FCC Test Report
(Class II Permissive Change)

Product Name	PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Model No	QCNFA222
FCC ID.	PPD-QCNFA222

Applicant	Qualcomm Atheros, Inc.
Address	1700 Technology Drive, San Jose, CA 95110

Date of Receipt	Sep. 26, 2015
Issue Date	Nov. 04, 2015
Report No.	15A0003R-RFUSP23V00
Report Version	V1.0

Testing Laboratory
3023

Test Report

Issue Date: Nov. 04, 2015
Report No.: 15A0003R-RFUSP23V00

Product Name	PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Applicant	Qualcomm Atheros, Inc.
Address	1700 Technology Drive, San Jose, CA 95110
Manufacturer	Qualcomm Atheros, Inc.
Model No.	QCNFA222
EUT Rated Voltage	DC 3.3V (via Mini-PCI Express slot)
EUT Test Voltage	AC 120V/60Hz
Trade Name	Qualcomm
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2013 ANSI C63.4: 2014, ANSI C63.10: 2013 KDB 558074 D01 DTS Meas Guidance v03r03
Test Result	Complied

Documented By : Jinn Chen
(Senior Adm. Specialist / Jinn Chen)

Tested By : Jack Hsu
(Engineer / Jack Hsu)

Approved By :
(Director / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Trade Name	Qualcomm
Model No.	QCNFA222
FCC ID.	PPD-QCNFA222
Frequency Range	802.11b/g/n-20MHz:2412-2462MHz,802.11n-40MHz:2422-2452MHz
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: up to 300Mbps
Type of Modulation	802.11b:DSSS, DBPSK, DQPSK, CCK 802.11g/n: OFDM, BPSK, QPSK, 16QAM, 64QAM
Antenna Type	PIFA Antenna
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
Power Adapter	MFR: ASUS, M/N: ADP-65AW Input: AC 100-240V ~ 50/60Hz, 1.5A Output: DC 19V, 3.42A Cable out: Non-Shielded, 1.8m, with one ferrite core bonded.
Test Platform.	Brand Name: ASUS, M/N: TP301U, Q303U

Antenna List

Manufacturer	Part No.	Peak Gain
LUXSHARE	LA05RF867-1H (MAIN) LA05RF868 -1H (AUX)	-3.1dBi For 2.4GHz
Hong Lin	260-26076 (Main) 260-26077 (Aux)	-3.1dBi For 2.4GHz

Note: 1. The antenna of EUT is conform to FCC 15.203

2. Only the higher gain antenna was tested and recorded in this report.

802.11b/g/n-20MHz Center Frequency of Each Channel:

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

802.11n-40MHz (2.4G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz		

Note:

1. This device is an PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card with a built-in WLAN transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report.
4. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
5. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
6. This is to request a Class II permissive change for FCC ID: PPD-QCNFA222, originally granted on 8/11/2015.

   The major change filed under this application is:

   Change #1: Additional Chassis added, ASUSTeK, model TP301U, Q303U notebook/tablet.

   All models are lised as below

Brand	Model	Difference
ASUS	TP301U (Main test model)	All models are electrically identical, different model names are for marketing purpose.
	Q303U	

   #2: Reduce the Output Power through firmware (only reduce Wi-Fi Power, bluetooth power haven't changes).

   #3: Addition two new antennas, the antenna type is the same, the antenna gain is lower than the original application

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)
	Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

Duty Cycle

Formula:

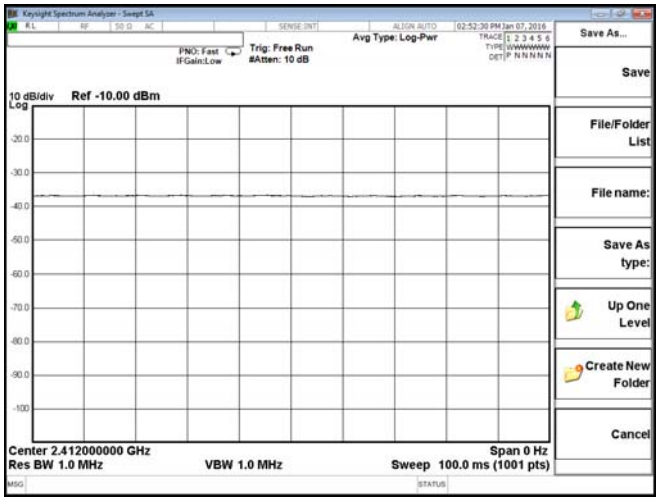
Duty cycle = Ton / (Ton + Toff)

Duty Factor = 10 Log (1/Duty Cycle)

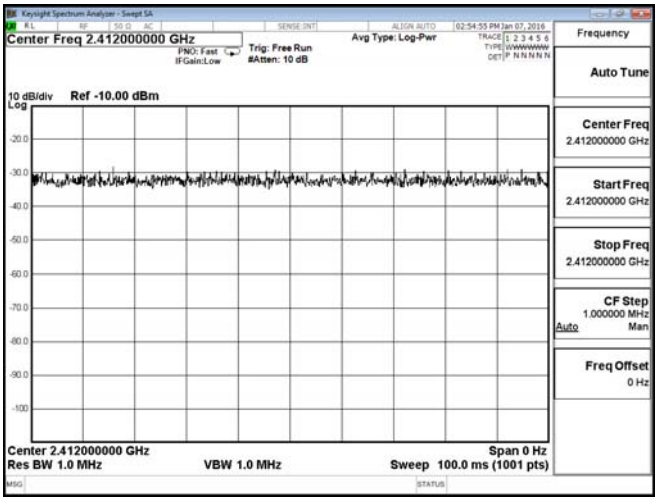
Results:

Mode	Duty Cycle	Duty Factor (dB)	Mode	Duty Cycle	Duty Factor (dB)
802.11b	1	0	802.11n-20	1	0
802.11g	1	0	802.11n-40	1	0

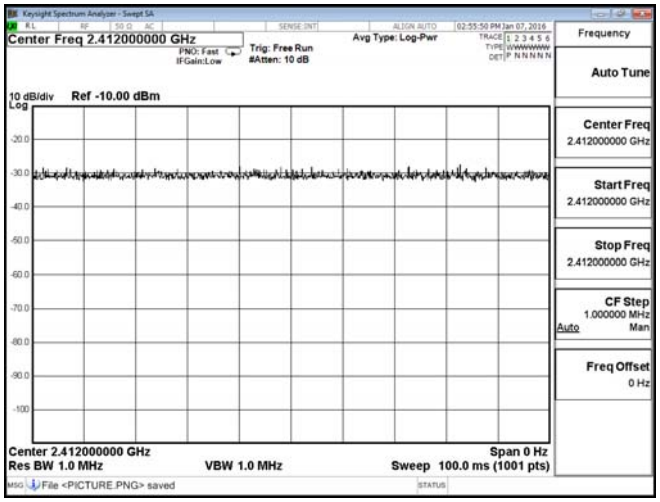
802.11b:



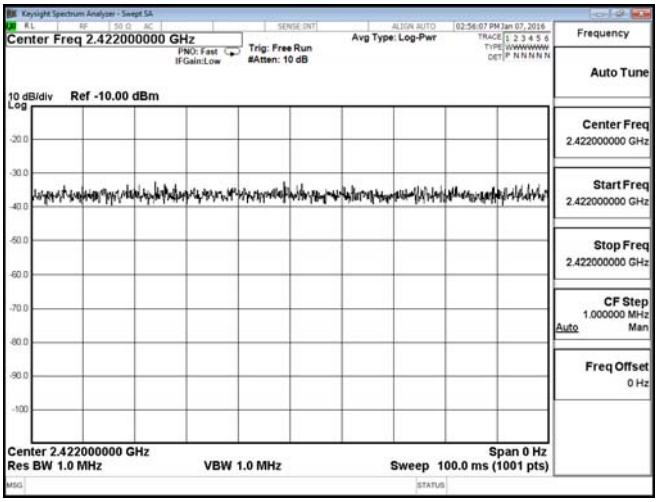
802.11g:



802.11n-20:



802.11n-40:



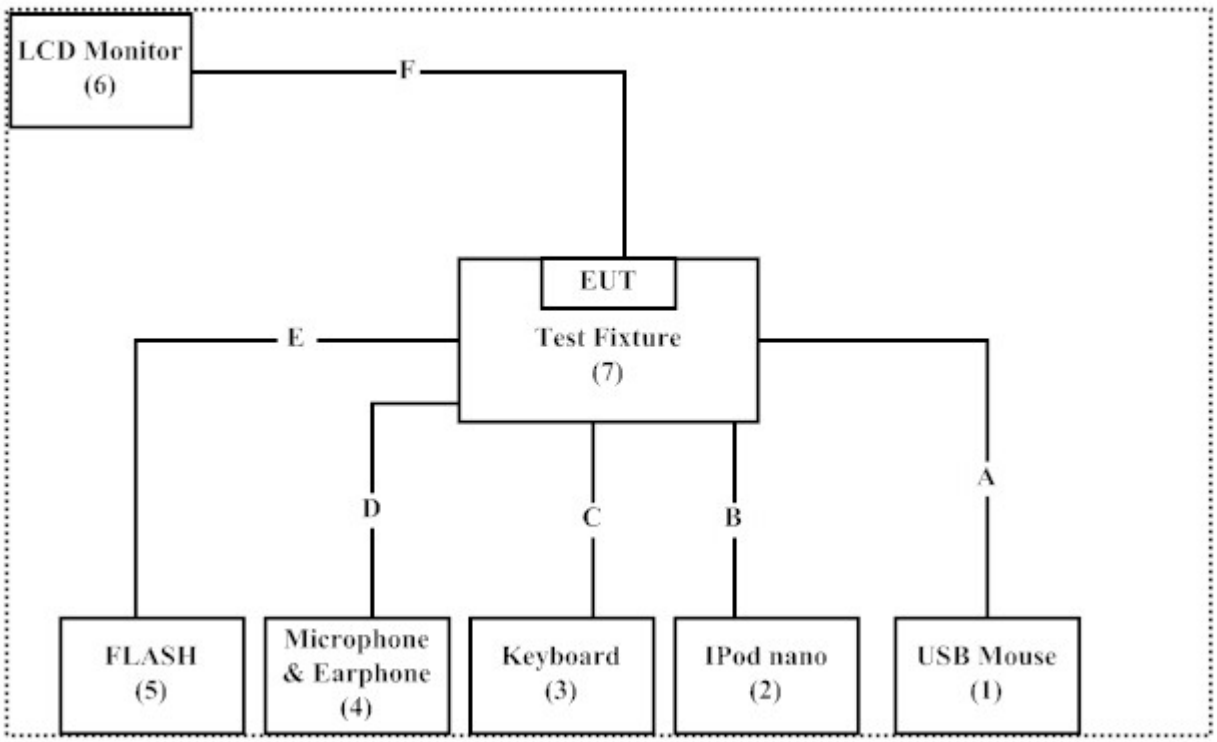
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	USB Mouse	Logitech	M-BE58	HCA30103100	N/A
2	IPod nano	Apple	A1199	YM706LSCVQ5	N/A
3	Keyboard	DELL	SK-8115	MY-0DJ325-71619-6 A3-1913	N/A
4	Microphone & Earphone	PCHOME	N/A	N/A	N/A
5	FLASH	Transcend	JetFlash110	155422-2931	N/A
6	LCD Monitor	DELL	ST2320Lf	CN-0M2nn6-72872-2 2I-CA1S	Non-Shielded, 1.8m
7	Test Fixture	ASUS	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
A	USB Cable	Shielded, 1.8 m
B	USB Cable	Shielded, 1.2 m
C	USB Cable	Shielded, 1.8 m, with one ferrite core bonded.
D	Microphone & Earphone Cable	Non-Shielded, 2 m
E	USB Cable	Shielded, 2 m
F	HDMI Cable	Non-Shielded, 1.8 m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

(1) Setup the EUT as shown on 1.4
(2) Execute “ART2-GUI 2.3” program on the EUT.
(3) Configure the test mode, the test channel, and the data rate.
(4) Start the continuous transmission.
(5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site: http://www.quietek.com/chinese/about/certificates.aspx?bval=5
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: http://www.quietek.com/

Site Description: Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Site Name: Quietek Corporation
Site Address: No.5-22, Ruishukeng,
Linkou Dist. New Taipei City 24451,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

2. Maximum Conducted Power

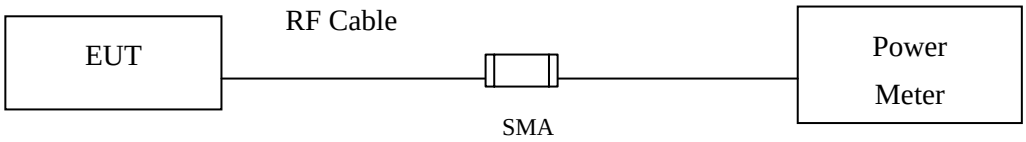
2.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2015
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2015
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2015
	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

2.2. Test Setup



2.3. Limits

The maximum average power shall be less 1 Watt. (Section 15.247 (b)(3))

2.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 D01 DTS Meas Guidance v03r02 section 9.1.2 PKPM1 Peak power meter method.

2.5. Uncertainty

± 1.27 dB

2.6. Test Result of Maximum Conducted Power

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Maximum Conducted Power
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	13.5	--	--	--	15.77	<30dBm	Pass
06	2437	14	13.84	13.59	13.34	16.31	<30dBm	Pass
11	2462	15	--	--	--	17.21	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11	1		
		Measurement Level (dBm)						
01	2412	13.41	--	--	--	15.73	<30dBm	Pass
06	2437	13.77	13.65	13.51	13.38	16.06	<30dBm	Pass
11	2462	14.63	--	--	--	16.83	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
1	2412	1	15.77	15.73	18.76	<30dBm	Pass
6	2437	1	16.31	16.06	19.20	<30dBm	Pass
11	2462	1	17.21	16.83	20.03	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Maximum Conducted Power
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	13.50	--	--	--	--	--	--	--	22.85	<30dBm	Pass
06	2437	14.00	13.81	13.59	13.37	13.14	12.93	12.69	12.46	22.72	<30dBm	Pass
11	2462	11.99	--	--	--	--	--	--	--	21.44	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54	6		
		Measurement Level (dBm)										
01	2412	13.38	--	--	--	--	--	--	--	22.32	<30dBm	Pass
06	2437	13.89	13.65	13.44	13.22	13.03	12.84	12.61	12.38	22.07	<30dBm	Pass
11	2462	11.55	--	--	--	--	--	--	--	20.99	<30dBm	Pass

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
1	2412	6	22.85	22.32	25.60	<30dBm	Pass
6	2437	6	22.72	22.07	25.42	<30dBm	Pass
11	2462	6	21.44	20.99	24.23	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Maximum Conducted Power
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8
		Measurement Level (dBm)								
01	2412	12.99	--	--	--	--	--	--	--	22.88
06	2437	14.00	13.79	13.56	13.32	13.11	12.90	12.68	12.45	23.21
11	2462	11.96	--	--	--	--	--	--	--	21.41

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8
		Measurement Level (dBm)								
01	2412	12.99	--	--	--	--	--	--	--	22.08
06	2437	13.85	13.62	13.39	13.17	12.95	12.73	12.51	12.28	22.06
11	2462	11.64	--	--	--	--	--	--	--	21.05

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
1	2412	HT8	22.88	22.08	25.51	<30dBm	Pass
6	2437	HT8	23.21	22.06	25.68	<30dBm	Pass
11	2462	HT8	21.41	21.05	24.24	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Maximum Conducted Power
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band)

CHAIN A

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8
		Measurement Level (dBm)								
3	2422	12.5	--	--	--	--	--	--	--	21.99
6	2437	14.00	13.79	13.56	13.34	13.11	12.88	12.65	12.42	22.48
9	2452	12	--	--	--	--	--	--	--	21.02

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN B

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power
		HT8	HT9	HT10	HT11	HT12	HT13	HT14	HT15	HT8
		Measurement Level (dBm)								
3	2422	11.88	--	--	--	--	--	--	--	20.99
6	2437	13.61	13.29	12.97	12.66	12.37	12.05	11.74	11.43	21.41
9	2452	11.73	--	--	--	--	--	--	--	20.82

Note: Peak Power Output Value =Reading value on power meter + cable loss

CHAIN A+B

Channel	Frequency (MHz)	Data Rata (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
3	2422	HT8	21.99	20.99	24.53	<30dBm	Pass
6	2437	HT8	22.48	21.41	24.99	<30dBm	Pass
9	2452	HT8	21.02	20.82	23.93	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW))

3. Radiated Emission

3.1. Test Equipment

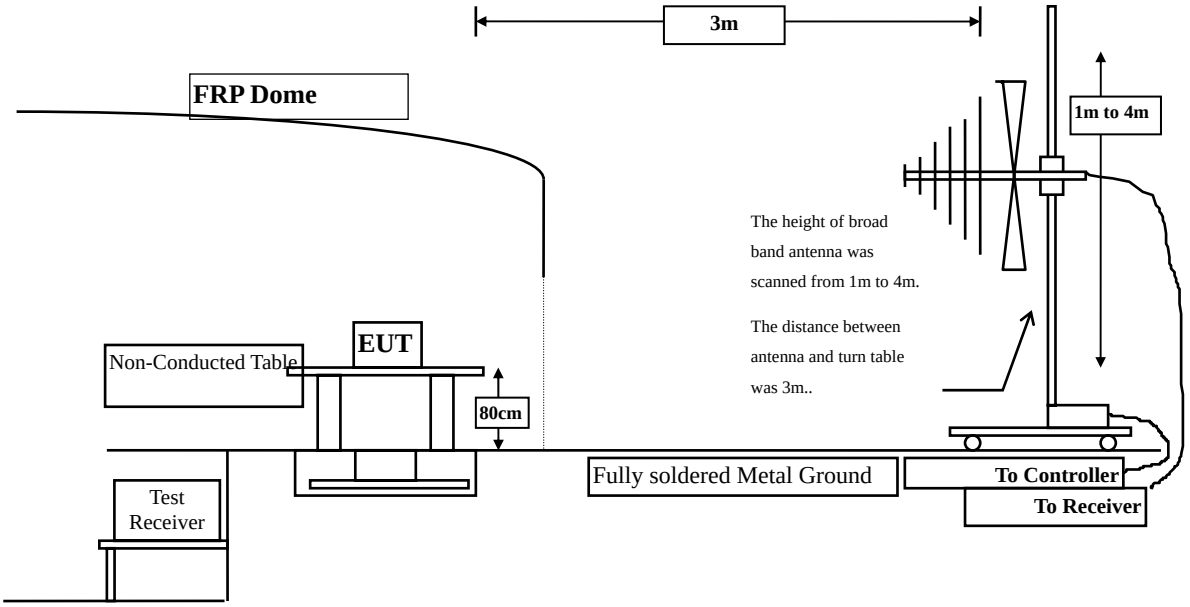
The following test equipments are used during the radiated emission test:

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep, 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun, 2015
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun, 2015
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun, 2015
	X	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun, 2015

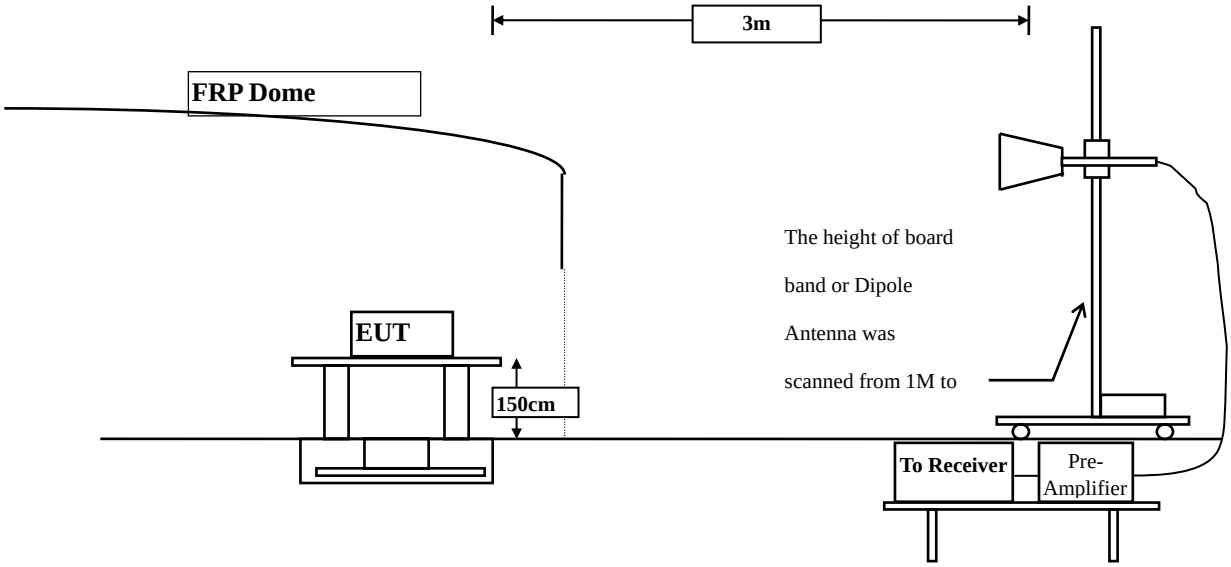
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

