

RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART C

CLASS II PERMISSIVE CHANGE

Test Standard	FCC Part 15.247
FCC ID	TX2-RTL8821AU
Product name	802.11a/b/g/n/ac RTL8821AU Combo module
Brand Name	Realtek
Model	RTL8821AU
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)



Approved by:

Handwritten signature of Sam Chuang in black ink.

Sam Chuang
Manager

Tested by:

Handwritten signature of Jerry Chuang in black ink.

Jerry Chuang
Engineer

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	November 13, 2017	Initial Issue	ALL	Allison Chen
01	December 7, 2017	1. Modify section 1.6	page 7, 8	Allison Chen

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APPENDIX 1 - PHOTOGRAPHS OF EUT

1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Realtek Semiconductor Corp. No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu, 300 Taiwan
Manufacturer	Realtek Semiconductor Corp. No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu, 300 Taiwan
Equipment	802.11a/b/g/n/ac RTL8821AU Combo module
Model No.	RTL8821AU
Model Discrepancy	N/A
Trade Name	Realtek
Received Date	October 12, 2017
Date of Test	November 29 ~ December 2, 2017
Output Power(W)	IEEE 802.11b mode: 0.0259 (EIRP : 0.0408) IEEE 802.11g mode: 0.1387 (EIRP : 0.2183) IEEE 802.11n HT 20 MHz mode: 0.1309 (EIRP: 0.2061) IEEE 802.11n HT 40 MHz mode: 0.1211 (EIRP: 0.1905)
Power Operation	1. Power from host device. (DC 3.8V) 2. Power from Li-ion Polymer Battery. Model: PR-464059G (1ICP5/40/59) Nominal Voltage: 3.8V Rated Capacity: 1630mAh / 6.2Wh Limited Charge voltage: 4.35V
Class II Permissive Change	Applicants add a new appearance of EUT and change the circuit and layout, but the antenna type and module are identical with original.

1.2 EUT CHANNEL INFORMATION

Frequency Range	2412MHz-2462MHz
Modulation Type	1. IEEE 802.11b mode: CCK 2. IEEE 802.11g mode: OFDM 3. IEEE 802.11n HT 20 MHz mode: OFDM 4. IEEE 802.11n HT40 MHz mode: OFDM
Bandwidth	1. IEEE 802.11b mode: 11 Channels 2. IEEE 802.11g mode: 11 Channels 3. IEEE 802.11n HT 20 MHz mode: 11 Channels 4. IEEE 802.11n HT 20 MHz mode: 9 Channels

Remark:

Refer as ANSI 63.10:2013 clause 5.6.1 Table 4 and RSS-GEN Table A1 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
<input type="checkbox"/> 1 MHz or less	1	Middle
<input type="checkbox"/> 1 MHz to 10 MHz	2	1 near top and 1 near bottom
<input checked="" type="checkbox"/> More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Type	<input checked="" type="checkbox"/> PIFA <input type="checkbox"/> PCB <input type="checkbox"/> Dipole <input type="checkbox"/> Coils
Antenna Gain	Gain: 1.97dBi

1.4 MEASUREMENT UNCERTAINTY

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

Remark:

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

1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at
No. 11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)

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

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

1.6 INSTRUMENT CALIBRATION

AC Conduction Test Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
LISN	R&S	ENV216	101054	05/18/2017	05/17/2018
LISN	SCHWARZBECK	NSLK 8127	8127-541	02/14/2017	02/13/2018
EMI Test Receiver	R&S	ESCI	100064	05/17/2017	05/16/2018

Wugu 966 Chamber A					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Bilog Antenna	Sunol Sciences	JB3	A030105	06/20/2017	06/19/2018
EMI Test Receiver	R&S	ESCI	100064	05/17/2017	05/16/2018
Horn Antenna	ETS LINDGREN	3117	00055165	02/20/2017	02/19/2018
K Type Cable	Huber+Suhner	SUCOFLEX 102	29406/2	01/10/2017	01/09/2018
K Type Cable	Huber+Suhner	SUCOFLEX 102	22470/2	01/10/2017	01/09/2018
Pre-Amplifier	MITEQ	AMF-6F-2604 00-40-8P	985646	01/10/2017	01/09/2018
Pre-Amplifier	EMCI	EMC 012635	980151	08/01/2017	07/31/2018
Pre-Amplifier	EMEC	EM330	060609	07/31/2017	07/30/2018
Spectrum Analyzer	Agilent	E4446A	US42510252	11/27/2017	11/26/2018
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)				

Remark:

- Each piece of equipment is scheduled for calibration once a year and Precision Dipole is scheduled for calibration once three years.
- N.C.R. = No Calibration Request.

Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Power Meter	Anritsu	ML2495A	1033009	04/11/2017	04/10/2018
Power Sensor	Anritsu	MA2411B	917072	07/03/2017	07/02/2018
Spectrum Analyzer	R&S	FSV 40	101073	10/02/2017	10/01/2018
Thermostatic/Hrgrosati c Chamber	GWINSTEK	GTC-288MH- CC	TH160402	05/23/2017	05/22/2018
SUCOFLEX Cable	HUBER SUHNER	SUCOFLEX 104PEA	25157	07/31/2017	07/30/2018
Divider	Solvang Technology	2-18GHz 4Way	STI08-0015	07/26/2017	07/25/2018
Coupler	Agilent	87301d	MY44350252	07/25/2017	07/24/2018

Remark:

1. Each piece of equipment is scheduled for calibration once a year and Precision Dipole is scheduled for calibration once three years.
2. N.C.R. = No Calibration Request.

1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

No	Equipment	Brand	Model	Series No.	FCC ID	Data Cable	Power Cord
1	NB(H)	Acer	Aspire 4320 series	R33142	QDS-BRCM1 018	N/A	N/A
2	NB(A)	Dell	PP19L	R33002	CXSMM01BR D02D110	N/A	N/A

1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247, KDB 558074 D01 v04.

2. TEST SUMMERY

FCC Standard Section	Report Section	Test Item	Result
15.203	1.2	Antenna Requirement	Pass
15.207(a)	4.1	AC Conducted Emission	Pass
15.247(b)	4.3	Output Power Measurement	Pass
15.247(d)	4.6	Radiation Band Edge	Pass
15.247(d)	4.6	Radiation Spurious Emission	Pass

3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	IEEE 802.11b mode :1Mbps IEEE 802.11g mode :6Mbps IEEE 802.11n HT20 mode :MCS0 IEEE 802.11n HT40 mode: MCS0
Test Channel Frequencies	IEEE 802.11b mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz IEEE 802.11g mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz IEEE 802.11n HT20 mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz IEEE 802.11n HT40 mode : 1. Lowest Channel : 2422MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2452MHz
Operation Transmitter	IEEE 802.11b mode :1T1R IEEE 802.11g mode :1T1R IEEE 802.11n HT20 mode :1T1R IEEE 802.11n HT40 mode :1T1R

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were 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	DC 3.8V
Test Mode	Mode 1: EUT power by Battery.
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

Radiated Emission Measurement Above 1G	
Test Condition	Band edge, Emission for Unwanted and Fundamental
Voltage/Hz	DC 3.8V
Test Mode	Mode 1: EUT power by Battery.
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4
Worst Position	<input type="checkbox"/> Placed in fixed position. <input checked="" type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane) <input type="checkbox"/> Placed in fixed position at Z-Plane (H-Plane)
Worst Polarity	<input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical

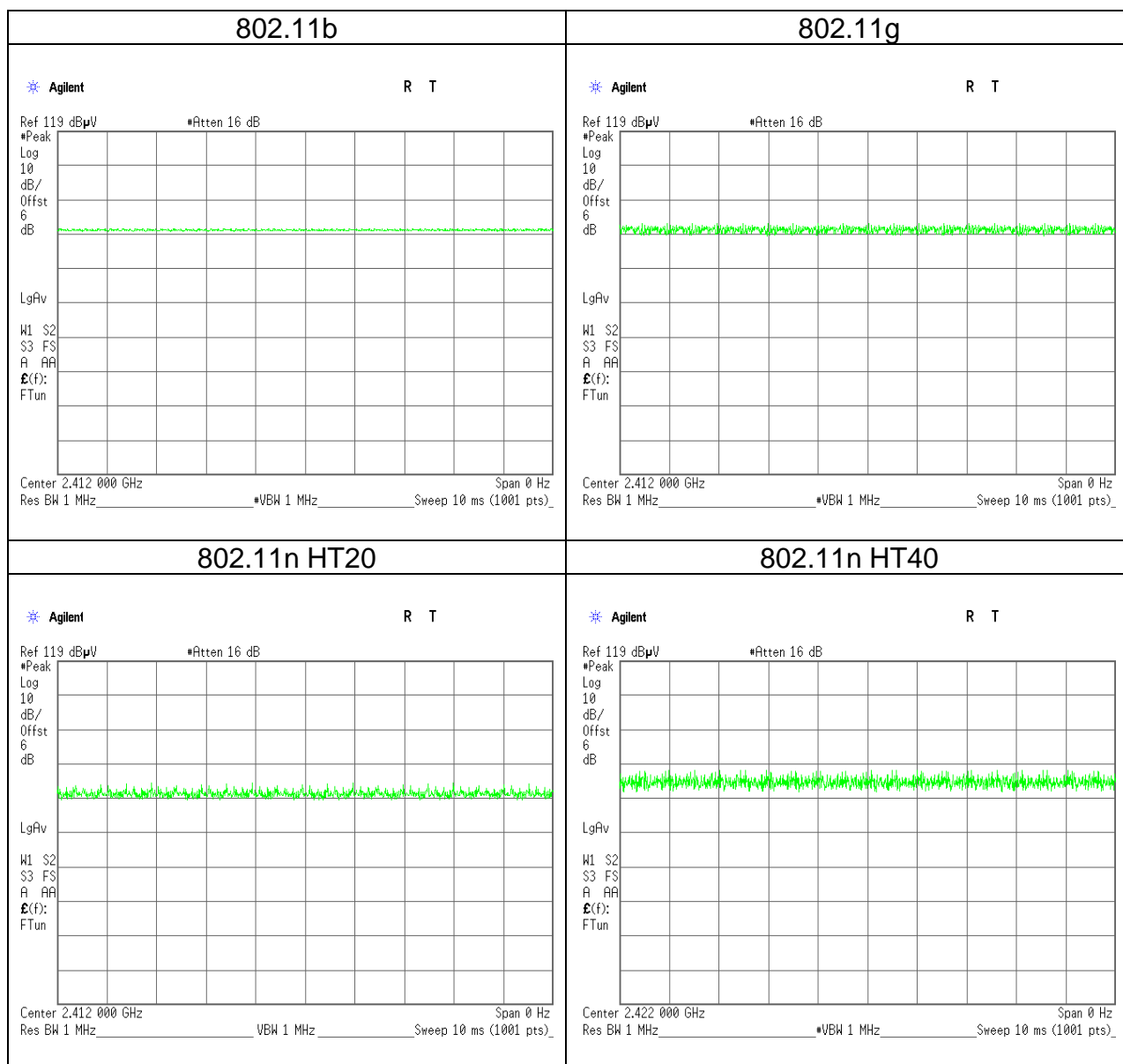
Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Voltage/Hz	DC 3.8V
Test Mode	Mode 1: EUT power by Battery.
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

Remark:

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

3.3 EUT DUTY CYCLE

Duty Cycle				
Configuration	TX ON (ms)	TX ALL (ms)	Duty Cycle (%)	Duty Factor(dB)
802.11b	1.0000	1.0000	100.00%	0.00
802.11g	1.0000	1.0000	100.00%	0.00
802.11n HT20	1.0000	1.0000	100.00%	0.00
802.11n HT40	1.0000	1.0000	100.00%	0.00



4. TEST RESULT

4.1 AC POWER LINE CONDUCTED EMISSION

4.1.1 Test Limit

According to §15.207(a)(2)

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

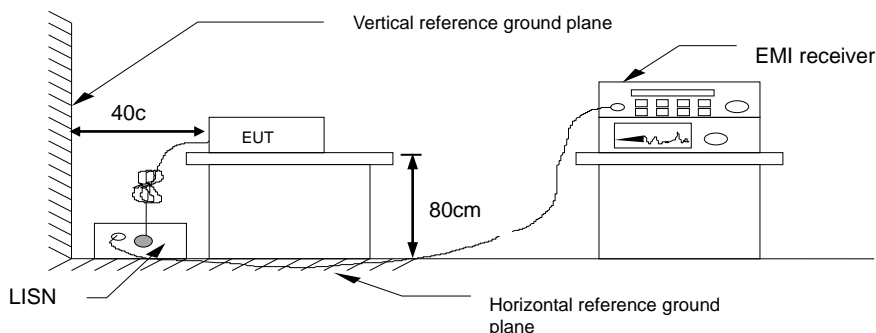
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

Test method Refer as ANSI 63.10:2013 clause 6.2,

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

4.1.3 Test Setup

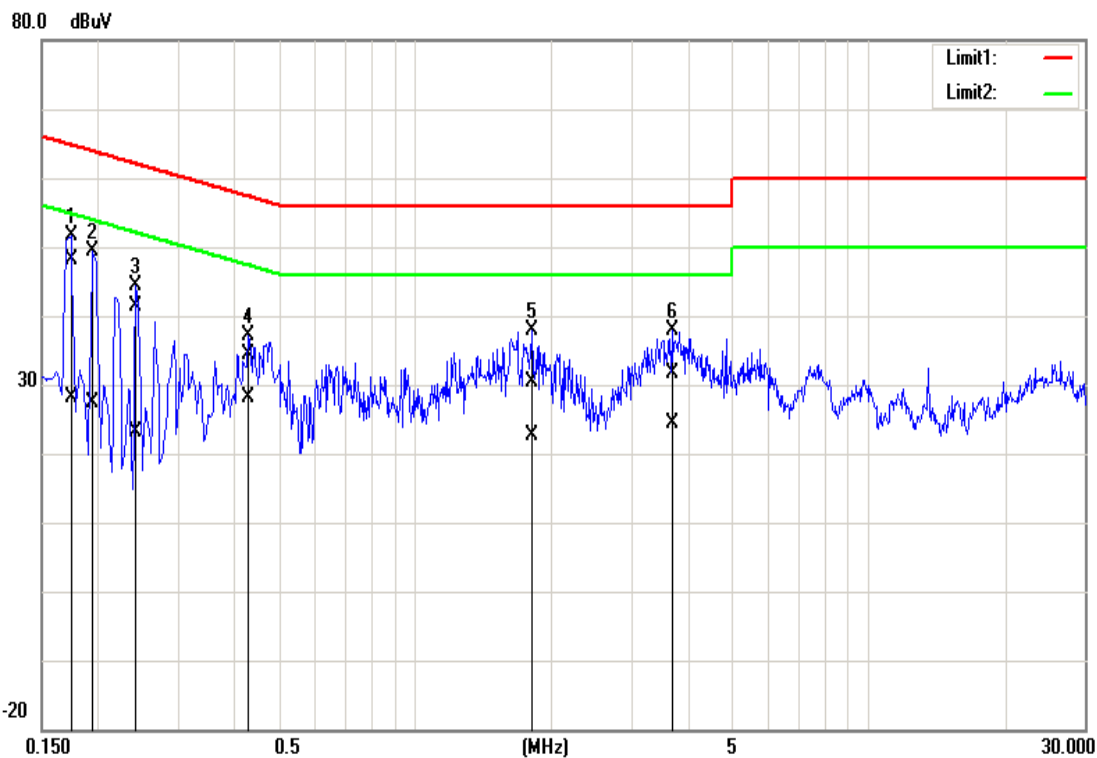


4.1.4 Test Result

Pass.

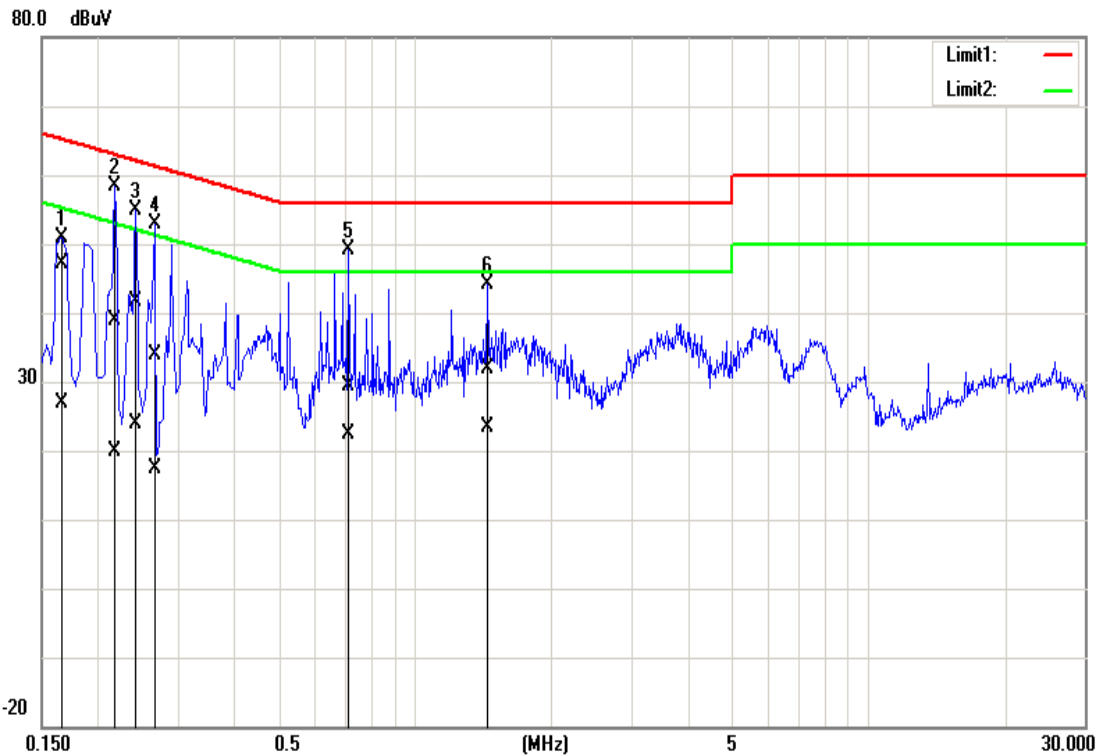
Test Data

Test Mode:	Mode 1	Temp/Hum	24(°C)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	November 30, 2017
Phase:	Line	Test Engineer	Jerry Chuang



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)
1	0.1740	48.09	28.13	0.08	48.17	28.21	64.77	54.77	-16.60	-26.56
2	0.1940	49.21	27.27	0.09	49.30	27.36	63.86	53.86	-14.56	-26.50
3	0.2420	41.41	22.93	0.09	41.50	23.02	62.03	52.03	-20.53	-29.01
4	0.4300	34.33	28.15	0.10	34.43	28.25	57.25	47.25	-22.82	-19.00
5	1.8100	30.34	22.48	0.16	30.50	22.64	56.00	46.00	-25.50	-23.36
6	3.6820	31.37	24.21	0.22	31.59	24.43	56.00	46.00	-24.41	-21.57

Test Mode:	Mode 1	Temp/Hum	24(°C)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	November 30, 2017
Phase:	Neutral	Test Engineer	Jerry Chuang



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)
1	0.1660	47.06	26.64	0.15	47.21	26.79	65.16	55.16	-17.95	-28.37
2	0.2180	38.65	19.64	0.16	38.81	19.80	62.89	52.89	-24.08	-33.09
3	0.2420	41.40	23.63	0.16	41.56	23.79	62.03	52.03	-20.47	-28.24
4	0.2660	33.84	17.12	0.16	34.00	17.28	61.24	51.24	-27.24	-33.96
5	0.7140	29.19	22.29	0.20	29.39	22.49	56.00	46.00	-26.61	-23.51
6	1.4460	31.60	23.09	0.22	31.82	23.31	56.00	46.00	-24.18	-22.69

4.2 OUTPUT POWER MEASUREMENT

4.2.1 Test Limit

According to §15.247(b)

Peak output power :

For systems using digital modulation in the 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt(30 dBm) and the e.i.r.p. shall not exceed 4Watt(36 dBm), base on the use of antennas with directional gain not exceed 6 dBi If transmitting antennas of directional gain greater than 6dBi are used the peak output power the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 30dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : [Limit = 30 – (DG – 6)] <input type="checkbox"/> Point-to-point operation :
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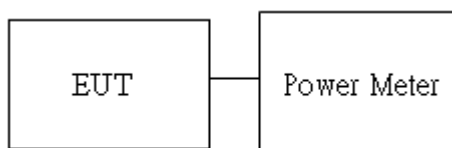
Average output power : For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as KDB 558074 D01 v04, Section 9.1.2.

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 Peak output power and Average output power. in the test report.

4.2.3 Test Setup



4.2.4 Test Result

Peak output power :

Wifi 2.4G													
Config	CH	Freq. (MHz)	power set		PK Power(dBm)		PK Total Power (dBm)	PK Total Power (W)	EIRP PK Total Power (dBm)	EIRP PK Total Power (W)	DG (dBi)	Limit (dBm)	EIRP Limit (dBm)
			chain0	chain1	chain0	chain1							
IEEE 802.11b Data rate: 1Mbps	Low	2412	30	-	13.82	-	13.82	0.0241	15.79	0.0379	1.97	30	36
	Mid	2437	30	-	14.02	-	14.02	0.0252	15.99	0.0397			
	High	2462	30	-	14.14	-	14.14	0.0259	16.11	0.0408			
IEEE 802.11g Data rate: 6Mbps	Low	2412	46	-	21.02	-	21.02	0.1265	22.99	0.1991			
	Mid	2437	47	-	21.42	-	21.42	0.1387	23.39	0.2183			
	High	2462	47	-	21.21	-	21.21	0.1321	23.18	0.2080			
IEEE 802.11n HT20 Data rate: MCS0	Low	2412	47	-	21.14	-	21.14	0.1300	23.11	0.2046			
	Mid	2437	47	-	21.06	-	21.06	0.1276	23.03	0.2009			
	High	2462	47	-	21.17	-	21.17	0.1309	23.14	0.2061			
IEEE 802.11n HT40 Data rate: MCS0	Low	2422	47	-	20.78	-	20.78	0.1197	22.75	0.1884			
	Mid	2437	47	-	20.83	-	20.83	0.1211	22.80	0.1905			
	High	2452	47	-	20.75	-	20.75	0.1189	22.72	0.1871			

Average output power :

Wifi 2.4G					
Config	CH	Freq. (MHz)	AV Power(dBm)		AV Total Power (dBm)
			chain0	chain1	
IEEE 802.11b Data rate: 1Mbps	Low	2412	11.55	-	11.55
	Mid	2437	11.76	-	11.76
	High	2462	11.92	-	11.92
IEEE 802.11g Data rate: 6Mbps	Low	2412	12.65	-	12.65
	Mid	2437	12.85	-	12.85
	High	2462	12.87	-	12.87
IEEE 802.11n HT20 Data rate: MCS0	Low	2412	12.83	-	12.83
	Mid	2437	12.75	-	12.75
	High	2462	12.71	-	12.71
IEEE 802.11n HT40 Data rate: MCS0	Low	2422	12.81	-	12.81
	Mid	2437	12.76	-	12.76
	High	2452	12.83	-	12.83

4.3 RADIATION BANDEGE AND SPURIOUS EMISSION

4.3.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

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	Field Strength (microvolts/m)	Measurement Distance (metres)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

4.3.2 Test Procedure

Test method Refer as KDB 558074 D01 v04, Section 12.1.

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 937606.

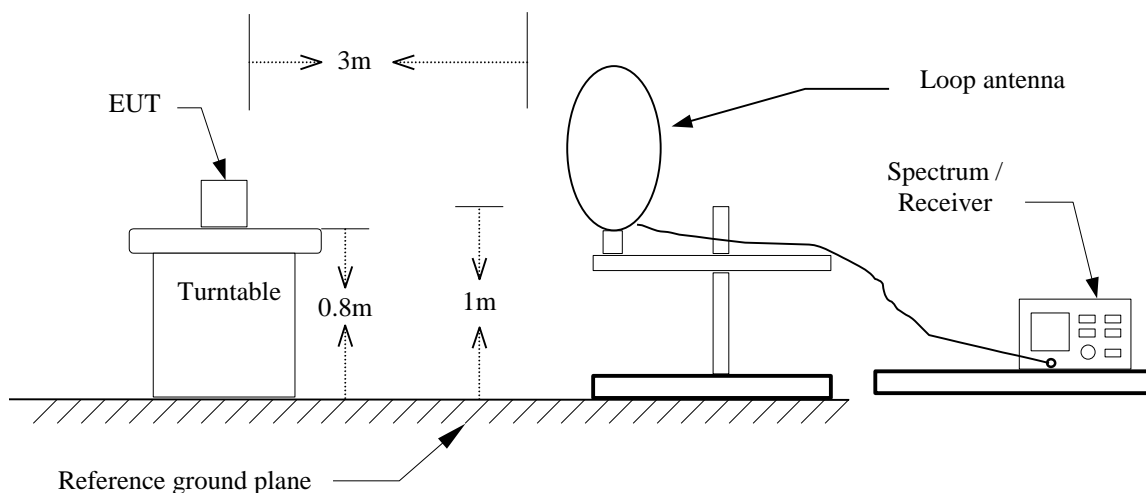
4. The SA setting following :

- (1) Below 1G : RBW = 100kHz, VBW \geq 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
- (2) Above 1G :
 - (2.1) For Peak measurement : RBW = 1MHz, VBW \geq 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.

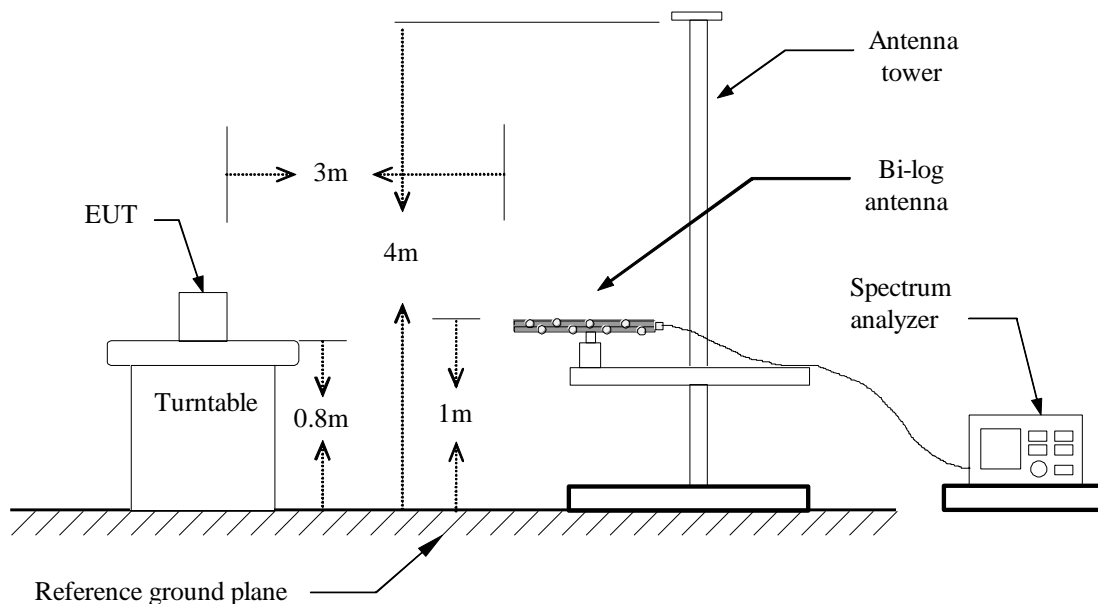
Configuration	Duty Cycle (%)	T(ms)	1/T (kHz)	VBW Setting
802.11b	100%	1.0000	-	300Hz
802.11g	100%	1.0000	-	300Hz
802.11n HT20	100%	1.0000	-	300Hz
802.11n HT40	100%	1.0000	-	300Hz

4.3.3 Test Setup

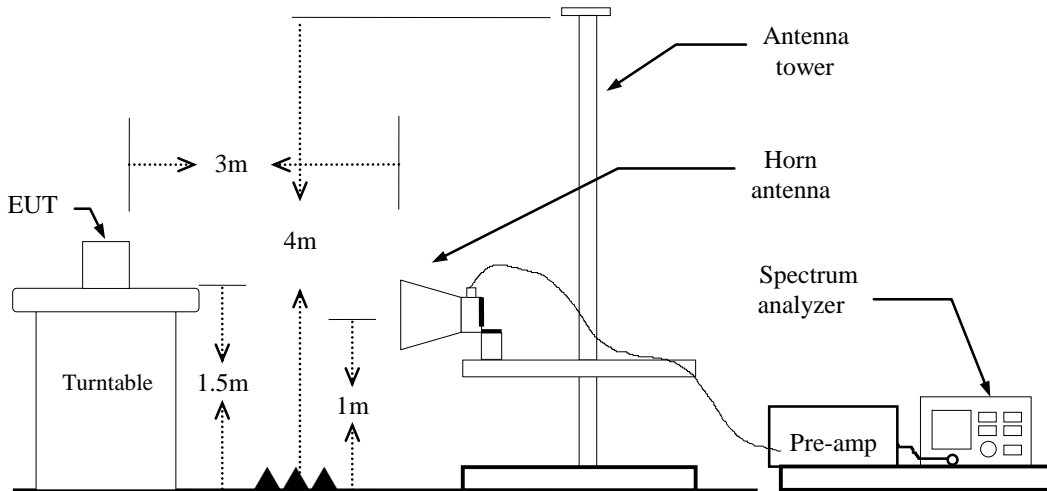
9kHz ~ 30MHz



30MHz ~ 1GHz



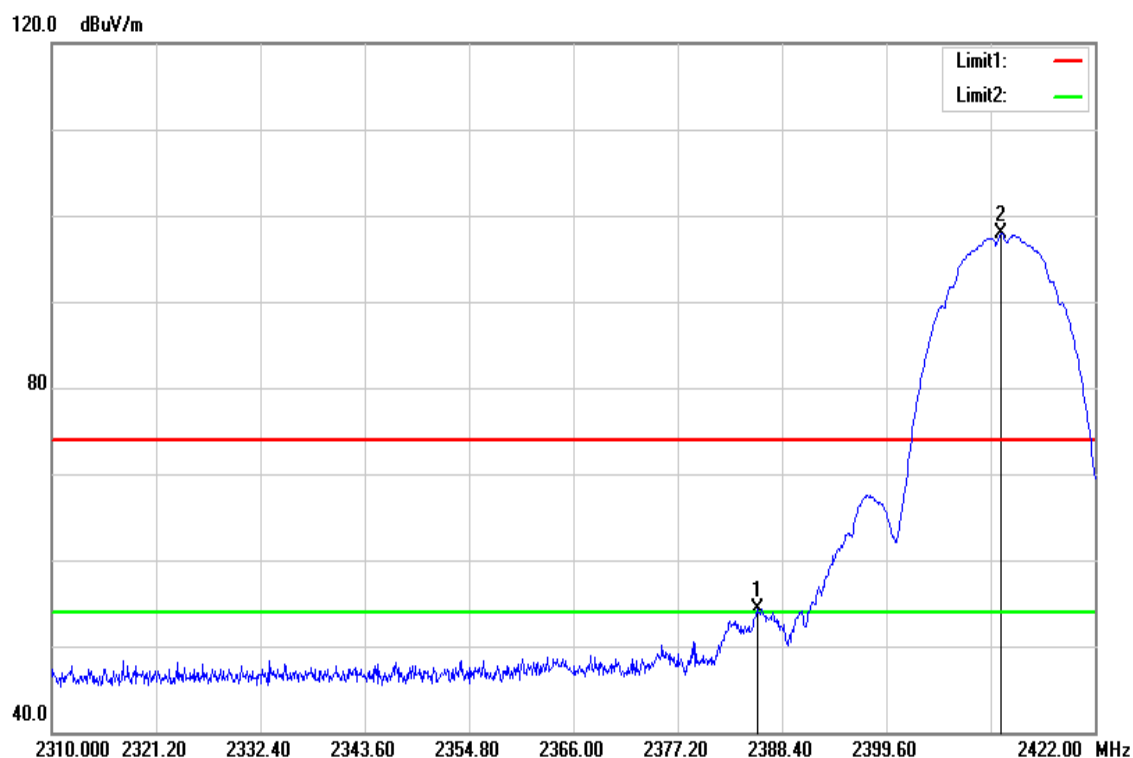
Above 1 GHz



4.3.4 Test Result

Band Edge Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak		



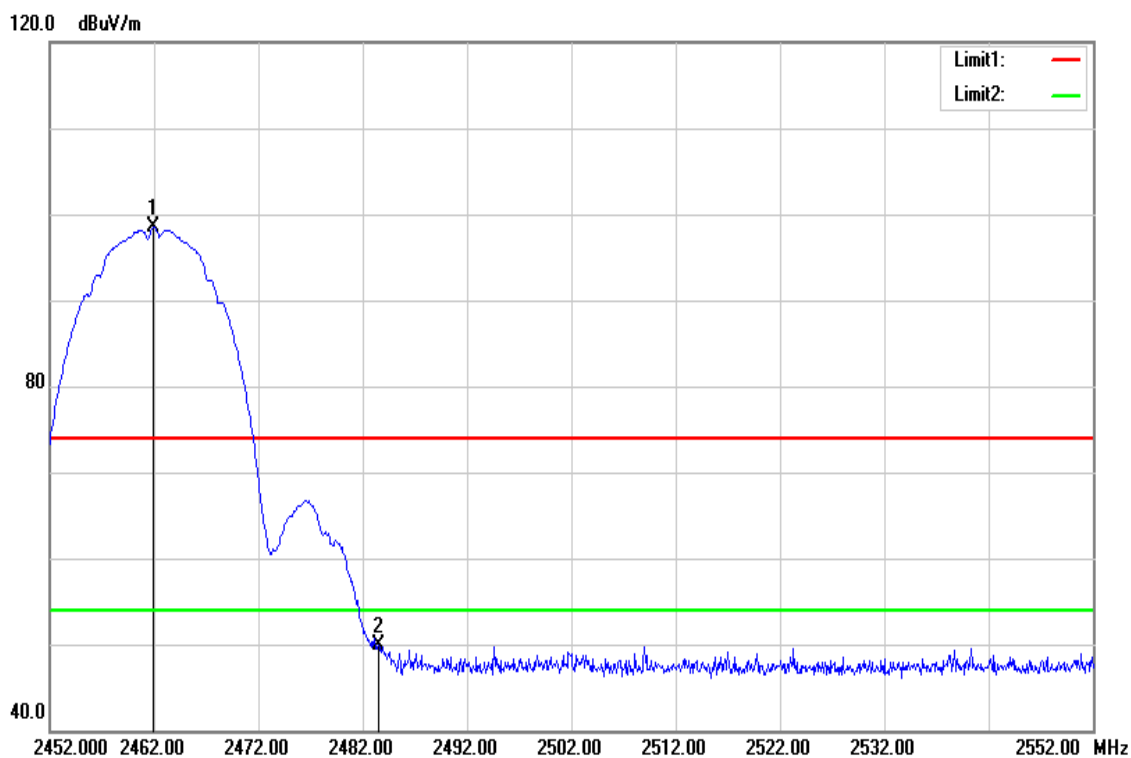
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2343.264	57.39	-2.99	54.40	74.00	-19.60	peak
2412.032	100.77	-2.92	97.85	-	-	peak

Test Mode	IEEE 802.11b Low CH	Temperature:	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Average		



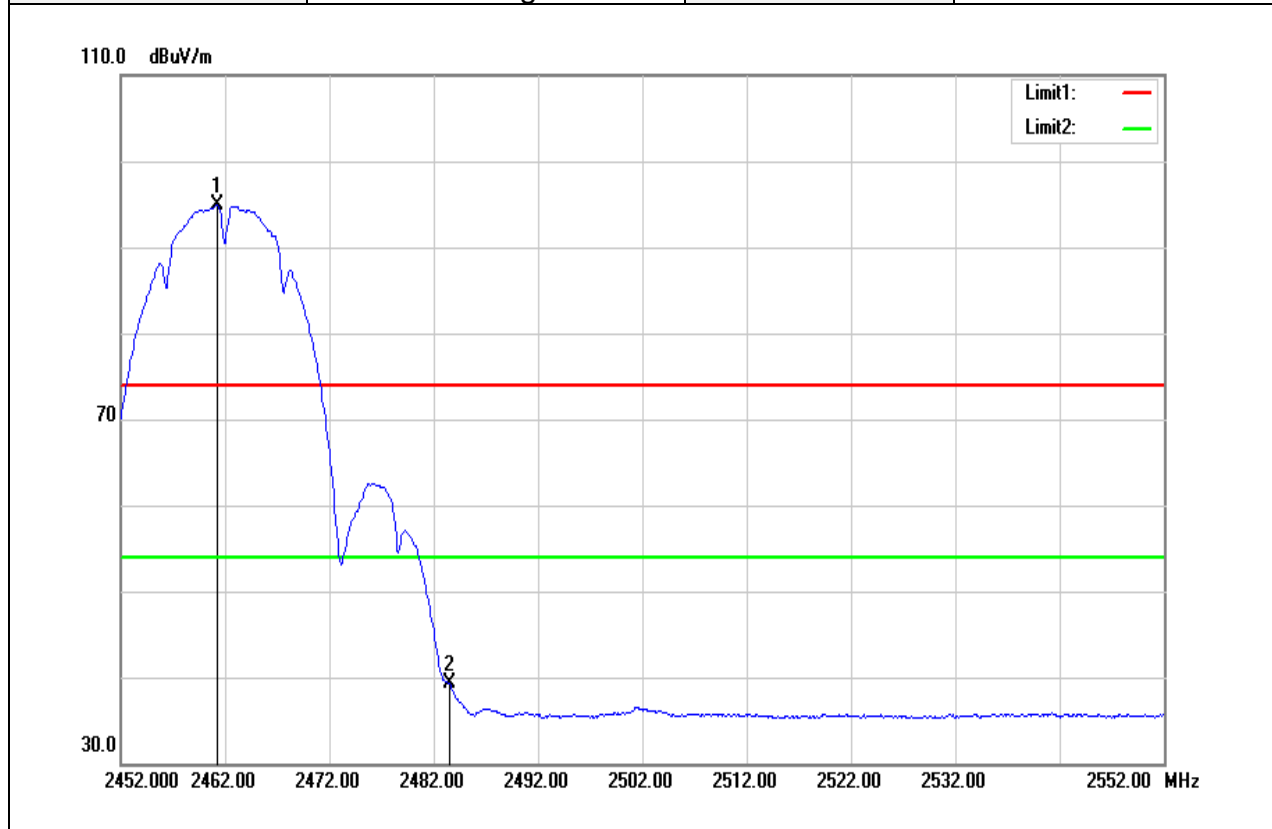
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2386.944	53.29	-2.99	50.30	54.00	-3.70	AVG
2411.248	97.74	-2.92	94.82	-	-	AVG

Test Mode	IEEE 802.11b High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak	-	



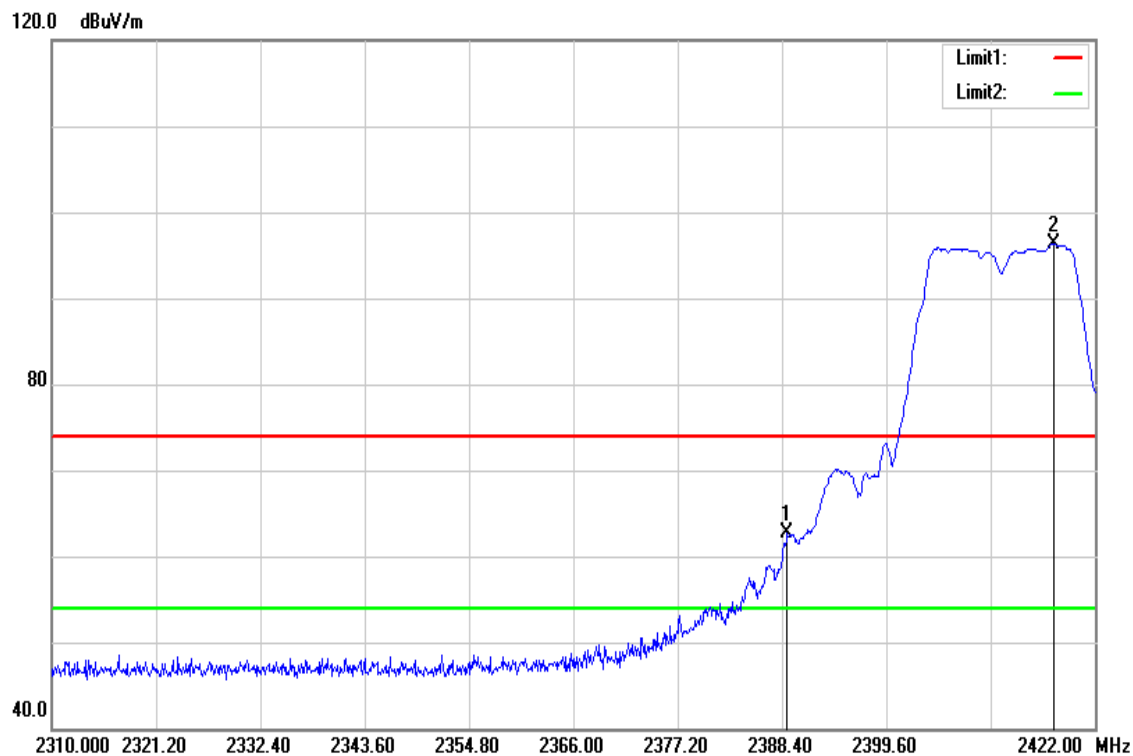
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2462.000	101.18	-2.76	98.42	-	-	peak
2523.800	52.52	-2.69	49.83	74.00	-24.17	peak

Test Mode	IEEE 802.11b High CH	Temperature:	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Average		



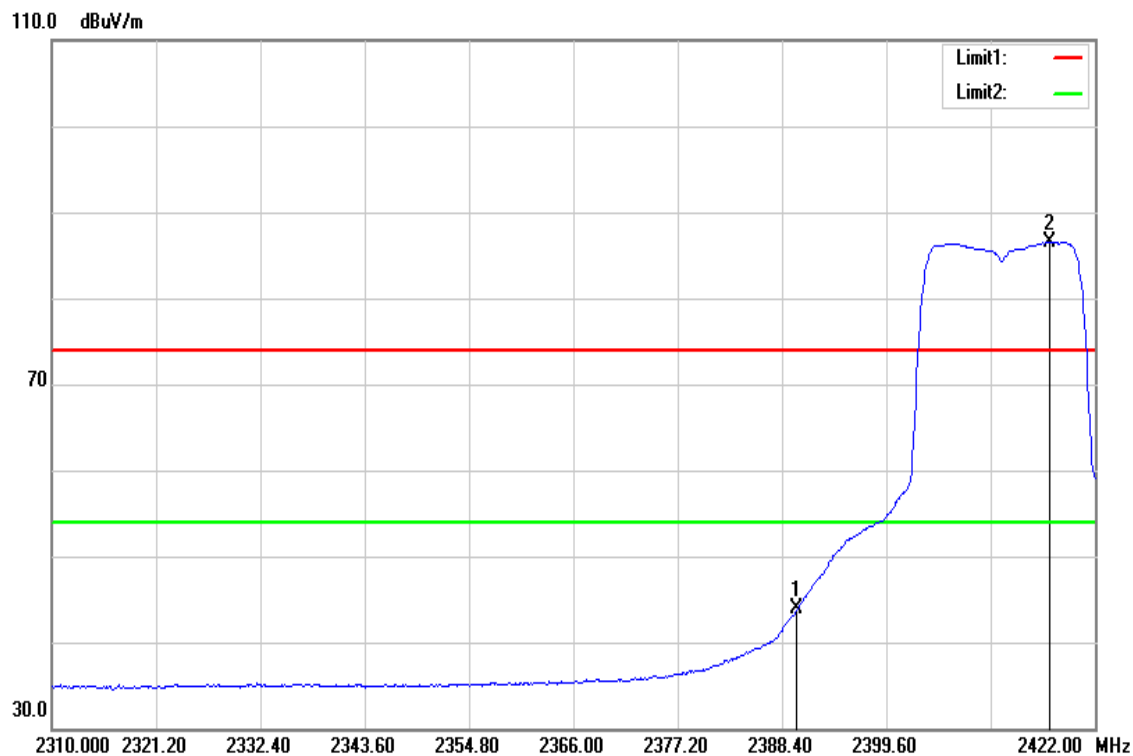
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2461.200	97.71	-2.76	94.95	-	-	AVG
2525.000	41.96	-2.69	39.27	54.00	-14.73	AVG

Test Mode	IEEE 802.11g Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak		



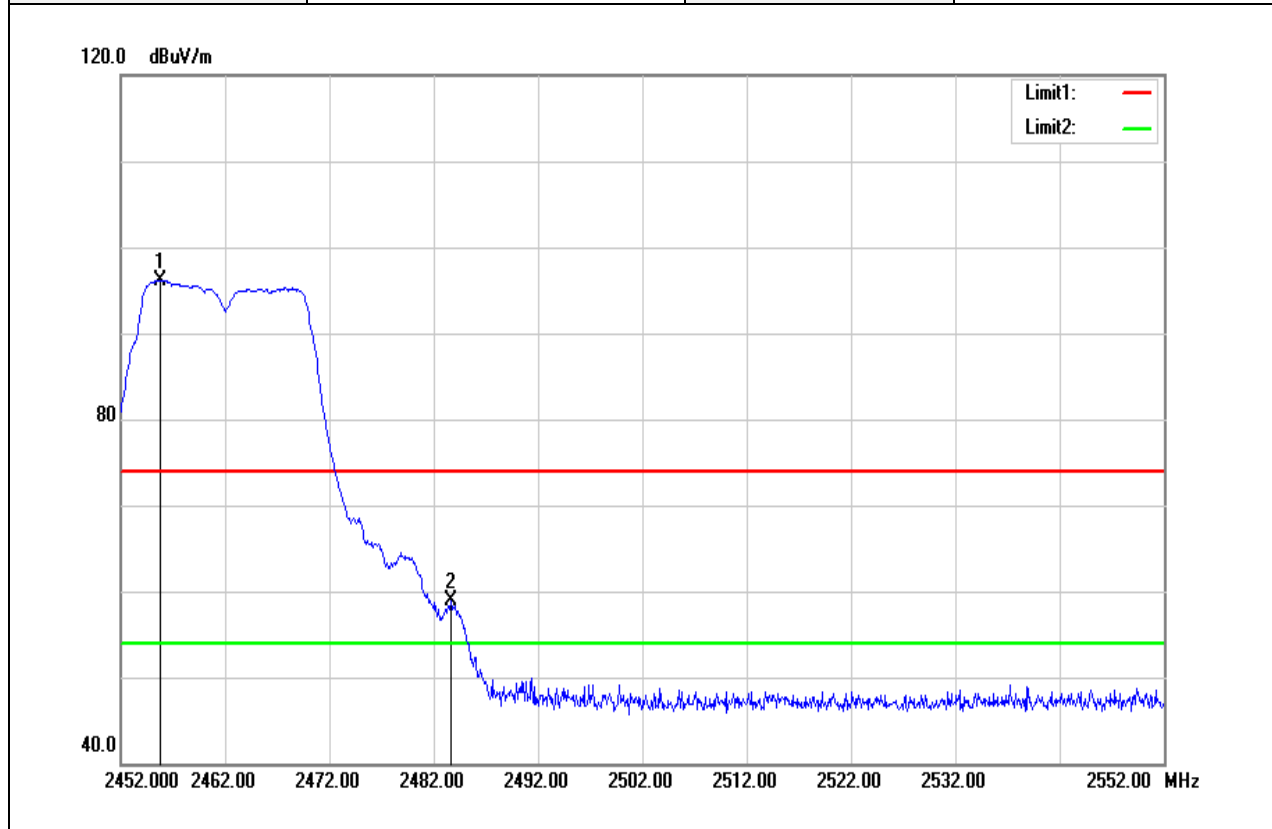
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2387.616	65.66	-2.98	62.68	74.00	-11.32	peak
2419.088	99.14	-2.89	96.25	-	-	peak

Test Mode	IEEE 802.11g Low CH	Temperature:	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Average		



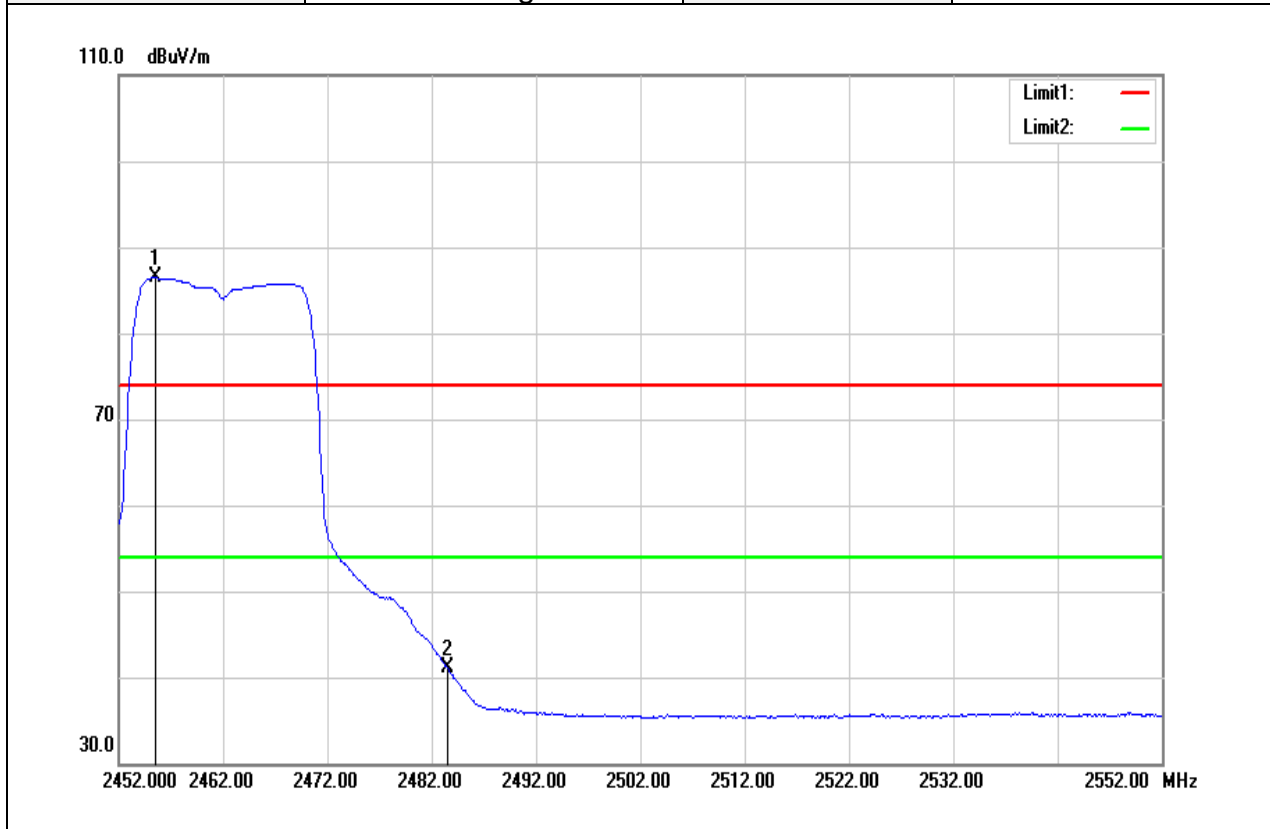
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	46.95	-2.98	43.97	54.00	-10.03	AVG
2418.304	89.43	-2.90	86.53	-	-	AVG

Test Mode	IEEE 802.11g High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak		



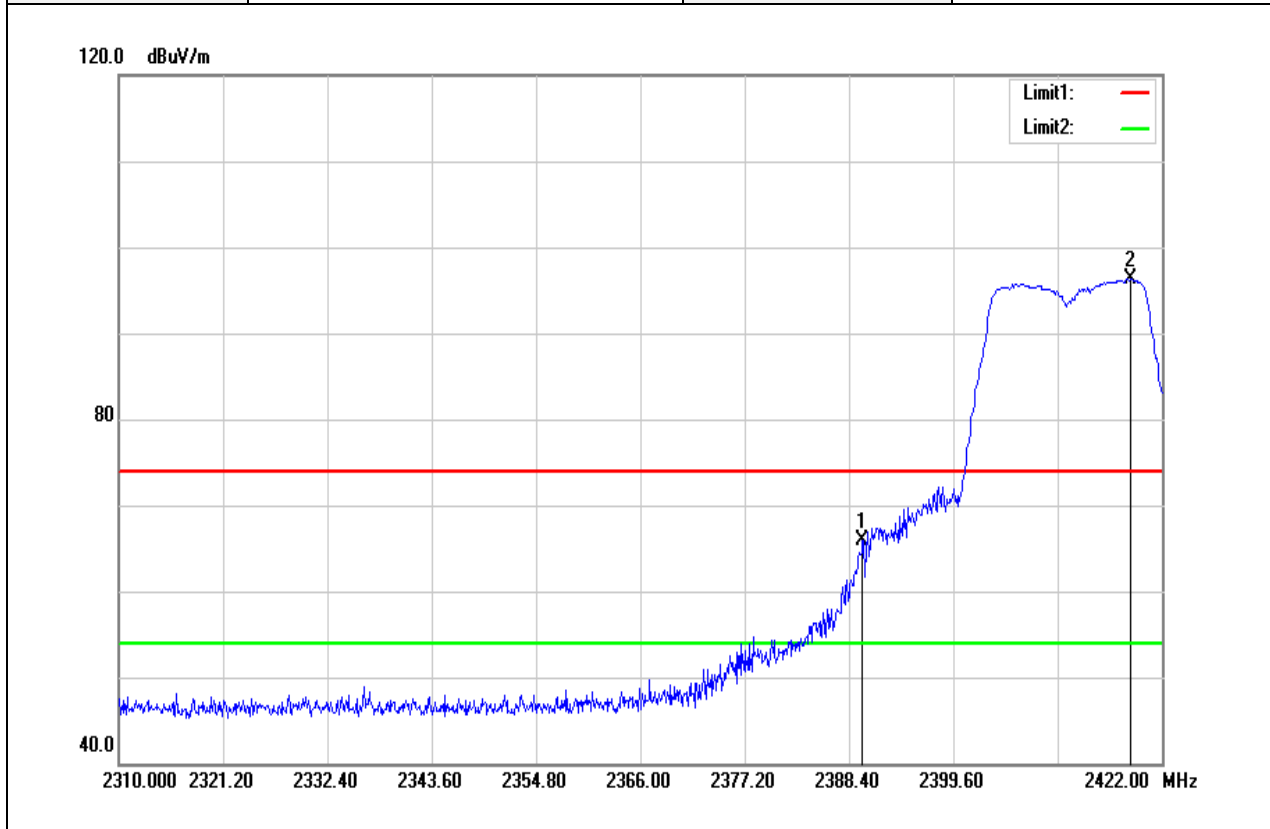
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2455.000	98.89	-2.78	96.11	-	-	peak
2525.300	61.50	-2.69	58.81	74.00	-15.19	peak

Test Mode	IEEE 802.11g High CH	Temperature:	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Average		



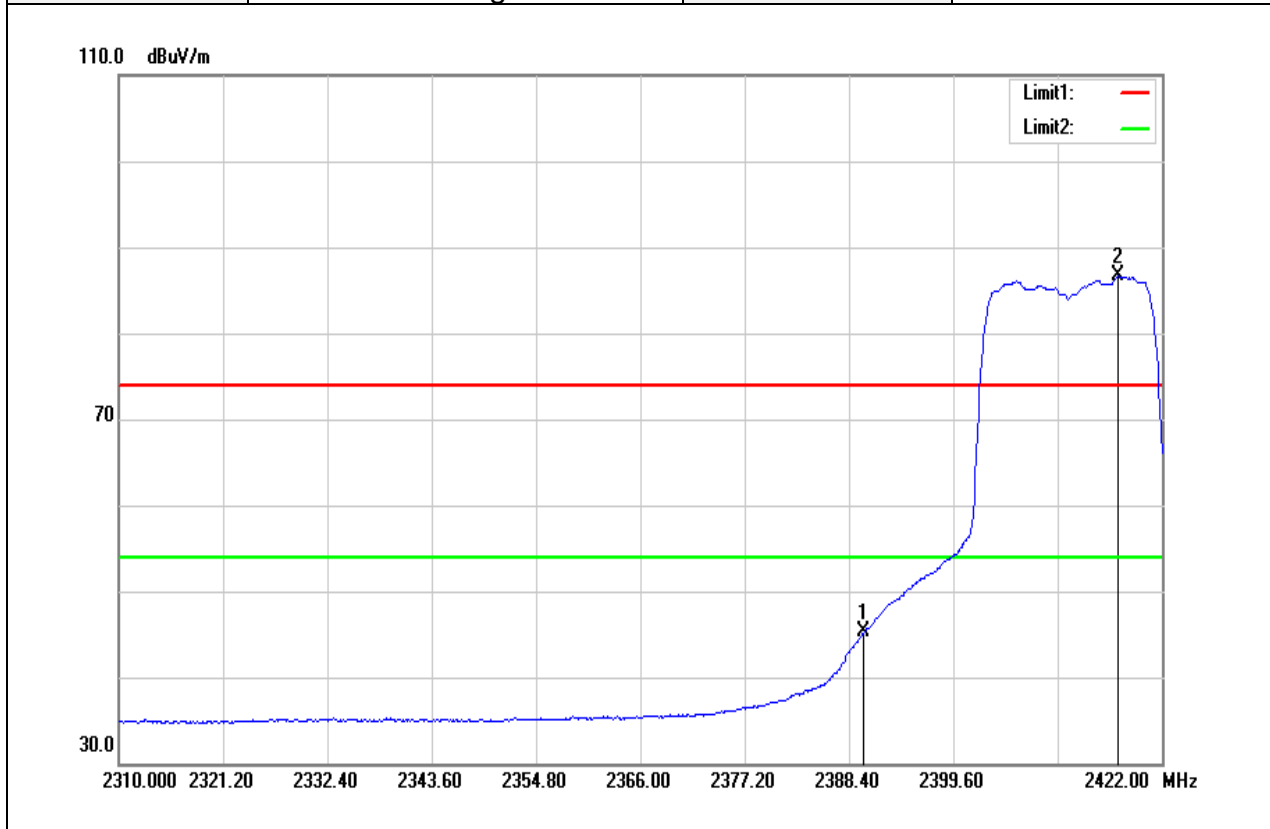
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2456.100	89.24	-2.78	86.46	-	-	AVG
2483.700	43.71	-2.69	41.02	54.00	-12.98	AVG

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak		



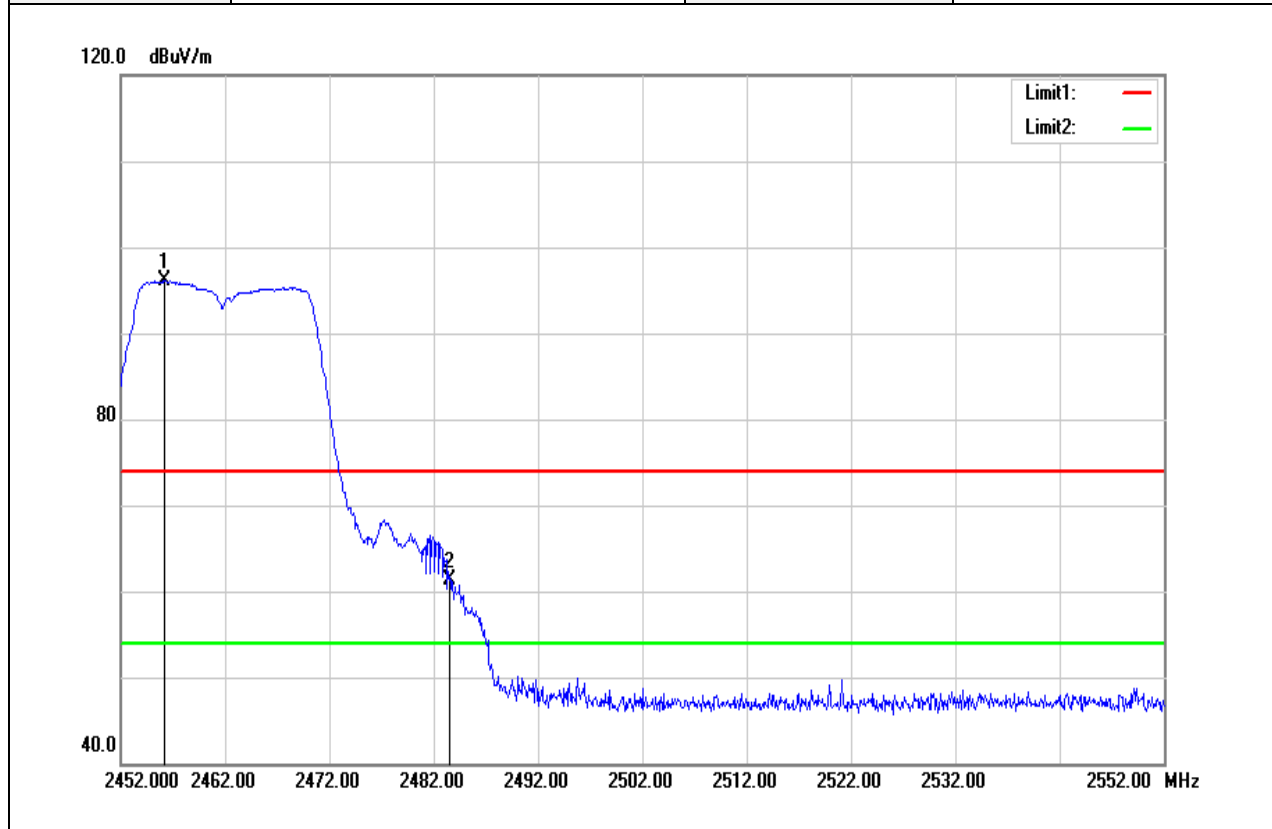
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2388.288	68.82	-2.98	65.84	74.00	-8.16	peak
2418.304	99.14	-2.89	96.25	-	-	peak

Test Mode	IEEE 802.11n HT20 Low CH	Temperature:	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Average		



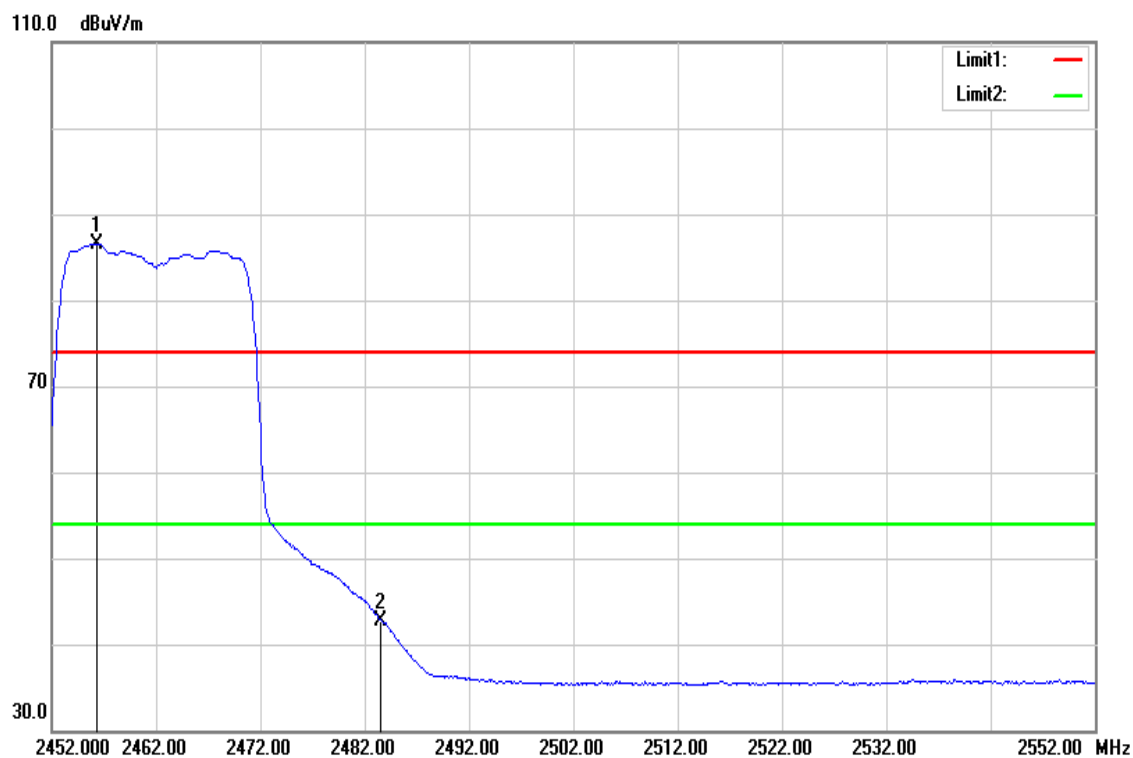
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	48.27	-2.98	45.29	54.00	-8.71	AVG
2405.424	89.51	-2.90	86.61	-	-	AVG

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak		



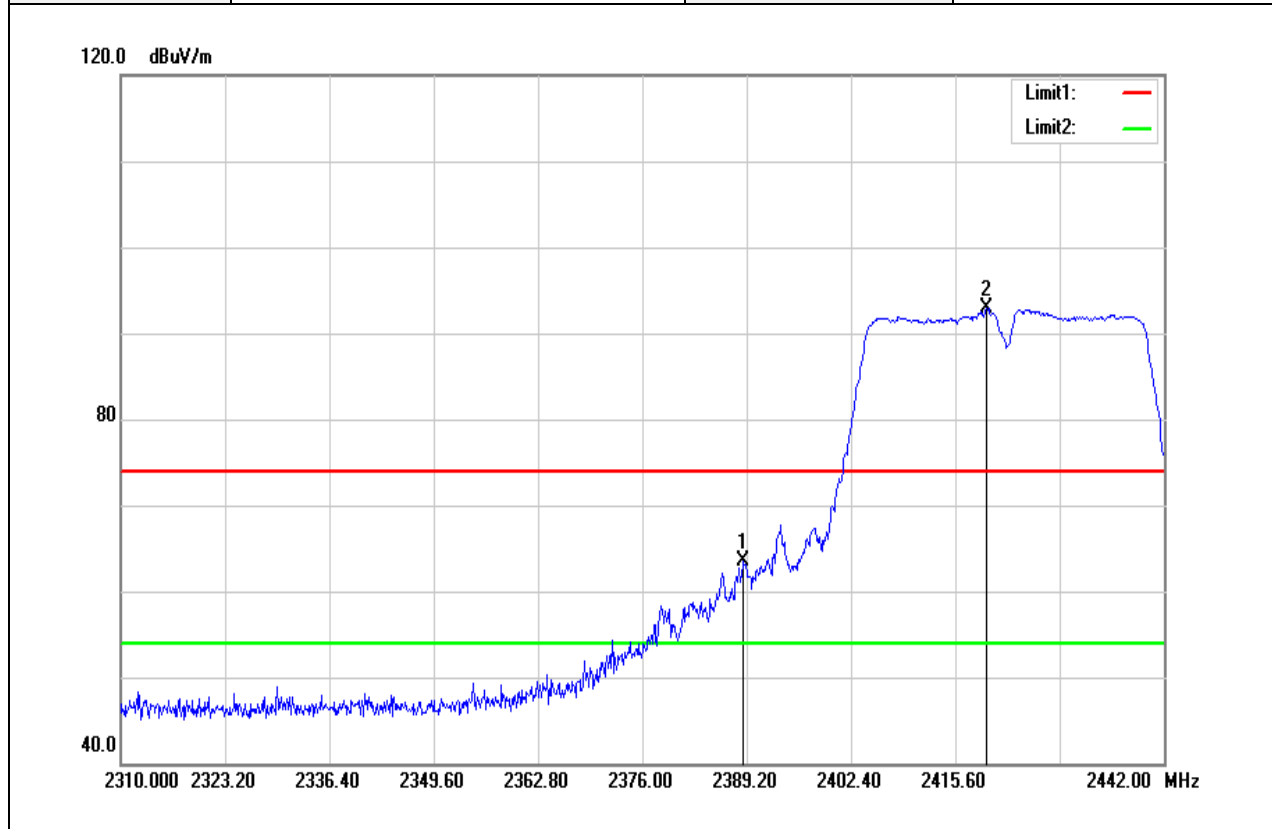
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2458.600	98.85	-2.78	96.07	-	-	peak
2484.500	64.04	-2.69	61.35	74.00	-12.65	peak

Test Mode	IEEE 802.11n HT20 High CH	Temperature:	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Average		



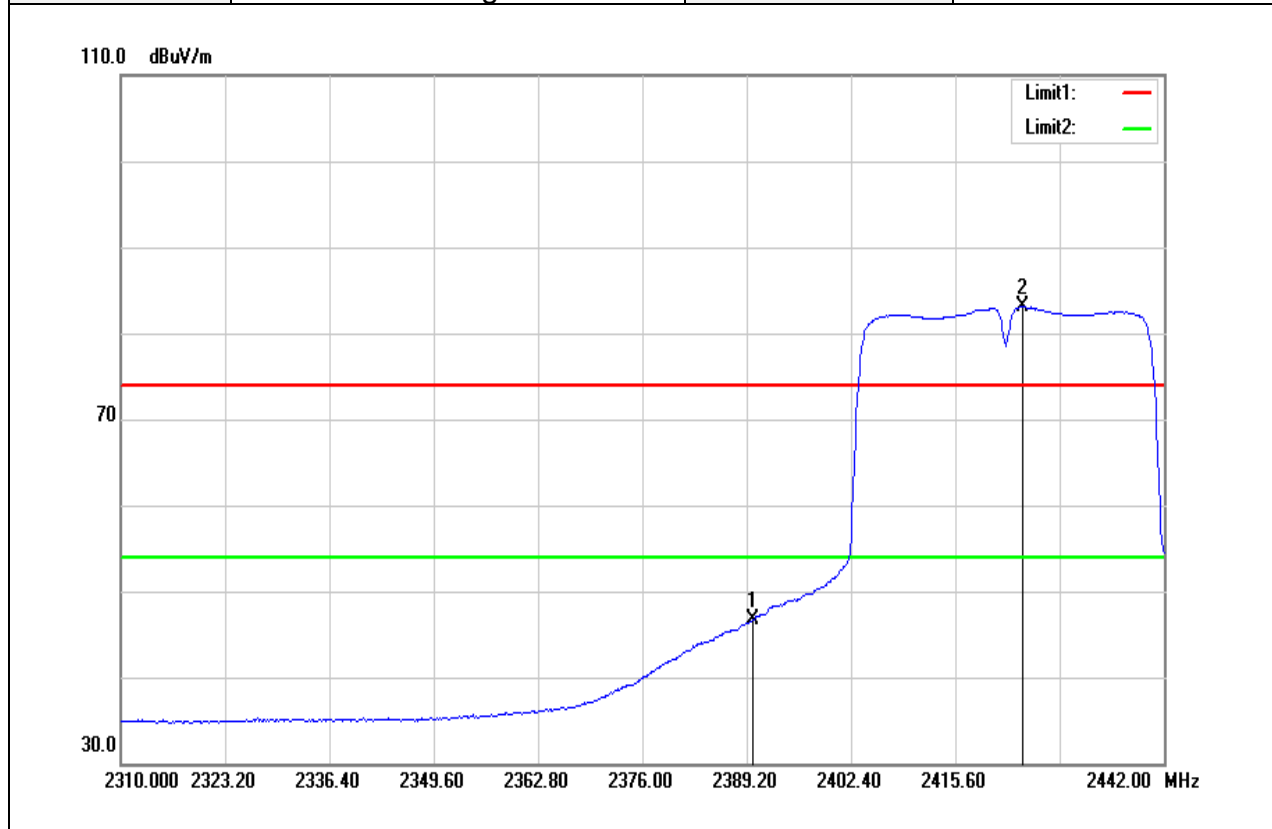
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2456.400	89.33	-2.78	86.55	-	-	AVG
2483.600	45.49	-2.69	42.80	54.00	-11.20	AVG

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak		



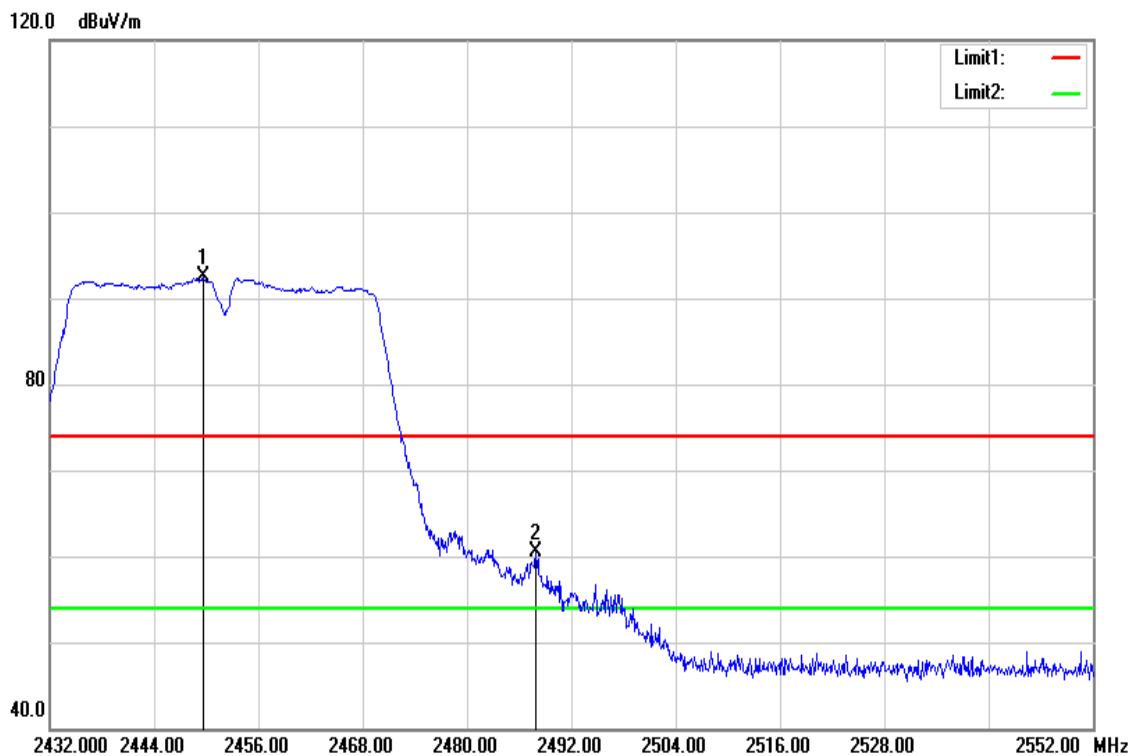
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.596	66.57	-2.98	63.59	74.00	-10.41	peak
2429.988	95.81	-2.89	92.92	-	-	peak

Test Mode	IEEE 802.11n HT20 Low CH	Temperature:	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Average		



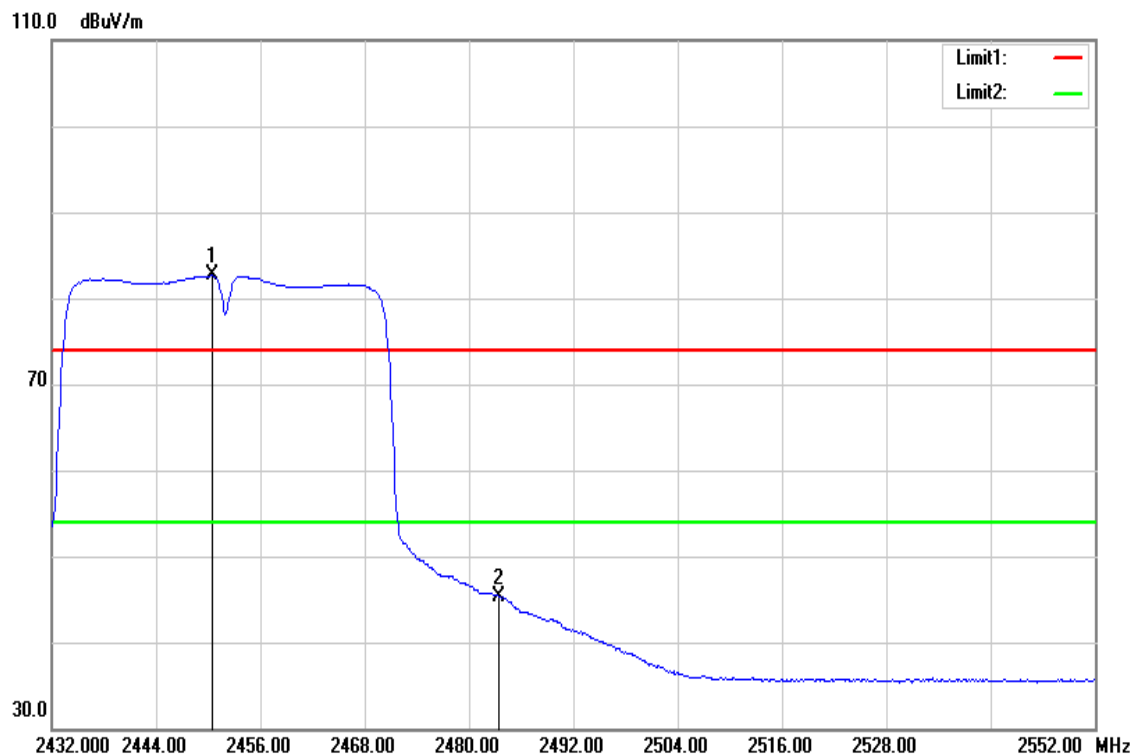
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	49.77	-2.98	46.79	54.00	-7.21	AVG
2436.324	85.92	-2.87	83.05	-	-	AVG

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2449.640	95.26	-2.79	92.47	-	-	peak
2483.500	63.12	-2.67	60.45	74.00	-13.55	peak

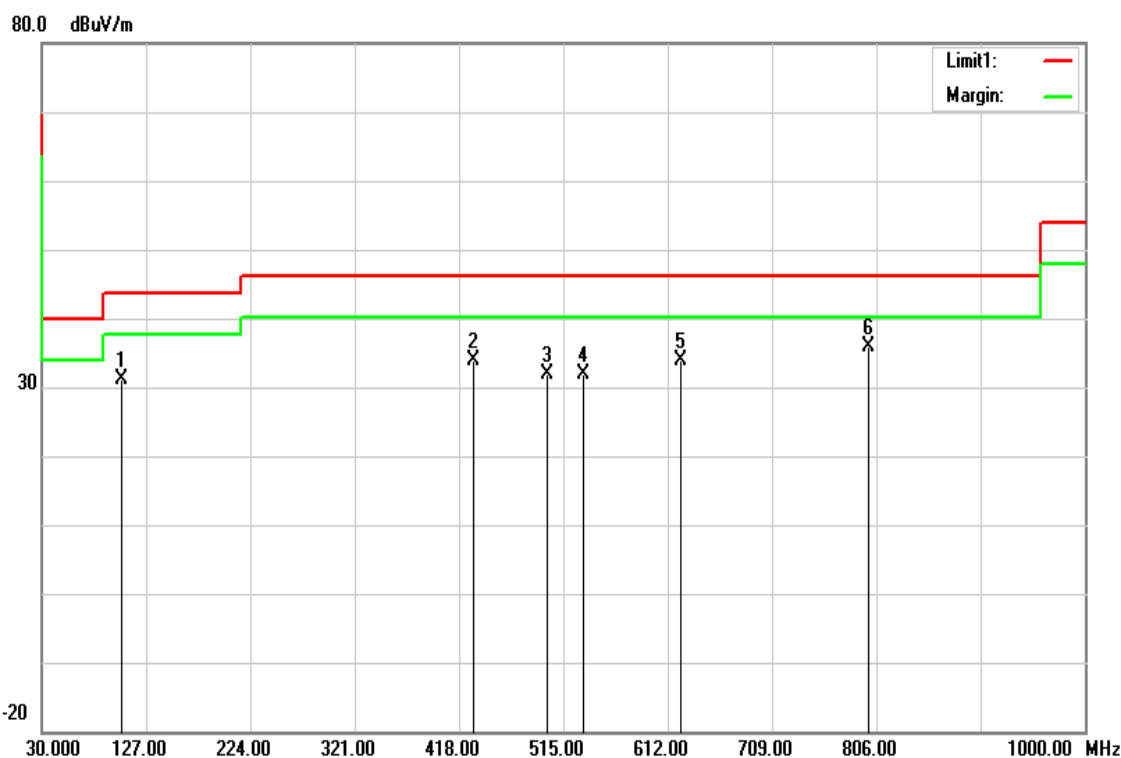
Test Mode	IEEE 802.11n HT40 High CH	Temperature:	24(°C)/ 33%RH
Test Item	Band Edge	Test Date	November 30, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2450.480	85.43	-2.79	82.64	-	-	AVG
2483.500	47.98	-2.69	45.29	54.00	-8.71	AVG

Below 1G Test Data

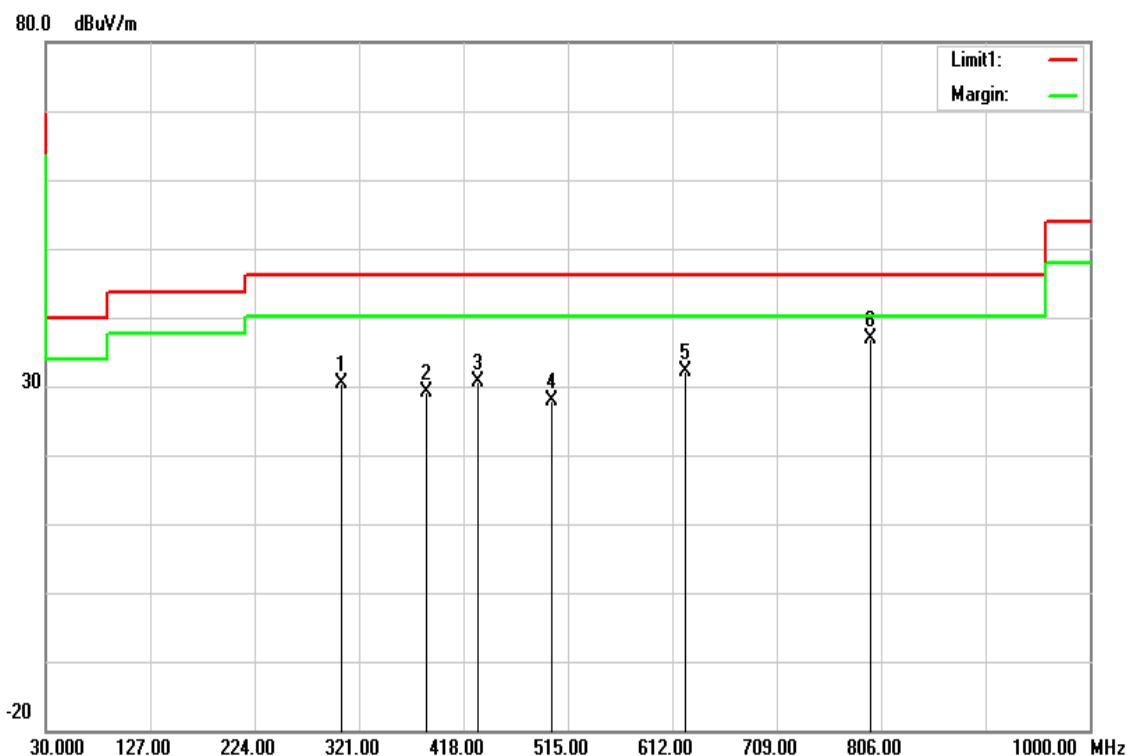
Test Mode	Mode 1	Temp/Hum	24(°C)/ 33%RH
Test Item	30MHz-1GHz	Test Date	December 1, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
103.7200	49.11	-17.91	31.20	43.52	-12.32	peak
431.5800	44.18	-10.25	33.93	46.02	-12.09	peak
500.4500	40.41	-8.48	31.93	46.02	-14.09	peak
533.4300	39.69	-7.86	31.83	46.02	-14.19	peak
623.6400	40.26	-6.27	33.99	46.02	-12.03	peak
799.2100	39.35	-3.39	35.96	46.02	-10.06	peak

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

Test Mode	Mode 1	Temp/Hum	24(°C)/ 33%RH
Test Item	30MHz-1GHz	Test Date	December 1, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak		

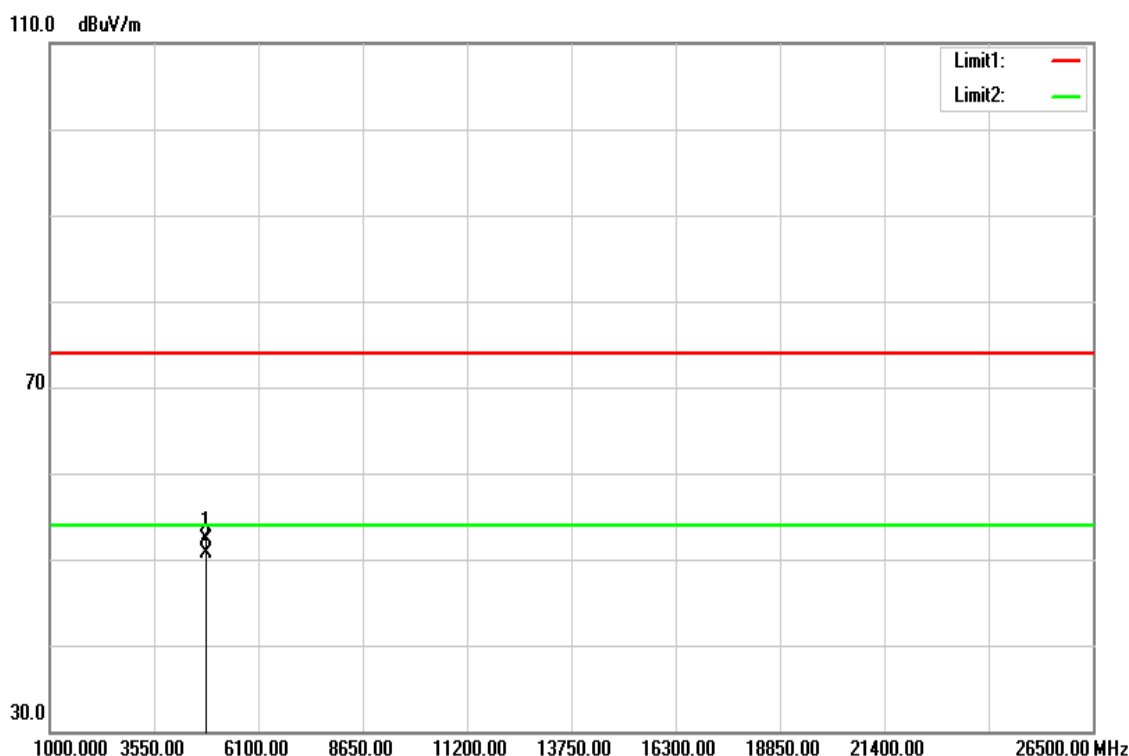


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
304.5100	44.46	-13.97	30.49	46.02	-15.53	peak
384.0500	40.97	-11.90	29.07	46.02	-16.95	peak
431.5800	40.88	-10.25	30.63	46.02	-15.39	peak
500.4500	36.27	-8.48	27.79	46.02	-18.23	peak
623.6400	38.38	-6.27	32.11	46.02	-13.91	peak
796.3000	40.30	-3.44	36.86	46.02	-9.16	peak

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

Above 1G Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

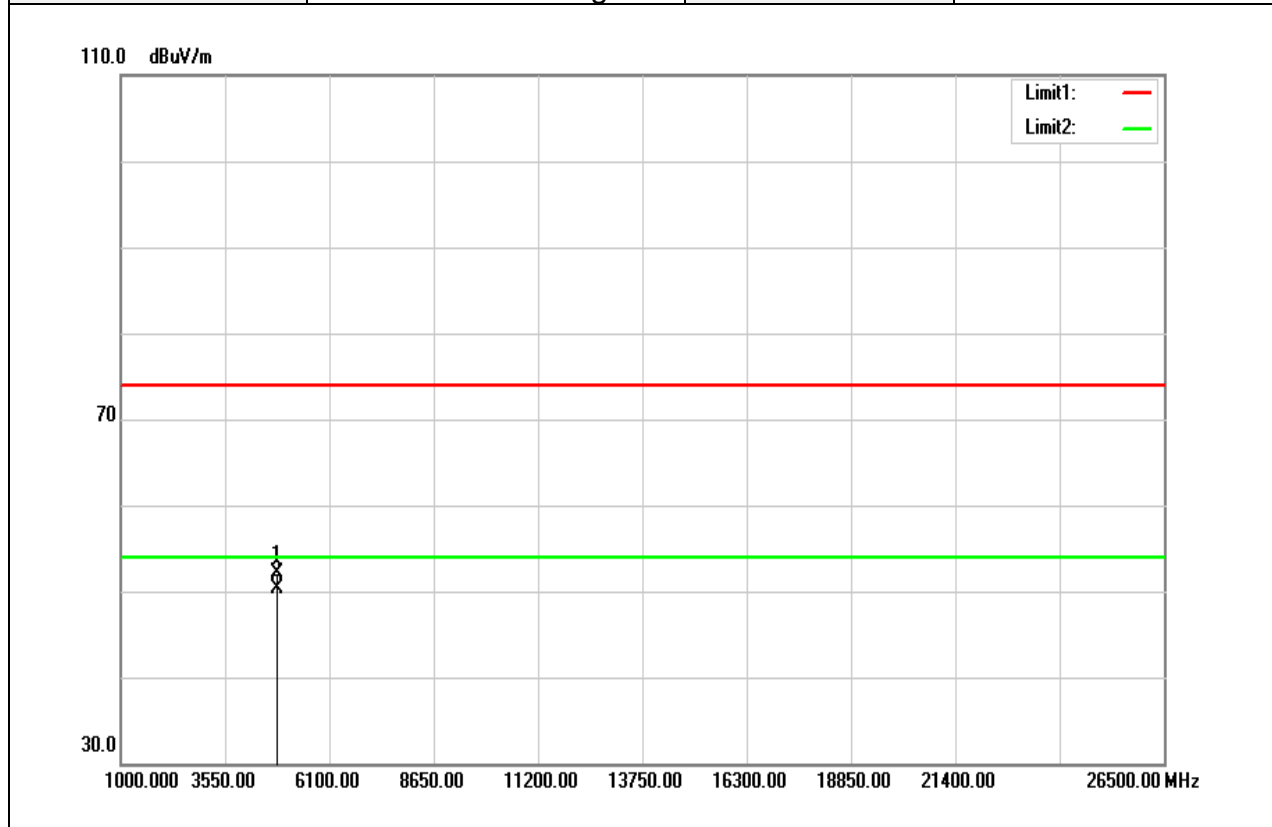


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	47.98	4.38	52.36	74.00	-21.64	peak
4827.000	46.42	4.38	50.80	54.00	-3.20	AVG

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 802.11b Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

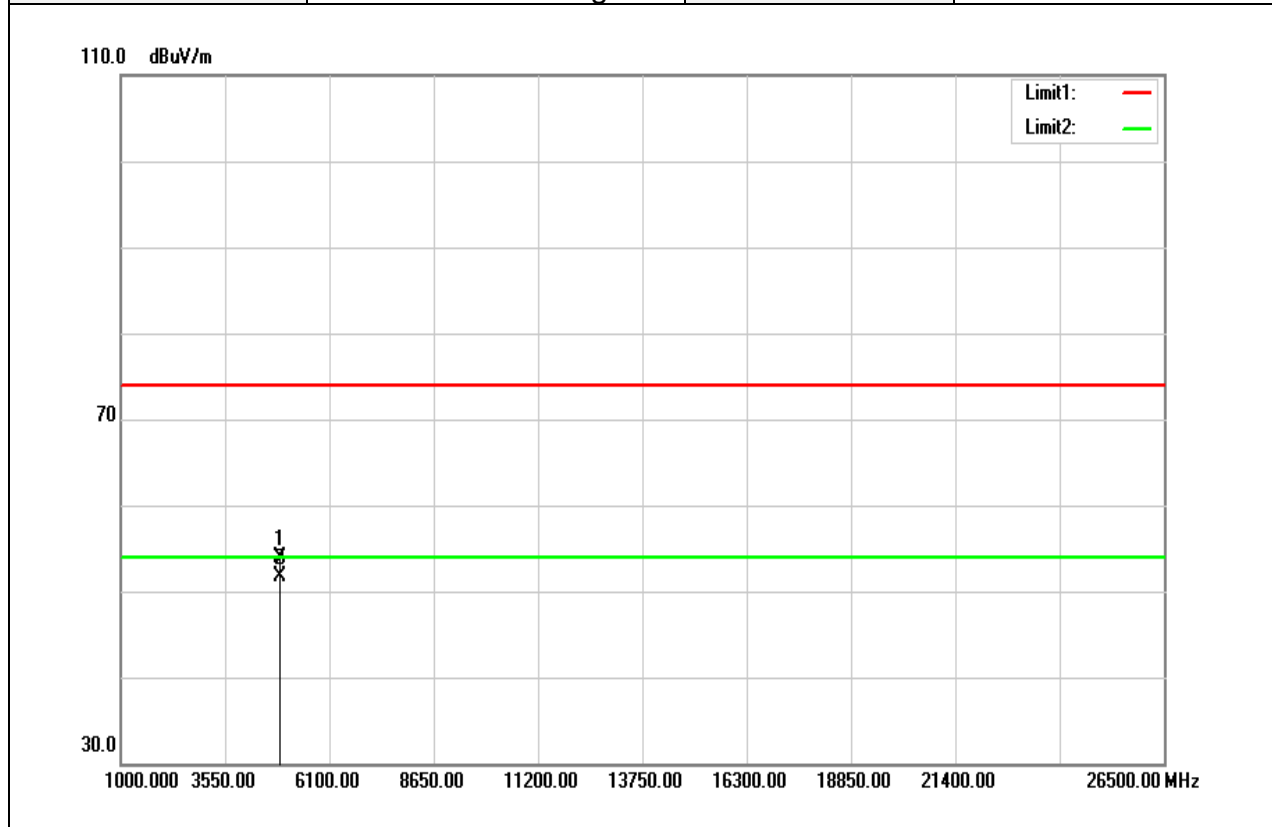


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	47.64	4.38	52.02	74.00	-21.98	peak
4827.000	45.96	4.38	50.34	54.00	-3.66	AVG

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 802.11b Mid CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

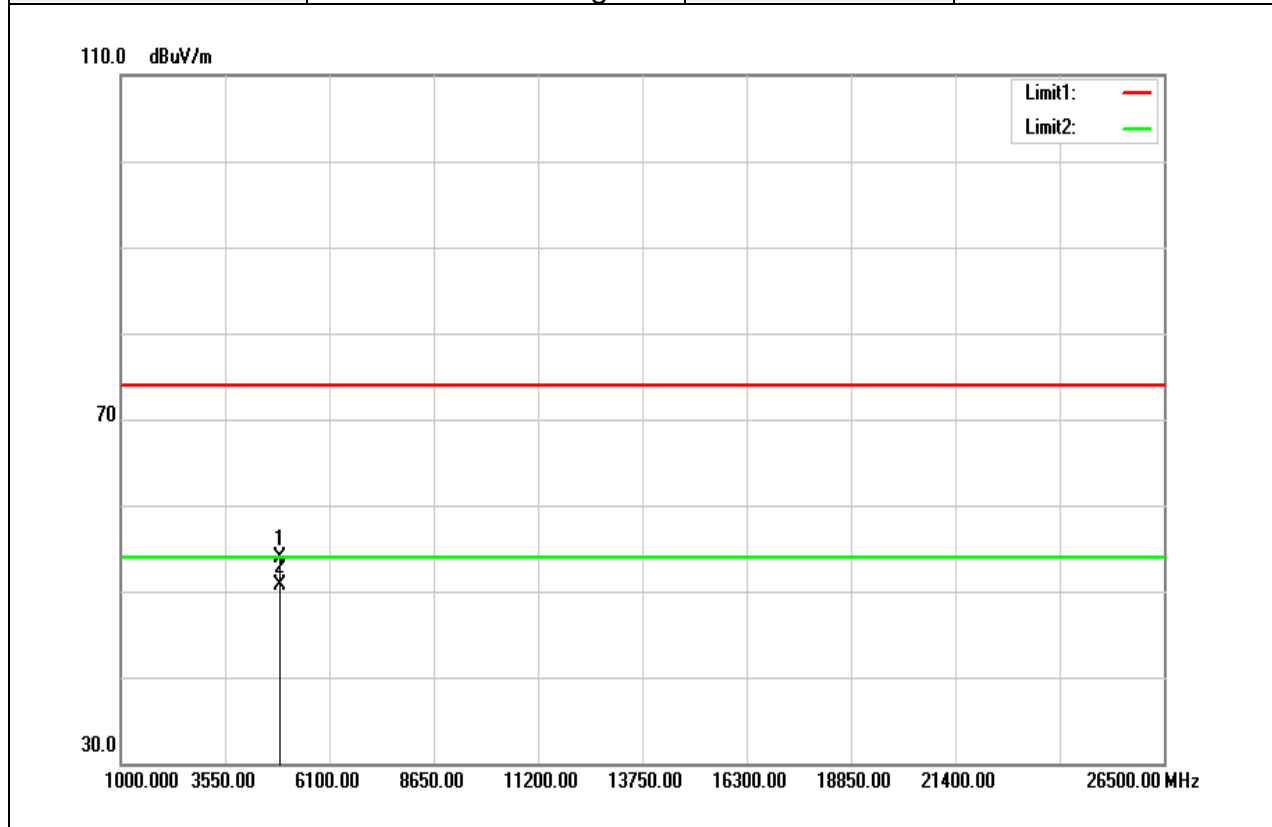


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	49.51	4.47	53.98	74.00	-20.02	peak
4876.000	47.19	4.47	51.66	54.00	-2.34	AVG

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 802.11b Mid CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

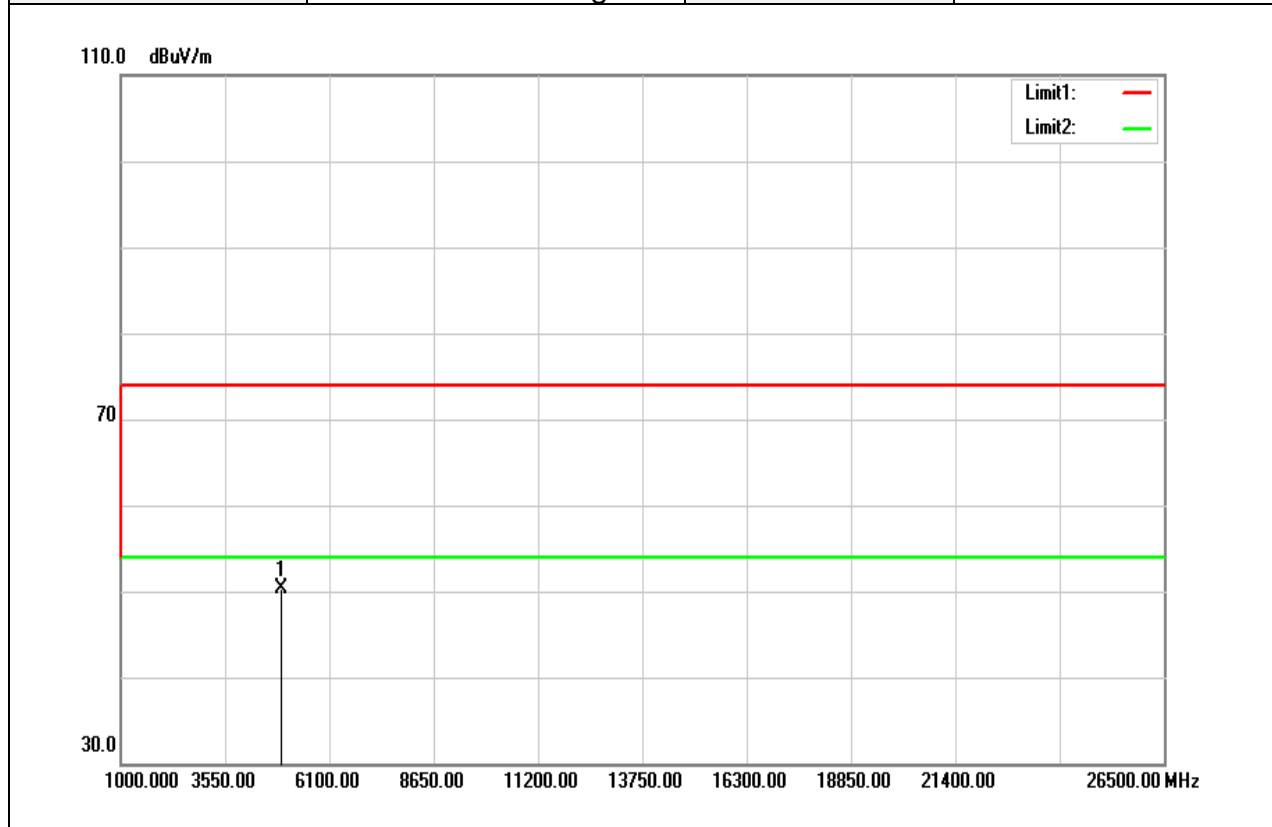


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	49.43	4.47	53.90	74.00	-20.10	peak
4876.000	46.31	4.47	50.78	54.00	-3.22	AVG

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 802.11b High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

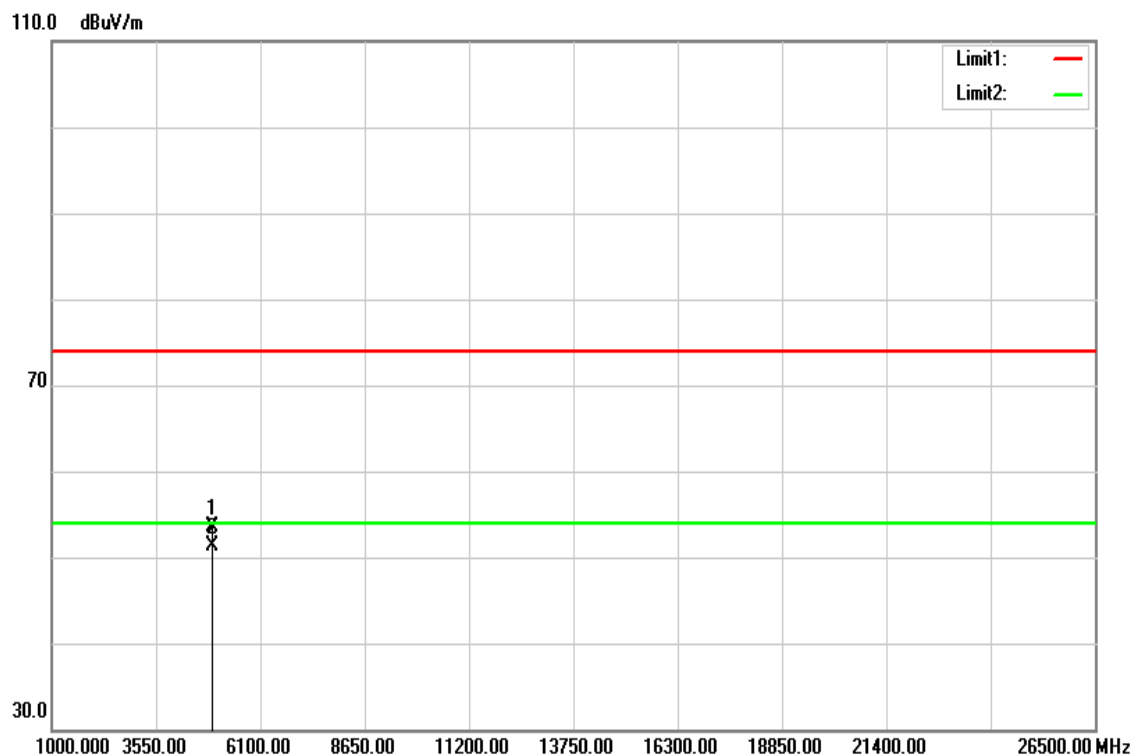


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4925.000	49.90	4.55	54.45	74.00	-19.55	peak
4925.000	46.62	4.55	51.17	54.00	-2.83	AVG

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 802.11b High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

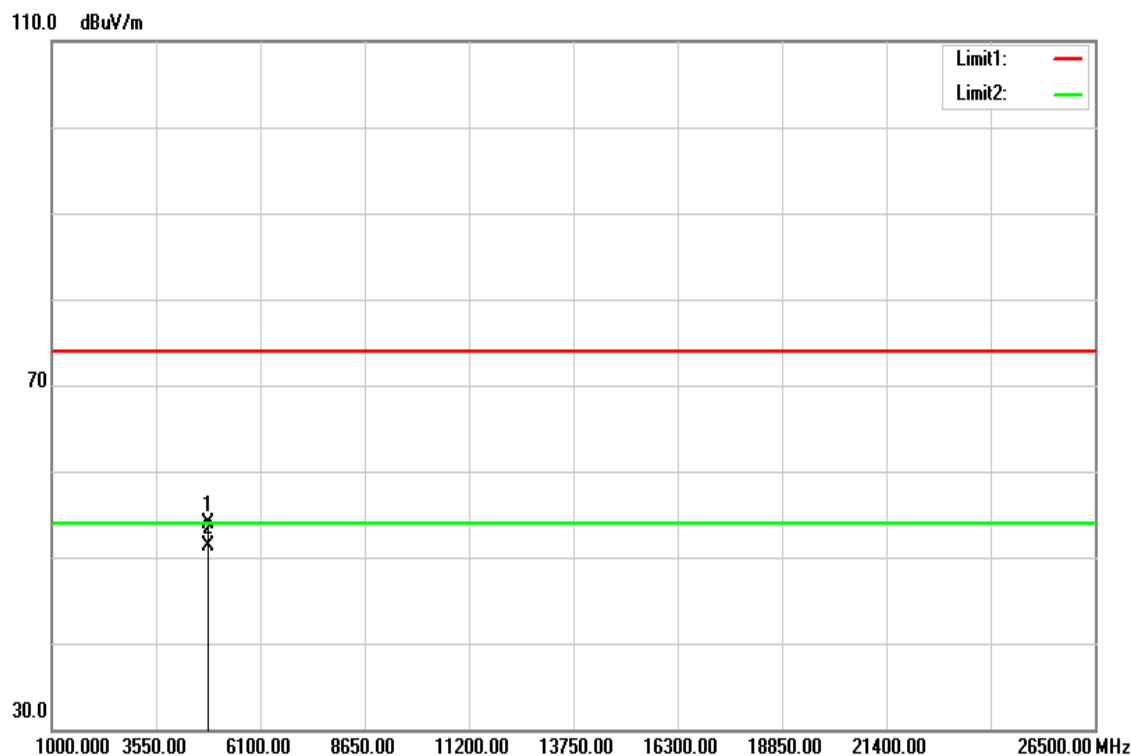


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4925.000	48.96	4.55	53.51	74.00	-20.49	peak
4925.000	46.65	4.55	51.20	54.00	-2.80	AVG

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 802.11g Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

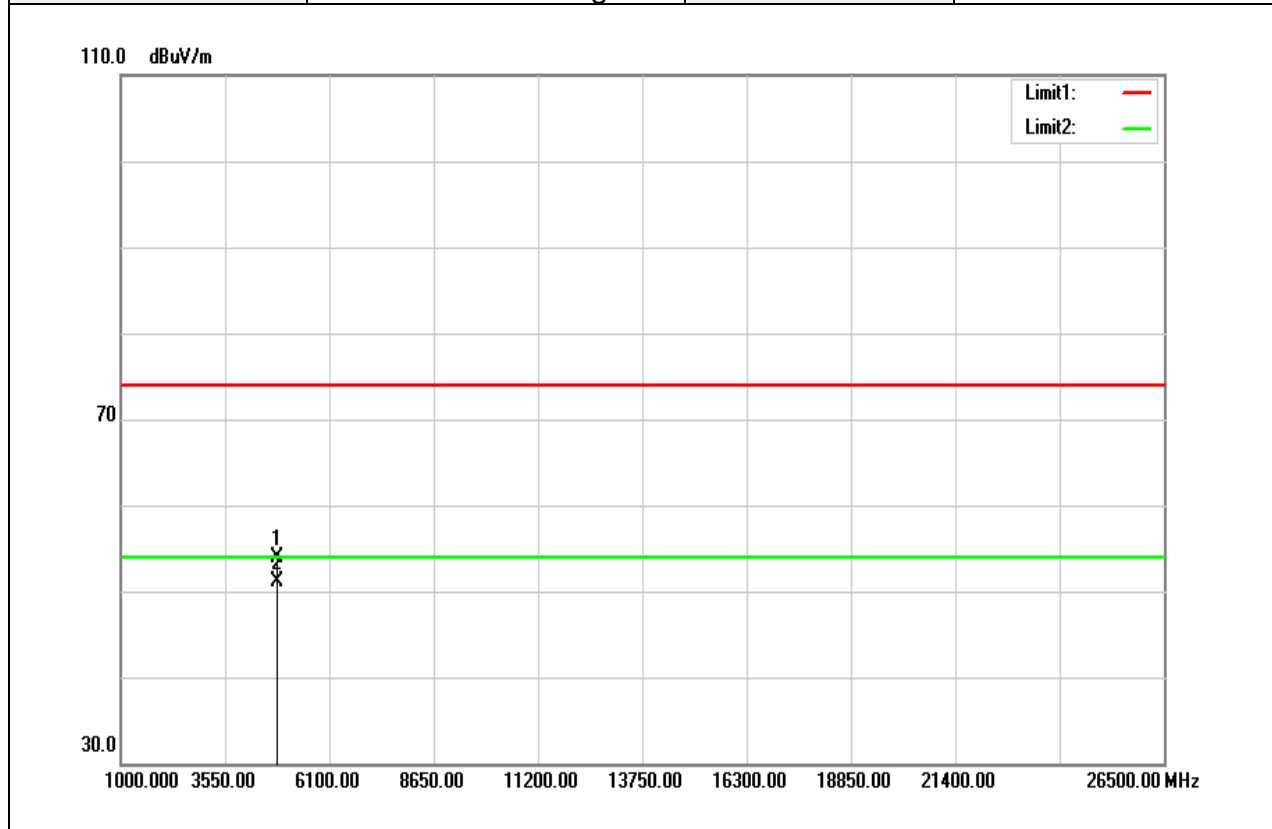


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	49.43	4.38	53.81	74.00	-20.19	peak
4827.000	46.85	4.38	51.23	54.00	-2.77	AVG

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 802.11g Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

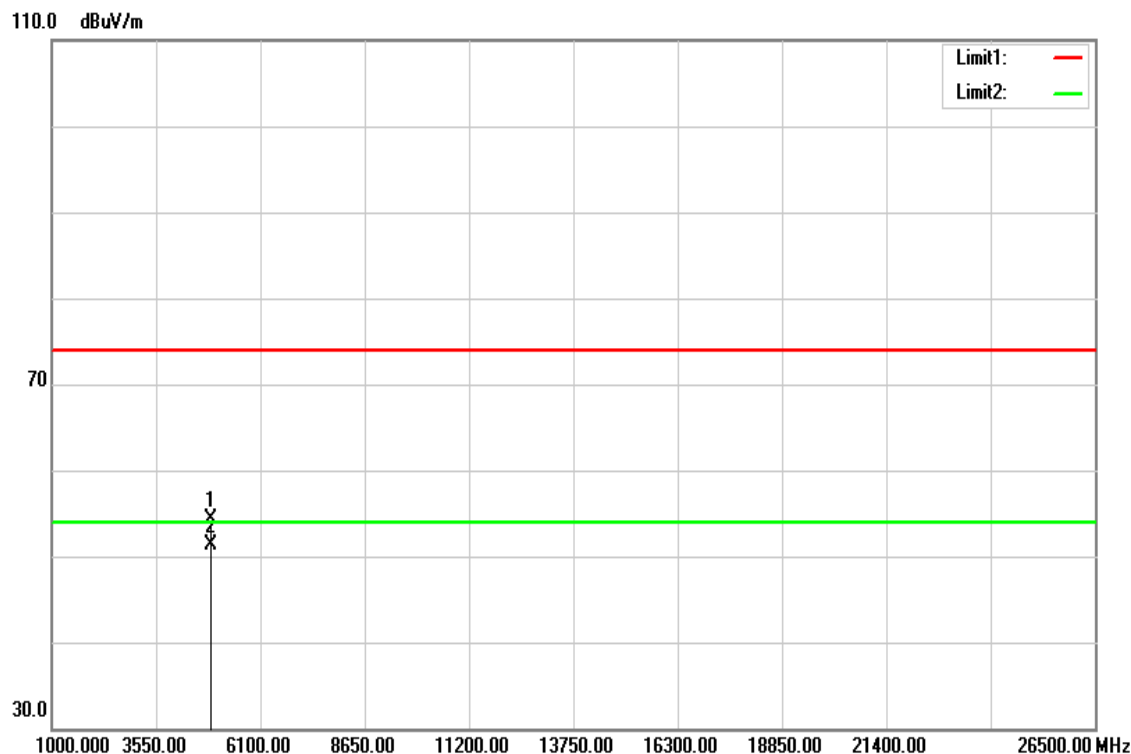


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4820.000	49.45	4.36	53.81	74.00	-20.19	peak
4820.000	46.75	4.36	51.11	54.00	-2.89	AVG

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 802.11g Mid CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

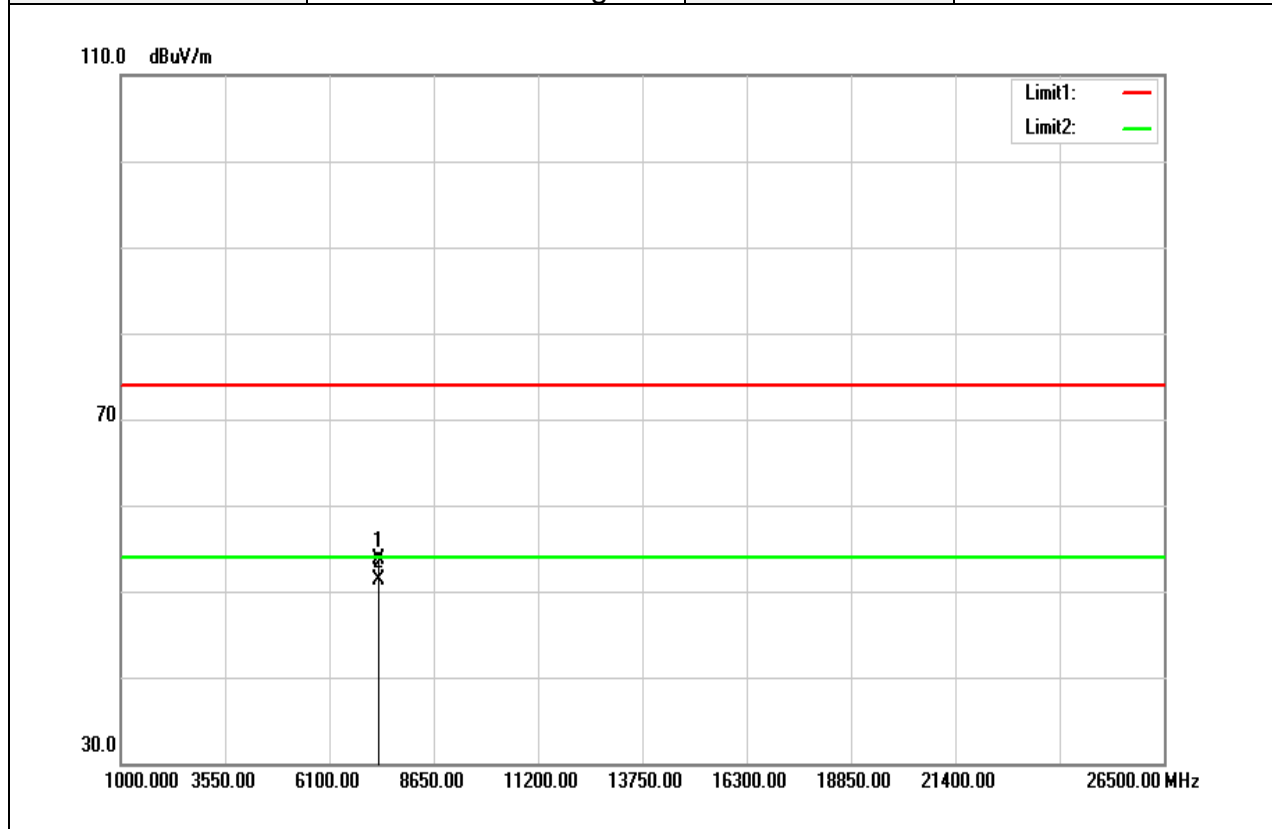


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	49.87	4.47	54.34	74.00	-19.66	peak
4876.000	46.74	4.47	51.21	54.00	-2.79	AVG

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 802.11g Mid CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

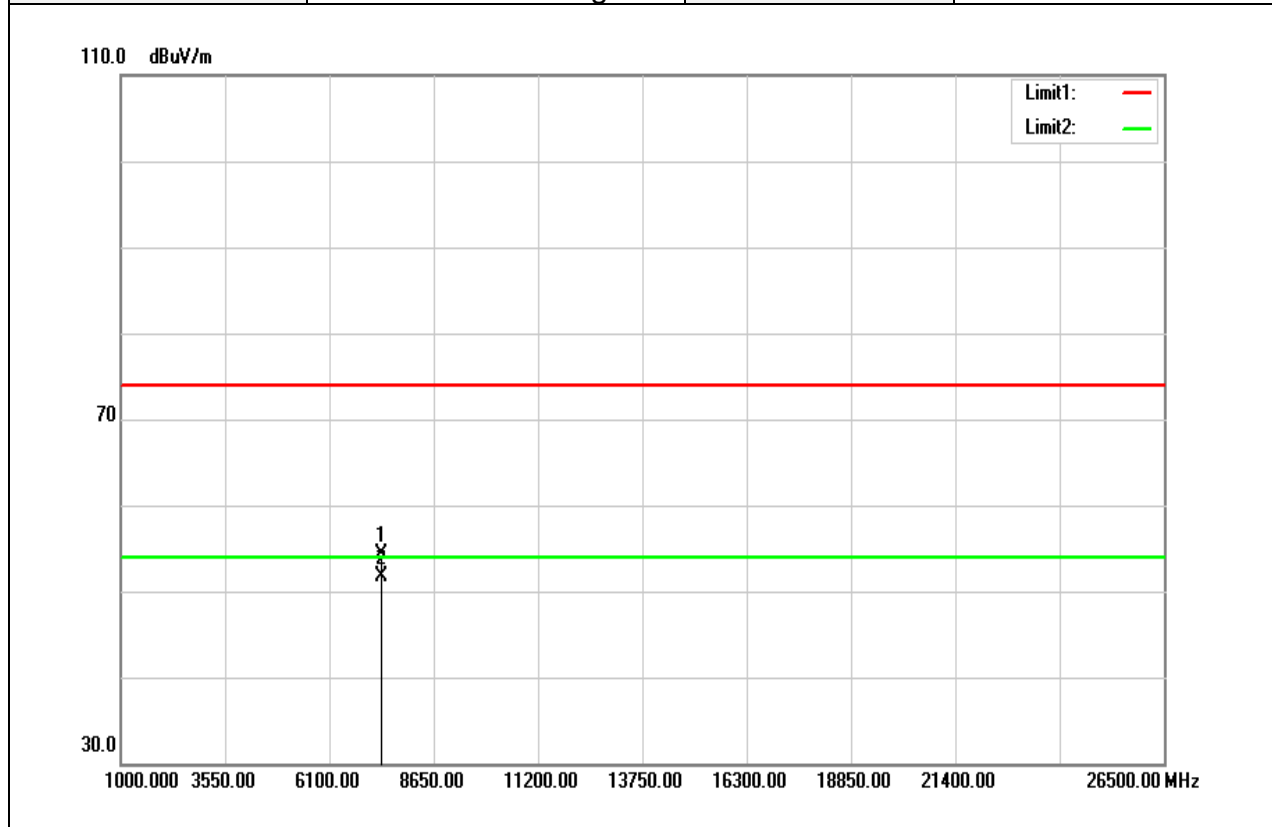


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
7312.000	43.32	10.44	53.76	74.00	-20.24	peak
7312.000	40.92	10.44	51.36	54.00	-2.64	AVG

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 802.11g High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

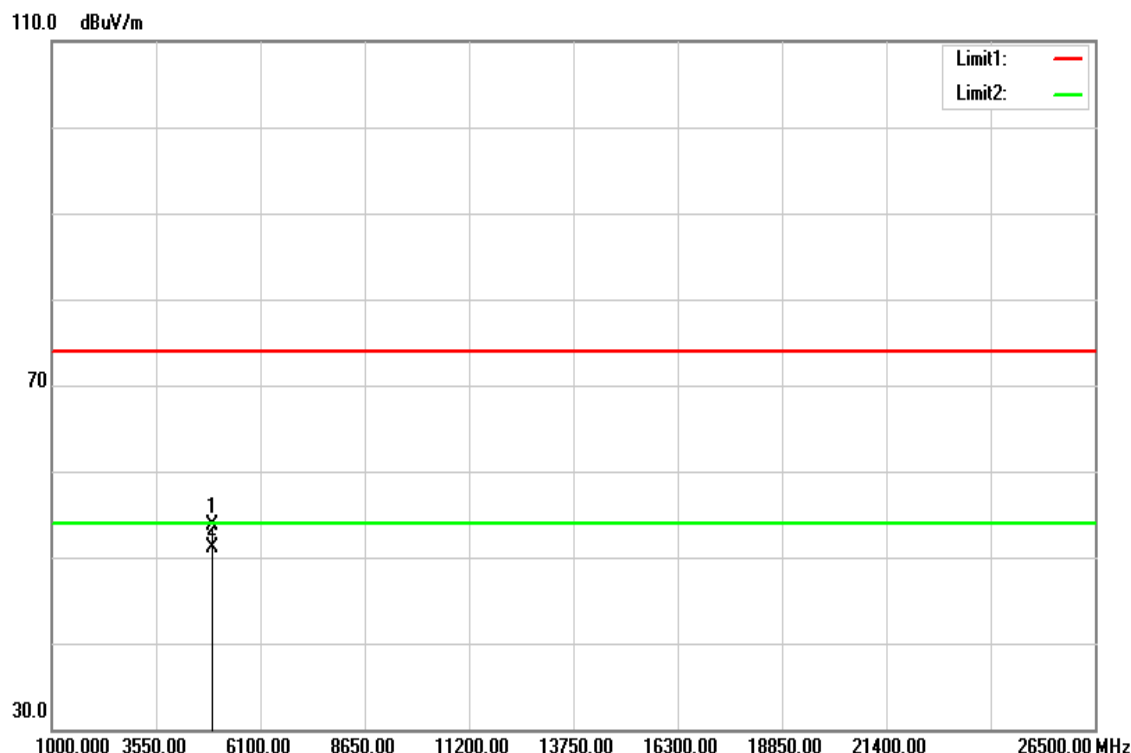


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
7389.000	43.90	10.49	54.39	74.00	-19.61	peak
7389.000	41.20	10.49	51.69	54.00	-2.31	AVG

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 802.11g High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

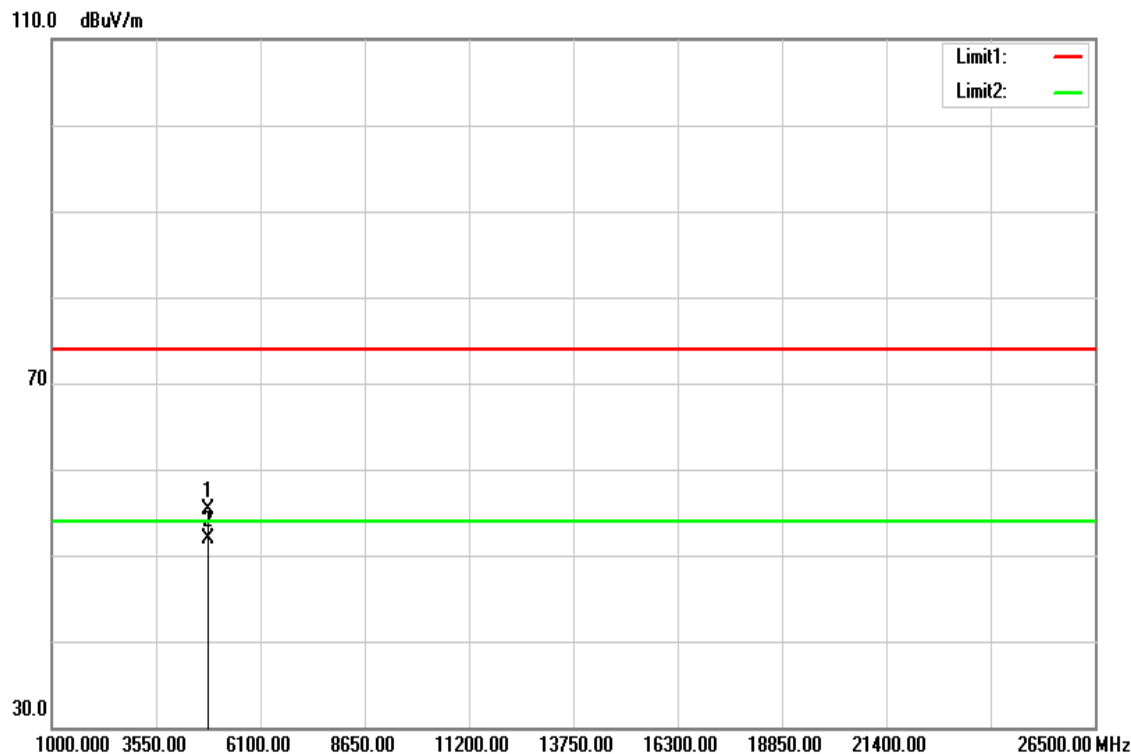


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4925.000	49.25	4.55	53.80	74.00	-20.20	peak
4925.000	46.62	4.55	51.17	54.00	-2.83	AVG

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 Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

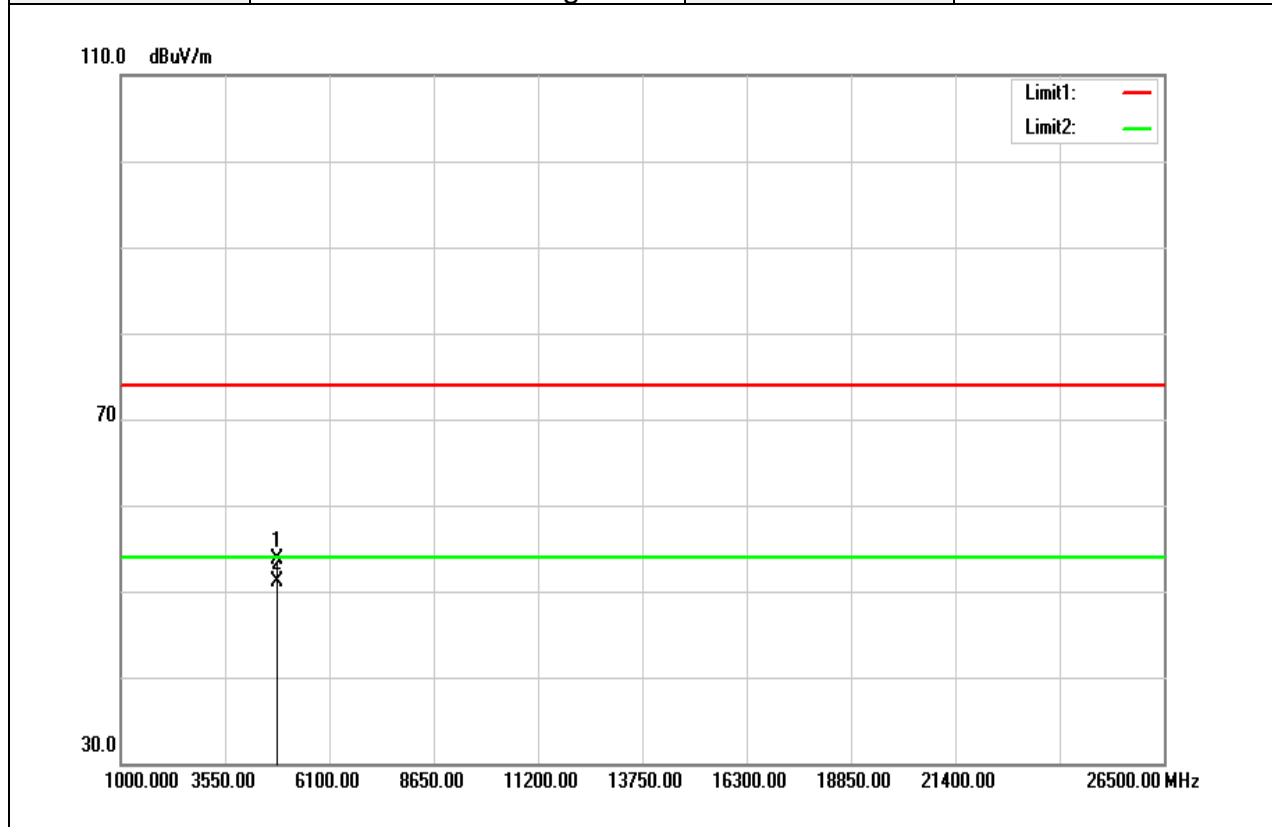


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4834.000	50.93	4.39	55.32	74.00	-18.68	peak
4834.000	47.50	4.39	51.89	54.00	-2.11	AVG

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 Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

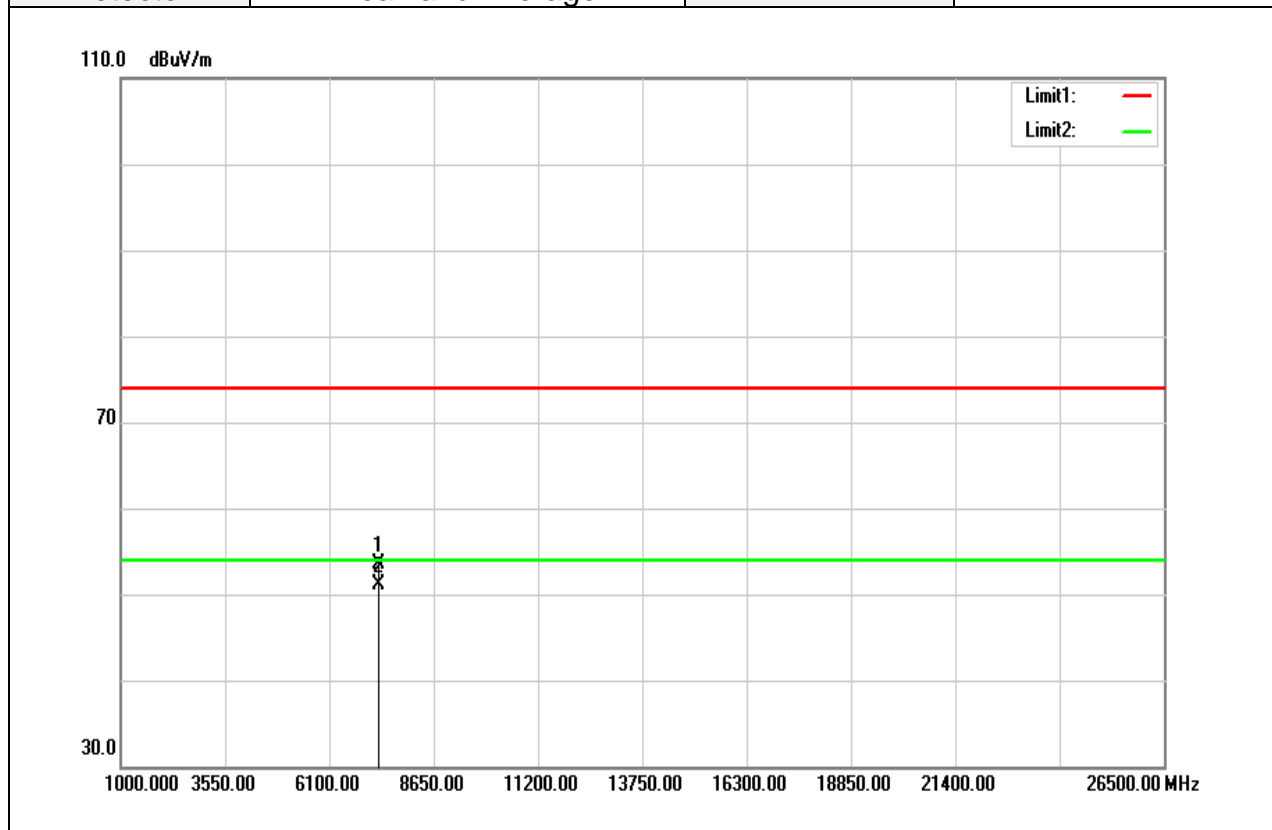


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	49.31	4.38	53.69	74.00	-20.31	peak
4827.000	46.69	4.38	51.07	54.00	-2.93	AVG

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 Mid CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

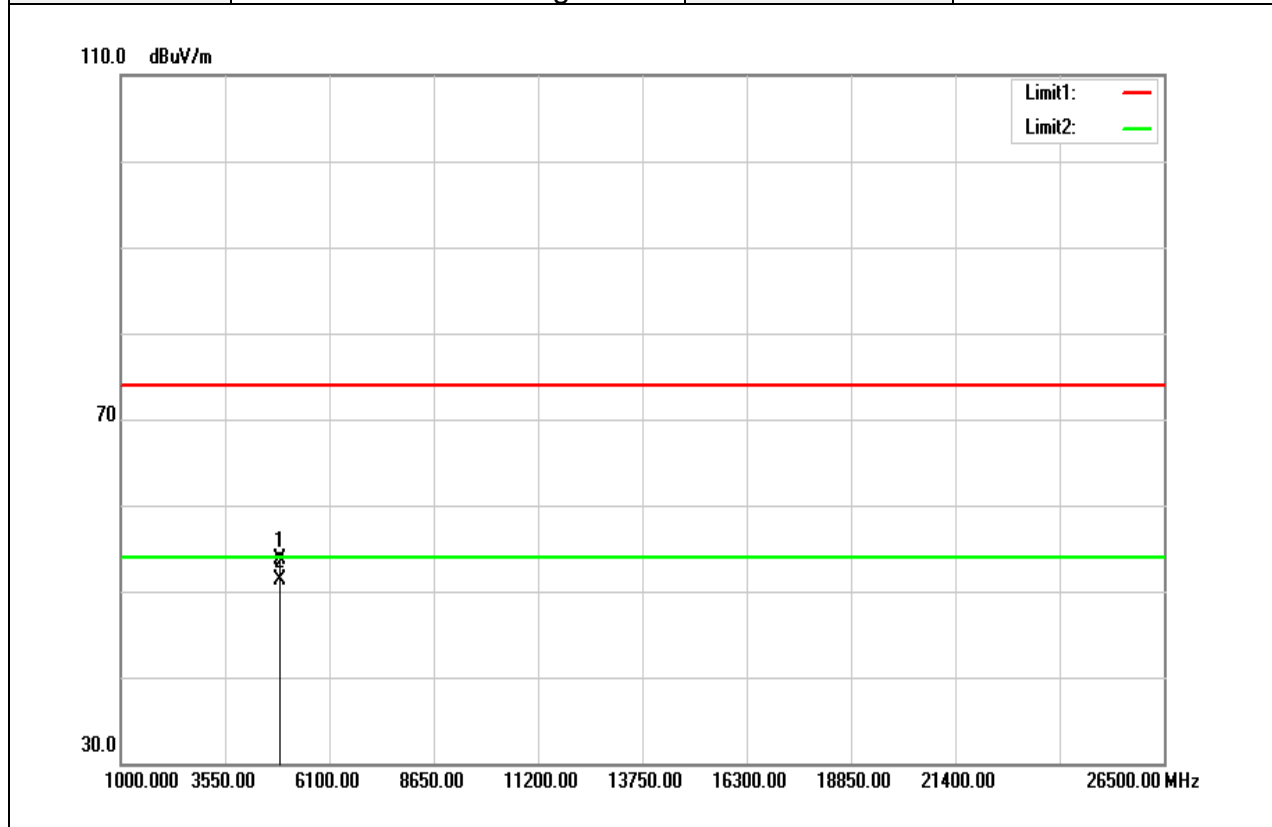


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
7312.000	43.12	10.44	53.56	74.00	-20.44	peak
7312.000	40.65	10.44	51.09	54.00	-2.91	AVG

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 Mid CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

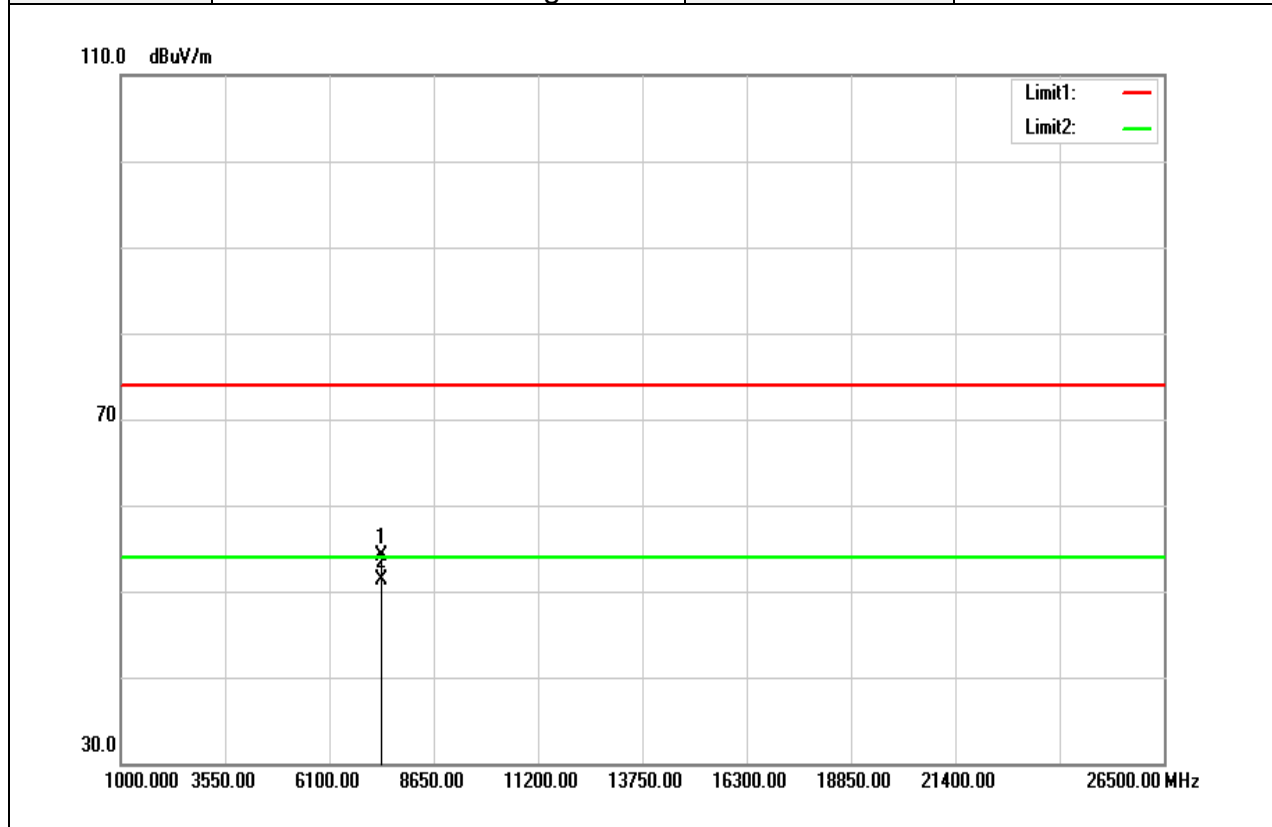


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	49.18	4.47	53.65	74.00	-20.35	peak
4876.000	46.89	4.47	51.36	54.00	-2.64	AVG

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 HT20 High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

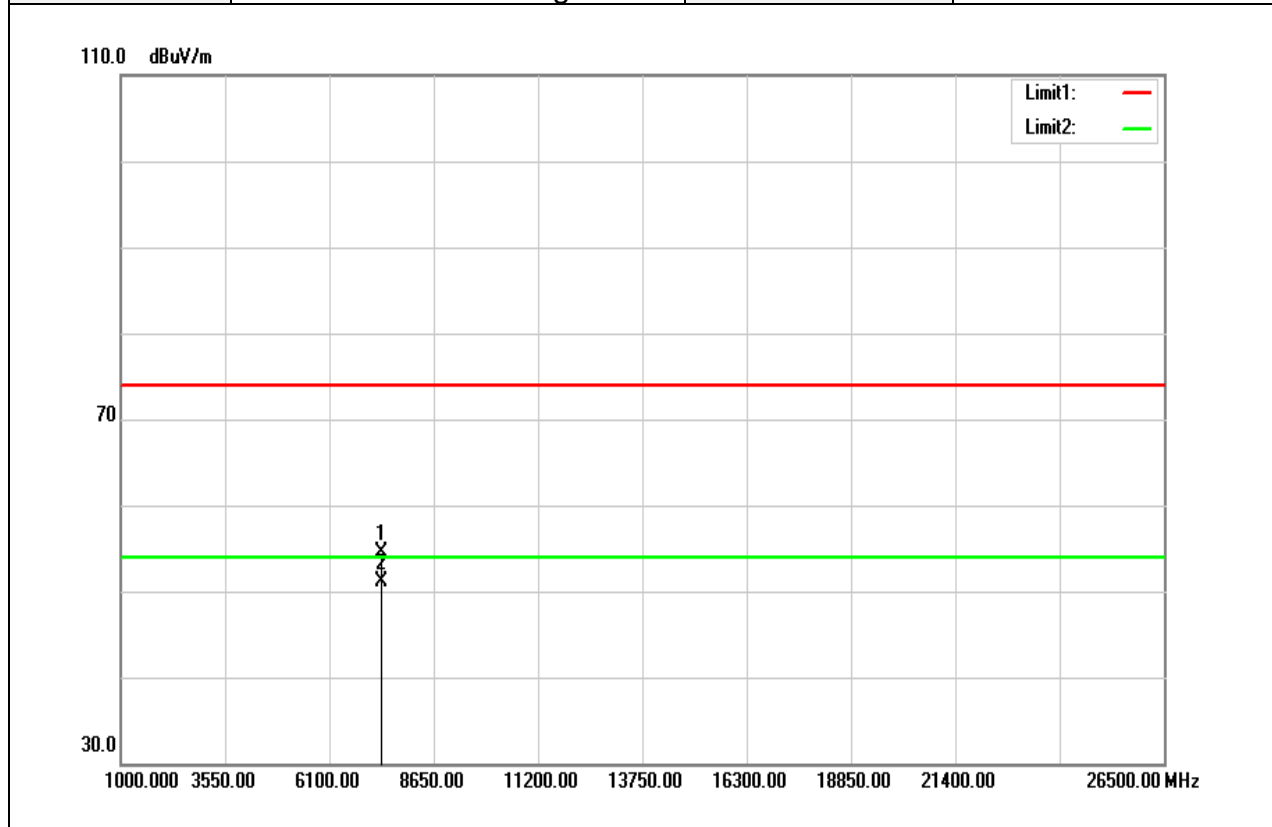


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
7382.000	43.66	10.47	54.13	74.00	-19.87	peak
7382.000	40.84	10.47	51.31	54.00	-2.69	AVG

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 High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

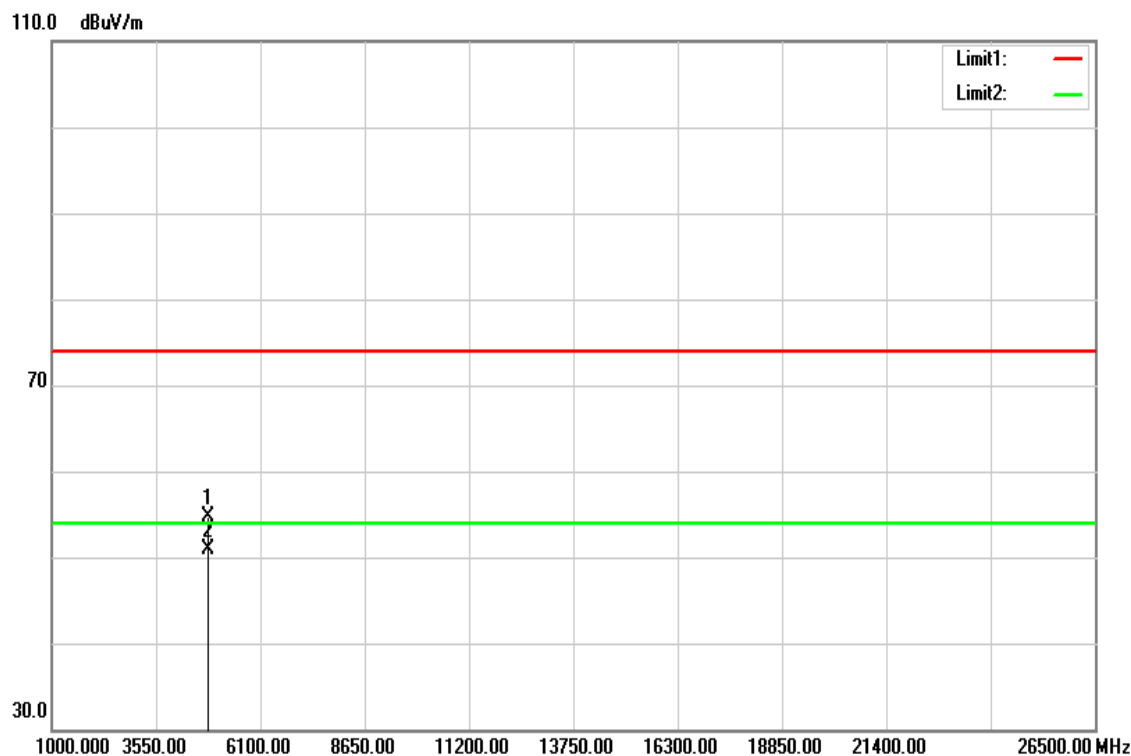


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
7382.000	43.97	10.47	54.44	74.00	-19.56	peak
7382.000	40.71	10.47	51.18	54.00	-2.82	AVG

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 Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

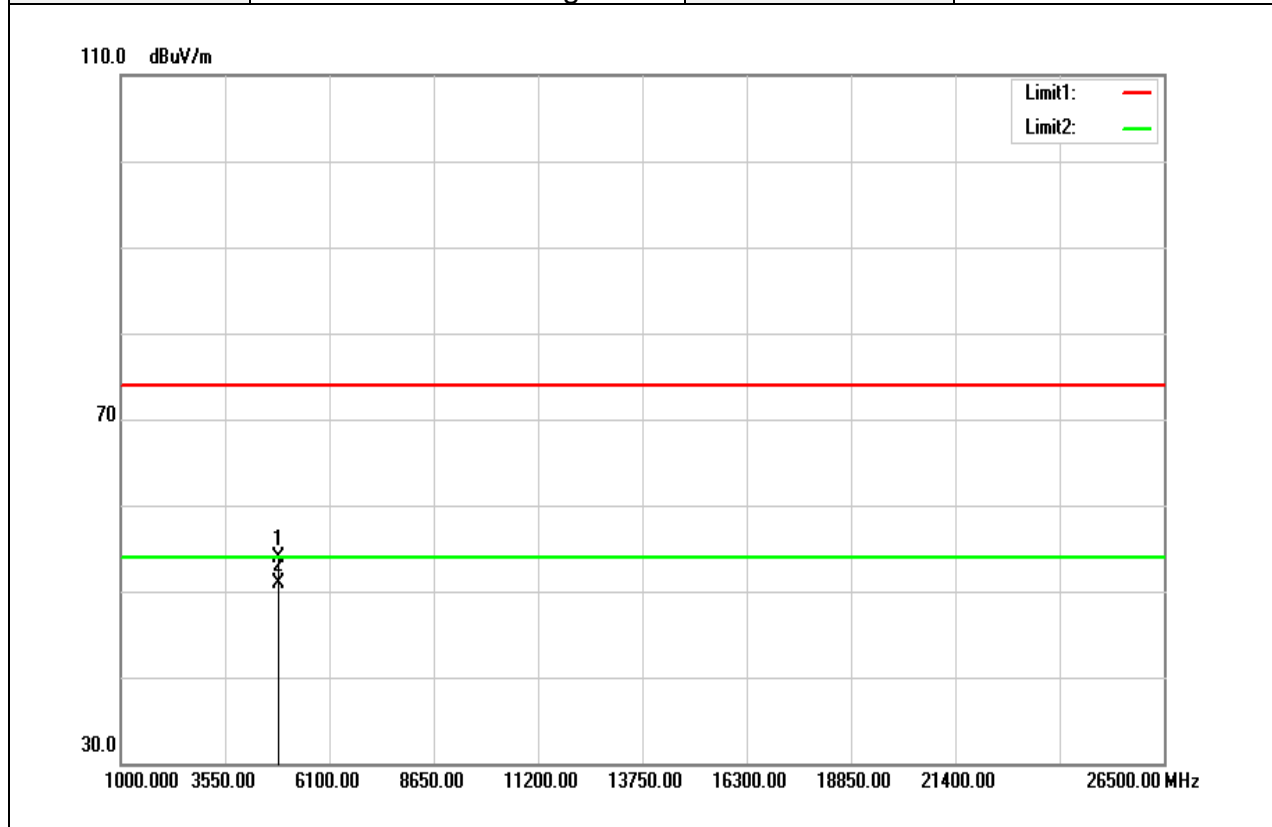


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4841.000	50.36	4.41	54.77	74.00	-19.23	peak
4841.000	46.57	4.41	50.98	54.00	-3.02	AVG

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 Low CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

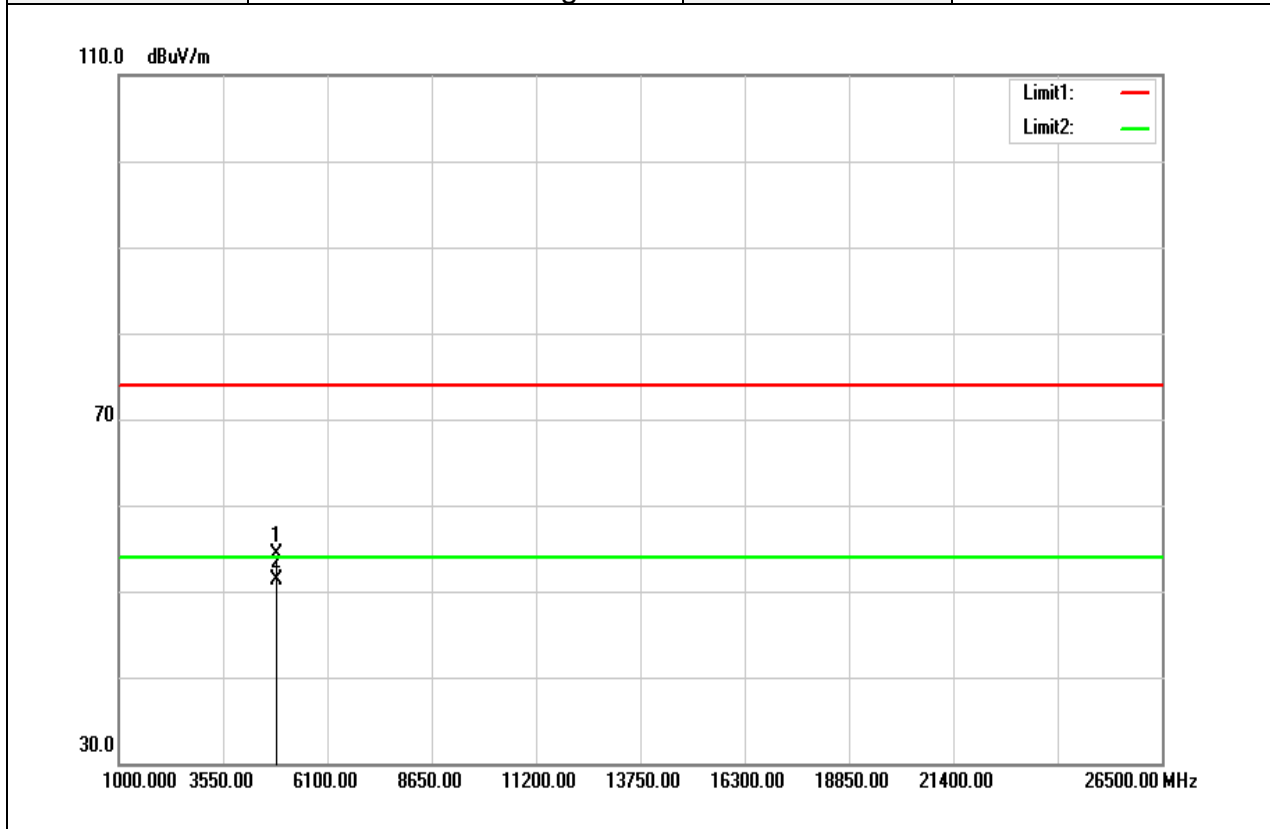


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4848.000	49.40	4.43	53.83	74.00	-20.17	peak
4848.000	46.54	4.43	50.97	54.00	-3.03	AVG

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 Mid CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

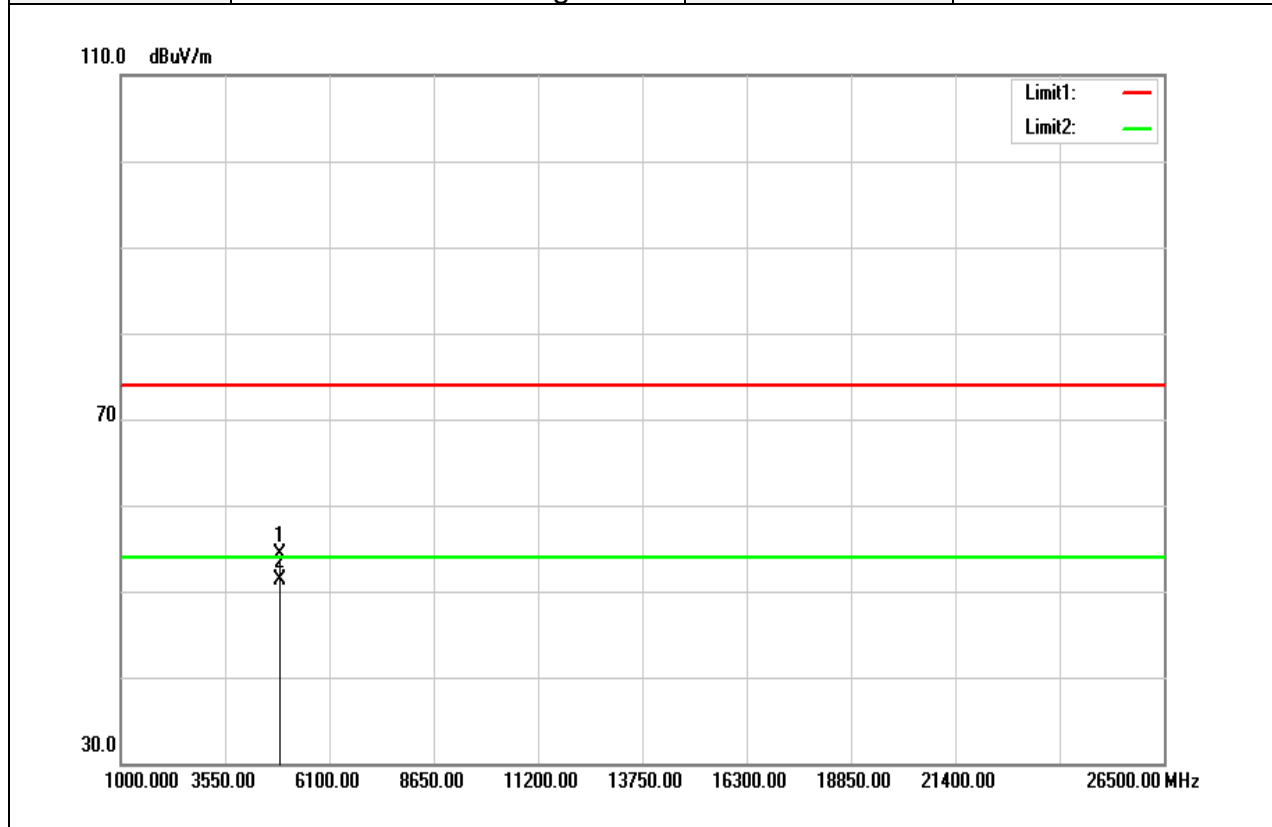


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4869.000	49.91	4.45	54.36	74.00	-19.64	peak
4869.000	46.75	4.45	51.20	54.00	-2.80	AVG

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 Mid CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		

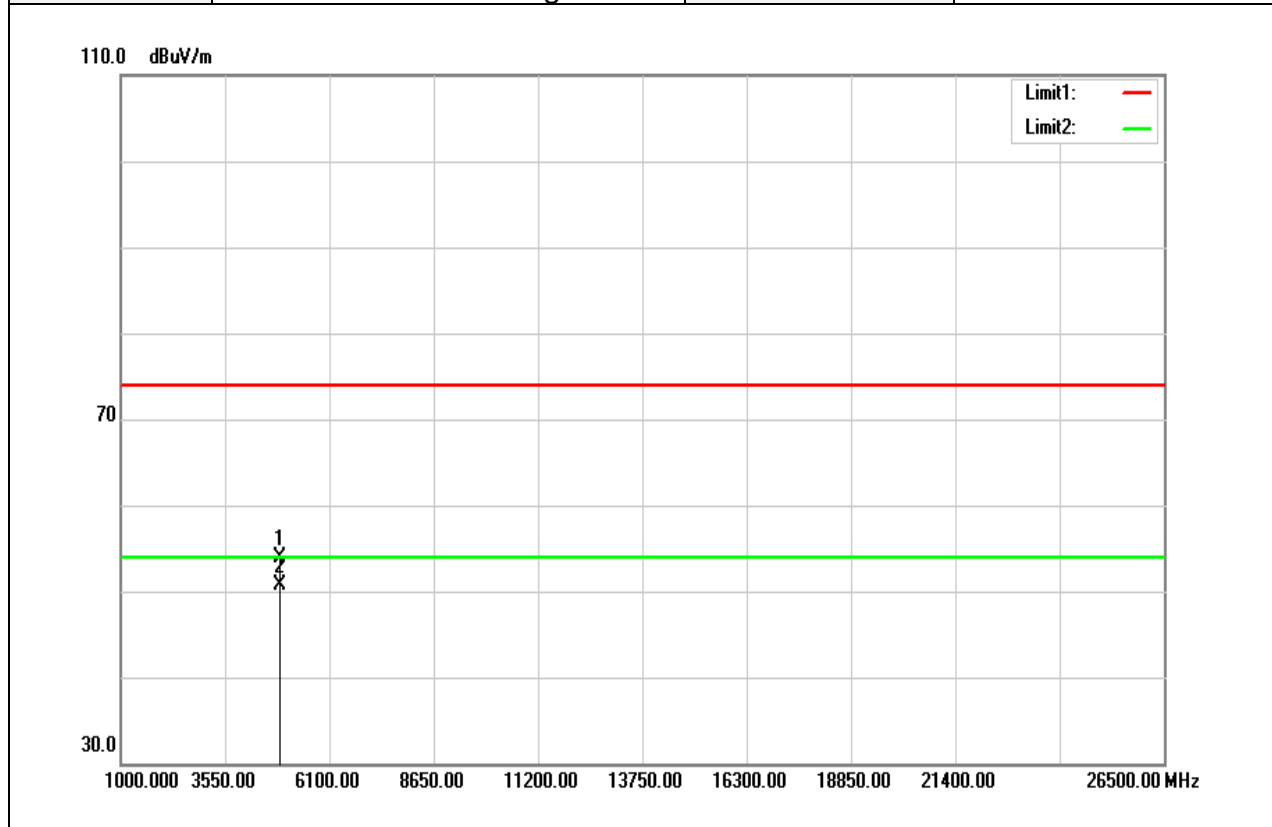


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	49.78	4.47	54.25	74.00	-19.75	peak
4876.000	46.77	4.47	51.24	54.00	-2.76	AVG

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 High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Vertical	Test Engineer	Kevin Kuo
Detector	Peak and Average		

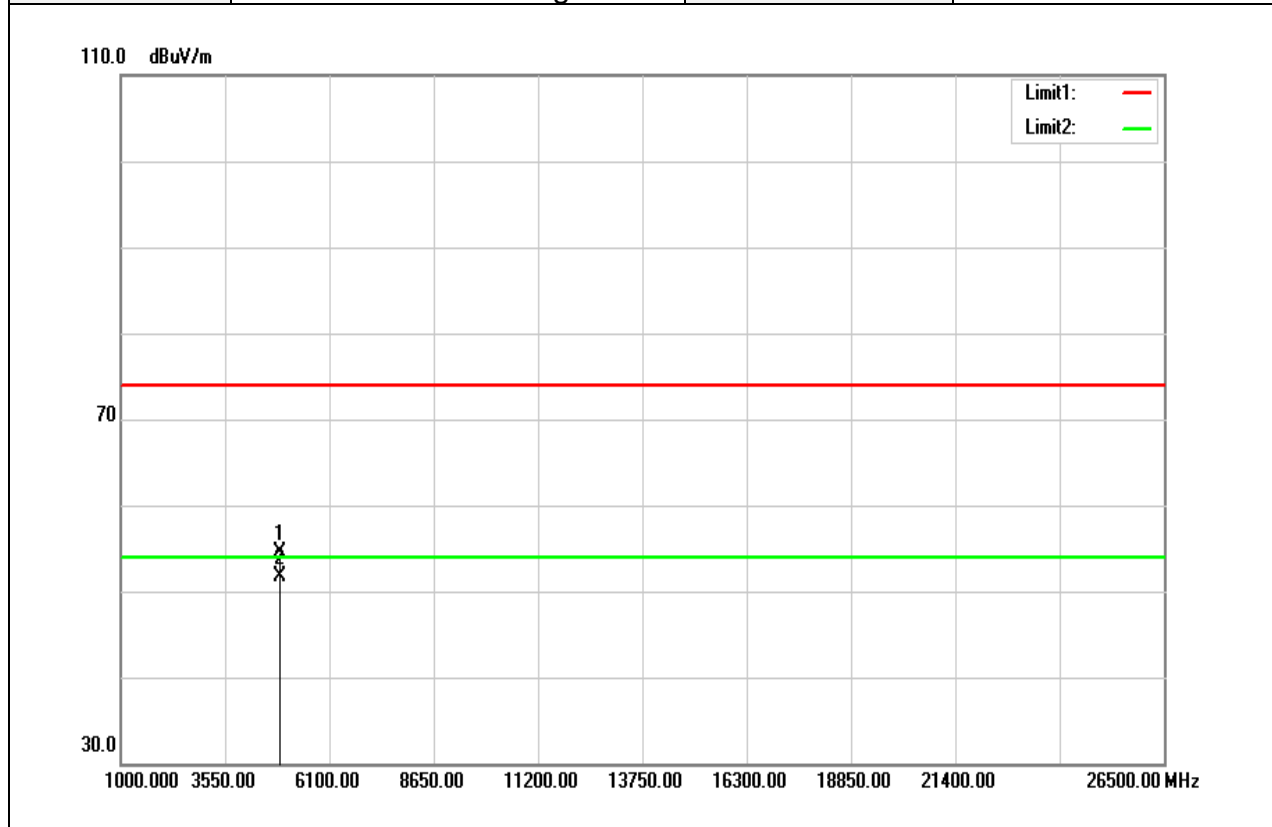


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4904.000	49.39	4.51	53.90	74.00	-20.10	peak
4904.000	46.18	4.51	50.69	54.00	-3.31	AVG

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 High CH	Temp/Hum	24(°C)/ 33%RH
Test Item	Harmonic	Test Date	December 2, 2017
Polarize	Horizontal	Test Engineer	Kevin Kuo
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4897.000	50.04	4.51	54.55	74.00	-19.45	peak
4897.000	47.20	4.51	51.71	54.00	-2.29	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