MEASUREMENT REPORT

FCC PART 15 Subpart E / RSS-247 WLAN 802.11a/n/ac

Report No.: YTC21113001-NJLZ-002-3
Report Version: V01
Issue Date: 01-10-2022

Applicant:	Wallys Communications(SuZhou)Co.,LTD
Address:	Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R. China
FCC ID:	2AG7VDR600VX
IC:	26861-DR600VX
Product:	Dual Band 11AC Wireless Module
Model No.:	DR600VX, DR600VX-M
Trade Mark:	/
FCC Classification:	Unlicensed National Information Infrastructure (UNII)
FCC Rule Part(s):	Part 15 Subpart E (Section 15.407)
IC Rule(s):	RSS-247 Issue 2, RSS-Gen Issue 5
Test Procedure(s):	ANSI C63.10-2013, KDB 789033 D02v02r01, KDB 662911 D01v02r01
Test Date:	Dec 15 ~ Dec 27, 2021

Compiled By: Yuwei Jiang
(Yuwei Jiang)
Senior Test Engineer

Approved By: Ke Chen
(Ke Chen)
Engineer Manager

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 789033 D02v02r01. Test results reported herein relate only to the item(s) tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by A2LA or any agency of the Government.

Revision History

Report No.	Version	Description	Issue Date
YTC21113001-NJLZ-002-3	Rev. 01	/	01-10-2022

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§2.1033 General Information

Applicant:	Wallys Communications(SuZhou)Co.,LTD
Applicant Address:	Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R. China
Manufacturer:	Wallys Communications(SuZhou)Co.,LTD
Manufacturer Address:	Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R. China
Factory:	Wallys Communications(SuZhou)Co.,LTD
Factory Address:	Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R. China
Test Site:	JIANGSU YANGTZE TESTING, CERTIFICATION AND INSPECTION CORPORATION
Test Site Address:	No.6-3, Xingzhi Road, Xingzhi Technology Park Xingang Economic Development Zone Nanjing City, Jiangsu Province, 210046, People's Republic of China
CAB ID:	CN0084
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	Unlicensed National Information Infrastructure (UNII)

1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2. YTC Corporation Location

We, **YTC Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/ accepted (audited or listed) by the following related bodies in compliance with ISO 17025 and specified testing scope:

USA	**:**	**FCC, A2LA**

The address and introduction of YTC Corporation's laboratories can be founded in our Web site: www.njjszx.com

If you have any comments, Please don't hesitate to contact us.

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	Dual Band 11AC Wireless Module
Model Name:	DR600VX
Additional Model:	DR600VX-M
Model Description:	The differences of them are as follows: Model name.
Input Voltage Range:	DC 3.3V
Wi-Fi Specification:	802.11a/n-HT20/ n-HT40/ac-VHT20/ac-VHT40/ac-VHT80

2.2. Product Specification Subjective to this Report

Frequency Range:	For 802.11a/n-HT20/ac-VHT20: 5180~5240MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40: 5190~5230MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5775MHz
Type of Modulation:	802.11a/n/ac: OFDM
Data Rate:	802.11a: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Antenna Type:	Dual band Dipole Antenna
Antenna Gain:	2dBi

This device contains the following capabilities:

2.4GHz WLAN (DTS)&5GHz WLAN (UNII)

Note: 5GHz (NII) operation is possible in 20MHz, 40MHz and 80MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 8MHz, and detector = average per the guidance of Section B)2)b) of KDB 789033 D02v02r01. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	2.03	2.11	96.21
	Ant2	5180	2.03	2.10	96.67

	Ant1	5200	2.02	2.10	96.19
	Ant2	5200	2.03	2.18	93.12
	Ant1	5240	2.03	2.10	96.67
	Ant2	5240	2.02	2.10	96.19
	Ant1	5745	2.03	2.10	96.67
	Ant2	5745	2.03	2.10	96.67
	Ant1	5785	2.03	2.11	96.21
	Ant2	5785	2.02	2.10	96.19
	Ant1	5825	2.03	2.10	96.67
	Ant2	5825	2.03	2.11	96.21
11N20SISO	Ant1	5180	1.89	2.04	92.65
	Ant2	5180	1.89	2.04	92.65
	Ant1	5200	1.89	2.08	90.87
	Ant2	5200	1.88	2.04	92.16
	Ant1	5240	1.89	2.04	92.65
	Ant2	5240	1.89	2.04	92.65
	Ant1	5745	1.89	2.04	92.65
	Ant2	5745	1.89	2.04	92.65
	Ant1	5785	1.89	2.05	92.20
	Ant2	5785	1.88	2.04	92.16
	Ant1	5825	1.89	2.04	92.65
	Ant2	5825	1.88	2.04	92.16
11N40SISO	Ant1	5190	0.93	1.01	92.08
	Ant2	5190	0.93	1.05	88.57
	Ant1	5230	0.93	1.03	90.29
	Ant2	5230	0.93	1.01	92.08
	Ant1	5755	0.93	1.00	93.00
	Ant2	5755	0.93	1.00	93.00
	Ant1	5795	0.93	1.01	92.08
	Ant2	5795	0.93	1.00	93.00
11AC20SISO	Ant1	5180	1.90	2.06	92.23
	Ant2	5180	1.90	2.03	93.60
	Ant1	5200	1.90	2.06	92.23
	Ant2	5200	1.90	2.06	92.23
	Ant1	5240	1.90	2.06	92.23
	Ant2	5240	1.90	2.03	93.60
	Ant1	5745	1.90	2.03	93.60

	Ant2	5745	1.90	1.97	96.45
	Ant1	5785	1.90	2.03	93.60
	Ant2	5785	1.90	2.03	93.60
	Ant1	5825	1.90	2.03	93.60
	Ant2	5825	1.90	2.03	93.60
11AC40SISO	Ant1	5190	0.93	1.01	92.08
	Ant2	5190	0.94	1.01	93.07
	Ant1	5230	0.94	1.01	93.07
	Ant2	5230	0.94	1.01	93.07
	Ant1	5755	0.93	1.01	92.08
	Ant2	5755	0.94	1.02	92.16
	Ant1	5795	0.94	1.02	92.16
	Ant2	5795	0.94	1.02	92.16
11AC80SISO	Ant1	5210	1.14	1.21	94.21
	Ant2	5210	1.14	1.21	94.21
	Ant1	5775	1.14	1.37	83.21
	Ant2	5775	1.13	1.20	94.17
11A-CDD	Ant1	5180	2.03	2.11	96.21
	Ant2	5180	2.03	2.10	96.67
	Ant1	5200	2.03	2.17	93.55
	Ant2	5200	2.03	2.11	96.21
	Ant1	5240	2.03	2.10	96.67
	Ant2	5240	2.03	2.10	96.67
	Ant1	5745	2.03	2.26	89.82
	Ant2	5745	2.02	2.15	93.95
	Ant1	5785	2.03	2.10	96.67
	Ant2	5785	2.03	2.10	96.67
	Ant1	5825	2.03	2.11	96.21
	Ant2	5825	2.03	2.10	96.67
11N20MIMO	Ant1	5180	1.89	2.04	92.65
	Ant2	5180	1.89	2.07	91.30
	Ant1	5200	1.88	2.07	90.82
	Ant2	5200	1.89	2.04	92.65
	Ant1	5240	1.88	2.04	92.16
	Ant2	5240	1.89	2.04	92.65
	Ant1	5745	1.89	1.96	96.43
	Ant2	5745	1.89	1.99	94.97

	Ant1	5785	1.89	2.05	92.20
	Ant2	5785	1.89	2.07	91.30
	Ant1	5825	1.89	2.05	92.20
	Ant2	5825	1.89	2.04	92.65
11N40MIMO	Ant1	5190	0.93	1.03	90.29
	Ant2	5190	0.93	1.01	92.08
	Ant1	5230	0.93	1.01	92.08
	Ant2	5230	0.93	1.00	93.00
	Ant1	5755	0.93	1.01	92.08
	Ant2	5755	0.93	1.14	81.58
	Ant1	5795	0.93	1.02	91.18
	Ant2	5795	0.92	1.00	92.00
11AC20MIMO	Ant1	5180	1.90	2.06	92.23
	Ant2	5180	1.90	2.04	93.14
	Ant1	5200	1.90	2.03	93.60
	Ant2	5200	1.90	2.03	93.60
	Ant1	5240	1.90	2.04	93.14
	Ant2	5240	1.90	2.06	92.23
	Ant1	5745	1.90	1.97	96.45
	Ant2	5745	1.91	1.99	95.98
	Ant1	5785	1.90	2.03	93.60
	Ant2	5785	1.90	2.02	94.06
	Ant1	5825	1.90	2.07	91.79
	Ant2	5825	1.90	2.04	93.14
11AC40MIMO	Ant1	5190	0.94	1.01	93.07
	Ant2	5190	0.94	1.01	93.07
	Ant1	5230	0.94	1.01	93.07
	Ant2	5230	0.94	1.01	93.07
	Ant1	5755	0.94	1.42	66.20
	Ant2	5755	0.93	1.01	92.08
	Ant1	5795	0.94	1.01	93.07
	Ant2	5795	0.93	1.01	92.08
11AC80MIMO	Ant1	5210	1.14	1.21	94.21
	Ant2	5210	1.13	1.36	83.09
	Ant1	5775	1.13	1.37	82.48
	Ant2	5775	1.14	1.21	94.21

Note1: Test Plots see Appendix K.

2.3. Operation Frequencies and Channel List

802.11a/n-HT20/ac-VHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz
48	5240 MHz	149	5745 MHz	153	5765 MHz
157	5785 MHz	161	5805 MHz	165	5825 MHz

802.11n-HT40/ac-VHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz
159	5795 MHz	--	--	--	--

802.11ac-VHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	155	5775 MHz	--	--

2.4. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	Product Number	Tx Paths
Dipole antenna	2.4	DRDPA1209	2
	5		2

Antenna	Frequency Band (MHz)	Tx Paths	Per Chain Max Antenna Gain (dBi)		Beam Forming Directional Gain (dBi)	CDD Directional Gain (dBi)	
			Ant 0	Ant 1		For Power	For PSD
DRDPA1209	2412 ~2462	2	2	2	Nonsupport	2	5
	5150 ~ 5250	2	2	2	Nonsupport	2	5
	5725 ~ 5850	2	2	2	Nonsupport	2	5

Note

Unequal Antenna gains, with equal transmit powers. For Antenna gains given by G_1, G_2, …, G_N dBi transmit signals are correlated, then

- Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N_{ANT}]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
- Directional Gain = $10*\log[(10^{2/20} + 10^{2/20})^2/2] = 5$ dBi

2.5. Test Software

The test utility software used during testing was "artgui", and the power setting value is 15.

2.6. ANTENNA REQUIREMENTS

The EUT has four antennas. The antennas are Dipole Antennas.
The max gain of 5G antenna 1 is 2dBi and the max gain of 5G antenna 2 is 2dBi .which accordance 15.203.is considered sufficient to comply with the provisions of this section

- The antenna of the **Dual Band 11AC Wireless Module** uses a unique connector.

Antenna Type	Antenna Connector Type
Dual band Dipole Antenna	IPEX connector

2.7. Test Mode

Test Mode	Mode 1: Transmit by 802.11a Ant 1
	Mode 2: Transmit by 802.11n-HT20 Ant 1
	Mode 3: Transmit by 802.11n-HT40 Ant 1
	Mode 4: Transmit by 802.11ac-VHT20 Ant 1
	Mode 5: Transmit by 802.11ac-VHT40 Ant 1
	Mode 6: Transmit by 802.11ac-VHT80 Ant 1
	Mode 7: Transmit by 802.11a Ant 2
	Mode 8: Transmit by 802.11n-HT20 Ant 2
	Mode 9: Transmit by 802.11n-HT40 Ant 2
	Mode 10: Transmit by 802.11ac-VHT20 Ant 2
	Mode 11: Transmit by 802.11ac-VHT40 Ant 2
	Mode 12: Transmit by 802.11ac-VHT80 Ant 2
	Mode 13: Transmit by 802.11a Ant 1+ Ant 2
	Mode 14: Transmit by 802.11n-HT20 Ant 1+ Ant 2
	Mode 15: Transmit by 802.11n-HT40 Ant 1+ Ant 2
	Mode 16: Transmit by 802.11ac-VHT20 Ant 1+ Ant 2
	Mode 17: Transmit by 802.11ac-VHT40 Ant 1+ Ant 2
	Mode 18: Transmit by 802.11ac-VHT80 Ant 1+ Ant 2

2.8. Test Configuration

The EUT was tested per the guidance of KDB 789033 D02v02r01. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.9. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.10. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

RSP-100 Issue 11 Section 3

The manufacturer, importer or distributor shall meet the labelling requirements set out in this section for every unit:

(i) prior to marketing in Canada, for products manufactured in Canada

(ii) prior to importation into Canada, for imported products

For information regarding the e-labelling option, see Notice 2014-DRS1003. The label for the certified product represents the manufacturer's or importer's compliance with Innovation, Science and Economic Development Canada's (ISED) regulatory requirements.

Please see attachment for IC label and label location.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in KDB 789033 D02v02r01 were used in the measurement of the EUT.

Deviation from measurement procedure…….....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside a 9'x4'x3' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

Line conducted emissions test results are shown in Section 7.11.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. An MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-40GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Bi-Log Antenna	R&S	HL562E	FWXGJC-2016-267-06	1 year	2022/03/30
Broadband Horn Antenna	R&S	HF907	FWXGJC-2016-267-07	1 year	2022/03/30
EMI Receiver	R&S	ESR26	FWXGJC-2016-267-01	1 year	2022/11/26
Pre-Amplifier	R&S	SCU-18D	FWXGJC-2016-267-05	1 year	2022/12/12
SHF-EHF Horn Antenna	Schwarzbeck	BBHA 9170	FWXGJC-2018-016	1 year	2022/06/04
EXA Signal Analyzer	Keysight	N9010B	FWXGJC-2018-010	1 year	2022/05/30
Thermohygrometer	Yuhuaze	HTC-1	FWXDA-2016-386	1 year	2022/12/27
Anechoic Chamber	Aimuke	EMCCT-3	FWXGJC-2016-270	3 year	2023/04/07

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Keysight	N9010B	FWXGJC-2018-010	1 year	2022/05/30
RF Control Unit	Toncend	JS0806-2	FWXGJC-2018-013	1 year	2022/08/12
Thermohygrometer	Yuhuaze	HTC-1	FWXDA-2016-385	1 year	2022/12/27

Test Software	Manufacturer	Version	Asset No.	Function
EMI Test Software	tonscend	/	/	/

5. MEASUREMENT UNCERTAINTY

Where relevant, the following test 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.

AC Conducted Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.28dB
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.72dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 30MHz-1GHz: 1.00 dB 1GHz-26.5GHz: 1.30 dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.60dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.80dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.20MHz

6. TEST RESULT

6.1. Summary

FCC Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.407(a)	26dB Bandwidth	N/A	Conducted	Pass	Section 6.2
15.407(e)	6dB Bandwidth	≥ 500kHz		Pass	Section 6.3
15.407(a)(1)(iv), (2), (3)	Maximum Conducted Output Power	≤ 24 dBm U-NII-1 & U-NII-2 ≤ 30 dBm U-NII-3		Pass	Section 6.4
15.407(h)(1)	Transmit Power Control	≤ 24 dBm		Pass	Section 6.5
15.407(a)(1)(iv), (2), (3), (5)	Peak Power Spectral Density	≤ 11 dBm/MHz U-NII-1 & U-NII-2 ≤ 30 dBm/500kHz U-NII-3		Pass	Section 6.6
15.407(g)	Frequency Stability	≤ 20 PPM		Pass	Section 6.7
15.407(b)(1), (2), (3), (4)(i)	Undesirable Emissions	≤ -27dBm/MHz EIRP Detail see section 7.9	Radiated	Pass	Section 6.8 & 6.9
15.205, 15.209 15.407(b)(5), (6), (7)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209		Pass	
15.207	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	N/A	Section 6.10

RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
RSS-247 §6.2	99% Bandwidth	N/A	Conducted	Pass	Section 6.2
RSS-247 §6.2.4	6dB Bandwidth	≥ 500kHz		Pass	Section 6.3
RSS-247 §6.2.1, §6.2.2, §6.2.3, §6.2.4	Max Conducted Output Power	5250~5250, 5470~5725MHz ≤ 250 mW or 11 + 10 log10(99% B) 5725~5850MHz, ≤ 30 dBm		Pass	Section 6.4
	Maximum E.I.R.P	5150~5250MHz ≤ 23 dBm or 10 + 10 log10(99% B) 5250~5250, 5470~5725MHz ≤ 30 dBm or 17 + 10 log10(99% B)			
RSS-247 §6.2.2, §6.2.3	Transmit Power Control	≤ 24 dBm		Pass	Section 6.5
RSS-247 §6.2.1, §6.2.2, §6.2.3, §6.2.4	Peak Power Spectral Density	5150~5250MHz ≤ 10 dBm/MHz 5250~5250, 5470~5725MHz ≤ 11 dBm/MHz 5725~5850MHz, ≤ 30 dBm/500kHz		Pass	Section 6.6
RSS-Gen [8.11]	Frequency Stability	N/A		Pass	Section 6.7
RSS-247 §6.2.1, §6.2.2, §6.2.3, §6.2.4	Out-of-Band Emissions	Refer to section 6.10	Radiated	Pass	Section 6.8 & 6.9
RSS-247 §6.2.1, §6.2.2, §6.2.3, §6.2.4	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in RSS-Gen [8.9]		Pass	
RSS-Gen [8.8]	AC Conducted Emissions 150kHz - 30MHz	< RSS-Gen [8.8] limits	Line Conducted	N/A	Section 6.10

Notes:

1) All channels, modes, and modulations/data rates were investigated among all UNII bands. The test results shown in the following sections represent the worst case emissions.

2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.

6.2. 26dB Bandwidth Measurement and 99% Bandwidth

6.2.1. Test Limit

N/A

6.2.2. Test Procedure used

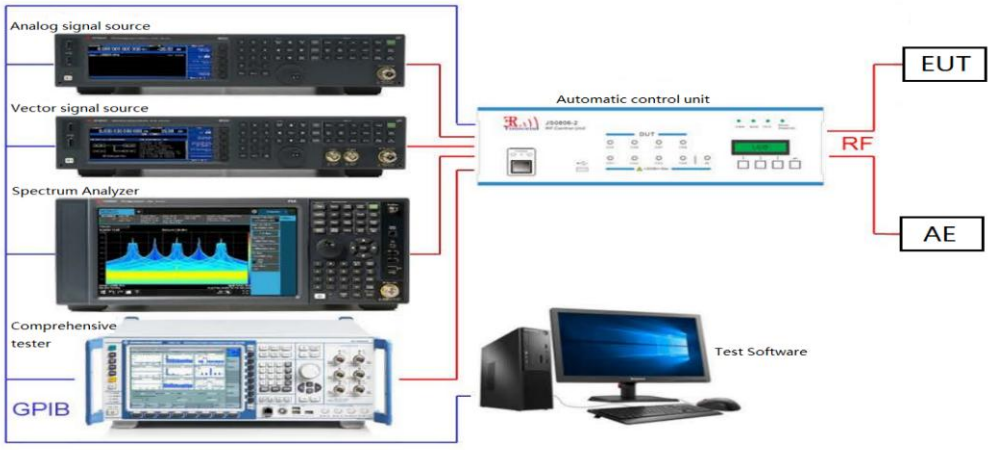
KDB 789033 D02v02r01 – Section C.1

ANSI C63.10-2013 D02v02r01 – Section C

6.2.3. Test Setting

1. The analyzers' automatic bandwidth measurement capability was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 26. The automatic bandwidth measurement function also has the capability of simultaneously measuring the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediated power nulls in the fundamental emission.
2. RBW = approximately 1% of the emission bandwidth.
3. VBW ≥ 3 × RBW.
4. Detector = Peak.
5. Trace mode = max hold.

