RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART E
INDUSTRY CANADA RSS-247

Test Standard	**FCC Part 15.407**
Brand name	**ADVANTECH**
Applicant	**Advantech Co.Ltd**
Product name	**Computer**
Model No.	**AIM-37ACxxxxxxxxxxxxxxxx; AIM37ACxxxxxxxxxxxxxxxx (where "x" may be any alphanumeric character, "-" or blank for marketing purpose and no impact safety related critical components and constructions)**
Test Result	**Pass**

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

Approved by:

Sam Chuang
Manager

Reviewed by:

Jerry Chuang
Engineer

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	January 24, 2018	Initial Issue	ALL	May Lin
01	May 14, 2018	1. Revised model discrepancy. 2. Revised radiation test photo.	P.4, P.228	May Lin
02	July 31, 2018	1. Re-test AC Conducted Emissions and modify test setup photo.	P.15-16, P.230	May Lin

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1.1 EUT INFORMATION

<table>
<tr><td>Applicant</td><td>Advantech Co.Ltd.
No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.</td></tr>
<tr><td>Manufacturer</td><td>Advantech Co.Ltd.
No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.</td></tr>
<tr><td>Equipment</td><td>Computer</td></tr>
<tr><td>Model Name</td><td>AIM-37ACxxxxxxxxxxxxxxxx; AIM37ACxxxxxxxxxxxxxxxx (where “x” may be any alphanumeric character, “-” or blank for marketing purpose and no impact safety related critical components and constructions)</td></tr>
<tr><td>Model Discrepancy</td><td>
<table>
<tr><th>Model Name</th><th colspan="5">Model Discrepancy</th></tr>
<tr><td>-</td><td>-</td><td>Magnetic stripe reader</td><td>IC reader</td><td>Memory / Storage</td><td>Color</td></tr>
<tr><td rowspan="5">AIM-37AC</td><td>SKU1</td><td>V</td><td>V</td><td rowspan="2">4GB / 64GB</td><td rowspan="2">Orange</td></tr>
<tr><td>SKU2</td><td>V</td><td>V</td></tr>
<tr><td>SKU3</td><td rowspan="3">X</td><td rowspan="3">X</td><td>2GB / 32GB</td><td rowspan="2">Grey</td></tr>
<tr><td>SKU4</td><td rowspan="2">4GB / 64GB</td></tr>
<tr><td>SKU5</td><td></td></tr>
<tr><td>AIM-37ACxxxxxxxxxxxxxxxx; AIM37ACxxxxxxxxxxxxxxxx (where “x” may be any alphanumeric character, “-” or blank for marketing purpose and no impact safety related critical components and constructions)</td><td colspan="5">All the model number was just for marketing purpose only.</td></tr>
</table>
</td></tr>
<tr><td>Received Date</td><td>September 19, 2017</td></tr>
<tr><td>Date of Test</td><td>December 25, 2017 ~ July 27, 2018</td></tr>
<tr><td>Power Operation</td><td>VDC from Power Adapter
Brand: Asian Power Devices Inc.
Model name: WA-15I05R
Input: 100-240Vac, 50-60Hz, 0.5A Max
Output: 5Vdc, 3A</td></tr>
</table>

Output Power(W)		**Band**	**Mode**	**Frequency Range (MHz)**	**Output Power (W)**
		U-NII-1	IEEE 802.11a	5180 ~ 5240	0.0094
			IEEE 802.11n HT 20 MHz	5180 ~ 5240	0.0094
			IEEE 802.11n HT 40 MHz	5190 ~ 5230	0.0073
			IEEE 802.11ac VHT 80 MHz	5210	0.0077
		U-NII-2a	IEEE 802.11a	5260 ~ 5320	0.0096
			IEEE 802.11n HT 20 MHz	5260 ~ 5320	0.0090
			IEEE 802.11n HT 40 MHz	5270 ~ 5310	0.0080
			IEEE 802.11ac VHT 80 MHz	5290	0.0082
		U-NII-2c	IEEE 802.11a	5500 ~ 5700	0.0097
			IEEE 802.11n HT 20 MHz	5500 ~ 5700	0.0087
			IEEE 802.11n HT 40 MHz	5510 ~ 5670	0.0080
			IEEE 802.11ac VHT 80 MHz	5530~5610	0.0082
		U-NII-3	IEEE 802.11a	5745 ~ 5825	0.0091
			IEEE 802.11n HT 20 MHz	5745 ~ 5825	0.0083
			IEEE 802.11n HT 40 MHz	5755 ~ 5795	0.0076
			IEEE 802.11ac VHT 80 MHz	5775	0.0078

Remark:

1.For Canada the EUT Frequency Range 5600~5650MHz will be disabled.

1.2 EUT CHANNEL INFORMATION

Frequency Range	

UNII-1	
IEEE 802.11a	5180 ~ 5240 MHz
IEEE 802.11n HT 20 MHz	5180 ~ 5240 MHz
IEEE 802.11n HT 40 MHz	5190 ~ 5230 MHz
IEEE 802.11ac VHT 20 MHz	5180 ~ 5240 MHz
IEEE 802.11ac VHT 40 MHz	5190 ~ 5230 MHz
IEEE 802.11ac VHT 80 MHz	5210 MHz
UNII-2a	
IEEE 802.11a	5260 ~ 5320 MHz
IEEE 802.11n HT 20 MHz	5260 ~ 5320 MHz
IEEE 802.11n HT 40 MHz	5270 ~ 5310 MHz
IEEE 802.11ac VHT 20 MHz	5260 ~ 5320 MHz
IEEE 802.11ac VHT 40 MHz	5270 ~ 5310 MHz
IEEE 802.11ac VHT 80 MHz	5290 MHz
UNII-2c	
IEEE 802.11a	5500 ~ 5700 MHz
IEEE 802.11n HT 20 MHz	5500 ~ 5700 MHz
IEEE 802.11n HT 40 MHz	5510 ~ 5670 MHz
IEEE 802.11ac VHT 20 MHz	5500 ~ 5700 MHz
IEEE 802.11ac VHT 20 MHz	5720 MHz
IEEE 802.11ac VHT 40 MHz	5510 ~ 5670 MHz
IEEE 802.11ac VHT 80 MHz	5530-5610 MHz
UNII-3	
IEEE 802.11a	5745 ~ 5825 MHz
IEEE 802.11n HT 20 MHz	5745 ~ 5825 MHz
IEEE 802.11n HT 40 MHz	5755 ~ 5795 MHz
IEEE 802.11ac VHT 20 MHz	5745 ~ 5825 MHz
IEEE 802.11ac VHT 40 MHz	5755 ~ 5795 MHz
IEEE 802.11ac VHT 80 MHz	5775 MHz

Modulation Type	1. IEEE 802.11a mode: OFDM 2. IEEE 802.11n HT 20 MHz mode: OFDM 3. IEEE 802.11n HT 40 MHz mode: OFDM 4. IEEE 802.11ac VHT 20 MHz mode: OFDM 5. IEEE 802.11ac VHT 40 MHz mode: OFDM 5. IEEE 802.11ac VHT 80 MHz mode: OFDM

Remark:
Refer as ANSI 63.10:2013 clause 5.6.1 Table 4 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	**Number of frequencies**	**Location in frequency range of operation**
☐ 1 MHz or less	1	Middle
☐ 1 MHz to 10 MHz	2	1 near top and 1 near bottom
☒ More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Type	☒ PIFA ☐ PCB ☐ Dipole ☐ Coils
Antenna Gain	Gain: 0.14 dBi

1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 30 to 1000 MHz	+/- 3.97
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 1 to 18GHz	+/- 3.58
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 18 to 26 GHz	+/- 3.59
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 26 to 40 GHz	+/- 3.81
Conducted Emission (Mains Terminals), 9kHz to 30MHz	+/- 2.48

Remark:
1.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)

Test site	Test Engineer	Remark
AC Conduction Room	Dally Hong	-
Radiation	Jerry Chuang	-
RF Conducted	Eric Lee	-

Remark: *The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.*

1.6 INSTRUMENT CALIBRATION

RF Conducted Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Power Meter	Anritsu	ML2495A	1033009	04/11/2017	04/10/2018
Power Sensor	Anritsu	MA2411B	917072	07/03/2017	07/02/2018
Spectrum Analyzer	R&S	FSV 40	101073	10/02/2017	10/01/2018
Directional Coupler	Agilent	87301D	MY44350252	07/25/2017	07/24/2018
SUCOFLEX Cable	HUBER SUHNER	SUCOFLEX 104PEA	25157	07/31/2017	07/30/2018
Divider	Solvang Technology	2-18GHz 4Way	STI08-0015	07/26/2017	07/25/2018

3M 966 Chamber Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Bilog Antenna	Sunol Sciences	JB3	A030105	06/20/2017	06/19/2018
Horn Antenna	EMCO	3117	00055165	02/20/2017	02/19/2018
Pre-Amplifier	EMEC	EM330	060609	06/07/2017	06/06/2018
Spectrum Analyzer	Agilent	E4446A	US42510252	11/27/2017	11/26/2018
Loop Ant	COM-POWER	AL-130	121051	03/02/2017	03/01/2018
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Pre-Amplifier	HP	8449B	3008A00965	06/27/2017	06/26/2018
Filter	N/A	2400-2500	N/A	N/A	N/A
Filter	N/A	0-6000	N/A	N/A	N/A
Cable	HUBER SUHNER	SUCOFLEX 104PEA	25157	07/31/2017	07/30/2018
Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	07/31/2017	07/30/2018

Remark: *Each piece of equipment is scheduled for calibration once a year.*

AC Conducted Emissions Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
LISN	R&S	ENV216	101054	02/06/2018	02/05/2019
LISN	SCHWARZBECK	NSLK 8127	8127-541	02/09/2018	02/08/2019
EMI Test Receiver	R&S	ESCI	101203	11/02/2017	11/01/2018

Remark: *Each piece of equipment is scheduled for calibration once a year.*

1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

EUT Accessories Equipment					
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**
	N/A				

Support Equipment					
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**
1	NB(K)	Toshiba	voyager	ZD 154034s	N/A

1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.407, KDB 789033 D02 v01r04, KDB 905462 D02 v02.

FCC Standard Sec.	Chapter	Test Item	Result
15.203	1.3	Antenna Requirement	Pass
15.207	4.1	AC Conducted Emission	Pass
15.403(i)	4.2	26dB Bandwidth	Pass
15.407(e)	4.2	6dB Bandwidth	Pass
15.403(i)	4.2	Occupied Bandwidth (99%)	Pass
15.407(a)	4.3	Output Power Measurement	Pass
15.407(a)	4.4	Power Spectral Density	Pass
15.407(b)	4.5	Radiation Band Edge	Pass
15.407(b)	4.5	Radiation Spurious Emission	Pass
15.407(g)	4.6	Frequency Stability	Pass
15.407(h)	4.7	Dynamic Frequency Selection	Pass

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	1. IEEE 802.11a mode: 6Mbps 2. IEEE 802.11n HT 20 MHz mode: MCS0 3. IEEE 802.11n HT 40 MHz mode: MCS0 4. IEEE 802.11ac VHT 20 MHz mode: MCS0 5. IEEE 802.11ac VHT 40 MHz mode: MCS0 5. IEEE 802.11ac VHT 80 MHz mode: MCS0

Operating Frequency Range & Number of Channels

	Mode	Frequency Range (MHz)	Number of Channels
U-NII-1	IEEE 802.11a	5180 ~ 5240	4 Channels
	IEEE 802.11n HT 20 MHz	5180 ~ 5240	4 Channels
	IEEE 802.11n HT 40 MHz	5190 ~ 5230	2 Channels
	IEEE 802.11ac VHT 20 MHz	5180 ~ 5240	4 Channels
	IEEE 802.11ac VHT 40 MHz	5190 ~ 5230	2 Channels
	IEEE 802.11ac VHT 80 MHz	5210	1 Channels
U-NII-2a	IEEE 802.11a	5260 ~ 5320	4 Channels
	IEEE 802.11n HT 20 MHz	5260 ~ 5320	4 Channels
	IEEE 802.11n HT 40 MHz	5270 ~ 5310	2 Channels
	IEEE 802.11ac VHT 20 MHz	5260 ~ 5320	4 Channels
	IEEE 802.11ac VHT 40 MHz	5270 ~ 5310	2 Channels
	IEEE 802.11ac VHT 80 MHz	5290	1 Channels
U-NII-2c	IEEE 802.11a	5500 ~ 5700	11 Channels
	IEEE 802.11n HT 20 MHz	5500 ~ 5700	11 Channels
	IEEE 802.11n HT 40 MHz	5510 ~ 5670	5 Channels
	IEEE 802.11ac VHT 20 MHz	5500 ~ 5700	11 Channels
	IEEE 802.11ac VHT 40 MHz	5510 ~ 5670	5 Channels
	IEEE 802.11ac VHT 80 MHz	5530~5610	2 Channels
U-NII-3	IEEE 802.11a	5745 ~ 5825	5 Channels
	IEEE 802.11n HT 20 MHz	5745 ~ 5825	5 Channels
	IEEE 802.11n HT 40 MHz	5755 ~ 5795	2 Channels
	IEEE 802.11ac VHT 20 MHz	5745 ~ 5825	5 Channels
	IEEE 802.11ac VHT 40 MHz	5755 ~ 5795	2 Channels
	IEEE 802.11ac VHT 80 MHz	5775	1 Channels

Remark:
1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2. Covered modes are test reduction modes. The output powers on the covered modes are equal to or less than the mode referenced and use the same module
3.The mode IEEE 802.11ac VHT20 and VHT40 are only different in control messages with IEEE 802.11n HT20 and HT40, and have same power setting. Therefore, the highest power(IEEE 802.11n HT20 and HT40) were test conducted and radiated measurement and recorded in this report.

3.2 THE WORST MODE OF MEASUREMENT

AC Power Line Conducted Emission	
Test Condition	AC Power line conducted emission for line and neutral
Voltage/Hz	120V/60Hz
Test Mode	Mode 1: EUT power by AC adapter via power cable.
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Radiated Emission Measurement Above 1G	
Test Condition	Band edge, Emission for Unwanted and Fundamental
Voltage/Hz	120V/60Hz
Test Mode	Mode 1: EUT power by AC adapter via power cable.
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4
Worst Position	☐ Placed in fixed position. ☒ Placed in fixed position at X-Plane (E2-Plane) ☐ Placed in fixed position at Y-Plane (E1-Plane) ☐ Placed in fixed position at Z-Plane (H-Plane)
Worst Polarity	☒ Horizontal ☐ Vertical

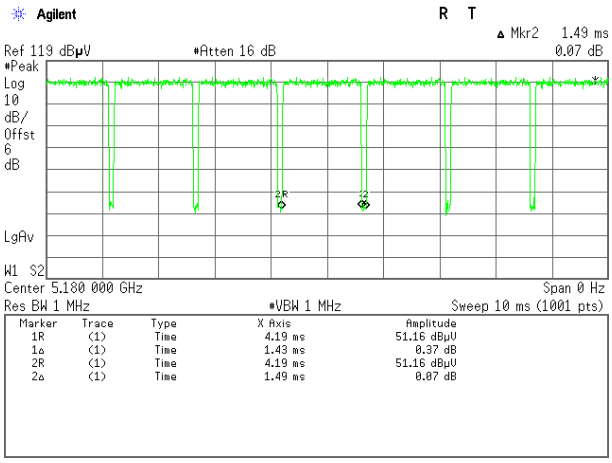
Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Voltage/Hz	120V/60Hz
Test Mode	Mode 1: EUT power by AC adapter via power cable.
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Remark:
1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis, X, Y, Z and two polarity, Horizontal and Vertical for radiated measurement. The worst case (X-Plane and Horizontal) were recorded in this report
3. For below 1G, AC power line conducted emission and radiation emission were performed the EUT transmit at the highest output power channel as worse case.

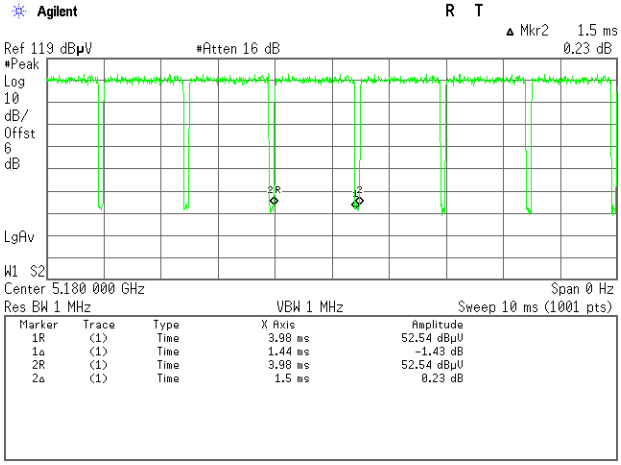
3.3 EUT DUTY CYCLE

Duty Cycle				
Configuration	TX ON (ms)	TX ALL (ms)	Duty Cycle (%)	Duty Factor(dB)
802.11a	1.4300	1.4900	95.97%	0.18
802.11n HT20	1.4400	1.5000	96.00%	0.18
802.11n HT40	0.6600	0.7450	88.59%	0.53
802.11ac VHT80	0.3450	0.4350	79.31%	1.01

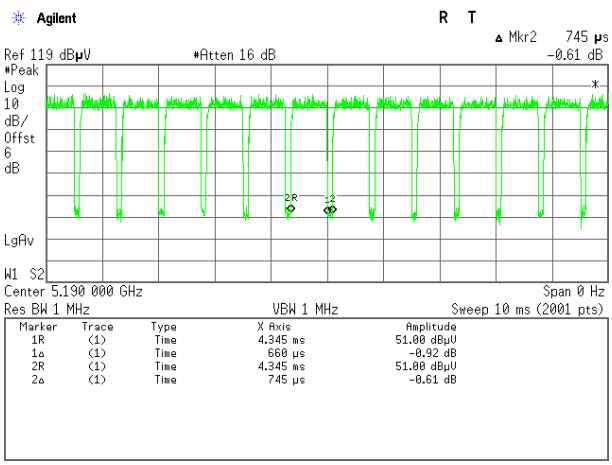
802.11a



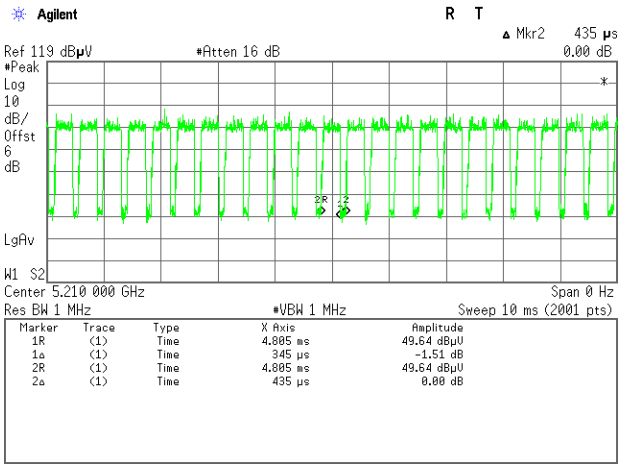
802.11n HT20



802.11n HT40



802.11ac VHT80



4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a) and RSS-GEN section 8.8,

Frequency Range (MHz)	Limits(dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

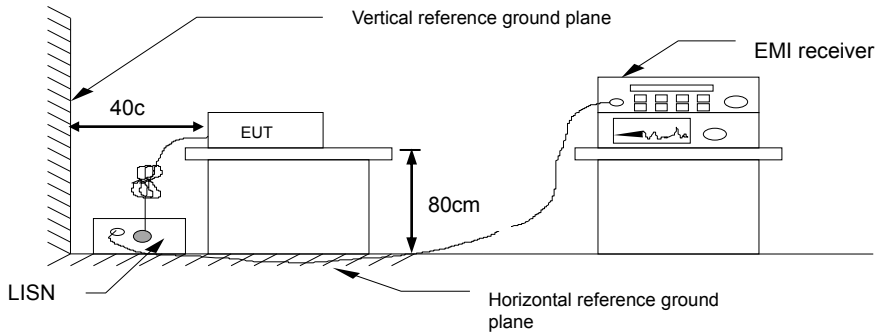
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

Test method Refer as ANSI 63.10:2013 clause 6.2,

1. The EUT was placed on a non-conducted table, which is 0.8m above horizontal ground plane and 0.4m above vertical ground plane.
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

4.1.3 Test Setup

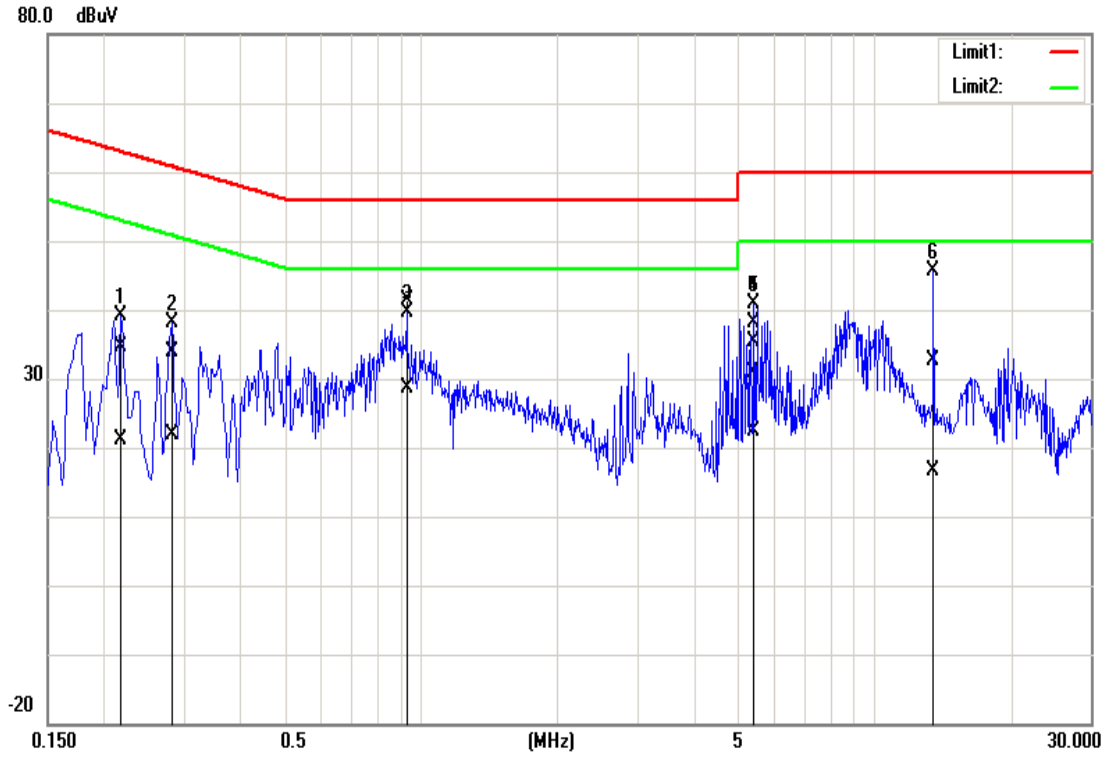


4.1.4 Test Result

Pass.

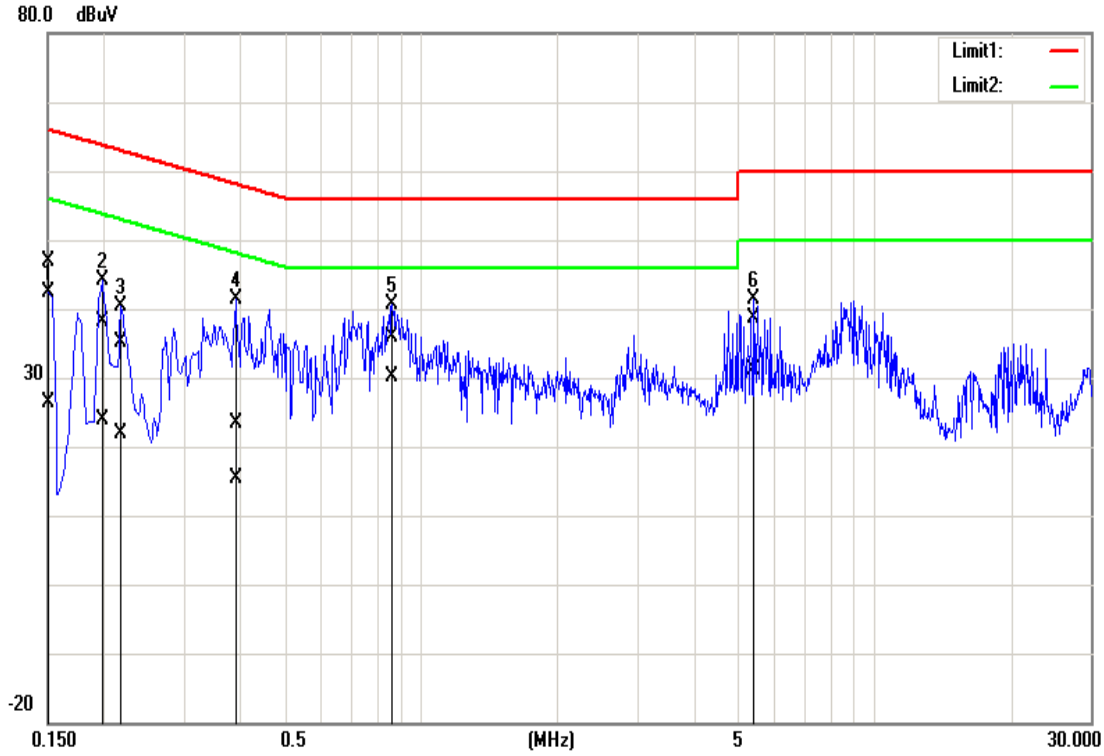
Test Data

Test Mode:	Mode 1	Temp/Hum	24(℃)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	2018/07/27
Phase:	Line	Test Engineer	Dally Hong



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2180	34.46	21.09	0.11	34.57	21.20	62.89	52.89	-28.32	-31.69	Pass
2	0.2820	33.70	21.81	0.11	33.81	21.92	60.76	50.76	-26.95	-28.84	Pass
3	0.9300	41.36	28.51	0.13	41.49	28.64	56.00	46.00	-14.51	-17.36	Pass
4	5.4420	37.99	30.72	0.22	38.21	30.94	60.00	50.00	-21.79	-19.06	Pass
5	5.4460	35.16	22.12	0.22	35.38	22.34	60.00	50.00	-24.62	-27.66	Pass
6	13.5340	32.27	16.31	0.36	32.63	16.67	60.00	50.00	-27.37	-33.33	Pass

Test Mode:	Mode 1	Temp/Hum	24(℃)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	2018/07/27
Phase:	Neutral	Test Engineer	Dally Hong



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1500	46.86	26.36	0.14	47.00	26.50	65.99	56.00	-18.99	-29.50	Pass
2	0.1980	38.05	23.67	0.13	38.18	23.80	63.69	53.69	-25.51	-29.89	Pass
3	0.2180	34.96	21.76	0.13	35.09	21.89	62.89	52.89	-27.80	-31.00	Pass
4	0.3899	23.13	15.22	0.13	23.26	15.35	58.06	48.07	-34.80	-32.72	Pass
5	0.8620	35.80	29.97	0.14	35.94	30.11	56.00	46.00	-20.06	-15.89	Pass
6	5.4420	38.29	30.87	0.22	38.51	31.09	60.00	50.00	-21.49	-18.91	Pass

4.2 26DB BANDWIDTH, 6DB BANDWIDTH AND OCCUPIED BANDWIDTH (99%)

4.2.1 Test Limit

26 dB Bandwidth ：For reporting purposes only.

6 dB Bandwidth ：Least 500kHz.

Occupied Bandwidth(99%) ： For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as KDB 789033 D02 v01r04 Section C, D, and ANSI 63.10:2013 clause 6.9.2,

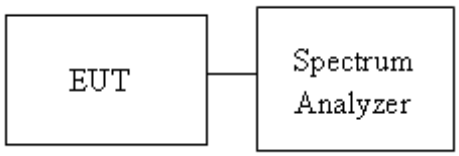
1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. UNII-1, UNII-2a and UNII-2c,

   (1) BW=20MHz : SA set RBW = 300kHz, VBW = 1MHz and Detector = Peak, to measurement 26 dB Bandwidth

   (2) BW=40MHz : SA set RBW = 1MHz, VBW = 3MHz and Detector = Peak, to measurement 26 dB Bandwidth

   (3) BW=80MHz : SA set RBW = 1MHz, VBW = 3MHz and Detector = Peak, to measurement 26 dB Bandwidth
4. UNII-3, SA set RBW = 100kHz, VBW = 300kHz and Detector = Peak, to measurement 6 dB Bandwidth
5. SA set RBW = 1% ~ 5% OBW, VBW = three times the RBW and Detector = Peak, to measurement 99% Bandwidth
6. Measure and record the result of 6 dB Bandwidth and 99% Bandwidth. in the test report.

4.2.3 Test Setup



4.2.4 Test Result

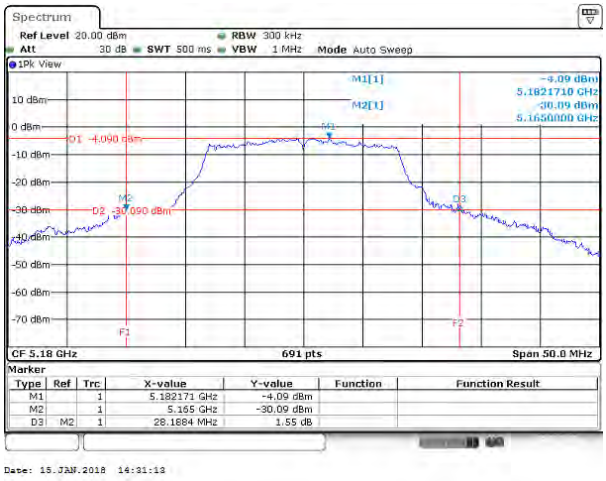
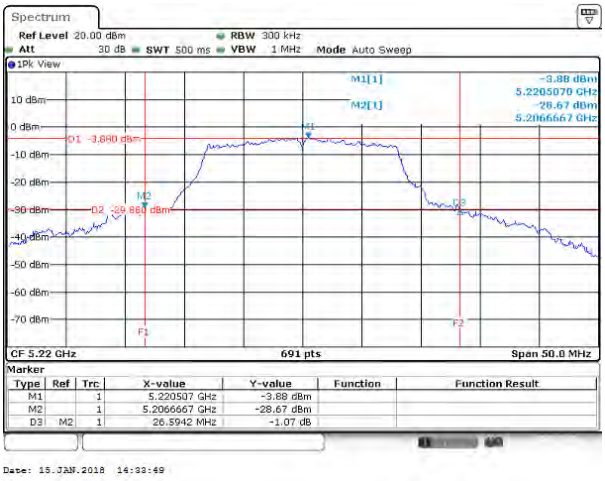
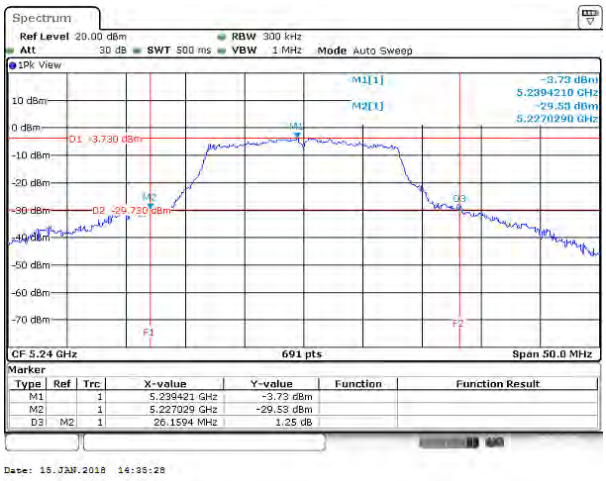
UNII-1 5150-5250 MHz					
Test mode: IEEE 802.11a mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5180	16.9319	-	28.1884	-
Mid	5220	16.8596	-	26.5942	-
High	5240	16.9319	-	26.1594	-
Test mode: IEEE 802.11n HT20 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5180	18.1620	-	30.0	-
Mid	5220	18.1620	-	29.4203	-
High	5240	18.0897	-	29.7826	-
Test mode: IEEE 802.11n HT40 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5190	36.7004	-	67.13	-
High	5230	36.8162	-	63.652	-
Test mode: IEEE 802.11ac VHT80 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Mid	5210	76.4109	-	110.145	-

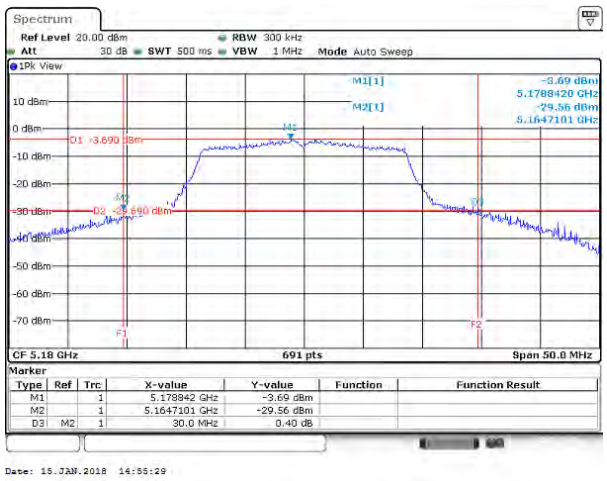
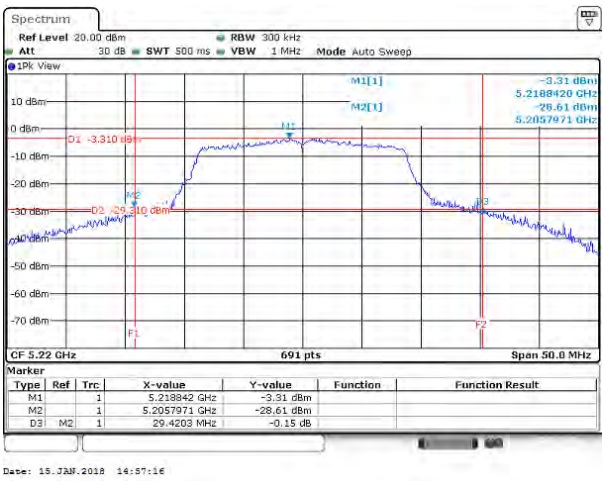
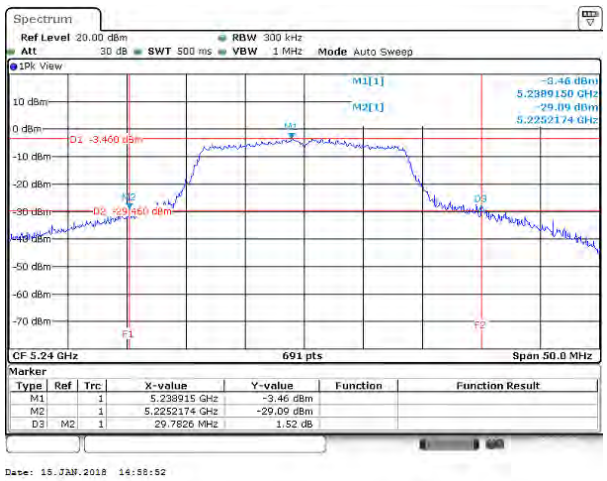
UNII-2a 5250-5350 MHz					
Test mode: IEEE 802.11a mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5260	17.0767	-	28.6232	-
Mid	5280	17.0043	-	28.1884	-
High	5320	17.0767	-	29.4203	-
Test mode: IEEE 802.11n HT20 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5260	18.1620	-	30.2899	-
Mid	5280	18.2344	-	30.5072	-
High	5320	18.1620	-	29.4203	-
Test mode: IEEE 802.11n HT40 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5270	36.8162	-	72.464	-
High	5310	36.8162	-	66.899	-
Test mode: IEEE 802.11ac VHT80 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Mid	5290	76.1794	-	113.855	-

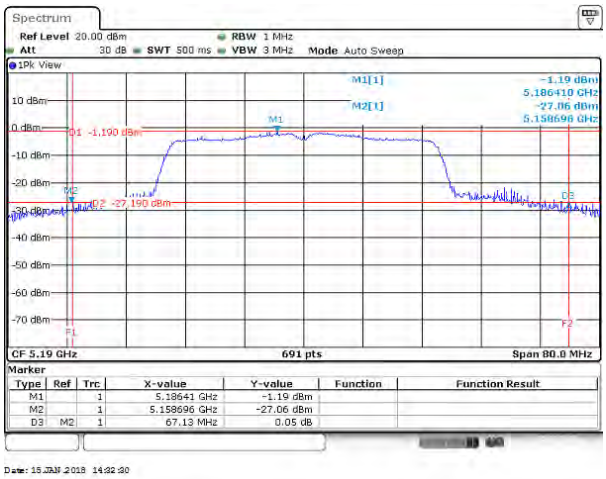
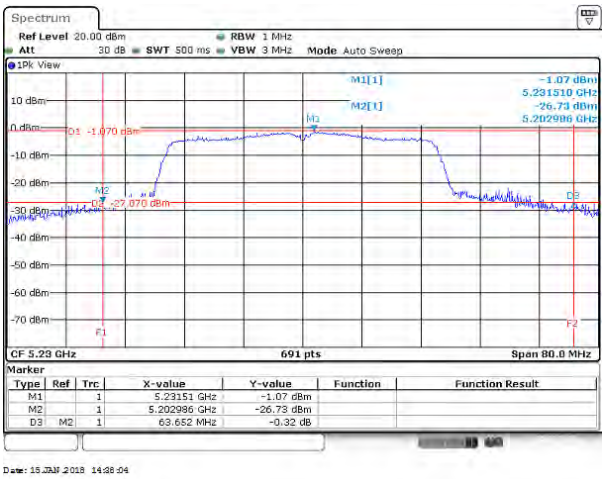
UNII-2c 5475-5725 MHz					
Test mode: IEEE 802.11a mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5500	16.8596	-	24.6377	-
Mid	5580	16.7872	-	22.029	-
High	5700	16.8596	-	23.4783	-
Test mode: IEEE 802.11n HT20 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5500	17.9450	-	27.5362	-
Mid	5580	17.9450	-	27.1739	-
High	5700	18.0173	-	25.0	-
Test mode: IEEE 802.11n HT40 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Low	5510	36.5846	-	63.884	-
Mid	5500	36.5846	-	59.362	-
High	5670	36.7004	-	62.957	-
Test mode: IEEE 802.11ac VHT80 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 26dB BW (MHz)**	**Chain 1 26dB BW (MHz)**
Mid	5530	75.9479	-	89.043	-

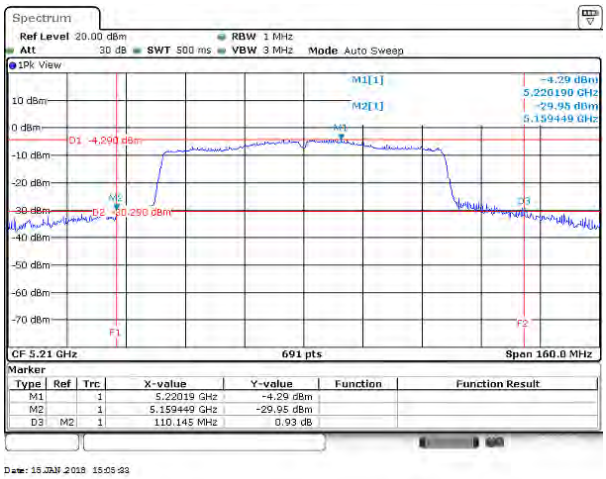
UNII-3 5725-5825MHz					
Test mode: IEEE 802.11a mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 6dB BW (MHz)**	**Chain 1 6dB BW (MHz)**
Low	5745	16.8596	-	16.3043	-
Mid	5785	16.8596	-	16.3043	-
High	5825	16.8596	-	16.3478	-
Test mode: IEEE 802.11n HT20 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 6dB BW (MHz)**	**Chain 1 6dB BW (MHz)**
Low	5745	18.0173	-	17.5217	-
Mid	5785	17.9450	-	17.5652	-
High	5825	18.0897	-	17.5652	-
Test mode: IEEE 802.11n HT40 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 6dB BW (MHz)**	**Chain 1 6dB BW (MHz)**
Low	5755	36.5846	-	36.058	-
High	5795	36.5846	-	35.71	-
Test mode: IEEE 802.11ac VHT80 mode					
Channel	**Frequency (MHz)**	**Chain 0 OBW(99%) (MHz)**	**Chain 1 OBW(99%) (MHz)**	**Chain 0 6dB BW (MHz)**	**Chain 1 6dB BW (MHz)**
Mid	5775	75.9479	-	75.13	-

Test Data (26dB)

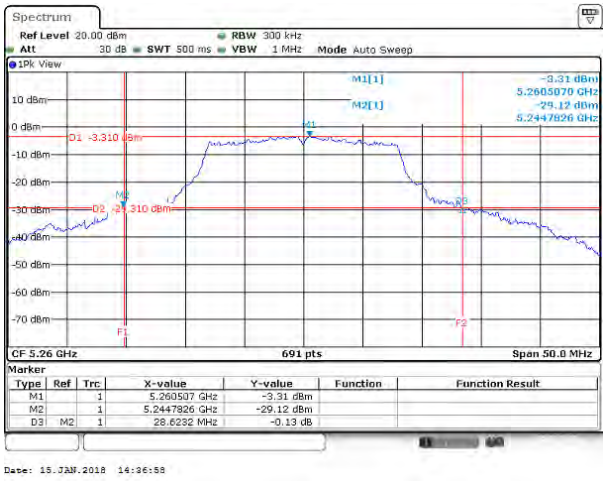
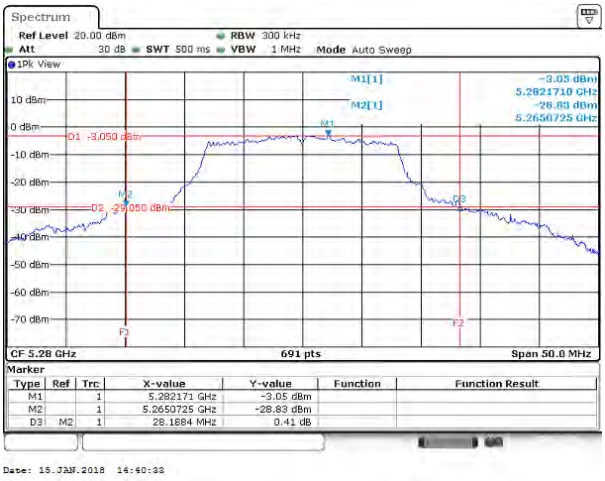
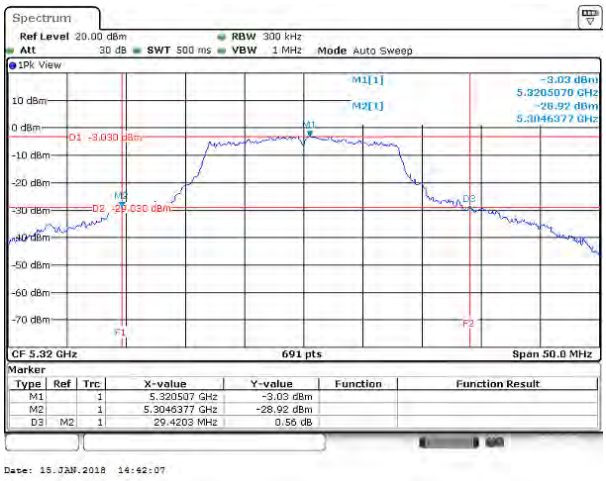
UNII-1 IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

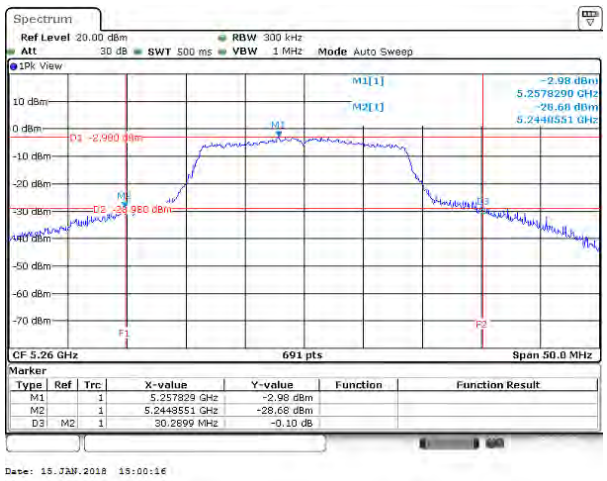
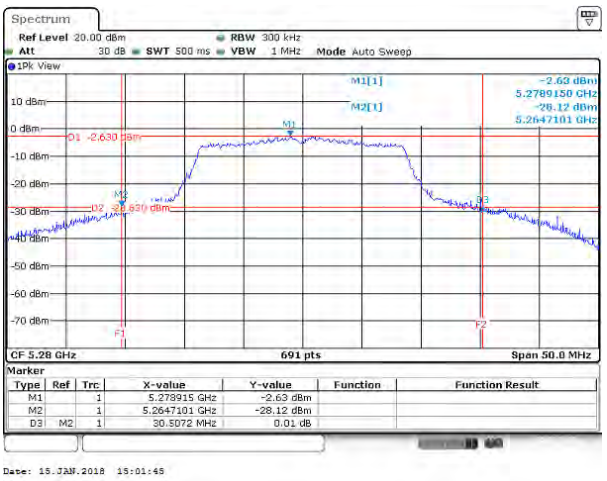
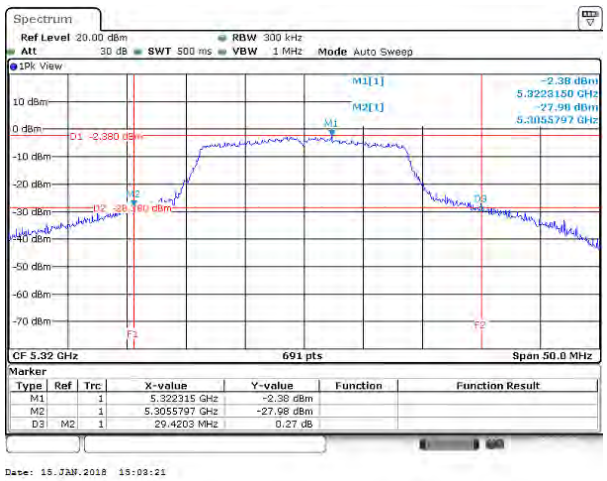
UNII-1 IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

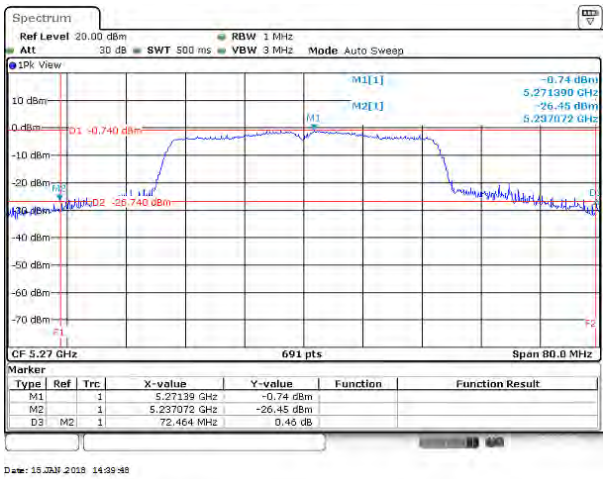
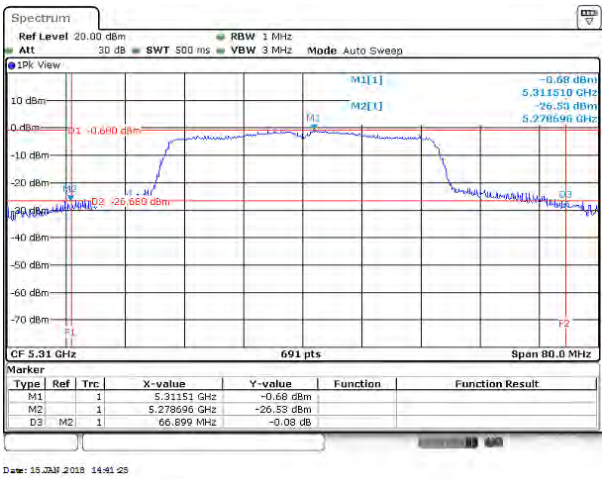
UNII-1 IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

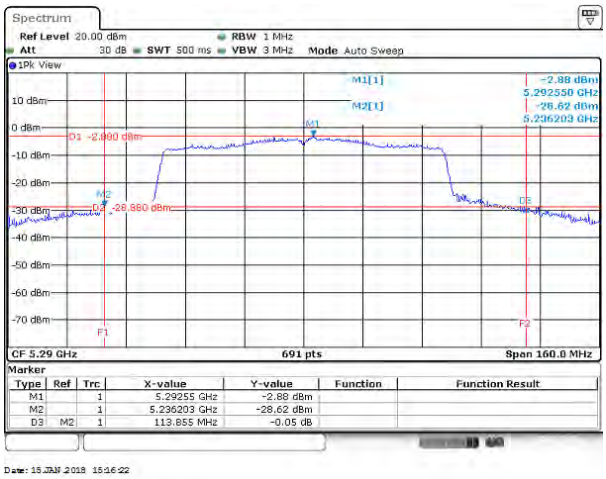
UNII-1 IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

Test Data (26dB)

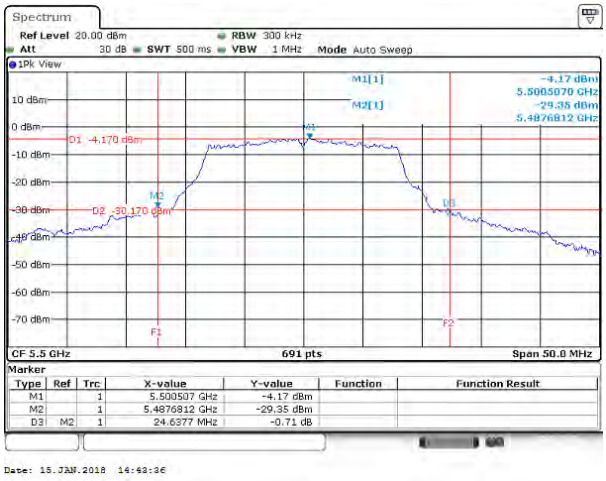
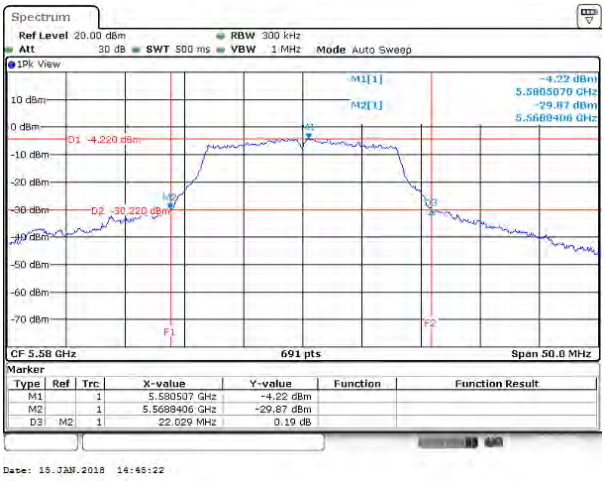
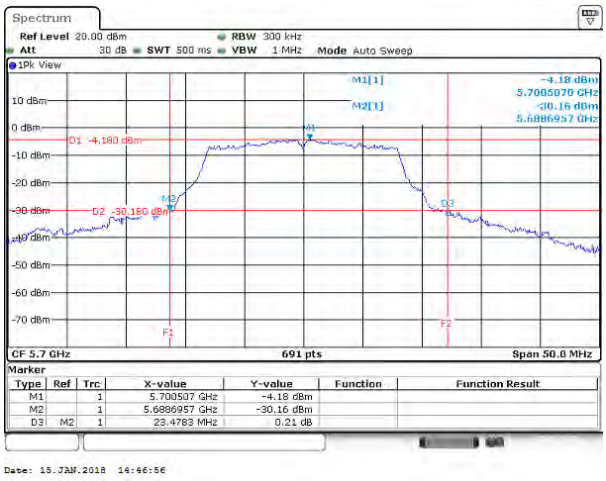
UNII-2a IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

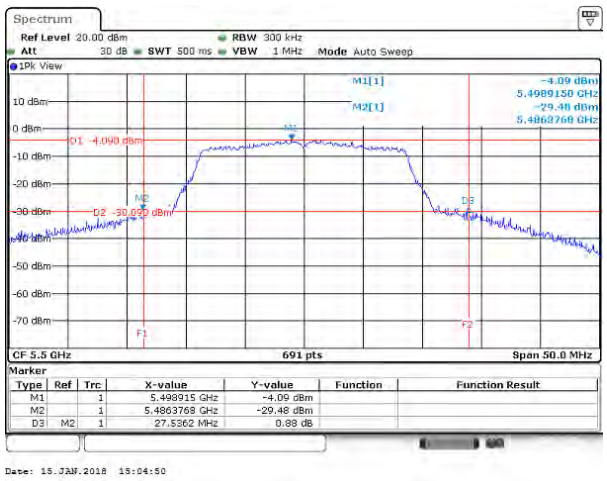
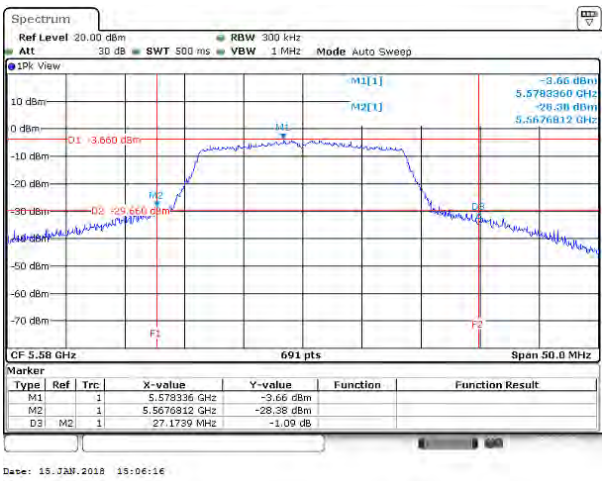
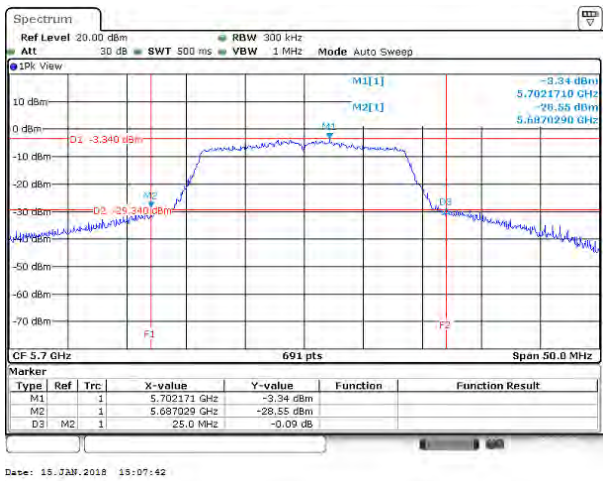
UNII-2a IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

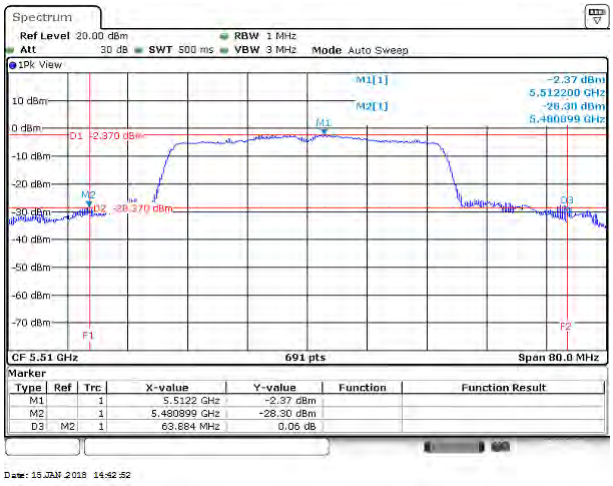
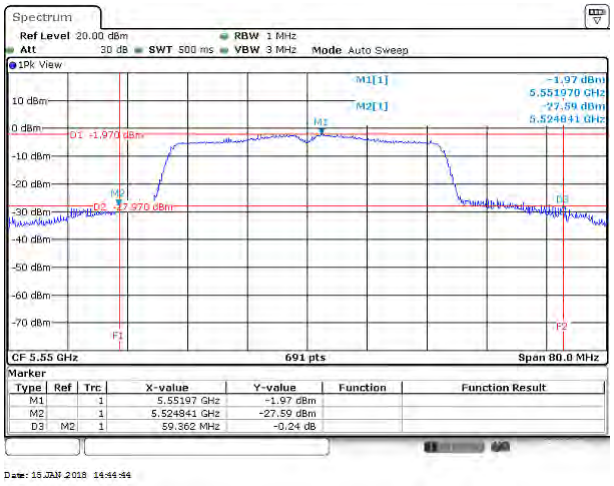
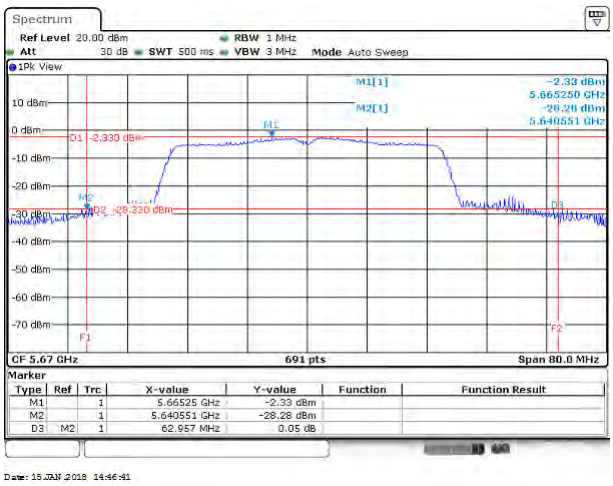
UNII-2a IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

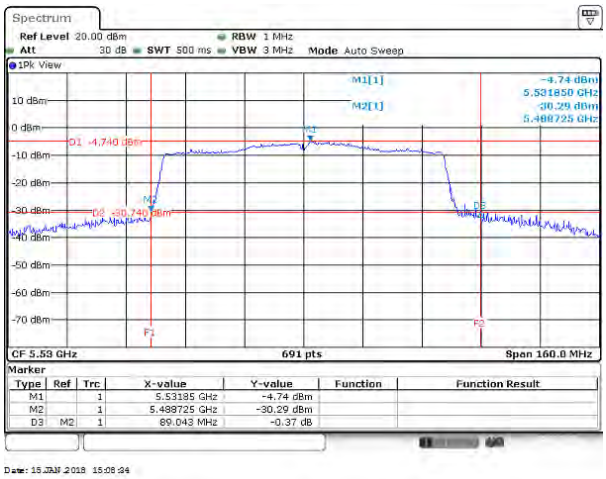
UNII-2a IEEE 802.11ac VHT80 mode- chain 0
Mid CH


Test Data (26dB)

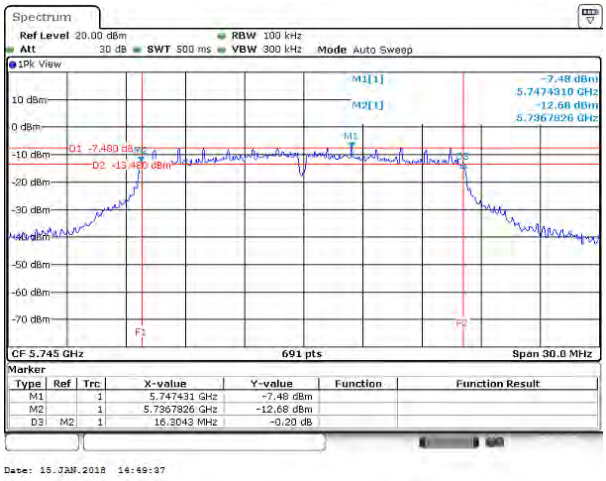
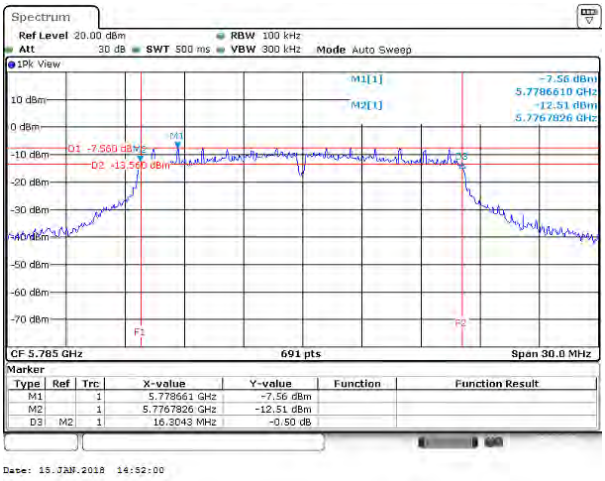
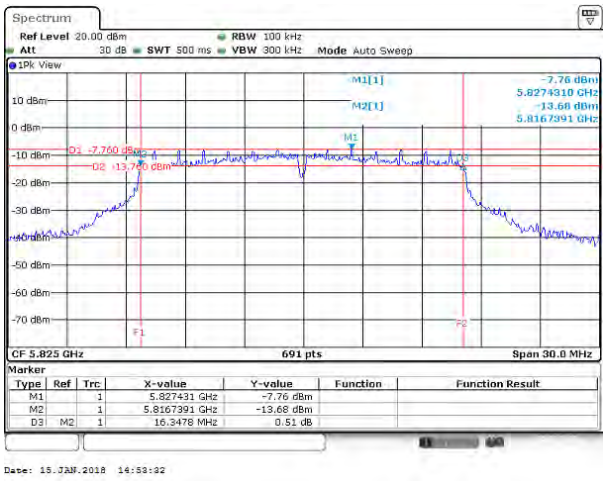
UNII-2c IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

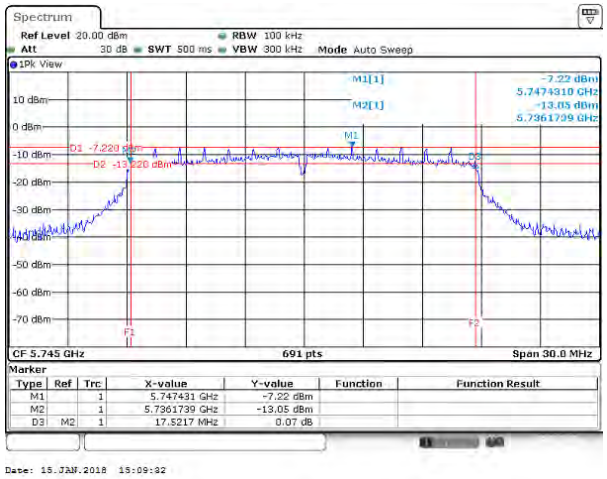
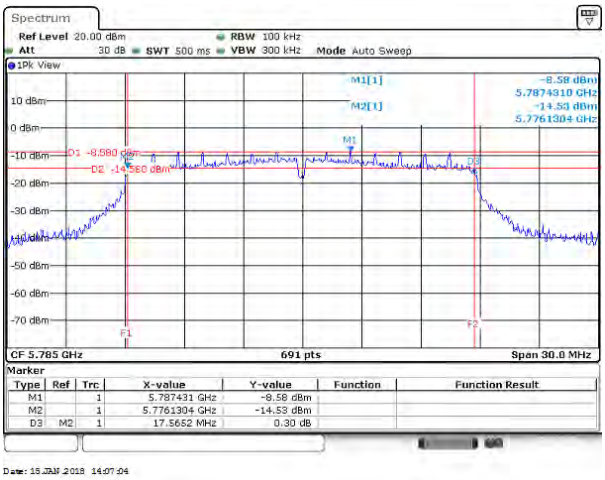
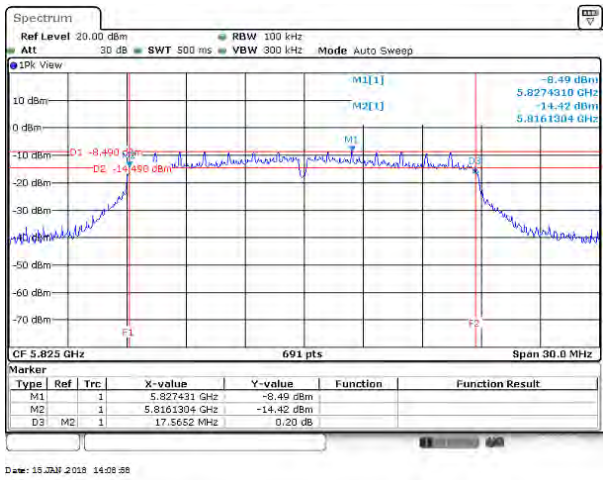
UNII-2c IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

