TEST REPORT

Applicant:	CC&C Technologies, Inc.
Address:	8F, No.150, Jian Yi Rd, Zhonghe District, New Taipei City,235, Taiwan
Equipment Type:	ac2x2+BT5.0 USB2.0
Model Name:	CM-8822CU-V2
Brand Name:	CC&C
FCC ID:	PANCM8822CUV2
Test Standard:	47 CFR Part 15 Subpart C (refer section 3.1)
Sample Arrival Date:	Nov. 28, 2022
Test Date:	Dec. 04, 2022 - Dec. 13, 2022
Date of Issue:	Feb. 07, 2023

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Julie Zhu **Checked by:** Ye Hongji **Approved by:** Liao Jianming

(Technical Director)

Revision History

Version	Issue Date	Revisions
Rev. 01	Jan. 05, 2023	Initial Issue
Rev. 02	Feb. 07, 2023	Updated antenna gain

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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.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	CC&C Technologies, Inc.
Address	8F, No.150, Jian Yi Rd, Zhonghe District, New Taipei City,235, Taiwan

2.2 Manufacturer Information

Manufacturer	CC&C Technologies, Inc.
Address	8F, No.150, Jian Yi Rd, Zhonghe District, New Taipei City,235, Taiwan

2.3 Factory Information

Factory	Kunshan CC&C Technologies, Co., Ltd
Address	No.9 building, 3rd Main Street, Kunshan Free Trade Zone, Jiangsu Province, P. R. China

2.4 General Description for Equipment under Test (EUT)

EUT Name	ac2x2+BT5.0 USB2.0
Model Name Under Test	CM-8822CU-V2
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V. A
Software Version	V15(WIFI+BT)
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 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) U-NII-1/3

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

Frequency Range		802.11b/g/n(20 MHz): 2.412 GHz - 2.462 GHz f_c = 2412 MHz + (N-1)*5 MHz, where - f_c = “Operating Frequency” in MHz, - N = “Channel Number” with the range from 1 to 11. 802.11n(40 MHz): 2.422 GHz - 2.452 GHz f_c = 2412 MHz + (N-1)*5 MHz, where - f_c = “Operating Frequency” in MHz, - N = “Channel Number” with the range from 3 to 9.
Modulation Type		DSSS, OFDM
Product Type		☒ Mobile ☐ Portable ☐ Fix Location
Antenna System (eg., MIMO, Smart Antenna)		Cyclic Delay Diversity (CDD) for 802.11b/g Multi Input Multi Output (MIMO) for 802.11n
Categorization as Correlated or Completely Uncorrelated		Categorization as Correlated for 802.11b/g Categorization as Uncorrelated for 802.11n
Antenna Type	Main Antenna	External Antenna
	Aux. Antenna	
Antenna Gain	Main Antenna	2.46 dBi
	Aux. Antenna	2.46 dBi
Total directional gain	For power spectral density(PSD) measurements	Correlated: 5.40 dBi Formulas: Directional gain = GANT + 10 log(NANT) dBi Uncorrelated: 2.46 dBi Formulas: Directional gain = GANT
About the Product		Only the WIFI 802.11b, 802.11g and 802.11n (HT20/40) was tested in this report.

Mode	Antenna		
	Main Antenna	Aux. Antenna	MIMO
802.11b	√	√	--
802.11g	√	√	--
802.11n20	√	√	√
802.11n40	√	√	√
Note: All the configurations were tested, but only the worst data was shown in this report.			

Modulation technology	Modulation Type	Transfer Rate (Mbps)(Single RF path)
DSSS (802.11b)	DBPSK	1
	DQPSK	2
	CCK	5.5/11
OFDM (802.11g)	BPSK	6/9
	QPSK	12/18
	16QAM	24/36
	64QAM	48/54
OFDM (802.11n-20 MHz)	BPSK	6.5/7.2
	QPSK	13/19.5/14.4/21.7
	16QAM	26/39/28.9/43.3
	64QAM	52/58.5/65/57.8/65/72.2
OFDM (802.11n-40 MHz)	BPSK	13.5/15
	QPSK	27/40.5/30/45
	16QAM	54/81/60/90
	64QAM	108/121.5/135/120/150

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	Channel	
Output Power	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Occupied Bandwidth	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Conducted Spurious Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Conducted Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Radiated Spurious Emission	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Band Edge	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9
Power spectral density (PSD)	11b/11g/11n20/11n40	1/6/6.5/13.5 Mbps	1/6/11	3/6/9

Note: The above EUT information in section 2.4 and 2.6 was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C	Intentional radiators of radio frequency equipment
2	KDB Publication 662911 D01v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)
3	ANSI C63.10-2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
4	KDB Publication 558074 D01v05r02	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES

3.2 Test Verdict

No.	Description	FCC PART No.	Test Result	Verdict	Remark
1	Antenna Requirement	15.203	N/A	Pass	Note [1]
2	Output Power	15.247 (b)	ANNEX A.1	Pass	--
3	Occupied Bandwidth	15.247 (a)	ANNEX A.2	Pass	Note [3]
4	Conducted Spurious Emission	15.247 (d)	ANNEX A.3	Pass	Note [3]
5	Band Edge(Authorized-band band-edge)	15.247 (d)	ANNEX A.4	Pass	Note [3]
6	Conducted Emission	15.207	ANNEX A.5	Pass	--
7	Radiated Spurious Emission	15.209; 15.247 (d)	ANNEX A.6	Pass	--
8	Band Edge(Restricted-band band-edge)	15.209; 15.247 (d)	ANNEX A.7	Pass	--
9	Power spectral density (PSD)	15.247 (e)	ANNEX A.8	Pass	Note [3]
10	Receiver Spurious Emissions	N/A	N/A	N/A	Note [2]

Note [1]: Please refer to section 5.1.

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

Note [3]: Compared with the EUT in the test report BL-EC19A0003-603, the EUT in this report has replaced the radiation antenna, Other hardware circuits and software are the same as those mentioned in the test report BL-EC19A0003-603.

Therefore, so just radiation test of Output Power, Conducted Emissions, Radiated Spurious Emissions and Band Edge (Restricted-band band-edge) were retested in this report. Other test items please refer to the report BL-EC19A0003-603 issued by Shenzhen BALUN Technology Co., Ltd. on December 12, 2019 for all test data.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

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

Relative Humidity	43% to 64%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+19.9℃ to +24.2℃
Working Voltage of the EUT	NV (Normal Voltage)	DC 3.3V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-40	101544	2022.01.04	2023.01.03
Spectrum Analyzer	KEYSIGHT	N9020A	MY50531259	2022.09.06	2023.09.05
Signaling Unit	ROHDE&SCHWARZ	CMW500	171150	2022.06.29	2023.06.28
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	02460	2021.05.19	2024.05.08
Test Antenna-Horn (18-40 GHz)	A-INFO	LB-180400KF	J211060273	2021.07.02	2024.07.01
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2021.08.16	2024.08.15
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2022.09.09	2023.09.08
Test Antenna-Bi-Log(30 MHz-1 GHz)	SCHWARZBECK	VULB 9168	00883	2022.04.01	2025.03.31
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2021.04.16	2024.04.15
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	N/A	2021.08.15	2024.08.14
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2022.09.09	2023.09.08
LISN	SCHWARZBECK	NSLK 8127	8127-687	2022.06.01	2023.05.31
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	N/A	2022.02.19	2025.02.18
Amplifier (1-12GHz)	COM-MV	LSCX_LNA 1-12G-01	180602	2020.09.08	2023.09.07
Amplifier (7-18GHz)	COM-MV	XKu_LNA7-18G-01	180601	2020.09.08	2023.09.07
Amplifier (18-40GHz)	COM-MV	KA_LNA18-40G-01	18050001	2020.09.08	2023.09.07
Power Sensor	ROHDE&SCHWARZ	NRP18S	102521	2022.03.09	2023.03.08

4.3 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.

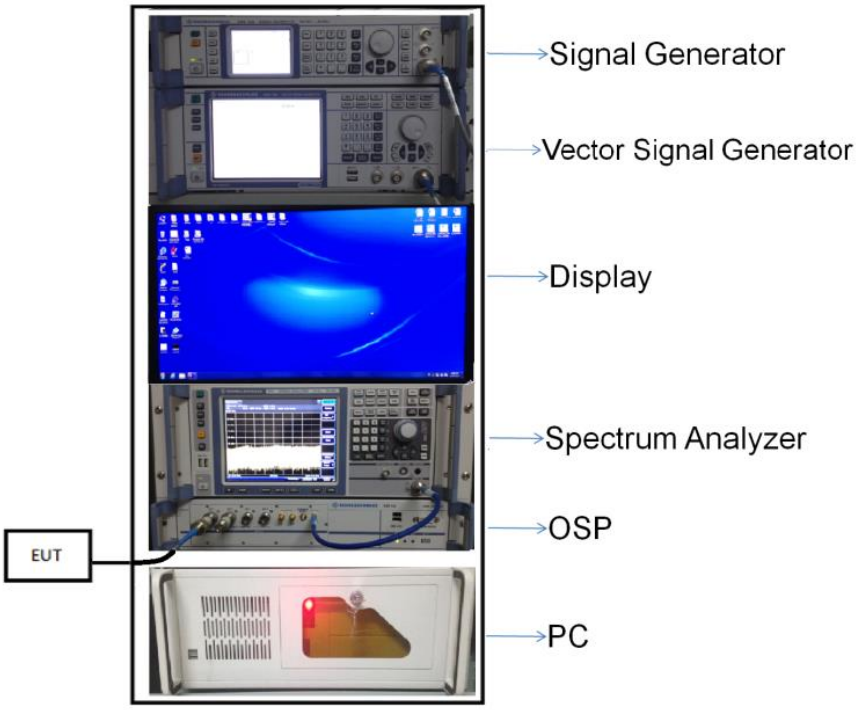
Parameters	Uncertainty
Occupied Channel Bandwidth	2.8%
RF output power, conducted	1.28 dB
Power Spectral Density, conducted	1.30 dB
Unwanted Emissions, conducted	1.84 dB
All emissions, radiated	5.36 dB
Temperature	0.82°C
Humidity	4.1%

4.4 Description of Test Setup

4.4.1 For Antenna Port Test

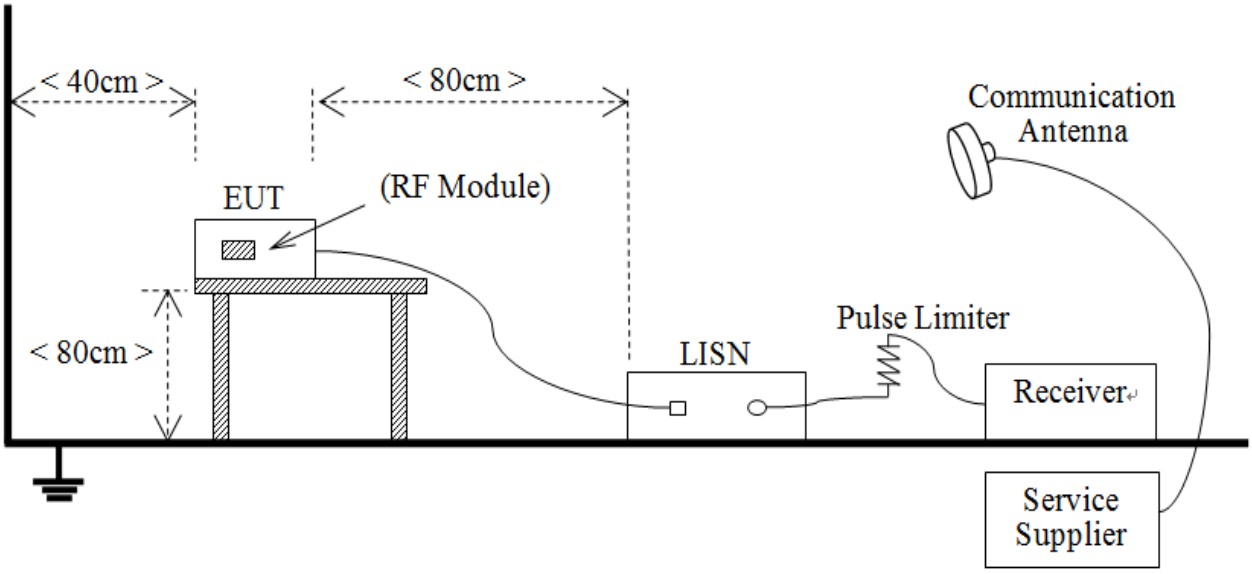
Conducted value (dBm) = Measurement value (dBm) + cable loss (dB)

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



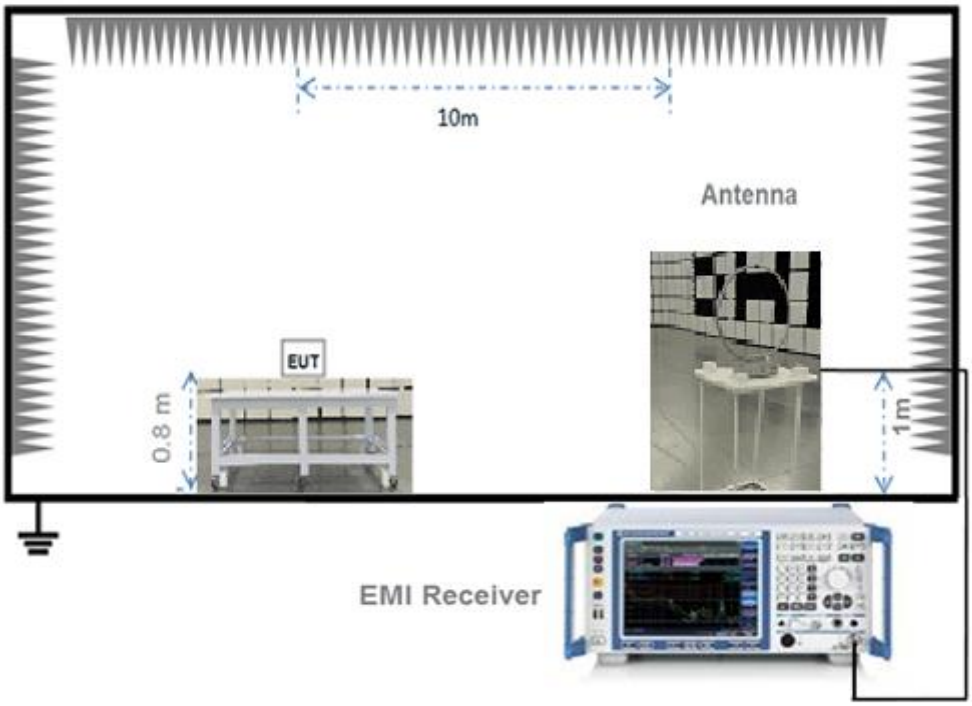
(Diagram 1)

4.4.2 For AC Power Supply Port Test



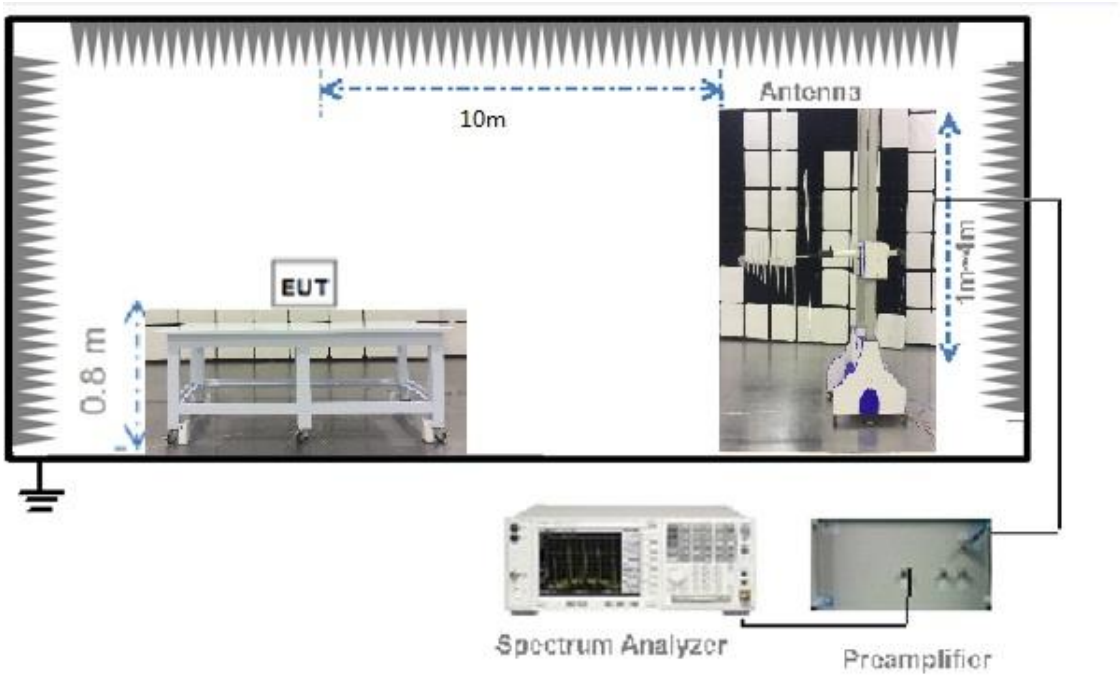
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



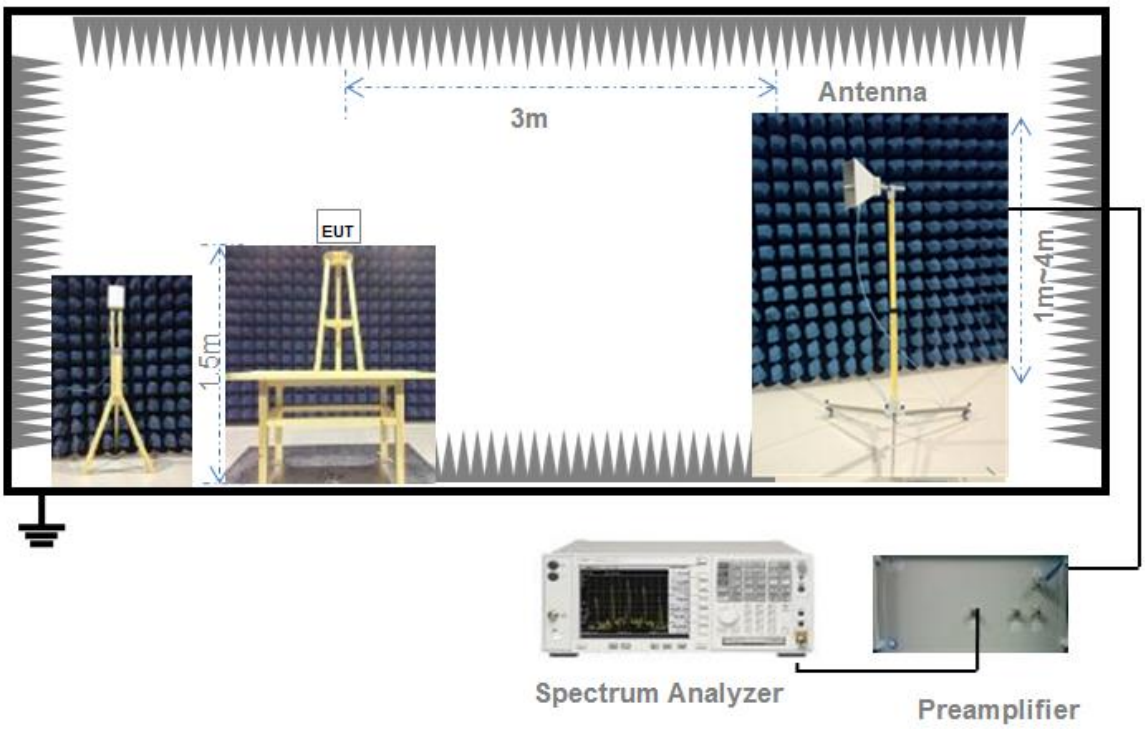
(Diagram 3)

4.4.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.4.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

4.5 Measurement Results Explanation Example

4.5.1 For conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.
The spectrum analyzer offset is derived from RF cable loss and attenuator factor.
Offset = RF cable loss + attenuator factor.

4.5.2 For radiated band edges and spurious emission test:

$$E = EIRP - 20\log D + 104.8$$

where:

E = electric field strength in dBμV/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

EIRP= Measure Conducted output power Value (dBm) + Maximum transmit antenna gain (dBi) + the appropriate maximum ground reflection factor (dB)

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Relevant Standards

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
Compliance with 15.203, use of a standard antenna jack or electrical connector is prohibited.	The antenna is the unique connector with a wire antenna.

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

5.2 Output Power

5.2.1 Test Limit

FCC § 15.247(b)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements.

5.2.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Maximum peak conducted output power

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

Maximum conducted (average) output power (Reporting Only)

a) As an alternative to spectrum analyzer or EMI receiver measurements, measurements may be perfor med

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 factor.

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 si gnal as

described in Section 6.0.

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 10log (1/x), where x is the duty cycle to the measurement r esult.

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 ≥ OBW if possible; otherwise, set RBW to the largest available value.

Set VBW ≥ 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 ≤ 16.7 microseconds.)

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 Occupied Bandwidth

5.3.1 Limit

FCC §15.247(a)

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.

5.3.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

Use the following spectrum analyzer settings:

Set RBW = 100 kHz.

Set the video bandwidth (VBW) ⩾ 3 RBW.

Detector = Peak.

Trace mode = max hold.

Sweep = auto couple.

Allow the trace to stabilize.

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.

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Conducted Spurious Emission

5.4.1 Limit

FCC §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.4.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The DTS rules specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

a) If the maximum peak conducted output power procedure was used to demonstrate compliance as described in 9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

b) If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

c) In either case, attenuation to levels below the 15.209 general radiated emissions limits is not required.

The following procedures shall be used to demonstrate compliance to these limits. Note that these procedures can be used in either an antenna-port conducted or radiated test set-up. Radiated tests must conform to the test site requirements and utilize maximization procedures defined herein.

<u>Reference level measurement</u>

Establish a reference level by using the following procedure:

Set instrument center frequency to DTS channel center frequency.

Set the span to ⩾ 1.5 times the DTS bandwidth.

Set the RBW = 100 kHz.

Set the VBW ⩾ 3 x RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum PSD level.

Emission level measurement

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

Set the RBW = 100 kHz.

Set the VBW ⩾ 3 x RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b). Report the three highest emissions relative to the limit.

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Band Edge (Authorized-band band-edge)

5.5.1 Limit

FCC §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.5.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The following procedures may be used to determine the peak or average field strength or power of an unwanted emission that is within 2 MHz of the authorized band edge. If a peak detector is utilized, use the procedure described in 13.2.1. Use the procedure described in 13.2.2 when using an average detector and the EUT can be configured to transmit continuously (i.e., duty cycle ⩾ 98%). Use the procedure described in 13.2.3 when using an average detector and the EUT cannot be configured to transmit continuously but the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent). Use the procedure described in 13.2.4 when using an average detector for those cases where the EUT cannot be configured to transmit continuously and the duty cycle is not constant (duty cycle variations equal or exceed 2 percent).

