



中国认可
国际互认
检测
TESTING
CNAS L6791

TEST REPORT

Applicant: GN Hearing A/S
Address: Lautrupbjerg 7 ,2750 Ballerup Denmark
Equipment Type: Touch Controller
Model Name: VTD050
Brand Name: Jabra
FCC ID: BCE-VTD050
ISED Number: 2386C-VTD050
Test Standard: 47 CFR Part 15 Subpart E
RSS-Gen Issue 5
RSS-247 Issue 3
(refer to section 3.1)
Sample Arrival Date: Oct. 23, 2024
Test Date: Oct. 25, 2024 - Nov. 11, 2024
Date of Issue: Jul. 22, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Julie Zhu

Checked by: Ye Hongji

Approved by: Sunny Zou
(Technical Director)

Julie Zhu

Ye Hongji

Sunny Zou

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Feb. 17, 2025</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Jul. 22, 2025</u>	<u>Add the Note ⁴ in ANNEX A.1</u>
		<u>Add the Note ² in ANNEX A.4</u>
		<u>Modify the UNII-3 PSD ISED limits in ANNEX A.4</u>
		<u>Modify the Product Type in Section 2.4</u>
		<u>The original report is invalid.</u>

TABLE OF CONTENTS

1	GENERAL INFORMATION	4
1.1	Test Laboratory	4
1.2	Test Location	4
2	PRODUCT INFORMATION	5
2.1	Applicant Information	5
2.2	Manufacturer Information	5
2.3	General Description for Equipment under Test (EUT)	5
2.4	Technical Information	6
2.5	Channel List	7
3	SUMMARY OF TEST RESULTS	11
3.1	Test Standards	11
3.2	Test Verdict	11
4	GENERAL TEST CONFIGURATIONS	12
4.1	Test Environments	12
4.2	Test Equipment List	12
4.3	Test Software List	12
4.4	Measurement Uncertainty	13
4.5	Description of Test Setup	13
5	TEST ITEMS	16
5.1	RF Output Power	16
5.2	Emission Bandwidth and 6 dB Bandwidth	18
5.3	Power Spectral density (PSD)	19

5.4	Conducted Emission.....	20
5.5	Radiated Spurious Emissions and Band Edge (Restricted-band).....	21
ANNEX A	TEST RESULT	26
A.1	RF Output Power	26
A.2	Emission Bandwidth & 99% Bandwidth	31
A.3	6 dB Bandwidth	33
A.4	Power Spectral Density	34
A.5	Conducted Emissions	38
A.6	Radiated Spurious Emissions and Band Edge (Restricted-band).....	40
A.7	Band Edge (Restricted-band)	74
ANNEX B	TEST SETUP PHOTOS	105
ANNEX C	EUT EXTERNAL PHOTOS.....	105
ANNEX D	EUT INTERNAL PHOTOS.....	105

1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☒ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	GN Hearing A/S
Address	Lautrupbjerg 7 ,2750 Ballerup Denmark

2.2 Manufacturer Information

Manufacturer	N/A
Address	N/A

2.3 General Description for Equipment under Test (EUT)

EUT Name	Touch Controller
Model Name Under Test	VTD050
Series Model Name	N/A
Description of Model name differentiation	N/A
Serial Number	N/A
Hardware Version	LTAM781
Software Version	panacastcontroller-user-6.51.0-35
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n (HT20/40) 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80)
-----------------------------------	---

The requirement for the following technical information of the EUT was tested in this report:

Frequency Range	U-NII-1: 5150 MHz to 5250 MHz, U-NII-2A: 5250 MHz to 5350 MHz, U-NII-2C: 5470 MHz to 5725 MHz, U-NII-3: 5725 MHz to 5850 MHz
Product Type	☒ Mobile ☐ Portable ☐ Fix Location Indoor for IC standard
Modulation technology	OFDM
Modulation Type	256QAM, 64QAM, 16QAM, BPSK, QPSK
Transfer Rate (Mbps) (Single RF path)	802.11a: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6 Mbps 802.11n: up to 150 Mbps 802.11ac: up to VHT-MCS9
Channel Bandwidth	802.11a: 20 MHz 802.11n: 20 MHz, 40 MHz 802.11ac: 20 MHz, 40 MHz, 80 MHz
Maximum Output Power	U-NII-1: 22.52 mW U-NII-2A: 22.52 mW U-NII-2C: 26.28 mW U-NII-3: 28.16 mW
Antenna System (eg., MIMO, Smart Antenna)	N/A
Categorization as Correlated or Completely Uncorrelated	N/A
Antenna Type	Dipole Antenna
Antenna Gain	U-NII-1: 5150 MHz to 5250 MHz:3.5 dBi U-NII-2A: 5250 MHz to 5350 MHz: 3.5 dBi U-NII-2C: 5470 MHz to 5725 MHz: 2.0 dBi U-NII-3: 5725 MHz to 5850 MHz: 2.5 dBi
About the Product	The equipment is Touch Controller, intended for used with information technology equipment.

2.5 Channel List

20 MHz		40 MHz		80 MHz	
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	58	5290
44	5220	54	5270	106	5530
48	5240	62	5310	122	5610
52	5260	102	5510	155	5775
56	5280	110	5550		
60	5300	118	5590		
64	5320	126	5630		
100	5500	134	5670		
104	5520	151	5755		
108	5540	159	5795		
112	5560				
116	5580				
120	5600				
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
149	5745				
153	5765				
157	5785				
161	5805				
165	5825				

Note: This report equipment will not transmit in the 5600-5650 MHz frequency band when used in Canada. This restriction is to protect weather radars operating in this frequency band.

The Lowest frequency, the middle frequency and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n(HT20)/ac(VHT20)

U-NII-1 (5150 - 5250 MHz)			U-NII-2A (5250 - 5350 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
36	Low	5180	52	Low	5260
44	Mid	5220	60	Mid	5300
48	High	5240	64	High	5320

U-NII-2C (5470 - 5725 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
100	Low	5500	149	Low	5745
116	Mid	5580	157	Mid	5785
140	High	5700	165	High	5825

For 802.11n(HT40)/ac(VHT40)

U-NII-1 (5150 - 5250 MHz)			U-NII-2A (5250 - 5350 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
38	Low	5190	54	Low	5270
46	High	5230	62	High	5310

U-NII-2C (5470 - 5725 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
102	Low	5510	151	Low	5755
118	Mid	5590	159	High	5795
134	High	5670			

For 802.11ac(VHT80)

U-NII-1 (5150 - 5250 MHz)			U-NII-2A (5250 - 5350 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
42	Mid	5210	58	Mid	5290

U-NII-2C (5470 - 5725 MHz)			U-NII-3 (5725 - 5850 MHz)		
Channel Number	Channel	Frequency (MHz)	Channel Number	Channel	Frequency (MHz)
106	Low	5530	155	Mid	5775
122	High	5610			

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Modulation Type	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
				Channel	Channel	Channel	Channel
RF Output Power	11a	6	BPSK	48/44/36	64/60/52	140/116/100	165/157/149
	11n(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
	11n(40 MHz)	13.5		46/38	62/54	134/118/102	159/151
	11ac(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
	11ac(40 MHz)	13.5		46/38	62/54	134/118/102	159/151
	11ac(80 MHz)	29.3		42	58	122/106	155
Emission Bandwidth & 99% Occupied Bandwidth	11a	6	BPSK	48/44/36	64/60/52	140/116/100	165/157/149
	11n(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
	11n(40 MHz)	13.5		46/38	62/54	134/118/102	159/151
	11ac(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
	11ac(40 MHz)	13.5		46/38	62/54	134/118/102	159/151
	11ac(80 MHz)	29.3		42	58	122/106	155
6 dB bandwidth	11a	6	BPSK	N/A	N/A	N/A	165/157/149
	11n(20 MHz)	6.5		N/A	N/A	N/A	165/157/149
	11n(40 MHz)	13.5		N/A	N/A	N/A	159/151
	11ac(20 MHz)	6.5		N/A	N/A	N/A	165/157/149
	11ac(40 MHz)	13.5		N/A	N/A	N/A	159/151
	11ac(80 MHz)	29.3		N/A	N/A	N/A	155
Power Spectral Density	11a	6	BPSK	48/44/36	64/60/52	140/116/100	165/157/149
	11n(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
	11n(40 MHz)	13.5		46/38	62/54	134/118/102	159/151
	11ac(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
	11ac(40 MHz)	13.5		46/38	62/54	134/118/102	159/151
	11ac(80 MHz)	29.3		42	58	122/106	155
Radiated Spurious Emissions	11a	6	BPSK	48/44/36	64/60/52	140/116/100	165/157/149
	11n(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
	11n(40 MHz)	13.5		46/38	62/54	134/118/102	159/151
	11ac(20 MHz)	6.5		48/44/36	64/60/52	140/116/100	165/157/149
	11ac(40 MHz)	13.5		46/38	62/54	134/118/102	159/151
	11ac(80 MHz)	29.3		42	58	122/106	155
Band Edge (Restricted-band)	11a	6	BPSK	48/36	64/52	140/100	165/149
	11n(20 MHz)	6.5		48/36	64/52	140/100	165/149
	11n(40 MHz)	13.5		46/38	62/54	134/102	159/151
	11ac(20 MHz)	6.5		48/36	64/52	140/100	165/149
	11ac(40 MHz)	13.5		46/38	62/54	134/102	159/151
	11ac(80 MHz)	29.3		42	58	122/106	155

Test Items	Mode	Data Rate	Modulation Type	U-NII-1	U-NII-2A	U-NII-2C	U-NII-3
				Channel	Channel	Channel	Channel
RF Output Power	11a	6	BPSK	48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11n(20 MHz)	6.5		48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11n(40 MHz)	13.5		46/38	62/54	142/134/118/102	159/151/142
	11ac(20 MHz)	6.5		48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11ac(40 MHz)	13.5		46/38	62/54	142/134/118/102	159/151/142
	11ac(80 MHz)	29.3		42	58	138/122/106	155/138
Emission Bandwidth & 99% Occupied Bandwidth	11a	6	BPSK	48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11n(20 MHz)	6.5		48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11n(40 MHz)	13.5		46/38	62/54	142/134/118/102	159/151/142
	11ac(20 MHz)	6.5		48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11ac(40 MHz)	13.5		46/38	62/54	142/134/118/102	159/151/142
	11ac(80 MHz)	29.3		42	58	138/122/106	155/138
6 dB bandwidth	11a	6	BPSK	N/A	N/A	N/A	165/157/149/144
	11n(20 MHz)	6.5		N/A	N/A	N/A	165/157/149/144
	11n(40 MHz)	13.5		N/A	N/A	N/A	159/151/142
	11ac(20 MHz)	6.5		N/A	N/A	N/A	165/157/149/144
	11ac(40 MHz)	13.5		N/A	N/A	N/A	159/151/142
	11ac(80 MHz)	29.3		N/A	N/A	N/A	155/138
Power Spectral Density	11a	6	BPSK	48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11n(20 MHz)	6.5		48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11n(40 MHz)	13.5		46/38	62/54	142/134/118/102	159/151/142
	11ac(20 MHz)	6.5		48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11ac(40 MHz)	13.5		46/38	62/54	142/134/118/102	159/151/142
	11ac(80 MHz)	29.3		42	58	138/122/106	155/138
Radiated Spurious Emissions	11a	6	BPSK	48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11n(20 MHz)	6.5		48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11n(40 MHz)	13.5		46/38	62/54	142/134/118/102	159/151/142
	11ac(20 MHz)	6.5		48/44/36	64/60/52	144/140/116/100	165/157/149/144
	11ac(40 MHz)	13.5		46/38	62/54	142/134/118/102	159/151/142
	11ac(80 MHz)	29.3		42	58	138/122/106	155/138
Band Edge (Restricted-band)	11a	6	BPSK	48/36	64/52	144/140/100	165/149/144
	11n(20 MHz)	6.5		48/36	64/52	144/140/100	165/149/144
	11n(40 MHz)	13.5		46/38	62/54	142/134/102	159/151/142
	11ac(20 MHz)	6.5		48/36	64/52	144/140/100	165/149/144
	11ac(40 MHz)	13.5		46/38	62/54	142/134/102	159/151/142
	11ac(80 MHz)	29.3		42	58	138/122/106	155/138

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart E	Unlicensed National Information Infrastructure Devices
2	RSS-Gen Issue 5	General Requirements for Compliance of Radio Apparatus
3	RSS-247 Issue 3	Digital Transmission Systems (DTSs), Frequency Hopping Systems(FHSs) and Licence-Exemp Local Area Network (LE-LAN) Devices
4	KDB Publication 789033 D02v02r01☆	Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E
5	ANSI C63.10-2013☆	American National Standard for Testing Unlicensed Wireless Devices

3.2 Test Verdict

No.	Description	FCC Part No.	RSS Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	RSS-247, 6.2	--	Pass ^{Note1}
2	RF Output Power	15.407(a)	RSS-247, 6.2	ANNEX A.1	Pass
3	Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	RSS-247, 6.2	ANNEX A.2	Pass
4	6 dB bandwidth	15.407(e)	RSS-247, 6.2	ANNEX A.3	Pass
5	Power Spectral Density	15.407(a)	RSS-247, 6.2	ANNEX A.4	Pass
6	Conducted Emission	15.207	RSS-GEN, 8.8	ANNEX A.5	Pass
7	Radiated Spurious Emissions and Band Edge (Restricted-band)	15.407(b)	RSS-247, 6.2	ANNEX A.6	Pass
8	Receiver Spurious Emissions	--	RSS-Gen, 7.1.2	--	N/A ^{Note2}

Note ¹: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

Note ²: Only radio communication receivers operating in stand-alone mode within the U-NII-30-960 MHz, as well as scanner receivers, are subject to Industry Canada requirements, so this test is not applicable.

Note ³: Under all normal operating conditions specified in the user manual, frequency stability can keep radiation within the operating frequency band.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	53% to 59%	
Atmospheric Pressure	101 kPa	
Temperature	NT (Normal Temperature)	+22.3℃ to +23.9℃
Working Voltage of the EUT	NV (Normal Voltage)	48 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	KEYSIGHT	N9020A	MY50330200	2024.05.08	2025.05.07
Spectrum Analyzer	KEYSIGHT	N9020A	MY50531259	2024.08.01	2025.07.31
Spectrum Analyzer	KEYSIGHT	N9010B	MY60240977	2024.02.22	2025.02.21
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	2460	2024.05.16	2027.05.15
Test Antenna-Horn	A-INFO	LB-180400KF	J211060273	2024.06.15	2027.06.14
Anechoic Chamber	RAINFORD	9m*6m*6m	140	2024.07.28	2026.07.27
Amplifier	COM-MV	LSCX_LNA1-12G-01	7210214	2024.08.01	2025.07.31
Amplifier	COM-MV	XKu_LNA7-18G-01	7210209	2024.08.01	2025.07.31
Amplifier	COM-MV	KA LNA18 40G-01	18050001	2023.12.06	2024.12.05
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2024.08.01	2025.07.31
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.04.15	2027.04.14
Amplifier	COM-MV	ZT30-1000M	B2018054558	2023.12.05	2024.12.04
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	130	2024.07.13	2027.07.12
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2024.08.01	2025.07.31
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2024.07.06	2026.07.05
Amplifier	COM-MV	ZT30-1000M	B2017119082	2023.12.05	2024.12.04
Anechoic Chamber	RAINFORD	9m*6m*6m	101	2023.03.04	2026.03.03
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2024.08.01	2025.07.31
LISN	SCHWARZBECK	NSLK 8127	8127-687	2024.05.08	2025.05.07
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	112	2022.02.19	2025.02.18

4.3 Test Software List

Description	Manufacturer	Software Version	Serial No.	Applicable test Setup
BL410R	BALUN	V2.1.1.488	N/A	The section 4.5.1
BL410E	BALUN	V22.930	N/A	The section 4.5.2&4.5.3&4.5.4&4.5.5

4.4 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Parameters	Uncertainty
Occupied Channel Bandwidth	2.8%
RF output power, conducted	1.28 dB
Power Spectral Density, conducted	1.30 dB
Unwanted Emissions, conducted	1.84 dB
All emissions, radiated	5.36 dB
Temperature	0.8°C
Humidity	4%

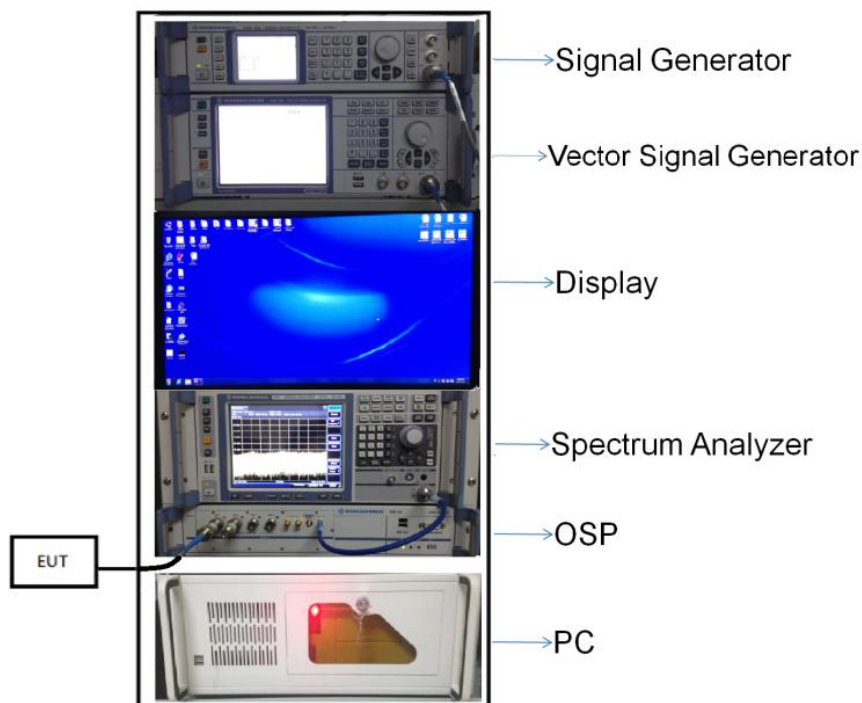
4.5 Description of Test Setup

4.5.1 For Antenna Port Test

Conducted value (dBm) = Measurement value (dBm) + cable loss (dB)

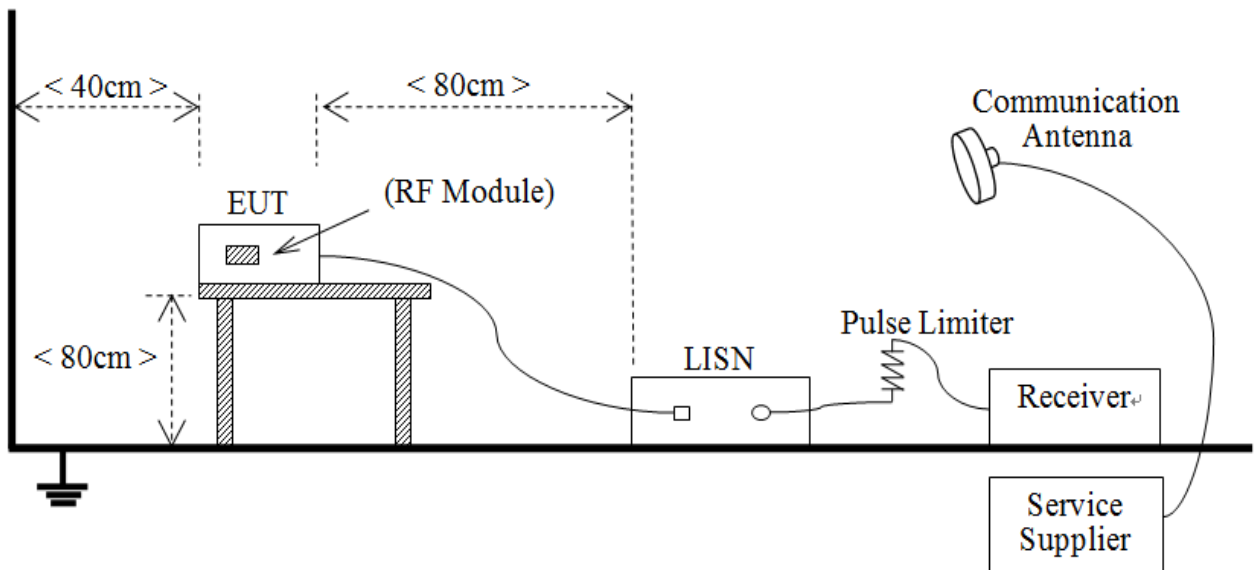
For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:

Conducted value (dBm) = 10 dBm + 0.5 dB = 10.5 dBm



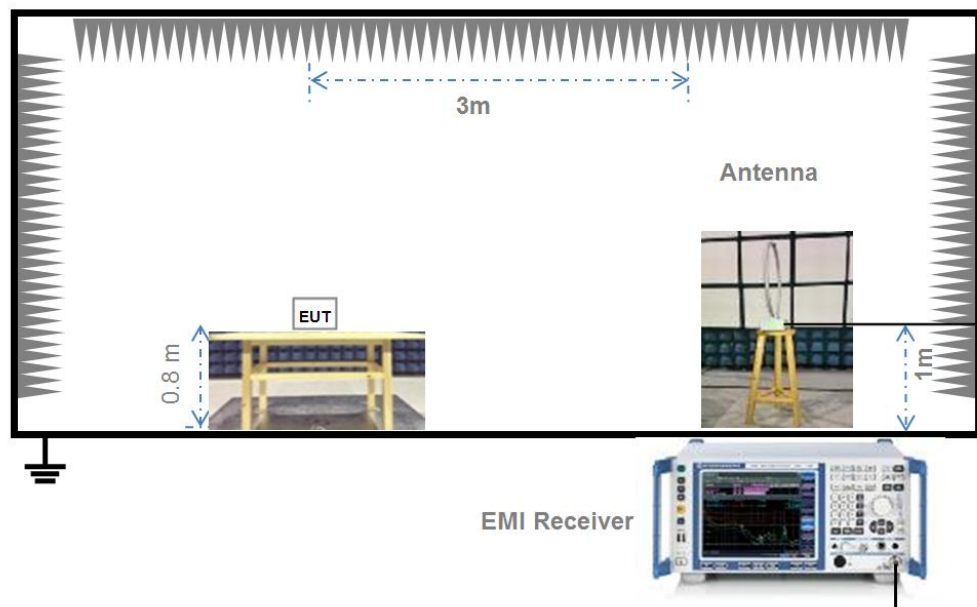
(Diagram 1)

4.5.2 For AC Power Supply Port Test



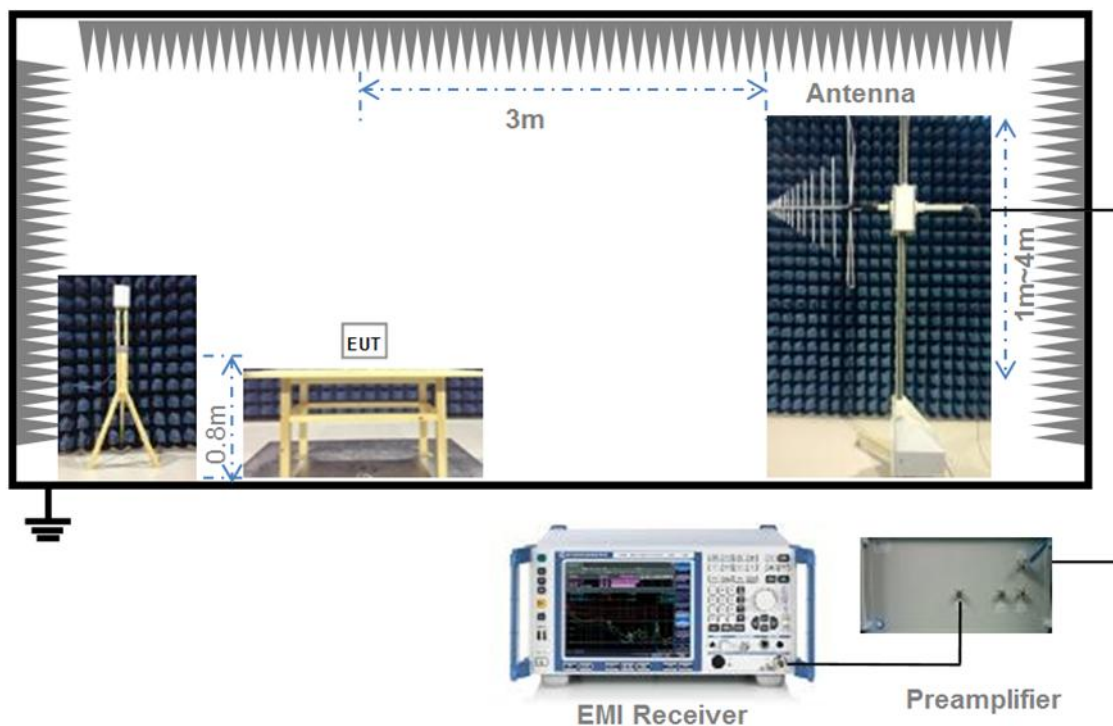
(Diagram 2)

4.5.3 For Radiated Test (Below 30 MHz)



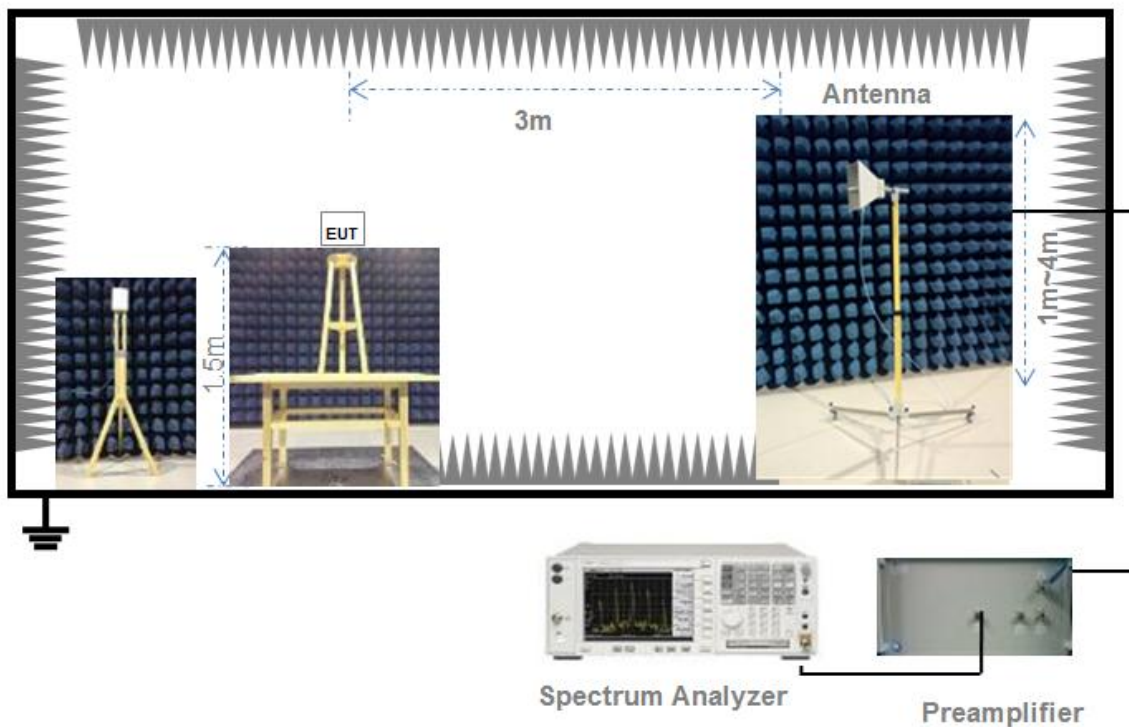
(Diagram 3)

4.5.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.5.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

5 TEST ITEMS

5.1 RF Output Power

5.1.1 Test Limit

FCC §15.407(a)

The maximum conducted output power should not exceed:

Frequency Band (MHz)	Limit
5150-5250	250 mW
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W
Note: Where “B” is the 26 dB emissions bandwidth in MHz.	

RSS-247, 6.2

The maximum conducted output power shall not exceed:

Frequency Band (MHz)	Limit
5150-5250	N/A
5250-5350	250 mW or 11 dBm + 10log B, whichever is less.
5470-5725	250 mW or 11 dBm + 10log B, whichever is less.
5725-5850	1 W
Note: Where “B” is the 99% emissions bandwidth in MHz.	

The maximum e.i.r.p. shall not exceed:

Frequency Band (MHz)	Limit
5150-5250	200 mW or 10 dBm + 10log B, whichever is less.
5250-5350	1W or 17 dBm + 10log B, whichever is less.
5470-5725	1W or 17 dBm + 10log B, whichever is less.
5725-5850	N/A
Note1: Where “B” is the 99% emissions bandwidth in MHz.	
Note2: EIRP= maximum conducted output power+ Antenna Gain.	

5.1.2 Test Setup

The section 4.5.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.3 Test Procedure

Maximum conducted (average) output power

a) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.

- 1) The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by

at least a factor of five.

b) If the transmitter does not transmit continuously, measure the duty cycle (x) of the transmitter output signal.

c) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.

d) Adjust the measurement in dBm by adding $10 \log (1/x)$ where x is the duty cycle.

Measurements of duty cycle

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.

Set the center frequency of the instrument to the center frequency of the transmission.

Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value.

Set $VBW \geq RBW$. Set detector = peak or average.

The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

The E.I.R.P used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

5.1.4 Test Result

Please refer to ANNEX A.1.

5.2 Emission Bandwidth and 6 dB Bandwidth

5.2.1 Limit

FCC §15.407(a), RSS-247, 6.2

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

5.2.2 Test Setup

The test setup photo please refer to 4.5.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Emission bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set VBW $\geq 3 \times$ RBW,
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

Occupied Bandwidth

1. Set Span = 1.5 times to 5.0 times the OBW
2. Set RBW = 1% to 5% of the OBW.
3. Set VBW $\geq 3 \times$ RBW, Detector = Peak.
4. Trace mode = Max hold.
5. Use the 99% power bandwidth function of the instrument.

6 dB bandwidth

1. Set RBW = 100 kHz, VBW = 300 kHz.
2. Detector = Peak. Trace mode = Max hold.
3. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.2.4 Test Result

Please refer to ANNEX A.2 and ANNEX A.3.

5.3 Power Spectral density (PSD)

5.3.1 Limit

FCC §15.407(a)

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	11 dBm/MHz
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

RSS-247, 6.2

The maximum power spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	N/A
5250-5350	11 dBm/MHz
5470-5725	11 dBm/MHz
5725-5850	30 dBm/500kHz

The e.i.r.p. spectral density should not exceed:

Frequency Band (MHz)	Limit
5150-5250	10 dBm/MHz
5250-5350	N/A
5470-5725	N/A
5725-5850	N/A
e.i.r.p. spectral density= maximum power spectral density+ Antenna Gain.	

5.3.2 Test Setup

The section 4.5.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth.

1. Set RBW = 510 kHz/1 MHz, VBW $\geq 3 \times$ RBW, Sweep time = Auto, Detector = RMS.
2. Allow the sweeps to continue until the trace stabilizes.
3. Use the peak marker function to determine the maximum amplitude level.
4. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.

5.3.4 Test Result

Please refer to ANNEX A.4.

5.4 Conducted Emission

5.4.1 Limit

FCC §15.207, RSS-GEN, 8.8

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the U-NII-150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.4.2 Test Setup

The section 4.5.2 (Diagram 2) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

5.4.4 Test Result

Please refer to ANNEX A.5.

5.5 Radiated Spurious Emissions and Band Edge (Restricted-band)

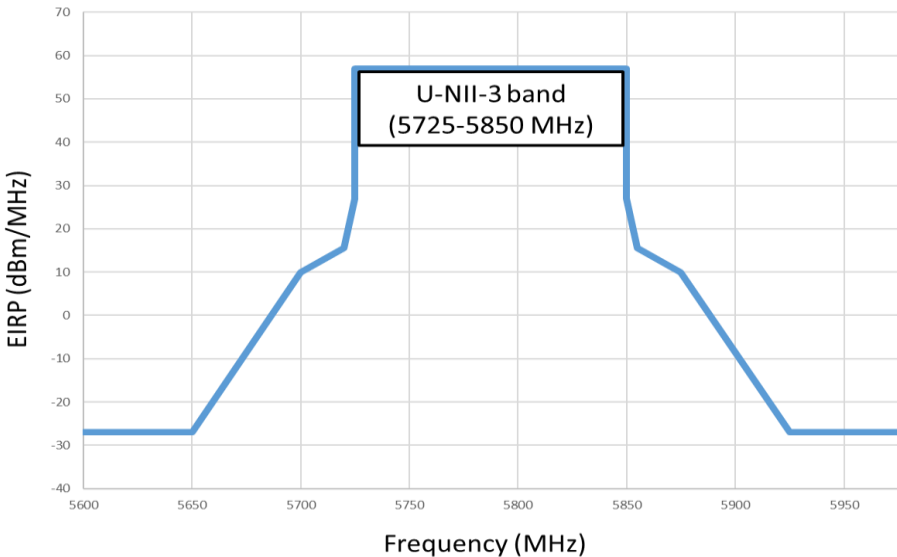
5.5.1 Limit

FCC §15.209 & 15.407(b), RSS-247, 6.2

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note ¹: The Limit for radiated test was performed according to FCC Part 15C

Note ²: The tighter limit applies at the band edge.

Un-restricted band emissions	
Out Operating Band (MHz)	Limit
5150 - 5250	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5250 - 5350	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5470 - 5725	e.i.r.p. -27 dBm (68.2 dBuV/m@3m)
5725 - 5850	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. 

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength.

5.5.2 Test Setup

The section 4.5.3-4.5.5 (Diagram 3 - Diagram 5) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).
- c) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
- d) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20\log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

- e) Compare the resultant electric field strength level to the applicable limit.
- f) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable

emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

- a) RBW = as specified in Table 1.
- b) VBW $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Sweep time = auto.
- e) Trace mode = max hold.
- f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

- a) The EUT shall be configured to operate at the maximum achievable duty cycle.
- b) Measure the duty cycle, x , of the transmitter output signal as described in section 6.0.
- c) RBW = 1 MHz (unless otherwise specified).
- d) VBW $\geq 3 \times$ RBW.
- e) Detector = RMS, if $\text{span}/(\# \text{ of points in sweep}) \leq (\text{RBW}/2)$. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- f) Averaging type = power (i.e., RMS).
 - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
 - 2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
- g) Sweep time = auto.

h) Perform a trace average of at least 100 traces.

i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:

1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is $10 \log(1/x)$, where x is the duty cycle.

2) If linear voltage averaging mode was used in step f), then the applicable correction factor is $20 \log(1/x)$, where x is the duty cycle.

3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.5.4 Test Result

Please refer to ANNEX A.6.

ANNEX A TEST RESULT

A.1 RF Output Power

Note ¹: For FCC standard, if transmitting antennas of directional gain greater than 6 dBi are used, all band maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note ²: For IC standard, the U-NII-3 (5725 - 5850 MHz) maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note ³: All the configurations were tested, but only the worst data was shown in this report.

Note ⁴: The RF Output Power has considered the Duty Factor.