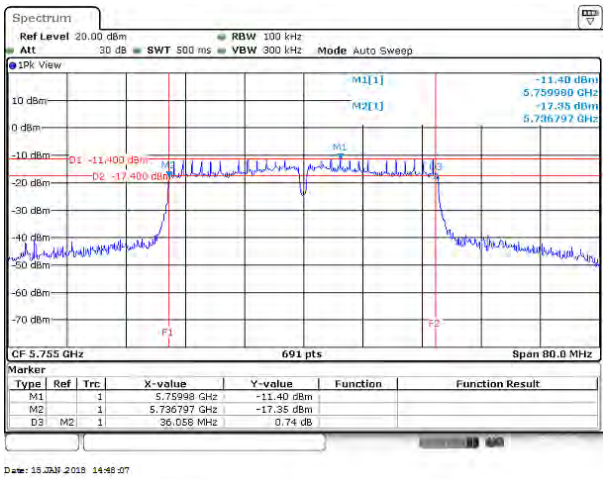
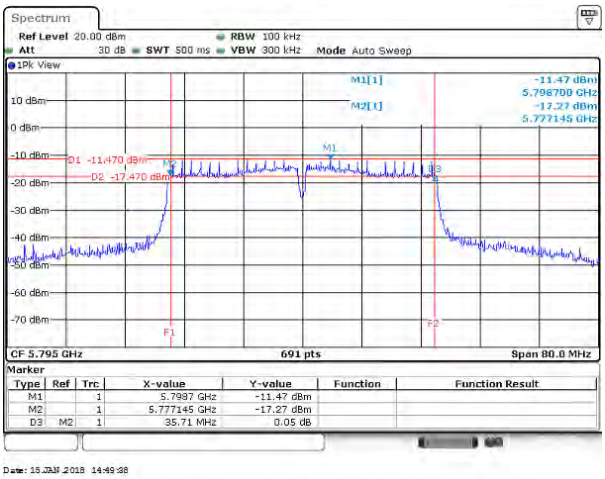
UNII-2c IEEE 802.11n HT40 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

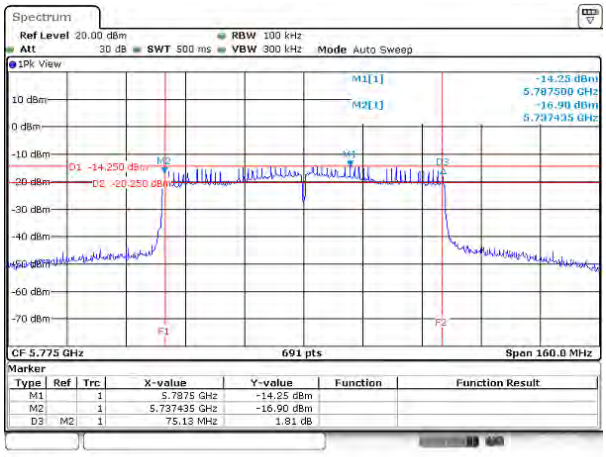
UNII-2c IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

Test Data (6dB)

UNII-3 IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

UNII-3 IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

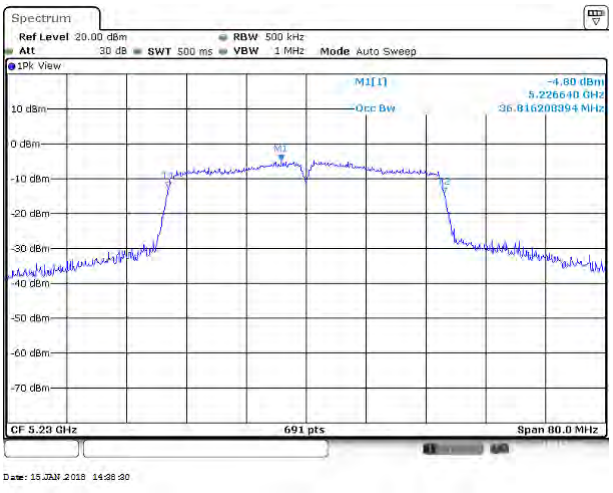
UNII-3 IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

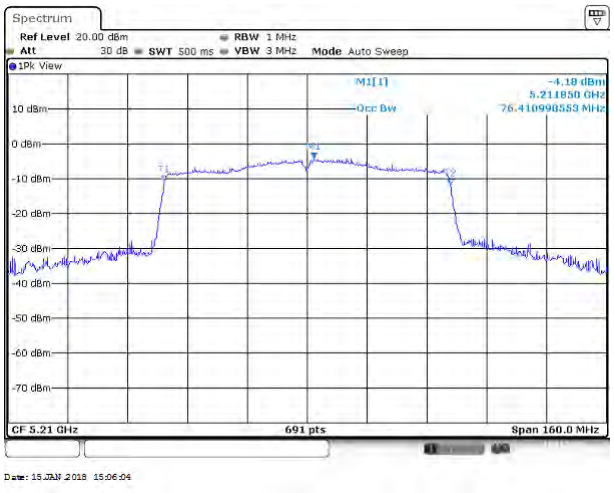
UNII-3 IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

Test Data (99%OBW)

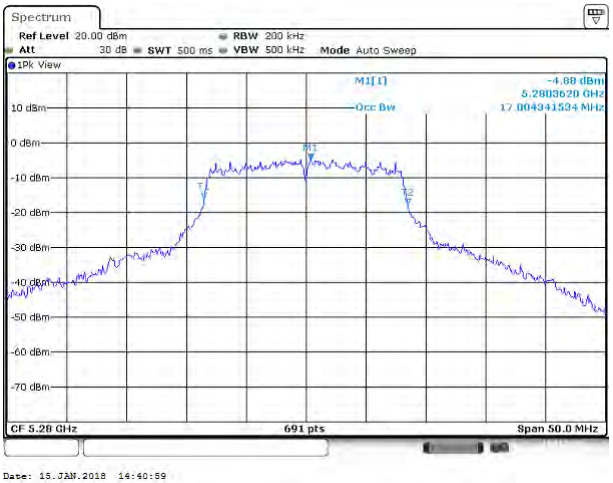
UNII-1 IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

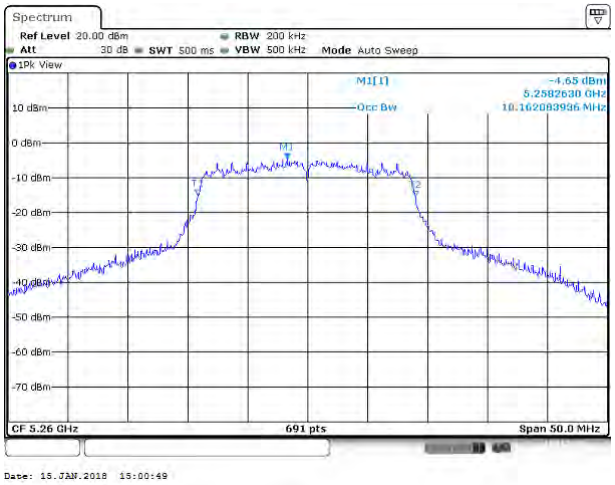
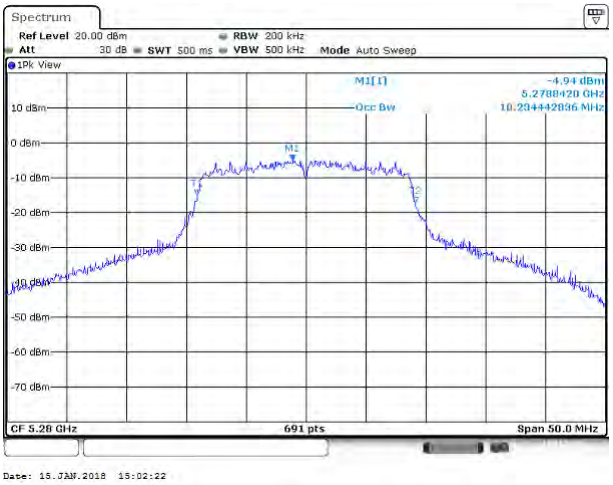
UNII-1 IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

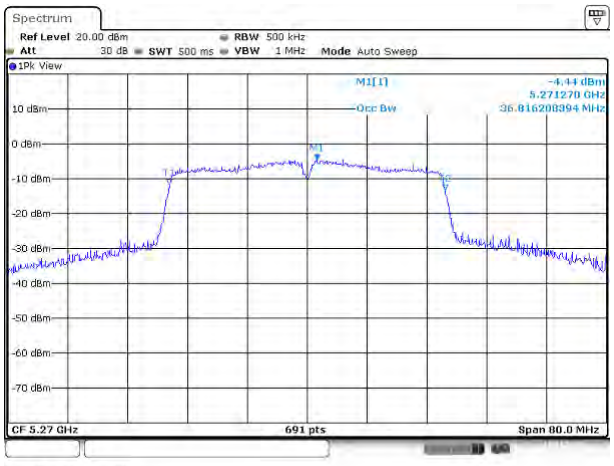
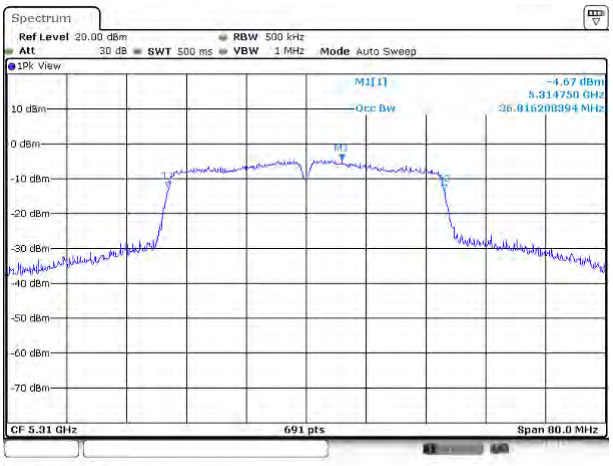
UNII-1 IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

UNII-1 IEEE 802.11ac VHT80 mode- chain 0
Mid CH


Test Data (99%OBW)

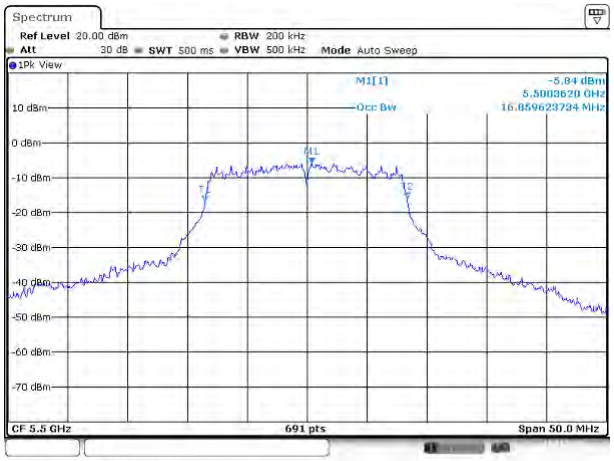
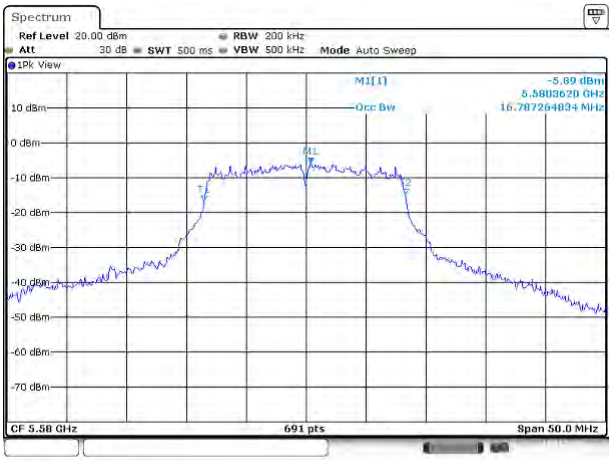
UNII-2a IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

UNII-2a IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

UNII-2a IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

UNII-2a IEEE 802.11ac VHT80 mode- chain 0
Mid CH


Test Data (99%OBW)

UNII-2c IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

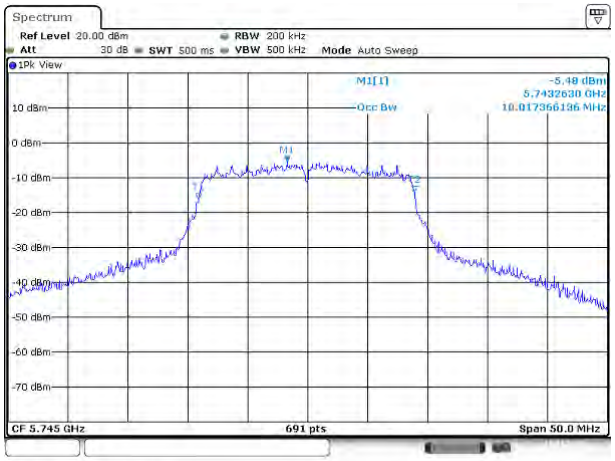
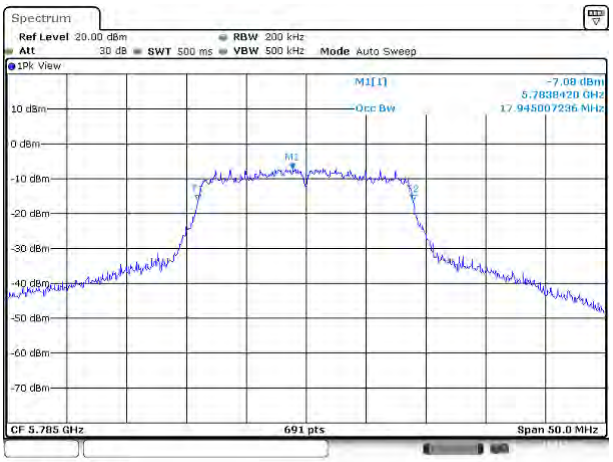
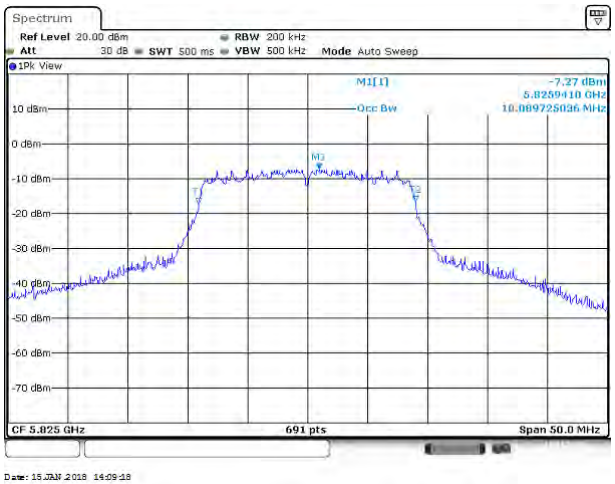
UNII-2c IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

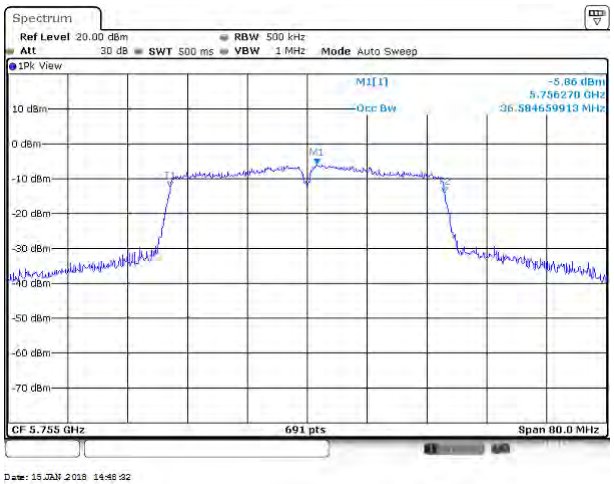
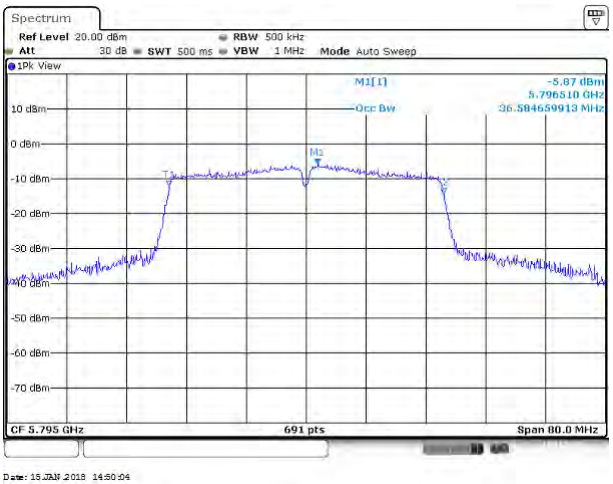
UNII-2c IEEE 802.11n HT40 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

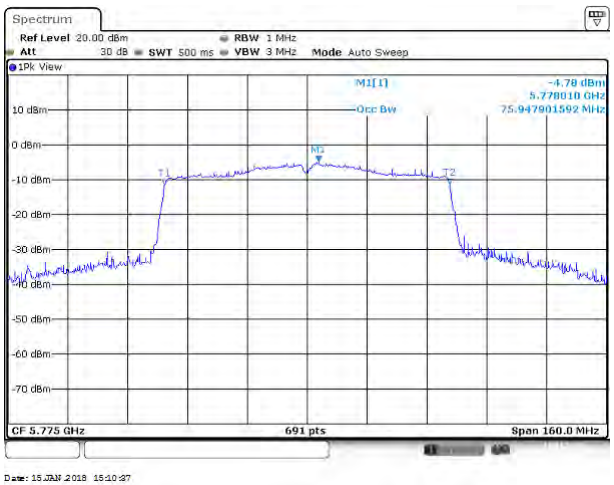
UNII-2c IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

Test Data (99%OBW)

UNII-3 IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

UNII-3 IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

UNII-3 IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

UNII-3 IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

4.3 OUTPUT POWER MEASUREMENT

4.3.1 Test Limit

According to §15.407 (a)(1), 15.407(a)(2) and 15.407(a)(3)

UNII-1 :

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW(24 dBm) and The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz, provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

UNII-2a and 2c:

the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. and The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 Log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

UNII-3:

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

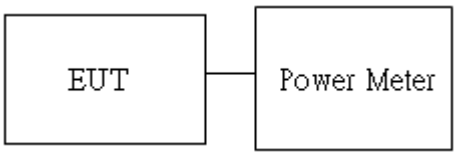
UNII-1 Limit	☒ Antenna not exceed 6 dBi：24dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 24 – (DG – 6)]
UNII-2a/2c Limit	☒ Antenna not exceed 6 dBi：24dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 24 – (DG – 6)]
UNII-3 Limit	☒ Antenna not exceed 6 dBi：30dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 30 – (DG – 6)]

4.3.2 Test Procedure

Test method Refer as KDB 789033 D02 v01r04, Section E.3.b.

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Average output power. in the test report.

4.3.3 Test Setup



4.3.4 Test Result

Conducted output power：

UNII-1										
Config	CH	Freq. (MHz)	Power Set		AV Power(dBm)		AV Total Power (dBm)	AV Total Power (W)	DG (dBi)	Limit (dBm)
			chain0	chain1	chain0	chain1				
IEEE 802.11a Data rate: 6Mbps	36	5180	11.75	-	9.30	-	9.30	0.0085	0.14	24
	44	5220	11.75	-	9.67	-	9.67	0.0093		
	48	5240	11.75	-	9.71	-	9.71	0.0094		
IEEE 802.11n HT20 Data rate: MCS0	36	5180	12.00	-	9.38	-	9.38	0.0087		
	44	5220	11.75	-	9.67	-	9.67	0.0093		
	48	5240	11.75	-	9.71	-	9.71	0.0094		
IEEE 802.11n HT40 Data rate: MCS0	38	5190	11.75	-	8.62	-	8.62	0.0073		
	46	5230	11.75	-	8.66	-	8.66	0.0073		
IEEE 802.11ac VHT80 Data rate: MCS0	42	5210	12.00	-	8.89	-	8.89	0.0077		

UNII-2a										
Config	CH	Freq. (MHz)	Power Set		AV Power(dBm)		AV Total Power (dBm)	AV Total Power (W)	DG (dBi)	Limit (dBm)
			chain0	chain1	chain0	chain1				
IEEE 802.11a Data rate: 6Mbps	52	5260	11.75	-	9.72	-	9.72	0.0094	0.14	24
	56	5280	11.75	-	9.84	-	9.84	0.0096		
	64	5320	11.75	-	9.74	-	9.74	0.0094		
IEEE 802.11n HT20 Data rate: MCS0	52	5260	11.75	-	9.25	-	9.25	0.0084		
	56	5280	11.75	-	9.35	-	9.35	0.0086		
	64	5320	11.75	-	9.52	-	9.52	0.0090		
IEEE 802.11n HT40 Data rate: MCS0	54	5270	11.75	-	8.95	-	8.95	0.0079		
	62	5310	11.75	-	9.02	-	9.02	0.0080		
IEEE 802.11ac VHT80 Data rate: MCS0	58	5290	12	-	9.16	-	9.16	0.0082		

UNII-2c										
Config	CH	Freq. (MHz)	Power Set		AV Power(dBm)		AV Total Power (dBm)	AV Total Power (W)	DG (dBi)	Limit (dBm)
			chain0	chain1	chain0	chain1				
IEEE 802.11a Data rate: 6Mbps	100	5500	11.75	-	9.70	-	9.70	0.0093	0.14	24
	116	5580	11.75	-	9.87	-	9.87	0.0097		
	140	5700	11.75	-	9.66	-	9.66	0.0092		
IEEE 802.11n HT20 Data rate: MCS0	100	5500	11.75	-	9.29	-	9.29	0.0085		
	116	5580	11.75	-	9.42	-	9.42	0.0087		
	140	5700	11.75	-	9.27	-	9.27	0.0085		
IEEE 802.11n HT40 Data rate: MCS0	102	5510	11.75	-	8.77	-	8.77	0.0075		
	110	5550	11.75	-	8.83	-	8.83	0.0076		
	134	5670	11.75	-	9.01	-	9.01	0.0080		
IEEE 802.11ac VHT80 Data rate: MCS0	106	5530	12	-	9.15	-	9.15	0.0082		

UNII-3										
Config	CH	Freq. (MHz)	Power Set		AV Power(dBm)		AV Total Power (dBm)	AV Total Power (W)	DG (dBi)	Limit (dBm)
			chain0	chain1	chain0	chain1				
IEEE 802.11a Data rate: 6Mbps	149	5745	11.75	-	9.60	-	9.60	0.0091	0.14	30
	157	5785	11.75	-	9.41	-	9.41	0.0087		
	165	5825	11.75	-	9.20	-	9.20	0.0083		
IEEE 802.11n HT20 Data rate: MCS0	149	5745	11.75	-	9.17	-	9.17	0.0083		
	157	5785	11.75	-	8.99	-	8.99	0.0079		
	165	5825	11.75	-	9.06	-	9.06	0.0081		
IEEE 802.11n HT40 Data rate: MCS0	151	5755	11.75	-	8.82	-	8.82	0.0076		
	159	5795	11.75	-	8.76	-	8.76	0.0075		
IEEE 802.11ac VHT80 Data rate: MCS0	155	5775	12.00	-	8.93	-	8.93	0.0078		

4.4 POWER SPECTRAL DENSITY

4.4.1 Test Limit

According to §15.407 (a)(1), 15.407(a)(2) and 15.407(a)(3)

UNII-1 :

FCC: The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

UNII-2a and 2c:

The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

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

UNII-3:

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.i.

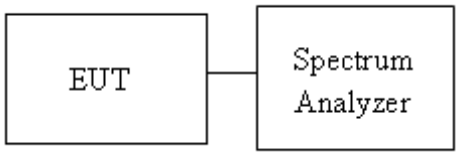
UNII-1 Limit	☒ Antenna not exceed 6 dBi：11 dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 11 – (DG – 6)]
UNII-2a Limit	☒ Antenna not exceed 6 dBi：11 dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 11 – (DG – 6)]
UNII-2c Limit	☒ Antenna not exceed 6 dBi：11 dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 11 – (DG – 6)]
UNII-3 Limit	☒ Antenna not exceed 6 dBi：30 dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 30 – (DG – 6)]

4.4.2 Test Procedure

Test method Refer as KDB 789033 D02 v01r04, Section F

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. UNII-1, UNII-2a and UNII-2c, SA set RBW = 1MHz, VBW = 3MHz and Detector = RMS, to measurement Power Density.
4. UNII-3, SA set RBW = 500kHz, VBW = 2MHz and Detector = RMS, to measurement Power Density
5. The path loss and Duty Factor were compensated to the results for each measurement by SA.
6. Mark the maximum level.
7. Measure and record the result of power spectral density. in the test report.

4.4.3 Test Setup



4.4.4 Test Result

UNII-1 5150-5250 MHz					
Test mode: IEEE 802.11a mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5180	-2.31	-	-2.31	11
Mid	5220	-1.66	-	-1.66	
High	5240	-1.75	-	-1.75	
Test mode: IEEE 802.11n HT20 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5180	-2.12	-	-2.12	11
Mid	5220	-2.40	-	-2.40	
High	5240	-2.20	-	-2.20	
Test mode: IEEE 802.11n HT40 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5190	-5.80	-	-5.80	11
High	5230	-5.24	-	-5.24	
Test mode: IEEE 802.11ac VHT80 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Mid	5210	-2.01	-	-2.01	11

UNII-2a 5250-5350 MHz					
Test mode: IEEE 802.11a mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5260	-1.94	-	-1.94	11
Mid	5280	-1.79	-	-1.79	
High	5320	-1.79	-	-1.79	
Test mode: IEEE 802.11n HT20 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5260	-2.61	-	-2.61	11
Mid	5280	-2.46	-	-2.46	
High	5320	-2.41	-	-2.41	
Test mode: IEEE 802.11n HT40 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5270	-5.32	-	-5.32	11
High	5310	-5.00	-	-5.00	
Test mode: IEEE 802.11ac VHT80 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Mid	5290	-1.18	-	-1.18	11

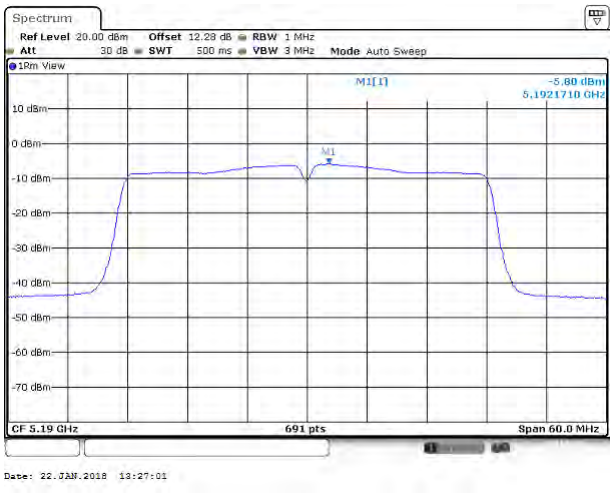
UNII-2c 5470-5725 MHz					
Test mode: IEEE 802.11a mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5500	-1.49	-	-1.49	11
Mid	5580	-1.55	-	-1.55	
High	5700	-2.06	-	-2.06	
Test mode: IEEE 802.11n HT20 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5500	-2.20	-	-2.20	11
Mid	5580	-2.38	-	-2.38	
High	5700	-2.27	-	-2.27	
Test mode: IEEE 802.11n HT40 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5510	-4.95	-	-4.95	11
Mid	5500	-4.97	-	-4.97	
High	5670	-5.39	-	-5.39	
Test mode: IEEE 802.11ac VHT80 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Mid	5530	-2.02	-	-2.02	11

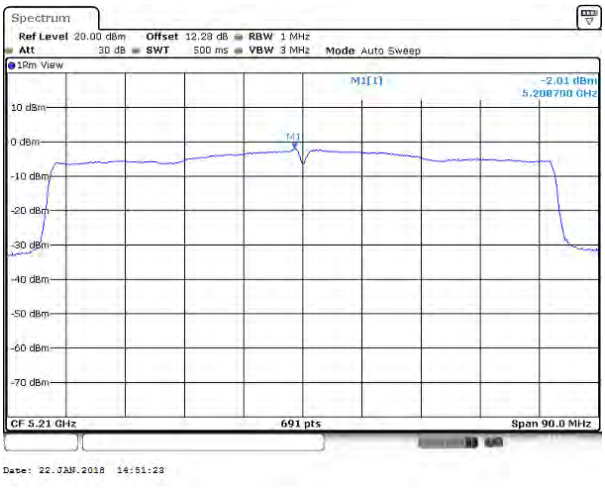
UNII-3 5725-5825 MHz					
Test mode: IEEE 802.11a mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5745	2.63	-	2.63	30
Mid	5785	2.42	-	2.42	
High	5825	2.12	-	2.12	
Test mode: IEEE 802.11n HT20 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5745	2.59	-	2.59	30
Mid	5785	3.15	-	3.15	
High	5825	3.14	-	3.14	
Test mode: IEEE 802.11n HT40 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Low	5755	-0.10	-	-0.10	30
High	5795	-0.46	-	-0.46	
Test mode: IEEE 802.11ac VHT80 mode					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PPSD (dBm)**	**Limit (dBm)**
Mid	5775	3.84	-	3.84	30

Test Data

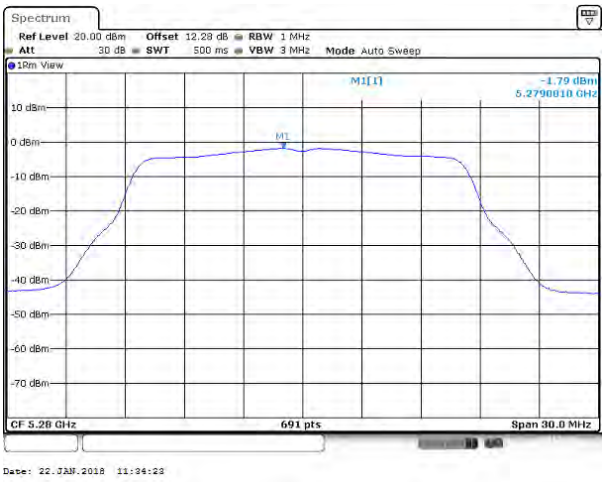
UNII-1 IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

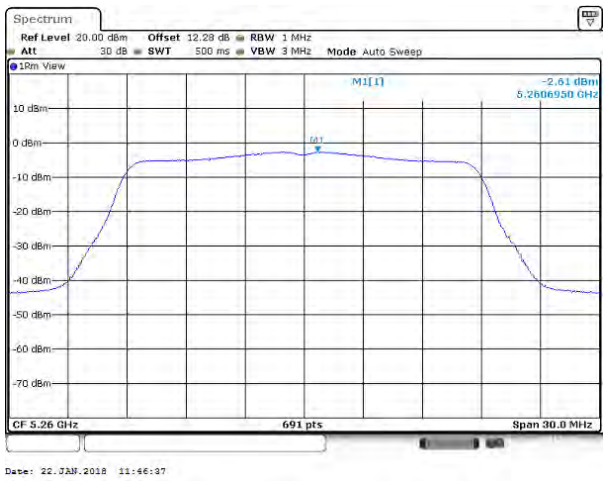
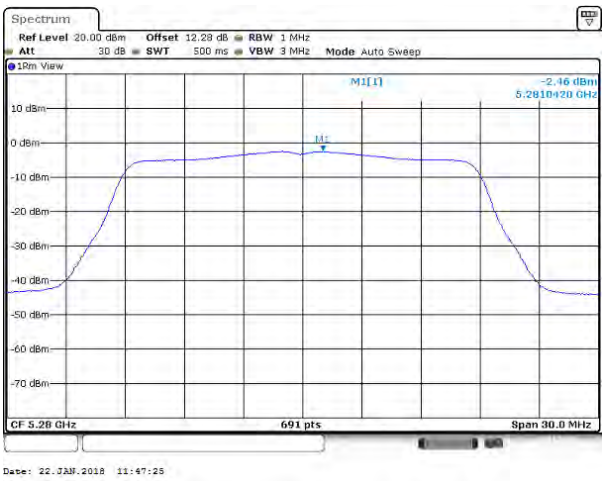
UNII-1 IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

UNII-1 IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

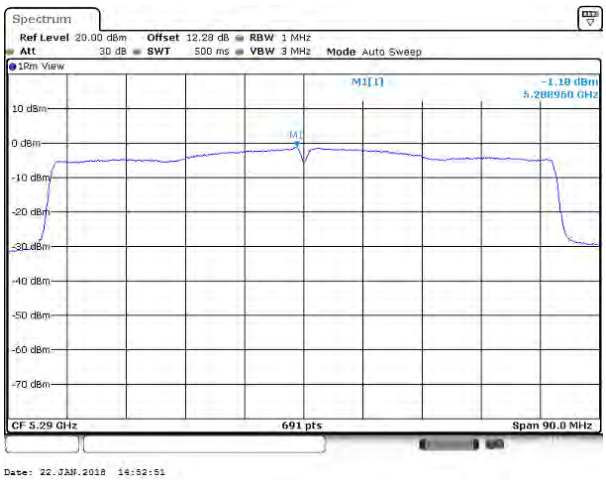
UNII-1 IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

Test Data

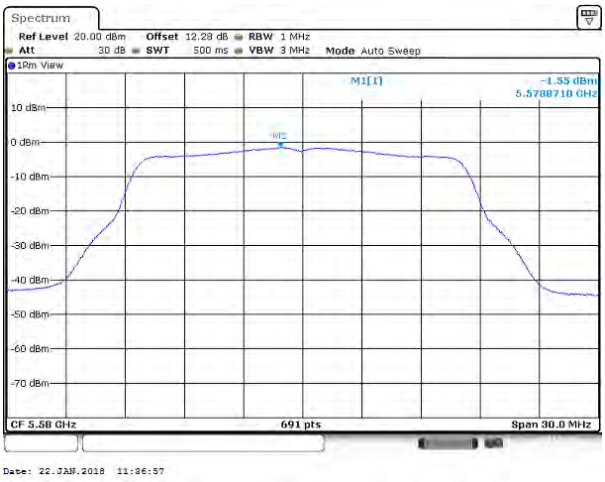
UNII-2a IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

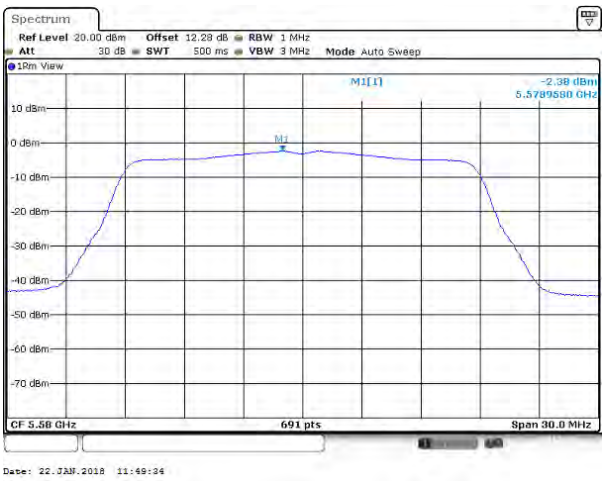
UNII-2a IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

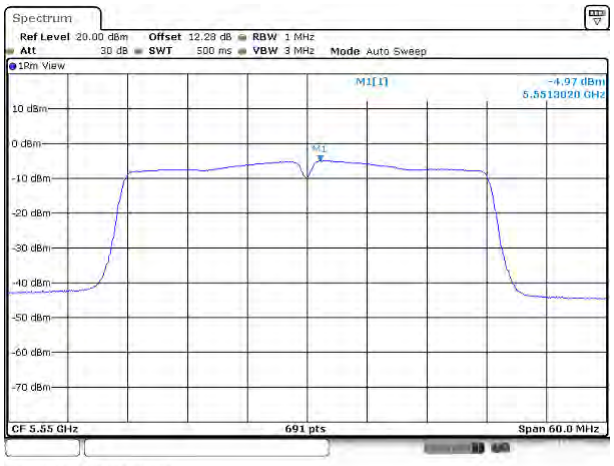
UNII-2a IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

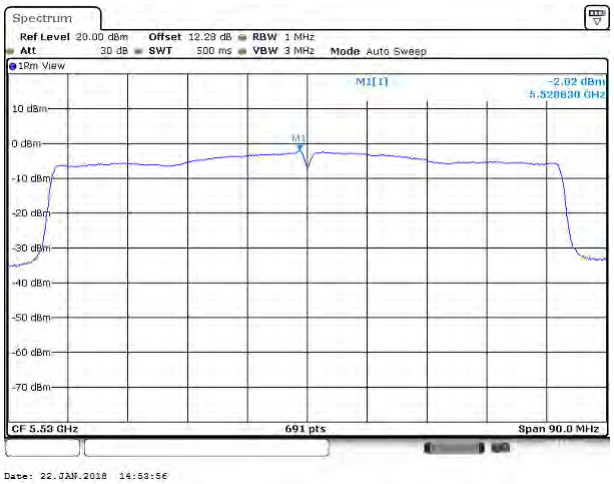
UNII-2a IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

Test Data

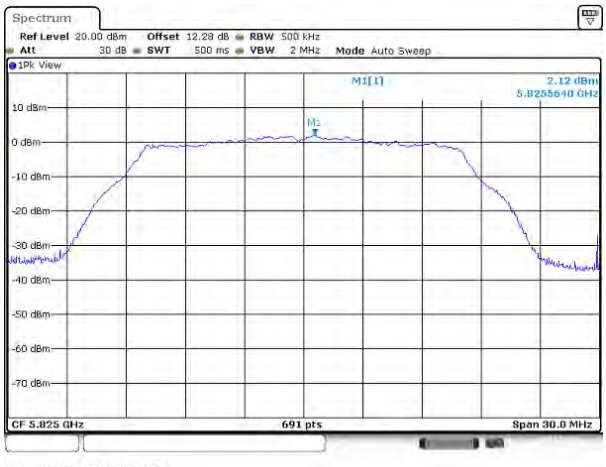
UNII-2c IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

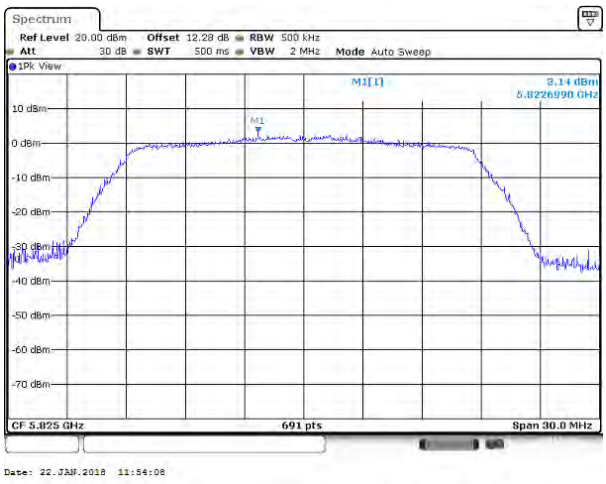
UNII-2c IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

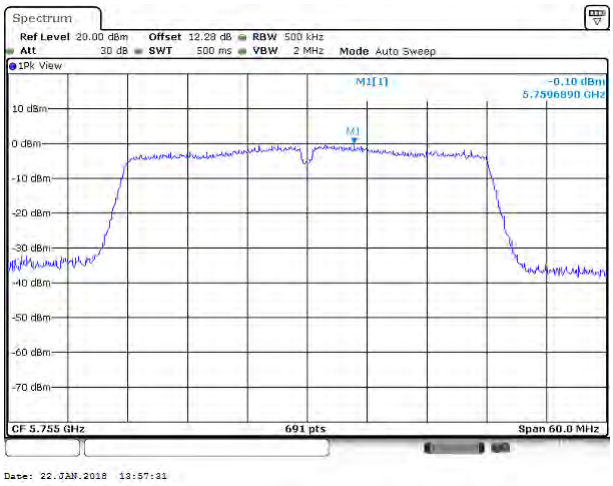
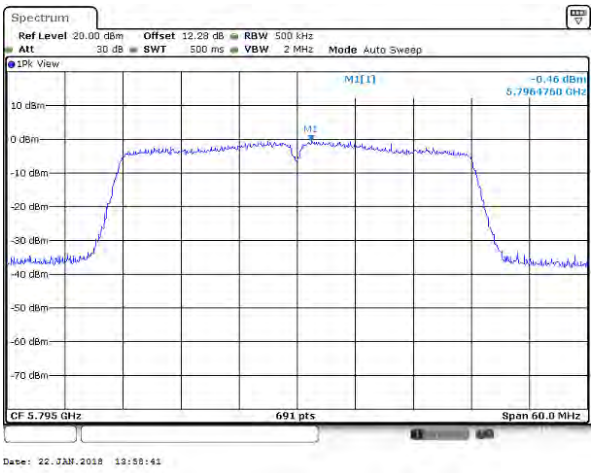
UNII-2c IEEE 802.11n HT40 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

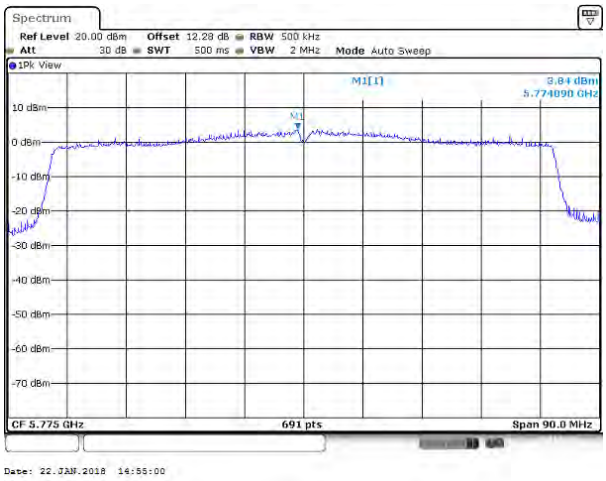
UNII-2c IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

Test Data

UNII-3 IEEE 802.11a mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

UNII-3 IEEE 802.11n HT20 mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

UNII-3 IEEE 802.11n HT40 mode- chain 0	
Low CH	**High CH**
	

UNII-3 IEEE 802.11ac VHT80 mode- chain 0	
Mid CH	
	

4.5 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.5.1 Test Limit

FCC according to §15.407, §15.209 and §15.205,

Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

Above 30 MHz

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

UNII-1 :

For transmitters operating in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, any unwanted emissions that fall into the band 5250-5350 MHz must be 26 dBc, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth, above 5.25 GHz. Otherwise, the transmission is considered as intentional and the devices shall implement dynamic frequency selection (DFS) and transmitter power control (TPC) as per the requirements for the band 5250-5350 MHz

UNII-2a and 2c :

For devices with operating frequencies in the band 5250-5350 MHz but having a channel bandwidth that overlaps the band 5150-5250 MHz, the devices' unwanted emission shall not exceed -27 dBm/MHz e.i.r.p. outside the band 5150-5350 MHz and its power shall comply with the spectral power density for operation within the band 5150-5250 MHz. The device shall be labelled "for indoor use only." Emissions outside the band 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

UNII-3:

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.

4.5.2 Test Procedure

Test method Refer as KDB 789033 D02 v01r04, Section G.3, G.4, G.5, and G.6,.

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10, and the EUT set in a continuous mode.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.

3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

4. No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)

5. The SA setting following：

(1) Below 1G：RBW = 100kHz, VBW ≥ 3*RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2) Above 1G：

(2.1) For Peak measurement：RBW = 1MHz, VBW ≥ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

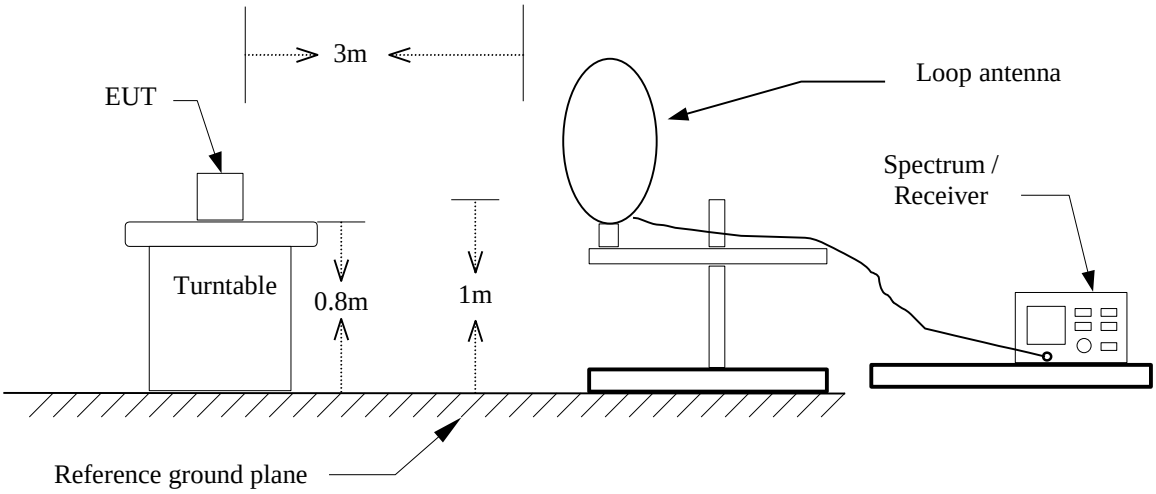
(2.2) For Average measurement：RBW = 1MHz, VBW

- If Duty Cycle ≥ 98%, VBW=10Hz.
- If Duty Cycle < 98%, VBW=1/T.

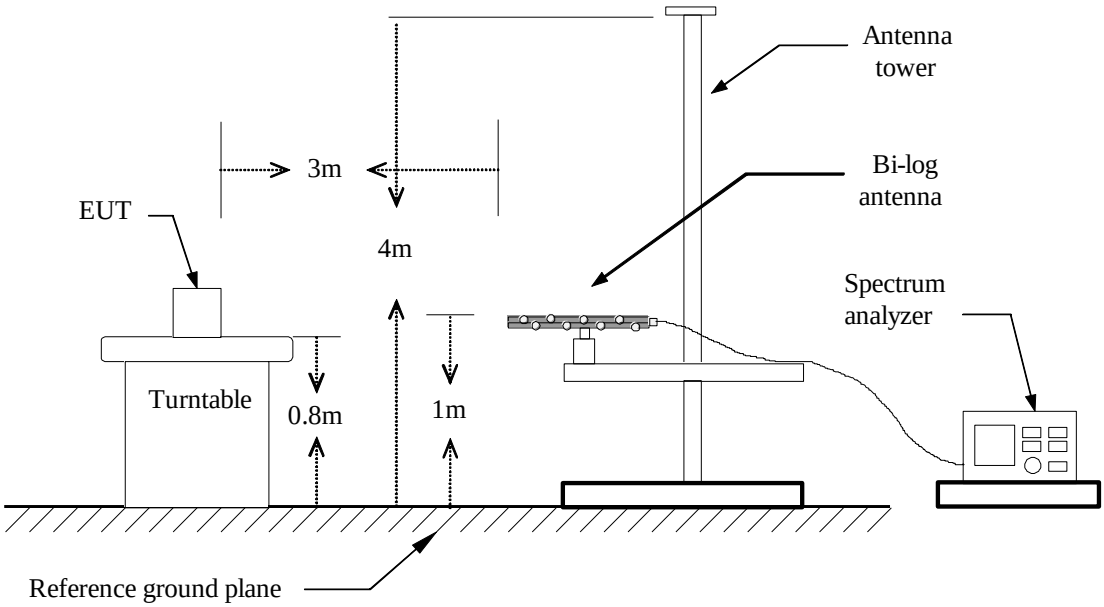
Configuration	Duty Cycle (%)	T(ms)	1/T (Hz)	VBW Setting
802.11a	96%	1.4300	699.301	750Hz
802.11n HT20	96%	1.4400	694.444	750Hz
802.11n HT40	89%	0.6600	1515.152	1.6kHz
802.11ac VHT80	79%	0.3450	2898.551	3kHz

4.5.3 Test Setup

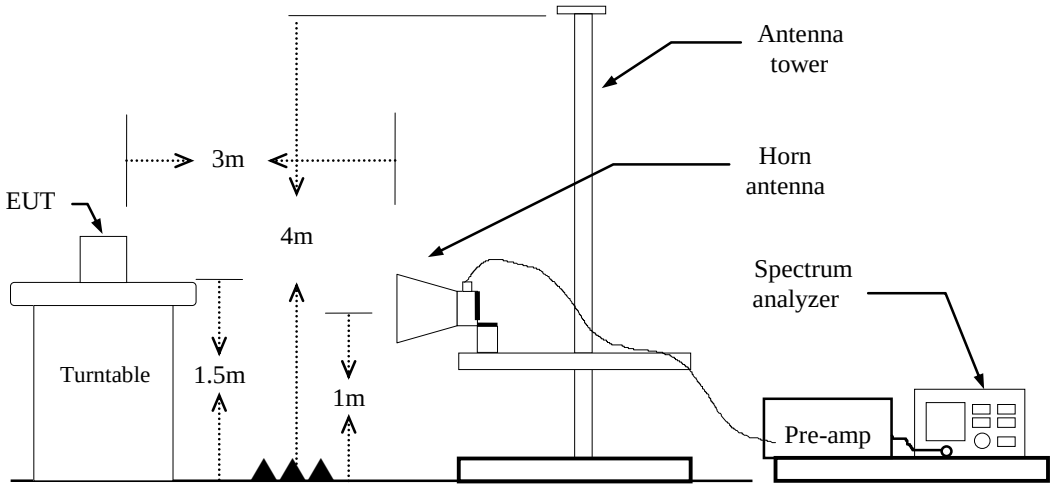
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1 GHz

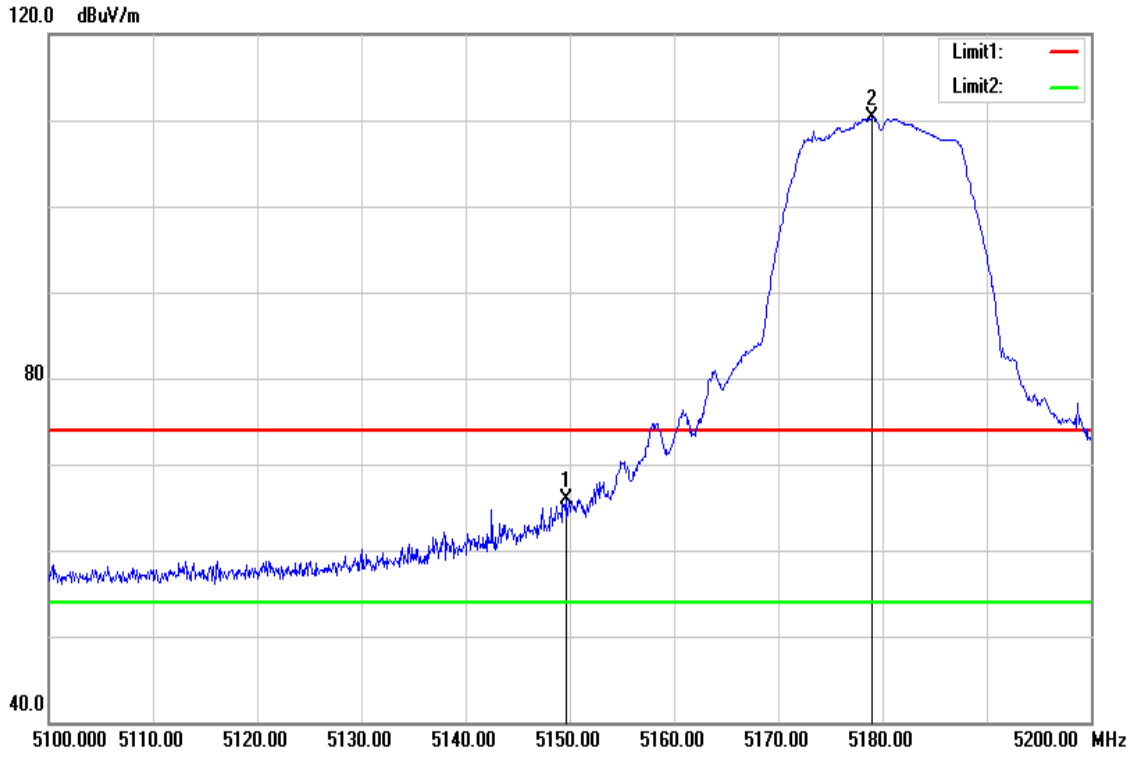


4.5.4 Test Result

Test Data

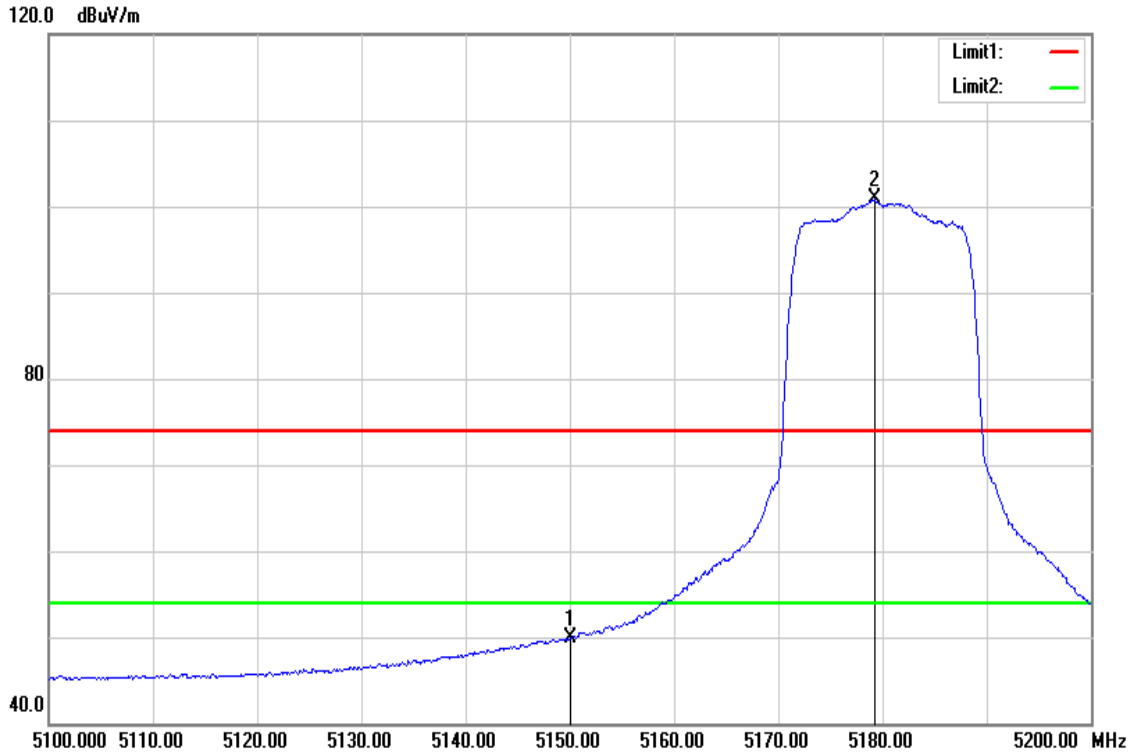
Band Edge Test Data for UNII-1

Test Mode	IEEE 802.11a / 5180MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



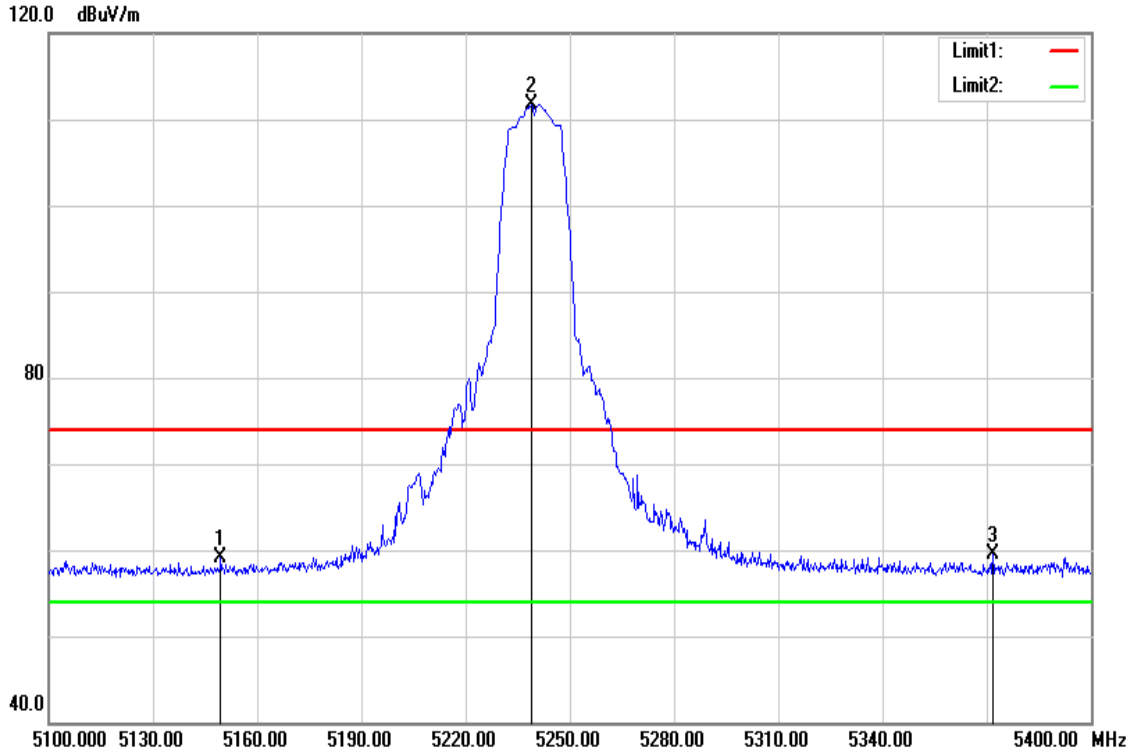
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5149.600	58.34	7.57	65.91	74.00	-8.09	peak
5179.000	102.62	7.62	110.24	-	-	peak

Test Mode	IEEE 802.11a / 5180MHZ	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



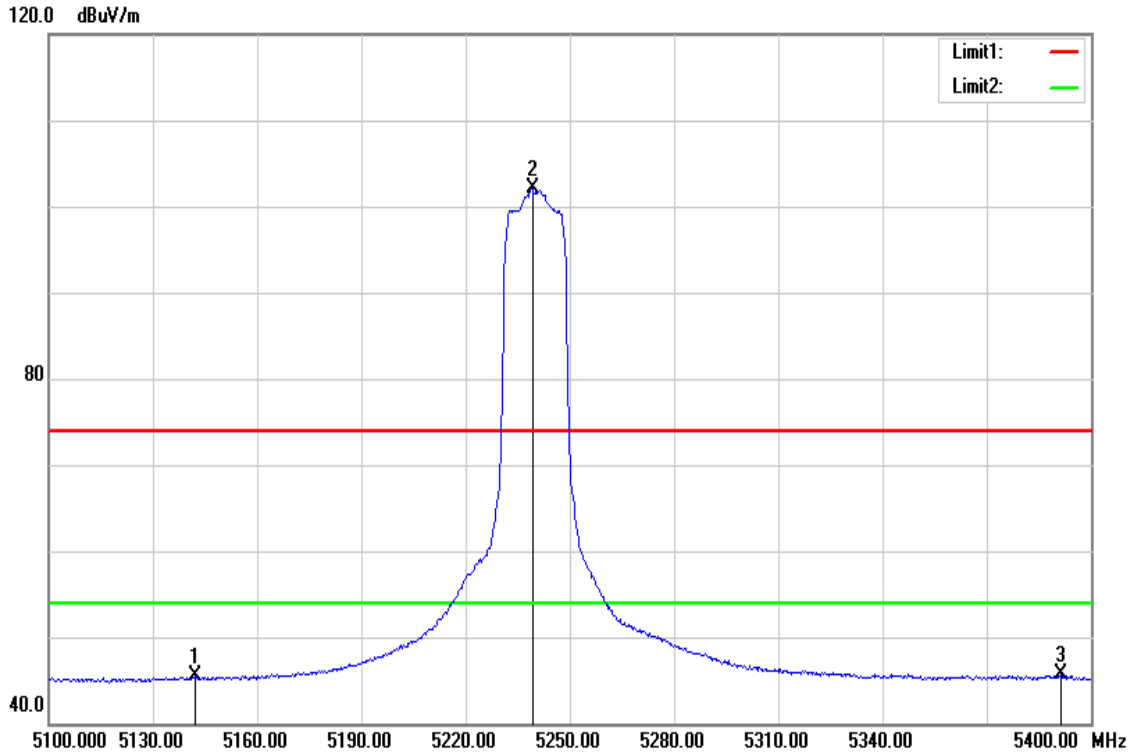
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	42.25	7.57	49.82	54.00	-4.18	AVG
5179.200	93.20	7.62	100.82	-	-	AVG

Test Mode	IEEE 802.11a / 5240MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



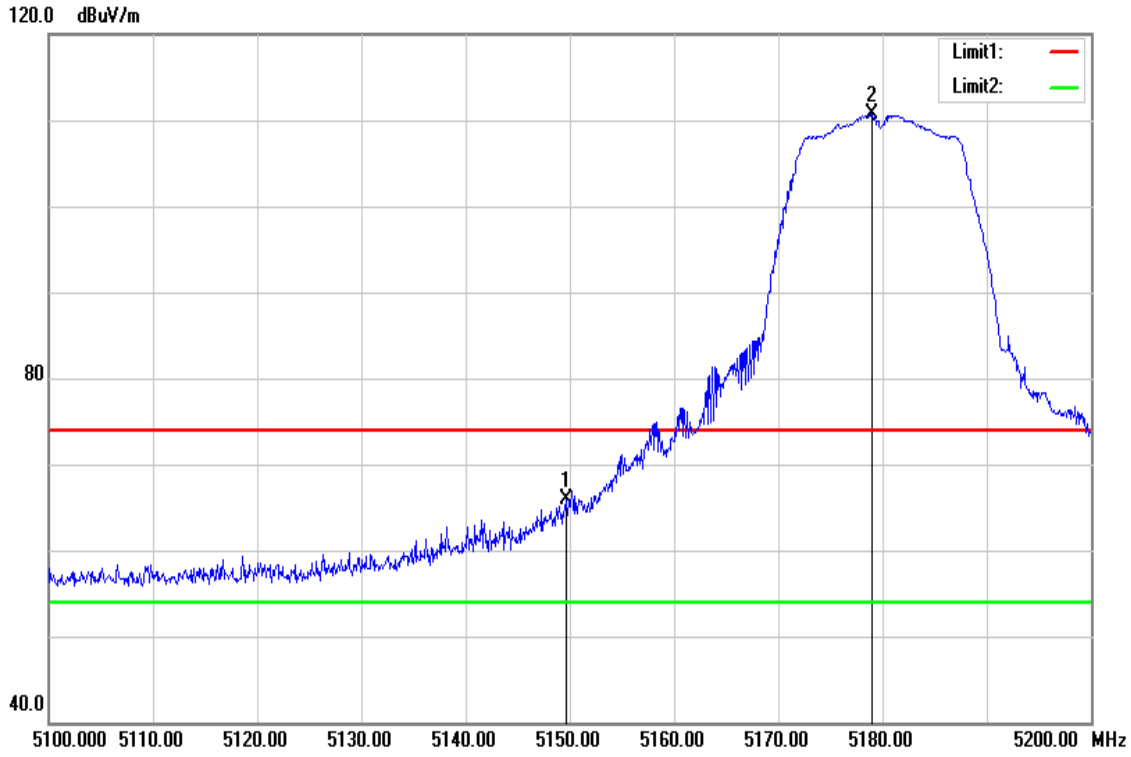
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5149.500	51.50	7.57	59.07	74.00	-14.93	peak
5238.900	104.02	7.73	111.75	-	-	peak
5371.800	51.52	7.97	59.49	74.00	-14.51	peak

Test Mode	IEEE 802.11a / 5240MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



