FCC RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS-247

Test Standard	**FCC Part 15.247 and RSS-247 Issue 2**
Brand name	**ADVANTECH**
Product name	**Computer**
Model No.	**FCC: AIM8IACxxxxxxxxxxxxxxxxx; AIM8Ixxxxxxxxxxxxxxxxx; AIM-x5ATxxxxxxxxxxxx (where "x" may be any alphanumeric character, "-" or blank for marketing purpose and no impact safety related critical components and constructions) ISED: AIM8IAC**
Test Result	**Pass**

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.
The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory)

Approved by: Tested by:

Sam Chuang
Manager

Jerry Chuang
Engineer

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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Revision History

Rev.	Issue Date	Revisions	Revised By
00	October 30, 2018	Initial Issue	May Lin

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1. GENERAL INFORMATION

1.1 EUT INFORMATION

Applicant	Advantech Co.Ltd. No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.
Manufacturer	Advantech Co.Ltd. No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.
Equipment	Computer
Model No.	**FCC:** AIM8IACxxxxxxxxxxxxxxxx; AIM8Ixxxxxxxxxxxxxxxx; AIM-x5ATxxxxxxxxxxx (where "x" may be any alphanumeric character, "-" or blank for marketing purpose and no impact safety related critical components and constructions) **ISED:** AIM8IAC
Model Discrepancy	**FCC:** All the above models are identical except for the designation of model numbers. The suffix of (where "x" may be any alphanumeric character, "-" or blank for marketing purpose and no impact safety related critical components and constructions) on model number is just for marketing purpose only.
Received Date	May 22, 2018
Date of Test	June 11 ~ 29, 2018
Output Power(W)	IEEE 802.11b mode: 0.0782 IEEE 802.11g mode: 0.3540 IEEE 802.11n HT 20 mode: 0.3516
Power Supply	1. VDC from Power Adapter Brand: Chicony Model name: A16-018N1A Input: 100-240Vac, 50-60Hz, 1A Output: 5.15Vdc, 3A / 9.1Vdc, 2A 2. Power from Battery: ADVANTECH / AIM-BAT-8 Rating: 3.8Vdc 4900mAh

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1.2 EUT CHANNEL INFORMATION

Frequency Range	2412MHz-2462MHz
Modulation Type	1. IEEE 802.11b Mode: DSSS(DBPSK/DQPSK/CCK) 2. IEEE 802.11g Mode: OFDM (BPSK/QPSK/16QAM/64QAM) 3. IEEE 802.11n HT20 Mode: OFDM (BPSK/QPSK/16QAM/64QAM)
Bandwidth	1. IEEE 802.11b mode: 11 Channels 2. IEEE 802.11g mode: 11 Channels 3. IEEE 802.11n HT 20 mode: 11 Channels

Remark:
Refer as ANSI 63.10:2013 clause 5.6.1 Table 4 and RSS-GEN Table 1 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 ☐ Coils
Antenna Gain	Gain: 0.37dBi

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1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 2.96
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

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.

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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	Dally Hong	-
Radiation	Jerry Chuang	-
RF Conducted	Jerry Chuang	-

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

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1.6 INSTRUMENT CALIBRATION

RF Conducted Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Power Meter	Anritsu	ML2495A	1012009	09/18/2017	09/17/2018
Power Sensor	Anritsu	MA2411B	917072	09/18/2017	09/17/2018
Base Station	R&S	CMW 500	116875	04/20/2018	04/19/2019
Spectrum Analyzer	R&S	FSV 40	101073	10/02/2017	10/01/2018
Directional Coupler	Agilent	87301D	MY44350252	07/25/2017	07/24/2018
SUCOFLEX Cable	HUBER SUHNER	SUCOFLEX 104PEA	25157	07/31/2017	07/30/2018
Divider	Solvang Technology	2-18GHz 4Way	STI08-0015	07/26/2017	07/25/2018

3M 966 Chamber Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Band Reject Filters	MICRO TRONICS	BRM 50702	120	05/14/2018	05/13/2019
Bilog Antenna	Sunol Sciences	JB3	A030105	06/19/2018	06/18/2019
Cable	HUBER SUHNER	SUCOFLEX 104PEA	25157	07/31/2017	07/30/2018
Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	07/31/2017	07/30/2018
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	02/08/2018	02/07/2019
Double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	08/25/2017	08/24/2018
Loop Ant	COM-POWER	AL-130	121051	03/21/2018	03/20/2019
Pre-Amplifier	HP	8449B	3008A00965	06/28/2018	06/27/2019
Pre-Amplifier	EMEC	EM330	060609	07/31/2017	07/30/2018
Wideband Radio Communication Tester	R&S	CMW 500	116875	04/20/2018	04/19/2019
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	05/31/2018	05/30/2019
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

AC Conducted Emissions Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
LISN	R&S	ENV216	101054	02/06/2018	02/05/2019
LISN	SCHWARZBECK	NSLK 8127	8127-541	02/09/2018	02/08/2019
EMI Test Receiver	R&S	ESCI	101203	11/02/2017	11/01/2018

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

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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**
	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, RSS-247 Issue 2 and RSS-GEN Issue 5.

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2. TEST SUMMERY

FCC Standard Section	IC Standard Section	Report Section	Test Item	Result
15.203	-	1.3	Antenna Requirement	Pass
15.207(a)	RSS-GEN 8.8	4.1	AC Conducted Emission	Pass
15.247(a)(2)	RSS-247(5.2)(a)	4.2	6 dB Bandwidth	Pass
-	RSS-GEN 6.7	4.2	Occupied Bandwidth (99%)	Pass
15.247(b)	RSS-247(5.4)(d)	4.3	Output Power Measurement	Pass
15.247(e)	RSS-247(5.2)(b)	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 Spurious 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

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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
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
Operation Transmitter	IEEE 802.11b mode :1T1R IEEE 802.11g mode :1T1R IEEE 802.11n HT20 mode :1T1R

Remark:
1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.

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3.2 THE WORST MODE OF MEASUREMENT

AC Power Line Conducted Emission	
Test Condition	AC Power line conducted emission for line and neutral
Power supply Mode	Mode 1: EUT power by AC adapter via power cable. Mode 2: EUT power by battery.
Worst Mode	☒ Mode 1 ☐ Mode 2 ☐ Mode 3 ☐ Mode 4

Radiated Emission Measurement Above 1G	
Test Condition	Band edge, Emission for Unwanted and Fundamental
Power supply Mode	Mode 1: EUT power by AC adapter via power cable. Mode 2: EUT power by battery.
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
Power supply Mode	Mode 1: EUT power by AC adapter via power cable. Mode 2: EUT power by battery.
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 Horizontal) were recorded in this report
3. For below 1G, AC power line conducted emission and radiation emission were performed the EUT transmit at the highest output power channel as worse case.

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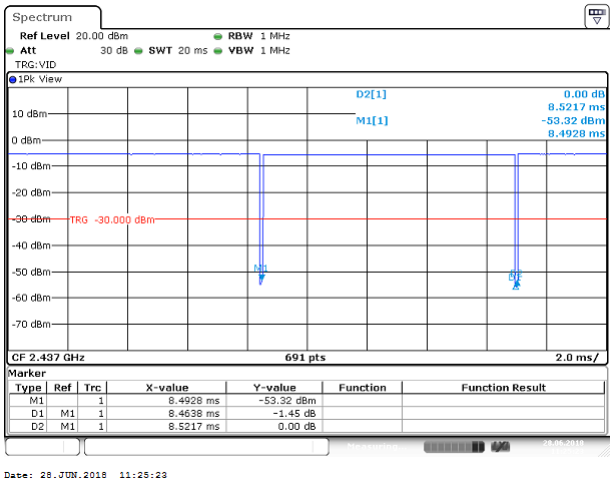
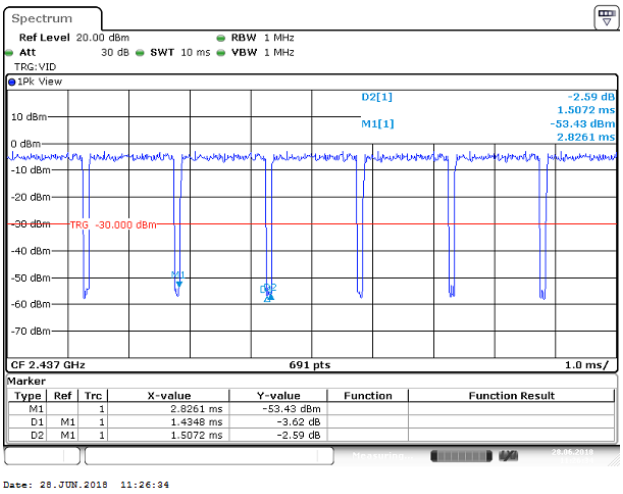
3.3 EUT DUTY CYCLE

Duty Cycle				
Configuration	TX ON (ms)	TX ALL (ms)	Duty Cycle (%)	Duty Factor(dB)
802.11b	8.4638	8.5217	99.32%	0.03
802.11g	1.4348	1.5072	95.20%	0.21
802.11n HT20	1.4203	1.4928	95.14%	0.22

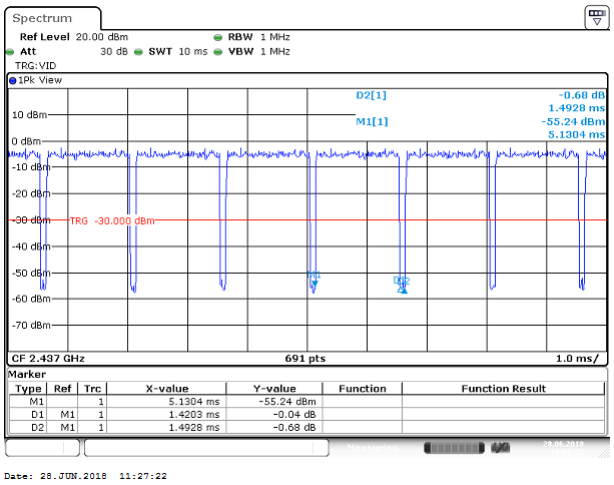
802.11b



802.11g



802.11n HT20



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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

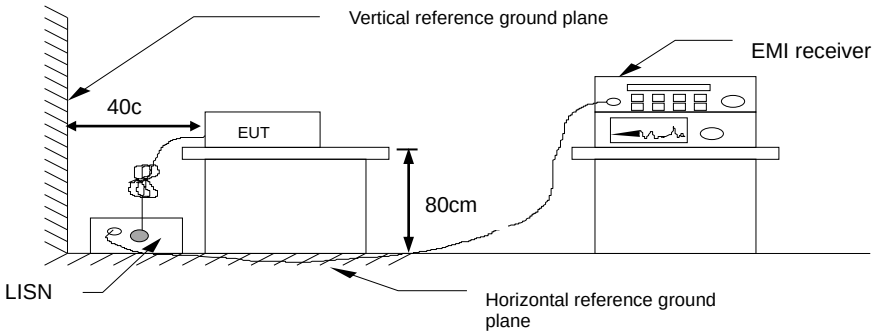
* Decreases with the logarithm of the frequency.

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.

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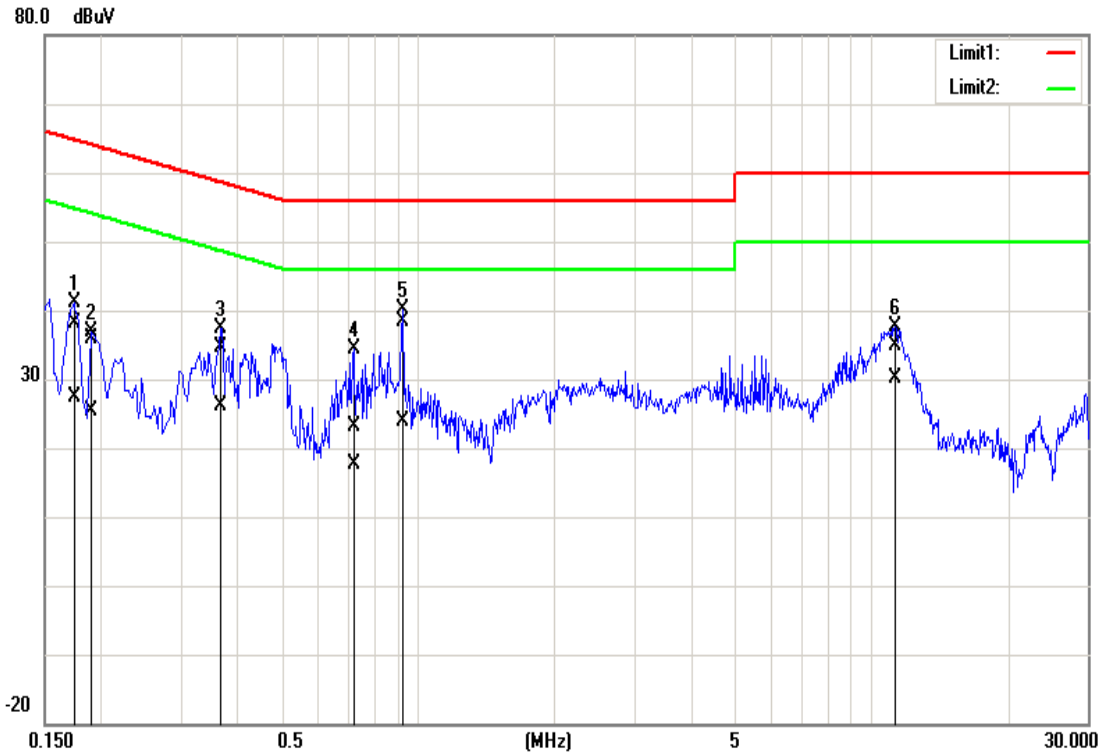
Test Data

Test Mode:	Mode 1	Temp/Hum	24(℃)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	2018/06/29
Phase:	Line	Test Engineer	Dally Hong



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1740	38.01	27.25	0.11	38.12	27.36	64.77	54.77	-26.65	-27.41	Pass
2	0.1900	35.72	25.38	0.11	35.83	25.49	64.04	54.04	-28.21	-28.55	Pass
3	0.3660	34.57	25.98	0.12	34.69	26.10	58.59	48.59	-23.90	-22.49	Pass
4	0.7220	23.06	17.51	0.13	23.19	17.64	56.00	46.00	-32.81	-28.36	Pass
5	0.9260	38.34	23.82	0.13	38.47	23.95	56.00	46.00	-17.53	-22.05	Pass
6	11.3060	34.59	29.69	0.32	34.91	30.01	60.00	50.00	-25.09	-19.99	Pass

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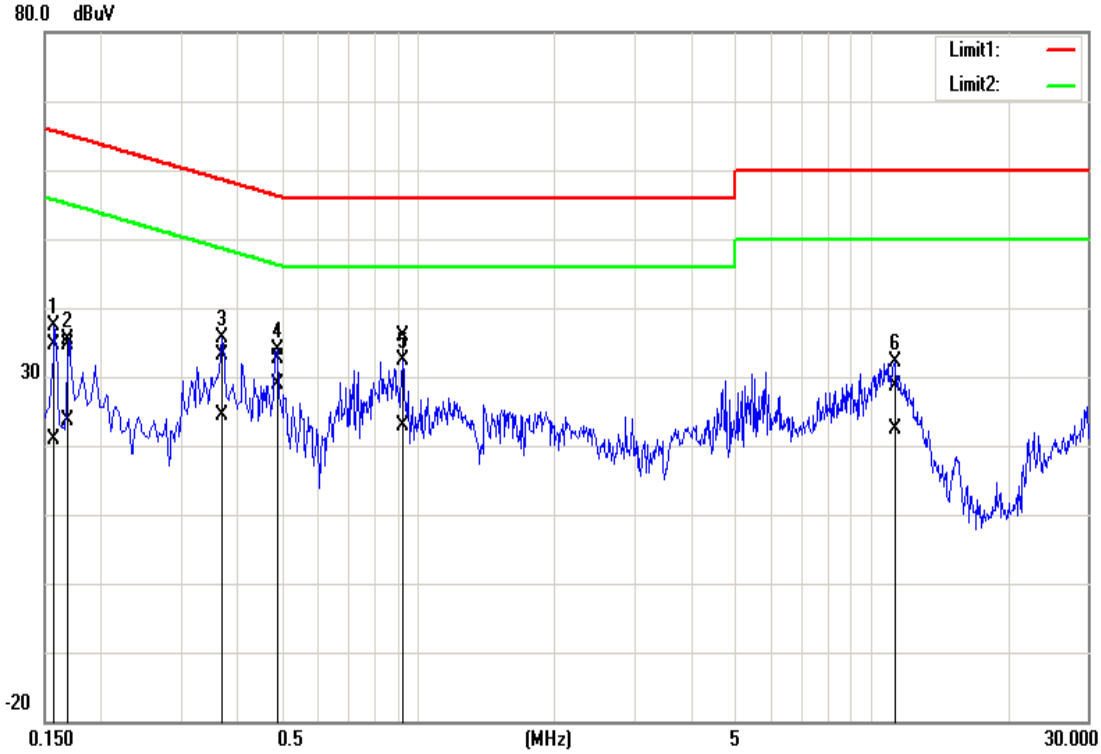
Test Mode:	Mode 1	Temp/Hum	24(℃)/ 50%RH
Test Voltage:	120Vac / 60Hz	Test Date	2018/06/29
Phase:	Neutral	Test Engineer	Dally Hong



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1580	34.49	20.72	0.14	34.63	20.86	65.57	55.57	-30.94	-34.71	Pass
2	0.1700	34.38	23.57	0.14	34.52	23.71	64.96	54.96	-30.44	-31.25	Pass
3	0.3700	33.05	24.26	0.13	33.18	24.39	58.50	48.50	-25.32	-24.11	Pass
4	0.4900	32.60	28.70	0.13	32.73	28.83	56.17	46.17	-23.44	-17.34	Pass
5	0.9260	35.85	22.65	0.14	35.99	22.79	56.00	46.00	-20.01	-23.21	Pass
6	11.2660	28.19	21.98	0.32	28.51	22.30	60.00	50.00	-31.49	-27.70	Pass

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4.2 6dB BANDWIDTH AND OCCUPIED BANDWIDTH (99%)

4.2.1 Test Limit

According to §15.247(a)(2)、RSS-247 section 5.2(a) and RSS-GEN 6.7,

6 dB Bandwidth ：

Limit	Shall be at least 500kHz

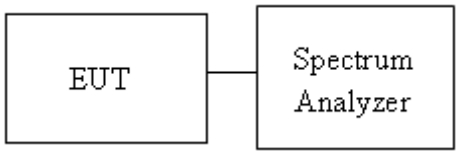
Occupied Bandwidth(99%) ： For reporting purposes only.

4.2.2 Test Procedure

Test method Refer as KDB 558074 D01 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.
4. SA set RBW = 1% ~ 5% OBW, VBW = three times the RBW and Detector = Peak, to measurement 99% Bandwidth
5. Measure and record the result of 6 dB Bandwidth and 99% Bandwidth. in the test report.