Duty Cycle

Test Mode	On Time (ms)	On+Off time (ms)	Duty Cycle	Duty Factor
11a	1.39	1.41	98.93%	0.05
11n (HT20)	1.30	1.32	98.78%	0.05
11ac (VHT20)	0.65	0.66	97.44%	0.11
11n (HT40)	1.31	1.33	98.72%	0.06
11ac (VHT40)	0.65	0.67	97.45%	0.11
11ac (VHT80)	0.32	0.34	94.57%	0.24

Test Data

Conducted Power

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	12.40	17.36	250	Pass
11a	CH44	13.45	22.11	250	Pass
11a	CH48	13.53	22.52	250	Pass
11n (HT20)	CH36	10.48	11.18	250	Pass
11n (HT20)	CH44	10.53	11.31	250	Pass
11n (HT20)	CH48	10.64	11.60	250	Pass
11n (HT40)	CH38	7.59	5.74	250	Pass
11n (HT40)	CH46	11.57	14.36	250	Pass
11ac (VHT20)	CH36	11.56	14.31	250	Pass
11ac (VHT20)	CH44	12.62	18.26	250	Pass
11ac (VHT20)	CH48	12.70	18.60	250	Pass
11ac (VHT40)	CH38	7.60	5.76	250	Pass
11ac (VHT40)	CH46	11.58	14.39	250	Pass
11ac (VHT80)	CH42	6.41	4.38	250	Pass

U-NII-2A (5250 - 5350 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH52	13.53	22.52	249	Pass
11a	CH60	13.53	22.52	250	Pass
11a	CH64	12.72	18.69	250	Pass
11n (HT20)	CH52	10.62	11.54	250	Pass
11n (HT20)	CH60	10.64	11.60	250	Pass
11n (HT20)	CH64	10.51	11.25	250	Pass
11n (HT40)	CH54	11.56	14.33	250	Pass
11n (HT40)	CH62	8.97	7.89	250	Pass
11ac (VHT20)	CH52	12.70	18.60	250	Pass
11ac (VHT20)	CH60	12.72	18.69	250	Pass
11ac (VHT20)	CH64	12.57	18.06	250	Pass
11ac (VHT40)	CH54	11.57	5.76	250	Pass
11ac (VHT40)	CH62	8.98	14.39	250	Pass
11ac (VHT80)	CH58	7.48	5.60	250	Pass

U-NII-2C (5470 - 5725 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH100	8.39	6.90	249	Pass
11a	CH116	14.20	26.28	250	Pass
11a	CH140	10.70	11.74	250	Pass
11n (HT20)	CH100	9.56	9.04	250	Pass
11n (HT20)	CH116	11.42	13.88	250	Pass
11n (HT20)	CH140	10.91	12.34	250	Pass
11n (HT40)	CH102	9.62	9.17	250	Pass
11n (HT40)	CH118	12.30	16.99	250	Pass
11n (HT40)	CH134	12.04	16.00	250	Pass
11ac (VHT20)	CH100	9.58	9.07	250	Pass
11ac (VHT20)	CH116	13.43	22.00	250	Pass
11ac (VHT20)	CH140	10.92	12.35	250	Pass
11ac (VHT40)	CH102	9.63	9.19	250	Pass
11ac (VHT40)	CH118	12.30	16.99	250	Pass
11ac (VHT40)	CH134	12.04	16.00	250	Pass
11ac (VHT80)	CH106	9.41	8.73	250	Pass
11ac (VHT80)	CH122	9.90	9.78	250	Pass

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH149	13.85	24.25	1000	Pass
11a	CH157	14.15	25.98	1000	Pass
11a	CH165	14.50	28.16	1000	Pass
11n (HT20)	CH149	10.98	12.54	1000	Pass
11n (HT20)	CH157	11.29	13.47	1000	Pass
11n (HT20)	CH165	11.68	14.73	1000	Pass
11n (HT40)	CH151	12.02	15.93	1000	Pass
11n (HT40)	CH159	12.35	17.19	1000	Pass
11ac (VHT20)	CH149	13.00	19.93	1000	Pass
11ac (VHT20)	CH157	13.31	21.41	1000	Pass
11ac (VHT20)	CH165	13.68	23.31	1000	Pass
11ac (VHT40)	CH151	12.02	15.93	1000	Pass
11ac (VHT40)	CH159	12.37	17.27	1000	Pass
11ac (VHT80)	CH155	9.70	9.34	1000	Pass

E.I.R.P

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	E.I.R.P Limit (mW)	Verdict
11a	CH36	15.90	38.87	166	Pass
11a	CH44	16.95	49.51	166	Pass
11a	CH48	17.03	50.43	167	Pass
11n (HT20)	CH36	13.98	25.02	176	Pass
11n (HT20)	CH44	14.03	25.31	176	Pass
11n (HT20)	CH48	14.14	25.96	176	Pass
11n (HT40)	CH38	11.09	12.86	200	Pass
11n (HT40)	CH46	15.07	32.16	200	Pass
11ac (VHT20)	CH36	15.06	32.03	176	Pass
11ac (VHT20)	CH44	16.12	40.89	176	Pass
11ac (HVT20)	CH48	16.20	41.65	176	Pass
11ac (VHT40)	CH38	11.10	12.89	200	Pass
11ac (VHT40)	CH46	15.08	32.23	200	Pass
11ac (VHT80)	CH42	9.91	9.80	200	Pass

U-NII-2A (5250 - 5350 MHz)					
Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	E.I.R.P Limit (mW)	Verdict
11a	CH52	17.03	50.43	834	Pass
11a	CH60	17.03	50.43	834	Pass
11a	CH64	16.22	41.85	834	Pass
11n (HT20)	CH52	14.12	25.84	884	Pass
11n (HT20)	CH60	14.14	25.96	884	Pass
11n (HT20)	CH64	14.01	25.19	884	Pass
11n (HT40)	CH54	15.06	32.08	1000	Pass
11n (HT40)	CH62	12.47	17.67	1000	Pass
11ac (VHT20)	CH52	16.20	41.65	884	Pass
11ac (VHT20)	CH60	16.22	41.84	884	Pass
11ac (HVT20)	CH64	16.07	40.42	884	Pass
11ac (VHT40)	CH54	15.07	32.15	1000	Pass
11ac (VHT40)	CH62	12.48	17.71	1000	Pass
11ac (VHT80)	CH58	10.98	12.54	1000	Pass

U-NII-2C (5470 - 5725 MHz)					
Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	E.I.R.P Limit (mW)	Verdict
11a	CH100	10.39	10.93	834	Pass
11a	CH116	16.20	41.65	834	Pass
11a	CH140	12.70	18.61	834	Pass
11n (HT20)	CH100	11.56	14.33	884	Pass
11n (HT20)	CH116	13.42	21.99	884	Pass
11n (HT20)	CH140	12.91	19.56	885	Pass
11n (HT40)	CH102	11.62	14.53	1000	Pass
11n (HT40)	CH118	14.30	26.93	1000	Pass
11n (HT40)	CH134	14.04	25.37	1000	Pass
11ac (VHT20)	CH100	11.58	14.37	884	Pass
11ac (VHT20)	CH116	15.43	34.87	884	Pass
11ac (VHT20)	CH140	12.92	19.57	884	Pass
11ac (VHT40)	CH102	11.63	14.56	1000	Pass
11ac (VHT40)	CH118	14.30	26.93	1000	Pass
11ac (VHT40)	CH134	14.04	25.36	1000	Pass
11ac (VHT80)	CH106	11.41	13.84	1000	Pass
11ac (VHT80)	CH122	11.90	15.50	1000	Pass

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	E.I.R.P (dBm)	E.I.R.P (mW)	Verdict
11a	CH149	16.35	43.12	Pass
11a	CH157	16.65	46.20	Pass
11a	CH165	17.00	50.08	Pass
11n (HT20)	CH149	13.48	22.30	Pass
11n (HT20)	CH157	13.79	23.95	Pass
11n (HT20)	CH165	14.18	26.20	Pass
11n (HT40)	CH151	14.52	28.33	Pass
11n (HT40)	CH159	14.85	30.57	Pass
11ac (VHT20)	CH149	15.50	35.45	Pass
11ac (VHT20)	CH157	15.81	38.07	Pass
11ac (VHT20)	CH165	16.18	41.46	Pass
11ac (VHT40)	CH151	14.52	28.33	Pass
11ac (VHT40)	CH159	14.87	30.70	Pass
11ac (VHT80)	CH155	12.20	16.61	Pass

A.2 Emission Bandwidth & 99% Bandwidth

Note: Test plots please refer to the document “Annex No.:BL-SH24A0783-604 Data Part 1.pdf”.

Test Data

U-NII-1 (5150 - 5250 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH36	20.22	16.65
11a	CH44	19.96	16.64
11a	CH48	19.96	16.65
11n (HT20)	CH36	20.32	17.65
11n (HT20)	CH44	20.97	17.65
11n (HT20)	CH48	21.10	17.64
11n (HT40)	CH38	42.11	36.23
11n (HT40)	CH46	42.08	36.22
11ac (VHT20)	CH36	20.48	17.64
11ac (VHT20)	CH44	20.40	17.64
11ac (VHT20)	CH48	20.52	17.64
11ac (VHT40)	CH38	42.08	36.23
11ac (VHT40)	CH46	42.57	36.23
11ac (VHT80)	CH42	83.45	76.31

U-NII-2A (5250 - 5350 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH52	19.81	16.64
11a	CH60	20.39	16.64
11a	CH64	19.85	16.64
11n (HT20)	CH52	20.91	17.65
11n (HT20)	CH60	20.48	17.65
11n (HT20)	CH64	20.41	17.63
11n (HT40)	CH54	42.07	36.23
11n (HT40)	CH62	41.92	36.22
11ac (VHT20)	CH52	20.69	17.64
11ac (VHT20)	CH60	20.53	17.64
11ac (VHT20)	CH64	20.40	17.64
11ac (VHT40)	CH54	42.16	36.20
11ac (VHT40)	CH62	41.53	36.23
11ac (VHT80)	CH58	82.86	76.30

U-NII-2C (5470 - 5725 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH100	19.79	16.64
11a	CH116	19.96	16.63
11a	CH140	20.27	16.64
11n (HT20)	CH100	21.02	17.65
11n (HT20)	CH116	20.65	17.64
11n (HT20)	CH140	20.86	17.65
11n (HT40)	CH102	42.17	36.22
11n (HT40)	CH118	41.33	36.21
11n (HT40)	CH134	41.85	36.22
11ac (VHT20)	CH100	20.53	17.64
11ac (VHT20)	CH116	20.55	17.64
11ac (VHT20)	CH140	20.40	17.64
11ac (VHT40)	CH102	42.74	36.24
11ac (VHT40)	CH118	42.48	36.23
11ac (VHT40)	CH134	41.73	36.22
11ac (VHT80)	CH106	83.03	76.33
11ac (VHT80)	CH122	82.84	76.25

U-NII-3 (5725 - 5850 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH149	19.98	16.64
11a	CH157	20.22	16.65
11a	CH165	19.79	16.66
11n (HT20)	CH149	20.65	17.64
11n (HT20)	CH157	20.96	17.65
11n (HT20)	CH165	20.53	17.64
11n (HT40)	CH151	42.22	36.22
11n (HT40)	CH159	41.58	36.26
11ac (VHT20)	CH149	20.56	17.65
11ac (VHT20)	CH157	20.48	17.65
11ac (VHT20)	CH165	20.54	17.65
11ac (VHT40)	CH151	41.48	36.23
11ac (VHT40)	CH159	42.19	36.23
11ac (VHT80)	CH155	83.34	76.38

A.3 6 dB Bandwidth

Note: Test plots please refer to the document “Annex No.:BL-SH24A0783-604 Data Part 2.pdf”.

Test Data

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	6 dB Bandwidth (MHz)	Limit (kHz)	Verdict
11a	CH149	16.60	500.00	Pass
11a	CH157	16.60	500.00	Pass
11a	CH165	16.60	500.00	Pass
11n (HT20)	CH149	17.80	500.00	Pass
11n (HT20)	CH157	17.80	500.00	Pass
11n (HT20)	CH165	17.80	500.00	Pass
11n (HT40)	CH151	36.00	500.00	Pass
11n (HT40)	CH159	36.20	500.00	Pass
11ac (VHT20)	CH149	17.80	500.00	Pass
11ac (VHT20)	CH157	17.80	500.00	Pass
11ac (VHT20)	CH165	17.80	500.00	Pass
11ac (VHT40)	CH151	36.00	500.00	Pass
11ac (VHT40)	CH159	36.00	500.00	Pass
11ac (VHT80)	CH155	76.20	500.00	Pass

A.4 Power Spectral Density

Note¹: Test plots please refer to the document “Annex No.:BL-SH24A0783-604 Data Part 3.pdf”.

Note²: The PSD has considered the Duty Factor.

Test Data

U-NII-1 (5150 - 5250 MHz)				
Mode	Channel	PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
11a	CH36	1.23	11.00	Pass
11a	CH44	2.70	11.00	Pass
11a	CH48	2.85	11.00	Pass
11n (HT20)	CH36	-0.54	11.00	Pass
11n (HT20)	CH44	-0.41	11.00	Pass
11n (HT20)	CH48	-0.23	11.00	Pass
11n (HT40)	CH38	-6.47	11.00	Pass
11n (HT40)	CH46	-2.08	11.00	Pass
11ac (VHT20)	CH36	0.21	11.00	Pass
11ac (VHT20)	CH44	1.68	11.00	Pass
11ac (VHT20)	CH48	1.72	11.00	Pass
11ac (VHT40)	CH38	-6.49	11.00	Pass
11ac (VHT40)	CH46	-2.11	11.00	Pass
11ac (VHT80)	CH42	-11.06	11.00	Pass

U-NII-2A (5250 - 5350 MHz)				
Mode	Channel	PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
11a	CH52	2.89	11.00	Pass
11a	CH60	2.67	11.00	Pass
11a	CH64	1.57	11.00	Pass
11n (HT20)	CH52	-0.23	11.00	Pass
11n (HT20)	CH60	-0.46	11.00	Pass
11n (HT20)	CH64	-0.52	11.00	Pass
11n (HT40)	CH54	-2.07	11.00	Pass
11n (HT40)	CH62	-5.13	11.00	Pass
11ac (VHT20)	CH52	1.79	11.00	Pass
11ac (VHT20)	CH60	1.56	11.00	Pass
11ac (VHT20)	CH64	1.50	11.00	Pass
11ac (VHT40)	CH54	-2.00	11.00	Pass
11ac (VHT40)	CH62	-5.12	11.00	Pass
11ac (VHT80)	CH58	-10.27	11.00	Pass

U-NII-2C (5470 - 5725 MHz)				
Mode	Channel	PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
11a	CH100	-2.88	11.00	Pass
11a	CH116	1.77	11.00	Pass
11a	CH140	-0.47	11.00	Pass
11n (HT20)	CH100	-1.88	11.00	Pass
11n (HT20)	CH116	-1.30	11.00	Pass
11n (HT20)	CH140	-0.54	11.00	Pass
11n (HT40)	CH102	-4.58	11.00	Pass
11n (HT40)	CH118	-3.06	11.00	Pass
11n (HT40)	CH134	-3.20	11.00	Pass
11ac (VHT20)	CH100	-1.92	11.00	Pass
11ac (VHT20)	CH116	0.71	11.00	Pass
11ac (VHT20)	CH140	-0.53	11.00	Pass
11ac (VHT40)	CH102	-4.59	11.00	Pass
11ac (VHT40)	CH118	-3.06	11.00	Pass
11ac (VHT40)	CH134	-3.24	11.00	Pass
11ac (VHT80)	CH106	-8.30	11.00	Pass
11ac (VHT80)	CH122	-9.54	11.00	Pass

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Verdict
11a	CH149	-1.71	30.00	Pass
11a	CH157	-1.51	30.00	Pass
11a	CH165	-1.08	30.00	Pass
11n (HT20)	CH149	-4.76	30.00	Pass
11n (HT20)	CH157	-4.50	30.00	Pass
11n (HT20)	CH165	-4.11	30.00	Pass
11n (HT40)	CH151	-6.59	30.00	Pass
11n (HT40)	CH159	-6.37	30.00	Pass
11ac (VHT20)	CH149	-2.75	30.00	Pass
11ac (VHT20)	CH157	-2.66	30.00	Pass
11ac (VHT20)	CH165	-2.11	30.00	Pass
11ac (VHT40)	CH151	-6.60	30.00	Pass
11ac (VHT40)	CH159	-6.28	30.00	Pass
11ac (VHT80)	CH155	-12.44	30.00	Pass

E.I.R.P PSD

U-NII-1 (5150 - 5250 MHz)				
Mode	Channel	PSD (dBm/MHz)	E.I.R.P Limit (dBm/MHz)	Verdict
11a	CH36	4.73	10.00	Pass
11a	CH44	6.20	10.00	Pass
11a	CH48	6.35	10.00	Pass
11n(HT20)	CH36	2.96	10.00	Pass
11n(HT20)	CH44	3.09	10.00	Pass
11n(HT20)	CH48	3.27	10.00	Pass
11n(HT40)	CH38	-2.97	10.00	Pass
11n(HT40)	CH46	1.42	10.00	Pass
11ac(VHT20)	CH36	3.71	10.00	Pass
11ac(VHT20)	CH44	5.18	10.00	Pass
11ac(VHT20)	CH48	5.22	10.00	Pass
11ac(VHT40)	CH38	-2.99	10.00	Pass
11ac(VHT40)	CH46	1.39	10.00	Pass
11ac(VHT80)	CH42	-7.56	10.00	Pass

U-NII-2A (5250 - 5350 MHz)			
Mode	Channel	PSD (dBm/MHz)	Verdict
11a	CH52	6.34	Pass
11a	CH60	6.12	Pass
11a	CH64	5.02	Pass
11n(HT20)	CH52	3.27	Pass
11n(HT20)	CH60	3.04	Pass
11n(HT20)	CH64	2.98	Pass
11n(HT40)	CH54	1.43	Pass
11n(HT40)	CH62	-1.63	Pass
11ac(VHT20)	CH52	5.29	Pass
11ac(VHT20)	CH60	5.06	Pass
11ac(VHT20)	CH64	5.00	Pass
11ac(VHT40)	CH54	1.50	Pass
11ac(VHT40)	CH62	-1.62	Pass
11ac(VHT80)	CH58	-6.77	Pass

U-NII-2C (5470 - 5725 MHz)			
Mode	Channel	PSD (dBm/MHz)	Verdict
11a	CH100	-0.88	Pass
11a	CH116	3.77	Pass
11a	CH140	1.53	Pass
11n(HT20)	CH100	0.12	Pass
11n(HT20)	CH116	0.70	Pass
11n(HT20)	CH140	1.46	Pass
11n(HT40)	CH102	-2.58	Pass
11n(HT40)	CH118	-1.06	Pass
11n(HT40)	CH134	-1.20	Pass
11ac(VHT20)	CH100	0.08	Pass
11ac(VHT20)	CH116	2.71	Pass
11ac(VHT20)	CH140	1.48	Pass
11ac(VHT40)	CH102	-2.59	Pass
11ac(VHT40)	CH118	-1.06	Pass
11ac(VHT40)	CH134	-1.24	Pass
11ac(VHT80)	CH106	-6.30	Pass
11ac(VHT80)	CH122	-7.54	Pass

U-NII-3 (5725 - 5850 MHz)			
Mode	Channel	PSD (dBm/500kHz)	Verdict
11a	CH149	0.79	Pass
11a	CH157	0.99	Pass
11a	CH165	1.42	Pass
11n(HT20)	CH149	-2.26	Pass
11n(HT20)	CH157	-2.00	Pass
11n(HT20)	CH165	-1.61	Pass
11n(HT40)	CH151	-4.09	Pass
11n(HT40)	CH159	-3.87	Pass
11ac(VHT20)	CH149	-0.25	Pass
11ac(VHT20)	CH157	-0.16	Pass
11ac(VHT20)	CH165	0.39	Pass
11ac(VHT40)	CH151	-4.10	Pass
11ac(VHT40)	CH159	-3.78	Pass
11ac(VHT80)	CH155	-9.94	Pass

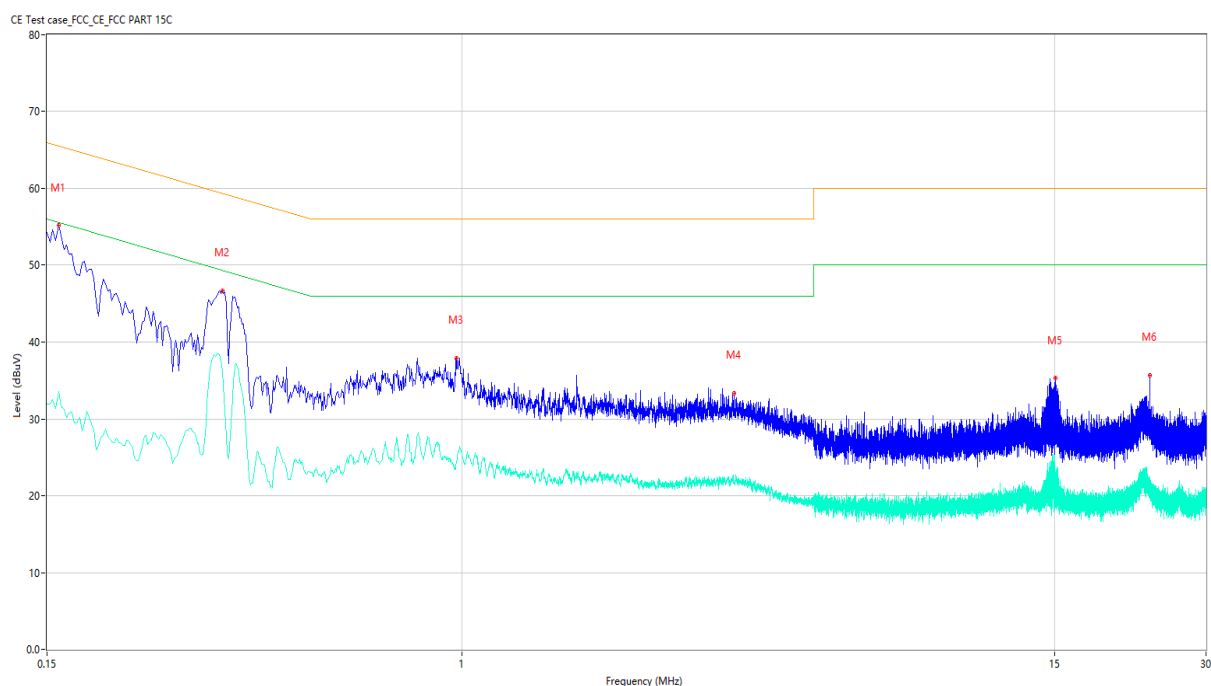
A.5 Conducted Emissions

Note¹: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

Note²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

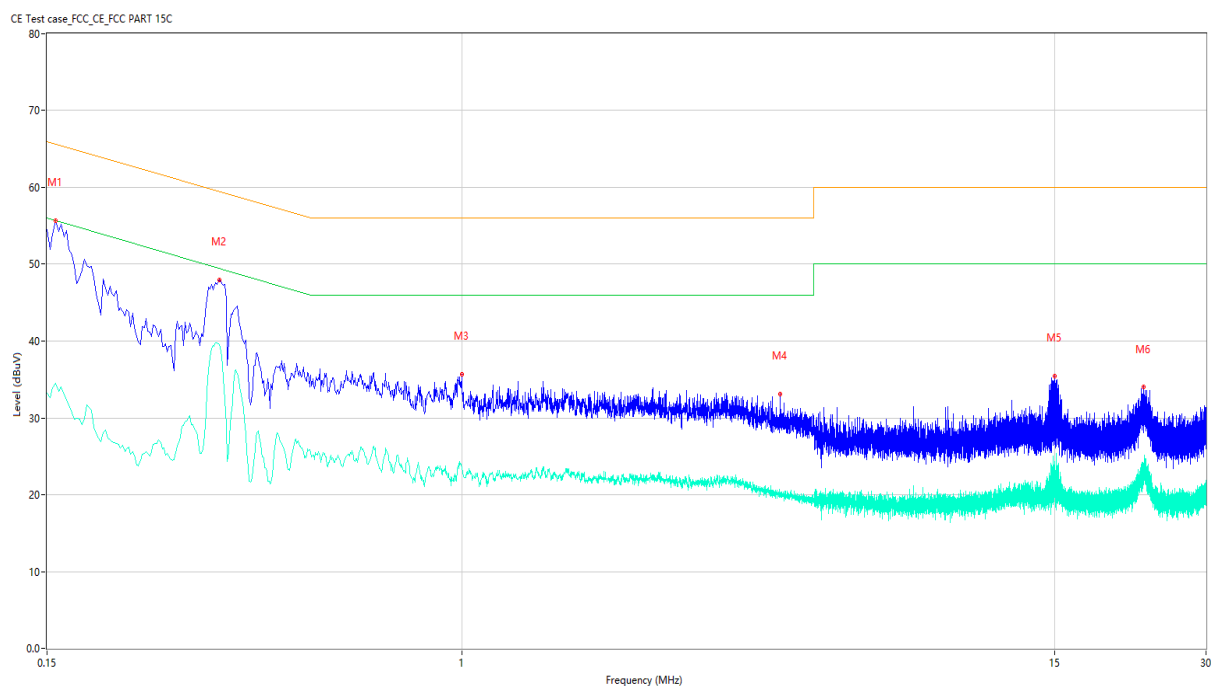
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.158	55.16	9.75	65.57	10.41	Peak	L	Pass
1**	0.158	33.56	9.75	55.57	22.01	AV	L	Pass
2	0.334	46.72	9.74	59.35	12.63	Peak	L	Pass
2**	0.334	36.23	9.74	49.35	13.12	AV	L	Pass
3	0.976	37.87	9.70	56.00	18.13	Peak	L	Pass
3**	0.976	24.61	9.70	46.00	21.39	AV	L	Pass
4	3.464	33.31	9.66	56.00	22.69	Peak	L	Pass
4**	3.464	21.49	9.66	46.00	24.51	AV	L	Pass
5	15.102	35.32	9.25	60.00	24.68	Peak	L	Pass
5**	15.102	22.25	9.25	50.00	27.75	AV	L	Pass
6	23.186	35.70	8.88	60.00	24.30	Peak	L	Pass
6**	23.186	22.33	8.88	50.00	27.67	AV	L	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.156	55.66	9.70	65.67	10.01	Peak	N	Pass
1**	0.156	34.45	9.70	55.67	21.22	AV	N	Pass
2	0.330	47.96	9.77	59.45	11.49	Peak	N	Pass
2**	0.330	39.56	9.77	49.45	9.89	AV	N	Pass
3	0.998	35.64	9.86	56.00	20.36	Peak	N	Pass
3**	0.998	23.54	9.86	46.00	22.46	AV	N	Pass
4	4.282	33.09	9.83	56.00	22.91	Peak	N	Pass
4**	4.282	20.10	9.83	46.00	25.90	AV	N	Pass
5	15.004	35.42	9.51	60.00	24.58	Peak	N	Pass
5**	15.004	24.29	9.51	50.00	25.71	AV	N	Pass
6	22.568	33.99	9.05	60.00	26.01	Peak	N	Pass
6**	22.568	23.51	9.05	50.00	26.49	AV	N	Pass

A.6 Radiated Spurious Emissions and Band Edge (Restricted-band)

Note¹: The symbol of "--" in the table which means not application.

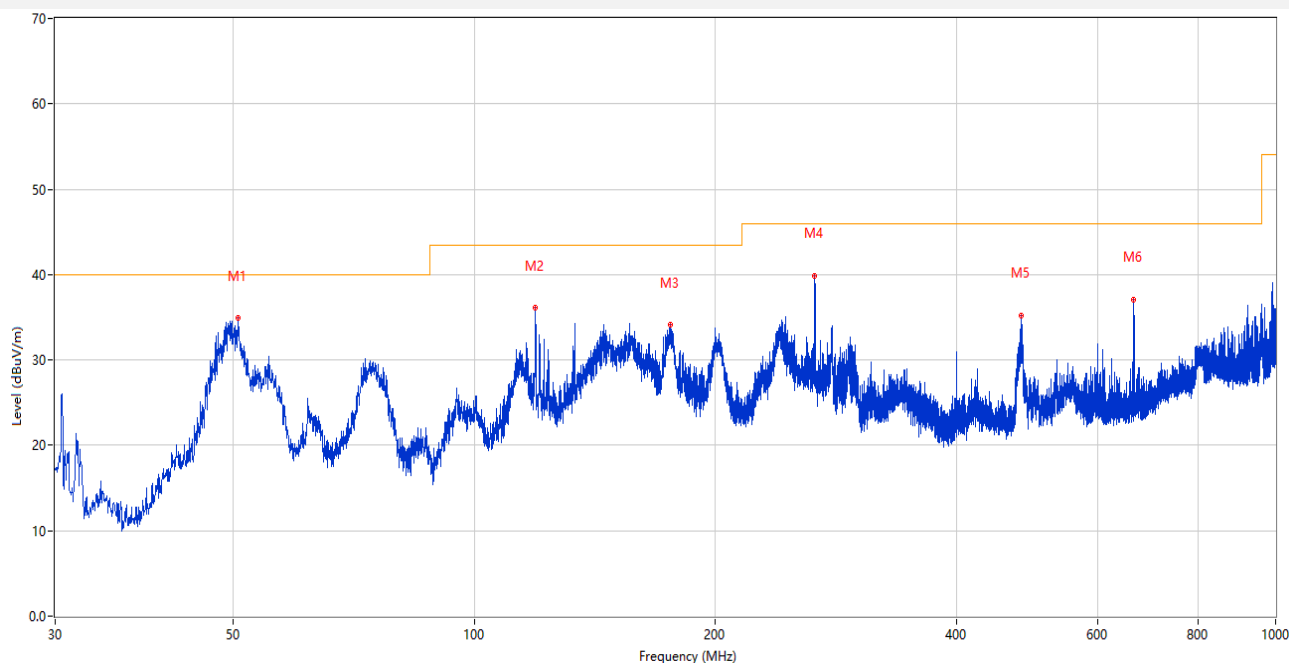
Note²: For the test data above 1 GHz, According the ANSI C63.4, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note³: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note⁴: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and normal link mode is worst.

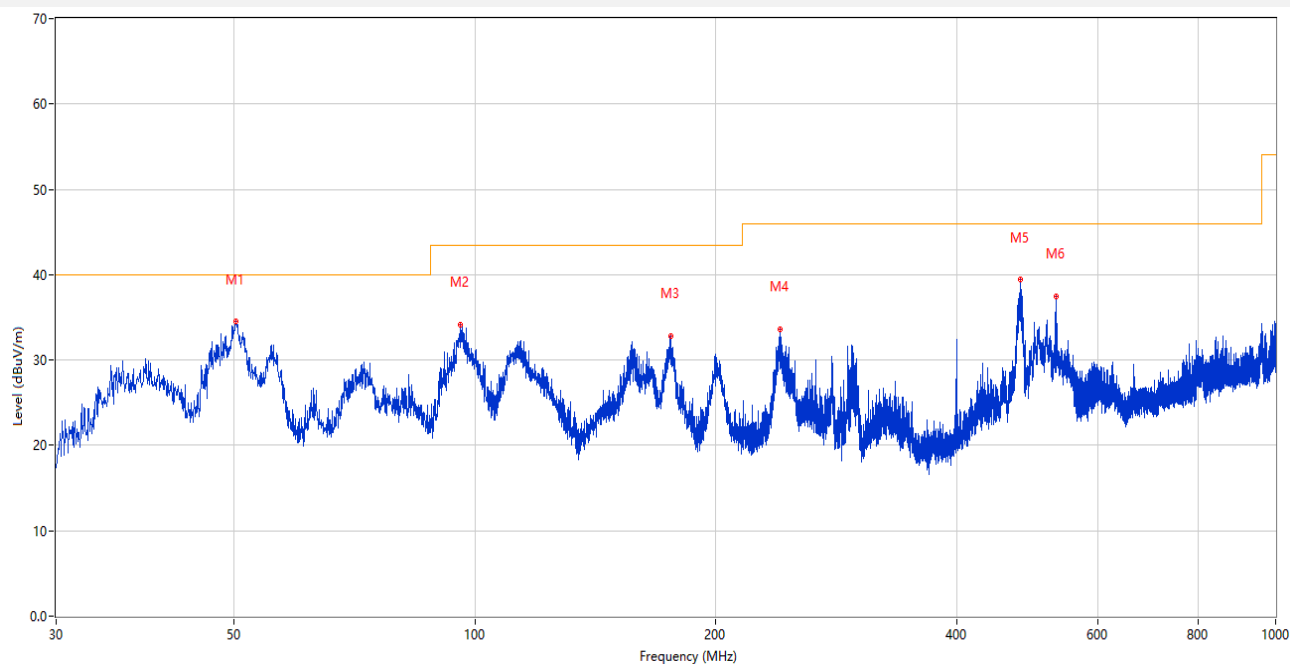
Test Data and Plots

30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.758	34.91	-24.57	40.0	5.09	Peak	20.00	200	Horizontal	Pass
2	119.191	36.06	-28.09	43.5	7.44	Peak	135.00	200	Horizontal	Pass
3	175.597	34.07	-28.23	43.5	9.43	Peak	0.00	200	Horizontal	Pass
4	266.195	39.88	-24.13	46.0	6.12	Peak	9.00	100	Horizontal	Pass
5	482.069	35.21	-18.62	46.0	10.79	Peak	260.00	200	Horizontal	Pass
6	665.593	37.02	-14.37	46.0	8.98	Peak	174.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

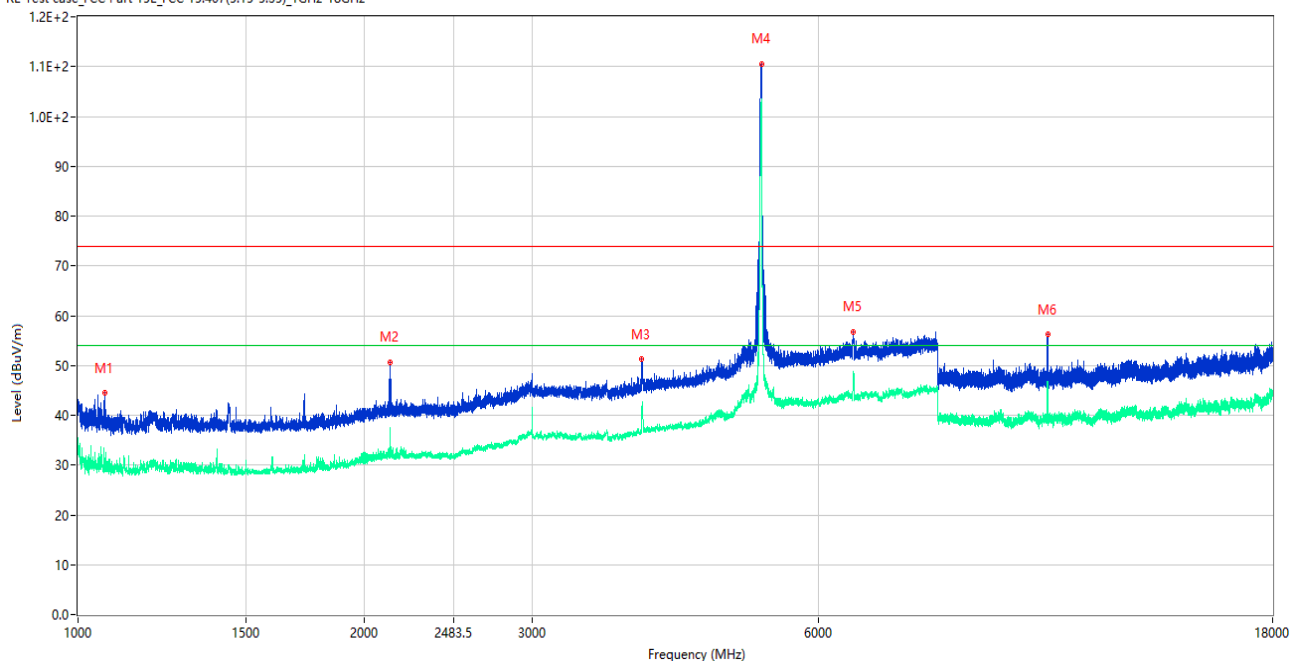


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.322	34.50	-24.53	40.0	5.50	Peak	280.00	100	Vertical	Pass
2	95.960	34.19	-26.53	43.5	9.31	Peak	53.00	200	Vertical	Pass
3	175.500	32.79	-28.24	43.5	10.71	Peak	262.00	100	Vertical	Pass
4	240.830	33.65	-24.42	46.0	12.35	Peak	360.00	100	Vertical	Pass
5	479.983	39.41	-18.70	46.0	6.59	Peak	158.00	100	Vertical	Pass
6	532.411	37.45	-17.37	46.0	8.55	Peak	76.00	200	Vertical	Pass

Note: The spurious above 18G is noise only, do not show on the report.

