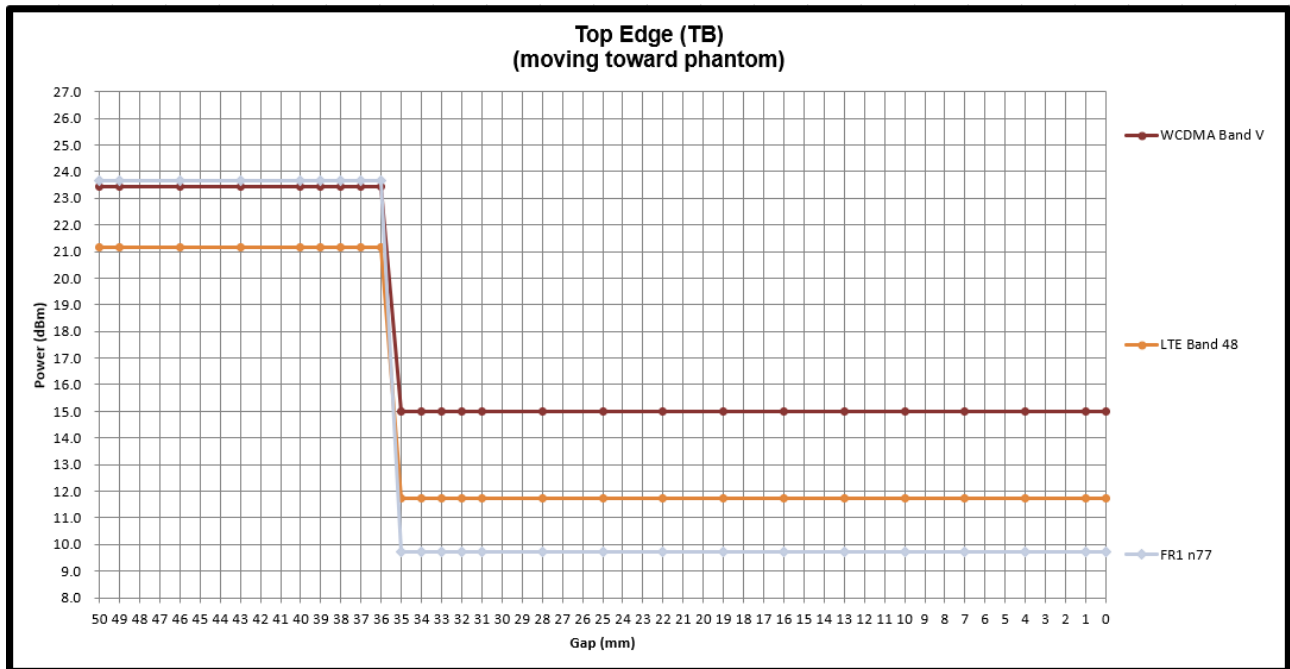
<Aux>

- Bottom Side: [22 mm](#)
- Back: [34 mm](#)
- Top Edge: [24 mm](#)
- Left Edge: [15 mm](#)

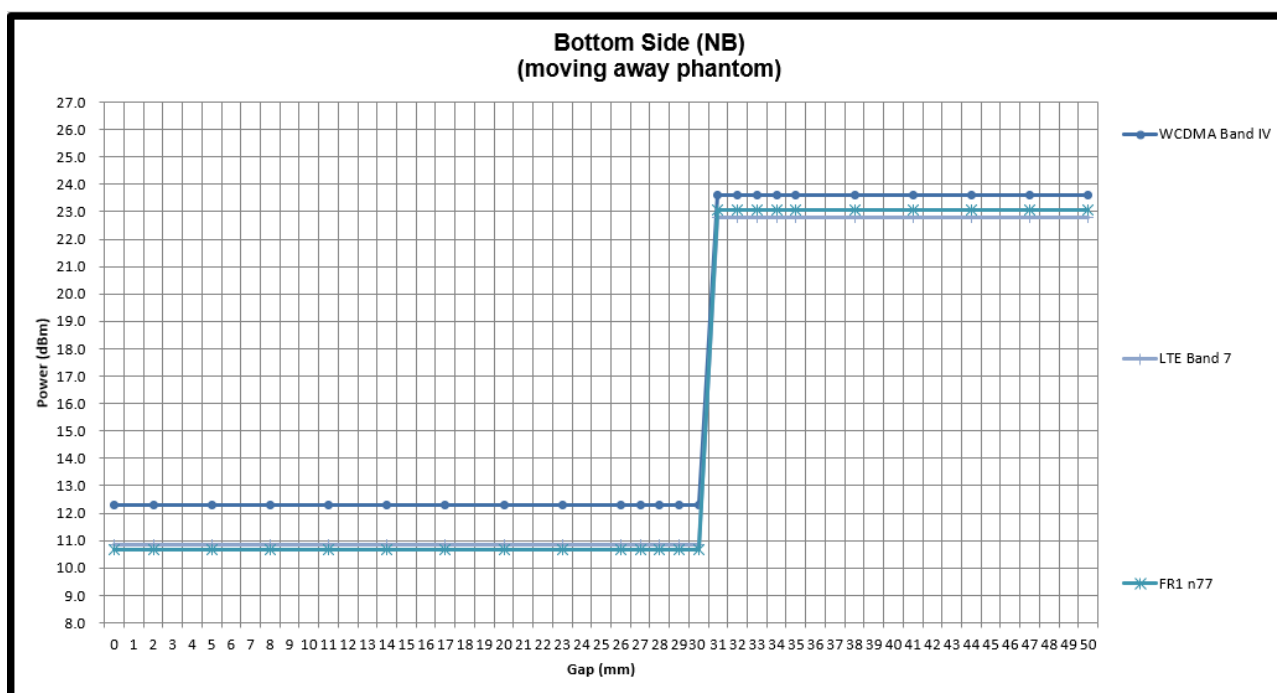
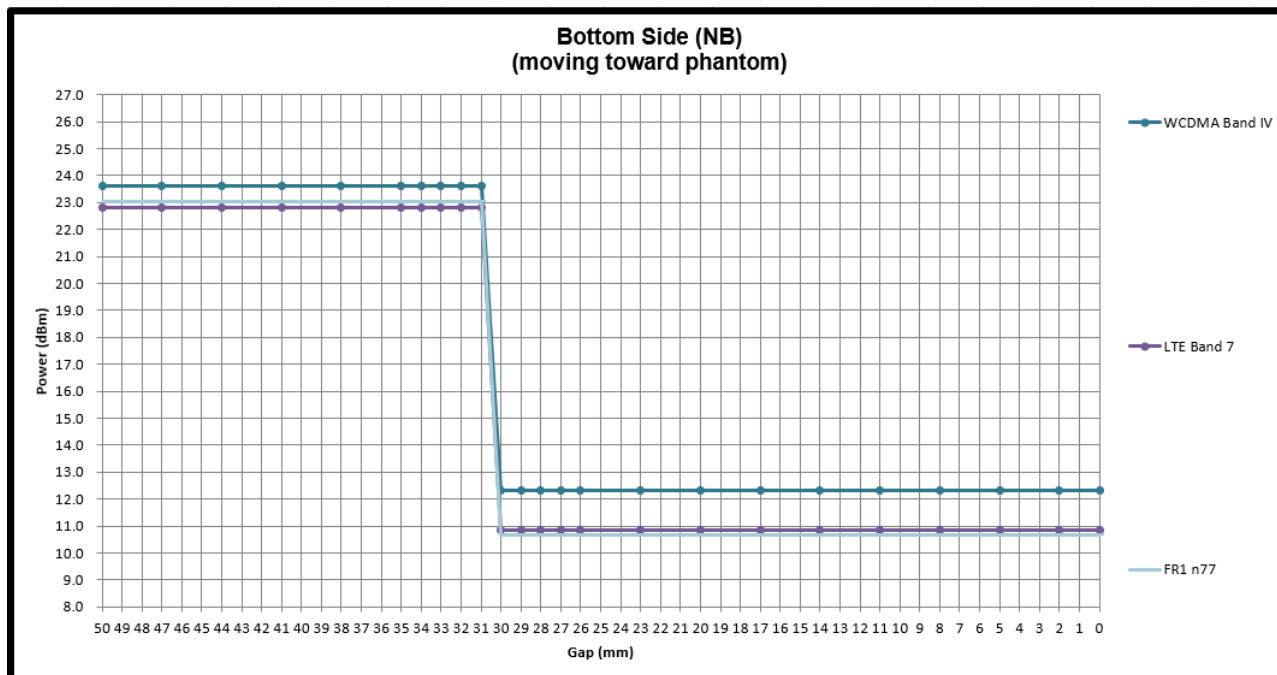
Power Measurement during Sensor Trigger distance testing
<Main>


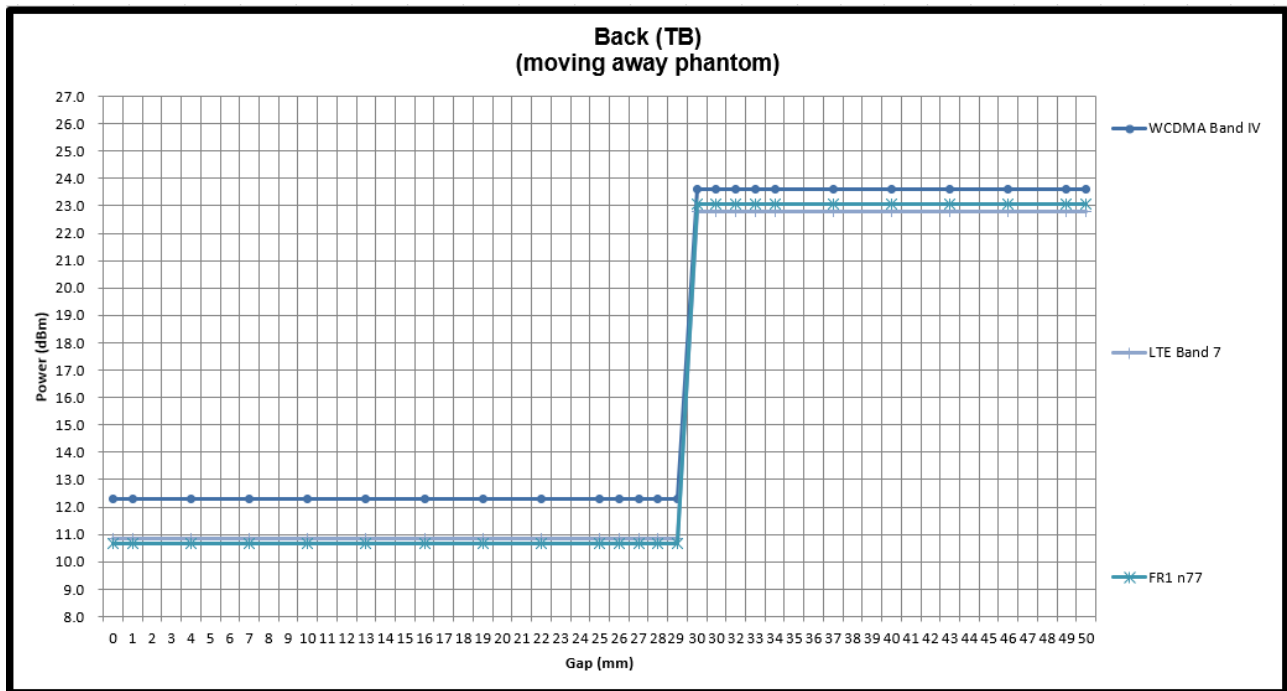
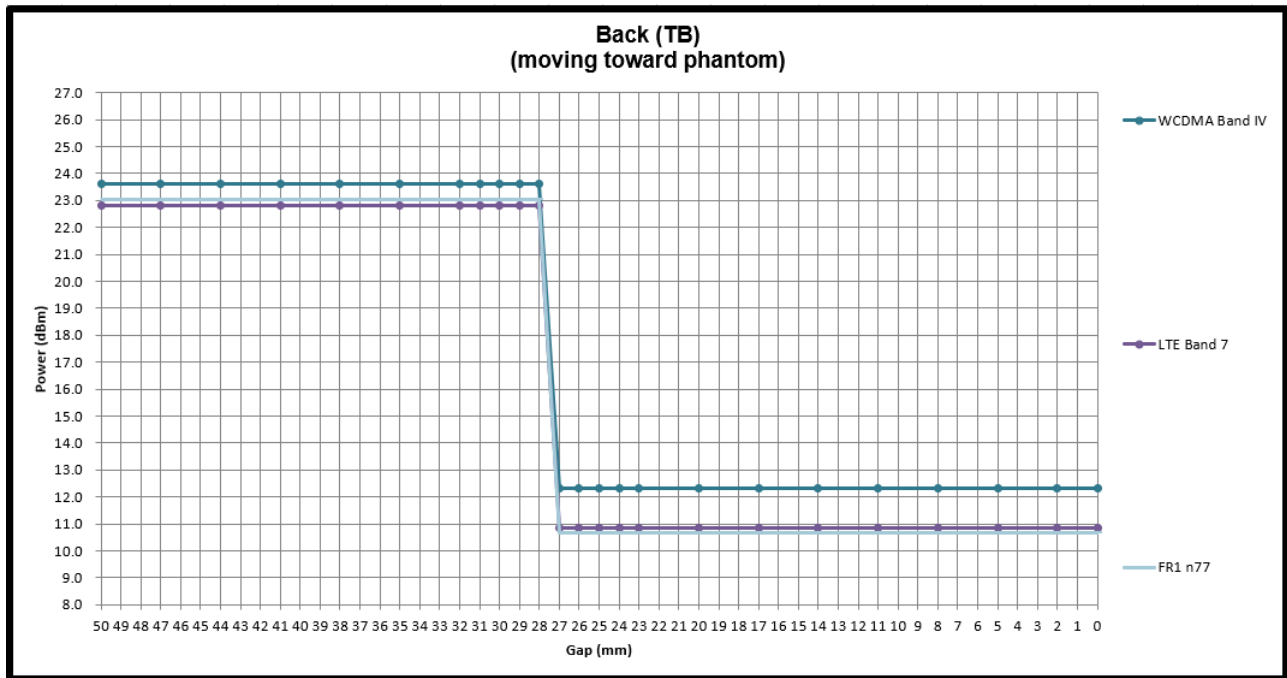


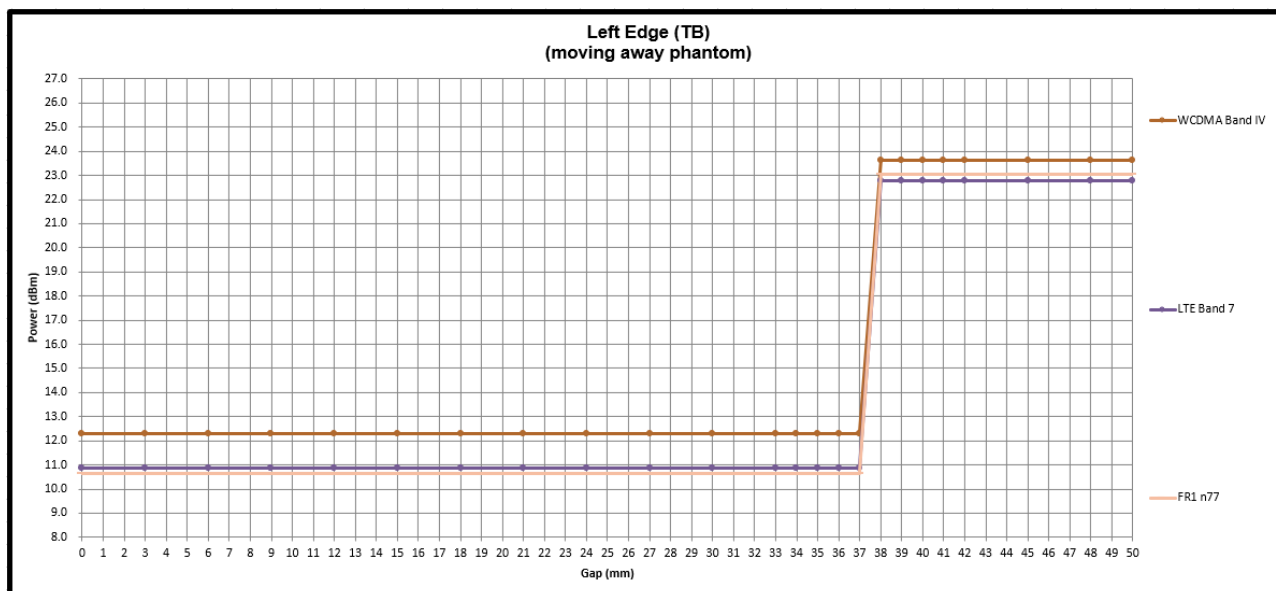
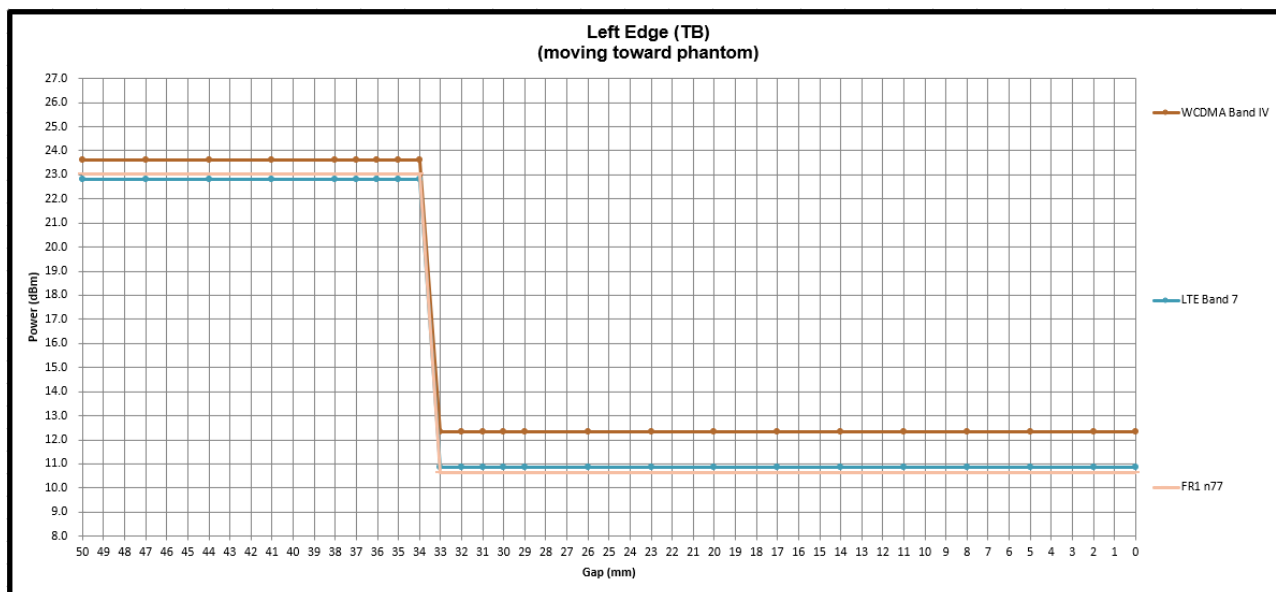


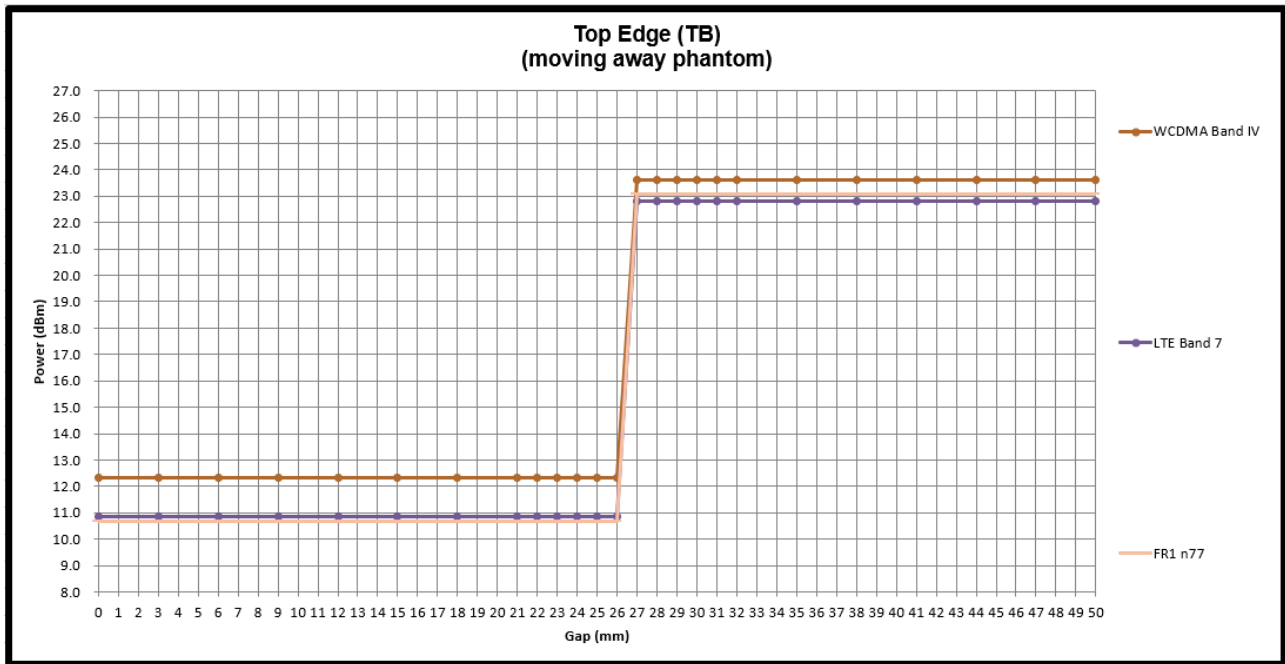
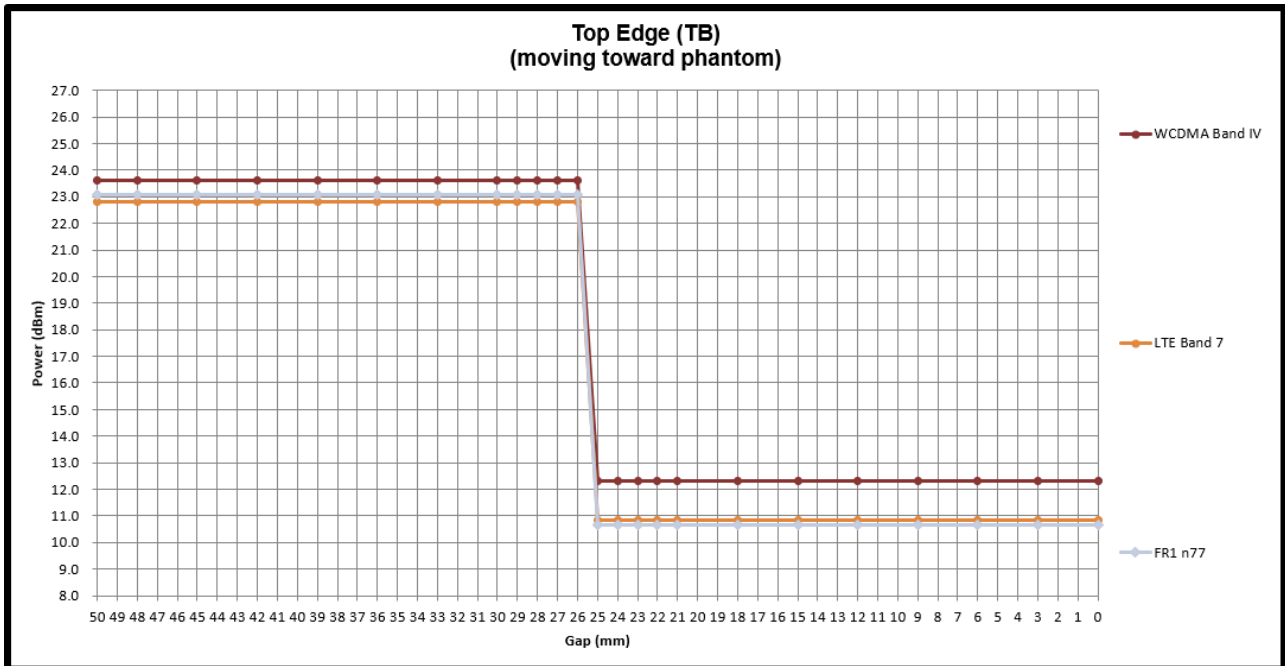


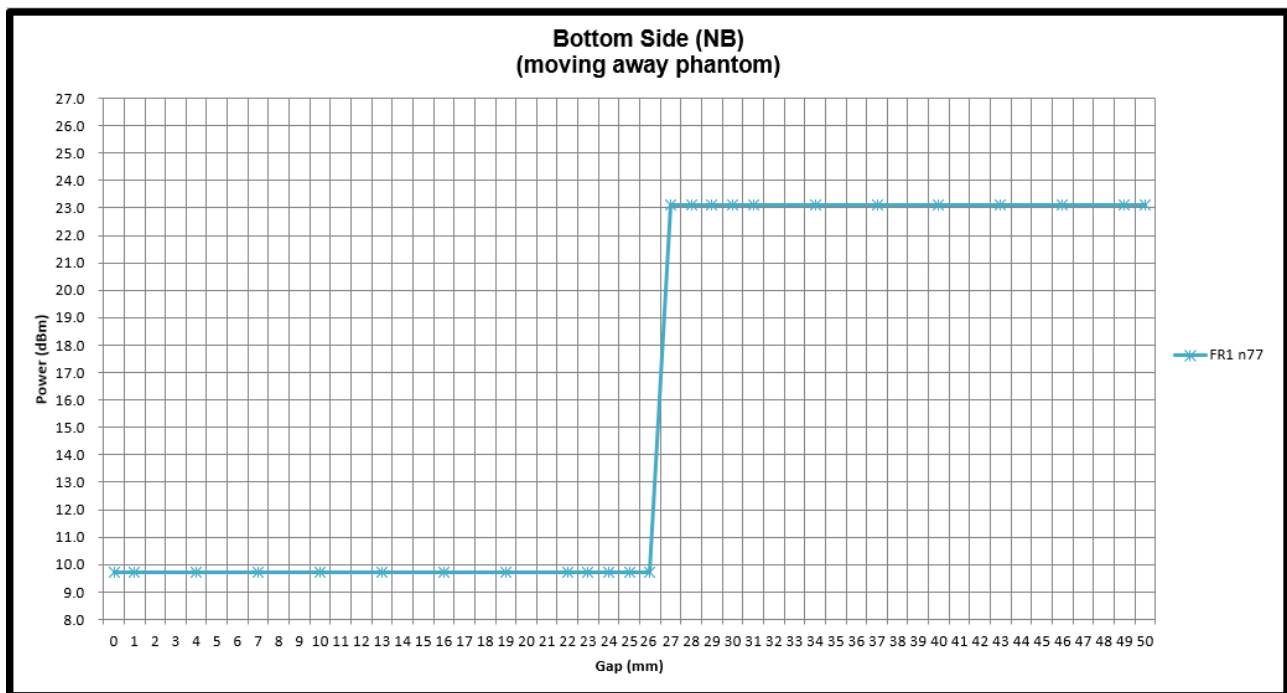
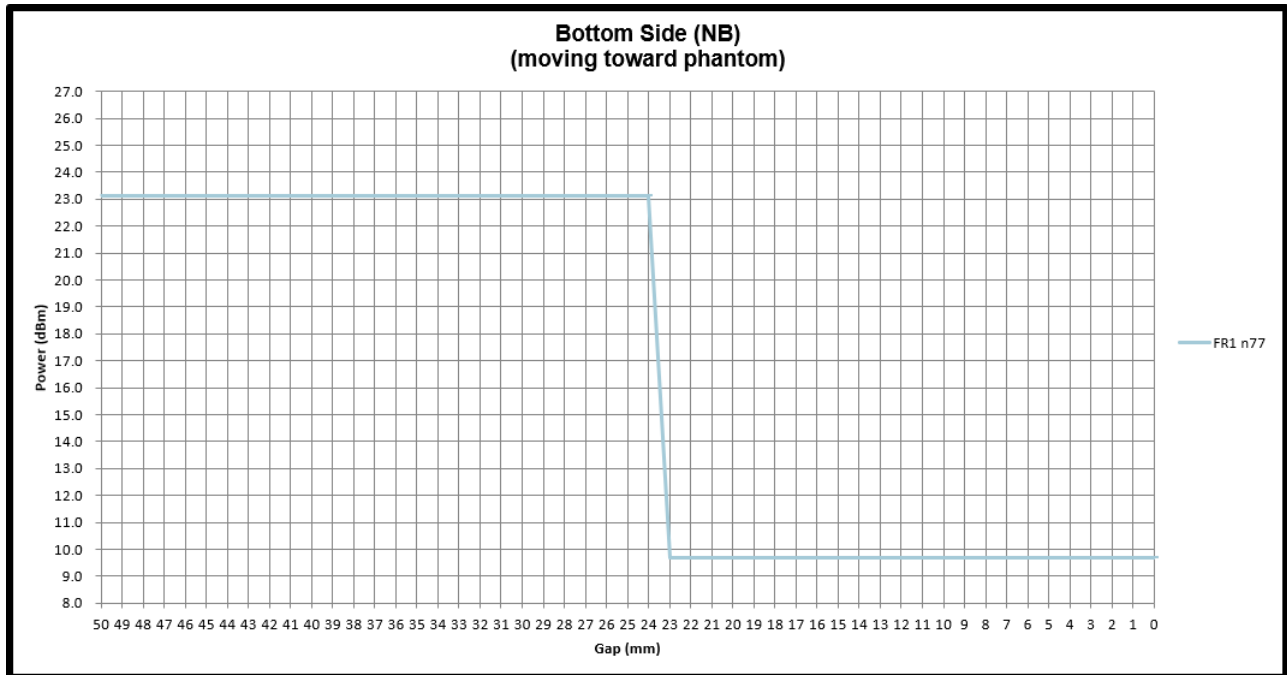
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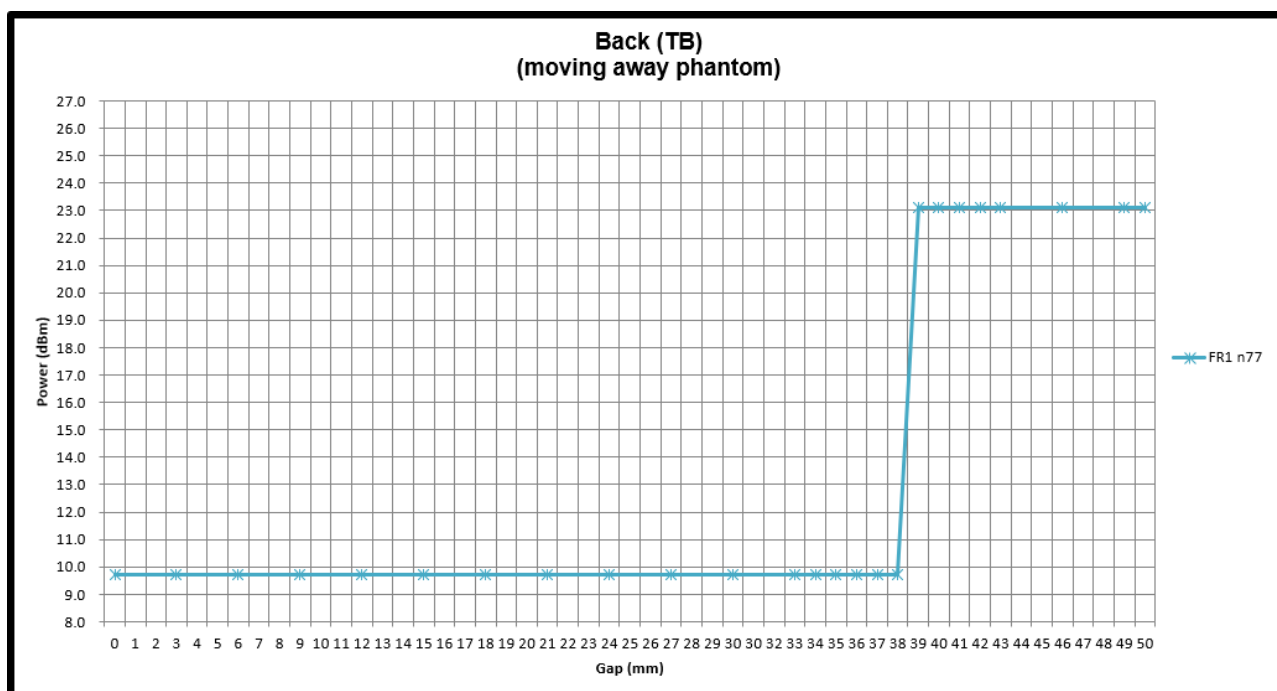
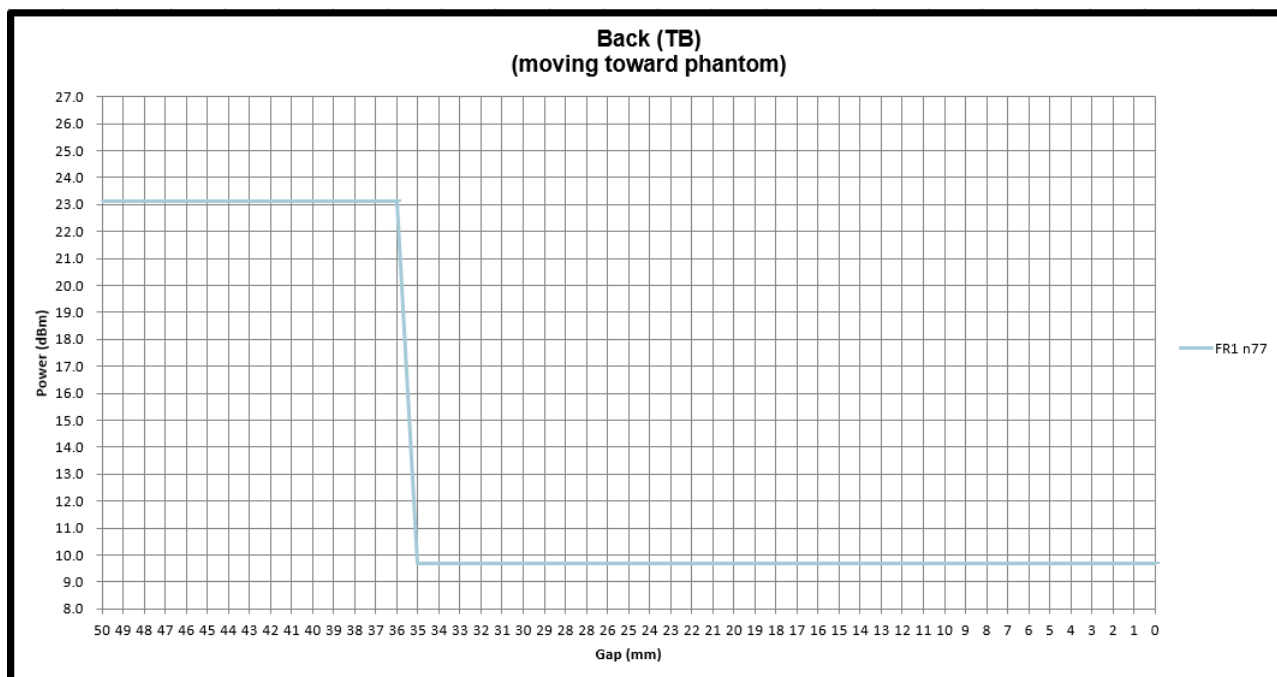


