RADIO TEST REPORT
FCC 47 CFR PART 15 SUBPART C

Test Standard	**FCC Part 15.247**
FCC ID	**2AKOR10101**
Product name	**360livecam**
Brand Name	**Tamaggo**
Model	**10101**
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 CCS. lnc.

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

Approved by:

Sam Chuang
Manager

Tested by:

Ed Chiang
Engineer

Revision History

Rev.	Issue Date	Revisions	Revised By
00	March 24, 2017	Initial Issue	Doris Chu
01	July 4, 2017	1. Added conduction data in P 14-15.	Angel Cheng

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1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Tamaggo Enterprises S.A. Rue du Mont-Blanc 14, Geneva, CH, 1201, Switzerland
Manufacturer	Altek (Kunshan) Co., Ltd. No. 77, 3rd Main Street, Kunshan Free Trade Zone, Jiangsu Province, P.R. China
Equipment	360livecam
Model No.	10101
Model Discrepancy	N/A
Trade Name	Tamaggo
Received Date	February 15, 2017
Date of Test	March 9 ~ June 13, 2017
Output Power(W)	IEEE 802.11b mode: 0.0650 IEEE 802.11g mode: 0.2858 IEEE 802.11n HT 20 MHz mode: 0.2432 IEEE 802.11n HT 40 MHz mode: 0.1081
Power Operation	DC 3.7V

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 HT 40 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 3. IEEE 802.11n HT 40 MHz mode: 7 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**
☐ 1 MHz or less	1	Middle
☐ 1 MHz to 10 MHz	2	1 near top and 1 near bottom
☒ More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Type	☐ PIFA ☐ PCB ☐ Dipole ☒ FPC
Antenna Gain	1.92 (dBi)

1.4 MEASUREMENT UNCERTAINTY

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

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

1.5 FACILITIES AND TEST LOCATION

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

Test site	Test Engineer	Remark
AC Conduction Room	Eric Lee	-
Radiation	Ed Chiang	-
RF Conducted	Eric Lee	-

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

1.6 INSTRUMENT CALIBRATION

RF Conducted Test Site					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Power Meter	Anritsu	ML2495A	1012009	07/04/2016	07/03/2017
Power Sensor	Anritsu	MA2411B	917072	07/04/2016	07/03/2017
Spectrum Analyzer	R&S	FSV 40	101073	10/05/2016	10/04/2017

Wugu 966 Chamber A					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Bilog Antenna	Sunol Sciences	JB3	A030105	07/03/2016	07/02/2017
Horn Antenna	EMCO	3117	00055165	02/20/2017	02/19/2018
Horn Antenna	ETS LINDGREN	3116	00026370	01/12/2017	01/11/2018
Pre-Amplifier	EMCI	EMC 012635	980151	06/23/2016	06/22/2017
Pre-Amplifier	EMEC	EM330	060609	06/08/2016	06/07/2017
Spectrum Analyzer	Agilent	E4446A	US42510252	12/05/2016	12/04/2017
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	EZ-EMC (CCS-3A1RE)				

Conducted Emission Room # B					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
LISN	R&S	ENV216	101054	05/18/2017	05/17/2018
LISN	SCHWARZBECK	NSLK 8127	8127-541	02/14/2017	02/13/2018
Receiver	R&S	ESCI	101073	08/20/2016	08/19/2017

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

1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

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

Support Equipment					
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**
1	Notebook	Lenovo	IBM 7663	N/A	N/A
2	DC Power Source	GWINSTEK	SPS-3610	N/A	N/A
3	NB	ASUS	M5200AE	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 v03r05,

1.9 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements	FCC MRA: TW0240

2. TEST SUMMERY

FCC Standard Section	Chapter	Test Item	Result
15.203	1.3	Antenna Requirement	Pass
15.207	4.1	AC Conducted Emission	-
15.247(a)(2)	4.2	6 dB Bandwidth	Pass
-	4.2	Occupied Bandwidth (99%)	-
15.247(b)	4.3	Output Power Measurement	Pass
15.247(e)	4.4	Power Spectral Density	Pass
15.247(d)	4.5	Conducted Band Edge	Pass
15.247(d)	4.5	Conducted Emission	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

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

Radiated Emission Measurement Above 1G	
Test Condition	**Band edge, Emission for Unwanted and Fundamental**
DC Voltage	**3.7V**
Test Mode	**Mode 1:EUT power by DC source.**
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4
Worst Position	☐ Placed in fixed position. ☒ Placed in fixed position at X-Plane (E2-Plane) ☐ Placed in fixed position at Y-Plane (E1-Plane) ☐ Placed in fixed position at Z-Plane (H-Plane)
Worst Polarity	☐ Horizontal ☒ Vertical

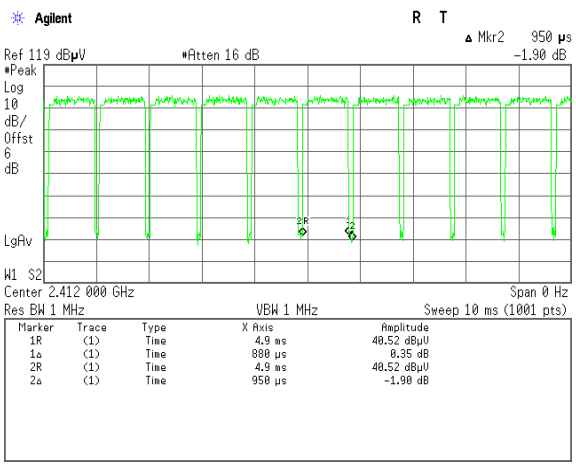
Radiated Emission Measurement Below 1G	
Test Condition	**Radiated Emission Below 1G**
DC Voltage	**3.7V**
Test Mode	**Mode 1:EUT power by DC source.**
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Remark:
1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, Horizontal and Vertical for radiated measurement. The worst case(X-Plane and Vertical) were recorded in this report
.

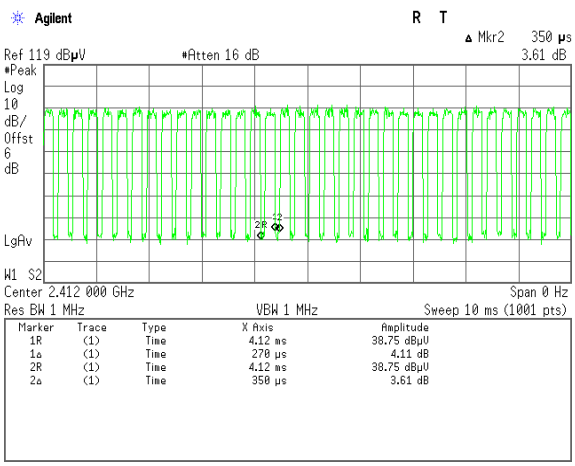
3.3 EUT DUTY CYCLE

Duty Cycle				
Configuration	TX ON (us)	TX ALL (us)	Duty Cycle (%)	Duty Factor(dB)
802.11b	880	950	92.6	0.33
802.11g	270	350	77.1	1.13
802.11n HT20	210	270	77.8	1.09
802.11n HT40	670	740	90.5	0.43

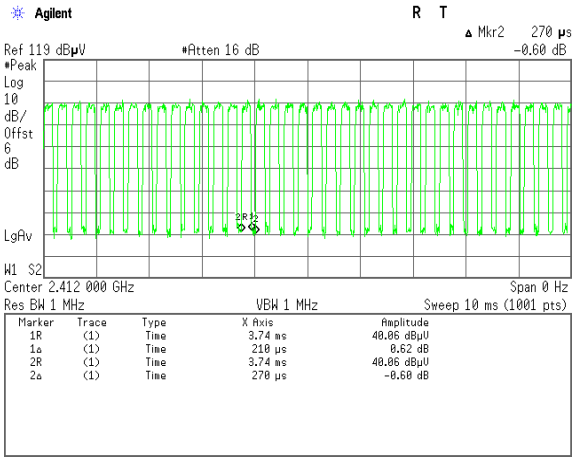
802.11b



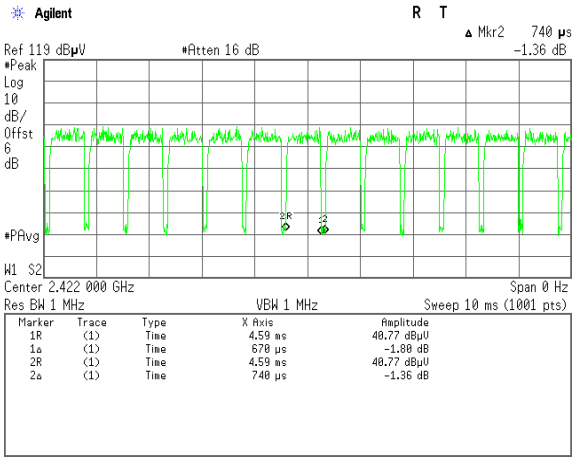
802.11g



802.11n HT20



802.11n HT40



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

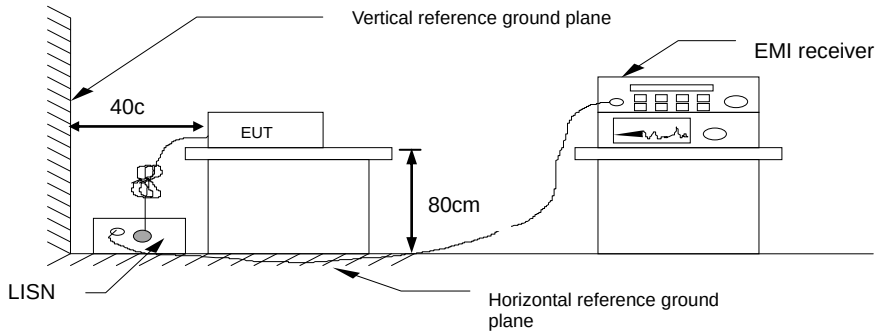
* Decreases with the logarithm of the frequency.

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.

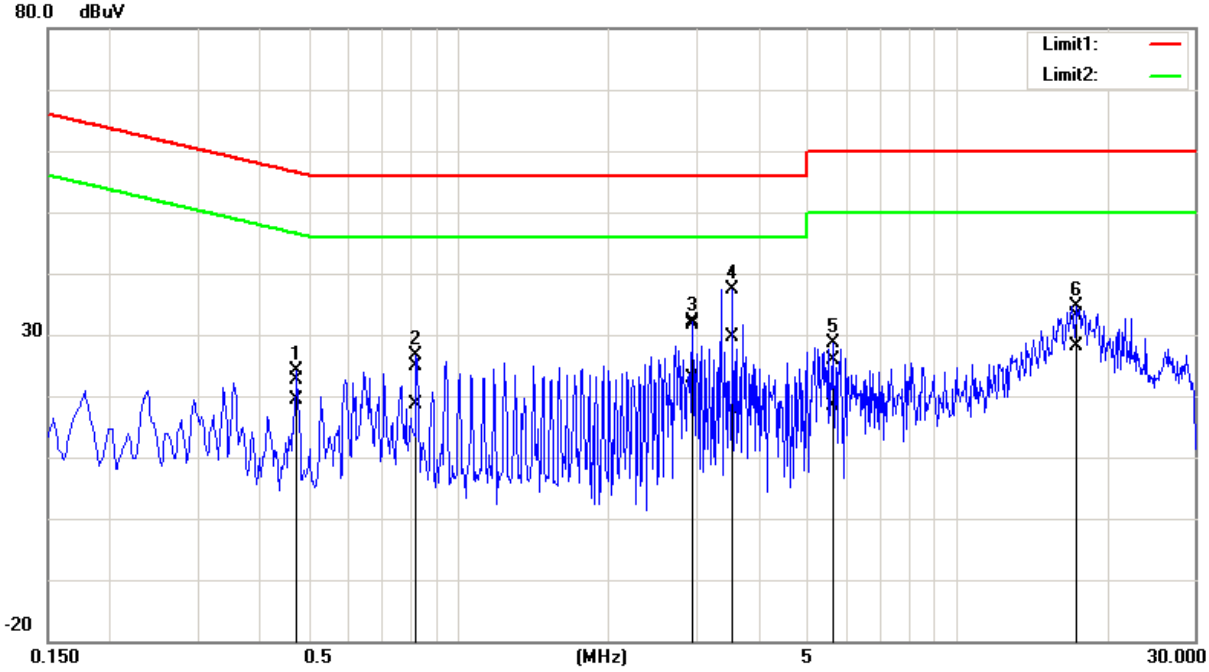
4.1.3 Test Setup



4.1.4 Test Result

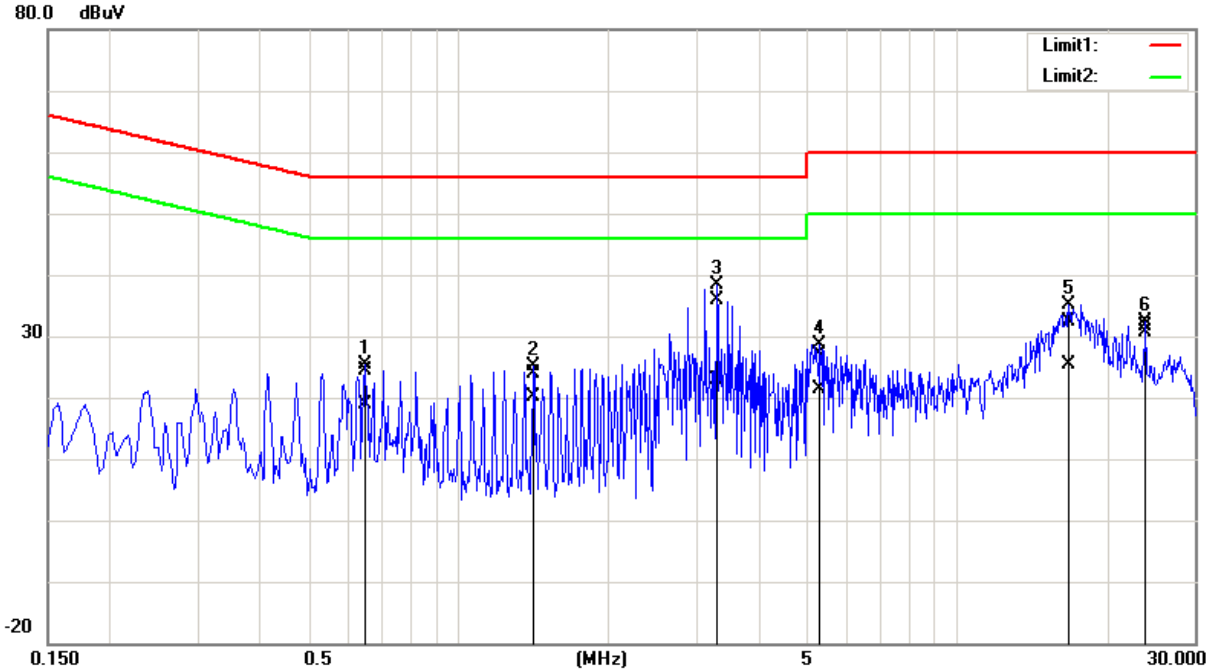
Test Data

Test Mode:	Mode 1	Temp/Hum	24(℃)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	2017/6/13
Phase:	Line	Test Engineer	Eric Lee



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)
1	0.4740	22.74	19.41	-0.05	22.69	19.36	56.44	46.44	-33.75	-27.08
2	0.8260	24.90	18.72	-0.05	24.85	18.67	56.00	46.00	-31.15	-27.33
3	2.9539	31.68	23.06	-0.06	31.62	23.00	56.00	46.00	-24.38	-23.00
4	3.5500	29.78	17.88	-0.05	29.73	17.83	56.00	46.00	-26.27	-28.17
5	5.6740	25.97	18.36	0.02	25.99	18.38	60.00	50.00	-34.01	-31.62
6*	17.4300	33.23	28.25	-0.20	33.03	28.05	60.00	50.00	-26.97	-21.95

Test Mode:	Mode 1	Temp/Hum	27(℃)/ 53%RH
Test Voltage:	120Vac / 60Hz	Test Date	2017/6/13
Phase:	Neutral	Test Engineer	Eric Lee



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)
1	0.6500	24.40	18.93	-0.13	24.27	18.80	56.00	46.00	-31.73	-27.20
2	1.4180	23.98	20.21	-0.13	23.85	20.08	56.00	46.00	-32.15	-25.92
3	3.3060	35.92	23.03	-0.13	35.79	22.90	56.00	46.00	-20.21	-23.10
4	5.3140	27.24	21.41	-0.15	27.09	21.26	60.00	50.00	-32.91	-28.74
5	16.8340	32.60	25.73	-0.31	32.29	25.42	60.00	50.00	-27.71	-24.58
6*	23.9260	32.10	31.05	-0.39	31.71	30.66	60.00	50.00	-28.29	-19.34

4.2 6DB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

4.2.1 Test Limit

According to §15.247(a)(2),

6 dB Bandwidth ：

Limit	Shall be at least 500kHz

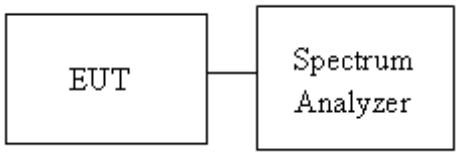
Occupied Bandwidth(99%) ： For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as KDB 558074 D01 v03r05, Section 8.1 and ANSI 63.10:2013 clause 6.9.3,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 100kHz, VBW = 300kHz and Detector = Peak, to measurement 6 dB Bandwidth and 99% Bandwidth.
4. Measure and record the result of 6 dB Bandwidth and 99% Bandwidth in the test report.

4.2.3 Test Setup



4.2.4 Test Result

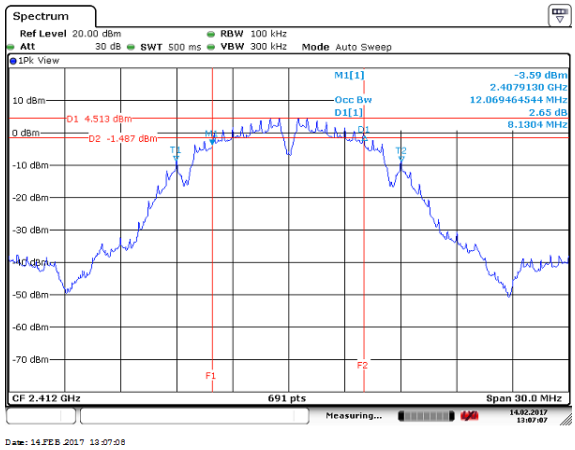
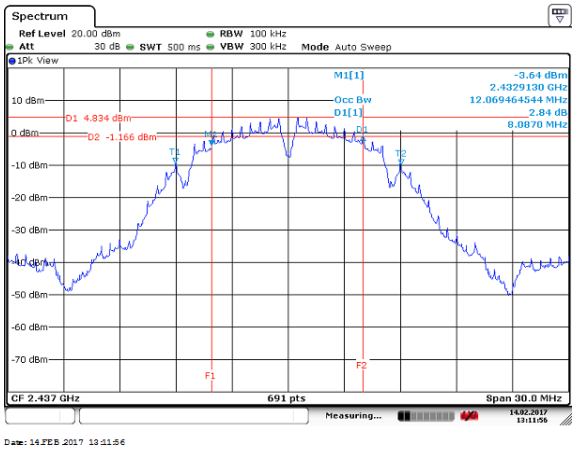
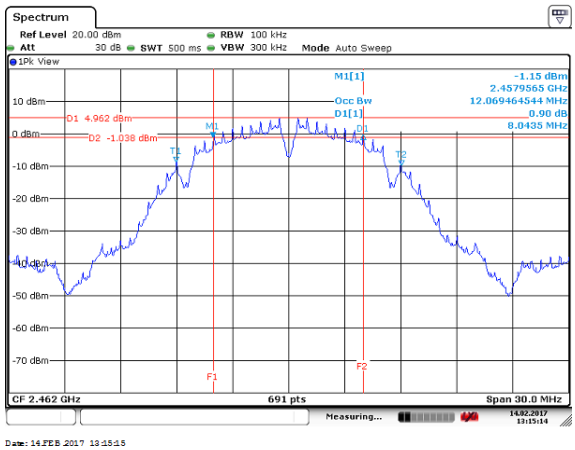
Test mode: IEEE 802.11b mode / 2412-2462 MHz				
Channel	**Frequency (MHz)**	**OBW(99%) (MHz)**	**6dB BW (MHz)**	**6dB limit (kHz)**
Low	2412	12.0694	8.1304	≥500
Mid	2437	12.0694	8.0870	
High	2462	12.0694	8.0435	

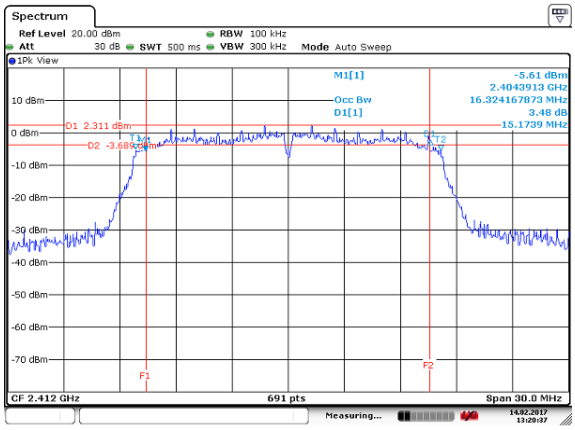
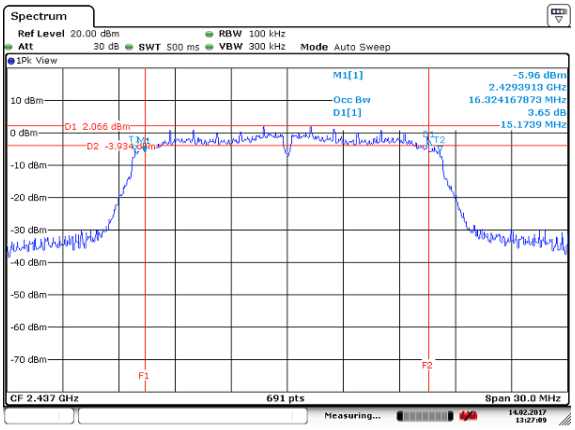
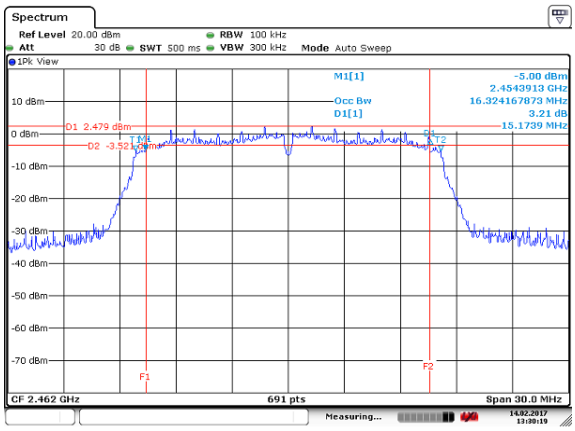
Test mode: IEEE 802.11g mode / 2412-2462 MHz				
Channel	**Frequency (MHz)**	**OBW(99%) (MHz)**	**6dB BW (MHz)**	**6dB limit (kHz)**
Low	2412	16.3241	15.1739	≥500
Mid	2437	16.3241	15.1739	
High	2462	16.3241	15.1739	

Test mode: IEEE 802.11n HT 20 MHz mode / 2412-2462 MHz				
Channel	**Frequency (MHz)**	**OBW(99%) (MHz)**	**6dB BW (MHz)**	**6dB limit (kHz)**
Low	2412	16.3241	16.0000	≥500
Mid	2437	16.3241	16.0435	
High	2462	16.3241	15.8696	

Test mode: IEEE 802.11n HT 40 MHz mode / 2422-2452 MHz				
Channel	**Frequency (MHz)**	**OBW(99%) (MHz)**	**6dB BW (MHz)**	**6dB limit (kHz)**
Low	2422	35.8900	35.246	≥500
Mid	2437	35.8900	35.246	
High	2452	35.8900	35.246	

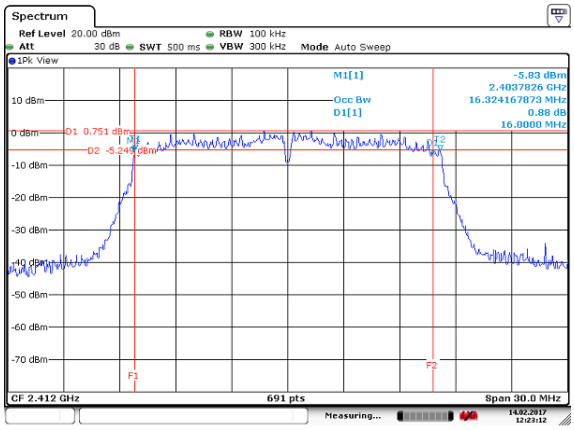
Test Data

IEEE 802.11b mode	
Low CH	**Mid CH**
	
High CH	
	

IEEE 802.11g mode	
Low CH	**Mid CH**
	
High CH	
	

IEEE 802.11n HT20 mode

Low CH



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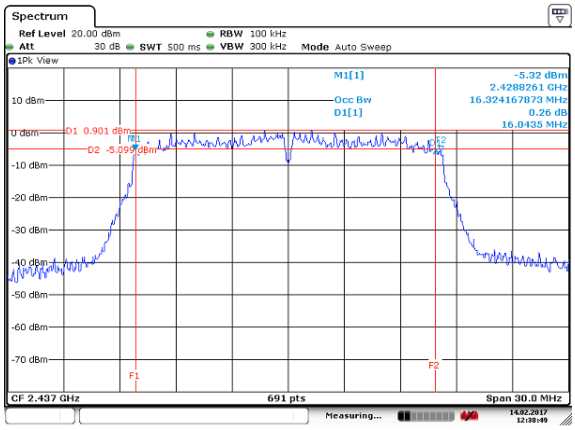
Mid CH