11a, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT H

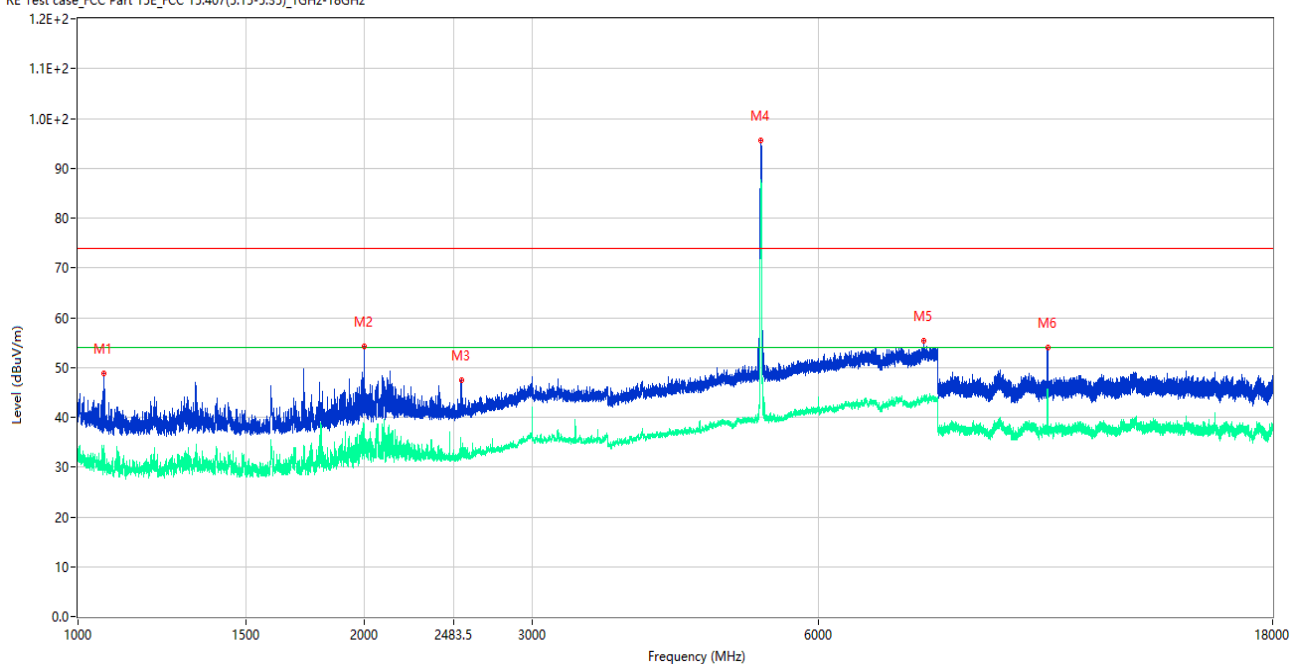
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1067.000	44.58	-15.59	74.0	29.42	Peak	34.00	150	Horizontal	Pass
1**	1067.000	29.72	-15.59	54.0	24.28	AV	34.00	150	Horizontal	Pass
2	2127.000	50.72	-12.15	74.0	23.28	Peak	147.00	150	Horizontal	Pass
2**	2127.000	31.71	-12.15	54.0	22.29	AV	147.00	150	Horizontal	Pass
3	3912.000	51.25	-3.48	74.0	22.75	Peak	161.00	150	Horizontal	Pass
3**	3912.000	41.63	-3.48	54.0	12.37	AV	161.00	150	Horizontal	Pass
4	5227.000	110.60	-0.81	74.0	-36.60	Peak	191.00	150	Horizontal	N/A
4**	5227.000	102.73	-0.81	54.0	-48.73	AV	191.00	150	Horizontal	N/A
5	6528.000	56.83	1.95	74.0	17.17	Peak	181.00	150	Horizontal	Pass
5**	6528.000	48.46	1.95	54.0	5.54	AV	181.00	150	Horizontal	Pass
6	10442.450	56.18	-1.06	74.0	17.82	Peak	196.00	150	Horizontal	Pass
6**	10442.450	46.75	-1.06	54.0	7.25	AV	196.00	150	Horizontal	Pass

11a, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT V

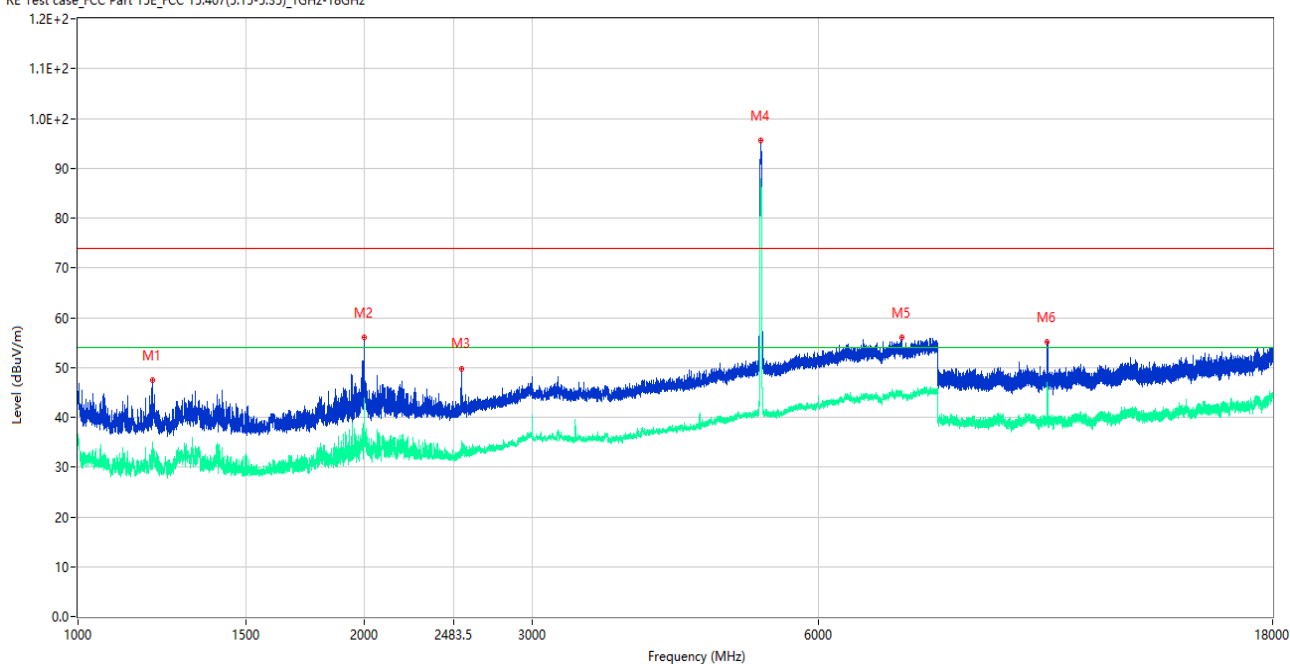
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1064.250	48.71	-15.57	74.0	25.29	Peak	105.00	150	Vertical	Pass
1**	1064.250	31.55	-15.57	54.0	22.45	AV	105.00	150	Vertical	Pass
2	1997.250	54.32	-13.28	74.0	19.68	Peak	94.00	150	Vertical	Pass
2**	1997.250	32.81	-13.28	54.0	21.19	AV	94.00	150	Vertical	Pass
3	2531.500	47.36	-10.38	74.0	26.64	Peak	182.00	150	Vertical	Pass
3**	2531.500	32.12	-10.38	54.0	21.88	AV	182.00	150	Vertical	Pass
4	5222.500	95.51	-0.83	74.0	-21.51	Peak	271.00	150	Vertical	N/A
4**	5222.500	87.46	-0.83	54.0	-33.46	AV	271.00	150	Vertical	N/A
5	7738.000	55.41	3.36	74.0	18.59	Peak	240.00	150	Vertical	Pass
5**	7738.000	44.06	3.36	54.0	9.94	AV	240.00	150	Vertical	Pass
6	10442.687	53.94	-1.05	74.0	20.06	Peak	76.00	150	Vertical	Pass
6**	10442.687	43.04	-1.05	54.0	10.96	AV	76.00	150	Vertical	Pass

11ac20, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT H

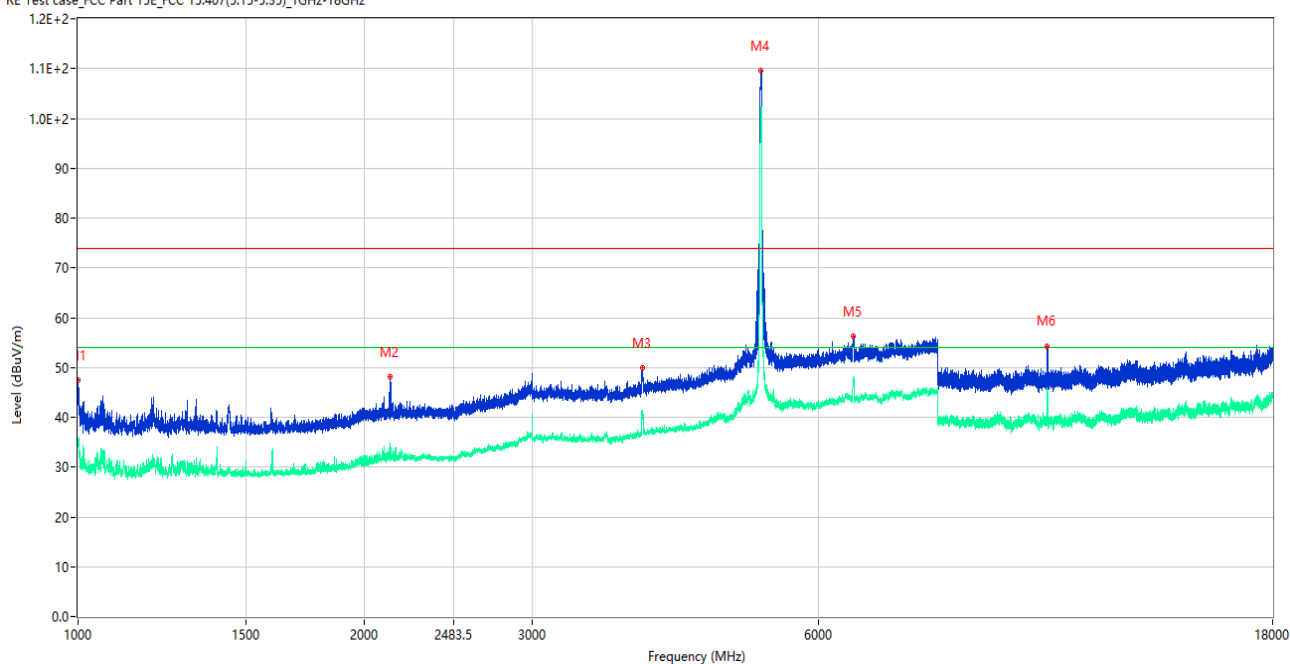
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1198.500	47.40	-15.29	74.0	26.60	Peak	124.00	150	Horizontal	Pass
1**	1198.500	29.65	-15.29	54.0	24.35	AV	124.00	150	Horizontal	Pass
2	1997.500	56.09	-13.26	74.0	17.91	Peak	114.00	150	Horizontal	Pass
2**	1997.500	35.76	-13.26	54.0	18.24	AV	114.00	150	Horizontal	Pass
3	2530.750	49.80	-10.41	74.0	24.20	Peak	129.00	150	Horizontal	Pass
3**	2530.750	35.22	-10.41	54.0	18.78	AV	129.00	150	Horizontal	Pass
4	5213.000	95.59	-0.96	74.0	-21.59	Peak	58.00	150	Horizontal	N/A
4**	5213.000	87.86	-0.96	54.0	-33.86	AV	58.00	150	Horizontal	N/A
5	7337.500	55.95	3.05	74.0	18.05	Peak	219.00	150	Horizontal	Pass
5**	7337.500	44.71	3.05	54.0	9.29	AV	219.00	150	Horizontal	Pass
6	10437.224	55.06	-1.16	74.0	18.94	Peak	101.00	150	Horizontal	Pass
6**	10437.224	44.78	-1.16	54.0	9.22	AV	101.00	150	Horizontal	Pass

11ac20, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT V

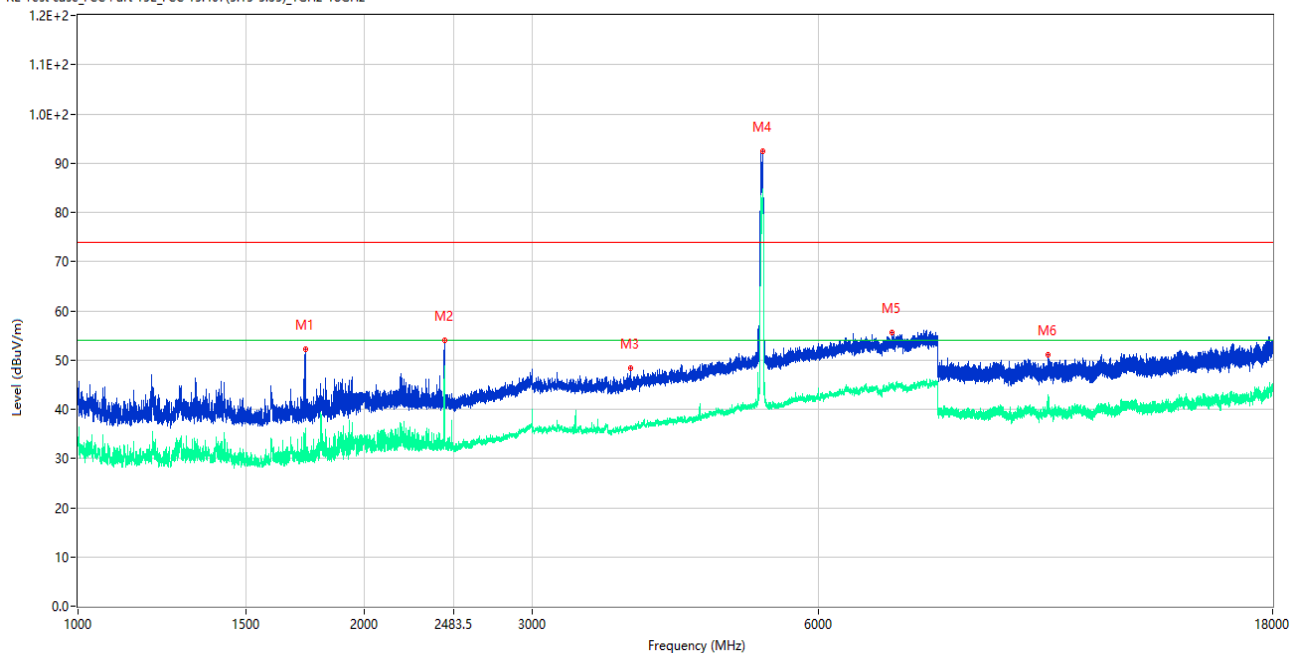
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1001.000	47.47	-15.27	74.0	26.53	Peak	111.00	150	Vertical	Pass
1**	1001.000	34.05	-15.27	54.0	19.95	AV	111.00	150	Vertical	Pass
2	2128.750	48.18	-12.09	74.0	25.82	Peak	58.00	150	Vertical	Pass
2**	2128.750	31.19	-12.09	54.0	22.81	AV	58.00	150	Vertical	Pass
3	3916.500	49.97	-3.29	74.0	24.03	Peak	191.00	150	Vertical	Pass
3**	3916.500	40.65	-3.29	54.0	13.35	AV	191.00	150	Vertical	Pass
4	5212.500	109.64	-0.98	74.0	-35.64	Peak	191.00	150	Vertical	N/A
4**	5212.500	102.38	-0.98	54.0	-48.38	AV	191.00	150	Vertical	N/A
5	6531.500	56.28	1.79	74.0	17.72	Peak	180.00	150	Vertical	Pass
5**	6531.500	46.53	1.79	54.0	7.47	AV	180.00	150	Vertical	Pass
6	10438.175	54.33	-1.22	74.0	19.67	Peak	242.00	150	Vertical	Pass
6**	10438.175	43.45	-1.22	54.0	10.55	AV	242.00	150	Vertical	Pass

11ac40, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT H

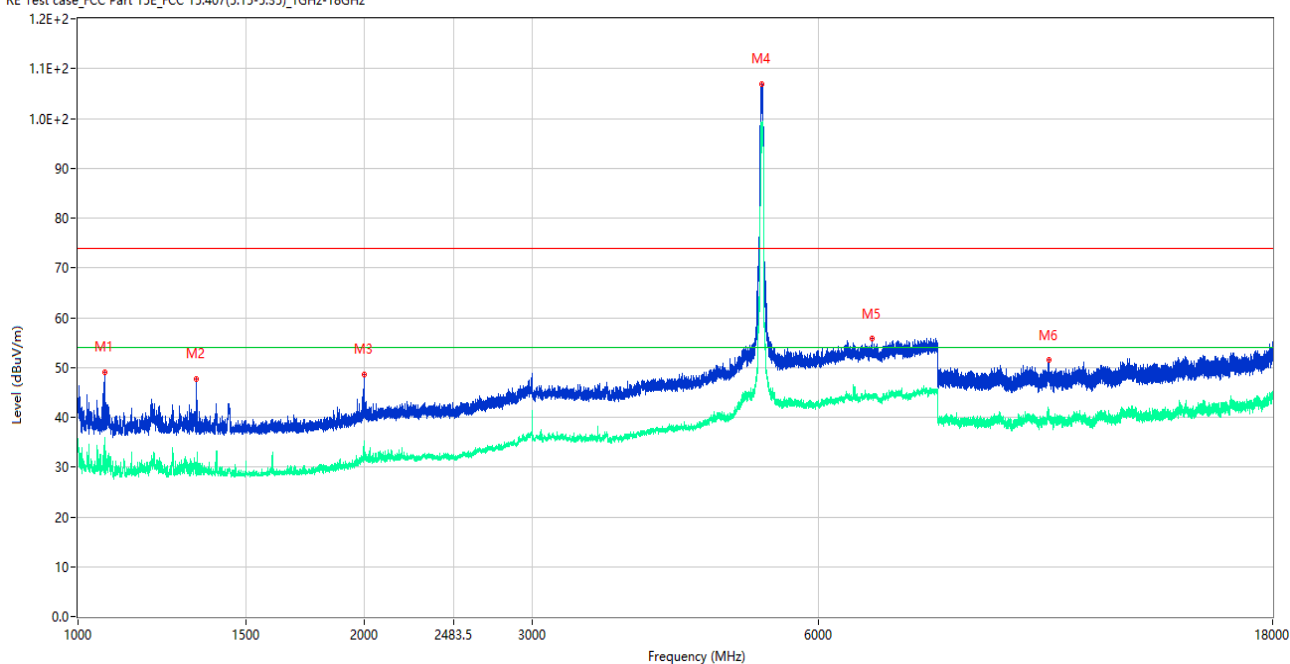
RE Test case_FCC Part 15E_FCC 15.407(5,15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1732.500	52.25	-15.37	74.0	21.75	Peak	112.00	150	Horizontal	Pass
1**	1732.500	29.50	-15.37	54.0	24.50	AV	112.00	150	Horizontal	Pass
2	2426.000	54.10	-11.53	74.0	19.90	Peak	22.00	150	Horizontal	Pass
2**	2426.000	48.49	-11.53	54.0	5.51	AV	22.00	150	Horizontal	Pass
3	3806.500	48.33	-3.86	74.0	25.67	Peak	259.00	150	Horizontal	Pass
3**	3806.500	36.32	-3.86	54.0	17.68	AV	259.00	150	Horizontal	Pass
4	5246.000	92.37	-0.60	74.0	-18.37	Peak	277.00	150	Horizontal	N/A
4**	5246.000	84.84	-0.60	54.0	-30.84	AV	277.00	150	Horizontal	N/A
5	7166.000	55.56	2.28	74.0	18.44	Peak	88.00	150	Horizontal	Pass
5**	7166.000	44.70	2.28	54.0	9.30	AV	88.00	150	Horizontal	Pass
6	10462.162	51.12	-1.46	74.0	22.88	Peak	100.00	150	Horizontal	Pass
6**	10462.162	41.22	-1.46	54.0	12.78	AV	100.00	150	Horizontal	Pass

11ac40, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT V

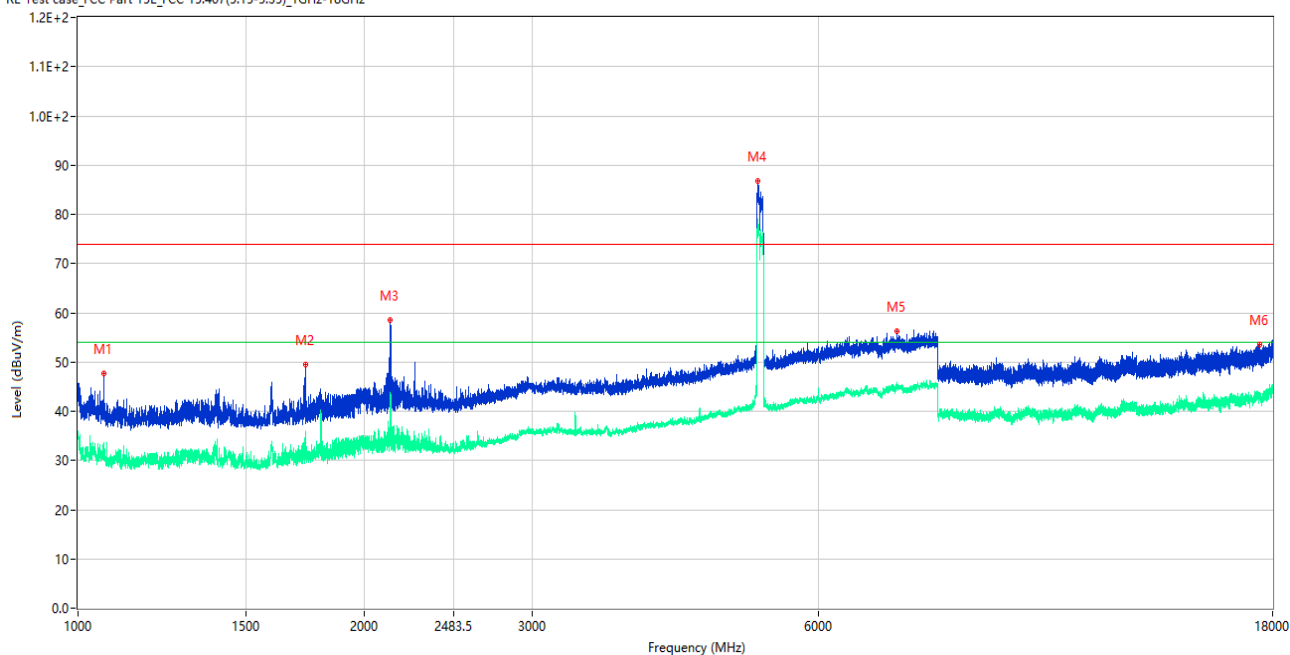
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1066.250	49.13	-15.57	74.0	24.87	Peak	196.00	150	Vertical	Pass
1**	1066.250	28.95	-15.57	54.0	25.05	AV	196.00	150	Vertical	Pass
2	1332.750	47.71	-15.55	74.0	26.29	Peak	323.00	150	Vertical	Pass
2**	1332.750	28.82	-15.55	54.0	25.18	AV	323.00	150	Vertical	Pass
3	1996.750	48.69	-13.30	74.0	25.31	Peak	151.00	150	Vertical	Pass
3**	1996.750	33.23	-13.30	54.0	20.77	AV	151.00	150	Vertical	Pass
4	5224.000	107.00	-0.81	74.0	-33.00	Peak	191.00	150	Vertical	N/A
4**	5224.000	98.94	-0.81	54.0	-44.94	AV	191.00	150	Vertical	N/A
5	6830.000	55.72	2.35	74.0	18.28	Peak	29.00	150	Vertical	Pass
5**	6830.000	44.16	2.35	54.0	9.84	AV	29.00	150	Vertical	Pass
6	10478.312	51.54	-1.00	74.0	22.46	Peak	197.00	150	Vertical	Pass
6**	10478.312	40.82	-1.00	54.0	13.18	AV	197.00	150	Vertical	Pas

11ac80, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT H

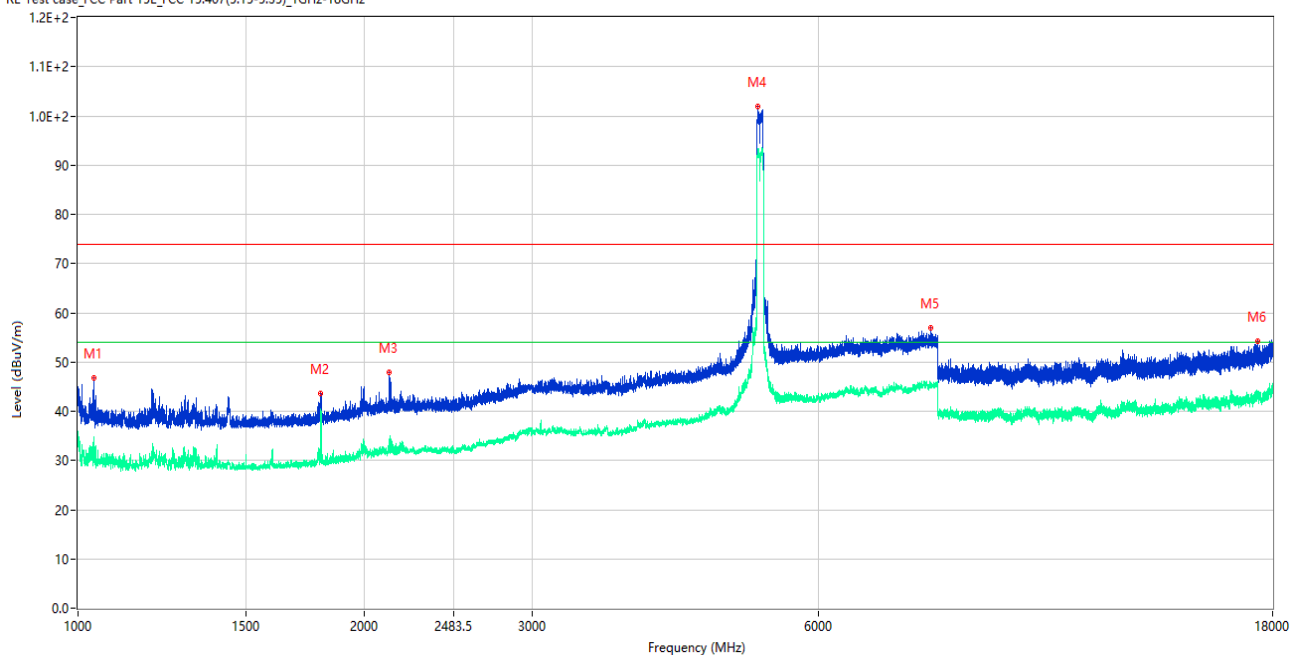
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1065.000	47.63	-15.57	74.0	26.37	Peak	318.00	150	Horizontal	Pass
1**	1065.000	31.02	-15.57	54.0	22.98	AV	318.00	150	Horizontal	Pass
2	1733.250	49.54	-15.39	74.0	24.46	Peak	100.00	150	Horizontal	Pass
2**	1733.250	32.13	-15.39	54.0	21.87	AV	100.00	150	Horizontal	Pass
3	2126.750	58.42	-12.16	74.0	15.58	Peak	127.00	150	Horizontal	Pass
3**	2126.750	35.36	-12.16	54.0	18.64	AV	127.00	150	Horizontal	Pass
4	5181.000	86.84	-0.94	74.0	-12.84	Peak	279.00	150	Horizontal	N/A
4**	5181.000	76.82	-0.94	54.0	-22.82	AV	279.00	150	Horizontal	N/A
5	7250.000	56.20	3.13	74.0	17.80	Peak	148.00	150	Horizontal	Pass
5**	7250.000	44.92	3.13	54.0	9.08	AV	148.00	150	Horizontal	Pass
6	17439.562	53.46	3.54	74.0	20.54	Peak	240.00	150	Horizontal	Pass
6**	17439.562	43.28	3.54	54.0	10.72	AV	240.00	150	Horizontal	Pass

11ac80, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT V

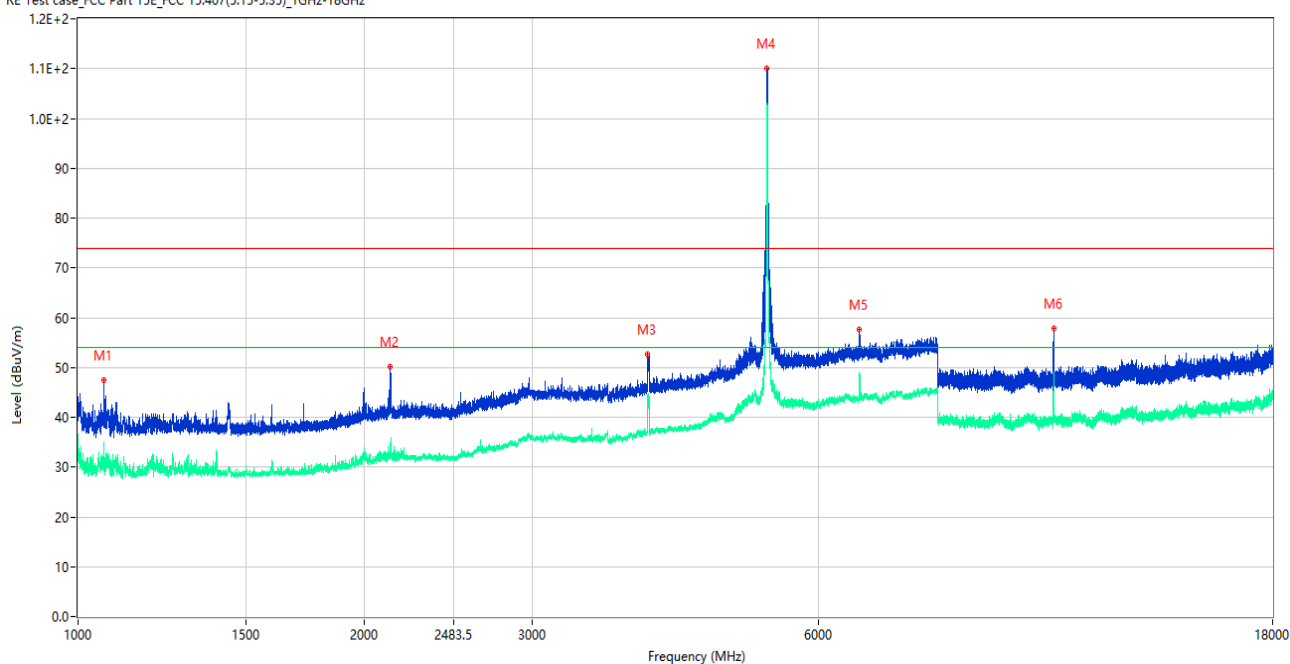
RE Test case_FCC Part 15E_FCC 15.407(5,15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1038.750	46.78	-15.83	74.0	27.22	Peak	157.00	150	Vertical	Pass
1**	1038.750	31.43	-15.83	54.0	22.57	AV	157.00	150	Vertical	Pass
2	1800.250	43.66	-14.97	74.0	30.34	Peak	246.00	150	Vertical	Pass
2**	1800.250	40.52	-14.97	54.0	13.48	AV	246.00	150	Vertical	Pass
3	2124.000	47.92	-12.24	74.0	26.08	Peak	40.00	150	Vertical	Pass
3**	2124.000	32.28	-12.24	54.0	21.72	AV	40.00	150	Vertical	Pass
4	5183.000	101.95	-0.92	74.0	-27.95	Peak	188.00	150	Vertical	N/A
4**	5183.000	92.31	-0.92	54.0	-38.31	AV	188.00	150	Vertical	N/A
5	7865.500	56.86	3.87	74.0	17.14	Peak	169.00	150	Vertical	Pass
5**	7865.500	45.35	3.87	54.0	8.65	AV	169.00	150	Vertical	Pass
6	17366.063	54.21	3.87	74.0	19.79	Peak	345.00	150	Vertical	Pass
6**	17366.063	42.96	3.87	54.0	11.04	AV	345.00	150	Vertical	Pass

11a20, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT H

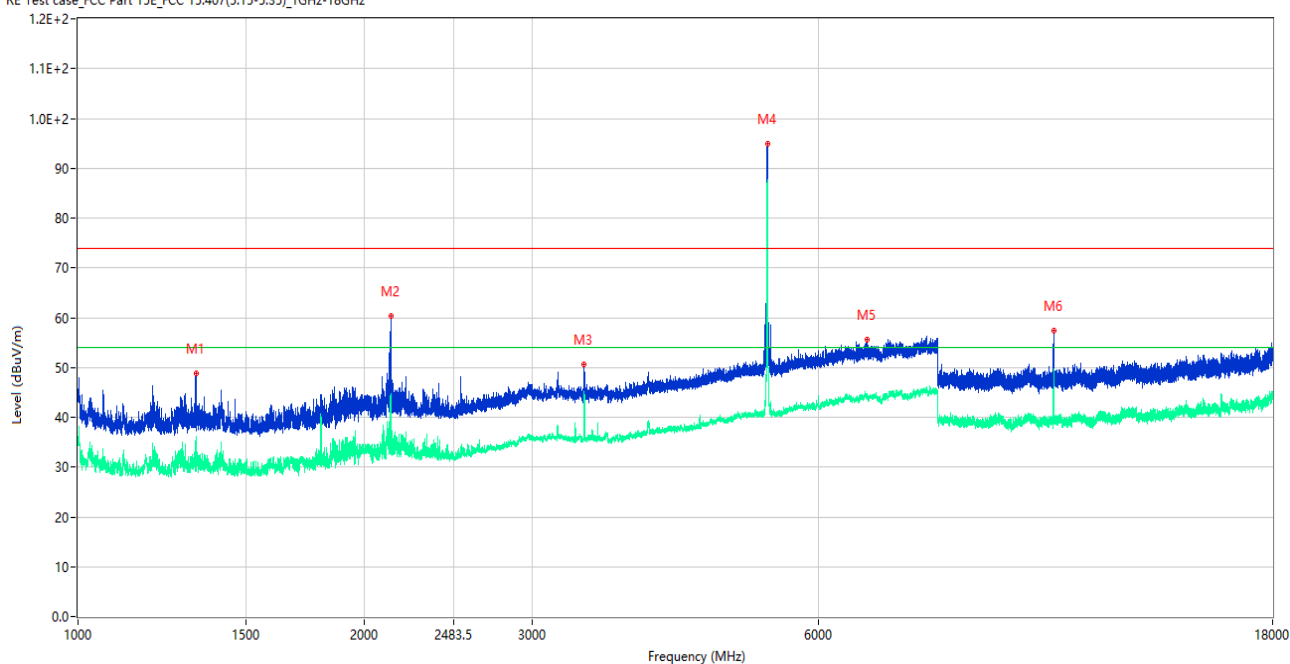
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1064.750	47.47	-15.57	74.0	26.53	Peak	154.00	150	Horizontal	Pass
1**	1064.750	30.03	-15.57	54.0	23.97	AV	154.00	150	Horizontal	Pass
2	2129.750	50.14	-12.05	74.0	23.86	Peak	53.00	150	Horizontal	Pass
2**	2129.750	33.45	-12.05	54.0	20.55	AV	53.00	150	Horizontal	Pass
3	3967.500	52.70	-3.23	74.0	21.30	Peak	169.00	150	Horizontal	Pass
3**	3967.500	43.30	-3.23	54.0	10.70	AV	169.00	150	Horizontal	Pass
4	5297.000	110.04	-0.51	74.0	-36.04	Peak	191.00	150	Horizontal	N/A
4**	5297.000	102.27	-0.51	54.0	-48.27	AV	191.00	150	Horizontal	N/A
5	6617.500	57.69	2.08	74.0	16.31	Peak	222.00	150	Horizontal	Pass
5**	6617.500	47.67	2.08	54.0	6.33	AV	222.00	150	Horizontal	Pass
6	10600.388	55.72	-1.19	74.0	18.28	Peak	0.00	150	Horizontal	Pass
6**	10600.388	46.38	-1.19	54.0	7.62	AV	0.00	150	Horizontal	Pass

