

FCC RF Test Report

APPLICANT : Sony Mobile Communications AB
EQUIPMENT : Smart phone
BRAND NAME : Sony
MODEL NAME : C2304
TYPE NAME : PM-0710-BV
FCC ID : PY7PM-0710
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Aug. 06, 2013 and testing was completed on Sep. 25, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.2	15.247(b)	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.53 dB at 2389.560 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 12.60 dB at 2.374 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Sony Mobile Communications AB
Nya Vattentorget, 22188 Lund, Sweden

1.2 Manufacturer

Arima Communications Corp.
6F., No. 866, Jhongjheng Rd., Jhonghe Dist., New Taipei City 23586, Taiwan

1.3 Feature of Equipment Under Test

The Equipment Under Test (hereafter called: EUT) is smart phone supporting, GSM / WCDMA / Wi-Fi 2.4GHz 802.11b/g/n, Bluetooth with FM Receiver, and GPS features, and below is details of information.

General Information of Equipment Under Test	
Equipment	Smart phone
Brand Name	Sony
Model Name	C2304
Type Name	PM-0710-BV
FCC ID	PY7PM-0710
GSM Operating Band(s)	GSM 850/900/1800/1900MHz
WCDMA Operating Band(s)	FDD Band I / II / V
WCDMA Rel. Version	Rel. 8
GPRS / EGPRS Multi Slot Class	GPRS Class 12 , EGPRS Class 12
Wi-Fi Specification	802.11b/g/n (HT20/HT40)
Bluetooth Version	v3.0+EDR / v4.0-LE
Power Supply	Battery / AC Adapter / Car Charger

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz
Maximum Output Power to Antenna	802.11b : 20.17 dBm (0.1040 W) 802.11g : 22.85 dBm (0.1928 W) 802.11n HT20 : 22.71 dBm (0.1866 W) 802.11n HT40 : 22.28 dBm (0.1690 W)
Antenna Type	PIFA Antenna type with gain -1.50 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT #1	IMEI : 00440214-695721-6 S/N : WUJ5875001
EUT #11	IMEI : 00440214-695741-4 S/N : WUJ5875011
EUT #12	IMEI : 00440214-695743-0 S/N : WUJ5875012
H/W	AP
S/W	16.0.B.1.3
EUT Stage	Production Unit

Accessory List	
AC Adapter 2	Model No. : EP800
	Type No. : AC-0300-CN
AC Adapter 3	Model No. : EP800
	Type No. : AC-0300-CN
Battery	Model No. : N/A
Earphone 2	Model No. : MH410c
	Type No. : AG-1100
Earphone 12	Model No. : MH410c
	Type No. : AG-1100
USB Cable 4	Model No. : EC450
	Part No. : 1242-6715.1 11W36
USB Cable 9	Model No. : EC450
	Part No. : 1242-6715.2 12W22

Note:

1. Above EUT list and accessory list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report.
3. For other wireless features of this EUT, test report will be issued separately.



1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	03CH07-HY	722060/4086B-1

Note: The test site complies with ANSI C63.4 2003 requirement.

1.7 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01
- ANSI C63.4-2003

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		



2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test shown in the following tables.

2.4GHz 802.11b mode				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	20.17	20.01	19.76	19.78

2.4GHz 802.11g mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	22.85	22.79	22.75	22.80	22.84	22.82	22.75	22.69

2.4GHz 802.11n HT20 mode									
Data Rate (MHz)		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	400GI	22.58	22.39	22.41	22.36	22.42	22.42	22.44	22.26
	800GI	22.71	22.56	22.60	22.40	22.44	22.45	22.33	22.23

2.4GHz 802.11n HT40 mode									
Data Rate (MHz)		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	400GI	22.22	22.01	22.09	22.12	22.02	21.99	22.17	22.02
	800GI	22.28	22.11	22.02	22.11	22.01	22.04	21.94	21.85



2.3 Test Mode

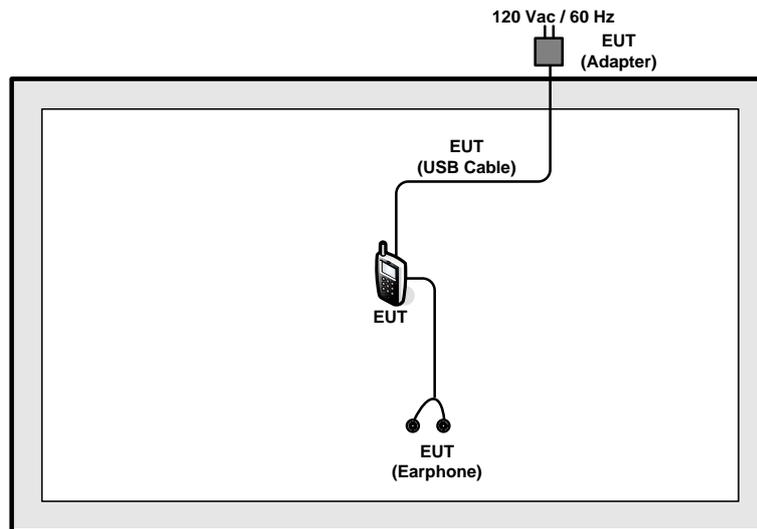
Final results of test modes, data rates and test channels are shown as following table.