6.2.4. Test Setup



6.2.5. Test Result

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	99% OCB [MHz]	FL[MHz]	FH[MHz]
11A	Ant1	5180	23.280	5168.080	5191.360	16.965	5171.429	5188.394
	Ant2	5180	20.680	5169.680	5190.360	16.786	5171.544	5188.330
	Ant1	5200	20.760	5189.440	5210.200	16.941	5191.424	5208.365
	Ant2	5200	20.760	5189.560	5210.320	16.937	5191.474	5208.411
	Ant1	5240	20.920	5229.400	5250.320	16.938	5231.408	5248.346
	Ant2	5240	20.920	5229.440	5250.360	16.942	5231.435	5248.377
	Ant1	5745	21.560	5734.440	5756.000	16.900	5736.448	5753.348
	Ant2	5745	21.720	5733.880	5755.600	16.989	5736.460	5753.449
	Ant1	5785	20.680	5774.880	5795.560	16.922	5776.411	5793.333
	Ant2	5785	20.120	5775.000	5795.120	16.864	5776.459	5793.323
	Ant1	5825	20.720	5814.520	5835.240	17.000	5816.380	5833.380
	Ant2	5825	21.200	5814.080	5835.280	17.004	5816.365	5833.369
11N20SISO	Ant1	5180	22.080	5168.920	5191.000	18.038	5170.881	5188.919
	Ant2	5180	21.640	5169.040	5190.680	18.090	5170.861	5188.951
	Ant1	5200	22.600	5188.560	5211.160	17.968	5190.908	5208.876
	Ant2	5200	21.600	5188.920	5210.520	18.034	5190.869	5208.903
	Ant1	5240	21.840	5228.880	5250.720	18.073	5230.884	5248.957
	Ant2	5240	21.480	5229.200	5250.680	18.025	5230.913	5248.938
	Ant1	5745	21.000	5734.520	5755.520	17.983	5735.866	5753.849
	Ant2	5745	22.520	5733.480	5756.000	18.089	5735.847	5753.936
	Ant1	5785	21.120	5774.280	5795.400	18.027	5775.854	5793.881
	Ant2	5785	21.480	5774.280	5795.760	18.098	5775.836	5793.934
	Ant1	5825	22.240	5813.760	5836.000	17.997	5815.860	5833.857
	Ant2	5825	21.880	5813.840	5835.720	17.995	5815.908	5833.903
11N40SISO	Ant1	5190	43.600	5168.160	5211.760	36.649	5171.599	5208.248
	Ant2	5190	42.160	5168.880	5211.040	36.547	5171.629	5208.176
	Ant1	5230	43.680	5207.760	5251.440	36.543	5211.703	5248.246
	Ant2	5230	43.200	5208.320	5251.520	36.550	5211.691	5248.241
	Ant1	5755	42.320	5733.720	5776.040	36.363	5736.723	5773.086
	Ant2	5755	42.560	5733.240	5775.800	36.472	5736.693	5773.165
	Ant1	5795	44.080	5772.840	5816.920	36.547	5776.571	5813.118
	Ant2	5795	42.720	5773.800	5816.520	36.612	5776.578	5813.190
11AC20SI	Ant1	5180	21.400	5169.160	5190.560	18.069	5170.899	5188.968

SO	Ant2	5180	22.360	5168.880	5191.240	18.059	5170.921	5188.980
	Ant1	5200	21.880	5188.960	5210.840	18.085	5190.885	5208.970
	Ant2	5200	21.920	5188.960	5210.880	18.040	5190.879	5208.919
	Ant1	5240	21.840	5228.920	5250.760	18.042	5230.868	5248.910
	Ant2	5240	22.040	5229.040	5251.080	18.048	5230.875	5248.923
	Ant1	5745	21.360	5734.360	5755.720	18.007	5735.882	5753.889
	Ant2	5745	22.560	5733.800	5756.360	18.115	5735.820	5753.935
	Ant1	5785	22.480	5773.520	5796.000	18.148	5775.799	5793.947
	Ant2	5785	22.480	5774.200	5796.680	18.016	5775.868	5793.884
	Ant1	5825	23.080	5813.400	5836.480	18.030	5815.881	5833.911
	Ant2	5825	22.480	5813.800	5836.280	18.064	5815.844	5833.908
11AC40SISO	Ant1	5190	42.560	5168.800	5211.360	36.513	5171.698	5208.211
	Ant2	5190	43.680	5167.520	5211.200	36.602	5171.669	5208.271
	Ant1	5230	42.800	5209.040	5251.840	36.501	5211.643	5248.144
	Ant2	5230	42.800	5208.400	5251.200	36.418	5211.723	5248.141
	Ant1	5755	44.160	5733.320	5777.480	36.585	5736.589	5773.174
	Ant2	5755	41.520	5734.280	5775.800	36.370	5736.723	5773.093
	Ant1	5795	43.840	5773.080	5816.920	36.531	5776.641	5813.172
	Ant2	5795	43.920	5772.520	5816.440	36.537	5776.563	5813.100
11AC80SISO	Ant1	5210	87.200	5166.480	5253.680	76.133	5171.883	5248.016
	Ant2	5210	85.280	5167.920	5253.200	76.121	5171.929	5248.050
	Ant1	5775	84.640	5732.440	5817.080	76.173	5736.797	5812.970
	Ant2	5775	85.120	5732.760	5817.880	75.895	5736.901	5812.796
11A-CDD	Ant1	5180	21.080	5169.560	5190.640	16.874	5171.464	5188.338
	Ant2	5180	21.440	5169.080	5190.520	16.807	5171.545	5188.352
	Ant1	5200	21.160	5189.200	5210.360	16.940	5191.432	5208.372
	Ant2	5200	21.080	5189.520	5210.600	16.753	5191.503	5208.256
	Ant1	5240	22.080	5228.720	5250.800	16.952	5231.425	5248.377
	Ant2	5240	21.000	5229.280	5250.280	16.867	5231.479	5248.346
	Ant1	5745	20.240	5734.840	5755.080	16.900	5736.454	5753.354
	Ant2	5745	21.280	5734.040	5755.320	16.844	5736.500	5753.344
	Ant1	5785	21.640	5774.520	5796.160	16.897	5776.450	5793.347
	Ant2	5785	21.120	5774.240	5795.360	16.819	5776.468	5793.287
	Ant1	5825	21.400	5814.640	5836.040	16.914	5816.431	5833.345
	Ant2	5825	21.160	5814.640	5835.800	16.797	5816.507	5833.304
11N20MIMO	Ant1	5180	22.520	5168.920	5191.440	18.069	5170.910	5188.979
	Ant2	5180	21.600	5169.080	5190.680	18.072	5170.897	5188.969

	Ant1	5200	21.880	5189.120	5211.000	17.991	5190.906	5208.897
	Ant2	5200	21.360	5189.000	5210.360	17.931	5190.929	5208.860
	Ant1	5240	22.040	5228.920	5250.960	18.039	5230.872	5248.911
	Ant2	5240	23.400	5228.440	5251.840	17.992	5230.910	5248.902
	Ant1	5745	22.280	5733.760	5756.040	18.052	5735.858	5753.910
	Ant2	5745	21.160	5734.200	5755.360	17.966	5735.941	5753.907
	Ant1	5785	22.360	5773.640	5796.000	17.977	5775.870	5793.847
	Ant2	5785	22.400	5773.960	5796.360	17.946	5775.934	5793.880
	Ant1	5825	22.240	5813.680	5835.920	18.092	5815.867	5833.959
	Ant2	5825	21.360	5814.240	5835.600	18.067	5815.828	5833.895
11N40MIMO	Ant1	5190	44.080	5167.760	5211.840	36.560	5171.675	5208.235
	Ant2	5190	44.000	5167.920	5211.920	36.465	5171.725	5208.190
	Ant1	5230	44.400	5206.800	5251.200	36.471	5211.664	5248.135
	Ant2	5230	43.280	5207.760	5251.040	36.393	5211.760	5248.153
	Ant1	5755	42.480	5733.800	5776.280	36.445	5736.632	5773.077
	Ant2	5755	42.560	5733.960	5776.520	36.380	5736.686	5773.066
	Ant1	5795	43.760	5772.840	5816.600	36.651	5776.547	5813.198
	Ant2	5795	42.800	5773.480	5816.280	36.516	5776.652	5813.168
11AC20MIMO	Ant1	5180	22.120	5168.800	5190.920	18.057	5170.903	5188.960
	Ant2	5180	22.960	5168.240	5191.200	18.116	5170.875	5188.991
	Ant1	5200	22.360	5188.840	5211.200	18.094	5190.830	5208.924
	Ant2	5200	21.360	5189.120	5210.480	17.971	5190.919	5208.890
	Ant1	5240	22.080	5229.160	5251.240	18.093	5230.834	5248.927
	Ant2	5240	21.520	5229.160	5250.680	17.919	5230.982	5248.901
	Ant1	5745	21.240	5734.240	5755.480	18.111	5735.826	5753.937
	Ant2	5745	21.520	5734.120	5755.640	17.942	5735.932	5753.874
	Ant1	5785	22.400	5774.120	5796.520	18.007	5775.893	5793.900
	Ant2	5785	20.520	5774.720	5795.240	18.044	5775.902	5793.946
	Ant1	5825	21.560	5814.280	5835.840	18.029	5815.910	5833.939
	Ant2	5825	21.360	5814.320	5835.680	18.043	5815.860	5833.903
11AC40MIMO	Ant1	5190	43.920	5167.680	5211.600	36.594	5171.635	5208.229
	Ant2	5190	45.200	5167.120	5212.320	36.394	5171.721	5208.115
	Ant1	5230	44.080	5207.520	5251.600	36.555	5211.614	5248.169
	Ant2	5230	42.160	5208.960	5251.120	36.379	5211.806	5248.185
	Ant1	5755	44.560	5731.960	5776.520	36.558	5736.550	5773.108
	Ant2	5755	41.600	5734.440	5776.040	36.418	5736.729	5773.147
	Ant1	5795	42.320	5773.720	5816.040	36.583	5776.569	5813.152

	Ant2	5795	43.040	5773.240	5816.280	36.545	5776.623	5813.168
11AC80MIMO	Ant1	5210	86.880	5167.120	5254.000	76.245	5171.840	5248.085
	Ant2	5210	86.240	5166.480	5252.720	76.085	5171.848	5247.933
	Ant1	5775	86.400	5731.800	5818.200	76.031	5736.827	5812.858
	Ant2	5775	87.360	5731.800	5819.160	75.915	5737.048	5812.963

Note1: Test Plots see Appendix E1&E2.

6.3. 6dB Bandwidth Measurement

6.3.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

6.3.2. Test Procedure used

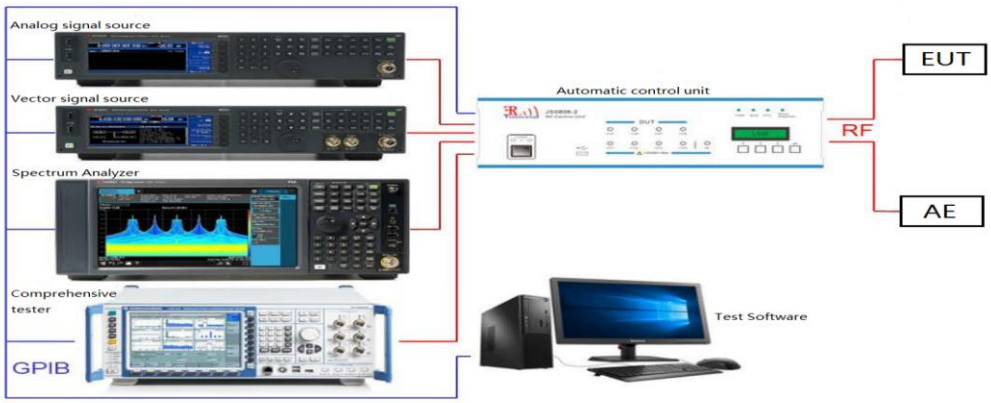
KDB 789033 D02v02r01 – Section C.2

ANSI C63.10-2013 – Section C

6.3.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 100 kHz.
3. VBW ≧ 3 × RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. 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.

6.3.4. Test Setup



6.3.5. Test Result

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.360	5736.720	5753.080	0.5	PASS
	Ant2	5745	16.400	5736.680	5753.080	0.5	PASS
	Ant1	5785	16.160	5776.920	5793.080	0.5	PASS
	Ant2	5785	16.440	5776.680	5793.120	0.5	PASS
	Ant1	5825	16.120	5816.960	5833.080	0.5	PASS
	Ant2	5825	16.400	5816.680	5833.080	0.5	PASS
11N20SISO	Ant1	5745	17.640	5736.080	5753.720	0.5	PASS
	Ant2	5745	17.720	5736.040	5753.760	0.5	PASS
	Ant1	5785	17.360	5776.080	5793.440	0.5	PASS
	Ant2	5785	17.560	5776.120	5793.680	0.5	PASS
	Ant1	5825	17.720	5816.040	5833.760	0.5	PASS
	Ant2	5825	17.600	5816.120	5833.720	0.5	PASS
11N40SISO	Ant1	5755	36.080	5736.680	5772.760	0.5	PASS
	Ant2	5755	35.840	5737.240	5773.080	0.5	PASS
	Ant1	5795	34.800	5777.080	5811.880	0.5	PASS
	Ant2	5795	35.520	5777.240	5812.760	0.5	PASS
11AC20SISO	Ant1	5745	17.720	5736.040	5753.760	0.5	PASS
	Ant2	5745	17.440	5736.280	5753.720	0.5	PASS
	Ant1	5785	17.640	5776.080	5793.720	0.5	PASS
	Ant2	5785	17.640	5776.080	5793.720	0.5	PASS
	Ant1	5825	17.680	5816.040	5833.720	0.5	PASS
	Ant2	5825	17.760	5816.000	5833.760	0.5	PASS
11AC40SISO	Ant1	5755	35.440	5737.240	5772.680	0.5	PASS
	Ant2	5755	35.840	5737.080	5772.920	0.5	PASS
	Ant1	5795	36.240	5776.680	5812.920	0.5	PASS
	Ant2	5795	36.080	5777.000	5813.080	0.5	PASS
11AC80SISO	Ant1	5775	72.480	5737.560	5810.040	0.5	PASS
	Ant2	5775	72.320	5738.680	5811.000	0.5	PASS
11A-CDD	Ant1	5745	16.440	5736.680	5753.120	0.5	PASS
	Ant2	5745	16.560	5736.640	5753.200	0.5	PASS
	Ant1	5785	16.520	5776.600	5793.120	0.5	PASS
	Ant2	5785	16.440	5776.680	5793.120	0.5	PASS
	Ant1	5825	16.440	5816.680	5833.120	0.5	PASS
	Ant2	5825	16.440	5816.680	5833.120	0.5	PASS
11N20MIMO	Ant1	5745	17.640	5736.080	5753.720	0.5	PASS

	Ant2	5745	17.680	5736.080	5753.760	0.5	PASS
	Ant1	5785	17.640	5776.080	5793.720	0.5	PASS
	Ant2	5785	17.640	5776.080	5793.720	0.5	PASS
	Ant1	5825	17.640	5816.080	5833.720	0.5	PASS
	Ant2	5825	17.640	5816.080	5833.720	0.5	PASS
11N40MIMO	Ant1	5755	35.200	5737.240	5772.440	0.5	PASS
	Ant2	5755	35.840	5736.920	5772.760	0.5	PASS
	Ant1	5795	35.520	5776.680	5812.200	0.5	PASS
	Ant2	5795	35.280	5777.240	5812.520	0.5	PASS
11AC20MIMO	Ant1	5745	17.080	5736.640	5753.720	0.5	PASS
	Ant2	5745	17.360	5736.360	5753.720	0.5	PASS
	Ant1	5785	17.000	5776.080	5793.080	0.5	PASS
	Ant2	5785	17.640	5776.080	5793.720	0.5	PASS
	Ant1	5825	17.080	5816.240	5833.320	0.5	PASS
	Ant2	5825	17.320	5816.400	5833.720	0.5	PASS
11AC40MIMO	Ant1	5755	36.080	5736.680	5772.760	0.5	PASS
	Ant2	5755	36.240	5736.920	5773.160	0.5	PASS
	Ant1	5795	36.480	5776.680	5813.160	0.5	PASS
	Ant2	5795	35.600	5776.920	5812.520	0.5	PASS
11AC80MIMO	Ant1	5775	73.760	5737.560	5811.320	0.5	PASS
	Ant2	5775	75.040	5737.240	5812.280	0.5	PASS

Note1: Test Plots see Appendix F.

6.4. Output Power Measurement

6.4.1. Test Limit

For FCC Power MeasurementLimit

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

For IC Power MeasurementLimit

For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW (23.01dBm) or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

For the 5.725-5.85 GHz band, the maximum conducted output power shall not exceed 1 W.

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

EIRP Limit Calculation as below:

For 5150-5250MHz

802.11a: 10 + 10 log10 (16.786MHz) = 22.25dBm < 23.01dBm;

802.11n-HT20: 10 + 10 log10 (17.931MHz) = 22.54dBm < 23.01dBm;

802.11ac-VHT20: 10 + 10 log10 (17.919MHz) = 22.53dBm < 23.01dBm;

802.11n-HT40/ac-VHT40/ac-VHT80: 10 + 10 log10 B > 23.01dBm;

6.4.2. Test Procedure Used

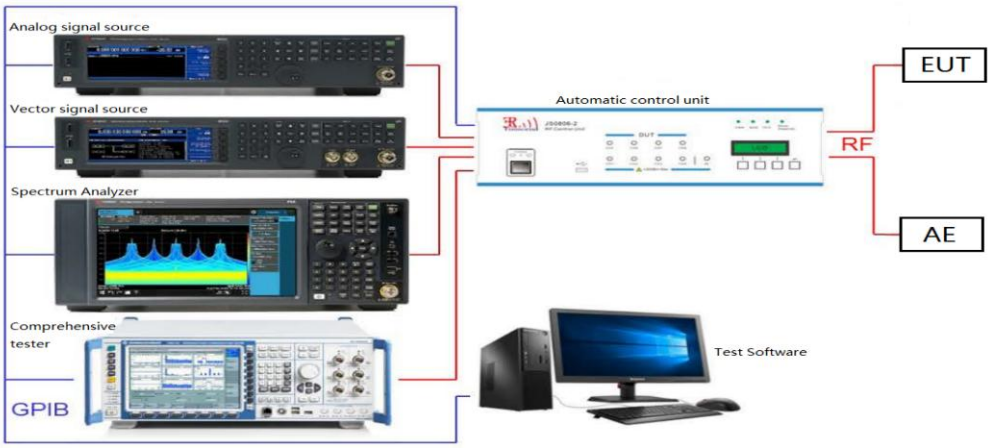
KDB 789033 D02v02r01 - Section E) 3) b) Method PM-G

ANSI C63.10-2013 – Section 12.3.3.2 Method PM-G

6.4.3. Test Setting

Average power measurements were perform only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

6.4.4. Test Setup



6.4.5. Test Rate Assessment

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (yellow marker) for final test of each channel.