When using a peak detector to measure unwanted emissions at or near the band edge (within 2 MHz of the authorized band), the following integration procedure can be used.

Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).

Set span to 2 MHz

RBW = 100 kHz.

VBW ⩾ 3 x RBW.

Detector = peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweep to continue until the trace stabilizes (required measurement time may increase for low duty cycle applications)

Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency (femission) ± 0.5 MHz. If the instrument does not have a band power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by femission ± 0.5 MHz.

Standard method(The 99% OBW of the fundamental emission is without 2 MHz of the authorized band):

Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation.

Reference level: As required to keep the signal from exceeding the maximum instrument input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

Attenuation: Auto (at least 10 dB preferred).

Sweep time: Coupled.

Resolution bandwidth: 100 kHz.

Video bandwidth: 300 kHz.

Detector: Peak.

Trace: Max hold.

5.5.4 Test Result

Please refer to ANNEX A.4.

5.6 Conducted Emission

5.6.1 Limit

FCC §15.207

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 band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

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

5.6.2 Test Setup

See section 4.5.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX B.

5.6.3 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.
Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.6.4 Test Result

Please refer to ANNEX A.5.

5.7 Radiated Spurious Emission

5.7.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/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. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
2. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.7.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.7.3 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:

$E = EIRP – 20\log D + 104.8$

where:

E = electric field strength in dBμV/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 ≥ 3 x 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 ≥ 3 x RBW.

e) Detector = RMS, if span/(# of points in sweep) ≤ (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 ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

5.7.4 Test Result

Please refer to ANNEX A.6.

5.8 Band Edge (Restricted-band band-edge)

5.8.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.8.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.8.3 Test Procedure

The measurement frequency range is from 9 kHz 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 ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

For transmitters operating above 1 GHz repeat the measurement with an average detector.

5.8.4 Test Result

Please refer to ANNEX A.7.

5.9 Power Spectral density (PSD)

5.9.1 Limit

FCC §15.247(e)

The same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output power is measured, then a peak power spectral density measurement is required. If an average output power is measured, then an average power spectral density measurement should be used.

5.9.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.9.3 Test Procedure

Set analyzer center frequency to DTS channel center frequency.

Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: 3 kHz ⩽ RBW ⩽ 100 kHz.

Set the VBW ⩾ 3 RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.9.4 Test Result

Please refer to ANNEX A.8.

ANNEX A TEST RESULT

A.1 Output Power

Duty Cycle

Test Mode	On Time (ms)	On+Off time (ms)	Duty Cycle
802.11b	8.143	8.702	93.58%
802.11g	1.355	1.865	72.65%
802.11n-20 MHz	1.270	1.775	71.55%
802.11n-40 MHz	0.628	1.135	55.36%

Main Antenna

Peak Power Test Data

802.11b Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	20.67	116.68	30	1000	Pass
Middle	22.03	159.59			Pass
High	21.24	133.05			Pass

802.11g Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	23.42	219.79	30	1000	Pass
Middle	23.12	205.12			Pass
High	23.21	209.41			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	23.55	226.46	30	1000	Pass
Middle	23.24	210.86			Pass
High	22.16	164.44			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	20.57	114.02	30	1000	Pass
Middle	22.13	163.31			Pass
High	21.51	141.58			Pass

Average Power Test Data

802.11b Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	17.36	54.45	30	1000	Pass
Middle	19.48	88.72			Pass
High	18.76	75.16			Pass

802.11g Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.45	35.08	30	1000	Pass
Middle	18.43	69.66			Pass
High	17.86	61.09			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	17.49	56.10	30	1000	Pass
Middle	17.32	53.95			Pass
High	16.60	45.71			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.26	33.57	30	1000	Pass
Middle	17.42	55.21			Pass
High	16.03	40.09			Pass

Aux. Antenna

Peak Power Test Data

802.11b Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	22.18	165.20	30	1000	Pass
Middle	21.24	133.05			Pass
High	21.02	126.47			Pass

802.11g Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	22.74	187.93	30	1000	Pass
Middle	22.57	180.72			Pass
High	21.69	147.57			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	23.04	201.37	30	1000	Pass
Middle	22.36	172.19			Pass
High	22.07	161.06			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	20.54	113.24	30	1000	Pass
Middle	22.49	177.42			Pass
High	21.82	152.05			Pass

Average Power Test Data

802.11b Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.40	69.18	30	1000	Pass
Middle	19.04	80.17			Pass
High	18.96	78.70			Pass

802.11g Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.40	69.18	30	1000	Pass
Middle	18.57	71.94			Pass
High	17.61	57.68			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.81	76.03	30	1000	Pass
Middle	18.40	69.18			Pass
High	17.69	58.75			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	16.30	42.66	30	1000	Pass
Middle	18.59	72.28			Pass
High	18.08	64.27			Pass

MIMO-Main Antenna

Peak Power Test Data

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	17.96	62.52	30	1000	Pass
Middle	17.59	57.41			Pass
High	17.46	55.72			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	16.18	41.50	30	1000	Pass
Middle	16.21	41.78			Pass
High	15.94	39.26			Pass

Average Power Test Data

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	13.87	24.38	30	1000	Pass
Middle	14.02	25.23			Pass
High	13.60	22.91			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	11.36	13.68	30	1000	Pass
Middle	11.04	12.71			Pass
High	10.22	10.52			Pass

MIMO-Aux. Antenna

Peak Power Test Data

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	17.24	52.97	30	1000	Pass
Middle	17.45	55.59			Pass
High	17.63	57.94			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	15.54	35.81	30	1000	Pass
Middle	15.85	38.46			Pass
High	15.61	36.39			Pass

Average Power Test Data

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	13.69	23.39	30	1000	Pass
Middle	13.56	22.70			Pass
High	13.48	22.28			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	11.03	12.68	30	1000	Pass
Middle	11.28	13.43			Pass
High	10.54	11.32			Pass

MIMO

Peak Power Test Data

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	20.63	115.48	30	1000	Pass
Middle	20.53	113.00			Pass
High	20.56	113.66			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	18.88	77.31	30	1000	Pass
Middle	19.04	80.24			Pass
High	18.79	75.66			Pass

Average Power Test Data

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	16.79	47.77	30	1000	Pass
Middle	16.81	47.93			Pass
High	16.55	45.19			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	14.21	26.35	30	1000	Pass
Middle	14.17	26.13			Pass
High	13.39	21.84			Pass

A.2 Occupied Bandwidth

Note: The Occupied Bandwidth please refer to report: BL-EC19A0003-603, which was issued by Shenzhen BALUN Technology Co., Ltd. on Dec. 12, 2019, **section A.2 Occupied Bandwidth**.

A.3 Conducted Spurious Emissions

Note: The Conducted Spurious Emission please refer to report: BL-EC19A0003-603, which was issued by Shenzhen BALUN Technology Co., Ltd. on Dec. 12, 2019, **section A.3 Conducted Spurious Emissions.**

A.4 Band Edge (Authorized-band band-edge)

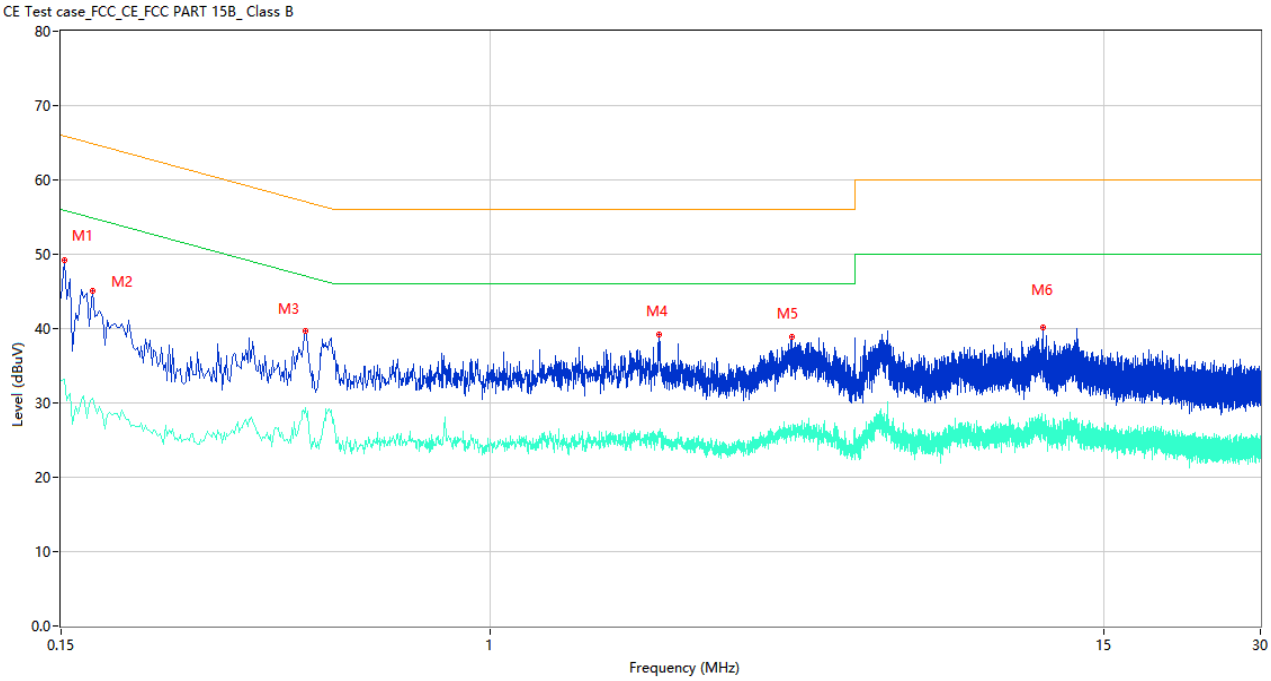
Note: Note: Band Edge (Authorized-band band-edge) please refer to report: BL-EC19A0003-603, which was issued by Shenzhen BALUN Technology Co., Ltd. on Dec. 12, 2019, **section A.4 Band Edge (Authorized-band band-edge).**

A.5 Conducted Emissions

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

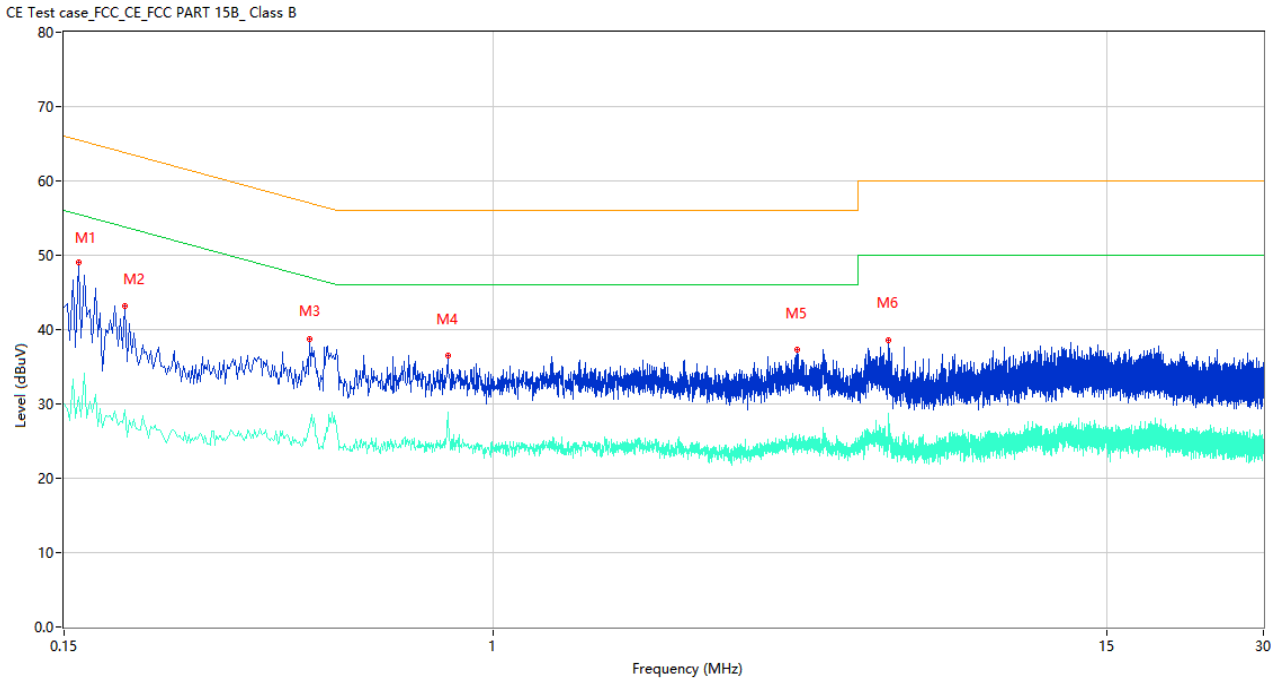
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.152	49.14	10.09	65.89	16.75	Peak	L	Pass
1**	0.152	33.20	10.09	55.89	22.69	AV	L	Pass
2	0.172	45.08	10.07	64.86	19.78	Peak	L	Pass
2**	0.172	30.57	10.07	54.86	24.29	AV	L	Pass
3	0.442	39.69	10.31	57.02	17.33	Peak	L	Pass
3**	0.442	29.40	10.31	47.02	17.62	AV	L	Pass
4	2.106	39.13	10.05	56.00	16.87	Peak	L	Pass
4**	2.106	26.20	10.05	46.00	19.80	AV	L	Pass
5	3.778	38.87	10.44	56.00	17.13	Peak	L	Pass
5**	3.778	26.16	10.44	46.00	19.84	AV	L	Pass
6	11.470	40.21	10.30	60.00	19.79	Peak	L	Pass
6**	11.470	26.81	10.30	50.00	23.19	AV	L	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.160	49.04	10.08	65.46	16.42	Peak	N	Pass
1**	0.160	30.90	10.08	55.46	24.56	AV	N	Pass
2	0.196	43.20	10.06	63.78	20.58	Peak	N	Pass
2**	0.196	29.25	10.06	53.78	24.53	AV	N	Pass
3	0.444	38.75	10.29	56.99	18.24	Peak	N	Pass
3**	0.444	26.91	10.29	46.99	20.08	AV	N	Pass
4	0.818	36.47	10.70	56.00	19.53	Peak	N	Pass
4**	0.818	28.82	10.70	46.00	17.18	AV	N	Pass
5	3.826	37.24	10.37	56.00	18.76	Peak	N	Pass
5**	3.826	24.83	10.37	46.00	21.17	AV	N	Pass
6	5.724	38.60	10.45	60.00	21.40	Peak	N	Pass
6**	5.724	28.40	10.45	50.00	21.60	AV	N	Pass

A.6 Radiated Emission

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

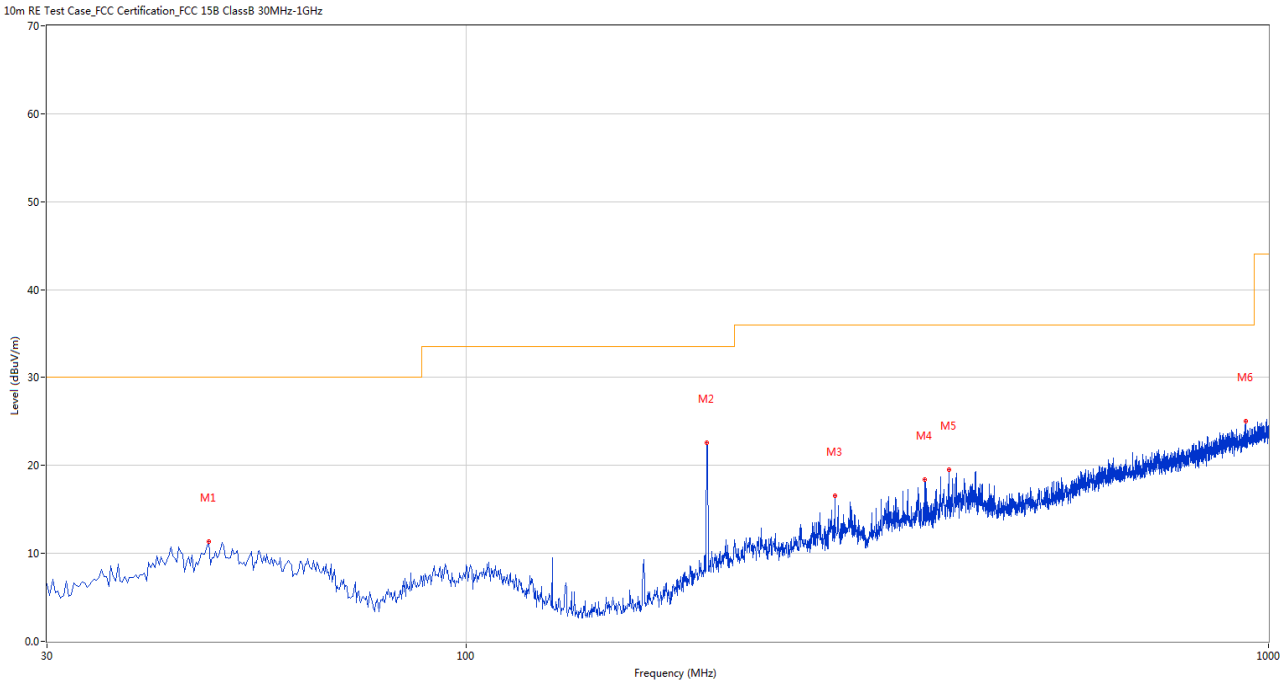
Note [2]: For the test data above 1 GHz，According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

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.

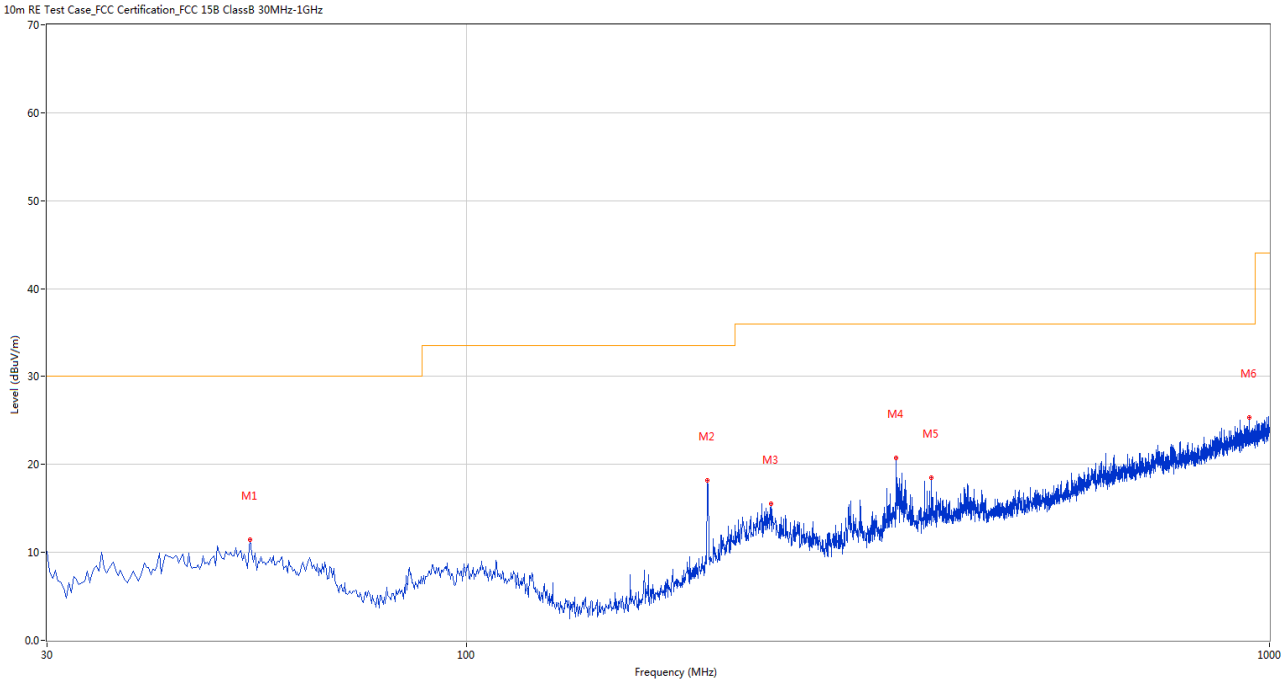
Test Data and Plots

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	47.698	11.31	-26.37	30.0	18.69	Peak	233.00	200	Horizontal	Pass
2	199.223	22.60	-27.79	33.5	10.90	Peak	214.00	200	Horizontal	Pass
3	287.956	16.60	-25.19	36.0	19.40	Peak	186.00	200	Horizontal	Pass
4	373.052	18.41	-23.45	36.0	17.59	Peak	288.00	200	Horizontal	Pass
5	399.478	19.56	-22.53	36.0	16.44	Peak	121.00	200	Horizontal	Pass
6	936.238	25.07	-12.51	36.0	10.93	Peak	50.00	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	53.759	11.41	-26.46	30.0	18.59	Peak	0.00	200	Vertical	Pass
2	199.223	18.21	-27.79	33.5	15.29	Peak	316.00	100	Vertical	Pass
3	239.468	15.54	-26.67	36.0	20.46	Peak	0.00	200	Vertical	Pass
4	342.747	20.74	-23.48	36.0	15.26	Peak	28.00	100	Vertical	Pass
5	379.355	18.45	-23.17	36.0	17.55	Peak	360.00	100	Vertical	Pass
6	943.027	25.32	-12.14	36.0	10.68	Peak	62.00	200	Vertical	Pass

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note 2: The spurious above 18G is noise only, do not show on the report.