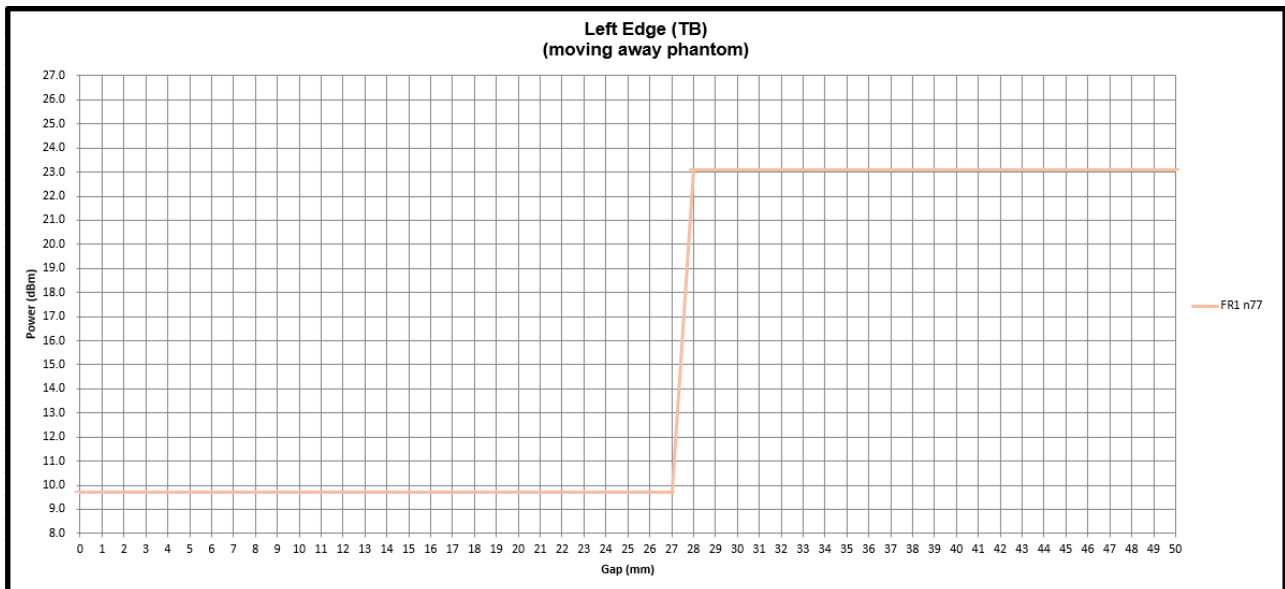
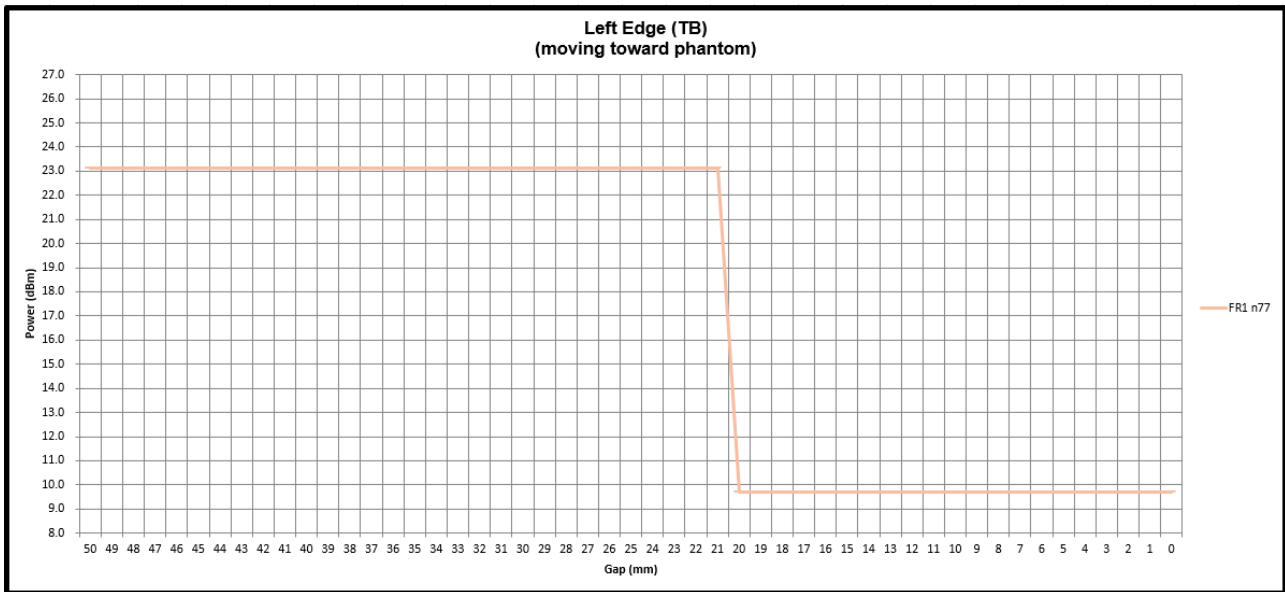


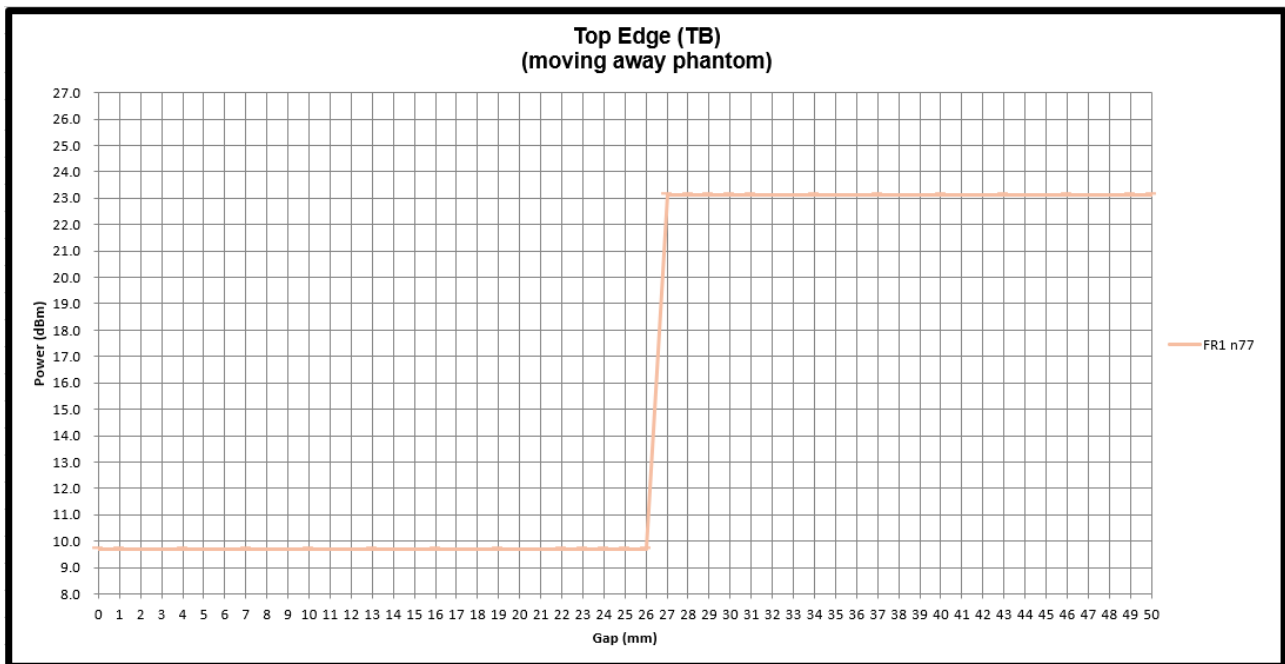
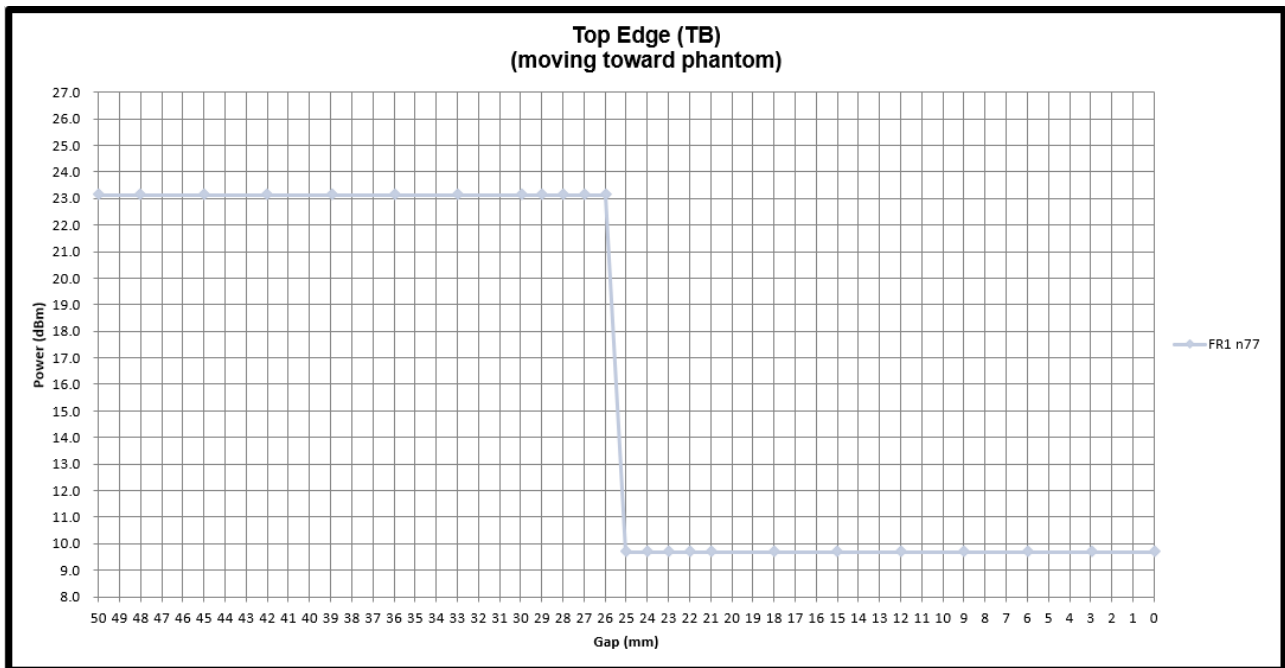




<Aux>








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)

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

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

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

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

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:

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

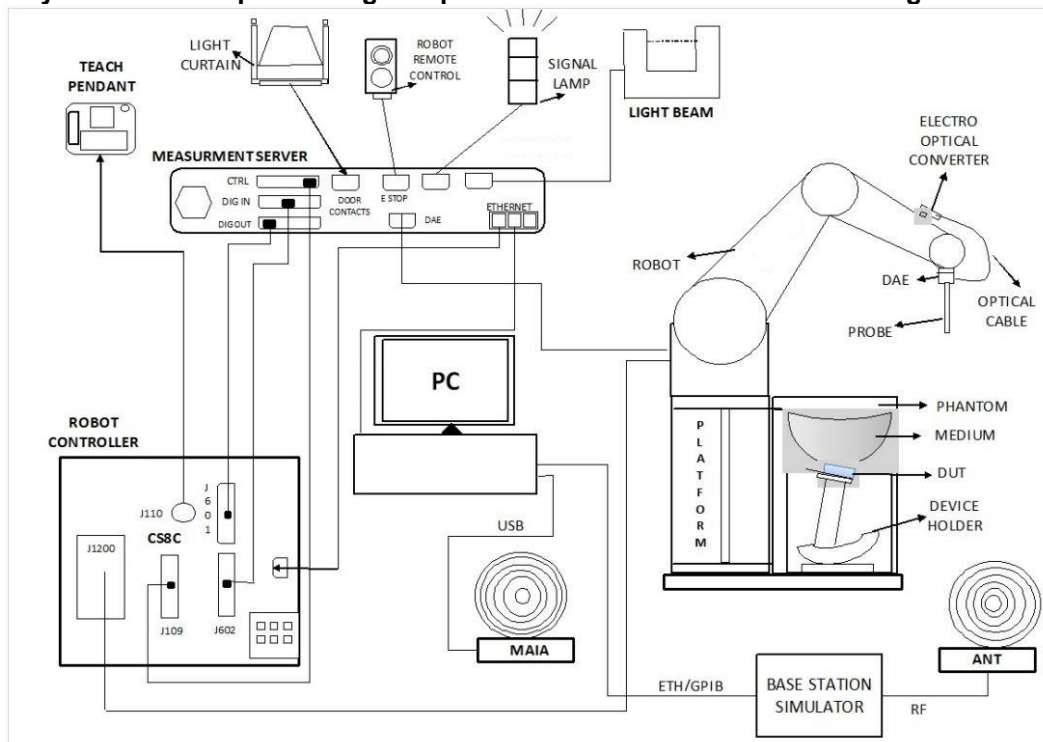
SAR is expressed in units of Watts per kilogram (W/kg)

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

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		TW3786 No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010				
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 DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

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

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

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 DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

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

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

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

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 dB0) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ 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 to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <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 to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

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	1107	Jun. 22, 2022	Jun. 19, 2025
SPEAG	835MHz System Validation Kit	D835V2	499	Aug. 22, 2024	Aug. 21, 2025
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	4d167	Nov. 24, 2022	Nov. 21, 2025
SPEAG	1750MHz System Validation Kit ⁽²⁾	D1750V2	1112	Jun. 22, 2022	Jun. 19, 2025
SPEAG	1900MHz System Validation Kit ⁽²⁾	D1900V2	5d093	Mar. 25, 2022	Mar. 22, 2025
SPEAG	2300MHz System Validation Kit ⁽²⁾	D2300V2	1006	Jan. 18, 2022	Jan. 15, 2025
SPEAG	2300MHz System Validation Kit	D2300V2	1088	Jul. 10, 2024	Jul. 09, 2025
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 15, 2024	Aug. 14, 2025
SPEAG	2600MHz System Validation Kit ⁽²⁾	D2600V2	1089	Mar. 24, 2022	Mar. 21, 2025
SPEAG	3500MHz System Validation Kit ⁽²⁾	D3500V2	1014	Jan. 17, 2022	Jan. 14, 2025
SPEAG	3500MHz System Validation Kit ⁽²⁾	D3500V2	1036	Mar. 23, 2022	Mar. 20, 2025
SPEAG	3700MHz System Validation Kit ⁽²⁾	D3700V2	1006	Jun. 20, 2022	Jun. 17, 2025
SPEAG	3700MHz System Validation Kit	D3700V2	1022	Jul. 10, 2024	Jul. 09, 2025
SPEAG	3900MHz System Validation Kit ⁽²⁾	D3900V2	1017	Apr. 22, 2022	Apr. 19, 2025
SPEAG	3900MHz System Validation Kit ⁽²⁾	D3900V2	1092	May. 15, 2023	May. 13, 2025
SPEAG	Data Acquisition Electronics	DAE4	661	May. 16, 2024	May. 15, 2025
SPEAG	Data Acquisition Electronics	DAE4	703	Apr. 22, 2024	Apr. 21, 2025
SPEAG	Data Acquisition Electronics	DAE4	1694	Nov. 19, 2024	Nov. 18, 2025
SPEAG	Data Acquisition Electronics	DAE4	1696	Sep. 03, 2024	Sep. 02, 2025
SPEAG	Data Acquisition Electronics	DAE4	1697	Nov. 14, 2024	Nov. 13, 2025
SPEAG	Data Acquisition Electronics	DAE4ip	1800	Jun. 18, 2024	Jun. 17, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	3931	Nov. 19, 2024	Nov. 18, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7625	Dec. 13, 2024	Dec. 12, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7694	Nov. 18, 2024	Nov. 17, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7700	Feb. 01, 2024	Jan. 31, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7785	Nov. 28, 2024	Nov. 27, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7813	May. 30, 2024	May. 29, 2025
Testo	Hygro meter	608-H1	45196600	Oct. 28, 2024	Oct. 27, 2025
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Nov. 12, 2024	Nov. 11, 2025
Keysight	5G Wireless Test Platform	E7515B	MY58300712	Apr. 22, 2024	Apr. 21, 2025
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Sep. 24, 2024	Sep. 23, 2025
Keysight	ENA Network Analyzer	E5071C	MY46104758	Oct. 20, 2024	Oct. 19, 2025
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 17, 2024	Sep. 16, 2025
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3690	Aug. 07, 2024	Aug. 06, 2025
Anritsu	Power Meter	ML2495A	1419002	Aug. 13, 2024	Aug. 12, 2025
Anritsu	Power Sensor	MA2411B	1911176	Aug. 13, 2024	Aug. 12, 2025
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 09, 2024	Jul. 08, 2025
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 23, 2024	Oct. 22, 2025
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 $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.

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

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	22.5	0.886	42.900	0.89	41.90	-0.45	2.39	± 5	2024/12/23
750	22.3	0.880	42.700	0.89	41.90	-1.12	1.91	± 5	2024/12/25
750	22.7	0.893	41.500	0.89	41.90	0.34	-0.95	± 5	2025/1/1
750	22.5	0.893	43.000	0.89	41.90	0.34	2.63	± 5	2025/1/7
750	22.6	0.892	43.100	0.89	41.90	0.22	2.86	± 5	2025/1/12
835	22.4	0.932	41.900	0.90	41.50	3.56	0.96	± 5	2024/12/24
835	22.7	0.927	41.200	0.90	41.50	3.00	-0.72	± 5	2025/1/1
835	22.5	0.928	42.700	0.90	41.50	3.11	2.89	± 5	2025/1/7
835	22.6	0.926	42.800	0.90	41.50	2.89	3.13	± 5	2025/1/12
1750	22.5	1.370	41.000	1.37	40.10	0.00	2.24	± 5	2024/12/31
1750	22.6	1.380	40.700	1.37	40.10	0.73	1.50	± 5	2025/1/8
1750	22.7	1.380	40.800	1.37	40.10	0.73	1.75	± 5	2025/1/17
1900	22.5	1.450	39.500	1.40	40.00	3.57	-1.25	± 5	2024/12/31
1900	22.6	1.400	40.500	1.40	40.00	0.00	1.25	± 5	2025/1/8
1900	22.6	1.430	38.600	1.40	40.00	2.14	-3.50	± 5	2025/1/14
2300	22.5	1.680	39.000	1.67	39.50	0.60	-1.27	± 5	2025/1/5
2300	22.5	1.630	40.500	1.67	39.50	-2.40	2.53	± 5	2025/1/9
2300	22.7	1.680	40.800	1.67	39.50	0.60	3.29	± 5	2025/1/17
2600	22.6	1.970	39.600	1.96	39.00	0.51	1.54	± 5	2024/12/26
2600	22.5	1.900	38.400	1.96	39.00	-3.06	-1.54	± 5	2025/1/5
2600	22.5	1.920	39.100	1.96	39.00	-2.04	0.26	± 5	2025/1/6
2600	22.1	1.970	38.300	1.96	39.00	0.51	-1.79	± 5	2025/1/11
2600	22.3	1.960	39.400	1.96	39.00	0.00	1.03	± 5	2025/1/15
3500	22.9	3.000	37.800	2.91	37.90	3.09	-0.26	± 5	2024/12/27
3500	22.4	2.940	38.400	2.91	37.90	1.03	1.32	± 5	2024/12/30
3500	22.5	2.960	38.600	2.91	37.90	1.72	1.85	± 5	2025/1/2
3500	22.5	2.980	39.000	2.91	37.90	2.41	2.90	± 5	2025/1/3
3500	22.6	2.910	37.900	2.91	37.90	0.00	0.00	± 5	2025/1/4
3500	22.5	2.890	37.900	2.91	37.90	-0.69	0.00	± 5	2025/1/10
3500	22.3	2.930	37.900	2.91	37.90	0.69	0.00	± 5	2025/1/13
3500	22.6	2.990	38.000	2.91	37.90	2.75	0.26	± 5	2025/1/16
3500	22.4	2.950	37.100	2.91	37.90	1.37	-2.11	± 5	2025/1/18
3700	22.6	3.180	38.500	3.12	37.70	1.92	2.12	± 5	2024/12/28
3700	22.4	3.120	37.500	3.12	37.70	0.00	-0.53	± 5	2024/12/29
3700	22.6	3.110	37.700	3.12	37.70	-0.32	0.00	± 5	2025/1/4
3700	22.5	3.080	37.800	3.12	37.70	-1.28	0.27	± 5	2025/1/10
3700	22.3	3.090	37.700	3.12	37.70	-0.96	0.00	± 5	2025/1/13
3700	22.6	3.210	37.800	3.12	37.70	2.88	0.27	± 5	2025/1/16
3700	22.4	3.130	36.900	3.12	37.70	0.32	-2.12	± 5	2025/1/18
3700	22.5	3.080	38.500	3.12	37.70	-1.28	2.12	± 5	2025/1/19
3700	22.3	3.090	38.800	3.12	37.70	-0.96	2.92	± 5	2025/1/20
3900	22.4	3.290	37.300	3.33	37.51	-1.20	-0.56	± 5	2024/12/29
3900	22.6	3.320	37.500	3.33	37.51	-0.30	-0.03	± 5	2025/1/4
3900	22.6	3.420	37.600	3.33	37.51	2.70	0.24	± 5	2025/1/16
3900	22.4	3.330	36.600	3.33	37.51	0.00	-2.43	± 5	2025/1/18

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 (%)
SAR-13	2024/12/23	750	50	D750V3-1107	EX3DV4 - SN7700	DAE4 Sn661	0.397	8.540	7.94	-7.03
SAR-13	2024/12/25	750	50	D750V3-1107	EX3DV4 - SN7700	DAE4 Sn661	0.395	8.540	7.9	-7.49
SAR-12	2025/1/1	750	50	D750V3-1107	EX3DV4 - SN7694	DAE4 Sn1697	0.419	8.540	8.38	-1.87
SAR-17	2025/1/7	750	50	D750V3-1107	EX3DV4 - SN7813	DAE4 Sn661	0.441	8.540	8.82	3.28
SAR-16	2025/1/12	750	50	D750V3-1107	EX3DV4 - SN3931	DAE4 Sn703	0.421	8.540	8.42	-1.41
SAR-13	2024/12/24	835	50	D835V2-4d167	EX3DV4 - SN7700	DAE4 Sn1696	0.475	9.800	9.5	-3.06
SAR-12	2025/1/1	835	50	D835V2-499	EX3DV4 - SN7694	DAE4 Sn1697	0.496	9.440	9.92	5.08
SAR-17	2025/1/7	835	50	D835V2-499	EX3DV4 - SN7813	DAE4 Sn661	0.515	9.440	10.3	9.11
SAR-16	2025/1/12	835	50	D835V2-499	EX3DV4 - SN3931	DAE4 Sn703	0.504	9.440	10.08	6.78
SAR-12	2024/12/31	1750	50	D1750V2-1112	EX3DV4 - SN7694	DAE4 Sn1697	1.750	36.900	35	-5.15
SAR-17	2025/1/8	1750	50	D1750V2-1112	EX3DV4 - SN7813	DAE4 Sn661	1.820	36.900	36.4	-1.36
SAR-19	2025/1/17	1750	50	D1750V2-1112	EX3DV4 - SN7785	DAE4 Sn1694	1.830	36.900	36.6	-0.81
SAR-12	2024/12/31	1900	50	D1900V2-5d093	EX3DV4 - SN7694	DAE4 Sn1697	1.940	39.900	38.8	-2.76
SAR-17	2025/1/8	1900	50	D1900V2-5d093	EX3DV4 - SN7813	DAE4 Sn661	1.890	39.900	37.8	-5.26
SAR-16	2025/1/14	1900	50	D1900V2-5d093	EX3DV4 - SN3931	DAE4 Sn703	1.870	39.900	37.4	-6.27
SAR-12	2025/1/5	2300	50	D2300V2-1006	EX3DV4 - SN7694	DAE4 Sn1697	2.240	48.300	44.8	-7.25
SAR-17	2025/1/9	2300	50	D2300V2-1006	EX3DV4 - SN7813	DAE4 Sn661	2.240	48.300	44.8	-7.25
SAR-19	2025/1/17	2300	50	D2300V2-1088	EX3DV4 - SN7785	DAE4 Sn1694	2.380	48.200	47.6	-1.24
SAR-13	2024/12/26	2600	50	D2600V2-1008	EX3DV4 - SN7700	DAE4 Sn1696	2.650	55.700	53	-4.85
SAR-12	2025/1/5	2600	50	D2600V2-1089	EX3DV4 - SN7694	DAE4 Sn1697	2.540	55.400	50.8	-8.30
SAR-17	2025/1/6	2600	50	D2600V2-1089	EX3DV4 - SN7813	DAE4 Sn661	2.620	55.400	52.4	-5.42
SAR-17	2025/1/11	2600	50	D2600V2-1089	EX3DV4 - SN7813	DAE4 Sn661	2.630	55.400	52.6	-5.05
SAR-16	2025/1/15	2600	50	D2600V2-1089	EX3DV4 - SN3931	DAE4 Sn703	2.690	55.400	53.8	-2.89
SAR-13	2024/12/27	3500	50	D3500V2-1014	EX3DV4 - SN7700	DAE4 Sn1696	3.280	67.200	65.6	-2.38
SAR-13	2024/12/30	3500	50	D3500V2-1036	EX3DV4 - SN7700	DAE4 Sn661	3.050	67.400	61	-9.50
SAR-13	2025/1/2	3500	50	D3500V2-1036	EX3DV4 - SN7700	DAE4 Sn661	3.100	67.400	62	-8.01
SAR-16	2025/1/3	3500	50	D3500V2-1036	EX3DV4 - SN3931	DAE4 Sn703	3.480	67.400	69.6	3.26
SAR-12	2025/1/4	3500	50	D3500V2-1014	EX3DV4 - SN7694	DAE4 Sn1697	3.100	67.200	62	-7.74
SAR-17	2025/1/10	3500	50	D3500V2-1014	EX3DV4 - SN7813	DAE4 Sn661	3.290	67.200	65.8	-2.08
SAR-17	2025/1/13	3500	50	D3500V2-1036	EX3DV4 - SN7813	DAE4 Sn661	3.110	67.400	62.2	-7.72
SAR-16	2025/1/16	3500	50	D3500V2-1036	EX3DV4 - SN3931	DAE4 Sn703	3.370	67.400	67.4	0.00
SAR-18	2025/1/18	3500	50	D3500V2-1036	EX3DV4 - SN7625	DAE4ip Sn1800	3.400	67.400	68	0.89
SAR-16	2024/12/28	3700	50	D3700V2-1022	EX3DV4 - SN3931	DAE4 Sn703	3.410	68.100	68.2	0.15
SAR-18	2024/12/29	3700	50	D3700V2-1022	EX3DV4 - SN7625	DAE4ip Sn1800	3.370	68.100	67.4	-1.03
SAR-12	2025/1/4	3700	50	D3700V2-1022	EX3DV4 - SN7694	DAE4 Sn1697	3.320	68.100	66.4	-2.50
SAR-17	2025/1/10	3700	50	D3700V2-1022	EX3DV4 - SN7813	DAE4 Sn661	3.210	68.100	64.2	-5.73
SAR-17	2025/1/13	3700	50	D3700V2-1022	EX3DV4 - SN7813	DAE4 Sn661	3.280	68.100	65.6	-3.67
SAR-16	2025/1/16	3700	50	D3700V2-1022	EX3DV4 - SN3931	DAE4 Sn703	3.250	68.100	65	-4.55
SAR-18	2025/1/18	3700	50	D3700V2-1006	EX3DV4 - SN7625	DAE4ip Sn1800	3.310	65.600	66.2	0.91
SAR-16	2025/1/19	3700	50	D3700V2-1022	EX3DV4 - SN3931	DAE4 Sn703	3.310	68.100	66.2	-2.79
SAR-16	2025/1/20	3700	50	D3700V2-1022	EX3DV4 - SN3931	DAE4 Sn703	3.320	68.100	66.4	-2.50
SAR-18	2024/12/29	3900	50	D3900V2-1017	EX3DV4 - SN7625	DAE4ip Sn1800	3.190	68.700	63.8	-7.13
SAR-12	2025/1/4	3900	50	D3900V2-1092	EX3DV4 - SN7694	DAE4 Sn1697	3.150	67.000	63	-5.97
SAR-16	2025/1/16	3900	50	D3900V2-1092	EX3DV4 - SN3931	DAE4 Sn703	3.130	67.000	62.6	-6.57
SAR-18	2025/1/18	3900	50	D3900V2-1092	EX3DV4 - SN7625	DAE4ip Sn1800	3.210	67.000	64.2	-4.18