11a20, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT V

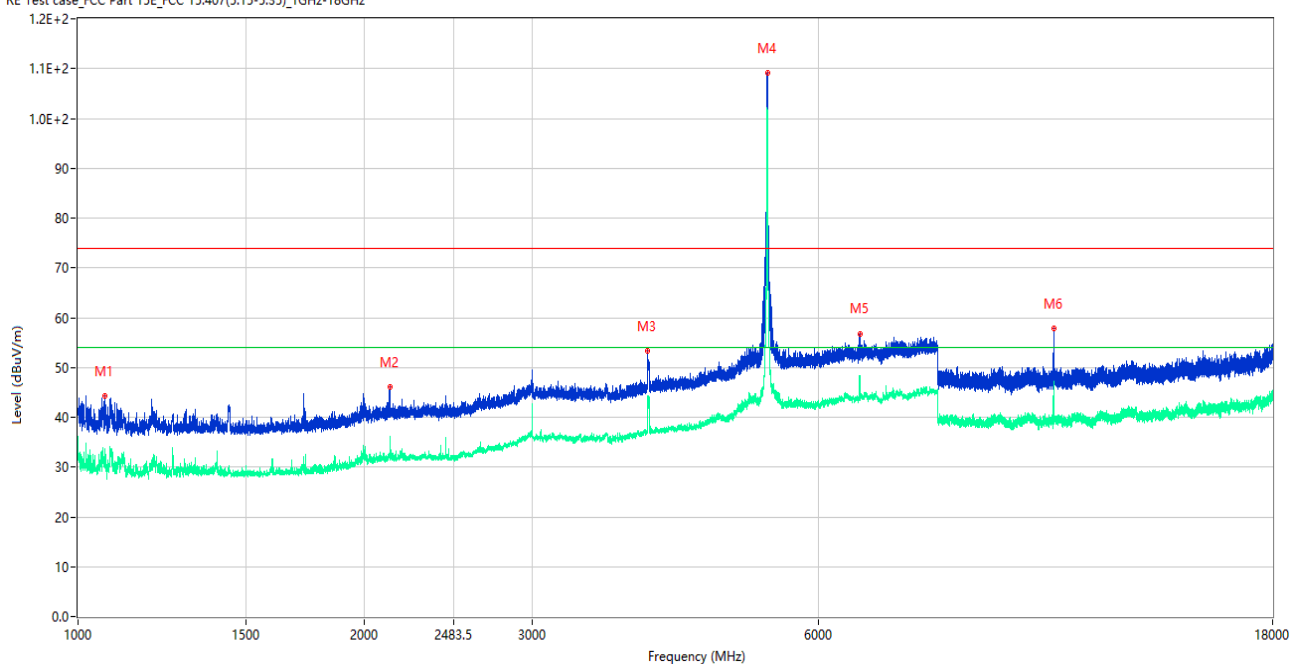
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.750	48.78	-15.53	74.0	25.22	Peak	109.00	150	Vertical	Pass
1**	1331.750	31.94	-15.53	54.0	22.06	AV	109.00	150	Vertical	Pass
2	2131.000	60.42	-11.99	74.0	13.58	Peak	131.00	150	Vertical	Pass
2**	2131.000	37.28	-11.99	54.0	16.72	AV	131.00	150	Vertical	Pass
3	3404.500	50.66	-6.23	74.0	23.34	Peak	5.00	150	Vertical	Pass
3**	3404.500	45.24	-6.23	54.0	8.76	AV	5.00	150	Vertical	Pass
4	5303.000	94.93	-0.57	74.0	-20.93	Peak	280.00	150	Vertical	N/A
4**	5303.000	87.51	-0.57	54.0	-33.51	AV	280.00	150	Vertical	N/A
5	6742.500	55.60	2.66	74.0	18.40	Peak	1.00	150	Vertical	Pass
5**	6742.500	44.28	2.66	54.0	9.72	AV	1.00	150	Vertical	Pass
6	10598.725	57.42	-1.22	74.0	16.58	Peak	101.00	150	Vertical	Pass
6**	10598.725	47.10	-1.22	54.0	6.90	AV	101.00	150	Vertical	Pass

11ac20, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT H

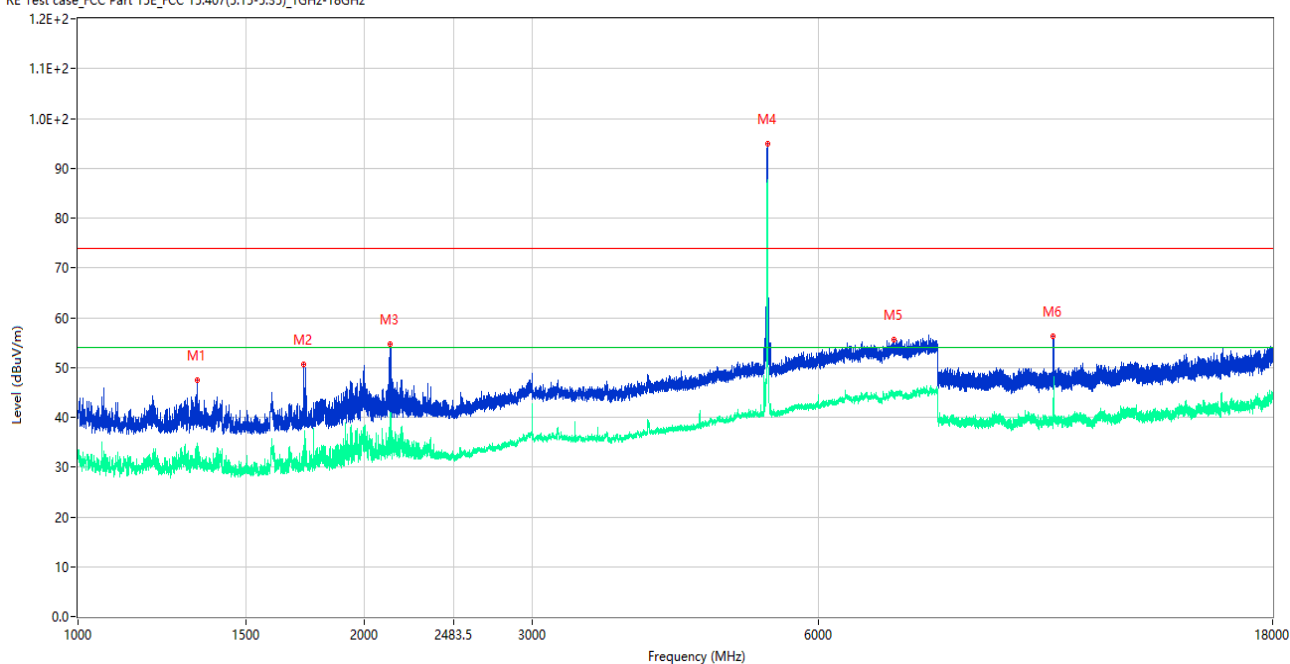
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1067.250	44.36	-15.59	74.0	29.64	Peak	210.00	150	Horizontal	Pass
1**	1067.250	30.87	-15.59	54.0	23.13	AV	210.00	150	Horizontal	Pass
2	2126.750	46.16	-12.16	74.0	27.84	Peak	47.00	150	Horizontal	Pass
2**	2126.750	32.11	-12.16	54.0	21.89	AV	47.00	150	Horizontal	Pass
3	3967.000	53.39	-3.20	74.0	20.61	Peak	169.00	150	Horizontal	Pass
3**	3967.000	44.01	-3.20	54.0	9.99	AV	169.00	150	Horizontal	Pass
4	5301.500	109.16	-0.62	74.0	-35.16	Peak	179.00	150	Horizontal	N/A
4**	5301.500	100.75	-0.62	54.0	-46.75	AV	179.00	150	Horizontal	N/A
5	6628.000	56.82	1.93	74.0	17.18	Peak	229.00	150	Horizontal	Pass
5**	6628.000	47.36	1.93	54.0	6.64	AV	229.00	150	Horizontal	Pass
6	10604.188	57.82	-1.15	74.0	16.18	Peak	198.00	150	Horizontal	Pass
6**	10604.188	45.49	-1.15	54.0	8.51	AV	198.00	150	Horizontal	Pass

11ac20, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT V

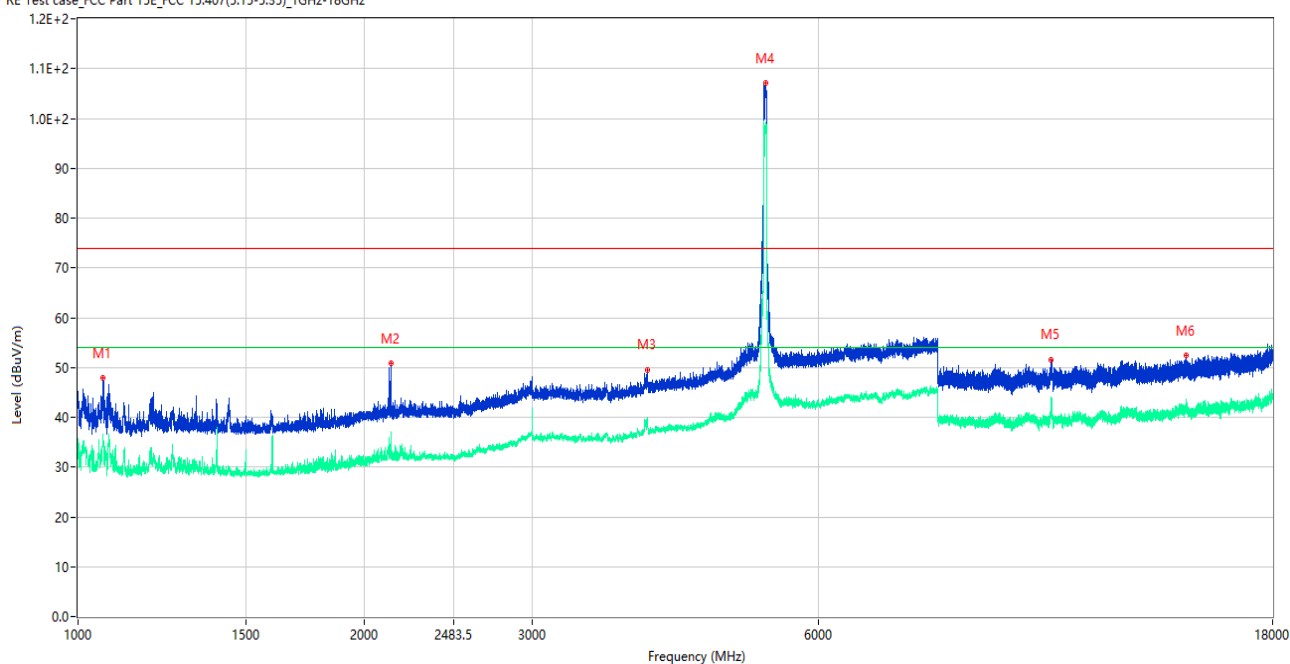
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.250	47.38	-15.55	74.0	26.62	Peak	127.00	150	Vertical	Pass
1**	1333.250	31.90	-15.55	54.0	22.10	AV	127.00	150	Vertical	Pass
2	1728.000	50.65	-15.20	74.0	23.35	Peak	96.00	150	Vertical	Pass
2**	1728.000	30.36	-15.20	54.0	23.64	AV	96.00	150	Vertical	Pass
3	2129.500	54.69	-12.06	74.0	19.31	Peak	147.00	150	Vertical	Pass
3**	2129.500	33.52	-12.06	54.0	20.48	AV	147.00	150	Vertical	Pass
4	5301.500	94.89	-0.62	74.0	-20.89	Peak	280.00	150	Vertical	N/A
4**	5301.500	87.12	-0.62	54.0	-33.12	AV	280.00	150	Vertical	N/A
5	7204.000	55.59	2.82	74.0	18.41	Peak	321.00	150	Vertical	Pass
5**	7204.000	44.57	2.82	54.0	9.43	AV	321.00	150	Vertical	Pass
6	10588.512	56.27	-1.06	74.0	17.73	Peak	98.00	150	Vertical	Pass
6**	10588.512	42.09	-1.06	54.0	11.91	AV	98.00	150	Vertical	Pass

11ac40, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT H

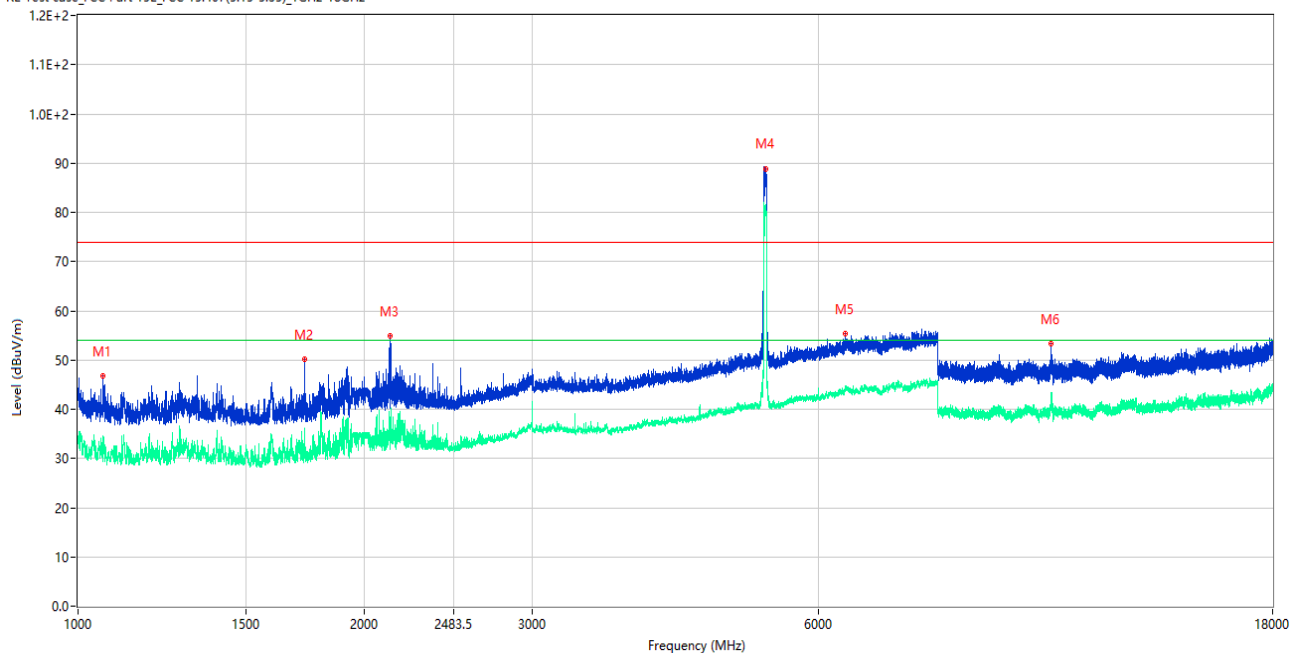
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1062.750	47.82	-15.58	74.0	26.18	Peak	191.00	150	Horizontal	Pass
1**	1062.750	34.55	-15.58	54.0	19.45	AV	191.00	150	Horizontal	Pass
2	2131.000	50.85	-11.99	74.0	23.15	Peak	136.00	150	Horizontal	Pass
2**	2131.000	37.00	-11.99	54.0	17.00	AV	136.00	150	Horizontal	Pass
3	3968.000	49.59	-3.24	74.0	24.41	Peak	161.00	150	Horizontal	Pass
3**	3968.000	39.95	-3.24	54.0	14.05	AV	161.00	150	Horizontal	Pass
4	5274.500	107.07	-0.86	74.0	-33.07	Peak	202.00	150	Horizontal	N/A
4**	5274.500	98.52	-0.86	54.0	-44.52	AV	202.00	150	Horizontal	N/A
5	10539.825	51.63	-0.74	74.0	22.37	Peak	29.00	150	Horizontal	Pass
5**	10539.825	42.65	-0.74	54.0	11.35	AV	29.00	150	Horizontal	Pass
6	14594.326	52.32	1.06	74.0	21.68	Peak	102.00	150	Horizontal	Pass
6**	14594.326	42.46	1.06	54.0	11.54	AV	102.00	150	Horizontal	Pass

11ac40, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT V

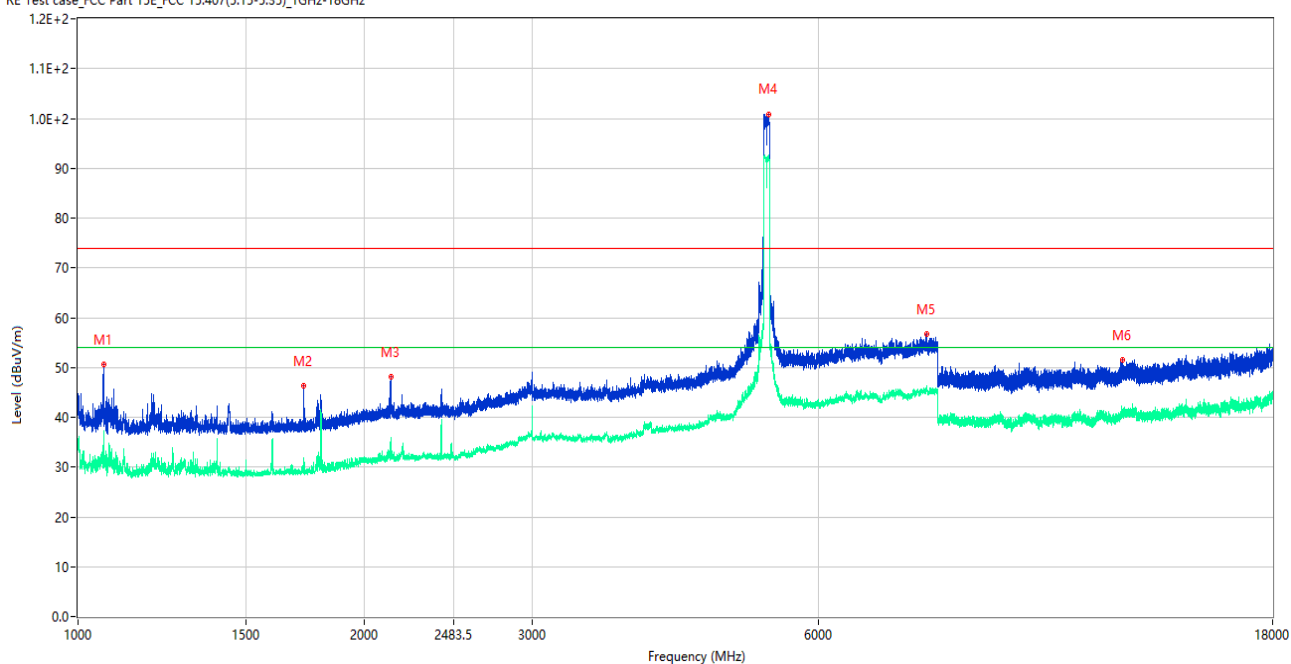
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1062.000	46.79	-15.58	74.0	27.21	Peak	290.00	150	Vertical	Pass
1**	1062.000	30.92	-15.58	54.0	23.08	AV	290.00	150	Vertical	Pass
2	1729.500	50.12	-15.24	74.0	23.88	Peak	86.00	150	Vertical	Pass
2**	1729.500	34.26	-15.24	54.0	19.74	AV	86.00	150	Vertical	Pass
3	2127.000	54.96	-12.15	74.0	19.04	Peak	142.00	150	Vertical	Pass
3**	2127.000	34.39	-12.15	54.0	19.61	AV	142.00	150	Vertical	Pass
4	5274.500	88.71	-0.86	74.0	-14.71	Peak	302.00	150	Vertical	N/A
4**	5274.500	81.55	-0.86	54.0	-27.55	AV	302.00	150	Vertical	N/A
5	6399.500	55.39	2.43	74.0	18.61	Peak	360.00	150	Vertical	Pass
5**	6399.500	44.34	2.43	54.0	9.66	AV	360.00	150	Vertical	Pass
6	10540.300	53.26	-0.75	74.0	20.74	Peak	100.00	150	Vertical	Pass
6**	10540.300	43.03	-0.75	54.0	10.97	AV	100.00	150	Vertical	Pass

11ac80, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT H

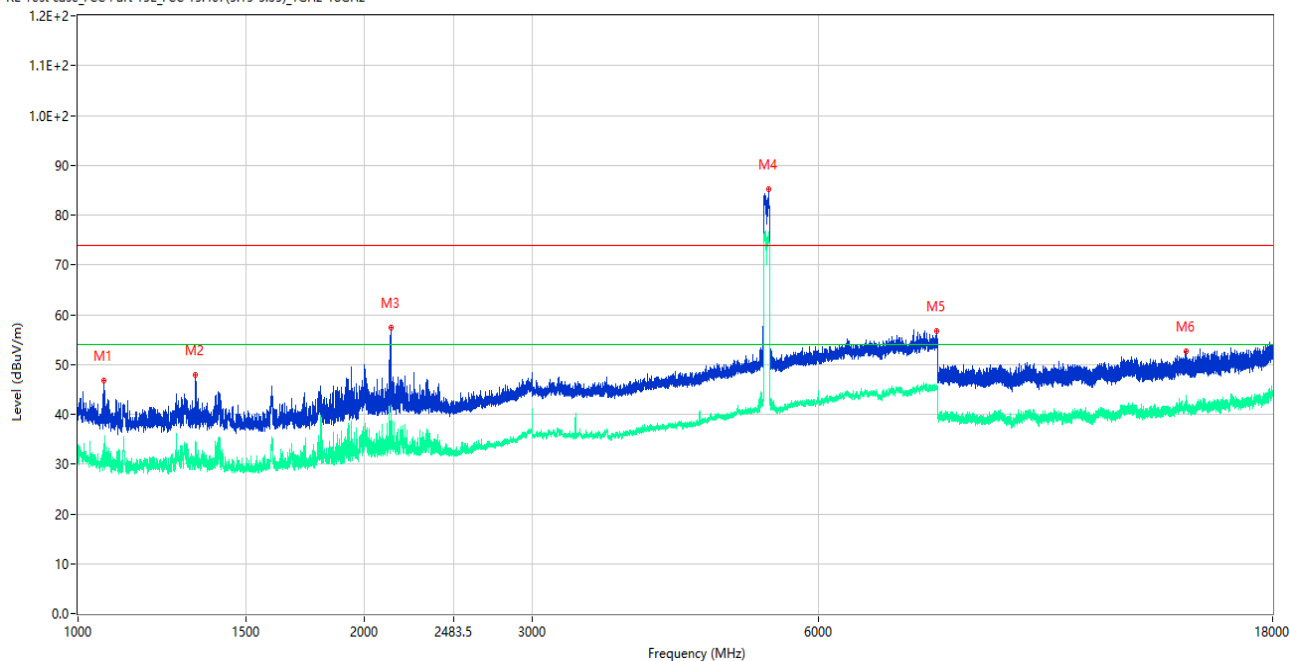
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1064.750	50.52	-15.57	74.0	23.48	Peak	194.00	150	Horizontal	Pass
1**	1064.750	32.47	-15.57	54.0	21.53	AV	194.00	150	Horizontal	Pass
2	1727.750	46.22	-15.20	74.0	27.78	Peak	117.00	150	Horizontal	Pass
2**	1727.750	29.12	-15.20	54.0	24.88	AV	117.00	150	Horizontal	Pass
3	2130.500	48.16	-12.01	74.0	25.84	Peak	141.00	150	Horizontal	Pass
3**	2130.500	31.64	-12.01	54.0	22.36	AV	141.00	150	Horizontal	Pass
4	5323.500	100.90	-0.90	74.0	-26.90	Peak	193.00	150	Horizontal	N/A
4**	5323.500	91.95	-0.90	54.0	-37.95	AV	193.00	150	Horizontal	N/A
5	7794.000	56.62	3.91	74.0	17.38	Peak	74.00	150	Horizontal	Pass
5**	7794.000	45.77	3.91	54.0	8.23	AV	74.00	150	Horizontal	Pass
6	12506.563	51.59	-0.11	74.0	22.41	Peak	6.00	150	Horizontal	Pass
6**	12506.563	40.98	-0.11	54.0	13.02	AV	6.00	150	Horizontal	Pass

11ac80, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT V

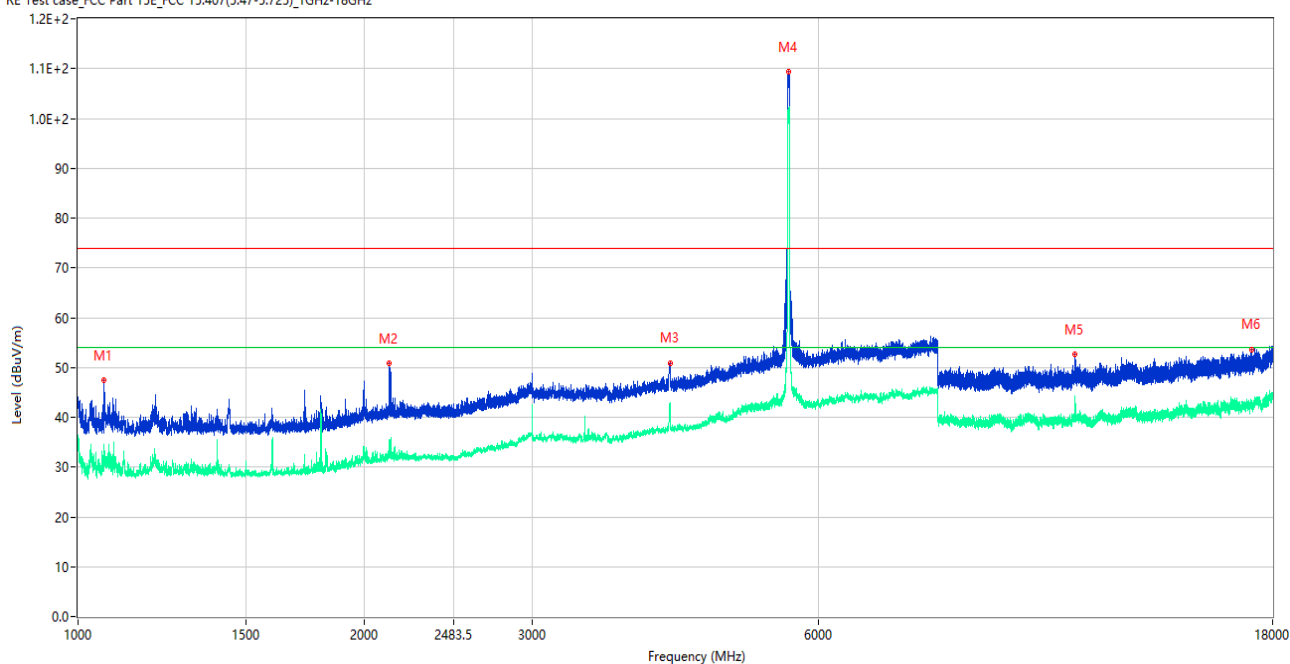
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1065.750	46.76	-15.57	74.0	27.24	Peak	119.00	150	Vertical	Pass
1**	1065.750	32.81	-15.57	54.0	21.19	AV	119.00	150	Vertical	Pass
2	1328.750	47.95	-15.50	74.0	26.05	Peak	101.00	150	Vertical	Pass
2**	1328.750	29.46	-15.50	54.0	24.54	AV	101.00	150	Vertical	Pass
3	2133.500	57.43	-11.87	74.0	16.57	Peak	132.00	150	Vertical	Pass
3**	2133.500	36.52	-11.87	54.0	17.48	AV	132.00	150	Vertical	Pass
4	5316.000	85.27	-0.54	74.0	-11.27	Peak	119.00	150	Vertical	N/A
4**	5316.000	75.64	-0.54	54.0	-21.64	AV	119.00	150	Vertical	N/A
5	7990.000	56.84	3.59	74.0	17.16	Peak	50.00	150	Vertical	Pass
5**	7990.000	45.70	3.59	54.0	8.30	AV	50.00	150	Vertical	Pass
6	14595.900	52.63	1.23	74.0	21.37	Peak	206.00	150	Vertical	Pass
6**	14595.900	42.53	1.23	54.0	11.47	AV	206.00	150	Vertical	Pass

11a, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT H

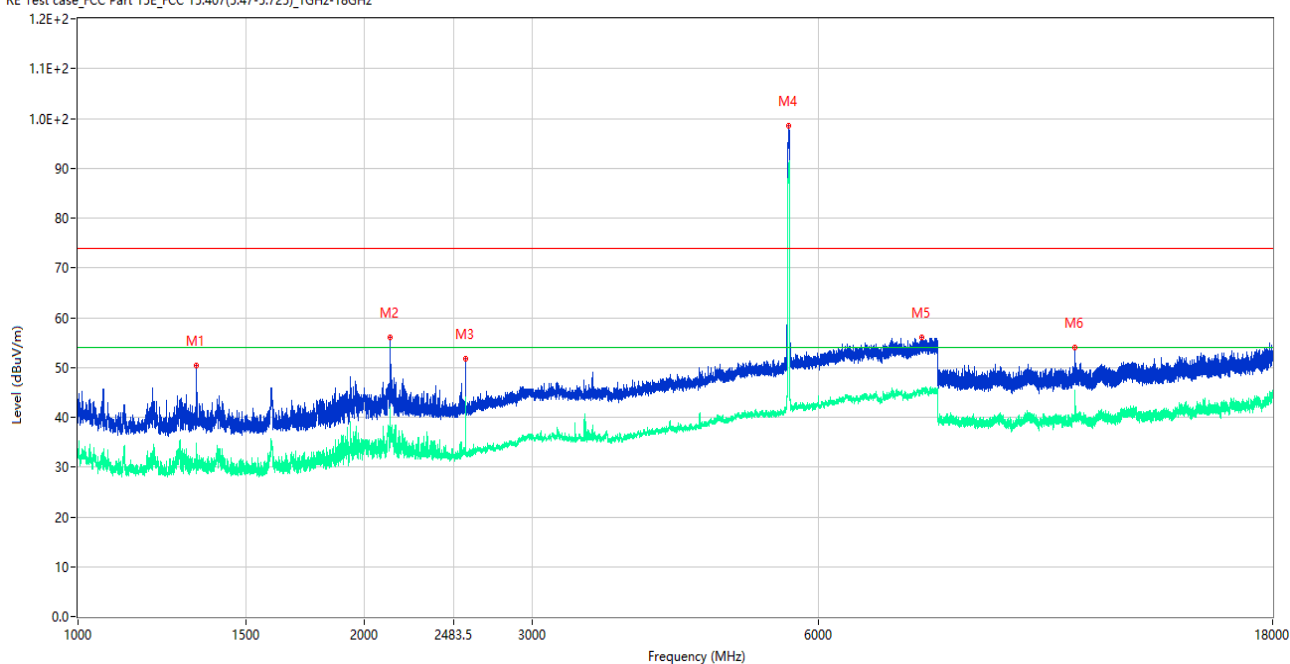
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1065.500	47.42	-15.57	74.0	26.58	Peak	40.00	150	Horizontal	Pass
1**	1065.500	31.82	-15.57	54.0	22.18	AV	40.00	150	Horizontal	Pass
2	2123.250	50.88	-12.25	74.0	23.12	Peak	147.00	150	Horizontal	Pass
2**	2123.250	32.17	-12.25	54.0	21.83	AV	147.00	150	Horizontal	Pass
3	4189.000	50.95	-2.83	74.0	23.05	Peak	190.00	150	Horizontal	Pass
3**	4189.000	42.33	-2.83	54.0	11.67	AV	190.00	150	Horizontal	Pass
4	5576.500	109.30	-0.76	74.0	-35.30	Peak	200.00	150	Horizontal	N/A
4**	5576.500	100.96	-0.76	54.0	-46.96	AV	200.00	150	Horizontal	N/A
5	11153.287	52.72	-1.28	74.0	21.28	Peak	164.00	150	Horizontal	Pass
5**	11153.287	42.54	-1.28	54.0	11.46	AV	164.00	150	Horizontal	Pass
6	17130.864	53.66	2.56	74.0	20.34	Peak	0.00	150	Horizontal	Pass
6**	17130.864	42.63	2.56	54.0	11.37	AV	0.00	150	Horizontal	Pass

11a, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT V

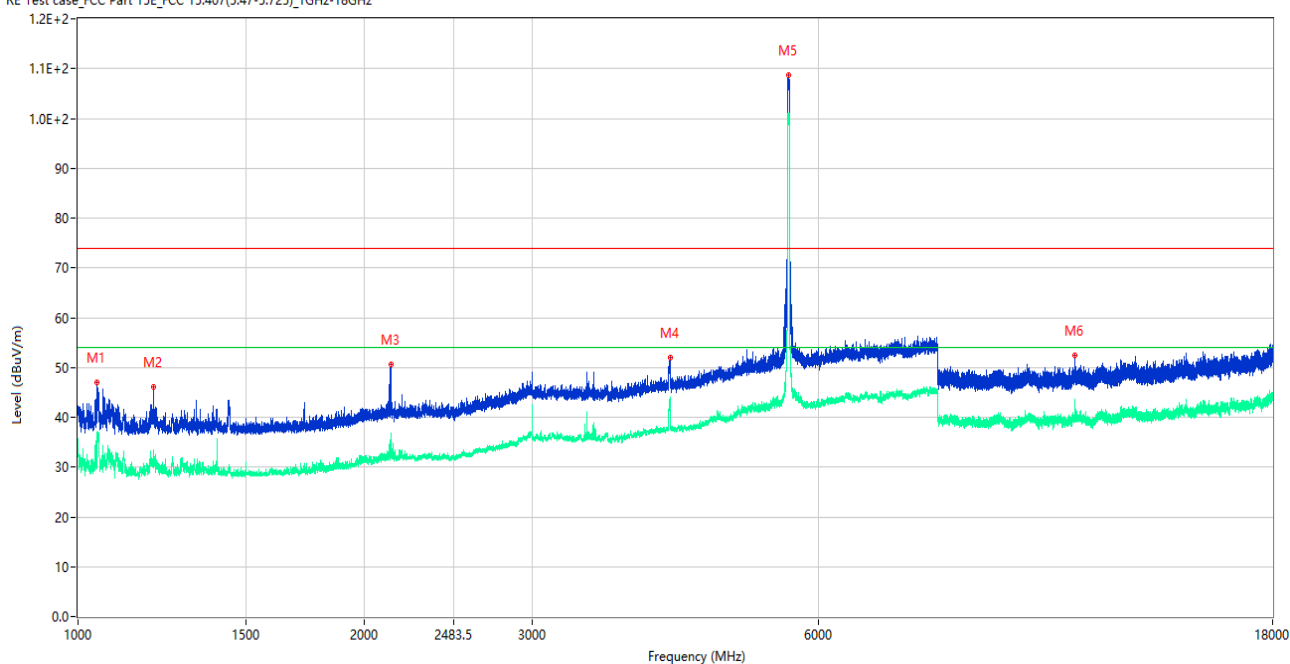
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.750	50.37	-15.55	74.0	23.63	Peak	129.00	150	Vertical	Pass
1**	1332.750	34.47	-15.55	54.0	19.53	AV	129.00	150	Vertical	Pass
2	2128.000	56.11	-12.12	74.0	17.89	Peak	101.00	150	Vertical	Pass
2**	2128.000	38.00	-12.12	54.0	16.00	AV	101.00	150	Vertical	Pass
3	2552.500	51.66	-9.63	74.0	22.34	Peak	360.00	150	Vertical	Pass
3**	2552.500	35.96	-9.63	54.0	18.04	AV	360.00	150	Vertical	Pass
4	5587.000	98.45	-0.61	74.0	-24.45	Peak	280.00	150	Vertical	N/A
4**	5587.000	90.51	-0.61	54.0	-36.51	AV	280.00	150	Vertical	N/A
5	7700.000	56.08	3.74	74.0	17.92	Peak	81.00	150	Vertical	Pass
5**	7700.000	45.31	3.74	54.0	8.69	AV	81.00	150	Vertical	Pass
6	11159.224	54.10	-1.35	74.0	19.90	Peak	89.00	150	Vertical	Pass
6**	11159.224	42.97	-1.35	54.0	11.03	AV	89.00	150	Vertical	Pass