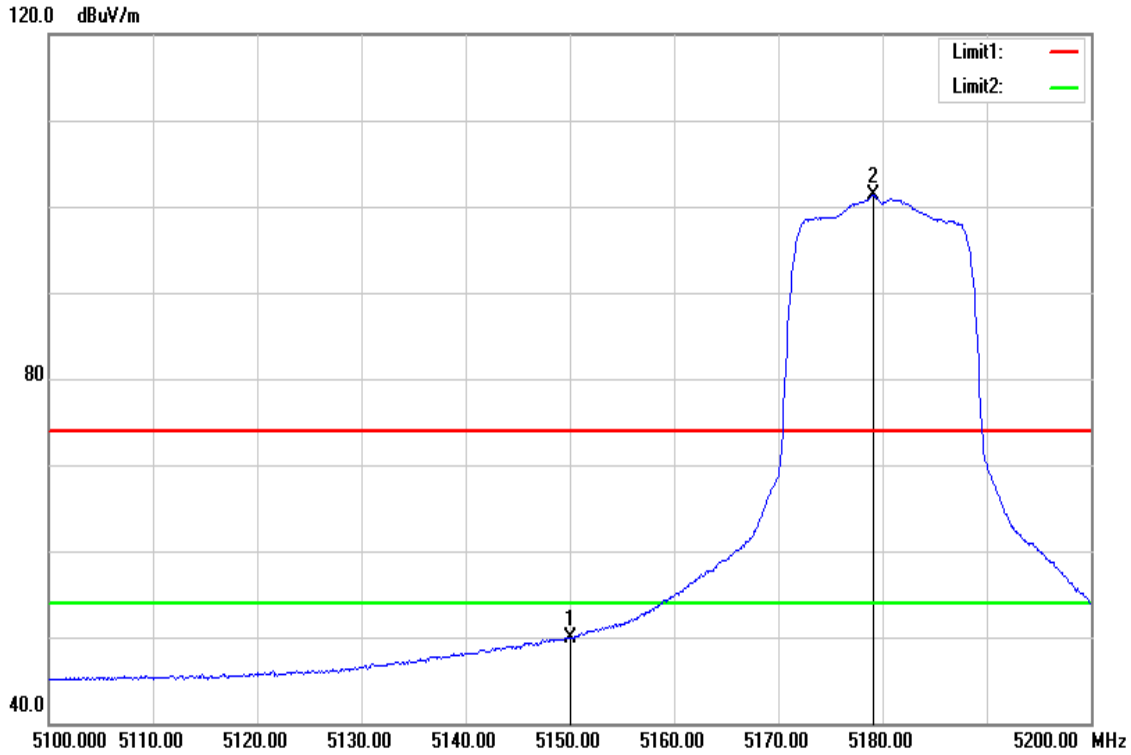
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5142.300	37.89	7.55	45.44	54.00	-8.56	AVG
5239.200	94.39	7.73	102.12	-	-	AVG
5391.300	37.62	8.00	45.62	54.00	-8.38	AVG

Test Mode	IEEE 802.11n HT20 / 5180MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



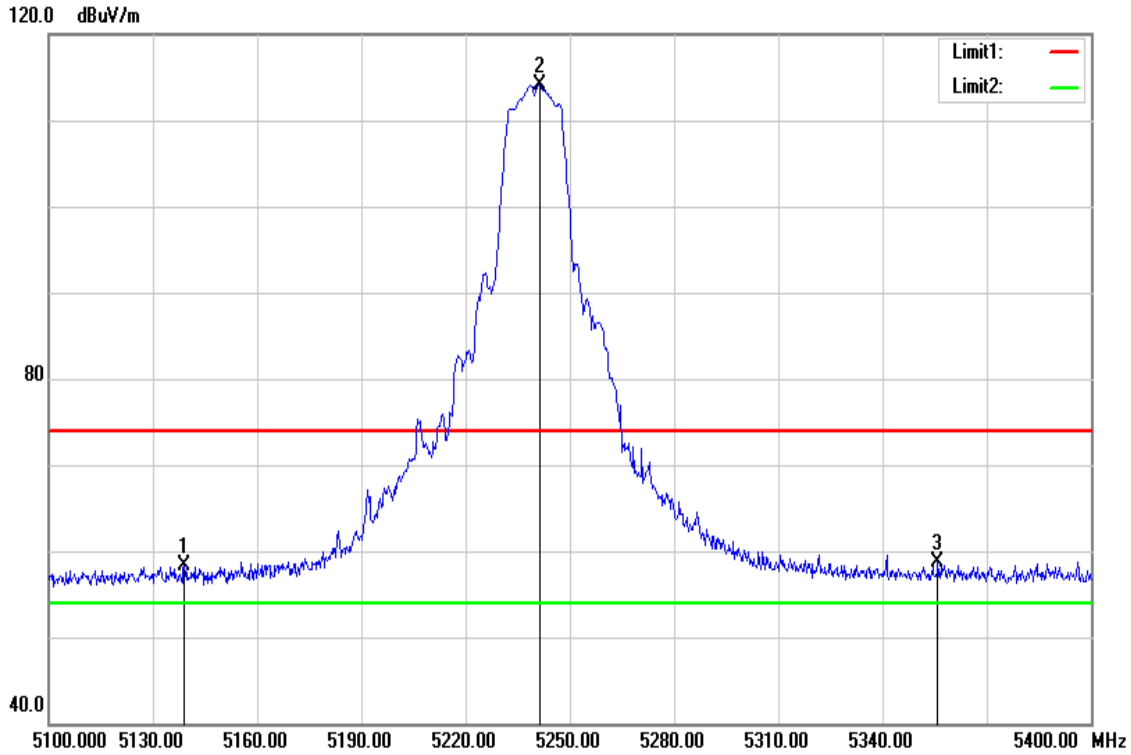
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5149.600	58.38	7.57	65.95	74.00	-8.05	peak
5179.000	103.10	7.62	110.72	-	-	peak

Test Mode	IEEE 802.11n HT20 / 5180MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



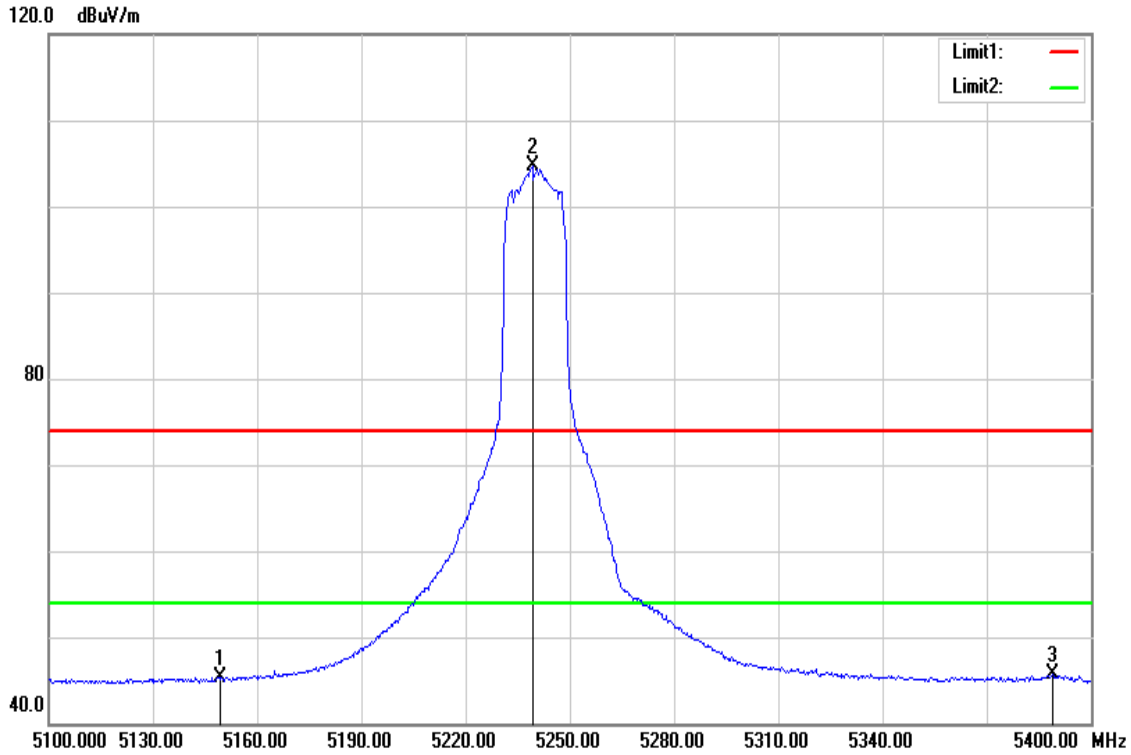
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	42.40	7.57	49.97	54.00	-4.03	AVG
5179.100	93.70	7.62	101.32	-	-	AVG

Test Mode	IEEE 802.11n HT20 / 5240MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



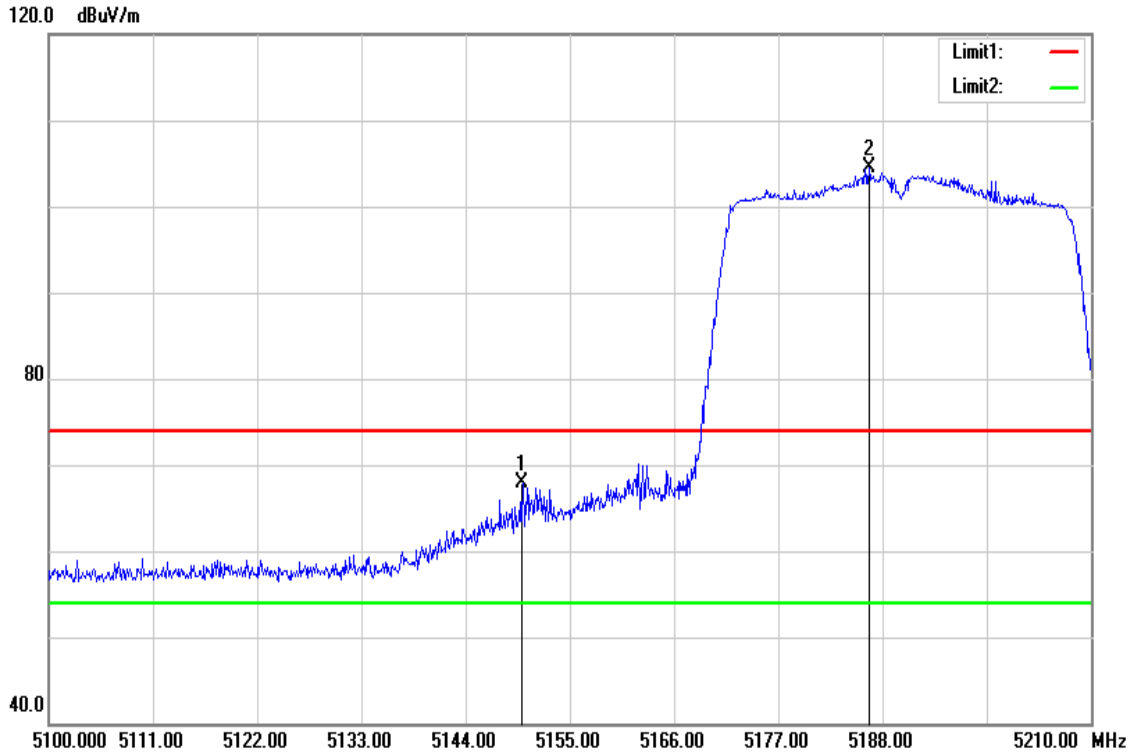
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5139.000	50.70	7.54	58.24	74.00	-15.76	peak
5241.300	106.43	7.73	114.16	-	-	peak
5355.900	50.78	7.95	58.73	74.00	-15.27	peak

Test Mode	IEEE 802.11n HT20 / 5240MHZ	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



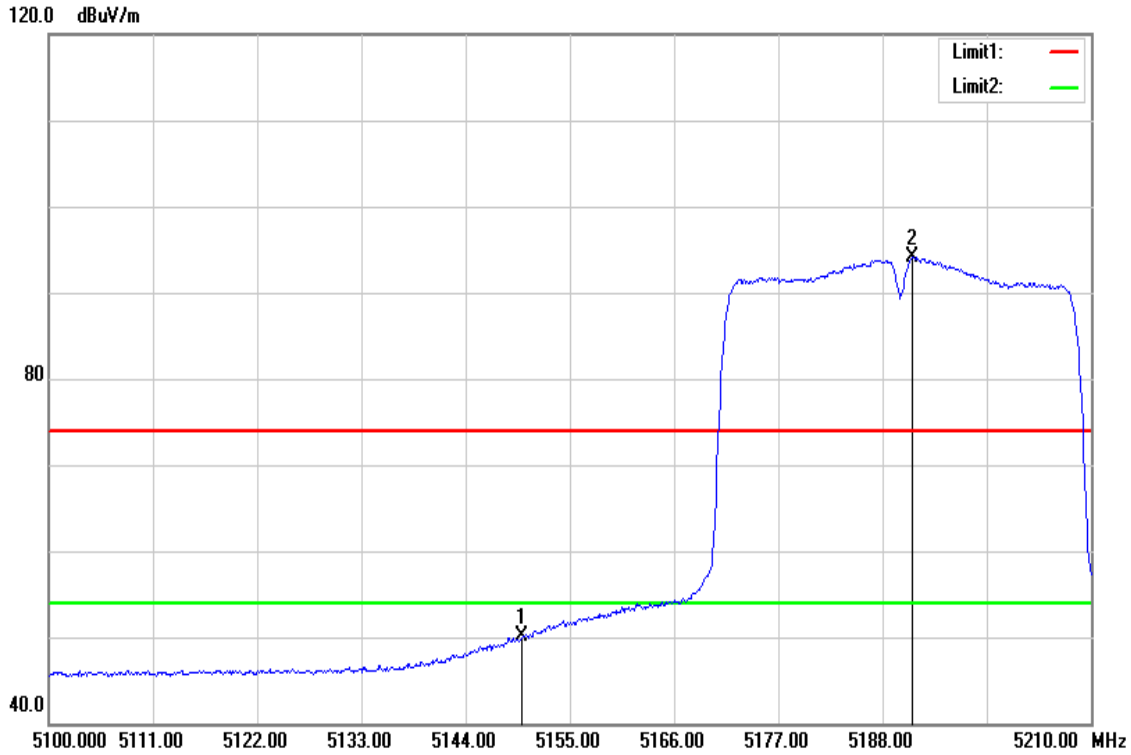
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5149.200	37.80	7.57	45.37	54.00	-8.63	AVG
5239.200	96.93	7.73	104.66	-	-	AVG
5388.900	37.62	8.00	45.62	54.00	-8.38	AVG

Test Mode	IEEE 802.11n HT40 / 5190MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



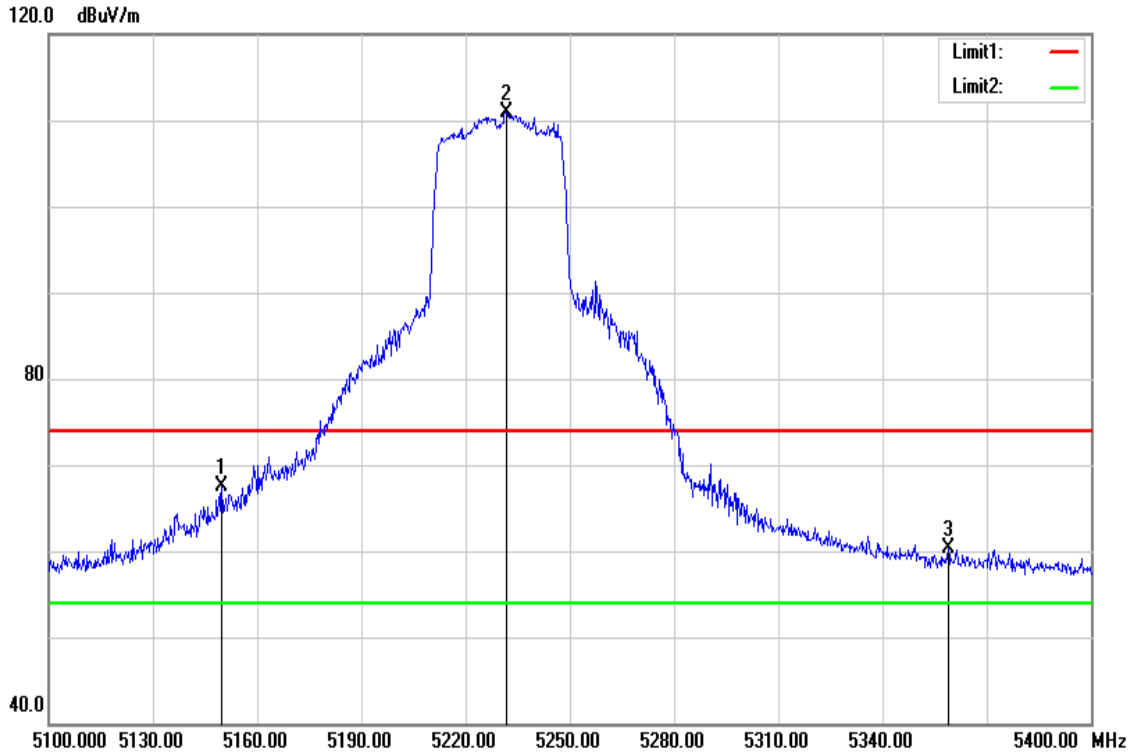
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	60.26	7.57	67.83	74.00	-6.17	peak
5186.625	96.87	7.63	104.50	-	-	peak

Test Mode	IEEE 802.11n HT40 / 5190MHZ	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



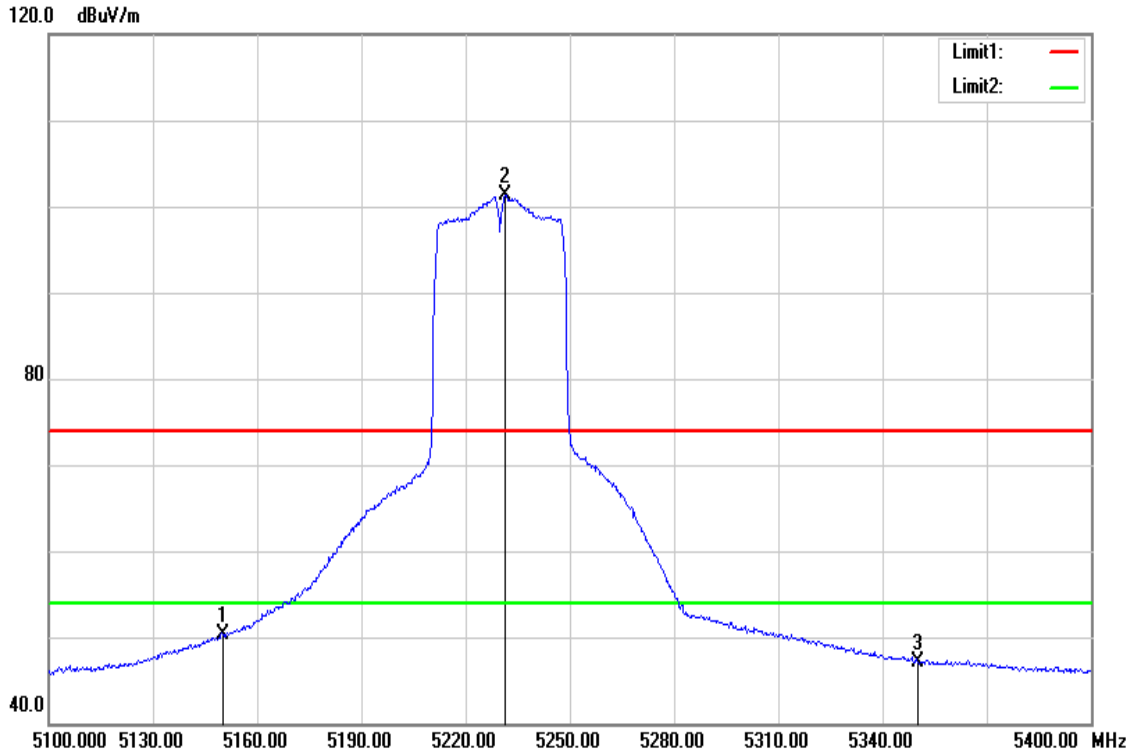
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	42.61	7.57	50.18	54.00	-3.82	AVG
5191.245	86.47	7.64	94.11	-	-	AVG

Test Mode	IEEE 802.11n HT40 / 5230MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



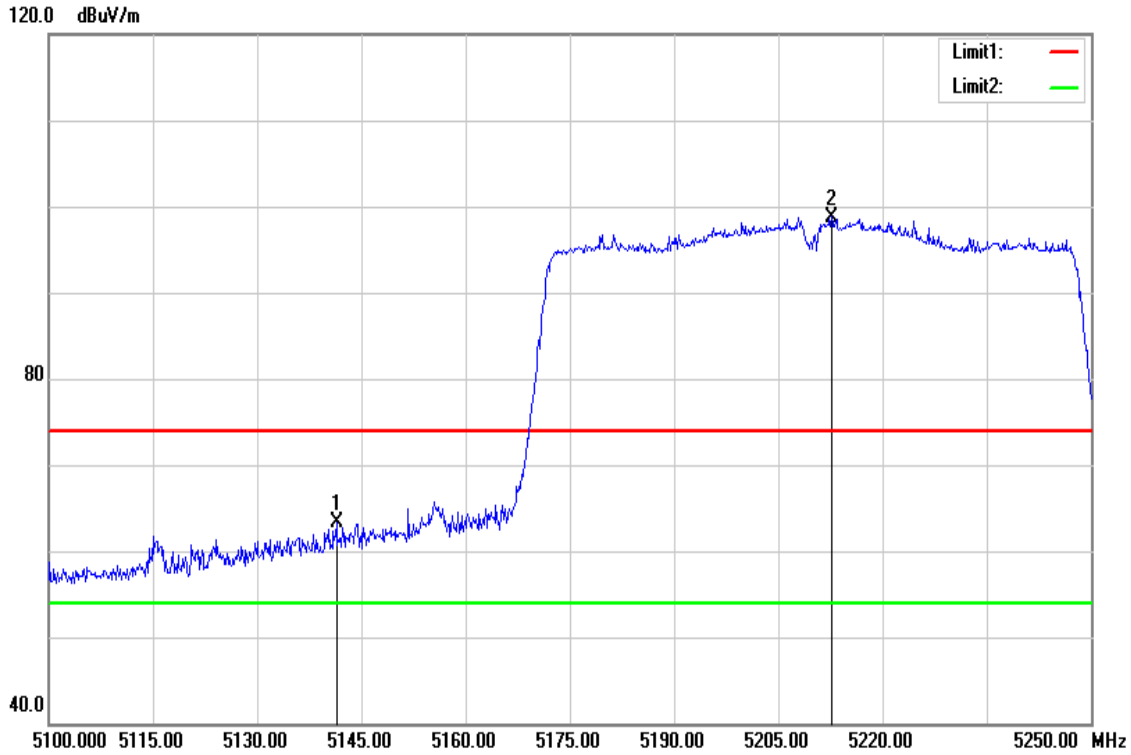
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5149.800	59.90	7.57	67.47	74.00	-6.53	peak
5231.850	103.20	7.72	110.92	-	-	peak
5359.050	52.32	7.96	60.28	74.00	-13.72	peak

Test Mode	IEEE 802.11n HT40 / 5230MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



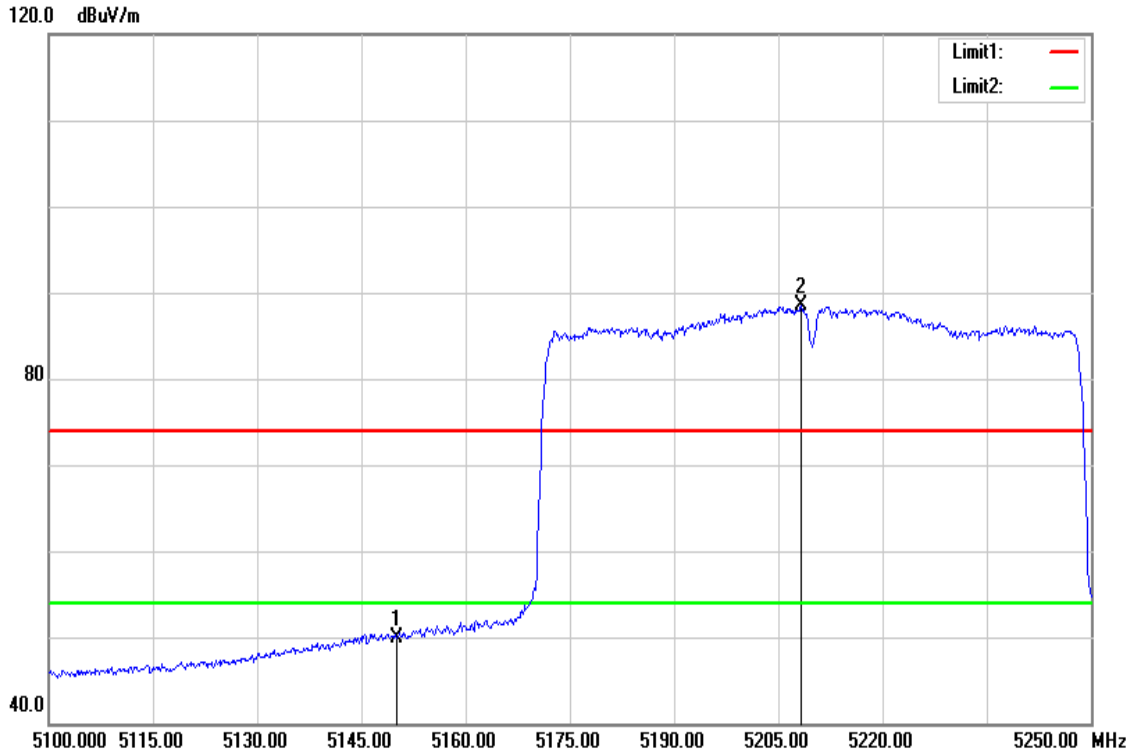
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	42.67	7.57	50.24	54.00	-3.76	AVG
5231.550	93.53	7.72	101.25	-	-	AVG
5350.000	39.08	7.93	47.01	54.00	-6.99	AVG

Test Mode	I EEE 802.11ac VHT80 / 5210MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5141.475	55.86	7.54	63.40	74.00	-10.60	peak
5212.725	91.12	7.68	98.80	-	-	peak

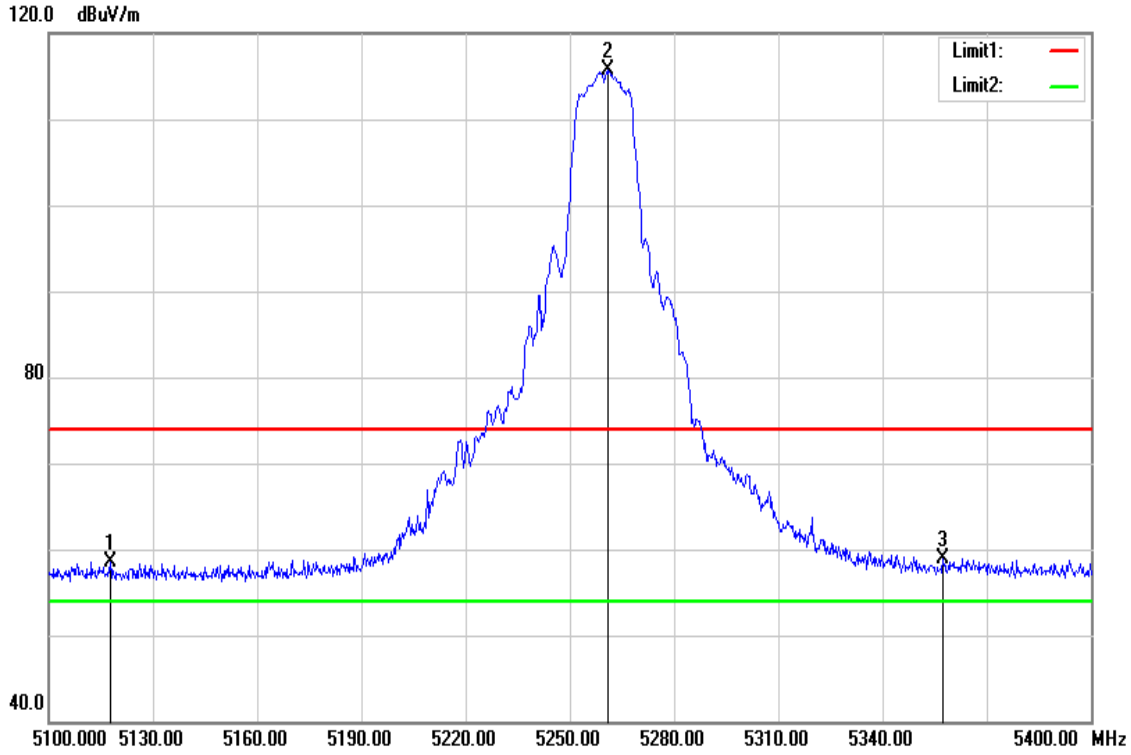
Test Mode	I EEE 802.11ac VHT80 / 5210MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	42.26	7.57	49.83	54.00	-4.17	AVG
5208.300	80.73	7.67	88.40	-	-	AVG

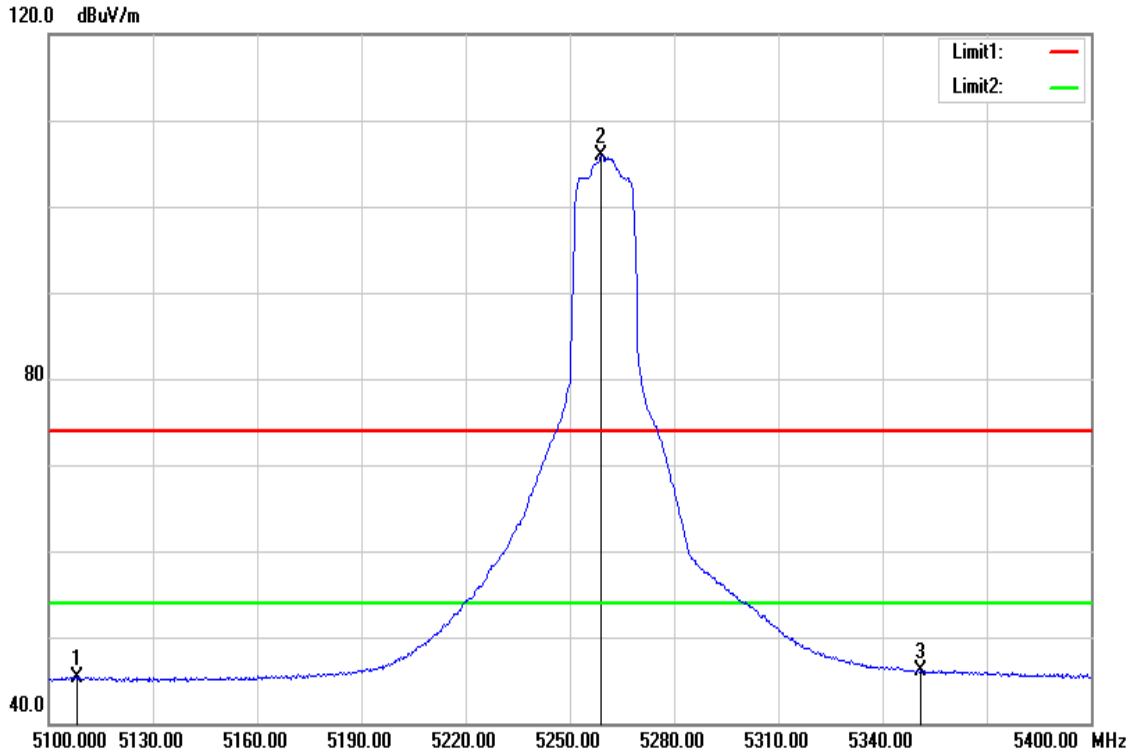
Band Edge Test Data for UNII-2a

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



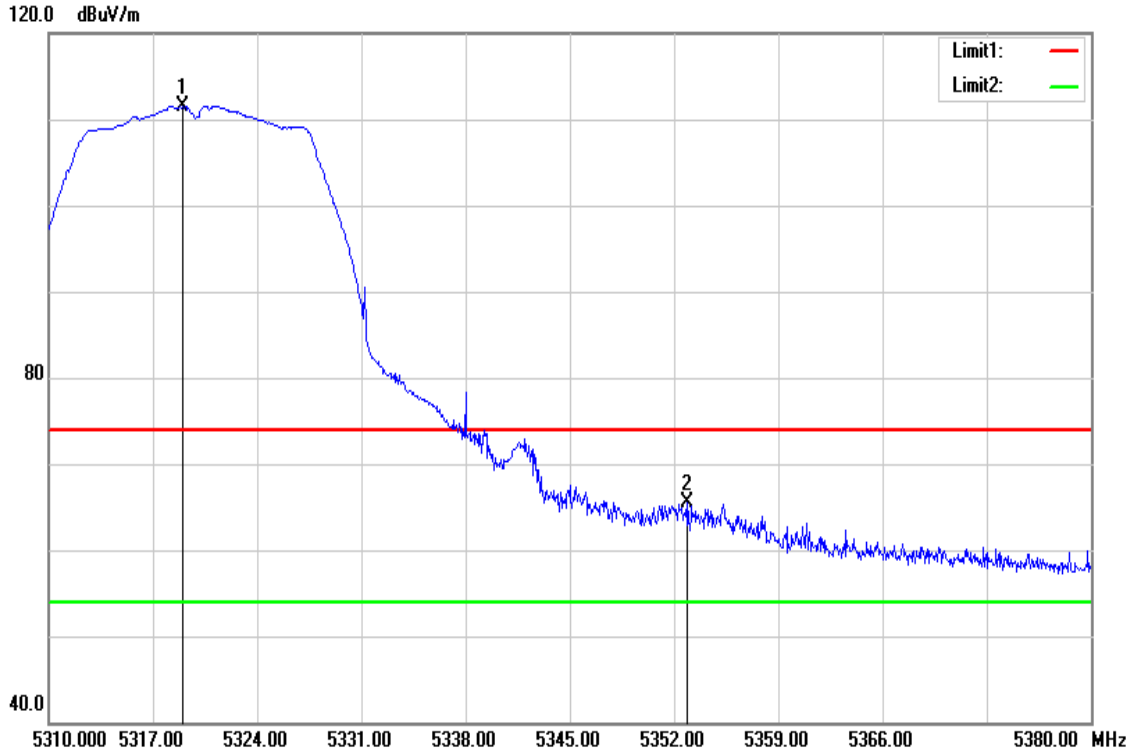
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5117.700	51.04	7.51	58.55	74.00	-15.45	peak
5261.100	107.89	7.77	115.66	-	-	peak
5357.400	50.97	7.95	58.92	74.00	-15.08	peak

Test Mode	IEEE 802.11a / 5260MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



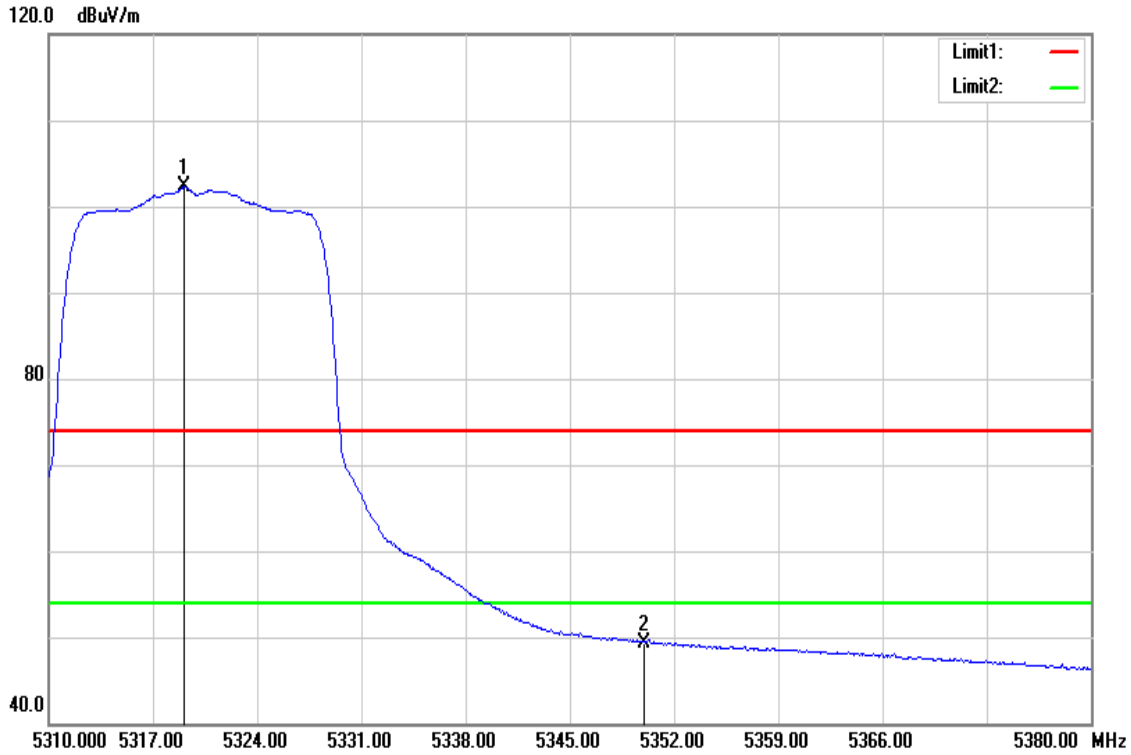
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5108.100	37.89	7.49	45.38	54.00	-8.62	AVG
5259.000	98.15	7.77	105.92	-	-	AVG
5350.800	38.17	7.93	46.10	54.00	-7.90	AVG

Test Mode	IEEE 802.11a / 5320MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



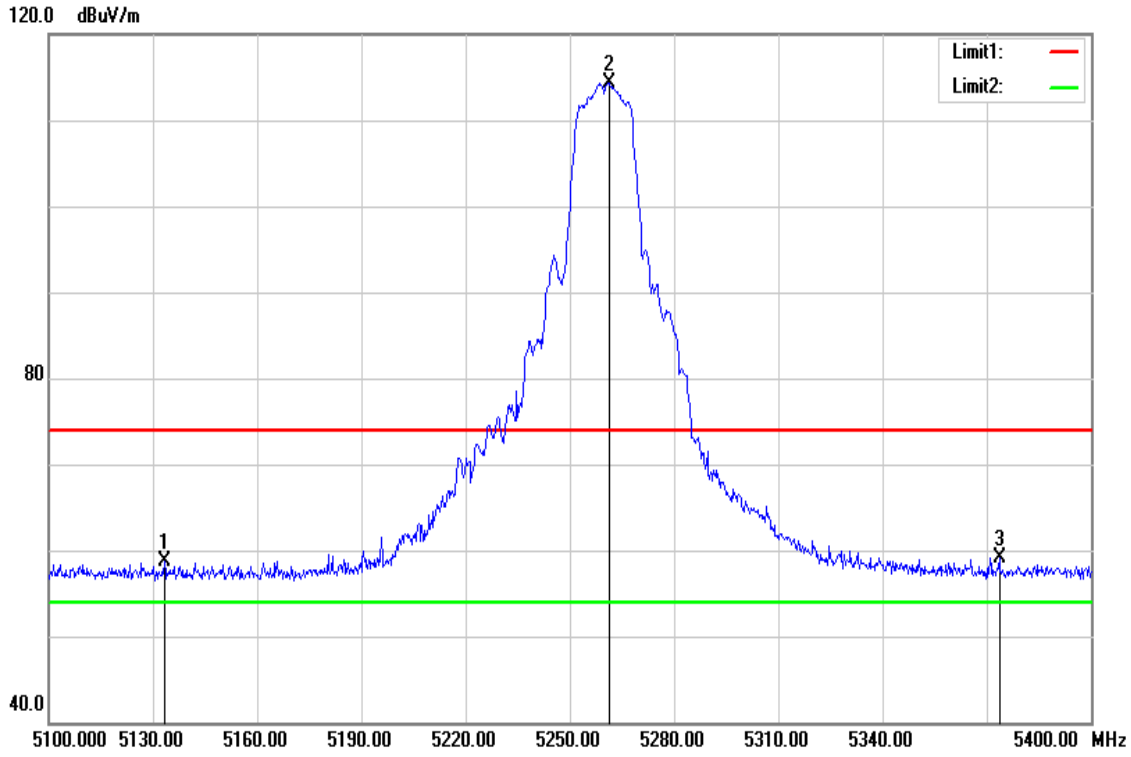
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5318.960	103.71	7.88	111.59	-	-	peak
5352.910	57.57	7.93	65.50	74.00	-8.50	peak

Test Mode	IEEE 802.11a / 5320MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



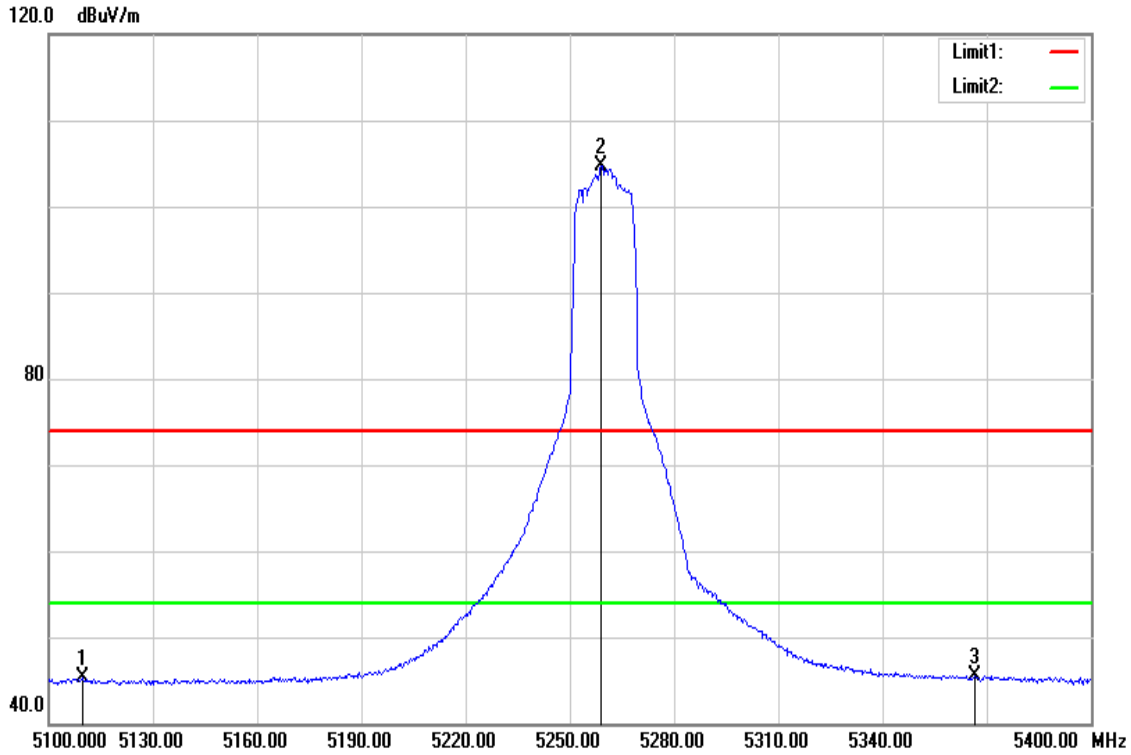
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5319.100	94.36	7.88	102.24	-	-	AVG
5350.000	41.45	7.93	49.38	54.00	-4.62	AVG

Test Mode	IEEE 802.11n HT20 / 5260MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



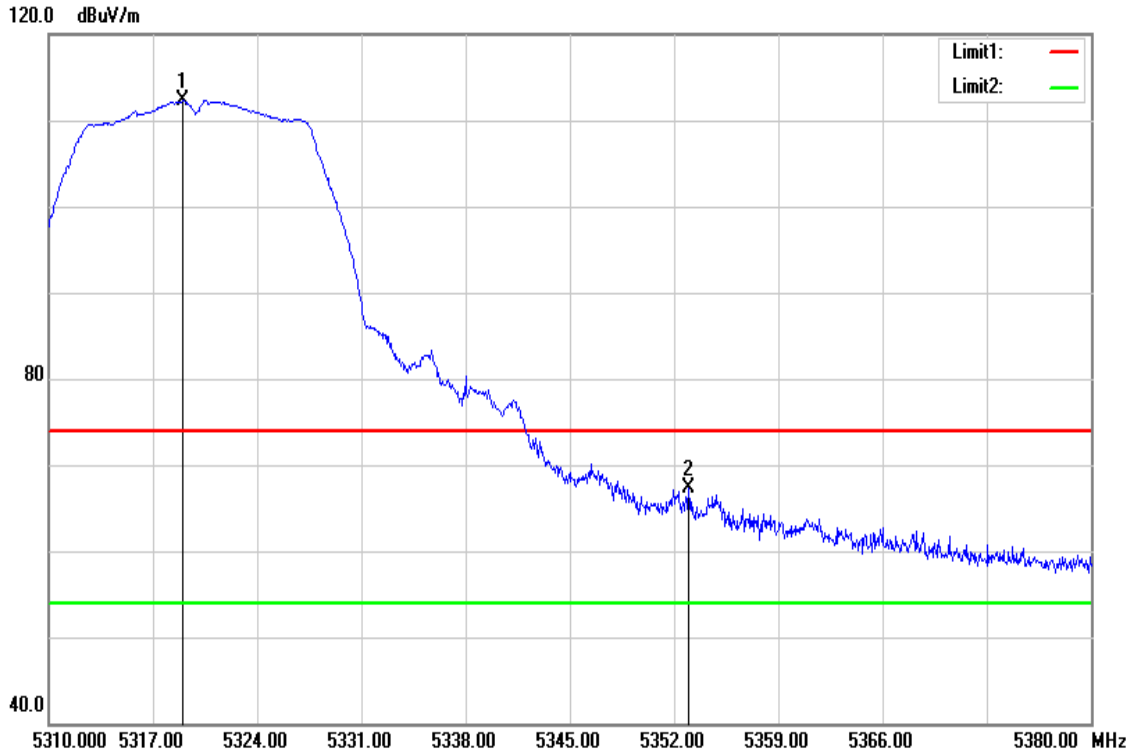
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5133.300	51.09	7.53	58.62	74.00	-15.38	peak
5261.400	106.61	7.77	114.38	-	-	peak
5373.600	51.22	7.97	59.19	74.00	-14.81	peak

Test Mode	IEEE 802.11n HT20 / 5260MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



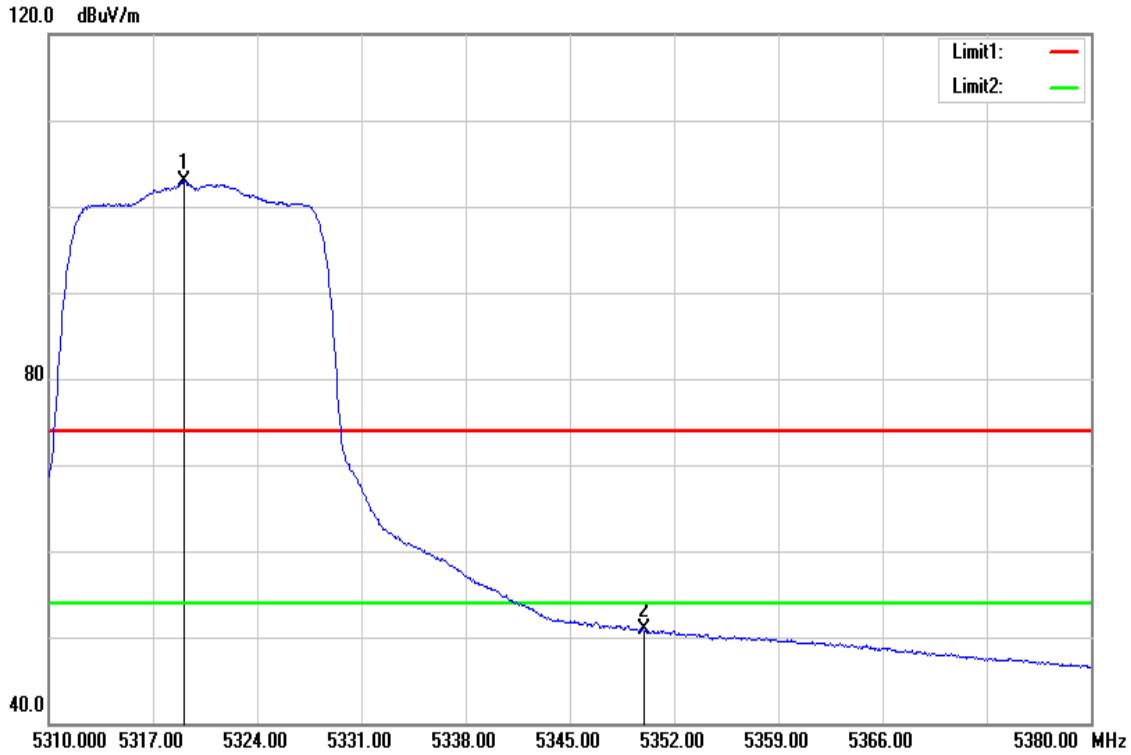
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5109.900	37.73	7.50	45.23	74.00	-28.77	AVG
5259.000	96.93	7.77	104.70	-	-	AVG
5366.700	37.59	7.97	45.56	74.00	-28.44	AVG

Test Mode	IEEE 802.11n HT20 / 5320MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



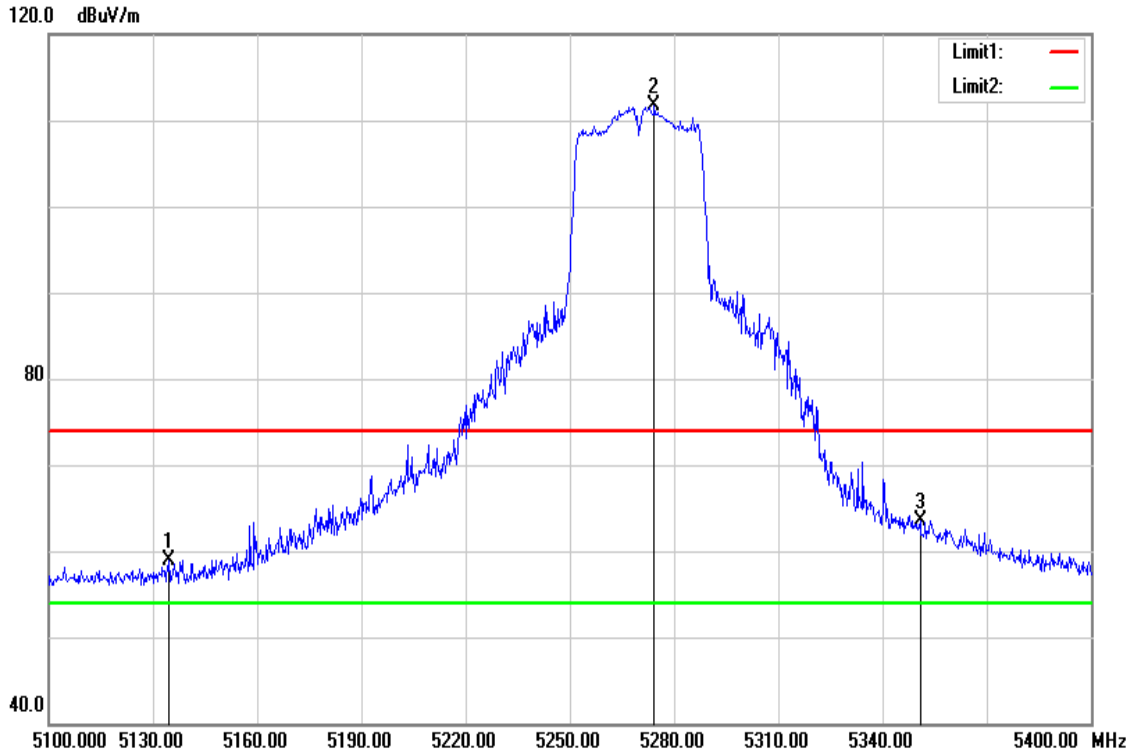
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5318.960	104.40	7.88	112.28	-	-	peak
5352.980	59.34	7.93	67.27	74.00	-6.73	peak

Test Mode	IEEE 802.11n HT20 / 5320MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



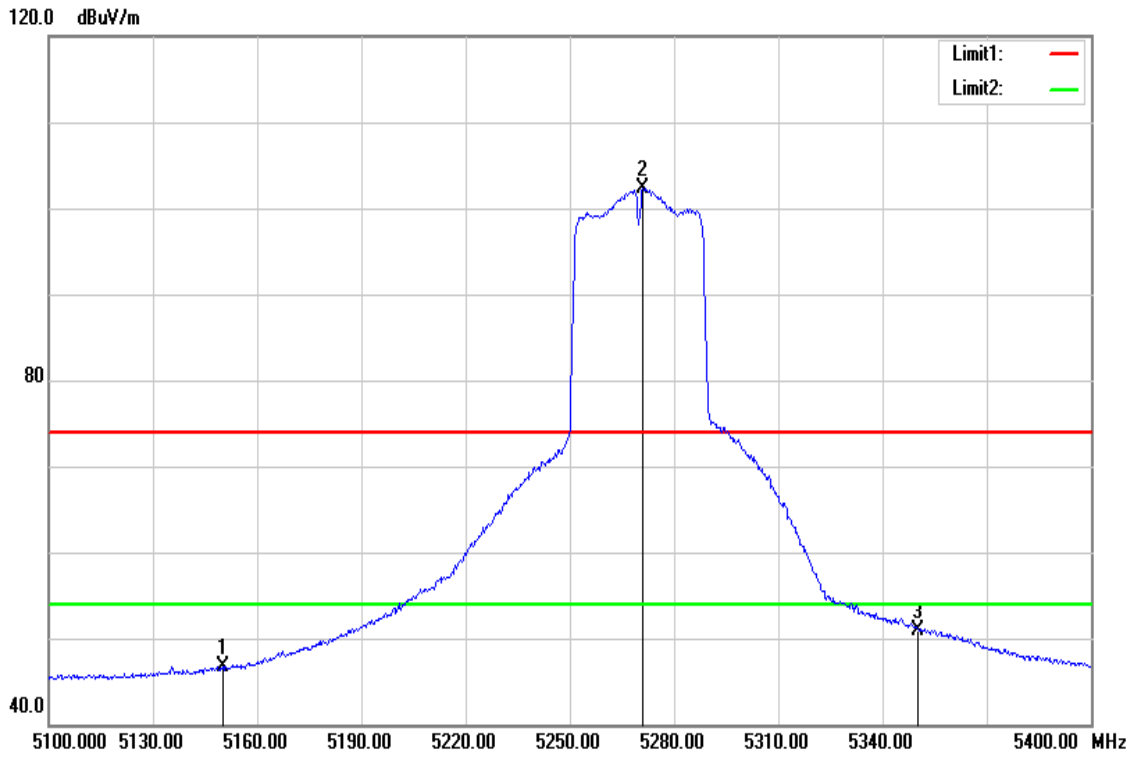
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5319.100	95.01	7.88	102.89	-	-	AVG
5350.000	42.93	7.93	50.86	54.00	-3.14	AVG

Test Mode	IEEE 802.11n HT40 / 5270MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



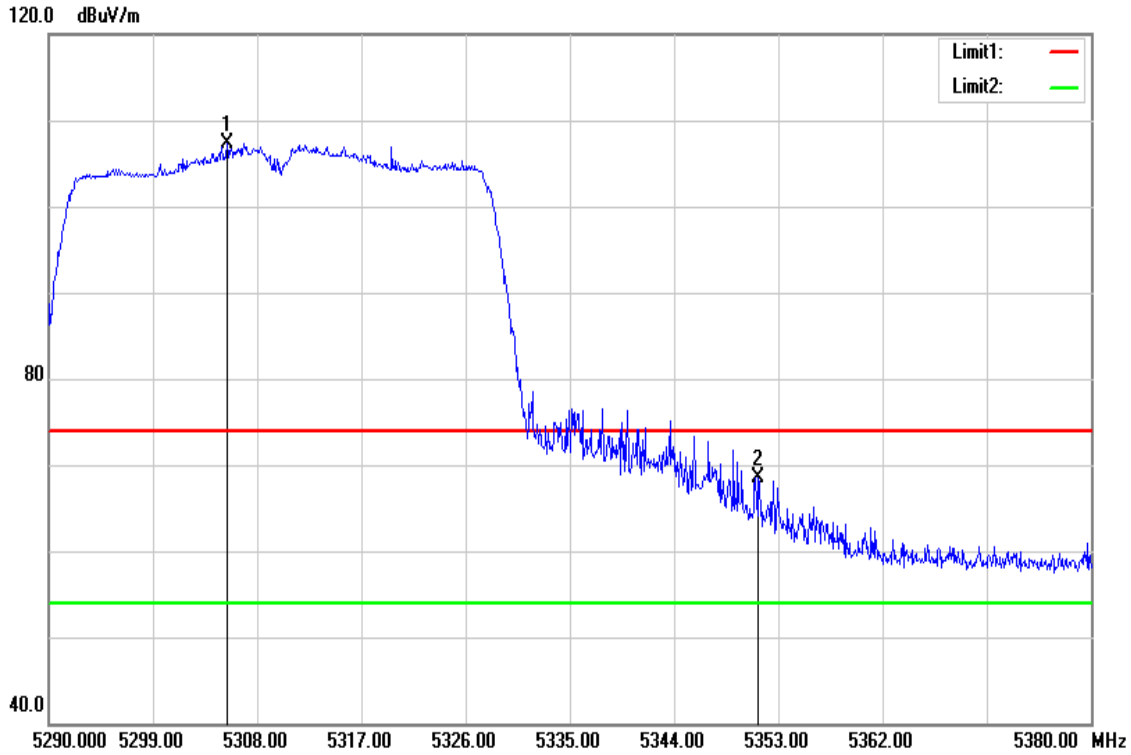
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5134.500	51.39	7.53	58.92	74.00	-15.08	peak
5274.300	103.84	7.79	111.63	-	-	peak
5350.950	55.57	7.93	63.50	74.00	-10.50	peak

Test Mode	IEEE 802.11n HT40 / 5270MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



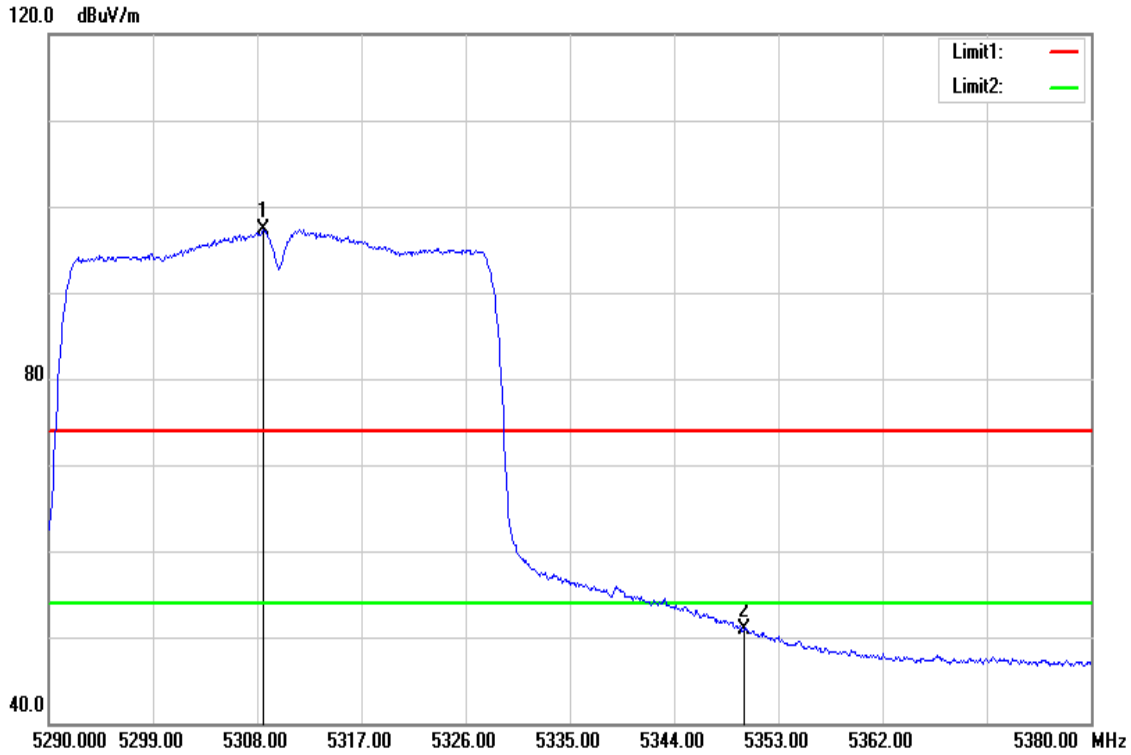
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	39.06	7.57	46.63	54.00	-7.37	AVG
5271.000	94.49	7.79	102.28	-	-	AVG
5350.000	42.96	7.93	50.89	54.00	-3.11	AVG

Test Mode	IEEE 802.11n HT40 / 5310MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



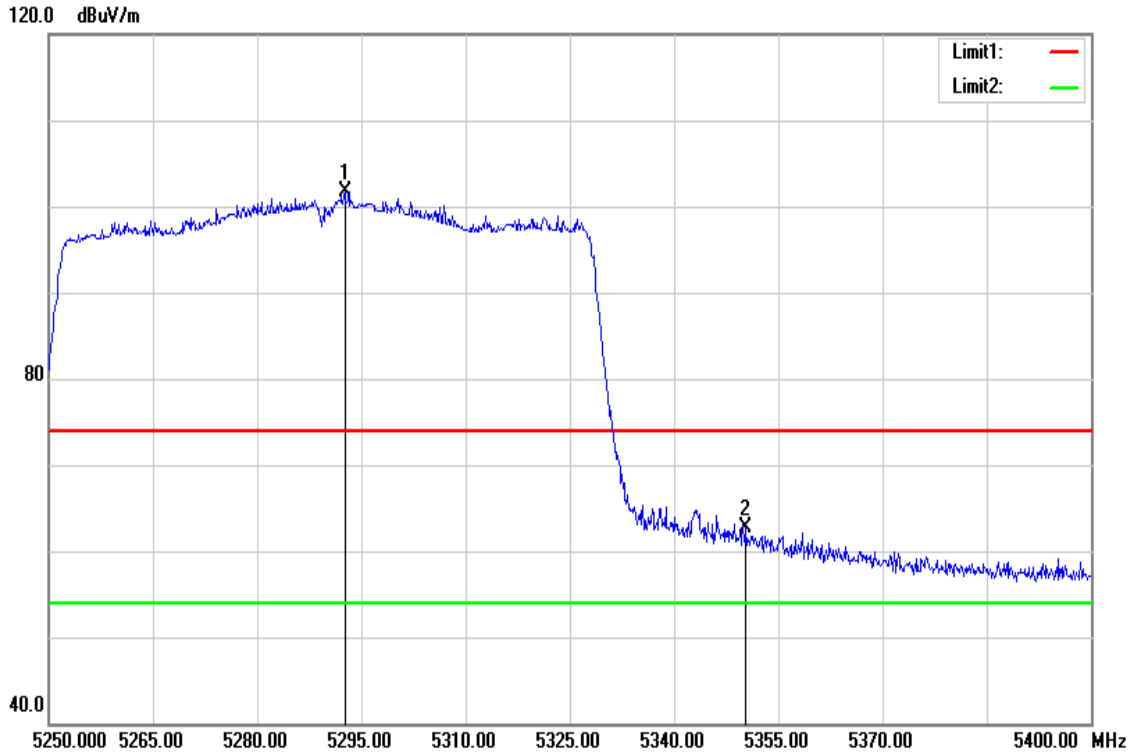
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5305.390	99.44	7.85	107.29	-	-	peak
5351.290	60.53	7.93	68.46	74.00	-5.54	peak

Test Mode	IEEE 802.11n HT40 / 5310MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