3.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



3.3. Limits

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 limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

3.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

3.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

3.6. Test Result of Radiated Emission

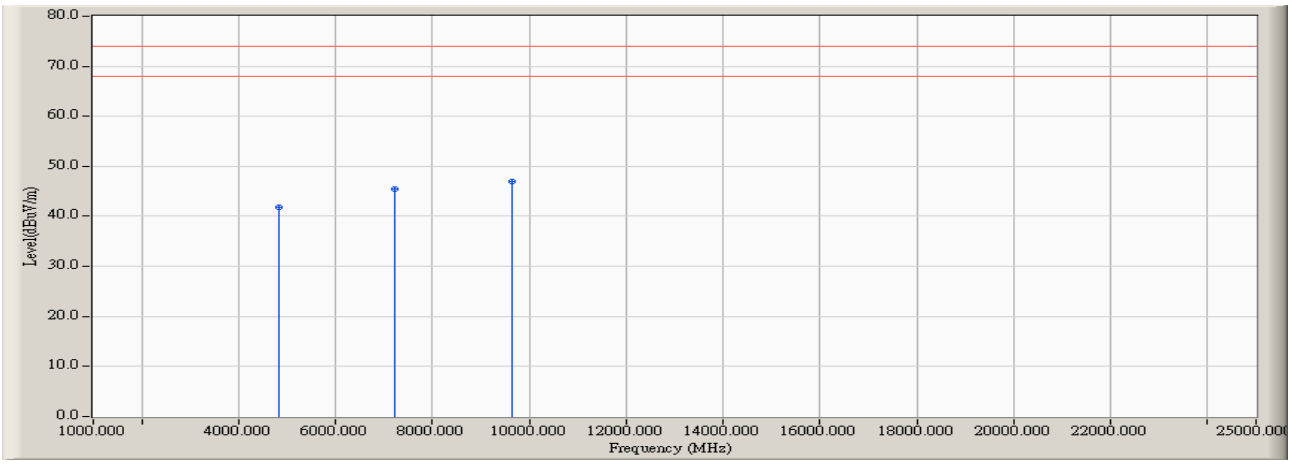
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.347	38.436	41.784	-32.216	74.000
7236.000	7.324	38.050	45.374	-28.626	74.000
9648.000	10.334	36.641	46.975	-27.025	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	3.347	38.717	42.065	-31.935	74.000
7236.000	7.324	37.437	44.761	-29.239	74.000
9648.000	10.334	37.248	47.582	-26.418	74.000
Average Detector:					
--					

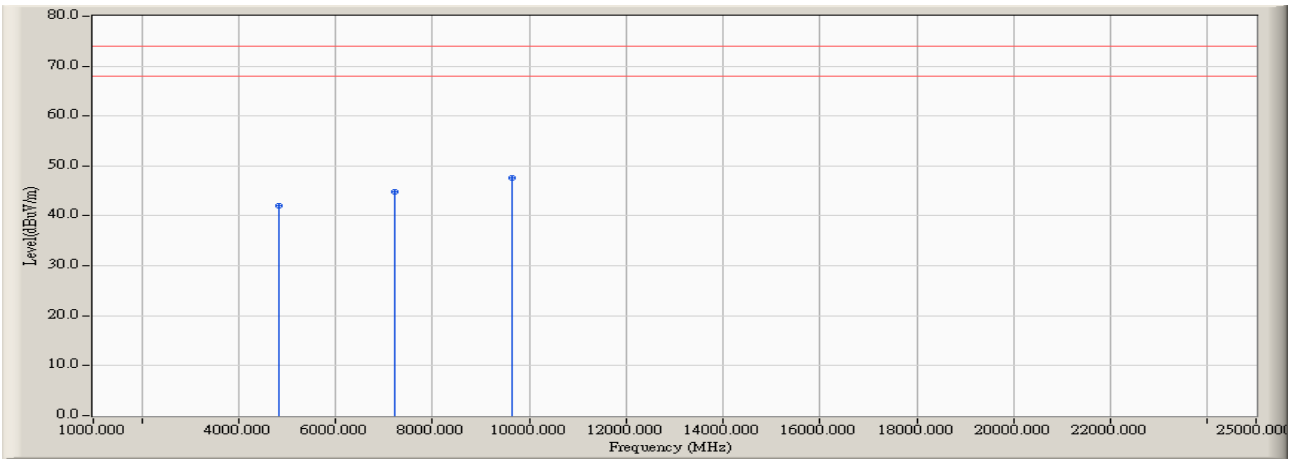
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



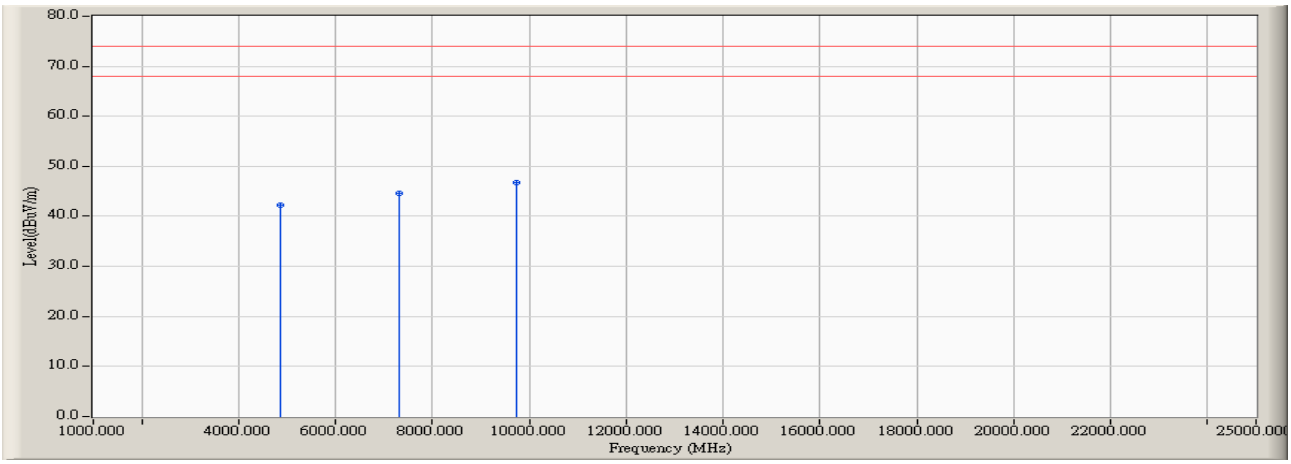
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
4874.000	2.997	39.306	42.302	-31.698	74.000
7311.000	7.727	36.981	44.708	-29.292	74.000
9748.000	10.342	36.510	46.852	-27.148	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4874.000	2.997	39.680	42.676	-31.324	74.000
7311.000	7.727	37.987	45.714	-28.286	74.000
9748.000	10.342	37.664	48.006	-25.994	74.000
Average Detector:					
--					

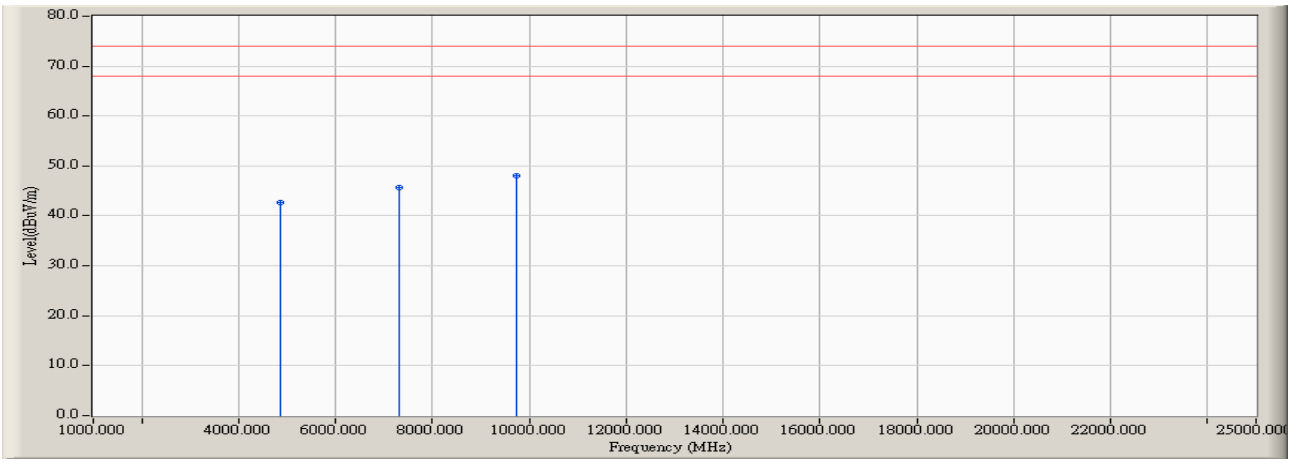
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



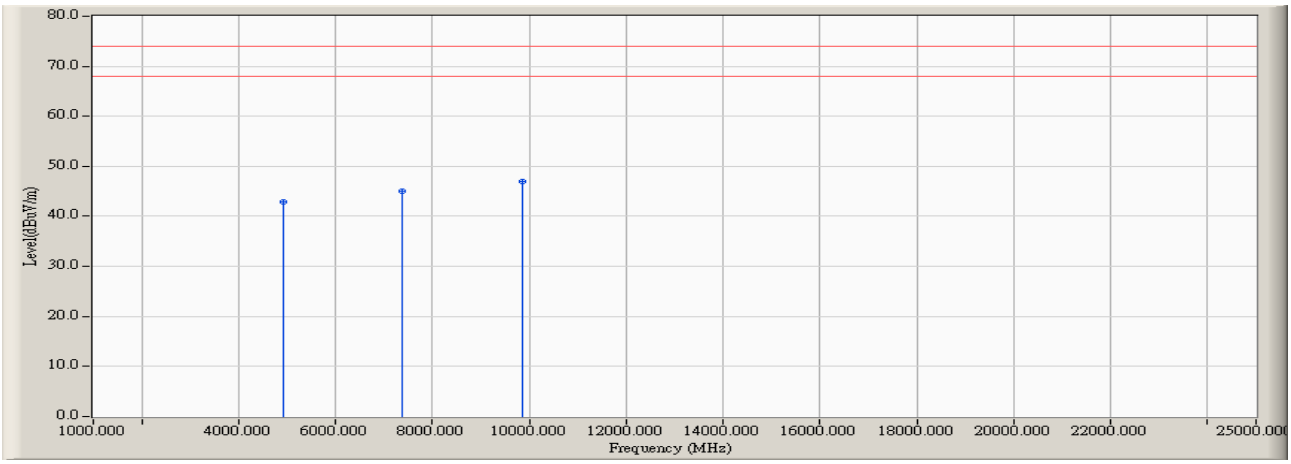
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	3.404	39.542	42.946	-31.054	74.000
7386.000	7.613	37.421	45.034	-28.966	74.000
9848.000	10.573	36.389	46.962	-27.038	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4924.000	3.404	39.000	42.404	-31.596	74.000
7386.000	7.613	37.996	45.609	-28.391	74.000
9848.000	10.573	37.455	48.028	-25.972	74.000
Average					
Detector:					
--					

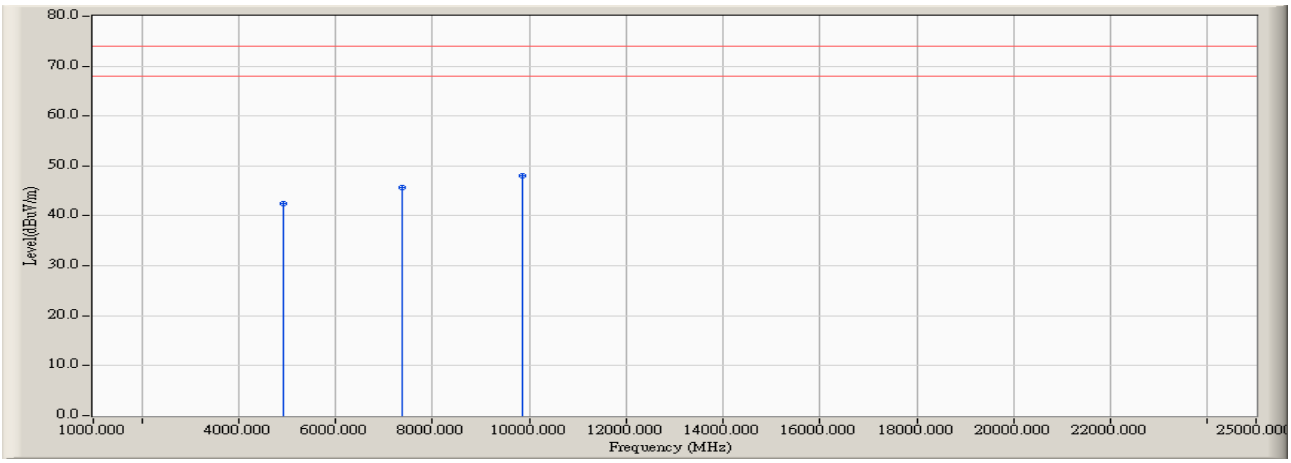
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



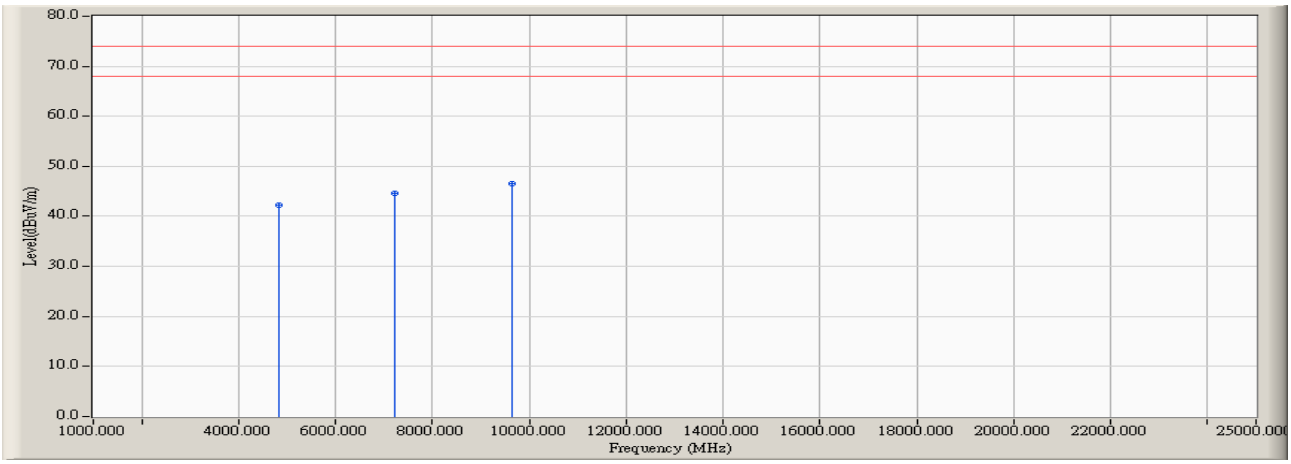
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.347	38.938	42.286	-31.714	74.000
7236.000	7.324	37.257	44.581	-29.419	74.000
9648.000	10.334	36.113	46.447	-27.553	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	3.347	39.484	42.832	-31.168	74.000
7236.000	7.324	37.688	45.012	-28.988	74.000
9648.000	10.334	37.992	48.326	-25.674	74.000
Average Detector:					
--					

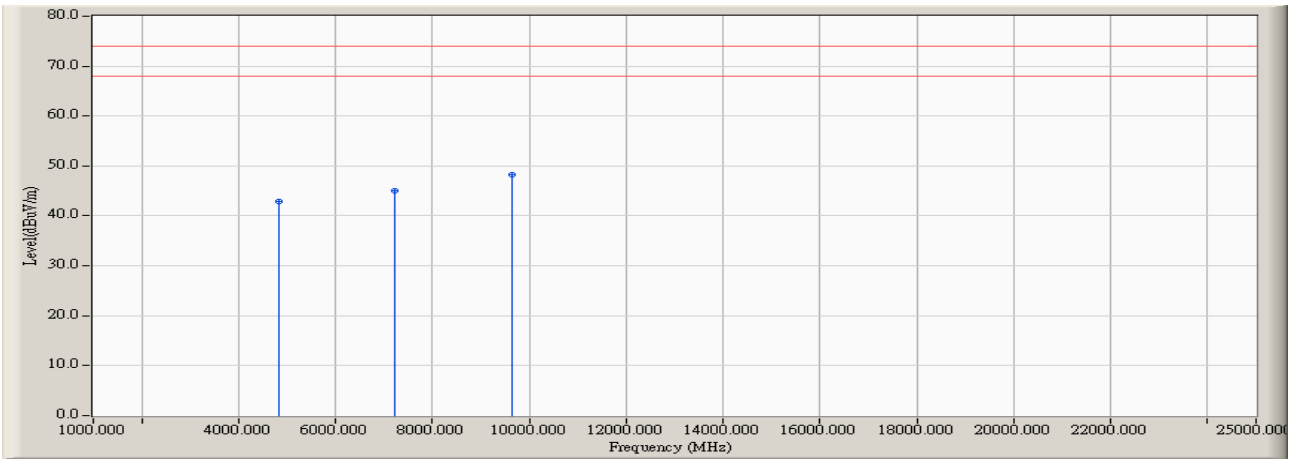
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



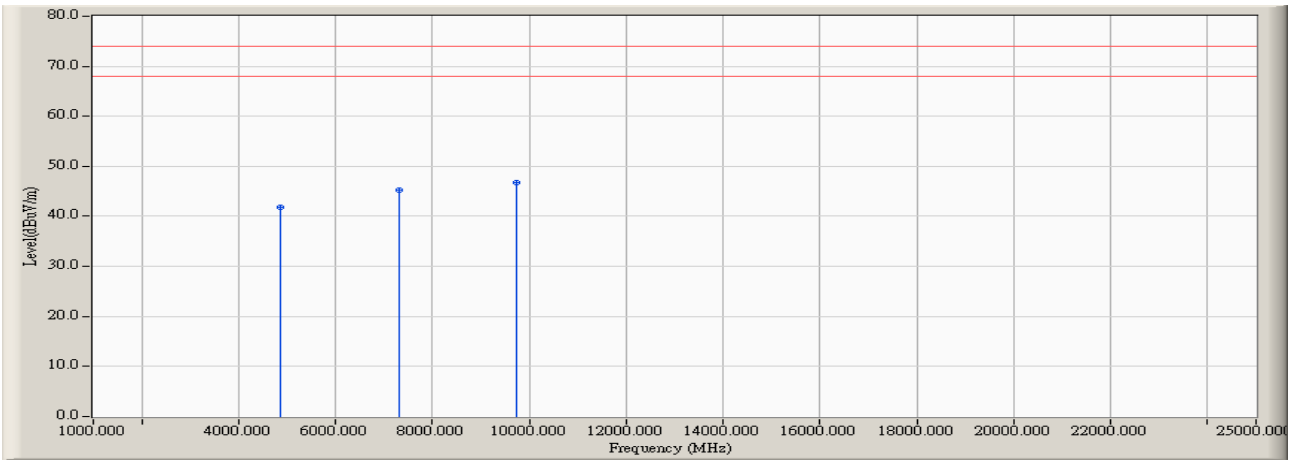
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.997	38.753	41.749	-32.251	74.000
7311.000	7.727	37.559	45.286	-28.714	74.000
9748.000	10.342	36.439	46.781	-27.219	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.997	39.817	42.813	-31.187	74.000
7311.000	7.727	37.023	44.750	-29.250	74.000
9748.000	10.342	37.439	47.781	-26.219	74.000
Average Detector:					
--					