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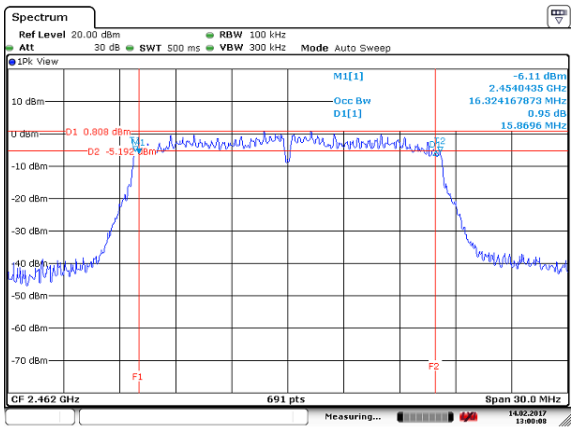
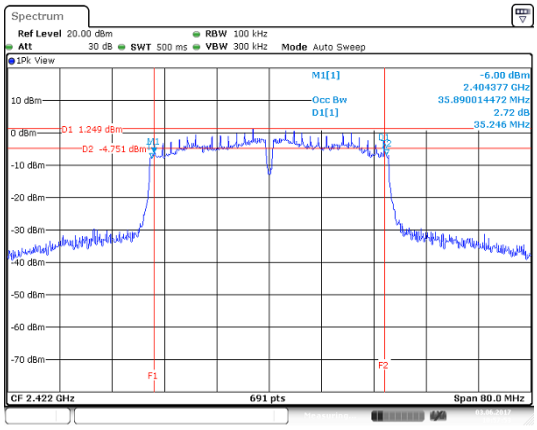
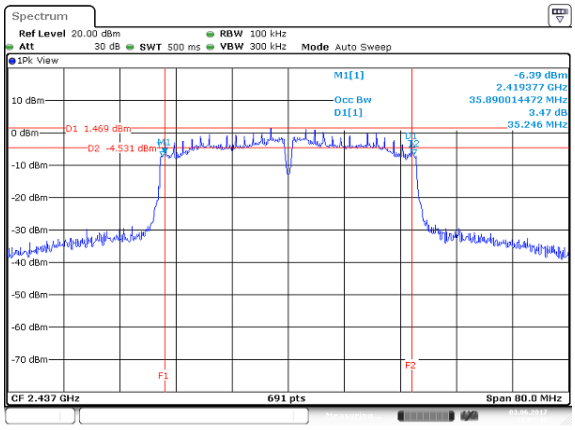
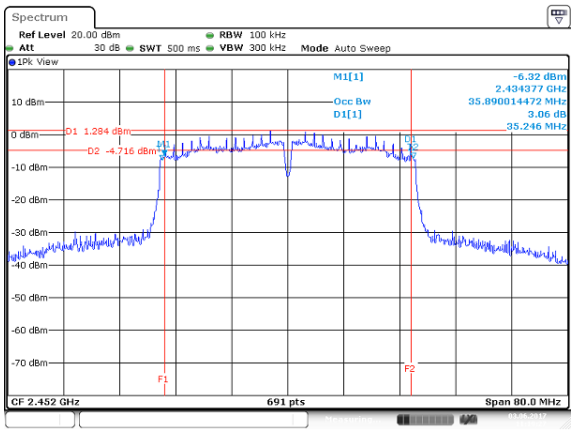
High CH



Date: 14.FEB.2017 13:00:08

IEEE 802.11n HT40 mode	
Low CH	**Mid CH**
	
High CH	
	

4.3 OUTPUT POWER MEASUREMENT

4.3.1 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), 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	☒ Antenna not exceed 6 dBi：30dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 30 – (DG – 6)] ☐ Point-to-point operation：

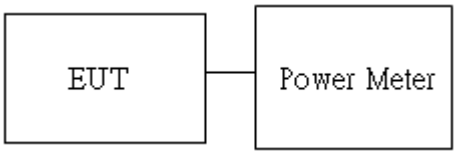
Average output power：For reporting purposes only.

4.3.2 Test Procedure

Test method Refer as KDB 558074 D01 v03r05, 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.

4.3.3 Test Setup



4.3.4 Test Result

Peak output power：

IEEE 802.11b mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (dBm)	Result
Low	2412	18.05	0.0638	30	PASS
Mid	2437	***18.13**	0.0650		PASS
High	2462	18.00	0.0631		PASS

IEEE 802.11g mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (dBm)	Result
Low	2412	23.91	0.2460	30	PASS
Mid	2437	24.23	0.2649		PASS
High	2462	***24.56**	0.2858		PASS

IEEE 802.11n HT 20 MHz mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (dBm)	Result
Low	2412	23.43	0.2203	30	PASS
Mid	2437	***23.86**	0.2432		PASS
High	2462	23.78	0.2388		PASS

IEEE 802.11n HT 40 MHz mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (dBm)	Result
Low	2422	20.23	0.1054	30	PASS
Mid	2437	***20.34**	0.1081		PASS
High	2452	20.32	0.1076		PASS

Average output power：

Test mode: IEEE 802.11b mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2412	14.79	0.0301
Mid	2437	14.77	0.0300
High	2462	14.75	0.0299

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2412	14.74	0.0298
Mid	2437	14.67	0.0293
High	2462	14.82	0.0303

Test mode: IEEE 802.11n HT 20 MHz mode

Channel	Frequency (MHz)	Total Output Power (dBm)	Output Power (W)
Low	2412	11.58	0.0144
Mid	2437	11.76	0.0150
High	2462	11.75	0.0150

Test mode: IEEE 802.11n HT 40 MHz mode

Channel	Frequency (MHz)	Total Output Power (dBm)	Output Power (W)
Low	2422	11.84	0.0152
Mid	2437	11.98	0.0157
High	2452	11.90	0.0154

4.4 POWER SPECTRAL DENSITY

4.4.1 Test Limit

According to §15.247(e),

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

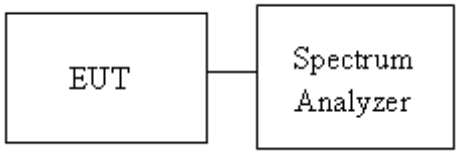
Limit	☒ Antenna not exceed 6 dBi：8dBm ☐ Antenna with DG greater than 6 dBi [Limit = 8 – (DG – 6)] ☐ Point-to-point operation：

4.4.2 Test Procedure

Test method Refer as KDB 558074 D01 v03r05, Section 10.2

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 3kHz, VBW = 30kHz, Span = 1.5 times DTS Bandwidth (6 dB BW), Detector = Peak, Sweep Time = Auto and Trace = Max hold.
4. The path loss and Duty Factor were compensated to the results for each measurement by SA.
5. Mark the maximum level.
6. Measure and record the result of power spectral density. in the test report.

4.4.3 Test Setup



4.4.4 Test Result

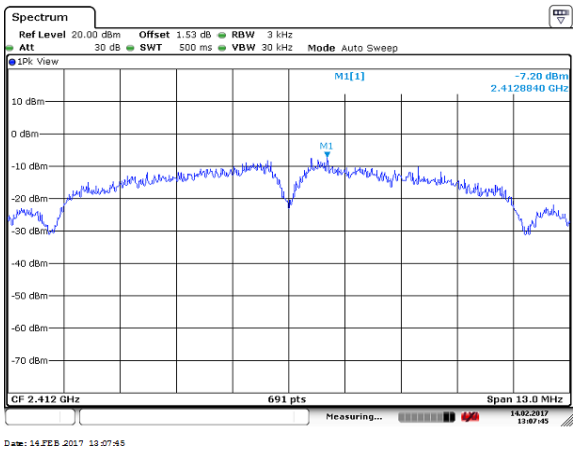
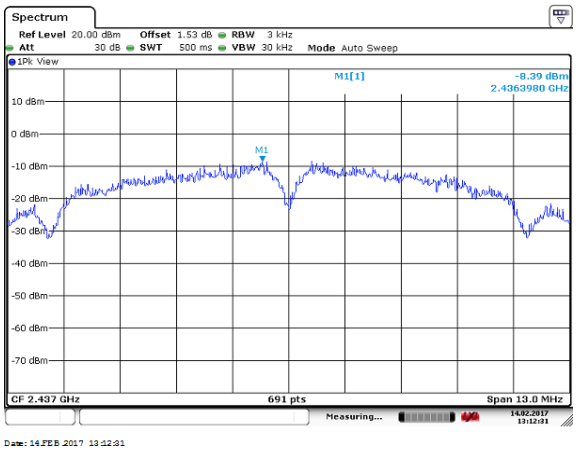
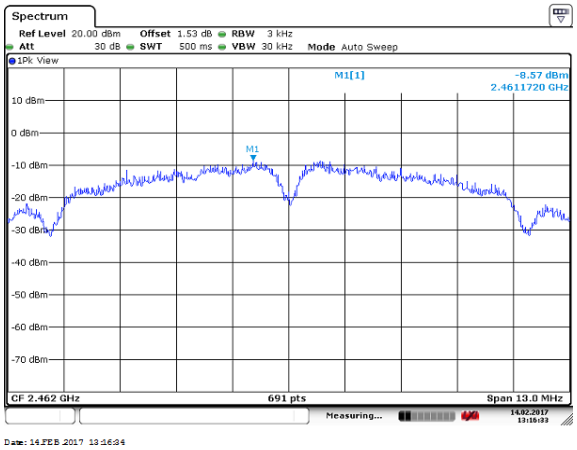
Test mode: IEEE 802.11b mode / 2412-2462 MHz			
Channel	**Frequency (MHz)**	**PPSD (dBm)**	**Limit (dBm)**
Low	2412	-7.20	8
Mid	2437	-8.39	
High	2462	-8.57	

Test mode: IEEE 802.11g mode / 2412-2462 MHz			
Channel	**Frequency (MHz)**	**PPSD (dBm)**	**Limit (dBm)**
Low	2412	-10.09	8
Mid	2437	-9.78	
High	2462	-9.91	

Test mode: IEEE 802.11n HT 20 MHz mode / 2412-2462 MHz			
Channel	**Frequency (MHz)**	**PPSD (dBm)**	**Limit (dBm)**
Low	2412	-11.09	8
Mid	2437	-10.28	
High	2462	-11.43	

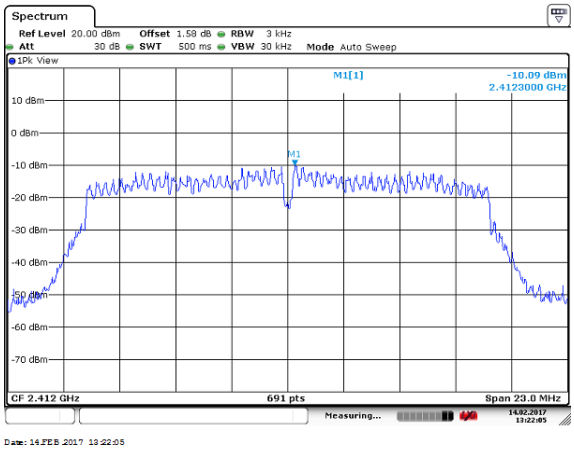
Test mode: IEEE 802.11n HT 40 MHz mode / 2422-2452 MHz			
Channel	**Frequency (MHz)**	**PPSD (dBm)**	**Limit (dBm)**
Low	2422	-10.52	8
Mid	2437	-10.56	
High	2452	-10.44	

Test Data

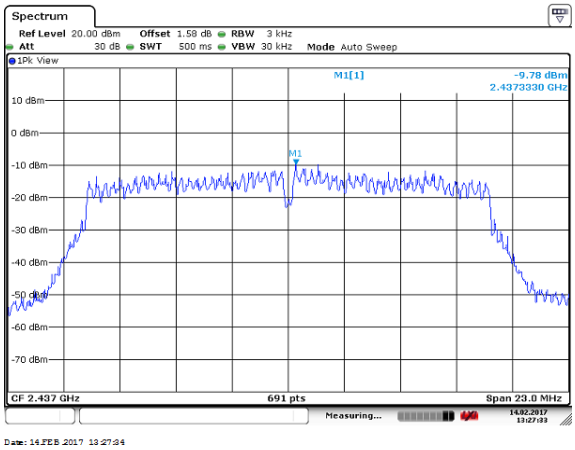
IEEE 802.11b mode	
Low CH	**Mid CH**
	
High CH	
	

IEEE 802.11g mode

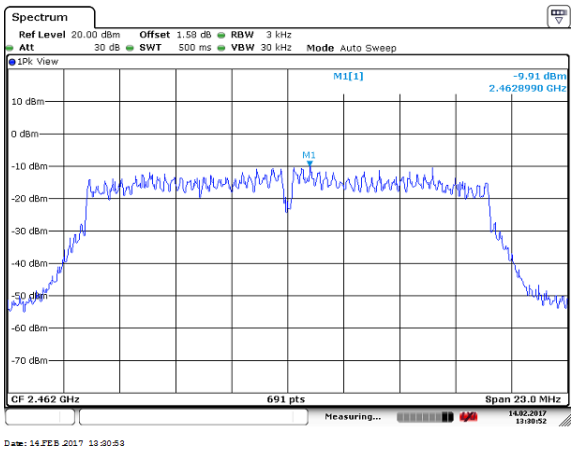
Low CH



Mid CH

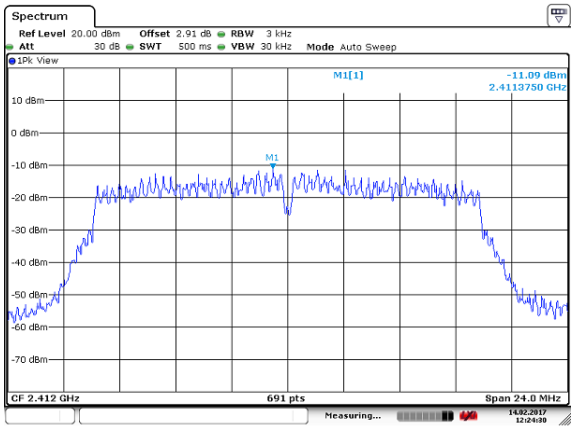


High CH

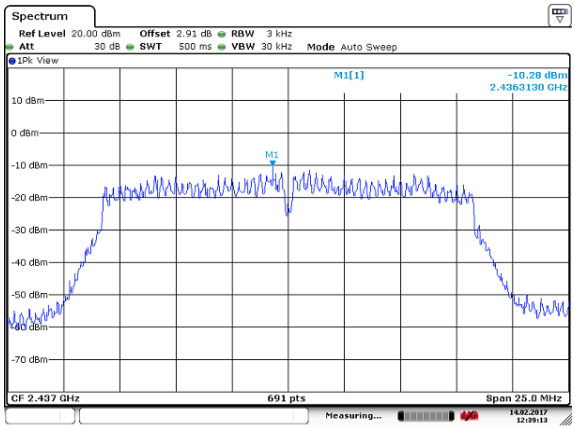


IEEE 802.11n HT20 mode

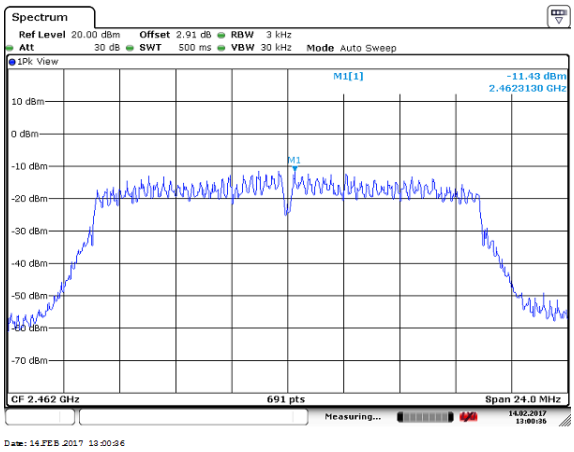
Low CH

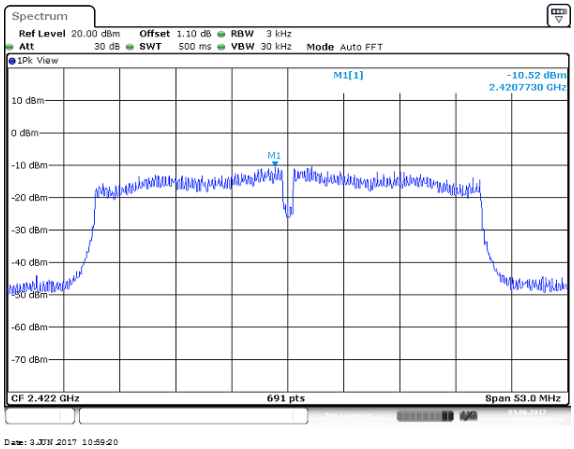
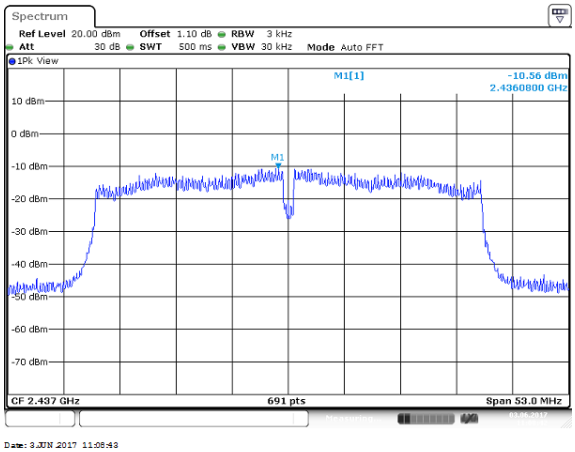
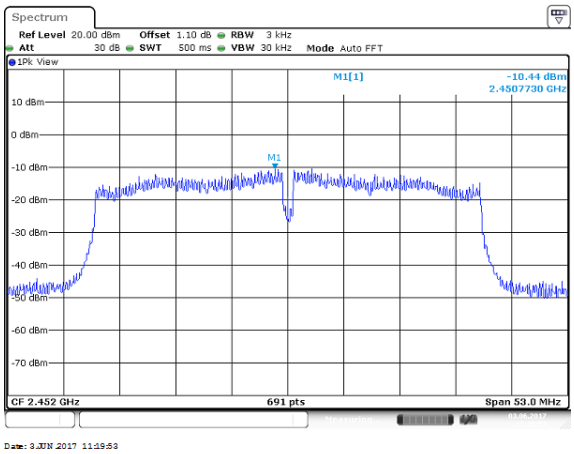


Mid CH



High CH



IEEE 802.11n HT40 mode	
Low CH	**Mid CH**
	
High CH	
	

4.5 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

4.5.1 Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

4.5.2 Test Procedure

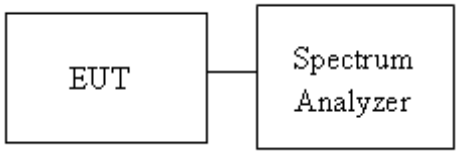
Test method Refer as KDB 558074 D01 v03r05, Section 11.

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.

2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.

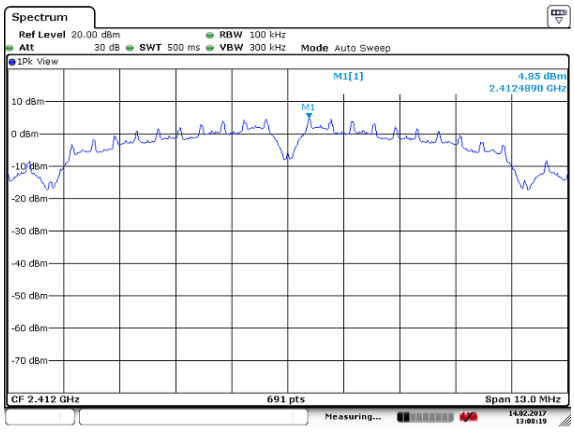
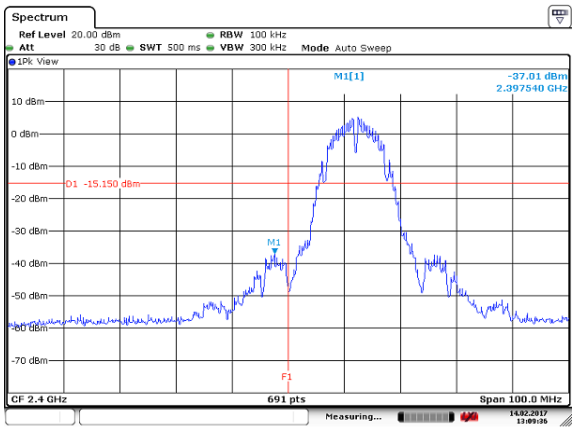
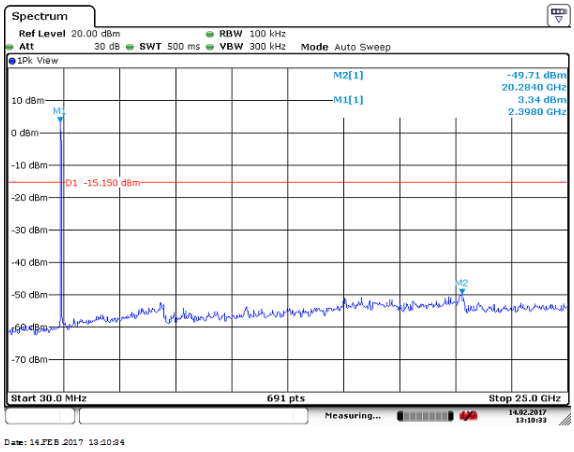
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. f the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

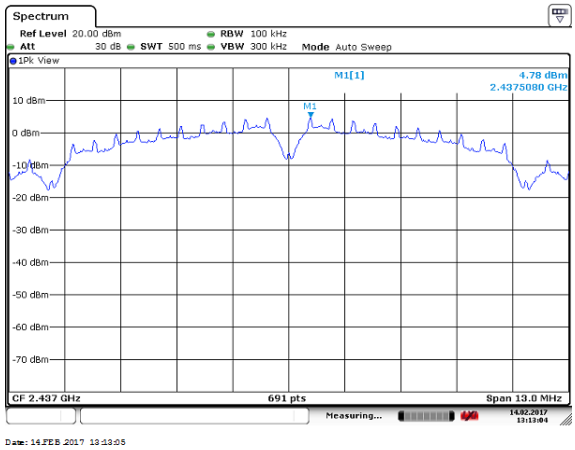
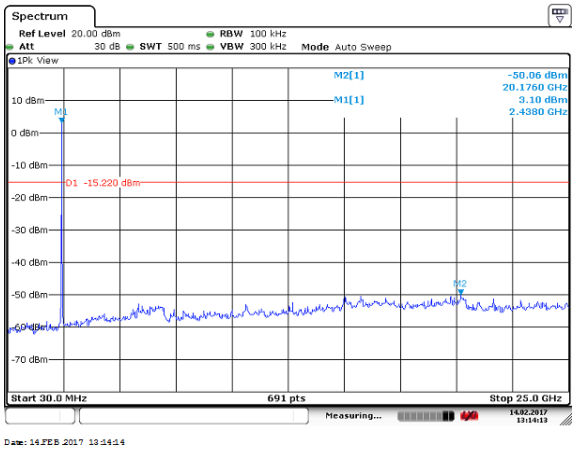
4.5.3 Test Setup

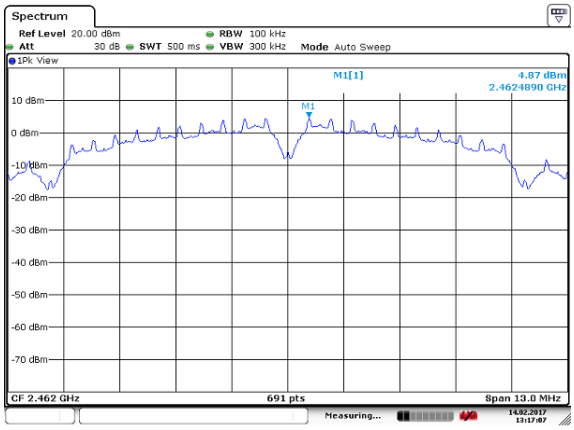
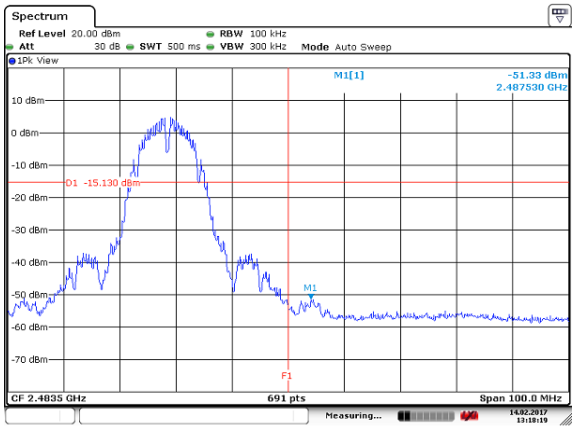
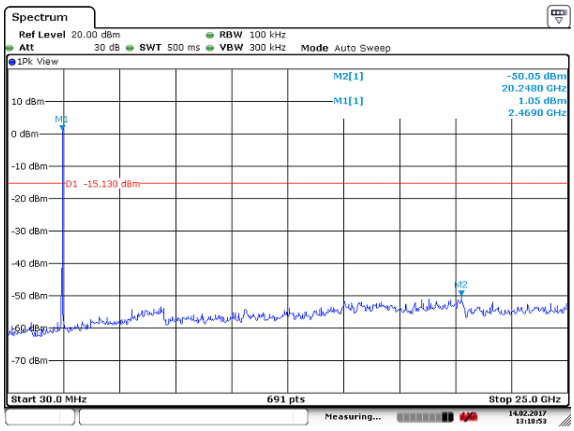


