

FCC Test Report

Product Name : Dual-Band Wireless AC/N VDSL2 Combo WAN
Gigabit Gateway

Brand Name : ZYXEL

Model No. : VMG3625-T50B

FCC ID : I88VMG3625-T50B

Applicant : ZyXEL Communications Corporation

Address : No.2 Industry East RD. IX, Science Park,
Hsinchu, Taiwan

Date of Receipt : Sep. 09, 2019

Issued Date : Jul. 29, 2022

Report No. : 2230646R-RFUSWL2V01-A

Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd.



Product Name : Dual-Band Wireless AC/N VDSL2 Combo WAN Gigabit Gateway
Applicant : ZyXEL Communications Corporation
Address : No.2 Industry East RD. IX, Science Park, Hsinchu, Taiwan
Manufacturer : ZyXEL Communications Corporation
Address : No.2 Industry East RD. IX, Science Park, Hsinchu, Taiwan
Brand Name : ZYXEL
Model No. : VMG3625-T50B
FCC ID : I88VMG3625-T50B
EUT Voltage : DC 12V (adapter)
Testing Voltage : AC 120V/60Hz
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10: 2013
Laboratory Name : DEKRA Testing and Certification Co., Ltd.
Hsin Chu Laboratory
Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu
County 310, Taiwan, R.O.C.
Test Result : Complied

Documented By : Hailey Peng
(Hailey Peng / Senior Engineer)

Approved By : Rueyyan Lin
(Rueyyan Lin / Supervisor)

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Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Jul. 29, 2022

TABLE OF CONTENTS

Description	Page
1. General Information.....	6
1.1. EUT Description	6
1.2. Test Mode.....	8
1.3. Comments and Remarks.....	9
1.4. Tested System Details	10
1.5. Configuration of Tested System	10
1.6. EUT Operation of during Test	10
1.7. Test Facility	11
1.8. List of Test Equipment	12
1.9. Measurement Uncertainty	14
1.10. Duty Cycle.....	15
2. AC Power Line Conducted Emission.....	17
2.1. Test Setup	17
2.2. Test Limit	17
2.3. Test Procedure	17
2.4. Test Specification	17
2.5. Test Result of AC Power Line Conducted Emission	18
3. Maximum Conducted Output Power.....	20
3.1. Test Setup	20
3.2. Test Limit	20
3.3. Test Procedures	20
3.4. Test Specification	20
3.5. Test Result of Maximum Conducted Output Power.....	21
4. Radiated Emission	22
4.1. Test Setup	22
4.2. Test Limit	23
4.3. Test Procedure	23
4.4. Test Specification	24
4.5. Test Result of Radiated Emissions (30 MHz ~ 1 GHz).....	25
4.6. Test Result of Radiated Emissions (1 GHz ~ 10 th Harmonic).....	26
5. Antenna Port Conducted Emission.....	50
5.1. Test Setup	50
5.2. Test Limit	50
5.3. Test Procedure	50
5.4. Test Specification	50
5.5. Test Result of Antenna Port Conducted Emission.....	51
6. Radiated Emission Band Edge.....	59
6.1. Test Setup	59
6.2. Test Limit	59
6.3. Test Procedure	60
6.4. Test Specification	60
6.5. Test Result of Radiated Emission Band Edge.....	61
7. Occupied Bandwidth & DTS Bandwidth.....	111
7.1. Test Setup	111
7.2. Test Limit	111
7.3. Test Procedures	111
7.4. Test Specification	111
7.5. Test Result of Occupied Bandwidth	112
7.6. Test Result of DTS Bandwidth	114

8.	Maximum Power Spectral Density	116
8.1.	Test Setup	116
8.2.	Test Limit	116
8.3.	Test Procedures	116
8.4.	Test Specification	116
8.5.	Test Result of Maximum Power Spectral Density.....	117
Appendix A	119
<input type="checkbox"/>	Test Result of Radiated Emissions Co-location.....	119
Appendix B	120
<input type="checkbox"/>	Test Setup Photograph.....	120

1. General Information

1.1. EUT Description

Product Name	Dual-Band Wireless AC/N VDSL2 Combo WAN Gigabit Gateway	
Brand Name	ZYXEL	
Model No.	VMG3625-T50B	
Frequency Range / Channel Number	IEEE 802.11b/g	2412 ~ 2462 MHz / 11 Channels
	IEEE 802.11n (20 MHz)	2412 ~ 2462 MHz / 11 Channels
	IEEE 802.11n (40 MHz)	2422 ~ 2452 MHz / 7 Channels
Type of Modulation	IEEE 802.11b	DSSS
	IEEE 802.11g/n	OFDM
Data Rate	IEEE 802.11b	1, 2, 5.5, 11 Mbps
	IEEE 802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0 ~ MCS 15 and bandwidth defined in 802.11n

Accessories Information				
No.	Equipment Name	Brand Name	Model No.	Rating
1	Adapter	APD	WB-24J12FU	INPUT: AC 100~240V, 50~60Hz, 0.7A Max. OUTPUT: DC 12V, 2A
No.	Equipment Name	Brand Name	Model No.	Description
2	VDSL Micro Filter	MAGCOM	VFN773P	Non-Shielded, 0.1m
3	Ethernet Cable	-	-	Non-Shielded, 1.5m
4	DSL Cable	-	-	Non-Shielded, 1.5m

Antenna Information						
Ant.	Brand Name	Model No.	Type	Antenna Gain (dBi)	Maximum Antenna Gain (dBi)	Directional Gain (dBi)
0	HONGBO	T50B (2.4GHz)	PCB	2.95	3.23	6.10
1	ZYXEL	2.4G Antenna #2	Internal Printed	3.23		

Directional Gain = $10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{Ant}]$

For IEEE 802.11b/g/n mode: (2TX, 2RX)

Both Ant. 0 and Ant. 1 can be used as transmitting/receiving antennas, and they can transmit/receive signal simultaneously.

IEEE 802.11b/g & IEEE 802.11n (20 MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	-	-

IEEE 802.11n (40 MHz)

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	-	-

Note:

1. Regards to the frequency band operation; the lowest, middle and highest frequency of channel were selected to perform the test, and then shown on this report.
2. The above EUT information is declared by the manufacturer.

1.2. Test Mode

DEKRA has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

Test Mode	Mode 1: Transmit
-----------	------------------

Test Items	Modulation	Channel	Antenna	Result
AC Power Line Conducted Emission	11b	6	0+1	Pass
Maximum Conducted Output Power	11b	1/6/11	0+1	Pass
	11g	1/6/11	0+1	Pass
	11n (20 MHz)	1/6/11	0+1	Pass
	11n (40 MHz)	3/4/6/8/9	0+1	Pass
Radiated Emission Below 1 GHz	11b	6	0+1	Pass
Radiated Emission Above 1 GHz	11b	1/6/11	0+1	Pass
	11g	1/6/11	0+1	Pass
	11n (20 MHz)	1/6/11	0+1	Pass
	11n (40 MHz)	3/6/9	0+1	Pass
Antenna Port Conducted Emission	11b	1/6/11	0+1	Pass
	11g	1/6/11	0+1	Pass
	11n (20 MHz)	1/6/11	0+1	Pass
	11n (40 MHz)	3/6/9	0+1	Pass
Radiated Emission Band Edge	11b	1/6/11	0+1	Pass
	11g	1/6/11	0+1	Pass
	11n (20 MHz)	1/6/11	0+1	Pass
	11n (40 MHz)	3/4/6/8/9	0+1	Pass
Occupied Bandwidth & DTS Bandwidth	11b	1/6/11	0+1	Pass
	11g	1/6/11	0+1	Pass
	11n (20 MHz)	1/6/11	0+1	Pass
	11n (40 MHz)	3/6/9	0+1	Pass
Maximum Power Spectral Density	11b	1/6/11	0+1	Pass
	11g	1/6/11	0+1	Pass
	11n (20 MHz)	1/6/11	0+1	Pass
	11n (40 MHz)	3/6/9	0+1	Pass

Note:

- Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- The worst case of data rate for 802.11b is 1 Mbps, for 802.11g is 6 Mbps, for 802.11n (20 MHz)/802.11n (40 MHz) are MCS 0, Nss1.

3. For radiated emission below 1 GHz and AC power line conducted emission have performed all modes of operation were investigated and the worst-case emissions are reported.
4. The EUT could be applied with WiFi 2.4 GHz function and WiFi 5 GHz function; therefore Co-location Maximum Permissible Exposure (Please refer to DEKRA Report No.: 2230646R-RFUSMPEV02-A) and Radiated Emission Co-location (Please refer to Appendix A) tests are added for simultaneously transmit between WiFi 2.4 GHz function and WiFi 5 GHz function.
5. Reference to DEKRA Project No.: 1990099R (After evaluating, related test items have been verified, and the original test data is replaced.).

1.3. Comments and Remarks

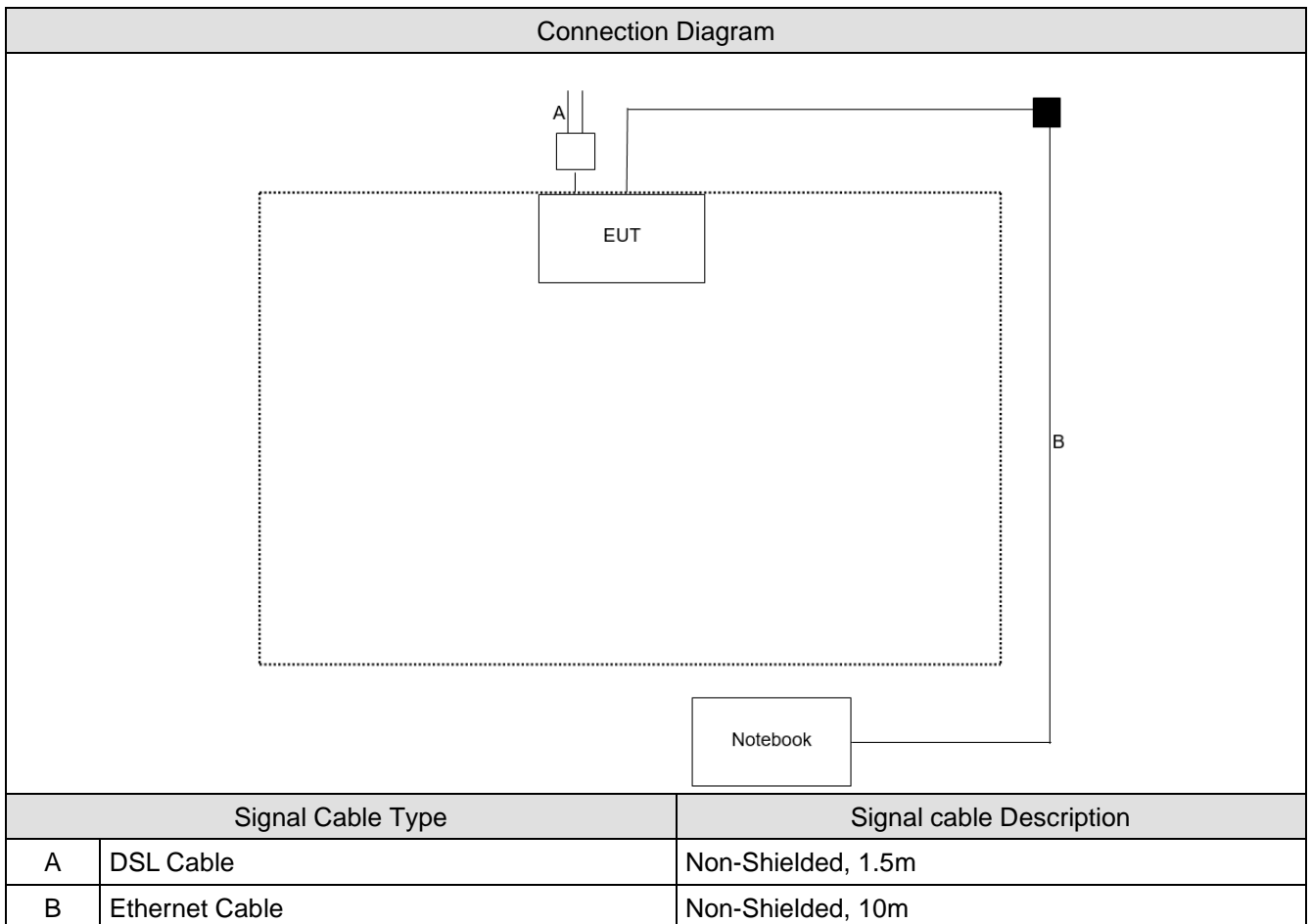
The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1.4. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system.

	Product	Manufacturer	Model No.	Serial No.	FCC ID
1	Notebook	Lenovo	Lenovo Ideapad 110 15IBR	PF0MEEB0	SDoC

1.5. Configuration of Tested System



1.6. EUT Operation of during Test

1	Execute control command by software "QATool ver 0.0.1.85".
2	Configure the test mode, the test channel, and the data rate.
3	Press "Start TX" to start the continuous transmitting.
4	Verify that the EUT works properly.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Actually	Tested by	Test Date	Test Site
Temperature (°C)	AC Power Line Conducted Emission	22.5	Ling Chen	2022/05/03	HC-SR02
Humidity (%RH)		61			
Temperature (°C)	Maximum Conducted Output Power	23 ~ 24.5	Clemens Fang	2019/11/22, 2022/07/21, 2022/07/29	HC-SR12
Humidity (%RH)		51 ~ 60			
Temperature (°C)	Radiated Emission Below 1GHz	22	Gary Liao	2022/05/04	HC-CB04
Humidity (%RH)		61			
Temperature (°C)	Radiated Emission Above 1GHz	25.4	Clemens Fang	2019/09/25	HC-CB04
Humidity (%RH)		58			
Temperature (°C)	Antenna Port Conducted Emission	25	Clemens Fang	2019/09/26	HC-SR12
Humidity (%RH)		54			
Temperature (°C)	Radiated Emission Band Edge	23.8 ~ 25.5	Elwin Lin Ling Chen	2019/09/19, 2022/07/21, 2022/07/29	HC-CB04
Humidity (%RH)		56 ~ 62			
Temperature (°C)	Occupied Bandwidth & DTS Bandwidth	25	Clemens Fang	2019/09/26 ~ 2019/09/27	HC-SR12
Humidity (%RH)		54			
Temperature (°C)	Maximum Power Spectral Density	24	Clemens Fang	2019/11/23	HC-SR12
Humidity (%RH)		58			
Temperature (°C)	Radiated Emission Co-location	24	Ling Chen	2022/07/07	HC-CB04
Humidity (%RH)		60			

Note: Test site information refers to Laboratory Information.

USA : **FCC Registration Number: TW3024**

Canada : **CAB identifier : TW3024**

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: <http://www.dekra.com.tw>

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
E mail address	info.tw@dekra.com
Website	http://www.dekra.com.tw

Note: Test site number for address 1 includes HC-SR02. Test site number for address 2 includes HC-CB02, HC-CB03, HC-CB04, SR10-H and HC-SR12.

1.8. List of Test Equipment

HC-SR02

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2021/12/27	2022/12/26
EMI Test Receiver	R&S	ESR3	102608	2022/05/30	2023/05/29
LISN	R&S	ENV216	100092	2022/04/29	2023/04/28
Coaxial Cable(9 m)	Harbour	RG-400	HC-SR02	2021/08/15	2022/08/14
DEKRA Testing System	DEKRA	Version 2.0	HC-SR02	N/A	N/A

HC-SR12

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2018/12/17	2019/12/16
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2021/11/12	2022/11/11
Pulse Power Sensor	Anritsu	MA2411B	1531043	2018/12/17	2019/12/16
Pulse Power Sensor	Anritsu	MA2411B	1531043	2021/11/12	2022/11/11
Pulse Power Sensor	Anritsu	MA2411B	1531044	2018/12/17	2019/12/16
Pulse Power Sensor	Anritsu	MA2411B	1531044	2021/11/12	2022/11/11
Power Meter	Keysight	8990B	MY51000248	2019/05/21	2020/05/20
Power Sensor	Keysight	N1923A	MY57240005	2019/05/21	2020/05/20
Spectrum Analyzer	Agilent	N9010A	US47140172	2019/06/28	2020/06/27
Signal & Spectrum Analyzer	R&S	FSV40	101049	2019/09/11	2020/09/10
Spectrum Analyzer	Keysight	N9030B	MY57140404	2019/06/18	2020/06/17
Spectrum Analyzer	Keysight	N9010B	MY57110159	2019/05/03	2020/05/02

HC-CB04

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2019/10/21	2020/10/20
Signal Analyzer	R&S	FSVA40	101455	2021/10/22	2022/10/21
Signal & Spectrum Analyzer	R&S	FSV40	101049	2019/09/11	2020/09/10
Signal & Spectrum Analyzer	R&S	FSV40	101049	2022/04/25	2023/04/24
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2019/03/15	2020/03/14
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2022/01/07	2023/01/06
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	1209	2022/06/14	2023/06/13
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2019/05/28	2020/05/27
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2022/05/06	2023/05/05
Horn Antenna	Schwarzbeck	BBHA 9170	202	2019/01/16	2020/01/15
Pre-Amplifier	EMCI	EMC01820I	980364	2021/08/27	2022/08/26
Pre-Amplifier	EMCI	EMC01820I	980365	2022/04/15	2023/04/14
Pre-Amplifier	DEKRA	AP-025C	201801236	2019/09/24	2020/09/23
Pre-Amplifier	EMCI	EMC11830I	980366	2018/12/21	2019/12/20
Pre-Amplifier	DEKRA	AP-400C	201801231	2018/12/05	2019/12/04
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2019/10/25	2020/10/24
Signal Analyzer	R&S	FSV40	101435	2019/07/08	2020/07/07
Signal and Spectrum Analyzer	R&S	FSVA40	101435	2022/05/30	2023/05/29
EMI Test Receiver	R&S	ESR7	102260	2021/12/22	2022/12/21
Magnetic Loop Antenna	Teseq	HLA 6121	44287	2021/09/06	2022/09/05
Coaxial Cable(10m)	Suhner	SF102_SF104	HC-CB04	2021/08/09	2022/08/08
Coaxial Cable(19m)	Suhner	SF102_SF104_SF106	HC-CB04_2	2019/07/25	2020/07/24
DEKRA Testing System	DEKRA	Version 2.0	HC-CB04	N/A	N/A
Radiated Software	AUDIX	e3 V9	HC-CB04_1	N/A	N/A

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

1.9. Measurement Uncertainty

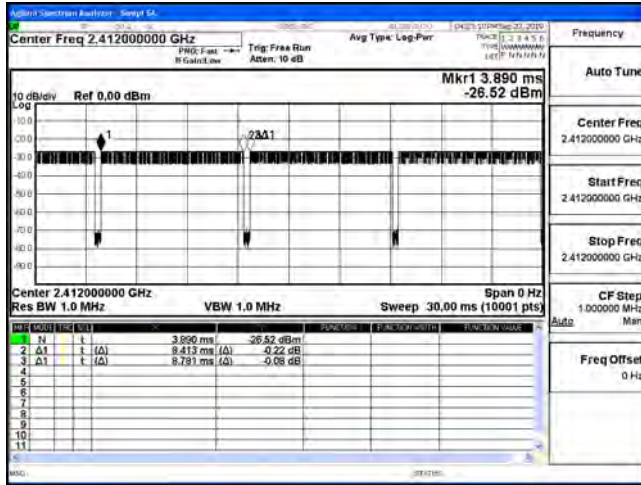
Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Test Item	Uncertainty
AC Power Line Conducted Emission	± 2.10 dB
Maximum Conducted Output Power	± 1.16 dB
Radiated Emission	± 3.25 dB below 1 GHz ± 3.46 dB above 1 GHz
Antenna Port Conducted Emission	± 2.11 dB
Radiated Emission Band Edge	± 3.16 dB above 1GHz
DTS Bandwidth	± 282 Hz
Occupied Bandwidth	± 282 Hz
Maximum Power Spectral Density	± 2.11 dB

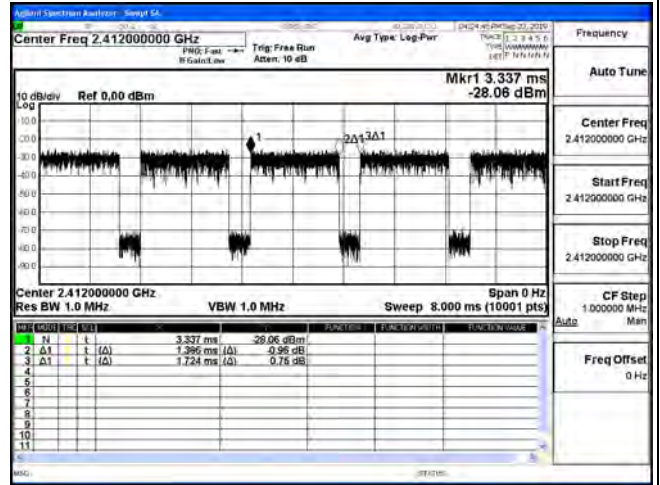
1.10. Duty Cycle

Modulation	On Times (ms)	On+Off Times (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11b	8.413	8.781	95.81	0.372	0.119
802.11g	1.386	1.724	80.39	1.895	0.722
802.11n (20 MHz)	1.304	1.671	78.04	1.618	0.767
802.11n (40 MHz)	0.621	0.992	62.60	4.068	1.610

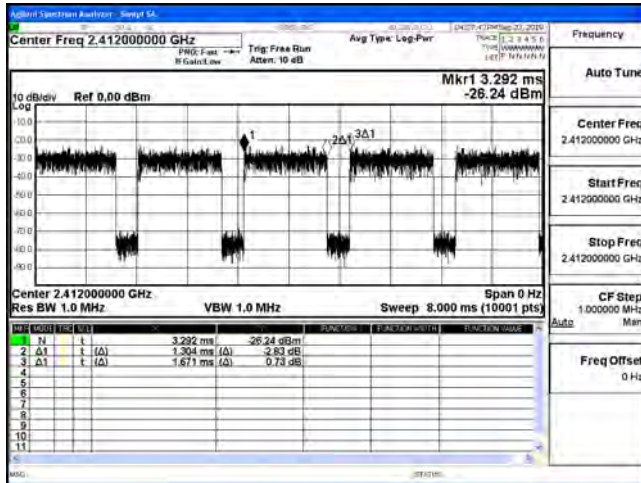
802.11b



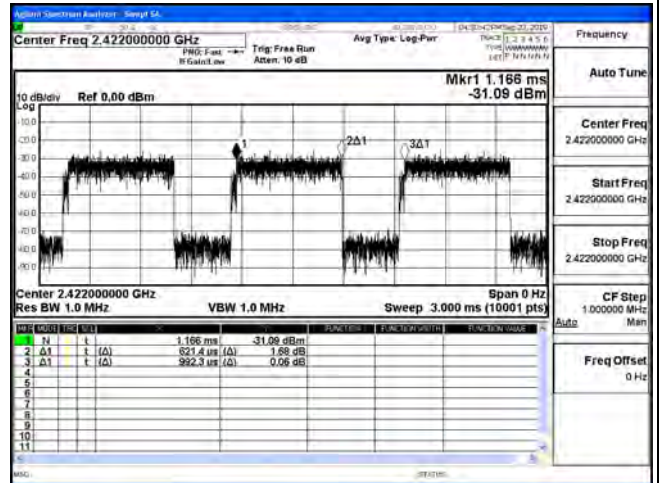
802.11g



802.11n (20 MHz)

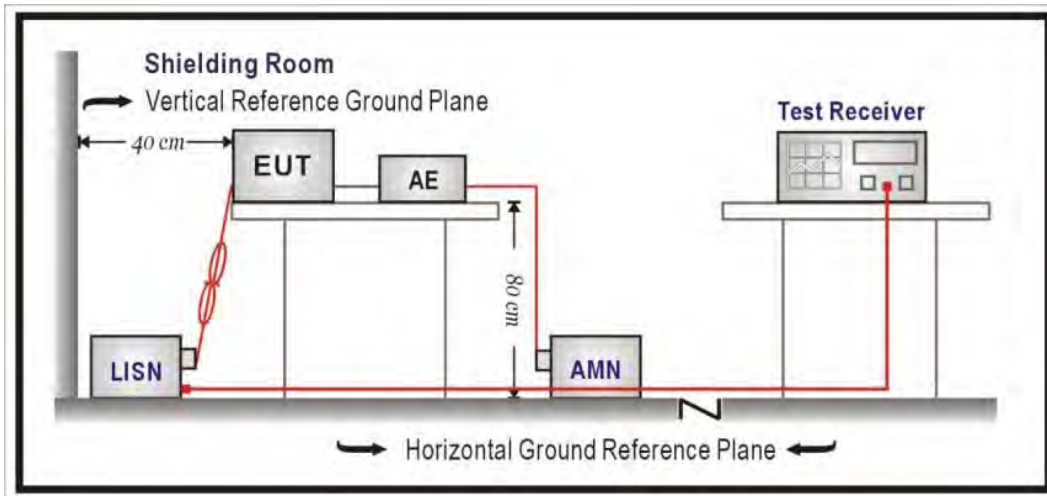


802.11n (40 MHz)



2. AC Power Line Conducted Emission

2.1. Test Setup



2.2. Test Limit

Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50 uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm/50 uH coupling impedance with 50 ohm termination. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.

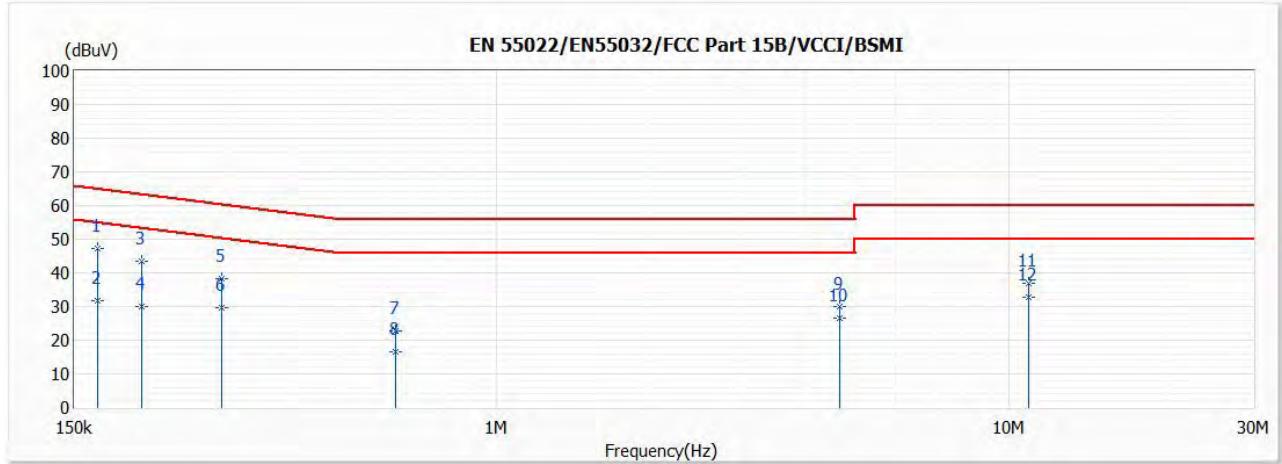
AC Power Line Conducted Emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz.

2.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

2.5. Test Result of AC Power Line Conducted Emission

Test Mode	Mode 1	Phase	Line
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2437 MHz		

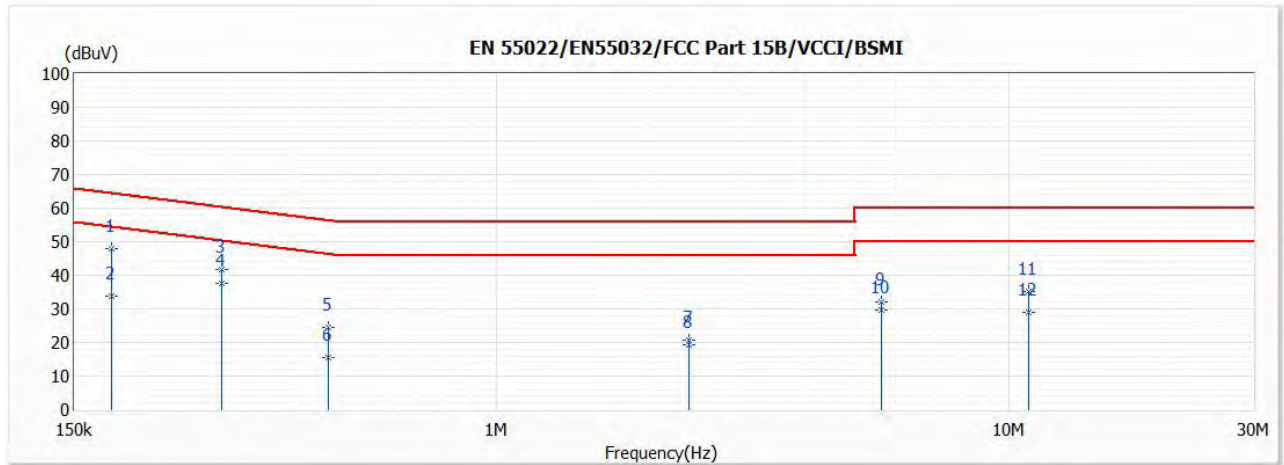


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.167	47.26	65.13	-17.87	37.63	9.63	QP
2	0.167	31.67	55.13	-23.46	22.04	9.63	AV
3	0.203	43.46	63.50	-20.04	33.82	9.64	QP
4	0.203	30.04	53.50	-23.46	20.40	9.64	AV
5	0.291	38.18	60.50	-22.32	28.53	9.65	QP
6	0.291	29.65	50.50	-20.85	20.00	9.65	AV
7	0.636	22.66	56.00	-33.34	12.98	9.68	QP
8	0.636	16.52	46.00	-29.48	6.84	9.68	AV
9	4.673	30.16	56.00	-25.84	20.24	9.92	QP
10	4.673	26.42	46.00	-19.58	16.50	9.92	AV
11	10.905	36.94	60.00	-23.06	26.81	10.13	QP
*12	10.905	32.62	50.00	-17.38	22.49	10.13	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Test Mode	Mode 1	Phase	Neutral
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2437 MHz		



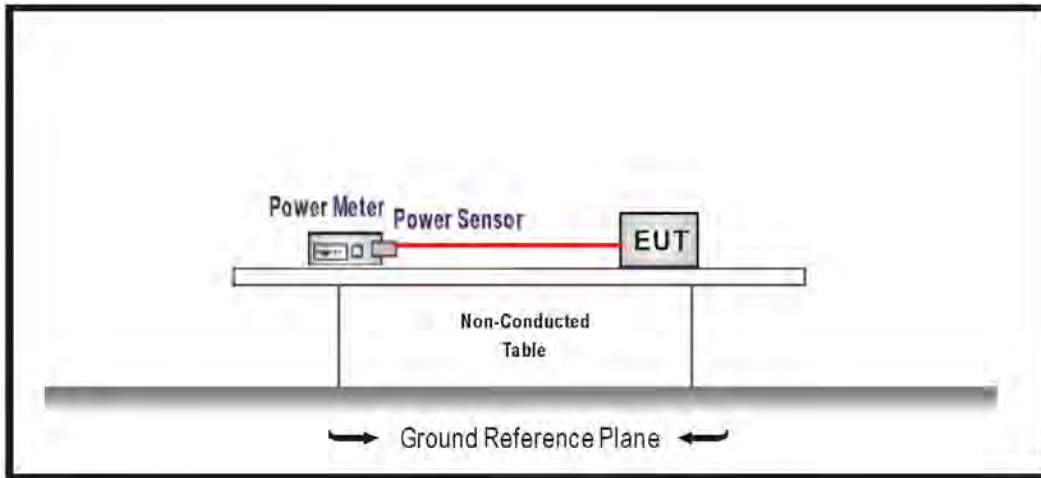
No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.177	47.89	64.61	-16.72	38.27	9.62	QP
2	0.177	33.64	54.61	-20.97	24.02	9.62	AV
3	0.290	41.73	60.52	-18.79	32.09	9.64	QP
*4	0.290	37.55	50.52	-12.97	27.91	9.64	AV
5	0.470	24.60	56.51	-31.91	14.93	9.67	QP
6	0.470	15.48	46.51	-31.03	5.81	9.67	AV
7	2.369	20.83	56.00	-35.17	11.04	9.79	QP
8	2.369	19.33	46.00	-26.67	9.54	9.79	AV
9	5.644	32.00	60.00	-28.00	22.03	9.97	QP
10	5.644	29.65	50.00	-20.35	19.68	9.97	AV
11	10.912	35.24	60.00	-24.76	25.06	10.18	QP
12	10.912	29.11	50.00	-20.89	18.93	10.18	AV

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

3. Maximum Conducted Output Power

3.1. Test Setup



3.2. Test Limit

The maximum conducted output power shall be less 30 dBm (1 Watt).

3.3. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB 558074 D01 v05r02 for compliance to FCC 47CFR 15.247 requirements.

3.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

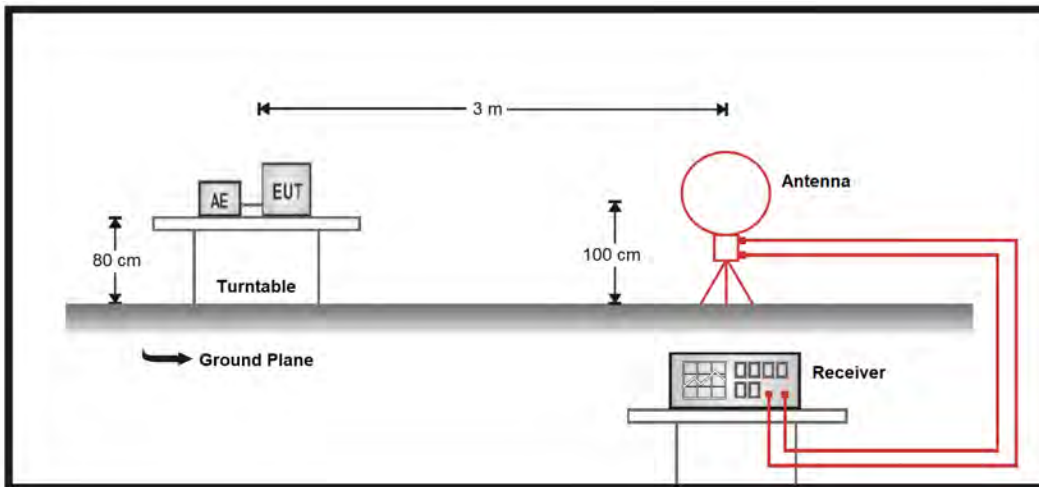
3.5. Test Result of Maximum Conducted Output Power

Modulation	Channel	Frequency (MHz)	Maximum Conducted Output Power (dBm)			Limit (dBm)	Result
			Ant. 0	Ant. 1	Total		
802.11b	1	2412	16.030	15.840	18.946	≤ 30.00	Pass
	6	2437	16.940	15.740	19.392	≤ 30.00	Pass
	11	2462	17.030	16.570	19.816	≤ 30.00	Pass
802.11g	1	2412	19.63	18.94	22.309	≤ 30.00	Pass
	6	2437	20.47	19.13	22.862	≤ 30.00	Pass
	11	2462	20.82	19.61	23.267	≤ 30.00	Pass
802.11n (20 MHz)	1	2412	18.98	18.59	21.800	≤ 30.00	Pass
	6	2437	20.36	19.45	22.939	≤ 30.00	Pass
	11	2462	20.74	19.85	23.328	≤ 30.00	Pass
802.11n (40 MHz)	3	2422	16.21	15.27	18.776	≤ 30.00	Pass
	4	2427	18.65	17.70	21.211	≤ 30.00	Pass
	6	2437	18.82	18.07	21.471	≤ 30.00	Pass
	8	2447	18.72	17.86	21.322	≤ 30.00	Pass
	9	2452	17.28	16.32	19.837	≤ 30.00	Pass

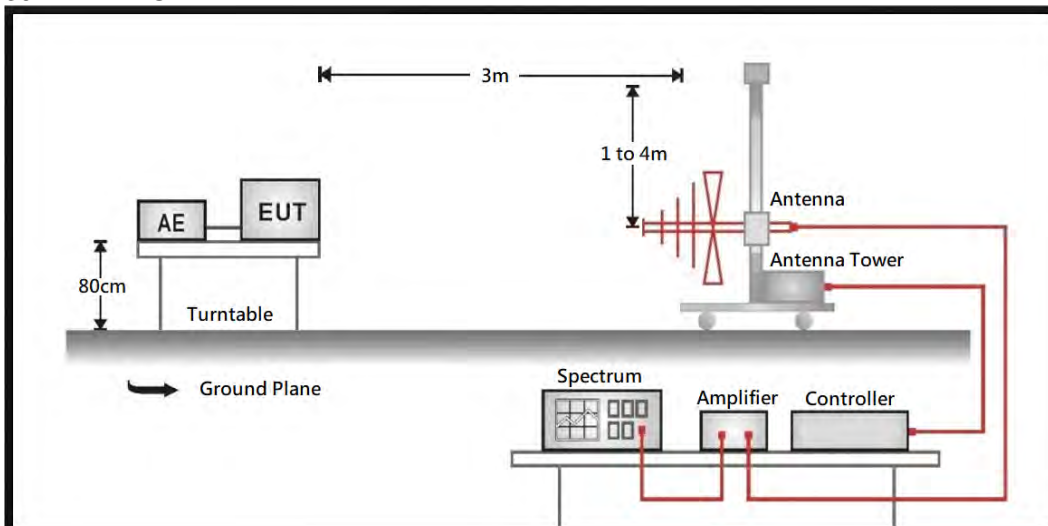
4. Radiated Emission

4.1. Test Setup

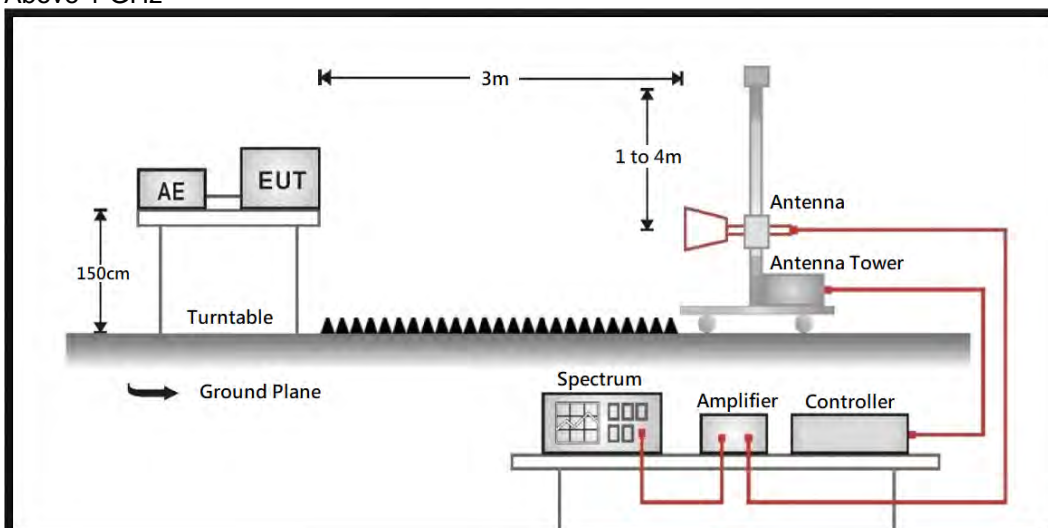
9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



Above 1 GHz



4.2. Test Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 30dB below the level of the fundamental or to the general radiated emission limit in paragraph 15.209, whichever is the lesser attenuation.