Main Antenna

1 GHz to 18 GHz, ANT H 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.200	42.25	-16.68	74.0	31.75	Peak	122.00	100	Horizontal	Pass
1**	1328.200	33.38	-16.68	54.0	20.62	AV	122.00	100	Horizontal	Pass
2	2412.000	108.80	-9.93	--	--	Peak	44.00	200	Horizontal	N/A
2**	2412.000	104.40	-9.93	--	--	AV	44.00	200	Horizontal	N/A
3	4713.500	51.44	-2.84	74.0	22.56	Peak	360.00	100	Horizontal	Pass
3**	4713.500	41.39	-2.84	54.0	12.61	AV	360.00	100	Horizontal	Pass
4	7771.250	54.80	1.66	74.0	19.20	Peak	87.00	200	Horizontal	Pass
4**	7771.250	44.32	1.66	54.0	9.68	AV	87.00	200	Horizontal	Pass
5	10710.350	51.71	-2.27	74.0	22.29	Peak	121.00	200	Horizontal	Pass
5**	10710.350	41.91	-2.27	54.0	12.09	AV	121.00	200	Horizontal	Pass
6	15752.738	52.67	0.30	74.0	21.33	Peak	360.00	200	Horizontal	Pass
6**	15752.738	43.26	0.30	54.0	10.74	AV	360.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1575.200	42.87	-16.47	74.0	31.13	Peak	21.00	200	Vertical	Pass
1**	1575.200	32.63	-16.47	54.0	21.37	AV	21.00	200	Vertical	Pass
2	2412.000	106.04	-9.93	--	--	Peak	257.00	100	Vertical	N/A
2**	2412.000	100.28	-9.93	--	--	AV	257.00	100	Vertical	N/A
3	4721.250	50.11	-2.80	74.0	23.89	Peak	229.00	200	Vertical	Pass
3**	4721.250	41.57	-2.80	54.0	12.43	AV	229.00	200	Vertical	Pass
4	7830.000	54.68	3.17	74.0	19.32	Peak	360.00	100	Vertical	Pass
4**	7830.000	44.88	3.17	54.0	9.12	AV	360.00	100	Vertical	Pass
5	11196.512	51.63	-1.74	74.0	22.37	Peak	274.00	300	Vertical	Pass
5**	11196.512	42.40	-1.74	54.0	11.60	AV	274.00	300	Vertical	Pass
6	16320.787	53.40	0.02	74.0	20.60	Peak	335.00	300	Vertical	Pass
6**	16320.787	43.86	0.02	54.0	10.14	AV	335.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.600	42.67	-16.67	74.0	31.33	Peak	260.00	400	Horizontal	Pass
1**	1330.600	33.35	-16.67	54.0	20.65	AV	260.00	400	Horizontal	Pass
2	2435.400	108.92	-8.92	--	--	Peak	47.00	200	Horizontal	N/A
2**	2435.400	106.00	-8.92	--	--	AV	47.00	200	Horizontal	N/A
3	4708.750	50.16	-2.73	74.0	23.84	Peak	257.00	200	Horizontal	Pass
3**	4708.750	41.49	-2.73	54.0	12.51	AV	257.00	200	Horizontal	Pass
4	7753.500	54.18	1.71	74.0	19.82	Peak	244.00	100	Horizontal	Pass
4**	7753.500	44.55	1.71	54.0	9.45	AV	244.00	100	Horizontal	Pass
5	9090.125	51.56	-2.72	74.0	22.44	Peak	238.00	300	Horizontal	Pass
5**	9090.125	40.69	-2.72	54.0	13.31	AV	238.00	300	Horizontal	Pass
6	15749.588	52.70	0.37	74.0	21.30	Peak	316.00	400	Horizontal	Pass
6**	15749.588	43.14	0.37	54.0	10.86	AV	316.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1390.800	42.72	-16.62	74.0	31.28	Peak	112.00	300	Vertical	Pass
1**	1390.800	32.74	-16.62	54.0	21.26	AV	112.00	300	Vertical	Pass
2	2436.900	103.83	-9.14	--	--	Peak	252.00	150	Vertical	N/A
2**	2436.900	98.39	-9.14	--	--	AV	252.00	150	Vertical	N/A
3	4731.250	50.80	-2.94	74.0	23.20	Peak	228.00	100	Vertical	Pass
3**	4731.250	41.24	-2.94	54.0	12.76	AV	228.00	100	Vertical	Pass
4	7966.750	53.98	2.06	74.0	20.02	Peak	293.00	300	Vertical	Pass
4**	7966.750	44.43	2.06	54.0	9.57	AV	293.00	300	Vertical	Pass
5	11140.938	51.82	-0.96	74.0	22.18	Peak	313.00	400	Vertical	Pass
5**	11140.938	42.44	-0.96	54.0	11.56	AV	313.00	400	Vertical	Pass
6	16325.250	52.62	0.14	74.0	21.38	Peak	278.00	100	Vertical	Pass
6**	16325.250	43.89	0.14	54.0	10.11	AV	278.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.200	42.29	-16.68	74.0	31.71	Peak	257.00	200	Horizontal	Pass
1**	1328.200	32.37	-16.68	54.0	21.63	AV	257.00	200	Horizontal	Pass
2	2462.000	108.09	-9.74	--	--	Peak	153.00	200	Horizontal	N/A
2**	2462.000	103.48	-9.74	--	--	AV	153.00	200	Horizontal	N/A
3	4770.750	50.01	-2.54	74.0	23.99	Peak	360.00	100	Horizontal	Pass
3**	4770.750	41.43	-2.54	54.0	12.57	AV	360.00	100	Horizontal	Pass
4	7782.250	54.06	1.68	74.0	19.94	Peak	70.00	100	Horizontal	Pass
4**	7782.250	44.81	1.68	54.0	9.19	AV	70.00	100	Horizontal	Pass
5	11067.787	51.76	-1.61	74.0	22.24	Peak	360.00	100	Horizontal	Pass
5**	11067.787	42.58	-1.61	54.0	11.42	AV	360.00	100	Horizontal	Pass
6	16332.599	52.56	0.35	74.0	21.44	Peak	187.00	300	Horizontal	Pass
6**	16332.599	43.99	0.35	54.0	10.01	AV	187.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1498.500	43.36	-16.60	74.0	30.64	Peak	348.00	200	Vertical	Pass
1**	1498.500	32.70	-16.60	54.0	21.30	AV	348.00	200	Vertical	Pass
2	2462.000	104.23	-9.74	--	--	Peak	252.00	150	Vertical	N/A
2**	2462.000	99.26	-9.74	--	--	AV	252.00	150	Vertical	N/A
3	4751.000	50.27	-2.71	74.0	23.73	Peak	11.00	150	Vertical	Pass
3**	4751.000	41.33	-2.71	54.0	12.67	AV	11.00	150	Vertical	Pass
4	7930.500	54.08	2.55	74.0	19.92	Peak	360.00	100	Vertical	Pass
4**	7930.500	44.88	2.55	54.0	9.12	AV	360.00	100	Vertical	Pass
5	11125.500	52.01	-0.98	74.0	21.99	Peak	360.00	300	Vertical	Pass
5**	11125.500	42.84	-0.98	54.0	11.16	AV	360.00	300	Vertical	Pass
6	16312.912	52.96	-0.21	74.0	21.04	Peak	241.00	400	Vertical	Pass
6**	16312.912	43.30	-0.21	54.0	10.70	AV	241.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.500	44.08	-16.67	74.0	29.92	Peak	86.00	100	Horizontal	Pass
1**	1329.500	32.69	-16.67	54.0	21.31	AV	86.00	100	Horizontal	Pass
2	2410.400	110.11	-10.04	--	--	Peak	52.00	200	Horizontal	N/A
2**	2410.400	102.92	-10.04	--	--	AV	52.00	200	Horizontal	N/A
3	4733.250	50.00	-2.94	74.0	24.00	Peak	309.00	150	Horizontal	Pass
3**	4733.250	40.96	-2.94	54.0	13.04	AV	309.00	150	Horizontal	Pass
4	7784.000	54.01	1.65	74.0	19.99	Peak	192.00	100	Horizontal	Pass
4**	7784.000	44.63	1.65	54.0	9.37	AV	192.00	100	Horizontal	Pass
5	11389.362	51.74	-1.70	74.0	22.26	Peak	23.00	400	Horizontal	Pass
5**	11389.362	41.43	-1.70	54.0	12.57	AV	23.00	400	Horizontal	Pass
6	16339.162	52.53	0.54	74.0	21.47	Peak	114.00	300	Horizontal	Pass
6**	16339.162	43.17	0.54	54.0	10.83	AV	114.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.000	44.01	-16.69	74.0	29.99	Peak	13.00	300	Vertical	Pass
1**	1328.000	32.46	-16.69	54.0	21.54	AV	13.00	300	Vertical	Pass
2	2413.600	106.97	-10.05	--	--	Peak	254.00	200	Vertical	N/A
2**	2413.600	99.47	-10.05	--	--	AV	254.00	200	Vertical	N/A
3	4933.000	50.13	-2.57	74.0	23.87	Peak	283.00	100	Vertical	Pass
3**	4933.000	39.81	-2.57	54.0	14.19	AV	283.00	100	Vertical	Pass
4	7924.250	53.71	2.17	74.0	20.29	Peak	348.00	200	Vertical	Pass
4**	7924.250	45.65	2.17	54.0	8.35	AV	348.00	200	Vertical	Pass
5	11168.487	51.36	-1.26	74.0	22.64	Peak	205.00	400	Vertical	Pass
5**	11168.487	42.42	-1.26	54.0	11.58	AV	205.00	400	Vertical	Pass
6	16346.776	52.52	0.75	74.0	21.48	Peak	151.00	300	Vertical	Pass
6**	16346.776	43.23	0.75	54.0	10.77	AV	151.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1412.000	43.39	-16.60	74.0	30.61	Peak	76.00	400	Horizontal	Pass
1**	1412.000	33.29	-16.60	54.0	20.71	AV	76.00	400	Horizontal	Pass
2	2435.400	110.54	-8.92	--	--	Peak	47.00	100	Horizontal	N/A
2**	2435.400	103.27	-8.92	--	--	AV	47.00	100	Horizontal	N/A
3	4719.750	50.21	-2.84	74.0	23.79	Peak	135.00	200	Horizontal	Pass
3**	4719.750	41.37	-2.84	54.0	12.63	AV	135.00	200	Horizontal	Pass
4	7893.500	53.74	2.25	74.0	20.26	Peak	226.00	300	Horizontal	Pass
4**	7893.500	44.60	2.25	54.0	9.40	AV	226.00	300	Horizontal	Pass
5	11138.562	52.00	-0.96	74.0	22.00	Peak	1.00	100	Horizontal	Pass
5**	11138.562	42.61	-0.96	54.0	11.39	AV	1.00	100	Horizontal	Pass
6	16326.825	52.42	0.19	74.0	21.58	Peak	278.00	200	Horizontal	Pass
6**	16326.825	43.82	0.19	54.0	10.18	AV	278.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1477.200	42.72	-16.52	74.0	31.28	Peak	0.00	400	Vertical	Pass
1**	1477.200	33.05	-16.52	54.0	20.95	AV	0.00	400	Vertical	Pass
2	2435.100	105.17	-8.93	--	--	Peak	252.00	150	Vertical	N/A
2**	2435.100	97.13	-8.93	--	--	AV	252.00	150	Vertical	N/A
3	4718.250	50.27	-2.77	74.0	23.73	Peak	360.00	150	Vertical	Pass
3**	4718.250	41.28	-2.77	54.0	12.72	AV	360.00	150	Vertical	Pass
4	7535.750	54.21	2.26	74.0	19.79	Peak	296.00	300	Vertical	Pass
4**	7535.750	44.50	2.26	54.0	9.50	AV	296.00	300	Vertical	Pass
5	10595.875	51.65	-1.48	74.0	22.35	Peak	314.00	300	Vertical	Pass
5**	10595.875	41.49	-1.48	54.0	12.51	AV	314.00	300	Vertical	Pass
6	16338.900	52.82	0.53	74.0	21.18	Peak	259.00	200	Vertical	Pass
6**	16338.900	43.28	0.53	54.0	10.72	AV	259.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.100	43.01	-16.69	74.0	30.99	Peak	242.00	200	Horizontal	Pass
1**	1328.100	34.93	-16.69	54.0	19.07	AV	242.00	200	Horizontal	Pass
2	2464.700	109.08	-9.79	--	--	Peak	148.00	200	Horizontal	N/A
2**	2464.700	101.82	-9.79	--	--	AV	148.00	200	Horizontal	N/A
3	4775.250	50.46	-2.53	74.0	23.54	Peak	360.00	200	Horizontal	Pass
3**	4775.250	40.88	-2.53	54.0	13.12	AV	360.00	200	Horizontal	Pass
4	7744.750	54.07	1.23	74.0	19.93	Peak	280.00	200	Horizontal	Pass
4**	7744.750	43.67	1.23	54.0	10.33	AV	280.00	200	Horizontal	Pass
5	10719.375	51.75	-2.13	74.0	22.25	Peak	360.00	100	Horizontal	Pass
5**	10719.375	41.91	-2.13	54.0	12.09	AV	360.00	100	Horizontal	Pass
6	16323.151	52.68	0.08	74.0	21.32	Peak	187.00	200	Horizontal	Pass
6**	16323.151	43.75	0.08	54.0	10.25	AV	187.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.000	44.38	-16.67	74.0	29.62	Peak	265.00	400	Vertical	Pass
1**	1329.000	38.95	-16.67	54.0	15.05	AV	265.00	400	Vertical	Pass
2	2459.900	105.22	-9.74	--	--	Peak	252.00	150	Vertical	N/A
2**	2459.900	97.81	-9.74	--	--	AV	252.00	150	Vertical	N/A
3	4769.750	50.70	-2.46	74.0	23.30	Peak	138.00	200	Vertical	Pass
3**	4769.750	42.03	-2.46	54.0	11.97	AV	138.00	200	Vertical	Pass
4	7927.000	53.98	2.28	74.0	20.02	Peak	86.00	100	Vertical	Pass
4**	7927.000	44.81	2.28	54.0	9.19	AV	86.00	100	Vertical	Pass
5	10922.912	51.60	-2.88	74.0	22.40	Peak	241.00	300	Vertical	Pass
5**	10922.912	40.87	-2.88	54.0	13.13	AV	241.00	300	Vertical	Pass
6	16504.537	52.43	0.32	74.0	21.57	Peak	75.00	200	Vertical	Pass
6**	16504.537	43.02	0.32	54.0	10.98	AV	75.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1567.200	42.53	-16.75	74.0	31.47	Peak	270.00	300	Horizontal	Pass
1**	1567.200	32.88	-16.75	54.0	21.12	AV	270.00	300	Horizontal	Pass
2	2412.100	109.54	-9.93	--	--	Peak	148.00	150	Horizontal	N/A
2**	2412.100	102.28	-9.93	--	--	AV	148.00	150	Horizontal	N/A
3	4720.250	50.88	-2.82	74.0	23.12	Peak	47.00	150	Horizontal	Pass
3**	4720.250	40.57	-2.82	54.0	13.43	AV	47.00	150	Horizontal	Pass
4	7921.500	54.02	2.01	74.0	19.98	Peak	280.00	100	Horizontal	Pass
4**	7921.500	44.56	2.01	54.0	9.44	AV	280.00	100	Horizontal	Pass
5	11071.350	51.96	-1.54	74.0	22.04	Peak	78.00	200	Horizontal	Pass
5**	11071.350	42.14	-1.54	54.0	11.86	AV	78.00	200	Horizontal	Pass
6	16332.338	52.99	0.34	74.0	21.01	Peak	18.00	300	Horizontal	Pass
6**	16332.338	43.63	0.34	54.0	10.37	AV	18.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1385.300	43.02	-16.44	74.0	30.98	Peak	120.00	100	Vertical	Pass
1**	1385.300	33.76	-16.44	54.0	20.24	AV	120.00	100	Vertical	Pass
2	2412.700	104.99	-9.98	--	--	Peak	250.00	200	Vertical	N/A
2**	2412.700	97.71	-9.98	--	--	AV	250.00	200	Vertical	N/A
3	4943.500	50.01	-2.52	74.0	23.99	Peak	360.00	100	Vertical	Pass
3**	4943.500	40.85	-2.52	54.0	13.15	AV	360.00	100	Vertical	Pass
4	7927.750	53.65	2.35	74.0	20.35	Peak	36.00	100	Vertical	Pass
4**	7927.750	44.53	2.35	54.0	9.47	AV	36.00	100	Vertical	Pass
5	10719.849	51.54	-2.12	74.0	22.46	Peak	60.00	300	Vertical	Pass
5**	10719.849	43.37	-2.12	54.0	10.63	AV	60.00	300	Vertical	Pass
6	15752.475	53.03	0.31	74.0	20.97	Peak	187.00	300	Vertical	Pass
6**	15752.475	43.00	0.31	54.0	11.00	AV	187.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1398.900	42.51	-16.73	74.0	31.49	Peak	260.00	300	Horizontal	Pass
1**	1398.900	32.40	-16.73	54.0	21.60	AV	260.00	300	Horizontal	Pass
2	2435.900	108.97	-8.99	--	--	Peak	55.00	150	Horizontal	N/A
2**	2435.900	102.02	-8.99	--	--	AV	55.00	150	Horizontal	N/A
3	4659.000	50.51	-3.00	74.0	23.49	Peak	101.00	150	Horizontal	Pass
3**	4659.000	40.66	-3.00	54.0	13.34	AV	101.00	150	Horizontal	Pass
4	7085.000	53.86	0.13	74.0	20.14	Peak	218.00	100	Horizontal	Pass
4**	7085.000	44.00	0.13	54.0	10.00	AV	218.00	100	Horizontal	Pass
5	10811.288	51.75	-2.75	74.0	22.25	Peak	277.00	100	Horizontal	Pass
5**	10811.288	41.67	-2.75	54.0	12.33	AV	277.00	100	Horizontal	Pass
6	16355.438	52.88	0.73	74.0	21.12	Peak	262.00	200	Horizontal	Pass
6**	16355.438	43.83	0.73	54.0	10.17	AV	262.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1406.600	43.34	-16.58	74.0	30.66	Peak	247.00	400	Vertical	Pass
1**	1406.600	33.39	-16.58	54.0	20.61	AV	247.00	400	Vertical	Pass
2	2434.600	103.64	-8.98	--	--	Peak	252.00	200	Vertical	N/A
2**	2434.600	95.80	-8.98	--	--	AV	252.00	200	Vertical	N/A
3	4739.750	50.38	-2.95	74.0	23.62	Peak	360.00	200	Vertical	Pass
3**	4739.750	41.25	-2.95	54.0	12.75	AV	360.00	200	Vertical	Pass
4	7817.500	54.02	2.68	74.0	19.98	Peak	270.00	150	Vertical	Pass
4**	7817.500	44.23	2.68	54.0	9.77	AV	270.00	150	Vertical	Pass
5	9359.213	51.77	-2.38	74.0	22.23	Peak	360.00	200	Vertical	Pass
5**	9359.213	41.37	-2.38	54.0	12.63	AV	360.00	200	Vertical	Pass
6	16318.425	52.41	-0.05	74.0	21.59	Peak	244.00	200	Vertical	Pass
6**	16318.425	43.40	-0.05	54.0	10.60	AV	244.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.800	42.57	-16.67	74.0	31.43	Peak	84.00	300	Horizontal	Pass
1**	1329.800	33.12	-16.67	54.0	20.88	AV	84.00	300	Horizontal	Pass
2	2462.500	108.27	-9.74	--	--	Peak	154.00	100	Horizontal	N/A
2**	2462.500	100.52	-9.74	--	--	AV	154.00	100	Horizontal	N/A
3	4814.000	50.30	-2.17	74.0	23.70	Peak	127.00	200	Horizontal	Pass
3**	4814.000	40.54	-2.17	54.0	13.46	AV	127.00	200	Horizontal	Pass
4	7791.000	53.71	1.35	74.0	20.29	Peak	62.00	300	Horizontal	Pass
4**	7791.000	44.55	1.35	54.0	9.45	AV	62.00	300	Horizontal	Pass
5	11116.237	51.76	-0.99	74.0	22.24	Peak	223.00	400	Horizontal	Pass
5**	11116.237	42.91	-0.99	54.0	11.09	AV	223.00	400	Horizontal	Pass
6	15736.200	52.38	0.18	74.0	21.62	Peak	360.00	400	Horizontal	Pass
6**	15736.200	42.99	0.18	54.0	11.01	AV	360.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.600	42.52	-16.67	74.0	31.48	Peak	42.00	300	Vertical	Pass
1**	1329.600	33.60	-16.67	54.0	20.40	AV	42.00	300	Vertical	Pass
2	2458.100	103.81	-9.73	--	--	Peak	255.00	200	Vertical	N/A
2**	2458.100	96.51	-9.73	--	--	AV	255.00	200	Vertical	N/A
3	4790.000	49.91	-2.87	74.0	24.09	Peak	218.00	150	Vertical	Pass
3**	4790.000	40.86	-2.87	54.0	13.14	AV	218.00	150	Vertical	Pass
4	7926.250	54.41	2.20	74.0	19.59	Peak	231.00	100	Vertical	Pass
4**	7926.250	46.00	2.20	54.0	8.00	AV	231.00	100	Vertical	Pass
5	11207.912	52.34	-2.01	74.0	21.66	Peak	44.00	100	Vertical	Pass
5**	11207.912	42.19	-2.01	54.0	11.81	AV	44.00	100	Vertical	Pass
6	16350.188	52.71	0.84	74.0	21.29	Peak	298.00	200	Vertical	Pass
6**	16350.188	43.56	0.84	54.0	10.44	AV	298.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1460.700	43.34	-16.91	74.0	30.66	Peak	71.00	200	Horizontal	Pass
1**	1460.700	32.03	-16.91	54.0	21.97	AV	71.00	200	Horizontal	Pass
2	2425.400	106.23	-9.77	--	--	Peak	50.00	100	Horizontal	N/A
2**	2425.400	98.36	-9.77	--	--	AV	50.00	100	Horizontal	N/A
3	4785.500	50.52	-2.47	74.0	23.48	Peak	306.00	150	Horizontal	Pass
3**	4785.500	41.34	-2.47	54.0	12.66	AV	306.00	150	Horizontal	Pass
4	7516.750	54.12	2.03	74.0	19.88	Peak	125.00	200	Horizontal	Pass
4**	7516.750	44.97	2.03	54.0	9.03	AV	125.00	200	Horizontal	Pass
5	11149.013	51.74	-0.95	74.0	22.26	Peak	360.00	400	Horizontal	Pass
5**	11149.013	42.18	-0.95	54.0	11.82	AV	360.00	400	Horizontal	Pass
6	16317.901	53.01	-0.07	74.0	20.99	Peak	335.00	400	Horizontal	Pass
6**	16317.901	43.27	-0.07	54.0	10.73	AV	335.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1387.800	42.60	-16.46	74.0	31.40	Peak	6.00	400	Vertical	Pass
1**	1387.800	32.63	-16.46	54.0	21.37	AV	6.00	400	Vertical	Pass
2	2419.200	101.56	-9.96	--	--	Peak	257.00	100	Vertical	N/A
2**	2419.200	94.46	-9.96	--	--	AV	257.00	100	Vertical	N/A
3	4725.500	51.25	-2.95	74.0	22.75	Peak	335.00	100	Vertical	Pass
3**	4725.500	41.01	-2.95	54.0	12.99	AV	335.00	100	Vertical	Pass
4	7906.500	54.02	2.22	74.0	19.98	Peak	360.00	200	Vertical	Pass
4**	7906.500	45.01	2.22	54.0	8.99	AV	360.00	200	Vertical	Pass
5	11139.512	51.34	-0.96	74.0	22.66	Peak	329.00	100	Vertical	Pass
5**	11139.512	42.64	-0.96	54.0	11.36	AV	329.00	100	Vertical	Pass
6	15757.200	52.52	0.18	74.0	21.48	Peak	280.00	100	Vertical	Pass
6**	15757.200	43.45	0.18	54.0	10.55	AV	280.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1592.500	42.65	-16.75	74.0	31.35	Peak	299.00	300	Horizontal	Pass
1**	1592.500	32.35	-16.75	54.0	21.65	AV	299.00	300	Horizontal	Pass
2	2433.600	106.27	-9.09	--	--	Peak	42.00	200	Horizontal	N/A
2**	2433.600	99.01	-9.09	--	--	AV	42.00	200	Horizontal	N/A
3	4761.500	49.94	-2.68	74.0	24.06	Peak	306.00	100	Horizontal	Pass
3**	4761.500	41.92	-2.68	54.0	12.08	AV	306.00	100	Horizontal	Pass
4	7902.500	53.97	2.32	74.0	20.03	Peak	293.00	200	Horizontal	Pass
4**	7902.500	45.10	2.32	54.0	8.90	AV	293.00	200	Horizontal	Pass
5	10722.463	51.78	-2.08	74.0	22.22	Peak	360.00	400	Horizontal	Pass
5**	10722.463	42.26	-2.08	54.0	11.74	AV	360.00	400	Horizontal	Pass
6	15754.050	53.29	0.26	74.0	20.71	Peak	223.00	300	Horizontal	Pass
6**	15754.050	43.71	0.26	54.0	10.29	AV	223.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.300	43.38	-16.67	74.0	30.62	Peak	68.00	300	Vertical	Pass
1**	1329.300	35.76	-16.67	54.0	18.24	AV	68.00	300	Vertical	Pass
2	2426.300	100.21	-9.62	--	--	Peak	257.00	100	Vertical	N/A
2**	2426.300	92.80	-9.62	--	--	AV	257.00	100	Vertical	N/A
3	4755.000	50.62	-2.84	74.0	23.38	Peak	164.00	200	Vertical	Pass
3**	4755.000	41.32	-2.84	54.0	12.68	AV	164.00	200	Vertical	Pass
4	7827.500	54.75	3.05	74.0	19.25	Peak	360.00	100	Vertical	Pass
4**	7827.500	45.40	3.05	54.0	8.60	AV	360.00	100	Vertical	Pass
5	11072.775	51.57	-1.52	74.0	22.43	Peak	360.00	400	Vertical	Pass
5**	11072.775	42.17	-1.52	54.0	11.83	AV	360.00	400	Vertical	Pass
6	16337.325	52.84	0.49	74.0	21.16	Peak	360.00	100	Vertical	Pass
6**	16337.325	44.12	0.49	54.0	9.88	AV	360.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.900	43.47	-16.67	74.0	30.53	Peak	254.00	400	Horizontal	Pass
1**	1328.900	32.61	-16.67	54.0	21.39	AV	254.00	400	Horizontal	Pass
2	2454.900	105.52	-10.03	--	--	Peak	47.00	200	Horizontal	N/A
2**	2454.900	97.77	-10.03	--	--	AV	47.00	200	Horizontal	N/A
3	4947.250	50.31	-2.20	74.0	23.69	Peak	319.00	200	Horizontal	Pass
3**	4947.250	41.18	-2.20	54.0	12.82	AV	319.00	200	Horizontal	Pass
4	7928.750	54.04	2.44	74.0	19.96	Peak	360.00	400	Horizontal	Pass
4**	7928.750	44.98	2.44	54.0	9.02	AV	360.00	400	Horizontal	Pass
5	11122.650	51.41	-0.98	74.0	22.59	Peak	360.00	100	Horizontal	Pass
5**	11122.650	41.97	-0.98	54.0	12.03	AV	360.00	100	Horizontal	Pass
6	16324.463	52.57	0.12	74.0	21.43	Peak	360.00	300	Horizontal	Pass
6**	16324.463	43.65	0.12	54.0	10.35	AV	360.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1316.600	42.55	-16.53	74.0	31.45	Peak	213.00	400	Vertical	Pass
1**	1316.600	33.09	-16.53	54.0	20.91	AV	213.00	400	Vertical	Pass
2	2454.200	100.51	-10.09	--	--	Peak	252.00	200	Vertical	N/A
2**	2454.200	92.62	-10.09	--	--	AV	252.00	200	Vertical	N/A
3	4758.000	50.00	-2.79	74.0	24.00	Peak	21.00	200	Vertical	Pass
3**	4758.000	41.03	-2.79	54.0	12.97	AV	21.00	200	Vertical	Pass
4	7910.500	54.64	1.89	74.0	19.36	Peak	267.00	100	Vertical	Pass
4**	7910.500	44.79	1.89	54.0	9.21	AV	267.00	100	Vertical	Pass
5	11167.300	51.54	-1.24	74.0	22.46	Peak	168.00	100	Vertical	Pass
5**	11167.300	41.86	-1.24	54.0	12.14	AV	168.00	100	Vertical	Pass
6	15749.063	52.74	0.36	74.0	21.26	Peak	114.00	300	Vertical	Pass
6**	15749.063	43.63	0.36	54.0	10.37	AV	114.00	300	Vertical	Pass