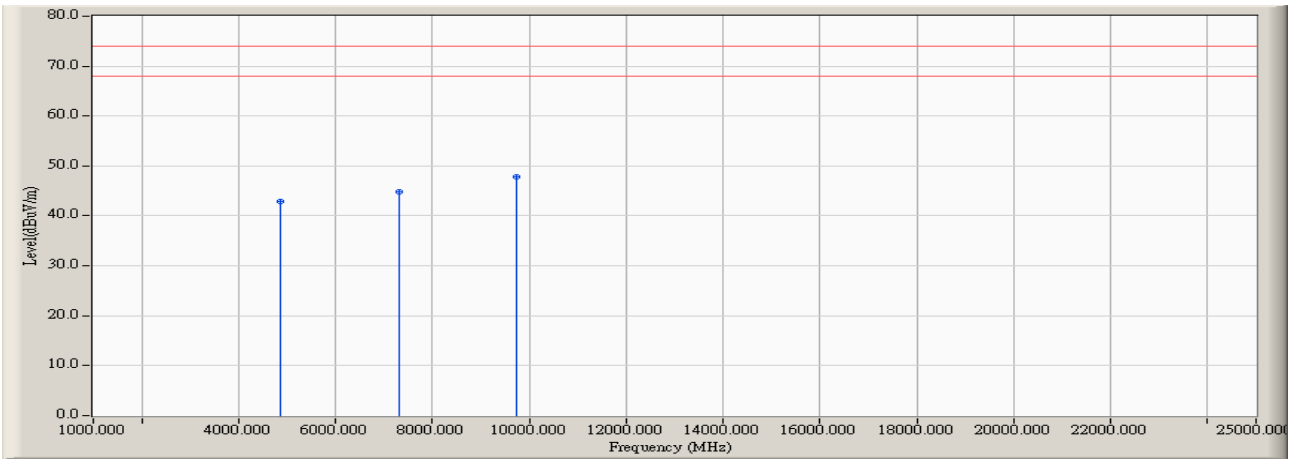
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



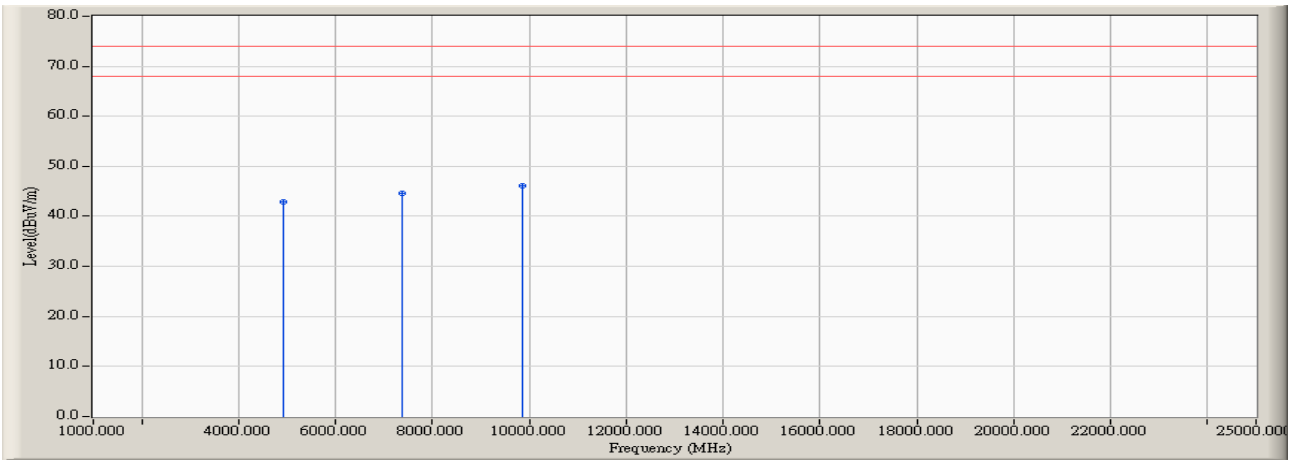
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	3.404	39.535	42.939	-31.061	74.000
7386.000	7.613	37.040	44.653	-29.347	74.000
9848.000	10.573	35.538	46.111	-27.889	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4924.000	3.404	39.515	42.919	-31.081	74.000
7386.000	7.613	37.028	44.641	-29.359	74.000
9848.000	10.573	36.915	47.488	-26.512	74.000
Average					
Detector:					
--					

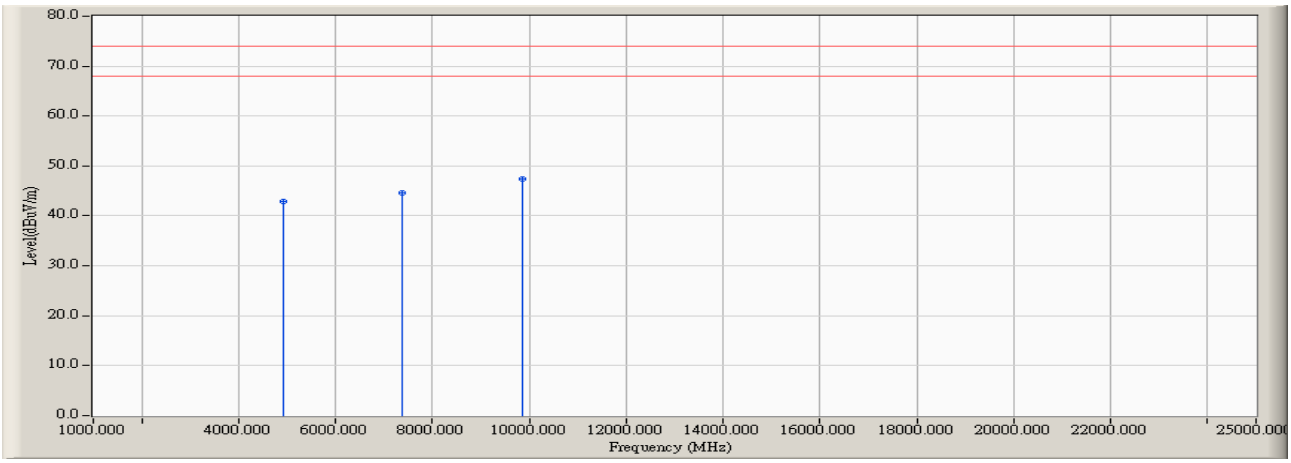
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



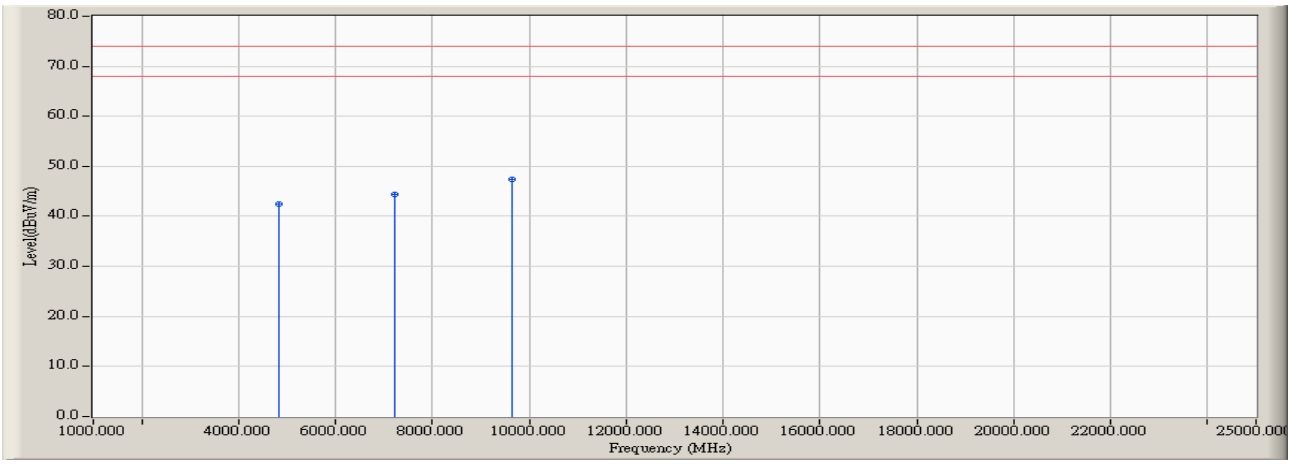
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2412MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.347	39.040	42.388	-31.612	74.000
7236.000	7.324	37.012	44.336	-29.664	74.000
9648.000	10.334	36.975	47.309	-26.691	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	3.347	39.531	42.879	-31.121	74.000
7236.000	7.324	37.584	44.908	-29.092	74.000
9648.000	10.334	37.556	47.890	-26.110	74.000
Average Detector:					
--					

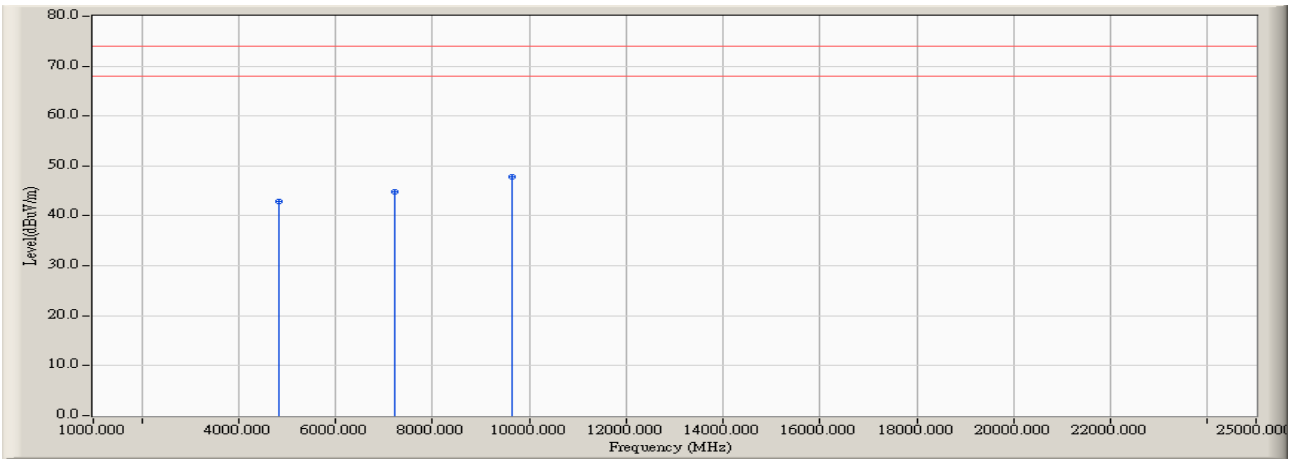
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



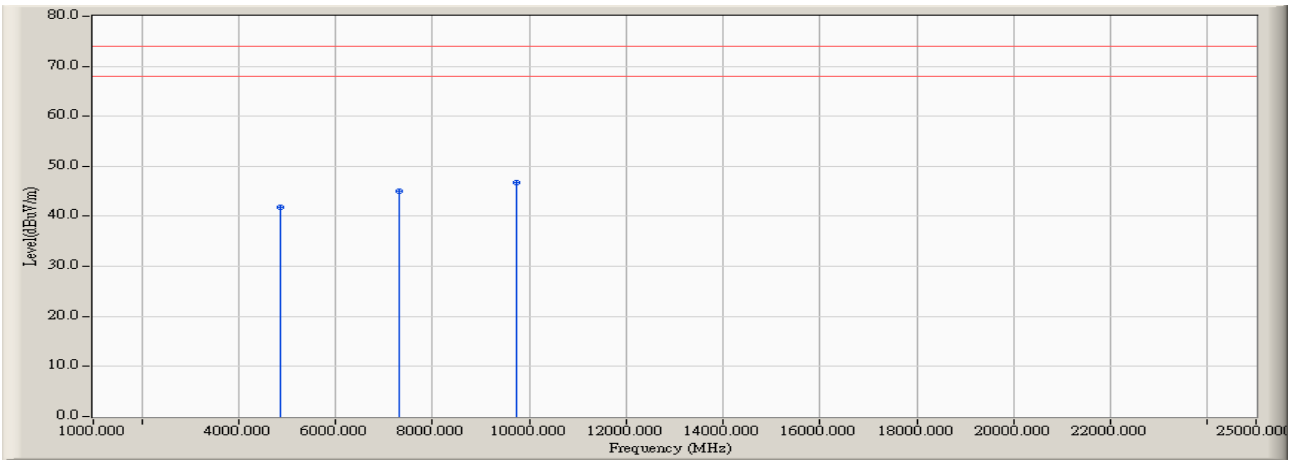
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.997	38.737	41.733	-32.267	74.000
7311.000	7.727	37.251	44.978	-29.022	74.000
9748.000	10.342	36.361	46.703	-27.297	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.997	39.813	42.809	-31.191	74.000
7311.000	7.727	37.239	44.966	-29.034	74.000
9748.000	10.342	37.169	47.511	-26.489	74.000
Average Detector:					
--					

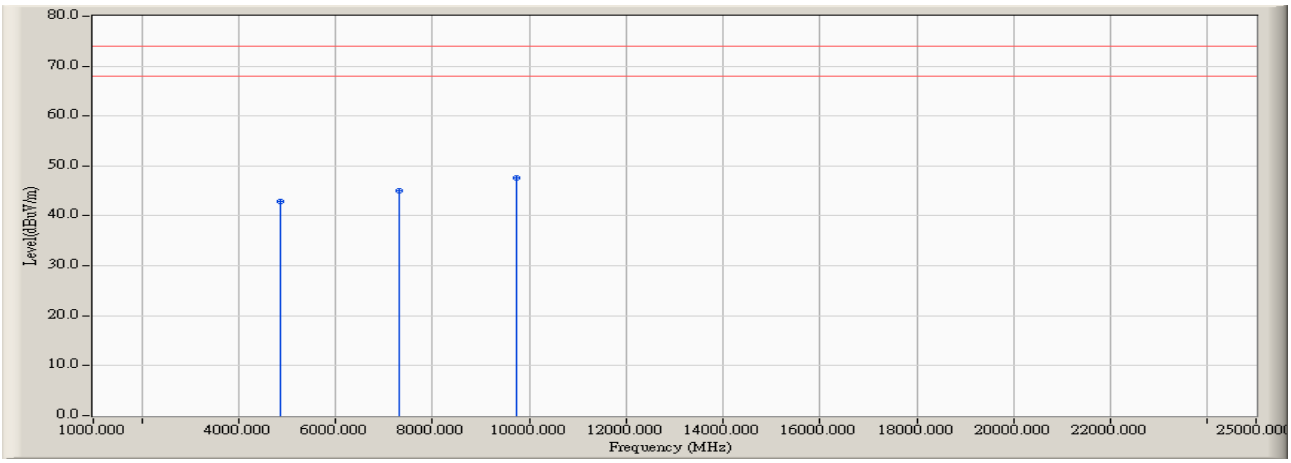
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



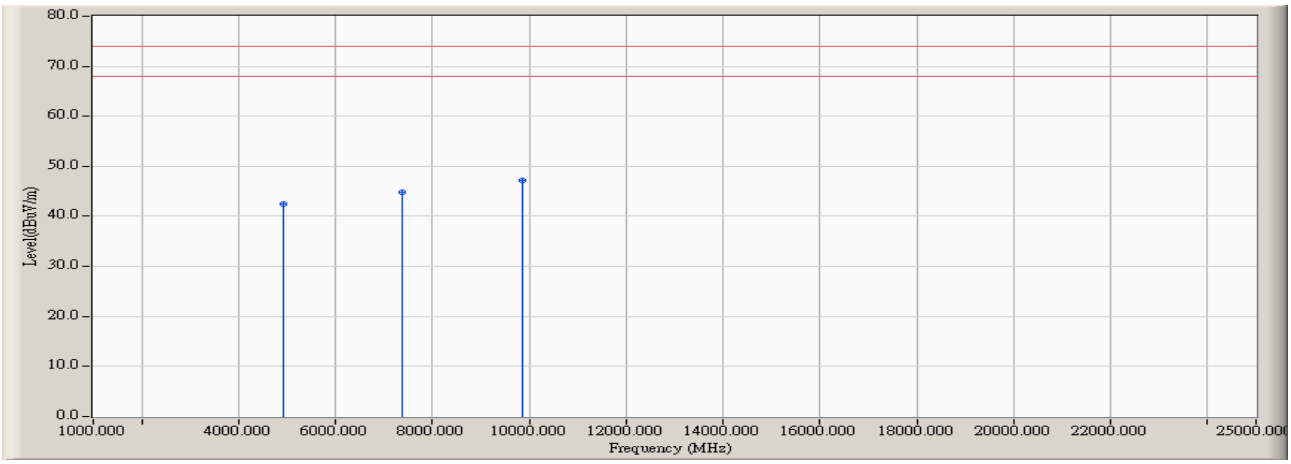
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal Peak Detector:					
4924.000	3.404	38.998	42.402	-31.598	74.000
7386.000	7.613	37.212	44.825	-29.175	74.000
9848.000	10.573	36.598	47.171	-26.829	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4924.000	3.404	39.206	42.610	-31.390	74.000
7386.000	7.613	37.203	44.816	-29.184	74.000
9848.000	10.573	37.153	47.726	-26.274	74.000
Average Detector:					
--					

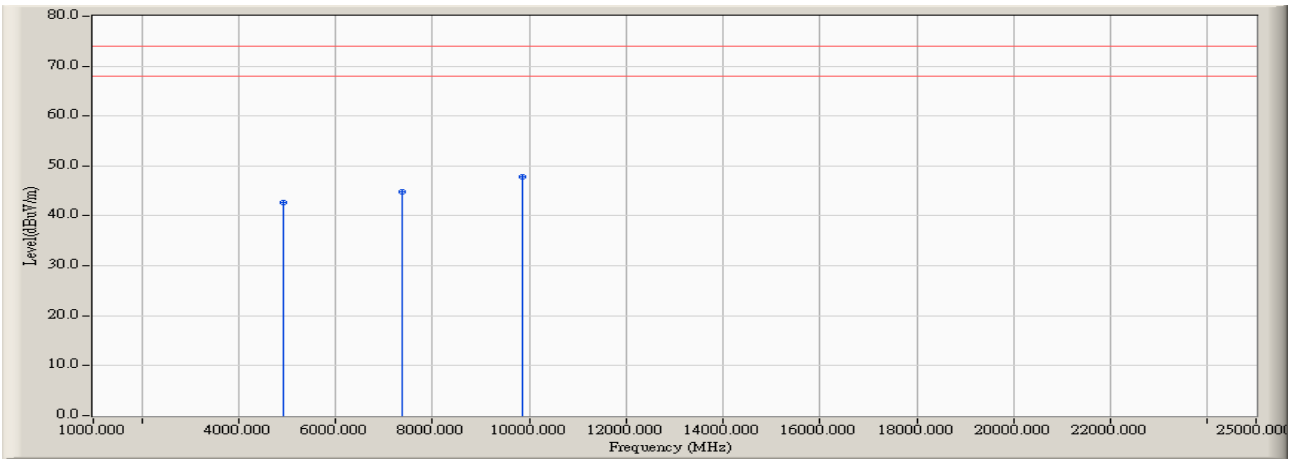
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