Frequency (MHz)	Field strength (uV/m)	Field strength (dBuV/m)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	20 log (2400/F(kHz))	300
0.490 – 1.705	24000/F(kHz)	20 log (24000/F(kHz))	30
1.705 - 30	30	29.5	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Remarks:

1. Field strength (dBuV/m) = 20 log Field strength (uV/m)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

4.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB 558074 D01V05r02 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

On any frequency or frequencies from 9 kHz(include The the lowest oscillator frequency generated within the device up to the 10th harmonic) to 1000 MHz, the limit shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limit shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

The bandwidth below 1 GHz setting on the field strength meter is 120 kHz and above 1 GHz is 1 MHz.

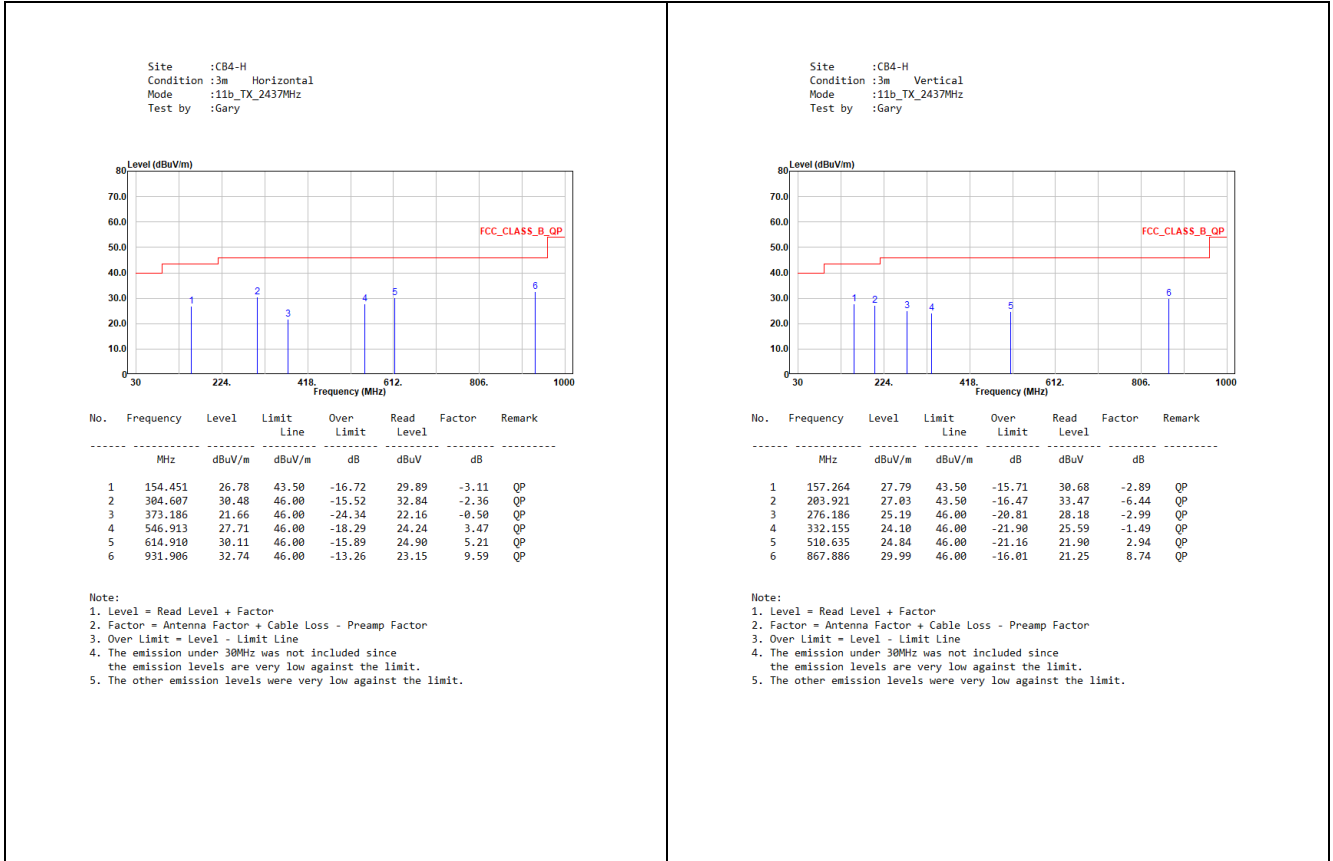
The following table is the setting of spectrum analyzer.

Spectrum Parameter	Setting	
RBW	1 MHz for Peak, 1 MHz for Average	
VBW	802.11b	3 MHz for Peak, 1 kHz for Average
	802.11g	3 MHz for Peak, 1 kHz for Average
	802.11n (20 MHz)	3 MHz for Peak, 1 kHz for Average
	802.11n (40 MHz)	3 MHz for Peak, 2 kHz for Average

4.4. Test Specification

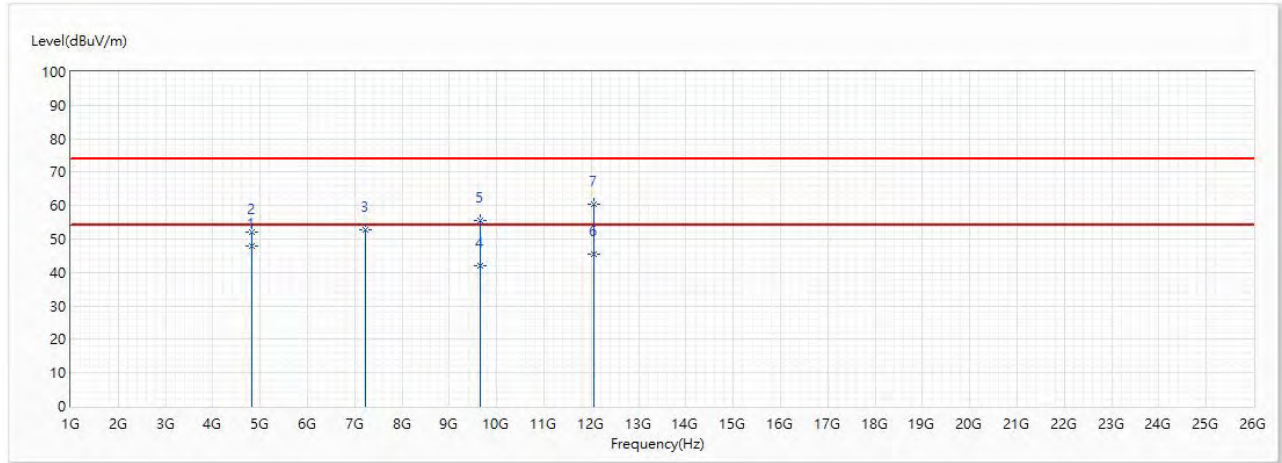
According to FCC Part 15 Subpart C Paragraph 15.247.

4.5. Test Result of Radiated Emissions (30 MHz ~ 1 GHz)



4.6. Test Result of Radiated Emissions (1 GHz ~ 10th Harmonic)

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2412 MHz		

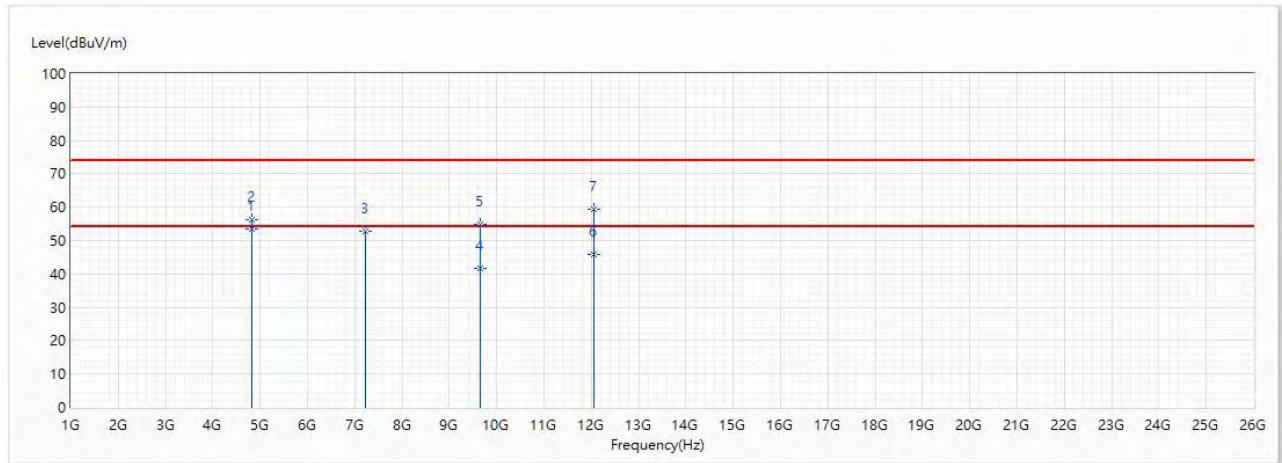


No	Frequency (MHz)	Emission Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Reading Level (dBUV)	Correct Factor (dB)	Detector Type
* 1	4824	47.81	54.00	-6.19	44.48	3.33	AV
2	4824	52.13	74.00	-21.87	48.80	3.33	PK
3	7236	52.78	74.00	-21.22	40.28	12.50	PK
4	9648	41.85	54.00	-12.15	25.52	16.33	AV
5	9648	55.69	74.00	-18.31	39.36	16.33	PK
6	12060	45.56	54.00	-8.44	25.03	20.53	AV
7	12060	60.35	74.00	-13.65	39.82	20.53	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2412 MHz		

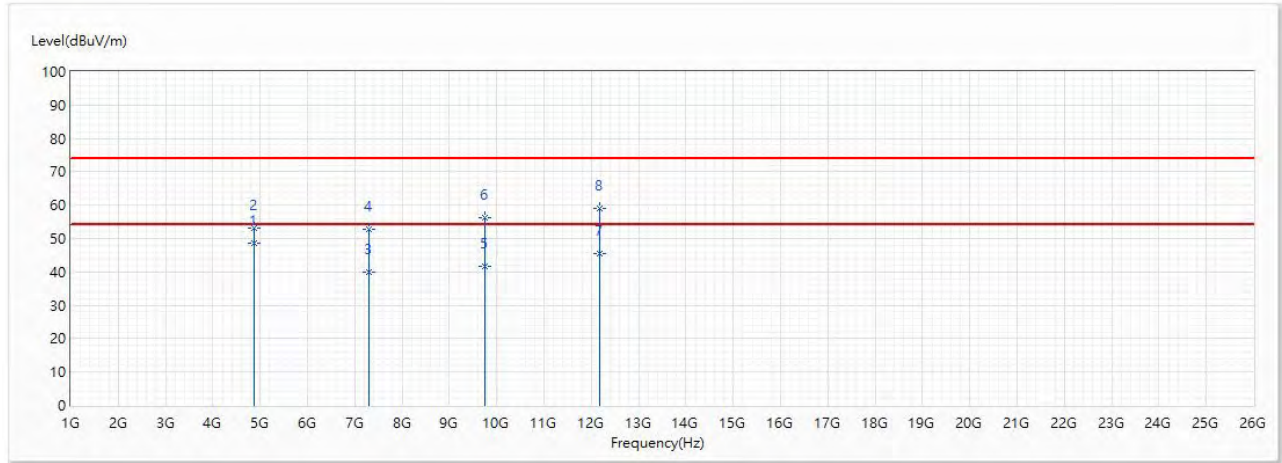


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4824	53.48	54.00	-0.52	50.15	3.33	AV
2	4824	56.33	74.00	-17.67	53.00	3.33	PK
3	7236	52.81	74.00	-21.19	40.31	12.50	PK
4	9648	41.54	54.00	-12.46	25.21	16.33	AV
5	9648	54.99	74.00	-19.01	38.66	16.33	PK
6	12060	45.69	54.00	-8.31	25.16	20.53	AV
7	12060	59.38	74.00	-14.62	38.85	20.53	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2437 MHz		

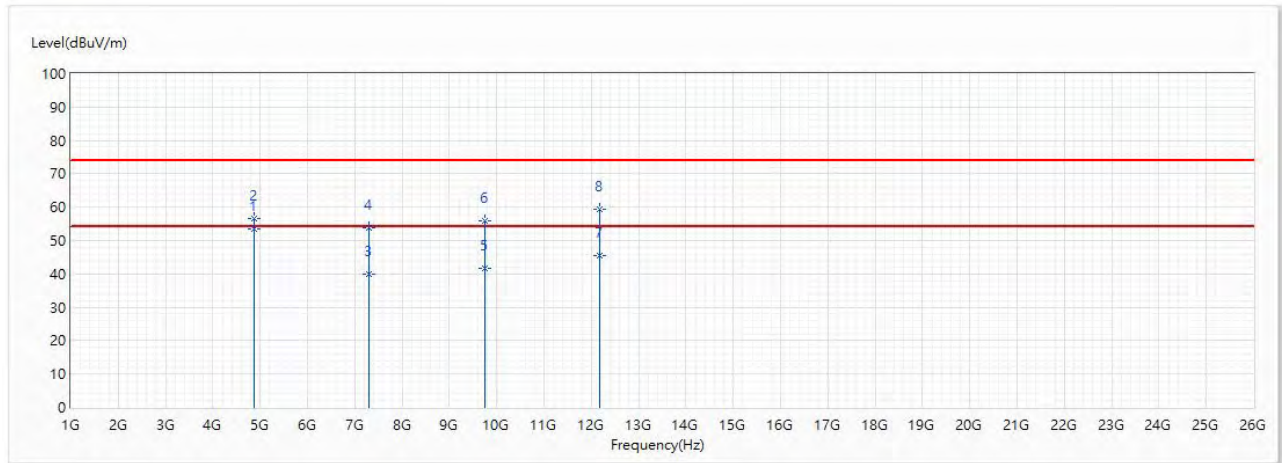


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4874	48.73	54.00	-5.27	45.19	3.54	AV
2	4874	53.01	74.00	-20.99	49.47	3.54	PK
3	7311	39.94	54.00	-14.06	27.18	12.76	AV
4	7311	52.87	74.00	-21.13	40.11	12.76	PK
5	9748	41.65	54.00	-12.35	25.08	16.57	AV
6	9748	56.31	74.00	-17.69	39.74	16.57	PK
7	12185	45.34	54.00	-8.66	24.89	20.45	AV
8	12185	58.87	74.00	-15.13	38.42	20.45	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2437 MHz		

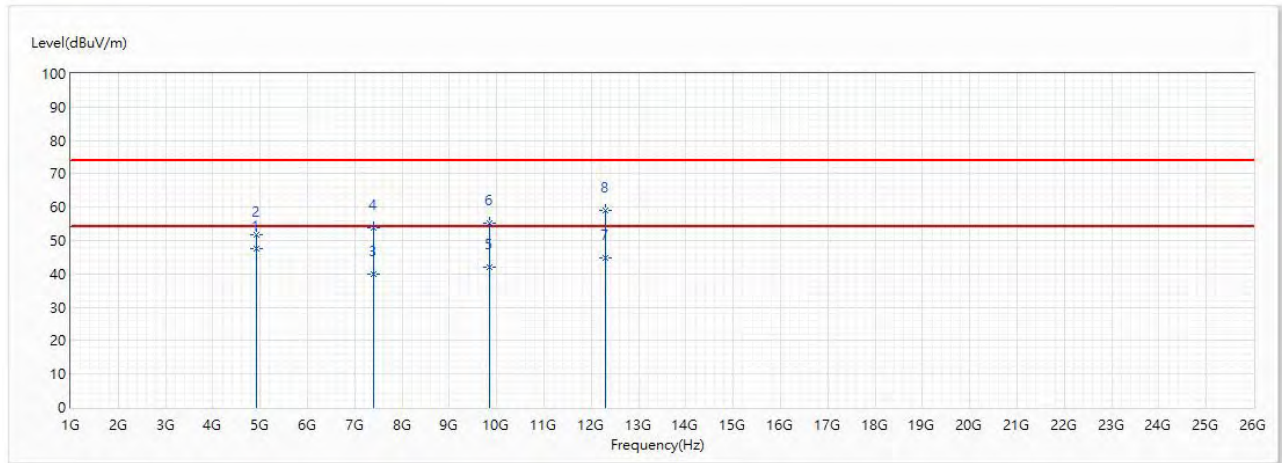


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4874	53.49	54.00	-0.51	49.95	3.54	AV
2	4874	56.53	74.00	-17.47	52.99	3.54	PK
3	7311	40.08	54.00	-13.92	27.32	12.76	AV
4	7311	53.84	74.00	-20.16	41.08	12.76	PK
5	9748	41.59	54.00	-12.41	25.02	16.57	AV
6	9748	55.92	74.00	-18.08	39.35	16.57	PK
7	12185	45.33	54.00	-8.67	24.88	20.45	AV
8	12185	59.25	74.00	-14.75	38.80	20.45	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2462 MHz		

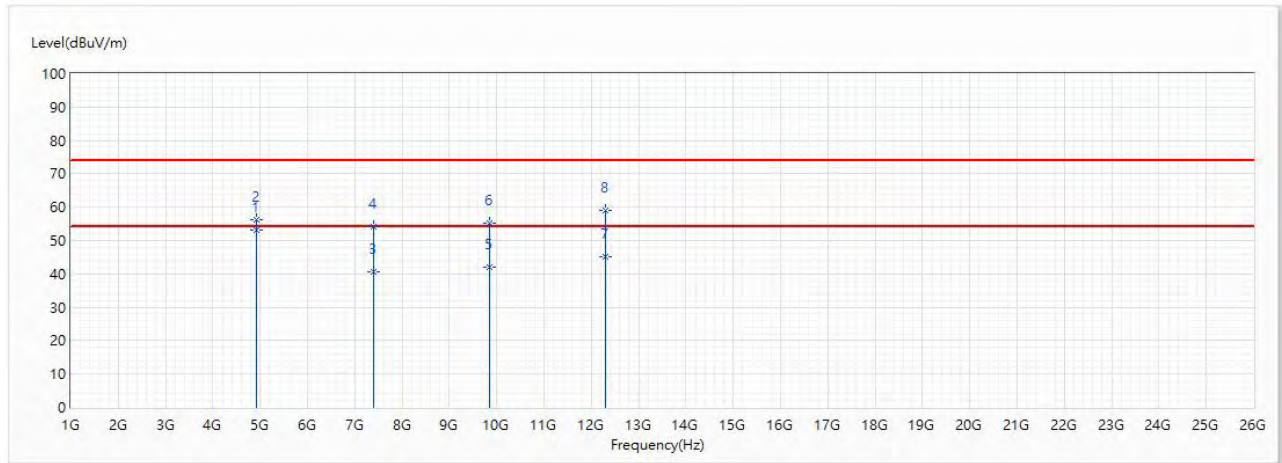


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4924	47.65	54.00	-6.35	43.90	3.75	AV
2	4924	51.66	74.00	-22.34	47.91	3.75	PK
3	7386	39.88	54.00	-14.12	26.88	13.00	AV
4	7386	53.94	74.00	-20.06	40.94	13.00	PK
5	9848	41.89	54.00	-12.11	25.09	16.80	AV
6	9848	55.05	74.00	-18.95	38.25	16.80	PK
7	12310	44.85	54.00	-9.15	24.48	20.37	AV
8	12310	58.88	74.00	-15.12	38.51	20.37	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2462 MHz		

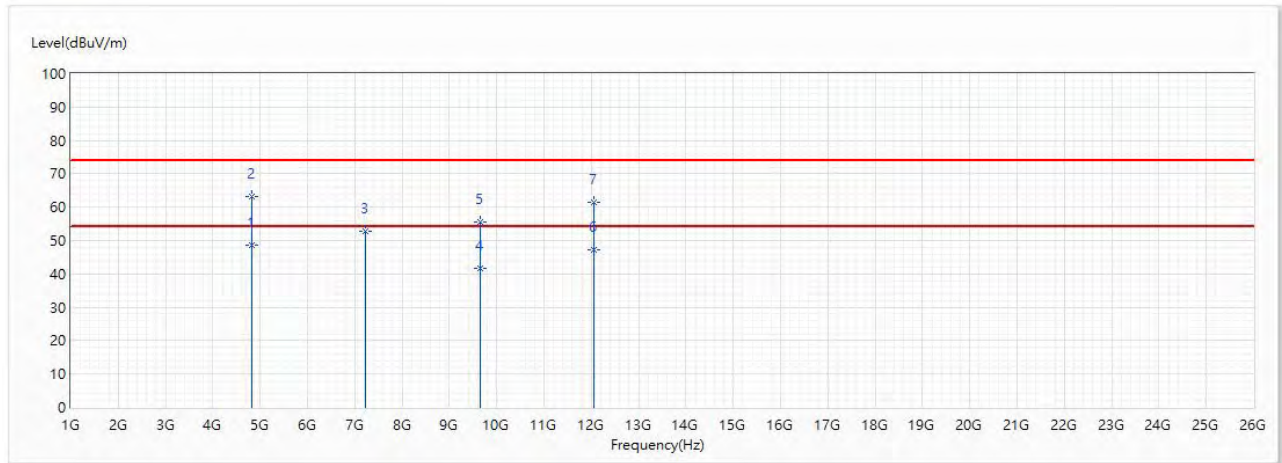


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4924	53.22	54.00	-0.78	49.47	3.75	AV
2	4924	56.32	74.00	-17.68	52.57	3.75	PK
3	7386	40.64	54.00	-13.36	27.64	13.00	AV
4	7386	54.24	74.00	-19.76	41.24	13.00	PK
5	9848	42.01	54.00	-11.99	25.21	16.80	AV
6	9848	55.37	74.00	-18.63	38.57	16.80	PK
7	12310	45.10	54.00	-8.90	24.73	20.37	AV
8	12310	59.01	74.00	-14.99	38.64	20.37	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2412 MHz		

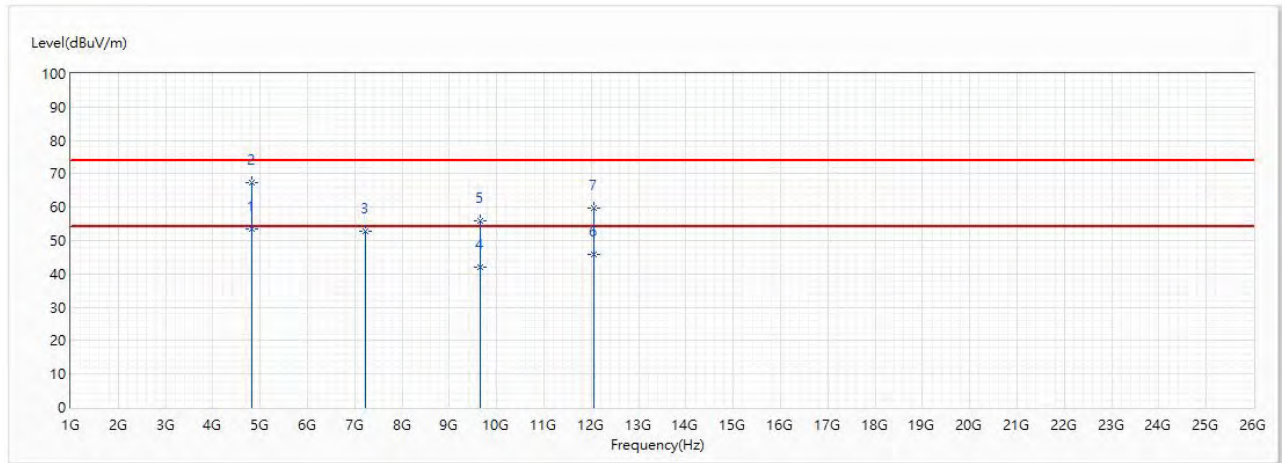


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4824	48.75	54.00	-5.25	45.42	3.33	AV
2	4824	63.29	74.00	-10.71	59.96	3.33	PK
3	7236	52.87	74.00	-21.13	40.37	12.50	PK
4	9648	41.58	54.00	-12.42	25.25	16.33	AV
5	9648	55.70	74.00	-18.30	39.37	16.33	PK
6	12060	47.25	54.00	-6.75	26.72	20.53	AV
7	12060	61.62	74.00	-12.38	41.09	20.53	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2412 MHz		

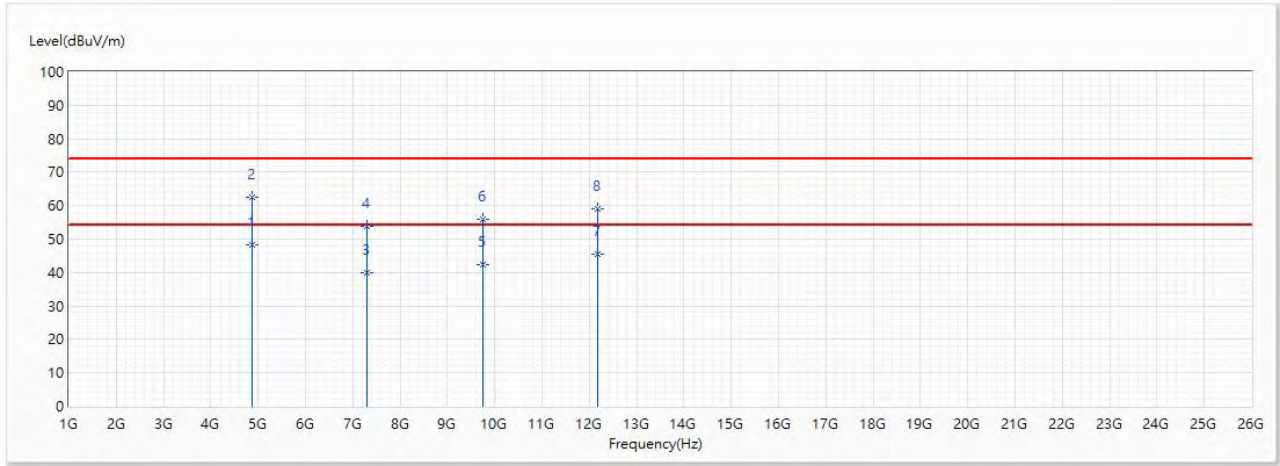


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4824	53.45	54.00	-0.55	50.12	3.33	AV
2	4824	67.38	74.00	-6.62	64.05	3.33	PK
3	7236	52.95	74.00	-21.05	40.45	12.50	PK
4	9648	42.16	54.00	-11.84	25.83	16.33	AV
5	9648	55.87	74.00	-18.13	39.54	16.33	PK
6	12060	45.78	54.00	-8.22	25.25	20.53	AV
7	12060	59.67	74.00	-14.33	39.14	20.53	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2437 MHz		

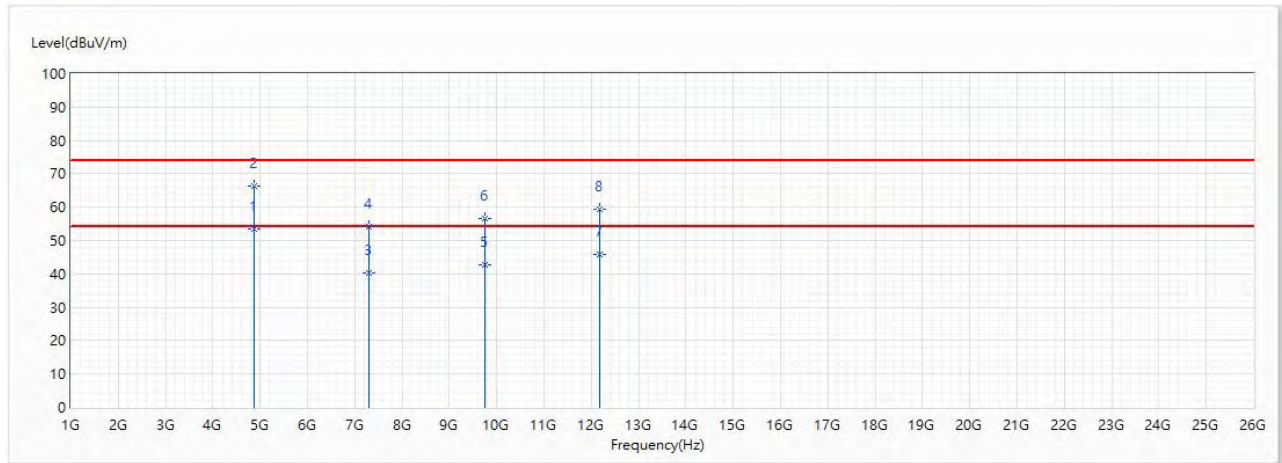


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4874	48.21	54.00	-5.79	44.67	3.54	AV
2	4874	62.48	74.00	-11.52	58.94	3.54	PK
3	7311	39.85	54.00	-14.15	27.09	12.76	AV
4	7311	53.90	74.00	-20.10	41.14	12.76	PK
5	9748	42.49	54.00	-11.51	25.92	16.57	AV
6	9748	55.88	74.00	-18.12	39.31	16.57	PK
7	12185	45.38	54.00	-8.62	24.93	20.45	AV
8	12185	59.04	74.00	-14.96	38.59	20.45	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2437 MHz		

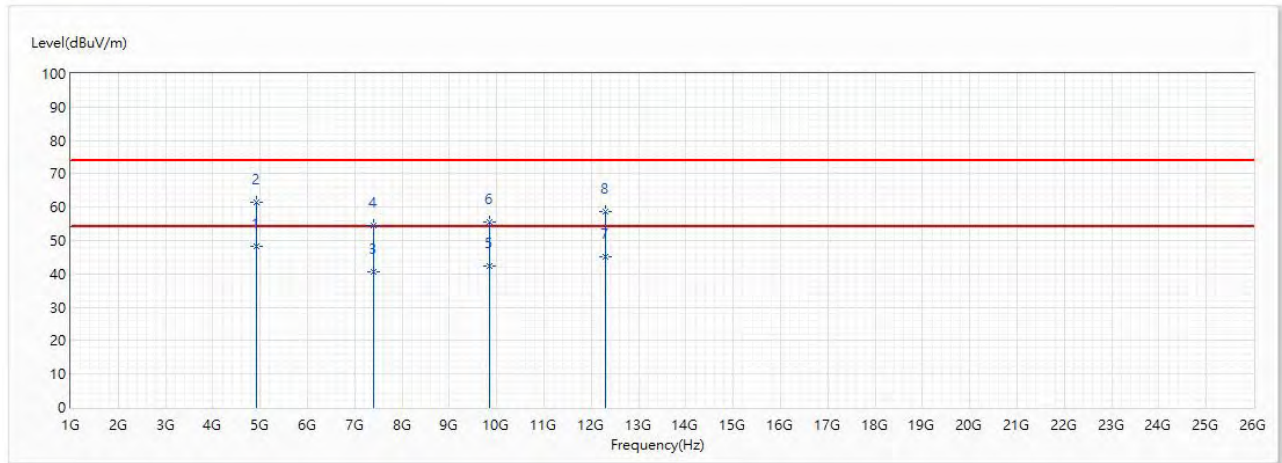


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4874	53.38	54.00	-0.62	49.84	3.54	AV
2	4874	66.34	74.00	-7.66	62.80	3.54	PK
3	7311	40.16	54.00	-13.84	27.40	12.76	AV
4	7311	54.09	74.00	-19.91	41.33	12.76	PK
5	9748	42.71	54.00	-11.29	26.14	16.57	AV
6	9748	56.62	74.00	-17.38	40.05	16.57	PK
7	12185	45.66	54.00	-8.34	25.21	20.45	AV
8	12185	59.41	74.00	-14.59	38.96	20.45	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2462 MHz		

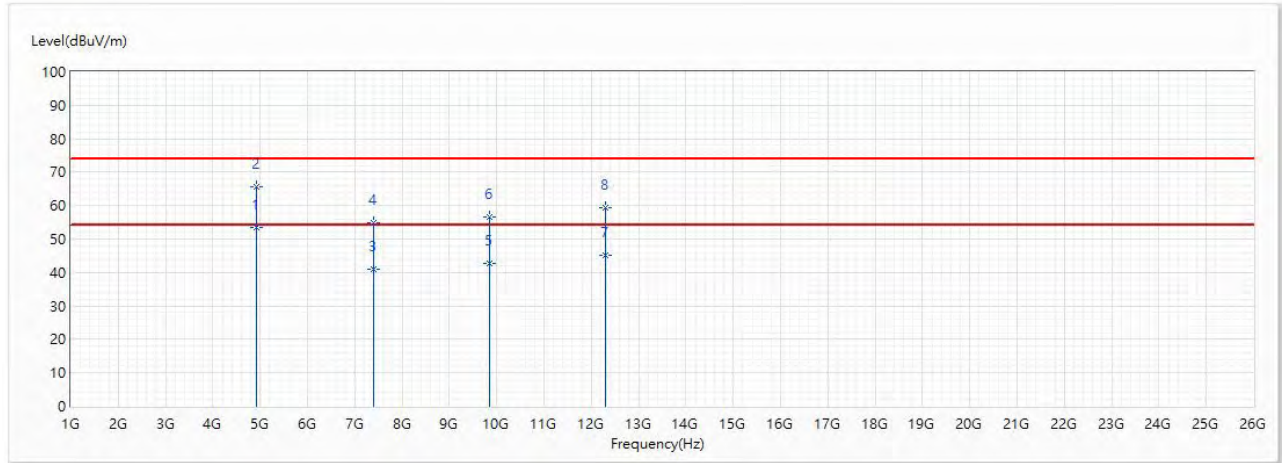


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4924	48.24	54.00	-5.76	44.49	3.75	AV
2	4924	61.35	74.00	-12.65	57.60	3.75	PK
3	7386	40.56	54.00	-13.44	27.56	13.00	AV
4	7386	54.66	74.00	-19.34	41.66	13.00	PK
5	9848	42.39	54.00	-11.61	25.59	16.80	AV
6	9848	55.59	74.00	-18.41	38.79	16.80	PK
7	12310	45.07	54.00	-8.93	24.70	20.37	AV
8	12310	58.51	74.00	-15.49	38.14	20.37	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2462 MHz		

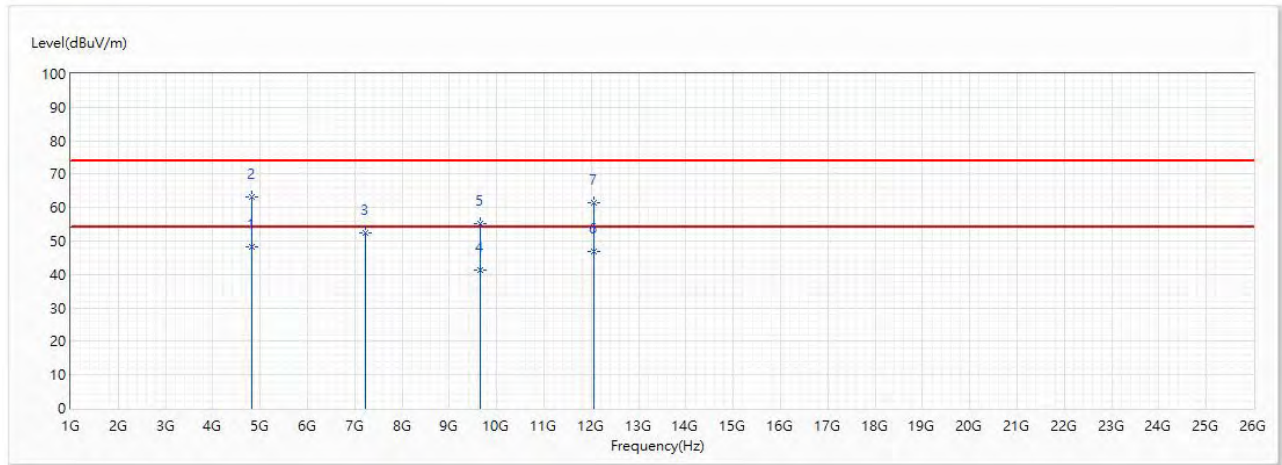


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4924	53.39	54.00	-0.61	49.64	3.75	AV
2	4924	65.77	74.00	-8.23	62.02	3.75	PK
3	7386	40.88	54.00	-13.12	27.88	13.00	AV
4	7386	54.98	74.00	-19.02	41.98	13.00	PK
5	9848	42.78	54.00	-11.22	25.98	16.80	AV
6	9848	56.70	74.00	-17.30	39.90	16.80	PK
7	12310	45.26	54.00	-8.74	24.89	20.37	AV
8	12310	59.22	74.00	-14.78	38.85	20.37	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2412 MHz		