N_{Tx}	802.11a	MCS Index for 802.11n	Data Rate (Mbps)			
			20MHz Bandwidth		40MHz Bandwidth	
			800ns GI	400ns GI	800ns GI	400ns GI
2	6	8	13.0	14.4	27.0	30.0
2	9	9	26.0	28.9	54.0	60.0
2	12	10	39.0	43.3	81.0	90.0
2	18	11	52.0	57.8	108.0	120.0
2	24	12	78.0	86.7	162.0	180.0
2	36	13	104.0	115.6	216.0	240.0
2	48	14	117.0	130.0	243.0	270.0
2	54	15	130.0	144.4	270.0	300.0

N_{Tx}	MCS Index for 802.11ac	Data Rate (Mbps)					
		20MHz Bandwidth		40MHz Bandwidth		80MHz Bandwidth	
		800ns GI	400ns GI	800ns GI	400ns GI	800ns GI	400ns GI
2	0	13.0	14.4	27.0	30.0	58.6	65.0
2	1	26.0	28.8	54.0	60.0	117.0	130.0
2	2	39.0	43.4	81.0	90.0	175.6	195.0
2	3	52.0	57.8	108.0	120.0	234.0	260.0
2	4	78.0	86.6	162.0	180.0	351.0	390.0
2	5	104.0	115.6	216.0	240.0	468.0	520.0
2	6	117.0	130.0	243.0	270.0	526.6	585.0
2	7	130.0	144.4	270.0	300.0	585.0	650.0
2	8	156.0	173.4	324.0	360.0	702.0	780.0
2	9	--	--	360.0	400.0	780.0	866.6

Note: Power output test was verified over all data rates of each mode shown as above, and then choose the maximum power output (yellow marker) for final test of each channel.

6.4.6. Test Result

TestMode	Antenna	Channel	FCC Power Result[dBm]	FCC Limit[dBm]	IC EIRP Result[dBm]	IC Limit[dBm]	Verdict
11A	Ant1	5180	14.89	≤30	16.89	≤22.25	PASS
	Ant2	5180	14.74	≤30	16.74	≤22.25	PASS
	Ant1	5200	14.76	≤30	16.76	≤22.25	PASS
	Ant2	5200	14.63	≤30	16.63	≤22.25	PASS
	Ant1	5240	14.06	≤30	16.06	≤22.25	PASS
	Ant2	5240	14.54	≤30	16.54	≤22.25	PASS
	Ant1	5745	14.36	≤30	16.36	≤30	PASS
	Ant2	5745	14.15	≤30	16.15	≤30	PASS
	Ant1	5785	14.79	≤30	16.79	≤30	PASS
	Ant2	5785	13.94	≤30	15.94	≤30	PASS
	Ant1	5825	15.09	≤30	17.09	≤30	PASS
	Ant2	5825	14.44	≤30	16.44	≤30	PASS
11N20SISO	Ant1	5180	14.90	≤30	16.9	≤22.54	PASS
	Ant2	5180	14.88	≤30	16.88	≤22.54	PASS
	Ant1	5200	14.70	≤30	16.7	≤22.54	PASS
	Ant2	5200	14.47	≤30	16.47	≤22.54	PASS
	Ant1	5240	14.27	≤30	16.27	≤22.54	PASS
	Ant2	5240	14.61	≤30	16.61	≤22.54	PASS
	Ant1	5745	14.34	≤30	16.34	≤30	PASS
	Ant2	5745	14.65	≤30	16.65	≤30	PASS
	Ant1	5785	14.70	≤30	16.7	≤30	PASS
	Ant2	5785	14.16	≤30	16.16	≤30	PASS
	Ant1	5825	15.27	≤30	17.27	≤30	PASS
	Ant2	5825	14.93	≤30	16.93	≤30	PASS
11N40SISO	Ant1	5190	14.76	≤30	16.76	≤23.01	PASS
	Ant2	5190	14.82	≤30	16.82	≤23.01	PASS
	Ant1	5230	14.67	≤30	16.67	≤23.01	PASS
	Ant2	5230	14.40	≤30	16.4	≤23.01	PASS
	Ant1	5755	15.13	≤30	17.13	≤30	PASS
	Ant2	5755	14.63	≤30	16.63	≤30	PASS
	Ant1	5795	14.82	≤30	16.82	≤30	PASS
	Ant2	5795	14.33	≤30	16.33	≤30	PASS
11AC20SISO	Ant1	5180	14.93	≤30	16.93	≤22.53	PASS
	Ant2	5180	14.70	≤30	16.7	≤22.53	PASS

	Ant1	5200	14.73	≤30	16.73	≤22.53	PASS
	Ant2	5200	14.55	≤30	16.55	≤22.53	PASS
	Ant1	5240	14.48	≤30	16.48	≤22.53	PASS
	Ant2	5240	14.39	≤30	16.39	≤22.53	PASS
	Ant1	5745	14.76	≤30	16.76	≤30	PASS
	Ant2	5745	14.76	≤30	16.76	≤30	PASS
	Ant1	5785	14.99	≤30	16.99	≤30	PASS
	Ant2	5785	14.24	≤30	16.24	≤30	PASS
	Ant1	5825	15.45	≤30	17.45	≤30	PASS
	Ant2	5825	14.86	≤30	16.86	≤30	PASS
11AC40SISO	Ant1	5190	14.92	≤30	16.92	≤23.01	PASS
	Ant2	5190	14.78	≤30	16.78	≤23.01	PASS
	Ant1	5230	14.41	≤30	16.41	≤23.01	PASS
	Ant2	5230	14.41	≤30	16.41	≤23.01	PASS
	Ant1	5755	14.49	≤30	16.49	≤30	PASS
	Ant2	5755	14.55	≤30	16.55	≤30	PASS
	Ant1	5795	15.21	≤30	17.21	≤30	PASS
	Ant2	5795	14.74	≤30	16.74	≤30	PASS
11AC80SISO	Ant1	5210	14.11	≤30	16.11	≤23.01	PASS
	Ant2	5210	13.83	≤30	15.83	≤23.01	PASS
	Ant1	5775	14.28	≤30	16.28	≤30	PASS
	Ant2	5775	13.45	≤30	15.45	≤30	PASS
11A-CDD	Ant1	5180	15.37	≤30	17.37	≤22.25	PASS
	Ant2	5180	11.90	≤30	13.9	≤22.25	PASS
	total	5180	16.98	≤30	18.98	≤22.25	PASS
	Ant1	5200	15.24	≤30	17.24	≤22.25	PASS
	Ant2	5200	11.49	≤30	13.49	≤22.25	PASS
	total	5200	16.77	≤30	18.77	≤22.25	PASS
	Ant1	5240	14.87	≤30	16.87	≤22.25	PASS
	Ant2	5240	11.56	≤30	13.56	≤22.25	PASS
	total	5240	16.53	≤30	18.53	≤22.25	PASS
	Ant1	5745	14.18	≤30	16.18	≤30	PASS
	Ant2	5745	13.30	≤30	15.3	≤30	PASS
	total	5745	16.77	≤30	18.77	≤30	PASS
	Ant1	5785	14.35	≤30	16.35	≤30	PASS
	Ant2	5785	13.31	≤30	15.31	≤30	PASS
	total	5785	16.87	≤30	18.87	≤30	PASS

	Ant1	5825	14.29	≤30	16.29	≤30	PASS
	Ant2	5825	13.77	≤30	15.77	≤30	PASS
	total	5825	17.05	≤30	19.05	≤30	PASS
11N20MIMO	Ant1	5180	15.16	≤30	17.16	≤22.54	PASS
	Ant2	5180	11.76	≤30	13.76	≤22.54	PASS
	total	5180	16.79	≤30	18.79	≤22.54	PASS
	Ant1	5200	15.31	≤30	17.31	≤22.54	PASS
	Ant2	5200	11.62	≤30	13.62	≤22.54	PASS
	total	5200	16.86	≤30	18.86	≤22.54	PASS
	Ant1	5240	15.07	≤30	17.07	≤22.54	PASS
	Ant2	5240	11.43	≤30	13.43	≤22.54	PASS
	total	5240	16.63	≤30	18.63	≤22.54	PASS
	Ant1	5745	13.87	≤30	15.87	≤30	PASS
	Ant2	5745	13.26	≤30	15.26	≤30	PASS
	total	5745	16.59	≤30	18.59	≤30	PASS
	Ant1	5785	14.61	≤30	16.61	≤30	PASS
	Ant2	5785	13.99	≤30	15.99	≤30	PASS
	total	5785	17.32	≤30	19.32	≤30	PASS
	Ant1	5825	14.77	≤30	16.77	≤30	PASS
	Ant2	5825	14.24	≤30	16.24	≤30	PASS
	total	5825	17.52	≤30	19.52	≤30	PASS
11N40MIMO	Ant1	5190	15.57	≤30	17.57	≤23.01	PASS
	Ant2	5190	11.67	≤30	13.67	≤23.01	PASS
	total	5190	17.05	≤30	19.05	≤23.01	PASS
	Ant1	5230	14.89	≤30	16.89	≤23.01	PASS
	Ant2	5230	11.61	≤30	13.61	≤23.01	PASS
	total	5230	16.56	≤30	18.56	≤23.01	PASS
	Ant1	5755	14.18	≤30	16.18	≤30	PASS
	Ant2	5755	13.52	≤30	15.52	≤30	PASS
	total	5755	16.87	≤30	18.87	≤30	PASS
	Ant1	5795	14.72	≤30	16.72	≤30	PASS
	Ant2	5795	14.09	≤30	16.09	≤30	PASS
	total	5795	17.43	≤30	19.43	≤30	PASS
11AC20MIMO	Ant1	5180	15.35	≤30	17.35	≤22.53	PASS
	Ant2	5180	11.82	≤30	13.82	≤22.53	PASS
	total	5180	16.94	≤30	18.94	≤22.53	PASS
	Ant1	5200	15.13	≤30	17.13	≤22.53	PASS

	Ant2	5200	11.69	≤30	13.69	≤22.53	PASS
	total	5200	16.75	≤30	18.75	≤22.53	PASS
	Ant1	5240	14.80	≤30	16.8	≤22.53	PASS
	Ant2	5240	11.59	≤30	13.59	≤22.53	PASS
	total	5240	16.50	≤30	18.5	≤22.53	PASS
	Ant1	5745	13.94	≤30	15.94	≤30	PASS
	Ant2	5745	12.87	≤30	14.87	≤30	PASS
	total	5745	16.45	≤30	18.45	≤30	PASS
	Ant1	5785	13.51	≤30	15.51	≤30	PASS
	Ant2	5785	13.35	≤30	15.35	≤30	PASS
	total	5785	16.44	≤30	18.44	≤30	PASS
	Ant1	5825	14.45	≤30	16.45	≤30	PASS
	Ant2	5825	13.84	≤30	15.84	≤30	PASS
	total	5825	17.17	≤30	19.17	≤30	PASS
11AC40MIMO	Ant1	5190	15.09	≤30	17.09	≤23.01	PASS
	Ant2	5190	11.64	≤30	13.64	≤23.01	PASS
	total	5190	16.71	≤30	18.71	≤23.01	PASS
	Ant1	5230	14.94	≤30	16.94	≤23.01	PASS
	Ant2	5230	11.42	≤30	13.42	≤23.01	PASS
	total	5230	16.54	≤30	18.54	≤23.01	PASS
	Ant1	5755	15.48	≤30	17.48	≤30	PASS
	Ant2	5755	13.03	≤30	15.03	≤30	PASS
	total	5755	17.43	≤30	19.43	≤30	PASS
	Ant1	5795	14.58	≤30	16.58	≤30	PASS
	Ant2	5795	14.07	≤30	16.07	≤30	PASS
	total	5795	17.34	≤30	19.34	≤30	PASS
11AC80MIMO	Ant1	5210	14.69	≤30	16.69	≤23.01	PASS
	Ant2	5210	11.56	≤30	13.56	≤23.01	PASS
	total	5210	16.41	≤30	18.41	≤23.01	PASS
	Ant1	5775	14.02	≤30	16.02	≤30	PASS
	Ant2	5775	12.95	≤30	14.95	≤30	PASS
	total	5775	16.53	≤30	18.53	≤30	PASS

Note1: Test Plots see Appendix G.

Note2: The Duty Cycle Factor is compensated in the graph.

6.5. Transmit Power Control

6.5.1. Test Limit

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

6.5.2. Test Procedure Used

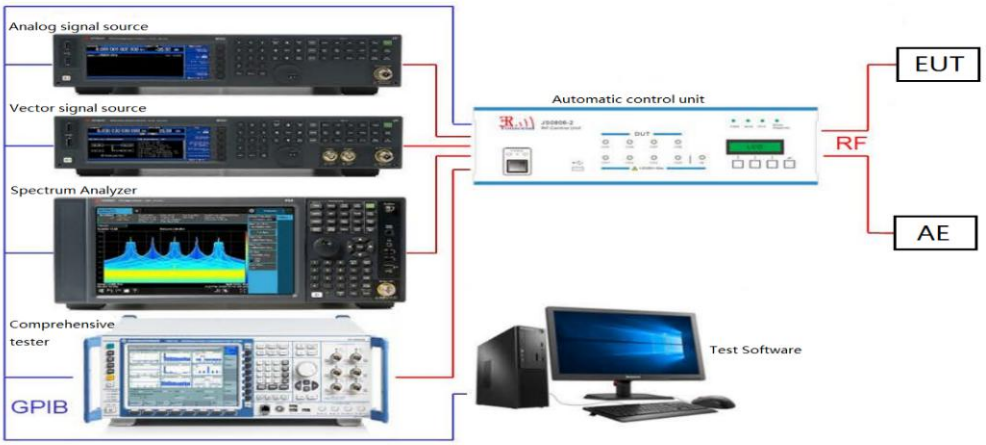
KDB 789033 D02v02r01 - Section E) 3) b) Method PM-G

ANSI C63.10-2013 – Section 12.3.3.2 Method PM-G

6.5.3. Test Setting

Average power measurements were perform only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

6.5.4. Test Setup



6.5.5. Test Result

A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

6.6. Power Spectral Density Measurement

6.6.1. Test Limit

For FCC

For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

For IC

For the band 5.15-5.25 GHz, the e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For the 5.725-5.85 GHz band, the power spectral density shall not exceed 30 dBm in any 500 kHz band.

6.6.2. Test Procedure Used

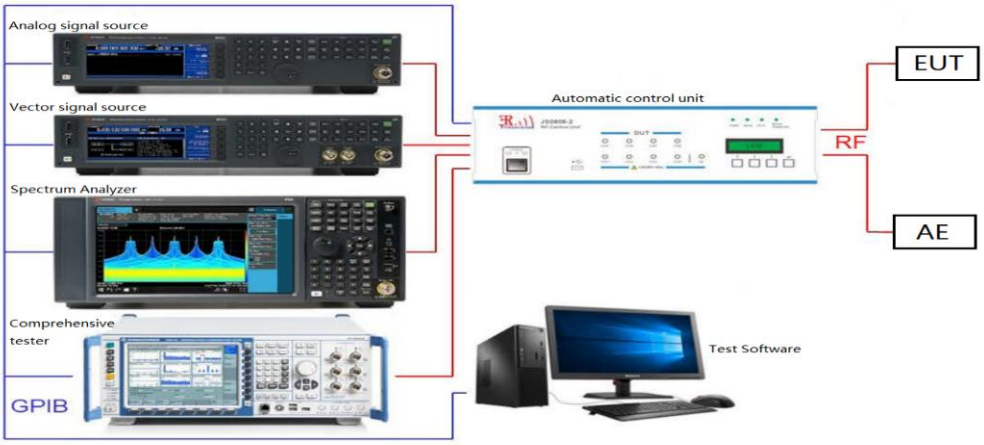
KDB 789033 D02v02r01 - Section F

ANSI C63.10-2013 - Section 12.3.2.2

6.6.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz, if measurement bandwidth of Maximum PSD is specified in 500 kHz,
4. RBW = 100 kHz
5. VBW = 3MHz
6. Number of sweep points ≥ 2 × (span / RBW)
7. Detector = power averaging (Average)
8. Sweep time = auto
9. Trigger = free run
10. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
11. Add 10*log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10*log(1/0.25) = 6 dB if the duty cycle is 25 percent.
12. When the measurement bandwidth of Maximum PSD is specified in 500 kHz, add a constant factor 10*log(500kHz/100kHz) = 7 dB to the measured result

6.6.4. Test Setup



6.6.5. Test Result

TestMode	Antenna	Channel	FCC Result [dBm/MHz]	FCC Limit [dBm/MHz]	IC Result [dBm/MHz]	IC Limit [dBm/MHz]	Verdict
11A	Ant1	5180	4.74	≤17	6.74	≤10	PASS
	Ant2	5180	0.67	≤17	2.67	≤10	PASS
	Ant1	5200	4.62	≤17	6.62	≤10	PASS
	Ant2	5200	4.35	≤17	6.35	≤10	PASS
	Ant1	5240	3.72	≤17	5.72	≤10	PASS
	Ant2	5240	4.22	≤17	6.22	≤10	PASS
	Ant1	5745	1.54	≤30	3.54	≤30	PASS
	Ant2	5745	1.33	≤30	3.33	≤30	PASS
	Ant1	5785	2.05	≤30	4.05	≤30	PASS
	Ant2	5785	1.03	≤30	3.03	≤30	PASS
	Ant1	5825	2.27	≤30	4.27	≤30	PASS
	Ant2	5825	1.68	≤30	3.68	≤30	PASS
11N20SISO	Ant1	5180	4.61	≤17	6.61	≤10	PASS
	Ant2	5180	4.85	≤17	6.85	≤10	PASS
	Ant1	5200	4.19	≤17	6.19	≤10	PASS
	Ant2	5200	4.42	≤17	6.42	≤10	PASS
	Ant1	5240	4.46	≤17	6.46	≤10	PASS
	Ant2	5240	3.91	≤17	5.91	≤10	PASS
	Ant1	5745	1.14	≤30	3.14	≤30	PASS
	Ant2	5745	2.02	≤30	4.02	≤30	PASS
	Ant1	5785	1.31	≤30	3.31	≤30	PASS
	Ant2	5785	1.15	≤30	3.15	≤30	PASS
	Ant1	5825	1.99	≤30	3.99	≤30	PASS
	Ant2	5825	1.63	≤30	3.63	≤30	PASS
11N40SISO	Ant1	5190	1.42	≤17	3.42	≤10	PASS
	Ant2	5190	2.1	≤17	4.1	≤10	PASS
	Ant1	5230	1.95	≤17	3.95	≤10	PASS
	Ant2	5230	1.27	≤17	3.27	≤10	PASS
	Ant1	5755	-1.02	≤30	0.98	≤30	PASS
	Ant2	5755	-1.84	≤30	0.16	≤30	PASS
	Ant1	5795	-1.35	≤30	0.65	≤30	PASS
	Ant2	5795	-1.71	≤30	0.29	≤30	PASS
11AC20SISO	Ant1	5180	4.8	≤17	6.8	≤10	PASS
	Ant2	5180	4.42	≤17	6.42	≤10	PASS