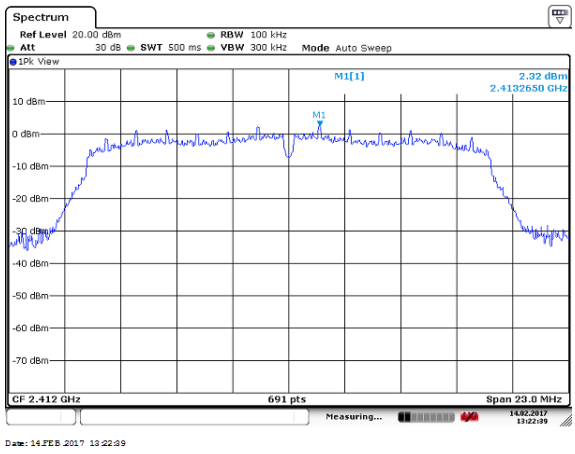
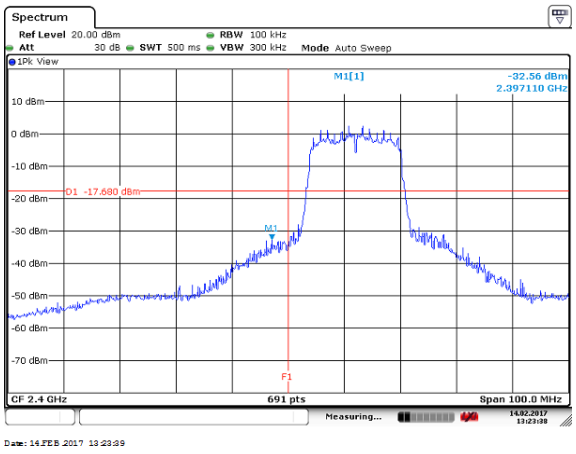
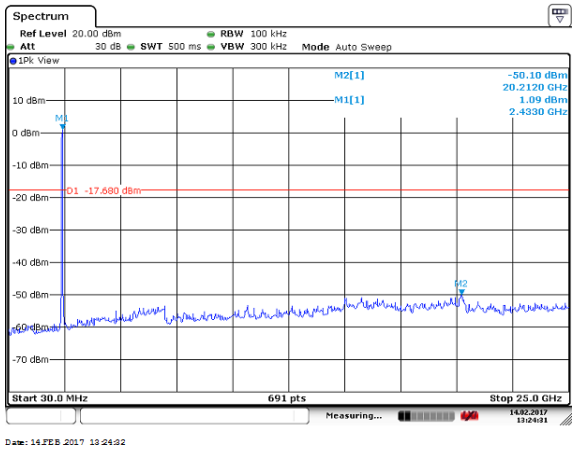
4.5.4 Test Result

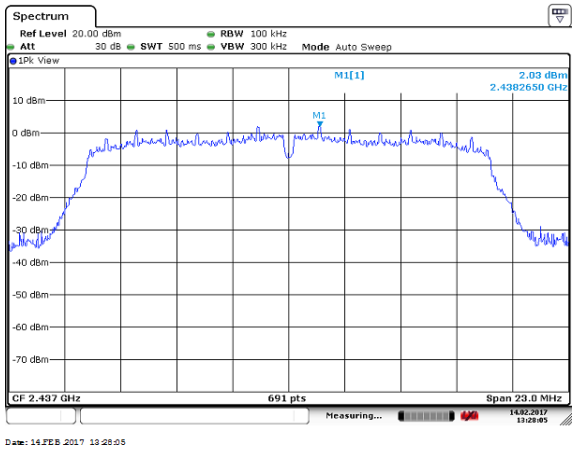
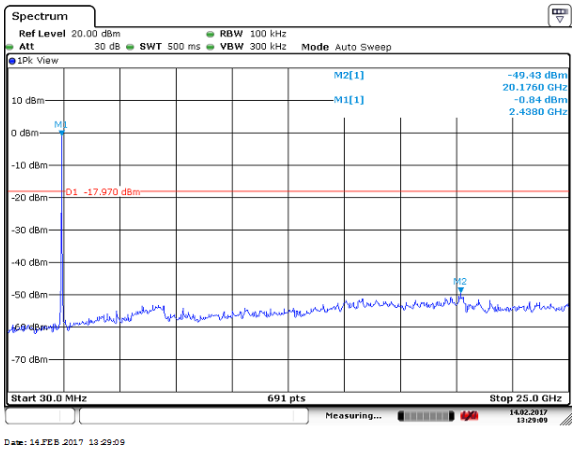
Test Data

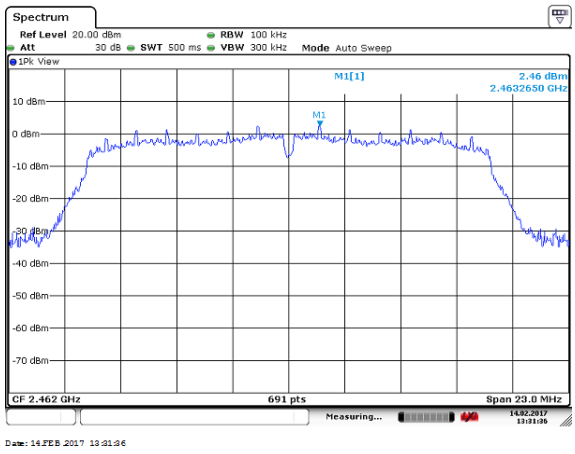
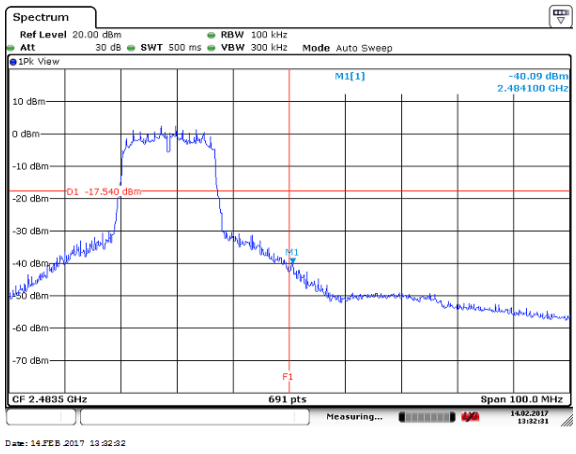
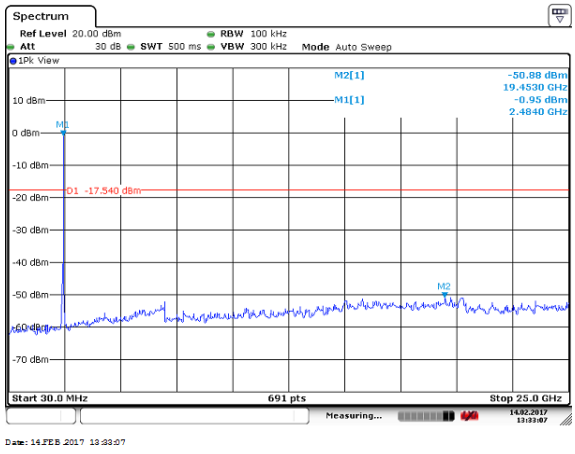
IEEE 802.11b mode Low CH	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

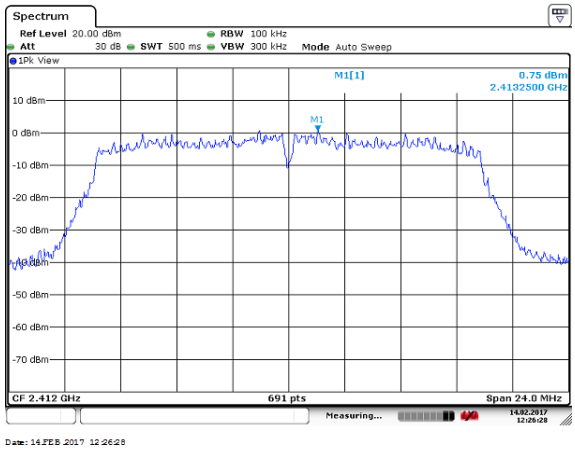
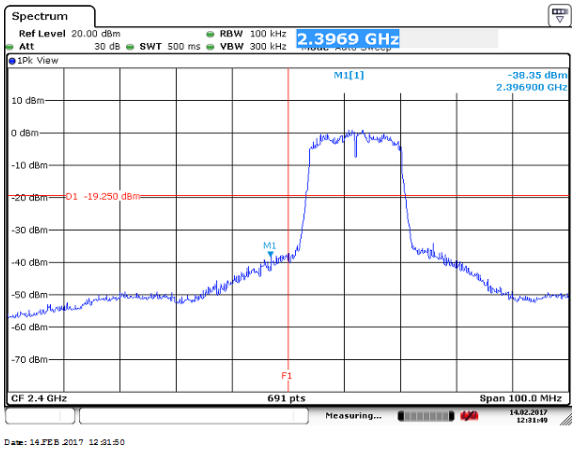
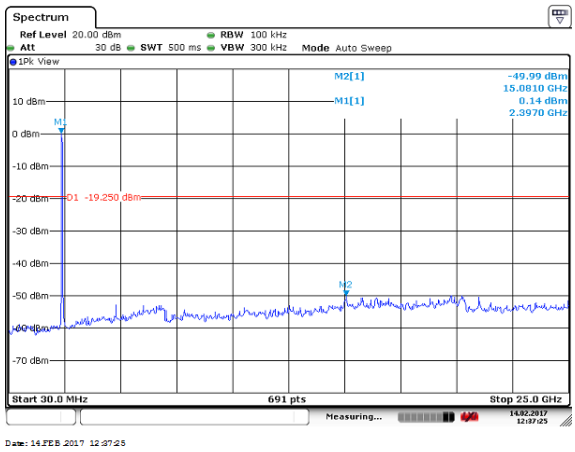
IEEE 802.11b mode Mid CH	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

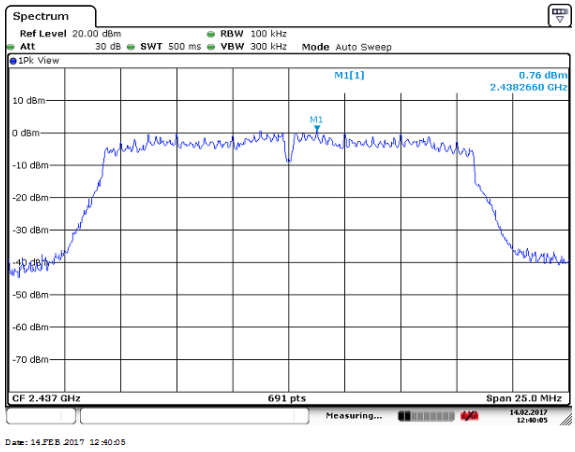
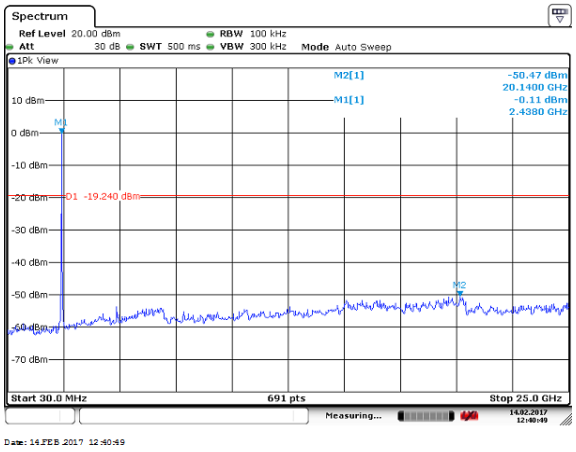
IEEE 802.11b mode High CH	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

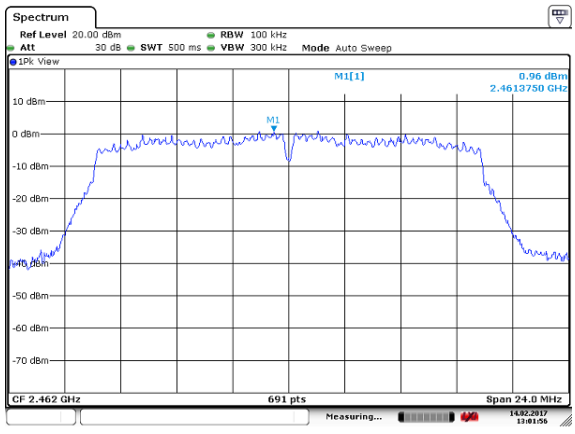
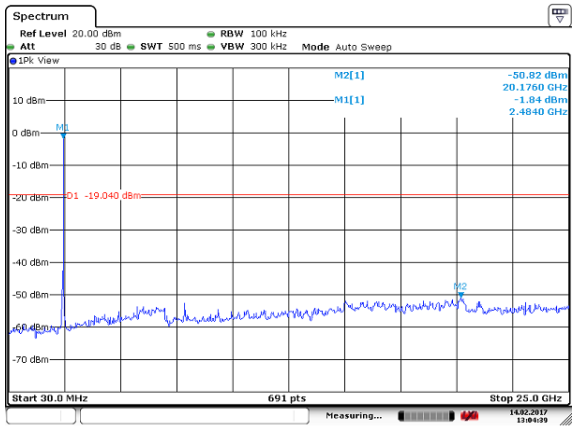
IEEE 802.11g mode Low CH	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

IEEE 802.11g mode Mid CH	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

IEEE 802.11g mode High CH	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

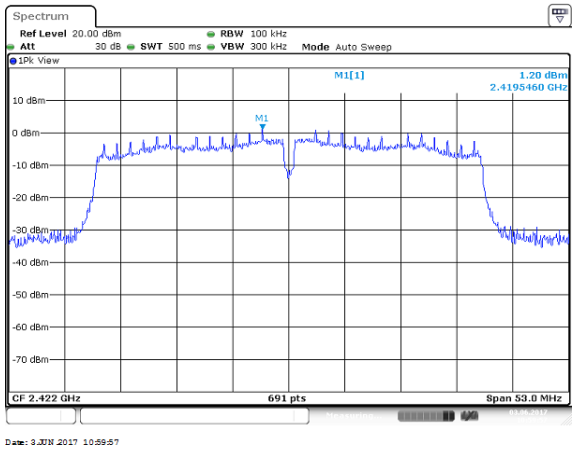
IEEE 802.11 n HT20 mode Low CH	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

IEEE 802.11 n HT20 mode Mid CH	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

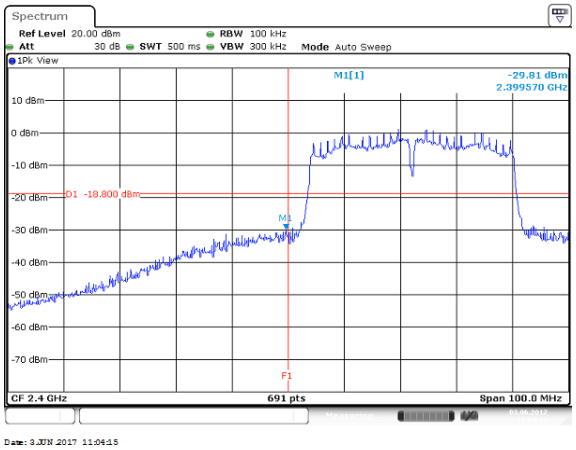
IEEE 802.11n HT20 mode High CH	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

IEEE 802.11 n HT40 mode Low CH

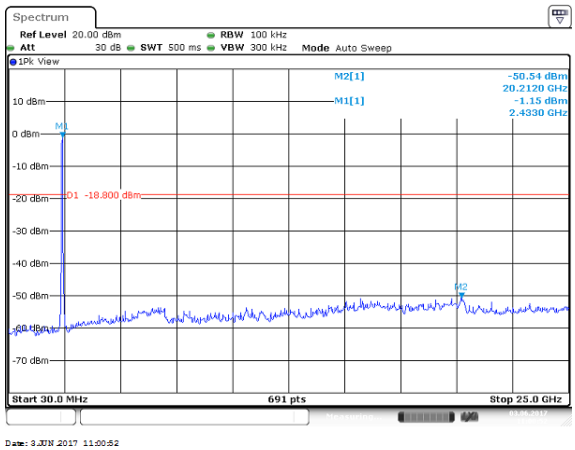
Reference Level of PSD in 100kHz

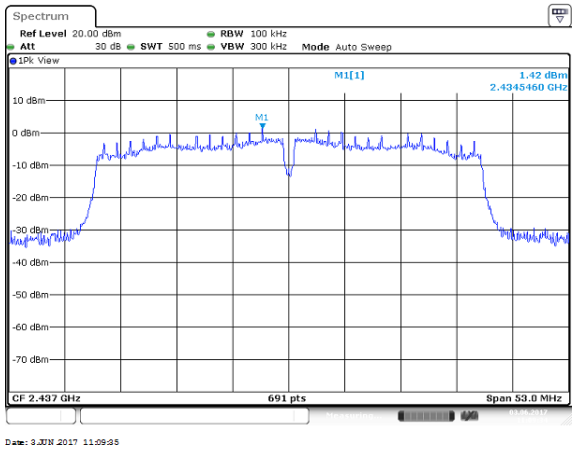
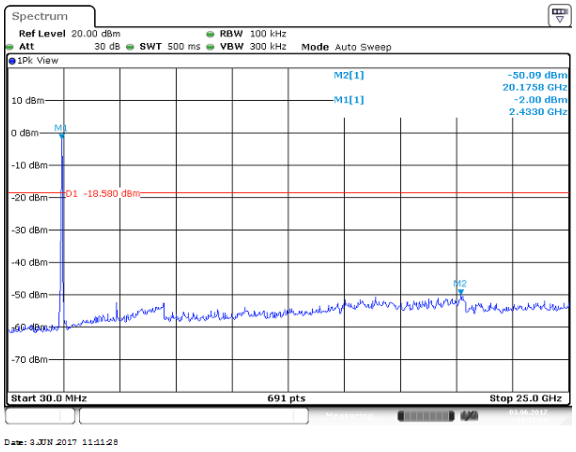


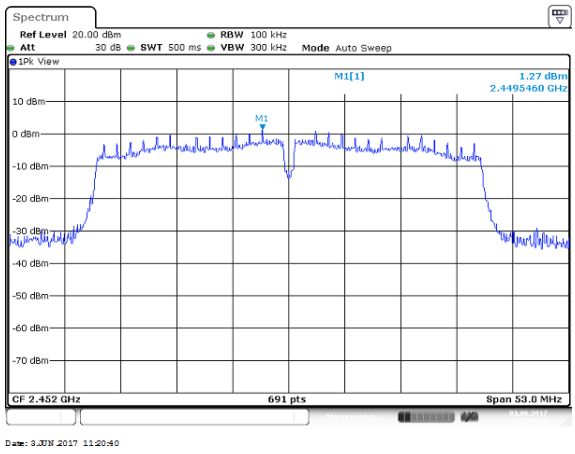
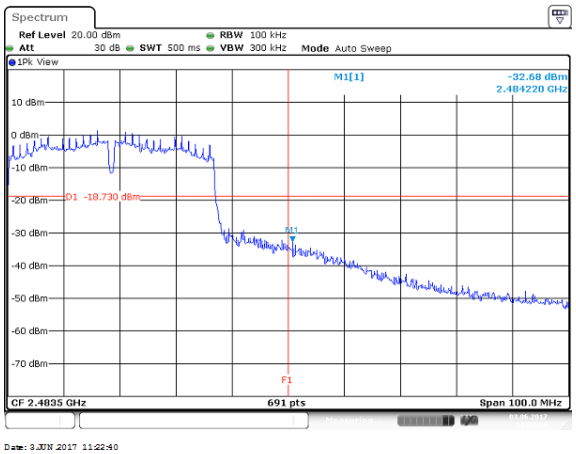
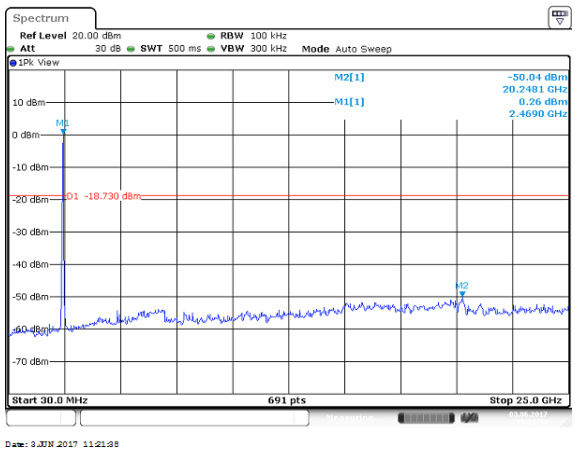
Band Edge



Spurious Emission 30MHz-25GHz



IEEE 802.11 n HT40 mode Mid CH	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

IEEE 802.11n HT40 mode High CH	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

4.6 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.6.1 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 (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)

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.

4.6.2 Test Procedure

Test method Refer as KDB 558074 D01 v03r05, 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.

5. The SA setting following：

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

(2) Above 1G：

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

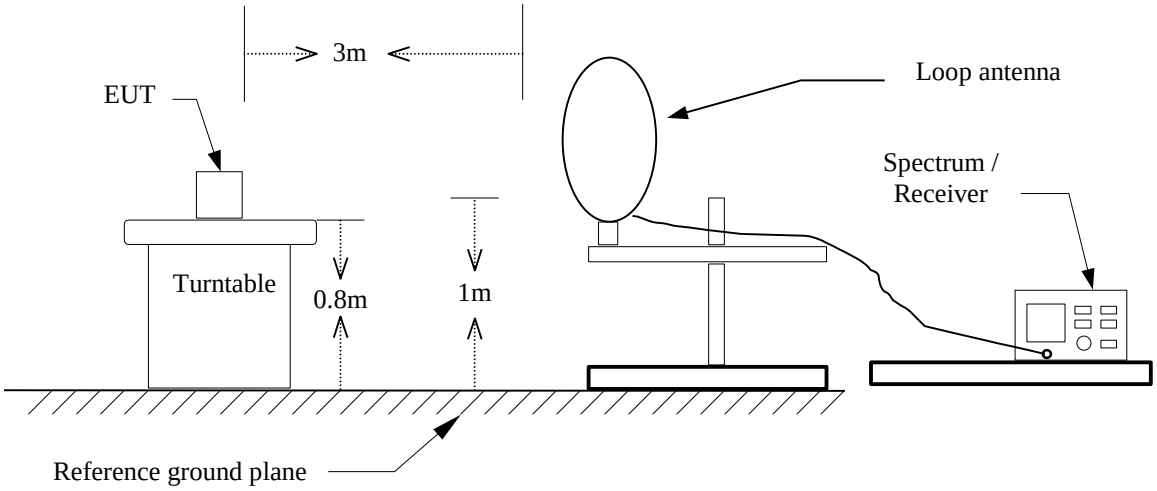
(2.2) For Average measurement：RBW = 1MHz, VBW

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

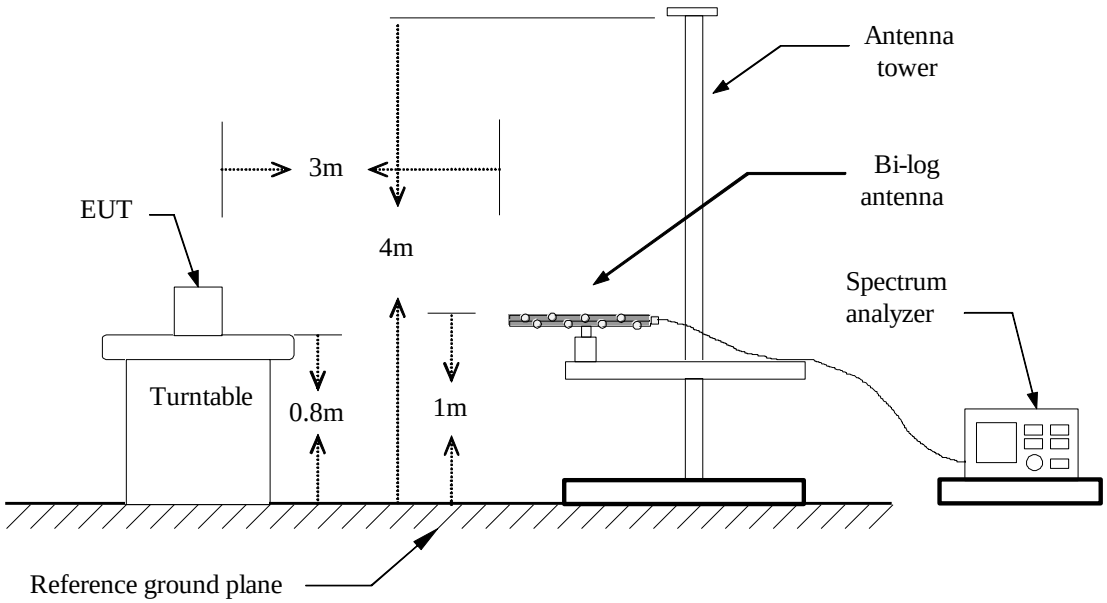
Configuration	Duty Cycle (%)	TX ON (ms)	1/T(kHz)	VBW
802.11b	93%	0.8800	1136.364	1.2KHz
802.11g	77%	0.2700	3.704	3.9KHz
802.11n HT20	78%	0.2100	4.762	5.1KHz
802.11n HT40	91%	0.6700	1.493	1.5KHz