11ac20, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT H

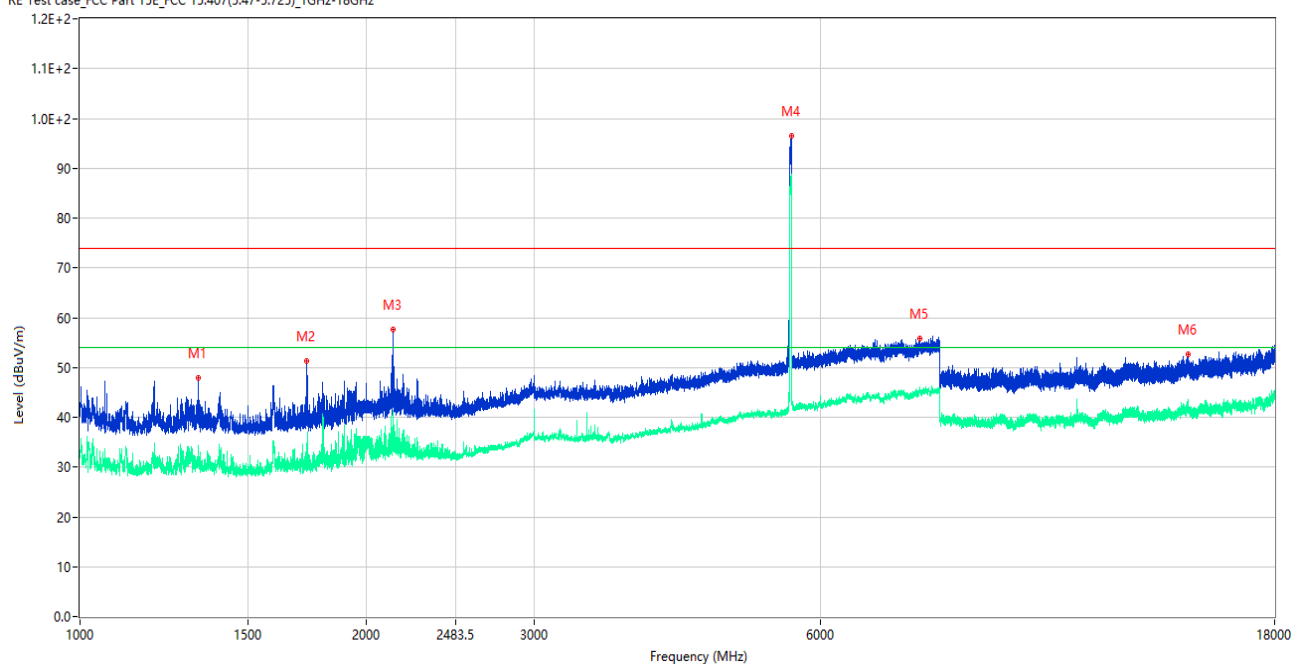
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1047.000	46.91	-15.72	74.0	27.09	Peak	161.00	150	Horizontal	Pass
1**	1047.000	36.01	-15.72	54.0	17.99	AV	161.00	150	Horizontal	Pass
2	1200.000	46.06	-15.31	74.0	27.94	Peak	230.00	150	Horizontal	Pass
2**	1200.000	31.10	-15.31	54.0	22.90	AV	230.00	150	Horizontal	Pass
3	2132.500	50.52	-11.93	74.0	23.48	Peak	148.00	150	Horizontal	Pass
3**	2132.500	32.49	-11.93	54.0	21.51	AV	148.00	150	Horizontal	Pass
4	4188.000	51.87	-2.90	74.0	22.13	Peak	191.00	150	Horizontal	Pass
4**	4188.000	43.98	-2.90	54.0	10.02	AV	191.00	150	Horizontal	Pass
5	5577.500	108.69	-0.75	74.0	-34.69	Peak	200.00	150	Horizontal	N/A
5**	5577.500	100.40	-0.75	54.0	-46.40	AV	200.00	150	Horizontal	N/A
6	11159.700	52.46	-1.25	74.0	21.54	Peak	164.00	150	Horizontal	Pass
6**	11159.700	42.77	-1.25	54.0	11.23	AV	164.00	150	Horizontal	Pass

11ac20, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT V

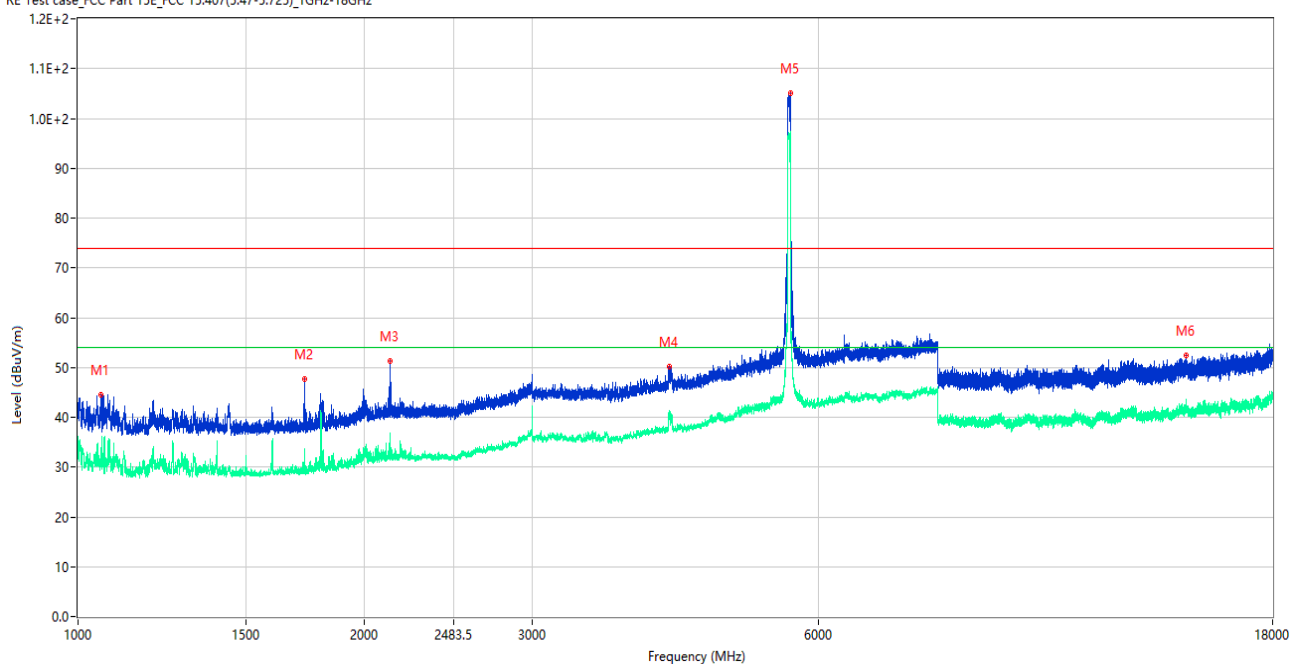
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.000	47.85	-15.53	74.0	26.15	Peak	95.00	150	Vertical	Pass
1**	1332.000	31.14	-15.53	54.0	22.86	AV	95.00	150	Vertical	Pass
2	1732.250	51.34	-15.36	74.0	22.66	Peak	100.00	150	Vertical	Pass
2**	1732.250	30.21	-15.36	54.0	23.79	AV	100.00	150	Vertical	Pass
3	2130.750	57.61	-12.00	74.0	16.39	Peak	147.00	150	Vertical	Pass
3**	2130.750	34.76	-12.00	54.0	19.24	AV	147.00	150	Vertical	Pass
4	5588.000	96.51	-0.60	74.0	-22.51	Peak	281.00	150	Vertical	N/A
4**	5588.000	88.50	-0.60	54.0	-34.50	AV	281.00	150	Vertical	N/A
5	7629.500	55.88	3.03	74.0	18.12	Peak	0.00	150	Vertical	Pass
5**	7629.500	45.30	3.03	54.0	8.70	AV	0.00	150	Vertical	Pass
6	14588.550	52.63	0.97	74.0	21.37	Peak	0.00	150	Vertical	Pass
6**	14588.550	42.28	0.97	54.0	11.72	AV	0.00	150	Vertical	Pass

11ac40, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT H

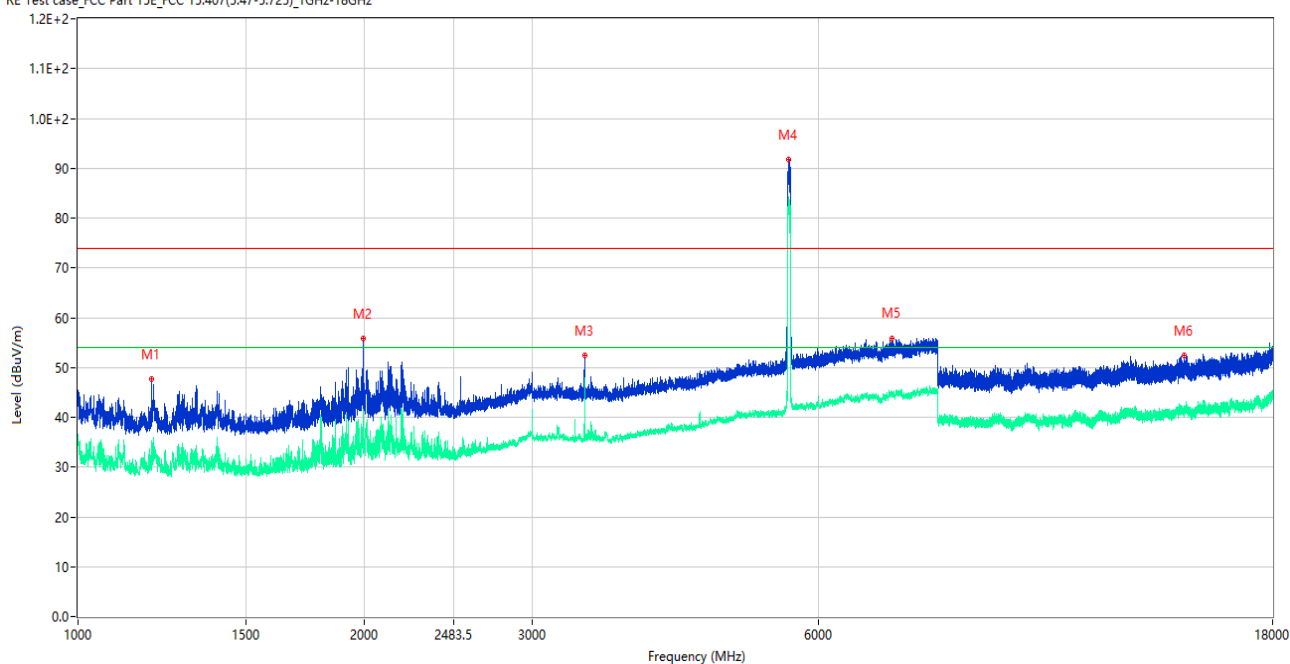
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1056.000	44.50	-15.63	74.0	29.50	Peak	155.00	150	Horizontal	Pass
1**	1056.000	32.78	-15.63	54.0	21.22	AV	155.00	150	Horizontal	Pass
2	1730.750	47.70	-15.34	74.0	26.30	Peak	124.00	150	Horizontal	Pass
2**	1730.750	29.92	-15.34	54.0	24.08	AV	124.00	150	Horizontal	Pass
3	2126.750	51.28	-12.16	74.0	22.72	Peak	147.00	150	Horizontal	Pass
3**	2126.750	33.24	-12.16	54.0	20.76	AV	147.00	150	Horizontal	Pass
4	4178.000	50.23	-3.20	74.0	23.77	Peak	191.00	150	Horizontal	Pass
4**	4178.000	40.62	-3.20	54.0	13.38	AV	191.00	150	Horizontal	Pass
5	5605.500	105.03	-0.46	74.0	-31.03	Peak	202.00	150	Horizontal	N/A
5**	5605.500	97.43	-0.46	54.0	-43.43	AV	202.00	150	Horizontal	N/A
6	14595.112	52.34	1.14	74.0	21.66	Peak	139.00	150	Horizontal	Pass
6**	14595.112	42.47	1.14	54.0	11.53	AV	139.00	150	Horizontal	Pass

11ac40, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT V

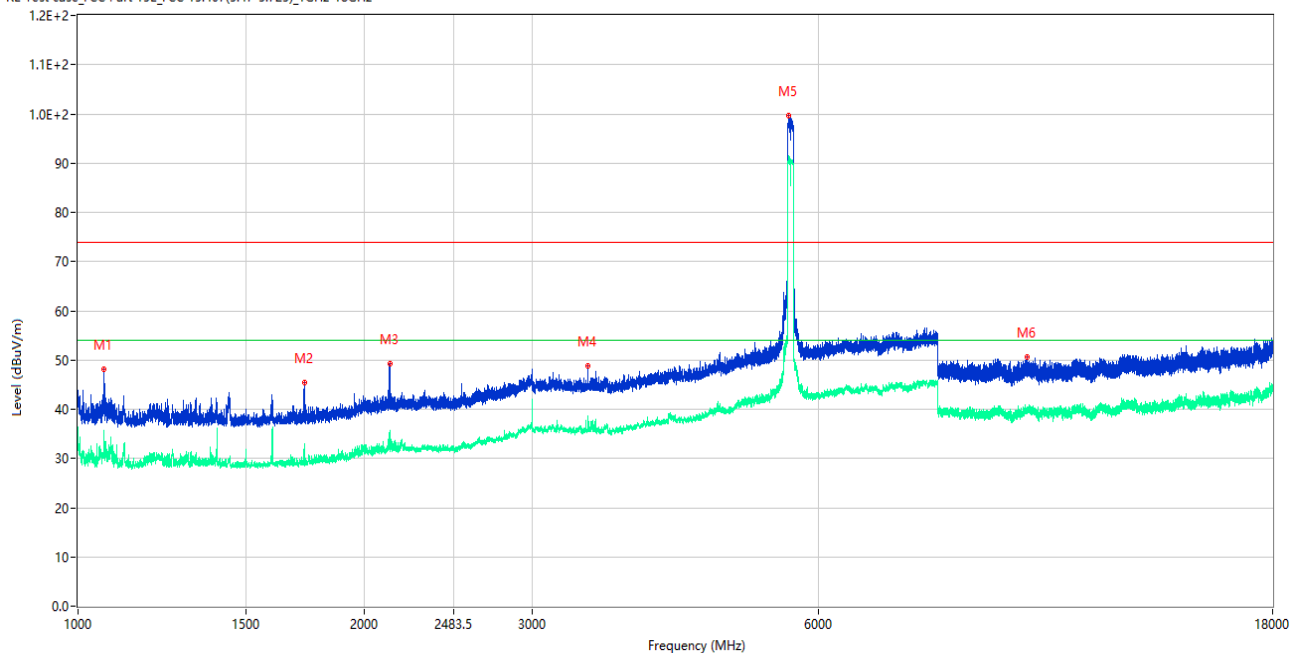
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1194.750	47.72	-15.23	74.0	26.28	Peak	223.00	150	Vertical	Pass
1**	1194.750	30.39	-15.23	54.0	23.61	AV	223.00	150	Vertical	Pass
2	1995.500	55.84	-13.34	74.0	18.16	Peak	98.00	150	Vertical	Pass
2**	1995.500	36.57	-13.34	54.0	17.43	AV	98.00	150	Vertical	Pass
3	3405.500	52.51	-6.22	74.0	21.49	Peak	209.00	150	Vertical	Pass
3**	3405.500	46.87	-6.22	54.0	7.13	AV	209.00	150	Vertical	Pass
4	5586.500	91.77	-0.59	74.0	-17.77	Peak	280.00	150	Vertical	N/A
4**	5586.500	84.35	-0.59	54.0	-30.35	AV	280.00	150	Vertical	N/A
5	7165.500	55.91	2.28	74.0	18.09	Peak	209.00	150	Vertical	Pass
5**	7165.500	44.73	2.28	54.0	9.27	AV	209.00	150	Vertical	Pass
6	14538.412	52.33	0.35	74.0	21.67	Peak	104.00	150	Vertical	Pass
6**	14538.412	41.27	0.35	54.0	12.73	AV	104.00	150	Vertical	Pass

11ac80, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT H

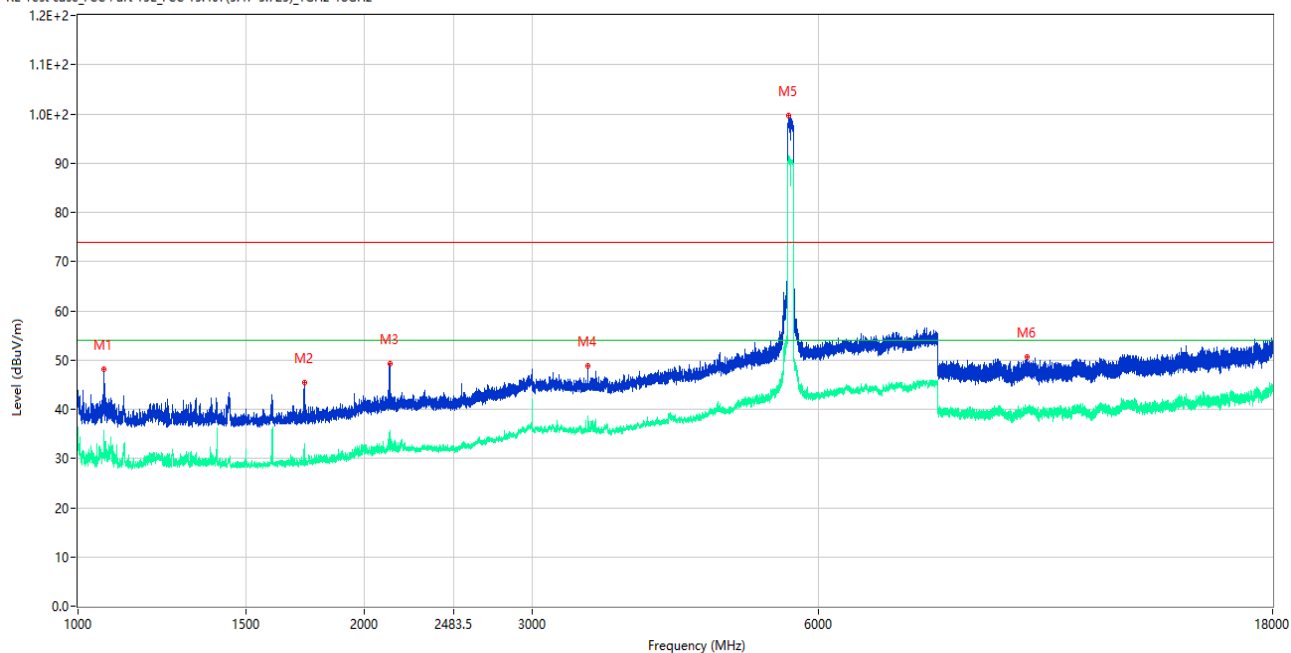
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1065.250	48.18	-15.57	74.0	25.82	Peak	154.00	150	Horizontal	Pass
1**	1065.250	29.98	-15.57	54.0	24.02	AV	154.00	150	Horizontal	Pass
2	1730.250	45.40	-15.30	74.0	28.60	Peak	114.00	150	Horizontal	Pass
2**	1730.250	28.79	-15.30	54.0	25.21	AV	114.00	150	Horizontal	Pass
3	2127.000	49.28	-12.15	74.0	24.72	Peak	147.00	150	Horizontal	Pass
3**	2127.000	32.45	-12.15	54.0	21.55	AV	147.00	150	Horizontal	Pass
4	3434.000	48.81	-5.74	74.0	25.19	Peak	279.00	150	Horizontal	Pass
4**	3434.000	36.27	-5.74	54.0	17.73	AV	279.00	150	Horizontal	Pass
5	5581.500	99.66	-0.71	74.0	-25.66	Peak	190.00	150	Horizontal	N/A
5**	5581.500	91.40	-0.71	54.0	-37.40	AV	190.00	150	Horizontal	N/A
6	9928.738	50.59	-1.07	74.0	23.41	Peak	0.00	150	Horizontal	Pass
6**	9928.738	39.13	-1.07	54.0	14.87	AV	0.00	150	Horizontal	Pass

11ac80, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT V

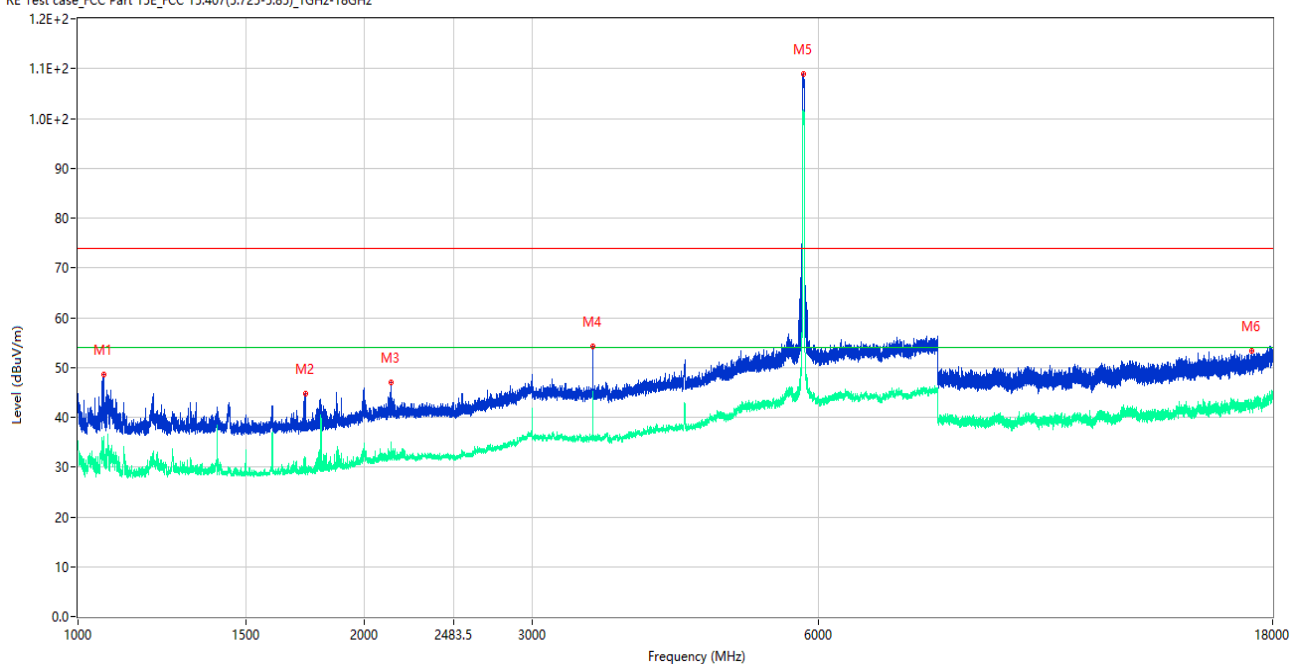
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1327.500	50.71	-15.50	74.0	23.29	Peak	111.00	150	Vertical	Pass
1**	1327.500	31.46	-15.50	54.0	22.54	AV	111.00	150	Vertical	Pass
2	1998.500	52.55	-13.21	74.0	21.45	Peak	102.00	150	Vertical	Pass
2**	1998.500	36.75	-13.21	54.0	17.25	AV	102.00	150	Vertical	Pass
3	2125.500	53.76	-12.20	74.0	20.24	Peak	125.00	150	Vertical	Pass
3**	2125.500	33.49	-12.20	54.0	20.51	AV	125.00	150	Vertical	Pass
4	3435.500	48.73	-5.69	74.0	25.27	Peak	8.00	150	Vertical	Pass
4**	3435.500	38.93	-5.69	54.0	15.07	AV	8.00	150	Vertical	Pass
5	5583.500	89.17	-0.66	74.0	-15.17	Peak	271.00	150	Vertical	N/A
5**	5583.500	80.63	-0.66	54.0	-26.63	AV	271.00	150	Vertical	N/A
6	16111.838	54.04	1.79	74.0	19.96	Peak	345.00	150	Vertical	Pass
6**	16111.838	42.47	1.79	54.0	11.53	AV	345.00	150	Vertical	Pass

11a, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT H

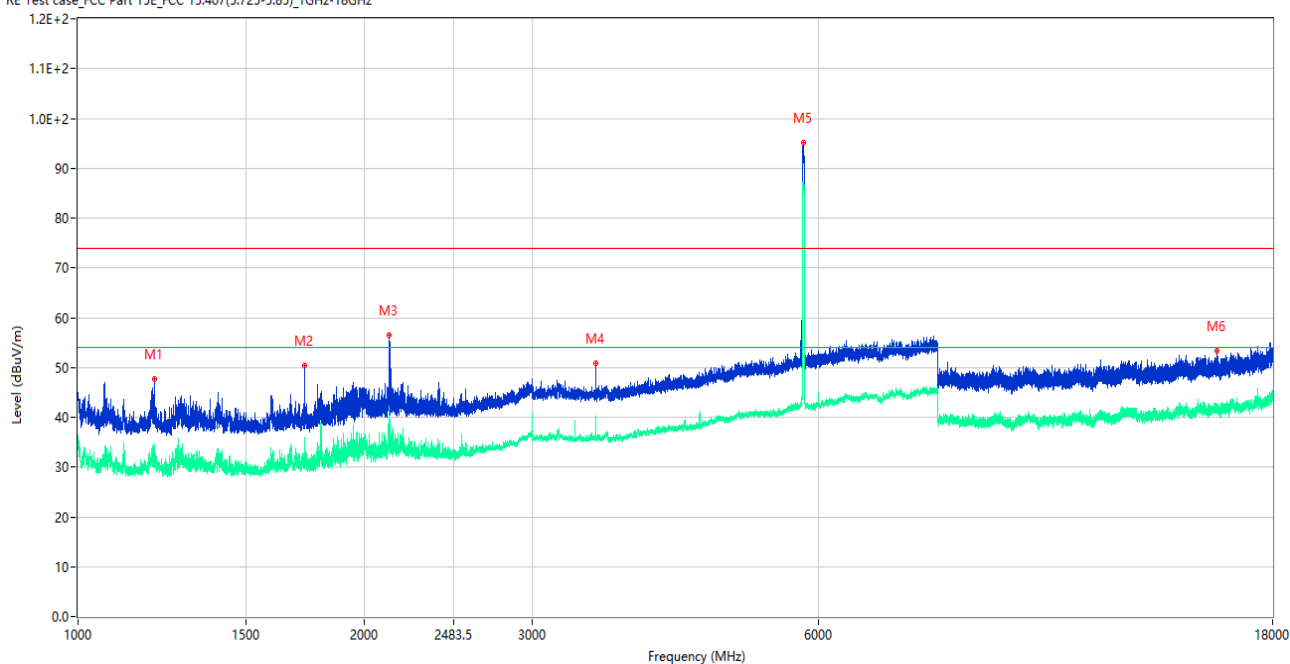
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1064.500	48.58	-15.56	74.0	25.42	Peak	210.00	150	Horizontal	Pass
1**	1064.500	31.44	-15.56	54.0	22.56	AV	210.00	150	Horizontal	Pass
2	1733.750	44.83	-15.39	74.0	29.17	Peak	119.00	150	Horizontal	Pass
2**	1733.750	28.50	-15.39	54.0	25.50	AV	119.00	150	Horizontal	Pass
3	2131.500	46.95	-11.98	74.0	27.05	Peak	169.00	150	Horizontal	Pass
3**	2131.500	32.41	-11.98	54.0	21.59	AV	169.00	150	Horizontal	Pass
4	3474.000	54.22	-6.22	74.0	19.78	Peak	239.00	150	Horizontal	Pass
4**	3474.000	35.54	-6.22	54.0	18.46	AV	239.00	150	Horizontal	Pass
5	5792.000	108.98	0.34	74.0	-34.98	Peak	200.00	150	Horizontal	N/A
5**	5792.000	101.04	0.34	54.0	-47.04	AV	200.00	150	Horizontal	N/A
6	17095.687	53.33	2.22	74.0	20.67	Peak	240.00	150	Horizontal	Pass
6**	17095.687	42.89	2.22	54.0	11.11	AV	240.00	150	Horizontal	Pass

11a, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT V

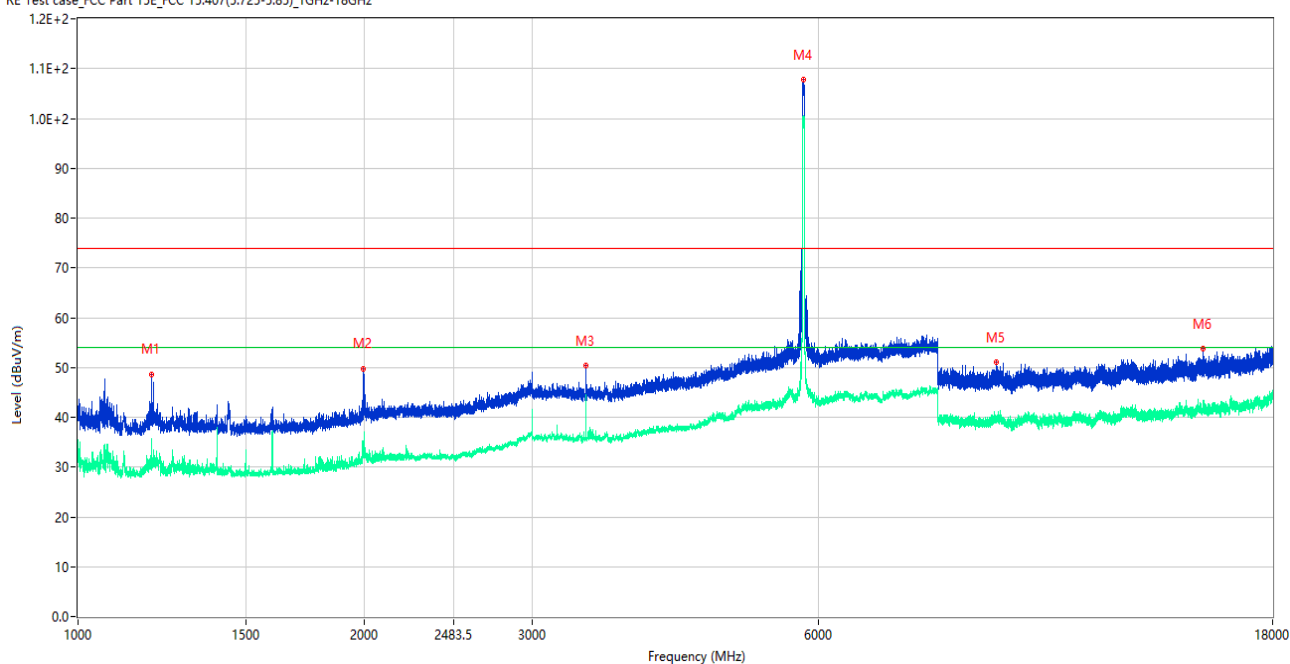
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1203.750	47.67	-15.32	74.0	26.33	Peak	121.00	150	Vertical	Pass
1**	1203.750	32.23	-15.32	54.0	21.77	AV	121.00	150	Vertical	Pass
2	1729.750	50.48	-15.26	74.0	23.52	Peak	104.00	150	Vertical	Pass
2**	1729.750	32.04	-15.26	54.0	21.96	AV	104.00	150	Vertical	Pass
3	2124.500	56.54	-12.23	74.0	17.46	Peak	126.00	150	Vertical	Pass
3**	2124.500	35.52	-12.23	54.0	18.48	AV	126.00	150	Vertical	Pass
4	3497.000	50.84	-5.74	74.0	23.16	Peak	192.00	150	Vertical	Pass
4**	3497.000	35.83	-5.74	54.0	18.17	AV	192.00	150	Vertical	Pass
5	5783.000	95.05	0.32	74.0	-21.05	Peak	268.00	150	Vertical	N/A
5**	5783.000	87.28	0.32	54.0	-33.28	AV	268.00	150	Vertical	N/A
6	15724.125	53.28	1.30	74.0	20.72	Peak	276.00	150	Vertical	Pass
6**	15724.125	41.92	1.30	54.0	12.08	AV	276.00	150	Vertical	Pass

11ac20, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT H

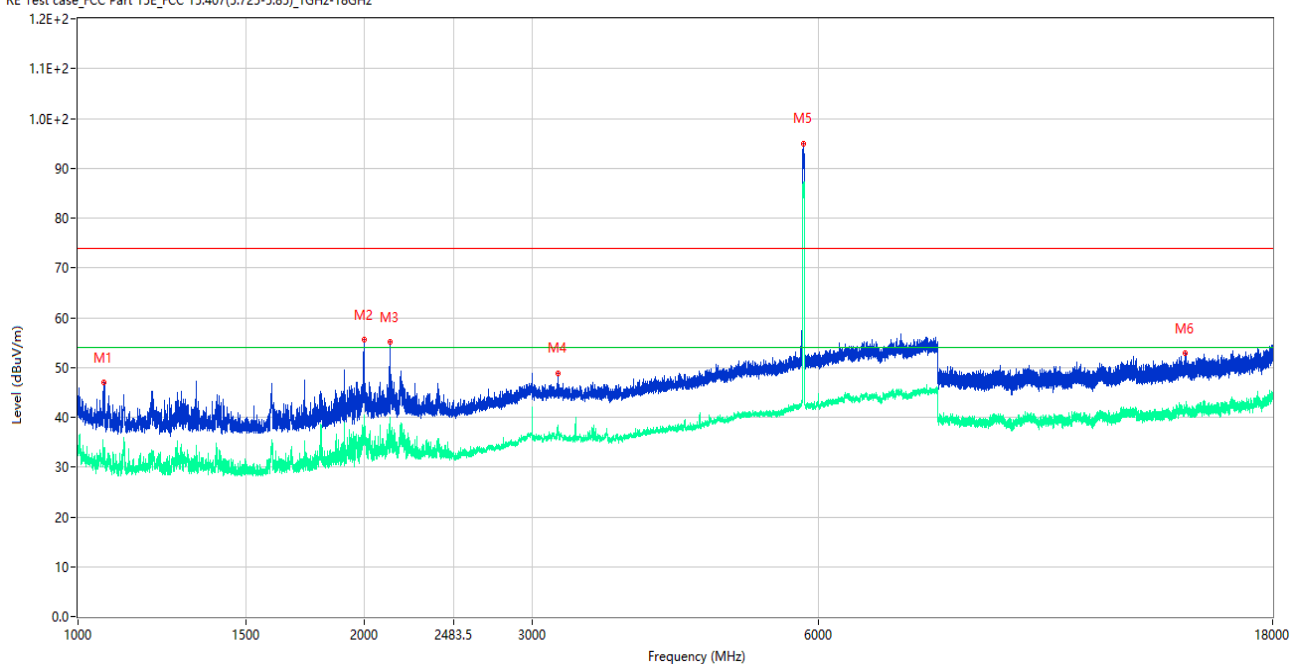
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1195.250	48.68	-15.25	74.0	25.32	Peak	223.00	150	Horizontal	Pass
1**	1195.250	30.92	-15.25	54.0	23.08	AV	223.00	150	Horizontal	Pass
2	1995.250	49.82	-13.35	74.0	24.18	Peak	80.00	150	Horizontal	Pass
2**	1995.250	32.00	-13.35	54.0	22.00	AV	80.00	150	Horizontal	Pass
3	3417.500	50.46	-5.79	74.0	23.54	Peak	231.00	150	Horizontal	Pass
3**	3417.500	36.58	-5.79	54.0	17.42	AV	231.00	150	Horizontal	Pass
4	5786.500	107.85	0.39	74.0	-33.85	Peak	210.00	150	Horizontal	N/A
4**	5786.500	99.35	0.39	54.0	-45.35	AV	210.00	150	Horizontal	N/A
5	9229.300	51.11	-2.44	74.0	22.89	Peak	245.00	150	Horizontal	Pass
5**	9229.300	39.43	-2.44	54.0	14.57	AV	245.00	150	Horizontal	Pass
6	15216.975	53.78	1.73	74.0	20.22	Peak	207.00	150	Horizontal	Pass
6**	15216.975	42.47	1.73	54.0	11.53	AV	207.00	150	Horizontal	Pass

