FCC RADIO TEST REPORT
FCC 47 CFR PART 15 SUBPART C

Test Standard	**FCC Part 15.247 and RSS-247 Issue 1**
FCC ID	**PPQ-WN4517L**
ISED No.	**4491A-WN4517L**
Brand name	**LITE-ON**
Applicant	**Lite-On Technology Corp.**
Product name	**802.11a/b/g/n/ac, 2T2R Wireless LAN USB2.0 Module**
Model No.	**WN4517L**
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:

Davis Tseng
Sr. Engineer

Reviewed by:

Ed Chiang
Engineer

Revision History

Rev.	Issue Date	Revisions	Revised By
00	January 10, 2017	Initial Issue	Angel Cheng

Table of contents

1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Lite-On Technology Corp.
Applicant address	Bldg. C, 90, Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C
Equipment	802.11a/b/g/n/ac, 2T2R Wireless LAN USB2.0 Module
Model Name	WN4517L
Model Discrepancy	N/A
EUT Functions	IEEE 802.11abgn+ac
Received Date	Nov 28, 2016
Date of Test	Dec 05, 2016 ~ Jan 08, 2017
Output Power(W)	IEEE 802.11b mode: 0.0887 (EIRP : 0.1538) IEEE 802.11g mode: 0.3516 (EIRP : 0.6095) IEEE 802.11n HT 20 MHz mode: 0.5236 (EIRP : 0.9078) IEEE 802.11n HT 40 MHz mode: 0.4955 (EIRP : 0.8590)
Power Operation	☐ AC 120V/60Hz ☐ Adapter ☐ PoE ☒ Host system(NB) ☐ DC Type : ☐ Battery ☐ DC Power Supply ☐ External DC adapter
FW Version	V62/V01
Product SW/HW version	1030.12/V01
Radio SW/HW version	1030.12/V01
Test SW Version	1030.12

Remark:
All listed models are using an identical RF module with the only differences on number of key buttons mounted for additional functions.
Due to similarity of RF product constructions of given model series, only dedicated model as described in test report with the most complexity constructions was selected for testing and record.

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

1.3 ANTENNA INFORMATION

Antenna Category	☒ Integral: antenna permanently attached ☐ External dedicated antennas ☐ External Unique antenna connector
Antenna Type	☒ PIFA ☐ PCB ☐ Dipole ☐ Coils
Antenna Gain	Ant 0: 2.48 (dBi) : On board Ant 1: 0.76 (dBi) : On board Ant 2: 2.30 (dBi) : via Antenna Cable
Power Directional gain	2.39 (dBi)
Power Density Directional gain	2.39 (dBi)

Remark:
1. Antenna had two ways, one was Ant0+ Ant2(On board + via Antenna Cable), and the other one was Ant0 + Ant1(On board + On board).
2. Power Directional gain =10log(((10^(Ant0/10)+10^(Ant2/10))/2))=10log(((10^(2.48/10)+10^(2.30/10))/2))=2.39 dBi
3. Power Density Directional gain=10log(((10^(Ant0/10)+10^(Ant2/10))/2))+10log(NTX/Nss) =10log(((10^(2.48/10)+10^(2.30/10))/2))+10log(2/2)=2.39 dBi

1.4 MEASUREMENT UNCERTAINTY

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

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

1.5 FACILITIES AND TEST LOCATION

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

NO. 989-1 Wen Shan Rd., Shang Shan Village, Qionglin Township, Hsinchu County 30741, Taiwan (R.O.C.)

Test site	Test Engineer	Remark
AC Conduction Room	ED Chiang	
Radiation	ED Chiang	
RF Conducted	Ian Tu	

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

1.6 INSTRUMENT CALIBRATION

RF Conducted Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Spectrum Analyzer	R&S	FSV 40	101073	08/01/2016	07/31/2017

3M 966 Chamber Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Bi-log Antenna	TESEQ	CBL 6112D	35403	07/03/2016	07/02/2017
Double Ridged BroadBand Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-778	07/15/2016	07/14/2017
Double Ridged Guide Horn Antenna	ETS・LINDGREN	3117	00078733	11/17/2016	11/16/2017
EMI Test Receiver	R&S	ESCI	100221	04/27/2016	04/26/2017
Horn Antenna	COM-POWER	AH-840	03077	12/02/2016	12/01/2017
Loop Antenna	COM-POWER	AL-130	121060	05/24/2016	05/23/2017
Preamplifier	Agilent	8447D	2944A10052	07/13/2016	07/12/2017
Preamplifier	Agilent	8449B	3008A01916	07/13/2016	07/12/2017
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	04/13/2016	04/12/2017

AC Conducted Emissions Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
EMI Test Receiver	R&S	ESHS 30	838550/003	10/26/2016	10/25/2017
LISN	SCHWARZBECK	NSLK 8127	8127465	07/29/2016	07/28/2017

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	ACER	Z01	N/A	QDS-BRCM1018

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, RSS-247 Issue 1 and RSS-GEN Issue 4.

1.9 TABLE OF ACCREDITATIONS AND LISTINGS

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

2. TEST SUMMERY

FCC Standard Section	IC Standard Section	Report Section	Test Item	Result
15.203	-	1.2	Antenna Requirement	Pass
15.207(a)	RSS-GEN 8.8	4.1	AC Conducted Emission	Pass
15.247(a)(2)	RSS-247(5.2)(1)	4.2	6 dB Bandwidth	Pass
-	RSS-GEN 6.6	4.2	Occupied Bandwidth (99%)	Pass
15.247(b)	RSS-247(5.4)(4)	4.3	Output Power Measurement	Pass
15.247(e)	RSS-247(5.2)(2)	4.4	Power Spectral Density	Pass
15.247(d)	RSS-247(5.5)	4.5	Conducted Band Edge	Pass
15.247(d)	RSS-247(5.5)	4.5	Conducted Emission	Pass
15.247(d)	RSS-GEN 8.9, 8.10	4.6	Radiation Band Edge	Pass
15.247(d)	RSS-GEN 8.9, 8.10	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 :MCS8 IEEE 802.11n HT40 mode :MCS8
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 :2T2R IEEE 802.11n HT40 mode :2T2R

Remark:
1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.
2.Antenna had two ways, one was Ant0+ Ant2(On Board + via Antenna Cable), and the other one was Ant0 + Ant1(On Board + On Board).

3.2 THE WORST MODE OF MEASUREMENT

AC Power Line Conducted Emission	
Test Condition	**AC Power line conducted emission for line and neutral**
Voltage/Hz	**120V/60Hz**
Test Mode	**Mode 1:EUT power by host system (Ant0 + Ant1)** **Mode 2:EUT power by host system (Ant0 + Ant2)**
Worst Mode	☒ **Mode 1** ☒ **Mode 2** ☐ **Mode 3** ☐ **Mode 4**

Radiated Emission Measurement Above 1G	
Test Condition	**Band edge, Emission for Unwanted and Fundamental**
Voltage/Hz	**120V/60Hz**
Test Mode	**Mode 1:EUT power by host system (Ant0 + Ant2)**
Worst Mode	☒ **Mode 1** ☐ **Mode 2** ☐ **Mode 3** ☐ **Mode 4**
Worst Position	☐ **Placed in fixed position.** ☐ **Placed in fixed position at X-Plane (E2-Plane)** ☐ **Placed in fixed position at Y-Plane (E1-Plane)** ☒ **Placed in fixed position at Z-Plane (H-Plane)**
Worst Polarity	☐ **Horizontal** ☒ **Vertical**

Radiated Emission Measurement Below 1G	
Test Condition	**Radiated Emission Below 1G**
Voltage/Hz	**120V/60Hz**
Test Mode	**Mode 1:EUT power by host system (Ant0 + Ant1)** **Mode 2:EUT power by host system (Ant0 + Ant2)**
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(Z-plane and Vertical) 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.

4. EUT antenna had two ways, one was Ant0+ Ant2(On Board + via Antenna Cable), and the other one was Ant0 + Ant1(On Board + On Board). The worst case(Ant0 + Ant2, because these two antenna gain both higher than Ant1) was recorded in this report.

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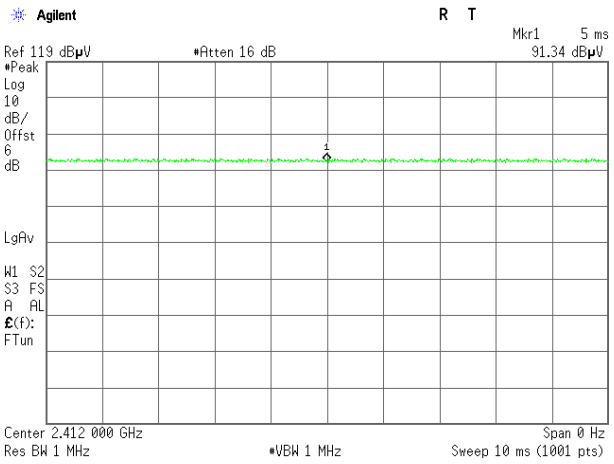
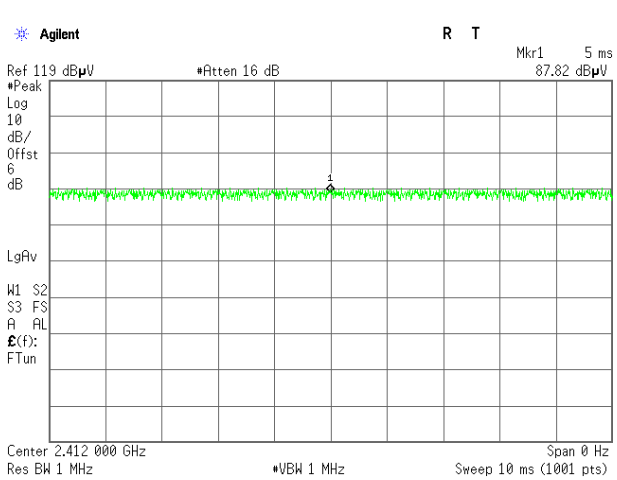
3.3 EUT DUTY CYCLE

Duty Cycle				
Configuration	TX ON (ms)	TX ALL (ms)	Duty Cycle (%)	Duty Factor(dB)
802.11b	1.0000	1.0000	100%	0.00
802.11g	1.0000	1.0000	100%	0.00
802.11n HT20	1.0000	1.0000	100%	0.00
802.11n HT40	1.0000	1.0000	100%	0.00

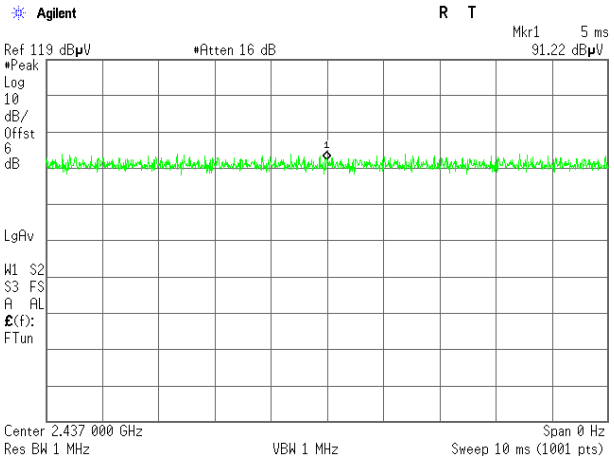
802.11b



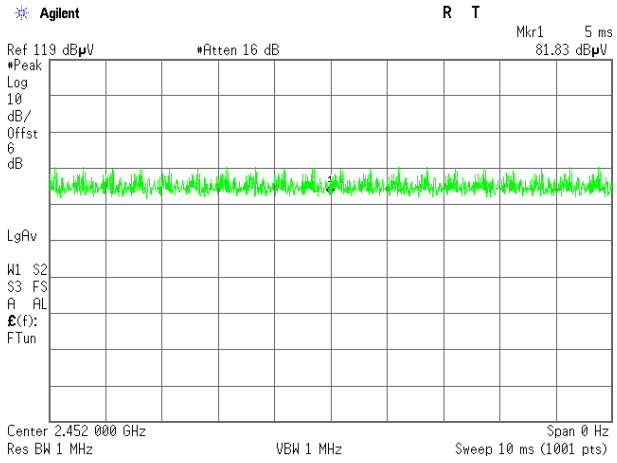
802.11g



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) and RSS-GEN section 8.8,

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

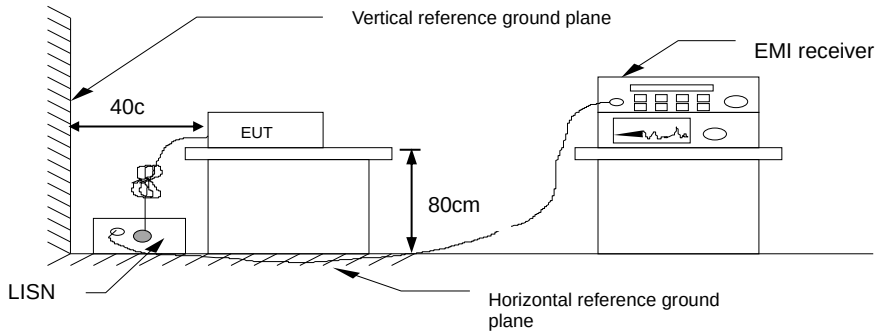
* Decreases with the logarithm of the frequency.

4.1.2 Test Procedure

Test method Refer as ANSI 63.10:2013 clause 6.2,

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

4.1.3 Test Setup

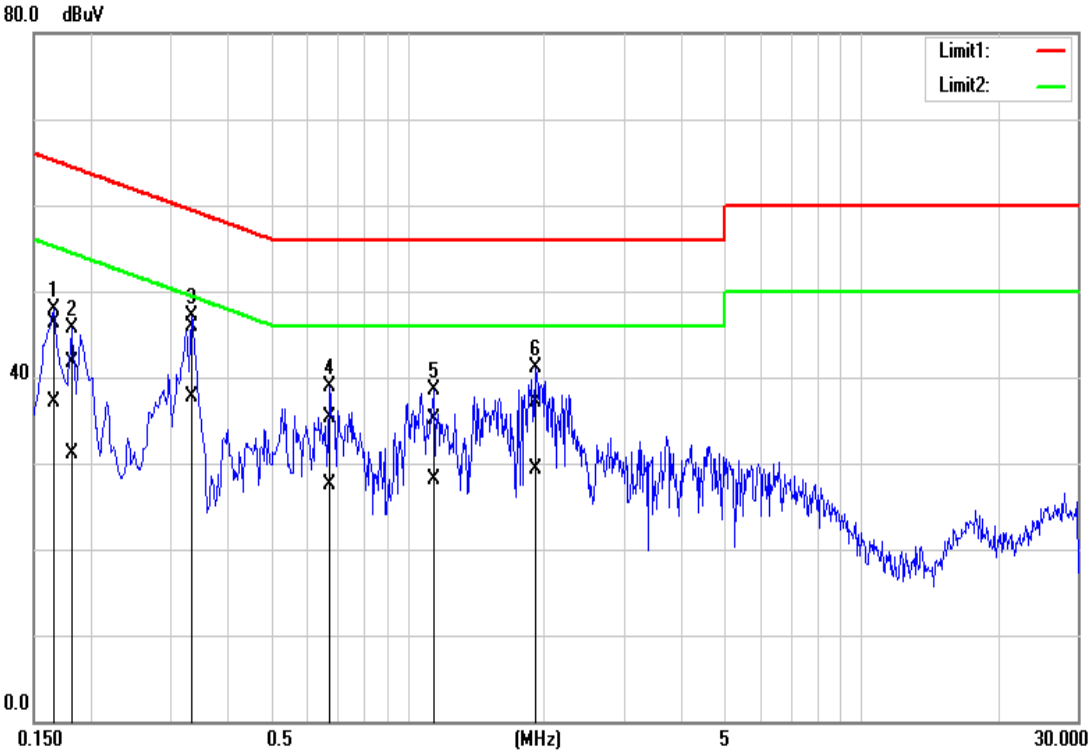


4.1.4 Test Result

Pass.

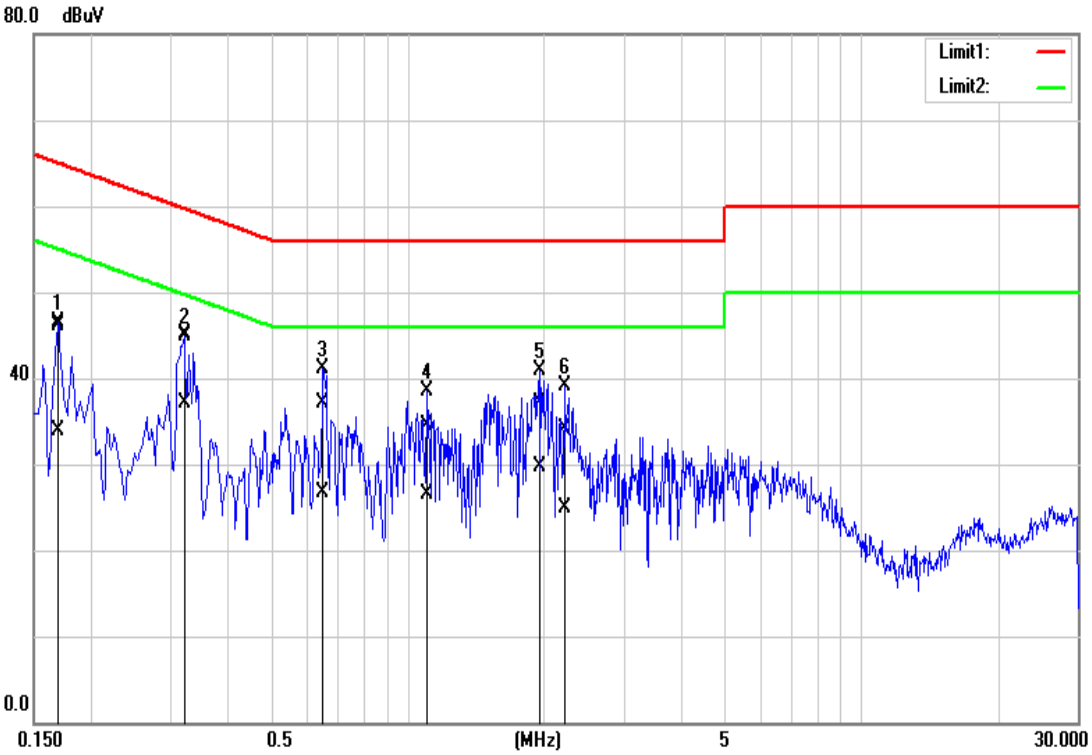
Test Data

Test Mode:	Mode 1	Temp/Hum	24(℃)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	Dec 21, 2016
Phase:	Line	Test Engineer	ED Chiang



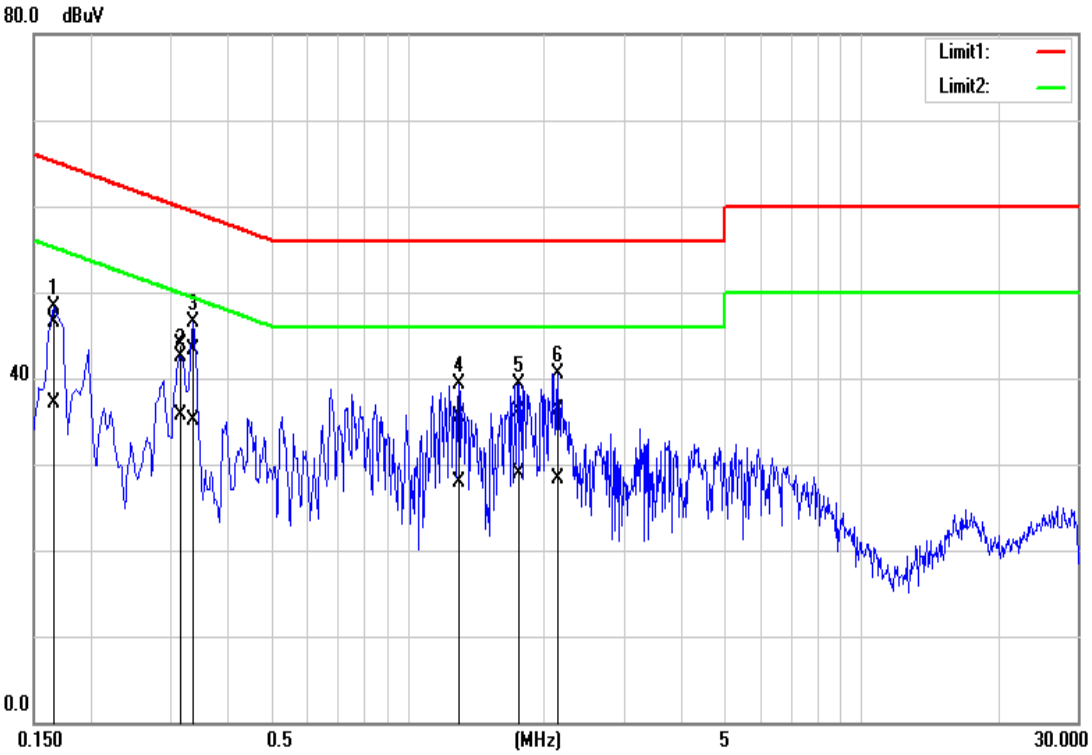
Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1660	36.61	27.51	9.69	46.30	37.20	65.15	55.16	-18.85	-17.96	Pass
0.1819	32.08	21.52	9.68	41.76	31.20	64.39	54.40	-22.63	-23.20	Pass
0.3339	36.13	28.04	9.69	45.82	37.73	59.35	49.35	-13.53	-11.62	Pass
0.6740	25.18	17.44	10.07	35.25	27.51	56.00	46.00	-20.75	-18.49	Pass
1.1420	24.71	17.75	10.41	35.12	28.16	56.00	46.00	-20.88	-17.84	Pass
1.9140	27.21	19.52	9.83	37.04	29.35	56.00	46.00	-18.96	-16.65	Pass

Test Mode:	Mode 1	Temp/Hum	27(℃)/ 53%RH
Test Voltage:	120Vac / 60Hz	Test Date	Dec 21, 2016
Phase:	Neutral	Test Engineer	ED Chiang



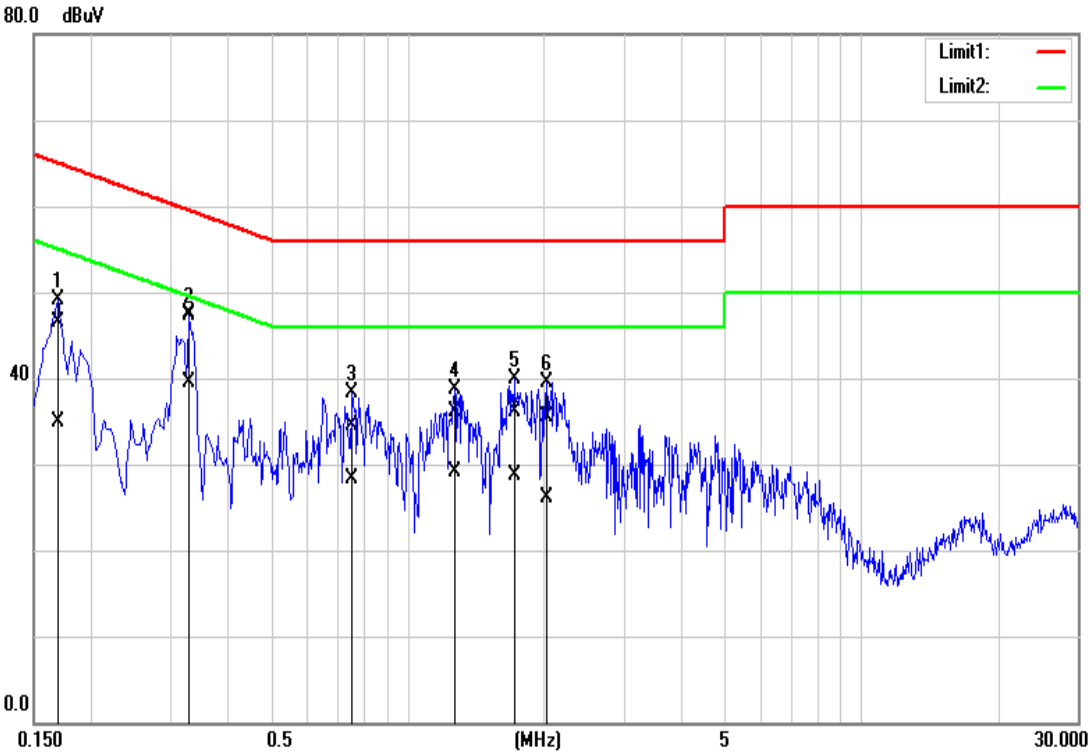
Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1700	36.39	24.36	9.64	46.03	34.00	64.96	54.96	-18.93	-20.96	Pass
0.3220	35.42	27.45	9.65	45.07	37.10	59.65	49.66	-14.58	-12.56	Pass
0.6540	27.09	16.64	10.00	37.09	26.64	56.00	46.00	-18.91	-19.36	Pass
1.1060	24.07	16.17	10.40	34.47	26.57	56.00	46.00	-21.53	-19.43	Pass
1.9500	27.42	20.00	9.76	37.18	29.76	56.00	46.00	-18.82	-16.24	Pass
2.2139	24.34	15.27	9.72	34.06	24.99	56.00	46.00	-21.94	-21.01	Pass

Test Mode:	Mode 2	Temp/Hum	24(℃)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	Dec 21, 2016
Phase:	Line	Test Engineer	ED Chiang



Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1660	36.78	27.45	9.69	46.47	37.14	65.15	55.16	-18.68	-18.02	Pass
0.3180	34.16	25.96	9.69	43.85	35.65	59.76	49.76	-15.91	-14.11	Pass
0.3379	33.71	25.32	9.69	43.40	35.01	59.25	49.25	-15.85	-14.24	Pass
1.3020	25.25	17.62	10.29	35.54	27.91	56.00	46.00	-20.46	-18.09	Pass
1.7540	26.22	19.02	9.95	36.17	28.97	56.00	46.00	-19.83	-17.03	Pass
2.1460	26.52	18.61	9.76	36.28	28.37	56.00	46.00	-19.72	-17.63	Pass

Test Mode:	Mode 2	Temp/Hum	27(℃)/ 53%RH
Test Voltage:	120Vac / 60Hz	Test Date	Dec 21, 2016
Phase:	Neutral	Test Engineer	ED Chiang



Frequency (MHz)	Quasi Peak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	Quasi Peak result (dBuV)	Average result (dBuV)	Quasi Peak limit (dBuV)	Average limit (dBuV)	Quasi Peak margin (dB)	Average margin (dB)	Remark
0.1700	36.91	25.17	9.64	46.55	34.81	64.96	54.96	-18.41	-20.15	Pass
0.3300	37.92	29.84	9.65	47.57	39.49	59.45	49.45	-11.88	-9.96	Pass
0.7580	24.45	18.08	10.15	34.60	28.23	56.00	46.00	-21.40	-17.77	Pass
1.2740	25.75	18.83	10.27	36.02	29.10	56.00	46.00	-19.98	-16.90	Pass
1.7220	26.09	18.80	9.93	36.02	28.73	56.00	46.00	-19.98	-17.27	Pass
2.0300	25.83	16.43	9.72	35.55	26.15	56.00	46.00	-20.45	-19.85	Pass

4.2 6DB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

4.2.1 Test Limit

According to §15.247(a)(2) and RSS-247 section 5.2(1),

6 dB Bandwidth ：

Limit	Shall be at least 500kHz

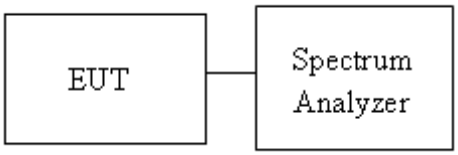
Occupied Bandwidth(99%) ： For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as KDB 558074 D01 v03r05, Section 8.1 and ANSI 63.10:2013 clause 6.9.2,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 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

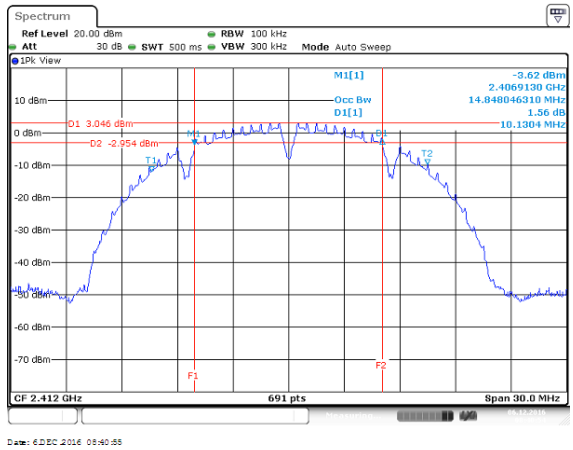
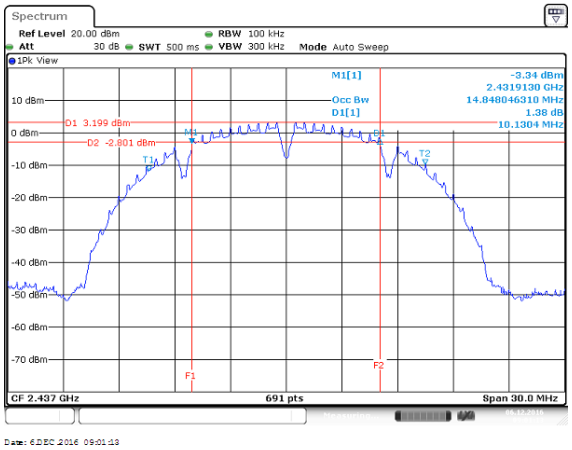
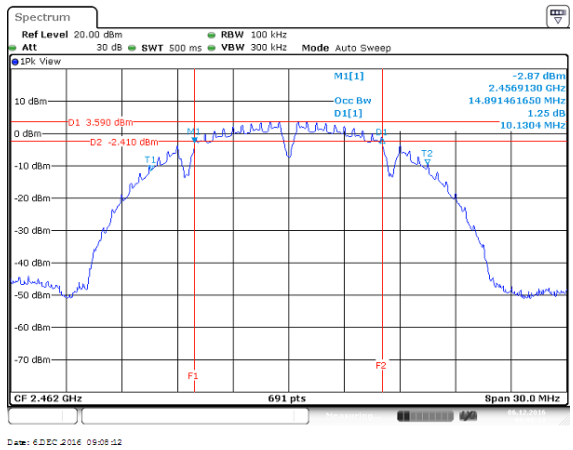
Test mode: IEEE 802.11b mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)	6dB limit (kHz)
Low	2412	14.8480	-	10.1304	-	≥500
Mid	2437	14.8480	-	10.1304	-	
High	2462	14.8914	-	10.1304	-	