	Ant1	5200	4.28	≤17	6.28	≤10	PASS
	Ant2	5200	4.76	≤17	6.76	≤10	PASS
	Ant1	5240	4.13	≤17	6.13	≤10	PASS
	Ant2	5240	3.54	≤17	5.54	≤10	PASS
	Ant1	5745	1.71	≤30	3.71	≤30	PASS
	Ant2	5745	2.27	≤30	4.27	≤30	PASS
	Ant1	5785	2.2	≤30	4.2	≤30	PASS
	Ant2	5785	0.78	≤30	2.78	≤30	PASS
	Ant1	5825	3.23	≤30	5.23	≤30	PASS
	Ant2	5825	1.96	≤30	3.96	≤30	PASS
11AC40SISO	Ant1	5190	1.39	≤17	3.39	≤10	PASS
	Ant2	5190	1.62	≤17	3.62	≤10	PASS
	Ant1	5230	1.36	≤17	3.36	≤10	PASS
	Ant2	5230	1.14	≤17	3.14	≤10	PASS
	Ant1	5755	-1.58	≤30	0.42	≤30	PASS
	Ant2	5755	-1.57	≤30	0.43	≤30	PASS
	Ant1	5795	-0.6	≤30	1.4	≤30	PASS
	Ant2	5795	-1.53	≤30	0.47	≤30	PASS
11AC80SISO	Ant1	5210	-2.52	≤17	-0.52	≤10	PASS
	Ant2	5210	-2.9	≤17	-0.9	≤10	PASS
	Ant1	5775	-4.99	≤30	-2.99	≤30	PASS
	Ant2	5775	-5.74	≤30	-3.74	≤30	PASS
11A-CDD	Ant1	5180	3.08	≤17	5.08	≤10	PASS
	Ant2	5180	-0.64	≤17	1.36	≤10	PASS
	total	5180	4.62	≤17	9.62	≤10	PASS
	Ant1	5200	3.24	≤17	5.24	≤10	PASS
	Ant2	5200	-1.18	≤17	0.82	≤10	PASS
	total	5200	4.58	≤17	9.58	≤10	PASS
	Ant1	5240	3.39	≤17	5.39	≤10	PASS
	Ant2	5240	-1.29	≤17	0.71	≤10	PASS
	total	5240	4.66	≤17	9.66	≤10	PASS
	Ant1	5745	2.48	≤30	4.48	≤30	PASS
	Ant2	5745	0.44	≤30	2.44	≤30	PASS
	total	5745	4.59	≤30	9.59	≤30	PASS
	Ant1	5785	1.35	≤30	3.35	≤30	PASS
	Ant2	5785	0.48	≤30	2.48	≤30	PASS
	total	5785	3.95	≤30	8.95	≤30	PASS

	Ant1	5825	1.65	≤30	3.65	≤30	PASS
	Ant2	5825	0.99	≤30	2.99	≤30	PASS
	total	5825	4.34	≤30	9.34	≤30	PASS
11N20MIMO	Ant1	5180	3.03	≤17	5.03	≤10	PASS
	Ant2	5180	-0.85	≤17	1.15	≤10	PASS
	total	5180	4.52	≤17	9.52	≤10	PASS
	Ant1	5200	2.89	≤17	4.89	≤10	PASS
	Ant2	5200	-1.1	≤17	0.9	≤10	PASS
	total	5200	4.35	≤17	9.35	≤10	PASS
	Ant1	5240	2.74	≤17	4.74	≤10	PASS
	Ant2	5240	-0.91	≤17	1.09	≤10	PASS
	total	5240	4.30	≤17	9.3	≤10	PASS
	Ant1	5745	1.19	≤30	3.19	≤30	PASS
	Ant2	5745	-0.1	≤30	1.9	≤30	PASS
	total	5745	3.60	≤30	8.6	≤30	PASS
	Ant1	5785	1.6	≤30	3.6	≤30	PASS
	Ant2	5785	0.97	≤30	2.97	≤30	PASS
	total	5785	4.31	≤30	9.31	≤30	PASS
	Ant1	5825	1.73	≤30	3.73	≤30	PASS
	Ant2	5825	0.86	≤30	2.86	≤30	PASS
	total	5825	4.33	≤30	9.33	≤30	PASS
11N40MIMO	Ant1	5190	2.49	≤17	4.49	≤10	PASS
	Ant2	5190	-1.52	≤17	0.48	≤10	PASS
	total	5190	3.94	≤17	8.94	≤10	PASS
	Ant1	5230	1.57	≤17	3.57	≤10	PASS
	Ant2	5230	-1.29	≤17	0.71	≤10	PASS
	total	5230	3.38	≤17	8.38	≤10	PASS
	Ant1	5755	-1.74	≤30	0.26	≤30	PASS
	Ant2	5755	-2.68	≤30	-0.68	≤30	PASS
	total	5755	0.83	≤30	5.83	≤30	PASS
	Ant1	5795	-1.56	≤30	0.44	≤30	PASS
	Ant2	5795	-1.89	≤30	0.11	≤30	PASS
	total	5795	1.29	≤30	6.29	≤30	PASS
11AC20MIMO	Ant1	5180	3.4	≤17	5.4	10	PASS
	Ant2	5180	-0.34	≤17	1.66	≤10	PASS
	total	5180	4.93	≤17	9.93	≤10	PASS
	Ant1	5200	2.72	≤17	4.72	≤10	PASS

	Ant2	5200	-1.19	≤17	0.81	≤10	PASS
	total	5200	4.20	≤17	9.2	≤10	PASS
	Ant1	5240	2.7	≤17	4.7	≤10	PASS
	Ant2	5240	-0.32	≤17	1.68	≤10	PASS
	total	5240	4.46	≤17	9.46	≤10	PASS
	Ant1	5745	0.31	≤30	2.31	≤30	PASS
	Ant2	5745	0.46	≤30	2.46	≤30	PASS
	total	5745	3.40	≤30	8.4	≤30	PASS
	Ant1	5785	0.3	≤30	2.3	≤30	PASS
	Ant2	5785	-0.05	≤30	1.95	≤30	PASS
	total	5785	3.14	≤30	8.14	≤30	PASS
	Ant1	5825	1.25	≤30	3.25	≤30	PASS
	Ant2	5825	1.16	≤30	3.16	≤30	PASS
	total	5825	4.22	≤30	9.22	≤30	PASS
11AC40MIMO	Ant1	5190	1.93	≤17	3.93	≤10	PASS
	Ant2	5190	-1.81	≤17	0.19	≤10	PASS
	total	5190	3.46	≤17	8.46	≤10	PASS
	Ant1	5230	1.51	≤17	3.51	≤10	PASS
	Ant2	5230	-1.62	≤17	0.38	≤10	PASS
	total	5230	3.23	≤17	8.23	≤10	PASS
	Ant1	5755	-0.55	≤30	1.45	≤30	PASS
	Ant2	5755	-2.51	≤30	-0.51	≤30	PASS
	total	5755	1.59	≤30	6.59	≤30	PASS
	Ant1	5795	-2.07	≤30	-0.07	≤30	PASS
	Ant2	5795	-2.02	≤30	-0.02	≤30	PASS
	total	5795	0.97	≤30	5.97	≤30	PASS
11AC80MIMO	Ant1	5210	-1.92	≤17	0.08	≤10	PASS
	Ant2	5210	-4.68	≤17	-2.68	≤10	PASS
	total	5210	-0.07	≤17	4.93	≤10	PASS
	Ant1	5775	-5.42	≤30	-3.42	≤30	PASS
	Ant2	5775	-5.99	≤30	-3.99	≤30	PASS
	total	5775	-2.69	≤30	-2.31	≤30	PASS

Note1: Test Plots see Appendix H.

Note2:The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

Note3:The Duty Cycle Factor and RBW Factor is compensated in the graph.

6.7. Frequency Stability Measurement

6.7.1. Test Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

6.7.2. Test Procedure Used

Frequency Stability Under Temperature Variations:

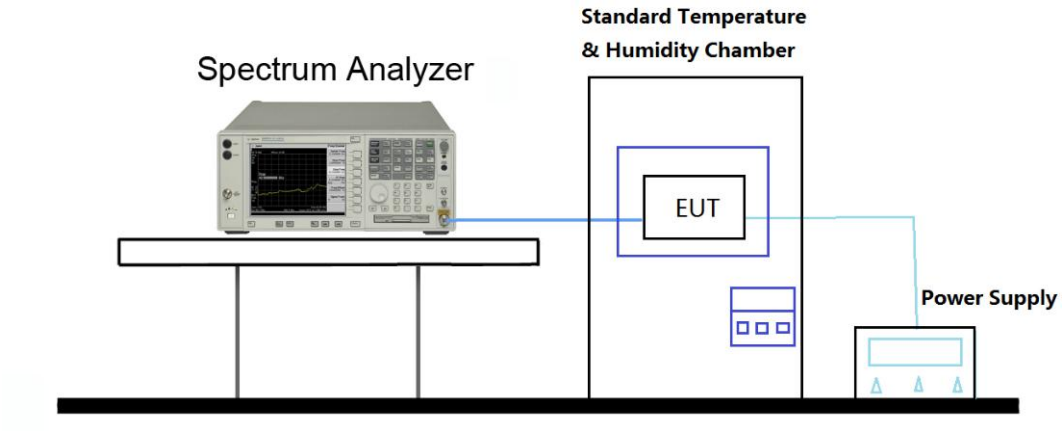
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, record the maximum frequency change.

6.7.3. Test Setup



6.7.4. Test Result

Voltage								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	NT	-81000	-15.637066	20	PASS
	Ant2	5180	NV	NT	-76000	-14.671815	20	PASS
	Ant1	5200	NV	NT	-75000	-14.423077	20	PASS
	Ant2	5200	NV	NT	-70000	-13.461538	20	PASS
	Ant1	5240	NV	NT	-78000	-14.885496	20	PASS
	Ant2	5240	NV	NT	-71000	-13.549618	20	PASS
	Ant1	5745	NV	NT	-82000	-14.273281	20	PASS
	Ant2	5745	NV	NT	-76000	-13.228895	20	PASS
	Ant1	5785	NV	NT	-91000	-15.730337	20	PASS
	Ant2	5785	NV	NT	-86000	-14.866033	20	PASS
	Ant1	5825	NV	NT	-86000	-14.763948	20	PASS
	Ant2	5825	NV	NT	-81000	-13.905579	20	PASS
11N20SISO	Ant1	5180	NV	NT	-79000	-15.250965	20	PASS
	Ant2	5180	NV	NT	-71000	-13.706564	20	PASS
	Ant1	5200	NV	NT	-71000	-13.653846	20	PASS
	Ant2	5200	NV	NT	-70000	-13.461538	20	PASS
	Ant1	5240	NV	NT	-77000	-14.694656	20	PASS
	Ant2	5240	NV	NT	-70000	-13.358779	20	PASS
	Ant1	5745	NV	NT	-76000	-13.228895	20	PASS
	Ant2	5745	NV	NT	-78000	-13.577023	20	PASS
	Ant1	5785	NV	NT	-88000	-15.211755	20	PASS
	Ant2	5785	NV	NT	-85000	-14.693172	20	PASS
	Ant1	5825	NV	NT	-84000	-14.420601	20	PASS
	Ant2	5825	NV	NT	-80000	-13.733906	20	PASS
11N40SISO	Ant1	5190	NV	NT	-91000	-17.533719	20	PASS
	Ant2	5190	NV	NT	-91000	-17.533719	20	PASS
	Ant1	5230	NV	NT	-93000	-17.782027	20	PASS
	Ant2	5230	NV	NT	-92000	-17.590822	20	PASS
	Ant1	5755	NV	NT	-98000	-17.028671	20	PASS
	Ant2	5755	NV	NT	-96000	-16.681147	20	PASS
	Ant1	5795	NV	NT	-103000	-17.773943	20	PASS
	Ant2	5795	NV	NT	-99000	-17.083693	20	PASS
11AC20SIS	Ant1	5180	NV	NT	-78000	-15.057915	20	PASS

O	Ant2	5180	NV	NT	-70000	-13.513514	20	PASS
	Ant1	5200	NV	NT	-70000	-13.461538	20	PASS
	Ant2	5200	NV	NT	-69000	-13.269231	20	PASS
	Ant1	5240	NV	NT	-72000	-13.740458	20	PASS
	Ant2	5240	NV	NT	-71000	-13.549618	20	PASS
	Ant1	5745	NV	NT	-76000	-13.228895	20	PASS
	Ant2	5745	NV	NT	-78000	-13.577023	20	PASS
	Ant1	5785	NV	NT	-87000	-15.038894	20	PASS
	Ant2	5785	NV	NT	-82000	-14.174589	20	PASS
	Ant1	5825	NV	NT	-83000	-14.248927	20	PASS
	Ant2	5825	NV	NT	-80000	-13.733906	20	PASS
11AC40SISO	Ant1	5190	NV	NT	-91000	-17.533719	20	PASS
	Ant2	5190	NV	NT	-90000	-17.34104	20	PASS
	Ant1	5230	NV	NT	-92000	-17.590822	20	PASS
	Ant2	5230	NV	NT	-92000	-17.590822	20	PASS
	Ant1	5755	NV	NT	-97000	-16.854909	20	PASS
	Ant2	5755	NV	NT	-97000	-16.854909	20	PASS
	Ant1	5795	NV	NT	-102000	-17.601381	20	PASS
	Ant2	5795	NV	NT	-98000	-16.91113	20	PASS
11AC80SISO	Ant1	5210	NV	NT	-91000	-17.466411	20	PASS
	Ant2	5210	NV	NT	-91000	-17.466411	20	PASS
	Ant1	5775	NV	NT	-104000	-18.008658	20	PASS
	Ant2	5775	NV	NT	-103000	-17.835498	20	PASS
11A-CDD	Ant1	5180	NV	NT	-70000	-13.513514	20	PASS
	Ant2	5180	NV	NT	-70000	-13.513514	20	PASS
	Ant1	5200	NV	NT	-69000	-13.269231	20	PASS
	Ant2	5200	NV	NT	-68000	-13.076923	20	PASS
	Ant1	5240	NV	NT	-70000	-13.358779	20	PASS
	Ant2	5240	NV	NT	-70000	-13.358779	20	PASS
	Ant1	5745	NV	NT	-77000	-13.402959	20	PASS
	Ant2	5745	NV	NT	-77000	-13.402959	20	PASS
	Ant1	5785	NV	NT	-83000	-14.34745	20	PASS
	Ant2	5785	NV	NT	-83000	-14.34745	20	PASS
	Ant1	5825	NV	NT	-78000	-13.390558	20	PASS
	Ant2	5825	NV	NT	-78000	-13.390558	20	PASS
11N20MIMO	Ant1	5180	NV	NT	-70000	-13.513514	20	PASS
	Ant2	5180	NV	NT	-77000	-14.864865	20	PASS

	Ant1	5200	NV	NT	-69000	-13.269231	20	PASS
	Ant2	5200	NV	NT	-81000	-15.576923	20	PASS
	Ant1	5240	NV	NT	-70000	-13.358779	20	PASS
	Ant2	5240	NV	NT	-70000	-13.358779	20	PASS
	Ant1	5745	NV	NT	-78000	-13.577023	20	PASS
	Ant2	5745	NV	NT	-77000	-13.402959	20	PASS
	Ant1	5785	NV	NT	-83000	-14.34745	20	PASS
	Ant2	5785	NV	NT	-80000	-13.828868	20	PASS
	Ant1	5825	NV	NT	-78000	-13.390558	20	PASS
	Ant2	5825	NV	NT	-78000	-13.390558	20	PASS
11N40MIMO	Ant1	5190	NV	NT	-90000	-17.34104	20	PASS
	Ant2	5190	NV	NT	-90000	-17.34104	20	PASS
	Ant1	5230	NV	NT	-92000	-17.590822	20	PASS
	Ant2	5230	NV	NT	-89000	-17.017208	20	PASS
	Ant1	5755	NV	NT	-96000	-16.681147	20	PASS
	Ant2	5755	NV	NT	-96000	-16.681147	20	PASS
	Ant1	5795	NV	NT	-97000	-16.738568	20	PASS
	Ant2	5795	NV	NT	-98000	-16.91113	20	PASS
11AC20MIMO	Ant1	5180	NV	NT	-71000	-13.706564	20	PASS
	Ant2	5180	NV	NT	-71000	-13.706564	20	PASS
	Ant1	5200	NV	NT	-77000	-14.807692	20	PASS
	Ant2	5200	NV	NT	-76000	-14.615385	20	PASS
	Ant1	5240	NV	NT	-70000	-13.358779	20	PASS
	Ant2	5240	NV	NT	-70000	-13.358779	20	PASS
	Ant1	5745	NV	NT	-77000	-13.402959	20	PASS
	Ant2	5745	NV	NT	-77000	-13.402959	20	PASS
	Ant1	5785	NV	NT	-80000	-13.828868	20	PASS
	Ant2	5785	NV	NT	-80000	-13.828868	20	PASS
	Ant1	5825	NV	NT	-77000	-13.218884	20	PASS
	Ant2	5825	NV	NT	-76000	-13.04721	20	PASS
11AC40MIMO	Ant1	5190	NV	NT	-90000	-17.34104	20	PASS
	Ant2	5190	NV	NT	-90000	-17.34104	20	PASS
	Ant1	5230	NV	NT	-89000	-17.017208	20	PASS
	Ant2	5230	NV	NT	-87000	-16.634799	20	PASS
	Ant1	5755	NV	NT	-96000	-16.681147	20	PASS
	Ant2	5755	NV	NT	-96000	-16.681147	20	PASS
	Ant1	5795	NV	NT	-99000	-17.083693	20	PASS

	Ant2	5795	NV	NT	-97000	-16.738568	20	PASS
11AC80MIMO	Ant1	5210	NV	NT	-90000	-17.274472	20	PASS
	Ant2	5210	NV	NT	-90000	-17.274472	20	PASS
	Ant1	5775	NV	NT	-102000	-17.662338	20	PASS
	Ant2	5775	NV	NT	-102000	-17.662338	20	PASS

Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	HT	-79000	-15.250965	20	PASS
	Ant2	5180	NV	HT	-76000	-14.671815	20	PASS
	Ant1	5200	NV	HT	-74000	-14.230769	20	PASS
	Ant2	5200	NV	HT	-70000	-13.461538	20	PASS
	Ant1	5240	NV	HT	-77000	-14.694656	20	PASS
	Ant2	5240	NV	HT	-71000	-13.549618	20	PASS
	Ant1	5745	NV	HT	-81000	-14.099217	20	PASS
	Ant2	5745	NV	HT	-77000	-13.402959	20	PASS
	Ant1	5785	NV	HT	-89000	-15.384615	20	PASS
	Ant2	5785	NV	HT	-86000	-14.866033	20	PASS
	Ant1	5825	NV	HT	-85000	-14.592275	20	PASS
	Ant2	5825	NV	HT	-81000	-13.905579	20	PASS
11N20SISO	Ant1	5180	NV	HT	-79000	-15.250965	20	PASS
	Ant2	5180	NV	HT	-70000	-13.513514	20	PASS
	Ant1	5200	NV	HT	-70000	-13.461538	20	PASS
	Ant2	5200	NV	HT	-70000	-13.461538	20	PASS
	Ant1	5240	NV	HT	-76000	-14.503817	20	PASS
	Ant2	5240	NV	HT	-69000	-13.167939	20	PASS
	Ant1	5745	NV	HT	-76000	-13.228895	20	PASS
	Ant2	5745	NV	HT	-78000	-13.577023	20	PASS
	Ant1	5785	NV	HT	-87000	-15.038894	20	PASS
	Ant2	5785	NV	HT	-84000	-14.520311	20	PASS
	Ant1	5825	NV	HT	-84000	-14.420601	20	PASS
	Ant2	5825	NV	HT	-80000	-13.733906	20	PASS
11N40SISO	Ant1	5190	NV	HT	-92000	-17.726397	20	PASS
	Ant2	5190	NV	HT	-91000	-17.533719	20	PASS
	Ant1	5230	NV	HT	-93000	-17.782027	20	PASS
	Ant2	5230	NV	HT	-92000	-17.590822	20	PASS
	Ant1	5755	NV	HT	-97000	-16.854909	20	PASS

	Ant2	5755	NV	HT	-96000	-16.681147	20	PASS
	Ant1	5795	NV	HT	-102000	-17.601381	20	PASS
	Ant2	5795	NV	HT	-99000	-17.083693	20	PASS
11AC20SISO	Ant1	5180	NV	HT	-78000	-15.057915	20	PASS
	Ant2	5180	NV	HT	-69000	-13.320463	20	PASS
	Ant1	5200	NV	HT	-70000	-13.461538	20	PASS
	Ant2	5200	NV	HT	-70000	-13.461538	20	PASS
	Ant1	5240	NV	HT	-72000	-13.740458	20	PASS
	Ant2	5240	NV	HT	-70000	-13.358779	20	PASS
	Ant1	5745	NV	HT	-75000	-13.05483	20	PASS
	Ant2	5745	NV	HT	-79000	-13.751088	20	PASS
	Ant1	5785	NV	HT	-87000	-15.038894	20	PASS
	Ant2	5785	NV	HT	-81000	-14.001729	20	PASS
	Ant1	5825	NV	HT	-83000	-14.248927	20	PASS
	Ant2	5825	NV	HT	-80000	-13.733906	20	PASS
11AC40SISO	Ant1	5190	NV	HT	-92000	-17.726397	20	PASS
	Ant2	5190	NV	HT	-90000	-17.34104	20	PASS
	Ant1	5230	NV	HT	-92000	-17.590822	20	PASS
	Ant2	5230	NV	HT	-92000	-17.590822	20	PASS
	Ant1	5755	NV	HT	-97000	-16.854909	20	PASS
	Ant2	5755	NV	HT	-97000	-16.854909	20	PASS
	Ant1	5795	NV	HT	-100000	-17.256255	20	PASS
	Ant2	5795	NV	HT	-97000	-16.738568	20	PASS
11AC80SISO	Ant1	5210	NV	HT	-90000	-17.274472	20	PASS
	Ant2	5210	NV	HT	-92000	-17.658349	20	PASS
	Ant1	5775	NV	HT	-103000	-17.835498	20	PASS
	Ant2	5775	NV	HT	-101000	-17.489177	20	PASS
11A-CDD	Ant1	5180	NV	HT	-70000	-13.513514	20	PASS
	Ant2	5180	NV	HT	-69000	-13.320463	20	PASS
	Ant1	5200	NV	HT	-69000	-13.269231	20	PASS
	Ant2	5200	NV	HT	-69000	-13.269231	20	PASS
	Ant1	5240	NV	HT	-71000	-13.549618	20	PASS
	Ant2	5240	NV	HT	-71000	-13.549618	20	PASS
	Ant1	5745	NV	HT	-77000	-13.402959	20	PASS
	Ant2	5745	NV	HT	-78000	-13.577023	20	PASS
	Ant1	5785	NV	HT	-83000	-14.34745	20	PASS
	Ant2	5785	NV	HT	-83000	-14.34745	20	PASS

	Ant1	5825	NV	HT	-78000	-13.390558	20	PASS
	Ant2	5825	NV	HT	-77000	-13.218884	20	PASS
11N20MIMO	Ant1	5180	NV	HT	-70000	-13.513514	20	PASS
	Ant2	5180	NV	HT	-76000	-14.671815	20	PASS
	Ant1	5200	NV	HT	-69000	-13.269231	20	PASS
	Ant2	5200	NV	HT	-81000	-15.576923	20	PASS
	Ant1	5240	NV	HT	-70000	-13.358779	20	PASS
	Ant2	5240	NV	HT	-70000	-13.358779	20	PASS
	Ant1	5745	NV	HT	-77000	-13.402959	20	PASS
	Ant2	5745	NV	HT	-78000	-13.577023	20	PASS
	Ant1	5785	NV	HT	-81000	-14.001729	20	PASS
	Ant2	5785	NV	HT	-80000	-13.828868	20	PASS
	Ant1	5825	NV	HT	-78000	-13.390558	20	PASS
	Ant2	5825	NV	HT	-77000	-13.218884	20	PASS
11N40MIMO	Ant1	5190	NV	HT	-91000	-17.533719	20	PASS
	Ant2	5190	NV	HT	-91000	-17.533719	20	PASS
	Ant1	5230	NV	HT	-92000	-17.590822	20	PASS
	Ant2	5230	NV	HT	-89000	-17.017208	20	PASS
	Ant1	5755	NV	HT	-96000	-16.681147	20	PASS
	Ant2	5755	NV	HT	-96000	-16.681147	20	PASS
	Ant1	5795	NV	HT	-98000	-16.91113	20	PASS
	Ant2	5795	NV	HT	-99000	-17.083693	20	PASS
11AC20MIMO	Ant1	5180	NV	HT	-71000	-13.706564	20	PASS
	Ant2	5180	NV	HT	-70000	-13.513514	20	PASS
	Ant1	5200	NV	HT	-77000	-14.807692	20	PASS
	Ant2	5200	NV	HT	-75000	-14.423077	20	PASS
	Ant1	5240	NV	HT	-70000	-13.358779	20	PASS
	Ant2	5240	NV	HT	-69000	-13.167939	20	PASS
	Ant1	5745	NV	HT	-77000	-13.402959	20	PASS
	Ant2	5745	NV	HT	-77000	-13.402959	20	PASS
	Ant1	5785	NV	HT	-80000	-13.828868	20	PASS
	Ant2	5785	NV	HT	-78000	-13.483146	20	PASS
	Ant1	5825	NV	HT	-76000	-13.04721	20	PASS
	Ant2	5825	NV	HT	-76000	-13.04721	20	PASS
11AC40MIMO	Ant1	5190	NV	HT	-90000	-17.34104	20	PASS
	Ant2	5190	NV	HT	-90000	-17.34104	20	PASS
	Ant1	5230	NV	HT	-88000	-16.826004	20	PASS

	Ant2	5230	NV	HT	-88000	-16.826004	20	PASS
	Ant1	5755	NV	HT	-96000	-16.681147	20	PASS
	Ant2	5755	NV	HT	-97000	-16.854909	20	PASS
	Ant1	5795	NV	HT	-98000	-16.91113	20	PASS
	Ant2	5795	NV	HT	-97000	-16.738568	20	PASS
11AC80MIMO	Ant1	5210	NV	HT	-90000	-17.274472	20	PASS
	Ant2	5210	NV	HT	-90000	-17.274472	20	PASS
	Ant1	5775	NV	HT	-102000	-17.662338	20	PASS
	Ant2	5775	NV	HT	-103000	-17.835498	20	PASS

Note1: Test Plots see Appendix I.

Note2: Frequency Tolerance (ppm) = {[Measured Frequency (Hz) - Declared Frequency (Hz)] / Declared Frequency (Hz)} *106.

6.8. Conducted Band Edge

6.8.1. Test Settitng

(a) Set the center frequency and span to encompass frequency range to be measured

(b) RBW = 100kHz

(c) VBW = 300kHz

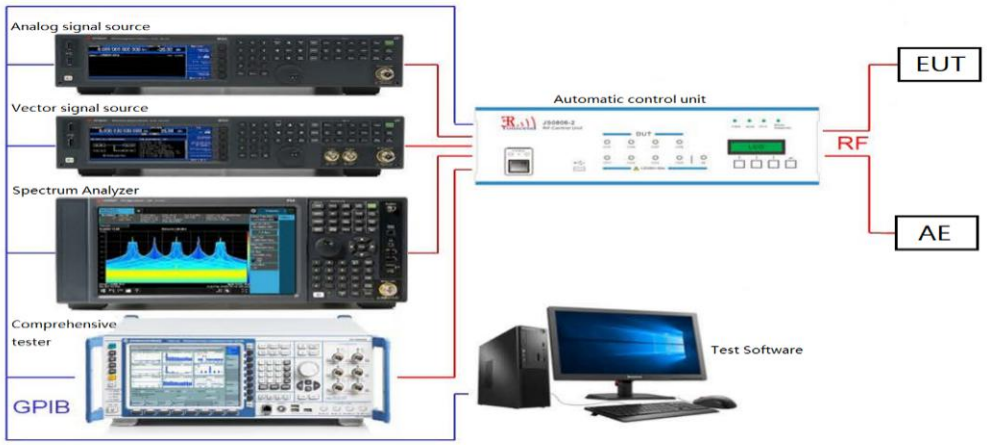
(d) Detector = Peak

(e) Trace mode = max hold

(f) Sweep time = auto couple

(g) The trace was allowed to stabilize

6.8.2. Test Setup



6.8.3. Test Result(Conducted Spurious Emission)

TestMode	Antenna	Channel	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	5078.85	-44.82	≤-27	PASS
			5360~40000	6906.1	-35.96	≤-27	PASS
	Ant2	5180	30~5140	5126.2	-46.54	≤-27	PASS
			5360~40000	6907.25	-33.71	≤-27	PASS
	Ant1	5200	30~5140	5064.54	-45.39	≤-27	PASS
			5360~40000	6933.81	-36.5	≤-27	PASS
	Ant2	5200	30~5140	5113.6	-44.87	≤-27	PASS
			5360~40000	6933.81	-30.25	≤-27	PASS
	Ant1	5240	30~5140	5050.06	-44.87	≤-27	PASS
			5360~40000	6986.93	-39.19	≤-27	PASS
	Ant2	5240	30~5140	5130.12	-45.08	≤-27	PASS
			5360~40000	6986.93	-31.92	≤-27	PASS
	Ant1	5745	30~5650	5452.55	-39.56	≤-27	PASS
			5925~40000	38113.38	-40.32	≤-27	PASS
	Ant2	5745	30~5650	5099.24	-38.62	≤-27	PASS
			5925~40000	38608.6	-40.33	≤-27	PASS
	Ant1	5785	30~5650	5290.32	-39.26	≤-27	PASS
			5925~40000	38196.3	-40.48	≤-27	PASS
	Ant2	5785	30~5650	5476.53	-41.78	≤-27	PASS
			5925~40000	38122.47	-40.71	≤-27	PASS
	Ant1	5825	30~5650	5301.19	-42.16	≤-27	PASS
			5925~40000	38617.69	-39.88	≤-27	PASS
	Ant2	5825	30~5650	5324.23	-41.32	≤-27	PASS
			5925~40000	38136.1	-40.26	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	5118.88	-45.36	≤-27	PASS
			5360~40000	6907.25	-36.48	≤-27	PASS
	Ant2	5180	30~5140	5045.47	-44.7	≤-27	PASS
			5360~40000	6907.25	-29.62	≤-27	PASS
	Ant1	5200	30~5140	5121.26	-35.4	≤-27	PASS
			5360~40000	6933.81	-36.91	≤-27	PASS
	Ant2	5200	30~5140	5097.76	-44.34	≤-27	PASS
			5360~40000	6933.81	-30.29	≤-27	PASS
	Ant1	5240	30~5140	5123.65	-36.24	≤-27	PASS
			5360~40000	6986.93	-38.76	≤-27	PASS

	Ant2	5240	30~5140	5086.35	-44.85	≤-27	PASS
			5360~40000	6986.93	-31.83	≤-27	PASS
	Ant1	5745	30~5650	5096.43	-38.75	≤-27	PASS
			5925~40000	38836.91	-38.47	≤-27	PASS
	Ant2	5745	30~5650	5561.58	-40.15	≤-27	PASS
			5925~40000	38266.72	-39.95	≤-27	PASS
	Ant1	5785	30~5650	5341.46	-40.26	≤-27	PASS
			5925~40000	38119.06	-40.01	≤-27	PASS
	Ant2	5785	30~5650	5294.63	-39.88	≤-27	PASS
			5925~40000	38207.66	-40.66	≤-27	PASS
	Ant1	5825	30~5650	5258.47	-42.1	≤-27	PASS
			5925~40000	38924.37	-39.51	≤-27	PASS
	Ant2	5825	30~5650	5514.75	-41.3	≤-27	PASS
			5925~40000	38706.29	-40.09	≤-27	PASS
11N40SISO	Ant1	5190	30~5140	5139.66	-42.39	≤-27	PASS
			5360~40000	6919.95	-36.81	≤-27	PASS
	Ant2	5190	30~5140	5140	-42.73	≤-27	PASS
			5360~40000	6919.95	-33.66	≤-27	PASS
	Ant1	5230	30~5140	5098.1	-45.61	≤-27	PASS
			5360~40000	6973.07	-37.52	≤-27	PASS
	Ant2	5230	30~5140	3789.26	-45.96	≤-27	PASS
			5360~40000	6973.07	-35.17	≤-27	PASS
	Ant1	5755	30~5650	5097.55	-42.66	≤-27	PASS
			5925~40000	38256.5	-40.64	≤-27	PASS
	Ant2	5755	30~5650	5120.41	-43.48	≤-27	PASS
			5925~40000	38793.75	-40.51	≤-27	PASS
	Ant1	5795	30~5650	5315.24	-42.85	≤-27	PASS
			5925~40000	38875.53	-39.73	≤-27	PASS
	Ant2	5795	30~5650	5246.48	-42.98	≤-27	PASS
			5925~40000	38169.04	-40.24	≤-27	PASS
11AC20SISO	Ant1	5180	30~5140	5135.91	-45	≤-27	PASS
			5360~40000	6906.1	-35.63	≤-27	PASS
	Ant2	5180	30~5140	5016.85	-44.73	≤-27	PASS
			5360~40000	6906.1	-29.59	≤-27	PASS
	Ant1	5200	30~5140	5036.44	-43.63	≤-27	PASS
			5360~40000	6933.81	-36.63	≤-27	PASS
	Ant2	5200	30~5140	5110.53	-45	≤-27	PASS

			5360~40000	6933.81	-30.25	≤-27	PASS
	Ant1	5240	30~5140	5134.21	-45.54	≤-27	PASS
			5360~40000	6986.93	-38.04	≤-27	PASS
	Ant2	5240	30~5140	5078.68	-44.94	≤-27	PASS
			5360~40000	6986.93	-31.49	≤-27	PASS
	Ant1	5745	30~5650	5102.05	-38.5	≤-27	PASS
			5925~40000	38945.95	-40.13	≤-27	PASS
	Ant2	5745	30~5650	5099.61	-39.05	≤-27	PASS
			5925~40000	38895.97	-40.18	≤-27	PASS
	Ant1	5785	30~5650	5139.14	-40.39	≤-27	PASS
			5925~40000	38743.77	-40.94	≤-27	PASS
	Ant2	5785	30~5650	5336.59	-40.74	≤-27	PASS
			5925~40000	38596.11	-40.14	≤-27	PASS
	Ant1	5825	30~5650	5184.48	-41.19	≤-27	PASS
			5925~40000	38167.9	-40.39	≤-27	PASS
	Ant2	5825	30~5650	5429.51	-41.56	≤-27	PASS
			5925~40000	38842.59	-40.47	≤-27	PASS
11AC40SISO	Ant1	5190	30~5140	5138.98	-44.51	≤-27	PASS
			5360~40000	6919.95	-36.12	≤-27	PASS
	Ant2	5190	30~5140	5140	-43.52	≤-27	PASS
			5360~40000	6919.95	-34.21	≤-27	PASS
	Ant1	5230	30~5140	5069.82	-45.5	≤-27	PASS
			5360~40000	6973.07	-37.39	≤-27	PASS
	Ant2	5230	30~5140	4958.94	-45.98	≤-27	PASS
			5360~40000	6973.07	-35.37	≤-27	PASS
	Ant1	5755	30~5650	5115.73	-43.81	≤-27	PASS
			5925~40000	38537.05	-40.4	≤-27	PASS
	Ant2	5755	30~5650	5101.86	-43.54	≤-27	PASS
			5925~40000	38520.01	-40.1	≤-27	PASS
	Ant1	5795	30~5650	5244.61	-42.48	≤-27	PASS
			5925~40000	36269.92	-40.78	≤-27	PASS
	Ant2	5795	30~5650	5138.58	-41.97	≤-27	PASS
			5925~40000	36683.37	-40.26	≤-27	PASS
11AC80SISO	Ant1	5210	30~5140	5134.38	-35	≤-27	PASS
			5360~40000	6946.51	-37.2	≤-27	PASS
	Ant2	5210	30~5140	5134.04	-30.49	≤-27	PASS
			5360~40000	6946.51	-35.71	≤-27	PASS

	Ant1	5775	30~5650	5433.82	-44.18	≤-27	PASS
			5925~40000	38053.18	-39.33	≤-27	PASS
	Ant2	5775	30~5650	5097.55	-43.57	≤-27	PASS
			5925~40000	38907.33	-39.66	≤-27	PASS
11A-CDD	Ant1	5180	30~5140	5060.62	-45.8	≤-27	PASS
			5360~40000	6907.25	-37.86	≤-27	PASS
	Ant2	5180	30~5140	5134.55	-45.52	≤-27	PASS
			5360~40000	6907.25	-31.42	≤-27	PASS
	Ant1	5200	30~5140	5025.02	-45.66	≤-27	PASS
			5360~40000	6933.81	-38.57	≤-27	PASS
	Ant2	5200	30~5140	5036.95	-45.56	≤-27	PASS
			5360~40000	6933.81	-32.14	≤-27	PASS
	Ant1	5240	30~5140	5075.61	-45.24	≤-27	PASS
			5360~40000	6986.93	-39.82	≤-27	PASS
	Ant2	5240	30~5140	4950.25	-44.67	≤-27	PASS
			5360~40000	6986.93	-33.81	≤-27	PASS
	Ant1	5745	30~5650	5099.43	-36.51	≤-27	PASS
			5925~40000	38507.52	-38.87	≤-27	PASS
	Ant2	5745	30~5650	5093.99	-38.1	≤-27	PASS
			5925~40000	38172.44	-40.05	≤-27	PASS
	Ant1	5785	30~5650	5142.89	-41.82	≤-27	PASS
			5925~40000	38094.07	-40.49	≤-27	PASS
	Ant2	5785	30~5650	5147.01	-42.75	≤-27	PASS
			5925~40000	38612.01	-39.89	≤-27	PASS
	Ant1	5825	30~5650	5415.83	-42.79	≤-27	PASS
			5925~40000	35656.57	-40.46	≤-27	PASS
	Ant2	5825	30~5650	5178.67	-42.22	≤-27	PASS
			5925~40000	38909.6	-40.98	≤-27	PASS
11N20MIMO	Ant1	5180	30~5140	5026.56	-44.73	≤-27	PASS
			5360~40000	38859.19	-38.11	≤-27	PASS
	Ant2	5180	30~5140	5129.27	-45.68	≤-27	PASS
			5360~40000	6906.1	-31.96	≤-27	PASS
	Ant1	5200	30~5140	4983.29	-44.12	≤-27	PASS
			5360~40000	6933.81	-39.27	≤-27	PASS
	Ant2	5200	30~5140	5113.26	-45.51	≤-27	PASS
			5360~40000	6933.81	-32.21	≤-27	PASS
	Ant1	5240	30~5140	4873.09	-44.17	≤-27	PASS