4.6.3 Test Setup

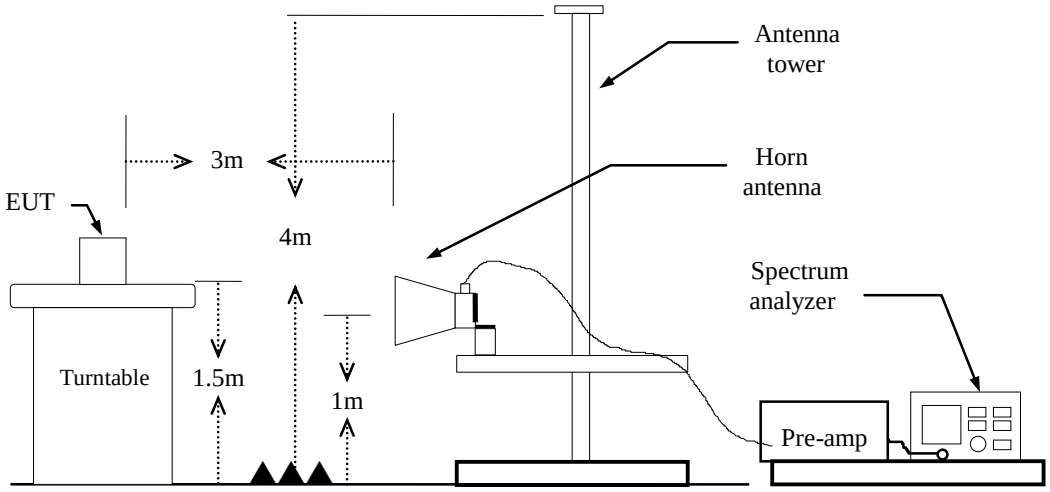
9kHz ~ 30MHz



30MHz ~ 1GHz



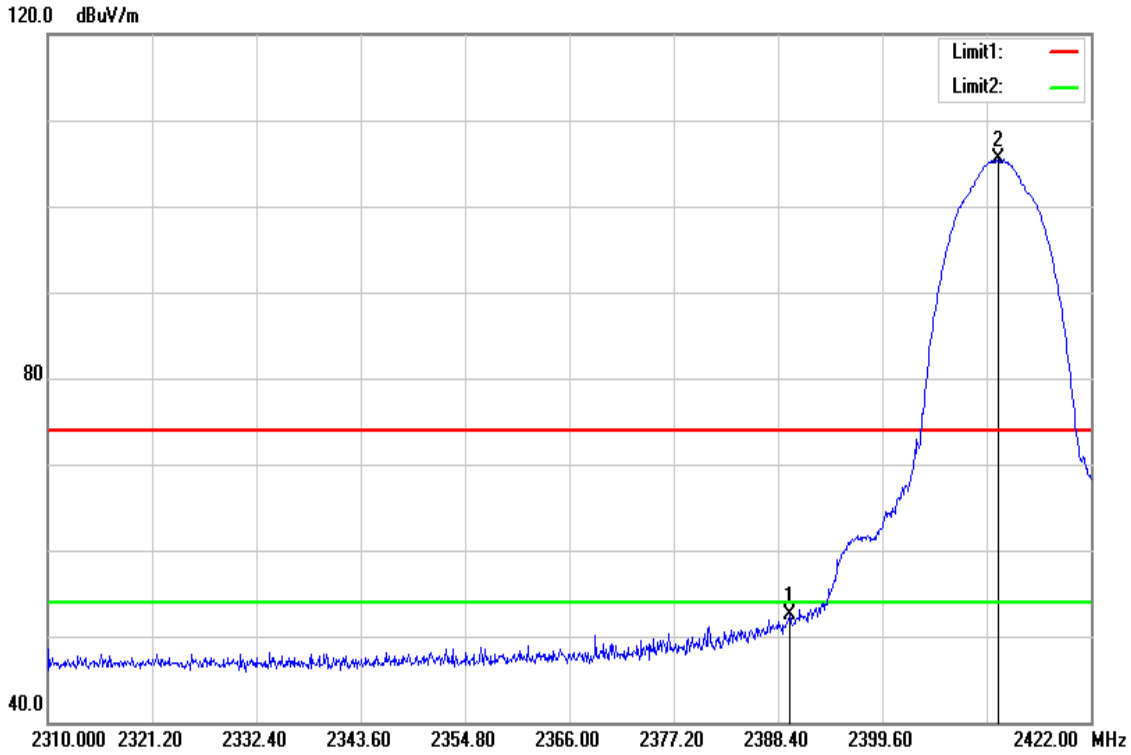
Above 1 GHz



4.6.4 Test Result

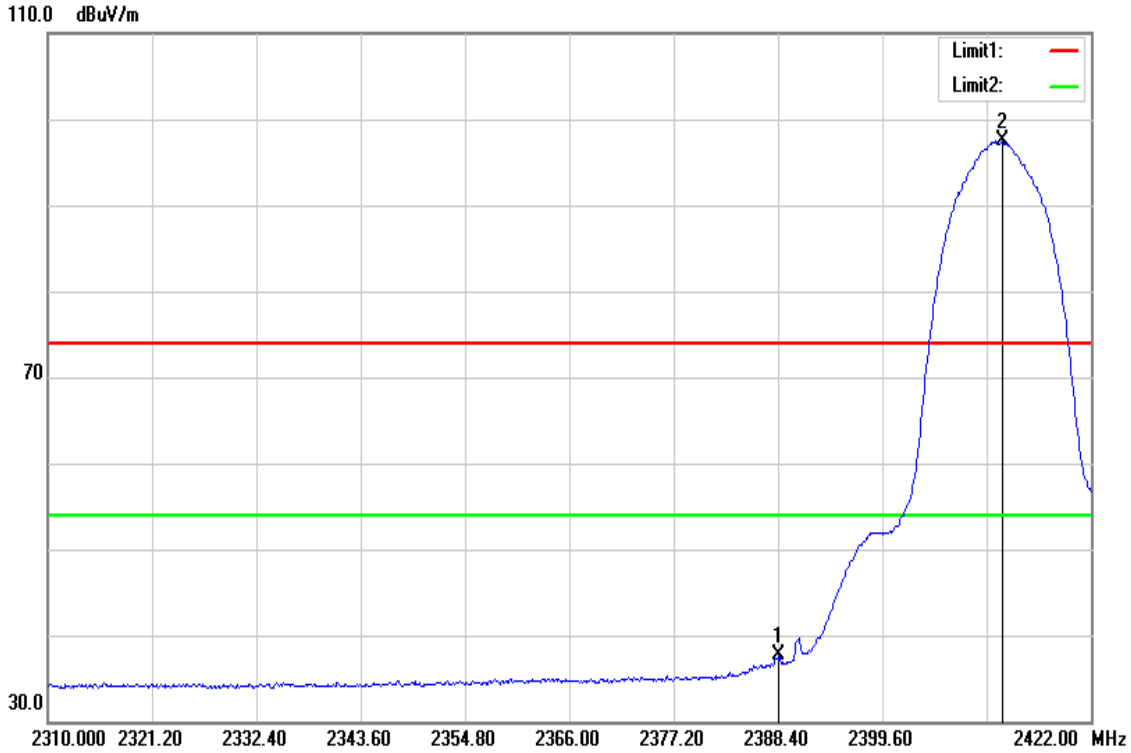
Band Edge Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak		



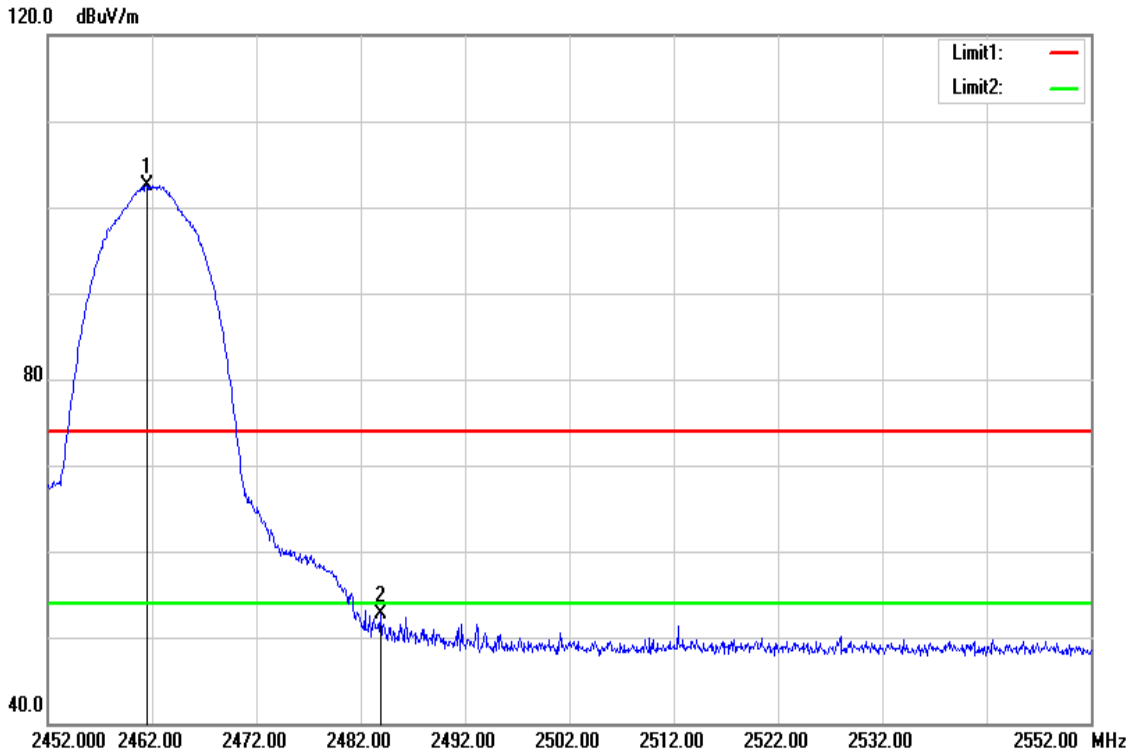
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.632	55.73	-3.28	52.45	74.00	-21.55	peak
2412.032	108.71	-3.23	105.48	-	-	peak

Test Mode	IEEE 802.11b Low CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Average		



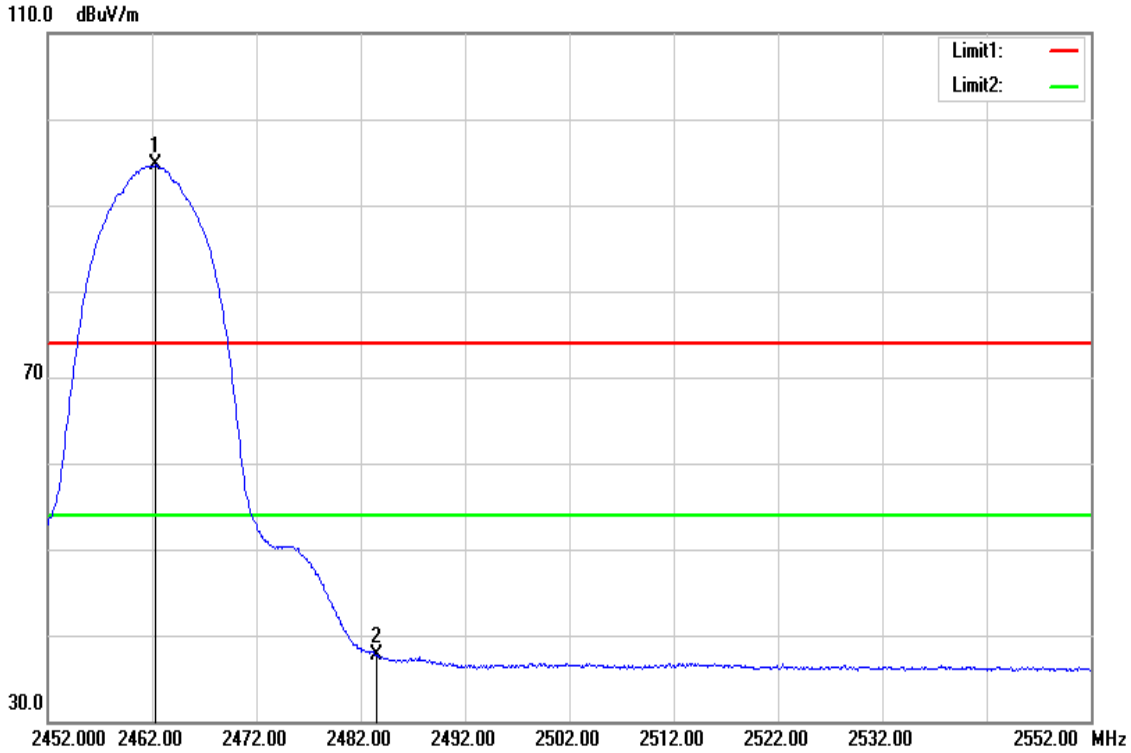
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2388.512	40.99	-3.29	37.7	54.00	-16.30	AVG
2412.480	100.70	-3.23	97.47	-	-	AVG

Test Mode	IEEE 802.11b High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak		



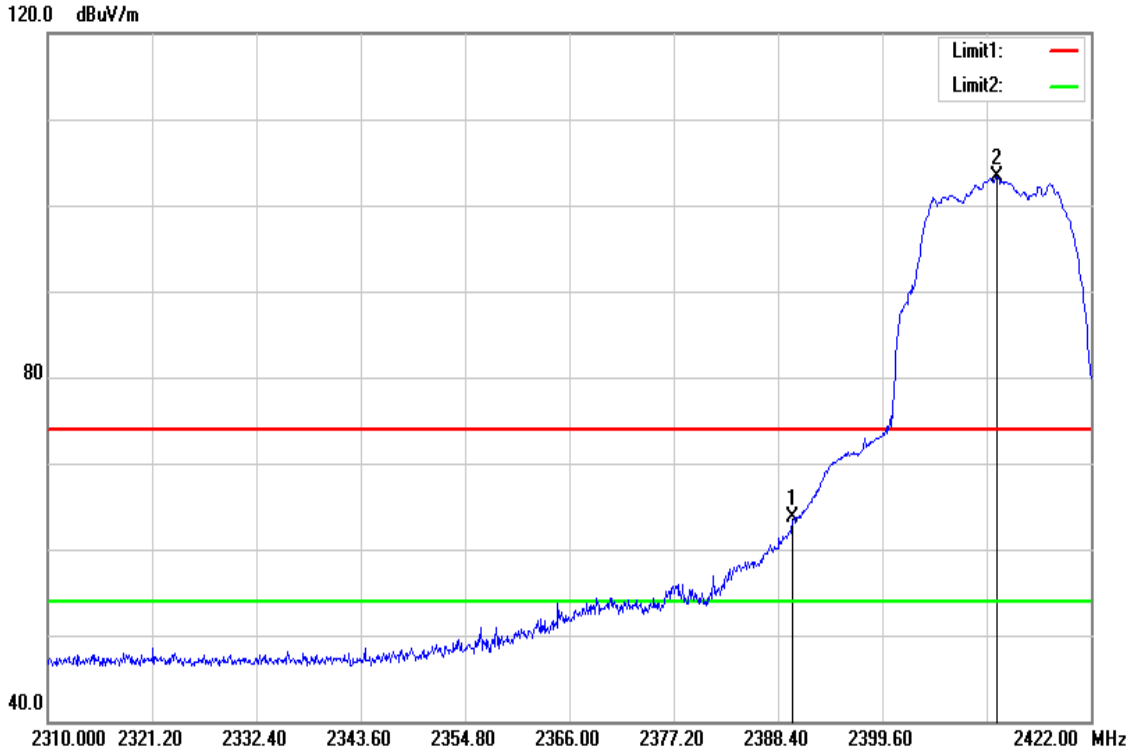
Frequency (MHz)	Reading (dB V)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2461.500	104.67	-2.10	102.57	-	-	peak
2483.900	54.61	-1.99	52.62	74.00	-21.38	peak

Test Mode	IEEE 802.11b High CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Average		



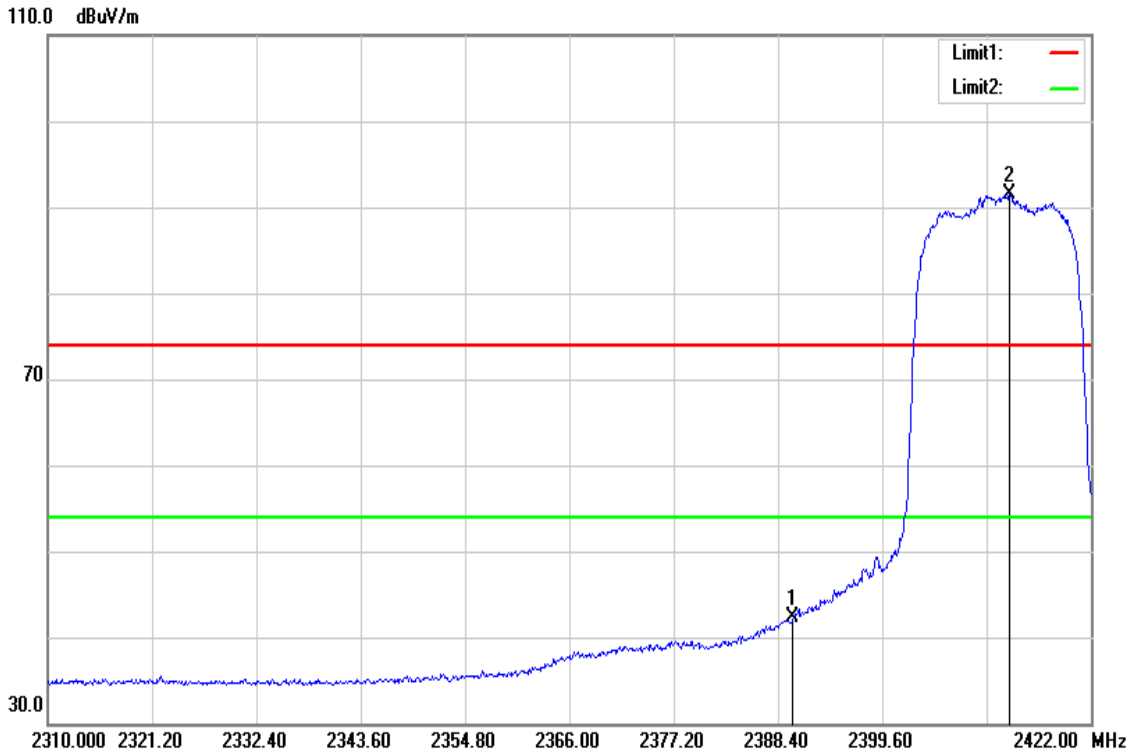
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2462.300	96.74	-2.09	94.65	-	-	AVG
2483.530	39.63	-1.99	37.64	54.00	-16.36	AVG

Test Mode	IEEE 802.11g Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak		



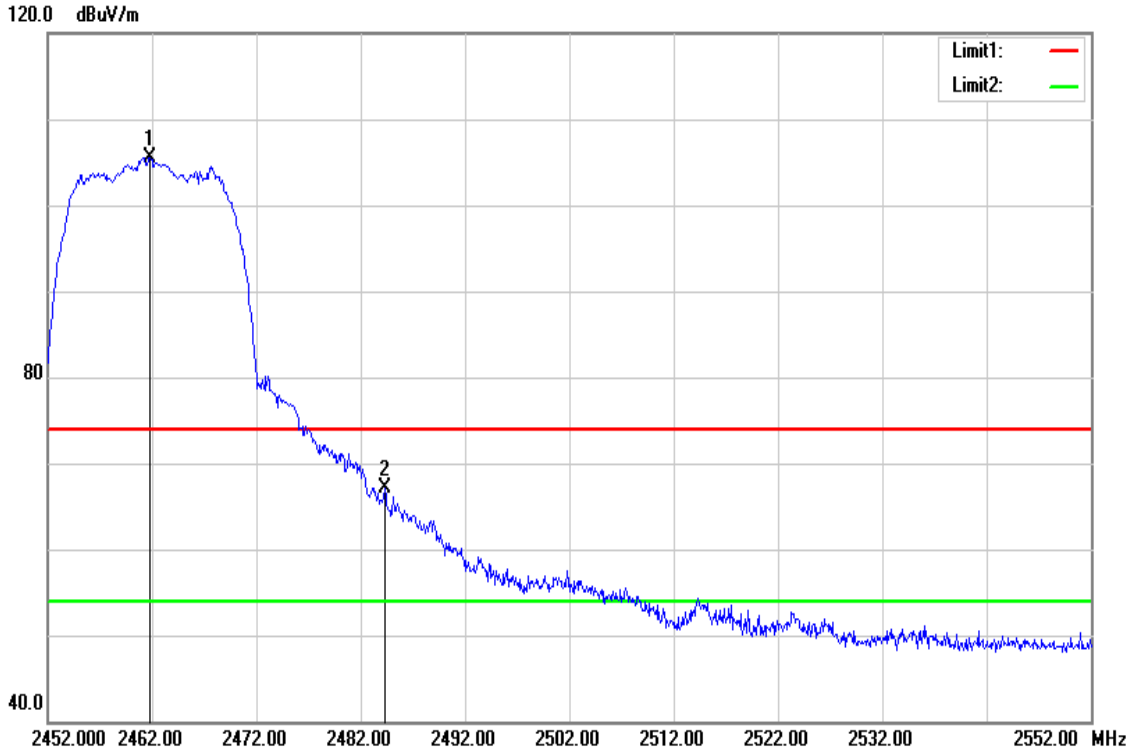
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	66.91	-3.28	63.63	7 .00	-10.37	peak
2411.920	106.46	-3.24	103.22	-	-	peak

Test Mode	IEEE 802.11g Low CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Average		



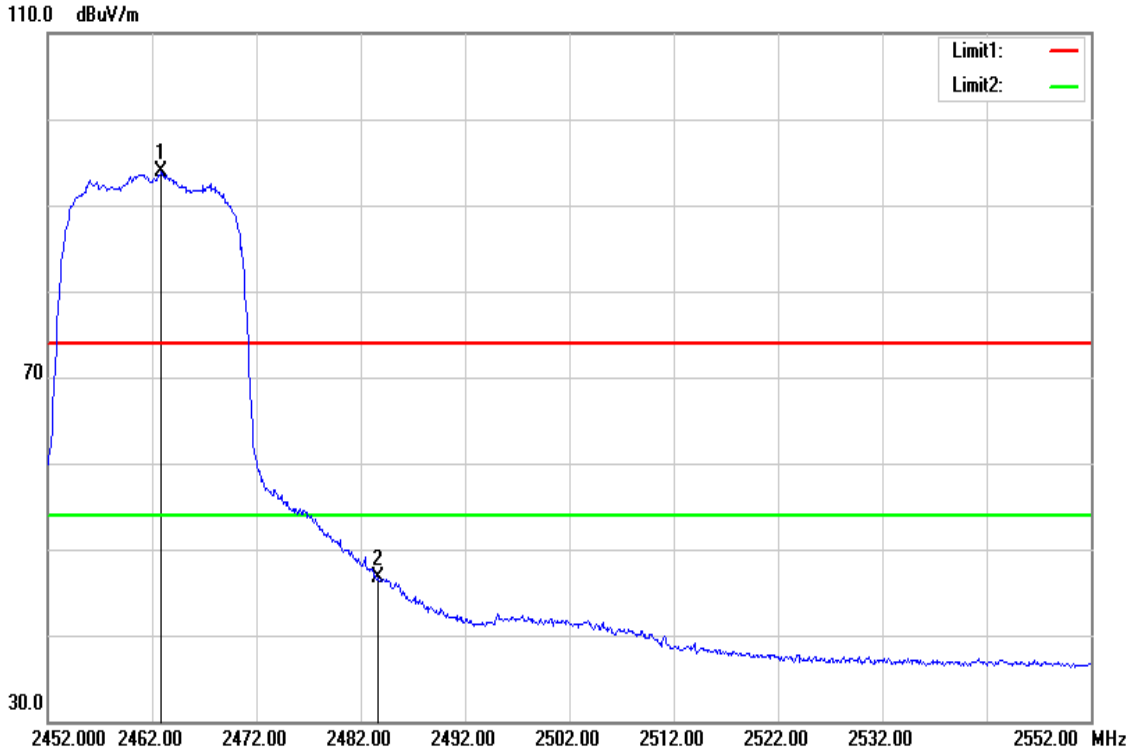
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	45.57	-3.28	42.29	54.00	-11.71	AVG
2413.264	94.65	-3.23	91.42	-	-	AVG

Test Mode	IEEE 802.11g High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak		



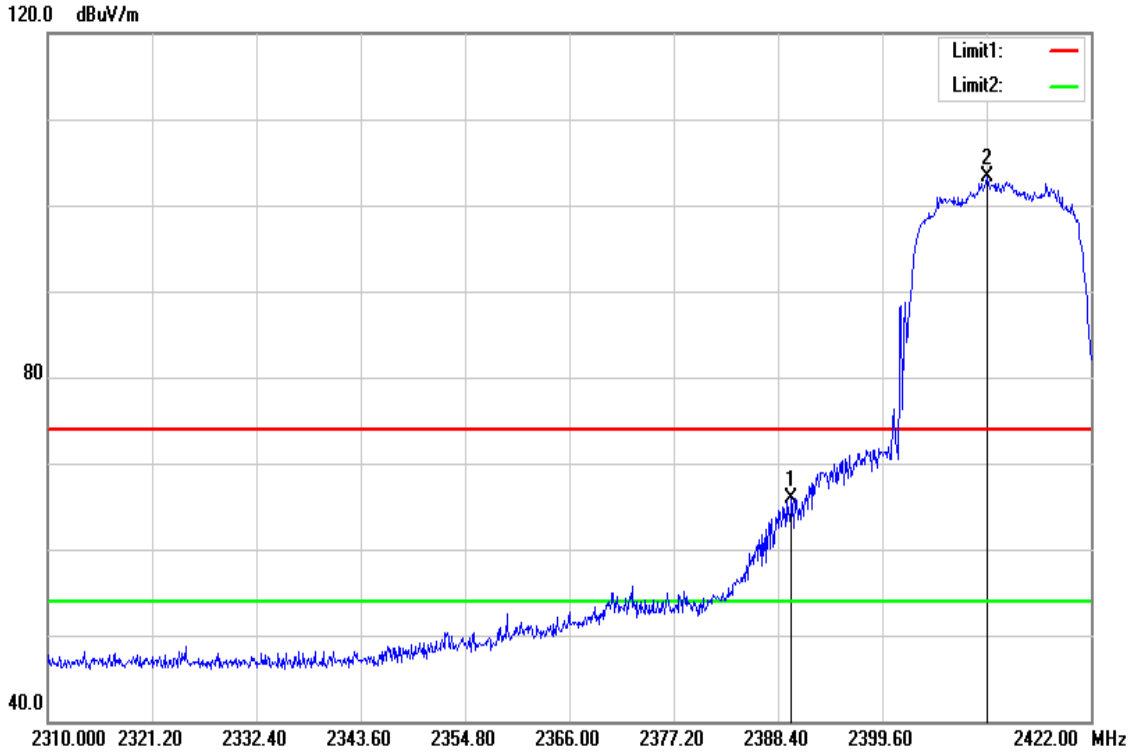
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2461.800	107.56	-2.10	105.46	-	-	peak
2484.300	69.10	-1.99	67.11	74.00	-6.89	peak