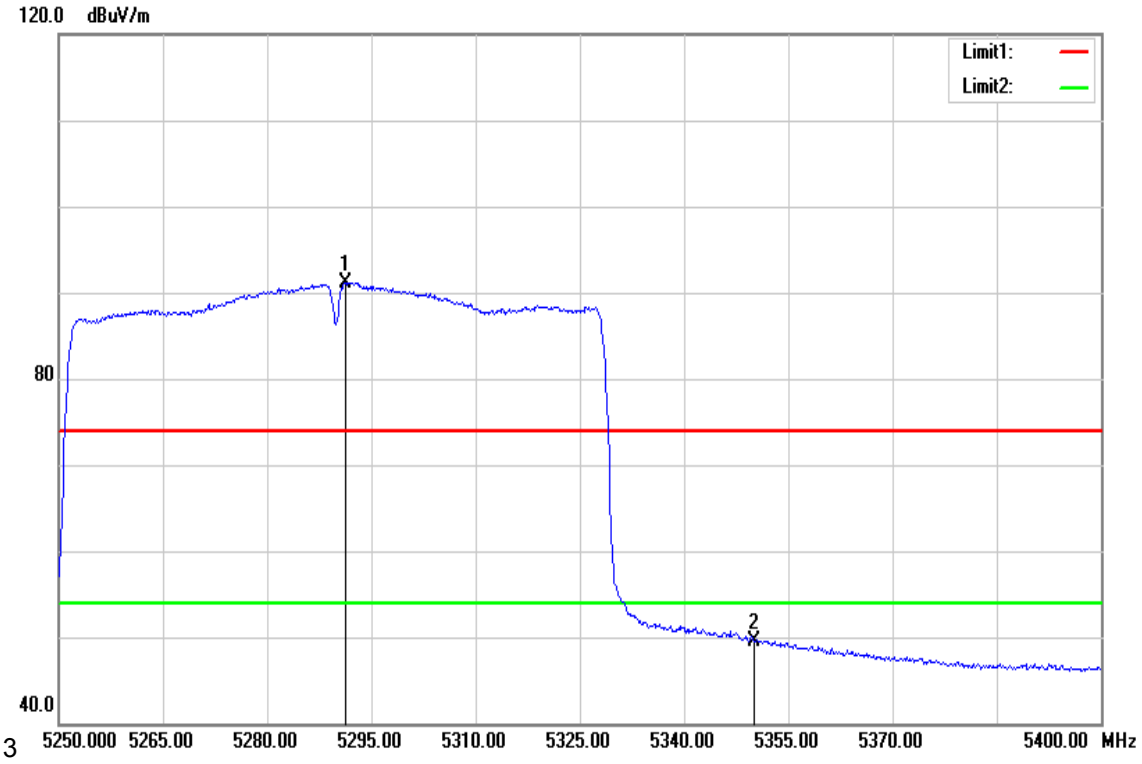
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5308.585	89.40	7.86	97.26	-	-	AVG
5350.000	42.97	7.93	50.90	54.00	-3.10	AVG

Test Mode	IEEE 802.11ac VHT80 / 5290MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5292.675	93.80	7.83	101.63	-	-	peak
5350.425	54.68	7.93	62.61	74.00	-11.39	peak

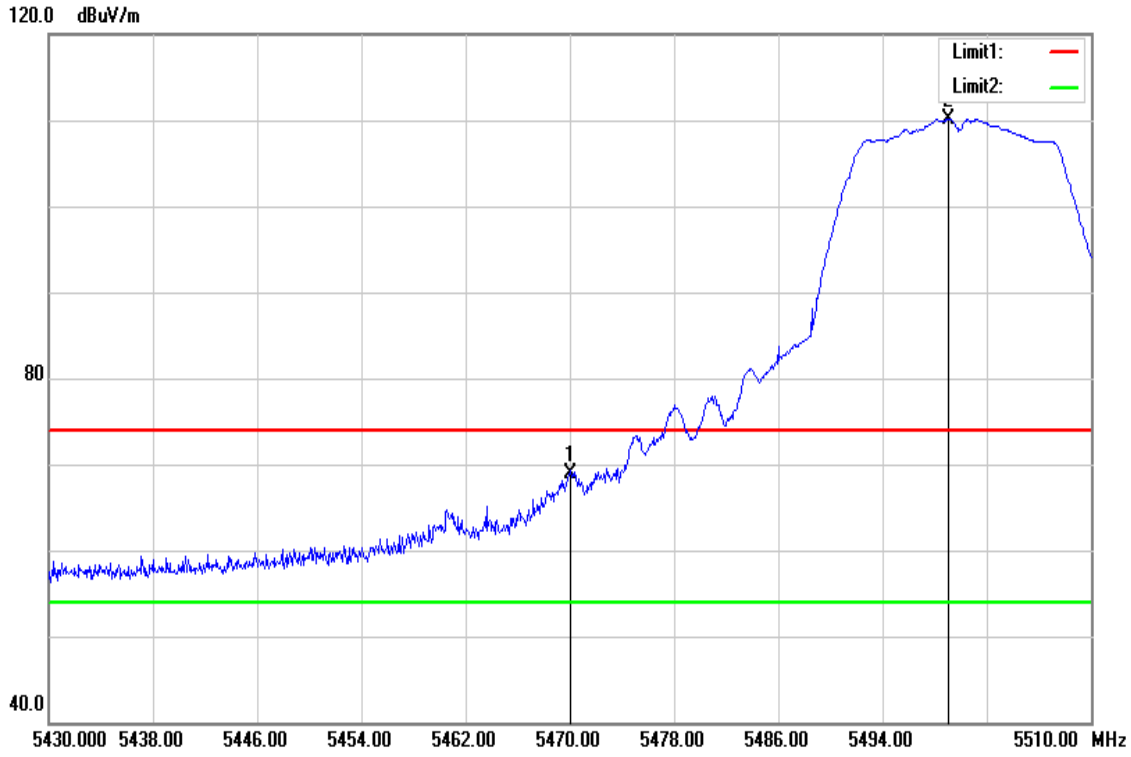
Test Mode	IEEE 802.11ac VHT80 / 5290MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5291.250	83.33	7.82	91.15	-	-	AVG
5350.000	41.65	7.93	49.58	54.00	-4.42	AVG

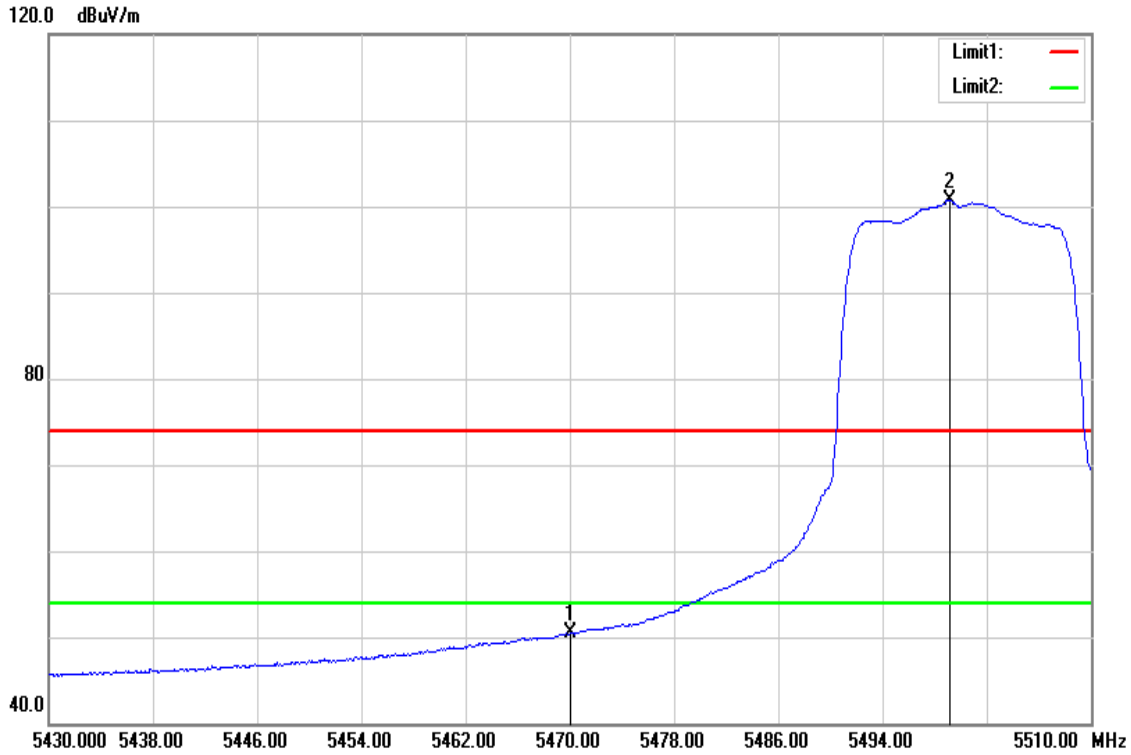
Band Edge Test Data for UNII-2c

Test Mode	IEEE 802.11a / 5500MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



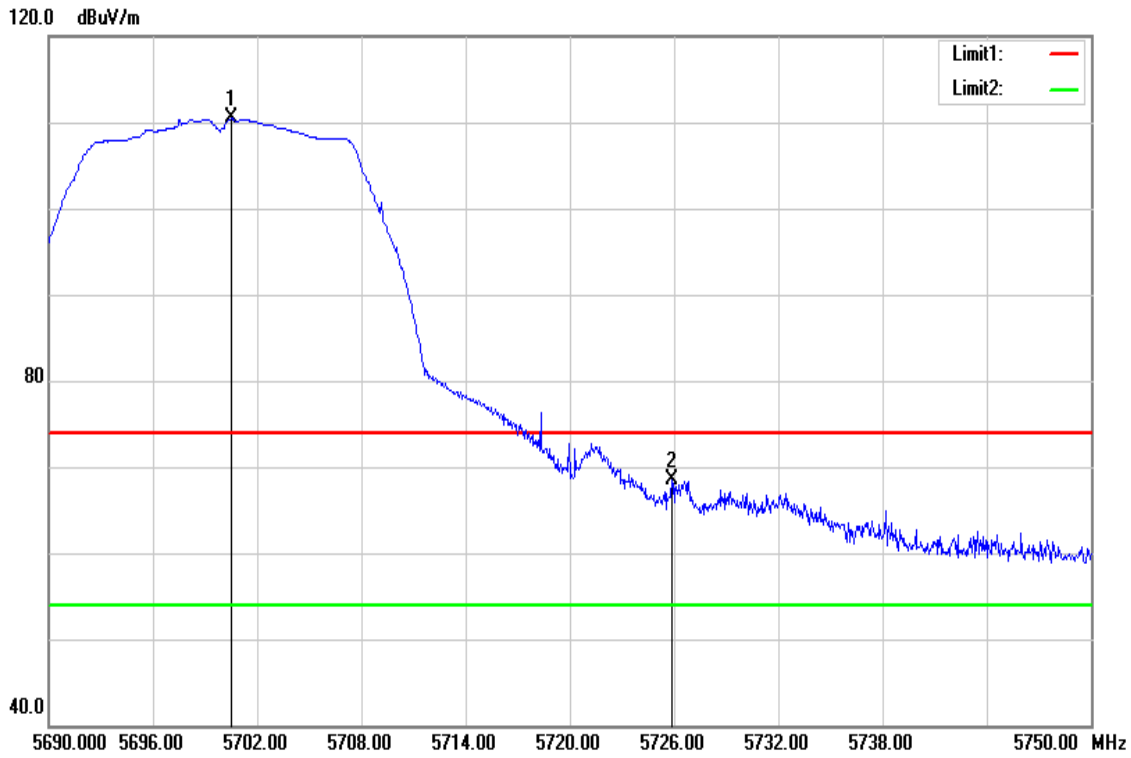
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	60.84	8.15	68.99	74.00	-5.01	peak
5499.040	101.98	8.21	110.19	-	-	peak

Test Mode	IEEE 802.11a / 5500MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



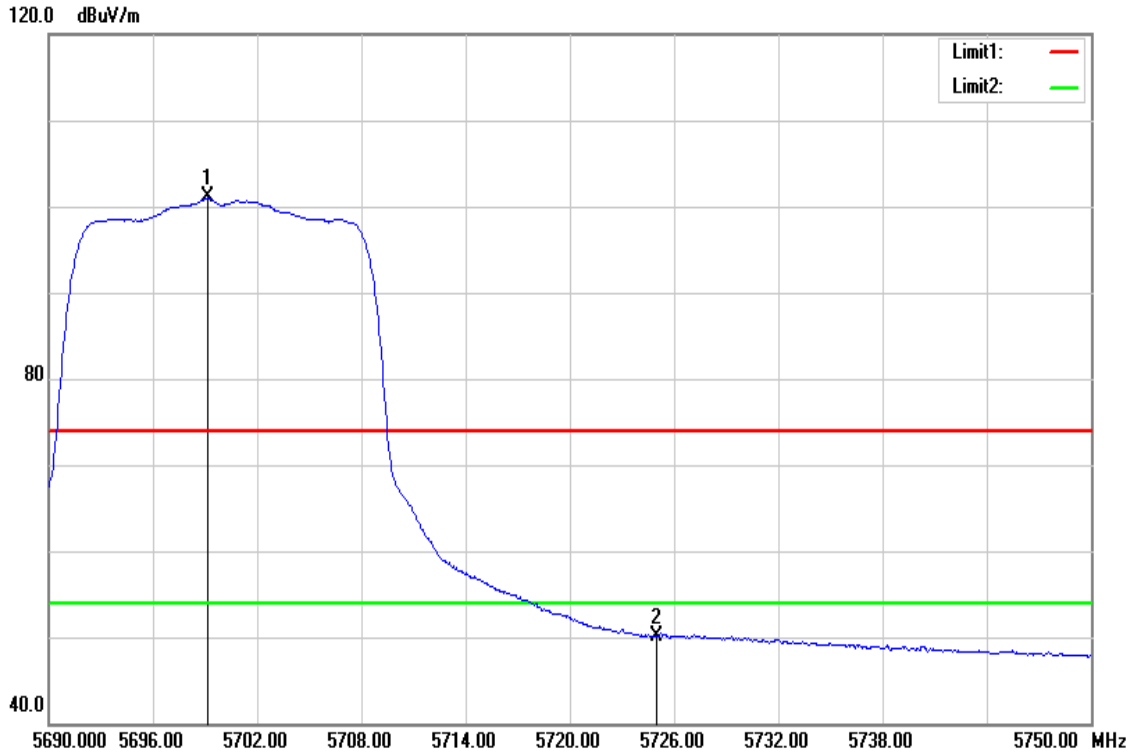
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	42.29	8.15	50.44	54.00	-3.56	AVG
5499.120	92.57	8.21	100.78	-	-	AVG

Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



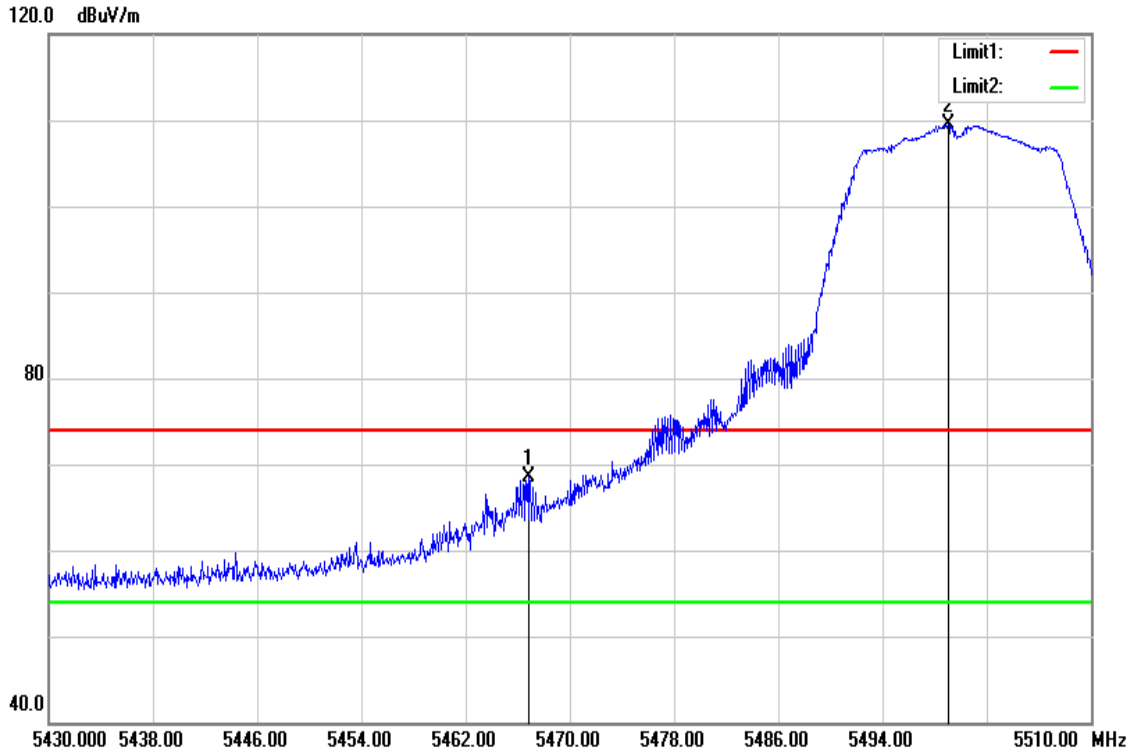
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5700.500	101.53	8.89	110.42	-	-	peak
5725.880	59.50	8.98	68.48	74.00	-5.52	peak

Test Mode	IEEE 802.11a / 5700 MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



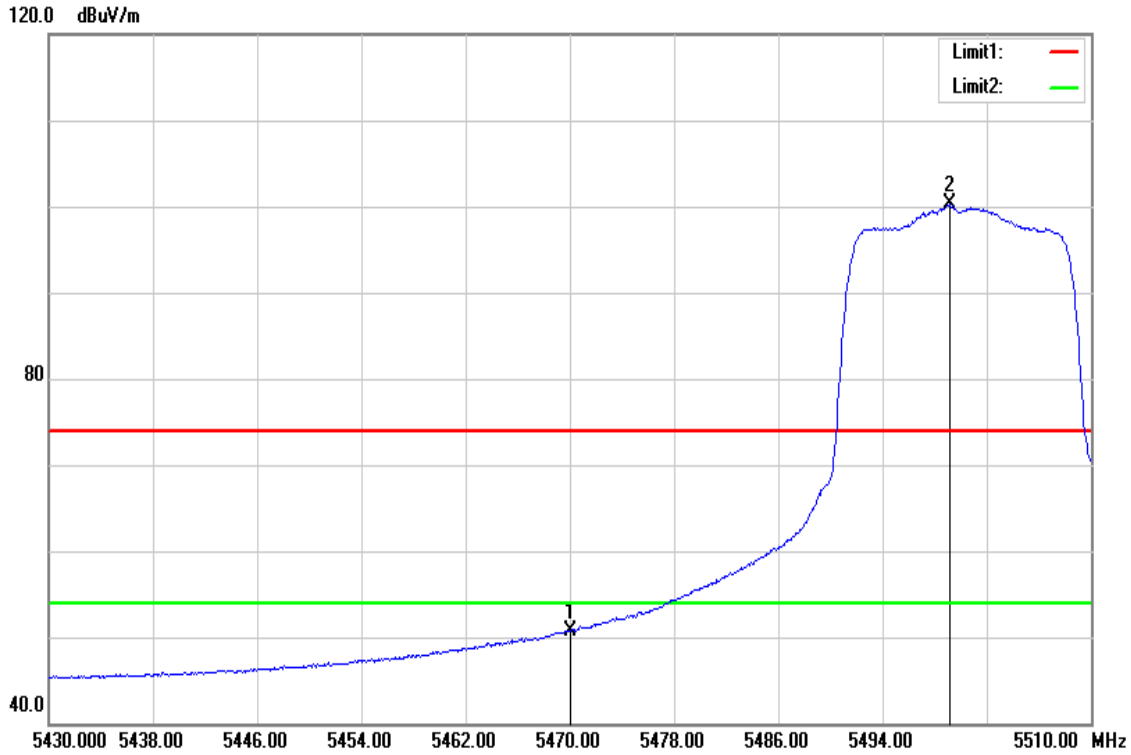
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5699.120	92.12	8.89	101.01	-	-	AVG
5725.000	41.10	8.98	50.08	54.00	-3.92	AVG

Test Mode	IEEE 802.11n HT20 / 5500MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



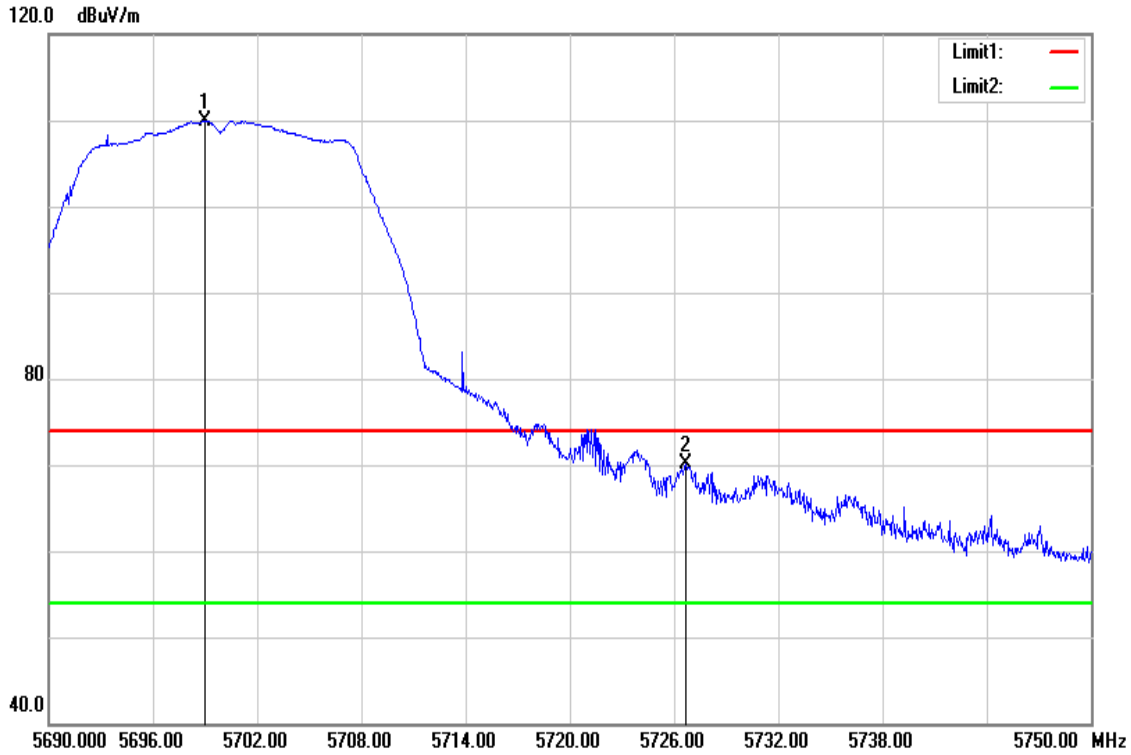
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5466.880	60.44	8.15	68.59	74.00	-5.41	peak
5499.040	101.20	8.21	109.41	-	-	peak

Test Mode	IEEE 802.11n HT20 / 5500MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



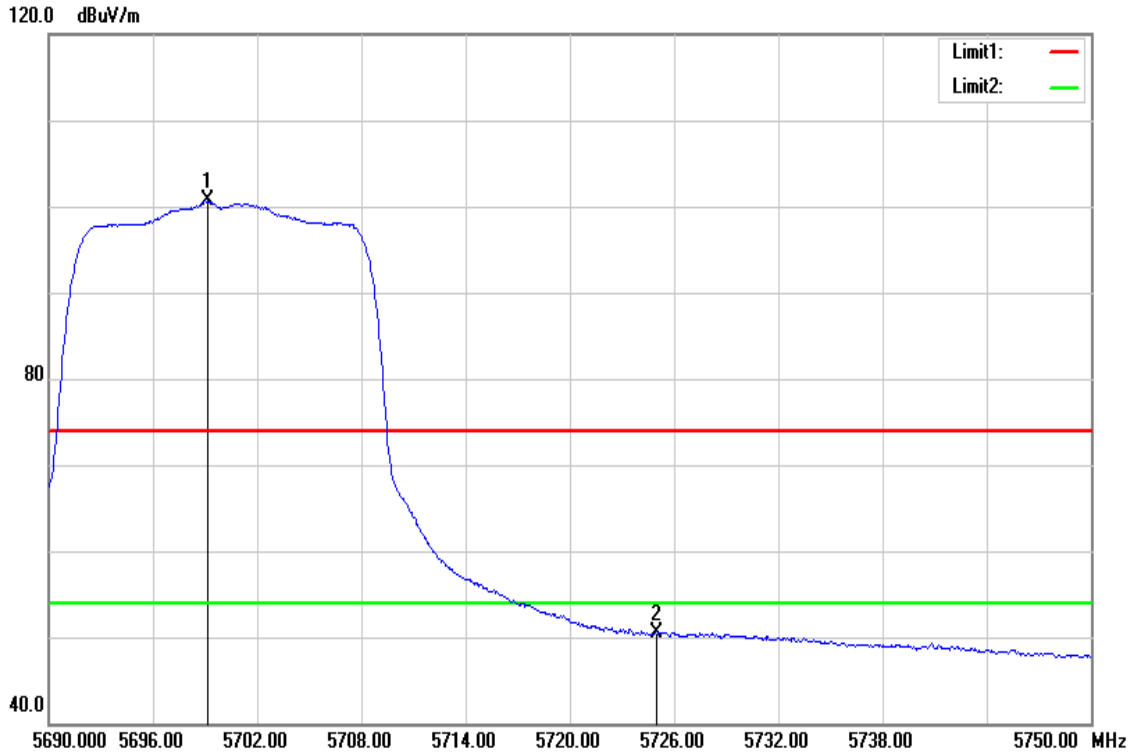
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	42.57	8.15	50.72	54.00	-3.28	AVG
5499.120	92.01	8.21	100.22	-	-	AVG

Test Mode	IEEE 802.11n HT20 / 5700 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



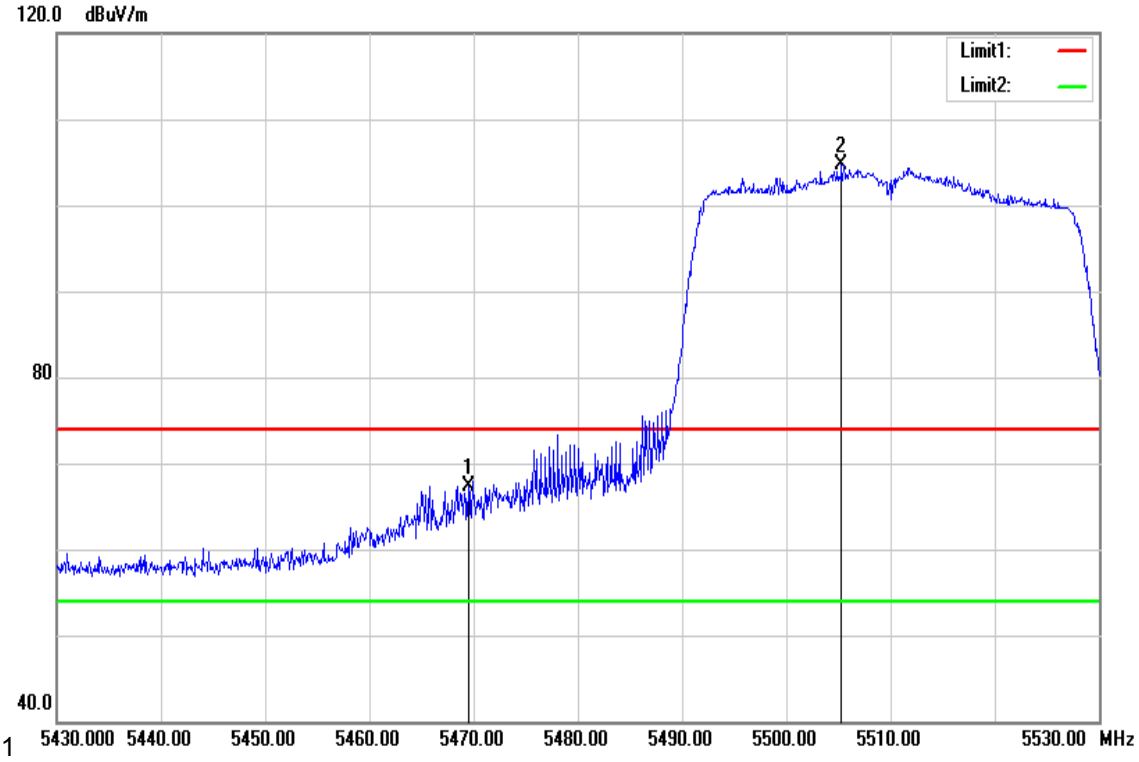
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5699.000	101.05	8.89	109.94	-	-	peak
5726.660	61.12	8.98	70.10	74.00	-3.90	peak

Test Mode	IEEE 802.11n HT20 / 5700 MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



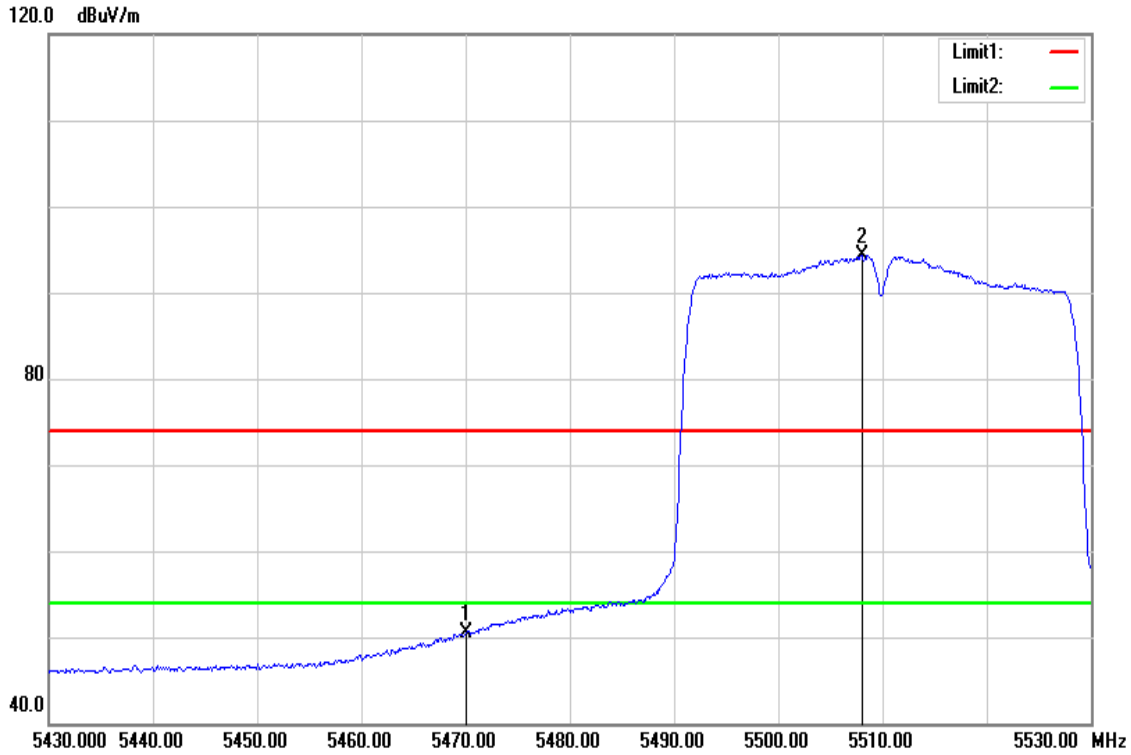
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5699.180	91.75	8.89	100.64	-	-	AVG
5725.000	41.45	8.98	50.43	54.00	-3.57	AVG

Test Mode	IEEE 802.11n HT40 / 5510 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



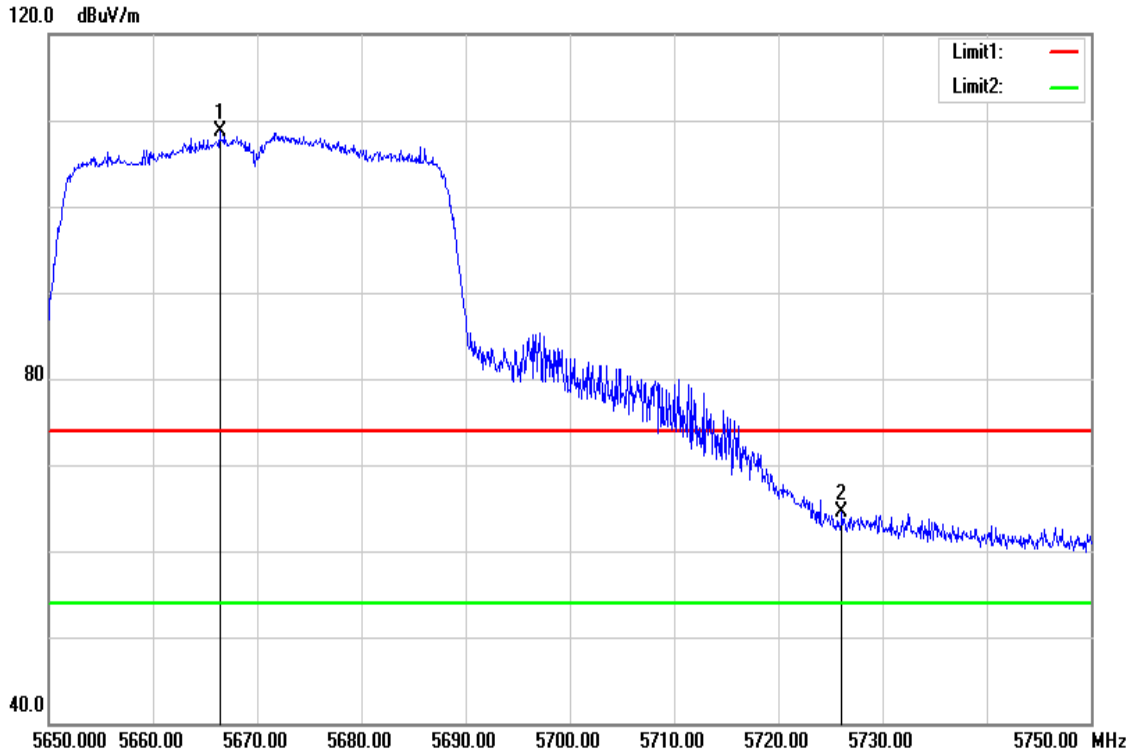
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5469.500	59.18	8.15	67.33	74.00	-6.67	peak
5505.300	96.43	8.23	104.66	-	-	peak

Test Mode	IEEE 802.11n HT40 / 5510 MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



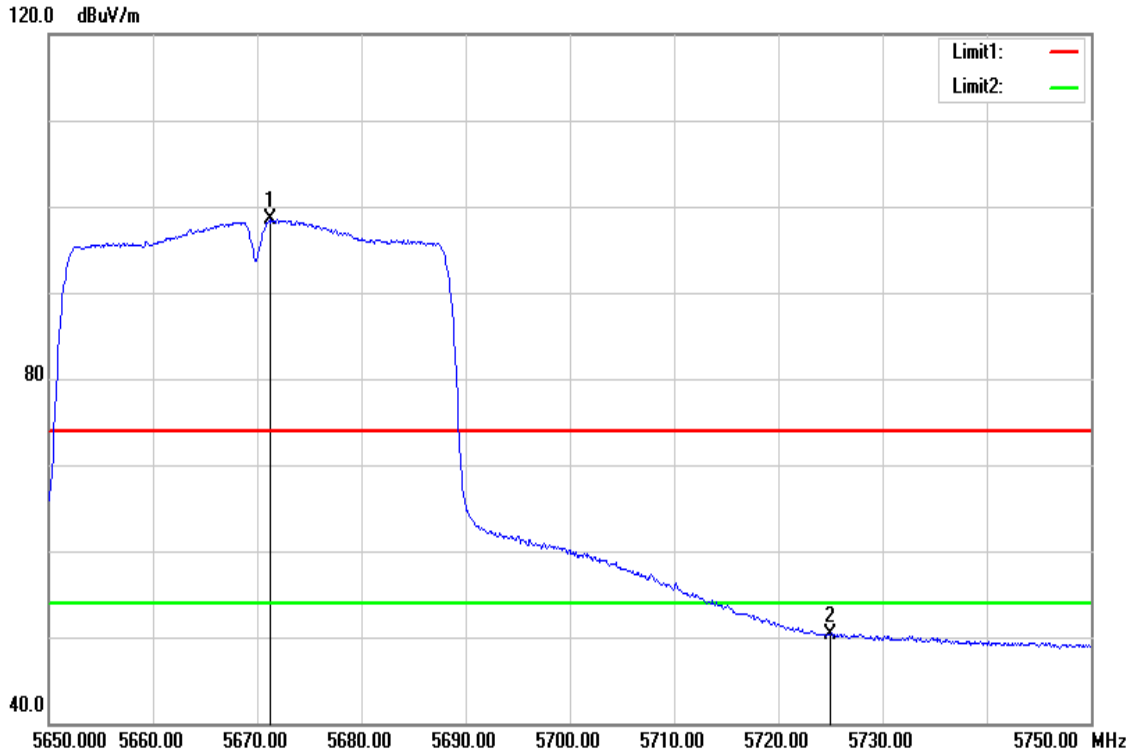
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	42.32	8.15	50.47	54.00	-3.53	AVG
5508.000	86.06	8.24	94.30	-	-	AVG

Test Mode	IEEE 802.11n HT40 / 5670 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



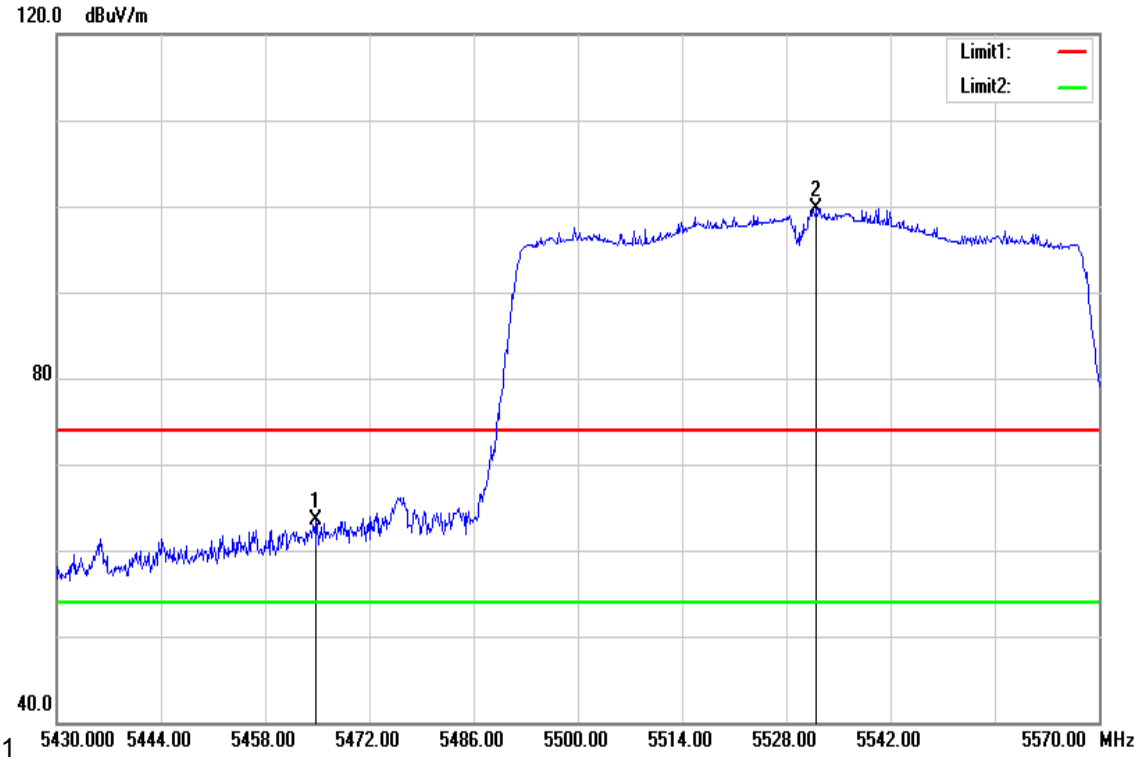
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5666.450	100.00	8.78	108.78	-	-	peak
5726.100	55.52	8.98	64.50	74.00	-9.50	peak

Test Mode	IEEE 802.11n HT40 / 5670 MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



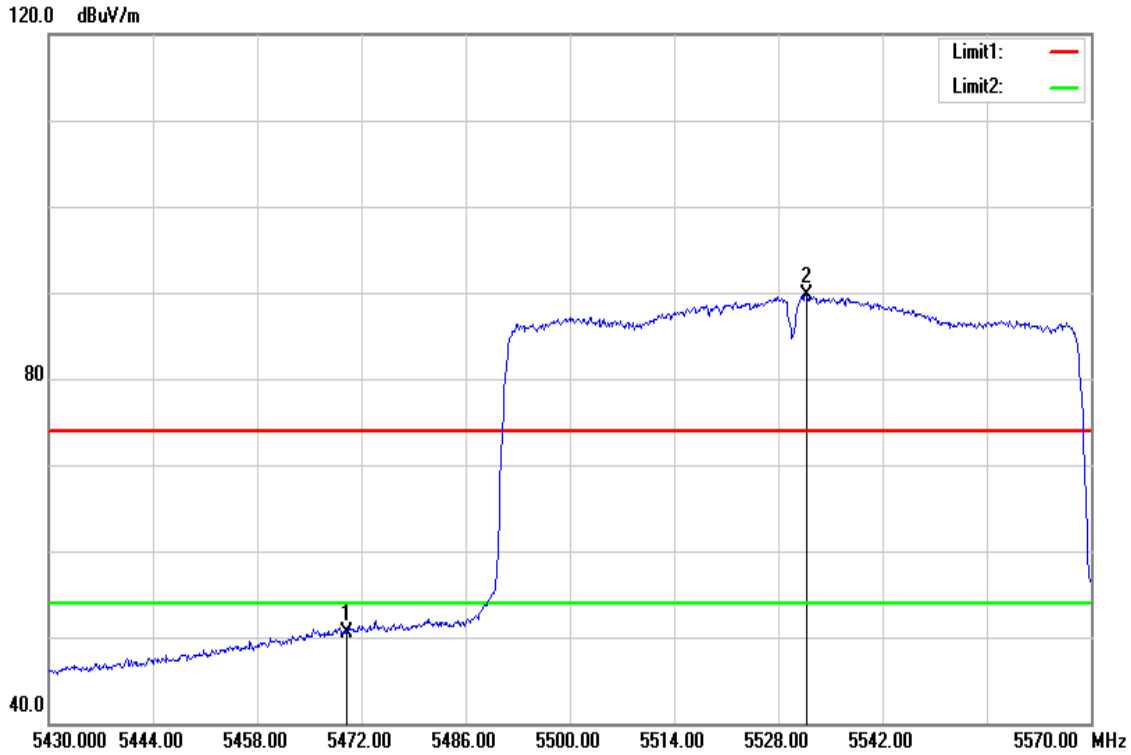
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5671.250	89.62	8.80	98.42	-	-	AVG
5725.000	41.34	8.98	50.32	54.00	-3.68	AVG

Test Mode	IEEE 802.11ac VHT80 / 5530 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5464.790	55.29	8.14	63.43	74.00	-10.57	peak
5532.060	91.43	8.32	99.75	-	-	peak

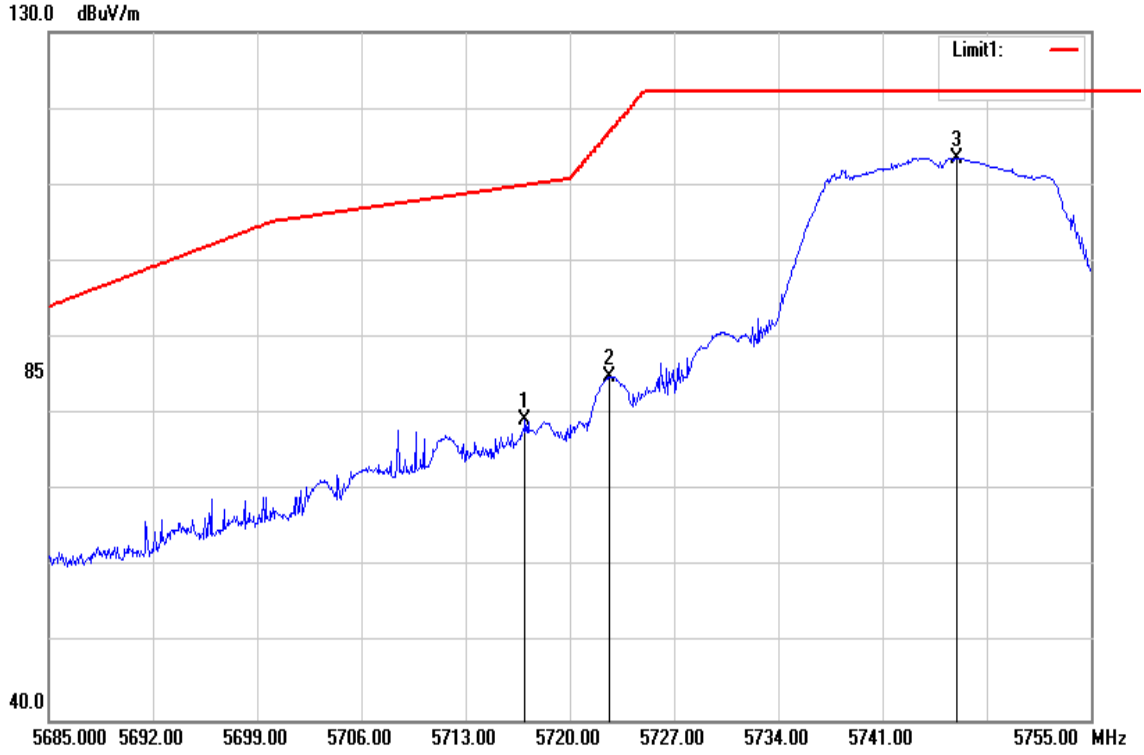
Test Mode	IEEE 802.11ac VHT80 / 5530 MHz	Temperature	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	42.37	8.15	50.52	54.00	-3.48	AVG
5531.780	81.41	8.32	89.73	-	-	AVG

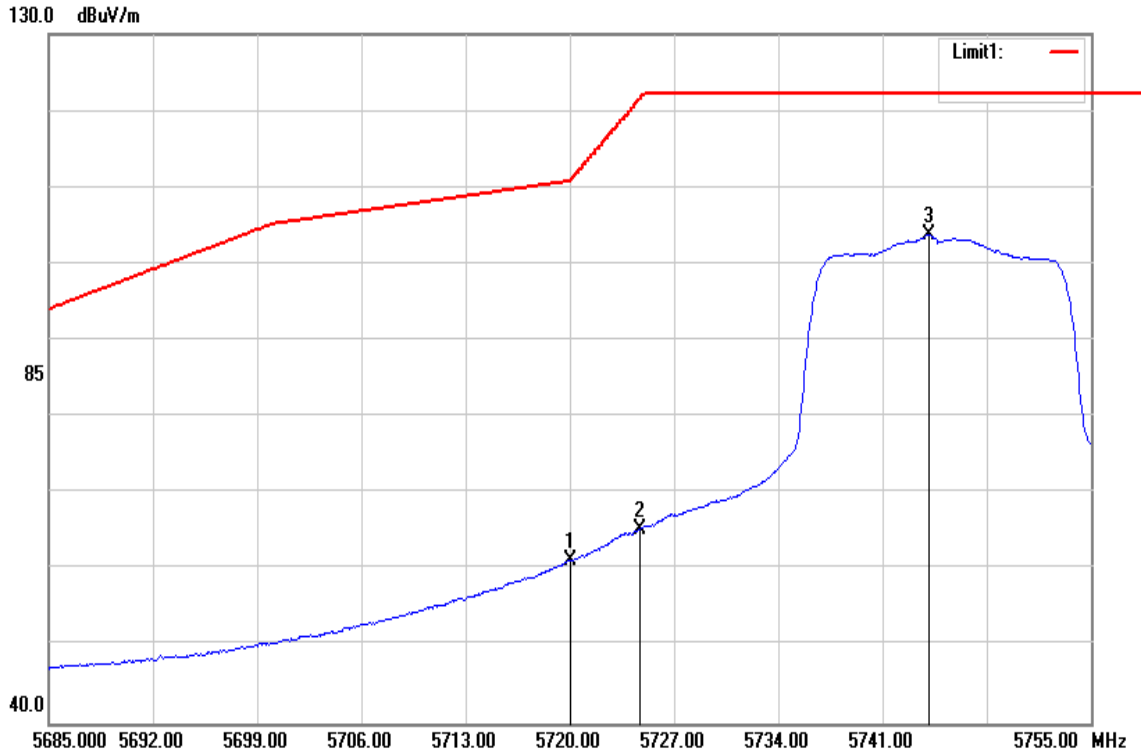
Band Edge Test Data for UNII-3

Test Mode	IEEE 802.11a / 5745 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



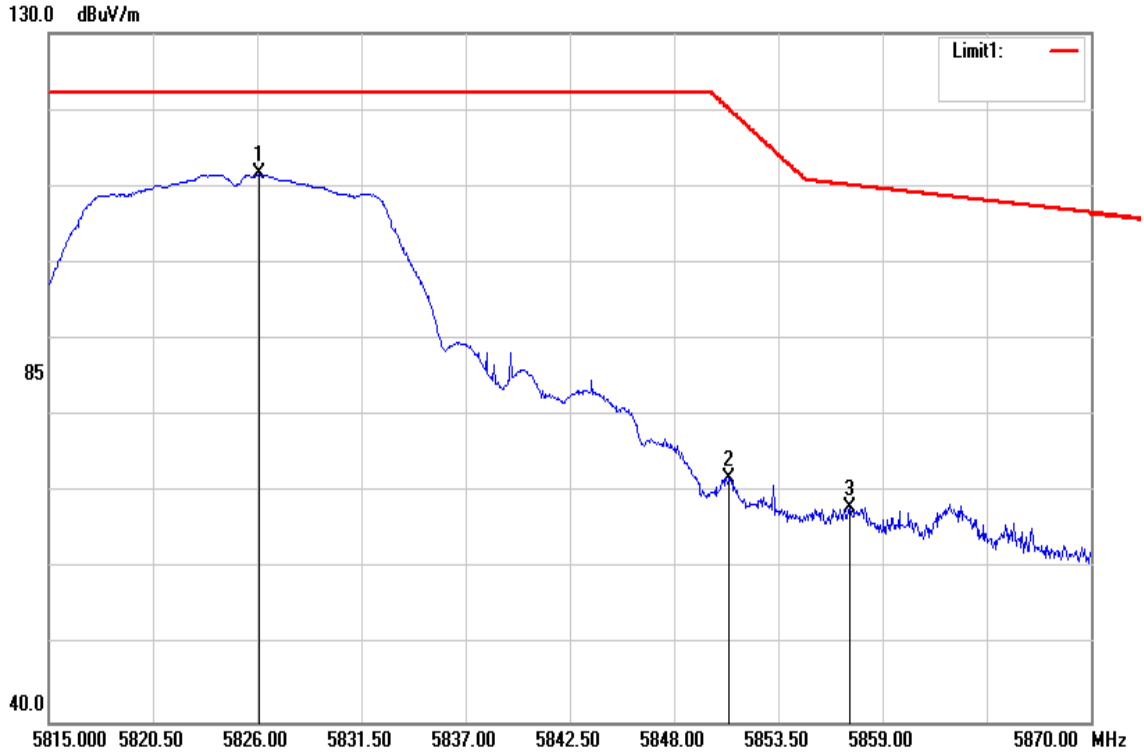
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5716.990	70.34	8.95	79.29	109.96	-30.67	peak
5722.660	75.98	8.98	84.96	116.86	-31.90	peak
5745.970	104.51	9.05	113.56	-	-	peak

Test Mode	IEEE 802.11a / 5745 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



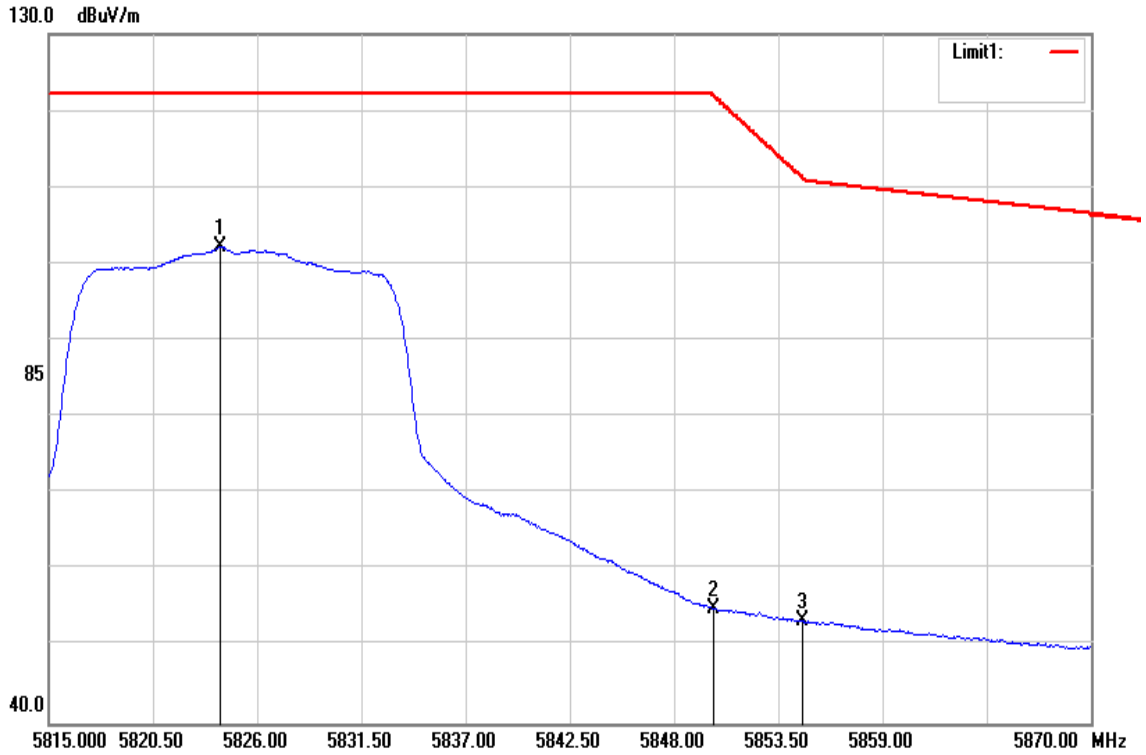
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5720.070	52.30	8.96	61.26	110.96	-49.70	AVG
5724.690	56.37	8.98	65.35	121.49	-56.14	AVG
5744.080	94.74	9.04	103.78	-	-	AVG

Test Mode	IEEE 802.11a / 5825 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



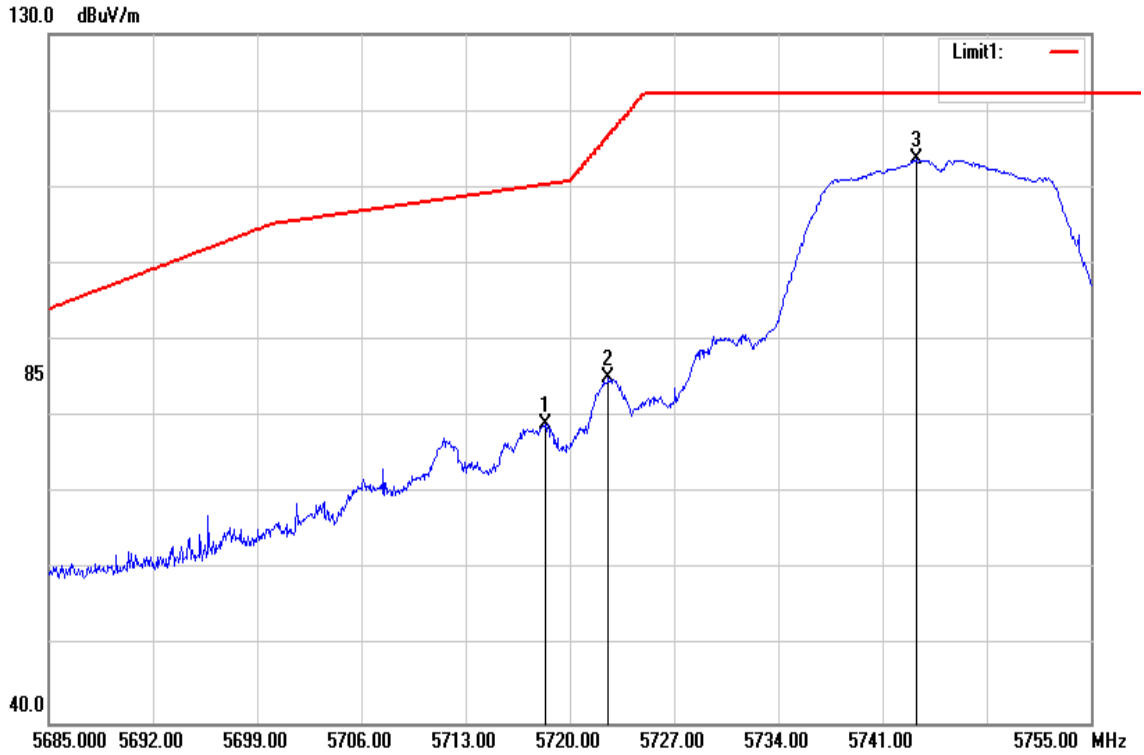
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5826.110	102.24	9.32	111.56	-	-	peak
5850.860	62.53	9.41	71.94	120.24	-48.30	peak
5857.295	58.50	9.43	67.93	110.16	-42.23	peak

Test Mode	IEEE 802.11a / 5825 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



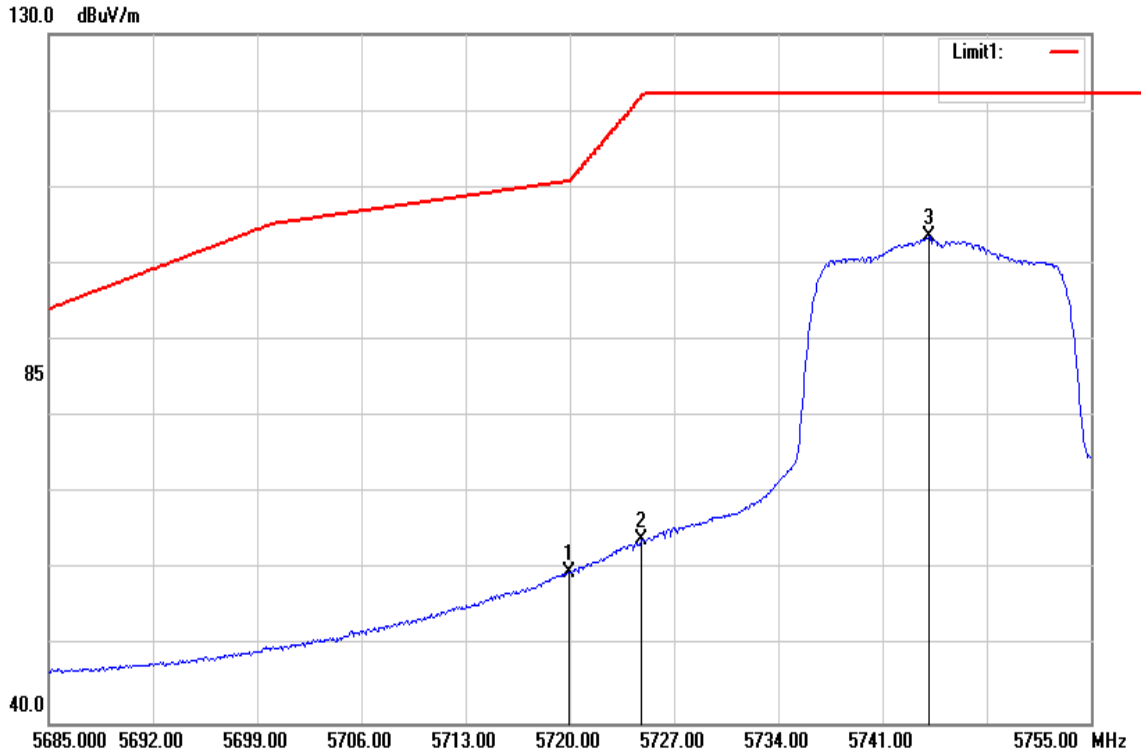
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5824.075	92.88	9.32	102.20	-	-	AVG
5850.090	45.66	9.41	55.07	121.99	-66.92	AVG
5854.765	43.99	9.43	53.42	111.34	-57.92	AVG

Test Mode	IEEE 802.11n HT20 / 5745 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



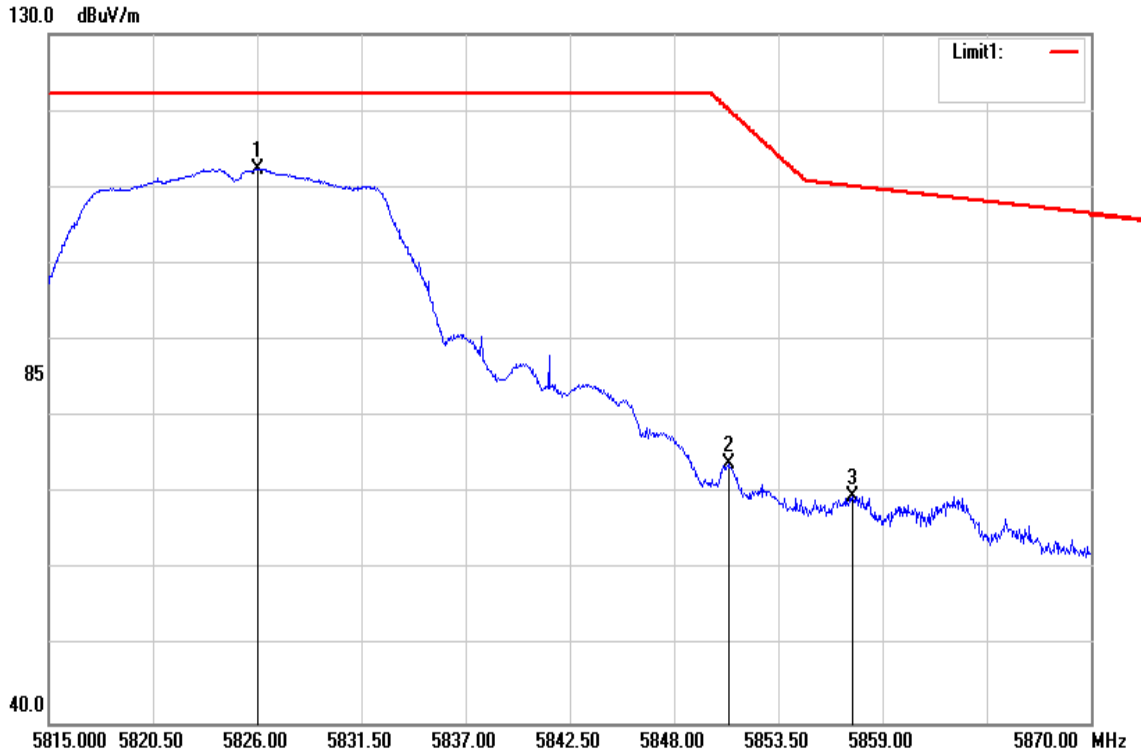
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5718.390	70.07	8.96	79.03	110.35	-31.32	peak
5722.590	76.04	8.98	85.02	116.71	-31.69	peak
5743.240	104.66	9.04	113.70	-	-	peak

Test Mode	IEEE 802.11n HT20 / 5745 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



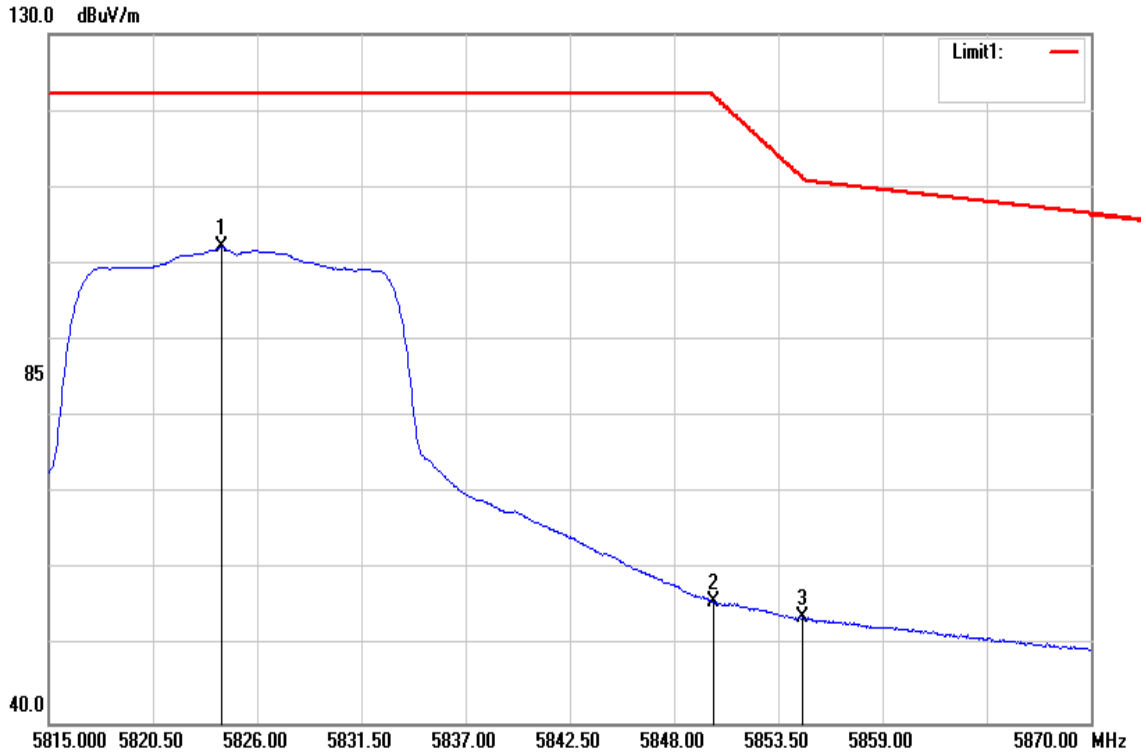
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5719.930	50.76	8.96	59.72	110.78	-51.06	AVG
5724.830	54.94	8.98	63.92	121.81	-57.89	AVG
5744.150	94.48	9.04	103.52	-	-	AVG