Aux. Antenna

1 GHz to 18 GHz, ANT H 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1471.900	42.26	-16.43	74.0	31.74	Peak	91.00	400	Horizontal	Pass
1**	1471.900	32.82	-16.43	54.0	21.18	AV	91.00	400	Horizontal	Pass
2	2412.000	108.17	-9.93	--	--	Peak	120.00	100	Horizontal	N/A
2**	2412.000	103.18	-9.93	--	--	AV	120.00	100	Horizontal	N/A
3	4939.000	50.46	-2.59	74.0	23.54	Peak	360.00	200	Horizontal	Pass
3**	4939.000	40.21	-2.59	54.0	13.79	AV	360.00	200	Horizontal	Pass
4	7928.500	53.66	2.43	74.0	20.34	Peak	254.00	100	Horizontal	Pass
4**	7928.500	46.04	2.43	54.0	7.96	AV	254.00	100	Horizontal	Pass
5	11154.237	51.43	-1.02	74.0	22.57	Peak	360.00	300	Horizontal	Pass
5**	11154.237	42.38	-1.02	54.0	11.62	AV	360.00	300	Horizontal	Pass
6	16336.538	52.58	0.46	74.0	21.42	Peak	280.00	400	Horizontal	Pass
6**	16336.538	44.32	0.46	54.0	9.68	AV	280.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.200	43.66	-16.67	74.0	30.34	Peak	247.00	300	Vertical	Pass
1**	1329.200	37.33	-16.67	54.0	16.67	AV	247.00	300	Vertical	Pass
2	2412.000	101.23	-9.93	--	--	Peak	190.00	200	Vertical	N/A
2**	2412.000	95.66	-9.93	--	--	AV	190.00	200	Vertical	N/A
3	4942.750	50.22	-2.55	74.0	23.78	Peak	31.00	100	Vertical	Pass
3**	4942.750	40.67	-2.55	54.0	13.33	AV	31.00	100	Vertical	Pass
4	7299.250	53.82	0.34	74.0	20.18	Peak	360.00	200	Vertical	Pass
4**	7299.250	42.98	0.34	54.0	11.02	AV	360.00	200	Vertical	Pass
5	11150.675	52.38	-0.96	74.0	21.62	Peak	360.00	300	Vertical	Pass
5**	11150.675	41.83	-0.96	54.0	12.17	AV	360.00	300	Vertical	Pass
6	16352.026	52.77	0.80	74.0	21.23	Peak	36.00	200	Vertical	Pass
6**	16352.026	43.74	0.80	54.0	10.26	AV	36.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1467.500	42.88	-16.66	74.0	31.12	Peak	309.00	300	Horizontal	Pass
1**	1467.500	32.99	-16.66	54.0	21.01	AV	309.00	300	Horizontal	Pass
2	2436.900	108.19	-9.14	--	--	Peak	167.00	150	Horizontal	N/A
2**	2436.900	102.68	-9.14	--	--	AV	167.00	150	Horizontal	N/A
3	4750.250	50.64	-2.68	74.0	23.36	Peak	231.00	100	Horizontal	Pass
3**	4750.250	41.75	-2.68	54.0	12.25	AV	231.00	100	Horizontal	Pass
4	7769.250	53.95	1.69	74.0	20.05	Peak	179.00	300	Horizontal	Pass
4**	7769.250	44.76	1.69	54.0	9.24	AV	179.00	300	Horizontal	Pass
5	11125.500	51.47	-0.98	74.0	22.53	Peak	360.00	100	Horizontal	Pass
5**	11125.500	43.00	-0.98	54.0	11.00	AV	360.00	100	Horizontal	Pass
6	16360.424	52.37	0.62	74.0	21.63	Peak	109.00	400	Horizontal	Pass
6**	16360.424	42.99	0.62	54.0	11.01	AV	109.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.700	43.25	-16.67	74.0	30.75	Peak	250.00	300	Vertical	Pass
1**	1333.700	34.18	-16.67	54.0	19.82	AV	250.00	300	Vertical	Pass
2	2437.000	103.42	-9.16	--	--	Peak	257.00	200	Vertical	N/A
2**	2437.000	97.13	-9.16	--	--	AV	257.00	200	Vertical	N/A
3	4711.750	50.37	-2.70	74.0	23.63	Peak	202.00	100	Vertical	Pass
3**	4711.750	40.82	-2.70	54.0	13.18	AV	202.00	100	Vertical	Pass
4	7924.000	54.74	2.16	74.0	19.26	Peak	86.00	100	Vertical	Pass
4**	7924.000	45.46	2.16	54.0	8.54	AV	86.00	100	Vertical	Pass
5	11064.700	52.34	-1.67	74.0	21.66	Peak	360.00	400	Vertical	Pass
5**	11064.700	42.38	-1.67	54.0	11.62	AV	360.00	400	Vertical	Pass
6	16348.349	52.58	0.80	74.0	21.42	Peak	112.00	100	Vertical	Pass
6**	16348.349	43.56	0.80	54.0	10.44	AV	112.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.300	44.68	-16.67	74.0	29.32	Peak	99.00	400	Horizontal	Pass
1**	1329.300	32.61	-16.67	54.0	21.39	AV	99.00	400	Horizontal	Pass
2	2462.000	107.64	-9.74	--	--	Peak	128.00	100	Horizontal	N/A
2**	2462.000	102.22	-9.74	--	--	AV	128.00	100	Horizontal	N/A
3	4970.000	49.94	-2.68	74.0	24.06	Peak	360.00	100	Horizontal	Pass
3**	4970.000	41.82	-2.68	54.0	12.18	AV	360.00	100	Horizontal	Pass
4	7930.250	54.13	2.54	74.0	19.87	Peak	360.00	100	Horizontal	Pass
4**	7930.250	45.69	2.54	54.0	8.31	AV	360.00	100	Horizontal	Pass
5	11152.575	51.46	-0.99	74.0	22.54	Peak	213.00	400	Horizontal	Pass
5**	11152.575	42.43	-0.99	54.0	11.57	AV	213.00	400	Horizontal	Pass
6	16355.700	52.23	0.72	74.0	21.77	Peak	360.00	100	Horizontal	Pass
6**	16355.700	43.38	0.72	54.0	10.62	AV	360.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.400	43.64	-16.67	74.0	30.36	Peak	302.00	300	Vertical	Pass
1**	1328.400	34.61	-16.67	54.0	19.39	AV	302.00	300	Vertical	Pass
2	2461.900	102.63	-9.74	--	--	Peak	250.00	200	Vertical	N/A
2**	2461.900	97.02	-9.74	--	--	AV	250.00	200	Vertical	N/A
3	4750.750	50.36	-2.70	74.0	23.64	Peak	360.00	150	Vertical	Pass
3**	4750.750	41.10	-2.70	54.0	12.90	AV	360.00	150	Vertical	Pass
4	7911.250	54.17	1.83	74.0	19.83	Peak	52.00	200	Vertical	Pass
4**	7911.250	44.68	1.83	54.0	9.32	AV	52.00	200	Vertical	Pass
5	11181.787	51.38	-1.49	74.0	22.62	Peak	360.00	200	Vertical	Pass
5**	11181.787	42.76	-1.49	54.0	11.24	AV	360.00	200	Vertical	Pass
6	15751.687	53.36	0.33	74.0	20.64	Peak	360.00	200	Vertical	Pass
6**	15751.687	43.01	0.33	54.0	10.99	AV	360.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1481.400	42.23	-16.42	74.0	31.77	Peak	21.00	100	Horizontal	Pass
1**	1481.400	33.37	-16.42	54.0	20.63	AV	21.00	100	Horizontal	Pass
2	2411.000	107.67	-9.99	--	--	Peak	123.00	100	Horizontal	N/A
2**	2411.000	100.48	-9.99	--	--	AV	123.00	100	Horizontal	N/A
3	4701.500	50.06	-2.71	74.0	23.94	Peak	360.00	150	Horizontal	Pass
3**	4701.500	41.10	-2.71	54.0	12.90	AV	360.00	150	Horizontal	Pass
4	7843.250	54.00	2.97	74.0	20.00	Peak	192.00	100	Horizontal	Pass
4**	7843.250	44.95	2.97	54.0	9.05	AV	192.00	100	Horizontal	Pass
5	11137.849	51.35	-0.96	74.0	22.65	Peak	360.00	400	Horizontal	Pass
5**	11137.849	42.82	-0.96	54.0	11.18	AV	360.00	400	Horizontal	Pass
6	16344.937	52.59	0.70	74.0	21.41	Peak	221.00	300	Horizontal	Pass
6**	16344.937	43.67	0.70	54.0	10.33	AV	221.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1280.100	42.66	-16.55	74.0	31.34	Peak	21.00	300	Vertical	Pass
1**	1280.100	32.65	-16.55	54.0	21.35	AV	21.00	300	Vertical	Pass
2	2411.500	101.09	-9.95	--	--	Peak	257.00	150	Vertical	N/A
2**	2411.500	93.78	-9.95	--	--	AV	257.00	150	Vertical	N/A
3	4929.000	49.91	-2.66	74.0	24.09	Peak	174.00	200	Vertical	Pass
3**	4929.000	42.16	-2.66	54.0	11.84	AV	174.00	200	Vertical	Pass
4	7360.000	53.99	0.75	74.0	20.01	Peak	360.00	200	Vertical	Pass
4**	7360.000	43.48	0.75	54.0	10.52	AV	360.00	200	Vertical	Pass
5	11125.026	51.27	-0.98	74.0	22.73	Peak	360.00	100	Vertical	Pass
5**	11125.026	42.14	-0.98	54.0	11.86	AV	360.00	100	Vertical	Pass
6	16785.150	52.55	0.63	74.0	21.45	Peak	140.00	100	Vertical	Pass
6**	16785.150	43.43	0.63	54.0	10.57	AV	140.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1545.700	42.70	-16.47	74.0	31.30	Peak	76.00	300	Horizontal	Pass
1**	1545.700	32.95	-16.47	54.0	21.05	AV	76.00	300	Horizontal	Pass
2	2436.500	108.49	-9.08	--	--	Peak	244.00	150	Horizontal	N/A
2**	2436.500	101.32	-9.08	--	--	AV	244.00	150	Horizontal	N/A
3	4983.500	50.19	-2.56	74.0	23.81	Peak	360.00	200	Horizontal	Pass
3**	4983.500	41.08	-2.56	54.0	12.92	AV	360.00	200	Horizontal	Pass
4	7836.250	54.33	3.57	74.0	19.67	Peak	44.00	150	Horizontal	Pass
4**	7836.250	45.00	3.57	54.0	9.00	AV	44.00	150	Horizontal	Pass
5	11195.563	51.90	-1.72	74.0	22.10	Peak	132.00	300	Horizontal	Pass
5**	11195.563	42.58	-1.72	54.0	11.42	AV	132.00	300	Horizontal	Pass
6	15733.049	53.50	0.14	74.0	20.50	Peak	360.00	300	Horizontal	Pass
6**	15733.049	42.85	0.14	54.0	11.15	AV	360.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1544.700	42.30	-16.42	74.0	31.70	Peak	55.00	300	Vertical	Pass
1**	1544.700	33.42	-16.42	54.0	20.58	AV	55.00	300	Vertical	Pass
2	2437.500	103.58	-9.23	--	--	Peak	252.00	100	Vertical	N/A
2**	2437.500	96.73	-9.23	--	--	AV	252.00	100	Vertical	N/A
3	4748.000	50.52	-2.73	74.0	23.48	Peak	265.00	200	Vertical	Pass
3**	4748.000	40.52	-2.73	54.0	13.48	AV	265.00	200	Vertical	Pass
4	7819.000	54.11	2.93	74.0	19.89	Peak	360.00	100	Vertical	Pass
4**	7819.000	45.29	2.93	54.0	8.71	AV	360.00	100	Vertical	Pass
5	11080.375	51.67	-1.37	74.0	22.33	Peak	360.00	300	Vertical	Pass
5**	11080.375	41.59	-1.37	54.0	12.41	AV	360.00	300	Vertical	Pass
6	16328.662	52.71	0.24	74.0	21.29	Peak	316.00	400	Vertical	Pass
6**	16328.662	44.26	0.24	54.0	9.74	AV	316.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1443.700	42.84	-16.47	74.0	31.16	Peak	304.00	200	Horizontal	Pass
1**	1443.700	33.45	-16.47	54.0	20.55	AV	304.00	200	Horizontal	Pass
2	2463.100	107.28	-9.74	--	--	Peak	167.00	150	Horizontal	N/A
2**	2463.100	100.11	-9.74	--	--	AV	167.00	150	Horizontal	N/A
3	4764.250	50.26	-2.60	74.0	23.74	Peak	2.00	100	Horizontal	Pass
3**	4764.250	41.23	-2.60	54.0	12.77	AV	2.00	100	Horizontal	Pass
4	7880.000	53.85	2.88	74.0	20.15	Peak	132.00	300	Horizontal	Pass
4**	7880.000	44.68	2.88	54.0	9.32	AV	132.00	300	Horizontal	Pass
5	11183.213	52.25	-1.51	74.0	21.75	Peak	360.00	300	Horizontal	Pass
5**	11183.213	41.91	-1.51	54.0	12.09	AV	360.00	300	Horizontal	Pass
6	16505.062	53.26	0.32	74.0	20.74	Peak	353.00	200	Horizontal	Pass
6**	16505.062	43.70	0.32	54.0	10.30	AV	353.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.300	45.50	-16.69	74.0	28.50	Peak	58.00	200	Vertical	Pass
1**	1331.300	32.92	-16.69	54.0	21.08	AV	58.00	200	Vertical	Pass
2	2461.200	102.72	-9.73	--	--	Peak	255.00	100	Vertical	N/A
2**	2461.200	94.38	-9.73	--	--	AV	255.00	100	Vertical	N/A
3	4710.500	50.37	-2.68	74.0	23.63	Peak	67.00	200	Vertical	Pass
3**	4710.500	41.57	-2.68	54.0	12.43	AV	67.00	200	Vertical	Pass
4	7839.000	53.72	3.34	74.0	20.28	Peak	145.00	100	Vertical	Pass
4**	7839.000	44.63	3.34	54.0	9.37	AV	145.00	100	Vertical	Pass
5	11194.849	51.46	-1.71	74.0	22.54	Peak	99.00	200	Vertical	Pass
5**	11194.849	41.96	-1.71	54.0	12.04	AV	99.00	200	Vertical	Pass
6	16321.313	52.86	0.03	74.0	21.14	Peak	358.00	200	Vertical	Pass
6**	16321.313	43.45	0.03	54.0	10.55	AV	358.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1599.400	42.88	-16.84	74.0	31.12	Peak	244.00	300	Horizontal	Pass
1**	1599.400	32.71	-16.84	54.0	21.29	AV	244.00	300	Horizontal	Pass
2	2412.000	108.16	-9.93	--	--	Peak	120.00	200	Horizontal	N/A
2**	2412.000	101.49	-9.93	--	--	AV	120.00	200	Horizontal	N/A
3	4732.250	50.43	-2.88	74.0	23.57	Peak	360.00	150	Horizontal	Pass
3**	4732.250	41.38	-2.88	54.0	12.62	AV	360.00	150	Horizontal	Pass
4	7832.500	54.22	3.35	74.0	19.78	Peak	96.00	200	Horizontal	Pass
4**	7832.500	44.49	3.35	54.0	9.51	AV	96.00	200	Horizontal	Pass
5	11141.650	51.44	-0.96	74.0	22.56	Peak	114.00	200	Horizontal	Pass
5**	11141.650	42.04	-0.96	54.0	11.96	AV	114.00	200	Horizontal	Pass
6	16780.162	52.67	0.45	74.0	21.33	Peak	360.00	200	Horizontal	Pass
6**	16780.162	43.40	0.45	54.0	10.60	AV	360.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802. 11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.800	43.43	-16.67	74.0	30.57	Peak	252.00	200	Vertical	Pass
1**	1328.800	33.53	-16.67	54.0	20.47	AV	252.00	200	Vertical	Pass
2	2411.900	101.85	-9.92	--	--	Peak	252.00	200	Vertical	N/A
2**	2411.900	94.55	-9.92	--	--	AV	252.00	200	Vertical	N/A
3	4749.000	50.50	-2.68	74.0	23.50	Peak	360.00	200	Vertical	Pass
3**	4749.000	41.86	-2.68	54.0	12.14	AV	360.00	200	Vertical	Pass
4	7861.750	53.81	2.19	74.0	20.19	Peak	267.00	100	Vertical	Pass
4**	7861.750	44.88	2.19	54.0	9.12	AV	267.00	100	Vertical	Pass
5	11127.400	51.50	-0.98	74.0	22.50	Peak	360.00	400	Vertical	Pass
5**	11127.400	43.54	-0.98	54.0	10.46	AV	360.00	400	Vertical	Pass
6	16339.687	52.43	0.55	74.0	21.57	Peak	360.00	200	Vertical	Pass
6**	16339.687	43.56	0.55	54.0	10.44	AV	360.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1293.300	43.14	-16.59	74.0	30.86	Peak	200.00	300	Horizontal	Pass
1**	1293.300	32.53	-16.59	54.0	21.47	AV	200.00	300	Horizontal	Pass
2	2436.100	107.91	-9.02	--	--	Peak	169.00	100	Horizontal	N/A
2**	2436.100	100.38	-9.02	--	--	AV	169.00	100	Horizontal	N/A
3	4949.500	50.31	-2.24	74.0	23.69	Peak	360.00	100	Horizontal	Pass
3**	4949.500	41.54	-2.24	54.0	12.46	AV	360.00	100	Horizontal	Pass
4	7836.000	53.44	3.55	74.0	20.56	Peak	360.00	200	Horizontal	Pass
4**	7836.000	45.09	3.55	54.0	8.91	AV	360.00	200	Horizontal	Pass
5	11128.588	51.61	-0.97	74.0	22.39	Peak	150.00	200	Horizontal	Pass
5**	11128.588	42.48	-0.97	54.0	11.52	AV	150.00	200	Horizontal	Pass
6	16280.100	52.89	-0.77	74.0	21.11	Peak	337.00	300	Horizontal	Pass
6**	16280.100	43.58	-0.77	54.0	10.42	AV	337.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.600	42.77	-16.71	74.0	31.23	Peak	250.00	200	Vertical	Pass
1**	1332.600	33.36	-16.71	54.0	20.64	AV	250.00	200	Vertical	Pass
2	2436.200	103.46	-9.04	--	--	Peak	255.00	200	Vertical	N/A
2**	2436.200	95.05	-9.04	--	--	AV	255.00	200	Vertical	N/A
3	4718.000	50.04	-2.75	74.0	23.96	Peak	355.00	150	Vertical	Pass
3**	4718.000	41.54	-2.75	54.0	12.46	AV	355.00	150	Vertical	Pass
4	7780.500	53.97	1.72	74.0	20.03	Peak	42.00	100	Vertical	Pass
4**	7780.500	44.45	1.72	54.0	9.55	AV	42.00	100	Vertical	Pass
5	11079.663	51.89	-1.39	74.0	22.11	Peak	360.00	400	Vertical	Pass
5**	11079.663	42.27	-1.39	54.0	11.73	AV	360.00	400	Vertical	Pass
6	16312.912	53.83	-0.21	74.0	20.17	Peak	360.00	100	Vertical	Pass
6**	16312.912	43.36	-0.21	54.0	10.64	AV	360.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.200	45.16	-16.71	74.0	28.84	Peak	221.00	300	Horizontal	Pass
1**	1332.200	33.45	-16.71	54.0	20.55	AV	221.00	300	Horizontal	Pass
2	2461.800	107.81	-9.74	--	--	Peak	149.00	100	Horizontal	N/A
2**	2461.800	101.37	-9.74	--	--	AV	149.00	100	Horizontal	N/A
3	4946.500	49.96	-2.27	74.0	24.04	Peak	360.00	100	Horizontal	Pass
3**	4946.500	42.03	-2.27	54.0	11.97	AV	360.00	100	Horizontal	Pass
4	7495.750	53.63	1.24	74.0	20.37	Peak	360.00	300	Horizontal	Pass
4**	7495.750	43.86	1.24	54.0	10.14	AV	360.00	300	Horizontal	Pass
5	10819.363	51.55	-2.56	74.0	22.45	Peak	335.00	100	Horizontal	Pass
5**	10819.363	42.17	-2.56	54.0	11.83	AV	335.00	100	Horizontal	Pass
6	15768.487	52.46	-0.13	74.0	21.54	Peak	166.00	400	Horizontal	Pass
6**	15768.487	43.99	-0.13	54.0	10.01	AV	166.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802. 11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.400	44.46	-16.67	74.0	29.54	Peak	260.00	100	Vertical	Pass
1**	1329.400	32.50	-16.67	54.0	21.50	AV	260.00	100	Vertical	Pass
2	2462.000	103.25	-9.74	--	--	Peak	125.00	100	Vertical	N/A
2**	2462.000	96.32	-9.74	--	--	AV	125.00	100	Vertical	N/A
3	4773.250	50.48	-2.50	74.0	23.52	Peak	16.00	150	Vertical	Pass
3**	4773.250	41.19	-2.50	54.0	12.81	AV	16.00	150	Vertical	Pass
4	7905.250	53.55	2.35	74.0	20.45	Peak	360.00	150	Vertical	Pass
4**	7905.250	44.59	2.35	54.0	9.41	AV	360.00	150	Vertical	Pass
5	11123.363	51.92	-0.98	74.0	22.08	Peak	275.00	400	Vertical	Pass
5**	11123.363	42.33	-0.98	54.0	11.67	AV	275.00	400	Vertical	Pass
6	16349.400	54.26	0.83	74.0	19.74	Peak	360.00	100	Vertical	Pass
6**	16349.400	45.39	0.83	54.0	8.61	AV	360.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.500	44.42	-16.67	74.0	29.58	Peak	187.00	100	Horizontal	Pass
1**	1330.500	36.15	-16.67	54.0	17.85	AV	187.00	100	Horizontal	Pass
2	2431.500	105.68	-9.07	--	--	Peak	239.00	150	Horizontal	N/A
2**	2431.500	97.68	-9.07	--	--	AV	239.00	150	Horizontal	N/A
3	4736.250	49.88	-3.11	74.0	24.12	Peak	316.00	200	Horizontal	Pass
3**	4736.250	40.48	-3.11	54.0	13.52	AV	316.00	200	Horizontal	Pass
4	7935.750	53.82	2.23	74.0	20.18	Peak	83.00	150	Horizontal	Pass
4**	7935.750	43.82	2.23	54.0	10.18	AV	83.00	150	Horizontal	Pass
5	11134.050	51.58	-0.97	74.0	22.42	Peak	360.00	200	Horizontal	Pass
5**	11134.050	43.33	-0.97	54.0	10.67	AV	360.00	200	Horizontal	Pass
6	16349.400	52.56	0.83	74.0	21.44	Peak	360.00	300	Horizontal	Pass
6**	16349.400	43.09	0.83	54.0	10.91	AV	360.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.700	43.74	-16.67	74.0	30.26	Peak	247.00	400	Vertical	Pass
1**	1330.700	32.93	-16.67	54.0	21.07	AV	247.00	400	Vertical	Pass
2	2432.500	99.43	-9.11	--	--	Peak	128.00	150	Vertical	N/A
2**	2432.500	91.99	-9.11	--	--	AV	128.00	150	Vertical	N/A
3	4702.750	50.05	-2.68	74.0	23.95	Peak	360.00	200	Vertical	Pass
3**	4702.750	41.02	-2.68	54.0	12.98	AV	360.00	200	Vertical	Pass
4	7840.000	53.38	3.24	74.0	20.62	Peak	234.00	400	Vertical	Pass
4**	7840.000	45.48	3.24	54.0	8.52	AV	234.00	400	Vertical	Pass
5	10710.112	51.88	-2.28	74.0	22.12	Peak	360.00	200	Vertical	Pass
5**	10710.112	42.40	-2.28	54.0	11.60	AV	360.00	200	Vertical	Pass
6	16490.363	52.92	0.38	74.0	21.08	Peak	145.00	300	Vertical	Pass
6**	16490.363	42.79	0.38	54.0	11.21	AV	145.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1477.900	42.29	-16.41	74.0	31.71	Peak	275.00	300	Horizontal	Pass
1**	1477.900	32.40	-16.41	54.0	21.60	AV	275.00	300	Horizontal	Pass
2	2433.800	105.36	-9.07	--	--	Peak	167.00	150	Horizontal	N/A
2**	2433.800	98.00	-9.07	--	--	AV	167.00	150	Horizontal	N/A
3	4739.250	50.01	-2.88	74.0	23.99	Peak	26.00	150	Horizontal	Pass
3**	4739.250	41.84	-2.88	54.0	12.16	AV	26.00	150	Horizontal	Pass
4	7760.750	53.77	1.68	74.0	20.23	Peak	360.00	300	Horizontal	Pass
4**	7760.750	45.06	1.68	54.0	8.94	AV	360.00	300	Horizontal	Pass
5	10584.713	51.74	-1.65	74.0	22.26	Peak	360.00	400	Horizontal	Pass
5**	10584.713	42.30	-1.65	54.0	11.70	AV	360.00	400	Horizontal	Pass
6	16331.288	52.76	0.31	74.0	21.24	Peak	353.00	400	Horizontal	Pass
6**	16331.288	43.66	0.31	54.0	10.34	AV	353.00	400	Horizontal	Pass
1	1477.900	42.29	-16.41	74.0	31.71	Peak	275.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1587.100	43.56	-16.68	74.0	30.44	Peak	338.00	400	Vertical	Pass
1**	1587.100	33.36	-16.68	54.0	20.64	AV	338.00	400	Vertical	Pass
2	2435.600	100.45	-8.95	--	--	Peak	125.00	100	Vertical	N/A
2**	2435.600	92.26	-8.95	--	--	AV	125.00	100	Vertical	N/A
3	4698.250	50.36	-2.81	74.0	23.64	Peak	360.00	150	Vertical	Pass
3**	4698.250	41.08	-2.81	54.0	12.92	AV	360.00	150	Vertical	Pass
4	7922.500	54.10	2.15	74.0	19.90	Peak	355.00	300	Vertical	Pass
4**	7922.500	44.72	2.15	54.0	9.28	AV	355.00	300	Vertical	Pass
5	10843.825	52.05	-1.97	74.0	21.95	Peak	360.00	100	Vertical	Pass
5**	10843.825	41.86	-1.97	54.0	12.14	AV	360.00	100	Vertical	Pass
6	16349.662	52.55	0.84	74.0	21.45	Peak	73.00	100	Vertical	Pass
6**	16349.662	44.71	0.84	54.0	9.29	AV	73.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.100	42.61	-16.67	74.0	31.39	Peak	94.00	300	Horizontal	Pass
1**	1329.100	35.21	-16.67	54.0	18.79	AV	94.00	300	Horizontal	Pass
2	2457.000	104.88	-9.71	--	--	Peak	174.00	150	Horizontal	N/A
2**	2457.000	97.02	-9.71	--	--	AV	174.00	150	Horizontal	N/A
3	4730.250	50.64	-3.01	74.0	23.36	Peak	360.00	150	Horizontal	Pass
3**	4730.250	40.78	-3.01	54.0	13.22	AV	360.00	150	Horizontal	Pass
4	7850.500	54.26	2.44	74.0	19.74	Peak	47.00	100	Horizontal	Pass
4**	7850.500	44.71	2.44	54.0	9.29	AV	47.00	100	Horizontal	Pass
5	11131.912	51.99	-0.97	74.0	22.01	Peak	360.00	200	Horizontal	Pass
5**	11131.912	42.00	-0.97	54.0	12.00	AV	360.00	200	Horizontal	Pass
6	16343.888	52.31	0.67	74.0	21.69	Peak	215.00	100	Horizontal	Pass
6**	16343.888	43.63	0.67	54.0	10.37	AV	215.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.000	44.40	-16.67	74.0	29.60	Peak	247.00	200	Vertical	Pass
1**	1329.000	32.69	-16.67	54.0	21.31	AV	247.00	200	Vertical	Pass
2	2454.300	100.15	-10.10	--	--	Peak	123.00	150	Vertical	N/A
2**	2454.300	92.83	-10.10	--	--	AV	123.00	150	Vertical	N/A
3	4759.500	50.59	-2.68	74.0	23.41	Peak	13.00	150	Vertical	Pass
3**	4759.500	41.23	-2.68	54.0	12.77	AV	13.00	150	Vertical	Pass
4	7744.500	54.14	1.21	74.0	19.86	Peak	353.00	400	Vertical	Pass
4**	7744.500	44.31	1.21	54.0	9.69	AV	353.00	400	Vertical	Pass
5	11124.312	51.55	-0.98	74.0	22.45	Peak	215.00	100	Vertical	Pass
5**	11124.312	41.81	-0.98	54.0	12.19	AV	215.00	100	Vertical	Pass
6	16466.475	53.27	0.47	74.0	20.73	Peak	360.00	200	Vertical	Pass
6**	16466.475	42.61	0.47	54.0	11.39	AV	360.00	200	Vertical	Pass

