



TEST REPORT

Applicant: OnPoint Systems, LLC

Address: 7 Perimeter Rd. Manchester NH 03103 United States

Equipment Type: SpotOn GPS Fence

Model Name: SOF-11-0001

Brand Name: SpotOn Fence™

FCC ID: 2APPWSOF11

ISED Number: 24233-SOF11

Test Standard: 47 CFR Part 15 Subpart E
RSS-Gen Issue 5
RSS-247 Issue 4
(refer to section 3.1)

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ISSUED BY:

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Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Nov. 25, 2025</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Address	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China

1.2 Test Location

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Location	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1352. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 29671.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	OnPoint Systems, LLC
Address	7 Perimeter Rd. Manchester NH 03103 United States

2.2 Manufacturer Information

Manufacturer	OnPoint Systems, LLC
Address	7 Perimeter Rd. Manchester NH 03103 United States

2.3 General Description for Equipment under Test (EUT)

EUT Name	SpotOn GPS Fence
Model Name Under Test	SOF-11-0001
Series Model Name	N/A
Description of Model name differentiation	N/A
Sample Number	SC-SH2560048-S05(conducted) SC-SH2560048-S11(radiated) SC-SH2560048-S12(radiated)
Hardware Version	V2.0
Software Version	V1.1.0.0
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	4G Network LTE CAT-M Band 2/4/5/12/13/25/66 LTE NB-IoT Band 2/4/5/12/13/25/66 UWB, BLE, 2.4GWIFI, 5GWIFI, GPS
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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
Modulation technology		OFDM
Modulation Type		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
Channel Bandwidth		802.11a: 20 MHz 802.11n: 20 MHz
Maximum Output Power		U-NII-1: 8.13 dBm U-NII-2A: 8.09 dBm U-NII-2C: 10.05 dBm U-NII-3: 10.91 dBm
Antenna System (eg., MIMO, Smart Antenna)		N/A
Categorization as Correlated or Completely Uncorrelated		N/A
Antenna Type	SISO-Main Antenna	Ceramics Antenna
	SISO-Aux. Antenna	
Antenna Gain		U-NII-1: 5150 MHz to 5250 MHz: 0.99 dBi U-NII-2A: 5250 MHz to 5350 MHz: 0.9 dBi U-NII-2C: 5470 MHz to 5725 MHz: 0.9 dBi U-NII-3: 5725 MHz to 5850 MHz: 0.3 dBi
About the Product		The equipment is SpotOn GPS Fence, intended for used with information technology equipment.

2.5 Channel List

20 MHz	
Channel Number	Frequency (MHz)
36	5180
40	5200
44	5220
48	5240
52	5260
56	5280
60	5300
64	5320
100	5500
104	5520
108	5540
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

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)

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

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
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
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
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
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
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

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 4	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 C63.10-2020	American National Standard for Testing Unlicensed Wireless Devices
6	ANSI C63.10-2020+Cor1-2023+C63.10a-2024	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	50% to 58%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+20.5°C to +24.1°C
Working Voltage of the EUT	NV (Normal Voltage)	3.7V

4.2 Test Equipment List

Description	Manufacturer	Model	Equipment No.	Cal. Date	Cal. Due
Spectrum Analyzer	KEYSIGHT	N9020A	BH-EMC-L066	2025.02.12	2026.02.11
Spectrum Analyzer	KEYSIGHT	N9010B	BH-EMC-L099	2025.02.12	2026.02.11
Signal Generator	Anritsu	MG3710E	BH-EMC-L131	2025.02.12	2026.02.11
Wideband Radio Communication Tester	R&S	CMW500	BH-EMC-L094	2025.02.11	2026.02.10
EMI Receiver	KEYSIGHT	N9038A	BH-EMC-L015	2025.07.04	2026.07.03
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519 B	BH-EMC-L067	2024.03.11	2027.03.10
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	BH-EMC-L008	2024.03.11	2027.03.10
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	BH-EMC-L044	2024.03.11	2027.03.10
Test Antenna-Horn (18-40 GHz)	A-INFO	LB-180400-KF	BH-EMC-L061	2024.03.11	2027.03.10
Anechoic Chamber	YiHeng	9m*6m*6m	BH-EMC-L001	2024.04.18	2027.04.17
EMI Receiver	KEYSIGHT	N9038A	BH-EMC-L127	2025.02.12	2026.02.11
LISN	SCHWARZBECK	NSLK 8127	BH-EMC-L011	2025.02.11	2026.02.10
10dB Limiter	SCHWARZBECK	VTSD 9561-F	BH-EMC-L014	2025.02.11	2026.02.10
Shielded Room	YiHeng	5m*4m*3.2m	BH-EMC-L006	2024.02.22	2027.02.21

4.3 Test Software List

Description	Manufacturer	Software Version	Serial No.	Applicable Test Setup
BL410R	BALUN	V2.1.1.496	N/A	The section 4.6.1
BL410E	BALUN	V21.919	N/A	The section 4.6.2&4.6.3&4.6.4&4.6.5

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	2.4 %
RF output power, conducted	0.41 dB
Power Spectral Density, conducted	1.73 dB
Unwanted Emissions, conducted	1.73 dB
All emissions, radiated	3.70 dB
Temperature	0.82 °C
Humidity	4.1 %

4.5 Decision Rule

- ☐ No Need
☒ Use General conformity decision rule (Consider uncertainty or not ☒No ☐Yes)
☐ Use Special Conformity Decision Rule (Consider uncertainty or not ☐No ☐Yes)

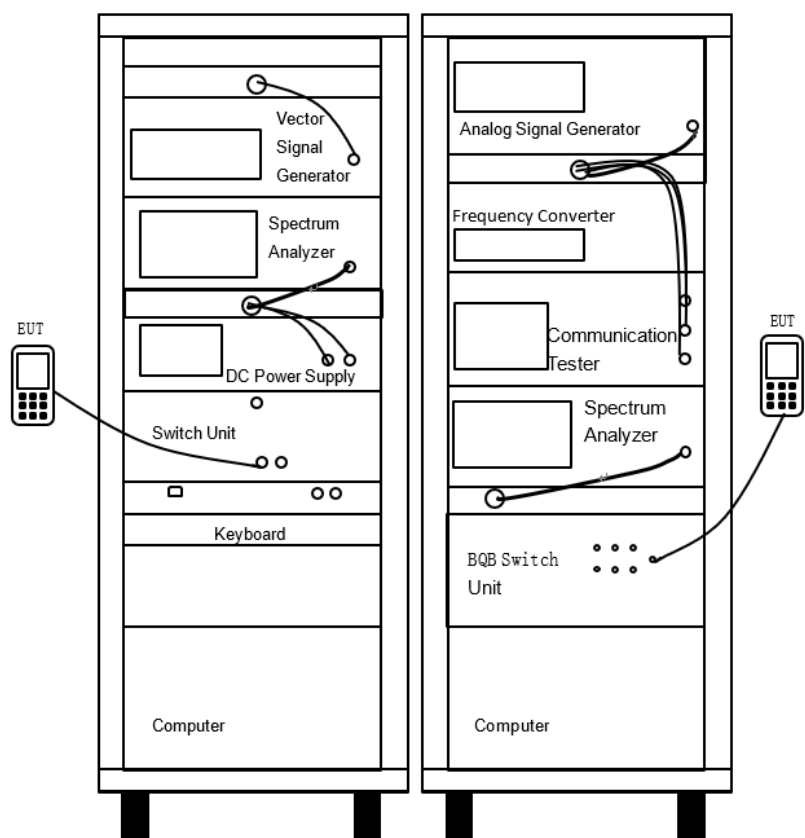
4.6 Description of Test Setup

4.6.1 For Antenna Port Test

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

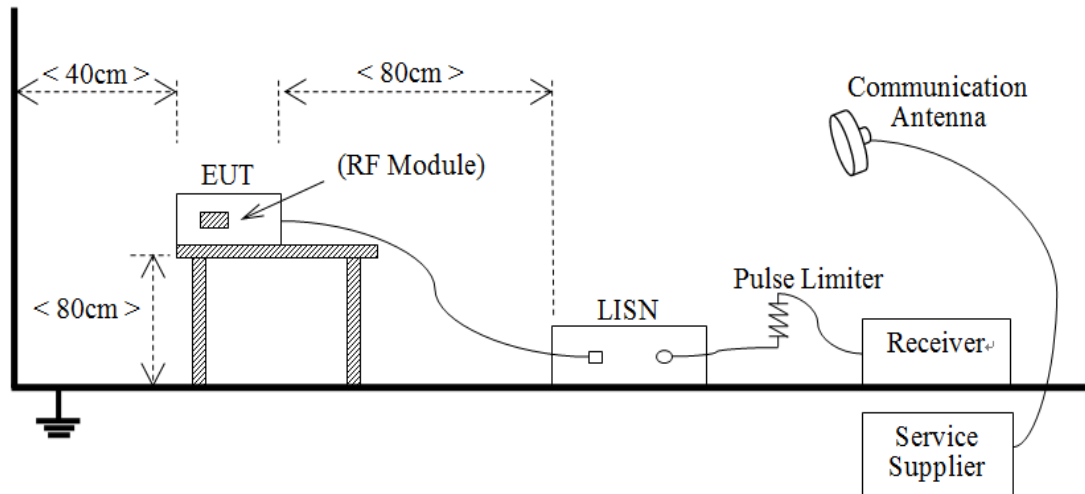
For example: the measurement value is 10 dBm and the cable 0.5 dB used, then the final result of EUT:

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



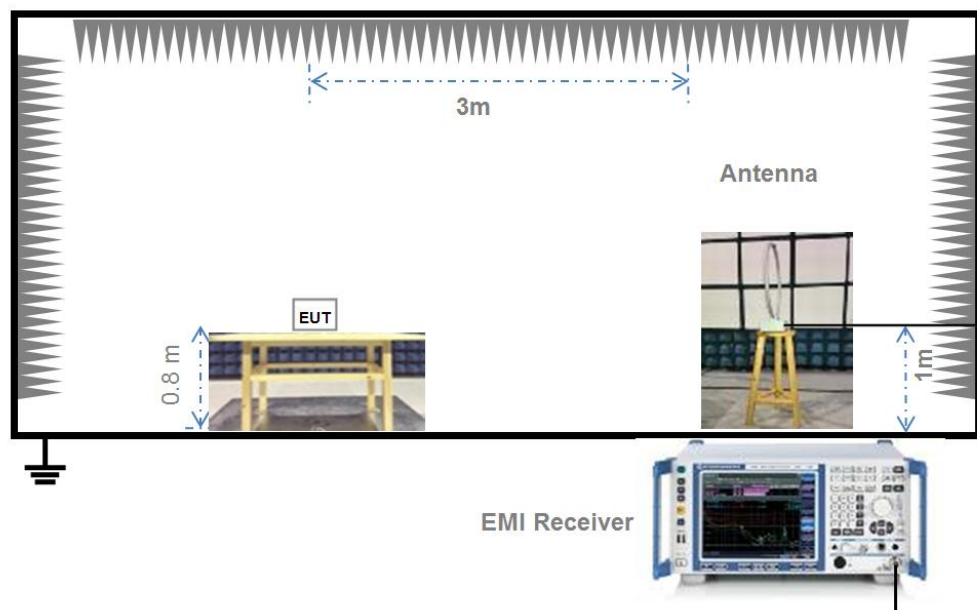
(Diagram 1)

4.6.2 For AC Power Supply Port Test



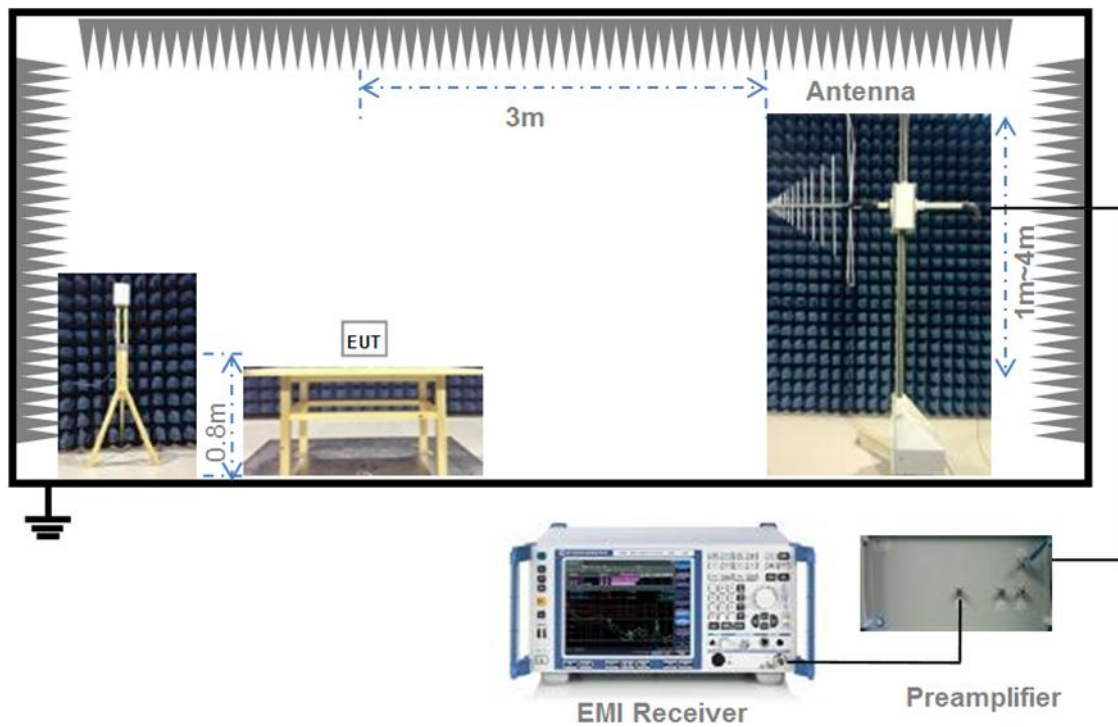
(Diagram 2)

4.6.3 For Radiated Test (Below 30 MHz)



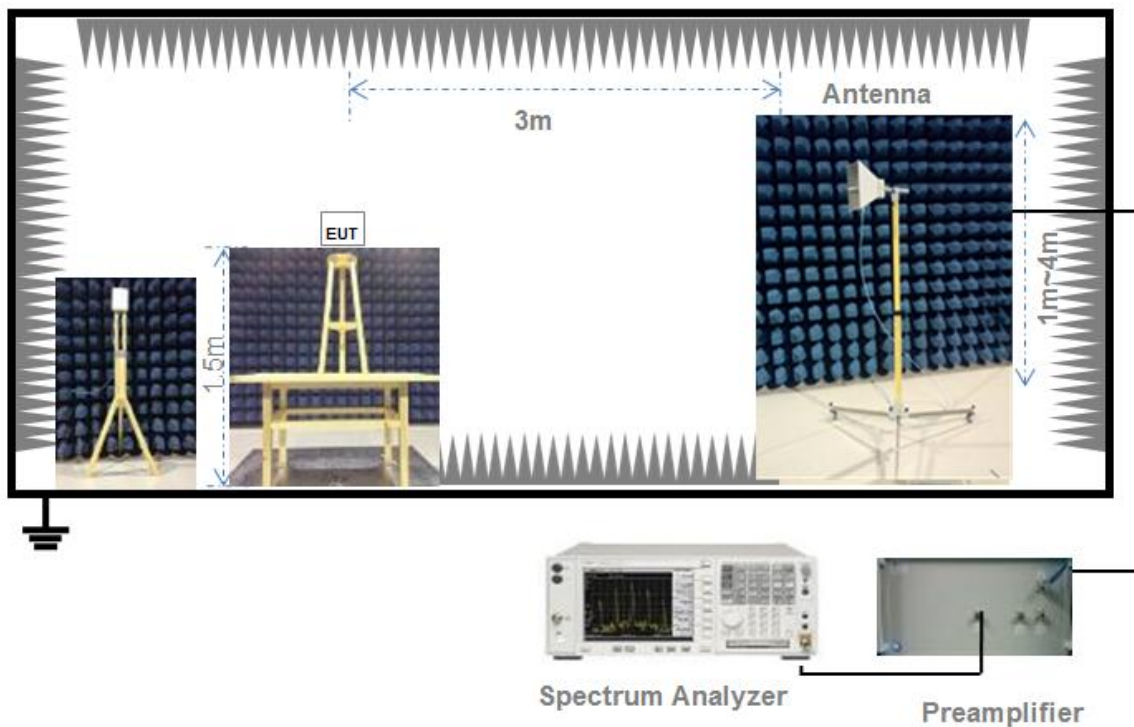
(Diagram 3)

4.6.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.6.5 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
Note: Where "B" is the 99% emissions bandwidth in MHz.	

5.1.2 Test Setup

The section 4.6.1 (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 4.6.1 (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,
4. Detector = Peak.
5. Trace mode = Max hold.
6. Use the 99% power bandwidth function of the instrument.

6 dB bandwidth

1. Set RBW = 100 kHz, VBW = 300 kHz.
2. Detector = Peak.
3. Trace mode = Max hold.
4. Allow the trace to stabilize.
5. 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

5.3.2 Test Setup

The section 4.6.1 (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
5 - 30	60	50

5.4.2 Test Setup

The section 4.6.2 (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)

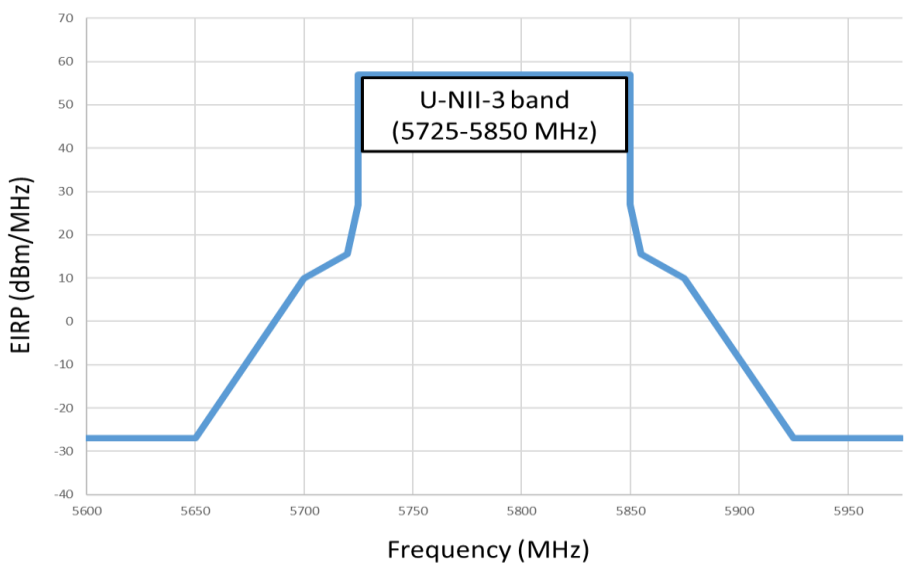
5.5.1 Limit

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 4.6.3-4.6.5 (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 maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)
- c) 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).
- d) 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).
- e) 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.
- f) Compare the resultant electric field strength level to the applicable limit.
- g) 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: The RF Output Power has considered the Duty Factor.