Test Mode	IEEE 802.11n HT20 / 5825 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



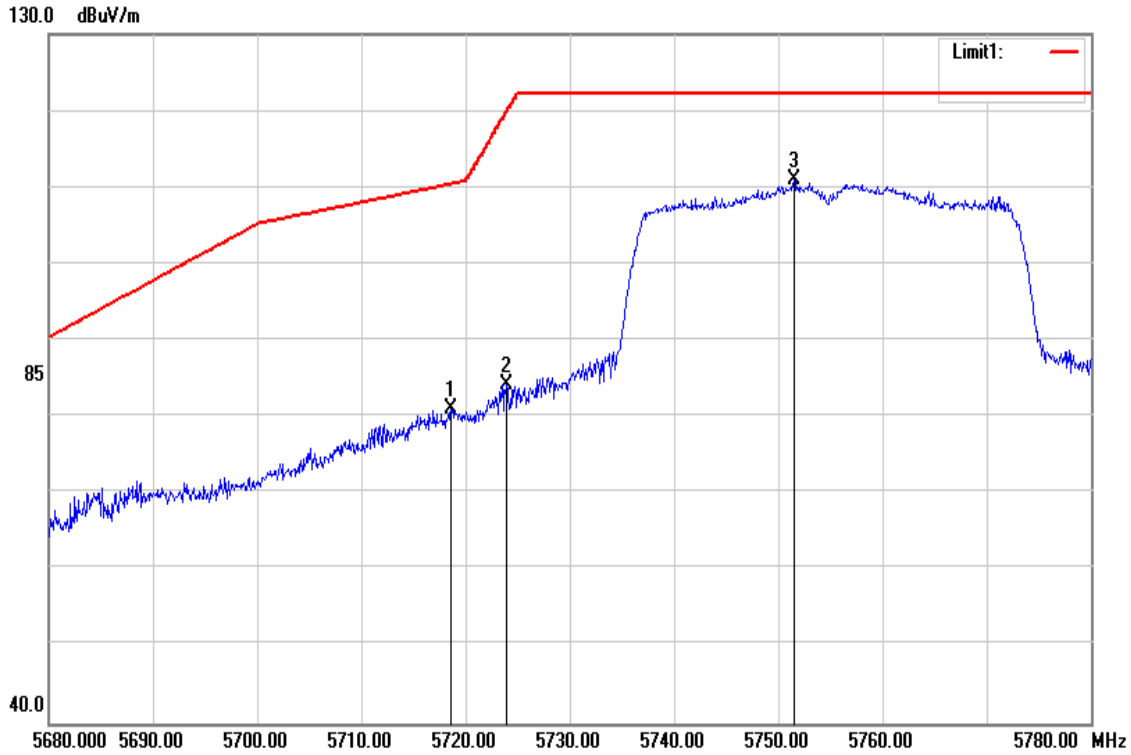
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5826.055	103.05	9.32	112.37	-	-	peak
5850.860	64.38	9.41	73.79	120.24	-46.45	peak
5857.405	60.17	9.43	69.60	110.13	-40.53	peak

Test Mode	IEEE 802.11n HT20 / 5825 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



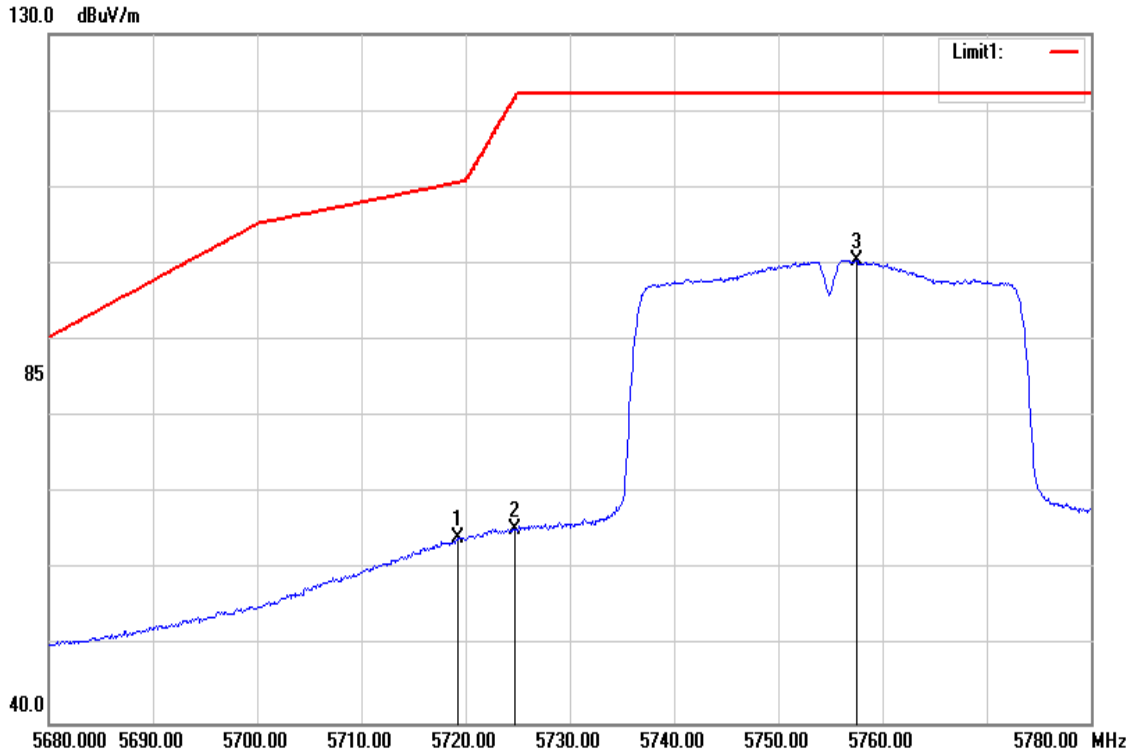
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5824.130	92.90	9.32	102.22	-	-	AVG
5850.090	46.42	9.41	55.83	121.99	-66.16	AVG
5854.765	44.41	9.43	53.84	111.34	-57.50	AVG

Test Mode	IEEE 802.11n HT40/ 5755 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



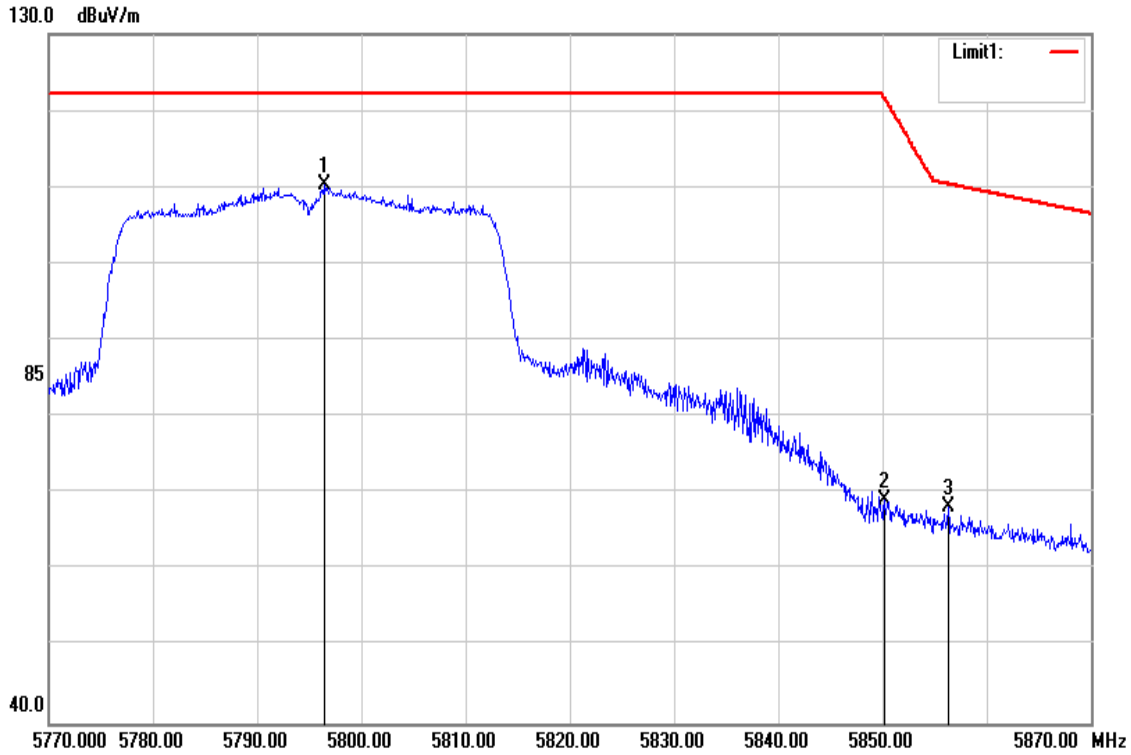
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5718.650	72.09	8.96	81.05	110.42	-29.37	peak
5723.900	75.20	8.98	84.18	119.69	-35.51	peak
5751.550	101.82	9.07	110.89	-	-	peak

Test Mode	IEEE 802.11n HT40/ 5755 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



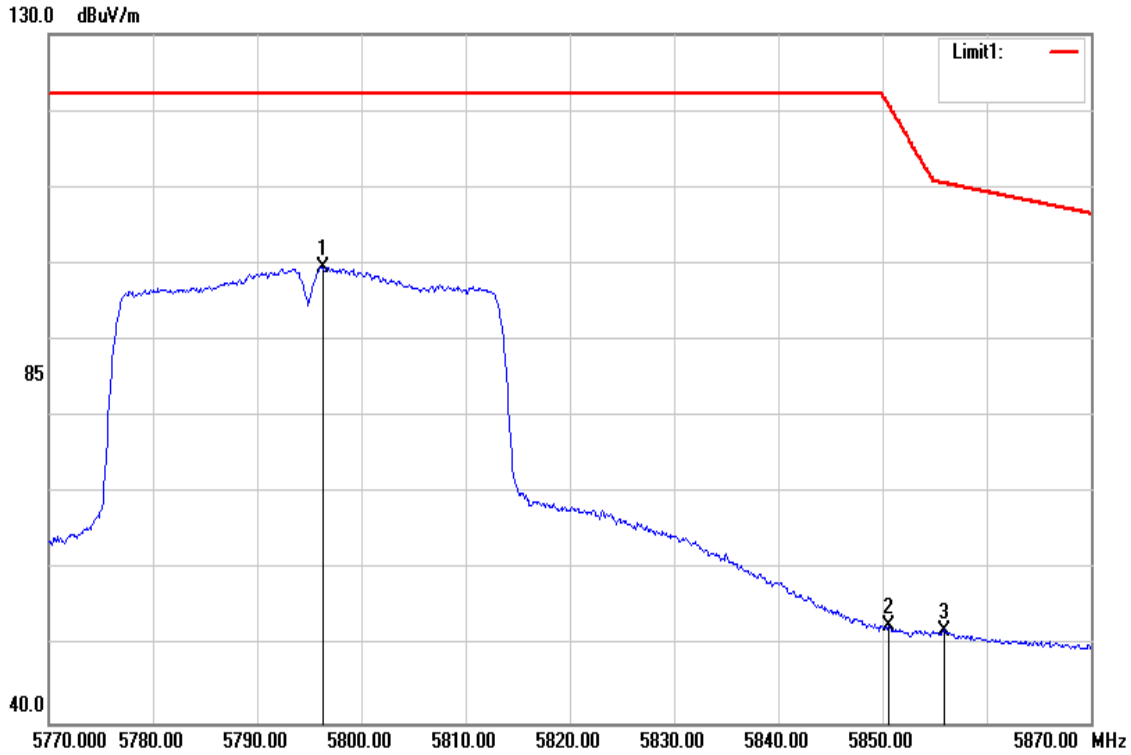
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5719.200	55.27	8.96	64.23	110.58	-46.35	AVG
5724.700	56.42	8.98	65.40	121.52	-56.12	AVG
5757.550	91.40	9.10	100.50	-	-	AVG

Test Mode	IEEE 802.11n HT40/ 5795 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



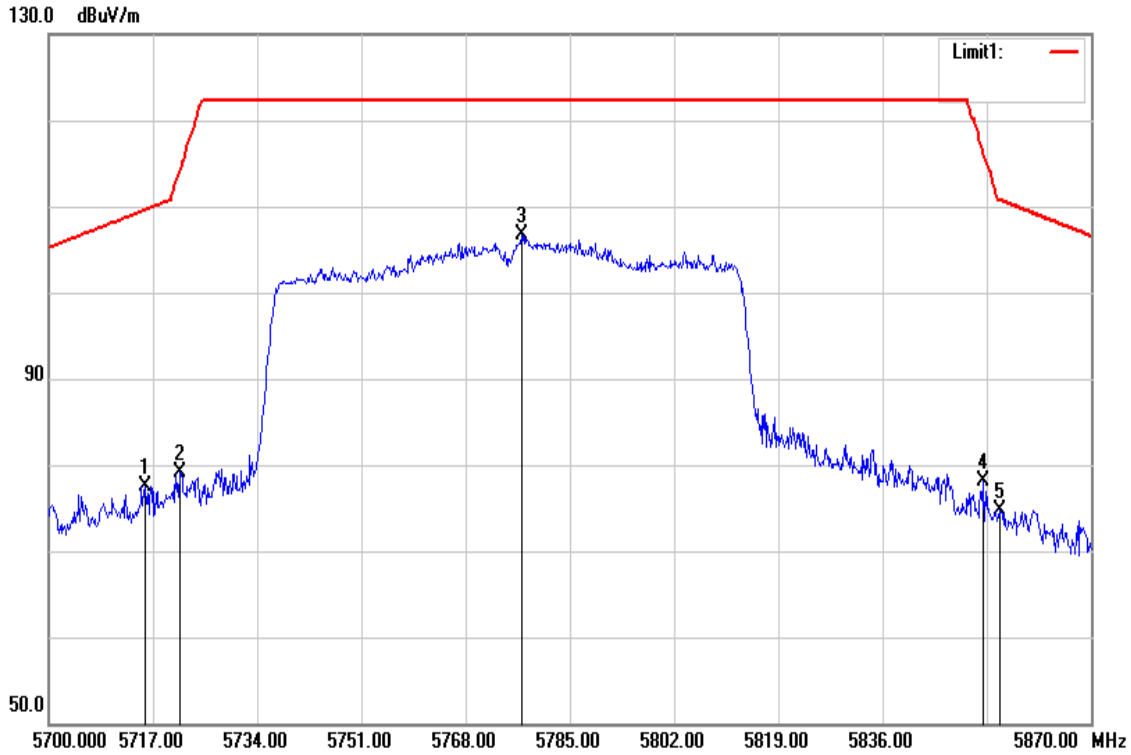
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5796.450	101.05	9.23	110.28	-	-	peak
5850.250	59.77	9.41	69.18	121.63	-52.45	peak
5856.350	58.75	9.43	68.18	110.42	-42.24	peak

Test Mode	IEEE 802.11n HT40/ 5795 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



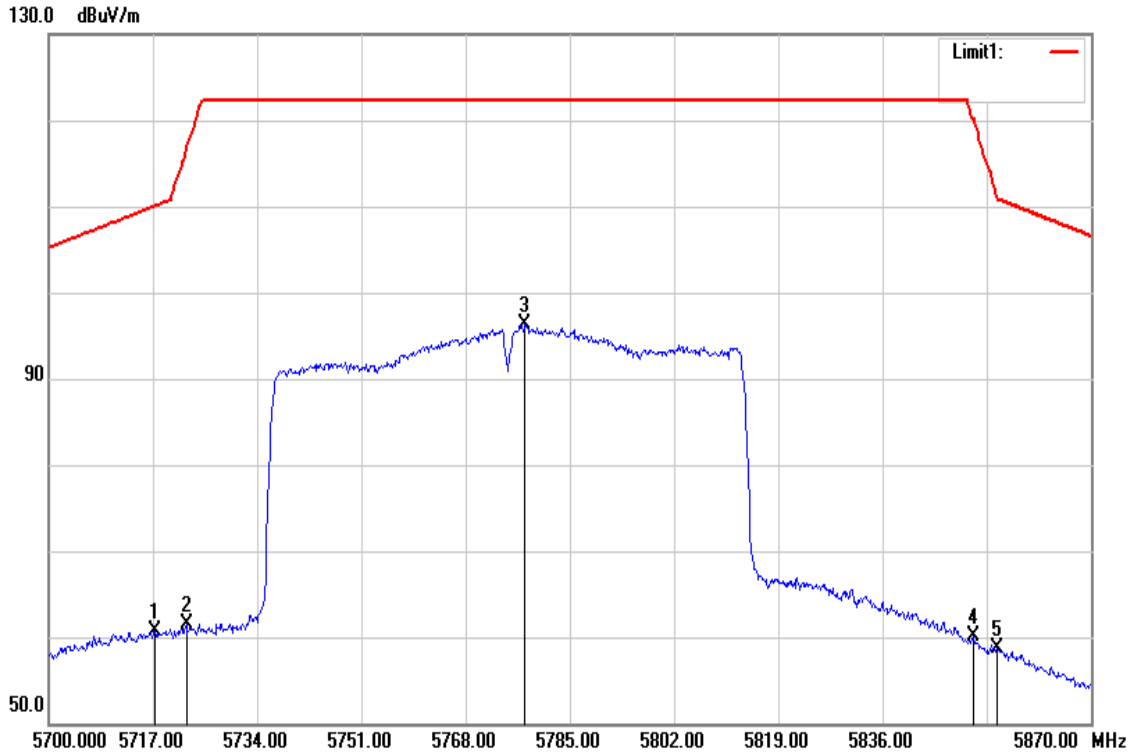
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5796.300	90.38	9.23	99.61	-	-	AVG
5850.600	43.35	9.41	52.76	120.83	-68.07	AVG
5855.900	42.72	9.43	52.15	110.55	-58.40	AVG

Test Mode	IEEE 802.11ac VHT80 / 5775 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5715.810	68.64	8.95	77.59	109.63	-32.04	peak
5721.505	70.19	8.97	79.16	114.23	-35.07	peak
5777.180	97.47	9.15	106.62	-	-	peak
5852.575	68.59	9.42	78.01	116.33	-38.32	peak
5855.125	65.30	9.43	74.73	110.77	-36.04	peak

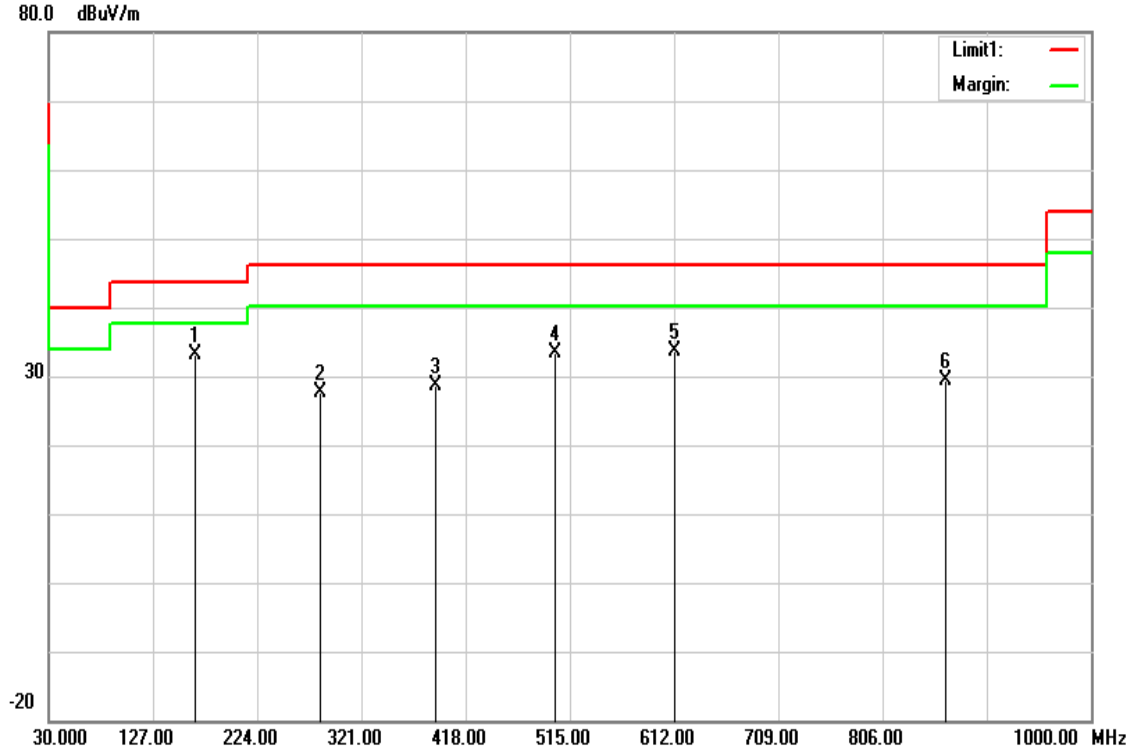
Test Mode	IEEE 802.11ac VHT80 / 5775 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Band Edge	Test Date	January 18, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5717.425	51.72	8.95	60.67	110.08	-49.41	AVG
5722.440	52.47	8.97	61.44	116.36	-54.92	AVG
5777.775	87.12	9.16	96.28	-	-	AVG
5850.790	50.61	9.41	60.02	120.40	-60.38	AVG
5854.700	49.21	9.43	58.64	111.48	-52.84	AVG

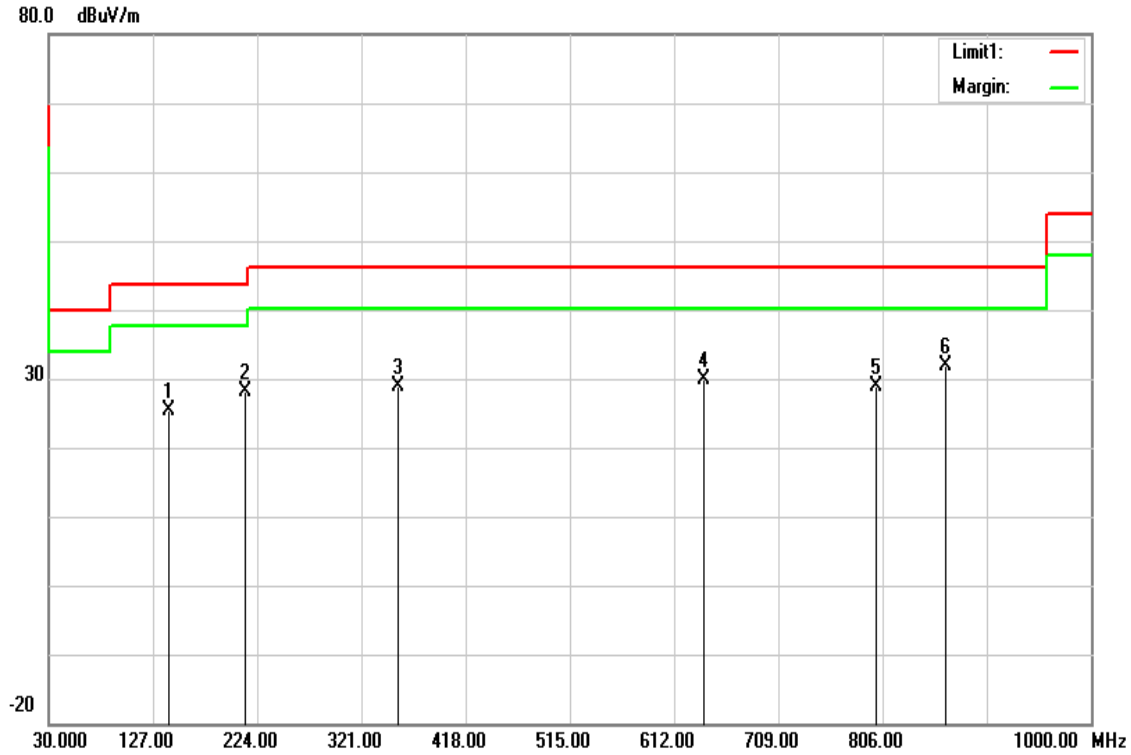
Below 1G Test Data

Test Mode	IEEE 802.11ac VHT80 / 5530MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	30MHz-1GHz	Test Date	January 19, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Quasi-peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
167.2550	49.52	-16.39	33.13	43.52	-10.39	peak
283.1700	41.79	-14.24	27.55	46.02	-18.47	peak
390.3550	40.41	-11.70	28.71	46.02	-17.31	peak
501.9050	41.71	-8.45	33.26	46.02	-12.76	peak
613.4550	40.29	-6.55	33.74	46.02	-12.28	peak
864.2000	32.07	-2.62	29.45	46.02	-16.57	peak

Test Mode	IEEE 802.11ac VHT80 / 5530MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	30MHz-1GHz	Test Date	January 19, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Quasi-peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
142.0350	41.05	-15.58	25.47	43.52	-18.05	peak
213.3300	44.88	-16.66	28.22	43.52	-15.30	peak
355.4350	41.72	-12.81	28.91	46.02	-17.11	peak
640.1300	35.78	-5.83	29.95	46.02	-16.07	peak
800.1800	32.26	-3.38	28.88	46.02	-17.14	peak
864.2000	34.48	-2.62	31.86	46.02	-14.16	peak

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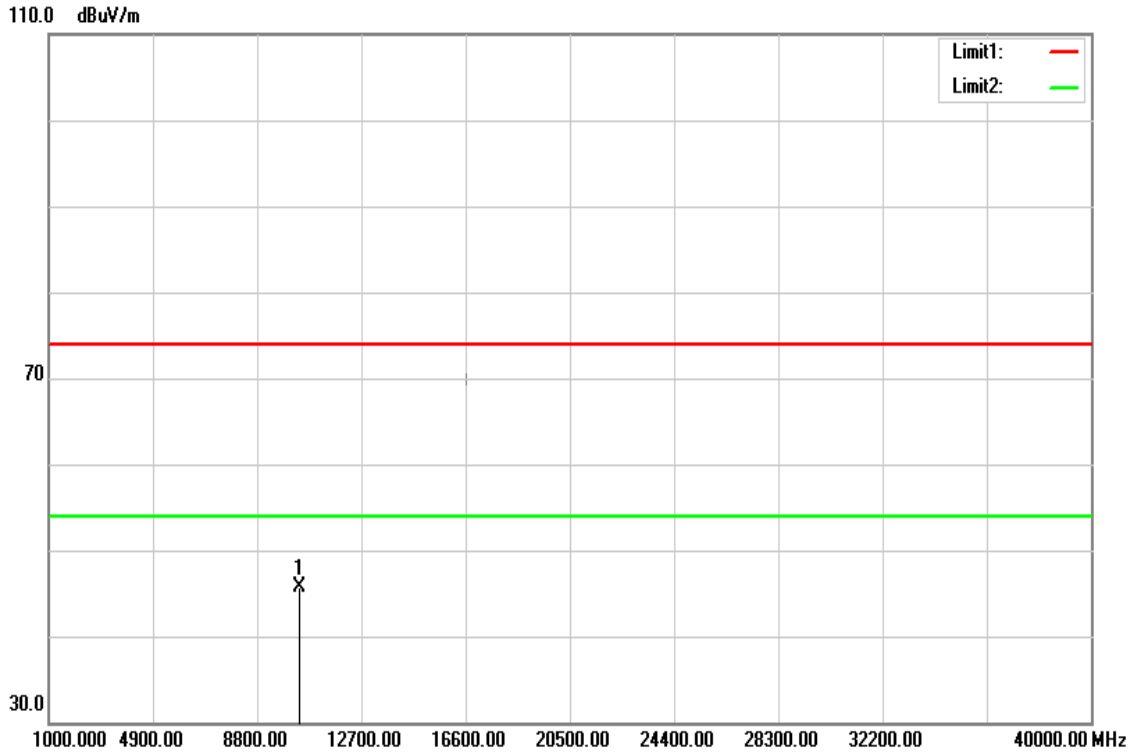
Above 1G Test Data for UNII-1

Test Mode	IEEE 802.11a / 5180MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

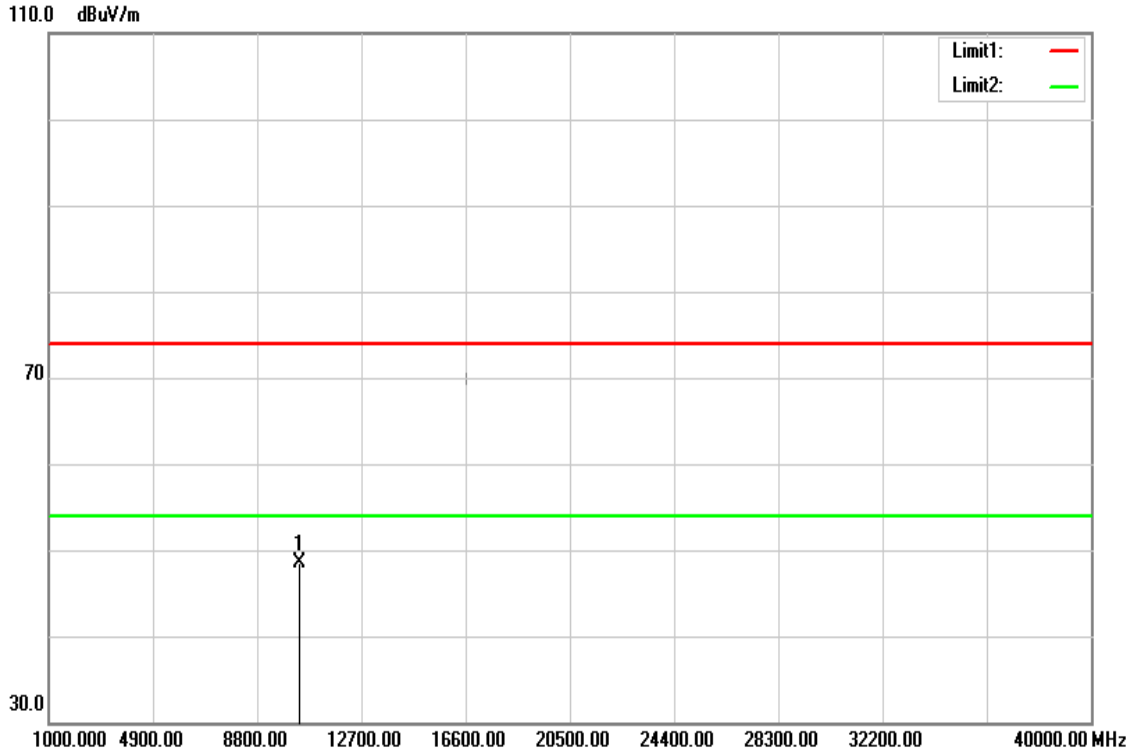


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10360.000	31.18	14.45	45.63	74.00	-28.37	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5180MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

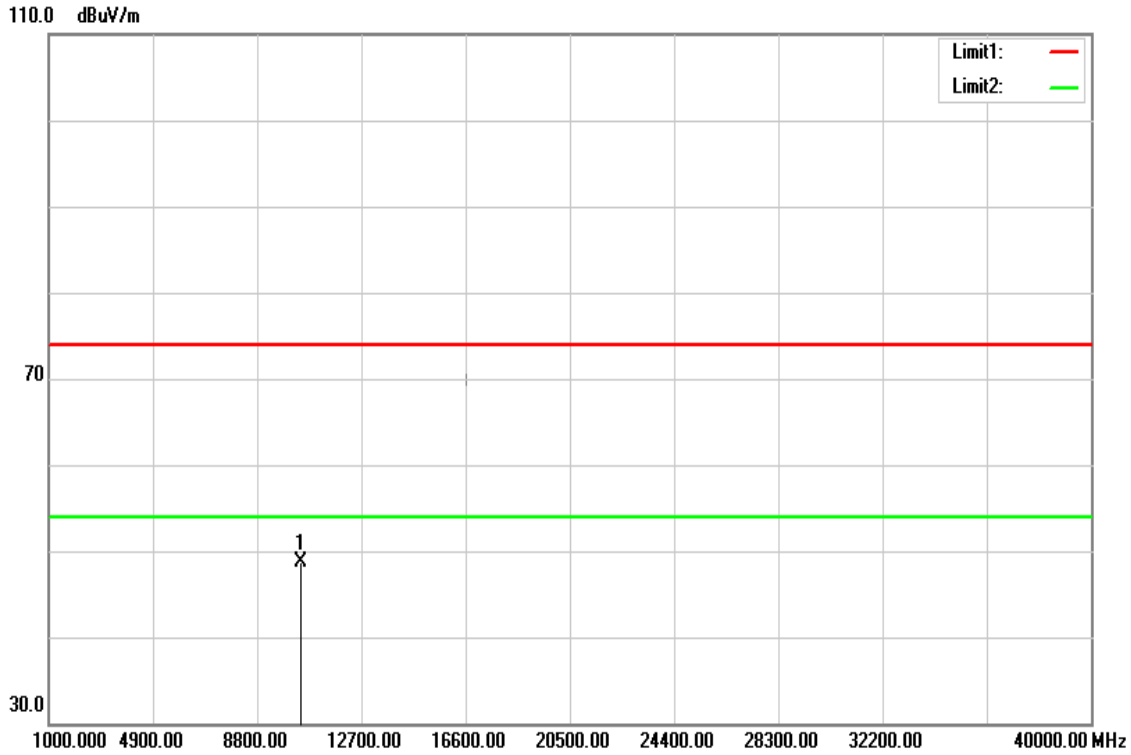


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10360.000	34.11	14.45	48.56	74.00	-25.44	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5220 MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Horizontal	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

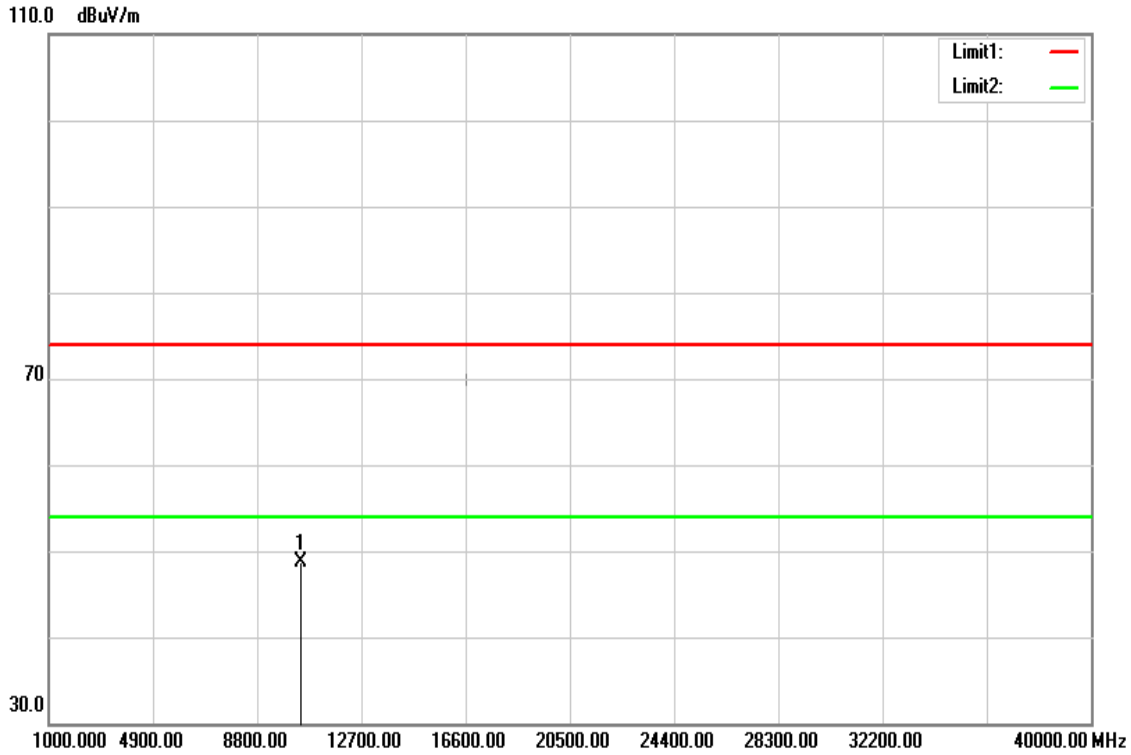


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10440.000	34.05	14.71	48.76	74.00	-25.24	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5220 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

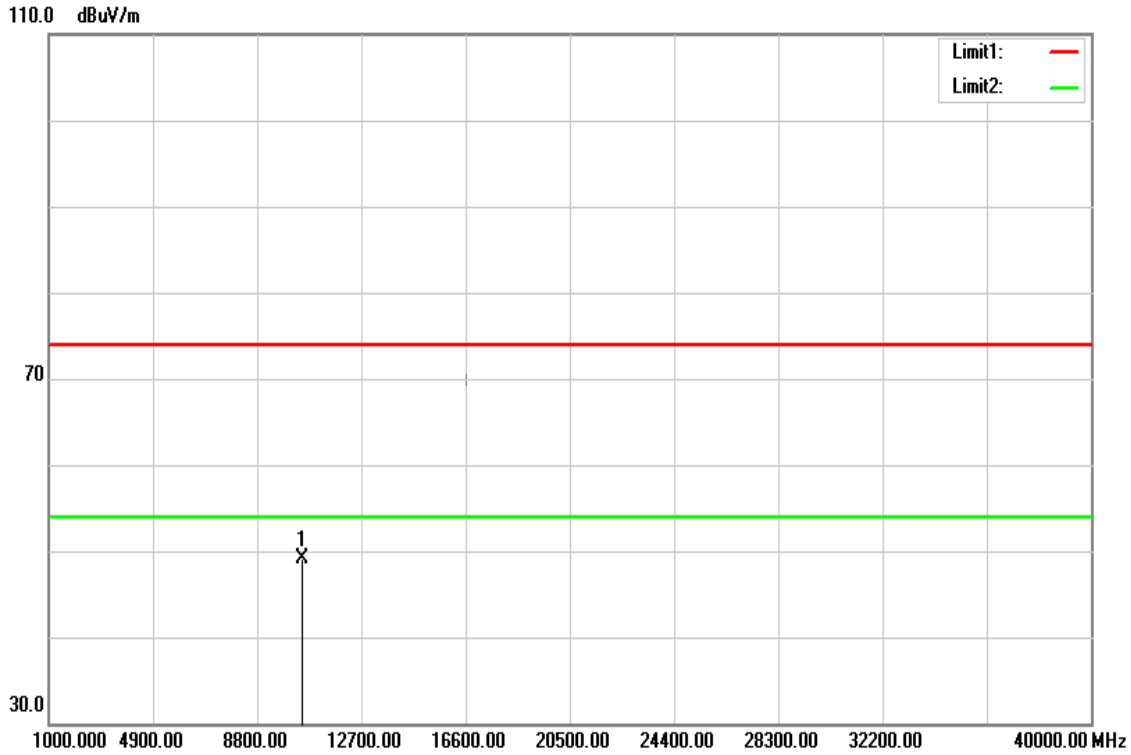


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10440.000	33.91	14.71	48.62	74.00	-25.38	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5240MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

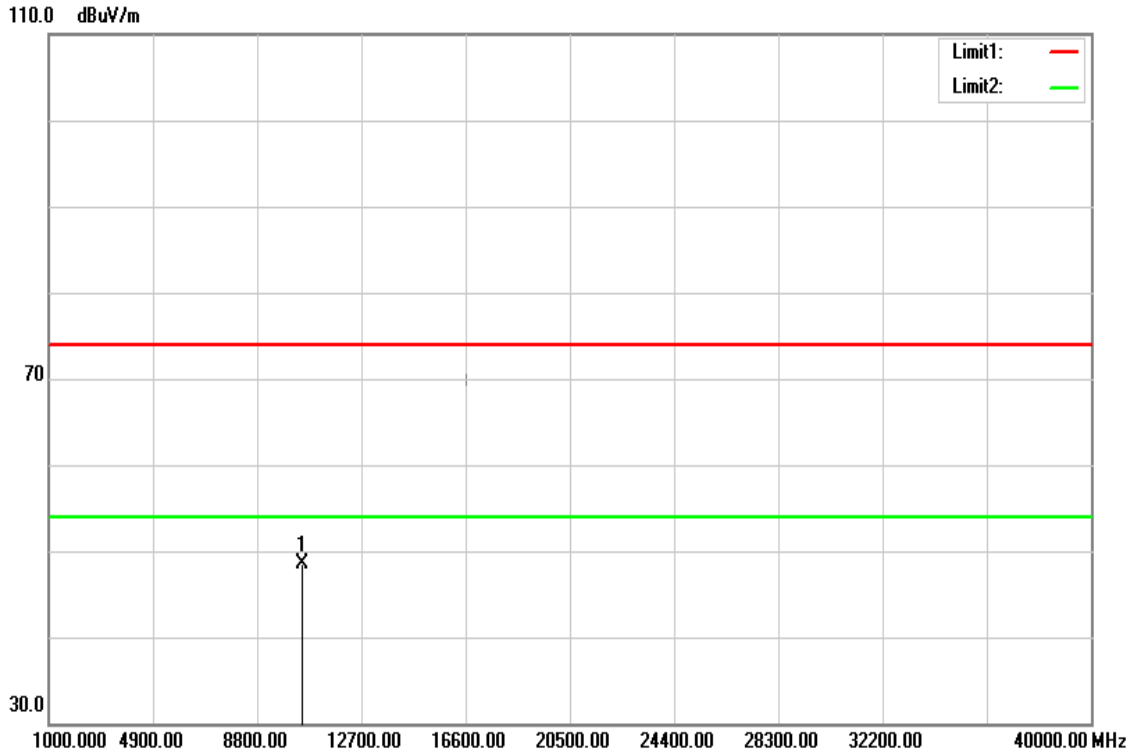


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10480.000	34.21	14.84	49.05	74.00	-24.95	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5240MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

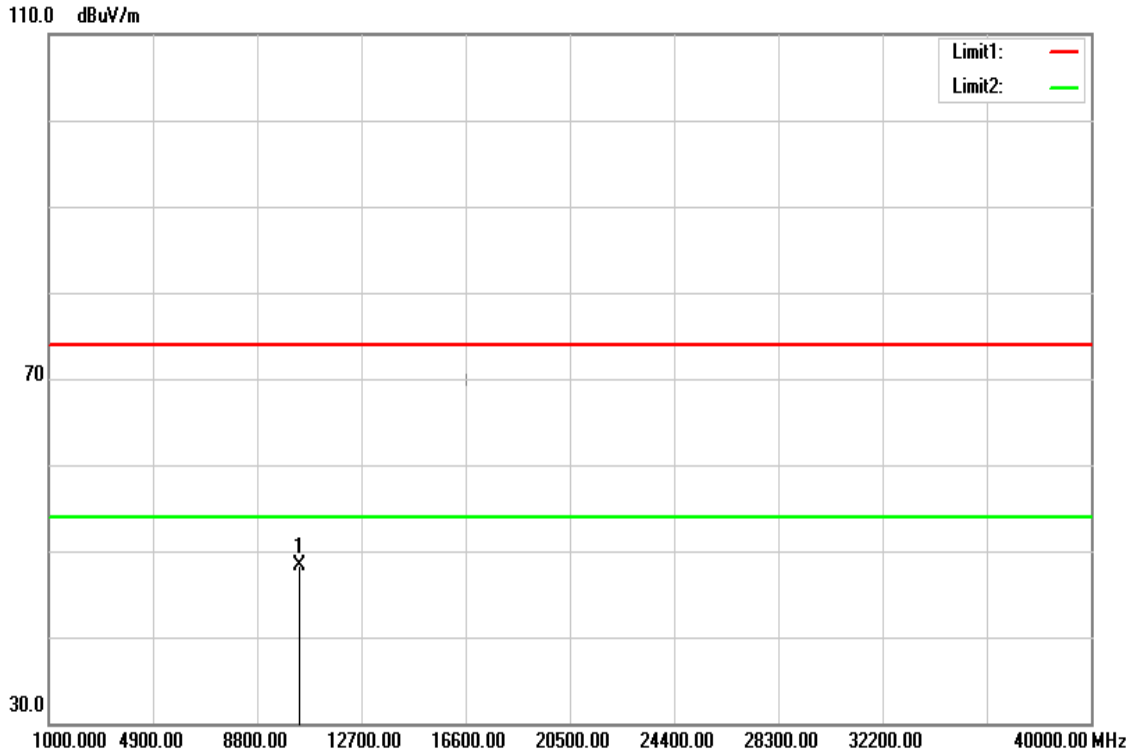


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10480.000	33.73	14.84	48.57	74.00	-25.43	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5180MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

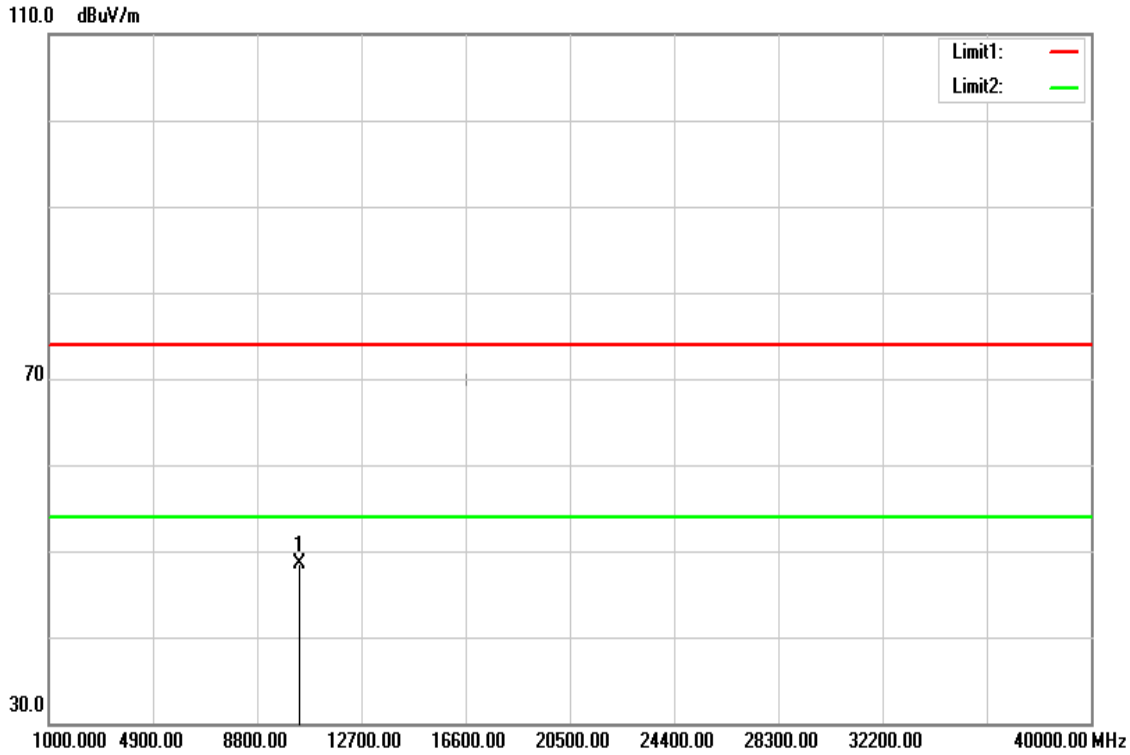


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10360.000	33.76	14.45	48.21	74.00	-25.79	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20/ 5180MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

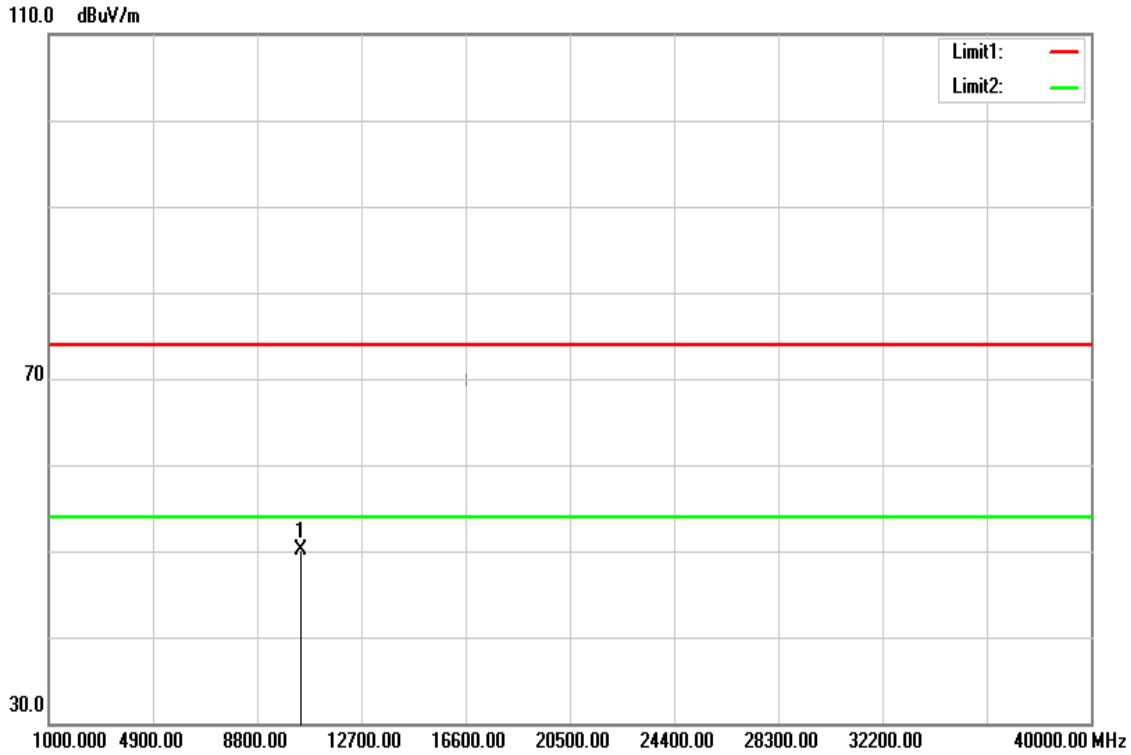


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10360.000	34.02	14.45	48.47	74.00	-25.53	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5220MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

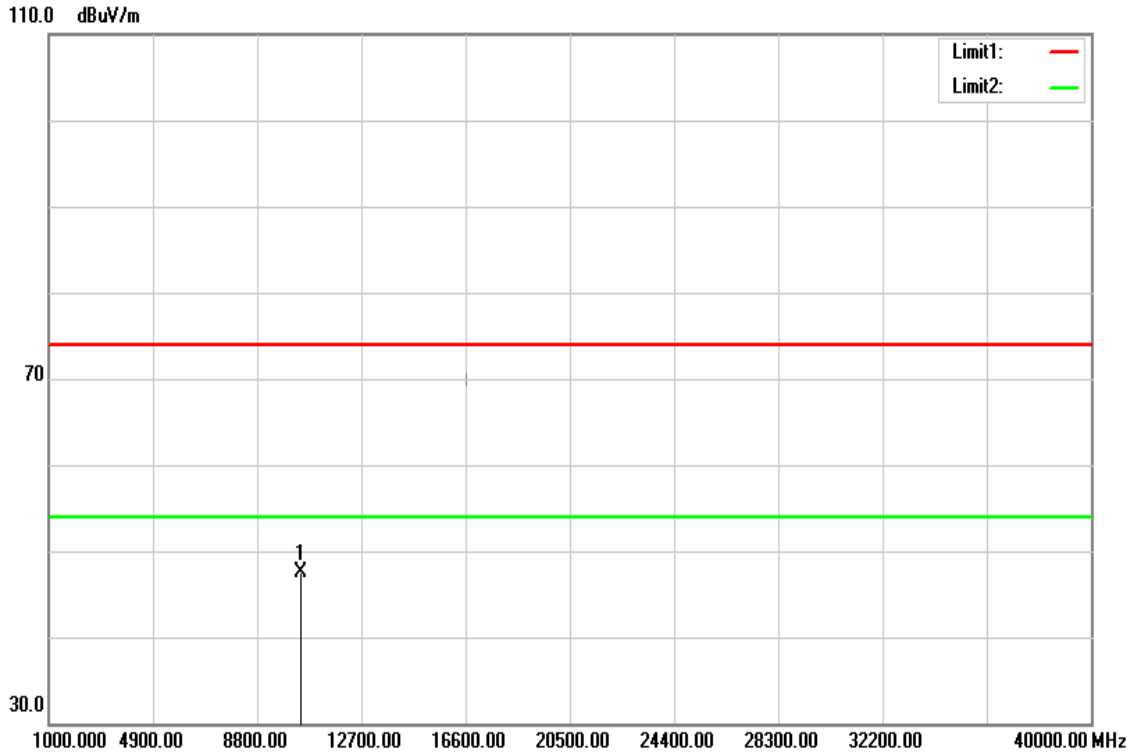


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10440.000	35.39	14.71	50.10	74.00	-23.90	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5220MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

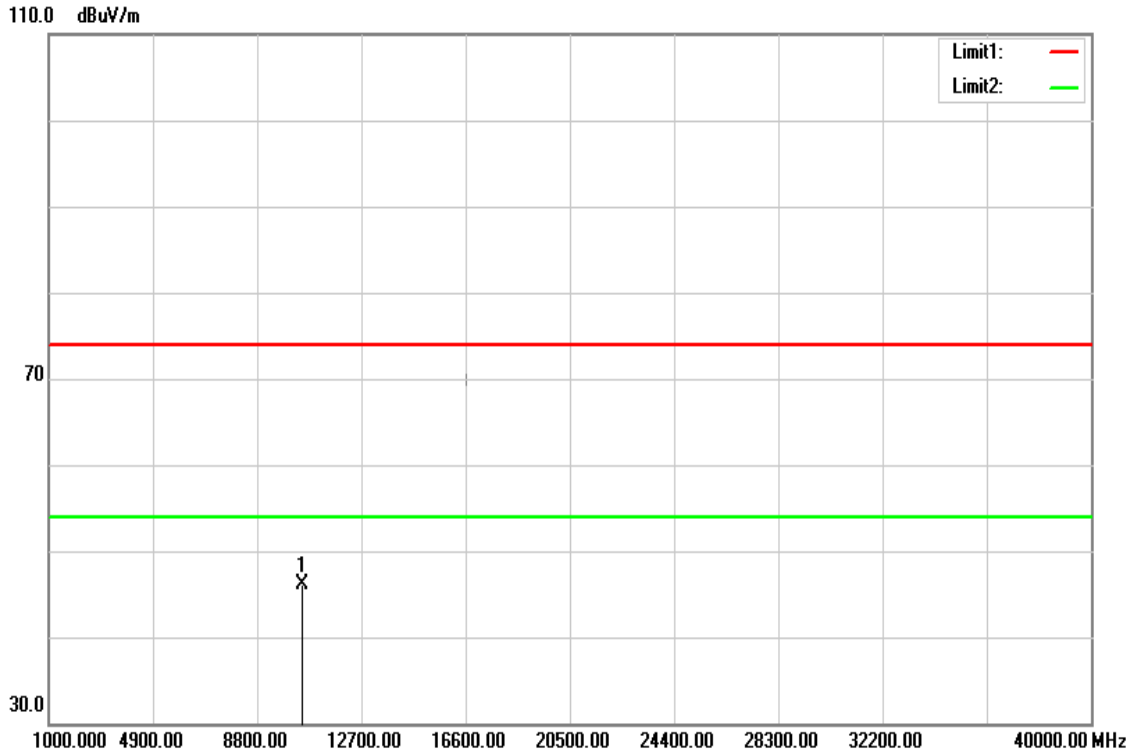


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10440.000	32.78	14.71	47.49	74.00	-26.51	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5240MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

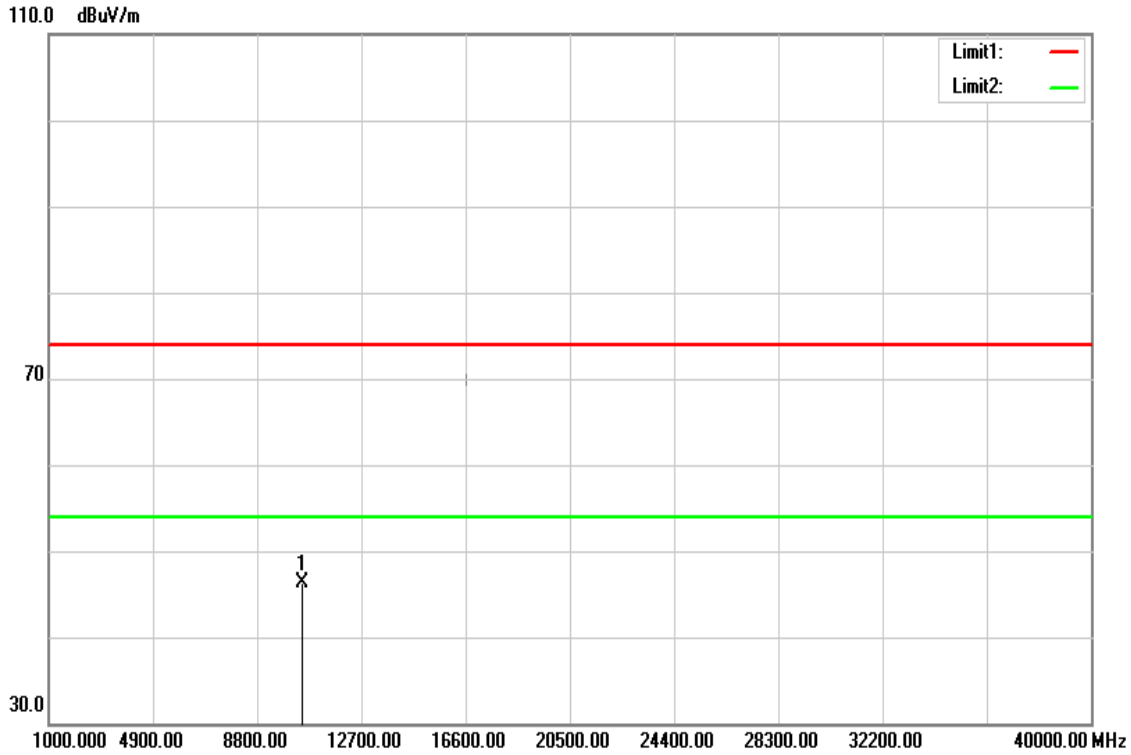


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10480.000	31.21	14.84	46.05	74.00	-27.95	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5240MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

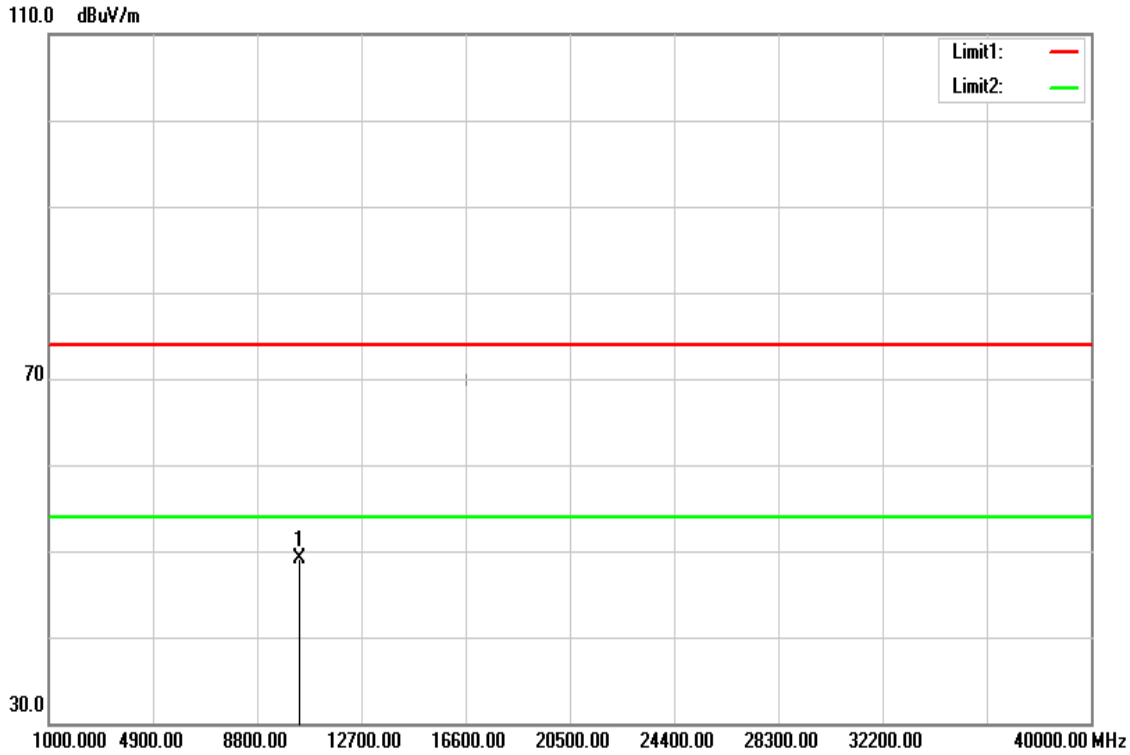


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10480.000	31.37	14.84	46.21	74.00	-27.79	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5190MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

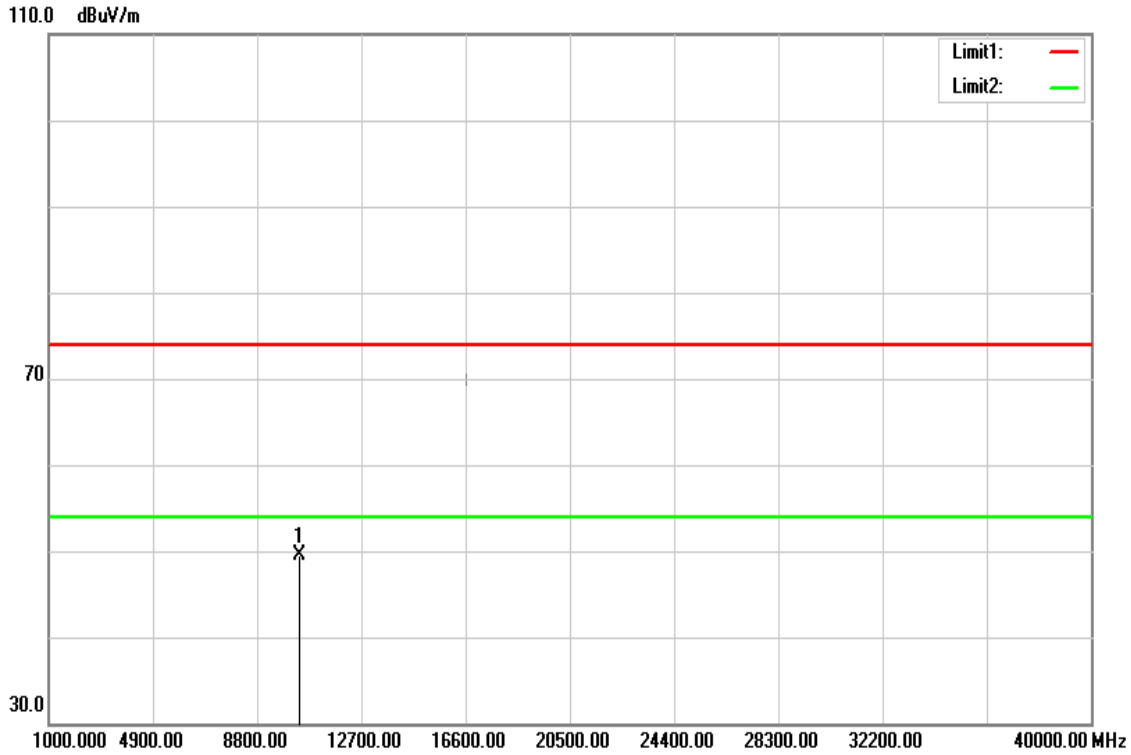


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10380.000	34.64	14.50	49.14	74.00	-24.86	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5190MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