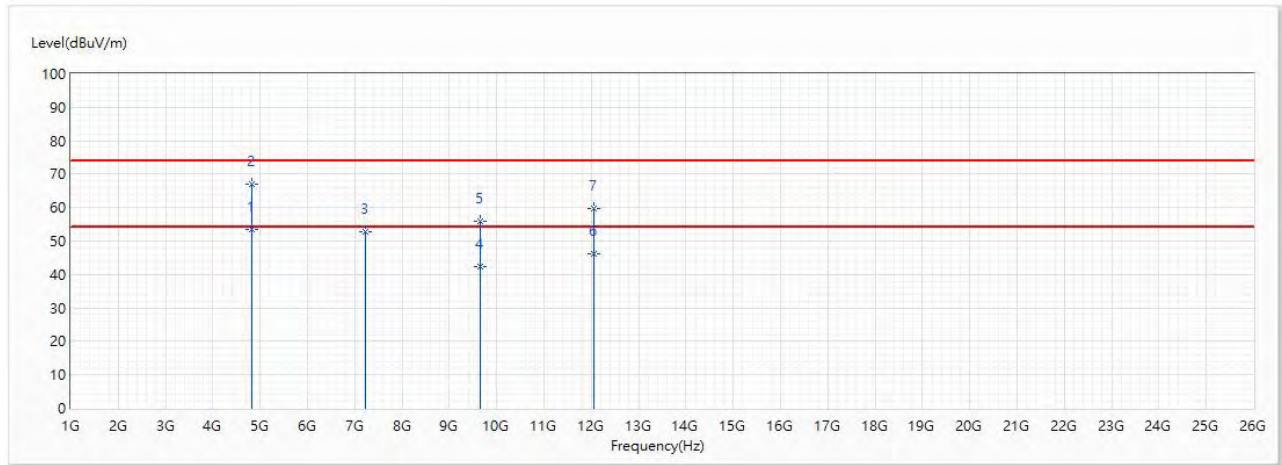


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4824	48.14	54.00	-5.86	44.81	3.33	AV
2	4824	63.04	74.00	-10.96	59.71	3.33	PK
3	7236	52.45	74.00	-21.55	39.95	12.50	PK
4	9648	41.31	54.00	-12.69	24.98	16.33	AV
5	9648	55.31	74.00	-18.69	38.98	16.33	PK
6	12060	46.76	54.00	-7.24	26.23	20.53	AV
7	12060	61.40	74.00	-12.60	40.87	20.53	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2412 MHz		

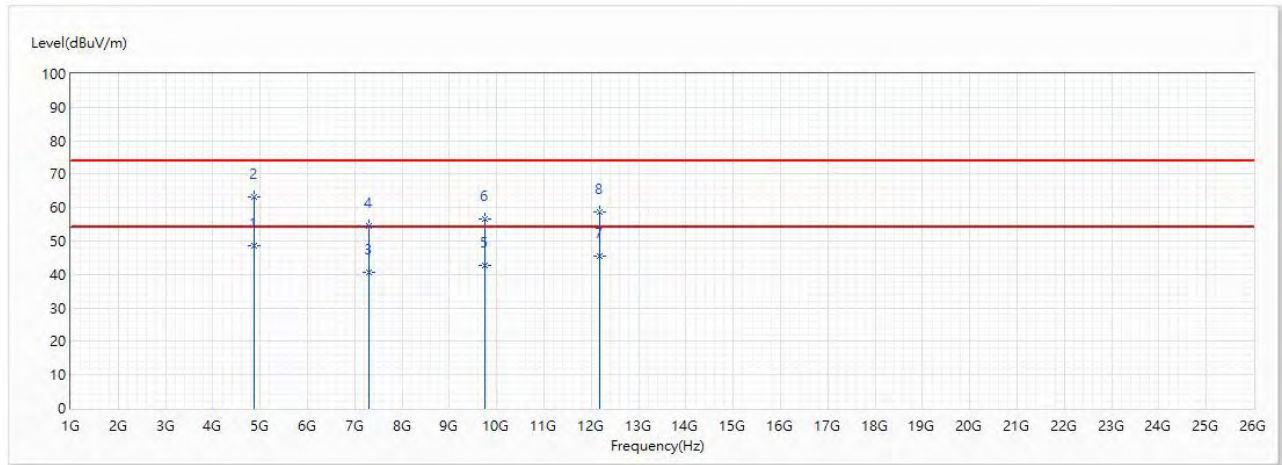


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4824	53.32	54.00	-0.68	49.99	3.33	AV
2	4824	66.94	74.00	-7.06	63.61	3.33	PK
3	7236	52.82	74.00	-21.18	40.32	12.50	PK
4	9648	42.52	54.00	-11.48	26.19	16.33	AV
5	9648	55.85	74.00	-18.15	39.52	16.33	PK
6	12060	46.35	54.00	-7.65	25.82	20.53	AV
7	12060	59.68	74.00	-14.32	39.15	20.53	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

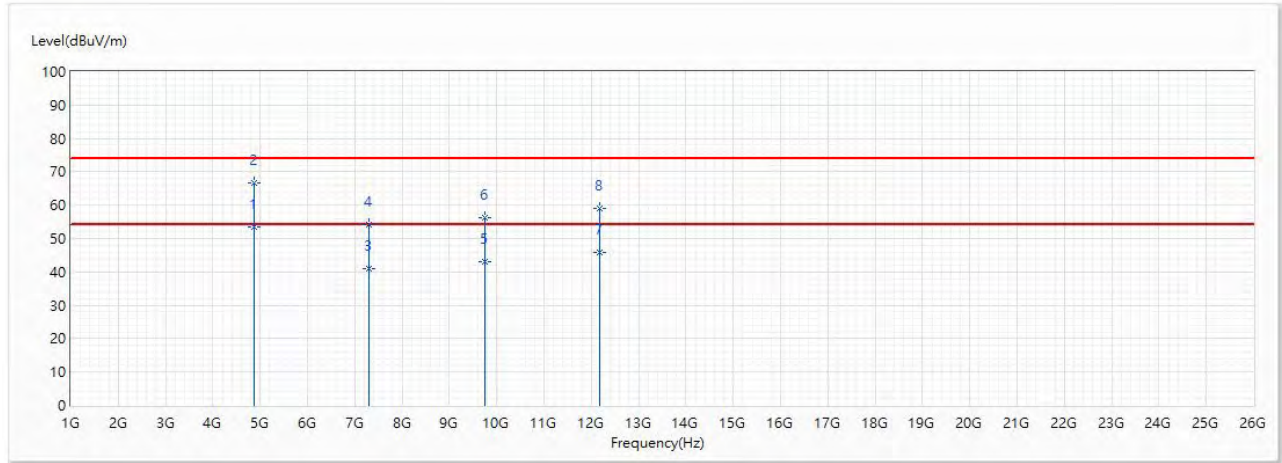


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4874	48.44	54.00	-5.56	44.90	3.54	AV
2	4874	63.04	74.00	-10.96	59.50	3.54	PK
3	7311	40.48	54.00	-13.52	27.72	12.76	AV
4	7311	54.59	74.00	-19.41	41.83	12.76	PK
5	9748	42.70	54.00	-11.30	26.13	16.57	AV
6	9748	56.51	74.00	-17.49	39.94	16.57	PK
7	12185	45.36	54.00	-8.64	24.91	20.45	AV
8	12185	58.56	74.00	-15.44	38.11	20.45	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

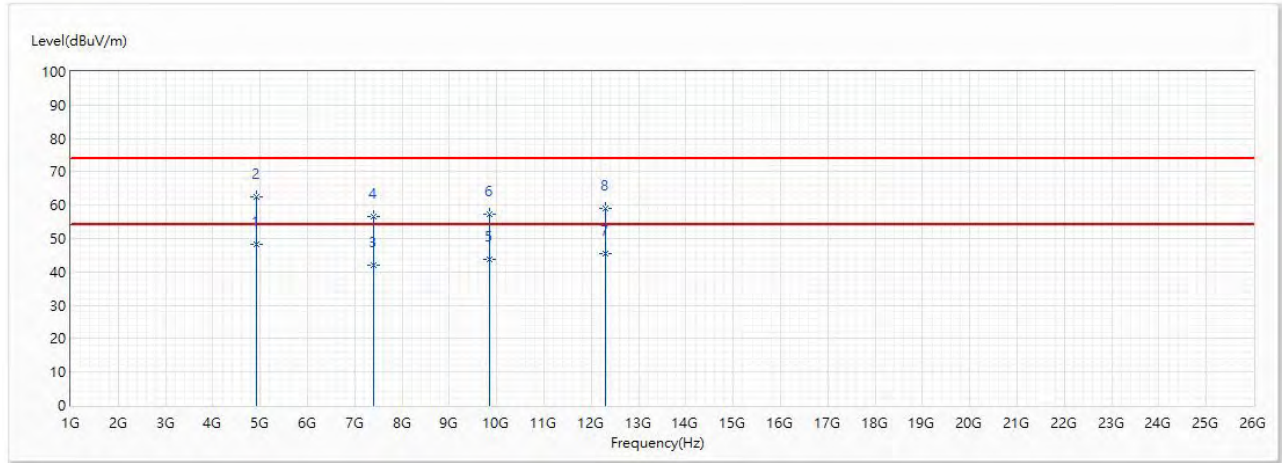


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4874	53.39	54.00	-0.61	49.85	3.54	AV
2	4874	66.71	74.00	-7.29	63.17	3.54	PK
3	7311	40.82	54.00	-13.18	28.06	12.76	AV
4	7311	54.25	74.00	-19.75	41.49	12.76	PK
5	9748	43.20	54.00	-10.80	26.63	16.57	AV
6	9748	56.40	74.00	-17.60	39.83	16.57	PK
7	12185	45.85	54.00	-8.15	25.40	20.45	AV
8	12185	59.13	74.00	-14.87	38.68	20.45	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2462 MHz		

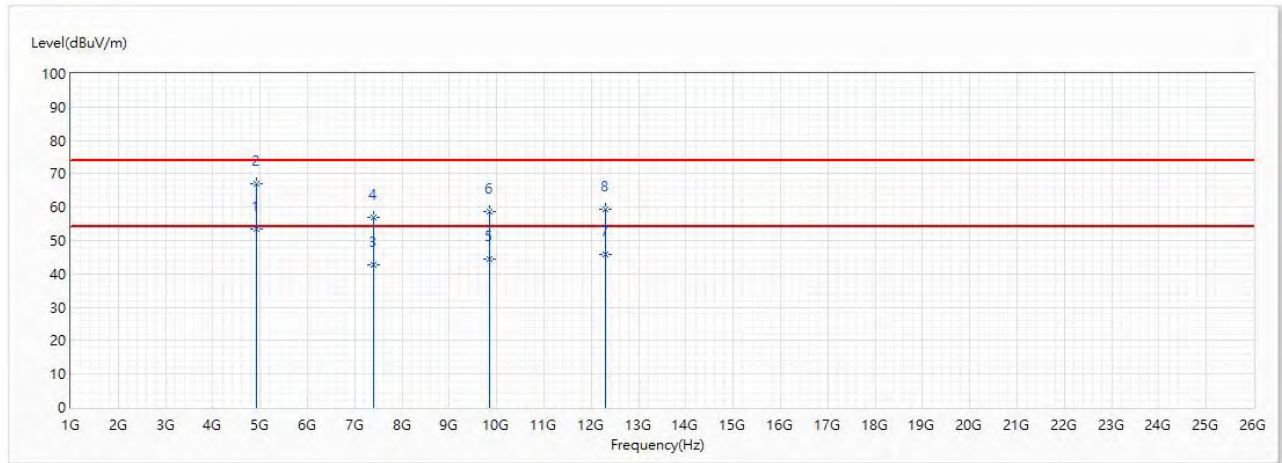


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4924	48.24	54.00	-5.76	44.49	3.75	AV
2	4924	62.42	74.00	-11.58	58.67	3.75	PK
3	7386	42.15	54.00	-11.85	29.15	13.00	AV
4	7386	56.47	74.00	-17.53	43.47	13.00	PK
5	9848	43.88	54.00	-10.12	27.08	16.80	AV
6	9848	57.39	74.00	-16.61	40.59	16.80	PK
7	12310	45.65	54.00	-8.35	25.28	20.37	AV
8	12310	58.96	74.00	-15.04	38.59	20.37	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2462 MHz		

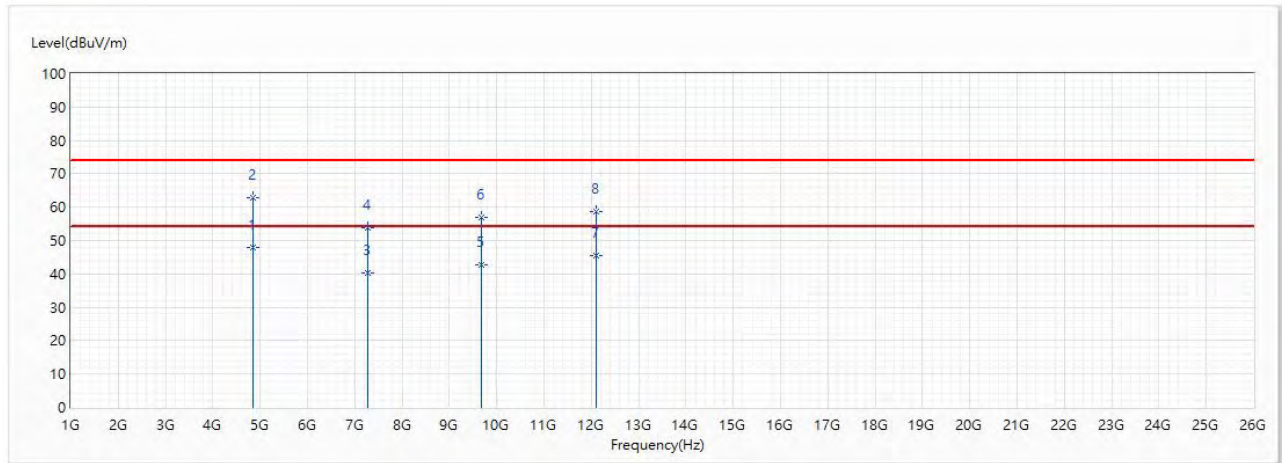


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4924	53.32	54.00	-0.68	49.57	3.75	AV
2	4924	66.92	74.00	-7.08	63.17	3.75	PK
3	7386	42.78	54.00	-11.22	29.78	13.00	AV
4	7386	56.84	74.00	-17.16	43.84	13.00	PK
5	9848	44.48	54.00	-9.52	27.68	16.80	AV
6	9848	58.72	74.00	-15.28	41.92	16.80	PK
7	12310	45.82	54.00	-8.18	25.45	20.37	AV
8	12310	59.54	74.00	-14.46	39.17	20.37	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2422 MHz		

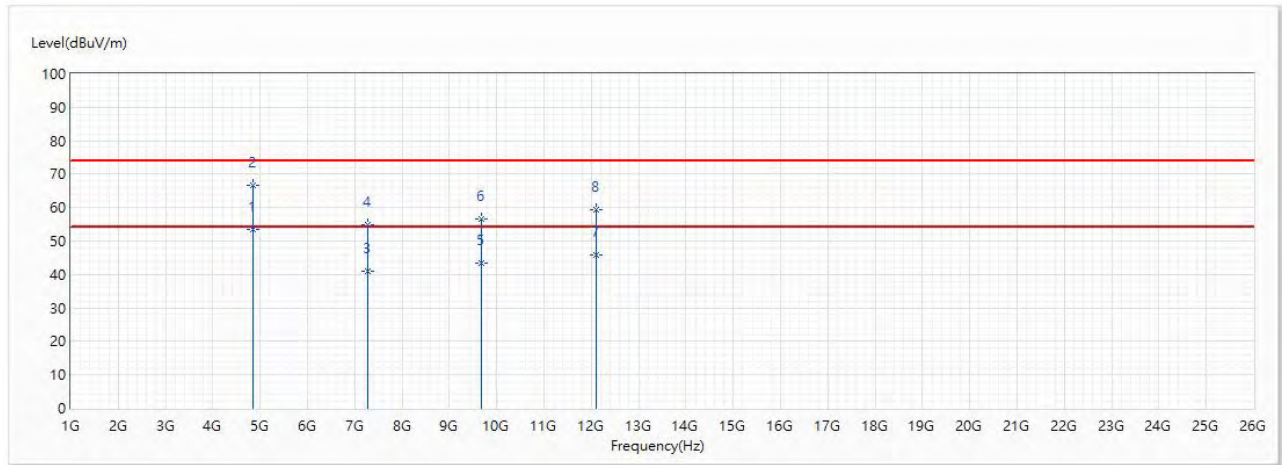


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4844	48.02	54.00	-5.98	44.60	3.42	AV
2	4844	62.94	74.00	-11.06	59.52	3.42	PK
3	7266	40.26	54.00	-13.74	27.65	12.61	AV
4	7266	53.98	74.00	-20.02	41.37	12.61	PK
5	9688	42.86	54.00	-11.14	26.43	16.43	AV
6	9688	56.89	74.00	-17.11	40.46	16.43	PK
7	12110	45.36	54.00	-8.64	24.87	20.49	AV
8	12110	58.77	74.00	-15.23	38.28	20.49	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2422 MHz		

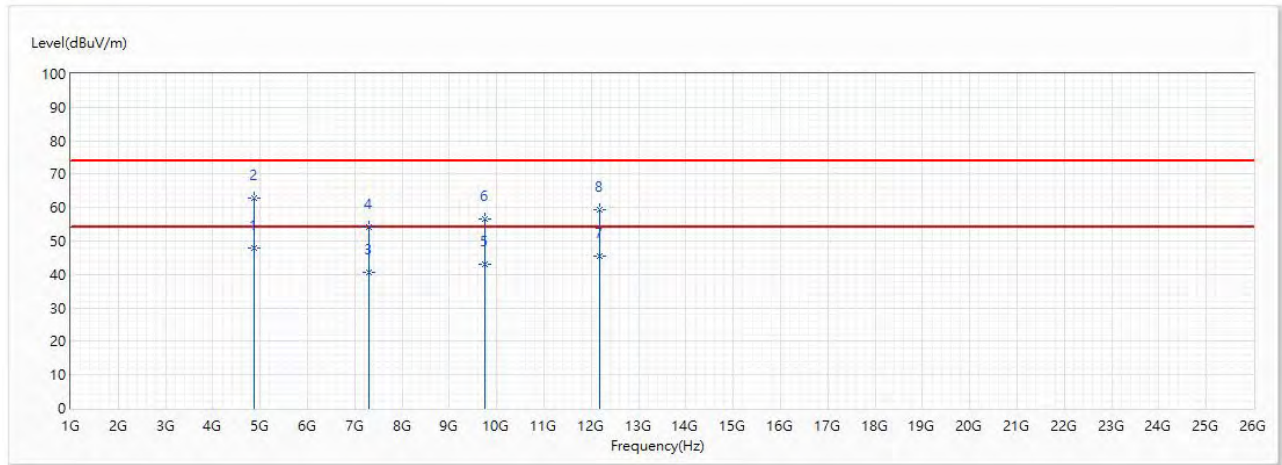


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4844	53.48	54.00	-0.52	50.06	3.42	AV
2	4844	66.79	74.00	-7.21	63.37	3.42	PK
3	7266	40.84	54.00	-13.16	28.23	12.61	AV
4	7266	54.81	74.00	-19.19	42.20	12.61	PK
5	9688	43.31	54.00	-10.69	26.88	16.43	AV
6	9688	56.45	74.00	-17.55	40.02	16.43	PK
7	12110	45.77	54.00	-8.23	25.28	20.49	AV
8	12110	59.31	74.00	-14.69	38.82	20.49	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

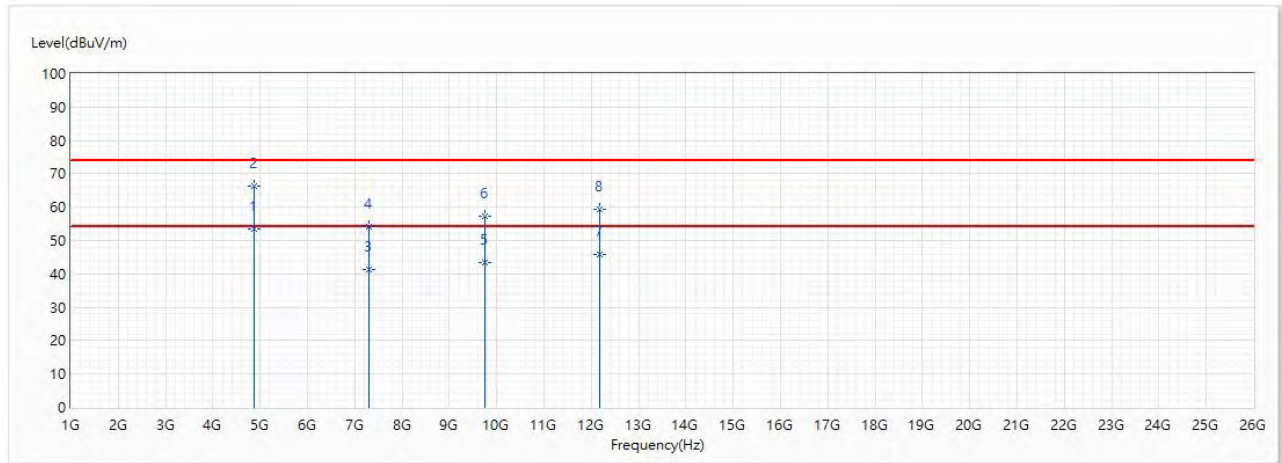


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4874	48.04	54.00	-5.96	44.50	3.54	AV
2	4874	62.86	74.00	-11.14	59.32	3.54	PK
3	7311	40.78	54.00	-13.22	28.02	12.76	AV
4	7311	54.26	74.00	-19.74	41.50	12.76	PK
5	9748	43.14	54.00	-10.86	26.57	16.57	AV
6	9748	56.45	74.00	-17.55	39.88	16.57	PK
7	12185	45.32	54.00	-8.68	24.87	20.45	AV
8	12185	59.26	74.00	-14.74	38.81	20.45	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

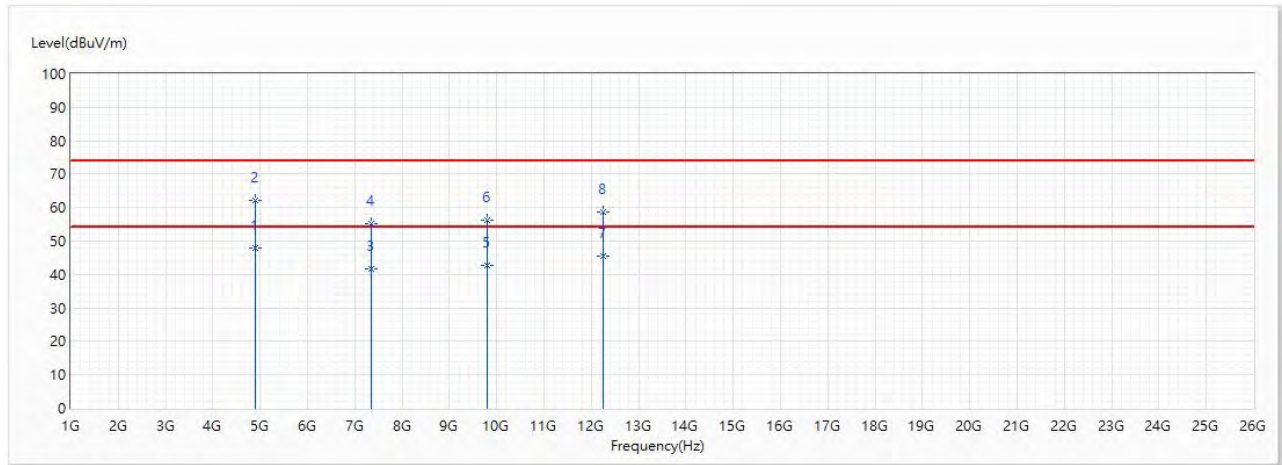


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4874	53.34	54.00	-0.66	49.80	3.54	AV
2	4874	66.37	74.00	-7.63	62.83	3.54	PK
3	7311	41.42	54.00	-12.58	28.66	12.76	AV
4	7311	54.15	74.00	-19.85	41.39	12.76	PK
5	9748	43.48	54.00	-10.52	26.91	16.57	AV
6	9748	57.13	74.00	-16.87	40.56	16.57	PK
7	12185	45.68	54.00	-8.32	25.23	20.45	AV
8	12185	59.34	74.00	-14.66	38.89	20.45	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2452 MHz		

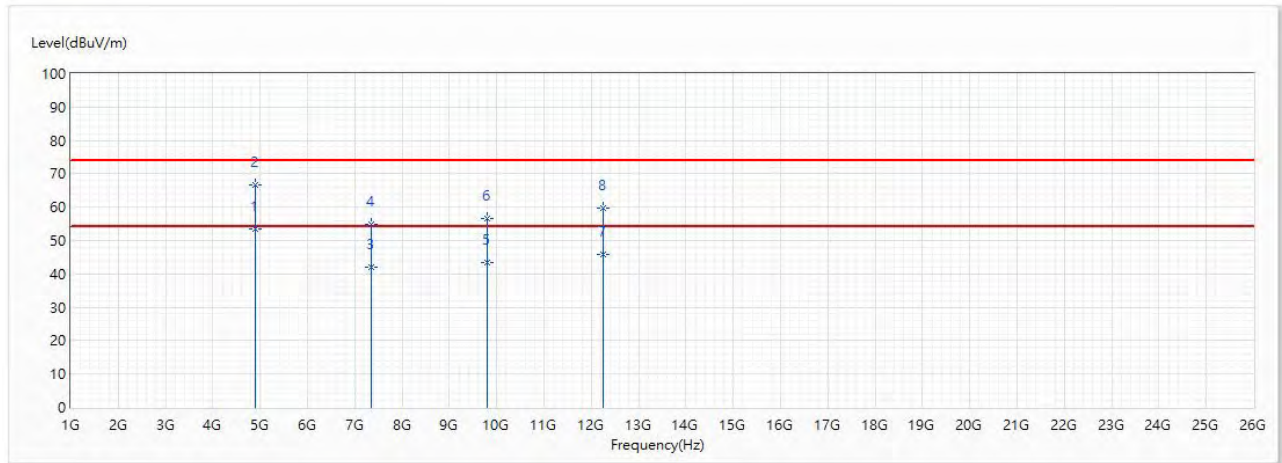


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4904	47.94	54.00	-6.06	44.26	3.68	AV
2	4904	62.24	74.00	-11.76	58.56	3.68	PK
3	7356	41.53	54.00	-12.47	28.62	12.91	AV
4	7356	55.05	74.00	-18.95	42.14	12.91	PK
5	9808	42.80	54.00	-11.20	26.09	16.71	AV
6	9808	56.34	74.00	-17.66	39.63	16.71	PK
7	12260	45.33	54.00	-8.67	24.93	20.40	AV
8	12260	58.78	74.00	-15.22	38.38	20.40	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2452 MHz		



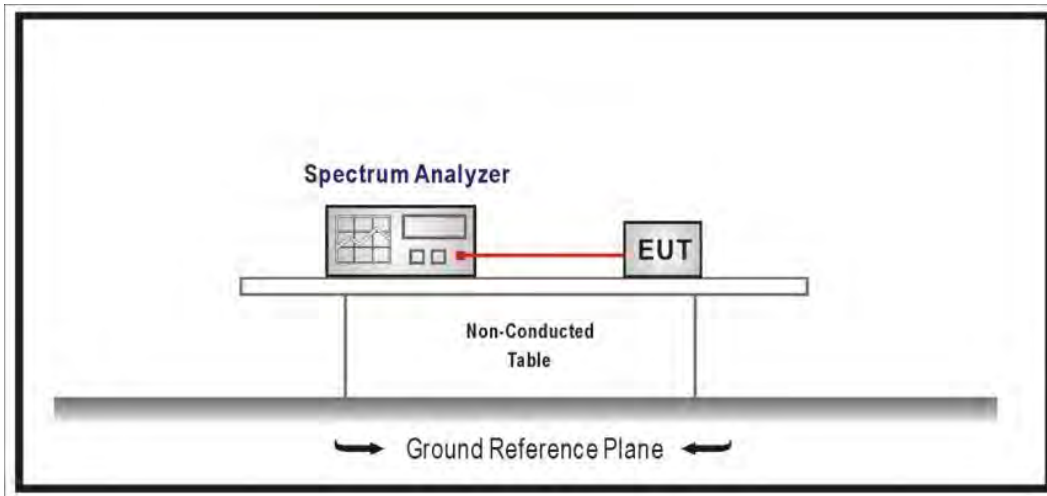
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4904	53.44	54.00	-0.56	49.76	3.68	AV
2	4904	66.81	74.00	-7.19	63.13	3.68	PK
3	7356	41.94	54.00	-12.06	29.03	12.91	AV
4	7356	54.75	74.00	-19.25	41.84	12.91	PK
5	9808	43.27	54.00	-10.73	26.56	16.71	AV
6	9808	56.71	74.00	-17.29	40.00	16.71	PK
7	12260	45.74	54.00	-8.26	25.34	20.40	AV
8	12260	59.70	74.00	-14.30	39.30	20.40	PK

Note:

1. “ * ”, means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.
4. The other emission levels were very low against the limit.

5. Antenna Port Conducted Emission

5.1. Test Setup



5.2. Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limit. If the transmitter complies with the conducted power limit 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. Attenuation below the general limit specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limit specified in §15.209(a) (see §15.205(c)).

5.3. Test Procedure

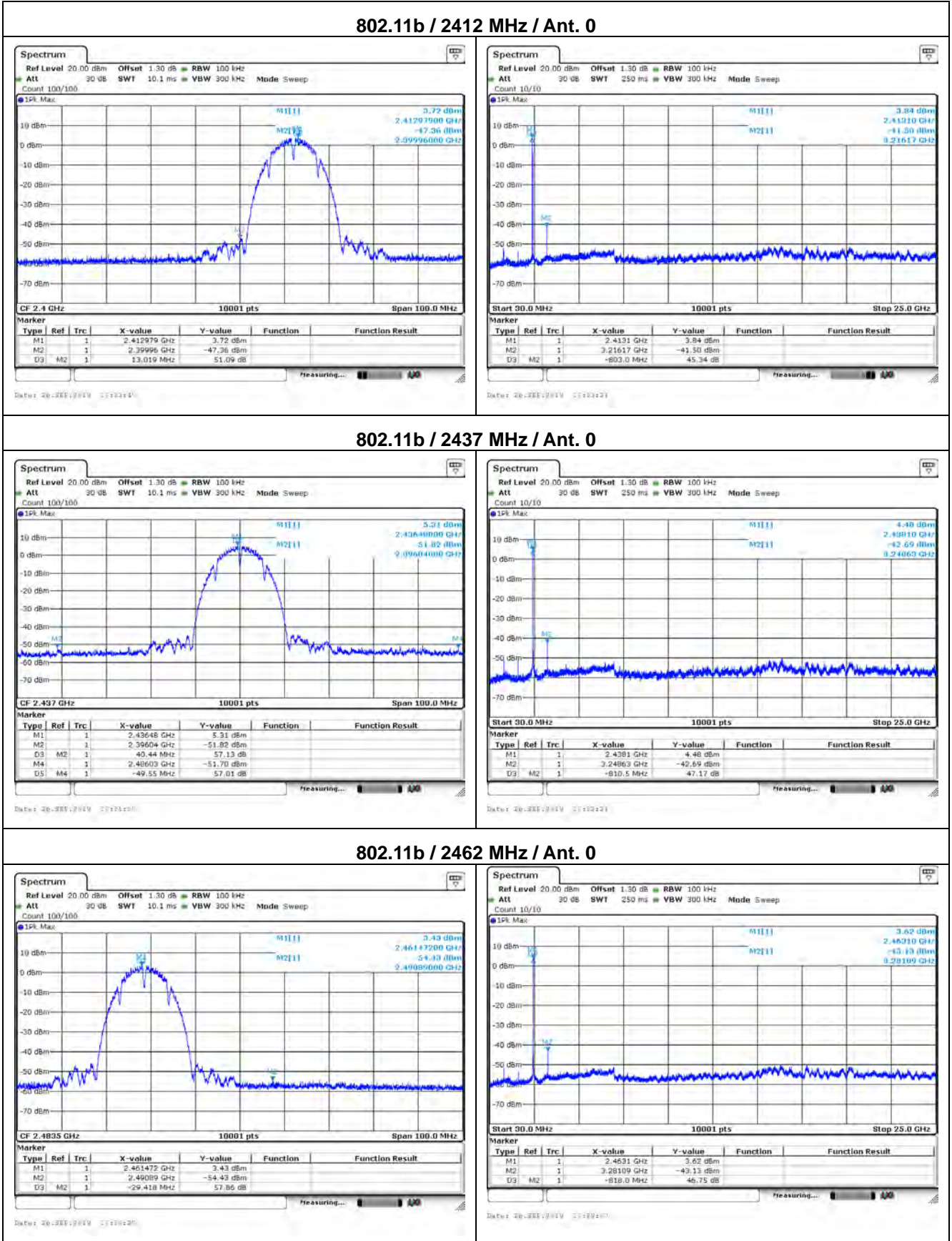
The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB 558074 D01 V05r02 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

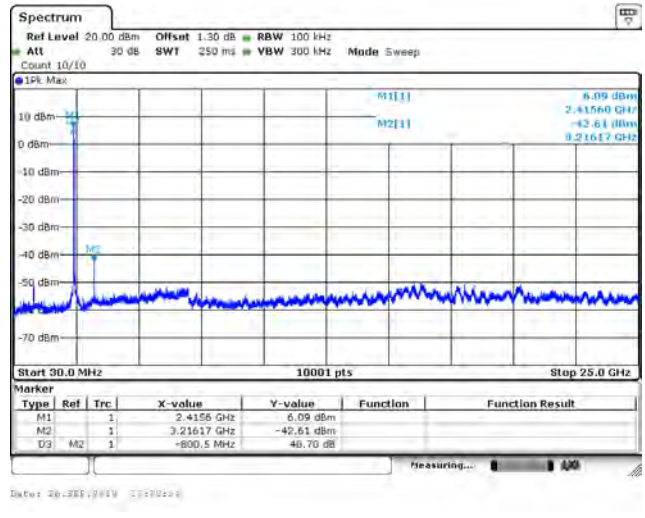
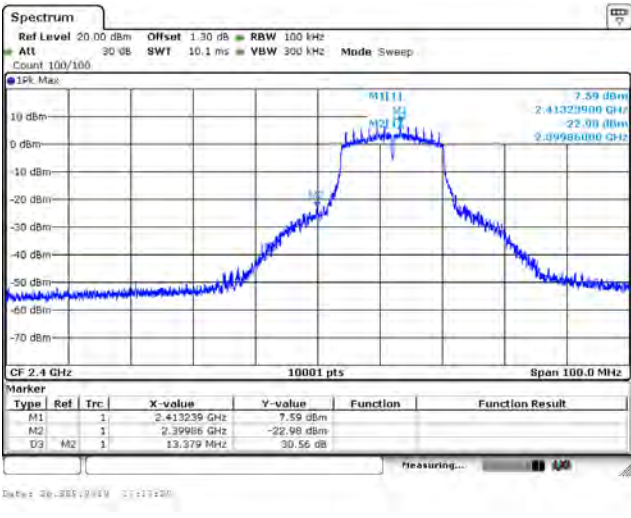
5.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

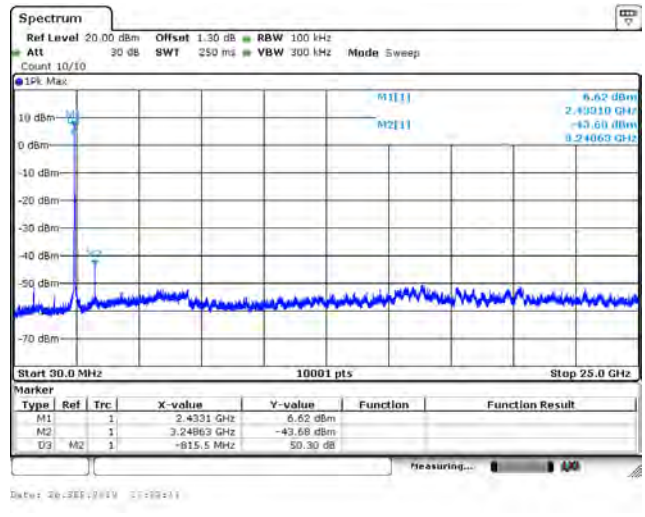
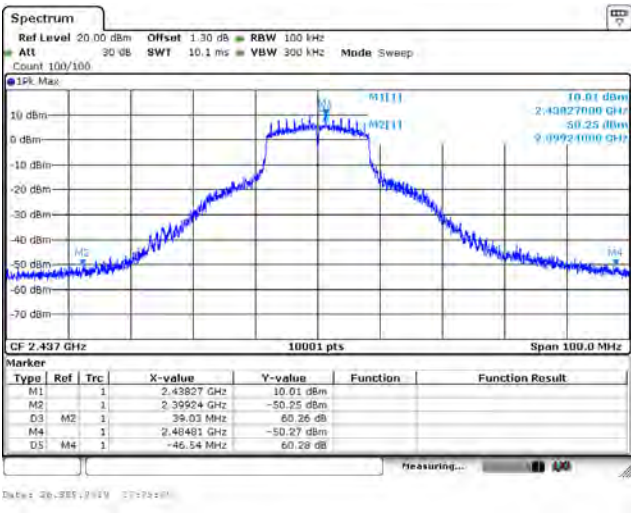
5.5. Test Result of Antenna Port Conducted Emission