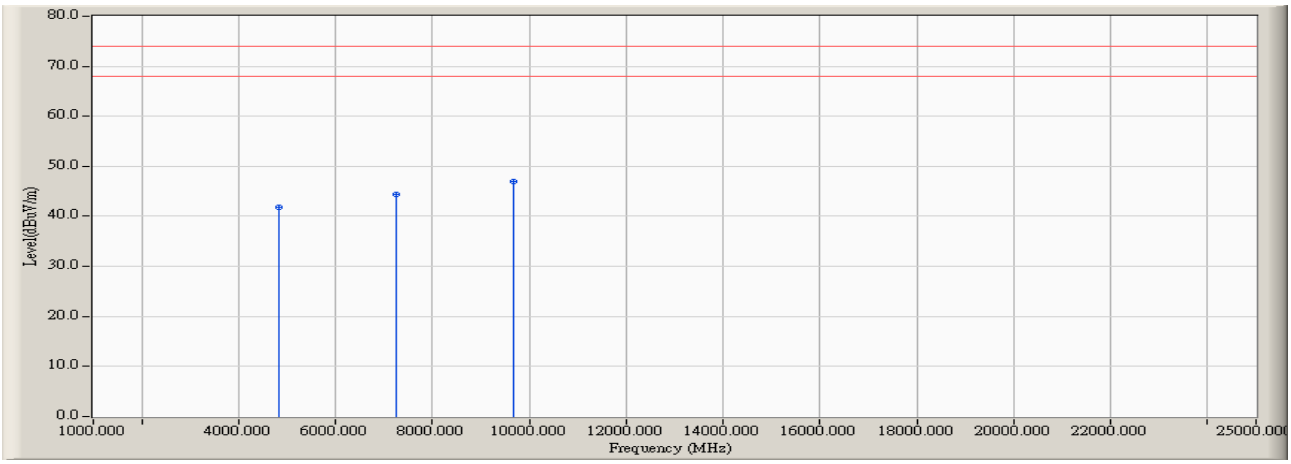
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2422MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4844.000	3.135	38.658	41.794	-32.206	74.000
7266.000	7.405	37.041	44.445	-29.555	74.000
9688.000	10.292	36.735	47.026	-26.974	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4844.000	3.135	39.748	42.884	-31.116	74.000
7266.000	7.405	37.157	44.561	-29.439	74.000
9688.000	10.292	37.735	48.026	-25.974	74.000
Average					
Detector:					
--					
--					

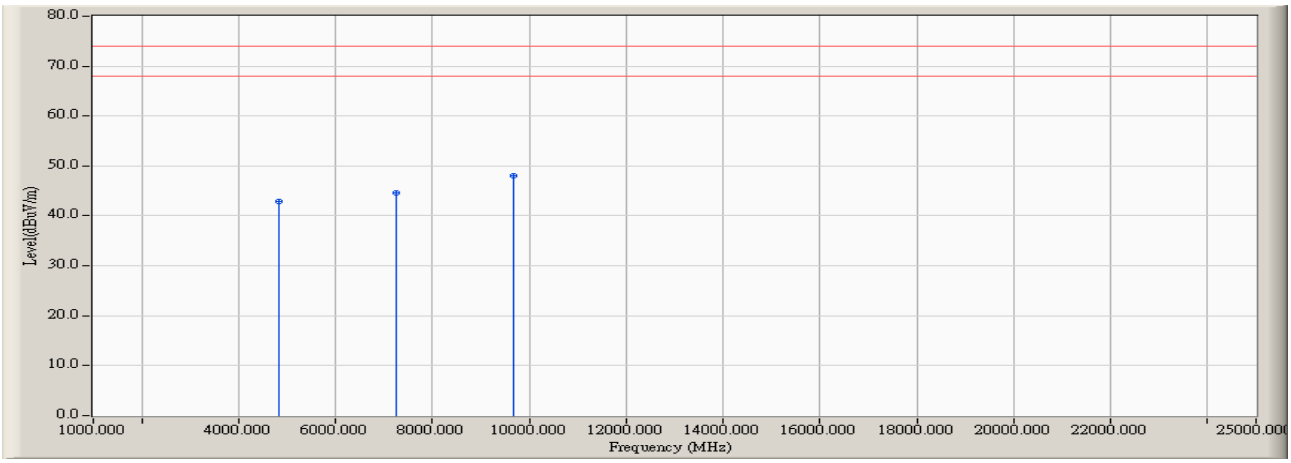
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



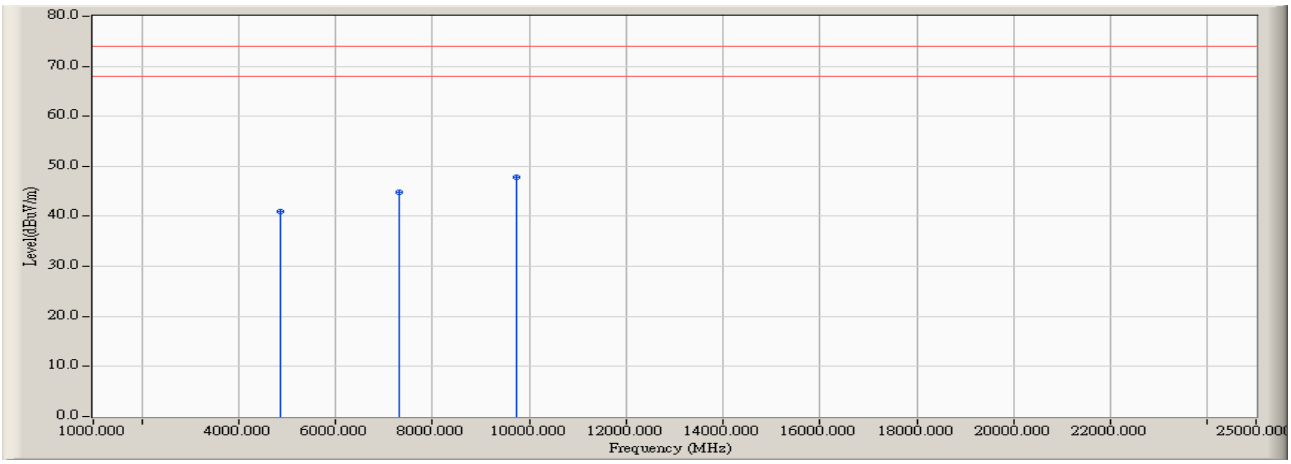
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	2.997	38.044	41.040	-32.960	74.000
7311.000	7.727	37.120	44.847	-29.153	74.000
9748.000	10.342	37.428	47.770	-26.230	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	2.997	39.715	42.711	-31.289	74.000
7311.000	7.727	37.947	45.674	-28.326	74.000
9748.000	10.342	37.341	47.683	-26.317	74.000
Average Detector:					
--					

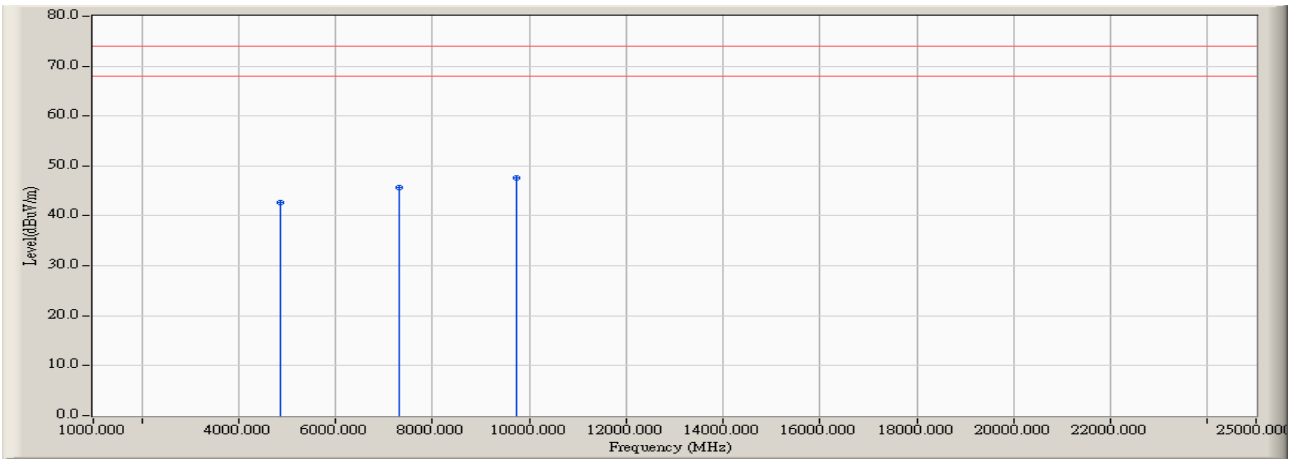
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



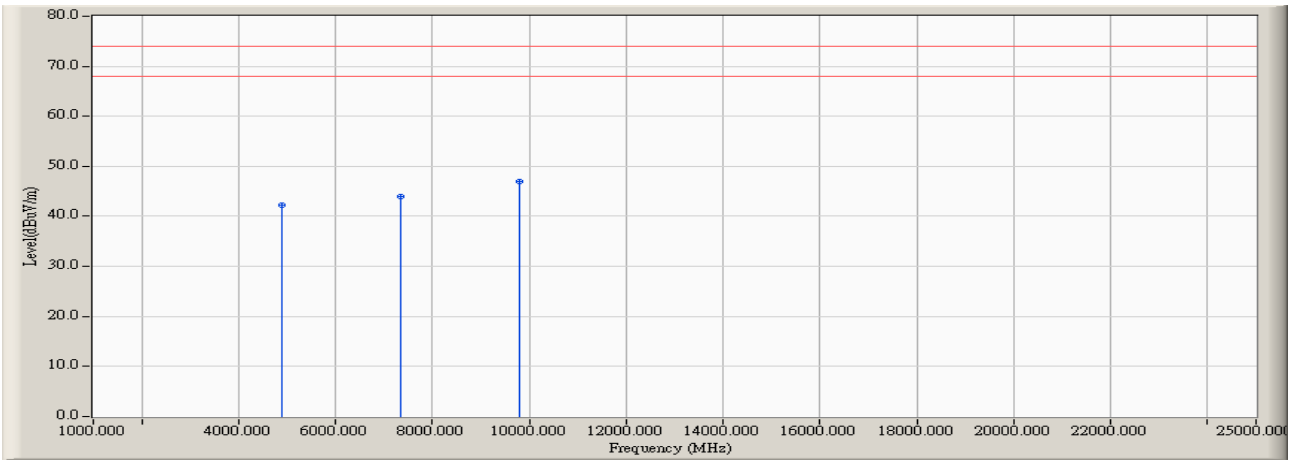
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2452 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4904.000	3.379	38.958	42.337	-31.663	74.000
7356.000	7.078	36.822	43.899	-30.101	74.000
9808.000	10.444	36.501	46.945	-27.055	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4904.000	3.379	39.946	43.325	-30.675	74.000
7356.000	7.078	37.046	44.123	-29.877	74.000
9808.000	10.444	37.671	48.115	-25.885	74.000
Average					
Detector:					
--					

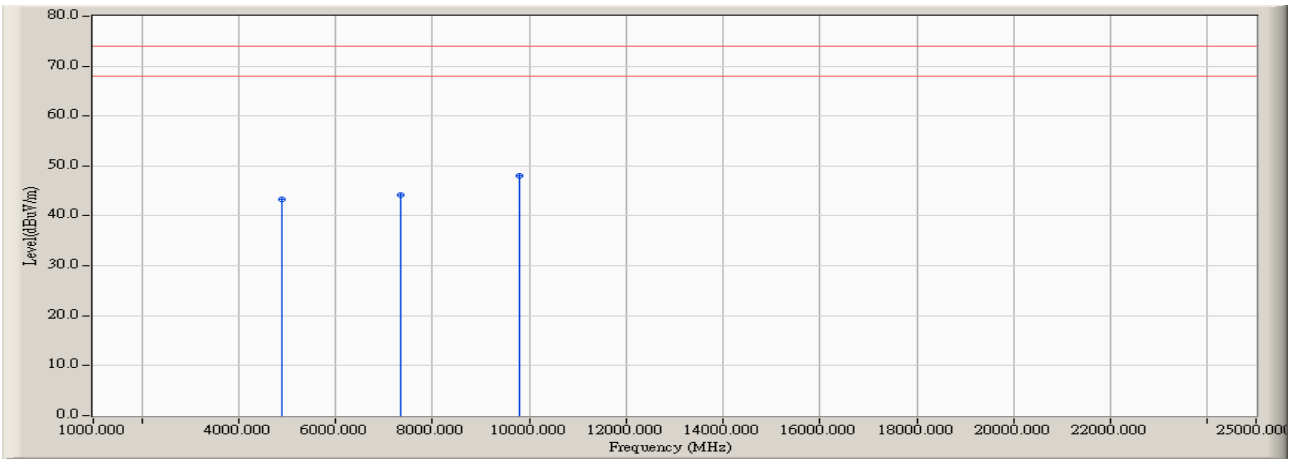
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Horizontal



Vertical



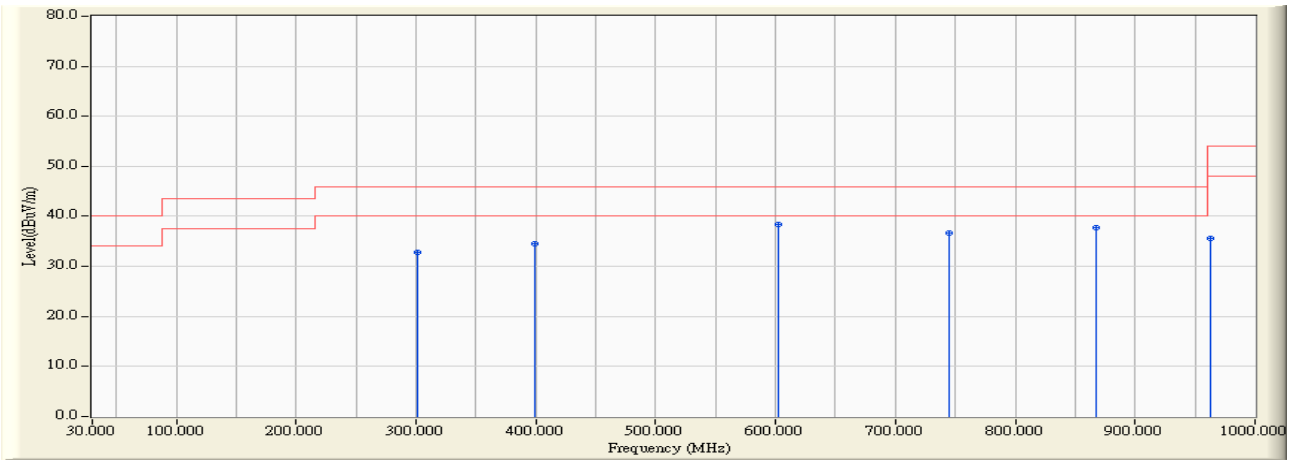
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
301.280	-3.418	36.230	32.813	-13.187	46.000
399.100	-2.273	36.774	34.501	-11.499	46.000
601.834	4.177	34.130	38.307	-7.693	46.000
744.320	3.323	33.450	36.772	-9.228	46.000
867.360	5.476	32.320	37.796	-8.204	46.000
962.850	6.634	28.940	35.574	-18.426	54.000
Vertical					
132.880	-4.446	39.260	34.815	-8.685	43.500
357.640	-3.703	36.850	33.147	-12.853	46.000
401.980	-5.648	36.820	31.172	-14.828	46.000
503.640	-0.852	31.250	30.398	-15.602	46.000
799.320	2.792	30.890	33.682	-12.318	46.000
952.130	6.629	31.640	38.270	-7.730	46.000

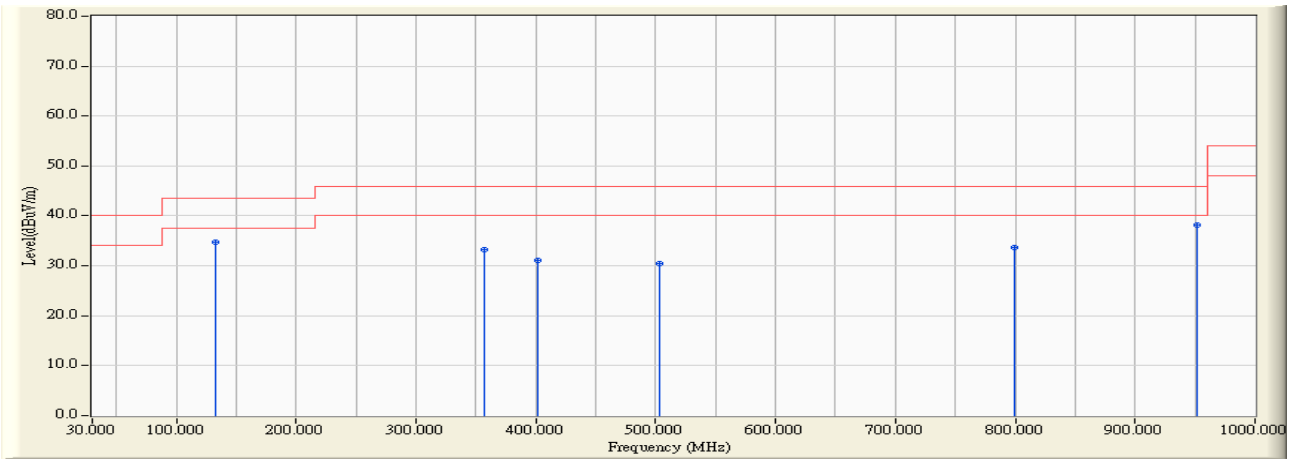
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Horizontal



Vertical



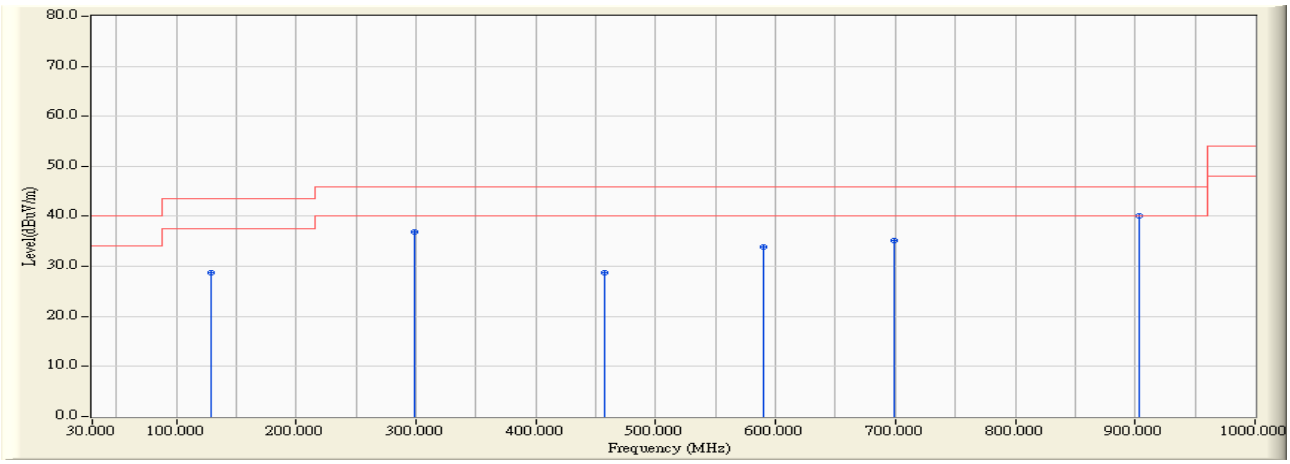
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
129.460	-10.107	38.830	28.723	-14.777	43.500
299.410	-3.594	40.500	36.906	-9.094	46.000
457.600	0.302	28.390	28.692	-17.308	46.000
590.160	3.592	30.311	33.903	-12.097	46.000
698.940	2.930	32.300	35.230	-10.770	46.000
902.850	5.643	34.360	40.003	-5.997	46.000
Vertical					
155.690	-6.208	40.533	34.325	-9.175	43.500
357.600	-3.697	41.210	37.513	-8.487	46.000
501.990	-0.811	29.840	29.029	-16.971	46.000
699.580	0.608	37.640	38.249	-7.751	46.000
823.400	3.461	31.150	34.611	-11.389	46.000
961.400	7.296	30.580	37.876	-16.124	54.000

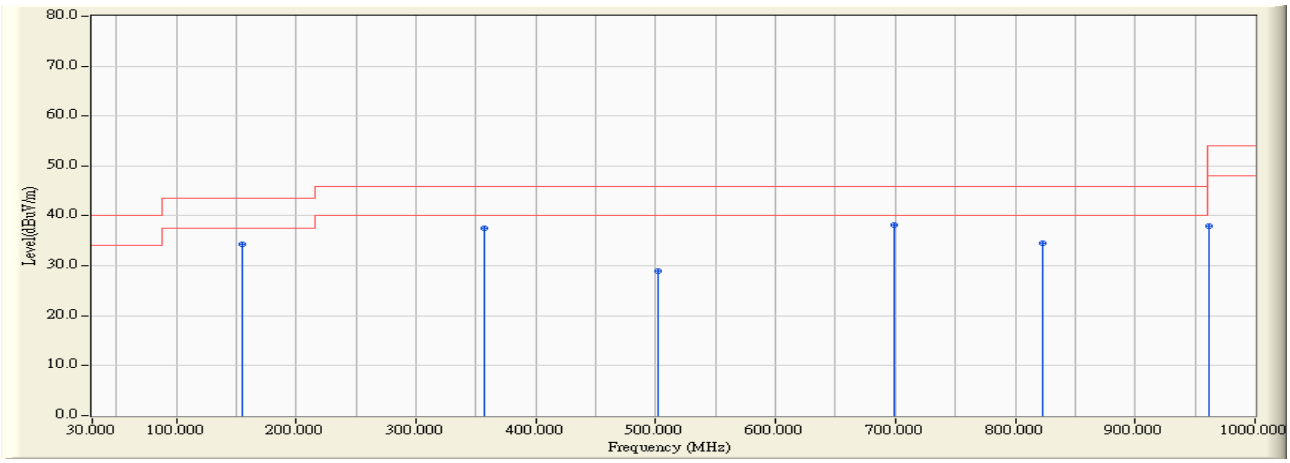
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Horizontal