Test Cases				
	Test Items	Mode	Data Rate	Test Channel
Conducted TCs	6dB BW and Power Spectral Density	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
		802.11n HT40	MCS0	3/6/9
	Output Power	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
		802.11n HT40	MCS0	3/6/9
	Conducted Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0	1/11
		802.11n HT40	MCS0	3/9
	Conducted Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
		802.11n HT40	MCS0	3/6/9
Radiated TCs	Radiated Band Edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	MCS0	1/11
		802.11n HT40	MCS0	3/9
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	MCS0	1/6/11
		802.11n HT40	MCS0	3/6/9

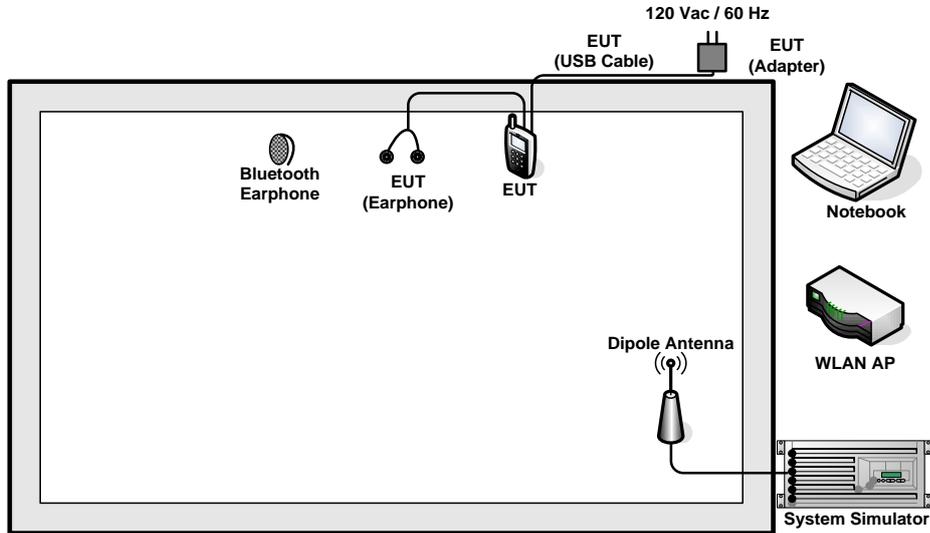
Test Cases	
AC Conducted Emission	Mode 1 : GSM1900 Idle + Bluetooth Link + WLAN Idle + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 1 Mode 2 : GSM1900 Idle + Bluetooth Link + WLAN Idle + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 2
Remark: 1. For Radiated TCs, The tests were performance with Adapter 2, Earphone 2, and USB Cable 9. 2. For Conduction TCs, The tests were performance with Adapter 3, Earphone 12, and USB Cable 4.	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Sony Ericsson	MH755	N/A	N/A	N/A
5.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.6 EUT Operation Test Setup

For WLAN RF test items, an engineering test program (SW16.0.B.1.3) was provided and enabled to make EUT continuous transmit/receive.



2.7 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 6dB Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

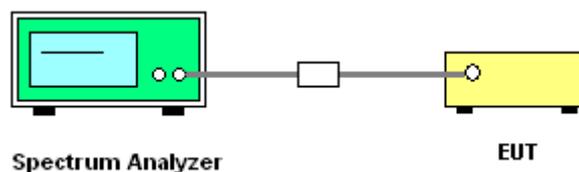
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r01.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. Measure and record the results in the test report.

