

FCC RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART E

Test Standard FCC Part 15.247

FCC ID PPQ-WP8331

**Brand name /
Trade Name:**

Model No.	Trade name
C-100	MOJO
WP8331	WatchGuard
AP220	LITE-ON
	WatchGuard

Applicant Lite-On Technology Corp.

Product name 802.11ac Dual Band PoE Access Point

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.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory)

The sample selected for test was production product and was provided by manufacturer.



Approved by:

Reviewed by:

A handwritten signature in black ink, appearing to read 'Sam Chuang'.

A handwritten signature in black ink, appearing to read 'Timmy Wang'.

Sam Chuang
Manager

Timmy Wang
Engineer

Revision History

Rev.	Issue Date	Revisions	Revised By
00	March 20, 2017	Initial Issue	Doris Chu
01	June 22, 2017	1. Added band edge test plot in page 82,83,94,95,104,105. 2. Modify polarize in page 113, 115. 3. Added TPC in page 38,40. 4. Modify section 1.3 in page 7. 5. Modify section 5.4.4 in page 42, 43.	Angel Cheng
02	June 29, 2017	1. Remove notes in page 42, 43.	Angel Cheng

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1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Lite-On Technology Corp.	
Applicant address	Bldg. C, 90, Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C	
Manufacturer	Lite-On Network Communication (Dongguan) Limited	
Equipment	802.11ac Dual Band PoE Access Point	
Model Name / Trade Name	Model No.	Brand name
	C-100	MOJO
	WP8331	WatchGuard
	AP220	LITE-ON
Model Discrepancy	All the model number was just for marketing purpose only.	
EUT Functions	IEEE 802.11abgn+ac	
Received Date	November 2, 2016	
Date of Test	November 4, 2016 ~ March 8, 2017	
Power Operation	☒ AC 120V/60Hz ☒ Adapter(Not for sale) ☒ PoE(Not for sale) ☐ DC Type : ☐ Battery ☐ DC Power Supply ☐ External DC adapter	

Output Power(W)		Mode	Frequency Range (MHz)	Output Power (dBm)	Output Power (w)
	U-NII-2A	IEEE 802.11a	5260 ~ 5320	19.10	0.0813
		IEEE 802.11n HT 20 MHz	5260 ~ 5320	20.20	0.1047
		IEEE 802.11n HT 40 MHz	5270 ~ 5310	23.08	0.2032
		IEEE 802.11ac VHT 20 MHz	5260 ~ 5320	20.26	0.1062
		IEEE 802.11ac VHT 40 MHz	5270 ~ 5310	22.86	0.1932
		IEEE 802.11ac VHT 80 MHz	5290	21.12	0.1294
	U-NII-2C	IEEE 802.11a	5500 ~ 5700	19.89	0.0975
		IEEE 802.11a	5720	20.21	0.1050
		IEEE 802.11n HT 20 MHz	5500 ~ 5700	20.82	0.1208
		IEEE 802.11n HT 20 MHz	5720	21.07	0.1279
		IEEE 802.11n HT 40 MHz	5510 ~ 5670	22.96	0.1977
		IEEE 802.11n HT 40 MHz	5710	23.13	0.2056
		IEEE 802.11ac VHT 20 MHz	5500 ~ 5700	20.62	0.1153
		IEEE 802.11ac VHT 20 MHz	5720	21.02	0.1265
		IEEE 802.11ac VHT 40 MHz	5510 ~ 5670	22.55	0.1799
		IEEE 802.11ac VHT 40 MHz	5710	23.02	0.2004
		IEEE 802.11ac VHT 80 MHz	5530-5610	20.84	0.1213
		IEEE 802.11ac VHT 80 MHz	5690	20.39	0.1094

1.2 EUT CHANNEL INFORMATION

Frequency Range	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 802.11a	5720 MHz
	IEEE 802.11n HT 20 MHz	5500 ~ 5700 MHz
	IEEE 802.11n HT 20 MHz	5720 MHz
	IEEE 802.11n HT 40 MHz	5510 ~ 5670 MHz
	IEEE 802.11n HT 40 MHz	5710 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 40 MHz	5710 MHz
	IEEE 802.11ac VHT 80 MHz	5530-5610 MHz
	IEEE 802.11ac VHT 80 MHz	5690 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 Category	☒ Integral: antenna permanently attached ☐ External dedicated antennas ☐ External Unique antenna connector
Antenna Type	☒ PIFA ☐ PCB ☐ Dipole ☐ Coils
Antenna Gain	PIFA Antenna 1. 5260 ~ 5320MHz 5G-1(Chain 0): Gain: 4.3dBi 5G-2(Chain 1): Gain: 5.0dBi Directional Gain: 4.66 1. 5500 ~ 5720MHz 5G-1(Chain 0): Gain: 5.1dBi 5G-2(Chain 1): Gain: 4.7dBi Directional Gain: 4.90

Notes:

For 5260 ~ 5320MHz

1. Directional gain= $10\log(((10^{(Ant1/10)}+10^{(Ant2/10)})/2))=10\log(((10^{(4.3/10)}+10^{(5/10)})/2))=4.66\text{ dBi}$

For 5500 ~ 5720MHz

1. Directional gain= $10\log(((10^{(Ant1/10)}+10^{(Ant2/10)})/2))=10\log(((10^{(5.1/10)}+10^{(4.7/10)})/2))=4.90\text{ dBi}$

1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 1.4003
RF output power, conducted	+/- 1.1372
Power density, conducted	+/- 1.4003
3M Semi Anechoic Chamber / 30M~200M	+/- 4.0138
3M Semi Anechoic Chamber / 200M~1000M	+/- 3.9483
3M Semi Anechoic Chamber / 1G~8G	+/- 2.5975
3M Semi Anechoic Chamber / 8G~18G	+/- 2.6112
3M Semi Anechoic Chamber / 18G~26G	+/- 2.7389
3M Semi Anechoic Chamber / 26G~40G	+/- 2.9683
3M Semi Anechoic Chamber / 40G~60G	+/- 1.8509
3M Semi Anechoic Chamber / 60G~75G	+/- 1.9869
3M Semi Anechoic Chamber / 75G~110G	+/- 2.9651
3M Semi Anechoic Chamber / 110G~170G	+/- 2.7807
3M Semi Anechoic Chamber / 170G~220G	+/- 3.6437
3M Semi Anechoic Chamber / 220G~325G	+/- 4.2982

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. 989-1 Wen Shan Rd., Shang Shan Village, Qionglin Township, Hsinchu County 30741, Taiwan (R.O.C.)

Test site	Test Engineer	Remark
AC Conduction Room	Timmy Wang	
Radiation	Timmy Wang	
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					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum Analyzer	R&S	FSV 40	101073	08/01/2016	07/31/2017

Wugu 966 Chamber A					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510252	12/07/2016	12/06/2017
Loop Ant	COM-POWER	AL-130	121051	02/24/2017	02/23/2018
Bilog Antenna	Sunol Sciences	JB3	A030105	07/03/2016	07/02/2017
Pre-Amplifier	EMEC	EM330	60609	06/08/2016	06/07/2017
Horn Antenna	ETC	MCTD 1209	DRH13M02003	09/02/2016	09/01/2017
Pre-Amplifier	MITEQ	AMF-6F-2604 00-40-8P	985646	01/13/2017	01/12/2018
Horn Antenna	EMCO	3116	26370	01/14/2017	01/13/2018
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
Software	EZ-EMC (CCS-3A1RE)				

Conducted Emission Room # B					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
LISN	R&S	ENV216	101054	05/11/2016	05/10/2017
Receiver	R&S	ESCI	101073	08/20/2016	08/19/2017
Software	CCS-3A1-CE				

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
1	Adapter	APD	WB-18D-12FU	N/A	N/A
2	PoE	I.T.E	PW130	N/A	N/A

Support Equipment					
No.	Equipment	Brand	Model	Series No.	FCC ID
1	Notebook	ASUS	A&J	N/A	PD9WM3945ABG
2	Notebook	ASUS	K45V	N/A	PPD-AR5B225

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 662911 D01 v02r01, KDB 789033 D02 v01r03, KDB 644545 D03 v01.

1.9 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements	 FCC MRA: TW0240
Canada	Industry Canada	3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform	 IC 2324G-1 IC 2324G-2

2. TEST SUMMERY

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
15.403(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

3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	1. IEEE 802.11a mode: 6Mbps 2. IEEE 802.11n HT 20 MHz mode: MCS8 3. IEEE 802.11n HT 40 MHz mode: MCS8 4. IEEE 802.11ac VHT 20 MHz mode: MCS8 5. IEEE 802.11ac VHT 40 MHz mode: MCS8 5. IEEE 802.11ac VHT 80 MHz mode: MCS8			
Operating Frequency Range & Number of Channels		Mode	Frequency Range (MHz)	Number of 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	8 Channels
		IEEE 802.11a	5720	1 Channels
		IEEE 802.11n HT 20 MHz	5500 ~ 5700	11 Channels
		IEEE 802.11n HT 20 MHz	5720	1 Channels
		IEEE 802.11n HT 40 MHz	5510 ~ 5670	5 Channels
		IEEE 802.11n HT 40 MHz	5710	1 Channels
		IEEE 802.11ac VHT 20 MHz	5500 ~ 5700	11 Channels
		IEEE 802.11ac VHT 20 MHz	5720	1 Channels
		IEEE 802.11ac VHT 40 MHz	5510 ~ 5670	5 Channels
		IEEE 802.11ac VHT 40 MHz	5710	1 Channels
		IEEE 802.11ac VHT 80 MHz	5530-5610	2 Channels
		IEEE 802.11ac VHT 80 MHz	5690	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

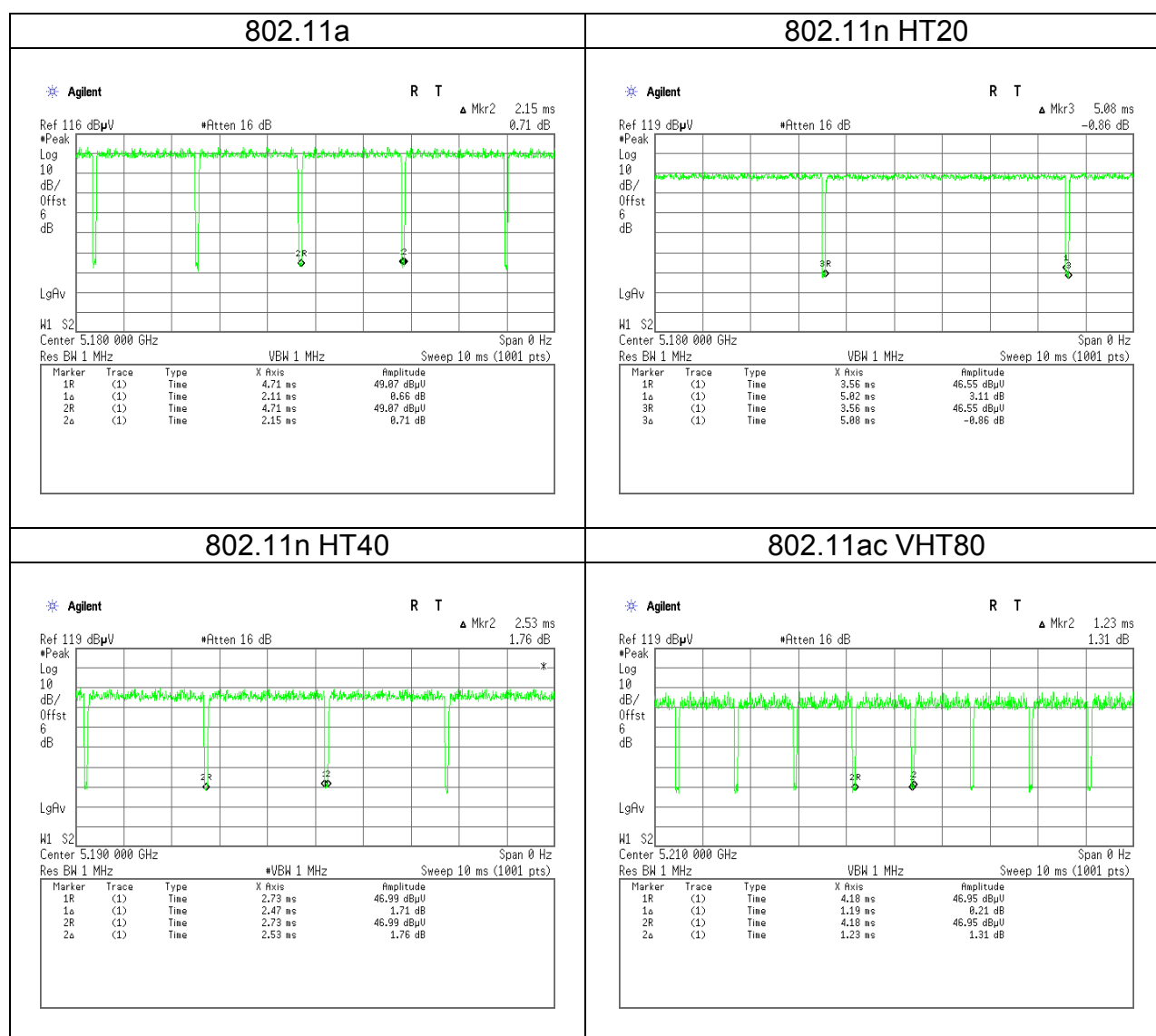
AC Power Line Conducted Emission	
Test Condition	AC Power line conducted emission for line and neutral
Voltage/Hz	120V/60Hz
Test Mode	Mode 1:EUT power by AC adapter Mode 2:EUT power by PoE adapter via LAN cable
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

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 Mode 2:EUT power by PoE adapter via LAN 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 Mode 2:EUT power by PoE adapter via LAN cable
Worst Mode	☒ Mode 1 ☒ Mode 2 ☐ Mode 3 ☐ Mode 4

3.3 EUT DUTY CYCLE

Duty Cycle				
Configuration	TX ON (ms)	TX ALL (ms)	Duty Cycle (%)	Duty Factor(dB)
802.11a	2.11	2.15	98.14	0.08
802.11n HT20	5.02	5.08	98.82	0.05
802.11n HT40	2.47	2.53	97.63	0.10
802.11ac VHT80	1.19	1.23	96.75	0.14



4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a)

Frequency Range (MHz)	Limits(dB μ V)	
	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

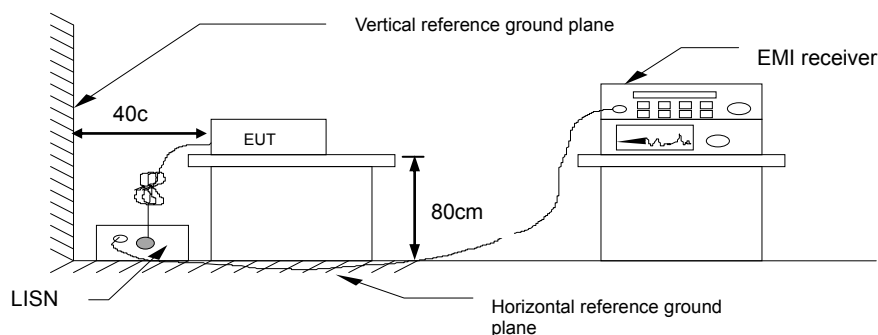
* Decreases with the logarithm of the frequency.

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

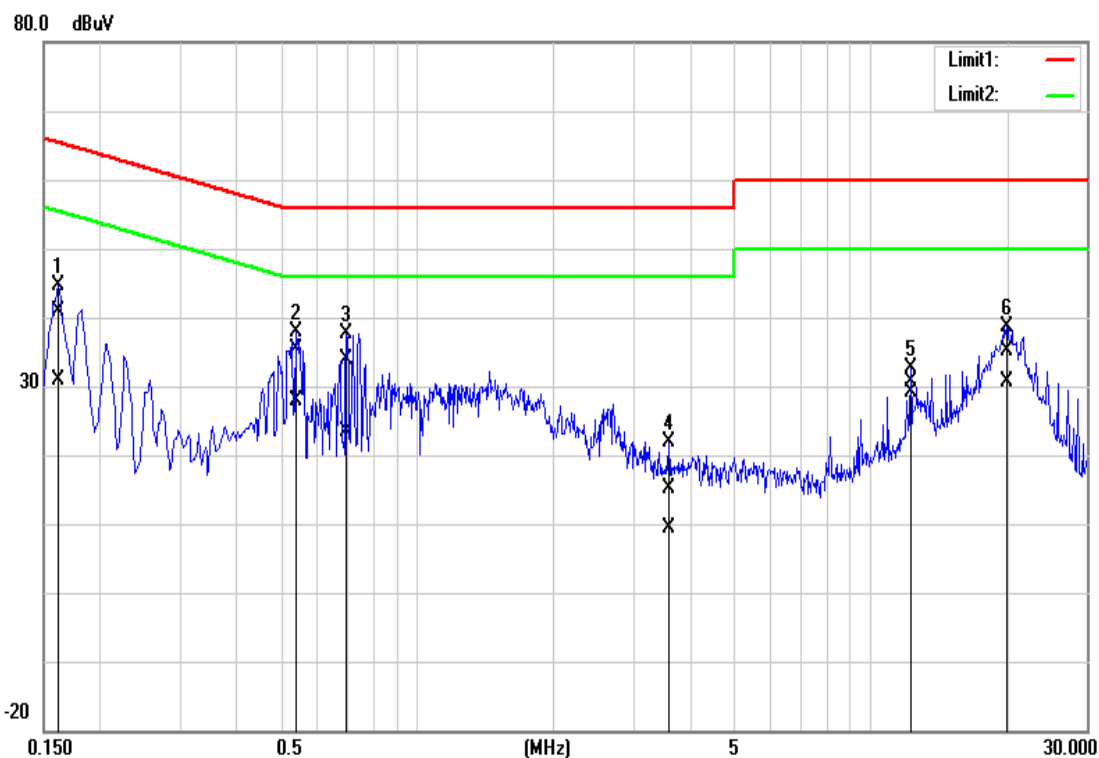


4.1.4 Test Result

Pass.

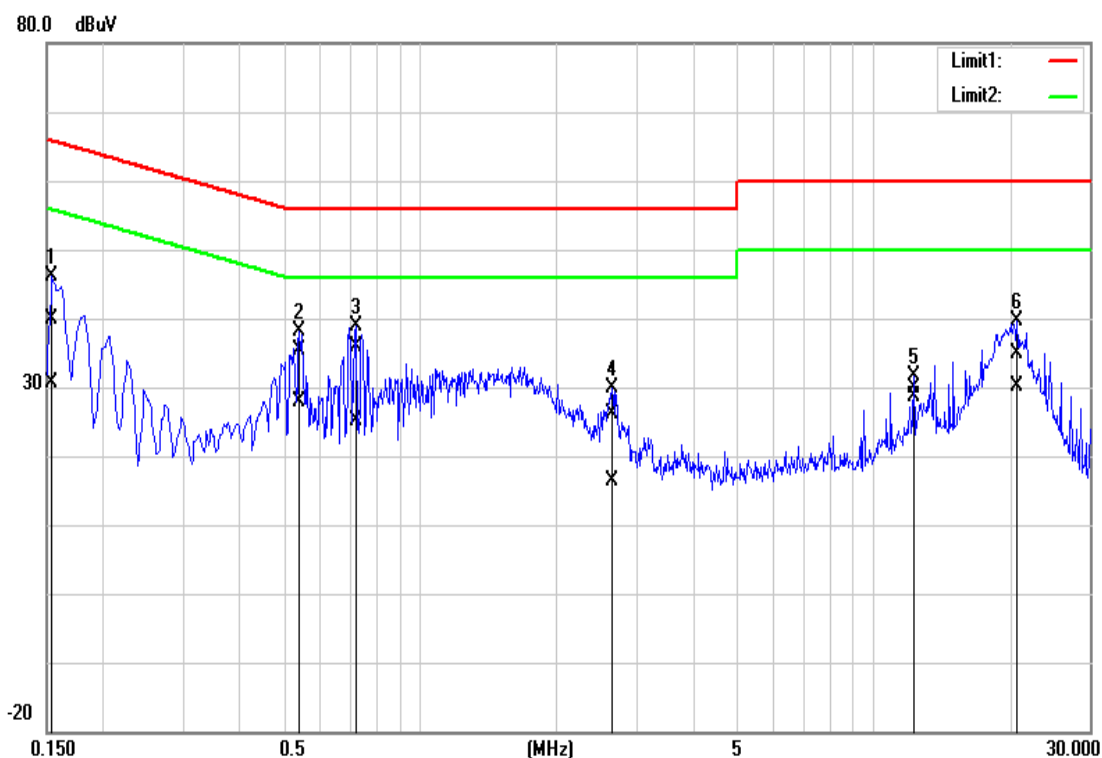
Test Data

Test Mode	Mode 1	Temp/Hum	24(°C) / 50%RH
Test Voltage	120Vac / 60Hz	Test Date	November 9, 2017
Phase	Line	Test Engineer	Timmy Wang



Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1620	31.14	21.29	9.71	40.85	31.00	65.36	55.36	-24.51	-24.36	Pass
0.5420	25.63	18.23	9.70	35.33	27.93	56.00	46.00	-20.67	-18.07	Pass
0.6980	24.07	13.66	9.70	33.77	23.36	56.00	46.00	-22.23	-22.64	Pass
3.5940	5.33	-0.44	9.74	15.07	9.30	56.00	46.00	-40.93	-36.70	Pass
12.2740	20.89	19.22	9.81	30.70	29.03	60.00	50.00	-29.30	-20.97	Pass
20.0020	25.26	20.75	9.88	35.14	30.63	60.00	50.00	-24.86	-19.37	Pass

Test Mode	Mode 1	Temp/Hum	27(°C)/ 53%RH
Test Voltage	120Vac / 60Hz	Test Date	November 9, 2017
Phase	Neutral	Test Engineer	Timmy Wang



Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1540	30.04	20.93	9.78	39.82	30.71	65.78	55.78	-25.96	-25.07	Pass
0.5420	25.56	18.06	9.76	35.32	27.82	56.00	46.00	-20.68	-18.18	Pass
0.7220	26.23	15.45	9.76	35.99	25.21	56.00	46.00	-20.01	-20.79	Pass
2.6540	16.32	6.64	9.80	26.12	16.44	56.00	46.00	-29.88	-29.56	Pass
12.2740	19.87	18.51	10.08	29.95	28.59	60.00	50.00	-30.05	-21.41	Pass
20.7300	24.72	19.95	10.28	35.00	30.23	60.00	50.00	-25.00	-19.77	Pass

4.2 26DB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

4.2.1 Test Limit

26 dB Bandwidth : For reporting purposes only.

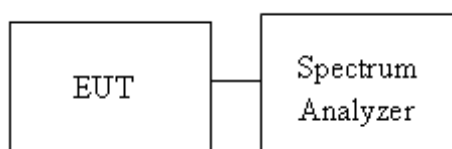
Occupied Bandwidth(99%) : For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as KDB 789033 D02 v01r03 Section C, D, and ANSI 63.10:2013 clause 6.9.3,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. UNII-2a and UNII-2c,
 - (1) BW=20MHz : SA set RBW = 300kHz, VBW = 1MHz and Detector = Peak, to measurement 26 dB Bandwidth and 99% Bandwidth
 - (2) BW=40MHz : SA set RBW = 1MHz, VBW = 3MHz and Detector = Peak, to measurement 26 dB Bandwidth and 99% Bandwidth
 - (3) BW=80MHz : SA set RBW = 1MHz, VBW = 3MHz and Detector = Peak, to measurement 26 dB Bandwidth and 99% Bandwidth
4. Measure and record the result of 26 dB Bandwidth and 99% Bandwidth. in the test report.

4.2.3 Test Setup

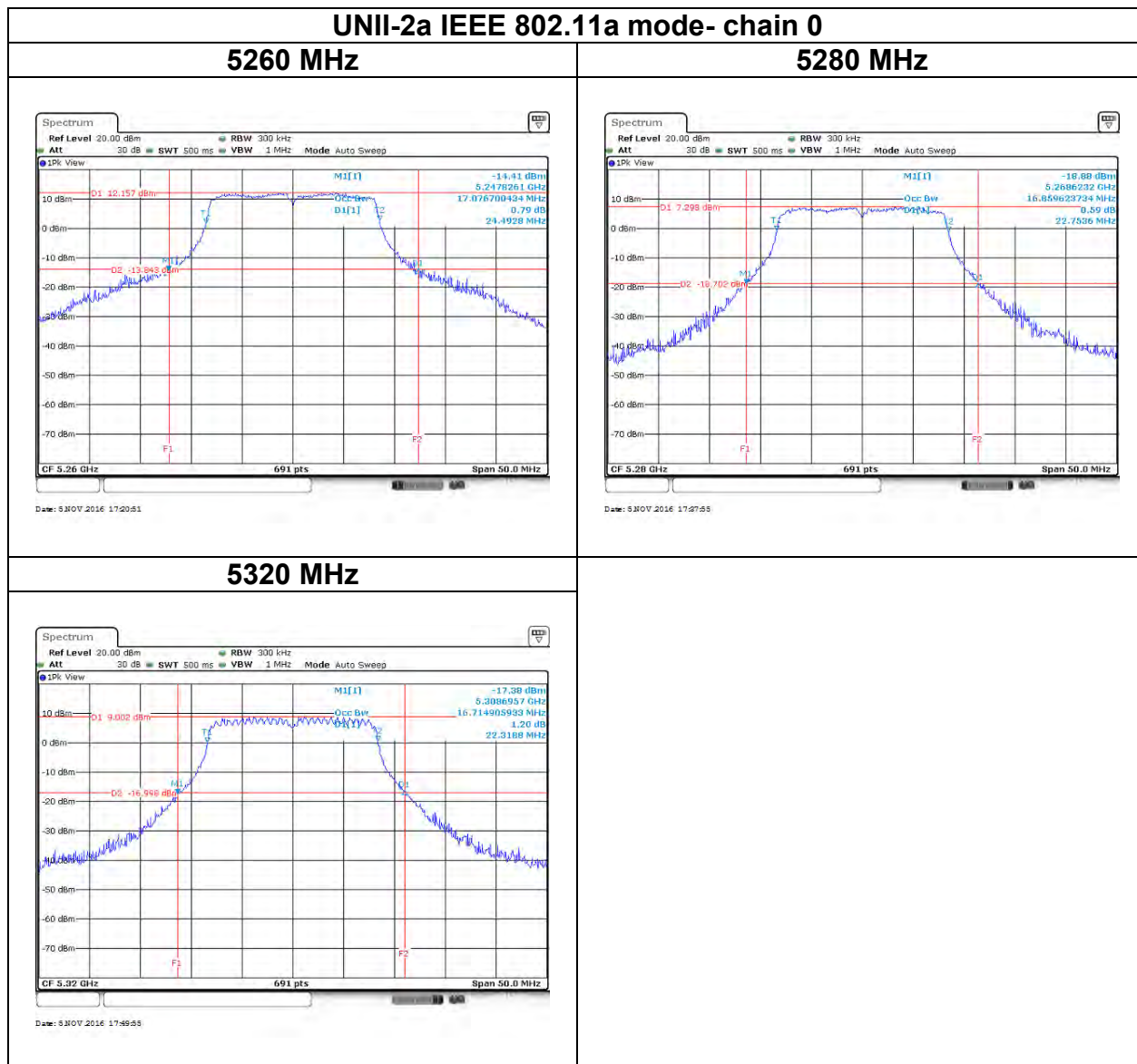


4.2.4 Test Result

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)
52	5260	17.0767	16.7872	24.4928	22.1740
56	5280	16.8596	16.7872	22.7536	22.3188
64	5320	16.7149	16.9319	22.3188	22.8261
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)
52	5260	18.0173	18.0173	23.9855	23.9130
56	5280	18.0173	18.0173	23.9130	24.0580
64	5320	18.0173	18.0173	23.6232	23.6232
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)
54	5270	37.5108	37.6266	48.8120	48.1160
62	5310	37.8581	37.5108	47.7700	47.1880
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)
58	5290	76.8740	76.8740	90.4350	90.2030

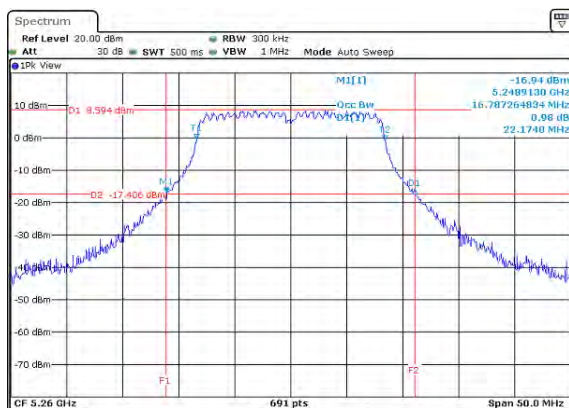
UNII-2c 5475-5725 MHz					
Test mode: IEEE 802.11a mode					
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 26dB BW (MHz)	Chain 1 26dB BW (MHz)
100	5500	16.9319	16.7872	22.8261	22.5362
116	5580	16.9319	16.7872	23.1884	22.6087
140	5700	17.0043	16.7872	22.8261	22.6812
144	5720	17.1490	16.7872	20.0430	19.4650
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)
100	5500	18.0173	18.0897	23.7681	23.8406
116	5580	18.0897	18.0897	23.9855	23.8406
120	5600	18.1620	18.0897	23.9855	24.2029
124	5620	18.1620	18.0897	24.0580	24.2029
128	5640	18.1620	18.0897	24.0580	24.3478
140	5700	18.1620	18.0173	24.2029	23.9855
144	5720	18.2344	18.0897	21.2740	21.0560
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)
102	5510	37.7424	37.3950	47.8840	46.7250
110	5550	37.6266	37.5108	51.7100	54.9570
118	5590	37.6266	37.5108	48.7000	47.1880
126	5630	37.6266	37.5108	59.2470	46.8410
134	5670	37.6266	37.5108	58.3190	54.1450
142	5710	37.5108	37.3950	42.1700	41.5900
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)
106	5530	76.8740	76.6425	90.2030	90.4350
122	5610	76.8740	76.6425	90.4350	89.7390
138	5690	77.1056	76.6425	91.3620	90.2030

Test Data



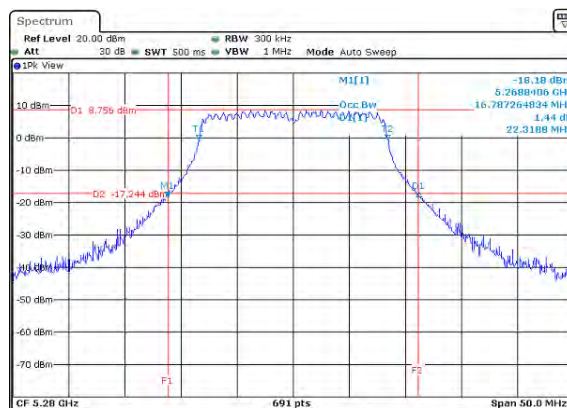
UNII-2a IEEE 802.11a mode- chain 1

5260 MHz



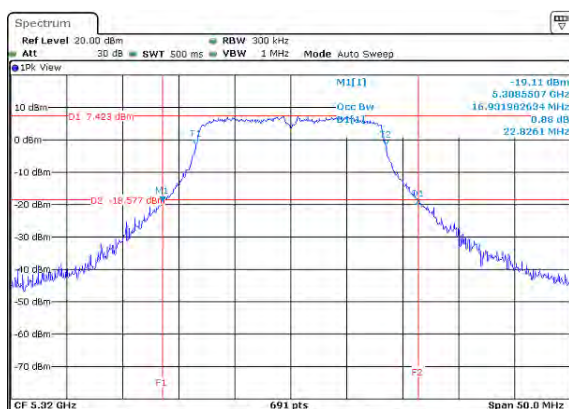
Date: 5/10/2016 17:27:21

5280 MHz



Date: 5/10/2016 17:26:25

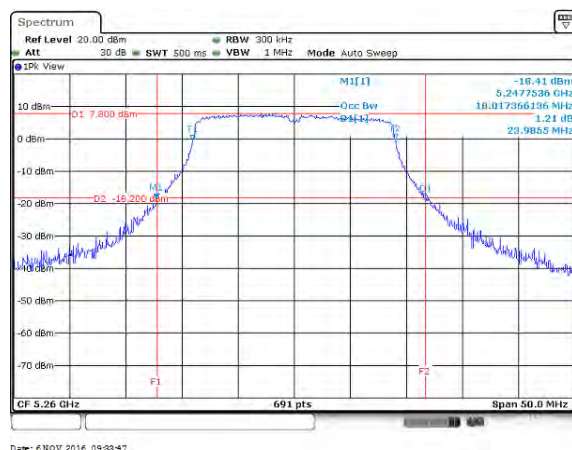
5320 MHz



Date: 5/10/2016 17:35:27

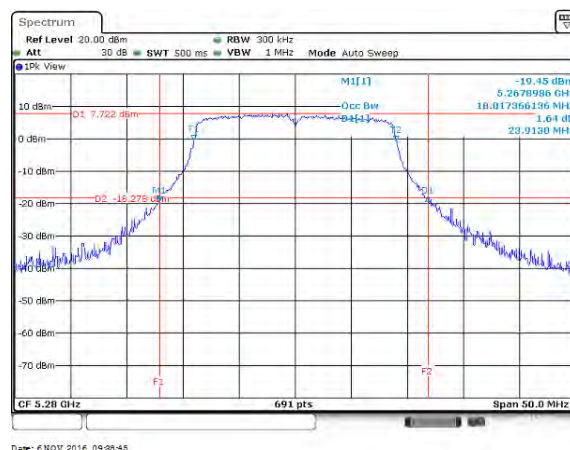
UNII-2a IEEE 802.11n HT20 mode- chain 0

5260 MHz



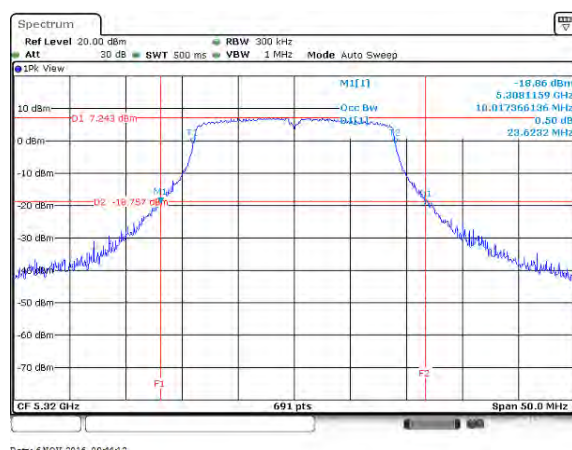
Date: 6/30/2016 09:28:47

5280 MHz



Date: 6/30/2016 09:28:48

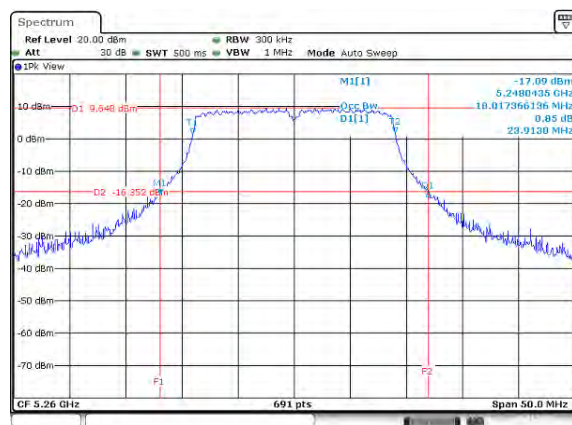
5320 MHz



Date: 6/30/2016 09:28:12

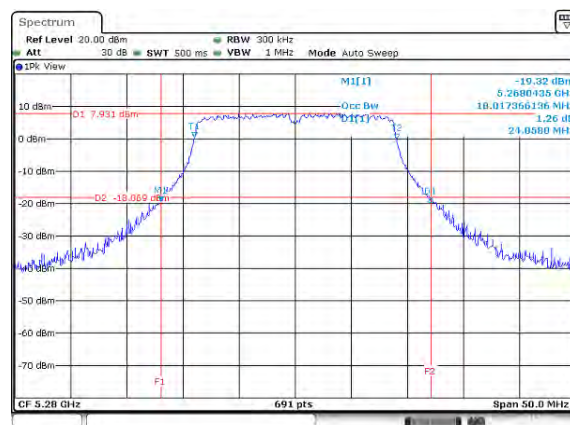
UNII-2a IEEE 802.11n HT20 mode- chain 1

5260 MHz



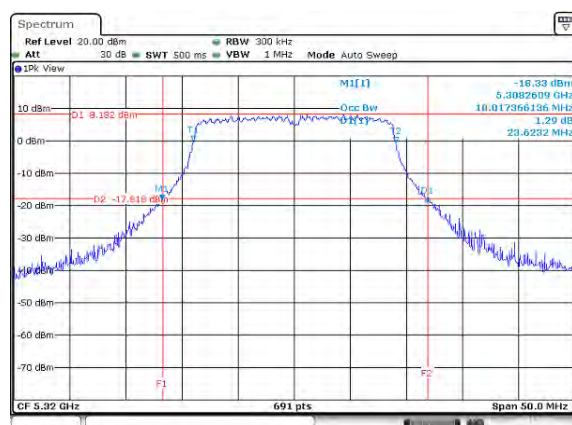
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5280 MHz



Date: 6/30/2016 09:29:51

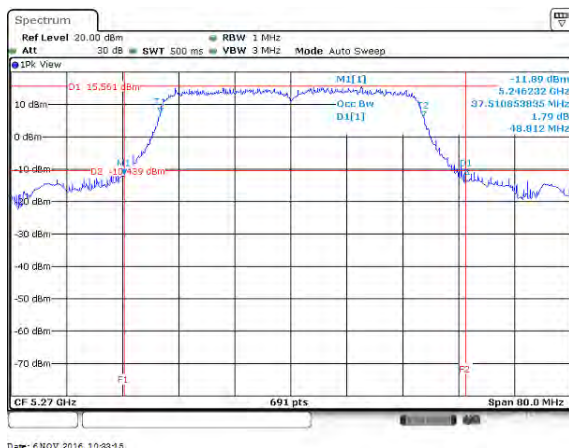
5320 MHz



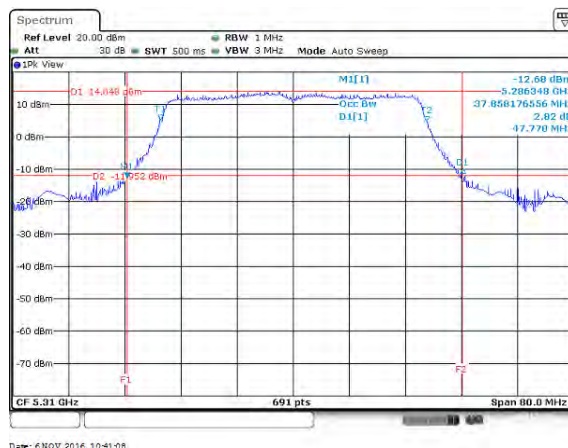
Date: 6/30/2016 09:42:26

UNII-2a IEEE 802.11n HT40 mode- chain 0

5270 MHz

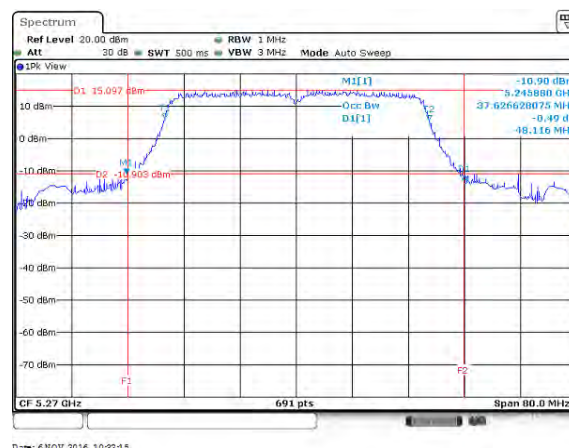


5310 MHz

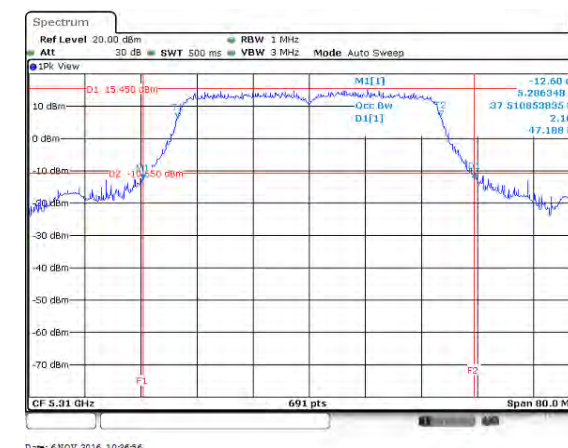


UNII-2a IEEE 802.11n HT40 mode- chain 1

5270 MHz

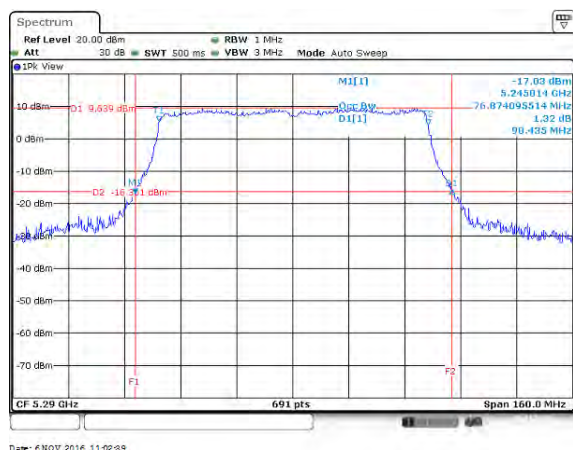


5310 MHz



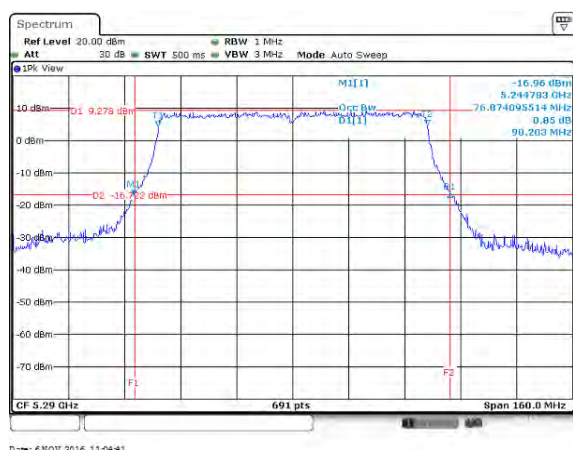
UNII-2a IEEE 802.11ac VHT80 mode- chain 0

5290 MHz

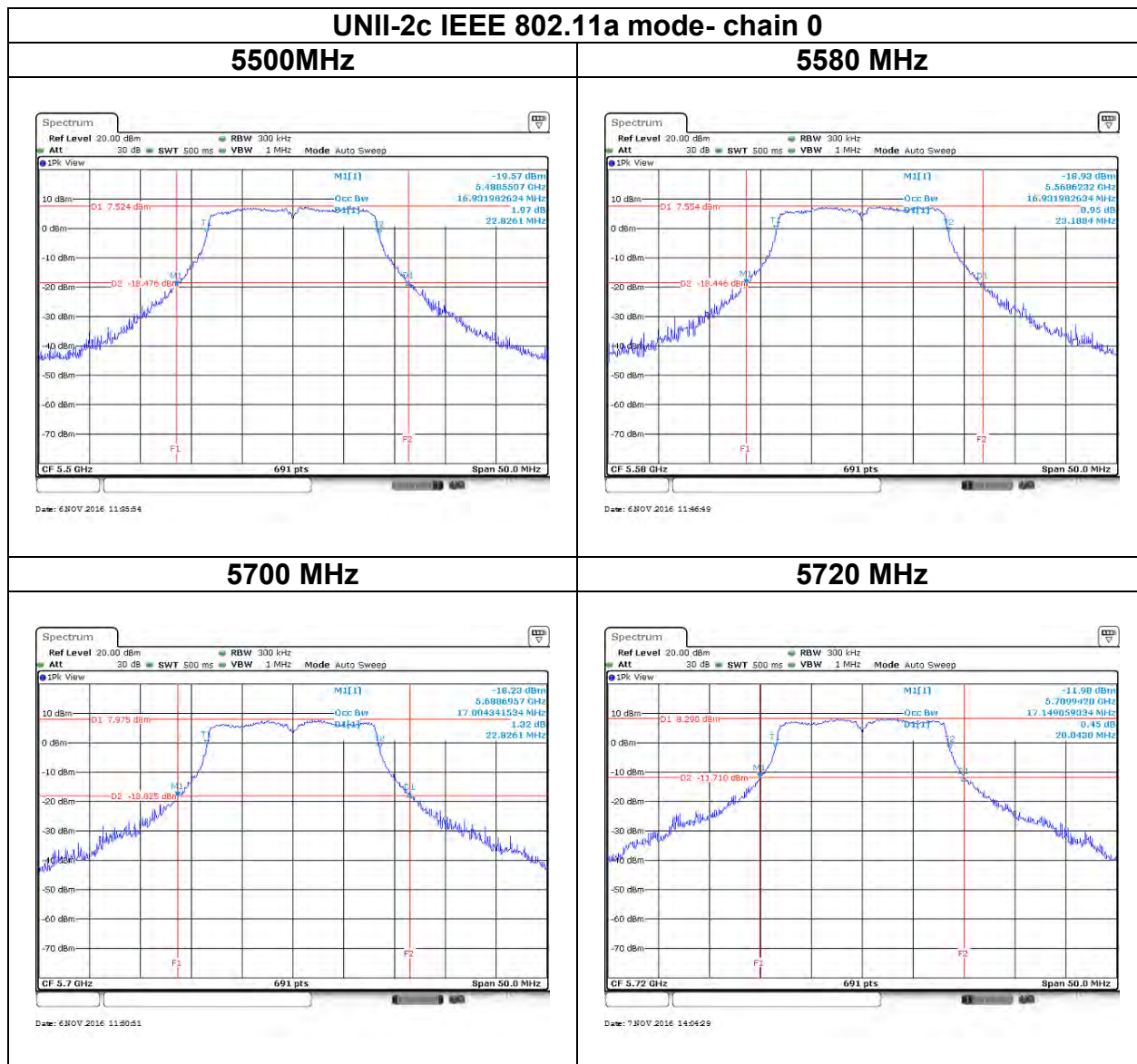


UNII-2a IEEE 802.11ac VHT80 mode- chain 1

5290 MHz

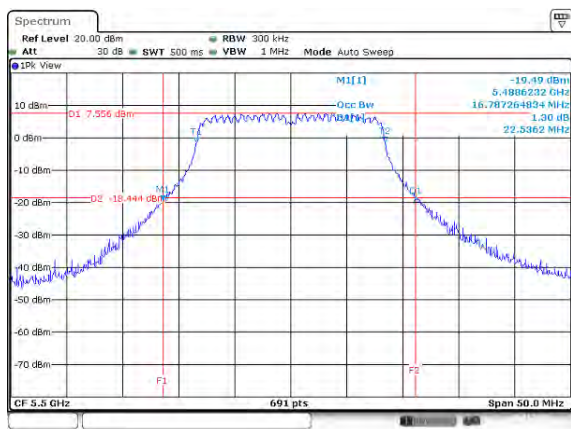


Test Data



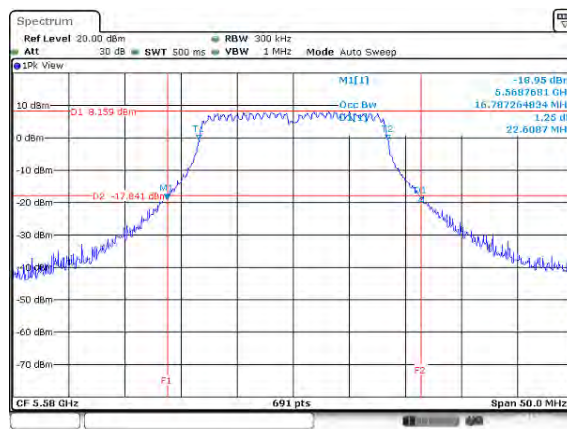
UNII-2c IEEE 802.11a mode- chain 1

5500MHz



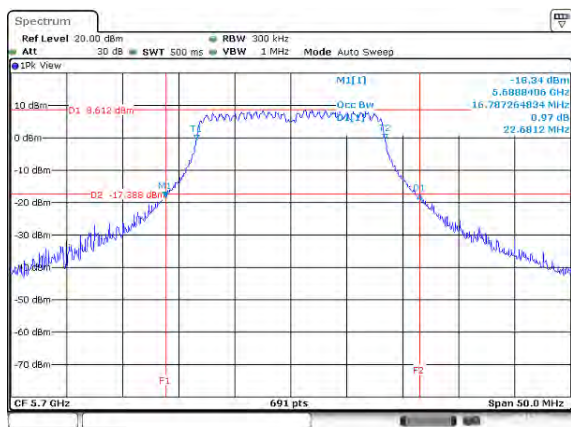
Date: 6 NOV 2016 11:22:22

5580 MHz



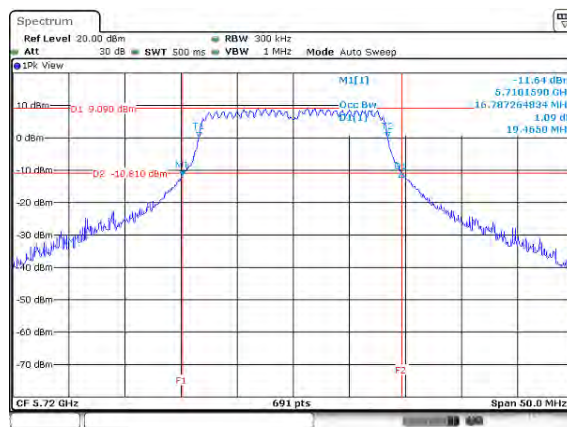
Date: 6 NOV 2016 11:43:21

5700 MHz

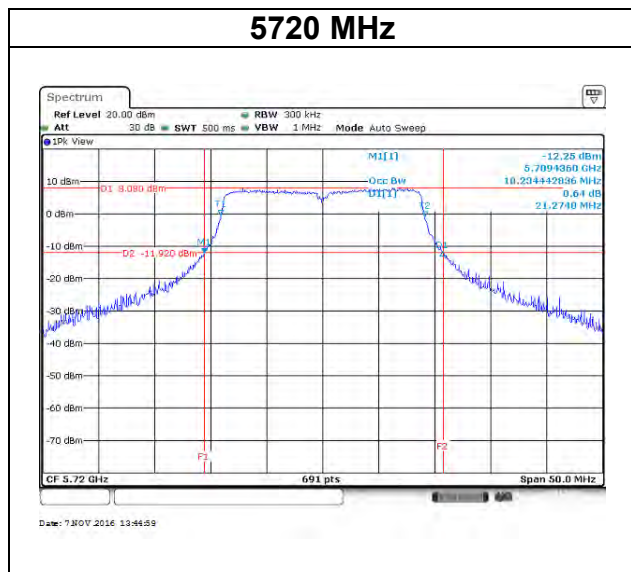


Date: 6 NOV 2016 11:23:41

5720 MHz



Date: 7 NOV 2016 14:29:50



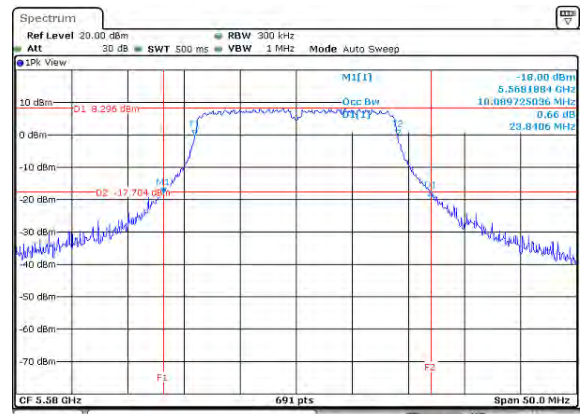
UNII-2c IEEE 802.11n HT20 mode- chain 1

5500MHz



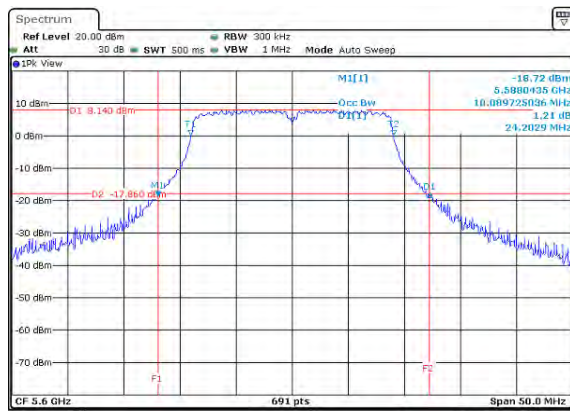
Date: 6 NOV 2016 12:59:01

5580 MHz



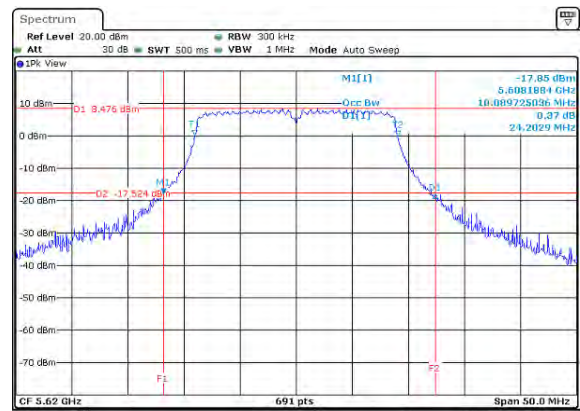
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5600 MHz



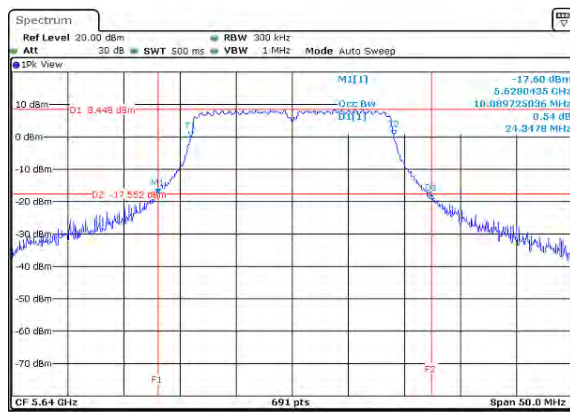
Date: 6 NOV 2016 12:26:10

5620 MHz



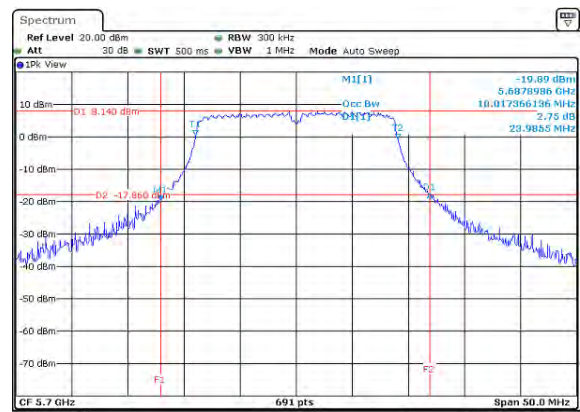
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5640MHz