Test Mode	IEEE 802.11g High CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Average		



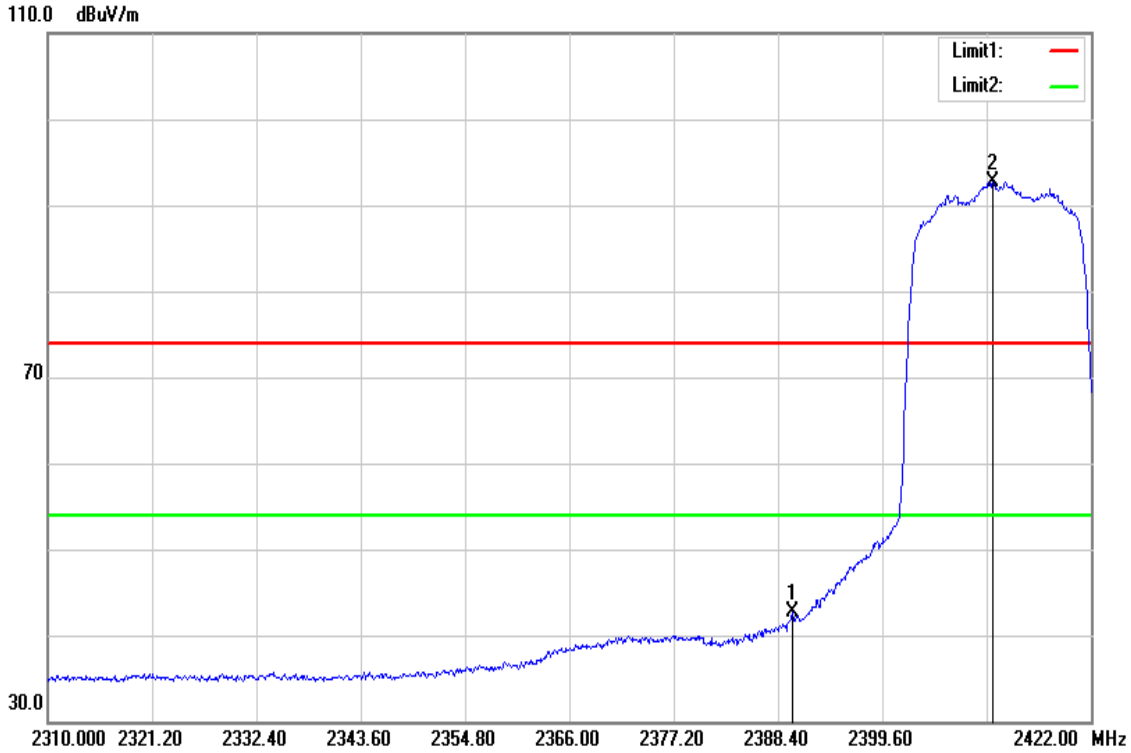
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2462.900	95.91	-2.09	93.8	-	-	AVG
2483.600	48.62	-1.99	46.63	54.00	-7.37	AVG

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak		



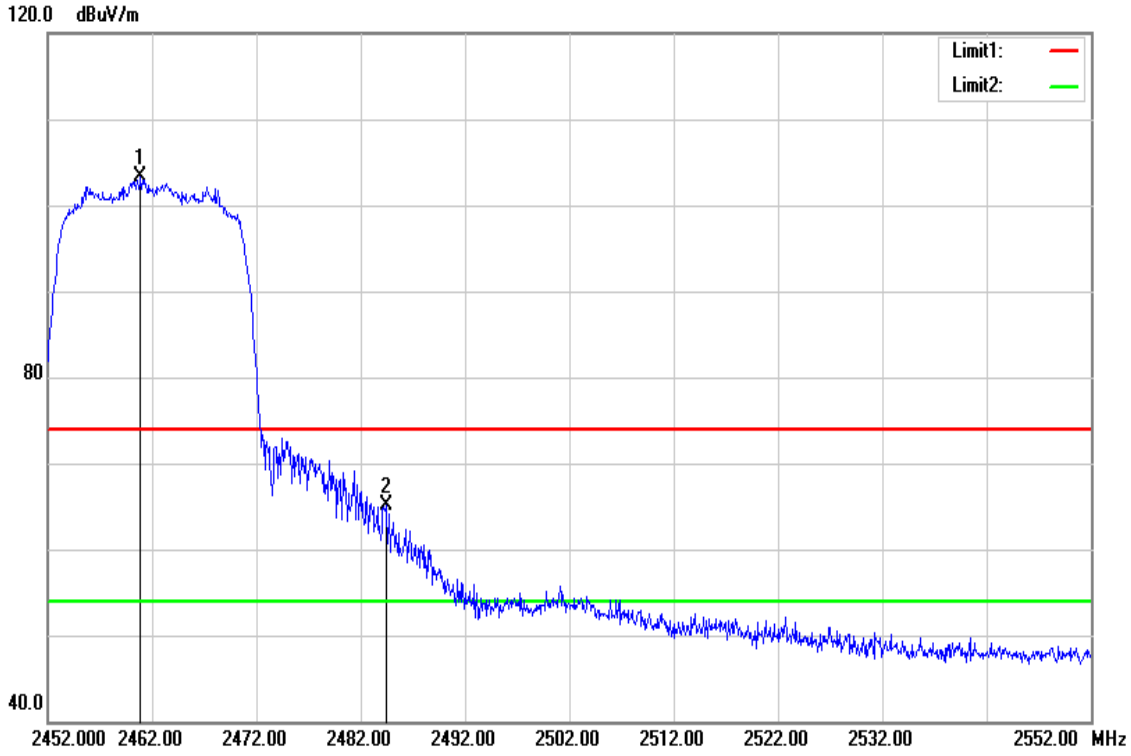
Frequency (MHz)	Reading dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.856	69.25	-3.28	65.97	74.00	-8.03	peak
2410.800	106.51	-3.24	103.27	-	-	peak

Test Mode	IEEE 802.11n HT20 Low CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Average		



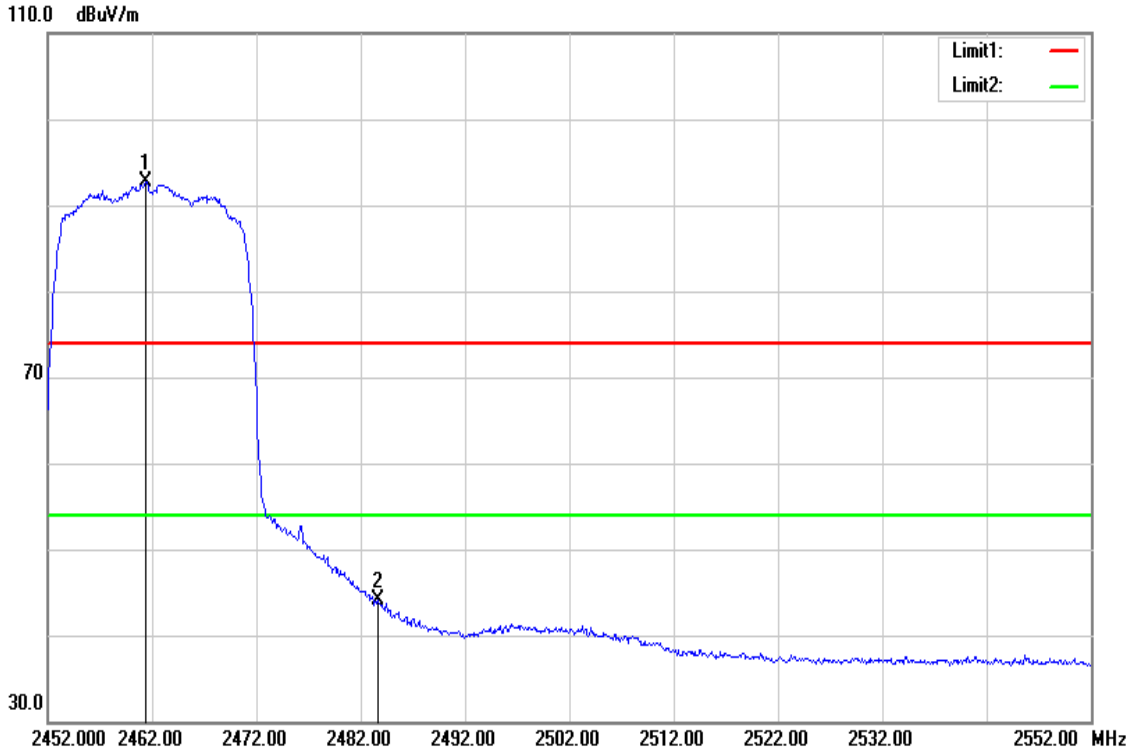
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.968	46.02	-3.28	42.74	54.00	-11.26	AVG
2411.472	95.91	-3.24	92.67	-	-	AVG

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak		



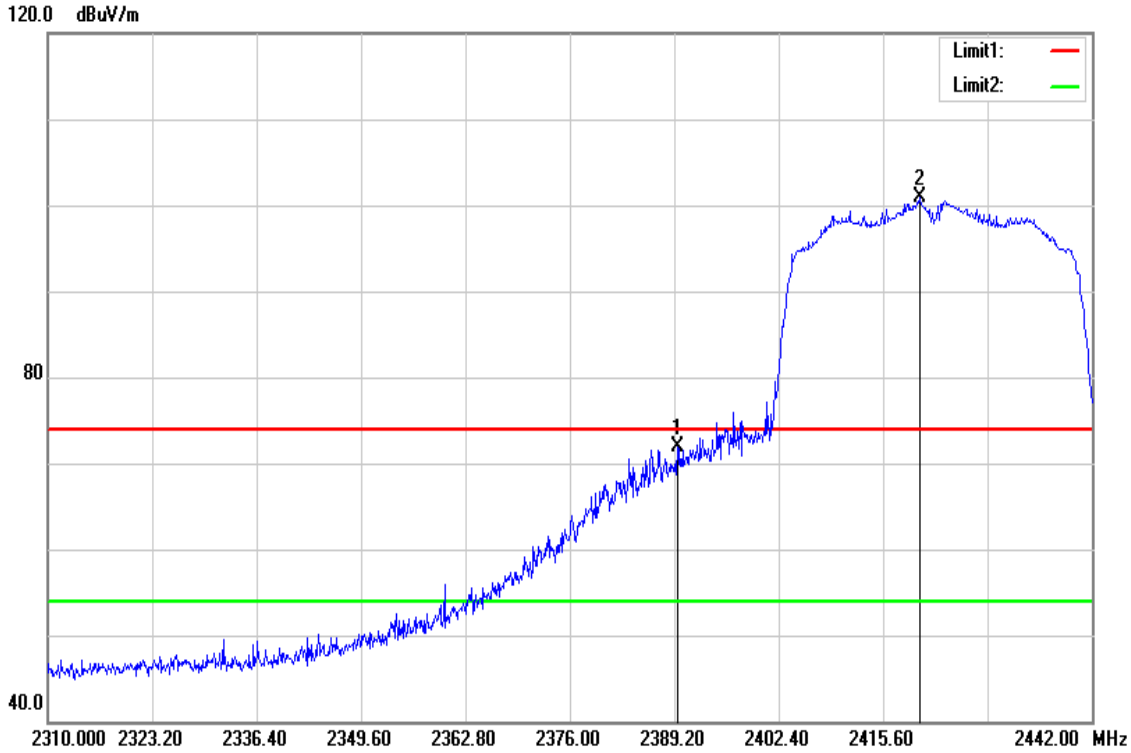
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2460.900	105.41	-2.10	103.31	-	-	peak
2484.400	67.17	-1.99	65.18	74.00	-8.82	peak

Test Mode	IEEE 802.11n HT20 High CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	March 9, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Average		



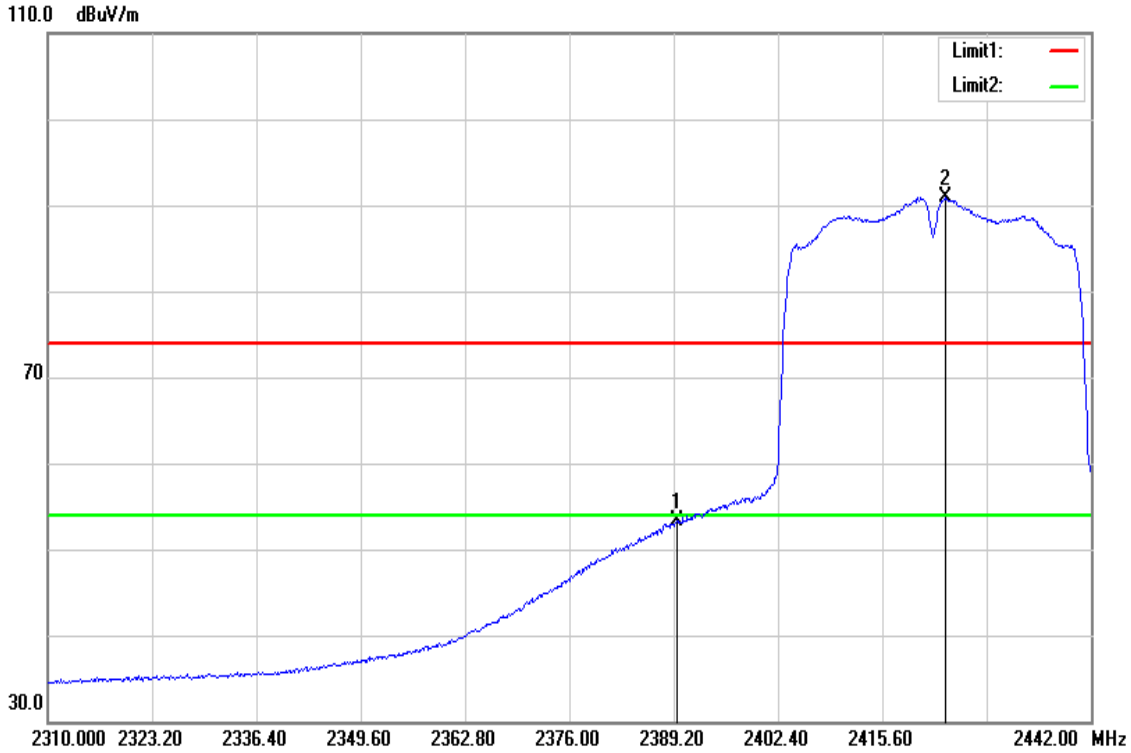
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2461.400	94.88	-2.10	92.78	-	-	AVG
2483.700	46.13	-1.99	44.14	54.00	-9.86	AVG

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	23(℃)/ 35%RH
Test Item	Band Edge	Test Date	June 6, 2017
Polarize	Horizontal	Test Engineer	Hayden
Detector	Peak		



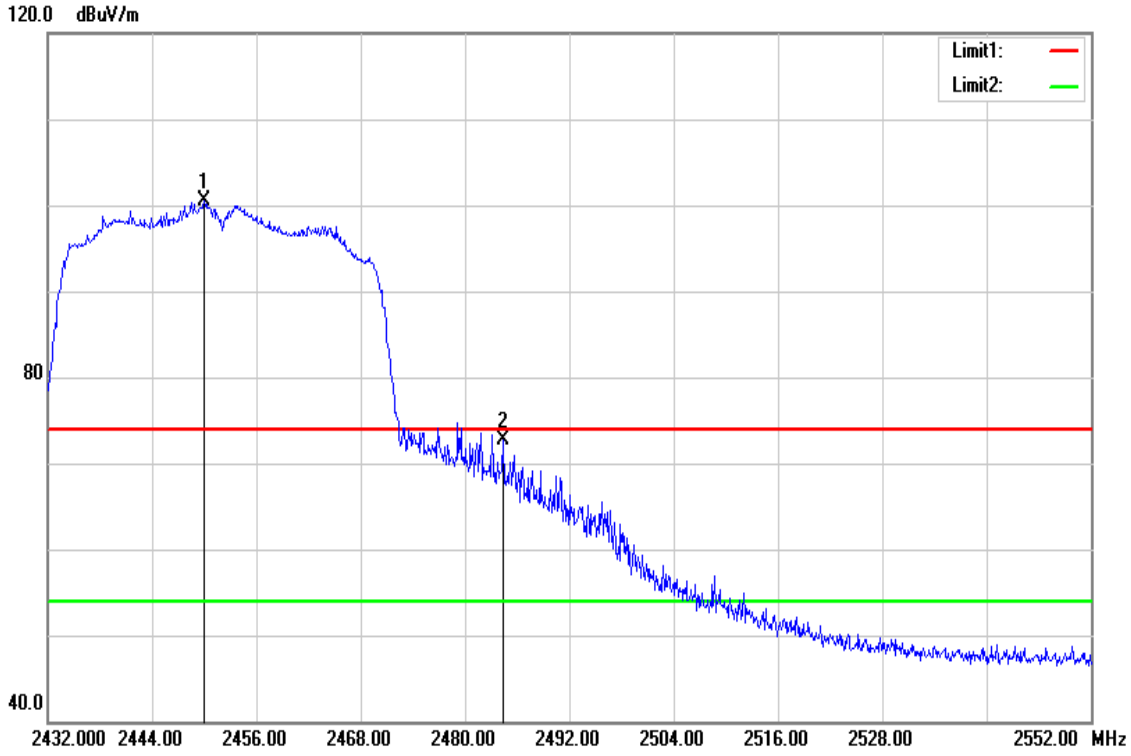
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.596	74.40	-2.49	71.91	74.00	-2.09	peak
2420.220	103.24	-2.36	100.88	-	-	peak

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	23(℃)/ 35%RH
Test Item	Band Edge	Test Date	June 6, 2017
Polarize	Horizontal	Test Engineer	Hayden
Detector	Average		



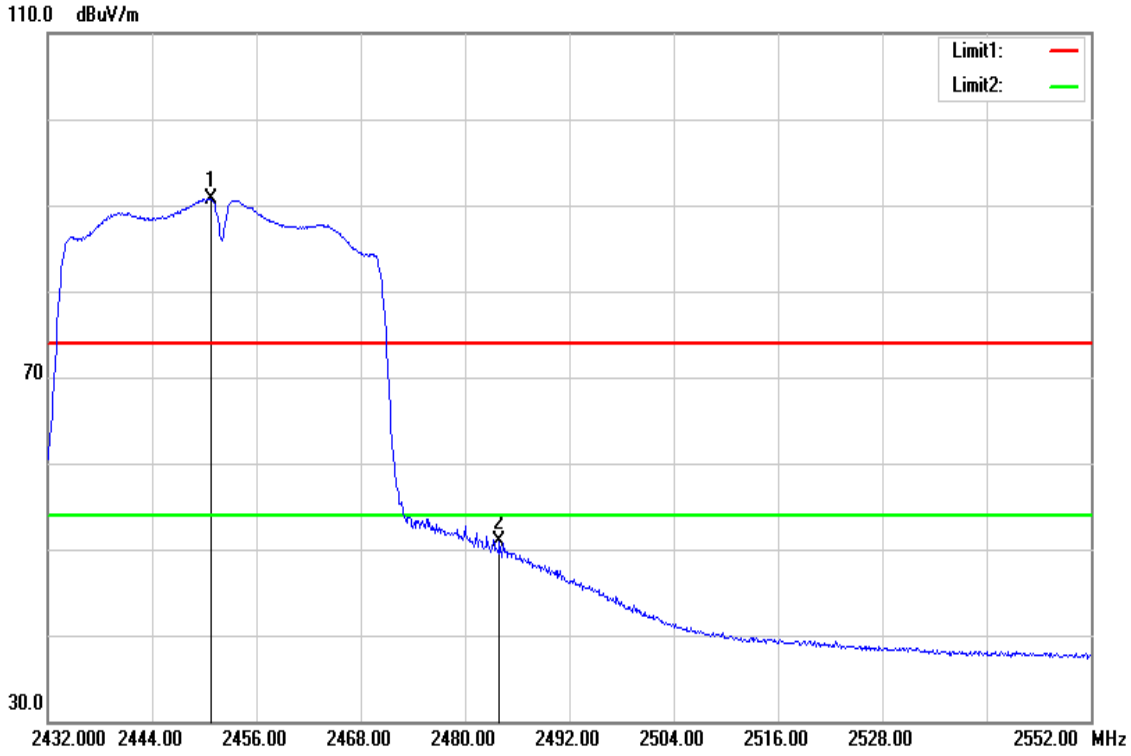
Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.596	55.85	-2.49	53.36	54 00	-0.64	AVG
2423.520	93.23	-2.33	90.90	-	-	AVG

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	23(℃)/ 35%RH
Test Item	Band Edge	Test Date	June 6, 2017
Polarize	Horizontal	Test Engineer	Hayden
Detector	Peak		



Frequency (MHz)	Reading (dBu)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2450.000	102.68	-2.14	100.54	-	-	peak
2484.320	74.72	-1.99	72.73	74.00	-1.27	peak

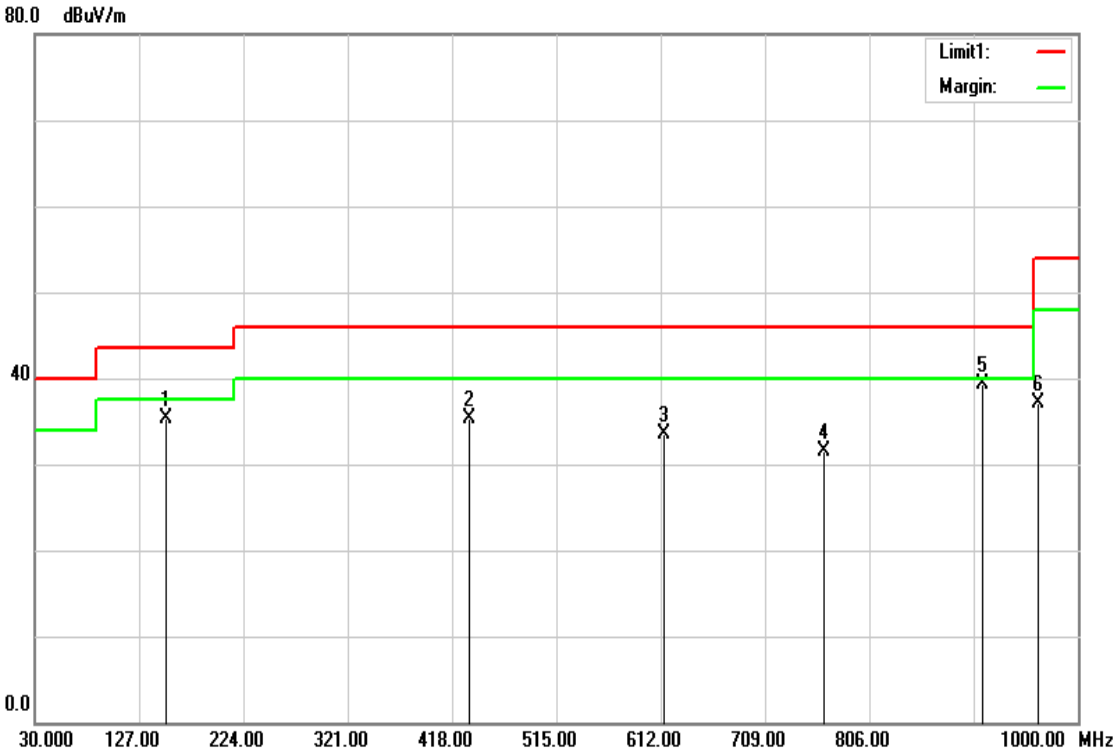
Test Mode	IEEE 802.11n HT40 High CH	Temperature:	23(℃)/ 35%RH
Test Item	Band Edge	Test Date	June 6, 2017
Polarize	Horizontal	Test Engineer	Hayden
Detector	Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2450.720	92.88	-2.14	90.74	-	-	AVG
2483.960	52.93	-1.99	50.94	54.00	-3.06	AVG