MIMO

1 GHz to 18 GHz, ANT H 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1573.700	43.42	-16.51	74.0	30.58	Peak	289.00	100	Horizontal	Pass
1**	1573.700	33.38	-16.51	54.0	20.62	AV	289.00	100	Horizontal	Pass
2	2408.900	109.51	-10.07	--	--	Peak	45.00	200	Horizontal	N/A
2**	2408.900	103.45	-10.07	--	--	AV	45.00	200	Horizontal	N/A
3	4688.750	50.27	-3.19	74.0	23.73	Peak	3.00	150	Horizontal	Pass
3**	4688.750	40.56	-3.19	54.0	13.44	AV	3.00	150	Horizontal	Pass
4	7838.250	54.39	3.45	74.0	19.61	Peak	316.00	100	Horizontal	Pass
4**	7838.250	44.80	3.45	54.0	9.20	AV	316.00	100	Horizontal	Pass
5	11133.575	51.85	-0.97	74.0	22.15	Peak	314.00	400	Horizontal	Pass
5**	11133.575	42.69	-0.97	54.0	11.31	AV	314.00	400	Horizontal	Pass
6	16788.824	52.74	0.76	74.0	21.26	Peak	236.00	100	Horizontal	Pass
6**	16788.824	43.01	0.76	54.0	10.99	AV	236.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.800	43.65	-16.70	74.0	30.35	Peak	42.00	300	Vertical	Pass
1**	1331.800	33.94	-16.70	54.0	20.06	AV	42.00	300	Vertical	Pass
2	2410.500	105.41	-10.03	--	--	Peak	252.00	150	Vertical	N/A
2**	2410.500	98.09	-10.03	--	--	AV	252.00	150	Vertical	N/A
3	4766.000	50.59	-2.53	74.0	23.41	Peak	360.00	200	Vertical	Pass
3**	4766.000	42.01	-2.53	54.0	11.99	AV	360.00	200	Vertical	Pass
4	7818.750	53.98	2.90	74.0	20.02	Peak	177.00	300	Vertical	Pass
4**	7818.750	46.47	2.90	54.0	7.53	AV	177.00	300	Vertical	Pass
5	11131.437	52.35	-0.97	74.0	21.65	Peak	360.00	100	Vertical	Pass
5**	11131.437	42.62	-0.97	54.0	11.38	AV	360.00	100	Vertical	Pass
6	16306.875	53.64	-0.38	74.0	20.36	Peak	360.00	100	Vertical	Pass
6**	16306.875	42.41	-0.38	54.0	11.59	AV	360.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.200	42.63	-16.66	74.0	31.37	Peak	219.00	200	Horizontal	Pass
1**	1330.200	32.78	-16.66	54.0	21.22	AV	219.00	200	Horizontal	Pass
2	2435.400	110.10	-8.92	--	--	Peak	169.00	200	Horizontal	N/A
2**	2435.400	102.90	-8.92	--	--	AV	169.00	200	Horizontal	N/A
3	4732.500	50.59	-2.87	74.0	23.41	Peak	360.00	100	Horizontal	Pass
3**	4732.500	41.22	-2.87	54.0	12.78	AV	360.00	100	Horizontal	Pass
4	7849.500	54.36	2.49	74.0	19.64	Peak	117.00	100	Horizontal	Pass
4**	7849.500	45.42	2.49	54.0	8.58	AV	117.00	100	Horizontal	Pass
5	10215.638	51.33	-2.28	74.0	22.67	Peak	104.00	200	Horizontal	Pass
5**	10215.638	42.25	-2.28	54.0	11.75	AV	104.00	200	Horizontal	Pass
6	16334.701	52.97	0.41	74.0	21.03	Peak	327.00	300	Horizontal	Pass
6**	16334.701	44.16	0.41	54.0	9.84	AV	327.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.300	44.00	-16.66	74.0	30.00	Peak	37.00	200	Vertical	Pass
1**	1330.300	33.17	-16.66	54.0	20.83	AV	37.00	200	Vertical	Pass
2	2432.500	104.17	-9.11	--	--	Peak	255.00	150	Vertical	N/A
2**	2432.500	96.79	-9.11	--	--	AV	255.00	150	Vertical	N/A
3	4712.750	50.21	-2.78	74.0	23.79	Peak	360.00	150	Vertical	Pass
3**	4712.750	41.36	-2.78	54.0	12.64	AV	360.00	150	Vertical	Pass
4	7837.000	54.04	3.63	74.0	19.96	Peak	247.00	100	Vertical	Pass
4**	7837.000	45.02	3.63	54.0	8.98	AV	247.00	100	Vertical	Pass
5	11122.413	51.54	-0.98	74.0	22.46	Peak	80.00	400	Vertical	Pass
5**	11122.413	43.17	-0.98	54.0	10.83	AV	80.00	400	Vertical	Pass
6	16343.099	53.61	0.65	74.0	20.39	Peak	164.00	100	Vertical	Pass
6**	16343.099	43.64	0.65	54.0	10.36	AV	164.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.400	44.79	-16.67	74.0	29.21	Peak	250.00	200	Horizontal	Pass
1**	1328.400	32.83	-16.67	54.0	21.17	AV	250.00	200	Horizontal	Pass
2	2465.100	109.14	-9.80	--	--	Peak	156.00	150	Horizontal	N/A
2**	2465.100	101.94	-9.80	--	--	AV	156.00	150	Horizontal	N/A
3	4721.750	50.07	-2.78	74.0	23.93	Peak	44.00	100	Horizontal	Pass
3**	4721.750	41.75	-2.78	54.0	12.25	AV	44.00	100	Horizontal	Pass
4	7903.000	54.74	2.36	74.0	19.26	Peak	360.00	300	Horizontal	Pass
4**	7903.000	45.00	2.36	54.0	9.00	AV	360.00	300	Horizontal	Pass
5	11130.250	51.89	-0.97	74.0	22.11	Peak	301.00	200	Horizontal	Pass
5**	11130.250	42.33	-0.97	54.0	11.67	AV	301.00	200	Horizontal	Pass
6	16497.188	52.61	0.36	74.0	21.39	Peak	360.00	100	Horizontal	Pass
6**	16497.188	43.64	0.36	54.0	10.36	AV	360.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.200	43.98	-16.68	74.0	30.02	Peak	262.00	300	Vertical	Pass
1**	1328.200	35.72	-16.68	54.0	18.28	AV	262.00	300	Vertical	Pass
2	2463.300	104.01	-9.75	--	--	Peak	247.00	100	Vertical	N/A
2**	2463.300	96.32	-9.75	--	--	AV	247.00	100	Vertical	N/A
3	4783.750	50.35	-2.60	74.0	23.65	Peak	239.00	100	Vertical	Pass
3**	4783.750	40.88	-2.60	54.0	13.12	AV	239.00	100	Vertical	Pass
4	7768.500	54.13	1.71	74.0	19.87	Peak	360.00	200	Vertical	Pass
4**	7768.500	45.28	1.71	54.0	8.72	AV	360.00	200	Vertical	Pass
5	11135.950	51.44	-0.97	74.0	22.56	Peak	353.00	300	Vertical	Pass
5**	11135.950	43.05	-0.97	54.0	10.95	AV	353.00	300	Vertical	Pass
6	17011.425	52.91	0.19	74.0	21.09	Peak	220.00	300	Vertical	Pass
6**	17011.425	42.95	0.19	54.0	11.05	AV	220.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.700	42.99	-16.67	74.0	31.01	Peak	187.00	200	Horizontal	Pass
1**	1330.700	32.57	-16.67	54.0	21.43	AV	187.00	200	Horizontal	Pass
2	2411.100	105.65	-9.98	--	--	Peak	50.00	100	Horizontal	N/A
2**	2411.100	98.27	-9.98	--	--	AV	50.00	100	Horizontal	N/A
3	4742.250	51.53	-3.09	74.0	22.47	Peak	348.00	100	Horizontal	Pass
3**	4742.250	40.62	-3.09	54.0	13.38	AV	348.00	100	Horizontal	Pass
4	7935.750	54.07	2.23	74.0	19.93	Peak	257.00	100	Horizontal	Pass
4**	7935.750	44.68	2.23	54.0	9.32	AV	257.00	100	Horizontal	Pass
5	11134.287	51.60	-0.97	74.0	22.40	Peak	298.00	200	Horizontal	Pass
5**	11134.287	43.01	-0.97	54.0	10.99	AV	298.00	200	Horizontal	Pass
6	16311.075	52.48	-0.26	74.0	21.52	Peak	112.00	100	Horizontal	Pass
6**	16311.075	44.13	-0.26	54.0	9.87	AV	112.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Low Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1245.300	42.73	-16.83	74.0	31.27	Peak	146.00	300	Vertical	Pass
1**	1245.300	31.85	-16.83	54.0	22.15	AV	146.00	300	Vertical	Pass
2	2413.600	99.18	-10.05	--	--	Peak	252.00	100	Vertical	N/A
2**	2413.600	91.88	-10.05	--	--	AV	252.00	100	Vertical	N/A
3	4809.250	50.08	-2.63	74.0	23.92	Peak	138.00	200	Vertical	Pass
3**	4809.250	41.45	-2.63	54.0	12.55	AV	138.00	200	Vertical	Pass
4	7912.750	53.91	1.82	74.0	20.09	Peak	112.00	100	Vertical	Pass
4**	7912.750	44.82	1.82	54.0	9.18	AV	112.00	100	Vertical	Pass
5	11126.450	51.87	-0.98	74.0	22.13	Peak	192.00	100	Vertical	Pass
5**	11126.450	42.81	-0.98	54.0	11.19	AV	192.00	100	Vertical	Pass
6	16317.901	52.73	-0.07	74.0	21.27	Peak	275.00	200	Vertical	Pass
6**	16317.901	43.56	-0.07	54.0	10.44	AV	275.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1326.700	42.85	-16.82	74.0	31.15	Peak	99.00	200	Horizontal	Pass
1**	1326.700	32.14	-16.82	54.0	21.86	AV	99.00	200	Horizontal	Pass
2	2435.800	107.13	-8.98	--	--	Peak	50.00	150	Horizontal	N/A
2**	2435.800	99.90	-8.98	--	--	AV	50.00	150	Horizontal	N/A
3	4907.750	50.19	-2.58	74.0	23.81	Peak	360.00	150	Horizontal	Pass
3**	4907.750	41.08	-2.58	54.0	12.92	AV	360.00	150	Horizontal	Pass
4	7762.000	53.63	1.66	74.0	20.37	Peak	220.00	100	Horizontal	Pass
4**	7762.000	44.36	1.66	54.0	9.64	AV	220.00	100	Horizontal	Pass
5	10811.288	51.20	-2.75	74.0	22.80	Peak	335.00	200	Horizontal	Pass
5**	10811.288	42.46	-2.75	54.0	11.54	AV	335.00	200	Horizontal	Pass
6	15748.537	53.50	0.35	74.0	20.50	Peak	112.00	100	Horizontal	Pass
6**	15748.537	43.17	0.35	54.0	10.83	AV	112.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Middle Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1536.600	42.51	-16.52	74.0	31.49	Peak	8.00	200	Vertical	Pass
1**	1536.600	32.75	-16.52	54.0	21.25	AV	8.00	200	Vertical	Pass
2	2430.100	101.36	-9.26	--	--	Peak	252.00	150	Vertical	N/A
2**	2430.100	94.10	-9.26	--	--	AV	252.00	150	Vertical	N/A
3	4909.250	50.44	-2.63	74.0	23.56	Peak	353.00	100	Vertical	Pass
3**	4909.250	40.34	-2.63	54.0	13.66	AV	353.00	100	Vertical	Pass
4	7911.500	53.94	1.82	74.0	20.06	Peak	360.00	300	Vertical	Pass
4**	7911.500	44.75	1.82	54.0	9.25	AV	360.00	300	Vertical	Pass
5	11145.450	52.39	-0.95	74.0	21.61	Peak	210.00	100	Vertical	Pass
5**	11145.450	42.18	-0.95	54.0	11.82	AV	210.00	100	Vertical	Pass
6	15772.951	53.06	-0.25	74.0	20.94	Peak	360.00	400	Vertical	Pass
6**	15772.951	43.34	-0.25	54.0	10.66	AV	360.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.500	44.05	-16.69	74.0	29.95	Peak	255.00	100	Horizontal	Pass
1**	1331.500	33.18	-16.69	54.0	20.82	AV	255.00	100	Horizontal	Pass
2	2456.200	105.10	-9.78	--	--	Peak	151.00	150	Horizontal	N/A
2**	2456.200	97.61	-9.78	--	--	AV	151.00	150	Horizontal	N/A
3	4772.250	50.45	-2.50	74.0	23.55	Peak	288.00	150	Horizontal	Pass
3**	4772.250	41.17	-2.50	54.0	12.83	AV	288.00	150	Horizontal	Pass
4	7843.000	53.95	2.99	74.0	20.05	Peak	39.00	200	Horizontal	Pass
4**	7843.000	44.41	2.99	54.0	9.59	AV	39.00	200	Horizontal	Pass
5	10838.362	51.62	-2.10	74.0	22.38	Peak	228.00	300	Horizontal	Pass
5**	10838.362	41.95	-2.10	54.0	12.05	AV	228.00	300	Horizontal	Pass
6	16795.387	52.93	0.99	74.0	21.07	Peak	360.00	100	Horizontal	Pass
6**	16795.387	42.87	0.99	54.0	11.13	AV	360.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 High Channel

