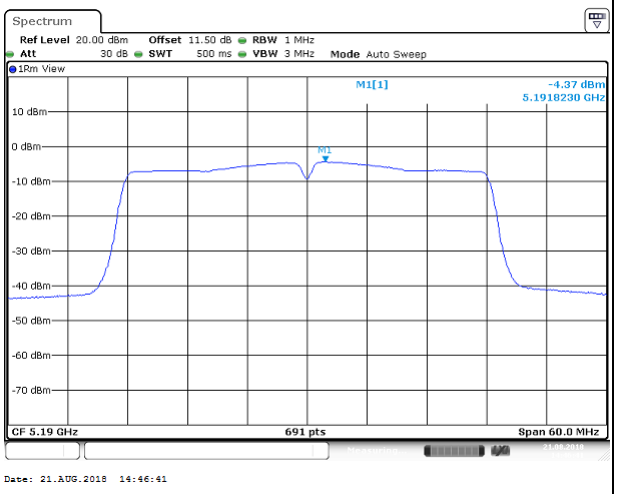
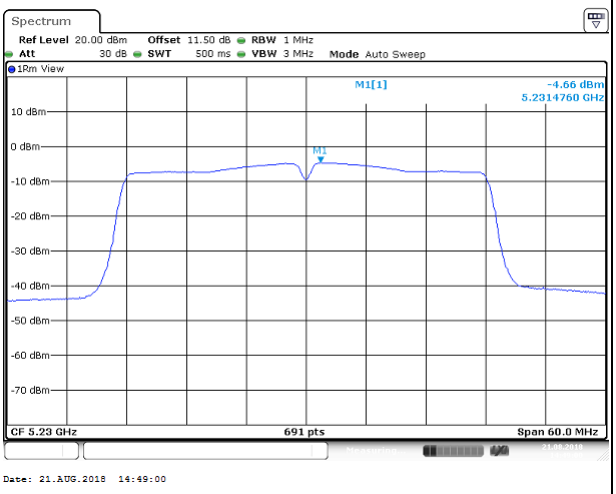
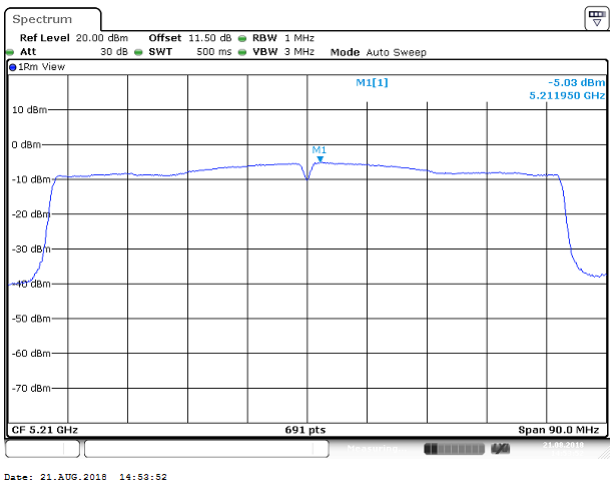
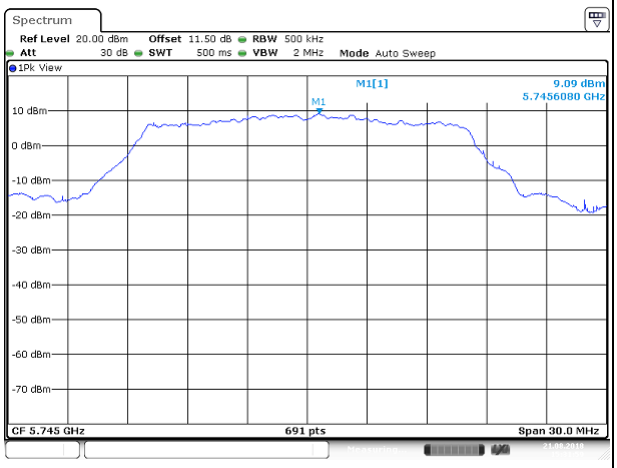
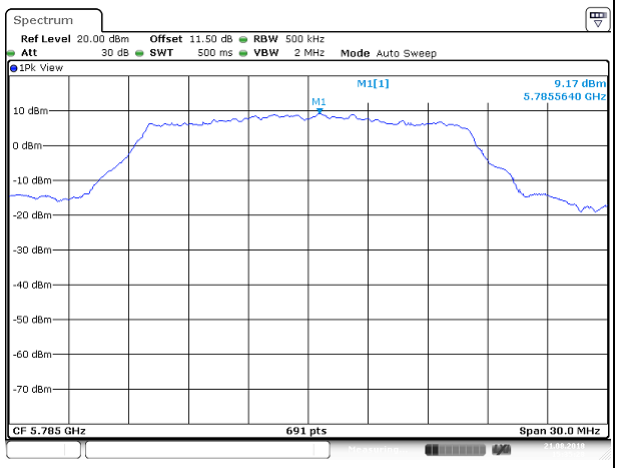
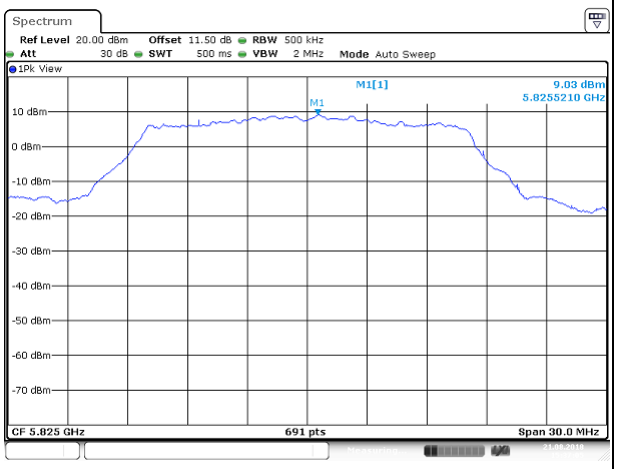
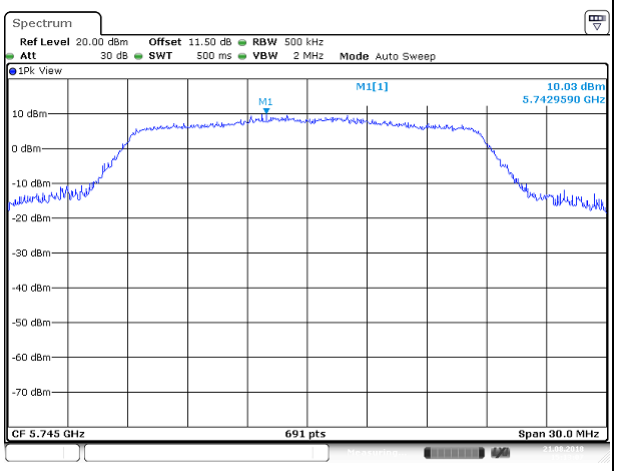
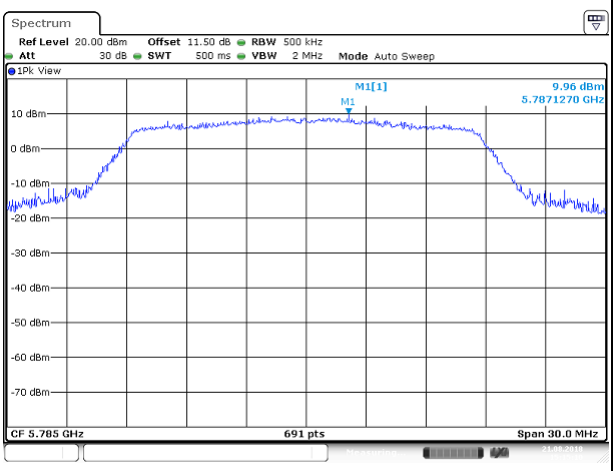
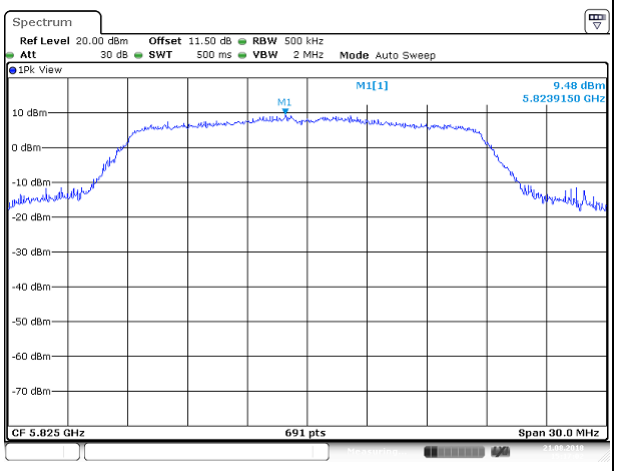
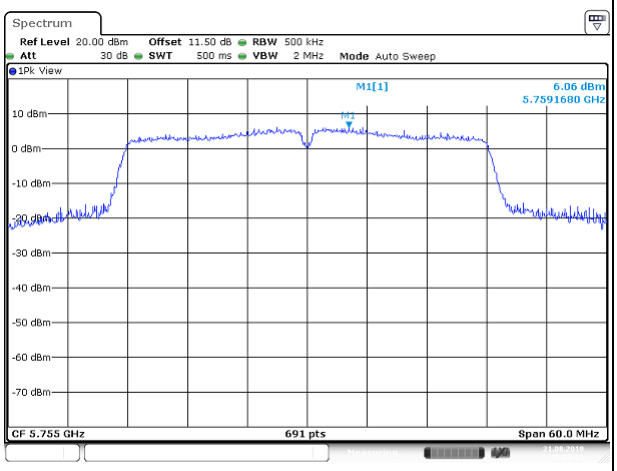
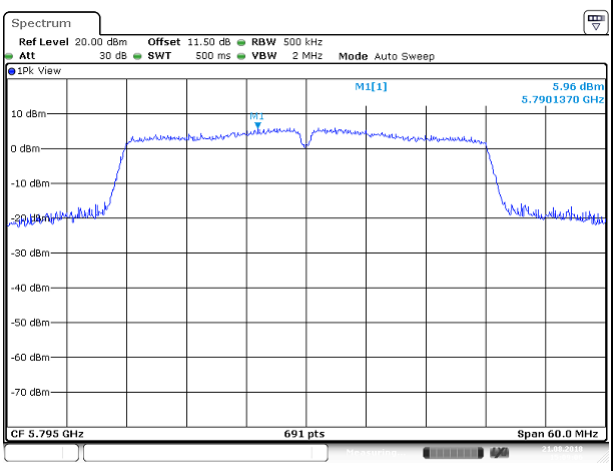
UNII-1 IEEE 802.11n HT40 mode- chain 1	
Low CH	**High CH**
	

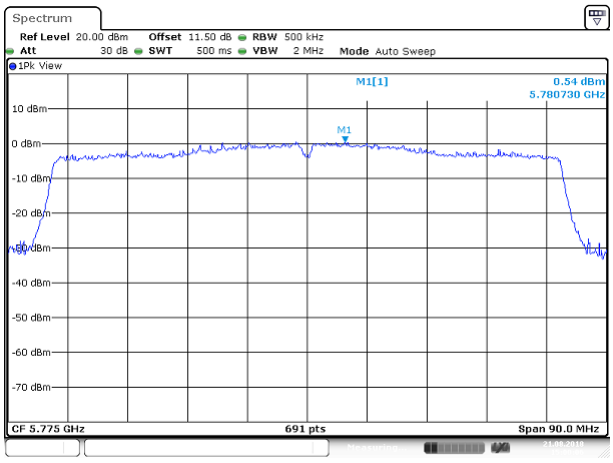
UNII-1 IEEE 802.11ac VHT80 mode- chain 1
Mid CH


Test Data

UNII-3 IEEE 802.11a mode- chain 1	
Low CH	**Mid CH**
	
High CH	
	

UNII-3 IEEE 802.11n HT20 mode- chain 1	
Low CH	**Mid CH**
	
High CH	
	

UNII-3 IEEE 802.11n HT40 mode- chain 1	
Low CH	**High CH**
	

UNII-3 IEEE 802.11ac VHT80 mode- chain 1	
Mid CH	
	

4.5 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.5.1 Test Limit

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

Below 30 MHz

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

Above 30 MHz

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

UNII-1 :

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

UNII-3:

For the band 5725-5850 MHz, emissions at frequencies from the band edges to 10 MHz above or below the band edges shall not exceed -17 dBm/MHz e.i.r.p.
For emissions at frequencies more than 10 MHz above or below the band edges, the emissions power shall not exceed -27 dBm/MHz

4.5.2 Test Procedure

Test method Refer as KDB 789033 D02, 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.

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

4. The SA setting following：

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

(2) Above 1G：

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

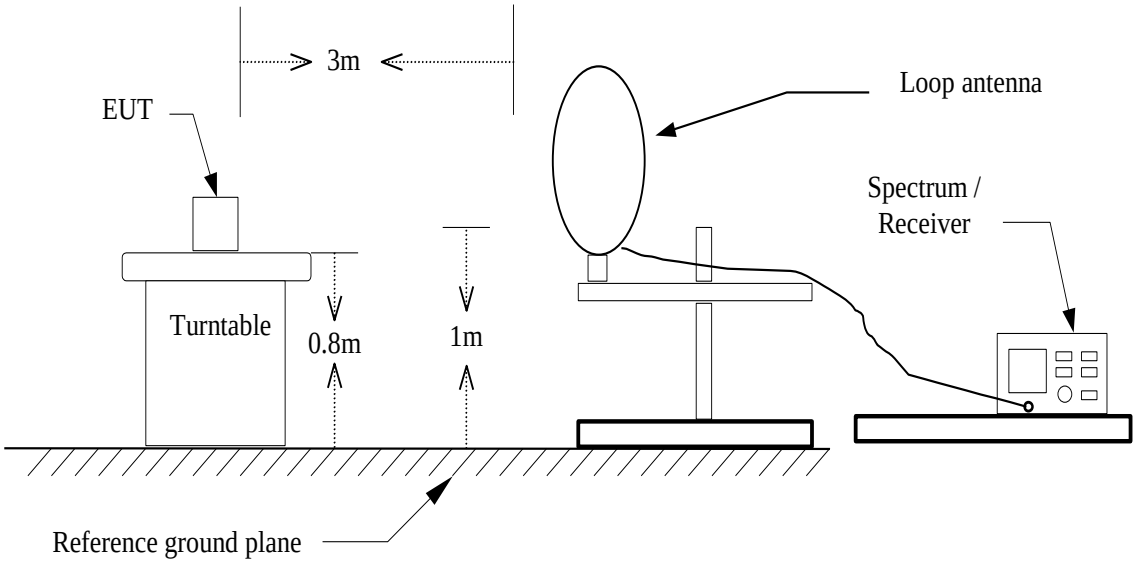
(2.2) For Average measurement：RBW = 1MHz, VBW

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

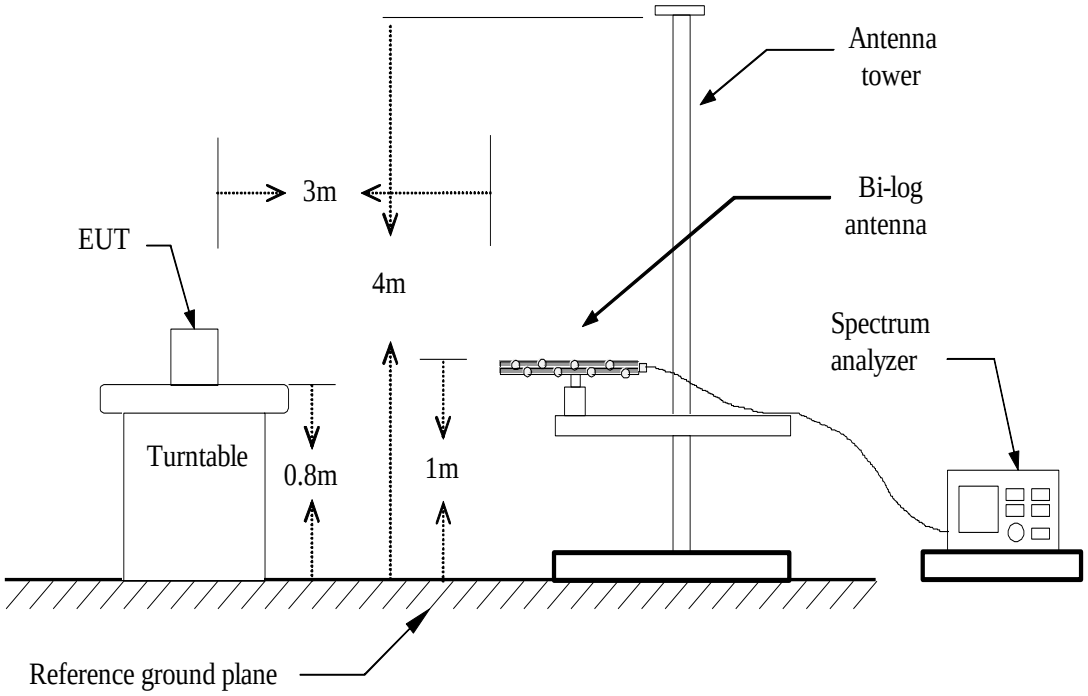
Configuration	Duty Cycle (%)	VBW
802.11a	95.95%	750Hz
802.11n HT20	94.33%	820Hz
802.11n HT40	89.33%	1.5KHz
802.11ac VHT80	97.96%	2.2KHz

4.5.3 Test Setup

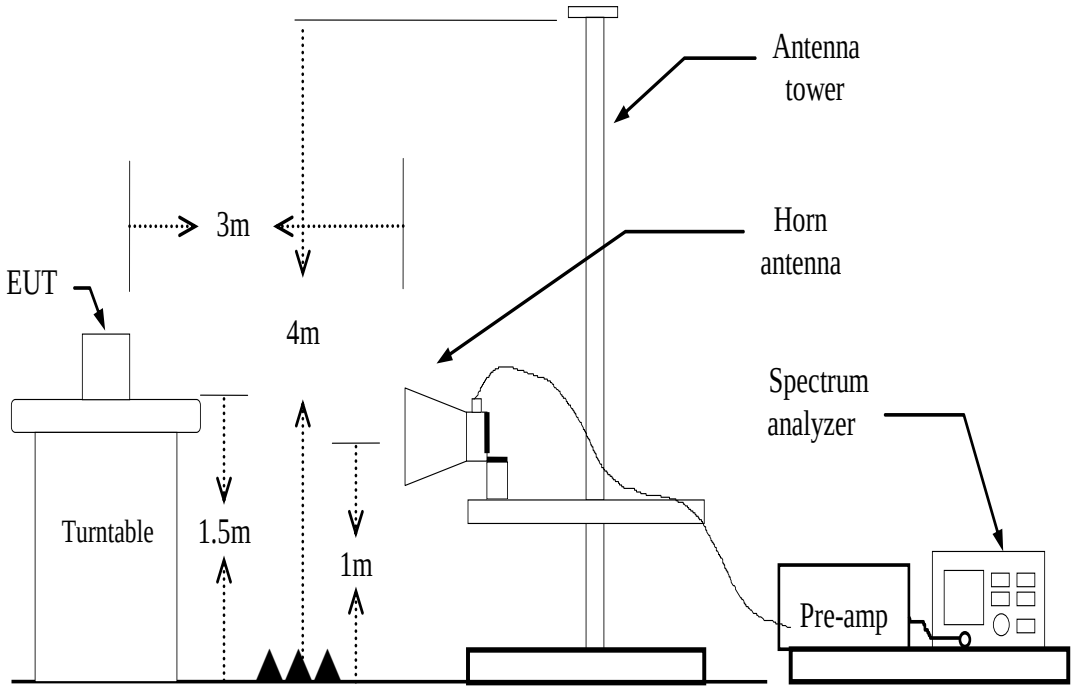
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1 GHz

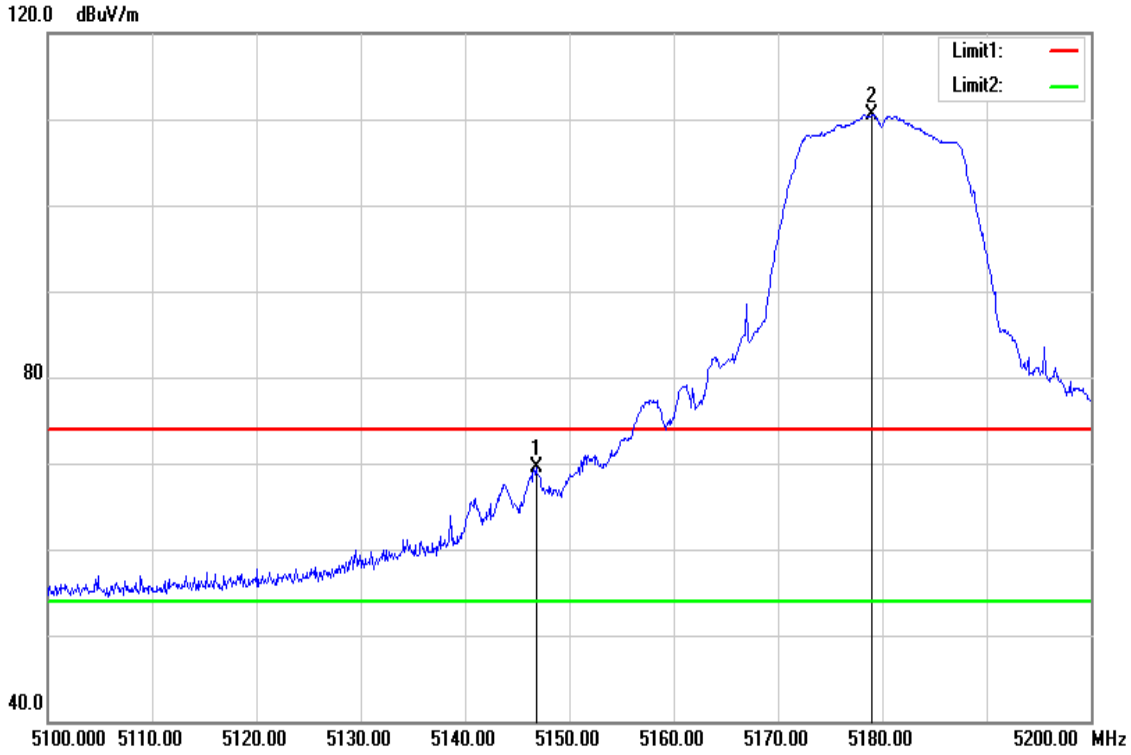


4.5.4 Test Result

Test Data

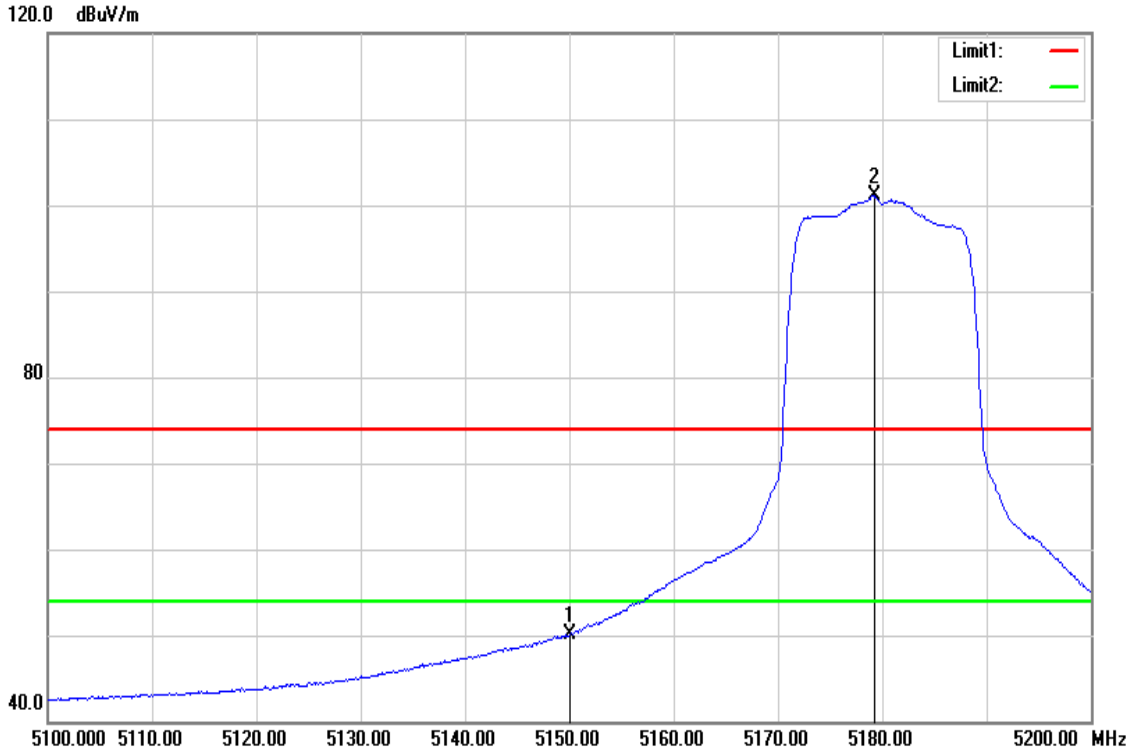
Band Edge Test Data for UNII-1

Test Mode	IEEE 802.11a Low CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



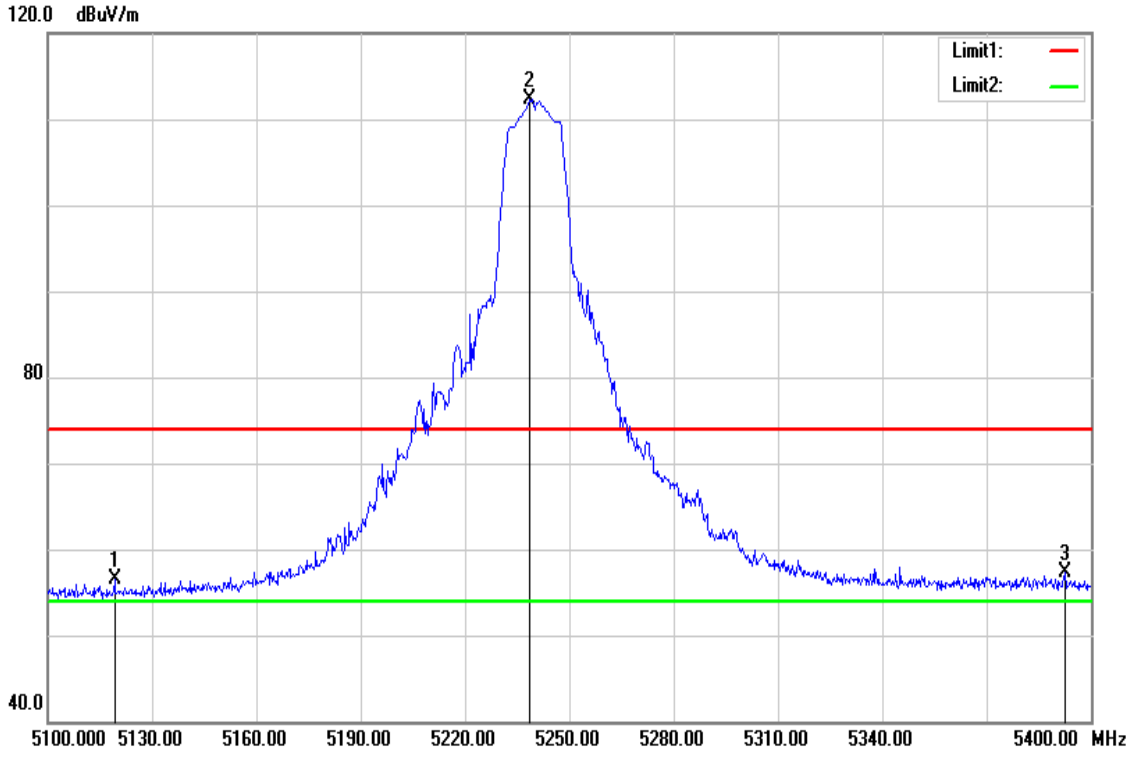
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5146.800	64.45	4.99	69.44	74.00	-4.56	peak
5179.000	105.33	5.12	110.45	-	-	peak

Test Mode	IEEE 802.11a Low CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



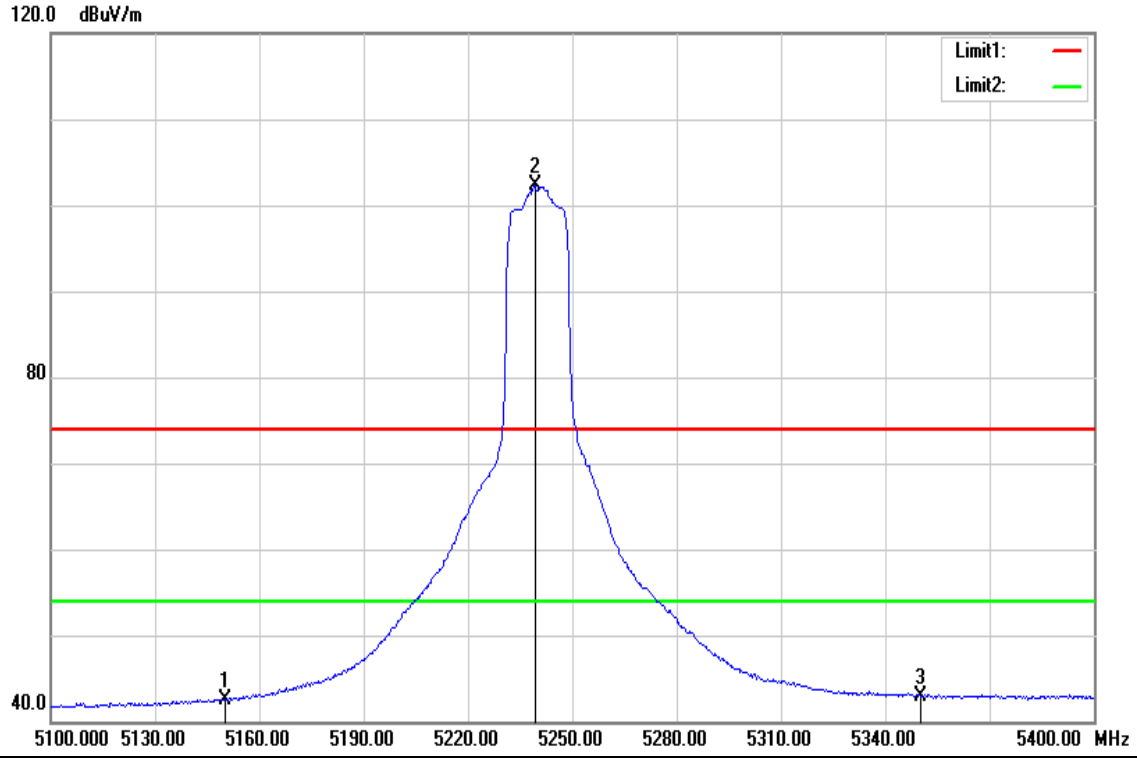
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	45.03	5.00	50.03	54.00	-3.97	AVG
5179.200	95.98	5.12	101.10	-	-	AVG

Test Mode	IEEE 802.11a High CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



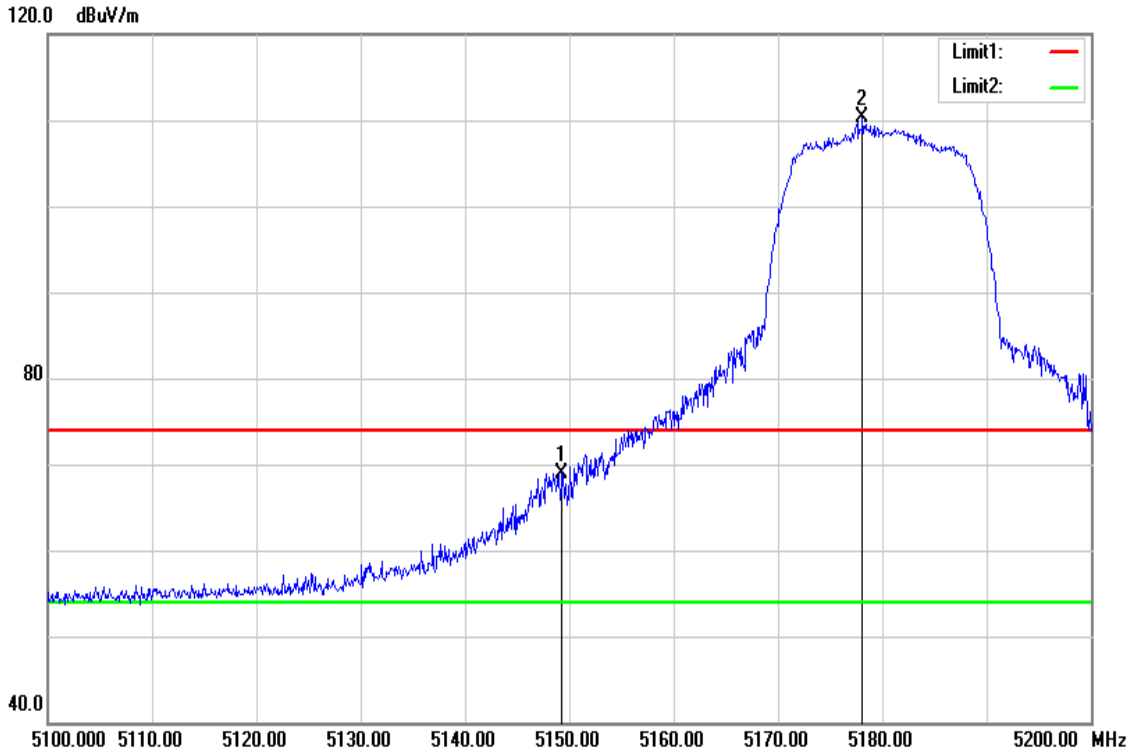
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5119.200	51.70	4.88	56.58	74.00	-17.42	peak
5238.600	107.12	5.24	112.36	-	-	peak
5392.500	51.87	5.40	57.27	74.00	-16.73	peak

Test Mode	IEEE 802.11a High CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



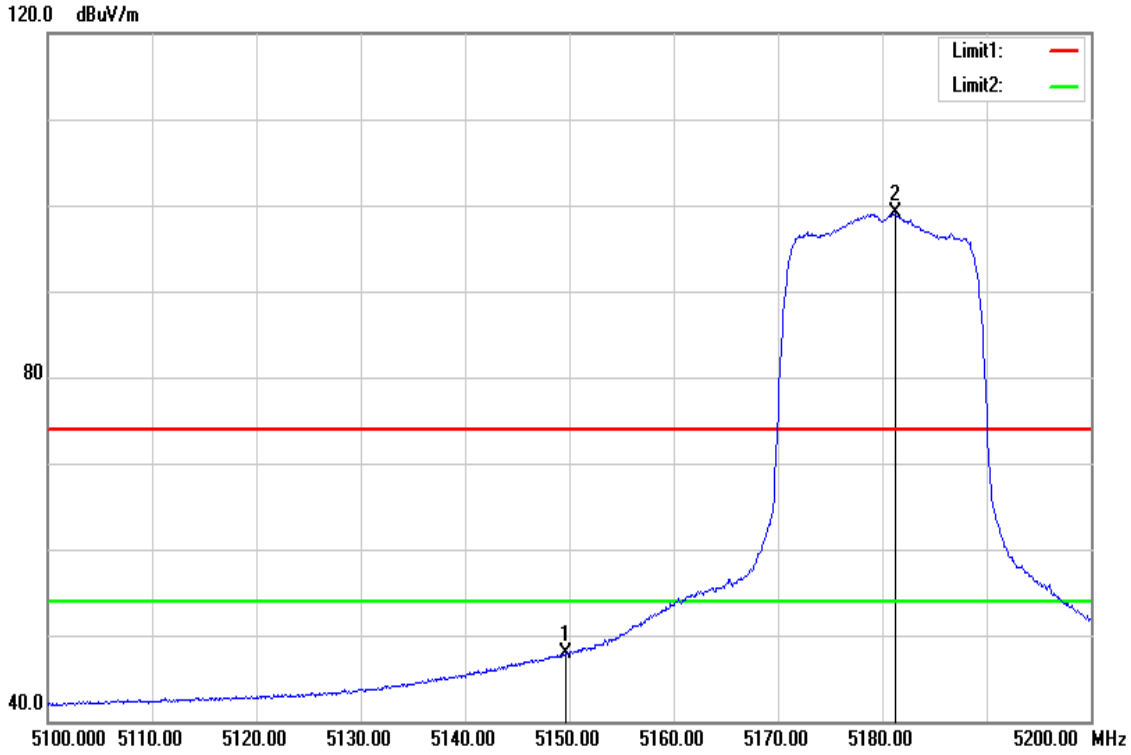
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	37.51	5.00	42.51	54.00	-11.49	AVG
5239.200	97.12	5.24	102.36	-	-	AVG
5350.000	37.61	5.36	42.97	54.00	-11.03	AVG

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



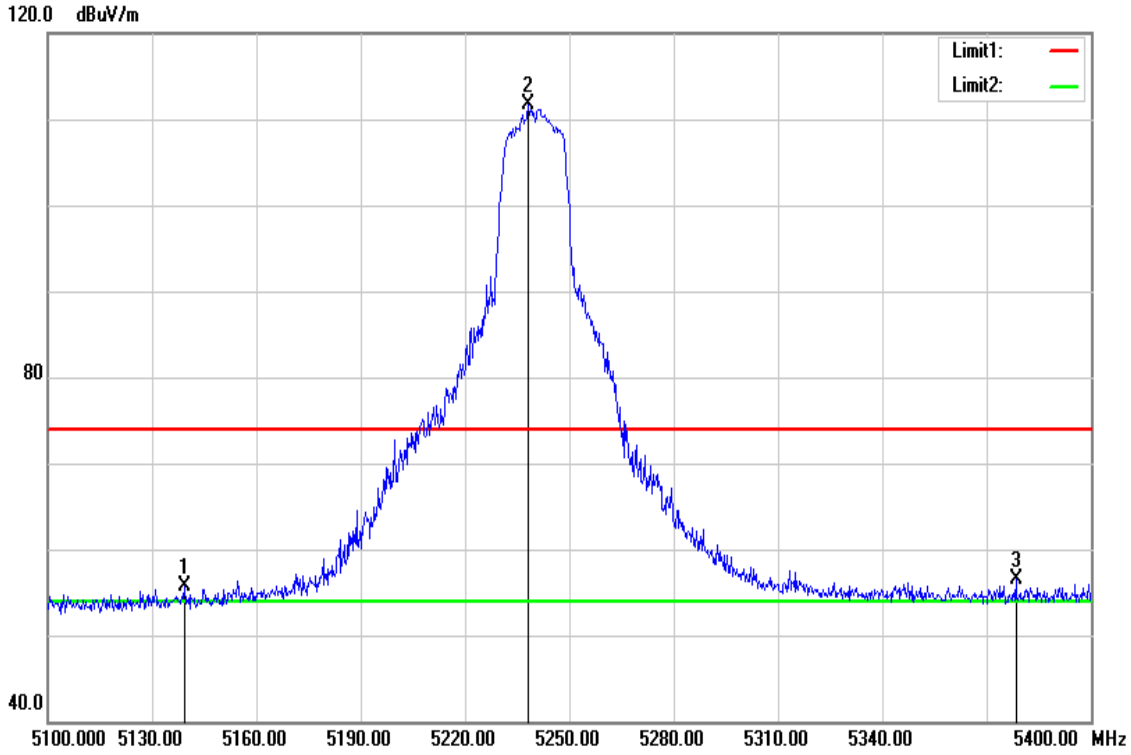
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5149.300	63.98	5.00	68.98	74.00	-5.02	peak
5178.100	105.09	5.12	110.21	-	-	peak

Test Mode	IEEE 802.11n HT20 Low CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



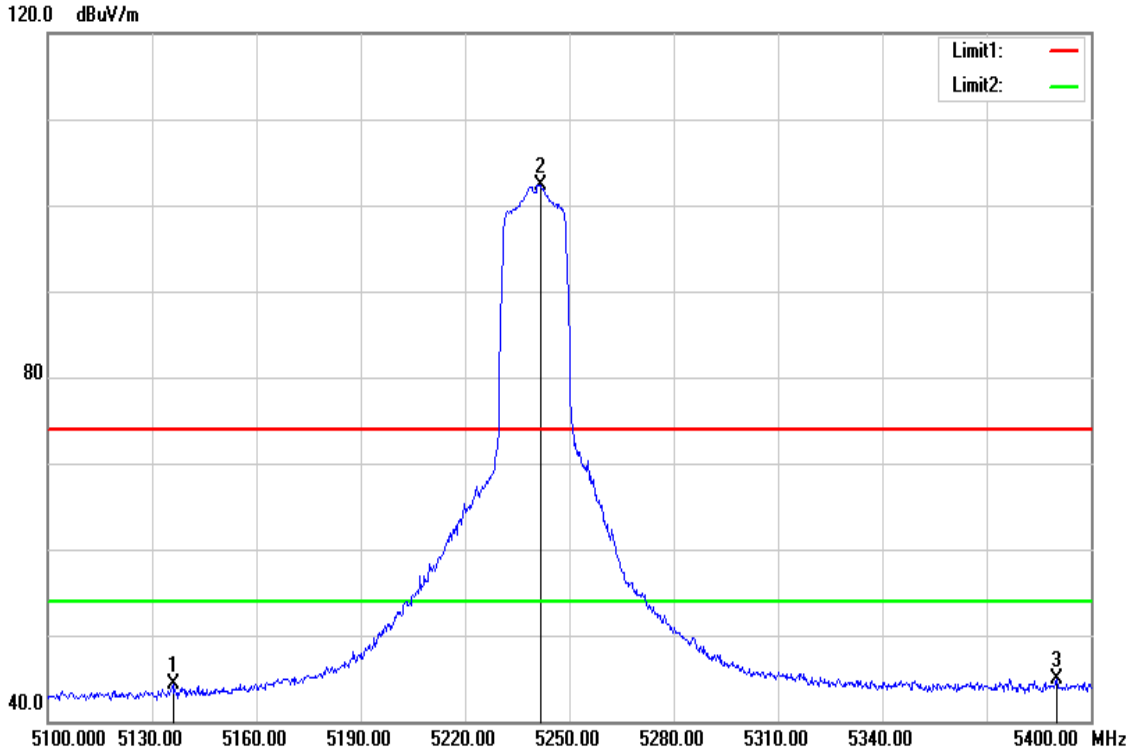
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5149.700	42.85	5.00	47.85	54.00	-6.15	AVG
5181.300	93.91	5.13	99.04	-	-	AVG

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



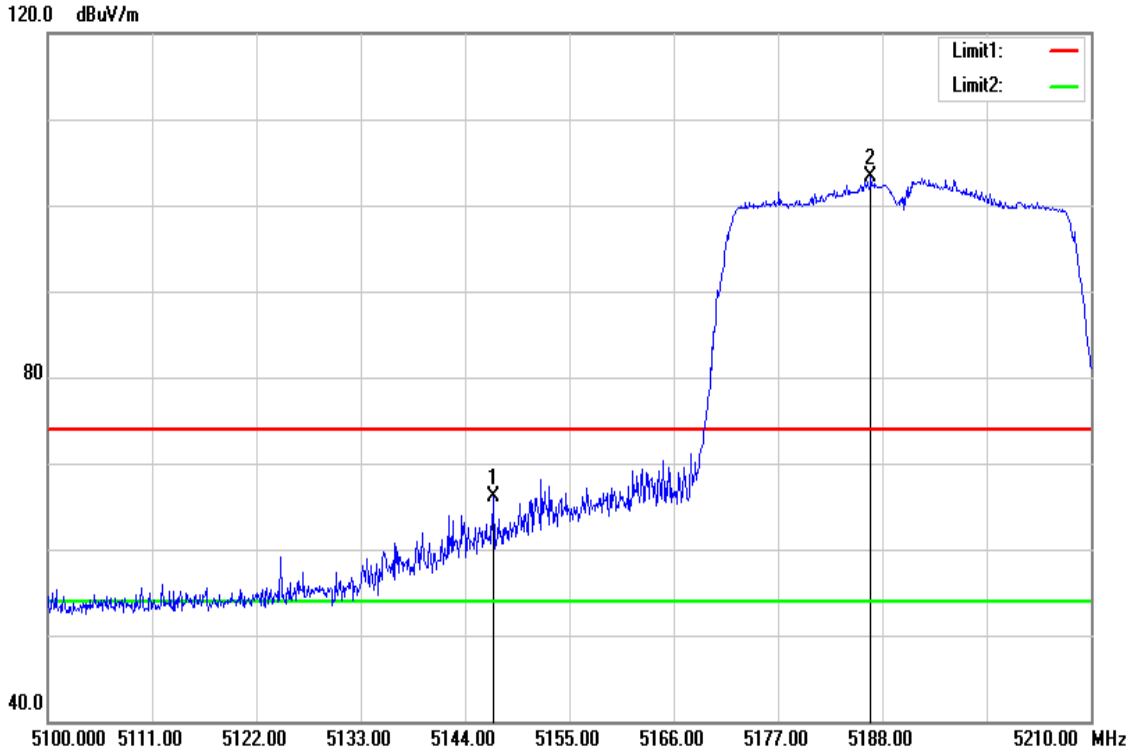
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5139.300	50.68	4.96	55.64	74.00	-18.36	peak
5238.000	106.44	5.24	111.68	-	-	peak
5378.400	51.03	5.39	56.42	74.00	-17.58	peak

Test Mode	IEEE 802.11n HT20 High CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



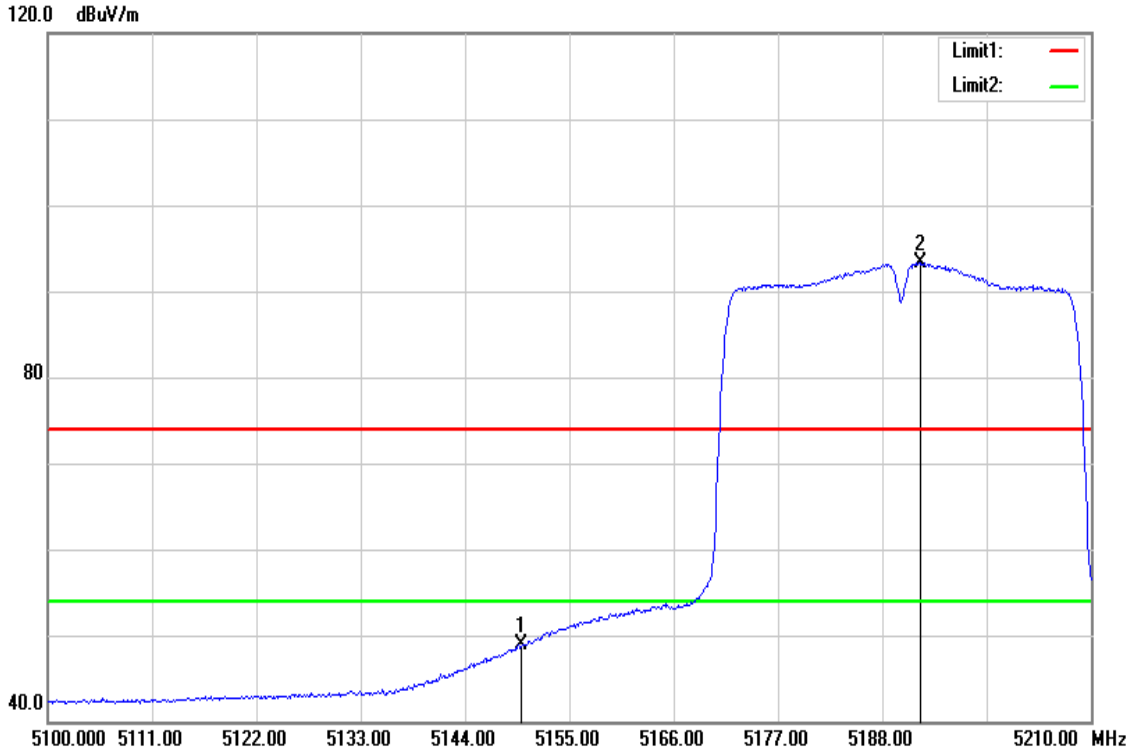
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5136.000	39.36	4.95	44.31	54.00	-9.69	AVG
5241.600	97.08	5.25	102.33	-	-	AVG
5390.100	39.52	5.40	44.92	54.00	-9.08	AVG

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



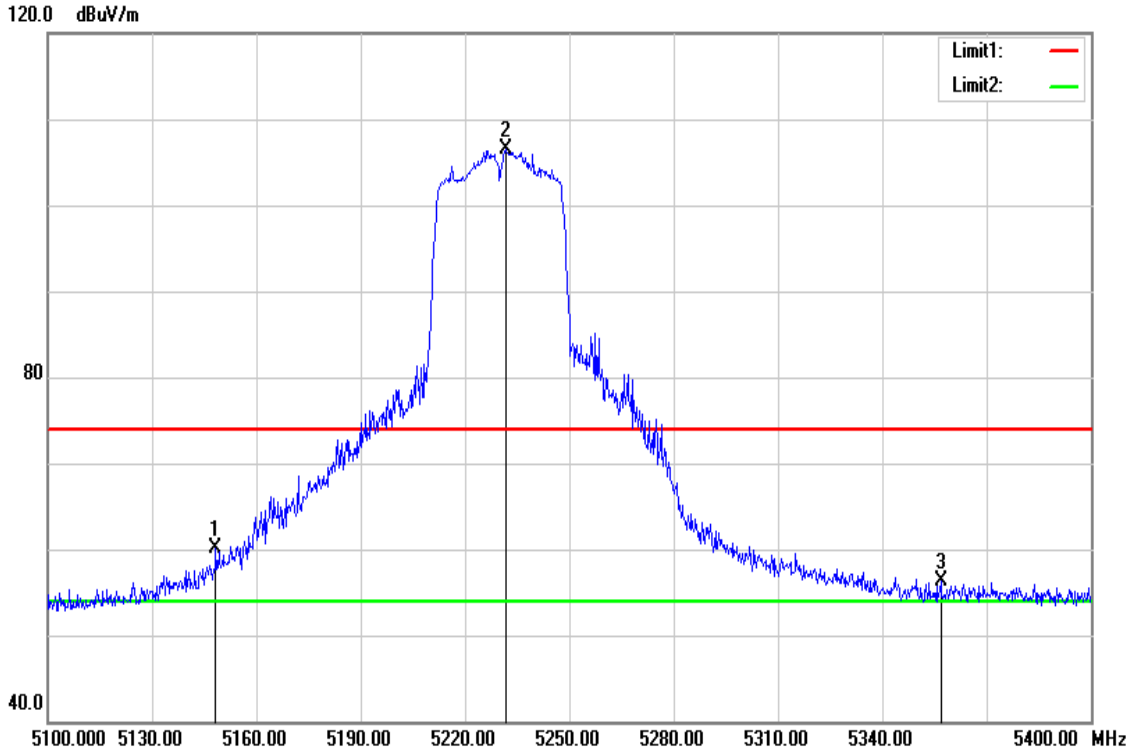
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5146.970	61.04	4.99	66.03	74.00	-7.97	peak
5186.790	98.24	5.15	103.39	-	-	peak

Test Mode	IEEE 802.11n HT40 Low CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



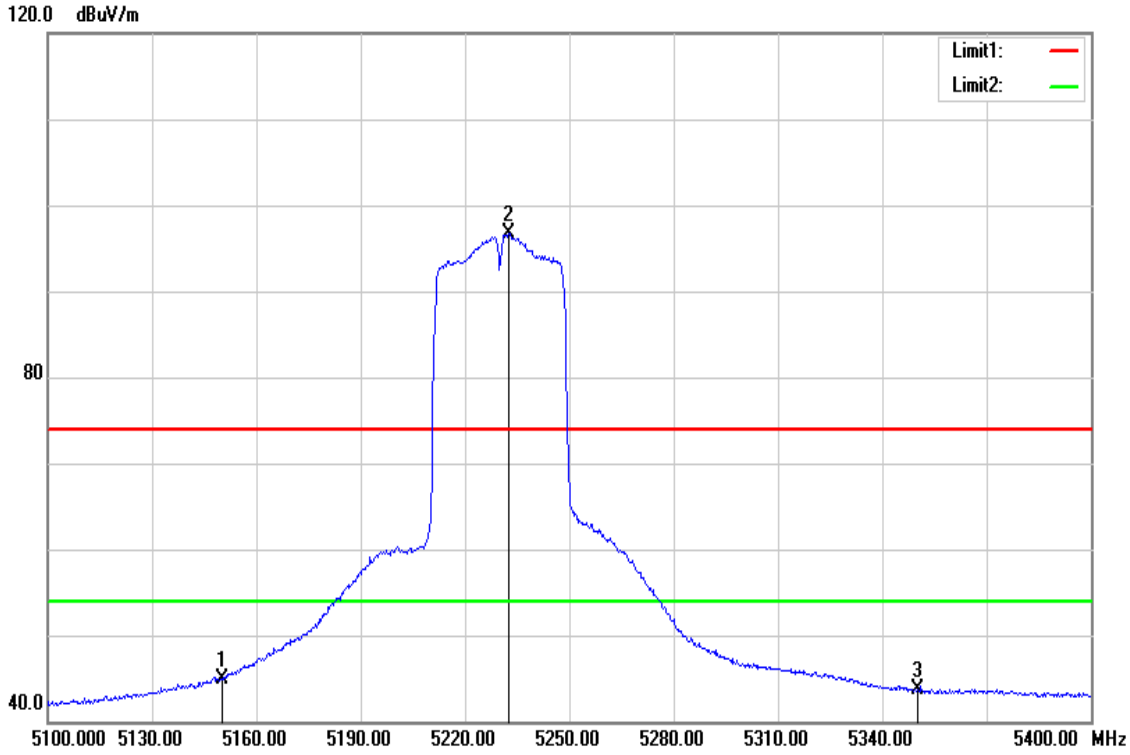
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	43.90	5.00	48.90	54.00	-5.10	AVG
5191.960	88.16	5.17	93.33	-	-	AVG

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



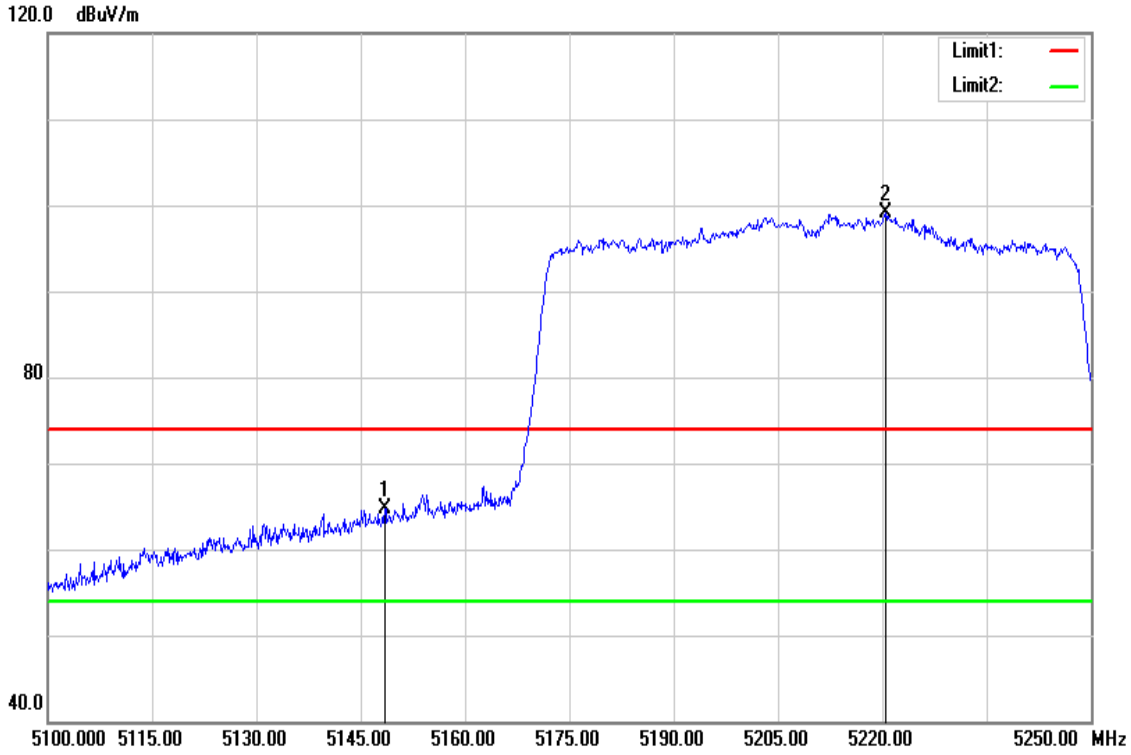
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5148.300	55.06	5.00	60.06	74.00	-13.94	peak
5231.700	101.18	5.23	106.41	-	-	peak
5356.800	50.92	5.36	56.28	74.00	-17.72	peak

Test Mode	IEEE 802.11n HT40 High CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



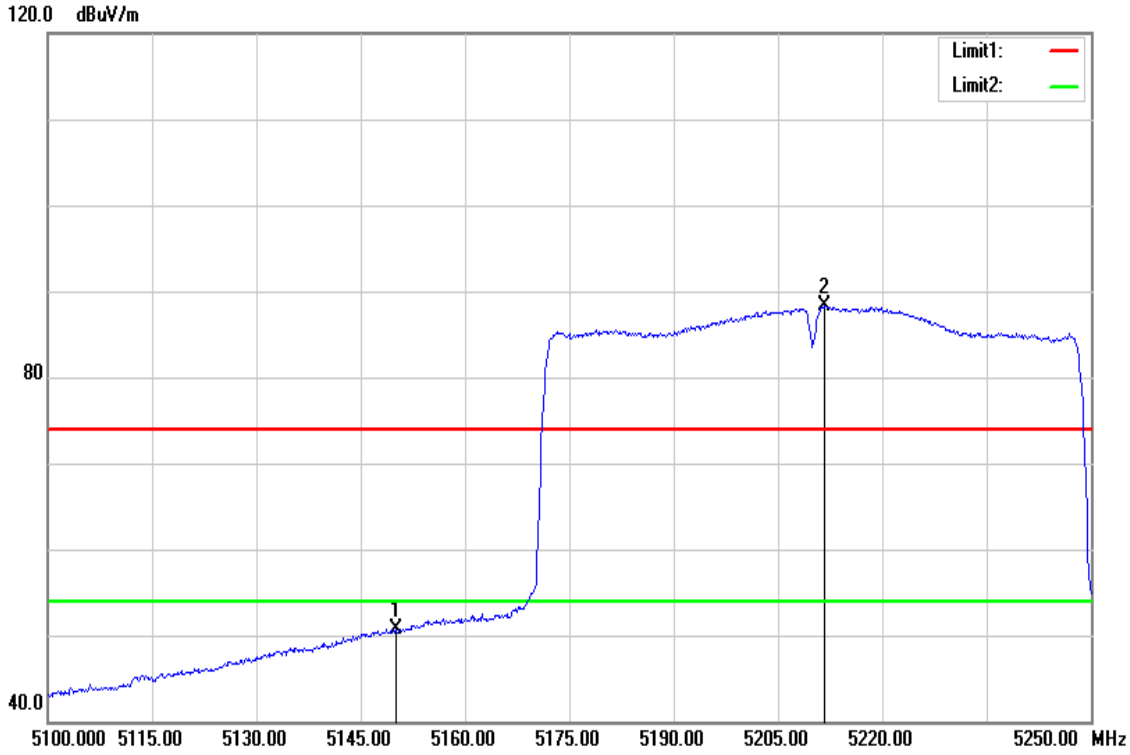
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	39.87	5.00	44.87	54.00	-9.13	AVG
5232.600	91.47	5.24	96.71	-	-	AVG
5350.000	38.31	5.36	43.67	54.00	-10.33	AVG

Test Mode	IEEE 802.11ac VHT80 Mid CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5148.450	59.75	5.00	64.75	74.00	-9.25	peak
5220.450	93.81	5.22	99.03	-	-	peak

Test Mode	IEEE 802.11ac VHT80 Mid CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		

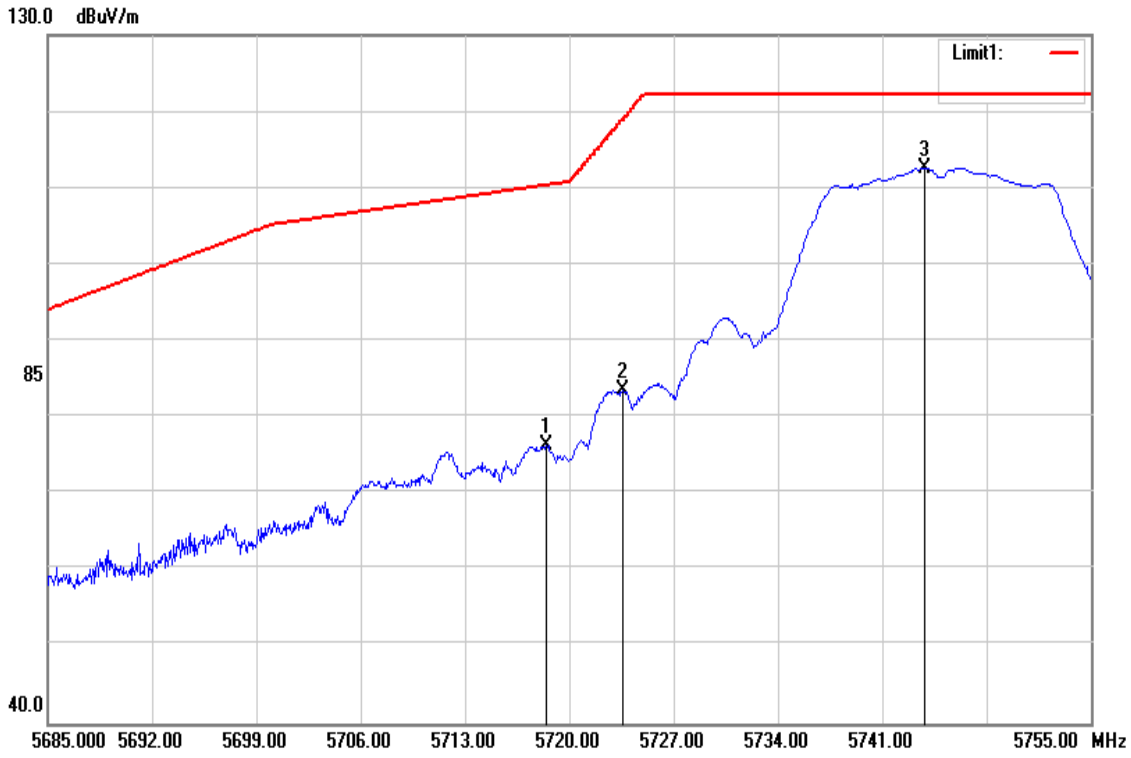


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5150.000	45.66	5.00	50.66	54.00	-3.34	AVG
5211.750	83.05	5.21	88.26	-	-	AVG

Test Data

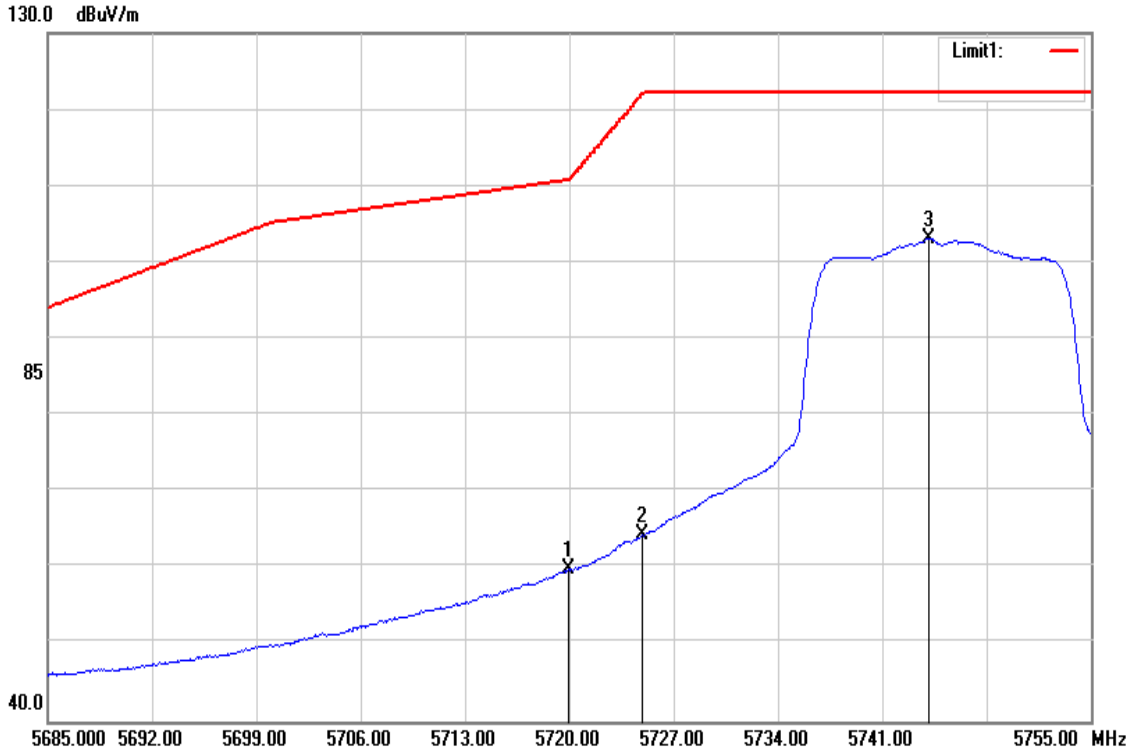
Band Edge Test Data for UNII-3

Test Mode	IEEE 802.11a Low CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



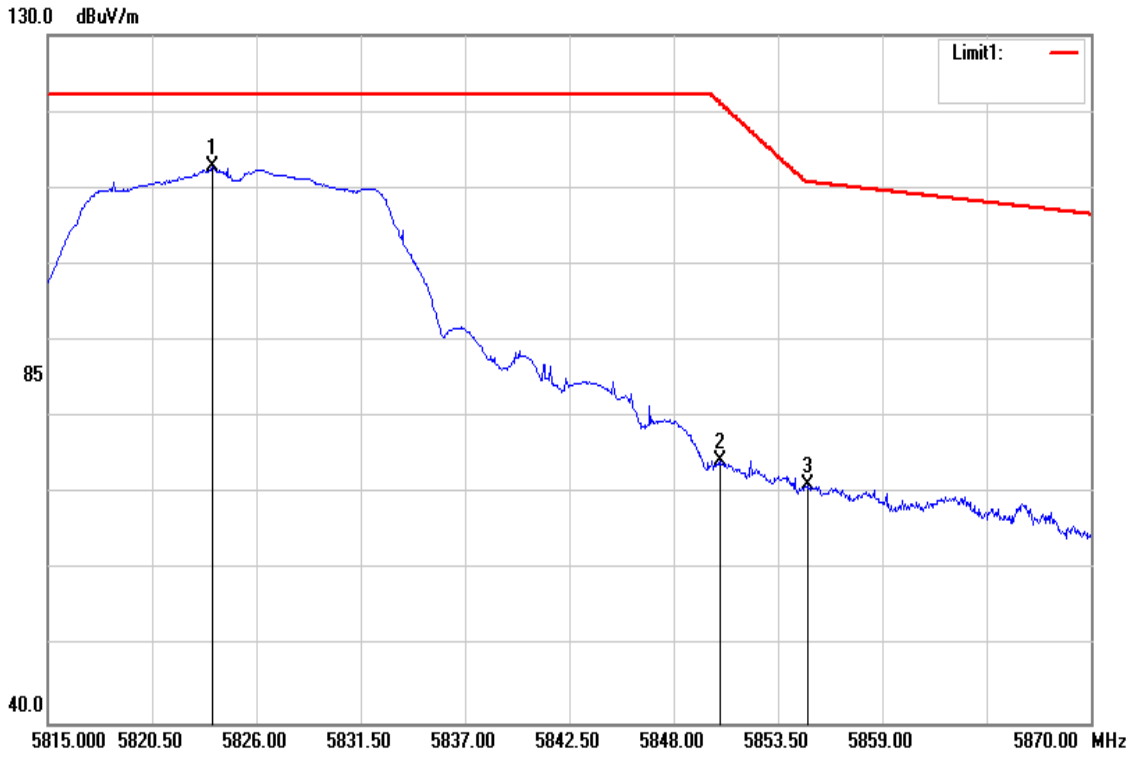
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5718.460	69.66	6.74	76.40	110.37	-33.97	peak
5723.570	76.76	6.75	83.51	118.94	-35.43	peak
5743.800	105.78	6.87	112.65	-	-	peak

Test Mode	IEEE 802.11a Low CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



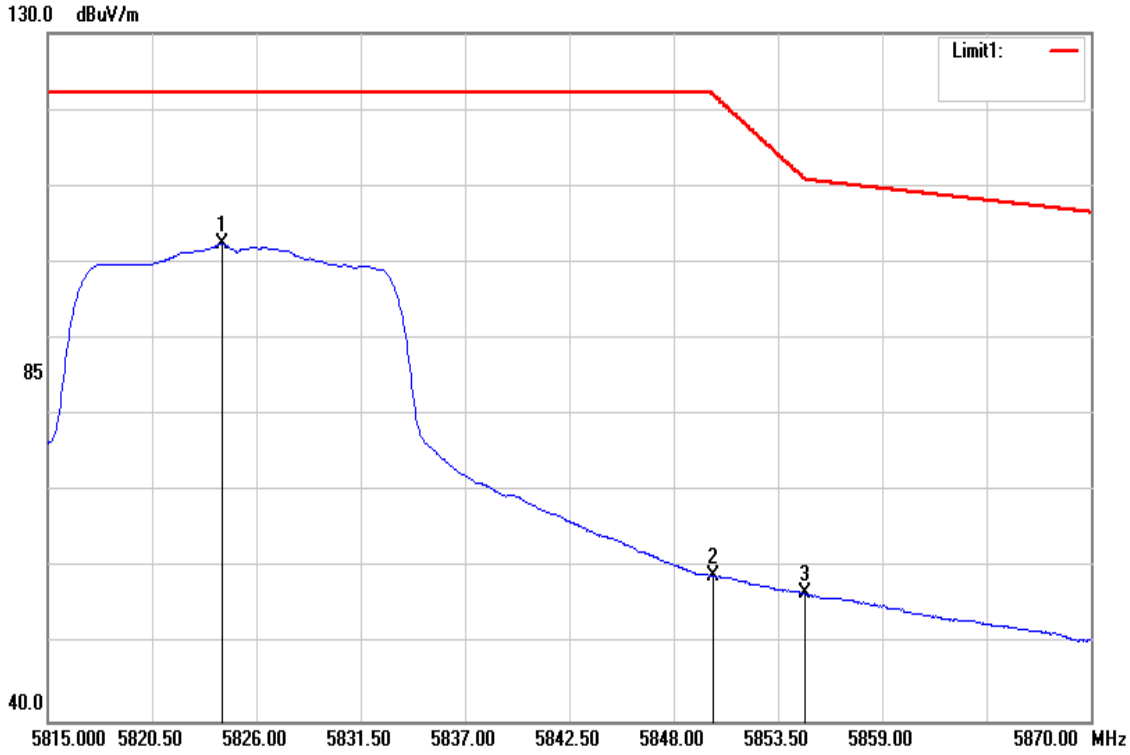
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5719.930	53.06	6.75	59.81	110.78	-50.97	AVG
5724.900	57.55	6.77	64.32	121.97	-57.65	AVG
5744.150	96.33	6.86	103.19	-	-	AVG

Test Mode	IEEE 802.11a High CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



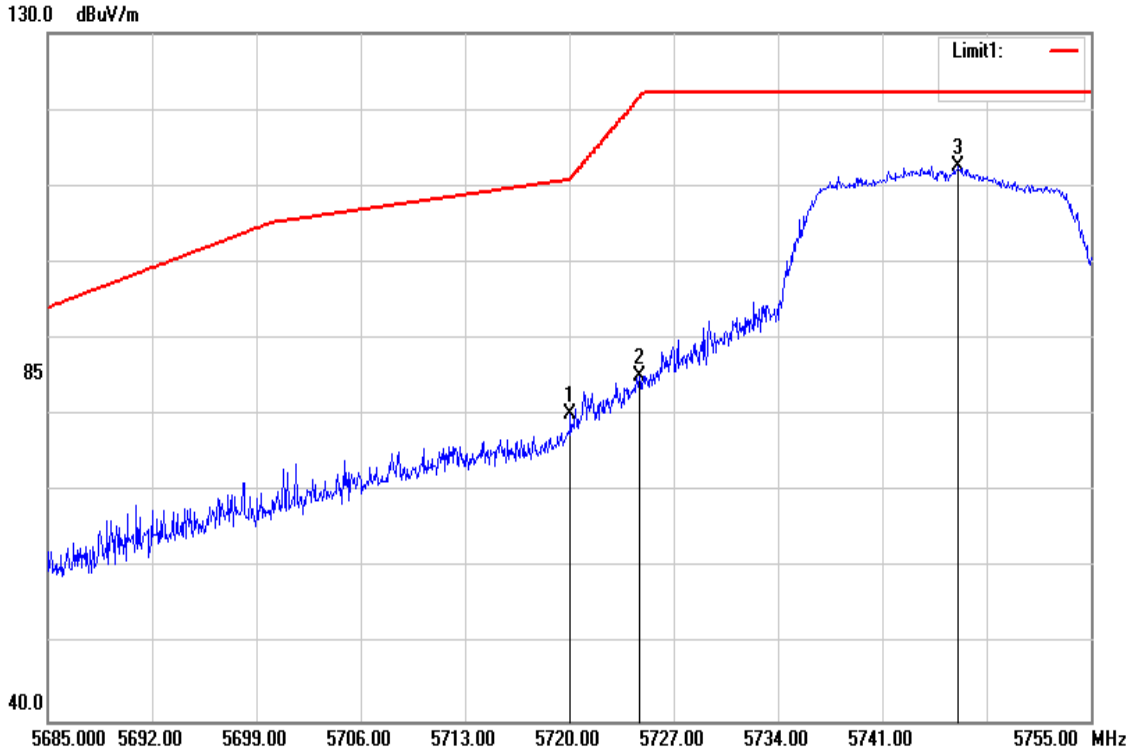
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5823.690	105.58	7.14	112.72	-	-	peak
5850.420	67.12	7.16	74.28	121.24	-46.96	peak
5855.040	64.09	7.16	71.25	110.79	-39.54	peak

Test Mode	IEEE 802.11a High CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



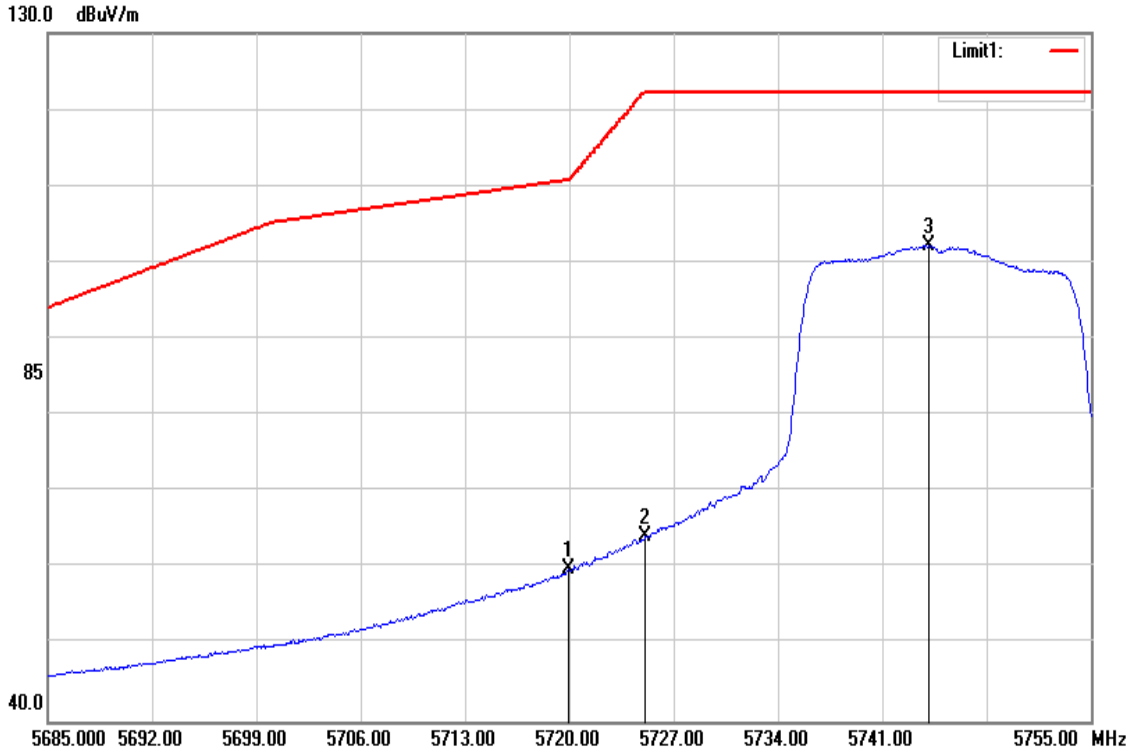
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5824.185	95.31	7.14	102.45	-	-	AVG
5850.090	51.88	7.16	59.04	121.99	-62.95	AVG
5854.930	49.52	7.16	56.68	110.96	-54.28	AVG

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



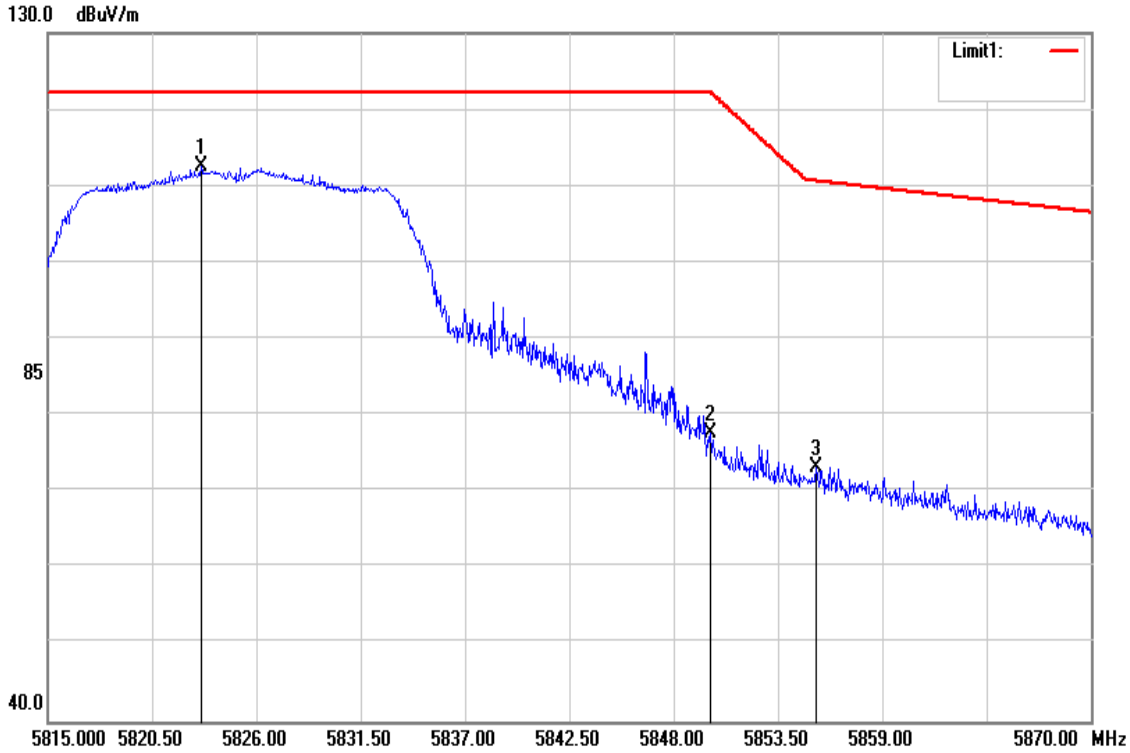
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5720.070	73.31	6.75	80.06	110.96	-30.90	peak
5724.690	78.30	6.77	85.07	121.49	-36.42	peak
5746.110	105.68	6.86	112.54	-	-	peak

Test Mode	IEEE 802.11n HT20 Low CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



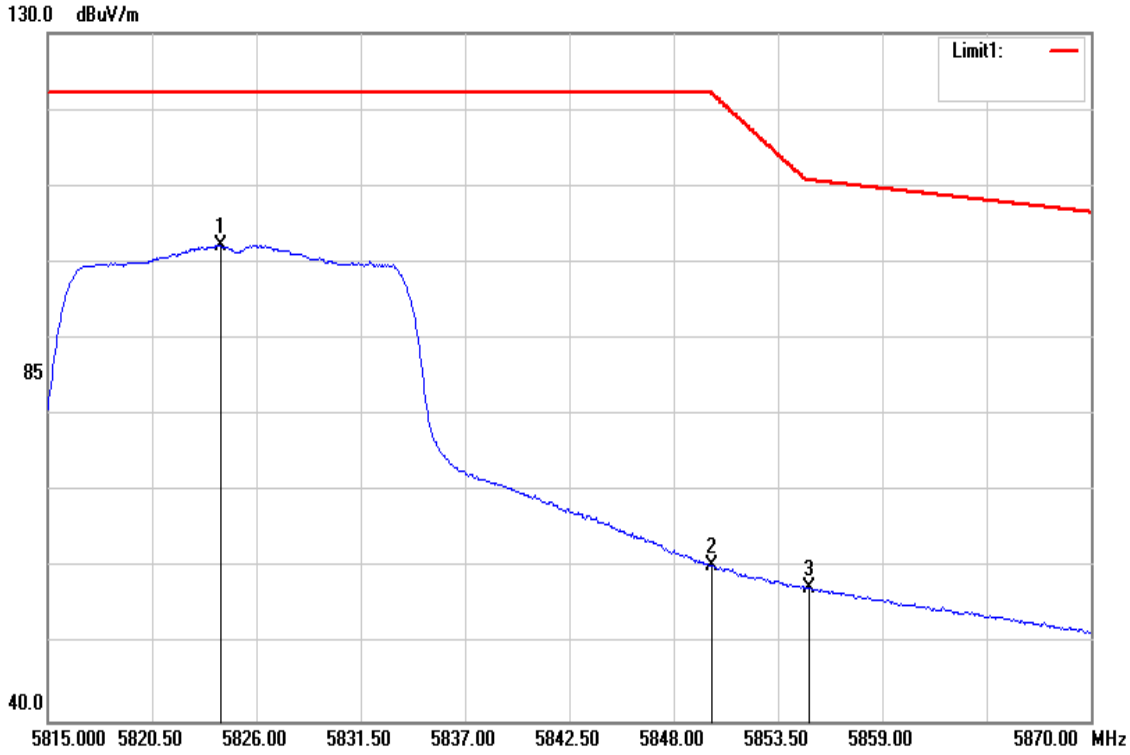
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5719.930	53.13	6.75	59.88	110.78	-50.90	AVG
5725.110	57.37	6.77	64.14	122.20	-58.06	AVG
5744.150	95.33	6.86	102.19	-	-	AVG

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



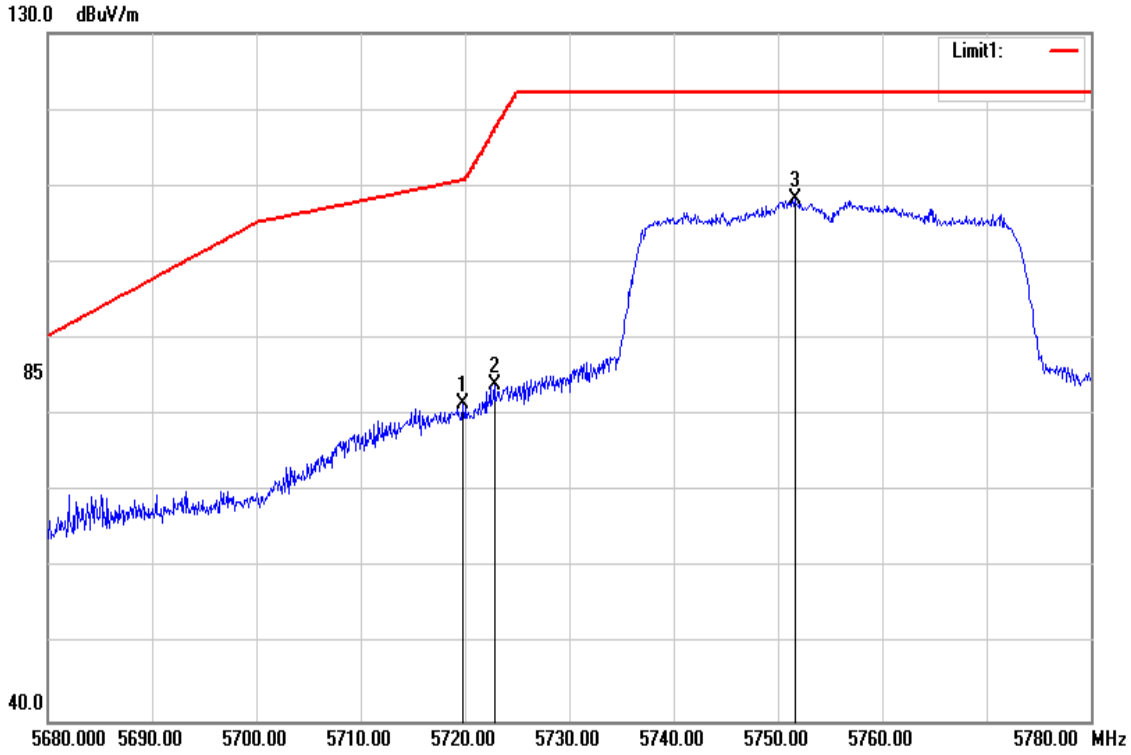
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5823.085	105.41	7.14	112.55	-	-	peak
5849.925	70.56	7.16	77.72	122.20	-44.48	peak
5855.480	65.99	7.16	73.15	110.67	-37.52	peak

Test Mode	IEEE 802.11n HT20 High CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



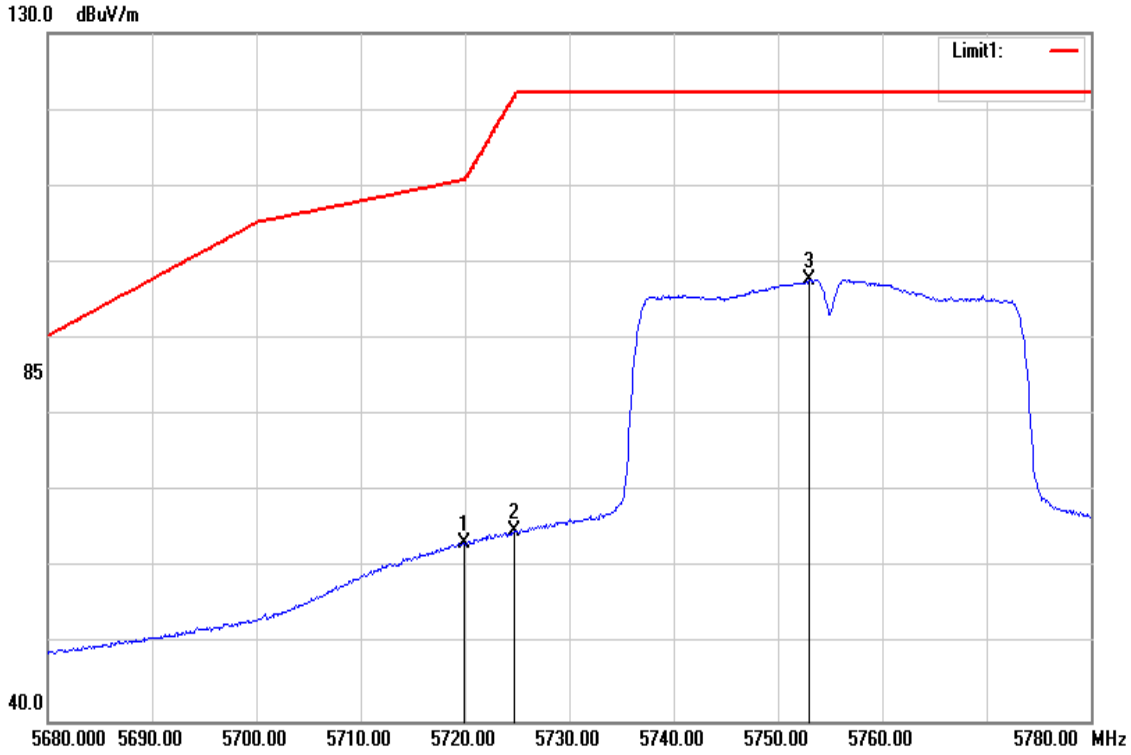
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5824.130	95.08	7.14	102.22	-	-	AVG
5850.035	53.18	7.16	60.34	122.12	-61.78	AVG
5855.150	50.36	7.16	57.52	110.76	-53.24	AVG

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



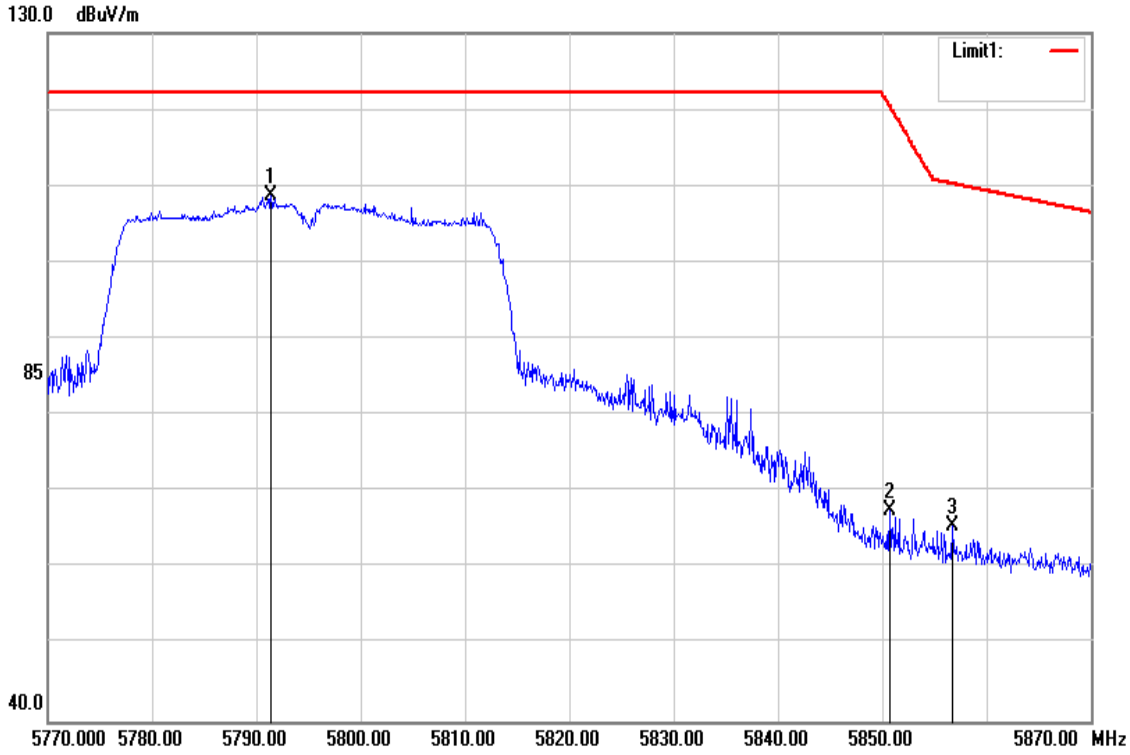
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5719.800	74.77	6.75	81.52	110.74	-29.22	peak
5722.800	77.16	6.75	83.91	117.18	-33.27	peak
5751.600	101.29	6.90	108.19	-	-	peak

Test Mode	IEEE 802.11n HT40 Low CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



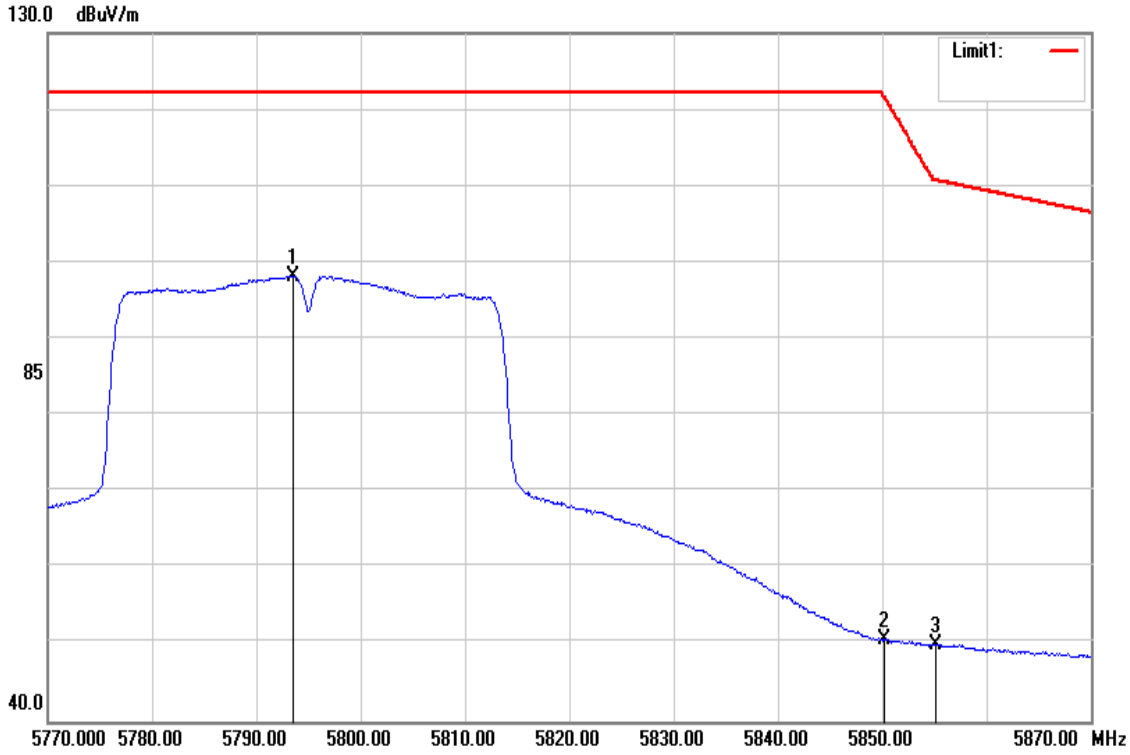
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5719.900	56.65	6.75	63.40	110.77	-47.37	AVG
5724.700	58.02	6.77	64.79	121.52	-56.73	AVG
5753.000	90.86	6.90	97.76	-	-	AVG

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



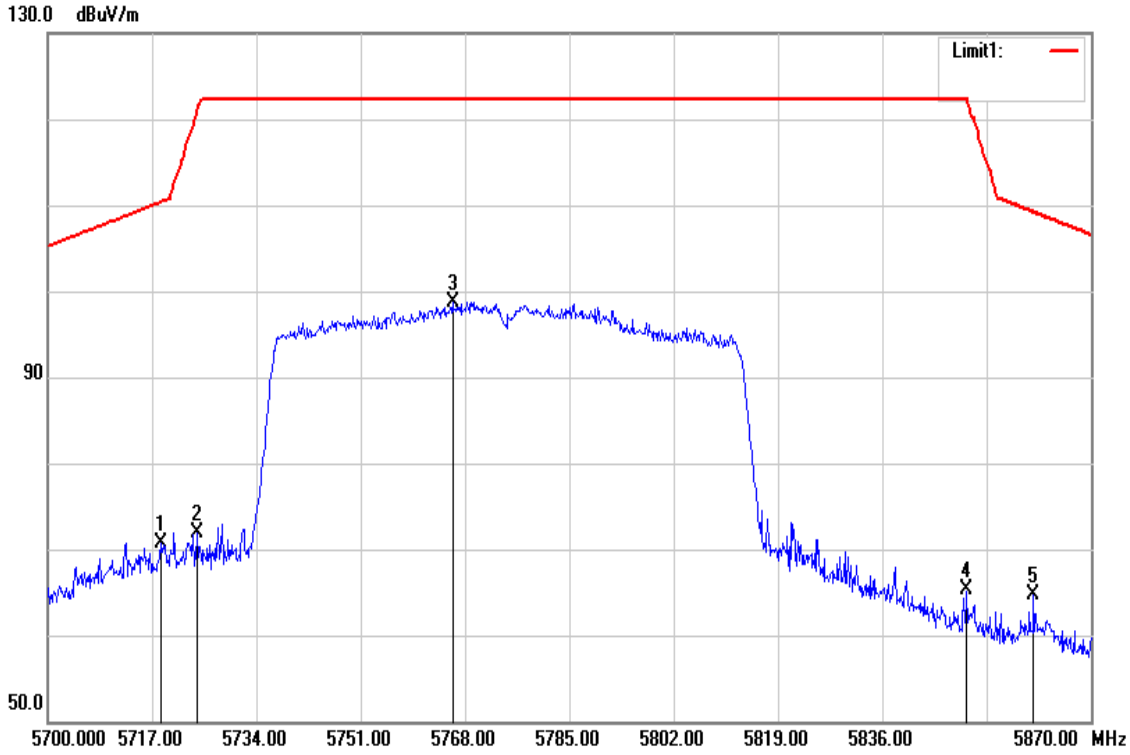
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5791.400	101.67	7.09	108.76	-	-	peak
5850.700	60.39	7.16	67.55	120.60	-53.05	peak
5856.700	58.46	7.16	65.62	110.32	-44.70	peak

Test Mode	IEEE 802.11n HT40 High CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



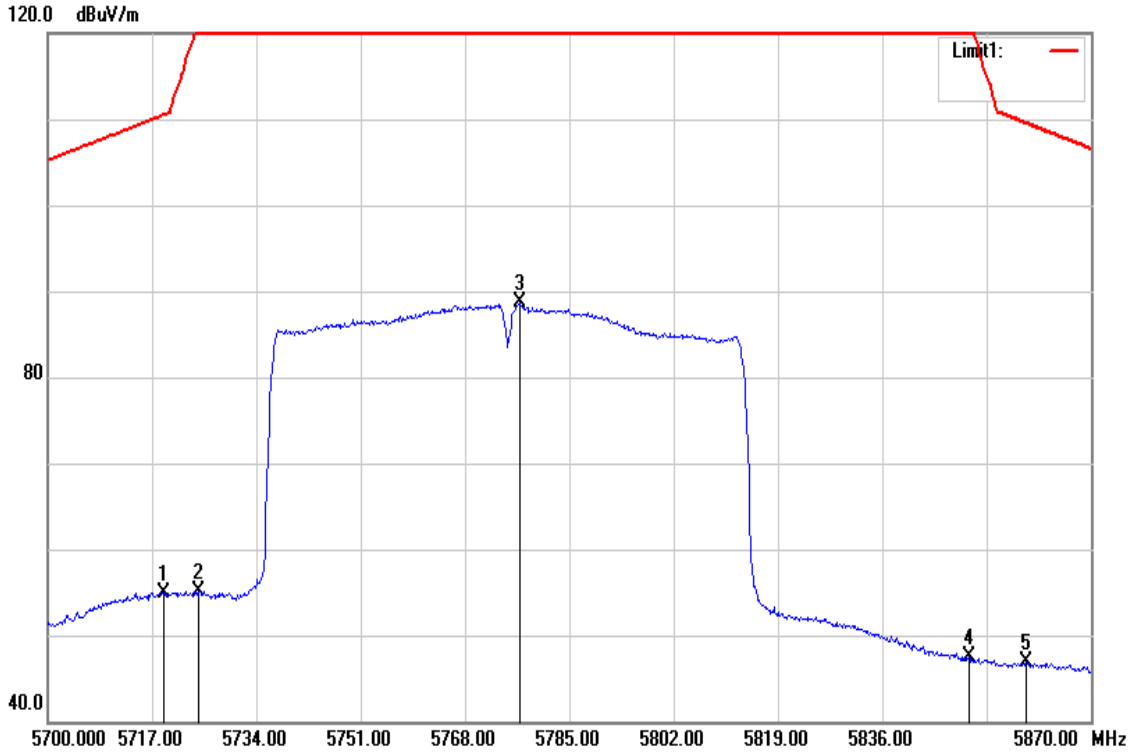
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5793.500	91.16	7.08	98.24	-	-	AVG
5850.200	43.61	7.16	50.77	121.74	-70.97	AVG
5855.100	42.86	7.16	50.02	110.77	-60.75	AVG

Test Mode	IEEE 802.11ac VHT80 Mid CH	Temp/Hum	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5718.360	63.96	6.74	70.70	110.34	-39.64	peak
5724.310	65.20	6.77	71.97	120.63	-48.66	peak
5765.960	91.80	6.96	98.76	-	-	peak
5849.770	58.04	7.16	65.20	122.20	-57.00	peak
5860.650	57.61	7.17	64.78	109.22	-44.44	peak

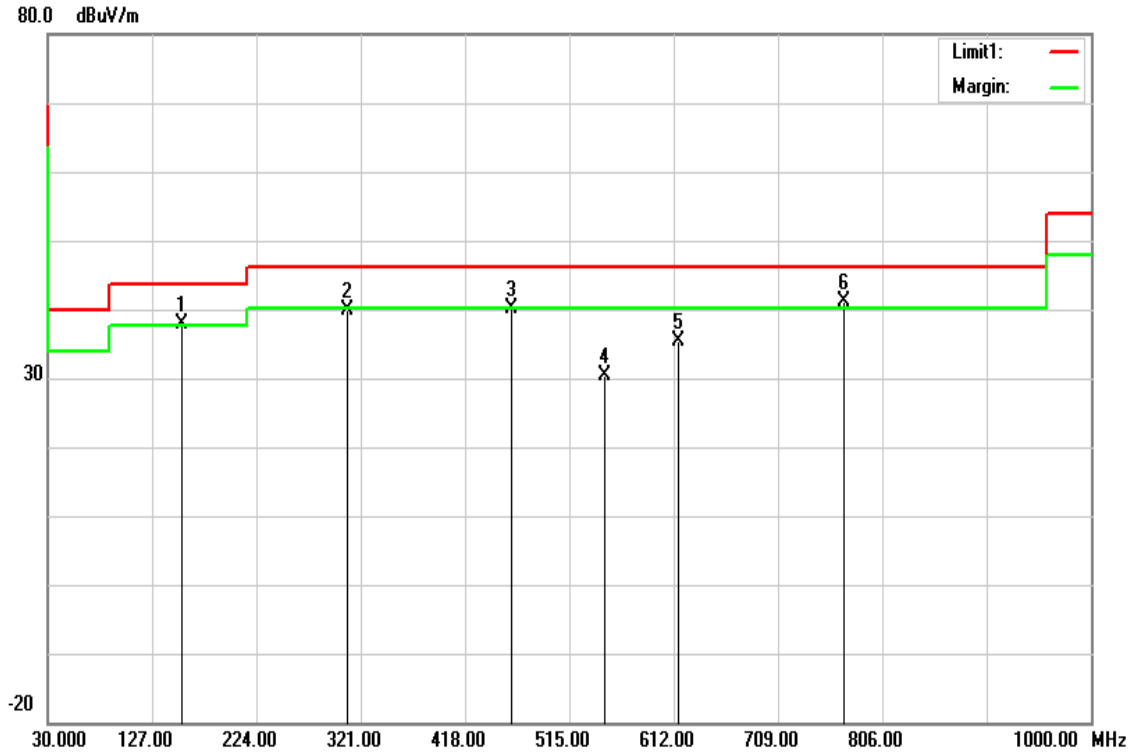
Test Mode	IEEE 802.11ac VHT80 Mid CH	Temperature	23.5(℃)/ 36%RH
Test Item	Band Edge	Test Date	August 27, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



Frequency (MHz	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5718.870	48.20	6.75	54.95	110.48	-55.53	AVG
5724.650	48.36	6.77	55.13	121.40	-66.27	AVG
5776.840	81.60	7.02	88.62	-	-	AVG
5850.110	40.37	7.16	47.53	121.95	-74.42	AVG
5859.460	39.75	7.16	46.91	109.55	-62.64	AVG

Below 1G Test Data

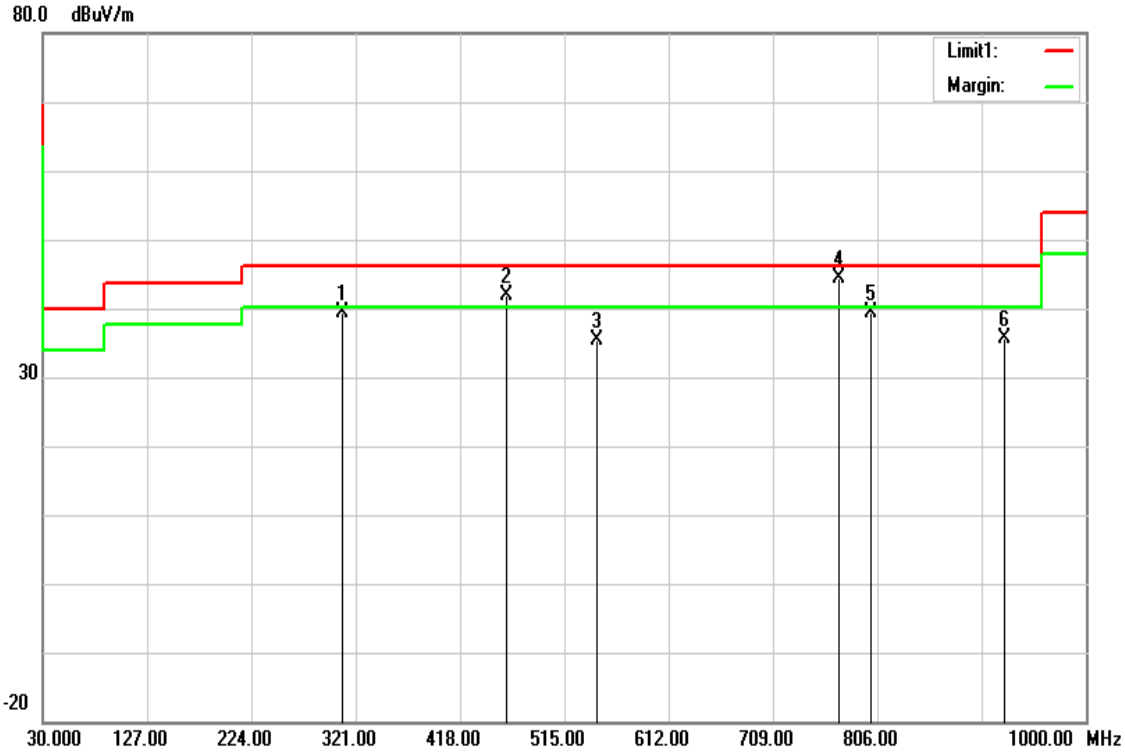
Test Mode	Mode 1	Temp/Hum	22.9(℃)/ 38%RH
Test Item	30MHz-1GHz	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Quasi-peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
154.1600	47.33	-9.38	37.95	43.52	-5.57	peak
308.3900	47.20	-7.25	39.95	46.02	-6.07	peak
461.6500	43.19	-2.95	40.24	46.02	-5.78	QP
547.9800	31.76	-1.44	30.32	46.02	-15.70	peak
615.8800	35.59	-0.16	35.43	46.02	-10.59	peak
770.1100	38.74	2.39	41.13	46.02	-4.89	QP

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

Test Mode	Mode 1	Temp/Hum	22.9(℃)/ 38%RH
Test Item	30MHz-1GHz	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Quasi-peak		

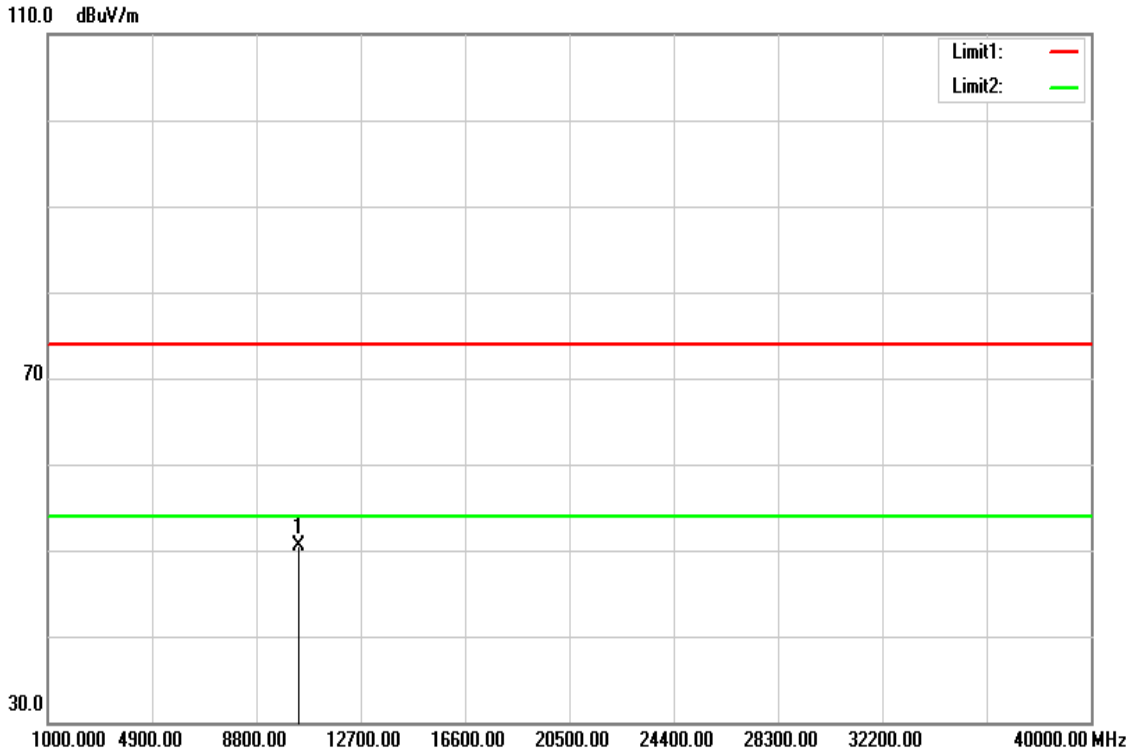


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB	Remark
308.3900	46.64	-7.25	39.39	46.02	-6.63	peak
461.6500	44.79	-2.95	41.84	46.02	-4.18	QP
545.0700	36.99	-1.49	35.50	46.02	-10.52	peak
770.1100	41.96	2.39	44.35	46.02	-1.67	QP
800.1800	36.22	3.04	39.26	46.02	-6.76	peak
924.3400	30.78	4.91	35.69	46.02	-10.33	peak

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

Above 1G Test Data for UNII-1

Test Mode	IEEE 802.11a Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

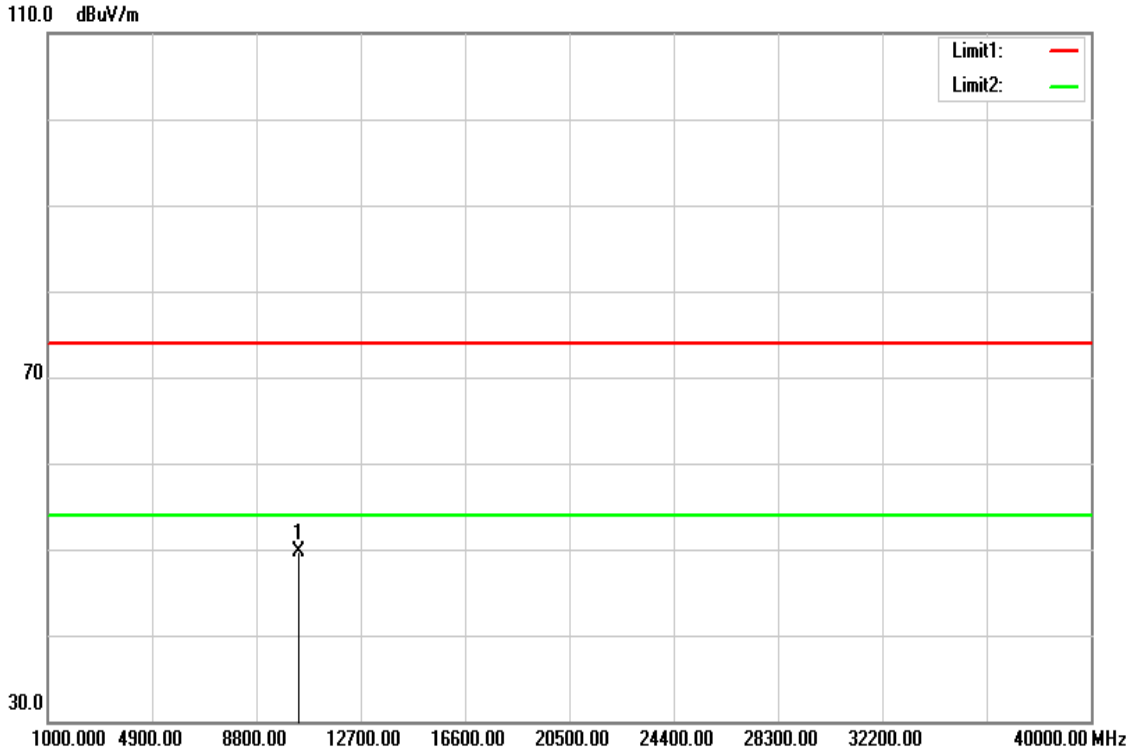


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10360.000	35.72	14.75	50.47	74.00	-23.53	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

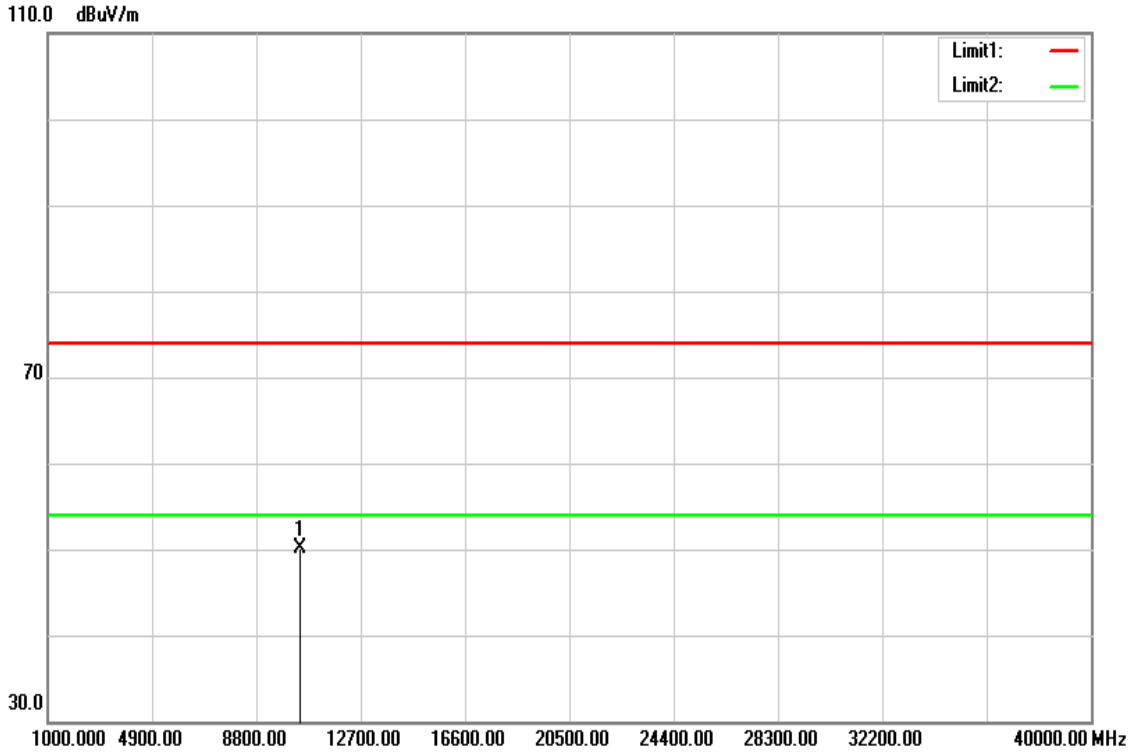


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10360.000	34.97	14.75	49.72	74.00	-24.28	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

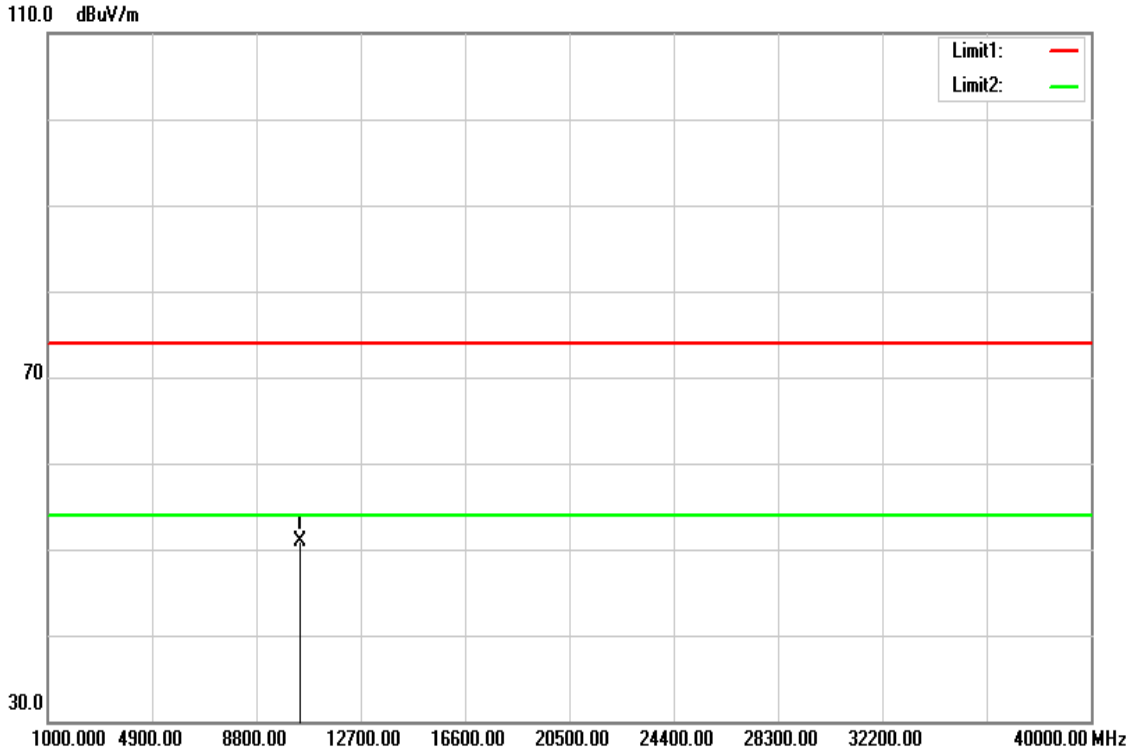


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10440.000	35.18	15.00	50.18	74.00	-23.82	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

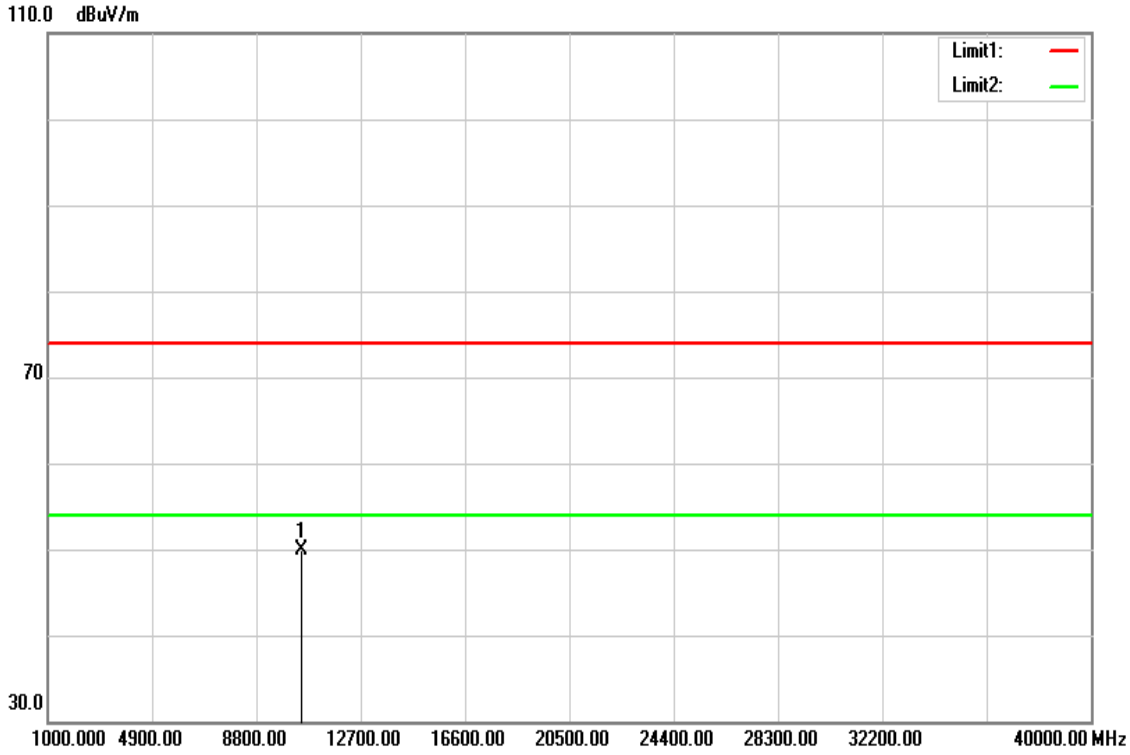


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10440.000	35.87	15.00	50.87	74.00	-23.13	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

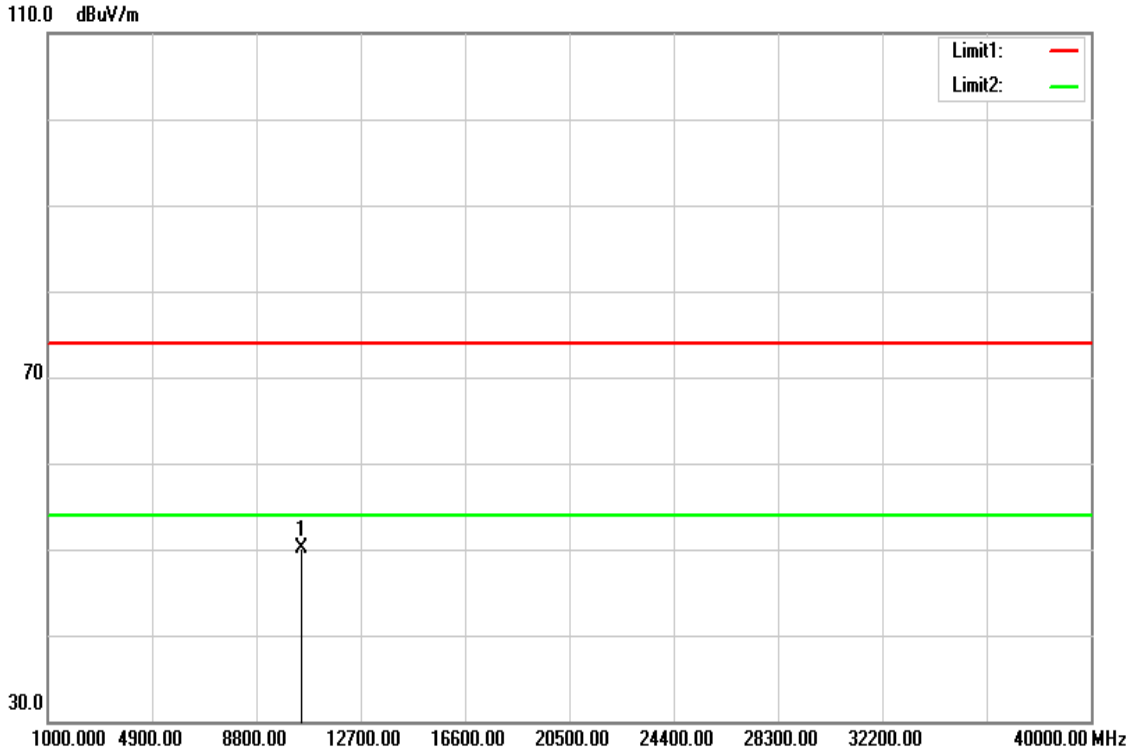


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10480.000	34.91	15.06	49.97	74.00	-24.03	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

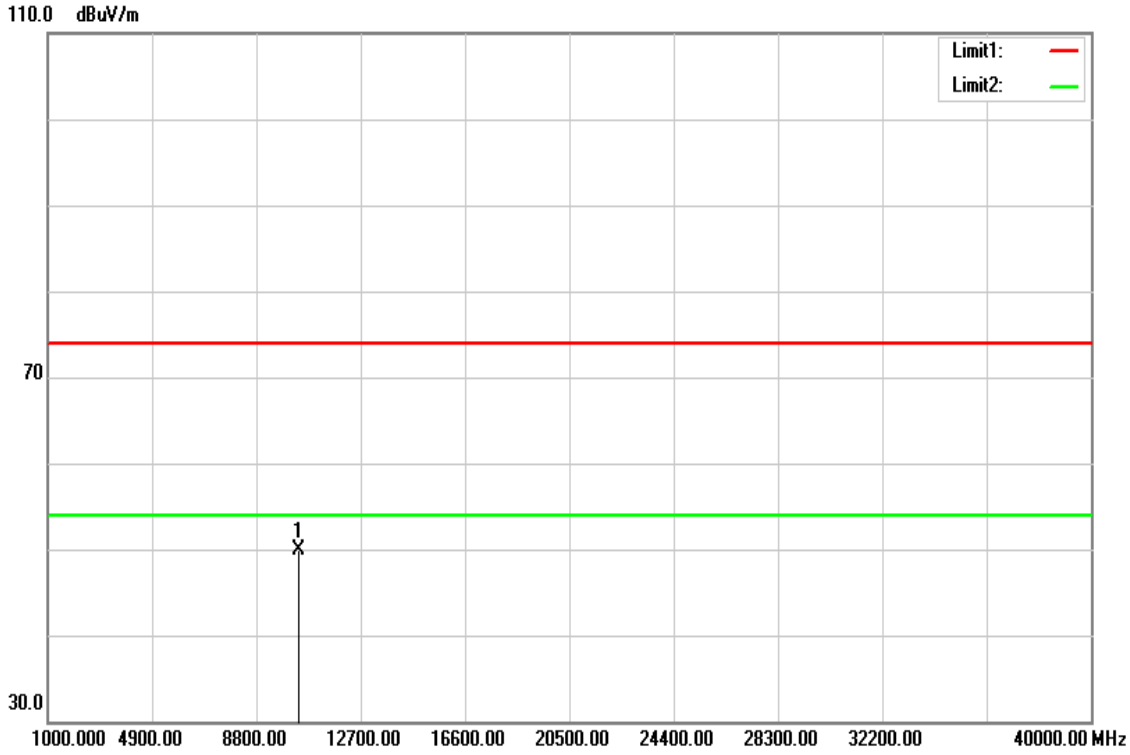


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10480.000	35.06	15.06	50.12	74.00	-23.88	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

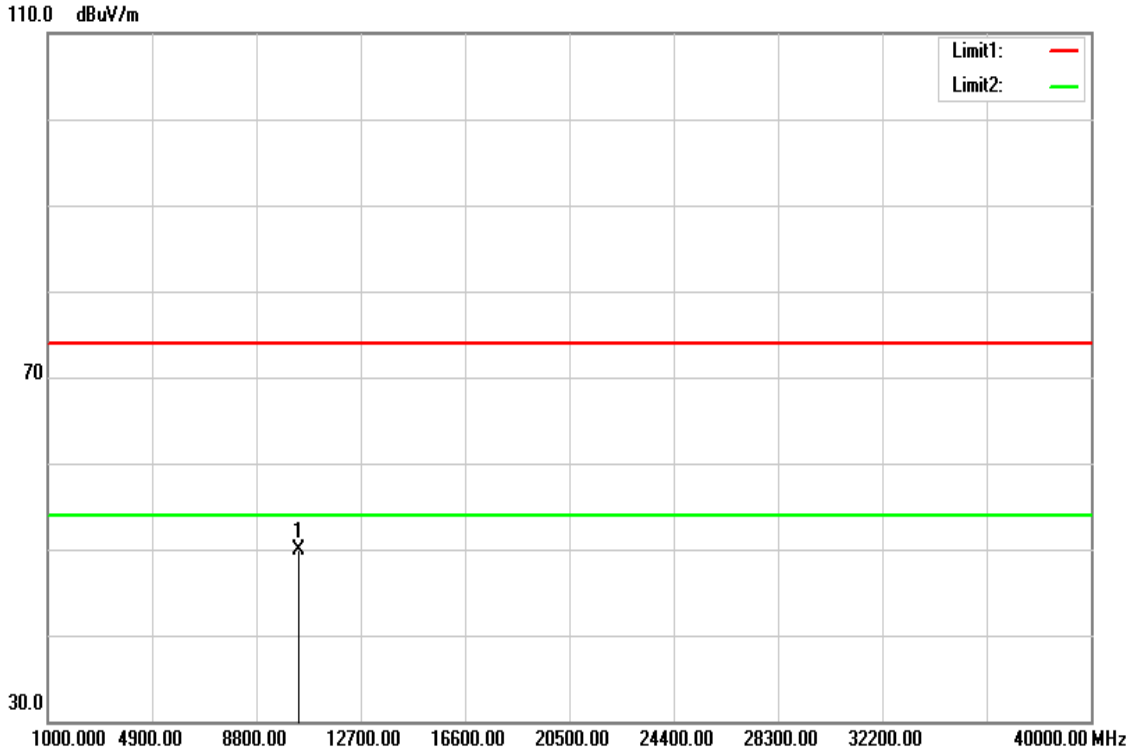


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10360.000	35.14	14.75	49.89	74.00	-24.11	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

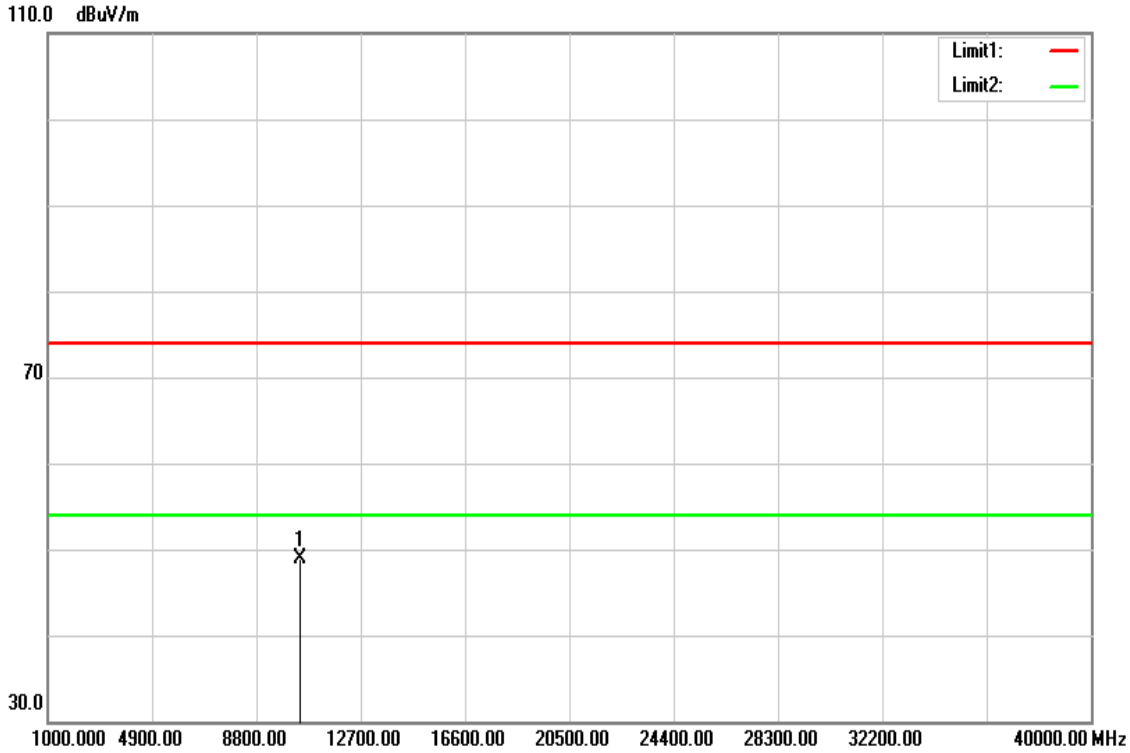


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10360.000	35.24	14.75	49.99	74.00	-24.01	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

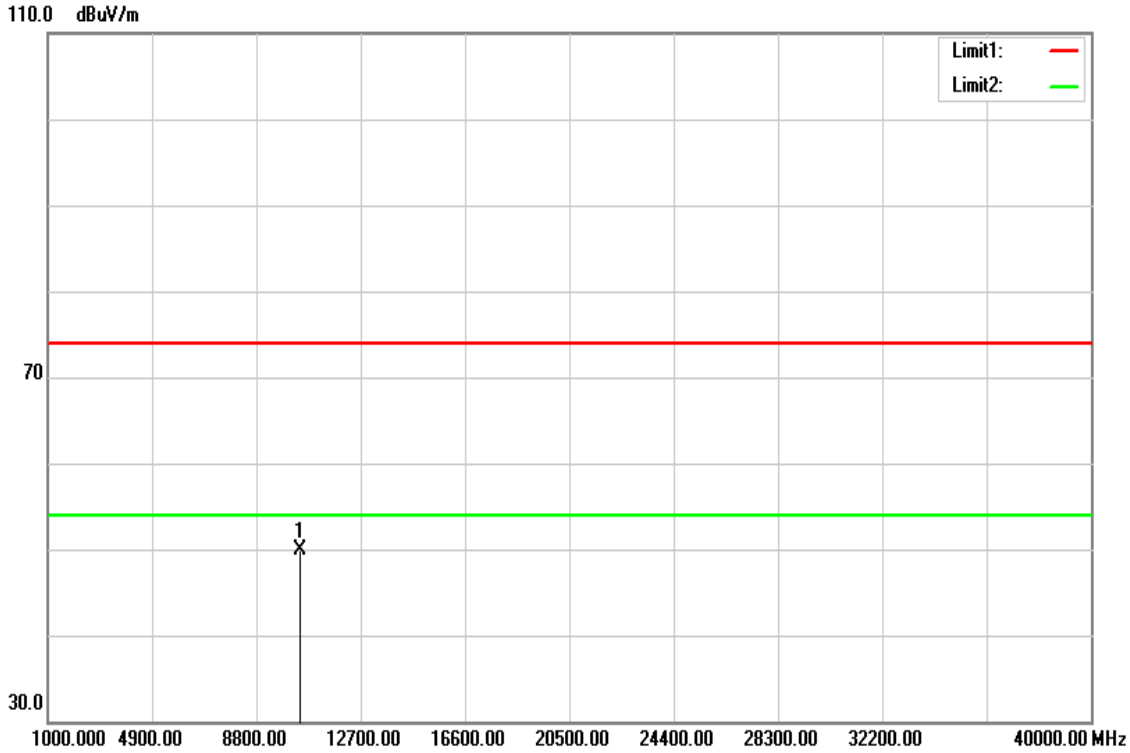


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10440.000	33.94	15.00	48.94	74.00	-25.06	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

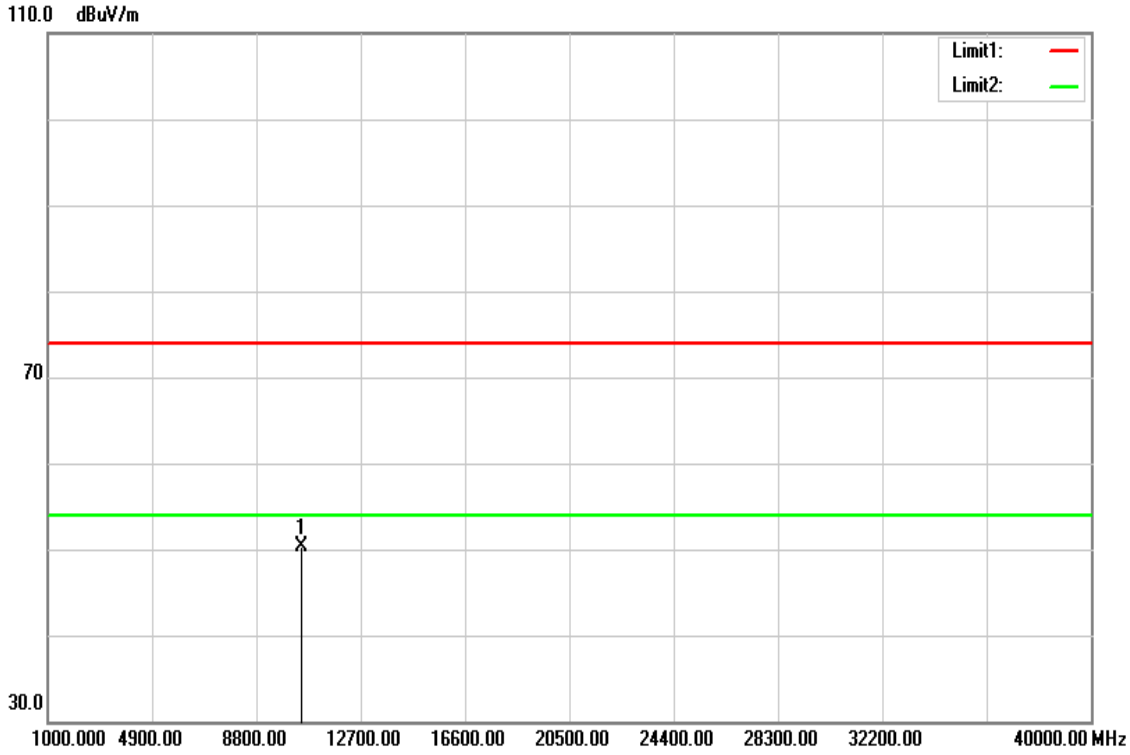


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10440.000	34.83	15.00	49.83	74.00	-24.17	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

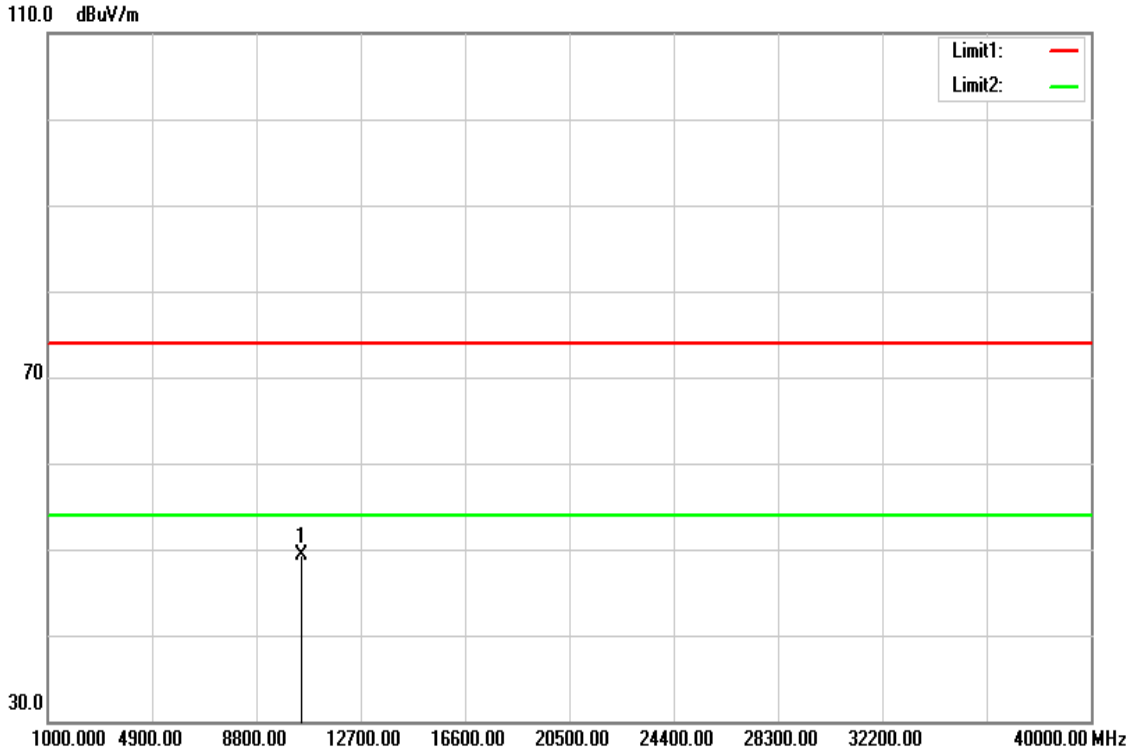


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10480.000	35.28	15.06	50.34	74.00	-23.66	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

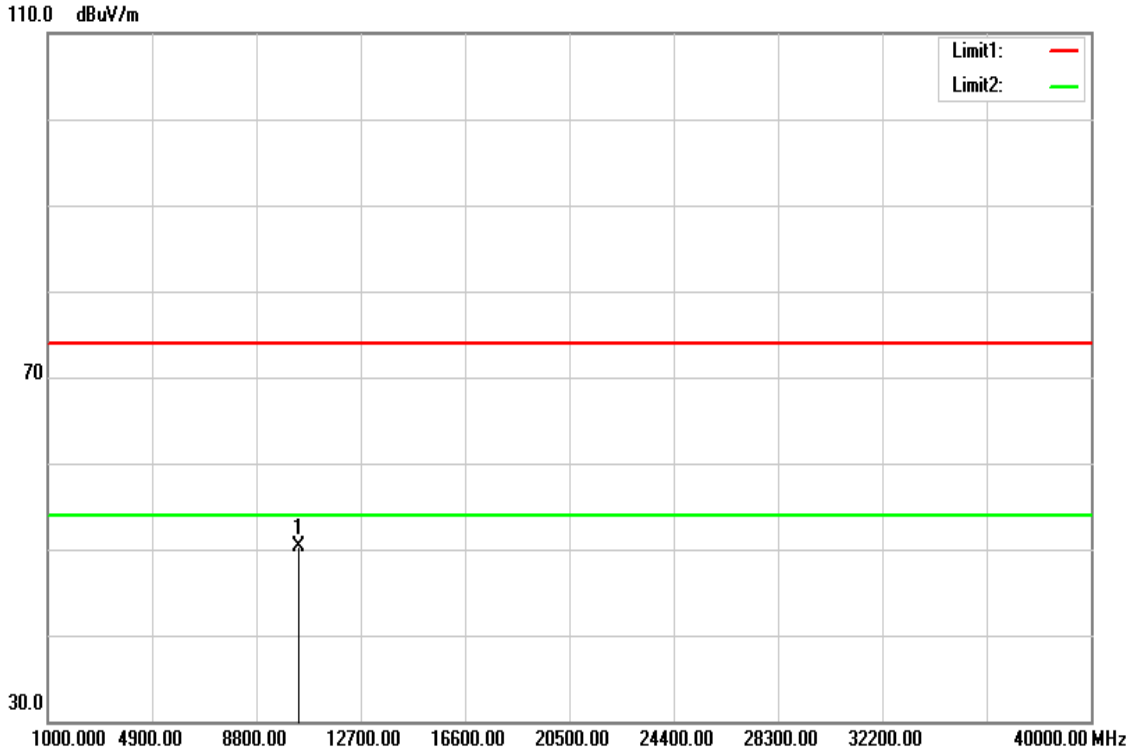


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10480.000	34.22	15.06	49.28	74.00	-24.72	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

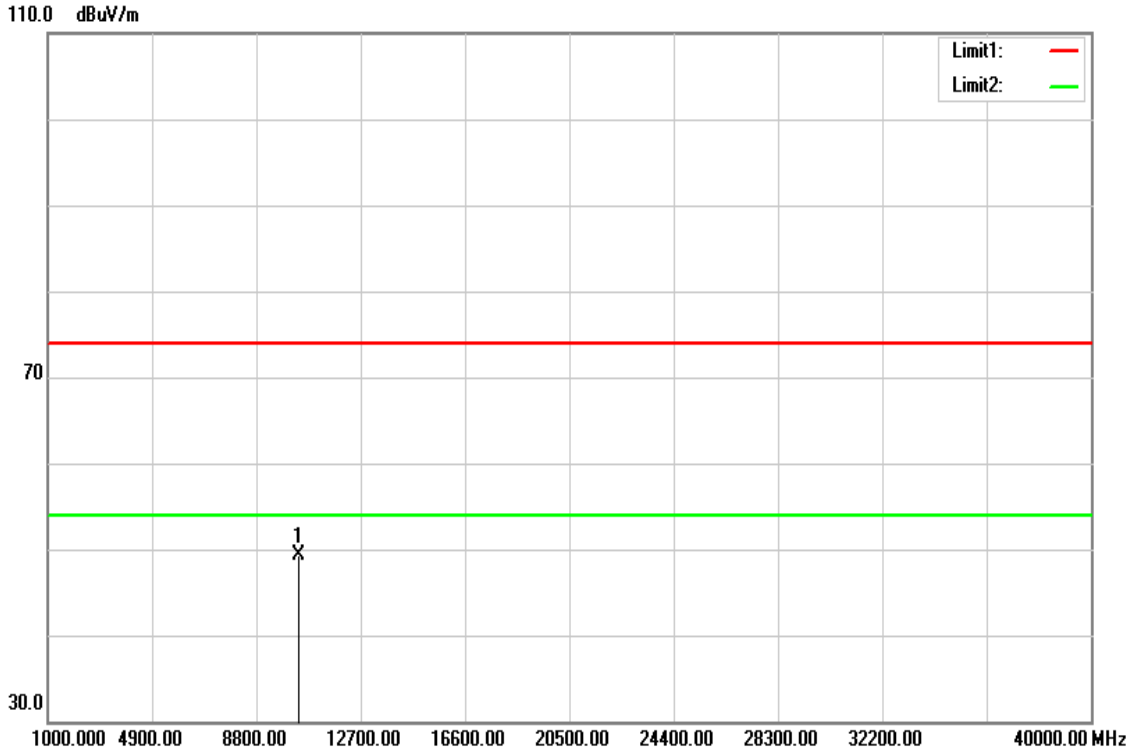


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10380.000	35.51	14.83	50.34	74.00	-23.66	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

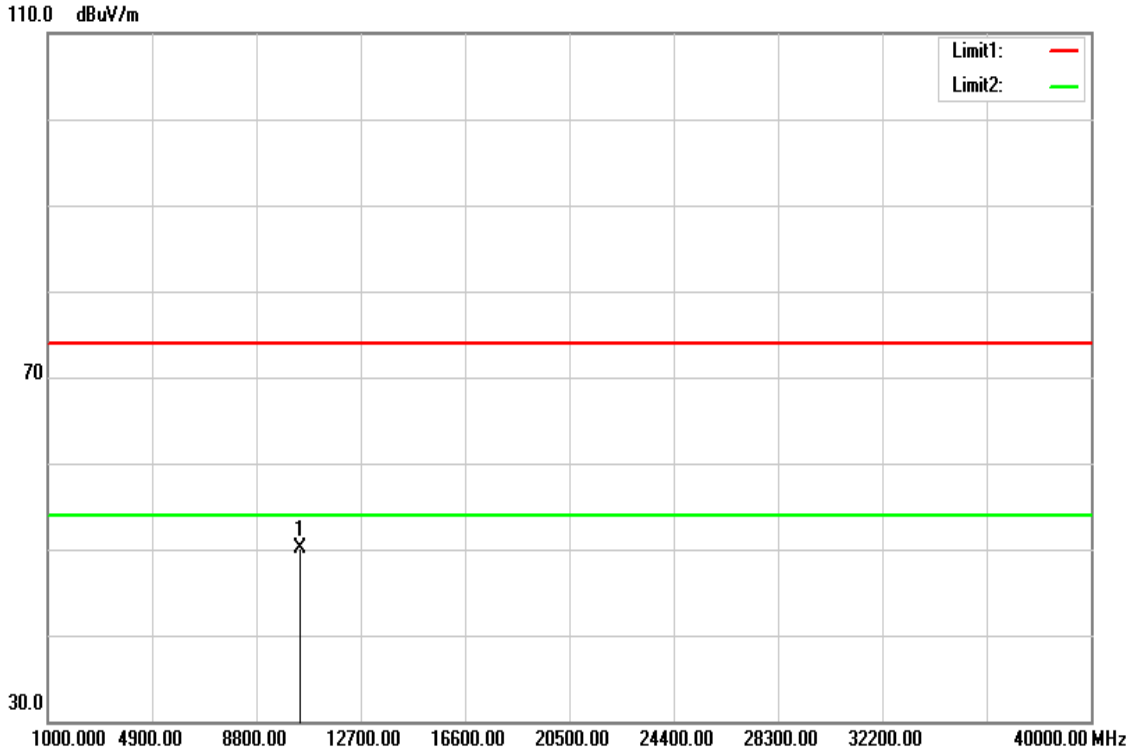


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10380.000	34.46	14.83	49.29	74.00	-24.71	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

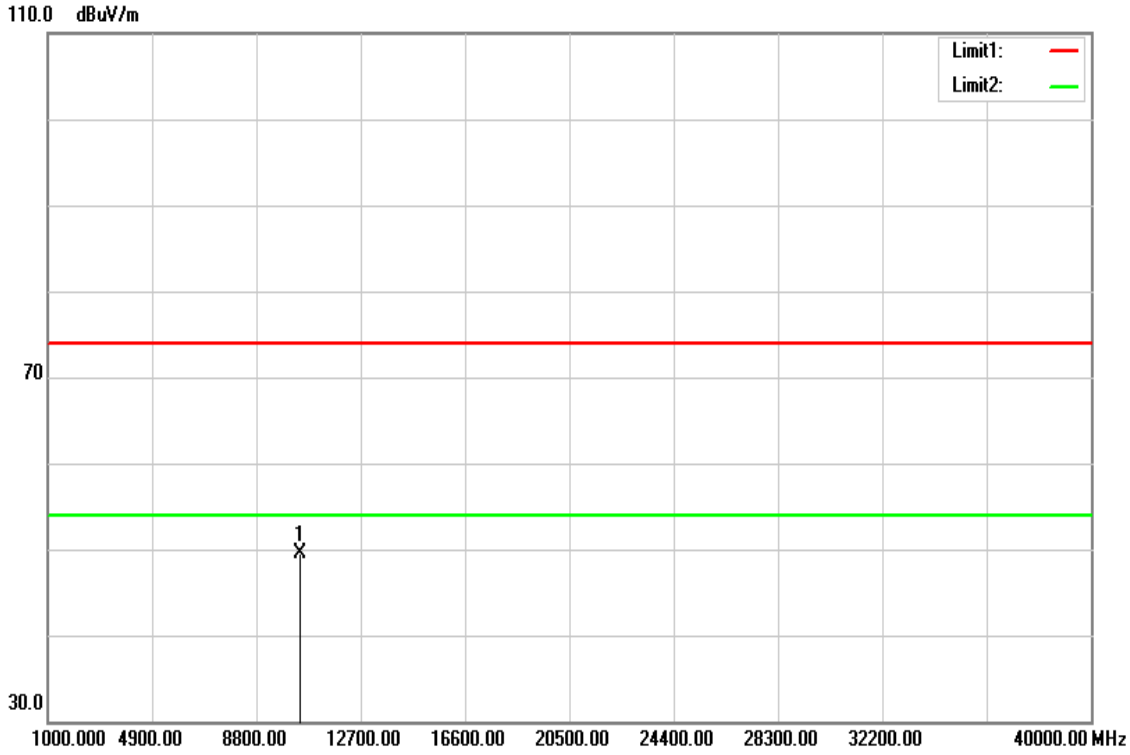


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10460.000	35.06	15.02	50.08	74.00	-23.92	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

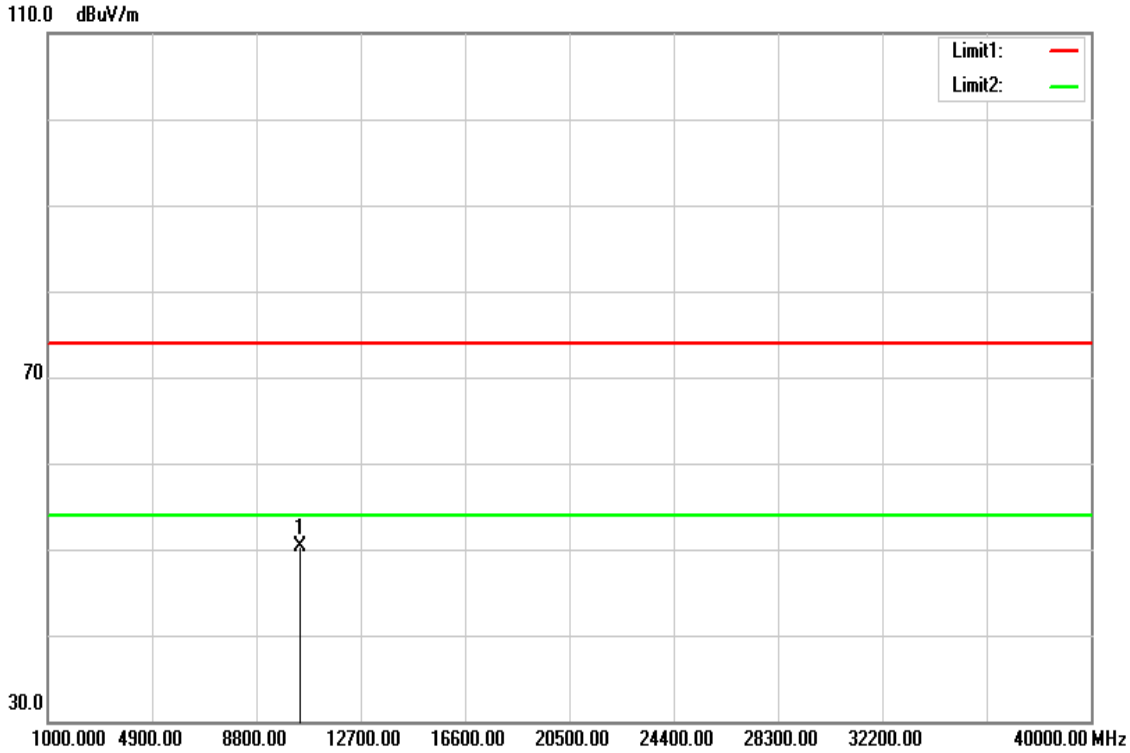


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10460.000	34.42	15.02	49.44	74.00	-24.56	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11ac VHT80 Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

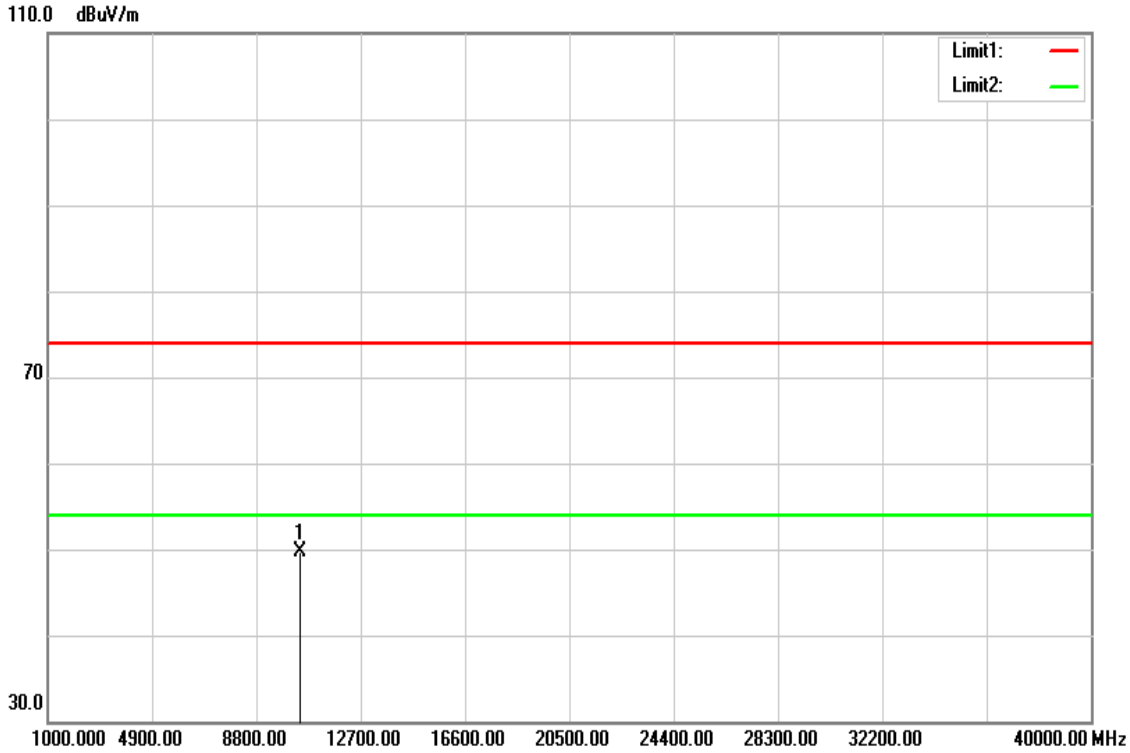


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10420.000	35.40	14.96	50.36	74.00	-23.64	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11ac VHT80 Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



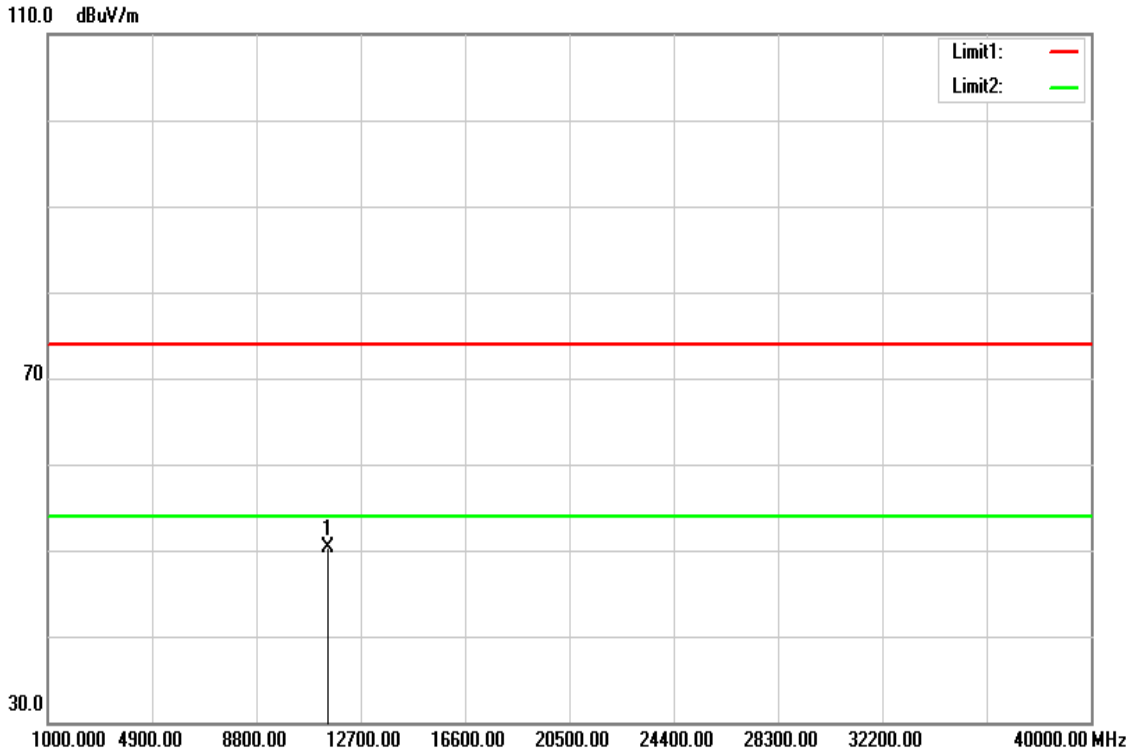
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
10420.000	34.80	14.96	49.76	74.00	-24.24	peak
N/A						

Remark:

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

Above 1G Test Data for UNII-3

Test Mode	IEEE 802.11a Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

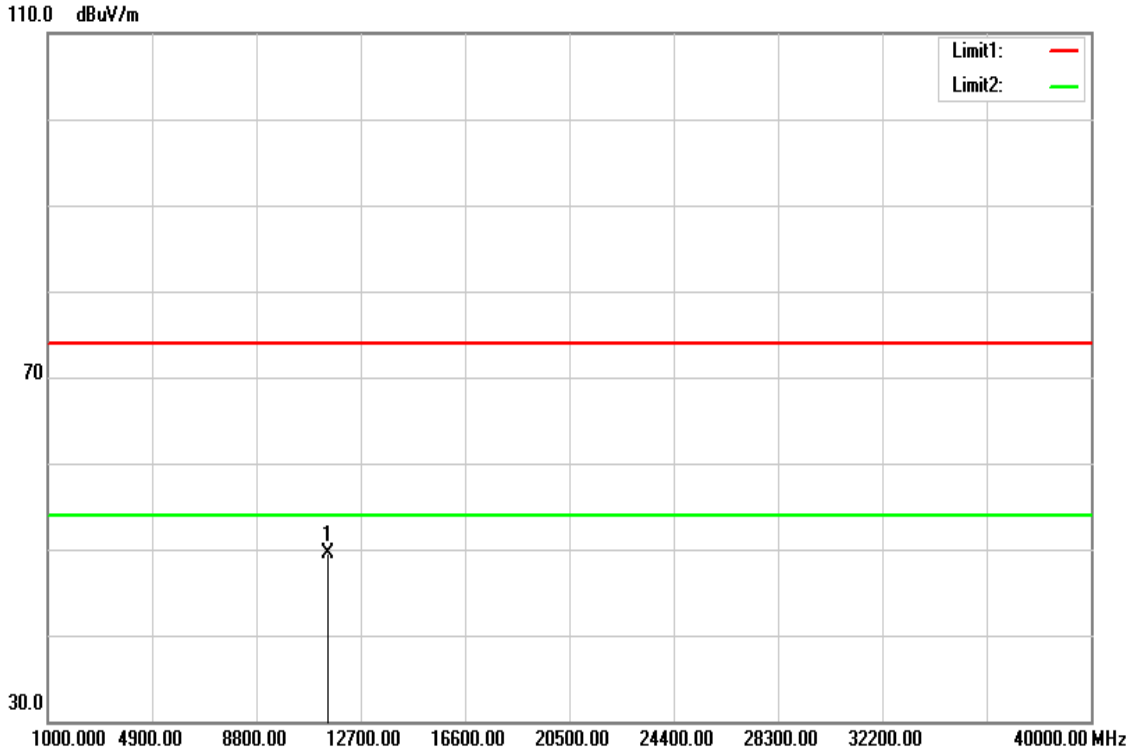


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	34.76	15.62	50.38	74.00	-23.62	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

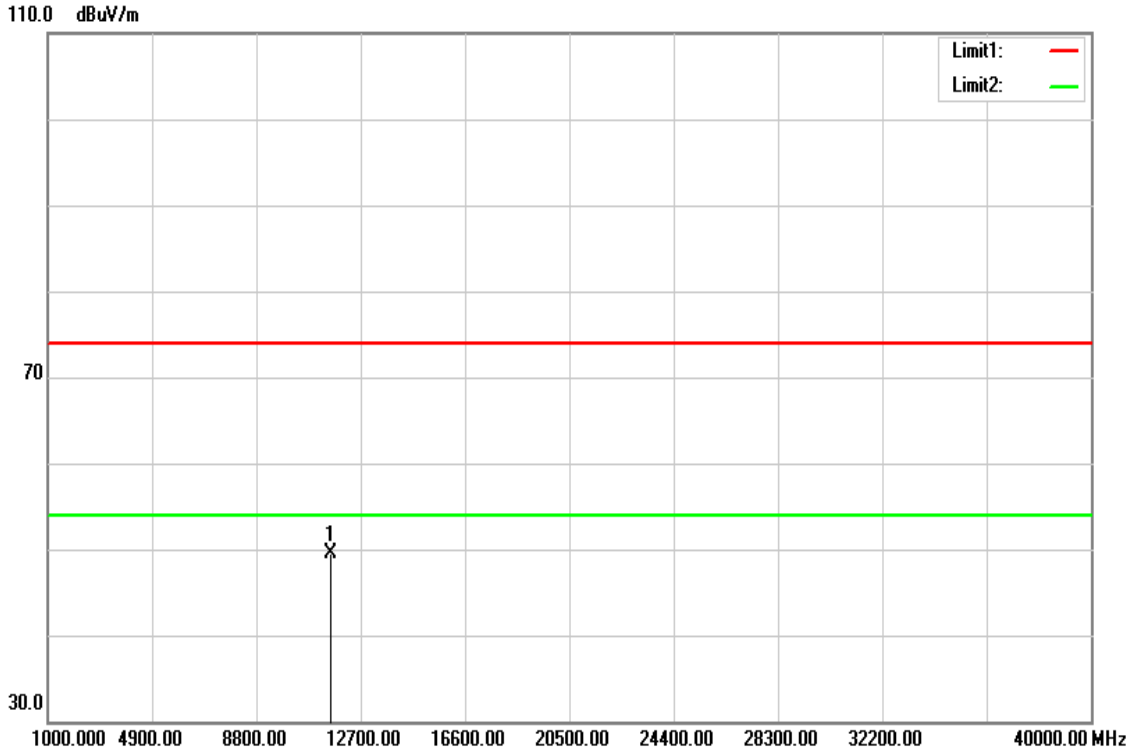


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	33.93	15.62	49.55	74.00	-24.45	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

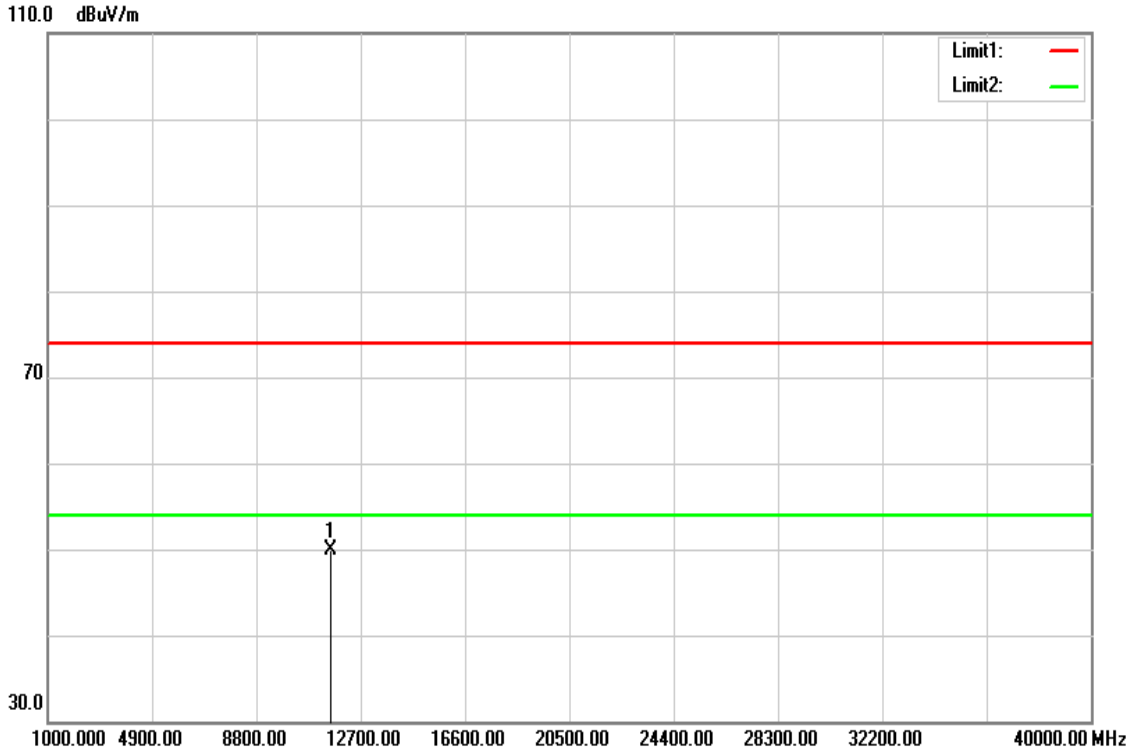


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11570.000	33.86	15.61	49.47	74.00	-24.53	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

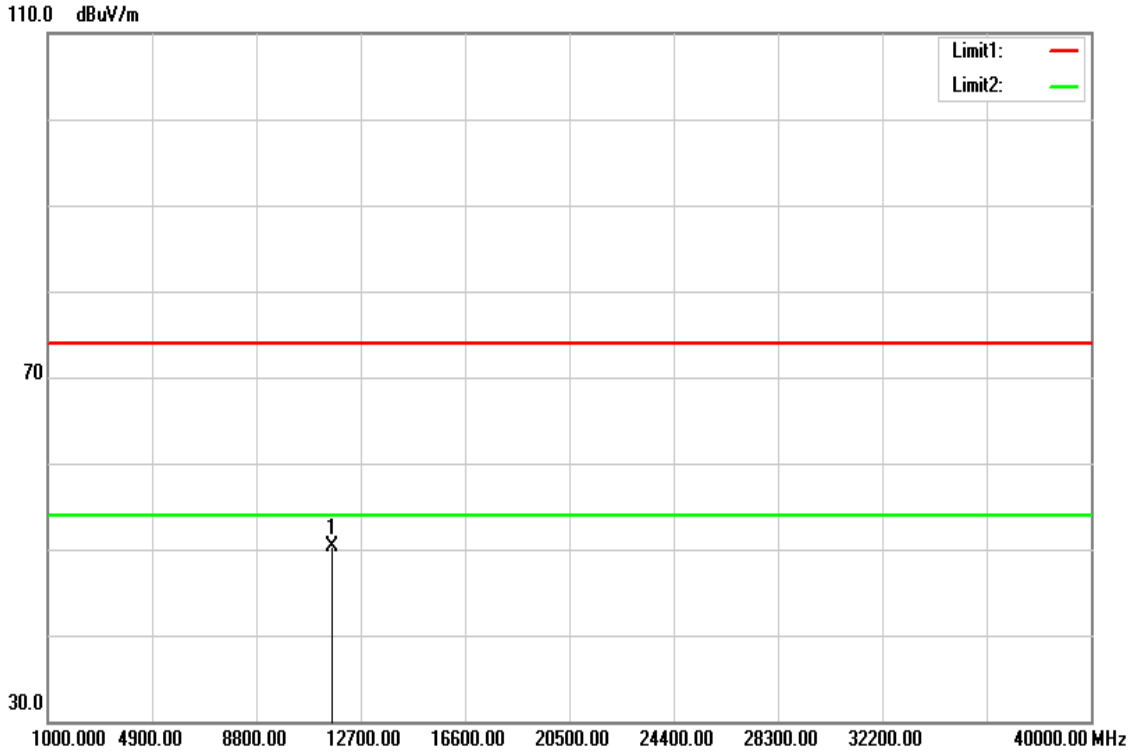


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11570.000	34.37	15.61	49.98	74.00	-24.02	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

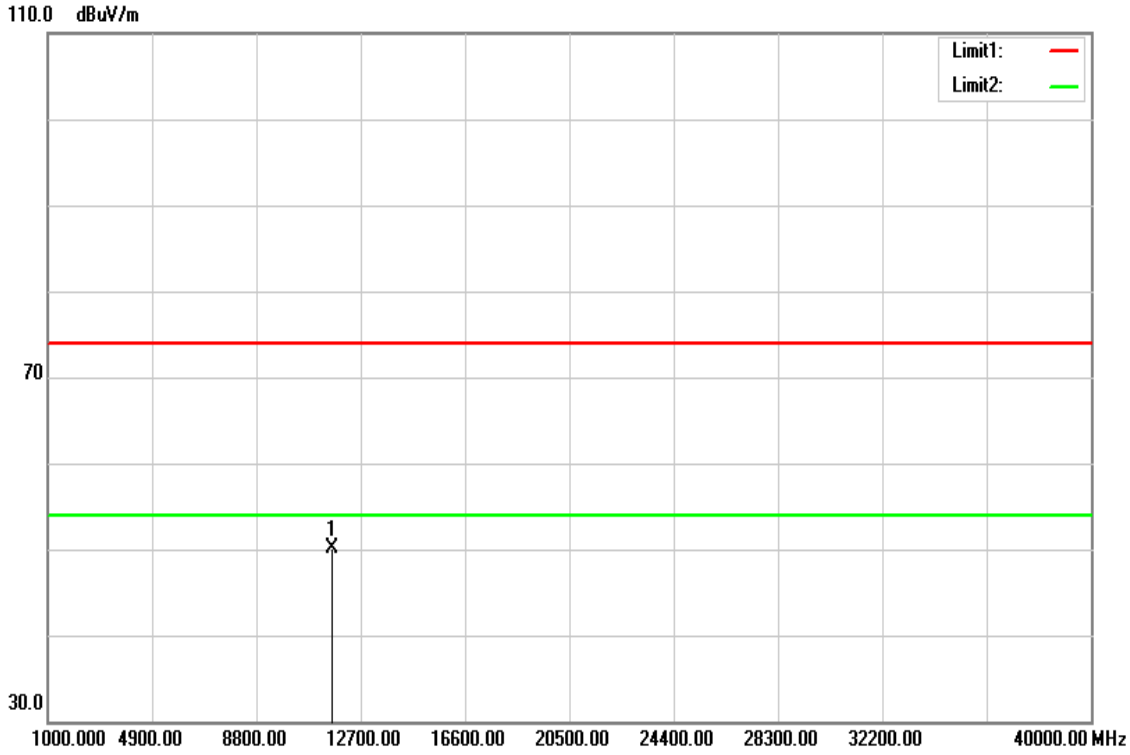


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	34.62	15.58	50.20	74.00	-23.80	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11a High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

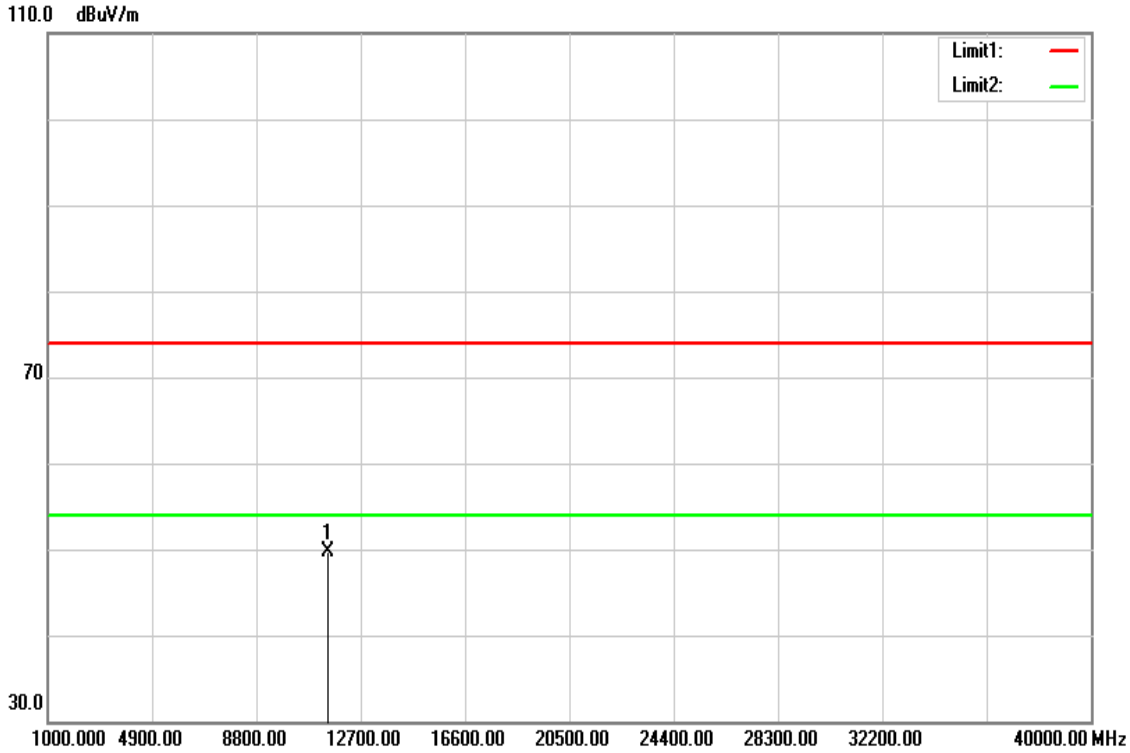


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	34.45	15.58	50.03	74.00	-23.97	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

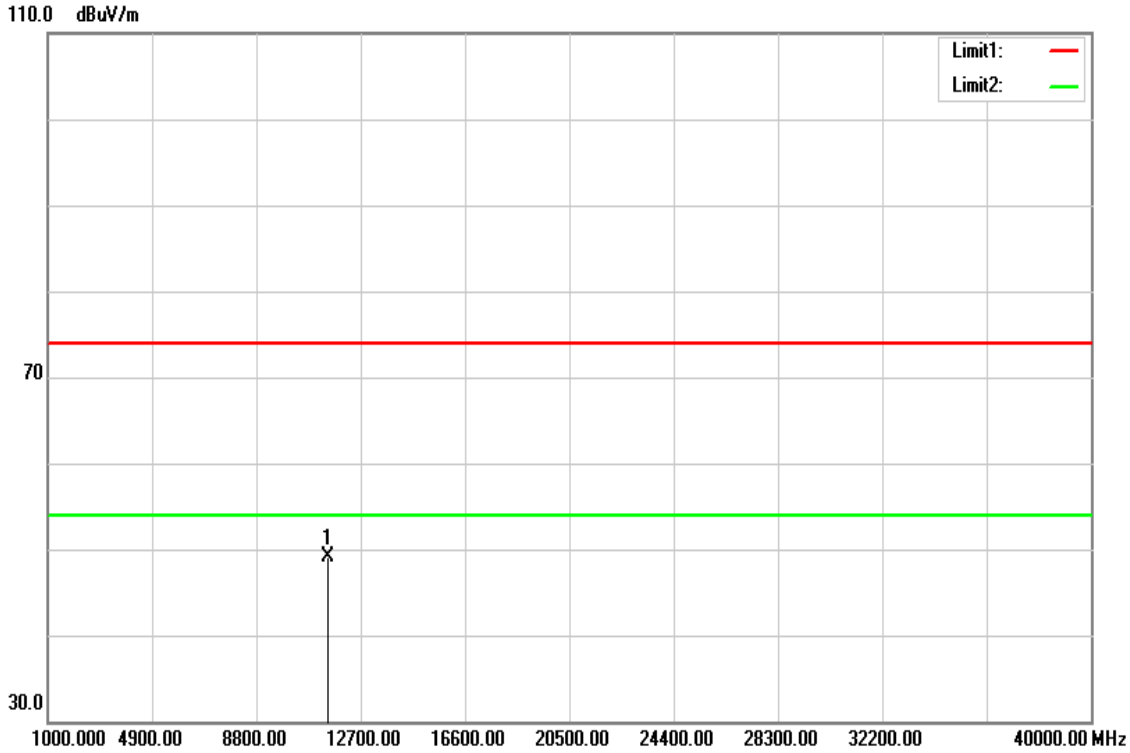


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	34.10	15.62	49.72	74.00	-24.28	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

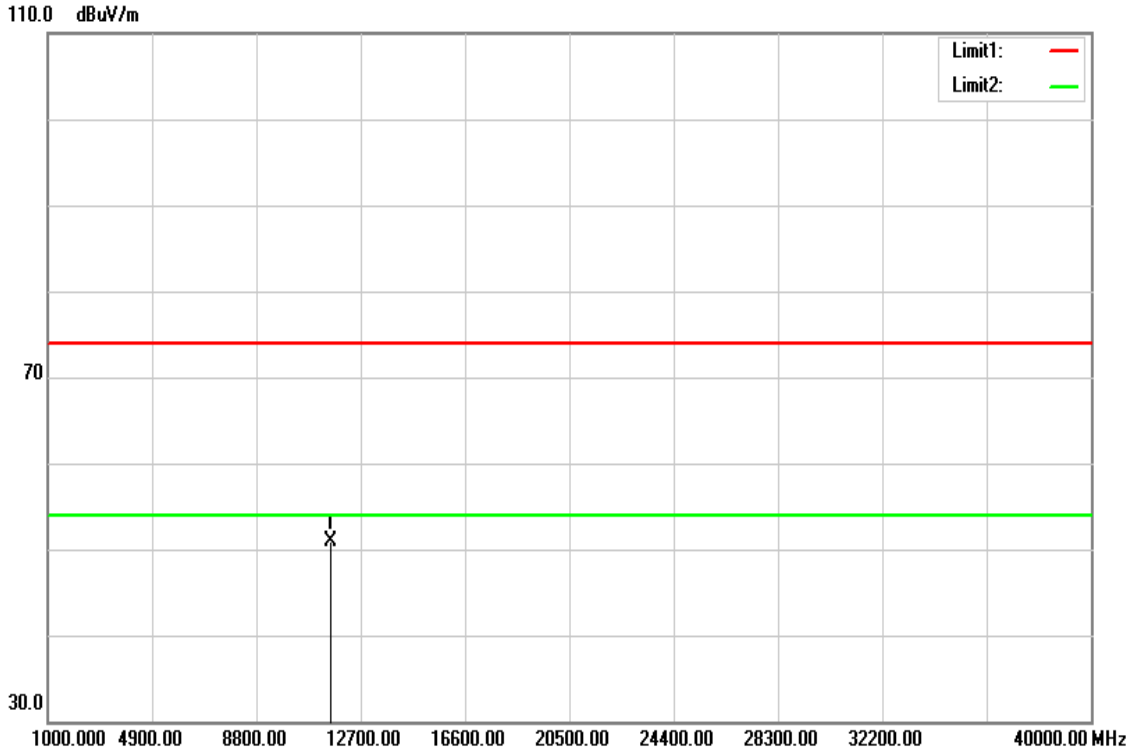


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11490.000	33.57	15.62	49.19	74.00	-24.81	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

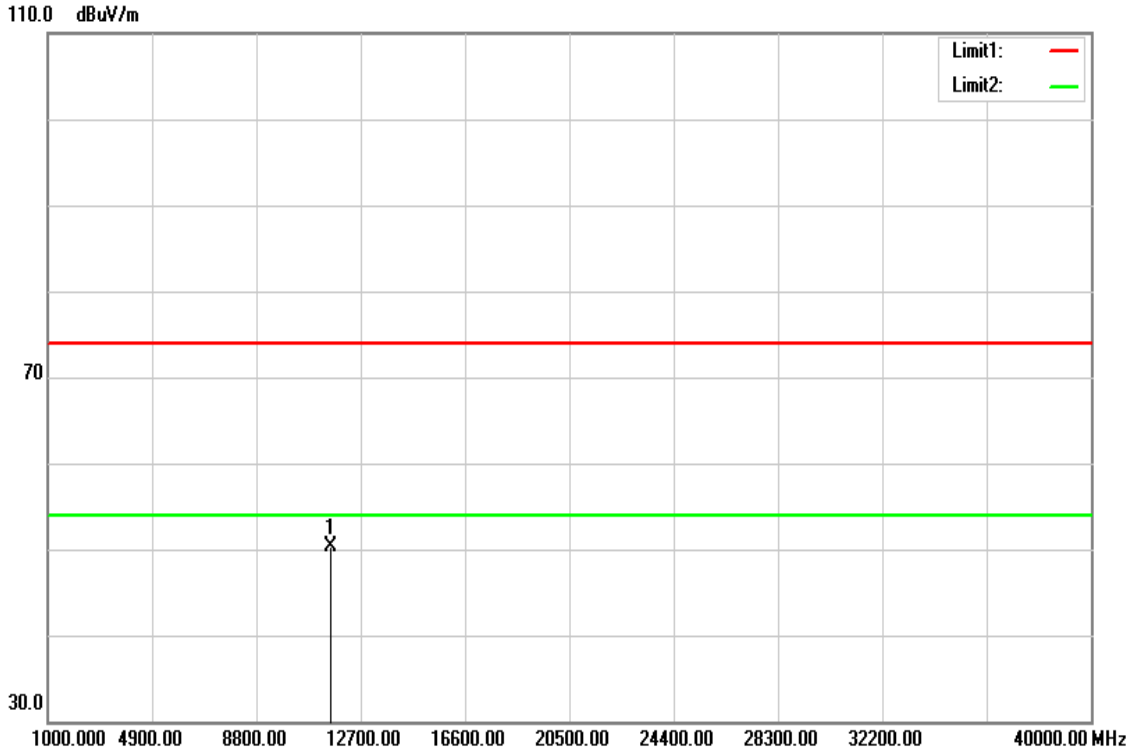


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11570.000	35.22	15.61	50.83	74.00	-23.17	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

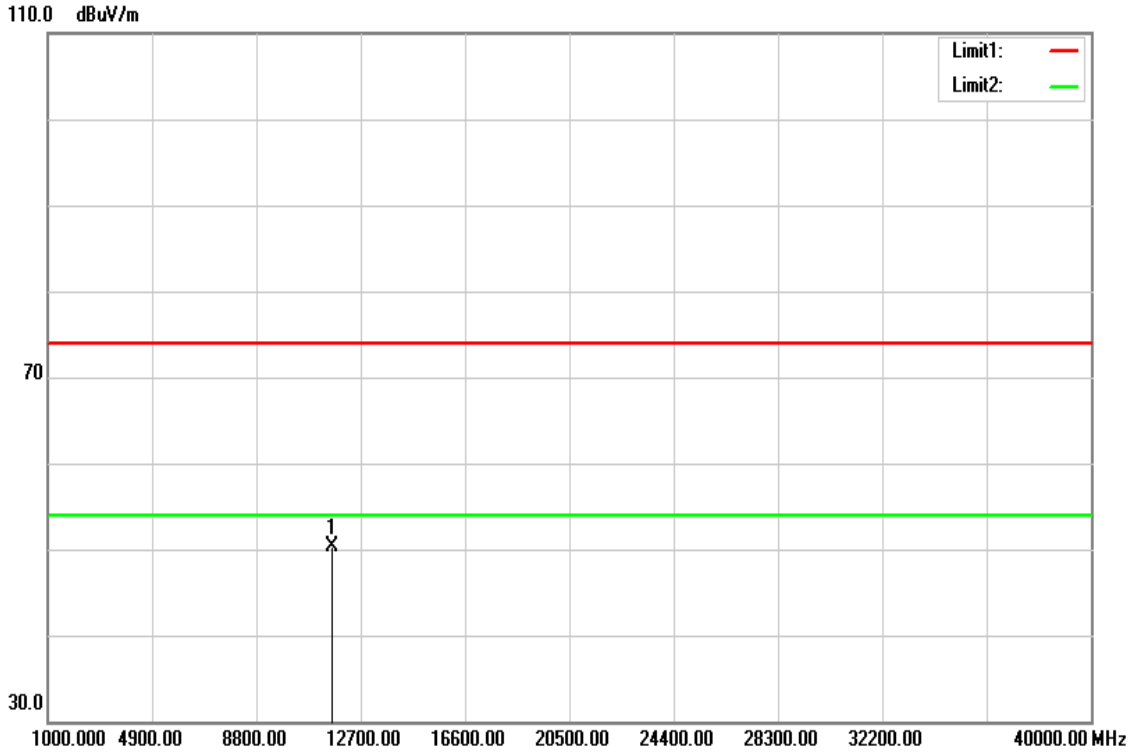


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11570.000	34.64	15.61	50.25	74.00	-23.75	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

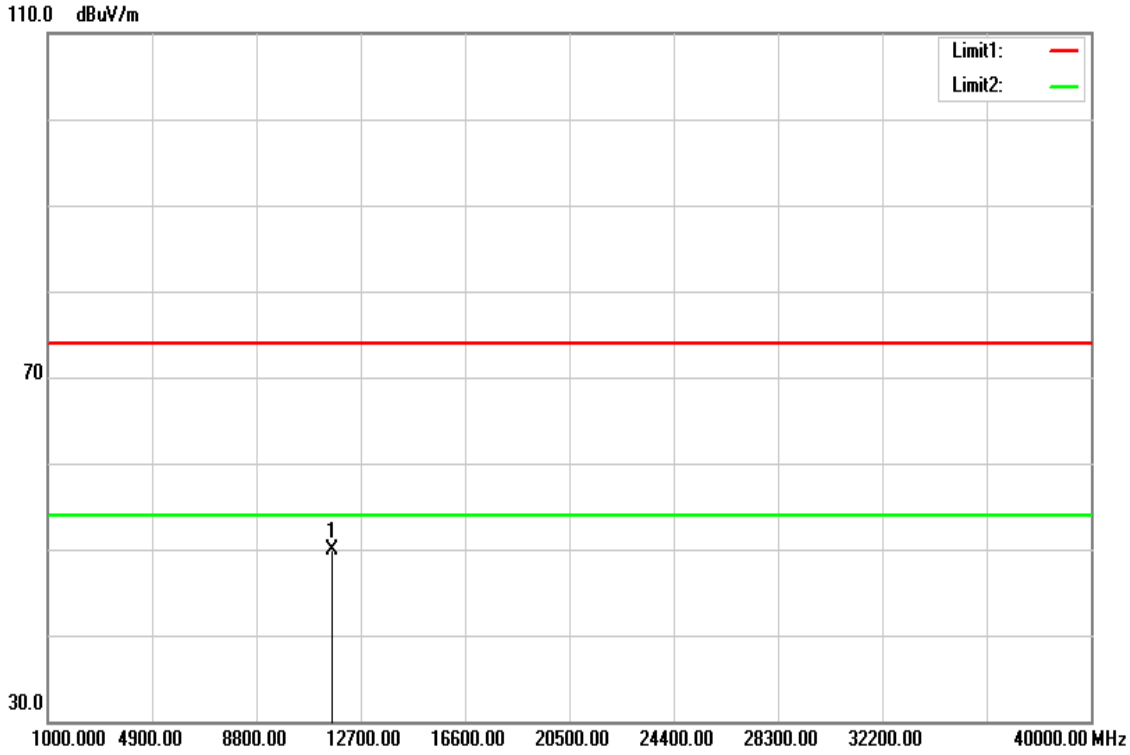


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	34.69	15.58	50.27	74.00	-23.73	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

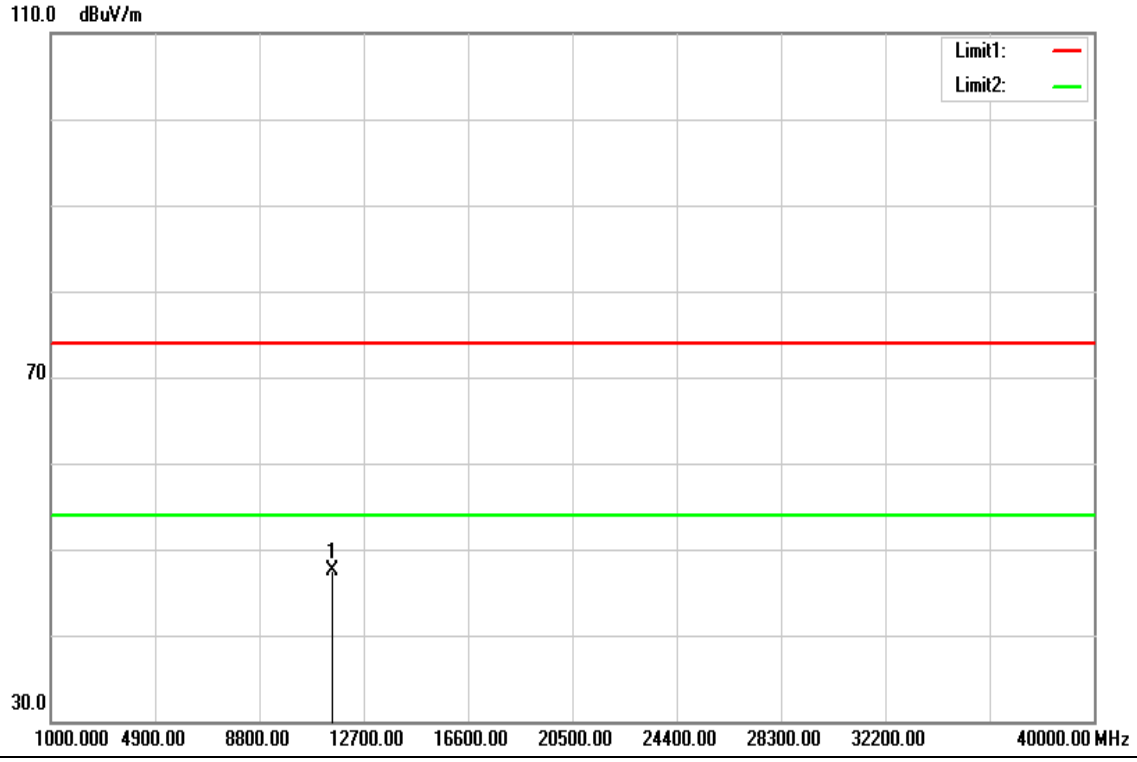


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	34.33	15.58	49.91	74.00	-24.09	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

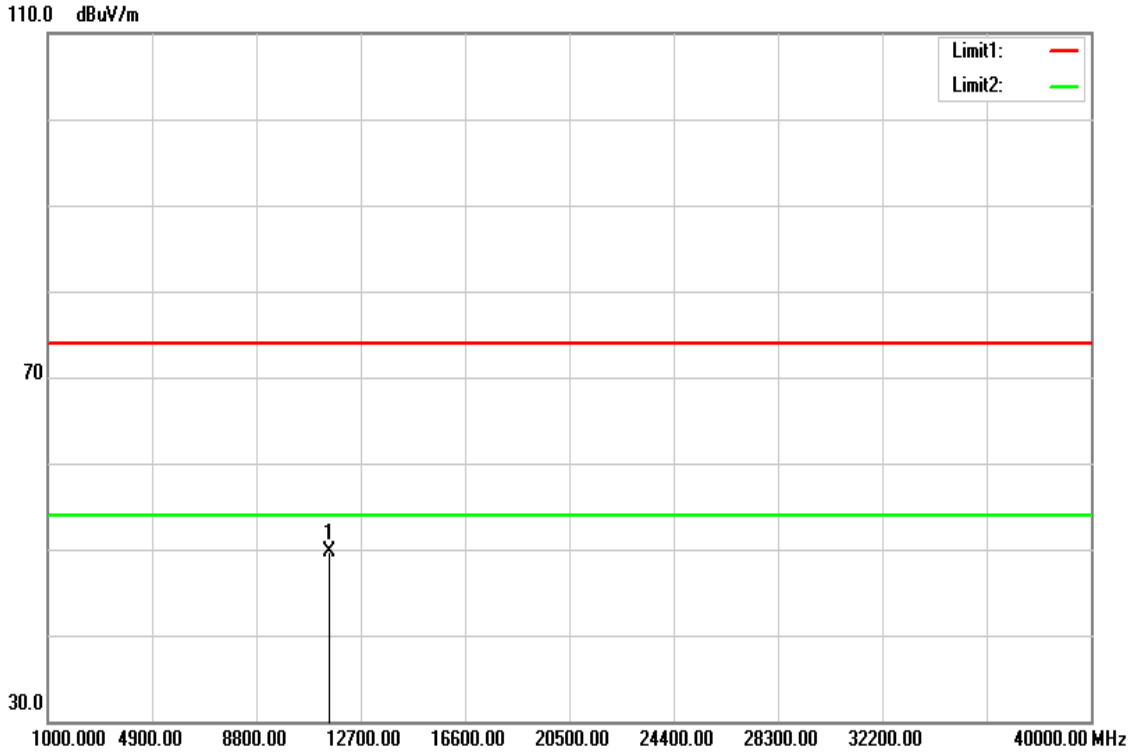


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11510.000	31.89	15.62	47.51	74.00	-26.49	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

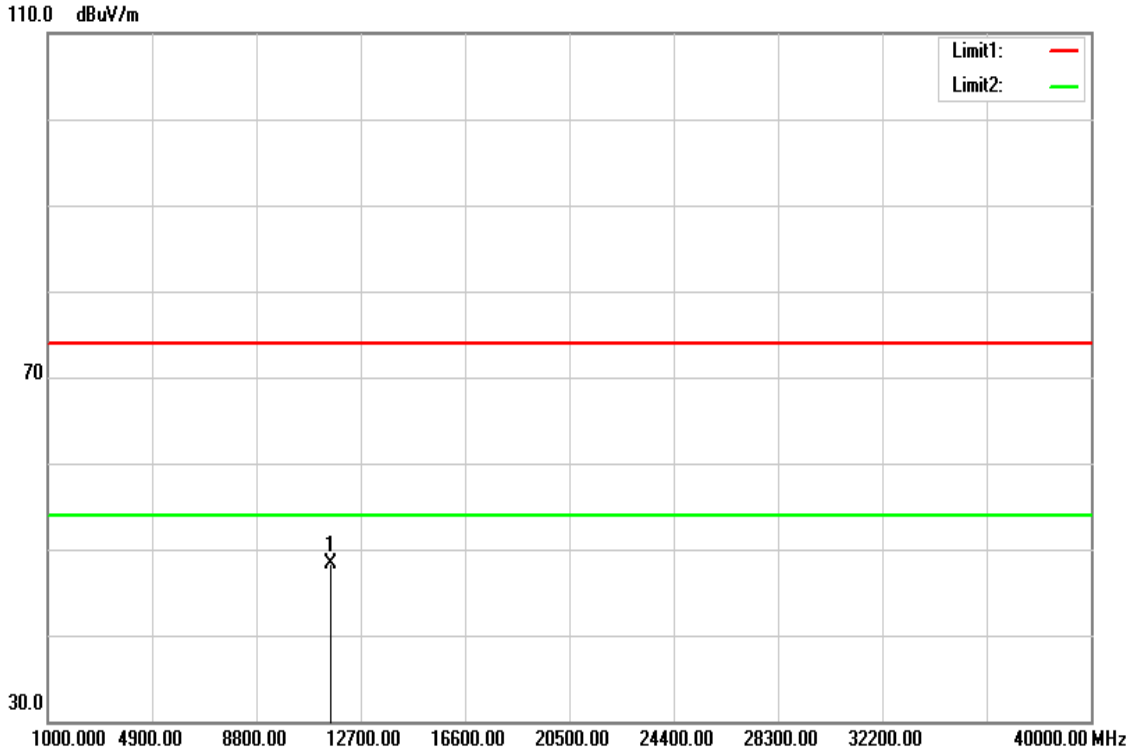


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11510.000	34.11	15.62	49.73	74.00	-24.27	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

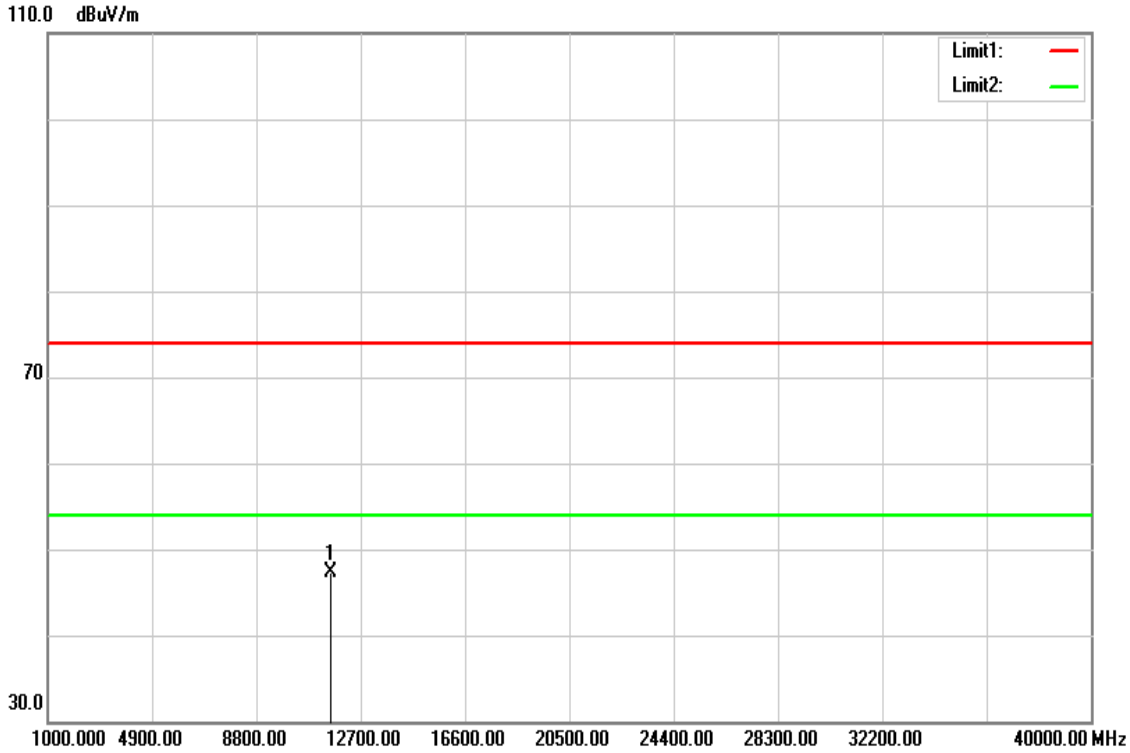


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11590.000	32.71	15.61	48.32	74.00	-25.68	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		

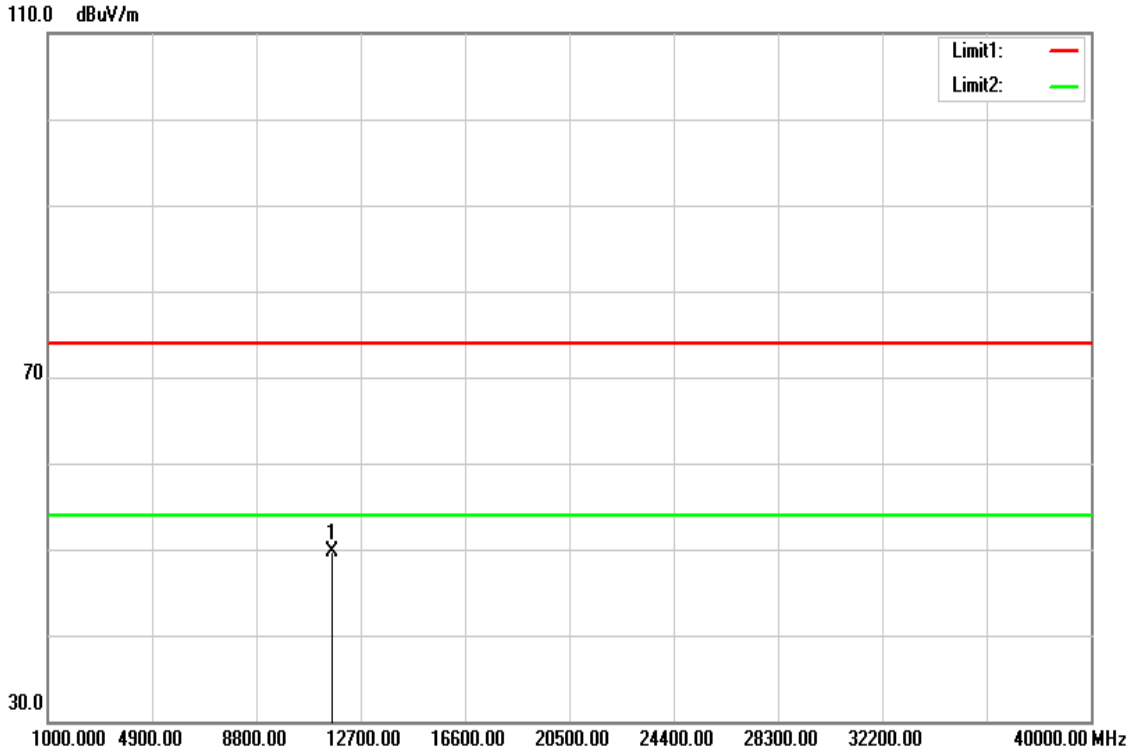


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11590.000	31.79	15.61	47.40	74.00	-26.60	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11ac VHT80 Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		

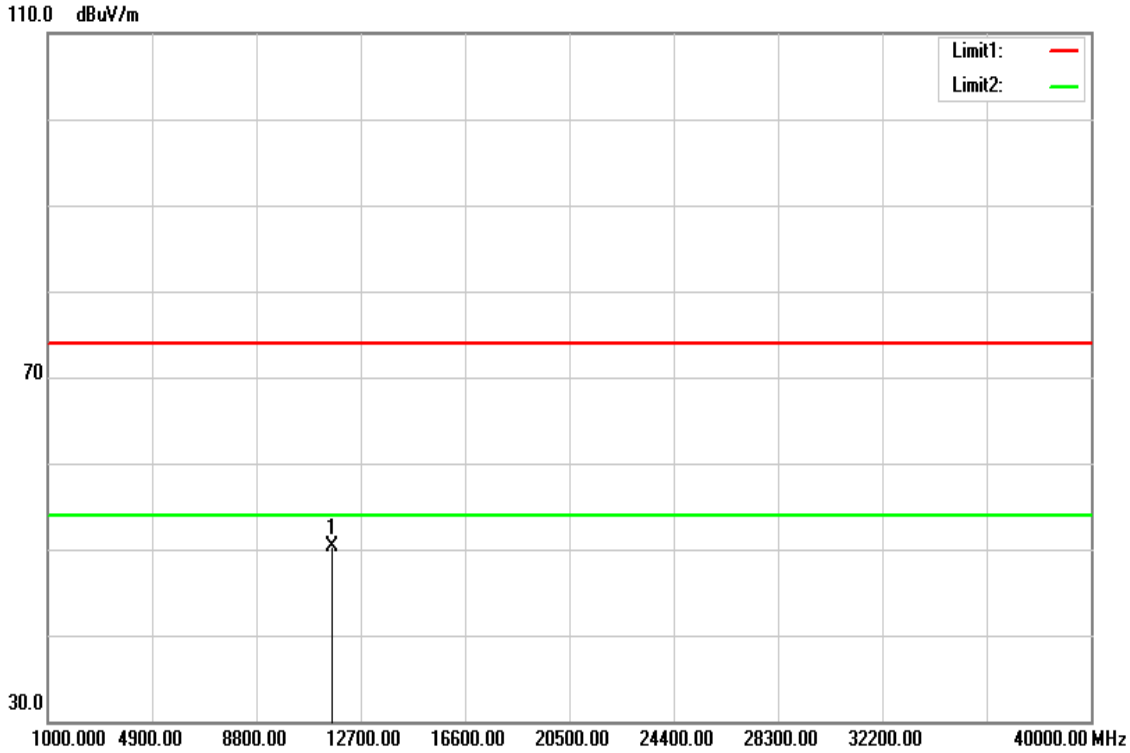


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	34.10	15.58	49.68	74.00	-24.32	peak
N/A						

Remark:

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

Test Mode	IEEE 802.11ac VHT80 Mid CH	Temp/Hum	22.9(℃)/ 38%RH
Test Item	Harmonic	Test Date	August 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
11650.000	34.66	15.58	50.24	74.00	-23.76	peak
N/A						

Remark:

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

4.6 FREQUENCY STABILITY

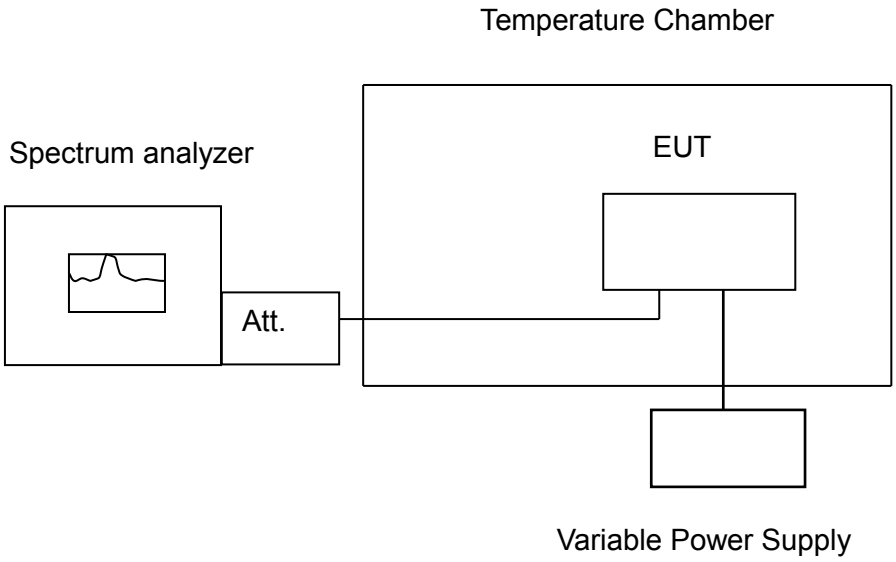
4.6.1 Test Limit

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

For Chain 0:

Temp. (ºC)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
40	Normal	5179.97612	5179.97569	5179.97525	5179.97482	-4.6100	-4.6931	-4.7780	-4.8610	Pass
30	Normal	5179.99305	5179.99262	5179.99219	5179.99175	-1.3417	-1.4247	-1.5077	-1.5927	Pass
Normal	Normal	5179.99696	5179.99653	5179.99609	5179.99566	-0.5869	-0.6699	-0.7548	-0.8378	Pass
10	Normal	5180.00304	5180.00391	5180.00434	5180.00478	0.5869	0.7548	0.8378	0.9228	Pass
Temp. (ºC)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
Normal	207	5179.996930	5179.99642	5179.99613	5179.99574	-0.5927	-0.6911	-0.7471	-0.8224	Pass
Normal	230	5179.996960	5179.99653	5179.99609	5179.99566	-0.5869	-0.6699	-0.7548	-0.8378	Pass
Normal	253	5179.996948	5179.99648	5179.99607	5179.99563	-0.5892	-0.6795	-0.7587	-0.8436	Pass

Temp. (ºC)	Voltage (V)	Measured Frequency	5745		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
40	Normal	5744.97482	5744.97438	5744.97395	5744.97352	-4.3829	-4.4595	-4.5344	-4.6092	Pass
30	Normal	5744.98910	5744.98828	5744.98784	5744.98741	-1.8973	-2.0400	-2.1166	-2.1915	Pass
Normal	Normal	5745.00217	5745.00087	5744.99957	5744.99826	0.3777	0.1514	-0.0748	-0.3029	Pass
10	Normal	5745.00651	5745.00695	5745.00738	5745.00781	1.1332	1.2097	1.2846	1.3594	Pass
Temp. (ºC)	Voltage (V)	Measured Frequency	5745		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
Normal	Minimum	5745.00214	5745.00084	5744.99954	5744.99823	0.3725	0.1462	-0.0801	-0.3081	Pass
Normal	Normal	5745.00217	5745.00087	5744.99957	5744.99826	0.3777	0.1514	-0.0748	-0.3029	Pass
Normal	Maximum	5745.00221	5745.00091	5744.99961	5744.99824	0.3847	0.1584	-0.0679	-0.3064	Pass

For Chain 1:

Temp. (ºC)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
40	Normal	5179.97622	5179.97571	5179.97530	5179.97452	-4.6100	-4.6931	-4.7780	-4.8610	Pass
30	Normal	5179.99309	5179.99252	5179.99217	5179.99219	-1.3417	-1.4247	-1.5077	-1.5927	Pass
Normal	Normal	5179.99696	5179.99566	5179.99653	5179.99566	-0.5869	-0.6699	-0.7548	-0.8378	Pass
10	Normal	5180.00308	5180.00340	5180.00445	5180.00448	0.5869	0.7548	0.8378	0.9228	Pass
Temp. (ºC)	Voltage (V)	Measured Frequency	5180		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
Normal	207	5179.99698	5179.99648	5179.99628	5179.99593	-0.5927	-0.6911	-0.7471	-0.8224	Pass
Normal	230	5179.99696	5179.99566	5179.99653	5179.99566	-0.5869	-0.6699	-0.7548	-0.8378	Pass
Normal	253	5179.99696	5179.99636	5179.99618	5179.99581	-0.5892	-0.6795	-0.7587	-0.8436	Pass

Temp. (ºC)	Voltage (V)	Measured Frequency	5745		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
40	Normal	5744.97452	5744.97438	5744.97315	5744.97352	-4.3829	-4.4595	-4.5344	-4.6092	Pass
30	Normal	5744.98910	5744.98882	5744.98784	5744.98751	-1.8973	-2.0400	-2.1166	-2.1915	Pass
Normal	Normal	5745.00223	5745.00096	5744.99982	5744.99836	0.3777	0.1514	-0.0748	-0.3029	Pass
10	Normal	5745.00688	5745.00643	5745.00752	5745.00742	1.1332	1.2097	1.2846	1.3594	Pass
Temp. (ºC)	Voltage (V)	Measured Frequency	5745		(MHz)	Limit				Result
		Time (min)				20ppm				
Operating Frequency:		0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min	
Normal	Minimum	5745.00236	5745.00084	5744.99925	5744.99823	0.3725	0.1462	-0.0801	-0.3081	Pass
Normal	Normal	5745.00223	5745.00096	5744.99982	5744.99836	0.3777	0.1514	-0.0748	-0.3029	Pass
Normal	Maximum	5745.00229	5745.00087	5744.99945	5744.99839	0.3847	0.1584	-0.0679	-0.3064	Pass

- End of Test Report -