3.1.4 Test Setup

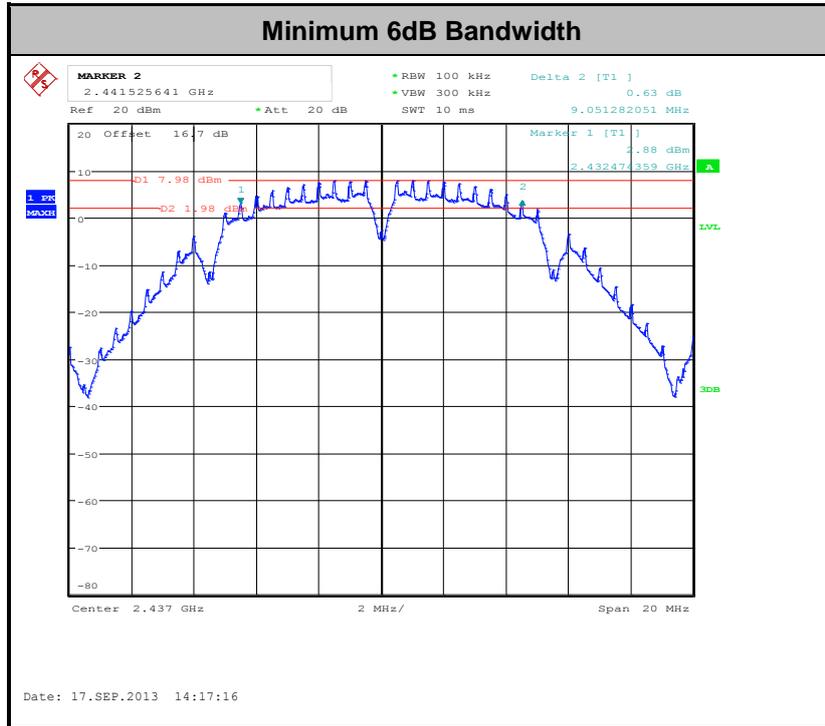




3.1.5 Test Result of 6dB Bandwidth

Test Band :	2.4GHz	Temperature :	21~25°C
Test Engineer :	Book Lin	Relative Humidity :	51~54%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
11b	1Mbps	1	1	2412	9.07	0.5	Pass
11b	1Mbps	1	6	2437	9.05	0.5	Pass
11b	1Mbps	1	11	2462	9.07	0.5	Pass
11g	6Mbps	1	1	2412	16.32	0.5	Pass
11g	6Mbps	1	6	2437	15.81	0.5	Pass
11g	6Mbps	1	11	2462	16.30	0.5	Pass
HT20	MCS0	1	1	2412	17.58	0.5	Pass
HT20	MCS0	1	6	2437	17.58	0.5	Pass
HT20	MCS0	1	11	2462	17.58	0.5	Pass
HT40	MCS0	1	3	2422	35.49	0.5	Pass
HT40	MCS0	1	6	2437	35.45	0.5	Pass
HT40	MCS0	1	9	2452	35.68	0.5	Pass



Note: The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting Antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the Antenna exceeds 6dBi.

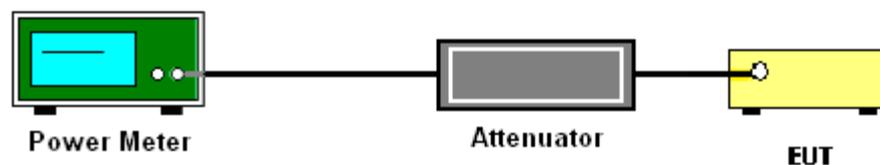
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v03r01.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup





3.2.5 Test Result of Peak Output Power

Test Mode :	2.4GHz	Temperature :	21~25°C
Test Engineer :	Book Lin	Relative Humidity :	51~54%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	RF Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	19.46	30	-1.50	Pass
11b	1Mbps	1	6	2437	19.86	30	-1.50	Pass
11b	1Mbps	1	11	2462	20.17	30	-1.50	Pass
11g	6Mbps	1	1	2412	20.84	30	-1.50	Pass
11g	6Mbps	1	6	2437	21.72	30	-1.50	Pass
11g	6Mbps	1	11	2462	22.85	30	-1.50	Pass
HT20	MCS0	1	1	2412	20.98	30	-1.50	Pass
HT20	MCS0	1	6	2437	21.52	30	-1.50	Pass
HT20	MCS0	1	11	2462	22.71	30	-1.50	Pass
HT40	MCS0	1	3	2422	21.05	30	-1.50	Pass
HT40	MCS0	1	6	2437	21.73	30	-1.50	Pass
HT40	MCS0	1	9	2452	22.28	30	-1.50	Pass

Note: Measured power (dBm) has offset with cable loss.



3.2.6 Test Result of Average output Power (Reporting Only)

Test Mode :	2.4GHz	Temperature :	21~25°C
Test Engineer :	Book Lin	Relative Humidity :	51~54%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Duty Factor (dB)	Average Output Power (dBm)	Power Limit (dBm)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	0.04	16.62	30	-1.50	Pass
11b	1Mbps	1	6	2437	0.04	16.87	30	-1.50	Pass
11b	1Mbps	1	11	2462	0.04	16.94	30	-1.50	Pass
11g	6Mbps	1	1	2412	0.33	12.46	30	-1.50	Pass
11g	6Mbps	1	6	2437	0.33	13.59	30	-1.50	Pass
11g	6Mbps	1	11	2462	0.33	13.64	30	-1.50	Pass
HT20	MCS0	1	1	2412	0.38	11.63	30	-1.50	Pass
HT20	MCS0	1	6	2437	0.38	11.60	30	-1.50	Pass
HT20	MCS0	1	11	2462	0.38	11.67	30	-1.50	Pass
HT40	MCS0	1	3	2422	0.68	10.90	30	-1.50	Pass
HT40	MCS0	1	6	2437	0.68	11.66	30	-1.50	Pass
HT40	MCS0	1	9	2452	0.68	11.73	30	-1.50	Pass

Note: Measured power (dBm) has offset with cable loss and duty factor.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

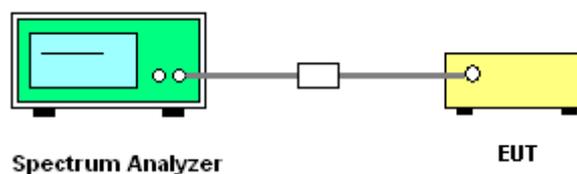
3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.