4.2.3 Test Setup



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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	11.8523	--	8.5652	--	≥500
Mid	2437	11.8958	--	8.0435	--	
High	2462	11.9392	--	8.0435	--	

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	16.6280	--	16.3043	--	≥500
Mid	2437	16.6280	--	16.3478	--	
High	2462	16.5412	--	15.8261	--	

Test mode: IEEE 802.11n HT 20 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	16.6280	--	16.3043	--	≥500
Mid	2437	16.6280	--	16.3043	--	
High	2462	16.5412	--	16.0435	--	

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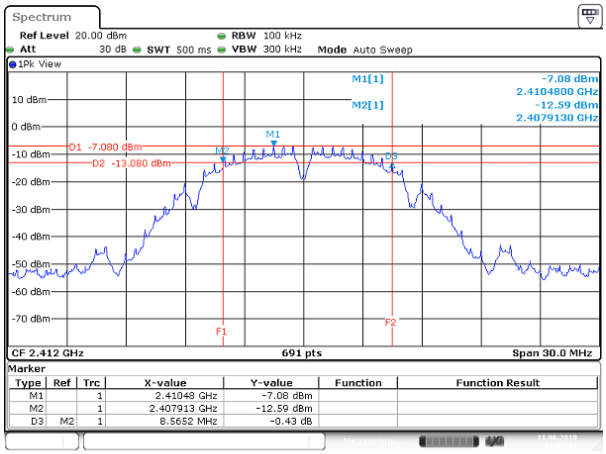
Test Data (6dB BANDWIDTH)

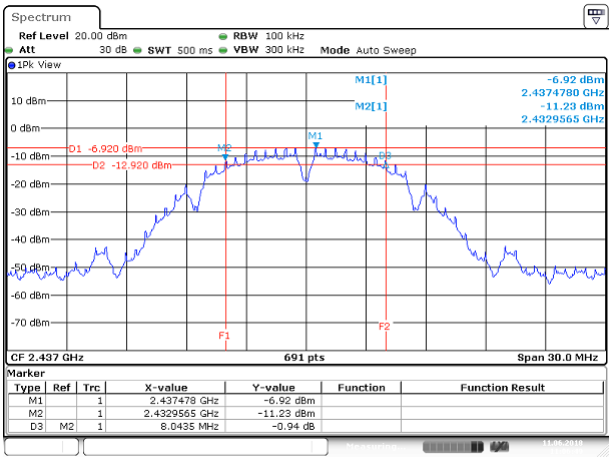
IEEE 802.11b mode- chain 0

Low CH



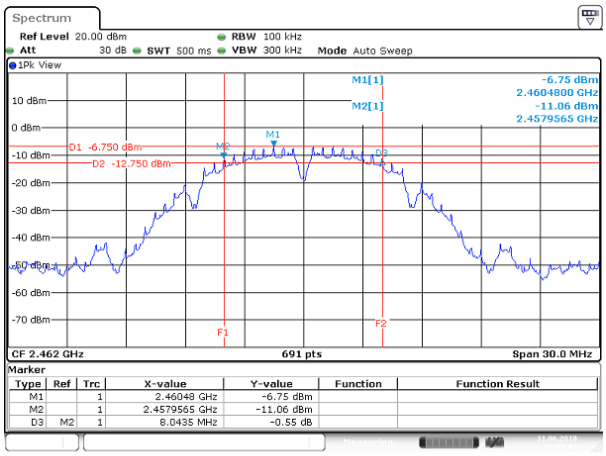
Date: 11.JUN.2018 11:02:13

Mid CH



Date: 11.JUN.2018 11:06:49

High CH



Date: 11.JUN.2018 11:10:03

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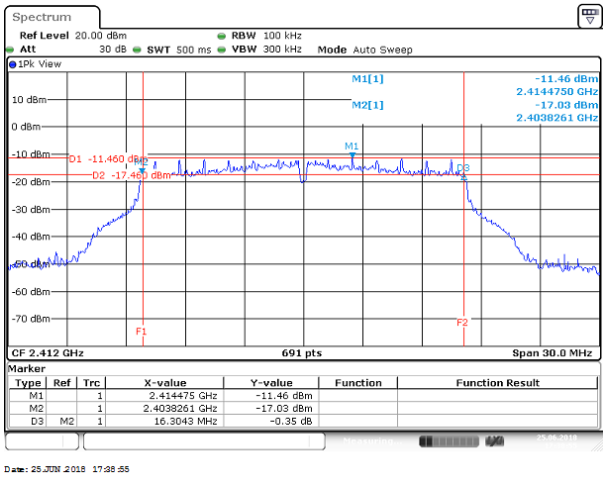
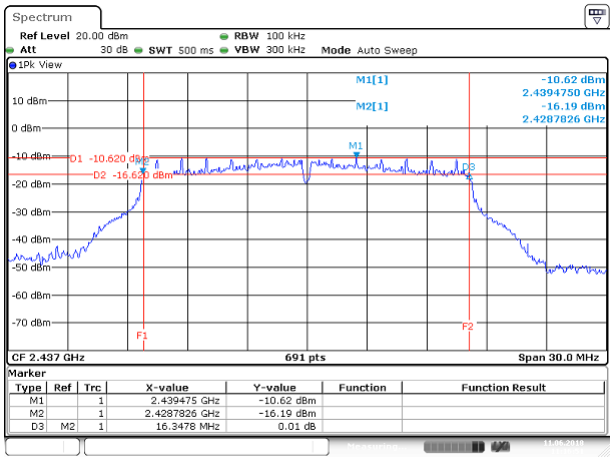
IEEE 802.11g mode- chain 0

Low CH



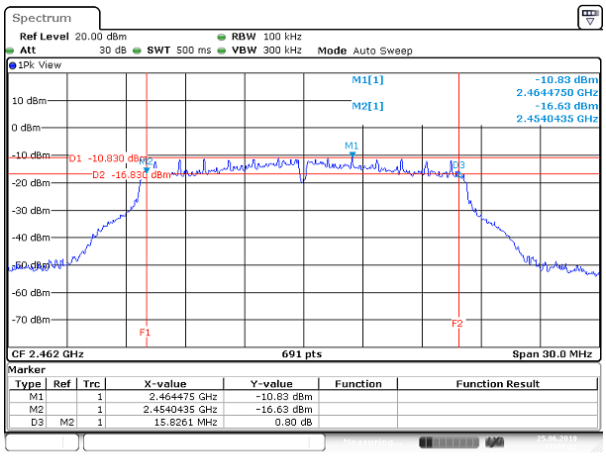
Date: 25.JUN.2018 17:38:55

Mid CH



Date: 11.JUN.2018 11:16:51

High CH



Date: 25.JUN.2018 17:41:22

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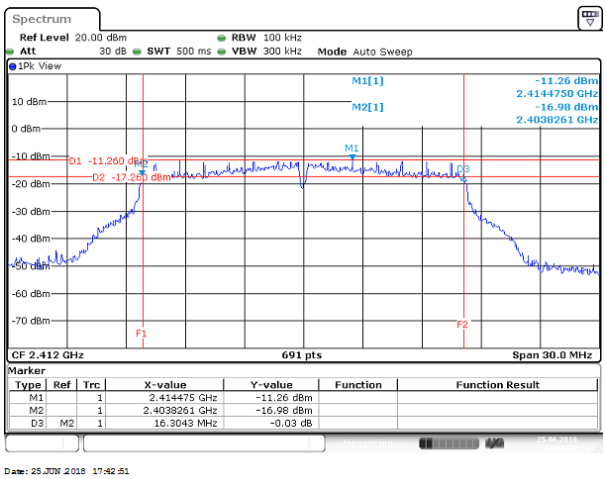
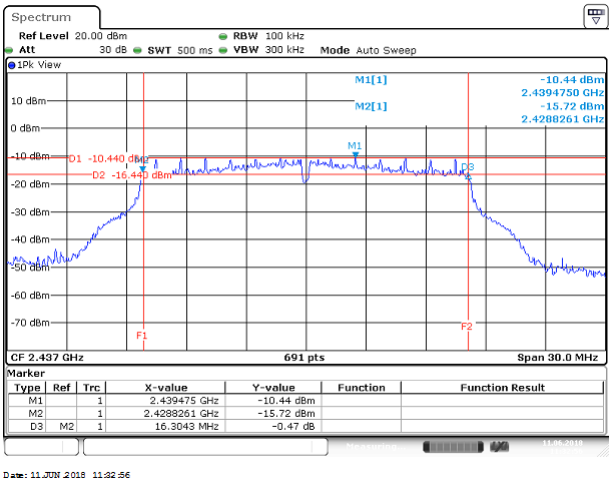
IEEE 802.11n HT20 mode- chain 0

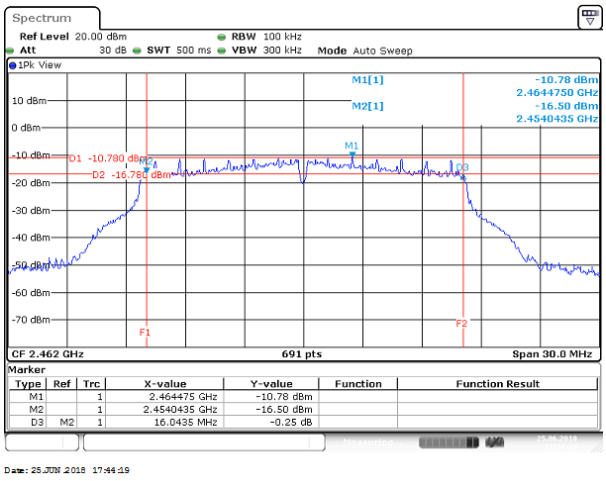
Low CH



Mid CH



High CH



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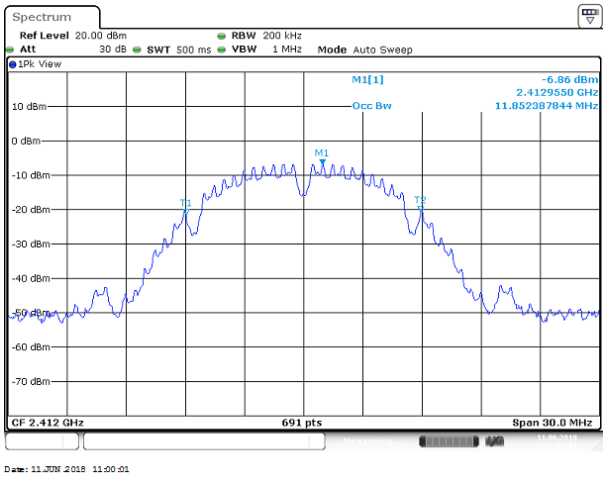
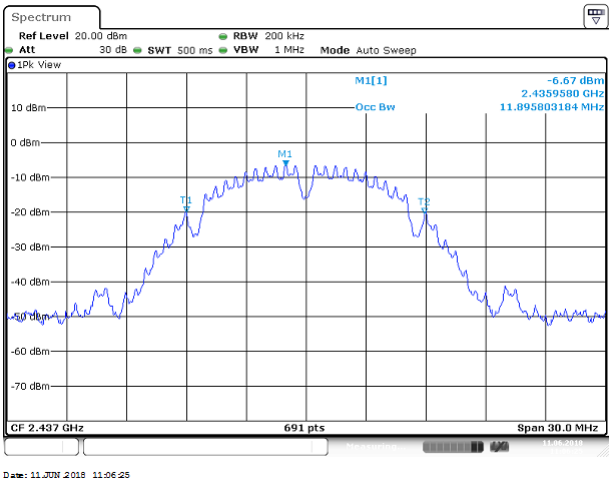
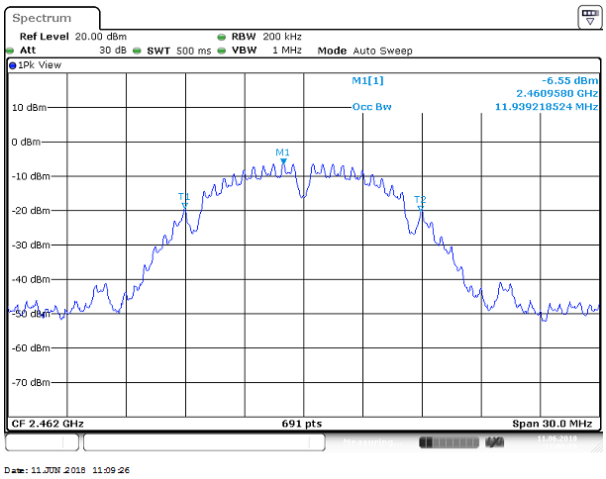
Test Data (BANDWIDTH 99%)

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

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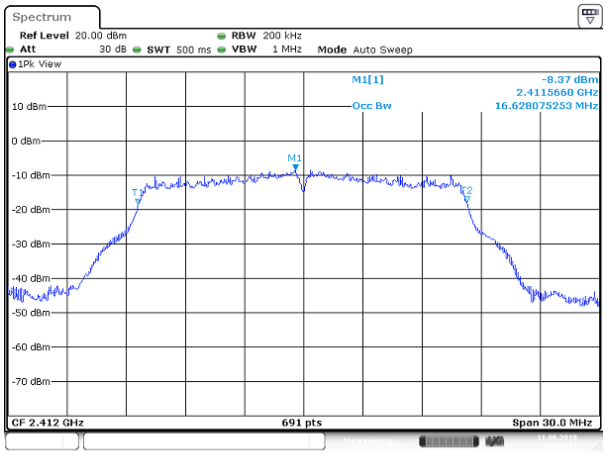
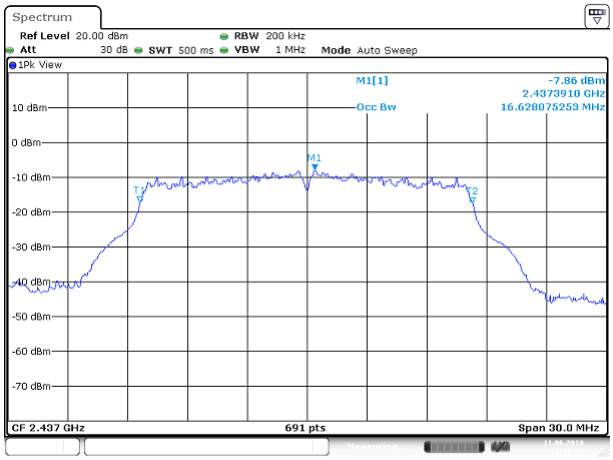
IEEE 802.11g mode- chain 0

Low CH



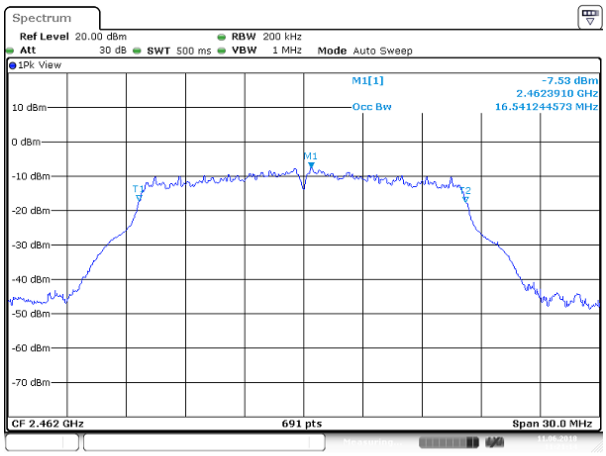
Date: 11.JUN.2018 11:13:12

Mid CH



Date: 11.JUN.2018 11:16:27

High CH



Date: 11.JUN.2018 11:21:14

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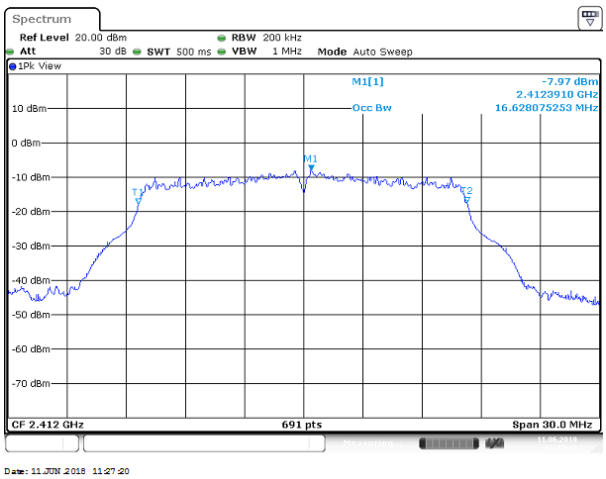
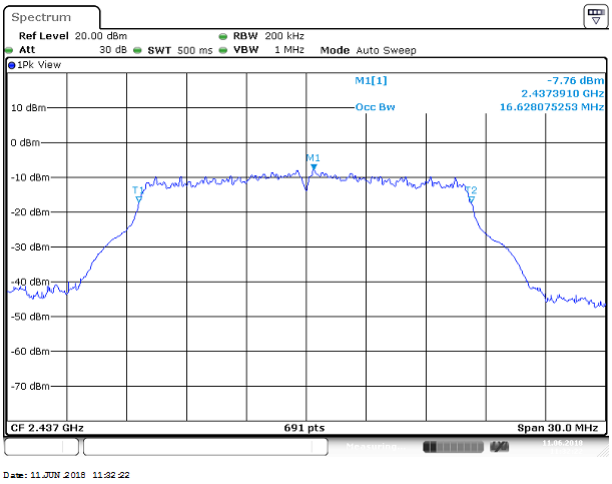
IEEE 802.11n HT20 mode- chain 0

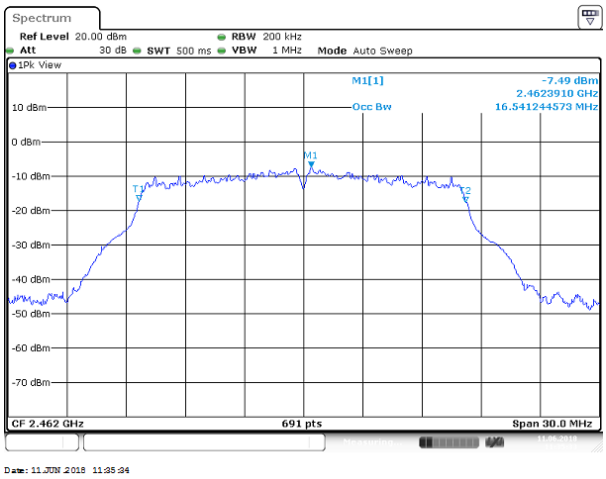
Low CH



Mid CH



High CH



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4.3 OUTPUT POWER MEASUREMENT

4.3.1 Test Limit

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

Peak output power：

For systems using digital modulation in the 2400-2483.5 MHz: 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：

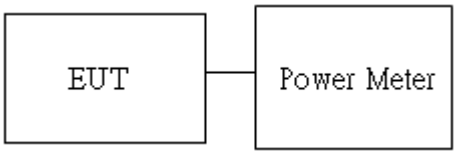
Average output power：For reporting purposes only.

4.3.2 Test Procedure

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

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

4.3.3 Test Setup



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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)	Limit (dBm)	EIRP Limit (dBm)
			chain0	chain1	chain0	chain1						
IEEE 802.11b Data rate: 1Mbps	Low	2412	-1	-	18.92	-	18.92	0.0780	19.29	0.0849	30	36
	Mid	2437	-1	-	18.64	-	18.64	0.0731	19.01	0.0796		
	High	2462	-1	-	18.93	-	18.93	0.0782	19.30	0.0851		
IEEE 802.11g Data rate: 6Mbps	Low	2412	15	-	25.38	-	25.38	0.3451	25.75	0.3758		
	Mid	2437	-1	-	25.49	-	25.49	0.3540	25.86	0.3855		
	High	2462	15	-	25.31	-	25.31	0.3396	25.68	0.3698		
IEEE 802.11n HT20 Data rate: MCS8	Low	2412	15	-	25.41	-	25.41	0.3475	25.78	0.3784		
	Mid	2437	-1	-	25.36	-	25.36	0.3436	25.73	0.3741		
	High	2462	15	-	25.46	-	25.46	0.3516	25.83	0.3828		

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	15.94	-	15.94
	Mid	2437	15.67	-	15.67
	High	2462	15.94	-	15.94
IEEE 802.11g Data rate: 6Mbps	Low	2412	15.36	-	15.36
	Mid	2437	15.53	-	15.53
	High	2462	15.47	-	15.47
IEEE 802.11n HT20 Data rate: MCS 0	Low	2412	15.38	-	15.38
	Mid	2437	15.66	-	15.66
	High	2462	15.57	-	15.57

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4.4 POWER SPECTRAL DENSITY

4.4.1 Test Limit

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

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.

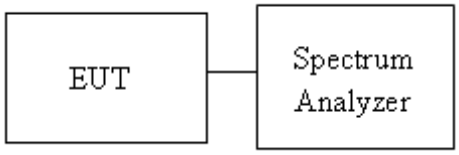
Limit	☒ Antenna not exceed 6 dBi：8dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 8 – (DG – 6)] ☐ Point-to-point operation：

4.4.2 Test Procedure

Test method Refer as KDB 558074 D01,

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



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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	-7.40	-	-7.40	8
Mid	2437	-8.71	-	-8.71	
High	2462	-8.31	-	-8.31	

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	-9.78	-	-9.78	8
Mid	2437	-9.93	-	-9.93	
High	2462	-8.96	-	-8.96	

Test mode: IEEE 802.11n HT 20 mode / 2412-2462 MHz					
Channel	**Frequency (MHz)**	**Chain 0 PPSD (dBm)**	**Chain 1 PPSD (dBm)**	**Total PSSD (dBm)**	**Limit (dBm)**
Low	2412	-9.57	-	-9.57	8
Mid	2437	-9.21	-	-9.21	
High	2462	-10.28	-	-10.28	

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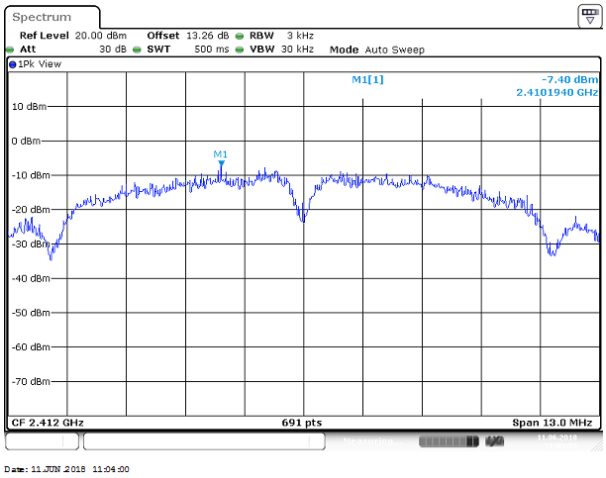
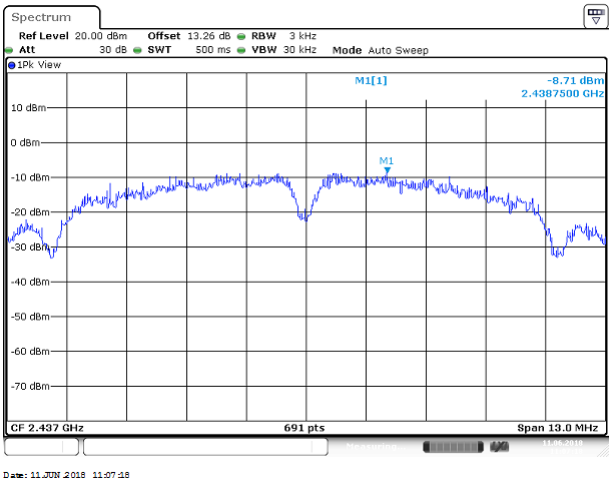
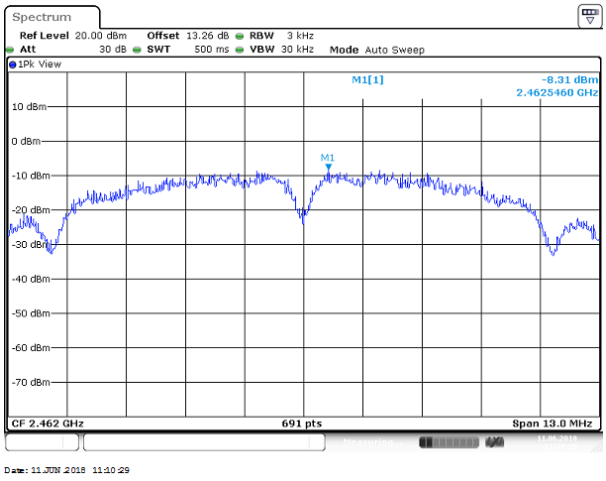
Test Data