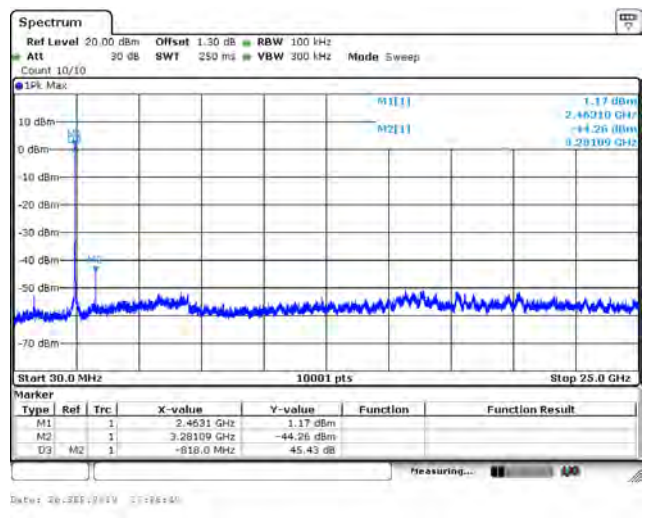
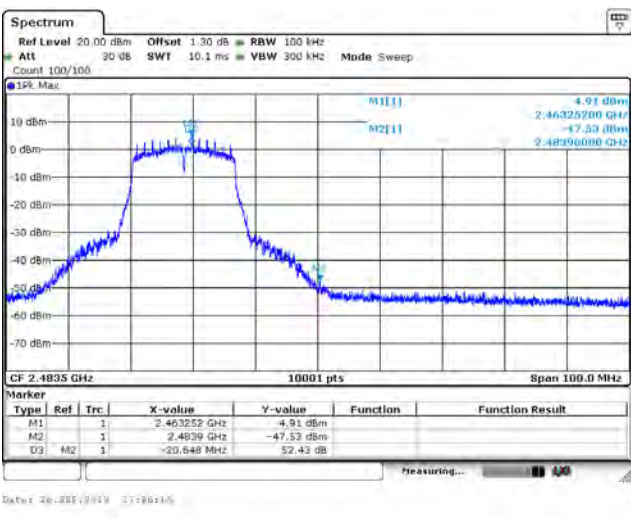
802.11g / 2412 MHz / Ant. 0



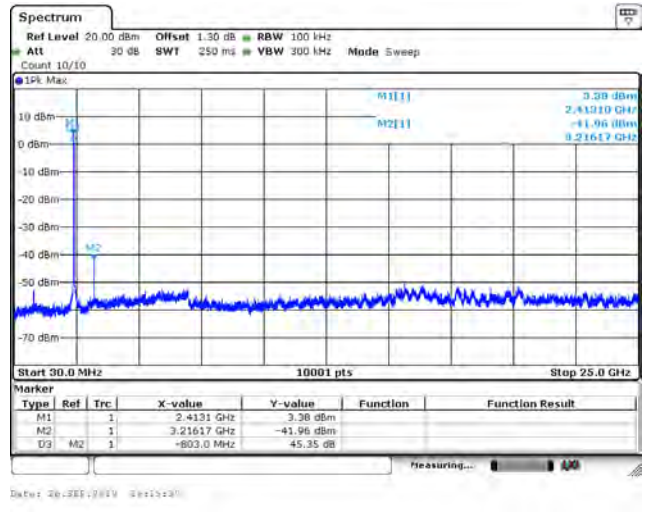
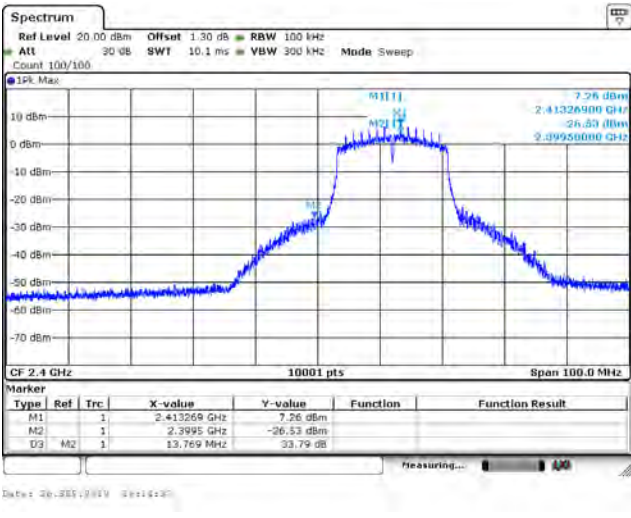
802.11g / 2437 MHz / Ant. 0



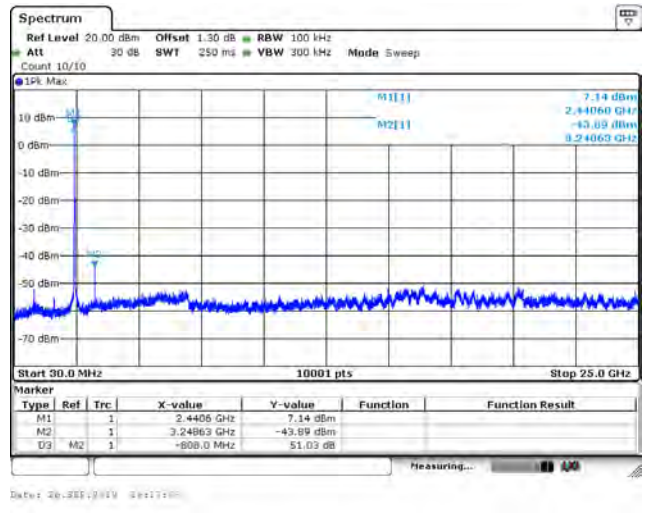
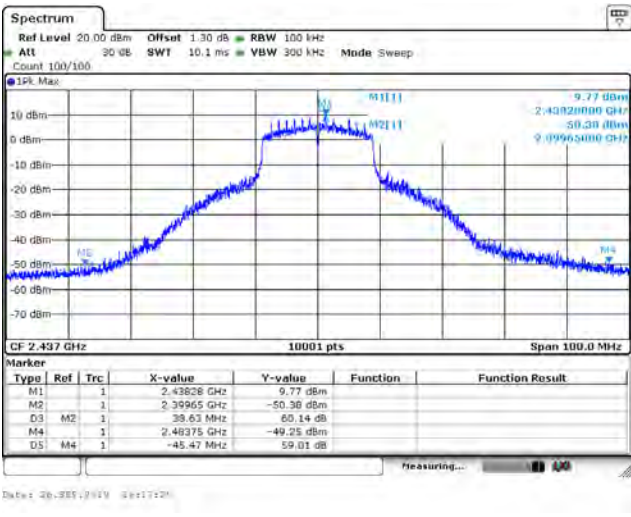
802.11g / 2462 MHz / Ant. 0



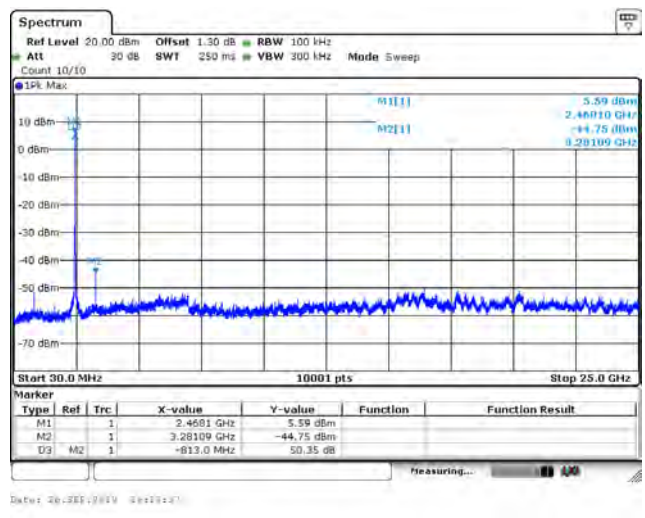
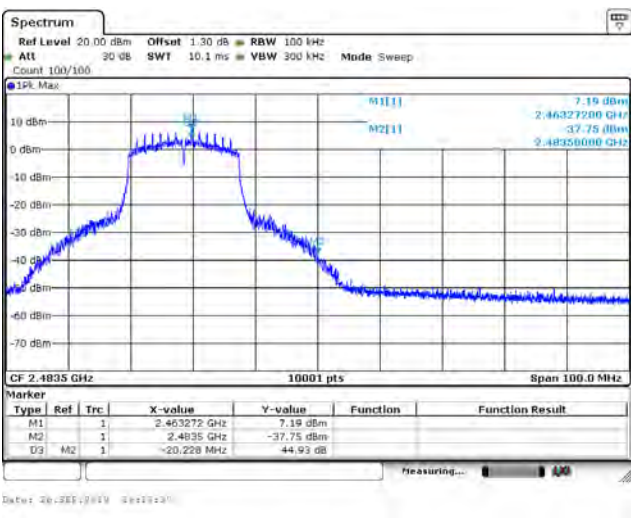
802.11n (20 MHz) / 2412 MHz / Ant. 0



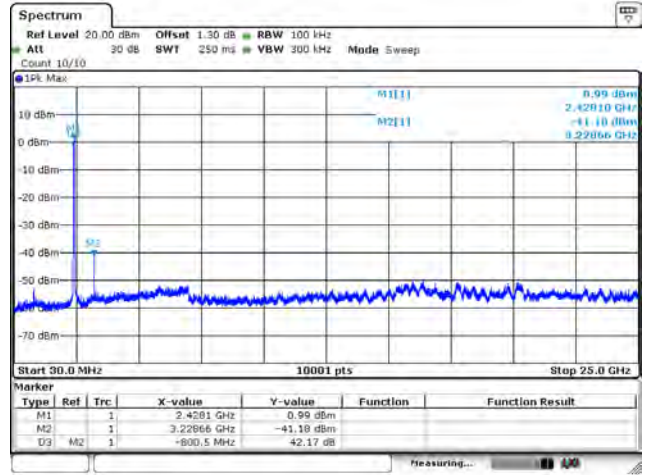
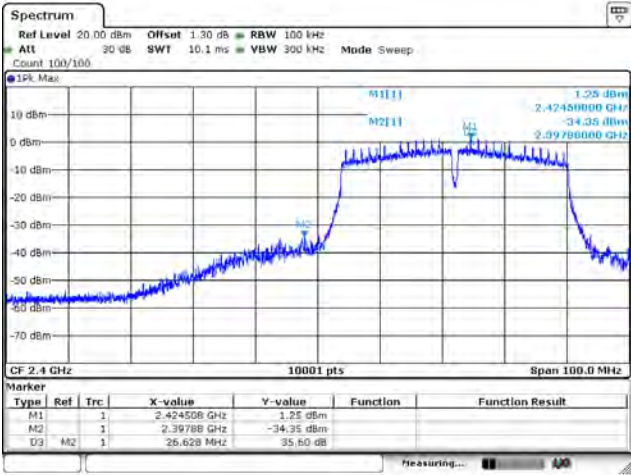
802.11n (20 MHz) / 2437 MHz / Ant. 0



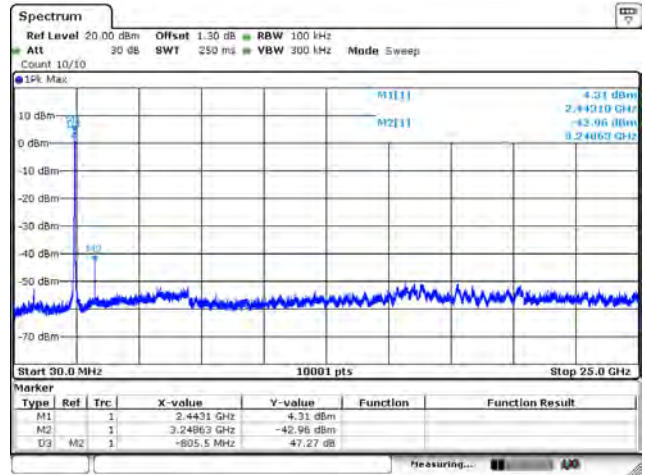
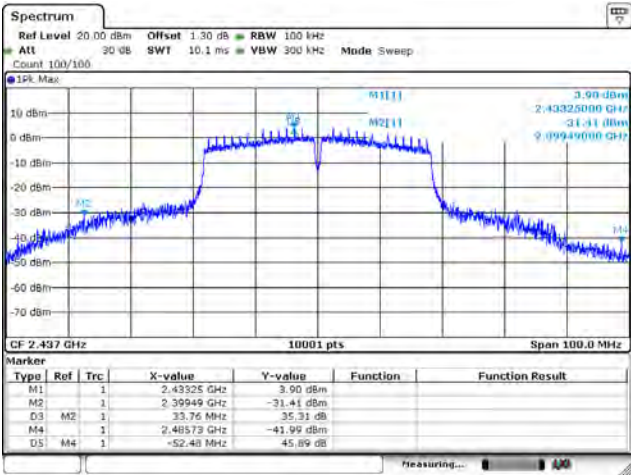
802.11n (20 MHz) / 2462 MHz / Ant. 0



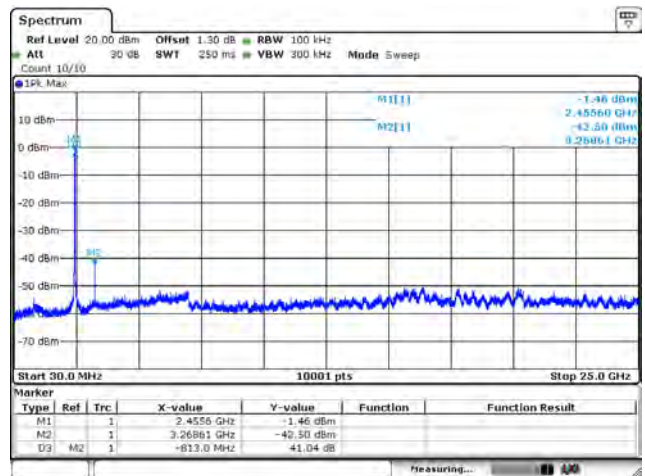
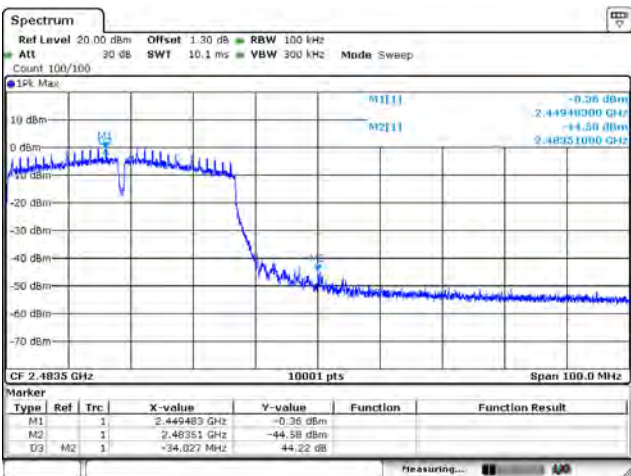
802.11n (40 MHz) / 2422 MHz / Ant. 0



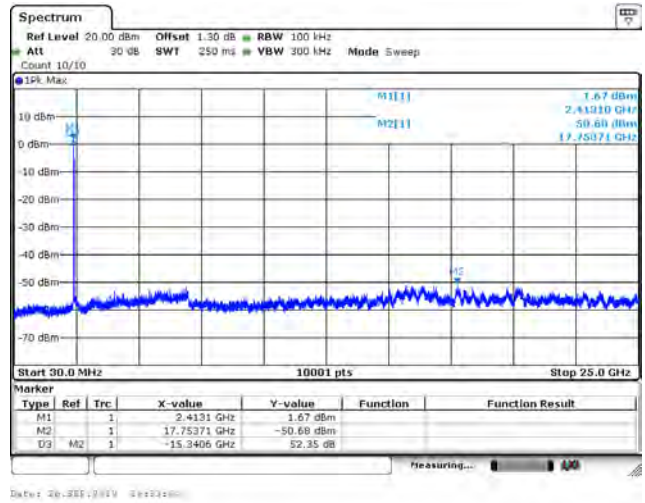
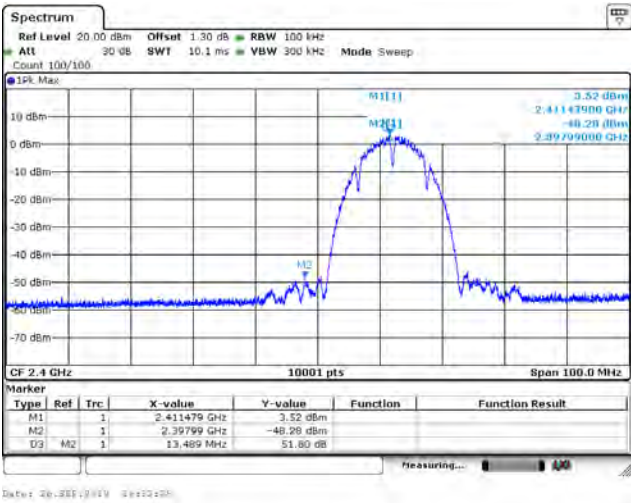
802.11n (40 MHz) / 2437 MHz / Ant. 0



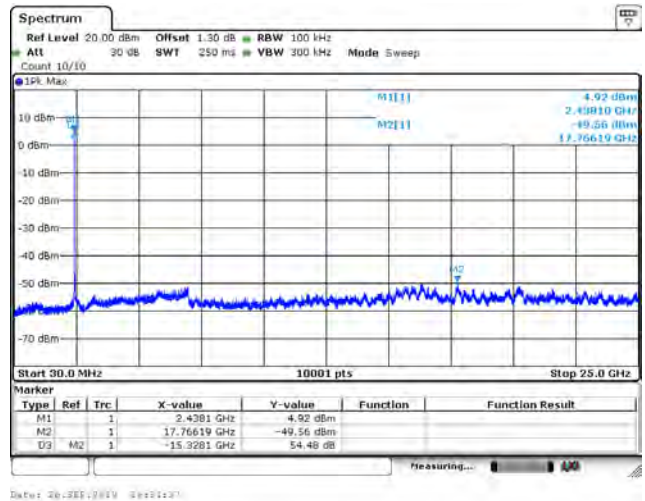
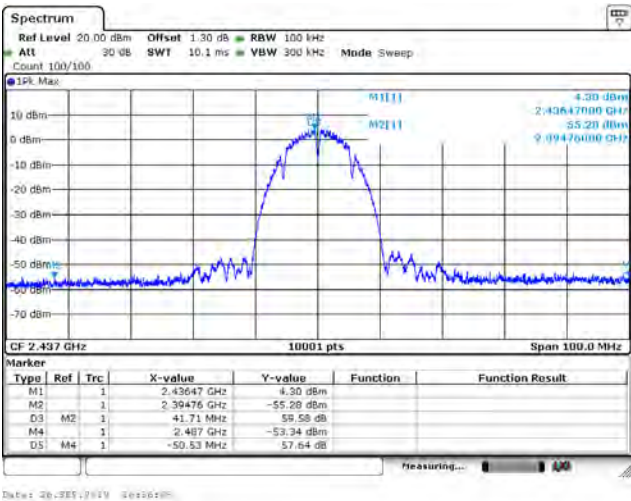
802.11n (40 MHz) / 2452 MHz / Ant. 0



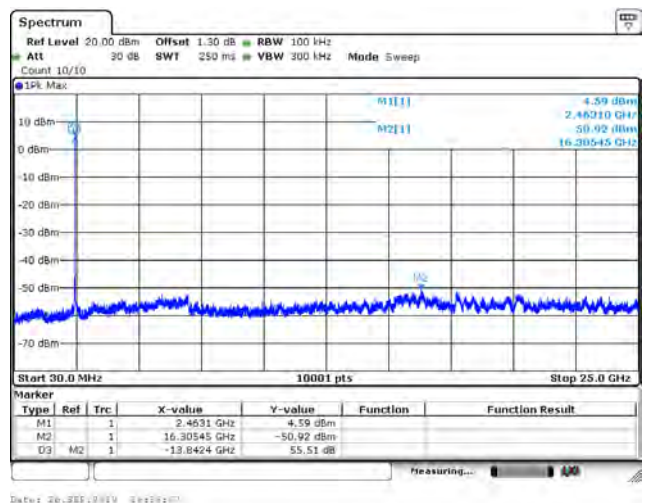
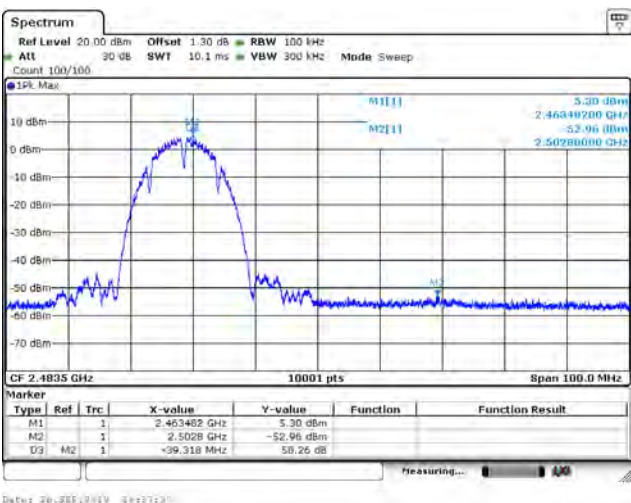
802.11b / 2412 MHz / Ant. 1



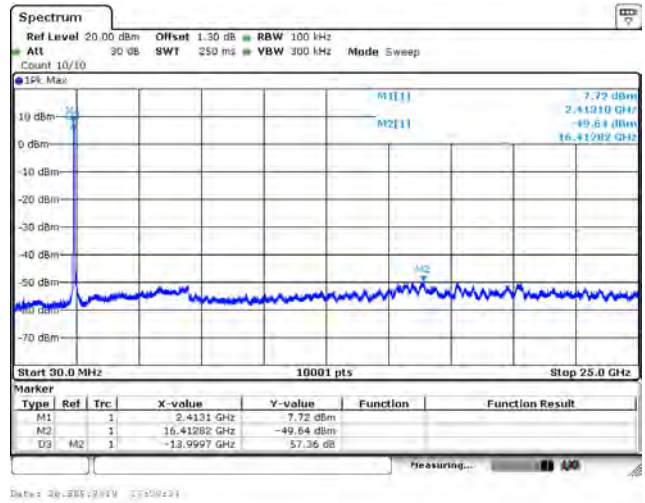
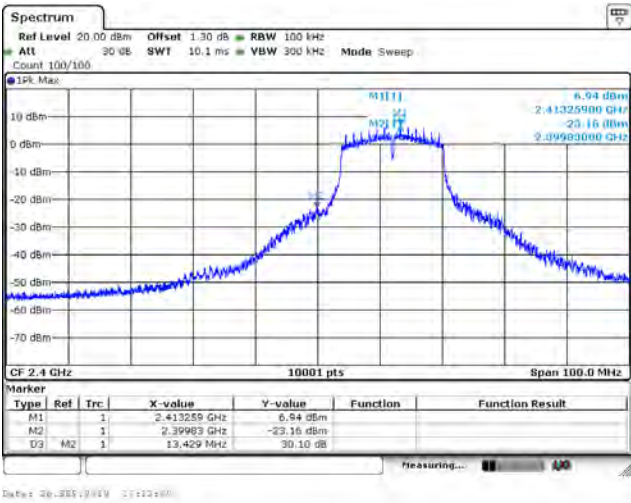
802.11b / 2437 MHz / Ant. 1



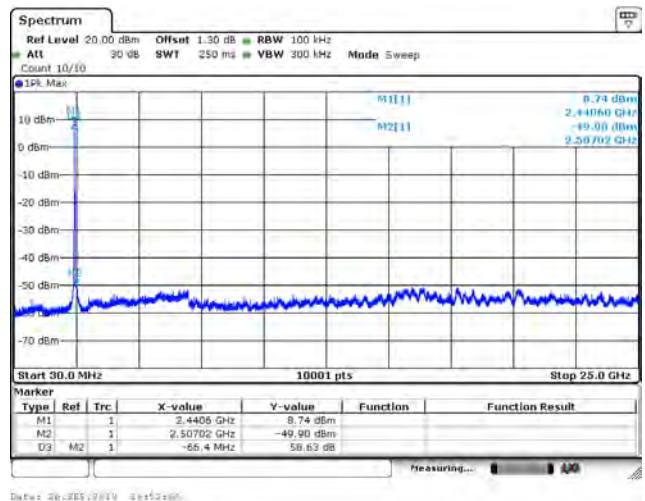
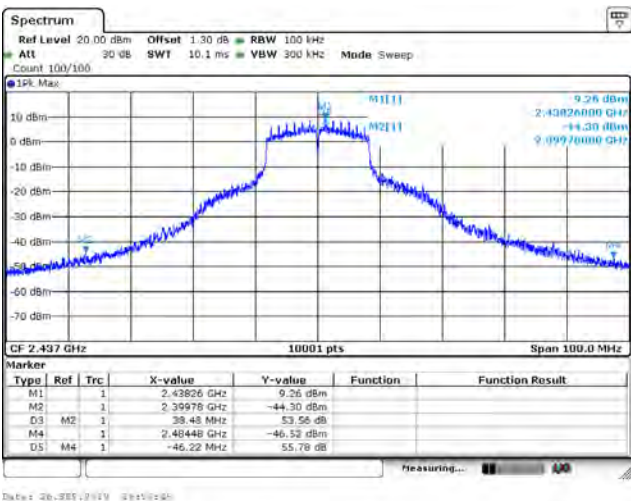
802.11b / 2462 MHz / Ant. 1



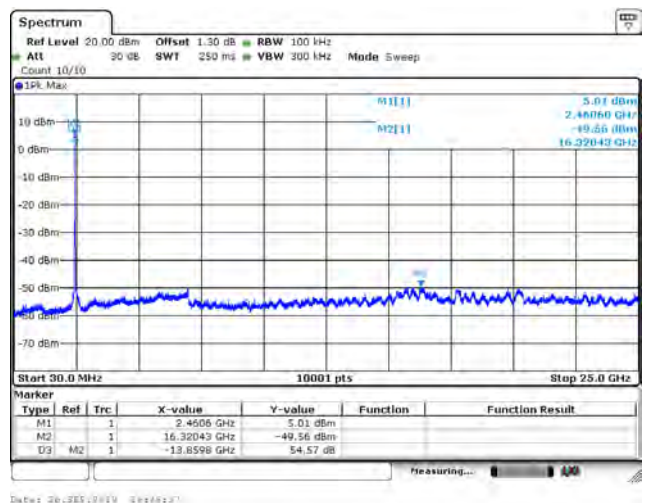
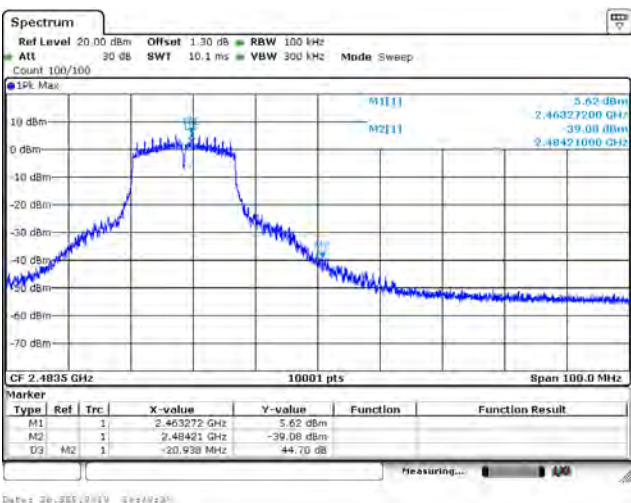
802.11g / 2412 MHz / Ant. 1



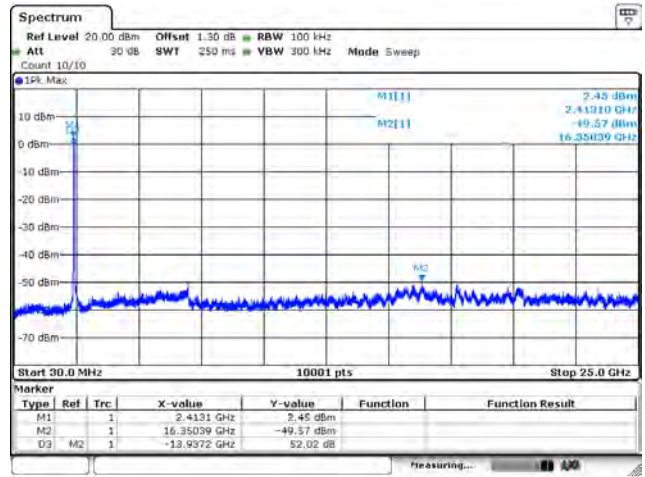
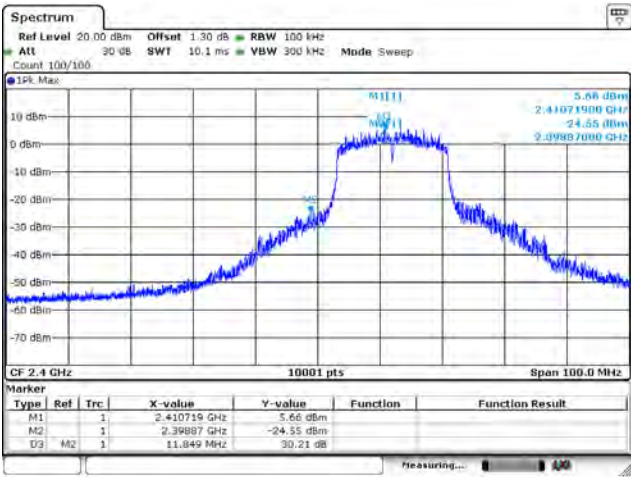
802.11g / 2437 MHz / Ant. 1



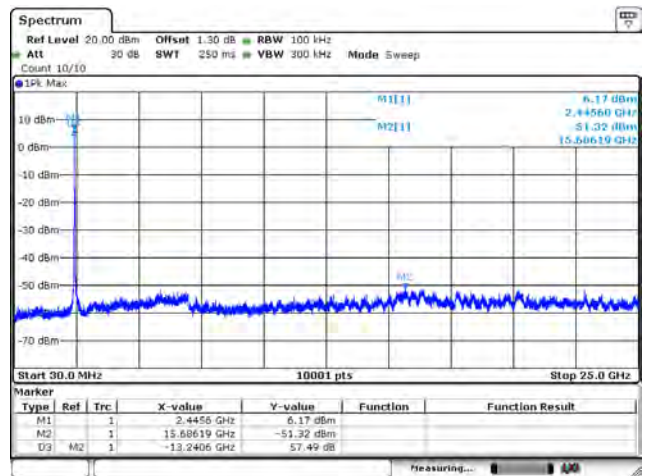
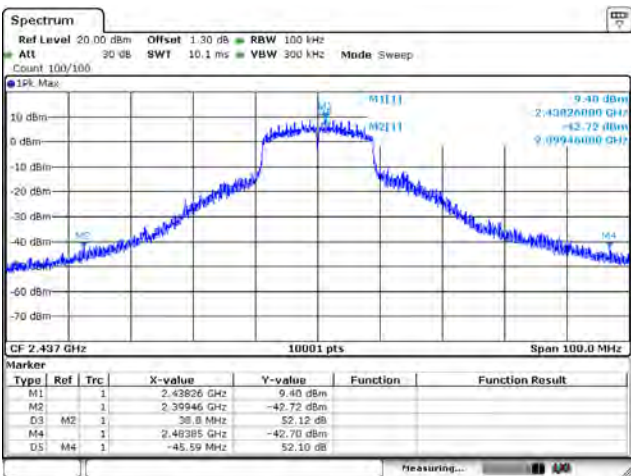
802.11g / 2462 MHz / Ant. 1



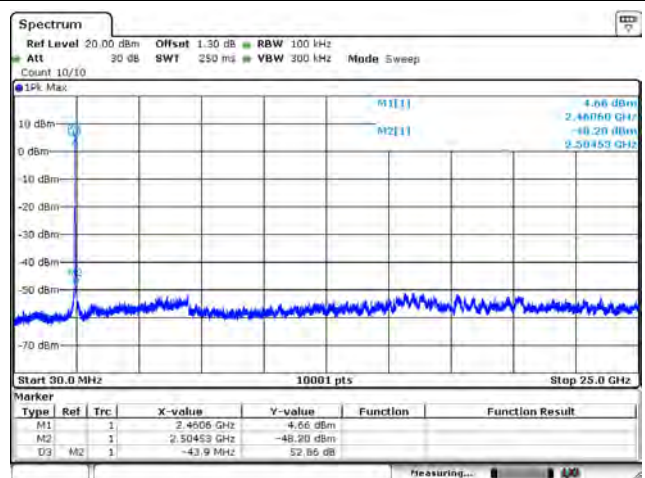
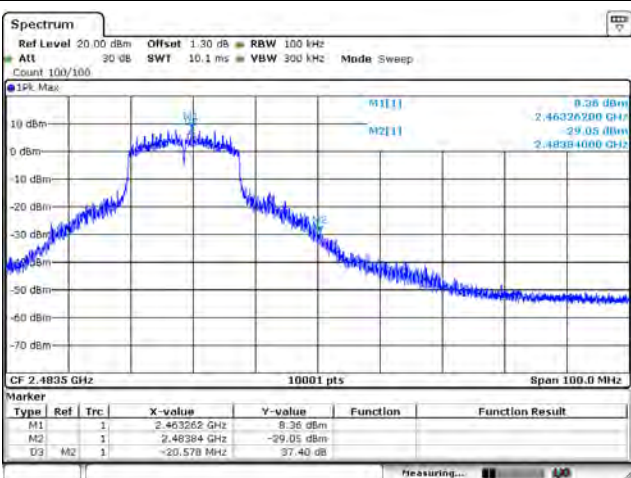
802.11n (20 MHz) / 2412 MHz / Ant. 1



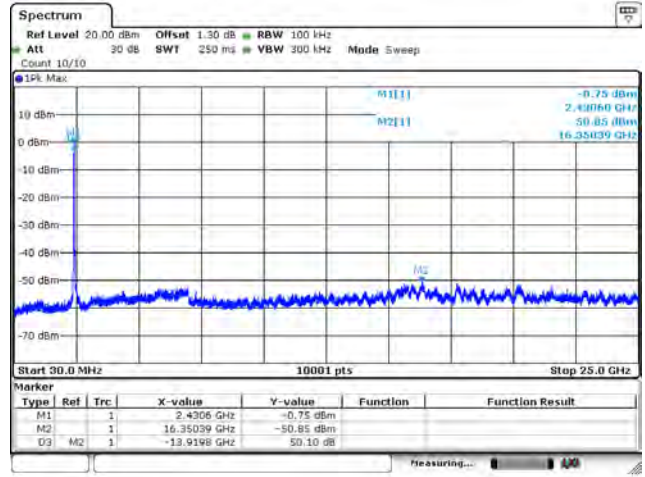
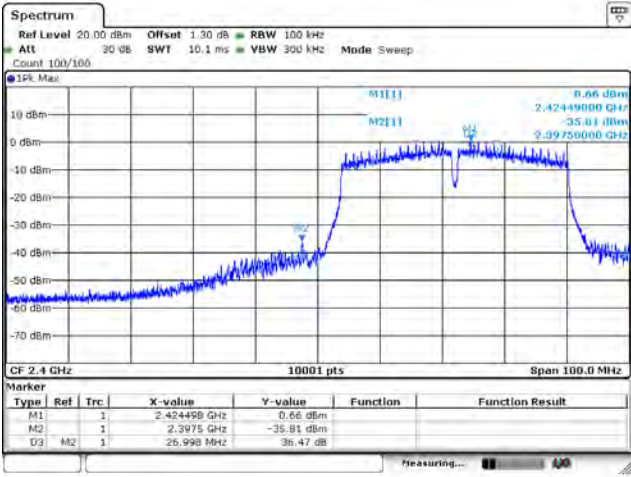
802.11n (20 MHz) / 2437 MHz / Ant. 1



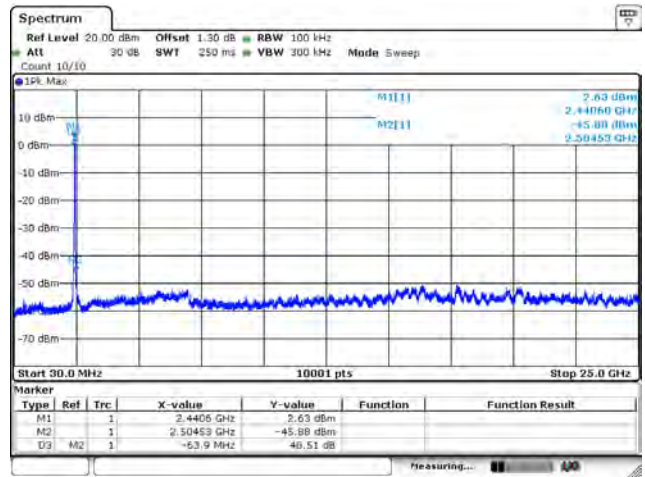
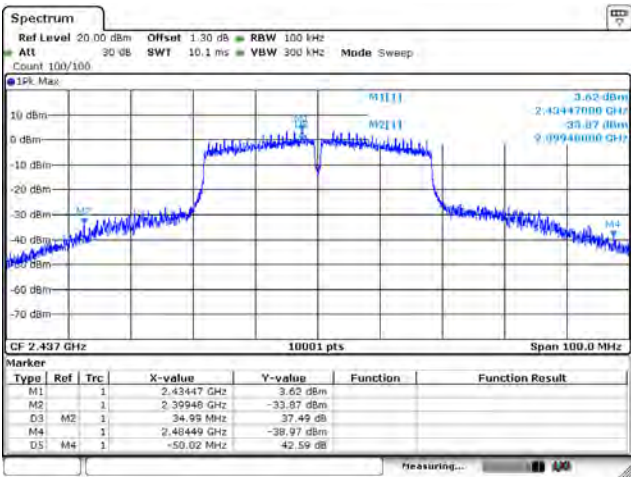
802.11n (20 MHz) / 2462 MHz / Ant. 1



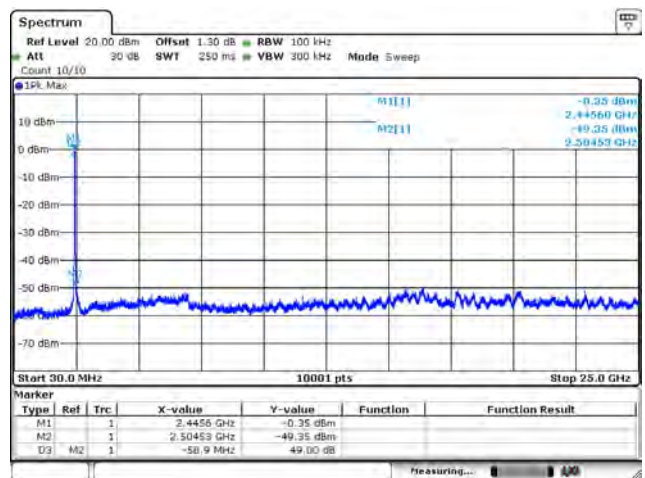
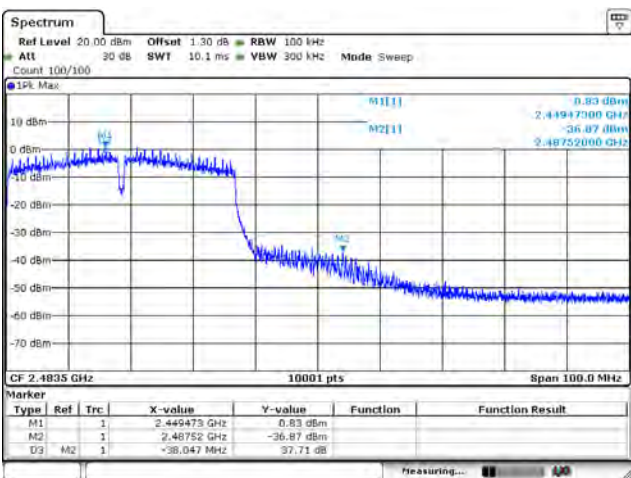
802.11n (40 MHz) / 2422 MHz / Ant. 1



802.11n (40 MHz) / 2437 MHz / Ant. 1

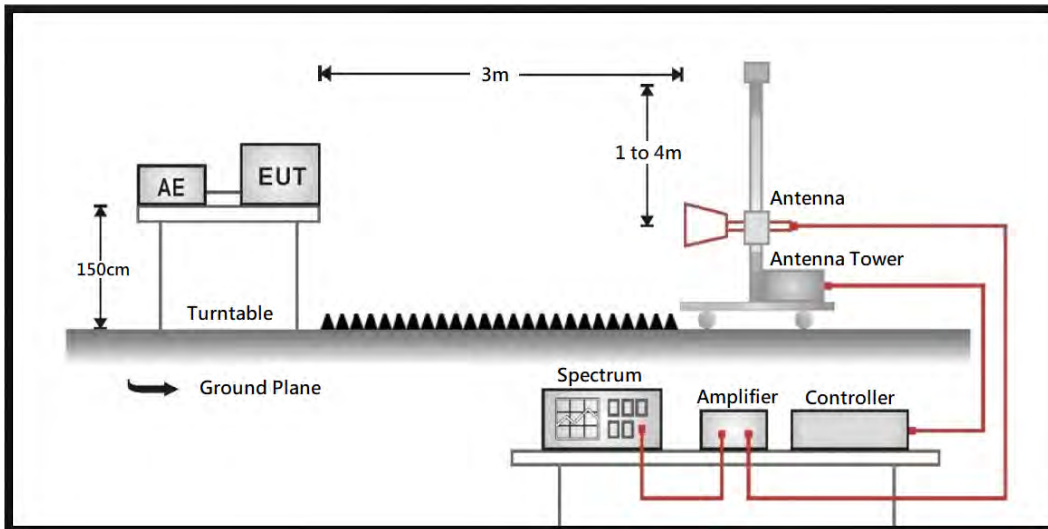


802.11n (40 MHz) / 2452 MHz / Ant. 1



6. Radiated Emission Band Edge

6.1. Test Setup



6.2. Test Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 30 dB below the level of the fundamental or to the general radiated emission limit in paragraph 15.209, whichever is the lesser attenuation.