3.3.4 Test Setup



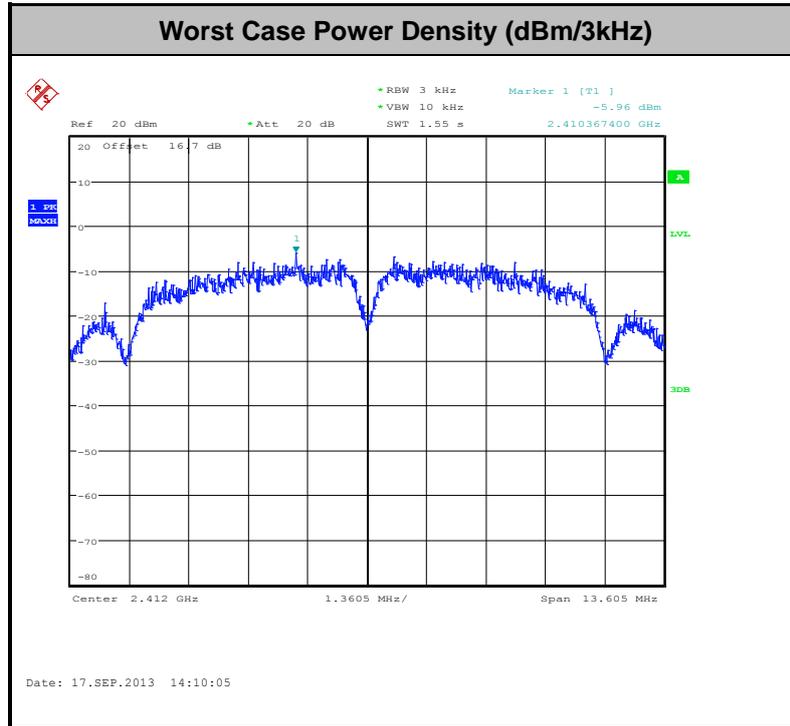


3.3.5 Test Result of Power Spectral Density

Test Mode :	2.4GHz	Temperature :	21~25°C
Test Engineer :	Book Lin	Relative Humidity :	51~54%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	Peak Power Density (dBm/3kHz)	Max. Limits (dBm/3kHz)	DG (dBi)	Pass/Fail
11b	1Mbps	1	1	2412	-5.96	8	-1.50	Pass
11b	1Mbps	1	6	2437	-6.23	8	-1.50	Pass
11b	1Mbps	1	11	2462	-6.31	8	-1.50	Pass
11g	6Mbps	1	1	2412	-14.04	8	-1.50	Pass
11g	6Mbps	1	6	2437	-11.29	8	-1.50	Pass
11g	6Mbps	1	11	2462	-11.15	8	-1.50	Pass
HT20	MCS0	1	1	2412	-14.08	8	-1.50	Pass
HT20	MCS0	1	6	2437	-14.39	8	-1.50	Pass
HT20	MCS0	1	11	2462	-13.64	8	-1.50	Pass
HT40	MCS0	1	3	2422	-16.50	8	-1.50	Pass
HT40	MCS0	1	6	2437	-16.58	8	-1.50	Pass
HT40	MCS0	1	9	2452	-16.46	8	-1.50	Pass

Note: Measured power density (dBm) has offset with cable loss.



Note: The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

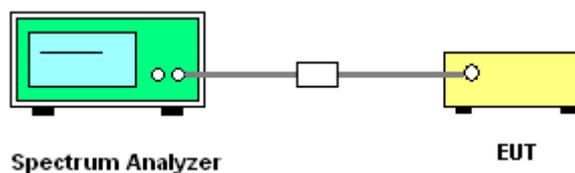
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

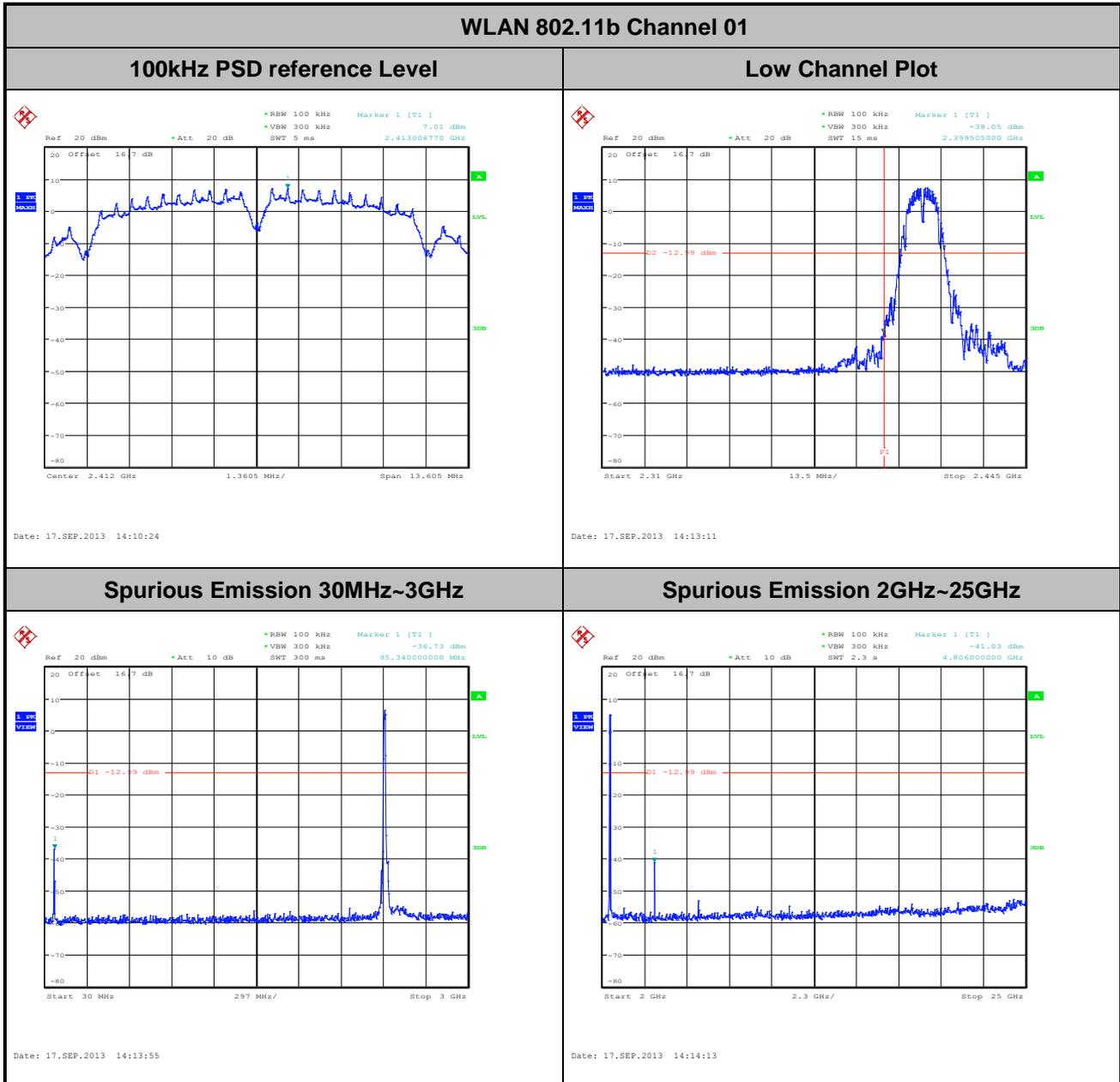
3.4.4 Test Setup





3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Book Lin



Note:

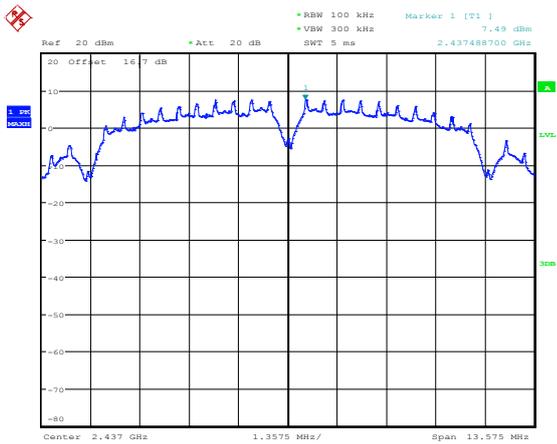
1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Book Lin

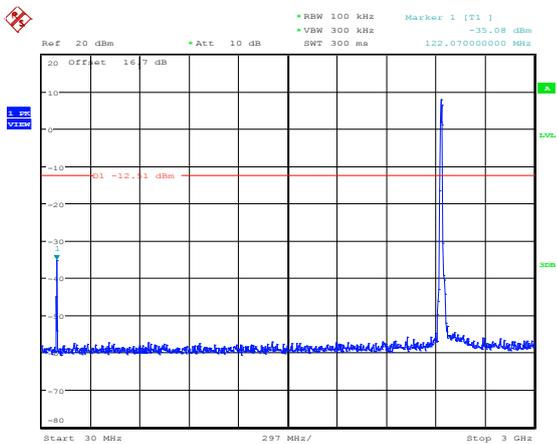
WLAN 802.11b Channel 06

100kHz PSD reference Level



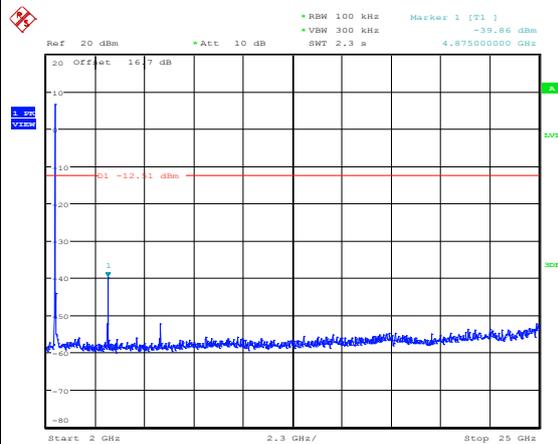
Date: 17.SEP.2013 14:18:17

Spurious Emission 30MHz~3GHz



Date: 17.SEP.2013 14:18:55

Spurious Emission 2GHz~25GHz



Date: 17.SEP.2013 14:19:13

Note:

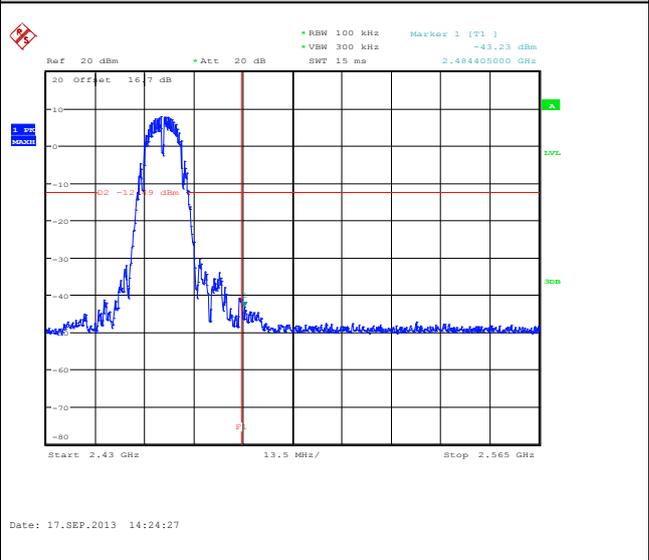
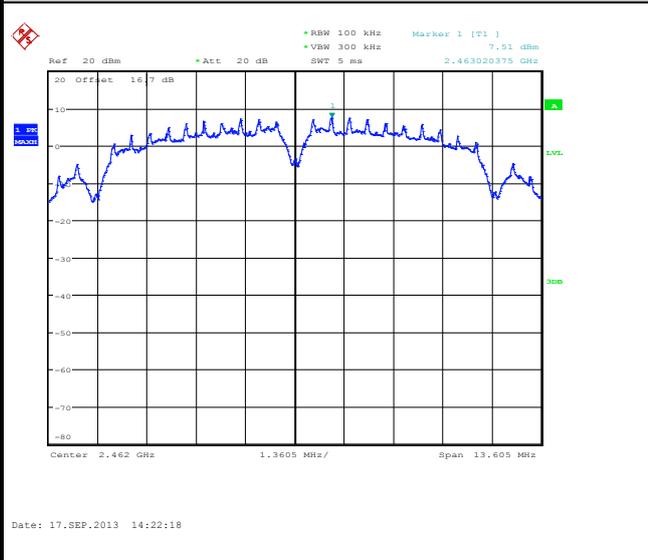
1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



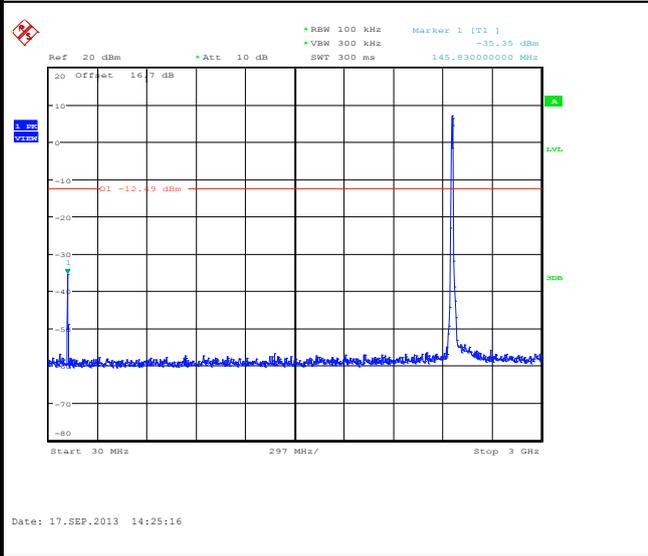
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Book Lin

WLAN 802.11b Channel 11

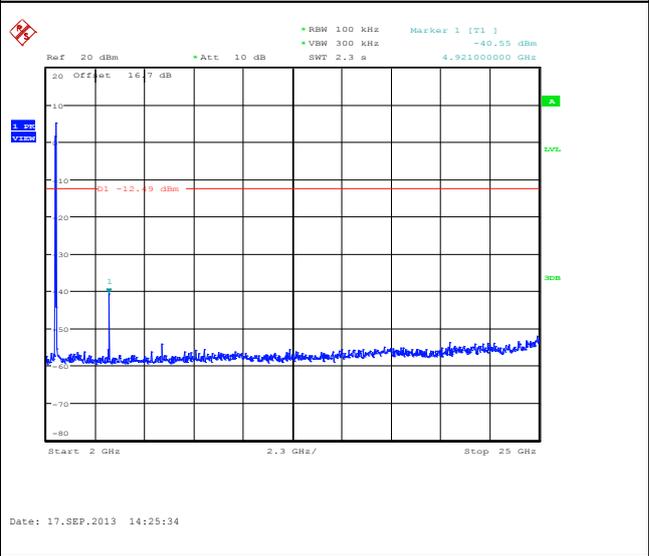
100kHz PSD reference Level	High Channel Plot
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Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz



Note:

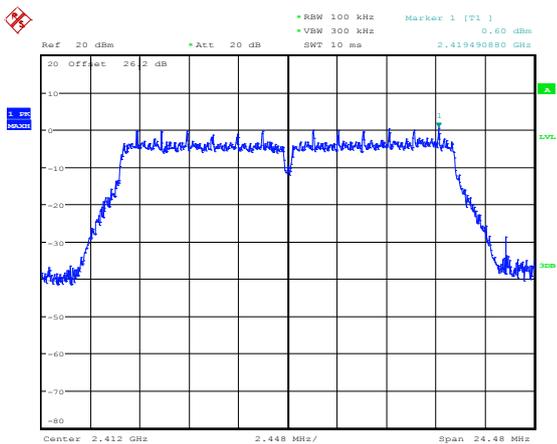
1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Book Lin

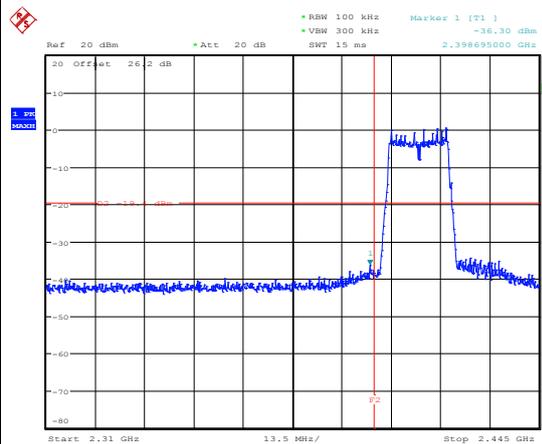
WLAN 802.11g Channel 01

100kHz PSD reference Level



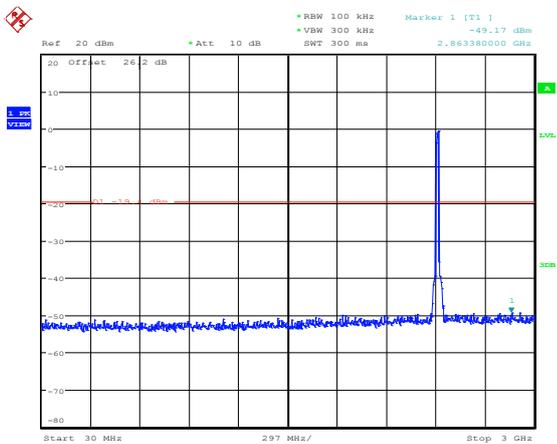
Date: 25.SEP.2013 18:16:34

Low Channel Plot



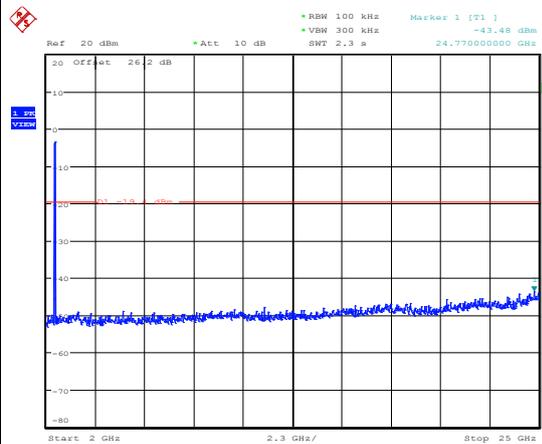
Date: 25.SEP.2013 18:16:52

Spurious Emission 30MHz~3GHz



Date: 25.SEP.2013 18:18:23

Spurious Emission 2GHz~25GHz



Date: 25.SEP.2013 18:18:41

Note:

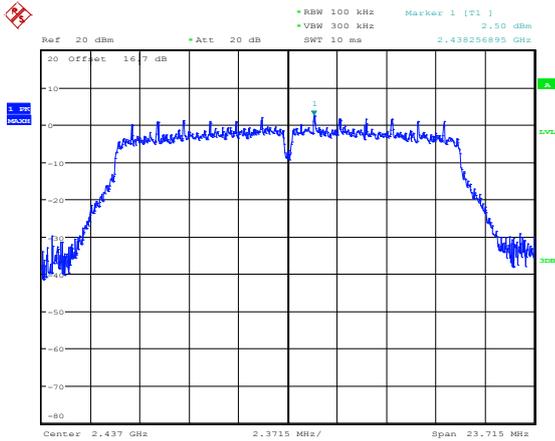
1. The total loss is 26.2 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Book Lin