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

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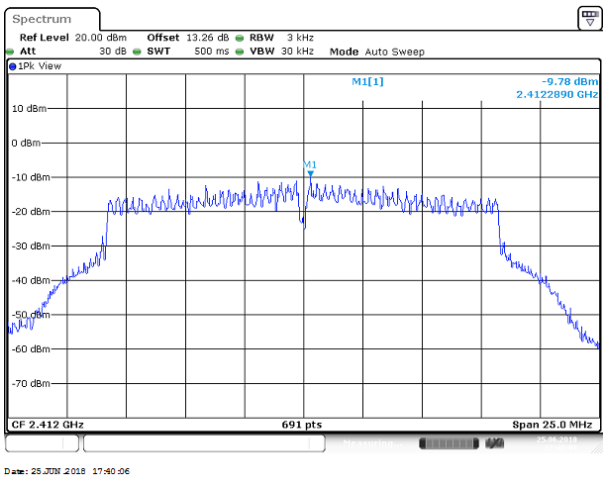
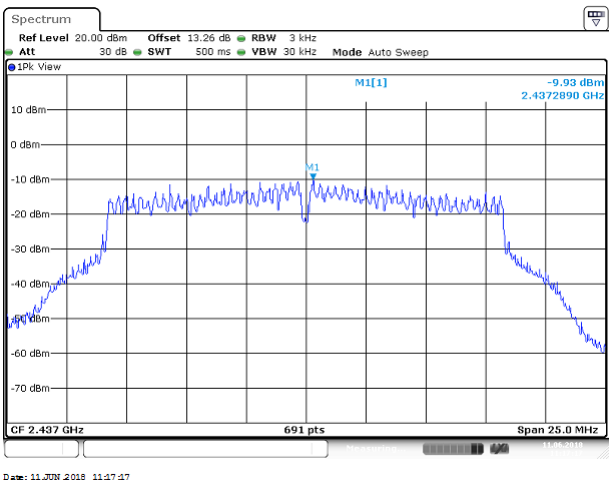
IEEE 802.11g mode- chain 0

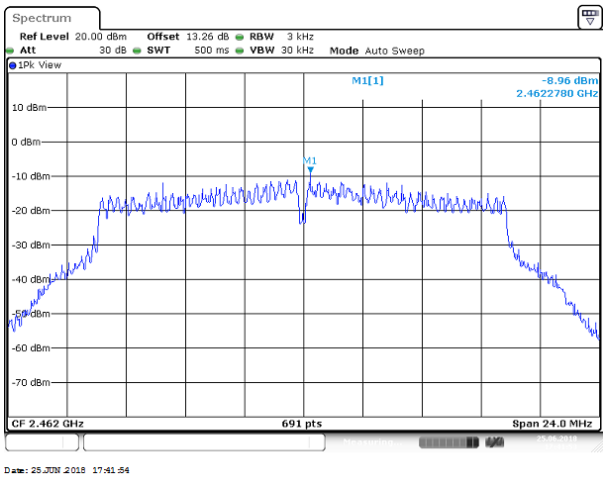
Low CH



Mid CH



High CH



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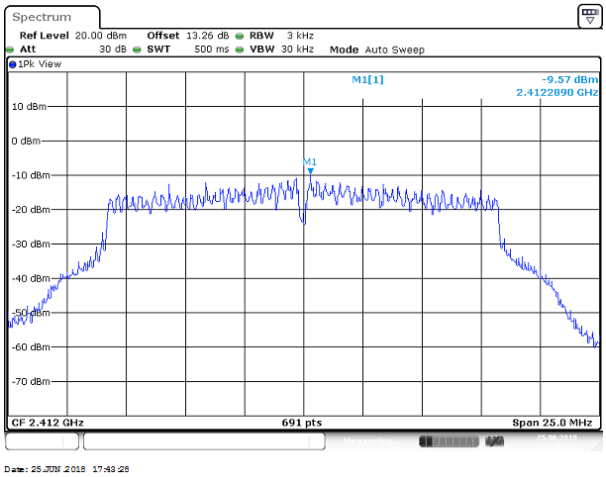
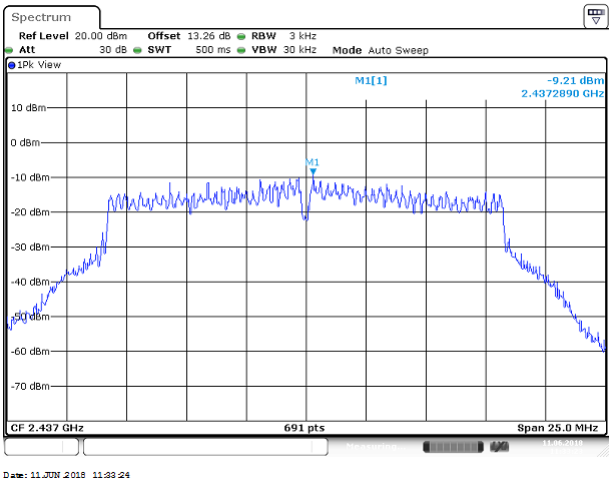
IEEE 802.11n HT20 mode- chain 0

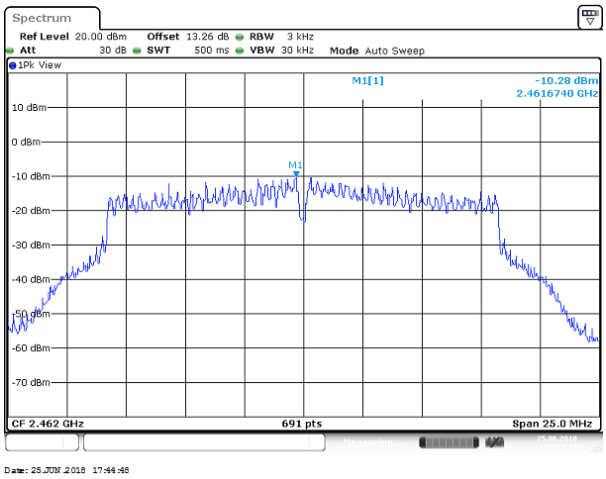
Low CH



Mid CH



High CH



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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

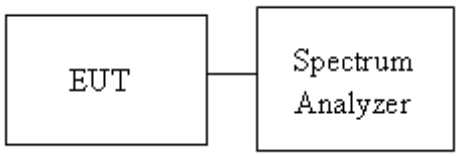
Test method Refer as KDB 558074 D01.

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



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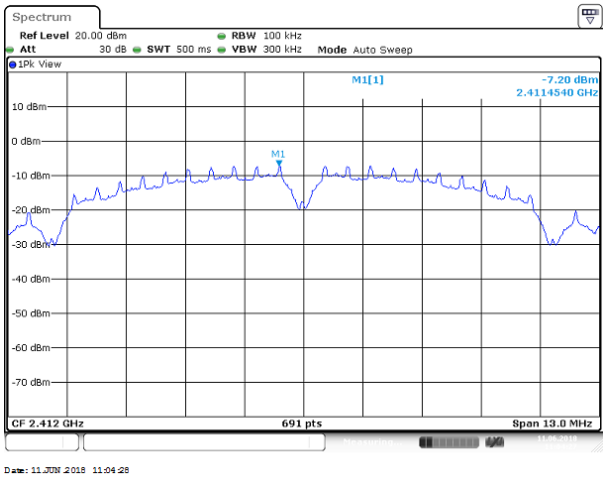
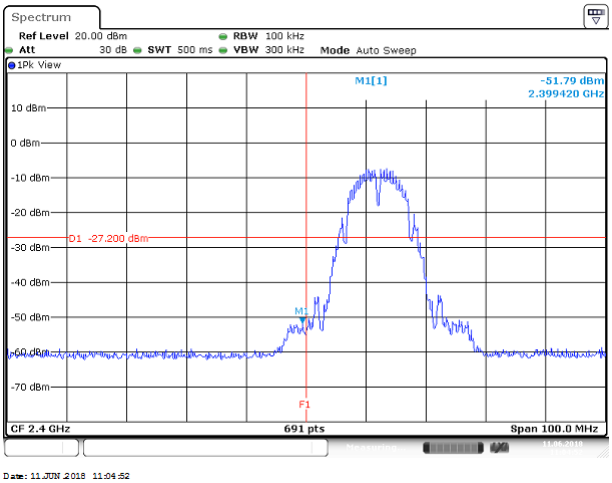
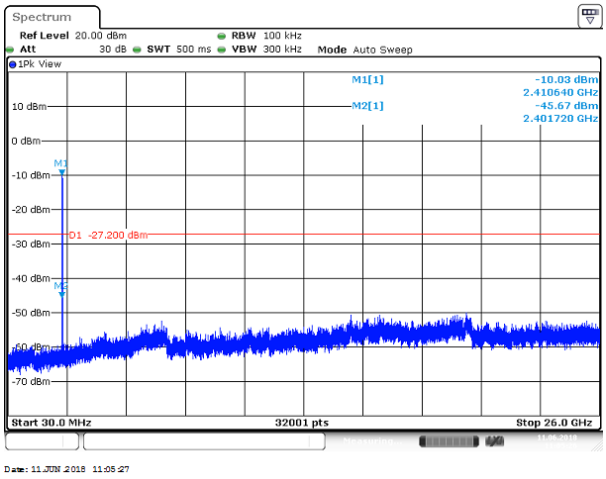
4.5.4 Test Result

Test Data

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

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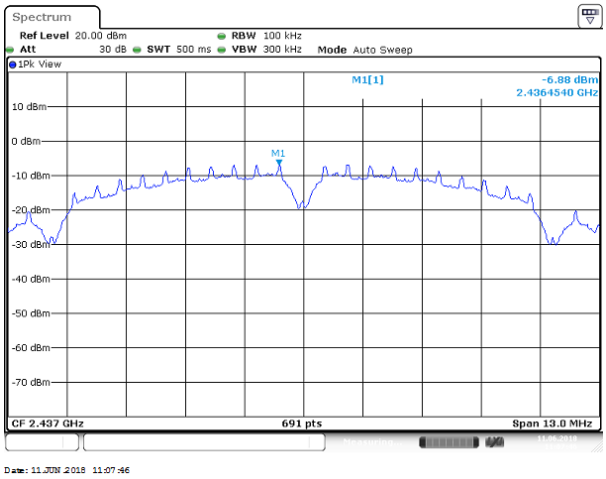
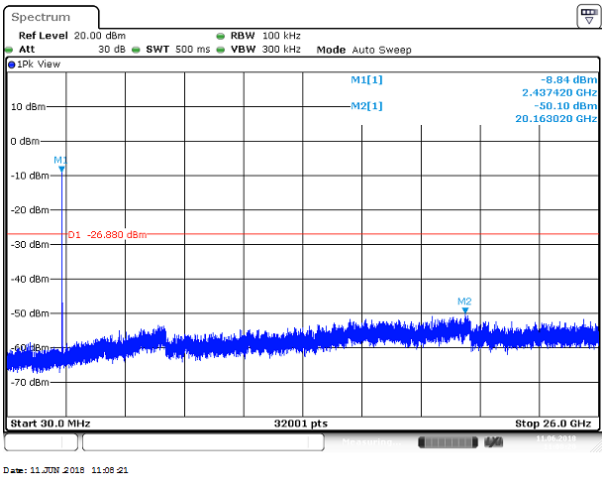
IEEE 802.11b mode Mid CH chain 0	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

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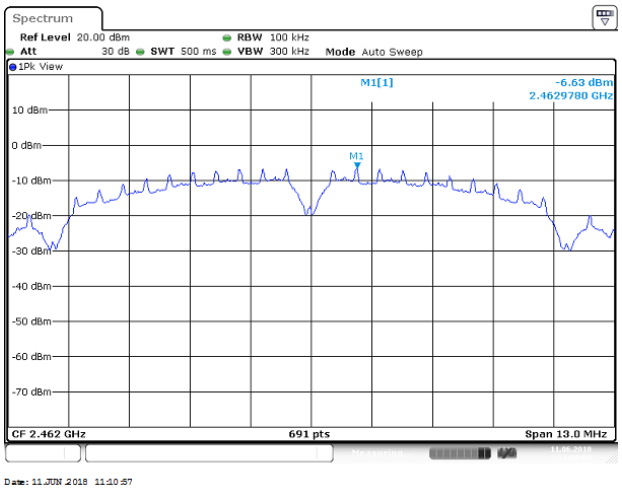
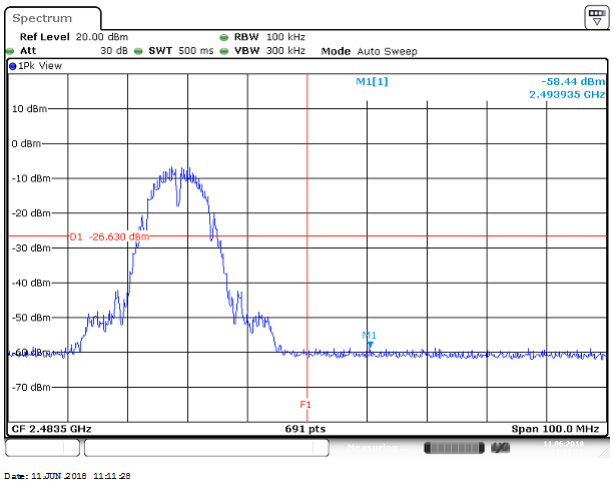
IEEE 802.11b mode High CH chain 0

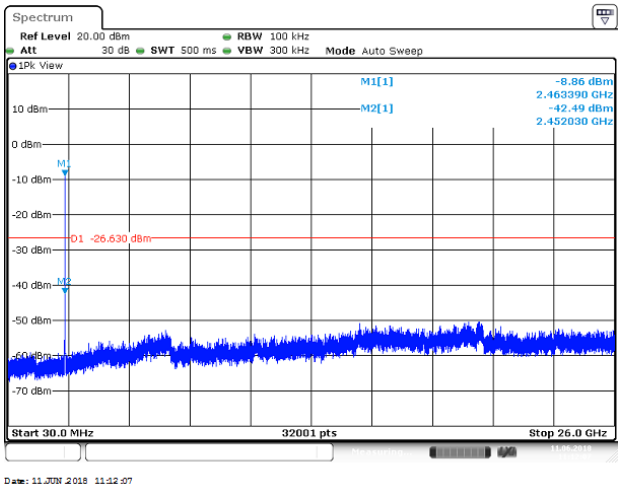
Reference Level of PSD in 100kHz



Band Edge



Spurious Emission 30MHz-25GHz



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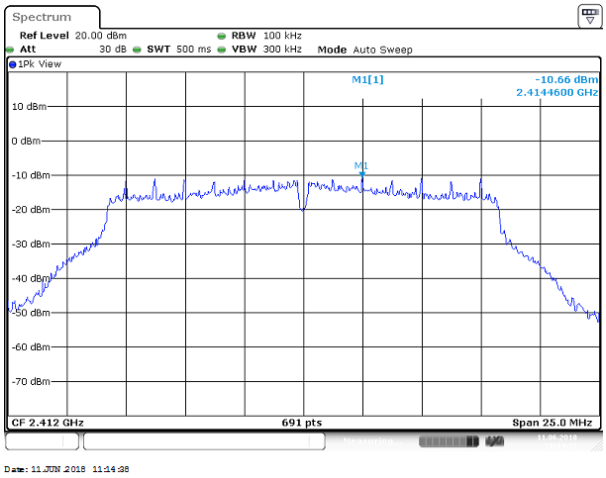
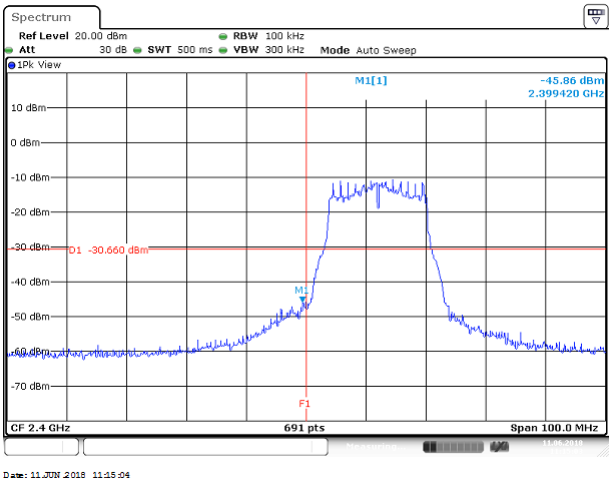
IEEE 802.11g mode Low CH chain 0

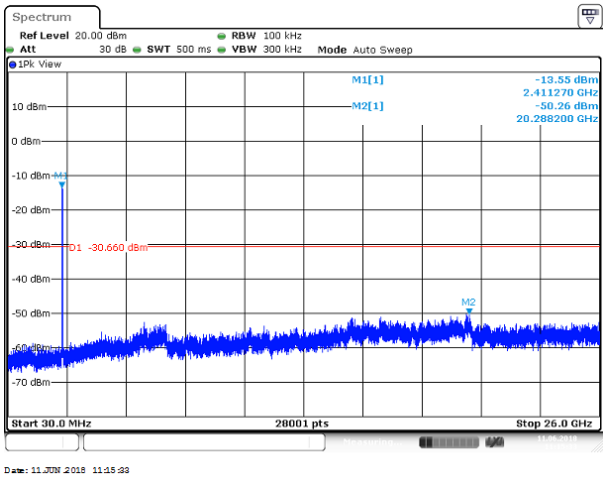
Reference Level of PSD in 100kHz



Band Edge



Spurious Emission 30MHz-25GHz



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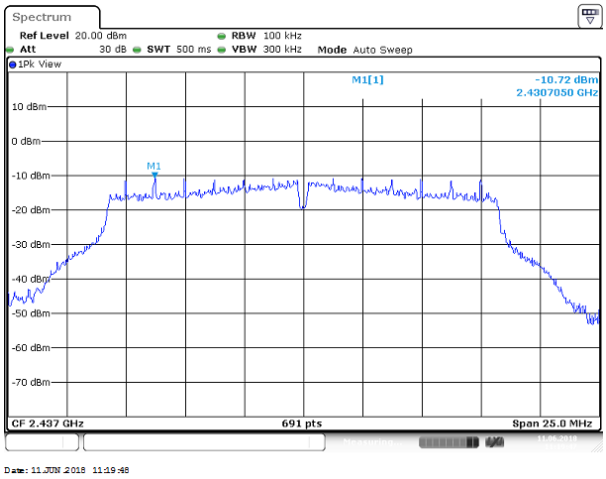
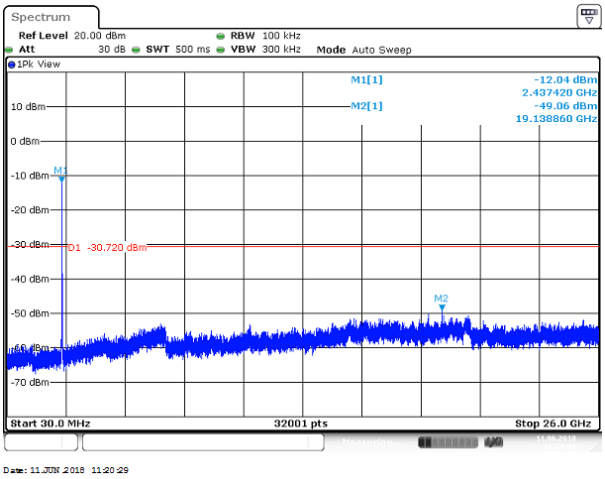
IEEE 802.11g mode Mid CH chain 0	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

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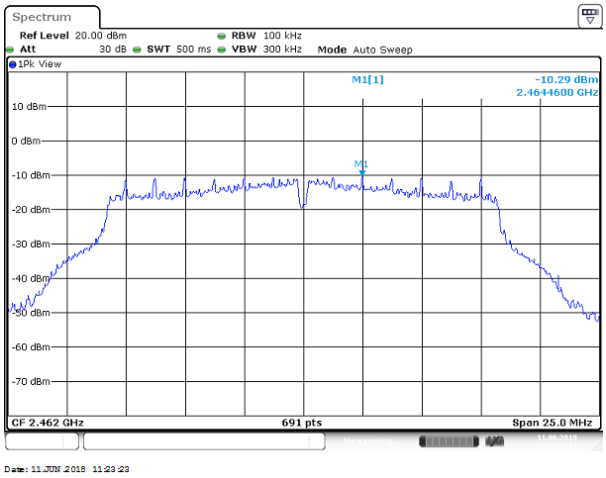
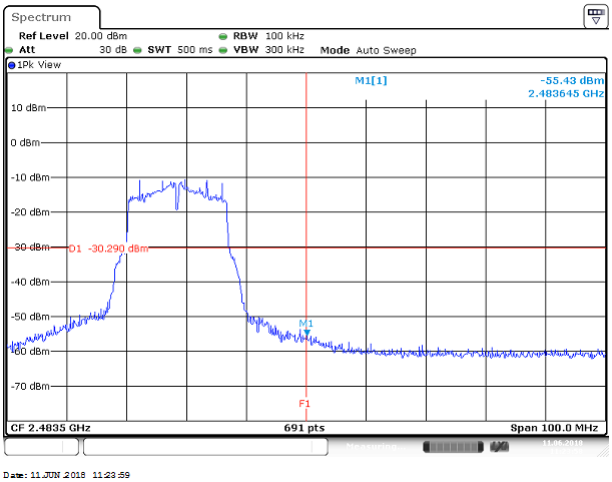
IEEE 802.11g mode High CH chain 0