Vertical



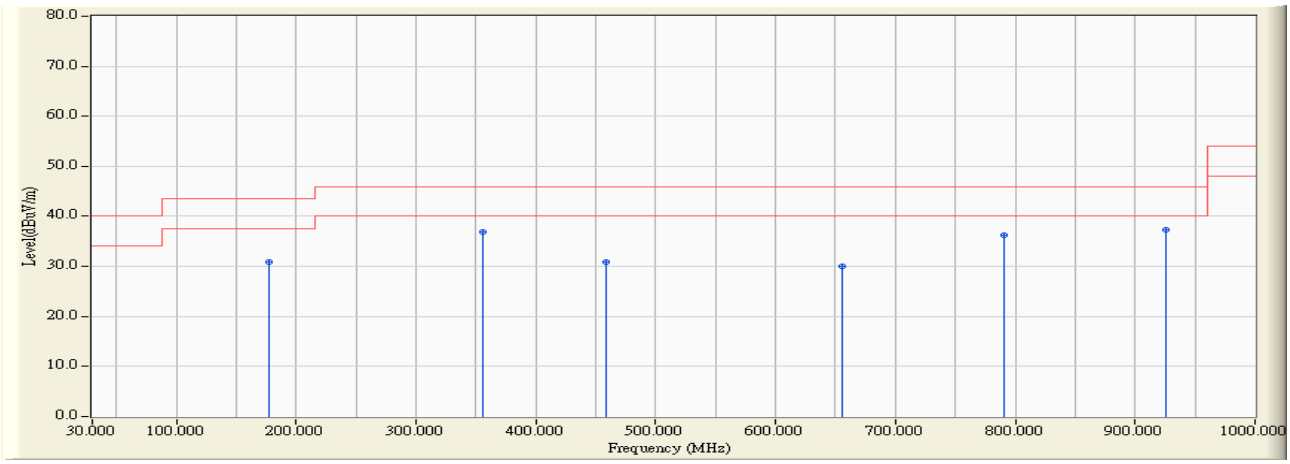
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
177.400	-10.859	41.680	30.821	-12.679	43.500
355.620	-2.523	39.430	36.908	-9.092	46.000
458.640	0.786	30.120	30.906	-15.094	46.000
655.140	2.142	27.859	30.001	-15.999	46.000
791.250	5.213	31.140	36.353	-9.647	46.000
925.600	6.372	30.980	37.352	-8.648	46.000
Vertical					
0.000	1.020	38.485	39.505	-0.495	40.000
161.450	-6.572	40.780	34.208	-9.292	43.500
503.900	-0.852	30.813	29.961	-16.039	46.000
599.380	-2.927	33.450	30.524	-15.476	46.000
763.920	2.307	32.988	35.294	-10.706	46.000
932.300	6.115	32.990	39.105	-6.895	46.000

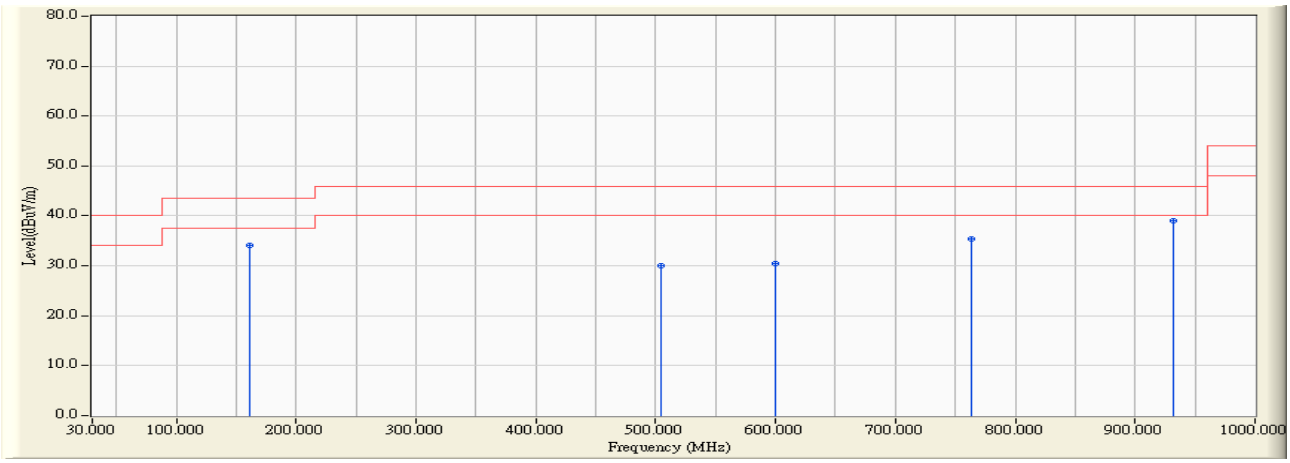
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Horizontal



Vertical



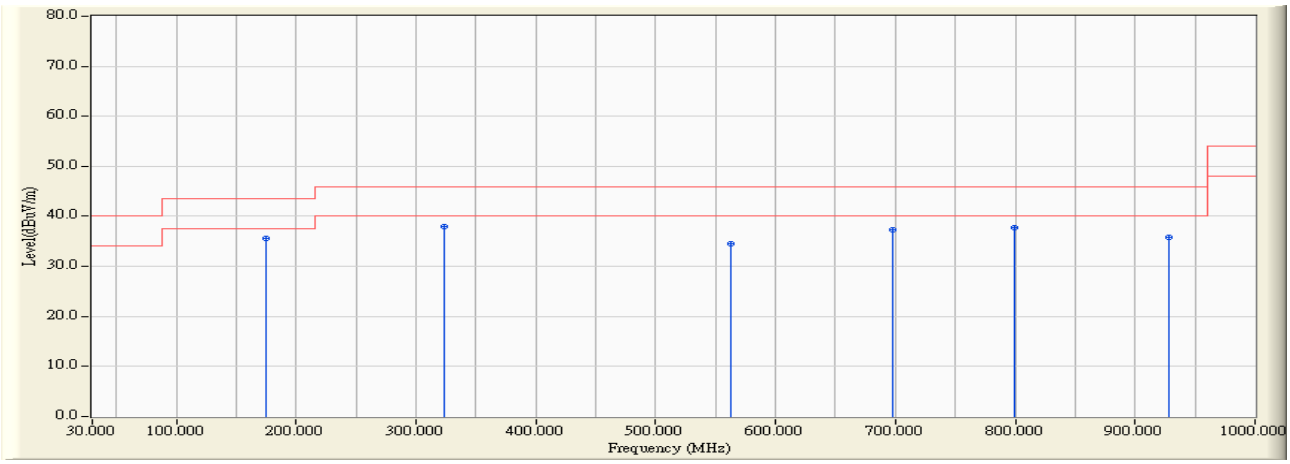
Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
174.585	-9.888	45.390	35.502	-7.998	43.500
323.150	-4.447	42.358	37.910	-8.090	46.000
562.300	1.517	33.010	34.527	-11.473	46.000
698.100	3.059	34.310	37.368	-8.632	46.000
799.340	5.150	32.590	37.740	-8.260	46.000
928.390	6.925	28.900	35.824	-10.176	46.000
Vertical					
110.300	-0.563	35.920	35.357	-8.143	43.500
251.230	-7.508	33.269	25.761	-20.239	46.000
351.340	-3.895	34.288	30.393	-15.607	46.000
577.410	-5.667	31.450	25.783	-20.217	46.000
789.100	2.940	31.990	34.930	-11.070	46.000
927.600	6.081	31.060	37.141	-8.859	46.000

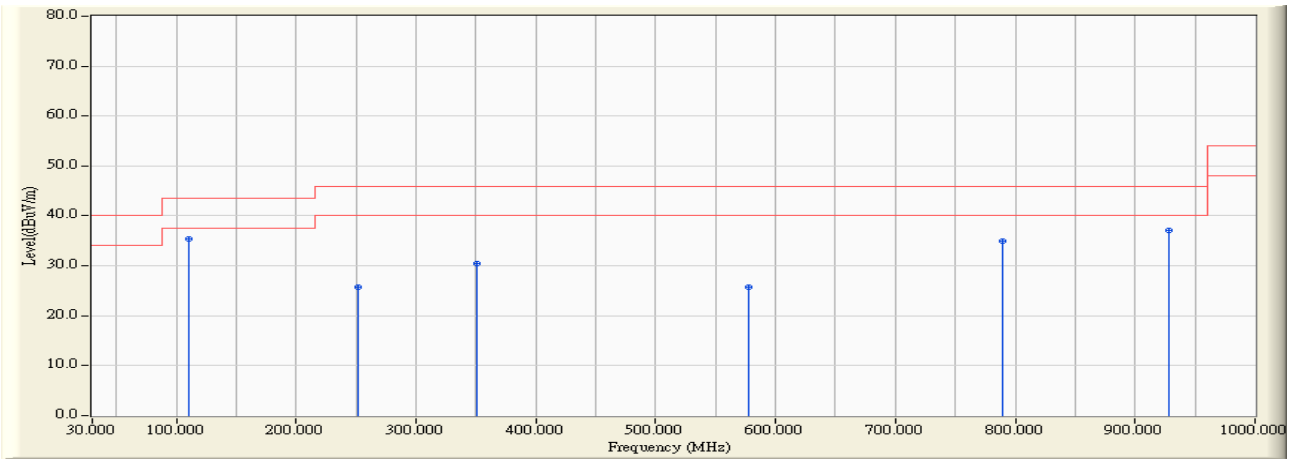
Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Horizontal



Vertical



4. Band Edge

4.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

RF Radiated Measurement:

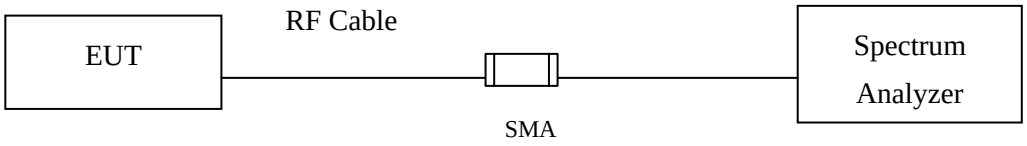
The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2015
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2015
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2015
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2015
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2015

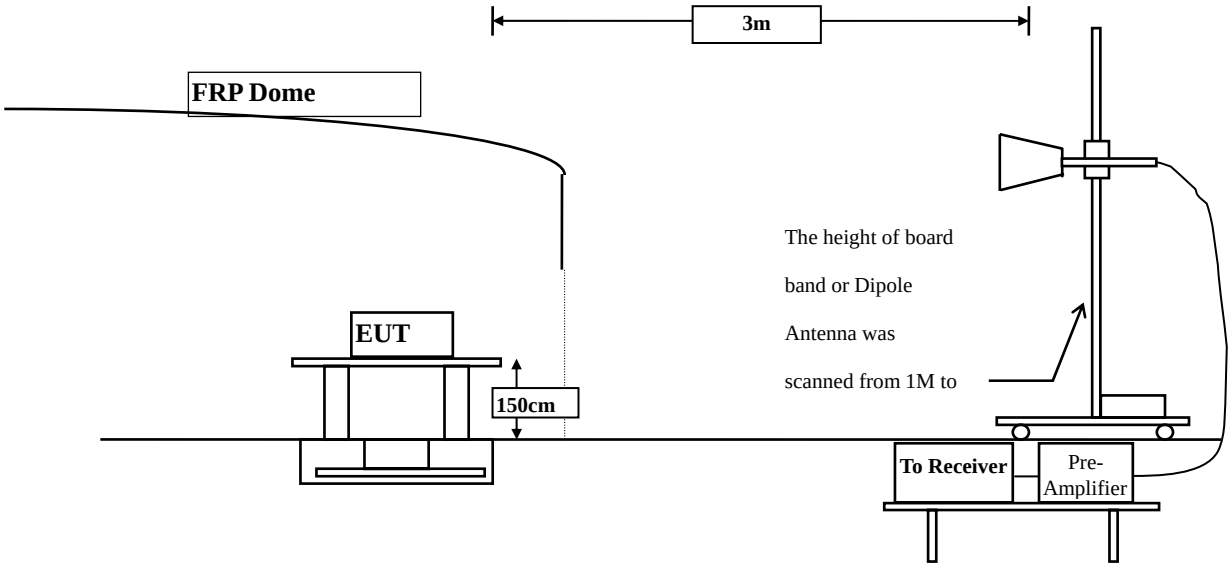
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



4.3. Limits

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 limits in paragraph 15.209, whichever is the lesser attenuation.

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.
The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

4.5. Uncertainty

± 3.9 dB above 1GHz
± 3.8 dB below 1GHz

4.6. Test Result of Band Edge

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-1.182	52.421	51.238	74.00	54.00	Pass
01 (Peak)	2397.700	-1.171	62.179	61.008	--	--	--
01 (Peak)	2400.000	-1.168	56.784	55.616	--	--	--
01 (Peak)	2413.000	-1.022	102.825	101.803	--	--	--
01 (Average)	2390.000	-1.182	39.432	38.249	74.00	54.00	Pass
01 (Average)	2397.000	-1.172	56.974	55.802	--	--	--
01 (Average)	2400.000	-1.168	48.134	46.966	--	--	--
01 (Average)	2414.200	-1.006	99.973	98.967	--	--	--

Figure Channel 01: Horizontal (Peak)

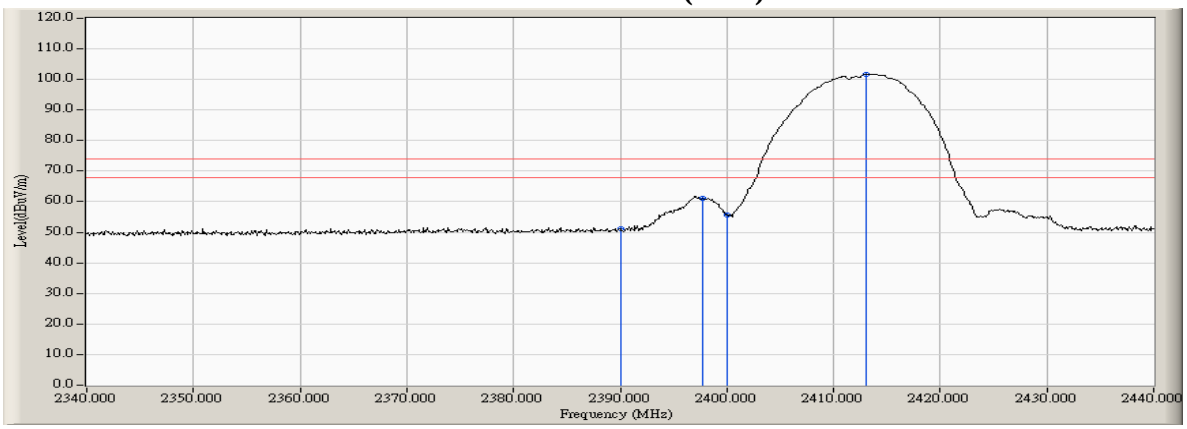
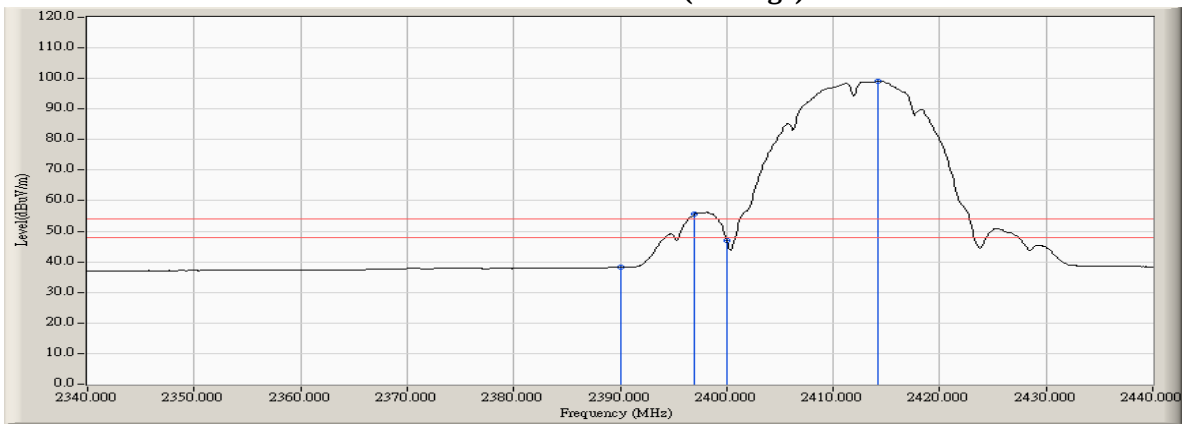


Figure Channel 01: Horizontal (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-1.182	51.300	50.117	74.00	54.00	Pass
01 (Peak)	2397.400	-1.171	54.877	53.706	--	--	--
01 (Peak)	2400.000	-1.168	52.117	50.949	--	--	--
01 (Peak)	2413.900	-1.010	95.496	94.486	--	--	--
01 (Average)	2390.000	-1.182	38.412	37.229	74.00	54.00	Pass
01 (Average)	2398.600	-1.170	50.442	49.272	--	--	--
01 (Average)	2400.000	-1.168	44.383	43.215	--	--	--
01 (Average)	2414.700	-0.999	93.922	92.923	--	--	--

Figure Channel 01: Vertical (Peak)

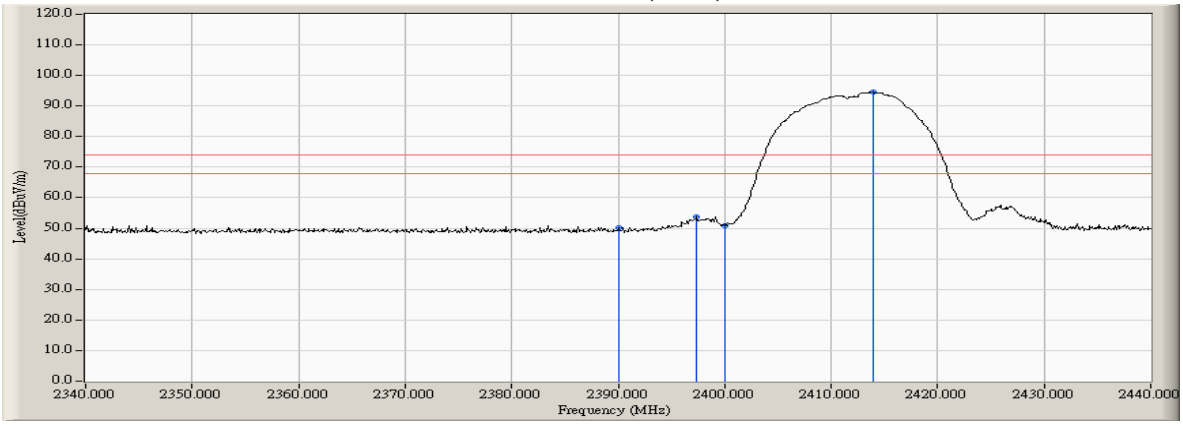
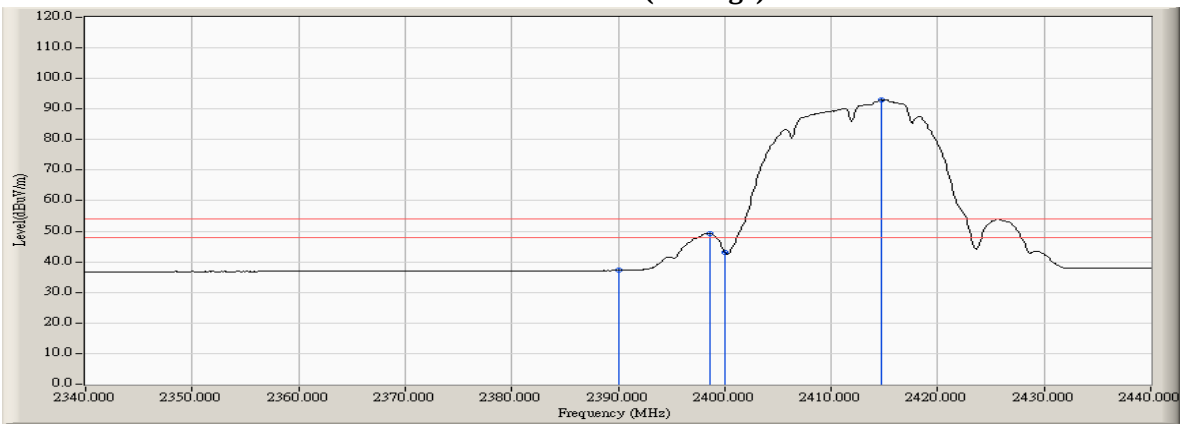