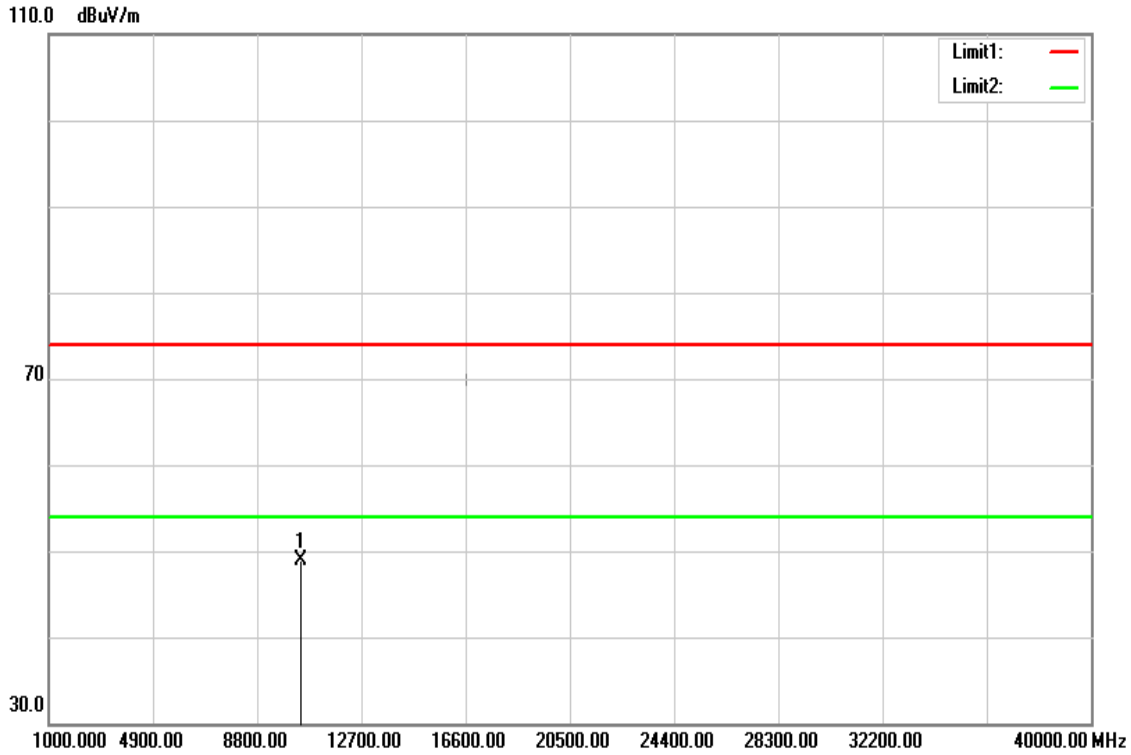


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10380.000	34.94	14.50	49.44	74.00	-24.56	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5230MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

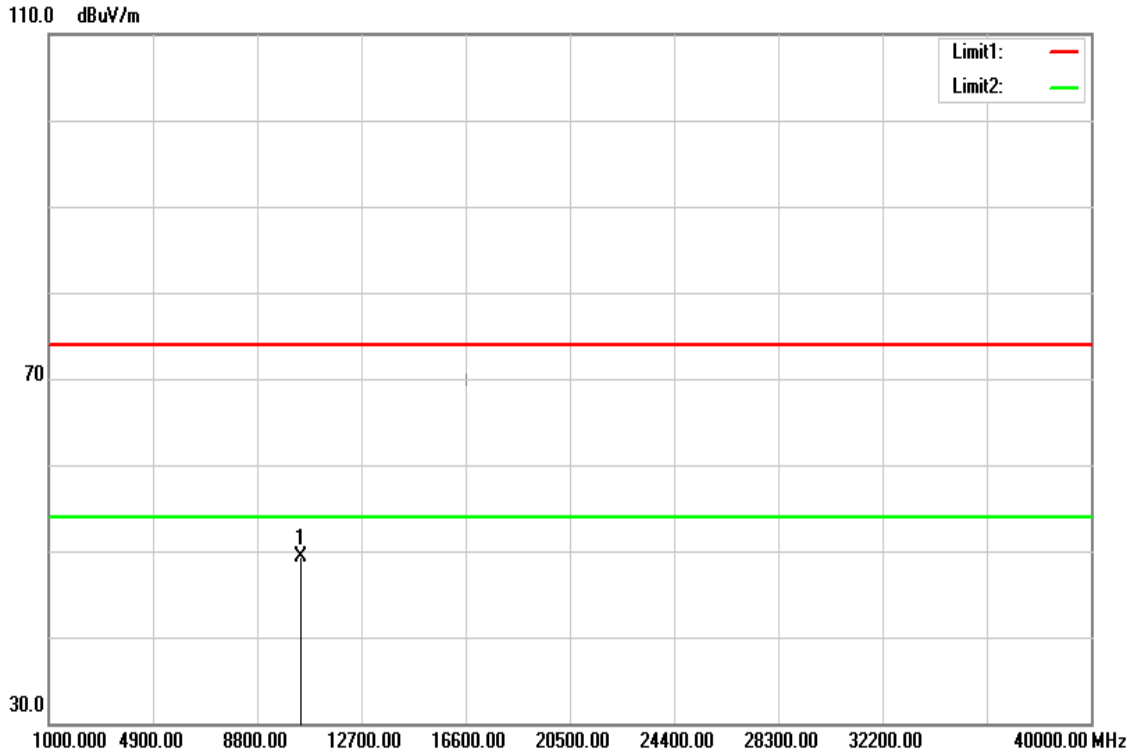


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10460.000	34.05	14.79	48.84	74.00	-25.16	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5230MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

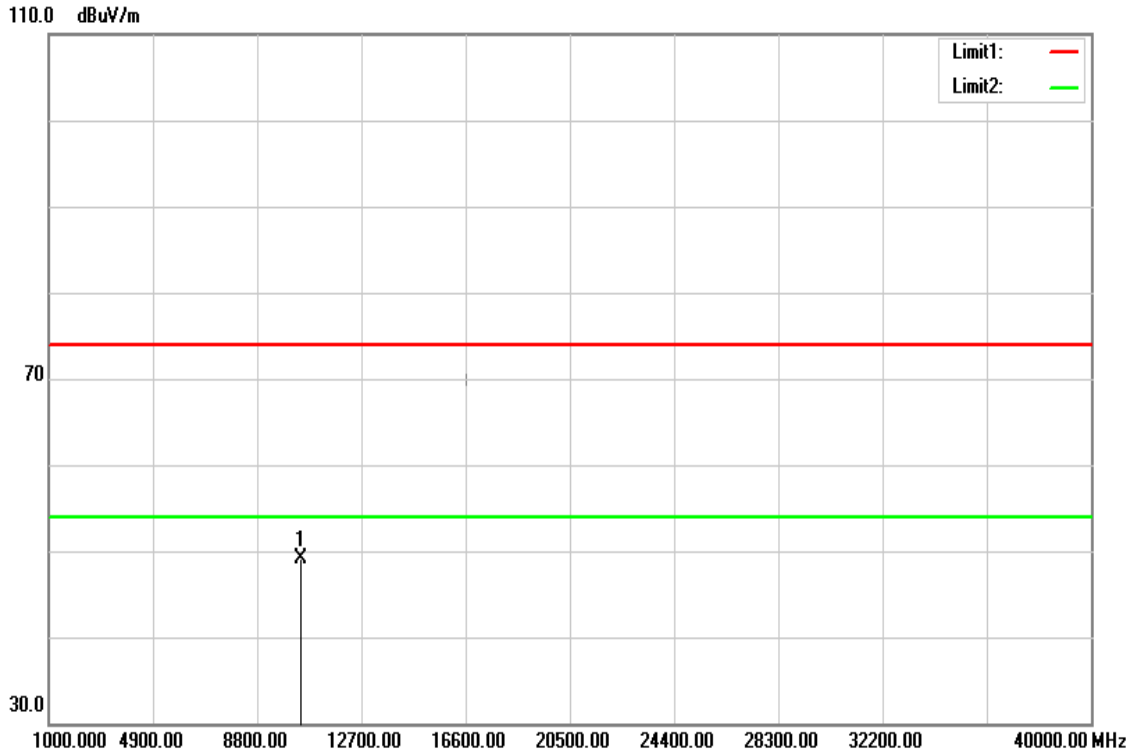


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10460.000	34.54	14.79	49.33	74.00	-24.67	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11ac VHT80 / 5210MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

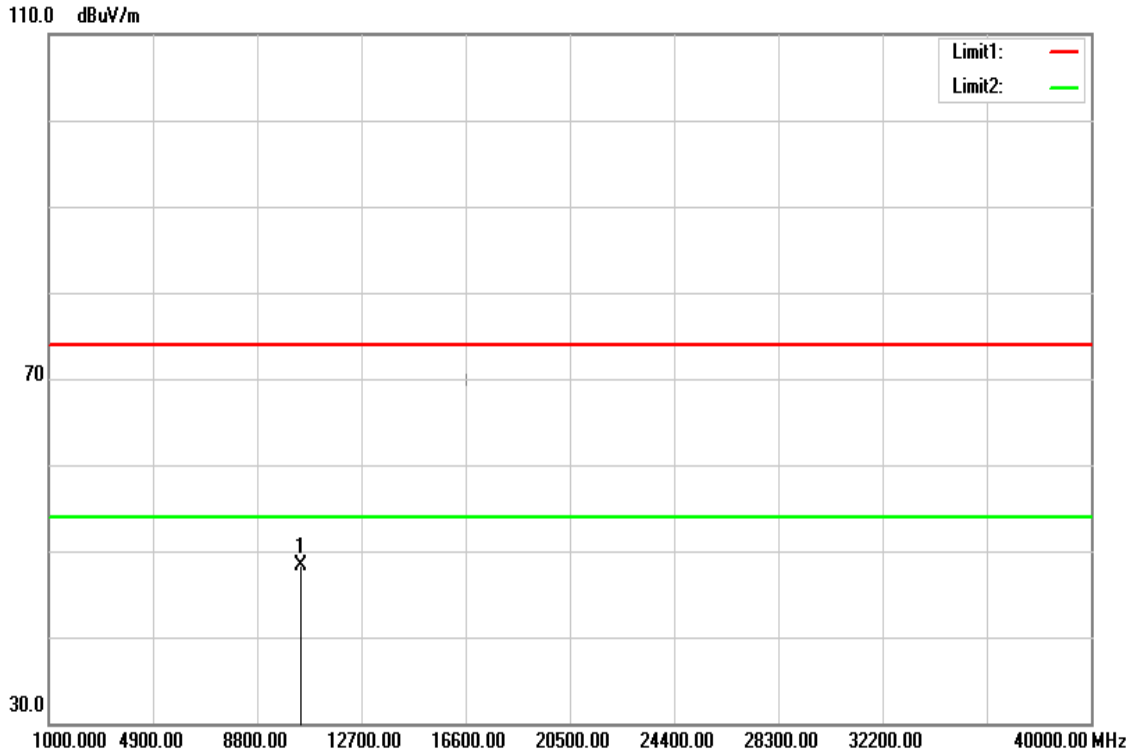


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10420.000	34.41	14.66	49.07	74.00	-24.93	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11ac VHT80 / 5210MHZ	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10420.000	33.65	14.66	48.31	74.00	-25.69	peak
N/A						

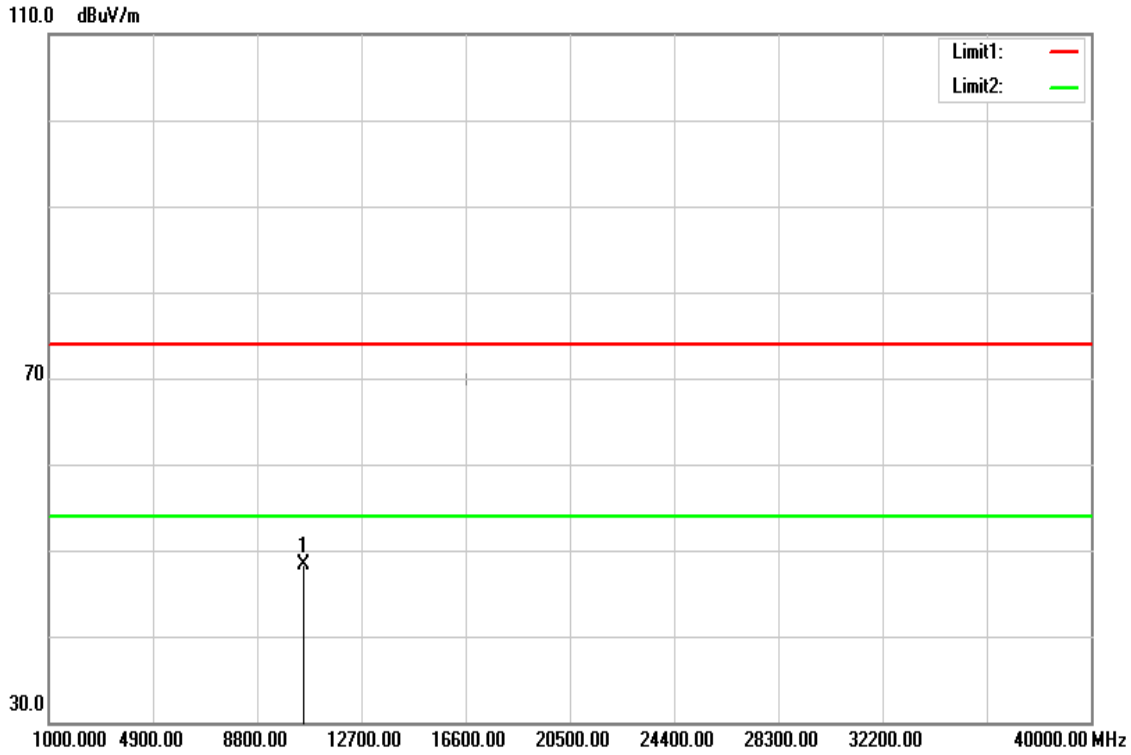
Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Report No.: T170919D06-A-RP4

Above 1G Test Data for UNII-2a

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

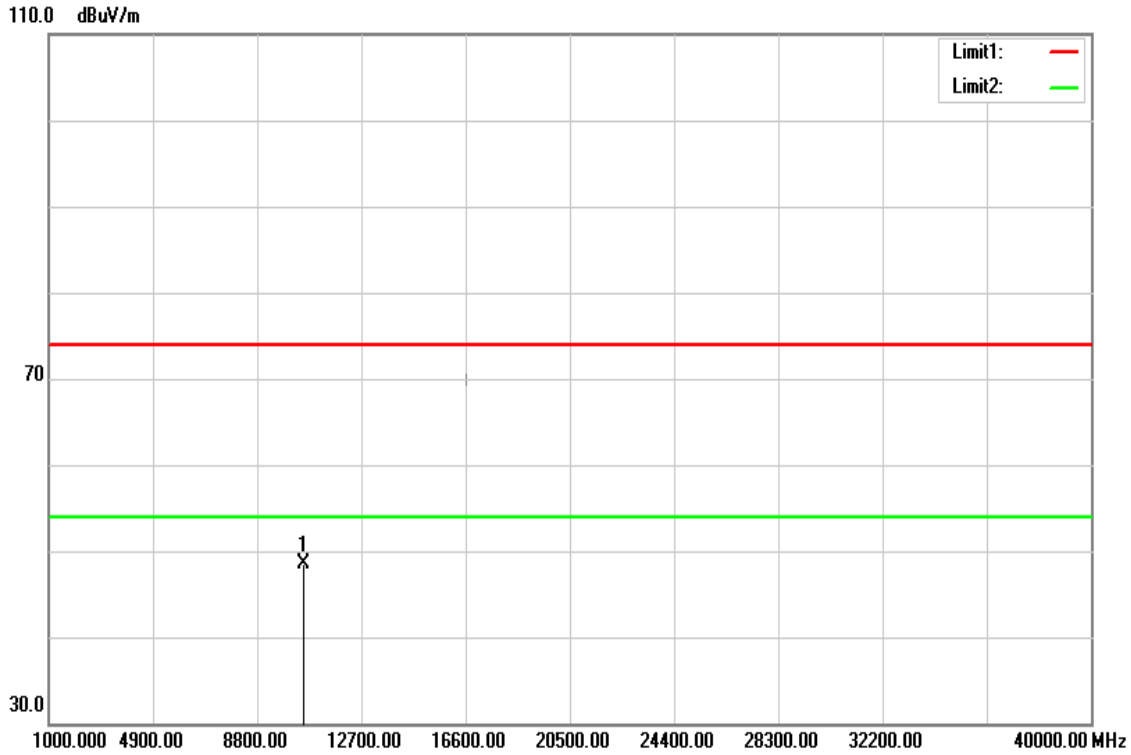


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10520.000	33.24	14.97	48.21	74.00	-25.79	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

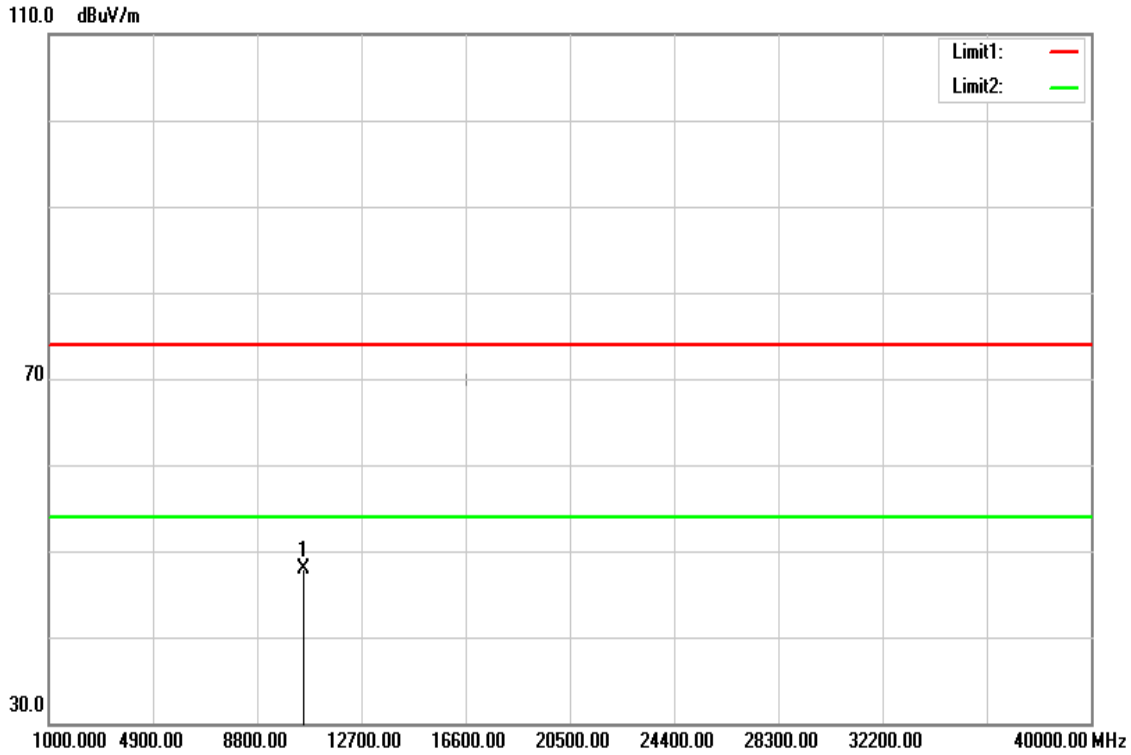


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10520.000	33.50	14.97	48.47	74.00	-25.53	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5280 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

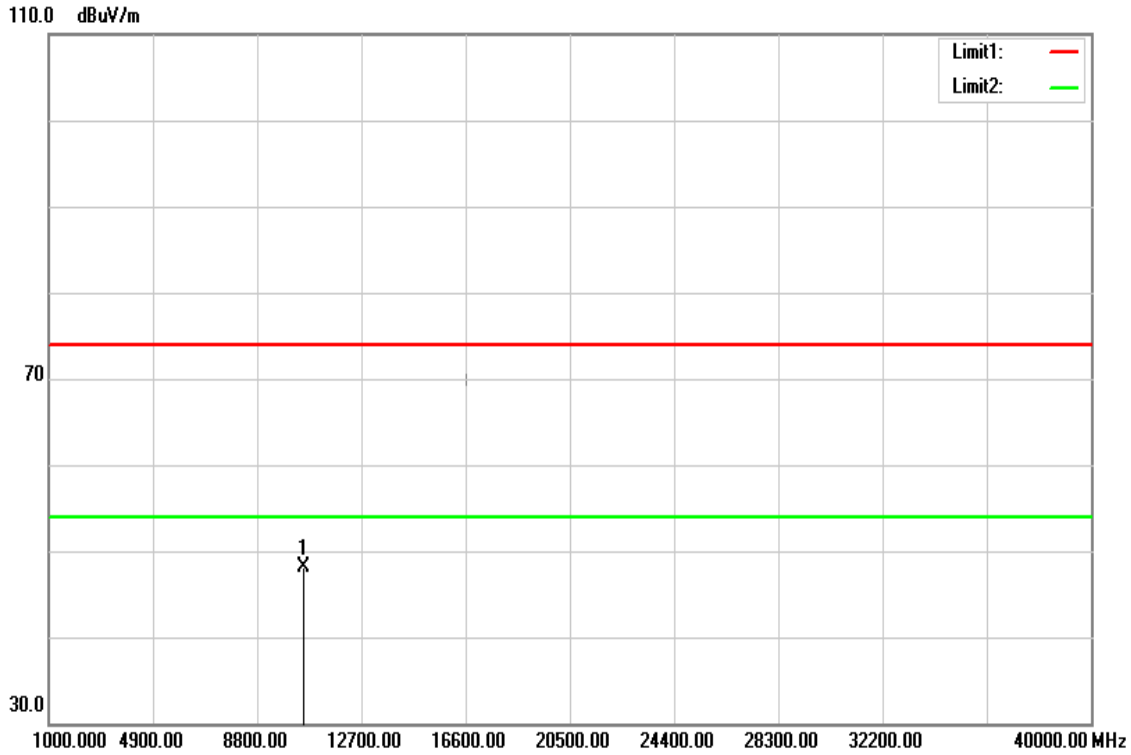


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10560.000	32.89	15.06	47.95	74.00	-26.05	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5280 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

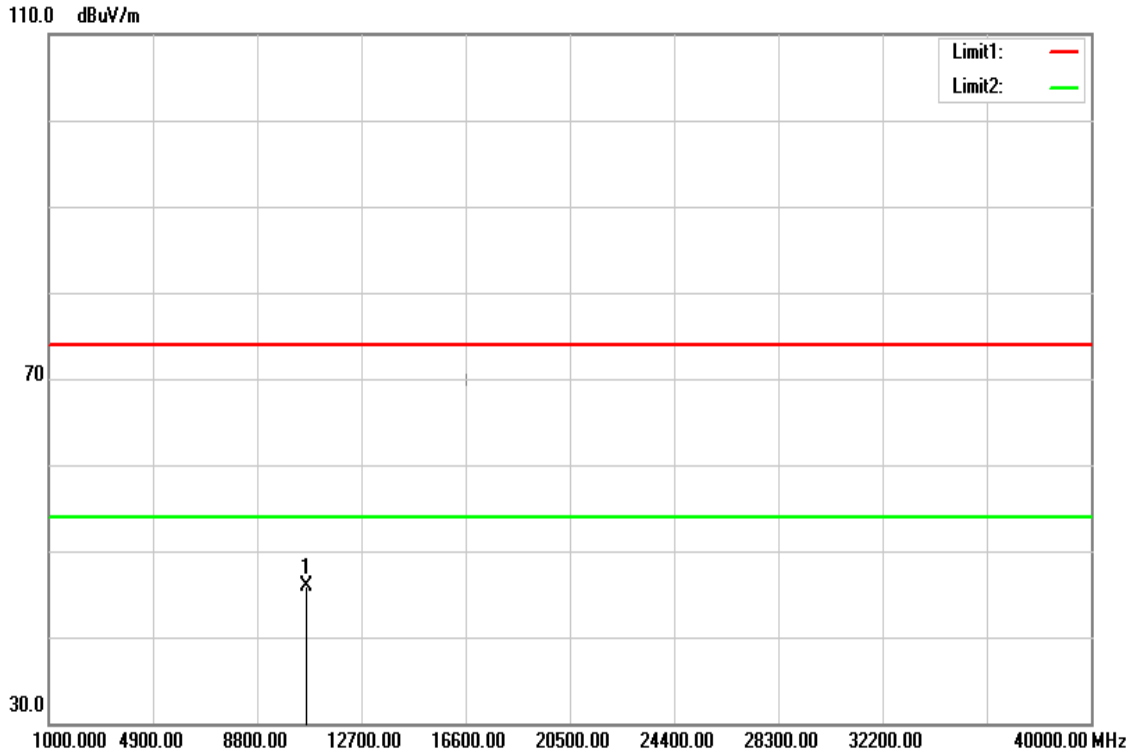


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10560.000	33.11	15.06	48.17	74.00	-25.83	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5320 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

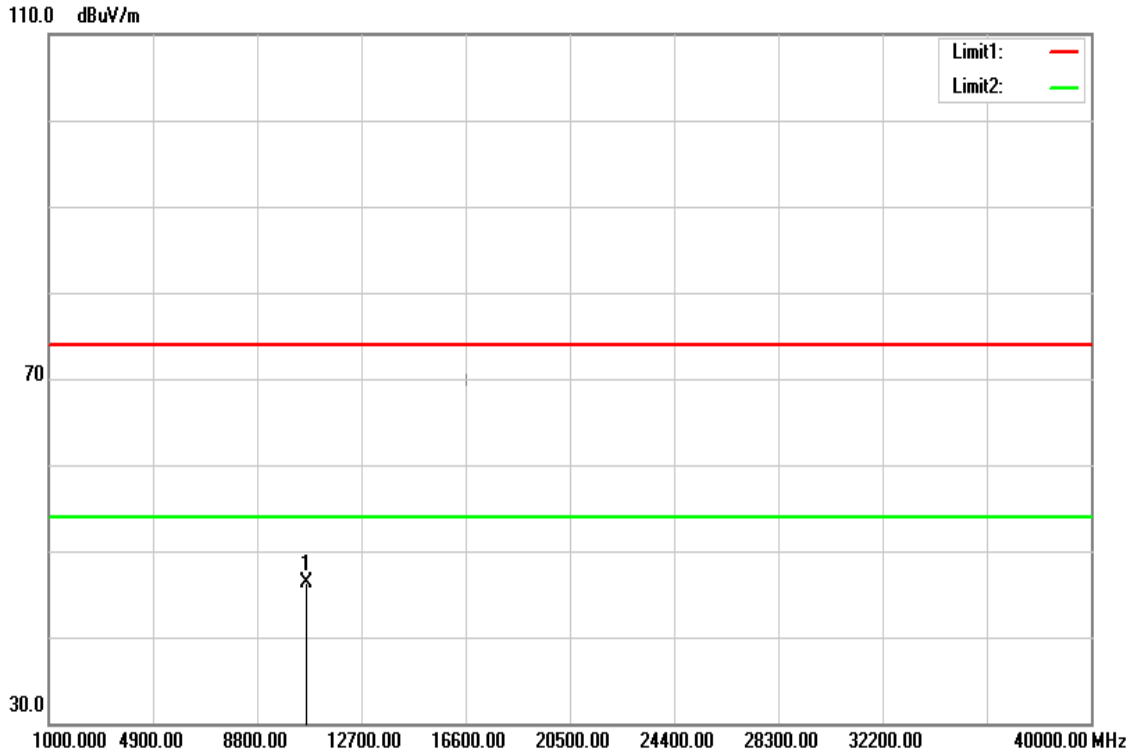


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10640.000	30.72	15.23	45.95	74.00	-28.05	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5320 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

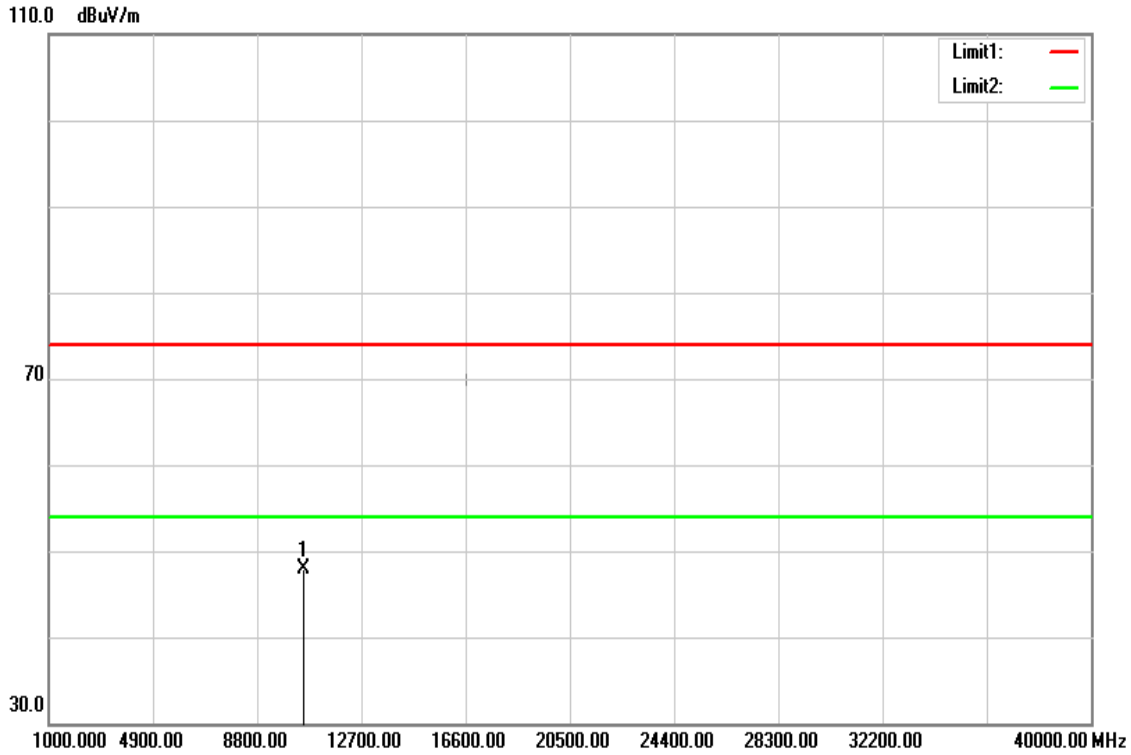


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10640.000	31.10	15.23	46.33	74.00	-27.67	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5260 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

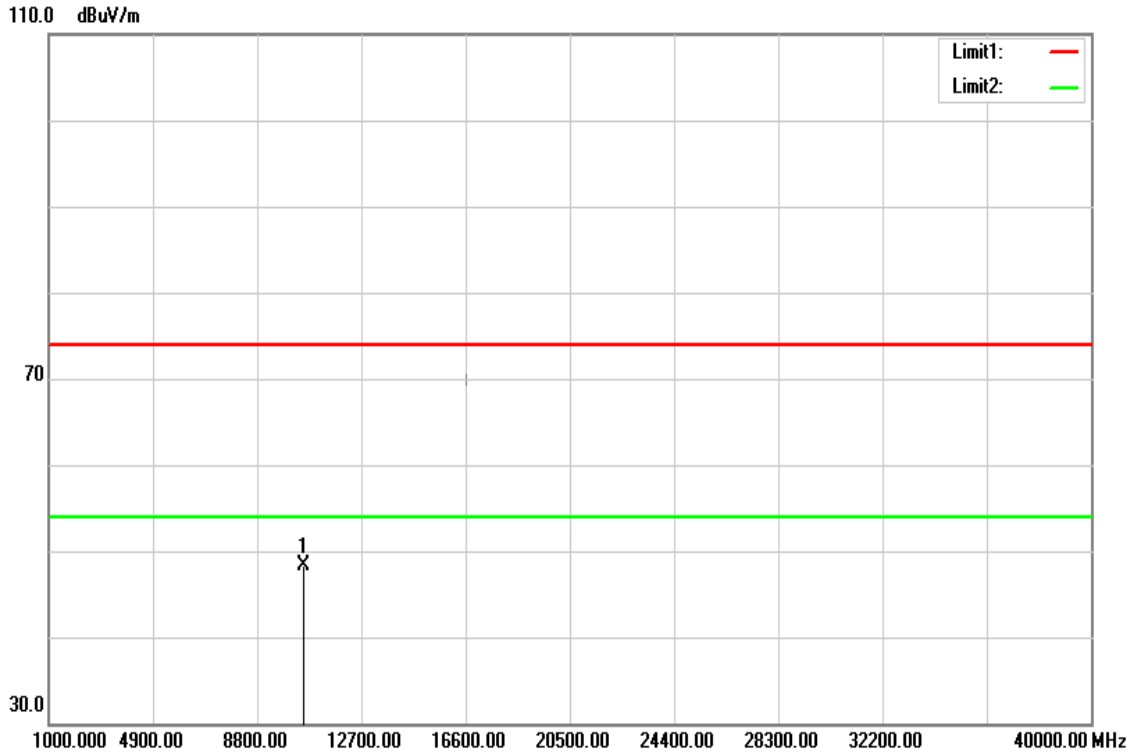


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10520.000	32.96	14.97	47.93	74.00	-26.07	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5260 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

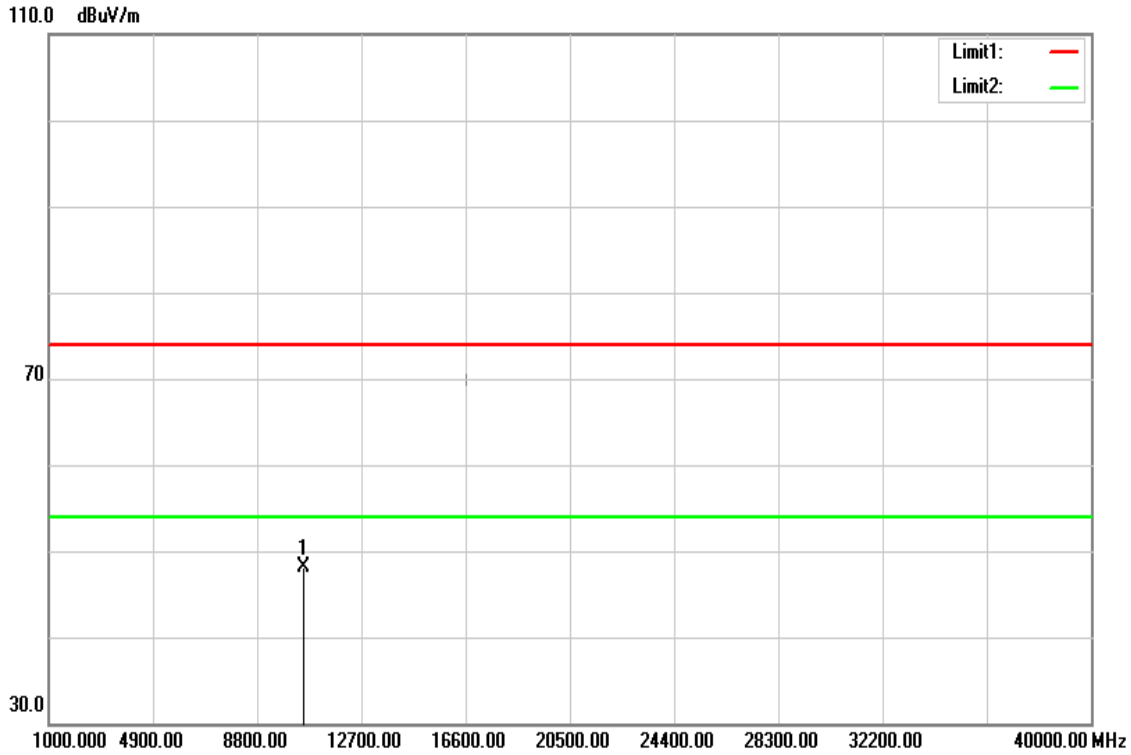


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10520.000	33.43	14.97	48.40	74.00	-25.60	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5280 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

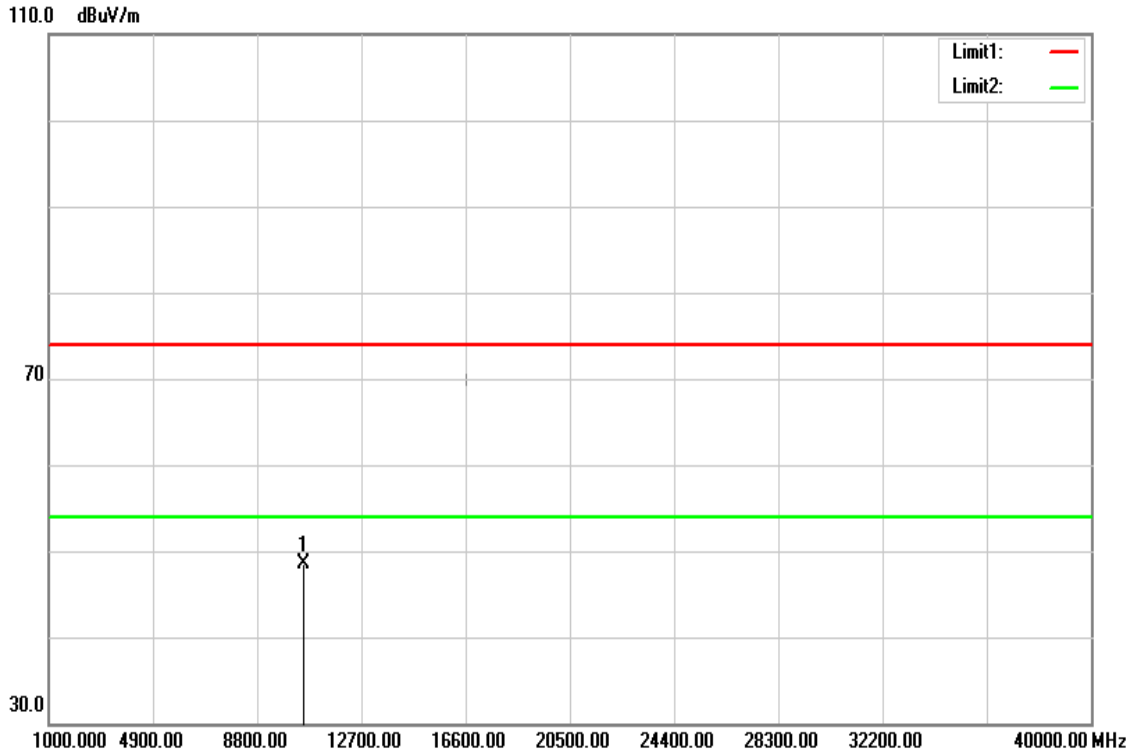


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10560.000	33.04	15.06	48.10	74.00	-25.90	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5280 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

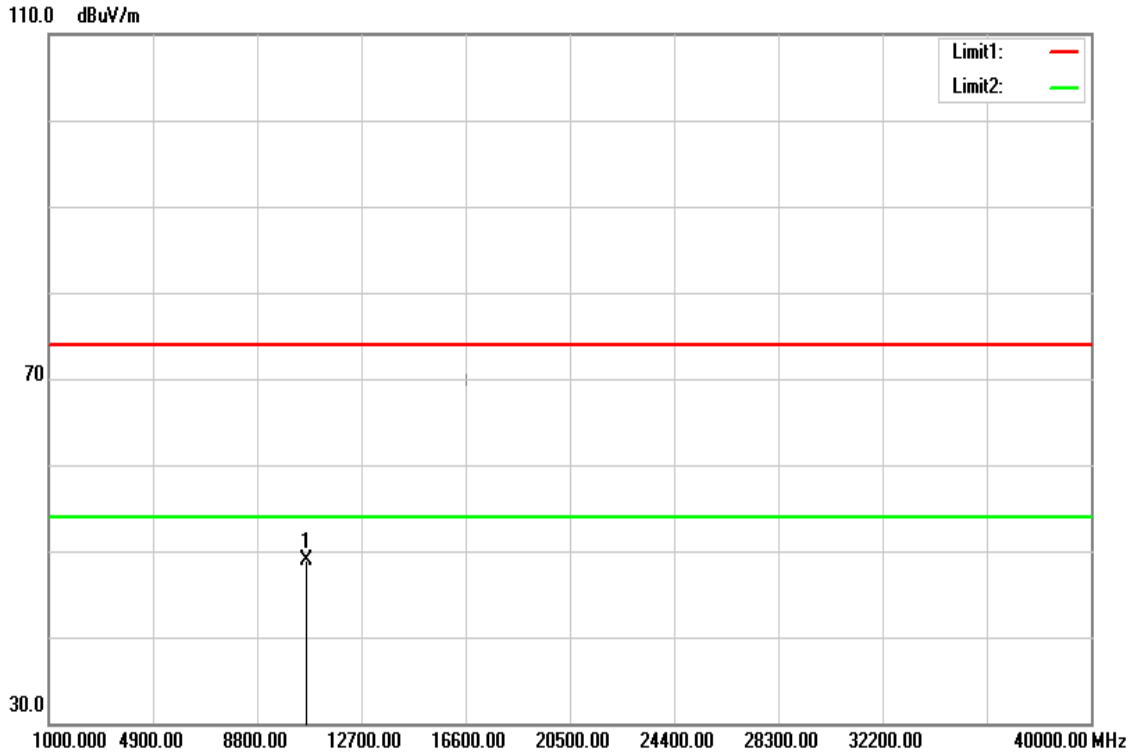


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10560.000	33.43	15.06	48.49	74.00	-25.51	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5320 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

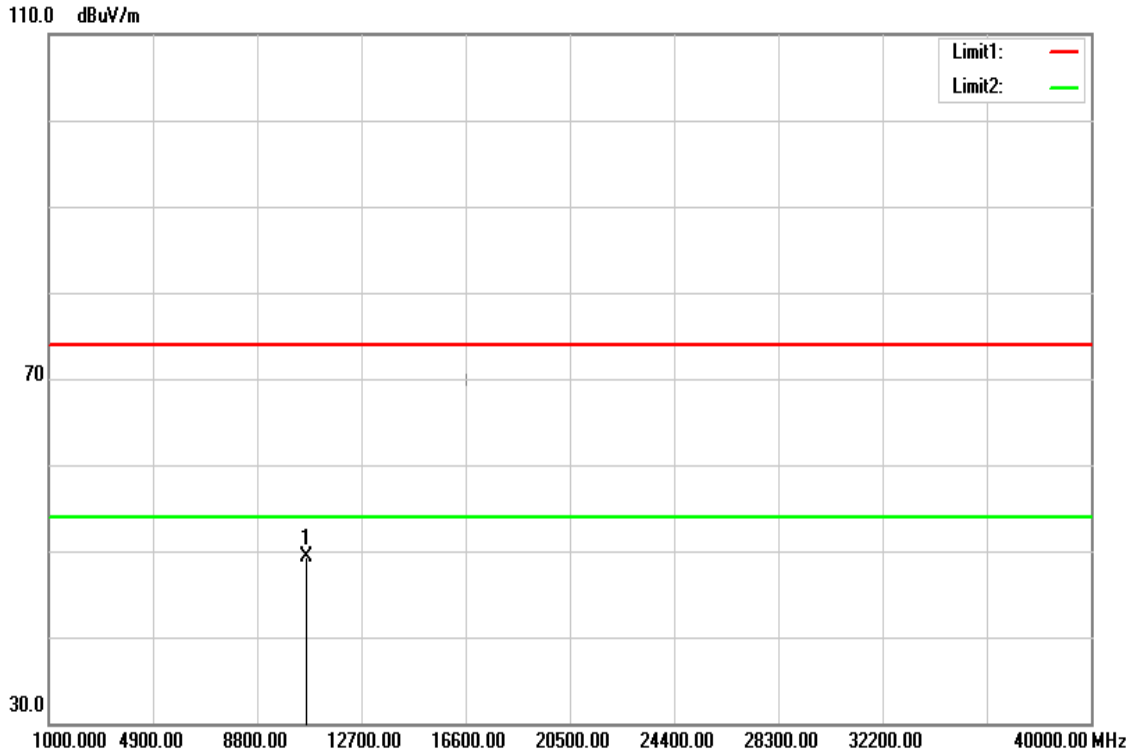


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10640.000	33.69	15.23	48.92	74.00	-25.08	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5320 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

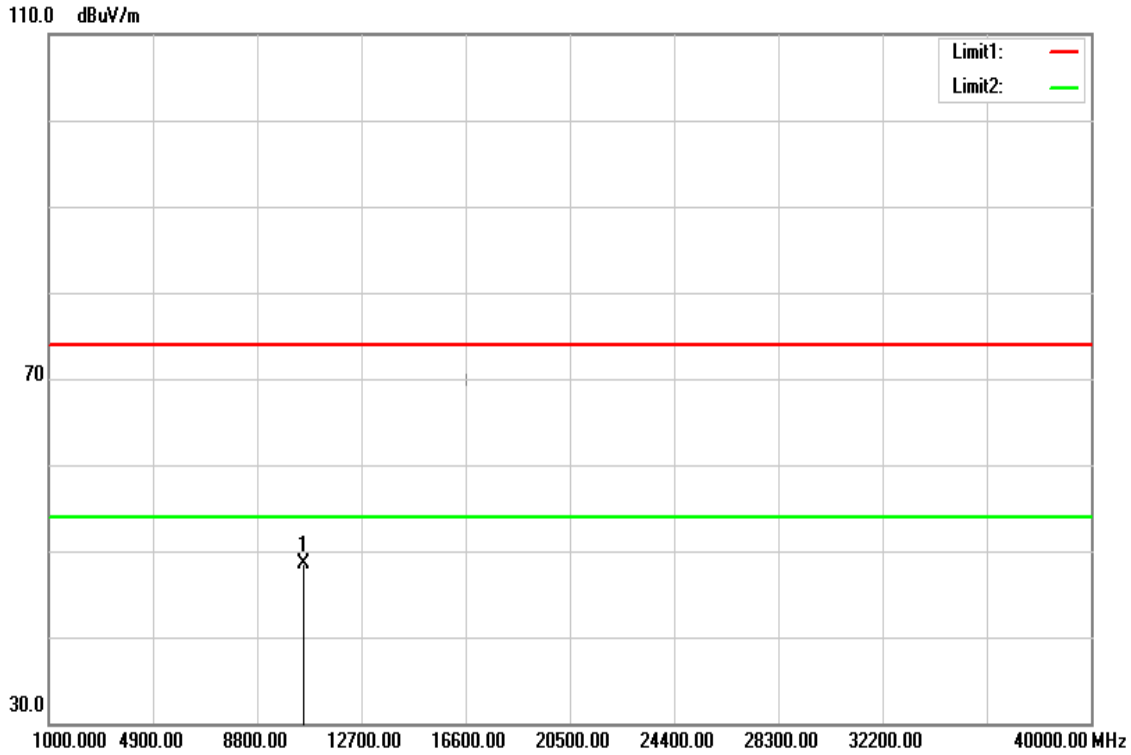


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10640.000	34.00	15.23	49.23	74.00	-24.77	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5270 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

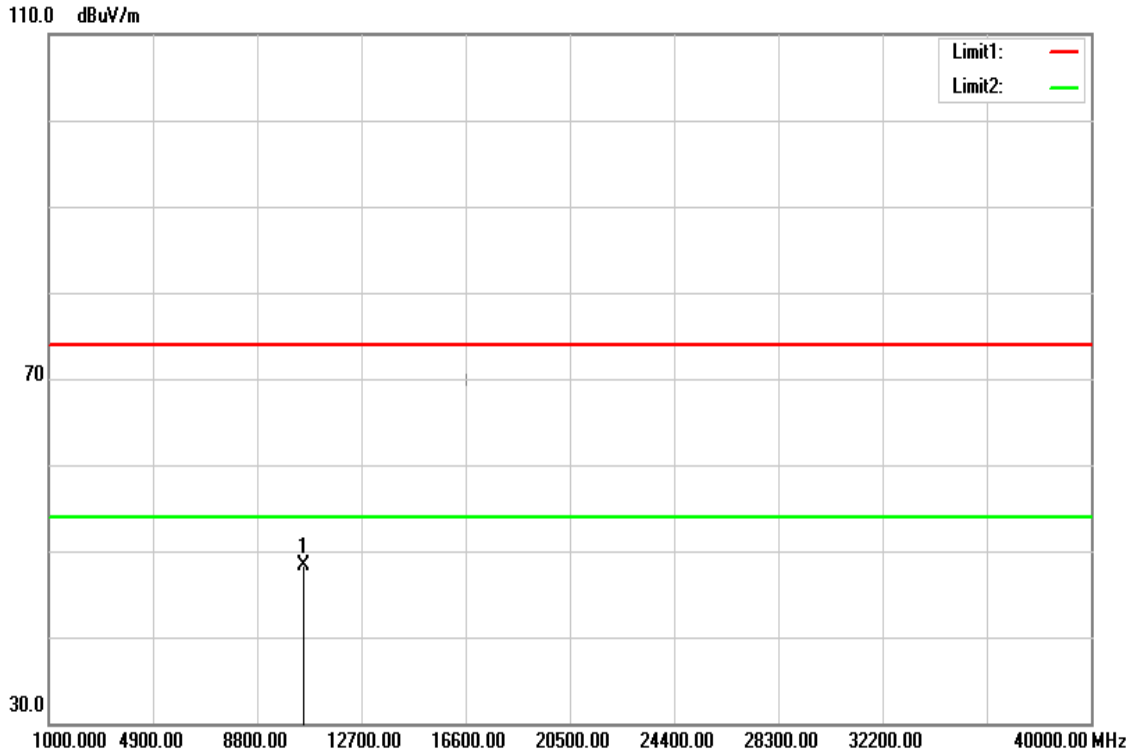


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10540.000	33.47	15.01	48.48	74.00	-25.52	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5270 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

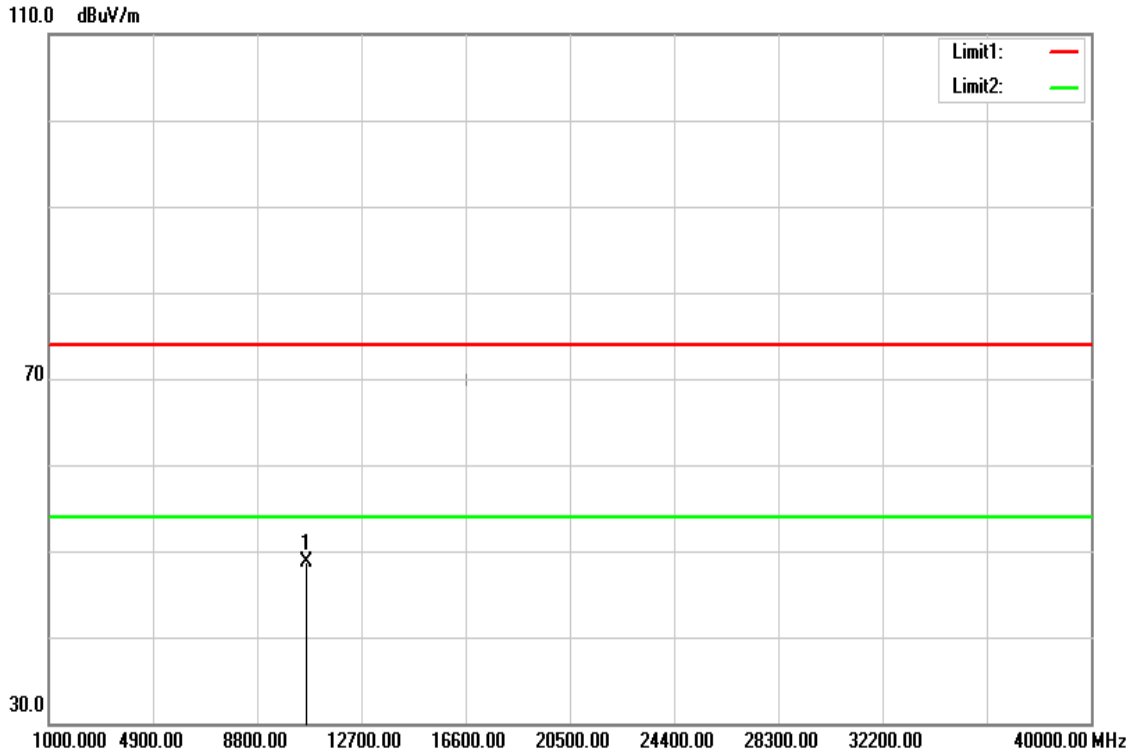


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10540.000	33.23	15.01	48.24	74.00	-25.76	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5310 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

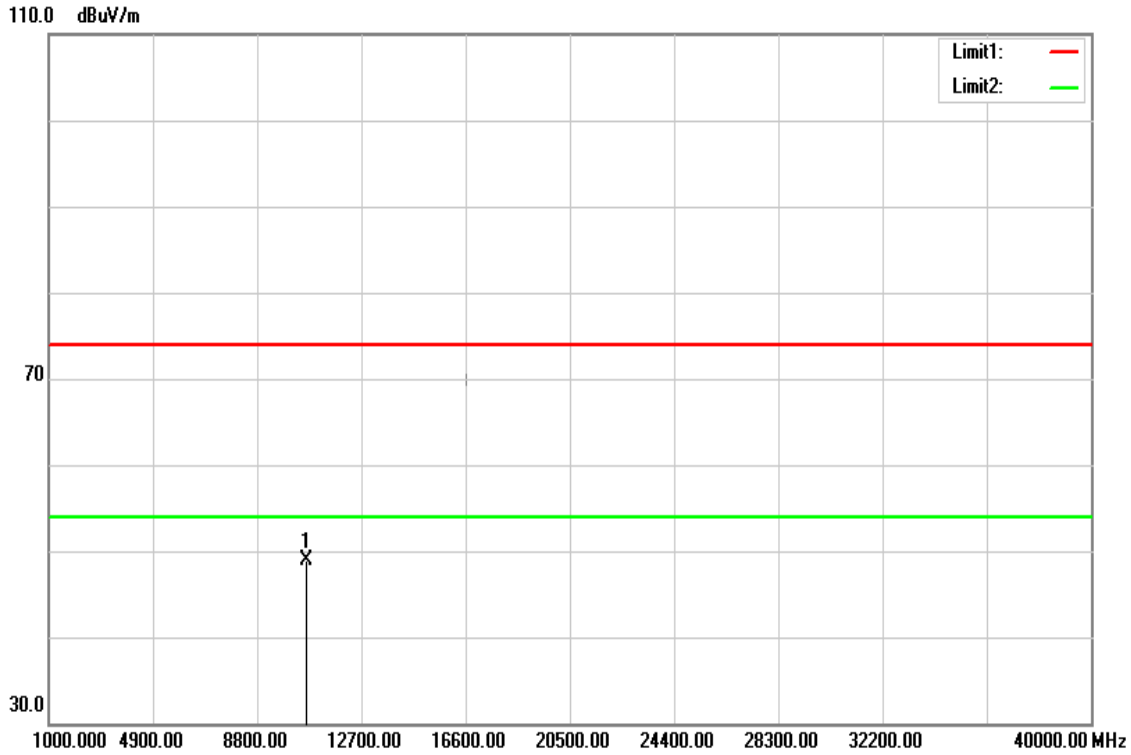


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10620.000	33.56	15.20	48.76	74.00	-25.24	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5310 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

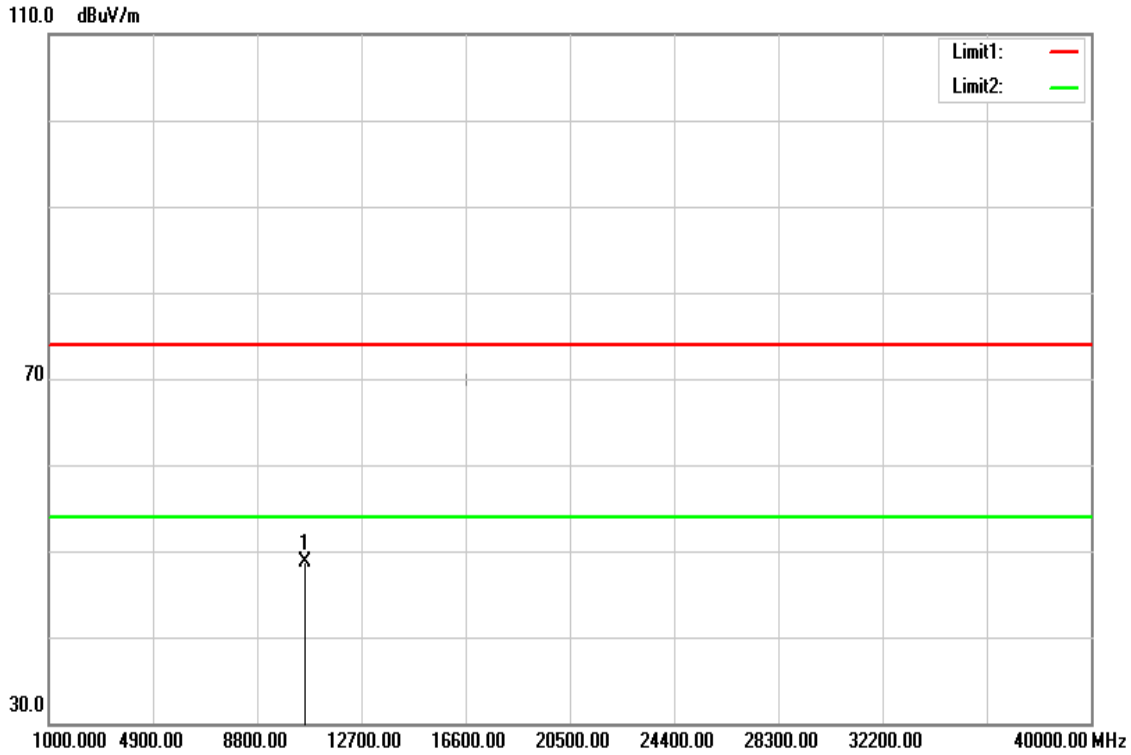


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10620.000	33.79	15.20	48.99	74.00	-25.01	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11ac VHT80 / 5290 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

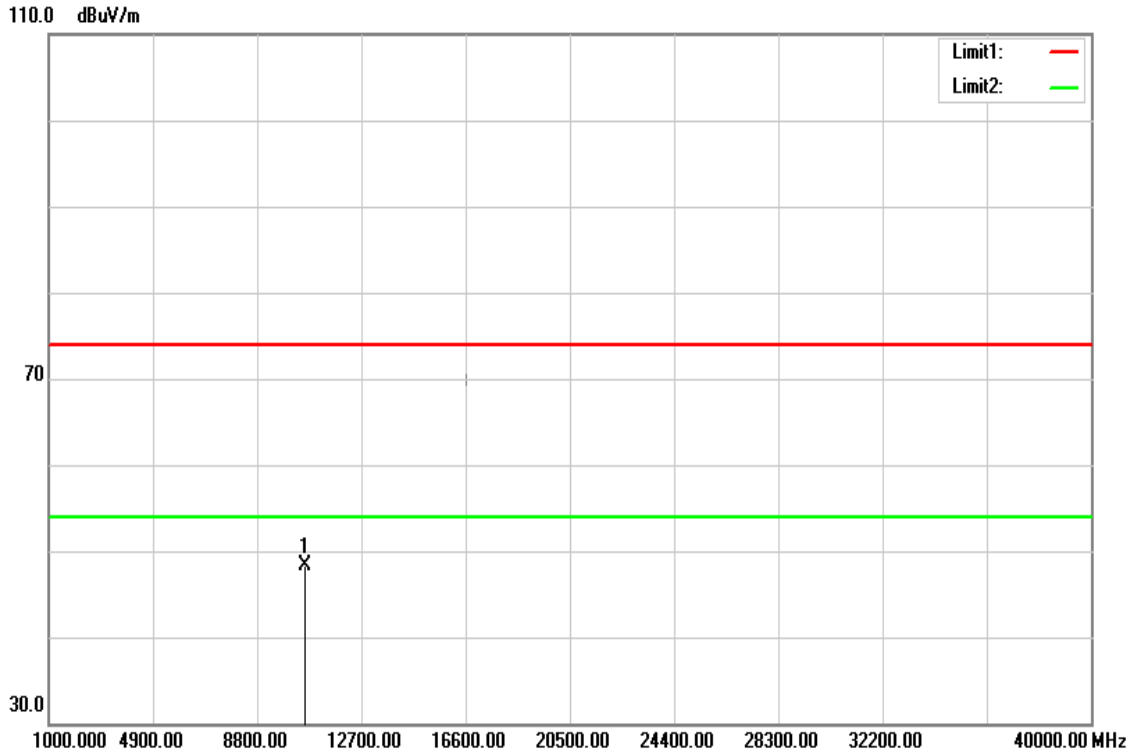


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10580.000	33.60	15.10	48.70	74.00	-25.30	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11ac VHT80 / 5290 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



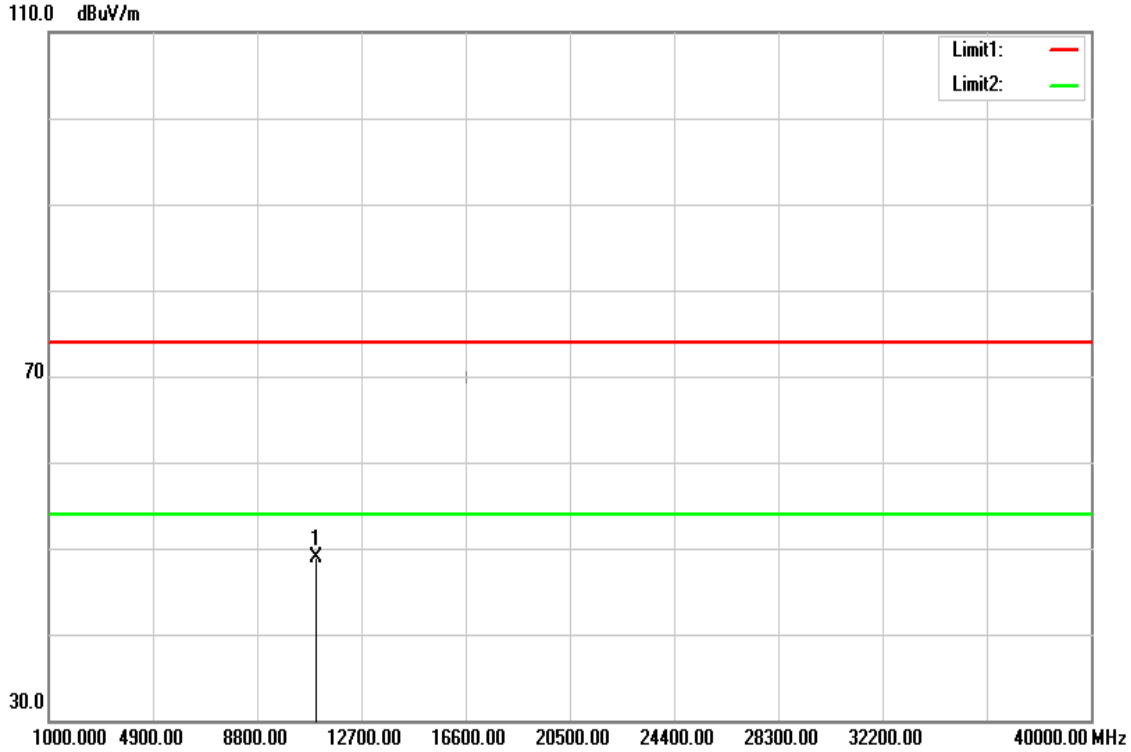
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10580.000	33.27	15.10	48.37	74.00	-25.63	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Above 1G Test Data for UNII-2c

Test Mode	IEEE 802.11a / 5500 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