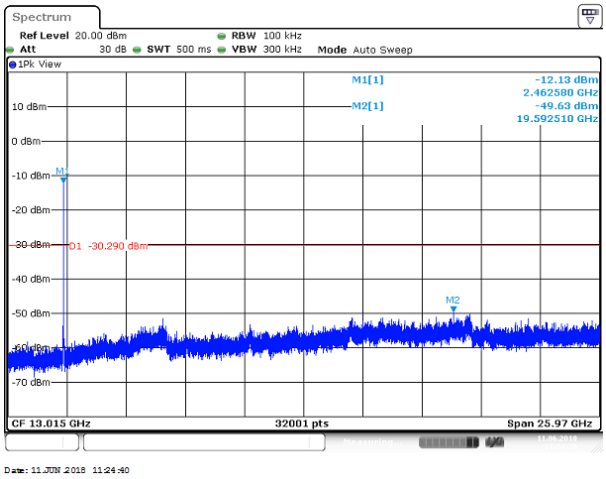
Reference Level of PSD in 100kHz



Band Edge



Spurious Emission 30MHz-25GHz



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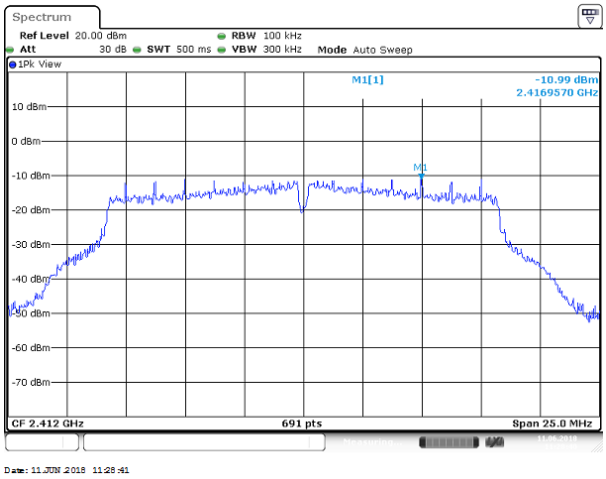
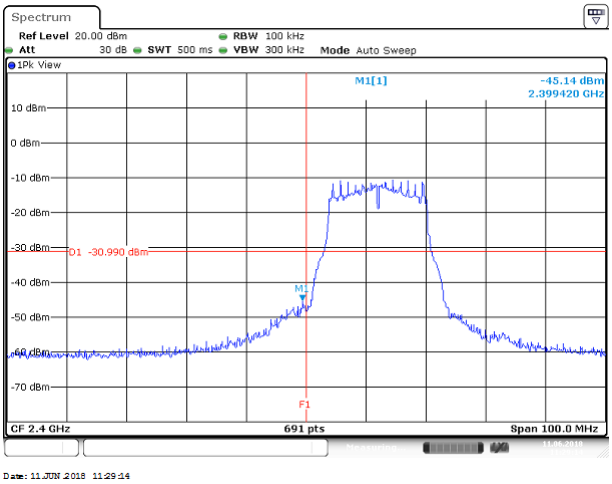
IEEE 802.11 n HT20 mode Low CH chain 0

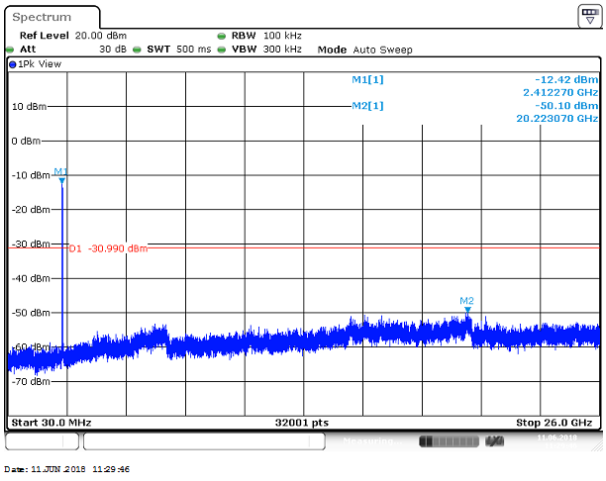
Reference Level of PSD in 100kHz



Band Edge



Spurious Emission 30MHz-25GHz



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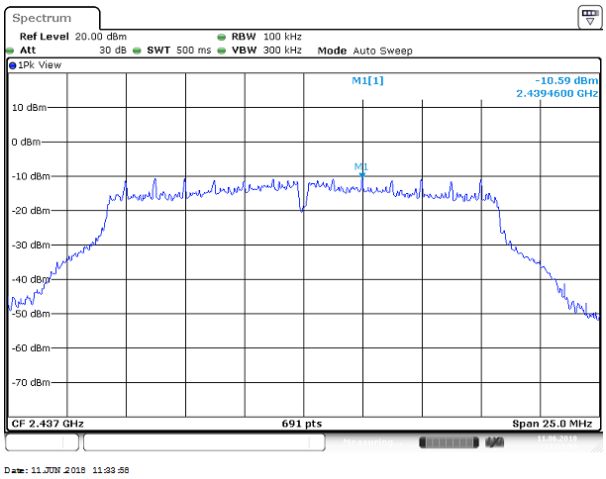
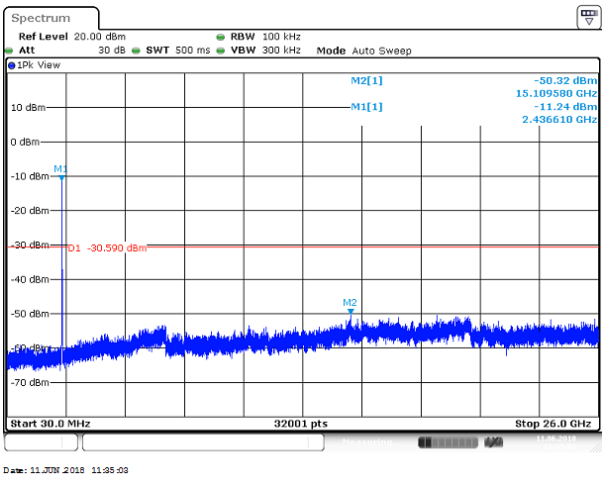
IEEE 802.11 n HT20 mode Mid CH chain 0	
Reference Level of PSD in 100kHz	**Spurious Emission 30MHz-25GHz**
	

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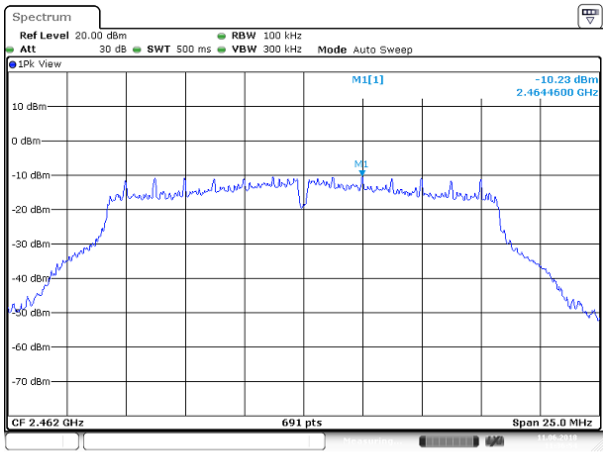
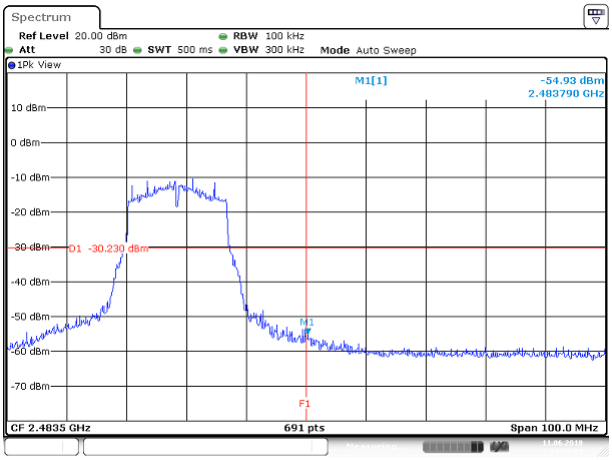
IEEE 802.11n HT20 mode High CH chain 0

Reference Level of PSD in 100kHz



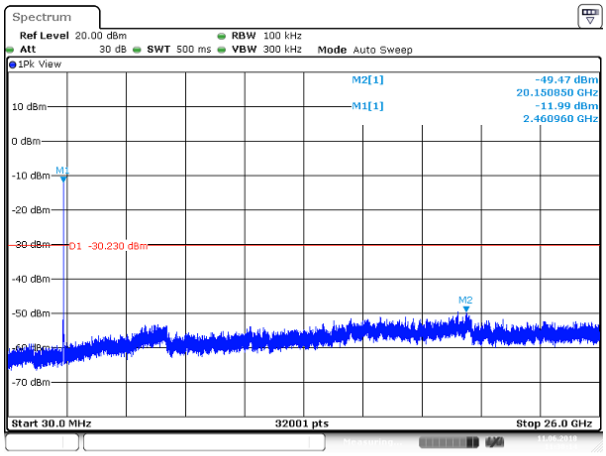
Date: 11.JUN.2018 11:36:55

Band Edge



Date: 11.JUN.2018 11:37:22

Spurious Emission 30MHz-25GHz



Date: 11.JUN.2018 11:38:15

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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

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4.6.2 Test Procedure

Test method Refer as KDB 558074 D01.

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 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

Remark:

1. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.
2. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

4. The SA setting following：

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

(2) Above 1G：

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

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

˙If Duty Cycle ≥ 98%, VBW=10Hz.

˙If Duty Cycle < 98%, VBW=1/T.

Configuration	Duty Cycle (%)	T(ms)	1/T (kHz)	VBW Setting
802.11b	99%	8.4638	-	10Hz
802.11g	95%	1.4348	0.697	750Hz
802.11n HT20	95%	1.4203	0.704	750Hz

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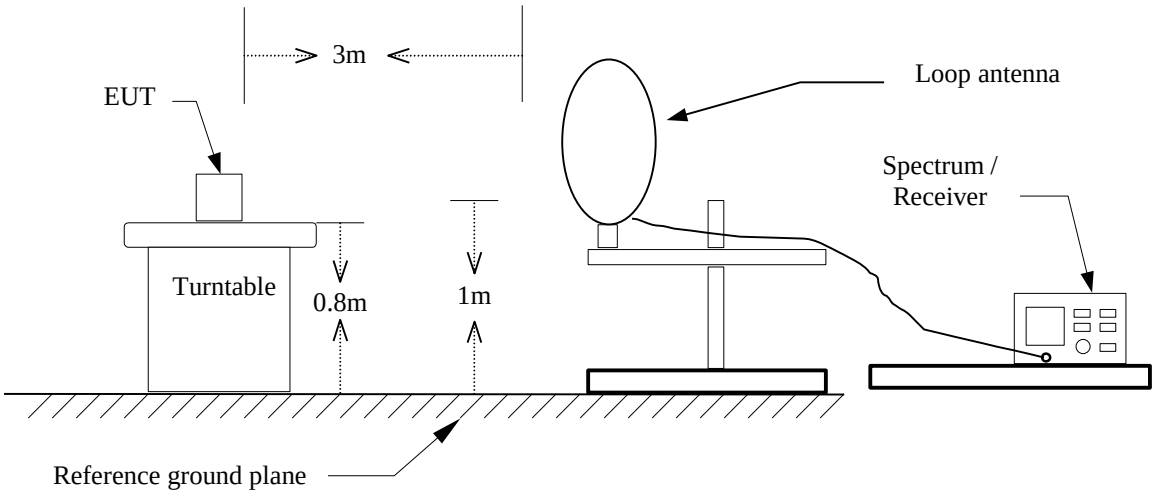
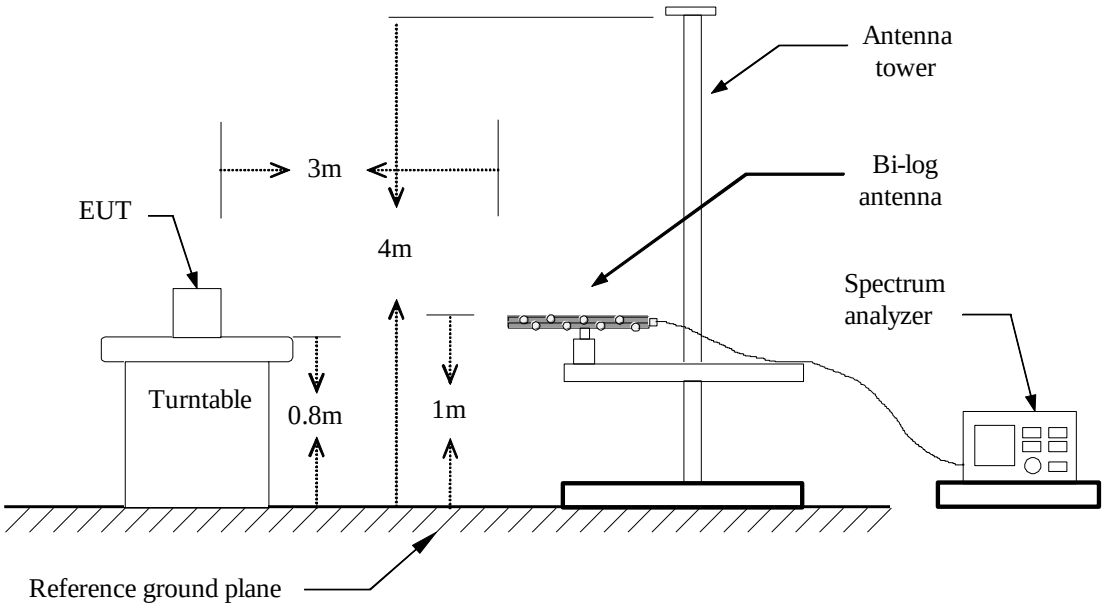
4.6.3 Test Setup

9kHz ~ 30MHz



30MHz ~ 1GHz



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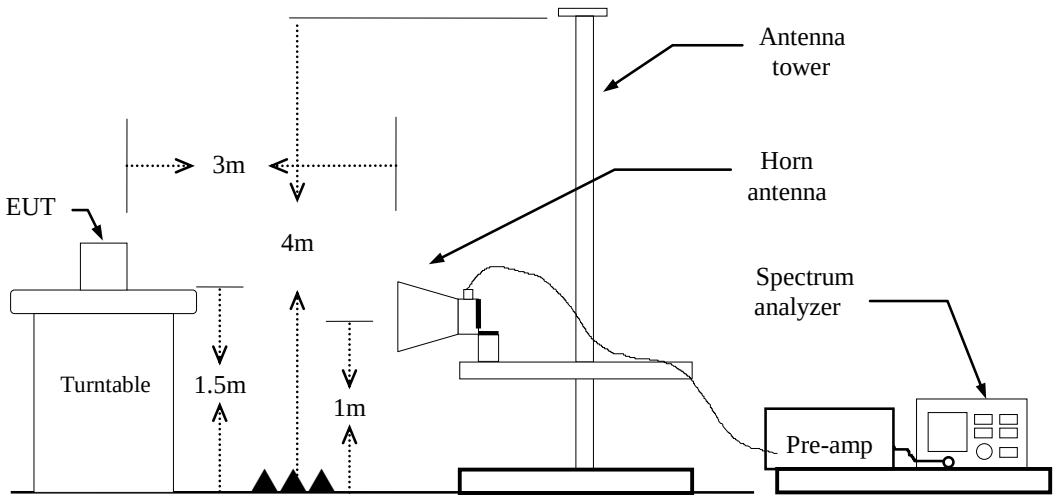
Above 1 GHz



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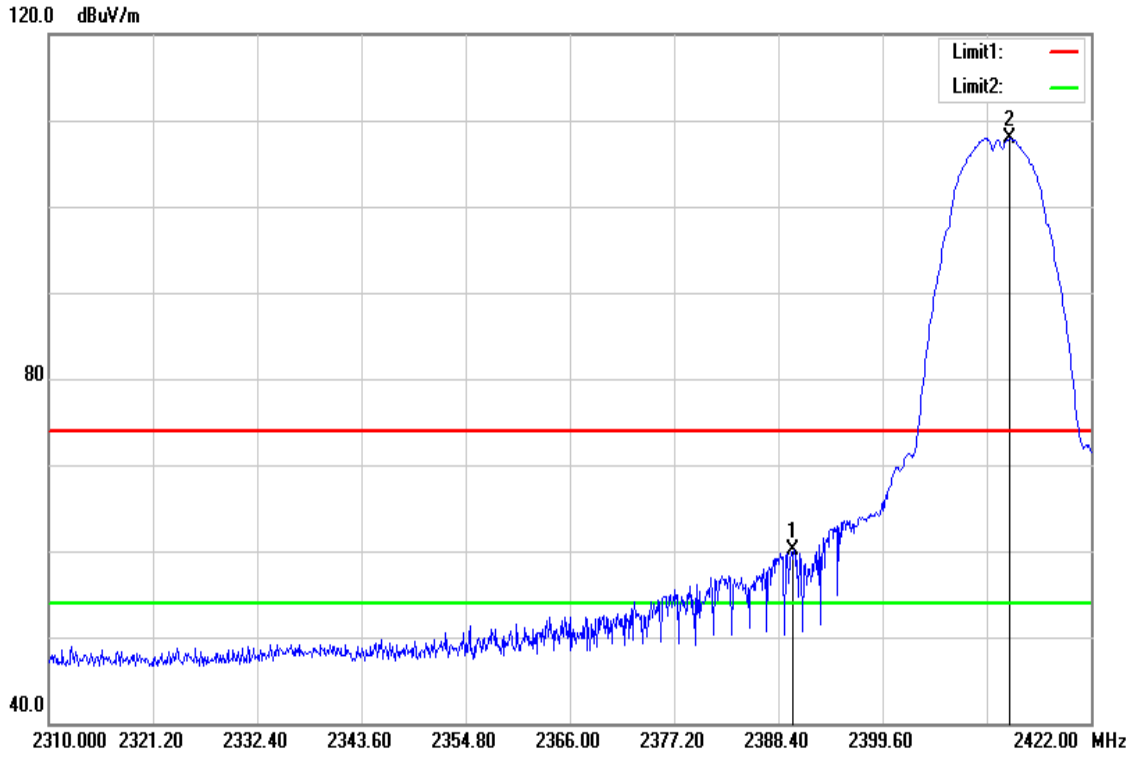
4.6.4 Test Result

Band Edge Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	63.09	-2.98	60.11	74.00	-13.89	peak
2413.264	110.73	-2.90	107.83	-	-	peak

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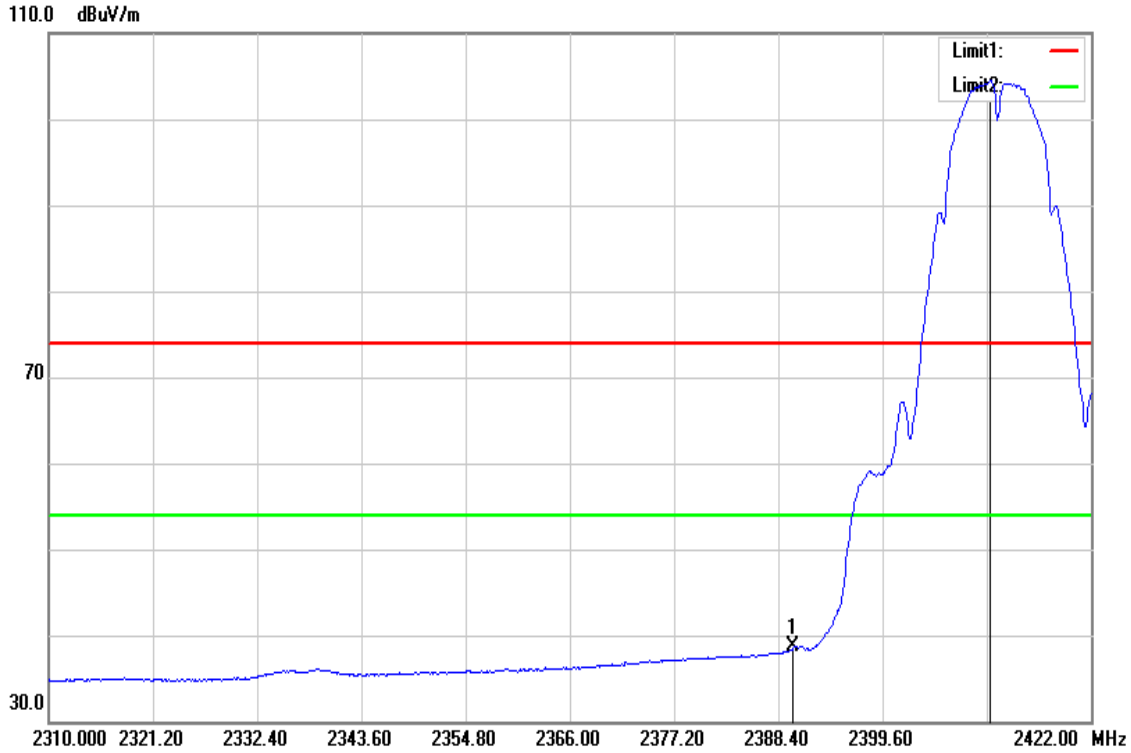
Test Mode	IEEE 802.11b Low CH	Temperature:	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	41.61	-2.98	38.63	54.00	-15.37	AVG
2411.136	107.36	-2.92	104.44	-	-	AVG