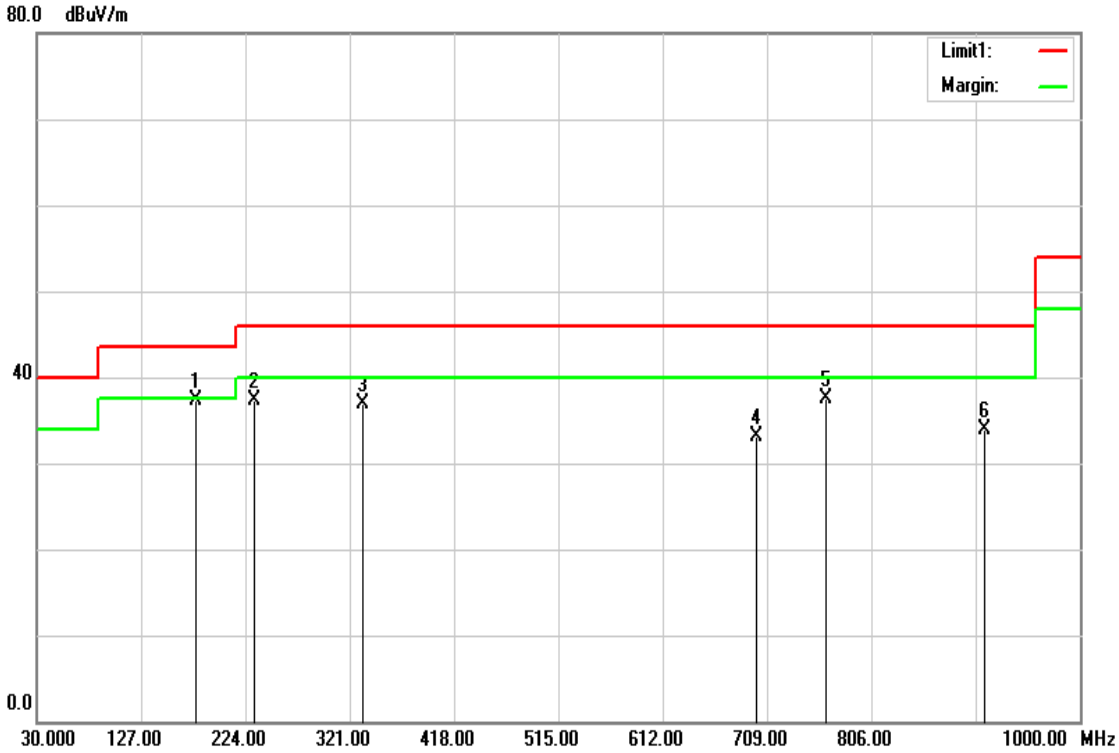
Below 1G Test Data

Test Mode	Mode 1	Temp/Hum	27(℃)/ 53%RH
Test Item	30MHz-1GHz	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Qusi-peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
152.2200	51.47	-16.13	35.34	43.50	-8.16	peak
433.5200	45.95	-10.69	35.26	46.00	-10.74	peak
614.9100	40.87	-7.41	33.46	46.00	-12.54	peak
763.3200	36.31	-4.81	31.50	46.00	-14.50	peak
911.7300	42.21	-3.00	39.21	46.00	-6.79	QP
963.1400	39.37	-2.18	37.19	54.00	-16.81	peak

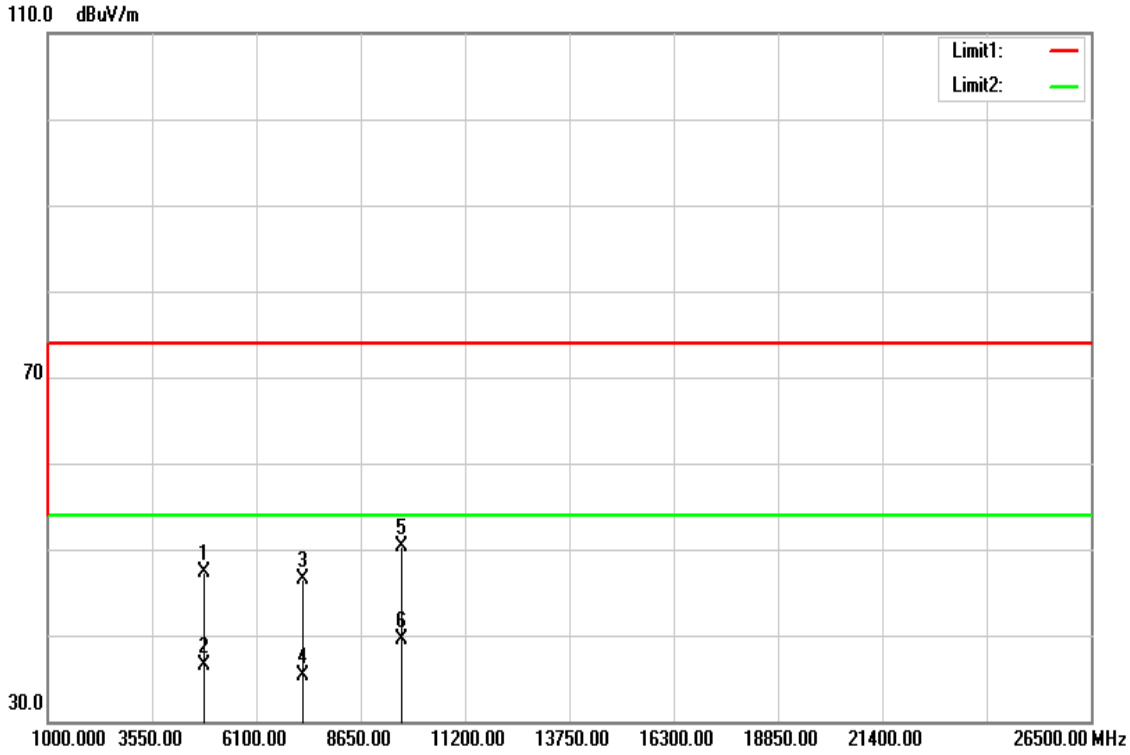
Test Mode	Mode 1	Temp/Hum	27(℃)/ 53%RH
Test Item	30MHz-1GHz	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Qusi-peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
177.4400	54.48	-17.21	37.27	43.50	-6.23	QP
232.7300	53.97	-16.67	37.30	46.00	-8.70	QP
333.6100	50.27	-13.33	36.94	46.00	-9.06	peak
699.3000	39.24	-6.08	33.16	46.00	-12.84	peak
763.3200	42.28	-4.81	37.47	46.00	-8.53	peak
911.7300	36.86	-3.00	33.86	46.00	-12.14	peak

Above 1G Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

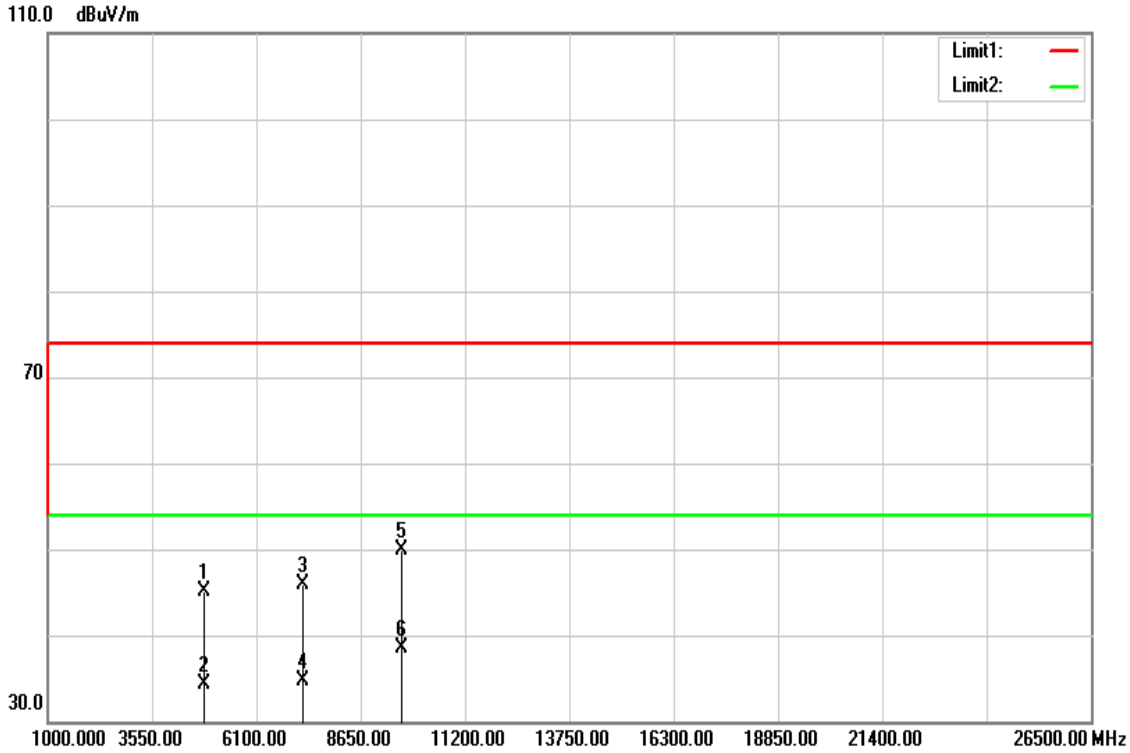


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	42.25	5.11	47.36	74.00	-26.64	peak
4827.000	31.33	5.11	36.44	54.00	-17.56	AVG
7236.000	33.72	12.71	46.43	74.00	-27.57	peak
7236.000	22.65	12.71	35.36	54.00	-18.64	AVG
9648.000	32.69	17.60	50.29	74.00	-23.71	peak
9648.000	21.94	17.60	39.54	54.00	-14.46	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

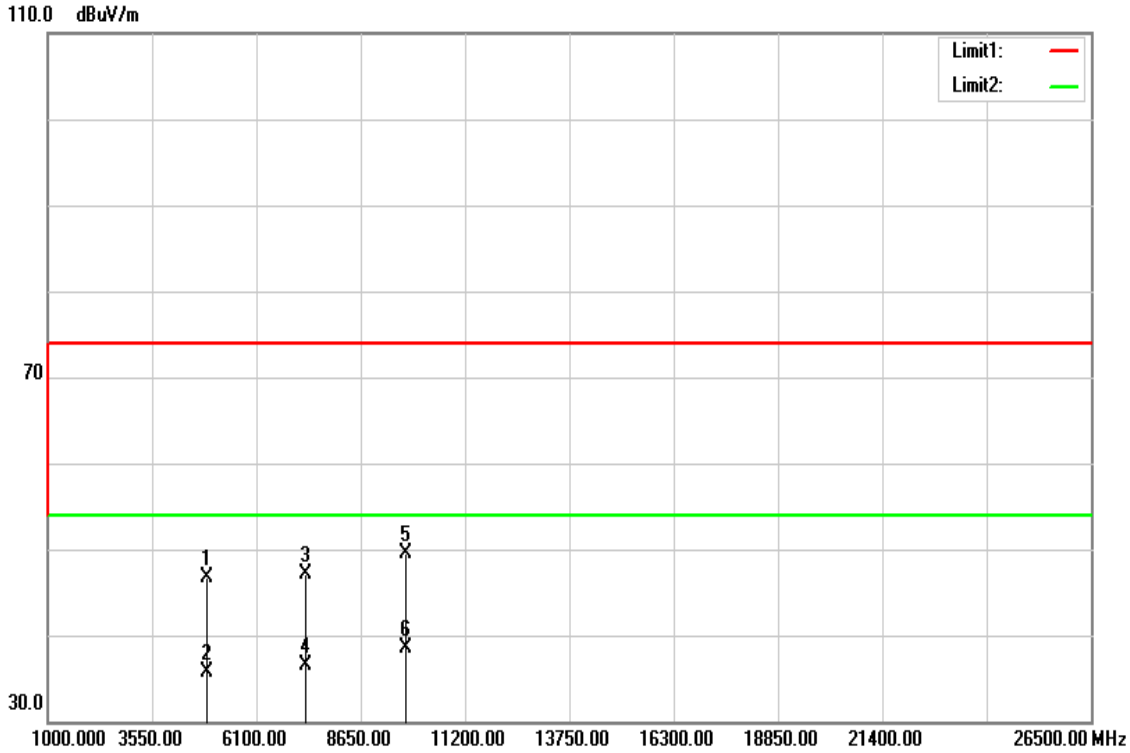


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	39.97	5.11	45.08	74.00	-28.92	peak
4827.000	29.13	5.11	34.24	54.00	-19.76	AVG
7236.000	33.18	12.71	45.89	74.00	-28.11	peak
7236.000	21.92	12.71	34.63	54.00	-19.37	AVG
9648.000	32.26	17.60	49.86	74.00	-24.14	peak
9648.000	20.91	17.60	38.51	54.00	-15.49	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

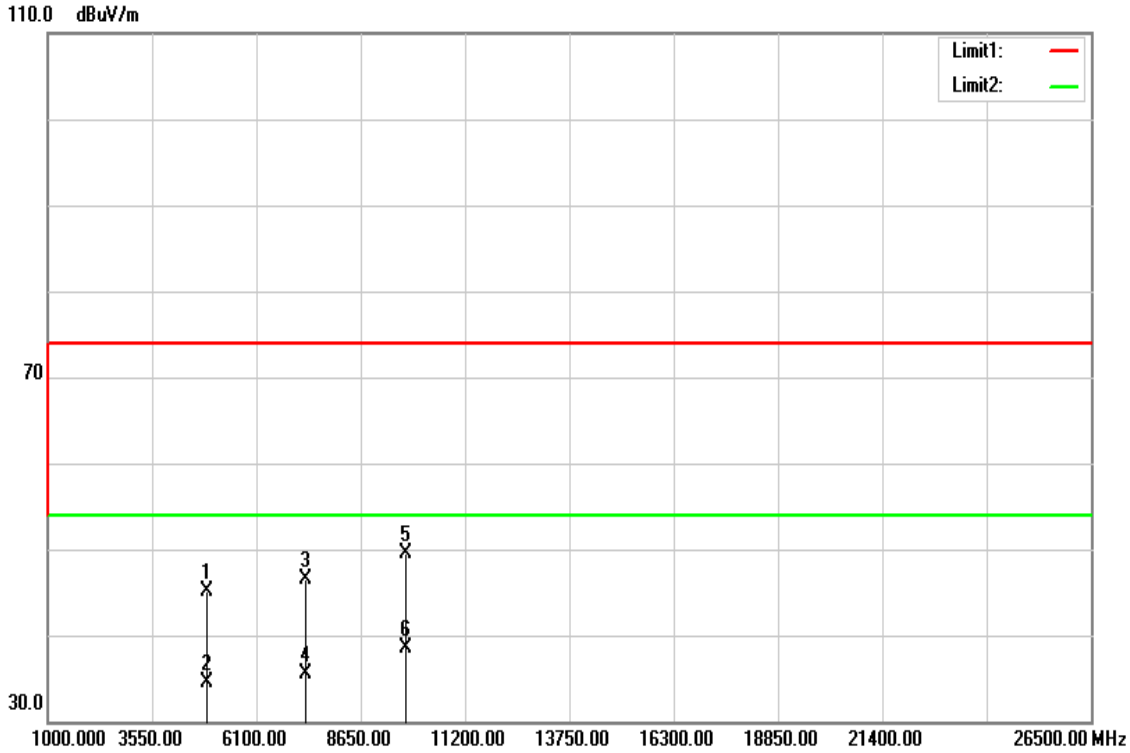


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	41.51	5.24	46.75	74.00	-27.25	peak
4876.000	30.38	5.24	35.62	54.00	-18.38	AVG
7311.000	34.15	12.94	47.09	74.00	-26.91	peak
7311.000	23.61	12.94	36.55	54.00	-17.45	AVG
9748.000	31.93	17.60	49.53	74.00	-24.47	peak
9748.000	20.81	17.60	38.41	54.00	-15.59	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

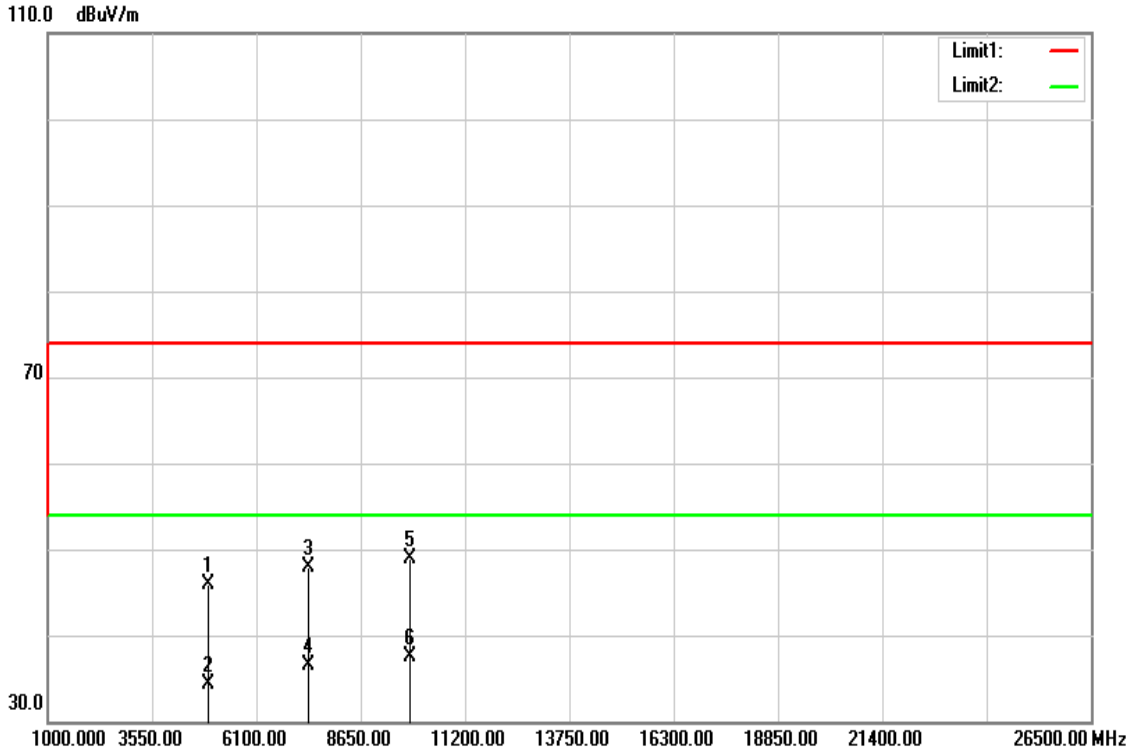


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	39.78	5.24	45.02	74.00	-28.98	peak
4876.000	29.30	5.24	34.54	54.00	-19.46	AVG
7311.000	33.54	12.94	46.48	74.00	-27.52	peak
7311.000	22.52	12.94	35.46	54.00	-18.54	AVG
9748.000	31.99	17.60	49.59	74.00	-24.41	peak
9748.000	20.87	17.60	38.47	54.00	-15.53	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

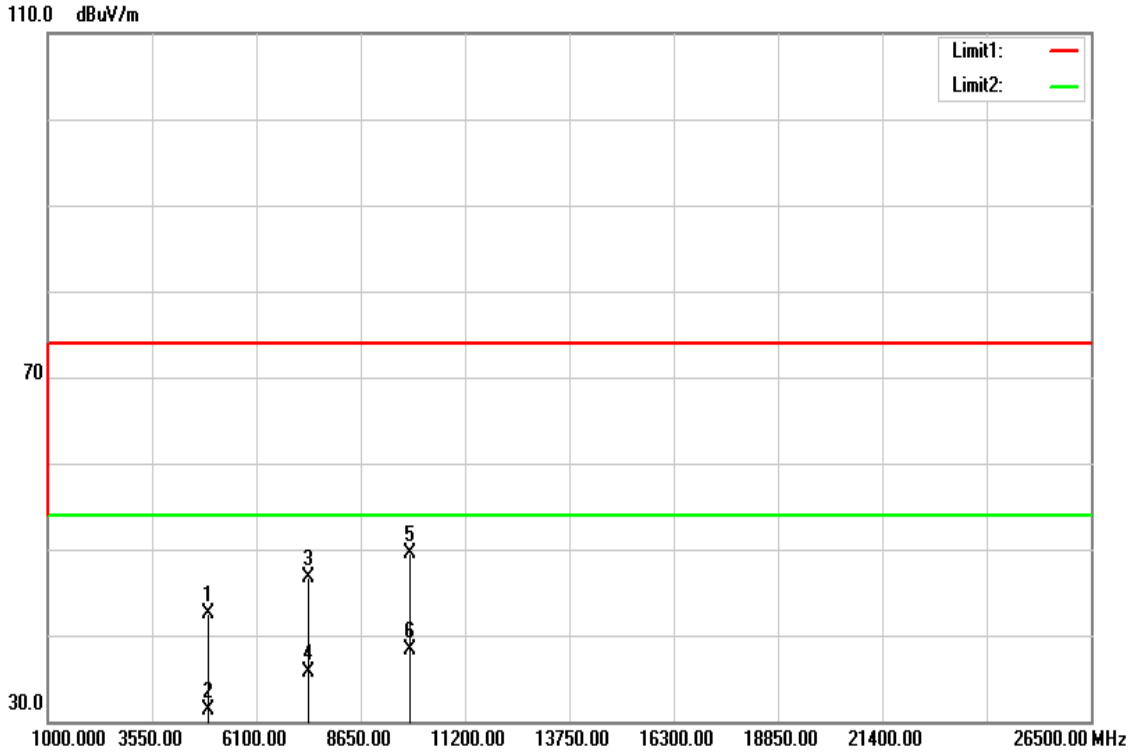


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4925.000	40.52	5.37	45.89	74.00	-28.11	peak
4925.000	28.91	5.37	34.28	54.00	-19.72	AVG
7386.000	34.65	13.17	47.82	74.00	-26.18	peak
7386.000	23.24	13.17	36.41	54.00	-17.59	AVG
9848.000	31.38	17.60	48.98	74.00	-25.02	peak
9848.000	19.95	17.60	37.55	54.00	-16.45	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

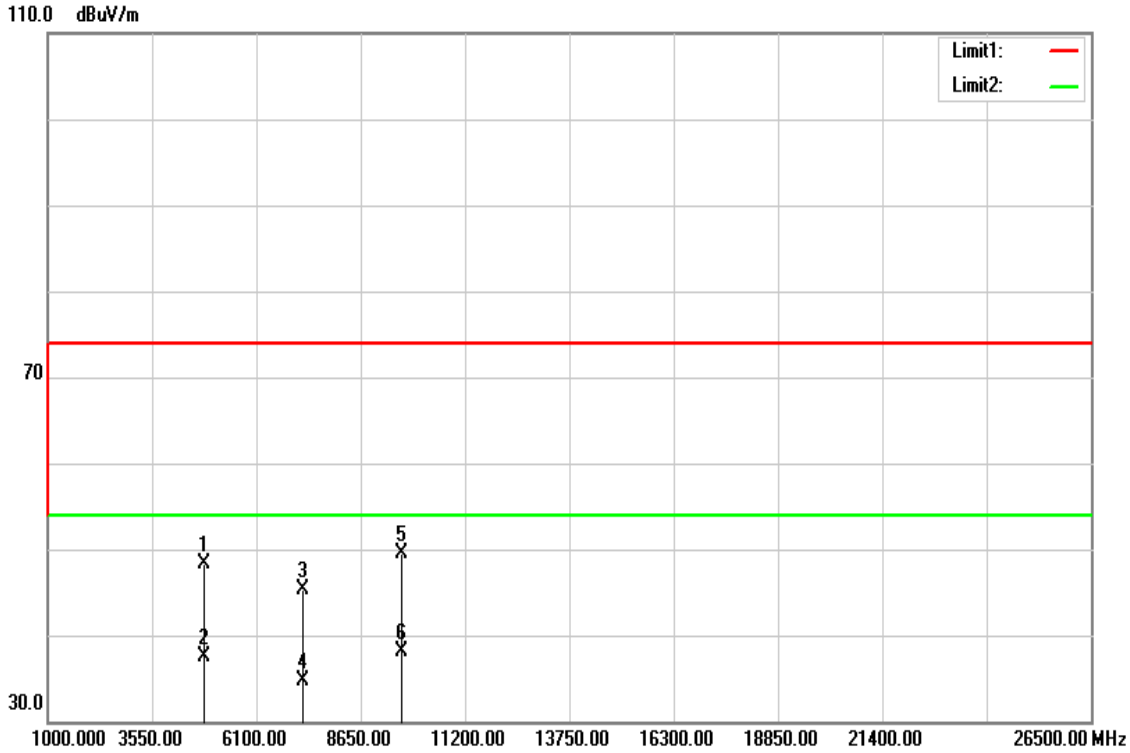


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	37.15	5.37	42.52	74.00	-31.48	peak
4924.000	25.85	5.37	31.22	54.00	-22.78	AVG
7386.000	33.63	13.17	46.80	74.00	-27.20	peak
7386.000	22.47	13.17	35.64	54.00	-18.36	AVG
9848.000	31.81	17.60	49.41	74.00	-24.59	peak
9848.000	20.64	17.60	38.24	54.00	-15.76	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 802.11g Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

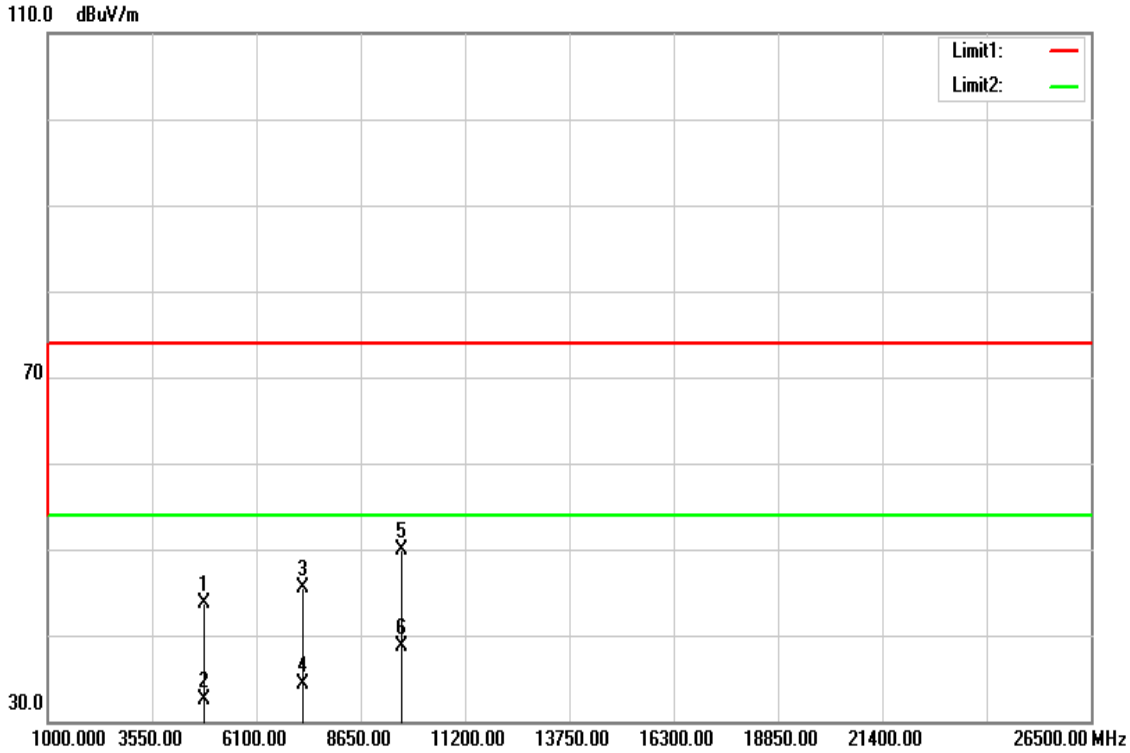


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	43.12	5.11	48.23	74.00	-25.77	peak
4827.000	32.44	5.11	37.55	54.00	-16.45	AVG
7236.000	32.58	12.71	45.29	74.00	-28.71	peak
7236.000	21.92	12.71	34.63	54.00	-19.37	AVG
9648.000	31.87	17.60	49.47	74.00	-24.53	peak
9648.000	20.54	17.60	38.14	54.00	-15.86	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