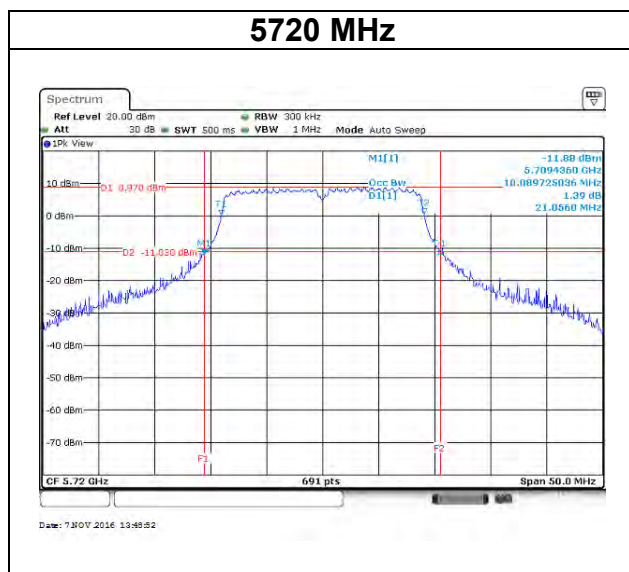


Date: 6 NOV 2016 12:29:46

5700 MHz

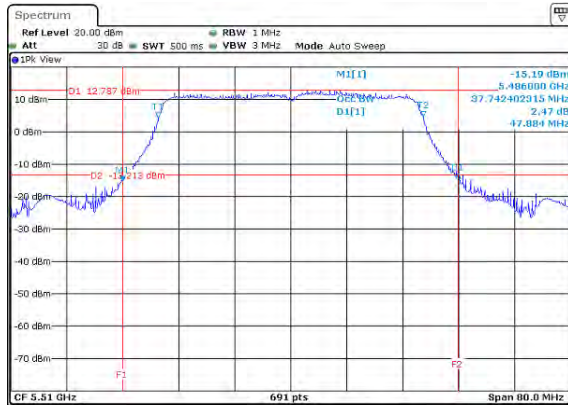


Date: 6 NOV 2016 12:41:24



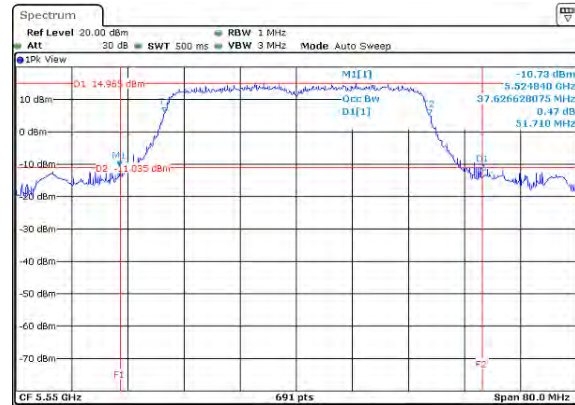
UNII-2c IEEE 802.11n HT40 mode- chain 0

5510 MHz



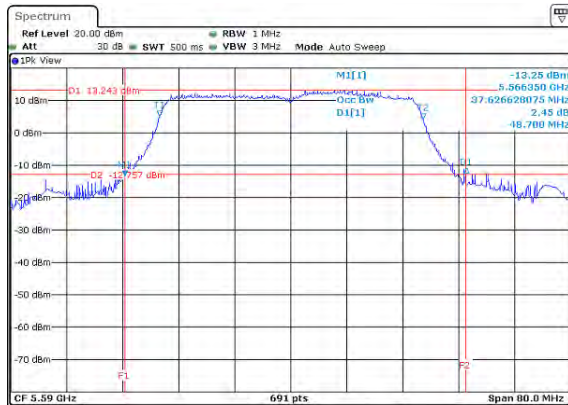
Date: 6 NOV 2016 14:21:04

5550 MHz



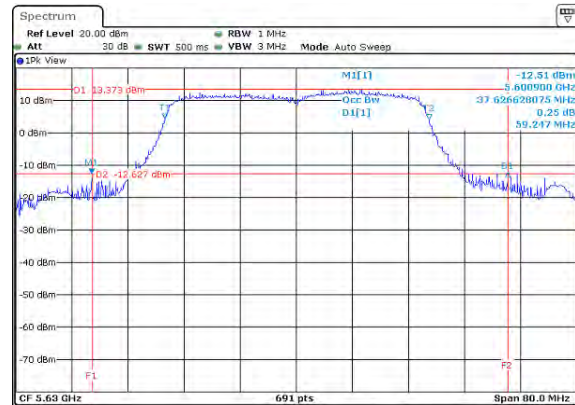
Date: 6 NOV 2016 14:29:12

5590 MHz



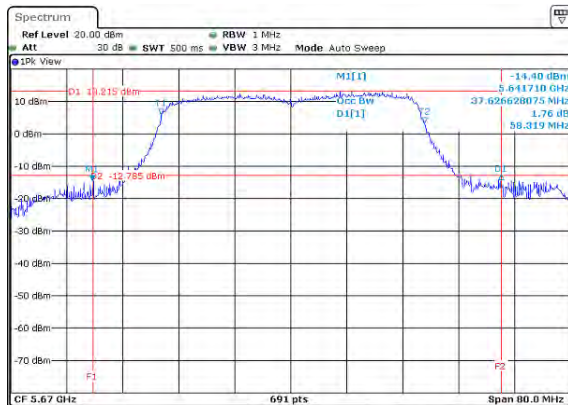
Date: 6 NOV 2016 15:44:14

5630 MHz



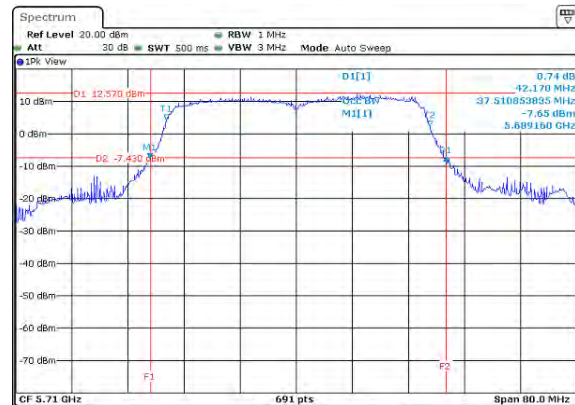
Date: 6 NOV 2016 15:49:48

5670 MHz



Date: 6 NOV 2016 15:44:23

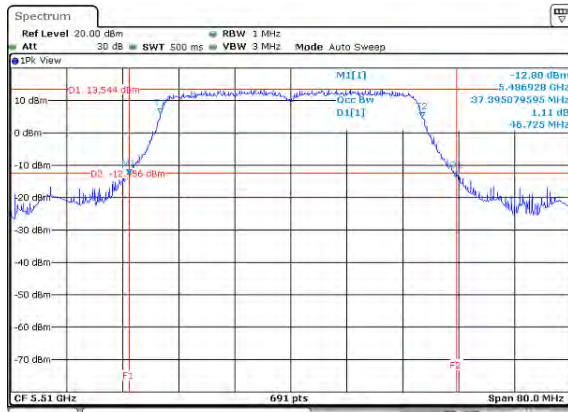
5710 MHz



Date: 7 NOV 2016 13:41:36

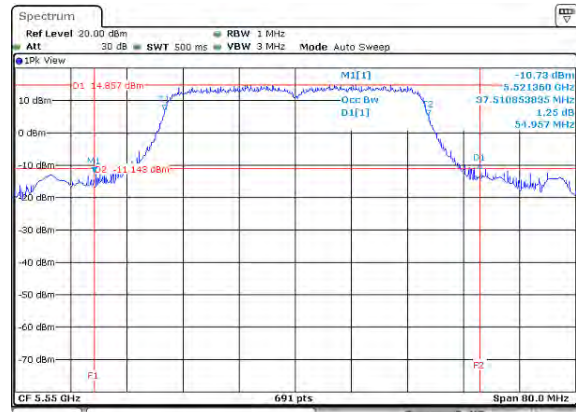
UNII-2c IEEE 802.11n HT40 mode- chain 1

5510 MHz



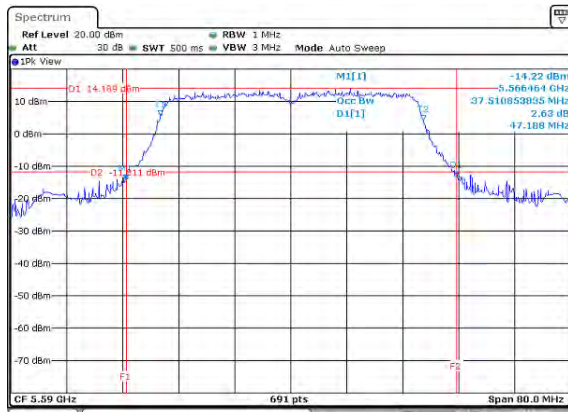
Date: 6 NOV 2016 14:23:51

5550 MHz



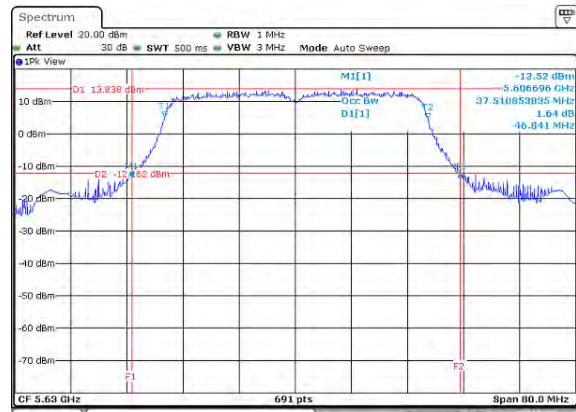
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5590 MHz



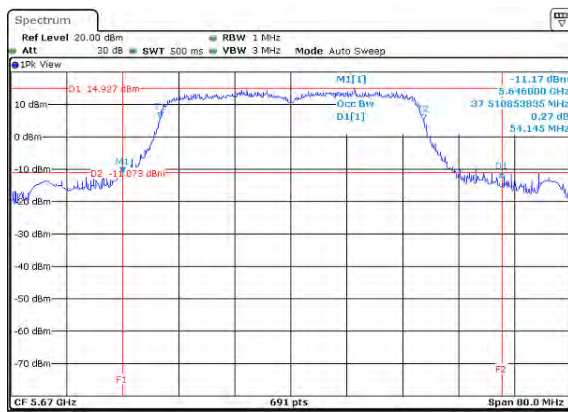
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5630 MHz



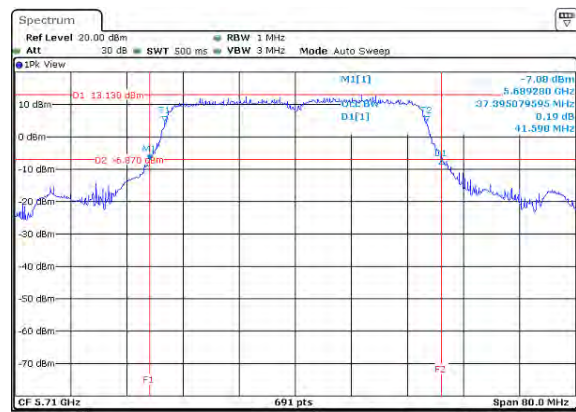
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5670 MHz



Date: 6 NOV 2016 15:28:22

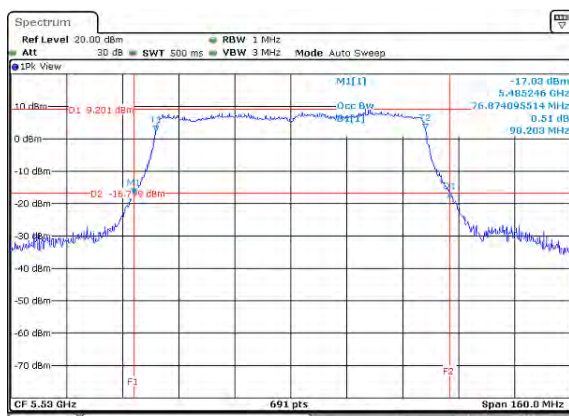
5710 MHz



Date: 7 NOV 2016 13:40:17

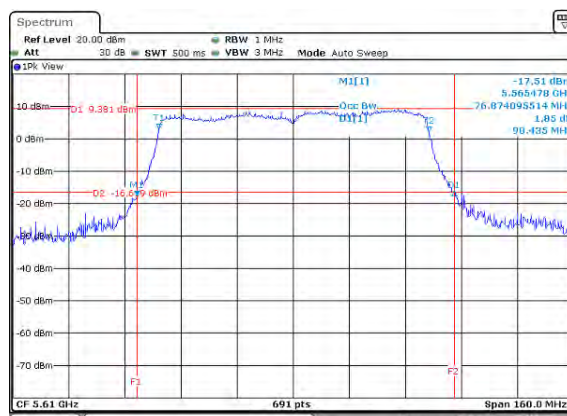
UNII-2c IEEE 802.11ac VHT80 mode- chain 0

5530 MHz



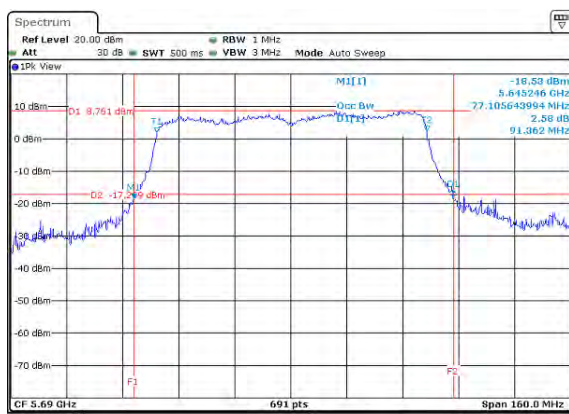
Date: 6 NOV 2016 16:30:53

5610 MHz



Date: 6 NOV 2016 16:33:54

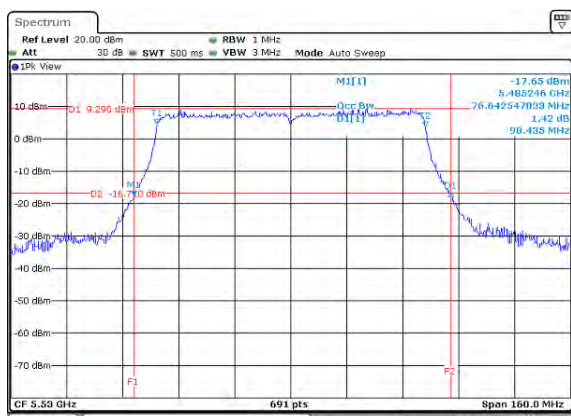
5690 MHz



Date: 7 NOV 2016 13:29:47

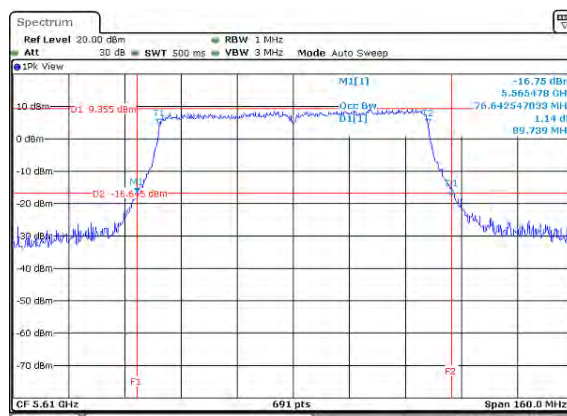
UNII-2c IEEE 802.11ac VHT80 mode- chain 1

5530 MHz



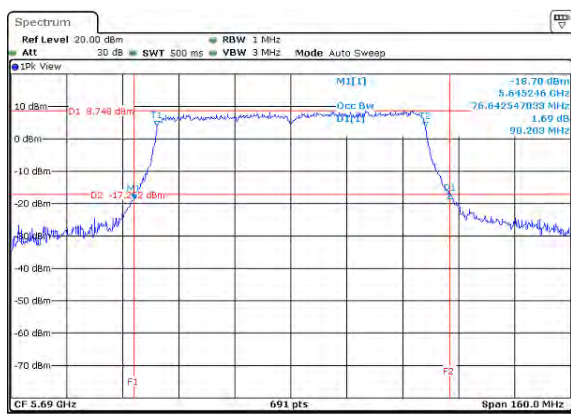
Date: 6 NOV 2016 16:28:59

5610 MHz



Date: 6 NOV 2016 16:28:06

5690 MHz



Date: 7 NOV 2016 13:28:25

4.3 OUTPUT POWER MEASUREMENT

4.3.1 Test Limit

According to 15.407(a)(2)

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.

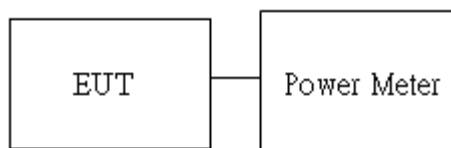
UNII-2a/2c Limit	☐ Antenna not exceed 6 dBi : 24dBm (EIRP : 30dBm) ☒ Antenna with DG greater than 6 dBi : [Limit = 24 – (DG – 6)]
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4.3.2 Test Procedure

Test method Refer as KDB 789033 D02 v01r03, 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 :

5G-2Tx (UNII-2a)								
Configuration	Channel	Frequency (MHz)	Power Setting		AV Power(dBm)		AV Total Power(dBm)	Limit (dBm)
			chain0	chain1	chain0	chain1		
IEEE 802.11a Data rate: 6Mbps	52	5260	15.50	15.50	15.97	16.21	*19.10	24
	56	5280	15.50	15.50	15.90	15.67	18.79	
	64	5320	16.00	16.00	16.35	16.09	19.23	
IEEE 802.11 HT20 Data rate: MCS8	52	5260	16.50	16.50	17.23	17.15	*20.20	
	56	5280	16.50	16.50	16.99	17.06	20.03	
	64	5320	16.50	16.50	17.02	17.07	20.05	
IEEE 802.11 HT40 Data rate: MCS8	54	5270	18.50	18.50	20.01	20.13	*23.08	
	62	5310	18.00	18.00	19.60	19.74	22.68	
IEEE 802.11 VHT20 Data rate: MCS8	52	5260	16.50	16.50	16.96	17.00	19.99	
	56	5280	16.50	16.50	16.99	17.08	20.04	
	64	5320	16.50	16.50	17.19	17.31	*20.26	
IEEE 802.11 VHT40 Data rate: MCS8	54	5270	19.00	19.00	19.80	19.91	*22.86	
	62	5310	18.00	18.00	19.38	19.52	22.46	
IEEE 802.11 VHT80 Data rate: MCS8	58	5290	17.00	17.00	18.30	17.90	*21.12	

5G-2Tx (UNII-2a) (With TPC)					
Configuration	Channel	Frequency (MHz)	AV Power(dBm)		AV Total Power(dBm)
			chain0	chain1	
IEEE 802.11a Data rate: 6Mbps	52	5260	10.21	10.10	13.17
	56	5280	14.02	13.52	16.79
	64	5320	14.21	13.90	17.07
IEEE 802.11 HT20 Data rate: MCS8	52	5260	13.87	14.10	17.00
	56	5280	13.43	13.90	16.68
	64	5320	14.04	14.15	17.11
IEEE 802.11 HT40 Data rate: MCS8	54	5270	14.06	13.96	17.02
	62	5310	13.51	14.33	16.95
IEEE 802.11 VHT20 Data rate: MCS8	52	5260	14.12	13.70	16.92
	56	5280	13.66	14.04	16.87
	64	5320	14.23	14.16	17.21
IEEE 802.11 VHT40 Data rate: MCS8	54	5270	13.35	14.12	16.76
	62	5310	13.55	13.61	16.59
IEEE 802.11 VHT80 Data rate: MCS8	58	5290	13.88	13.55	16.73

5G-2Tx (UNII-2c)								
Configuration	Channel	Frequency (MHz)	Power Setting		AV Power(dBm)		AV Total Power(dBm)	Limit (dBm)
			chain0	chain1	chain0	chain1		
IEEE 802.11a Data rate: 6Mbps	100	5500	16.50	16.50	16.69	16.79	19.75	24
	116	5580	16.50	16.50	16.88	16.88	*19.89	
	140	5700	16.50	16.50	16.45	16.48	19.48	
	144	5720	17.50	17.50	17.15	17.25	*20.21	
IEEE 802.11 HT20 Data rate: MCS8	100	5500	17.00	17.00	17.35	17.43	20.40	
	116	5580	17.50	17.50	17.80	17.59	20.70	
	120	5600	17.50	17.50	17.79	17.64	20.72	
	124	5620	17.50	17.50	17.84	17.78	*20.82	
	128	5640	17.50	17.50	17.49	17.36	20.43	
	140	5700	18.00	18.00	18.19	17.36	20.80	
	144	5720	18.50	18.50	18.12	18.00	*21.07	
IEEE 802.11 HT40 Data rate: MCS8	102	5510	18.00	18.00	19.46	19.21	22.34	
	110	5550	19.00	19.00	19.93	19.97	*22.96	
	118	5590	19.00	19.00	19.95	19.86	22.91	
	126	5630	19.00	19.00	19.80	19.70	22.76	
	134	5670	19.00	19.00	19.57	19.53	22.56	
	142	5710	20.00	20.00	19.92	20.32	*23.13	
IEEE 802.11 VHT20 Data rate: MCS8	100	5500	17.00	17.00	17.20	17.07	20.14	
	116	5580	17.50	17.50	17.41	17.53	20.48	
	120	5600	17.50	17.50	17.70	17.52	*20.62	
	124	5620	17.50	17.50	17.60	17.39	20.51	
	128	5640	17.50	17.50	17.20	17.23	20.22	
	140	5700	17.50	17.50	17.03	17.23	20.14	
	144	5720	18.50	18.50	18.03	18.00	*21.02	
IEEE 802.11 VHT40 Data rate: MCS8	102	5510	18.00	18.00	19.27	19.24	22.26	
	110	5550	19.00	19.00	19.48	19.60	*22.55	
	118	5590	19.00	19.00	19.51	19.56	22.54	
	126	5630	19.00	19.00	19.38	19.41	22.40	
	134	5670	19.00	19.00	19.14	19.11	22.13	
	142	5710	20.00	20.00	19.82	20.19	*23.02	
IEEE 802.11 VHT80 Data rate: MCS8	106	5530	17.50	17.50	17.77	17.50	20.65	
	122	5610	17.50	17.50	17.92	17.74	*20.84	
	138	5690	17.50	17.50	17.31	17.45	*20.39	

5G-2Tx (UNII-2c) (With TPC)					
Configuration	Channel	Frequency (MHz)	AV Power(dBm)		AV Total Power(dBm)
			chain0	chain1	
IEEE 802.11a Data rate: 6Mbps	100	5500	10.94	10.77	13.87
	116	5580	10.68	10.14	13.43
	140	5700	10.61	10.23	13.43
	144	5720	10.94	10.83	13.89
IEEE 802.11 HT20 Data rate: MCS8	100	5500	10.95	10.42	13.71
	116	5580	10.57	10.20	13.39
	120	5600	10.88	10.66	13.78
	124	5620	10.83	10.57	13.71
	128	5640	10.65	10.61	13.64
	140	5700	10.98	10.94	13.97
	144	5720	11.53	11.67	14.61
IEEE 802.11 HT40 Data rate: MCS8	102	5510	12.99	12.56	15.79
	110	5550	12.19	13.73	16.04
	118	5590	12.76	13.35	16.08
	126	5630	11.69	13.51	15.70
	134	5670	13.11	14.03	16.60
	142	5710	12.26	13.68	16.03
IEEE 802.11 VHT20 Data rate: MCS8	100	5500	12.17	13.62	15.96
	116	5580	13.00	13.30	16.16
	120	5600	11.44	13.35	15.51
	124	5620	12.96	13.61	16.31
	128	5640	12.28	14.14	16.32
	140	5700	13.68	13.63	16.66
	144	5720	12.07	13.31	15.74
IEEE 802.11 VHT40 Data rate: MCS8	102	5510	13.61	14.03	16.84
	110	5550	11.44	13.78	15.77
	118	5590	13.63	13.60	16.62
	126	5630	11.80	13.30	15.63
	134	5670	13.45	13.66	16.57
	142	5710	12.41	14.03	16.30
IEEE 802.11 VHT80 Data rate: MCS8	106	5530	12.16	13.89	16.12
	122	5610	13.48	13.90	16.70
	138	5690	11.87	13.80	15.95

4.4 POWER SPECTRAL DENSITY

4.4.1 Test Limit

According to 15.407(a)(2)

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.

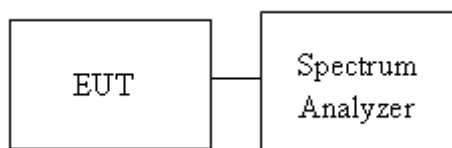
UNII-2a/2c Limit	☒ Antenna not exceed 6 dBi : 11 dBm ☐ Antenna with DG greater than 6 dBi : [Limit = 11 – (DG – 6)]
------------------	---

4.4.2 Test Procedure

Test method Refer as KDB 789033 D02 v01r03, Section F

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

4.4.3 Test Setup

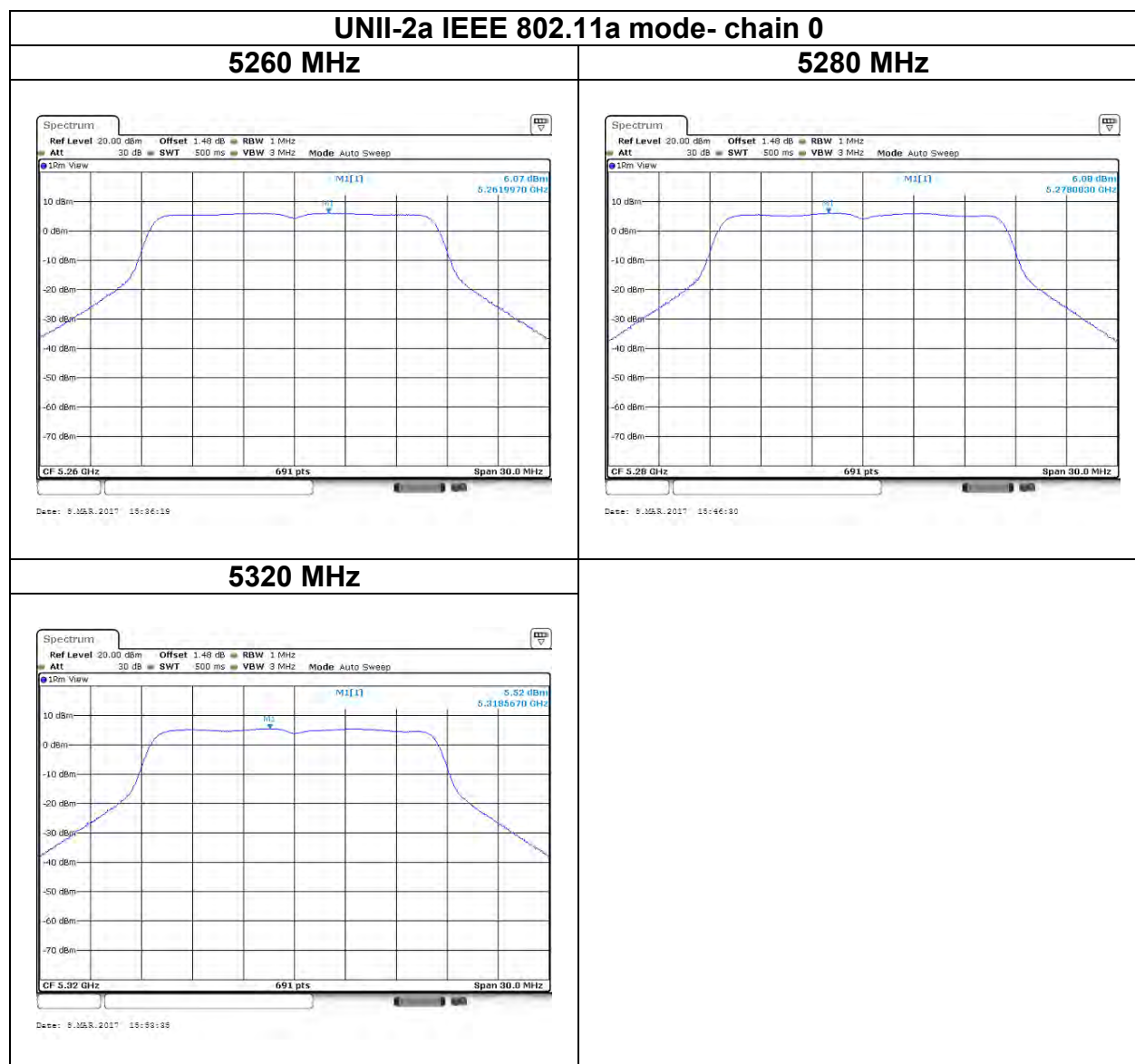


4.4.4 Test Result

UNII-2a 5250-5350 MHz					
Test mode: IEEE 802.11a mode					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PSSD (dBm)	Limit (dBm)
52	5260	6.07	6.11	9.10	11.00
56	5280	6.08	6.08	9.09	
64	5320	5.52	5.92	8.73	
Test mode: IEEE 802.11n HT20 mode					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PSSD (dBm)	Limit (dBm)
52	5260	6.03	5.99	9.02	11.00
56	5280	6.01	6.07	9.05	
64	5320	6.01	6.22	9.13	
Test mode: IEEE 802.11n HT40 mode					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PSSD (dBm)	Limit (dBm)
54	5270	5.72	5.54	8.64	11.00
62	5310	5.97	5.96	8.98	
Test mode: IEEE 802.11ac VHT80 mode					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PSSD (dBm)	Limit (dBm)
58	5290	0.60	0.78	3.70	11.00

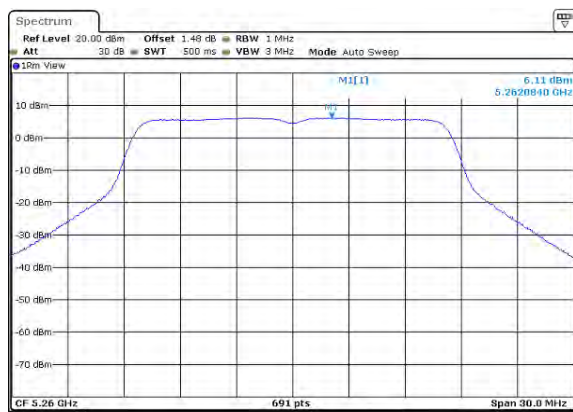
UNII-2c 5470-5725 MHz					
Test mode: IEEE 802.11a mode					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PSSD (dBm)	Limit (dBm)
100	5500	5.66	5.50	8.59	11.00
116	5580	5.89	5.44	8.68	
140	5700	5.77	5.35	8.58	
144	5720	5.80	5.29	8.56	
Test mode: IEEE 802.11n HT20 mode					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PSSD (dBm)	Limit (dBm)
100	5500	5.74	5.41	8.59	11.00
116	5580	5.94	5.41	8.69	
120	5600	5.96	5.37	8.69	
124	5620	5.79	5.30	8.56	
128	5640	5.69	5.25	8.49	
140	5700	5.35	5.25	8.31	
144	5720	5.28	5.67	8.49	
Test mode: IEEE 802.11n HT40 mode					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PSSD (dBm)	Limit (dBm)
102	5510	5.28	4.73	8.02	11.00
110	5550	5.85	5.40	8.64	
118	5590	6.12	5.47	8.82	
126	5630	5.82	5.15	8.51	
134	5670	5.84	5.49	8.68	
142	5710	5.51	5.02	8.28	
Test mode: IEEE 802.11ac VHT80 mode					
Channel	Frequency (MHz)	Chain 0 PPSD (dBm)	Chain 1 PPSD (dBm)	Total PSSD (dBm)	Limit (dBm)
106	5530	0.66	0.58	3.63	11.00
122	5610	1.43	0.85	4.16	
138	5690	0.95	0.16	3.58	

Test Data



UNII-2a IEEE 802.11a mode- chain 1

5260 MHz



Date: 9.MAR.2017 15:49:01

5280 MHz



Date: 9.MAR.2017 15:47:49

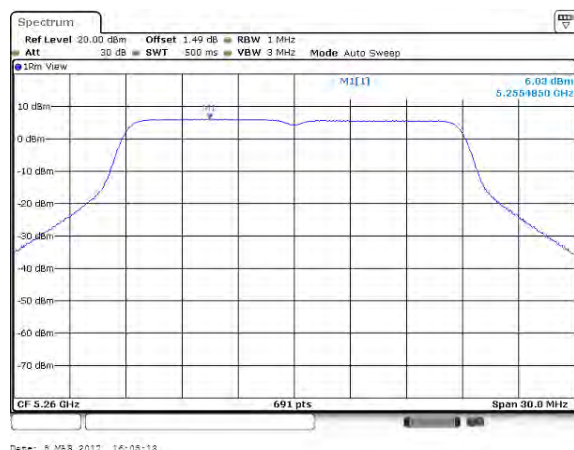
5320 MHz



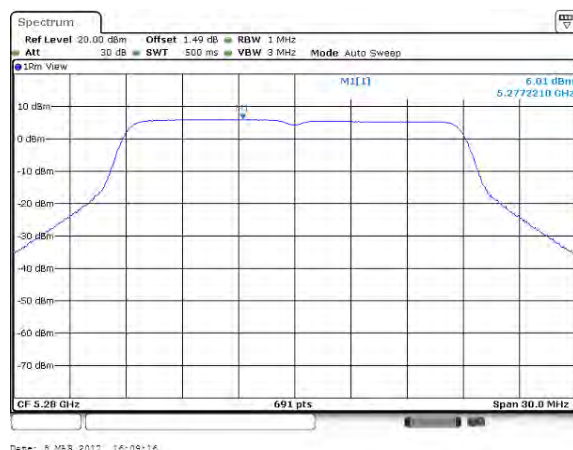
Date: 9.MAR.2017 15:51:19

UNII-2a IEEE 802.11n HT20 mode- chain 0

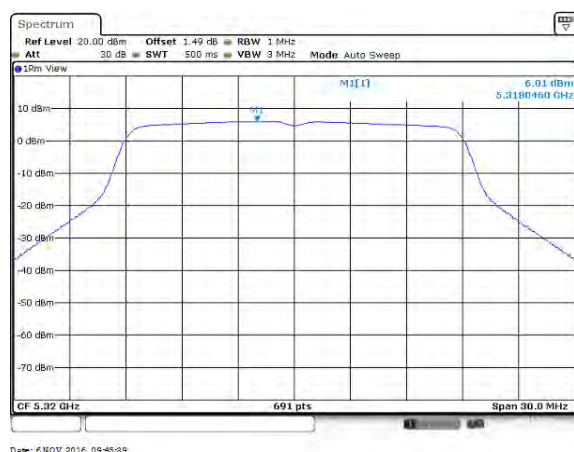
5260 MHz



5280 MHz

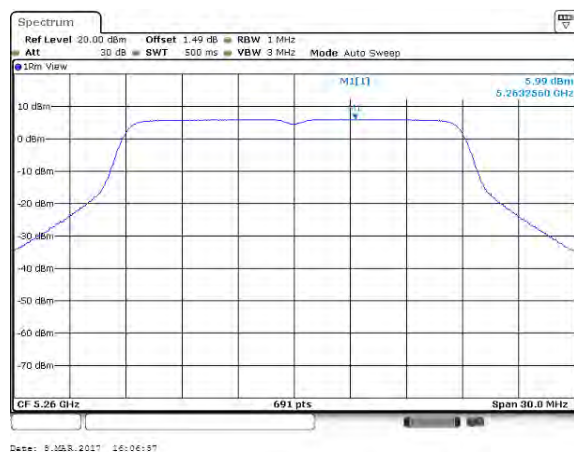


5320 MHz

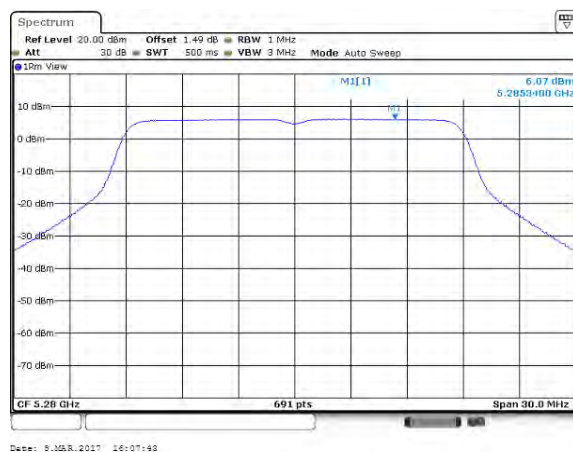


UNII-2a IEEE 802.11n HT20 mode- chain 1

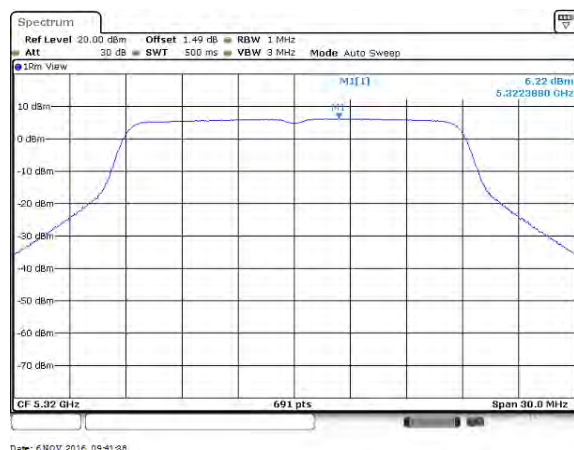
5260 MHz



5280 MHz

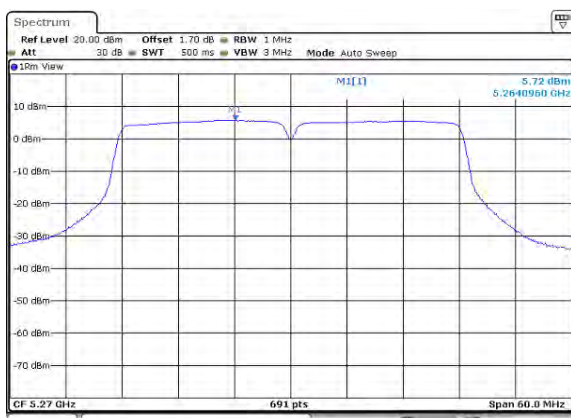


5320 MHz



UNII-2a IEEE 802.11n HT40 mode- chain 0

5270 MHz



5310 MHz



UNII-2a IEEE 802.11n HT40 mode- chain 1

5270 MHz

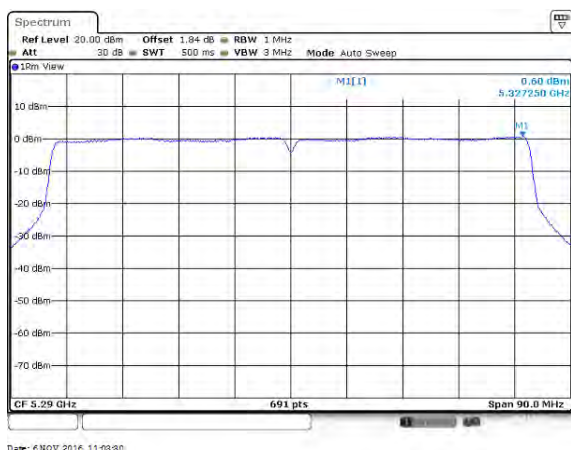


5310 MHz



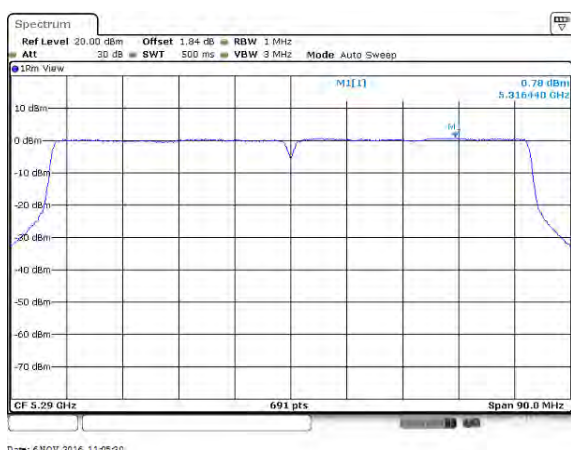
UNII-2a IEEE 802.11ac VHT80 mode- chain 0

5290 MHz

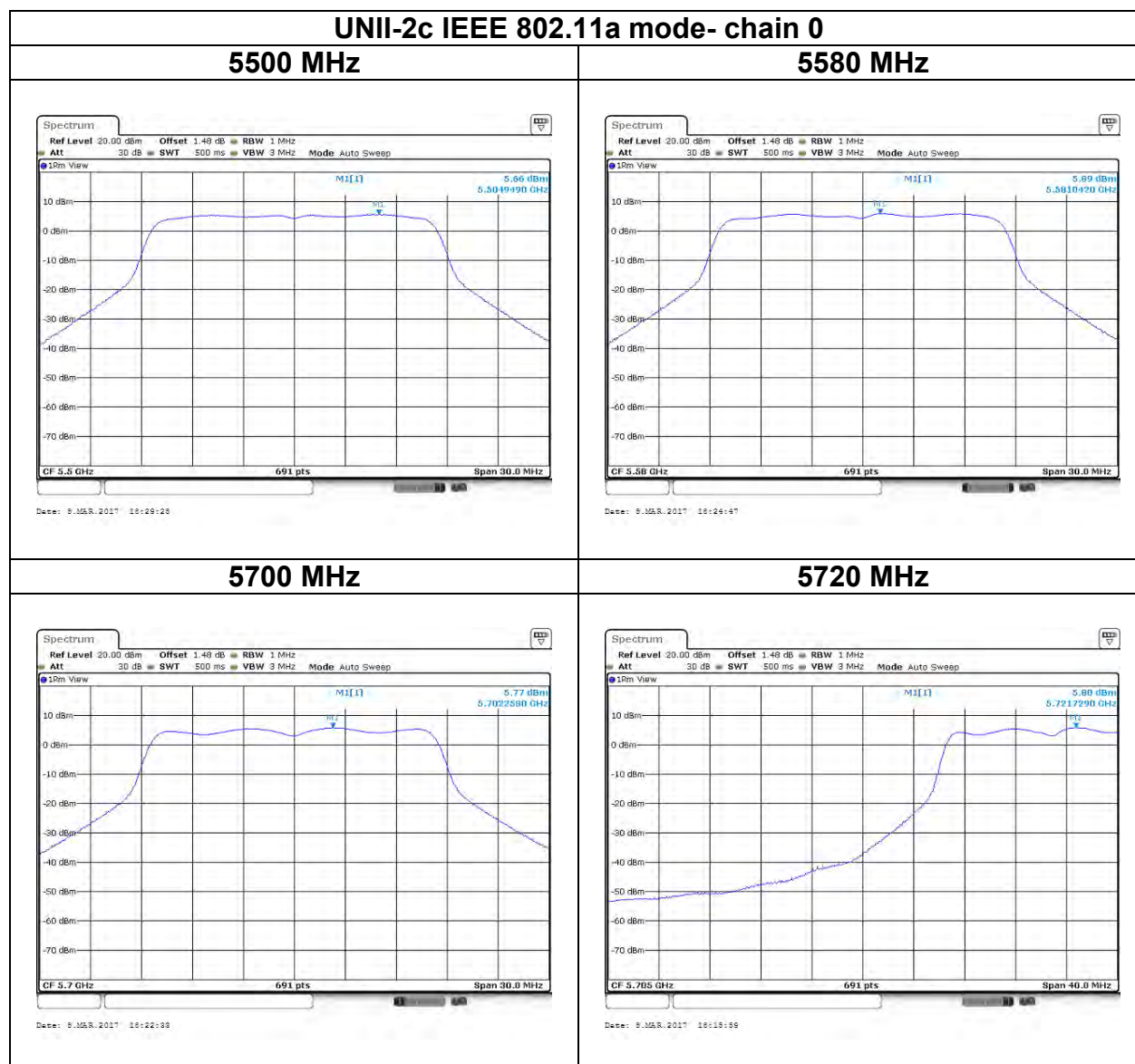


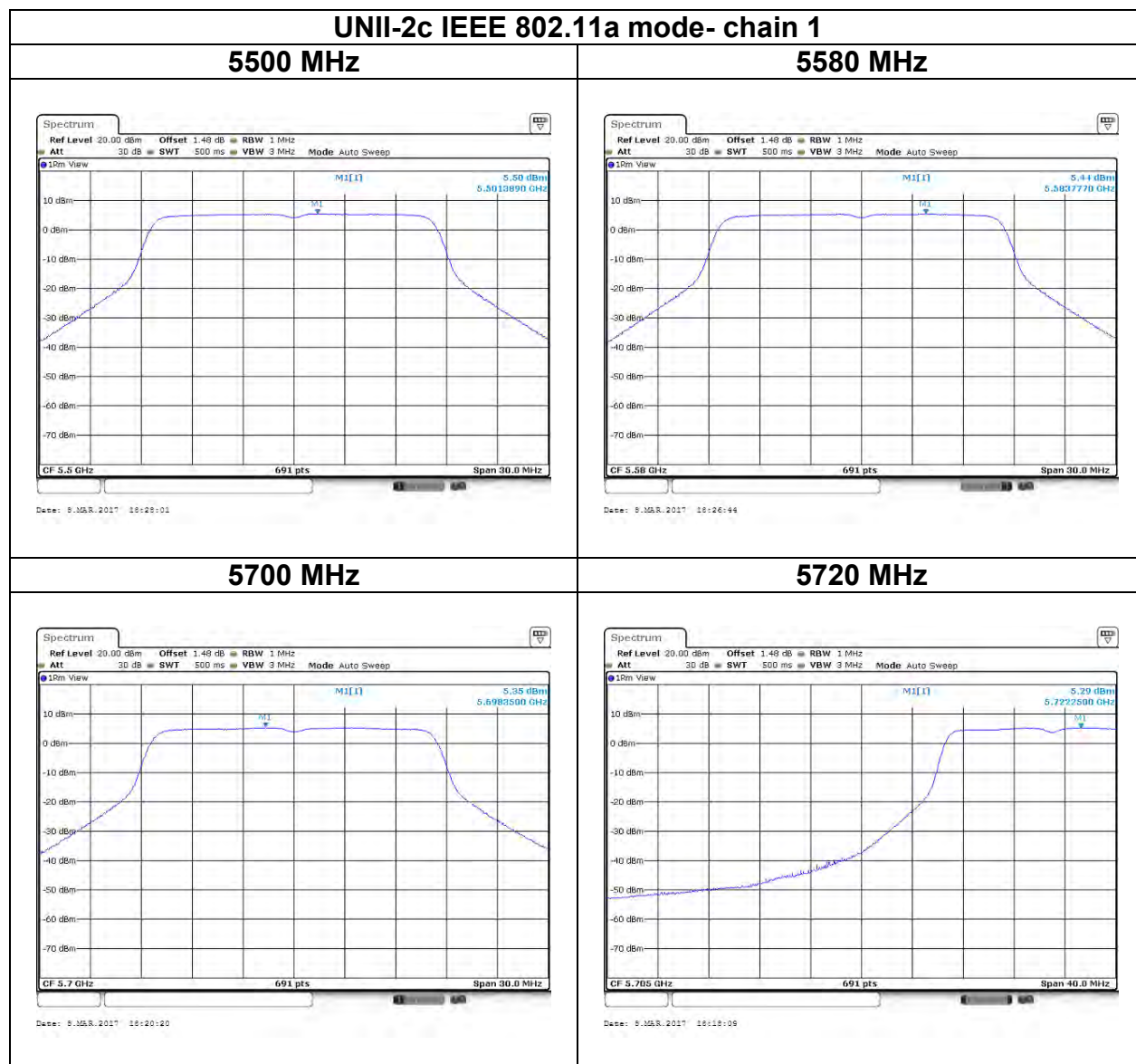
UNII-2a IEEE 802.11ac VHT80 mode- chain 1

5290 MHz



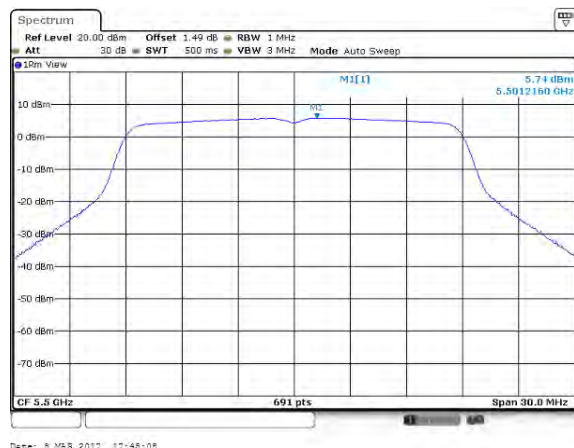
Test Data



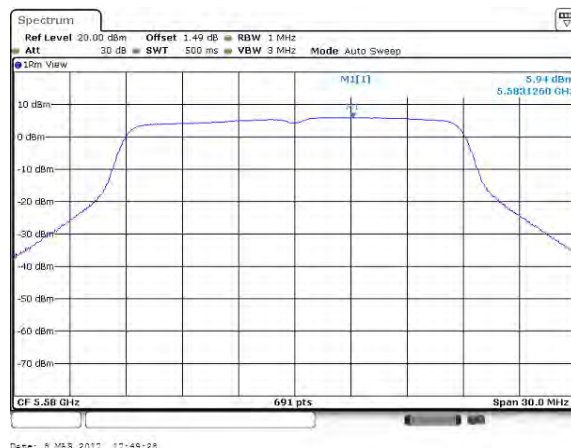


UNII-2c IEEE 802.11n HT20 mode- chain 0

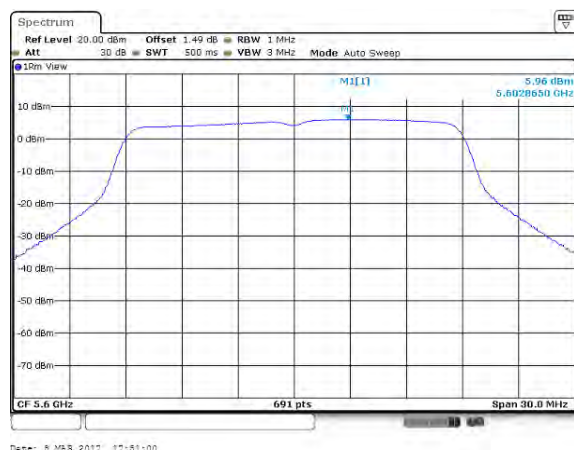
5500 MHz



5580 MHz



5600 MHz



5620 MHz

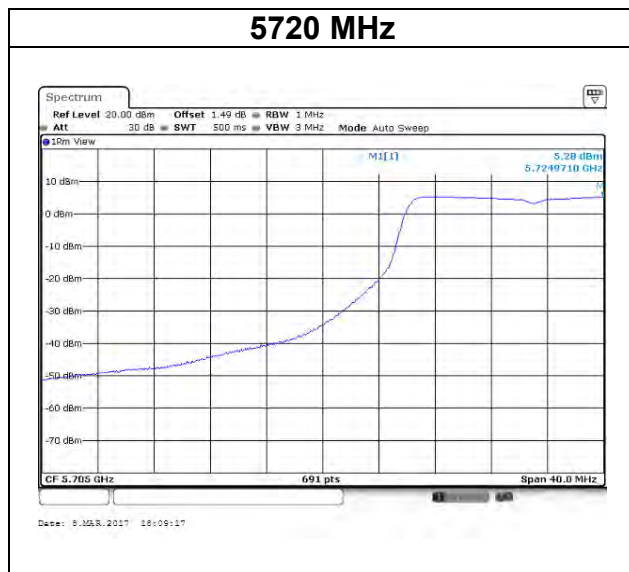


5640MHz



5700 MHz



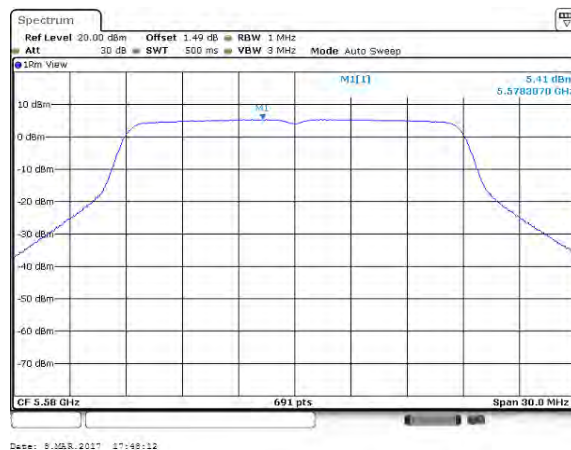


UNII-2c IEEE 802.11n HT20 mode- chain 1

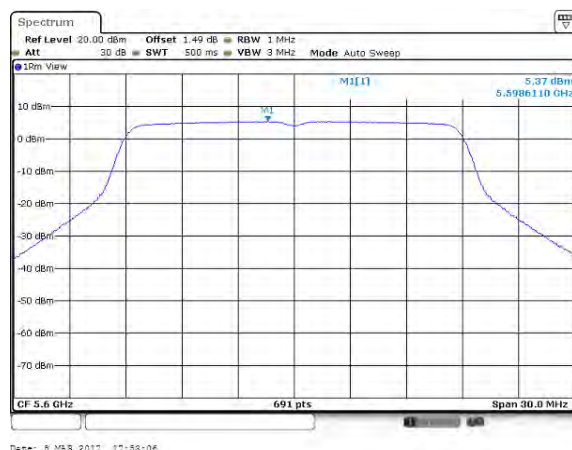
5500 MHz



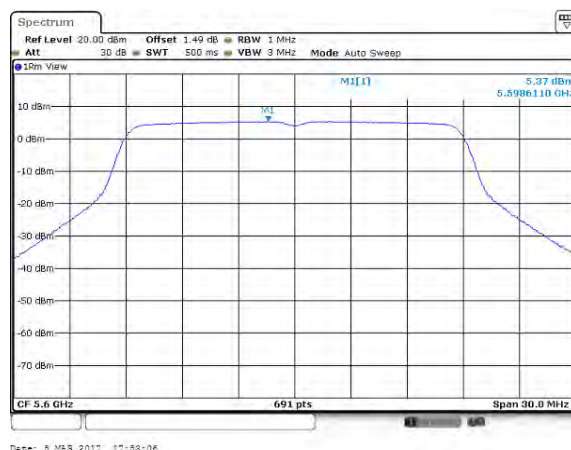
5580 MHz



5600 MHz



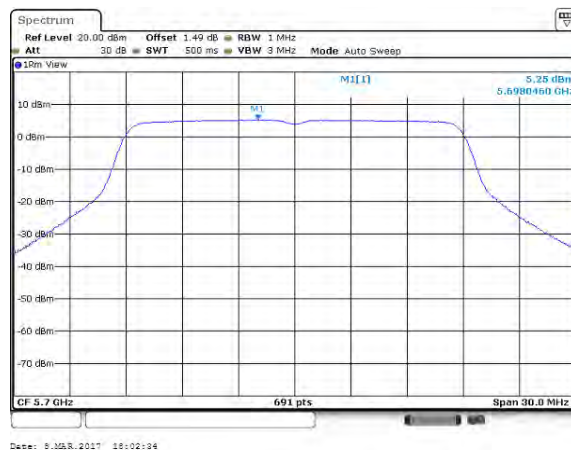
5620 MHz

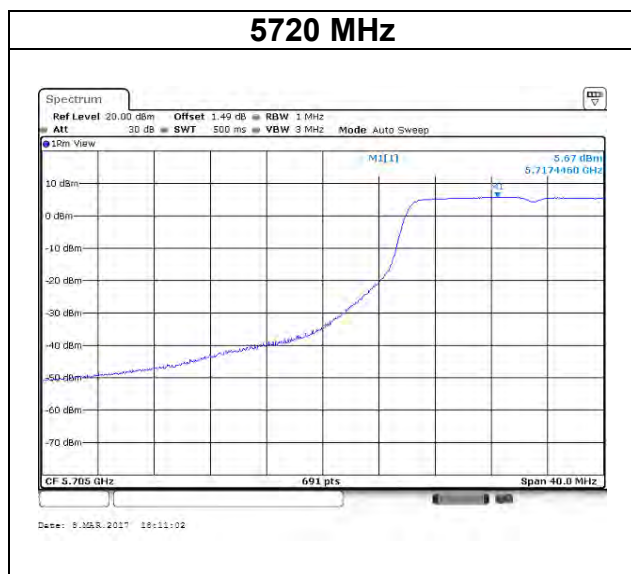


5640MHz



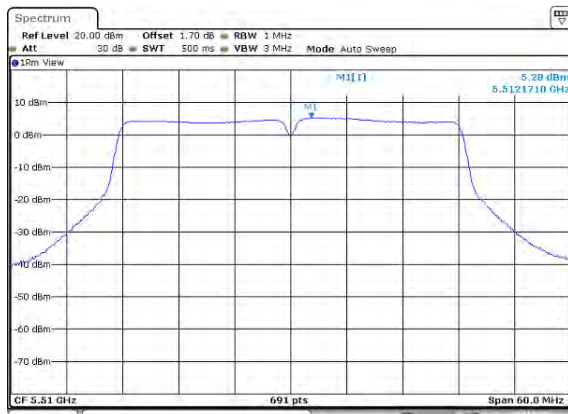
5700 MHz





UNII-2c IEEE 802.11n HT40 mode- chain 0

5510 MHz



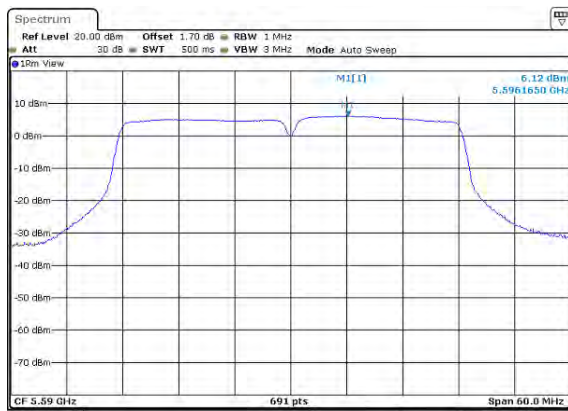
Date: 6 NOV 2016 15:56:06

5550 MHz



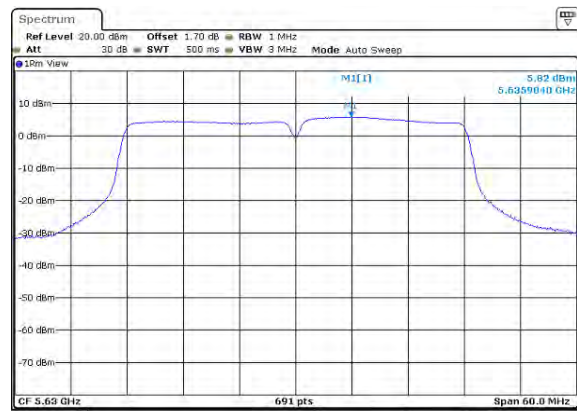
Date: 6 NOV 2016 15:52:00

5590 MHz



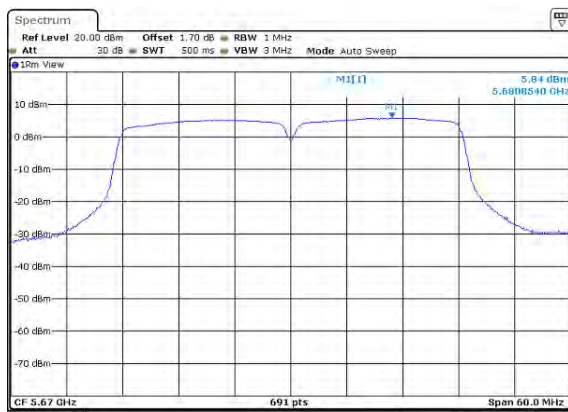
Date: 6 NOV 2016 15:51:02

5630 MHz



Date: 9 MAR 2017 16:29:21

5670 MHz



Date: 6 NOV 2016 15:45:08

5710 MHz



Date: 9 MAR 2017 16:39:29

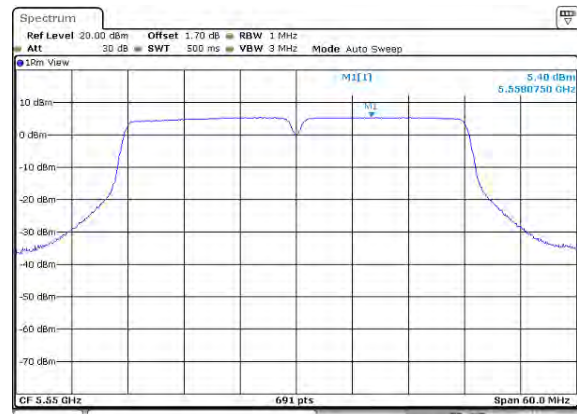
UNII-2c IEEE 802.11n HT40 mode- chain 1

5510 MHz



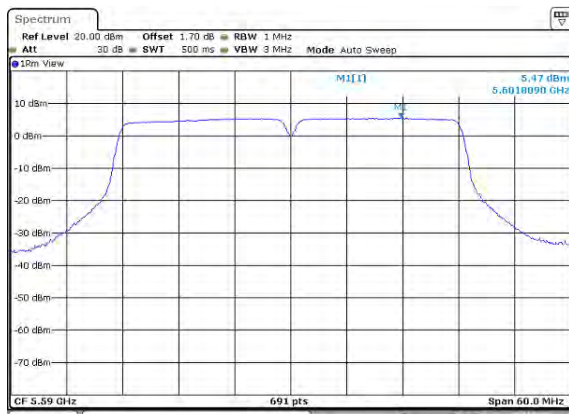
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5550 MHz



Date: 6 NOV 2016 15:52:27

5590 MHz



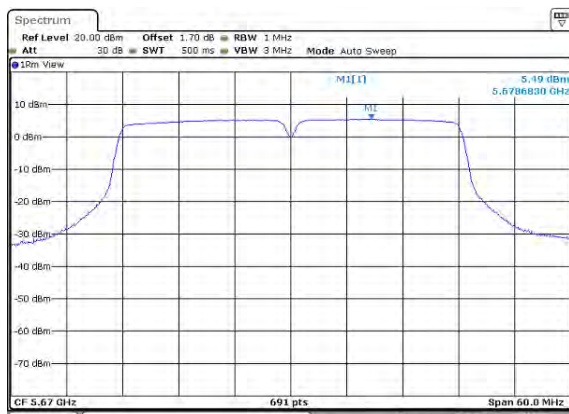
Date: 6 NOV 2016 15:50:15

5630 MHz



Date: 9 MAR 2017 16:32:31

5670 MHz



Date: 6 NOV 2016 15:50:29

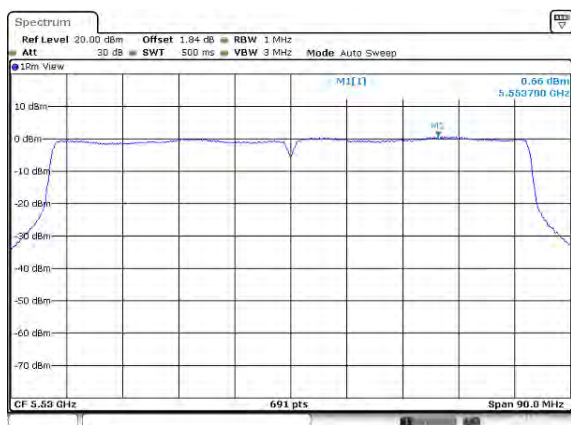
5710 MHz



Date: 9 MAR 2017 16:37:49

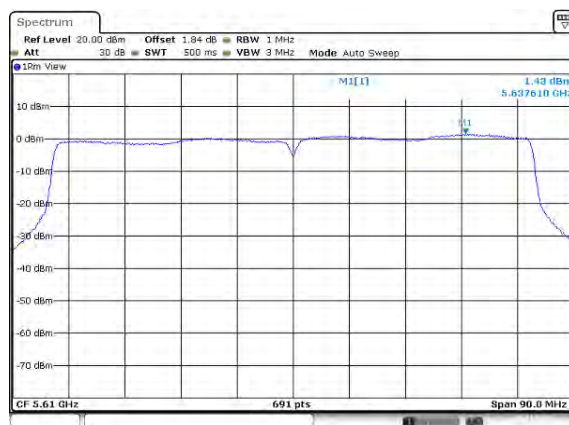
UNII-2c IEEE 802.11ac VHT80 mode- chain 0

5530 MHz



Date: 6 NOV 2016 16:31:49

5610 MHz



Date: 6 NOV 2016 16:34:54

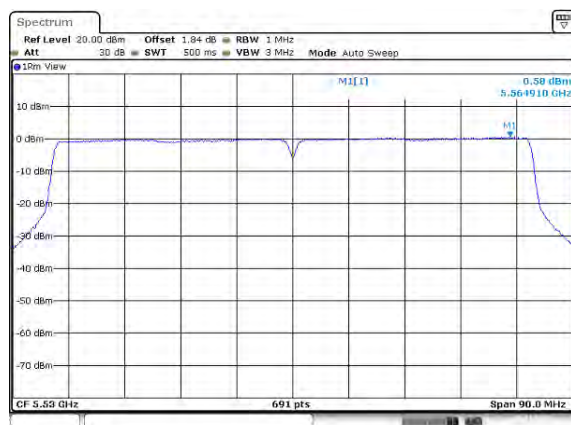
5690 MHz



Date: 7 NOV 2016 13:27:28

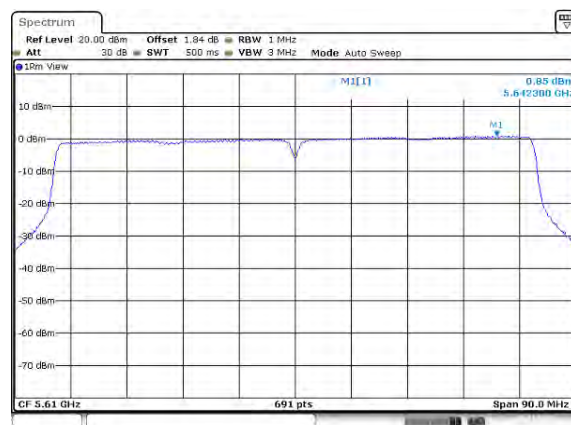
UNII-2c IEEE 802.11ac VHT80 mode- chain 1

5530 MHz



Date: 6 NOV 2016 16:00:04

5610 MHz



Date: 6 NOV 2016 16:06:54

5690 MHz



Date: 7 NOV 2016 13:26:55

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-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.

4.5.2 Test Procedure

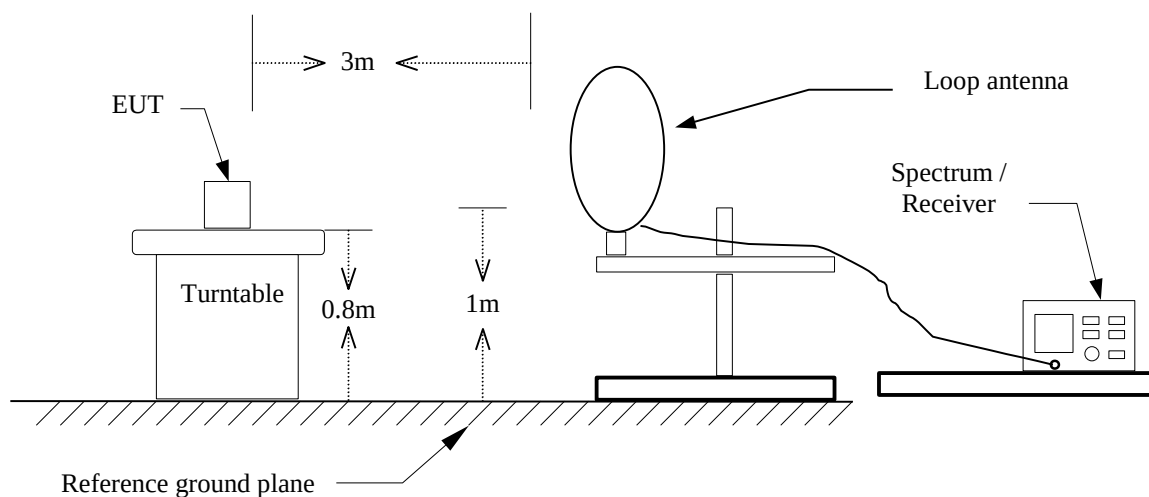
Test method Refer as KDB 789033 D02 v01r03, Section G.3, G.4, G.5, and G.6,.

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 30MHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.
5. The SA setting following :
 - (1) Below 1G : RBW = 100kHz, VBW $\geq 3 \times$ 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 $\geq 98\%$, VBW=10Hz.
 - If Duty Cycle $< 98\%$, VBW=1/T.

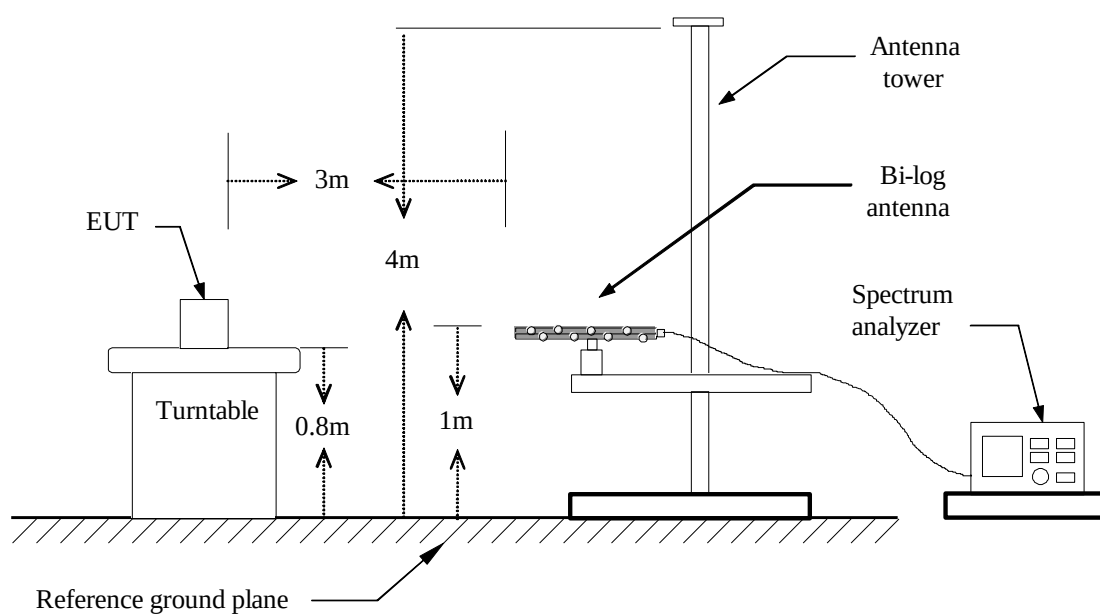
Configuration	Duty Cycle (%)	VBW
802.11a	98.14 %	10Hz
802.11n HT20	98.82 %	10Hz
802.11n HT40	97.63 %	10Hz
802.11ac VHT80	96.75 %	910Hz

4.5.3 Test Setup

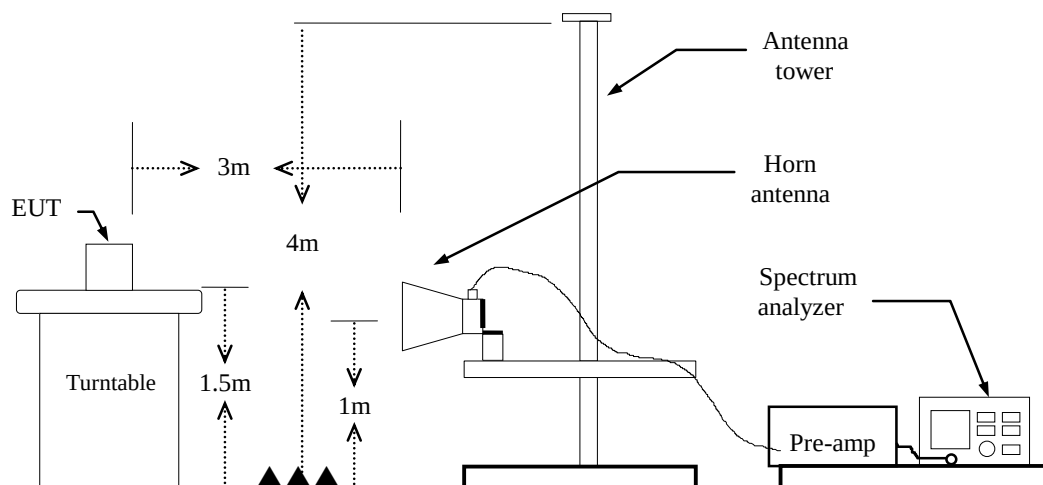
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1 GHz

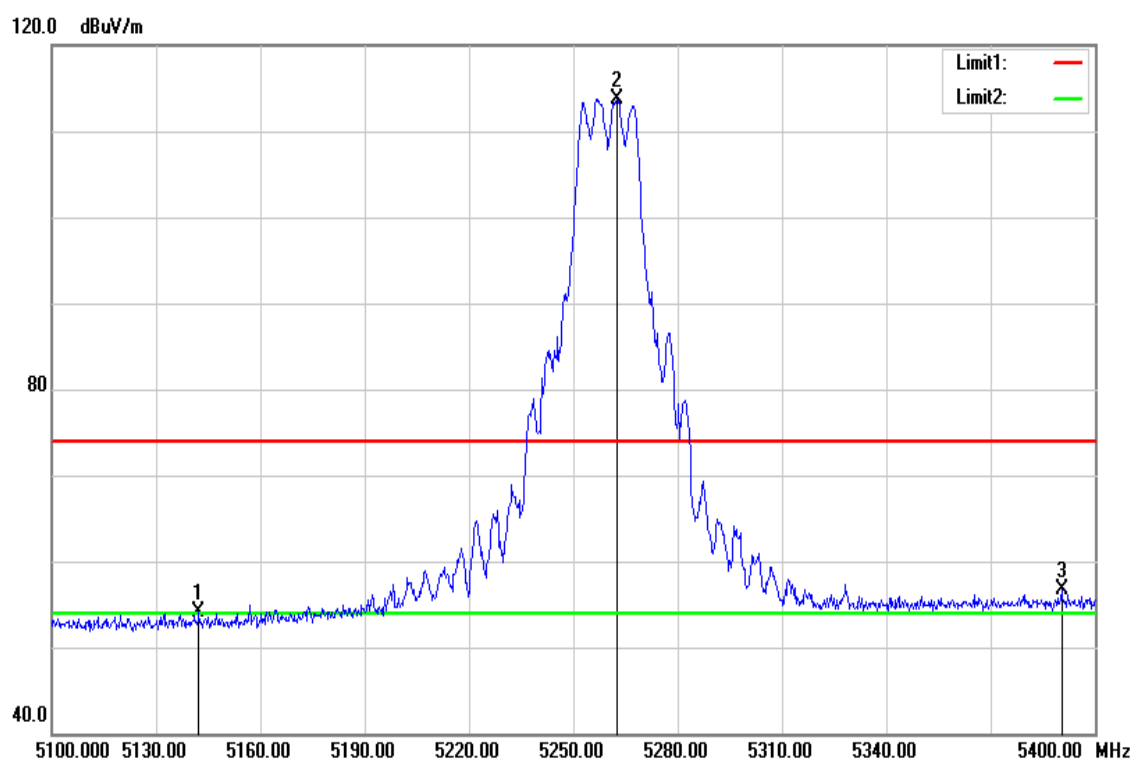


4.5.4 Test Result

Test Data

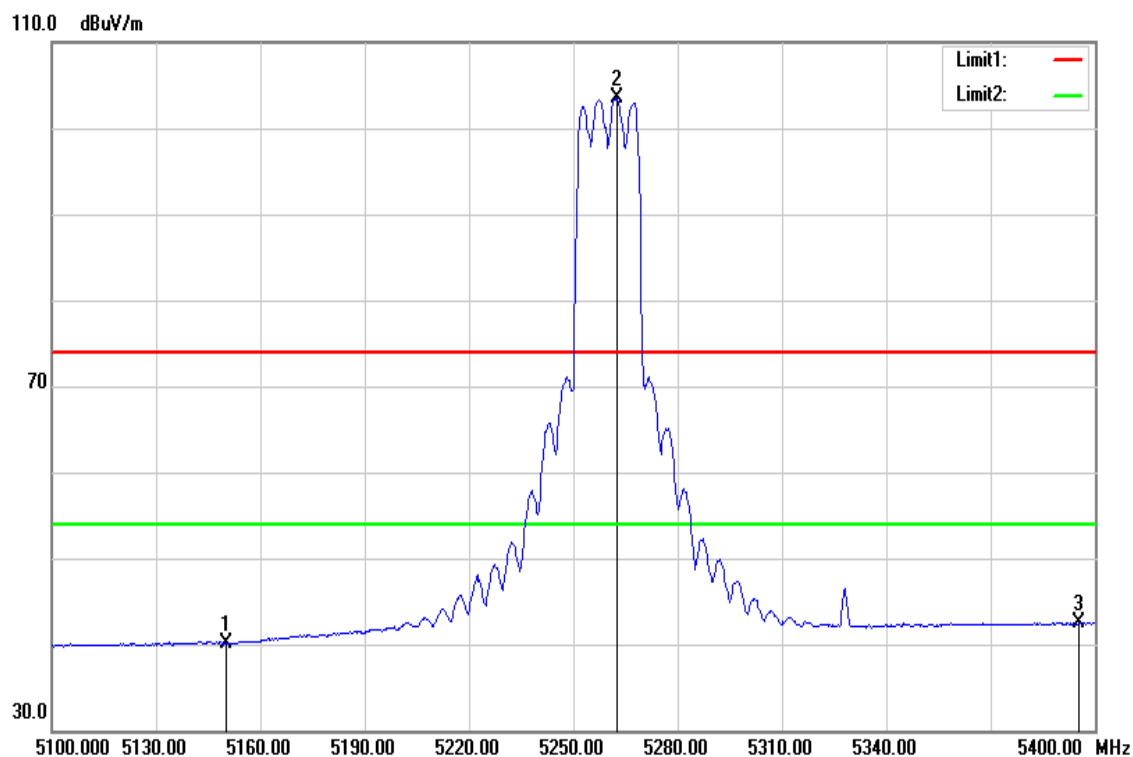
Band Edge Test Data for UNII-2a

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



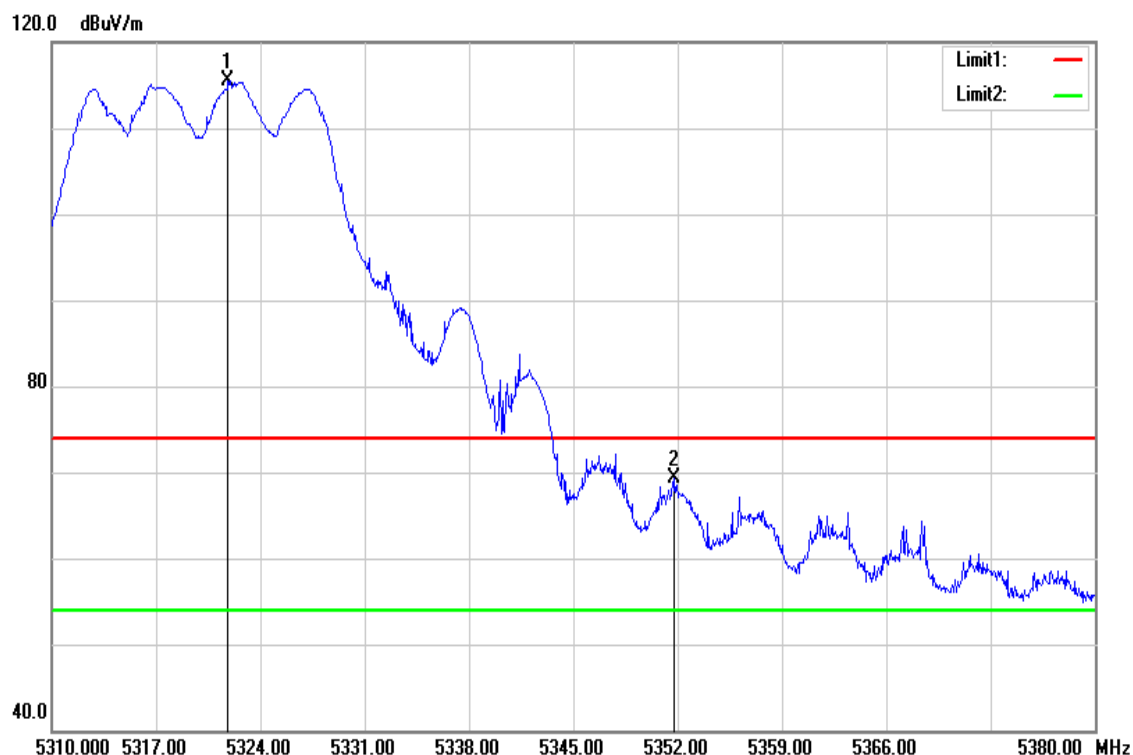
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5142.300	51.02	2.99	54.01	74.00	-19.99	peak
5262.600	109.04	4.70	113.74	-	-	peak
5390.400	51.03	5.64	56.67	74.00	-17.33	peak

Test Mode	IEEE 802.11a / 5260 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



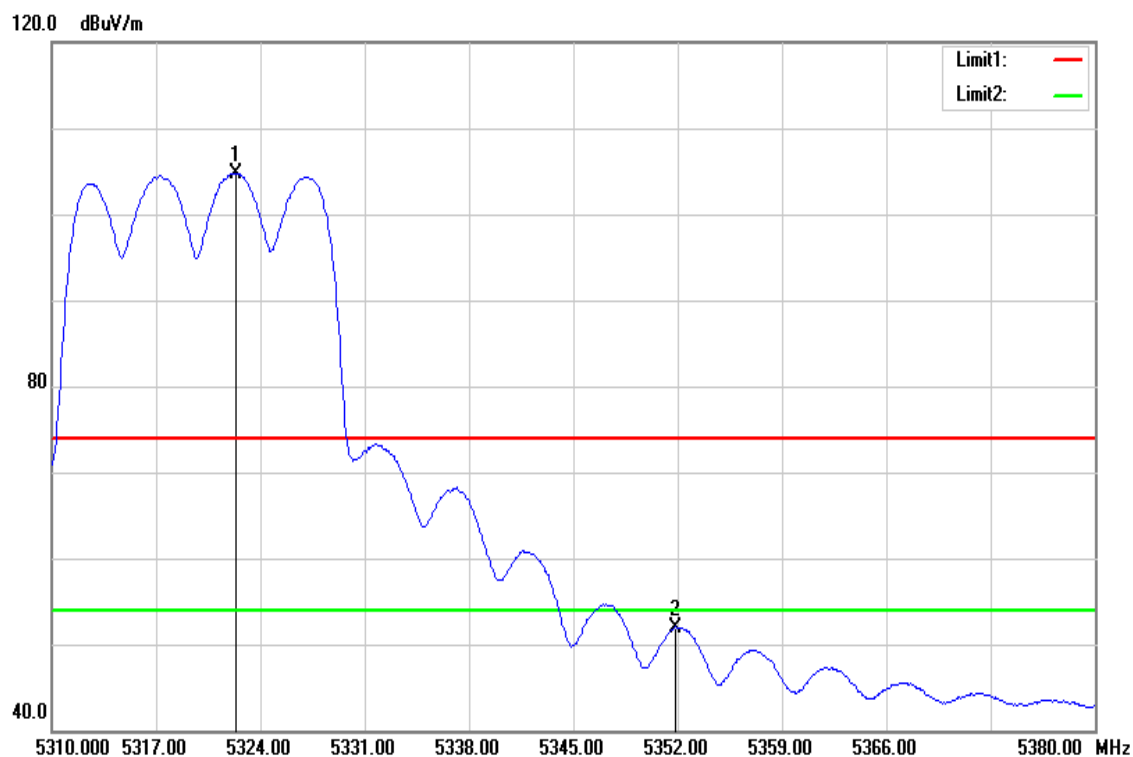
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	37.04	3.04	40.08	54.00	-13.92	AVG
5262.600	98.83	4.70	103.53	-	-	AVG
5395.500	36.89	5.68	42.57	54.00	-11.43	AVG

Test Mode	IEEE 802.11a / 5320MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



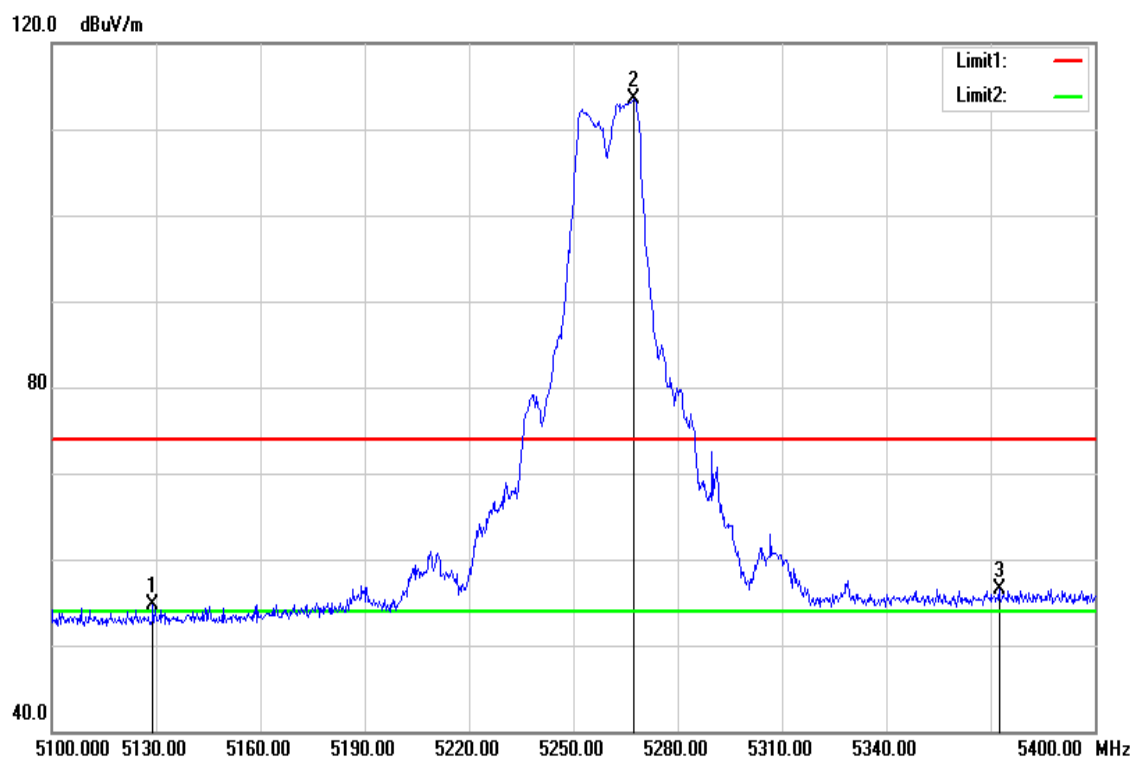
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5321.830	110.43	5.04	115.47	-	-	peak
5351.790	63.97	5.32	69.29	74.00	-4.71	peak

Test Mode	IEEE 802.11a / 5320MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



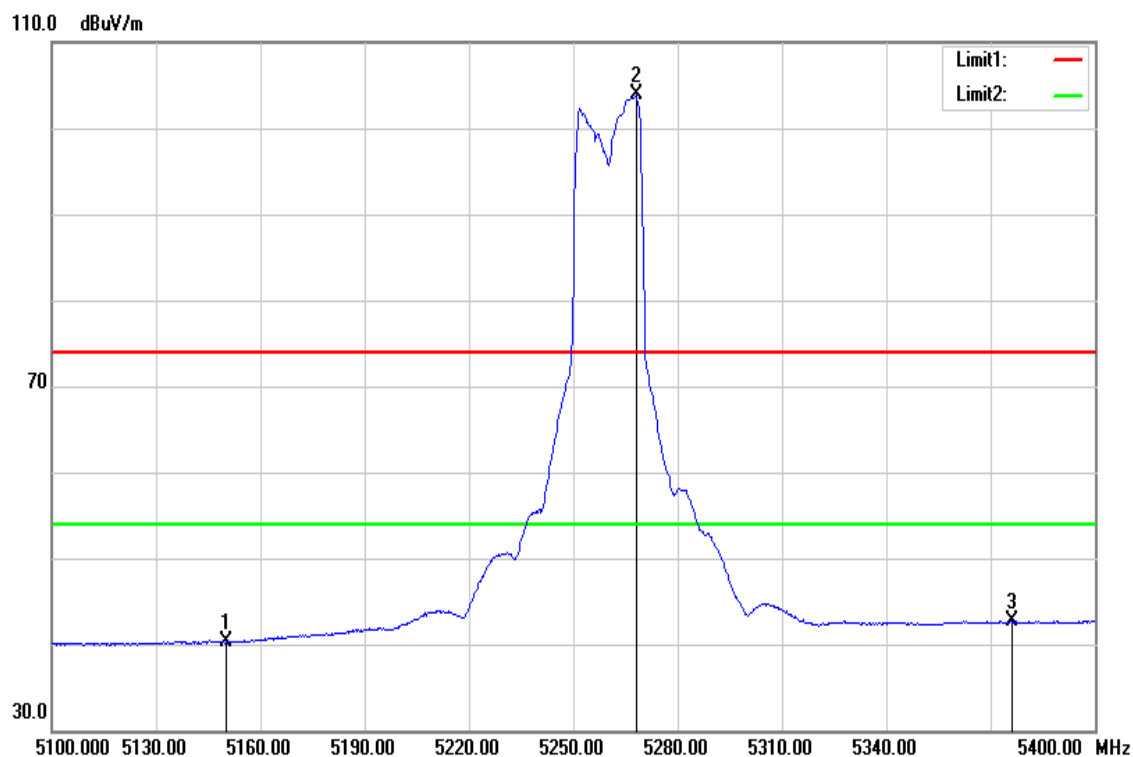
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5322.320	99.71	5.04	104.75	-	-	AVG
5351.860	46.67	5.33	52.00	54.00	-2.00	AVG

Test Mode	IEEE 802.11n HT20 / 5260MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



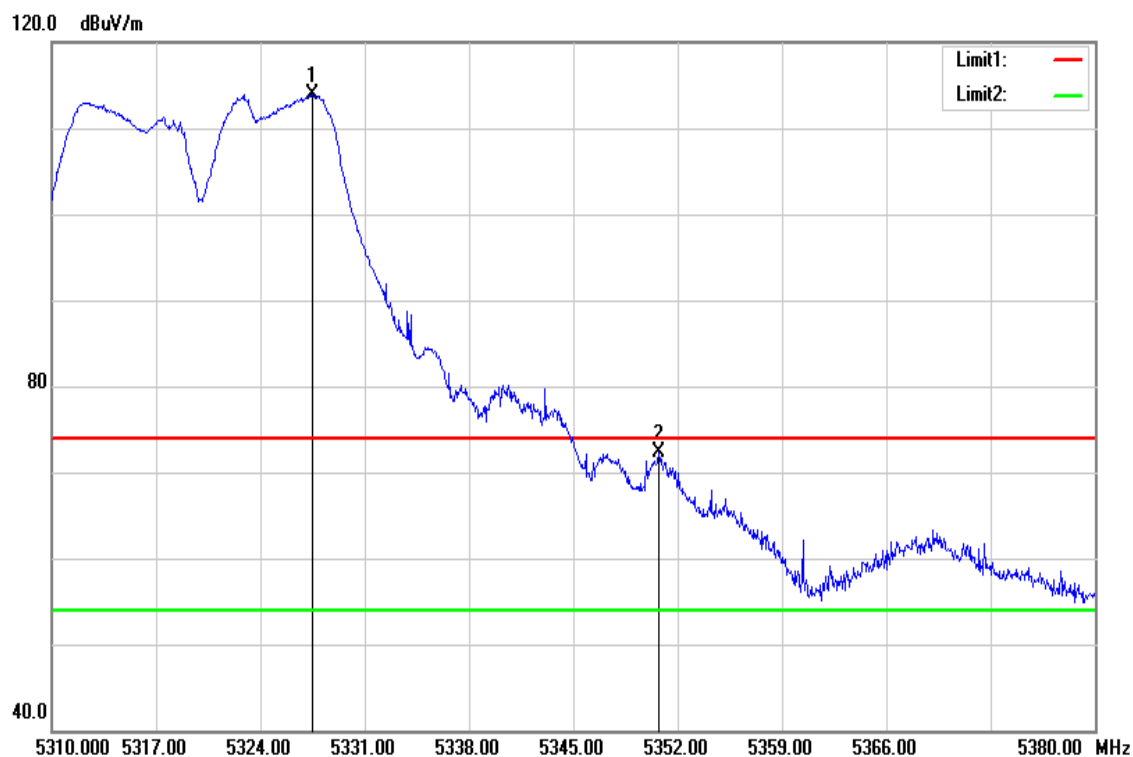
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5129.100	51.75	2.90	54.65	74.00	-19.35	peak
5267.400	108.72	4.72	113.44	-	-	peak
5372.400	51.05	5.49	56.54	74.00	-17.46	peak

Test Mode	IEEE 802.11n HT20 / 5260MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



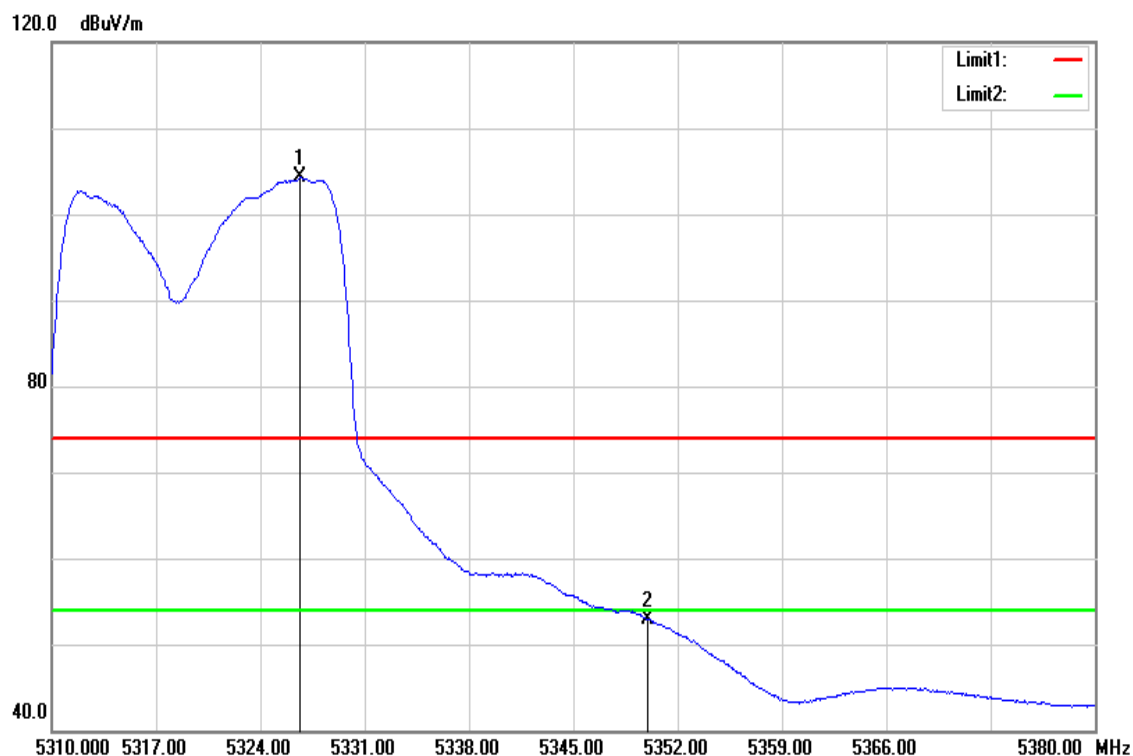
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	37.19	3.04	40.23	54.00	-13.77	AVG
5268.000	99.13	4.72	103.85	-	-	AVG
5376.000	37.23	5.52	42.75	54.00	-11.25	AVG

Test Mode	IEEE 802.11n HT20 / 5320MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



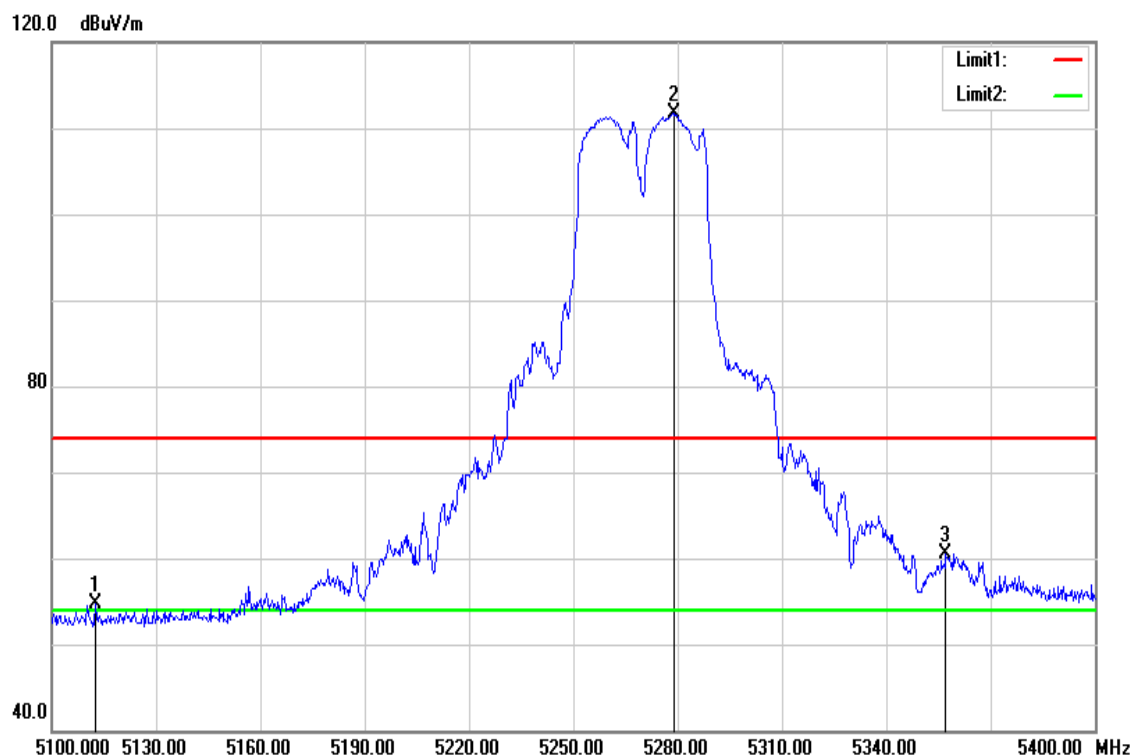
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5327.500	108.85	5.09	113.94	-	-	peak
5350.740	66.98	5.32	72.30	74.00	-1.70	peak

Test Mode	IEEE 802.11n HT20 / 5320MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



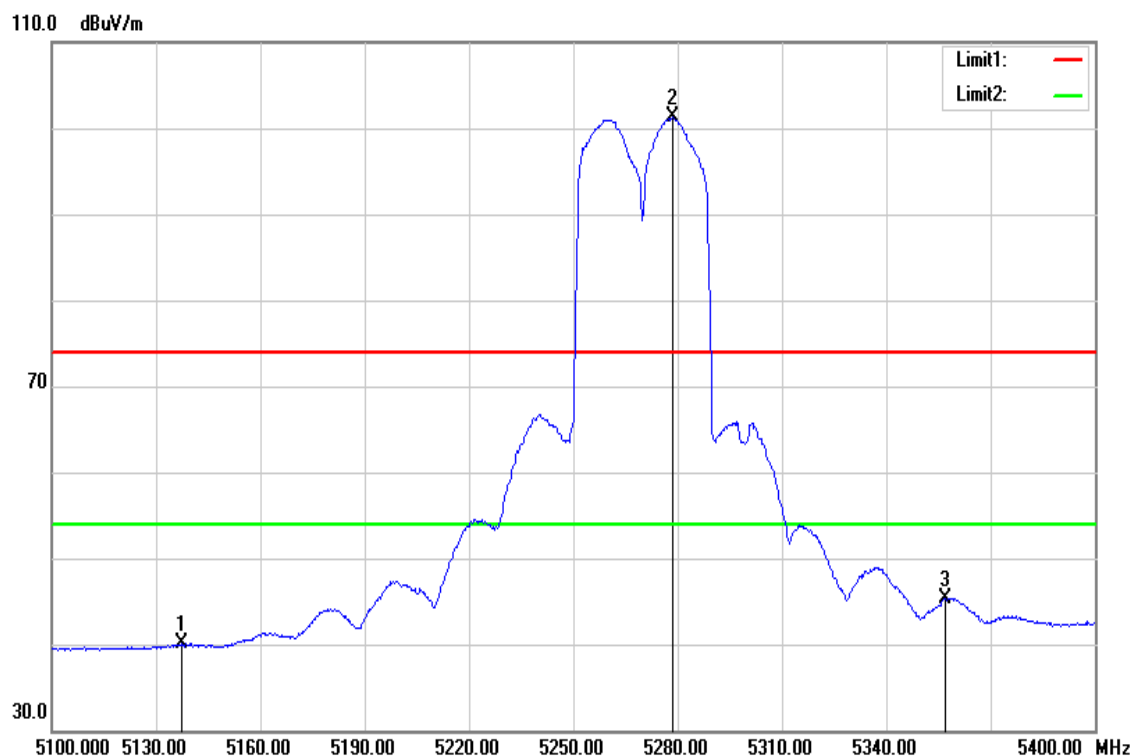
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5326.660	99.14	5.09	104.23	-	-	AVG
5350.000	47.56	5.31	52.87	54.00	-1.13	AVG

Test Mode	IEEE 802.11n HT40 / 5270MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



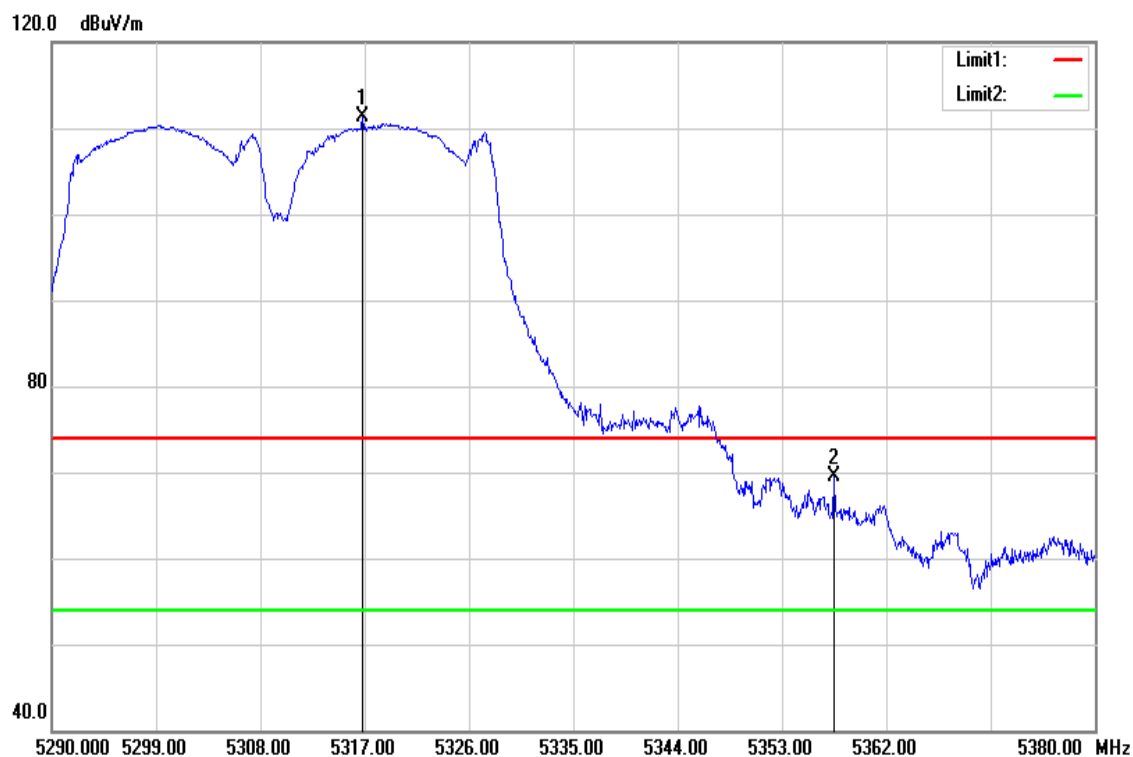
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5112.600	51.88	2.79	54.67	74.00	-19.33	peak
5278.800	106.94	4.76	111.70	-	-	peak
5357.100	55.16	5.37	60.53	74.00	-13.47	peak

Test Mode	IEEE 802.11n HT40 / 5270MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



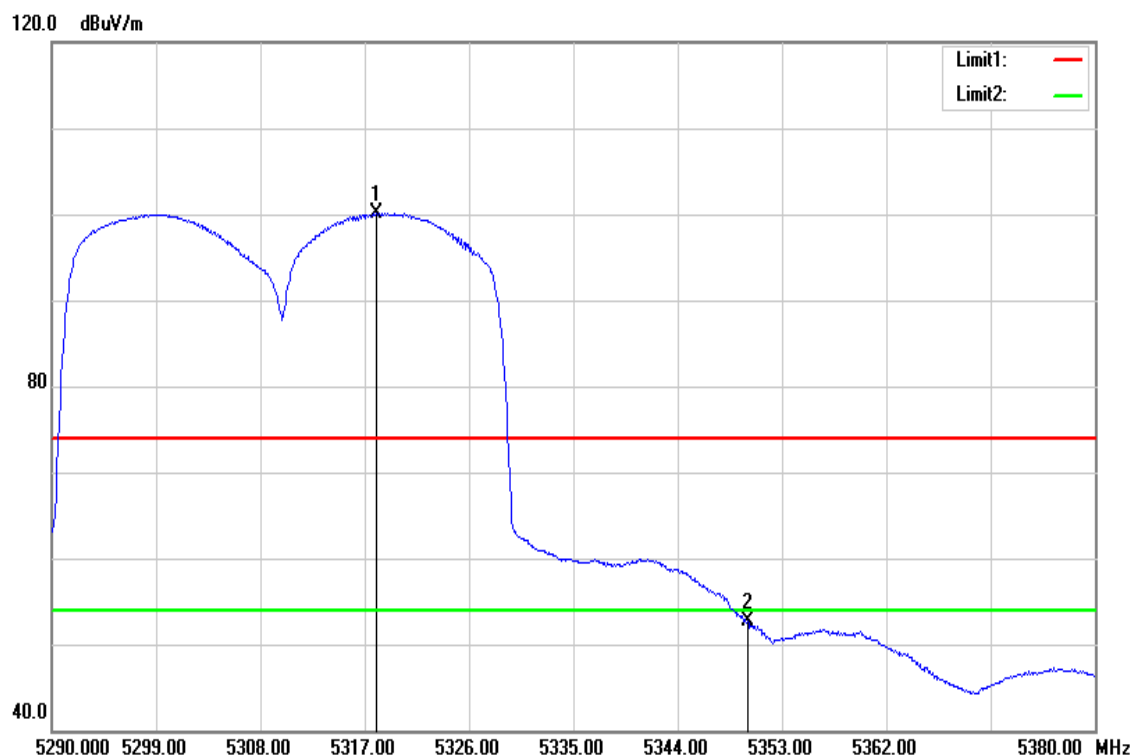
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5137.200	37.12	2.95	40.07	54.00	-13.93	AVG
5278.500	96.46	4.76	101.22	-	-	AVG
5356.800	40.02	5.37	45.39	54.00	-8.61	AVG

Test Mode	IEEE 802.11n HT40 / 5310MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



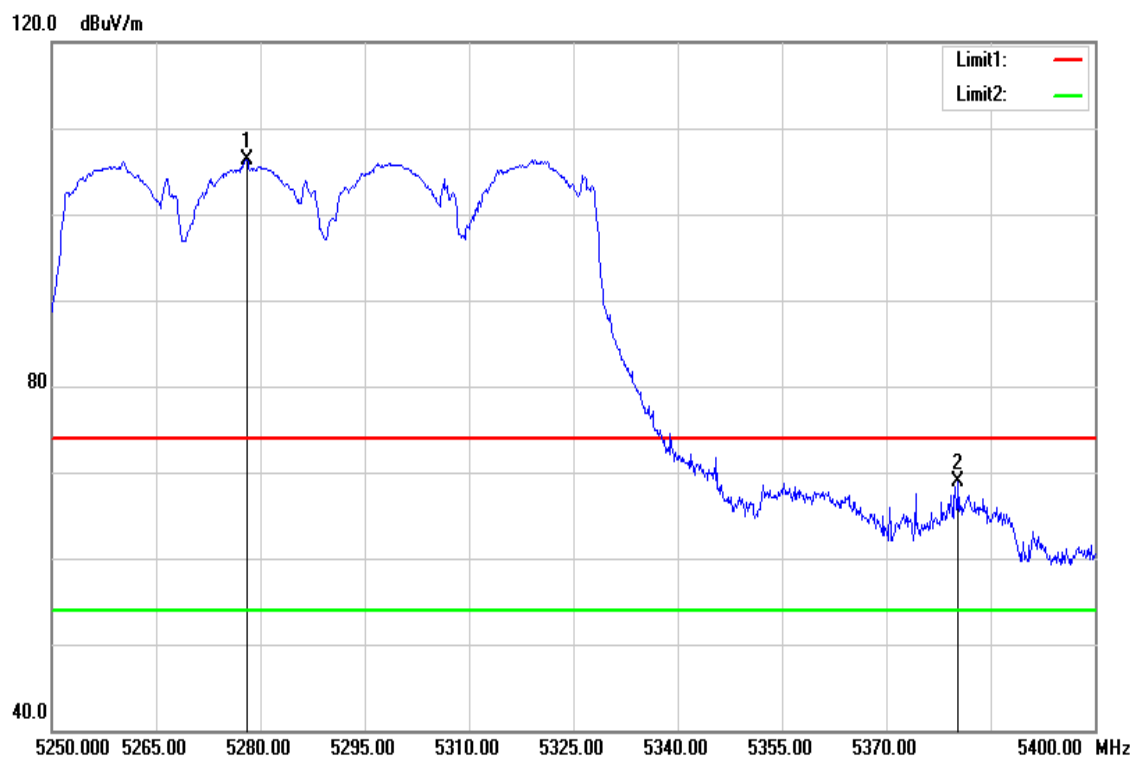
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5316.820	106.33	4.99	111.32	-	-	peak
5357.500	64.07	5.37	69.44	74.00	-4.56	peak

Test Mode	IEEE 802.11n HT40 / 5310MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



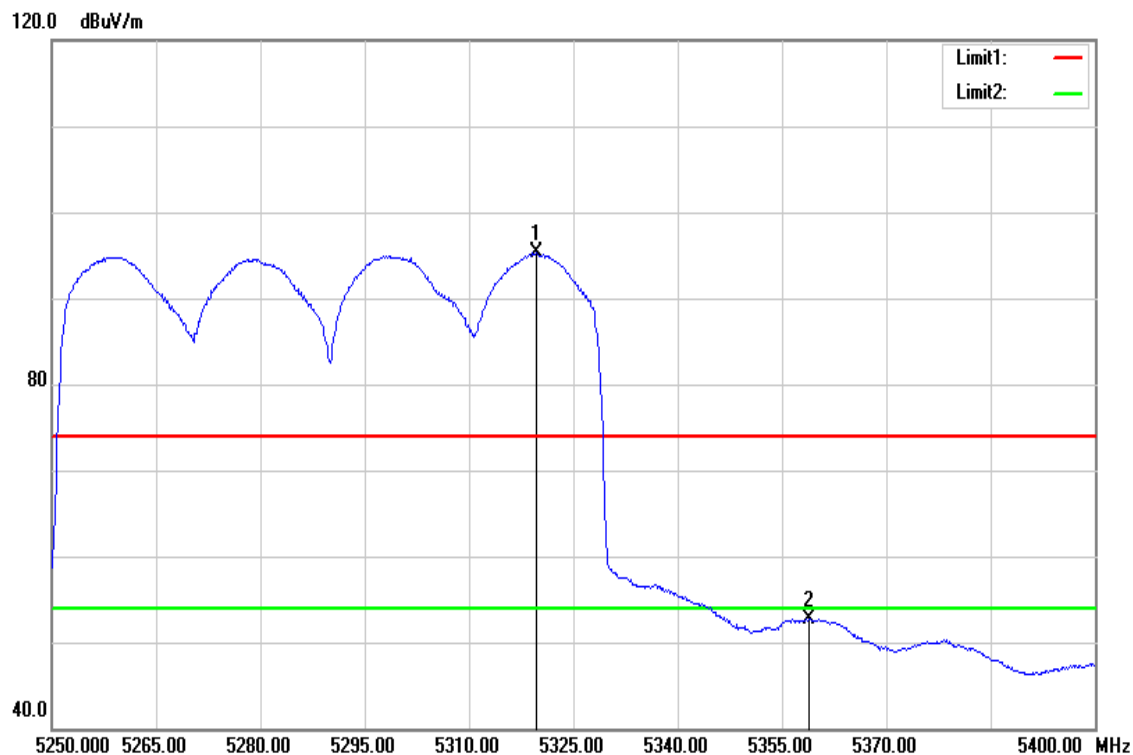
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5317.990	95.07	5.00	100.07	-	-	AVG
5350.030	47.33	5.31	52.64	54.00	-1.36	AVG

Test Mode	IEEE 802.11ac VHT80 / 5290MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5278.050	101.59	4.76	106.35	-	-	peak
5380.350	63.42	5.56	68.98	74.00	-5.02	peak

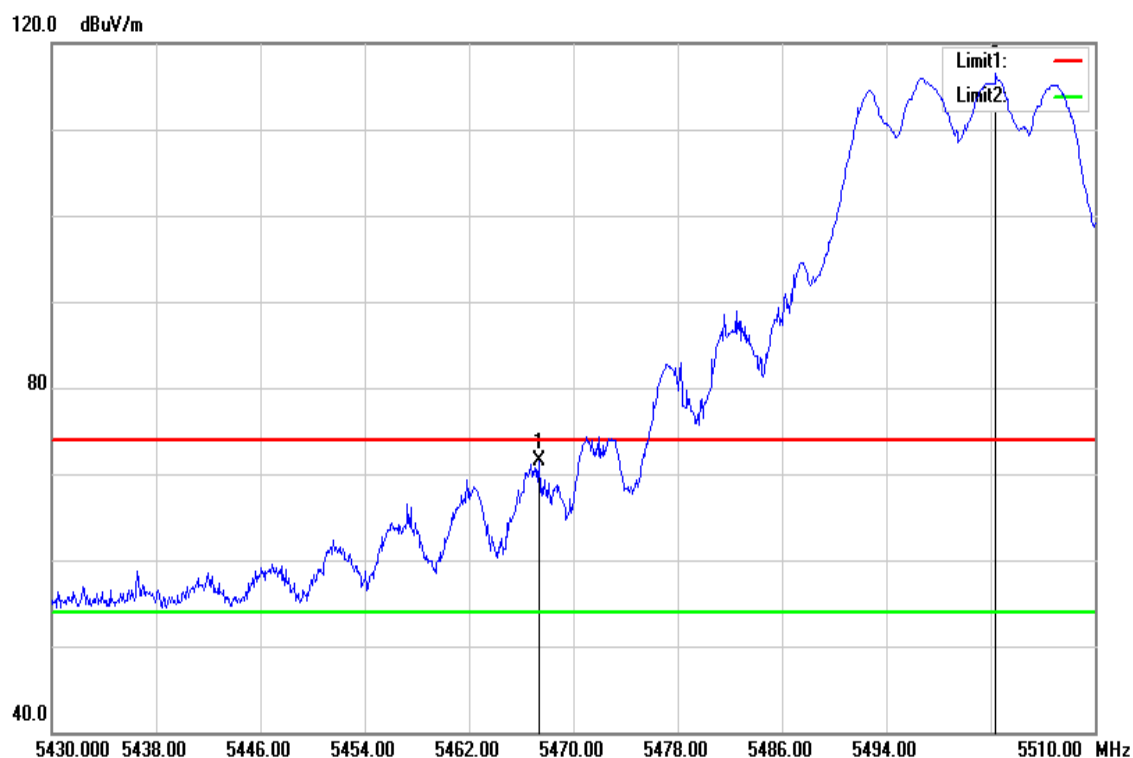
Test Mode	IEEE 802.11ac VHT80 / 5290MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5319.750	90.24	5.02	95.26	-	-	AVG
5358.900	47.36	5.38	52.74	54.00	-1.26	AVG

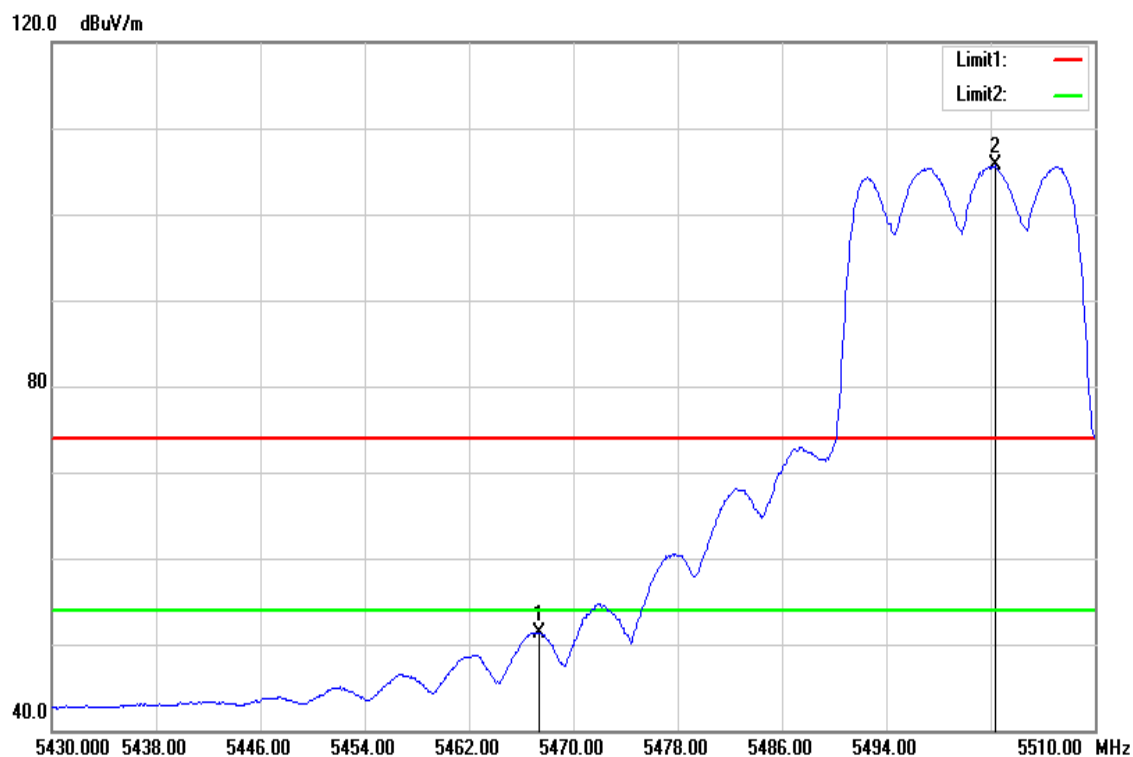
Test Data**Band Edge Test Data for UNII-2c**

Test Mode	IEEE 802.11a / 5500MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



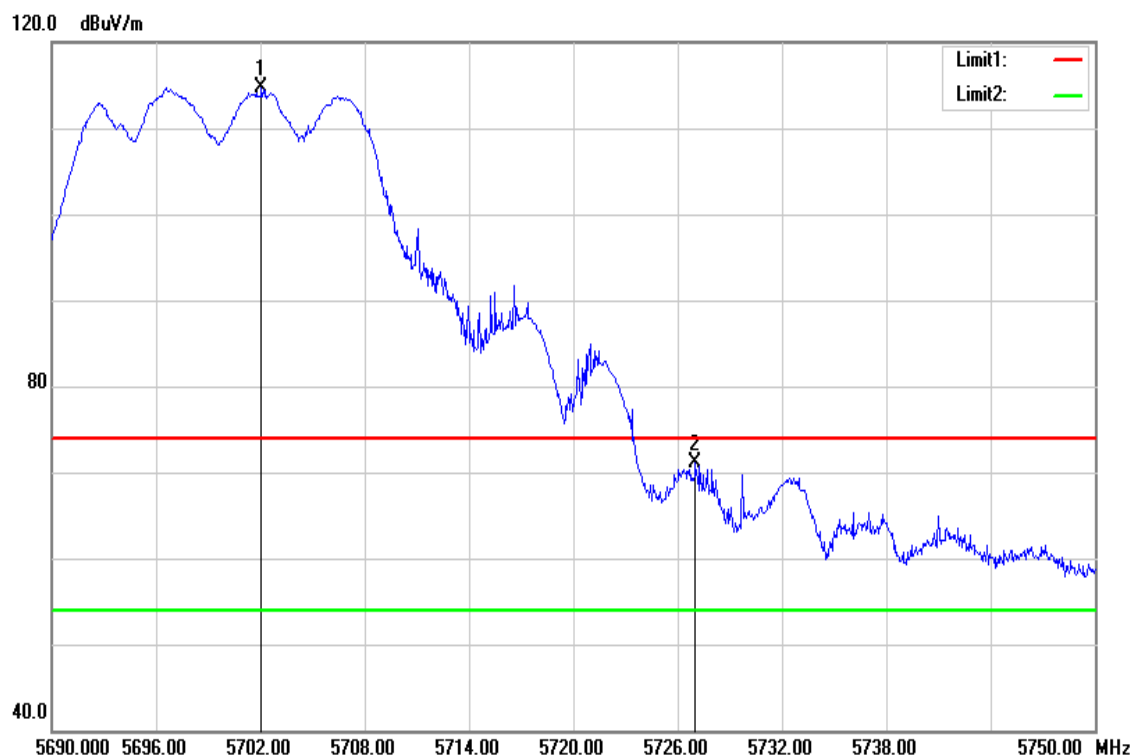
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5467.360	66.18	5.40	71.58	74.00	-2.42	peak
5502.400	111.19	5.26	116.45	-	-	peak

Test Mode	IEEE 802.11a / 5500MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



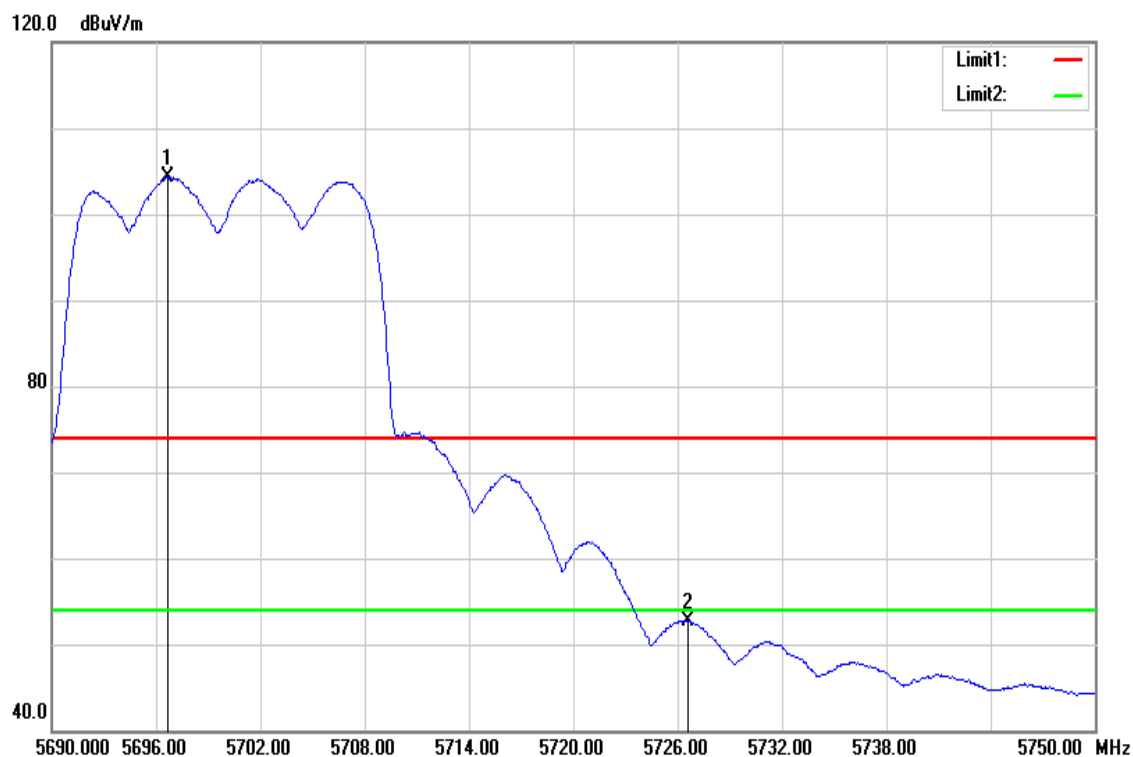
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5467.360	45.92	5.40	51.32	54.00	-2.68	AVG
5502.400	100.35	5.26	105.61	-	-	AVG

Test Mode	IEEE 802.11a / 5700 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



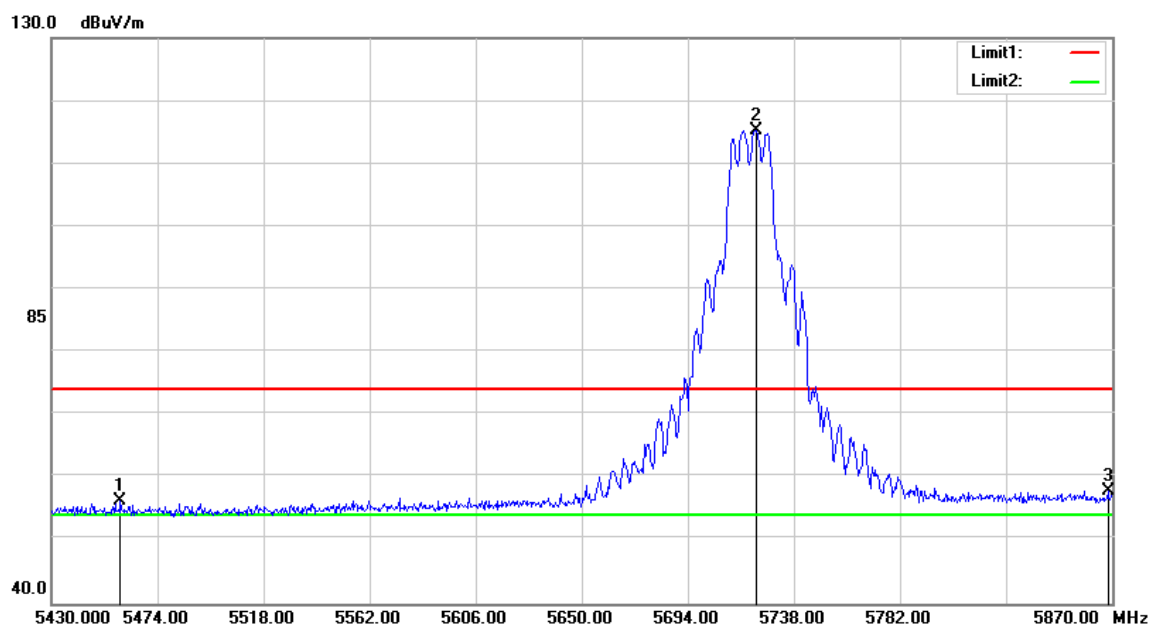
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5702.060	108.56	6.11	114.67	-	-	peak
5727.020	64.86	6.22	71.08	74.00	-2.92	peak

Test Mode	IEEE 802.11a / 5700 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



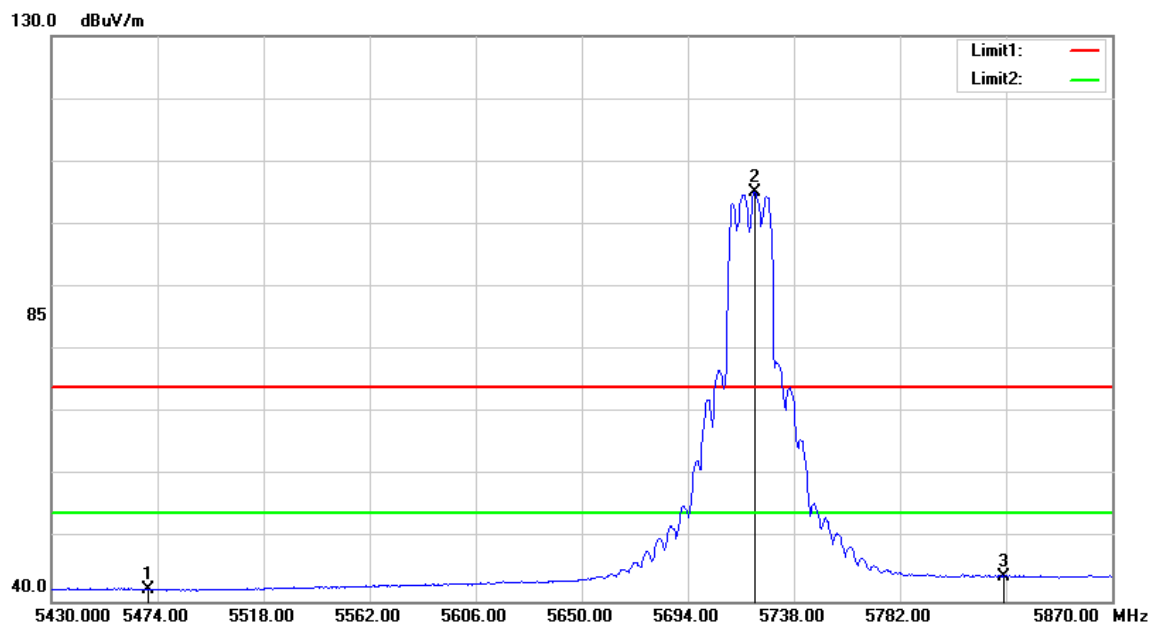
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5696.660	98.20	6.09	104.29	-	-	AVG
5726.600	46.49	6.22	52.71	54.00	-1.29	AVG

Test Mode	IEEE 802.11a / 5720 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



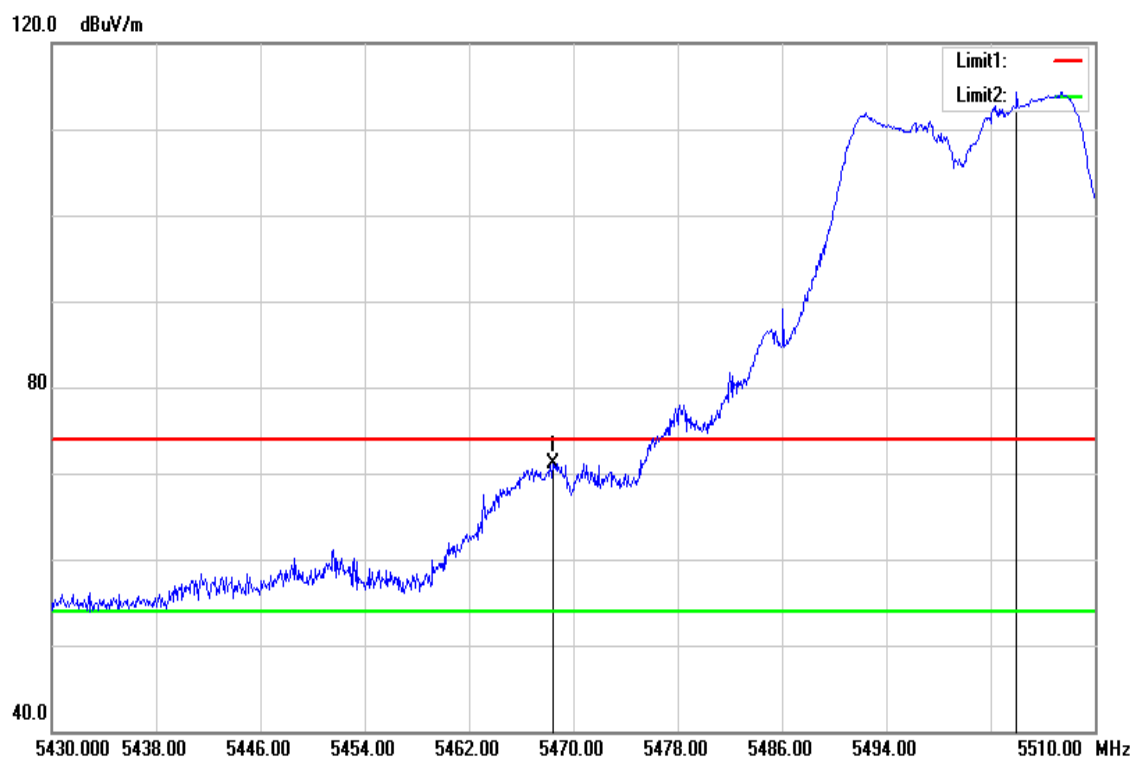
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5458.600	50.90	5.44	56.34	74.00	-17.66	peak
5722.600	109.12	6.20	115.32	-	-	peak
5868.240	51.16	6.82	57.98	74.00	-16.02	peak

Test Mode	IEEE 802.11a / 5720 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



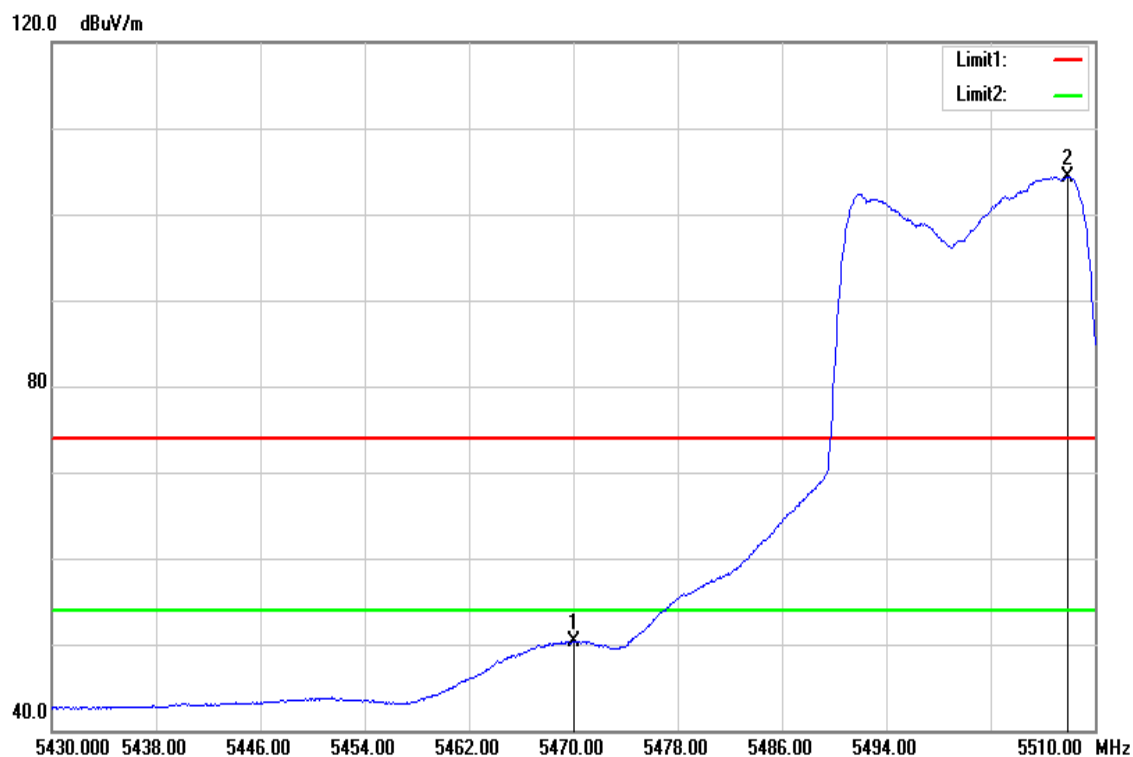
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Rema
5470.000	36.58	5.39	41.97	54.00	-12.03	AVG
5721.720	98.97	6.19	105.16	-	-	AVG
5825.000	37.38	6.63	44.01	54.00	-9.99	AVG

Test Mode	IEEE 802.11n HT20 / 5500MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



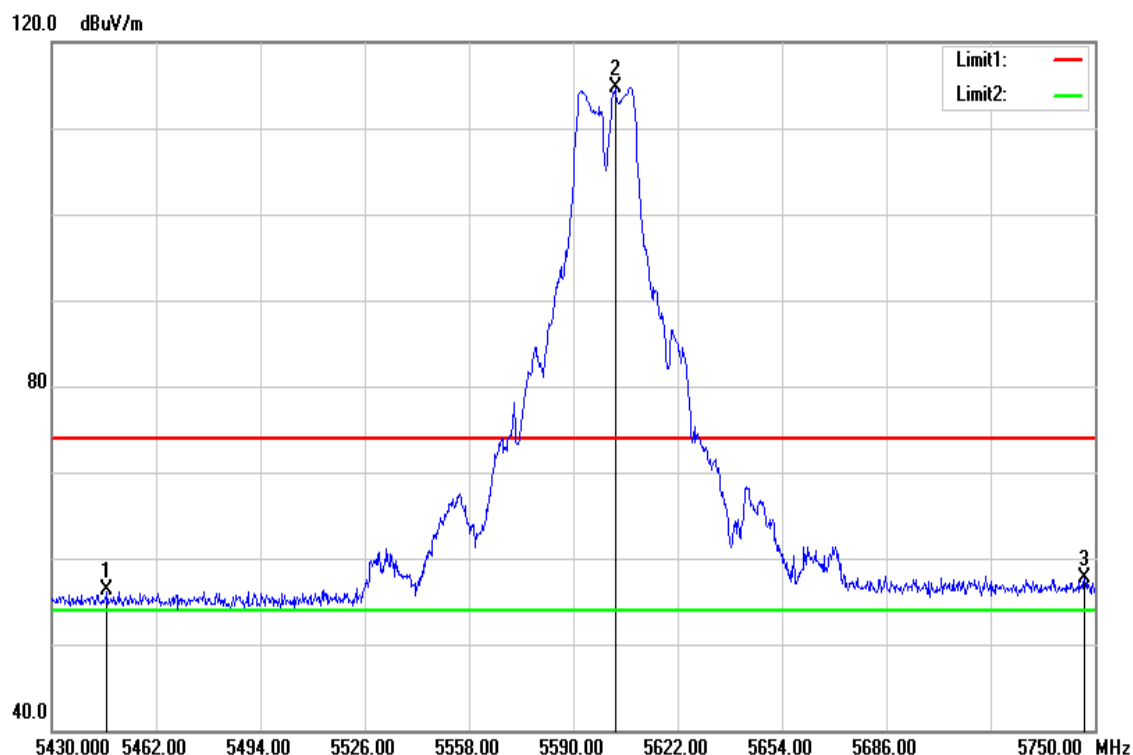
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5468.400	65.72	5.40	71.12	74.00	-2.88	peak
5504.000	109.12	5.27	114.39	-	-	peak

Test Mode	IEEE 802.11n HT20 / 5500MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



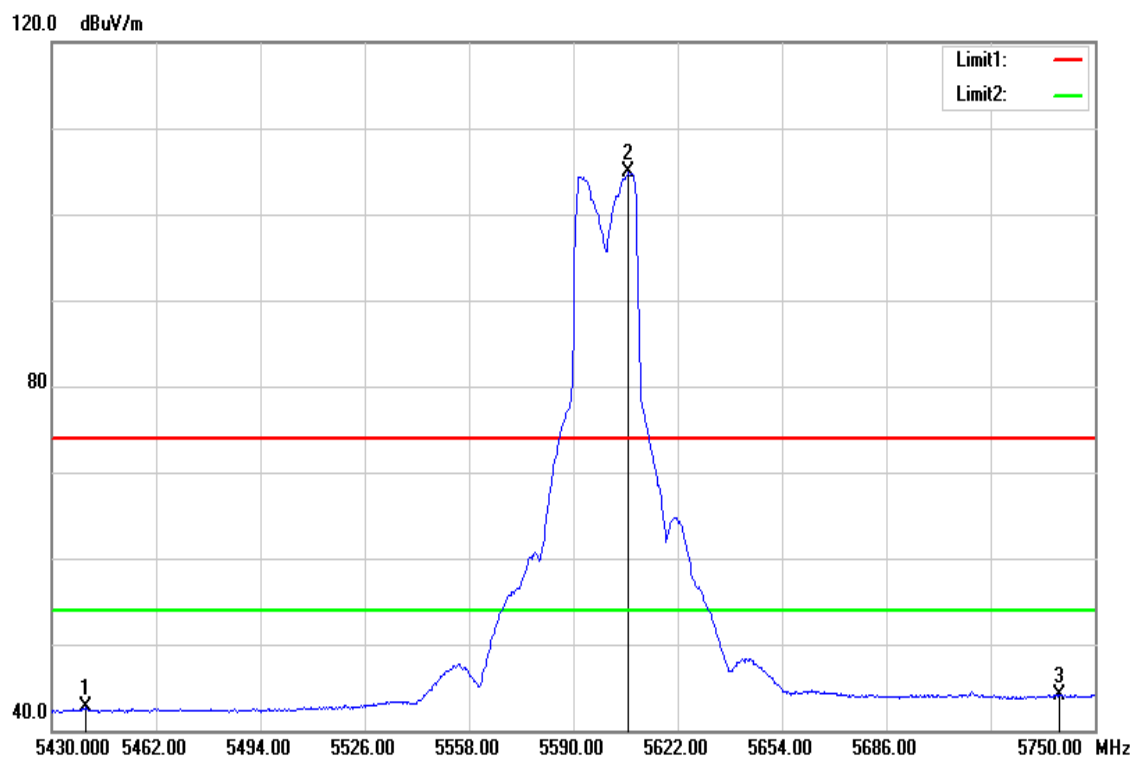
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	44.86	5.39	50.25	54.00	-3.75	AVG
5507.920	99.10	5.28	104.38	-	-	AVG

Test Mode	IEEE 802.11n HT20 / 5600 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



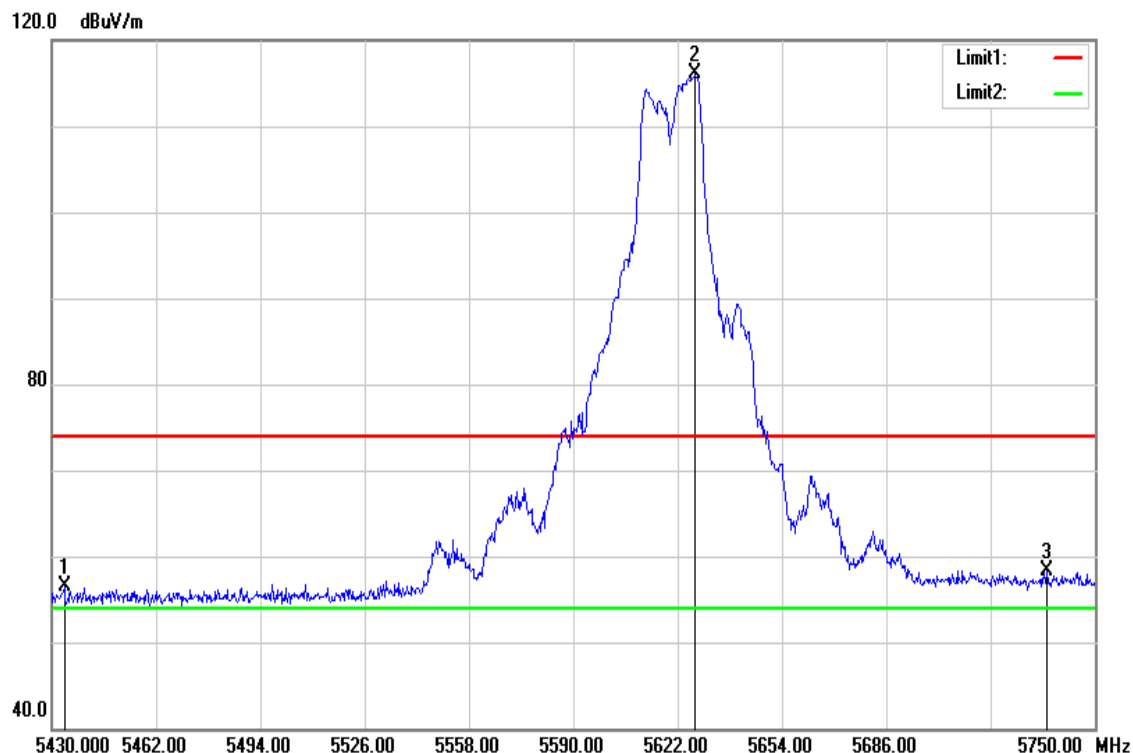
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5446.960	50.70	5.50	56.20	74.00	-17.80	peak
5602.800	109.04	5.69	114.73	-	-	peak
5746.800	51.33	6.30	57.63	74.00	-16.37	peak

Test Mode	IEEE 802.11n HT20 / 5600 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



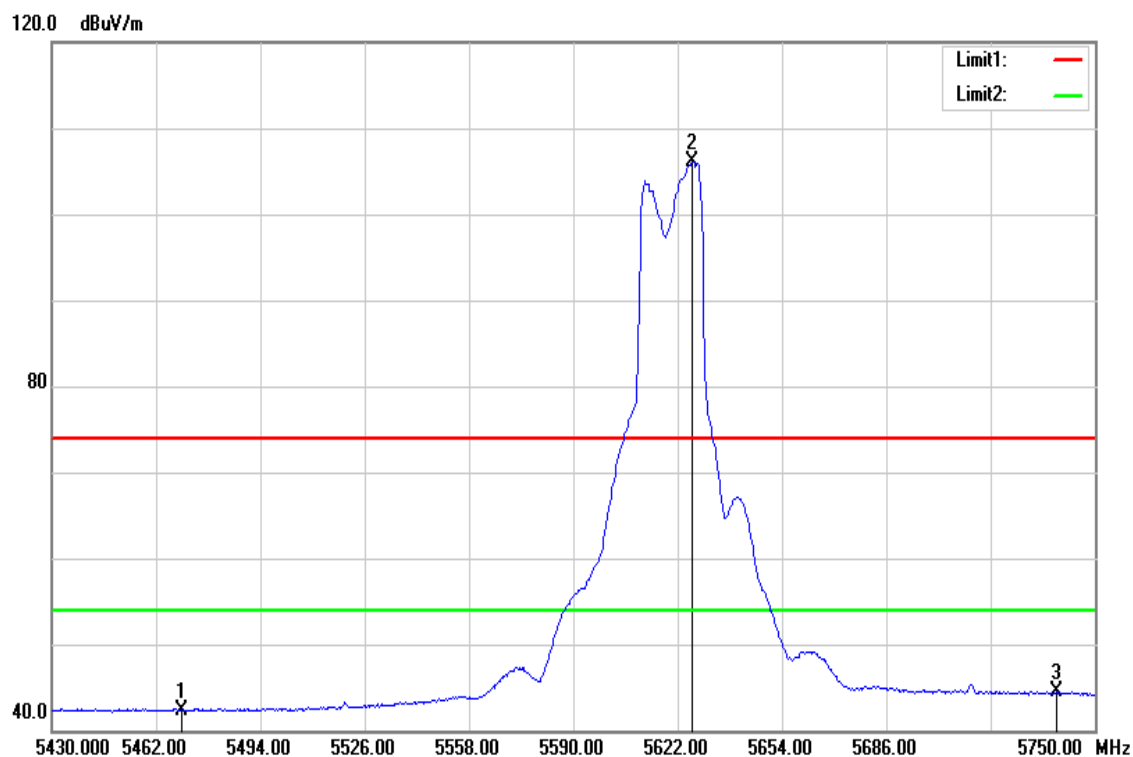
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5440.240	37.07	5.53	42.60	54.00	-11.40	AVG
5606.960	99.10	5.71	104.81	-	-	AVG
5739.120	37.85	6.27	44.12	54.00	-9.88	AVG

Test Mode	IEEE 802.11n HT20 / 5620 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



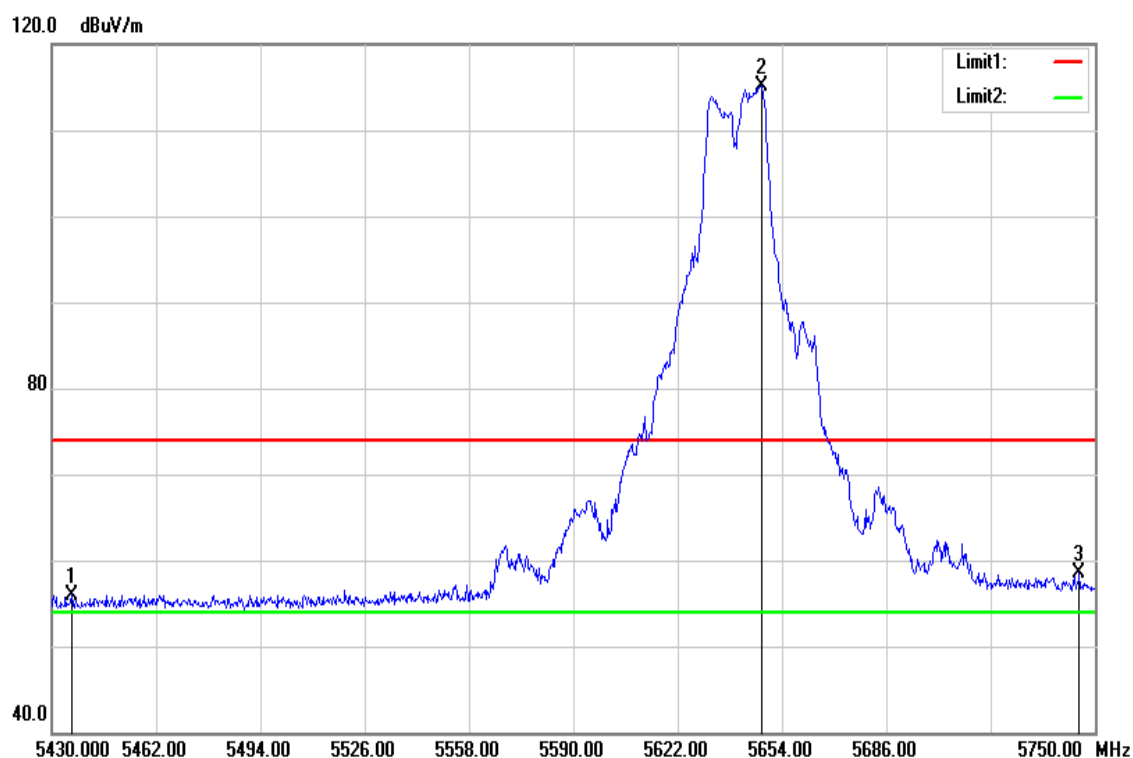
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5433.840	50.85	5.56	56.41	74.00	-17.59	peak
5627.440	110.33	5.79	116.12	-	-	peak
5735.280	52.10	6.25	58.35	74.00	-15.65	peak

Test Mode	IEEE 802.11n HT20 / 5620 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



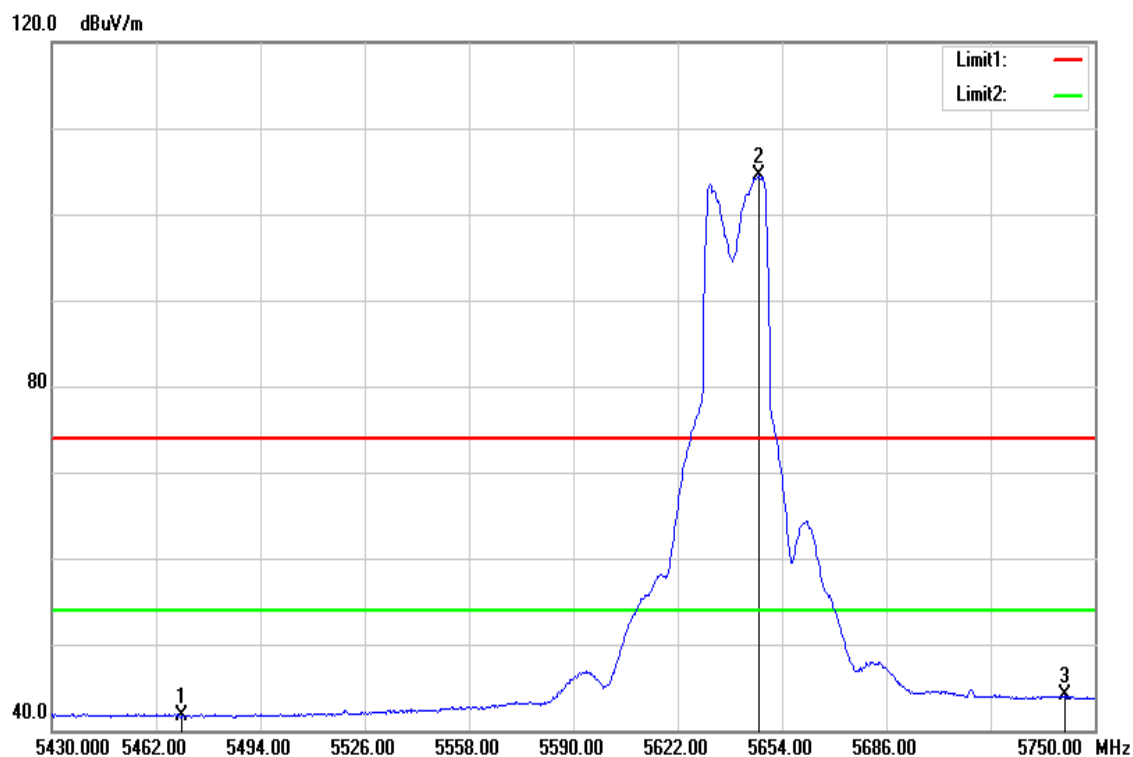
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	36.99	5.39	42.38	54.00	-11.62	AVG
5626.480	100.40	5.79	106.19	-	-	AVG
5738.160	38.27	6.26	44.53	54.00	-9.47	AVG

Test Mode	IEEE 802.11n HT20 / 5640 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



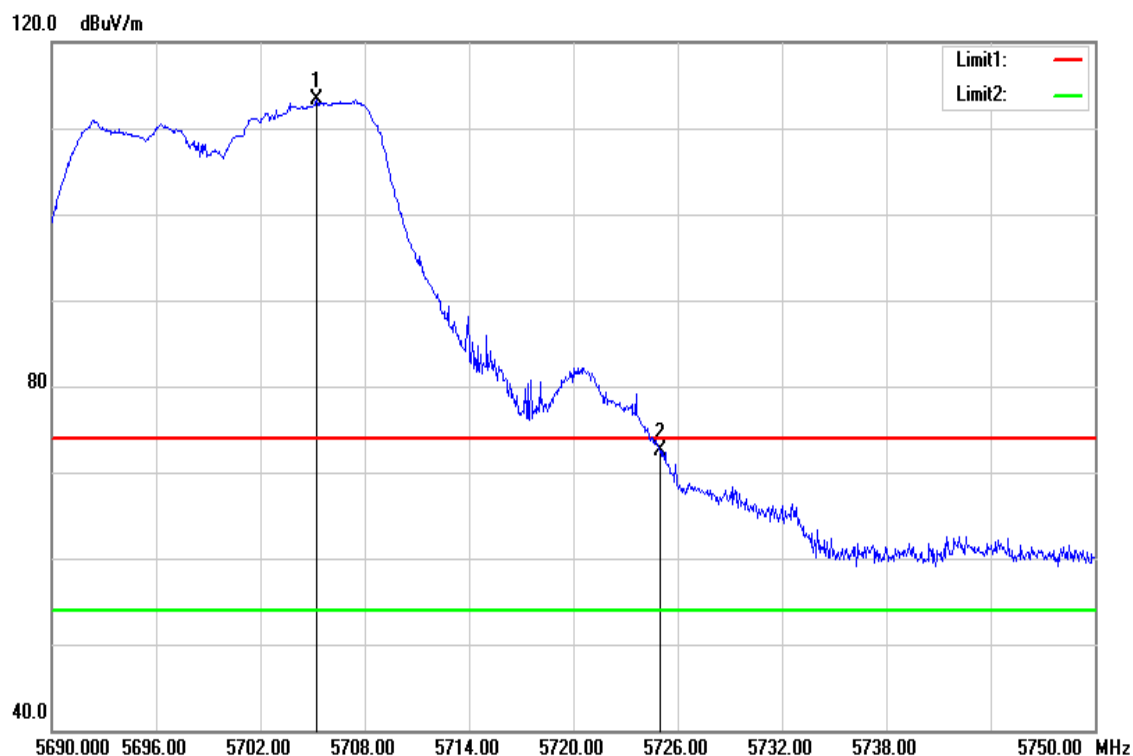
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5436.080	50.45	5.55	56.00	74.00	-18.00	peak
5647.600	109.27	5.88	115.15	-	-	peak
5745.200	52.20	6.29	58.49	74.00	-15.51	peak

Test Mode	IEEE 802.11n HT20 / 5640 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



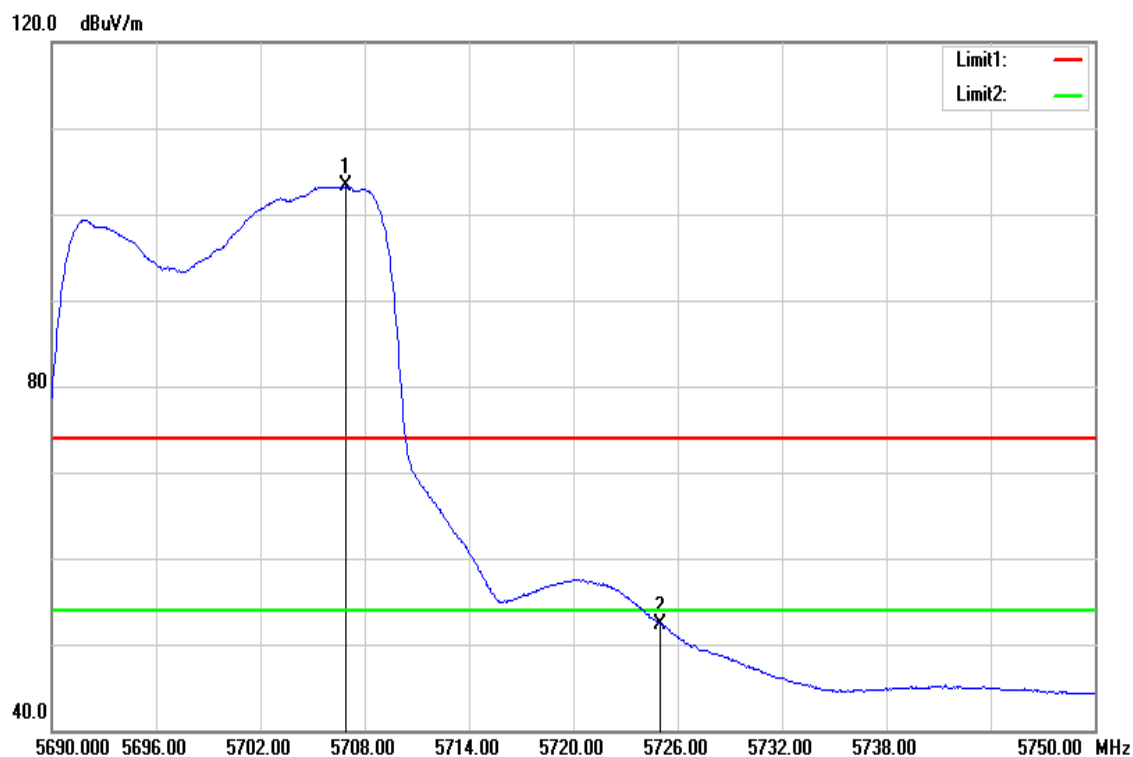
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	36.21	5.39	41.60	54.00	-12.40	AVG
5646.960	98.60	5.88	104.48	-	-	AVG
5740.720	37.76	6.28	44.04	54.00	-9.96	AVG

Test Mode	IEEE 802.11n HT20 / 5700 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



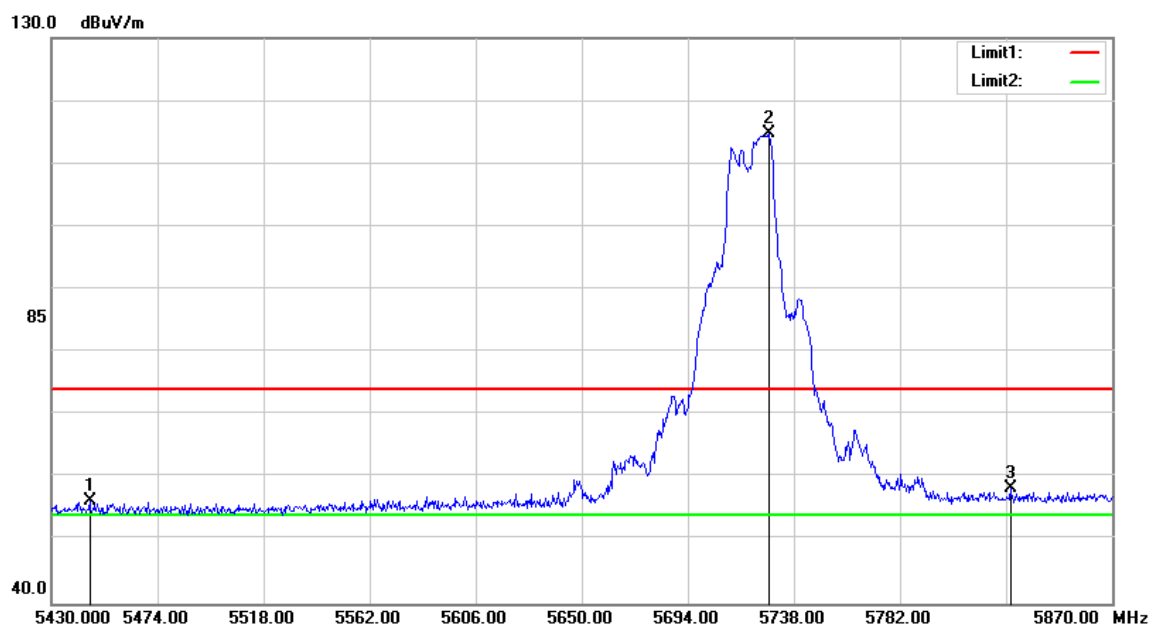
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5705.240	107.16	6.12	113.28	-	-	peak
5725.000	66.36	6.21	72.57	74.00	-1.43	peak

Test Mode	IEEE 802.11n HT20 / 5700 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



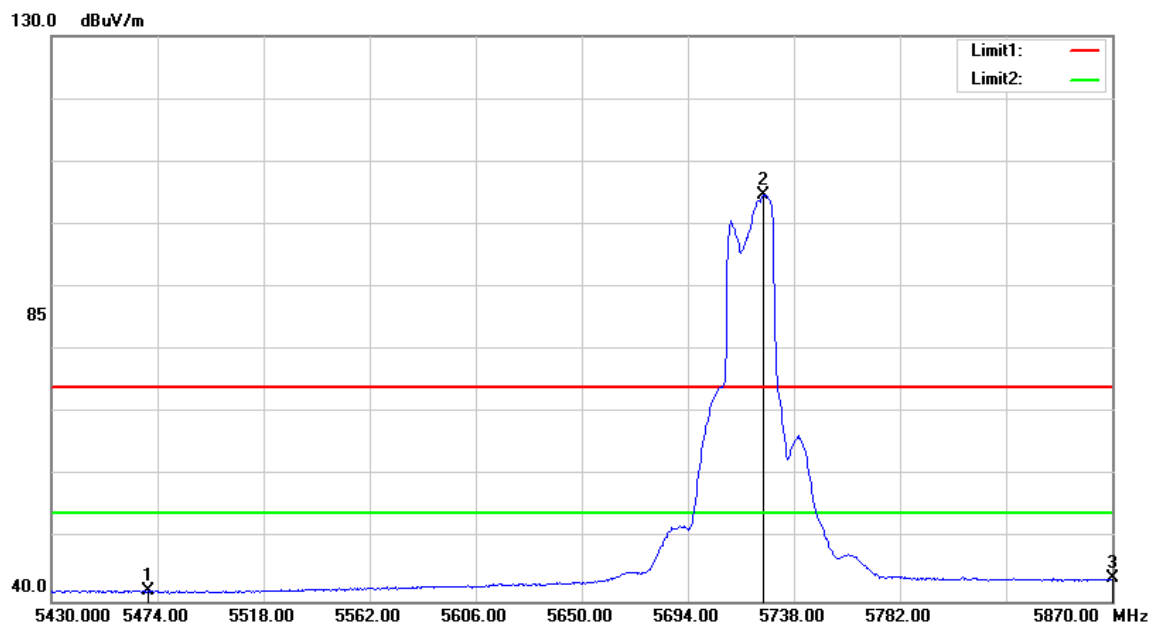
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5706.920	97.09	6.13	103.22	-	-	AVG
5725.000	46.13	6.21	52.34	54.00	-1.66	AVG

Test Mode	IEEE 802.11n HT20 / 5720 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



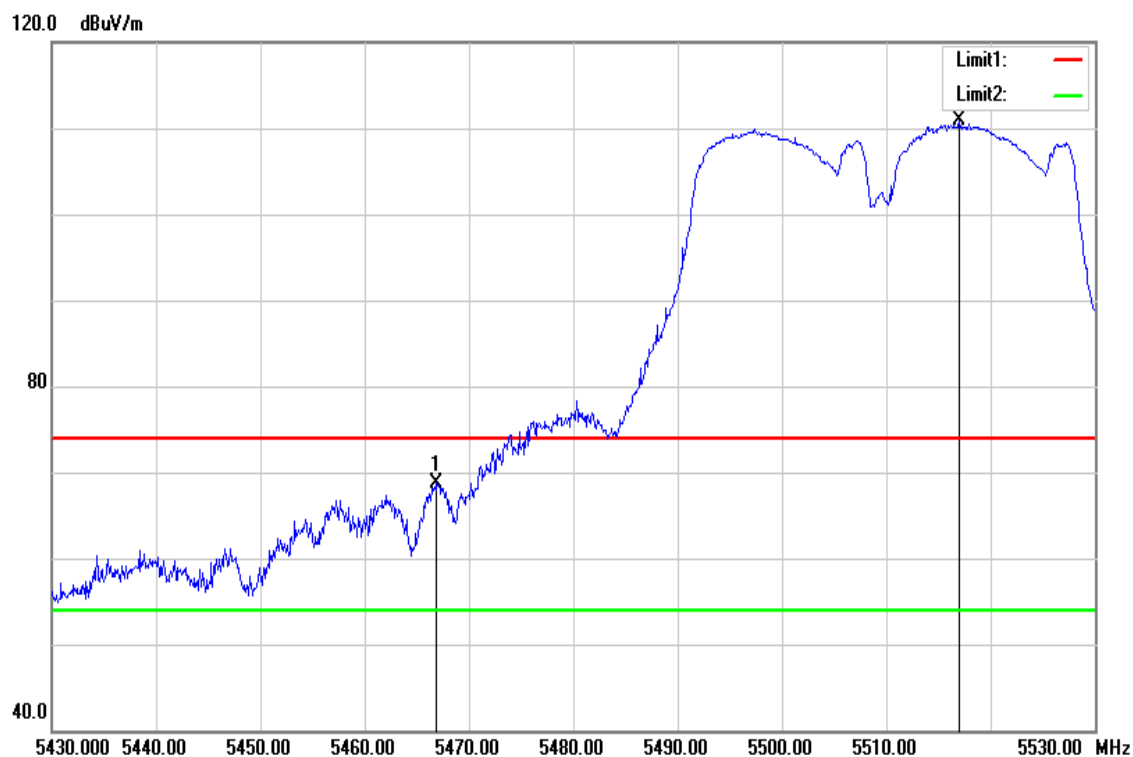
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5445.840	50.78	5.50	56.28	74.00	-17.72	peak
5727.440	108.51	6.22	114.73	-	-	peak
5827.760	51.63	6.65	58.28	74.00	-15.72	peak

Test Mode	IEEE 802.11n HT20 / 5720 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



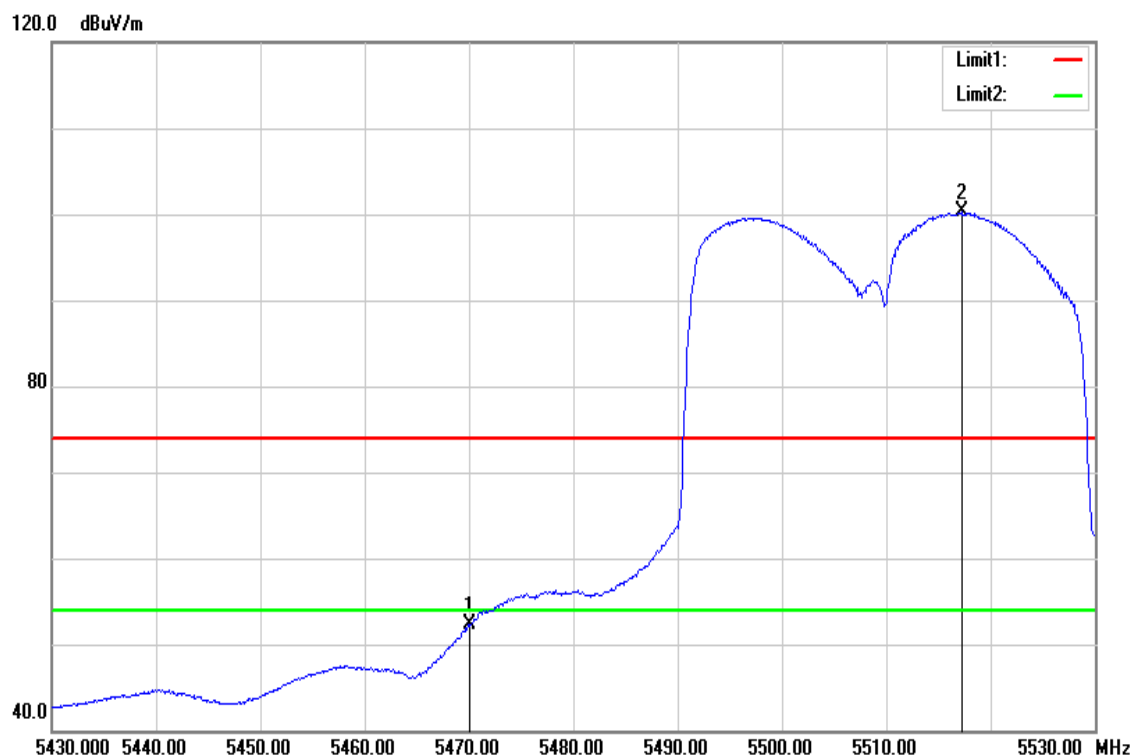
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	36.24	5.39	41.63	54.00	-12.37	AVG
5725.240	98.49	6.21	104.70	-	-	AVG
5870.000	36.80	6.83	43.63	54.00	-10.37	AVG

Test Mode	IEEE 802.11n HT40 / 5510 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5466.900	63.21	5.41	68.62	74.00	-5.38	peak
5517.000	105.63	5.32	110.95	-	-	peak

Test Mode	IEEE 802.11n HT40 / 5510 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



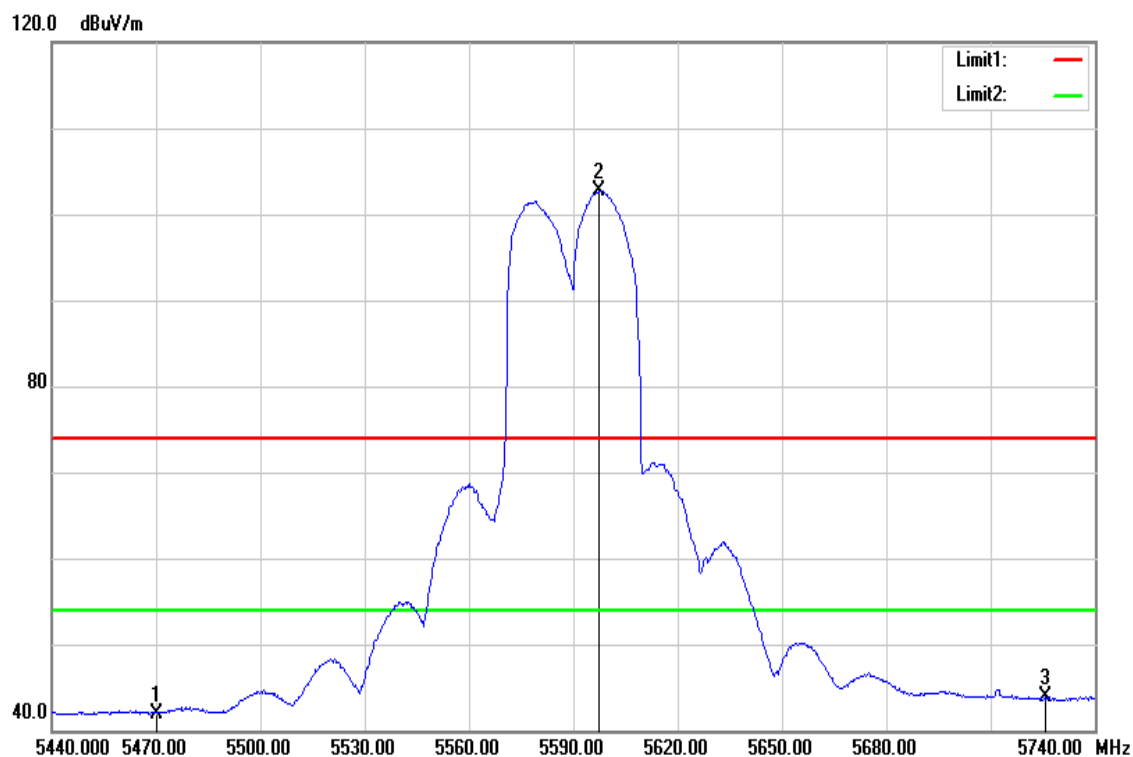
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	46.96	5.39	52.35	54.00	-1.65	AVG
5517.300	94.90	5.32	100.22	-	-	AVG

Test Mode	IEEE 802.11n HT40 / 5590 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



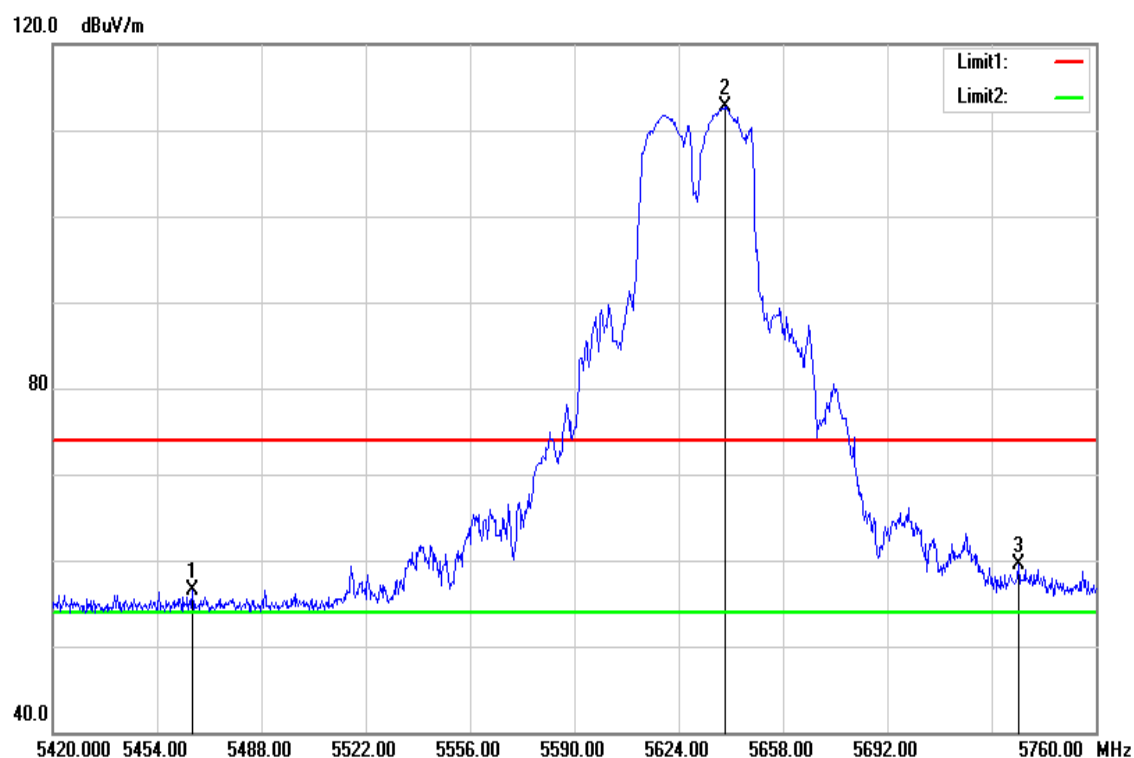
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5467.300	51.26	5.40	56.66	74.00	-17.34	peak
5598.400	107.40	5.67	113.07	-	-	peak
5737.600	51.62	6.26	57.88	74.00	-16.12	peak

Test Mode	IEEE 802.11n HT40 / 5590 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



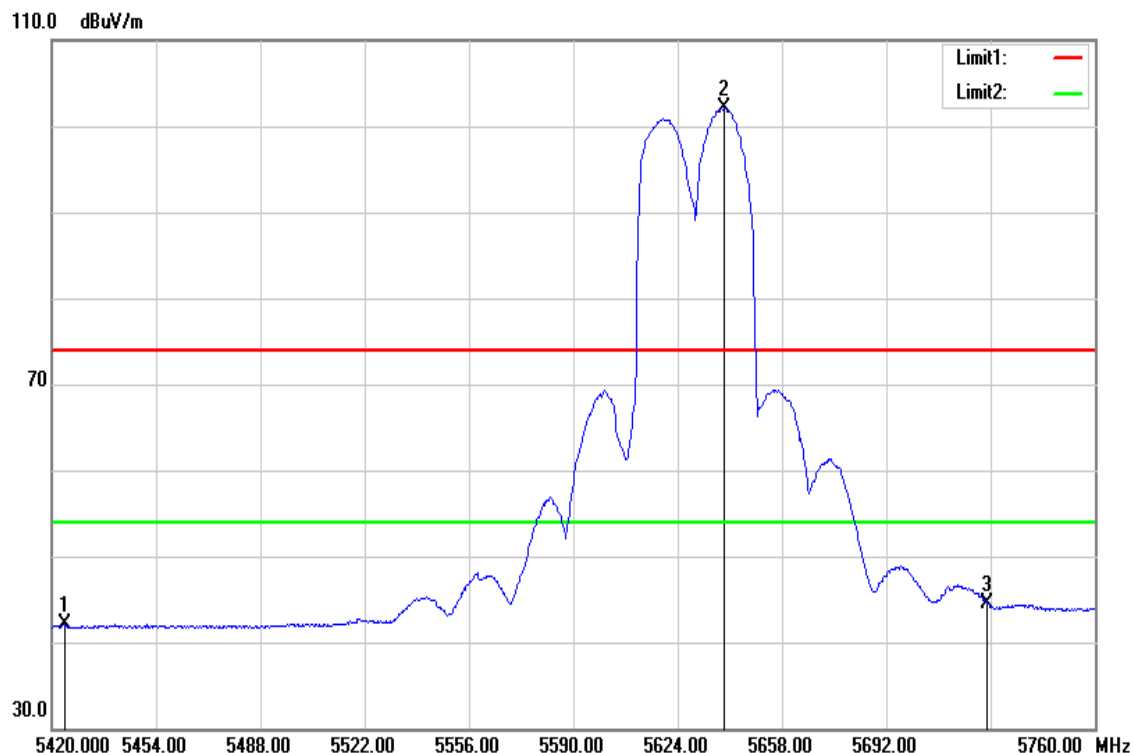
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	36.61	5.39	42.00	54.00	-12.00	AVG
5597.500	97.05	5.67	102.72	-	-	AVG
5725.600	37.68	6.21	43.89	54.00	-10.11	AVG

Test Mode	IEEE 802.11n HT40 / 5630 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



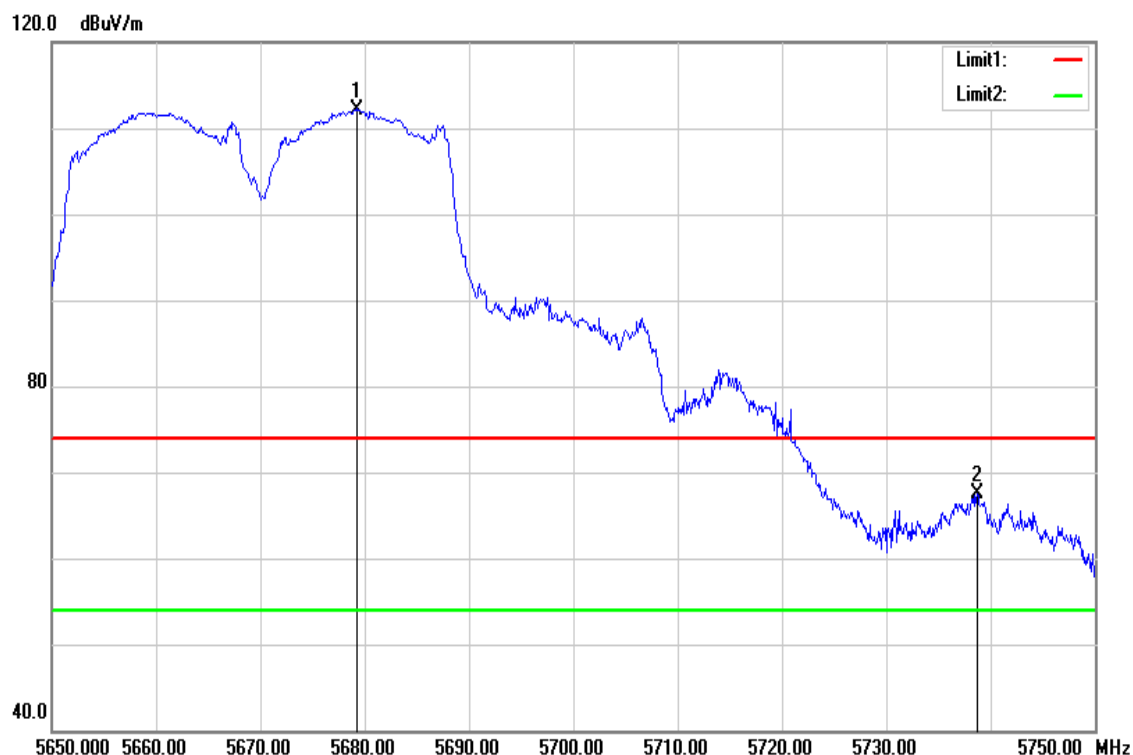
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5465.560	51.09	5.41	56.50	74.00	-17.50	peak
5639.300	106.85	5.84	112.69	-	-	peak
5734.840	53.17	6.25	59.42	74.00	-14.58	peak

Test Mode	IEEE 802.11n HT40 / 5630 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



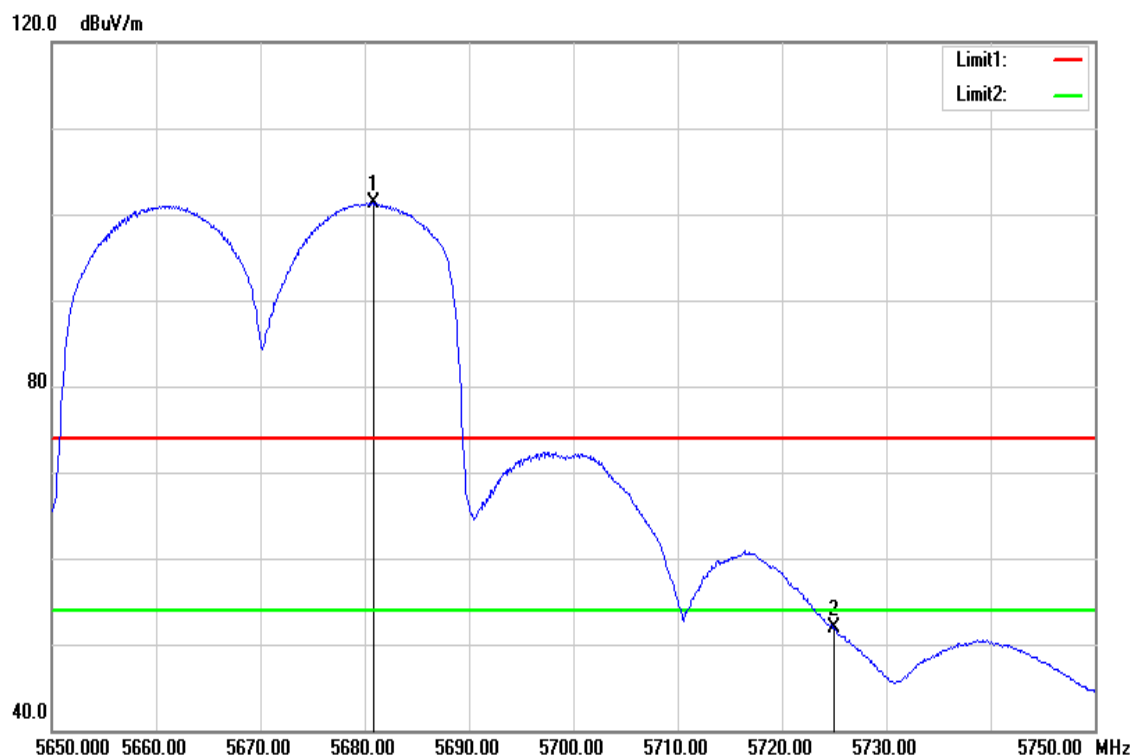
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5424.080	36.54	5.61	42.15	54.00	-11.85	AVG
5638.960	96.29	5.84	102.13	-	-	AVG
5725.000	38.21	6.21	44.42	54.00	-9.58	AVG

Test Mode	IEEE 802.11n HT40 / 5670 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5679.200	106.19	6.01	112.20	-	-	peak
5738.700	61.29	6.27	67.56	74.00	-6.44	peak

Test Mode	IEEE 802.11n HT40 / 5670 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



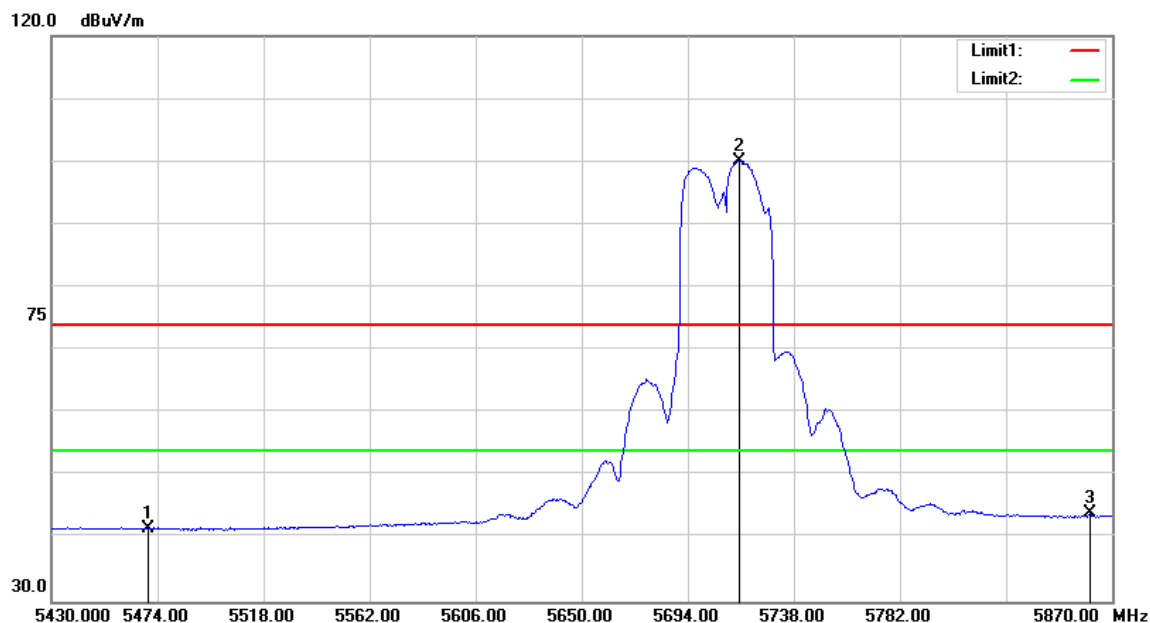
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5680.800	95.32	6.02	101.34	-	-	AVG
5725.000	45.61	6.21	51.82	54.00	-2.18	AVG

Test Mode	IEEE 802.11n HT40 / 5710 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



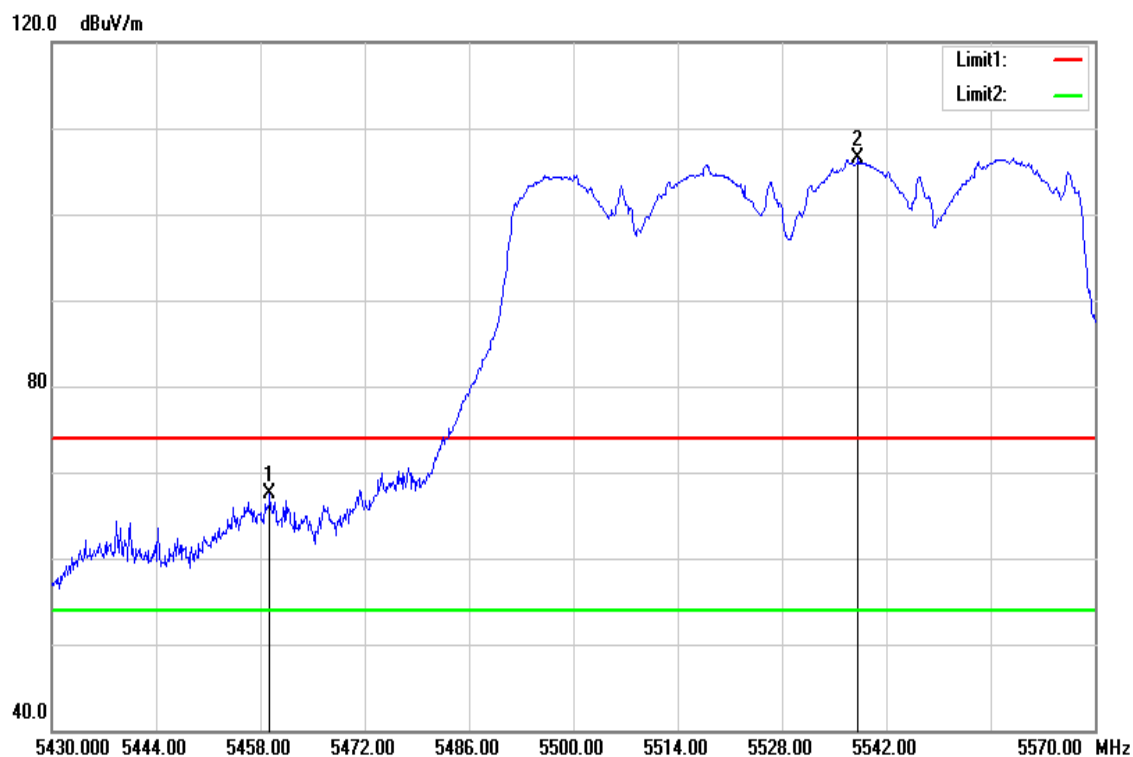
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5438.360	50.86	5.54	56.40	74.00	-17.60	peak
5715.560	105.54	6.17	111.71	74.00	37.71	peak
5865.160	51.42	6.81	58.23	74.00	-15.77	peak

Test Mode	IEEE 802.11n HT40 / 5710 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



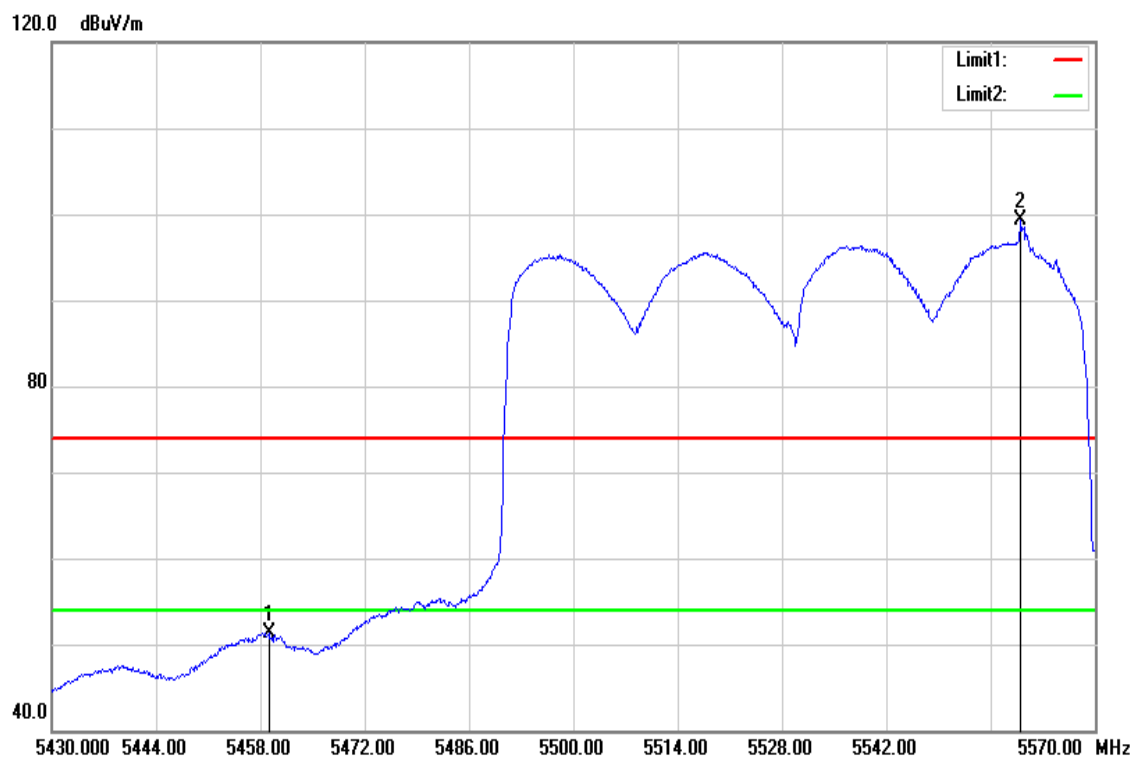
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5470.000	36.16	5.39	41.55	54.00	-12.45	AVG
5715.560	93.91	6.17	100.08	54.00	46.08	AVG
5860.760	37.17	6.79	43.96	54.00	-10.04	AVG

Test Mode	IEEE 802.11ac VHT80 / 5530 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



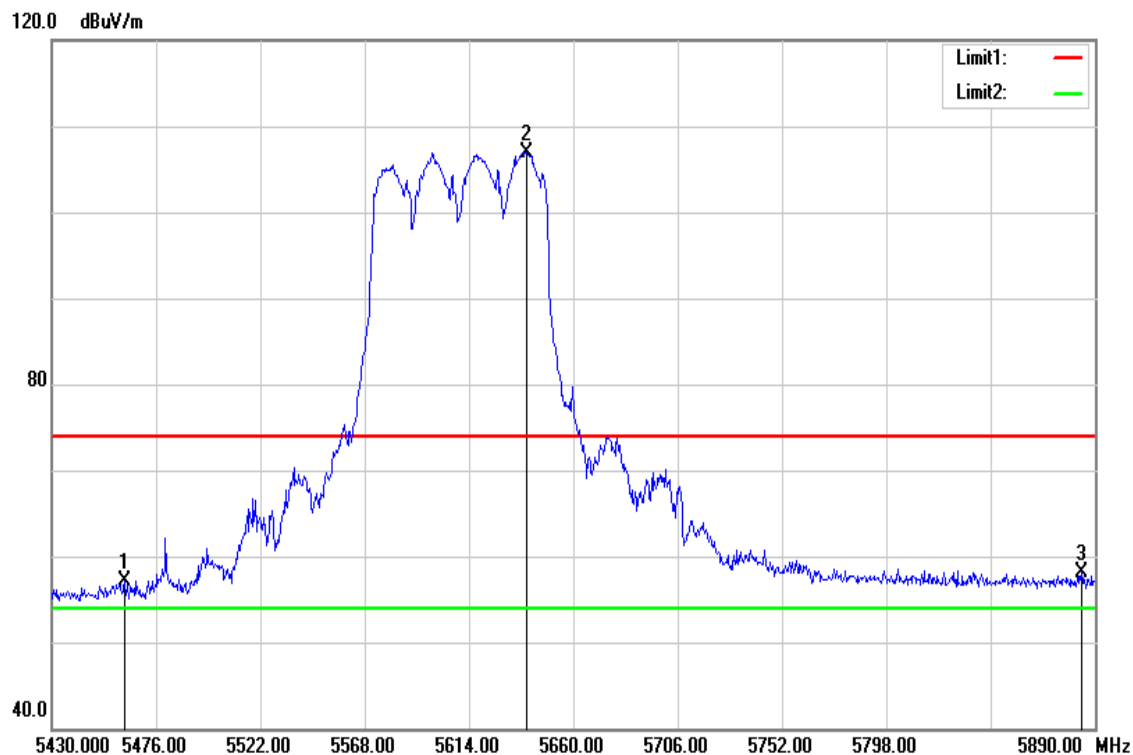
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5459.260	62.06	5.44	67.50	74.00	-6.50	peak
5538.220	101.07	5.41	106.48	-	-	peak

Test Mode	IEEE 802.11ac VHT80 / 5530 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



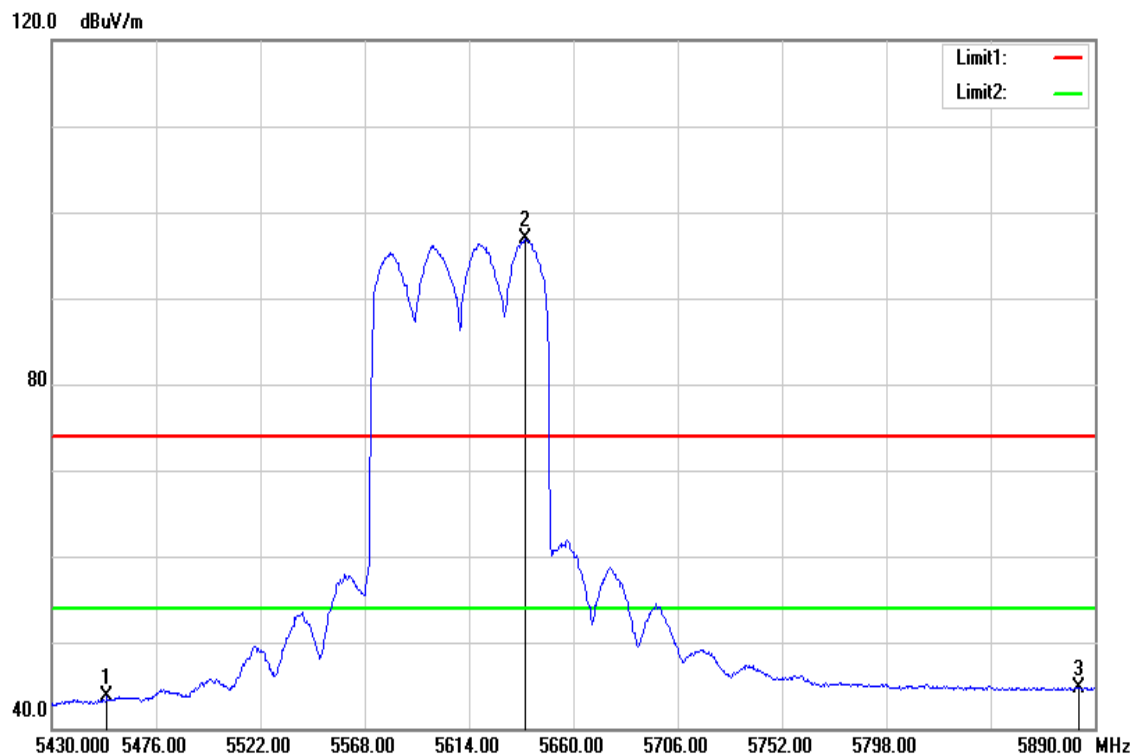
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5459.120	45.78	5.44	51.22	54.00	-2.78	AVG
5560.060	93.71	5.51	99.22	-	-	AVG

Test Mode	IEEE 802.11ac VHT80 / 5610 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



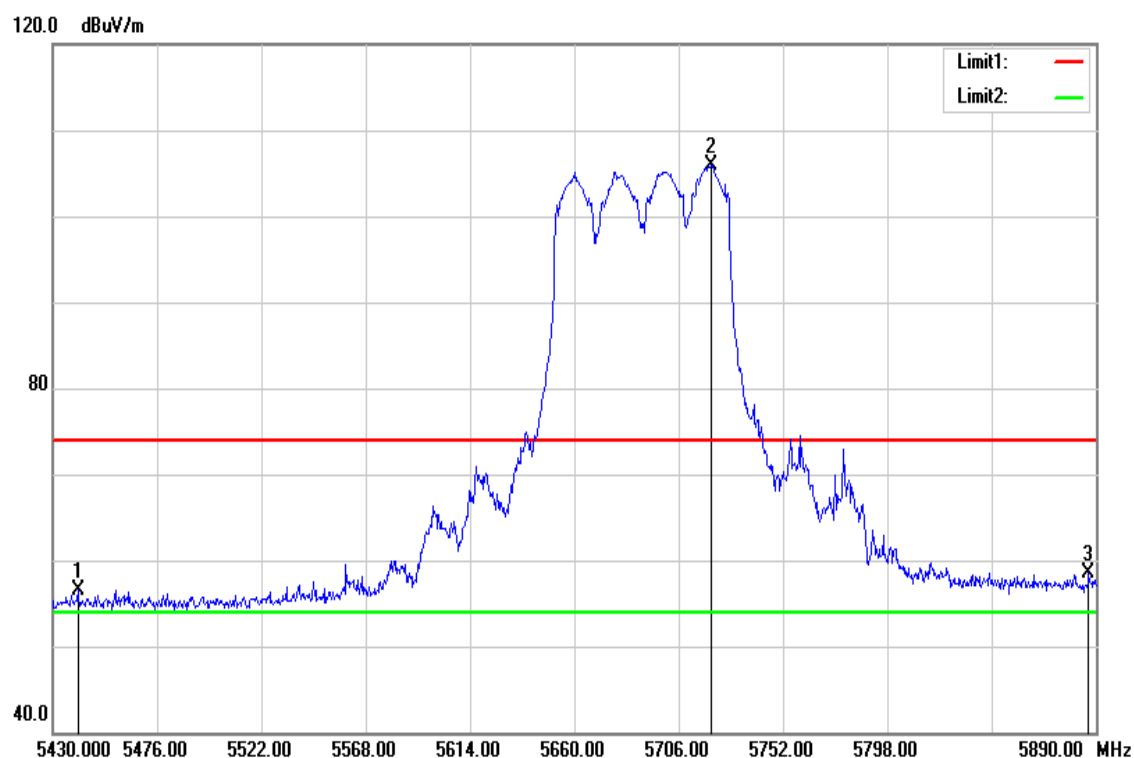
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5462.200	51.72	5.43	57.15	74.00	-16.85	peak
5639.300	101.10	5.84	106.94	-	-	peak
5884.020	51.12	6.89	58.01	74.00	-15.99	peak

Test Mode	IEEE 802.11ac VHT80 / 5610 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



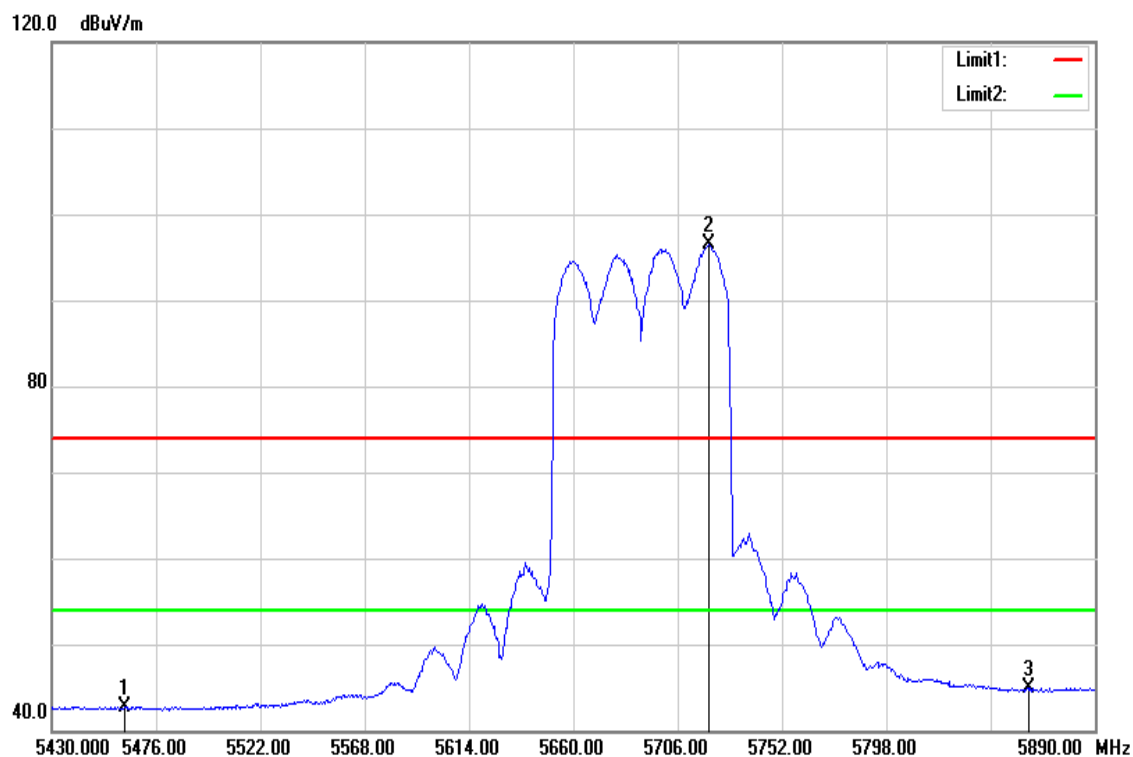
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5454.380	38.19	5.46	43.65	54.00	-10.35	AVG
5638.840	91.00	5.84	96.84	-	-	AVG
5883.100	37.92	6.88	44.80	54.00	-9.20	AVG

Test Mode	IEEE 802.11ac VHT80 / 5690 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5441.040	50.95	5.53	56.48	74.00	-17.52	peak
5720.260	99.78	6.19	105.97	-	-	peak
5886.780	51.68	6.90	58.58	74.00	-15.42	peak

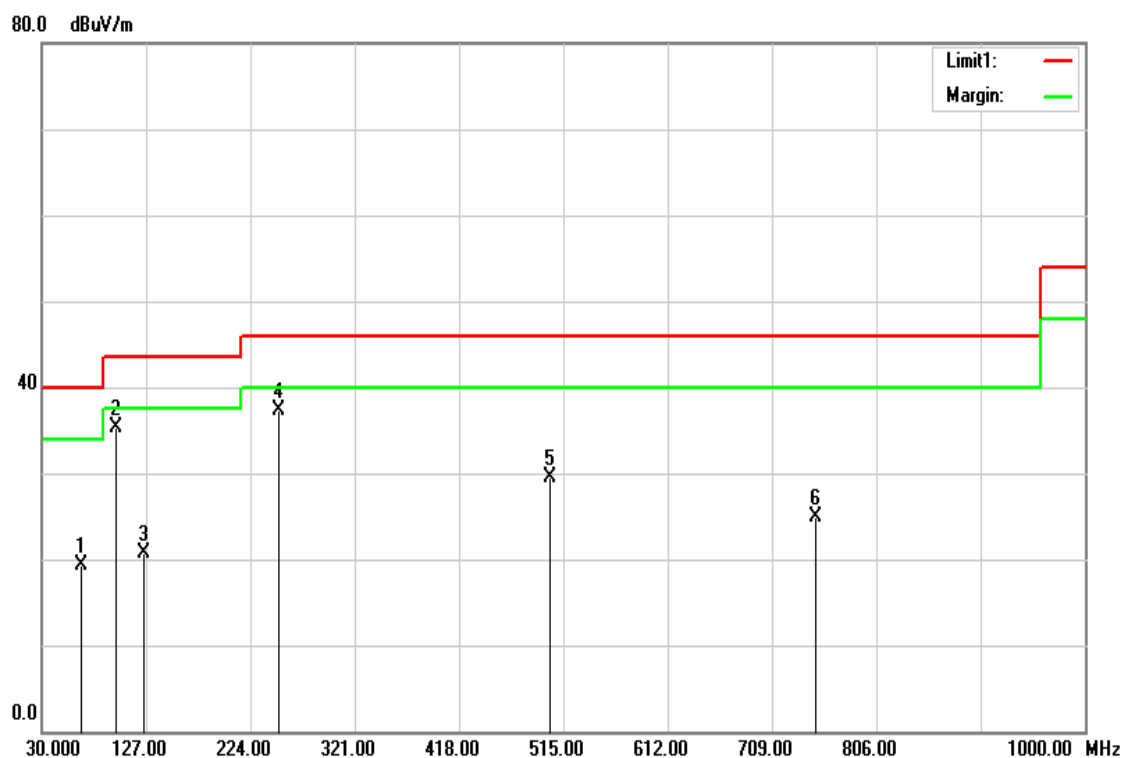
Test Mode	IEEE 802.11ac VHT80 / 5690 MHz	Temperature	27(°C) / 53%RH
Test Item	Band Edge	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5462.200	37.31	5.43	42.74	54.00	-11.26	AVG
5719.800	90.22	6.19	96.41	-	-	AVG
5861.020	38.19	6.79	44.98	54.00	-9.02	AVG

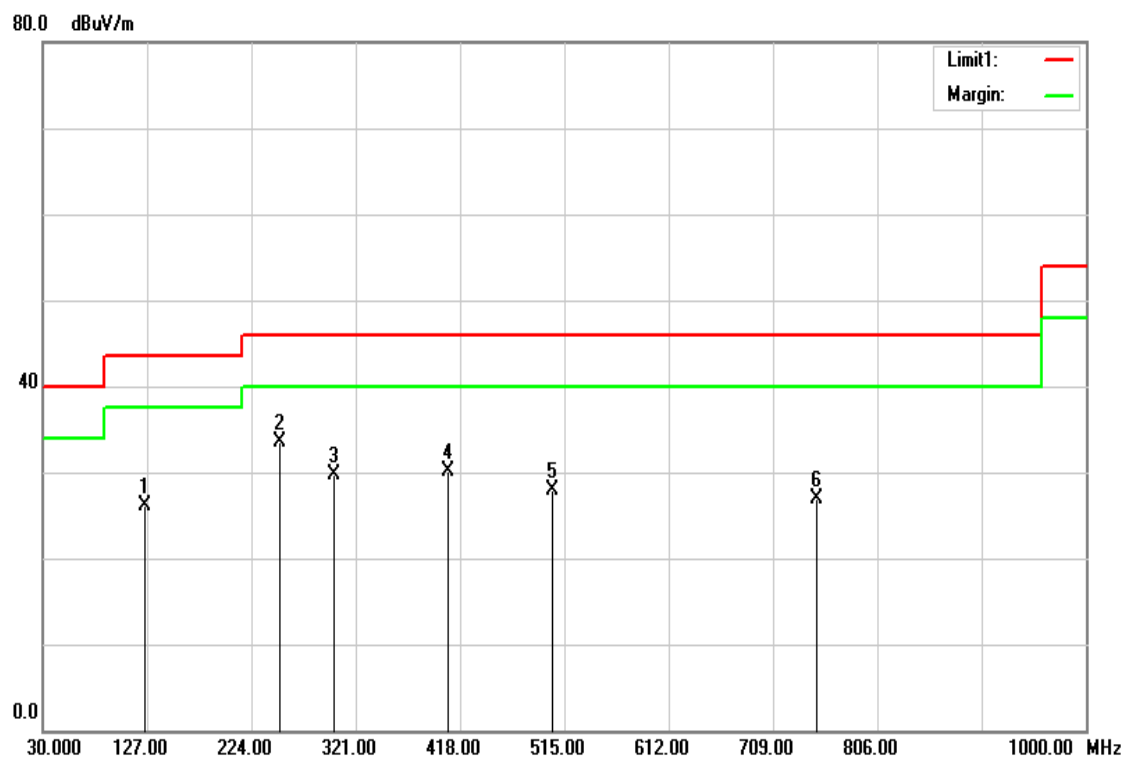
Below 1G Test Data

Test Mode	Mode 1	Temp/Hum	27(°C)/ 53%RH
Test Item	30MHz-1GHz	Test Date	November 17, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Qusi-peak	Test Voltage	120Vac / 60Hz



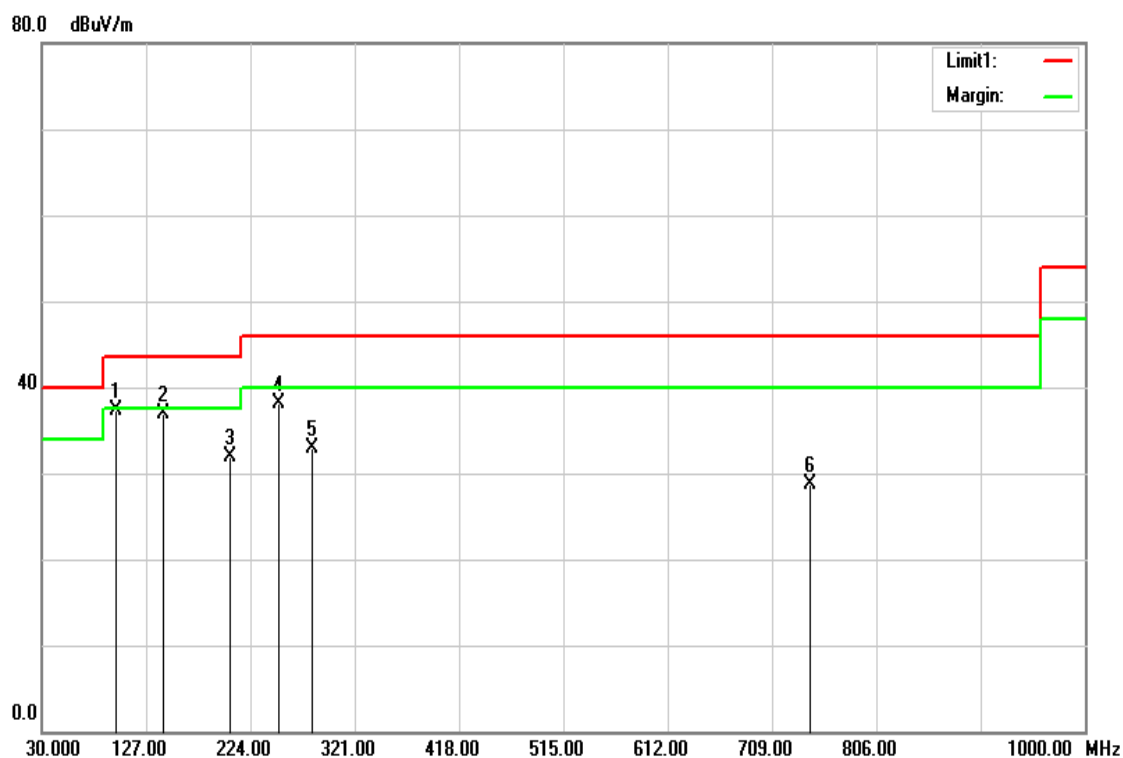
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
66.8600	40.52	-21.16	19.36	40.00	-20.64	QP
98.8700	54.55	-19.31	35.24	43.50	-8.26	peak
125.0600	36.31	-15.57	20.74	43.50	-22.76	QP
250.1900	53.51	-16.27	37.24	46.00	-8.76	peak
502.3900	38.79	-9.20	29.59	46.00	-16.41	peak
749.7400	29.81	-4.93	24.88	46.00	-21.12	peak

Test Mode	Mode 1	Temp/Hum	27(°C)/ 53%RH
Test Item	30MHz-1GHz	Test Date	November 17, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Qusi-peak	Test Voltage	120Vac / 60Hz



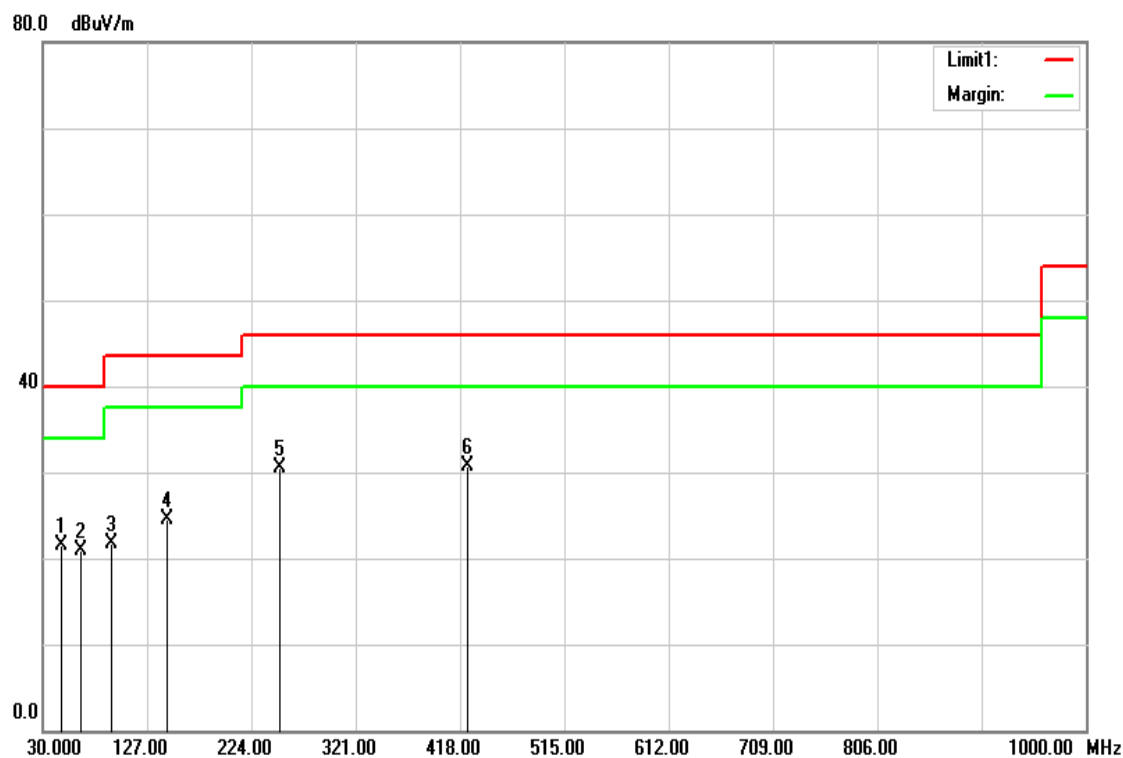
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
125.0600	41.68	-15.57	26.11	43.50	-17.39	peak
250.1900	49.70	-16.27	33.43	46.00	-12.57	peak
300.6300	43.86	-14.22	29.64	46.00	-16.36	peak
407.3300	41.52	-11.48	30.04	46.00	-15.96	peak
503.3600	37.15	-9.19	27.96	46.00	-18.04	peak
749.7400	31.82	-4.93	26.89	46.00	-19.11	peak

Test Mode	Mode 2	Temp/Hum	27(°C) / 53%RH
Test Item	30MHz-1GHz	Test Date	November 17, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Qusi-peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
98.8700	56.65	-19.31	37.34	43.50	-6.16	peak
143.4900	52.86	-15.88	36.98	43.50	-6.52	peak
204.6000	47.87	-15.87	32.00	43.50	-11.50	peak
250.1900	54.35	-16.27	38.08	46.00	-7.92	peak
281.2300	47.55	-14.59	32.96	46.00	-13.04	peak
743.9200	33.70	-5.06	28.64	46.00	-17.36	peak

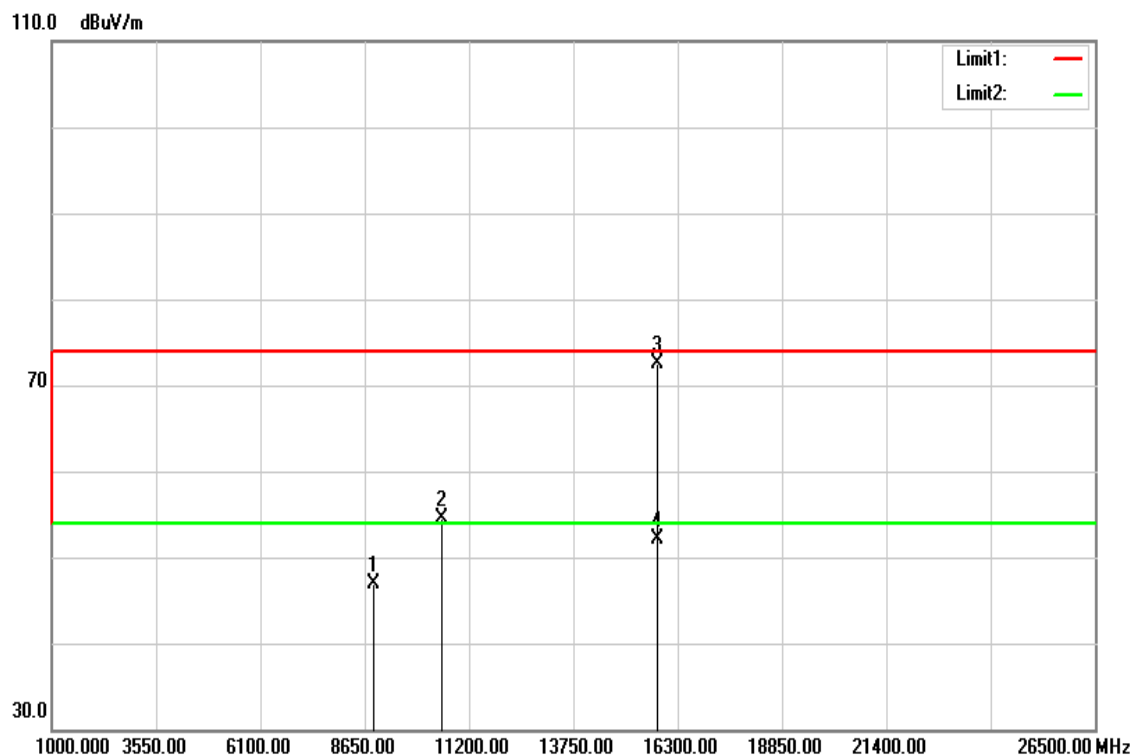
Test Mode	Mode 2	Temp/Hum	27(°C)/ 53%RH
Test Item	30MHz-1GHz	Test Date	November 17, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Qusi-peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
47.4600	41.18	-19.61	21.57	40.00	-18.43	QP
64.9200	42.30	-21.43	20.87	40.00	-19.13	QP
94.0200	42.19	-20.51	21.68	43.50	-21.82	QP
145.4300	40.46	-15.94	24.52	43.50	-18.98	QP
250.1900	46.77	-16.27	30.50	46.00	-15.50	peak
424.7900	41.67	-10.95	30.72	46.00	-15.28	peak

Above 1G Test Data for UNII-2a

Test Mode	IEEE 802.11a / 5260 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

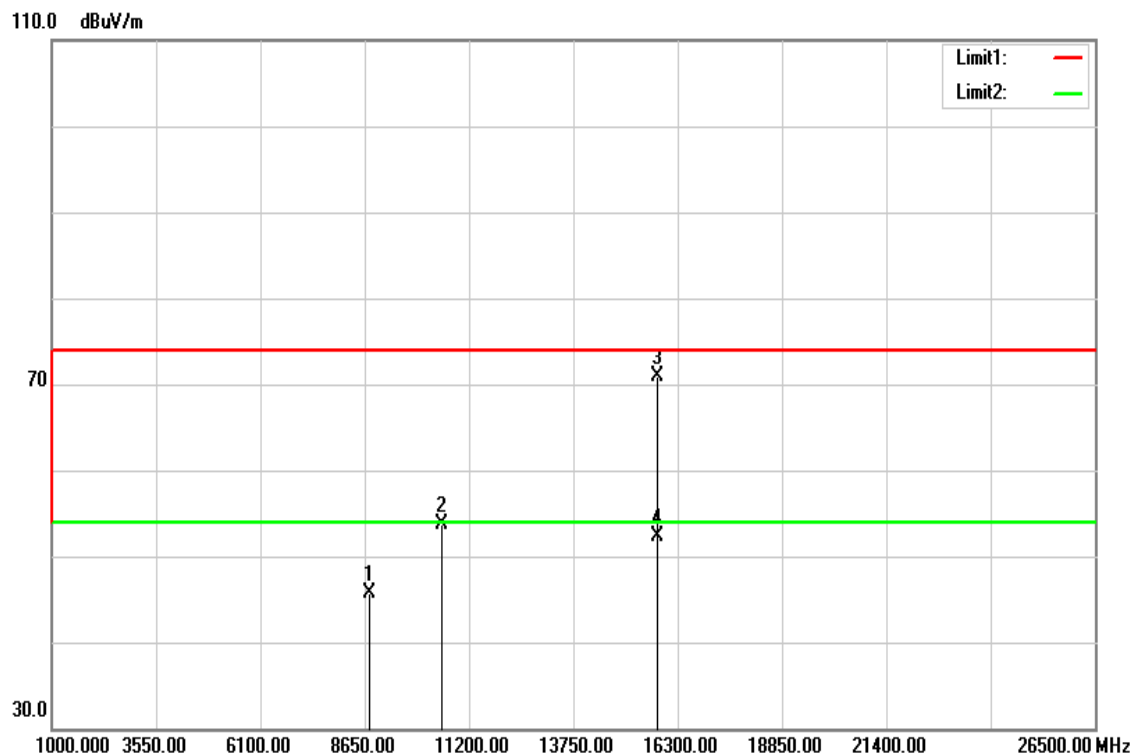


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8865.000	31.09	15.77	46.86	74.00	-27.14	peak
10520.000	36.97	17.59	54.56	74.00	-19.44	peak
15790.000	51.13	21.46	72.59	74.00	-1.41	peak
15790.000	30.59	21.46	52.05	54.00	-1.95	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

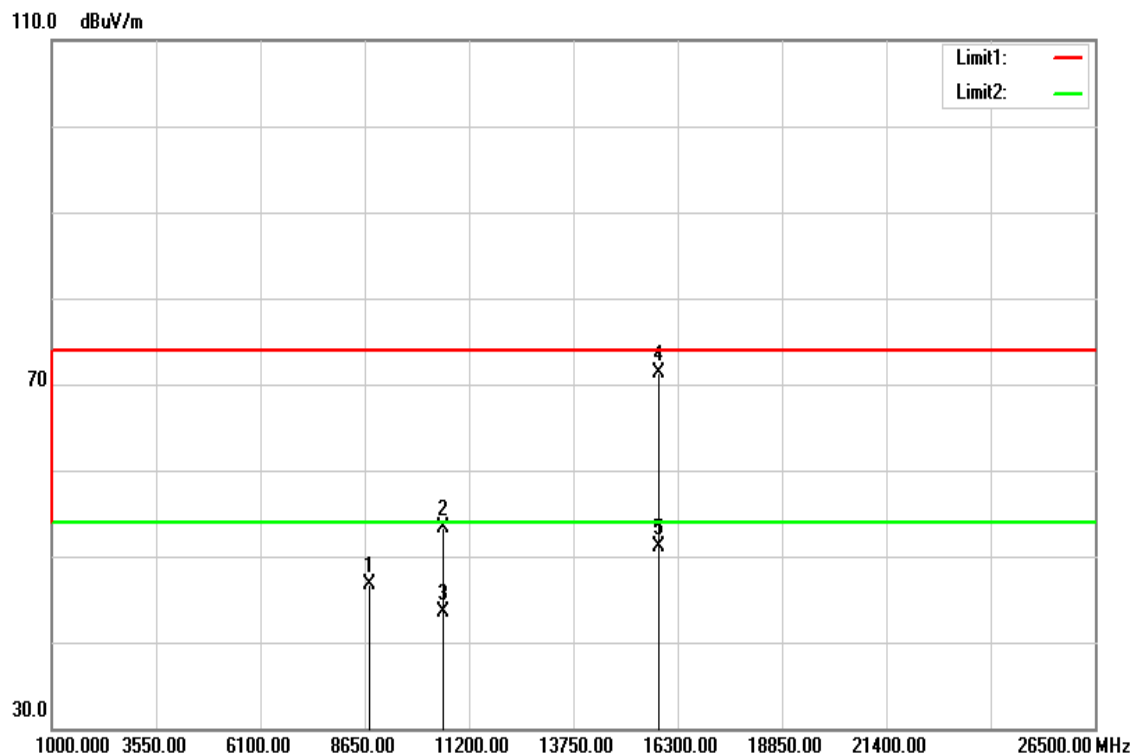


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	30.20	15.56	45.76	74.00	-28.24	peak
10520.000	36.02	17.59	53.61	74.00	-20.39	peak
15790.000	49.36	21.46	70.82	74.00	-3.18	peak
15790.000	30.91	21.46	52.37	54.00	-1.63	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

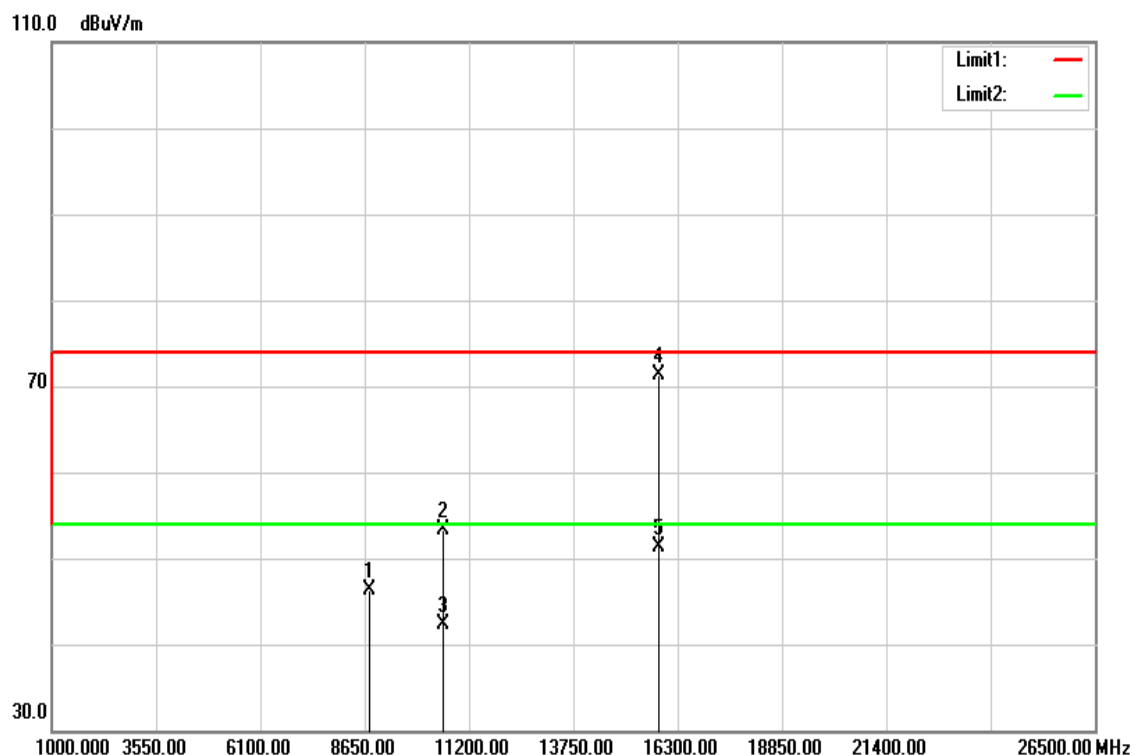


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	31.07	15.56	46.63	74.00	-27.37	peak
10560.000	35.77	17.63	53.40	74.00	-20.60	peak
10560.000	25.92	17.63	43.55	54.00	-10.45	AVG
15840.000	49.70	21.63	71.33	74.00	-2.67	peak
15840.000	29.41	21.63	51.04	54.00	-2.96	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

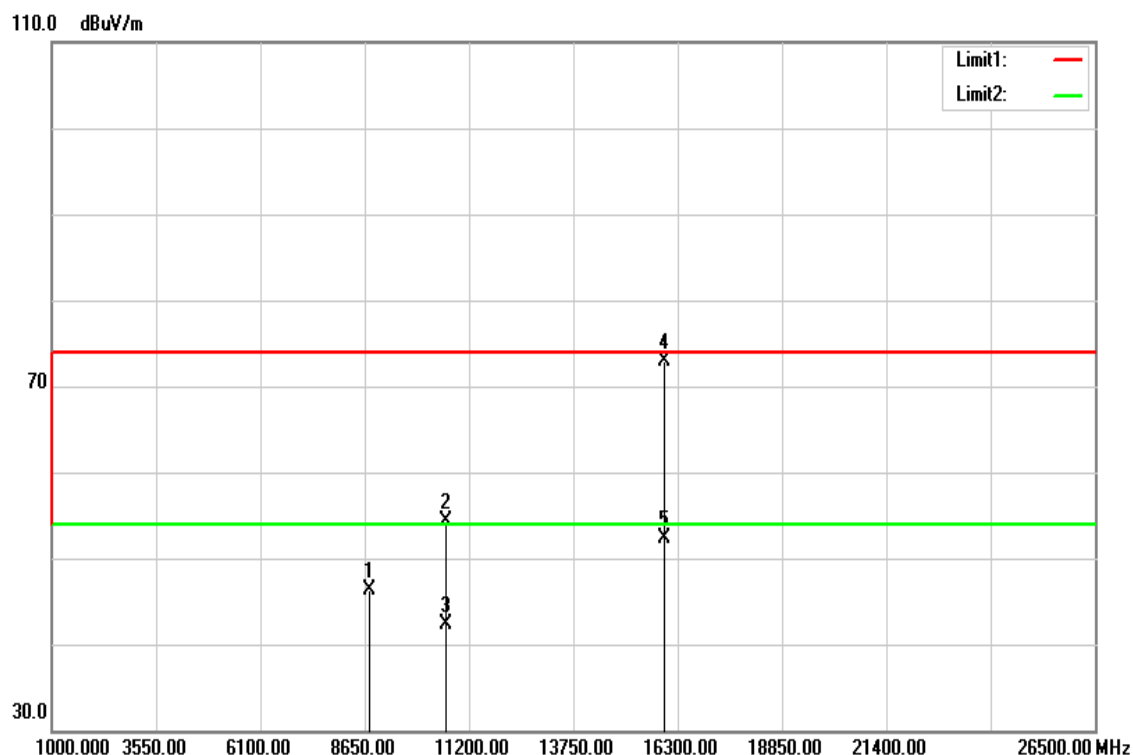


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	30.82	15.56	46.38	74.00	-27.62	peak
10560.000	35.74	17.63	53.37	74.00	-20.63	peak
10560.000	24.73	17.63	42.36	54.00	-11.64	AVG
15840.000	49.60	21.63	71.23	74.00	-2.77	peak
15840.000	29.58	21.63	51.21	54.00	-2.79	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

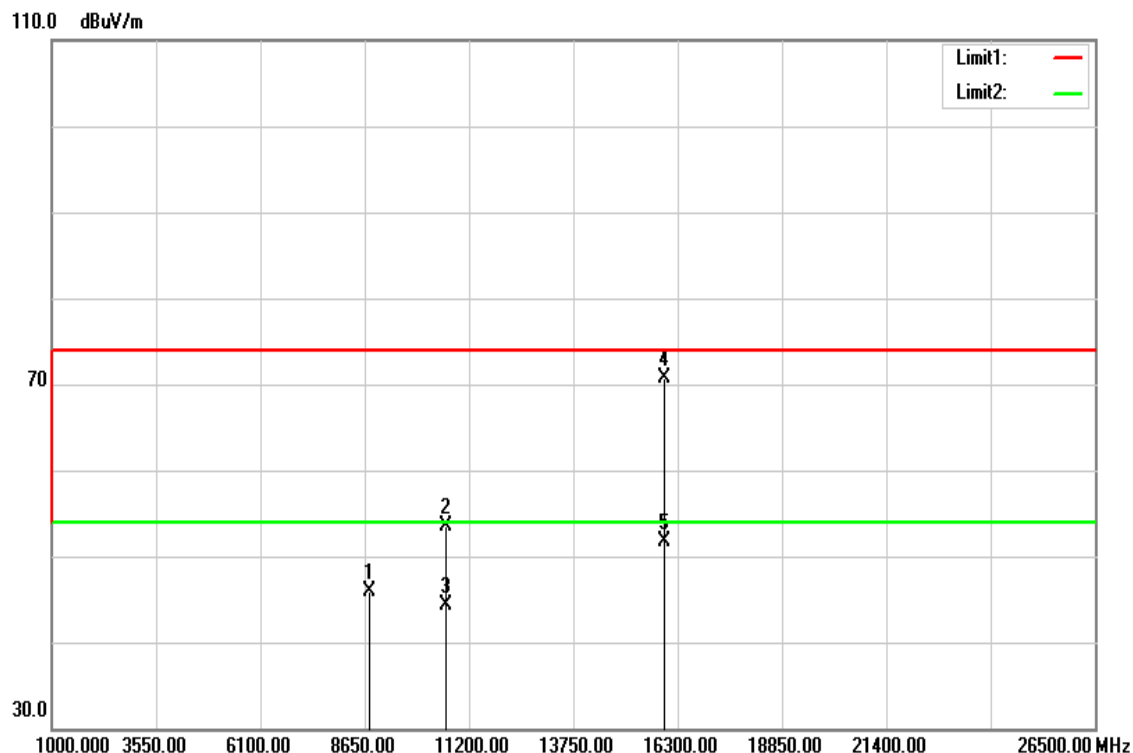


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	30.73	15.56	46.29	74.00	-27.71	peak
10640.000	36.63	17.72	54.35	74.00	-19.65	peak
10640.000	24.58	17.72	42.30	54.00	-11.70	AVG
15970.000	50.80	22.08	72.88	74.00	-1.12	peak
15970.000	30.13	22.08	52.21	54.00	-1.79	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

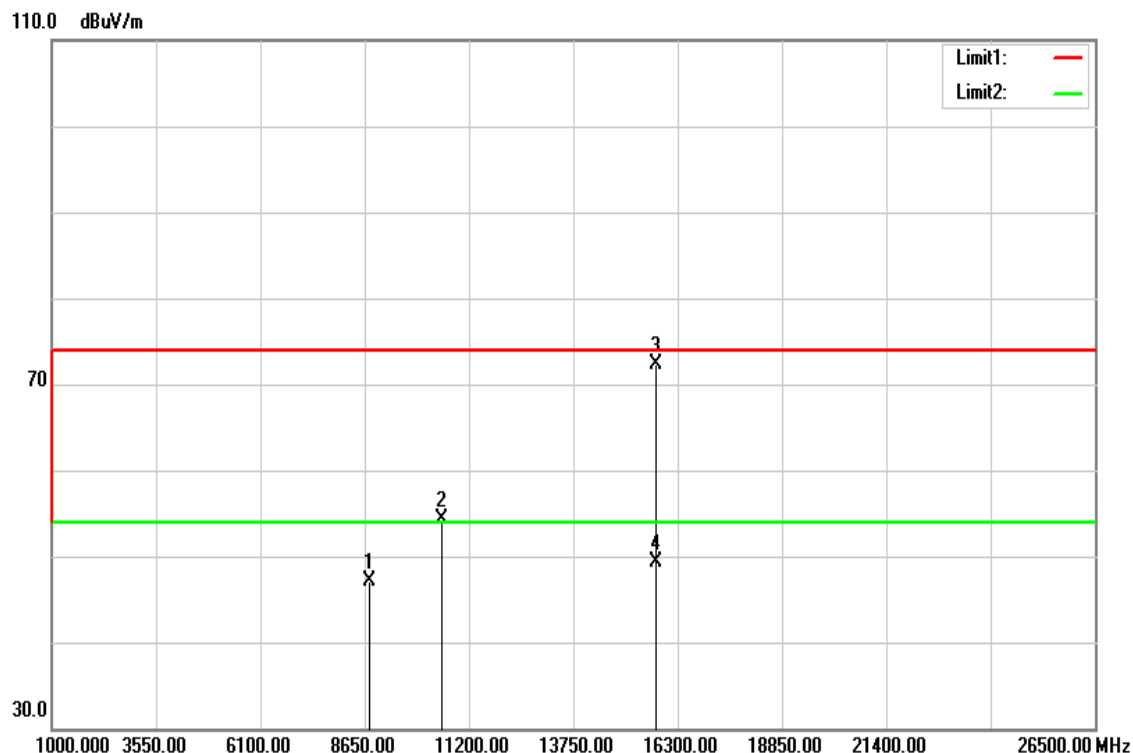


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	30.43	15.56	45.99	74.00	-28.01	peak
10640.000	35.85	17.72	53.57	74.00	-20.43	peak
10640.000	26.64	17.72	44.36	54.00	-9.64	AVG
15970.000	48.59	22.08	70.67	74.00	-3.33	peak
15970.000	29.63	22.08	51.71	54.00	-2.29	AVG

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- 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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

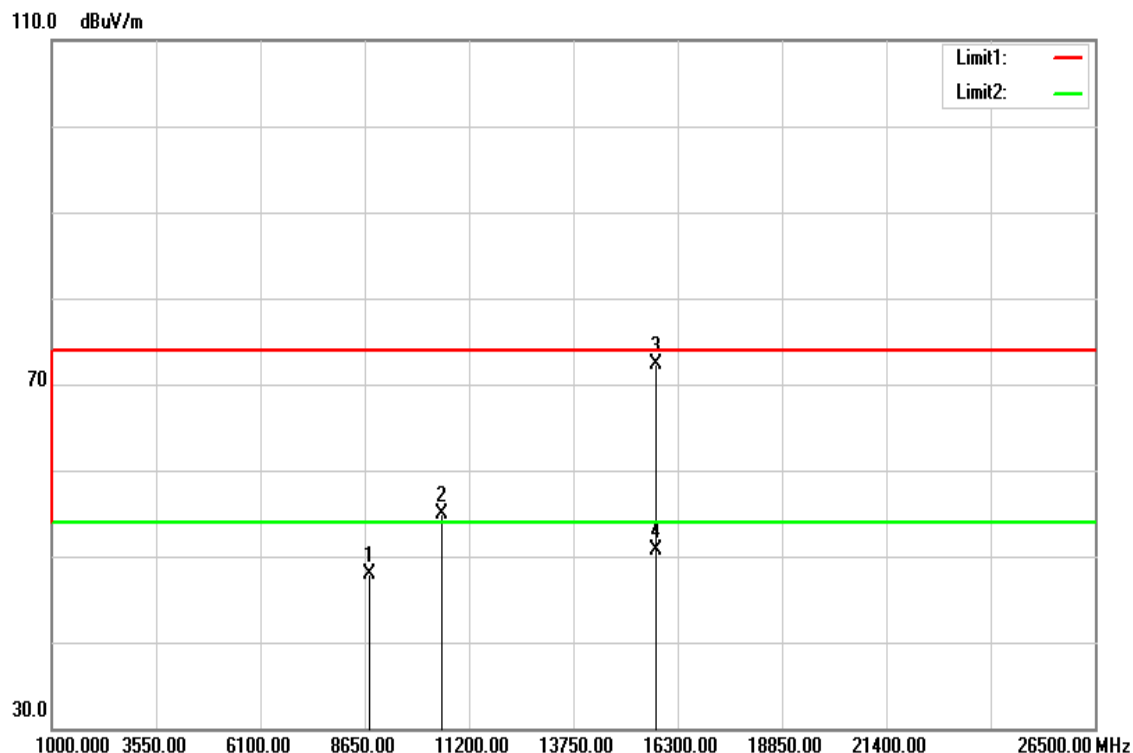


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	31.51	15.56	47.07	74.00	-26.93	peak
10530.000	36.61	17.60	54.21	74.00	-19.79	peak
15770.000	50.96	21.39	72.35	74.00	-1.65	peak
15770.000	27.94	21.39	49.33	54.00	-4.67	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

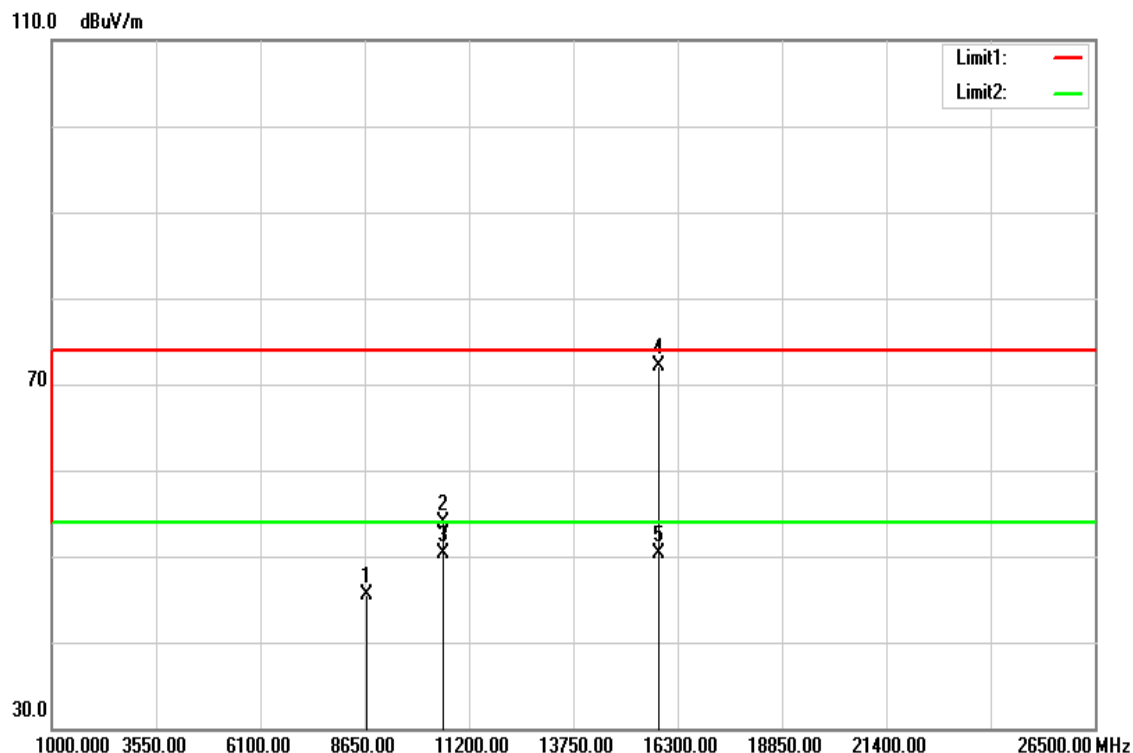


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	32.39	15.56	47.95	74.00	-26.05	peak
10520.000	37.37	17.59	54.96	74.00	-19.04	peak
15780.000	50.93	21.43	72.36	74.00	-1.64	peak
15780.000	29.35	21.43	50.78	54.00	-3.22	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

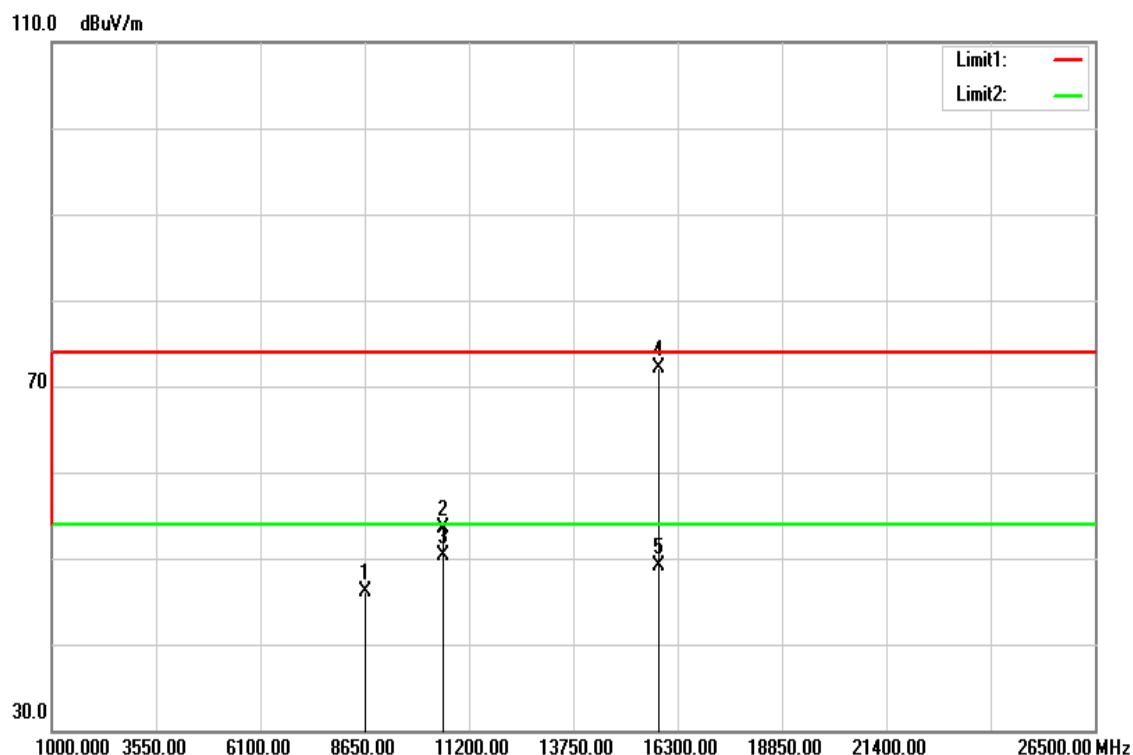


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8698.000	29.98	15.45	45.43	74.00	-28.57	peak
10570.000	36.17	17.64	53.81	74.00	-20.19	peak
10570.000	32.68	17.64	50.32	54.00	-3.68	AVG
15830.000	50.54	21.60	72.14	74.00	-1.86	peak
15830.000	28.71	21.60	50.31	54.00	-3.69	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

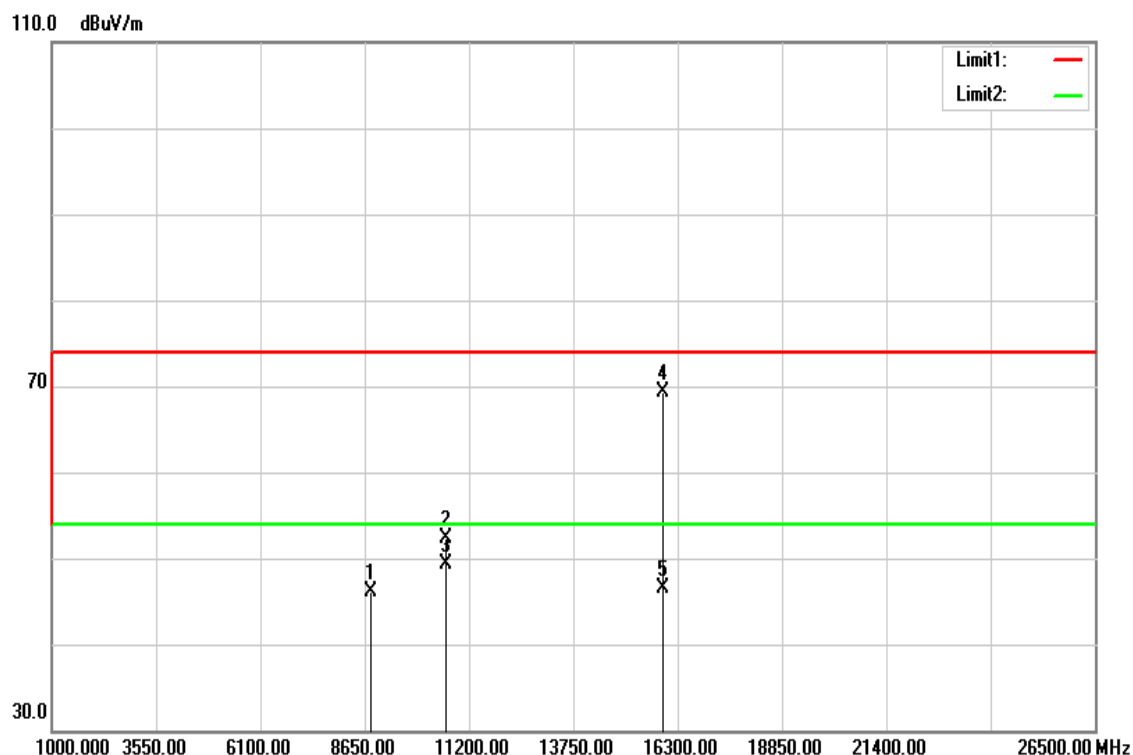


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8655.000	30.65	15.37	46.02	74.00	-27.98	peak
10560.000	35.88	17.63	53.51	74.00	-20.49	peak
10560.000	32.73	17.63	50.36	54.00	-3.64	AVG
15850.000	50.34	21.67	72.01	74.00	-1.99	peak
15850.000	27.46	21.67	49.13	54.00	-4.87	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

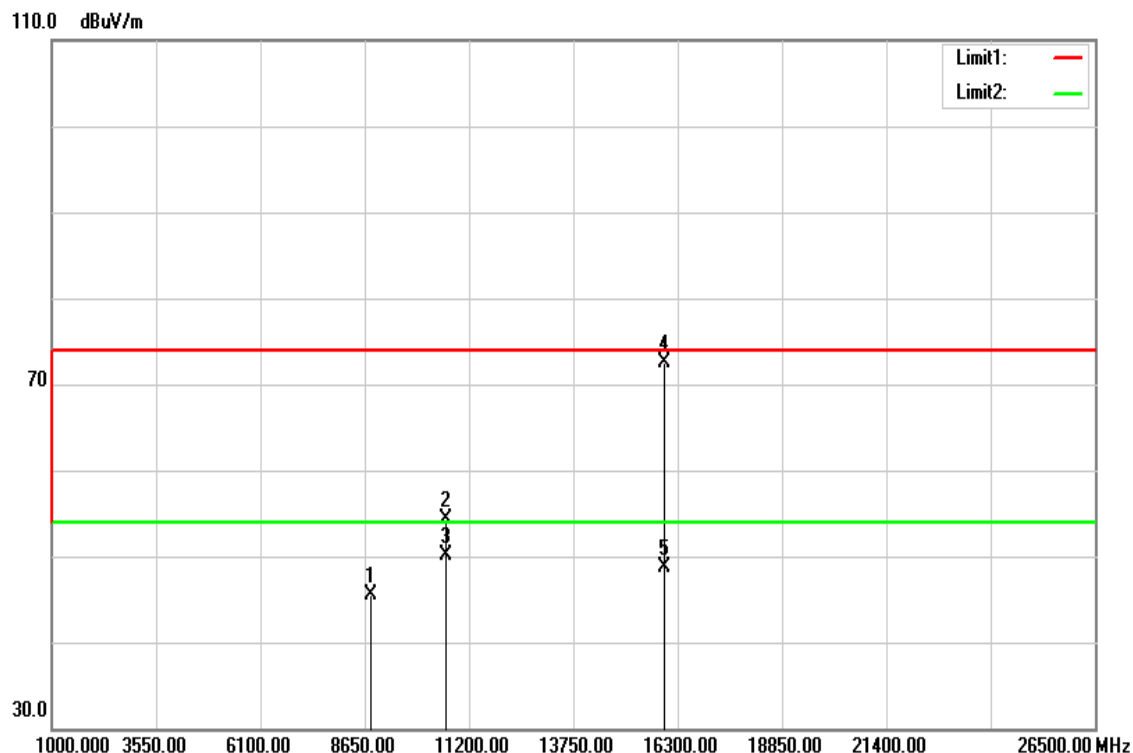


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8788.000	30.57	15.62	46.19	74.00	-27.81	peak
10640.000	34.63	17.72	52.35	74.00	-21.65	peak
10640.000	31.53	17.72	49.25	54.00	-4.75	AVG
15950.000	47.23	22.01	69.24	74.00	-4.76	peak
15950.000	24.57	22.01	46.58	54.00	-7.42	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

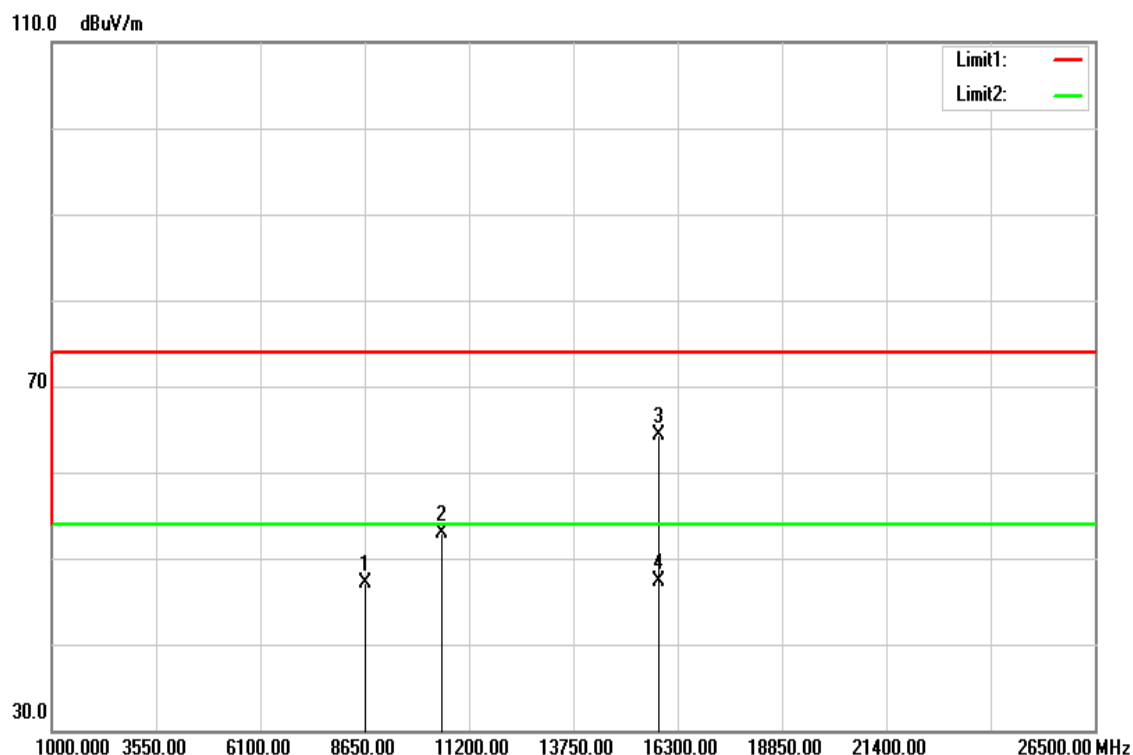


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8788.000	29.98	15.62	45.60	74.00	-28.40	peak
10640.000	36.62	17.72	54.34	74.00	-19.66	peak
10640.000	32.42	17.72	50.14	54.00	-3.86	AVG
15970.000	50.52	22.08	72.60	74.00	-1.40	peak
15970.000	26.59	22.08	48.67	54.00	-5.33	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

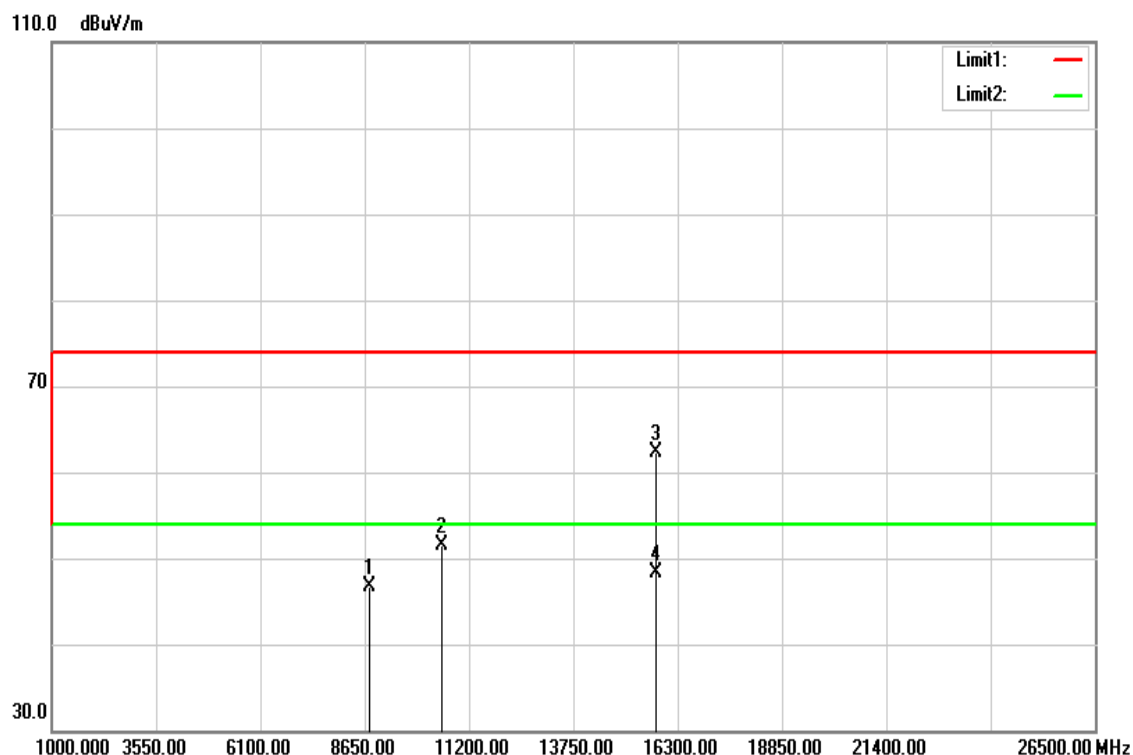


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8656.000	31.76	15.37	47.13	74.00	-26.87	peak
10550.000	35.25	17.62	52.87	74.00	-21.13	peak
15840.000	42.73	21.63	64.36	74.00	-9.64	peak
15840.000	25.62	21.63	47.25	54.00	-6.75	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

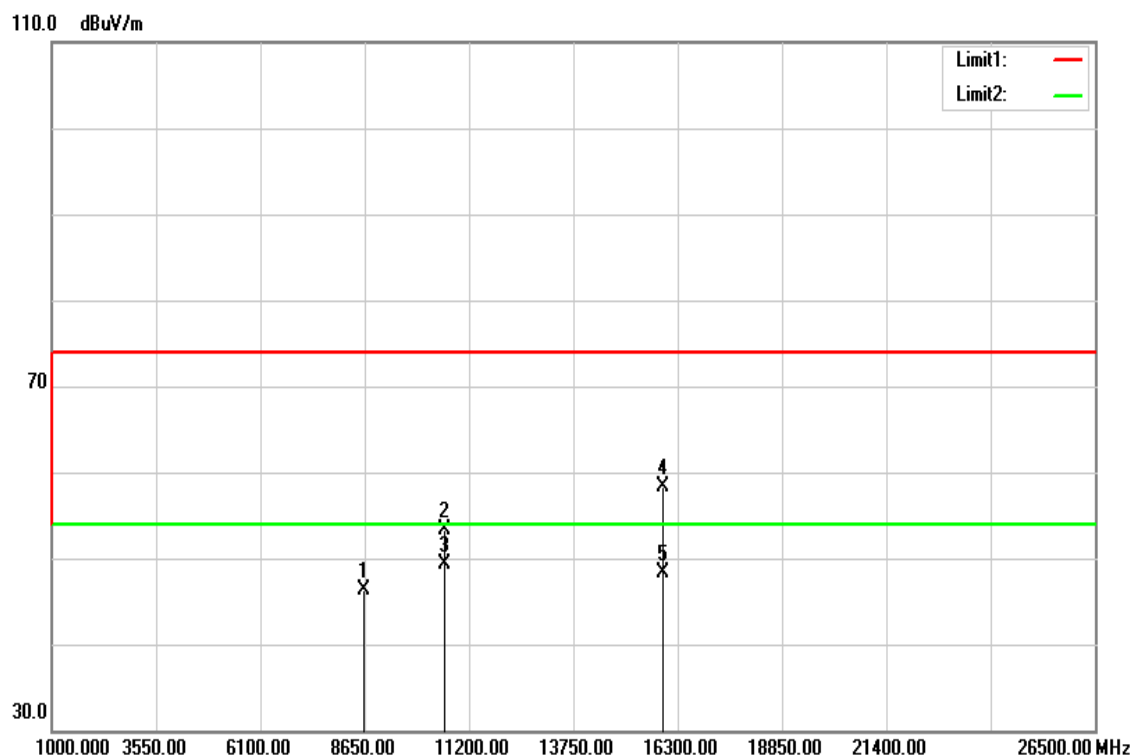


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	31.13	15.56	46.69	74.00	-27.31	peak
10550.000	33.87	17.62	51.49	74.00	-22.51	peak
15780.000	40.93	21.43	62.36	74.00	-11.64	peak
15780.000	26.93	21.43	48.36	54.00	-5.64	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

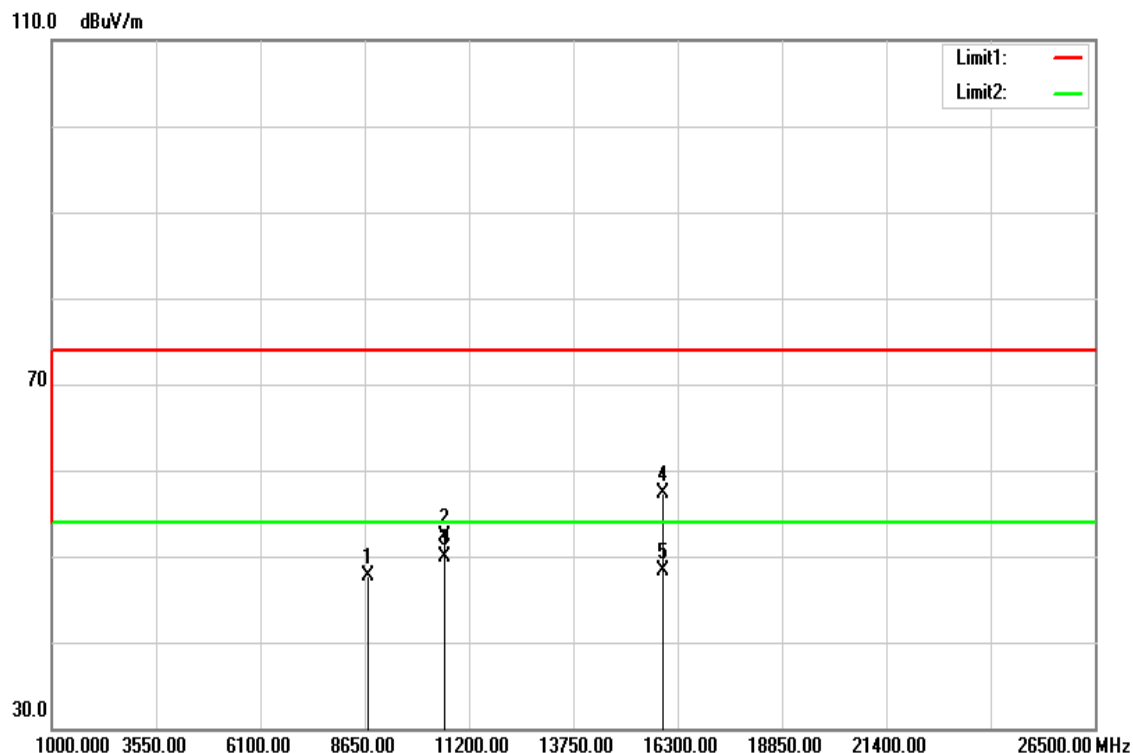


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8645.000	31.02	15.35	46.37	74.00	-27.63	peak
10620.000	35.62	17.70	53.32	74.00	-20.68	peak
10620.000	31.52	17.70	49.22	54.00	-4.78	AVG
15930.000	36.42	21.94	58.36	74.00	-15.64	peak
15930.000	26.45	21.94	48.39	54.00	-5.61	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

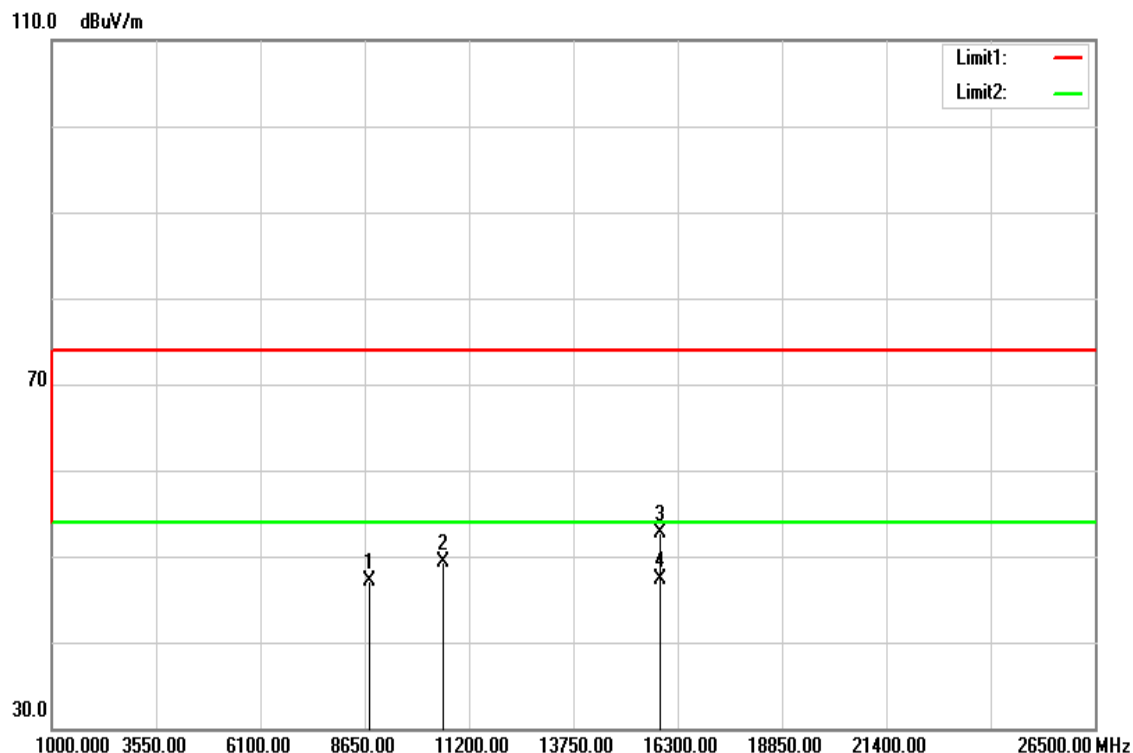


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8745.000	32.24	15.54	47.78	74.00	-26.22	peak
10620.000	34.66	17.70	52.36	74.00	-21.64	peak
10620.000	32.27	17.70	49.97	54.00	-4.03	AVG
15930.000	35.39	21.94	57.33	74.00	-16.67	peak
15930.000	26.42	21.94	48.36	54.00	-5.64	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

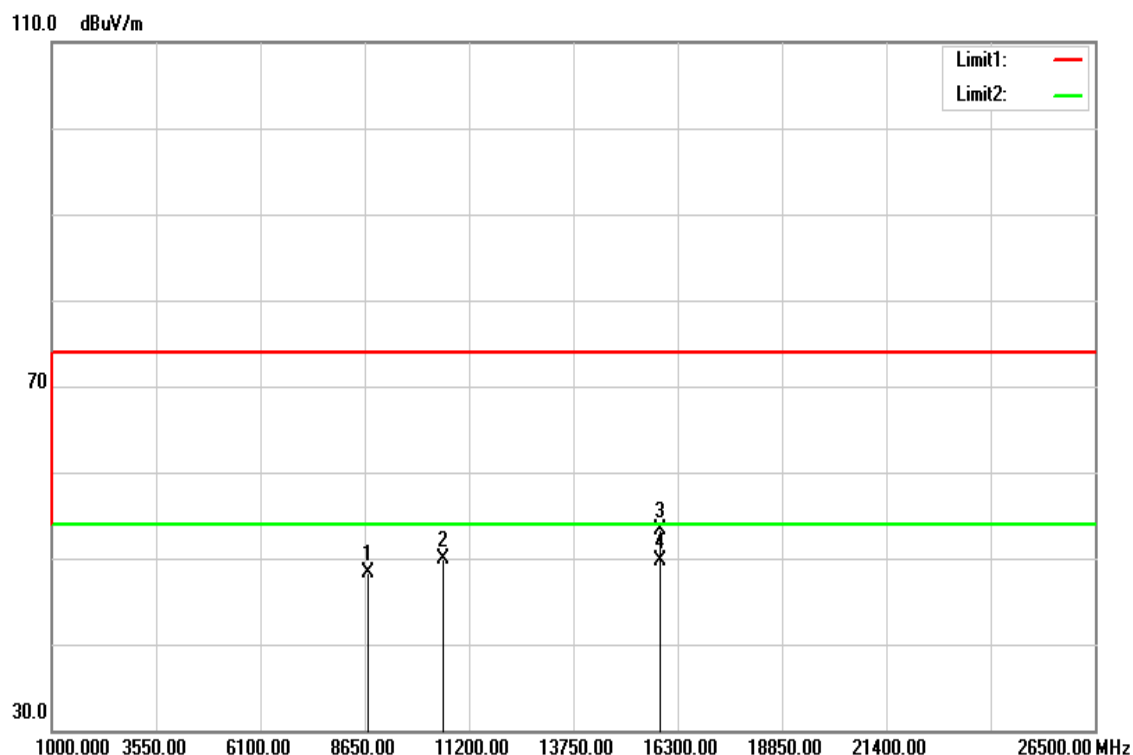


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	31.50	15.56	47.06	74.00	-26.94	peak
10580.000	31.63	17.65	49.28	74.00	-24.72	peak
15870.000	31.00	21.74	52.74	74.00	-21.26	peak
15870.000	25.48	21.74	47.22	54.00	-6.78	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



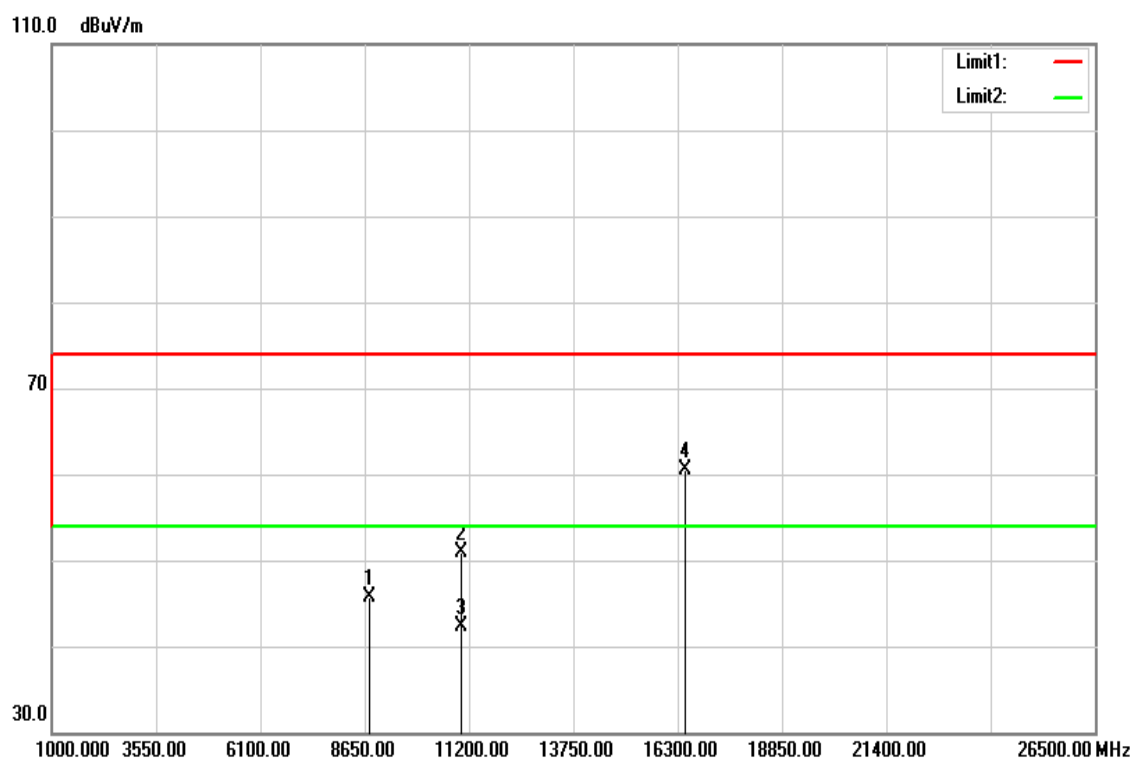
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8744.000	32.71	15.54	48.25	74.00	-25.75	peak
10580.000	32.24	17.65	49.89	74.00	-24.11	peak
15870.000	31.61	21.74	53.35	74.00	-20.65	peak
15870.000	27.94	21.74	49.68	54.00	-4.32	AVG

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

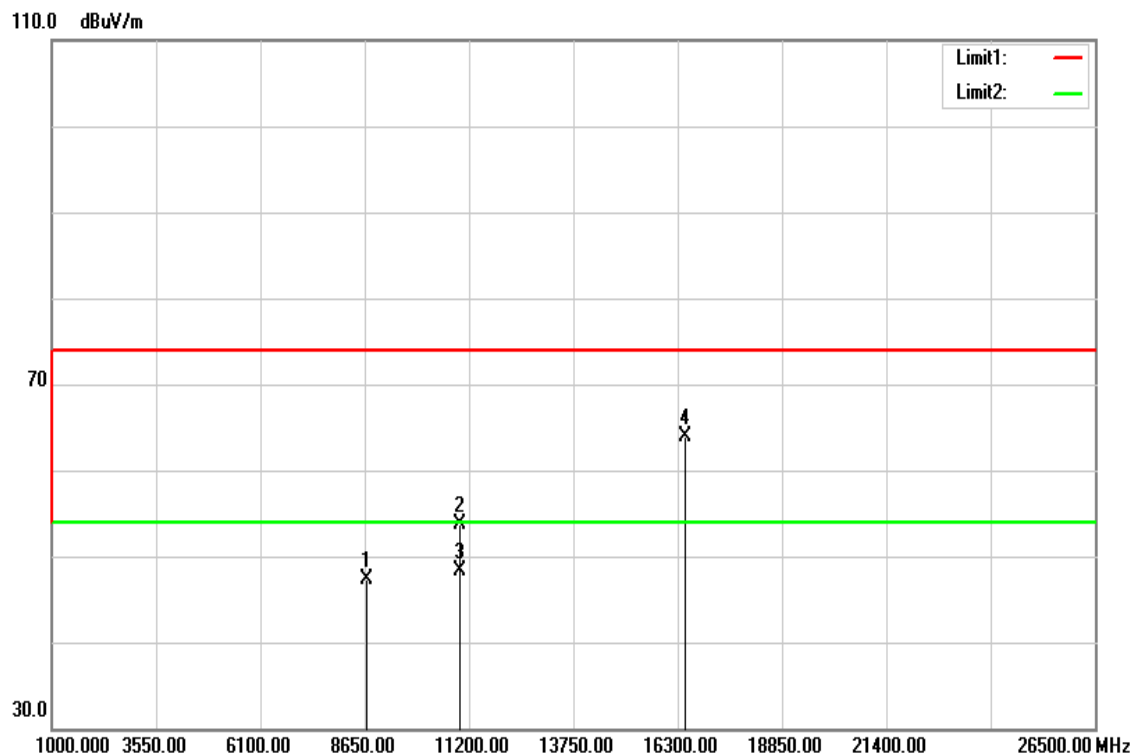


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8754.000	30.13	15.56	45.69	74.00	-28.31	peak
11000.000	32.72	18.10	50.82	74.00	-23.18	peak
11000.000	24.25	18.10	42.35	54.00	-11.65	AVG
16490.000	36.98	23.54	60.52	74.00	-13.48	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

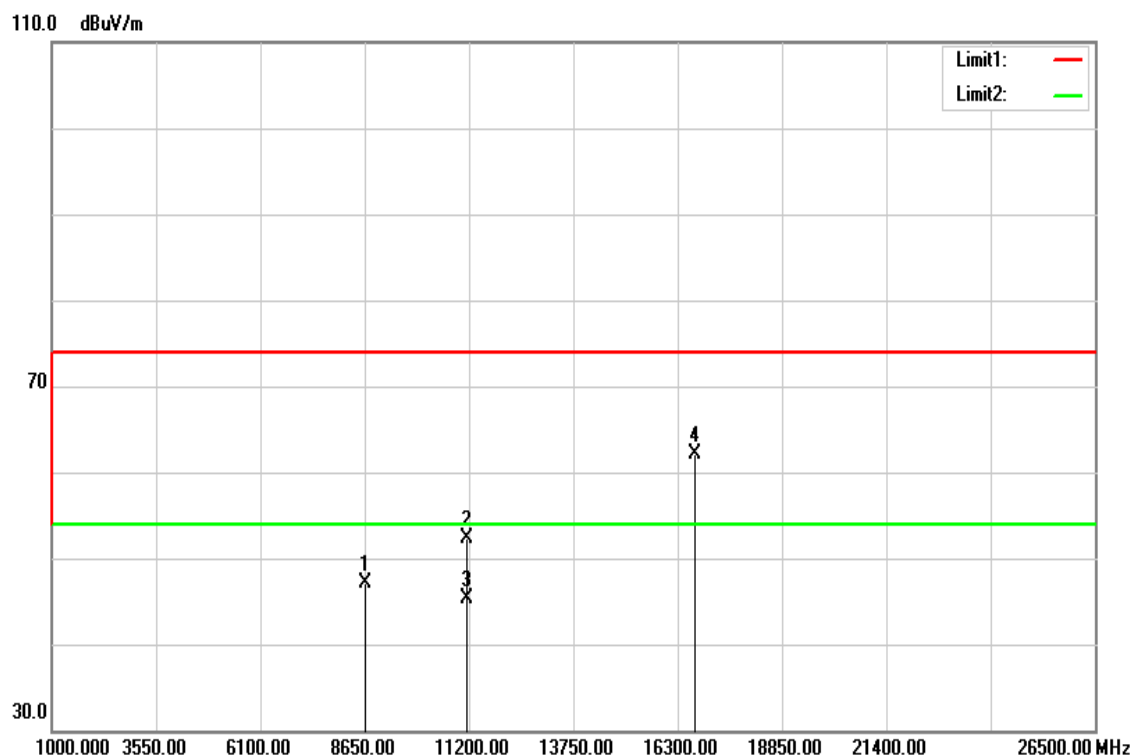


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8689.000	31.96	15.44	47.40	74.00	-26.60	peak
10990.000	35.71	18.09	53.80	74.00	-20.20	peak
10990.000	30.27	18.09	48.36	54.00	-5.64	AVG
16500.000	40.41	23.57	63.98	74.00	-10.02	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

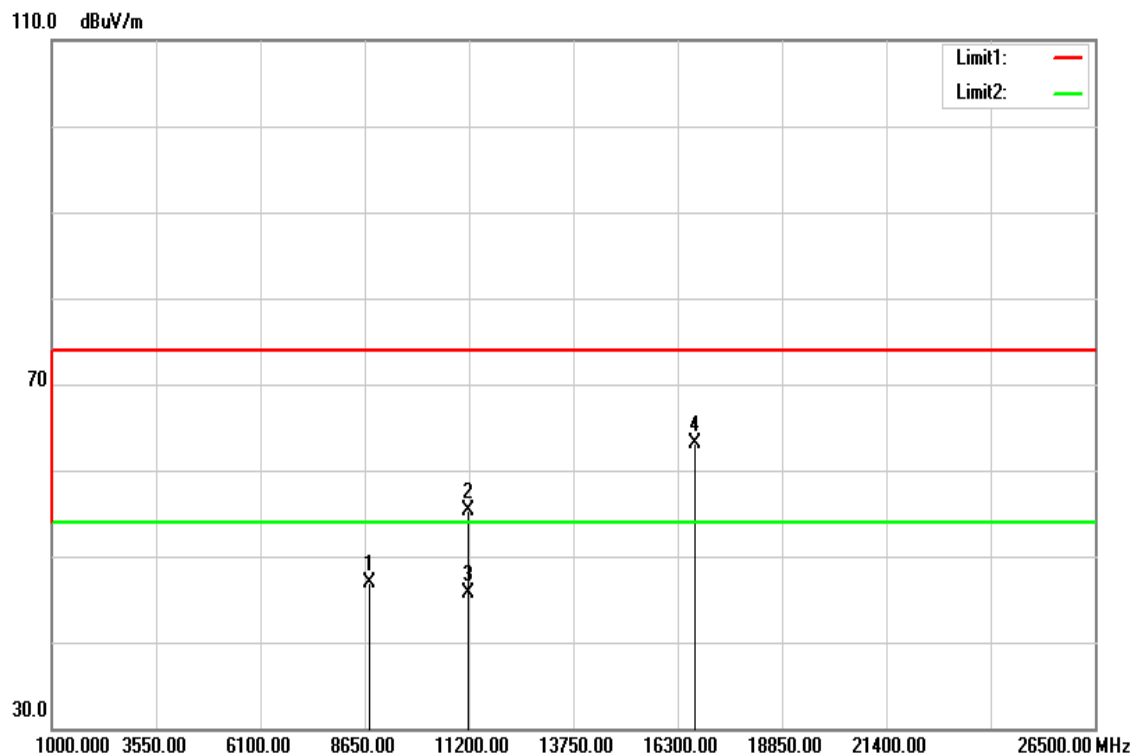


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8656.000	31.64	15.37	47.01	74.00	-26.99	peak
11160.000	34.12	18.12	52.24	74.00	-21.76	peak
11160.000	27.21	18.12	45.33	54.00	-8.67	AVG
16740.000	37.69	24.45	62.14	74.00	-11.86	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

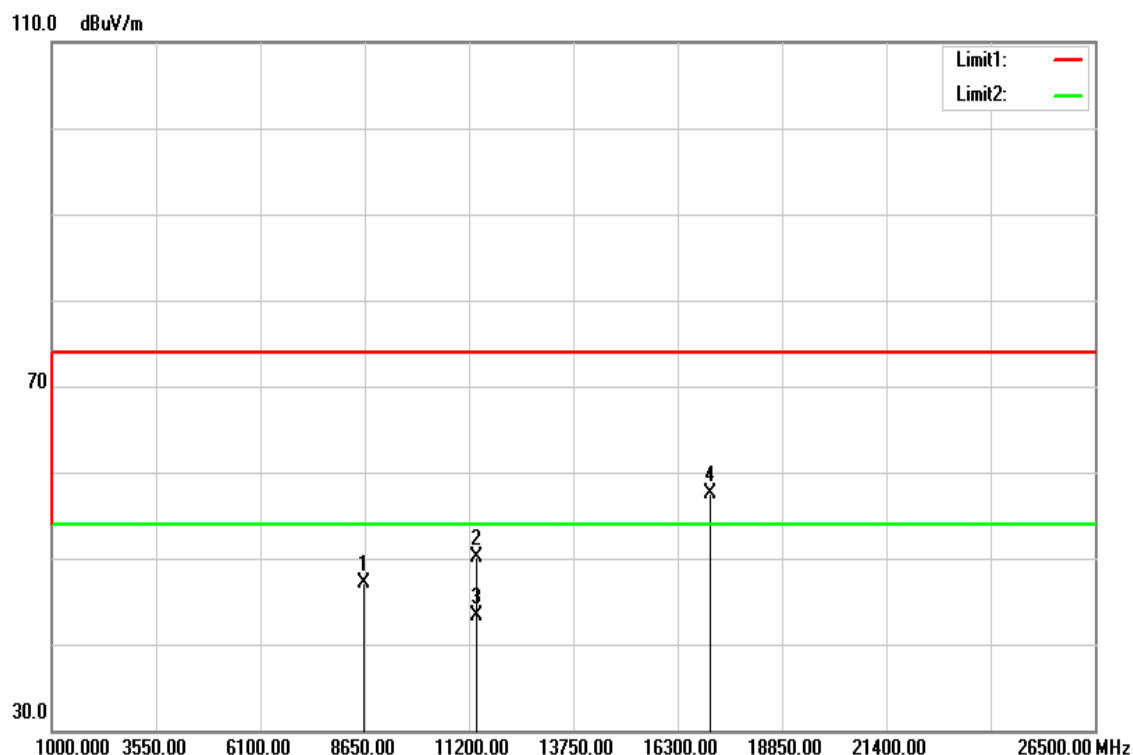


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	31.40	15.56	46.96	74.00	-27.04	peak
11170.000	37.18	18.12	55.30	74.00	-18.70	peak
11170.000	27.57	18.12	45.69	54.00	-8.31	AVG
16740.000	38.59	24.45	63.04	74.00	-10.96	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

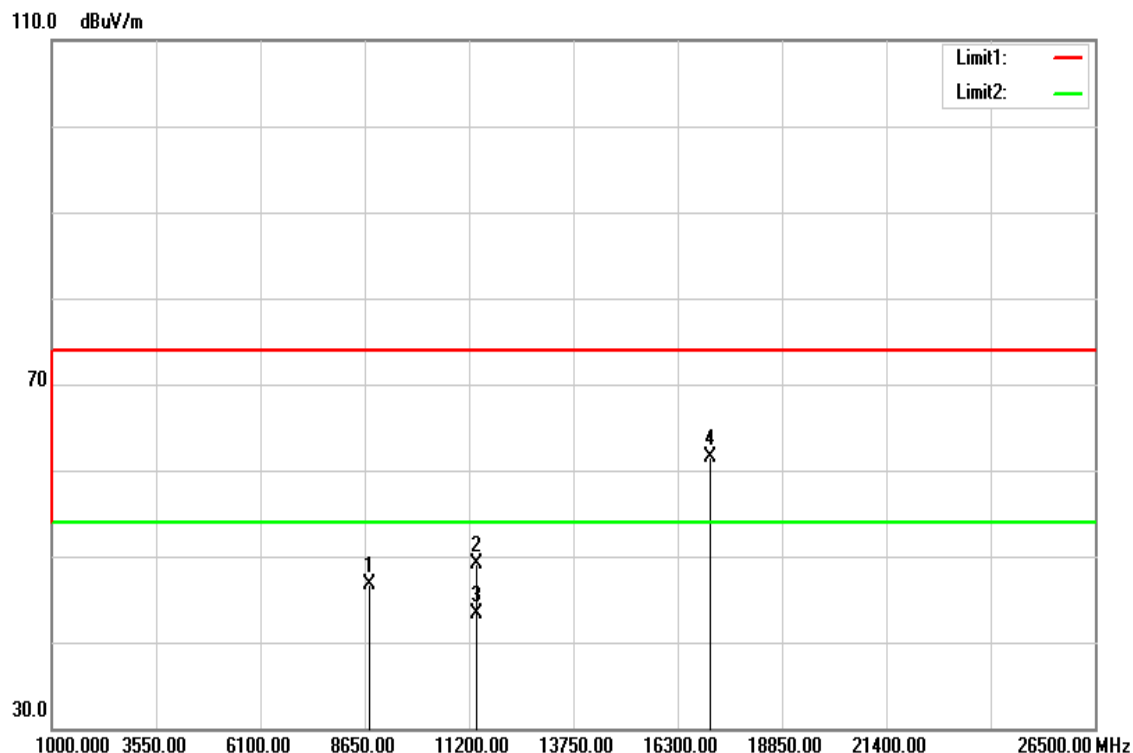


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8645.000	31.67	15.35	47.02	74.00	-26.98	peak
11400.000	31.99	18.15	50.14	74.00	-23.86	peak
11400.000	25.10	18.15	43.25	54.00	-10.75	AVG
17100.000	31.44	26.01	57.45	74.00	-16.55	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

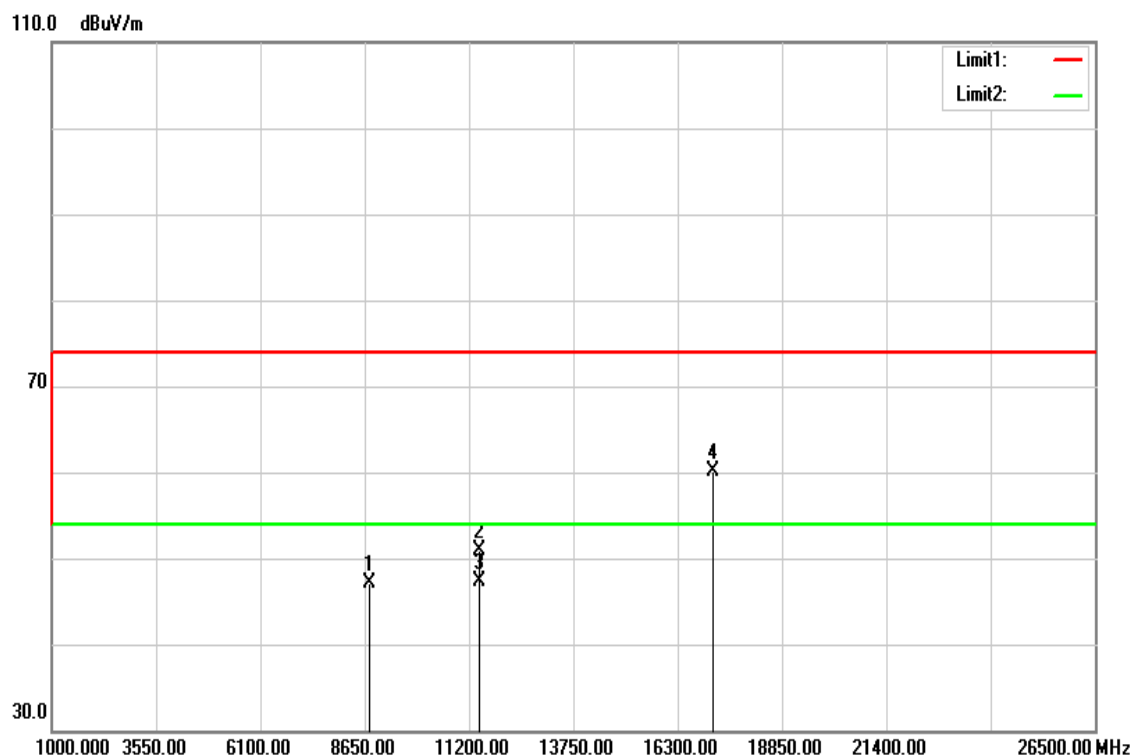


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	31.18	15.56	46.74	74.00	-27.26	peak
11400.000	30.92	18.15	49.07	74.00	-24.93	peak
11400.000	25.06	18.15	43.21	54.00	-10.79	AVG
17100.000	35.57	26.01	61.58	74.00	-12.42	peak

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 / 5720 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

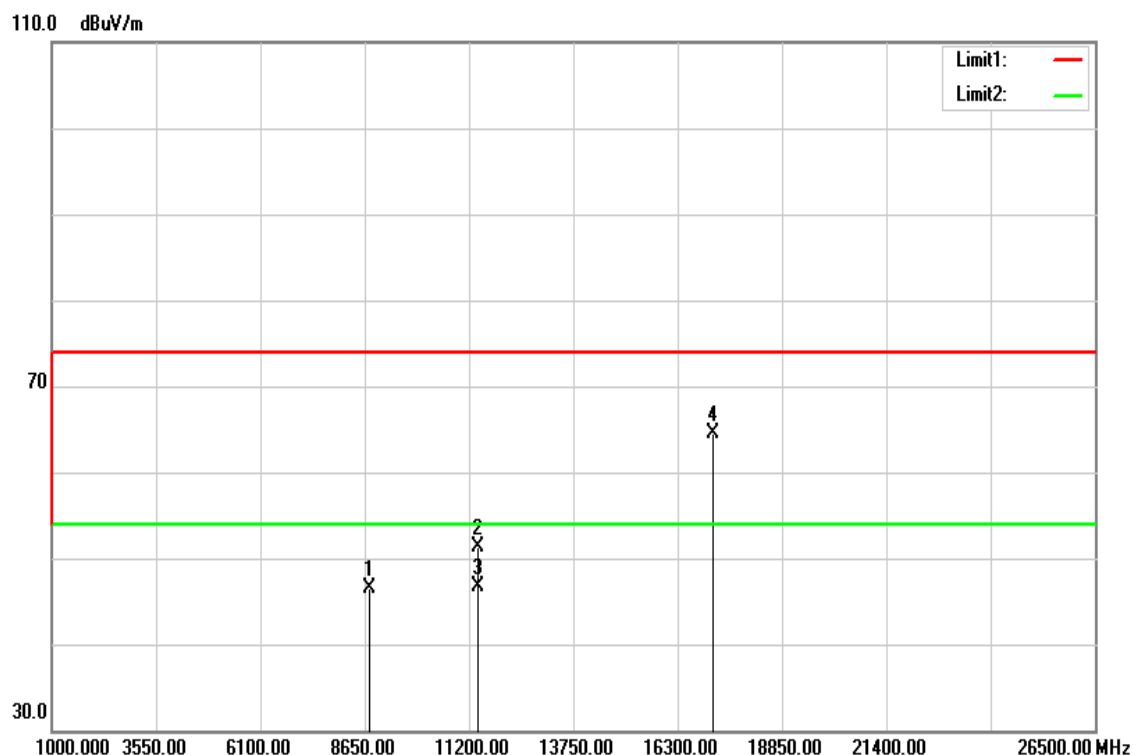


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	31.63	15.56	47.19	74.00	-26.81	peak
11450.000	32.73	18.15	50.88	74.00	-23.12	peak
11450.000	29.21	18.15	47.36	54.00	-6.64	AVG
17160.000	33.68	26.38	60.06	74.00	-13.94	peak

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 / 5720 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

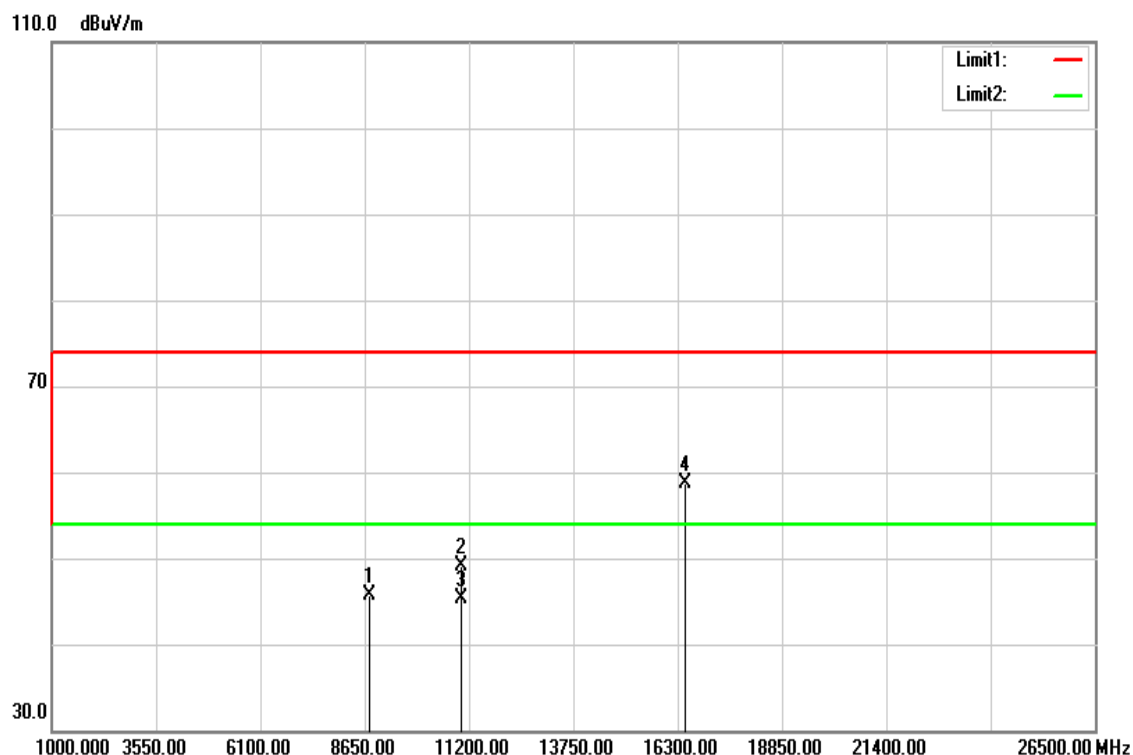


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	30.99	15.56	46.55	74.00	-27.45	peak
11430.000	33.13	18.15	51.28	74.00	-22.72	peak
11430.000	28.51	18.15	46.66	54.00	-7.34	AVG
17160.000	38.05	26.38	64.43	74.00	-9.57	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

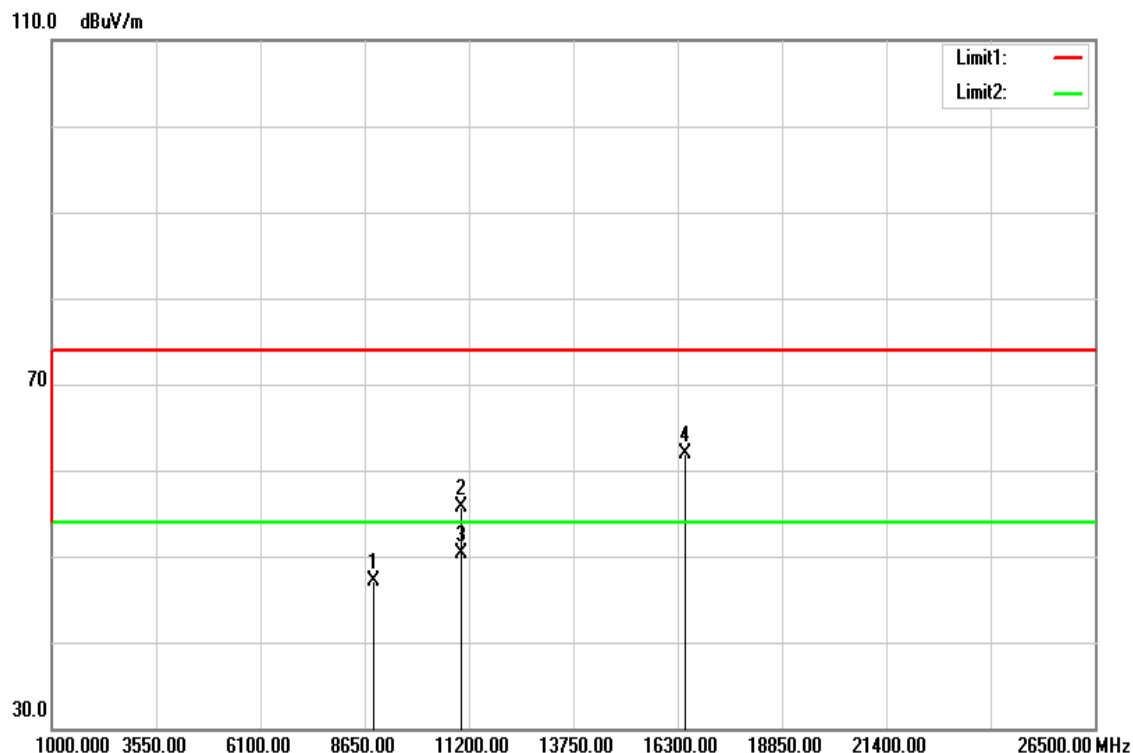


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8758.000	30.09	15.57	45.66	74.00	-28.34	peak
11000.000	30.91	18.10	49.01	74.00	-24.99	peak
11000.000	27.15	18.10	45.25	54.00	-8.75	AVG
16500.000	35.20	23.57	58.77	74.00	-15.23	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

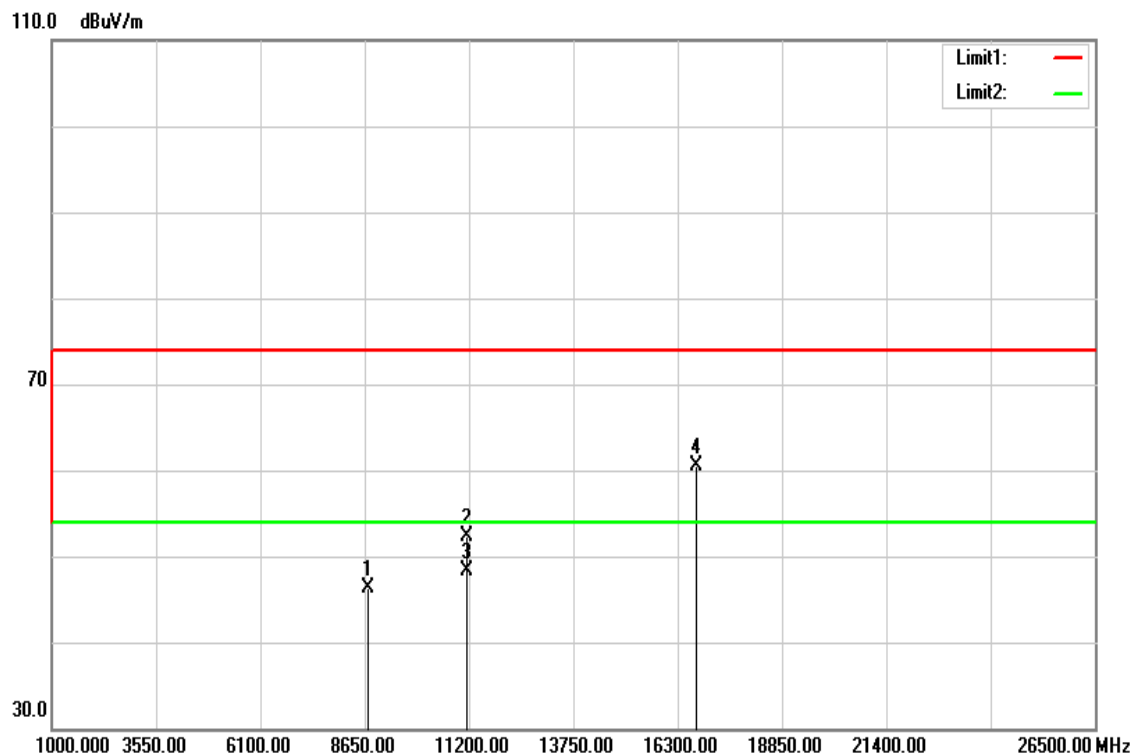


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8866.000	31.34	15.77	47.11	74.00	-26.89	peak
11000.000	37.53	18.10	55.63	74.00	-18.37	peak
11000.000	32.15	18.10	50.25	54.00	-3.75	AVG
16500.000	38.24	23.57	61.81	74.00	-12.19	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

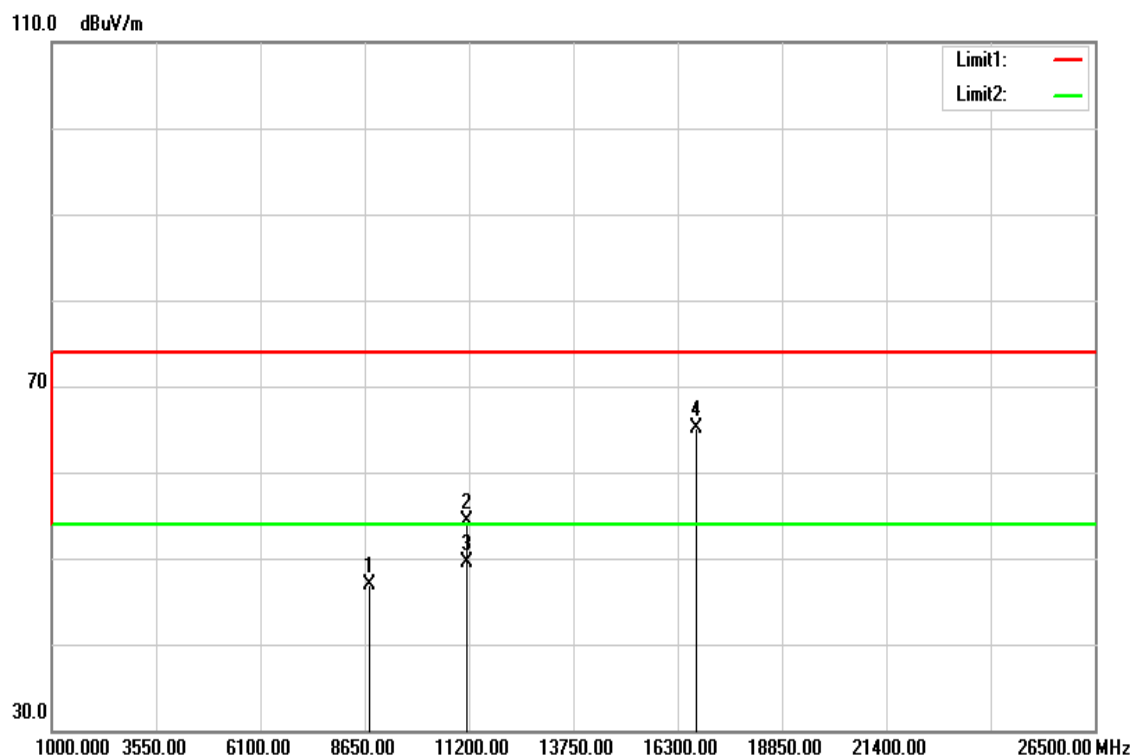


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8745.000	30.83	15.54	46.37	74.00	-27.63	peak
11160.000	34.08	18.12	52.20	74.00	-21.80	peak
11160.000	30.23	18.12	48.35	54.00	-5.65	AVG
16750.000	36.04	24.48	60.52	74.00	-13.48	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

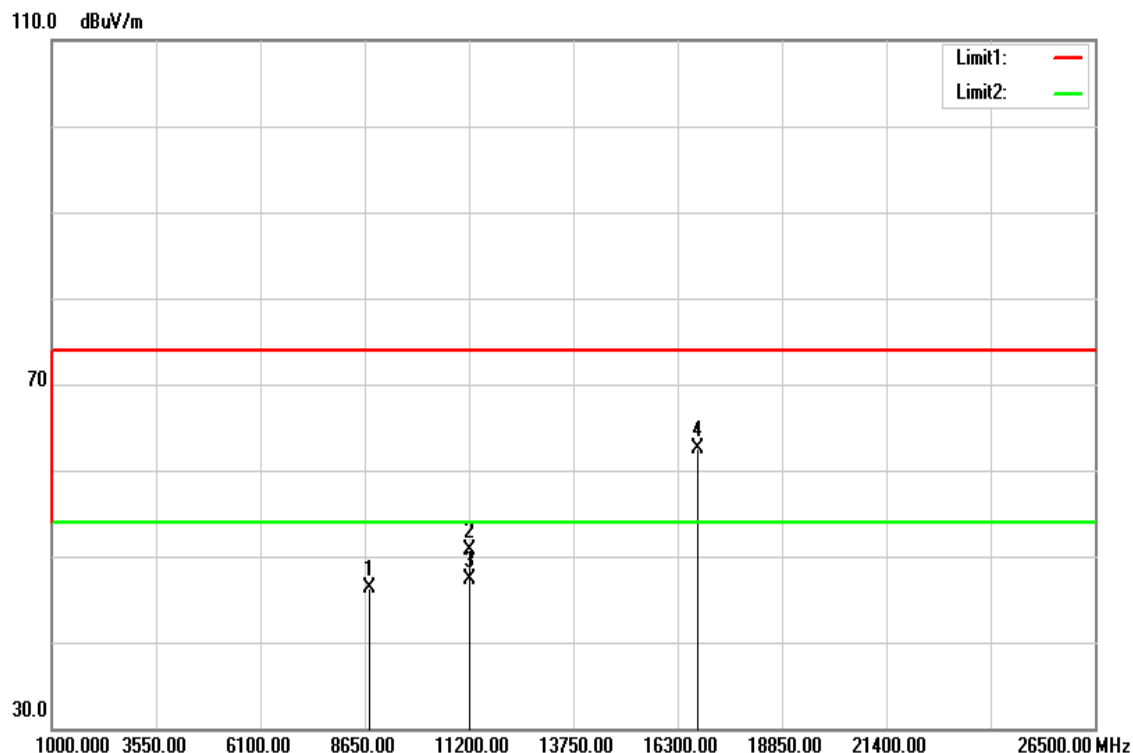


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8759.000	31.24	15.57	46.81	74.00	-27.19	peak
11160.000	36.10	18.12	54.22	74.00	-19.78	peak
11160.000	31.43	18.12	49.55	54.00	-4.45	AVG
16750.000	40.72	24.48	65.20	74.00	-8.80	peak

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 / 5600 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

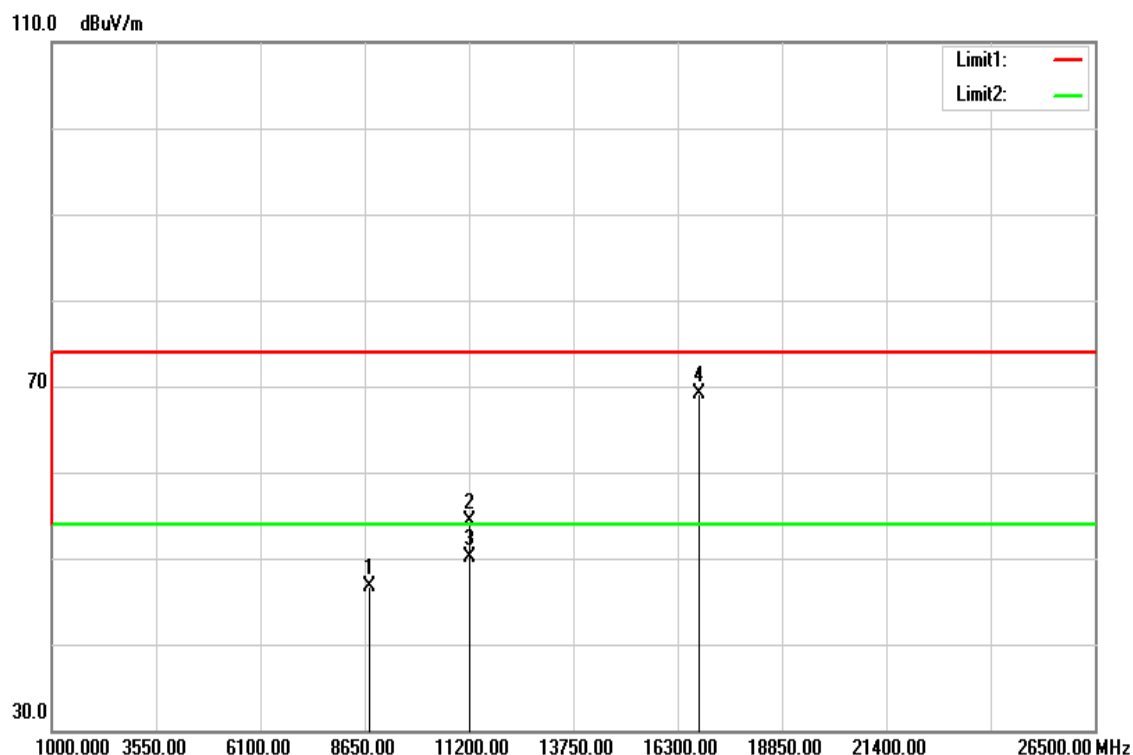


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8778.000	30.79	15.60	46.39	74.00	-27.61	peak
11200.000	32.63	18.12	50.75	74.00	-23.25	peak
11200.000	29.13	18.12	47.25	54.00	-6.75	AVG
16790.000	37.94	24.63	62.57	74.00	-11.43	peak

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 / 5600 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

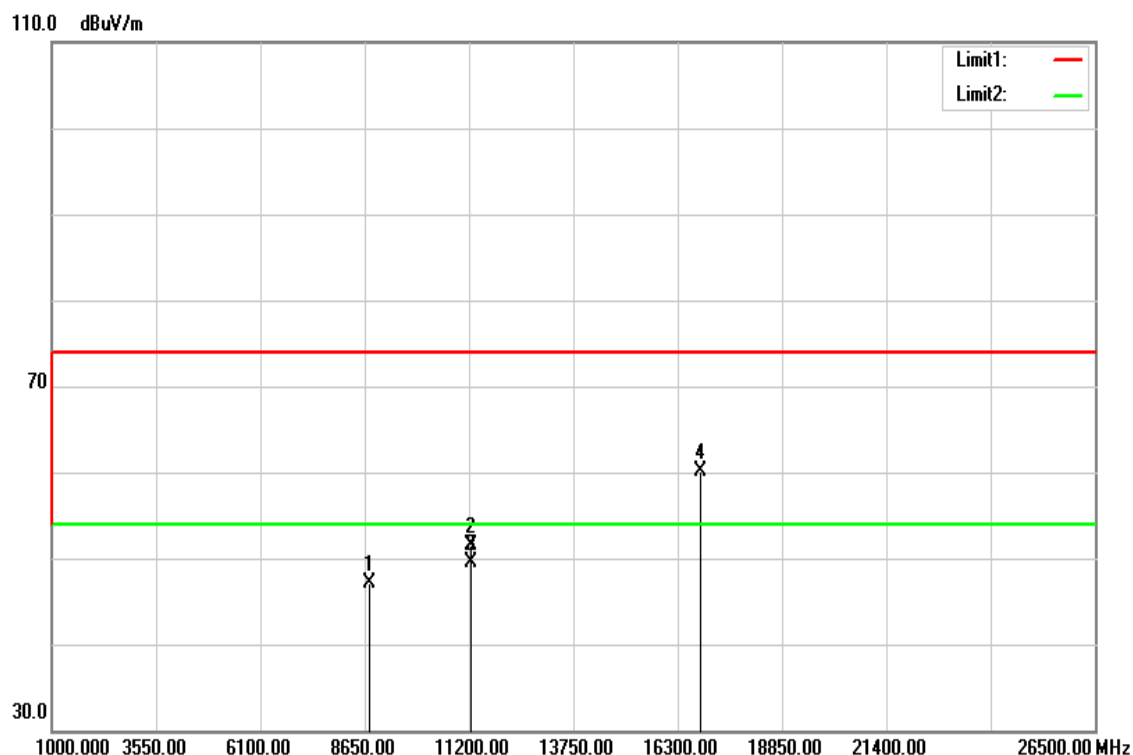


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8766.000	31.21	15.58	46.79	74.00	-27.21	peak
11200.000	36.20	18.12	54.32	74.00	-19.68	peak
11200.000	32.02	18.12	50.14	54.00	-3.86	AVG
16810.000	44.32	24.70	69.02	74.00	-4.98	peak

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 / 5620 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

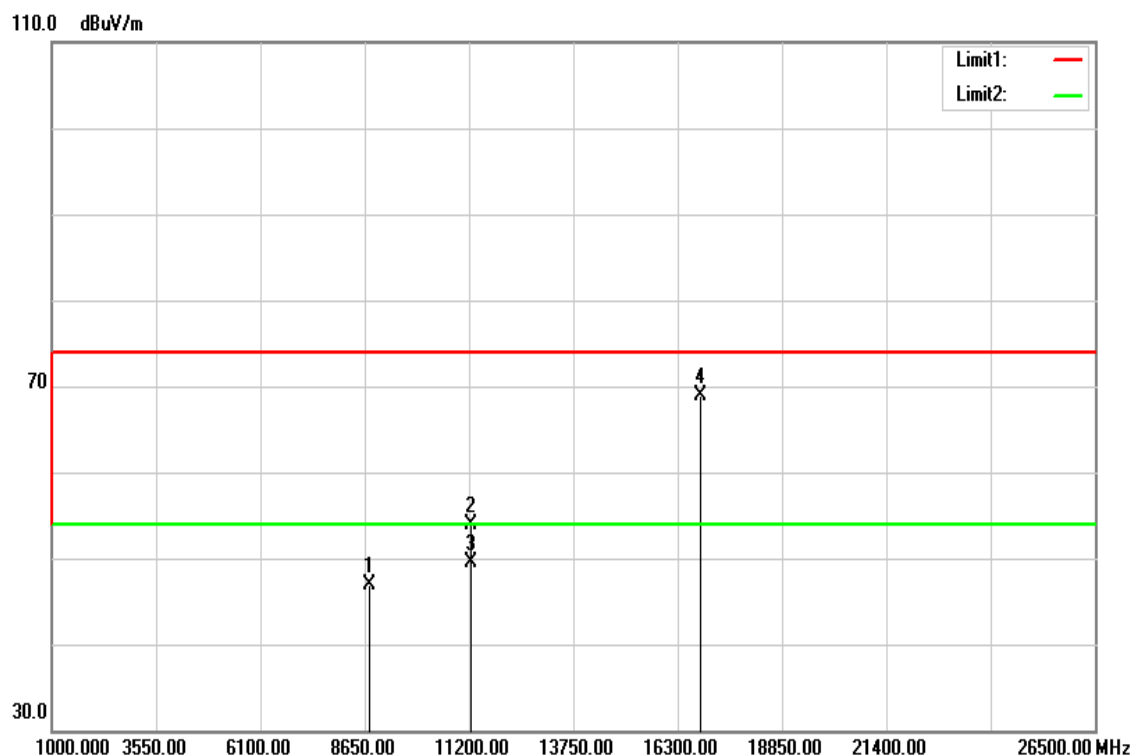


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8754.000	31.53	15.56	47.09	74.00	-26.91	peak
11240.000	33.38	18.13	51.51	74.00	-22.49	peak
11240.000	31.41	18.13	49.54	54.00	-4.46	AVG
16870.000	35.23	24.92	60.15	74.00	-13.85	peak

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 / 5620 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

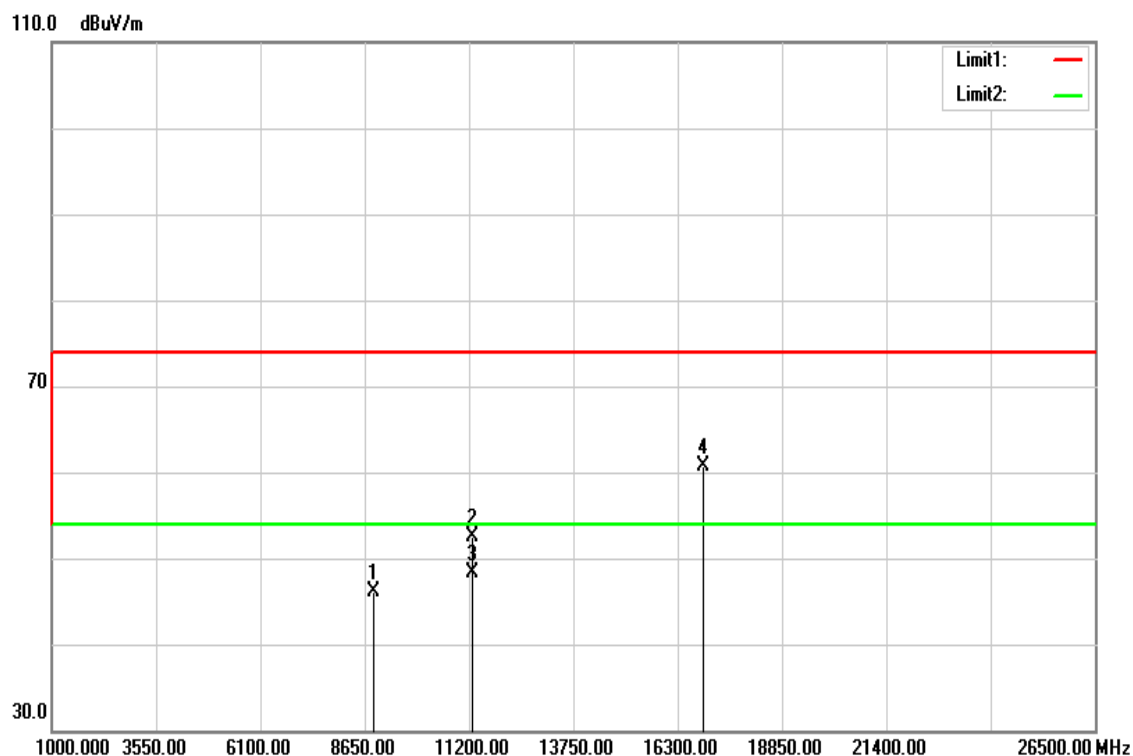


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8765.000	31.23	15.58	46.81	74.00	-27.19	peak
11240.000	35.77	18.13	53.90	74.00	-20.10	peak
11240.000	31.42	18.13	49.55	54.00	-4.45	AVG
16870.000	44.05	24.92	68.97	74.00	-5.03	peak

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 / 5640 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

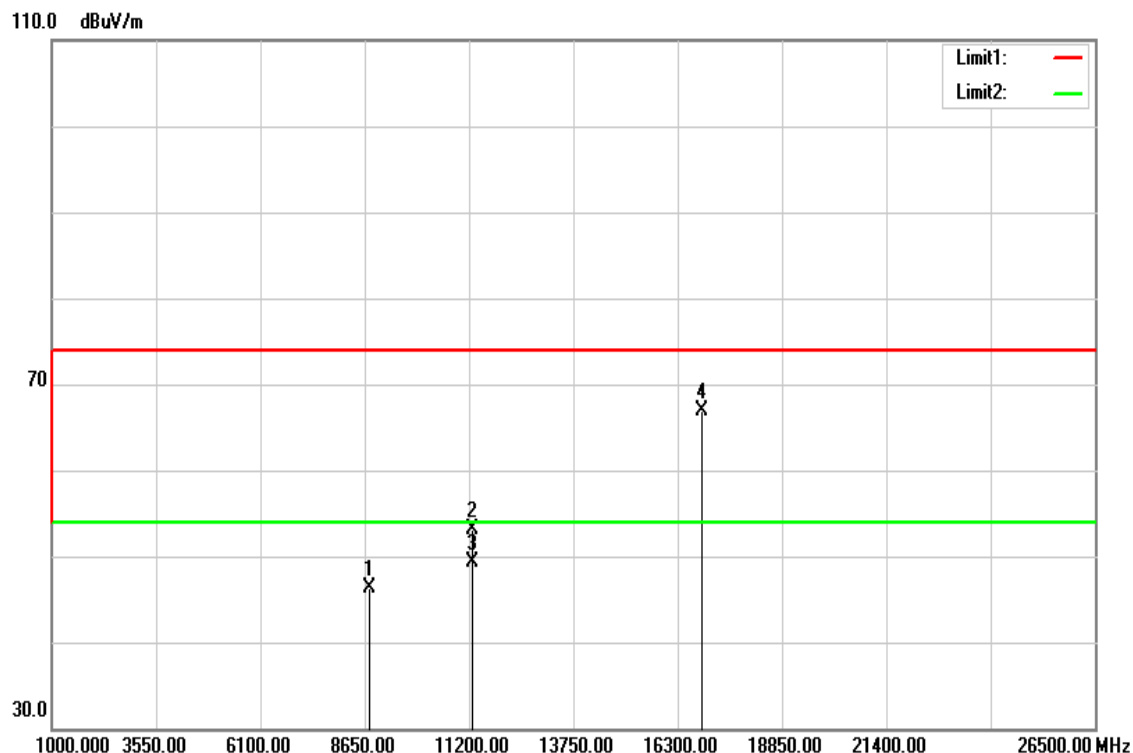


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8865.000	30.36	15.77	46.13	74.00	-27.87	peak
11290.000	34.38	18.13	52.51	74.00	-21.49	peak
11290.000	30.22	18.13	48.35	54.00	-5.65	AVG
16940.000	35.47	25.18	60.65	74.00	-13.35	peak

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 / 5640 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

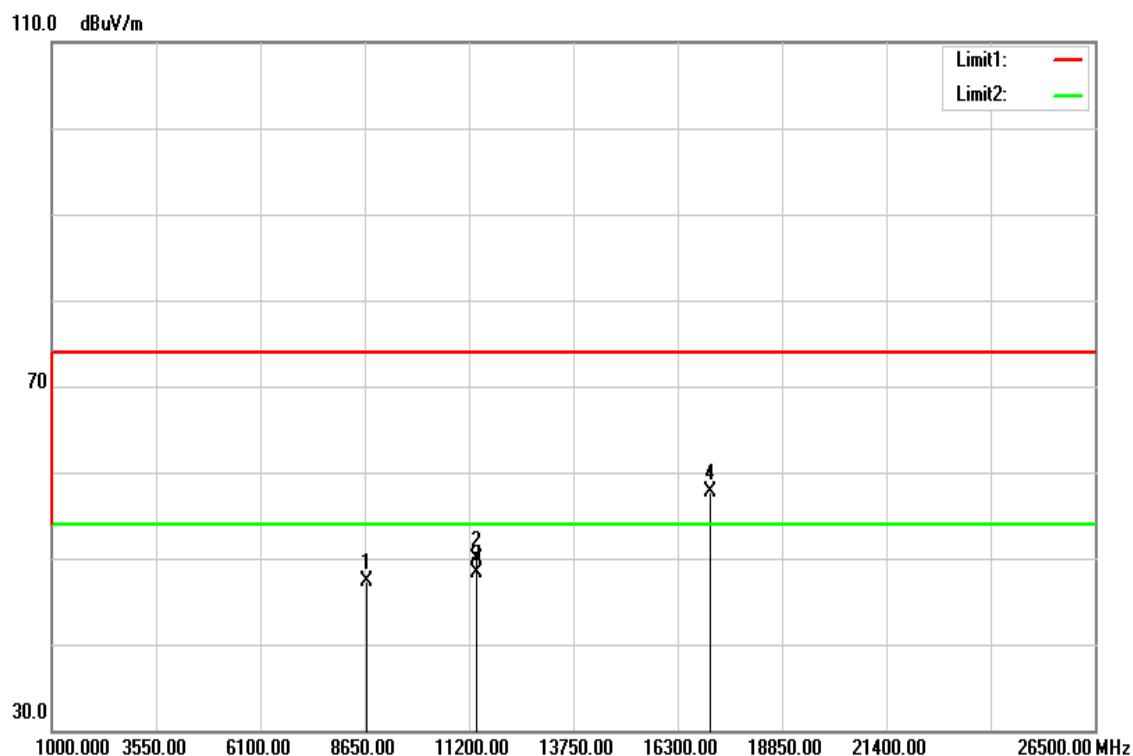


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	30.76	15.56	46.32	74.00	-27.68	peak
11280.000	34.90	18.13	53.03	74.00	-20.97	peak
11280.000	31.12	18.13	49.25	54.00	-4.75	AVG
16910.000	41.82	25.07	66.89	74.00	-7.11	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

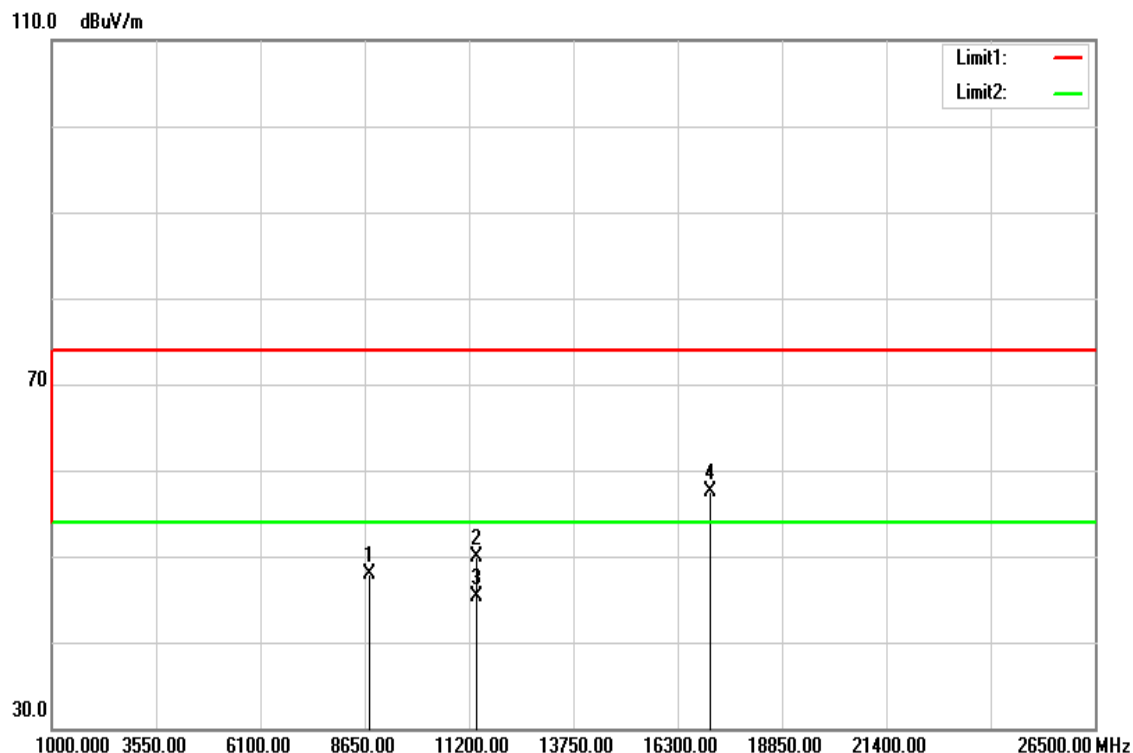


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8688.000	31.90	15.43	47.33	74.00	-26.67	peak
11400.000	31.85	18.15	50.00	74.00	-24.00	peak
11400.000	30.21	18.15	48.36	54.00	-5.64	AVG
17100.000	31.74	26.01	57.75	74.00	-16.25	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

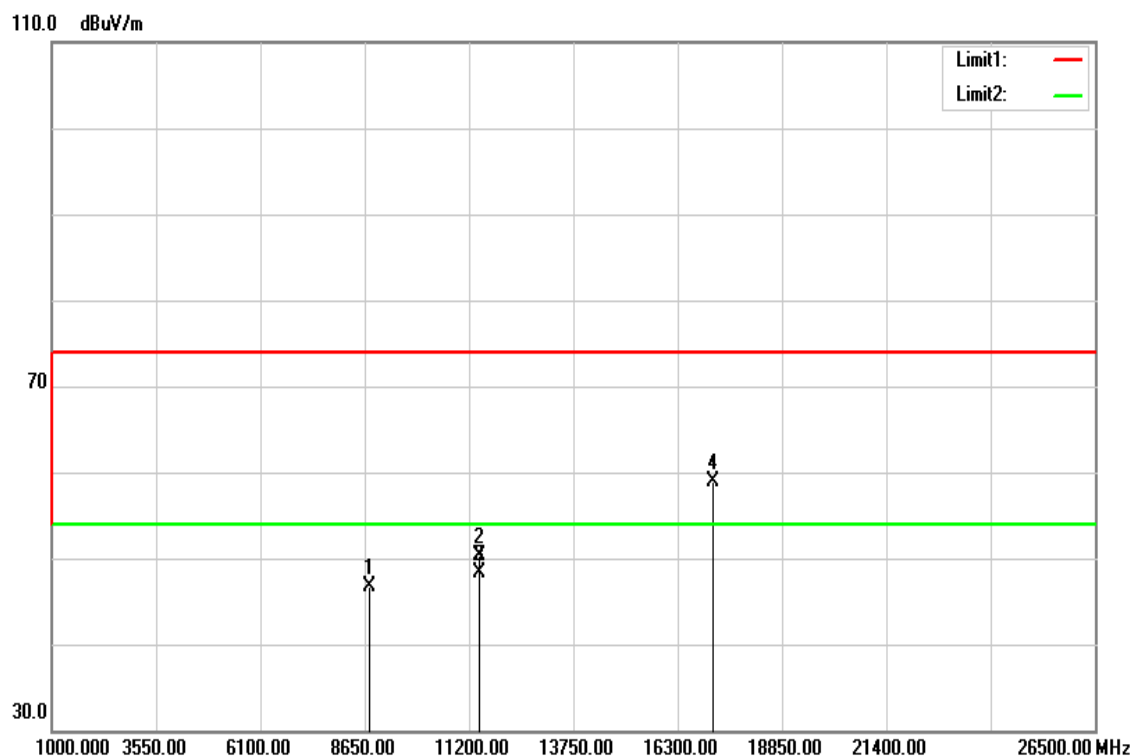


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	32.28	15.56	47.84	74.00	-26.16	peak
11400.000	31.84	18.15	49.99	74.00	-24.01	peak
11400.000	27.21	18.15	45.36	54.00	-8.64	AVG
17100.000	31.44	26.01	57.45	74.00	-16.55	peak

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 / 5720 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

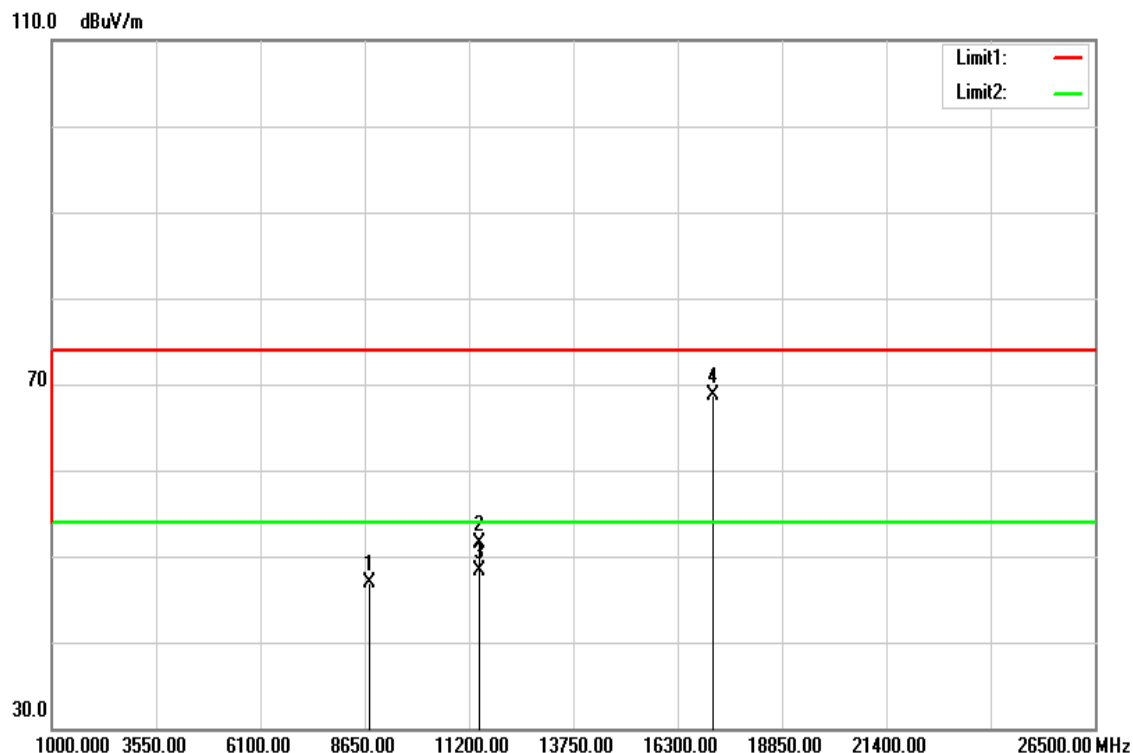


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8756.000	31.07	15.56	46.63	74.00	-27.37	peak
11440.000	32.08	18.15	50.23	74.00	-23.77	peak
11440.000	30.21	18.15	48.36	54.00	-5.64	AVG
17170.000	32.47	26.44	58.91	74.00	-15.09	peak

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 / 5720 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

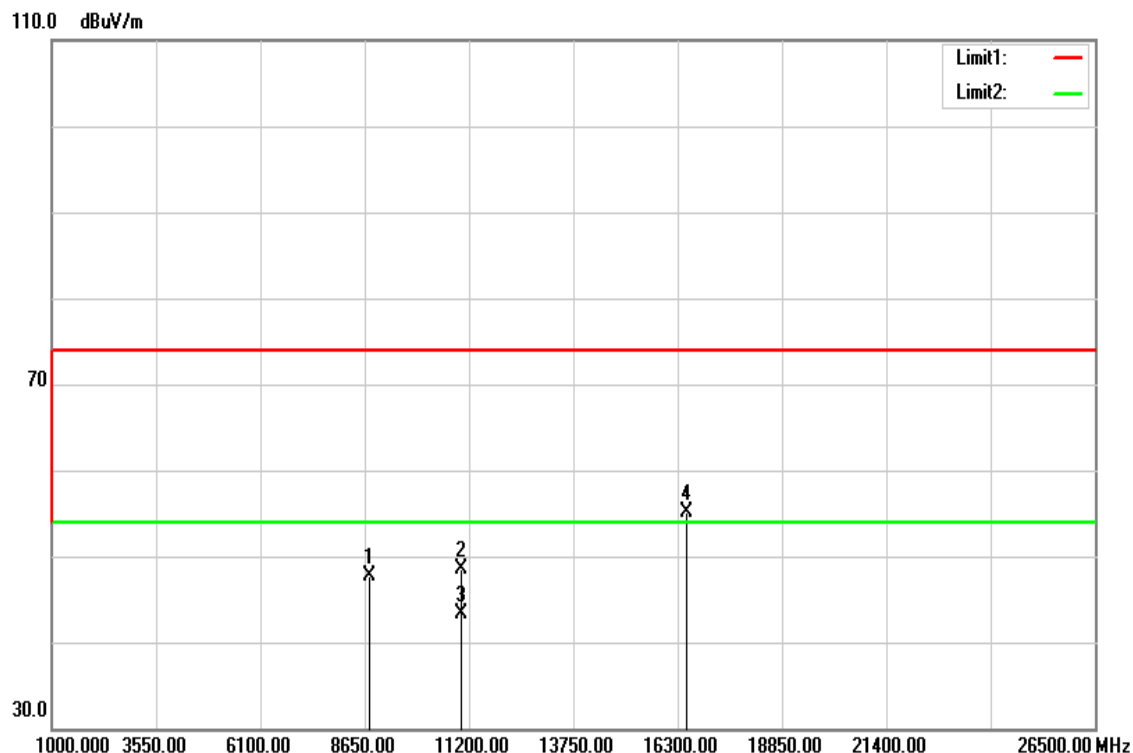


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	31.44	15.56	47.00	74.00	-27.00	peak
11440.000	33.43	18.15	51.58	74.00	-22.42	peak
11440.000	30.21	18.15	48.36	54.00	-5.64	AVG
17170.000	42.26	26.44	68.70	74.00	-5.30	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

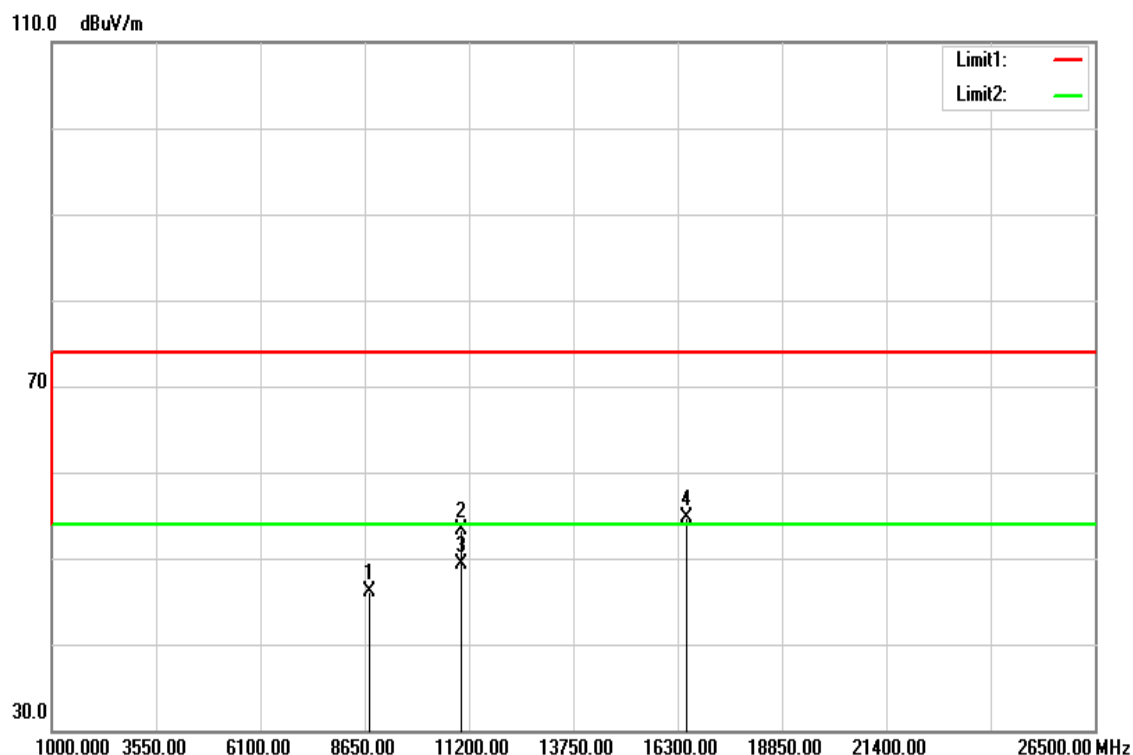


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8756.000	32.08	15.56	47.64	74.00	-26.36	peak
11020.000	30.33	18.10	48.43	74.00	-25.57	peak
11020.000	25.26	18.10	43.36	54.00	-10.64	AVG
16530.000	31.48	23.68	55.16	74.00	-18.84	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

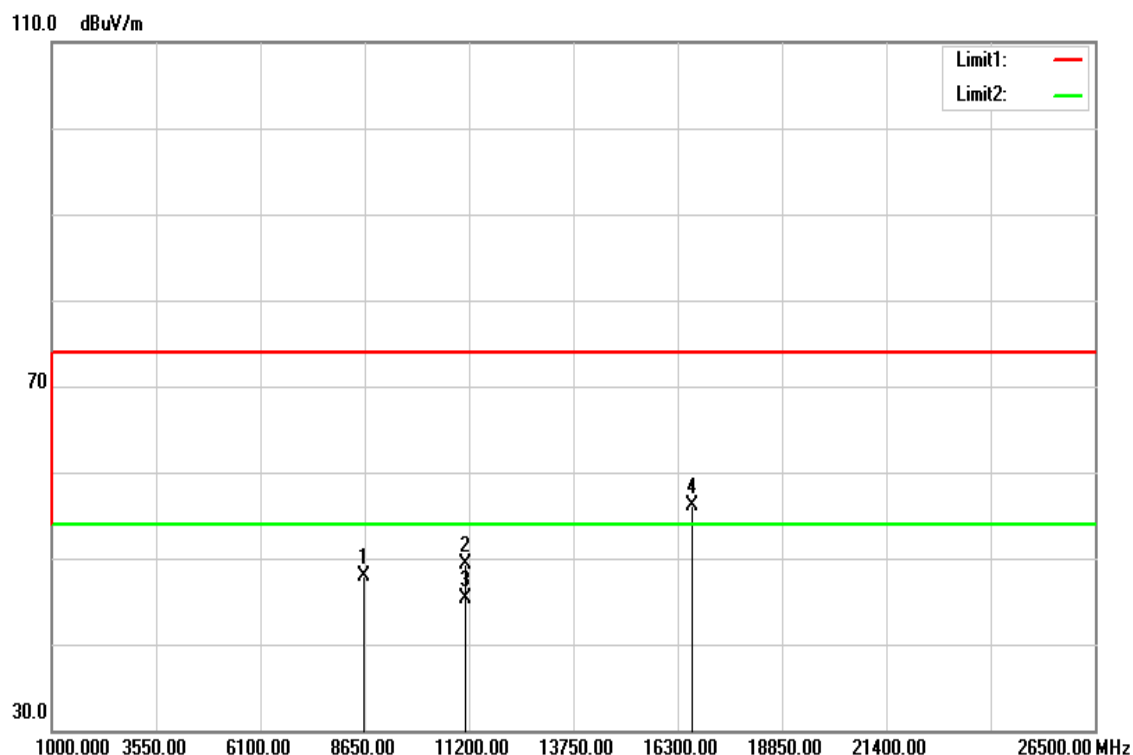


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8765.000	30.50	15.58	46.08	74.00	-27.92	peak
11020.000	35.21	18.10	53.31	74.00	-20.69	peak
11020.000	31.26	18.10	49.36	54.00	-4.64	AVG
16530.000	31.04	23.68	54.72	74.00	-19.28	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

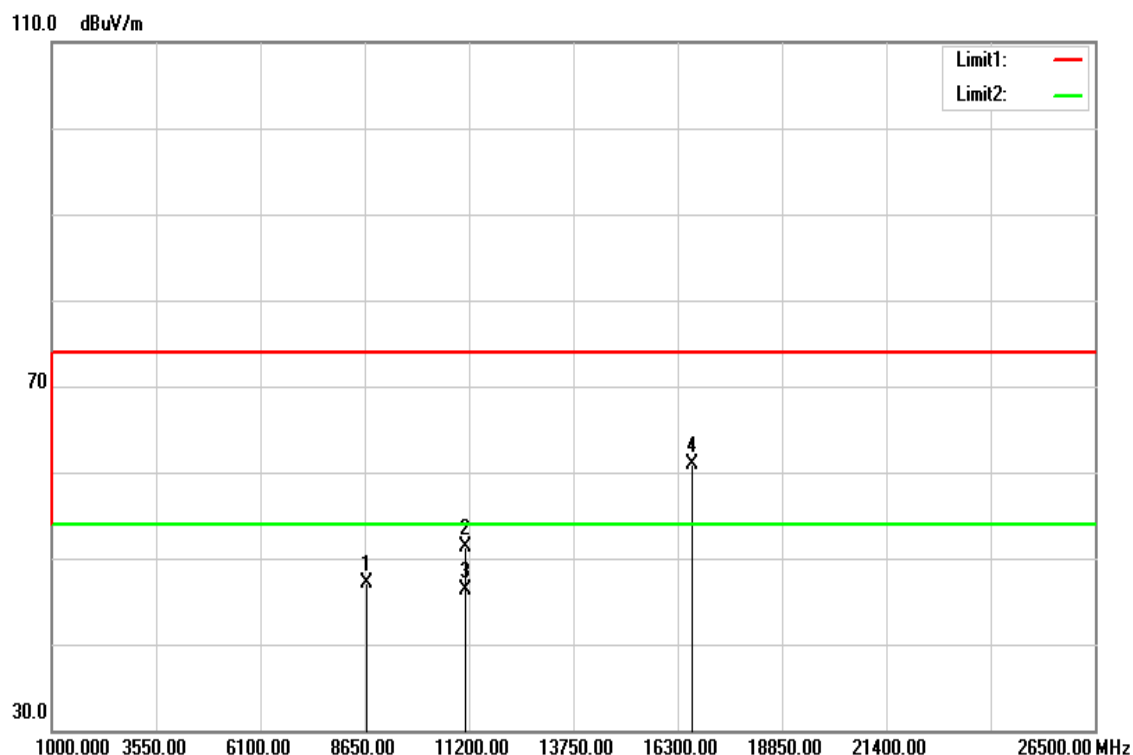


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8635.000	32.59	15.33	47.92	74.00	-26.08	peak
11100.000	31.21	18.11	49.32	74.00	-24.68	peak
11100.000	27.25	18.11	45.36	54.00	-8.64	AVG
16650.000	31.99	24.12	56.11	74.00	-17.89	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

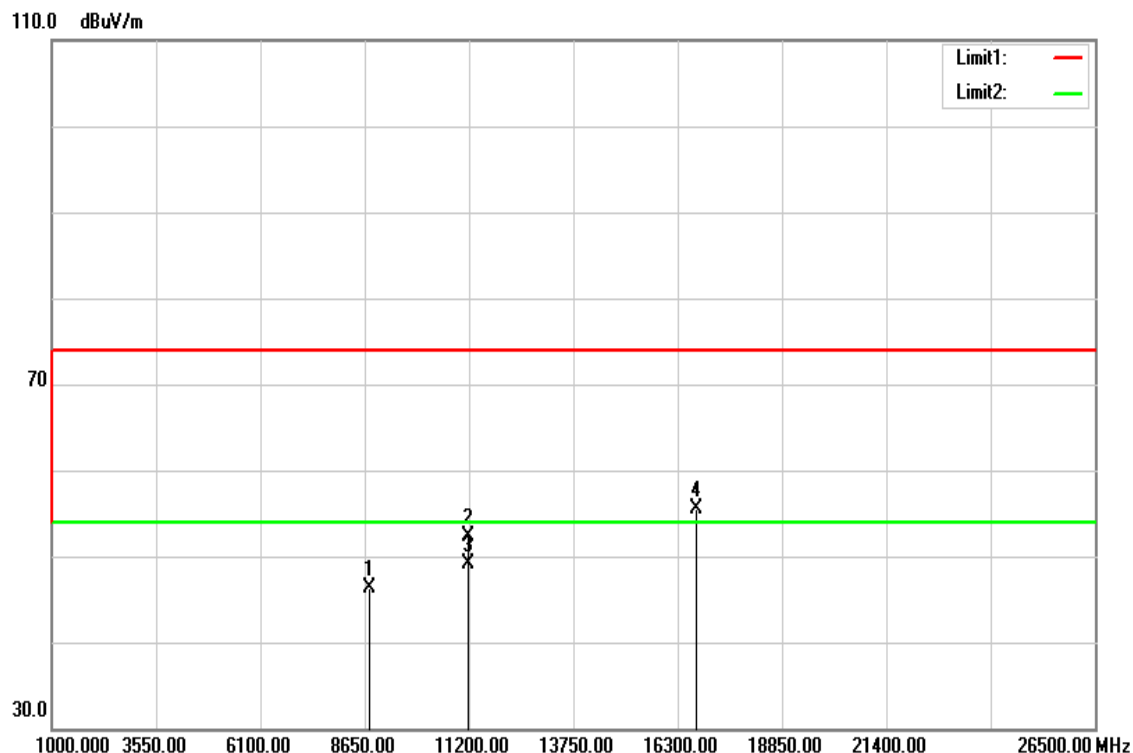


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8695.000	31.66	15.45	47.11	74.00	-26.89	peak
11100.000	33.09	18.11	51.20	74.00	-22.80	peak
11100.000	28.25	18.11	46.36	54.00	-7.64	AVG
16650.000	36.70	24.12	60.82	74.00	-13.18	peak

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 / 5590 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

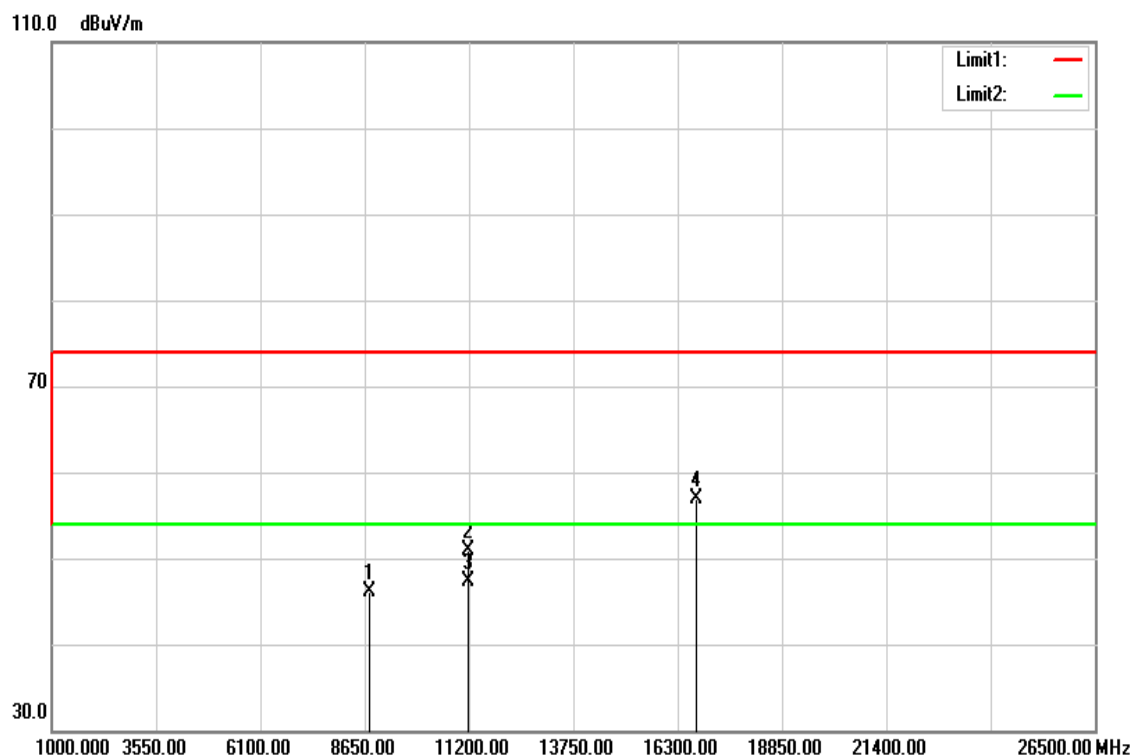


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8765.000	30.63	15.58	46.21	74.00	-27.79	peak
11180.000	34.24	18.12	52.36	74.00	-21.64	peak
11180.000	31.05	18.12	49.17	54.00	-4.83	AVG
16770.000	30.99	24.56	55.55	74.00	-18.45	peak

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 / 5590 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

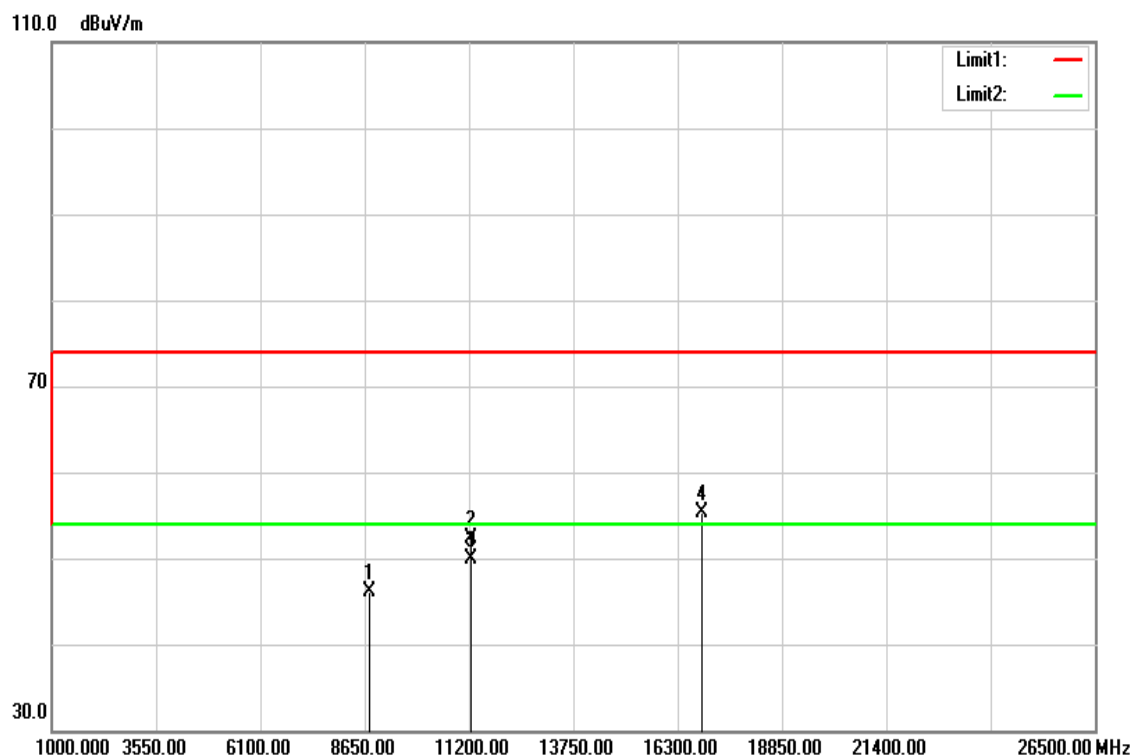


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8765.000	30.46	15.58	46.04	74.00	-27.96	peak
11180.000	32.76	18.12	50.88	74.00	-23.12	peak
11180.000	29.13	18.12	47.25	54.00	-6.75	AVG
16770.000	32.27	24.56	56.83	74.00	-17.17	peak

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 / 5630 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

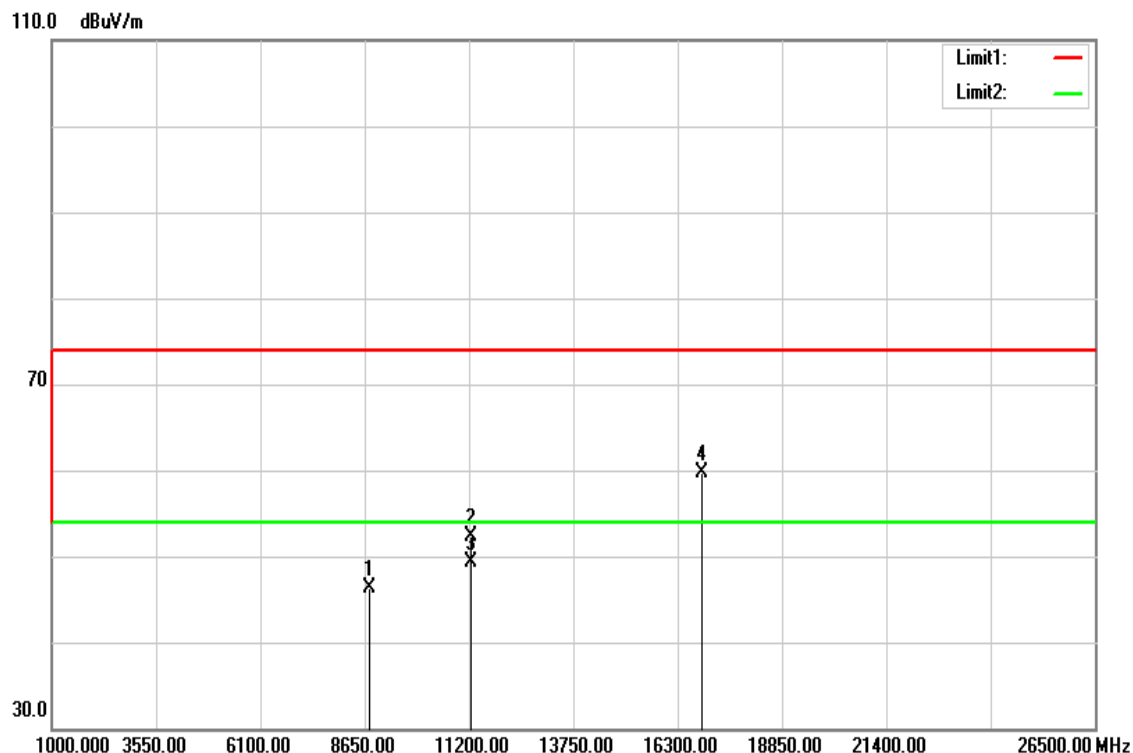


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8756.000	30.55	15.56	46.11	74.00	-27.89	peak
11260.000	34.23	18.13	52.36	74.00	-21.64	peak
11260.000	31.86	18.13	49.99	54.00	-4.01	AVG
16890.000	30.22	25.00	55.22	74.00	-18.78	peak

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 / 5630 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

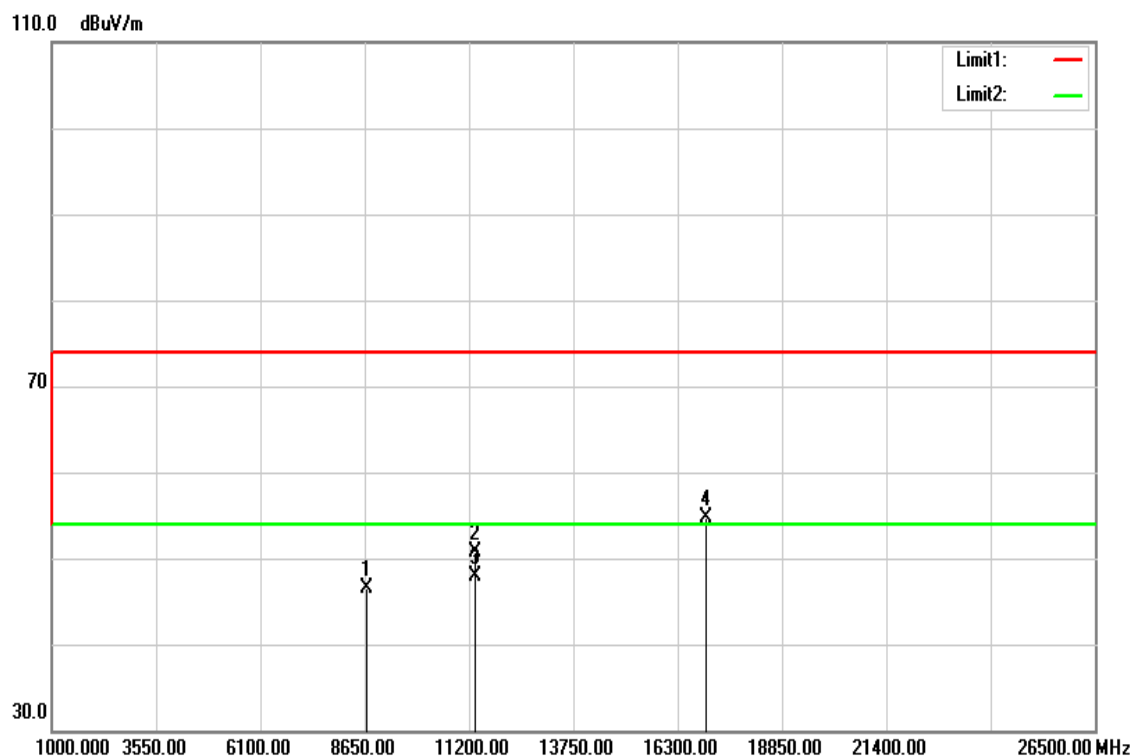


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8756.000	30.79	15.56	46.35	74.00	-27.65	peak
11260.000	34.23	18.13	52.36	74.00	-21.64	peak
11260.000	31.25	18.13	49.38	54.00	-4.62	AVG
16890.000	34.66	25.00	59.66	74.00	-14.34	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

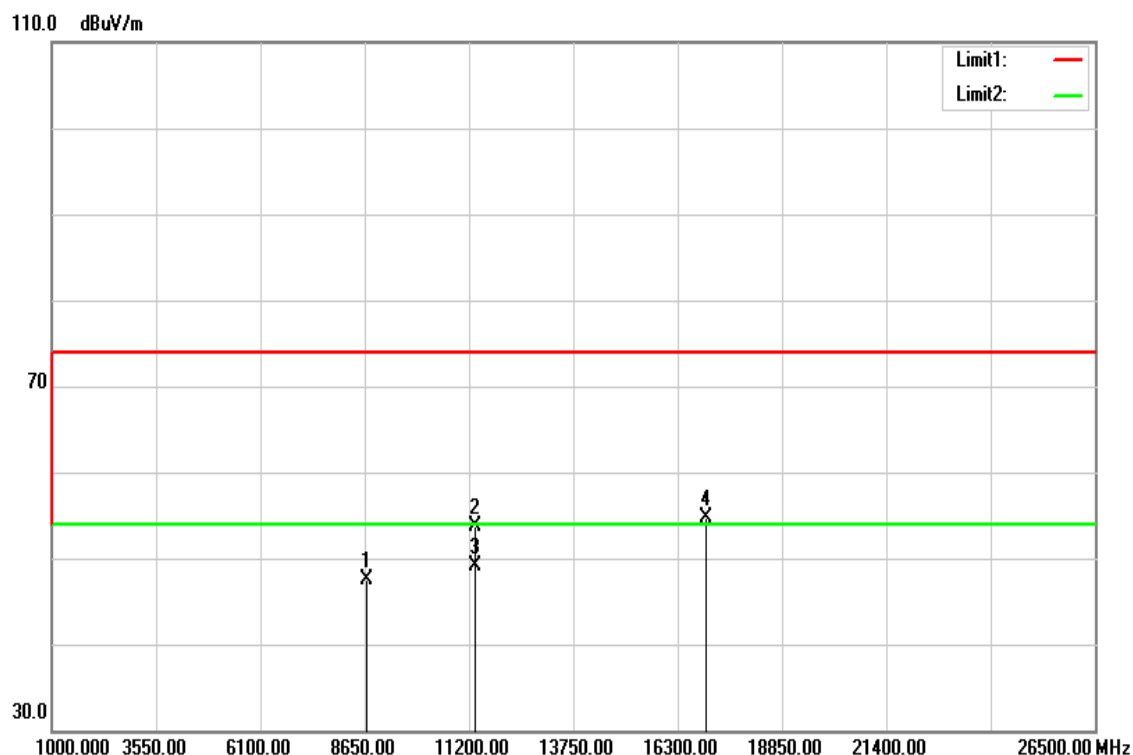


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8699.000	31.00	15.45	46.45	74.00	-27.55	peak
11340.000	32.52	18.14	50.66	74.00	-23.34	peak
11340.000	29.76	18.14	47.90	54.00	-6.10	AVG
17010.000	29.23	25.46	54.69	74.00	-19.31	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

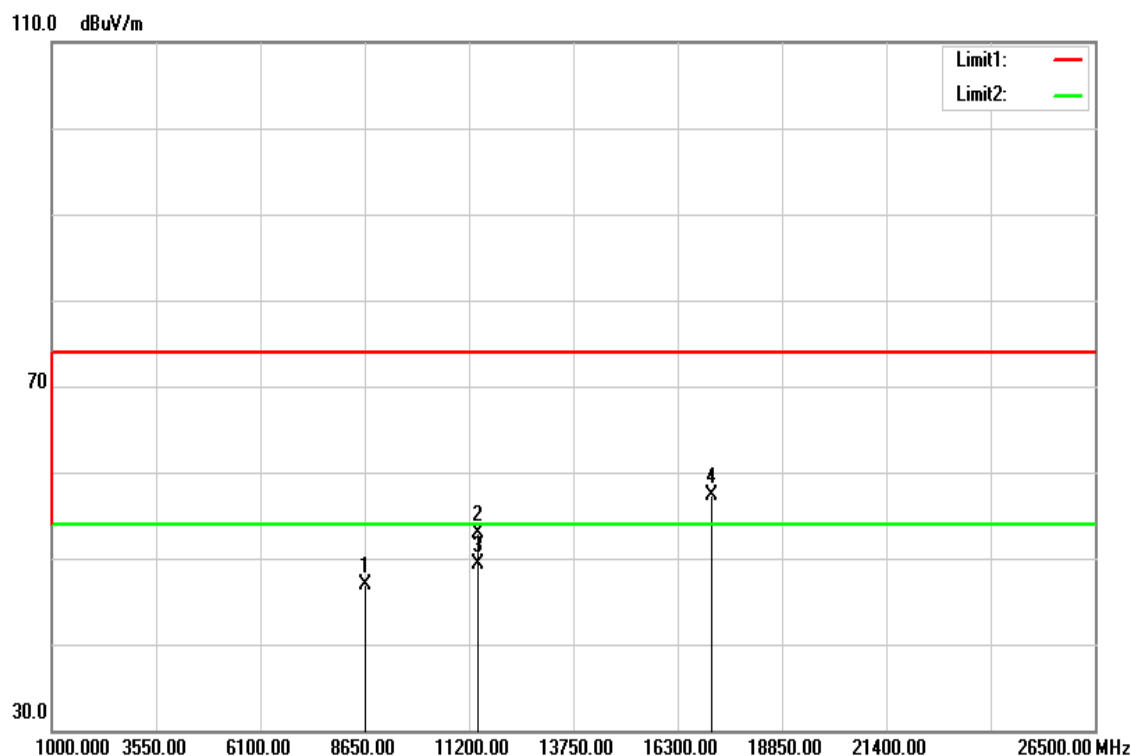


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8699.000	32.04	15.45	47.49	74.00	-26.51	peak
11340.000	35.63	18.14	53.77	74.00	-20.23	peak
11340.000	30.90	18.14	49.04	54.00	-4.96	AVG
17010.000	29.21	25.46	54.67	74.00	-19.33	peak

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 / 5710 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

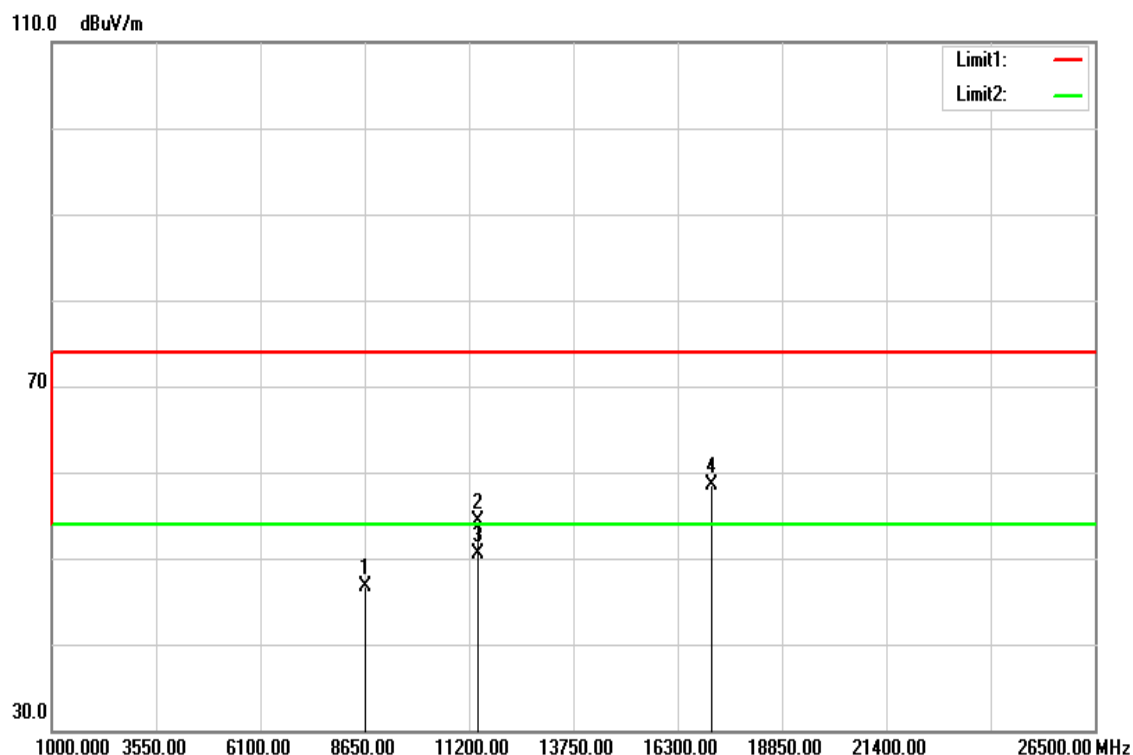


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8679.000	31.54	15.42	46.96	74.00	-27.04	peak
11420.000	34.79	18.15	52.94	74.00	-21.06	peak
11420.000	31.22	18.15	49.37	54.00	-4.63	AVG
17130.000	31.08	26.19	57.27	74.00	-16.73	peak

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 / 5710 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

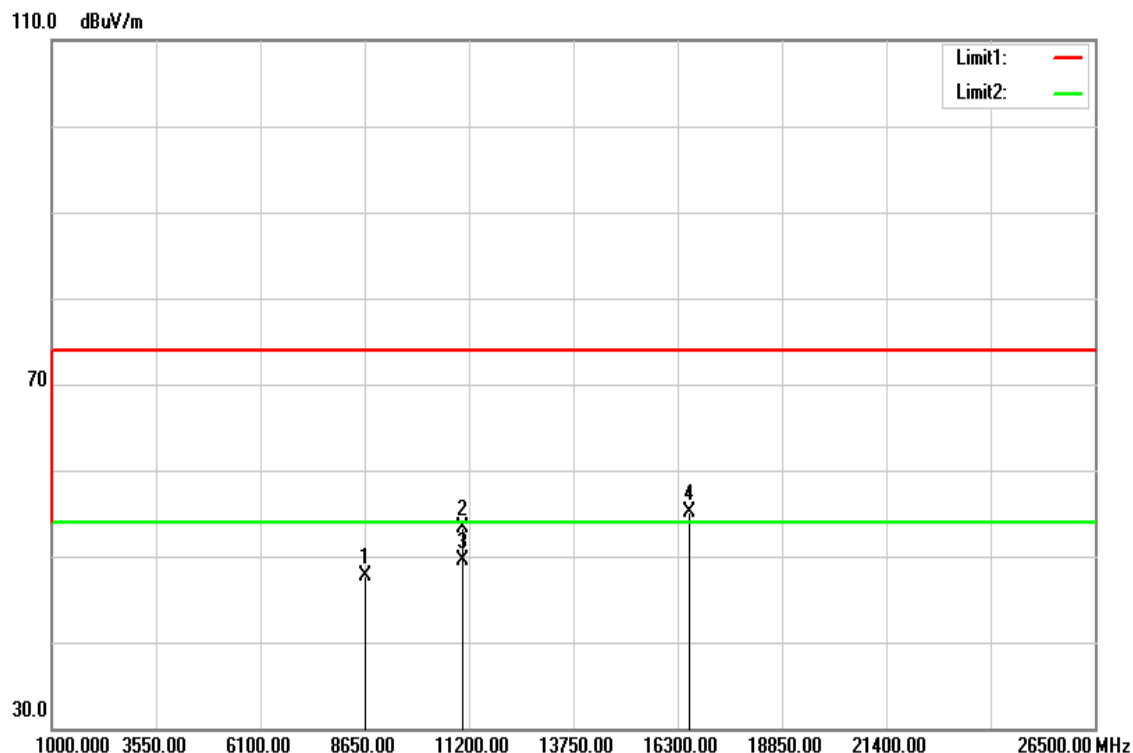


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8679.000	31.31	15.42	46.73	74.00	-27.27	peak
11420.000	36.21	18.15	54.36	74.00	-19.64	peak
11420.000	32.33	18.15	50.48	54.00	-3.52	AVG
17130.000	32.35	26.19	58.54	74.00	-15.46	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

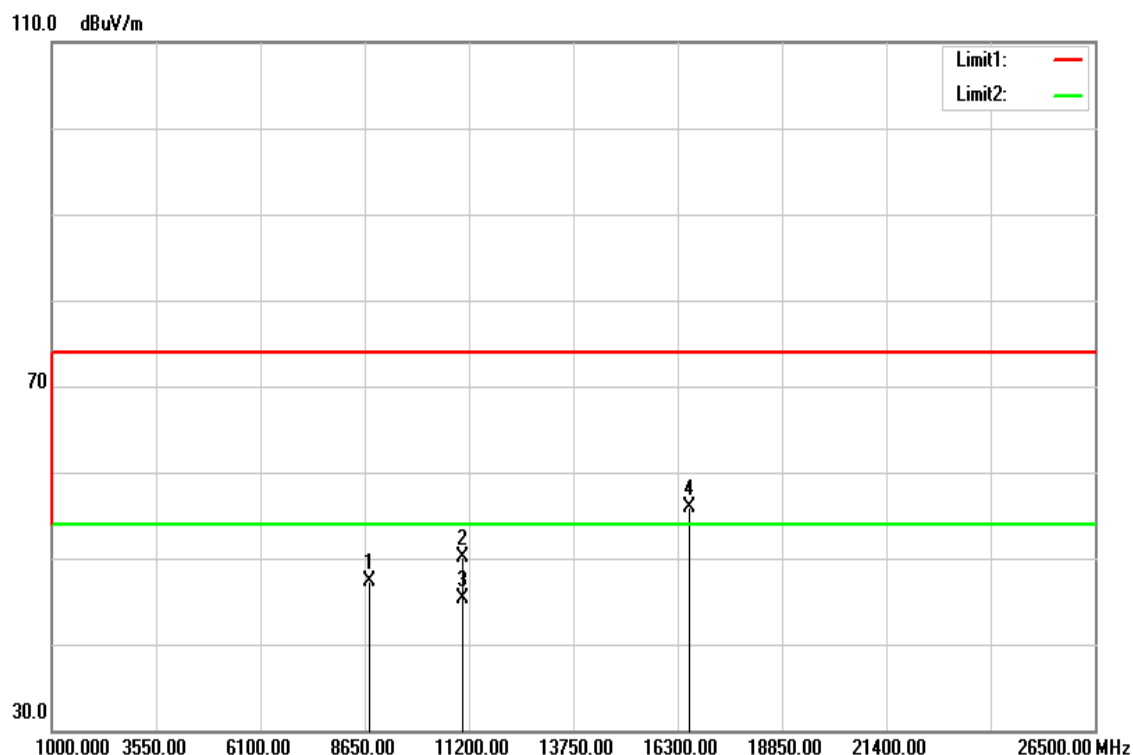


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8666.000	32.31	15.39	47.70	74.00	-26.30	peak
11060.000	35.25	18.11	53.36	74.00	-20.64	peak
11060.000	31.49	18.11	49.60	54.00	-4.40	AVG
16590.000	31.27	23.90	55.17	74.00	-18.83	peak

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	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

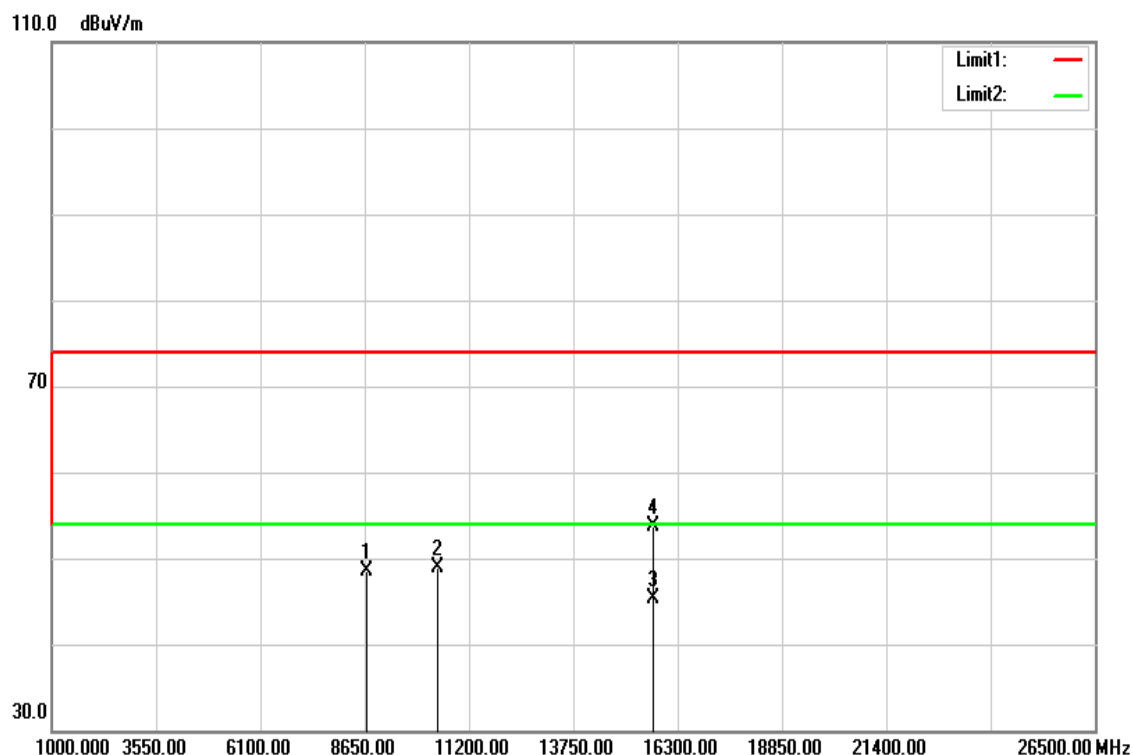


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8754.000	31.69	15.56	47.25	74.00	-26.75	peak
11060.000	31.92	18.11	50.03	74.00	-23.97	peak
11060.000	27.25	18.11	45.36	54.00	-8.64	AVG
16590.000	32.07	23.90	55.97	74.00	-18.03	peak

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 / 5610 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

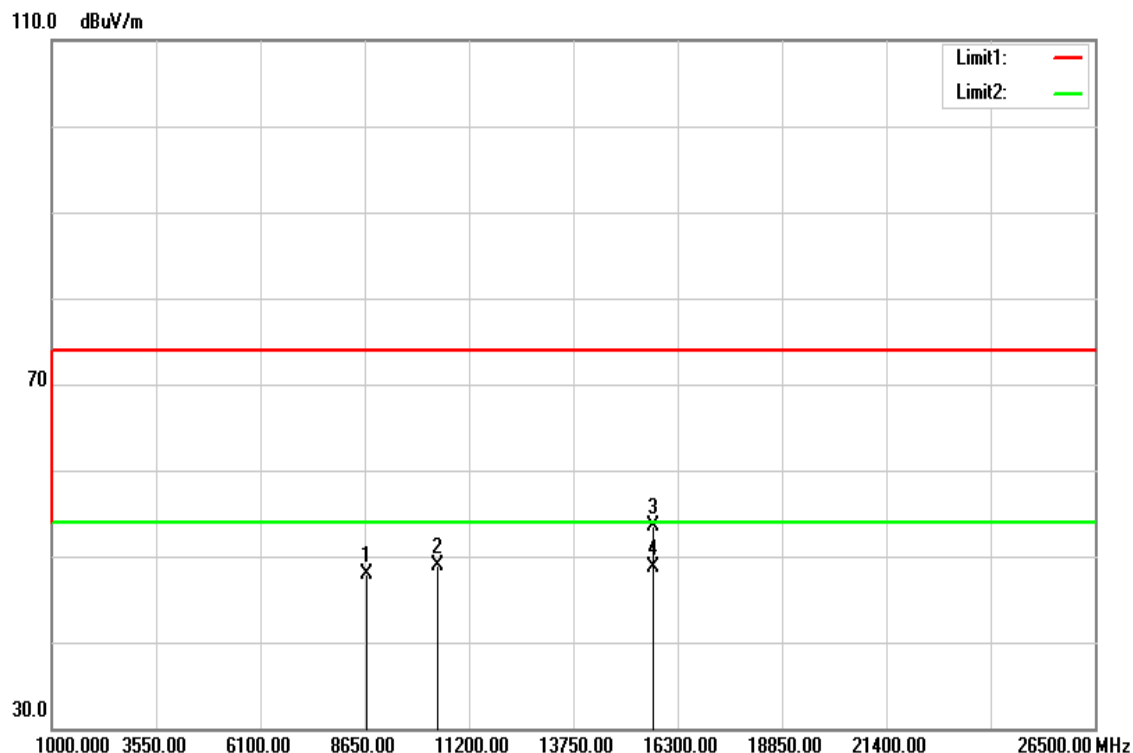


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8692.000	33.12	15.44	48.56	74.00	-25.44	peak
10420.000	31.43	17.57	49.00	74.00	-25.00	peak
15720.000	24.14	21.22	45.36	74.00	-28.64	peak
15720.000	32.53	21.22	53.75	54.00	-0.25	AVG

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 / 5610 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

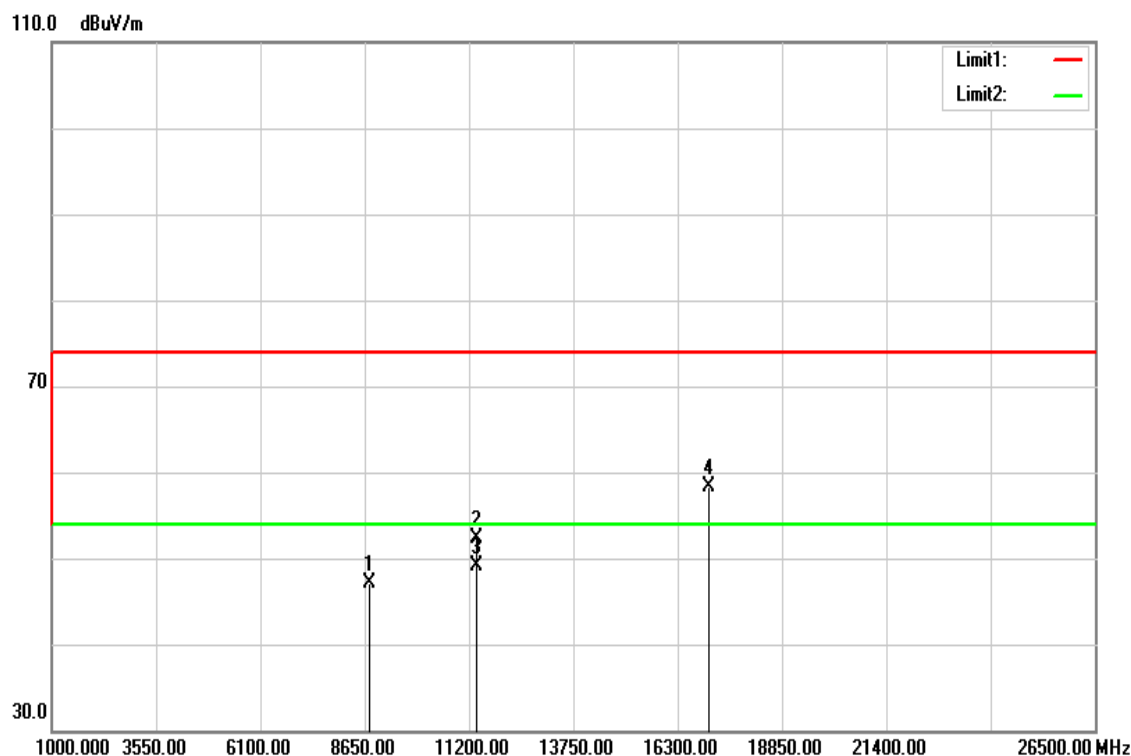


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
8692.000	32.45	15.44	47.89	74.00	-26.11	peak
10420.000	31.24	17.57	48.81	74.00	-25.19	peak
15720.000	32.24	21.22	53.46	74.00	-20.54	peak
15720.000	27.40	21.22	48.62	54.00	-5.38	AVG

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 / 5690 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Vertical	Test Engineer	Timmy Wang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

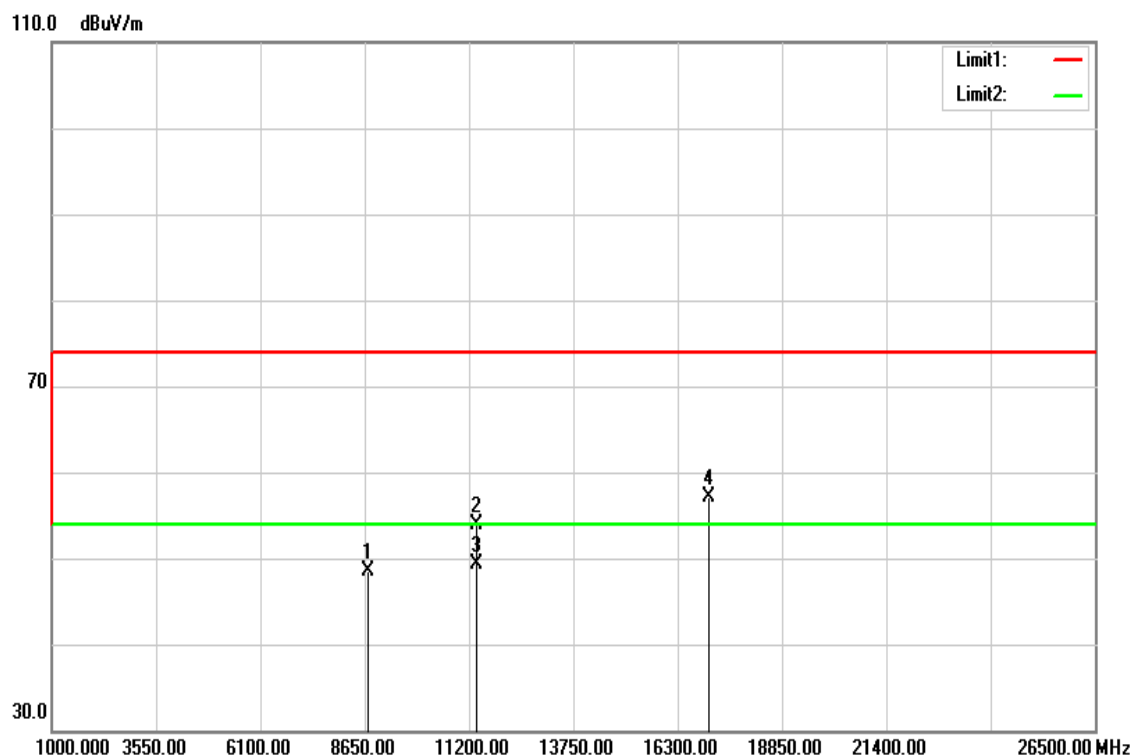


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
8756.000	31.58	15.56	47.14	74.00	-26.86	peak
11380.000	34.21	18.15	52.36	74.00	-21.64	peak
11380.000	30.86	18.15	49.01	54.00	-4.99	AVG
17070.000	32.53	25.83	58.36	74.00	-15.64	peak

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 / 5690 MHz	Temp/Hum	27(°C) / 53%RH
Test Item	Harmonic	Test Date	November 4, 2016
Polarize	Horizontal	Test Engineer	Timmy Wang
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
8744.000	32.94	15.54	48.48	74.00	-25.52	peak
11380.000	35.80	18.15	53.95	74.00	-20.05	peak
11380.000	31.05	18.15	49.20	54.00	-4.80	AVG
17070.000	31.30	25.83	57.13	74.00	-16.87	peak

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

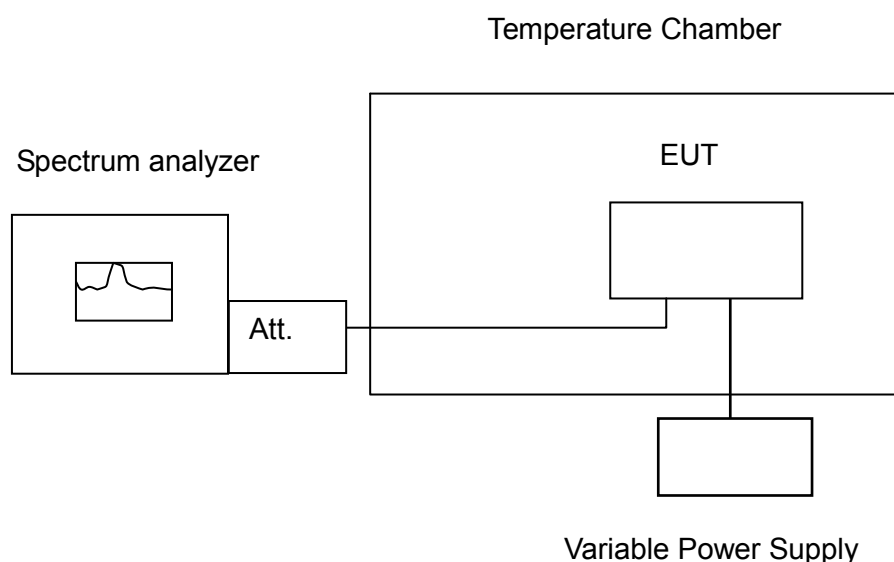
4.6.1 Test Limit

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

Operating Frequency: 5260 MHz										
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)				Limit (20ppm)				Test Result
		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	120	5260.00984	5260.00984	5260.00984	5260.00984	1.8701	1.8701	1.8701	1.8701	Pass
40	120	5260.00984	5260.00984	5260.00984	5260.00984	1.8698	1.8698	1.8698	1.8698	Pass
30	120	5260.00983	5260.00983	5260.00983	5260.00983	1.8695	1.8695	1.8694	1.8695	Pass
20	120	5260.00983	5260.00983	5260.00983	5260.00983	1.8692	1.8691	1.8691	1.8691	Pass
10	120	5260.00952	5260.00949	5260.00948	5260.00948	1.8101	1.8042	1.8023	1.8023	Pass
0	120	5260.01253	5260.01252	5260.01249	5260.01249	2.3817	2.3802	2.3745	2.3745	Pass
-10	120	5260.02110	5260.02111	5260.02110	5260.02110	4.0116	4.0133	4.0116	4.0116	Pass
-20	120	5260.03894	5260.03892	5260.03892	5260.03891	7.4034	7.3992	7.3992	7.3973	Pass

Operating Frequency: 5260 MHz										
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)				Limit (20ppm)				Test Result
		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	108	5260.00985	5260.00985	5260.00985	5260.00985	1.8717	1.8717	1.8717	1.8717	Pass
	120	5260.00983	5260.00983	5260.00983	5260.00983	1.8692	1.8691	1.8691	1.8691	Pass
	132	5260.00982	5260.00982	5260.00982	5260.00982	1.8672	1.8672	1.8672	1.8672	Pass

Operating Frequency: 5500 MHz										
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)				Limit (20ppm)				Test Result
		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
50	120	5500.00980	5500.00980	5500.00980	5500.00980	1.7823	1.7823	1.7823	1.7823	Pass
40	120	5500.00981	5500.00981	5500.00981	5500.00981	1.7837	1.7837	1.7837	1.7837	Pass
30	120	5500.00981	5500.00981	5500.00981	5500.00981	1.7837	1.7837	1.7837	1.7837	Pass
20	120	5500.00982	5500.00982	5500.00982	5500.00982	1.7850	1.7849	1.7849	1.7849	Pass
10	120	5500.00522	5500.00521	5500.00520	5500.00522	0.9485	0.9473	0.9455	0.9485	Pass
0	120	5500.01052	5500.01052	5500.01051	5500.01051	1.9118	1.9118	1.9109	1.9109	Pass
-10	120	5500.02120	5500.02119	5500.02119	5500.02118	3.8538	3.8527	3.8527	3.8509	Pass
-20	120	5500.03566	5500.03565	5500.03565	5500.03564	6.4833	6.4818	6.4818	6.4800	Pass

Operating Frequency: 5500 MHz										
Environment Temperature (°C)	Voltage (V)	Measured Frequency (MHz)				Limit (20ppm)				Test Result
		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
20	108	5500.00985	5500.00985	5500.00985	5500.00985	1.7913	1.7913	1.7913	1.7913	Pass
	120	5500.00982	5500.00982	5500.00982	5500.00982	1.7850	1.7850	1.7849	1.7849	Pass
	132	5500.00981	5500.00981	5500.00981	5500.00981	1.7838	1.7838	1.7838	1.7838	Pass