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1512.400	42.78	-16.45	74.0	31.22	Peak	304.00	100	Vertical	Pass
1**	1512.400	32.33	-16.45	54.0	21.67	AV	304.00	100	Vertical	Pass
2	2453.900	99.31	-10.06	--	--	Peak	247.00	100	Vertical	N/A
2**	2453.900	92.27	-10.06	--	--	AV	247.00	100	Vertical	N/A
3	4780.750	50.79	-2.64	74.0	23.21	Peak	18.00	200	Vertical	Pass
3**	4780.750	41.21	-2.64	54.0	12.79	AV	18.00	200	Vertical	Pass
4	7929.000	53.71	2.46	74.0	20.29	Peak	161.00	150	Vertical	Pass
4**	7929.000	45.51	2.46	54.0	8.49	AV	161.00	150	Vertical	Pass
5	11144.974	51.60	-0.95	74.0	22.40	Peak	67.00	200	Vertical	Pass
5**	11144.974	41.99	-0.95	54.0	12.01	AV	67.00	200	Vertical	Pass
6	16480.912	52.74	0.42	74.0	21.26	Peak	360.00	100	Vertical	Pass
6**	16480.912	42.84	0.42	54.0	11.16	AV	360.00	100	Vertical	Pass

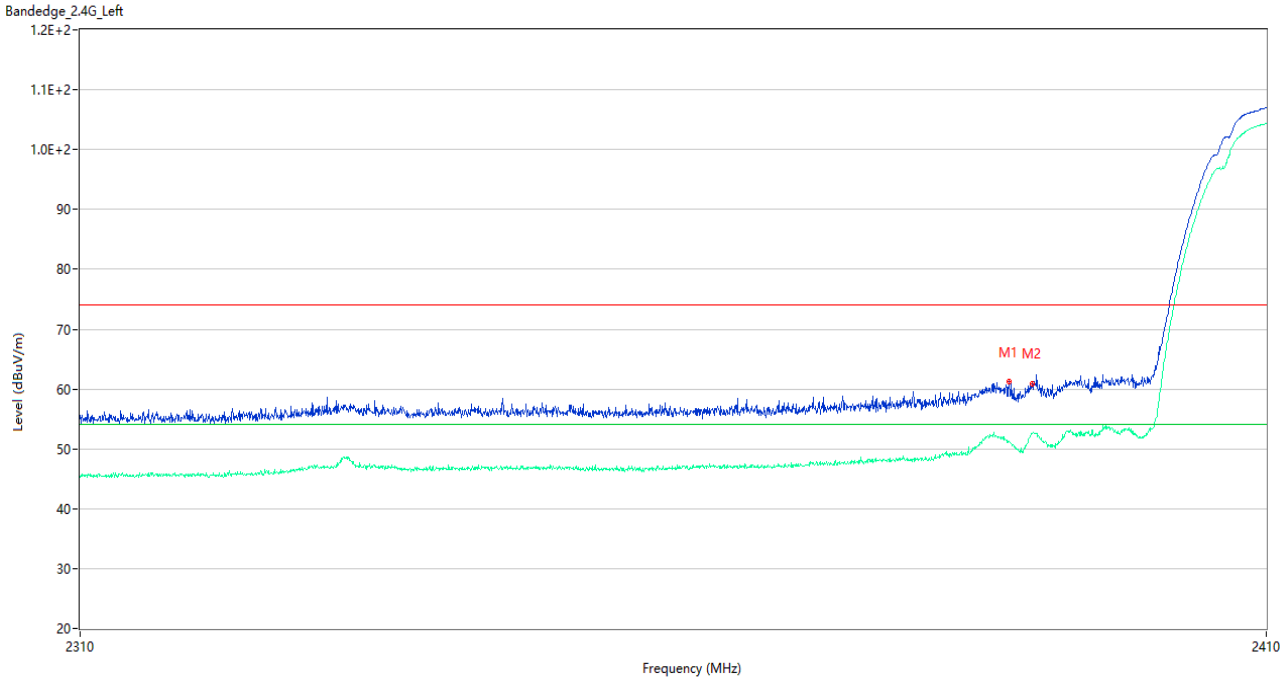
A.7 Band Edge (Restricted-band band-edge)

Note [1]: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.
Note [2]: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.
Note [3]: According the ANSI C63.10-2013, 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 [4]: All the configurations were pre tested, only the worst configuration has been reported in this report.

Test Data and Plots

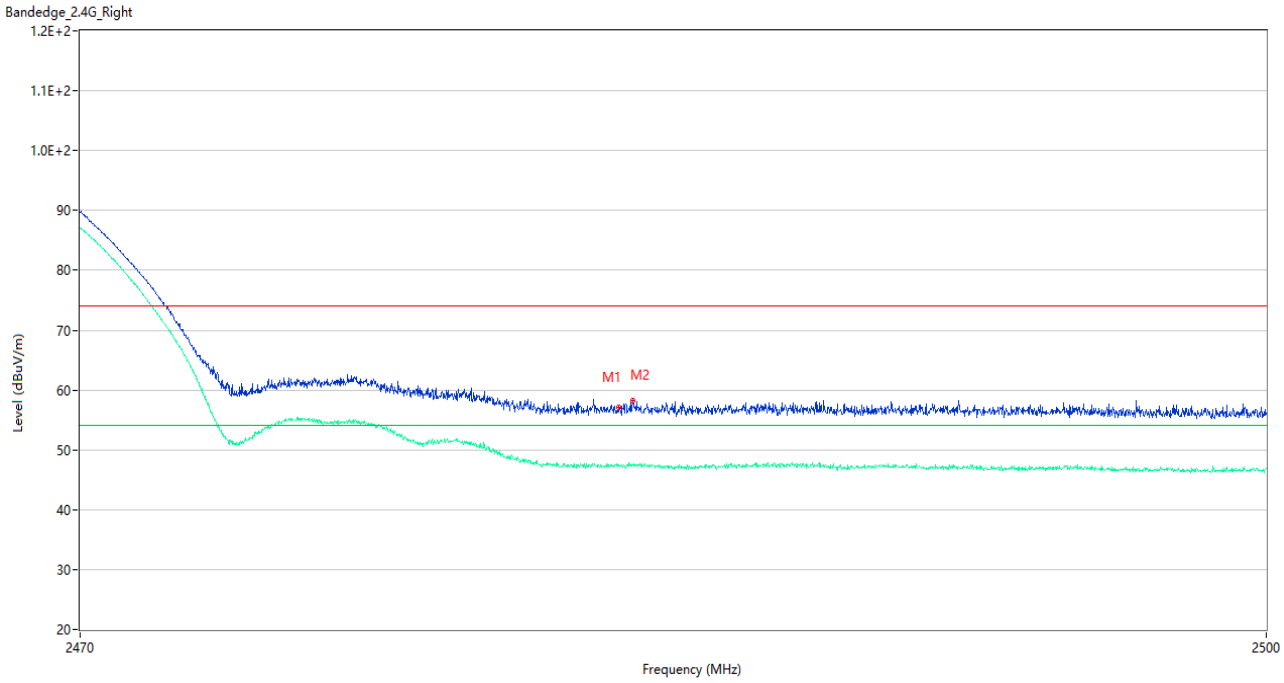
Main Antenna

802.11b LOW CHANNEL



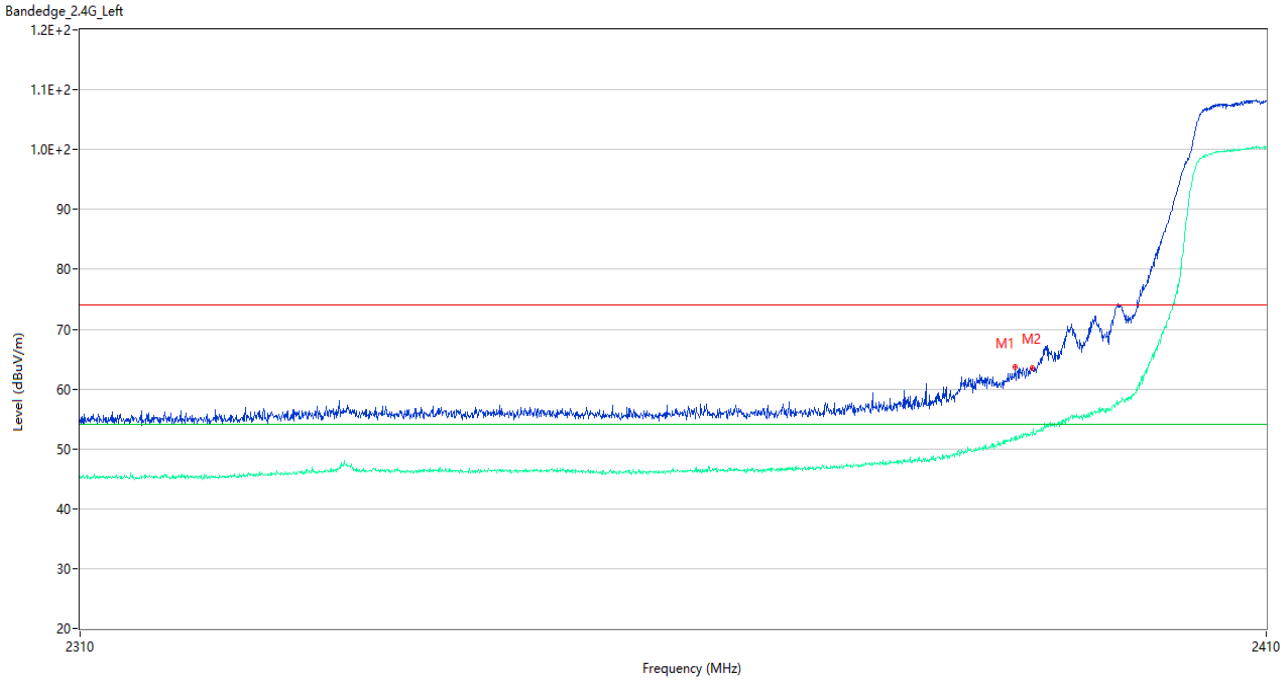
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2387.950	61.16	1.98	74.0	12.84	Peak	54.00	100	Horizontal	Pass
1**	2387.950	51.19	1.98	54.0	2.81	AV	54.00	100	Horizontal	Pass
2	2389.950	60.90	1.86	74.0	13.10	Peak	159.00	200	Horizontal	Pass
2**	2389.950	52.64	1.86	54.0	1.36	AV	159.00	200	Horizontal	Pass

802.11b HIGH CHANNEL



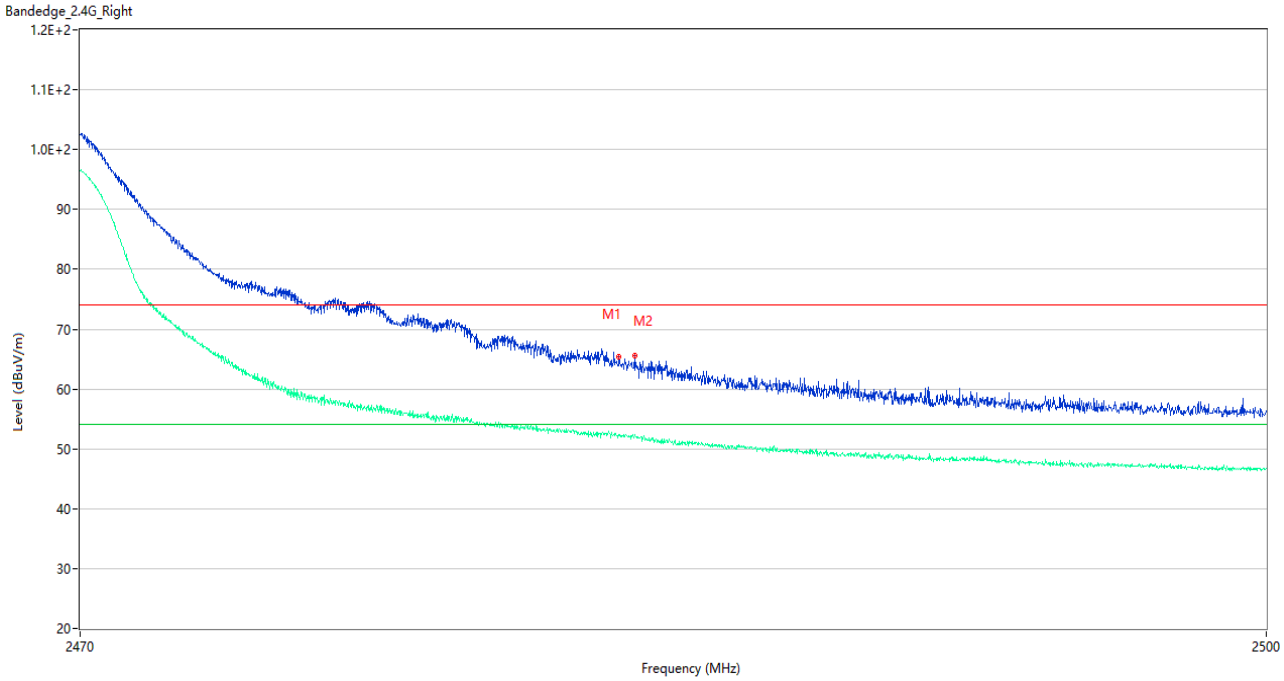
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.575	57.15	1.77	74.0	16.85	Peak	144.00	200	Horizontal	Pass
1**	2483.575	47.52	1.77	54.0	6.48	AV	144.00	200	Horizontal	Pass
2	2483.935	58.30	1.77	74.0	15.70	Peak	323.00	200	Horizontal	Pass
2**	2483.935	47.51	1.77	54.0	6.49	AV	323.00	200	Horizontal	Pass

802.11g LOW CHANNEL



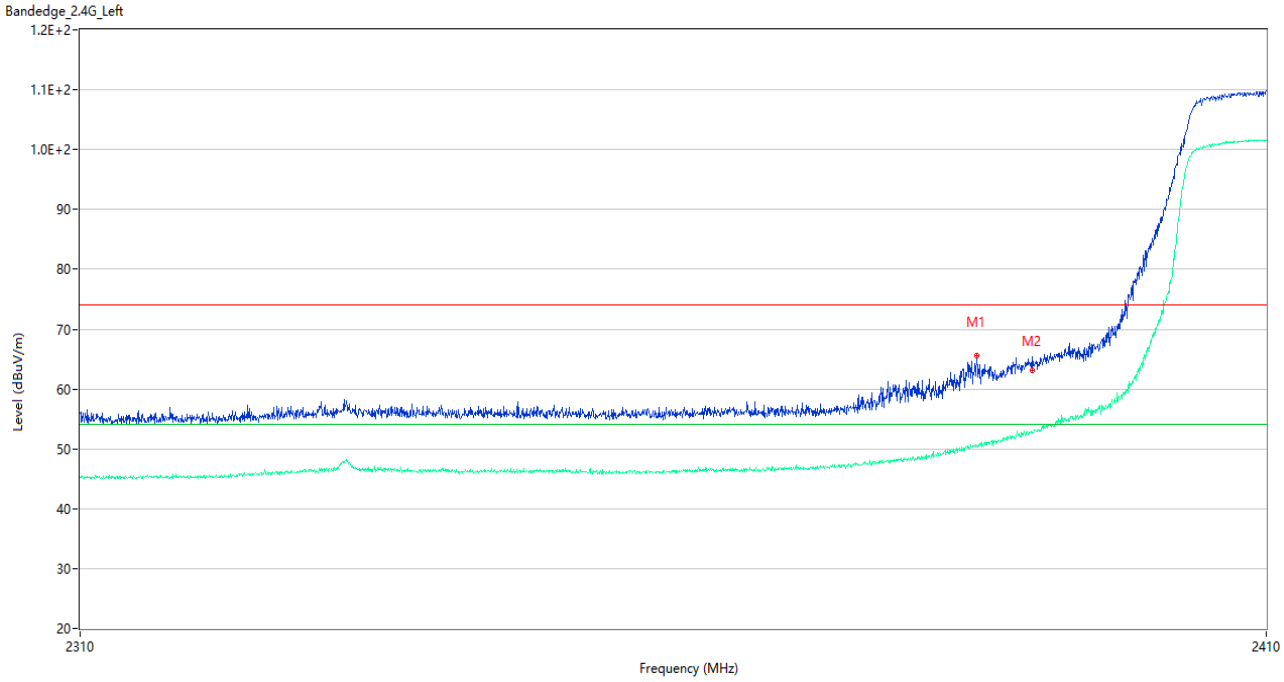
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2388.500	63.78	1.95	74.0	10.22	Peak	59.00	150	Horizontal	Pass
1**	2388.500	51.39	1.95	54.0	2.61	AV	59.00	150	Horizontal	Pass
2	2389.950	63.48	1.86	74.0	10.52	Peak	55.00	200	Horizontal	Pass
2**	2389.950	52.27	1.86	54.0	1.73	AV	55.00	200	Horizontal	Pass

802.11g HIGH CHANNEL



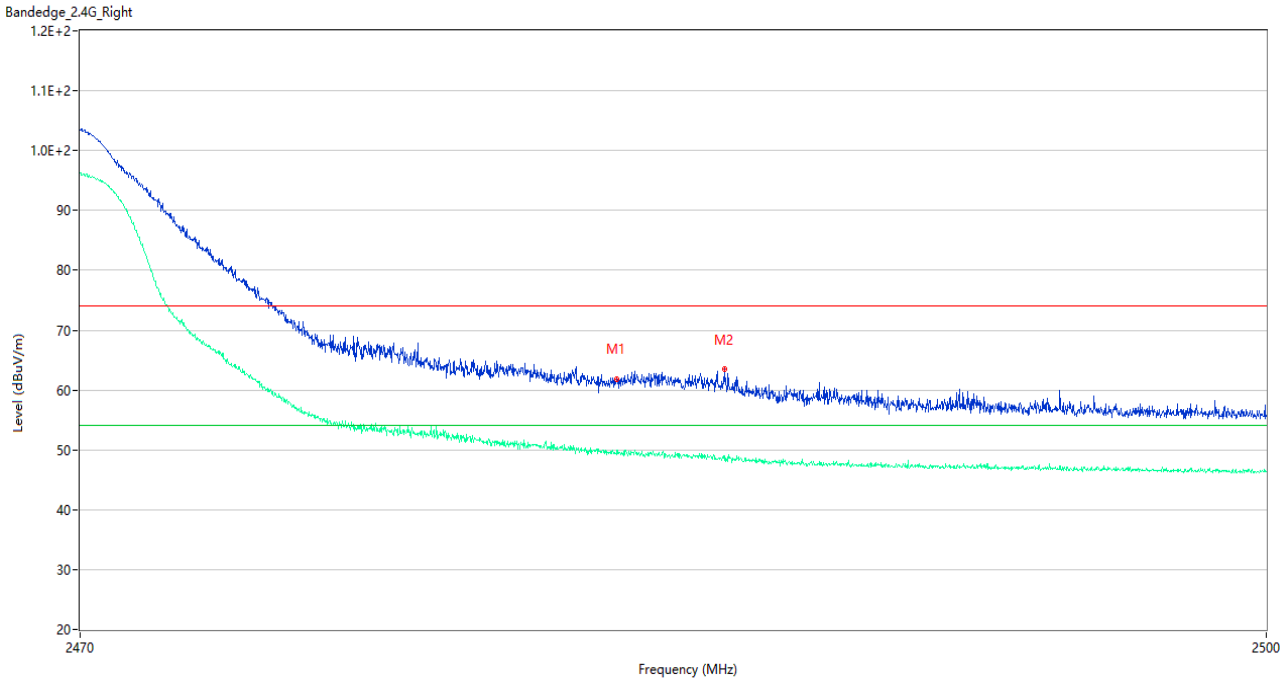
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.590	65.45	1.77	74.0	8.55	Peak	173.00	200	Horizontal	Pass
1**	2483.590	52.31	1.77	54.0	1.69	AV	173.00	200	Horizontal	Pass
2	2483.995	65.48	1.77	74.0	8.52	Peak	173.00	200	Horizontal	Pass
2**	2483.995	52.12	1.77	54.0	1.88	AV	173.00	200	Horizontal	Pass