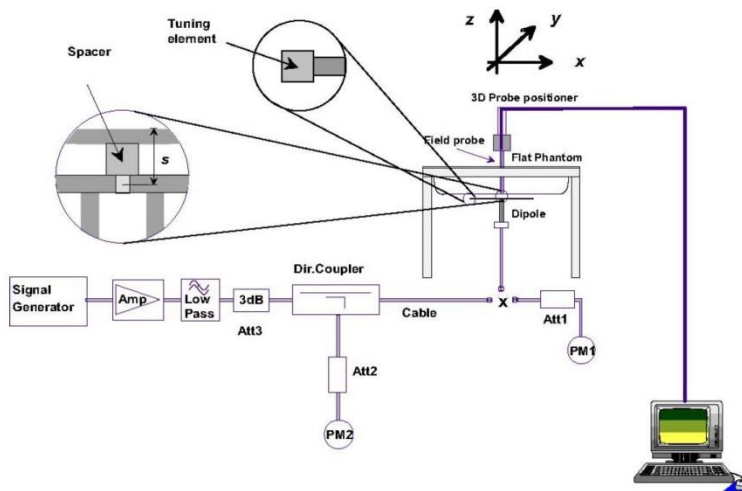

Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

11. RF Exposure Positions

11.1 SAR Testing for Tablet

This device can be used also in full sized tablet exposure conditions, due to its size. Per FCC KDB 616217, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR exclusion threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

12. UL/DL Carrier aggregation

<LTE DL Carrier Aggregation>

General Note:

1. According to 202410 TCB workshop, the downlink (DL) pertains to receiver functionality, thus it is not related to RF exposure compliance limits related to cumulative effects of different transmitters.
2. According to 202410 TCB workshop, equipment authorization applications shall refer to the worst-case UL powers resulting from all the possible modes of operations. Accordingly, CA-DL cases do not need to be analyzed separately, unless pertinent to establishing UL power setting.
3. This device supports LTE carrier aggregation in the downlink. All uplink maximum output power with downlink carrier aggregation active does not show more than ¼ dB higher than the maximum output power without downlink carrier aggregation active, therefore SAR evaluation with downlink carrier aggregation active can be excluded

<LTE UL carrier aggregation>

General Note:

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

2CC Uplink Carrier Aggregation	
Number	Combination
1	5B
2	7C
3	66B
4	66C
5	38C
6	41C
7	42C
8	48C

Sensor OFF

CA_5B_Main										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20450	20549	QPSK	1	0	0	0	1	0	22.54	24
20475	20574	QPSK	1	49	1	0	2	0	22.49	24
20600	20501	QPSK	1	0	1	49	2	0	22.58	24

CA_41C_Main										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	22.29	24
40185	39987	QPSK	1	0	0	0	1	0	22.77	24
40620	40422	QPSK	1	0	0	0	1	0	22.53	24
41055	40857	QPSK	1	0	0	0	1	0	22.72	24
41490	41292	QPSK	1	0	0	0	1	0	22.5	24

CA_42C_Main										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
43190	43388	QPSK	1	0	0	0	1	0	21.41	22
43241	43439	QPSK	1	0	0	0	1	0	21.27	22
43292	43490	QPSK	1	0	0	0	1	0	21.41	22

CA_48C_Main										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	20.83	22
55632	55830	QPSK	1	0	0	0	1	0	20.68	22
55952	56150	QPSK	1	0	0	0	1	0	20.71	22
56442	56640	QPSK	1	0	0	0	1	0	20.86	22

CA_7C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	22.49	24
21100	20902	QPSK	1	0	1	99	2	0	22.2	24
21350	21152	QPSK	1	0	1	99	2	0	22.65	24

CA_66B_MIMO2										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	23.1	24
132229	132322	QPSK	1	0	0	0	1	0	23.07	24
132504	132597	QPSK	1	0	0	0	1	0	23.15	24

CA_66C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	21.94	24
132322	132124	QPSK	1	0	1	99	2	0	22.08	24
132572	132374	QPSK	1	0	1	99	2	0	22.19	24

CA_38C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	22.43	24
37901	38000	QPSK	1	0	0	0	1	0	22.7	24
38150	37952	QPSK	1	0	0	0	1	0	22.63	24

CA_41C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	22.17	24
40185	39987	QPSK	1	0	0	0	1	0	22.56	24
40620	40422	QPSK	1	0	0	0	1	0	22.41	24
41055	40857	QPSK	1	0	0	0	1	0	22.51	24
41490	41292	QPSK	1	0	0	0	1	0	22.34	24

CA_42C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
43190	43388	QPSK	1	0	0	0	1	0	21.57	22
43241	43439	QPSK	1	0	0	0	1	0	21.6	22
43292	43490	QPSK	1	0	0	0	1	0	21.59	22

CA_48C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	20.78	22
55632	55830	QPSK	1	0	0	0	1	0	20.76	22
55952	56150	QPSK	1	0	0	0	1	0	20.76	22
56442	56640	QPSK	1	0	0	0	1	0	20.77	22

Sensor ON

CA_5B_Main										
Combination 10MHz+10MHz (50RB+50RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20450	20549	QPSK	1	0	0	0	1	0	16.66	17
20475	20574	QPSK	1	49	1	0	2	0	16.65	17
20600	20501	QPSK	1	0	1	49	2	0	16.63	17

CA_41C_Main										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	13.29	14.5
40185	39987	QPSK	1	0	0	0	1	0	13.34	14.5
40620	40422	QPSK	1	0	0	0	1	0	13.35	14.5
41055	40857	QPSK	1	0	0	0	1	0	13.39	14.5
41490	41292	QPSK	1	0	0	0	1	0	13.4	14.5

CA_42C_Main										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
43190	43388	QPSK	1	0	0	0	1	0	12.47	13
43241	43439	QPSK	1	0	0	0	1	0	12.41	13
43292	43490	QPSK	1	0	0	0	1	0	12.44	13

CA_48C_Main										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	11.26	12
55632	55830	QPSK	1	0	0	0	1	0	11.3	12
55952	56150	QPSK	1	0	0	0	1	0	11.29	12
56442	56640	QPSK	1	0	0	0	1	0	11.34	12

CA_7C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
20850	21048	QPSK	1	0	0	0	1	0	9.86	11
21100	20902	QPSK	1	0	1	99	2	0	10.12	11
21350	21152	QPSK	1	0	1	99	2	0	10.17	11

CA_66B_MIMO2										
Combination 15MHz+5MHz (75RB+25RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132047	132140	QPSK	1	0	0	0	1	0	11.75	12.5
132229	132322	QPSK	1	0	0	0	1	0	11.8	12.5
132504	132597	QPSK	1	0	0	0	1	0	11.77	12.5

CA_66C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
132072	132270	QPSK	1	0	0	0	1	0	11.69	12.5
132322	132124	QPSK	1	0	1	99	2	0	11.87	12.5
132572	132374	QPSK	1	0	1	99	2	0	11.8	12.5

CA_38C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
37850	38048	QPSK	1	0	0	0	1	0	11.15	12.5
37901	38000	QPSK	1	0	0	0	1	0	11.2	12.5
38150	37952	QPSK	1	0	0	0	1	0	11.33	12.5

CA_41C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
39750	39948	QPSK	1	0	0	0	1	0	11.29	12.5
40185	39987	QPSK	1	0	0	0	1	0	11.27	12.5
40620	40422	QPSK	1	0	0	0	1	0	11.38	12.5
41055	40857	QPSK	1	0	0	0	1	0	11.41	12.5
41490	41292	QPSK	1	0	0	0	1	0	11.27	12.5

CA_42C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
43190	43388	QPSK	1	0	0	0	1	0	11.56	12
43241	43439	QPSK	1	0	0	0	1	0	11.51	12
43292	43490	QPSK	1	0	0	0	1	0	11.6	12

CA_48C_MIMO2										
Combination 20MHz+20MHz (100RB+100RB)										
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset				
55340	55538	QPSK	1	0	0	0	1	0	14.02	14.5
55632	55830	QPSK	1	0	0	0	1	0	13.95	14.5
55952	56150	QPSK	1	0	0	0	1	0	13.99	14.5
56442	56640	QPSK	1	0	0	0	1	0	13.98	14.5

<SAR test exclusion table>
General Note:

1. The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
2. Maximum power is the source-based time-average power and represents the maximum RF output power among production units
3. Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
4. Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.
5. Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison
6. Per KDB 447498 D01v06, at 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following
 - a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

<Main>

	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 71	LTE Band 12	LTE Band 13	LTE Band 14	LTE Band 17	LTE Band 5	LTE Band 26	LTE Band 4	LTE Band 66	LTE Band 2	LTE Band 25	LTE Band 30	LTE Band 7	LTE Band 38	LTE Band 41	LTE Band 42	LTE Band 48	LTE Band n77	LTE Band n78
Exposure Position	Calculated Frequency (MHz)	846	1750	1907	695	715	784	795	713	848	848	1754	1779	1909	1914	2312	2567	2617	2687	3597	3690	3650	3650
	Maximum power (dBm)	24.5	24.5	24.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	22.0	27.0	27.0
	Maximum rated power (mW)	281.84	281.84	281.84	251.19	251.19	251.19	251.19	251.19	251.19	251.19	251.19	251.19	251.19	251.19	251.19	251.19	251.19	251.19	158.49	158.49	501.19	501.19
Bottom Side	Separation distance (mm)	5.0																					
	exclusion threshold	51.9	74.6	77.8	41.9	42.5	44.5	44.8	42.4	46.3	46.3	66.5	67.0	69.4	69.5	76.4	80.5	81.3	82.4	60.1	60.9	191.5	191.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom Edge	Separation distance (mm)	208.0																					
	exclusion threshold	1054.0	1693.0	1689.0	912.0	931.0	1749.0	1748.0	929.0	1056.0	1056.0	1961.0	1986.0	2119.0	2125.0	1679.0	1674.0	1673.0	1672.0	1659.0	1658.0	1659.0	1659.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Back	Separation distance (mm)	5.0																					
	exclusion threshold	51.9	74.6	77.8	41.9	42.5	44.5	44.8	42.4	46.3	46.3	66.5	67.0	69.4	69.5	76.4	80.5	81.3	82.4	60.1	60.9	191.5	191.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Top Edge	Separation distance (mm)	5.8																					
	exclusion threshold	44.7	64.3	67.1	36.1	36.6	38.4	38.6	36.6	39.9	39.9	57.4	57.8	59.8	59.9	65.9	69.4	70.1	71.0	51.8	52.5	165.1	165.1
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right Edge	Separation distance (mm)	5.0																					
	exclusion threshold	51.9	74.6	77.8	41.9	42.5	44.5	44.8	42.4	46.3	46.3	66.5	67.0	69.4	69.5	76.4	80.5	81.3	82.4	60.1	60.9	191.5	191.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Left Edge	Separation distance (mm)	218.3																					
	exclusion threshold	1112.0	1796.0	1792.0	960.0	980.0	1852.0	1851.0	978.0	1114.0	1114.0	2081.0	2108.0	2250.0	2256.0	1782.0	1777.0	1776.0	1775.0	1762.0	1761.0	1762.0	1762.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Exposure Position	Wireless Interface	LTE Band n12	LTE Band n14	LTE Band n5 / n26	LTE Band n71	LTE Band n2 / n25	LTE Band n41	LTE Band n48	LTE Band n77	LTE Band n78
	Calculated Frequency (MHz)	716	798	849	698	1915	2690	3700	3900	3800
	Maximum power (dBm)	24.0	24.0	24.0	24.0	24.0	27.0	22.0	27.0	27.0
	Maximum rated power(mW)	251.19	251.19	251.19	251.19	251.19	501.19	158.49	501.19	501.19
Bottom Side	Separation distance(mm)	5.0								
	exclusion threshold	42.5	44.9	46.3	42.0	69.5	164.4	61.0	198.0	195.4
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom Edge	Separation distance(mm)	208.0								
	exclusion threshold	931.0	1008.0	1057.0	915.0	2126.0	1671.0	1658.0	1656.0	1657.0
	Testing required?	No	No	No	No	No	No	No	No	No
Back	Separation distance(mm)	5.0								
	exclusion threshold	42.5	44.9	46.3	42.0	69.5	164.4	61.0	198.0	195.4
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Top Edge	Separation distance(mm)	5.8								
	exclusion threshold	36.7	38.7	39.9	36.2	59.9	141.7	52.6	170.7	168.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right Edge	Separation distance(mm)	5.0								
	exclusion threshold	42.5	44.9	46.3	42.0	69.5	164.4	61.0	198.0	195.4
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Left Edge	Separation distance(mm)	218.3								
	exclusion threshold	981.0	1063.0	1115.0	963.0	2257.0	1774.0	1761.0	1759.0	1760.0
	Testing required?	No	No	No	No	No	No	No	No	No

<MIMO1>

Exposure Position	Wireless Interface	LTE Band n41	LTE Band n77	LTE Band n78
	Calculated Frequency (MHz)	2687	3650	3650
	Maximum power (dBm)	27.0	27.0	27.0
	Maximum rated power(mW)	501.19	501.19	501.19
Bottom Side	Separation distance(mm)	5.8		
	exclusion threshold	141.7	165.1	165.1
	Testing required?	Yes	Yes	Yes
Bottom Edge	Separation distance(mm)	149.3		
	exclusion threshold	1085.0	1072.0	1072.0
	Testing required?	No	No	No
Back	Separation distance(mm)	5.0		
	exclusion threshold	164.3	191.5	191.5
	Testing required?	Yes	Yes	Yes
Top Edge	Separation distance(mm)	5.8		
	exclusion threshold	141.7	165.1	165.1
	Testing required?	Yes	Yes	Yes
Right Edge	Separation distance(mm)	5.0		
	exclusion threshold	164.3	191.5	191.5
	Testing required?	Yes	Yes	Yes
Left Edge	Separation distance(mm)	300.0		
	exclusion threshold	2592.0	2579.0	2579.0
	Testing required?	No	No	No

<MIMO2>

Exposure Position	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 4	LTE Band 66	LTE Band 2	LTE Band 25	LTE Band 30	LTE Band 7	LTE Band 38	LTE Band 43	LTE Band 41	LTE Band 42	LTE Band 48	LTE Band n77	LTE Band n78
	Calculated Frequency (MHz)	846	1750	1907	1754	1779	1909	1914	2312	2567	2617	3690	2687	3597	3690	3650	3650
	Maximum power (dBm)	24.5	24.5	24.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	22.0	24.0	22.0	22.0	27.0	27.0
	Maximum rated power(mW)	281.84	281.84	281.84	251.19	251.19	251.19	251.19	251.19	251.19	251.19	158.49	251.19	158.49	158.49	501.19	501.19
Bottom Side	Separation distance(mm)	5.0															
	exclusion threshold	51.9	74.6	77.8	66.5	67.0	69.4	69.5	76.4	80.5	81.3	60.9	82.4	60.1	60.9	191.5	191.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom Edge	Separation distance(mm)	208.0															
	exclusion threshold	1054.0	1693.0	1689.0	1961.0	1986.0	2119.0	2125.0	1679.0	1674.0	1673.0	1658.0	1672.0	1659.0	1658.0	1659.0	1659.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Back	Separation distance(mm)	5.0															
	exclusion threshold	51.9	74.6	77.8	66.5	67.0	69.4	69.5	76.4	80.5	81.3	60.9	82.4	60.1	60.9	191.5	191.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Top Edge	Separation distance(mm)	5.8															
	exclusion threshold	44.7	64.3	67.1	57.4	57.8	59.8	59.9	65.9	69.4	70.1	52.5	71.0	51.8	52.5	165.1	165.1
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right Edge	Separation distance(mm)	300.0															
	exclusion threshold	1573.0	2613.0	2609.0	3037.0	3077.0	3290.0	3298.0	2599.0	2594.0	2593.0	2578.0	2592.0	2579.0	2578.0	2579.0	2579.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Left Edge	Separation distance(mm)	5.0															
	exclusion threshold	51.9	74.6	77.8	66.5	67.0	69.4	69.5	76.4	80.5	81.3	60.9	82.4	60.1	60.9	191.5	191.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Exposure Position	Wireless Interface	LTE Band n2 / n25	LTE Band n7	LTE Band n30	LTE Band n66	LTE Band n38	LTE Band n41	LTE Band n48	LTE Band n77	LTE Band n78
	Calculated Frequency (MHz)	1915	698	2315	1780	2620	2690	3700	3900	3800
	Maximum power (dBm)	24.0	24.0	24.0	24.0	24.0	27.0	22.0	27.0	27.0
	Maximum rated power(mW)	251.19	251.19	251.19	251.19	251.19	501.19	158.49	501.19	501.19
Bottom Side	Separation distance(mm)	5.0								
	exclusion threshold	69.5	42.0	76.4	67.0	81.3	164.4	61.0	198.0	195.4
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom Edge	Separation distance(mm)	208.0								
	exclusion threshold	2126.0	915.0	1679.0	1692.0	1673.0	1671.0	1658.0	1656.0	1657.0
	Testing required?	No	No	No	No	No	No	No	No	No
Back	Separation distance(mm)	5.0								
	exclusion threshold	69.5	42.0	76.4	67.0	81.3	164.4	61.0	198.0	195.4
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Top Edge	Separation distance(mm)	5.8								
	exclusion threshold	59.9	36.2	65.9	57.8	70.1	141.7	52.6	170.7	168.5
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Right Edge	Separation distance(mm)	300.0								
	exclusion threshold	3300.0	1343.0	2599.0	2612.0	2593.0	2591.0	2578.0	2576.0	2577.0
	Testing required?	No	No	No	No	No	No	No	No	No
Left Edge	Separation distance(mm)	5.0								
	exclusion threshold	69.5	42.0	76.4	67.0	81.3	164.4	61.0	198.0	195.4
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

<Aux>

Exposure Position	Wireless Interface	LTE Band n41	LTE Band n77	LTE Band n78
	Calculated Frequency (MHz)	2687	3650	3650
	Maximum power (dBm)	27.0	27.0	27.0
	Maximum rated power(mW)	501.19	501.19	501.19
Bottom Side	Separation distance(mm)	5.8		
	exclusion threshold	141.7	165.1	165.1
	Testing required?	Yes	Yes	Yes
Bottom Edge	Separation distance(mm)	208.0		
	exclusion threshold	1672.0	1659.0	1659.0
	Testing required?	No	No	No
Back	Separation distance(mm)	5.0		
	exclusion threshold	164.3	191.5	191.5
	Testing required?	Yes	Yes	Yes
Top Edge	Separation distance(mm)	5.8		
	exclusion threshold	141.7	165.1	165.1
	Testing required?	Yes	Yes	Yes
Right Edge	Separation distance(mm)	235.0		
	exclusion threshold	1942.0	1929.0	1929.0
	Testing required?	No	No	No
Left Edge	Separation distance(mm)	5.0		
	exclusion threshold	164.3	191.5	191.5
	Testing required?	Yes	Yes	Yes

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.

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

LTE Note:

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

5G NR Note:

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

**13.1 Body SAR****<WCDMA SAR>**

Plot No.	Band	Mode	Test Position	Gap (mm)	User Scenario	Power Reduction	Ch.	Freq. (MHz)	Antenna Vendor	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
01	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Bottom Side	0mm	Laptop	ON	9400	1880	ICT	15.15	15.50	1.084	0.08	0.463	0.502
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Back	0mm	Tablet	ON	9400	1880	ICT	15.15	15.50	1.084	0.03	0.905	0.981
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Back	0mm	Tablet	ON	9262	1852.4	ICT	14.81	15.50	1.172	0.01	0.994	1.165
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Back	0mm	Tablet	ON	9538	1907.6	ICT	15.06	15.50	1.107	-0.08	0.808	0.894
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Top Edge	0mm	Tablet	ON	9400	1880	ICT	15.15	15.50	1.084	-0.08	0.001	0.001
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Left Edge	0mm	Tablet	ON	9400	1880	ICT	15.15	15.50	1.084	0.1	0.492	0.533
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Bottom Side	29mm	Laptop	OFF	9400	1880	ICT	23.06	24.50	1.393	0.08	0.109	0.152
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Back	26mm	Tablet	OFF	9400	1880	ICT	23.06	24.50	1.393	0.03	0.132	0.184
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Top Edge	24mm	Tablet	OFF	9400	1880	ICT	23.06	24.50	1.393	-0.08	0.001	0.001
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Left Edge	21mm	Tablet	OFF	9400	1880	ICT	23.06	24.50	1.393	-0.08	0.229	0.319
	WCDMA II_Ant MIMO2	RMC 12.2Kbps	Back	0mm	Tablet	ON	9262	1852.4	AWAN	14.81	15.50	1.172	-0.18	0.627	0.735
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Bottom Side	0mm	Laptop	ON	1312	1712.4	ICT	12.32	13.50	1.312	0.1	0.216	0.283
02	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Back	0mm	Tablet	ON	1312	1712.4	ICT	12.32	13.50	1.312	0.11	0.796	1.045
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Back	0mm	Tablet	ON	1413	1732.6	ICT	12.08	13.50	1.387	0.08	0.721	1.000
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Back	0mm	Tablet	ON	1513	1752.6	ICT	12.26	13.50	1.330	-0.17	0.715	0.951
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Top Edge	0mm	Tablet	ON	1312	1712.4	ICT	12.32	13.50	1.312	-0.03	0.001	0.001
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Left Edge	0mm	Tablet	ON	1312	1712.4	ICT	12.32	13.50	1.312	0.14	0.352	0.462
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Bottom Side	29mm	Laptop	OFF	1312	1712.4	ICT	23.62	24.50	1.225	0.1	0.106	0.130
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Back	26mm	Tablet	OFF	1312	1712.4	ICT	23.62	24.50	1.225	0.1	0.124	0.152
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Top Edge	24mm	Tablet	OFF	1312	1712.4	ICT	23.62	24.50	1.225	0.12	0.001	0.001
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Left Edge	21mm	Tablet	OFF	1312	1712.4	ICT	23.62	24.50	1.225	0.08	0.227	0.278
	WCDMA IV_Ant MIMO2	RMC 12.2Kbps	Back	0mm	Tablet	ON	1413	1732.6	AWAN	12.08	13.50	1.387	0.11	0.486	0.674
	WCDMA V_Ant Main	RMC 12.2Kbps	Bottom Side	0mm	Laptop	ON	4132	826.4	ICT	14.99	16.00	1.262	-0.17	0.651	0.821
	WCDMA V_Ant Main	RMC 12.2Kbps	Bottom Side	0mm	Laptop	ON	4182	836.4	ICT	14.89	16.00	1.291	0.04	0.610	0.788
03	WCDMA V_Ant Main	RMC 12.2Kbps	Bottom Side	0mm	Laptop	ON	4233	846.6	ICT	14.89	16.00	1.291	-0.01	0.668	0.863
	WCDMA V_Ant Main	RMC 12.2Kbps	Back	0mm	Tablet	ON	4132	826.4	ICT	14.99	16.00	1.262	0.05	0.828	1.045
	WCDMA V_Ant Main	RMC 12.2Kbps	Back	0mm	Tablet	ON	4182	836.4	ICT	14.89	16.00	1.291	0.06	0.777	1.003
	WCDMA V_Ant Main	RMC 12.2Kbps	Back	0mm	Tablet	ON	4233	846.6	ICT	14.89	16.00	1.291	-0.09	0.850	1.098
	WCDMA V_Ant Main	RMC 12.2Kbps	Top Edge	0mm	Tablet	ON	4132	826.4	ICT	14.99	16.00	1.262	-0.08	0.177	0.223
	WCDMA V_Ant Main	RMC 12.2Kbps	Right Edge	0mm	Tablet	ON	4132	826.4	ICT	14.99	16.00	1.262	0.12	0.894	1.128
	WCDMA V_Ant Main	RMC 12.2Kbps	Right Edge	0mm	Tablet	ON	4182	836.4	ICT	14.89	16.00	1.291	0.13	0.784	1.012
	WCDMA V_Ant Main	RMC 12.2Kbps	Right Edge	0mm	Tablet	ON	4233	846.6	ICT	14.89	16.00	1.291	0.12	0.726	0.937
	WCDMA V_Ant Main	RMC 12.2Kbps	Bottom Side	35mm	Laptop	OFF	4132	826.4	ICT	23.42	24.50	1.282	-0.17	0.046	0.059
	WCDMA V_Ant Main	RMC 12.2Kbps	Back	31mm	Tablet	OFF	4132	826.4	ICT	23.42	24.50	1.282	0.14	0.055	0.071
	WCDMA V_Ant Main	RMC 12.2Kbps	Top Edge	34mm	Tablet	OFF	4132	826.4	ICT	23.42	24.50	1.282	0.11	0.001	0.001
	WCDMA V_Ant Main	RMC 12.2Kbps	Right Edge	14mm	Tablet	OFF	4132	826.4	ICT	23.42	24.50	1.282	-0.05	0.108	0.138
	WCDMA V_Ant Main	RMC 12.2Kbps	Right Edge	0mm	Tablet	ON	4132	826.4	AWAN	14.99	16.00	1.262	0.03	0.378	0.477



<LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	User Scenario	Power Reduction	Ch.	Freq. (MHz)	Antenna Vendor	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 MIMO2	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	21350	2560	ICT	10.84	11.00	1.038			0.08	0.214	0.222
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Bottom Side	0mm	Laptop	ON	21350	2560	ICT	10.86	11.00	1.033			0.01	0.214	0.221
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	21350	2560	ICT	10.84	11.00	1.038			-0.08	0.959	0.995
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	20850	2510	ICT	10.50	11.00	1.122			0.1	0.741	0.831
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	21100	2535	ICT	10.62	11.00	1.091			-0.18	0.792	0.864
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	21350	2560	ICT	10.86	11.00	1.033			0.1	0.785	0.811
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	20850	2510	ICT	10.49	11.00	1.125			0.12	0.741	0.833
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	21100	2535	ICT	10.66	11.00	1.081			0.08	0.930	1.006
	LTE Band 7_Ant MIMO2	20M	QPSK	100	0	Back	0mm	Tablet	ON	21350	2560	ICT	10.80	11.00	1.047			-0.17	0.930	0.974
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	21350	2560	ICT	10.84	11.00	1.038			-0.03	0.129	0.134
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Top Edge	0mm	Tablet	ON	21350	2560	ICT	10.86	11.00	1.033			0.14	0.132	0.136
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	21350	2560	ICT	10.84	11.00	1.038			0.11	1.030	1.069
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	20850	2510	ICT	10.50	11.00	1.122			-0.05	0.727	0.816
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	21100	2535	ICT	10.62	11.00	1.091			0.18	0.836	0.912
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	21350	2560	ICT	10.86	11.00	1.033			0.14	1.030	1.064
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	20850	2510	ICT	10.49	11.00	1.125			-0.17	0.734	0.825
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	21100	2535	ICT	10.66	11.00	1.081			0.17	0.843	0.912
	LTE Band 7_Ant MIMO2	20M	QPSK	100	0	Left Edge	0mm	Tablet	ON	21350	2560	ICT	10.80	11.00	1.047			-0.05	0.996	1.043
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Bottom Side	29mm	Laptop	OFF	21350	2560	ICT	22.80	24.00	1.318			0.18	0.158	0.208
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Bottom Side	29mm	Laptop	OFF	21350	2560	ICT	21.86	23.00	1.300			0.14	0.125	0.163
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Back	26mm	Tablet	OFF	21350	2560	ICT	22.80	24.00	1.318			-0.05	0.325	0.428
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Back	26mm	Tablet	OFF	21350	2560	ICT	21.86	23.00	1.300			0.01	0.254	0.330
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Top Edge	24mm	Tablet	OFF	21350	2560	ICT	22.80	24.00	1.318			0.1	0.001	0.001
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Top Edge	24mm	Tablet	OFF	21350	2560	ICT	21.86	23.00	1.300			-0.17	0.001	0.001
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Left Edge	21mm	Tablet	OFF	21350	2560	ICT	22.80	24.00	1.318			0.04	0.499	0.658
	LTE Band 7_Ant MIMO2	20M	QPSK	50	24	Left Edge	21mm	Tablet	OFF	21350	2560	ICT	21.86	23.00	1.300			-0.01	0.397	0.516
	LTE Band 7C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	21350+21152	2560	ICT	10.17	11.00	1.211			0.03	0.859	1.040
	LTE Band 7C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	20850+21048	2510	ICT	9.86	11.00	1.300			0.01	0.656	0.853
	LTE Band 7C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	21100+20902	2535	ICT	10.12	11.00	1.225			0.03	0.741	0.907
04	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	21350	2560	AWAN	10.84	11.00	1.038			-0.01	1.090	1.131
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	20850	2510	AWAN	10.50	11.00	1.122			0.01	0.756	0.848
	LTE Band 7_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	21100	2535	AWAN	10.62	11.00	1.091			0.1	0.879	0.959
	LTE Band 12_Ant Main	10M	QPSK	1	25	Bottom Side	0mm	Laptop	ON	23095	707.5	ICT	15.76	16.00	1.057			-0.1	0.203	0.215
	LTE Band 12_Ant Main	10M	QPSK	25	12	Bottom Side	0mm	Laptop	ON	23095	707.5	ICT	15.82	16.00	1.042			0.07	0.204	0.213
	LTE Band 12_Ant Main	10M	QPSK	1	25	Back	0mm	Tablet	ON	23095	707.5	ICT	15.76	16.00	1.057			0.01	0.554	0.585
	LTE Band 12_Ant Main	10M	QPSK	25	12	Back	0mm	Tablet	ON	23095	707.5	ICT	15.82	16.00	1.042			-0.15	0.540	0.563
	LTE Band 12_Ant Main	10M	QPSK	1	25	Top Edge	0mm	Tablet	ON	23095	707.5	ICT	15.76	16.00	1.057			0.19	0.097	0.103
	LTE Band 12_Ant Main	10M	QPSK	25	12	Top Edge	0mm	Tablet	ON	23095	707.5	ICT	15.82	16.00	1.042			0.07	0.095	0.099
05	LTE Band 12_Ant Main	10M	QPSK	1	25	Right Edge	0mm	Tablet	ON	23095	707.5	ICT	15.76	16.00	1.057			-0.13	1.070	1.131
	LTE Band 12_Ant Main	10M	QPSK	25	12	Right Edge	0mm	Tablet	ON	23095	707.5	ICT	15.82	16.00	1.042			-0.18	1.060	1.105
	LTE Band 12_Ant Main	10M	QPSK	50	0	Right Edge	0mm	Tablet	ON	23095	707.5	ICT	15.74	16.00	1.062			-0.18	1.040	1.104
	LTE Band 12_Ant Main	10M	QPSK	1	25	Bottom Side	35mm	Laptop	OFF	23095	707.5	ICT	23.00	24.00	1.259			-0.03	0.001	0.001
	LTE Band 12_Ant Main	10M	QPSK	25	12	Bottom Side	35mm	Laptop	OFF	23095	707.5	ICT	21.96	23.00	1.271			0.04	0.001	0.001
	LTE Band 12_Ant Main	10M	QPSK	1	25	Back	31mm	Tablet	OFF	23095	707.5	ICT	23.00	24.00	1.259			-0.12	0.001	0.001
	LTE Band 12_Ant Main	10M	QPSK	25	12	Back	31mm	Tablet	OFF	23095	707.5	ICT	21.96	23.00	1.271			0.08	0.001	0.001
	LTE Band 12_Ant Main	10M	QPSK	1	25	Top Edge	34mm	Tablet	OFF	23095	707.5	ICT	23.00	24.00	1.259			-0.06	0.001	0.001
	LTE Band 12_Ant Main	10M	QPSK	25	12	Top Edge	34mm	Tablet	OFF	23095	707.5	ICT	21.96	23.00	1.271			0.05	0.001	0.001
	LTE Band 12_Ant Main	10M	QPSK	1	25	Right Edge	14mm	Tablet	OFF	23095	707.5	ICT	23.00	24.00	1.259			-0.01	0.074	0.093
	LTE Band 12_Ant Main	10M	QPSK	25	12	Right Edge	14mm	Tablet	OFF	23095	707.5	ICT	21.96	23.00	1.271			0.08	0.061	0.078
	LTE Band 12_Ant Main	10M	QPSK	1	25	Right Edge	0mm	Tablet	ON	23095	707.5	AWAN	15.76	16.00	1.057			0.03	0.465	0.491
	LTE Band 13_Ant Main	10M	QPSK	1	25	Bottom Side	0mm	Laptop	ON	23230	782	ICT	14.81	15.50	1.172			-0.15	0.180	0.211