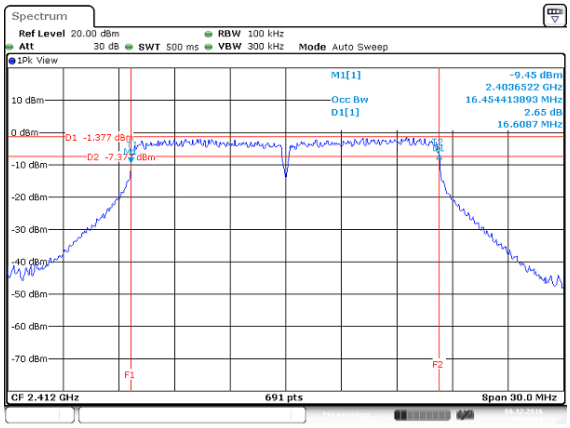
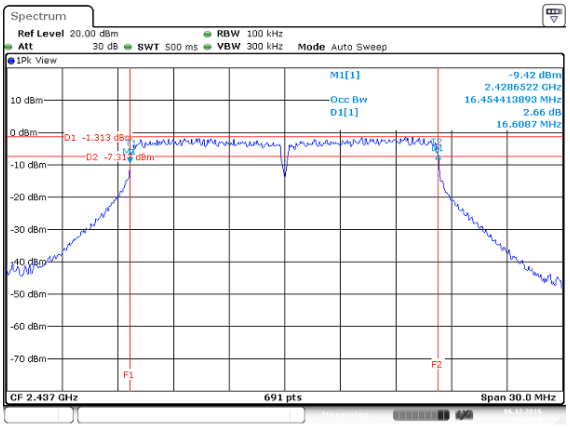
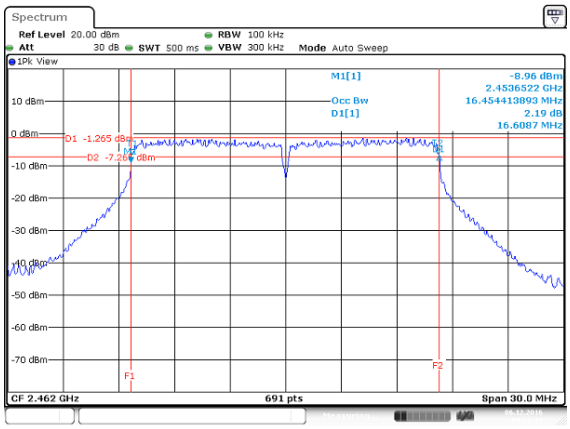
Test mode: IEEE 802.11g mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)	6dB limit (kHz)
Low	2412	16.4544	-	16.6087	-	≥500
Mid	2437	16.4544	-	16.6087	-	
High	2462	16.4544	-	16.6087	-	

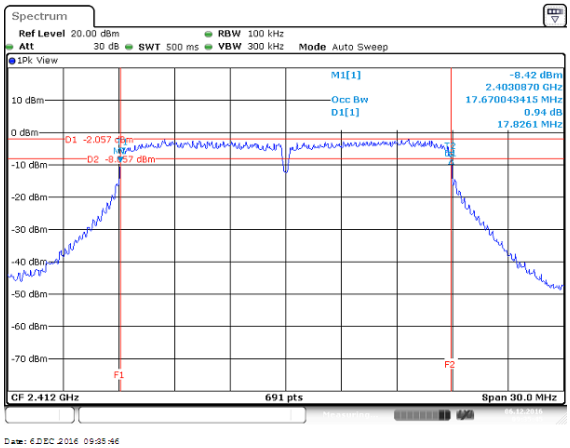
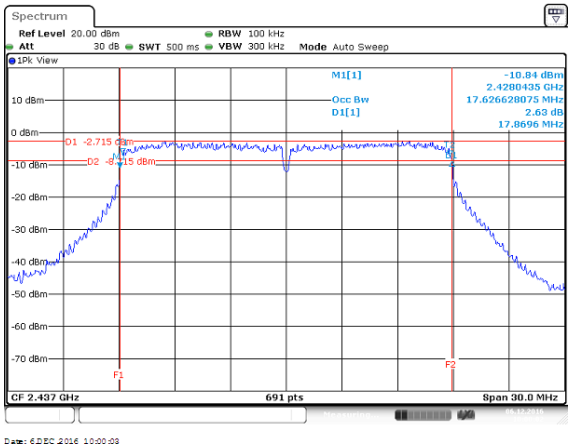
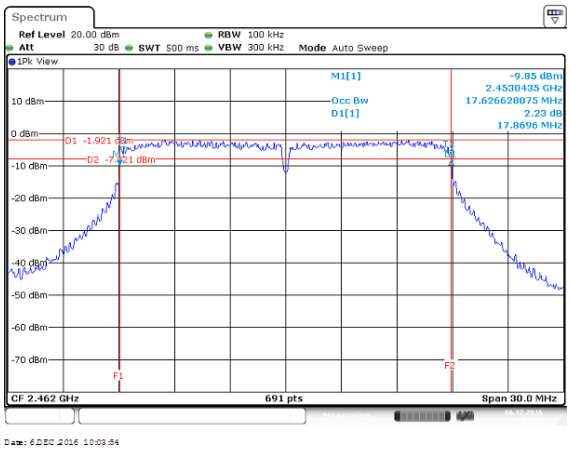
Test mode: IEEE 802.11n HT 20 MHz mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)	6dB limit (kHz)
Low	2412	17.6700	17.6266	17.8261	17.6957	≥500
Mid	2437	17.6266	17.6266	17.8696	17.6957	
High	2462	17.6266	17.6266	17.8696	17.6957	

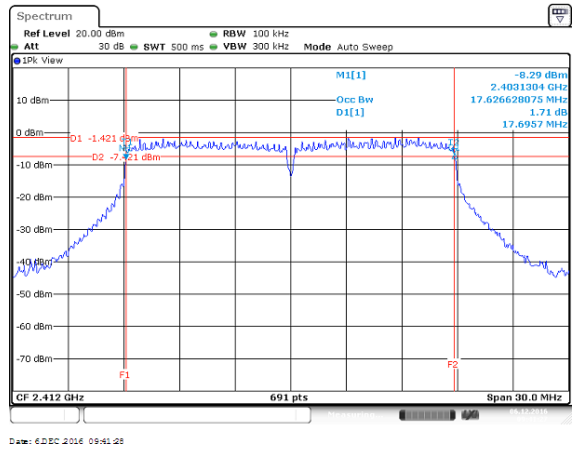
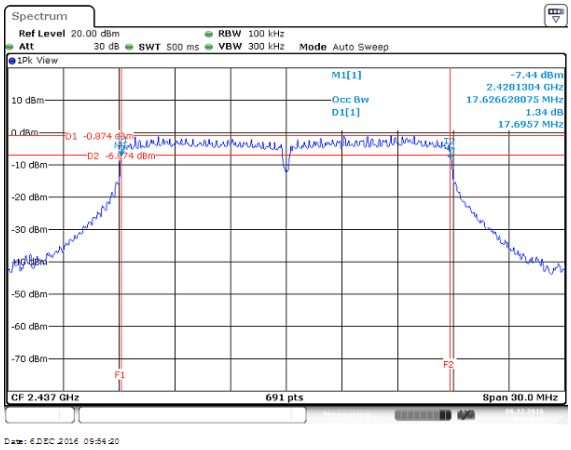
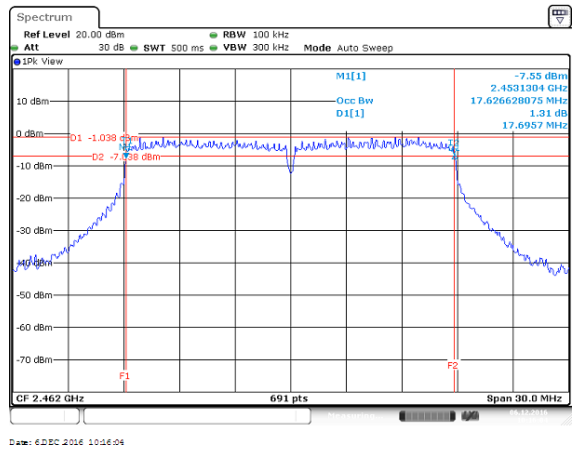
Test mode: IEEE 802.11n HT 40 MHz mode / 2422-2452 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (MHz)	Chain 1 6dB BW (MHz)	6dB limit (kHz)
Low	2422	36.2373	36.2373	36.638	36.522	>500
Mid	2437	36.1215	36.2373	36.622	36.522	
High	2452	36.1215	36.1215	36.638	36.522	

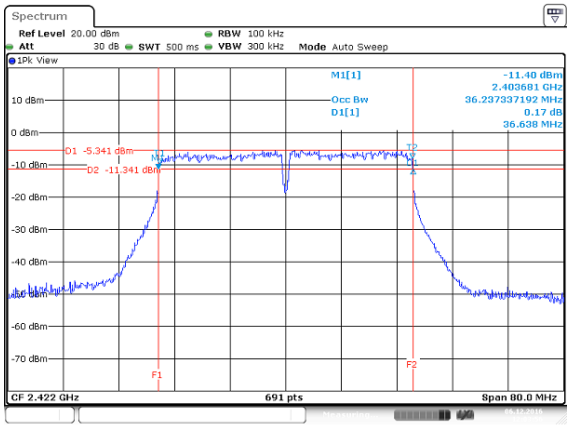
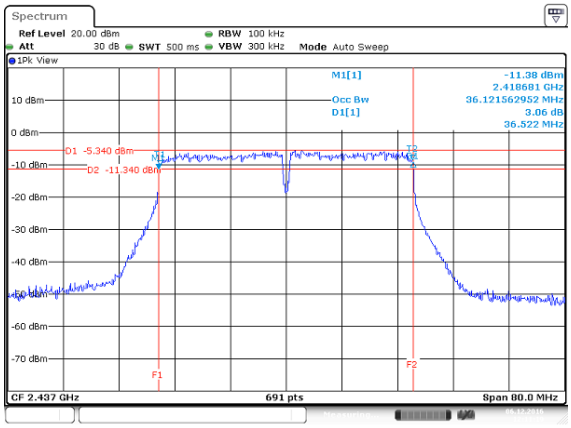
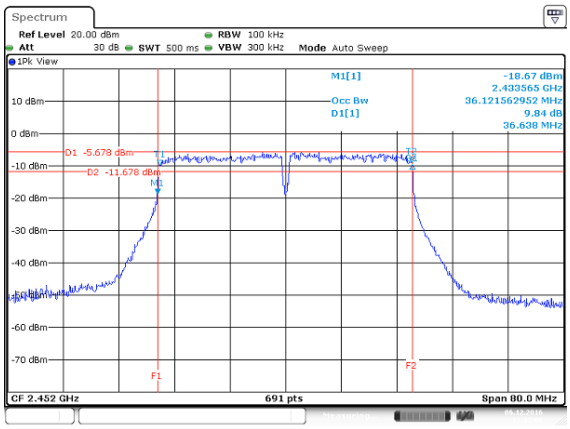
Test Data

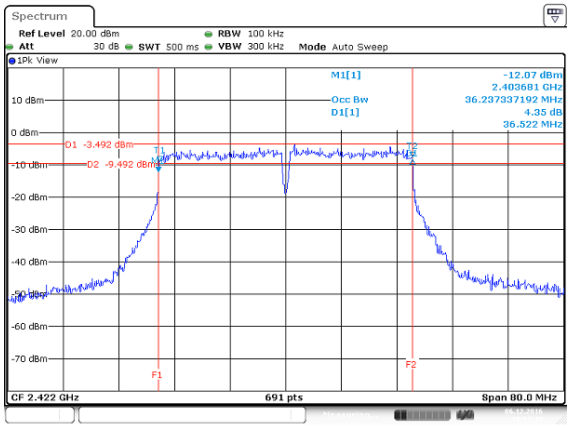
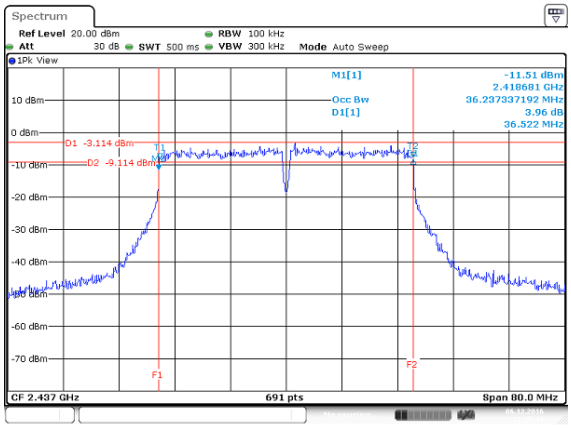
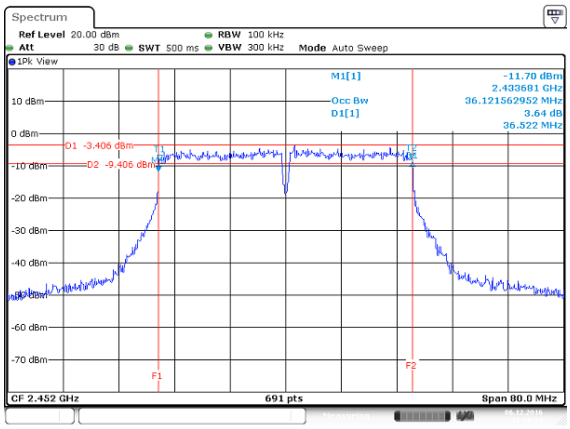
IEEE 802.11b mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

IEEE 802.11g mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

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

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

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

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

4.3 OUTPUT POWER MEASUREMENT

4.3.1 Test Limit

According to §15.247(b) and RSS-247 section 5.4(4),

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

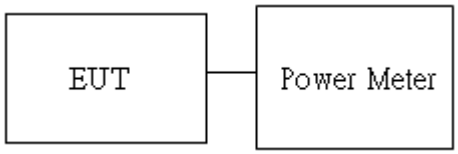
Average output power：For reporting purposes only.

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：

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	37	-	19.38	-	19.38	0.0867	21.77	0.1503	2.39	30	36
	Mid	2437	36	-	19.42	-	19.42	0.0875	21.81	0.1517			
	High	2462	36	-	19.48	-	19.48	0.0887	21.87	0.1538			
IEEE 802.11g Data rate: 6Mbps	Low	2412	48	-	25.32	-	25.32	0.3404	27.71	0.5902			
	Mid	2437	47	-	25.35	-	25.35	0.3428	27.74	0.5943			
	High	2462	46	-	25.46	-	25.46	0.3516	27.85	0.6095			
IEEE 802.11n HT20 Data rate: MCS8	Low	2412	48	49	24.38	23.42	26.94	0.4943	29.33	0.8570			
	Mid	2437	48	49	24.56	23.51	27.08	0.5105	29.47	0.8851			
	High	2462	48	49	24.81	23.45	27.19	0.5236	29.58	0.9078			
IEEE 802.11n HT40 Data rate: MCS8	Low	2422	50	50	24.18	23.32	26.78	0.4764	29.17	0.8260			
	Mid	2437	49	51	23.93	23.77	26.86	0.4853	29.25	0.8414			
	High	2452	49	50	24.47	23.33	26.95	0.4955	29.34	0.8590			

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	16.81	-	16.81
	Mid	2437	16.82	-	16.82
	High	2462	16.85	-	16.85
IEEE 802.11g Data rate: 6Mbps	Low	2412	15.98	-	15.98
	Mid	2437	15.99	-	15.99
	High	2462	15.68	-	15.68
IEEE 802.11n HT20 Data rate: MCS8	Low	2412	14.86	14.85	17.87
	Mid	2437	15.02	14.87	17.96
	High	2462	15.08	14.77	17.94
IEEE 802.11n HT40 Data rate: MCS8	Low	2422	14.98	14.56	17.79
	Mid	2437	14.64	14.99	17.83
	High	2452	14.88	14.68	17.79

4.4 POWER SPECTRAL DENSITY

4.4.1 Test Limit

According to §15.247(e) and RSS-247 section 5.2(2),

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.

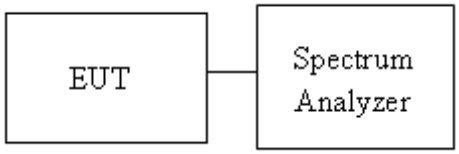
Limit	☒ Antenna not exceed 6 dBi：8dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 8 – (DG – 6)] ☐ Point-to-point operation：

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

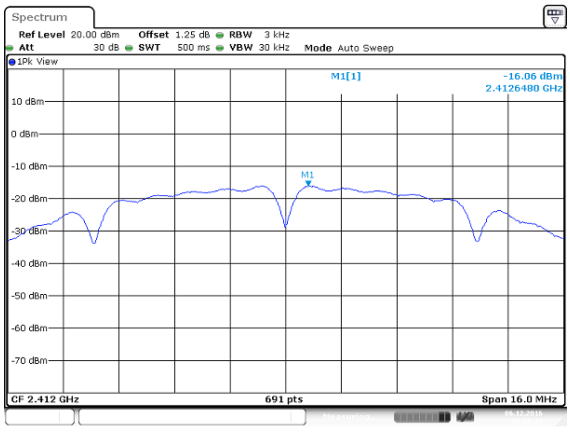
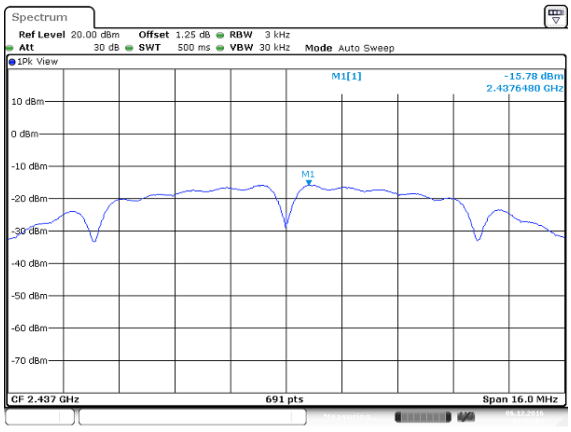
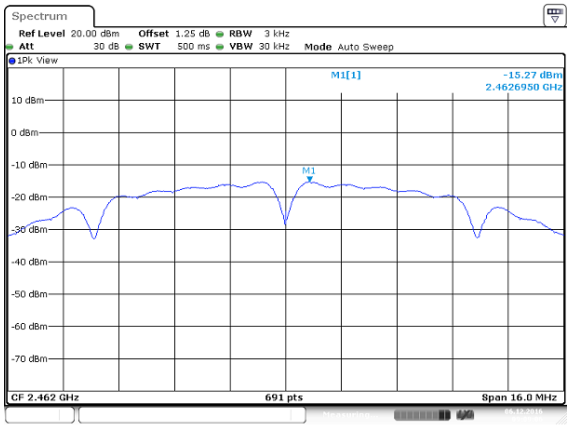
Test mode: IEEE 802.11b mode / 2412-2462 MHz					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PSSD (dBm)**	**Limit (dBm)**
Low	2412	-16.06	-	-16.06	8
Mid	2437	-15.78	-	-15.78	
High	2462	-15.27	-	-15.27	

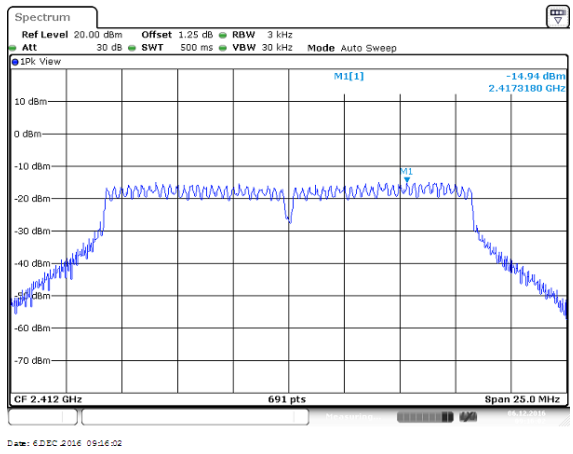
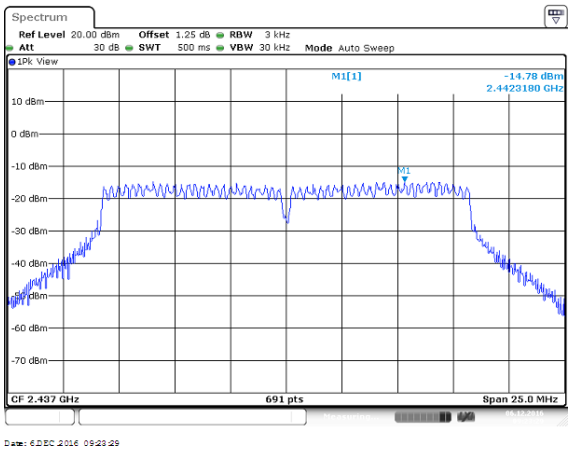
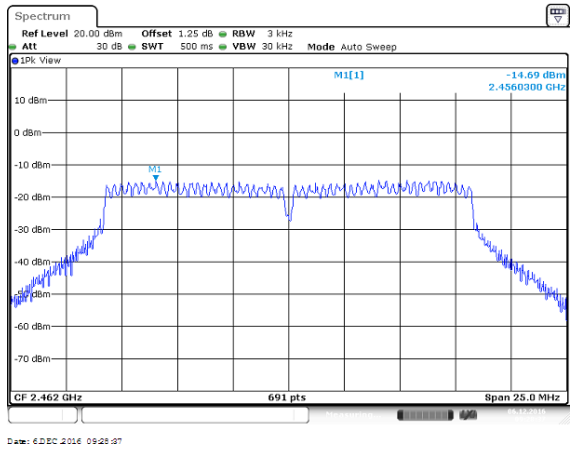
Test mode: IEEE 802.11g mode / 2412-2462 MHz					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PSSD (dBm)**	**Limit (dBm)**
Low	2412	-14.94	-	-14.94	8
Mid	2437	-14.78	-	-14.78	
High	2462	-14.69	-	-14.69	

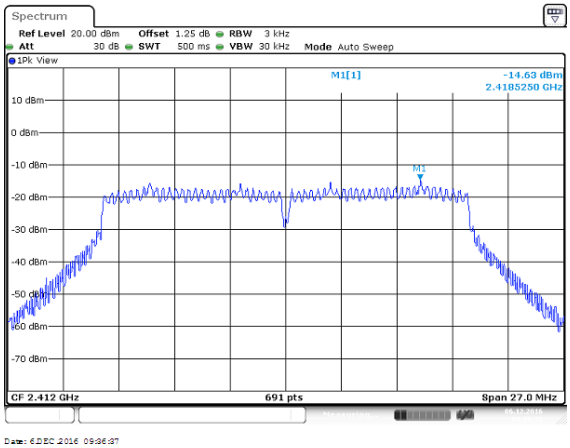
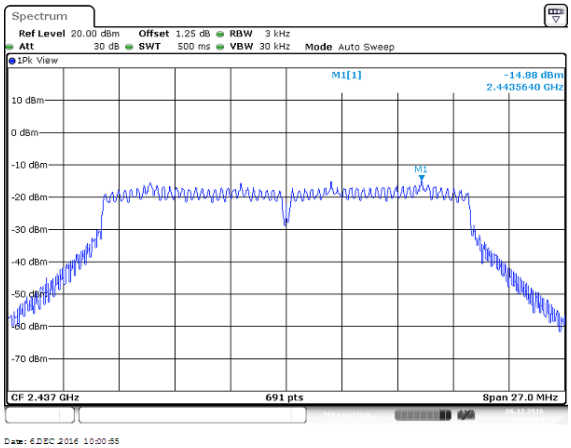
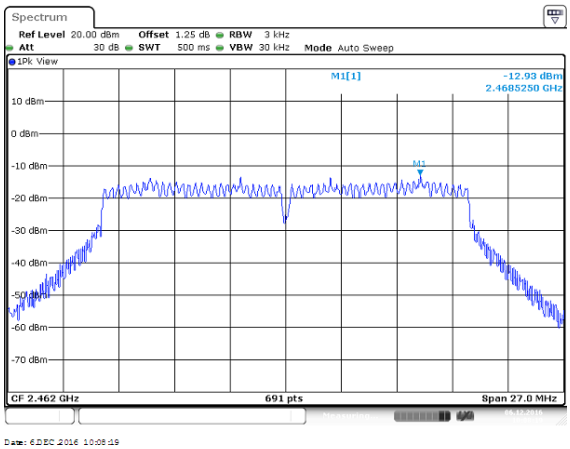
Test mode: IEEE 802.11n HT 20 MHz mode / 2412-2462 MHz					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PSSD (dBm)**	**Limit (dBm)**
Low	2412	-14.63	-14.06	-11.33	8
Mid	2437	-14.88	-13.77	-11.28	
High	2462	-12.93	-13.57	-10.23	

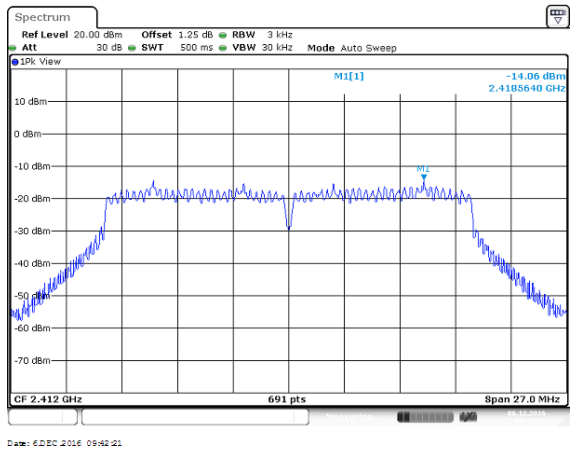
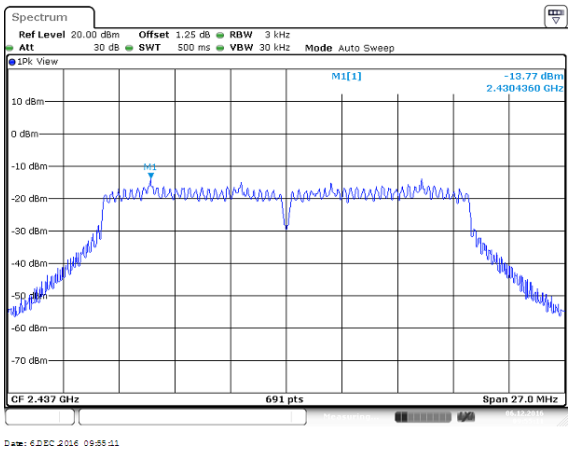
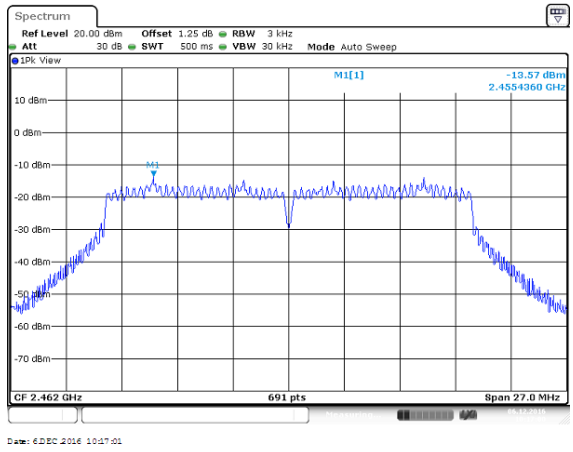
Test mode: IEEE 802.11n HT 40 MHz mode / 2422-2452 MHz					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PSSD (dBm)**	**Limit (dBm)**
Low	2422	-16.75	-17.21	-13.96	8
Mid	2437	-17.07	-16.85	-13.81	
High	2452	-17.01	-17.16	-14.07	

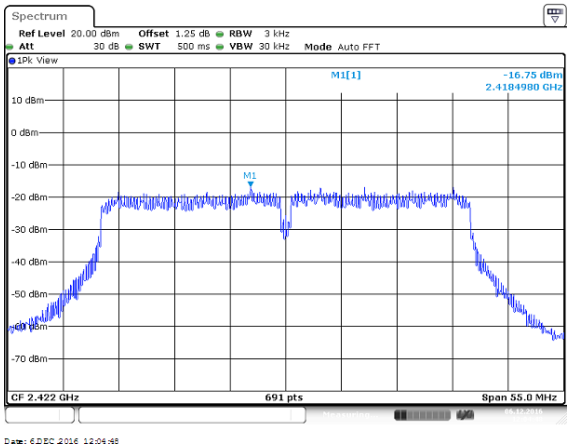
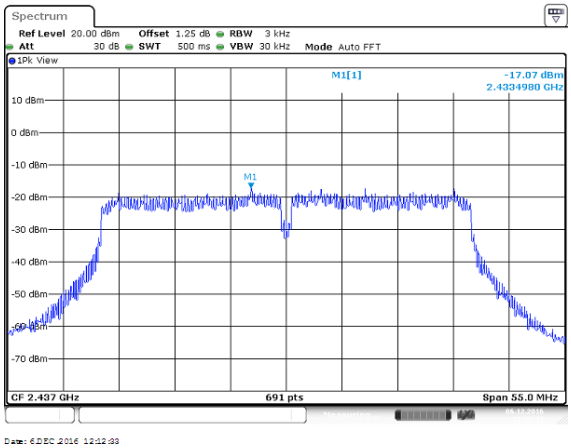
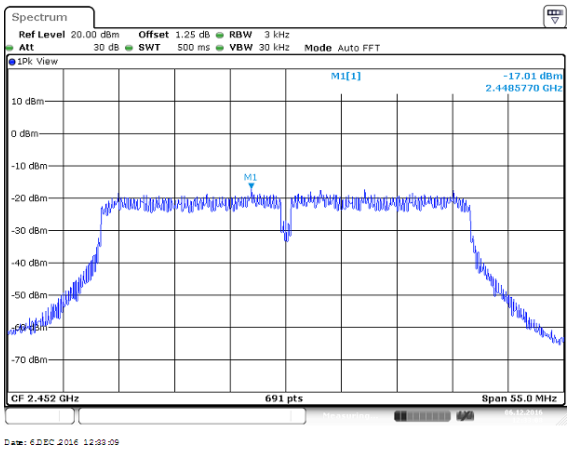
Test Data

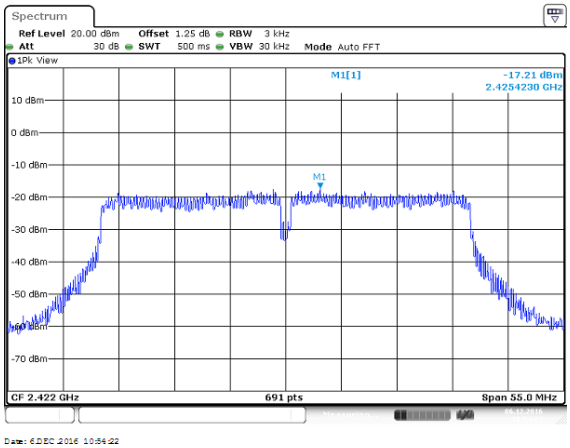
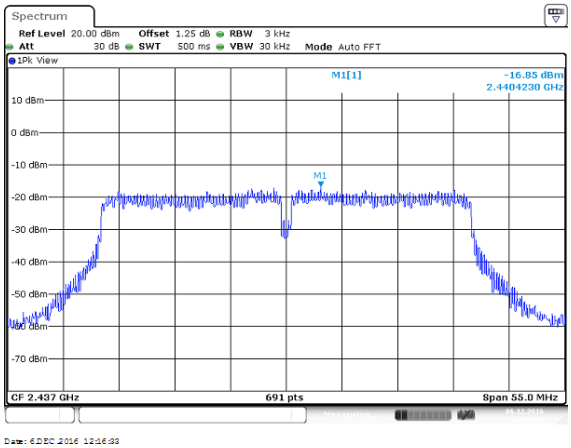
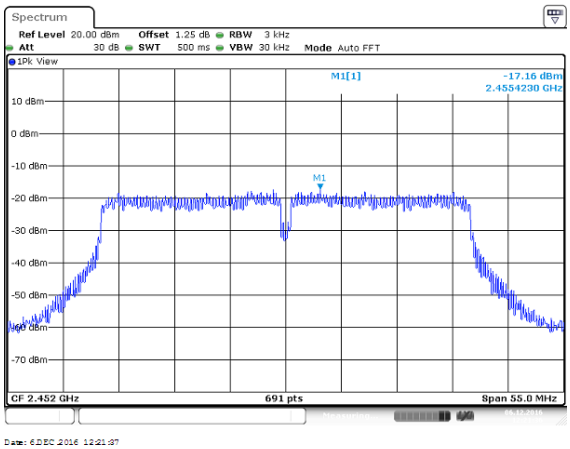
IEEE 802.11b mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

IEEE 802.11g mode- chain 0	
Low CH	**Mid CH**
	
High CH	
	

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

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

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

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

4.5 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

4.5.1 Test Limit

According to §15.247(d) and RSS-247 section 5.5,

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

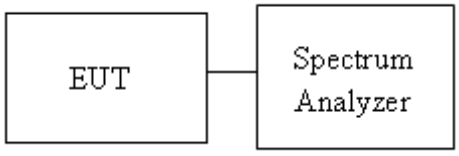
Test method Refer as KDB 558074 D01 v03r05, Section 11.