			5360~40000	6986.93	-39.03	≤-27	PASS
	Ant2	5240	30~5140	5106.1	-45.31	≤-27	PASS
			5360~40000	6986.93	-33.76	≤-27	PASS
	Ant1	5745	30~5650	5100.74	-39.99	≤-27	PASS
			5925~40000	38859.62	-39.37	≤-27	PASS
	Ant2	5745	30~5650	5094.18	-39.15	≤-27	PASS
			5925~40000	38942.54	-39.49	≤-27	PASS
	Ant1	5785	30~5650	5142.14	-41.97	≤-27	PASS
			5925~40000	38977.75	-40.47	≤-27	PASS
	Ant2	5785	30~5650	5196.09	-42.09	≤-27	PASS
			5925~40000	38658.58	-39.51	≤-27	PASS
	Ant1	5825	30~5650	5503.88	-42.38	≤-27	PASS
			5925~40000	38916.42	-38.6	≤-27	PASS
	Ant2	5825	30~5650	5085.94	-41.89	≤-27	PASS
			5925~40000	38109.97	-39.8	≤-27	PASS
11N40MIMO	Ant1	5190	30~5140	5138.98	-40.72	≤-27	PASS
			5360~40000	5742.19	-33.89	≤-27	PASS
	Ant2	5190	30~5140	5139.32	-44.79	≤-27	PASS
			5360~40000	5752.59	-31.06	≤-27	PASS
	Ant1	5230	30~5140	4869.85	-45	≤-27	PASS
			5360~40000	6973.07	-39.45	≤-27	PASS
	Ant2	5230	30~5140	5122.97	-45.86	≤-27	PASS
			5360~40000	6973.07	-37.52	≤-27	PASS
	Ant1	5755	30~5650	5098.12	-40.86	≤-27	PASS
			5925~40000	38723.32	-40.62	≤-27	PASS
	Ant2	5755	30~5650	5094.56	-42.95	≤-27	PASS
			5925~40000	38533.64	-39.51	≤-27	PASS
	Ant1	5795	30~5650	5457.8	-44.02	≤-27	PASS
			5925~40000	38943.68	-40.3	≤-27	PASS
	Ant2	5795	30~5650	5385.49	-43.03	≤-27	PASS
			5925~40000	38864.17	-39.73	≤-27	PASS
11AC20MIMO	Ant1	5180	30~5140	5076.81	-45.42	≤-27	PASS
			5360~40000	6906.1	-38.47	≤-27	PASS
	Ant2	5180	30~5140	5133.53	-45.43	≤-27	PASS
			5360~40000	6907.25	-31.98	≤-27	PASS
	Ant1	5200	30~5140	5061.82	-45	≤-27	PASS
			5360~40000	6933.81	-38.64	≤-27	PASS

	Ant2	5200	30~5140	5101.33	-45.08	≤-27	PASS
			5360~40000	5741.04	-32.44	≤-27	PASS
	Ant1	5240	30~5140	5097.76	-27.9	≤-27	PASS
			5360~40000	5751.43	-39.41	≤-27	PASS
	Ant2	5240	30~5140	5079.53	-45.17	≤-27	PASS
			5360~40000	6986.93	-34.34	≤-27	PASS
	Ant1	5745	30~5650	5102.8	-38.05	≤-27	PASS
			5925~40000	38909.6	-39.68	≤-27	PASS
	Ant2	5745	30~5650	5097.93	-40.25	≤-27	PASS
			5925~40000	38398.48	-39.54	≤-27	PASS
	Ant1	5785	30~5650	5471.66	-40.34	≤-27	PASS
			5925~40000	38874.39	-39.34	≤-27	PASS
	Ant2	5785	30~5650	5148.51	-41.8	≤-27	PASS
			5925~40000	38906.19	-39.61	≤-27	PASS
	Ant1	5825	30~5650	5493.95	-42.58	≤-27	PASS
			5925~40000	38769.89	-40.01	≤-27	PASS
	Ant2	5825	30~5650	5094.56	-42.42	≤-27	PASS
			5925~40000	38926.64	-39.13	≤-27	PASS
11AC40MIMO	Ant1	5190	30~5140	5139.49	-41.79	≤-27	PASS
			5360~40000	6919.95	-38.34	≤-27	PASS
	Ant2	5190	30~5140	5101.33	-45.61	≤-27	PASS
			5360~40000	6919.95	-36.64	≤-27	PASS
	Ant1	5230	30~5140	5018.55	-46.18	≤-27	PASS
			5360~40000	6973.07	-39.02	≤-27	PASS
	Ant2	5230	30~5140	5059.09	-45.97	≤-27	PASS
			5360~40000	6973.07	-37.37	≤-27	PASS
	Ant1	5755	30~5650	5100.55	-41.47	≤-27	PASS
			5925~40000	38913.01	-40.47	≤-27	PASS
	Ant2	5755	30~5650	5094.74	-42.39	≤-27	PASS
			5925~40000	38930.05	-39.85	≤-27	PASS
	Ant1	5795	30~5650	5153.75	-43.11	≤-27	PASS
			5925~40000	38054.32	-40.06	≤-27	PASS
	Ant2	5795	30~5650	5139.7	-43.59	≤-27	PASS
			5925~40000	38923.23	-39.49	≤-27	PASS
11AC80MIMO	Ant1	5210	30~5140	5133.87	-31.62	≤-27	PASS
			5360~40000	6946.51	-38.85	≤-27	PASS
	Ant2	5210	30~5140	5139.83	-38.93	≤-27	PASS

			5360~40000	6946.51	-37.63	≤-27	PASS
	Ant1	5775	30~5650	5099.61	-42.55	≤-27	PASS
			5925~40000	38973.21	-39.5	≤-27	PASS
	Ant2	5775	30~5650	3850.1	-43.69	≤-27	PASS
			5925~40000	36250.61	-40.08	≤-27	PASS

Note1: Test Plots see Appendix J1.

6.8.4. Test Result(Band edge)

TestMode	Antenna	ChName	Channel	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-42.93	≤-27	PASS
	Ant2	Low	5180	-42.81	≤-27	PASS
	Ant1	High	5240	-45.72	≤-27	PASS
	Ant2	High	5240	-46.03	≤-27	PASS
11N20SISO	Ant1	Low	5180	-42.81	≤-27	PASS
	Ant2	Low	5180	-42.76	≤-27	PASS
	Ant1	High	5240	-46.15	≤-27	PASS
	Ant2	High	5240	-45.33	≤-27	PASS
11N40SISO	Ant1	Low	5190	-35.79	≤-27	PASS
	Ant2	Low	5190	-40.79	≤-27	PASS
	Ant1	High	5230	-45.73	≤-27	PASS
	Ant2	High	5230	-46.25	≤-27	PASS
11AC20SISO	Ant1	Low	5180	-43.31	≤-27	PASS
	Ant2	Low	5180	-39.86	≤-27	PASS
	Ant1	High	5240	-45.45	≤-27	PASS
	Ant2	High	5240	-45	≤-27	PASS
11AC40SISO	Ant1	Low	5190	-36.62	≤-27	PASS
	Ant2	Low	5190	-40.75	≤-27	PASS
	Ant1	High	5230	-46.03	≤-27	PASS
	Ant2	High	5230	-46.04	≤-27	PASS
11AC80SISO	Ant1	Low	5210	-33.8	≤-27	PASS
	Ant2	Low	5210	-33.72	≤-27	PASS
	Ant1	High	5210	-46.12	≤-27	PASS
	Ant2	High	5210	-46.42	≤-27	PASS
11A-CDD	Ant1	Low	5180	-42.42	≤-27	PASS
	Ant2	Low	5180	-42.74	≤-27	PASS
	Ant1	High	5240	-46.18	≤-27	PASS
	Ant2	High	5240	-46.01	≤-27	PASS
11N20MIMO	Ant1	Low	5180	-39.22	≤-27	PASS
	Ant2	Low	5180	-43.67	≤-27	PASS
	Ant1	High	5240	-46.22	≤-27	PASS
	Ant2	High	5240	-45.66	≤-27	PASS
11N40MIMO	Ant1	Low	5190	-36.66	≤-27	PASS

	Ant2	Low	5190	-43.09	≤-27	PASS
	Ant1	High	5230	-45.98	≤-27	PASS
	Ant2	High	5230	-45.64	≤-27	PASS
11AC20MIMO	Ant1	Low	5180	-41.63	≤-27	PASS
	Ant2	Low	5180	-43.35	≤-27	PASS
	Ant1	High	5240	-45.41	≤-27	PASS
	Ant2	High	5240	-45.95	≤-27	PASS
11AC40MIMO	Ant1	Low	5190	-37.72	≤-27	PASS
	Ant2	Low	5190	-43.23	≤-27	PASS
	Ant1	High	5230	-45.17	≤-27	PASS
	Ant2	High	5230	-46.44	≤-27	PASS
11AC80MIMO	Ant1	Low	5210	-35.54	≤-27	PASS
	Ant2	Low	5210	-27.48	≤-27	PASS
	Ant1	High	5210	-46.12	≤-27	PASS
	Ant2	High	5210	-45.69	≤-27	PASS

TestMode	Antenna	ChName	Channel	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5650~5700	-44.53	≤-5.00	PASS
				5700~5720	-44.74	≤14.76	PASS
				5720~5725	-40.67	≤26.30	PASS
				5760~5650	-45.27	≤-27	PASS
	Ant2	Low	5745	5650~5700	-43.93	≤-24.06	PASS
				5700~5720	-44.81	≤15.59	PASS
				5720~5725	-42.05	≤26.83	PASS
				5760~5650	-45.05	≤-27	PASS
	Ant1	High	5825	5850~5855	-44.93	≤20.41	PASS
				5855~5875	-44.55	≤12.44	PASS
				5875~5925	-44.57	≤-10.27	PASS
				5925~5935	-44.5	≤-27	PASS
	Ant2	High	5825	5850~5855	-44.57	≤20.72	PASS
				5855~5875	-44.68	≤10.44	PASS
				5875~5925	-44.74	≤2.51	PASS
				5925~5935	-45.26	≤-27	PASS
11N20SISO	Ant1	Low	5745	5650~5700	-45.12	≤-23.64	PASS
				5700~5720	-45.34	≤13.50	PASS
				5720~5725	-40.89	≤24.73	PASS

				5760~5650	-45.73	≤-27	PASS
	Ant2	Low	5745	5650~5700	-43.8	≤2.23	PASS
				5700~5720	-44.28	≤14.85	PASS
				5720~5725	-41.16	≤24.99	PASS
				5760~5650	-45.62	≤-27	PASS
	Ant1	High	5825	5850~5855	-44.76	≤24.10	PASS
				5855~5875	-44.76	≤11.16	PASS
				5875~5925	-44.45	≤-18.56	PASS
				5925~5935	-45.01	≤-27	PASS
	Ant2	High	5825	5850~5855	-45.26	≤26.26	PASS
				5855~5875	-45.01	≤15.31	PASS
				5875~5925	-44.52	≤-11.67	PASS
				5925~5935	-44.74	≤-27	PASS
11N40SISO	Ant1	Low	5755	5650~5700	-45.41	≤-6.12	PASS
				5700~5720	-37.32	≤14.86	PASS
				5720~5725	-36.89	≤26.82	PASS
				5780~5650	-45.93	≤-27	PASS
	Ant2	Low	5755	5650~5700	-44.38	≤-11.92	PASS
				5700~5720	-37.69	≤14.86	PASS
				5720~5725	-36.59	≤26.82	PASS
				5780~5650	-46.63	≤-27	PASS
	Ant1	High	5795	5850~5855	-45.27	≤22.80	PASS
				5855~5875	-45	≤14.52	PASS
				5875~5925	-43.39	≤-10.07	PASS
				5925~5935	-44.52	≤-27	PASS
	Ant2	High	5795	5850~5855	-45.33	≤18.29	PASS
				5855~5875	-44.07	≤13.87	PASS
				5875~5925	-44.15	≤3.85	PASS
				5925~5935	-45.53	≤-27	PASS
11AC20SIS O	Ant1	Low	5745	5650~5700	-45.08	≤7.77	PASS
				5700~5720	-44.94	≤15.24	PASS
				5720~5725	-40.55	≤26.04	PASS
				5760~5650	-45.27	≤-27	PASS
	Ant2	Low	5745	5650~5700	-44.24	≤7.77	PASS
				5700~5720	-45.05	≤12.79	PASS
				5720~5725	-40.44	≤22.37	PASS
				5760~5650	-45.15	≤-27	PASS

	Ant1	High	5825	5850~5855	-44.68	≤22.57	PASS
				5855~5875	-43.86	≤13.08	PASS
				5875~5925	-44.38	≤-24.86	PASS
				5925~5935	-45.32	≤-27	PASS
	Ant2	High	5825	5850~5855	-43.91	≤17.95	PASS
				5855~5875	-44.61	≤13.73	PASS
				5875~5925	-44.8	≤5.11	PASS
				5925~5935	-45.55	≤-27	PASS
11AC40SISO	Ant1	Low	5755	5650~5700	-44.09	≤4.76	PASS
				5700~5720	-38.83	≤15.05	PASS
				5720~5725	-36.35	≤24.66	PASS
				5780~5650	-46.65	≤-27	PASS
	Ant2	Low	5755	5650~5700	-45.05	≤-0.93	PASS
				5700~5720	-38.63	≤14.86	PASS
				5720~5725	-36.18	≤25.28	PASS
				5780~5650	-45.44	≤-27	PASS
	Ant1	High	5795	5850~5855	-44.98	≤20.55	PASS
				5855~5875	-44.64	≤11.01	PASS
				5875~5925	-44.94	≤7.02	PASS
				5925~5935	-45.83	≤-27	PASS
	Ant2	High	5795	5850~5855	-44.91	≤25.06	PASS
				5855~5875	-44.7	≤15.35	PASS
				5875~5925	-43.69	≤7.02	PASS
				5925~5935	-45.36	≤-27	PASS
11AC80SISO	Ant1	Low	5775	5650~5700	-39.95	≤4.86	PASS
				5700~5720	-36.84	≤14.95	PASS
				5720~5725	-34.61	≤25.54	PASS
				5800~5650	-46.97	≤-27	PASS
		High	5775	5850~5855	-41.85	≤19.17	PASS
				5855~5875	-41.71	≤13.91	PASS
				5875~5925	-43.33	≤-26.00	PASS
				5925~5935	-46.04	≤-27	PASS
	Ant2	Low	5775	5650~5700	-33.13	≤9.90	PASS
				5700~5720	-30.58	≤15.48	PASS
				5720~5725	-30.28	≤19.53	PASS
				5800~5650	-44.34	≤-27	PASS
		High	5775	5850~5855	-33.12	≤17.48	PASS

				5855~5875	-35.18	≤10.07	PASS
				5875~5925	-41.08	≤-26.68	PASS
				5925~5935	-44.67	≤-27	PASS
11A-CDD	Ant1	Low	5745	5650~5700	-44.48	≤-0.32	PASS
				5700~5720	-44.39	≤14.08	PASS
				5720~5725	-42.29	≤26.57	PASS
				5760~5650	-46.07	≤-27	PASS
	Ant2	Low	5745	5650~5700	-45.04	≤-15.30	PASS
				5700~5720	-45.22	≤14.63	PASS
				5720~5725	-43.52	≤24.47	PASS
				5760~5650	-45.89	≤-27	PASS
	Ant1	High	5825	5850~5855	-45.1	≤23.49	PASS
				5855~5875	-44.4	≤14.18	PASS
				5875~5925	-44.76	≤2.32	PASS
				5925~5935	-44.04	≤-27	PASS
	Ant2	High	5825	5850~5855	-44.78	≤16.10	PASS
				5855~5875	-44.95	≤13.16	PASS
				5875~5925	-44.88	≤-4.98	PASS
				5925~5935	-45.12	≤-27	PASS
11N20MIMO	Ant1	Low	5745	5650~5700	-45.27	≤-20.74	PASS
				5700~5720	-45.29	≤15.08	PASS
				5720~5725	-39.63	≤26.83	PASS
				5760~5650	-45.66	≤-27	PASS
	Ant2	Low	5745	5650~5700	-45.51	≤-21.42	PASS
				5700~5720	-44.3	≤15.40	PASS
				5720~5725	-40.78	≤26.57	PASS
				5760~5650	-46.66	≤-27	PASS
	Ant1	High	5825	5850~5855	-44.51	≤24.41	PASS
				5855~5875	-44.92	≤10.78	PASS
				5875~5925	-43.91	≤-15.27	PASS
				5925~5935	-45.27	≤-27	PASS
	Ant2	High	5825	5850~5855	-45.31	≤20.10	PASS
				5855~5875	-44.74	≤11.87	PASS
				5875~5925	-45.14	≤6.01	PASS
				5925~5935	-44.91	≤-27	PASS
11N40MIMO	Ant1	Low	5755	5650~5700	-45.41	≤-9.22	PASS
				5700~5720	-37.47	≤14.86	PASS

				5720~5725	-34.81	≤23.74	PASS
				5780~5650	-46.66	≤-27	PASS
	Ant2	Low	5755	5650~5700	-45	≤-25.51	PASS
				5700~5720	-40.12	≤15.31	PASS
				5720~5725	-39.15	≤22.51	PASS
				5780~5650	-46.12	≤-27	PASS
	Ant1	High	5795	5850~5855	-44.92	≤17.91	PASS
				5855~5875	-42.76	≤11.15	PASS
				5875~5925	-44.89	≤-24.60	PASS
				5925~5935	-45.73	≤-27	PASS
	Ant2	High	5795	5850~5855	-45.9	≤15.66	PASS
				5855~5875	-45.95	≤15.49	PASS
				5875~5925	-44.47	≤7.14	PASS
				5925~5935	-45.46	≤-27	PASS
11AC20MIMO	Ant1	Low	5745	5650~5700	-44.87	≤-3.38	PASS
				5700~5720	-44.42	≤10.31	PASS
				5720~5725	-40.39	≤25.26	PASS
				5760~5650	-45.85	≤-27	PASS
	Ant2	Low	5745	5650~5700	-43.61	≤-24.49	PASS
				5700~5720	-45.22	≤14.85	PASS
				5720~5725	-41.99	≤26.30	PASS
				5760~5650	-46.06	≤-27	PASS
	Ant1	High	5825	5850~5855	-45.06	≤21.03	PASS
				5855~5875	-44.7	≤11.61	PASS
				5875~5925	-44.54	≤6.21	PASS
				5925~5935	-44.77	≤-27	PASS
	Ant2	High	5825	5850~5855	-44.61	≤15.79	PASS
				5855~5875	-45.14	≤10.51	PASS
				5875~5925	-44.81	≤4.31	PASS
				5925~5935	-45.53	≤-27	PASS
11AC40MIMO	Ant1	Low	5755	5650~5700	-44.99	≤-12.12	PASS
				5700~5720	-36.87	≤14.86	PASS
				5720~5725	-35.09	≤18.20	PASS
				5780~5650	-46.2	≤-27	PASS
	Ant2	Low	5755	5650~5700	-45.26	≤-8.82	PASS
				5700~5720	-38.98	≤15.24	PASS
				5720~5725	-36.85	≤21.28	PASS

				5780~5650	-46.43	≤-27	PASS
	Ant1	High	5795	5850~5855	-46.19	≤15.66	PASS
				5855~5875	-44.74	≤12.63	PASS
				5875~5925	-43.64	≤-25.95	PASS
				5925~5935	-45.66	≤-27	PASS
	Ant2	High	5795	5850~5855	-46.14	≤16.41	PASS
				5855~5875	-44.49	≤10.41	PASS
				5875~5925	-44.54	≤-8.85	PASS
				5925~5935	-44.83	≤-27	PASS
11AC80MIMO	Ant1	Low	5775	5650~5700	-37.97	≤8.07	PASS
				5700~5720	-34.55	≤14.87	PASS
				5720~5725	-34.46	≤20.59	PASS
				5800~5650	-46.27	≤-27	PASS
		High	5775	5850~5855	-36.42	≤21.28	PASS
				5855~5875	-40.03	≤11.11	PASS
				5875~5925	-44.21	≤-25.72	PASS
				5925~5935	-45.37	≤-27	PASS
	Ant2	Low	5775	5650~5700	-39.1	≤7.15	PASS
				5700~5720	-36.91	≤14.26	PASS
				5720~5725	-33.48	≤25.19	PASS
				5800~5650	-46.43	≤-27	PASS
		High	5775	5850~5855	-39.37	≤18.75	PASS
				5855~5875	-38.63	≤10.75	PASS
				5875~5925	-43.3	≤-26.54	PASS
				5925~5935	-45.19	≤-27	PASS

Note1: Test Plots see Appendix J2.