Frequency (MHz)	Field strength (uV/m)	Field strength (dBuV/m)	Measurement distance (m)
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Remarks:

1. Field strength (dBuV/m) = 20 log Field strength (uV/m)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

6.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to the FCC KDB 558074 D01 v05r02 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

The following table is the setting of spectrum analyzer.

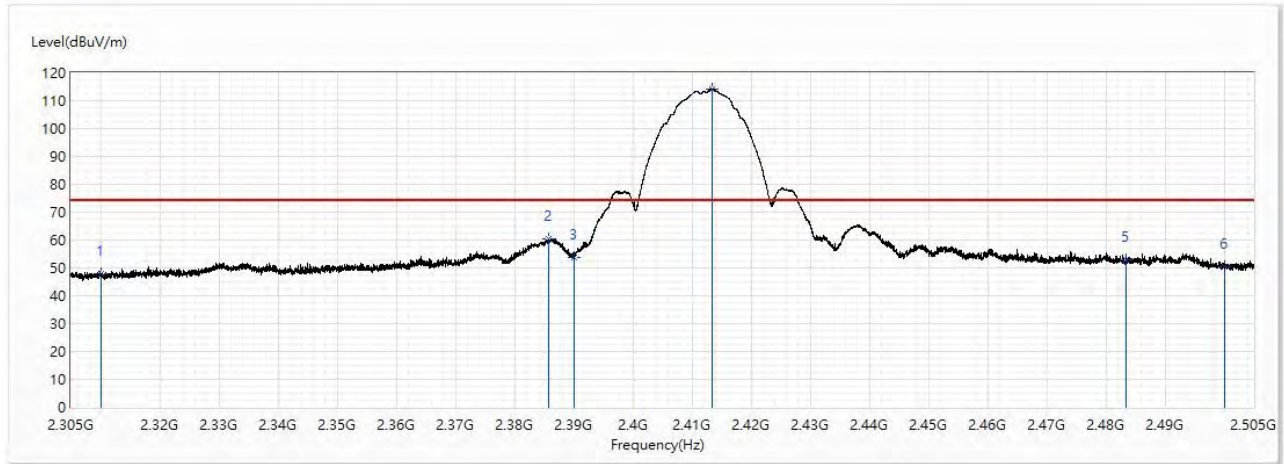
Spectrum Parameter	Setting	
RBW	1 MHz for Peak, 1 MHz for Average	
VBW	802.11b	3 MHz for Peak, 1 kHz for Average
	802.11g	3 MHz for Peak, 1 kHz for Average
	802.11n (20 MHz)	3 MHz for Peak, 1 kHz for Average
	802.11n (40 MHz)	3 MHz for Peak, 2 kHz for Average

6.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

6.5. Test Result of Radiated Emission Band Edge

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2412 MHz		

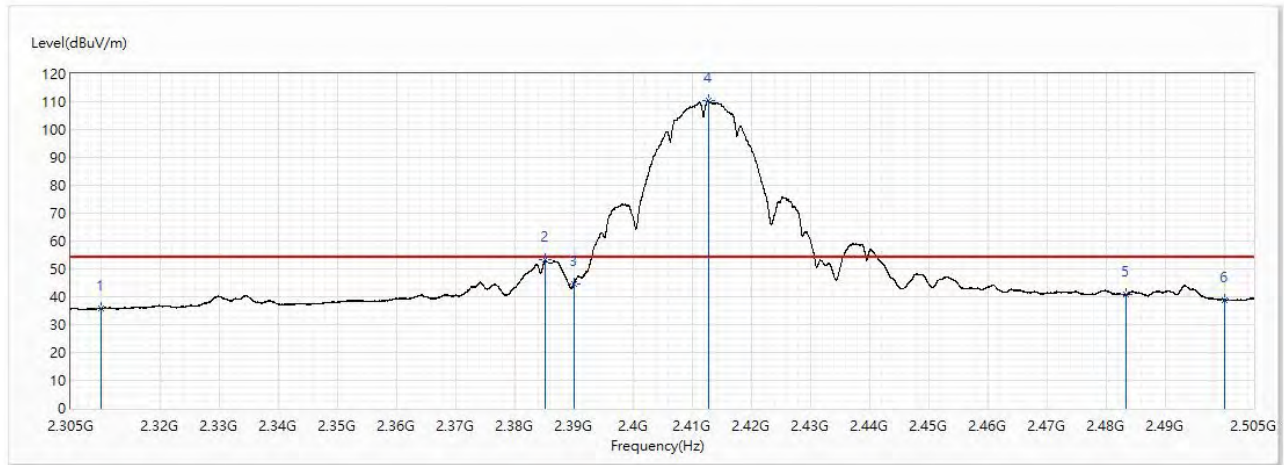


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	47.82	74.00	-26.18	33.93	13.89	PK
2	2385.75	60.61	74.00	-13.39	46.26	14.35	PK
3	2390	53.91	74.00	-20.09	39.53	14.38	PK
! 4	2413.45	114.25	74.00	40.25	99.74	14.51	PK
5	2483.5	52.93	74.00	-21.07	38.00	14.93	PK
6	2500	50.24	74.00	-23.76	35.21	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2412 MHz		

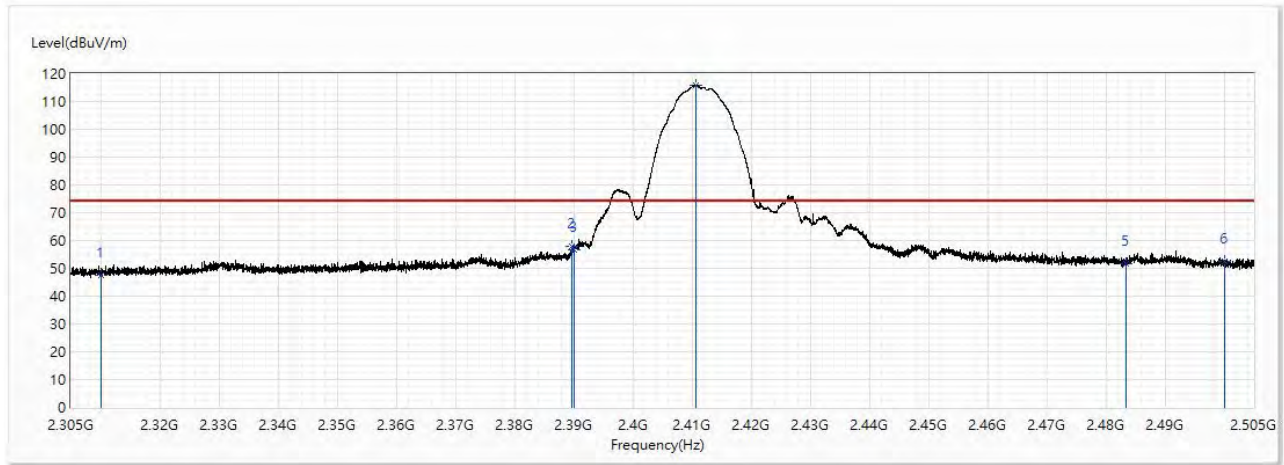


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	35.79	54.00	-18.21	21.90	13.89	AV
2	2385.125	53.33	54.00	-0.67	38.99	14.34	AV
3	2390	44.41	54.00	-9.59	30.03	14.38	AV
! 4	2412.775	110.36	54.00	56.36	95.85	14.51	AV
5	2483.5	40.75	54.00	-13.25	25.82	14.93	AV
6	2500	38.92	54.00	-15.08	23.89	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2412 MHz		

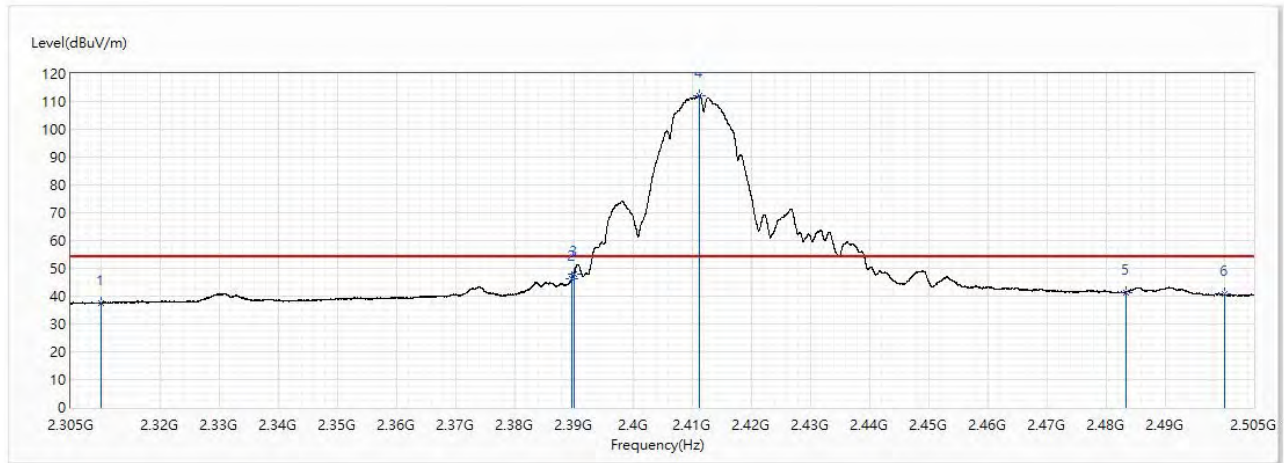


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	47.57	74.00	-26.43	33.68	13.89	PK
2	2389.675	57.71	74.00	-16.29	43.33	14.38	PK
3	2390	56.62	74.00	-17.38	42.24	14.38	PK
! 4	2410.675	115.99	74.00	41.99	101.48	14.51	PK
5	2483.5	51.71	74.00	-22.29	36.78	14.93	PK
6	2500	52.43	74.00	-21.57	37.40	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2412 MHz		

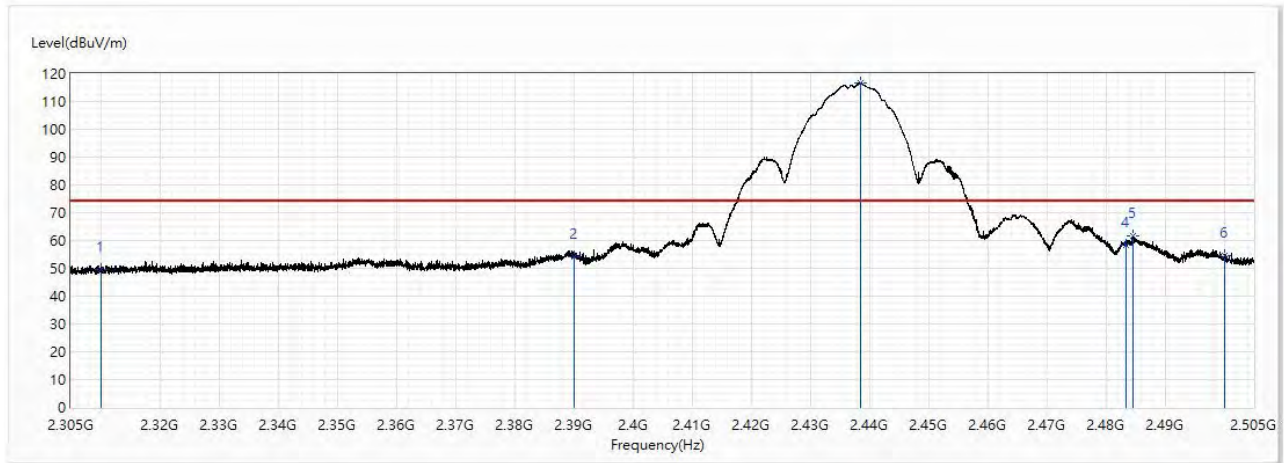


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.68	54.00	-16.32	23.79	13.89	AV
2	2389.75	46.36	54.00	-7.64	31.98	14.38	AV
3	2390	47.85	54.00	-6.15	33.47	14.38	AV
! 4	2411.225	112.21	54.00	58.21	97.70	14.51	AV
5	2483.5	41.45	54.00	-12.55	26.52	14.93	AV
6	2500	40.63	54.00	-13.37	25.60	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2437 MHz		

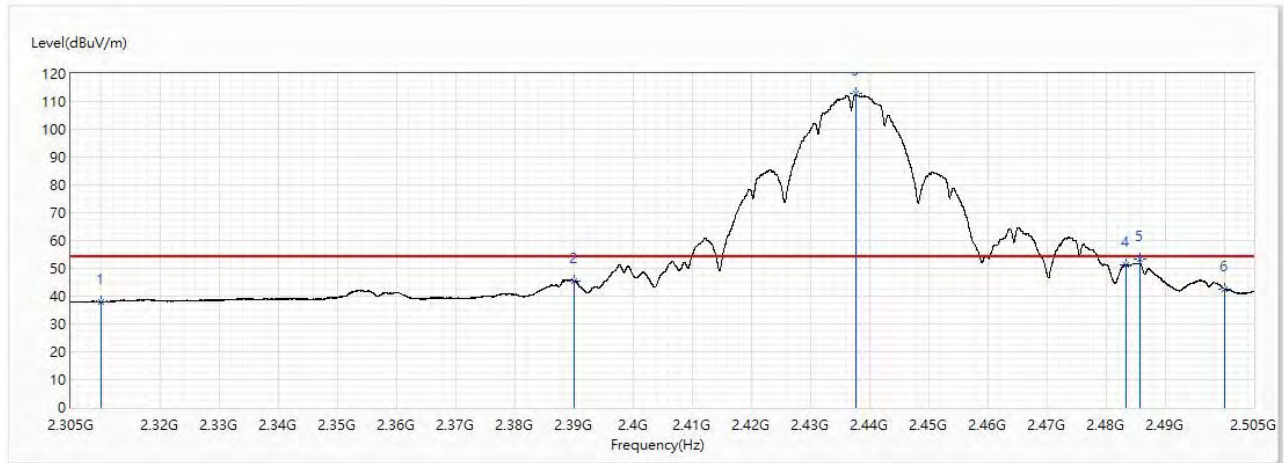


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	49.70	74.00	-24.30	35.81	13.89	PK
2	2390	54.30	74.00	-19.70	39.92	14.38	PK
! 3	2438.45	116.60	74.00	42.60	101.94	14.66	PK
4	2483.5	58.35	74.00	-15.65	43.42	14.93	PK
5	2484.55	61.59	74.00	-12.41	46.66	14.93	PK
6	2500	54.65	74.00	-19.35	39.62	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2437 MHz		

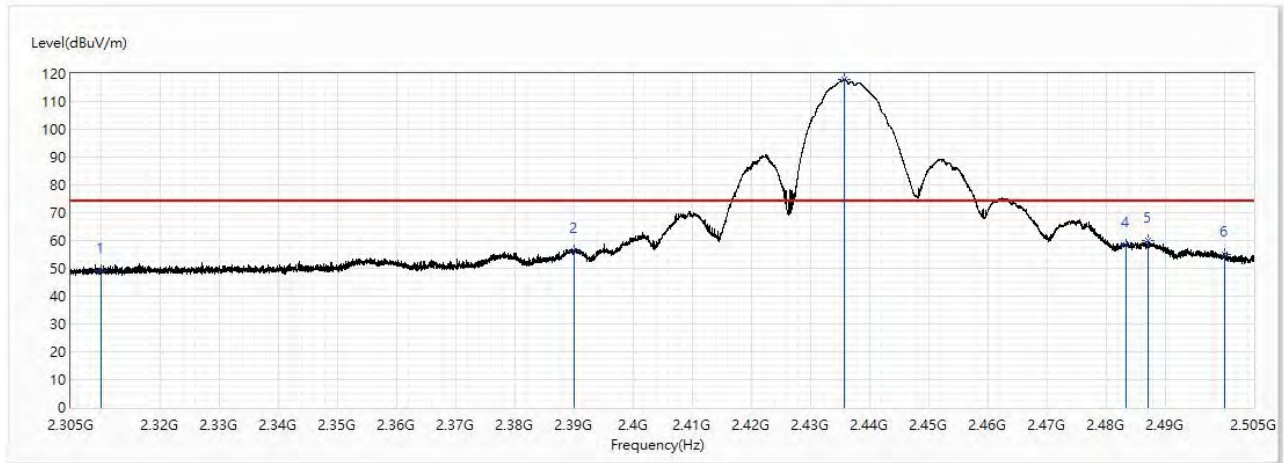


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.84	54.00	-16.16	23.95	13.89	AV
2	2390	45.28	54.00	-8.72	30.90	14.38	AV
! 3	2437.75	112.78	54.00	58.78	98.12	14.66	AV
4	2483.5	51.26	54.00	-2.74	36.33	14.93	AV
5	2485.825	53.28	54.00	-0.72	38.33	14.95	AV
6	2500	42.66	54.00	-11.34	27.63	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2437 MHz		

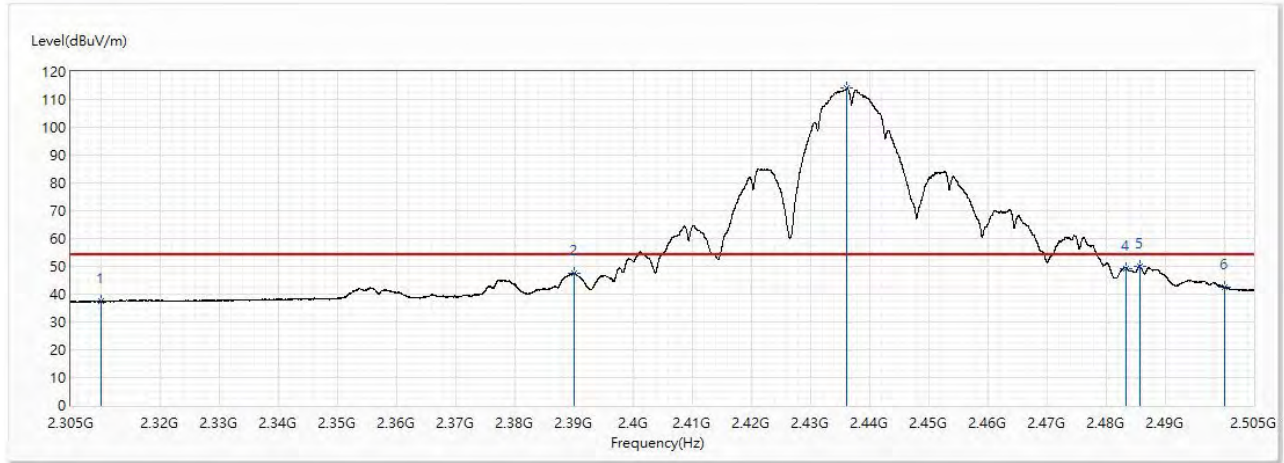


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	49.05	74.00	-24.95	35.16	13.89	PK
2	2390	56.28	74.00	-17.72	41.90	14.38	PK
! 3	2435.75	117.80	74.00	43.80	103.14	14.66	PK
4	2483.5	58.35	74.00	-15.65	43.42	14.93	PK
5	2487.25	60.12	74.00	-13.88	45.16	14.96	PK
6	2500	54.80	74.00	-19.20	39.77	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2437 MHz		

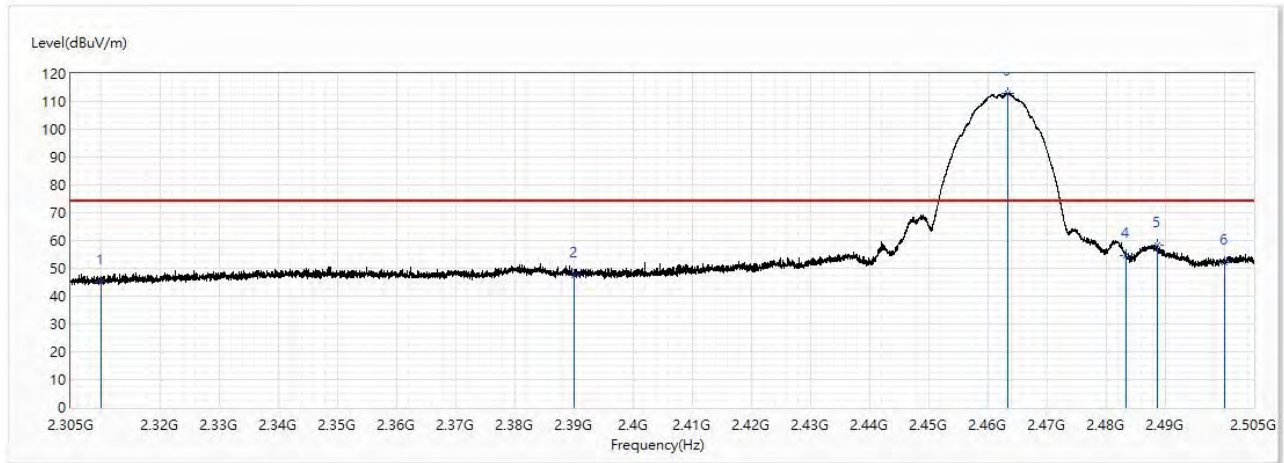


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.31	54.00	-16.69	23.42	13.89	AV
2	2390	47.49	54.00	-6.51	33.11	14.38	AV
! 3	2436.225	114.01	54.00	60.01	99.35	14.66	AV
4	2483.5	49.22	54.00	-4.78	34.29	14.93	AV
5	2485.85	50.03	54.00	-3.97	35.08	14.95	AV
6	2500	42.46	54.00	-11.54	27.43	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2462 MHz		

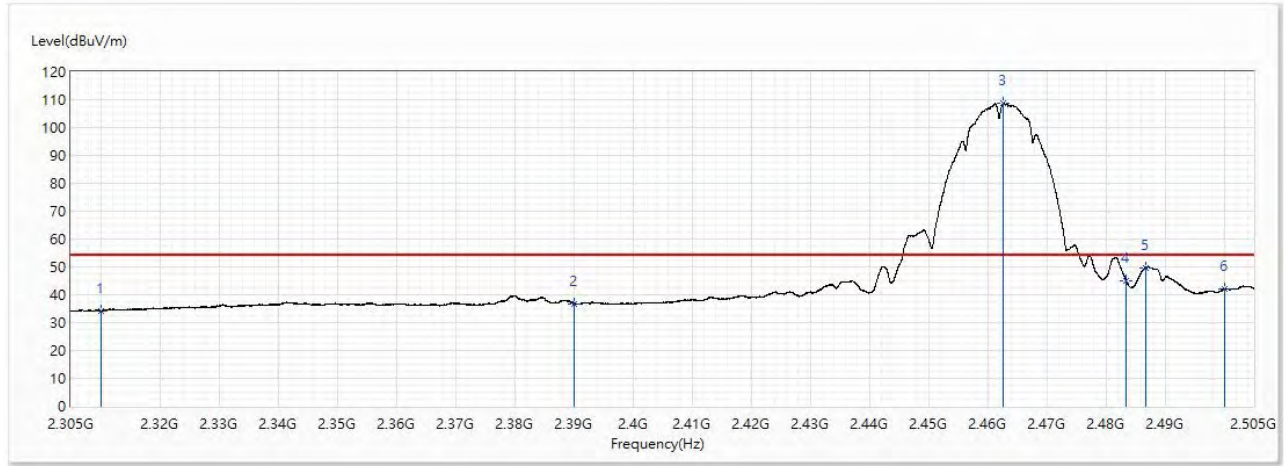


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	45.18	74.00	-28.82	31.29	13.89	PK
2	2390	47.47	74.00	-26.53	33.09	14.38	PK
! 3	2463.375	113.01	74.00	39.01	98.20	14.81	PK
4	2483.5	54.67	74.00	-19.33	39.74	14.93	PK
5	2488.675	58.35	74.00	-15.65	43.39	14.96	PK
6	2500	52.02	74.00	-21.98	36.99	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2462 MHz		

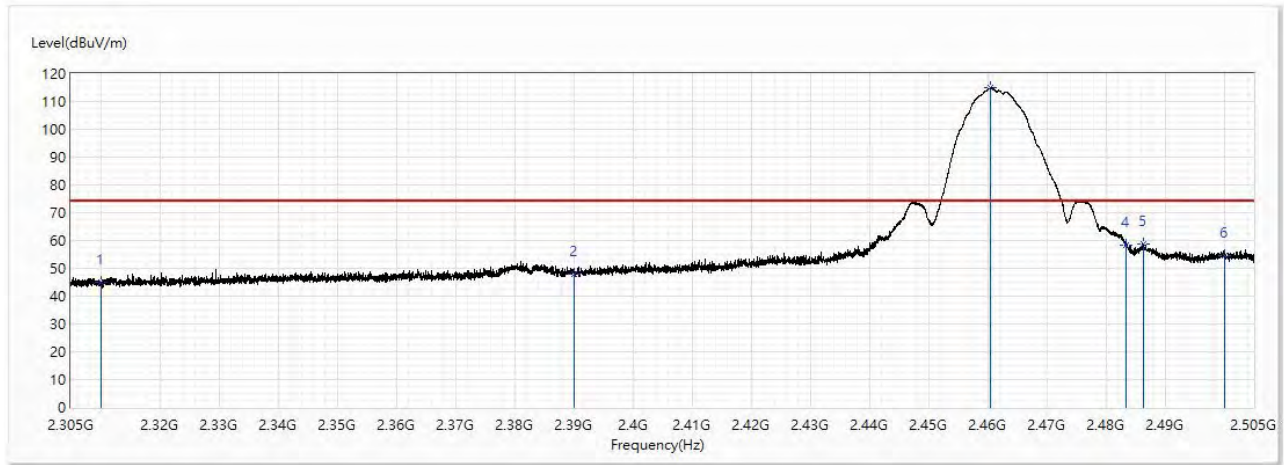


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	34.24	54.00	-19.76	20.35	13.89	AV
2	2390	36.86	54.00	-17.14	22.48	14.38	AV
! 3	2462.725	108.95	54.00	54.95	94.14	14.81	AV
4	2483.5	44.99	54.00	-9.01	30.06	14.93	AV
5	2486.675	49.57	54.00	-4.43	34.62	14.95	AV
6	2500	42.08	54.00	-11.92	27.05	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2462 MHz		

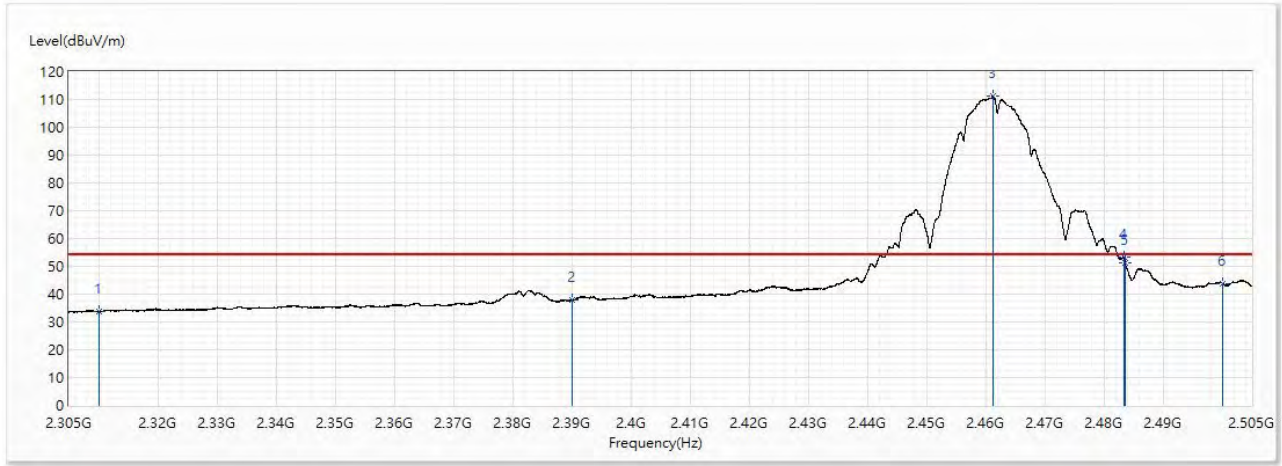


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	44.94	74.00	-29.06	31.05	13.89	PK
2	2390	47.91	74.00	-26.09	33.53	14.38	PK
! 3	2460.55	114.96	74.00	40.96	100.16	14.80	PK
4	2483.5	58.30	74.00	-15.70	43.37	14.93	PK
5	2486.45	58.81	74.00	-15.19	43.86	14.95	PK
6	2500	54.46	74.00	-19.54	39.43	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11b / Ant. 0 + Ant. 1 / 2462 MHz		

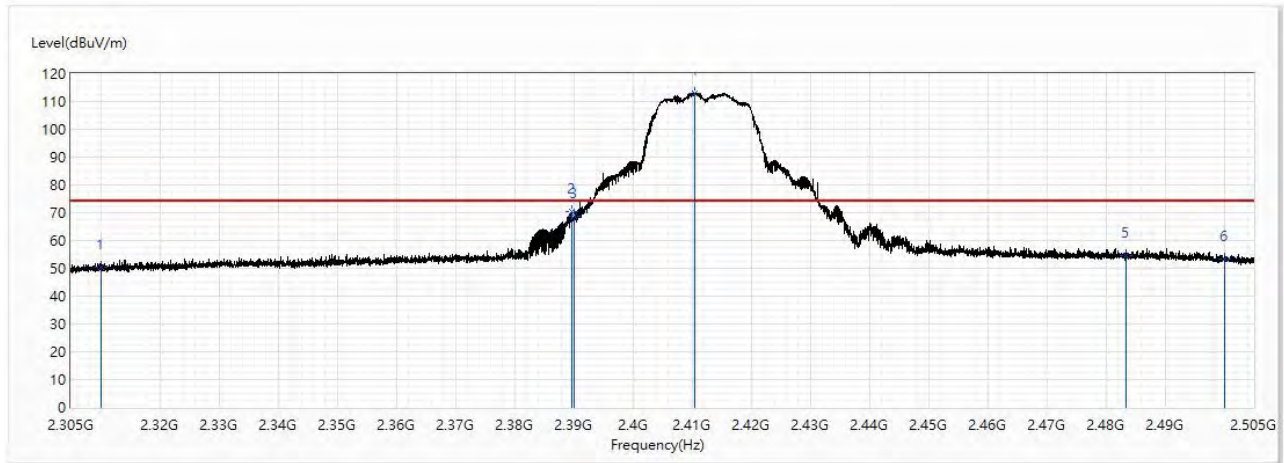


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	33.74	54.00	-20.26	19.85	13.89	AV
2	2390	37.73	54.00	-16.27	23.35	14.38	AV
! 3	2461.25	111.10	54.00	57.10	96.30	14.80	AV
4	2483.5	53.29	54.00	-0.71	38.36	14.93	AV
5	2483.625	51.05	54.00	-2.95	36.12	14.93	AV
6	2500	43.89	54.00	-10.11	28.86	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2412 MHz		

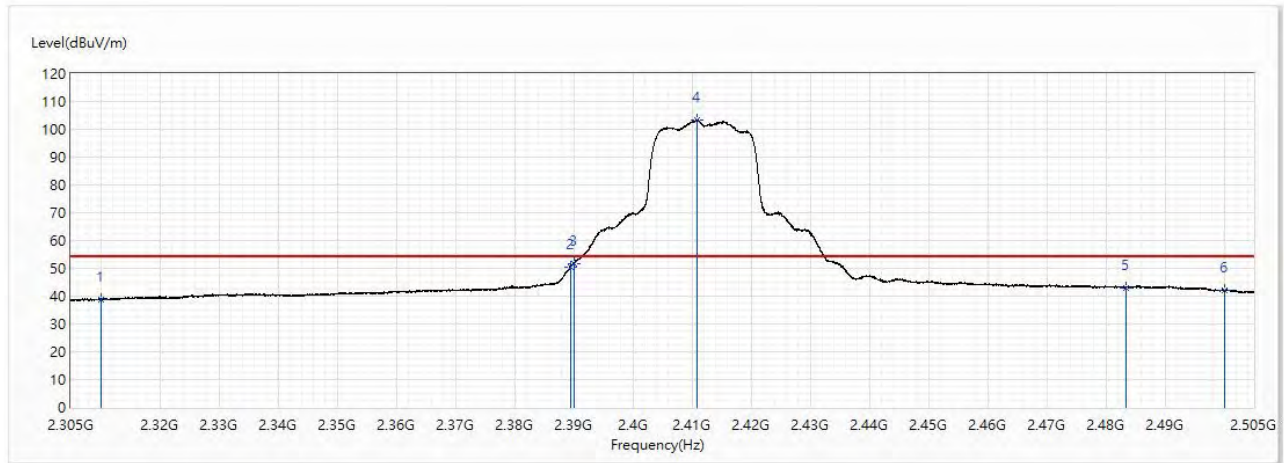


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	50.45	74.00	-23.55	36.56	13.89	PK
2	2389.625	70.21	74.00	-3.79	55.83	14.38	PK
3	2390	68.62	74.00	-5.38	54.24	14.38	PK
! 4	2410.475	113.08	74.00	39.08	98.58	14.50	PK
5	2483.5	54.44	74.00	-19.56	39.51	14.93	PK
6	2500	53.53	74.00	-20.47	38.50	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2412 MHz		