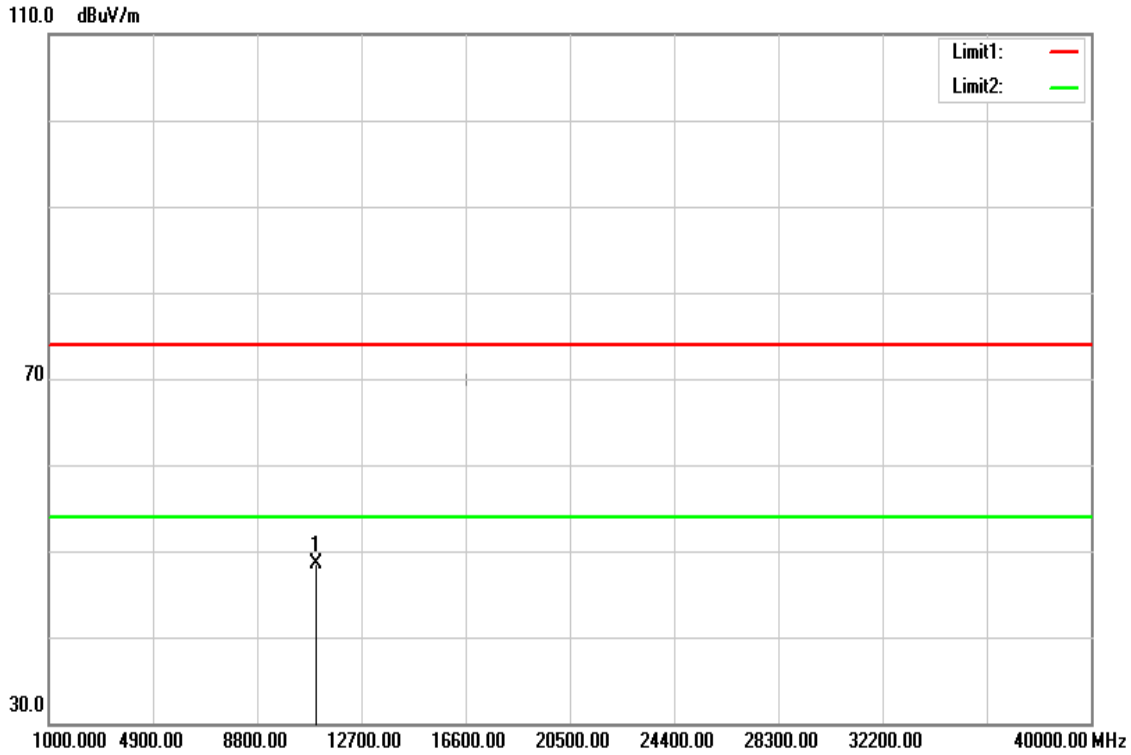


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11000.000	32.79	16.06	48.85	74.00	-25.15	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5500 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

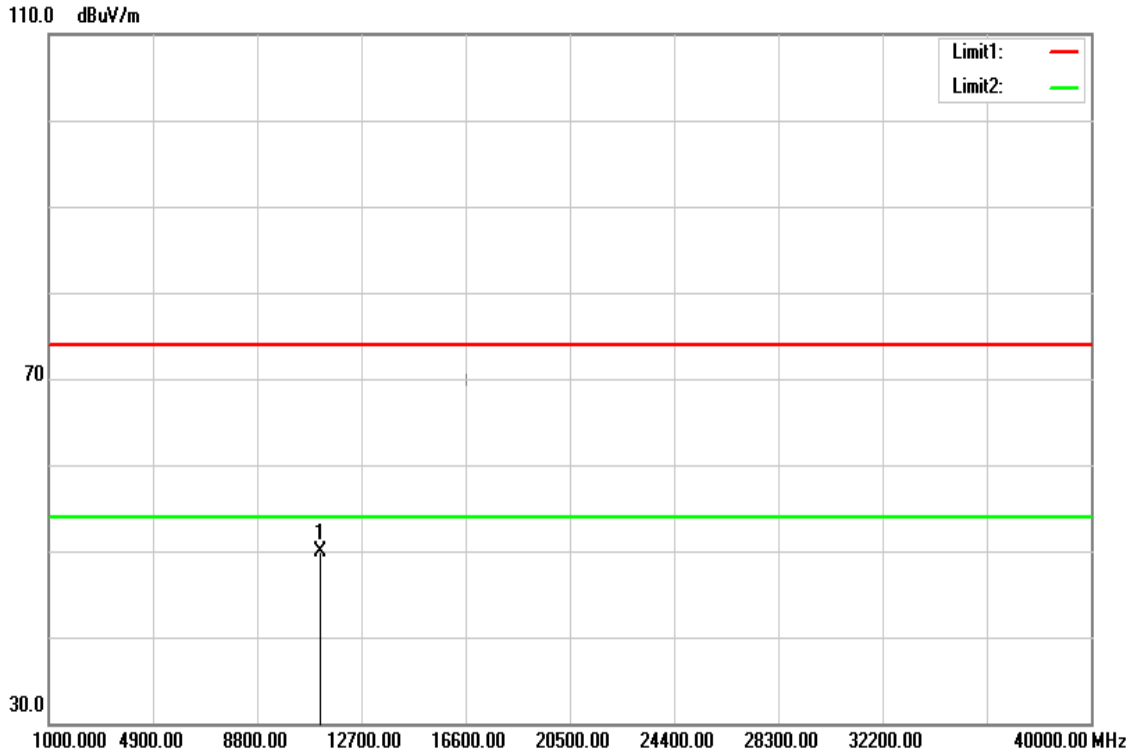


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11000.000	32.45	16.06	48.51	74.00	-25.49	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5580 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

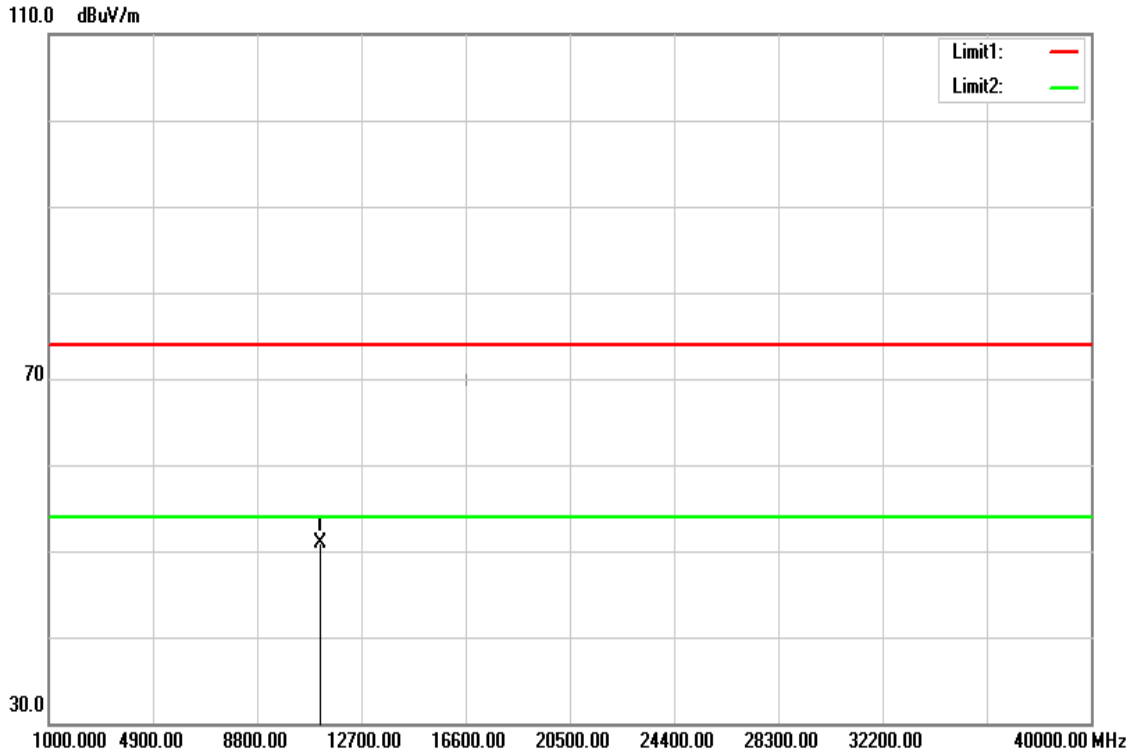


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11160.000	33.81	16.07	49.88	74.00	-24.12	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5580 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

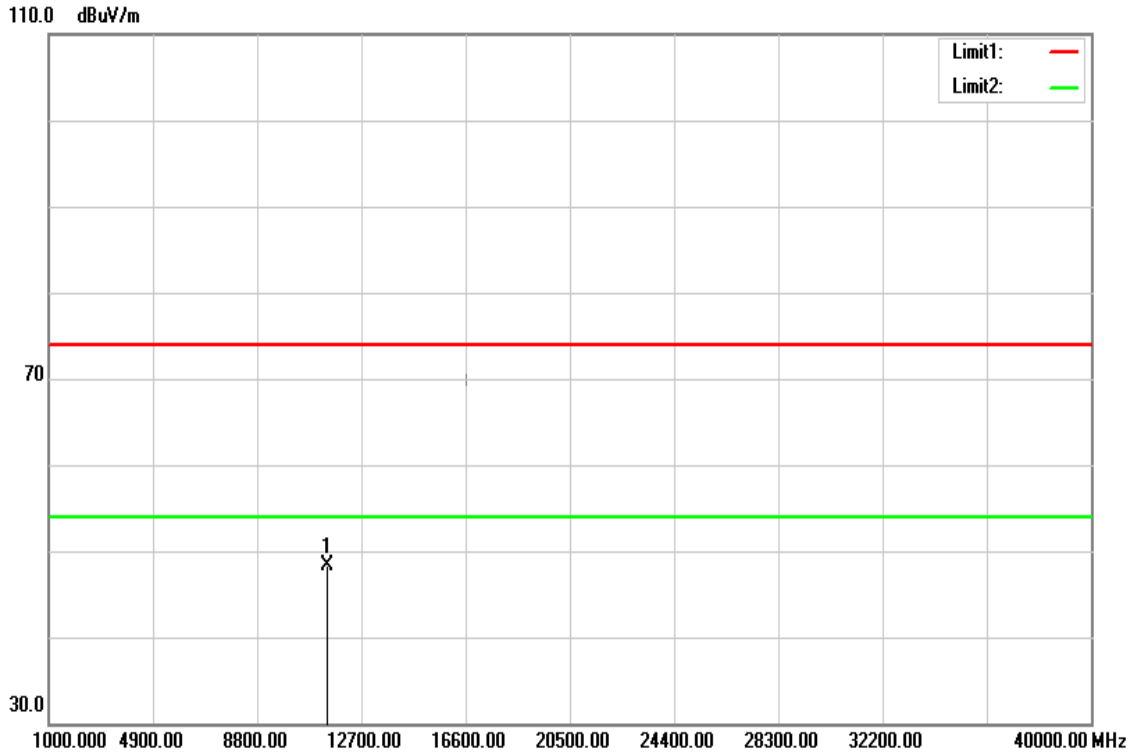


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11160.000	34.88	16.07	50.95	74.00	-23.05	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

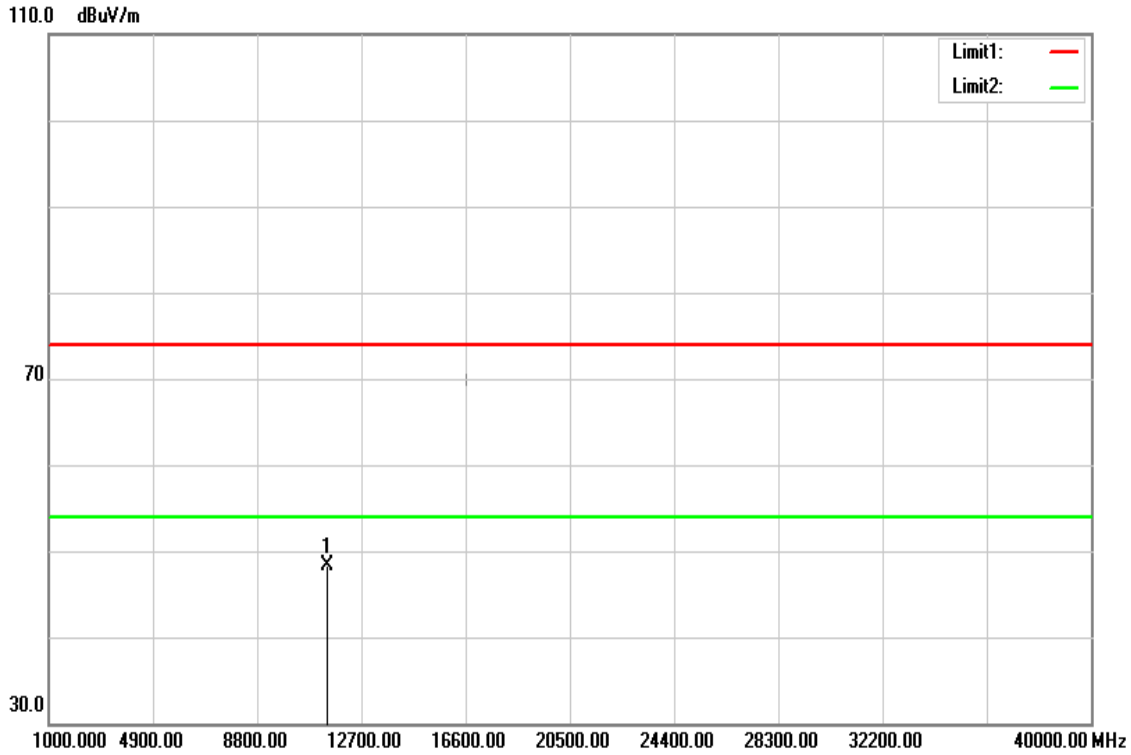


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11400.000	32.32	16.08	48.40	74.00	-25.60	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

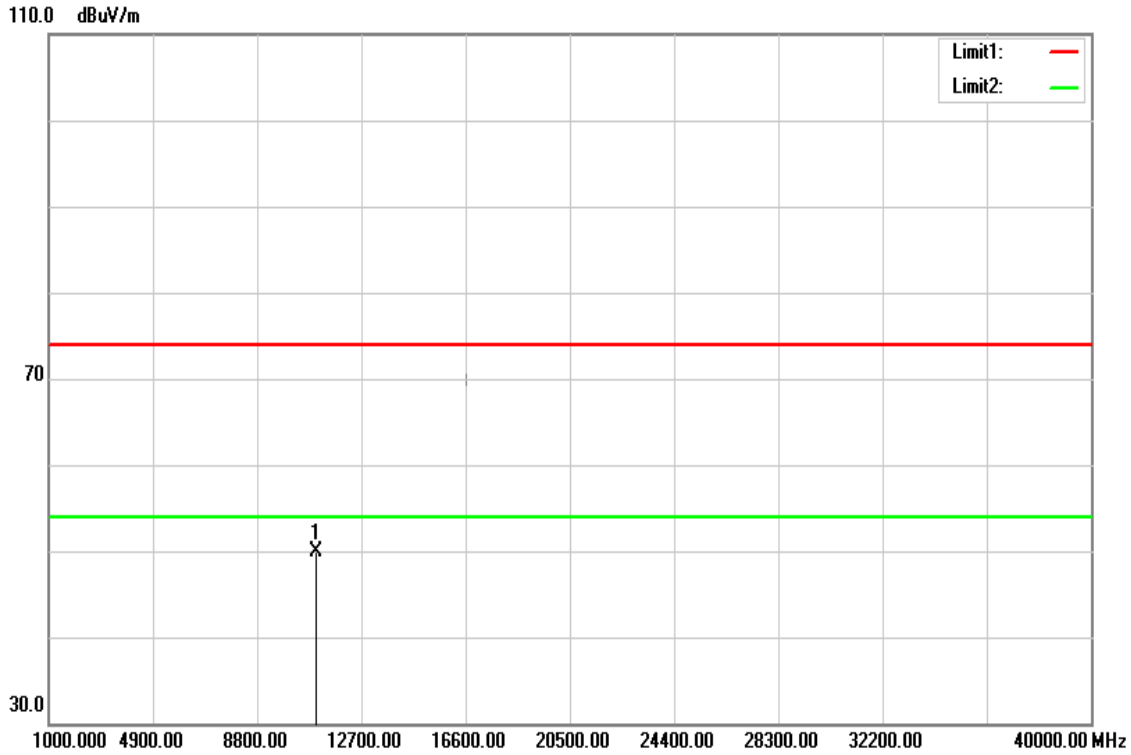


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11400.000	32.32	16.08	48.40	74.00	-25.60	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5500 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

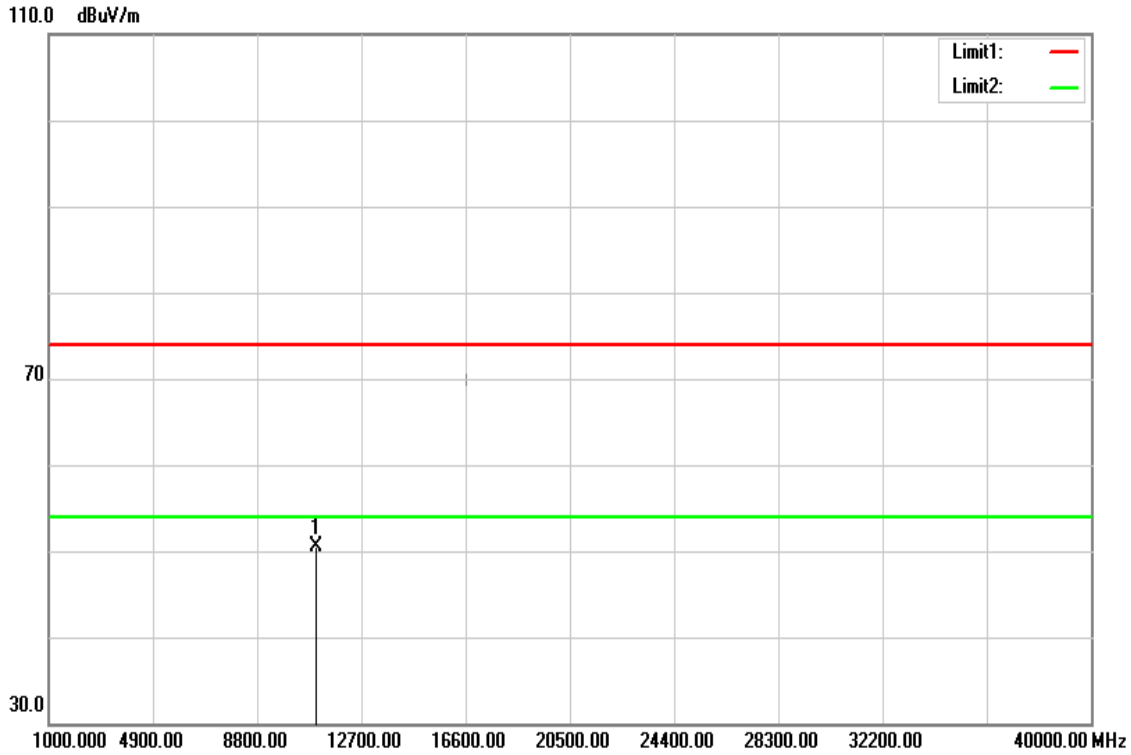


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11000.000	33.83	16.06	49.89	74.00	-24.11	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5500 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

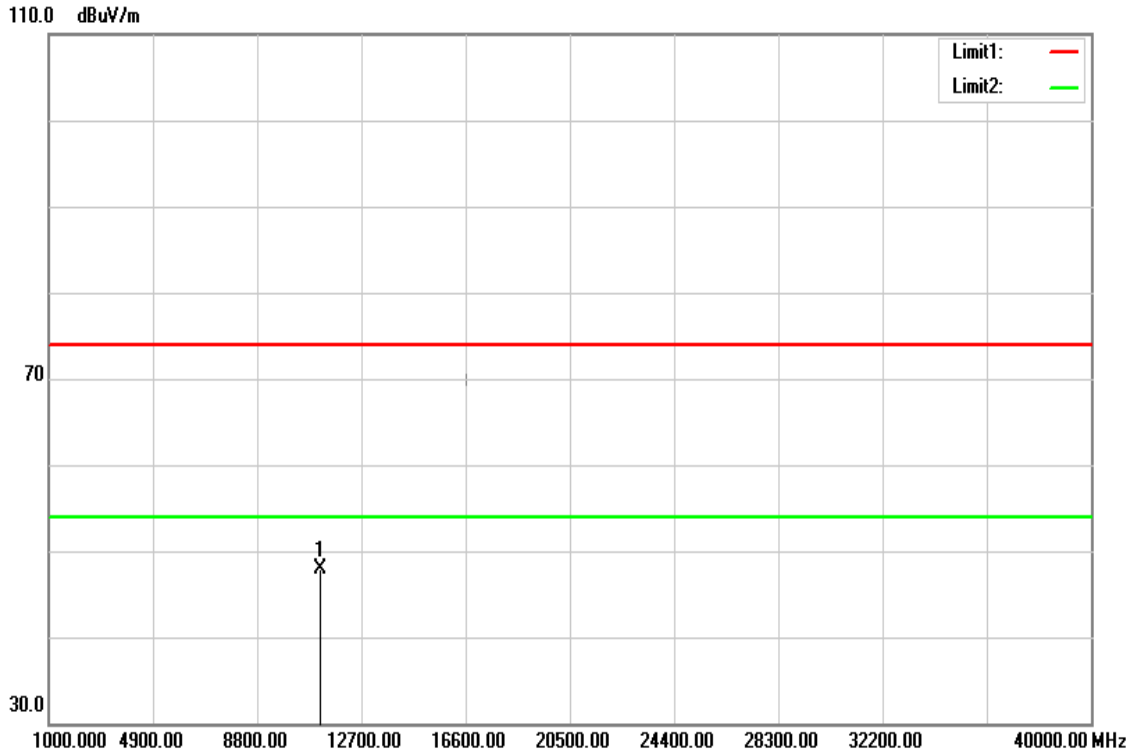


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11000.000	34.42	16.06	50.48	74.00	-23.52	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5580 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

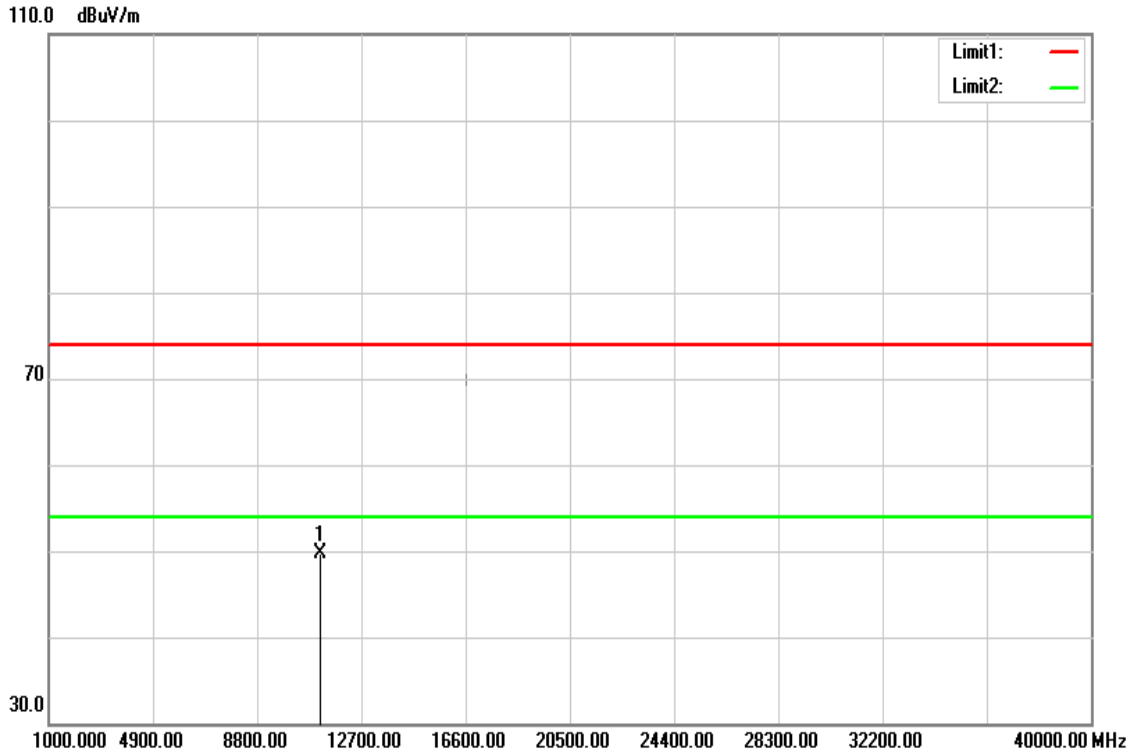


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11160.000	31.76	16.07	47.83	74.00	-26.17	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5580 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

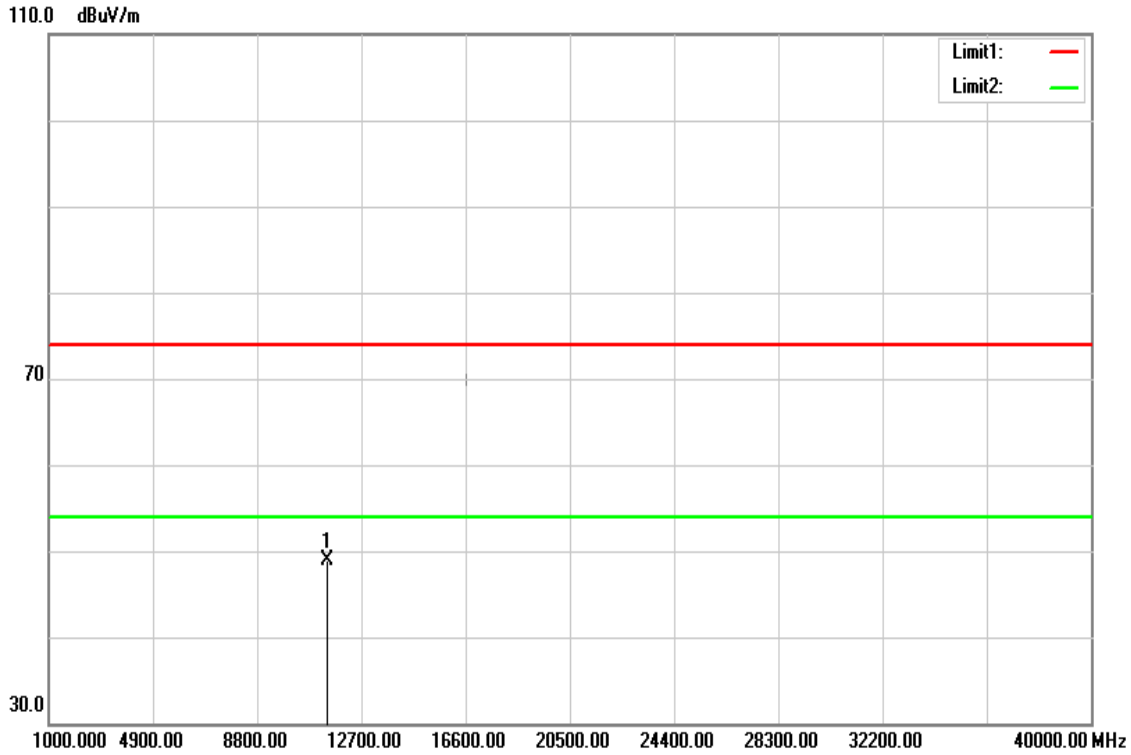


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11160.000	33.70	16.07	49.77	74.00	-24.23	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5700 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

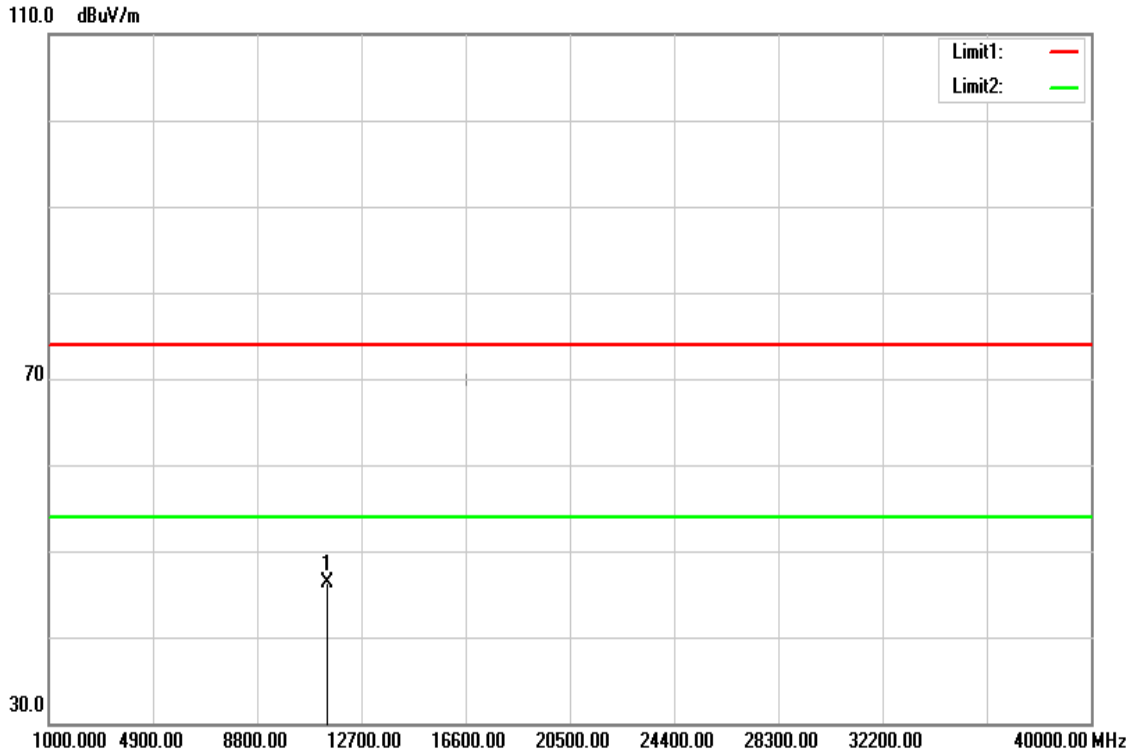


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11400.000	32.92	16.08	49.00	74.00	-25.00	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5700 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

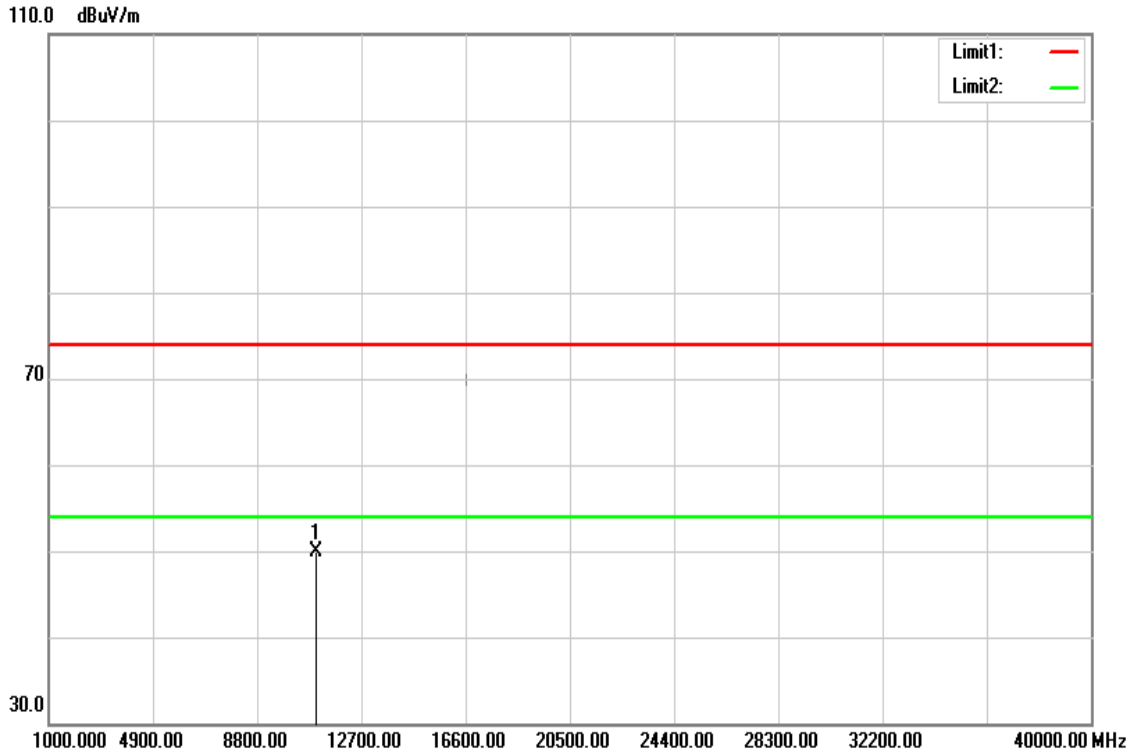


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11400.000	30.20	16.08	46.28	74.00	-27.72	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5510 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

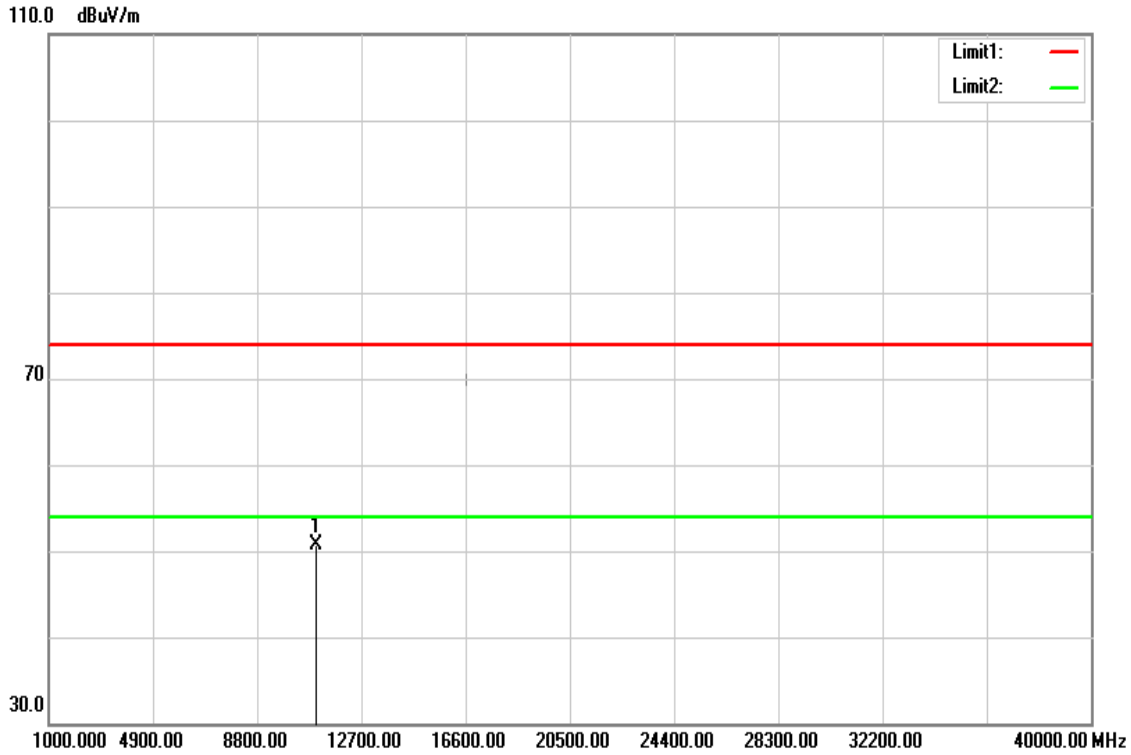


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11020.000	33.91	16.05	49.96	74.00	-24.04	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5510 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

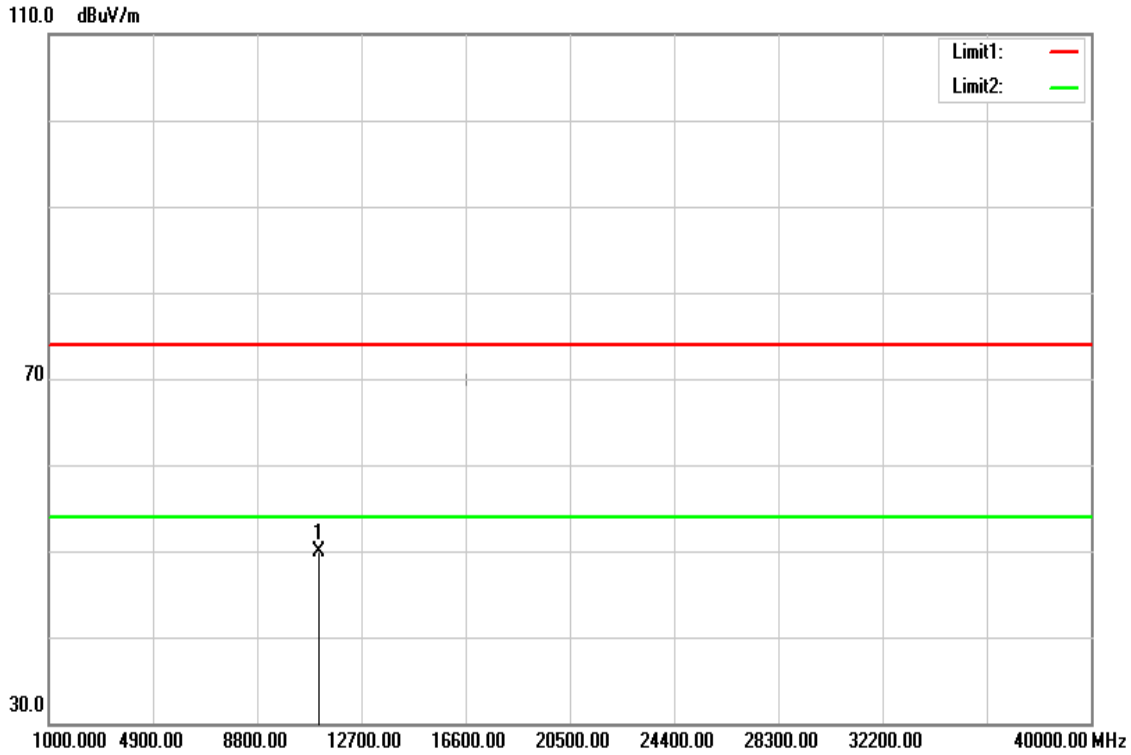


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11020.000	34.70	16.05	50.75	74.00	-23.25	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5550 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

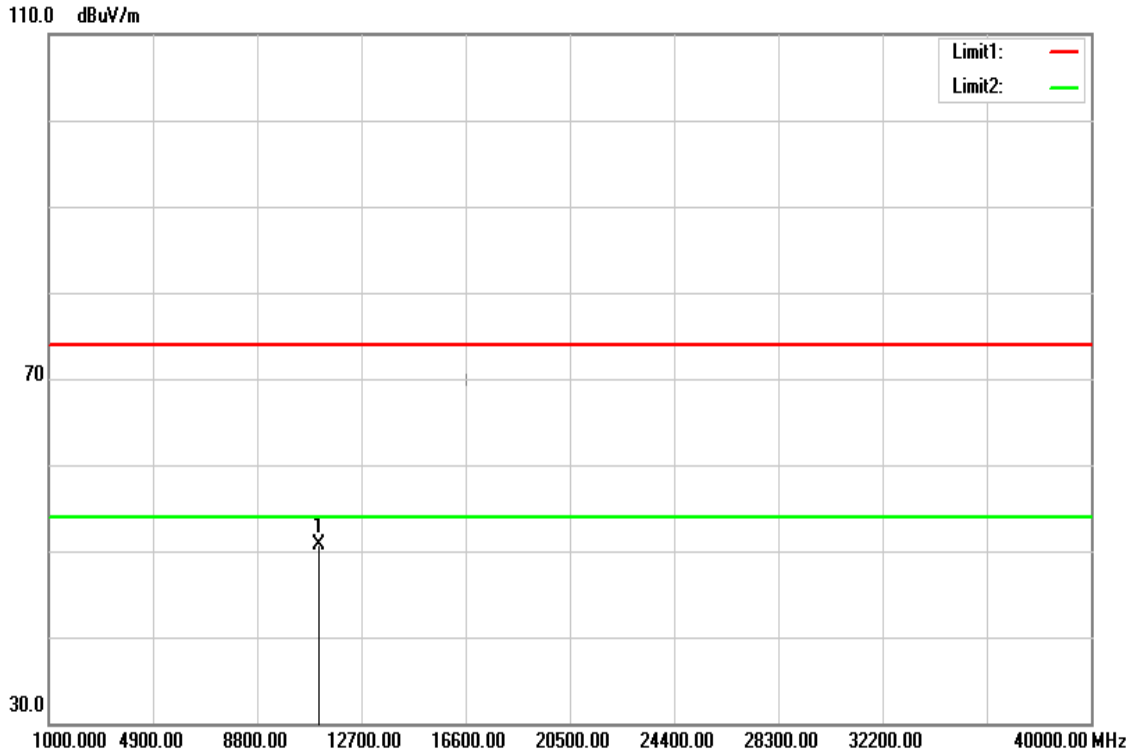


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11100.000	33.88	16.07	49.95	74.00	-24.05	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5550 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

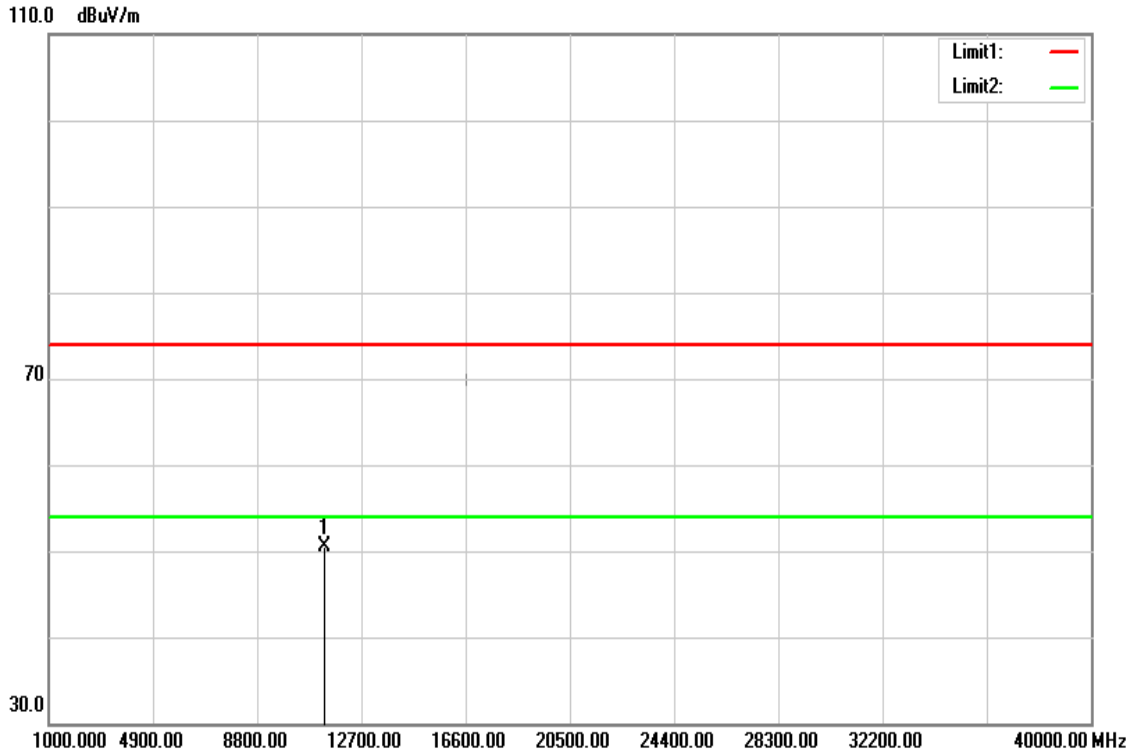


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11100.000	34.62	16.07	50.69	74.00	-23.31	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5670 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

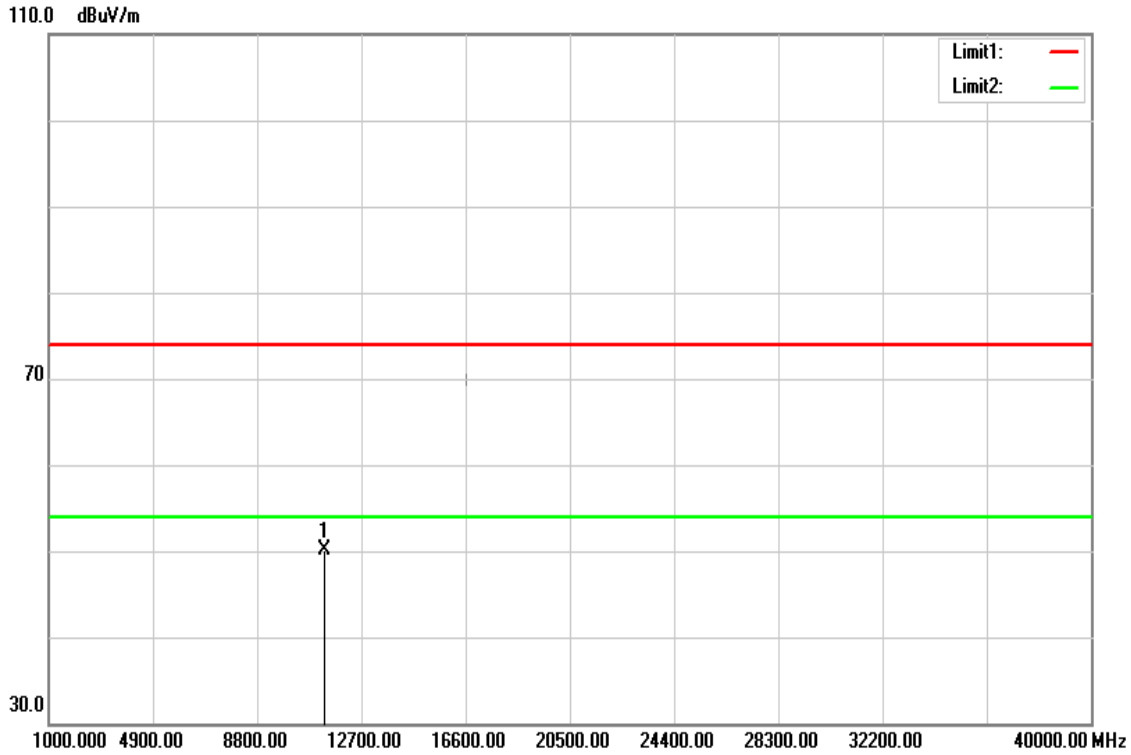


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11340.000	34.33	16.08	50.41	74.00	-23.59	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40 / 5670 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

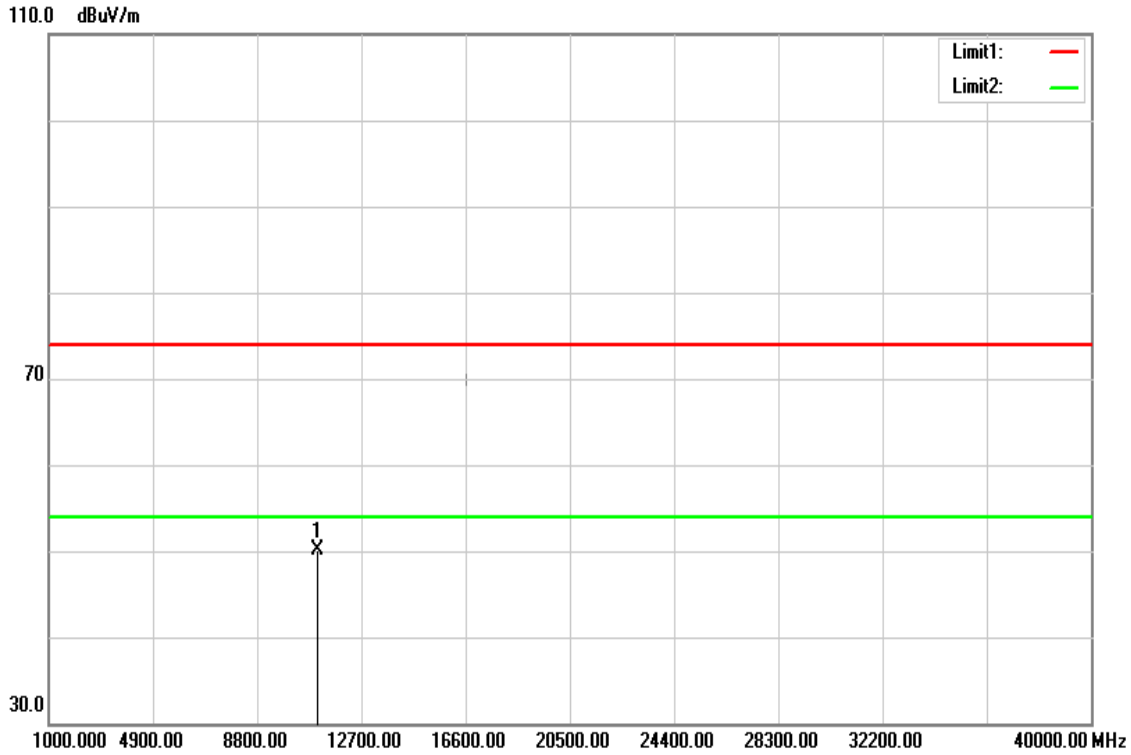


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11340.000	34.09	16.08	50.17	74.00	-23.83	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11ac VHT80 / 5530 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

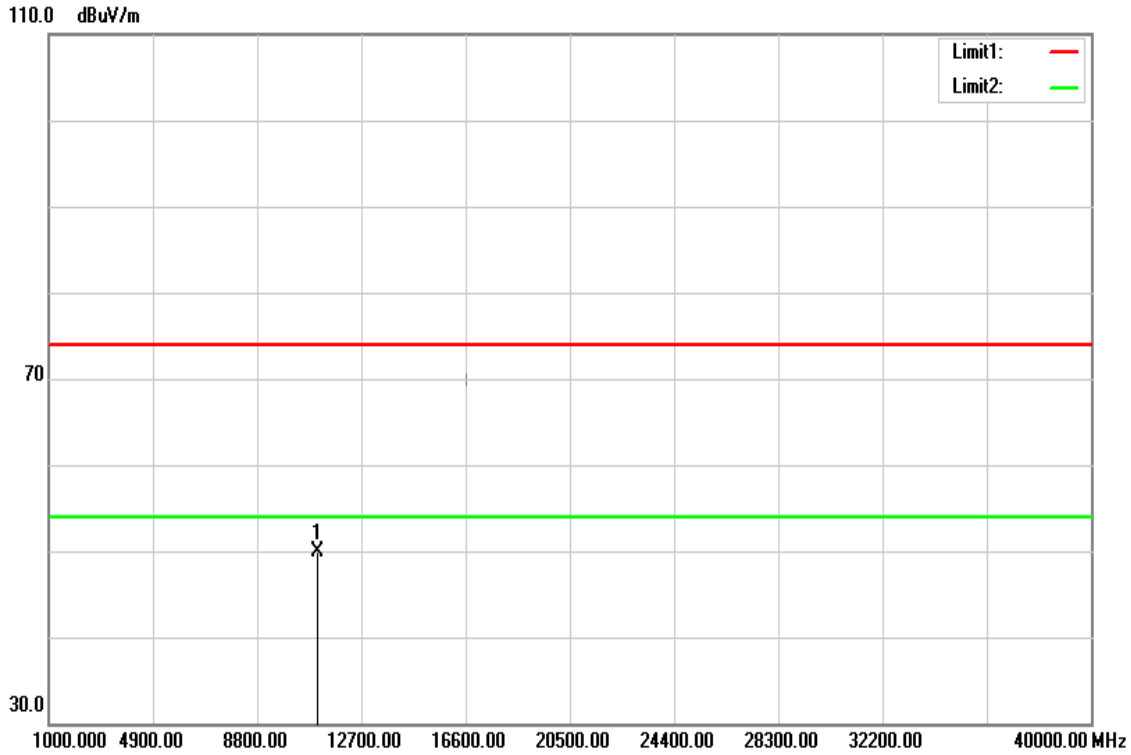


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11060.000	34.08	16.06	50.14	74.00	-23.86	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11ac VHT80 / 5530 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



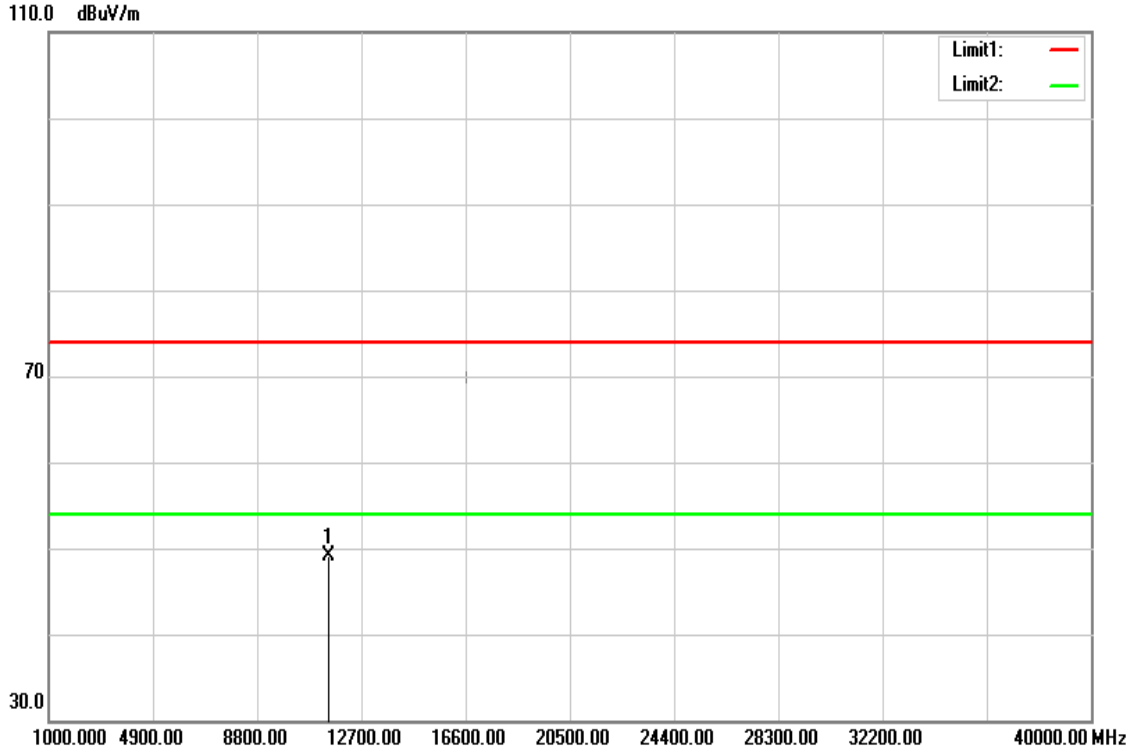
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11060.000	33.89	16.06	49.95	74.00	-24.05	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Above 1G Test Data for UNII-3

Test Mode	IEEE 802.11a / 5745 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

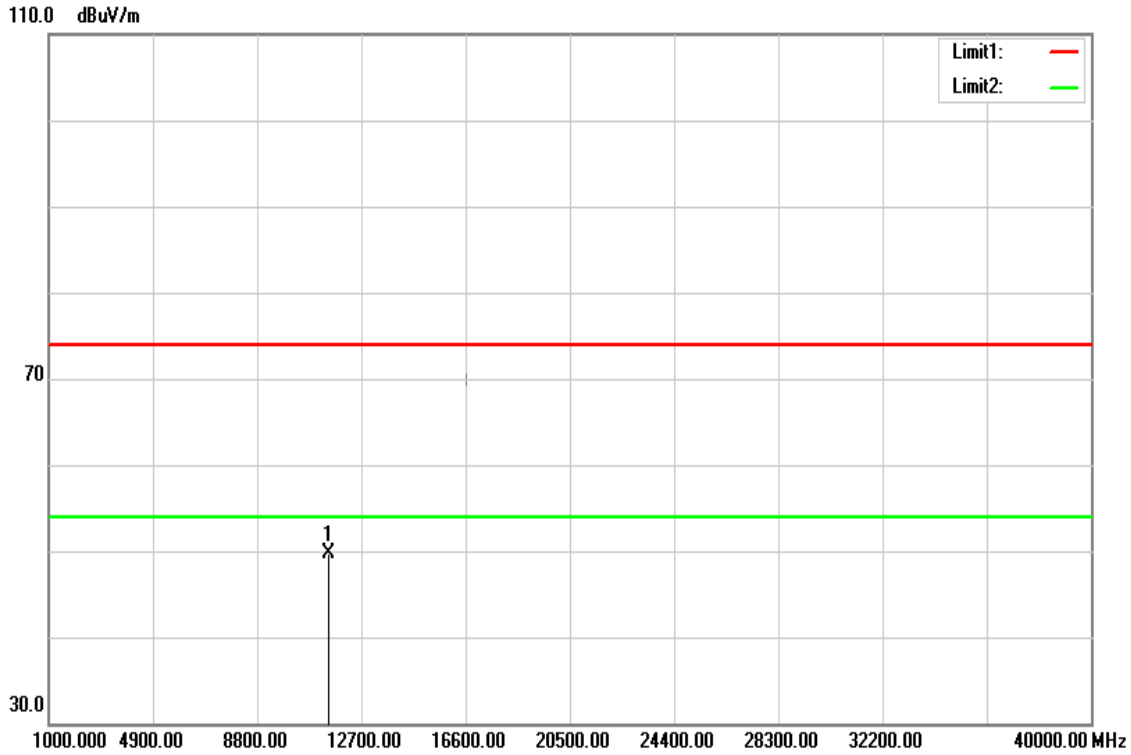


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	33.00	16.09	49.09	74.00	-24.91	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5745 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

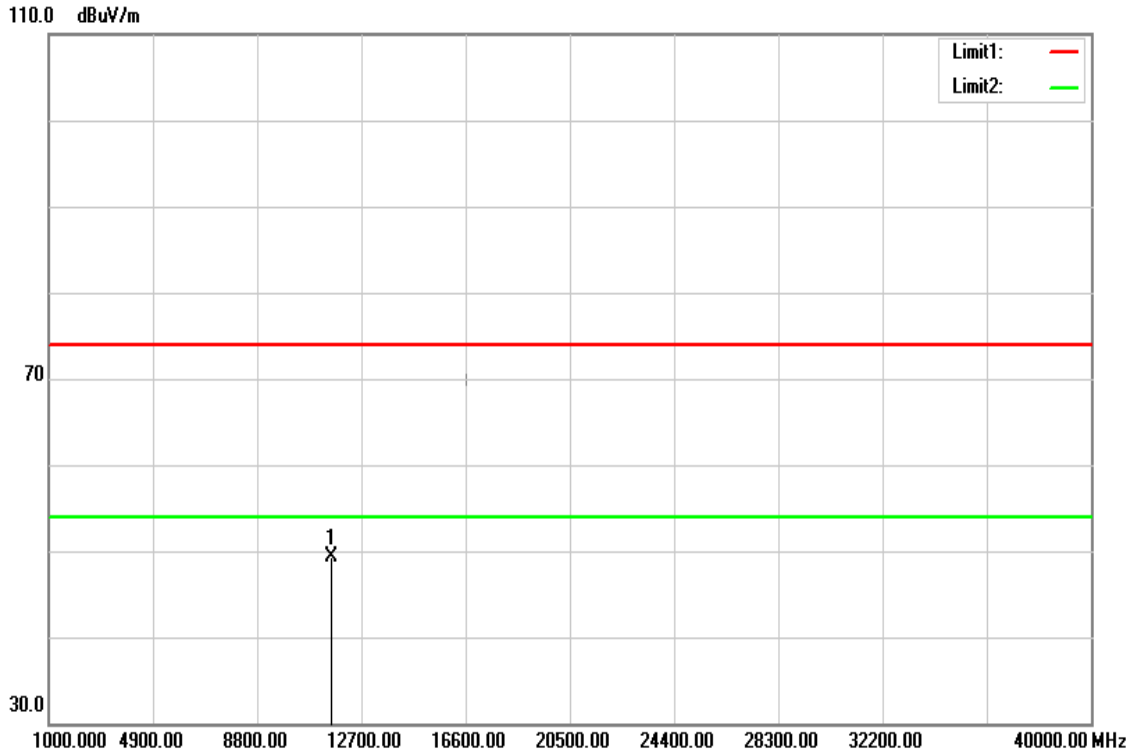


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	33.55	16.09	49.64	74.00	-24.36	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5785 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

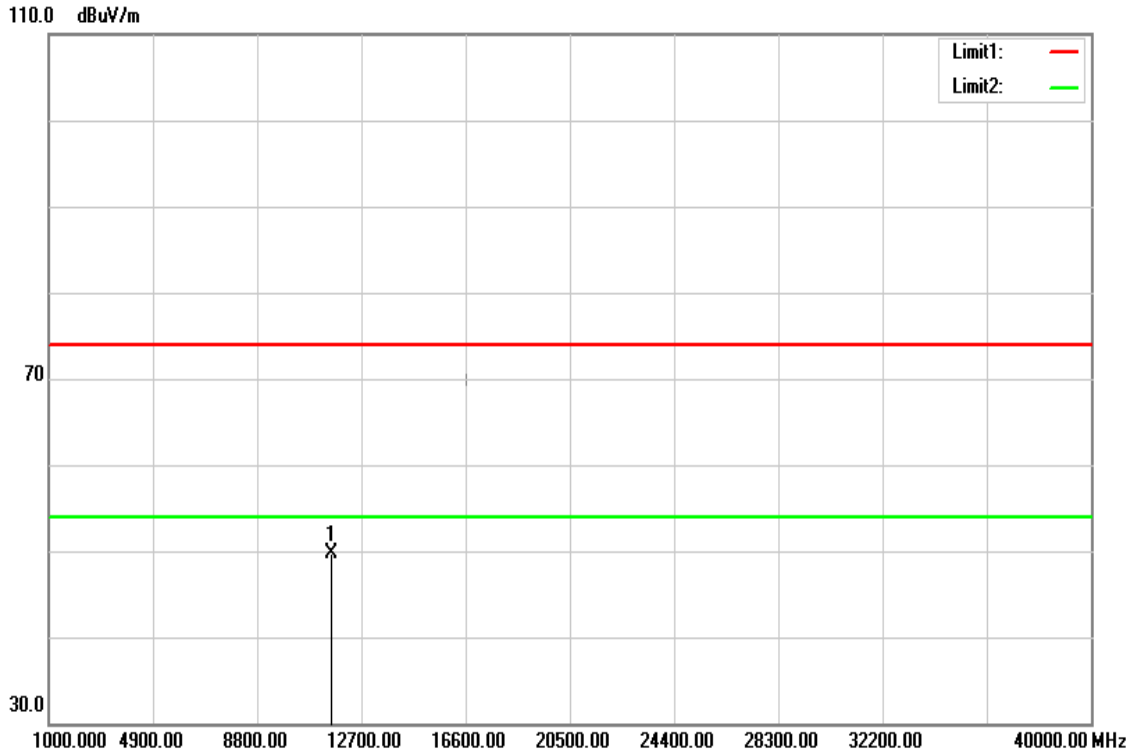


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11570.000	33.31	16.01	49.32	74.00	-24.68	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5785 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

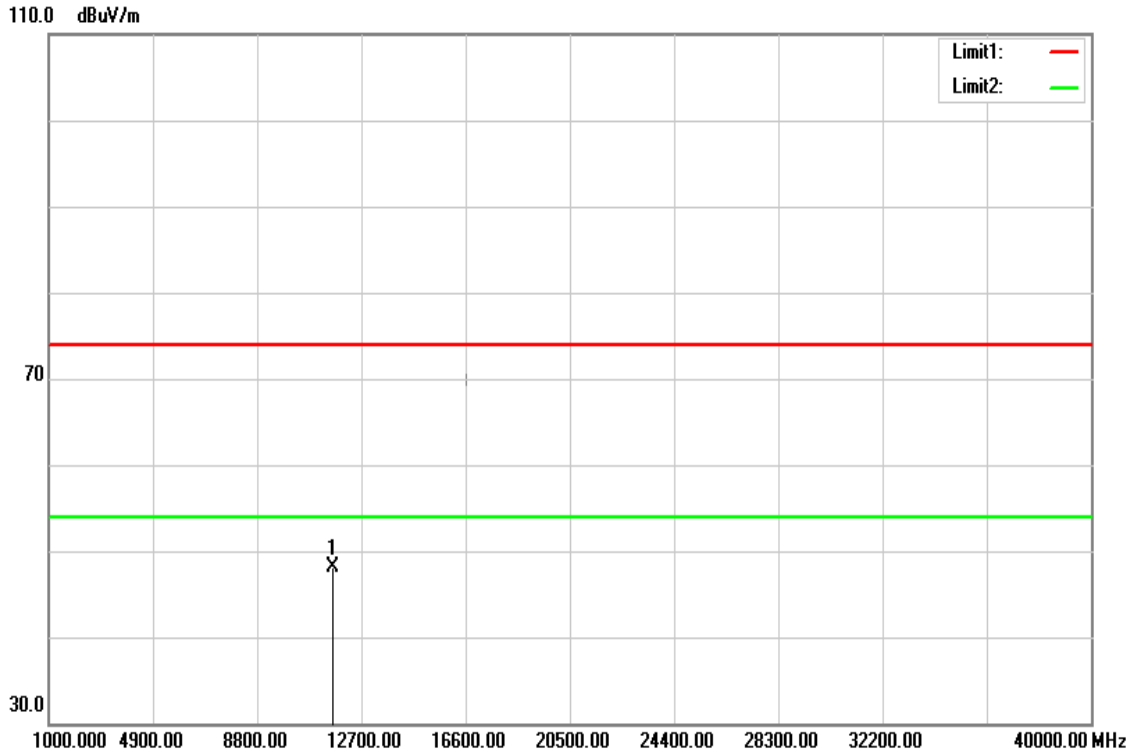


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11570.000	33.77	16.01	49.78	74.00	-24.22	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5825 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