Duty Cycle

Test Mode	On Time (ms)	On+Off time (ms)	Duty Cycle
11a	1.89	2.06	91.50%
11n (HT20)	1.76	1.94	90.63%

Test Data

Conducted Power

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH36	5.84	3.83	250	Pass
11a	CH44	8.13	6.49	250	Pass
11a	CH48	7.87	6.12	250	Pass
11n (HT20)	CH36	7.15	5.18	250	Pass
11n (HT20)	CH44	7.91	6.18	250	Pass
11n (HT20)	CH48	7.53	5.66	250	Pass

U-NII-2A (5250 - 5350 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH52	7.67	5.84	250	Pass
11a	CH60	8.09	6.44	250	Pass
11a	CH64	7.40	5.49	250	Pass
11n (HT20)	CH52	7.44	5.54	250	Pass
11n (HT20)	CH60	7.87	6.12	250	Pass
11n (HT20)	CH64	7.20	5.24	250	Pass

U-NII-2C (5470 - 5725 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH100	6.66	4.63	250	Pass
11a	CH116	10.04	10.08	250	Pass
11a	CH140	8.08	6.42	250	Pass
11n (HT20)	CH100	6.55	4.52	250	Pass
11n (HT20)	CH116	10.05	10.11	250	Pass
11n (HT20)	CH140	7.81	6.04	250	Pass

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	Conducted Power (dBm)	Conducted Power (mW)	FCC Limit (mW)	Verdict
11a	CH149	10.83	12.09	1000	Pass
11a	CH157	10.91	12.32	1000	Pass
11a	CH165	9.26	8.42	1000	Pass
11n (HT20)	CH149	10.66	11.63	1000	Pass
11n (HT20)	CH157	10.56	11.37	1000	Pass
11n (HT20)	CH165	9.63	9.18	1000	Pass

E.I.R.P Test Data (For ISED)

U-NII-1 (5150 - 5250 MHz)					
Mode	Channel	EIRP Power (dBm)	EIRP Power (mW)	EIRP Limit (mW)	Verdict
11a	CH36	6.74	4.72	173	Pass
11a	CH44	9.12	8.16	175	Pass
11a	CH48	8.86	7.68	176	Pass
11n (HT20)	CH36	8.14	6.51	182	Pass
11n (HT20)	CH44	8.90	7.76	183	Pass
11n (HT20)	CH48	8.52	7.11	182	Pass

U-NII-2A (5250 - 5350 MHz)					
Mode	Channel	EIRP Power (dBm)	EIRP Power (mW)	EIRP Limit (mW)	Verdict
11a	CH52	8.57	7.19	873	Pass
11a	CH60	8.99	7.92	885	Pass
11a	CH64	8.30	6.75	842	Pass
11n (HT20)	CH52	8.34	6.82	914	Pass
11n (HT20)	CH60	8.77	7.53	914	Pass
11n (HT20)	CH64	8.10	6.45	893	Pass

U-NII-2C (5470 - 5725 MHz)					
Mode	Channel	EIRP Power (dBm)	EIRP Power (mW)	EIRP Limit (mW)	Verdict
11a	CH100	7.56	5.70	838	Pass
11a	CH116	10.94	12.40	921	Pass
11a	CH140	8.98	7.90	828	Pass
11n (HT20)	CH100	7.45	5.56	890	Pass
11n (HT20)	CH116	10.95	12.44	949	Pass
11n (HT20)	CH140	8.71	7.43	878	Pass

U-NII-3 (5725 - 5850 MHz)					
Mode	Channel	EIRP Power (dBm)	EIRP Power (mW)	Verdict	
11a	CH149	11.13	12.96	Pass	
11a	CH157	11.21	13.20	Pass	
11a	CH165	9.56	9.03	Pass	
11n (HT20)	CH149	10.96	12.47	Pass	
11n (HT20)	CH157	10.86	12.18	Pass	
11n (HT20)	CH165	9.93	9.83	Pass	

A.2 Emission Bandwidth & 99% Bandwidth

Note: Test plots please refer to the document "Annex No.: BL-SH2580953-603 Data Part 1.pdf".

Test Data

U-NII-1 (5150 - 5250 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH36	29.89	17.28
11a	CH44	30.99	17.48
11a	CH48	31.01	17.57
11n (HT20)	CH36	30.55	18.22
11n (HT20)	CH44	30.73	18.35
11n (HT20)	CH48	30.52	18.21

U-NII-2A (5250 - 5350 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH52	30.87	17.43
11a	CH60	30.97	17.67
11a	CH64	29.05	16.81
11n (HT20)	CH52	30.66	18.23
11n (HT20)	CH60	30.81	18.24
11n (HT20)	CH64	27.22	17.81

U-NII-2C (5470 - 5725 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH100	26.40	16.73
11a	CH116	35.12	18.38
11a	CH140	24.08	16.52
11n (HT20)	CH100	26.79	17.75
11n (HT20)	CH116	35.06	18.94
11n (HT20)	CH140	21.69	17.53

U-NII-3 (5725 - 5850 MHz)			
Mode	Channel	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH149	33.59	18.42
11a	CH157	33.08	18.04
11a	CH165	31.75	16.97
11n (HT20)	CH149	33.48	18.96
11n (HT20)	CH157	34.42	18.48
11n (HT20)	CH165	30.73	18.01

A.3 6 dB Bandwidth

Note: Test plots please refer to the document "Annex No.: BL-SH2580953-603 Data Part 2.pdf".

Test Data

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	6 dB Bandwidth (MHz)	Limit (kHz)	Verdict
11a	CH149	15.30	500.00	Pass
11a	CH157	15.30	500.00	Pass
11a	CH165	15.20	500.00	Pass
11n (HT20)	CH149	15.30	500.00	Pass
11n (HT20)	CH157	15.30	500.00	Pass
11n (HT20)	CH165	14.00	500.00	Pass

A.4 Power Spectral Density

Note¹: Test plots please refer to the document “Annex No.: BL-SH2580953-603 Data Part 3.pdf”.

Note²: The RBW used in U-NII-3 is 1 MHz, and the PSD factor is: $10 \cdot \log(500 \text{ kHz/RBW}) = -3 \text{ dBm}$.

Note³: 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	-3.45	11.00	Pass
11a	CH44	0.93	11.00	Pass
11a	CH48	0.76	11.00	Pass
11n (HT20)	CH36	-3.63	11.00	Pass
11n (HT20)	CH44	0.40	11.00	Pass
11n (HT20)	CH48	0.28	11.00	Pass

U-NII-2A (5250 - 5350 MHz)				
Mode	Channel	PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
11a	CH52	0.65	11.00	Pass
11a	CH60	0.57	11.00	Pass
11a	CH64	-3.09	11.00	Pass
11n (HT20)	CH52	0.19	11.00	Pass
11n (HT20)	CH60	0.16	11.00	Pass
11n (HT20)	CH64	-3.26	11.00	Pass

U-NII-2C (5470 - 5725 MHz)				
Mode	Channel	PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
11a	CH100	0.76	11.00	Pass
11a	CH116	3.16	11.00	Pass
11a	CH140	0.19	11.00	Pass
11n (HT20)	CH100	0.39	11.00	Pass
11n (HT20)	CH116	2.72	11.00	Pass
11n (HT20)	CH140	-0.37	11.00	Pass

U-NII-3 (5725 - 5850 MHz)				
Mode	Channel	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Verdict
11a	CH149	0.29	30.00	Pass
11a	CH157	0.62	30.00	Pass
11a	CH165	-0.76	30.00	Pass
11n (HT20)	CH149	0.14	30.00	Pass
11n (HT20)	CH157	0.41	30.00	Pass
11n (HT20)	CH165	-0.92	30.00	Pass

EIRP PSD

U-NII-1 (5150 - 5250 MHz)				
Mode	Channel	PSD (dBm/MHz)	EIRP Limit (dBm/MHz)	Verdict
11a	CH36	-2.46	10.00	Pass
11a	CH44	1.92	10.00	Pass
11a	CH48	1.75	10.00	Pass
11n (HT20)	CH36	-2.64	10.00	Pass
11n (HT20)	CH44	1.39	10.00	Pass
11n (HT20)	CH48	1.27	10.00	Pass

U-NII-2A (5250 - 5350 MHz)			
Mode	Channel	PSD (dBm/MHz)	Verdict
11a	CH52	1.55	Pass
11a	CH60	1.47	Pass
11a	CH64	-2.19	Pass
11n (HT20)	CH52	1.09	Pass
11n (HT20)	CH60	1.06	Pass
11n (HT20)	CH64	-2.36	Pass

U-NII-2C (5470 - 5725 MHz)			
Mode	Channel	PSD (dBm/MHz)	Verdict
11a	CH100	1.66	Pass
11a	CH116	4.06	Pass
11a	CH140	1.09	Pass
11n (HT20)	CH100	1.29	Pass
11n (HT20)	CH116	3.62	Pass
11n (HT20)	CH140	0.53	Pass

U-NII-3 (5725 - 5850 MHz)			
Mode	Channel	PSD (dBm/MHz)	Verdict
11a	CH149	0.59	Pass
11a	CH157	0.92	Pass
11a	CH165	-0.46	Pass
11n (HT20)	CH149	0.44	Pass
11n (HT20)	CH157	0.71	Pass
11n (HT20)	CH165	-0.62	Pass

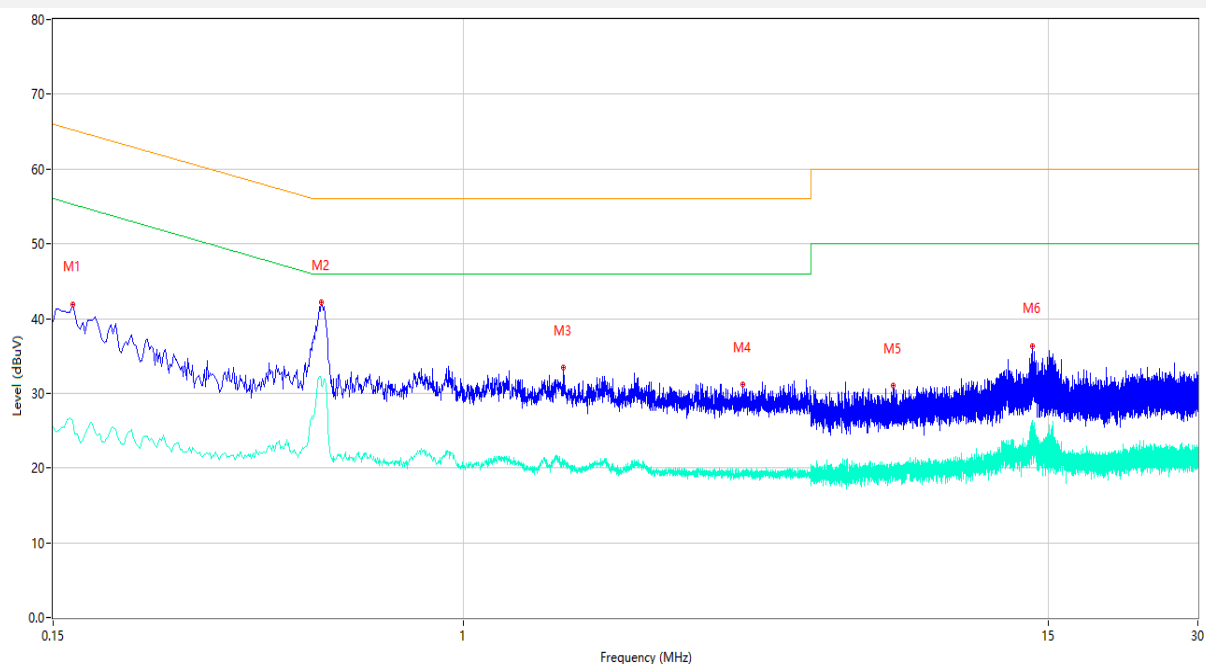
A.5 Conducted Emission

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

Note 2: 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.

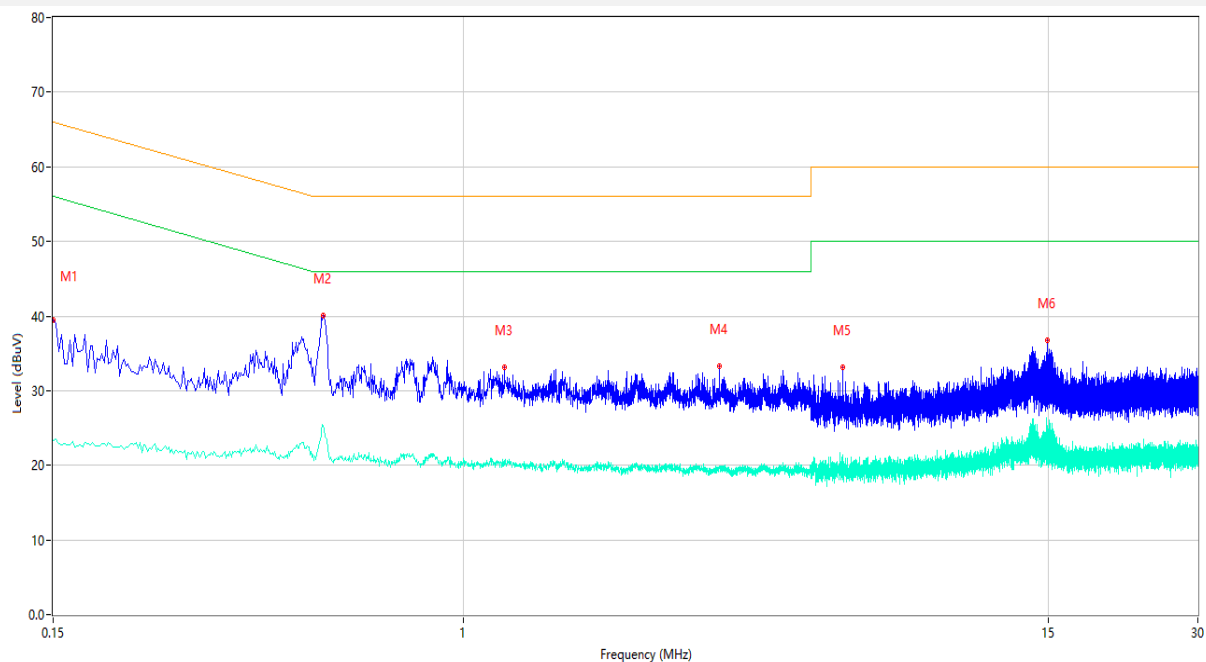
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.164	41.93	10.07	65.26	23.33	Peak	L	Pass
1**	0.164	26.34	10.07	55.26	28.92	AV	L	Pass
2	0.518	42.18	10.16	56.00	13.82	Peak	L	Pass
2**	0.518	31.88	10.16	46.00	14.12	AV	L	Pass
3	1.590	33.38	10.28	56.00	22.62	Peak	L	Pass
3**	1.590	20.93	10.28	46.00	25.07	AV	L	Pass
4	3.652	31.22	10.41	56.00	24.78	Peak	L	Pass
4**	3.652	19.72	10.41	46.00	26.28	AV	L	Pass
5	7.316	31.06	10.74	60.00	28.94	Peak	L	Pass
5**	7.316	20.13	10.74	50.00	29.87	AV	L	Pass
6	13.978	36.37	11.13	60.00	23.63	Peak	L	Pass
6**	13.978	26.44	11.13	50.00	23.56	AV	L	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	39.42	10.15	66.00	26.58	Peak	N	Pass
1**	0.150	23.39	10.15	56.00	32.61	AV	N	Pass
2	0.524	40.02	10.18	56.00	15.98	Peak	N	Pass
2**	0.524	25.27	10.18	46.00	20.73	AV	N	Pass
3	1.212	33.19	10.25	56.00	22.81	Peak	N	Pass
3**	1.212	20.57	10.25	46.00	25.43	AV	N	Pass
4	3.276	33.29	10.32	56.00	22.71	Peak	N	Pass
4**	3.276	19.69	10.32	46.00	26.31	AV	N	Pass
5	5.804	33.07	10.51	60.00	26.93	Peak	N	Pass
5**	5.804	20.29	10.51	50.00	29.71	AV	N	Pass
6	14.958	36.77	11.12	60.00	23.23	Peak	N	Pass
6**	14.958	25.36	11.12	50.00	24.64	AV	N	Pass

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

A.6.1 Radiated Spurious Emissions

Test Data

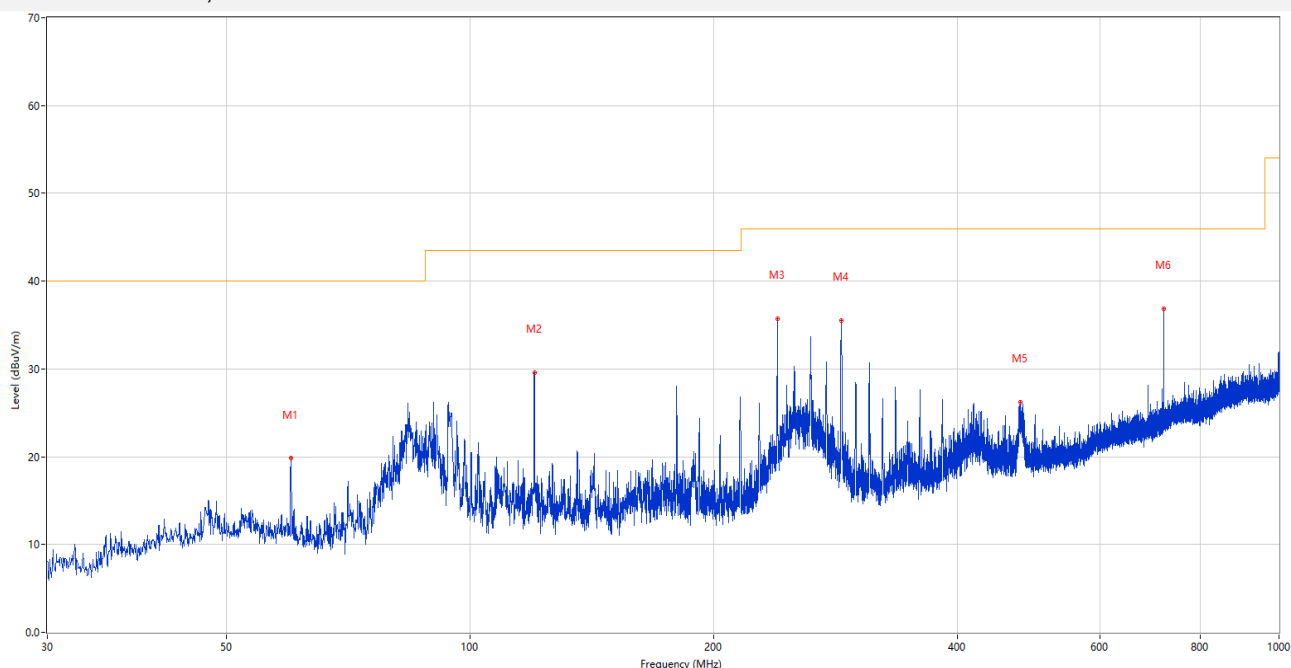
Note 1: The symbol of "--" in the table which means not application.

Note 2: 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.

Note 3: 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.

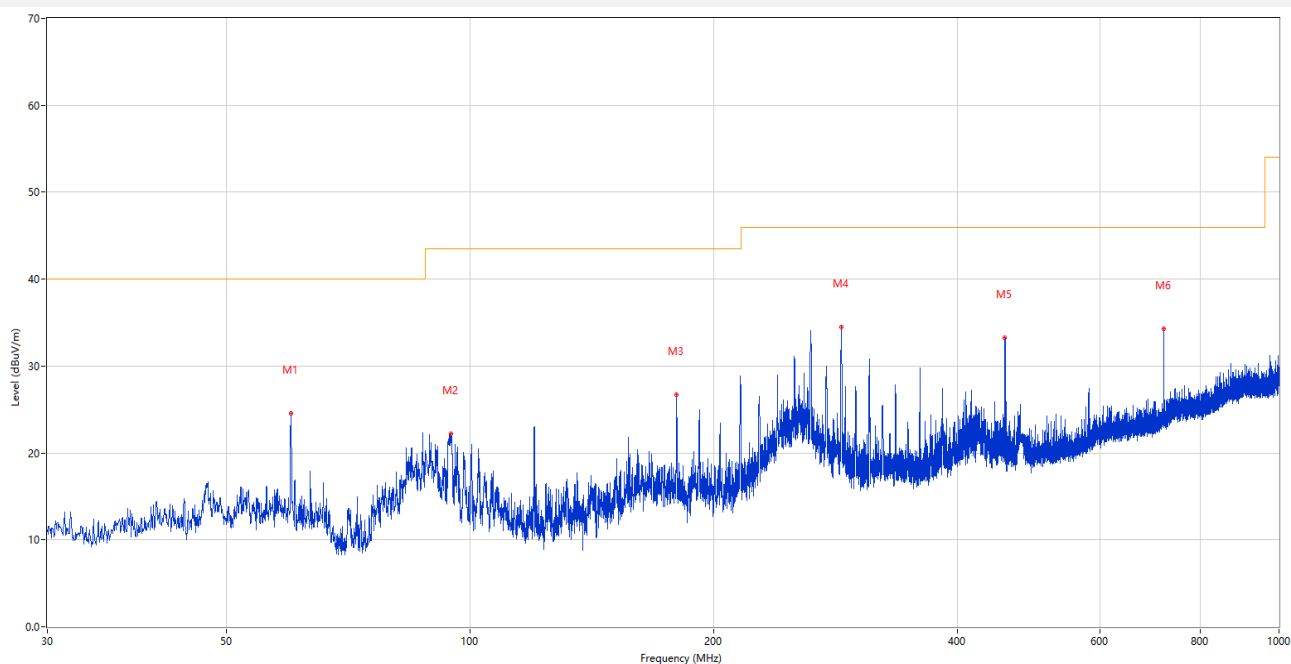
Note 4: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and normal link mode is worst.