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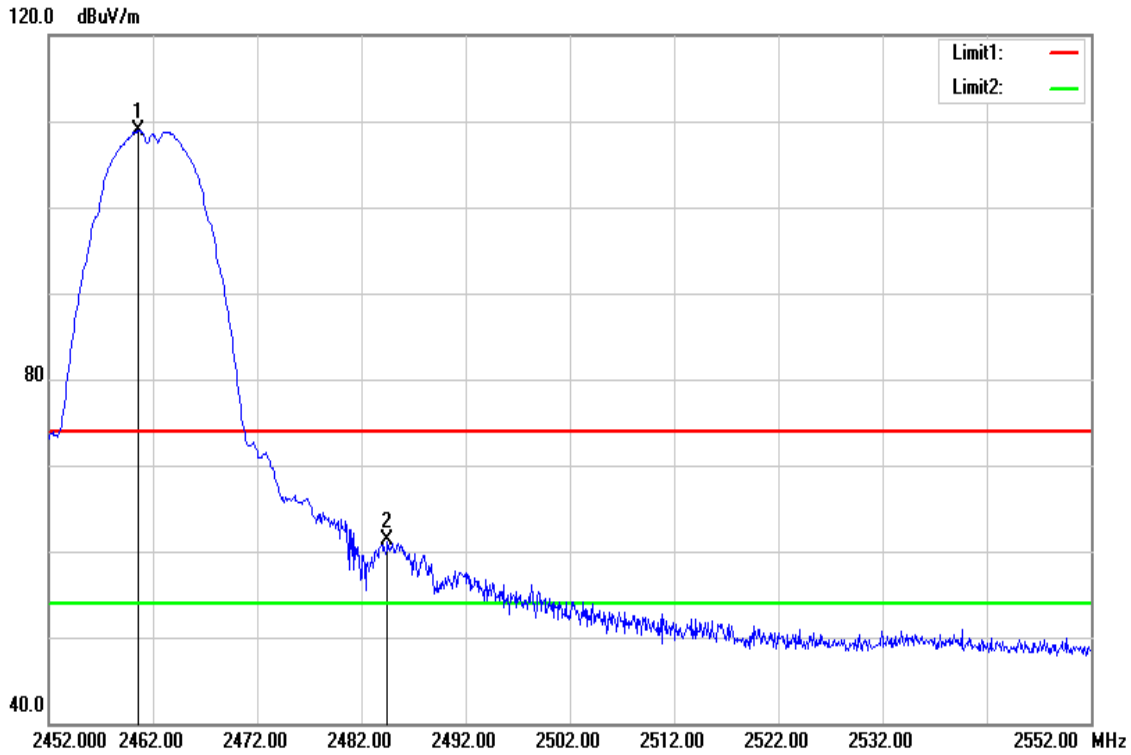
Test Mode	IEEE 802.11b High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2460.600	111.61	-2.76	108.85	-	-	peak
2484.500	63.89	-2.69	61.20	74.00	-12.80	peak

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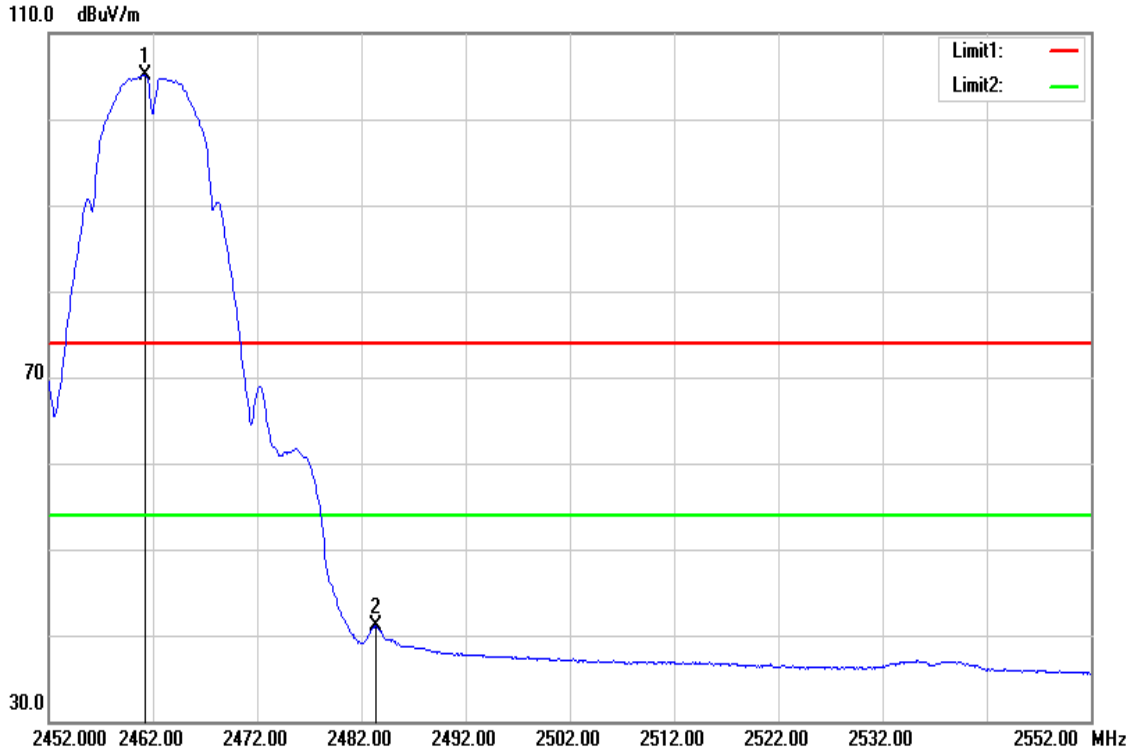
Test Mode	IEEE 802.11b High CH	Temperature:	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2461.200	107.89	-2.76	105.13	-	-	AVG
2483.400	43.82	-2.69	41.13	54.00	-12.87	AVG

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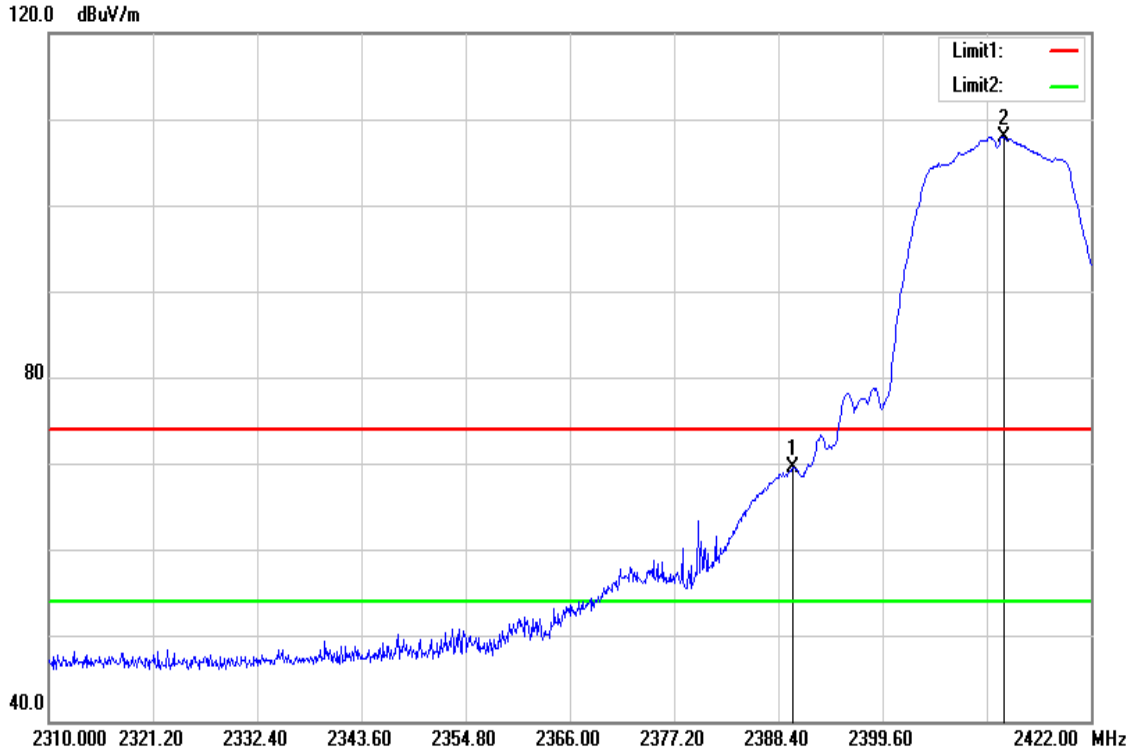
Test Mode	IEEE 802.11g Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	72.56	-2.98	69.58	74.00	-4.42	peak
2412.592	110.88	-2.90	107.98	-	-	peak

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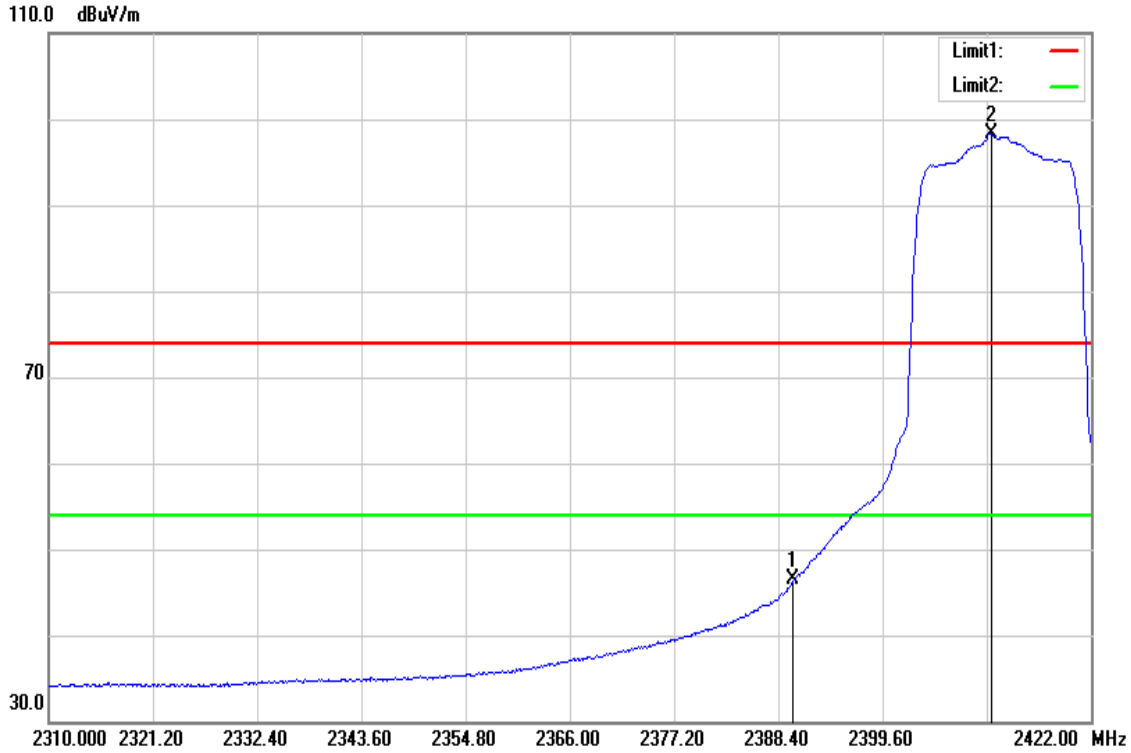
Test Mode	IEEE 802.11g Low CH	Temperature:	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	49.44	-2.98	46.46	54.00	-7.54	AVG
2411.248	101.20	-2.92	98.28	-	-	AVG

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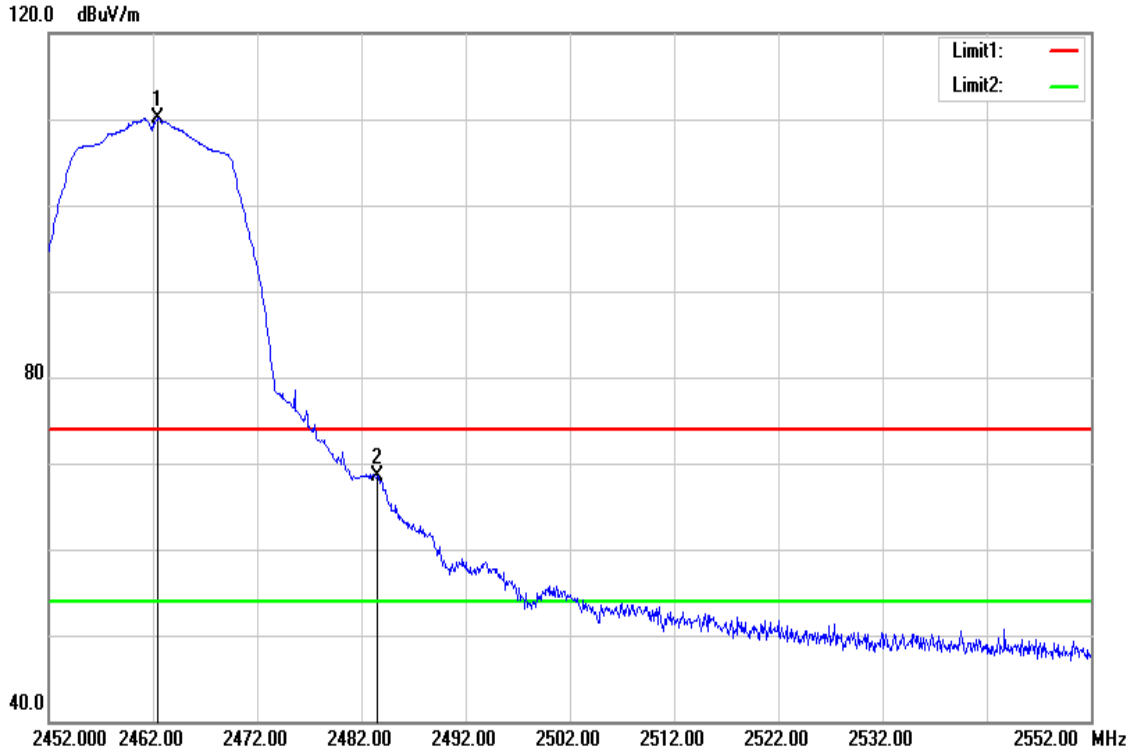
Test Mode	IEEE 802.11g High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2462.500	112.82	-2.75	110.07	-	-	peak
2483.500	71.16	-2.69	68.47	74.00	-5.53	peak

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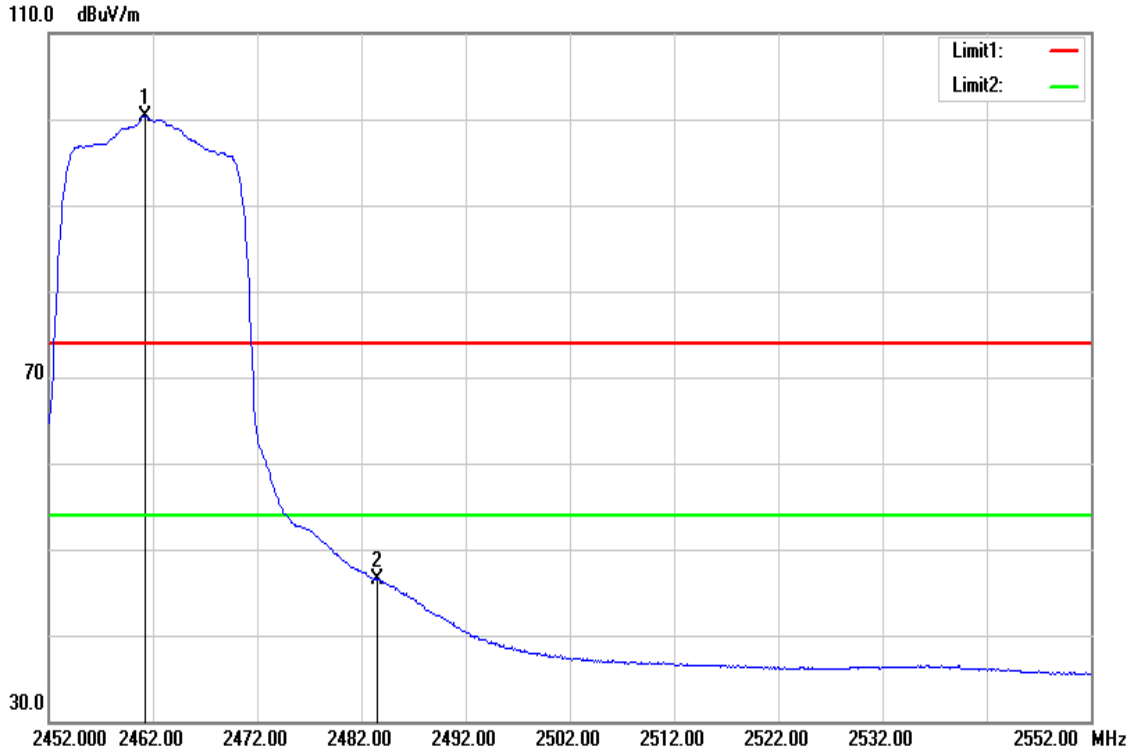
Test Mode	IEEE 802.11g High CH	Temperature:	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2461.200	103.08	-2.76	100.32	-	-	AVG
2483.500	49.12	-2.69	46.43	54.00	-7.57	AVG

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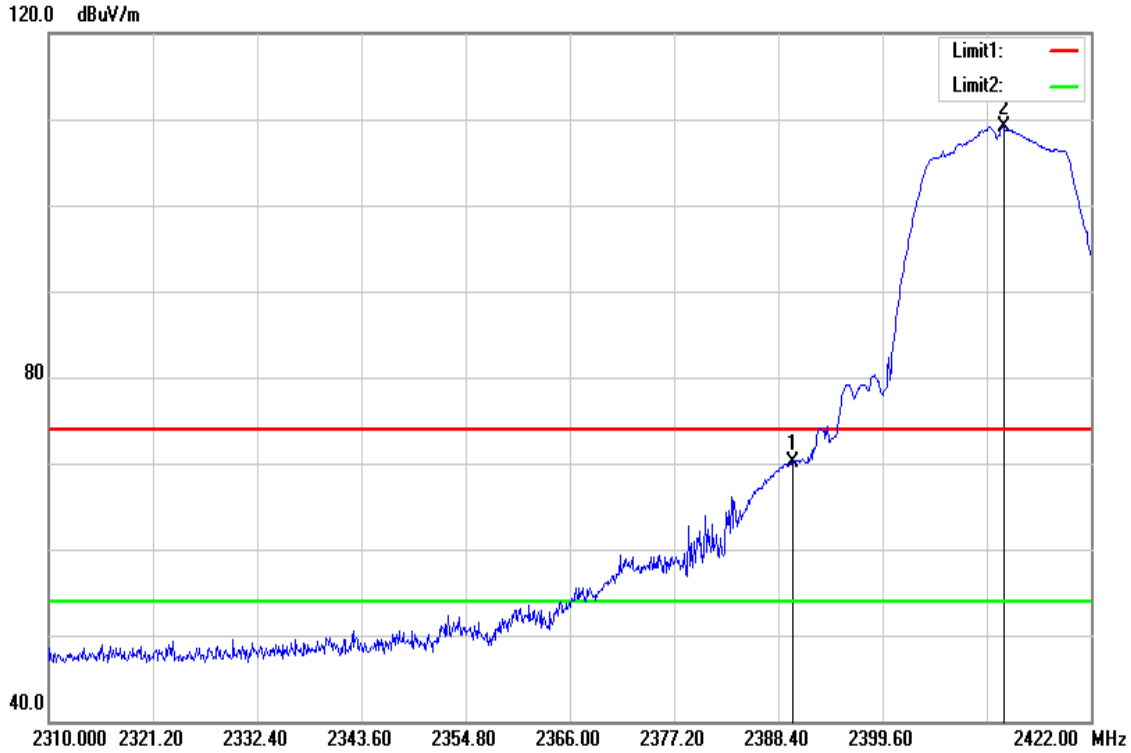
Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	73.18	-2.98	70.20	74.00	-3.80	peak
2412.592	111.99	-2.90	109.09	-	-	peak

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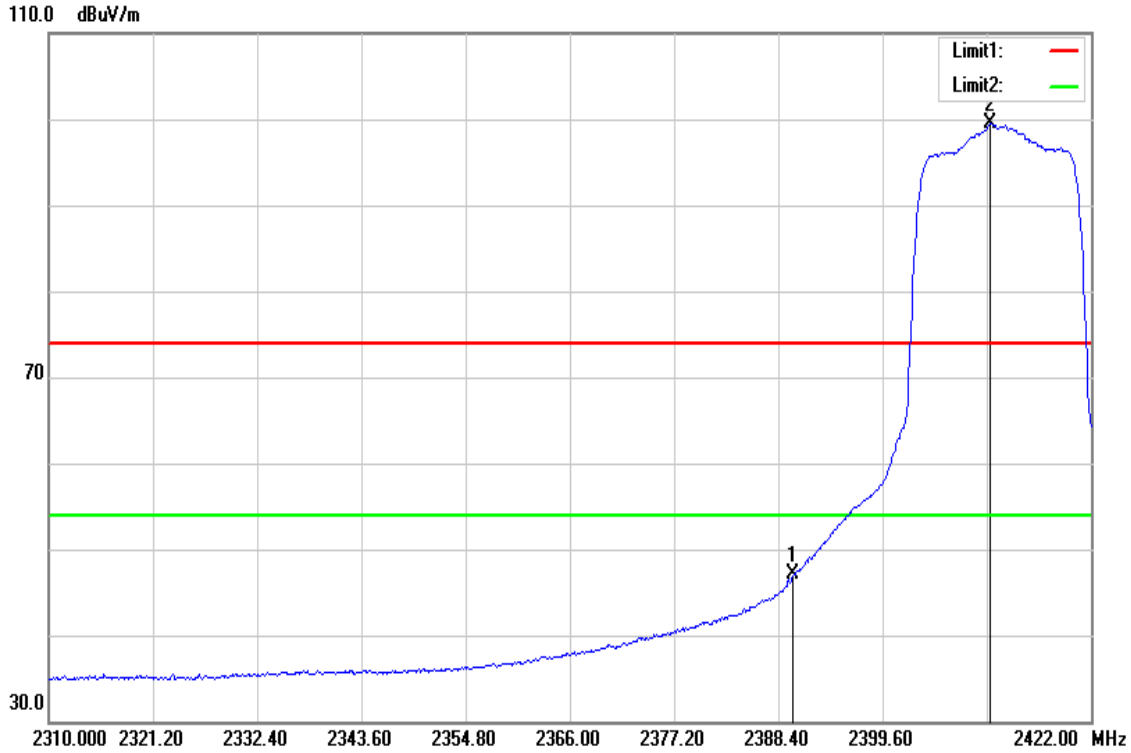
Test Mode	IEEE 802.11n HT20 Low CH	Temperature:	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2390.000	50.04	-2.98	47.06	54.00	-6.94	AVG
2411.136	102.43	-2.92	99.51	-	-	AVG