Figure Channel 01: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2459.300	-0.975	95.648	94.672	--	--	--
11 (Peak)	2483.500	-0.607	49.079	48.471	74.00	54.00	Pass
11 (Peak)	2485.700	-0.574	50.847	50.272	74.00	54.00	Pass
11 (Average)	2459.200	-0.978	93.234	92.256	--	--	--
11 (Average)	2483.500	-0.607	38.412	37.804	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

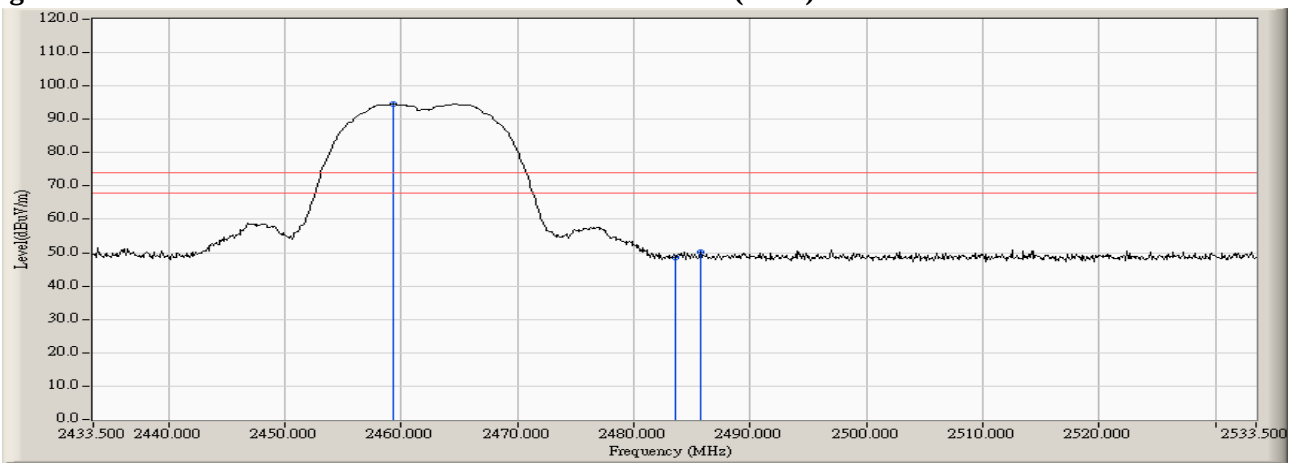
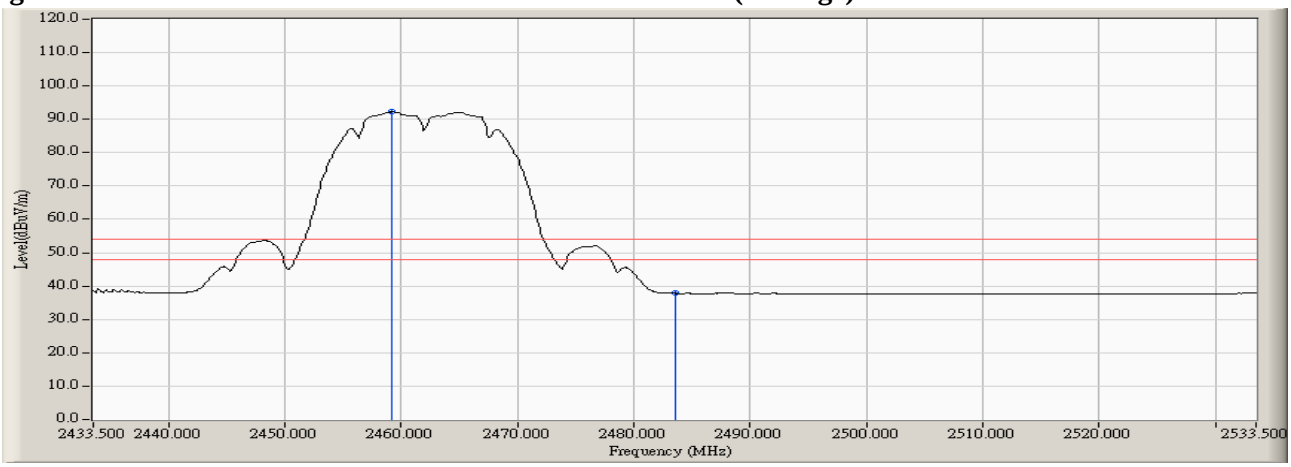


Figure Channel 11: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2459.300	-0.975	95.573	94.597	--	--	--
11 (Peak)	2483.500	-0.607	49.745	49.137	74.00	54.00	Pass
11 (Peak)	2485.200	-0.582	50.877	50.295	74.00	54.00	Pass
11 (Average)	2459.200	-0.978	93.000	92.022	--	--	--
11 (Average)	2483.500	-0.607	37.772	37.164	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

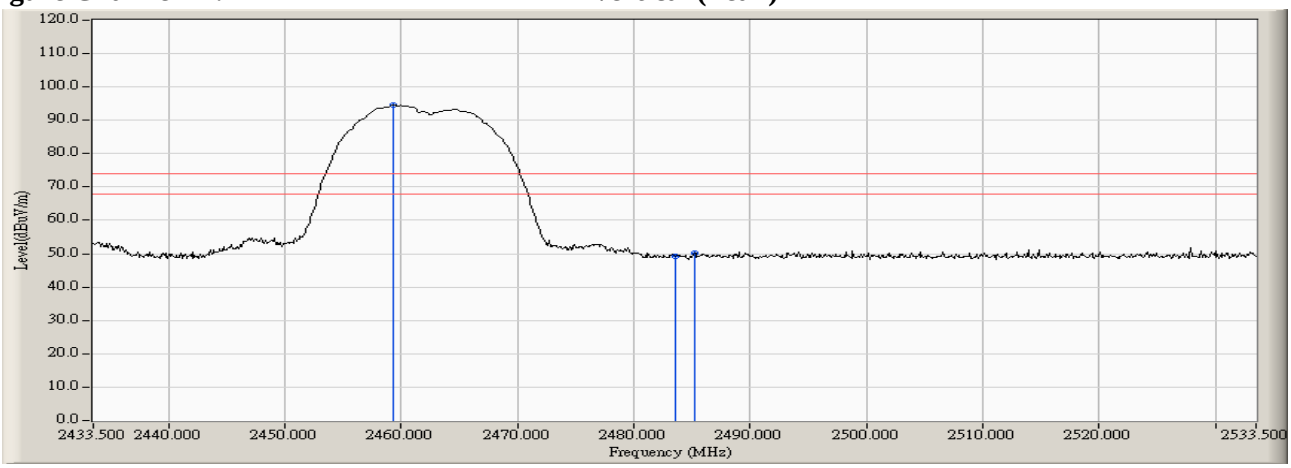
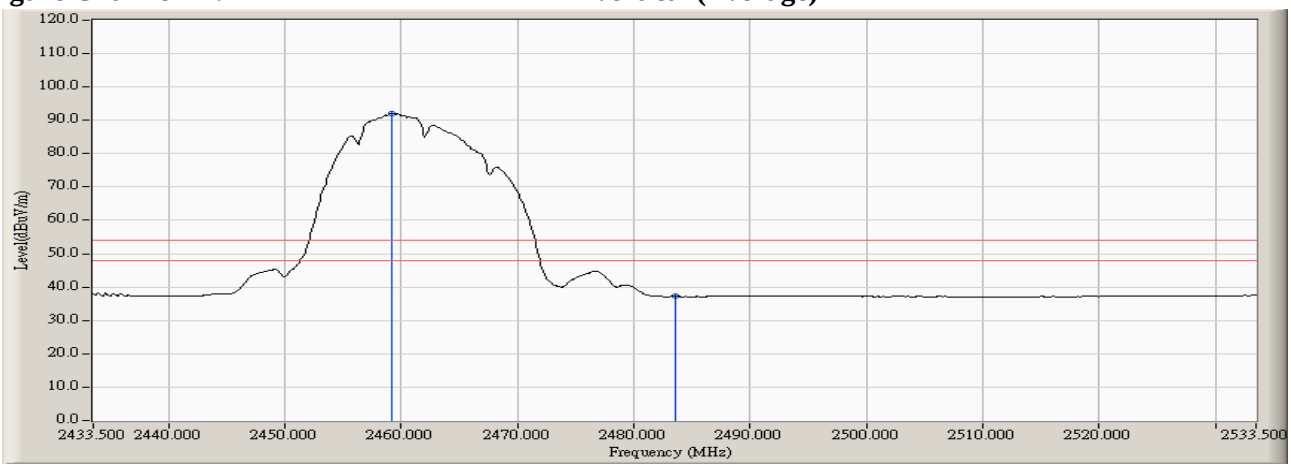


Figure Channel 11: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-1.182	73.109	71.926	74.00	54.00	Pass
01 (Peak)	2394.900	-1.174	80.903	79.729	--	--	--
01 (Peak)	2400.000	-1.168	82.692	81.524	--	--	--
01 (Peak)	2406.300	-1.110	106.171	105.061	--	--	--
01(Average)	2390.000	-1.182	48.997	47.814	74.00	54.00	Pass
01(Average)	2400.000	-1.168	63.708	62.540	--	--	--
01(Average)	2416.500	-0.974	95.822	94.848	--	--	--

Figure Channel 01: Horizontal (Peak)

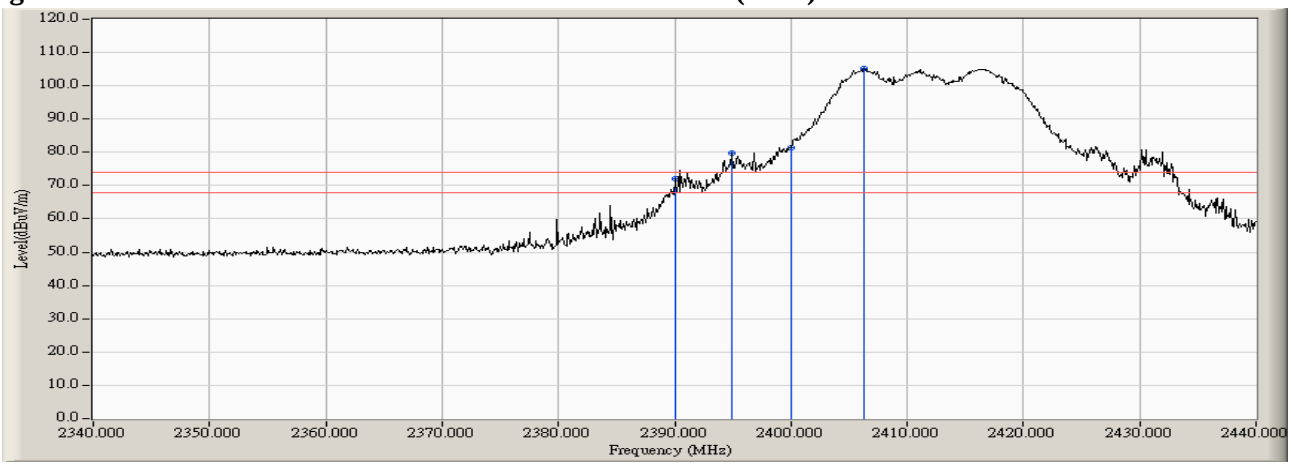
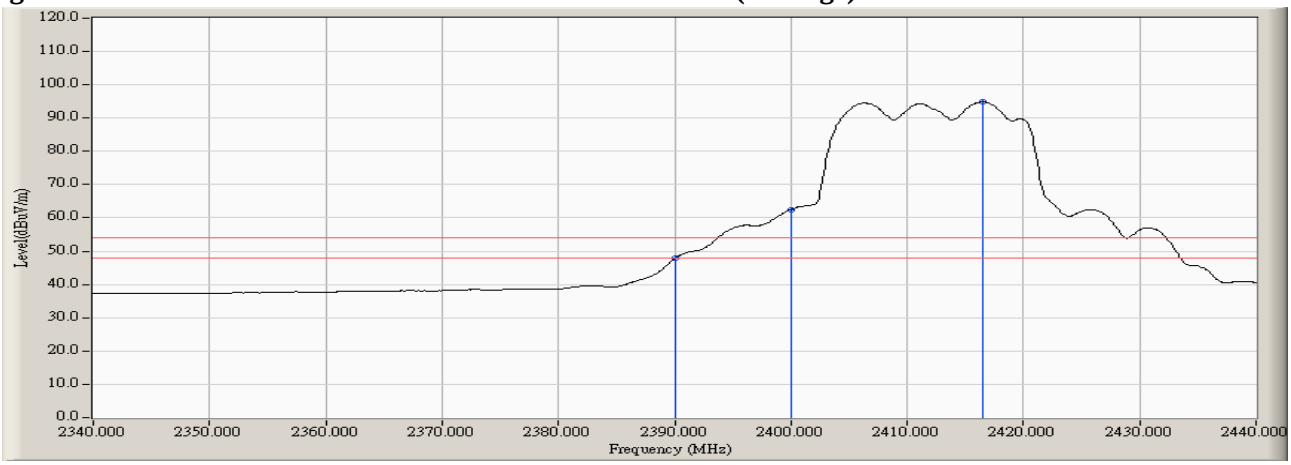


Figure Channel 01: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2389.700	-1.183	57.866	56.683	74.00	54.00	Pass
01 (Peak)	2390.000	-1.182	53.965	52.782	74.00	54.00	Pass
01 (Peak)	2400.000	-1.168	67.879	66.711	--	--	--
01 (Peak)	2419.200	-0.938	92.437	91.499	--	--	--
01 (Average)	2390.000	-1.182	39.968	38.785	74.00	54.00	Pass
01 (Average)	2400.000	-1.168	47.994	46.826	--	--	--
01 (Average)	2419.600	-0.933	83.169	82.237	--	--	--

Figure Channel 01: Vertical (Peak)

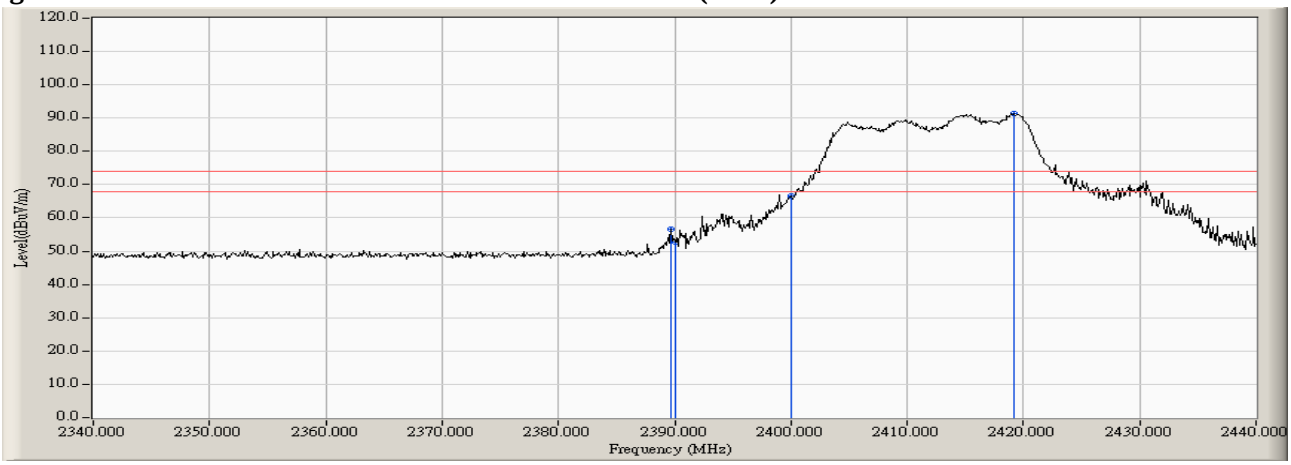
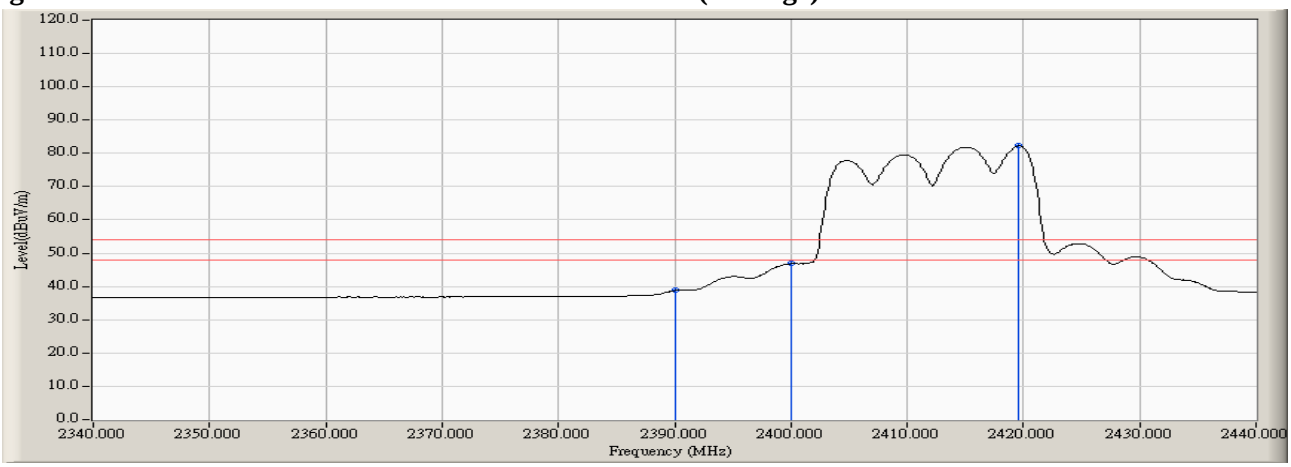


Figure Channel 01: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2456.600	-1.019	102.800	101.781	--	--	--
11 (Peak)	2483.500	-0.607	62.102	61.494	74.00	54.00	Pass
11 (Peak)	2483.900	-0.601	62.295	61.693	74.00	54.00	Pass
11 (Average)	2456.700	-1.017	93.568	92.551	--	--	--
11 (Average)	2483.500	-0.607	44.512	43.904	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