802.11n20 LOW CHANNEL



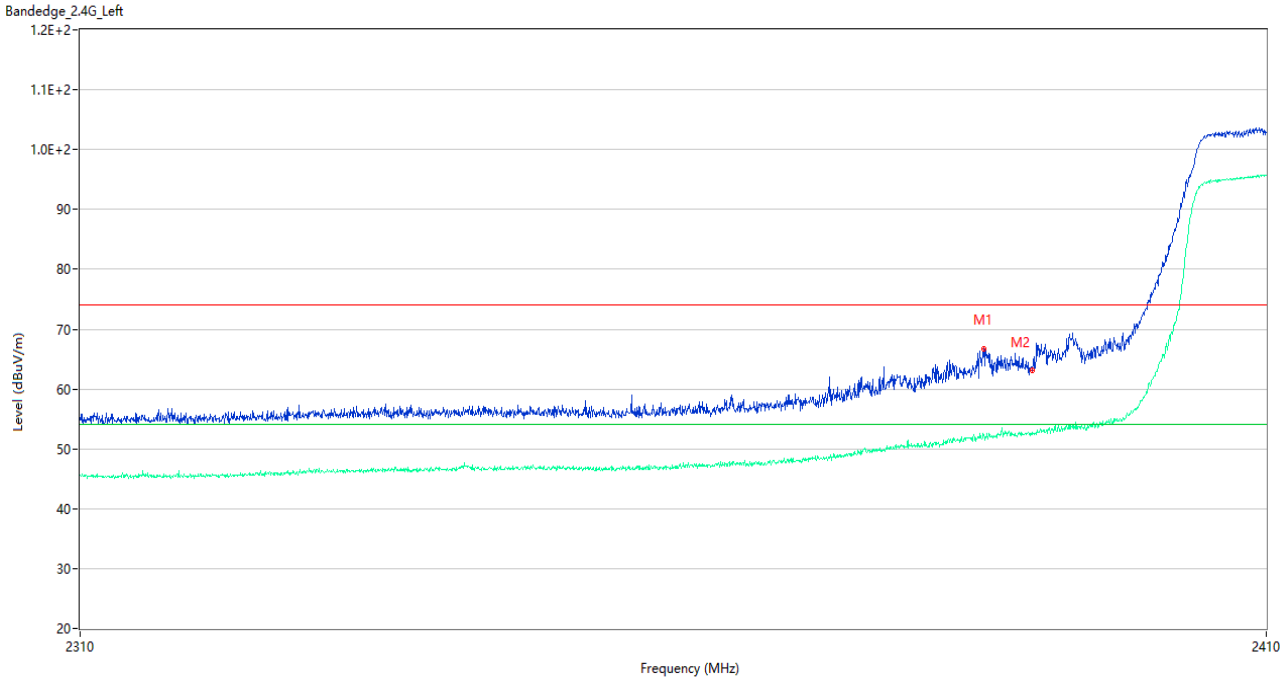
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2385.200	65.57	2.07	74.0	8.43	Peak	19.00	150	Horizontal	Pass
1**	2385.200	50.46	2.07	54.0	3.54	AV	19.00	150	Horizontal	Pass
2	2389.950	63.10	1.86	74.0	10.90	Peak	159.00	200	Horizontal	Pass
2**	2389.950	52.76	1.86	54.0	1.24	AV	159.00	200	Horizontal	Pass

802.11n20 HIGH CHANNEL



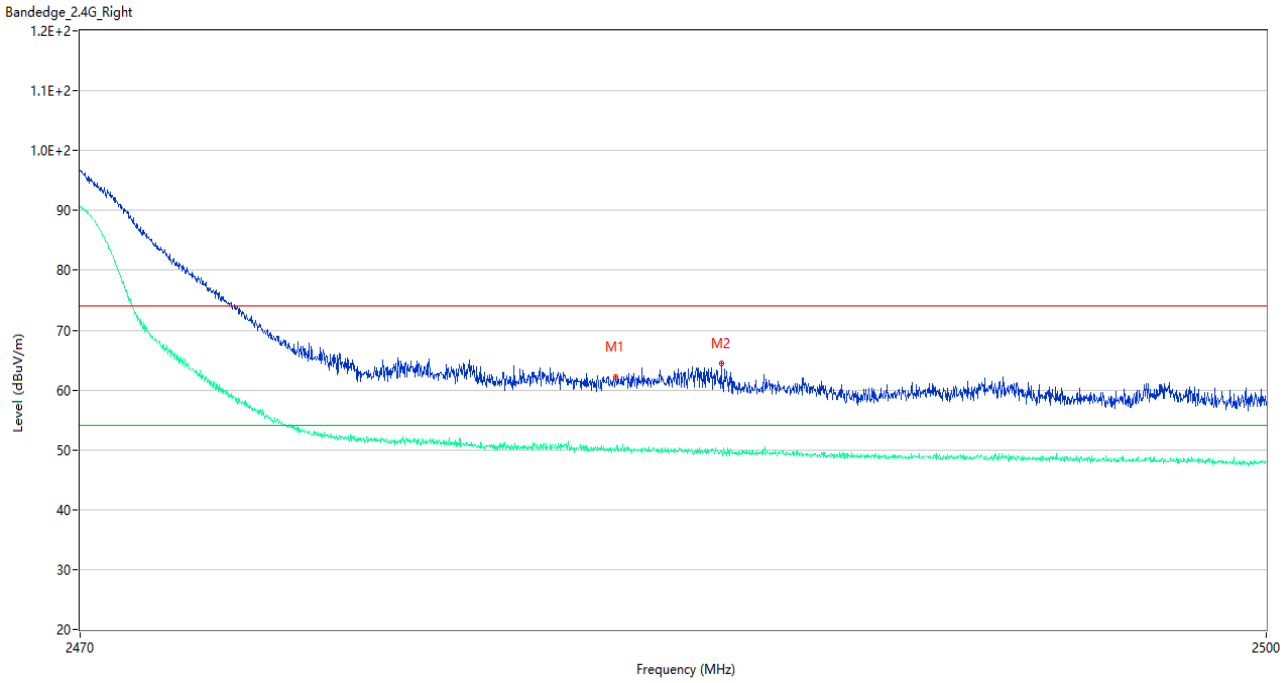
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	61.87	1.77	74.0	12.13	Peak	16.00	200	Horizontal	Pass
1**	2483.515	49.18	1.77	54.0	4.82	AV	16.00	200	Horizontal	Pass
2	2486.245	63.42	1.70	74.0	10.58	Peak	19.00	100	Horizontal	Pass
2**	2486.245	48.25	1.70	54.0	5.75	AV	19.00	100	Horizontal	Pass

802.11n40 LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2385.800	66.63	2.06	74.0	7.37	Peak	59.00	200	Horizontal	Pass
1**	2385.800	52.33	2.06	54.0	1.67	AV	59.00	200	Horizontal	Pass
2	2389.950	63.06	1.86	74.0	10.94	Peak	166.00	150	Horizontal	Pass
2**	2389.950	52.43	1.86	54.0	1.57	AV	166.00	150	Horizontal	Pass

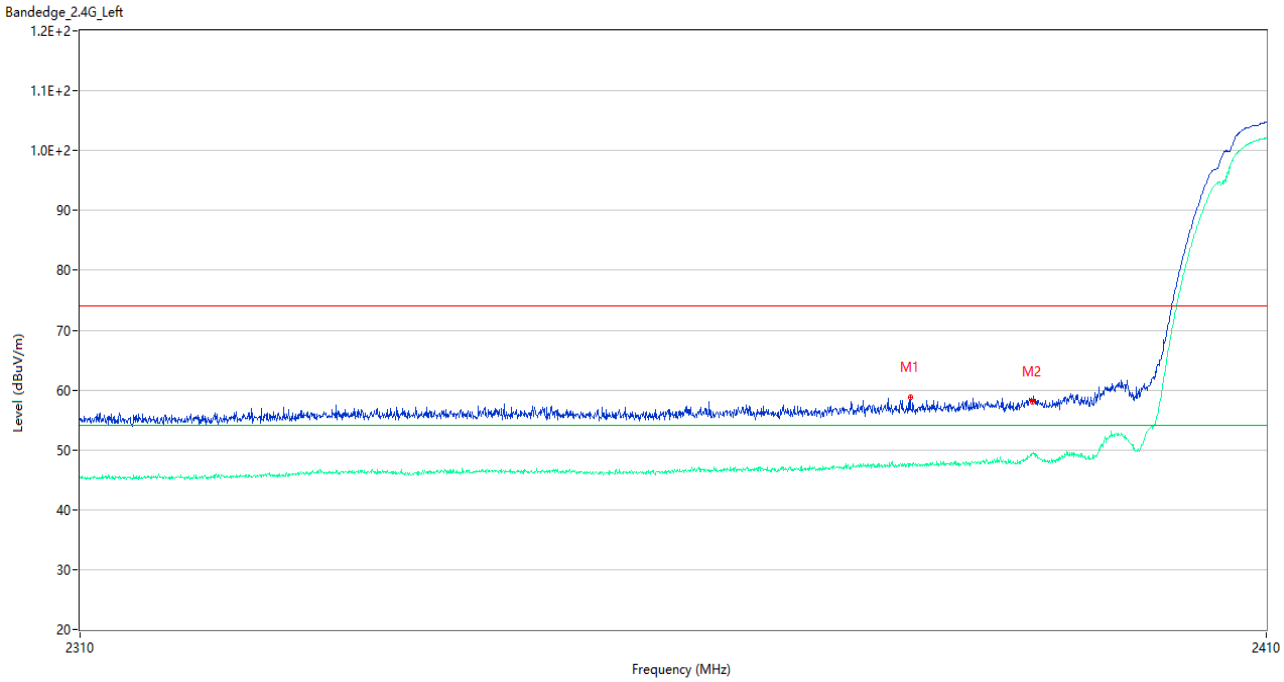
802.11n40 HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	62.25	1.77	74.0	11.75	Peak	18.00	150	Horizontal	Pass
1**	2483.500	49.86	1.77	54.0	4.14	AV	18.00	150	Horizontal	Pass
2	2486.170	64.41	1.70	74.0	9.59	Peak	18.00	100	Horizontal	Pass
2**	2486.170	49.70	1.70	54.0	4.30	AV	18.00	100	Horizontal	Pass

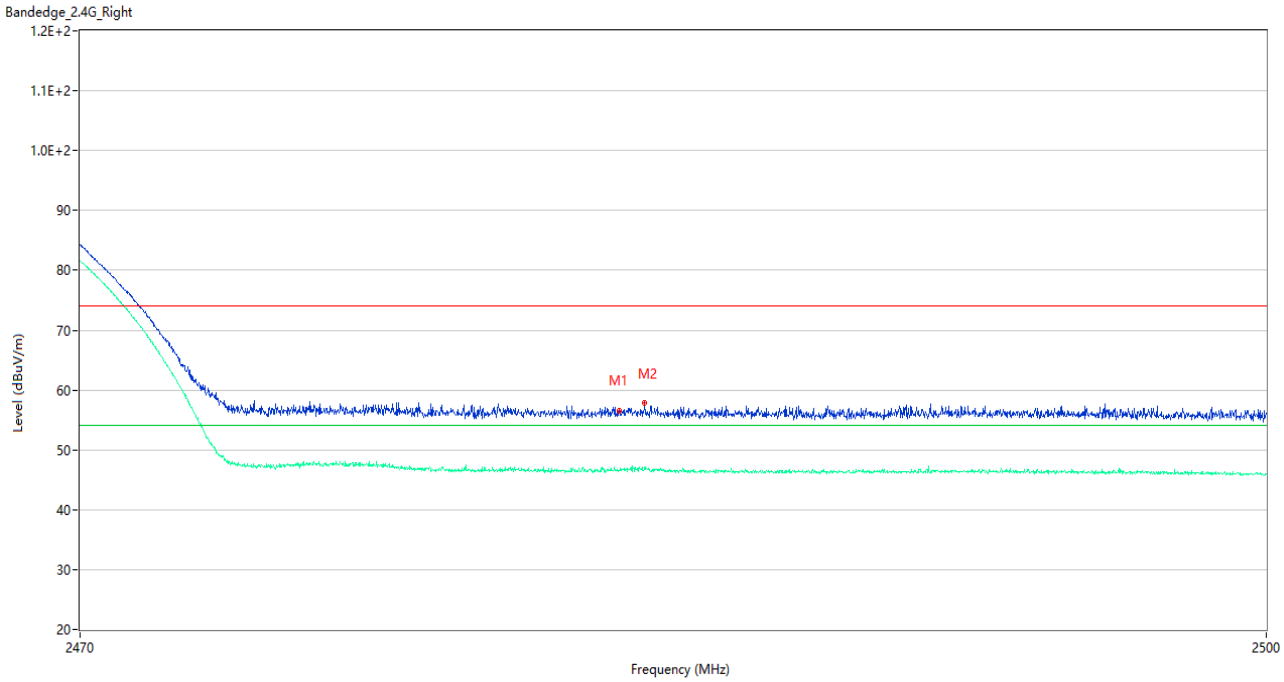
Aux. Antenna

802.11b LOW CHANNEL



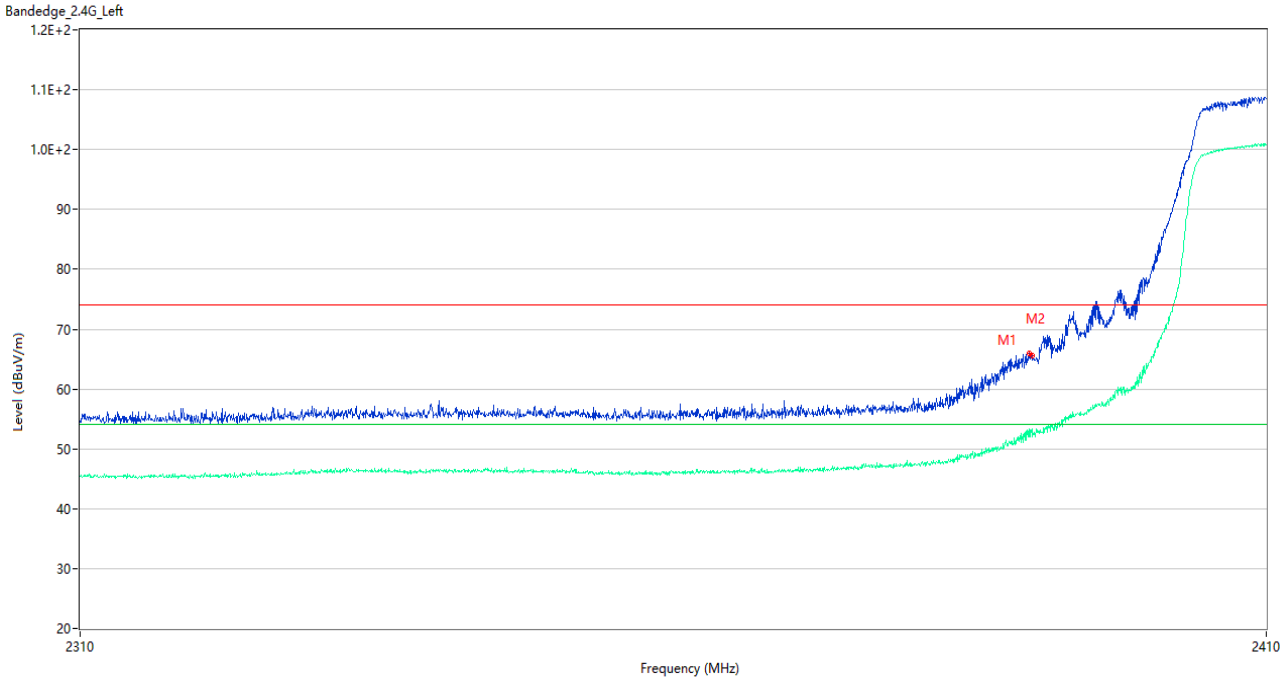
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2379.550	58.84	1.89	74.0	15.16	Peak	157.00	150	Horizontal	Pass
1**	2379.550	47.50	1.89	54.0	6.50	AV	157.00	150	Horizontal	Pass
2	2389.950	58.06	1.86	74.0	15.94	Peak	0.00	100	Horizontal	Pass
2**	2389.950	49.29	1.86	54.0	4.71	AV	0.00	100	Horizontal	Pass

802.11b HIGH CHANNEL



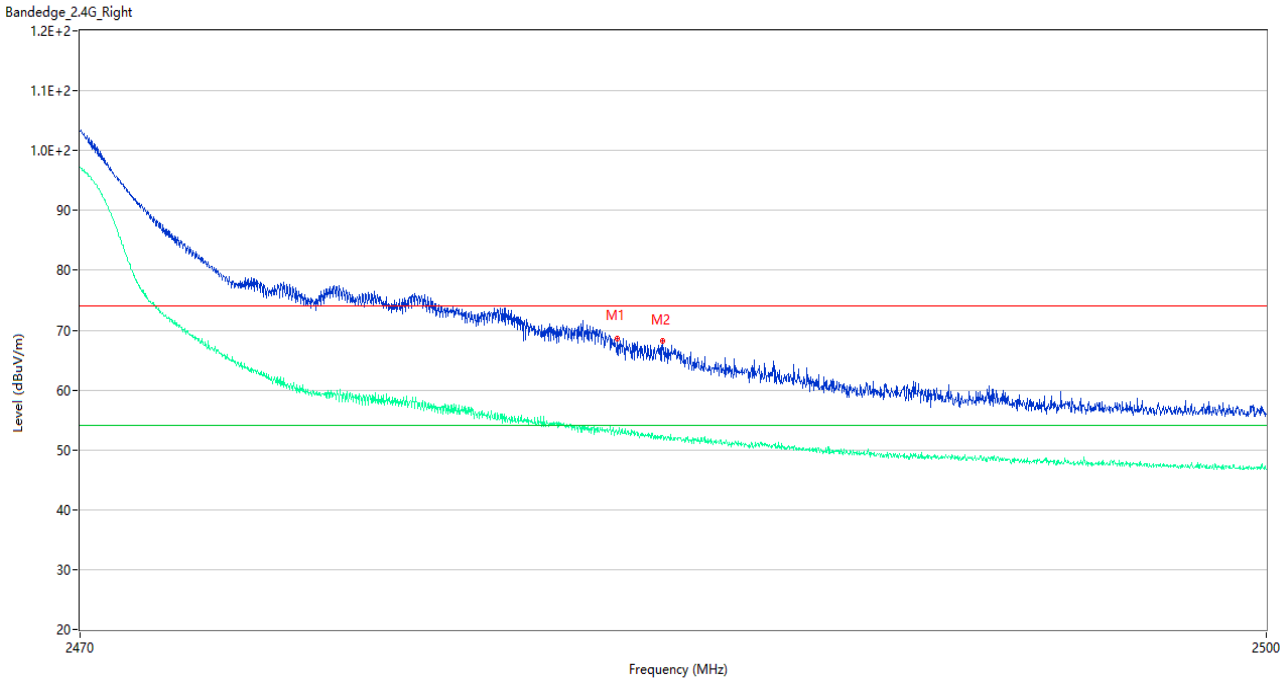
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.590	56.54	1.77	74.0	17.46	Peak	97.00	100	Horizontal	Pass
1**	2483.590	46.50	1.77	54.0	7.50	AV	97.00	100	Horizontal	Pass
2	2484.235	57.81	1.77	74.0	16.19	Peak	145.00	150	Horizontal	Pass
2**	2484.235	47.12	1.77	54.0	6.88	AV	145.00	150	Horizontal	Pass

802.11g LOW CHANNEL



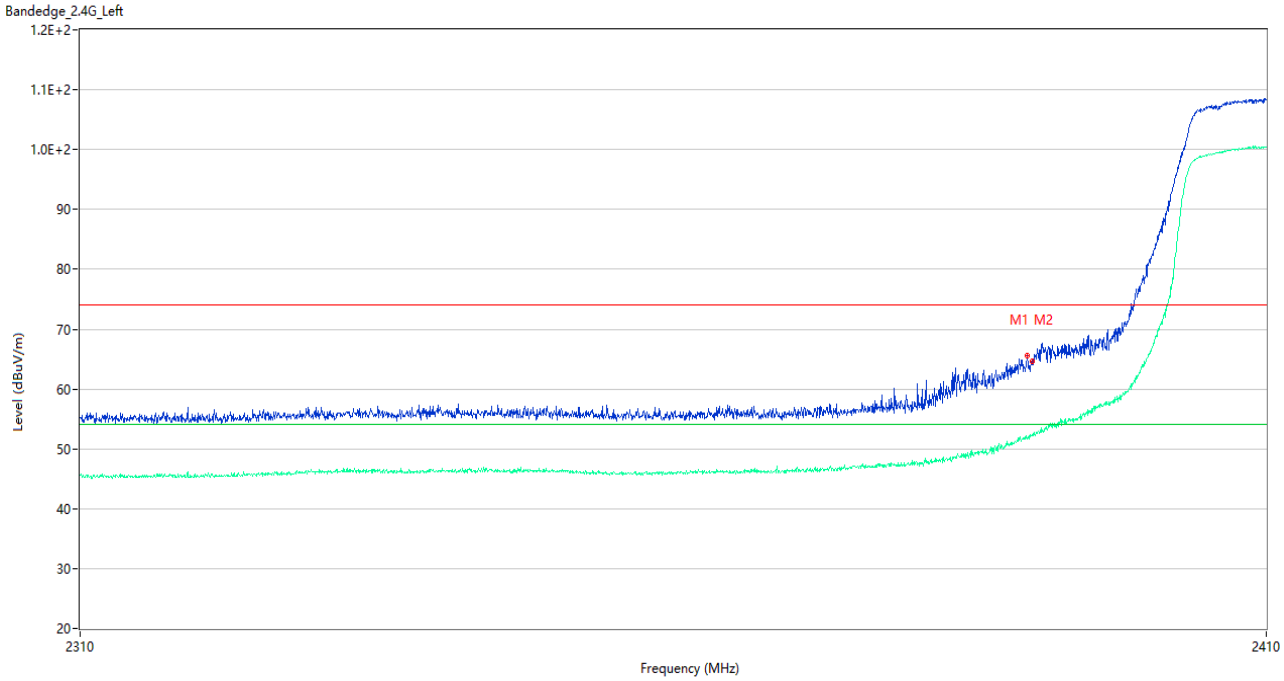
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.700	65.91	1.88	74.0	8.09	Peak	336.00	100	Horizontal	Pass
1**	2389.700	52.03	1.88	54.0	1.97	AV	336.00	100	Horizontal	Pass
2	2389.950	65.49	1.86	74.0	8.51	Peak	324.00	100	Horizontal	Pass
2**	2389.950	51.96	1.86	54.0	2.04	AV	324.00	100	Horizontal	Pass