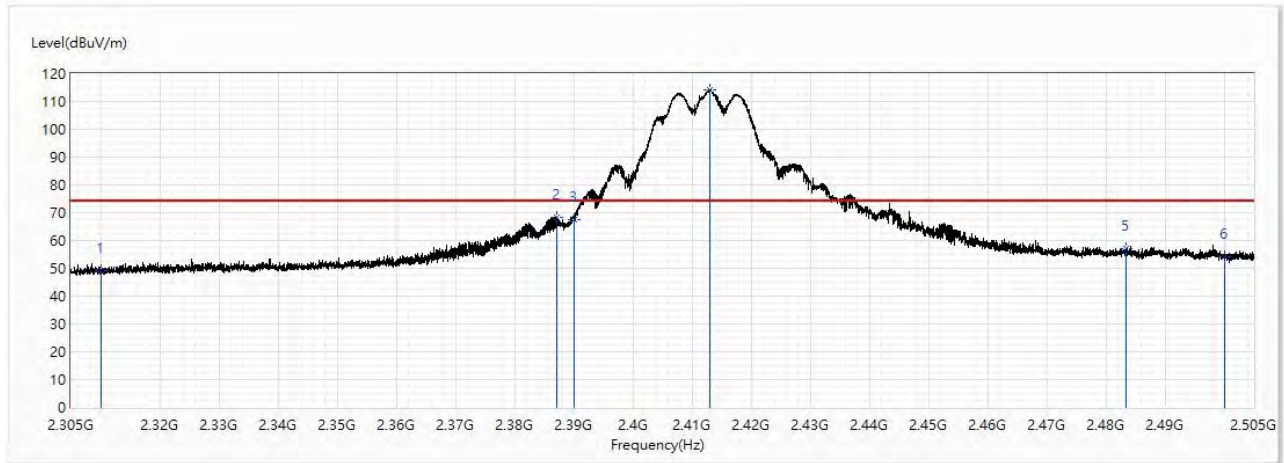


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.86	54.00	-15.14	24.97	13.89	AV
2	2389.475	50.53	54.00	-3.47	36.16	14.37	AV
3	2390	51.61	54.00	-2.39	37.23	14.38	AV
! 4	2410.975	103.31	54.00	49.31	88.80	14.51	AV
5	2483.5	42.98	54.00	-11.02	28.05	14.93	AV
6	2500	42.10	54.00	-11.90	27.07	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2412 MHz		

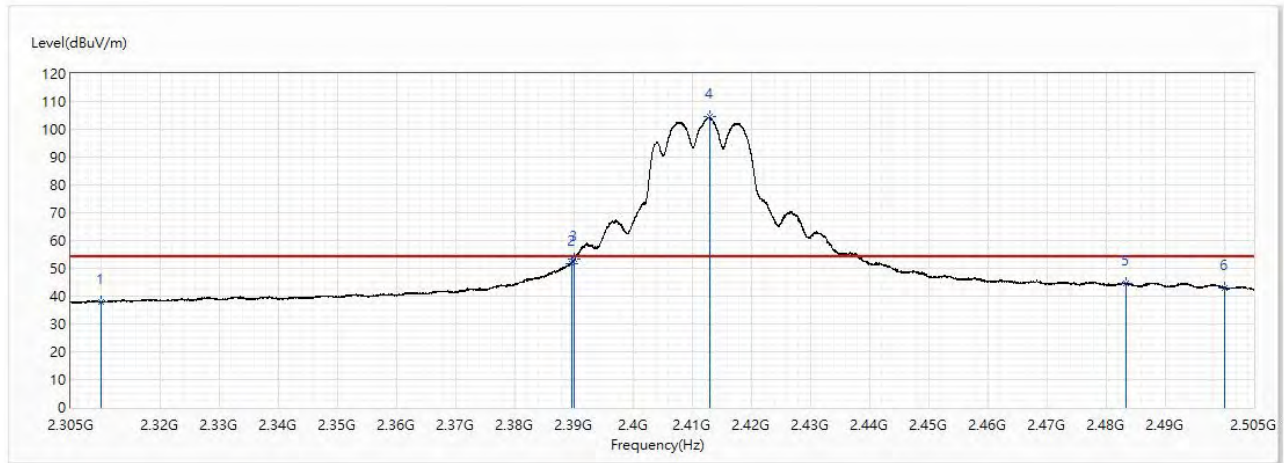


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	49.34	74.00	-24.66	35.45	13.89	PK
2	2387.075	68.48	74.00	-5.52	54.12	14.36	PK
3	2390	67.60	74.00	-6.40	53.22	14.38	PK
! 4	2412.975	114.19	74.00	40.19	99.68	14.51	PK
5	2483.5	56.96	74.00	-17.04	42.03	14.93	PK
6	2500	54.27	74.00	-19.73	39.24	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2412 MHz		

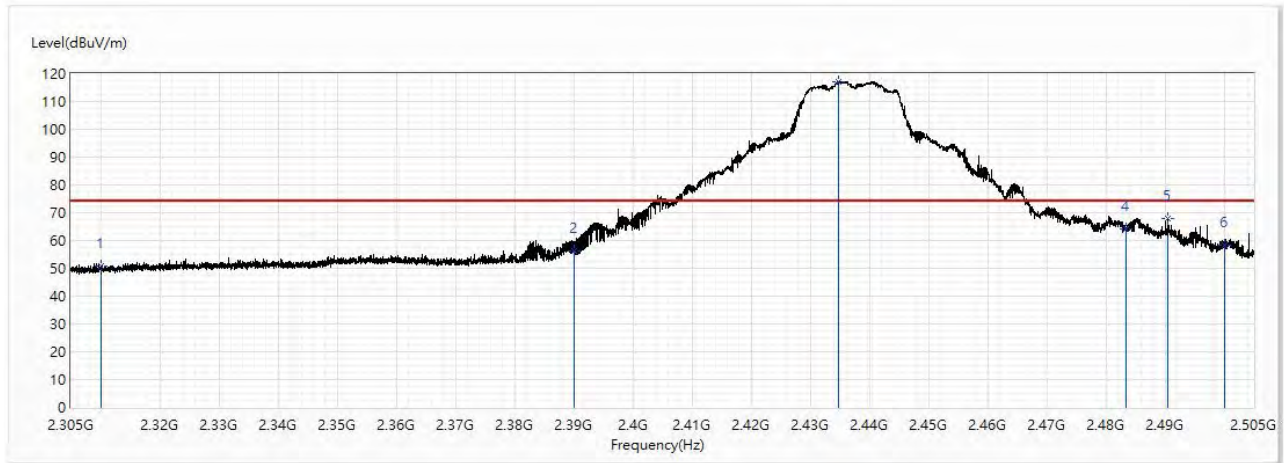


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.93	54.00	-16.07	24.04	13.89	AV
2	2389.675	51.87	54.00	-2.13	37.49	14.38	AV
3	2390	53.24	54.00	-0.76	38.86	14.38	AV
! 4	2412.95	104.38	54.00	50.38	89.87	14.51	AV
5	2483.5	44.69	54.00	-9.31	29.76	14.93	AV
6	2500	42.99	54.00	-11.01	27.96	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2437 MHz		

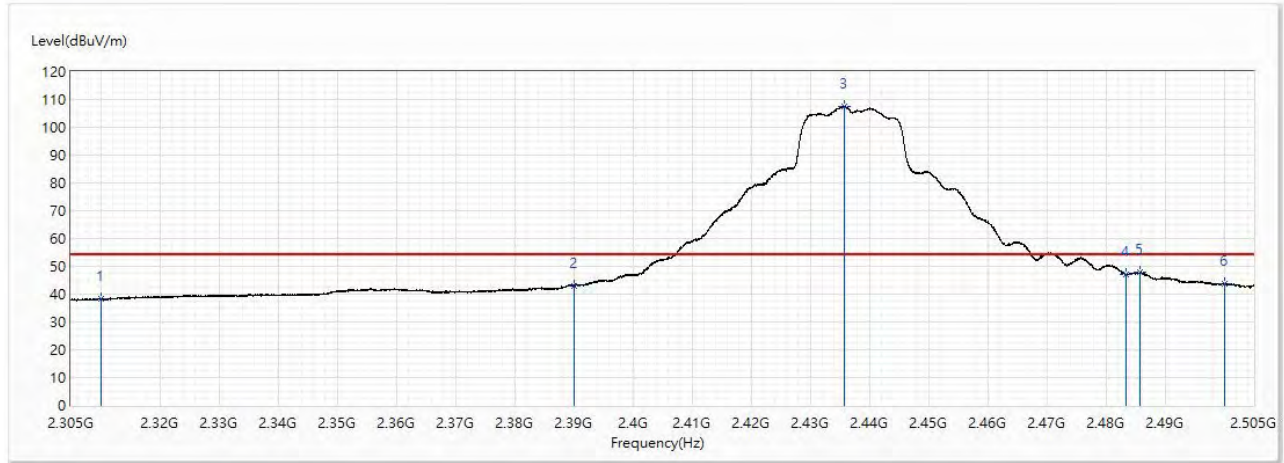


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	50.68	74.00	-23.32	36.79	13.89	PK
2	2390	56.05	74.00	-17.95	41.67	14.38	PK
! 3	2434.875	117.13	74.00	43.13	102.50	14.63	PK
4	2483.5	64.10	74.00	-9.90	49.17	14.93	PK
5	2490.575	68.07	74.00	-5.93	53.10	14.97	PK
6	2500	58.18	74.00	-15.82	43.15	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2437 MHz		

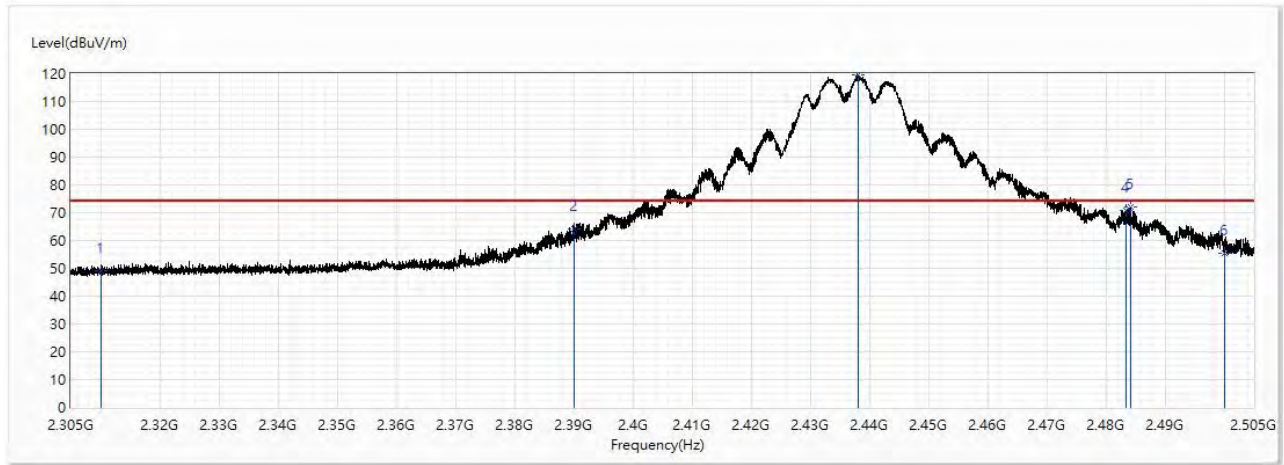


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.20	54.00	-15.80	24.31	13.89	AV
2	2390	43.12	54.00	-10.88	28.74	14.38	AV
! 3	2435.8	107.65	54.00	53.65	92.99	14.66	AV
4	2483.5	46.96	54.00	-7.04	32.03	14.93	AV
5	2485.8	47.95	54.00	-6.05	33.00	14.95	AV
6	2500	43.89	54.00	-10.11	28.86	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2437 MHz		

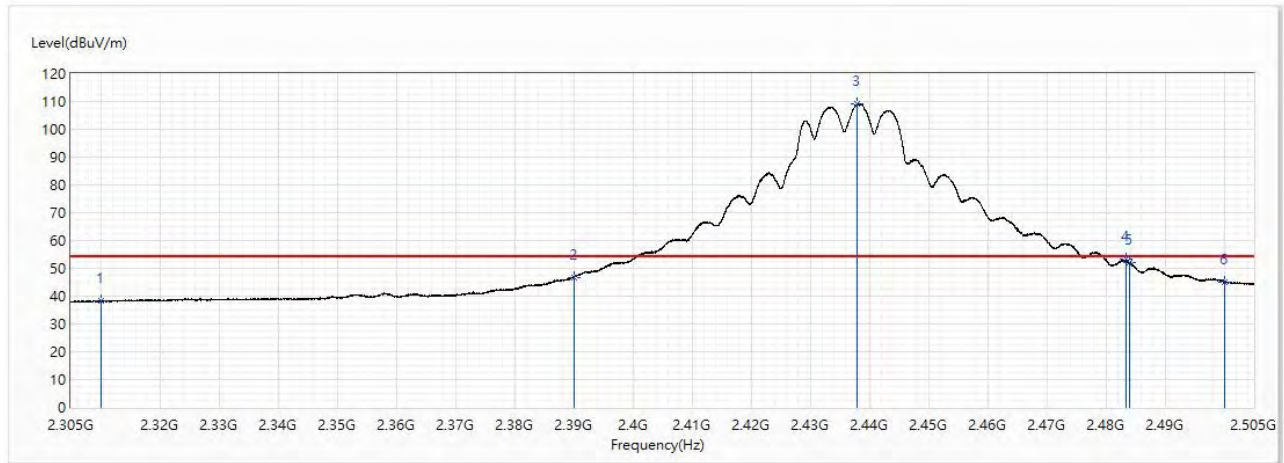


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	48.96	74.00	-25.04	35.07	13.89	PK
2	2390	64.36	74.00	-9.64	49.98	14.38	PK
! 3	2438.2	119.50	74.00	45.50	104.84	14.66	PK
4	2483.5	70.73	74.00	-3.27	55.80	14.93	PK
5	2484.2	71.90	74.00	-2.10	56.97	14.93	PK
6	2500	55.46	74.00	-18.54	40.43	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2437 MHz		

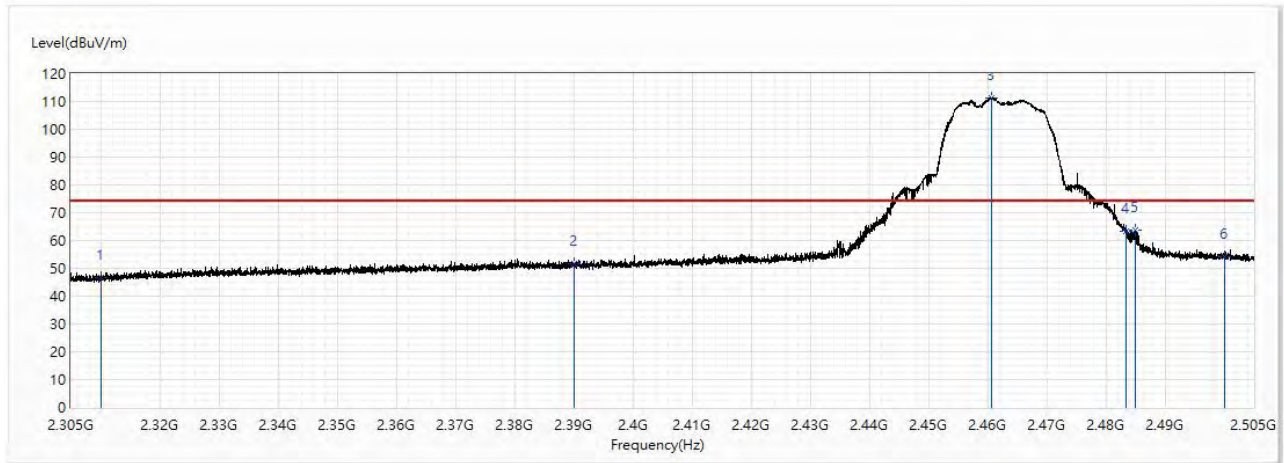


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.13	54.00	-15.87	24.24	13.89	AV
2	2390	46.61	54.00	-7.39	32.23	14.38	AV
! 3	2438	109.36	54.00	55.36	94.70	14.66	AV
4	2483.5	53.27	54.00	-0.73	38.34	14.93	AV
5	2483.925	51.93	54.00	-2.07	37.00	14.93	AV
6	2500	44.95	54.00	-9.05	29.92	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2462 MHz		

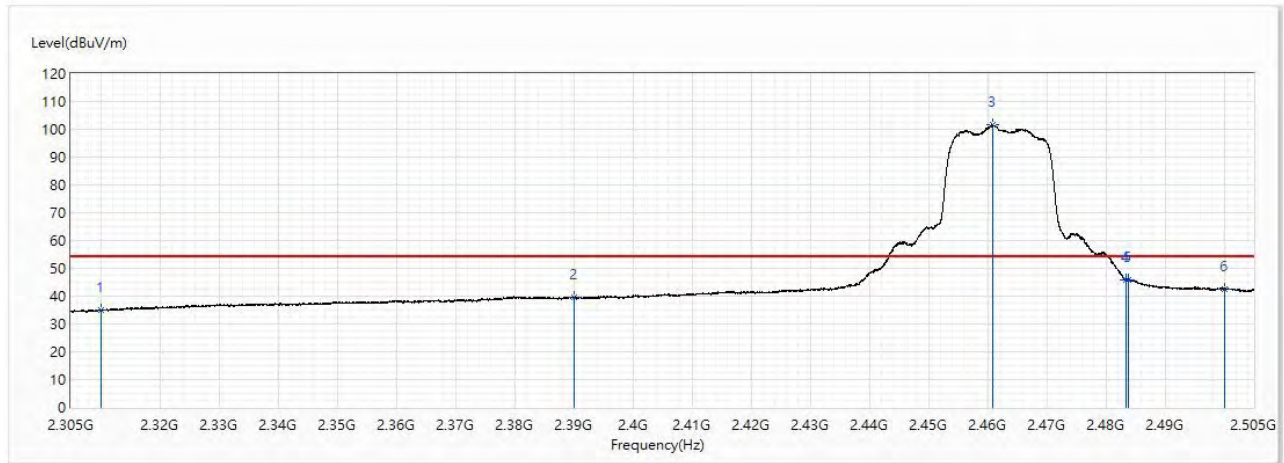


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	46.56	74.00	-27.44	32.67	13.89	PK
2	2390	51.50	74.00	-22.50	37.12	14.38	PK
! 3	2460.65	111.33	74.00	37.33	96.53	14.80	PK
4	2483.5	63.37	74.00	-10.63	48.44	14.93	PK
5	2485	63.57	74.00	-10.43	48.63	14.94	PK
6	2500	54.29	74.00	-19.71	39.26	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2462 MHz		

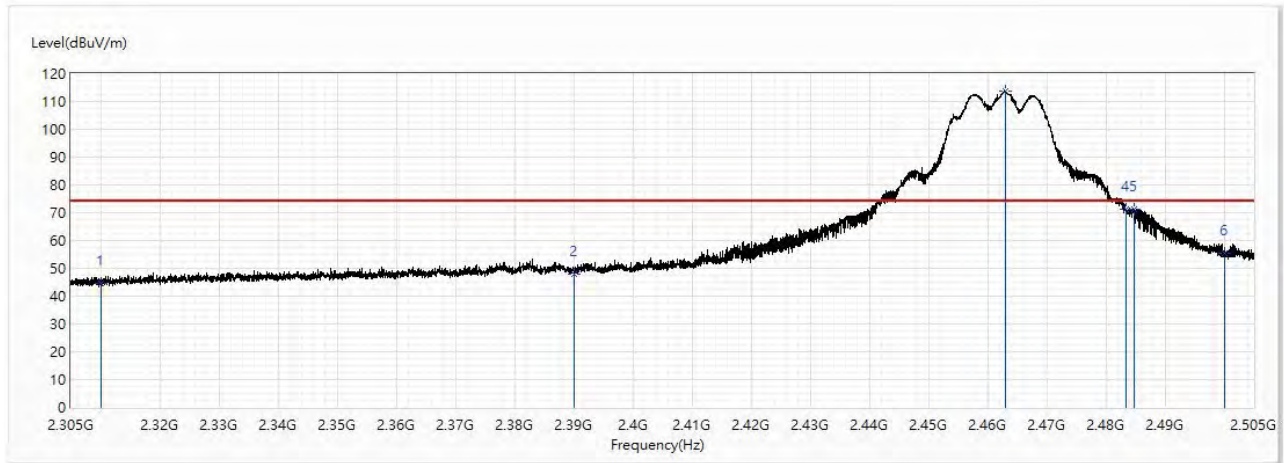


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	34.96	54.00	-19.04	21.07	13.89	AV
2	2390	39.59	54.00	-14.41	25.21	14.38	AV
! 3	2460.95	101.58	54.00	47.58	86.78	14.80	AV
4	2483.5	46.03	54.00	-7.97	31.10	14.93	AV
5	2483.75	45.72	54.00	-8.28	30.79	14.93	AV
6	2500	42.68	54.00	-11.32	27.65	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2462 MHz		

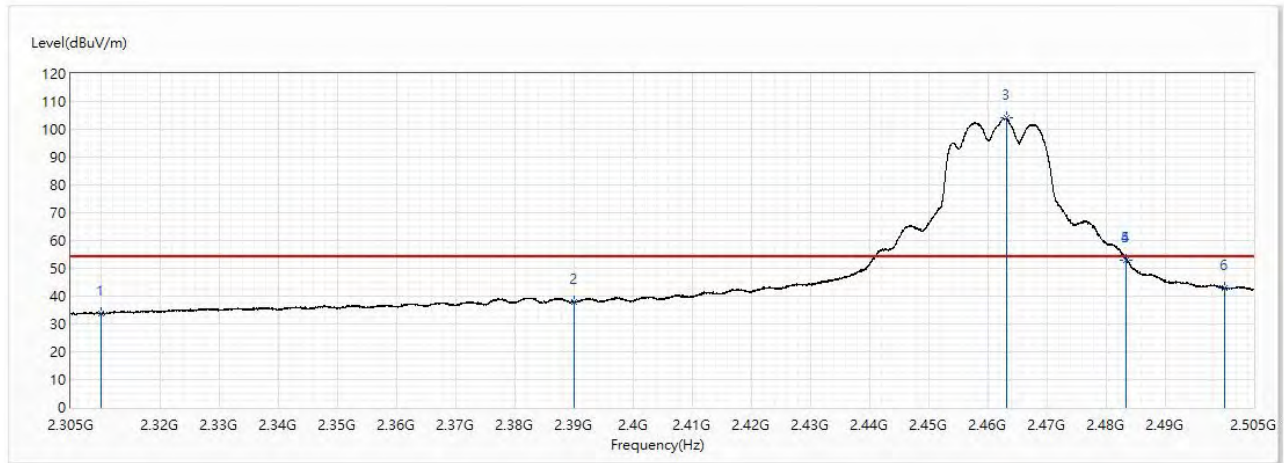


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	44.69	74.00	-29.31	30.80	13.89	PK
2	2390	48.00	74.00	-26.00	33.62	14.38	PK
! 3	2463	113.79	74.00	39.79	98.98	14.81	PK
4	2483.5	71.05	74.00	-2.95	56.12	14.93	PK
5	2484.725	71.44	74.00	-2.56	56.50	14.94	PK
6	2500	55.49	74.00	-18.51	40.46	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11g / Ant. 0 + Ant. 1 / 2462 MHz		

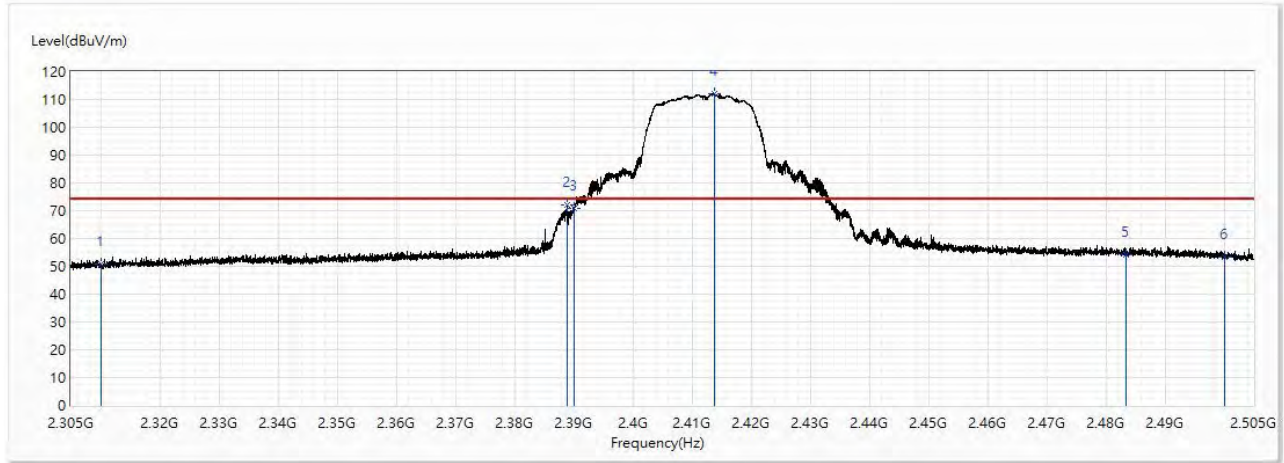


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	33.55	54.00	-20.45	19.66	13.89	AV
2	2390	37.98	54.00	-16.02	23.60	14.38	AV
! 3	2463.275	103.97	54.00	49.97	89.16	14.81	AV
4	2483.5	53.00	54.00	-1.00	38.07	14.93	AV
5	2483.525	53.11	54.00	-0.89	38.18	14.93	AV
6	2500	42.99	54.00	-11.01	27.96	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2412 MHz		

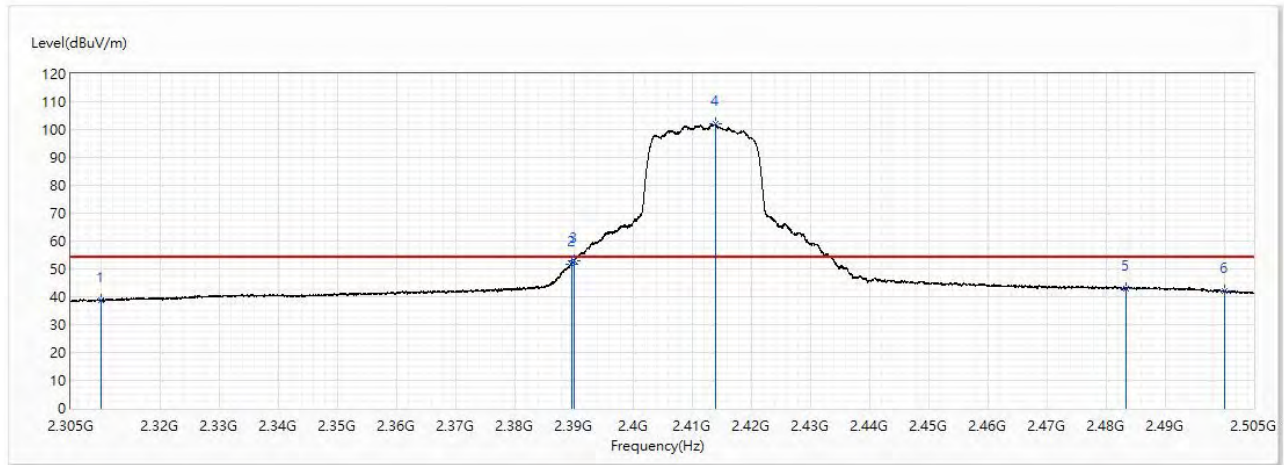


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	50.65	74.00	-23.35	36.76	13.89	PK
2	2388.85	72.29	74.00	-1.71	57.93	14.36	PK
3	2390	70.63	74.00	-3.37	56.25	14.38	PK
! 4	2413.875	112.05	74.00	38.05	97.54	14.51	PK
5	2483.5	54.02	74.00	-19.98	39.09	14.93	PK
6	2500	53.44	74.00	-20.56	38.41	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2412 MHz		

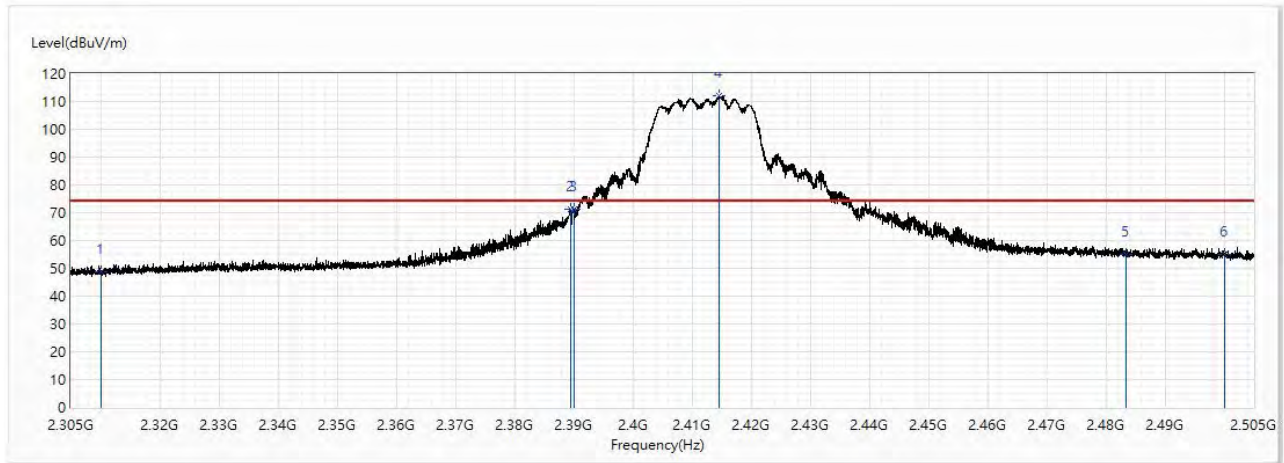


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.71	54.00	-15.29	24.82	13.89	AV
2	2389.675	51.69	54.00	-2.31	37.31	14.38	AV
3	2390	52.71	54.00	-1.29	38.33	14.38	AV
! 4	2413.975	102.02	54.00	48.02	87.51	14.51	AV
5	2483.5	42.99	54.00	-11.01	28.06	14.93	AV
6	2500	41.97	54.00	-12.03	26.94	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2412 MHz		

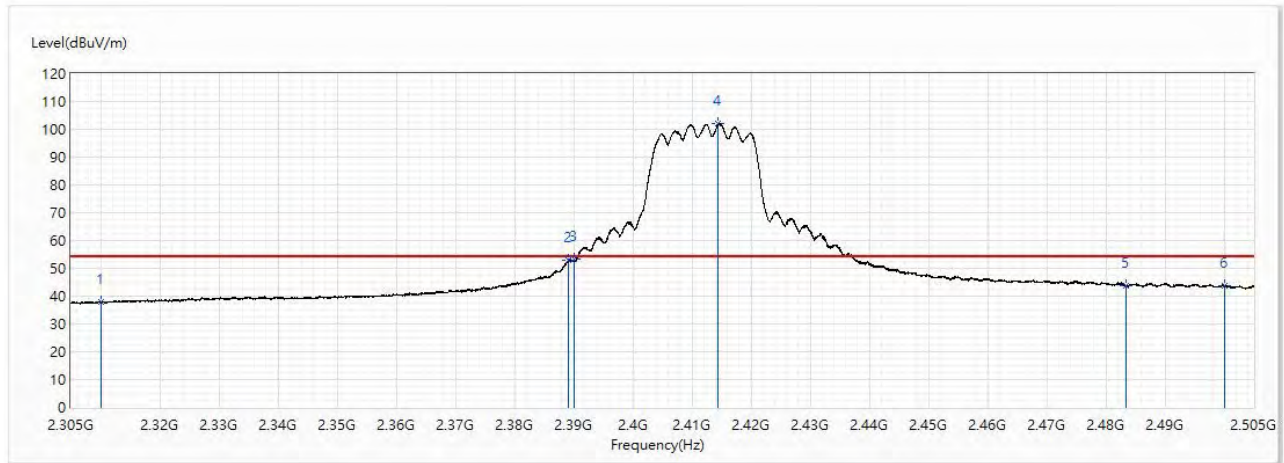


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	48.87	74.00	-25.13	34.98	13.89	PK
2	2389.55	71.16	74.00	-2.84	56.79	14.37	PK
3	2390	71.33	74.00	-2.67	56.95	14.38	PK
! 4	2414.525	112.21	74.00	38.21	97.70	14.51	PK
5	2483.5	55.00	74.00	-19.00	40.07	14.93	PK
6	2500	55.13	74.00	-18.87	40.10	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2412 MHz		

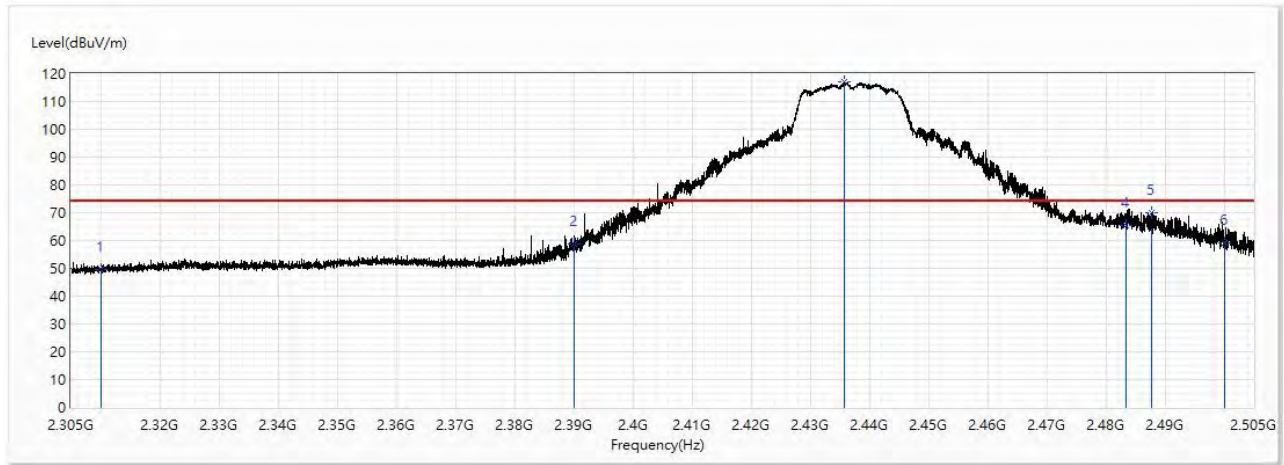


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.74	54.00	-16.26	23.85	13.89	AV
2	2389.1	52.82	54.00	-1.18	38.46	14.36	AV
3	2390	53.40	54.00	-0.60	39.02	14.38	AV
! 4	2414.475	102.06	54.00	48.06	87.55	14.51	AV
5	2483.5	43.86	54.00	-10.14	28.93	14.93	AV
6	2500	43.80	54.00	-10.20	28.77	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

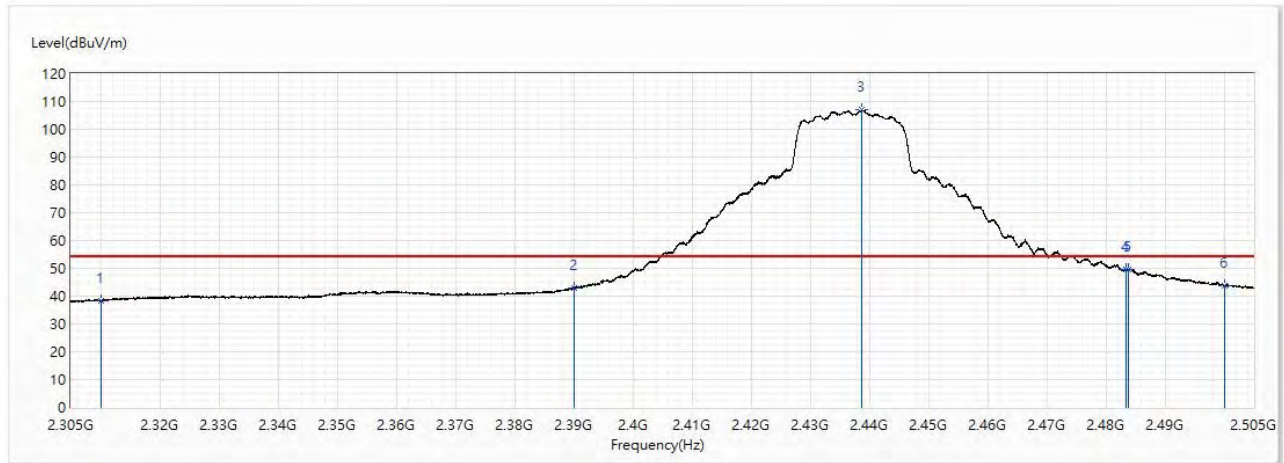


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	49.72	74.00	-24.28	35.83	13.89	PK
2	2390	58.73	74.00	-15.27	44.35	14.38	PK
! 3	2435.825	117.09	74.00	43.09	102.43	14.66	PK
4	2483.5	65.46	74.00	-8.54	50.53	14.93	PK
5	2487.825	69.98	74.00	-4.02	55.02	14.96	PK
6	2500	59.27	74.00	-14.73	44.24	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