FCC SAR TEST REPORT

Report No. : FA4D1633

	LTE Band 13_Ant Main	10M	QPSK	25	12	Bottom Side	0mm	Laptop	ON	23230	782	ICT	14.79	15.50	1.178			-0.15	0.177	0.208
	LTE Band 13_Ant Main	10M	QPSK	1	25	Back	0mm	Tablet	ON	23230	782	ICT	14.81	15.50	1.172			-0.17	0.708	0.830
	LTE Band 13_Ant Main	10M	QPSK	25	12	Back	0mm	Tablet	ON	23230	782	ICT	14.79	15.50	1.178			-0.08	0.715	0.842
	LTE Band 13_Ant Main	10M	QPSK	50	0	Back	0mm	Tablet	ON	23230	782	ICT	14.76	15.50	1.186			0.01	0.701	0.831
	LTE Band 13_Ant Main	10M	QPSK	1	25	Top Edge	0mm	Tablet	ON	23230	782	ICT	14.81	15.50	1.172			-0.04	0.092	0.108
	LTE Band 13_Ant Main	10M	QPSK	25	12	Top Edge	0mm	Tablet	ON	23230	782	ICT	14.79	15.50	1.178			-0.08	0.097	0.114
06	LTE Band 13_Ant Main	10M	QPSK	1	25	Right Edge	0mm	Tablet	ON	23230	782	ICT	14.81	15.50	1.172			-0.14	1.010	1.184
	LTE Band 13_Ant Main	10M	QPSK	25	12	Right Edge	0mm	Tablet	ON	23230	782	ICT	14.79	15.50	1.178			0.17	0.974	1.147
	LTE Band 13_Ant Main	10M	QPSK	50	0	Right Edge	0mm	Tablet	ON	23230	782	ICT	14.76	15.50	1.186			0.01	0.960	1.138
	LTE Band 13_Ant Main	10M	QPSK	1	25	Bottom Side	35mm	Laptop	OFF	23230	782	ICT	23.00	24.00	1.259			-0.03	0.001	0.001
	LTE Band 13_Ant Main	10M	QPSK	25	12	Bottom Side	35mm	Laptop	OFF	23230	782	ICT	21.97	23.00	1.268			-0.08	0.001	0.001
	LTE Band 13_Ant Main	10M	QPSK	1	25	Back	31mm	Tablet	OFF	23230	782	ICT	23.00	24.00	1.259			0.02	0.001	0.001
	LTE Band 13_Ant Main	10M	QPSK	25	12	Back	31mm	Tablet	OFF	23230	782	ICT	21.97	23.00	1.268			0.12	0.001	0.001
	LTE Band 13_Ant Main	10M	QPSK	1	25	Top Edge	34mm	Tablet	OFF	23230	782	ICT	23.00	24.00	1.259			0.18	0.001	0.001
	LTE Band 13_Ant Main	10M	QPSK	25	12	Top Edge	34mm	Tablet	OFF	23230	782	ICT	21.97	23.00	1.268			0.09	0.001	0.001
	LTE Band 13_Ant Main	10M	QPSK	1	25	Right Edge	14mm	Tablet	OFF	23230	782	ICT	23.00	24.00	1.259			-0.12	0.059	0.074
	LTE Band 13_Ant Main	10M	QPSK	25	12	Right Edge	14mm	Tablet	OFF	23230	782	ICT	21.97	23.00	1.268			-0.16	0.046	0.058
	LTE Band 13_Ant Main	10M	QPSK	1	25	Right Edge	0mm	Tablet	ON	23230	782	AWAN	14.81	15.50	1.172			0.18	0.400	0.469
	LTE Band 14_Ant Main	10M	QPSK	1	25	Bottom Side	0mm	Laptop	ON	23330	793	ICT	15.97	16.00	1.007			-0.04	0.209	0.210
	LTE Band 14_Ant Main	10M	QPSK	25	12	Bottom Side	0mm	Laptop	ON	23330	793	ICT	15.92	16.00	1.019			-0.08	0.208	0.212
	LTE Band 14_Ant Main	10M	QPSK	1	25	Back	0mm	Tablet	ON	23330	793	ICT	15.97	16.00	1.007			0.06	0.615	0.619
	LTE Band 14_Ant Main	10M	QPSK	25	12	Back	0mm	Tablet	ON	23330	793	ICT	15.92	16.00	1.019			-0.03	0.609	0.620
	LTE Band 14_Ant Main	10M	QPSK	1	25	Top Edge	0mm	Tablet	ON	23330	793	ICT	15.97	16.00	1.007			-0.03	0.111	0.112
	LTE Band 14_Ant Main	10M	QPSK	25	12	Top Edge	0mm	Tablet	ON	23330	793	ICT	15.92	16.00	1.019			0.08	0.120	0.122
07	LTE Band 14_Ant Main	10M	QPSK	1	25	Right Edge	0mm	Tablet	ON	23330	793	ICT	15.97	16.00	1.007			0.01	1.100	1.108
	LTE Band 14_Ant Main	10M	QPSK	25	12	Right Edge	0mm	Tablet	ON	23330	793	ICT	15.92	16.00	1.019			-0.07	1.070	1.090
	LTE Band 14_Ant Main	10M	QPSK	50	0	Right Edge	0mm	Tablet	ON	23330	793	ICT	15.93	16.00	1.016			-0.08	1.050	1.067
	LTE Band 14_Ant Main	10M	QPSK	1	25	Bottom Side	35mm	Laptop	OFF	23330	793	ICT	23.06	24.00	1.242			-0.03	0.001	0.001
	LTE Band 14_Ant Main	10M	QPSK	25	12	Bottom Side	35mm	Laptop	OFF	23330	793	ICT	22.05	23.00	1.245			0.04	0.001	0.001
	LTE Band 14_Ant Main	10M	QPSK	1	25	Back	31mm	Tablet	OFF	23330	793	ICT	23.06	24.00	1.242			-0.12	0.001	0.001
	LTE Band 14_Ant Main	10M	QPSK	25	12	Back	31mm	Tablet	OFF	23330	793	ICT	22.05	23.00	1.245			0.08	0.001	0.001
	LTE Band 14_Ant Main	10M	QPSK	1	25	Top Edge	34mm	Tablet	OFF	23330	793	ICT	23.06	24.00	1.242			-0.06	0.001	0.001
	LTE Band 14_Ant Main	10M	QPSK	25	12	Top Edge	34mm	Tablet	OFF	23330	793	ICT	22.05	23.00	1.245			0.05	0.001	0.001
	LTE Band 14_Ant Main	10M	QPSK	1	25	Right Edge	14mm	Tablet	OFF	23330	793	ICT	23.06	24.00	1.242			0.03	0.065	0.081
	LTE Band 14_Ant Main	10M	QPSK	25	12	Right Edge	14mm	Tablet	OFF	23330	793	ICT	22.05	23.00	1.245			0.04	0.053	0.066
	LTE Band 14_Ant Main	10M	QPSK	1	25	Right Edge	0mm	Tablet	ON	23330	793	AWAN	15.97	16.00	1.007			0.05	0.523	0.527
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	26340	1880	ICT	15.69	16.00	1.074			0.08	0.458	0.492
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Bottom Side	0mm	Laptop	ON	26340	1880	ICT	15.68	16.00	1.076			0.01	0.450	0.484
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	26340	1880	ICT	15.69	16.00	1.074			-0.08	1.070	1.149
08	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	26140	1860	ICT	15.59	16.00	1.099			0.02	1.090	1.198
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	26590	1905	ICT	15.49	16.00	1.125			0.1	0.941	1.058
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	26340	1880	ICT	15.68	16.00	1.076			-0.18	1.080	1.163
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	26140	1860	ICT	15.35	16.00	1.161			0.1	1.020	1.185
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	26590	1905	ICT	15.41	16.00	1.146			0.12	0.958	1.097
	LTE Band 25_Ant MIMO2	20M	QPSK	100	0	Back	0mm	Tablet	ON	26340	1880	ICT	15.60	16.00	1.096			0.08	1.060	1.162
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	26340	1880	ICT	15.69	16.00	1.074			-0.17	0.001	0.001
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Top Edge	0mm	Tablet	ON	26340	1880	ICT	15.68	16.00	1.076			-0.03	0.001	0.001
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	26340	1880	ICT	15.69	16.00	1.074			0.14	0.452	0.485
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	26340	1880	ICT	15.68	16.00	1.076			0.18	0.454	0.489
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Bottom Side	29mm	Laptop	OFF	26340	1880	ICT	22.72	24.00	1.343			-0.08	0.107	0.144
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Bottom Side	29mm	Laptop	OFF	26340	1880	ICT	21.67	23.00	1.358			0.05	0.084	0.114
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	26mm	Tablet	OFF	26340	1880	ICT	22.72	24.00	1.343			-0.08	0.132	0.177
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Back	26mm	Tablet	OFF	26340	1880	ICT	21.67	23.00	1.358			0.13	0.103	0.140
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Top Edge	24mm	Tablet	OFF	26340	1880	ICT	22.72	24.00	1.343			0.12	0.001	0.001
	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Top Edge	24mm	Tablet	OFF	26340	1880	ICT	21.67	23.00	1.358			0.03	0.001	0.001
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Left Edge	21mm	Tablet	OFF	26340	1880	ICT	22.72	24.00	1.343			0.18	0.176	0.236



FCC SAR TEST REPORT

Report No. : FA4D1633

	LTE Band 25_Ant MIMO2	20M	QPSK	50	24	Left Edge	21mm	Tablet	OFF	26340	1880	ICT	21.67	23.00	1.358			0.16	0.139	0.189
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	26140	1860	AWAN	15.59	16.00	1.099			0.17	0.851	0.935
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	26340	1880	AWAN	15.69	16.00	1.074			-0.05	0.851	0.914
	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	26590	1905	AWAN	15.49	16.00	1.125			0.01	0.749	0.842
	LTE Band 26_Ant Main	15M	QPSK	1	0	Bottom Side	0mm	Laptop	ON	26865	831.5	ICT	16.78	17.00	1.052			0.1	0.333	0.350
	LTE Band 26_Ant Main	15M	QPSK	36	0	Bottom Side	0mm	Laptop	ON	26865	831.5	ICT	16.65	17.00	1.084			-0.17	0.329	0.357
	LTE Band 26_Ant Main	15M	QPSK	1	0	Back	0mm	Tablet	ON	26865	831.5	ICT	16.78	17.00	1.052			0.04	0.906	0.953
	LTE Band 26_Ant Main	15M	QPSK	36	0	Back	0mm	Tablet	ON	26865	831.5	ICT	16.65	17.00	1.084			-0.01	0.872	0.945
	LTE Band 26_Ant Main	15M	QPSK	75	0	Back	0mm	Tablet	ON	26865	831.5	ICT	16.67	17.00	1.079			0.04	0.869	0.938
	LTE Band 26_Ant Main	15M	QPSK	1	0	Top Edge	0mm	Tablet	ON	26865	831.5	ICT	16.78	17.00	1.052			-0.08	0.209	0.220
	LTE Band 26_Ant Main	15M	QPSK	36	0	Top Edge	0mm	Tablet	ON	26865	831.5	ICT	16.65	17.00	1.084			0.05	0.218	0.236
	LTE Band 26_Ant Main	15M	QPSK	1	0	Right Edge	0mm	Tablet	ON	26865	831.5	ICT	16.78	17.00	1.052			0.06	0.752	0.791
	LTE Band 26_Ant Main	15M	QPSK	36	0	Right Edge	0mm	Tablet	ON	26865	831.5	ICT	16.65	17.00	1.084			-0.09	0.735	0.797
	LTE Band 26_Ant Main	15M	QPSK	1	37	Bottom Side	35mm	Laptop	OFF	26865	831.5	ICT	22.65	24.00	1.365			0.1	0.001	0.001
	LTE Band 26_Ant Main	15M	QPSK	36	20	Bottom Side	35mm	Laptop	OFF	26865	831.5	ICT	21.57	23.00	1.390			0.04	0.001	0.001
	LTE Band 26_Ant Main	15M	QPSK	1	37	Front Edge	41mm	Laptop	OFF	26865	831.5	ICT	22.65	24.00	1.365			0.13	0.001	0.001
	LTE Band 26_Ant Main	15M	QPSK	36	20	Front Edge	41mm	Laptop	OFF	26865	831.5	ICT	21.57	23.00	1.390			-0.18	0.001	0.001
	LTE Band 26_Ant Main	15M	QPSK	1	37	Back	31mm	Tablet	OFF	26865	831.5	ICT	22.65	24.00	1.365			-0.11	0.001	0.001
	LTE Band 26_Ant Main	15M	QPSK	36	20	Back	31mm	Tablet	OFF	26865	831.5	ICT	21.57	23.00	1.390			-0.16	0.001	0.001
	LTE Band 26_Ant Main	15M	QPSK	1	37	Top Edge	34mm	Tablet	OFF	26865	831.5	ICT	22.65	24.00	1.365			-0.15	0.001	0.001
	LTE Band 26_Ant Main	15M	QPSK	36	20	Top Edge	34mm	Tablet	OFF	26865	831.5	ICT	21.57	23.00	1.390			-0.06	0.001	0.001
	LTE Band 26_Ant Main	15M	QPSK	1	37	Right Edge	14mm	Tablet	OFF	26865	831.5	ICT	22.65	24.00	1.365			-0.14	0.097	0.132
	LTE Band 26_Ant Main	15M	QPSK	36	20	Right Edge	14mm	Tablet	OFF	26865	831.5	ICT	21.57	23.00	1.390			-0.19	0.083	0.115
	LTE Band 5B_Ant Main	10M	QPSK	1	0	Back	0mm-	Laptop	ON	20450+20549	829	ICT	16.66	17.00	1.081			0.06	0.869	0.940
09	LTE Band 26_Ant Main	15M	QPSK	1	0	Back	0mm	Tablet	ON	26865	831.5	AWAN	16.78	17.00	1.052			0.02	1.060	1.115
	LTE Band 30_Ant MIMO2	10M	QPSK	1	25	Bottom Side	0mm	Laptop	ON	27710	2310	ICT	12.71	13.00	1.069			0.08	0.242	0.259
	LTE Band 30_Ant MIMO2	10M	QPSK	25	12	Bottom Side	0mm	Laptop	ON	27710	2310	ICT	12.70	13.00	1.072			0.01	0.234	0.251
10	LTE Band 30_Ant MIMO2	10M	QPSK	1	25	Back	0mm	Tablet	ON	27710	2310	ICT	12.71	13.00	1.069			0.14	1.080	1.155
	LTE Band 30_Ant MIMO2	10M	QPSK	25	12	Back	0mm	Tablet	ON	27710	2310	ICT	12.70	13.00	1.072			-0.08	1.070	1.147
	LTE Band 30_Ant MIMO2	10M	QPSK	50	0	Back	0mm	Tablet	ON	27710	2310	ICT	12.66	13.00	1.081			0.1	1.050	1.136
	LTE Band 30_Ant MIMO2	10M	QPSK	1	25	Top Edge	0mm	Tablet	ON	27710	2310	ICT	12.71	13.00	1.069			-0.18	0.055	0.059
	LTE Band 30_Ant MIMO2	10M	QPSK	25	12	Top Edge	0mm	Tablet	ON	27710	2310	ICT	12.70	13.00	1.072			0.1	0.054	0.058
	LTE Band 30_Ant MIMO2	10M	QPSK	1	25	Left Edge	0mm	Tablet	ON	27710	2310	ICT	12.71	13.00	1.069			0.12	0.524	0.560
	LTE Band 30_Ant MIMO2	10M	QPSK	25	12	Left Edge	0mm	Tablet	ON	27710	2310	ICT	12.70	13.00	1.072			0.08	0.521	0.558
	LTE Band 30_Ant MIMO2	10M	QPSK	1	0	Bottom Side	29mm	Laptop	OFF	27710	2310	ICT	21.13	23.00	1.538			-0.05	0.069	0.106
	LTE Band 30_Ant MIMO2	10M	QPSK	25	0	Bottom Side	29mm	Laptop	OFF	27710	2310	ICT	20.15	22.00	1.531			0.02	0.056	0.086
	LTE Band 30_Ant MIMO2	10M	QPSK	1	0	Back	26mm	Tablet	OFF	27710	2310	ICT	21.13	23.00	1.538			0.09	0.086	0.132
	LTE Band 30_Ant MIMO2	10M	QPSK	25	0	Back	26mm	Tablet	OFF	27710	2310	ICT	20.15	22.00	1.531			-0.11	0.069	0.106
	LTE Band 30_Ant MIMO2	10M	QPSK	1	0	Top Edge	24mm	Tablet	OFF	27710	2310	ICT	21.13	23.00	1.538			-0.07	0.001	0.002
	LTE Band 30_Ant MIMO2	10M	QPSK	25	0	Top Edge	24mm	Tablet	OFF	27710	2310	ICT	20.15	22.00	1.531			0.02	0.001	0.002
	LTE Band 30_Ant MIMO2	10M	QPSK	1	0	Left Edge	21mm	Tablet	OFF	27710	2310	ICT	21.13	23.00	1.538			-0.12	0.104	0.160
	LTE Band 30_Ant MIMO2	10M	QPSK	25	0	Left Edge	21mm	Tablet	OFF	27710	2310	ICT	20.15	22.00	1.531			0.04	0.086	0.132
	LTE Band 30_Ant MIMO2	10M	QPSK	1	25	Back	0mm	Tablet	ON	27710	2310	AWAN	12.71	13.00	1.069			-0.03	0.706	0.755
	LTE Band 41_Ant Main	20M	QPSK	1	0	Bottom Side	0mm	Laptop	ON	40185	2549.5	ICT	13.73	14.50	1.194	62.9	1.006	0.08	0.202	0.243
	LTE Band 41_Ant Main	20M	QPSK	50	0	Bottom Side	0mm	Laptop	ON	40185	2549.5	ICT	13.85	14.50	1.161	62.9	1.006	0.01	0.197	0.230
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	40185	2549.5	ICT	13.73	14.50	1.194	62.9	1.006	-0.08	0.639	0.768
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	39750	2506	ICT	13.72	14.50	1.197	62.9	1.006	-0.18	0.898	1.081
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	40620	2593	ICT	13.68	14.50	1.208	62.9	1.006	0.1	0.545	0.662
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	41055	2636.5	ICT	13.62	14.50	1.225	62.9	1.006	0.12	0.667	0.822
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	41490	2680	ICT	13.57	14.50	1.239	62.9	1.006	0.08	0.916	1.142
	LTE Band 41_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	40185	2549.5	ICT	13.85	14.50	1.161	62.9	1.006	-0.17	0.672	0.785
	LTE Band 41_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	39750	2506	ICT	13.84	14.50	1.164	62.9	1.006	0.14	0.935	1.095
	LTE Band 41_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	40620	2593	ICT	13.84	14.50	1.164	62.9	1.006	0.11	0.556	0.651
	LTE Band 41_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	41055	2636.5	ICT	13.74	14.50	1.191	62.9	1.006	-0.05	0.660	0.791
	LTE Band 41_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	41490	2680	ICT	13.75	14.50	1.189	62.9	1.006	0.18	0.920	1.100
	LTE Band 41_Ant Main	20M	QPSK	100	0	Back	0mm	Laptop	ON	40185	2549.5	ICT	13.83	14.50	1.167	62.9	1.006	0.14	0.627	0.736



FCC SAR TEST REPORT

Report No. : FA4D1633

	LTE Band 41_Ant Main	20M	QPSK	1	0	Top Edge	0mm	Tablet	ON	40185	2549.5	ICT	13.73	14.50	1.194	62.9	1.006	-0.17	0.211	0.253
	LTE Band 41_Ant Main	20M	QPSK	50	0	Top Edge	0mm	Tablet	ON	40185	2549.5	ICT	13.85	14.50	1.161	62.9	1.006	0.17	0.208	0.243
	LTE Band 41_Ant Main	20M	QPSK	1	0	Right Edge	0mm	Tablet	ON	40185	2549.5	ICT	13.73	14.50	1.194	62.9	1.006	-0.05	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	50	0	Right Edge	0mm	Tablet	ON	40185	2549.5	ICT	13.85	14.50	1.161	62.9	1.006	0.01	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	1	49	Bottom Side	35mm	Laptop	OFF	40620	2593	ICT	22.95	24.00	1.274	62.9	1.006	-0.17	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	50	24	Bottom Side	35mm	Laptop	OFF	40620	2593	ICT	21.96	23.00	1.271	62.9	1.006	-0.1	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	1	49	Back	31mm	Tablet	OFF	40620	2593	ICT	22.95	24.00	1.274	62.9	1.006	-0.04	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	50	24	Back	31mm	Tablet	OFF	40620	2593	ICT	21.96	23.00	1.271	62.9	1.006	-0.05	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	1	49	Top Edge	34mm	Tablet	OFF	40620	2593	ICT	22.95	24.00	1.274	62.9	1.006	0	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	50	24	Top Edge	34mm	Tablet	OFF	40620	2593	ICT	21.96	23.00	1.271	62.9	1.006	-0.13	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	1	49	Right Edge	14mm	Tablet	OFF	40620	2593	ICT	22.95	24.00	1.274	62.9	1.006	-0.01	0.001	0.001
	LTE Band 41_Ant Main	20M	QPSK	50	24	Right Edge	14mm	Tablet	OFF	40620	2593	ICT	21.96	23.00	1.271	62.9	1.006	-0.09	0.001	0.001
	LTE Band 41C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	41490+41292	2680	ICT	13.40	14.50	1.288	62.9	1.006	-0.16	0.829	1.074
	LTE Band 41C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	39750+39948	2506	ICT	13.29	14.50	1.321	62.9	1.006	0.08	0.798	1.061
	LTE Band 41C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	40185+39987	2549.5	ICT	13.34	14.50	1.306	62.9	1.006	-0.17	0.550	0.723
	LTE Band 41C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	40620+40422	2593	ICT	13.35	14.50	1.303	62.9	1.006	-0.03	0.464	0.608
	LTE Band 41C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	41055+40857	2636.5	ICT	13.39	14.50	1.291	62.9	1.006	0.14	0.596	0.774
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	41490	2680	AWAN	13.57	14.50	1.239	62.9	1.006	-0.01	0.922	1.149
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	40185	2549.5	AWAN	13.73	14.50	1.194	62.9	1.006	0.1	0.612	0.735
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	39750	2506	AWAN	13.72	14.50	1.197	62.9	1.006	0.04	0.911	1.097
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	40620	2593	AWAN	13.68	14.50	1.208	62.9	1.006	-0.01	0.516	0.627
	LTE Band 41_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	41055	2636.5	AWAN	13.62	14.50	1.225	62.9	1.006	-0.08	0.663	0.817
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Bottom Side	0mm	Laptop	ON	40185	2549.5	ICT	11.83	12.50	1.167	62.9	1.006	0.05	0.188	0.221
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Bottom Side	0mm	Laptop	ON	40185	2549.5	ICT	11.82	12.50	1.169	62.9	1.006	0.06	0.178	0.209
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Back	0mm	Tablet	ON	40185	2549.5	ICT	11.83	12.50	1.167	62.9	1.006	0.13	0.738	0.866
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Back	0mm	Tablet	ON	39750	2506	ICT	11.60	12.50	1.230	62.9	1.006	0.03	0.674	0.834
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Back	0mm	Tablet	ON	40620	2593	ICT	11.65	12.50	1.216	62.9	1.006	0.18	0.791	0.968
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Back	0mm	Tablet	ON	41055	2636.5	ICT	11.68	12.50	1.208	62.9	1.006	0.16	0.830	1.009
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Back	0mm	Tablet	ON	41490	2680	ICT	11.46	12.50	1.271	62.9	1.006	-0.1	0.758	0.969
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Back	0mm	Tablet	ON	40185	2549.5	ICT	11.82	12.50	1.169	62.9	1.006	0.07	0.776	0.913
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Back	0mm	Tablet	ON	39750	2506	ICT	11.65	12.50	1.216	62.9	1.006	-0.1	0.702	0.859
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Back	0mm	Tablet	ON	40620	2593	ICT	11.63	12.50	1.222	62.9	1.006	0.01	0.807	0.992
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Back	0mm	Tablet	ON	41055	2636.5	ICT	11.74	12.50	1.191	62.9	1.006	-0.15	0.822	0.985
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Back	0mm	Tablet	ON	41490	2680	ICT	11.49	12.50	1.262	62.9	1.006	0.19	0.766	0.972
	LTE Band 41_Ant MIMO2	20M	QPSK	100	0	Back	0mm	Tablet	ON	40185	2549.5	ICT	11.80	12.50	1.175	62.9	1.006	0.07	0.776	0.917
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Top Edge	0mm	Tablet	ON	40185	2549.5	ICT	11.83	12.50	1.167	62.9	1.006	-0.18	0.069	0.081
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Top Edge	0mm	Tablet	ON	40185	2549.5	ICT	11.82	12.50	1.169	62.9	1.006	0.03	0.072	0.085
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	40185	2549.5	ICT	11.83	12.50	1.167	62.9	1.006	-0.15	0.791	0.928
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	39750	2506	ICT	11.60	12.50	1.230	62.9	1.006	0.11	0.586	0.725
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	40620	2593	ICT	11.65	12.50	1.216	62.9	1.006	-0.08	0.915	1.119
11	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	41055	2636.5	ICT	11.68	12.50	1.208	62.9	1.006	-0.01	0.985	1.197
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	41490	2680	ICT	11.46	12.50	1.271	62.9	1.006	-0.17	0.853	1.090
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Left Edge	0mm	Tablet	ON	40185	2549.5	ICT	11.82	12.50	1.169	62.9	1.006	-0.08	0.861	1.013
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Left Edge	0mm	Tablet	ON	39750	2506	ICT	11.65	12.50	1.216	62.9	1.006	-0.08	0.620	0.759
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Left Edge	0mm	Tablet	ON	40620	2593	ICT	11.63	12.50	1.222	62.9	1.006	0.17	0.954	1.173
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Left Edge	0mm	Tablet	ON	41055	2636.5	ICT	11.74	12.50	1.191	62.9	1.006	0.18	0.962	1.153
	LTE Band 41_Ant MIMO2	20M	QPSK	50	0	Left Edge	0mm	Tablet	ON	41490	2680	ICT	11.49	12.50	1.262	62.9	1.006	-0.04	0.869	1.103
	LTE Band 41_Ant MIMO2	20M	QPSK	100	0	Left Edge	0mm	Tablet	ON	40185	2549.5	ICT	11.80	12.50	1.175	62.9	1.006	-0.08	0.861	1.018
	LTE Band 41_Ant MIMO2	20M	QPSK	1	49	Bottom Side	29mm	Laptop	OFF	40620	2593	ICT	22.95	24.00	1.274	62.9	1.006	0.02	0.089	0.114
	LTE Band 41_Ant MIMO2	20M	QPSK	50	24	Bottom Side	29mm	Laptop	OFF	40620	2593	ICT	21.96	23.00	1.271	62.9	1.006	0.16	0.072	0.092
	LTE Band 41_Ant MIMO2	20M	QPSK	1	49	Back	26mm	Tablet	OFF	40620	2593	ICT	22.95	24.00	1.274	62.9	1.006	0	0.210	0.269
	LTE Band 41_Ant MIMO2	20M	QPSK	50	24	Back	26mm	Tablet	OFF	40620	2593	ICT	21.96	23.00	1.271	62.9	1.006	0.01	0.171	0.219
	LTE Band 41_Ant MIMO2	20M	QPSK	1	49	Top Edge	24mm	Tablet	OFF	40620	2593	ICT	22.95	24.00	1.274	62.9	1.006	-0.01	0.001	0.001
	LTE Band 41_Ant MIMO2	20M	QPSK	50	24	Top Edge	24mm	Tablet	OFF	40620	2593	ICT	21.96	23.00	1.271	62.9	1.006	-0.06	0.001	0.001
	LTE Band 41_Ant MIMO2	20M	QPSK	1	49	Left Edge	21mm	Tablet	OFF	40620	2593	ICT	22.95	24.00	1.274	62.9	1.006	-0.04	0.295	0.378
	LTE Band 41_Ant MIMO2	20M	QPSK	50	24	Left Edge	21mm	Tablet	OFF	40620	2593	ICT	21.96	23.00	1.271	62.9	1.006	-0.09	0.234	0.299