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.

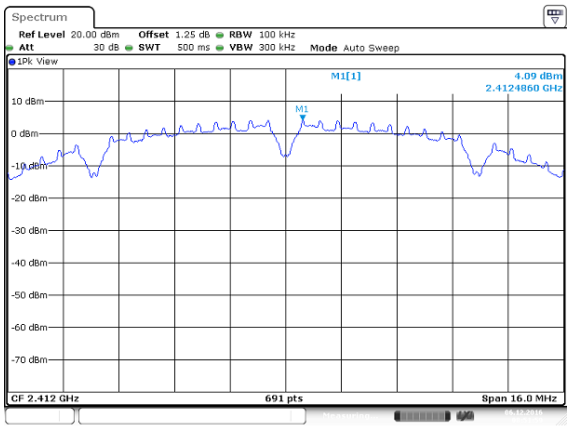
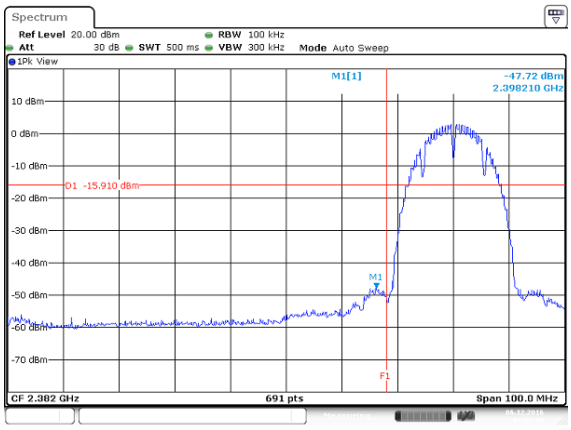
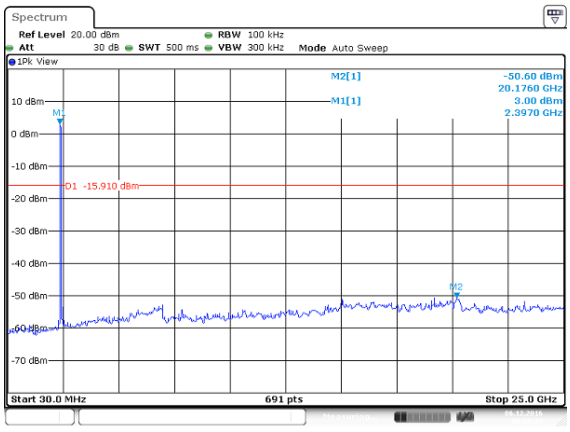
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. f the transmitter complies with the conducted power limits based on the use of RMS averaging over a time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

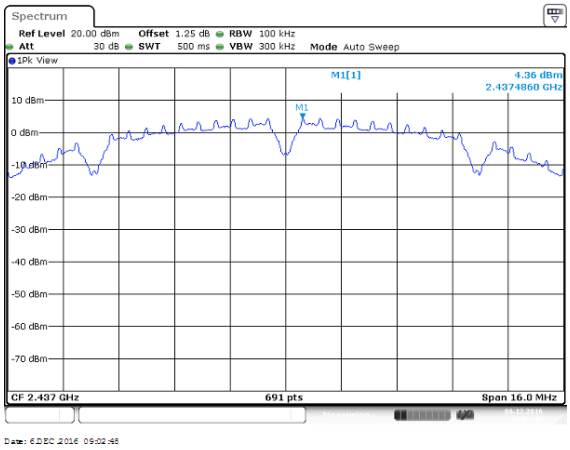
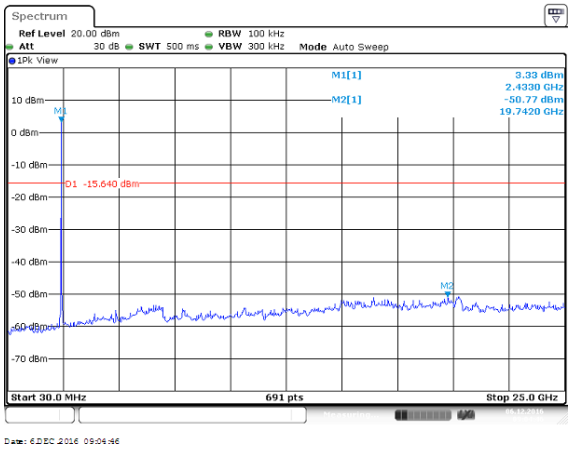
4.5.3 Test Setup

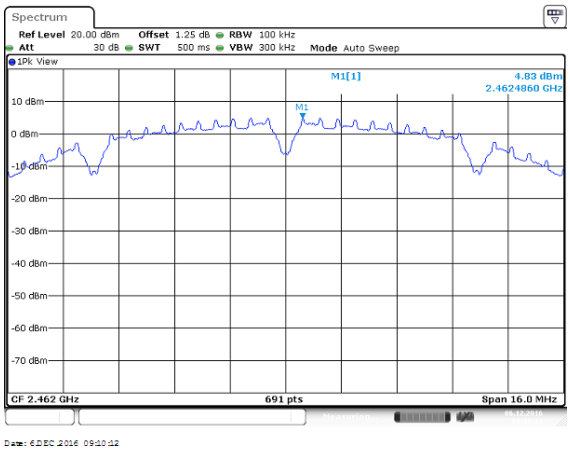
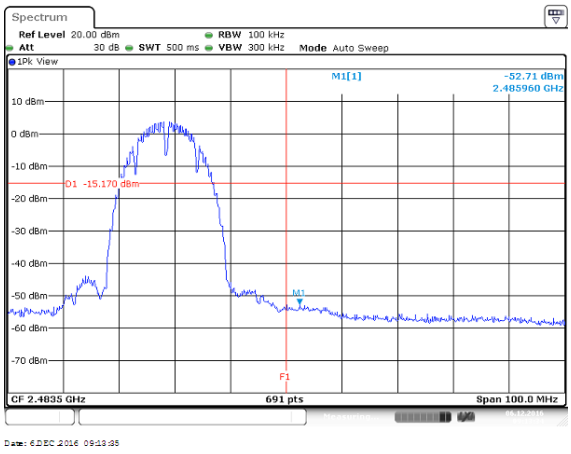
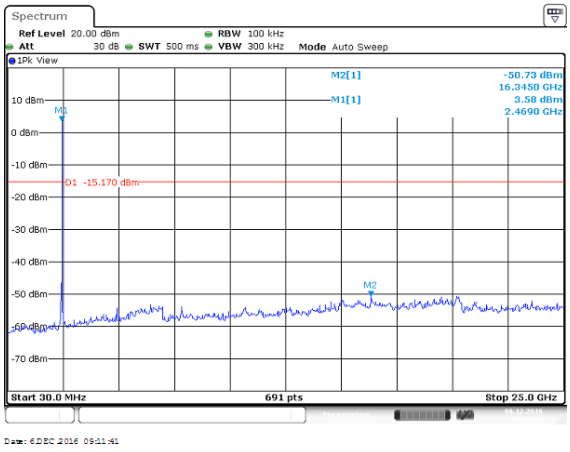


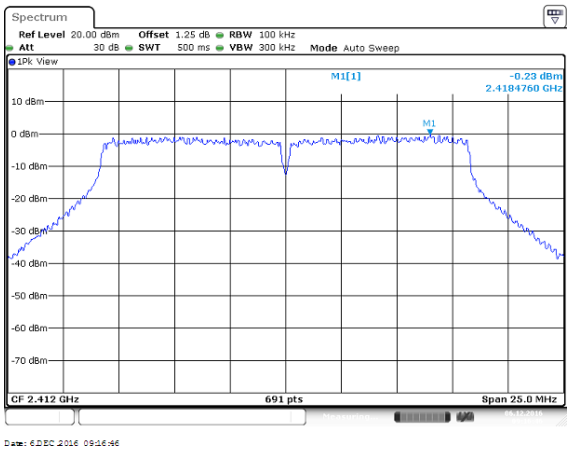
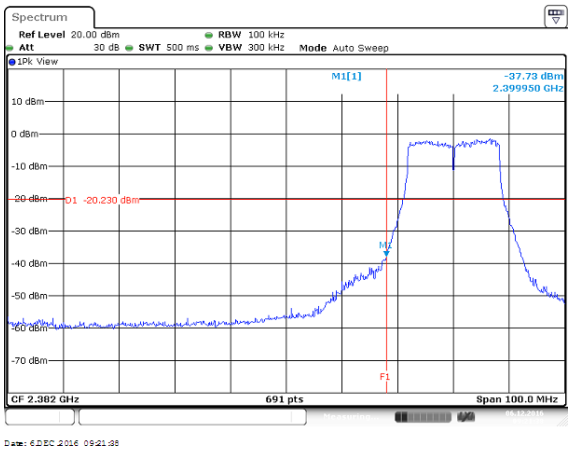
4.5.4 Test Result

Test Data

IEEE 802.11b mode Low CH chain 0	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

IEEE 802.11b mode Mid CH chain 0	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

IEEE 802.11b mode High CH chain 0	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

IEEE 802.11g mode Low CH chain 0	
Reference Level of PSD in 100kHz	**Band Edge**
	
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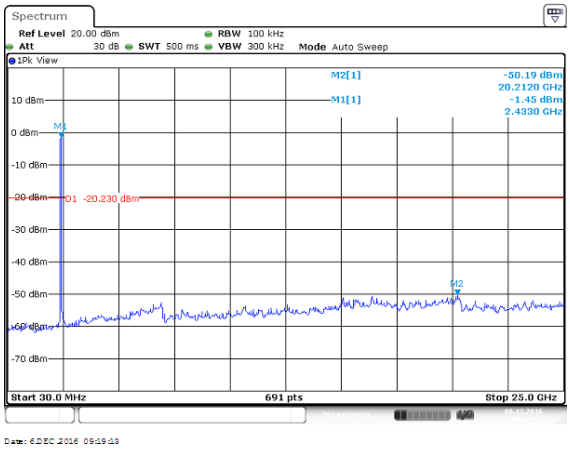
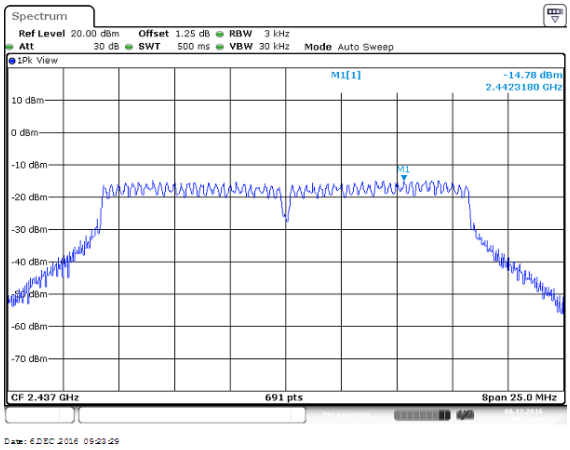
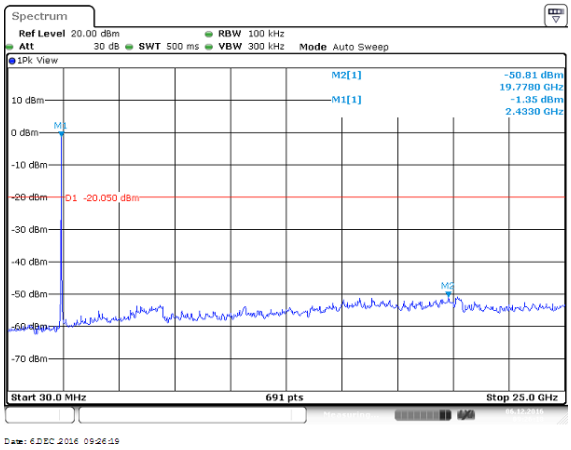
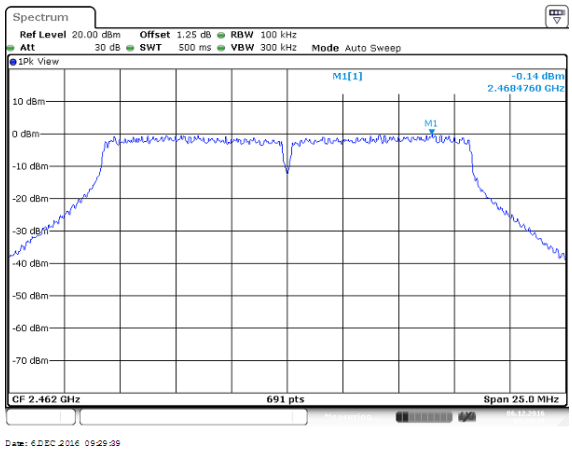
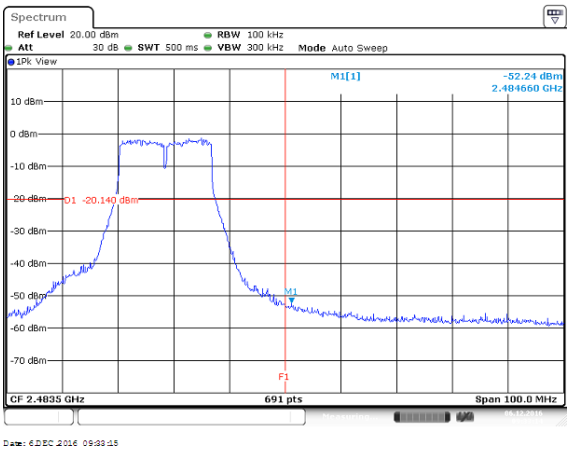
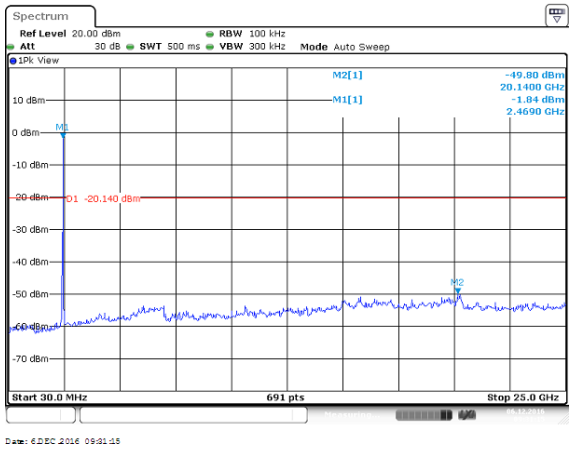
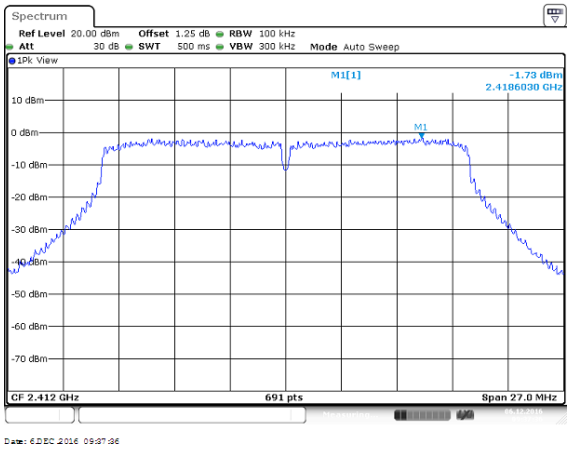
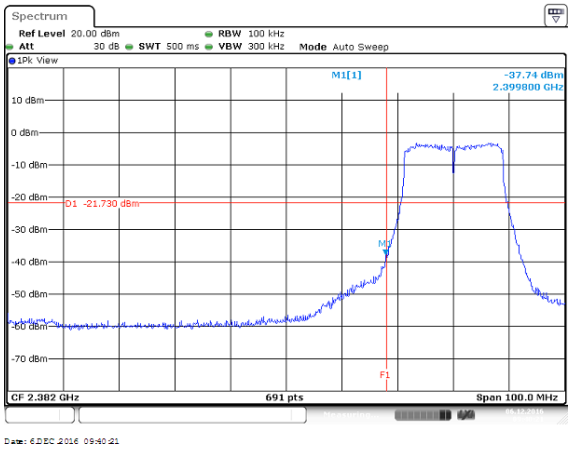
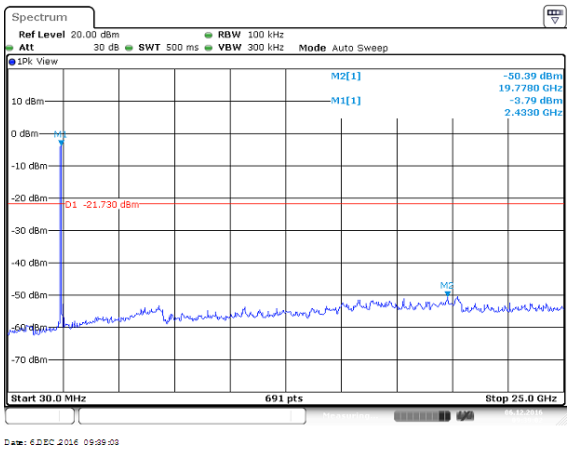
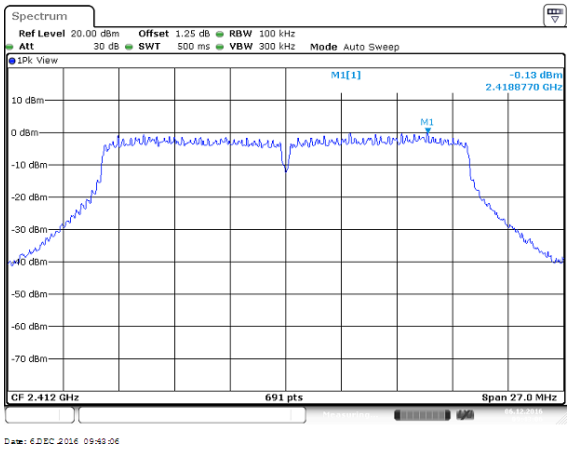
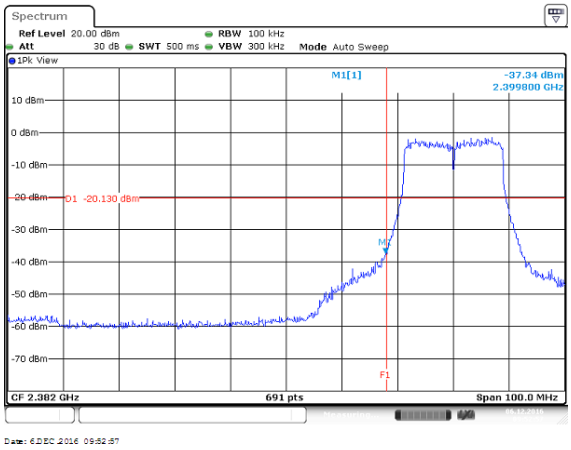
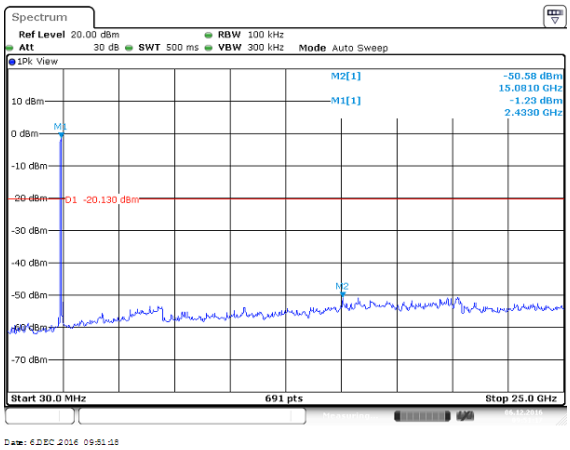
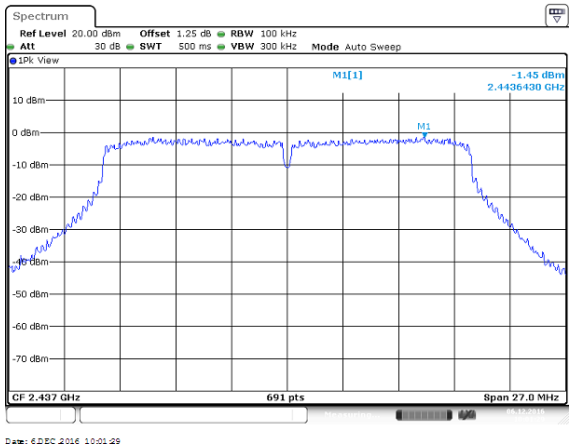
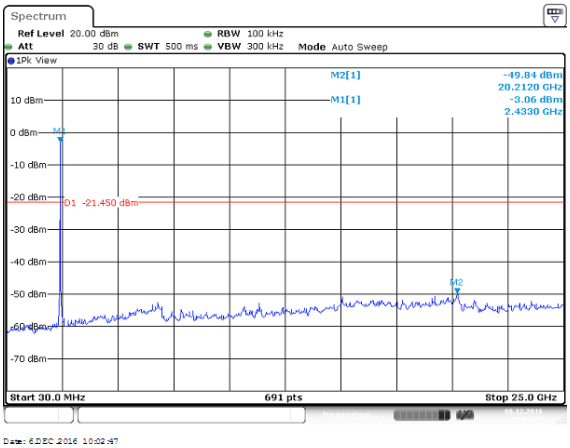
	

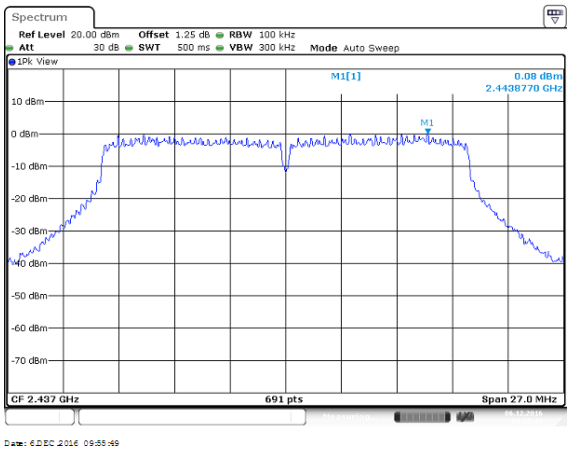
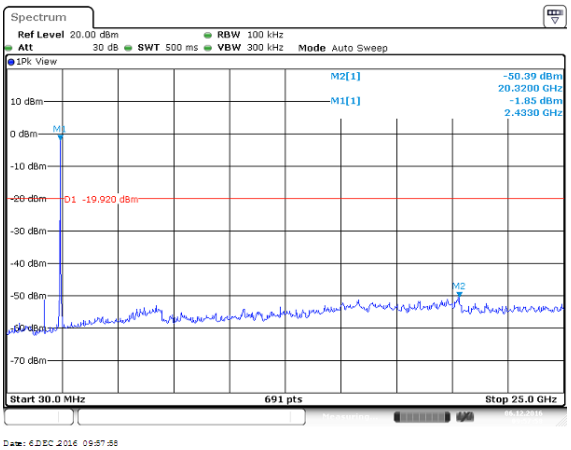
IEEE 802.11g mode Mid CH chain 0	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

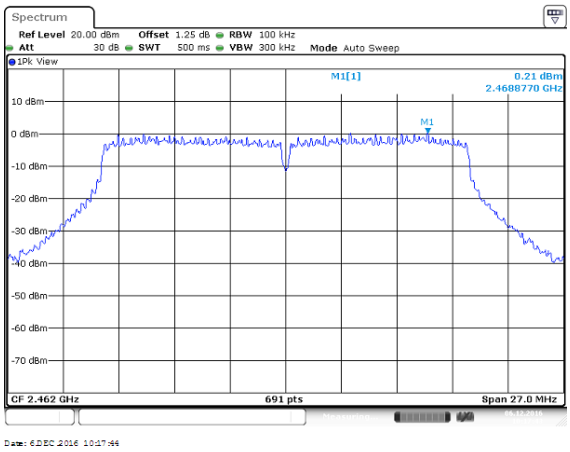
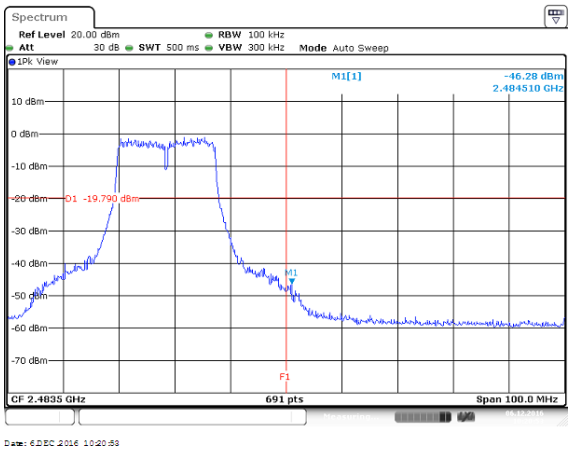
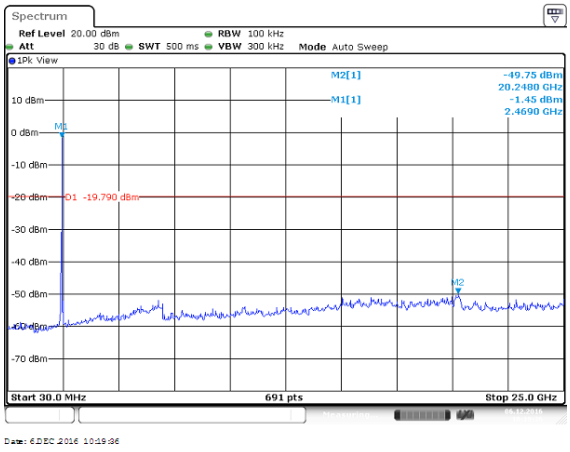
IEEE 802.11g mode High CH chain 1	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

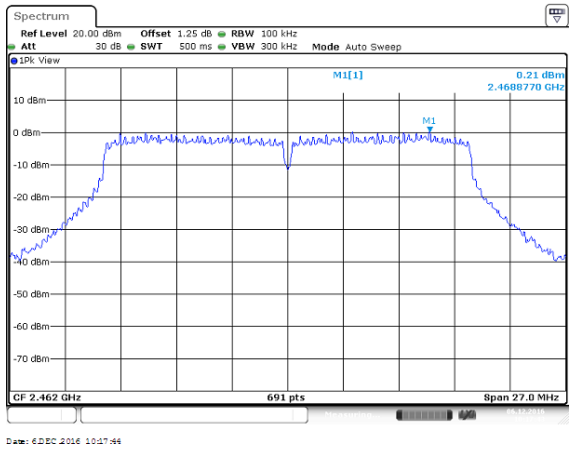
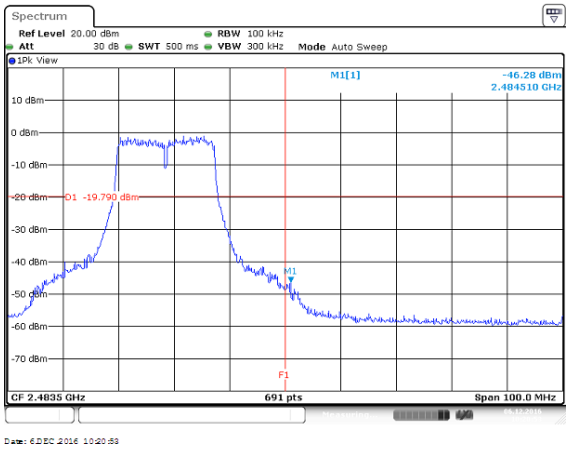
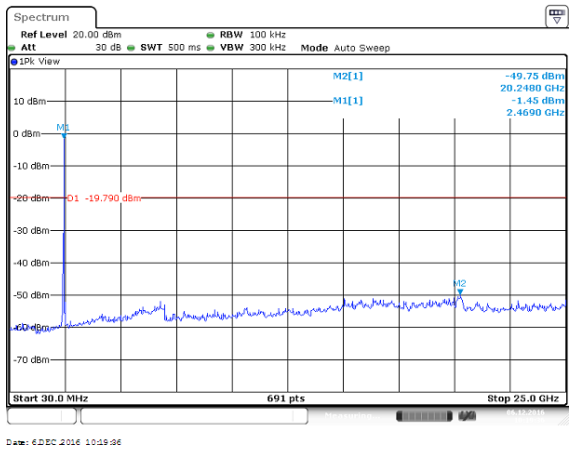
IEEE 802.11 n HT20 mode Low CH chain 0	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

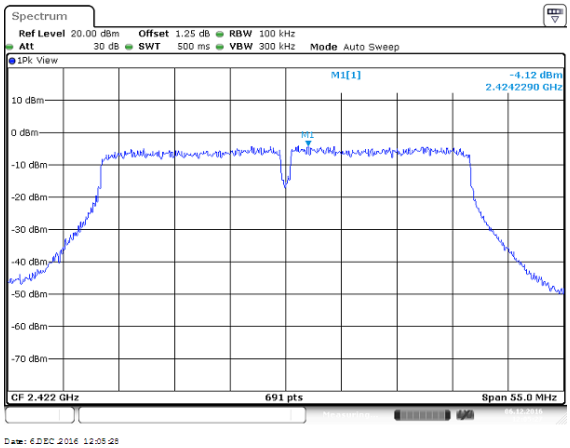
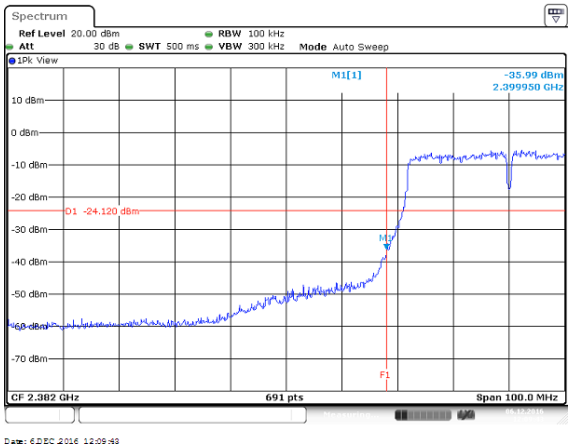
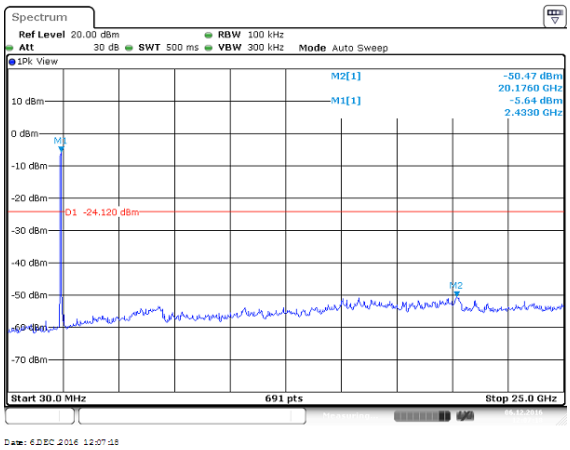
IEEE 802.11 n HT20 mode Low CH chain 1	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

