

TEST REPORT

Applicant: Eastern Times Technology Co., Ltd

Address of Applicant: Building D, Nan An Industrial Area, Youganpu Village,
Fenggang Town, Dongguan City, Guangdong, China.

Manufacturer: Eastern Times Technology Co., Ltd

**Address of
Manufacturer:** Building D, Nan An Industrial Area, Youganpu Village,
Fenggang Town, Dongguan City, Guangdong, China.

Equipment Under Test (EUT)

Product Name: WIRED/2.4G/BT GAMING MOUSE

Model No.: PC426A, ET-4004, GEPC426AWUS, GEPC426AWUS-PT

FCC ID: TUVDS-4004A

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249

Date of sample receipt: October 29, 2024

Date of Test: October 29, 2024 ~ November 13, 2024

Date of report issued: November 13, 2024

Test Result: PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Luo

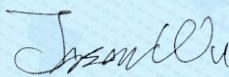
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
V1.0	November 13, 2024	Original

Prepared By:



Date:

November 13, 2024

Project Engineer

Check By:



Date:

November 13, 2024

Reviewer

3 Contents

	Page
1 COVER PAGE.....	1
2 VERSION	2
3 CONTENTS	3
4 TEST SUMMARY	4
4.1 MEASUREMENT UNCERTAINTY	4
5 GENERAL INFORMATION	5
5.1 GENERAL DESCRIPTION OF EUT	5
5.2 TEST MODE	7
5.3 DESCRIPTION OF SUPPORT UNITS	7
5.4 DEVIATION FROM STANDARDS	7
5.5 ABNORMALITIES FROM STANDARD CONDITIONS	7
5.6 TEST FACILITY	7
5.7 TEST LOCATION	7
5.8 ADDITIONAL INSTRUCTIONS	7
6 TEST INSTRUMENTS LIST	8
7 TEST RESULTS AND MEASUREMENT DATA	10
7.1 ANTENNA REQUIREMENT	10
7.2 CONDUCTED EMISSIONS	11
7.3 RADIATED EMISSION METHOD	14
7.3.1 Field Strength of The Fundamental Signal	16
7.3.2 Spurious emissions	17
7.3.3 Bandedge emissions	25
7.4 20dB OCCUPY BANDWIDTH	29
8 TEST SETUP PHOTO	32
9 EUT CONSTRUCTIONAL DETAILS	32

4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
AC Power Line Conducted Emission	15.207	Pass
Field strength of the fundamental signal	15.249 (a)	Pass
Spurious emissions	15.249 (a) (d)/15.209	Pass
Band edge	15.249 (d)/15.205	Pass
20dB Occupied Bandwidth	15.215 (c)	Pass

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. N/A: Not applicable.
3. Test according to ANSI C63.10:2013

4.1 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 7.25 \times 10^{-8}$
2	Duty cycle	$\pm 0.37\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF conducted power	$\pm 0.75\text{dB}$
5	RF power density	$\pm 3\text{dB}$
6	Conducted Spurious emissions	$\pm 2.58\text{dB}$
7	AC Power Line Conducted Emission	$\pm 3.44\text{dB}$ (0.15MHz ~ 30MHz)
8	Radiated Spurious emission test	$\pm 3.1\text{dB}$ (9kHz-30MHz)
		$\pm 3.8039\text{dB}$ (30MHz-200MHz)
		$\pm 3.9679\text{dB}$ (200MHz-1GHz)
		$\pm 4.29\text{dB}$ (1GHz-18GHz)
		$\pm 3.30\text{dB}$ (18GHz-40GHz)
9	Temperature test	$\pm 1^\circ\text{C}$
10	Humidity test	$\pm 3\%$
11	Time	$\pm 3\%$

5 General Information

5.1 General Description of EUT

Product Name:	WIRED/2.4G/BT GAMING MOUSE
Model No.:	ET-4004, GEPC426AWUS, GEPC426AWUS-PT
Test Model No.:	PC426A
Remark: All above models are identical in the same PCB layout, interior structure and electrical circuits. The only difference is model name for commercial purpose.	
Serial No.:	Z4H11
Test sample(s) ID:	GTSL2024120069-1
Sample(s) Status	Engineered sample
Operation Frequency:	2402-2480MHz
Channel Separate:	1MHz
Channel Number:	79
Modulation Type:	GFSK
Antenna Type:	PCB antenna
Antenna gain:	-2.39dBi
Rating:	Input: DC5V
Battery	DC3.7V, 400mAh Li-ion battery

Remark:

1. Antenna gain information provided by the customer
2. The relevant information of the sample is provided by the entrusting company, and the laboratory is not responsible for its authenticity.

Operation Frequency each of channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2402MHz	21	2422MHz	41	2442MHz	61	2462MHz
2	2403MHz	22	2423MHz	42	2443MHz	62	2463MHz
3	2404MHz	23	2424MHz	43	2444MHz	63	2464MHz
4	2405MHz	24	2425MHz	44	2445MHz	64	2465MHz
5	2406MHz	25	2426MHz	45	2446MHz	65	2466MHz
6	2407MHz	26	2427MHz	46	2447MHz	66	2467MHz
7	2408MHz	27	2428MHz	47	2448MHz	67	2468MHz
8	2409MHz	28	2429MHz	48	2449MHz	68	2469MHz
9	2410MHz	29	2430MHz	49	2450MHz	69	2470MHz
10	2411MHz	30	2431MHz	50	2451MHz	70	2471MHz
11	2412MHz	31	2432MHz	51	2452MHz	71	2472MHz
12	2413MHz	32	2433MHz	52	2453MHz	72	2473MHz
13	2414MHz	33	2434MHz	53	2454MHz	73	2474MHz
14	2415MHz	34	2435MHz	54	2455MHz	74	2475MHz
15	2416MHz	35	2436MHz	55	2456MHz	75	2476MHz
16	2417MHz	36	2437MHz	56	2457MHz	76	2477MHz
17	2418MHz	37	2438MHz	57	2458MHz	77	2478MHz
18	2419MHz	38	2439MHz	58	2459MHz	78	2479MHz
19	2420MHz	39	2440MHz	59	2460MHz	79	2480MHz
20	2421MHz	40	2441MHz	60	2461MHz		

The test frequencies are below:

Channel	Frequency (MHz)
The lowest channel	2402
The middle channel	2441
The Highest channel	2480

5.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
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5.3 Description of Support Units

None.

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations: ● FCC—Registration No.: 381383 Designation Number: CN5029 Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. ● ISED—Registration No.: 9079A CAB identifier: CN0091 The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of ISED for radio equipment testing ● NVLAP (LAB CODE:600179-0) Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).
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5.7 Test Location

All tests were performed at:
Global United Technology Services Co., Ltd. Address: No. 123- 128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Tel: 0755-27798480 Fax: 0755-27798960

5.8 Additional Instructions

Test Software	Special test command provided by manufacturer
Power level setup	Default

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Jun. 22, 2024	Jun. 21, 2027
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	Apr. 11, 2024	Apr. 10, 2025
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	GTS640	Mar. 19, 2023	Mar. 18, 2025
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	Apr. 17, 2023	Apr. 16, 2025
6	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	Apr. 11, 2024	Apr. 10, 2025
7	Loop Antenna	ZHINAN	ZN30900A	GTS534	Nov.12, 2024	Nov.11, 2025
8	Broadband Preamplifier	SCHWARZBECK	BBV9718	GTS535	Apr. 11, 2024	Apr. 10, 2025
9	Amplifier(1GHz-26.5GHz)	HP	8449B	GTS601	Apr. 11, 2024	Apr. 10, 2025
10	Horn Antenna (15GH-40GHz)	SCHWARZBECK	01296	GTS691	Mar. 07, 2024	Mar. 06, 2025
11	FSV·Signal Analyzer (10Hz-40GHz)	Keysight	FSV-40-N	GTS666	Mar. 12, 2024	Mar. 11, 2025
12	Amplifier	/	LNA-1000-30S	GTS650	Apr. 11, 2024	Apr. 10, 2025
13	CDNE M2+M3-16A	HCT	30MHz-300MHz	GTS692	Nov. 07, 2024	Nov. 06, 2025
14	Wideband Amplifier	/	WDA-01004000-15P35	GTS602	Apr. 11, 2024	Apr. 10, 2025
15	Thermo meter	JINCHUANG	GSP-8A	GTS643	Apr. 18, 2024	Apr. 17, 2025
16	RE cable 1	GTS	N/A	GTS675	Jul. 02, 2024	Jul. 01, 2025
17	RE cable 2	GTS	N/A	GTS676	Jul. 02, 2024	Jul. 01, 2025
18	RE cable 3	GTS	N/A	GTS677	Jul. 02, 2024	Jul. 01, 2025
19	RE cable 4	GTS	N/A	GTS678	Jul. 02, 2024	Jul. 01, 2025
20	RE cable 5	GTS	N/A	GTS679	Jul. 02, 2024	Jul. 01, 2025
21	RE cable 6	GTS	N/A	GTS680	Jul. 02, 2024	Jul. 01, 2025
22	RE cable 7	GTS	N/A	GTS681	Jul. 05, 2024	Jul. 04, 2025
23	RE cable 8	GTS	N/A	GTS682	Jul. 05, 2024	Jul. 04, 2025
24	EMI Test Software	AUDIX	E3-6.100614a	GTS725	N/A	N/A

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	Jul. 12, 2022	Jul. 11, 2027
2	EMI Test Receiver	R&S	ESCI 7	GTS552	Apr. 11, 2024	Apr. 10, 2025
3	LISN	ROHDE & SCHWARZ	ENV216	GTS226	Apr. 11, 2024	Apr. 10, 2025
4	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
5	Thermo meter	JINCHUANG	GSP-8A	GTS642	Apr. 18, 2024	Apr. 17, 2025
6	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	Apr. 11, 2024	Apr. 10, 2025
7	ISN	SCHWARZBECK	NTFM 8158	GTS565	Apr. 11, 2024	Apr. 10, 2025
8	High voltage probe	SCHWARZBECK	TK9420	GTS537	Apr. 11, 2024	Apr. 10, 2025
9	Antenna end assembly	Weinschel	1870A	GTS560	Apr. 11, 2024	Apr. 10, 2025
10	EMI Test Software	AUDIX	E3-6.100622	GTS726	N/A	N/A

RF Conducted Test:						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	Apr. 13, 2024	Apr. 12, 2025
2	EMI Test Receiver	R&S	ESCI 7	GTS552	Apr. 13, 2024	Apr. 12, 2025
3	PSA Series Spectrum Analyzer	Agilent	E4440A	GTS536	Apr. 13, 2024	Apr. 12, 2025
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	Apr. 13, 2024	Apr. 12, 2025
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	Apr. 13, 2024	Apr. 12, 2025
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	Apr. 13, 2024	Apr. 12, 2025
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	Apr. 13, 2024	Apr. 12, 2025
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	Apr. 13, 2024	Apr. 12, 2025
9	Thermo meter	JINCHUANG	GSP-8A	GTS641	Apr. 18, 2024	Apr. 17, 2025

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Barometer	KUMAO	SF132	GTS647	Apr. 18, 2024	Apr. 17, 2025

7 Test results and Measurement Data

7.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antenna is PCB antenna, reference to the appendix II for details.	

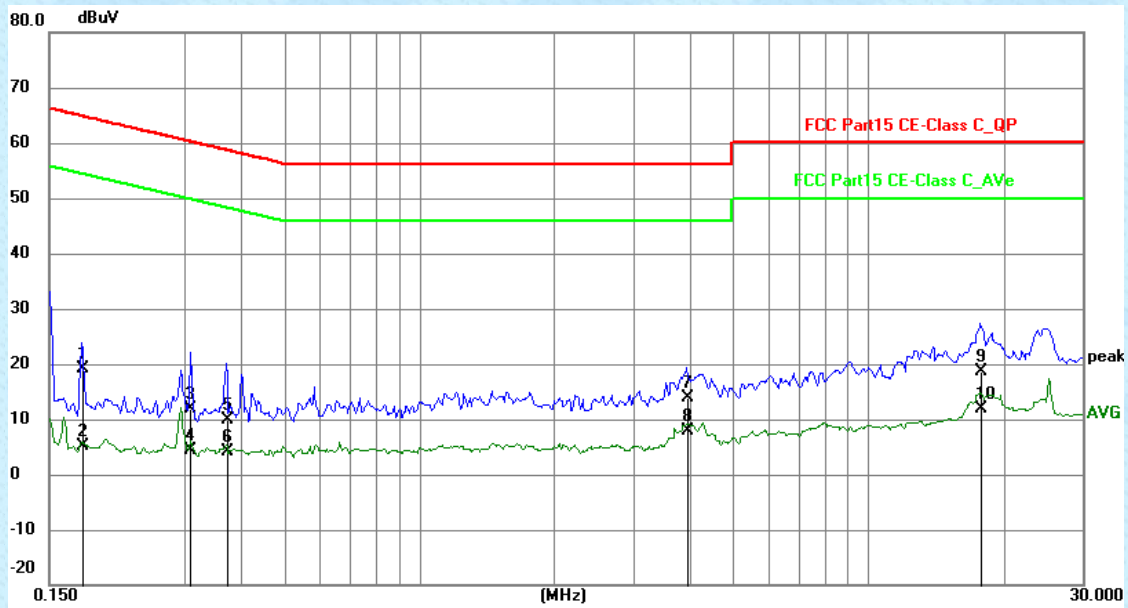
7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207						
Test Method:	ANSI C63.10:2013						
Test Frequency Range:	150KHz to 30MHz						
Class / Severity:	Class B						
Receiver setup:	RBW=9kHz, VBW=30kHz, Sweep time=auto						
Limit:	Frequency range (MHz)		Limit (dBuV)				
			Quasi-peak		Average		
	0.15-0.5		66 to 56*		56 to 46*		
	0.5-5		56		46		
	5-30		60		50		
* Decreases with the logarithm of the frequency.							
Test setup:	Reference Plane Remark: E.U.T.: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m						
Test procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.						
Test Instruments:	Refer to section 6.0 for details						
Test mode:	Refer to section 5.2 for details						
Test environment:	Temp.:	25 °C	Humid.:	50%	Press.:	1 010mbar	
Test voltage:	AC 120V, 60Hz						
Test results:	Pass						

Remark: Both high and low voltages have been tested to show only the worst low voltage test data.

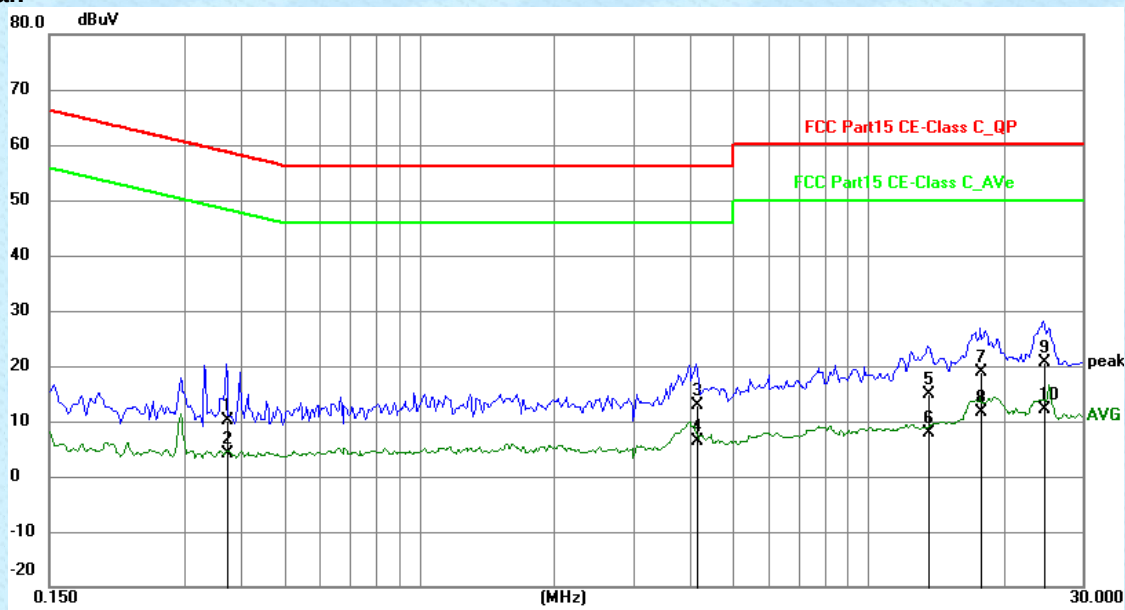
Measurement data:

Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1773	9.41	9.77	19.18	64.61	-45.43	QP	P
2	0.1773	-4.56	9.77	5.21	54.61	-49.40	AVG	P
3	0.3099	2.03	9.76	11.79	59.97	-48.18	QP	P
4	0.3099	-5.43	9.76	4.33	49.97	-45.64	AVG	P
5	0.3723	0.18	9.76	9.94	58.45	-48.51	QP	P
6	0.3723	-5.66	9.76	4.10	48.45	-44.35	AVG	P
7	3.9438	4.11	9.88	13.99	56.00	-42.01	QP	P
8	3.9438	-1.91	9.88	7.97	46.00	-38.03	AVG	P
9	17.7771	8.12	10.55	18.67	60.00	-41.33	QP	P
10	17.7771	1.35	10.55	11.90	50.00	-38.10	AVG	P

Neutral:

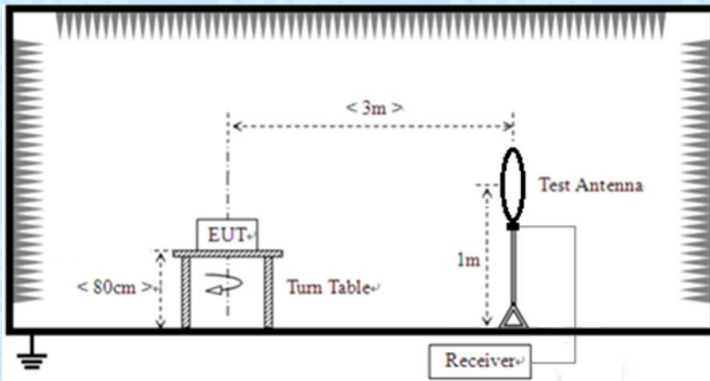


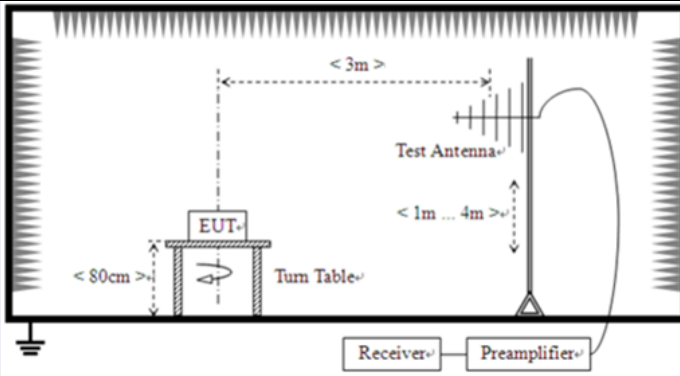
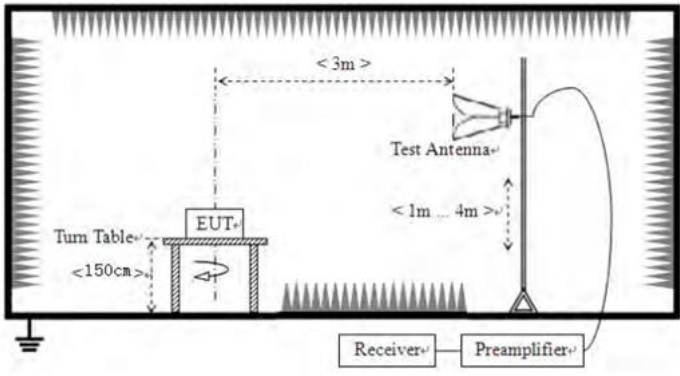
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.3723	0.42	9.76	10.18	58.45	-48.27	QP	P
2	0.3723	-5.59	9.76	4.17	48.45	-44.28	AVG	P
3	4.1427	3.08	9.89	12.97	56.00	-43.03	QP	P
4	4.1427	-3.40	9.89	6.49	46.00	-39.51	AVG	P
5	13.5807	4.53	10.32	14.85	60.00	-45.15	QP	P
6	13.5807	-2.54	10.32	7.78	50.00	-42.22	AVG	P
7	17.7732	8.28	10.55	18.83	60.00	-41.17	QP	P
8	17.7732	1.00	10.55	11.55	50.00	-38.45	AVG	P
9	24.5787	9.79	10.96	20.75	60.00	-39.25	QP	P
10	24.5787	1.13	10.96	12.09	50.00	-37.91	AVG	P

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss

7.3 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209																																	
Test Method:	ANSI C63.10:2013																																	
Test Frequency Range:	9kHz to 25GHz																																	
Test site:	Measurement Distance: 3m																																	
Receiver setup:	<table><tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr><tr><td>9kHz-150kHz</td><td>Quasi-peak</td><td>200Hz</td><td>300Hz</td><td>Quasi-peak Value</td></tr><tr><td>150kHz-30MHz</td><td>Quasi-peak</td><td>9kHz</td><td>10kHz</td><td>Quasi-peak Value</td></tr><tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak Value</td></tr><tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr><tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr></table> Note: For Duty cycle $\geq 98\%$, average detector set as above, For Duty cycle $< 98\%$, average detector set as below: $VBW \geq 1 / T$					Frequency	Detector	RBW	VBW	Remark	9kHz-150kHz	Quasi-peak	200Hz	300Hz	Quasi-peak Value	150kHz-30MHz	Quasi-peak	9kHz	10kHz	Quasi-peak Value	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value	Above 1GHz	Peak	1MHz	3MHz	Peak Value	Peak	1MHz	10Hz	Average Value
Frequency	Detector	RBW	VBW	Remark																														
9kHz-150kHz	Quasi-peak	200Hz	300Hz	Quasi-peak Value																														
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Above 1GHz	Peak	1MHz	3MHz	Peak Value																														
	Peak	1MHz	10Hz	Average Value																														
Limit: (Field strength of the fundamental signal)	<table><tr><td>Frequency</td><td>Limit (dBuV/m @3m)</td><td>Remark</td></tr><tr><td rowspan="2">2400MHz-2483.5MHz</td><td>94.00</td><td>Average Value</td></tr><tr><td>114.00</td><td>Peak Value</td></tr></table>		Frequency	Limit (dBuV/m @3m)	Remark	2400MHz-2483.5MHz	94.00	Average Value	114.00	Peak Value																								
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Limit: (Spurious Emissions)	<table><tr><td>Frequency</td><td>Limit (uV/m)</td><td>Remark</td></tr><tr><td>0.009MHz-0.490MHz</td><td>2400/F(kHz) @300m</td><td>Quasi-peak Value</td></tr><tr><td>0.490MHz-1.705MHz</td><td>24000/F(kHz) @30m</td><td>Quasi-peak Value</td></tr><tr><td>1.705MHz-30.0MHz</td><td>30 @30m</td><td>Quasi-peak Value</td></tr><tr><td>30MHz-88MHz</td><td>100 @3m</td><td>Quasi-peak Value</td></tr><tr><td>88MHz-216MHz</td><td>150 @3m</td><td>Quasi-peak Value</td></tr><tr><td>216MHz-960MHz</td><td>200 @3m</td><td>Quasi-peak Value</td></tr><tr><td>960MHz-1GHz</td><td>500 @3m</td><td>Quasi-peak Value</td></tr><tr><td rowspan="2">Above 1GHz</td><td>500 @3m</td><td>Average Value</td></tr><tr><td>5000 @3m</td><td>Peak Value</td></tr></table>		Frequency	Limit (uV/m)	Remark	0.009MHz-0.490MHz	2400/F(kHz) @300m	Quasi-peak Value	0.490MHz-1.705MHz	24000/F(kHz) @30m	Quasi-peak Value	1.705MHz-30.0MHz	30 @30m	Quasi-peak Value	30MHz-88MHz	100 @3m	Quasi-peak Value	88MHz-216MHz	150 @3m	Quasi-peak Value	216MHz-960MHz	200 @3m	Quasi-peak Value	960MHz-1GHz	500 @3m	Quasi-peak Value	Above 1GHz	500 @3m	Average Value	5000 @3m	Peak Value			
Frequency	Limit (uV/m)	Remark																																
0.009MHz-0.490MHz	2400/F(kHz) @300m	Quasi-peak Value																																
0.490MHz-1.705MHz	24000/F(kHz) @30m	Quasi-peak Value																																
1.705MHz-30.0MHz	30 @30m	Quasi-peak Value																																
30MHz-88MHz	100 @3m	Quasi-peak Value																																
88MHz-216MHz	150 @3m	Quasi-peak Value																																
216MHz-960MHz	200 @3m	Quasi-peak Value																																
960MHz-1GHz	500 @3m	Quasi-peak Value																																
Above 1GHz	500 @3m	Average Value																																
	5000 @3m	Peak Value																																
Limit: (band edge)	Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.																																	
Test setup:	For radiated emissions from 9kHz to 30MHz  For radiated emissions from 30MHz to1GHz																																	

	 For radiated emissions above 1GHz 
Test Procedure:	1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test environment:	Temp.: 25 °C Humid.: 52% Press.: 1012mbar
Test voltage:	DC3.7V
Test results:	Pass

Measurement data:

7.3.1 Field Strength of The Fundamental Signal

Peak value:

Frequency (MHz)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2402	-3.57	90.95	114.0	-23.05	Horizontal
2402	-3.57	81.37	114.0	-32.63	Vertical
2441	-3.57	89.21	114.0	-24.79	Horizontal
2441	-3.57	80.14	114.0	-33.86	Vertical
2480	-3.57	90.50	114.0	-23.50	Horizontal
2480	-3.57	80.27	114.0	-33.73	Vertical

Average value:

Frequency (MHz)	Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
2402	--	--	94.00	--	Vertical
2402	--	--	94.00	--	Horizontal
2441	--	--	94.00	--	Vertical
2441	--	-	94.00	--	Horizontal
2480	--	--	94.00	--	Vertical
2480	--	--	94.00	--	Horizontal

Note: 1. For fundamental frequency, RBW>20dB BW, VBW>=RBW, PK detector for PK value, RMS detector for AV value

2. Factor=Antenna Factor + Cable Loss-Amplifier

3. the measured PK value less than the AV limit

7.3.2 Spurious emissions

■ Below 30MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o), the test result no need to reported.

■ Below 1GHz

Pre-scan all test modes, found worst case at 2402MHz, and so only show the test result of it
Horizontal

General Radiated Emission Data

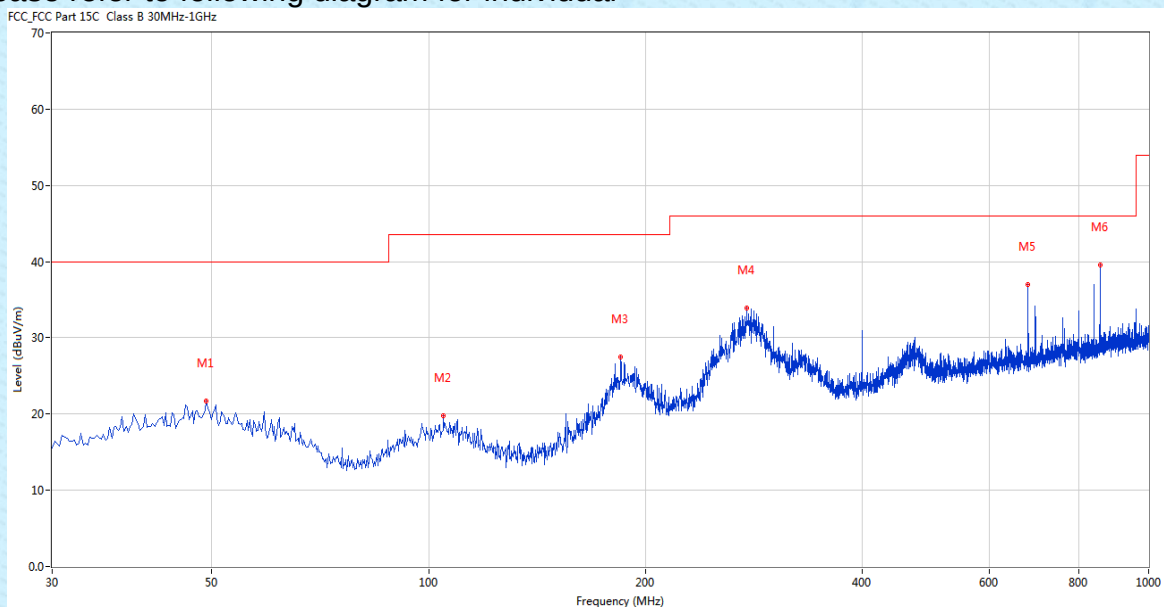
Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition:

Results:

Pass

Please refer to following diagram for individual



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	49.153	21.66	-11.24	40.0	18.34	Peak	118.00	100	Horizontal	Pass
2	104.914	19.84	-13.23	43.5	23.66	Peak	343.00	100	Horizontal	Pass
3	184.919	27.55	-14.93	43.5	15.95	Peak	277.00	100	Horizontal	Pass
4	276.561	33.91	-11.59	46.0	12.09	Peak	301.00	100	Horizontal	Pass
5	679.980	37.05	-4.46	46.0	8.95	Peak	66.00	100	Horizontal	Pass
6	855.991	39.52	-2.49	46.0	6.48	Peak	71.00	100	Horizontal	Pass

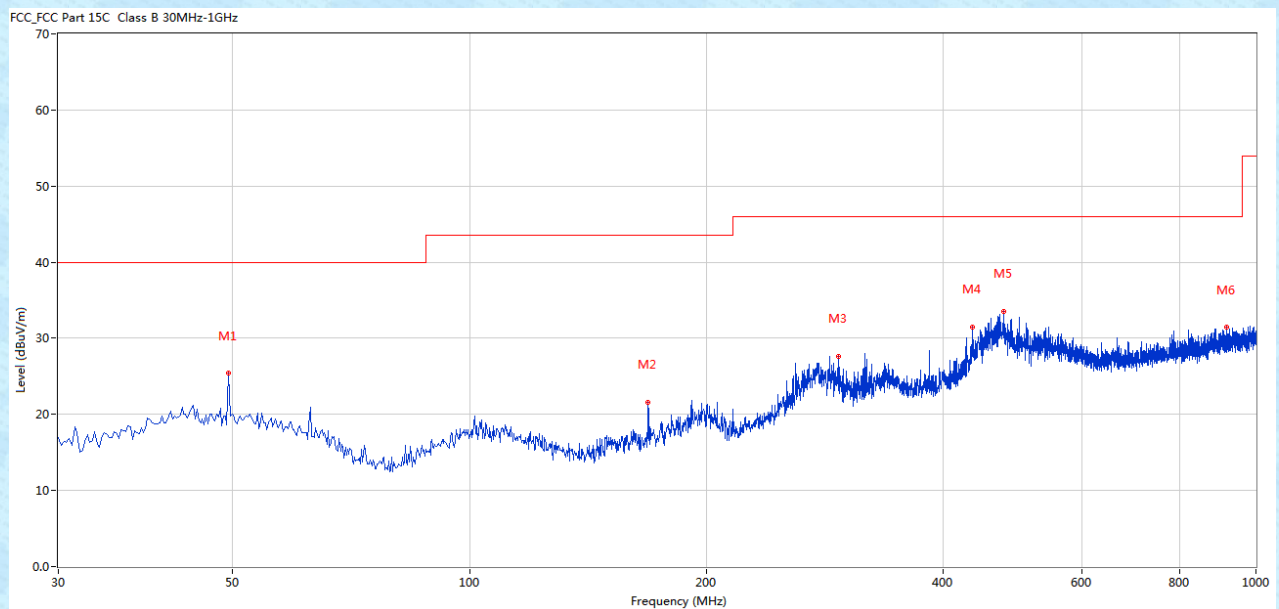
Vertical

Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

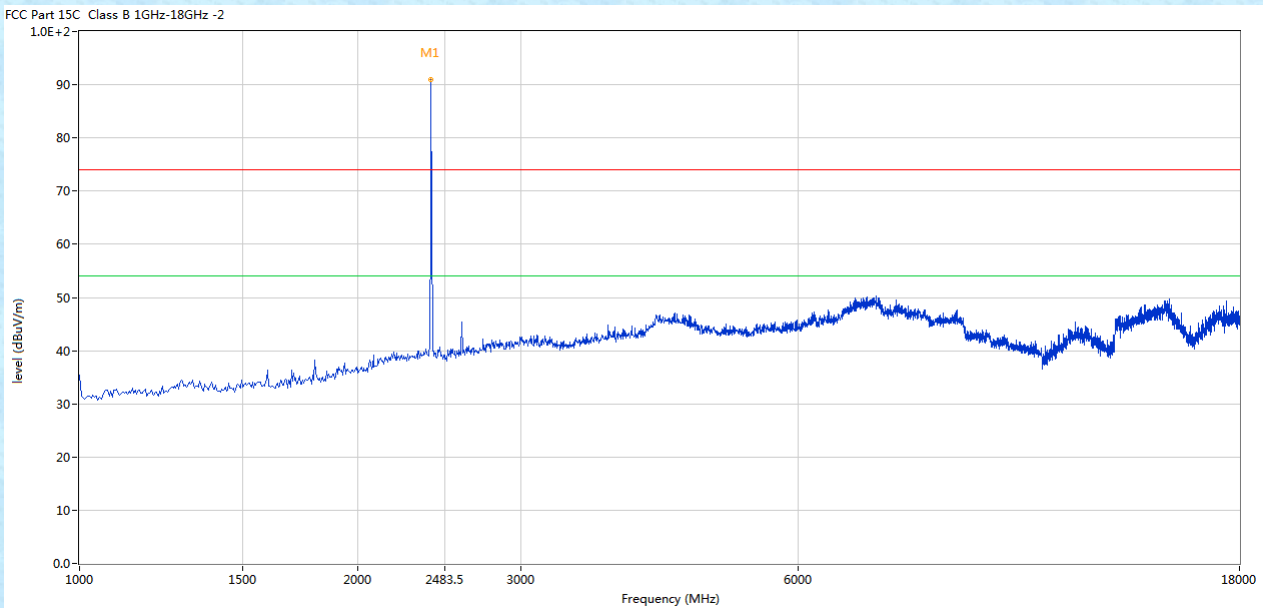
Please refer to following diagram for individual



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	49.395	25.37	-11.28	40.0	14.63	Peak	143.00	100	Vertical	Pass
2	168.675	21.61	-16.12	43.5	21.89	Peak	313.00	100	Vertical	Pass
3	294.501	27.67	-11.20	46.0	18.33	Peak	330.00	100	Vertical	Pass
4	436.086	31.50	-8.01	46.0	14.50	Peak	319.00	100	Vertical	Pass
5	478.270	33.52	-7.45	46.0	12.48	Peak	348.00	100	Vertical	Pass
6	917.328	31.46	-1.94	46.0	14.54	Peak	108.00	100	Vertical	Pass

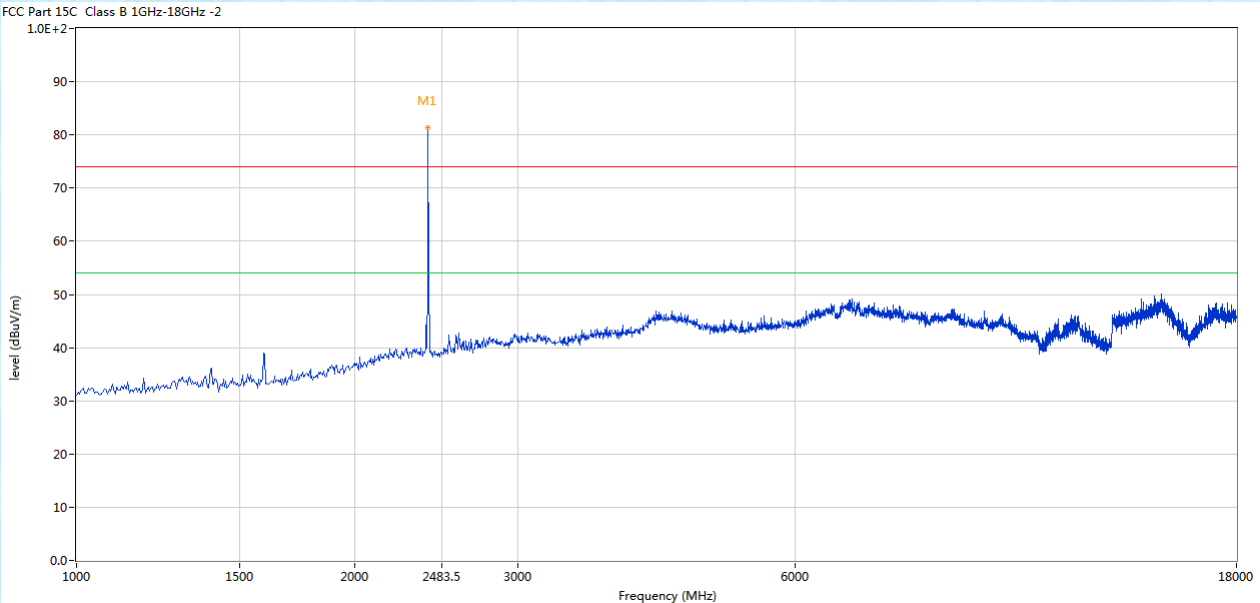
Above 1GHz

Test channel:	Lowest	Polarization:	Horizontal
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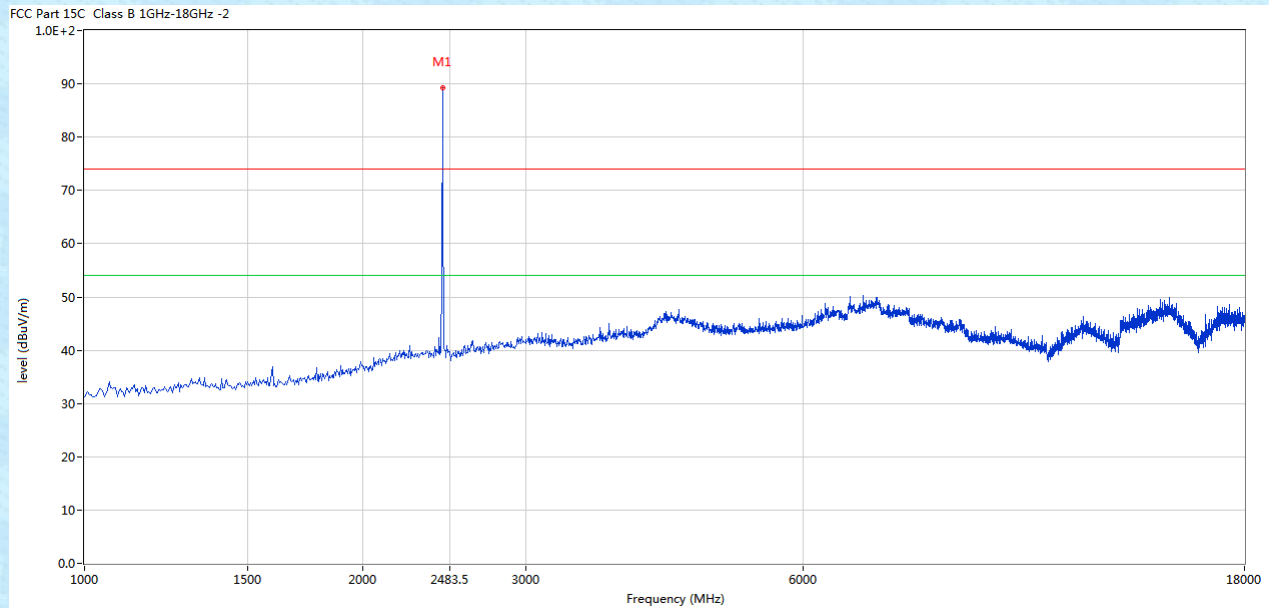
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2402	90.95	-3.57	114.0	-23.05	Peak	330.00	100	Horizontal	Pass

Test channel:	Lowest	Polarization:	Vertical
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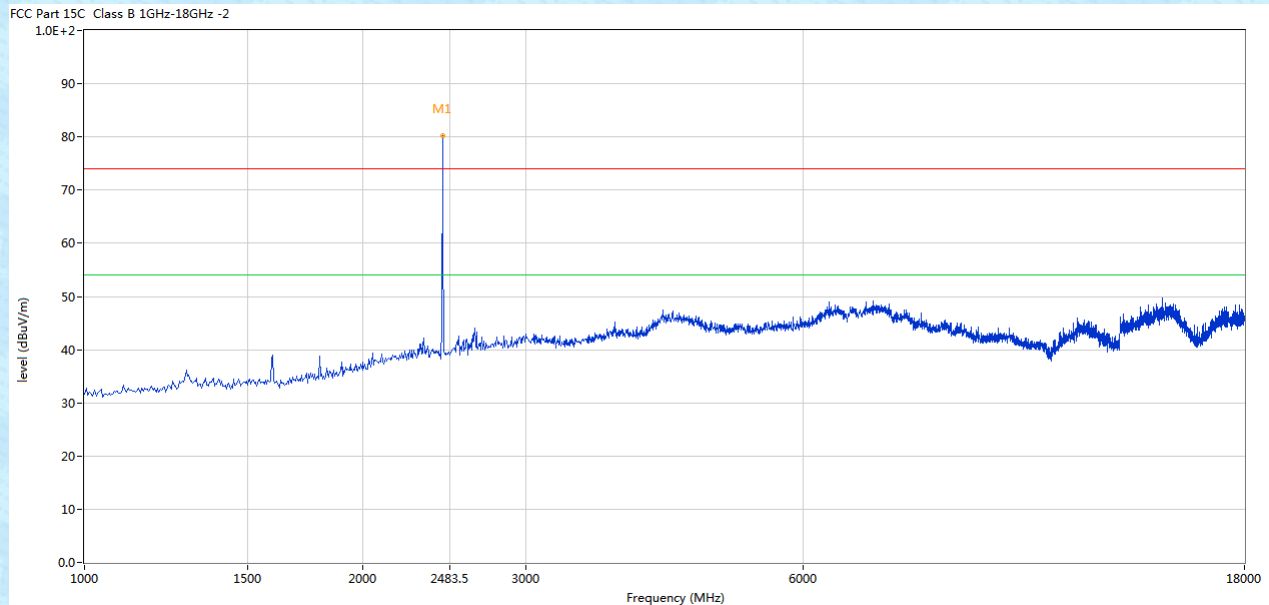
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2402	81.37	-3.57	114.0	-32.63	Peak	299.00	100	Vertical	Pass

Test channel:	Middle	Polarization:	Horizontal
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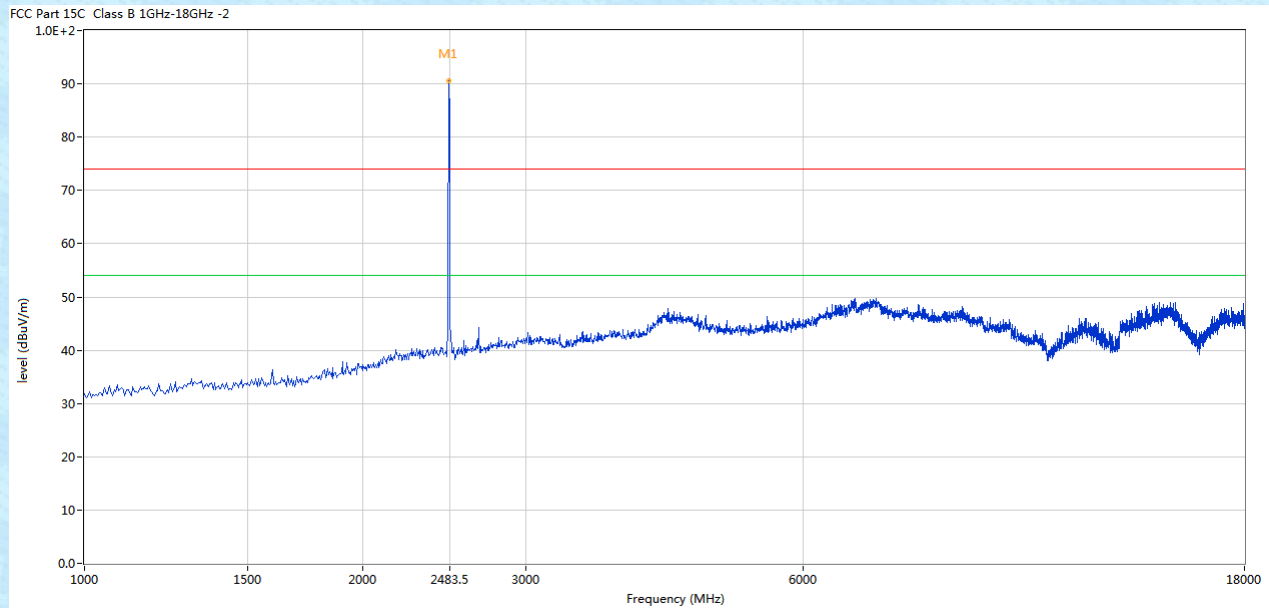
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2441	89.21	-3.57	114.0	-24.79	Peak	331.00	100	Horizontal	Pass

Test channel:	Middle	Polarization:	Vertical
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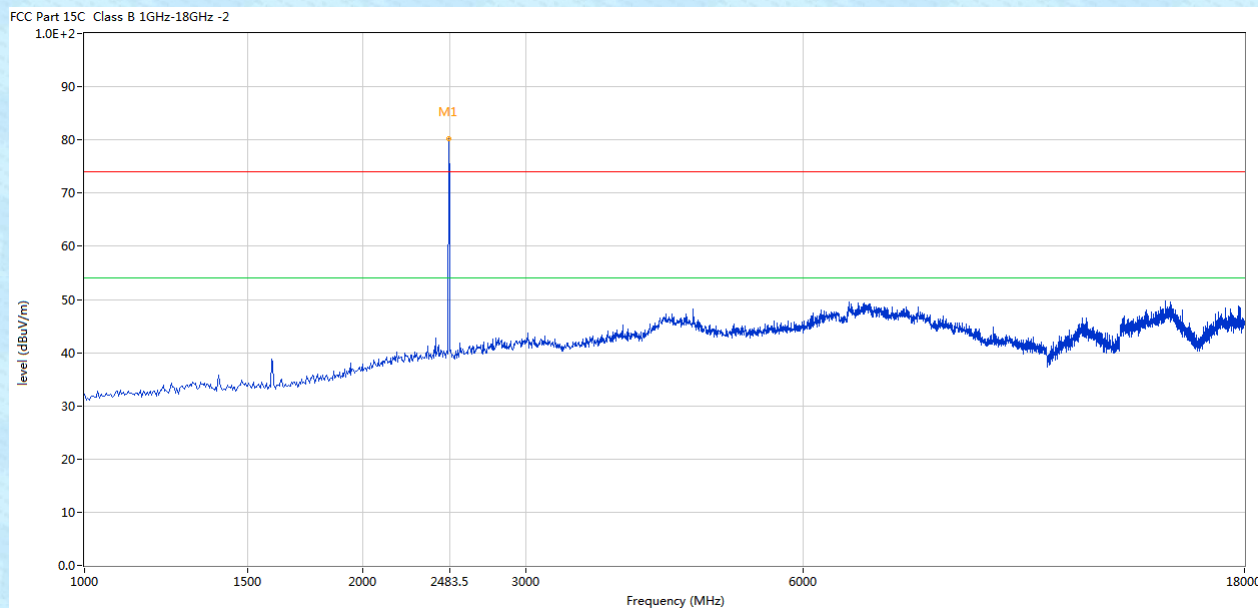
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2441	80.14	-3.57	114.0	-33.86	Peak	313.00	100	Vertical	Pass

Test channel:	Highest	Polarization:	Horizontal
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No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2480	90.50	-3.57	114.0	-23.50	Peak	157.00	100	Horizontal	Pass

Test channel:	Highest	Polarization:	Vertical
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No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2480	80.27	-3.57	114.0	-33.73	Peak	275.00	100	Vertical	Pass

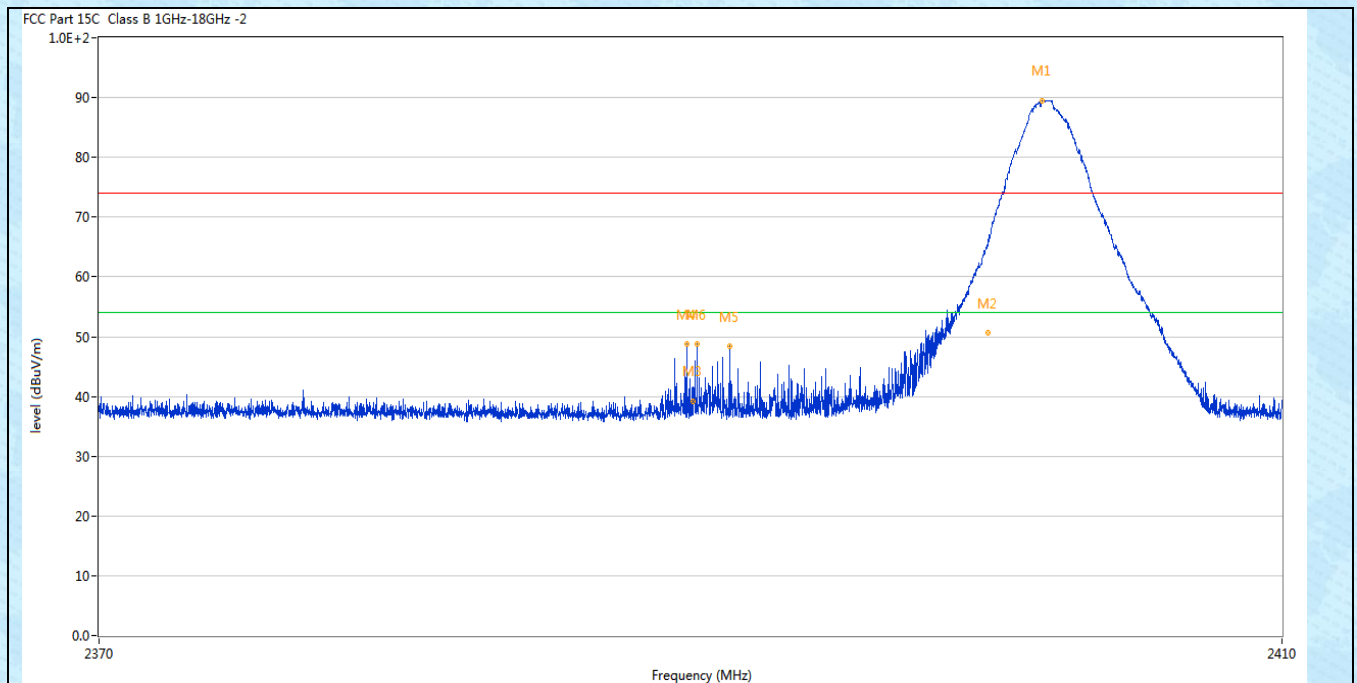
Remarks:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. For above 18GHz, no emission found.
4. If the average limit is met when using a Peak detector, the EUT shall be deemed to meet both peak and average limits. And measurement with the average detector is unnecessary.
5. New battery was used during test.

7.3.3 Bandedge emissions

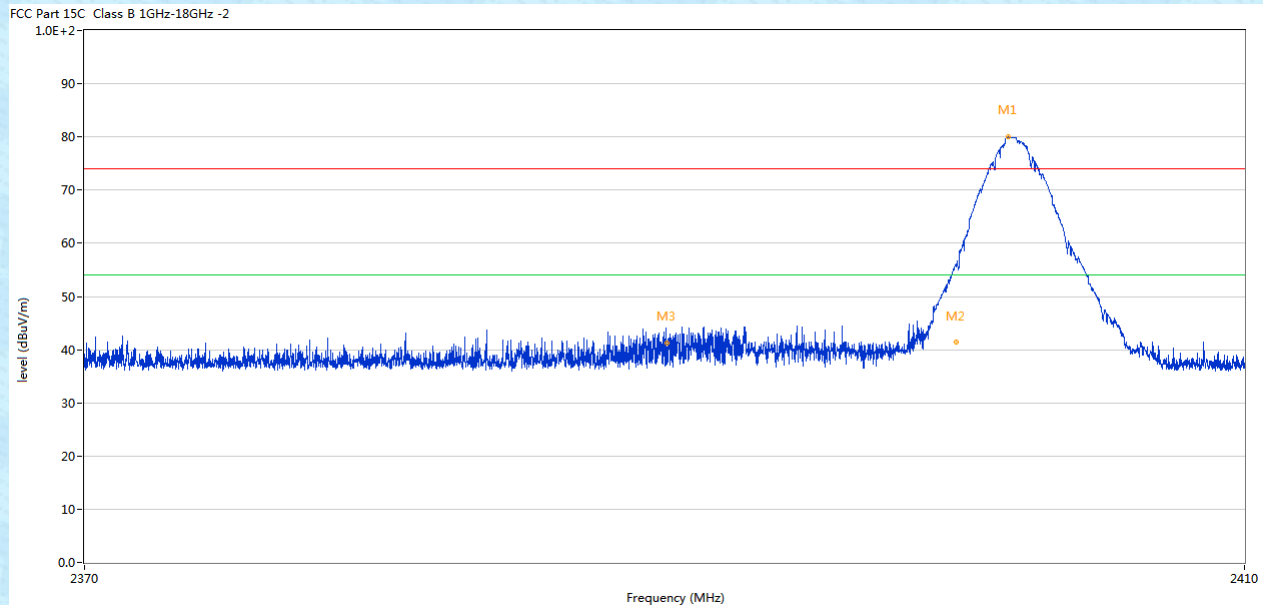
All of the restriction bands were tested, and only the data of worst case was exhibited.

Test channel:	Lowest	Polarization:	Horizontal
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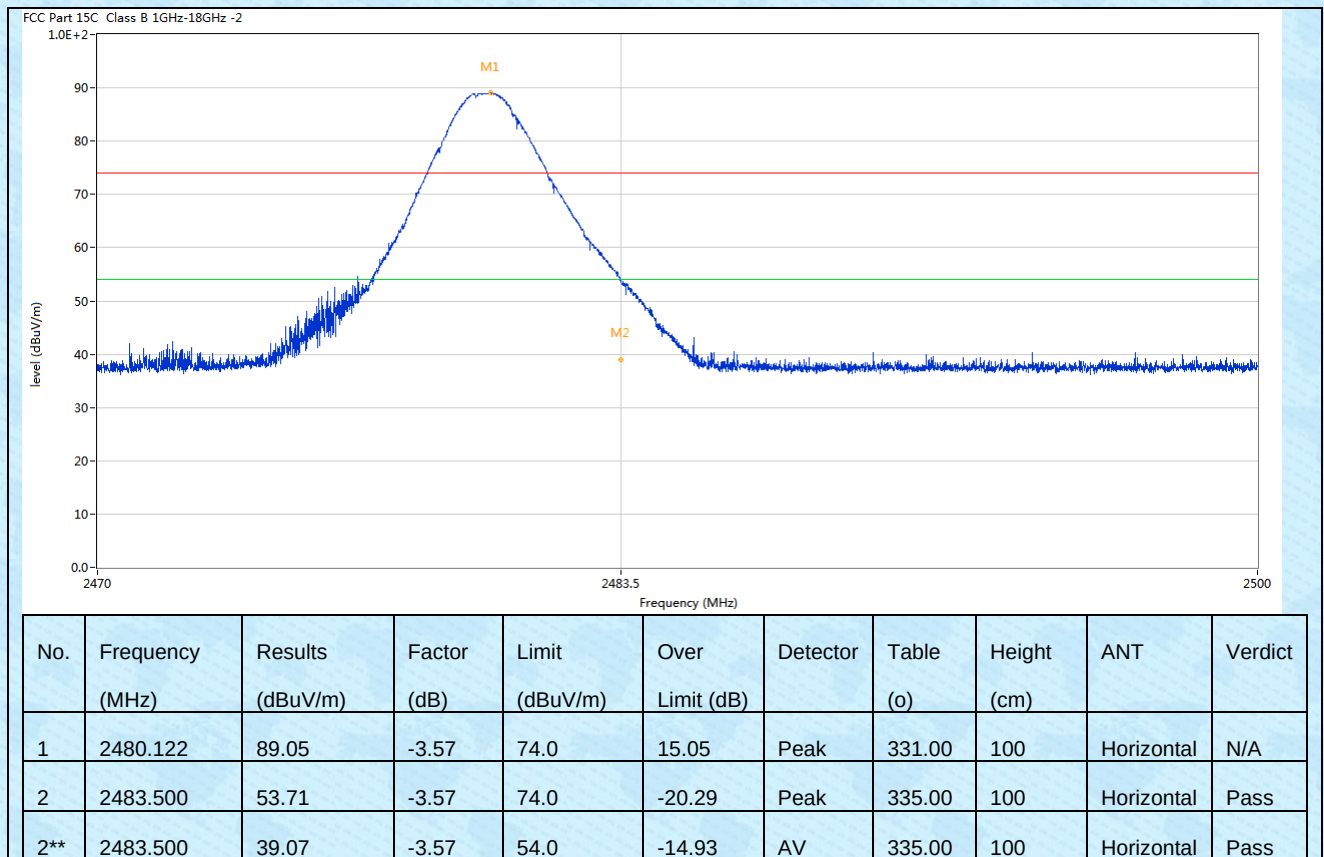
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2401.842	89.49	-3.57	74.0	15.49	Peak	327.00	100	Horizontal	N/A
2	2400.000	65.90	-3.57	74.0	-8.10	Peak	360.00	100	Horizontal	Pass
2**	2400.000	50.61	-3.57	54.0	-3.39	AV	360.00	100	Horizontal	Pass
3	2390.000	39.22	-3.53	74.0	-34.78	Peak	97.00	100	Horizontal	Pass
4	2389.785	48.87	-3.53	74.0	-25.13	Peak	18.00	100	Horizontal	Pass
5	2391.255	48.37	-3.54	74.0	-25.63	Peak	34.00	100	Horizontal	Pass
6	2390.145	48.76	-3.53	74.0	-25.24	Peak	22.00	100	Horizontal	Pass

Test channel:	Lowest	Polarization:	Vertical
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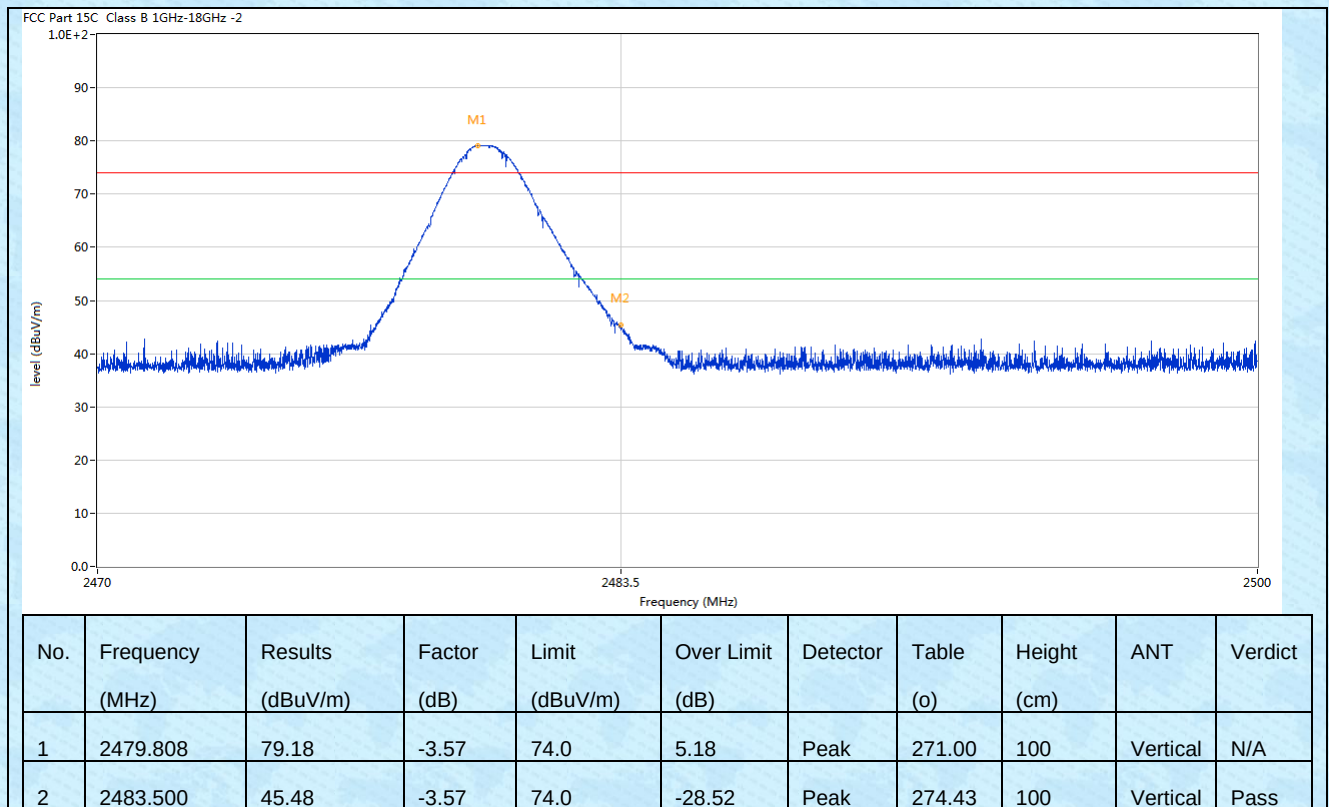


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2401.812	79.96	-3.57	74.0	5.96	Peak	311.00	100	Vertical	N/A
2	2400.000	55.98	-3.57	74.0	-18.02	Peak	315.00	100	Vertical	Pass
2**	2400.000	41.34	-3.57	54.0	-12.66	AV	315.00	100	Vertical	Pass
3	2390.000	41.24	-3.53	74.0	-32.76	Peak	327.50	100	Vertical	Pass

Test channel:	Highest	Polarization:	Horizontal
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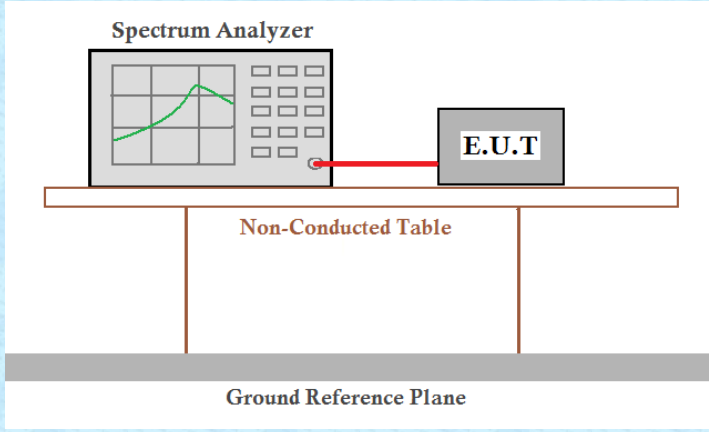
Test channel:	Highest	Polarization:	Vertical
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Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. For above 18GHz, no emission found

7.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part15 C Section 15.249/15.215
Test Method:	ANSI C63.10:2013
Limit:	Operation Frequency range 2400MHz~2483.5MHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data

Test channel	20dB bandwidth (MHz)	Result
Lowest	0.936	Pass
Middle	0.930	Pass
Highest	0.894	Pass