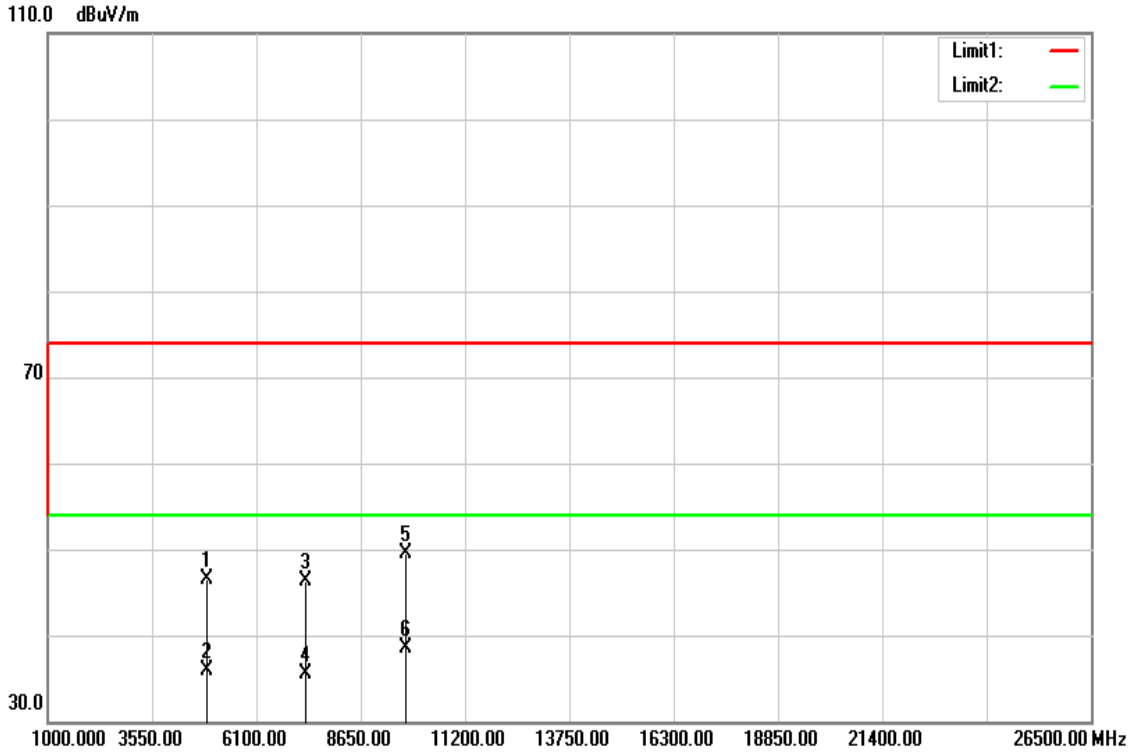


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	38.62	5.10	43.72	74.00	-30.28	peak
4824.000	27.31	5.10	32.41	54.00	-21.59	AVG
7236.000	32.74	12.71	45.45	74.00	-28.55	peak
7236.000	21.62	12.71	34.33	54.00	-19.67	AVG
9648.000	32.26	17.60	49.86	74.00	-24.14	peak
9648.000	21.01	17.60	38.61	54.00	-15.39	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

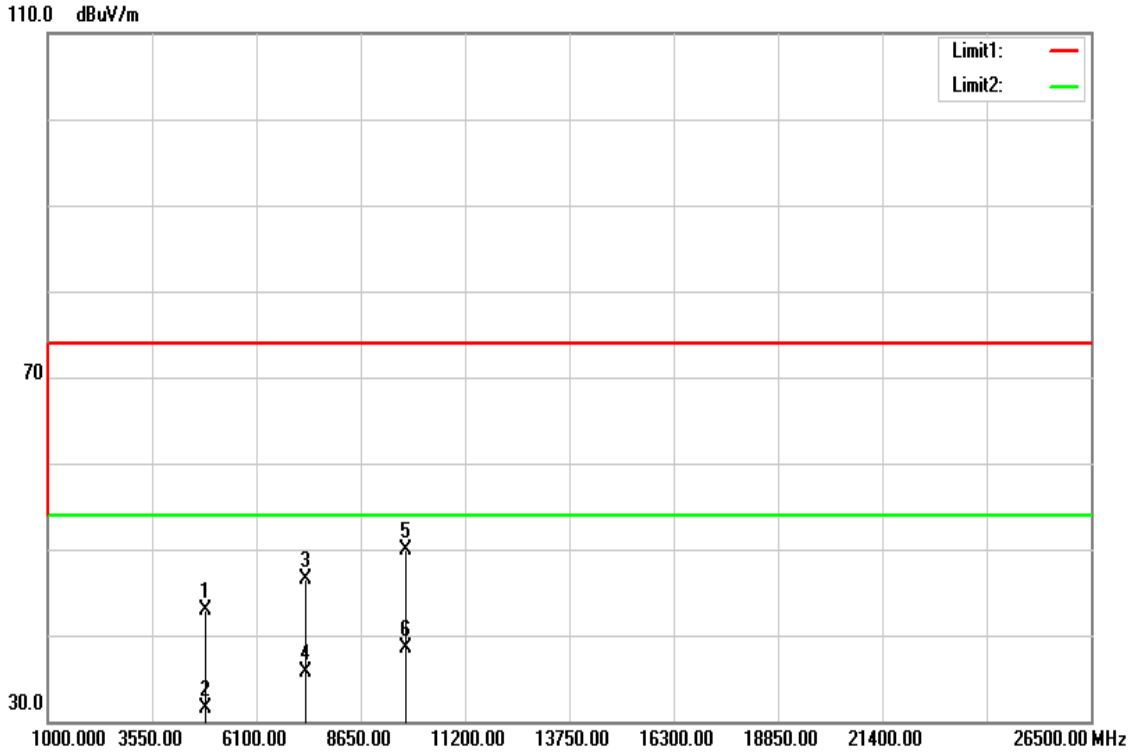


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	41.31	5.24	46.55	74.00	-27.45	peak
4876.000	30.70	5.24	35.94	54.00	-18.06	AVG
7311.000	33.39	12.94	46.33	74.00	-27.67	peak
7311.000	22.47	12.94	35.41	54.00	-18.59	AVG
9748.000	31.84	17.60	49.44	74.00	-24.56	peak
9748.000	20.91	17.60	38.51	54.00	-15.49	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

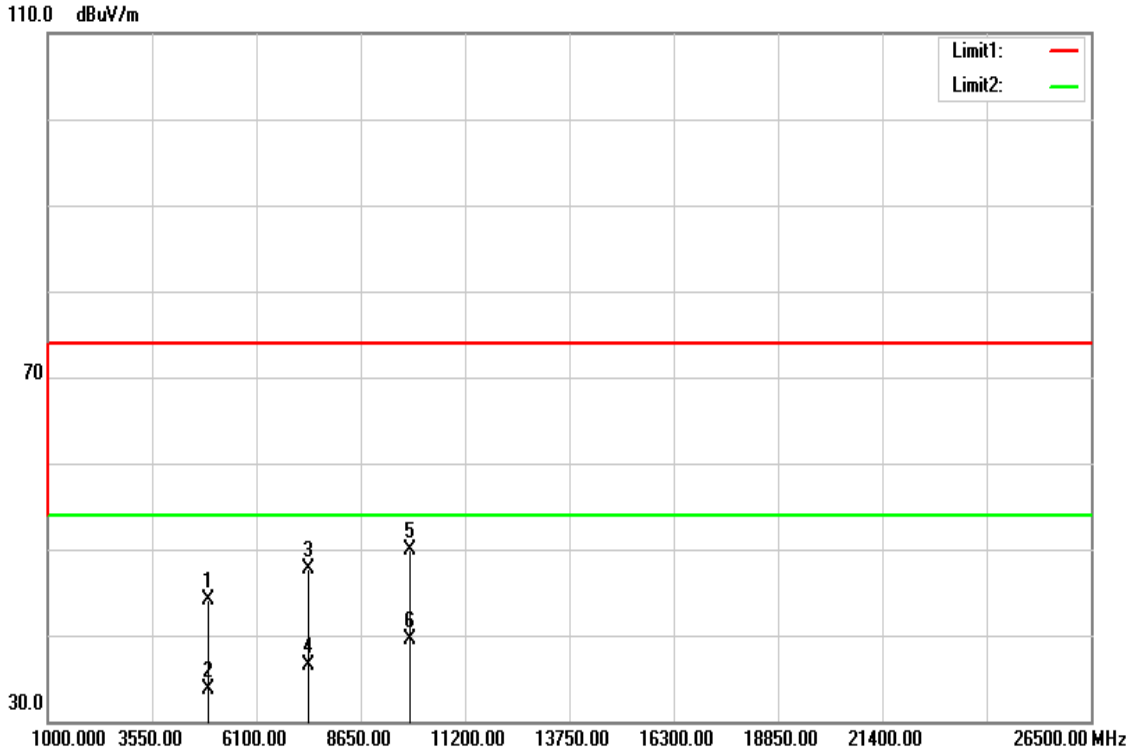


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	37.61	5.23	42.84	74.00	-31.16	peak
4874.000	26.19	5.23	31.42	54.00	-22.58	AVG
7311.000	33.51	12.94	46.45	74.00	-27.55	peak
7311.000	22.80	12.94	35.74	54.00	-18.26	AVG
9748.000	32.23	17.60	49.83	74.00	-24.17	peak
9748.000	20.81	17.60	38.41	54.00	-15.59	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

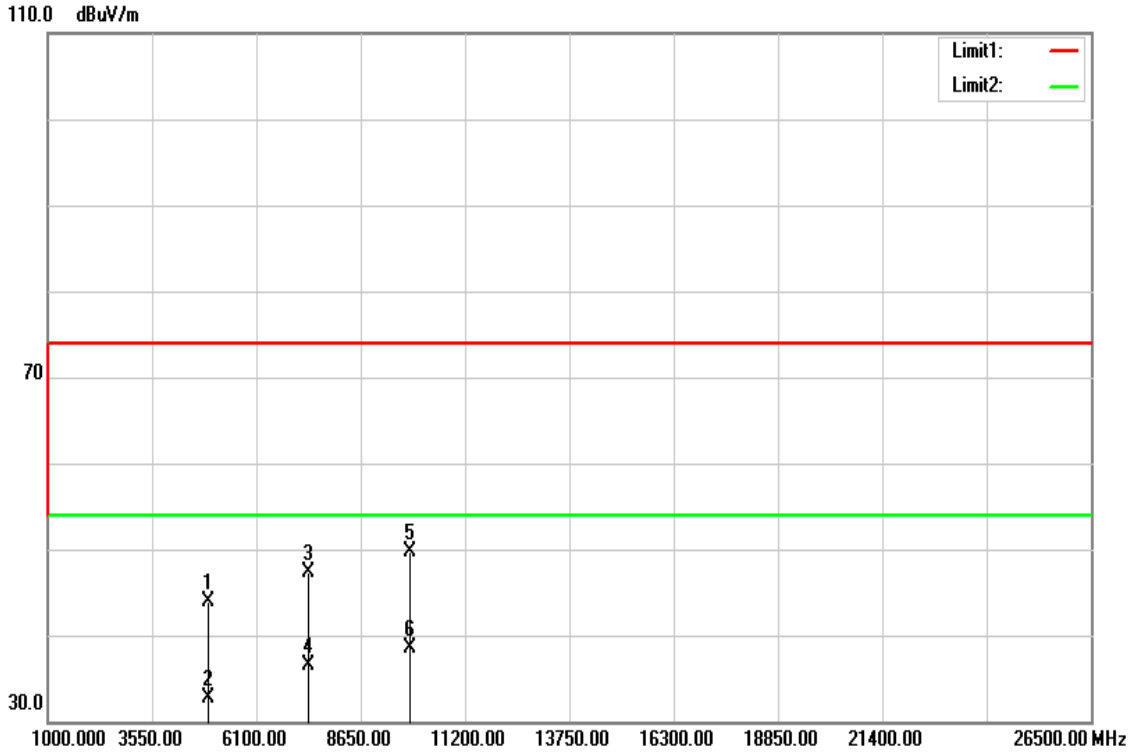


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	38.73	5.37	44.10	74.00	-29.90	peak
4924.000	28.25	5.37	33.62	54.00	-20.38	AVG
7386.000	34.56	13.17	47.73	74.00	-26.27	peak
7386.000	23.24	13.17	36.41	54.00	-17.59	AVG
9848.000	32.40	17.60	50.00	74.00	-24.00	peak
9848.000	21.82	17.60	39.42	54.00	-14.58	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

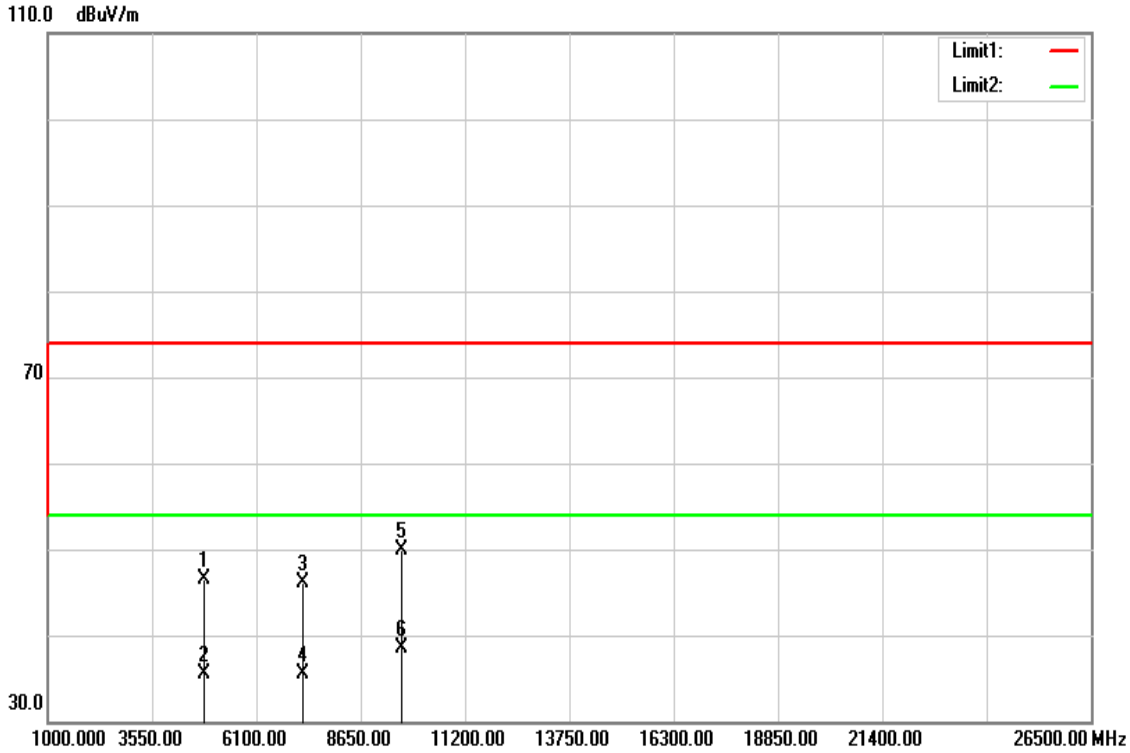


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	38.47	5.37	43.84	74.00	-30.16	peak
4924.000	27.25	5.37	32.62	54.00	-21.38	AVG
7386.000	34.17	13.17	47.34	74.00	-26.66	peak
7386.000	23.24	13.17	36.41	54.00	-17.59	AVG
9848.000	32.11	17.60	49.71	74.00	-24.29	peak
9848.000	20.85	17.60	38.45	54.00	-15.55	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

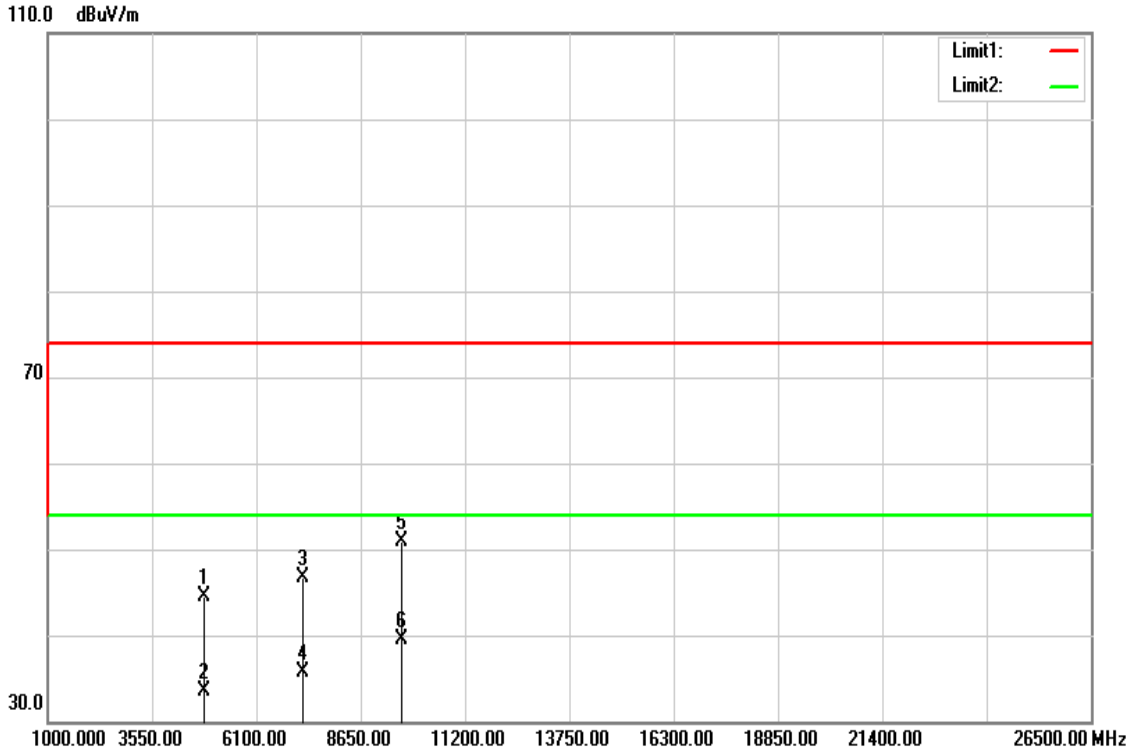


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	41.34	5.11	46.45	74.00	-27.55	peak
4827.000	30.30	5.11	35.41	54.00	-18.59	AVG
7236.000	33.36	12.71	46.07	74.00	-27.93	peak
7236.000	22.77	12.71	35.48	54.00	-18.52	AVG
9648.000	32.28	17.60	49.88	74.00	-24.12	peak
9648.000	20.92	17.60	38.52	54.00	-15.48	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

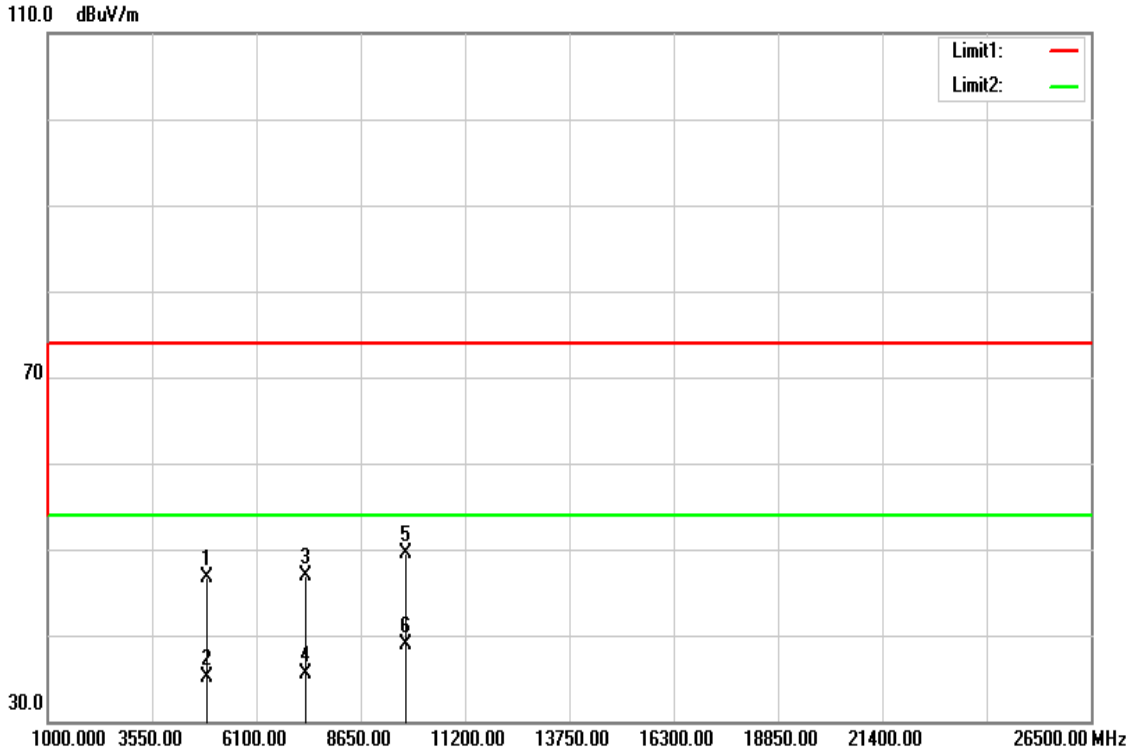


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	39.43	5.11	44.54	74.00	-29.46	peak
4827.000	28.36	5.11	33.47	54.00	-20.53	AVG
7236.000	33.95	12.71	46.66	74.00	-27.34	peak
7236.000	22.93	12.71	35.64	54.00	-18.36	AVG
9648.000	33.22	17.60	50.82	74.00	-23.18	peak
9648.000	21.82	17.60	39.42	54.00	-14.58	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

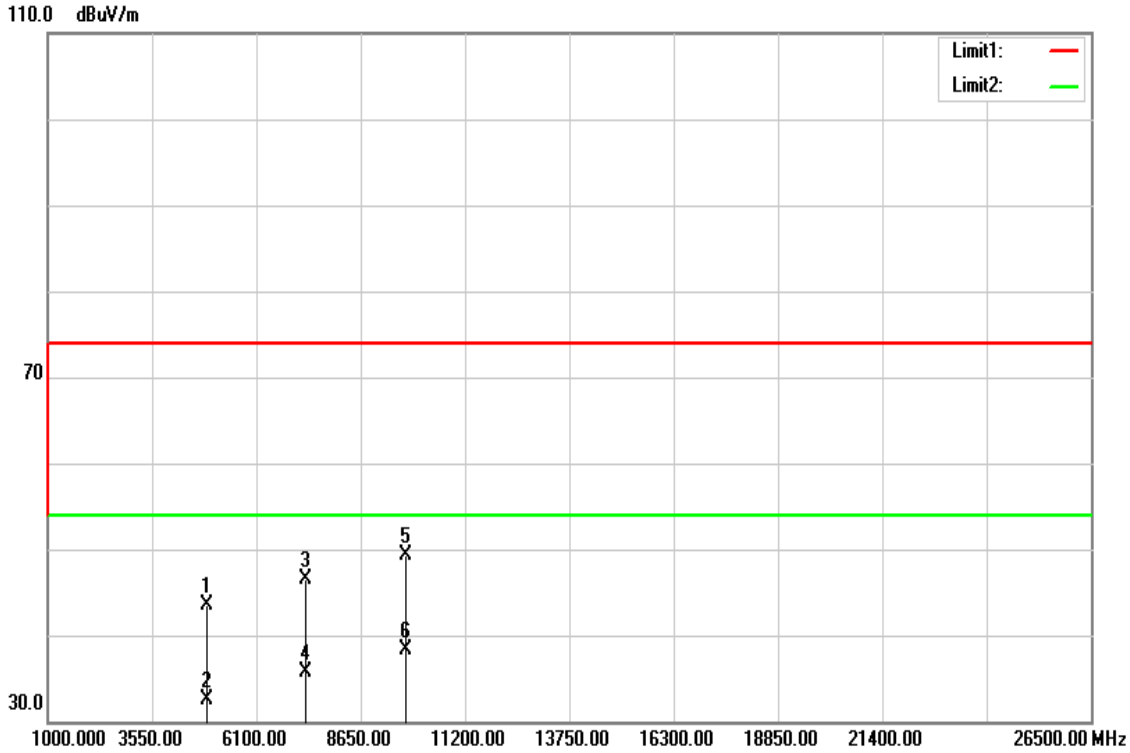


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	41.42	5.24	46.66	74.00	-27.34	peak
4876.000	29.90	5.24	35.14	54.00	-18.86	AVG
7311.000	33.97	12.94	46.91	74.00	-27.09	peak
7311.000	22.51	12.94	35.45	54.00	-18.55	AVG
9748.000	31.89	17.60	49.49	74.00	-24.51	peak
9748.000	21.32	17.60	38.92	54.00	-15.08	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