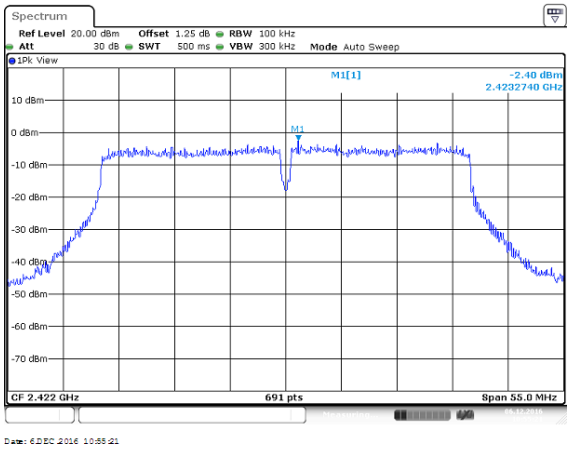
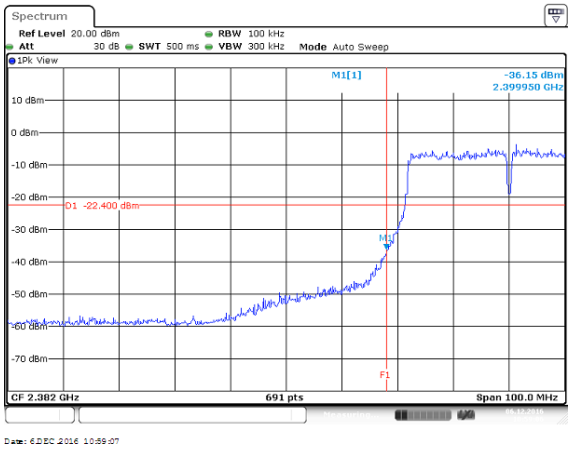
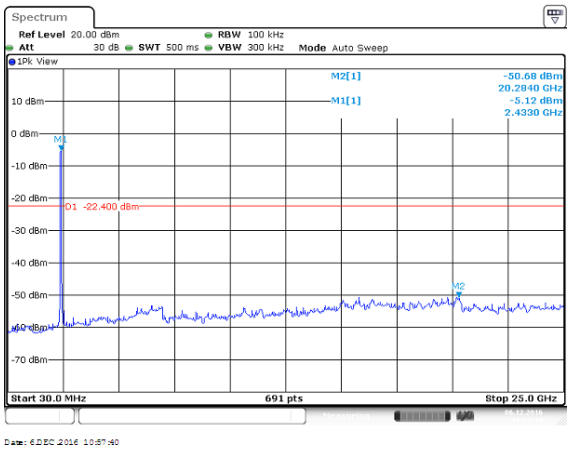
IEEE 802.11 n HT20 mode Mid CH chain 0	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

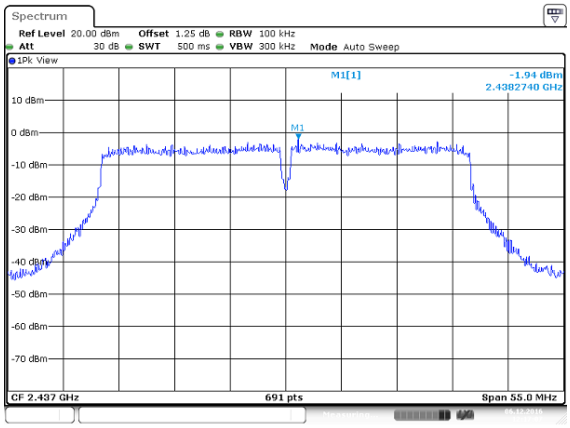
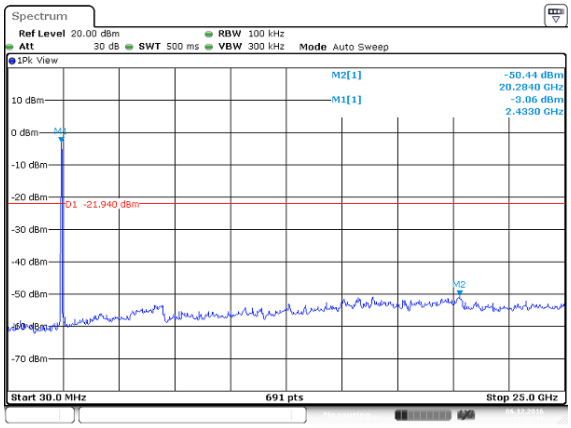
IEEE 802.11 n HT20 mode Mid CH chain 1	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

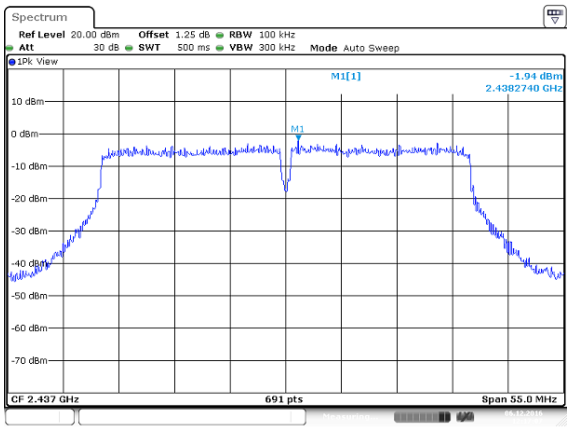
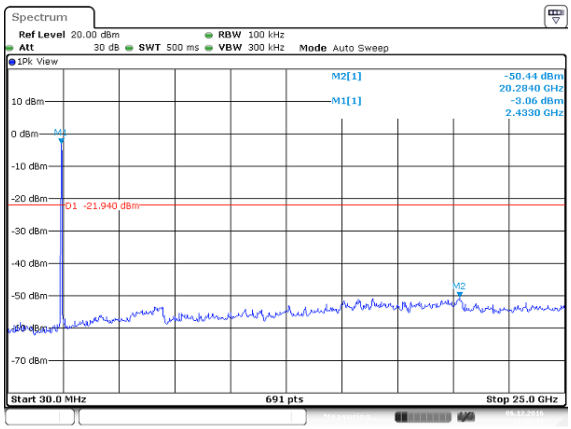
IEEE 802.11n HT20 mode High CH chain 0	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

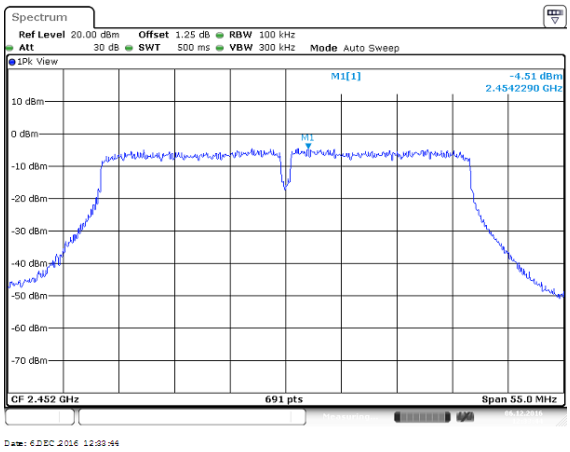
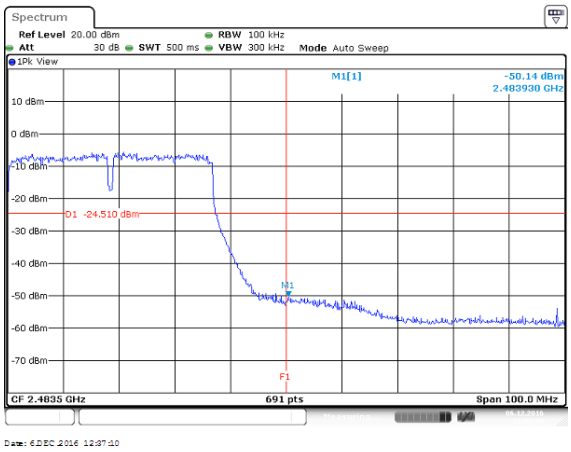
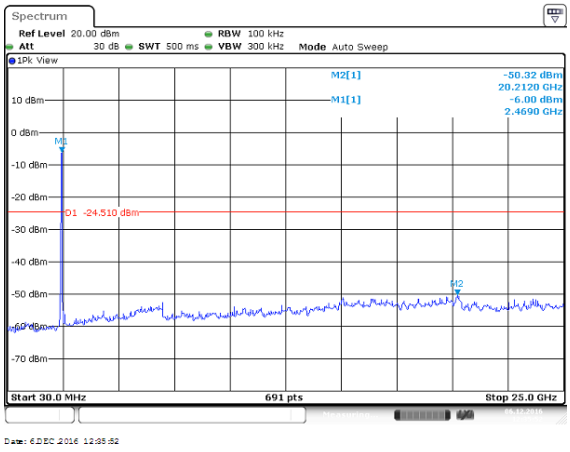
IEEE 802.11n HT20 mode High CH chain 1	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

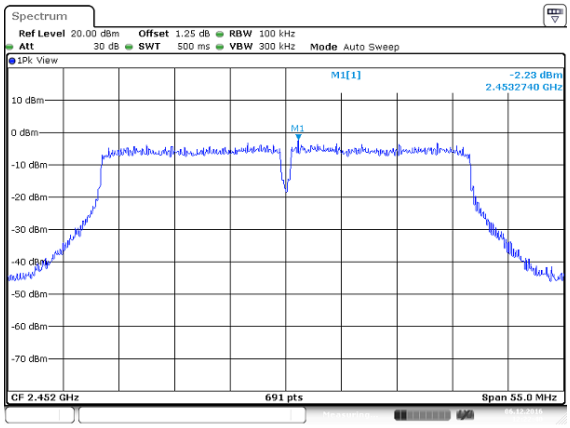
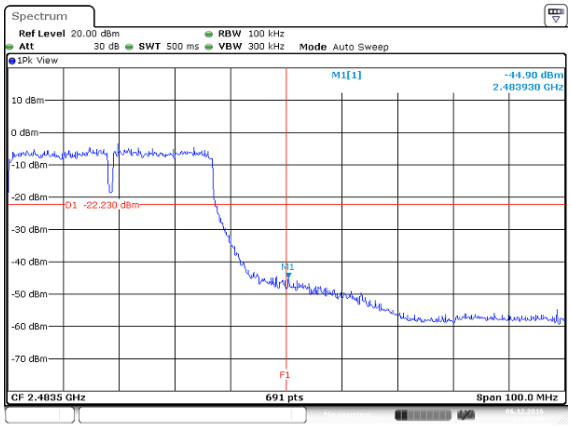
IEEE 802.11 n HT40 mode Low CH chain 0	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

IEEE 802.11 n HT40 mode Low CH chain 1	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

IEEE 802.11 n HT40 mode Mid CH chain 0	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

IEEE 802.11 n HT40 mode Mid CH chain 1	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

IEEE 802.11n HT40 mode High CH chain 0	
Reference Level of PSD in 100kHz	**Band Edge**
	
Spurious Emission 30MHz-25GHz	
	

IEEE 802.11n HT40 mode High CH chain 1	
Reference Level of PSD in 100kHz	**Band Edge**
	
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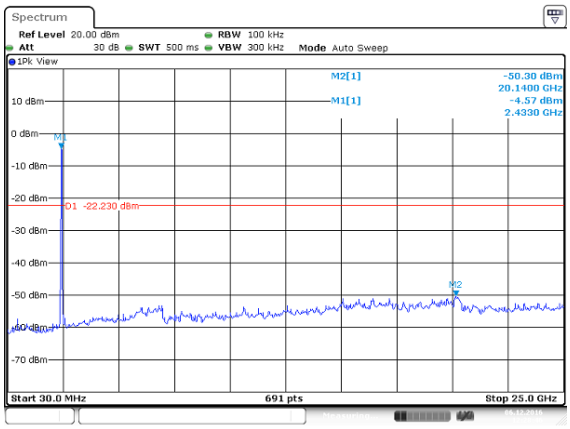
	

4.6 RADIATION BANDEDGE AND SPURIOUS EMISSION

4.6.1 Test Limit

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

IC according to RSS-247 section 5.5, RSS-Gen, Section 8.9 and 8.10

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

4.6.2 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.

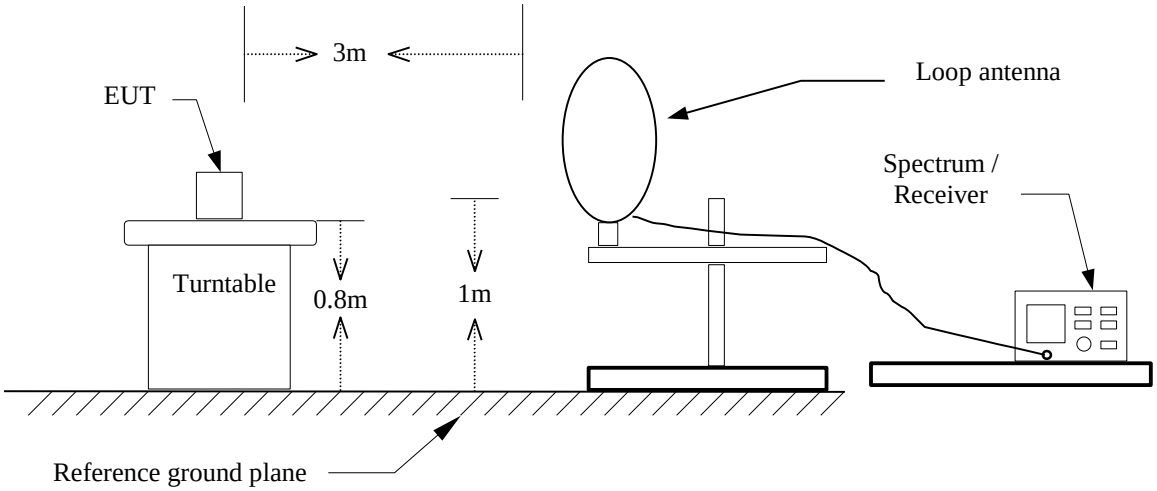
(2.2) For Average measurement：RBW = 1MHz, VBW

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

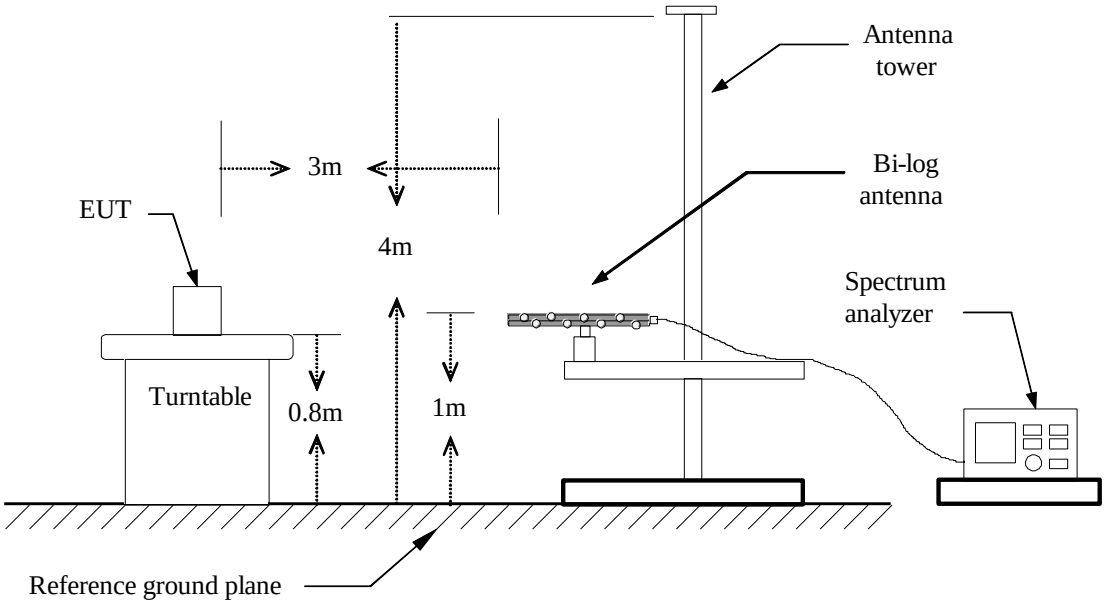
Configuration	Duty Cycle (%)	VBW
802.11b	100%	10Hz
802.11g	100%	10Hz
802.11n HT20	100%	10Hz
802.11n HT40	100%	10Hz

4.6.3 Test Setup

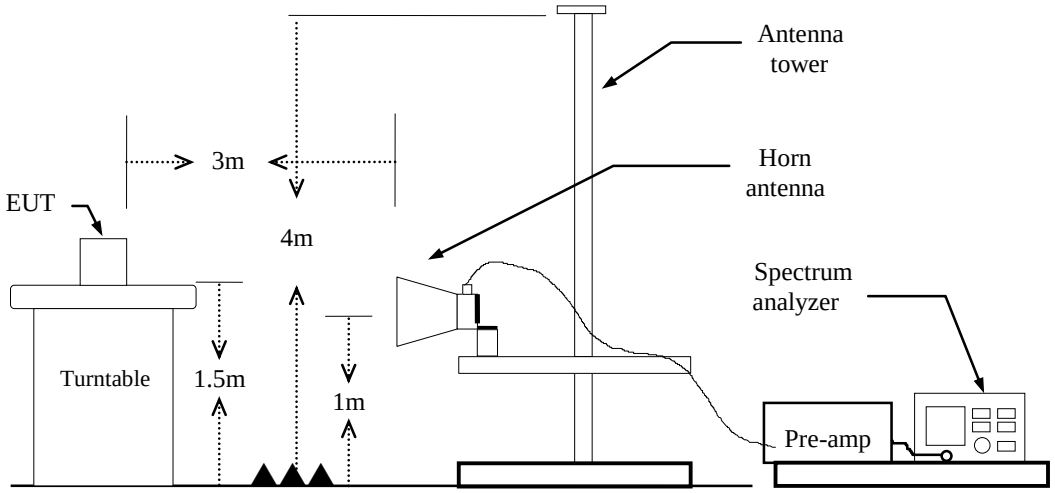
9kHz ~ 30MHz



30MHz ~ 1GHz



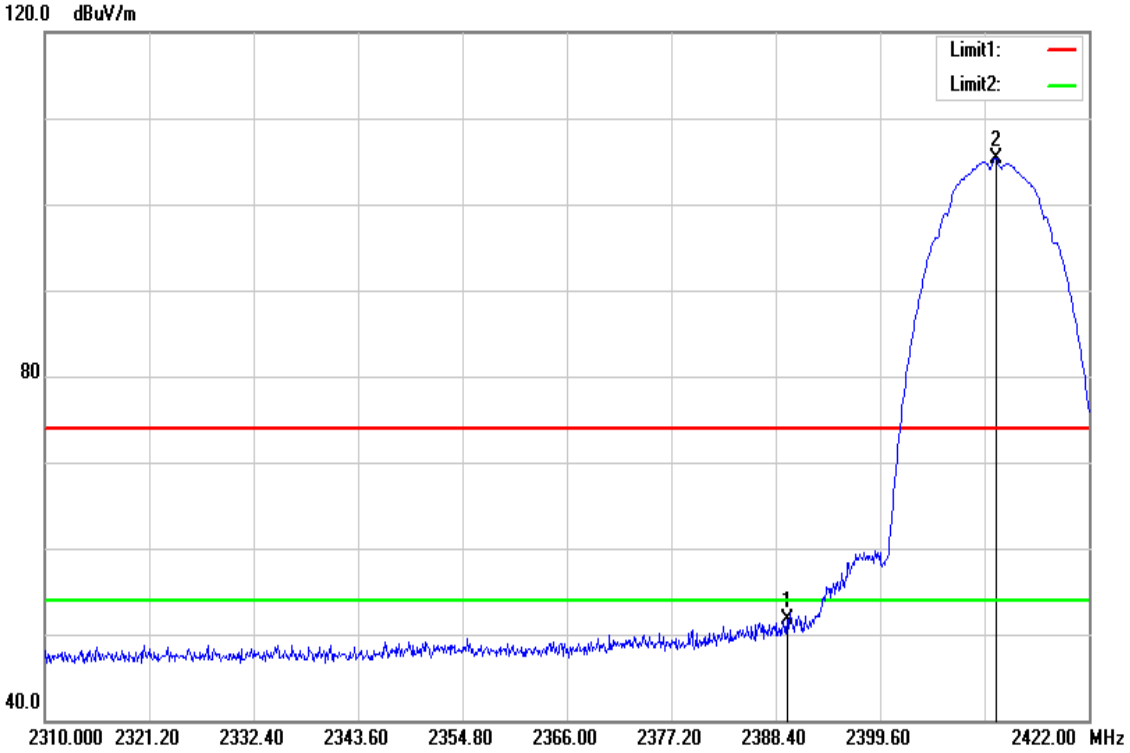
Above 1 GHz



4.6.4 Test Result

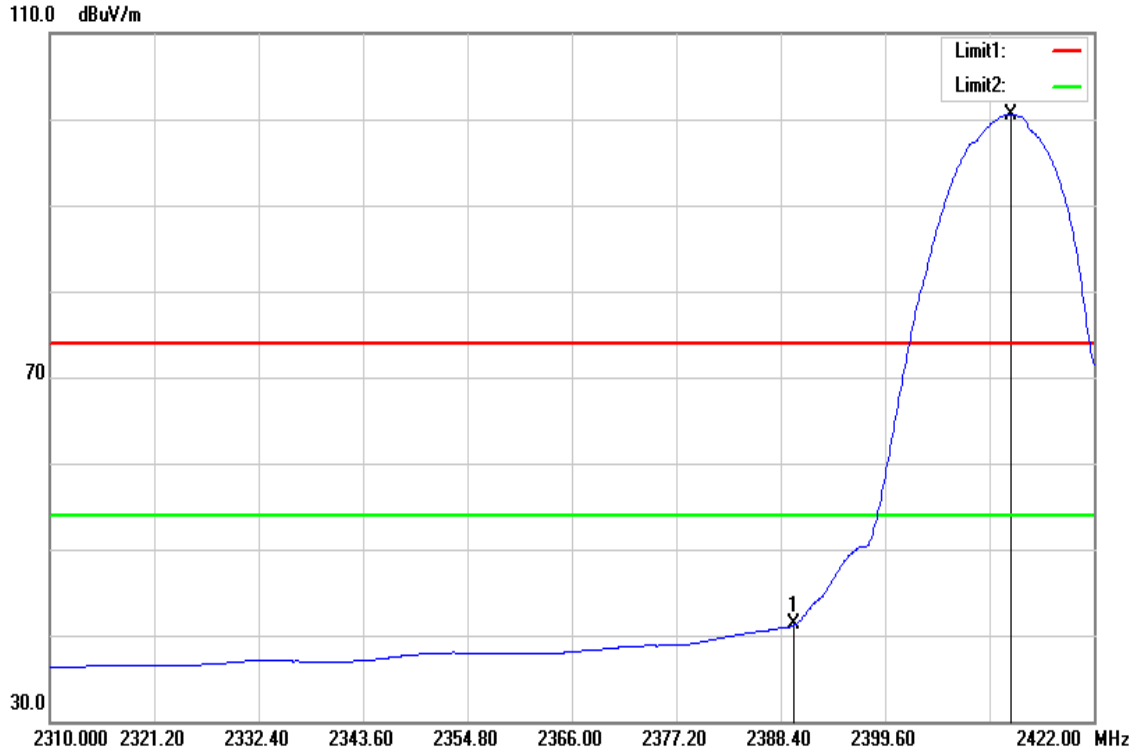
Band Edge Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak	Test Voltage	120Vac / 60Hz



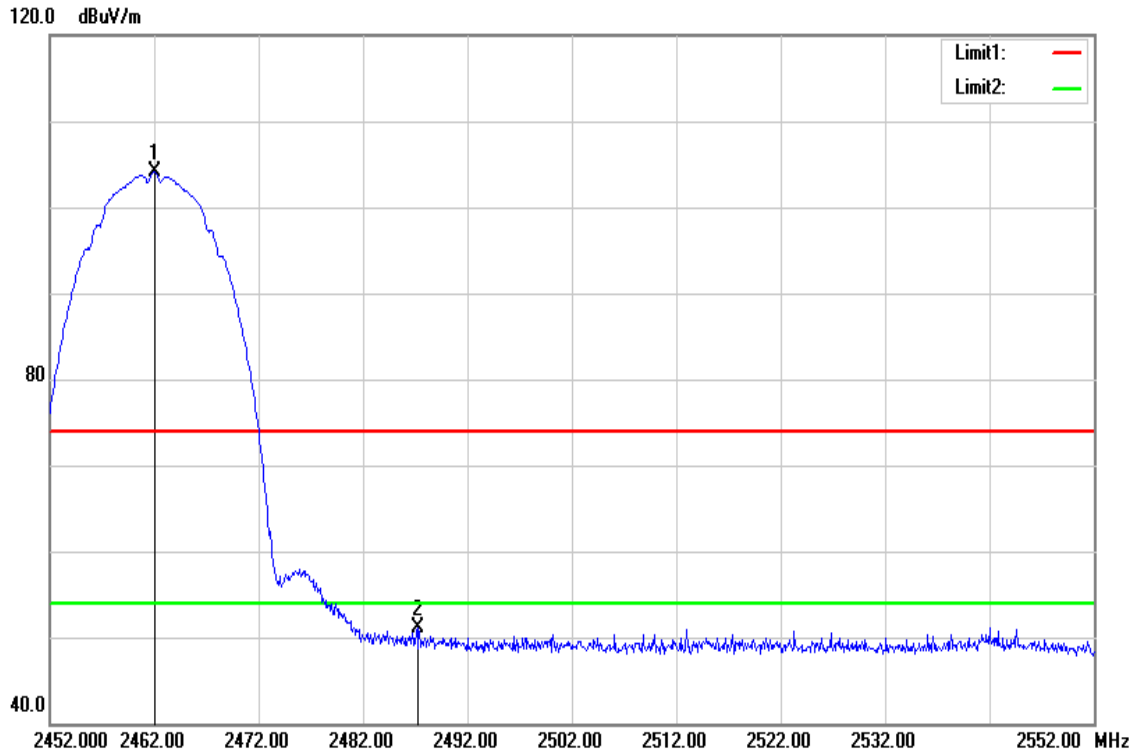
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.632	54.12	-2.49	51.63	74.00	-22.37	Peak
2412.032	107.76	-2.42	105.34	-	-	Peak

Test Mode	IEEE 802.11b Low CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Average	Test Voltage	120Vac / 60Hz



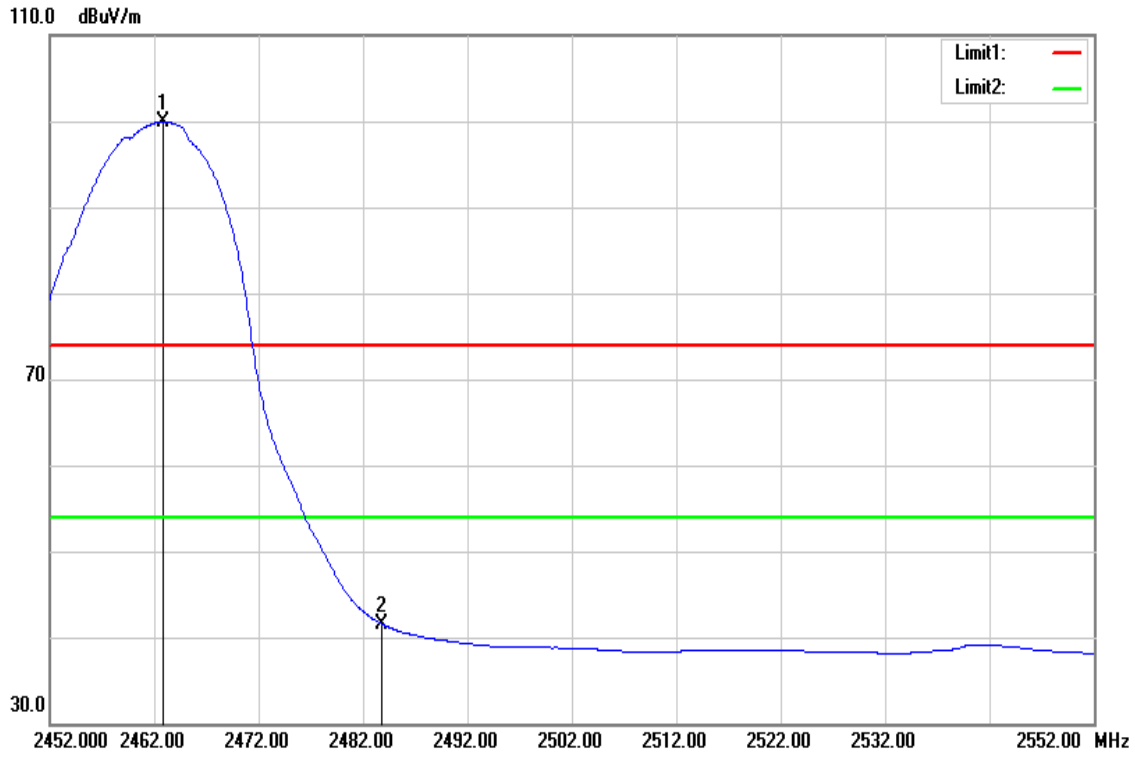
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.856	43.72	-2.49	41.23	54.00	-12.77	AVG
2413.040	102.92	-2.41	100.51	-	-	AVG

Test Mode	IEEE 802.11b High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak	Test Voltage	120Vac / 60Hz