802.11g HIGH CHANNEL



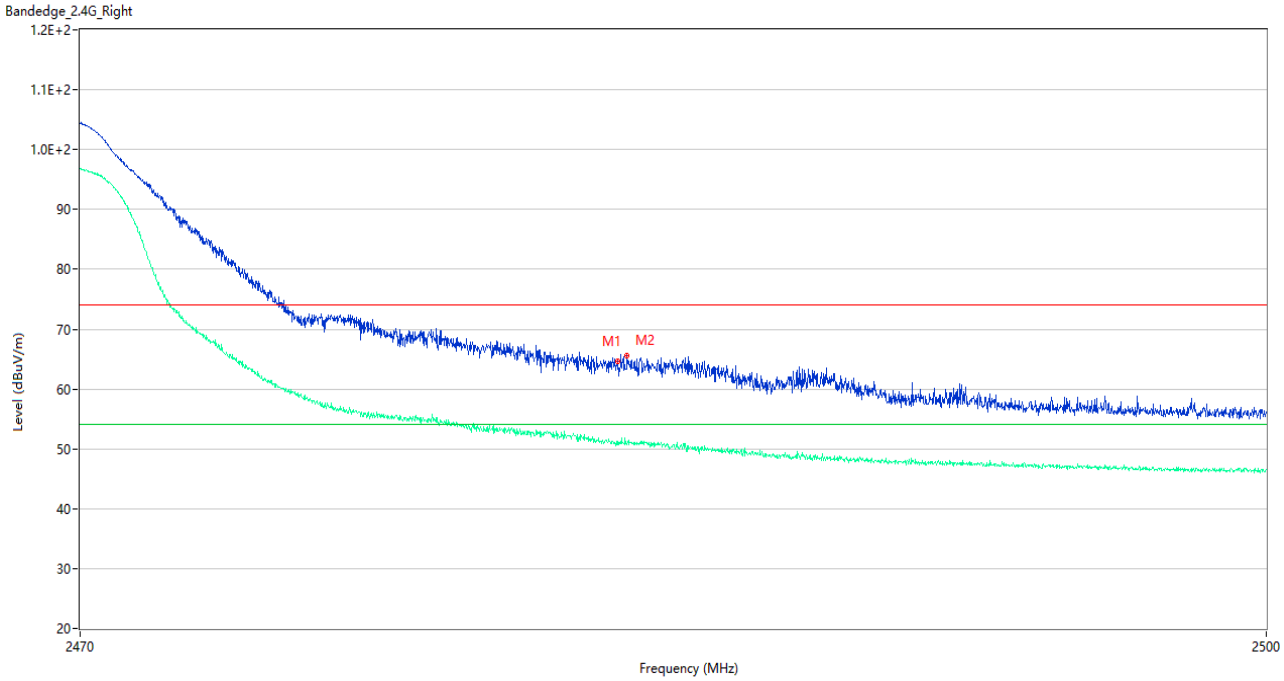
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.545	68.62	1.77	74.0	5.38	Peak	157.00	100	Horizontal	Pass
1**	2483.545	52.54	1.77	54.0	1.46	AV	157.00	100	Horizontal	Pass
2	2484.685	68.20	1.75	74.0	5.80	Peak	157.00	100	Horizontal	Pass
2**	2484.685	52.32	1.75	54.0	1.68	AV	157.00	100	Horizontal	Pass

802.11n20 LOW CHANNEL



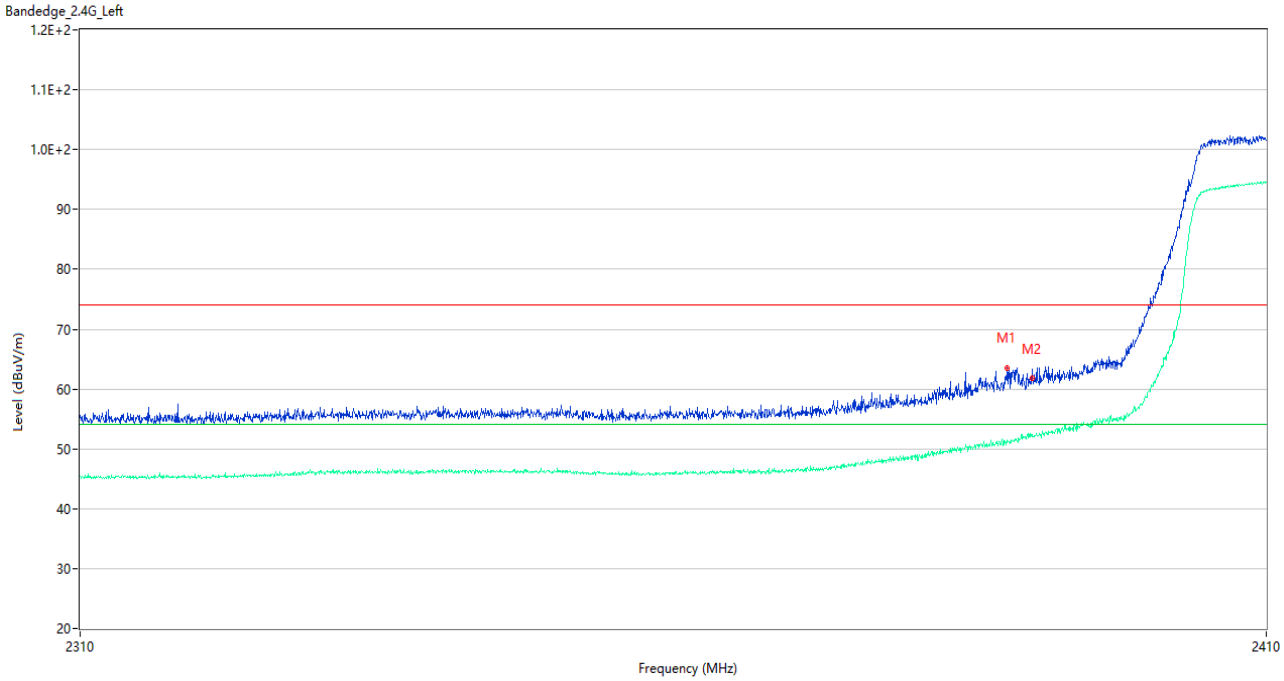
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.500	65.59	1.89	74.0	8.41	Peak	336.00	150	Horizontal	Pass
1**	2389.500	51.73	1.89	54.0	2.27	AV	336.00	150	Horizontal	Pass
2	2389.950	64.71	1.86	74.0	9.29	Peak	332.00	150	Horizontal	Pass
2**	2389.950	52.38	1.86	54.0	1.62	AV	332.00	150	Horizontal	Pass

802.11n20 HIGH CHANNEL



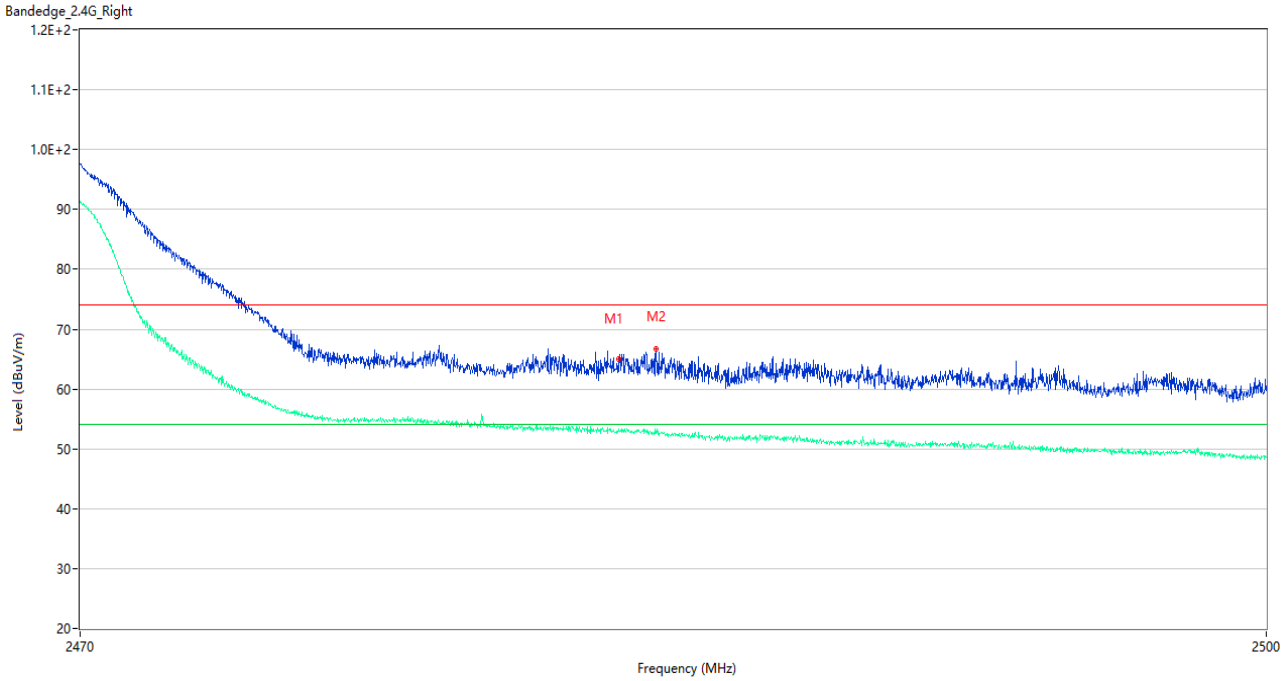
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.545	64.72	1.77	74.0	9.28	Peak	319.00	200	Horizontal	Pass
1**	2483.545	51.30	1.77	54.0	2.70	AV	319.00	200	Horizontal	Pass
2	2483.785	65.64	1.77	74.0	8.36	Peak	320.00	150	Horizontal	Pass
2**	2483.785	50.74	1.77	54.0	3.26	AV	320.00	150	Horizontal	Pass

802.11n40 LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2387.800	63.57	1.99	74.0	10.43	Peak	333.00	100	Horizontal	Pass
1**	2387.800	51.04	1.99	54.0	2.96	AV	333.00	100	Horizontal	Pass
2	2389.950	61.74	1.86	74.0	12.26	Peak	338.00	150	Horizontal	Pass
2**	2389.950	52.47	1.86	54.0	1.53	AV	338.00	150	Horizontal	Pass

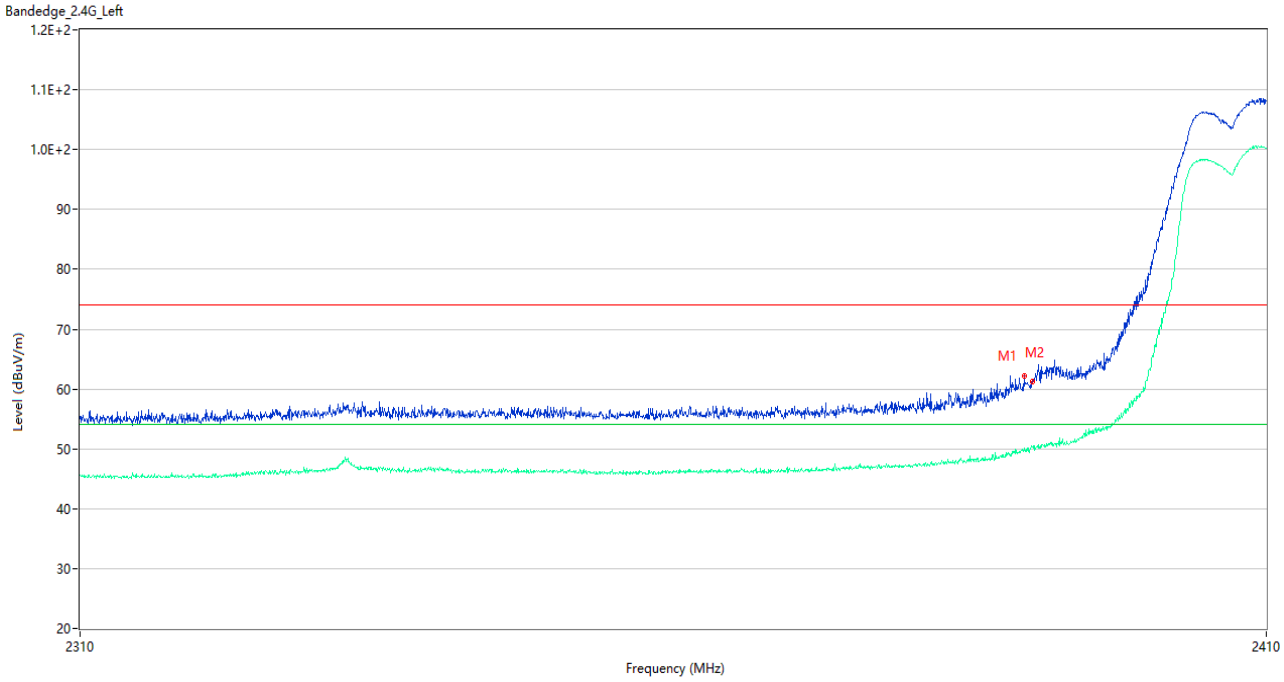
802.11n40 HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.575	65.05	1.77	74.0	8.95	Peak	329.00	100	Horizontal	Pass
1**	2483.575	52.95	1.77	54.0	1.05	AV	329.00	100	Horizontal	Pass
2	2484.520	66.68	1.76	74.0	7.32	Peak	325.00	200	Horizontal	Pass
2**	2484.520	52.57	1.76	54.0	1.43	AV	325.00	200	Horizontal	Pass

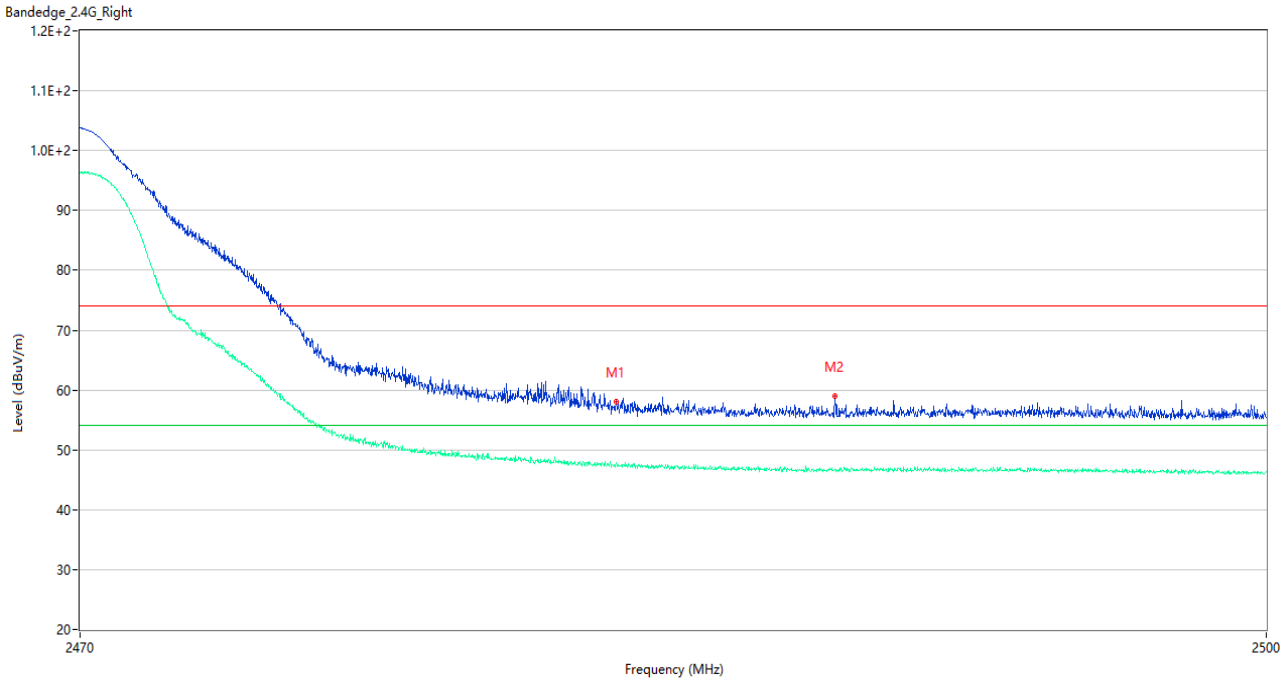
MIMO

802.11n20 LOW CHANNEL



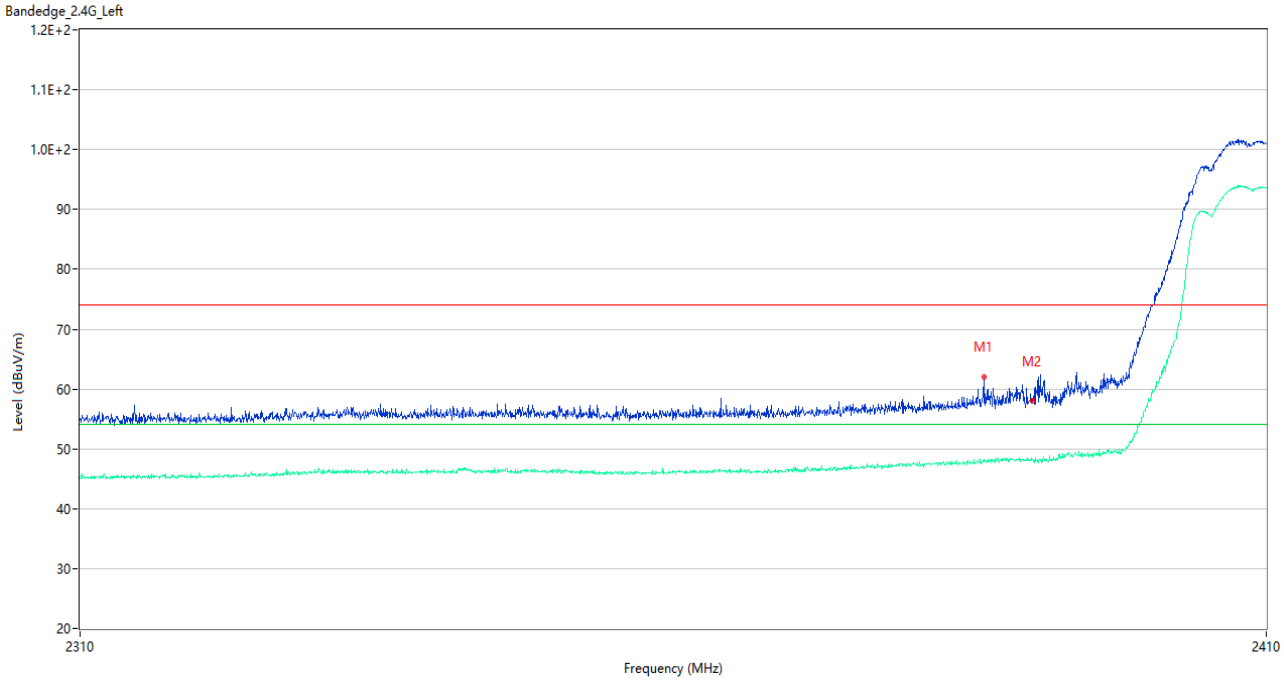
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.250	62.26	1.91	74.0	11.74	Peak	54.00	200	Horizontal	Pass
1**	2389.250	49.76	1.91	54.0	4.24	AV	54.00	200	Horizontal	Pass
2	2389.950	61.20	1.86	74.0	12.80	Peak	57.00	150	Horizontal	Pass
2**	2389.950	50.26	1.86	54.0	3.74	AV	57.00	150	Horizontal	Pass

802.11n20 HIGH CHANNEL



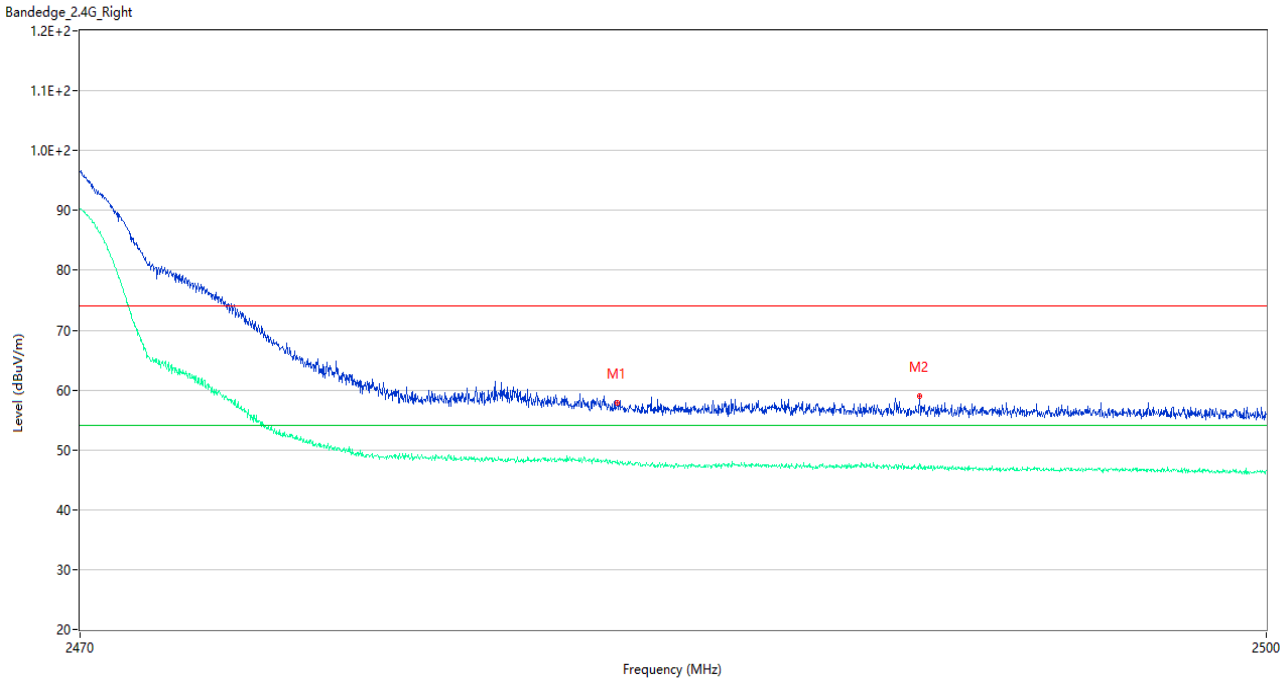
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	58.00	1.77	74.0	16.00	Peak	45.00	150	Horizontal	Pass
1**	2483.515	47.82	1.77	54.0	6.18	AV	45.00	150	Horizontal	Pass
2	2489.050	58.90	1.63	74.0	15.10	Peak	45.00	100	Horizontal	Pass
2**	2489.050	46.73	1.63	54.0	7.27	AV	45.00	100	Horizontal	Pass

802.11n40 LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2385.800	62.04	2.06	74.0	11.96	Peak	240.00	100	Horizontal	Pass
1**	2385.800	48.21	2.06	54.0	5.79	AV	240.00	100	Horizontal	Pass
2	2389.950	57.98	1.86	74.0	16.02	Peak	348.00	100	Horizontal	Pass
2**	2389.950	48.33	1.86	54.0	5.67	AV	348.00	100	Horizontal	Pass
3	2387.000	54.38	-2.66	74.0	19.62	Peak	62.00	200	Horizontal	Pass
3**	2387.000	44.08	-2.66	54.0	9.92	AV	62.00	200	Horizontal	Pass

802.11n40 HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.545	57.77	1.77	74.0	16.23	Peak	50.00	100	Horizontal	Pass
1**	2483.545	48.18	1.77	54.0	5.82	AV	50.00	100	Horizontal	Pass
2	2491.195	58.97	1.68	74.0	15.03	Peak	35.00	100	Horizontal	Pass
2**	2491.195	47.72	1.68	54.0	6.28	AV	35.00	100	Horizontal	Pass

A.8 Power Spectral Density (PSD)

Note: The Power Spectral Density (PSD) please refer to report: BL-EC19A0003-603, which was issued by Shenzhen BALUN Technology Co., Ltd. on Dec. 12, 2019, **section A.8 Power Spectral Density (PSD).**

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-EC22B1059-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-EC22B1059-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-EC22B1059-AI.PDF”.

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--END OF REPORT--