6.9. Radiated Spurious Emission Measurement

6.9.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 – 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.9.2. Test Procedure Used

KDB 789033 D02v02r01 – Section G

ANSI C63.10-2013 – Section 12.7.7.2, 12.7.7.6, 12.7.5

6.9.3. Test Setting

Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Quasi-Peak Measurements below 1GHz

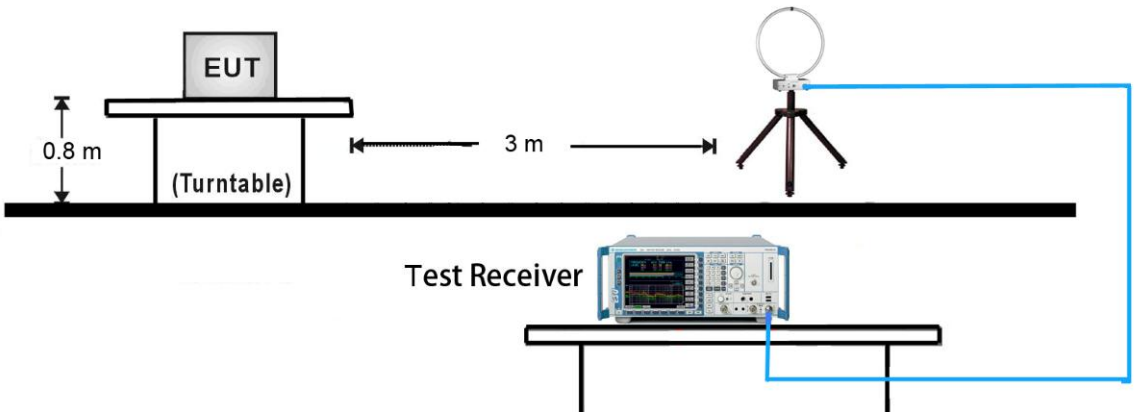
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 120 kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Average Measurements above 1GHz (Method AD)

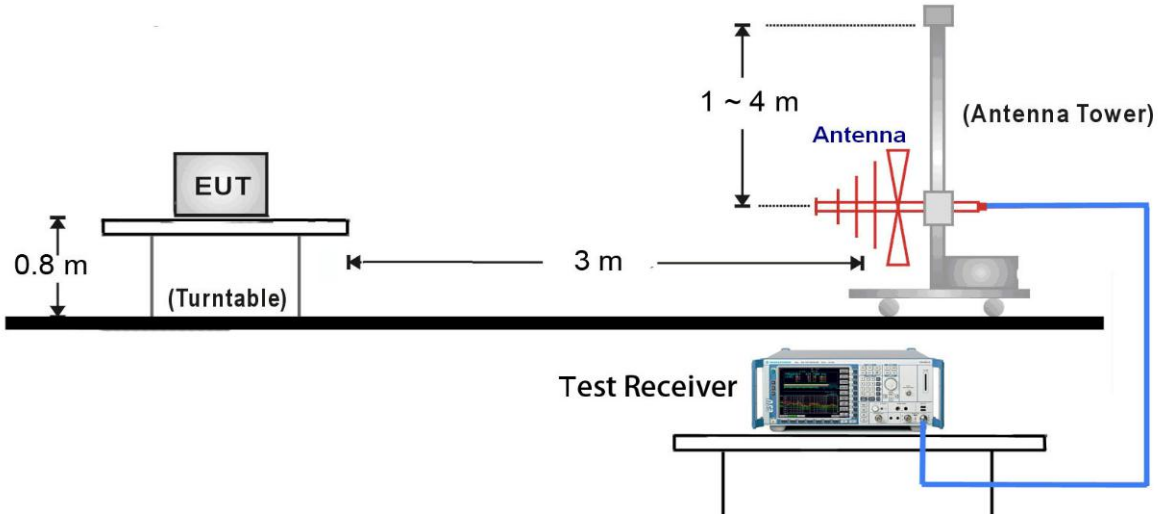
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (Average)
5. Number of measurement points = 1001 (Number of points must be > 2 x span/RBW)
6. Sweep time = auto
7. Trace was averaged over at 100 sweeps

6.9.4. Test Setup

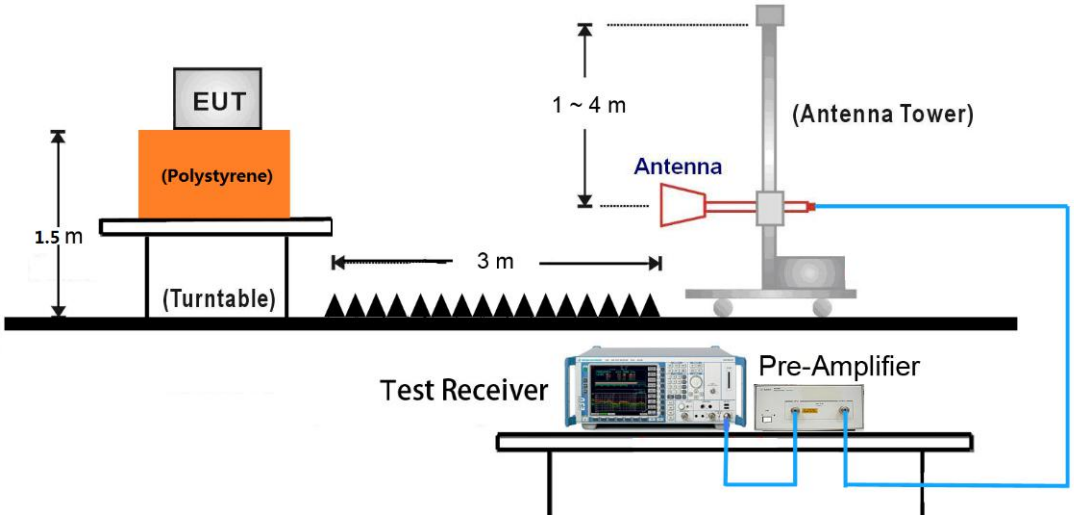
9kHz ~ 30MHz Test Setup:



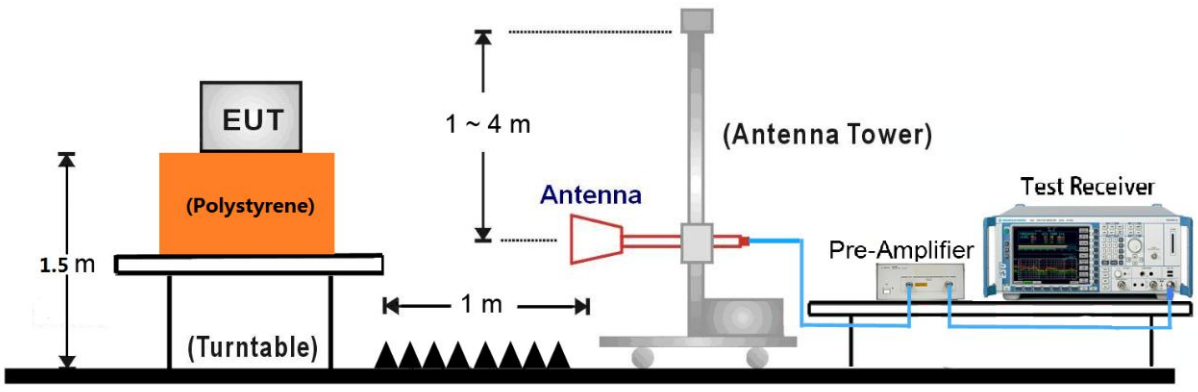
30MHz ~ 1GHz Test Setup:



1GHz ~18GHz Test Setup:



18GHz ~40GHz Test Setup:



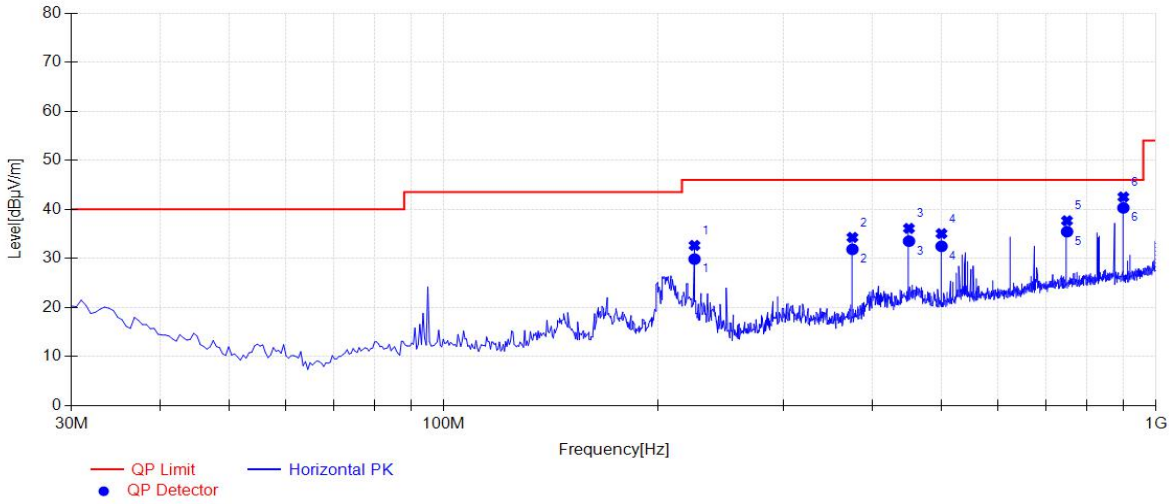
6.9.5. Test Result

The worst case of Radiated Emission Below 1GHz:

30MHz – 1GHz Test Data

EUT:	Dual Band 11AC Wireless Module	Polarity:	Horizontal
Model:	DR600VX	SN:	N/A
Mode:	Transmit by 802.11AC20 MIMO at Channel 5180MHz	Voltage:	120V/60Hz
Environment:	Temp: 25℃; Humi:60%	Engineer:	Amos Xia

Test Graph

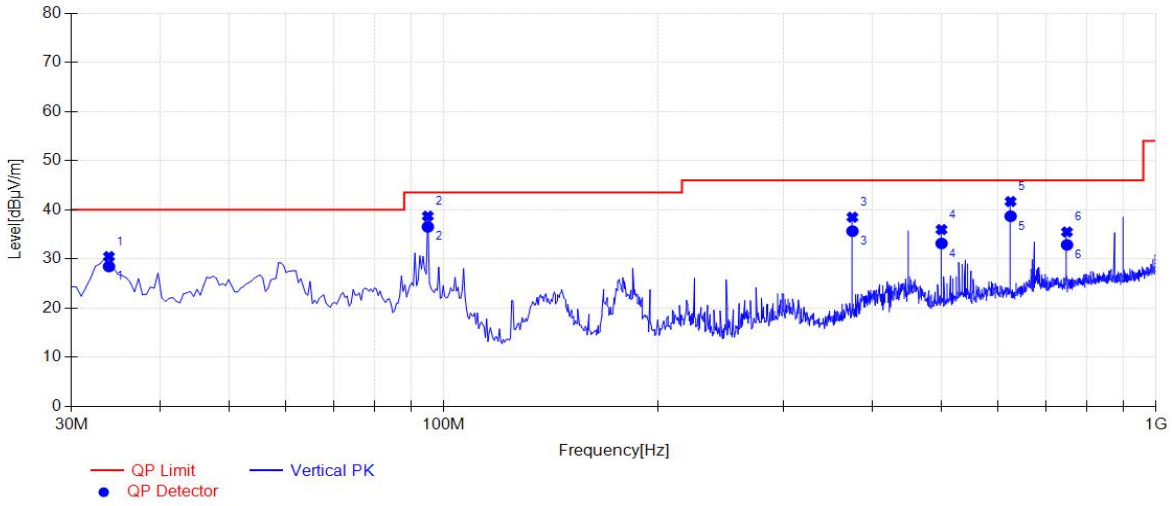


Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	224.970	10.63	29.87	46.00	16.13	100	184	Horizontal
2	374.835	15.33	31.86	46.00	14.14	100	220	Horizontal
3	450.010	17.60	33.53	46.00	12.47	200	226	Horizontal
4	499.965	18.92	32.47	46.00	13.53	200	183	Horizontal
5	750.225	22.67	35.45	46.00	10.55	100	170	Horizontal
6	900.090	23.87	40.30	46.00	5.70	100	184	Horizontal

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz), therefore no data appear in the report.

EUT:	Dual Band 11AC Wireless	Polarity:	Vertical
Model:	DR600VX	SN:	N/A
Mode:	Transmit by 802.11AC20 MIMO at Channel 5180MHz	Voltage:	120V/60Hz
Environment:	Temp: 25℃; Humi:60%	Engineer:	Amos Xia

Test Graph



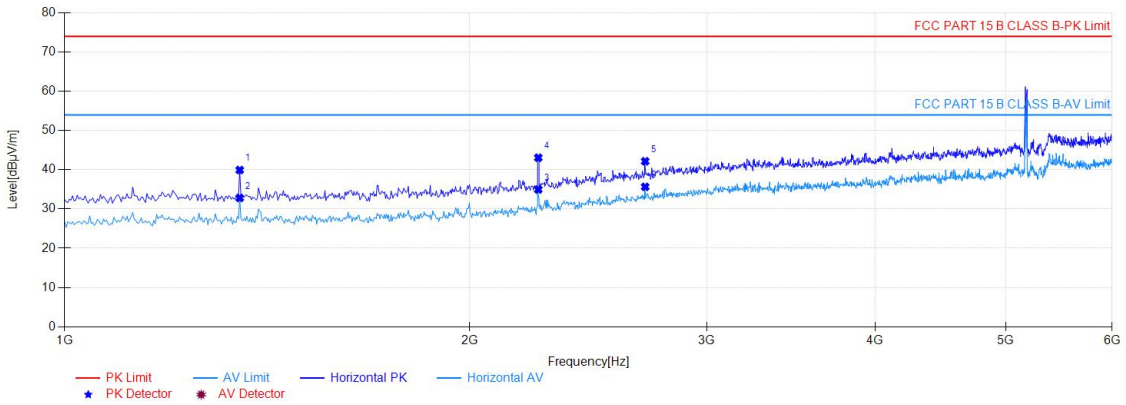
Final Data List								
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	33.8800	17.75	28.47	40.00	11.53	100	270	Vertical
2	94.9900	10.61	36.53	43.50	6.97	100	83	Vertical
3	374.835	15.33	35.67	46.00	10.33	100	162	Vertical
4	499.965	18.92	33.16	46.00	12.84	100	190	Vertical
5	625.095	20.70	38.70	46.00	7.30	100	162	Vertical
6	750.225	22.67	32.87	46.00	13.13	100	185	Vertical

Note 1: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz), therefore no data appear in the report.

The worst case of Radiated Emission Above 1GHz:

Test Mode:	802.11AC20 - Ant 1+ Ant 2	Test Date:	2021-12-26
Test Channel:	5180	Test Engineer:	Amos Xia
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 6-40GHz, there is not show in the report.		

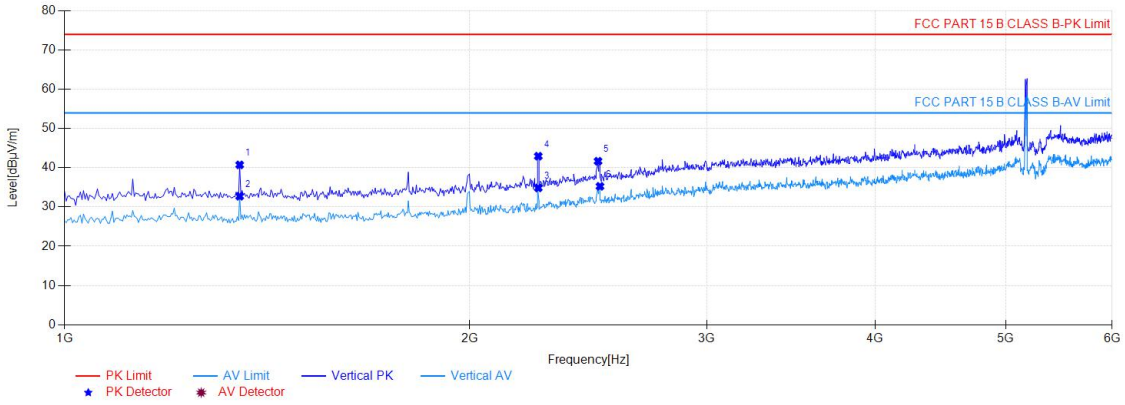
Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1349.25	39.94	-3.60	74.00	34.06	100	341	Horizontal
2	1349.25	32.83	-3.60	54.00	21.17	100	356	Horizontal
3	2248.50	34.97	-0.09	54.00	19.03	100	243	Horizontal
4	2248.50	43.08	-0.09	74.00	30.92	100	251	Horizontal
5	2699.50	42.17	2.54	74.00	31.83	100	227	Horizontal
6	2699.50	35.65	2.54	54.00	18.35	100	341	Horizontal

Test Mode:	802.11AC20 - Ant 1+ Ant 2	Test Date:	2021-12-26
Test Channel:	5180	Test Engineer:	Amos Xia
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 6-40GHz, there is not show in the report.		