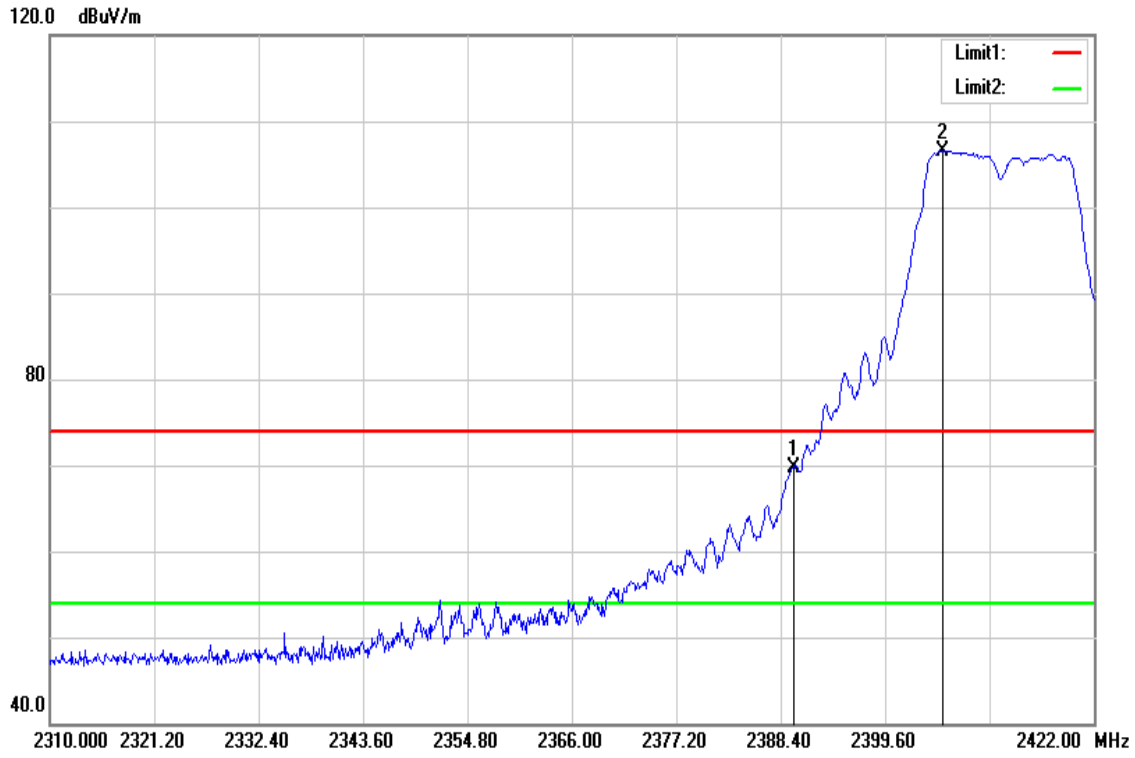
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2462.000	106.27	-2.10	104.17	-	-	Peak
2487.200	53.13	-1.96	51.17	74.00	-22.83	Peak

Test Mode	IEEE 802.11b High CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Average	Test Voltage	120Vac / 60Hz



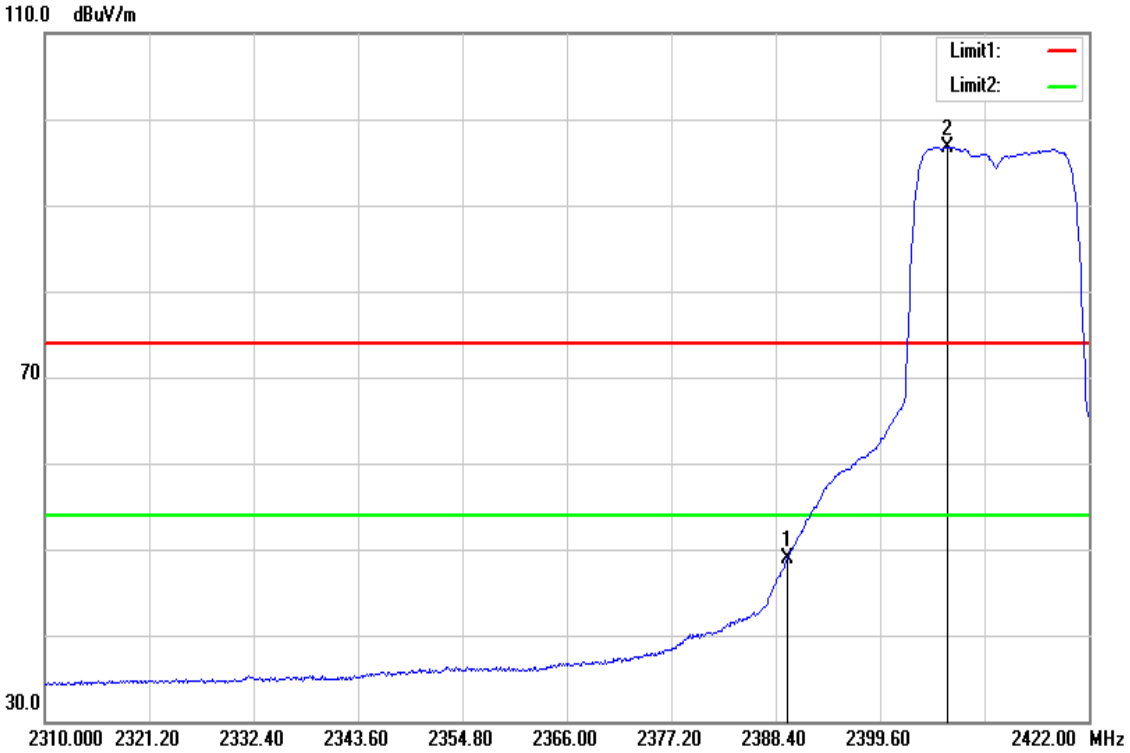
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2462.900	102.06	-2.09	99.97	-	-	AVG
2483.800	43.56	-1.99	41.57	54.00	-12.43	AVG

Test Mode	IEEE 802.11g Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak	Test Voltage	120Vac / 60Hz



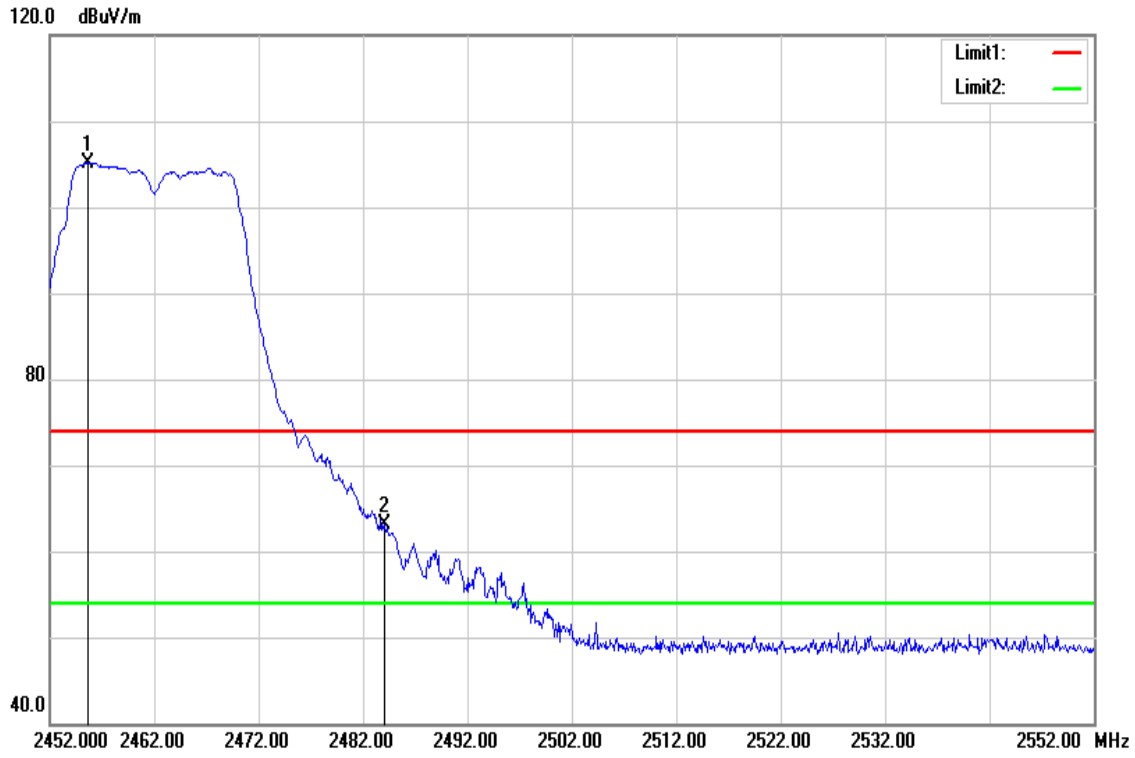
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.856	72.23	-2.49	69.74	74.00	-4.26	Peak
2405.760	109.01	-2.42	106.59	-	-	Peak

Test Mode	IEEE 802.11g Low CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Average	Test Voltage	120Vac / 60Hz



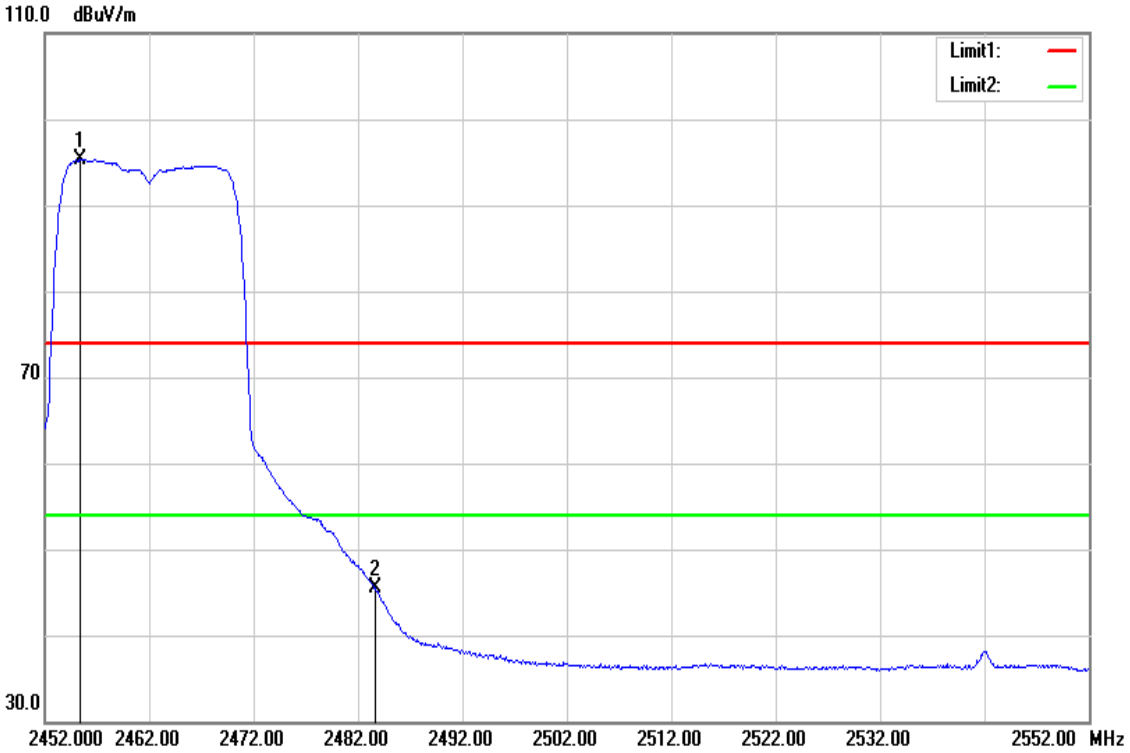
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.632	51.44	-2.49	48.95	54.00	-5.05	AVG
2406.880	99.15	-2.42	96.73	-	-	AVG

Test Mode	IEEE 802.11g High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak	Test Voltage	120Vac / 60Hz



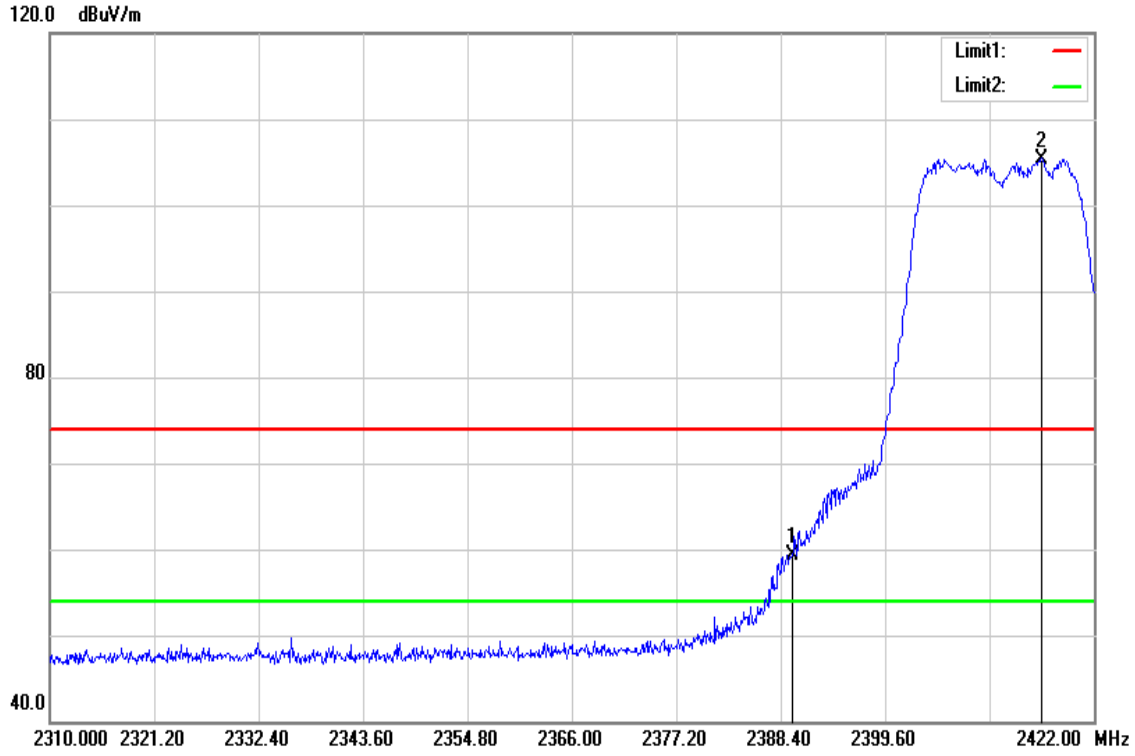
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2455.600	107.31	-2.12	105.19	-	-	Peak
2484.100	65.08	-1.99	63.09	74.00	-10.91	Peak

Test Mode	IEEE 802.11g High CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Average	Test Voltage	120Vac / 60Hz



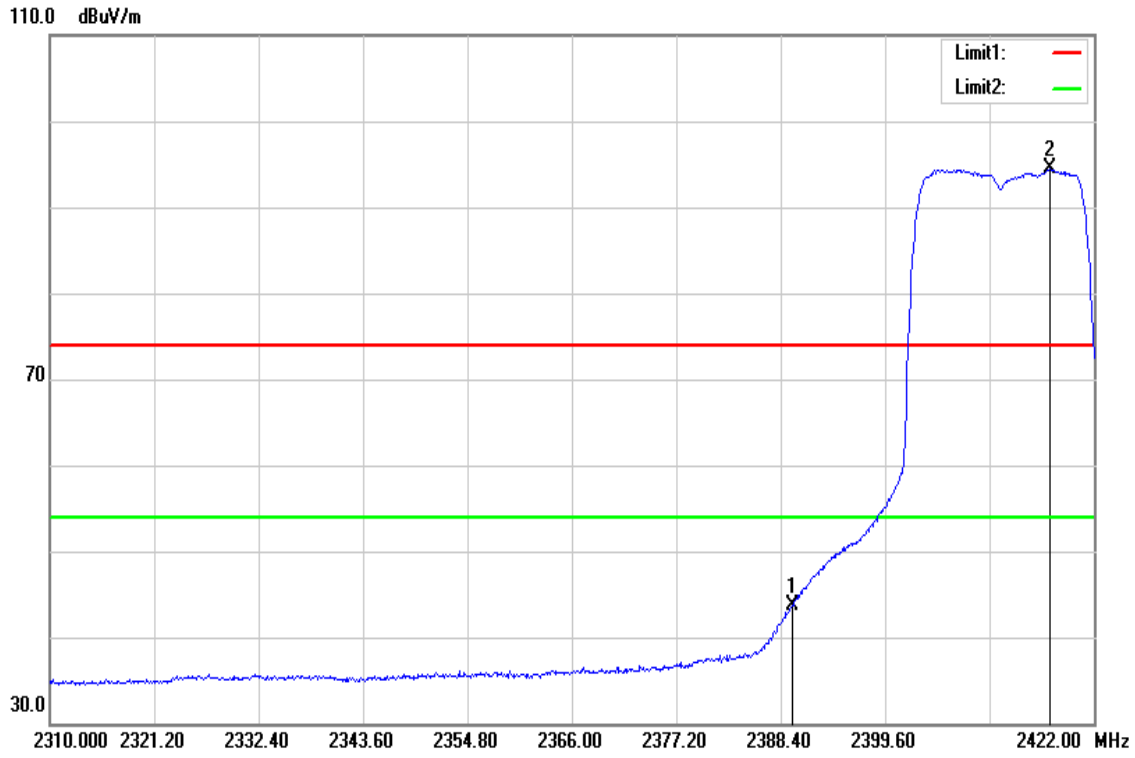
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2455.400	97.43	-2.12	95.31	-	-	AVG
2483.700	47.49	-1.99	45.50	54.00	-8.50	AVG

Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak	Test Voltage	120Vac / 60Hz



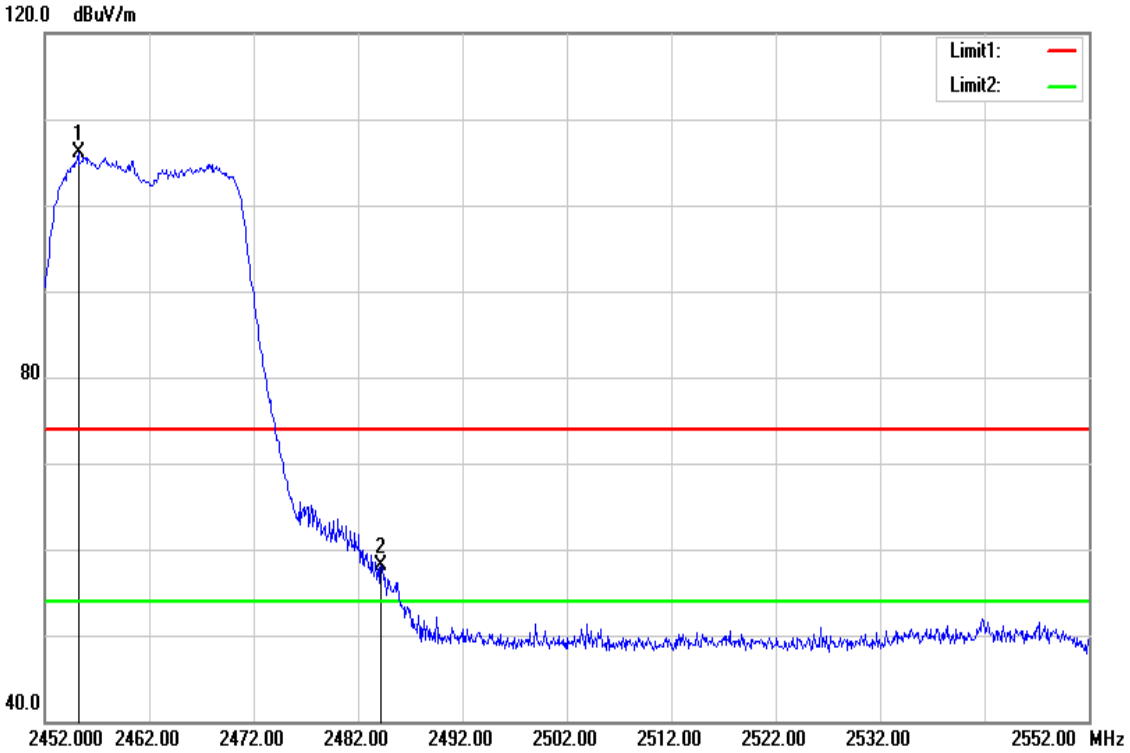
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.632	61.78	-2.49	59.29	74.00	-14.71	Peak
2416.400	107.78	-2.38	105.40	-	-	Peak

Test Mode	IEEE 802.11n HT20 Low CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Average	Test Voltage	120Vac / 60Hz



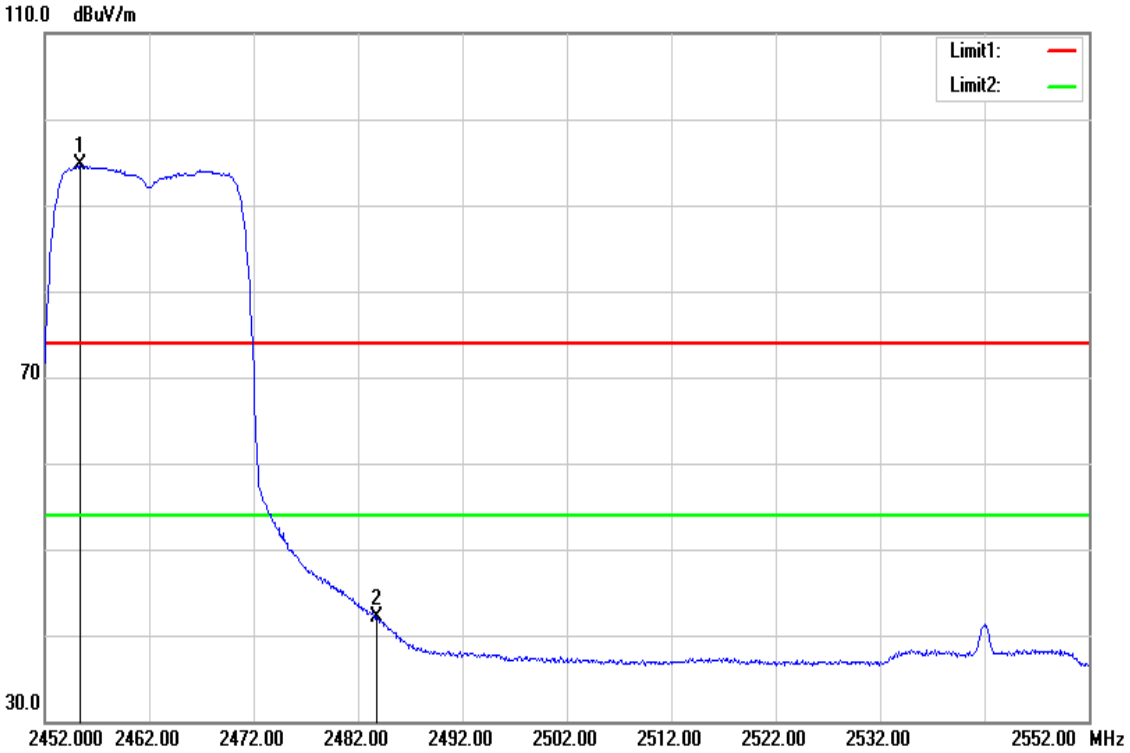
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.632	46.20	-2.49	43.71	54.00	-10.29	AVG
2417.296	96.82	-2.38	94.44	-	-	AVG

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak	Test Voltage	120Vac / 60Hz



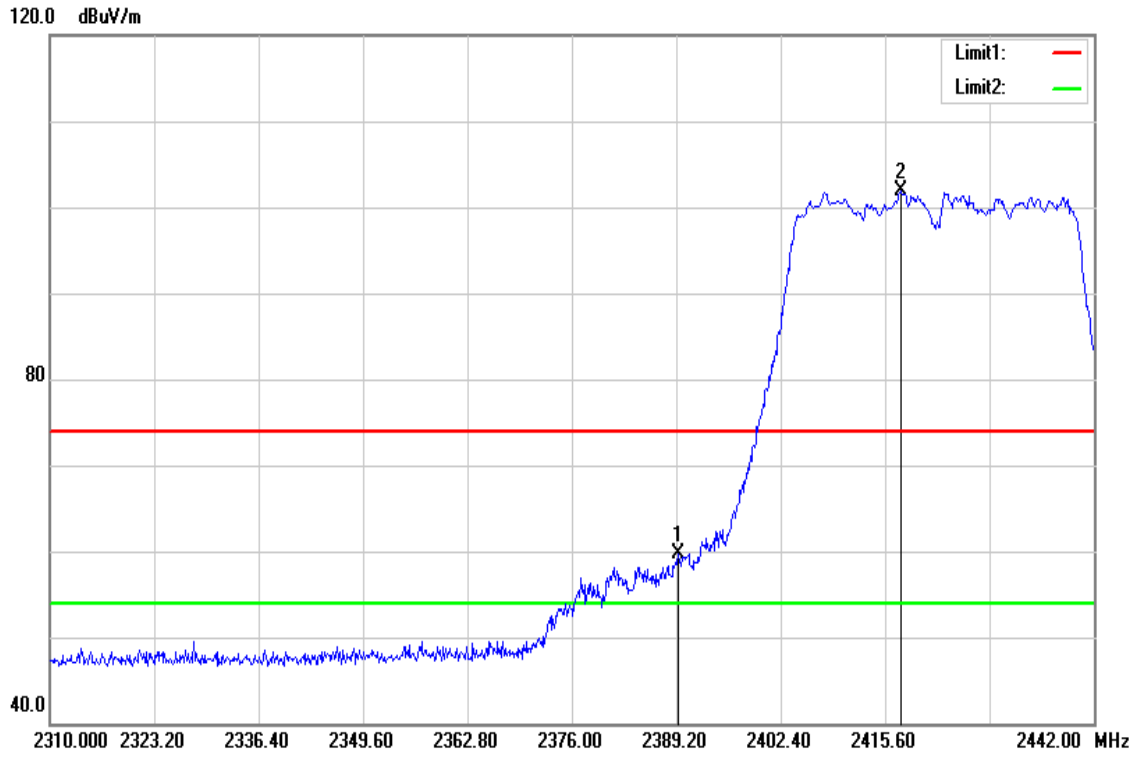
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2455.200	108.21	-2.12	106.09	-	-	Peak
2484.200	60.10	-1.99	58.11	74.00	-15.89	Peak

Test Mode	IEEE 802.11n HT20 High CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Average	Test Voltage	120Vac / 60Hz



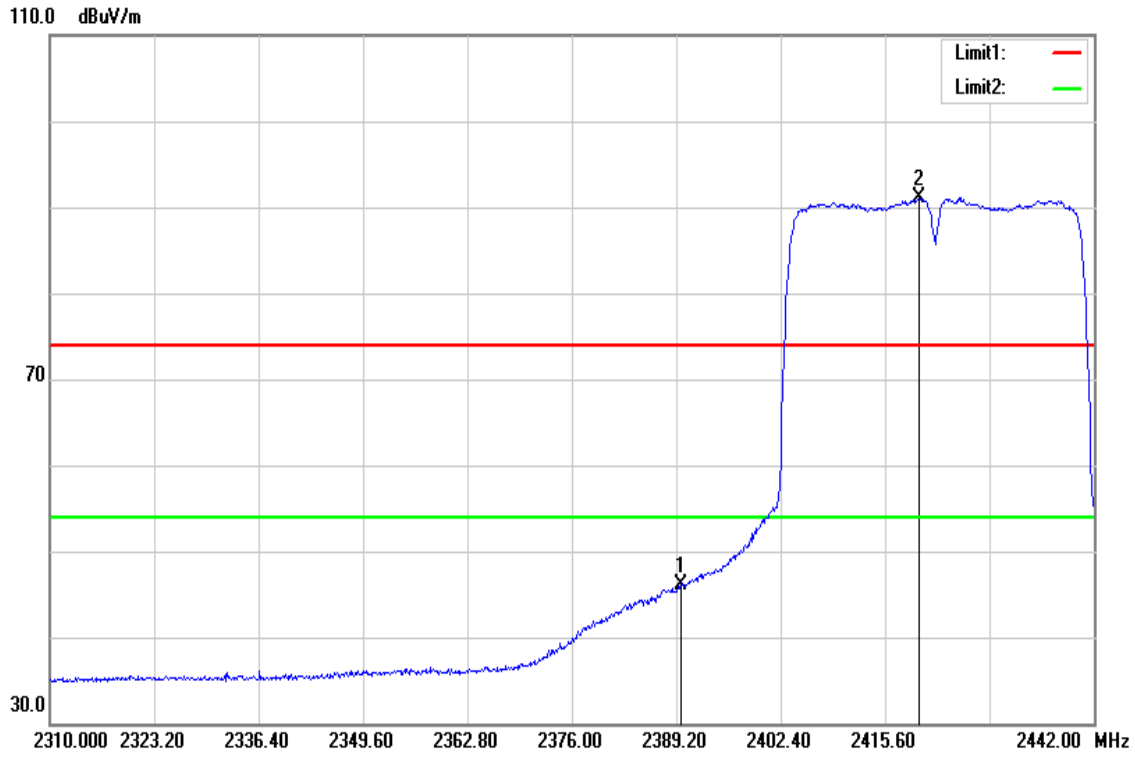
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2455.400	96.76	-2.12	94.64	-	-	AVG
2483.800	44.08	-1.99	42.09	54.00	-11.91	AVG

Test Mode	IEEE 802.11n HT40 Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak	Test Voltage	120Vac / 60Hz



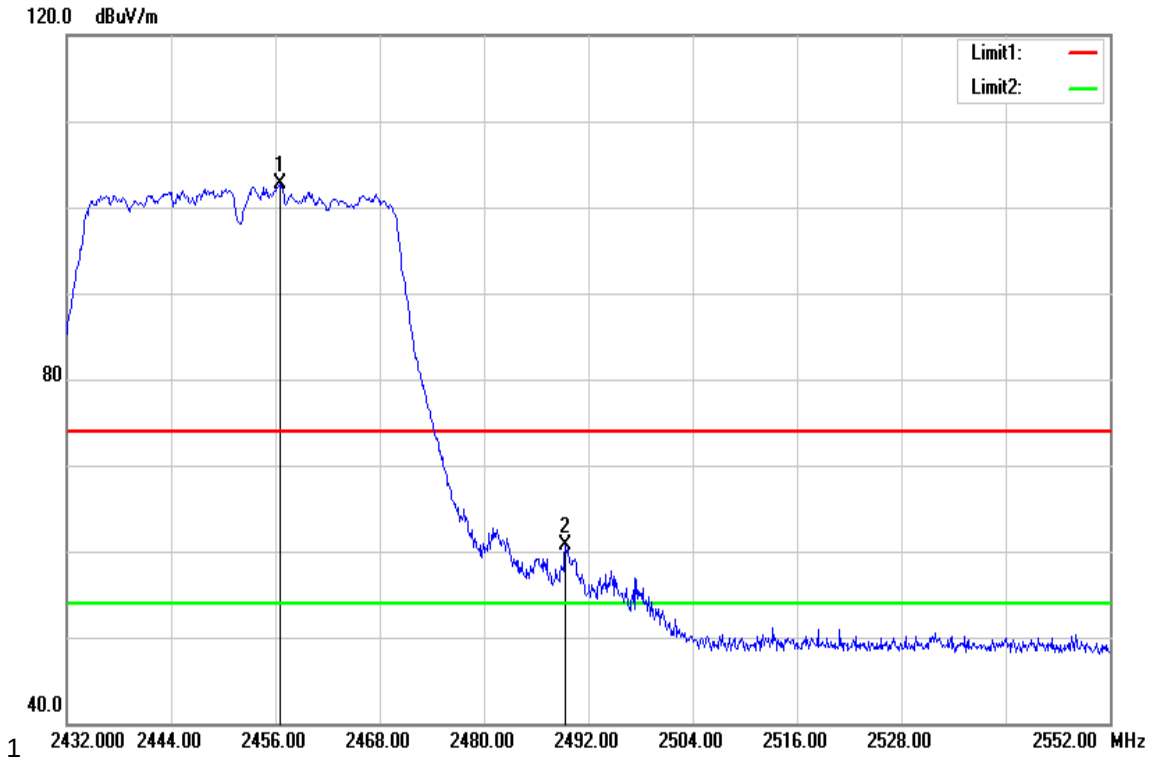
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.464	62.25	-2.49	59.76	74.00	-14.24	Peak
2417.580	104.21	-2.38	101.83	-	-	Peak