FCC SAR TEST REPORT

Report No. : FA4D1633

	LTE Band 41C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	41055+40857	2636.5	ICT	11.41	12.50	1.285	62.9	1.006	0.02	0.718	0.928
	LTE Band 41C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	39750+39948	2506	ICT	11.29	12.50	1.321	62.9	1.006	-0.08	0.554	0.736
	LTE Band 41C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	40185+39987	2549.5	ICT	11.27	12.50	1.327	62.9	1.006	0.1	0.685	0.915
	LTE Band 41C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	40620+40422	2593	ICT	11.38	12.50	1.294	62.9	1.006	-0.18	0.747	0.973
	LTE Band 41C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	41490+41292	2680	ICT	11.27	12.50	1.327	62.9	1.006	0.1	0.637	0.851
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	41055	2636.5	AWAN	11.68	12.50	1.208	62.9	1.006	-0.03	0.799	0.971
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	39750	2506	AWAN	11.60	12.50	1.230	62.9	1.006	0.06	0.617	0.764
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	40185	2549.5	AWAN	11.83	12.50	1.167	62.9	1.006	-0.03	0.762	0.894
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	40620	2593	AWAN	11.65	12.50	1.216	62.9	1.006	-0.13	0.853	1.044
	LTE Band 41_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	41490	2680	AWAN	11.46	12.50	1.271	62.9	1.006	0.08	0.709	0.906
	LTE Band 42_Ant Main	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	43340	3575	ICT	12.76	13.00	1.057	62.9	1.006	-0.07	0.213	0.226
	LTE Band 42_Ant Main	20M	QPSK	50	0	Bottom Side	0mm	Laptop	ON	43340	3575	ICT	12.80	13.00	1.047	62.9	1.006	0.05	0.212	0.223
	LTE Band 42_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	43340	3575	ICT	12.76	13.00	1.057	62.9	1.006	0.03	0.777	0.826
	LTE Band 42_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	43340	3575	ICT	12.80	13.00	1.047	62.9	1.006	-0.16	0.777	0.819
	LTE Band 42_Ant Main	20M	QPSK	100	0	Back	0mm	Tablet	ON	43340	3575	ICT	12.73	13.00	1.064	62.9	1.006	-0.02	0.770	0.824
	LTE Band 42_Ant Main	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	43340	3575	ICT	12.76	13.00	1.057	62.9	1.006	0.15	0.163	0.173
	LTE Band 42_Ant Main	20M	QPSK	50	0	Top Edge	0mm	Tablet	ON	43340	3575	ICT	12.80	13.00	1.047	62.9	1.006	-0.09	0.160	0.169
	LTE Band 42_Ant Main	20M	QPSK	1	49	Right Edge	0mm	Tablet	ON	43340	3575	ICT	12.76	13.00	1.057	62.9	1.006	0.11	0.001	0.001
	LTE Band 42_Ant Main	20M	QPSK	50	0	Right Edge	0mm	Tablet	ON	43340	3575	ICT	12.80	13.00	1.047	62.9	1.006	-0.05	0.001	0.001
	LTE Band 42_Ant Main	20M	QPSK	1	49	Bottom Side	35mm	Laptop	OFF	43340	3575	ICT	21.85	22.00	1.035	62.9	1.006	0.16	0.123	0.128
	LTE Band 42_Ant Main	20M	QPSK	50	0	Bottom Side	35mm	Laptop	OFF	43340	3575	ICT	20.99	21.00	1.002	62.9	1.006	0.05	0.101	0.102
	LTE Band 42_Ant Main	20M	QPSK	1	49	Back	31mm	Tablet	OFF	43340	3575	ICT	21.85	22.00	1.035	62.9	1.006	-0.15	0.166	0.173
	LTE Band 42_Ant Main	20M	QPSK	50	0	Back	31mm	Tablet	OFF	43340	3575	ICT	20.99	21.00	1.002	62.9	1.006	0.02	0.137	0.138
	LTE Band 42_Ant Main	20M	QPSK	1	49	Top Edge	34mm	Tablet	OFF	43340	3575	ICT	21.85	22.00	1.035	62.9	1.006	0.07	0.107	0.111
	LTE Band 42_Ant Main	20M	QPSK	50	0	Top Edge	34mm	Tablet	OFF	43340	3575	ICT	20.99	21.00	1.002	62.9	1.006	0.16	0.088	0.089
	LTE Band 42_Ant Main	20M	QPSK	1	49	Right Edge	14mm	Tablet	OFF	43340	3575	ICT	21.85	22.00	1.035	62.9	1.006	0.13	0.086	0.090
	LTE Band 42_Ant Main	20M	QPSK	50	0	Right Edge	14mm	Tablet	OFF	43340	3575	ICT	20.99	21.00	1.002	62.9	1.006	-0.18	0.073	0.074
	LTE Band 42C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	43190+43388	3560	ICT	12.47	13.00	1.130	62.9	1.006	0.04	0.721	0.819
12	LTE Band 42_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	43340	3575	AWAN	12.76	13.00	1.057	62.9	1.006	-0.01	0.859	0.913
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	43340	3575	ICT	12.00	12.00	1.000	62.9	1.006	-0.09	0.182	0.183
	LTE Band 42_Ant MIMO2	20M	QPSK	50	0	Bottom Side	0mm	Laptop	ON	43340	3575	ICT	11.98	12.00	1.005	62.9	1.006	-0.17	0.180	0.182
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	43340	3575	ICT	12.00	12.00	1.000	62.9	1.006	-0.17	0.439	0.442
	LTE Band 42_Ant MIMO2	20M	QPSK	50	0	Back	0mm	Tablet	ON	43340	3575	ICT	11.98	12.00	1.005	62.9	1.006	-0.04	0.450	0.455
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	43340	3575	ICT	12.00	12.00	1.000	62.9	1.006	0	0.001	0.001
	LTE Band 42_Ant MIMO2	20M	QPSK	50	0	Top Edge	0mm	Tablet	ON	43340	3575	ICT	11.98	12.00	1.005	62.9	1.006	-0.13	0.001	0.001
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	43340	3575	ICT	12.00	12.00	1.000	62.9	1.006	0.01	0.776	0.781
	LTE Band 42_Ant MIMO2	20M	QPSK	50	0	Left Edge	0mm	Tablet	ON	43340	3575	ICT	11.98	12.00	1.005	62.9	1.006	-0.01	0.758	0.766
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Bottom Side	29mm	Laptop	OFF	43340	3575	ICT	21.82	22.00	1.042	62.9	1.006	-0.04	0.128	0.134
	LTE Band 42_Ant MIMO2	20M	QPSK	50	0	Bottom Side	29mm	Laptop	OFF	43340	3575	ICT	21.00	21.00	1.000	62.9	1.006	-0.08	0.106	0.107
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Back	26mm	Tablet	OFF	43340	3575	ICT	21.82	22.00	1.042	62.9	1.006	0.06	0.303	0.318
	LTE Band 42_Ant MIMO2	20M	QPSK	50	0	Back	26mm	Tablet	OFF	43340	3575	ICT	21.00	21.00	1.000	62.9	1.006	-0.03	0.248	0.249
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Top Edge	24mm	Tablet	OFF	43340	3575	ICT	21.82	22.00	1.042	62.9	1.006	-0.03	0.001	0.001
	LTE Band 42_Ant MIMO2	20M	QPSK	50	0	Top Edge	24mm	Tablet	OFF	43340	3575	ICT	21.00	21.00	1.000	62.9	1.006	0.08	0.001	0.001
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Left Edge	21mm	Tablet	OFF	43340	3575	ICT	21.82	22.00	1.042	62.9	1.006	-0.07	0.478	0.501
	LTE Band 42_Ant MIMO2	20M	QPSK	50	0	Left Edge	21mm	Tablet	OFF	43340	3575	ICT	21.00	21.00	1.000	62.9	1.006	0.05	0.393	0.395
	LTE Band 42C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	43292+43490	3570.2	ICT	11.60	12.00	1.096	62.9	1.006	0.17	0.689	0.760
	LTE Band 42_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	43340	3575	AWAN	12.00	12.00	1.000	62.9	1.006	0.05	0.737	0.741
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	44490	3690	ICT	14.17	15.00	1.211	62.9	1.006	0.08	0.220	0.268
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Bottom Side	0mm	Laptop	ON	44490	3690	ICT	14.16	15.00	1.213	62.9	1.006	0.01	0.219	0.267
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	44490	3690	ICT	14.17	15.00	1.211	62.9	1.006	-0.08	0.575	0.700
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	44490	3690	ICT	14.16	15.00	1.213	62.9	1.006	0.1	0.575	0.702
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	44490	3690	ICT	14.17	15.00	1.211	62.9	1.006	-0.03	0.033	0.040
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Top Edge	0mm	Tablet	ON	44490	3690	ICT	14.16	15.00	1.213	62.9	1.006	0.14	0.033	0.040
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	44490	3690	ICT	14.17	15.00	1.211	62.9	1.006	0.11	0.831	1.012
13	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	43690	3610	ICT	14.02	15.00	1.253	62.9	1.006	0.02	0.929	1.171
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	44090	3650	ICT	13.99	15.00	1.262	62.9	1.006	-0.05	0.856	1.087



FCC SAR TEST REPORT

Report No. : FA4D1633

	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	44490	3690	ICT	14.16	15.00	1.213	62.9	1.006	0.18	0.831	1.014
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	43690	3610	ICT	13.98	15.00	1.265	62.9	1.006	0.14	0.913	1.162
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	44090	3650	ICT	14.03	15.00	1.250	62.9	1.006	-0.17	0.880	1.107
	LTE Band 43_Ant MIMO2	20M	QPSK	100	0	Left Edge	0mm	Tablet	ON	44490	3690	ICT	14.15	15.00	1.216	62.9	1.006	0.17	0.839	1.027
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Bottom Side	29mm	Laptop	OFF	44490	3690	ICT	21.89	22.00	1.026	62.9	1.006	0.03	0.135	0.139
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Bottom Side	29mm	Laptop	OFF	44490	3690	ICT	20.87	21.00	1.030	62.9	1.006	0.18	0.105	0.109
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Back	26mm	Tablet	OFF	44490	3690	ICT	21.89	22.00	1.026	62.9	1.006	0.07	0.353	0.364
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Back	26mm	Tablet	OFF	44490	3690	ICT	20.87	21.00	1.030	62.9	1.006	0.18	0.287	0.297
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Top Edge	24mm	Tablet	OFF	44490	3690	ICT	21.89	22.00	1.026	62.9	1.006	-0.1	0.001	0.001
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Top Edge	24mm	Tablet	OFF	44490	3690	ICT	20.87	21.00	1.030	62.9	1.006	0.01	0.001	0.001
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Left Edge	21mm	Tablet	OFF	44490	3690	ICT	21.89	22.00	1.026	62.9	1.006	-0.15	0.542	0.559
	LTE Band 43_Ant MIMO2	20M	QPSK	50	24	Left Edge	21mm	Tablet	OFF	44490	3690	ICT	20.87	21.00	1.030	62.9	1.006	0.19	0.432	0.448
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	43690	3610	AWAN	14.02	15.00	1.253	62.9	1.006	-0.05	0.815	1.027
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	44090	3650	AWAN	13.99	15.00	1.262	62.9	1.006	0.01	0.788	1.000
	LTE Band 43_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	44490	3690	AWAN	14.17	15.00	1.211	62.9	1.006	0.1	0.743	0.905
	LTE Band 48_Ant Main	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	55830	3609	ICT	11.68	12.00	1.076	62.9	1.006	0.08	0.283	0.306
	LTE Band 48_Ant Main	20M	QPSK	50	0	Bottom Side	0mm	Laptop	ON	55830	3609	ICT	11.72	12.00	1.067	62.9	1.006	0.01	0.282	0.303
	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	55830	3609	ICT	11.68	12.00	1.076	62.9	1.006	-0.08	0.917	0.993
	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	55340	3560	ICT	11.63	12.00	1.089	62.9	1.006	0.1	0.864	0.946
	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	56150	3641	ICT	11.64	12.00	1.086	62.9	1.006	-0.18	0.917	1.002
	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	56640	3690	ICT	11.55	12.00	1.109	62.9	1.006	0.1	0.839	0.936
	LTE Band 48_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	55830	3609	ICT	11.72	12.00	1.067	62.9	1.006	0.12	0.917	0.984
	LTE Band 48_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	55340	3560	ICT	11.66	12.00	1.081	62.9	1.006	0.08	0.861	0.937
	LTE Band 48_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	56150	3641	ICT	11.67	12.00	1.079	62.9	1.006	-0.17	0.908	0.986
	LTE Band 48_Ant Main	20M	QPSK	50	0	Back	0mm	Tablet	ON	56640	3690	ICT	11.59	12.00	1.099	62.9	1.006	-0.03	0.849	0.939
	LTE Band 48_Ant Main	20M	QPSK	100	0	Back	0mm	Tablet	ON	55830	3609	ICT	11.66	12.00	1.081	62.9	1.006	0.14	0.907	0.987
	LTE Band 48_Ant Main	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	55830	3609	ICT	11.68	12.00	1.076	62.9	1.006	0.11	0.212	0.230
	LTE Band 48_Ant Main	20M	QPSK	50	0	Top Edge	0mm	Tablet	ON	55830	3609	ICT	11.72	12.00	1.067	62.9	1.006	-0.05	0.208	0.223
	LTE Band 48_Ant Main	20M	QPSK	1	49	Right Edge	0mm	Tablet	ON	55830	3609	ICT	11.68	12.00	1.076	62.9	1.006	0.18	0.001	0.001
	LTE Band 48_Ant Main	20M	QPSK	50	0	Right Edge	0mm	Tablet	ON	55830	3609	ICT	11.72	12.00	1.067	62.9	1.006	0.14	0.001	0.001
	LTE Band 48_Ant Main	20M	QPSK	1	49	Bottom Side	35mm	Laptop	OFF	56640	3690	ICT	21.14	22.00	1.219	62.9	1.006	-0.17	0.078	0.096
	LTE Band 48_Ant Main	20M	QPSK	50	0	Bottom Side	35mm	Laptop	OFF	56640	3690	ICT	20.17	21.00	1.211	62.9	1.006	-0.03	0.065	0.079
	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	31mm	Tablet	OFF	56640	3690	ICT	21.14	22.00	1.219	62.9	1.006	-0.05	0.123	0.151
	LTE Band 48_Ant Main	20M	QPSK	50	0	Back	31mm	Tablet	OFF	56640	3690	ICT	20.17	21.00	1.211	62.9	1.006	0.18	0.099	0.121
	LTE Band 48_Ant Main	20M	QPSK	1	49	Top Edge	34mm	Tablet	OFF	56640	3690	ICT	21.14	22.00	1.219	62.9	1.006	0.14	0.105	0.129
	LTE Band 48_Ant Main	20M	QPSK	50	0	Top Edge	34mm	Tablet	OFF	56640	3690	ICT	20.17	21.00	1.211	62.9	1.006	-0.17	0.083	0.101
	LTE Band 48_Ant Main	20M	QPSK	1	49	Right Edge	14mm	Tablet	OFF	56640	3690	ICT	21.14	22.00	1.219	62.9	1.006	0.17	0.054	0.066
	LTE Band 48_Ant Main	20M	QPSK	50	0	Right Edge	14mm	Tablet	OFF	56640	3690	ICT	20.17	21.00	1.211	62.9	1.006	-0.05	0.045	0.055
	LTE Band 48C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	56442+56640	3670.2	ICT	11.34	12.00	1.164	62.9	1.006	0.08	0.849	0.994
	LTE Band 48C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	55340+55538	3560	ICT	11.26	12.00	1.186	62.9	1.006	0.01	0.806	0.961
	LTE Band 48C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	55632+55830	3589.2	ICT	11.30	12.00	1.175	62.9	1.006	0.1	0.836	0.988
	LTE Band 48C_Ant Main	20M	QPSK	1	0	Back	0mm	Tablet	ON	55952+56150	3621.2	ICT	11.29	12.00	1.178	62.9	1.006	-0.17	0.777	0.920
	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	56150	3641	AWAN	11.64	12.00	1.086	62.9	1.006	-0.17	1.080	1.180
14	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	55340	3560	AWAN	11.63	12.00	1.089	62.9	1.006	0	1.090	1.194
	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	55830	3609	AWAN	11.68	12.00	1.076	62.9	1.006	0.17	1.100	1.191
	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	56640	3690	AWAN	11.55	12.00	1.109	62.9	1.006	-0.05	1.040	1.160
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	56150	3641	ICT	14.47	14.50	1.007	62.9	1.006	0.12	0.183	0.185
	LTE Band 48_Ant MIMO2	20M	QPSK	50	24	Bottom Side	0mm	Laptop	ON	56150	3641	ICT	14.46	14.50	1.009	62.9	1.006	0.03	0.184	0.187
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	56150	3641	ICT	14.47	14.50	1.007	62.9	1.006	-0.1	0.431	0.437
	LTE Band 48_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	56150	3641	ICT	14.46	14.50	1.009	62.9	1.006	0.01	0.432	0.439
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	56150	3641	ICT	14.47	14.50	1.007	62.9	1.006	0.03	0.027	0.027
	LTE Band 48_Ant MIMO2	20M	QPSK	50	24	Top Edge	0mm	Tablet	ON	56150	3641	ICT	14.46	14.50	1.009	62.9	1.006	-0.15	0.024	0.024
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	56150	3641	ICT	14.47	14.50	1.007	62.9	1.006	-0.15	0.874	0.885
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	55340	3560	ICT	14.31	14.50	1.045	62.9	1.006	-0.01	1.020	1.072
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	55830	3609	ICT	14.37	14.50	1.030	62.9	1.006	0.11	0.914	0.947
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	56640	3690	ICT	14.44	14.50	1.014	62.9	1.006	-0.08	0.816	0.832



FCC SAR TEST REPORT

Report No. : FA4D1633

	LTE Band 48_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	56150	3641	ICT	14.46	14.50	1.009	62.9	1.006	-0.17	0.869	0.882
	LTE Band 48_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	55340	3560	ICT	14.36	14.50	1.033	62.9	1.006	-0.08	1.010	1.049
	LTE Band 48_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	55830	3609	ICT	14.41	14.50	1.021	62.9	1.006	-0.04	0.922	0.947
	LTE Band 48_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	56640	3690	ICT	14.44	14.50	1.014	62.9	1.006	-0.08	0.825	0.841
	LTE Band 48_Ant MIMO2	20M	QPSK	100	0	Left Edge	0mm	Tablet	ON	56150	3641	ICT	14.44	14.50	1.014	62.9	1.006	0.17	0.878	0.896
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Bottom Side	29mm	Laptop	OFF	56640	3690	ICT	21.14	22.00	1.219	62.9	1.006	0.08	0.094	0.115
	LTE Band 48_Ant MIMO2	20M	QPSK	50	0	Bottom Side	29mm	Laptop	OFF	56640	3690	ICT	20.17	21.00	1.211	62.9	1.006	0.01	0.075	0.091
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Back	26mm	Tablet	OFF	56640	3690	ICT	21.14	22.00	1.219	62.9	1.006	-0.08	0.229	0.281
	LTE Band 48_Ant MIMO2	20M	QPSK	50	0	Back	26mm	Tablet	OFF	56640	3690	ICT	20.17	21.00	1.211	62.9	1.006	0.1	0.182	0.222
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Top Edge	24mm	Tablet	OFF	56640	3690	ICT	21.14	22.00	1.219	62.9	1.006	-0.18	0.001	0.001
	LTE Band 48_Ant MIMO2	20M	QPSK	50	0	Top Edge	24mm	Tablet	OFF	56640	3690	ICT	20.17	21.00	1.211	62.9	1.006	0.1	0.001	0.001
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	21mm	Tablet	OFF	56640	3690	ICT	21.14	22.00	1.219	62.9	1.006	0.12	0.393	0.482
	LTE Band 48_Ant MIMO2	20M	QPSK	50	0	Left Edge	21mm	Tablet	OFF	56640	3690	ICT	20.17	21.00	1.211	62.9	1.006	0.08	0.324	0.395
	LTE Band 48C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	55340+55538	3560	ICT	14.02	14.50	1.117	62.9	1.006	0.04	0.923	1.037
	LTE Band 48C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	55632+55830	3589.2	ICT	13.95	14.50	1.135	62.9	1.006	-0.01	0.908	1.037
	LTE Band 48C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	55952+56150	3621.2	ICT	13.99	14.50	1.125	62.9	1.006	-0.08	0.891	1.008
	LTE Band 48C_Ant MIMO2	20M	QPSK	1	0	Left Edge	0mm	Tablet	ON	56442+56640	3670.2	ICT	13.98	14.50	1.127	62.9	1.006	0.05	0.880	0.998
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	55340	3560	AWAN	14.31	14.50	1.045	62.9	1.006	0.18	0.723	0.760
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	55830	3609	AWAN	14.37	14.50	1.030	62.9	1.006	-0.04	0.683	0.708
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	56150	3641	AWAN	14.47	14.50	1.007	62.9	1.006	-0.08	0.674	0.683
	LTE Band 48_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	56640	3690	AWAN	14.44	14.50	1.014	62.9	1.006	-0.13	0.616	0.628
	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	132322	1745	ICT	12.32	12.50	1.042			0.14	0.232	0.242
	LTE Band 66_Ant MIMO2	20M	QPSK	50	24	Bottom Side	0mm	Laptop	ON	132322	1745	ICT	12.32	12.50	1.042			0.11	0.232	0.242
	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	132322	1745	ICT	12.32	12.50	1.042			0.14	0.982	1.024
15	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	132072	1720	ICT	12.14	12.50	1.086			0.05	0.963	1.046
	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	132572	1770	ICT	12.28	12.50	1.052			-0.17	0.941	0.990
	LTE Band 66_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	132322	1745	ICT	12.32	12.50	1.042			0.17	0.991	1.033
	LTE Band 66_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	132072	1720	ICT	12.23	12.50	1.064			-0.05	0.982	1.045
	LTE Band 66_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	132572	1770	ICT	12.28	12.50	1.052			0.01	0.954	1.004
	LTE Band 66_Ant MIMO2	20M	QPSK	100	0	Back	0mm	Tablet	ON	132322	1745	ICT	12.29	12.50	1.050			0.1	0.982	1.031
	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	132322	1745	ICT	12.32	12.50	1.042			-0.17	0.001	0.001
	LTE Band 66_Ant MIMO2	20M	QPSK	50	24	Top Edge	0mm	Tablet	ON	132322	1745	ICT	12.32	12.50	1.042			0.04	0.001	0.001
	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Left Edge	0mm	Tablet	ON	132322	1745	ICT	12.32	12.50	1.042			-0.01	0.528	0.550
	LTE Band 66_Ant MIMO2	20M	QPSK	50	24	Left Edge	0mm	Tablet	ON	132322	1745	ICT	12.32	12.50	1.042			-0.08	0.528	0.550
	LTE Band 66_Ant MIMO2	20M	QPSK	1	0	Bottom Side	29mm	Laptop	OFF	132322	1745	ICT	23.32	24.00	1.169			0.17	0.102	0.119
	LTE Band 66_Ant MIMO2	20M	QPSK	50	0	Bottom Side	29mm	Laptop	OFF	132322	1745	ICT	22.30	23.00	1.175			0.18	0.081	0.095
	LTE Band 66_Ant MIMO2	20M	QPSK	1	0	Back	26mm	Tablet	OFF	132322	1745	ICT	23.32	24.00	1.169			-0.13	0.126	0.147
	LTE Band 66_Ant MIMO2	20M	QPSK	50	0	Back	26mm	Tablet	OFF	132322	1745	ICT	22.30	23.00	1.175			-0.13	0.099	0.116
	LTE Band 66_Ant MIMO2	20M	QPSK	1	0	Top Edge	24mm	Tablet	OFF	132322	1745	ICT	23.32	24.00	1.169			0.06	0.001	0.001
	LTE Band 66_Ant MIMO2	20M	QPSK	50	0	Top Edge	24mm	Tablet	OFF	132322	1745	ICT	22.30	23.00	1.175			-0.03	0.001	0.001
	LTE Band 66_Ant MIMO2	20M	QPSK	1	0	Left Edge	21mm	Tablet	OFF	132322	1745	ICT	23.32	24.00	1.169			-0.03	0.173	0.202
	LTE Band 66_Ant MIMO2	20M	QPSK	50	0	Left Edge	21mm	Tablet	OFF	132322	1745	ICT	22.30	23.00	1.175			0.08	0.136	0.160
	LTE Band 66B	15M	QPSK	1	0	Back	0mm	Tablet	ON	132229+132322	1735.7	ICT	11.8	12.50	1.175			0.06	0.843	0.990
	LTE Band 66B	15M	QPSK	1	0	Back	0mm	Tablet	ON	132047+132140	1717.5	ICT	11.75	12.50	1.189			-0.09	0.832	0.989
	LTE Band 66B	15M	QPSK	1	0	Back	0mm	Tablet	ON	132504+132597	1763.2	ICT	11.77	12.50	1.183			-0.08	0.831	0.983
	LTE Band 66C	20M	QPSK	1	0	Back	0mm	Tablet	ON	132322+132124	1745	ICT	11.87	12.50	1.156			0.13	0.846	0.978
	LTE Band 66C	20M	QPSK	1	0	Back	0mm	Tablet	ON	132072+132270	1720	ICT	11.69	12.50	1.205			0.12	0.828	0.998
	LTE Band 66C	20M	QPSK	1	0	Back	0mm	Tablet	ON	132572+132374	1770	ICT	11.8	12.50	1.175			0.03	0.829	0.974
	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	132072	1720	AWAN	12.14	12.50	1.086			0.05	0.845	0.918
	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	132322	1745	AWAN	12.32	12.50	1.042			0.06	0.827	0.862
	LTE Band 66_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	132572	1770	AWAN	12.28	12.50	1.052			-0.09	0.762	0.802
	LTE Band 71_Ant Main	20M	QPSK	1	49	Bottom Side	0mm	Laptop	ON	133297	680.5	ICT	15.79	16.50	1.178			-0.08	0.292	0.344
	LTE Band 71_Ant Main	20M	QPSK	50	24	Bottom Side	0mm	Laptop	ON	133297	680.5	ICT	15.86	16.50	1.159			0.13	0.290	0.336
	LTE Band 71_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	133297	680.5	ICT	15.79	16.50	1.178			0.18	0.781	0.920
	LTE Band 71_Ant Main	20M	QPSK	50	24	Back	0mm	Tablet	ON	133297	680.5	ICT	15.86	16.50	1.159			0.16	0.799	0.926
	LTE Band 71_Ant Main	20M	QPSK	100	0	Back	0mm	Tablet	ON	133297	680.5	ICT	15.77	16.50	1.183			0.05	0.778	0.920



FCC SAR TEST REPORT

Report No. : FA4D1633

	LTE Band 71_Ant Main	20M	QPSK	1	49	Top Edge	0mm	Tablet	ON	133297	680.5	ICT	15.79	16.50	1.178			-0.1	0.205	0.241
	LTE Band 71_Ant Main	20M	QPSK	50	24	Top Edge	0mm	Tablet	ON	133297	680.5	ICT	15.86	16.50	1.159			0.07	0.186	0.216
	LTE Band 71_Ant Main	20M	QPSK	1	49	Right Edge	0mm	Tablet	ON	133297	680.5	ICT	15.79	16.50	1.178			0.18	0.850	1.001
	LTE Band 71_Ant Main	20M	QPSK	50	24	Right Edge	0mm	Tablet	ON	133297	680.5	ICT	15.86	16.50	1.159			-0.1	0.837	0.970
	LTE Band 71_Ant Main	20M	QPSK	100	0	Right Edge	0mm	Tablet	ON	133297	680.5	ICT	15.77	16.50	1.183			0.03	0.829	0.981
	LTE Band 71_Ant Main	20M	QPSK	1	49	Bottom Side	35mm	Laptop	OFF	133297	680.5	ICT	23.06	24.00	1.242			0.07	0.001	0.001
	LTE Band 71_Ant Main	20M	QPSK	50	24	Bottom Side	35mm	Laptop	OFF	133297	680.5	ICT	22.11	23.00	1.227			-0.17	0.001	0.001
	LTE Band 71_Ant Main	20M	QPSK	1	49	Back	31mm	Tablet	OFF	133297	680.5	ICT	23.06	24.00	1.242			-0.16	0.001	0.001
	LTE Band 71_Ant Main	20M	QPSK	50	24	Back	31mm	Tablet	OFF	133297	680.5	ICT	22.11	23.00	1.227			-0.01	0.001	0.001
	LTE Band 71_Ant Main	20M	QPSK	1	49	Top Edge	34mm	Tablet	OFF	133297	680.5	ICT	23.06	24.00	1.242			0.03	0.001	0.001
	LTE Band 71_Ant Main	20M	QPSK	50	24	Top Edge	34mm	Tablet	OFF	133297	680.5	ICT	22.11	23.00	1.227			0.02	0.001	0.001
	LTE Band 71_Ant Main	20M	QPSK	1	49	Right Edge	14mm	Tablet	OFF	133297	680.5	ICT	23.06	24.00	1.242			0.06	0.056	0.070
	LTE Band 71_Ant Main	20M	QPSK	50	24	Right Edge	14mm	Tablet	OFF	133297	680.5	ICT	22.11	23.00	1.227			-0.18	0.045	0.055
16	LTE Band 71_Ant Main	20M	QPSK	1	49	Right Edge	0mm	Tablet	ON	133297	680.5	AWAN	15.79	16.50	1.178			-0.01	1.010	1.189

<5G NR SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	User Scenario	Power Reduction	Ch.	Freq. (MHz)	Antenna Vendor	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)
	FR1 n5_Ant Main	25M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	167300	836.5	ICT	16.90	17.50	1.148			0.01	0.324	0.372
	FR1 n5_Ant Main	25M	BPSK	64	0	Bottom Side	0mm	Laptop	ON	167300	836.5	ICT	16.90	17.50	1.148			0.1	0.377	0.433
17	FR1 n5_Ant Main	25M	BPSK	1	1	Back	0mm	Tablet	ON	167300	836.5	ICT	16.90	17.50	1.148			0.11	1.000	1.148
	FR1 n5_Ant Main	25M	BPSK	64	0	Back	0mm	Tablet	ON	167300	836.5	ICT	16.90	17.50	1.148			-0.01	0.973	1.117
	FR1 n5_Ant Main	25M	BPSK	128	0	Back	0mm	Tablet	ON	167300	836.5	ICT	16.89	17.50	1.151			-0.08	0.770	0.886
	FR1 n5_Ant Main	25M	BPSK	1	1	Top Edge	0mm	Tablet	ON	167300	836.5	ICT	16.90	17.50	1.148			0.05	0.150	0.172
	FR1 n5_Ant Main	25M	BPSK	64	0	Top Edge	0mm	Tablet	ON	167300	836.5	ICT	16.90	17.50	1.148			0.06	0.238	0.273
	FR1 n5_Ant Main	25M	BPSK	1	1	Right Edge	0mm	Tablet	ON	167300	836.5	ICT	16.90	17.50	1.148			-0.09	0.931	1.069
	FR1 n5_Ant Main	25M	BPSK	64	0	Right Edge	0mm	Tablet	ON	167300	836.5	ICT	16.90	17.50	1.148			-0.08	0.752	0.863
	FR1 n5_Ant Main	25M	BPSK	1	64	Bottom Side	35mm	Laptop	OFF	167300	836.5	ICT	23.03	24.00	1.250			0.08	0.052	0.065
	FR1 n5_Ant Main	25M	BPSK	64	33	Bottom Side	35mm	Laptop	OFF	167300	836.5	ICT	23.02	24.00	1.253			0.01	0.046	0.058
	FR1 n5_Ant Main	25M	BPSK	1	64	Back	31mm	Tablet	OFF	167300	836.5	ICT	23.03	24.00	1.250			-0.08	0.062	0.078
	FR1 n5_Ant Main	25M	BPSK	64	33	Back	31mm	Tablet	OFF	167300	836.5	ICT	23.02	24.00	1.253			0.1	0.055	0.069
	FR1 n5_Ant Main	25M	BPSK	1	64	Top Edge	34mm	Tablet	OFF	167300	836.5	ICT	23.03	24.00	1.250			-0.18	0.001	0.001
	FR1 n5_Ant Main	25M	BPSK	64	33	Top Edge	34mm	Tablet	OFF	167300	836.5	ICT	23.02	24.00	1.253			0.1	0.001	0.001
	FR1 n5_Ant Main	25M	BPSK	1	64	Right Edge	14mm	Tablet	OFF	167300	836.5	ICT	23.03	24.00	1.250			0.12	0.118	0.148
	FR1 n5_Ant Main	25M	BPSK	64	33	Right Edge	14mm	Tablet	OFF	167300	836.5	ICT	23.02	24.00	1.253			0.08	0.104	0.130
	FR1 n5_Ant Main	25M	BPSK	1	1	Back	0mm	Tablet	ON	167300	836.5	AWAN	16.90	17.50	1.148			0.13	0.988	1.134
	FR1 n7_Ant MIMO2	50M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	507000	2535	ICT	10.92	12.00	1.282			-0.13	0.175	0.224
	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Bottom Side	0mm	Laptop	ON	507000	2535	ICT	10.91	12.00	1.285			0.06	0.189	0.243
	FR1 n7_Ant MIMO2	50M	BPSK	1	1	Back	0mm	Tablet	ON	507000	2535	ICT	10.92	12.00	1.282			0.08	0.683	0.876
	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Back	0mm	Tablet	ON	507000	2535	ICT	10.91	12.00	1.285			-0.07	0.817	1.050
	FR1 n7_Ant MIMO2	50M	BPSK	270	0	Back	0mm	Tablet	ON	507000	2535	ICT	10.84	12.00	1.306			0.05	0.728	0.951
	FR1 n7_Ant MIMO2	50M	BPSK	1	1	Top Edge	0mm	Tablet	ON	507000	2535	ICT	10.92	12.00	1.282			-0.11	0.095	0.122
	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Top Edge	0mm	Tablet	ON	507000	2535	ICT	10.91	12.00	1.285			-0.12	0.120	0.154
	FR1 n7_Ant MIMO2	50M	BPSK	1	1	Left Edge	0mm	Tablet	ON	507000	2535	ICT	10.92	12.00	1.282			0.03	0.739	0.948
18	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Left Edge	0mm	Tablet	ON	507000	2535	ICT	10.91	12.00	1.285			0	0.902	1.159
	FR1 n7_Ant MIMO2	50M	BPSK	270	0	Left Edge	0mm	Tablet	ON	507000	2535	ICT	10.84	12.00	1.306			-0.16	0.822	1.074
	FR1 n7_Ant MIMO2	50M	BPSK	1	135	Bottom Side	29mm	Laptop	OFF	507000	2535	ICT	22.86	24.00	1.300			-0.17	0.137	0.178
	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Bottom Side	29mm	Laptop	OFF	507000	2535	ICT	22.70	24.00	1.349			-0.03	0.126	0.170
	FR1 n7_Ant MIMO2	50M	BPSK	1	135	Back	26mm	Tablet	OFF	507000	2535	ICT	22.86	24.00	1.300			-0.05	0.196	0.255
	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Back	26mm	Tablet	OFF	507000	2535	ICT	22.70	24.00	1.349			0.18	0.180	0.243
	FR1 n7_Ant MIMO2	50M	BPSK	1	135	Top Edge	24mm	Tablet	OFF	507000	2535	ICT	22.86	24.00	1.300			0.14	0.053	0.069
	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Top Edge	24mm	Tablet	OFF	507000	2535	ICT	22.70	24.00	1.349			-0.17	0.049	0.066
	FR1 n7_Ant MIMO2	50M	BPSK	1	135	Left Edge	21mm	Tablet	OFF	507000	2535	ICT	22.86	24.00	1.300			0.17	0.479	0.623
	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Left Edge	21mm	Tablet	OFF	507000	2535	ICT	22.70	24.00	1.349			-0.05	0.439	0.592