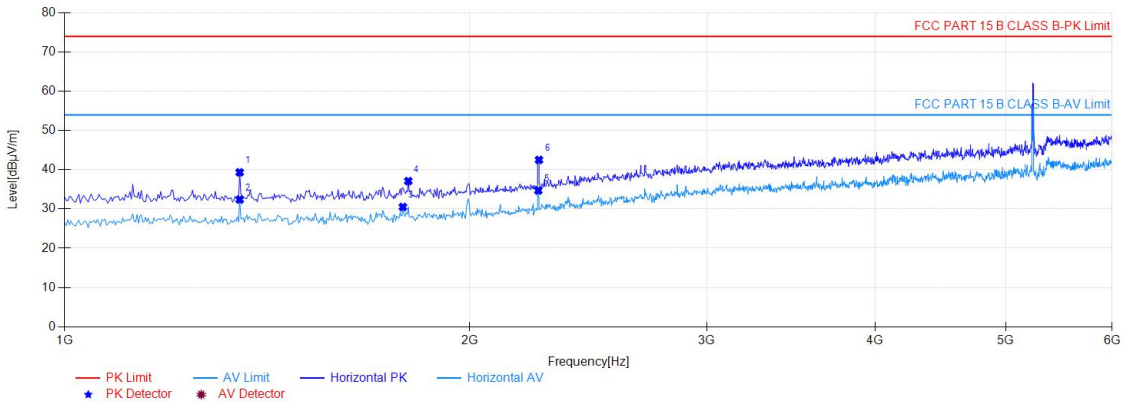
Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1349.25	40.75	-3.60	74.00	33.25	100	130	Vertical
2	1349.25	32.75	-3.60	54.00	21.25	100	130	Vertical
3	2248.50	34.87	-0.09	54.00	19.13	100	87	Vertical
4	2248.50	42.96	-0.09	74.00	31.04	100	284	Vertical
5	2490.50	41.68	1.38	74.00	32.32	100	277	Vertical
6	2498.75	35.28	1.45	54.00	18.72	100	80	Vertical

Test Mode:	802.11AC20 - Ant 1+ Ant 2	Test Date:	2021-12-26
Test Channel:	5240	Test Engineer:	Amos Xia
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 6-40GHz, there is not show in the report.		

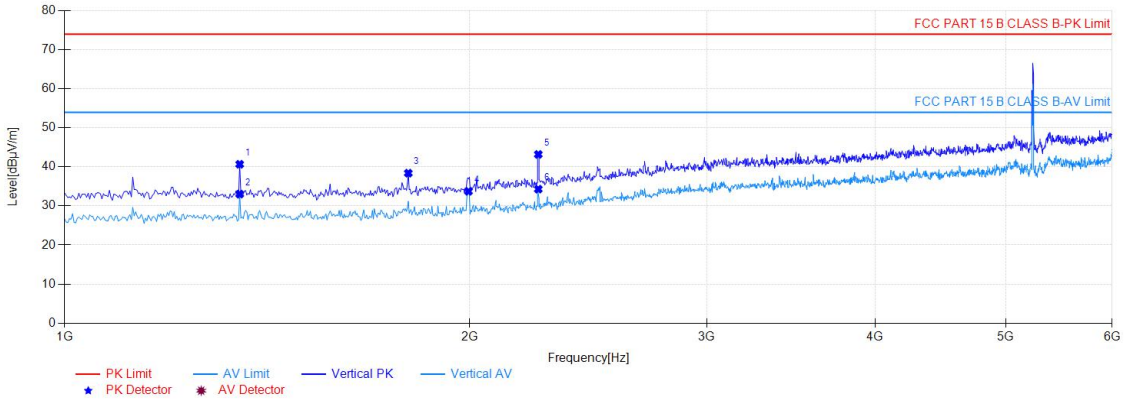
Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1349.25	39.35	-3.60	74.00	34.65	100	333	Horizontal
2	1349.25	32.42	-3.60	54.00	21.58	100	357	Horizontal
3	1783.75	30.52	-2.18	54.00	23.48	100	50	Horizontal
4	1800.25	37.13	-2.02	74.00	36.87	100	0	Horizontal
5	2248.50	34.71	-0.09	54.00	19.29	100	244	Horizontal
6	2251.25	42.52	-0.07	74.00	31.48	100	237	Horizontal

Test Mode:	802.11AC20 - Ant 1+ Ant 2	Test Date:	2021-12-26
Test Channel:	5240	Test Engineer:	Amos Xia
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 6-40GHz, there is not show in the report.		

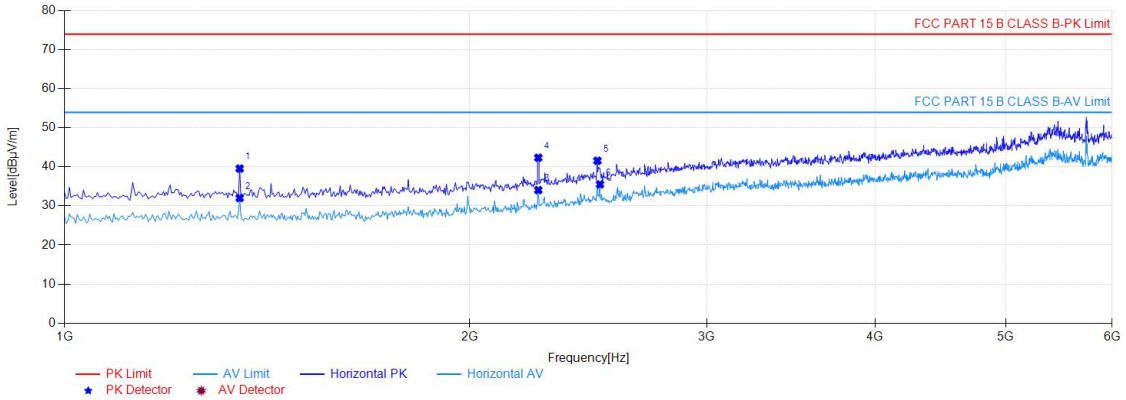
Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1349.25	40.68	-3.60	74.00	33.32	100	129	Vertical
2	1349.25	33.05	-3.60	54.00	20.95	100	138	Vertical
3	1800.25	38.41	-2.02	74.00	35.59	100	129	Vertical
4	1995.50	33.75	-1.60	54.00	20.25	100	309	Vertical
5	2248.50	43.21	-0.09	74.00	30.79	100	284	Vertical
6	2248.50	34.31	-0.09	54.00	19.69	100	72	Vertical

Test Mode:	802.11AC20 - Ant 1+ Ant 2	Test Date:	2021-12-26
Test Channel:	5745	Test Engineer:	Amos Xia
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 6-40GHz, there is not show in the report.		

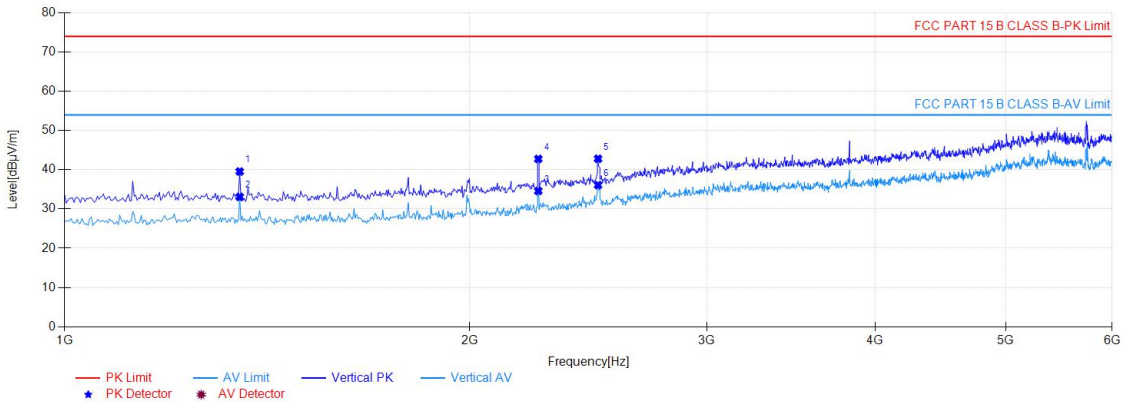
Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1349.25	39.58	-3.57	74.00	34.42	100	342	Horizontal
2	1349.25	32.04	-3.57	54.00	21.96	100	342	Horizontal
3	2248.50	34.07	0.11	54.00	19.93	100	243	Horizontal
4	2248.50	42.36	0.11	74.00	31.64	100	243	Horizontal
5	2487.75	41.58	1.35	74.00	32.42	100	309	Horizontal
6	2498.75	35.54	1.36	54.00	18.46	100	318	Horizontal

Test Mode:	802.11AC20 - Ant 1+ Ant 2	Test Date:	2021-12-26
Test Channel:	5745	Test Engineer:	Amos Xia
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 6-40GHz, there is not show in the report.		

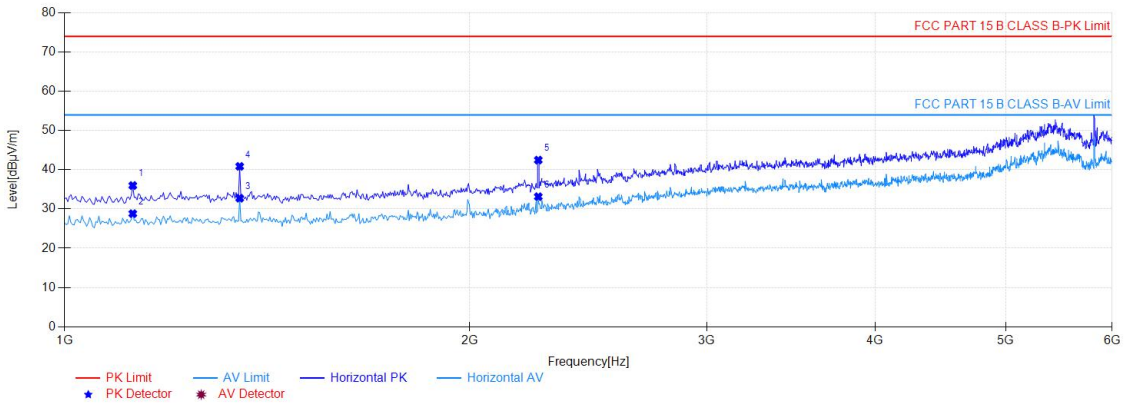
Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1349.25	39.56	-3.57	74.00	34.44	100	141	Vertical
2	1349.25	33.08	-3.57	54.00	20.92	100	141	Vertical
3	2248.50	34.60	0.11	54.00	19.40	100	67	Vertical
4	2248.50	42.77	0.11	74.00	31.23	100	67	Vertical
5	2490.50	42.82	1.35	74.00	31.18	100	101	Vertical
6	2490.50	36.10	1.35	54.00	17.90	100	101	Vertical

Test Mode:	802.11AC20 - Ant 1+ Ant 2	Test Date:	2021-12-26
Test Channel:	5825	Test Engineer:	Amos Xia
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 6-40GHz, there is not show in the report.		

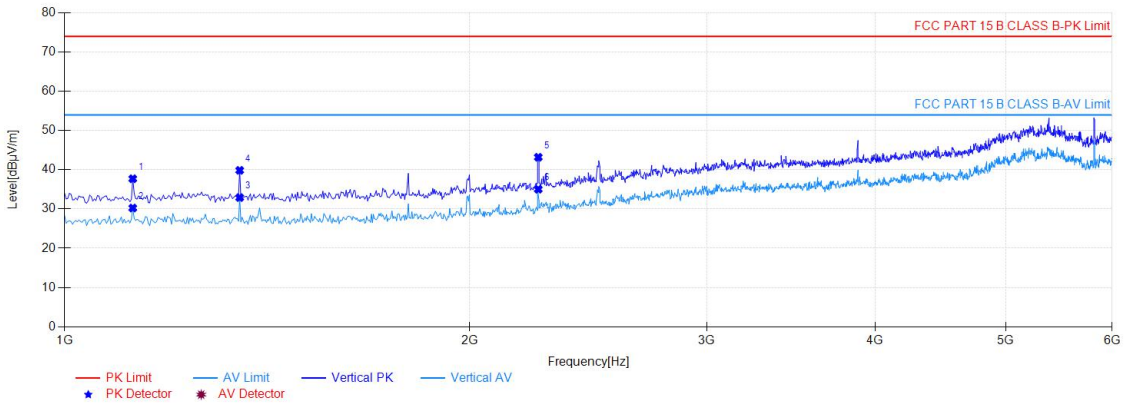
Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1123.75	35.99	-3.77	74.00	38.01	100	72	Horizontal
2	1123.75	28.82	-3.77	54.00	25.18	100	96	Horizontal
3	1349.25	32.76	-3.57	54.00	21.24	100	331	Horizontal
4	1349.25	40.87	-3.57	74.00	33.13	100	331	Horizontal
5	2248.50	42.48	0.11	74.00	31.52	100	243	Horizontal
6	2248.50	33.15	0.11	54.00	20.85	100	243	Horizontal

Test Mode:	802.11AC20 - Ant 1+ Ant 2	Test Date:	2021-12-26
Test Channel:	5825	Test Engineer:	Amos Xia
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 6-40GHz, there is not show in the report.		

Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1123.75	37.72	-3.77	74.00	36.28	100	270	Vertical
2	1123.75	30.26	-3.77	54.00	23.74	100	270	Vertical
3	1349.25	32.92	-3.57	54.00	21.08	100	133	Vertical
4	1349.25	39.86	-3.57	74.00	34.14	100	133	Vertical
5	2248.50	43.20	0.11	74.00	30.80	100	279	Vertical
6	2248.50	35.04	0.11	54.00	18.96	100	270	Vertical

6.10. Radiated Restricted Band Edge Measurement

6.10.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
1 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.25 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 – 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(2)
13.36 - 13.41	--	--	--

For RSS-Gen Section 8.10 Requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 8.10 of RSS-Gen, must also comply with the radiated emission limits specified in Section 8.9.

Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.009 ~ 0.110	240 ~ 285	9.0 ~ 9.2
2.1735 ~ 2.1905	322 ~ 335.4	9.3 ~ 9.5
3.020 ~ 3.026	399.9 ~ 410	10.6 ~ 12.7
4.125 ~ 4.128	608 ~ 614	13.25 ~ 13.4
4.17725 ~ 4.17775	960 ~ 1427	14.47 ~ 14.5
4.20725 ~ 4.20775	1435 ~ 1626.5	15.35 ~ 16.2
5.677 ~ 5.683	1645.5 ~ 1646.5	17.7 ~ 21.4
6.215 ~ 6.218	1660 ~ 1710	22.01 ~ 23.12
6.26775 ~ 6.26825	1718.8 ~1722.2	23.6 ~ 24.0
6.31175 ~ 6.31225	2200 ~ 2300	31.2 ~ 31.8
8.291 ~ 8.294	2310 ~ 2390	36.43 ~ 36.5
8.362 ~ 8.366	2655 ~ 2900	Above 38.6
8.37625 ~ 8.38675	3260 ~ 3267	--
8.41425 ~ 8.41475	3332 ~ 3339	
12.29 ~ 12.293	334.5 ~ 3358	
12.51975 ~ 12.52025	3500 ~ 4400	
12.57675 ~ 12.57725	4500 ~ 5150	
13.36 ~13.41	5350 ~ 5460	
16.42 ~ 16.423	7250 ~ 7750	
16.69475 ~ 16.69525	8025 ~ 8500	
16.80425 ~ 16.80475	--	
25.5 ~ 25.67		
37.5 ~ 38.25		
73 ~ 74.6		
74.8 ~ 75.2		
108 ~ 138		
156.52475 ~ 156.525225		
156.7 ~ 156.9		

Note: *Certain frequency bands listed in Table 6 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to the devices are set out in the 200- and 300-series of RSSs, such as RSS-210 and RSS-310, which contain the

requirements that apply to licence-exempt radio apparatus.

For 15.407(b) requirement:

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For FCC transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

For IC transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

Refer to KDB 789033 D02v02r01 G)2)c), as specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/m]	Measured Distance [Meters]
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

6.10.2. Test Result

Test Plots see Appendix L.

6.11. AC Conducted Emissions Measurement

6.11.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dBμV)	AV (dBμV)
0.15 ~ 0.50	66 ~ 56	56 ~ 46
0.50 ~ 5.0	56	46
5.0 ~ 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

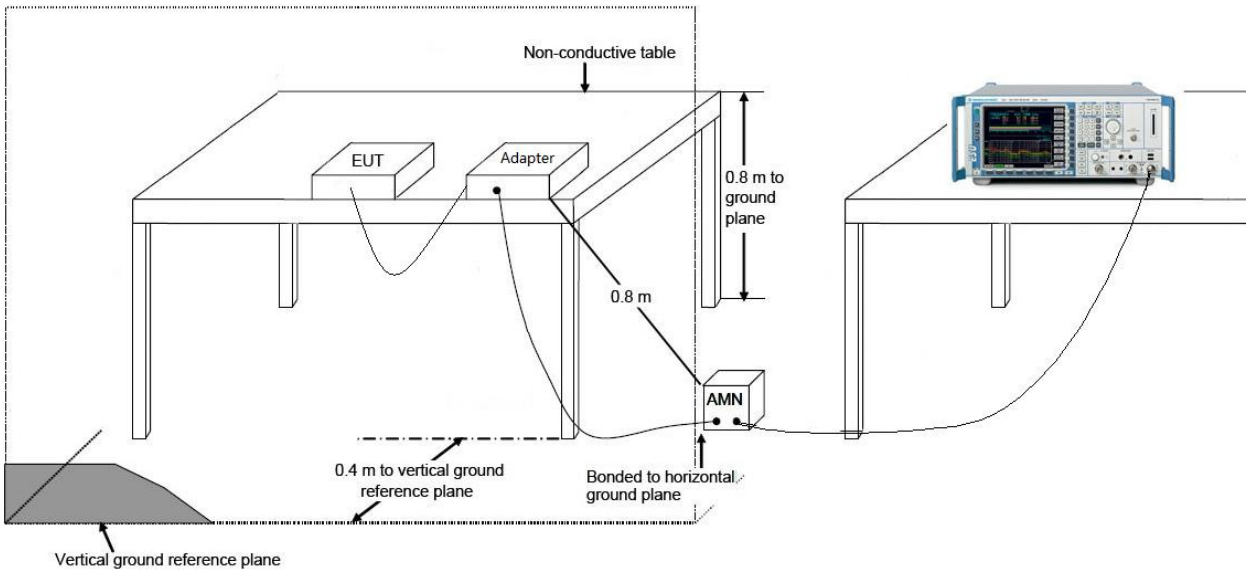
6.11.2. Test Procedure

The EUT was setup according to ANSI C63.4: 2014 and tested according to ANSI C63.10:2013 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

6.11.3. Test Setup



6.11.4. Test Result

EUT is powered by DC Source, not applicable.

7. CONCLUSION

The data collected relate only the item(s) tested and show that the **Dual Band 11AC Wireless Module** is in compliance with Part 15E of the FCC Rules and IC Rules.

The End