Test Mode	IEEE 802.11n HT40 Low CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Average	Test Voltage	120Vac / 60Hz



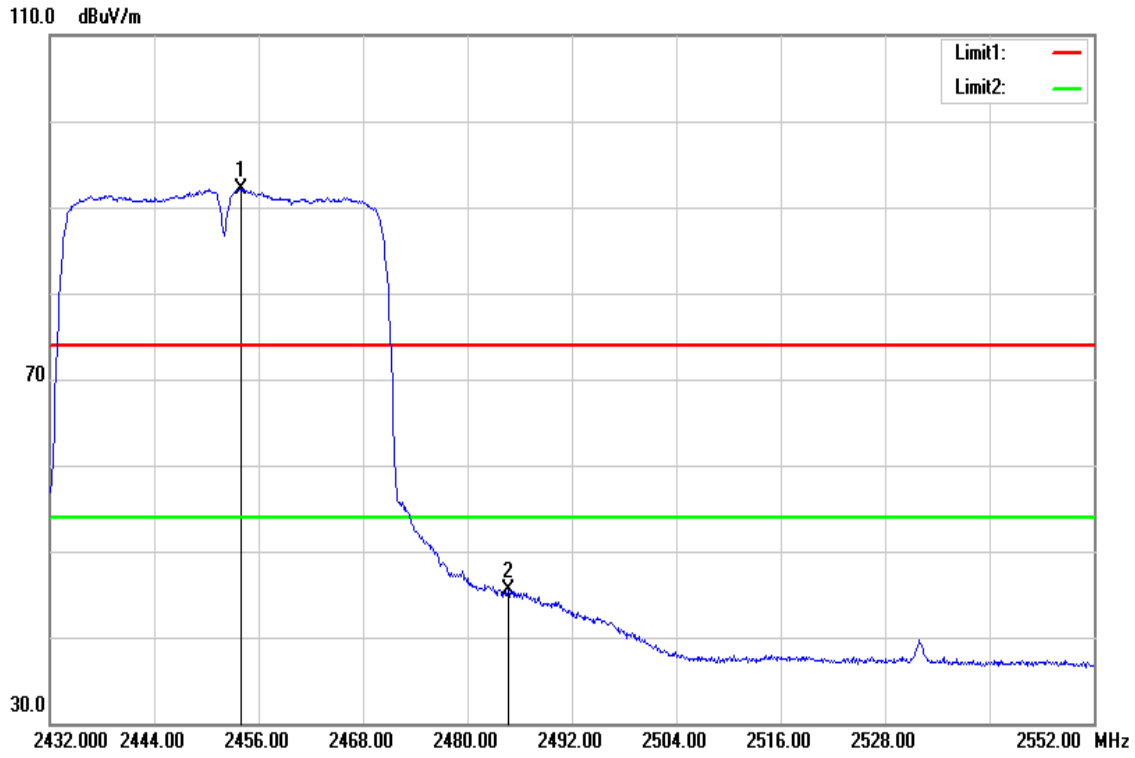
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2389.728	48.62	-2.49	46.13	54.00	-7.87	AVG
2419.956	93.52	-2.36	91.16	-	-	AVG

Test Mode	IEEE 802.11n HT40 High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2456.600	104.87	-2.12	102.75	-	-	Peak
2489.360	62.63	-1.94	60.69	74.00	-13.31	Peak

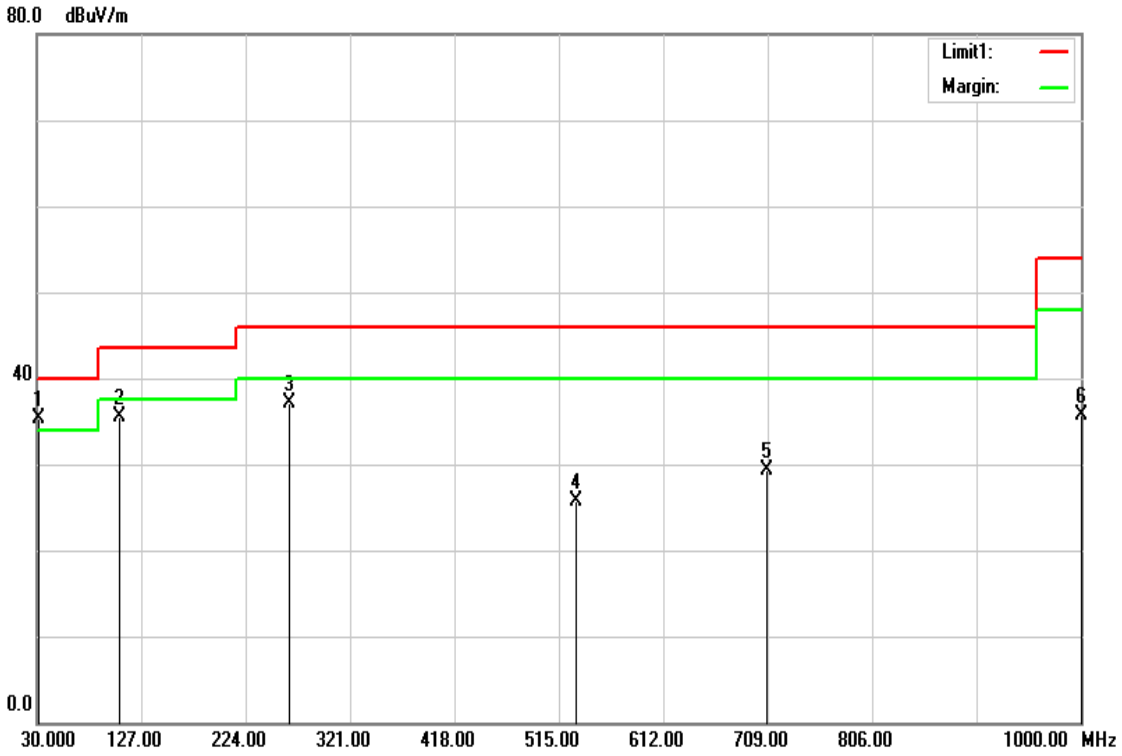
Test Mode	IEEE 802.11n HT40 High CH	Temperature:	27(℃)/ 53%RH
Test Item	Band Edge	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2453.960	94.29	-2.13	92.16	-	-	AVG
2484.680	47.42	-1.98	45.44	54.00	-8.56	AVG

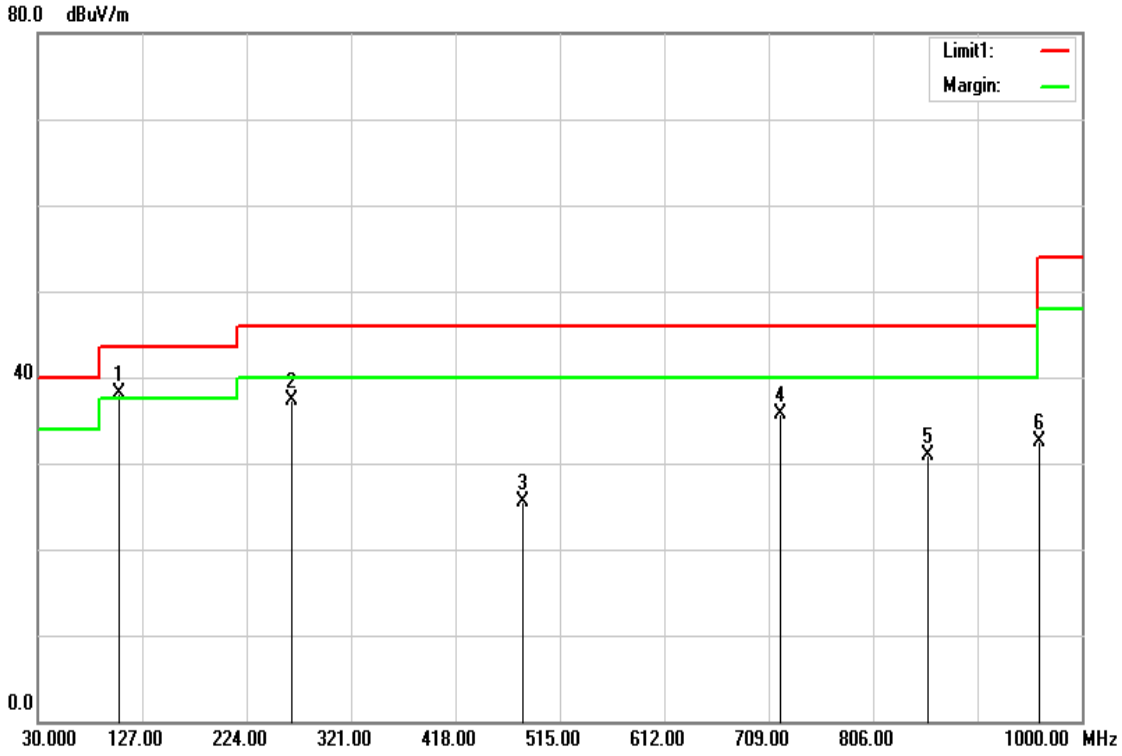
Below 1G Test Data

Test Mode	Mode 1	Temp/Hum	27(℃)/ 53%RH
Test Item	30MHz-1GHz	Test Date	Dec 16, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Qusi-peak	Test Voltage	120Vac / 60Hz



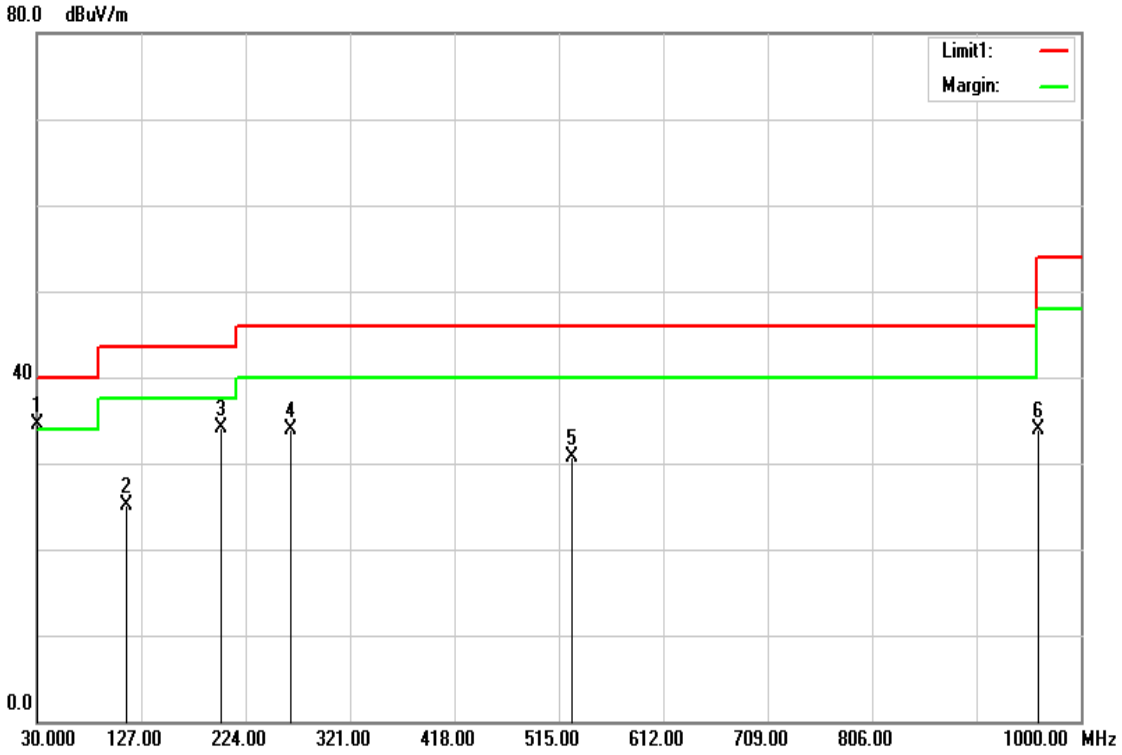
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
31.9400	44.61	-9.35	35.26	40.00	-4.74	Peak
106.6300	53.39	-17.86	35.53	43.50	-7.97	Peak
264.7400	52.32	-15.19	37.13	46.00	-8.87	Peak
530.5200	34.49	-8.78	25.71	46.00	-20.29	Peak
708.0300	35.29	-5.89	29.40	46.00	-16.60	Peak
1000.0000	37.37	-1.58	35.79	54.00	-18.21	Peak

Test Mode	Mode 1	Temp/Hum	27(℃)/ 53%RH
Test Item	30MHz-1GHz	Test Date	Nov 17, 2016
Polarize	Vertical	Test Engineer	Dennis Li
Detector	Peak and Qusi-peak	Test Voltage	120Vac / 60Hz



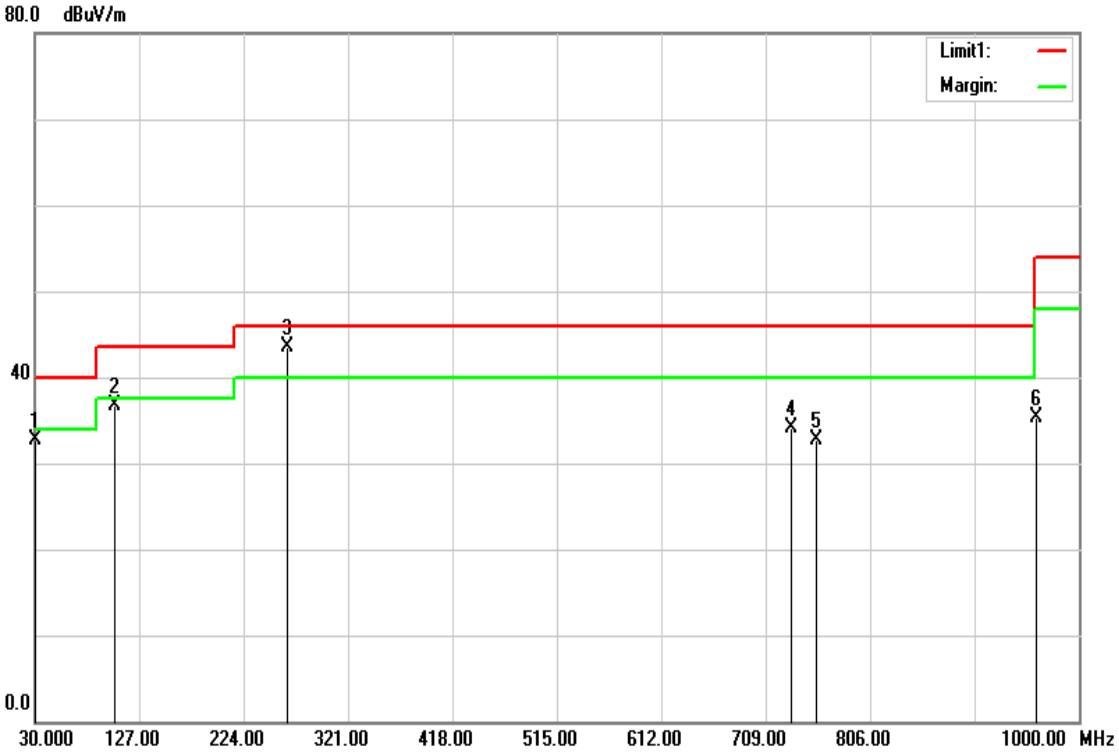
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB	Remark
105.6600	56.08	-18.03	38.05	43.50	-5.45	QP
265.7100	52.41	-15.12	37.29	46.00	-8.71	QP
480.0800	35.09	-9.62	25.47	46.00	-20.53	Peak
719.6700	41.40	-5.62	35.78	46.00	-10.22	Peak
857.4100	34.60	-3.69	30.91	46.00	-15.09	Peak
960.2300	34.67	-2.23	32.44	54.00	-21.56	Peak

Test Mode	Mode 2	Temp/Hum	27(℃)/ 53%RH
Test Item	30MHz-1GHz	Test Date	Nov 17, 2016
Polarize	Vertical	Test Engineer	Dennis Li
Detector	Peak and Qusi-peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
30.0000	42.34	-7.91	34.43	40.00	-5.57	QP
113.4200	41.69	-16.66	25.03	43.50	-18.47	QP
201.6900	49.78	-15.67	34.11	43.50	-9.39	peak
265.7100	49.11	-15.12	33.99	46.00	-12.01	peak
527.6100	39.45	-8.83	30.62	46.00	-15.38	peak
960.2300	36.11	-2.23	33.88	54.00	-20.12	peak

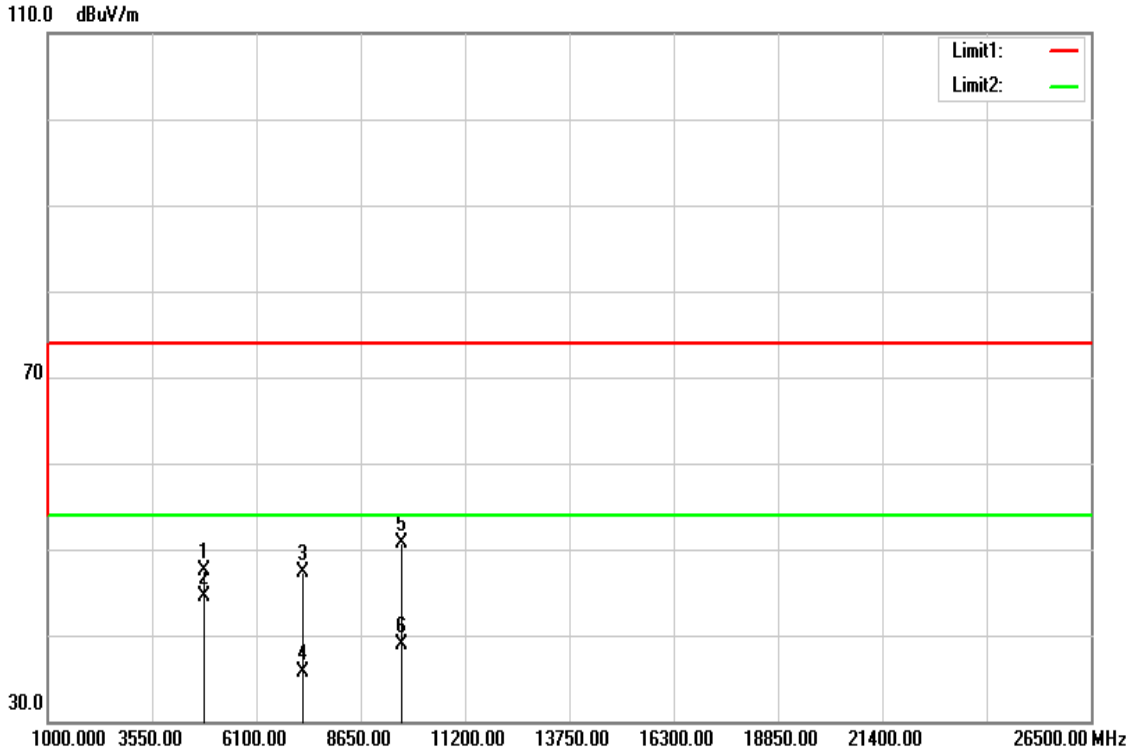
Test Mode	Mode 2	Temp/Hum	27(℃)/ 53%RH
Test Item	30MHz-1GHz	Test Date	Nov 17, 2016
Polarize	Vertical	Test Engineer	Dennis Li
Detector	Peak and Qusi-peak	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
30.0000	40.61	-7.91	32.70	40.00	-7.30	QP
104.6900	54.89	-18.20	36.69	43.50	-6.81	QP
264.7400	58.78	-15.19	43.59	46.00	-2.41	QP
732.2800	39.41	-5.33	34.08	46.00	-11.92	peak
756.5300	37.67	-4.87	32.80	46.00	-13.20	peak
960.2300	37.60	-2.23	35.37	54.00	-18.63	peak

Above 1G Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

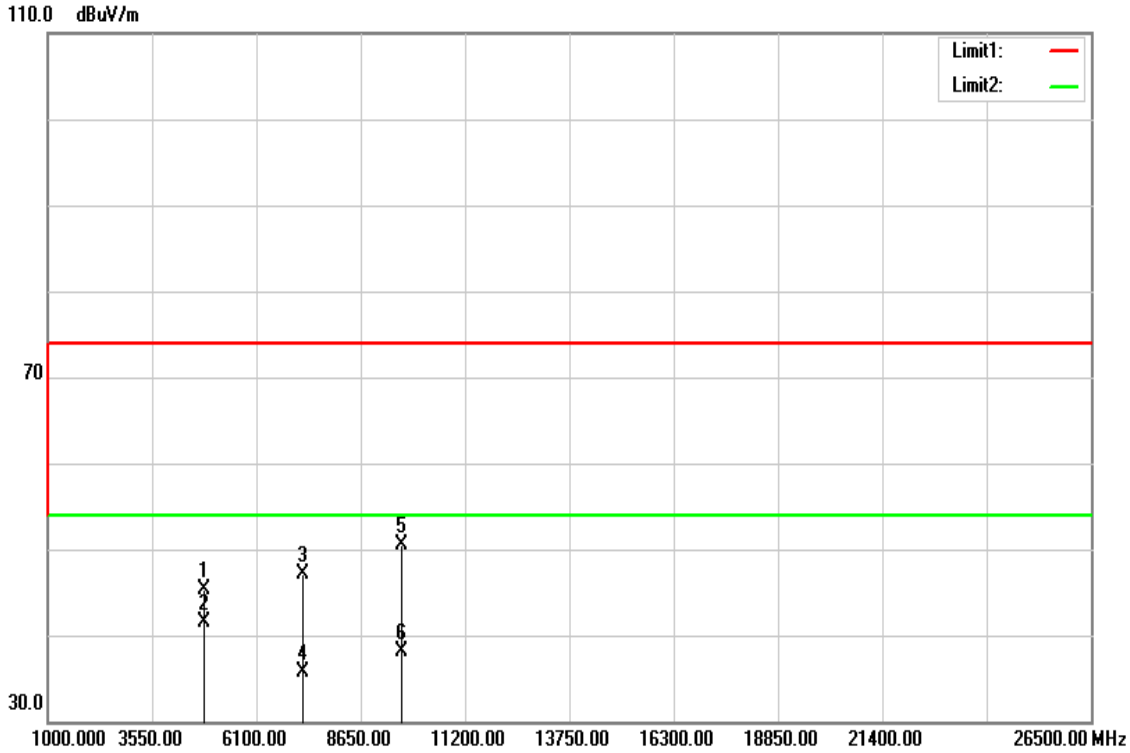


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	42.49	5.10	47.59	74.00	-26.41	Peak
4824.000	39.36	5.10	44.46	54.00	-9.54	AVG
7236.000	34.62	12.71	47.33	74.00	-26.67	Peak
7236.000	22.91	12.71	35.62	54.00	-18.38	AVG
9648.000	33.15	17.60	50.75	74.00	-23.25	Peak
9648.000	21.33	17.60	38.93	54.00	-15.07	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	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

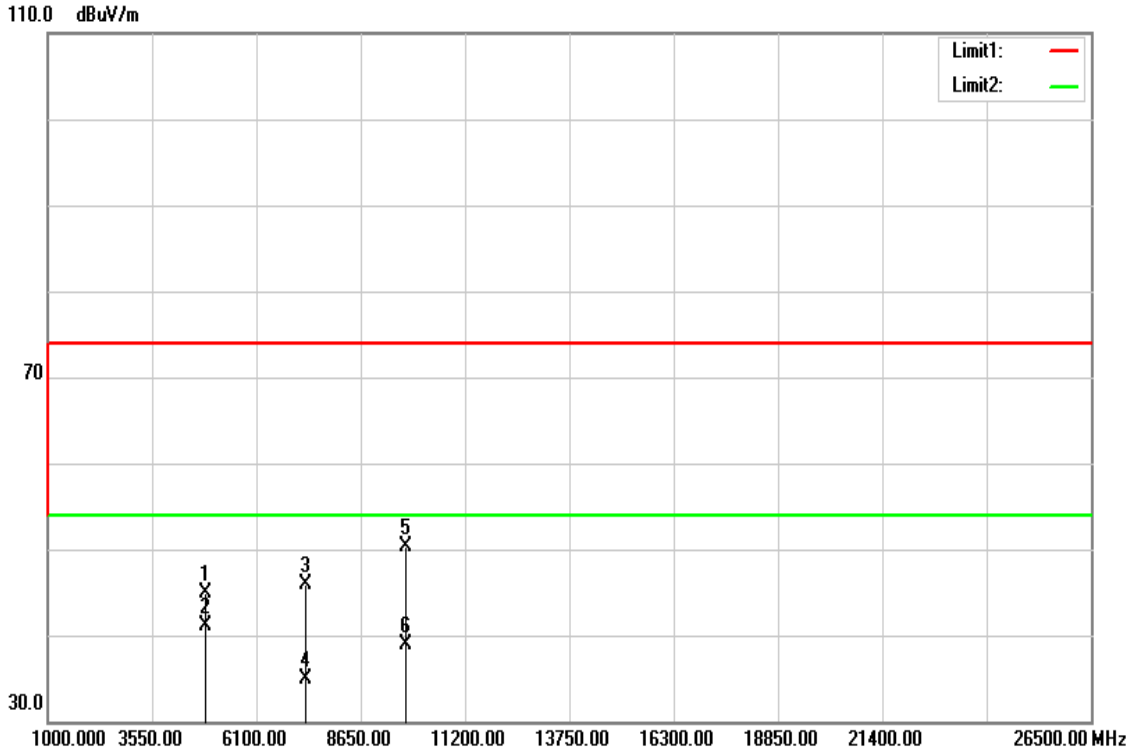


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	40.15	5.10	45.25	74.00	-28.75	Peak
4824.000	36.40	5.10	41.50	54.00	-12.50	AVG
7236.000	34.32	12.71	47.03	74.00	-26.97	Peak
7236.000	23.06	12.71	35.77	54.00	-18.23	AVG
9648.000	32.94	17.60	50.54	74.00	-23.46	Peak
9648.000	20.59	17.60	38.19	54.00	-15.81	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	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

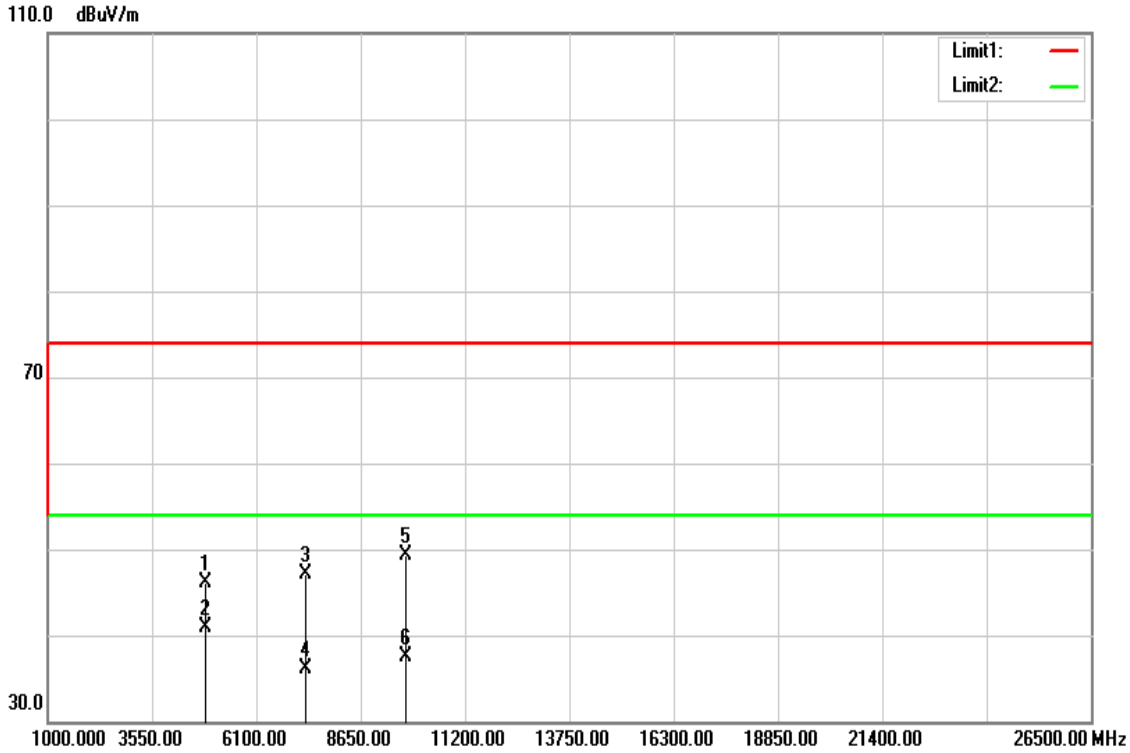


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	39.70	5.23	44.93	74.00	-29.07	Peak
4874.000	35.94	5.23	41.17	54.00	-12.83	AVG
7311.000	32.93	12.94	45.87	74.00	-28.13	Peak
7311.000	21.87	12.94	34.81	54.00	-19.19	AVG
9748.000	32.68	17.60	50.28	74.00	-23.72	Peak
9748.000	21.33	17.60	38.93	54.00	-15.07	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	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