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	60.022	18.71	-26.19	40.0	21.29	Peak	0.00	200	Horizontal	Pass
2	120.016	28.60	-28.36	43.5	14.90	Peak	162.00	100	Horizontal	Pass
3	240.005	35.71	-24.76	46.0	10.29	Peak	94.00	200	Horizontal	Pass
4	287.778	35.56	-23.86	46.0	10.44	Peak	237.00	200	Horizontal	Pass
5	478.916	26.19	-19.19	46.0	19.81	Peak	199.00	100	Horizontal	Pass
6	720.010	36.84	-13.82	46.0	9.16	Peak	111.00	200	Horizontal	Pass

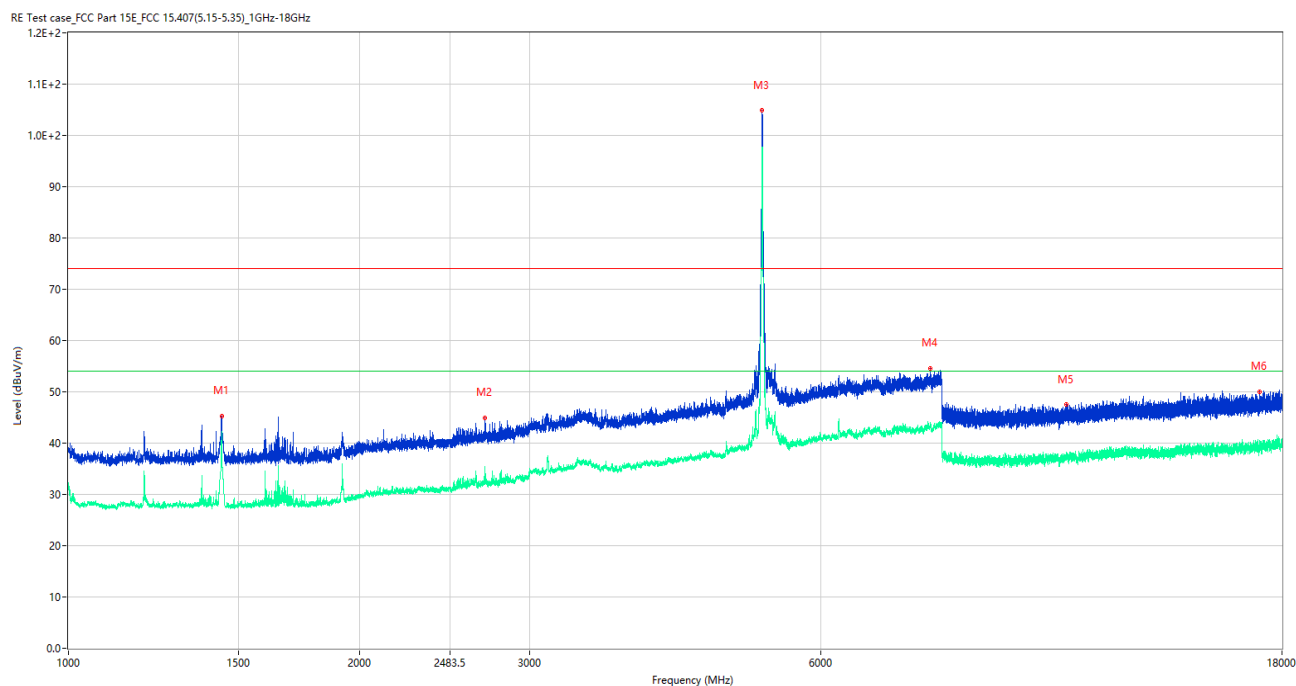
30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	60.022	24.55	-26.19	40.0	15.45	Peak	266.00	100	Vertical	Pass
2	94.747	22.16	-27.04	43.5	21.34	Peak	86.00	100	Vertical	Pass
3	179.962	26.75	-28.07	43.5	16.75	Peak	112.00	200	Vertical	Pass
4	287.729	34.52	-23.86	46.0	11.48	Peak	158.00	100	Vertical	Pass
5	458.449	33.30	-19.76	46.0	12.70	Peak	62.00	100	Vertical	Pass
6	720.010	34.29	-13.82	46.0	11.71	Peak	56.00	100	Vertical	Pass

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

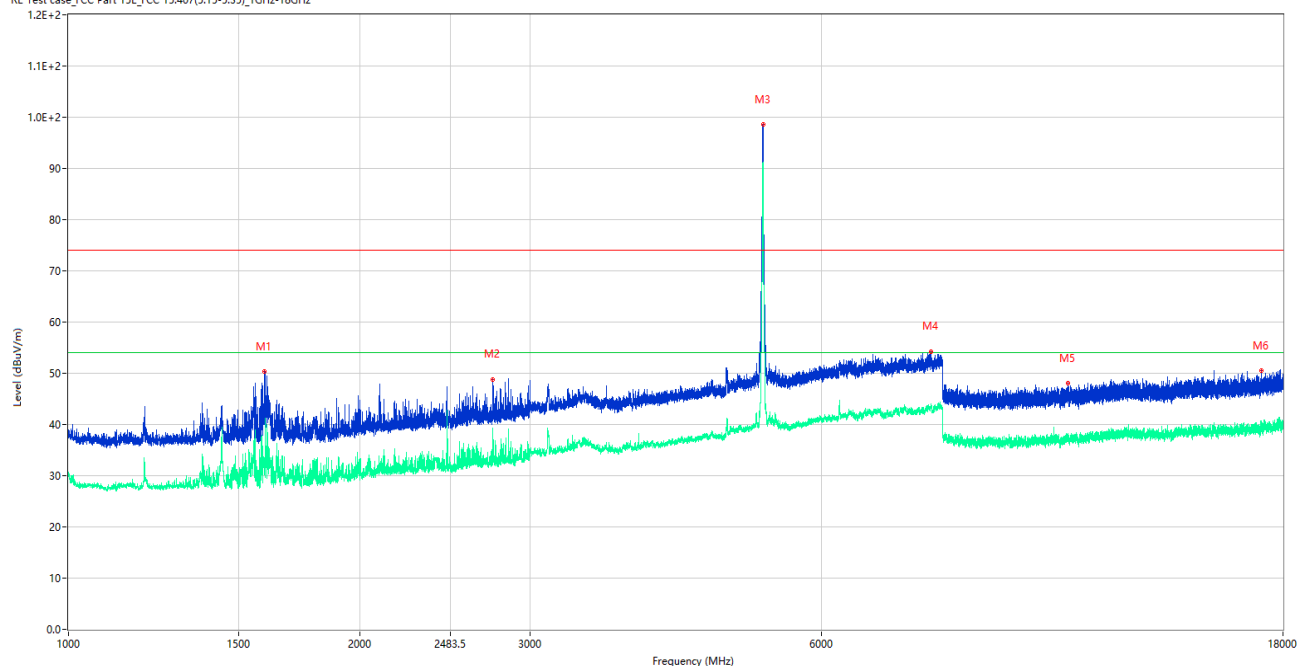
11a, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.250	45.30	-15.94	74.0	28.70	Peak	138.00	150	Horizontal	Pass
1**	1440.250	42.22	-15.94	54.0	11.78	AV	138.00	150	Horizontal	Pass
2	2698.250	45.00	-10.58	74.0	29.00	Peak	127.00	150	Horizontal	Pass
2**	2698.250	32.06	-10.58	54.0	21.94	AV	127.00	150	Horizontal	Pass
3	5218.500	104.93	-2.37	74.0	-30.93	Peak	100.00	150	Horizontal	N/A
3**	5218.500	97.15	-2.37	54.0	-43.15	AV	100.00	150	Horizontal	N/A
4	7789.500	54.64	1.61	74.0	19.36	Peak	0.00	150	Horizontal	Pass
4**	7789.500	43.34	1.61	54.0	10.66	AV	0.00	150	Horizontal	Pass
5	10779.463	47.55	-3.02	74.0	26.45	Peak	166.00	150	Horizontal	Pass
5**	10779.463	37.34	-3.02	54.0	16.66	AV	166.00	150	Horizontal	Pass
6	17065.500	49.95	-0.96	74.0	24.05	Peak	322.00	150	Horizontal	Pass
6**	17065.500	39.31	-0.96	54.0	14.69	AV	322.00	150	Horizontal	Pass

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

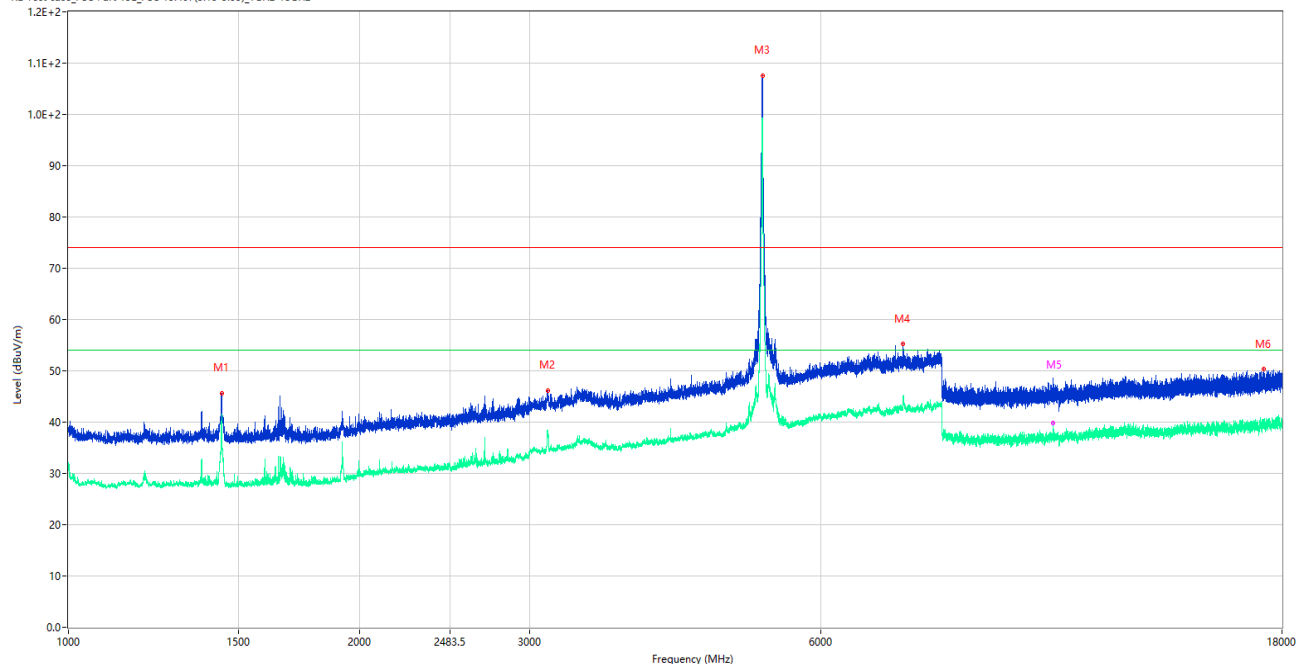
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1594.250	50.26	-16.22	74.0	23.74	Peak	298.00	150	Vertical	Pass
1**	1594.250	32.86	-16.22	54.0	21.14	AV	298.00	150	Vertical	Pass
2	2745.500	48.86	-10.55	74.0	25.14	Peak	122.00	150	Vertical	Pass
2**	2745.500	39.25	-10.55	54.0	14.75	AV	122.00	150	Vertical	Pass
3	5221.000	98.55	-2.36	74.0	-24.55	Peak	273.00	150	Vertical	N/A
3**	5221.000	90.95	-2.36	54.0	-36.95	AV	273.00	150	Vertical	N/A
4	7792.500	54.23	1.65	74.0	19.77	Peak	74.00	150	Vertical	Pass
4**	7792.500	43.20	1.65	54.0	10.80	AV	74.00	150	Vertical	Pass
5	10798.463	47.98	-3.21	74.0	26.02	Peak	72.00	150	Vertical	Pass
5**	10798.463	37.12	-3.21	54.0	16.88	AV	72.00	150	Vertical	Pass
6	17097.262	50.61	-0.95	74.0	23.39	Peak	360.00	150	Vertical	Pass
6**	17097.262	39.48	-0.95	54.0	14.52	AV	360.00	150	Vertical	Pass

11n20, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT H

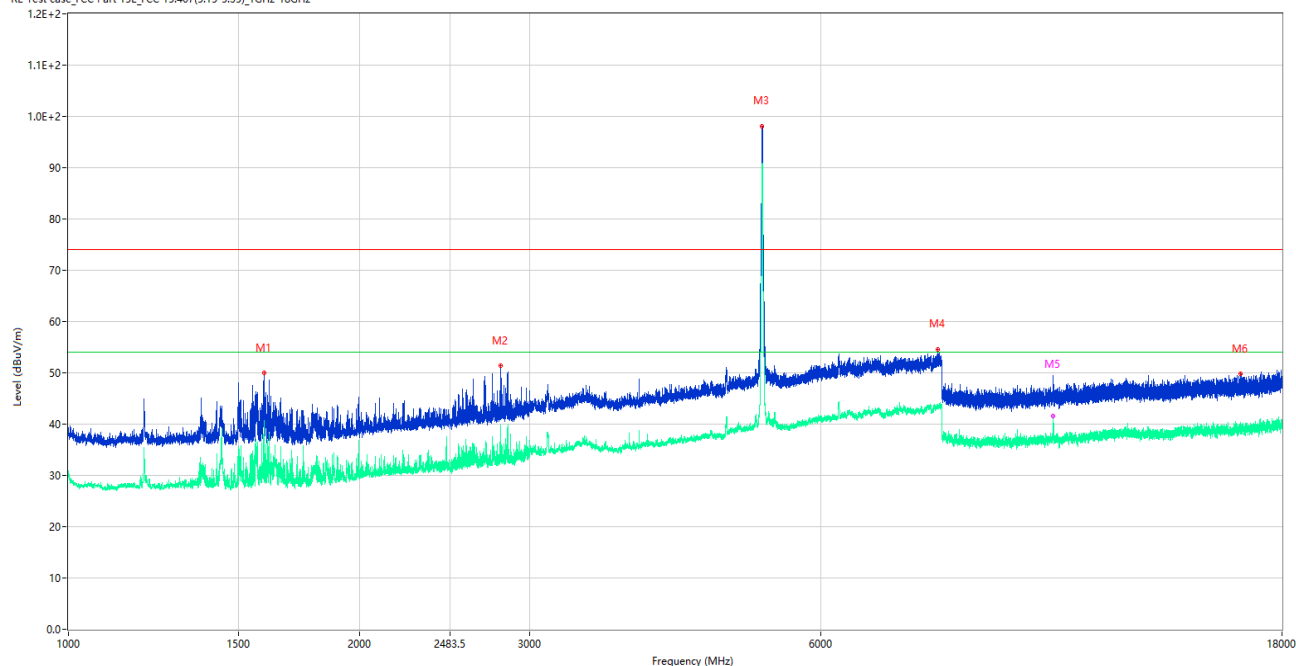
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.000	45.66	-15.95	74.0	28.34	Peak	138.00	150	Horizontal	Pass
1**	1440.000	41.58	-15.95	54.0	12.42	AV	138.00	150	Horizontal	Pass
2	3130.500	46.06	-7.37	74.0	27.94	Peak	121.00	150	Horizontal	Pass
2**	3130.500	37.33	-7.37	54.0	16.67	AV	121.00	150	Horizontal	Pass
3	5221.000	107.56	-2.36	74.0	-33.56	Peak	93.00	150	Horizontal	N/A
3**	5221.000	99.04	-2.36	54.0	-45.04	AV	93.00	150	Horizontal	N/A
4	7303.000	55.21	0.49	74.0	18.79	Peak	210.00	150	Horizontal	Pass
4**	7303.000	44.22	0.49	54.0	9.78	AV	210.00	150	Horizontal	Pass
5	10437.937	47.58	-3.35	74.0	26.42	Peak	95.00	150	Horizontal	Pass
5**	10437.937	39.77	-3.35	54.0	14.23	AV	95.00	150	Horizontal	Pass
6	17226.676	50.34	-0.55	74.0	23.66	Peak	351.00	150	Horizontal	Pass
6**	17226.676	39.75	-0.55	54.0	14.25	AV	351.00	150	Horizontal	Pass

11n20, U-NII-1, 1 GHz to 18 GHz, Middle Channel, ANT V

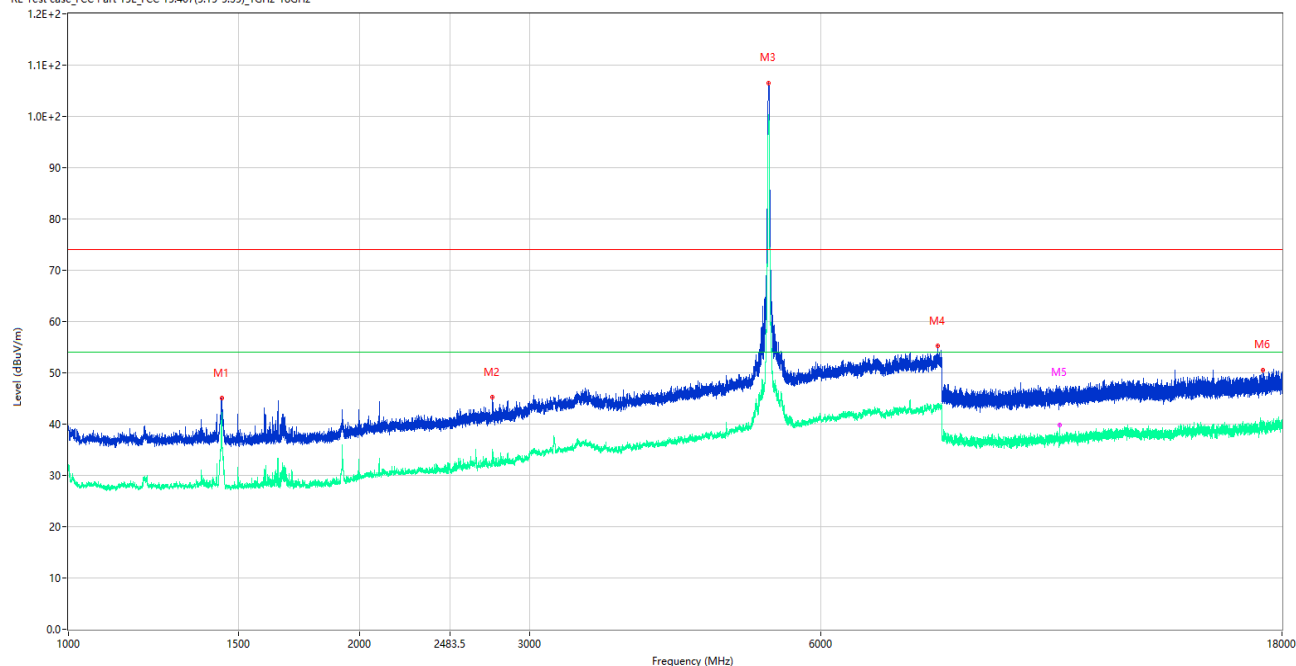
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1593.250	49.93	-16.21	74.0	24.07	Peak	123.00	150	Vertical	Pass
1**	1593.250	37.17	-16.21	54.0	16.83	AV	123.00	150	Vertical	Pass
2	2797.750	51.39	-9.99	74.0	22.61	Peak	286.00	150	Vertical	Pass
2**	2797.750	34.36	-9.99	54.0	19.64	AV	286.00	150	Vertical	Pass
3	5219.000	98.13	-2.36	74.0	-24.13	Peak	308.00	150	Vertical	N/A
3**	5219.000	90.75	-2.36	54.0	-36.75	AV	308.00	150	Vertical	N/A
4	7930.000	54.58	2.03	74.0	19.42	Peak	181.00	150	Vertical	Pass
4**	7930.000	43.23	2.03	54.0	10.77	AV	181.00	150	Vertical	Pass
5	10443.162	46.47	-3.30	74.0	27.53	Peak	95.00	150	Vertical	Pass
5**	10443.162	41.56	-3.30	54.0	12.44	AV	95.00	150	Vertical	Pass
6	16296.375	49.76	-1.52	74.0	24.24	Peak	0.00	150	Vertical	Pass
6**	16296.375	39.34	-1.52	54.0	14.66	AV	0.00	150	Vertical	Pass