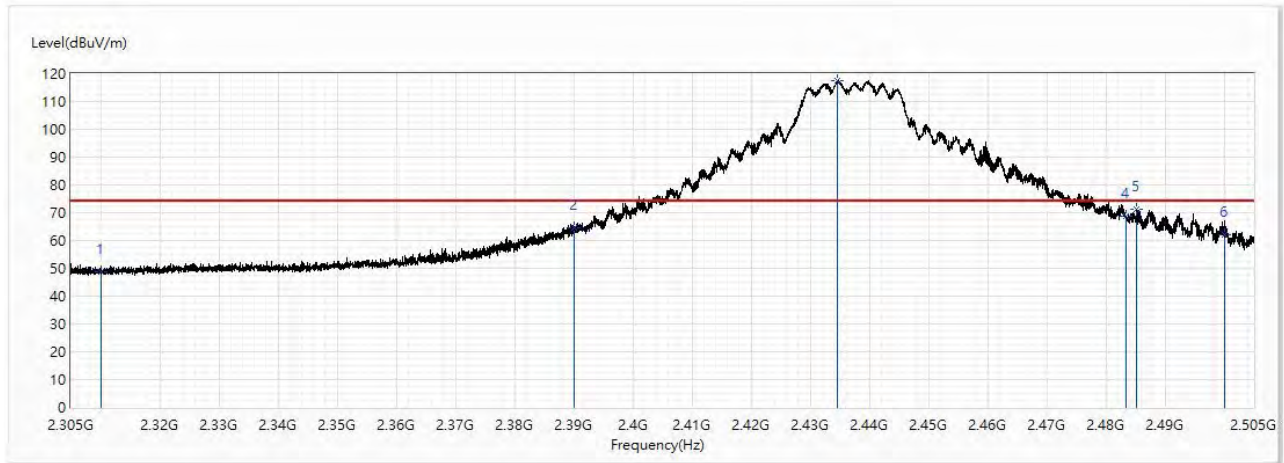


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.38	54.00	-15.62	24.49	13.89	AV
2	2390	42.90	54.00	-11.10	28.52	14.38	AV
! 3	2438.75	106.88	54.00	52.88	92.22	14.66	AV
4	2483.5	49.38	54.00	-4.62	34.45	14.93	AV
5	2483.775	49.66	54.00	-4.34	34.73	14.93	AV
6	2500	43.82	54.00	-10.18	28.79	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

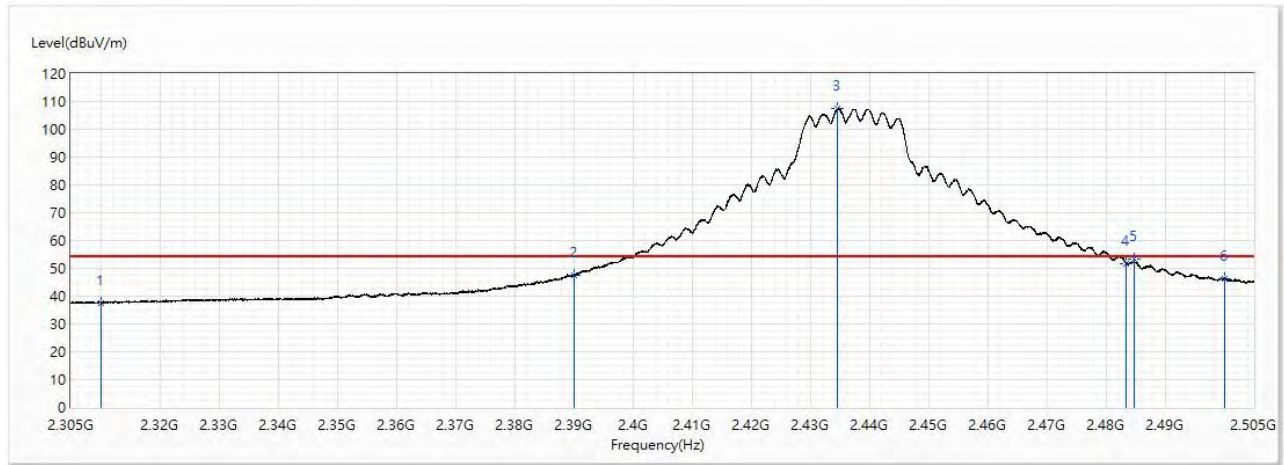


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	48.85	74.00	-25.15	34.96	13.89	PK
2	2390	64.40	74.00	-9.60	50.02	14.38	PK
! 3	2434.7	117.41	74.00	43.41	102.78	14.63	PK
4	2483.5	68.57	74.00	-5.43	53.64	14.93	PK
5	2485.25	71.20	74.00	-2.80	56.26	14.94	PK
6	2500	62.19	74.00	-11.81	47.16	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

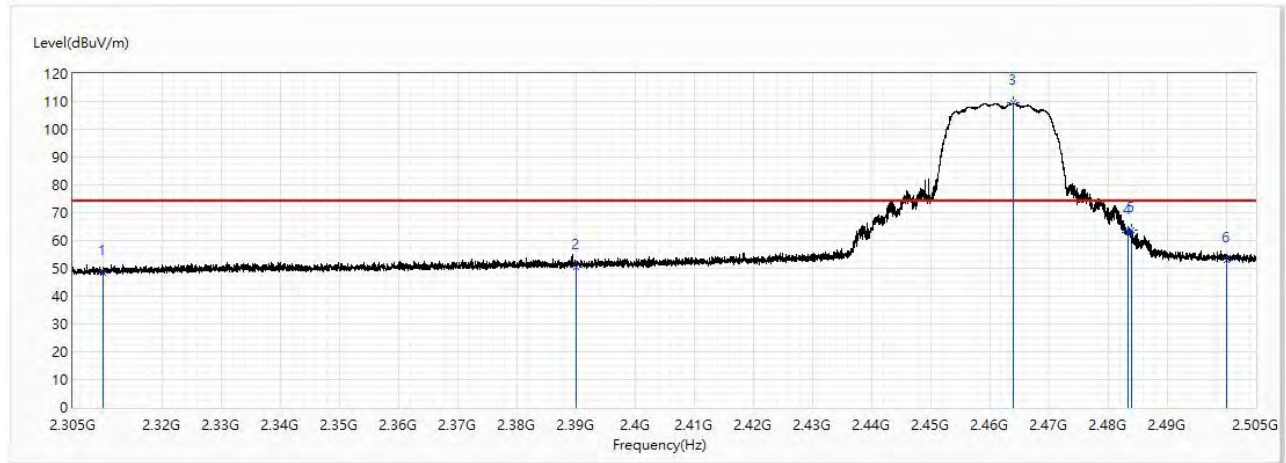


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.62	54.00	-16.38	23.73	13.89	AV
2	2390	47.55	54.00	-6.45	33.17	14.38	AV
! 3	2434.7	107.58	54.00	53.58	92.95	14.63	AV
4	2483.5	51.69	54.00	-2.31	36.76	14.93	AV
5	2484.775	53.21	54.00	-0.79	38.27	14.94	AV
6	2500	46.13	54.00	-7.87	31.10	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2462 MHz		

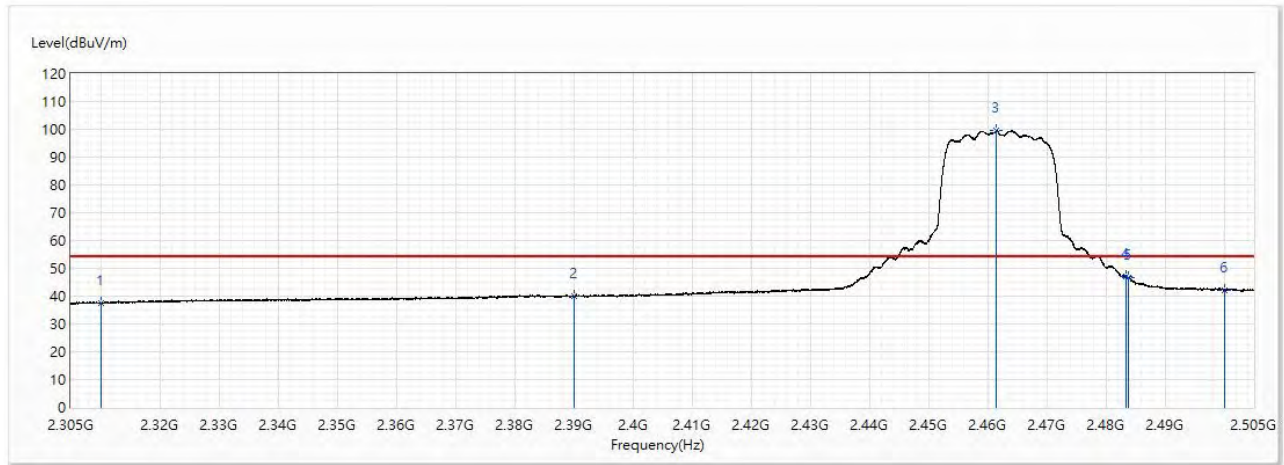


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	48.44	74.00	-25.56	34.55	13.89	PK
2	2390	50.59	74.00	-23.41	36.21	14.38	PK
! 3	2464.1	109.45	74.00	35.45	94.64	14.81	PK
4	2483.5	62.82	74.00	-11.18	47.89	14.93	PK
5	2484.05	63.57	74.00	-10.43	48.64	14.93	PK
6	2500	52.93	74.00	-21.07	37.90	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2462 MHz		

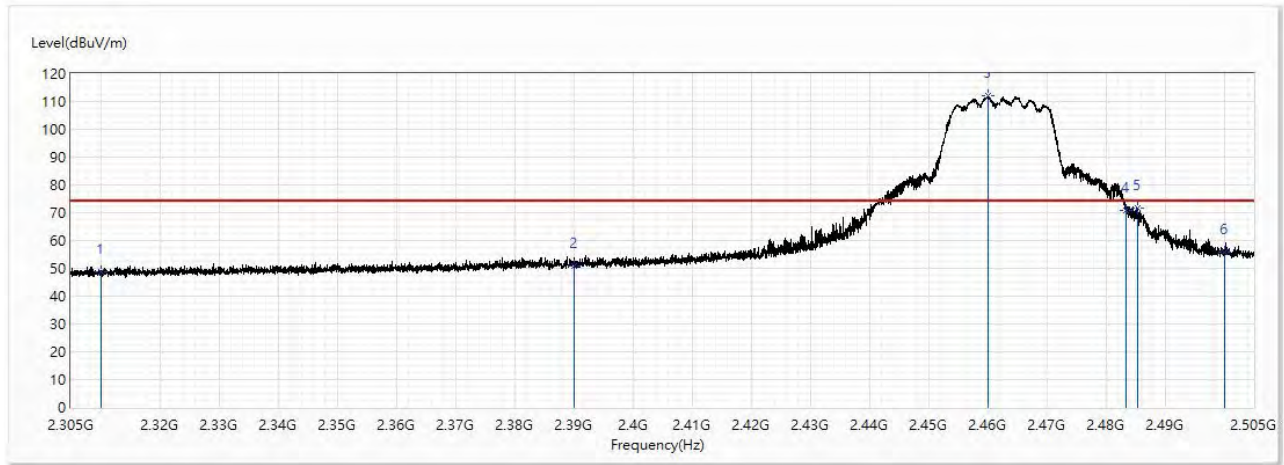


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.67	54.00	-16.33	23.78	13.89	AV
2	2390	39.88	54.00	-14.12	25.50	14.38	AV
! 3	2461.5	99.46	54.00	45.46	84.65	14.81	AV
4	2483.5	47.01	54.00	-6.99	32.08	14.93	AV
5	2483.75	46.86	54.00	-7.14	31.93	14.93	AV
6	2500	42.22	54.00	-11.78	27.19	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2462 MHz		

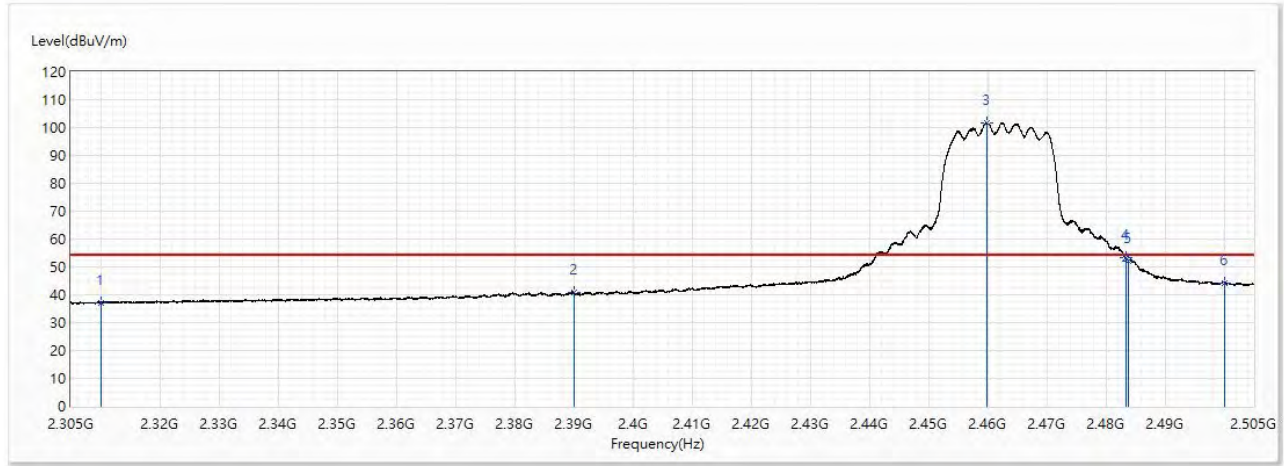


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	48.57	74.00	-25.43	34.68	13.89	PK
2	2390	50.82	74.00	-23.18	36.44	14.38	PK
! 3	2460.125	111.91	74.00	37.91	97.12	14.79	PK
4	2483.5	71.00	74.00	-3.00	56.07	14.93	PK
5	2485.4	71.51	74.00	-2.49	56.57	14.94	PK
6	2500	56.00	74.00	-18.00	40.97	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2462 MHz		

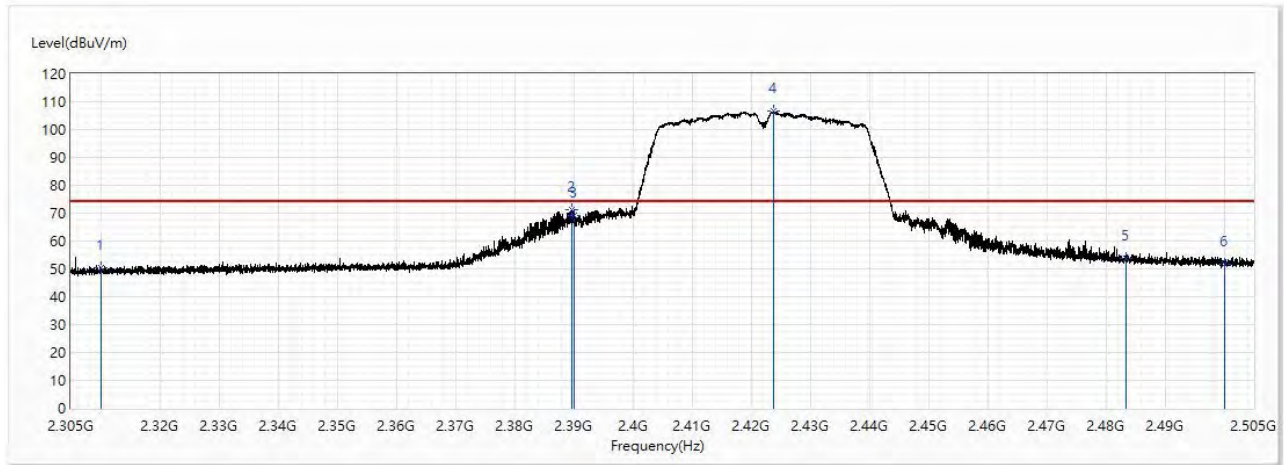


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.16	54.00	-16.84	23.27	13.89	AV
2	2390	40.95	54.00	-13.05	26.57	14.38	AV
! 3	2459.825	101.84	54.00	47.84	87.06	14.78	AV
4	2483.5	53.48	54.00	-0.52	38.55	14.93	AV
5	2483.85	52.02	54.00	-1.98	37.09	14.93	AV
6	2500	44.36	54.00	-9.64	29.33	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2422 MHz		

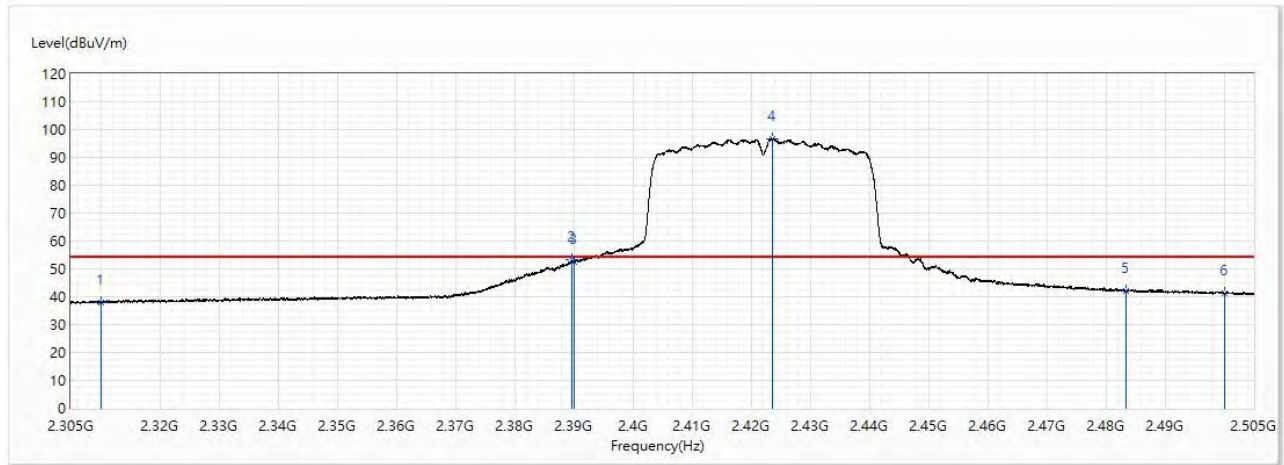


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	50.34	74.00	-23.66	36.45	13.89	PK
2	2389.625	71.09	74.00	-2.91	56.71	14.38	PK
3	2390	69.05	74.00	-4.95	54.67	14.38	PK
! 4	2423.775	106.49	74.00	32.49	91.91	14.58	PK
5	2483.5	53.85	74.00	-20.15	38.92	14.93	PK
6	2500	51.85	74.00	-22.15	36.82	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2422 MHz		

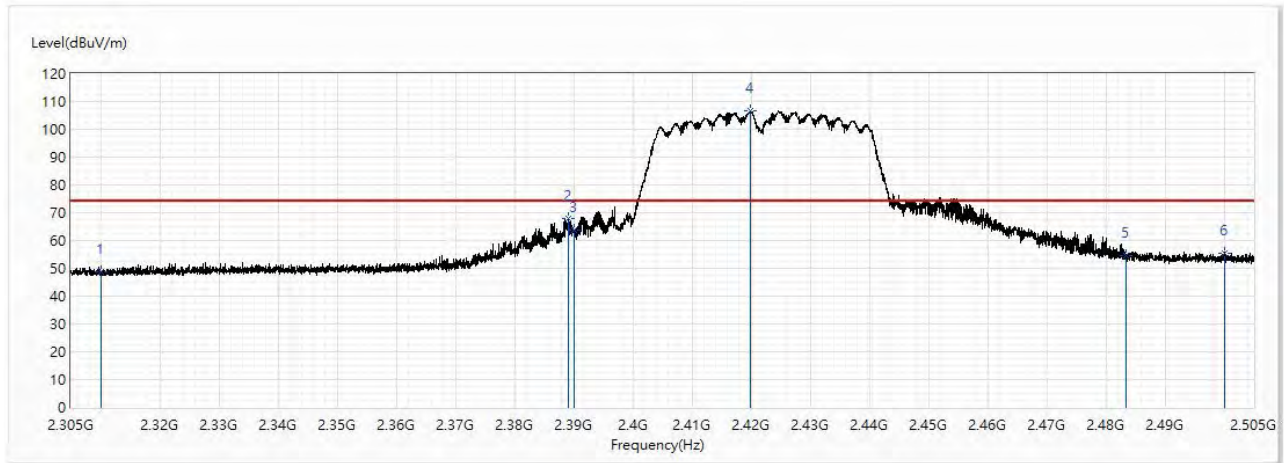


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.04	54.00	-15.96	24.15	13.89	AV
2	2389.75	53.32	54.00	-0.68	38.94	14.38	AV
3	2390	52.64	54.00	-1.36	38.26	14.38	AV
! 4	2423.575	96.86	54.00	42.86	82.28	14.58	AV
5	2483.5	42.07	54.00	-11.93	27.14	14.93	AV
6	2500	41.23	54.00	-12.77	26.20	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2422 MHz		

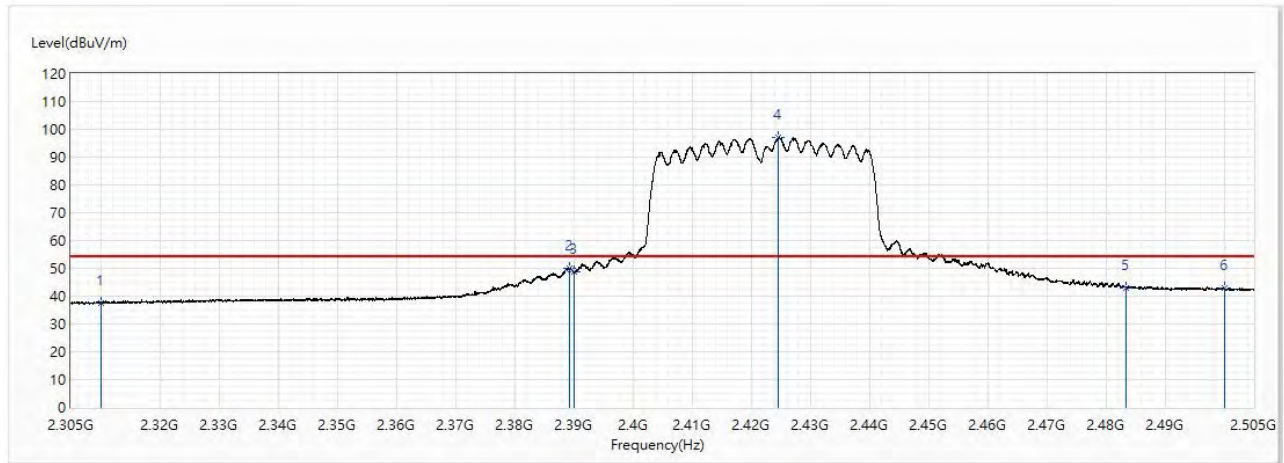


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	48.80	74.00	-25.20	34.91	13.89	PK
2	2389.2	67.79	74.00	-6.21	53.42	14.37	PK
3	2390	63.81	74.00	-10.19	49.43	14.38	PK
! 4	2419.925	106.51	74.00	32.51	91.96	14.55	PK
5	2483.5	54.45	74.00	-19.55	39.52	14.93	PK
6	2500	55.23	74.00	-18.77	40.20	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2422 MHz		

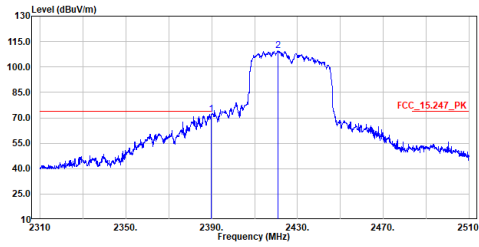


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.67	54.00	-16.33	23.78	13.89	AV
2	2389.3	50.04	54.00	-3.96	35.67	14.37	AV
3	2390	48.56	54.00	-5.44	34.18	14.38	AV
! 4	2424.7	97.14	54.00	43.14	82.56	14.58	AV
5	2483.5	43.04	54.00	-10.96	28.11	14.93	AV
6	2500	42.75	54.00	-11.25	27.72	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

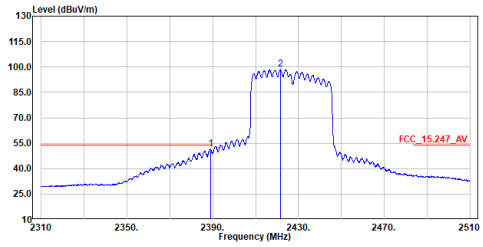
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11n40_TX_2427MHz
 Test By :Ling



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.900	71.87	74.00	-2.13	59.33	12.54	Peak
2	2420.900	109.46	-----	-----	96.73	12.73	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

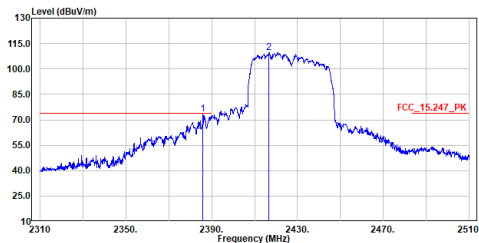
Site :HC-CB04
 Condition :3m ,Horizontal
 Mode :11n40_TX_2427MHz
 Test By :Ling



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.100	51.47	54.00	-2.53	38.93	12.54	Average
2	2421.600	98.84	-----	-----	86.11	12.73	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

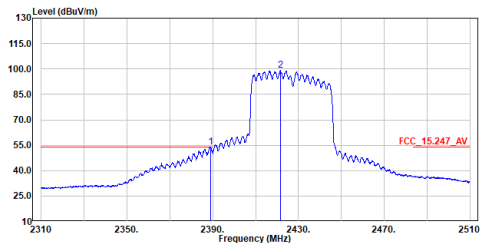
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11n40_TX_2427MHz
 Test By :Ling



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2385.900	73.43	74.00	-0.57	60.91	12.52	Peak
2	2416.800	109.81	-----	-----	97.11	12.70	Peak

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

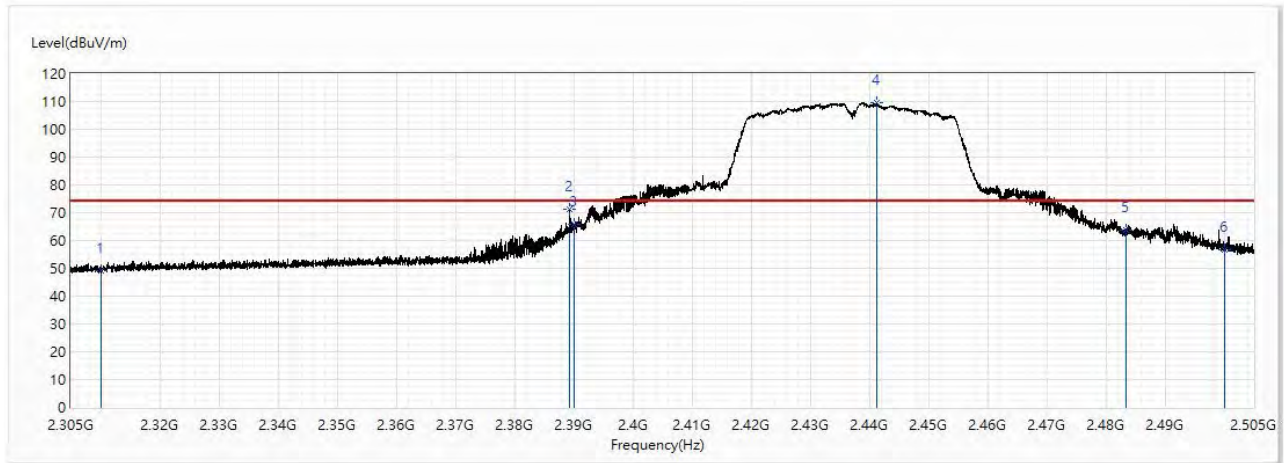
Site :HC-CB04
 Condition :3m ,Vertical
 Mode :11n40_TX_2427MHz
 Test By :Ling



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2388.900	53.83	54.00	-0.17	41.29	12.54	Average
2	2421.600	99.38	-----	-----	86.65	12.73	Average

Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor
 3. Over Limit = Level - Limit Line
 4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
 5. The other emission levels were very low against the limit.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

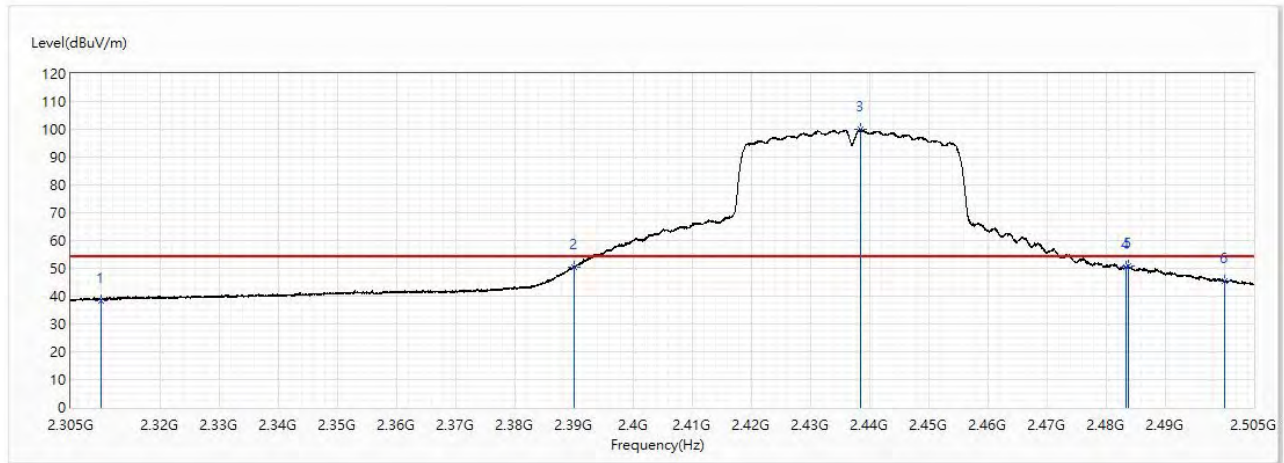


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	49.26	74.00	-24.74	35.37	13.89	PK
2	2389.4	71.40	74.00	-2.60	57.03	14.37	PK
3	2390	65.81	74.00	-8.19	51.43	14.38	PK
! 4	2441.3	109.55	74.00	35.55	94.87	14.68	PK
5	2483.5	63.86	74.00	-10.14	48.93	14.93	PK
6	2500	56.74	74.00	-17.26	41.71	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

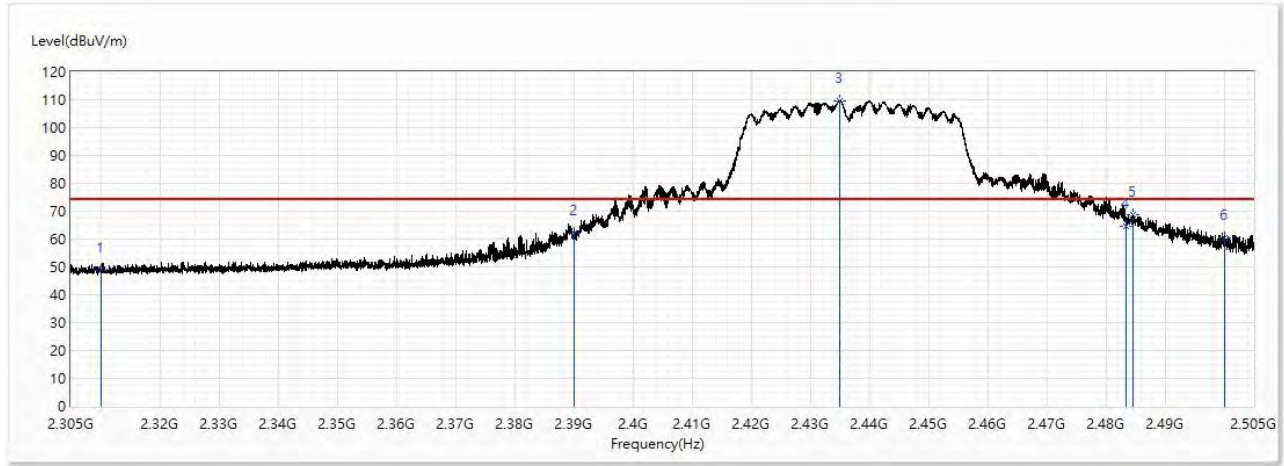


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.48	54.00	-15.52	24.59	13.89	AV
2	2390	50.50	54.00	-3.50	36.12	14.38	AV
! 3	2438.5	99.89	54.00	45.89	85.23	14.66	AV
4	2483.5	50.39	54.00	-3.61	35.46	14.93	AV
5	2483.825	50.76	54.00	-3.24	35.83	14.93	AV
6	2500	45.21	54.00	-8.79	30.18	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		

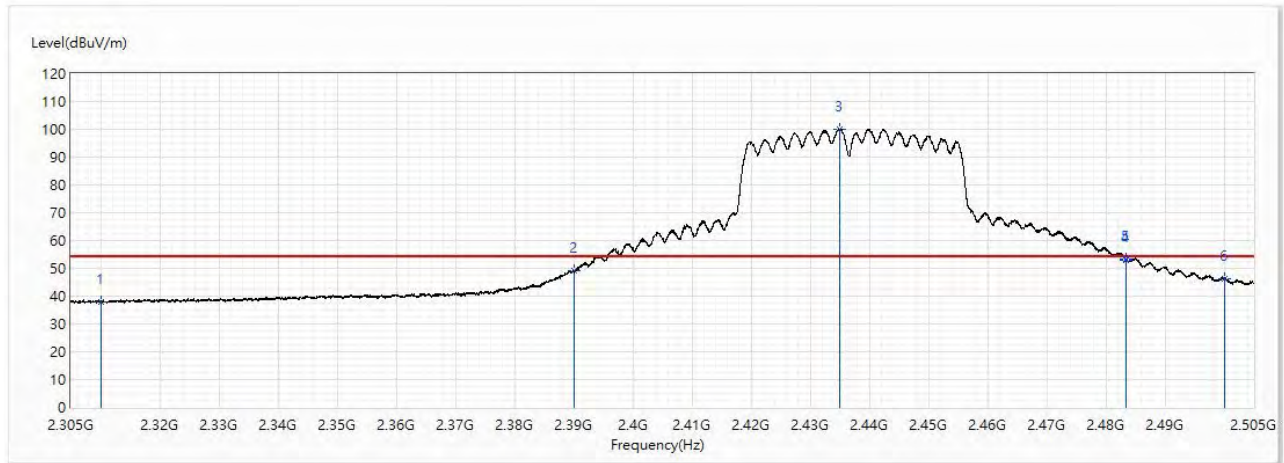


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	48.55	74.00	-25.45	34.66	13.89	PK
2	2390	62.27	74.00	-11.73	47.89	14.38	PK
! 3	2435.05	109.71	74.00	35.71	95.08	14.63	PK
4	2483.5	64.54	74.00	-9.46	49.61	14.93	PK
5	2484.7	68.91	74.00	-5.09	53.97	14.94	PK
6	2500	60.55	74.00	-13.45	45.52	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