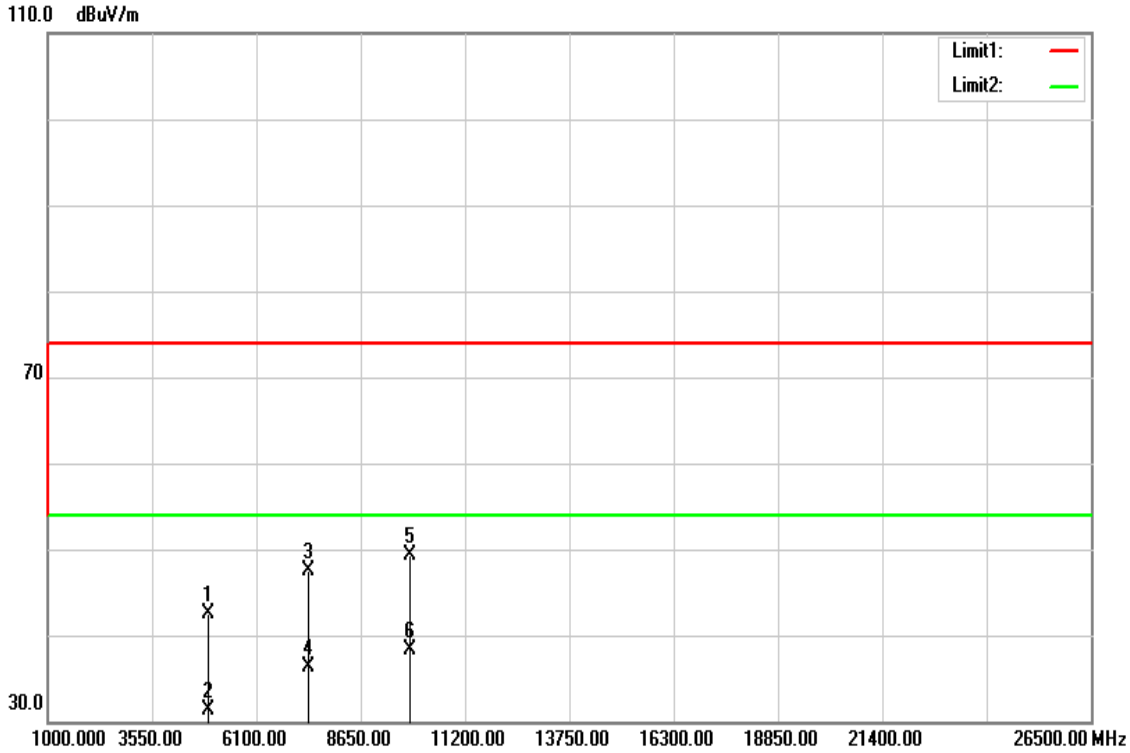


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	40.86	5.23	46.09	74.00	-27.91	Peak
4874.000	35.69	5.23	40.92	54.00	-13.08	AVG
7311.000	34.20	12.94	47.14	74.00	-26.86	Peak
7311.000	23.16	12.94	36.10	54.00	-17.90	AVG
9748.000	31.64	17.60	49.24	74.00	-24.76	Peak
9748.000	19.98	17.60	37.58	54.00	-16.42	AVG

Remark:

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

Test Mode	IEEE 802.11b High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

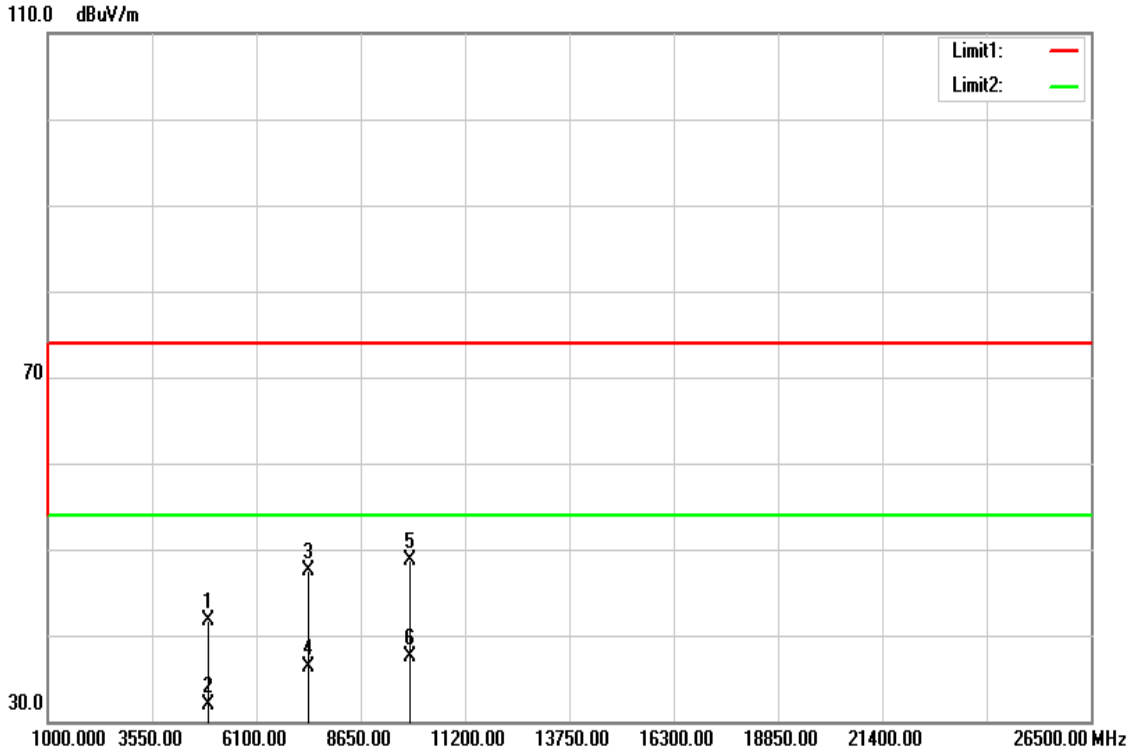


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	37.06	5.37	42.43	74.00	-31.57	Peak
4924.000	25.84	5.37	31.21	54.00	-22.79	AVG
7386.000	34.24	13.17	47.41	74.00	-26.59	Peak
7386.000	23.11	13.17	36.28	54.00	-17.72	AVG
9848.000	31.78	17.60	49.38	74.00	-24.62	Peak
9848.000	20.79	17.60	38.39	54.00	-15.61	AVG

Remark:

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

Test Mode	IEEE 802.11b High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

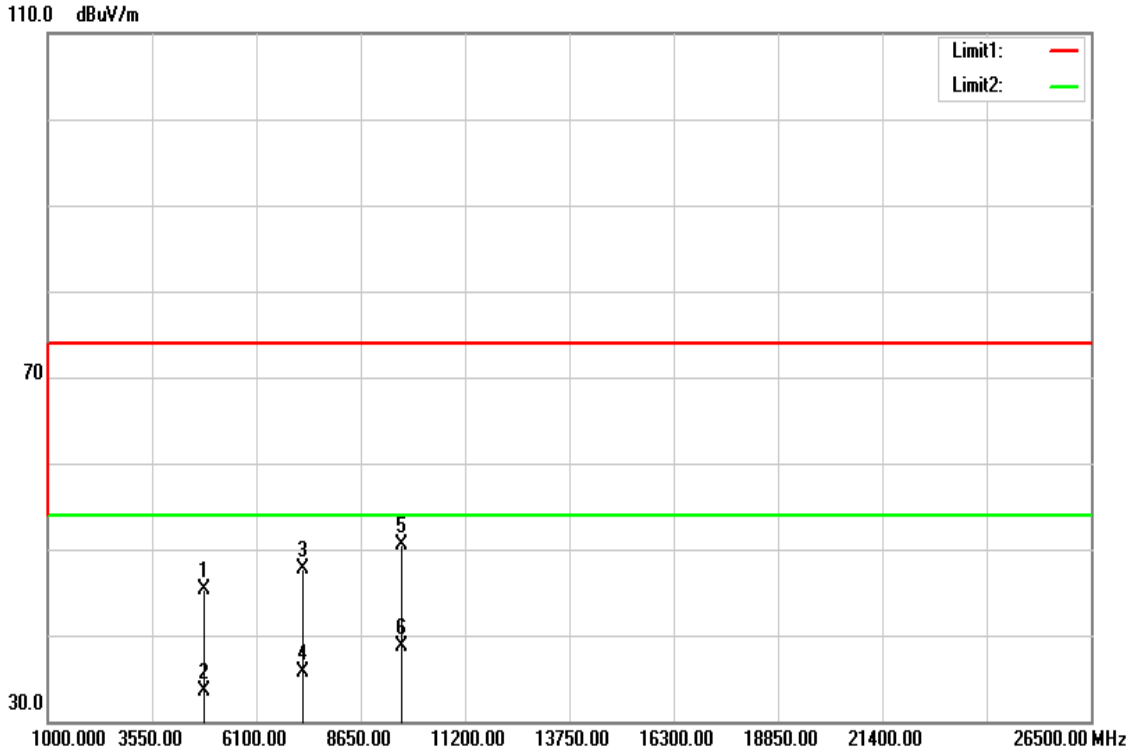


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB	Remark
4924.000	36.26	5.37	41.63	74.00	-32.37	Peak
4924.000	26.58	5.37	31.95	54.00	-22.05	AVG
7386.000	34.42	13.17	47.59	74.00	-26.41	Peak
7386.000	23.08	13.17	36.25	54.00	-17.75	AVG
9848.000	31.19	17.60	48.79	74.00	-25.21	Peak
9848.000	19.92	17.60	37.52	54.00	-16.48	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 802.11g Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

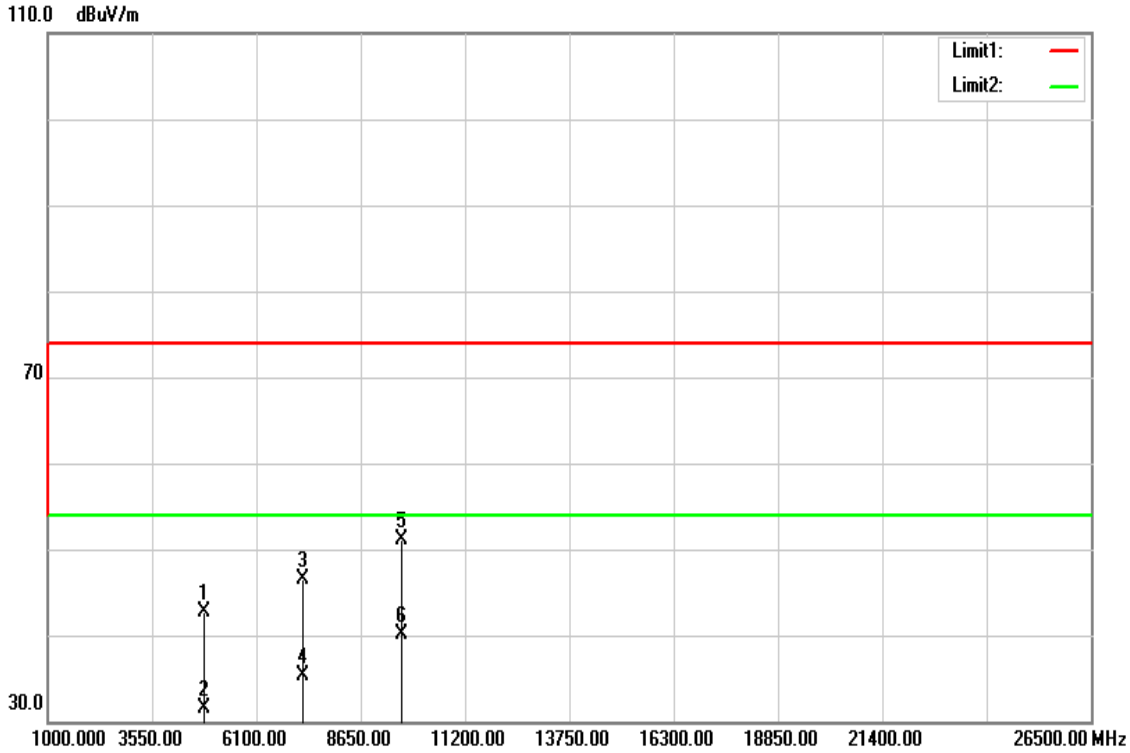


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	40.16	5.10	45.26	74.00	-28.74	Peak
4824.000	28.47	5.10	33.57	54.00	-20.43	AVG
7236.000	35.09	12.71	47.80	74.00	-26.20	Peak
7236.000	22.98	12.71	35.69	54.00	-18.31	AVG
9648.000	32.96	17.60	50.56	74.00	-23.44	Peak
9648.000	21.17	17.60	38.77	54.00	-15.23	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	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

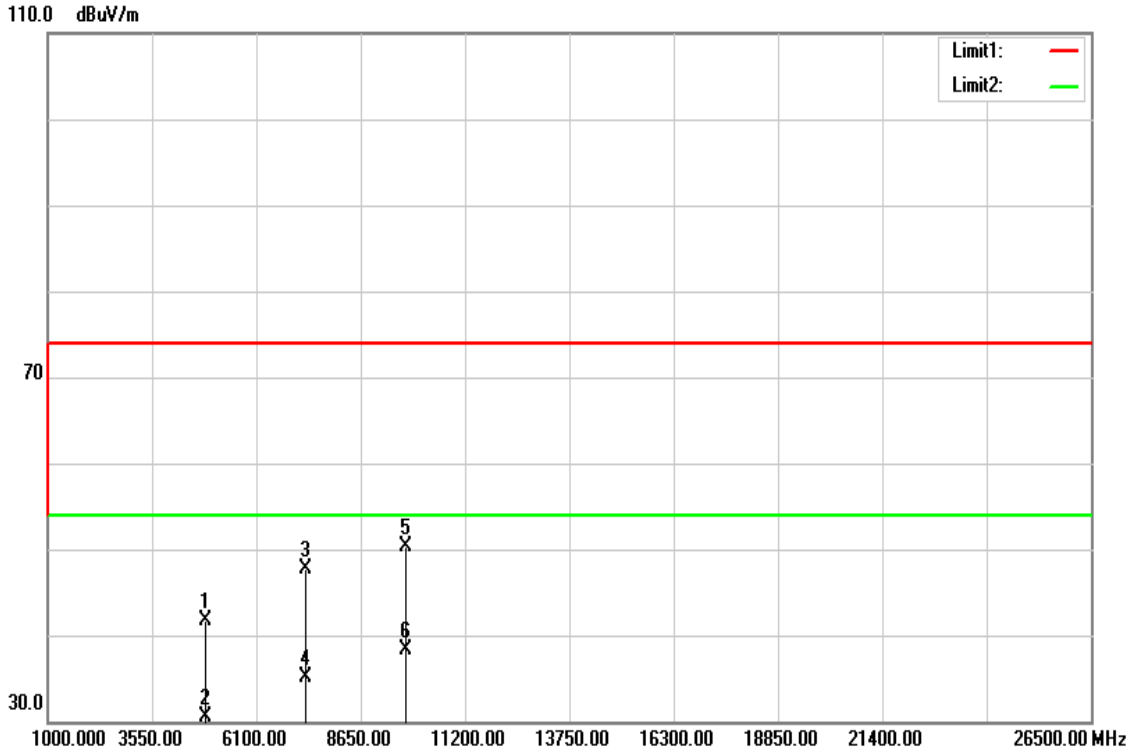


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	40.16	5.10	45.26	74.00	-28.74	Peak
4824.000	28.47	5.10	33.57	54.00	-20.43	AVG
7236.000	35.09	12.71	47.80	74.00	-26.20	Peak
7236.000	22.98	12.71	35.69	54.00	-18.31	AVG
9648.000	32.96	17.60	50.56	74.00	-23.44	Peak
9648.000	21.17	17.60	38.77	54.00	-15.23	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	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

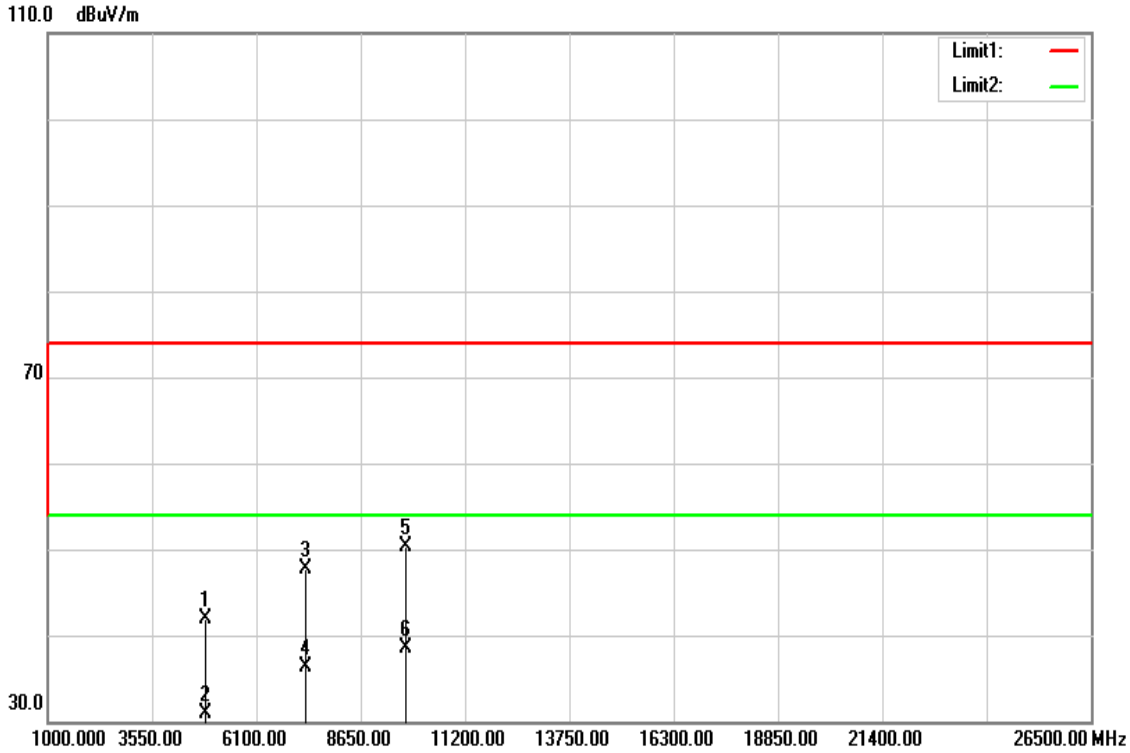


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	36.45	5.23	41.68	74.00	-32.32	Peak
4874.000	25.32	5.23	30.55	54.00	-23.45	AVG
7311.000	34.69	12.94	47.63	74.00	-26.37	Peak
7311.000	22.18	12.94	35.12	54.00	-18.88	AVG
9748.000	32.74	17.60	50.34	74.00	-23.66	Peak
9748.000	20.60	17.60	38.20	54.00	-15.80	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 Mid CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

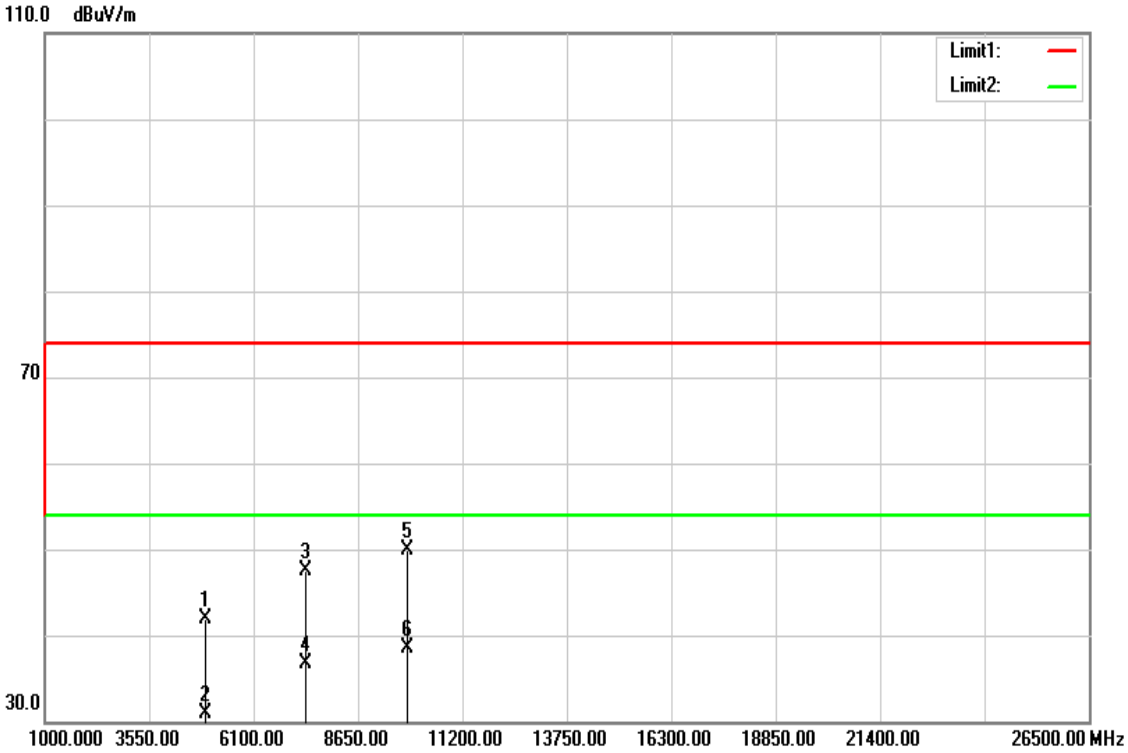


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (B)	Remark
4874.000	36.67	5.23	41.90	74.00	-32.10	Peak
4874.000	25.72	5.23	30.95	54.00	-23.05	AVG
7311.000	34.86	12.94	47.80	74.00	-26.20	Peak
7311.000	23.31	12.94	36.25	54.00	-17.75	AVG
9748.000	32.73	17.60	50.33	74.00	-23.67	Peak
9748.000	20.99	17.60	38.59	54.00	-15.41	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	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

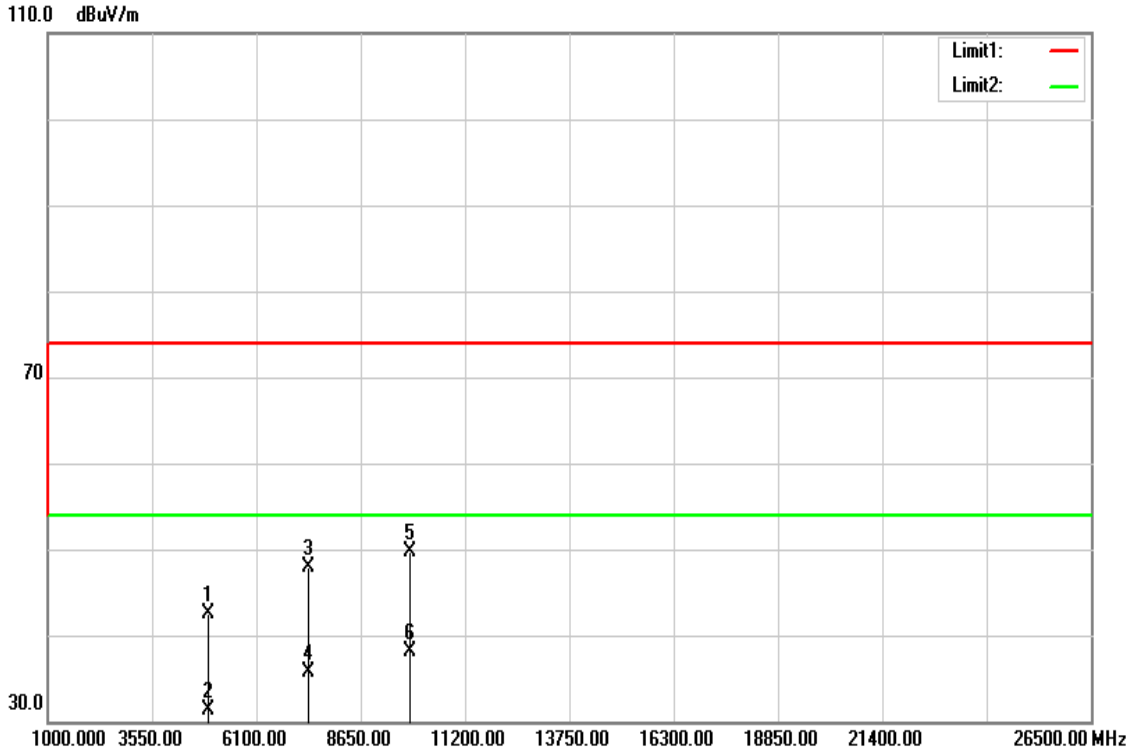


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	36.55	5.37	41.92	74.00	-32.08	Peak
4924.000	25.50	5.37	30.87	54.00	-23.13	AVG
7386.000	34.41	13.17	47.58	74.00	-26.42	Peak
7386.000	23.56	13.17	36.73	54.00	-17.27	AVG
9848.000	32.22	17.60	49.82	74.00	-24.18	Peak
9848.000	20.97	17.60	38.57	54.00	-15.43	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	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

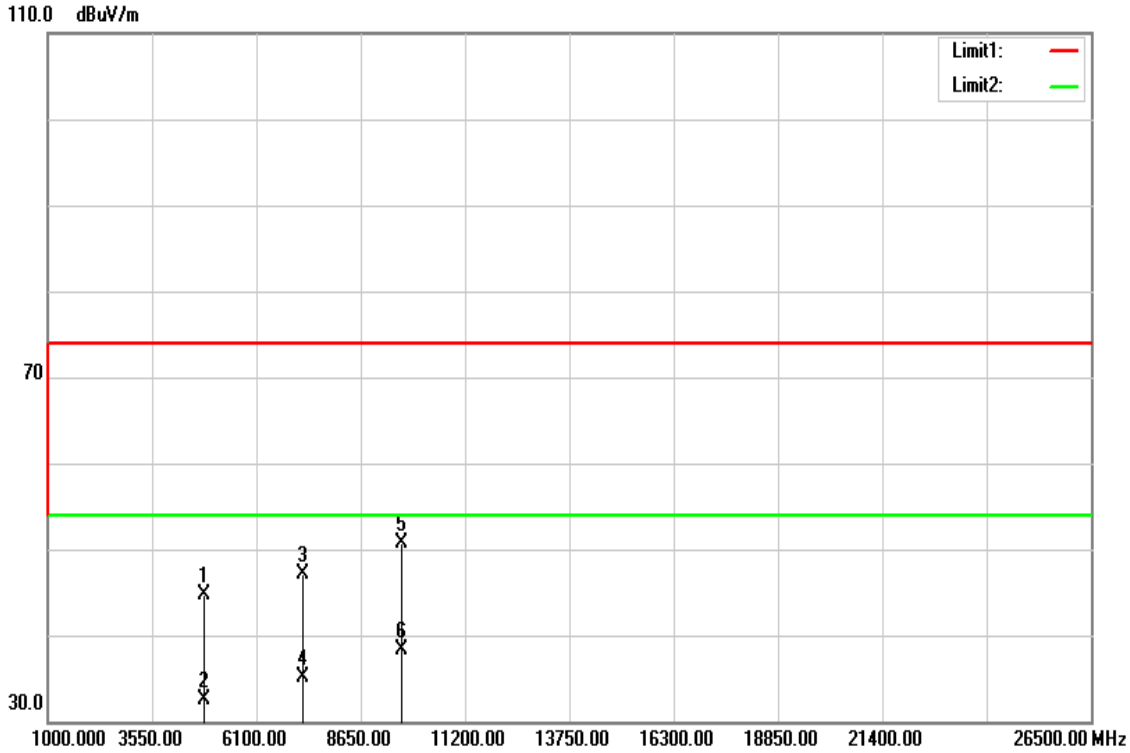


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB	Remark
4924.000	37.06	5.37	42.43	74.00	-31.57	Peak
4924.000	25.88	5.37	31.25	54.00	-22.75	AVG
7386.000	34.78	13.17	47.95	74.00	-26.05	Peak
7386.000	22.52	13.17	35.69	54.00	-18.31	AVG
9848.000	32.18	17.60	49.78	74.00	-24.22	Peak
9848.000	20.51	17.60	38.11	54.00	-15.89	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 802.11n HT20 Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

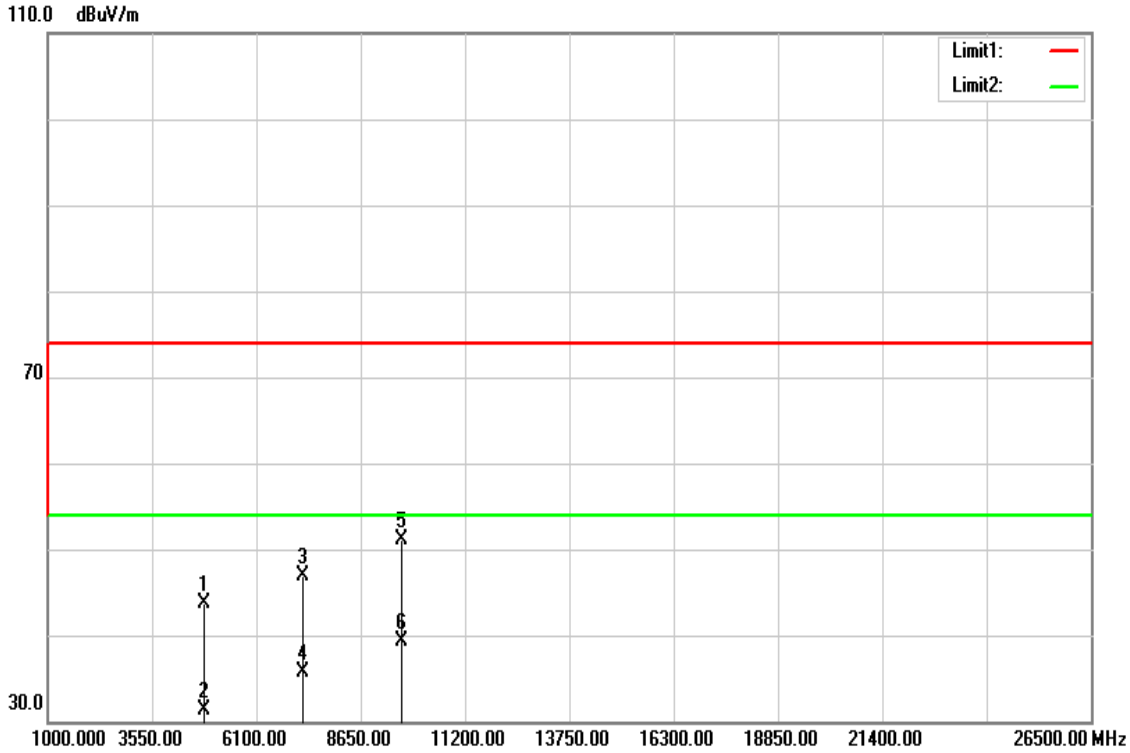


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	R mark
4924.000	36.55	5.37	41.92	74.00	-32.08	Peak
4924.000	25.50	5.37	30.87	54.00	-23.13	AVG
7386.000	34.41	13.17	47.58	74.00	-26.42	Peak
7386.000	23.56	13.17	36.73	54.00	-17.27	AVG
9848.000	32.22	17.60	49.82	74.00	-24.18	Peak
9848.000	20.97	17.60	38.57	54.00	-15.43	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	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