11ac20, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT V

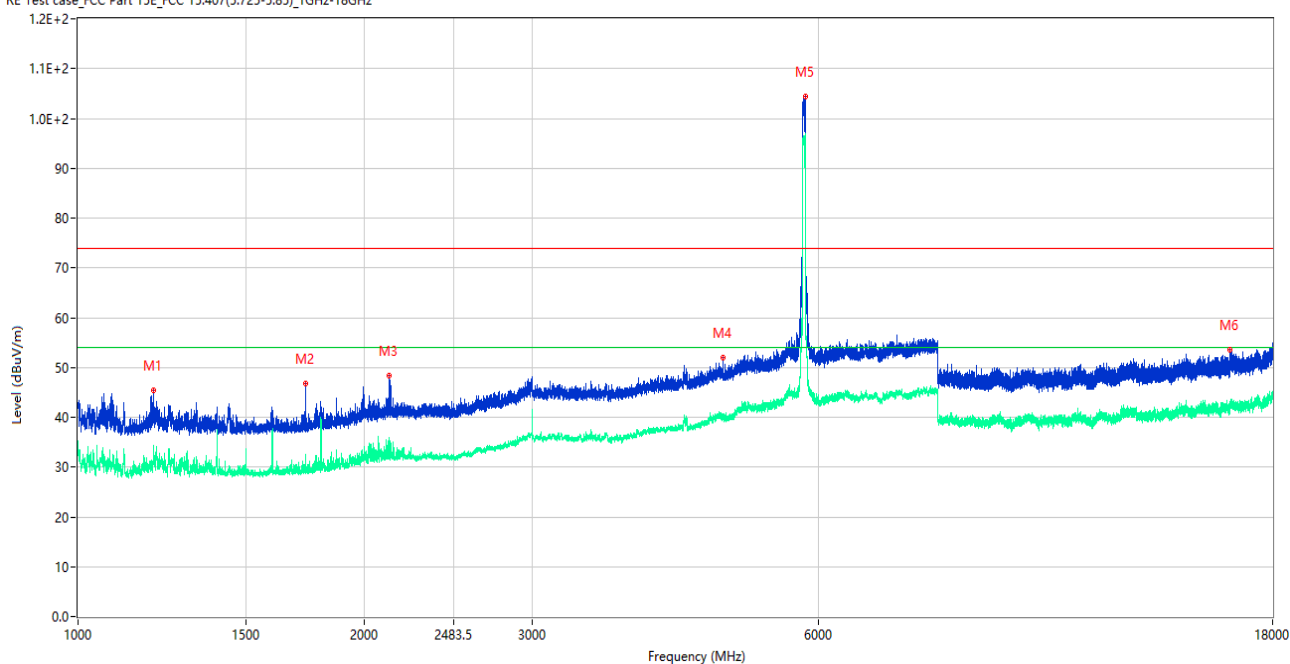
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1064.750	46.94	-15.57	74.0	27.06	Peak	119.00	150	Vertical	Pass
1**	1064.750	33.56	-15.57	54.0	20.44	AV	119.00	150	Vertical	Pass
2	1999.250	55.62	-13.17	74.0	18.38	Peak	102.00	150	Vertical	Pass
2**	1999.250	36.05	-13.17	54.0	17.95	AV	102.00	150	Vertical	Pass
3	2129.750	55.11	-12.05	74.0	18.89	Peak	127.00	150	Vertical	Pass
3**	2129.750	33.81	-12.05	54.0	20.19	AV	127.00	150	Vertical	Pass
4	3195.000	48.90	-6.60	74.0	25.10	Peak	121.00	150	Vertical	Pass
4**	3195.000	36.86	-6.60	54.0	17.14	AV	121.00	150	Vertical	Pass
5	5787.500	95.01	0.36	74.0	-21.01	Peak	271.00	150	Vertical	N/A
5**	5787.500	86.73	0.36	54.0	-32.73	AV	271.00	150	Vertical	N/A
6	14581.724	52.79	0.35	74.0	21.21	Peak	174.00	150	Vertical	Pass
6**	14581.724	42.09	0.35	54.0	11.91	AV	174.00	150	Vertical	Pass

11ac40, U-NII-3, 1 GHz to 18 GHz, High Channel, ANT H

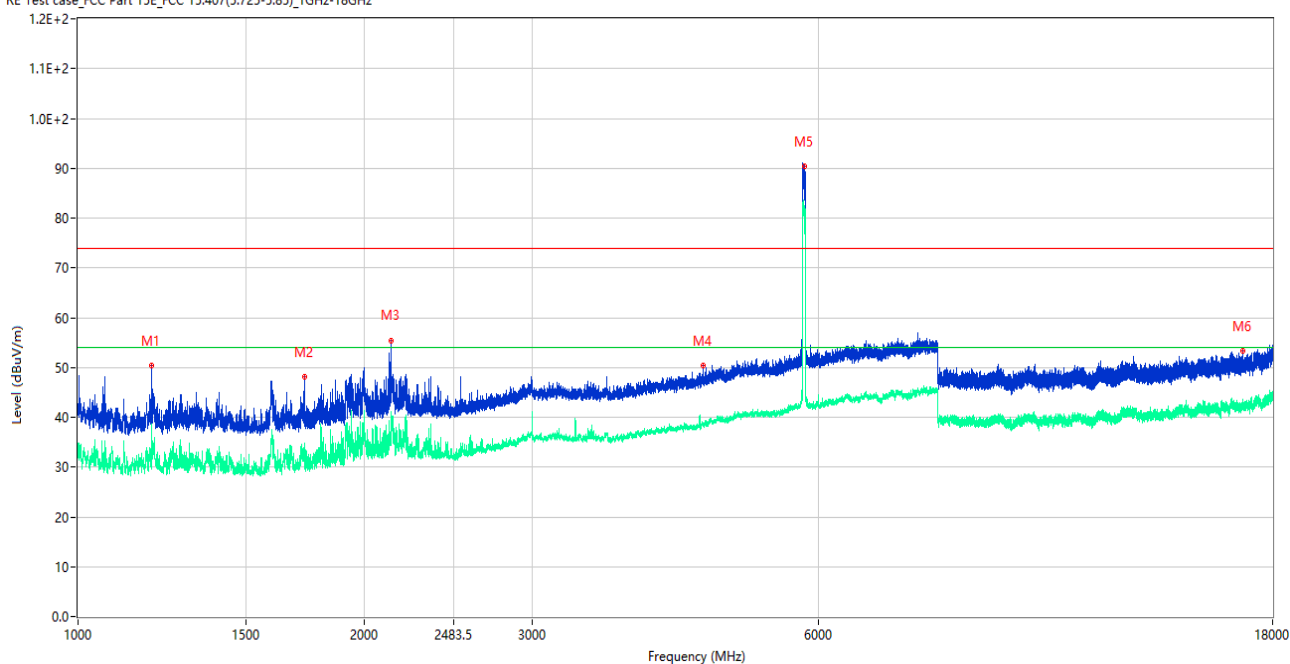
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1199.250	45.32	-15.30	74.0	28.68	Peak	180.00	150	Horizontal	Pass
1**	1199.250	31.93	-15.30	54.0	22.07	AV	180.00	150	Horizontal	Pass
2	1733.750	46.82	-15.39	74.0	27.18	Peak	123.00	150	Horizontal	Pass
2**	1733.750	29.12	-15.39	54.0	24.88	AV	123.00	150	Horizontal	Pass
3	2123.250	48.26	-12.25	74.0	25.74	Peak	92.00	150	Horizontal	Pass
3**	2123.250	33.91	-12.25	54.0	20.09	AV	92.00	150	Horizontal	Pass
4	4765.500	52.07	-1.79	74.0	21.93	Peak	223.00	150	Horizontal	Pass
4**	4765.500	39.71	-1.79	54.0	14.29	AV	223.00	150	Horizontal	Pass
5	5810.000	104.43	0.42	74.0	-30.43	Peak	202.00	150	Horizontal	N/A
5**	5810.000	96.97	0.42	54.0	-42.97	AV	202.00	150	Horizontal	N/A
6	16235.737	53.48	1.83	74.0	20.52	Peak	70.00	150	Horizontal	Pass
6**	16235.737	41.72	1.83	54.0	12.28	AV	70.00	150	Horizontal	Pass

11ac40, U-NII-3, 1 GHz to 18 GHz, High Channel, ANT V

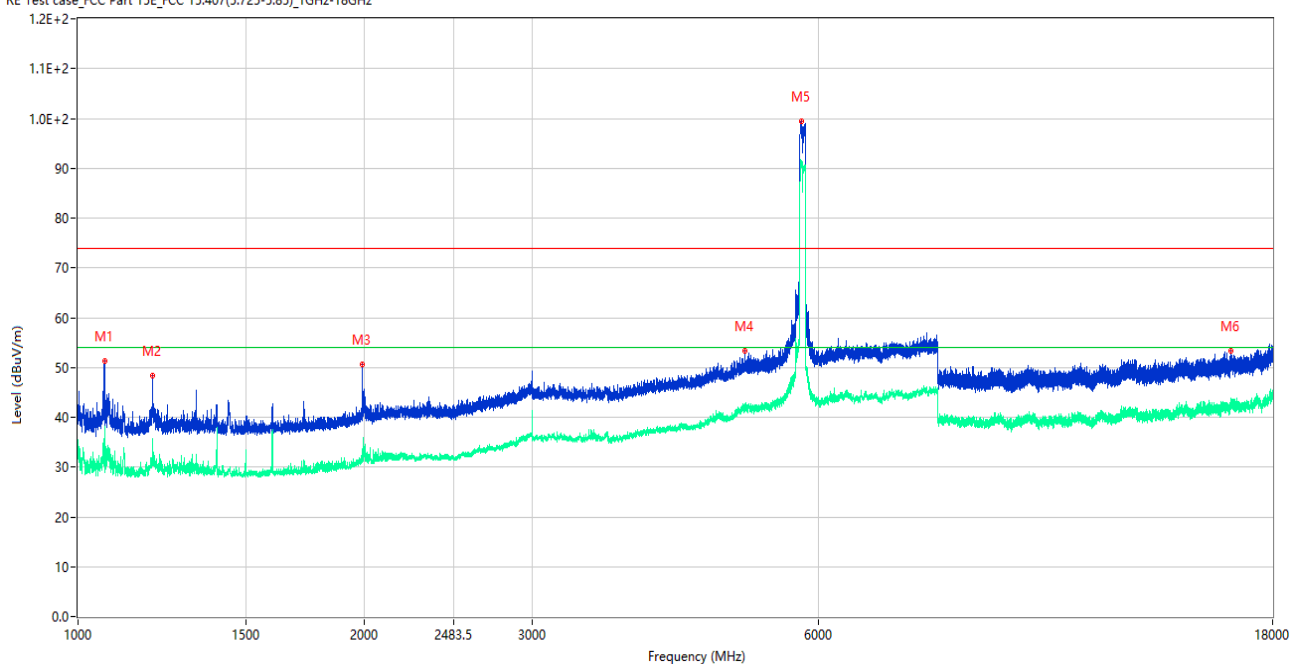
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1195.750	50.47	-15.26	74.0	23.53	Peak	118.00	150	Vertical	Pass
1**	1195.750	33.68	-15.26	54.0	20.32	AV	118.00	150	Vertical	Pass
2	1730.750	48.16	-15.34	74.0	25.84	Peak	77.00	150	Vertical	Pass
2**	1730.750	29.89	-15.34	54.0	24.11	AV	77.00	150	Vertical	Pass
3	2130.500	55.33	-12.01	74.0	18.67	Peak	158.00	150	Vertical	Pass
3**	2130.500	34.76	-12.01	54.0	19.24	AV	158.00	150	Vertical	Pass
4	4540.000	50.37	-2.22	74.0	23.63	Peak	278.00	150	Vertical	Pass
4**	4540.000	38.37	-2.22	54.0	15.63	AV	278.00	150	Vertical	Pass
5	5800.000	90.35	0.33	74.0	-16.35	Peak	278.00	150	Vertical	N/A
5**	5800.000	82.36	0.33	54.0	-28.36	AV	278.00	150	Vertical	N/A
6	16738.426	53.39	1.86	74.0	20.61	Peak	240.00	150	Vertical	Pass
6**	16738.426	42.45	1.86	54.0	11.55	AV	240.00	150	Vertical	Pass

11ac80, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT H

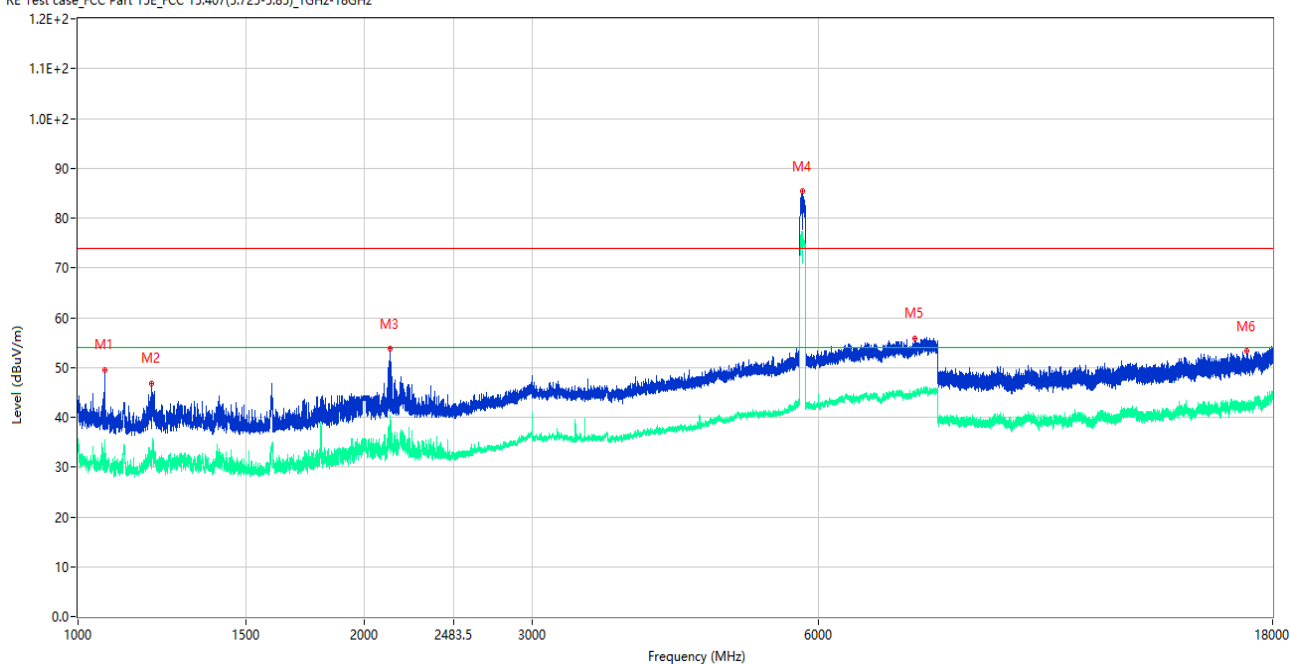
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1066.250	51.28	-15.57	74.0	22.72	Peak	185.00	150	Horizontal	Pass
1**	1066.250	31.30	-15.57	54.0	22.70	AV	185.00	150	Horizontal	Pass
2	1198.000	48.26	-15.27	74.0	25.74	Peak	217.00	150	Horizontal	Pass
2**	1198.000	32.42	-15.27	54.0	21.58	AV	217.00	150	Horizontal	Pass
3	1991.500	50.61	-13.38	74.0	23.39	Peak	119.00	150	Horizontal	Pass
3**	1991.500	31.74	-13.38	54.0	22.26	AV	119.00	150	Horizontal	Pass
4	5024.000	53.35	-0.75	74.0	20.65	Peak	198.00	150	Horizontal	Pass
4**	5024.000	41.81	-0.75	54.0	12.19	AV	198.00	150	Horizontal	Pass
5	5760.000	99.41	0.15	74.0	-25.41	Peak	207.00	150	Horizontal	N/A
5**	5760.000	90.83	0.15	54.0	-36.83	AV	207.00	150	Horizontal	N/A
6	16281.413	53.25	2.08	74.0	20.75	Peak	138.00	150	Horizontal	Pass
6**	16281.413	43.49	2.08	54.0	10.51	AV	138.00	150	Horizontal	Pass

11ac80, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT V

RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1066.750	49.59	-15.59	74.0	24.41	Peak	257.00	150	Vertical	Pass
1**	1066.750	30.14	-15.59	54.0	23.86	AV	257.00	150	Vertical	Pass
2	1196.000	46.87	-15.26	74.0	27.13	Peak	121.00	150	Vertical	Pass
2**	1196.000	31.24	-15.26	54.0	22.76	AV	121.00	150	Vertical	Pass
3	2127.000	53.84	-12.15	74.0	20.16	Peak	121.00	150	Vertical	Pass
3**	2127.000	37.98	-12.15	54.0	16.02	AV	121.00	150	Vertical	Pass
4	5773.000	85.40	0.43	74.0	-11.40	Peak	280.00	150	Vertical	N/A
4**	5773.000	75.02	0.43	54.0	-21.02	AV	280.00	150	Vertical	N/A
5	7567.000	55.80	3.14	74.0	18.20	Peak	309.00	150	Vertical	Pass
5**	7567.000	44.57	3.14	54.0	9.43	AV	309.00	150	Vertical	Pass
6	16895.137	53.28	2.19	74.0	20.72	Peak	172.00	150	Vertical	Pass
6**	16895.137	42.69	2.19	54.0	11.31	AV	172.00	150	Vertical	Pass

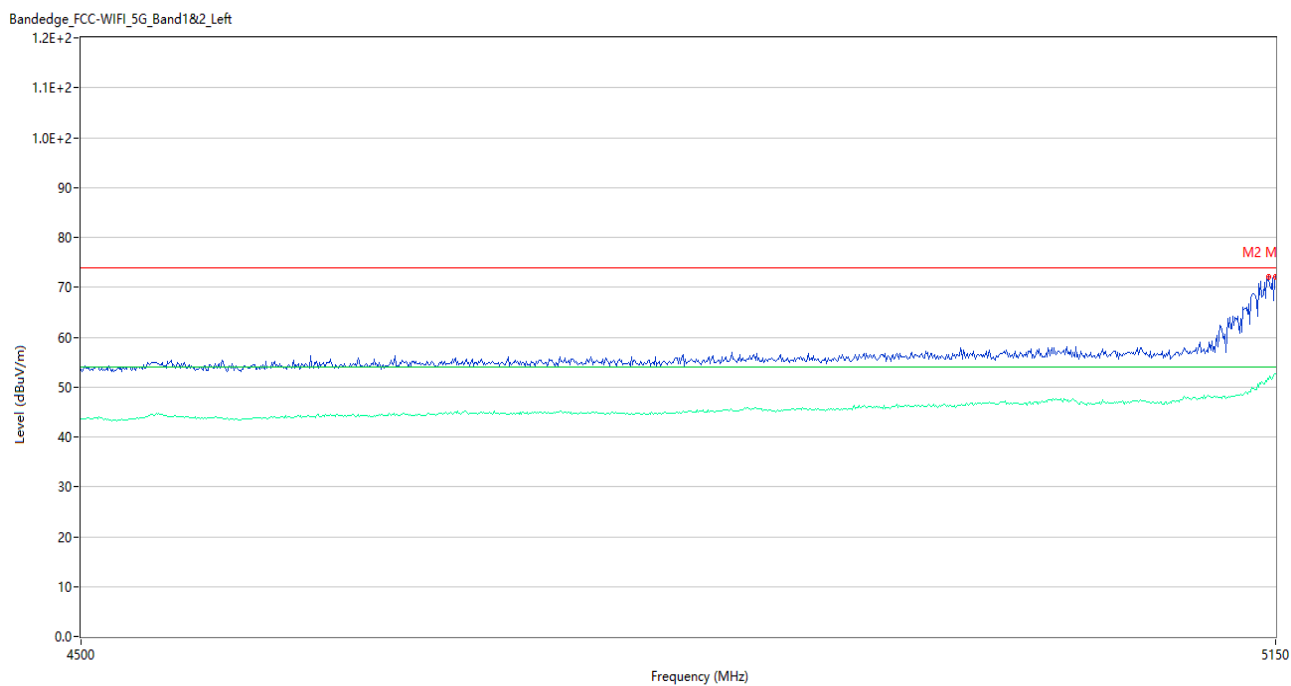
A.7 Band Edge (Restricted-band)

Test Band	Mode	Channel	Verdict
U-NII-1	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(VHT20)	Low	Pass
		High	Pass
U-NII-2A	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(VHT20)	Low	Pass
		High	Pass
U-NII-2C	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass
	802.11ac(VHT20)	Low	Pass
		High	Pass
U-NII-3	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
	802.11n(HT40)	Low	Pass
		High	Pass

Test Band	Mode	Channel	Verdict
	802.11ac(VHT20)	Low	Pass
		High	Pass
	802.11ac(VHT40)	Low	Pass
		High	Pass
	802.11ac(VHT80)	Middle	Pass

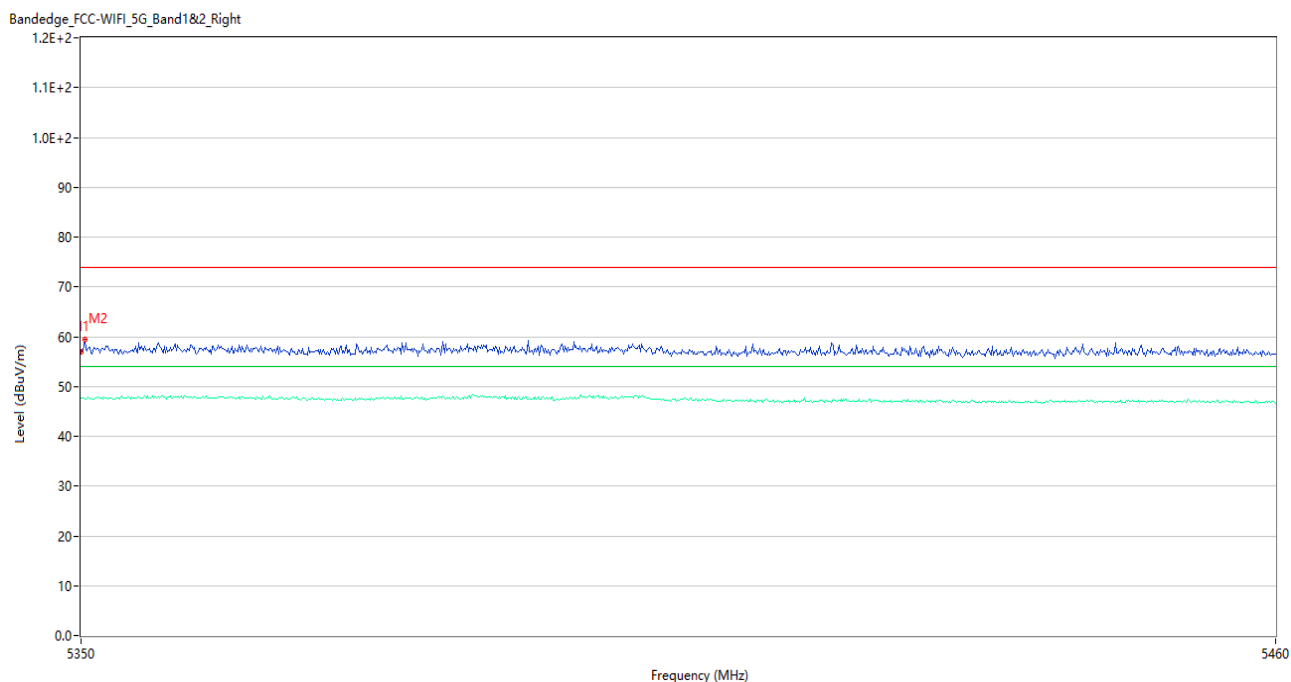
Test Plots

U-NII-1 11a Low Channel



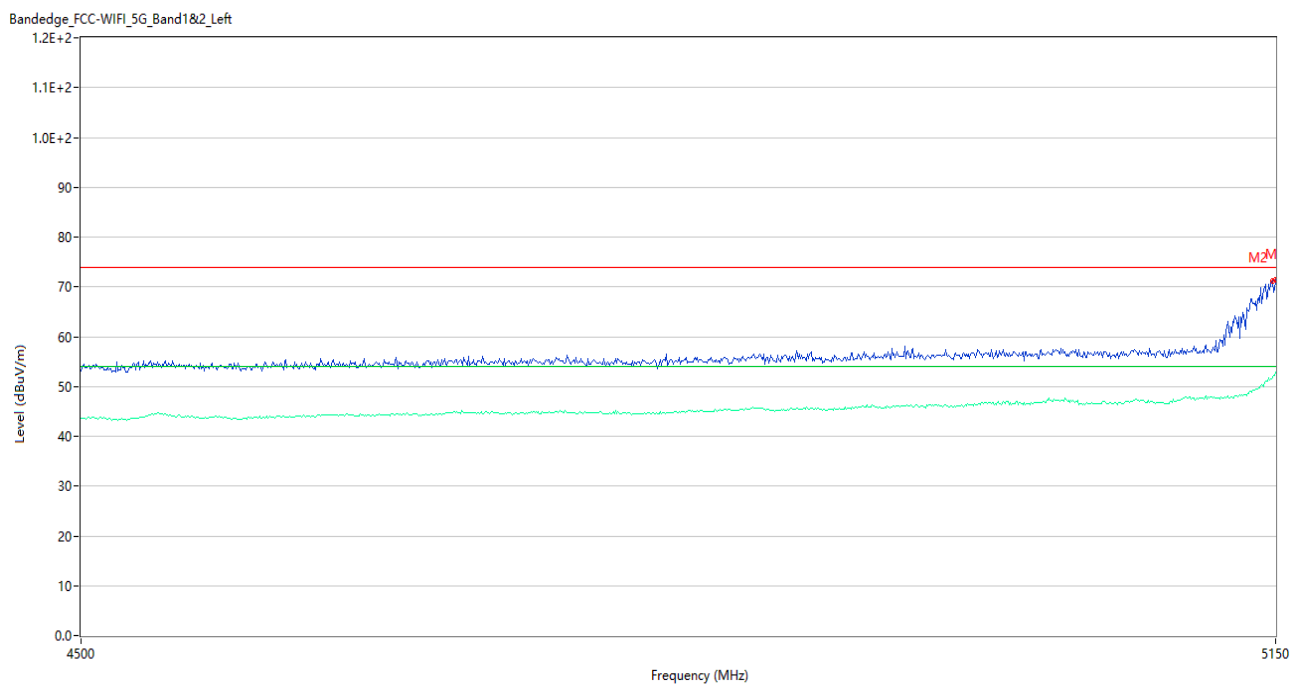
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	72.04	5.21	74.0	1.96	Peak	196.00	150	Horizontal	Pass
1**	5150.000	52.74	5.21	54.0	1.26	AV	196.00	150	Horizontal	Pass
2	5146.100	72.04	5.37	74.0	1.96	Peak	199.00	150	Horizontal	Pass
2**	5146.100	51.57	5.37	54.0	2.43	AV	199.00	150	Horizontal	Pass

U-NII-1 11a High Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	56.94	5.40	74.0	17.06	Peak	174.00	150	Horizontal	Pass
1**	5350.000	47.58	5.40	54.0	6.42	AV	174.00	150	Horizontal	Pass
2	5350.330	59.53	5.41	74.0	14.47	Peak	242.00	150	Horizontal	Pass
2**	5350.330	47.44	5.41	54.0	6.56	AV	242.00	150	Horizontal	Pass

U-NII-1 11ac20 Low Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	71.52	5.21	74.0	2.48	Peak	188.00	150	Horizontal	Pass
1**	5150.000	52.86	5.21	54.0	1.14	AV	188.00	150	Horizontal	Pass
2	5148.050	71.22	5.26	74.0	2.78	Peak	197.00	150	Horizontal	Pass
2**	5148.050	51.79	5.26	54.0	2.21	AV	197.00	150	Horizontal	Pass

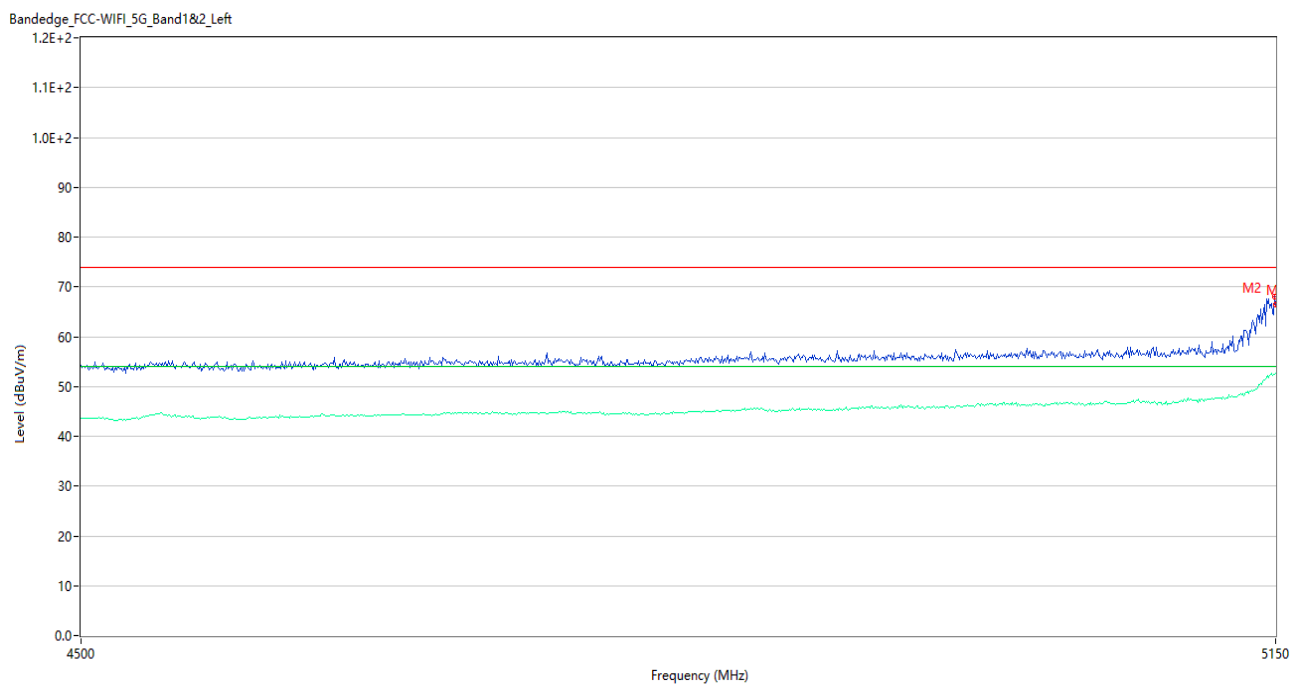
U-NII-1 11ac20 High Channel

Bandedge_FCC-WIFI_5G_Band1&2_Right



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	56.59	5.40	74.0	17.41	Peak	206.00	150	Vertical	Pass
1**	5350.000	47.73	5.40	54.0	6.27	AV	206.00	150	Vertical	Pass
2	5357.590	59.39	5.63	74.0	14.61	Peak	173.00	150	Vertical	Pass
2**	5357.590	47.51	5.63	54.0	6.49	AV	173.00	150	Vertical	Pass

U-NII-1 11ac40 Low Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	66.34	5.21	74.0	7.66	Peak	191.00	150	Vertical	Pass
1**	5150.000	52.72	5.21	54.0	1.28	AV	191.00	150	Vertical	Pass
2	5149.350	68.04	5.21	74.0	5.96	Peak	204.00	150	Vertical	Pass
2**	5149.350	52.53	5.21	54.0	1.47	AV	204.00	150	Vertical	Pass