FCC SAR TEST REPORT

Report No. : FA4D1633

	FR1 n7_Ant MIMO2	50M	BPSK	135	68	Left Edge	0mm	Tablet	ON	507000	2535	AWAN	10.91	12.00	1.285		-0.02	0.667	0.857
	FR1 n12_Ant Main	15M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	141500	707.5	ICT	16.23	17.00	1.194		0.15	0.225	0.269
	FR1 n12_Ant Main	15M	BPSK	36	0	Bottom Side	0mm	Laptop	ON	141500	707.5	ICT	16.19	17.00	1.205		-0.09	0.223	0.269
	FR1 n12_Ant Main	15M	BPSK	1	1	Back	0mm	Tablet	ON	141500	707.5	ICT	16.23	17.00	1.194		-0.08	0.857	1.023
	FR1 n12_Ant Main	15M	BPSK	36	0	Back	0mm	Tablet	ON	141500	707.5	ICT	16.19	17.00	1.205		0.16	0.804	0.969
	FR1 n12_Ant Main	15M	BPSK	75	0	Back	0mm	Tablet	ON	141500	707.5	ICT	16.11	17.00	1.227		0.05	0.866	1.063
	FR1 n12_Ant Main	15M	BPSK	1	1	Top Edge	0mm	Tablet	ON	141500	707.5	ICT	16.23	17.00	1.194		0.05	0.108	0.129
	FR1 n12_Ant Main	15M	BPSK	36	0	Top Edge	0mm	Tablet	ON	141500	707.5	ICT	16.19	17.00	1.205		-0.03	0.122	0.147
19	FR1 n12_Ant Main	15M	BPSK	1	1	Right Edge	0mm	Tablet	ON	141500	707.5	ICT	16.23	17.00	1.194		-0.01	0.904	1.079
	FR1 n12_Ant Main	15M	BPSK	36	0	Right Edge	0mm	Tablet	ON	141500	707.5	ICT	16.19	17.00	1.205		-0.15	0.867	1.045
	FR1 n12_Ant Main	15M	BPSK	75	0	Right Edge	0mm	Tablet	ON	141500	707.5	ICT	16.11	17.00	1.227		0.02	0.862	1.058
	FR1 n12_Ant Main	15M	BPSK	1	1	Bottom Side	35mm	Laptop	OFF	141500	707.5	ICT	23.52	24.00	1.117		0.01	0.001	0.001
	FR1 n12_Ant Main	15M	BPSK	36	22	Bottom Side	35mm	Laptop	OFF	141500	707.5	ICT	23.33	24.00	1.167		0.1	0.001	0.001
	FR1 n12_Ant Main	15M	BPSK	1	1	Back	31mm	Tablet	OFF	141500	707.5	ICT	23.52	24.00	1.117		-0.01	0.051	0.057
	FR1 n12_Ant Main	15M	BPSK	36	22	Back	31mm	Tablet	OFF	141500	707.5	ICT	23.33	24.00	1.167		-0.08	0.049	0.057
	FR1 n12_Ant Main	15M	BPSK	1	1	Top Edge	34mm	Tablet	OFF	141500	707.5	ICT	23.52	24.00	1.117		0.05	0.001	0.001
	FR1 n12_Ant Main	15M	BPSK	36	22	Top Edge	34mm	Tablet	OFF	141500	707.5	ICT	23.33	24.00	1.167		0.06	0.001	0.001
	FR1 n12_Ant Main	15M	BPSK	1	1	Right Edge	14mm	Tablet	OFF	141500	707.5	ICT	23.52	24.00	1.117		-0.09	0.113	0.126
	FR1 n12_Ant Main	15M	BPSK	36	22	Right Edge	14mm	Tablet	OFF	141500	707.5	ICT	23.33	24.00	1.167		-0.08	0.109	0.127
	FR1 n12_Ant Main	15M	BPSK	1	1	Right Edge	0mm	Tablet	ON	141500	707.5	AWAN	16.23	17.00	1.194		0.07	0.900	1.075
	FR1 n14_Ant Main	10M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	158600	793	ICT	16.30	17.00	1.175		0.13	0.199	0.234
	FR1 n14_Ant Main	10M	BPSK	25	0	Bottom Side	0mm	Laptop	ON	158600	793	ICT	16.27	17.00	1.183		0.12	0.195	0.231
	FR1 n14_Ant Main	10M	BPSK	1	1	Back	0mm	Tablet	ON	158600	793	ICT	16.30	17.00	1.175		0	0.909	1.068
	FR1 n14_Ant Main	10M	BPSK	25	0	Back	0mm	Tablet	ON	158600	793	ICT	16.27	17.00	1.183		0.16	0.854	1.010
	FR1 n14_Ant Main	10M	BPSK	50	0	Back	0mm	Tablet	ON	158600	793	ICT	16.25	17.00	1.189		-0.1	0.846	1.005
	FR1 n14_Ant Main	10M	BPSK	1	1	Top Edge	0mm	Tablet	ON	158600	793	ICT	16.30	17.00	1.175		0.07	0.108	0.127
	FR1 n14_Ant Main	10M	BPSK	25	0	Top Edge	0mm	Tablet	ON	158600	793	ICT	16.27	17.00	1.183		0.18	0.099	0.117
	FR1 n14_Ant Main	10M	BPSK	1	1	Right Edge	0mm	Tablet	ON	158600	793	ICT	16.30	17.00	1.175		-0.1	0.901	1.059
20	FR1 n14_Ant Main	10M	BPSK	25	0	Right Edge	0mm	Tablet	ON	158600	793	ICT	16.27	17.00	1.183		0	1.000	1.183
	FR1 n14_Ant Main	10M	BPSK	50	0	Right Edge	0mm	Tablet	ON	158600	793	ICT	16.25	17.00	1.189		0.01	0.912	1.084
	FR1 n14_Ant Main	10M	BPSK	1	1	Bottom Side	35mm	Laptop	OFF	158600	793	ICT	23.51	24.00	1.119		-0.15	0.001	0.001
	FR1 n14_Ant Main	10M	BPSK	25	14	Bottom Side	35mm	Laptop	OFF	158600	793	ICT	23.42	24.00	1.143		0.19	0.001	0.001
	FR1 n14_Ant Main	10M	BPSK	1	1	Back	31mm	Tablet	OFF	158600	793	ICT	23.51	24.00	1.119		0.03	0.001	0.001
	FR1 n14_Ant Main	10M	BPSK	25	0	Back	31mm	Tablet	OFF	158600	793	ICT	22.90	23.50	1.148		-0.15	0.001	0.001
	FR1 n14_Ant Main	10M	BPSK	1	1	Top Edge	34mm	Tablet	OFF	158600	793	ICT	23.51	24.00	1.119		-0.15	0.001	0.001
	FR1 n14_Ant Main	10M	BPSK	25	0	Top Edge	34mm	Tablet	OFF	158600	793	ICT	22.90	23.50	1.148		0.11	0.001	0.001
	FR1 n14_Ant Main	10M	BPSK	1	1	Right Edge	14mm	Tablet	OFF	158600	793	ICT	23.51	24.00	1.119		-0.08	0.075	0.084
	FR1 n14_Ant Main	10M	BPSK	25	0	Right Edge	14mm	Tablet	OFF	158600	793	ICT	22.90	23.50	1.148		-0.17	0.073	0.084
	FR1 n14_Ant Main	10M	BPSK	25	0	Right Edge	0mm	Tablet	ON	158600	793	AWAN	16.27	17.00	1.183		-0.08	0.951	1.125
	FR1 n25_Ant Main	45M	BPSK	1	1	Bottom Side	0mm	Laptop	OFF	376500	1882.5	ICT	15.36	16.00	1.159		0.16	0.349	0.404
	FR1 n25_Ant Main	45M	BPSK	120	0	Bottom Side	0mm	Laptop	OFF	376500	1882.5	ICT	15.52	16.00	1.117		0.13	0.346	0.386
	FR1 n25_Ant Main	45M	BPSK	1	1	Back	0mm	Laptop	OFF	376500	1882.5	ICT	15.36	16.00	1.159		0.02	0.818	0.948
	FR1 n25_Ant Main	45M	BPSK	120	0	Back	0mm	Tablet	OFF	376500	1882.5	ICT	15.52	16.00	1.117		0.16	0.798	0.891
	FR1 n25_Ant Main	45M	BPSK	240	0	Back	0mm	Tablet	OFF	376500	1882.5	ICT	15.41	16.00	1.146		-0.03	0.790	0.905
	FR1 n25_Ant Main	45M	BPSK	1	1	Top Edge	0mm	Tablet	OFF	376500	1882.5	ICT	15.36	16.00	1.159		0.07	0.256	0.297
	FR1 n25_Ant Main	45M	BPSK	120	0	Top Edge	0mm	Tablet	OFF	376500	1882.5	ICT	15.52	16.00	1.117		0	0.239	0.267
	FR1 n25_Ant Main	45M	BPSK	1	1	Right Edge	0mm	Tablet	OFF	376500	1882.5	ICT	15.36	16.00	1.159		0.01	0.209	0.242
	FR1 n25_Ant Main	45M	BPSK	120	0	Right Edge	0mm	Tablet	OFF	376500	1882.5	ICT	15.52	16.00	1.117		-0.01	0.210	0.235
	FR1 n25_Ant Main	45M	BPSK	1	120	Bottom Side	35mm	Laptop	OFF	376500	1882.5	ICT	22.56	24.00	1.393		-0.04	0.049	0.068
	FR1 n25_Ant Main	45M	BPSK	120	60	Bottom Side	35mm	Laptop	OFF	376500	1882.5	ICT	22.49	24.00	1.416		-0.08	0.046	0.065
	FR1 n25_Ant Main	45M	BPSK	1	120	Back	31mm	Laptop	OFF	376500	1882.5	ICT	22.56	24.00	1.393		-0.04	0.091	0.127
	FR1 n25_Ant Main	45M	BPSK	120	60	Back	31mm	Tablet	OFF	376500	1882.5	ICT	22.49	24.00	1.416		-0.08	0.085	0.120
	FR1 n25_Ant Main	45M	BPSK	1	120	Top Edge	34mm	Tablet	OFF	376500	1882.5	ICT	22.56	24.00	1.393		-0.13	0.001	0.001
	FR1 n25_Ant Main	45M	BPSK	120	60	Top Edge	34mm	Tablet	OFF	376500	1882.5	ICT	22.49	24.00	1.416		-0.13	0.001	0.001
	FR1 n25_Ant Main	45M	BPSK	1	120	Right Edge	14mm	Tablet	OFF	376500	1882.5	ICT	22.56	24.00	1.393		0.06	0.001	0.001
	FR1 n25_Ant Main	45M	BPSK	120	60	Right Edge	14mm	Tablet	OFF	376500	1882.5	ICT	22.49	24.00	1.416		-0.03	0.001	0.001



FCC SAR TEST REPORT

Report No. : FA4D1633

	FR1 n25_Ant Main	45M	BPSK	1	1	Back	0mm	Tablet	OFF	376500	1882.5	AWAN	15.36	16.00	1.159			-0.06	0.790	0.915
	FR1 n25_Ant MIMO2	45M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	376500	1882.5	ICT	14.39	16.00	1.449			-0.04	0.472	0.684
	FR1 n25_Ant MIMO2	45M	BPSK	120	0	Bottom Side	0mm	Laptop	ON	376500	1882.5	ICT	14.56	16.00	1.393			-0.09	0.455	0.634
21	FR1 n25_Ant MIMO2	45M	BPSK	1	1	Back	0mm	Tablet	ON	376500	1882.5	ICT	14.39	16.00	1.449			0	0.796	1.153
	FR1 n25_Ant MIMO2	45M	BPSK	120	0	Back	0mm	Tablet	ON	376500	1882.5	ICT	14.56	16.00	1.393			0.18	0.802	1.117
	FR1 n25_Ant MIMO2	45M	BPSK	240	0	Back	0mm	Tablet	ON	376500	1882.5	ICT	14.23	16.00	1.503			-0.17	0.766	1.151
	FR1 n25_Ant MIMO2	45M	BPSK	1	1	Top Edge	0mm	Tablet	ON	376500	1882.5	ICT	14.39	16.00	1.449			-0.04	0.001	0.001
	FR1 n25_Ant MIMO2	45M	BPSK	120	0	Top Edge	0mm	Tablet	ON	376500	1882.5	ICT	14.56	16.00	1.393			-0.05	0.001	0.001
	FR1 n25_Ant MIMO2	45M	BPSK	1	1	Left Edge	0mm	Tablet	ON	376500	1882.5	ICT	14.39	16.00	1.449			0	0.514	0.745
	FR1 n25_Ant MIMO2	45M	BPSK	120	0	Left Edge	0mm	Tablet	ON	376500	1882.5	ICT	14.56	16.00	1.393			-0.13	0.505	0.704
	FR1 n25_Ant MIMO2	45M	BPSK	1	120	Bottom Side	29mm	Laptop	OFF	376500	1882.5	ICT	22.63	24.00	1.371			-0.03	0.106	0.145
	FR1 n25_Ant MIMO2	45M	BPSK	120	60	Bottom Side	29mm	Laptop	OFF	376500	1882.5	ICT	22.62	24.00	1.374			0.08	0.111	0.153
	FR1 n25_Ant MIMO2	45M	BPSK	1	120	Back	26mm	Tablet	OFF	376500	1882.5	ICT	22.63	24.00	1.371			-0.11	0.101	0.138
	FR1 n25_Ant MIMO2	45M	BPSK	120	60	Back	26mm	Tablet	OFF	376500	1882.5	ICT	22.62	24.00	1.374			-0.12	0.106	0.146
	FR1 n25_Ant MIMO2	45M	BPSK	1	120	Top Edge	24mm	Tablet	OFF	376500	1882.5	ICT	22.63	24.00	1.371			0.03	0.001	0.001
	FR1 n25_Ant MIMO2	45M	BPSK	120	60	Top Edge	24mm	Tablet	OFF	376500	1882.5	ICT	22.62	24.00	1.374			-0.16	0.001	0.001
	FR1 n25_Ant MIMO2	45M	BPSK	1	120	Left Edge	21mm	Tablet	OFF	376500	1882.5	ICT	22.63	24.00	1.371			-0.02	0.136	0.186
	FR1 n25_Ant MIMO2	45M	BPSK	120	60	Left Edge	21mm	Tablet	OFF	376500	1882.5	ICT	22.62	24.00	1.374			0.15	0.142	0.195
	FR1 n25_Ant MIMO2	45M	BPSK	1	1	Back	0mm	Tablet	ON	376500	1882.5	AWAN	14.39	16.00	1.449			-0.01	0.735	1.065
	FR1 n26_Ant Main	20M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	166300	831.5	ICT	16.85	17.50	1.161			-0.09	0.214	0.249
	FR1 n26_Ant Main	20M	BPSK	50	0	Bottom Side	0mm	Laptop	ON	166300	831.5	ICT	16.84	17.50	1.164			0.05	0.230	0.268
22	FR1 n26_Ant Main	20M	BPSK	1	1	Back	0mm	Tablet	ON	166300	831.5	ICT	16.85	17.50	1.161			0	0.972	1.129
	FR1 n26_Ant Main	20M	BPSK	50	0	Back	0mm	Tablet	ON	166300	831.5	ICT	16.84	17.50	1.164			0.17	0.944	1.099
	FR1 n26_Ant Main	20M	BPSK	100	0	Back	0mm	Tablet	ON	166300	831.5	ICT	16.82	17.50	1.169			0.06	0.926	1.083
	FR1 n26_Ant Main	20M	BPSK	1	1	Top Edge	0mm	Tablet	ON	166300	831.5	ICT	16.85	17.50	1.161			0	0.128	0.149
	FR1 n26_Ant Main	20M	BPSK	50	0	Top Edge	0mm	Tablet	ON	166300	831.5	ICT	16.84	17.50	1.164			-0.04	0.131	0.153
	FR1 n26_Ant Main	20M	BPSK	1	1	Right Edge	0mm	Tablet	ON	166300	831.5	ICT	16.85	17.50	1.161			-0.15	0.644	0.748
	FR1 n26_Ant Main	20M	BPSK	50	0	Right Edge	0mm	Tablet	ON	166300	831.5	ICT	16.84	17.50	1.164			0.11	0.661	0.769
	FR1 n26_Ant Main	20M	BPSK	1	1	Bottom Side	35mm	Laptop	OFF	166300	831.5	ICT	23.00	24.00	1.259			-0.11	0.001	0.001
	FR1 n26_Ant Main	20M	BPSK	50	28	Bottom Side	35mm	Laptop	OFF	166300	831.5	ICT	22.95	24.00	1.274			-0.06	0.001	0.001
	FR1 n26_Ant Main	20M	BPSK	1	1	Back	31mm	Tablet	OFF	166300	831.5	ICT	23.00	24.00	1.259			-0.13	0.001	0.001
	FR1 n26_Ant Main	20M	BPSK	50	28	Back	31mm	Tablet	OFF	166300	831.5	ICT	22.95	24.00	1.274			0.16	0.001	0.001
	FR1 n26_Ant Main	20M	BPSK	1	1	Top Edge	34mm	Tablet	OFF	166300	831.5	ICT	23.00	24.00	1.259			-0.15	0.001	0.001
	FR1 n26_Ant Main	20M	BPSK	50	28	Top Edge	34mm	Tablet	OFF	166300	831.5	ICT	22.95	24.00	1.274			-0.02	0.001	0.001
	FR1 n26_Ant Main	20M	BPSK	1	1	Right Edge	14mm	Tablet	OFF	166300	831.5	ICT	23.00	24.00	1.259			-0.09	0.104	0.131
	FR1 n26_Ant Main	20M	BPSK	50	28	Right Edge	14mm	Tablet	OFF	166300	831.5	ICT	22.95	24.00	1.274			0.14	0.094	0.120
	FR1 n26_Ant Main	20M	BPSK	1	1	Back	0mm	Tablet	ON	166300	831.5	AWAN	16.85	17.50	1.161			0.1	0.787	0.914
	FR1 n30_Ant MIMO2	10M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	462000	2310	ICT	13.39	13.50	1.026			0.04	0.253	0.259
	FR1 n30_Ant MIMO2	10M	BPSK	25	0	Bottom Side	0mm	Laptop	ON	462000	2310	ICT	13.28	13.50	1.052			0.13	0.224	0.236
	FR1 n30_Ant MIMO2	10M	BPSK	1	1	Back	0mm	Tablet	ON	462000	2310	ICT	13.39	13.50	1.026			-0.16	0.879	0.902
23	FR1 n30_Ant MIMO2	10M	BPSK	25	0	Back	0mm	Tablet	ON	462000	2310	ICT	13.28	13.50	1.052			0.02	0.867	0.912
	FR1 n30_Ant MIMO2	10M	BPSK	50	0	Back	0mm	Tablet	ON	462000	2310	ICT	13.32	13.50	1.042			-0.15	0.860	0.896
	FR1 n30_Ant MIMO2	10M	BPSK	1	1	Top Edge	0mm	Tablet	ON	462000	2310	ICT	13.39	13.50	1.026			-0.06	0.056	0.057
	FR1 n30_Ant MIMO2	10M	BPSK	25	0	Top Edge	0mm	Tablet	ON	462000	2310	ICT	13.28	13.50	1.052			-0.14	0.059	0.062
	FR1 n30_Ant MIMO2	10M	BPSK	1	1	Left Edge	0mm	Tablet	ON	462000	2310	ICT	13.39	13.50	1.026			-0.19	0.577	0.592
	FR1 n30_Ant MIMO2	10M	BPSK	25	0	Left Edge	0mm	Tablet	ON	462000	2310	ICT	13.28	13.50	1.052			0.01	0.524	0.551
	FR1 n30_Ant MIMO2	10M	BPSK	1	1	Bottom Side	29mm	Laptop	OFF	462000	2310	ICT	22.60	23.00	1.096			-0.05	0.070	0.077
	FR1 n30_Ant MIMO2	10M	BPSK	25	14	Bottom Side	29mm	Laptop	OFF	462000	2310	ICT	22.35	23.00	1.161			-0.13	0.067	0.078
	FR1 n30_Ant MIMO2	10M	BPSK	1	1	Back	26mm	Tablet	OFF	462000	2310	ICT	22.60	23.00	1.096			0.01	0.098	0.107
	FR1 n30_Ant MIMO2	10M	BPSK	25	14	Back	26mm	Tablet	OFF	462000	2310	ICT	22.35	23.00	1.161			-0.16	0.094	0.109
	FR1 n30_Ant MIMO2	10M	BPSK	1	1	Top Edge	24mm	Tablet	OFF	462000	2310	ICT	22.60	23.00	1.096			0.1	0.001	0.001
	FR1 n30_Ant MIMO2	10M	BPSK	25	14	Top Edge	24mm	Tablet	OFF	462000	2310	ICT	22.35	23.00	1.161			-0.04	0.001	0.001
	FR1 n30_Ant MIMO2	10M	BPSK	1	1	Left Edge	21mm	Tablet	OFF	462000	2310	ICT	22.60	23.00	1.096			-0.01	0.125	0.137
	FR1 n30_Ant MIMO2	10M	BPSK	25	14	Left Edge	21mm	Tablet	OFF	462000	2310	ICT	22.35	23.00	1.161			0	0.120	0.139
	FR1 n30_Ant MIMO2	10M	BPSK	25	0	Back	0mm	Tablet	ON	462000	2310	AWAN	13.28	13.50	1.052			0.06	0.689	0.725
	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Bottom Side	0mm	Laptop	ON	519000	2595	ICT	11.17	12.00	1.211			-0.02	0.158	0.191



FCC SAR TEST REPORT

Report No. : FA4D1633

	FR1 n38_Ant MIMO2	40M	BPSK	50	0	Bottom Side	0mm	Laptop	ON	519000	2595	ICT	11.15	12.00	1.216			-0.09	0.200	0.243
24	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Back	0mm	Tablet	ON	519000	2595	ICT	11.17	12.00	1.211			-0.04	0.967	1.171
	FR1 n38_Ant MIMO2	40M	BPSK	50	0	Back	0mm	Tablet	ON	519000	2595	ICT	11.15	12.00	1.216			-0.09	0.905	1.101
	FR1 n38_Ant MIMO2	40M	BPSK	100	0	Back	0mm	Tablet	ON	519000	2595	ICT	11.13	12.00	1.222			0.07	0.923	1.128
	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Top Edge	0mm	Tablet	ON	519000	2595	ICT	11.17	12.00	1.211			-0.09	0.079	0.096
	FR1 n38_Ant MIMO2	40M	BPSK	50	0	Top Edge	0mm	Tablet	ON	519000	2595	ICT	11.15	12.00	1.216			-0.16	0.145	0.176
	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Left Edge	0mm	Tablet	ON	519000	2595	ICT	11.17	12.00	1.211			-0.18	0.789	0.955
	FR1 n38_Ant MIMO2	40M	BPSK	50	0	Left Edge	0mm	Tablet	ON	519000	2595	ICT	11.15	12.00	1.216			-0.07	0.741	0.901
	FR1 n38_Ant MIMO2	40M	BPSK	100	0	Left Edge	0mm	Tablet	ON	519000	2595	ICT	11.13	12.00	1.222			0.11	0.753	0.920
	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Bottom Side	29mm	Laptop	OFF	519000	2595	ICT	22.95	24.00	1.274			-0.01	0.142	0.181
	FR1 n38_Ant MIMO2	40M	BPSK	50	28	Bottom Side	29mm	Laptop	OFF	519000	2595	ICT	22.91	24.00	1.285			-0.09	0.133	0.171
	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Back	26mm	Tablet	OFF	519000	2595	ICT	22.95	24.00	1.274			-0.13	0.406	0.517
	FR1 n38_Ant MIMO2	40M	BPSK	50	28	Back	26mm	Tablet	OFF	519000	2595	ICT	22.91	24.00	1.285			0.17	0.383	0.492
	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Top Edge	24mm	Tablet	OFF	519000	2595	ICT	22.95	24.00	1.274			0.06	0.064	0.082
	FR1 n38_Ant MIMO2	40M	BPSK	50	28	Top Edge	24mm	Tablet	OFF	519000	2595	ICT	22.91	24.00	1.285			0	0.060	0.077
	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Left Edge	21mm	Tablet	OFF	519000	2595	ICT	22.95	24.00	1.274			-0.04	0.592	0.754
	FR1 n38_Ant MIMO2	40M	BPSK	50	28	Left Edge	21mm	Tablet	OFF	519000	2595	ICT	22.91	24.00	1.285			-0.15	0.555	0.713
	FR1 n38_Ant MIMO2	40M	BPSK	1	53	Back	0mm	Tablet	ON	519000	2595	AWAN	11.17	12.00	1.211			-0.08	0.923	1.117
	FR1 n41_Ant Main	100M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	518598	2592.99	ICT	12.66	13.50	1.213			-0.1	0.245	0.297
	FR1 n41_Ant Main	100M	BPSK	135	0	Bottom Side	0mm	Laptop	ON	518598	2592.99	ICT	12.64	13.50	1.219			-0.01	0.230	0.280
	FR1 n41_Ant Main	100M	BPSK	1	1	Back	0mm	Tablet	ON	518598	2592.99	ICT	12.66	13.50	1.213			0.02	0.942	1.143
	FR1 n41_Ant Main	100M	BPSK	135	0	Back	0mm	Tablet	ON	518598	2592.99	ICT	12.64	13.50	1.219			-0.17	0.883	1.076
	FR1 n41_Ant Main	100M	BPSK	270	0	Back	0mm	Tablet	ON	518598	2592.99	ICT	12.62	13.50	1.225			0.07	0.875	1.072
	FR1 n41_Ant Main	100M	BPSK	1	1	Top Edge	0mm	Tablet	ON	518598	2592.99	ICT	12.66	13.50	1.213			-0.01	0.280	0.340
	FR1 n41_Ant Main	100M	BPSK	135	0	Top Edge	0mm	Tablet	ON	518598	2592.99	ICT	12.64	13.50	1.219			-0.11	0.274	0.334
	FR1 n41_Ant Main	100M	BPSK	1	1	Right Edge	0mm	Tablet	ON	518598	2592.99	ICT	12.66	13.50	1.213			0.14	0.022	0.027
	FR1 n41_Ant Main	100M	BPSK	135	0	Right Edge	0mm	Tablet	ON	518598	2592.99	ICT	12.64	13.50	1.219			0.03	0.019	0.023
	FR1 n41_Ant Main	100M	BPSK	1	137	Bottom Side	35mm	Laptop	OFF	518598	2592.99	ICT	23.30	24.00	1.175			-0.04	0.042	0.049
	FR1 n41_Ant Main	100M	BPSK	135	69	Bottom Side	35mm	Laptop	OFF	518598	2592.99	ICT	23.50	24.00	1.122			-0.09	0.039	0.044
	FR1 n41_Ant Main	100M	BPSK	1	137	Back	31mm	Tablet	OFF	518598	2592.99	ICT	23.30	24.00	1.175			0.18	0.060	0.070
	FR1 n41_Ant Main	100M	BPSK	135	69	Back	31mm	Tablet	OFF	518598	2592.99	ICT	23.50	24.00	1.122			-0.17	0.056	0.063
	FR1 n41_Ant Main	100M	BPSK	1	137	Top Edge	34mm	Tablet	OFF	518598	2592.99	ICT	23.30	24.00	1.175			-0.04	0.051	0.060
	FR1 n41_Ant Main	100M	BPSK	135	69	Top Edge	34mm	Tablet	OFF	518598	2592.99	ICT	23.50	24.00	1.122			-0.05	0.048	0.054
	FR1 n41_Ant Main	100M	BPSK	1	137	Right Edge	14mm	Tablet	OFF	518598	2592.99	ICT	23.30	24.00	1.175			0	0.001	0.001
	FR1 n41_Ant Main	100M	BPSK	135	69	Right Edge	14mm	Tablet	OFF	518598	2592.99	ICT	23.50	24.00	1.122			-0.13	0.001	0.001
	FR1 n41_HPUE_Ant Main	100M	BPSK	1	1	Right Edge	0mm	Tablet	ON	518598	2592.99	ICT	15.60	16.50	1.230	50	1.000	0.08	0.911	1.121
	FR1 n41_Ant Main	100M	BPSK	1	1	Back	0mm	Tablet	ON	518598	2592.99	AWAN	12.66	13.50	1.213			0.1	0.907	1.101
	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Bottom Side	0mm	Laptop	ON	518598	2592.99	ICT	11.24	11.50	1.062			-0.09	0.226	0.240
	FR1 n41_Ant MIMO2	100M	BPSK	135	0	Bottom Side	0mm	Laptop	ON	518598	2592.99	ICT	11.23	11.50	1.064			0.11	0.213	0.227
	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Back	0mm	Tablet	ON	518598	2592.99	ICT	11.24	11.50	1.062			0.16	0.942	1.000
	FR1 n41_Ant MIMO2	100M	BPSK	135	0	Back	0mm	Tablet	ON	518598	2592.99	ICT	11.23	11.50	1.064			0.05	0.957	1.018
	FR1 n41_Ant MIMO2	100M	BPSK	270	0	Back	0mm	Tablet	ON	518598	2592.99	ICT	11.10	11.50	1.096			0.05	0.846	0.928
	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Top Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.24	11.50	1.062			-0.03	0.143	0.152
	FR1 n41_Ant MIMO2	100M	BPSK	135	0	Top Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.23	11.50	1.064			-0.15	0.100	0.106
25	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.24	11.50	1.062			-0.02	1.100	1.168
	FR1 n41_Ant MIMO2	100M	BPSK	135	0	Left Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.23	11.50	1.064			0.02	1.010	1.075
	FR1 n41_Ant MIMO2	100M	BPSK	270	0	Left Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.10	11.50	1.096			0.07	1.030	1.129
	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Bottom Side	29mm	Laptop	OFF	518598	2592.99	ICT	23.03	24.00	1.250			0.16	0.123	0.154
	FR1 n41_Ant MIMO2	100M	BPSK	135	69	Bottom Side	29mm	Laptop	OFF	518598	2592.99	ICT	22.94	24.00	1.276			0.13	0.115	0.147
	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Back	26mm	Tablet	OFF	518598	2592.99	ICT	23.03	24.00	1.250			0.16	0.350	0.438
	FR1 n41_Ant MIMO2	100M	BPSK	135	69	Back	26mm	Tablet	OFF	518598	2592.99	ICT	22.94	24.00	1.276			-0.03	0.331	0.423
	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Top Edge	24mm	Tablet	OFF	518598	2592.99	ICT	23.03	24.00	1.250			0.07	0.055	0.069
	FR1 n41_Ant MIMO2	100M	BPSK	135	69	Top Edge	24mm	Tablet	OFF	518598	2592.99	ICT	22.94	24.00	1.276			0	0.052	0.066
	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Left Edge	21mm	Tablet	OFF	518598	2592.99	ICT	23.03	24.00	1.250			0.01	0.511	0.639
	FR1 n41_Ant MIMO2	100M	BPSK	135	69	Left Edge	21mm	Tablet	OFF	518598	2592.99	ICT	22.94	24.00	1.276			-0.01	0.479	0.611
	FR1 n41_HPUE_Ant MIMO2	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	518598	2592.99	ICT	14.22	14.50	1.067	50	1.000	0.03	1.030	1.099



FCC SAR TEST REPORT

Report No. : FA4D1633

	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	518598	2592.99	AWAN	11.24	11.50	1.062			-0.06	0.890	0.945
	FR1 n41_Ant MIMO1	100M	BPSK	1	271	Bottom Side	0mm	Laptop	OFF	518598	2592.99	ICT	13.72	15.50	1.507			0.1	0.578	0.871
	FR1 n41_Ant MIMO1	100M	BPSK	135	69	Bottom Side	0mm	Laptop	OFF	518598	2592.99	ICT	13.84	15.50	1.466			-0.09	0.647	0.948
	FR1 n41_Ant MIMO1	100M	BPSK	270	0	Bottom Side	0mm	Tablet	OFF	518598	2592.99	ICT	13.83	15.50	1.469			0.07	0.607	0.892
	FR1 n41_Ant MIMO1	100M	BPSK	1	271	Back	0mm	Tablet	OFF	518598	2592.99	ICT	13.72	15.50	1.507			-0.18	0.409	0.616
	FR1 n41_Ant MIMO1	100M	BPSK	135	69	Back	0mm	Tablet	OFF	518598	2592.99	ICT	13.84	15.50	1.466			-0.07	0.423	0.620
	FR1 n41_Ant MIMO1	100M	BPSK	270	0	Back	0mm	Tablet	OFF	518598	2592.99	ICT	13.83	15.50	1.469			0.11	0.422	0.620
	FR1 n41_Ant MIMO1	100M	BPSK	1	271	Top Edge	0mm	Tablet	OFF	518598	2592.99	ICT	13.72	15.50	1.507			-0.08	0.001	0.002
	FR1 n41_Ant MIMO1	100M	BPSK	135	69	Top Edge	0mm	Tablet	OFF	518598	2592.99	ICT	13.84	15.50	1.466			-0.1	0.001	0.001
	FR1 n41_Ant MIMO1	100M	BPSK	1	271	Right Edge	0mm	Tablet	OFF	518598	2592.99	ICT	13.72	15.50	1.507			-0.01	0.714	1.076
	FR1 n41_Ant MIMO1	100M	BPSK	135	69	Right Edge	0mm	Tablet	OFF	518598	2592.99	ICT	13.84	15.50	1.466			0.01	0.747	1.095
	FR1 n41_Ant MIMO1	100M	BPSK	270	0	Right Edge	0mm	Tablet	OFF	518598	2592.99	ICT	13.83	15.50	1.469			-0.09	0.742	1.090
	FR1 n41_HPUE_Ant MIMO1	100M	BPSK	135	69	Right Edge	0mm	Tablet	OFF	518598	2592.99	ICT	17.01	18.50	1.409	50	1.000	0.03	0.738	1.040
	FR1 n41_Ant MIMO1	100M	BPSK	135	69	Right Edge	0mm	Tablet	OFF	518598	2592.99	AWAN	13.84	15.50	1.466			-0.06	0.597	0.875
	FR1 n41_Ant AUX	100M	BPSK	1	271	Bottom Side	0mm	Laptop	ON	518598	2592.99	ICT	11.30	12.50	1.318			-0.17	0.133	0.175
	FR1 n41_Ant AUX	100M	BPSK	135	69	Bottom Side	0mm	Laptop	ON	518598	2592.99	ICT	11.58	12.50	1.236			-0.01	0.130	0.161
	FR1 n41_Ant AUX	100M	BPSK	1	271	Back	0mm	Tablet	ON	518598	2592.99	ICT	11.30	12.50	1.318			0	0.816	1.076
	FR1 n41_Ant AUX	100M	BPSK	135	69	Back	0mm	Tablet	ON	518598	2592.99	ICT	11.58	12.50	1.236			0.03	0.629	0.777
	FR1 n41_Ant AUX	100M	BPSK	270	0	Back	0mm	Tablet	ON	518598	2592.99	ICT	11.53	12.50	1.250			0.1	0.623	0.779
	FR1 n41_Ant AUX	100M	BPSK	1	271	Top Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.30	12.50	1.318			0.16	0.090	0.119
	FR1 n41_Ant AUX	100M	BPSK	135	69	Top Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.58	12.50	1.236			-0.06	0.119	0.147
	FR1 n41_Ant AUX	100M	BPSK	1	271	Left Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.30	12.50	1.318			0.02	0.060	0.079
	FR1 n41_Ant AUX	100M	BPSK	135	69	Left Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.58	12.50	1.236			-0.16	0.107	0.132
	FR1 n41_Ant AUX	100M	BPSK	1	137	Bottom Side	22mm	Laptop	OFF	518598	2592.99	ICT	23.44	24.00	1.138			0.05	0.108	0.123
	FR1 n41_Ant AUX	100M	BPSK	135	69	Bottom Side	22mm	Laptop	OFF	518598	2592.99	ICT	23.15	24.00	1.216			-0.03	0.106	0.129
	FR1 n41_Ant AUX	100M	BPSK	1	137	Back	34mm	Tablet	OFF	518598	2592.99	ICT	23.44	24.00	1.138			0.16	0.055	0.063
	FR1 n41_Ant AUX	100M	BPSK	135	69	Back	34mm	Tablet	OFF	518598	2592.99	ICT	23.15	24.00	1.216			0.05	0.054	0.066
	FR1 n41_Ant AUX	100M	BPSK	1	137	Top Edge	24mm	Tablet	OFF	518598	2592.99	ICT	23.44	24.00	1.138			-0.06	0.070	0.080
	FR1 n41_Ant AUX	100M	BPSK	135	69	Top Edge	24mm	Tablet	OFF	518598	2592.99	ICT	23.15	24.00	1.216			-0.13	0.069	0.084
	FR1 n41_Ant AUX	100M	BPSK	1	137	Left Edge	15mm	Tablet	OFF	518598	2592.99	ICT	23.44	24.00	1.138			-0.01	0.640	0.728
	FR1 n41_Ant AUX	100M	BPSK	135	69	Left Edge	15mm	Tablet	OFF	518598	2592.99	ICT	23.15	24.00	1.216			-0.11	0.587	0.714
	FR1 n41_HPUE_Ant AUX	100M	BPSK	135	69	Back	0mm	Tablet	ON	518598	2592.99	ICT	14.65	15.50	1.216	50	1.000	0.08	0.799	0.972
	FR1 n41_Ant AUX	100M	BPSK	1	271	Back	0mm	Tablet	ON	518598	2592.99	AWAN	11.30	12.50	1.318			0.19	0.565	0.745
	FR1 n48_Ant Main	40M	BPSK	1	53	Bottom Side	0mm	Laptop	ON	641666	3624.99	ICT	10.06	11.00	1.242			-0.14	0.220	0.273
	FR1 n48_Ant Main	40M	BPSK	50	0	Bottom Side	0mm	Laptop	ON	641666	3624.99	ICT	9.89	11.00	1.291			-0.18	0.232	0.300
26	FR1 n48_Ant Main	40M	BPSK	1	53	Back	0mm	Tablet	ON	641666	3624.99	ICT	10.06	11.00	1.242			-0.04	0.899	1.116
	FR1 n48_Ant Main	40M	BPSK	1	53	Back	0mm	Tablet	ON	638000	3570	ICT	10.05	11.00	1.245			0.16	0.842	1.048
	FR1 n48_Ant Main	40M	BPSK	1	53	Back	0mm	Tablet	ON	645332	3679.98	ICT	9.68	11.00	1.355			0.01	0.741	1.004
	FR1 n48_Ant Main	40M	BPSK	50	0	Back	0mm	Tablet	ON	641666	3624.99	ICT	9.89	11.00	1.291			-0.04	0.825	1.065
	FR1 n48_Ant Main	40M	BPSK	50	0	Back	0mm	Tablet	ON	638000	3570	ICT	9.88	11.00	1.294			0.13	0.858	1.110
	FR1 n48_Ant Main	40M	BPSK	50	0	Back	0mm	Tablet	ON	645332	3679.98	ICT	9.70	11.00	1.349			0.12	0.758	1.023
	FR1 n48_Ant Main	40M	BPSK	1	53	Top Edge	0mm	Tablet	ON	641666	3624.99	ICT	10.06	11.00	1.242			0.07	0.120	0.149
	FR1 n48_Ant Main	40M	BPSK	50	0	Top Edge	0mm	Tablet	ON	641666	3624.99	ICT	9.89	11.00	1.291			0.08	0.129	0.167
	FR1 n48_Ant Main	40M	BPSK	1	53	Right Edge	0mm	Tablet	ON	641666	3624.99	ICT	10.06	11.00	1.242			0.19	0.001	0.001
	FR1 n48_Ant Main	40M	BPSK	50	0	Right Edge	0mm	Tablet	ON	641666	3624.99	ICT	9.89	11.00	1.291			-0.06	0.001	0.001
	FR1 n48_Ant Main	40M	BPSK	1	53	Bottom Side	35mm	Laptop	OFF	638000	3570	ICT	21.27	22.00	1.183			0	0.116	0.137
	FR1 n48_Ant Main	40M	BPSK	50	28	Bottom Side	35mm	Laptop	OFF	638000	3570	ICT	21.17	22.00	1.211			-0.03	0.106	0.128
	FR1 n48_Ant Main	40M	BPSK	1	53	Back	31mm	Tablet	OFF	638000	3570	ICT	21.27	22.00	1.183			-0.03	0.163	0.193
	FR1 n48_Ant Main	40M	BPSK	50	28	Back	31mm	Tablet	OFF	638000	3570	ICT	21.17	22.00	1.211			0.02	0.139	0.168
	FR1 n48_Ant Main	40M	BPSK	1	53	Top Edge	34mm	Tablet	OFF	638000	3570	ICT	21.27	22.00	1.183			0.12	0.108	0.128
	FR1 n48_Ant Main	40M	BPSK	50	28	Top Edge	34mm	Tablet	OFF	638000	3570	ICT	21.17	22.00	1.211			0.02	0.104	0.126
	FR1 n48_Ant Main	40M	BPSK	1	53	Right Edge	14mm	Tablet	OFF	638000	3570	ICT	21.27	22.00	1.183			-0.03	0.074	0.088
	FR1 n48_Ant Main	40M	BPSK	50	28	Right Edge	14mm	Tablet	OFF	638000	3570	ICT	21.17	22.00	1.211			0	0.070	0.085
	FR1 n48_Ant Main	40M	BPSK	1	53	Back	0mm	Tablet	ON	641666	3624.99	AWAN	10.06	11.00	1.242			-0.1	0.891	1.106
	FR1 n48_Ant Main	40M	BPSK	1	53	Back	0mm	Tablet	ON	638000	3570	AWAN	10.05	11.00	1.245			0.05	0.883	1.099
	FR1 n48_Ant Main	40M	BPSK	1	53	Back	0mm	Tablet	ON	645332	3679.98	AWAN	9.68	11.00	1.355			0	0.750	1.016



FCC SAR TEST REPORT

Report No. : FA4D1633

	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Bottom Side	0mm	Laptop	ON	641666	3624.99	ICT	10.82	12.00	1.312		0.07	0.228	0.299
	FR1 n48_Ant MIMO2	40M	BPSK	50	0	Bottom Side	0mm	Laptop	ON	641666	3624.99	ICT	10.78	12.00	1.324		0.15	0.229	0.303
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Back	0mm	Tablet	ON	641666	3624.99	ICT	10.82	12.00	1.312		-0.08	0.518	0.680
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Back	0mm	Tablet	ON	638000	3570	ICT	10.75	12.00	1.334		-0.13	0.527	0.703
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Back	0mm	Tablet	ON	645332	3679.98	ICT	10.49	12.00	1.416		0.01	0.536	0.759
	FR1 n48_Ant MIMO2	40M	BPSK	50	0	Back	0mm	Tablet	ON	641666	3624.99	ICT	10.78	12.00	1.324		-0.11	0.490	0.649
	FR1 n48_Ant MIMO2	40M	BPSK	50	0	Back	0mm	Tablet	ON	638000	3570	ICT	10.73	12.00	1.340		0.03	0.471	0.631
	FR1 n48_Ant MIMO2	40M	BPSK	50	0	Back	0mm	Tablet	ON	645332	3679.98	ICT	10.75	12.00	1.334		-0.05	0.525	0.700
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Top Edge	0mm	Tablet	ON	641666	3624.99	ICT	10.82	12.00	1.312		0.14	0.001	0.001
	FR1 n48_Ant MIMO2	40M	BPSK	50	0	Top Edge	0mm	Tablet	ON	641666	3624.99	ICT	10.78	12.00	1.324		-0.01	0.001	0.001
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Left Edge	0mm	Tablet	ON	641666	3624.99	ICT	10.82	12.00	1.312		-0.12	0.810	1.063
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Left Edge	0mm	Tablet	ON	638000	3570	ICT	10.75	12.00	1.334		-0.03	0.835	1.113
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Left Edge	0mm	Tablet	ON	645332	3679.98	ICT	10.49	12.00	1.416		0.07	0.753	1.066
	FR1 n48_Ant MIMO2	40M	BPSK	50	0	Left Edge	0mm	Tablet	ON	641666	3624.99	ICT	10.78	12.00	1.324		0.09	0.760	1.006
	FR1 n48_Ant MIMO2	40M	BPSK	50	0	Left Edge	0mm	Tablet	ON	638000	3570	ICT	10.73	12.00	1.340		0.04	0.800	1.072
	FR1 n48_Ant MIMO2	40M	BPSK	50	0	Left Edge	0mm	Tablet	ON	645332	3679.98	ICT	10.75	12.00	1.334		0.11	0.749	0.999
	FR1 n48_Ant MIMO2	40M	BPSK	100	0	Left Edge	0mm	Tablet	ON	645332	3679.98	ICT	10.58	12.00	1.387		0.06	0.715	0.992
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Bottom Side	29mm	Laptop	OFF	641666	3624.99	ICT	21.39	22.00	1.151		0.17	0.135	0.155
	FR1 n48_Ant MIMO2	40M	BPSK	50	28	Bottom Side	29mm	Laptop	OFF	641666	3624.99	ICT	21.30	22.00	1.175		-0.16	0.118	0.139
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Back	26mm	Tablet	OFF	641666	3624.99	ICT	21.39	22.00	1.151		-0.05	0.314	0.361
	FR1 n48_Ant MIMO2	40M	BPSK	50	28	Back	26mm	Tablet	OFF	641666	3624.99	ICT	21.30	22.00	1.175		-0.01	0.274	0.322
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Top Edge	24mm	Tablet	OFF	641666	3624.99	ICT	21.39	22.00	1.151		-0.14	0.041	0.047
	FR1 n48_Ant MIMO2	40M	BPSK	50	28	Top Edge	24mm	Tablet	OFF	641666	3624.99	ICT	21.30	22.00	1.175		-0.15	0.036	0.042
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Left Edge	21mm	Tablet	OFF	641666	3624.99	ICT	21.39	22.00	1.151		-0.12	0.506	0.582
	FR1 n48_Ant MIMO2	40M	BPSK	50	28	Left Edge	21mm	Tablet	OFF	641666	3624.99	ICT	21.30	22.00	1.175		-0.17	0.444	0.522
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Left Edge	0mm	Tablet	ON	638000	3570	AWAN	10.75	12.00	1.334		-0.13	0.826	1.101
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Left Edge	0mm	Tablet	ON	641666	3624.99	AWAN	10.82	12.00	1.312		0.12	0.830	1.089
	FR1 n48_Ant MIMO2	40M	BPSK	1	53	Left Edge	0mm	Tablet	ON	645332	3679.98	AWAN	10.49	12.00	1.416		-0.11	0.750	1.062
	FR1 n66_Ant MIMO2	45M	BPSK	1	120	Bottom Side	0mm	Laptop	ON	349000	1745	ICT	13.50	14.00	1.122		0.02	0.269	0.302
	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Bottom Side	0mm	Laptop	ON	349000	1745	ICT	13.48	14.00	1.127		0.12	0.291	0.328
	FR1 n66_Ant MIMO2	45M	BPSK	1	120	Back	0mm	Tablet	ON	349000	1745	ICT	13.50	14.00	1.122		0.07	0.932	1.046
27	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Back	0mm	Tablet	ON	349000	1745	ICT	13.48	14.00	1.127		0	0.955	1.076
	FR1 n66_Ant MIMO2	45M	BPSK	240	0	Back	0mm	Tablet	ON	349000	1745	ICT	13.29	14.00	1.178		-0.02	0.905	1.066
	FR1 n66_Ant MIMO2	45M	BPSK	1	120	Top Edge	0mm	Tablet	ON	349000	1745	ICT	13.50	14.00	1.122		-0.05	0.002	0.002
	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Top Edge	0mm	Tablet	ON	349000	1745	ICT	13.48	14.00	1.127		-0.13	0.002	0.002
	FR1 n66_Ant MIMO2	45M	BPSK	1	120	Left Edge	0mm	Tablet	ON	349000	1745	ICT	13.50	14.00	1.122		0.08	0.614	0.689
	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Left Edge	0mm	Tablet	ON	349000	1745	ICT	13.48	14.00	1.127		0.16	0.545	0.614
	FR1 n66_Ant MIMO2	45M	BPSK	1	120	Bottom Side	29mm	Laptop	OFF	349000	1745	ICT	23.53	24.00	1.114		-0.14	0.087	0.097
	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Bottom Side	29mm	Laptop	OFF	349000	1745	ICT	23.48	24.00	1.127		-0.19	0.094	0.106
	FR1 n66_Ant MIMO2	45M	BPSK	1	120	Back	26mm	Tablet	OFF	349000	1745	ICT	23.53	24.00	1.114		0.02	0.128	0.143
	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Back	26mm	Tablet	OFF	349000	1745	ICT	23.48	24.00	1.127		0.12	0.138	0.156
	FR1 n66_Ant MIMO2	45M	BPSK	1	120	Top Edge	24mm	Tablet	OFF	349000	1745	ICT	23.53	24.00	1.114		-0.16	0.001	0.001
	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Top Edge	24mm	Tablet	OFF	349000	1745	ICT	23.48	24.00	1.127		-0.12	0.001	0.001
	FR1 n66_Ant MIMO2	45M	BPSK	1	120	Left Edge	21mm	Tablet	OFF	349000	1745	ICT	23.53	24.00	1.114		0.07	0.164	0.183
	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Left Edge	21mm	Tablet	OFF	349000	1745	ICT	23.48	24.00	1.127		-0.02	0.177	0.200
	FR1 n66_Ant MIMO2	45M	BPSK	120	60	Back	0mm	Tablet	ON	349000	1745	AWAN	13.48	14.00	1.127		0.01	0.926	1.044
	FR1 n71_Ant Main	20M	BPSK	1	1	Bottom Side	0mm	Laptop	ON	136100	680.5	ICT	16.31	17.00	1.172		-0.16	0.148	0.173
	FR1 n71_Ant Main	20M	BPSK	50	0	Bottom Side	0mm	Laptop	ON	136100	680.5	ICT	16.30	17.00	1.175		0.1	0.159	0.187
	FR1 n71_Ant Main	20M	BPSK	1	1	Back	0mm	Tablet	ON	136100	680.5	ICT	16.31	17.00	1.172		0	0.685	0.803
	FR1 n71_Ant Main	20M	BPSK	50	0	Back	0mm	Tablet	ON	136100	680.5	ICT	16.30	17.00	1.175		-0.11	0.729	0.857
	FR1 n71_Ant Main	20M	BPSK	100	0	Back	0mm	Tablet	ON	136100	680.5	ICT	16.24	17.00	1.191		-0.06	0.770	0.917
	FR1 n71_Ant Main	20M	BPSK	1	1	Top Edge	0mm	Tablet	ON	136100	680.5	ICT	16.31	17.00	1.172		-0.15	0.092	0.108
	FR1 n71_Ant Main	20M	BPSK	50	0	Top Edge	0mm	Tablet	ON	136100	680.5	ICT	16.30	17.00	1.175		0.03	0.123	0.145
	FR1 n71_Ant Main	20M	BPSK	1	1	Right Edge	0mm	Tablet	ON	136100	680.5	ICT	16.31	17.00	1.172		-0.13	0.723	0.847
28	FR1 n71_Ant Main	20M	BPSK	50	0	Right Edge	0mm	Tablet	ON	136100	680.5	ICT	16.30	17.00	1.175		-0.02	1.020	1.198
	FR1 n71_Ant Main	20M	BPSK	100	0	Right Edge	0mm	Tablet	ON	136100	680.5	ICT	16.24	17.00	1.191		-0.15	0.801	0.954



FCC SAR TEST REPORT

Report No. : FA4D1633

	FR1 n71_Ant Main	20M	BPSK	1	1	Bottom Side	35mm	Laptop	OFF	136100	680.5	ICT	23.02	24.00	1.253			0.11	0.001	0.001
	FR1 n71_Ant Main	20M	BPSK	50	28	Bottom Side	35mm	Laptop	OFF	136100	680.5	ICT	23.27	24.00	1.183			-0.02	0.001	0.001
	FR1 n71_Ant Main	20M	BPSK	1	1	Back	31mm	Tablet	OFF	136100	680.5	ICT	23.02	24.00	1.253			0.13	0.001	0.001
	FR1 n71_Ant Main	20M	BPSK	50	28	Back	31mm	Tablet	OFF	136100	680.5	ICT	23.27	24.00	1.183			-0.18	0.001	0.001
	FR1 n71_Ant Main	20M	BPSK	1	1	Top Edge	34mm	Tablet	OFF	136100	680.5	ICT	23.02	24.00	1.253			-0.11	0.001	0.001
	FR1 n71_Ant Main	20M	BPSK	50	28	Top Edge	34mm	Tablet	OFF	136100	680.5	ICT	23.27	24.00	1.183			-0.16	0.001	0.001
	FR1 n71_Ant Main	20M	BPSK	1	1	Right Edge	14mm	Tablet	OFF	136100	680.5	ICT	23.02	24.00	1.253			-0.15	0.057	0.071
	FR1 n71_Ant Main	20M	BPSK	50	28	Right Edge	14mm	Tablet	OFF	136100	680.5	ICT	23.27	24.00	1.183			-0.06	0.061	0.072
	FR1 n71_Ant Main	20M	BPSK	50	0	Right Edge	0mm	Tablet	ON	136100	680.5	AWAN	16.30	17.00	1.175			-0.02	1.010	1.187
	FR1 n77_Ant Main	100M	BPSK	1	137	Bottom Side	0mm	Laptop	ON	656000	3840	ICT	9.71	10.00	1.069			0.08	0.244	0.261
	FR1 n77_Ant Main	100M	BPSK	135	0	Bottom Side	0mm	Laptop	ON	656000	3840	ICT	9.70	10.00	1.072			0.01	0.238	0.255
	FR1 n77_Ant Main	100M	BPSK	1	137	Back	0mm	Tablet	ON	656000	3840	ICT	9.71	10.00	1.069			0.03	0.709	0.758
	FR1 n77_Ant Main	100M	BPSK	135	0	Back	0mm	Tablet	ON	656000	3840	ICT	9.70	10.00	1.072			-0.01	0.705	0.755
	FR1 n77_Ant Main	100M	BPSK	1	137	Top Edge	0mm	Tablet	ON	656000	3840	ICT	9.71	10.00	1.069			0.09	0.172	0.184
	FR1 n77_Ant Main	100M	BPSK	135	0	Top Edge	0mm	Tablet	ON	656000	3840	#1 ICT	9.70	10.00	1.072			0.1	0.188	0.201
	FR1 n77_Ant Main	100M	BPSK	1	137	Right Edge	0mm	Tablet	ON	656000	3840	ICT	9.71	10.00	1.069			-0.04	0.001	0.001
	FR1 n77_Ant Main	100M	BPSK	135	0	Right Edge	0mm	Tablet	ON	656000	3840	ICT	9.70	10.00	1.072			0.15	0.001	0.001
	FR1 n77_Ant Main	100M	BPSK	1	137	Bottom Side	35mm	Laptop	OFF	656000	3840	ICT	23.40	24.00	1.148			-0.16	0.212	0.243
	FR1 n77_Ant Main	100M	BPSK	135	69	Bottom Side	35mm	Laptop	OFF	656000	3840	ICT	23.42	24.00	1.143			0.05	0.207	0.237
	FR1 n77_Ant Main	100M	BPSK	1	137	Front Edge	41mm	Tablet	OFF	656000	3840	ICT	23.40	24.00	1.148			0.08	0.108	0.124
	FR1 n77_Ant Main	100M	BPSK	135	69	Front Edge	41mm	Tablet	OFF	656000	3840	ICT	23.42	24.00	1.143			-0.18	0.105	0.120
	FR1 n77_Ant Main	100M	BPSK	1	137	Back	31mm	Tablet	OFF	656000	3840	ICT	23.40	24.00	1.148			-0.03	0.264	0.303
	FR1 n77_Ant Main	100M	BPSK	135	69	Back	31mm	Tablet	OFF	656000	3840	ICT	23.42	24.00	1.143			-0.04	0.257	0.294
	FR1 n77_Ant Main	100M	BPSK	1	137	Top Edge	34mm	Tablet	OFF	656000	3840	ICT	23.40	24.00	1.148			-0.09	0.124	0.142
	FR1 n77_Ant Main	100M	BPSK	135	69	Top Edge	34mm	Tablet	OFF	656000	3840	ICT	23.42	24.00	1.143			0.18	0.121	0.138
	FR1 n77_Ant Main	100M	BPSK	1	137	Right Edge	14mm	Tablet	OFF	656000	3840	ICT	23.40	24.00	1.148			0.11	0.120	0.138
	FR1 n77_Ant Main	100M	BPSK	135	69	Right Edge	14mm	Tablet	OFF	656000	3840	ICT	23.42	24.00	1.143			0.07	0.117	0.134
	FR1 n77_HPUE_Ant Main	100M	BPSK	270	0	Back	0mm	Tablet	ON	656000	3840	ICT	12.54	13.00	1.112	50	1.000	0.01	0.667	0.742
	FR1 n77_Ant Main	100M	BPSK	1	137	Back	0mm	Tablet	ON	656000	3840	AWAN	9.71	10.00	1.069			0.09	0.644	0.688
	FR1 n77_Ant Main	100M	BPSK	1	137	Bottom Side	0mm	Laptop	ON	633332	3499.98	ICT	9.67	10.00	1.079			-0.03	0.182	0.196
	FR1 n77_Ant Main	100M	BPSK	135	0	Bottom Side	0mm	Laptop	ON	633332	3499.98	ICT	9.66	10.00	1.081			0.09	0.138	0.149
	FR1 n77_Ant Main	100M	BPSK	1	137	Back	0mm	Tablet	ON	633332	3499.98	ICT	9.67	10.00	1.079			-0.03	0.694	0.749
	FR1 n77_Ant Main	100M	BPSK	135	0	Back	0mm	Tablet	ON	633332	3499.98	ICT	9.66	10.00	1.081			0.17	0.850	0.919
	FR1 n77_Ant Main	100M	BPSK	270	0	Back	0mm	Tablet	ON	633332	3499.98	ICT	9.61	10.00	1.094			-0.12	0.796	0.871
	FR1 n77_Ant Main	100M	BPSK	1	137	Top Edge	0mm	Tablet	ON	633332	3499.98	ICT	9.67	10.00	1.079			-0.14	0.136	0.147
	FR1 n77_Ant Main	100M	BPSK	135	0	Top Edge	0mm	Tablet	ON	633332	3499.98	ICT	9.66	10.00	1.081			0.06	0.190	0.205
	FR1 n77_Ant Main	100M	BPSK	1	137	Right Edge	0mm	Tablet	ON	633332	3499.98	ICT	9.67	10.00	1.079			-0.06	0.001	0.001
	FR1 n77_Ant Main	100M	BPSK	135	0	Right Edge	0mm	Tablet	ON	633332	3499.98	ICT	9.66	10.00	1.081			-0.15	0.001	0.001
	FR1 n77_Ant Main	100M	BPSK	1	137	Bottom Side	35mm	Laptop	OFF	633332	3499.98	ICT	22.95	24.00	1.274			-0.12	0.194	0.247
	FR1 n77_Ant Main	100M	BPSK	135	69	Bottom Side	35mm	Laptop	OFF	633332	3499.98	ICT	23.00	24.00	1.259			-0.16	0.238	0.300
	FR1 n77_Ant Main	100M	BPSK	1	137	Back	31mm	Tablet	OFF	633332	3499.98	ICT	22.95	24.00	1.274			0.02	0.303	0.386
	FR1 n77_Ant Main	100M	BPSK	135	69	Back	31mm	Tablet	OFF	633332	3499.98	ICT	23.00	24.00	1.259			0	0.371	0.467
	FR1 n77_Ant Main	100M	BPSK	1	137	Top Edge	34mm	Tablet	OFF	633332	3499.98	ICT	22.95	24.00	1.274			0.18	0.142	0.181
	FR1 n77_Ant Main	100M	BPSK	135	69	Top Edge	34mm	Tablet	OFF	633332	3499.98	ICT	23.00	24.00	1.259			-0.11	0.174	0.219
	FR1 n77_Ant Main	100M	BPSK	1	137	Right Edge	14mm	Tablet	OFF	633332	3499.98	ICT	22.95	24.00	1.274			-0.05	0.138	0.176
	FR1 n77_Ant Main	100M	BPSK	135	69	Right Edge	14mm	Tablet	OFF	633332	3499.98	ICT	23.00	24.00	1.259			-0.04	0.169	0.213
	FR1 n77_HPUE_Ant Main	100M	BPSK	1	137	Back	0mm	Tablet	ON	633332	3499.98	ICT	12.52	13.00	1.117	50	1.000	0.06	0.806	0.900
	FR1 n77_Ant Main	100M	BPSK	135	0	Back	0mm	Tablet	ON	633332	3499.98	AWAN	9.66	10.00	1.081			-0.01	0.995	1.076
	FR1 n77_HPUE_Ant Main	100M	BPSK	1	137	Back	0mm	Tablet	ON	633332	3499.98	AWAN	12.52	13.00	1.117	50	1.000	0.18	0.898	1.003
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Bottom Side	0mm	Laptop	ON	656000	3840	ICT	10.38	11.00	1.153			0.08	0.127	0.146
	FR1 n77_Ant MIMO2	100M	BPSK	135	0	Bottom Side	0mm	Laptop	ON	656000	3840	ICT	10.34	11.00	1.164			0.01	0.134	0.156
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Back	0mm	Tablet	ON	656000	3840	ICT	10.38	11.00	1.153			0	0.522	0.602
	FR1 n77_Ant MIMO2	100M	BPSK	135	0	Back	0mm	Tablet	ON	656000	3840	ICT	10.34	11.00	1.164			-0.08	0.489	0.569
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Top Edge	0mm	Tablet	ON	656000	3840	ICT	10.38	11.00	1.153			0.1	0.001	0.001
	FR1 n77_Ant MIMO2	100M	BPSK	135	0	Top Edge	0mm	Tablet	ON	656000	3840	ICT	10.34	11.00	1.164			-0.18	0.001	0.001
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	656000	3840	ICT	10.38	11.00	1.153			0.1	0.478	0.551



FCC SAR TEST REPORT

Report No. : FA4D1633

	FR1 n77_Ant MIMO2	100M	BPSK	135	0	Left Edge	0mm	Tablet	ON	656000	3840	ICT	10.34	11.00	1.164			0.12	0.495	0.576
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Bottom Side	29mm	Laptop	OFF	656000	3840	ICT	23.06	24.00	1.242			0.08	0.174	0.216
	FR1 n77_Ant MIMO2	100M	BPSK	135	69	Bottom Side	29mm	Laptop	OFF	656000	3840	ICT	23.05	24.00	1.245			-0.17	0.183	0.228
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Back	26mm	Tablet	OFF	656000	3840	ICT	23.06	24.00	1.242			0.11	0.365	0.453
	FR1 n77_Ant MIMO2	100M	BPSK	135	69	Back	26mm	Tablet	OFF	656000	3840	ICT	23.05	24.00	1.245			-0.05	0.412	0.513
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Top Edge	24mm	Tablet	OFF	656000	3840	ICT	23.06	24.00	1.242			0.18	0.113	0.140
	FR1 n77_Ant MIMO2	100M	BPSK	135	69	Top Edge	24mm	Tablet	OFF	656000	3840	ICT	23.05	24.00	1.245			0.14	0.122	0.152
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Left Edge	21mm	Tablet	OFF	656000	3840	ICT	23.06	24.00	1.242			-0.17	0.759	0.942
	FR1 n77_Ant MIMO2	100M	BPSK	135	69	Left Edge	21mm	Tablet	OFF	656000	3840	ICT	23.05	24.00	1.245			0.17	0.709	0.882
	FR1 n77_HPUE_Ant MIMO2	100M	BPSK	1	137	Left Edge	21mm	Tablet	OFF	656000	3840	ICT	26.37	27.00	1.156	50	1.000	0.06	0.735	0.850
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Left Edge	21mm	Tablet	ON	656000	3840	AWAN	10.38	11.00	1.153			-0.07	0.647	0.746
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Bottom Side	0mm	Laptop	ON	633332	3499.98	ICT	10.66	11.00	1.081			0.01	0.160	0.173
	FR1 n77_Ant MIMO2	100M	BPSK	135	0	Bottom Side	0mm	Laptop	ON	633332	3499.98	ICT	10.50	11.00	1.122			0.1	0.145	0.163
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Back	0mm	Tablet	ON	633332	3499.98	ICT	10.66	11.00	1.081			-0.01	0.503	0.544
	FR1 n77_Ant MIMO2	100M	BPSK	135	0	Back	0mm	Tablet	ON	633332	3499.98	ICT	10.50	11.00	1.122			-0.08	0.524	0.588
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Top Edge	0mm	Tablet	ON	633332	3499.98	ICT	10.66	11.00	1.081			0.05	0.001	0.001
	FR1 n77_Ant MIMO2	100M	BPSK	135	0	Top Edge	0mm	Tablet	ON	633332	3499.98	ICT	10.50	11.00	1.122			0.06	0.001	0.001
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	633332	3499.98	ICT	10.66	11.00	1.081			0.06	0.914	0.988
	FR1 n77_Ant MIMO2	100M	BPSK	135	0	Left Edge	0mm	Tablet	ON	633332	3499.98	ICT	10.50	11.00	1.122			-0.09	0.871	0.977
	FR1 n77_Ant MIMO2	100M	BPSK	270	0	Left Edge	0mm	Tablet	ON	633332	3499.98	ICT	10.44	11.00	1.138			0.04	0.851	0.968
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Bottom Side	29mm	Laptop	OFF	633332	3499.98	ICT	22.84	24.00	1.306			-0.08	0.219	0.286
	FR1 n77_Ant MIMO2	100M	BPSK	135	69	Bottom Side	29mm	Laptop	OFF	633332	3499.98	ICT	22.80	24.00	1.318			0.13	0.227	0.299
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Back	26mm	Tablet	OFF	633332	3499.98	ICT	22.84	24.00	1.306			0.18	0.577	0.754
	FR1 n77_Ant MIMO2	100M	BPSK	135	69	Back	26mm	Tablet	OFF	633332	3499.98	ICT	22.80	24.00	1.318			0.16	0.605	0.798
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Top Edge	24mm	Tablet	OFF	633332	3499.98	ICT	22.84	24.00	1.306			-0.1	0.100	0.131
	FR1 n77_Ant MIMO2	100M	BPSK	135	69	Top Edge	24mm	Tablet	OFF	633332	3499.98	ICT	22.80	24.00	1.318			0.07	0.091	0.120
29	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Left Edge	21mm	Tablet	OFF	633332	3499.98	ICT	22.84	24.00	1.306			-0.16	0.912	1.191
	FR1 n77_Ant MIMO2	100M	BPSK	135	69	Left Edge	21mm	Tablet	OFF	633332	3499.98	ICT	22.80	24.00	1.318			-0.1	0.863	1.138
	FR1 n77_Ant MIMO2	100M	BPSK	270	0	Left Edge	21mm	Tablet	OFF	633332	3499.98	ICT	22.80	23.50	1.175			0.03	0.876	1.029
	FR1 n77_HPUE_Ant MIMO2	100M	BPSK	1	137	Left Edge	21mm	Tablet	OFF	633332	3499.98	ICT	25.84	27.00	1.306	50	1.000	0.16	0.839	1.096
	FR1 n77_Ant MIMO2	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	633332	3499.98	AWAN	10.66	11.00	1.081			0.01	0.757	0.819
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Bottom Side	0mm	Laptop	OFF	656000	3840	ICT	14.44	15.00	1.138			0.08	0.914	1.040
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Bottom Side	0mm	Laptop	OFF	656000	3840	ICT	14.49	15.00	1.125			0	0.960	1.080
	FR1 n77_Ant MIMO1	100M	BPSK	270	0	Bottom Side	0mm	Tablet	OFF	656000	3840	ICT	14.34	15.00	1.164			-0.01	0.893	1.040
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Back	0mm	Tablet	OFF	656000	3840	ICT	14.44	15.00	1.138			-0.08	0.340	0.387
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Back	0mm	Tablet	OFF	656000	3840	ICT	14.49	15.00	1.125			-0.08	0.349	0.392
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Top Edge	0mm	Tablet	OFF	656000	3840	ICT	14.44	15.00	1.138			0.1	0.051	0.058
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Top Edge	0mm	Tablet	OFF	656000	3840	ICT	14.49	15.00	1.125			-0.18	0.076	0.085
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Right Edge	0mm	Tablet	OFF	656000	3840	ICT	14.44	15.00	1.138			0.1	0.327	0.372
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Right Edge	0mm	Tablet	OFF	656000	3840	ICT	14.49	15.00	1.125			0.12	0.357	0.401
	FR1 n77_HPUE_Ant MIMO1	100M	BPSK	135	69	Bottom Side	0mm	Tablet	OFF	656000	3840	ICT	17.05	18.00	1.245	50	1.000	0.03	0.861	1.072
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Bottom Side	0mm	Tablet	OFF	656000	3840	AWAN	14.49	15.00	1.125			0.08	0.899	1.011
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Bottom Side	0mm	Laptop	OFF	633332	3499.98	ICT	14.15	15.00	1.216			0	0.796	0.968
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Bottom Side	0mm	Laptop	OFF	633332	3499.98	ICT	14.20	15.00	1.202			-0.17	0.782	0.940
	FR1 n77_Ant MIMO1	100M	BPSK	270	0	Bottom Side	0mm	Laptop	OFF	633332	3499.98	ICT	13.72	15.00	1.343			0.06	0.618	0.830
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Back	0mm	Tablet	OFF	633332	3499.98	ICT	14.15	15.00	1.216			0.11	0.282	0.343
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Back	0mm	Tablet	OFF	633332	3499.98	ICT	14.20	15.00	1.202			-0.05	0.297	0.357
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Top Edge	0mm	Tablet	OFF	633332	3499.98	ICT	14.15	15.00	1.216			0.18	0.028	0.034
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Top Edge	0mm	Tablet	OFF	633332	3499.98	ICT	14.20	15.00	1.202			0.14	0.040	0.048
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Right Edge	0mm	Tablet	OFF	633332	3499.98	ICT	14.15	15.00	1.216			-0.17	0.456	0.555
	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Right Edge	0mm	Tablet	OFF	633332	3499.98	ICT	14.20	15.00	1.202			0.17	0.409	0.492
	FR1 n77_HPUE_Ant MIMO1	100M	BPSK	135	69	Bottom Side	0mm	Tablet	OFF	633332	3499.98	ICT	16.75	18.00	1.334	50	1.000	-0.17	0.712	0.949
	FR1 n77_Ant MIMO1	100M	BPSK	1	137	Bottom Side	0mm	Tablet	OFF	633332	3499.98	AWAN	14.15	15.00	1.216			-0.05	0.622	0.756
	FR1 n77_Ant AUX	100M	BPSK	1	137	Bottom Side	0mm	Laptop	ON	656000	3840	ICT	9.08	10.00	1.236			-0.03	0.134	0.166
	FR1 n77_Ant AUX	100M	BPSK	135	69	Bottom Side	0mm	Laptop	ON	656000	3840	ICT	9.14	10.00	1.219			-0.03	0.137	0.167
	FR1 n77_Ant AUX	100M	BPSK	1	137	Back	0mm	Tablet	ON	656000	3840	ICT	9.08	10.00	1.236			0.05	0.460	0.569



FCC SAR TEST REPORT

Report No. : FA4D1633

	FR1 n77_Ant AUX	100M	BPSK	135	69	Back	0mm	Tablet	ON	656000	3840	ICT	9.14	10.00	1.219			0.05	0.400	0.488
	FR1 n77_Ant AUX	100M	BPSK	1	137	Top Edge	0mm	Tablet	ON	656000	3840	ICT	9.08	10.00	1.236			-0.11	0.086	0.106
	FR1 n77_Ant AUX	100M	BPSK	135	69	Top Edge	0mm	Tablet	ON	656000	3840	ICT	9.14	10.00	1.219			-0.12	0.057	0.069
	FR1 n77_Ant AUX	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	656000	3840	ICT	9.08	10.00	1.236			0.03	0.236	0.292
	FR1 n77_Ant AUX	100M	BPSK	135	69	Left Edge	0mm	Tablet	ON	656000	3840	ICT	9.14	10.00	1.219			-0.16	0.239	0.291
	FR1 n77_Ant AUX	100M	BPSK	1	137	Bottom Side	22mm	Laptop	OFF	656000	3840	ICT	22.91	24.00	1.285			0.15	0.253	0.325
	FR1 n77_Ant AUX	100M	BPSK	135	69	Bottom Side	22mm	Laptop	OFF	656000	3840	ICT	22.94	24.00	1.276			-0.09	0.282	0.360
	FR1 n77_Ant AUX	100M	BPSK	1	137	Back	34mm	Tablet	OFF	656000	3840	ICT	22.91	24.00	1.285			-0.08	0.264	0.339
	FR1 n77_Ant AUX	100M	BPSK	135	69	Back	34mm	Tablet	OFF	656000	3840	ICT	22.94	24.00	1.276			0.16	0.213	0.272
	FR1 n77_Ant AUX	100M	BPSK	1	137	Top Edge	24mm	Tablet	OFF	656000	3840	ICT	22.91	24.00	1.285			0.05	0.136	0.175
	FR1 n77_Ant AUX	100M	BPSK	135	69	Top Edge	24mm	Tablet	OFF	656000	3840	ICT	22.94	24.00	1.276			0.05	0.126	0.161
	FR1 n77_Ant AUX	100M	BPSK	1	137	Left Edge	15mm	Tablet	OFF	656000	3840	ICT	22.91	24.00	1.285			-0.03	0.226	0.290
	FR1 n77_Ant AUX	100M	BPSK	135	69	Left Edge	15mm	Tablet	OFF	656000	3840	ICT	22.94	24.00	1.276			-0.15	0.239	0.305
	FR1 n77_HPUE_Ant AUX	100M	BPSK	135	69	Back	0mm	Tablet	ON	656000	3840	ICT	12.07	13.00	1.239	50	1.000	0.11	0.436	0.540
	FR1 n77_Ant AUX	100M	BPSK	135	69	Back	0mm	Tablet	ON	656000	3840	AWAN	9.14	10.00	1.219			-0.02	0.452	0.551
	FR1 n77_Ant AUX	100M	BPSK	1	137	Bottom Side	0mm	Laptop	ON	633332	3499.98	ICT	9.44	10.00	1.138			-0.16	0.151	0.172
	FR1 n77_Ant AUX	100M	BPSK	135	69	Bottom Side	0mm	Laptop	ON	633332	3499.98	ICT	9.50	10.00	1.122			0.1	0.178	0.200
	FR1 n77_Ant AUX	100M	BPSK	1	137	Back	0mm	Tablet	ON	633332	3499.98	ICT	9.44	10.00	1.138			0	0.975	1.109
	FR1 n77_Ant AUX	100M	BPSK	135	69	Back	0mm	Tablet	ON	633332	3499.98	ICT	9.50	10.00	1.122			0	0.953	1.069
	FR1 n77_Ant AUX	100M	BPSK	270	0	Back	0mm	Tablet	ON	633332	3499.98	ICT	9.35	10.00	1.161			-0.08	0.912	1.059
	FR1 n77_Ant AUX	100M	BPSK	1	137	Top Edge	0mm	Tablet	ON	633332	3499.98	ICT	9.44	10.00	1.138			-0.11	0.193	0.220
	FR1 n77_Ant AUX	100M	BPSK	135	69	Top Edge	0mm	Tablet	ON	633332	3499.98	ICT	9.50	10.00	1.122			-0.06	0.219	0.246
	FR1 n77_Ant AUX	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	633332	3499.98	ICT	9.44	10.00	1.138			-0.15	0.234	0.266
	FR1 n77_Ant AUX	100M	BPSK	135	69	Left Edge	0mm	Tablet	ON	633332	3499.98	ICT	9.50	10.00	1.122			0.03	0.254	0.285
	FR1 n77_Ant AUX	100M	BPSK	1	137	Bottom Side	22mm	Laptop	OFF	633332	3499.98	ICT	23.03	24.00	1.250			-0.13	0.171	0.214
	FR1 n77_Ant AUX	100M	BPSK	135	69	Bottom Side	22mm	Laptop	OFF	633332	3499.98	ICT	23.10	24.00	1.230			0.16	0.102	0.125
	FR1 n77_Ant AUX	100M	BPSK	1	137	Back	34mm	Tablet	OFF	633332	3499.98	ICT	23.03	24.00	1.250			0.03	0.169	0.211
	FR1 n77_Ant AUX	100M	BPSK	135	69	Back	34mm	Tablet	OFF	633332	3499.98	ICT	23.10	24.00	1.230			-0.09	0.131	0.161
	FR1 n77_Ant AUX	100M	BPSK	1	137	Top Edge	24mm	Tablet	OFF	633332	3499.98	ICT	23.03	24.00	1.250			0.14	0.128	0.160
	FR1 n77_Ant AUX	100M	BPSK	135	69	Top Edge	24mm	Tablet	OFF	633332	3499.98	ICT	23.10	24.00	1.230			0.1	0.171	0.210
	FR1 n77_Ant AUX	100M	BPSK	1	137	Left Edge	15mm	Tablet	OFF	633332	3499.98	ICT	23.03	24.00	1.250			-0.09	0.190	0.238
	FR1 n77_Ant AUX	100M	BPSK	135	69	Left Edge	15mm	Tablet	OFF	633332	3499.98	ICT	23.10	24.00	1.230			0.07	0.211	0.260
	FR1 n77_HPUE_Ant AUX	100M	BPSK	1	1	Back	0mm	Tablet	ON	633332	3499.98	ICT	12.38	13.00	1.153	50	1.000	-0.1	0.941	1.085
	FR1 n77_Ant AUX	100M	BPSK	1	137	Back	0mm	Tablet	ON	633332	3499.98	AWAN	9.44	10.00	1.138			-0.09	0.720	0.819

13.2 Repeated SAR Measurement

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	User Scenario	Power Reduction	Ch.	Freq. (MHz)	Antenna Vendor	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 14_Ant Main	10M	QPSK	1	25	Right Edge	0mm	Tablet	ON	23330	793	ICT	15.97	16.00	1.007			0.01	1.100	-	1.108
2nd	LTE Band 14_Ant Main	10M	QPSK	1	25	Right Edge	0mm	Tablet	ON	23330	793	ICT	15.97	16.00	1.007			0.07	0.996	1.10	1.003
1st	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	26140	1860	ICT	15.59	16.00	1.099			0.02	1.090	-	1.198
2nd	LTE Band 25_Ant MIMO2	20M	QPSK	1	49	Back	0mm	Tablet	ON	26140	1860	ICT	15.59	16.00	1.099			-0.01	1.010	1.08	1.110
1st	LTE Band 26_Ant Main	15M	QPSK	1	0	Back	0mm	Tablet	ON	26865	831.5	AWAN	16.78	17.00	1.052			0.02	1.060	-	1.115
2nd	LTE Band 26_Ant Main	15M	QPSK	1	0	Back	0mm	Tablet	ON	26865	831.5	AWAN	16.78	17.00	1.052			-0.11	1.010	1.05	1.062
1st	LTE Band 30_Ant MIMO2	10M	QPSK	1	25	Back	0mm	Tablet	ON	27710	2310	ICT	12.71	13.00	1.069			0.14	1.080	-	1.155
2nd	LTE Band 30_Ant MIMO2	10M	QPSK	1	25	Back	0mm	Tablet	ON	27710	2310	ICT	12.71	13.00	1.069			0.03	0.999	1.08	1.068
1st	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	55340	3560	AWAN	11.63	12.00	1.089	62.9	1.006	0	1.090	-	1.194
2nd	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	55340	3560	AWAN	11.63	12.00	1.089	62.9	1.006	-0.05	1.050	1.04	1.150
1st	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	55830	3609	AWAN	11.68	12.00	1.076	62.9	1.006	0.17	1.100	-	1.191
2nd	LTE Band 48_Ant Main	20M	QPSK	1	49	Back	0mm	Tablet	ON	55830	3609	AWAN	11.68	12.00	1.076	62.9	1.006	-0.08	1.030	1.07	1.115
1st	LTE Band 66_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	132322	1745	ICT	12.32	12.50	1.042			0.17	0.991	-	1.033
2nd	LTE Band 66_Ant MIMO2	20M	QPSK	50	24	Back	0mm	Tablet	ON	132322	1745	ICT	12.32	12.50	1.042			0.05	0.973	1.02	1.014
1st	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.24	11.50	1.062			-0.02	1.100	-	1.168
2nd	FR1 n41_Ant MIMO2	100M	BPSK	1	137	Left Edge	0mm	Tablet	ON	518598	2592.99	ICT	11.24	11.50	1.062			0.06	1.030	1.07	1.094
1st	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Bottom Side	0mm	Laptop	ON	656000	3840	ICT	14.49	15.00	1.125			0	0.960	-	1.080
2nd	FR1 n77_Ant MIMO1	100M	BPSK	135	69	Bottom Side	0mm	Laptop	ON	656000	3840	ICT	14.49	15.00	1.125			-0.07	0.942	1.02	1.059

General Note:

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

13.3 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%

	FR1 n41_Ant Main (Power Class 3)	FR1 n41_Ant Main (Power Class 2)
Maximum Tune up Power (dBm)	13.5	16.5
Reported 1g SAR (W/kg)	1.143	1.121
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	22.39	22.33
Linearity SAR(W/kg)	1.14	
% deviation from expected linearity		-1.69%

	FR1 n41_Ant MIMO1 (Power Class 3)	FR1 n41_Ant MIMO1 (Power Class 2)
Maximum Tune up Power (dBm)	15.5	18.5
Reported 1g SAR (W/kg)	1.095	1.04
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	35.48	35.40
Linearity SAR(W/kg)	1.09	
% deviation from expected linearity		-4.80%

	FR1 n41_Ant MIMO2 (Power Class 3)	FR1 n41_Ant MIMO2 (Power Class 2)
Maximum Tune up Power (dBm)	11.5	14.5
Reported 1g SAR (W/kg)	1.168	1.099
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	14.13	14.09
Linearity SAR(W/kg)	1.17	
% deviation from expected linearity		-5.68%

	FR1 n41_Ant Aux (Power Class 3)	FR1 n41_Ant Aux (Power Class 2)
Maximum Tune up Power (dBm)	12.5	15.5
Reported 1g SAR (W/kg)	1.076	0.972
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	17.78	17.74
Linearity SAR(W/kg)	1.07	
% deviation from expected linearity		-9.45%

	FR1 n77_Ant Main (Power Class 3)	FR1 n77_Ant Main (Power Class 2)
Maximum Tune up Power (dBm)	10	13
Reported 1g SAR (W/kg)	1.076	1.003
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	10.00	9.98
Linearity SAR(W/kg)	1.07	
% deviation from expected linearity		-6.56%

	FR1 n77_Ant MIMO1	FR1 n77_Ant MIMO1
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	15	18
Reported 1g SAR (W/kg)	1.08	1.072
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	31.62	31.55
Linearity SAR(W/kg)	1.08	
% deviation from expected linearity		-0.51%

	FR1 n77_Ant MIMO2	FR1 n77_Ant MIMO2
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	24	27
Reported 1g SAR (W/kg)	1.191	1.096
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	251.19	250.59
Linearity SAR(W/kg)	1.19	
% deviation from expected linearity		-7.76%

	FR1 n77_Ant Aux	FR1 n77_Ant Aux
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	10	13
Reported 1g SAR (W/kg)	1.109	1.085
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	10.00	9.98
Linearity SAR(W/kg)	1.11	
% deviation from expected linearity		-1.93%

14. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Body
1.	WWAN Main + WWAN MIMO2 + WLAN Ant Main	Yes
2.	WWAN Main + WWAN MIMO2 + WLAN Ant Aux	Yes
3.	WWAN Main + WWAN MIMO2 + Bluetooth Ant Aux	Yes
4.	WWAN MIMO1 + WLAN Ant Main	Yes
5.	WWAN MIMO1 + WLAN Ant Aux	Yes
6.	WWAN MIMO1 + Bluetooth Ant Aux	Yes
7.	WWAN Aux + WLAN Ant Main	Yes
8.	WWAN Aux + WLAN Ant Aux	Yes
9.	WWAN Aux + Bluetooth Ant Aux	Yes

General Note:

1. The WiFi/BT SAR of 1.59 W/kg was used conservatively for the purpose of simultaneous transmission analysis. For the WLAN main and WLAN Aux Sim-Tx analysis include in WLAN SAR report. In this report only, assessment WWAN to each WLAN/BT antenna.
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 $< 1.6\text{W/kg}$.
 - ii) $\text{SPLSR} = (\text{SAR1} + \text{SAR2})^{1.5} / (\text{min. separation distance, mm})$, 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 $\text{SPLSR} \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR $< 1.6\text{W/kg}$.
 - v) The SPLSR calculated results please refer to section 14.2.

14.1 Body Exposure Conditions

Exposure Position	1	2	3	4	5	1+2+3 Summed 1g SAR (W/kg)	1+2+4 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+2+3+4 SPLSR	Case No
	Maximum WWAN Main 1g SAR (W/kg)	Maximum WWAN MIMO2 1g SAR (W/kg)	WLAN Ant Main 1g SAR (W/kg)	WLAN Ant Aux 1g SAR (W/kg)	Bluetooth Ant Aux 1g SAR (W/kg)					
Bottom Side	0.863	0.684	1.590	1.590	1.590	3.137	3.137	3.137	0.020	Case 1
Back	1.194	1.198	1.590	1.590	1.590	3.982	3.982	3.982	0.030	Case 3
Top Edge	0.340	0.176				0.516	0.516	0.516		
Right Edge	1.198		1.590	1.590	1.590	2.788	2.788	2.788	0.020	Case 5
Left Edge		1.197	1.590	1.590	1.590	2.787	2.787	2.787	0.030	Case 6

Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN MIMO1 1g SAR (W/kg)	WLAN Ant Main 1g SAR (W/kg)	WLAN Ant Aux 1g SAR (W/kg)	Bluetooth Ant Aux 1g SAR (W/kg)					
Bottom Side	1.080	1.590	1.590	1.590	2.670	2.670	2.670	0.030	Case 1
Back	0.620	1.590	1.590	1.590	2.210	2.210	2.210	0.020	Case 2
Top Edge	0.085				0.085	0.085	0.085		
Right Edge	1.095	1.590	1.590	1.590	2.685	2.685	2.685	0.030	Case 4

Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN Aux 1g SAR (W/kg)	WLAN Ant Main 1g SAR (W/kg)	WLAN Ant Aux 1g SAR (W/kg)	Bluetooth Ant Aux 1g SAR (W/kg)					
Bottom Side	0.360	1.590	1.590	1.590	1.950	1.950	1.950	0.010	Case 1
Back	1.109	1.590	1.590	1.590	2.699	2.699	2.699	0.020	Case 3
Top Edge	0.246				0.246	0.246	0.246		
Left Edge	0.728	1.590	1.590	1.590	2.318	2.318	2.318	0.020	Case 5

14.2 SPLSR Evaluation and Analysis

General Note:

- According to antenna location in Appendix E the minimum distance between each transmit antenna is using for SPLSR analysis.
- Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneously transmitting antenna. When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. Therefore, the adjacent transmit antennas will be summed first, and then the SPLSR calculation will be evaluated with the farther transmitted antennas.
- $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary

<WWAN Main/MIMO2>

	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case 1	WWAN Main	Bottom Side	0.863	0	142.0	1.55	0.01	Not required
	WWAN MIMO2		0.684	0				
	WWAN Main	Bottom Side	0.863	0	208.0	2.45	0.02	Not required
	WLAN Ant Main		1.59	0				
	WWAN MIMO2	Bottom Side	0.684	0	165.5	1.55	0.01	Not required
	WLAN Ant Main		0.863	0				
	WWAN Main	Bottom Side	0.863	0	208.0	2.45	0.02	Not required
	WLAN Ant Aux		1.59	0				
	WWAN MIMO2	Bottom Side	0.684	0	165.5	2.27	0.02	Not required
	WLAN Ant Aux		1.59	0				
	WWAN Main	Bottom Side	0.863	0	208.0	2.45	0.02	Not required
	Bluetooth Ant Aux		1.59	0				
	WWAN MIMO2	Bottom Side	0.684	0	165.5	2.27	0.02	Not required
	Bluetooth Ant Aux		1.59	0				
Case 3	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WWAN Main	Back	1.194	0	142.0	2.39	0.03	Not required
	WWAN MIMO2		1.198	0				
	WWAN Main	Back	1.194	0	208.0	2.78	0.02	Not required
	WLAN Ant Main		1.59	0				
	WWAN MIMO2	Back	1.198	0	165.5	2.39	0.02	Not required
	WLAN Ant Main		1.194	0				
	WWAN Main	Back	1.194	0	208.0	2.78	0.02	Not required
	WLAN Ant Aux		1.59	0				
	WWAN MIMO2	Back	1.198	0	165.5	2.79	0.03	Not required
	WLAN Ant Aux		1.59	0				
	WWAN Main	Back	1.194	0	208.0	2.78	0.02	Not required
	Bluetooth Ant Aux		1.59	0				
	WWAN MIMO2	Back	1.198	0	165.5	2.79	0.03	Not required
	Bluetooth Ant Aux		1.59	0				
Case 5	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WWAN Main	Right Edge	1.198	0	208.0	2.79	0.02	Not required
	WLAN Ant Main		1.59	0				
	WWAN Main	Right Edge	1.198	0	208.0	2.79	0.02	Not required
	WLAN Ant Aux		1.59	0				
	WWAN Main	Right Edge	1.198	0	208.0	2.79	0.02	Not required
	Bluetooth Ant Aux		1.59	0				
Case 6	Band	Position	SAR (W/kg)	Gap	Minimum	Summed SAR	SPLSR	Simultaneous SAR

				(mm)	distance (mm)	(W/kg)	Results	
	WWAN MIMO2	Left Edge	1.197	0	165.5	2.79	0.03	Not required
	WLAN Ant Main		1.59	0				
	WWAN MIMO2	Left Edge	1.197	0	165.5	2.79	0.03	Not required
	WLAN Ant Aux		1.59	0				
	WWAN MIMO2	Left Edge	1.197	0	165.5	2.79	0.03	Not required
	Bluetooth Ant Aux		1.59	0				

<WWAN MIMO1>

	Band	Position	SAR (W/kg)	Gap	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 1	WWAN MIMO1	Bottom Side	1.08	0	149.3	2.67	0.03	Not required
	WLAN Ant Main		1.59	0				
	WWAN MIMO1	Bottom Side	1.08	0	149.3	2.67	0.03	Not required
	WLAN Ant Aux		1.59	0				
	WWAN MIMO1	Bottom Side	1.08	0	149.3	2.67	0.03	Not required
	Bluetooth Ant Aux		1.59	0				
Case 2	WWAN MIMO1	Back	0.62	0	149.3	2.21	0.02	Not required
	WLAN Ant Main		1.59	0				
	WWAN MIMO1	Back	0.62	0	149.3	2.21	0.02	Not required
	WLAN Ant Aux		1.59	0				
	WWAN MIMO1	Back	0.62	0	149.3	2.21	0.02	Not required
	Bluetooth Ant Aux		1.59	0				
Case 4	WWAN MIMO1	Right Edge	1.095	0	149.3	2.69	0.03	Not required
	WLAN Ant Main		1.59	0				
	WWAN MIMO1	Right Edge	1.095	0	149.3	2.69	0.03	Not required
	WLAN Ant Aux		1.59	0				
	WWAN MIMO1	Right Edge	1.095	0	149.3	2.69	0.03	Not required
	Bluetooth Ant Aux		1.59	0				

<WWAN Aux>

	Band	Position	SAR (W/kg)	Gap	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 1	WWAN Aux	Bottom Side	0.36	0	208.0	1.95	0.01	Not required
	WLAN Ant Main		1.59	0				
	WWAN Aux	Bottom Side	0.36	0	208.0	1.95	0.01	Not required
	WLAN Ant Aux		1.59	0				
	WWAN Aux	Bottom Side	0.36	0	208.0	1.95	0.01	Not required
	Bluetooth Ant Aux		1.59	0				
Case 3	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WWAN Aux	Back	1.109	0	208.0	2.70	0.02	Not required
	WLAN Ant Main		1.59	0				
	WWAN Aux	Back	1.109	0	208.0	2.70	0.02	Not required
	WLAN Ant Aux		1.59	0				
	WWAN Aux	Back	1.109	0	208.0	2.70	0.02	Not required
	Bluetooth Ant Aux		1.59	0				
Case 5	Band	Position	SAR (W/kg)	Gap (mm)	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WWAN Aux	Left Edge	0.728	0	208.0	2.32	0.02	Not required
	WLAN Ant Main		1.59	0				
	WWAN Aux	Left Edge	0.728	0	208.0	2.32	0.02	Not required
	WLAN Ant Aux		1.59	0				
	WWAN Aux	Left Edge	0.728	0	208.0	2.32	0.02	Not required
	Bluetooth Ant Aux		1.59	0				

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15. Uncertainty Assessment

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

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.

16. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [6] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [7] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [8] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [9] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [10] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [11] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.