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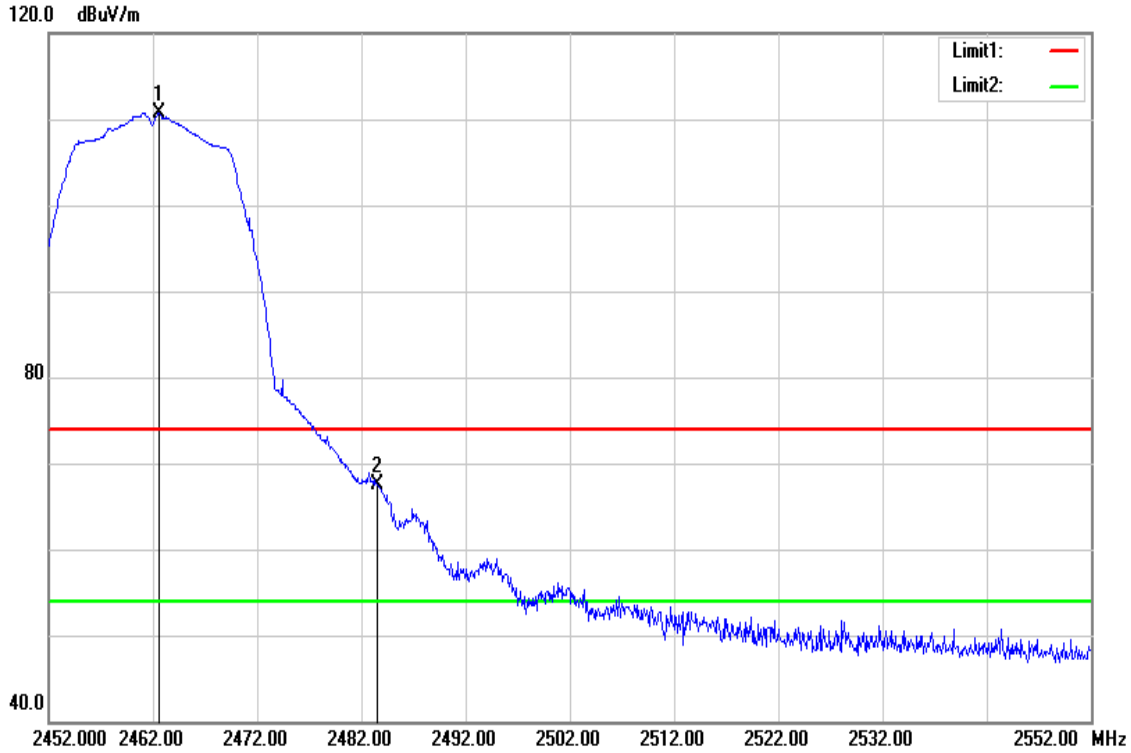
Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2462.600	113.40	-2.75	110.65	-	-	peak
2483.500	70.26	-2.69	67.57	74.00	-6.43	peak

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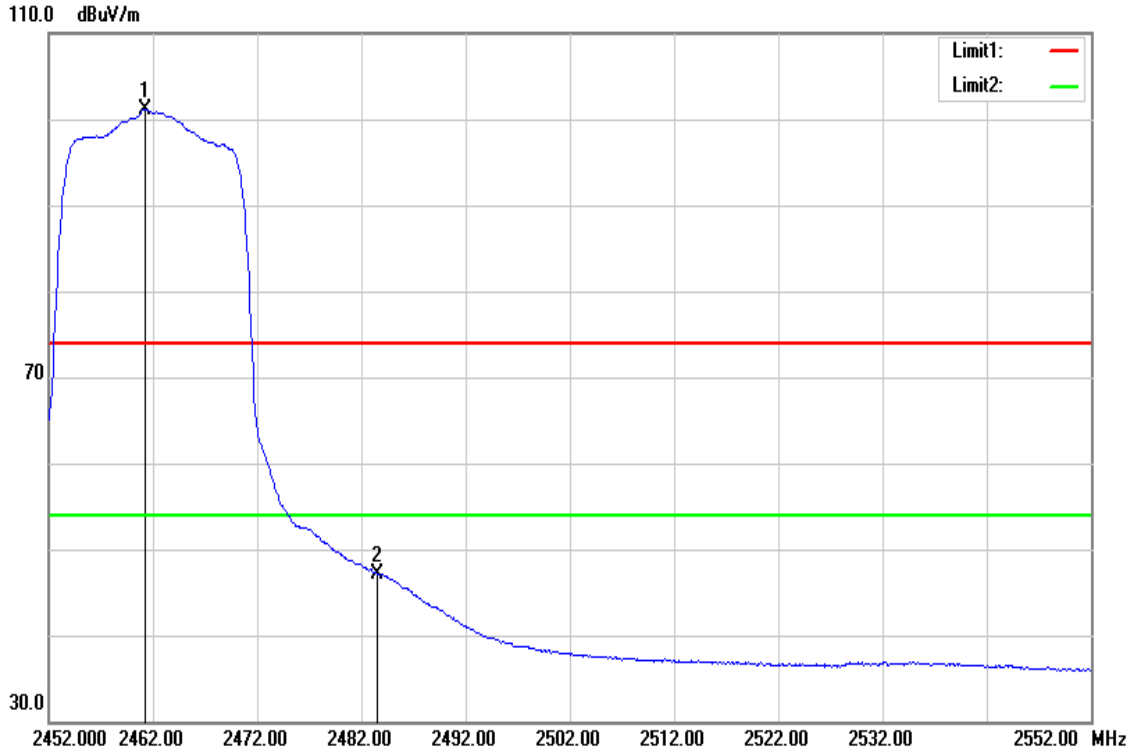
Test Mode	IEEE 802.11n HT20 High CH	Temperature:	22(℃)/ 34%RH
Test Item	Band Edge	Test Date	June 13, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
2461.200	103.95	-2.76	101.19	-	-	AVG
2483.500	49.87	-2.69	47.18	54.00	-6.82	AVG

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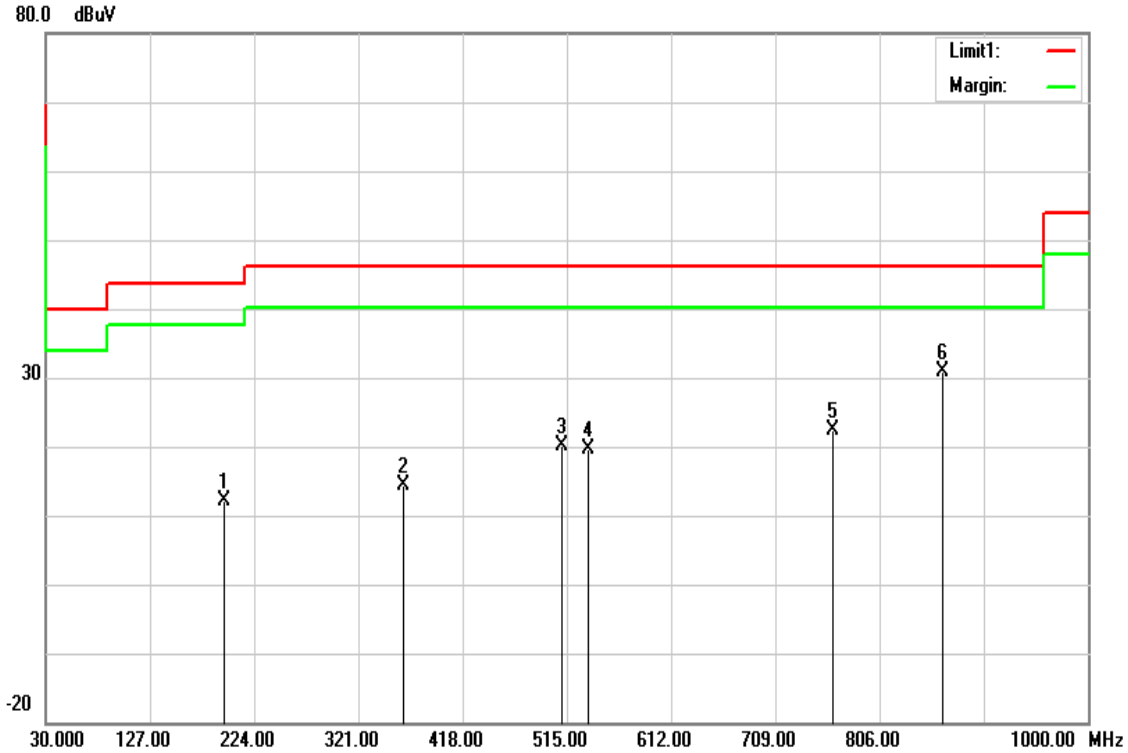
Below 1G Test Data

Test Mode	Mode 1	Temp/Hum	22(℃)/ 34%RH
Test Item	30MHz-1GHz	Test Date	June 25, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
195.8700	27.71	-15.68	12.03	43.52	-31.49	peak
363.1950	26.95	-12.56	14.39	46.02	-31.63	peak
510.1500	28.41	-8.30	20.11	46.02	-25.91	peak
534.8850	27.49	-7.84	19.65	46.02	-26.37	peak
762.3500	26.47	-4.06	22.41	46.02	-23.61	peak
864.2000	33.62	-2.62	31.00	46.02	-15.02	peak

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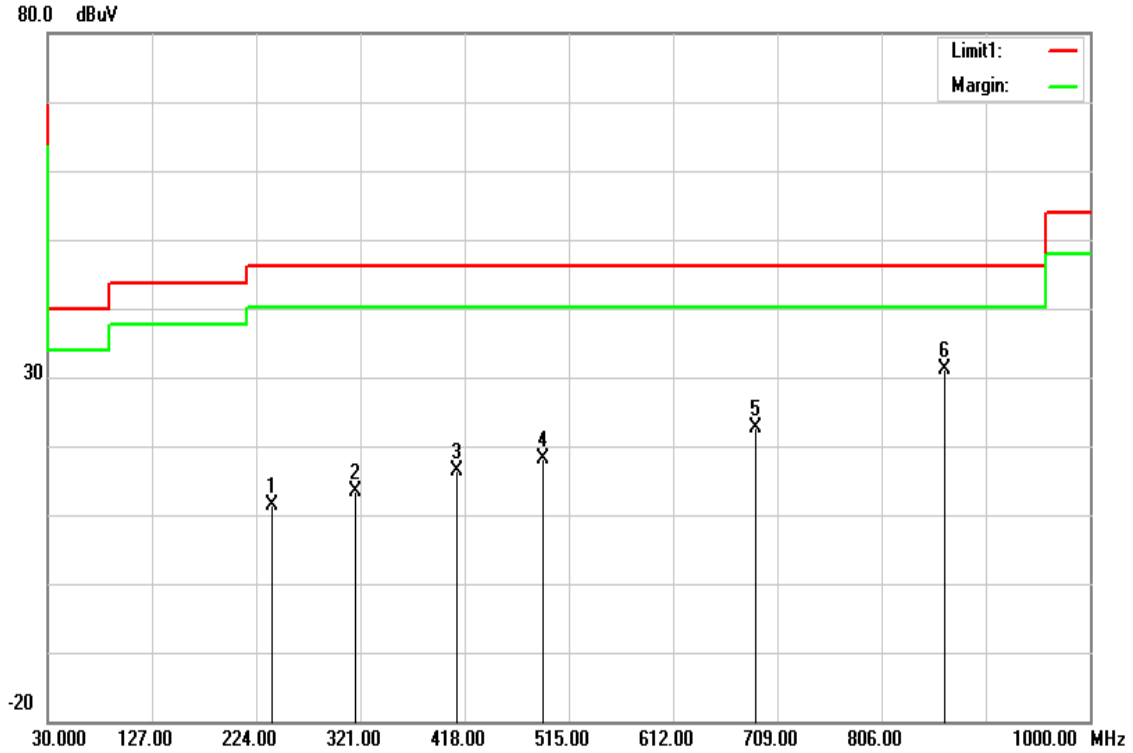
Test Mode	Mode 1	Temp/Hum	22(℃)/ 34%RH
Test Item	30MHz-1GHz	Test Date	June 25, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB	Remark
238.5500	27.71	-16.22	11.49	46.02	-34.53	peak
316.1500	27.18	-13.72	13.46	46.02	-32.56	peak
410.7250	27.42	-11.01	16.41	46.02	-29.61	peak
491.2350	26.75	-8.68	18.07	46.02	-27.95	peak
688.6300	27.63	-5.04	22.59	46.02	-23.43	peak
864.2000	33.67	-2.62	31.05	46.02	-14.97	peak

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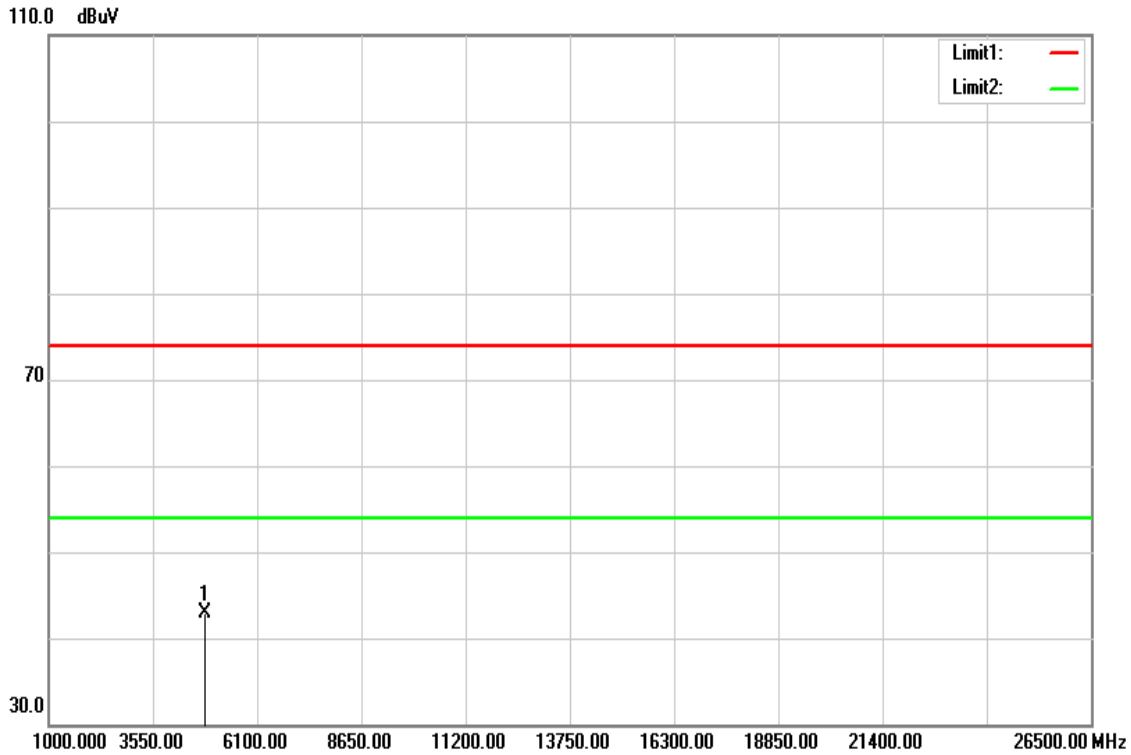
Above 1G Test Data

Test Mode	IEEE 802.11b Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	38.52	4.38	42.90	74.00	-31.10	peak
N/A						

Remark:

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

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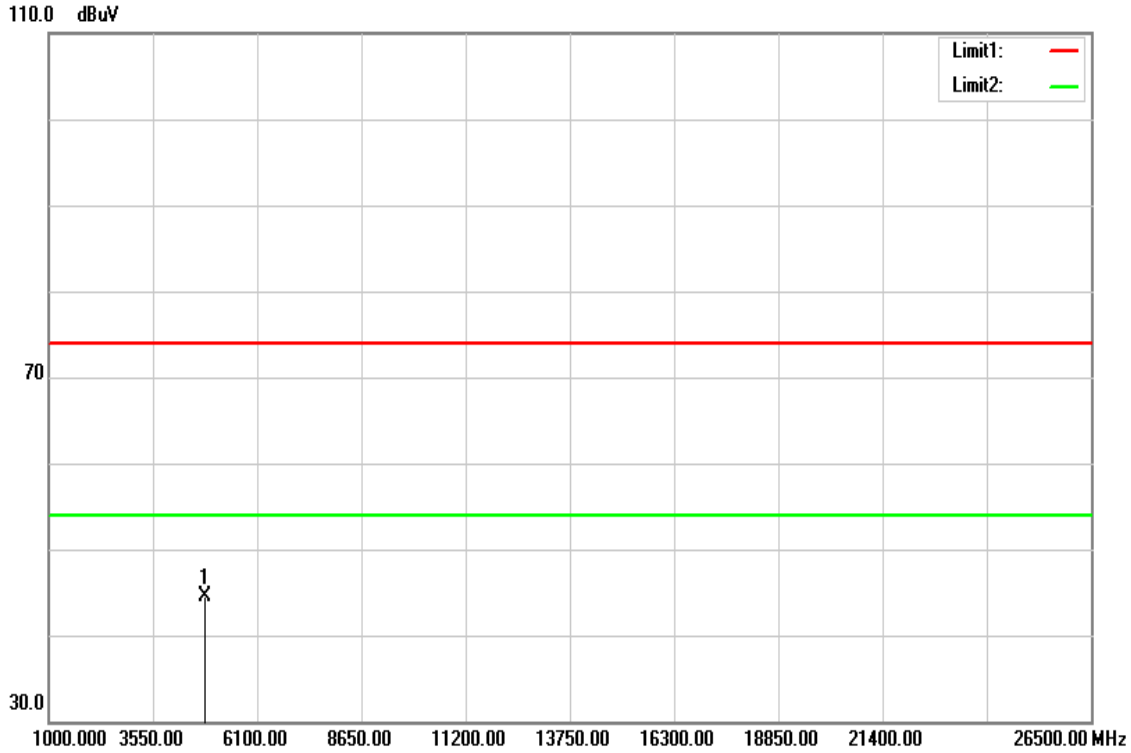
Test Mode	IEEE 802.11b Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4827.000	40.09	4.38	44.47	74.00	-29.53	peak
N/A						

Remark:

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

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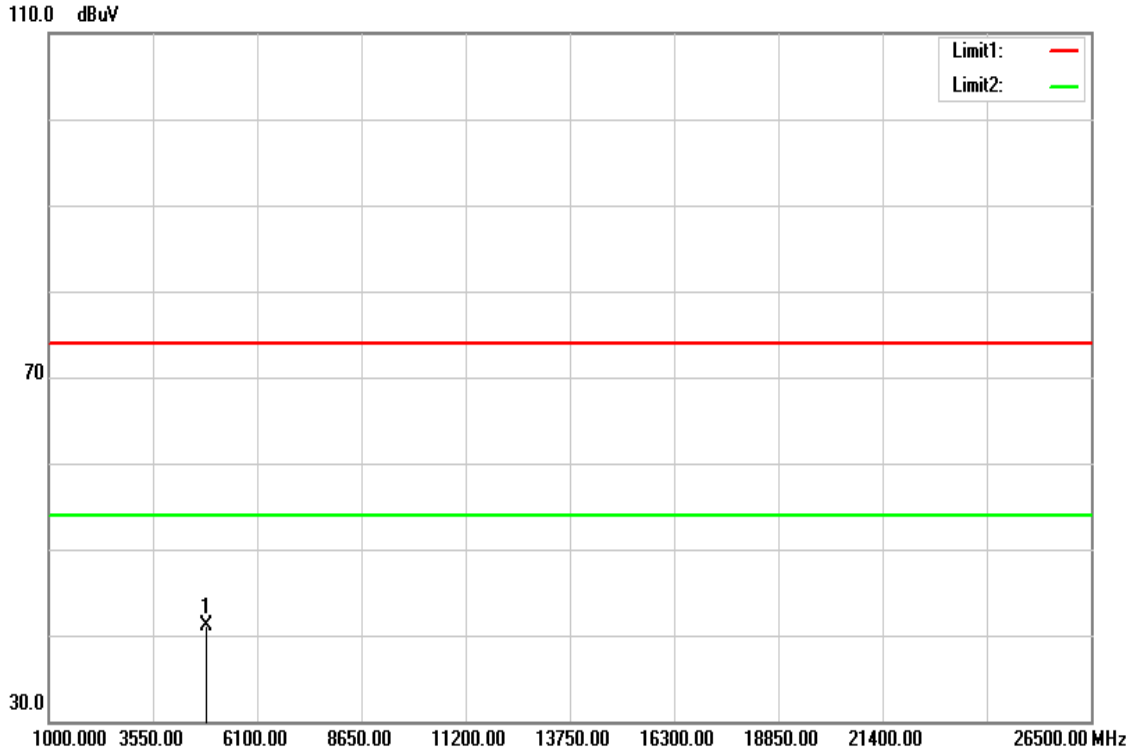
Test Mode	IEEE 802.11b Mid CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBu)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	36.69	4.47	41.16	74.00	-32.84	peak
N/A						