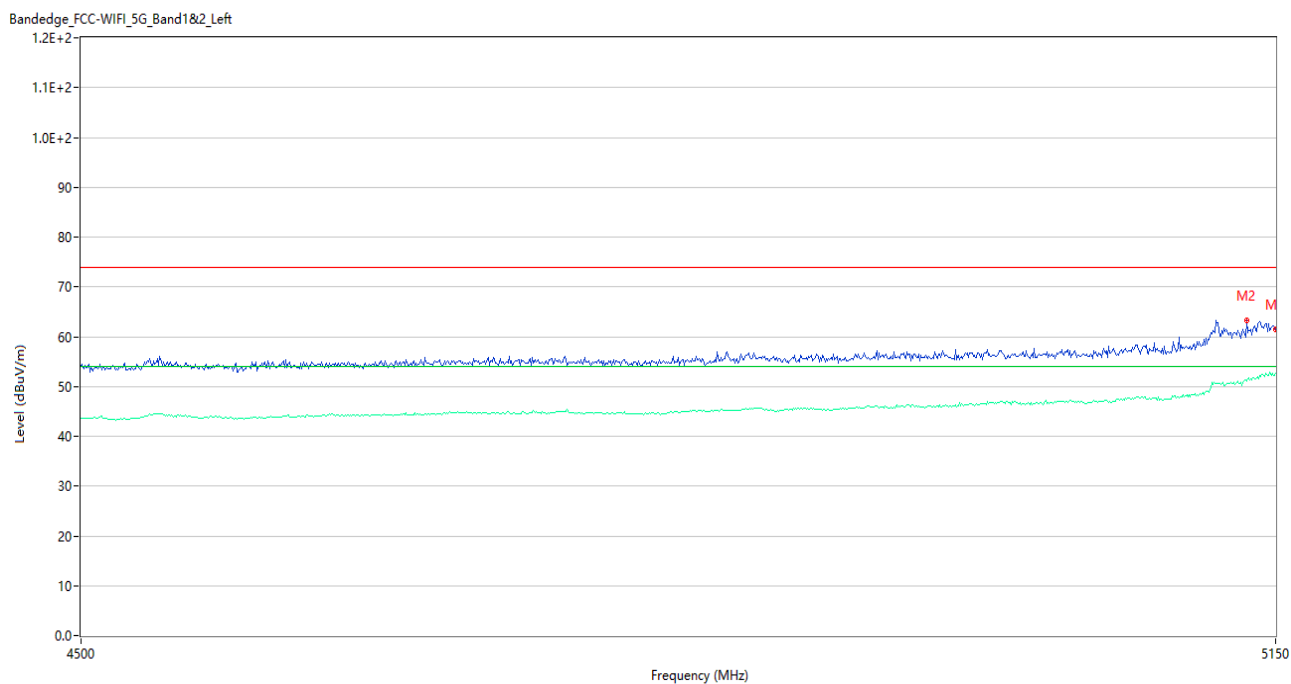
U-NII-1 11ac40 High Channel

Bandedge_FCC-WIFI_5G_Band1&2_Right



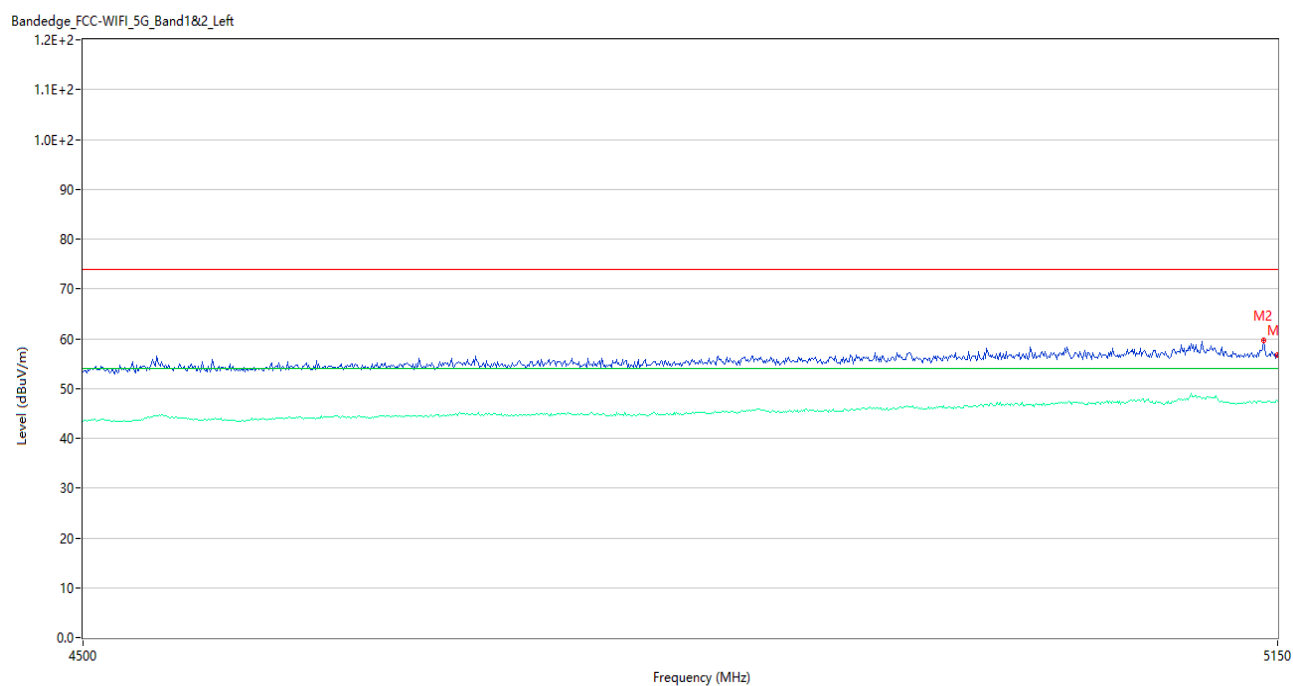
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	57.41	5.40	74.0	16.59	Peak	204.00	150	Vertical	Pass
1**	5350.000	47.57	5.40	54.0	6.43	AV	204.00	150	Vertical	Pass
2	5379.810	59.49	5.68	74.0	14.51	Peak	216.00	150	Vertical	Pass
2**	5379.810	47.44	5.68	54.0	6.56	AV	216.00	150	Vertical	Pass

U-NII-1 11ac80 Middle Channel



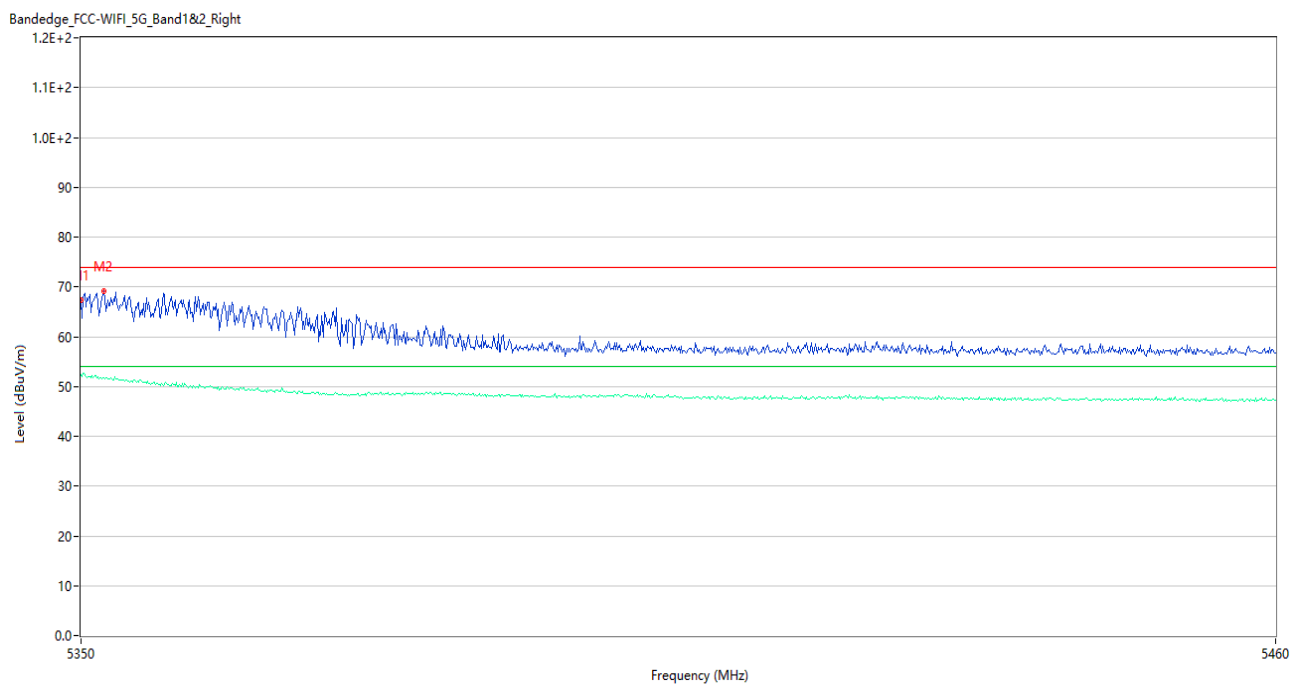
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	61.54	5.21	74.0	12.46	Peak	197.00	150	Vertical	Pass
1**	5150.000	52.60	5.21	54.0	1.40	AV	197.00	150	Vertical	Pass
2	5133.100	63.36	5.34	74.0	10.64	Peak	209.00	150	Vertical	Pass
2**	5133.100	51.08	5.34	54.0	2.92	AV	209.00	150	Vertical	Pass

U-NII-2A 11a Low Channel



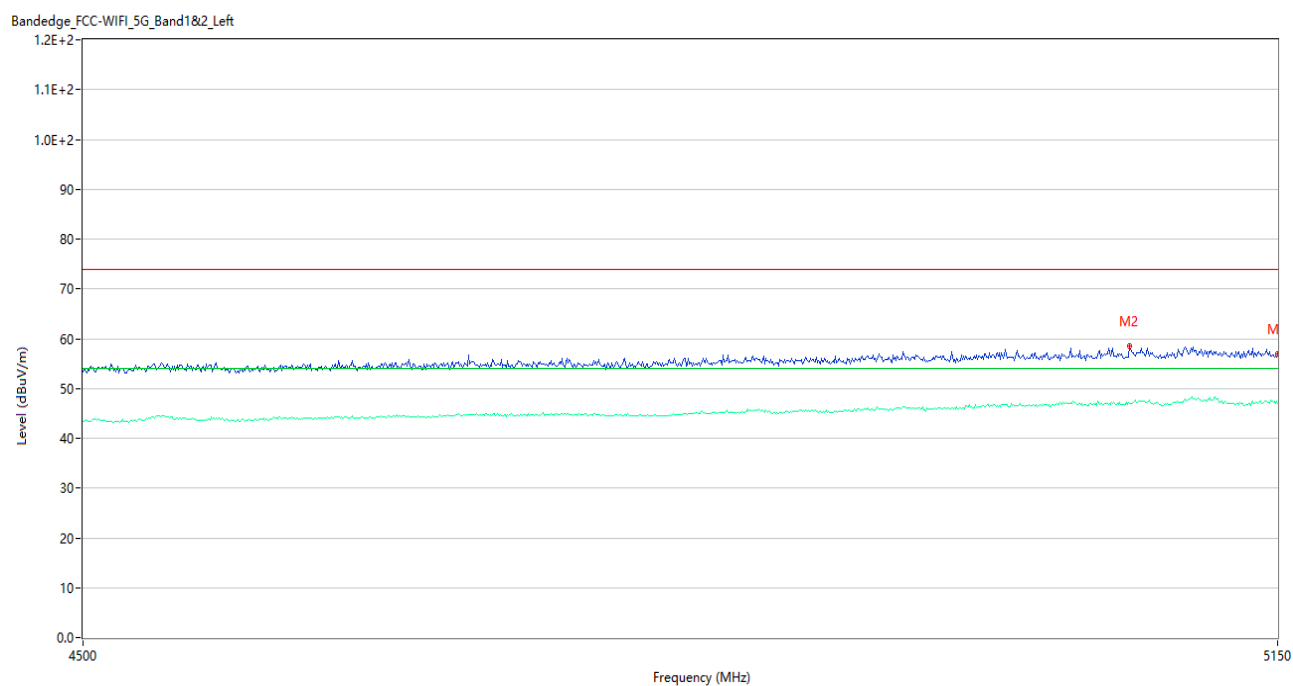
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	56.79	5.21	74.0	17.21	Peak	59.03	150	Horizontal	Pass
1**	5150.000	47.38	5.21	54.0	6.62	AV	59.03	150	Horizontal	Pass
2	5142.200	59.60	5.51	74.0	14.40	Peak	211.00	150	Horizontal	Pass
2**	5142.200	47.33	5.51	54.0	6.67	AV	211.00	150	Horizontal	Pass

U-NII-2A 11a High Channel



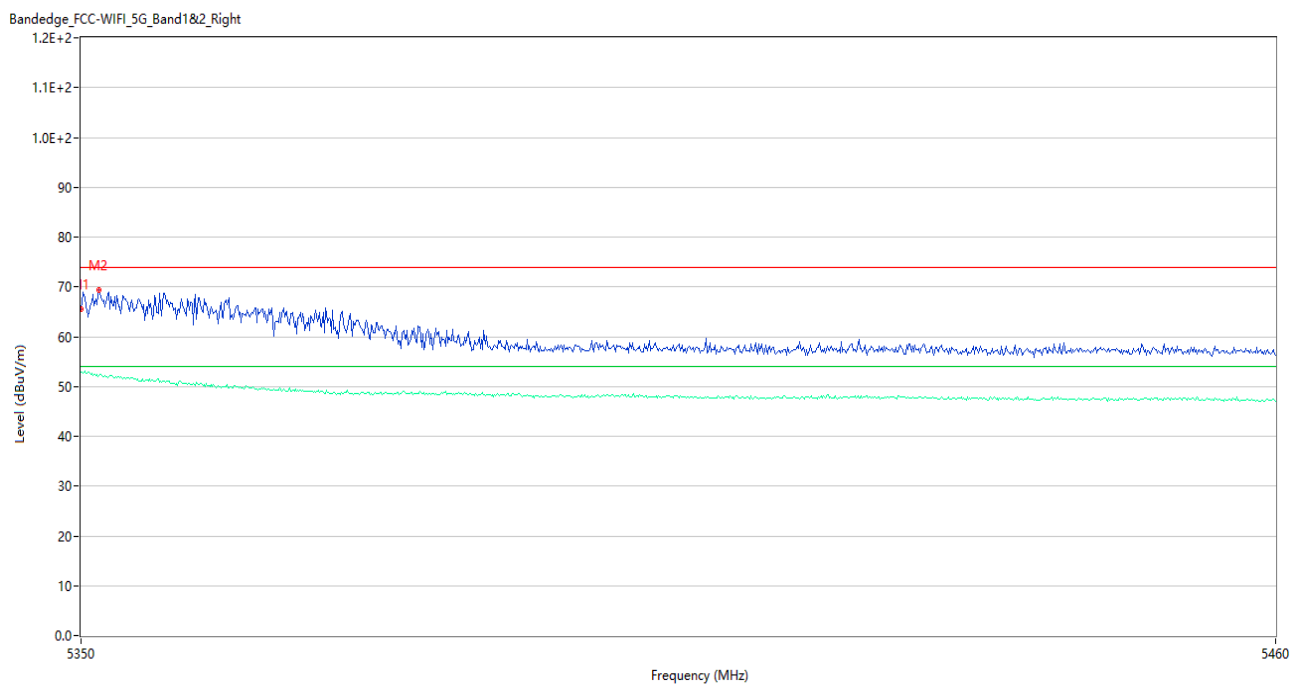
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	67.29	5.40	74.0	6.71	Peak	182.00	150	Horizontal	Pass
1**	5350.000	52.44	5.40	54.0	1.56	AV	182.00	150	Horizontal	Pass
2	5352.090	69.07	5.46	74.0	4.93	Peak	202.00	150	Horizontal	Pass
2**	5352.090	51.82	5.46	54.0	2.18	AV	202.00	150	Horizontal	Pass

U-NII-2A 11ac20 Low Channel



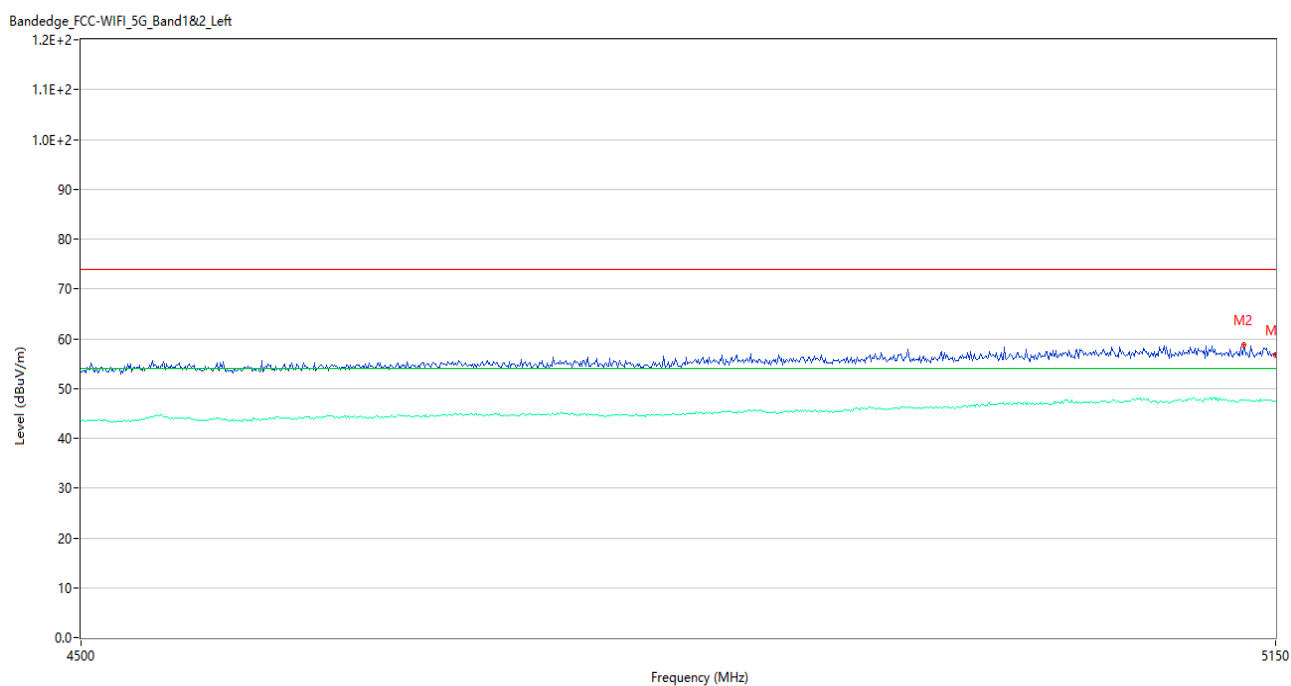
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	56.93	5.21	74.0	17.07	Peak	261.01	150	Horizontal	Pass
1**	5150.000	46.11	5.21	54.0	7.89	AV	261.01	150	Horizontal	Pass
2	5064.850	58.42	5.11	74.0	15.58	Peak	245.00	150	Horizontal	Pass
2**	5064.850	47.03	5.11	54.0	6.97	AV	245.00	150	Horizontal	Pass

U-NII-2A 11ac20 High Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	65.56	5.40	74.0	8.44	Peak	193.00	150	Horizontal	Pass
1**	5350.000	52.90	5.40	54.0	1.10	AV	193.00	150	Horizontal	Pass
2	5351.650	69.39	5.45	74.0	4.61	Peak	203.00	150	Horizontal	Pass
2**	5351.650	52.09	5.45	54.0	1.91	AV	203.00	150	Horizontal	Pass

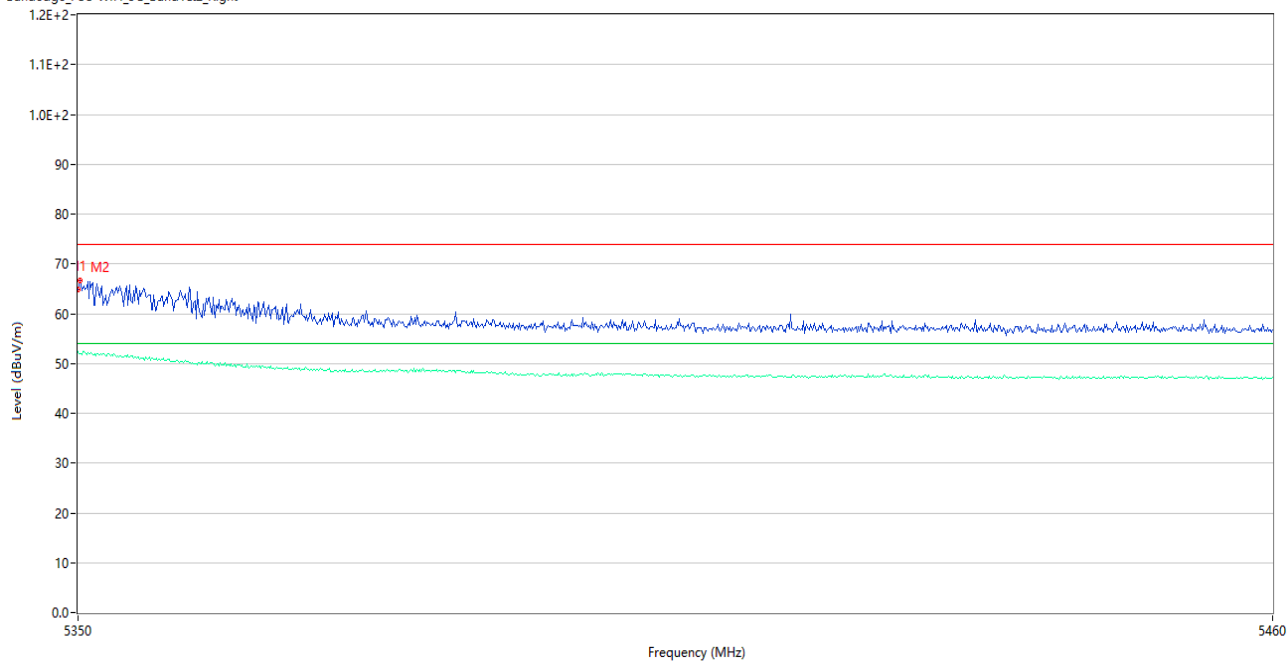
U-NII-2A 11ac40 Low Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	56.73	5.21	74.0	17.27	Peak	207.00	150	Horizontal	Pass
1**	5150.000	47.35	5.21	54.0	6.65	AV	207.00	150	Horizontal	Pass
2	5131.800	58.75	5.27	74.0	15.25	Peak	199.00	150	Horizontal	Pass
2**	5131.800	47.64	5.27	54.0	6.36	AV	199.00	150	Horizontal	Pass

U-NII-2A 11ac40 High Channel

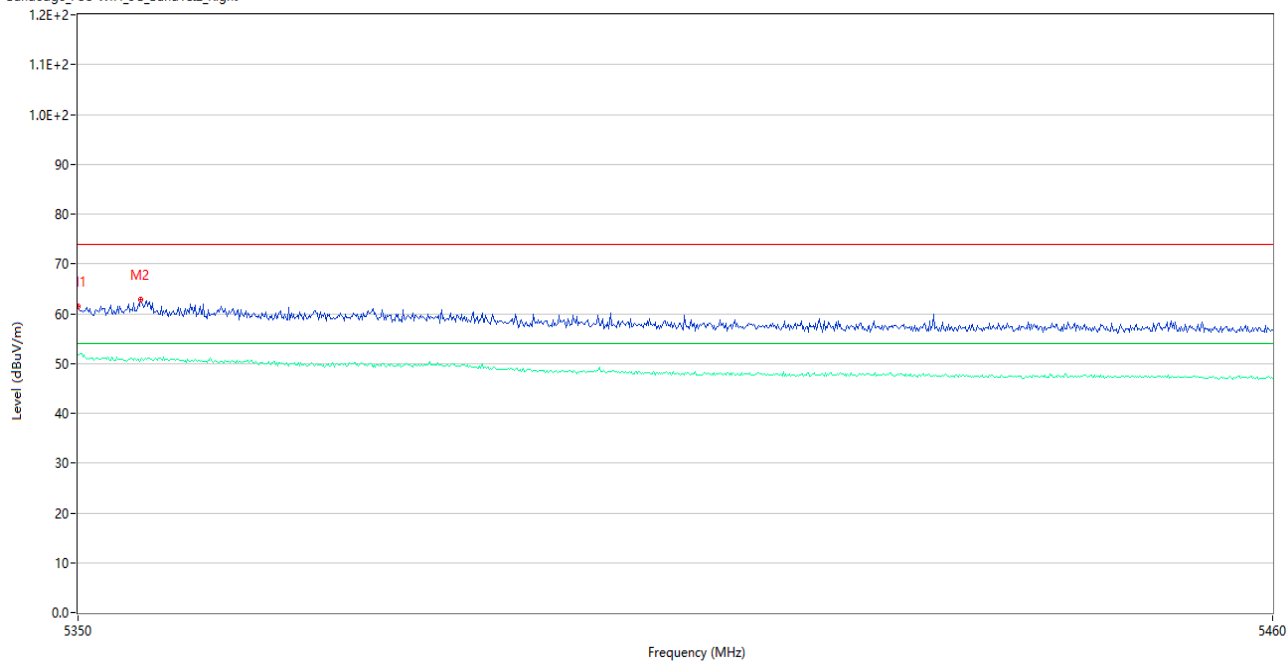
Bandedge_FCC-WIFI_5G_Band1&2_Right



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	64.89	5.40	74.0	9.11	Peak	224.00	150	Horizontal	Pass
1**	5350.000	52.35	5.40	54.0	1.65	AV	224.00	150	Horizontal	Pass
2	5350.220	66.76	5.41	74.0	7.24	Peak	202.00	150	Horizontal	Pass
2**	5350.220	52.08	5.41	54.0	1.92	AV	202.00	150	Horizontal	Pass

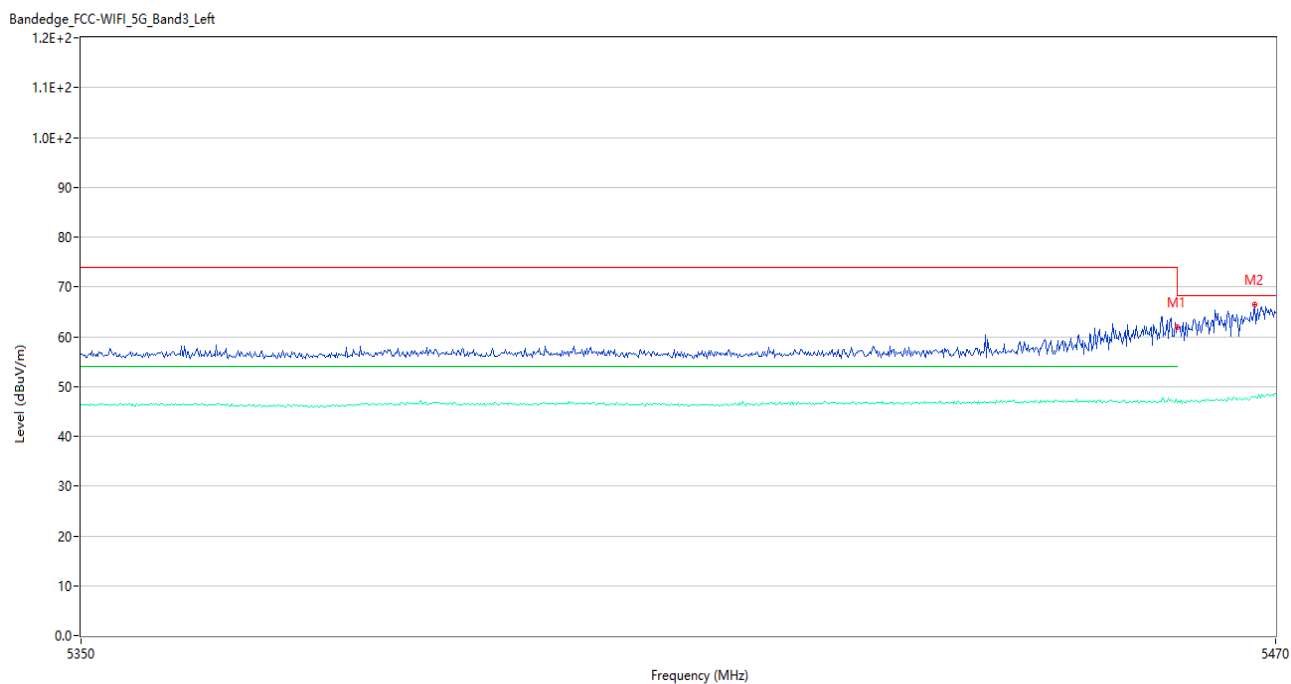
U-NII-2A 11ac80 Middle Channel

Bandedge_FCC-WIFI_5G_Band1&2_Right



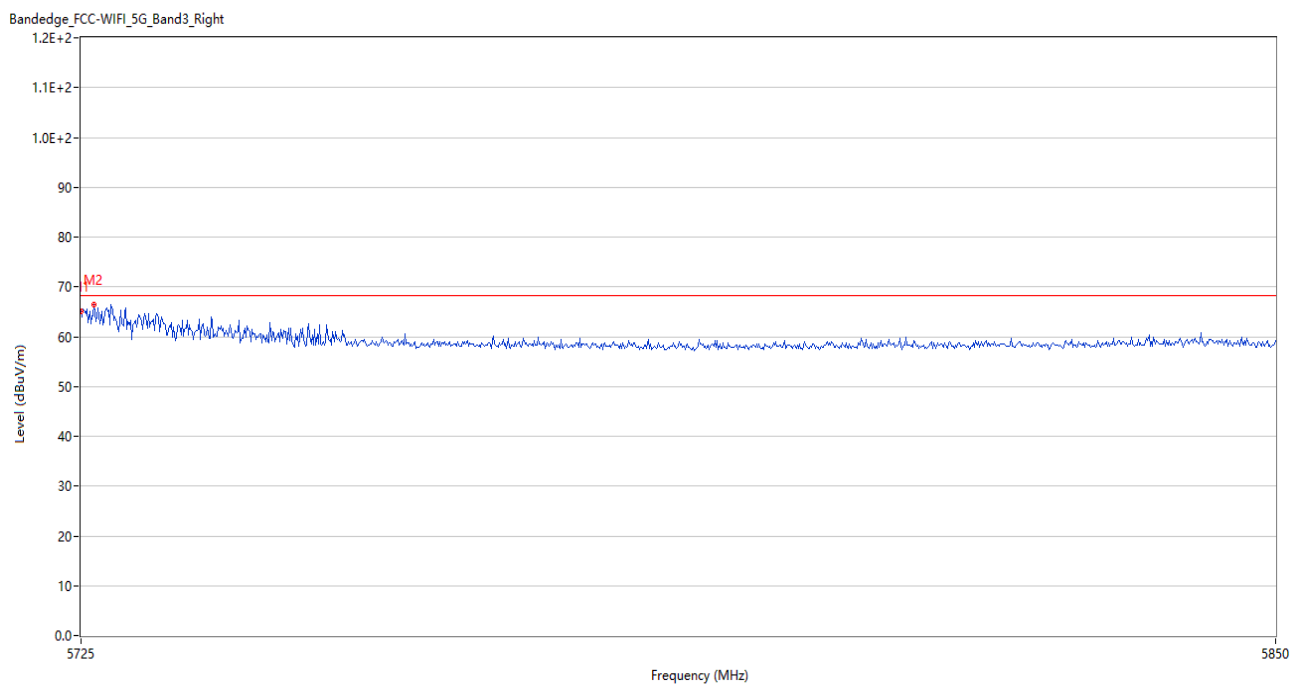
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	61.51	5.40	74.0	12.49	Peak	196.00	150	Horizontal	Pass
1**	5350.000	51.80	5.40	54.0	2.20	AV	196.00	150	Horizontal	Pass
2	5355.720	62.78	5.57	74.0	11.22	Peak	200.00	150	Horizontal	Pass
2**	5355.720	50.73	5.57	54.0	3.27	AV	200.00	150	Horizontal	Pass

U-NII-2C 11a Low Channel



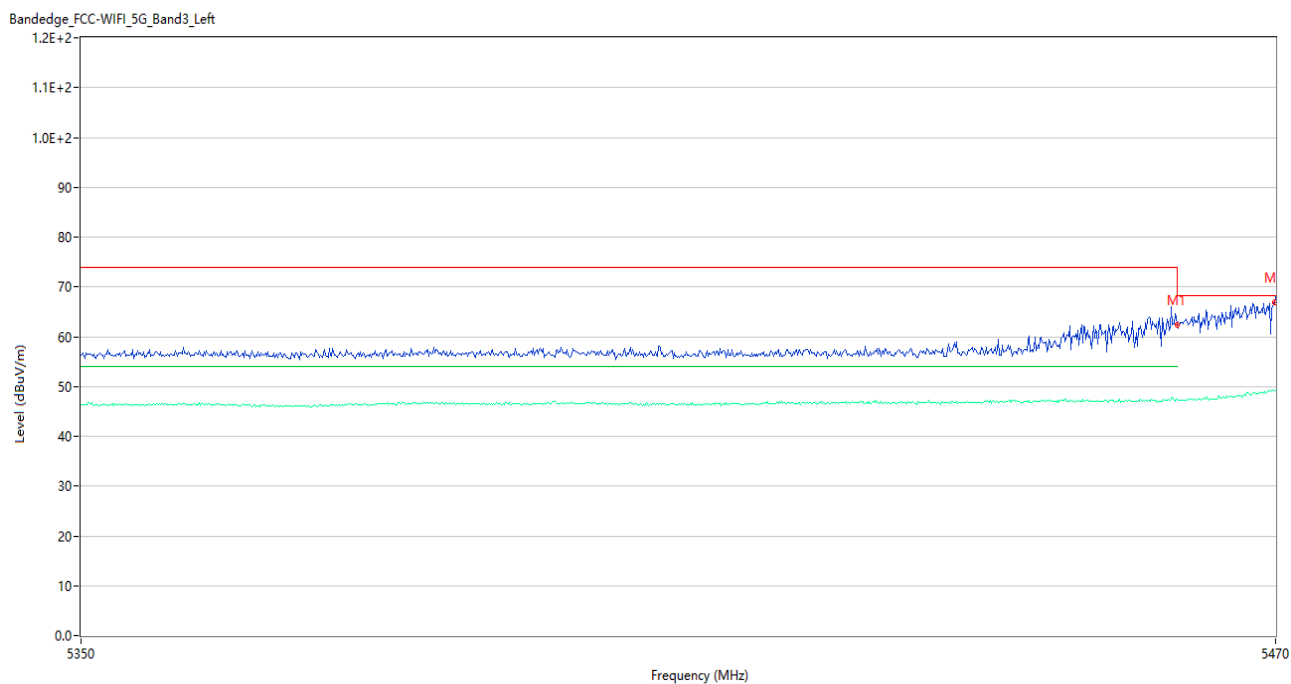
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5460.000	61.50	5.38	68.2	6.70	Peak	194.66	150	Horizontal	Pass
1**	5460.000	46.97	5.38	54.0	7.03	AV	194.66	150	Horizontal	Pass
2	5467.840	66.38	5.71	68.2	1.82	Peak	213.00	150	Horizontal	Pass
2**	5467.840	47.94	5.71	--	-47.94	AV	213.00	150	Horizontal	N/A

U-NII-2C 11a High Channel



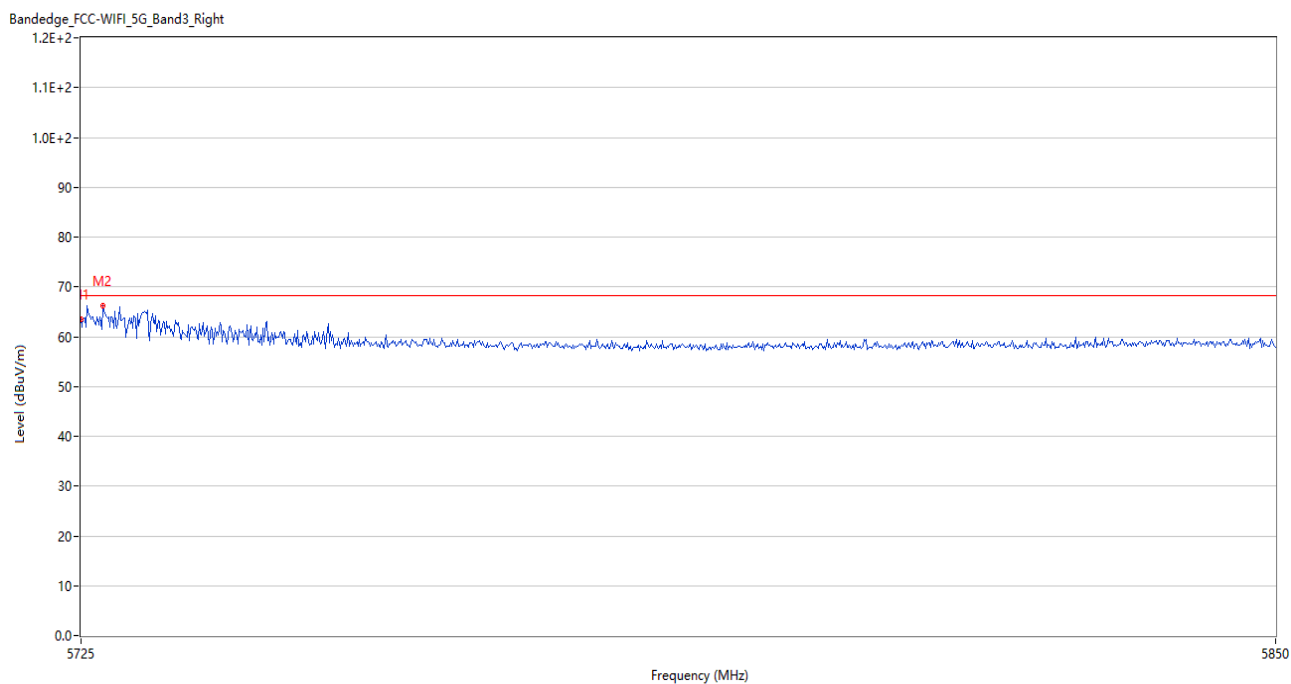
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5725.000	65.08	6.57	68.2	3.12	Peak	229.00	150	Horizontal	Pass
2	5726.375	66.52	6.54	68.2	1.68	Peak	193.00	150	Horizontal	Pass

U-NII-2C 11ac20 Low Channel



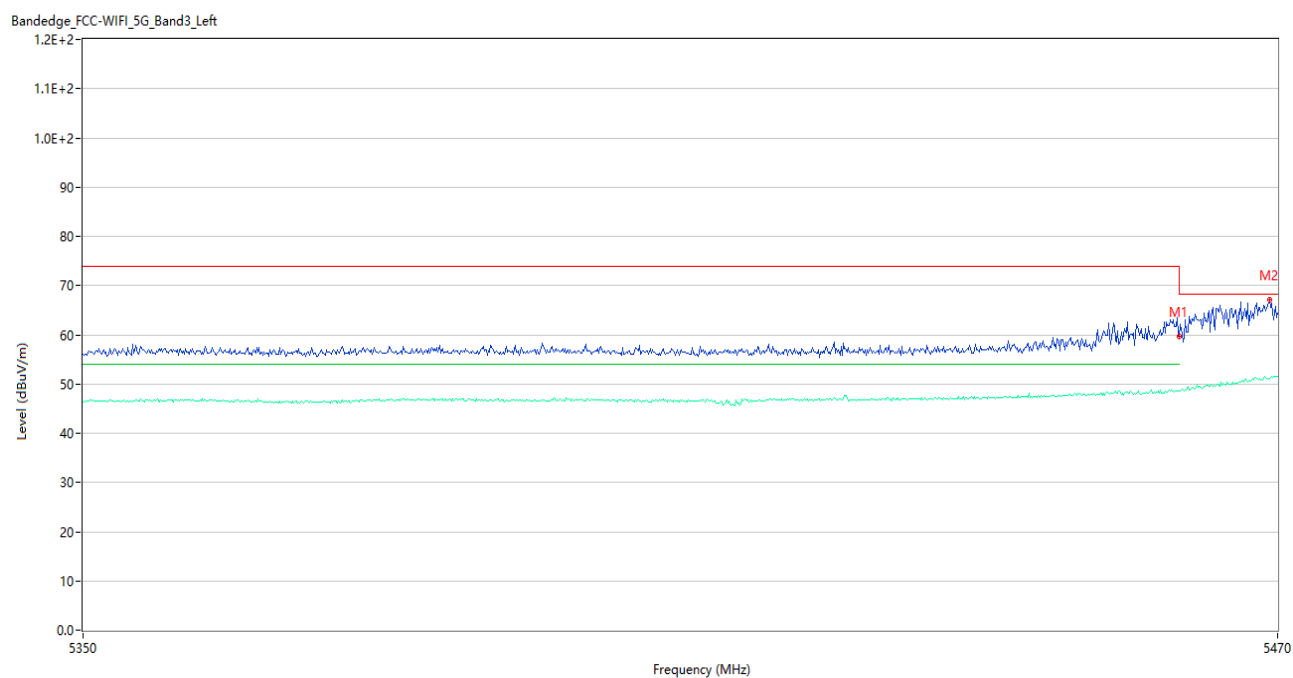
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5460.000	63.01	5.38	68.2	5.19	Peak	198.66	150	Horizontal	Pass
1**	5460.000	47.41	5.38	54.0	6.59	AV	198.66	150	Horizontal	Pass
2	5469.880	66.85	5.80	68.2	1.35	Peak	213.00	150	Horizontal	Pass
2**	5469.880	49.10	5.80	--	-49.10	AV	213.00	150	Horizontal	N/A

U-NII-2C 11ac20 High Channel



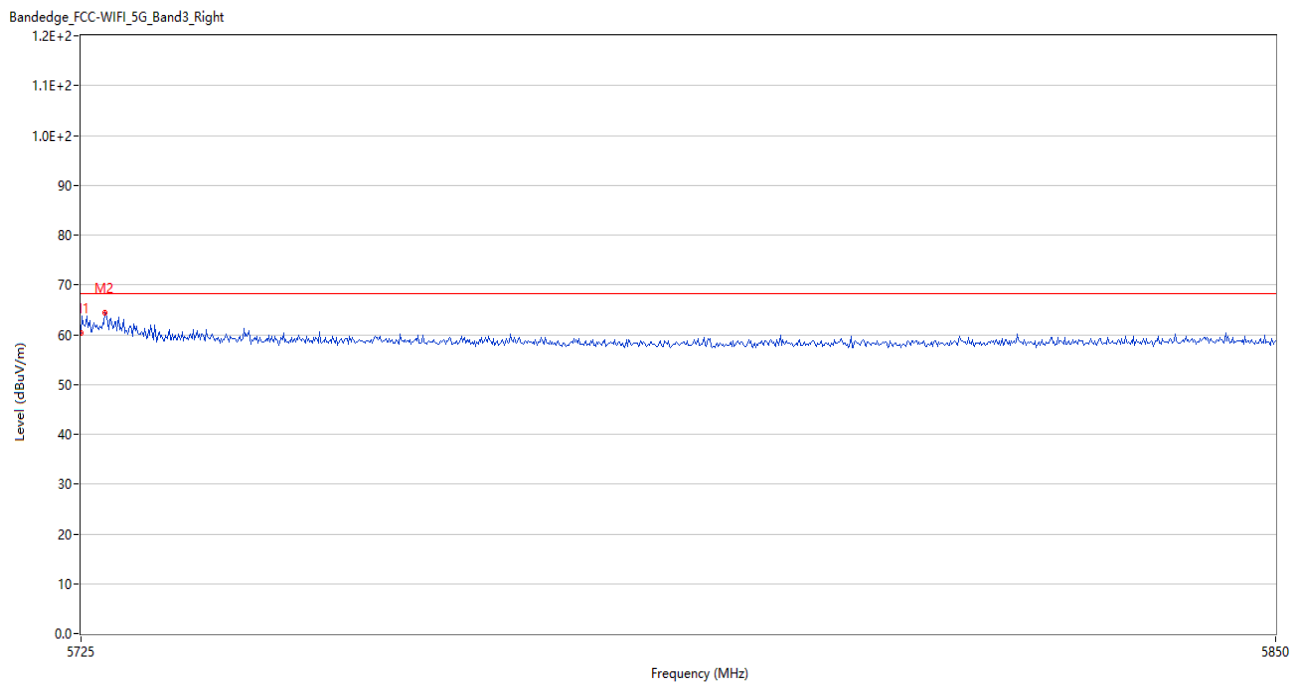
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5725.000	63.56	6.57	68.2	4.64	Peak	197.00	150	Horizontal	Pass
2	5727.250	66.27	6.51	68.2	1.93	Peak	194.00	150	Horizontal	Pass

U-NII-2C 11ac40 Low Channel



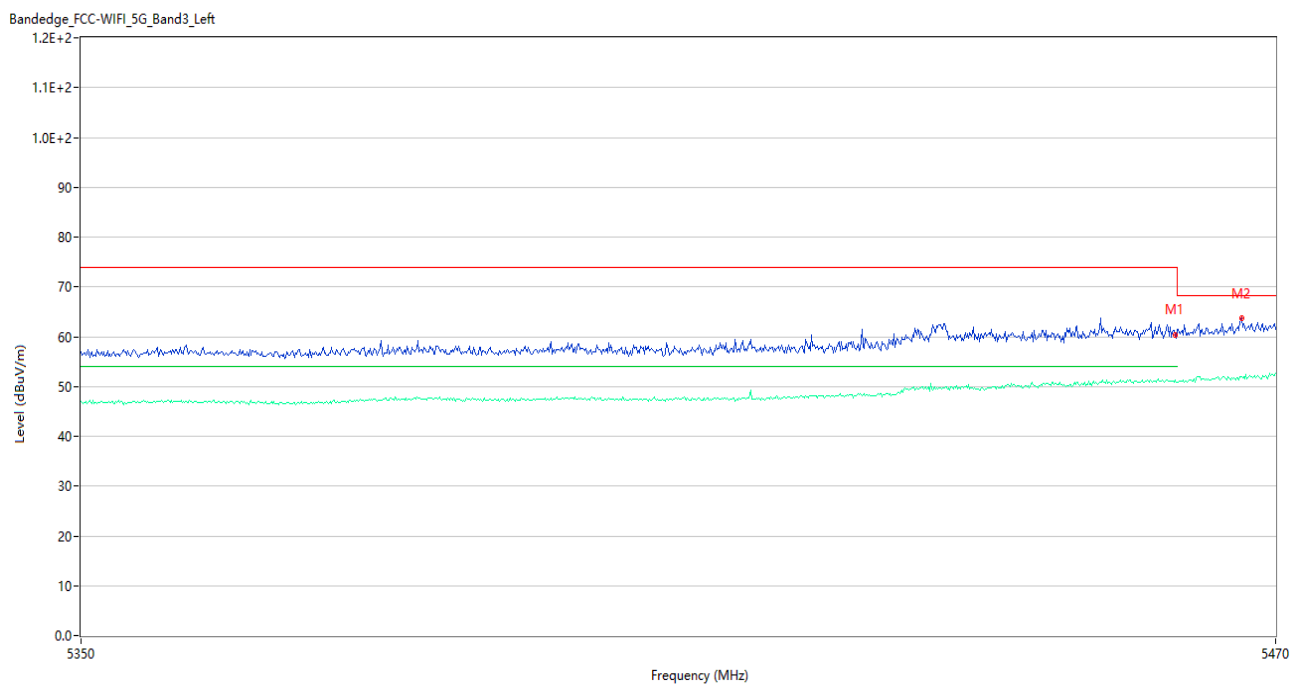
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5460.000	59.87	5.38	68.2	8.33	Peak	213.01	150	Horizontal	Pass
1**	5460.000	48.56	5.38	54.0	5.44	AV	213.01	150	Horizontal	Pass
2	5469.160	67.16	5.80	68.2	1.04	Peak	187.00	150	Horizontal	Pass
2**	5469.160	51.08	5.80	--	-51.08	AV	187.00	150	Horizontal	N/A

U-NII-2C 11ac40 High Channel



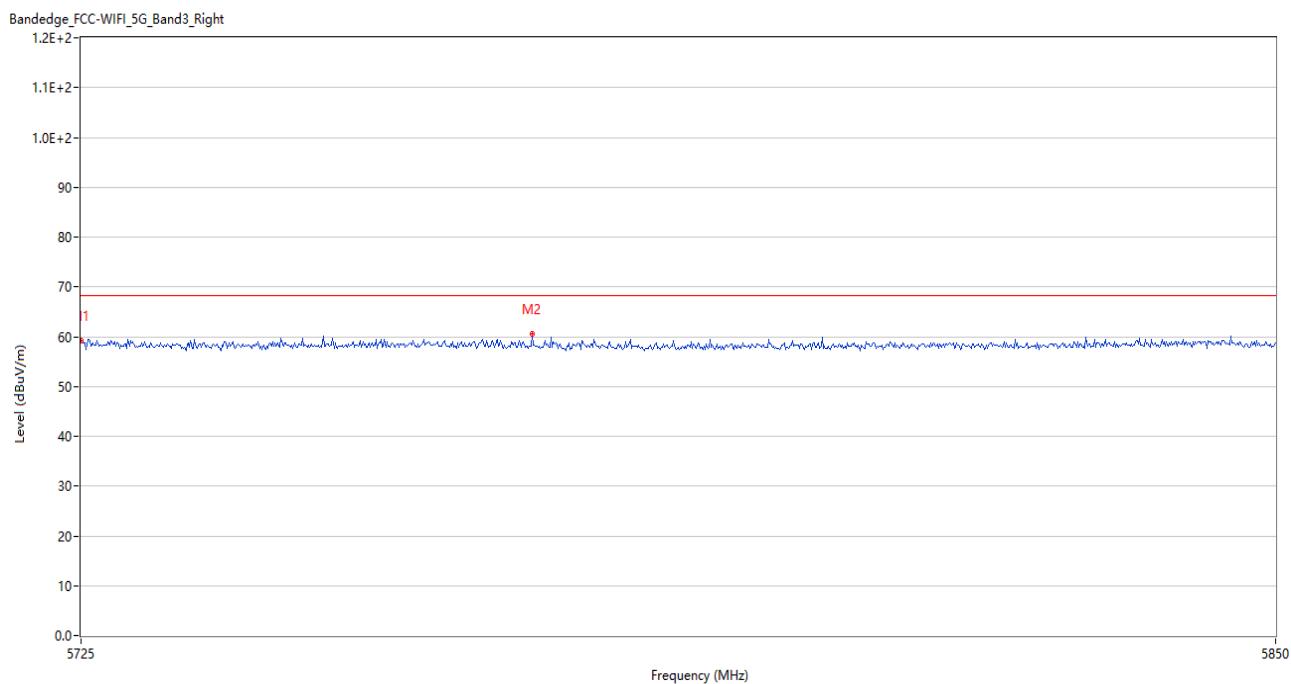
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5725.000	60.30	6.57	68.2	7.90	Peak	198.00	150	Horizontal	Pass
2	5727.500	64.46	6.50	68.2	3.74	Peak	214.00	150	Horizontal	Pass

U-NII-2C 11ac80 Low Channel



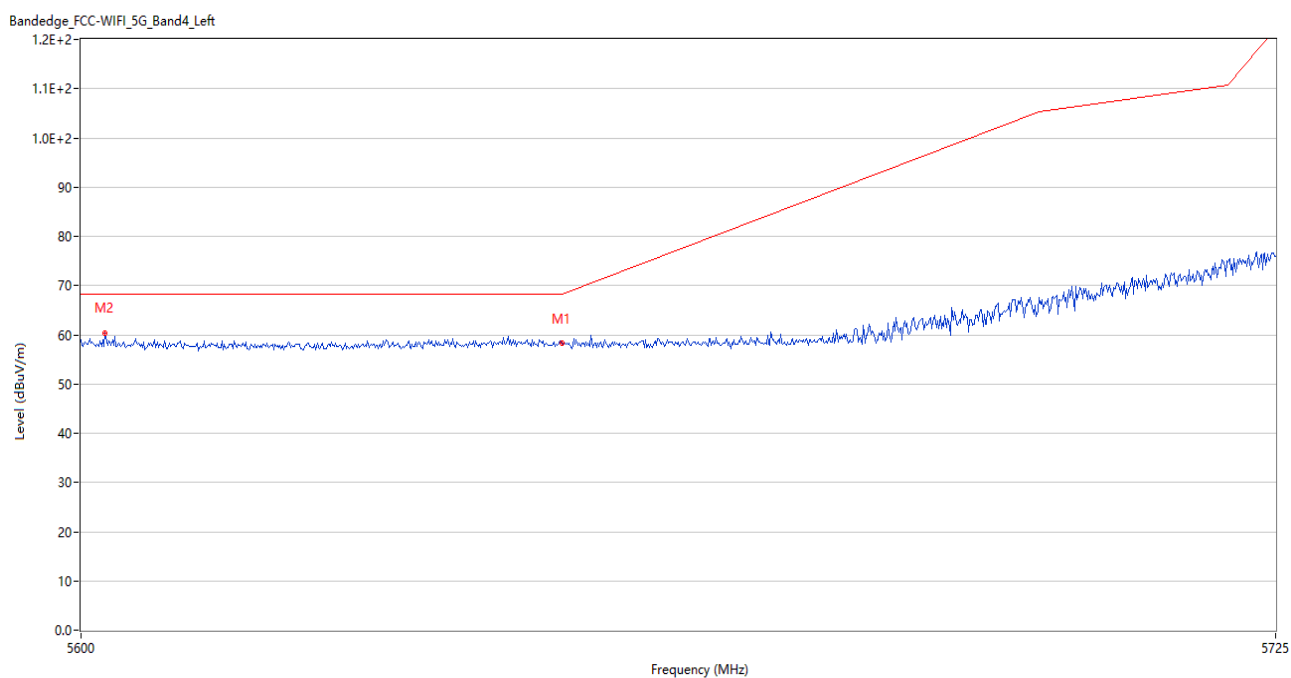
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5460.000	60.89	5.38	68.2	7.31	Peak	205.33	150	Horizontal	Pass
1**	5460.000	50.82	5.38	54.0	3.18	AV	205.33	150	Horizontal	Pass
2	5466.520	63.70	5.63	68.2	4.50	Peak	207.00	150	Horizontal	Pass
2**	5466.520	51.92	5.63	--	-51.92	AV	207.00	150	Horizontal	N/A

U-NII-2C 11ac80 High Channel



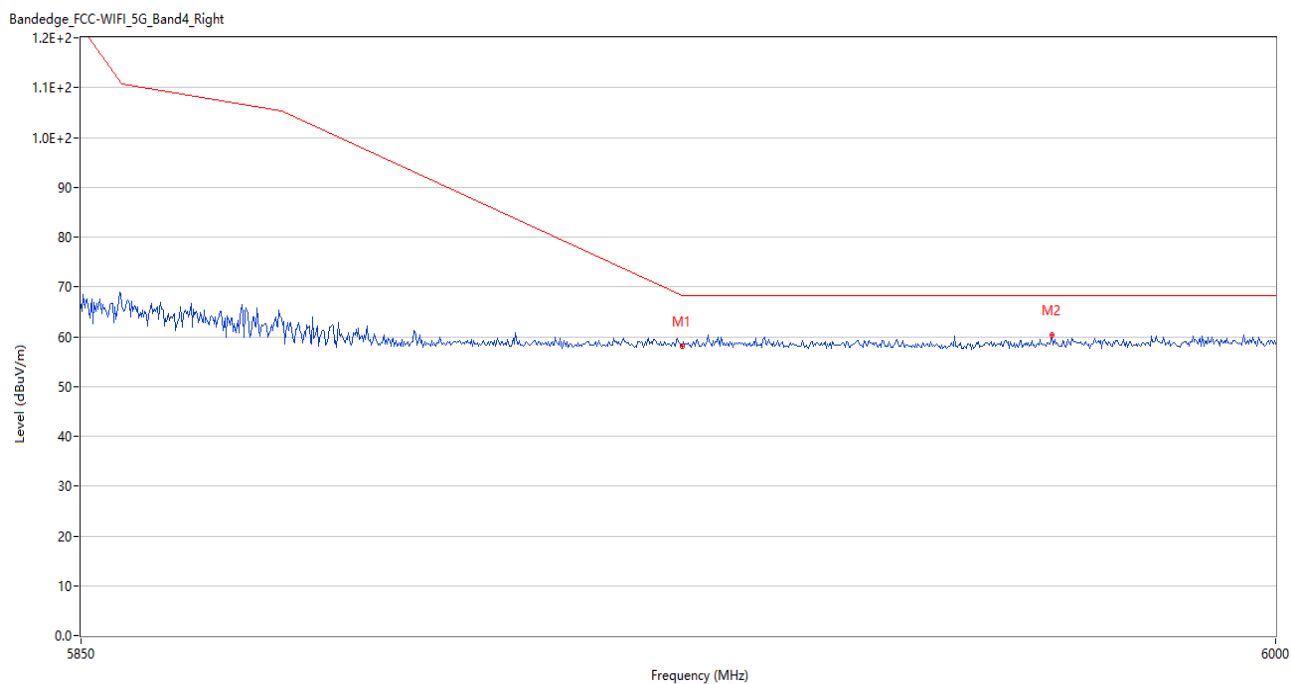
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5725.000	59.19	6.57	68.2	9.01	Peak	142.00	150	Vertical	Pass
2	5771.875	60.60	6.84	68.2	7.60	Peak	233.00	150	Vertical	Pass

U-NII-3 11a Low Channel



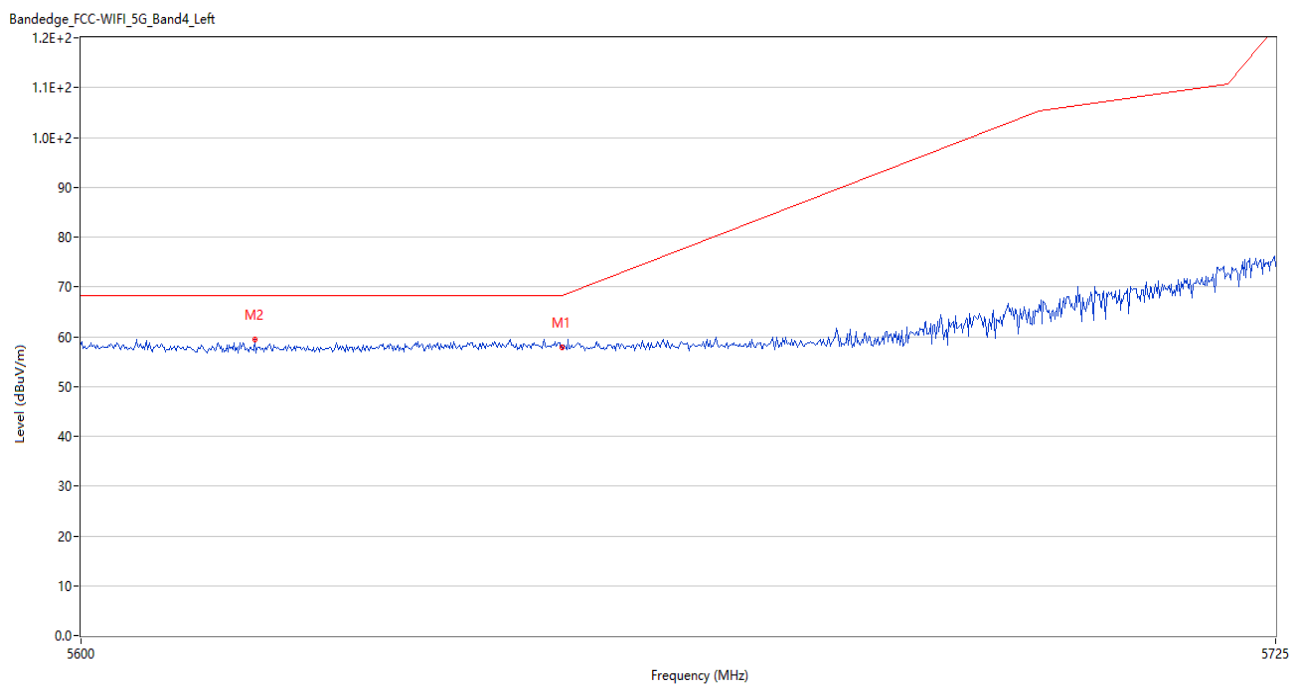
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5650.000	58.25	5.94	68.2	9.95	Peak	244.96	150	Horizontal	Pass
2	5602.500	60.44	5.98	68.2	7.76	Peak	227.00	150	Horizontal	Pass

U-NII-3 11a High Channel



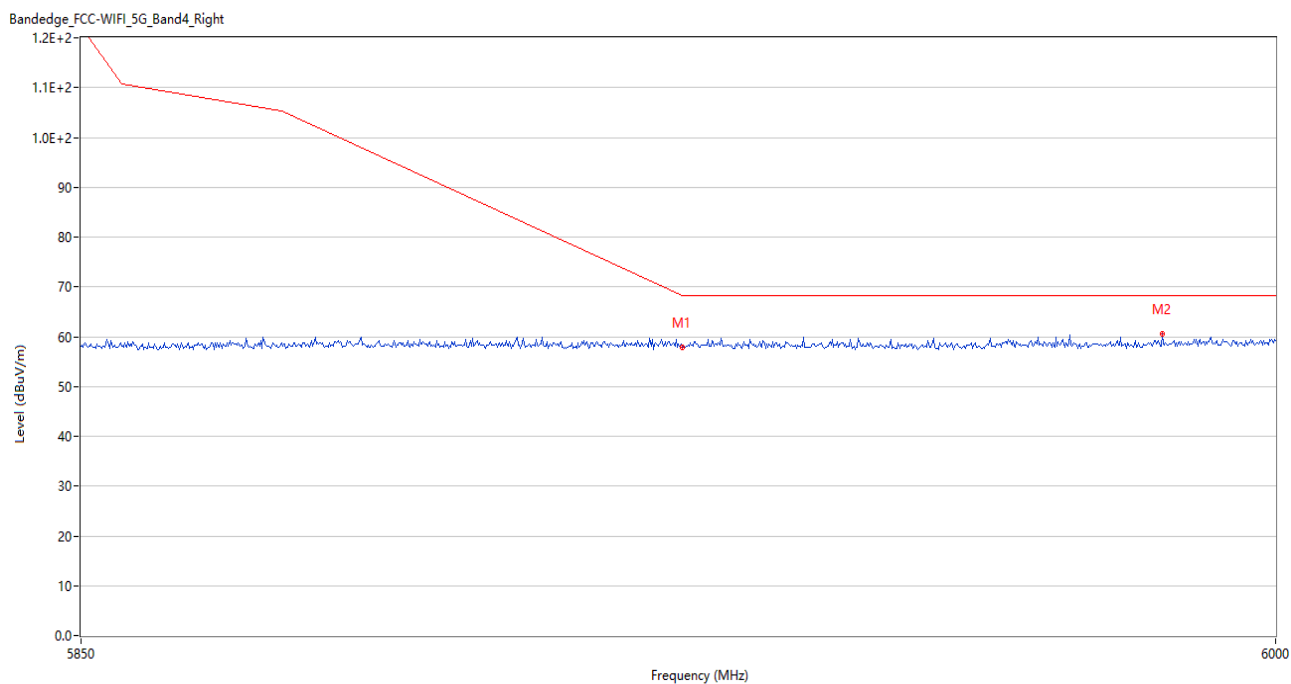
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	57.97	7.83	68.2	10.23	Peak	208.99	150	Horizontal	Pass
2	5971.650	60.44	7.55	68.2	7.76	Peak	360.00	150	Horizontal	Pass

U-NII-3 11ac20 Low Channel



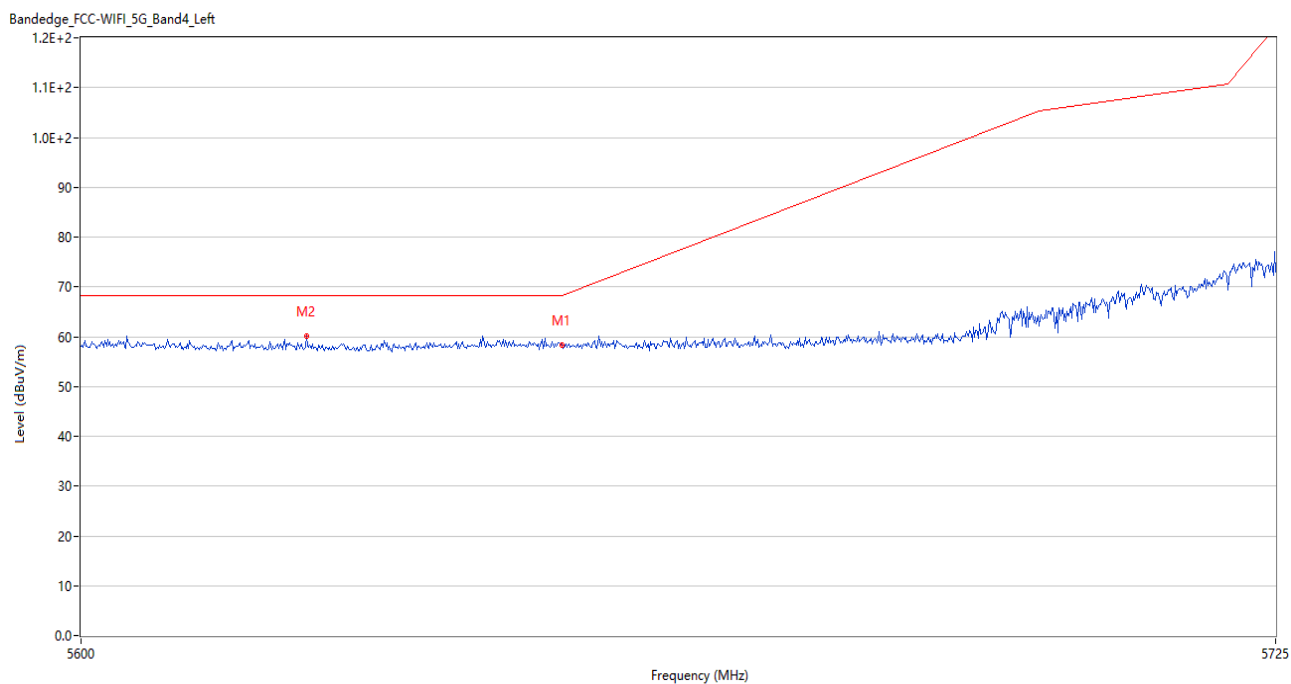
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5650.000	57.76	5.94	68.2	10.44	Peak	197.17	150	Horizontal	Pass
2	5618.000	59.44	5.96	68.2	8.76	Peak	194.00	150	Horizontal	Pass

U-NII-3 11ac20 High Channel



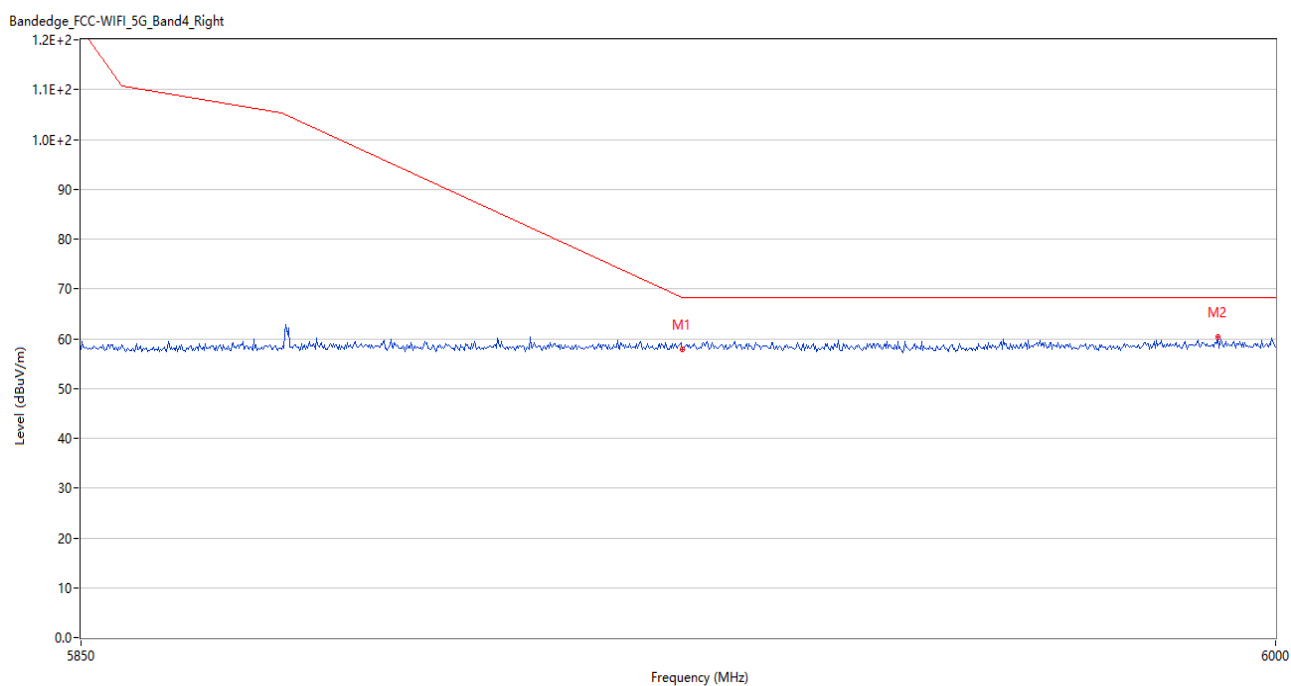
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	57.93	7.83	68.2	10.27	Peak	360.00	150	Vertical	Pass
2	5985.600	60.49	7.61	68.2	7.71	Peak	278.00	150	Vertical	Pass

U-NII-3 11ac40 Low Channel



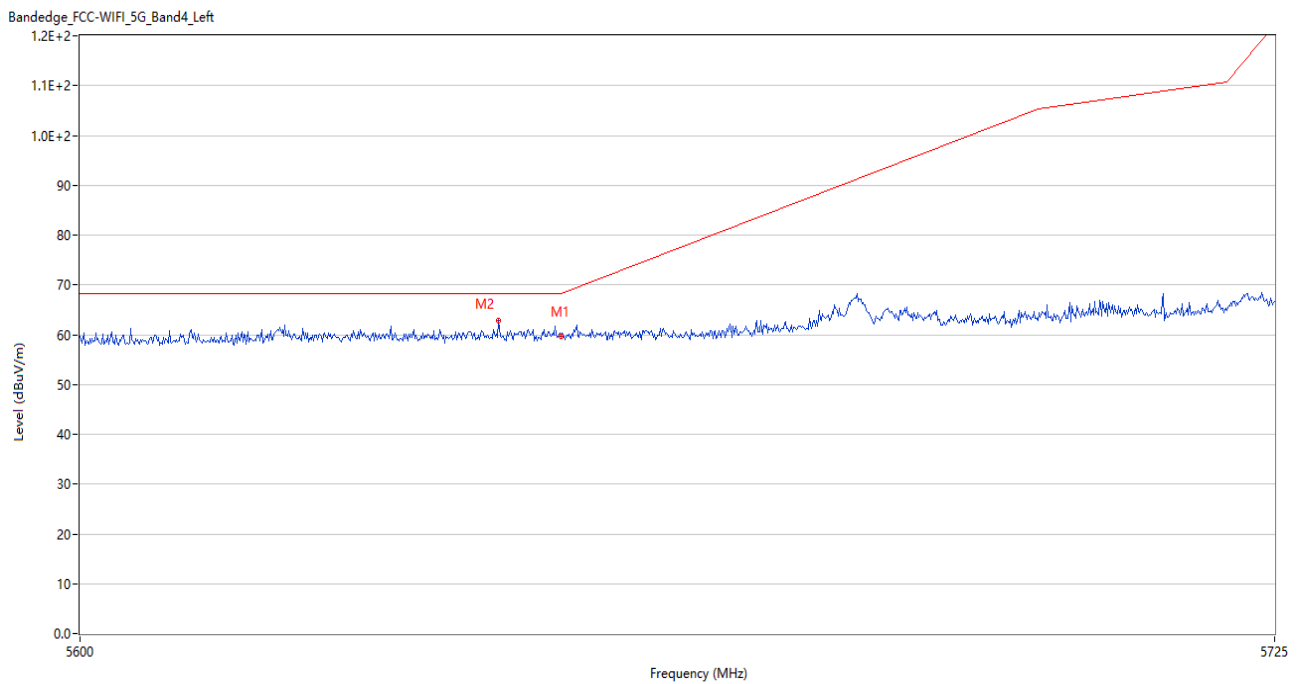
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5650.000	58.27	5.94	68.2	9.93	Peak	211.99	150	Horizontal	Pass
2	5623.375	60.20	5.90	68.2	8.00	Peak	199.00	150	Horizontal	Pass

U-NII-3 11ac40 High Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	57.85	7.83	68.2	10.35	Peak	94.88	150	Vertical	Pass
2	5992.650	60.34	7.97	68.2	7.86	Peak	130.00	150	Vertical	Pass

U-NII-3 11ac80 Middle Channel



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5650.000	59.63	5.94	68.2	8.57	Peak	221.97	150	Horizontal	Pass
2	5643.500	62.75	6.01	68.2	5.45	Peak	192.00	150	Horizontal	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SH24A0783-AR-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SH24A0783-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SH24A0783-AI.PDF”.

Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the "inspection and testing dedicated stamp" or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--