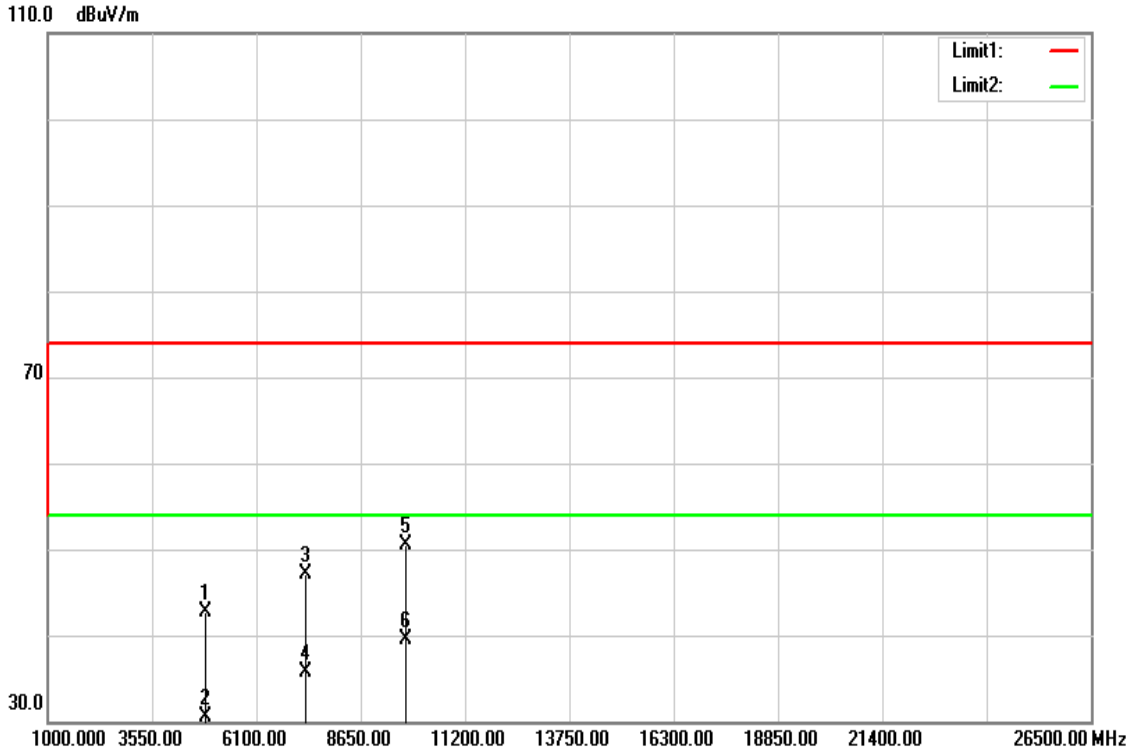


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	39.62	5.10	44.72	74.00	-29.28	Peak
4824.000	27.43	5.10	32.53	54.00	-21.47	AVG
7236.000	34.33	12.71	47.04	74.00	-26.96	Peak
7236.000	22.30	12.71	35.01	54.00	-18.99	AVG
9648.000	33.03	17.60	50.63	74.00	-23.37	Peak
9648.000	20.69	17.60	38.29	54.00	-15.71	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	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

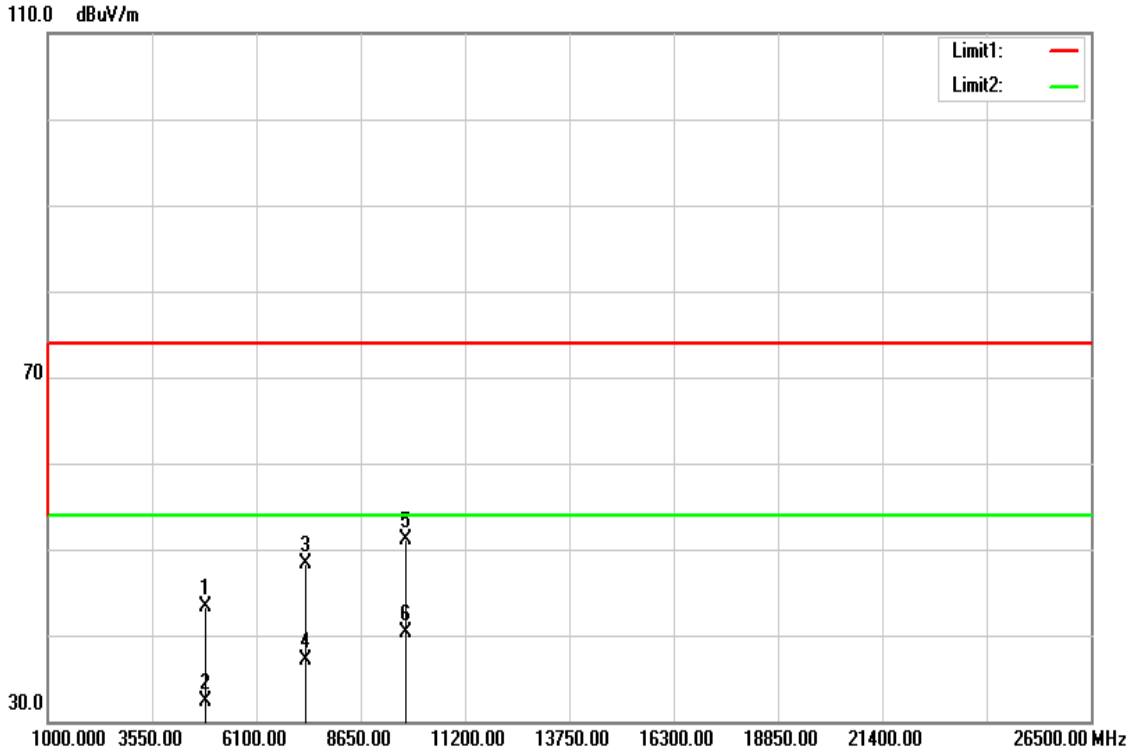


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	R mark
4824.000	38.57	5.10	43.67	74.00	-30.33	Peak
4824.000	26.15	5.10	31.25	54.00	-22.75	AVG
7236.000	34.29	12.71	47.00	74.00	-27.00	Peak
7236.000	22.95	12.71	35.66	54.00	-18.34	AVG
9648.000	33.56	17.60	51.16	74.00	-22.84	Peak
9648.000	21.64	17.60	39.24	54.00	-14.76	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 HT20 Mid CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

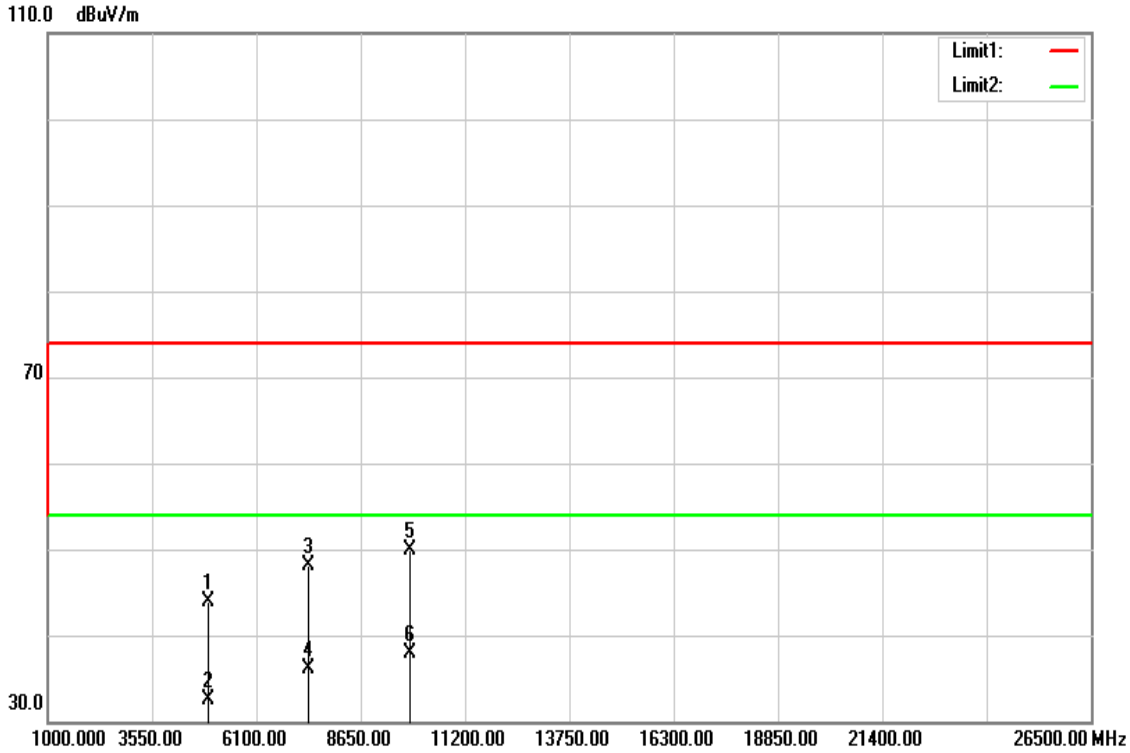


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	37.50	5.23	42.73	74.00	-31.27	Peak
4874.000	25.29	5.23	30.52	54.00	-23.48	AVG
7311.000	34.21	12.94	47.15	74.00	-26.85	Peak
7311.000	22.68	12.94	35.62	54.00	-18.38	AVG
9748.000	32.94	17.60	50.54	74.00	-23.46	Peak
9748.000	21.91	17.60	39.51	54.00	-14.49	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 802.11n HT20 High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

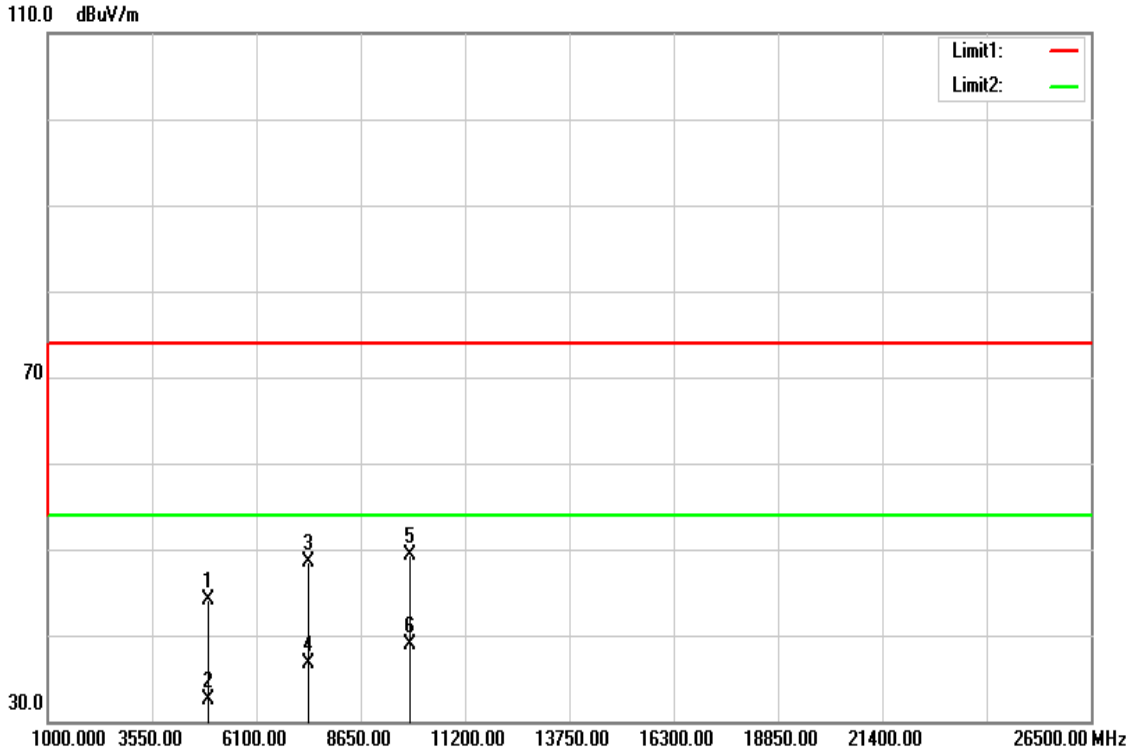


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	38.63	5.37	44.00	74.00	-30.00	Peak
4924.000	27.14	5.37	32.51	54.00	-21.49	AVG
7386.000	34.96	13.17	48.13	74.00	-25.87	Peak
7386.000	22.92	13.17	36.09	54.00	-17.91	AVG
9848.000	32.26	17.60	49.86	74.00	-24.14	Peak
9848.000	20.22	17.60	37.82	54.00	-16.18	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	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

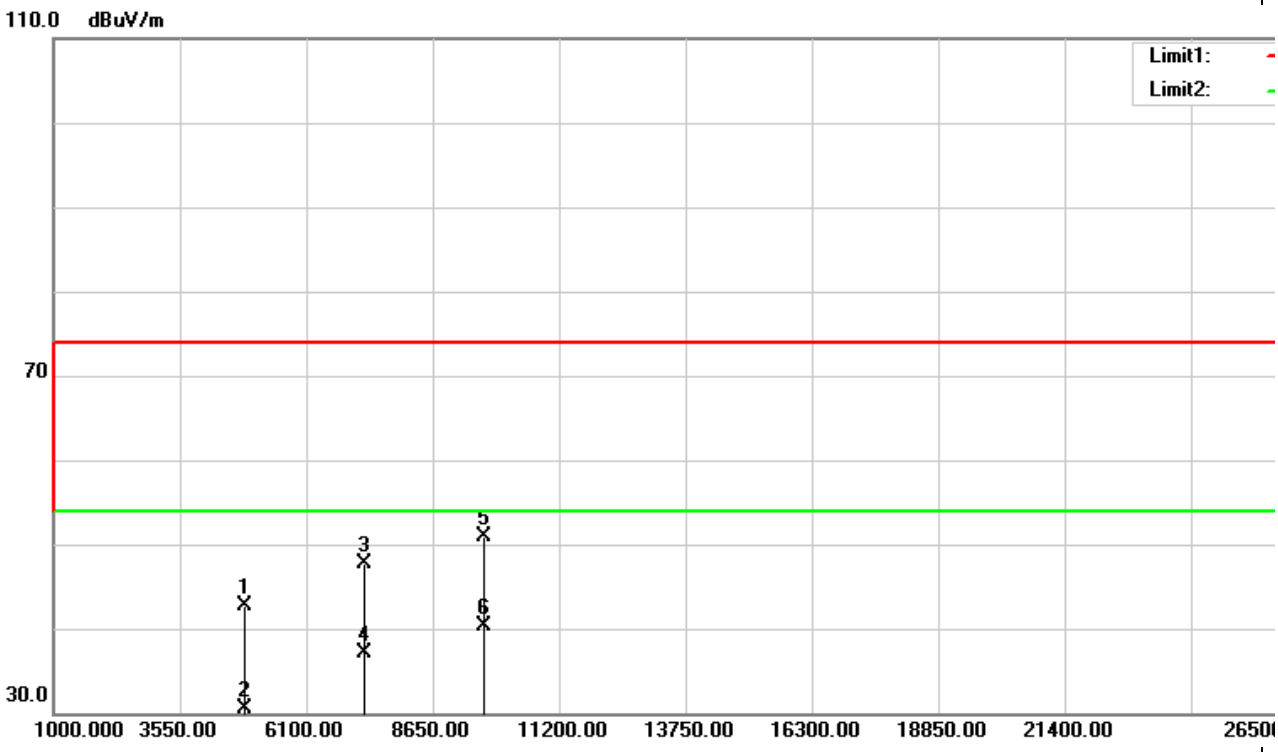


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	38.69	5.37	44.06	74.00	-29.94	Peak
4924.000	27.18	5.37	32.55	54.00	-21.45	AVG
7386.000	35.31	13.17	48.48	74.00	-25.52	Peak
7386.000	23.54	13.17	36.71	54.00	-17.29	AVG
9848.000	31.69	17.60	49.29	74.00	-24.71	Peak
9848.000	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 HT40 Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

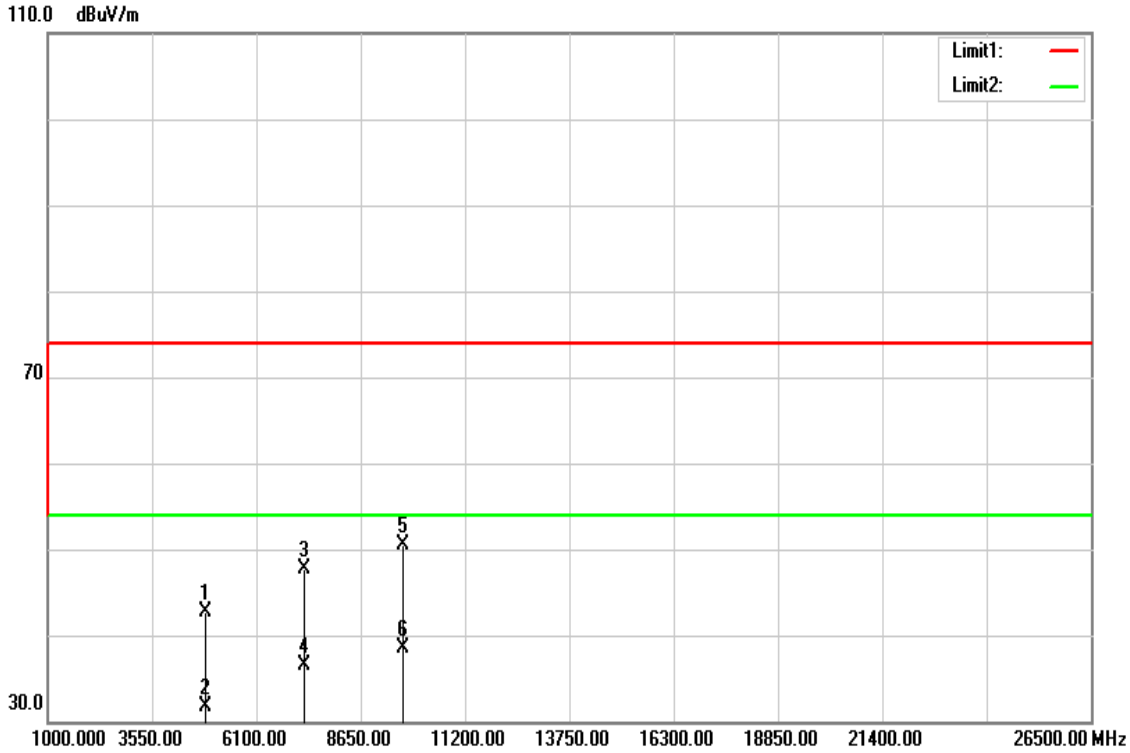


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4844.000	37.47	5.15	42.62	74.00	-31.38	Peak
4844.000	25.36	5.15	30.51	54.00	-23.49	AVG
7266.000	34.87	12.80	47.67	74.00	-26.33	Peak
7266.000	24.29	12.80	37.09	54.00	-16.91	AVG
9688.000	33.27	17.60	50.87	74.00	-23.13	Peak
9688.000	22.64	17.60	40.24	54.00	-13.76	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 Low CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

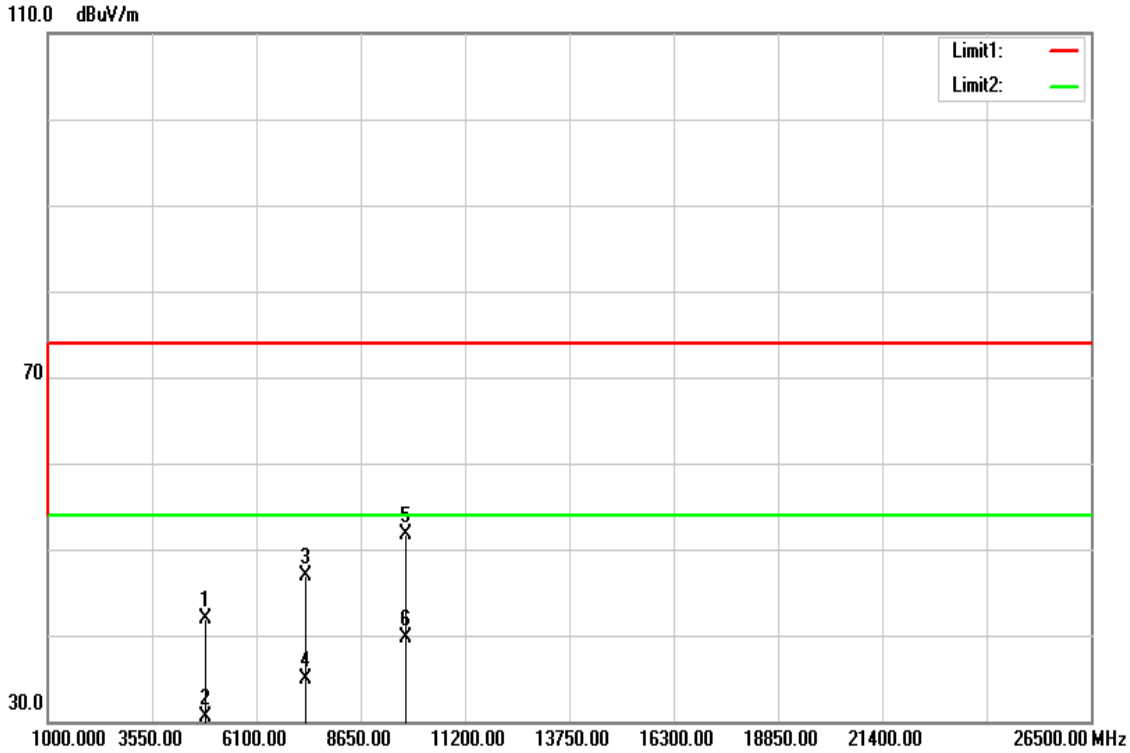


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4844.000	37.65	5.15	42.80	74.00	-31.20	Peak
4844.000	26.60	5.15	31.75	54.00	-22.25	AVG
7266.000	34.94	12.80	47.74	74.00	-26.26	Peak
7266.000	23.71	12.80	36.51	54.00	-17.49	AVG
9688.000	32.91	17.60	50.51	74.00	-23.49	Peak
9688.000	20.99	17.60	38.59	54.00	-15.41	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

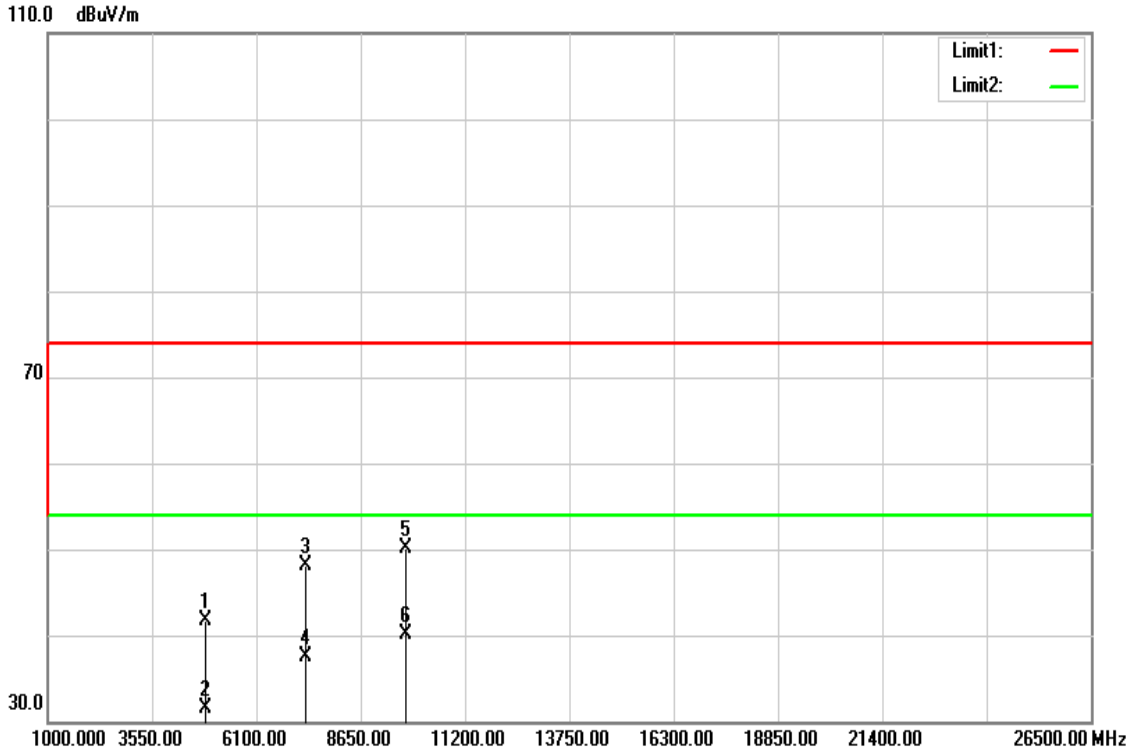


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	36.58	5.23	41.81	74.00	-32.19	Peak
4874.000	25.18	5.23	30.41	54.00	-23.59	AVG
7311.000	34.01	12.94	46.95	74.00	-27.05	Peak
7311.000	21.97	12.94	34.91	54.00	-19.09	AVG
9748.000	34.12	17.60	51.72	74.00	-22.28	Peak
9748.000	22.10	17.60	39.70	54.00	-14.30	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

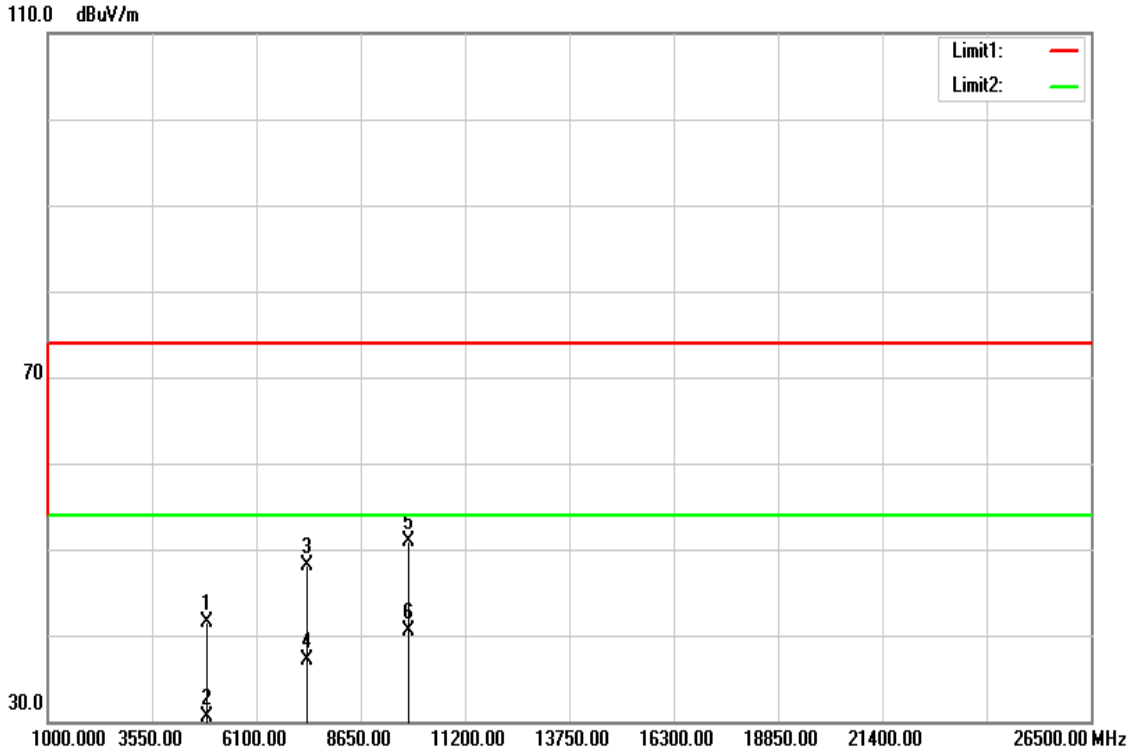


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	36.54	5.23	41.77	74.00	-32.23	Peak
4874.000	26.25	5.23	31.48	54.00	-22.52	AVG
7311.000	35.09	12.94	48.03	74.00	-25.97	Peak
7311.000	24.59	12.94	37.53	54.00	-16.47	AVG
9748.000	32.48	17.60	50.08	74.00	-23.92	Peak
9748.000	22.41	17.60	40.01	54.00	-13.99	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	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Vertical	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz

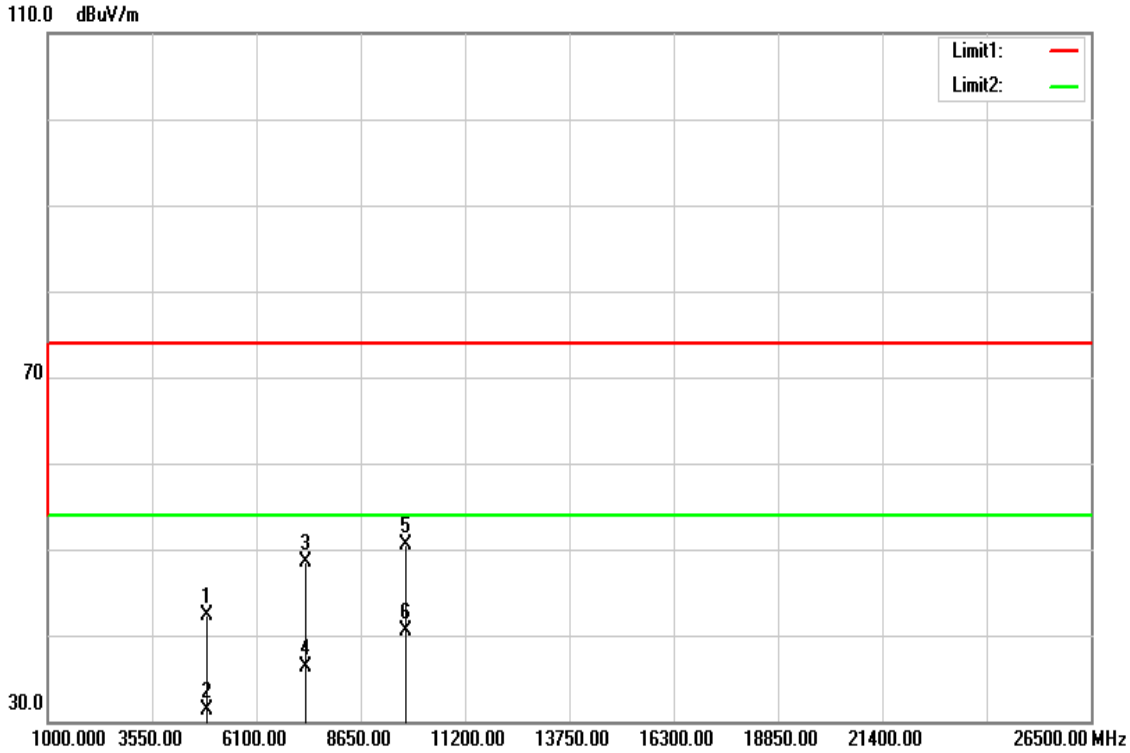


Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4904.000	36.26	5.31	41.57	74.00	-32.43	Peak
4904.000	25.20	5.31	30.51	54.00	-23.49	AVG
7356.000	35.05	13.08	48.13	74.00	-25.87	Peak
7356.000	24.01	13.08	37.09	54.00	-16.91	AVG
9808.000	33.28	17.60	50.88	74.00	-23.12	Peak
9808.000	22.92	17.60	40.52	54.00	-13.48	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 HT40 High CH	Temp/Hum	27(℃)/ 53%RH
Test Item	Harmonic	Test Date	Dec 12, 2016
Polarize	Horizontal	Test Engineer	ED Chiang
Detector	Peak and Average	Test Voltage	120Vac / 60Hz



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4904.000	37.01	5.31	42.32	74.00	-31.68	Peak
4904.000	25.91	5.31	31.22	54.00	-22.78	AVG
7311.000	35.49	12.94	48.43	74.00	-25.57	Peak
7311.000	23.46	12.94	36.40	54.00	-17.60	AVG
9748.000	32.92	17.60	50.52	74.00	-23.48	Peak
9748.000	22.81	17.60	40.41	54.00	-13.59	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*