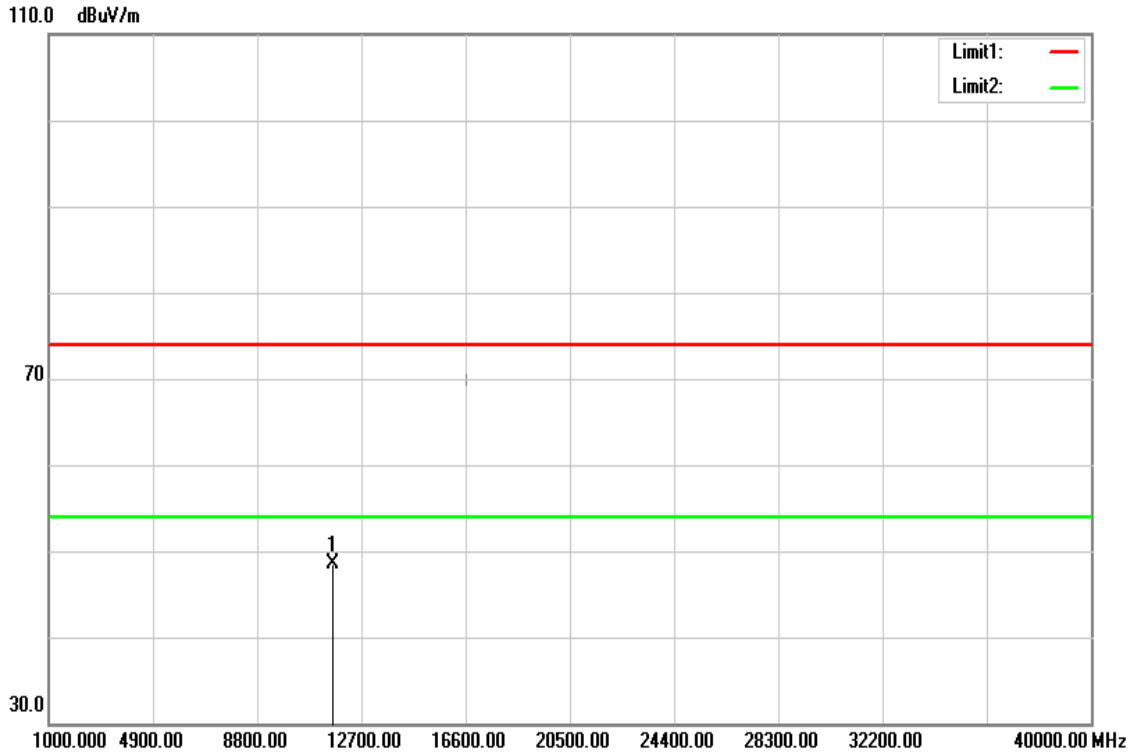


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	32.26	15.93	48.19	74.00	-25.81	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11a / 5825 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

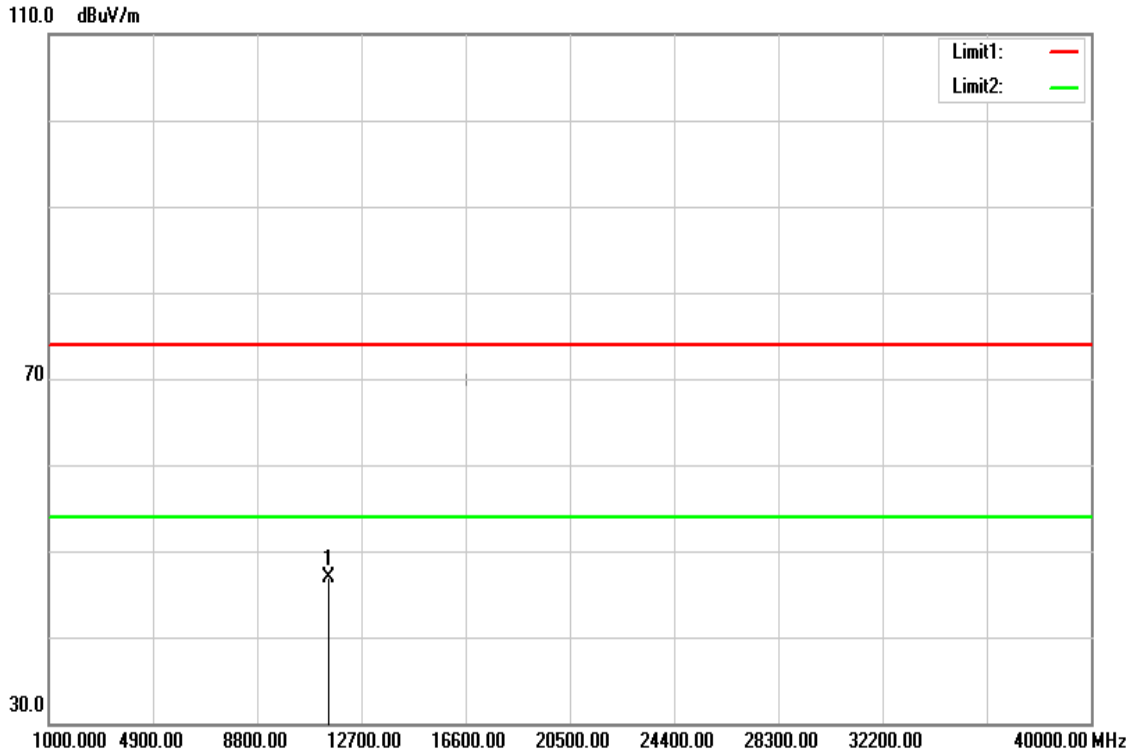


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	32.51	15.93	48.44	74.00	-25.56	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5745 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

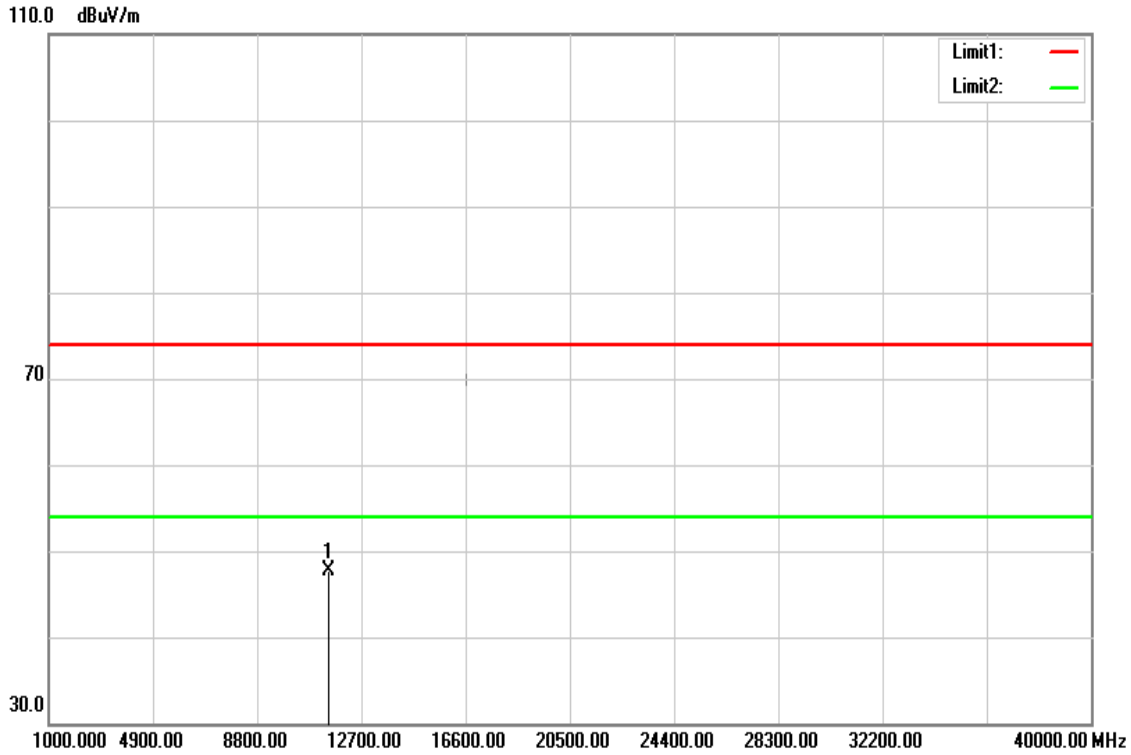


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	30.83	16.09	46.92	74.00	-27.08	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20 / 5745 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

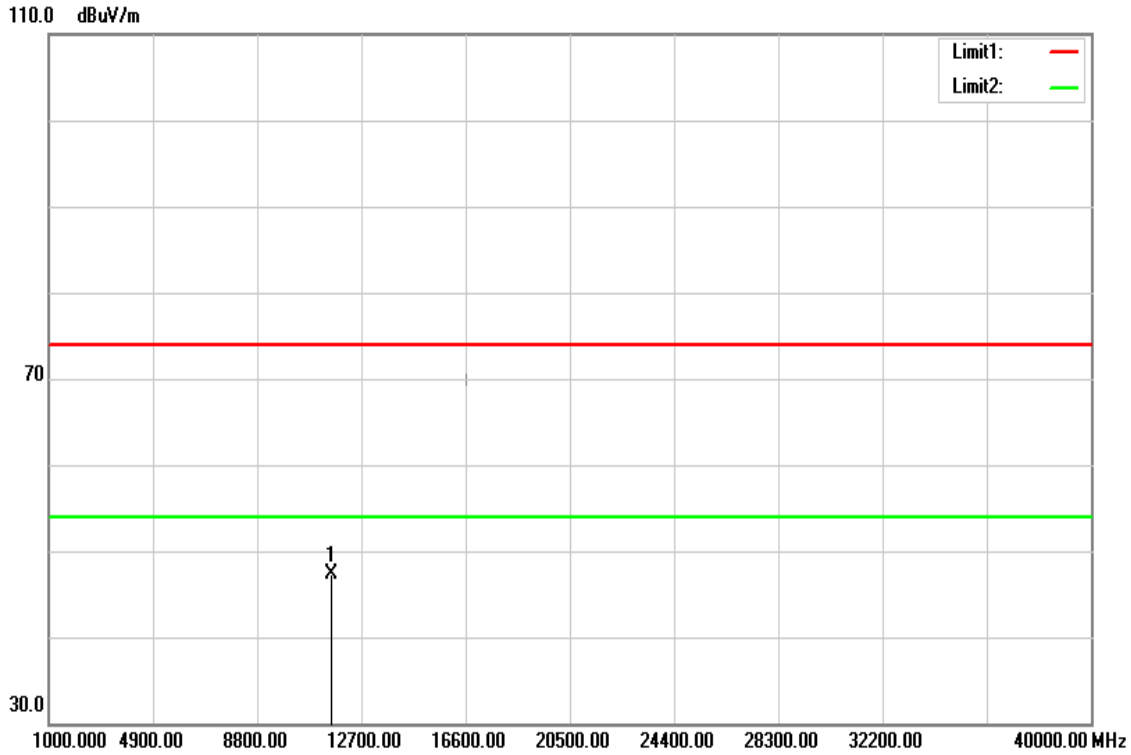


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	31.69	16.09	47.78	74.00	-26.22	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20/ 5785 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

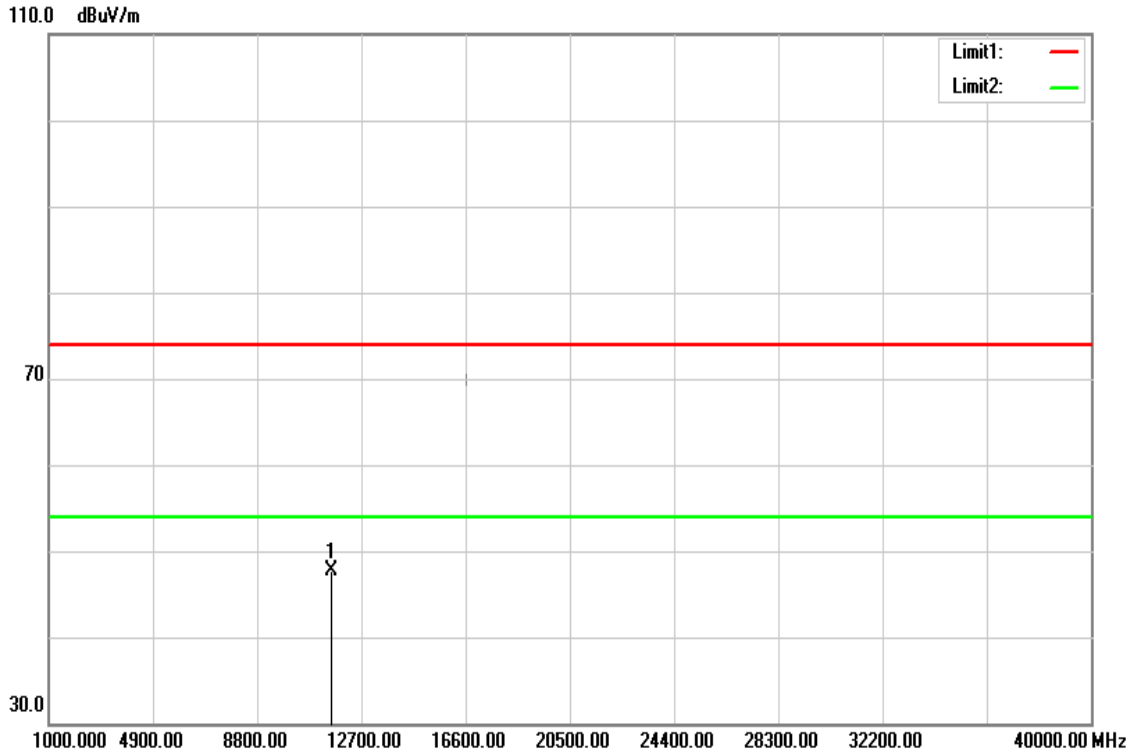


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11570.000	31.39	16.01	47.40	74.00	-26.60	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20/ 5785 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

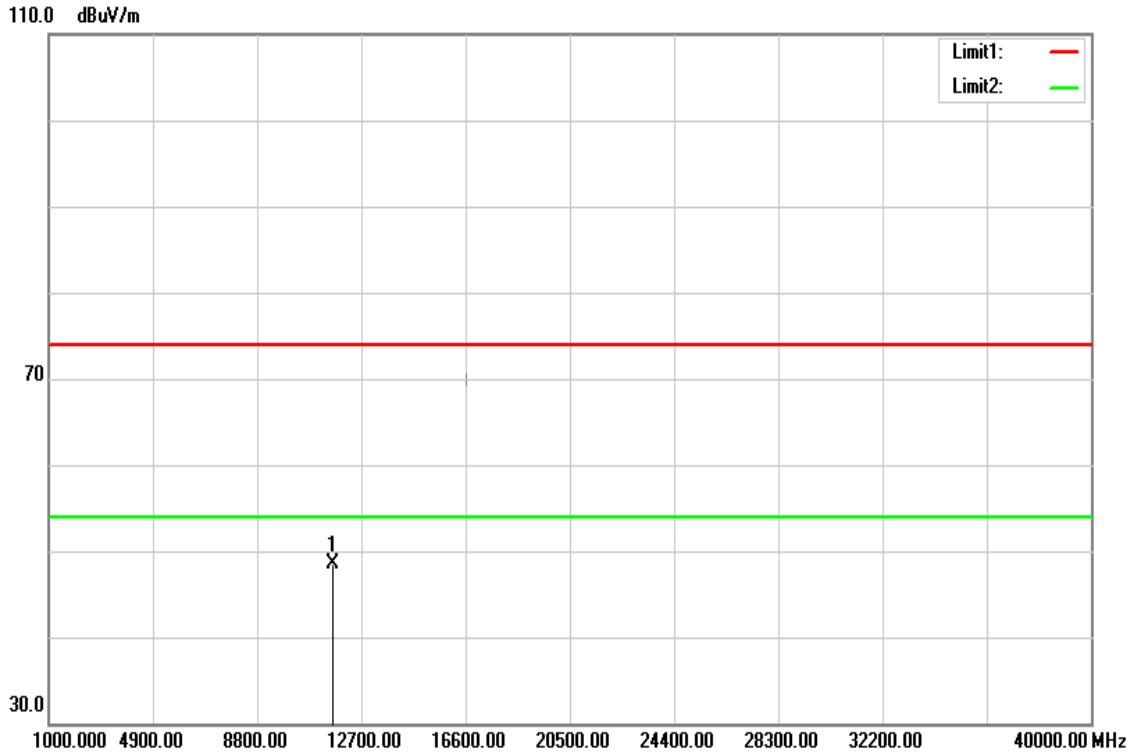


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11570.000	31.62	16.01	47.63	74.00	-26.37	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20/ 5825 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

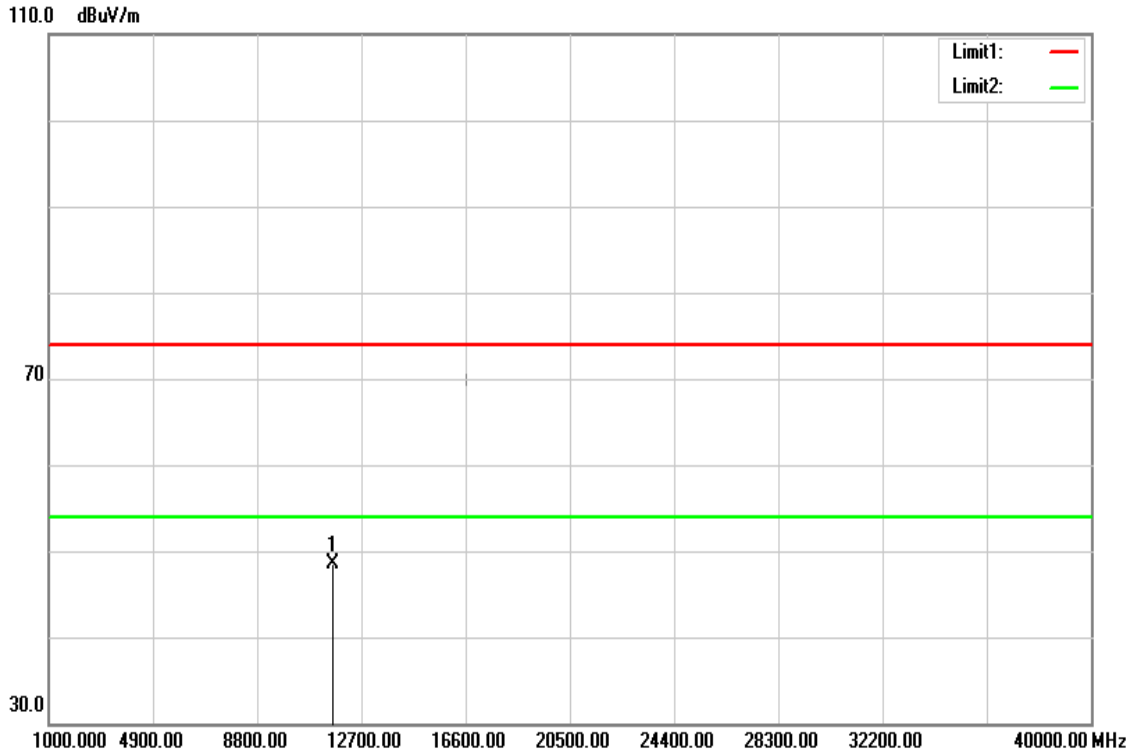


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	32.55	15.93	48.48	74.00	-25.52	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT20/ 5825 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

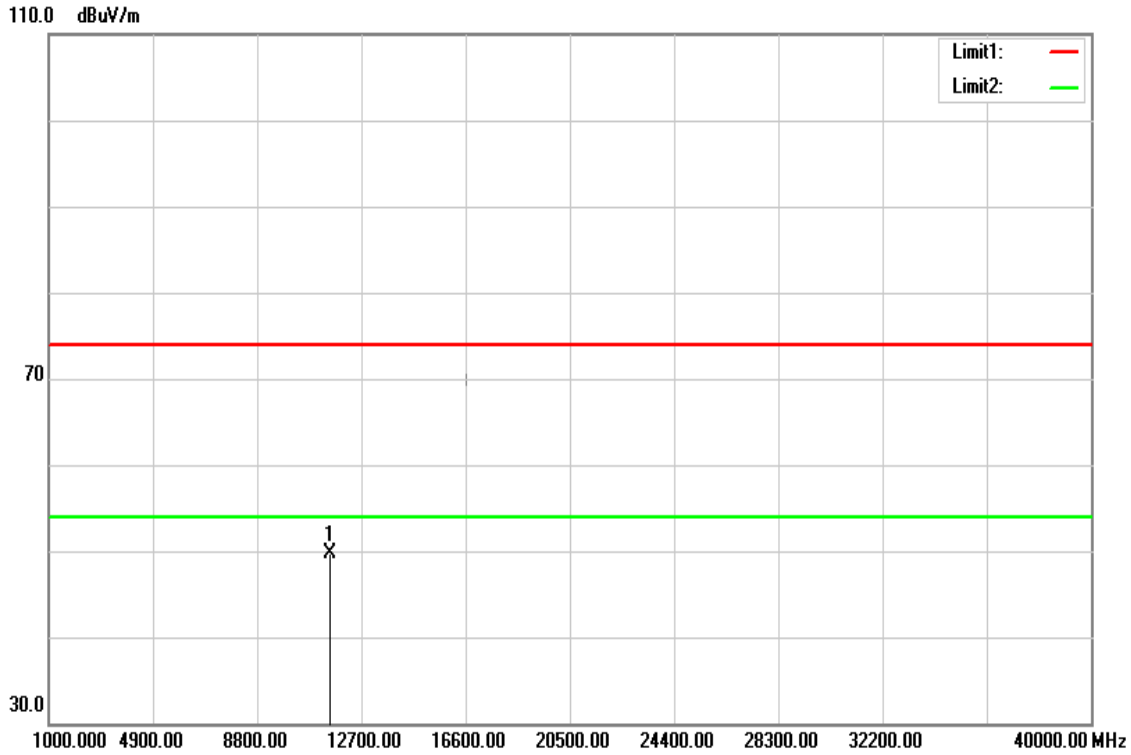


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	32.60	15.93	48.53	74.00	-25.47	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40/ 5755 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

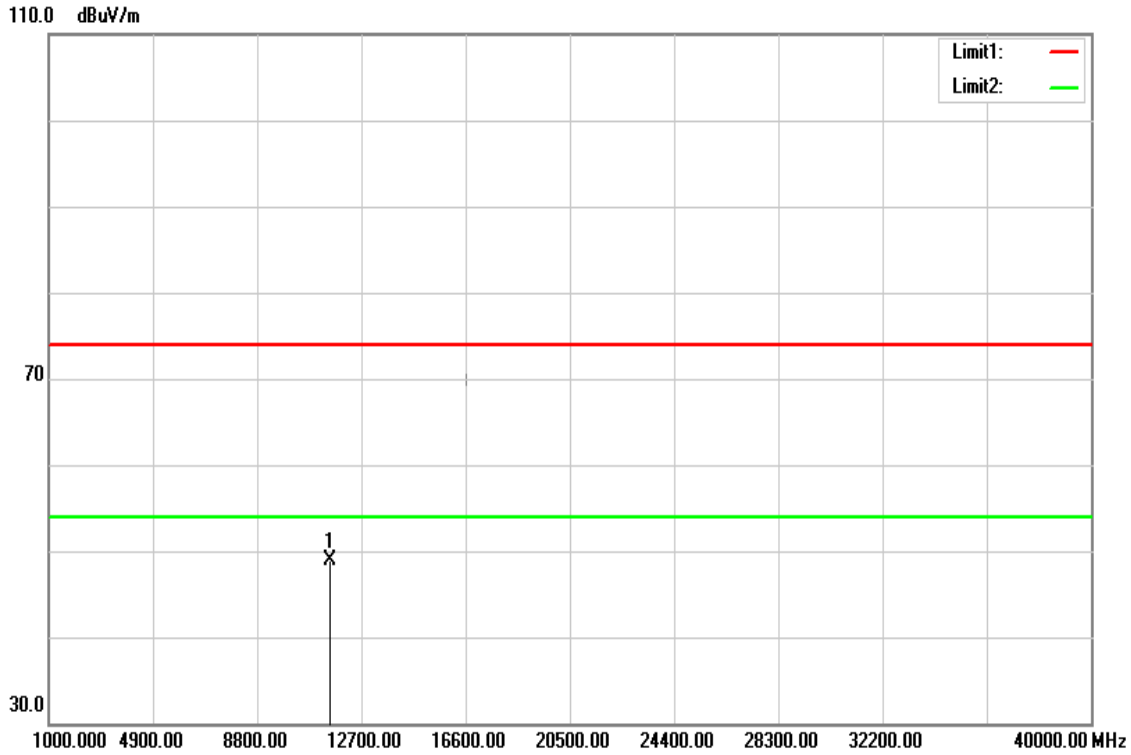


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11510.000	33.55	16.08	49.63	74.00	-24.37	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40/ 5755 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

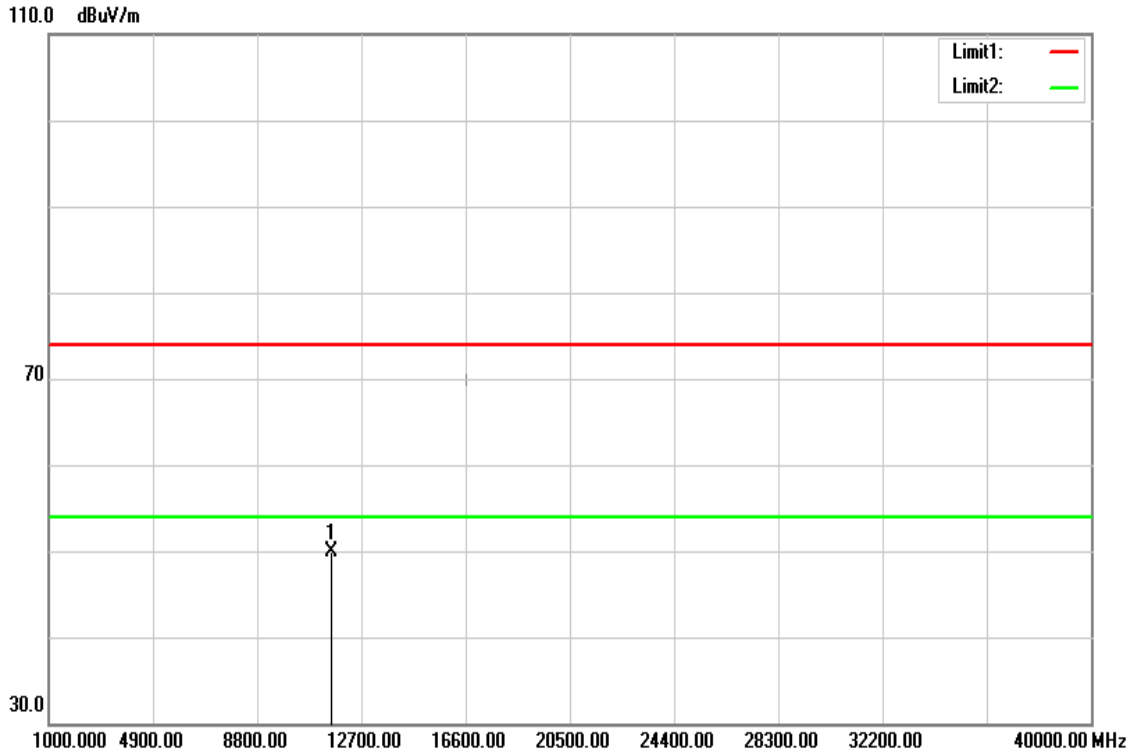


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11510.000	32.79	16.08	48.87	74.00	-25.13	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40/ 5795 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

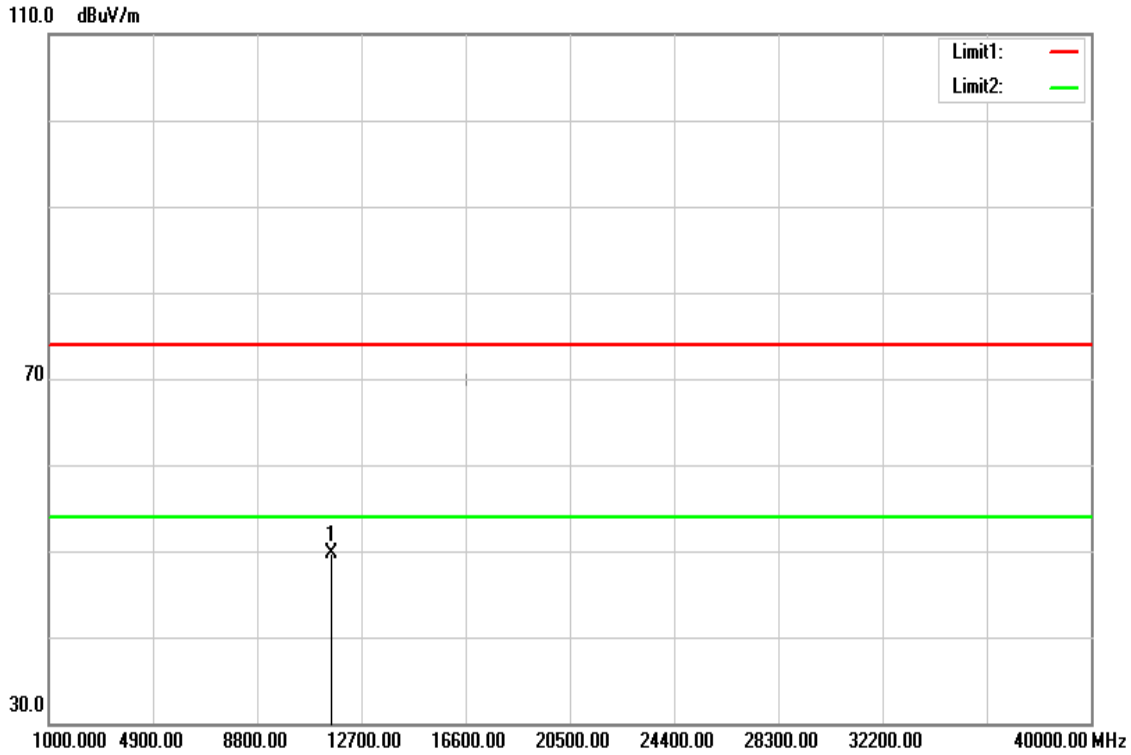


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11590.000	33.91	16.00	49.91	74.00	-24.09	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11n HT40/ 5795 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

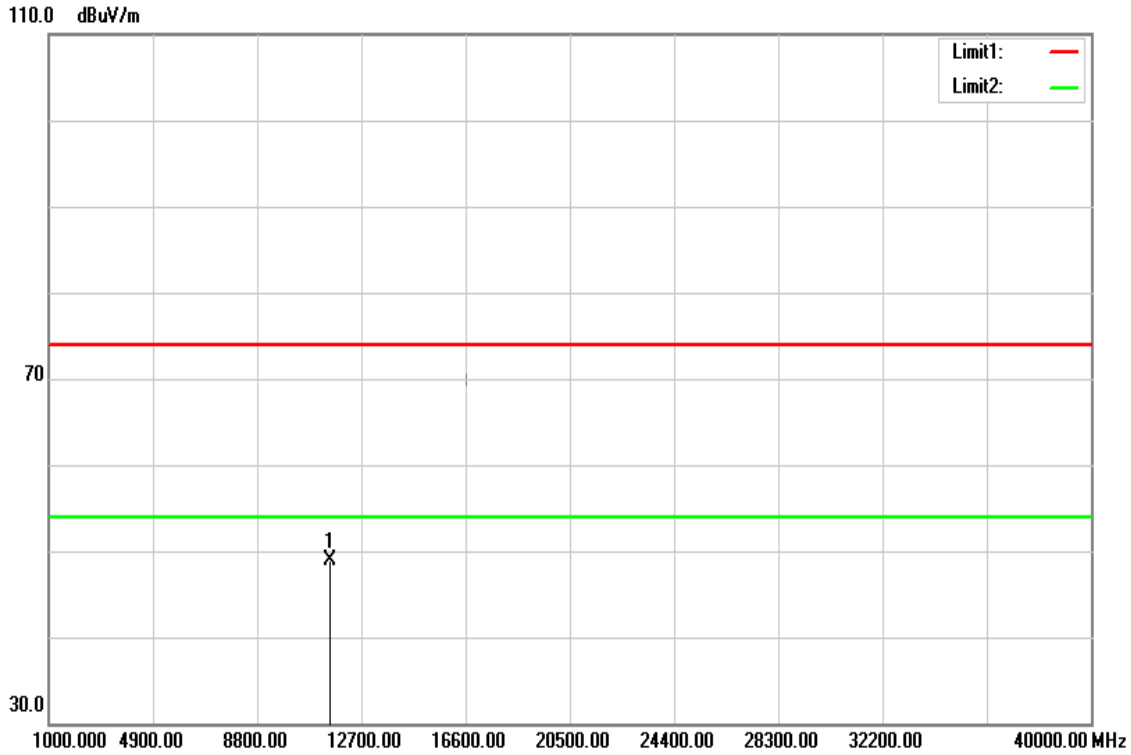


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11590.000	33.73	16.00	49.73	74.00	-24.27	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11ac VHT80/ 5775 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

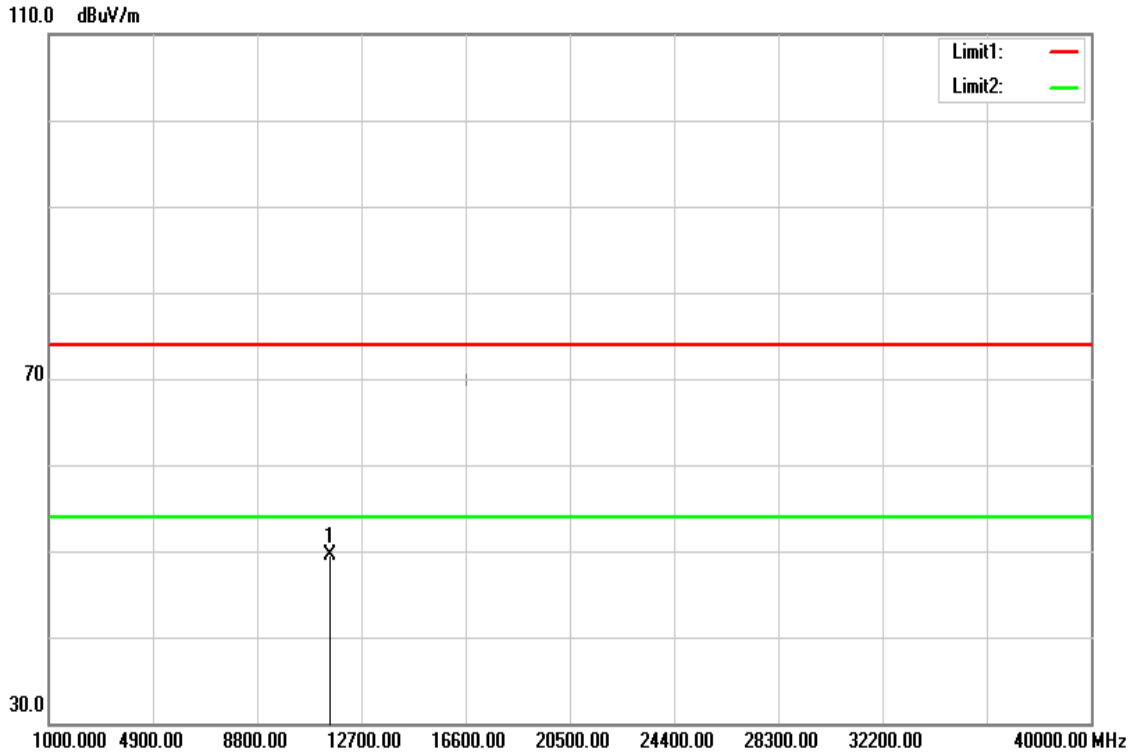


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11550.000	32.81	16.04	48.85	74.00	-25.15	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

Test Mode	IEEE 802.11ac VHT80/ 5775 MHz	Temp/Hum	24(℃)/ 33%RH
Test Item	Harmonic	Test Date	January 22, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11550.000	33.41	16.04	49.45	74.00	-24.55	peak
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit*

4.6 FREQUENCY STABILITY

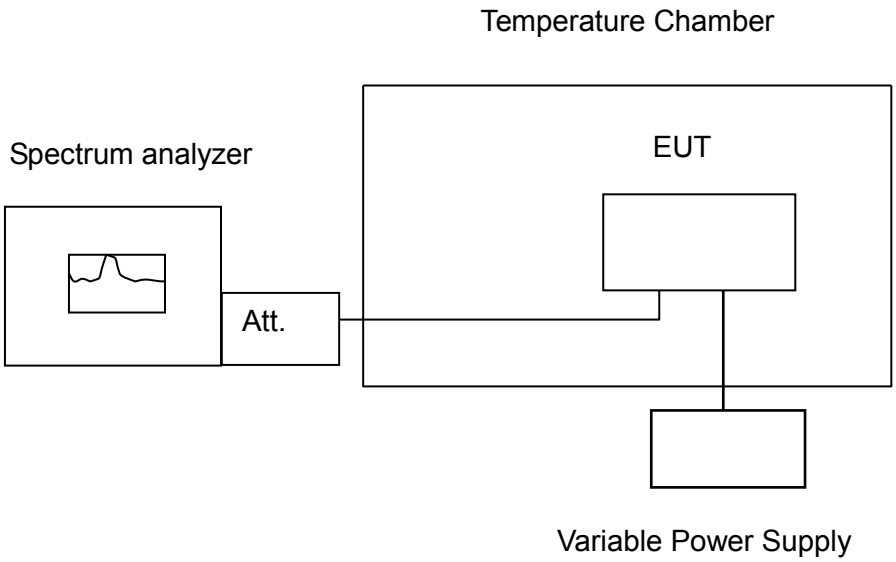
4.6.1 Test Limit

According to §15.407(g) manufacturers 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 operational description.

4.6.2 Test Procedure

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 –20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

4.6.3 Test Setup



4.6.4 Test Result

Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	110	5179.91577	5179.91577	5179.91577	5179.91577	-16.2606	-16.2606	-16.2606	-16.2606	Pass
40	110	5179.92671	5179.92587	5179.92438	5179.92371	-14.1486	-14.3108	-14.5985	-14.7278	Pass
30	110	5179.93852	5179.93753	5179.93654	5179.93613	-11.8687	-12.0598	-12.2510	-12.3301	Pass
20	110	5179.94964	5179.94920	5179.94877	5179.94834	-9.7220	-9.8069	-9.8900	-9.9730	Pass
10	110	5179.95094	5179.95094	5179.95094	5179.95094	-9.4710	-9.4710	-9.4710	-9.4710	Pass
0	110	5179.93878	5179.94399	5179.94486	5179.94573	-11.8185	-10.8127	-10.6448	-10.4768	Pass
Temp. (°C)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	99	5179.94964	5179.94964	5179.94964	5179.94834	-9.7220	-9.7220	-9.7220	-9.9730	Pass
20	110	5179.94964	5179.94920	5179.94877	5179.94834	-9.7220	-9.8069	-9.8900	-9.9730	Pass
20	121	5179.94834	5179.94964	5179.94964	5179.94834	-9.9730	-9.7220	-9.7220	-9.9730	Pass

Temp. (°C)	Voltage (V)	Measured Frequency	5260		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	110	5259.91577	5259.91534	5259.91491	5259.91470	-16.0133	-16.0951	-16.1768	-16.2167	Pass
40	110	5259.92564	5259.92468	5259.92381	5259.92274	-14.1369	-14.3194	-14.4848	-14.6882	Pass
30	110	5259.93010	5259.93231	5259.93252	5259.93256	-13.2888	-12.8688	-12.8289	-12.8213	Pass
20	110	5259.94616	5259.94573	5259.94530	5259.94860	-10.2357	-10.3175	-10.3992	-9.7719	Pass
10	110	5259.95051	5259.95007	5259.95007	5259.95007	-9.4087	-9.4924	-9.4924	-9.4924	Pass
0	110	5259.94747	5259.94790	5259.94834	5259.94834	-9.9867	-9.9049	-9.8213	-9.8213	Pass
Temp. (°C)	Voltage (V)	Measured Frequency	5260		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	99	5259.94573	5259.94616	5259.94573	5259.94860	-10.3175	-10.2357	-10.3175	-9.7719	Pass
20	110	5259.94616	5259.94573	5259.94530	5259.94860	-10.2357	-10.3175	-10.3992	-9.7719	Pass
20	121	5259.94573	5259.94530	5259.94860	5259.94860	-10.3175	-10.3992	-9.7719	-9.7719	Pass

Temp. (°C)	Voltage (V)	Measured Frequency	5500		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	110	5499.91360	5499.91317	5499.91274	5499.91230	-15.7091	-15.7873	-15.8655	-15.9455	Pass
40	110	5499.92643	5499.92517	5499.92436	5499.92287	-13.3764	-13.6055	-13.7527	-14.0236	Pass
30	110	5499.93184	5499.93063	5499.93329	5499.93249	-12.3927	-12.6127	-12.1284	-12.2745	Pass
20	110	5499.93835	5499.93792	5499.93748	5499.93748	-11.2091	-11.2873	-11.3673	-11.3673	Pass
10	110	5499.94790	5499.94790	5499.94790	5499.94790	-9.4727	-9.4727	-9.4727	-9.4727	Pass
0	110	5499.94834	5499.94703	5499.94703	5499.94703	-9.3927	-9.6309	-9.6309	-9.6309	Pass
Temp. (°C)	Voltage (V)	Measured Frequency	5500		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	99	5499.93748	5499.93792	5499.93792	5499.93792	-11.3673	-11.2873	-11.2873	-11.2873	Pass
20	110	5499.93835	5499.93792	5499.93748	5499.93792	-11.2091	-11.2873	-11.3673	-11.2873	Pass
20	121	5499.93748	5499.93792	5499.93792	5499.93792	-11.3673	-11.2873	-11.2873	-11.2873	Pass

Temp. (°C)	Voltage (V)	Measured Frequency	5745		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	110	5744.91360	5744.91317	5744.91274	5744.91230	-15.0392	-15.1140	-15.1889	-15.2654	Pass
40	110	5744.92187	5744.92143	5744.92108	5744.92091	-13.5997	-13.6762	-13.7372	-13.7668	Pass
30	110	5744.93087	5744.93065	5744.93042	5744.93056	-12.0331	-12.0722	-12.1112	-12.0869	Pass
20	110	5744.93401	5744.93357	5744.93357	5744.93314	-11.4865	-11.5631	-11.5631	-11.6379	Pass
10	110	5744.94530	5744.94573	5744.94530	5744.94530	-9.5213	-9.4465	-9.5213	-9.5213	Pass
0	110	5744.94530	5744.94486	5744.94486	5744.94443	-9.5213	-9.5979	-9.5979	-9.6728	Pass
Temp. (°C)	Voltage (V)	Measured Frequency	5745		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	99	5744.93314	5744.93357	5744.93357	5744.93314	-11.6379	-11.5631	-11.5631	-11.6379	Pass
20	110	5744.93401	5744.93357	5744.93357	5744.93314	-11.4865	-11.5631	-11.5631	-11.6379	Pass
20	121	5744.93314	5744.93314	5744.93314	5744.93314	-11.6379	-11.6379	-11.6379	-11.6379	Pass

4.7 DYNAMIC FREQUENCY SELECTION

4.7.1 Test Limit

FCC according to §15.407 (h), KDB 905462 D02 "compliance measurement procedures for unlicensed-national information infrastructure devices operating in the 5250-5350 MHz and 5470-5725 MHz bands incorporating dynamic frequency selection". and KDB 905462 D03 " U-NII client devices without radar detection capability.

IC according RSS-247 section 6.3, and it harmonized with FCC Part 15 DFS rules.

The EIRP refer section 4.3 output power measurement in this report.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client(with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	Master Device or Client with Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth mods	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

Table 3: Interference Threshold values, Master or Client incorporating In-Service

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. **Note 2:** The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. **Note 3:** During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.

Table 6 – Long Pulse Radar Test Signal

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

4.7.2 Test Procedure

Overview Of EUT With Respect To §15.407 (H) Requirements

The firmware installed in the EUT during testing was:

Firmware Rev: 1.596.19.1 (Android)

Firmware Rev: 1.596.33.0 (Windows)

The EUT operates over the 5250-5350 MHz range as a Client Device that does not have radar detection capability.

The EUT uses one transmitter connected to two 50-ohm coaxial antenna ports via a diversity switch. Only one antenna port is connected to the test system since the EUT has one antenna only.

The Slave device associated with the EUT during these tests does not have radar detection capability.

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using the media player with the V2.61 Codec package.

The EUT utilizes the 802.11a architecture, with a nominal channel bandwidth of 20 MHz.

The rated output power of the Master unit is < 23dBm (EIRP). Therefore the required interference threshold level is -62 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is –62 + 5 = -57dBm.

The calibrated conducted DFS Detection Threshold level is set to -57 dBm. The tested level is lower than the required level hence it provides margin to the limit.

Manufacturer’s Statement Regarding Uniform Channel Spreading

The end product implements an automatic channel selection feature at startup such that operation commences on channels distributed across the entire set of allowed 5GHz channels. This feature will ensure uniform spreading is achieved while avoiding non-allowed channels due to prior radar events.

TEST AND MEASUREMENT SYSTEM

System Overview

The measurement system is based on a conducted test method.

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

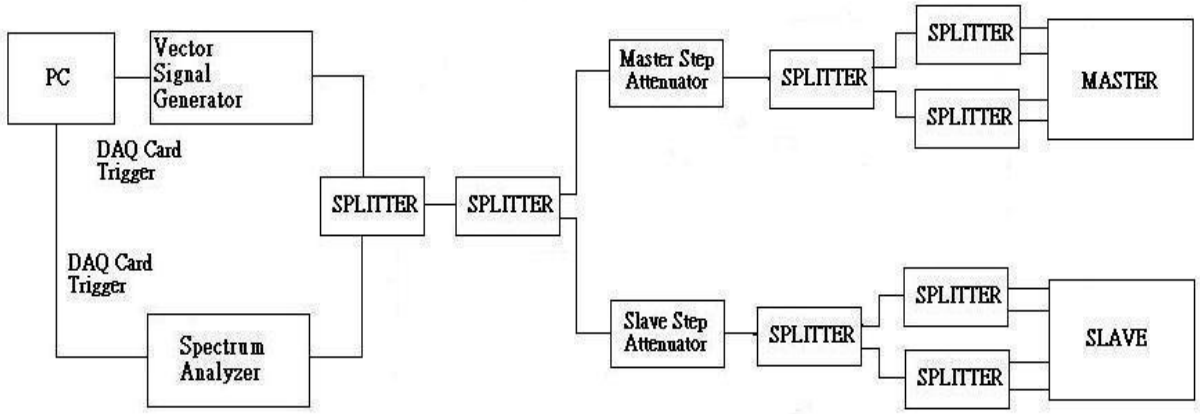
The short pulse types 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96 APPENDIX. The frequency of the signal generator is incremented in 1 MHz steps from FL to FH for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer set to display 8001 bins on the horizontal axis. The time-domain resolution is 2 msec / bin with a 16 second sweep time, meeting the 10 second short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold. The time-domain resolution is 3 msec / bin with a 24 second sweep time, meeting the 22 second long pulse reporting criteria and allowing a minimum of 10 seconds after the end of the long pulse waveform.

Should multiple RF ports be utilized for the Master and/or Slave devices (for example, for diversity or MIMO implementations), 50 ohm termination would be removed from the splitter so that connection can be established between splitter and the Master and/or Slave devices.

Conducted Method System Block Diagram



System Calibration

Connect the spectrum analyzer to the test system in place of the master device. Set the signal generator to CW mode. Adjust the amplitude of the signal generator to yield a measured level of –62 dBm on the spectrum analyzer.

Without changing any of the instrument settings, reconnect the spectrum analyzer to the Common port of the Spectrum Analyzer Combiner/Divider and connect a 50 ohm load to the Master Device port of the test system.

Measure the amplitude and calculate the difference from –62 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference. Confirm that the signal is displayed at –62 dBm. Readjust the RBW and VBW to 3 MHz, set the span to 10 MHz, and confirm that the signal is still displayed at –62 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –62 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

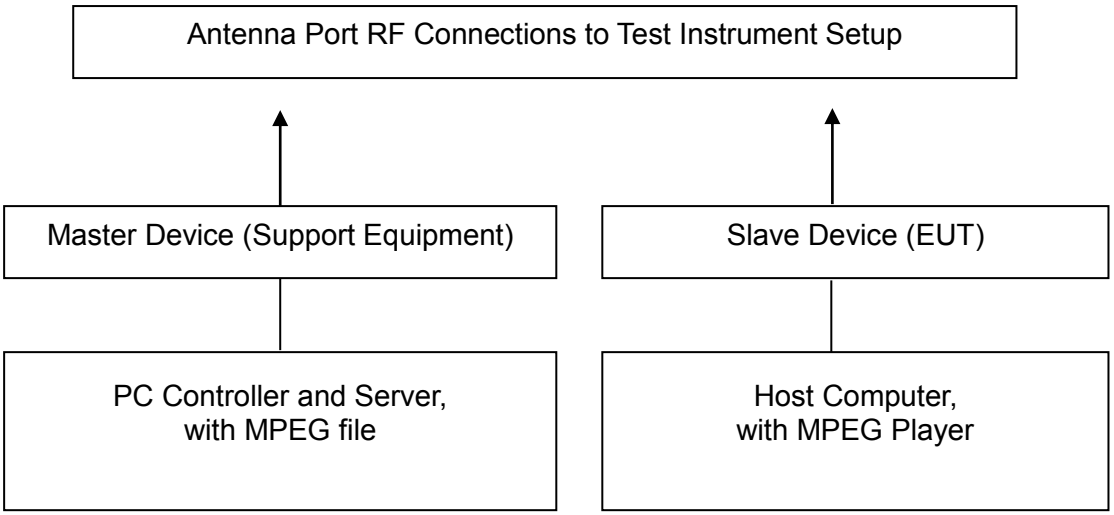
Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.

Adjustment Of Displayed Traffic Level

Establish a link between the Master and Slave, adjusting the Link Step Attenuator as needed to provide a suitable received level at the Master and Slave devices. Stream the video test file to generate WLAN traffic. Confirm that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold. Confirm that the displayed traffic is from the Master Device. For Master Device testing confirm that the displayed traffic does not include Slave Device traffic. For Slave Device testing confirm that the displayed traffic does not include Master Device traffic.

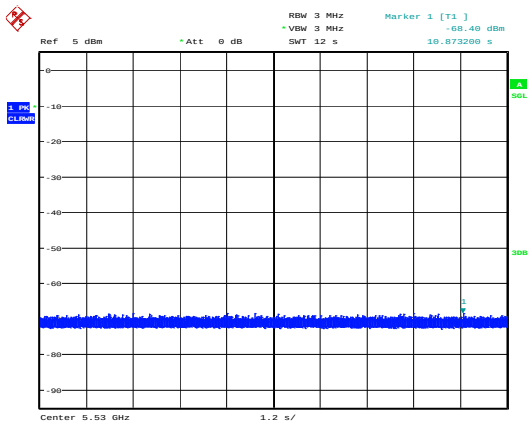
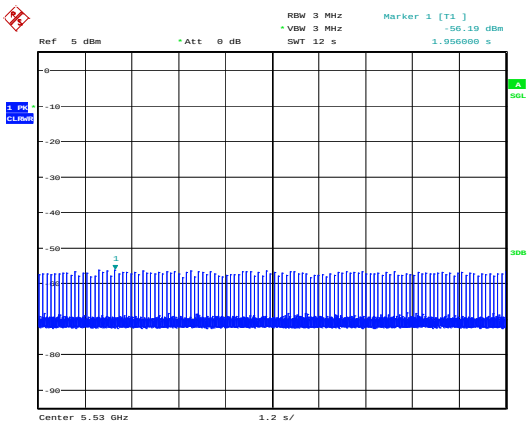
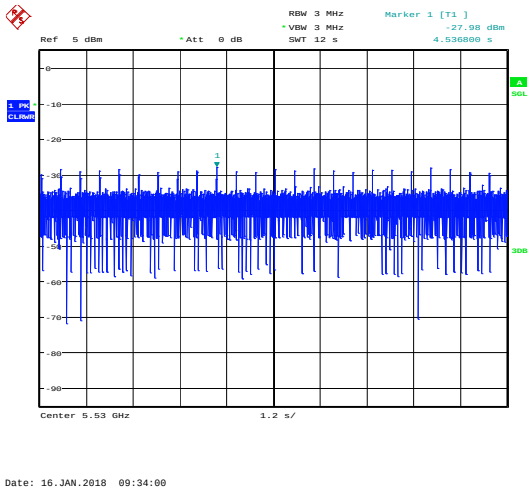
If a different setting of the Master Step Attenuator is required to meet the above conditions, perform a new System Calibration for the new Master Step Attenuator setting.

4.7.3 Test Setup



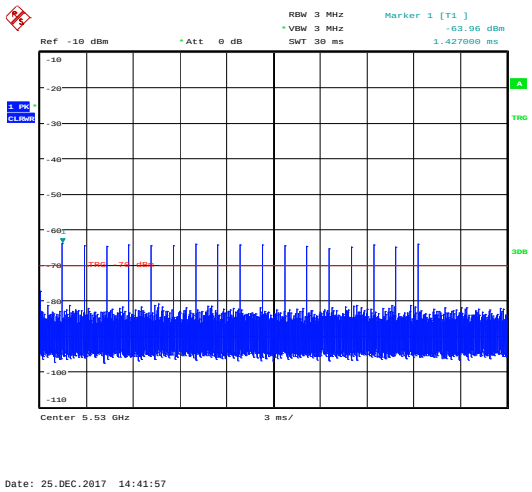
4.7.4 Test Result

Android

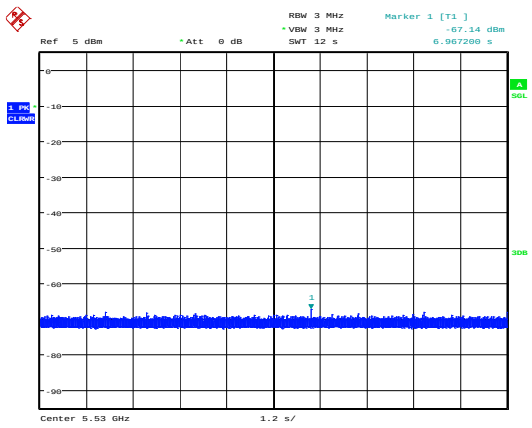
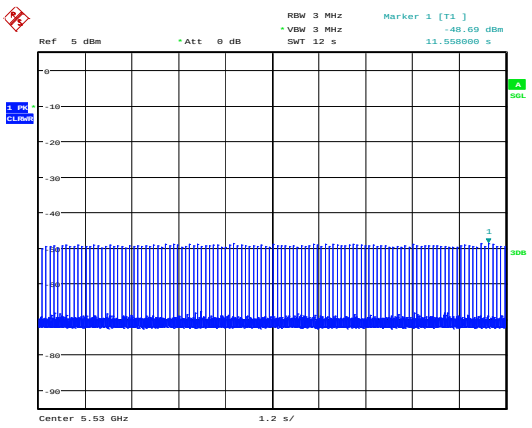
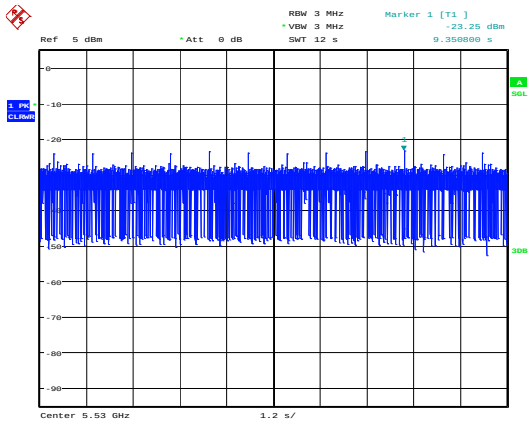
IEEE 802.11ac VHT80 MHz at 5530MHz	
Noise Floor	**Master Level**
	
Slave Level	
	

Radar Waveforms

Sample of short Pluse Radar Type 0

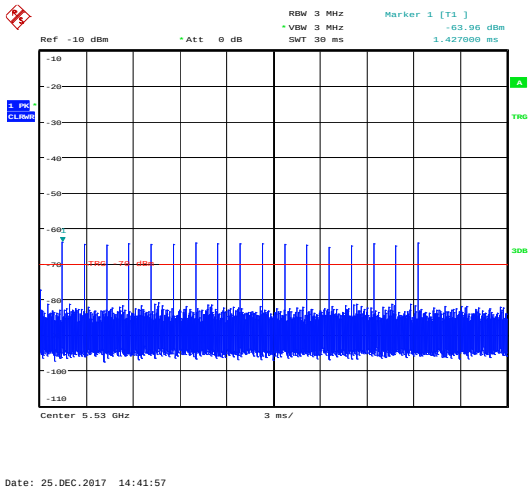


Windows

IEEE 802.11ac VHT80 MHz at 5530MHz	
Noise Floor	**Master Level**
	
Slave Level	
	

Radar Waveforms

Sample of short Pluse Radar Type 0



TEST CHANNEL AND METHOD

All tests were performed at a channel center frequency of 5530 MHz utilizing a conducted test method.

CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME

GENERAL REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =

(Number of analyzer bins showing transmission) * (dwell time per bin)

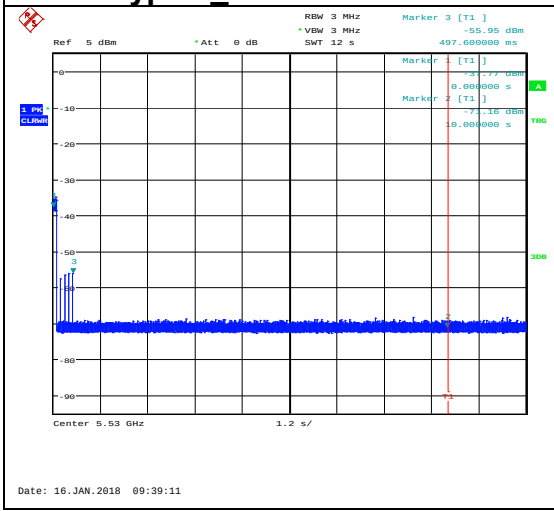
The observation period over which the aggregate time is calculated

Begins at (Reference Marker + 200 msec) and

Ends no earlier than (Reference Marker + 10 sec).

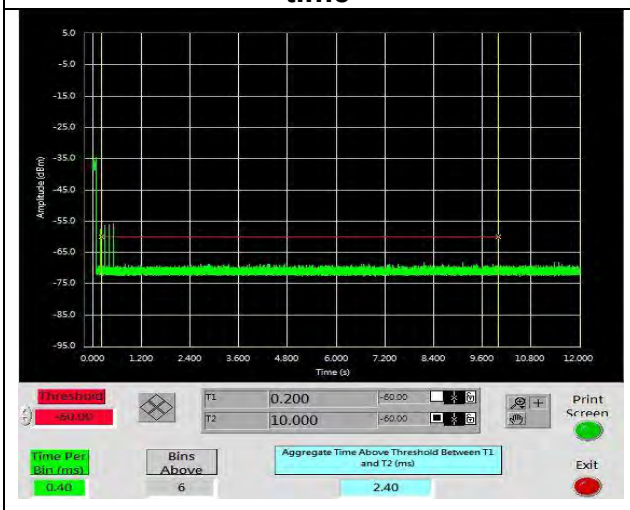
Android

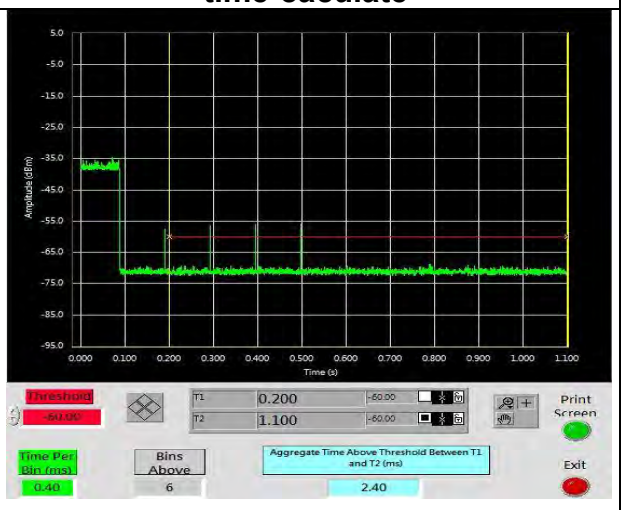
IEEE 802.11ac VHT 80 MHz at 5530	
Type 1_Channel Move Time	



Channel Move Time (ms)	Limit (s)
497.6	10

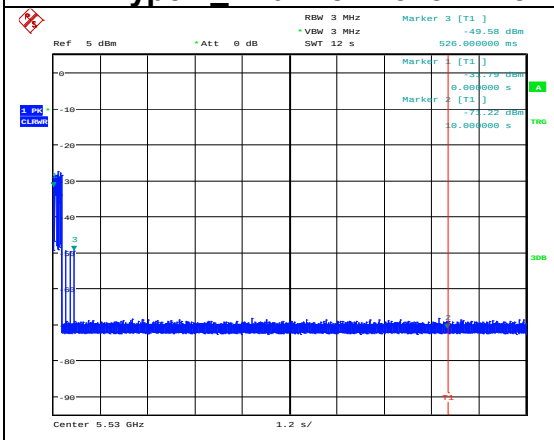
IEEE 802.11ac VHT 80 MHz at 5530	
Type 1_Channel closing transmisssion time	Type 1_Channel closing transmisssion time-caculate



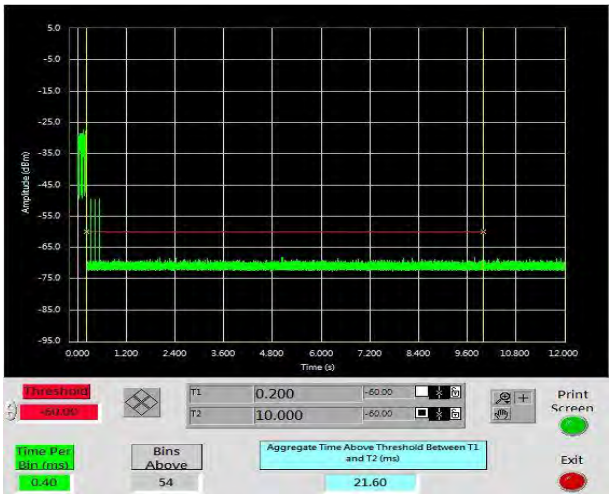
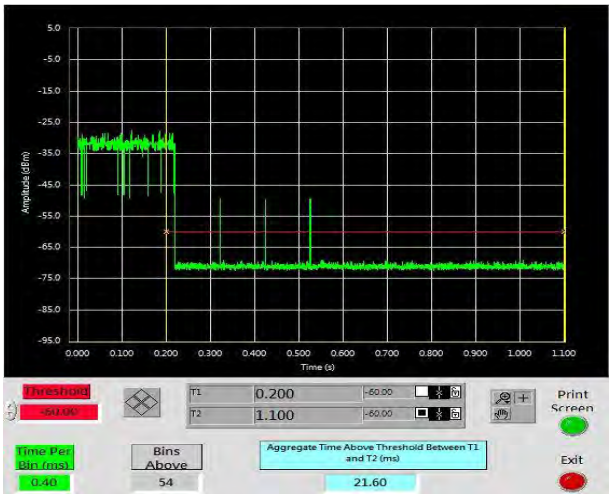


Aggregate Transmission Time (ms)	Limit (ms)	Margin (ms)
2.40	60	-57.60

Windows

IEEE 802.11ac VHT 80 MHz at 5530	
Type 1_Channel Move Time	
	

Channel Move Time (ms)	Limit (s)
526.0	10

IEEE 802.11ac VHT 80 MHz at 5530	
Type 1_Channel closing transmisssion time	**Type 1_Channel closing transmisssion time-caculate**
	

Aggregate Transmission Time (ms)	Limit (ms)	Margin (ms)
21.60	60	-38.40