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

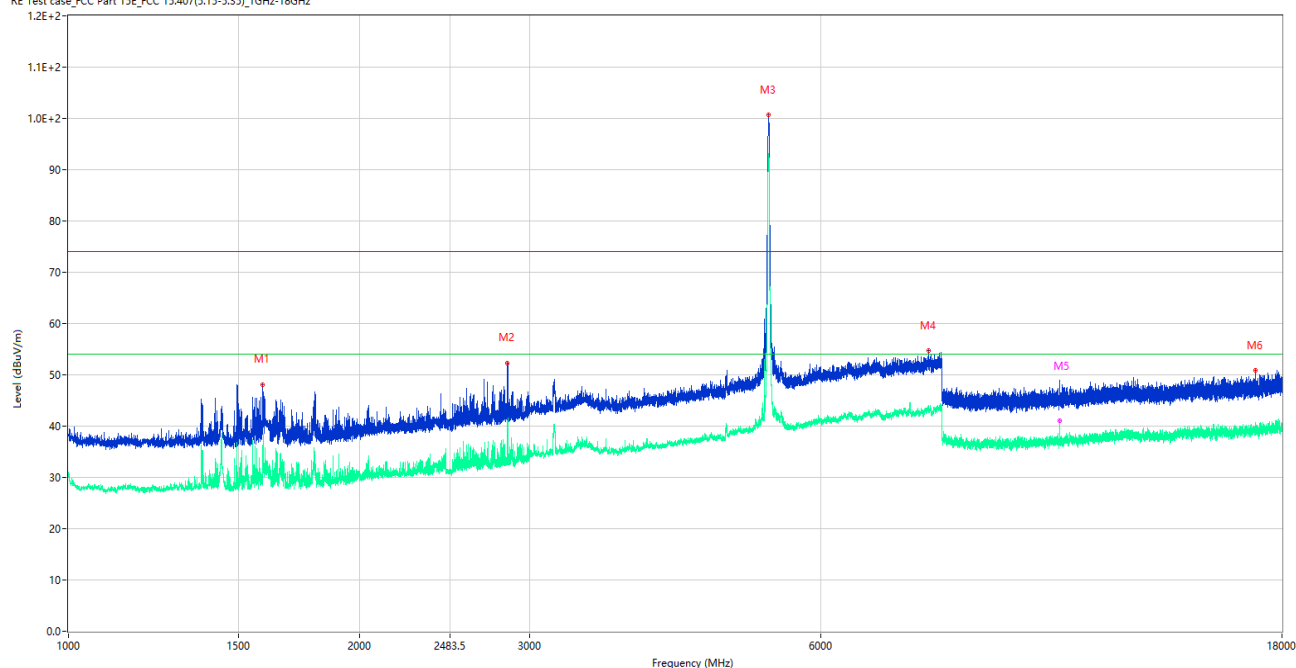
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.250	45.05	-15.94	74.0	28.95	Peak	138.00	150	Horizontal	Pass
1**	1440.250	42.24	-15.94	54.0	11.76	AV	138.00	150	Horizontal	Pass
2	2746.750	45.19	-10.53	74.0	28.81	Peak	0.00	150	Horizontal	Pass
2**	2746.750	35.08	-10.53	54.0	18.92	AV	0.00	150	Horizontal	Pass
3	5302.500	106.57	-2.04	74.0	-32.57	Peak	90.00	150	Horizontal	N/A
3**	5302.500	99.78	-2.04	54.0	-45.78	AV	90.00	150	Horizontal	N/A
4	7925.500	55.33	1.95	74.0	18.67	Peak	249.00	150	Horizontal	Pass
4**	7925.500	43.57	1.95	54.0	10.43	AV	249.00	150	Horizontal	Pass
5	10600.863	45.03	-3.67	74.0	28.97	Peak	6.00	150	Horizontal	Pass
5**	10600.863	39.77	-3.67	54.0	14.23	AV	6.00	150	Horizontal	Pass
6	17188.874	50.59	0.17	74.0	23.41	Peak	176.00	150	Horizontal	Pass
6**	17188.874	39.69	0.17	54.0	14.31	AV	176.00	150	Horizontal	Pass

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

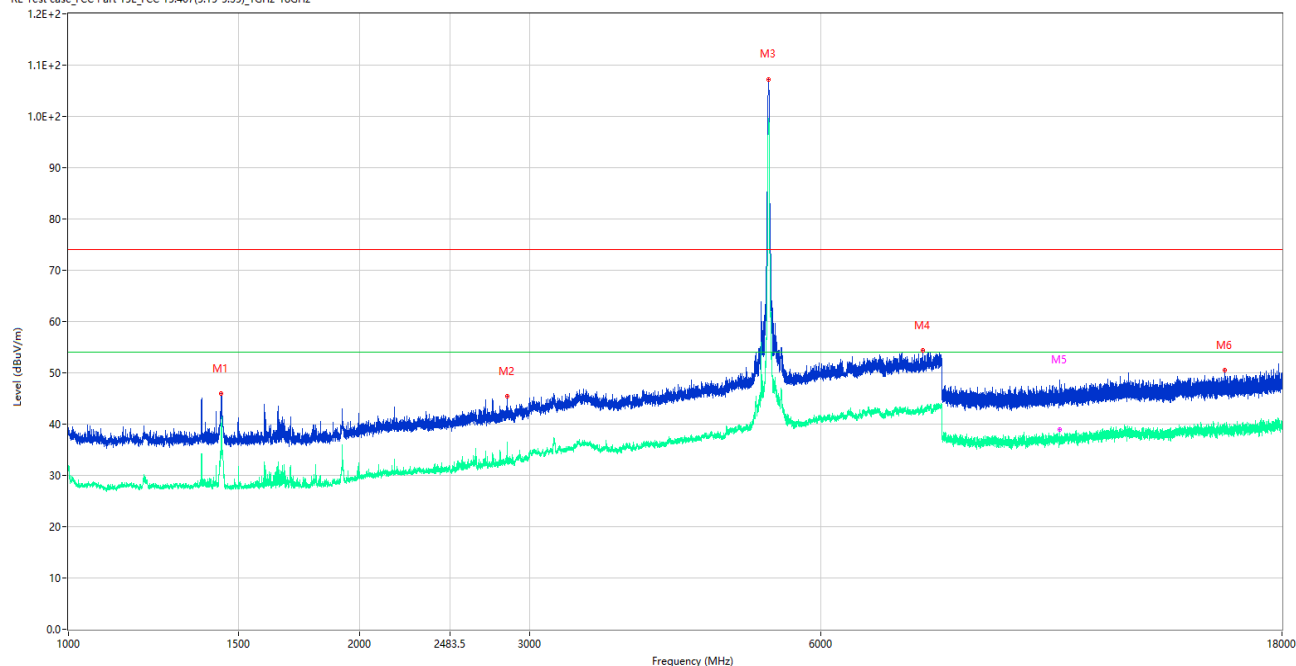
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1589.250	48.14	-16.18	74.0	25.86	Peak	115.00	150	Vertical	Pass
1**	1589.250	32.97	-16.18	54.0	21.03	AV	115.00	150	Vertical	Pass
2	2845.500	52.36	-9.48	74.0	21.64	Peak	277.00	150	Vertical	Pass
2**	2845.500	36.66	-9.48	54.0	17.34	AV	277.00	150	Vertical	Pass
3	5301.000	100.67	-2.07	74.0	-26.67	Peak	307.00	150	Vertical	N/A
3**	5301.000	92.49	-2.07	54.0	-38.49	AV	307.00	150	Vertical	N/A
4	7752.500	54.65	1.50	74.0	19.35	Peak	197.00	150	Vertical	Pass
4**	7752.500	44.09	1.50	54.0	9.91	AV	197.00	150	Vertical	Pass
5	10599.912	46.80	-3.67	74.0	27.20	Peak	147.00	150	Vertical	Pass
5**	10599.912	41.06	-3.67	54.0	12.94	AV	147.00	150	Vertical	Pass
6	16891.199	50.81	-0.45	74.0	23.19	Peak	39.00	150	Vertical	Pass
6**	16891.199	39.51	-0.45	54.0	14.49	AV	39.00	150	Vertical	Pass

11n20, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT H

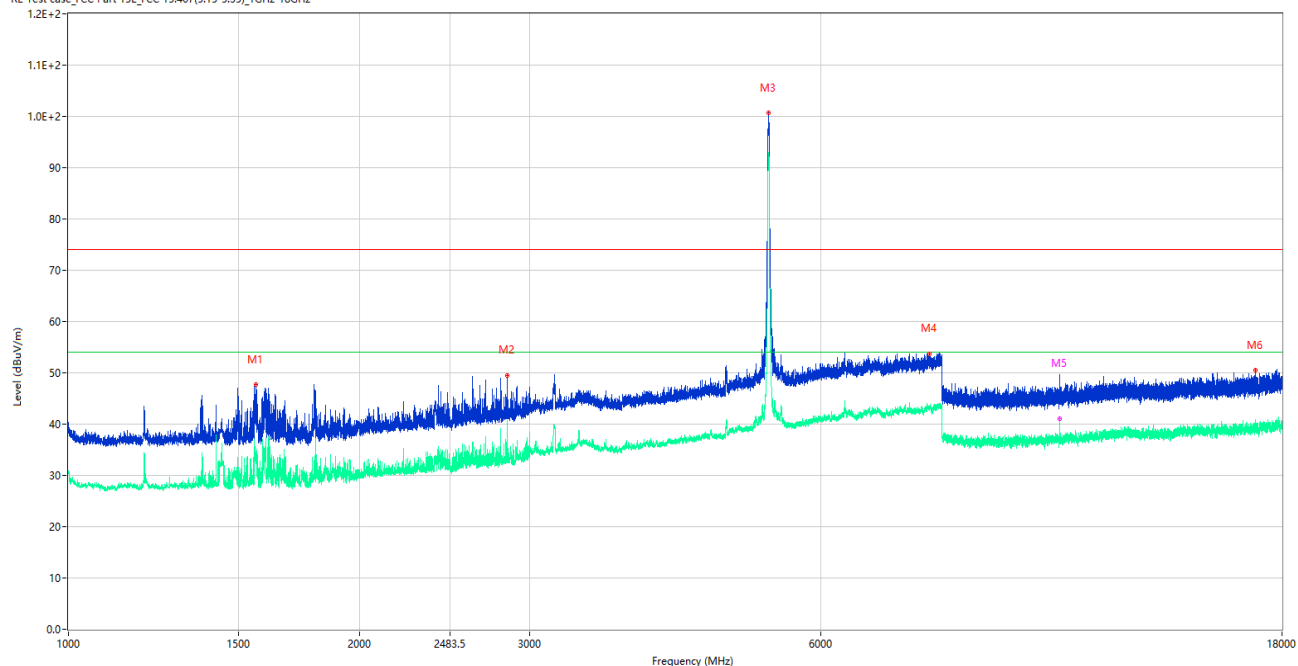
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.750	45.91	-15.95	74.0	28.09	Peak	139.00	150	Horizontal	Pass
1**	1439.750	39.07	-15.95	54.0	14.93	AV	139.00	150	Horizontal	Pass
2	2843.250	45.48	-9.45	74.0	28.52	Peak	264.00	150	Horizontal	Pass
2**	2843.250	35.51	-9.45	54.0	18.49	AV	264.00	150	Horizontal	Pass
3	5299.000	107.24	-2.01	74.0	-33.24	Peak	86.00	150	Horizontal	N/A
3**	5299.000	99.52	-2.01	54.0	-45.52	AV	86.00	150	Horizontal	N/A
4	7647.500	54.36	0.47	74.0	19.64	Peak	360.00	150	Horizontal	Pass
4**	7647.500	42.69	0.47	54.0	11.31	AV	360.00	150	Horizontal	Pass
5	10600.150	46.35	-3.67	74.0	27.65	Peak	147.00	150	Horizontal	Pass
5**	10600.150	38.95	-3.67	54.0	15.05	AV	147.00	150	Horizontal	Pass
6	15706.013	50.48	-1.79	74.0	23.52	Peak	107.00	150	Horizontal	Pass
6**	15706.013	39.23	-1.79	54.0	14.77	AV	107.00	150	Horizontal	Pass

11n20, U-NII-2A, 1 GHz to 18 GHz, Middle Channel, ANT V

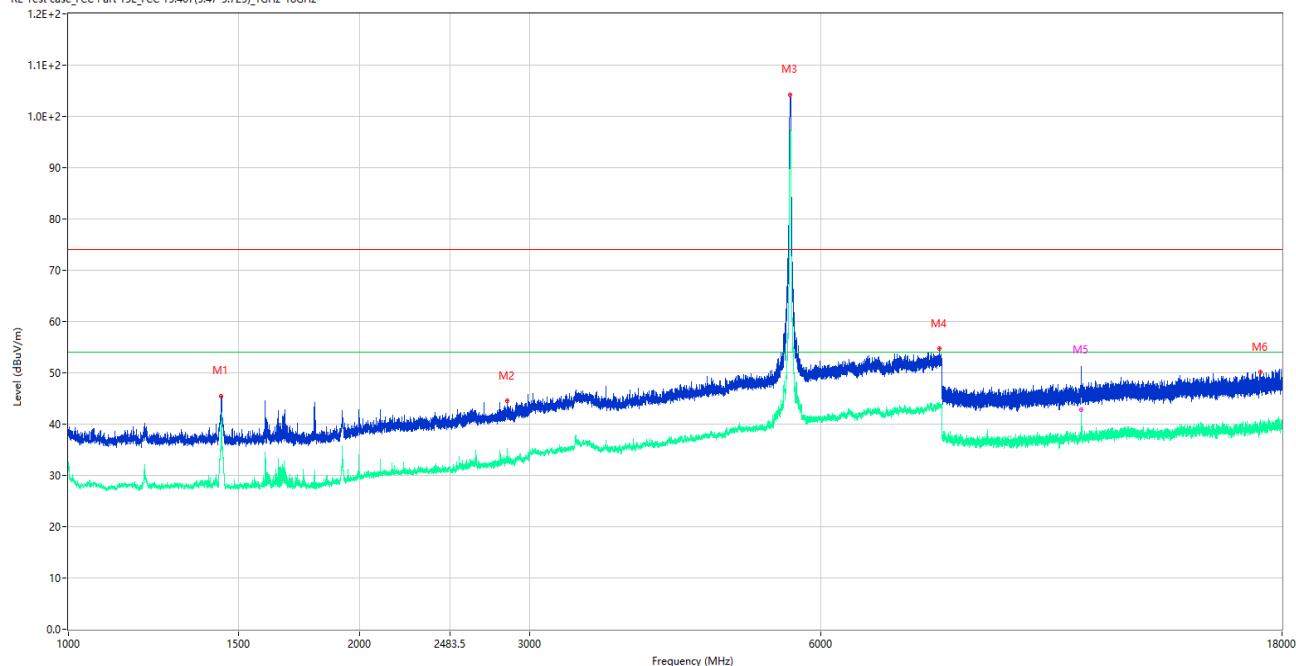
RE Test case_FCC Part 15E_FCC 15.407(5.15-5.35)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1562.000	47.78	-16.06	74.0	26.22	Peak	99.00	150	Vertical	Pass
1**	1562.000	33.11	-16.06	54.0	20.89	AV	99.00	150	Vertical	Pass
2	2845.500	49.52	-9.48	74.0	24.48	Peak	279.00	150	Vertical	Pass
2**	2845.500	40.76	-9.48	54.0	13.24	AV	279.00	150	Vertical	Pass
3	5301.000	100.65	-2.07	74.0	-26.65	Peak	306.00	150	Vertical	N/A
3**	5301.000	91.97	-2.07	54.0	-37.97	AV	306.00	150	Vertical	N/A
4	7781.000	53.64	1.34	74.0	20.36	Peak	1.00	150	Vertical	Pass
4**	7781.000	43.45	1.34	54.0	10.55	AV	1.00	150	Vertical	Pass
5	10599.675	46.72	-3.67	74.0	27.28	Peak	121.00	150	Vertical	Pass
5**	10599.675	41.04	-3.67	54.0	12.96	AV	121.00	150	Vertical	Pass
6	16908.526	50.52	-0.75	74.0	23.48	Peak	245.00	150	Vertical	Pass
6**	16908.526	40.23	-0.75	54.0	13.77	AV	245.00	150	Vertical	Pass

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

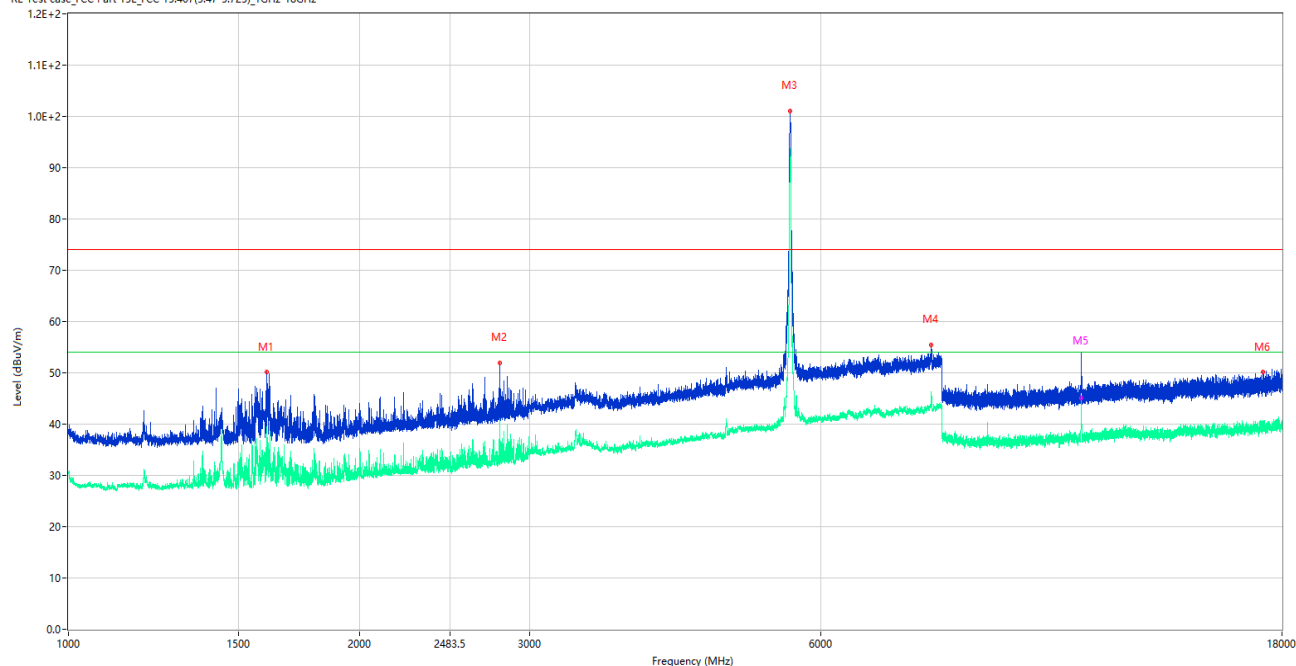
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.750	45.45	-15.95	74.0	28.55	Peak	142.00	150	Horizontal	Pass
1**	1439.750	40.06	-15.95	54.0	13.94	AV	142.00	150	Horizontal	Pass
2	2844.250	44.49	-9.46	74.0	29.51	Peak	272.00	150	Horizontal	Pass
2**	2844.250	32.74	-9.46	54.0	21.26	AV	272.00	150	Horizontal	Pass
3	5578.000	104.28	-2.89	74.0	-30.28	Peak	87.00	150	Horizontal	N/A
3**	5578.000	96.94	-2.89	54.0	-42.94	AV	87.00	150	Horizontal	N/A
4	7964.500	54.72	2.32	74.0	19.28	Peak	127.00	150	Horizontal	Pass
4**	7964.500	43.62	2.32	54.0	10.38	AV	127.00	150	Horizontal	Pass
5	11161.838	48.37	-4.03	74.0	25.63	Peak	50.00	150	Horizontal	Pass
5**	11161.838	42.82	-4.03	54.0	11.18	AV	50.00	150	Horizontal	Pass
6	17110.387	50.11	-0.64	74.0	23.89	Peak	345.00	150	Horizontal	Pass
6**	17110.387	39.82	-0.64	54.0	14.18	AV	345.00	150	Horizontal	Pass