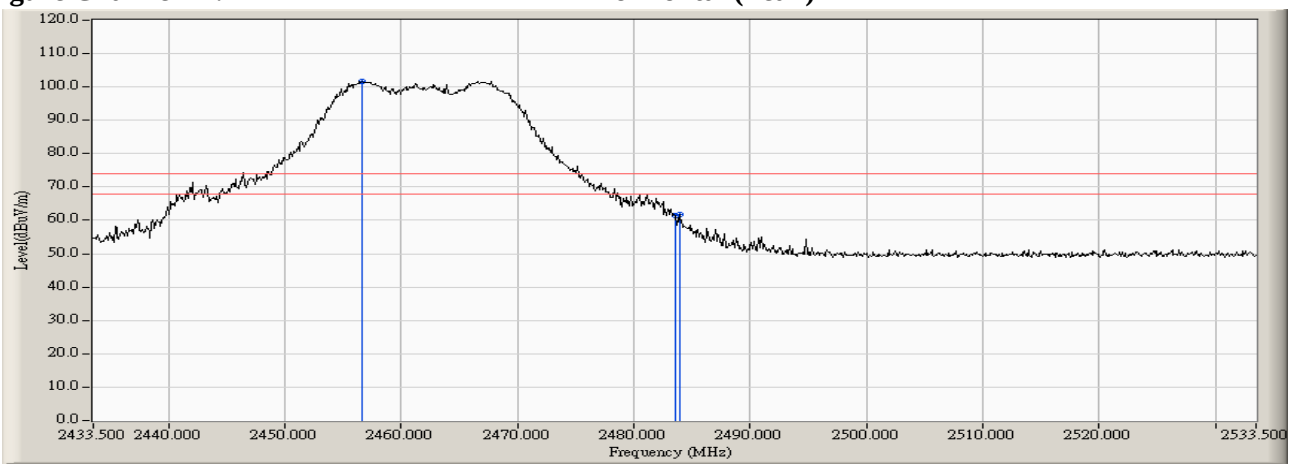
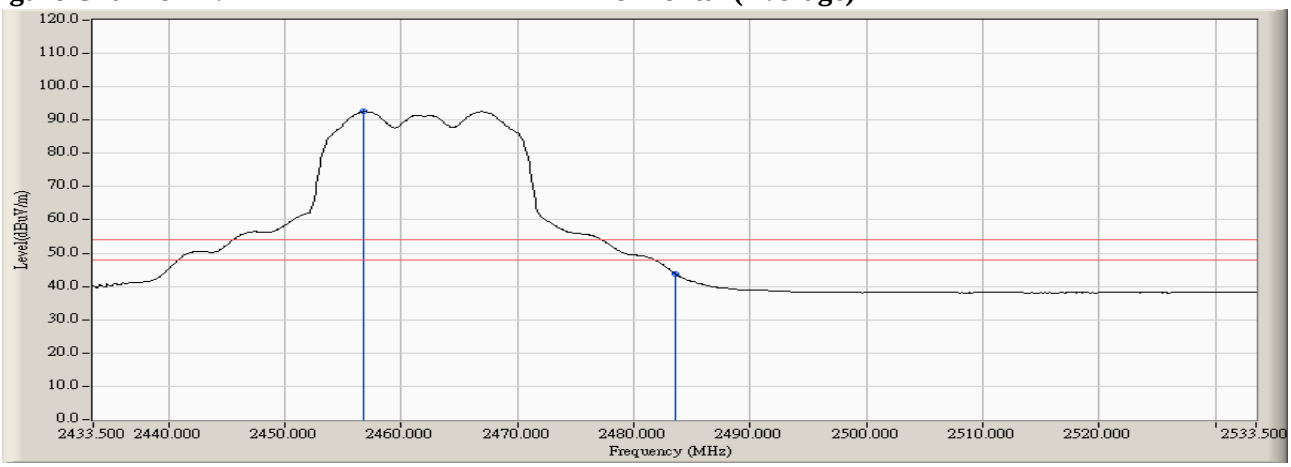


Figure Channel 11: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2460.000	-0.965	99.140	98.175	--	--	--
11 (Peak)	2483.500	-0.607	57.269	56.661	74.00	54.00	Pass
11 (Peak)	2484.300	-0.596	58.313	57.717	74.00	54.00	Pass
11 (Average)	2455.600	-1.025	89.048	88.023	--	--	--
11 (Average)	2483.500	-0.607	39.871	39.263	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

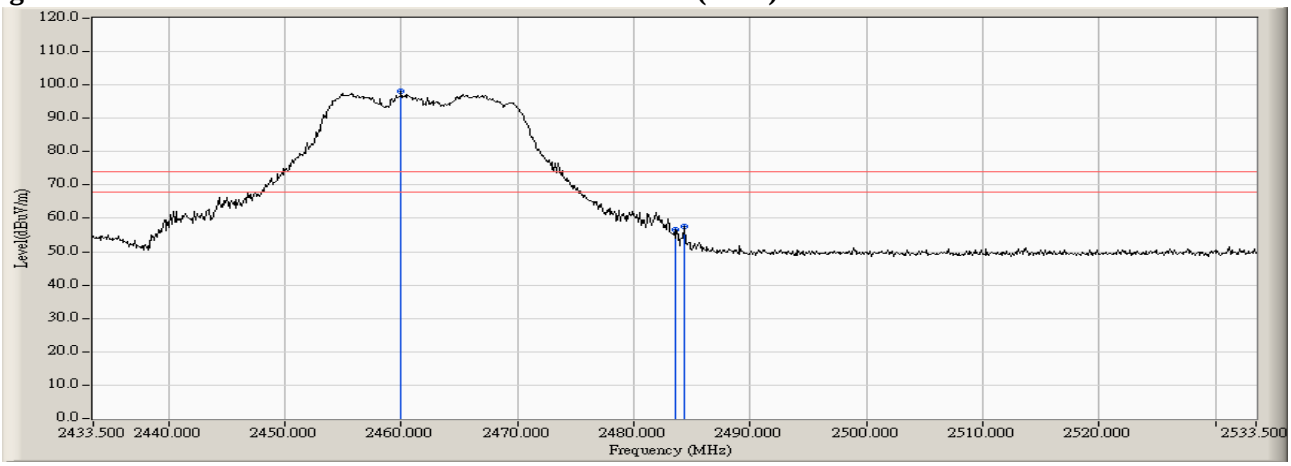
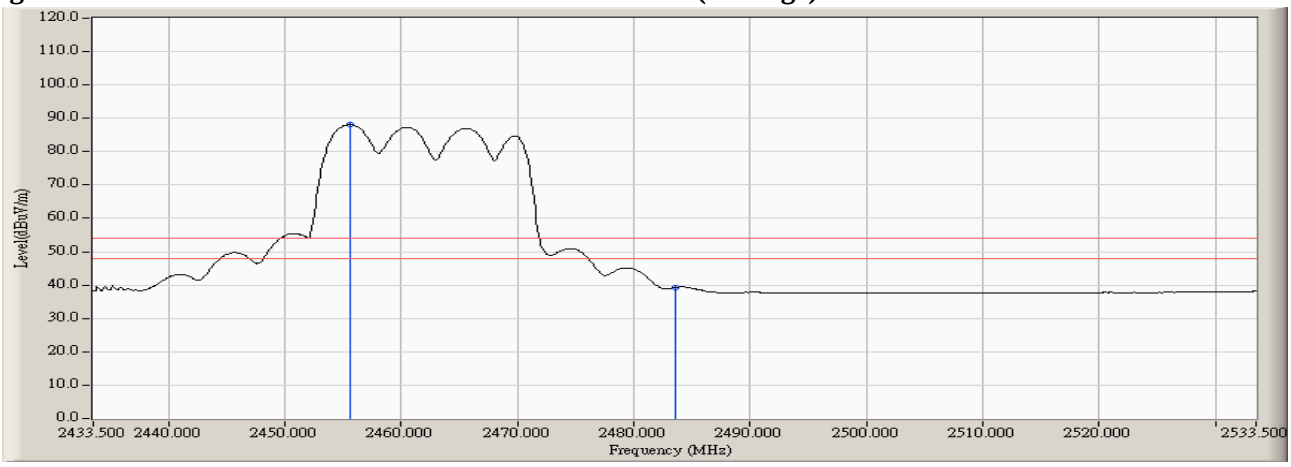


Figure Channel 11: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2412MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-1.182	68.714	67.531	74.00	54.00	Pass
01 (Peak)	2400.000	-1.168	77.582	76.414	--	--	--
01 (Peak)	2413.900	-1.010	101.053	100.043	--	--	--
01 (Average)	2390.000	-1.182	47.564	46.381	74.00	54.00	Pass
01 (Average)	2400.000	-1.168	57.347	56.179	--	--	--
01 (Average)	2416.800	-0.970	89.365	88.395	--	--	--

Figure Channel 01: Horizontal (Peak)

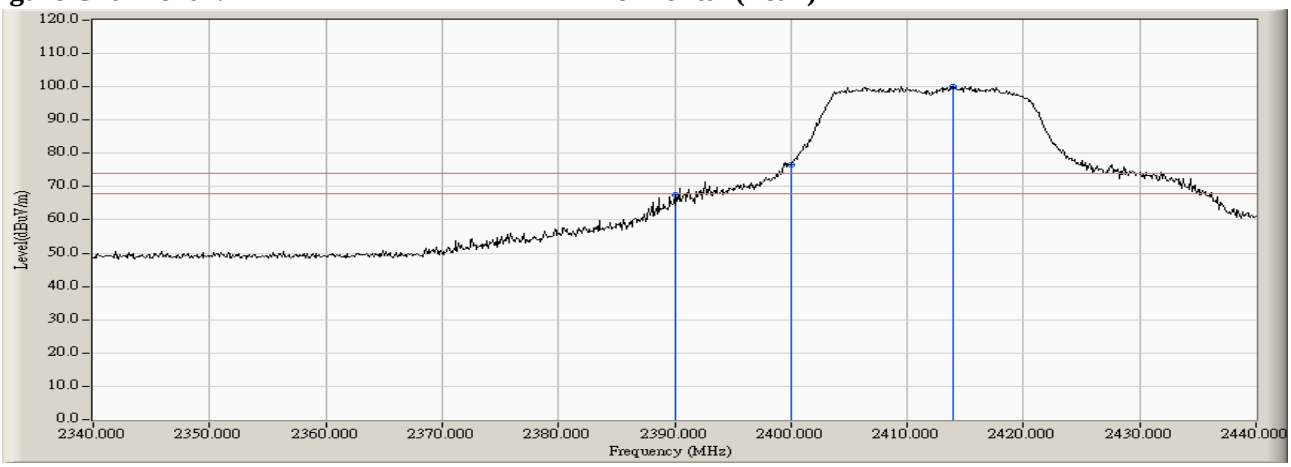
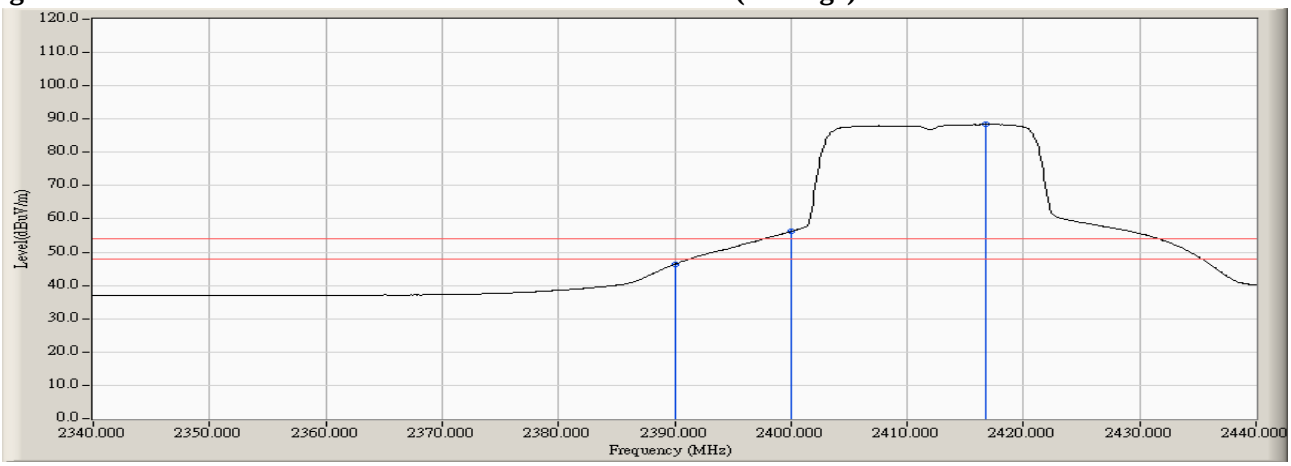


Figure Channel 01: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2412MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2389.700	-1.183	68.170	66.987	74.00	54.00	Pass
01 (Peak)	2390.000	-1.182	65.401	64.218	74.00	54.00	Pass
01 (Peak)	2400.000	-1.168	78.170	77.002	--	--	--
01 (Peak)	2418.000	-0.954	102.923	101.969	--	--	--
01 (Average)	2390.000	-1.182	47.733	46.550	74.00	54.00	Pass
01 (Average)	2400.000	-1.168	56.376	55.208	--	--	--
01 (Average)	2416.000	-0.981	89.462	88.481	--	--	--

Figure Channel 01: Vertical (Peak)

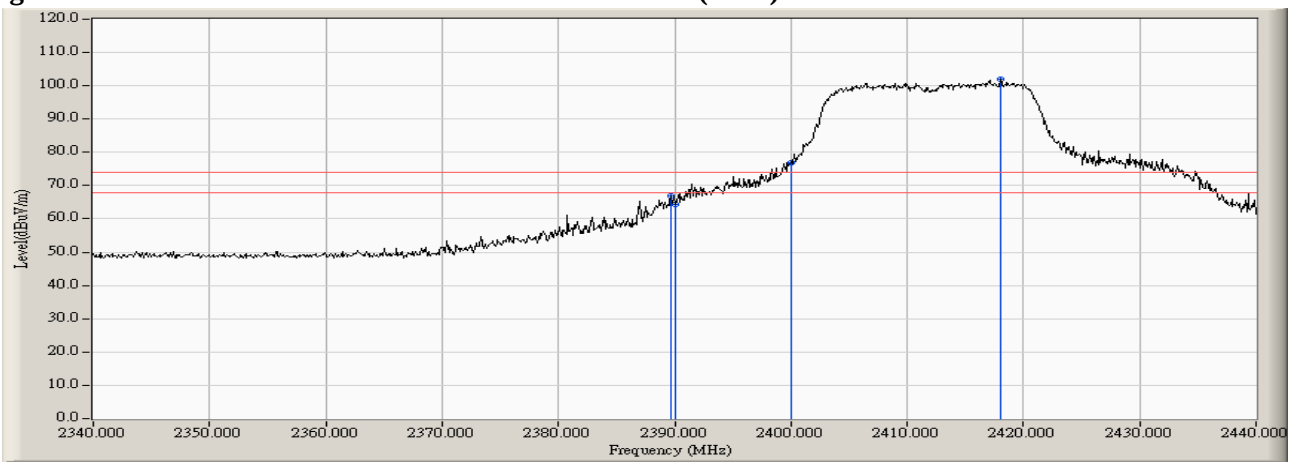
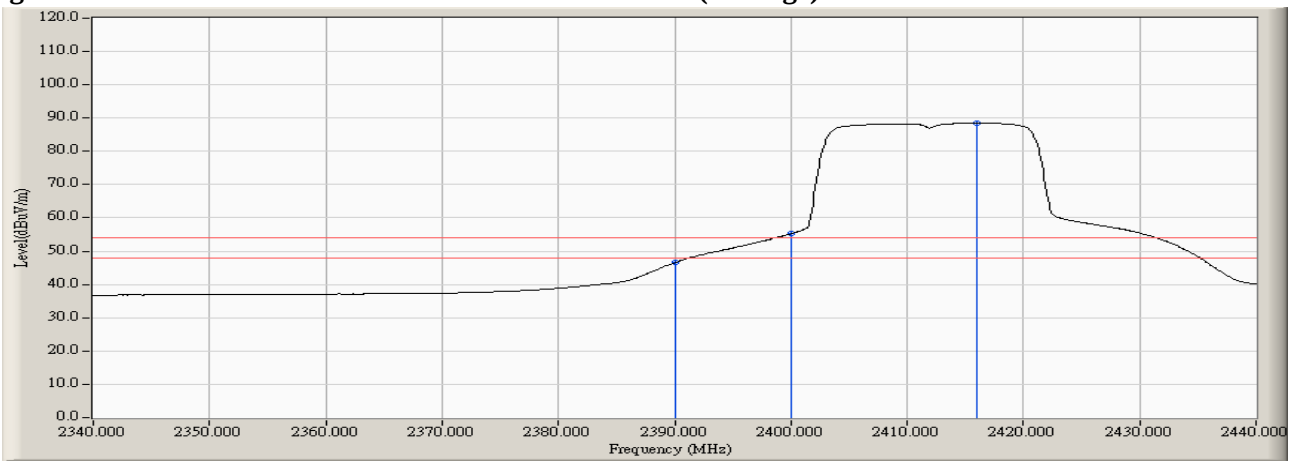


Figure Channel 01: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2462MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2466.300	-0.867	103.601	102.733	--	--	--
11 (Peak)	2483.500	-0.607	66.596	65.988	74.00	54.00	Pass
11 (Peak)	2484.600	-0.591	67.022	66.431	74.00	54.00	Pass
11 (Average)	2457.200	-1.009	91.679	90.670	--	--	--
11 (Average)	2483.500	-0.607	47.562	46.954	74.00	54.00	Pass

Figure Channel 11: Horizontal (Peak)

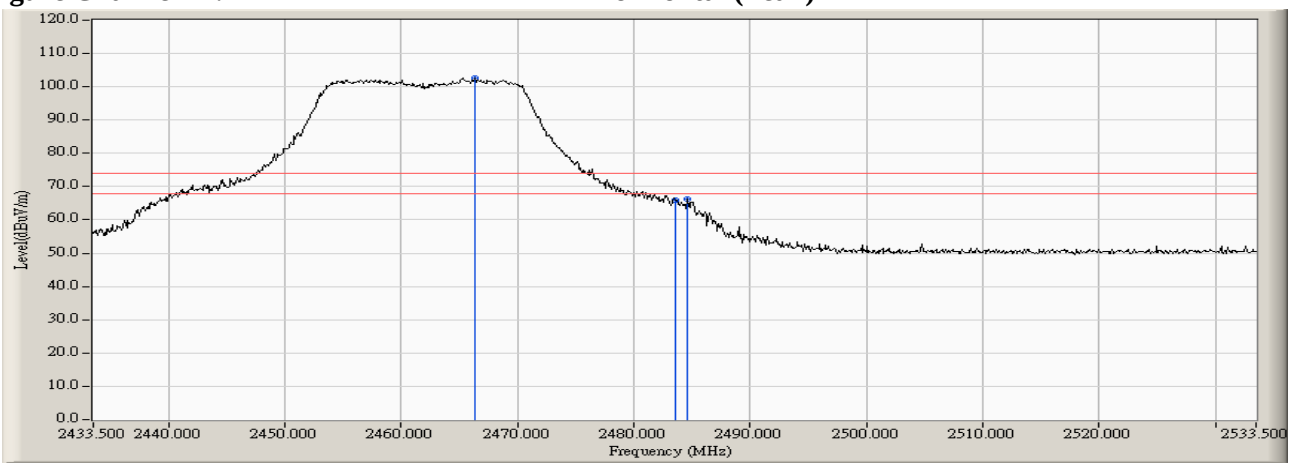
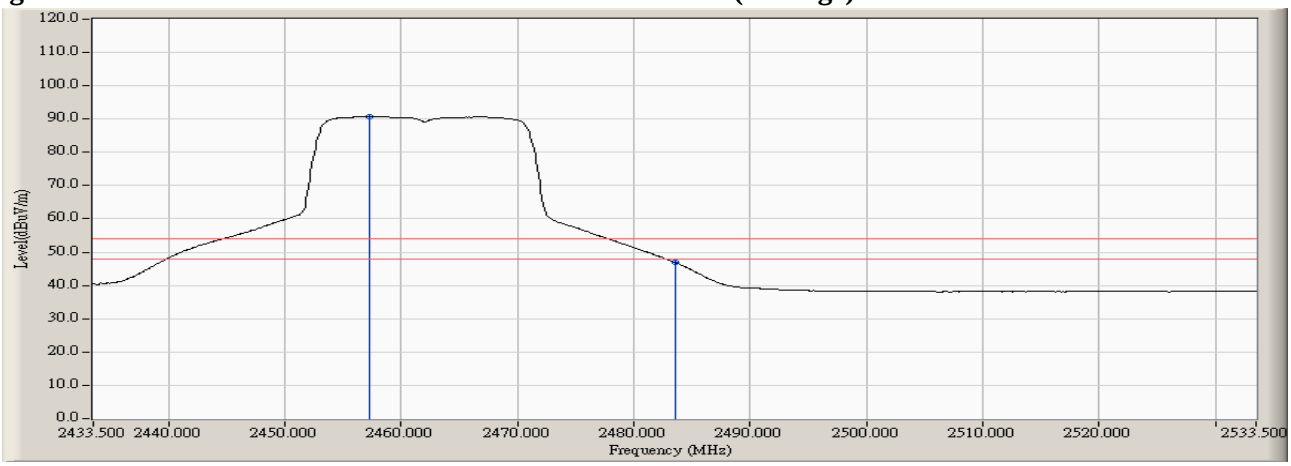