Remark:

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

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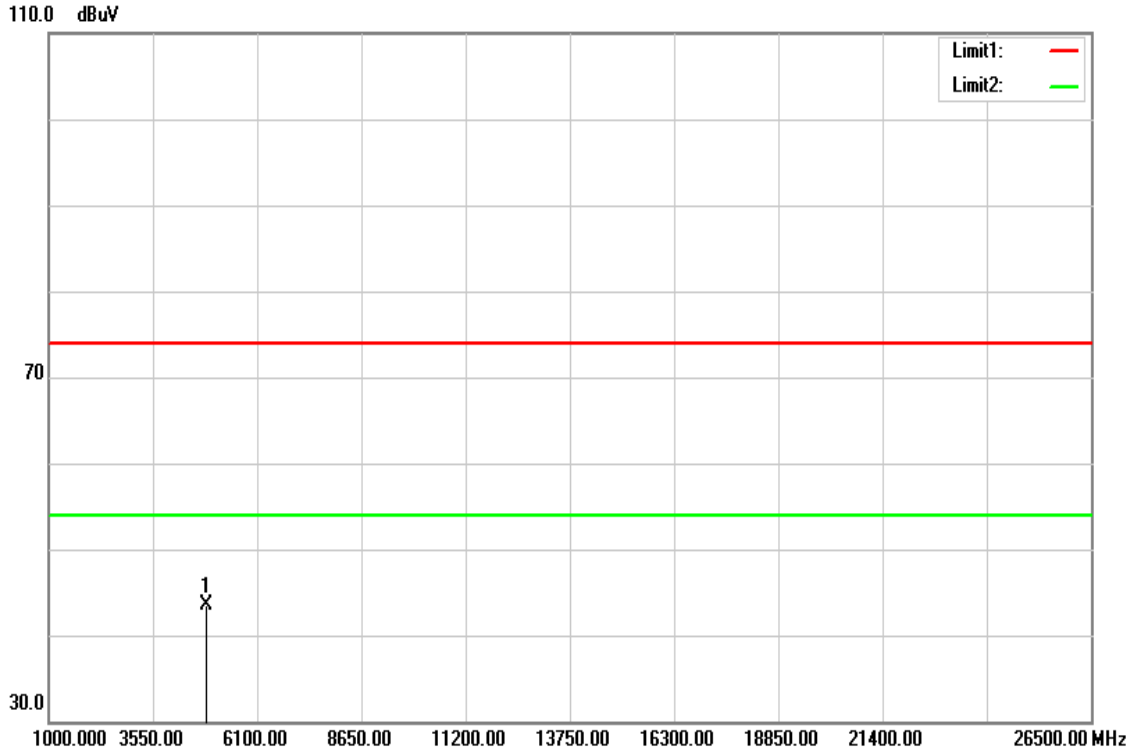
Test Mode	IEEE 802.11b Mid CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	39.05	4.47	43.52	74.00	-30.48	peak
N/A						

Remark:

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

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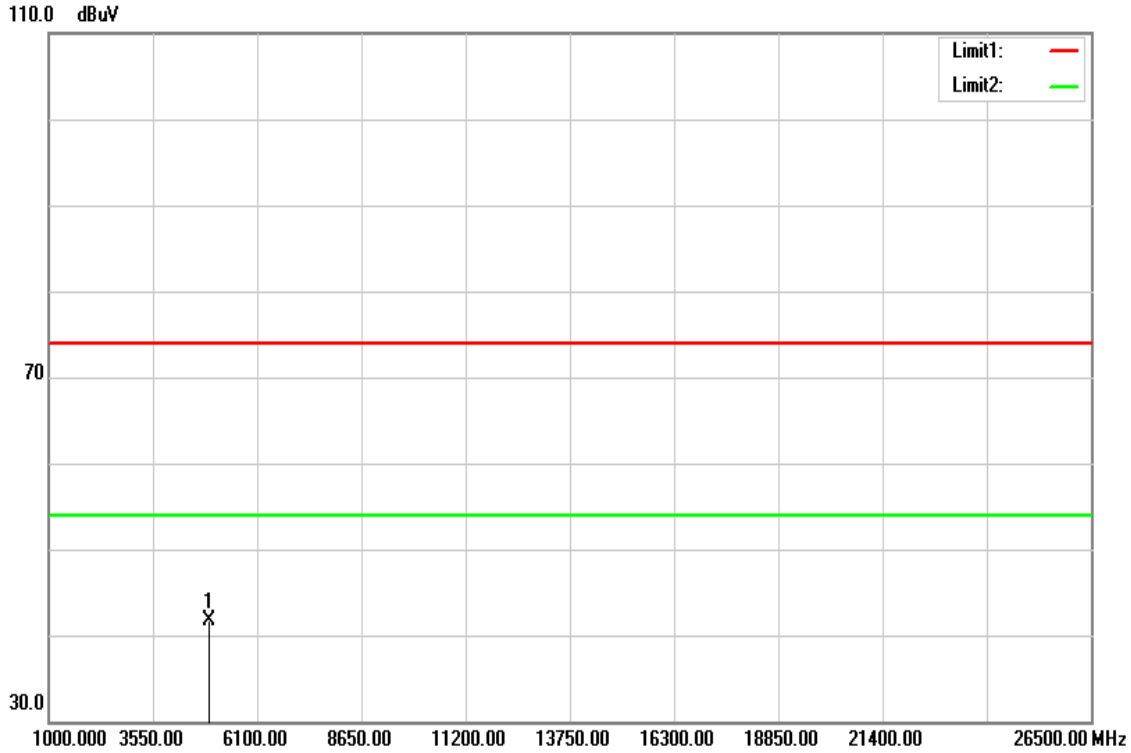
Test Mode	IEEE 802.11b High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	37.11	4.55	41.66	74.00	-32.34	peak
N/A						

Remark:

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

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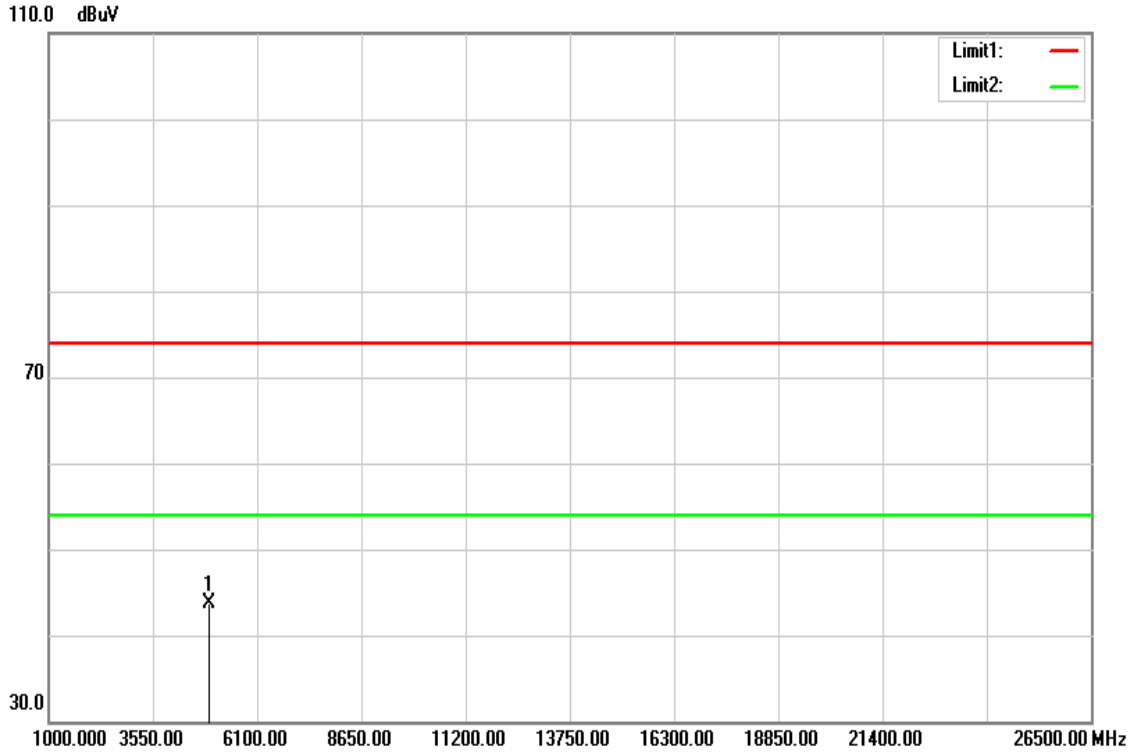
Test Mode	IEEE 802.11b High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	39.12	4.55	43.67	74.00	-30.33	peak
N/A						

Remark:

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

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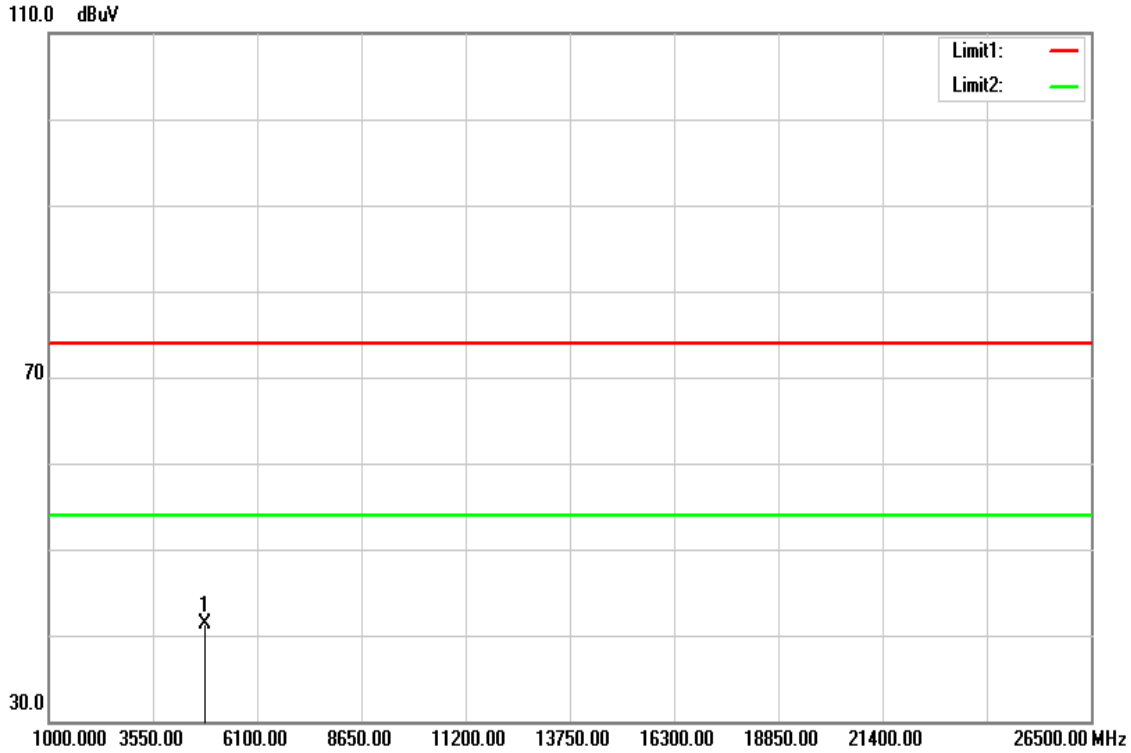
Test Mode	IEEE 802.11g Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	36.99	4.38	41.37	74.00	-32.63	peak
N/A						

Remark:

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

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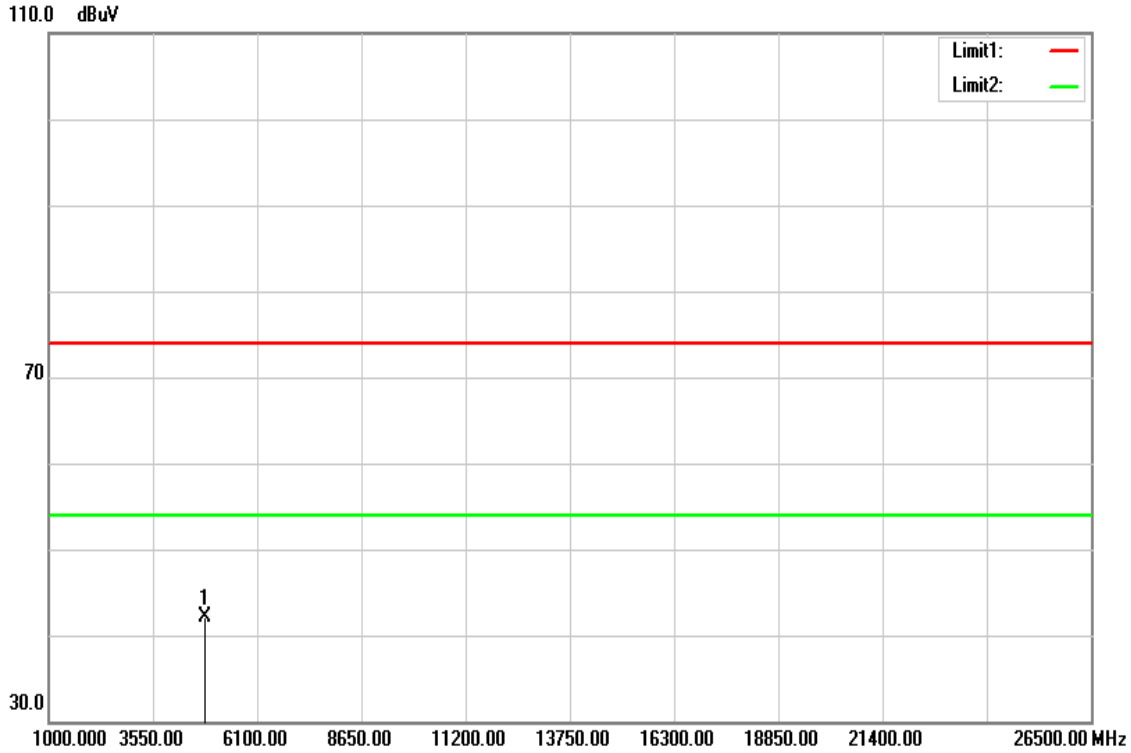
Test Mode	IEEE 802.11g Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	37.64	4.38	42.02	74.00	-31.98	peak
N/A						

Remark:

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

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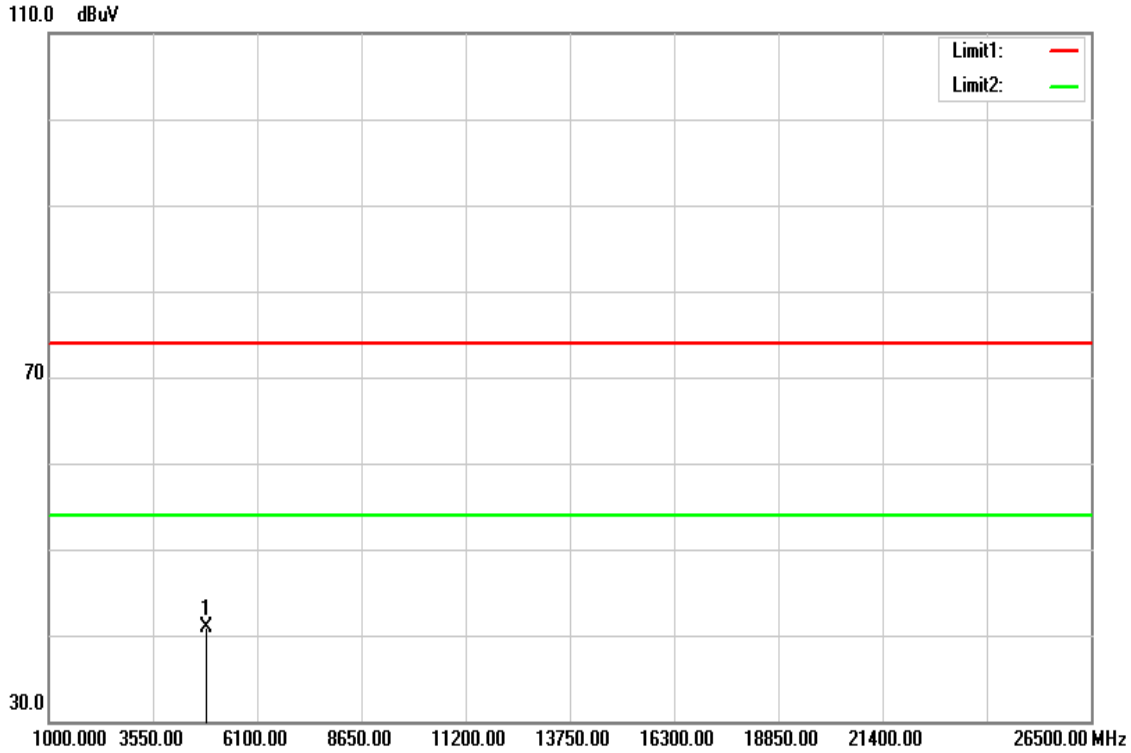
Test Mode	IEEE 802.11g Mid CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	36.51	4.47	40.98	74.00	-33.02	peak
N/A						

Remark:

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

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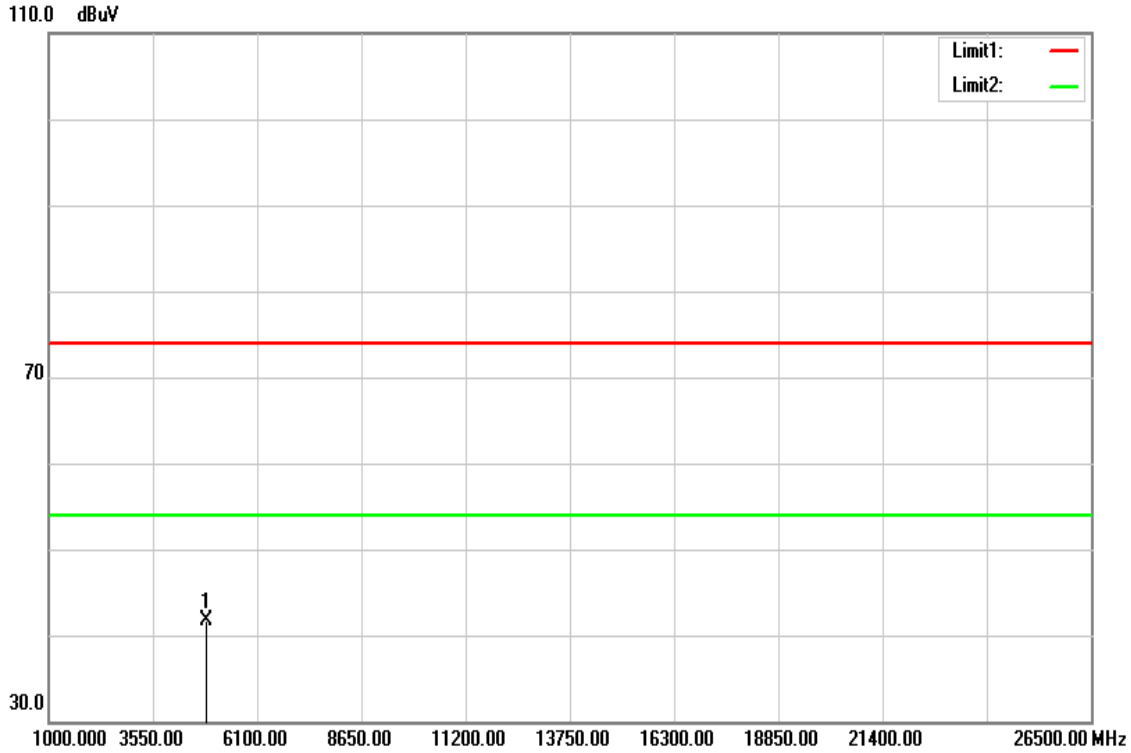
Test Mode	IEEE 802.11g Mid CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	37.18	4.47	41.65	74.00	-32.35	peak
N/A						

Remark:

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

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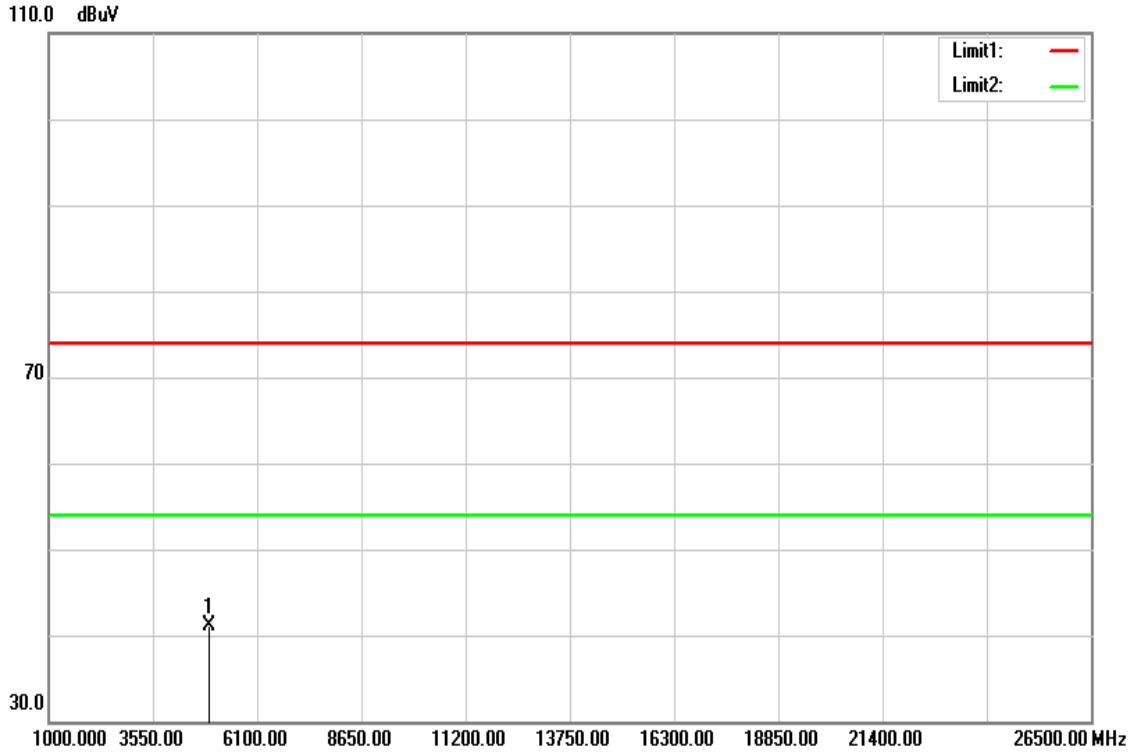
Test Mode	IEEE 802.11g High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	36.55	4.55	41.10	74.00	-32.90	peak
N/A						

Remark:

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

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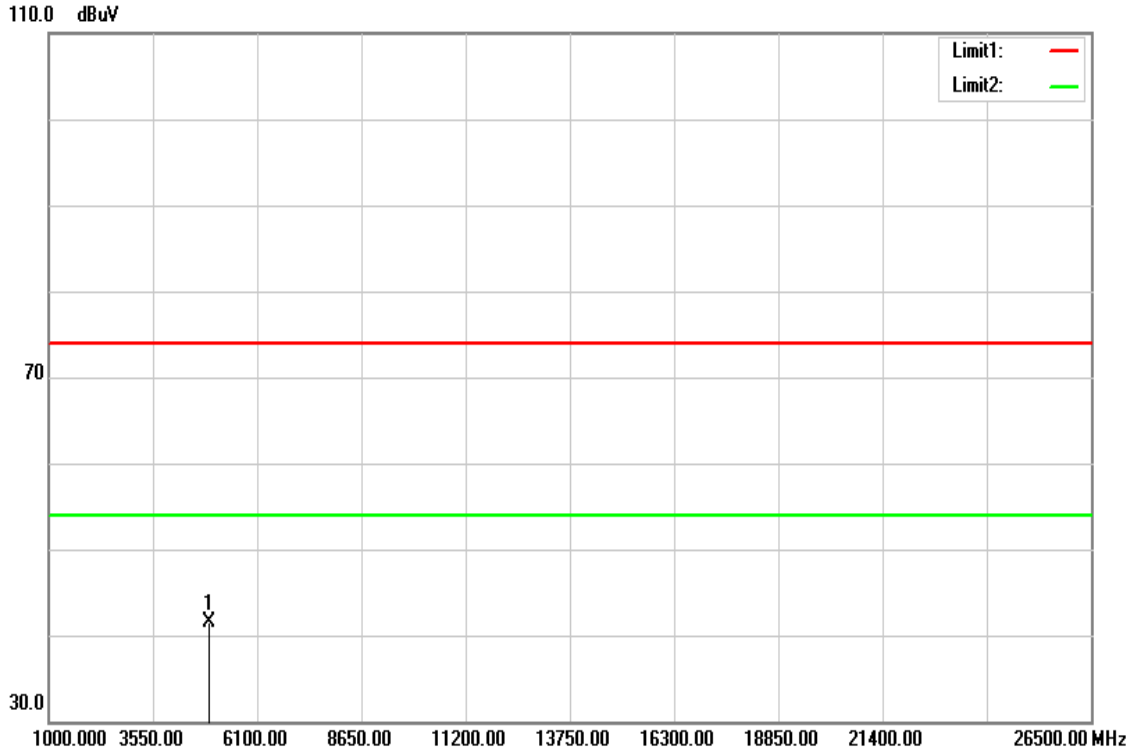
Test Mode	IEEE 802.11g High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	36.86	4.55	41.41	74.00	-32.59	peak
N/A						

Remark:

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

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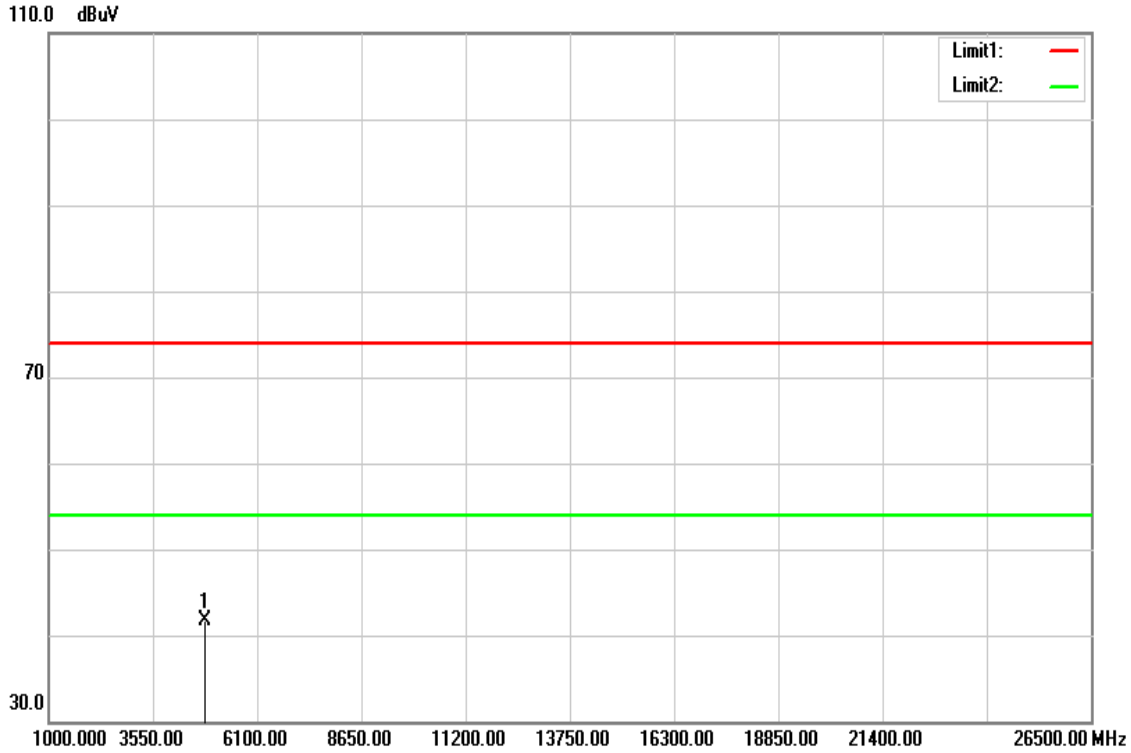
Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	37.23	4.38	41.61	74.00	-32.39	peak
N/A						

Remark:

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

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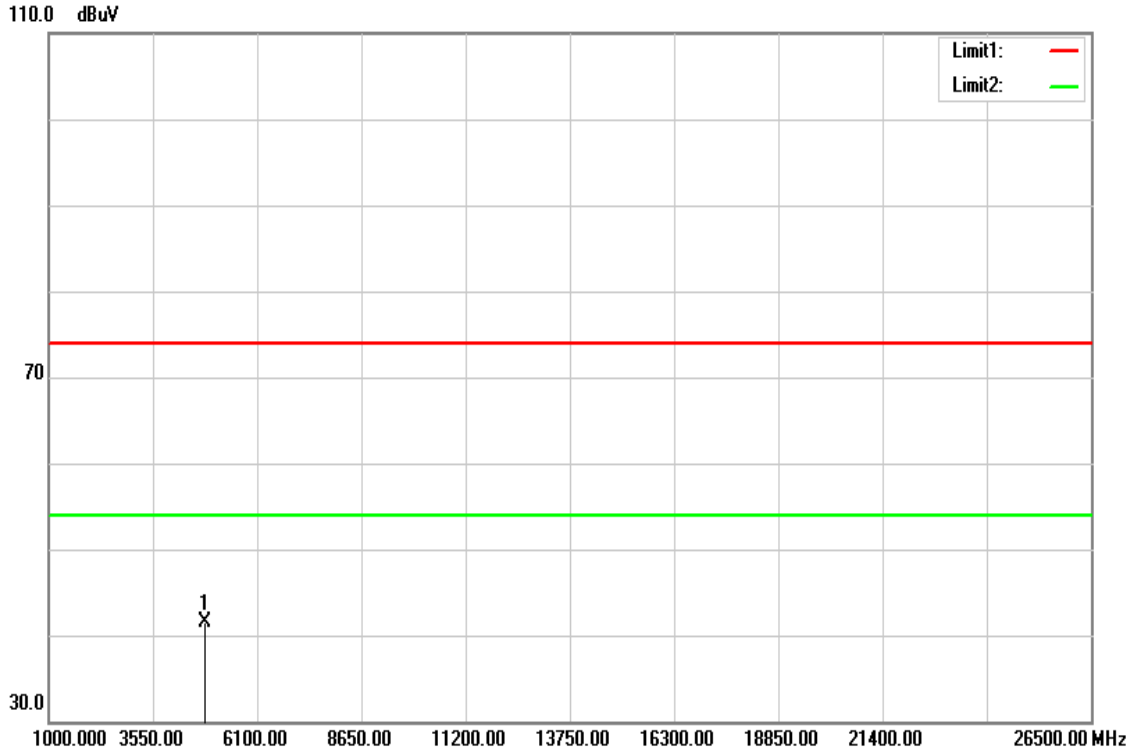
Test Mode	IEEE 802.11n HT20 Low CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4824.000	37.11	4.38	41.49	74.00	-32.51	peak
N/A						

Remark:

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

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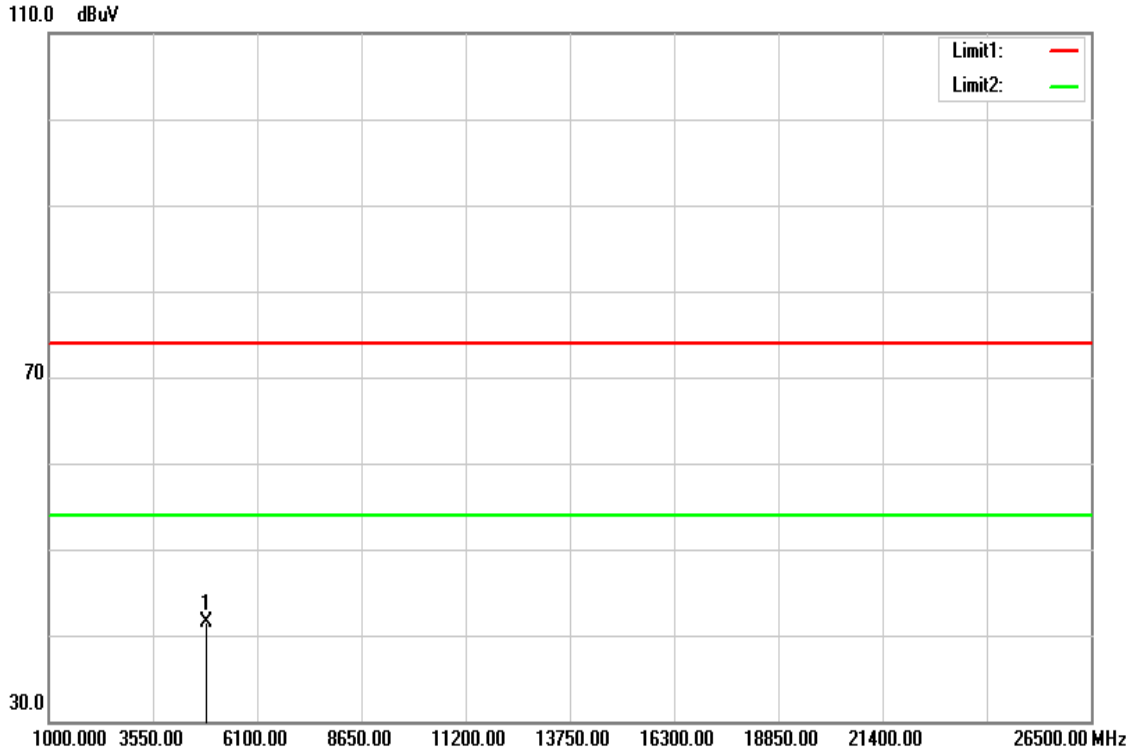
Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	36.97	4.47	41.44	74.00	-32.56	peak
N/A						

Remark:

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

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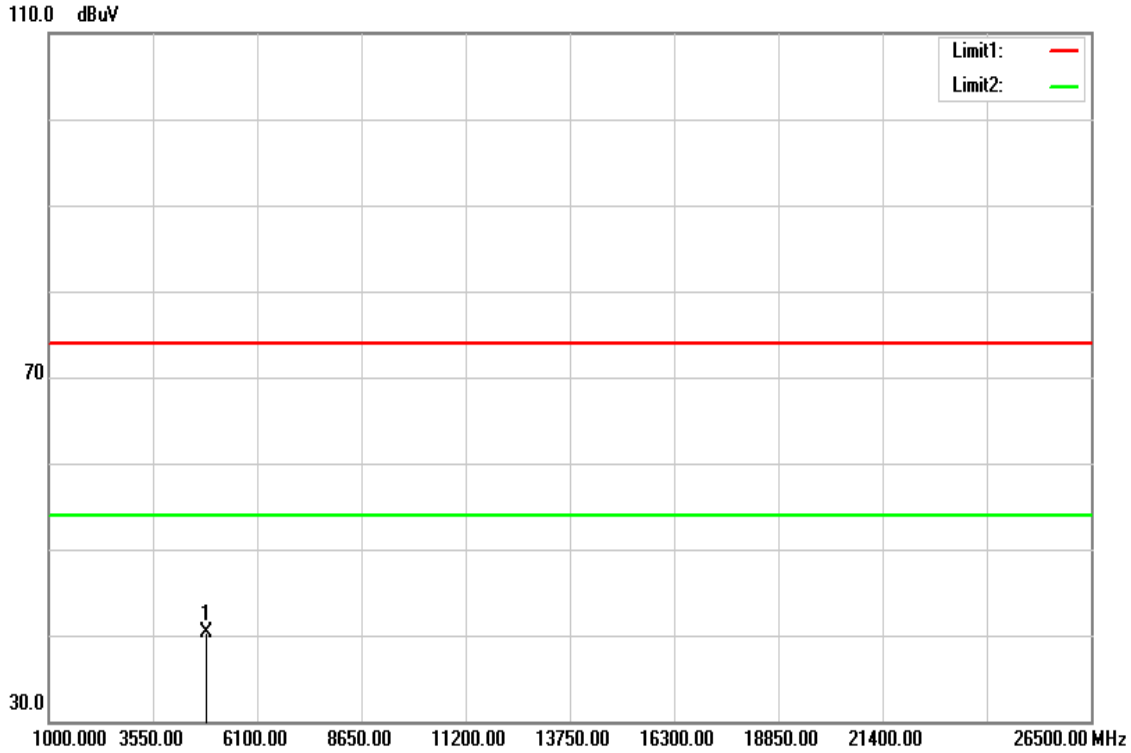
Test Mode	IEEE 802.11n HT20 Mid CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4874.000	35.77	4.47	40.24	74.00	-33.76	peak
N/A						

Remark:

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

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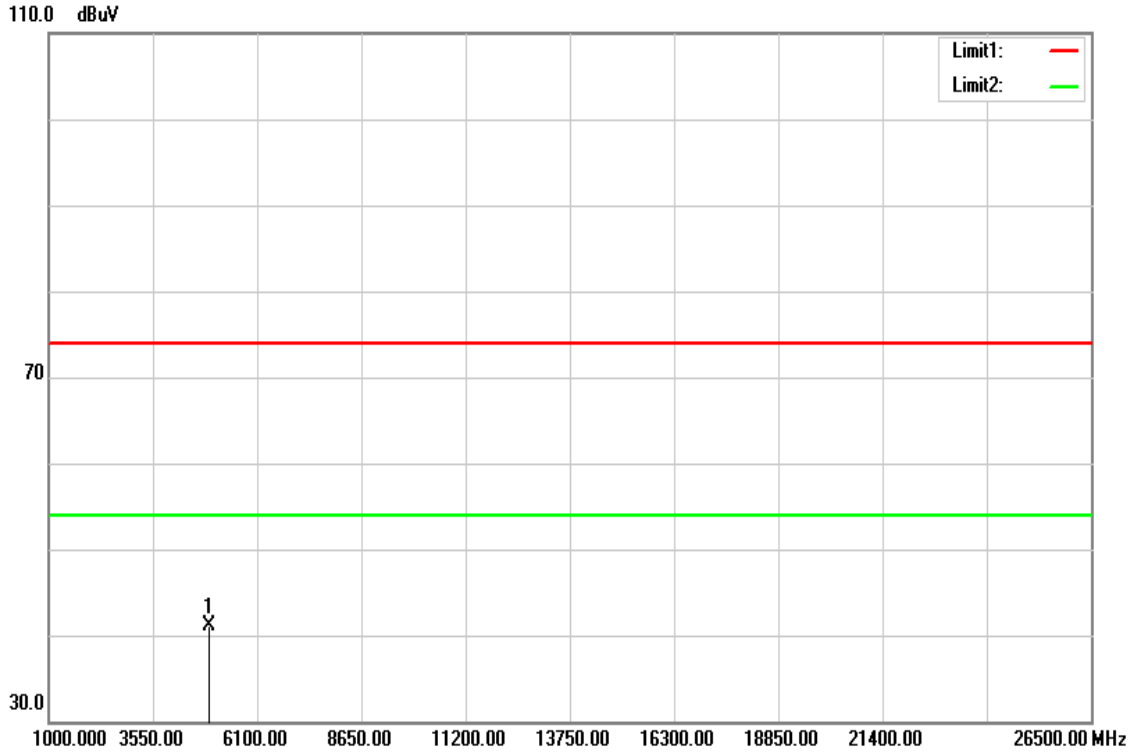
Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Vertical	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	36.50	4.55	41.05	74.00	-32.95	peak
N/A						

Remark:

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

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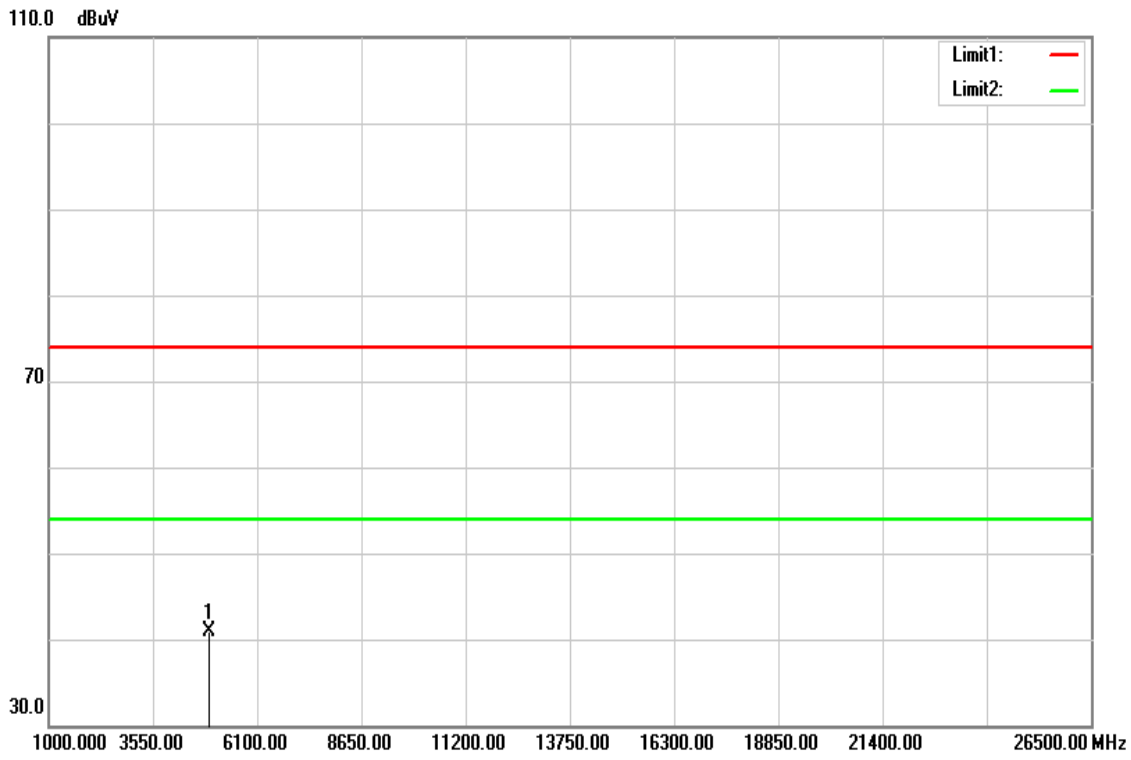
Report No.: T180522D10-RP3

Test Mode	IEEE 802.11n HT20 High CH	Temp/Hum	22(℃)/ 34%RH
Test Item	Harmonic	Test Date	June 28, 2018
Polarize	Horizontal	Test Engineer	Jerry Chuang
Detector	Peak and Average		



Frequency (MHz	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4924.000	36.34	4.55	40.89	74.00	-33.11	peak
N/A						

Remark:

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

--End of Report--

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