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

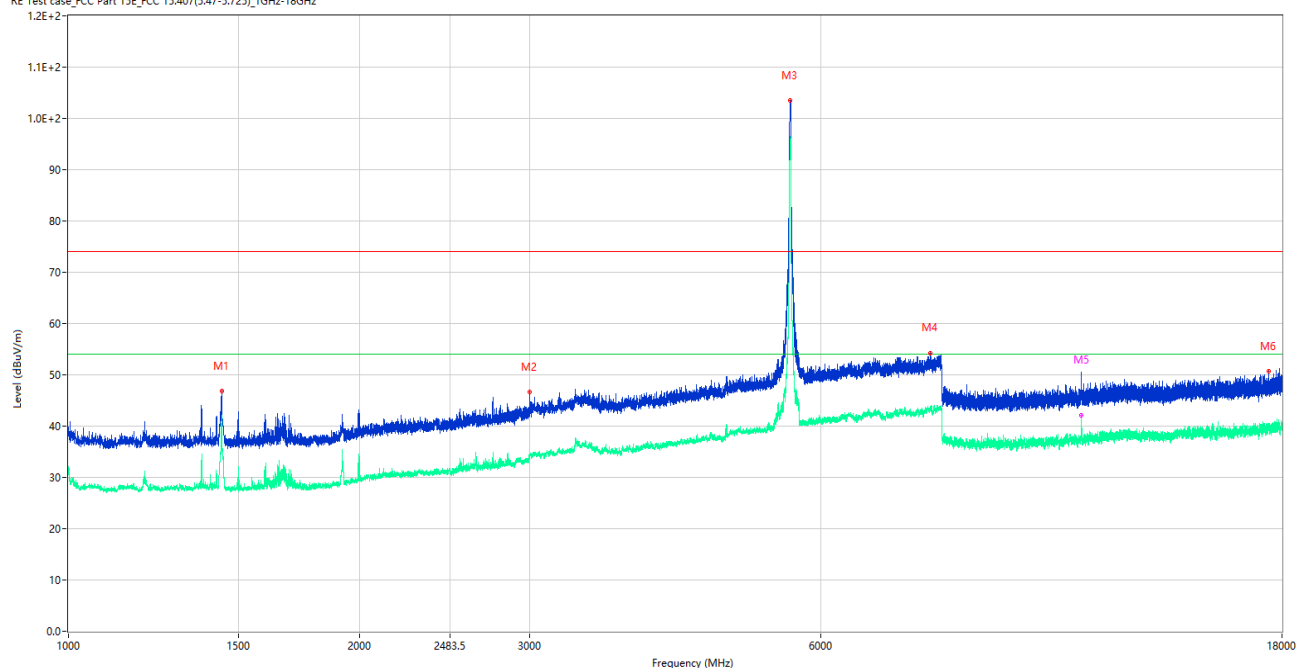
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1604.750	50.11	-16.23	74.0	23.89	Peak	125.00	150	Vertical	Pass
1**	1604.750	33.91	-16.23	54.0	20.09	AV	125.00	150	Vertical	Pass
2	2795.500	51.87	-9.85	74.0	22.13	Peak	288.00	150	Vertical	Pass
2**	2795.500	32.88	-9.85	54.0	21.12	AV	288.00	150	Vertical	Pass
3	5578.000	101.08	-2.89	74.0	-27.08	Peak	120.00	150	Vertical	N/A
3**	5578.000	92.27	-2.89	54.0	-38.27	AV	120.00	150	Vertical	N/A
4	7799.500	55.49	1.62	74.0	18.51	Peak	161.00	150	Vertical	Pass
4**	7799.500	43.73	1.62	54.0	10.27	AV	161.00	150	Vertical	Pass
5	11156.375	51.53	-4.03	74.0	22.47	Peak	149.00	150	Vertical	Pass
5**	11156.375	45.04	-4.03	54.0	8.96	AV	149.00	150	Vertical	Pass
6	17191.500	50.24	-0.09	74.0	23.76	Peak	211.00	150	Vertical	Pass
6**	17191.500	39.26	-0.09	54.0	14.74	AV	211.00	150	Vertical	Pass

11n20, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT H

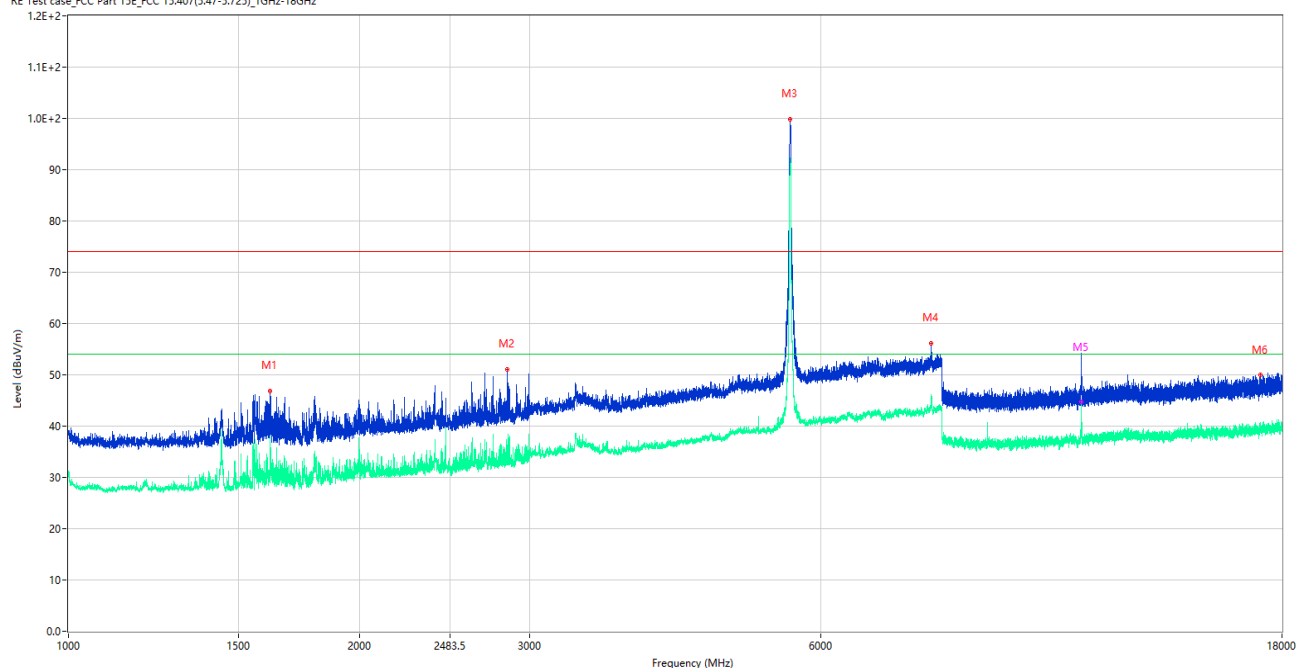
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.000	46.76	-15.95	74.0	27.24	Peak	143.00	150	Horizontal	Pass
1**	1440.000	41.36	-15.95	54.0	12.64	AV	143.00	150	Horizontal	Pass
2	2999.750	46.61	-8.74	74.0	27.39	Peak	51.00	150	Horizontal	Pass
2**	2999.750	33.95	-8.74	54.0	20.05	AV	51.00	150	Horizontal	Pass
3	5578.000	103.49	-2.89	74.0	-29.49	Peak	87.00	150	Horizontal	N/A
3**	5578.000	96.43	-2.89	54.0	-42.43	AV	87.00	150	Horizontal	N/A
4	7794.500	54.24	1.67	74.0	19.76	Peak	106.00	150	Horizontal	Pass
4**	7794.500	43.24	1.67	54.0	10.76	AV	106.00	150	Horizontal	Pass
5	11163.263	47.50	-4.06	74.0	26.50	Peak	194.00	150	Horizontal	Pass
5**	11163.263	42.15	-4.06	54.0	11.85	AV	194.00	150	Horizontal	Pass
6	17430.901	50.64	-0.05	74.0	23.36	Peak	75.00	150	Horizontal	Pass
6**	17430.901	39.52	-0.05	54.0	14.48	AV	75.00	150	Horizontal	Pass

11n20, U-NII-2C, 1 GHz to 18 GHz, Middle Channel, ANT V

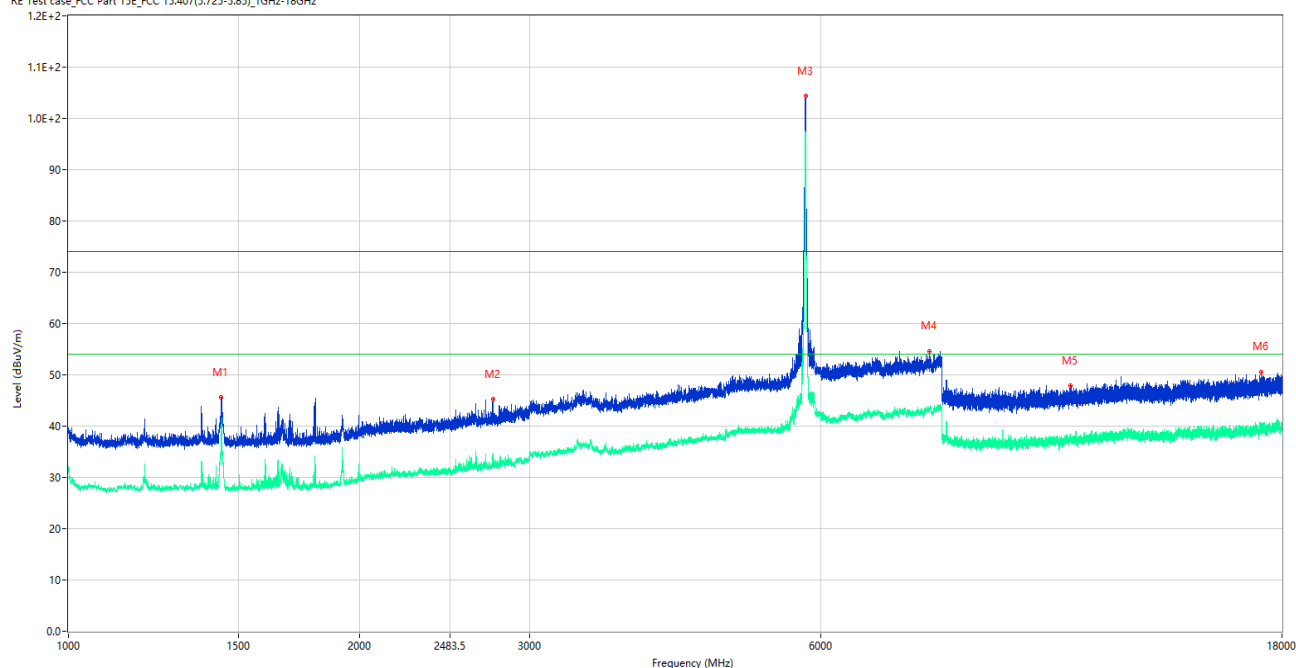
RE Test case_FCC Part 15E_FCC 15.407(5.47-5.725)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1617.000	46.79	-16.10	74.0	27.21	Peak	125.00	150	Vertical	Pass
1**	1617.000	29.39	-16.10	54.0	24.61	AV	125.00	150	Vertical	Pass
2	2843.750	51.13	-9.45	74.0	22.87	Peak	280.00	150	Vertical	Pass
2**	2843.750	34.03	-9.45	54.0	19.97	AV	280.00	150	Vertical	Pass
3	5579.000	99.86	-2.87	74.0	-25.86	Peak	126.00	150	Vertical	N/A
3**	5579.000	92.17	-2.87	54.0	-38.17	AV	126.00	150	Vertical	N/A
4	7802.000	56.19	1.52	74.0	17.81	Peak	167.00	150	Vertical	Pass
4**	7802.000	44.76	1.52	54.0	9.24	AV	167.00	150	Vertical	Pass
5	11166.113	50.10	-4.10	74.0	23.90	Peak	100.00	150	Vertical	Pass
5**	11166.113	44.69	-4.10	54.0	9.31	AV	100.00	150	Vertical	Pass
6	17095.162	49.96	-0.72	74.0	24.04	Peak	360.00	150	Vertical	Pass
6**	17095.162	39.68	-0.72	54.0	14.32	AV	360.00	150	Vertical	Pass

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

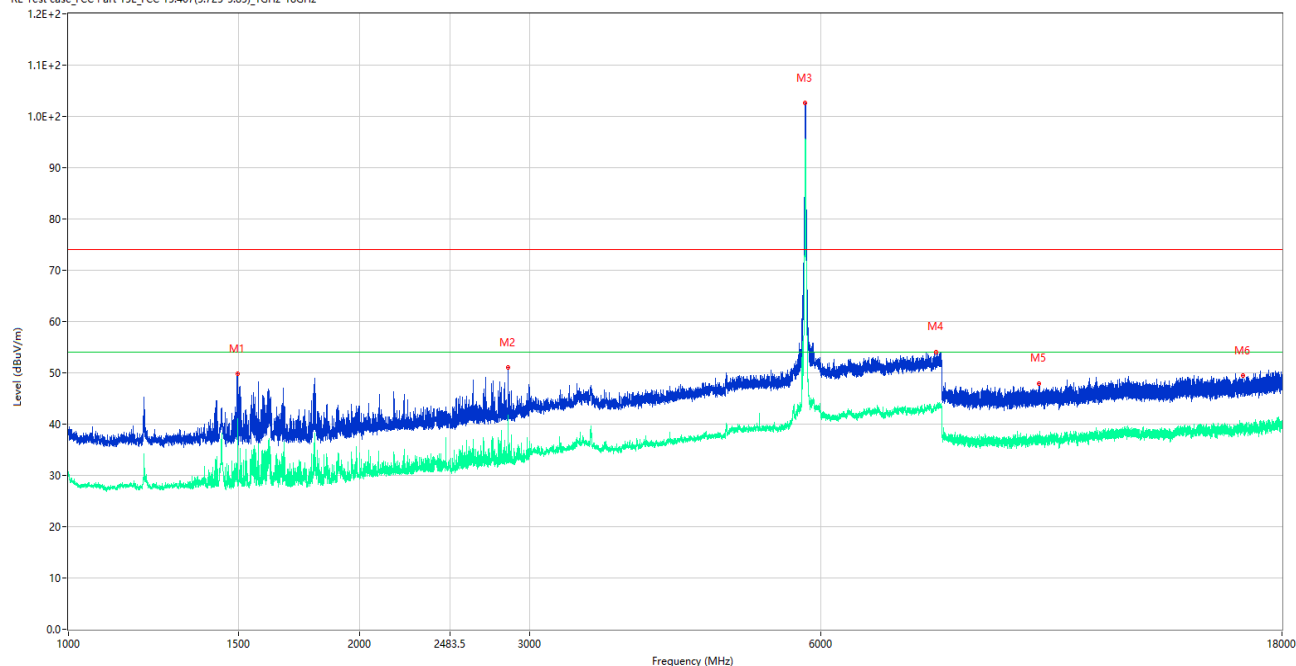
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.500	45.59	-15.96	74.0	28.41	Peak	138.00	150	Horizontal	Pass
1**	1439.500	37.79	-15.96	54.0	16.21	AV	138.00	150	Horizontal	Pass
2	2749.500	45.22	-10.53	74.0	28.78	Peak	360.00	150	Horizontal	Pass
2**	2749.500	32.40	-10.53	54.0	21.60	AV	360.00	150	Horizontal	Pass
3	5787.000	104.31	-1.54	74.0	-30.31	Peak	94.00	150	Horizontal	N/A
3**	5787.000	96.63	-1.54	54.0	-42.63	AV	94.00	150	Horizontal	N/A
4	7778.000	54.58	1.23	74.0	19.42	Peak	265.00	150	Horizontal	Pass
4**	7778.000	42.87	1.23	54.0	11.13	AV	265.00	150	Horizontal	Pass
5	10877.312	47.84	-3.25	74.0	26.16	Peak	262.00	150	Horizontal	Pass
5**	10877.312	37.23	-3.25	54.0	16.77	AV	262.00	150	Horizontal	Pass
6	17138.213	50.56	0.02	74.0	23.44	Peak	348.00	150	Horizontal	Pass
6**	17138.213	39.94	0.02	54.0	14.06	AV	348.00	150	Horizontal	Pass

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

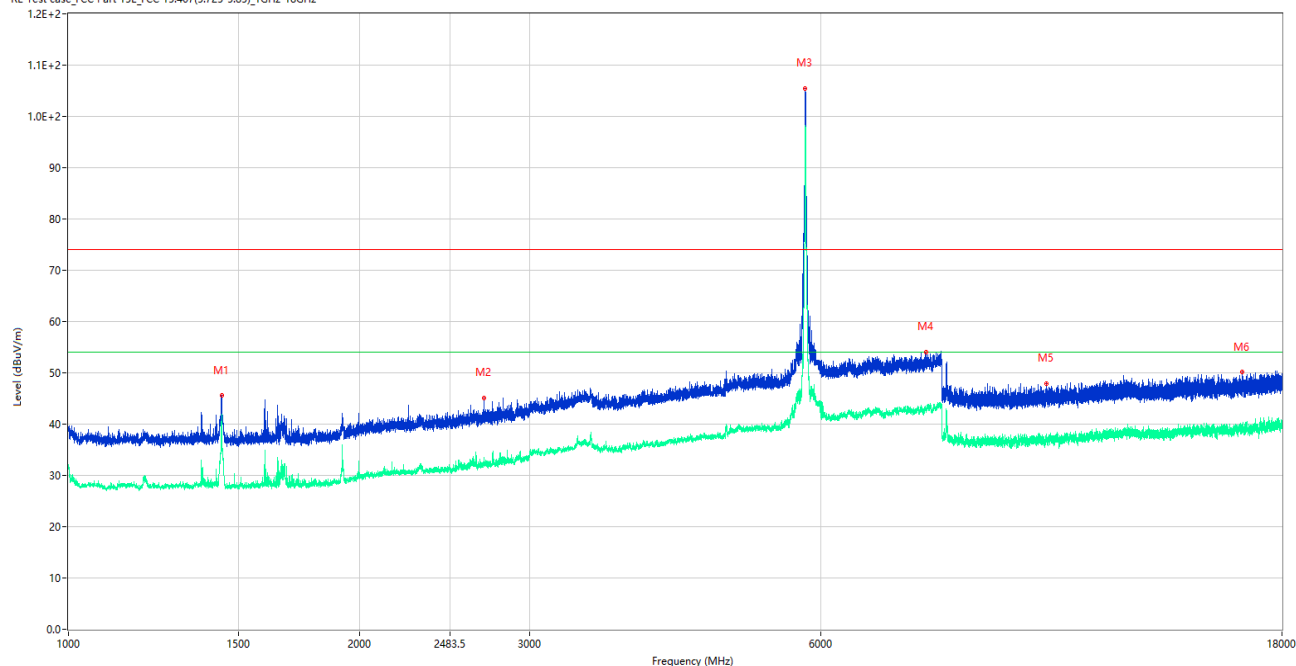
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1496.000	49.88	-16.17	74.0	24.12	Peak	95.00	150	Vertical	Pass
1**	1496.000	28.77	-16.17	54.0	25.23	AV	95.00	150	Vertical	Pass
2	2848.250	51.02	-9.51	74.0	22.98	Peak	280.00	150	Vertical	Pass
2**	2848.250	38.62	-9.51	54.0	15.38	AV	280.00	150	Vertical	Pass
3	5783.500	102.57	-1.54	74.0	-28.57	Peak	133.00	150	Vertical	N/A
3**	5783.500	95.08	-1.54	54.0	-41.08	AV	133.00	150	Vertical	N/A
4	7891.500	54.06	1.45	74.0	19.94	Peak	339.00	150	Vertical	Pass
4**	7891.500	42.81	1.45	54.0	11.19	AV	339.00	150	Vertical	Pass
5	10094.750	47.94	-4.10	74.0	26.06	Peak	240.00	150	Vertical	Pass
5**	10094.750	37.22	-4.10	54.0	16.78	AV	240.00	150	Vertical	Pass
6	16394.025	49.42	-1.11	74.0	24.58	Peak	0.00	150	Vertical	Pass
6**	16394.025	39.93	-1.11	54.0	14.07	AV	0.00	150	Vertical	Pass

11n20, U-NII-3, 1 GHz to 18 GHz, Middle Channel, ANT H

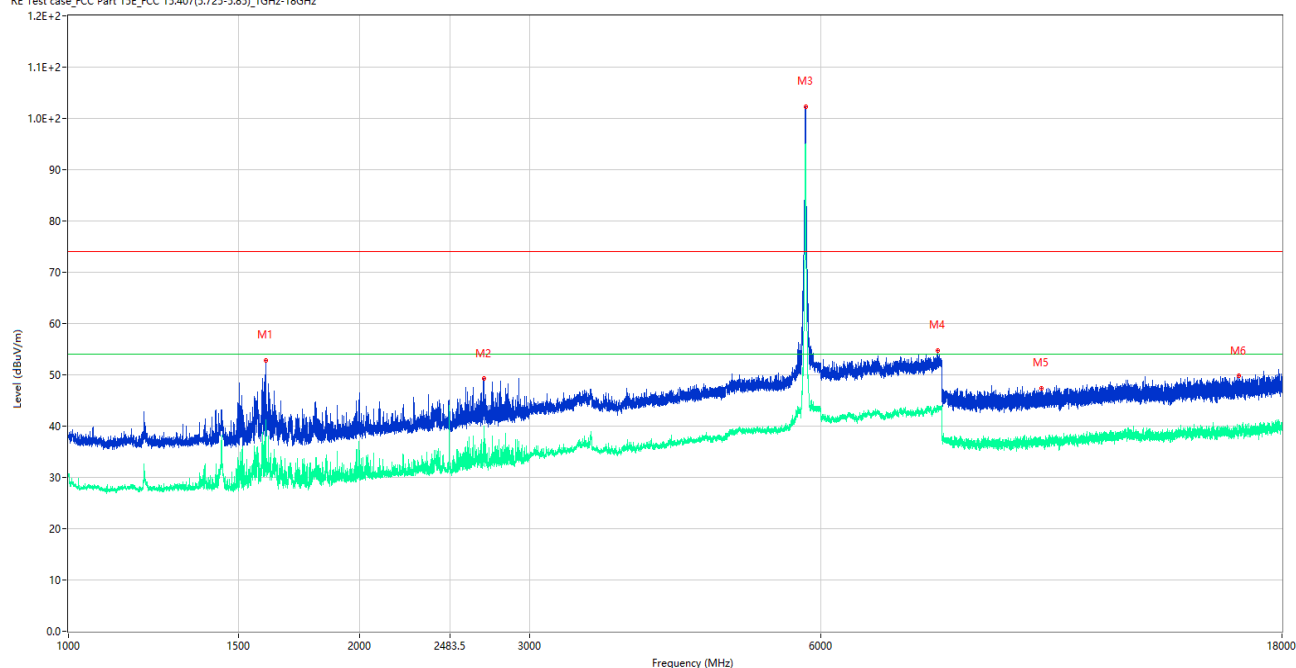
RE Test case_FCC Part 15E_FCC 15.407(5.725-5.85)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1440.000	45.61	-15.95	74.0	28.39	Peak	146.00	150	Horizontal	Pass
1**	1440.000	41.55	-15.95	54.0	12.45	AV	146.00	150	Horizontal	Pass
2	2692.750	45.13	-10.58	74.0	28.87	Peak	360.00	150	Horizontal	Pass
2**	2692.750	32.43	-10.58	54.0	21.57	AV	360.00	150	Horizontal	Pass
3	5783.500	105.50	-1.54	74.0	-31.50	Peak	81.00	150	Horizontal	N/A
3**	5783.500	98.12	-1.54	54.0	-44.12	AV	81.00	150	Horizontal	N/A
4	7706.000	53.98	1.46	74.0	20.02	Peak	90.00	150	Horizontal	Pass
4**	7706.000	42.74	1.46	54.0	11.26	AV	90.00	150	Horizontal	Pass
5	10260.525	47.94	-3.16	74.0	26.06	Peak	309.00	150	Horizontal	Pass
5**	10260.525	36.99	-3.16	54.0	17.01	AV	309.00	150	Horizontal	Pass
6	16380.112	50.13	-1.42	74.0	23.87	Peak	14.00	150	Horizontal	Pass
6**	16380.112	38.98	-1.42	54.0	15.02	AV	14.00	150	Horizontal	Pass

11n20, 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



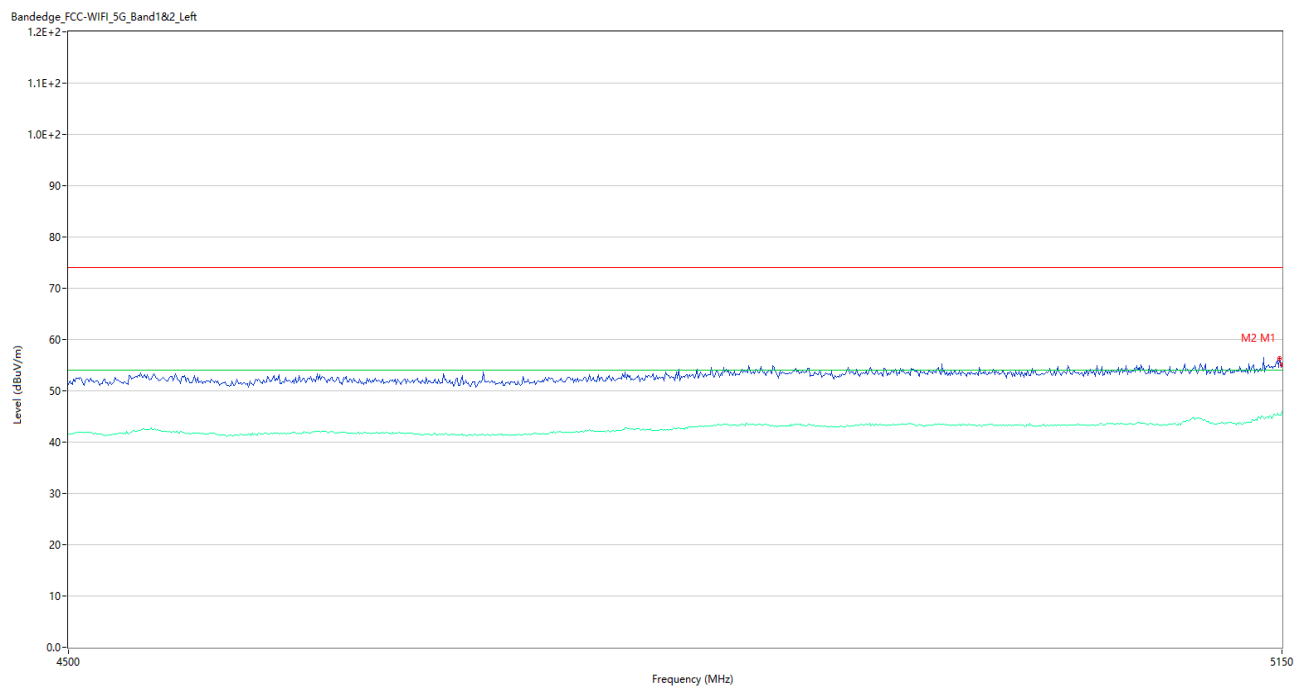
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1600.500	52.86	-16.24	74.0	21.14	Peak	101.00	150	Vertical	Pass
1**	1600.500	35.38	-16.24	54.0	18.62	AV	101.00	150	Vertical	Pass
2	2689.250	49.32	-10.49	74.0	24.68	Peak	299.00	150	Vertical	Pass
2**	2689.250	40.00	-10.49	54.0	14.00	AV	299.00	150	Vertical	Pass
3	5786.500	102.36	-1.53	74.0	-28.36	Peak	135.00	150	Vertical	N/A
3**	5786.500	94.96	-1.53	54.0	-40.96	AV	135.00	150	Vertical	N/A
4	7929.000	54.80	2.00	74.0	19.20	Peak	192.00	150	Vertical	Pass
4**	7929.000	43.47	2.00	54.0	10.53	AV	192.00	150	Vertical	Pass
5	10147.474	47.30	-4.30	74.0	26.70	Peak	9.00	150	Vertical	Pass
5**	10147.474	36.99	-4.30	54.0	17.01	AV	9.00	150	Vertical	Pass
6	16242.562	49.77	-1.41	74.0	24.23	Peak	0.00	150	Vertical	Pass
6**	16242.562	38.58	-1.41	54.0	15.42	AV	0.00	150	Vertical	Pass

A.6.2 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
U-NII-2A	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
U-NII-2C	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass
		High	Pass
U-NII-3	802.11a	Low	Pass
		High	Pass
	802.11n(HT20)	Low	Pass
		High	Pass

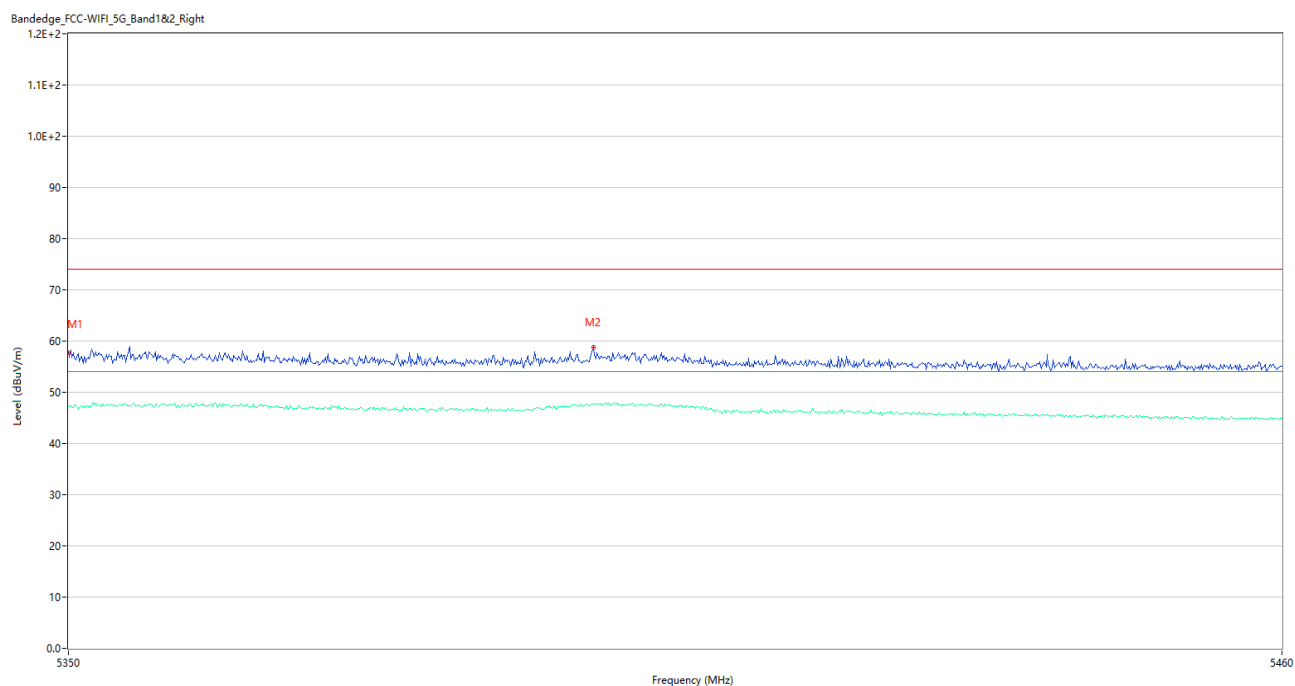
Test Data and Plots

U-NII-1 11a CH36



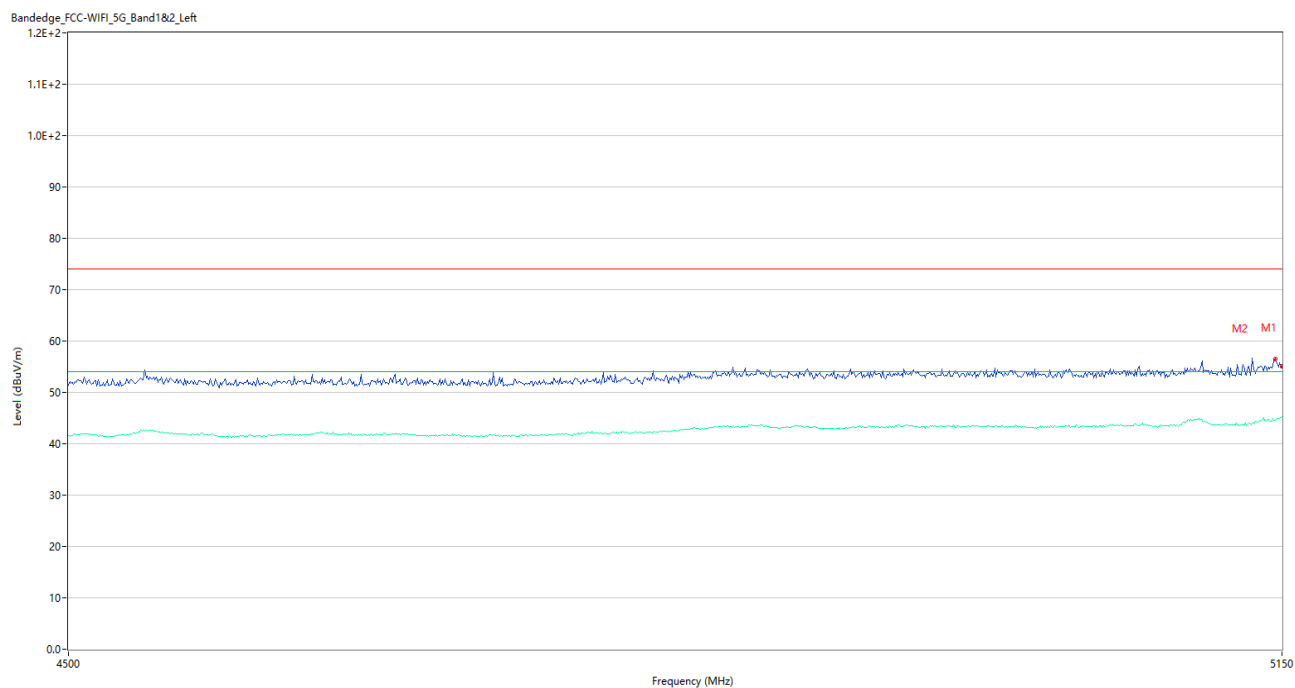
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	55.06	3.82	74.0	18.94	Peak	230.00	150	Vertical	Pass
1**	5150.000	45.90	3.82	54.0	8.10	AV	230.00	150	Vertical	Pass
2	5148.700	56.31	3.85	74.0	17.69	Peak	234.00	150	Vertical	Pass
2**	5148.700	45.23	3.85	54.0	8.77	AV	234.00	150	Vertical	Pass

U-NII-1 11a CH48



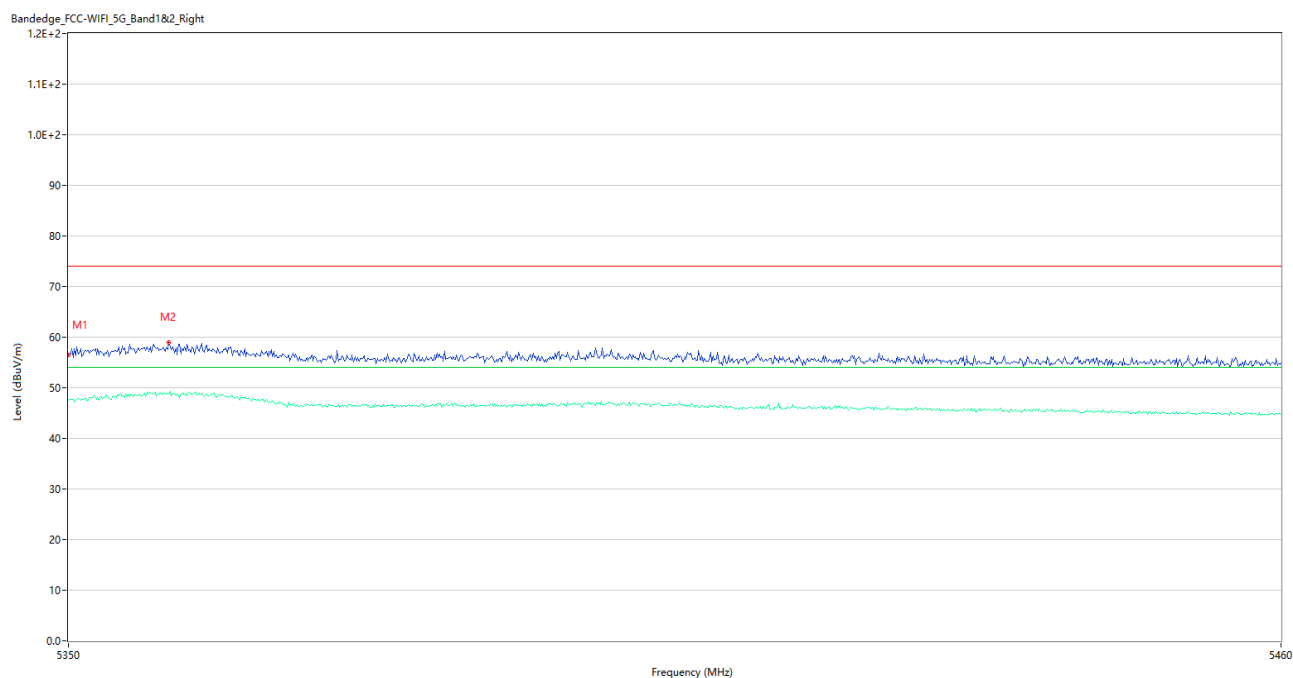
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	57.70	4.04	74.0	16.30	Peak	90.00	150	Horizontal	Pass
1**	5350.000	47.15	4.04	54.0	6.85	AV	90.00	150	Horizontal	Pass
2	5397.300	58.83	4.09	74.0	15.17	Peak	90.00	150	Horizontal	Pass
2**	5397.300	47.58	4.09	54.0	6.42	AV	90.00	150	Horizontal	Pass