Figure Channel 11: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit - 802.11n-20BW_14.4Mbps(2.4G Band) (2462MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2468.200	-0.838	97.224	96.385	--	--	--
11 (Peak)	2483.500	-0.607	56.845	56.237	74.00	54.00	Pass
11 (Average)	2455.300	-1.021	86.535	85.514	--	--	--
11 (Average)	2483.500	-0.607	41.713	41.105	74.00	54.00	Pass

Figure Channel 11: Vertical (Peak)

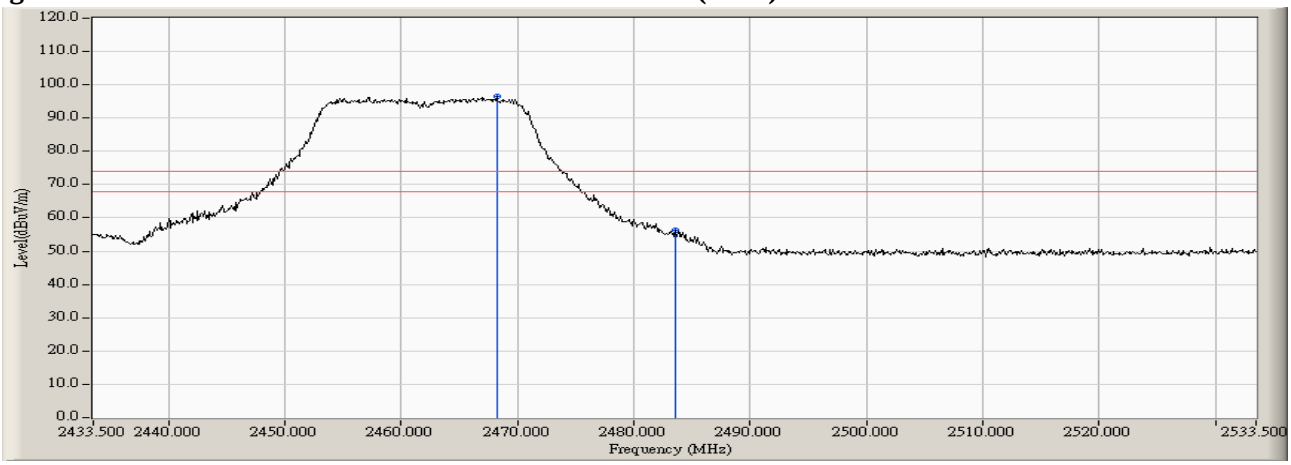
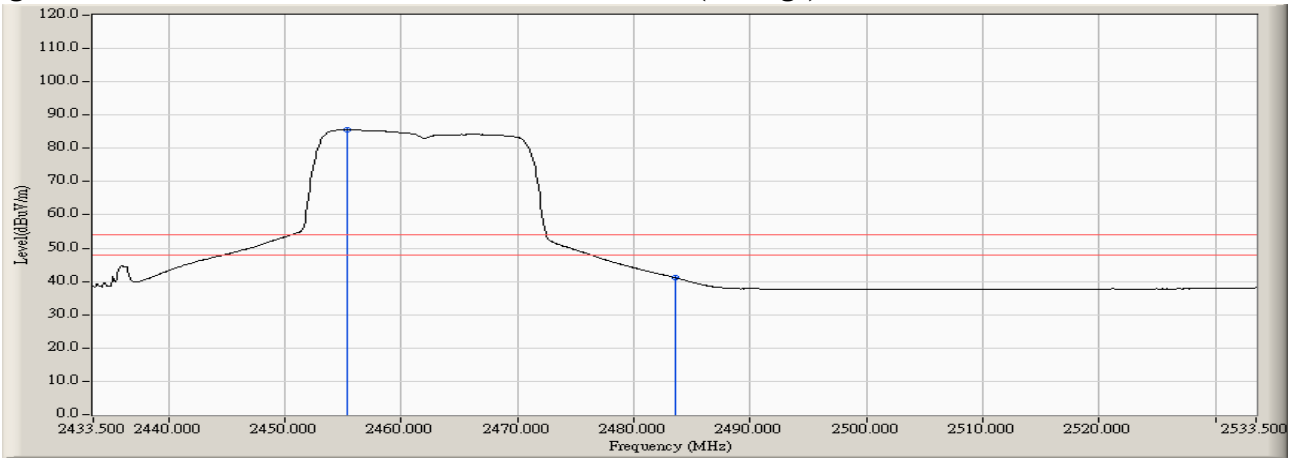


Figure Channel 11: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2422MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2389.200	-1.184	69.944	68.760	74.00	54.00	Pass
03 (Peak)	2390.000	-1.182	67.923	66.740	74.00	54.00	Pass
03 (Peak)	2399.400	-1.169	81.338	80.169	--	--	--
03 (Peak)	2400.000	-1.168	80.047	78.879	--	--	--
03 (Peak)	2405.500	-1.120	101.374	100.253	--	--	--
03 (Average)	2390.000	-1.182	54.649	53.466	74.00	54.00	Pass
03 (Average)	2400.000	-1.168	59.895	58.727	--	--	--
03 (Average)	2408.700	-1.079	90.281	89.202	--	--	--

Figure Channel 01: Horizontal (Peak)

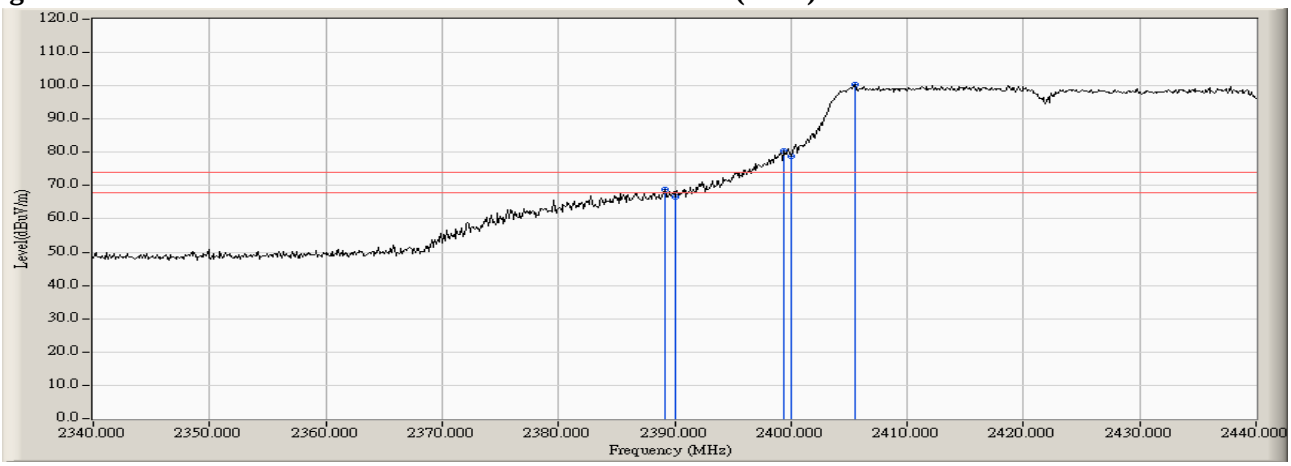
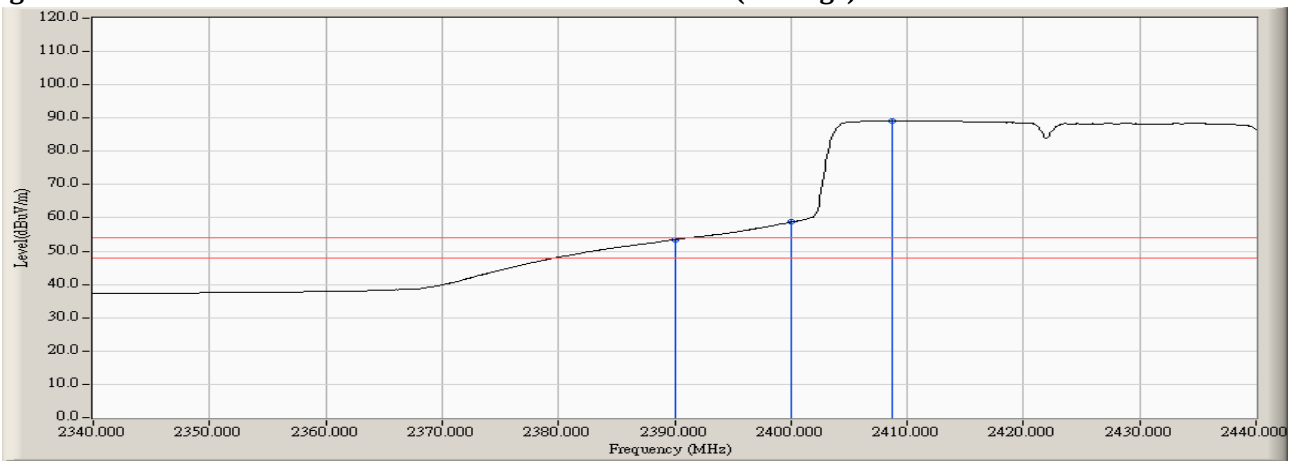


Figure Channel 01: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2422MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
03 (Peak)	2389.500	-1.184	63.462	62.278	74.00	54.00	Pass
03 (Peak)	2390.000	-1.182	63.149	61.966	74.00	54.00	Pass
03 (Peak)	2399.000	-1.169	77.612	76.443	--	--	--
03 (Peak)	2400.000	-1.168	76.695	75.527	--	--	--
03 (Peak)	2429.800	-0.859	97.956	97.097	--	--	--
03 (Average)	2390.000	-1.182	46.683	45.500	74.00	54.00	Pass
03 (Average)	2400.000	-1.168	53.521	52.353	--	--	--
03 (Average)	2410.400	-1.057	86.430	85.373	--	--	--

Figure Channel 01: Vertical (Peak)

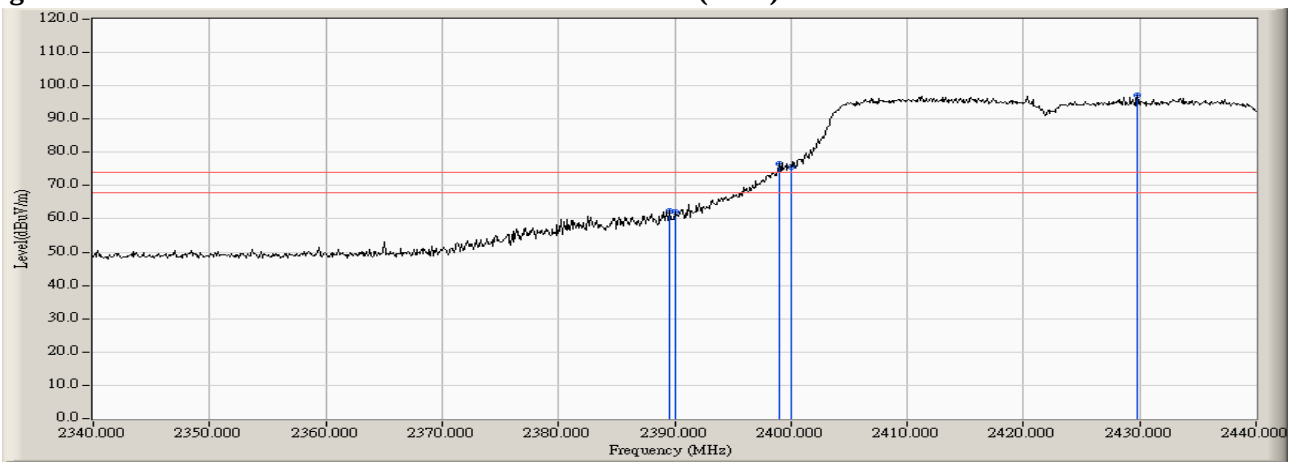
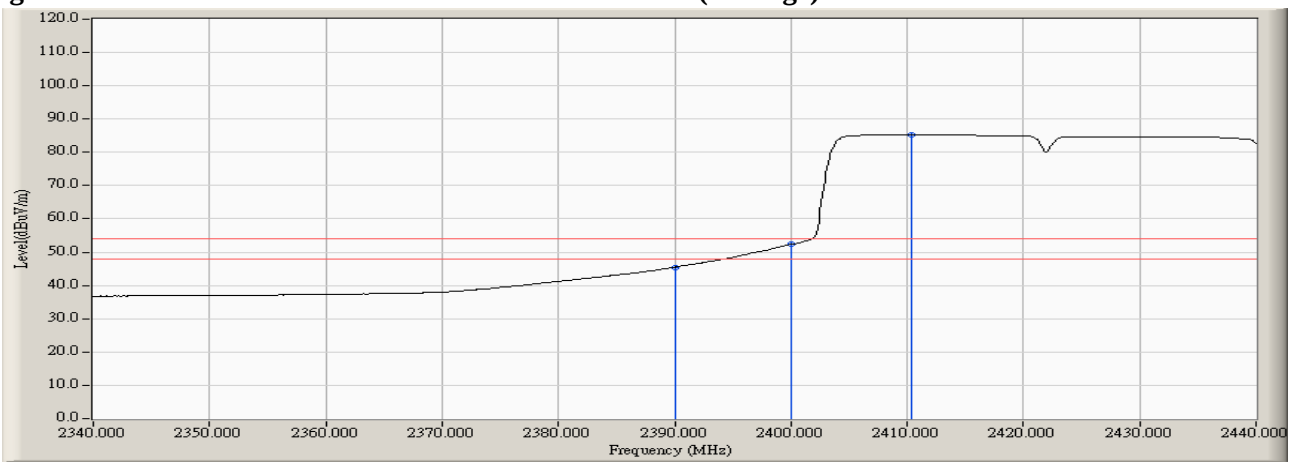


Figure Channel 01: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2452MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2438.400	-0.808	101.247	100.439	--	--	--
09 (Peak)	2483.500	-0.607	67.696	67.088	74.00	54.00	Pass
09 (Average)	2436.100	-0.816	89.981	89.165	--	--	--
09 (Average)	2483.500	-0.607	51.994	51.386	74.00	54.00	Pass

Figure Channel 07: Horizontal (Peak)

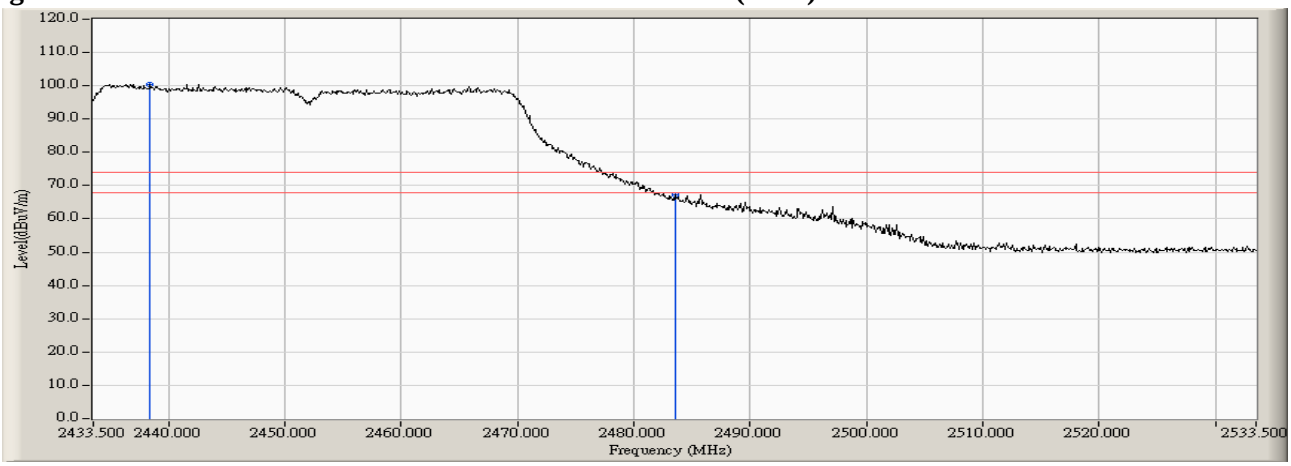
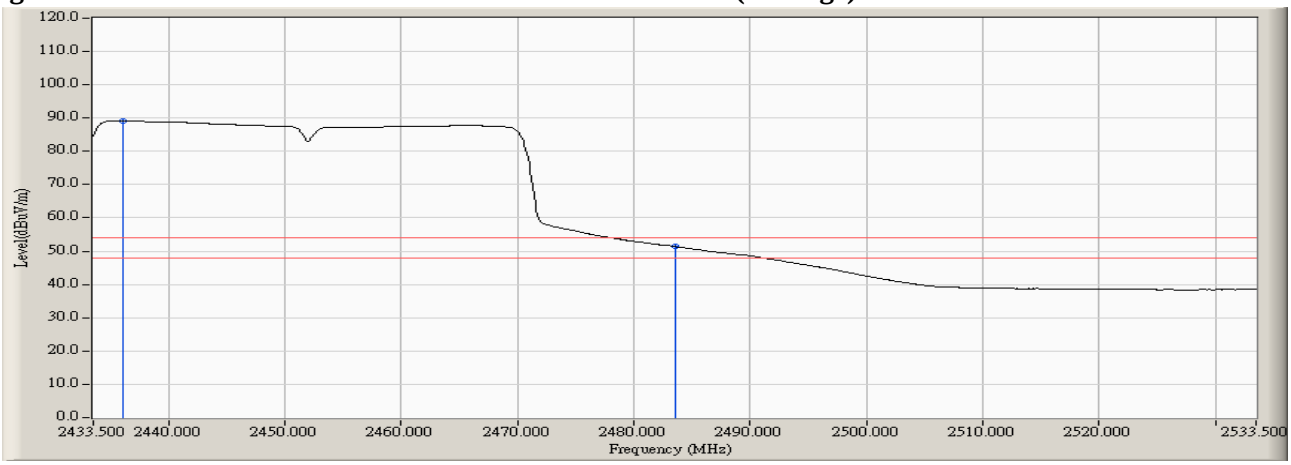


Figure Channel 07: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Test Item : Band Edge
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit - 802.11n-40BW_30Mbps(2.4G Band) (2452MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
09 (Peak)	2439.700	-0.824	96.771	95.946	--	--	--
09 (Peak)	2483.500	-0.607	60.221	59.613	74.00	54.00	Pass
09 (Average)	2435.600	-0.820	86.065	85.246	--	--	--
09 (Average)	2483.500	-0.607	45.444	44.836	74.00	54.00	Pass

Figure Channel 07: Vertical (Peak)

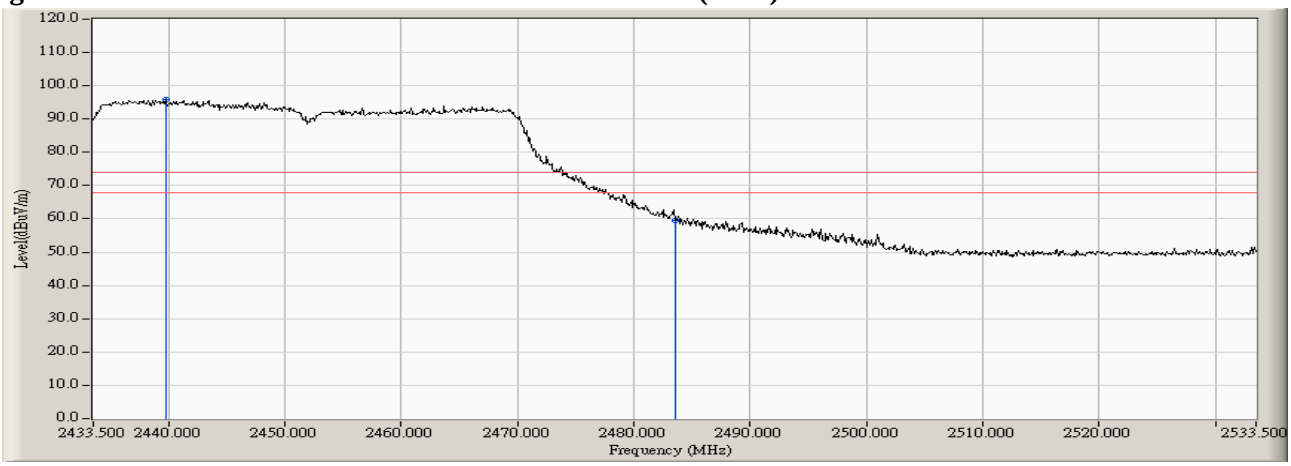


Figure Channel 07: Vertical (Average)

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

5. EMI Reduction Method During Compliance Testing

No modification was made during testing.