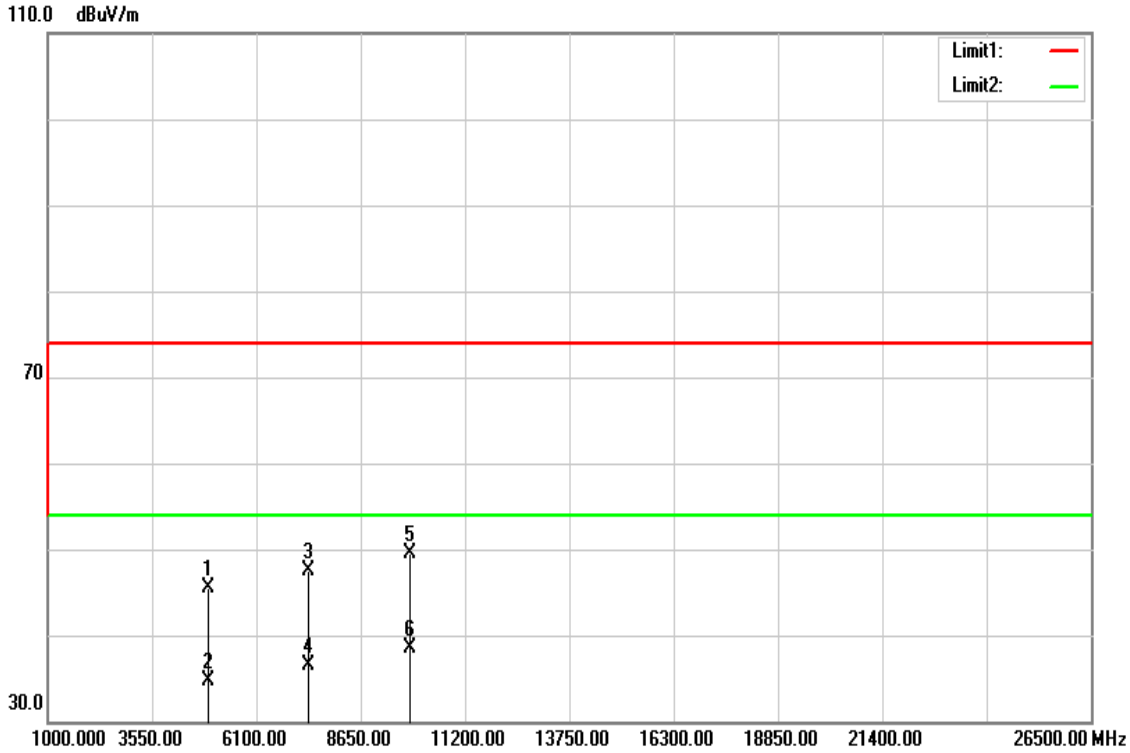


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4876.000	38.26	5.24	43.50	74.00	-30.50	peak
4876.000	27.17	5.24	32.41	54.00	-21.59	AVG
7311.000	33.49	12.94	46.43	74.00	-27.57	peak
7311.000	22.80	12.94	35.74	54.00	-18.26	AVG
9748.000	31.71	17.60	49.31	74.00	-24.69	peak
9748.000	20.62	17.60	38.22	54.00	-15.78	AVG

Remark:

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

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

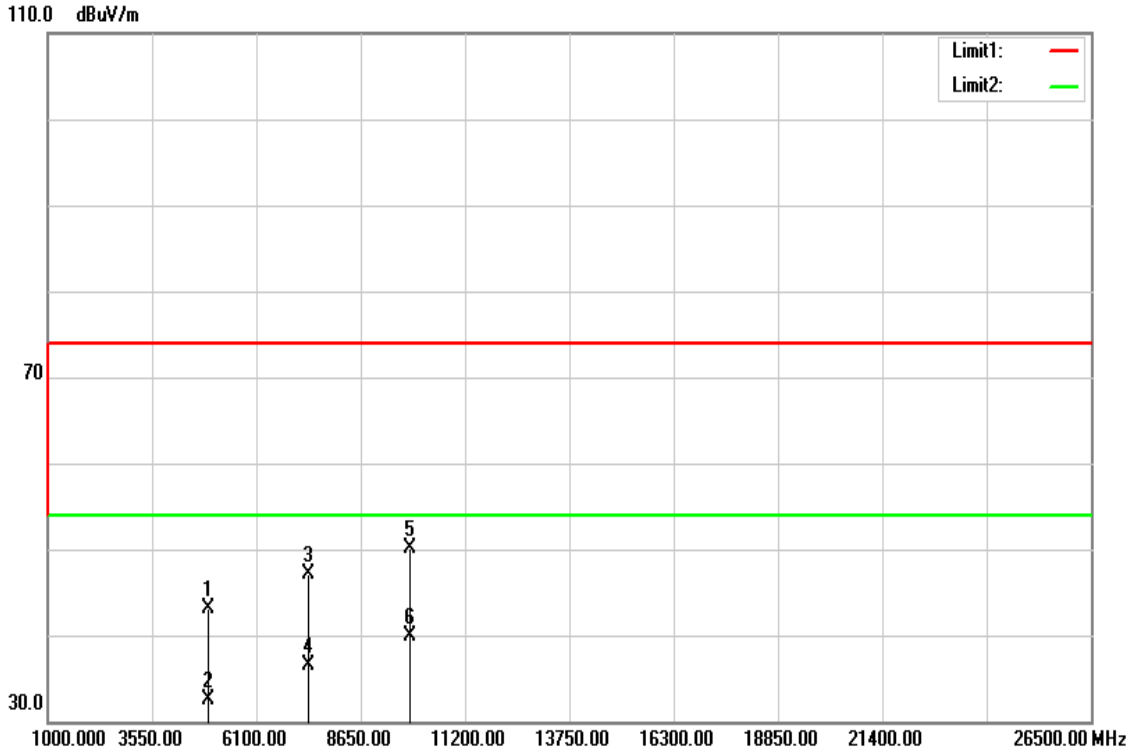


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4925.000	40.09	5.37	45.46	74.00	-28.54	peak
4925.000	29.32	5.37	34.69	54.00	-19.31	AVG
7386.000	34.25	13.17	47.42	74.00	-26.58	peak
7386.000	23.41	13.17	36.58	54.00	-17.42	AVG
9848.000	31.81	17.60	49.41	74.00	-24.59	peak
9848.000	20.81	17.60	38.41	54.00	-15.59	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	March 13, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

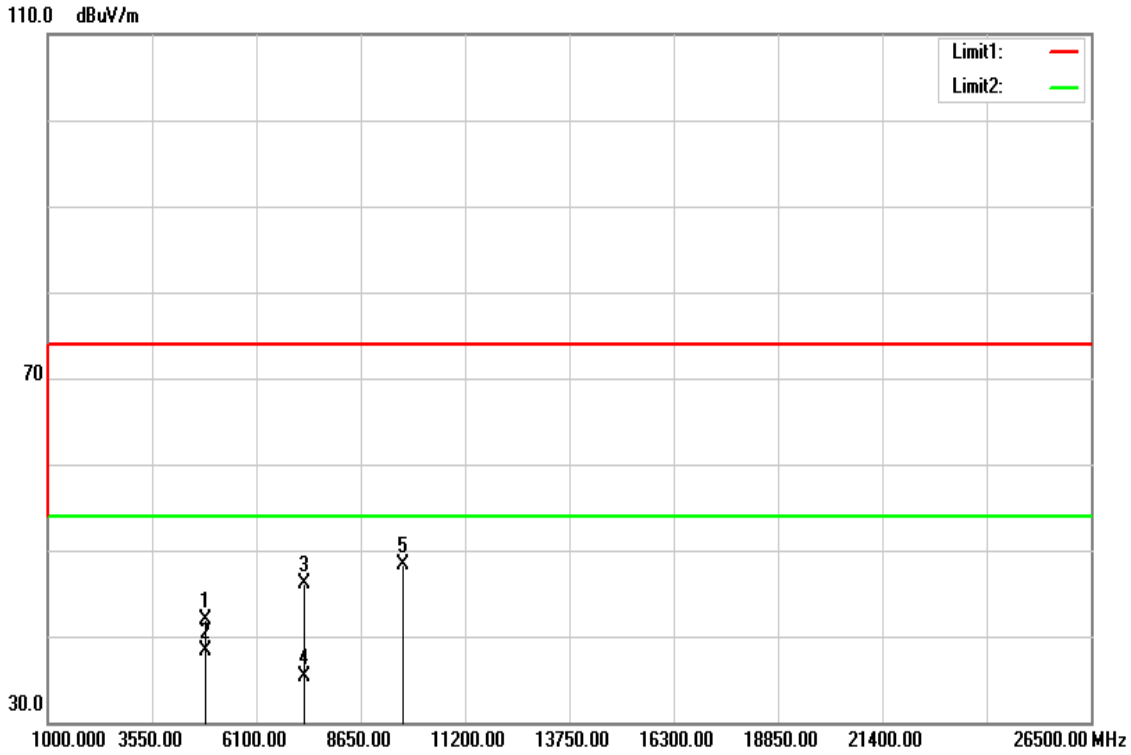


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	37.67	5.37	43.04	74.00	-30.96	peak
4924.000	27.11	5.37	32.48	54.00	-21.52	AVG
7386.000	34.01	13.17	47.18	74.00	-26.82	peak
7386.000	23.29	13.17	36.46	54.00	-17.54	AVG
9848.000	32.53	17.60	50.13	74.00	-23.87	peak
9848.000	22.21	17.60	39.81	54.00	-14.19	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	23(℃)/ 35%RH
Test Item	Harmonic	Test Date	June 7, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

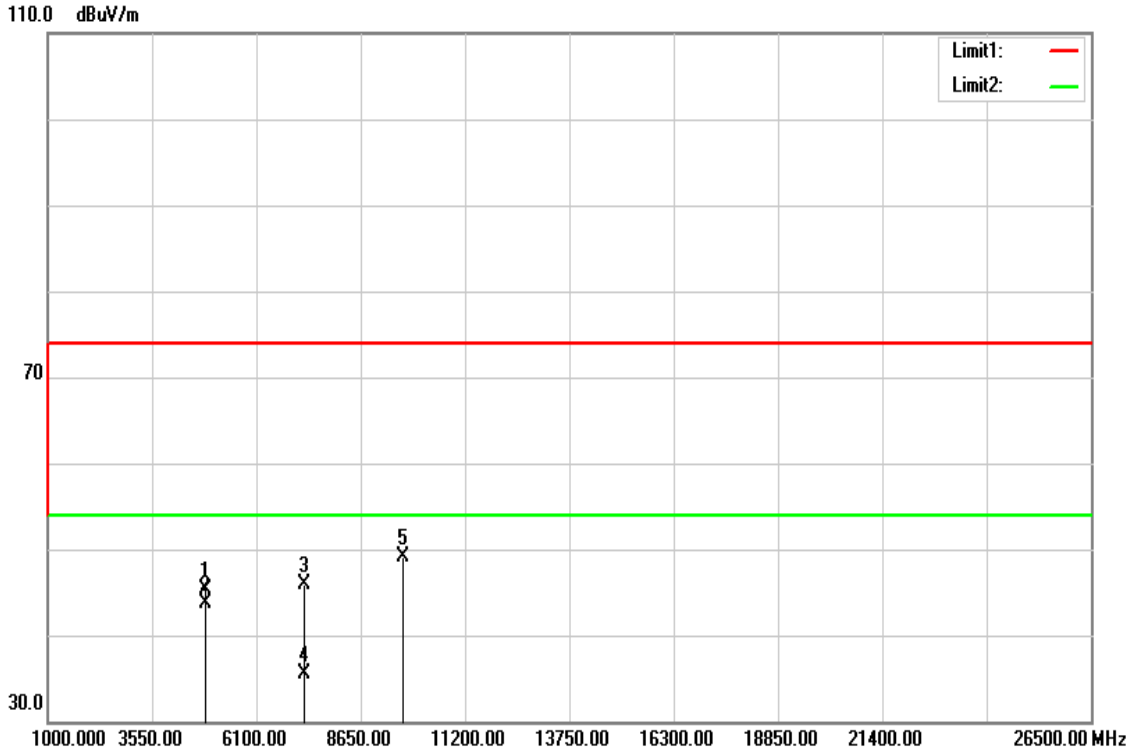


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4844.000	36.84	5.15	41.99	74.00	-32.01	peak
4844.000	33.05	5.15	38.20	54.00	-15.80	AVG
7266.000	33.24	12.80	46.04	74.00	-27.96	peak
7266.000	22.50	12.80	35.30	54.00	-18.70	AVG
9688.000	30.68	17.60	48.28	74.00	-25.72	peak

Remark:

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

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	23(℃)/ 35%RH
Test Item	Harmonic	Test Date	June 7, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

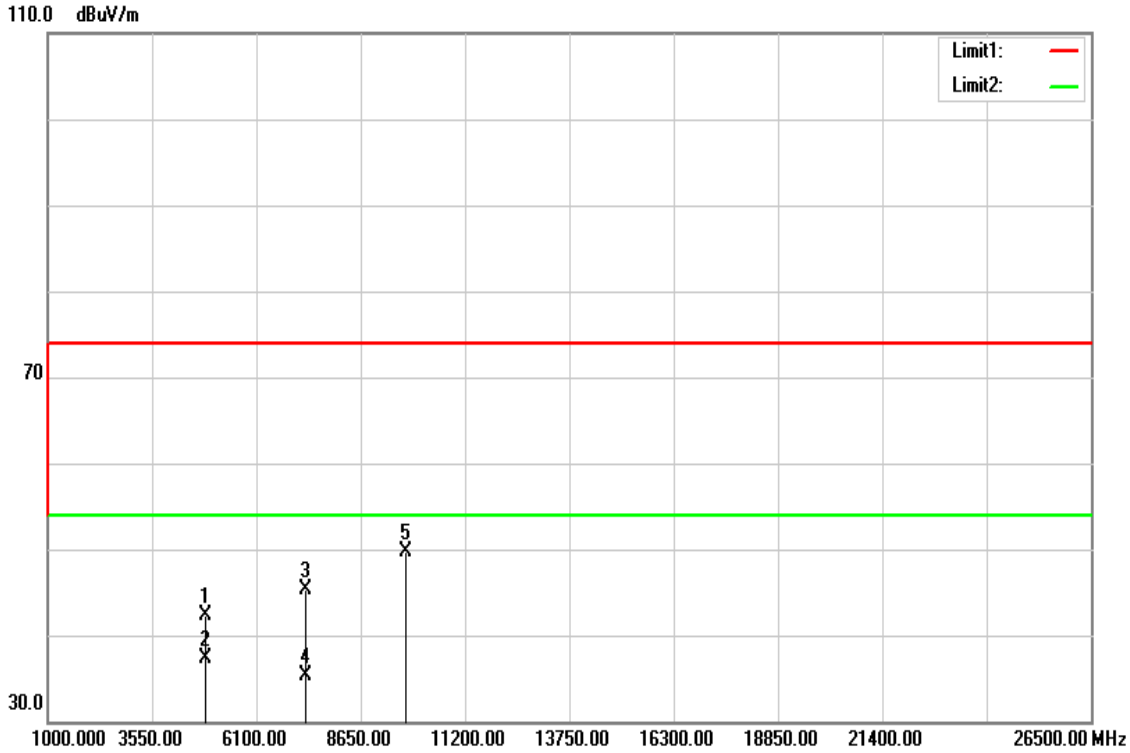


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4844.000	40.21	5.15	45.36	74.00	-28.64	peak
4844.000	38.53	5.15	43.68	54.00	-10.32	AVG
7266.000	33.14	12.80	45.94	74.00	-28.06	peak
7266.000	22.64	12.80	35.44	54.00	-18.56	AVG
9688.000	31.55	17.60	49.15	74.00	-24.85	peak

Remark:

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

Test Mode	IEEE 802.11n HT40 Mid CH	Temp/Hum	23(℃)/ 35%RH
Test Item	Harmonic	Test Date	June 7, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

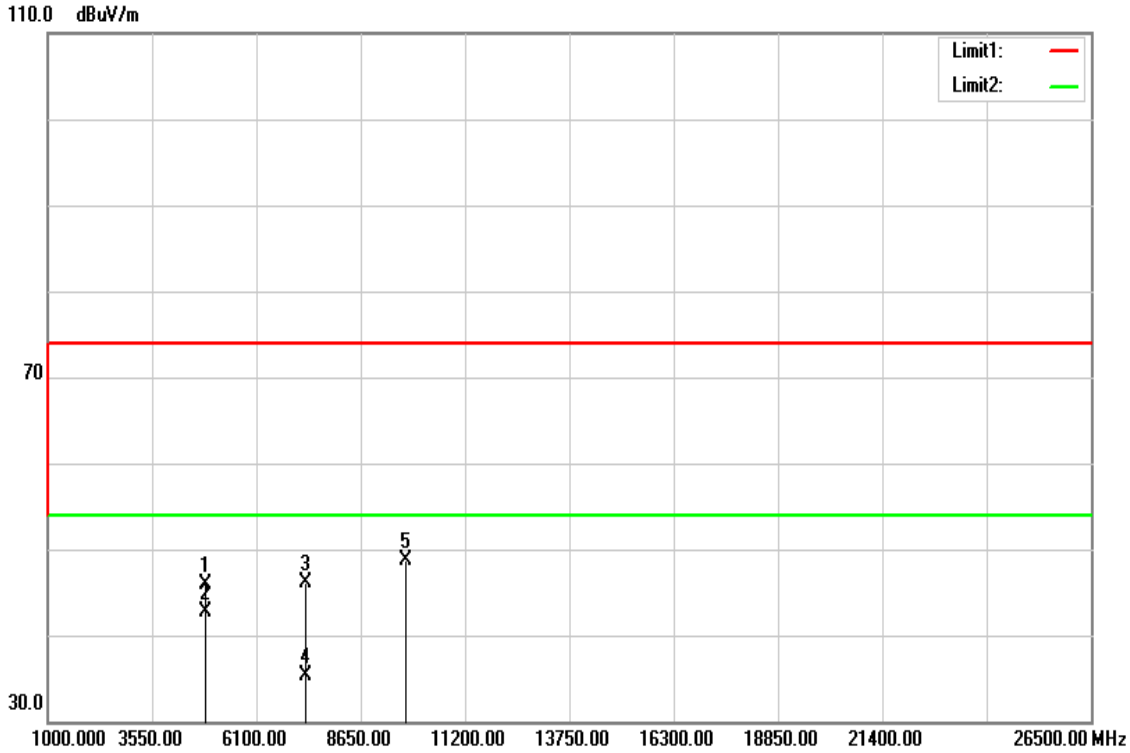


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	37.12	5.23	42.35	74.00	-31.65	peak
4874.000	32.07	5.23	37.30	54.00	-16.70	AVG
7311.000	32.34	12.94	45.28	74.00	-28.72	peak
7311.000	22.39	12.94	35.33	54.00	-18.67	AVG
9748.000	32.02	17.60	49.62	74.00	-24.38	peak

Remark:

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

Test Mode	IEEE 802.11n HT40 Mid CH	Temp/Hum	23(℃)/ 35%RH
Test Item	Harmonic	Test Date	June 7, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		

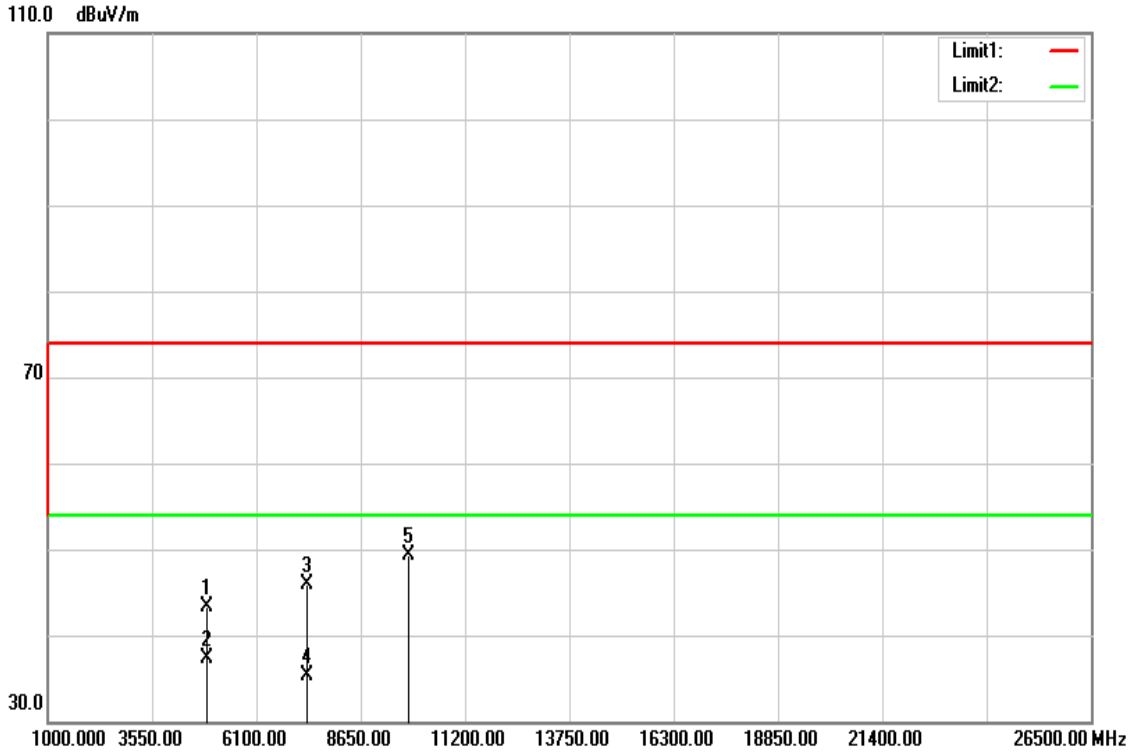


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	40.76	5.23	45.99	74.00	-28.01	peak
4874.000	37.53	5.23	42.76	54.00	-11.24	AVG
7311.000	33.11	12.94	46.05	74.00	-27.95	peak
7311.000	22.38	12.94	35.32	54.00	-18.68	AVG
9748.000	31.02	17.60	48.62	74.00	-25.38	peak

Remark:

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

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	23(℃)/ 35%RH
Test Item	Harmonic	Test Date	June 7, 2017
Polarize	Horizontal	Test Engineer	Ed Chiang
Detector	Peak and Average		

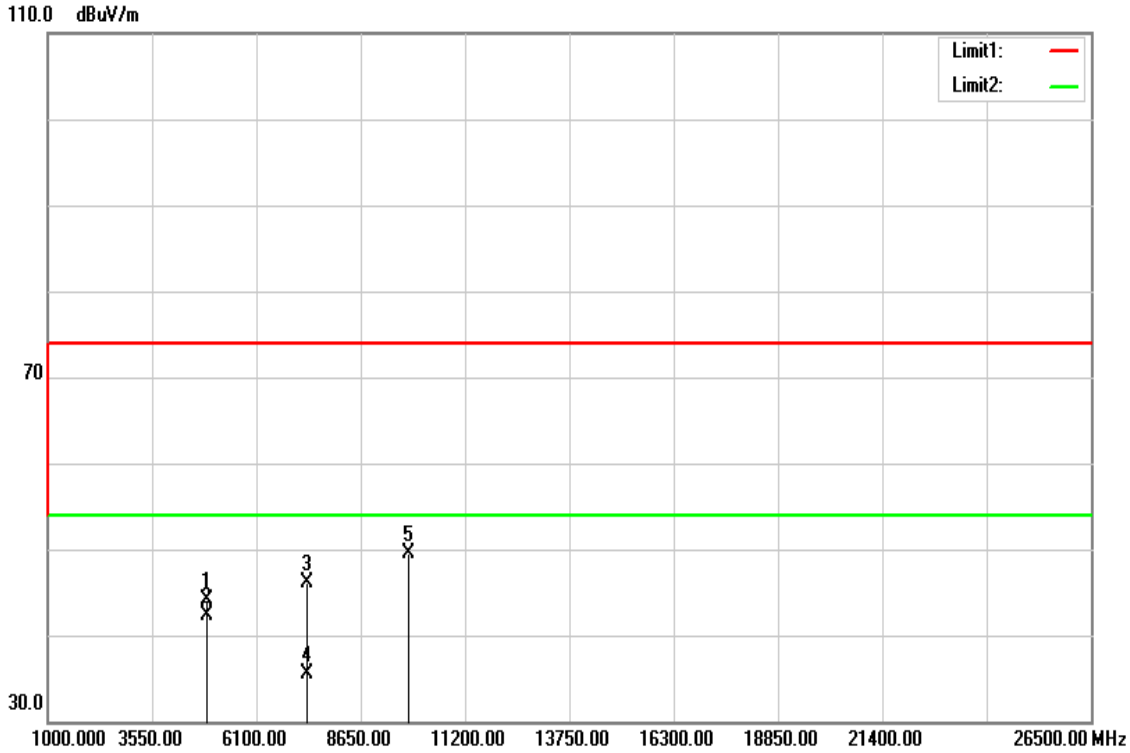


Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
904.000	37.92	5.31	43.23	74.00	-30.77	peak
4904.000	32.00	5.31	37.31	54.00	-16.69	AVG
7356.000	32.83	13.08	45.91	74.00	-28.09	peak
7356.000	22.29	13.08	35.37	54.00	-18.63	AVG
9808.000	31.68	17.60	49.28	74.00	-24.72	peak

Remark:

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

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	23(℃)/ 35%RH
Test Item	Harmonic	Test Date	June 7, 2017
Polarize	Vertical	Test Engineer	Ed Chiang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4904.000	38.82	5.31	4.13	74.00	-29.87	peak
4904.000	36.92	5.31	42.23	54.00	-11.77	AVG
7356.000	33.11	13.08	46.19	74.00	-27.81	peak
7356.000	22.50	13.08	35.58	54.00	-18.42	AVG
9808.000	31.95	17.60	49.55	74.00	-24.45	peak

Remark:

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