U-NII-1 11n20 CH36



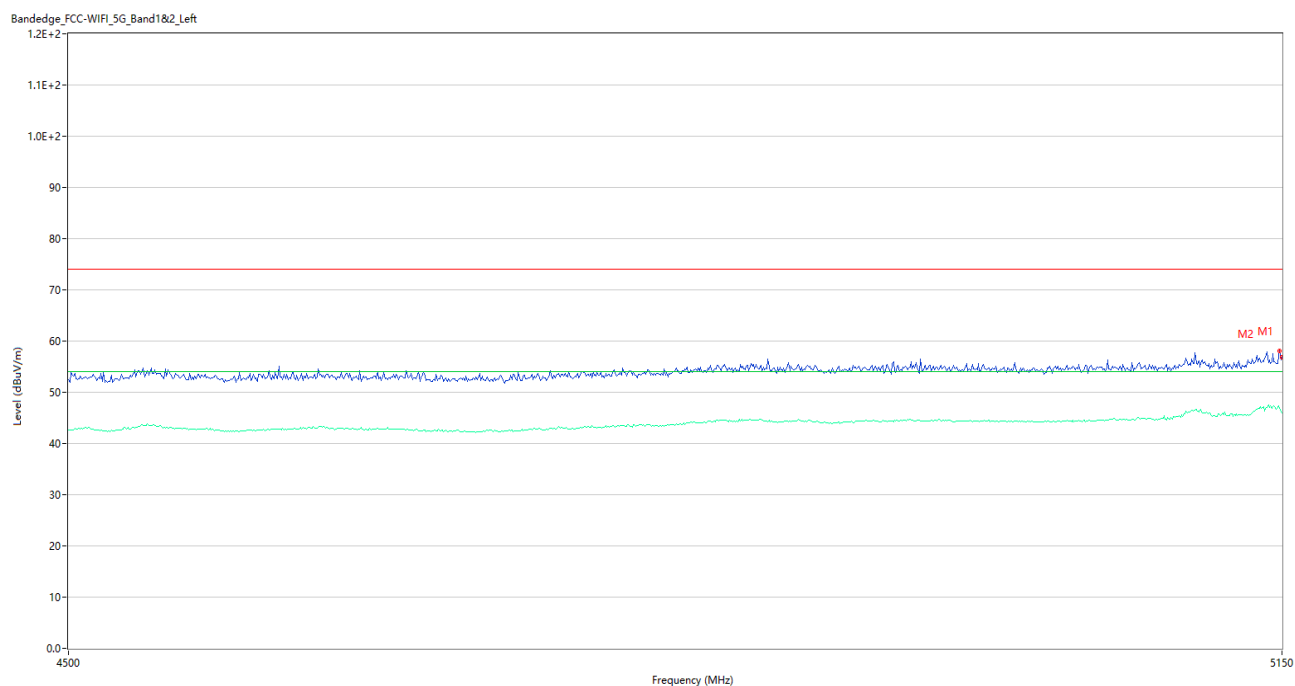
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	55.01	3.82	74.0	18.99	Peak	59.01	150	Horizontal	Pass
1**	5150.000	45.25	3.82	54.0	8.75	AV	59.01	150	Horizontal	Pass
2	5146.100	56.52	3.93	74.0	17.48	Peak	57.00	150	Horizontal	Pass
2**	5146.100	44.65	3.93	54.0	9.35	AV	57.00	150	Horizontal	Pass

U-NII-1 11n20 CH48



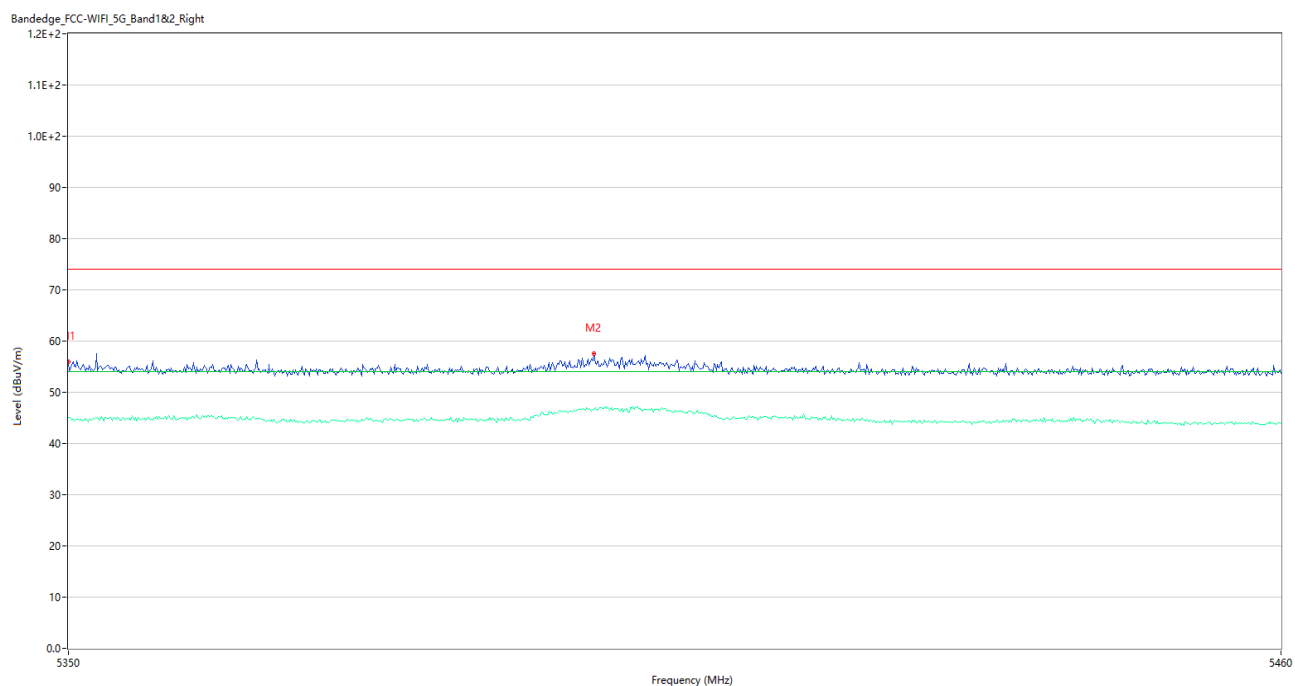
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	56.55	4.04	74.0	17.45	Peak	95.00	150	Horizontal	Pass
1**	5350.000	47.50	4.04	54.0	6.50	AV	95.00	150	Horizontal	Pass
2	5359.020	58.99	4.23	74.0	15.01	Peak	95.00	150	Horizontal	Pass
2**	5359.020	48.77	4.23	54.0	5.23	AV	95.00	150	Horizontal	Pass

U-NII-2A 11a CH52



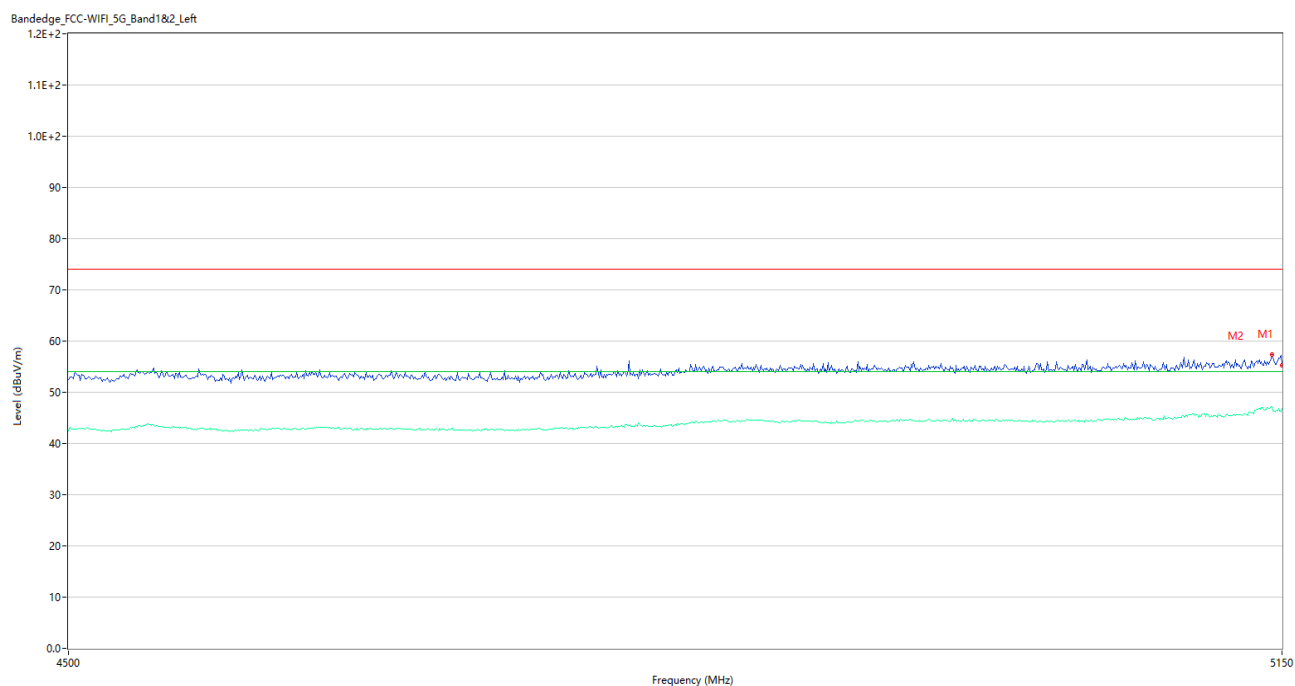
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	56.84	3.82	74.0	17.16	Peak	101.01	150	Horizontal	Pass
1**	5150.000	45.99	3.82	54.0	8.01	AV	101.01	150	Horizontal	Pass
2	5148.700	58.10	3.85	74.0	15.90	Peak	180.00	150	Horizontal	Pass
2**	5148.700	46.88	3.85	54.0	7.12	AV	180.00	150	Horizontal	Pass

U-NII-2A 11a CH64



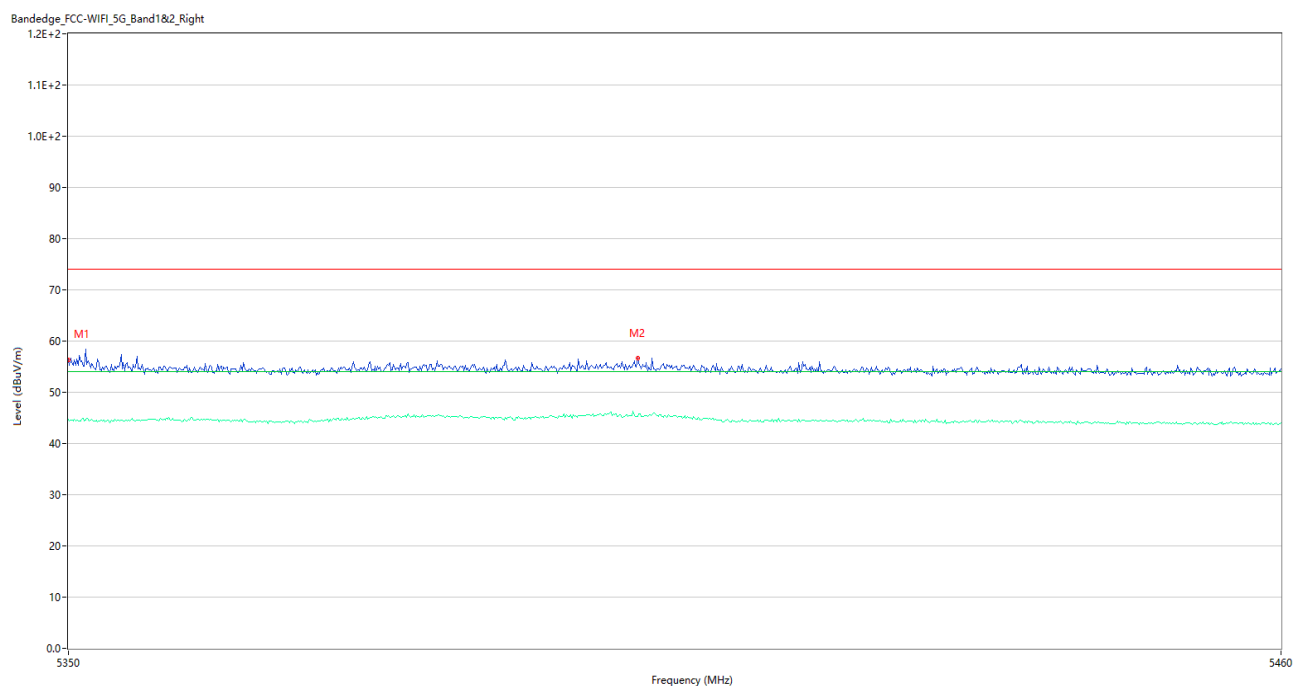
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	56.03	4.04	74.0	17.97	Peak	235.00	150	Horizontal	Pass
1**	5350.000	45.11	4.04	54.0	8.89	AV	235.00	150	Horizontal	Pass
2	5397.410	57.57	4.09	74.0	16.43	Peak	235.00	150	Horizontal	Pass
2**	5397.410	46.72	4.09	54.0	7.28	AV	235.00	150	Horizontal	Pass

U-NII-2A 11n20 CH52



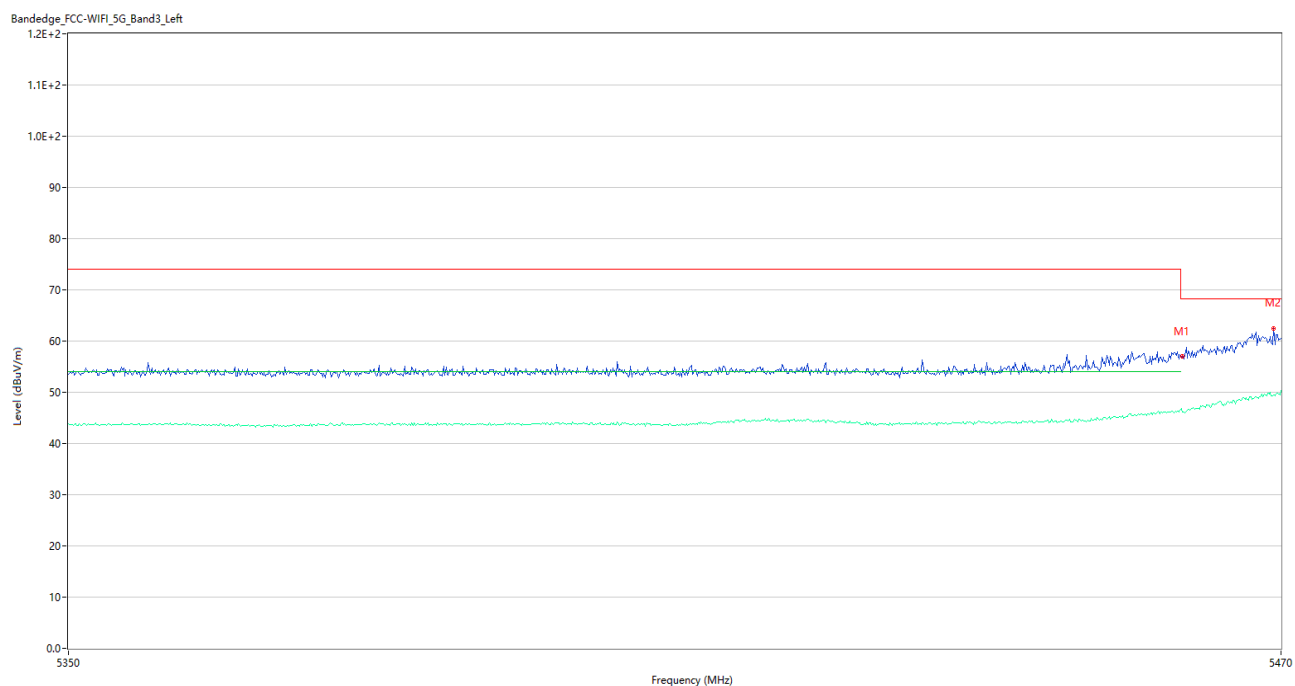
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5150.000	55.33	3.82	74.0	18.67	Peak	166.97	150	Horizontal	Pass
1**	5150.000	46.82	3.82	54.0	7.18	AV	166.97	150	Horizontal	Pass
2	5144.150	57.43	3.99	74.0	16.57	Peak	86.00	150	Horizontal	Pass
2**	5144.150	47.25	3.99	54.0	6.75	AV	86.00	150	Horizontal	Pass

U-NII-2A 11n20 CH64



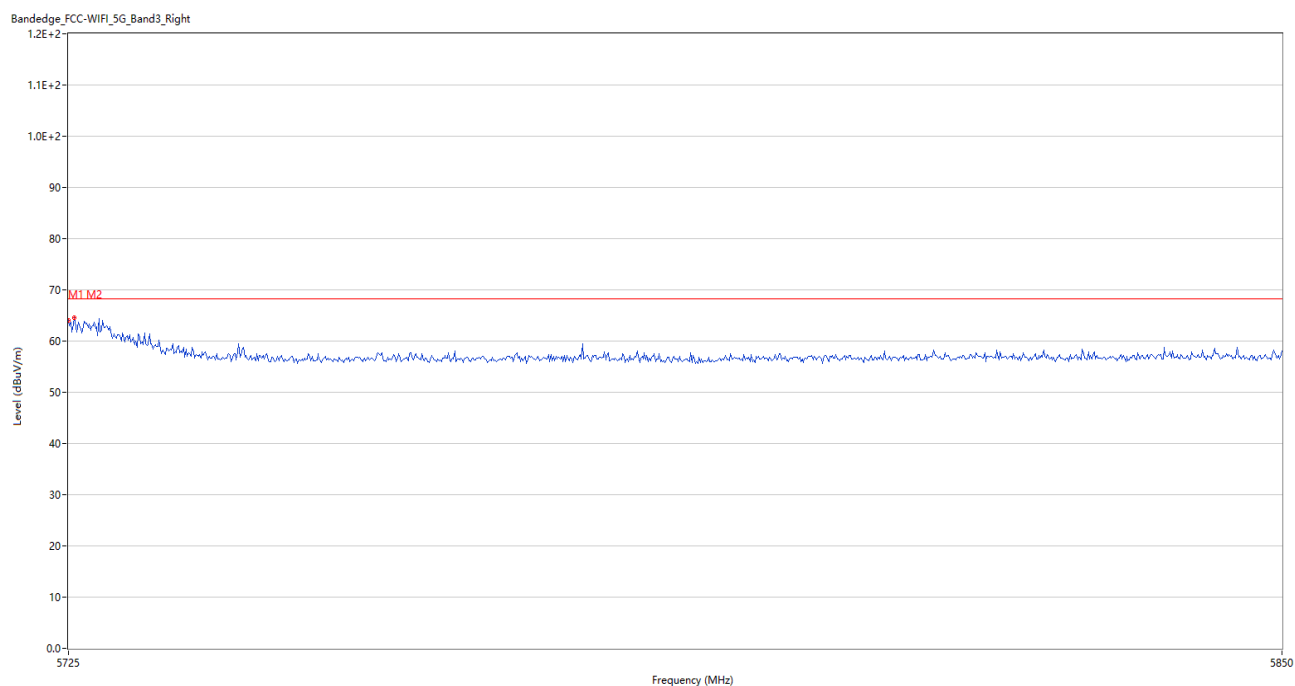
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5350.000	56.26	4.04	74.0	17.74	Peak	54.00	150	Vertical	Pass
1**	5350.000	44.75	4.04	54.0	9.25	AV	54.00	150	Vertical	Pass
2	5401.370	56.65	4.08	74.0	17.35	Peak	42.00	150	Vertical	Pass
2**	5401.370	45.28	4.08	54.0	8.72	AV	42.00	150	Vertical	Pass

U-NII-2C 11a CH100



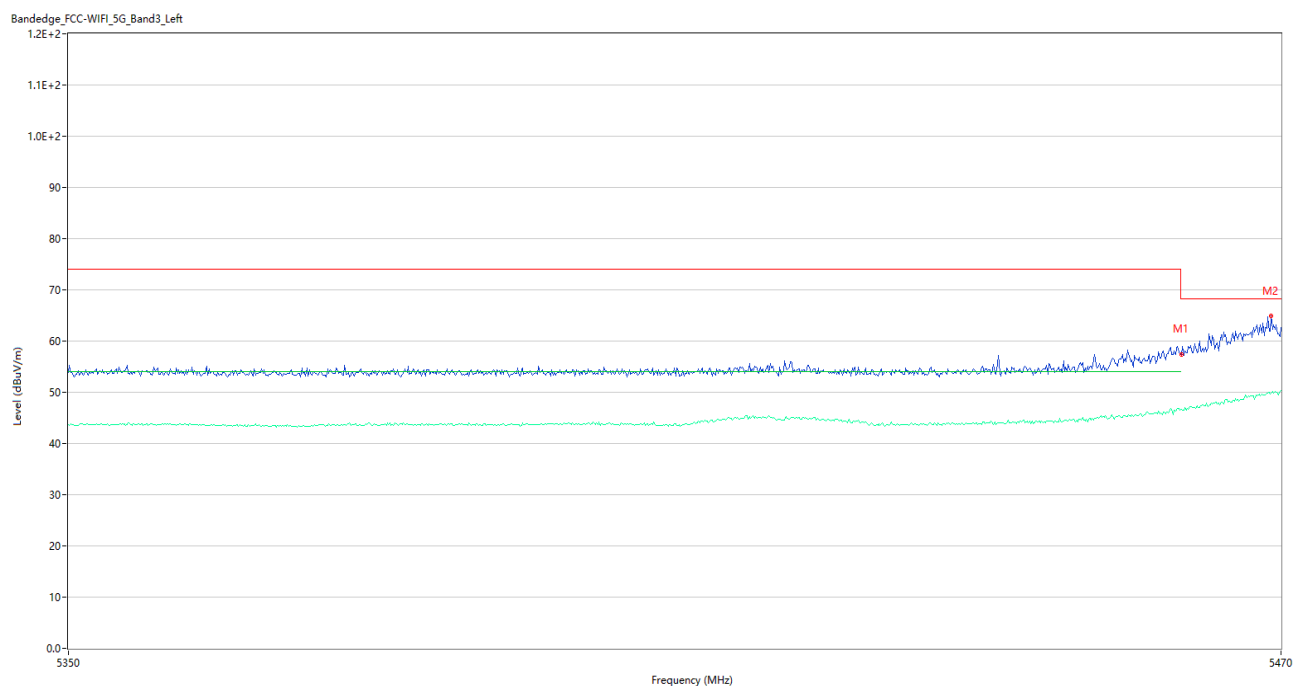
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5460.000	56.95	3.78	68.2	11.25	Peak	35.00	150	Vertical	Pass
1**	5460.000	46.75	3.78	54.0	7.25	AV	35.00	150	Vertical	Pass
2	5469.280	62.52	4.08	68.2	5.68	Peak	50.00	150	Vertical	Pass
2**	5469.280	49.40	4.08	--	-49.40	AV	50.00	150	Vertical	N/A

U-NII-2C 11a CH140



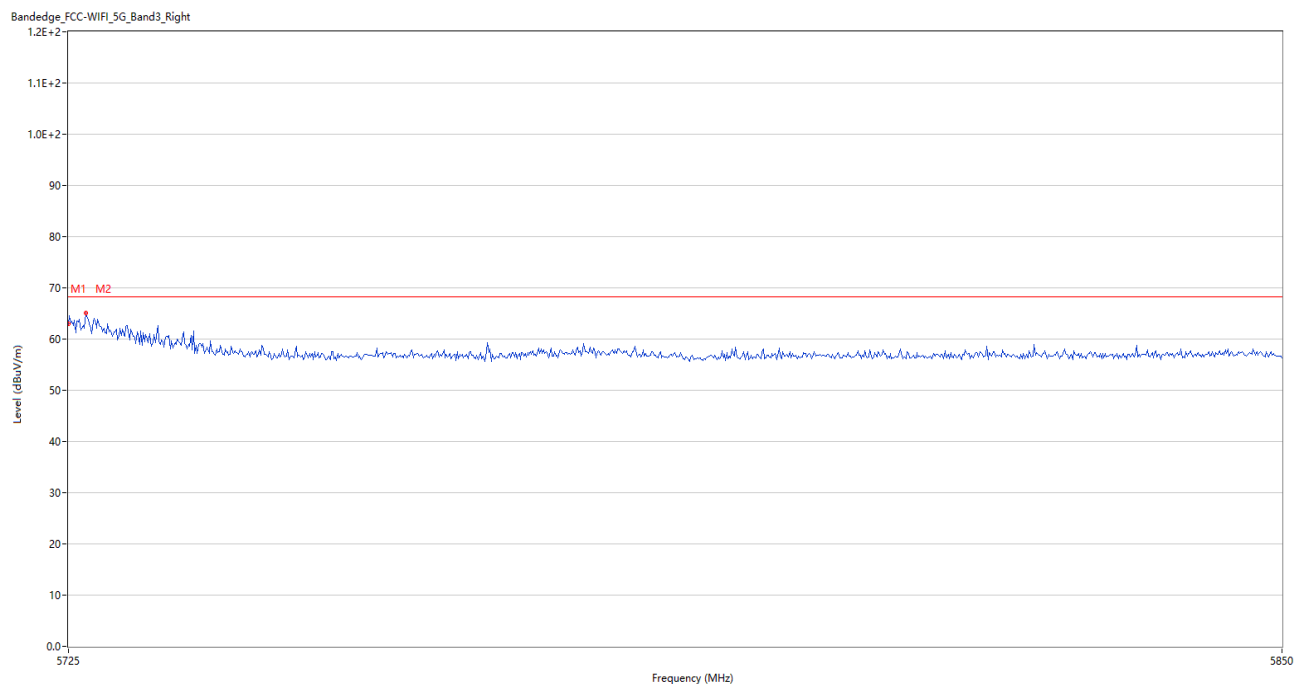
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5725.000	64.09	4.31	68.2	4.11	Peak	82.00	150	Horizontal	Pass
2	5725.625	64.51	4.29	68.2	3.69	Peak	86.00	150	Horizontal	Pass

U-NII-2C 11n20 CH100



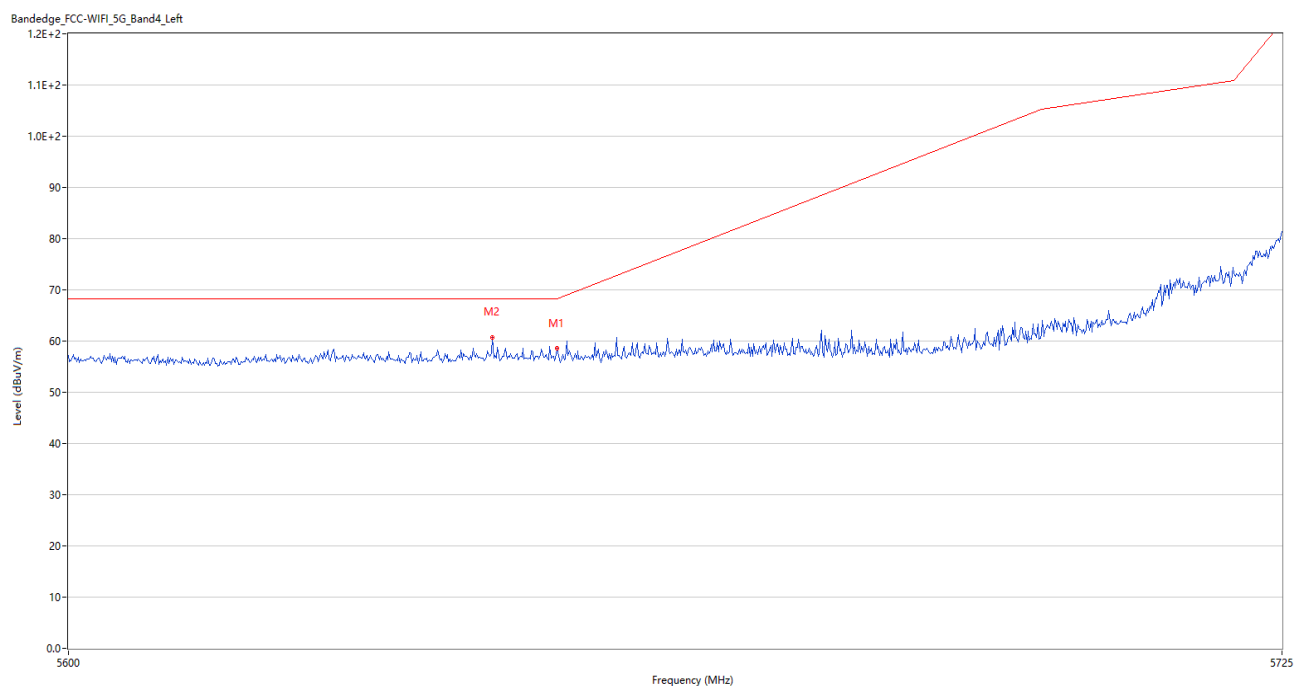
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5460.000	57.46	3.78	68.2	10.74	Peak	239.33	150	Horizontal	Pass
1**	5460.000	46.62	3.78	54.0	7.38	AV	239.33	150	Horizontal	Pass
2	5469.040	64.89	4.07	68.2	3.31	Peak	232.00	150	Horizontal	Pass
2**	5469.040	49.81	4.07	--	-49.81	AV	232.00	150	Horizontal	N/A

U-NII-2C 11n20 CH140



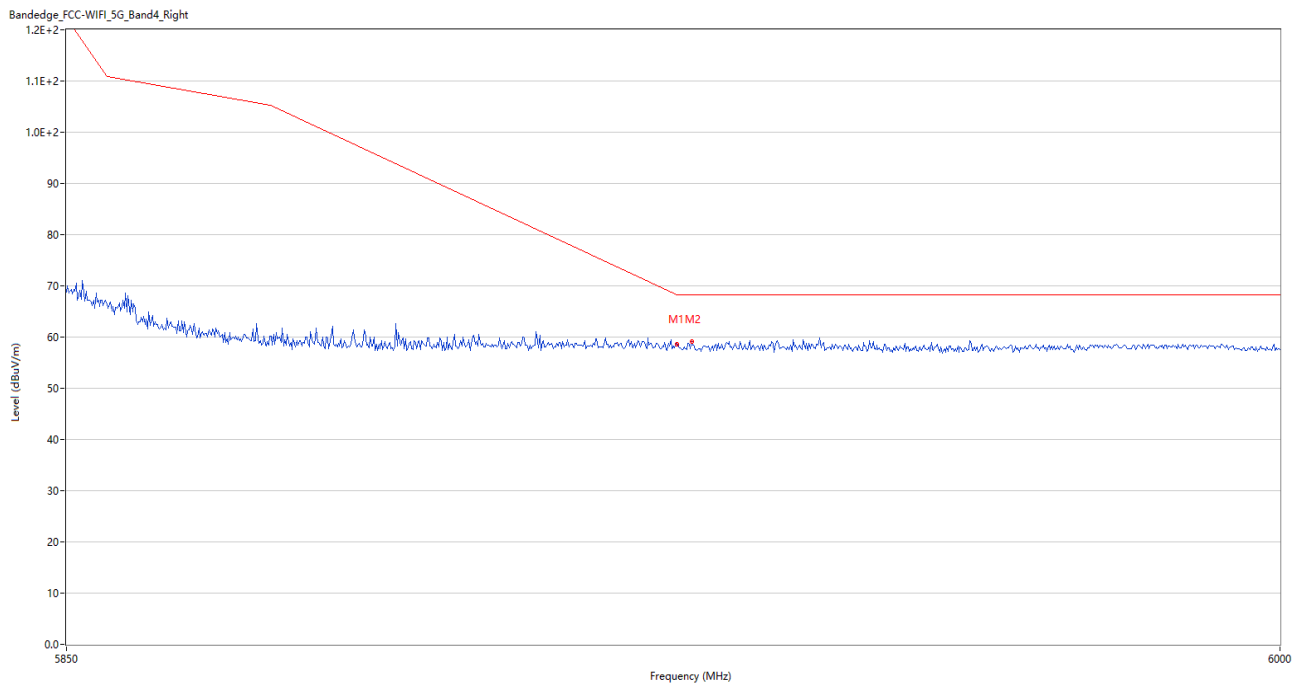
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5725.000	62.95	4.31	68.2	5.25	Peak	90.00	150	Horizontal	Pass
2	5726.750	65.05	4.25	68.2	3.15	Peak	87.00	150	Horizontal	Pass

U-NII-3 11a CH149



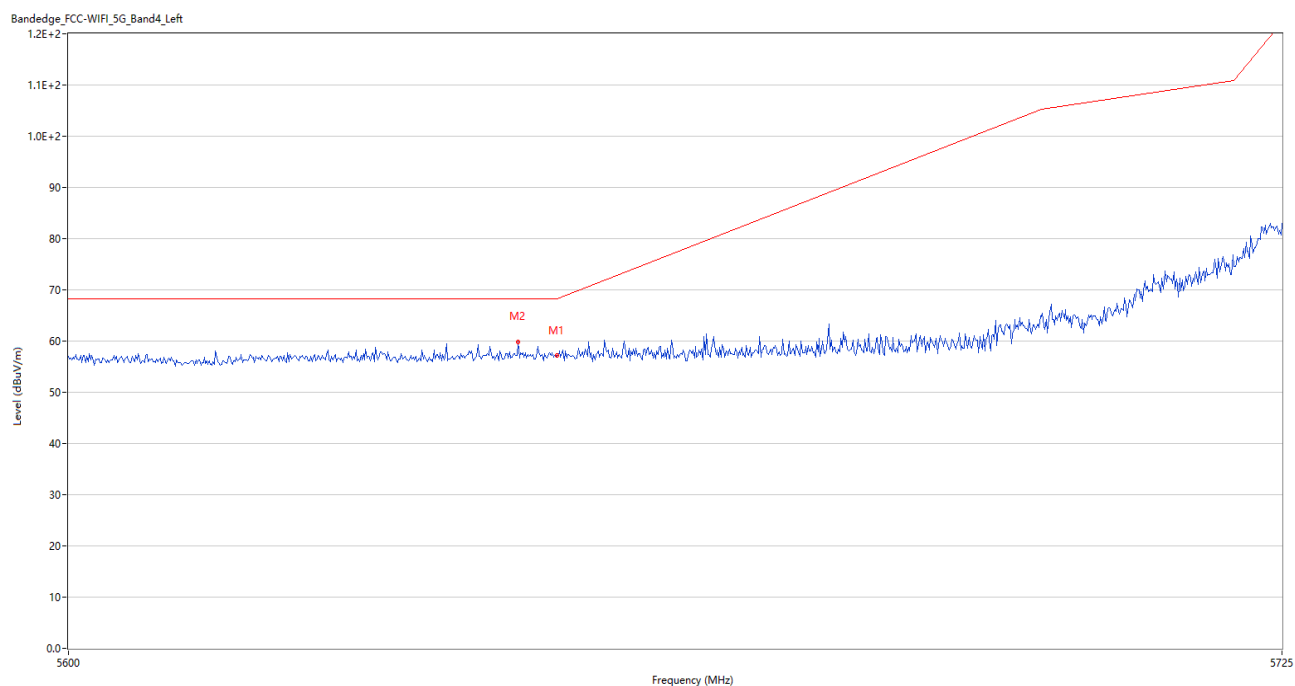
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5650.000	58.58	3.81	68.2	9.62	Peak	156.93	150	Horizontal	Pass
2	5643.375	60.65	3.76	68.2	7.55	Peak	90.00	150	Horizontal	Pass

U-NII-3 11a CH165



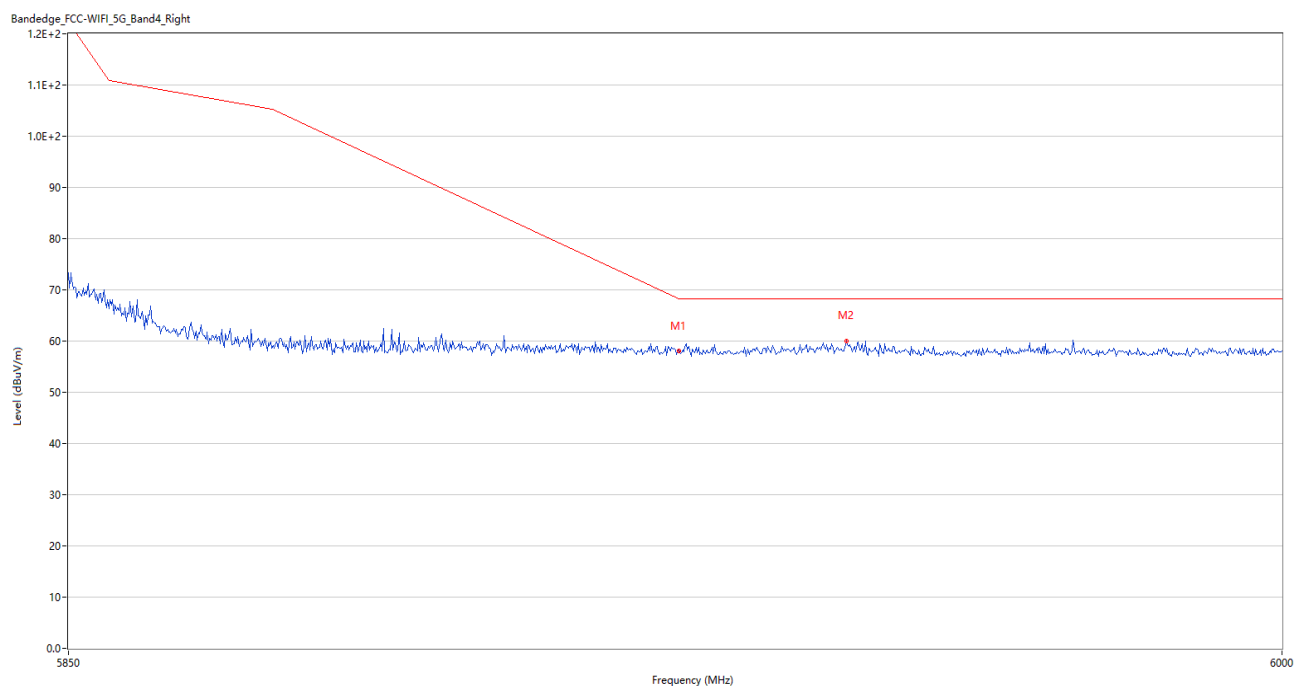
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	58.59	6.44	68.2	9.61	Peak	89.00	150	Horizontal	Pass
2	5926.800	59.04	6.40	68.2	9.16	Peak	132.00	150	Horizontal	Pass

U-NII-3 11n20 CH149



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5650.000	57.18	3.81	68.2	11.02	Peak	91.99	150	Horizontal	Pass
2	5646.000	59.84	3.78	68.2	8.36	Peak	83.00	150	Horizontal	Pass

U-NII-3 11n20 CH165



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	5925.000	58.05	6.44	68.2	10.15	Peak	39.07	150	Horizontal	Pass
2	5945.700	60.07	6.17	68.2	8.13	Peak	68.00	150	Horizontal	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SH2580953-AR-1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SH2580953 -AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SH2580953 -AI.PDF”.

Statement

1. The Testing Center 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.
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6. Any objection shall be raised to the Testing Center within 30 days after receiving the report.

--END OF REPORT--