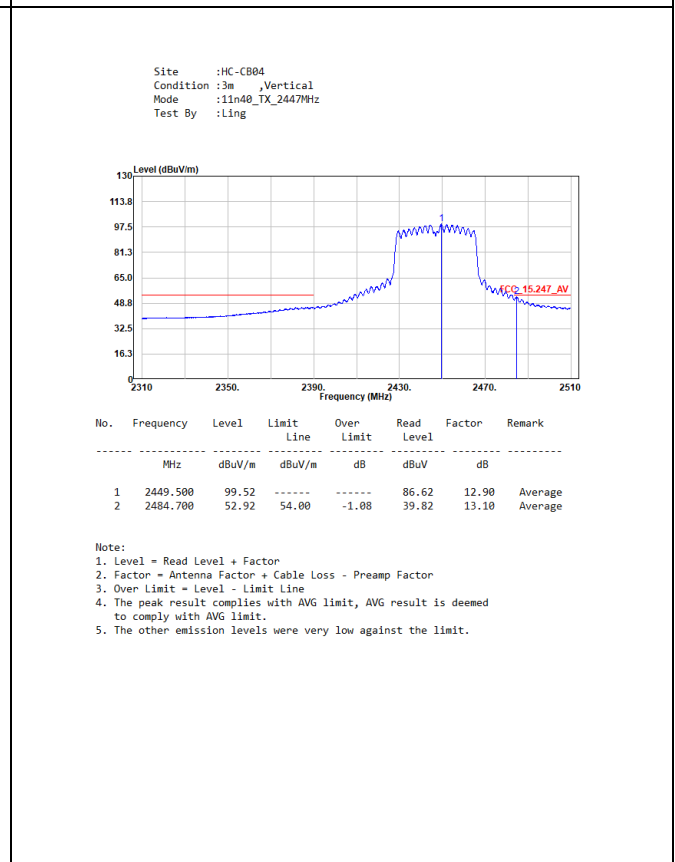
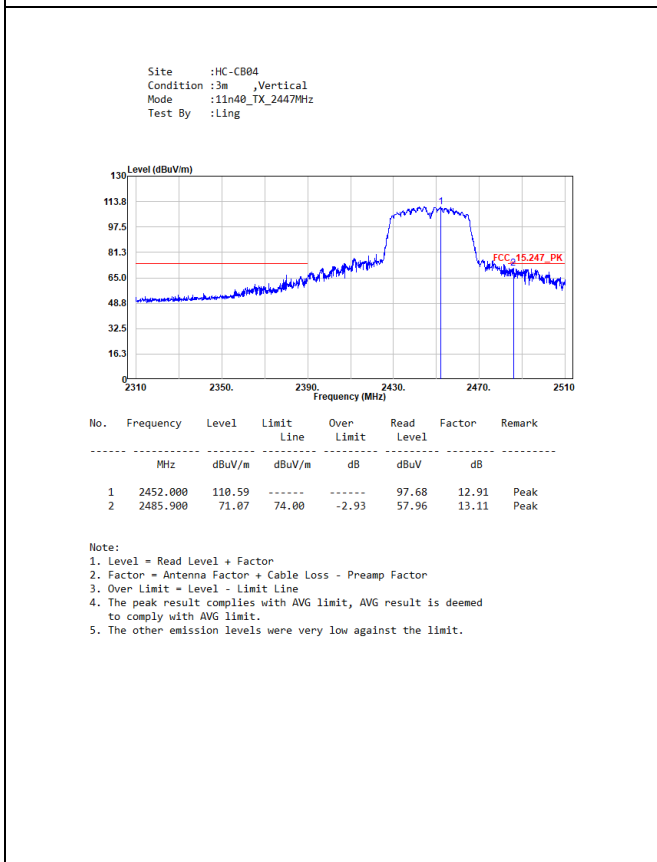
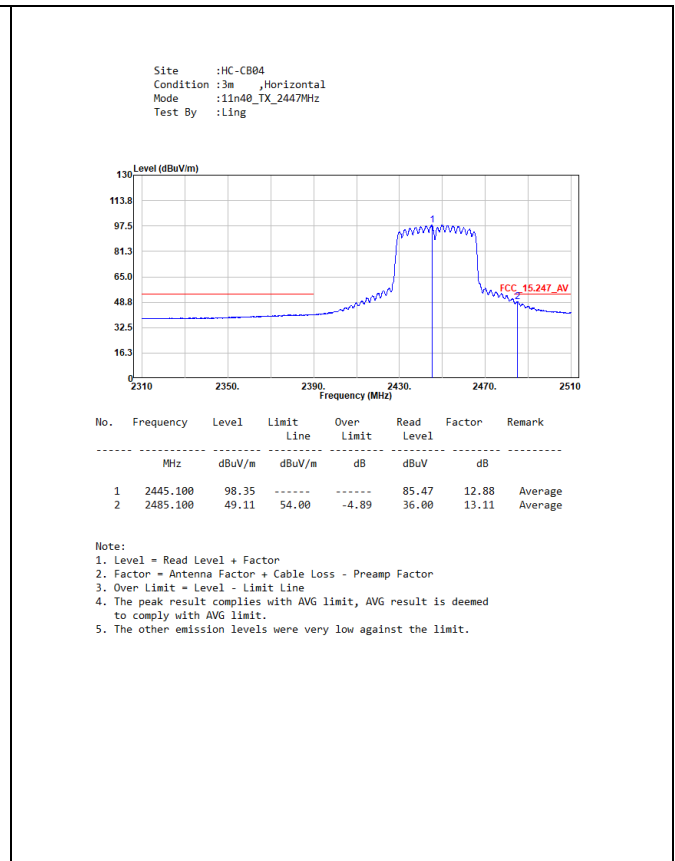
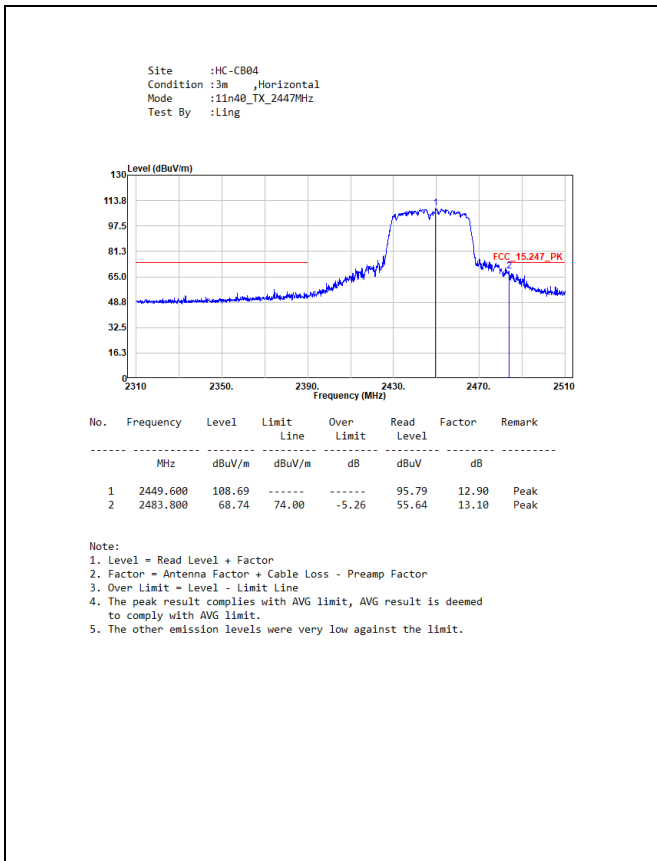
Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2437 MHz		



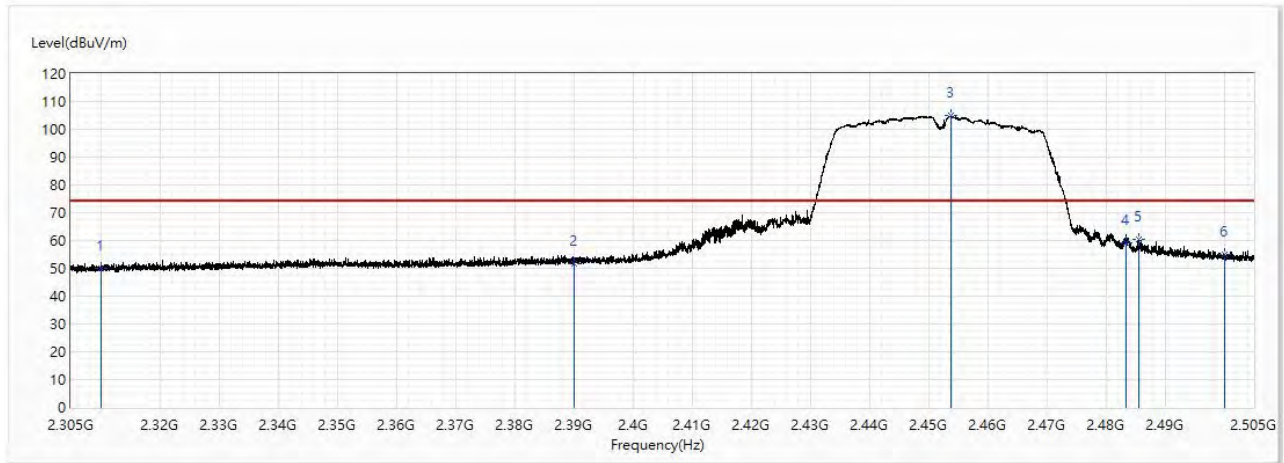
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.07	54.00	-15.93	24.18	13.89	AV
2	2390	48.96	54.00	-5.04	34.58	14.38	AV
! 3	2434.925	100.14	54.00	46.14	85.51	14.63	AV
4	2483.5	52.82	54.00	-1.18	37.89	14.93	AV
5	2483.5	53.30	54.00	-0.70	38.37	14.93	AV
6	2500	46.41	54.00	-7.59	31.38	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2452 MHz		

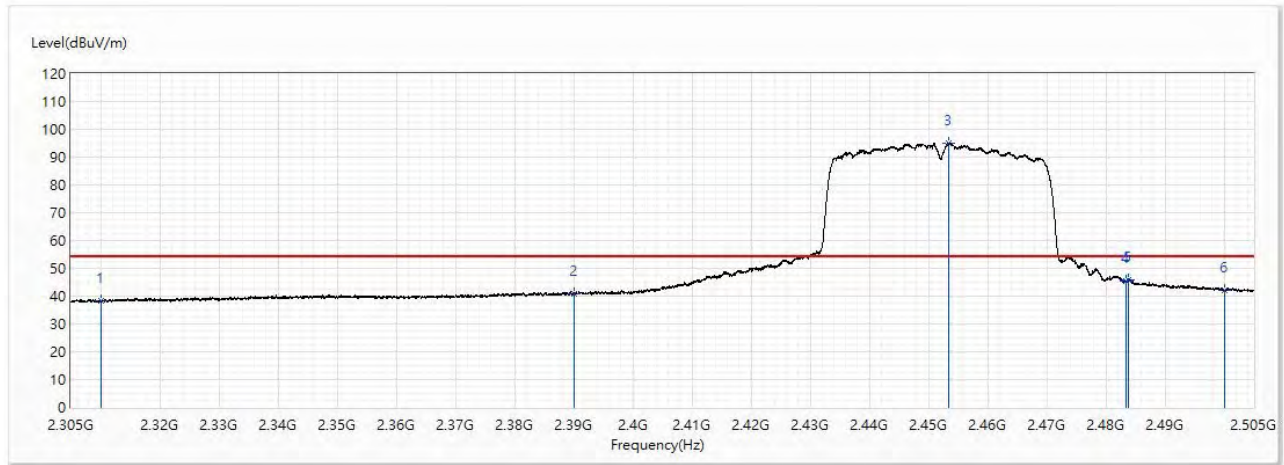


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	49.98	74.00	-24.02	36.09	13.89	PK
2	2390	51.74	74.00	-22.26	37.36	14.38	PK
! 3	2453.8	104.85	74.00	30.85	90.09	14.76	PK
4	2483.5	59.13	74.00	-14.87	44.20	14.93	PK
5	2485.575	60.26	74.00	-13.74	45.31	14.95	PK
6	2500	54.84	74.00	-19.16	39.81	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Horizontal
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2452 MHz		

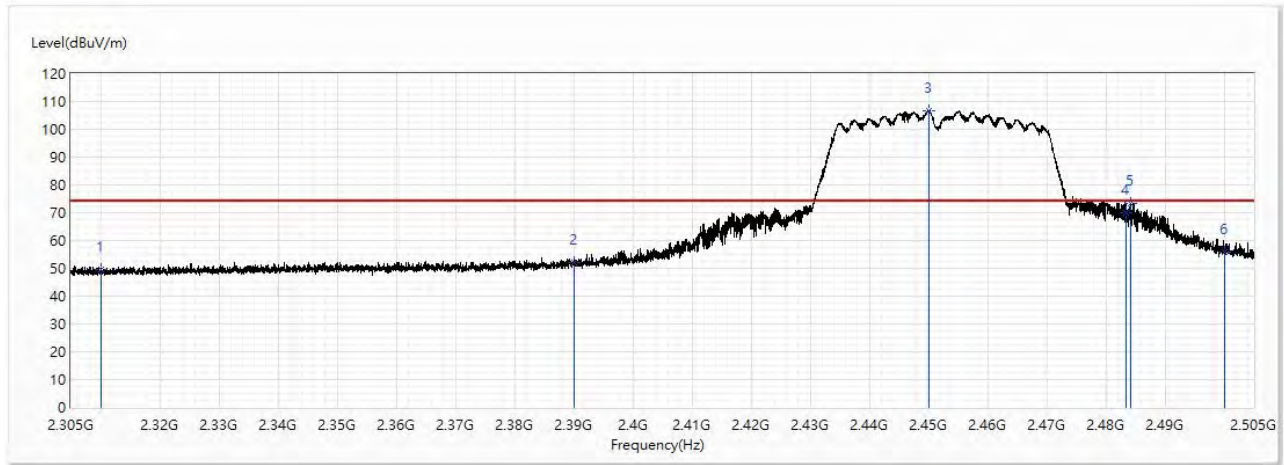


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	38.27	54.00	-15.73	24.38	13.89	AV
2	2390	40.86	54.00	-13.14	26.48	14.38	AV
! 3	2453.425	95.08	54.00	41.08	80.33	14.75	AV
4	2483.5	45.31	54.00	-8.69	30.38	14.93	AV
5	2483.775	45.84	54.00	-8.16	30.91	14.93	AV
6	2500	42.15	54.00	-11.85	27.12	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2452 MHz		

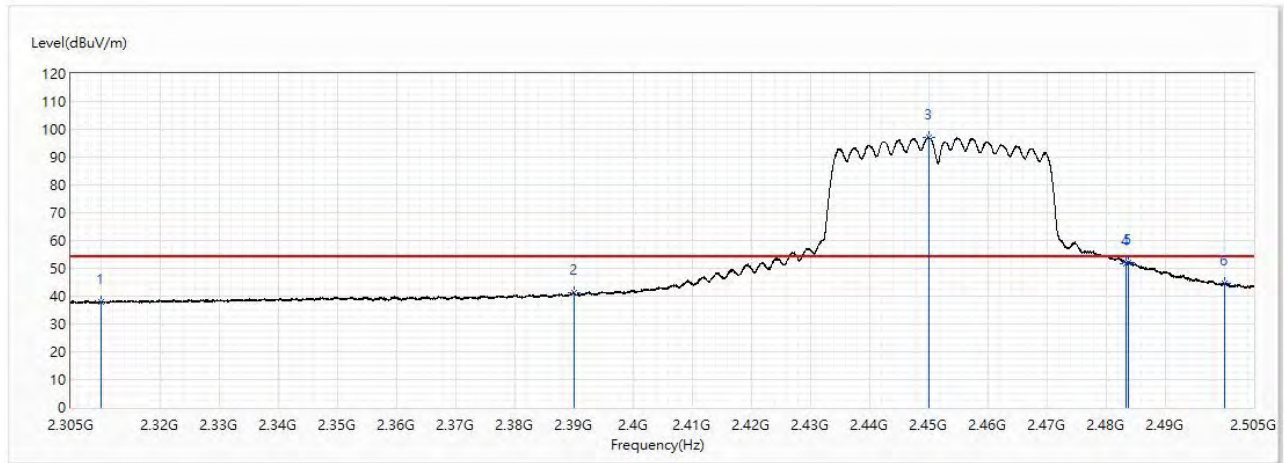


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	49.52	74.00	-24.48	35.63	13.89	PK
2	2390	52.29	74.00	-21.71	37.91	14.38	PK
! 3	2450	106.77	74.00	32.77	92.04	14.73	PK
4	2483.5	70.09	74.00	-3.91	55.16	14.93	PK
5	2484.225	73.49	74.00	-0.51	58.56	14.93	PK
6	2500	55.96	74.00	-18.04	40.93	15.03	PK

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Test Mode	Mode 1	Polarity	Vertical
Test Condition	802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2452 MHz		



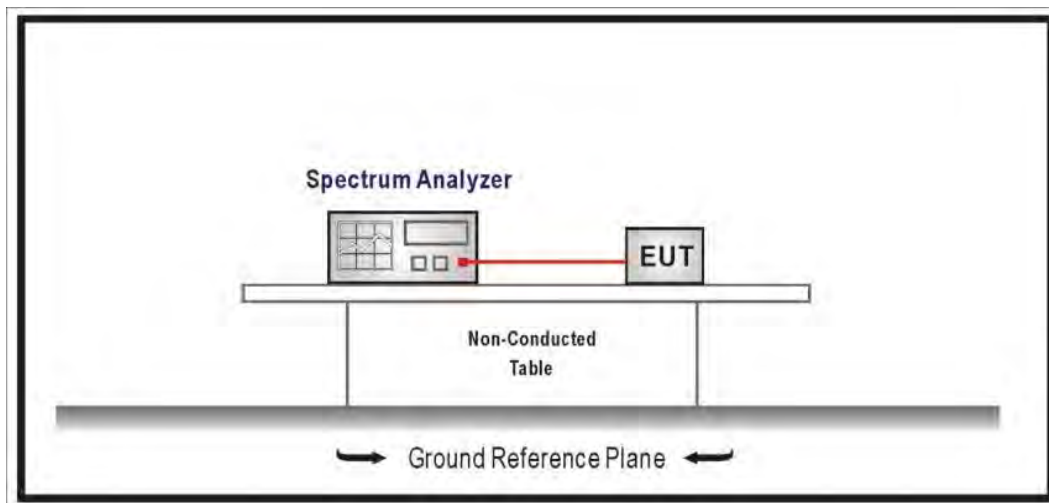
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2310	37.78	54.00	-16.22	23.89	13.89	AV
2	2390	41.05	54.00	-12.95	26.67	14.38	AV
! 3	2450	96.99	54.00	42.99	82.26	14.73	AV
4	2483.5	51.83	54.00	-2.17	36.90	14.93	AV
5	2483.8	52.06	54.00	-1.94	37.13	14.93	AV
6	2500	44.45	54.00	-9.55	29.42	15.03	AV

Note:

1. “ ! ”, means the the fundamental for reference only, it’s not restricted by unwanted emission limit.
2. Emission Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

7. Occupied Bandwidth & DTS Bandwidth

7.1. Test Setup



7.2. Test Limit

The 6 dB bandwidth: ≥ 0.50 MHz.

Occupied Bandwidth: NA

7.3. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB 558074 D01 V05r02 for compliance to FCC 47CFR 15.247 requirements.

7.4. Test Specification

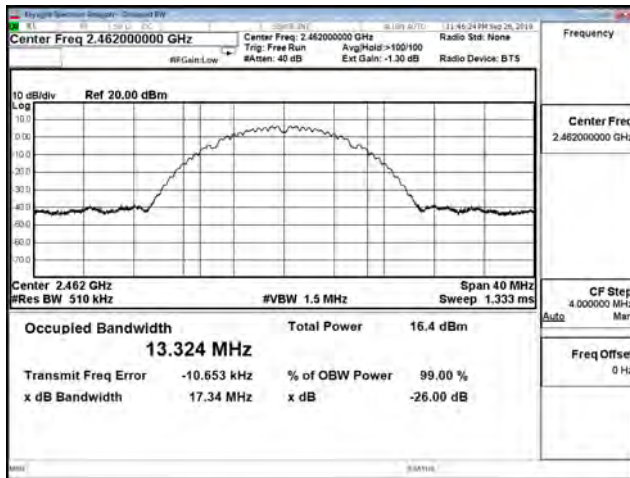
According to FCC Part 15 Subpart C Paragraph 15.247.

7.5. Test Result of Occupied Bandwidth

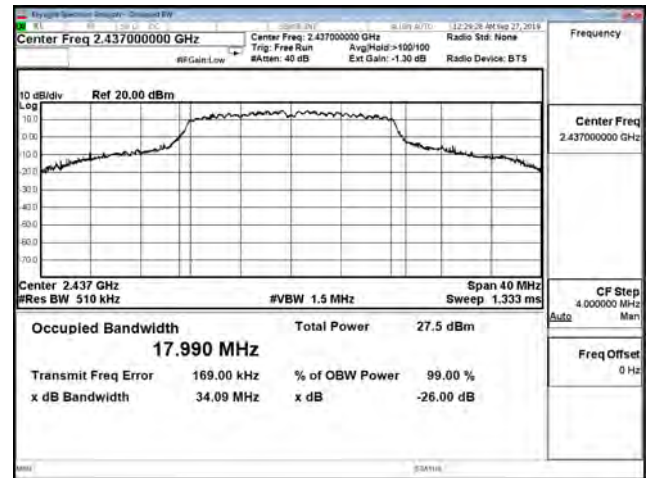
Modulation	Channel	Frequency (MHz)	Occupied Bandwidth (MHz)		Limit (MHz)
			Ant. 0	Ant. 1	
802.11b	1	2412	13.311	13.240	-
	6	2437	13.290	13.231	-
	11	2462	13.324	13.237	-
802.11g	1	2412	17.369	16.915	-
	6	2437	17.885	17.990	-
	11	2462	17.153	16.897	-
802.11n (20 MHz)	1	2412	18.065	17.758	-
	6	2437	19.300	19.655	-
	11	2462	18.134	18.411	-
802.11n (40 MHz)	3	2422	35.971	35.937	-
	6	2437	36.096	36.048	-
	9	2452	35.994	35.972	-

Spectrum plot of maximum value

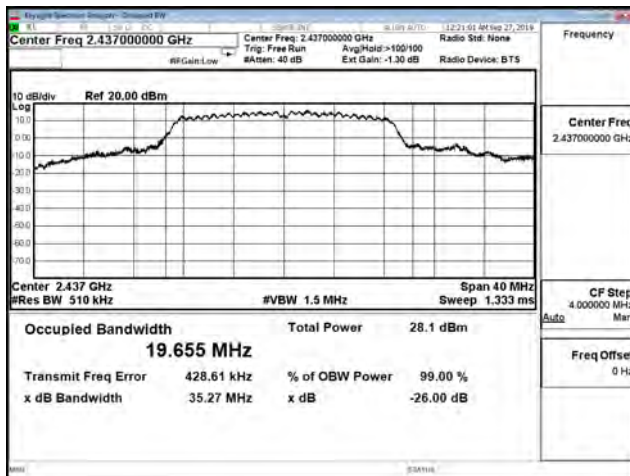
802.11b / Ant. 0 / 2462 MHz



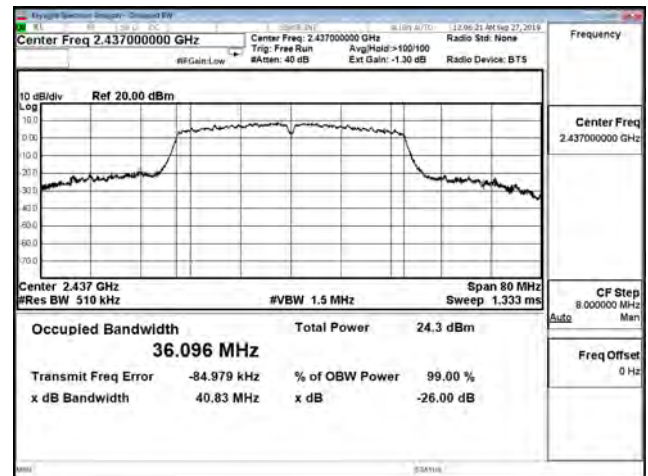
802.11g / Ant. 1 / 2437 MHz



802.11n (20 MHz) / Ant. 1 / 2437 MHz



802.11n (40 MHz) / Ant. 0 / 2437 MHz

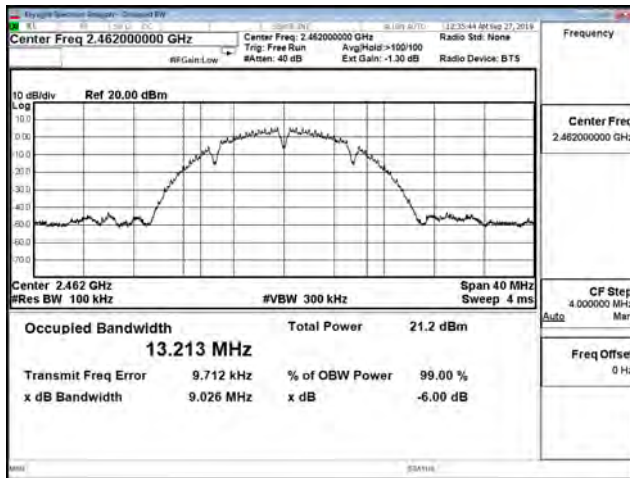


7.6. Test Result of DTS Bandwidth

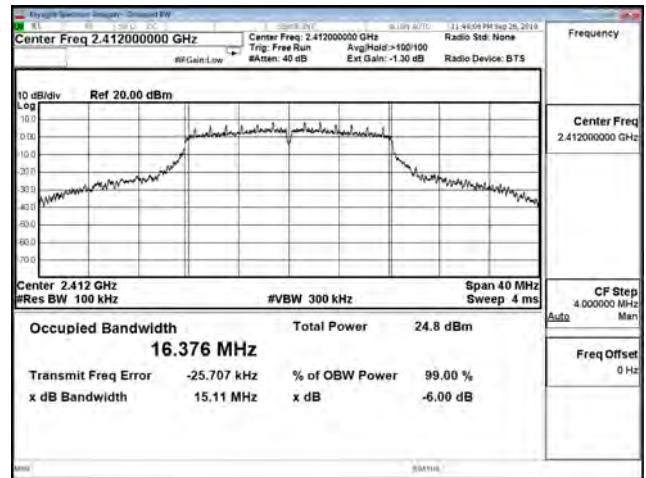
Modulation	Channel	Frequency (MHz)	DTS Bandwidth (MHz)		Limit (MHz)	Result
			Ant. 0	Ant. 1		
802.11b	1	2412	9.060	9.050	≥ 0.50	Pass
	6	2437	9.061	9.032	≥ 0.50	Pass
	11	2462	9.049	9.026	≥ 0.50	Pass
802.11g	1	2412	15.110	15.110	≥ 0.50	Pass
	6	2437	15.120	15.110	≥ 0.50	Pass
	11	2462	15.120	15.110	≥ 0.50	Pass
802.11n (20 MHz)	1	2412	15.110	15.710	≥ 0.50	Pass
	6	2437	15.100	15.700	≥ 0.50	Pass
	11	2462	15.120	15.700	≥ 0.50	Pass
802.11n (40 MHz)	3	2422	35.080	35.070	≥ 0.50	Pass
	6	2437	35.080	35.080	≥ 0.50	Pass
	9	2452	35.080	35.070	≥ 0.50	Pass

Spectrum plot of worst value

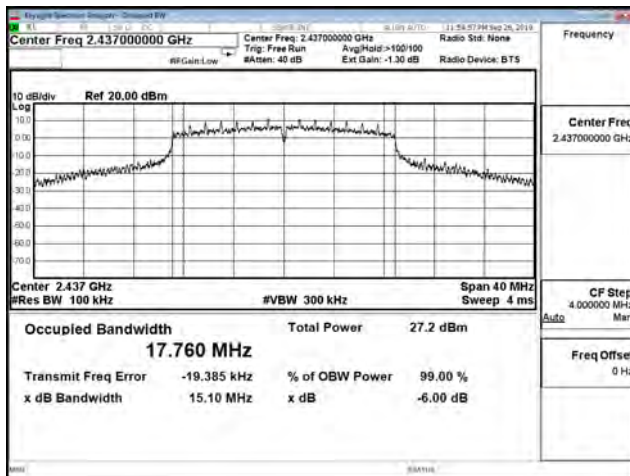
802.11b / Ant. 1 / 2462 MHz



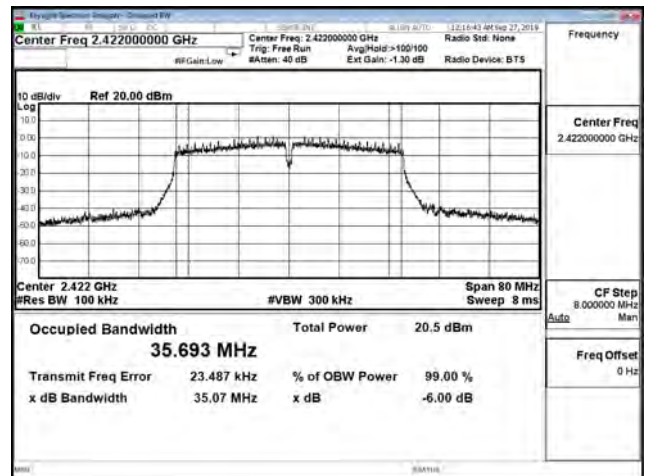
802.11g / Ant. 0 / 2412 MHz



802.11n (20 MHz) / Ant. 0 / 2437 MHz

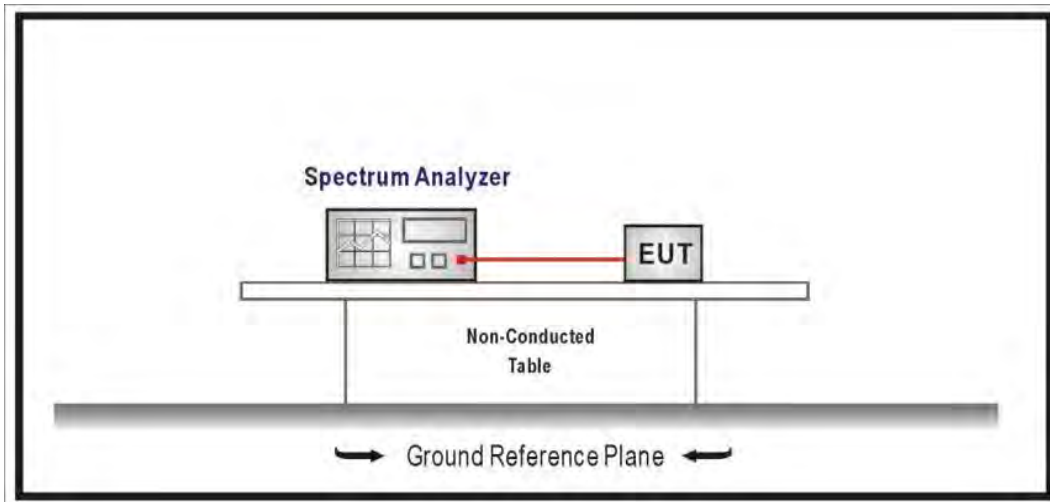


802.11n (40 MHz) / Ant. 1 / 2422 MHz



8. Maximum Power Spectral Density

8.1. Test Setup



8.2. Test Limit

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.3. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB 558074 D01 V05r02 for compliance to FCC 47CFR 15.247 requirements.

The following table is the setting of spectrum analyzer.

Spectrum Parameter	Setting
RBW	3 kHz
VBW	10 kHz

8.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247.

8.5. Test Result of Maximum Power Spectral Density

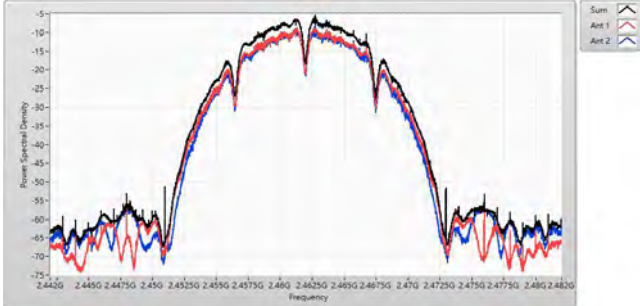
Modulation	Channel	Frequency (MHz)	Power Spectral Density (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
			Ant. 0 + Ant. 1		
802.11b	1	2412	-6.420	≤ 7.90	Pass
	6	2437	-6.320	≤ 7.90	Pass
	11	2462	-5.290	≤ 7.90	Pass
802.11g	1	2412	-5.390	≤ 7.90	Pass
	6	2437	-3.700	≤ 7.90	Pass
	11	2462	-5.550	≤ 7.90	Pass
802.11n (20 MHz)	1	2412	-6.240	≤ 7.90	Pass
	6	2437	-3.170	≤ 7.90	Pass
	11	2462	-5.230	≤ 7.90	Pass
802.11n (40 MHz)	3	2422	-12.000	≤ 7.90	Pass
	6	2437	-9.220	≤ 7.90	Pass
	9	2452	-11.110	≤ 7.90	Pass

Note:

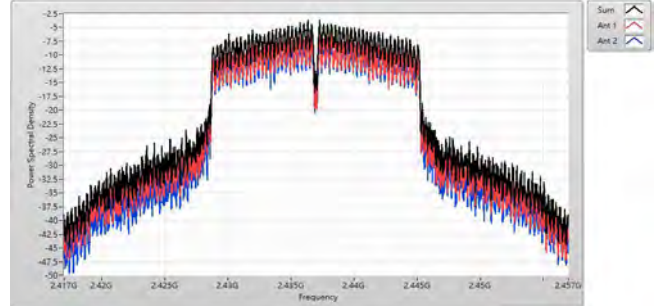
- Total power spectral density = power spectral density + duty factor, and the duty factor refer to section 1.10.
- Directional Gain = $10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{Ant}] = 6.10 \text{dBi} > 6 \text{dBi}$, so the limit = $8 - (6.10 - 6) = 7.90 \text{dBm}/3 \text{kHz}$.

Spectrum plot of worst value

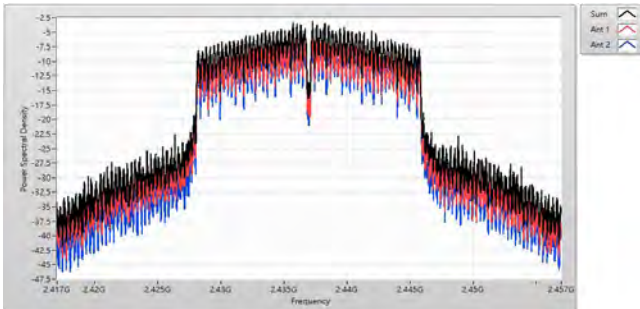
802.11b / Ant. 0 + Ant. 1 / 2462 MHz



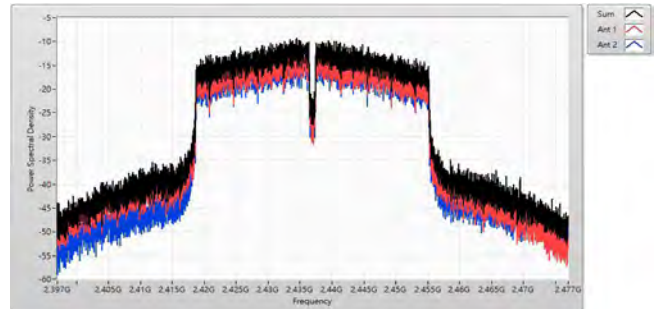
802.11g / Ant. 0 + Ant. 1 / 2437 MHz



802.11n (20 MHz) / Ant. 0 + Ant. 1 / 2437 MHz

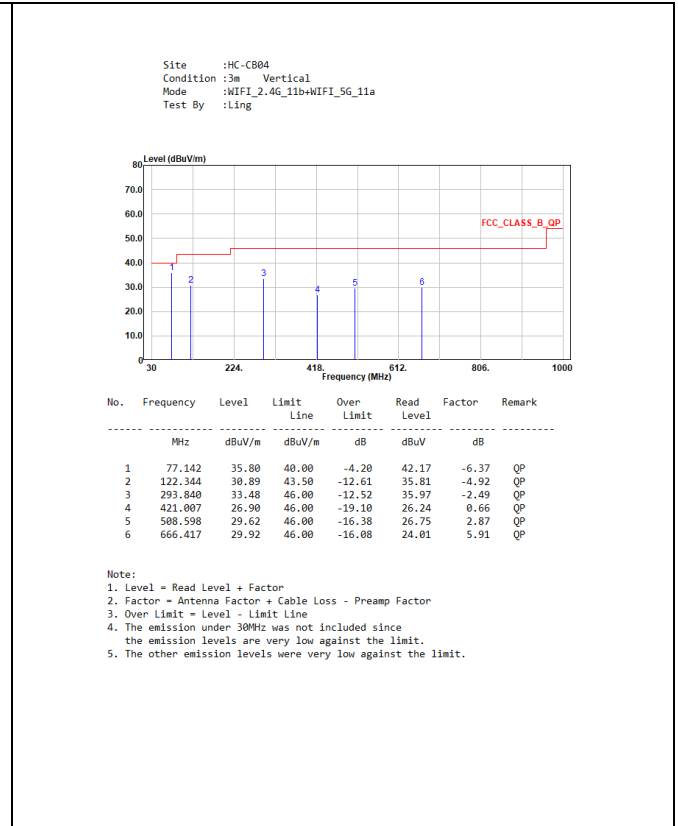
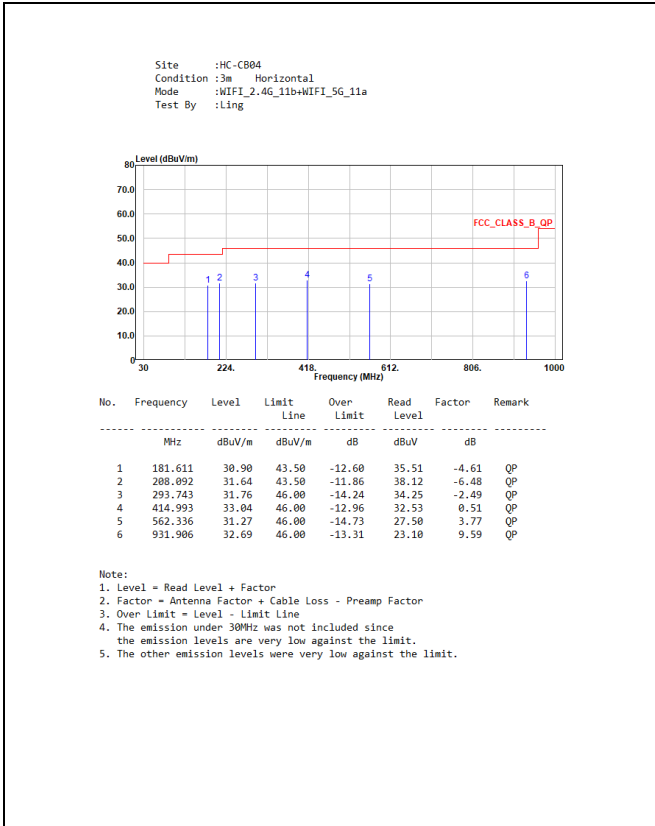


802.11n (40 MHz) / Ant. 0 + Ant. 1 / 2437 MHz



Appendix A

➤ Test Result of Radiated Emissions Co-location WiFi 2.4 GHz function + WiFi 5 GHz function 30 MHz ~ 1 GHz:



Above 1 GHz:

