

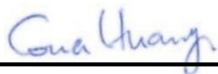
FCC SAR TEST REPORT

FCC ID : XMR2023RM520NGLT
Equipment : 5G Sub-6 GHz M.2 Module
Brand Name : Quectel
Model Name : RM520N-GL
Applicant : Quectel Wireless Solutions Co., Ltd.
Building 5, Shanghai Business Park Phase III (Area B), No.1016
Tianlin Road, Minhang District, Shanghai, China, 200233
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)

The product was installed into Notebook Computer (Brand Name: Lenovo, Model Name: TP00159C, TP00159D, TP00159E) during test.

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



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History of this test report

Report No.	Version	Description	Issued Date
FA3N1058-05	01	Initial issue of report	Mar. 27, 2025

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for Quectel Wireless Solutions Co., Ltd., 5G Sub-6 GHz M.2 Module, RM520N-GL, are as follows.

Equipment Class	Frequency Band		Highest SAR Summary	Highest Simultaneous Transmission 1g SAR (W/kg)
			Body (Separation 0mm)	
			1g SAR (W/kg)	
Licensed	WCDMA	WCDMA II	1.13	1.28
		WCDMA IV	1.14	
		WCDMA V	1.17	
	LTE	LTE Band 7	1.08	
		LTE Band 12/17	1.16	
		LTE Band 13	1.14	
		LTE Band 14	1.12	
		LTE Band 2/25	1.19	
		LTE Band 5/26	1.19	
		LTE Band 30	1.20	
		LTE Band 38/41	1.08	
		LTE Band 42	1.20	
		LTE Band 43	1.17	
		LTE Band 48	1.14	
		LTE Band 4/66	1.18	
		LTE Band 71	1.03	
	FR1	FR1 n7	1.16	
		FR1 n12	1.11	
		FR1 n13	1.12	
		FR1 n14	1.16	
		FR1 n2/n25	1.18	
		FR1 n5/n26	1.17	
		FR1 n30	1.28	
		FR1 n38/n41	1.17	
		FR1 n48	1.19	
		FR1 n66	1.08	
		FR1 n71	0.96	
		FR1 n77/n78	1.18	

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, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang
Report Producer: Paula Chen



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	5G Sub-6 GHz M.2 Module
Brand Name	Quectel
Model Name	RM520N-GL
FCC ID	XMR2023RM520NGLT
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: 3450 MHz ~ 3550 MHz LTE Band 43: 3700 MHz ~ 3800 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n13: 777 MHz ~ 787 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77 : 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz 5G NR n78 : 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM
Remark: 1. WWAN based on original report, FCC ID: XMR2023RM520NGLT, Sporton SAR Report, report number: FA3N1058 and FA3N1058-04 to do Sim-Tx analysis with Intel AX211D2W WLAN/BT module (FCC ID: PD9AX211D2) and Intel BE201D2W WLAN/BT module (FCC ID: PD9BE201D2), the Sim-Tx compliance with WWAN operation is addressed in section 5.	

Sample List	Antenna Vendor	Platform
Sample 1	AWAN	AL
Sample 2	Amphenol	AL
Sample 3	AWAN	PPS
Sample 4	Amphenol	PPS

WWAN Antenna Information				
Main Antenna	Manufacturer	Amphenol Taiwan Corporation	Peak gain(dBi)	0.98
	Part number	DC330022K00 DC330022K70	Type	PIFA
	Manufacturer	AWAN	Peak gain(dBi)	1.66
	Part number	DC330022H00 DC330022H70	Type	PIFA
MIMO2 Antenna	Manufacturer	Amphenol Taiwan Corporation	Peak gain(dBi)	0.98
	Part number	DC330022K10	Type	PIFA
	Manufacturer	AWAN	Peak gain(dBi)	1.66
	Part number	DC330022H10	Type	PIFA
Auxiliary Antenna	Manufacturer	Amphenol Taiwan Corporation	Peak gain(dBi)	-3.34
	Part number	DC330022K10 DC330022K70	Type	PIFA
	Manufacturer	AWAN	Peak gain(dBi)	-3.34
	Part number	DC330022H10 DC330022H70	Type	PIFA

Host Information	
Brand Name	Lenovo
Model Name	TP00159C, TP00159D, TP00159E
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
Remark: 1. The Intel AX211D2W WLAN/BT module (FCC ID: PD9AX211D2) is integrated into this host. 2. The Intel BE201D2W WLAN/BT module (FCC ID: PD9BE201D2) is also integrated into this host. 3. 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 30 seconds.	

3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05																																																																										
FCC ID		XMR2023RM520NGLT																																																																								
Equipment Name		5G Sub-6 GHz M.2 Module																																																																								
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: 3450 MHz ~ 3550 MHz LTE Band 43: 3700 MHz ~ 3800 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
Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3																																																																										
Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)																																																																			
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz																																																																				
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1																																																																			
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1																																																																			
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2																																																																			
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2																																																																			
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3																																																																			
256 QAM	≥ 1						≤ 5																																																																			
LTE A-MPR		In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)																																																																								
Spectrum plots for RB configuration		A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.																																																																								
Power reduction applied to satisfy SAR compliance		Yes, Proximity, G-Sensor and power verification refer to original report.																																																																								
LTE Carrier Aggregation Combinations		Inter-Band and Intra-Band possible combinations and the detail power measurement please referred to the original report, report number: FA3N1058.																																																																								
LTE Carrier Aggregation Additional Information		This device supports maximum of 5 carriers in the downlink and 2 carriers in the uplink. Additional following LTE Release features are not supported: Relay, HetNet, Enhanced MIMO, eICI, WiFi Offloading, MDH, eMBMA, Cross-Carrier Scheduling, Enhanced SC-FDMA.																																																																								
Transmission (H, M, L) channel numbers and frequencies in each LTE band																																																																										

LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 5												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	20407	824.7	20415	825.5	20425	826.5	20450	829				
M	20525	836.5	20525	836.5	20525	836.5	20525	836.5				
H	20643	848.3	20635	847.5	20625	846.5	20600	844				
LTE Band 7												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	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)				
L	37775	2572.5	37800	2575	37825	2577.5	37850	2580				
M	38000	2595	38000	2595	38000	2595	38000	2595				
H	38225	2617.5	38200	2615	38175	2612.5	38150	2610				
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
L	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
											M	
M	40620	2593	40620	2593	40620	2593	40620	2593				
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
											M	
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				
LTE Band 42												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	42115	3452.5	42140	3455	42165	3457.5	42190	3460				
M	42590	3500	42590	3500	42590	3500	42590	3500				
H	43065	3547.5	43040	3545	43015	3542.5	42990	3540				
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)				
L	44615	3702.5	44640	3705	44665	3707.5	44690	3710				
M	45090	3750	45090	3750	45090	3750	45090	3750				
H	45565	3797.5	45540	3795	45515	3792.5	45490	3790				
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)				
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560				
L	55810	3607	55815	3607.5	55820	3608	55830	3609				
											M	
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)				
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	XMR2023RM520NGLT
Equipment Name	5G Sub-6 GHz M.2 Module
Operating Frequency Range of each 5G NR transmission band	5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n13 : 777 MHz ~ 787 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77 : 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz 5G NR n78 : 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz
Channel Bandwidth	5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n7: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz 5G NR n12: 5MHz, 10MHz, 15MHz 5G NR n13: 5MHz, 10MHz 5G NR n14: 5MHz, 10MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz 30MHz, 40MHz 5G NR n26: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n30: 5MHz, 10MHz 5G NR n38: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n41: 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n48: 10MHz, 20MHz, 30MHz, 40MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n78: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz
SCS	FDD: SCS15KHz, TDD: SCS30KHz
uplink modulations used	DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM
A-MPR (Additional MPR) disabled for SAR Testing?	Yes
LTE Anchor Bands for n2	LTE B4/5/7/12/13/14/30/66/71
LTE Anchor Bands for n5	LTE B2/7/30/48/66
LTE Anchor Bands for n7	LTE B2/4/5/12/13/66/71
LTE Anchor Bands for n12	LTE B2/7/30/48/66
LTE Anchor Bands for n14	LTE B2/30/66
LTE Anchor Bands for n25	LTE B5/7/12/13/26/48/66/71
LTE Anchor Bands for n30	LTE B2/5/12/14/66
LTE Anchor Bands for n38	LTE B2/4/5/12/66/71
LTE Anchor Bands for n41	LTE B2/4/5/12/25/26/66/71
LTE Anchor Bands for n48	LTE B2/5/13/66
LTE Anchor Bands for n66	LTE B2/5/7/12/13/14/30/48/71
LTE Anchor Bands for n71	LTE B2/7/48/66
LTE Anchor Bands for n77	LTE B2/5/7/12/13/14/25/30/41/66/71
LTE Anchor Bands for n78	LTE B2/4/5/7/12/13/25/26/38/41/66/71

NR Band 2														
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 20MHz				
	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)		
L	370500		1852.5	371000		1855	371500		1857.5	372000		1860		
M	376000		1880	376000		1880	376000		1880	376000		1880		
H	381500		1907.5	381000		1905	380500		1902.5	380000		1900		
NR Band 5														
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 20MHz				
	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)	Ch. #		Freq. (MHz)		
L	165300		826.5	165800		829	166300		831.5	166800		834		
M	167300		836.5	167300		836.5	167300		836.5	167300		836.5		
H	169300		846.5	168800		844	168300		841.5	167800		839		
NR Band 7														
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	500500	2502.5	501000	2505	501500	2507.5	502000	2510	502500	2512.5	503000	2515	504000	2520
M	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535	507000	2535
H	513500	2567.5	513000	2565	512500	2562.5	512000	2560	511500	2557.5	511000	2555	510000	2550
NR Band 12														
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz							
	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 13														
	Bandwidth 5MHz				Bandwidth 10MHz									
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)							
L	155900		779.5		156400		782							
M	156400		782											
H	156900		784.5											
NR Band 14														
	Bandwidth 5MHz				Bandwidth 10MHz									
	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 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	374000	1870
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379000	1895
NR Band 26														
	Bandwidth 5MHz			Bandwidth 10MHz			Bandwidth 15MHz			Bandwidth 20MHz				
	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)							
L	461500		2307.5		462000		2310							
M	462000		2310											
H	462500		2312.5											



NR Band 38																						
	Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz				Bandwidth 30MHz				Bandwidth 40MHz					
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)			
L	515004		2575.02		515502		2577.51		516000		2580		517002		2585.01		518004		2590.02			
M	519000		2595		519000		2595		519000		2595		519000		2595		519000		2595			
H	522996		2614.98		522498		2612.49		522000		2610		520998		2604.99		519996		2599.98			
NR Band 41																						
	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)				
L	501204	2506.02	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01				
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99				
H	535998	2679.99	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640				
NR Band 48																						
	Bandwidth10MHz				Bandwidth20MHz				Bandwidth30MHz				Bandwidth 40MHz									
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)							
L	637000		3555		637334		3560.01		637668		3565.02		638000		3570							
M	641666		3624.99		641666		3624.99		641666		3624.99		641666		3624.99							
H	646332		3694.98		646000		3690		645666		3684.99		645332		3679.98							
NR Band 66																						
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 30MHz		Bandwidth 40MHz											
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)										
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	345000	1725	346000	1730										
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745										
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353000	1765	352000	1760										
NR Band 71																						
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz									
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)							
L	133100		665.5		133600		668		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																						
	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)		
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																						
	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)		
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(3450MHz ~ 3550MHz)																						
	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)		
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. RF Exposure Limits

4.1 Uncontrolled Environment

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

4.2 Controlled Environment

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

Limits for Occupational/Controlled Exposure (W/kg)

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

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

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

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

5. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Body
1.	WWAN Main + WWAN MIMO 2 + WLAN Main	Yes
2.	WWAN Main + WWAN MIMO 2 + WLAN/BT Aux	Yes
3.	WWAN MIMO 1 + WLAN Main	Yes
4.	WWAN MIMO 1 + WLAN/BT Aux	Yes
5.	WWAN Aux + WLAN Main	Yes
6.	WWAN Aux + WLAN/BT Aux	Yes

General Note:

- The WWAN SAR data refers to FCC ID: XMR2023RM520NGLT, Sporton SAR Report, report number: FA3N1058 and FA3N1058-04.
- The Intel AX211D2W WLAN/BT module (FCC ID: PD9AX211D2) is integrated into this host.
- The Intel BE201D2W WLAN/BT module (FCC ID: PD9BE201D2) is also integrated into this host.
- WiFi/BT SAR of 1.59 W/kg for each transmit antenna was used conservatively for the purpose of simultaneous transmission analysis.
- The worst case WWAN SAR is using for Sim-Tx analysis.
- The Scaled SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - Scalar SAR summation < 1.6W/kg.
 - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
 - Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
 - The SPLSR calculated results please refer to section 5.2.

5.1 Body Exposure Conditions

<AL Platform>

WWAN Band	FR1	Exposure Position	1	2	3	4	1+2+3 Summed 1g SAR (W/kg)	1+2+4 Summed 1g SAR (W/kg)	Case No.	1+2+3	Case No.	1+2+4
			Max WWAN 1g SAR (W/kg)	Max WWAN 1g SAR (W/kg)	WLAN Main 1g SAR (W/kg)	WLAN Aux/BT 1g SAR (W/kg)				SPLSR		SPLSR
Maximum WWAN Main Ant	Maximum WWAN MIMO2 Ant	Bottom Side at 0mm	1.283	1.199	1.590	1.590	4.072	4.072	Case 1	0.020	Case 2	0.020
Maximum WWAN MIMO1 Ant		Bottom Side at 0mm	0.700		1.590	1.590	2.290	2.290	Case 3	0.010	Case 4	0.020
Maximum WWAN Aux Ant		Bottom Side at 0mm	1.038		1.590	1.590	2.628	2.628	Case 5	0.020	Case 6	0.020

<PPS Platform>

WWAN Band	FR1	Exposure Position	1	2	3	4	1+2+3 Summed 1g SAR (W/kg)	1+2+4 Summed 1g SAR (W/kg)	Case No.	1+2+3	Case No.	1+2+4
			Max WWAN 1g SAR (W/kg)	Max WWAN 1g SAR (W/kg)	WLAN Main 1g SAR (W/kg)	WLAN Aux/BT 1g SAR (W/kg)				SPLSR		SPLSR
Maximum WWAN Main Ant	Maximum WWAN MIMO2 Ant	Bottom Side at 0mm	1.283	1.199	1.590	1.590	4.072	4.072	Case 1	0.020	Case 2	0.020
Maximum WWAN MIMO1 Ant		Bottom Side at 0mm	0.700		1.590	1.590	2.290	2.290	Case 3	0.010	Case 4	0.010
Maximum WWAN Aux Ant		Bottom Side at 0mm	1.038		1.590	1.590	2.628	2.628	Case 5	0.010	Case 6	0.010

5.2 SPLSR Evaluation and Analysis

General Note:

1. According to antenna location of Appendix A, the minimum distance between each transmit antenna is using for SPLSR analysis.
2. $SPLSR = (SAR_1 + SAR_2)^{1.5} / (min. \text{ separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.

<AL Platform>

	Band	Position	SAR (W/kg)	Gap	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 1	Maximum WWAN Main Ant	Bottom Side	1.283	0mm	280.0	2.48	0.01	Not required
	Maximum WWAN MIMO2 Ant		1.199	0mm				
	Maximum WWAN Main Ant	Bottom Side	1.283	0mm	275.0	2.87	0.02	Not required
	WLAN Main Ant		1.59	0mm				
	Maximum WWAN MIMO2 Ant	Bottom Side	1.199	0mm	190.0	2.79	0.02	Not required
	WLAN Main Ant		1.59	0mm				
Case 2	Maximum WWAN Main Ant	Bottom Side	1.283	0mm	280.0	2.48	0.01	Not required
	Maximum WWAN MIMO2 Ant		1.199	0mm				
	Maximum WWAN Main Ant	Bottom Side	1.283	0mm	220.0	2.87	0.02	Not required
	WLAN/BT Aux Ant		1.59	0mm				
	Maximum WWAN MIMO2 Ant	Bottom Side	1.199	0mm	240.0	2.79	0.02	Not required
	WLAN/BT Aux Ant		1.59	0mm				
Case 3	Maximum WWAN MIMO1 Ant	Bottom Side	0.7	0mm	270.0	2.29	0.01	Not required
	WLAN Main Ant		1.59	0mm				
Case 4	Maximum WWAN MIMO1 Ant	Bottom Side	0.7	0mm	225.0	2.29	0.02	Not required
	WLAN/BT Aux Ant		1.59	0mm				
Case 5	Maximum WWAN Aux Ant	Bottom Side	1.038	0mm	225.0	2.63	0.02	Not required
	WLAN Main Ant		1.59	0mm				
Case 6	Maximum WWAN Aux Ant	Bottom Side	1.038	0mm	270.0	2.63	0.02	Not required
	WLAN/BT Aux Ant		1.59	0mm				

<PPS Platform>

	Band	Position	SAR (W/kg)	Gap	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 1	Maximum WWAN Main Ant	Bottom Side	1.283	0mm	280.0	2.48	0.01	Not required
	Maximum WWAN MIMO2 Ant		1.199	0mm				
	Maximum WWAN Main Ant	Bottom Side	1.283	0mm	370.0	2.87	0.01	Not required
	WLAN Main Ant		1.59	0mm				
	Maximum WWAN MIMO2 Ant	Bottom Side	1.199	0mm	280.0	2.79	0.02	Not required
	WLAN Main Ant		1.59	0mm				
Case 2	Maximum WWAN Main Ant	Bottom Side	1.283	0mm	280.0	2.48	0.01	Not required
	Maximum WWAN MIMO2 Ant		1.199	0mm				
	Maximum WWAN Main Ant	Bottom Side	1.283	0mm	300.0	2.87	0.02	Not required
	WLAN/BT Aux Ant		1.59	0mm				
	Maximum WWAN MIMO2 Ant	Bottom Side	1.199	0mm	360.0	2.79	0.01	Not required
	WLAN/BT Aux Ant		1.59	0mm				
Case 3	Maximum WWAN MIMO1 Ant	Bottom Side	0.7	0mm	360.0	2.29	0.01	Not required
	WLAN Main Ant		1.59	0mm				
Case 4	Maximum WWAN MIMO1 Ant	Bottom Side	0.7	0mm	300.0	2.29	0.01	Not required
	WLAN/BT Aux Ant		1.59	0mm				
Case 5	Maximum WWAN Aux Ant	Bottom Side	1.038	0mm	300.0	2.63	0.01	Not required
	WLAN Main Ant		1.59	0mm				
Case 6	Maximum WWAN Aux Ant	Bottom Side	1.038	0mm	360.0	2.63	0.01	Not required
	WLAN/BT Aux Ant		1.59	0mm				

6. References

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- [5] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
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- [11] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.