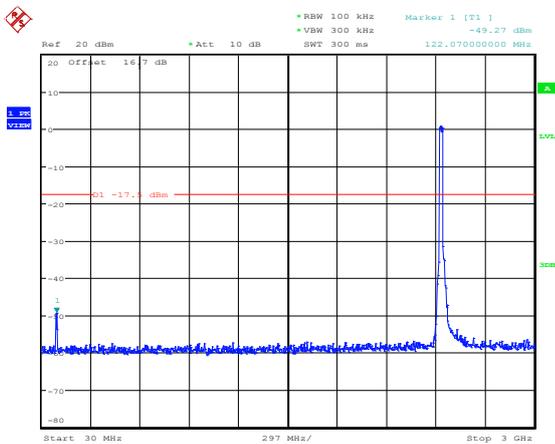
WLAN 802.11g Channel 06

100kHz PSD reference Level



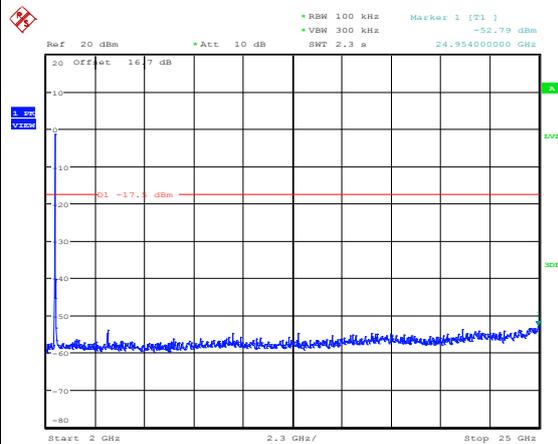
Date: 17.SEP.2013 14:34:24

Spurious Emission 30MHz~3GHz



Date: 17.SEP.2013 14:34:45

Spurious Emission 2GHz~25GHz



Date: 17.SEP.2013 14:35:03

Note:

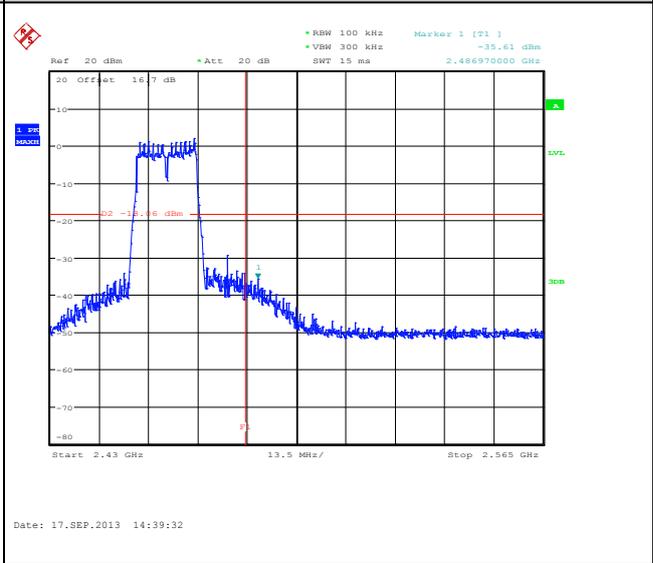
1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



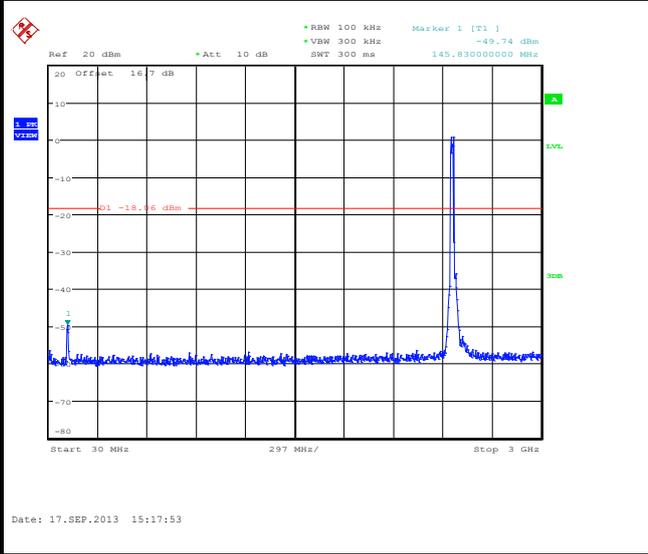
Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Book Lin

WLAN 802.11g Channel 11

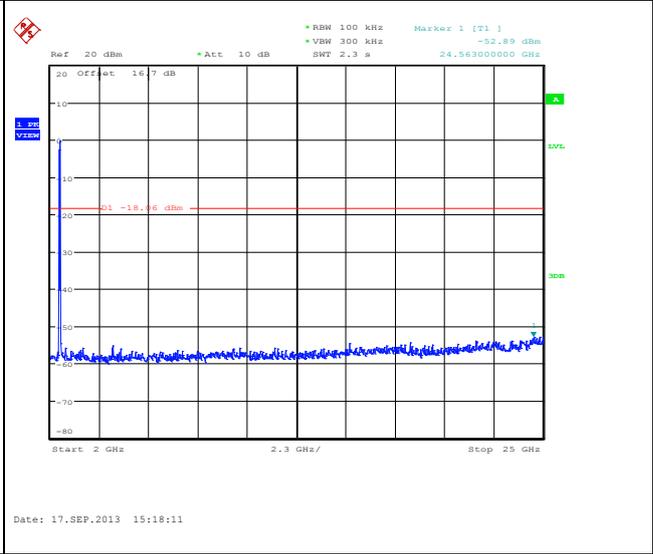
100kHz PSD reference Level	High Channel Plot
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Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

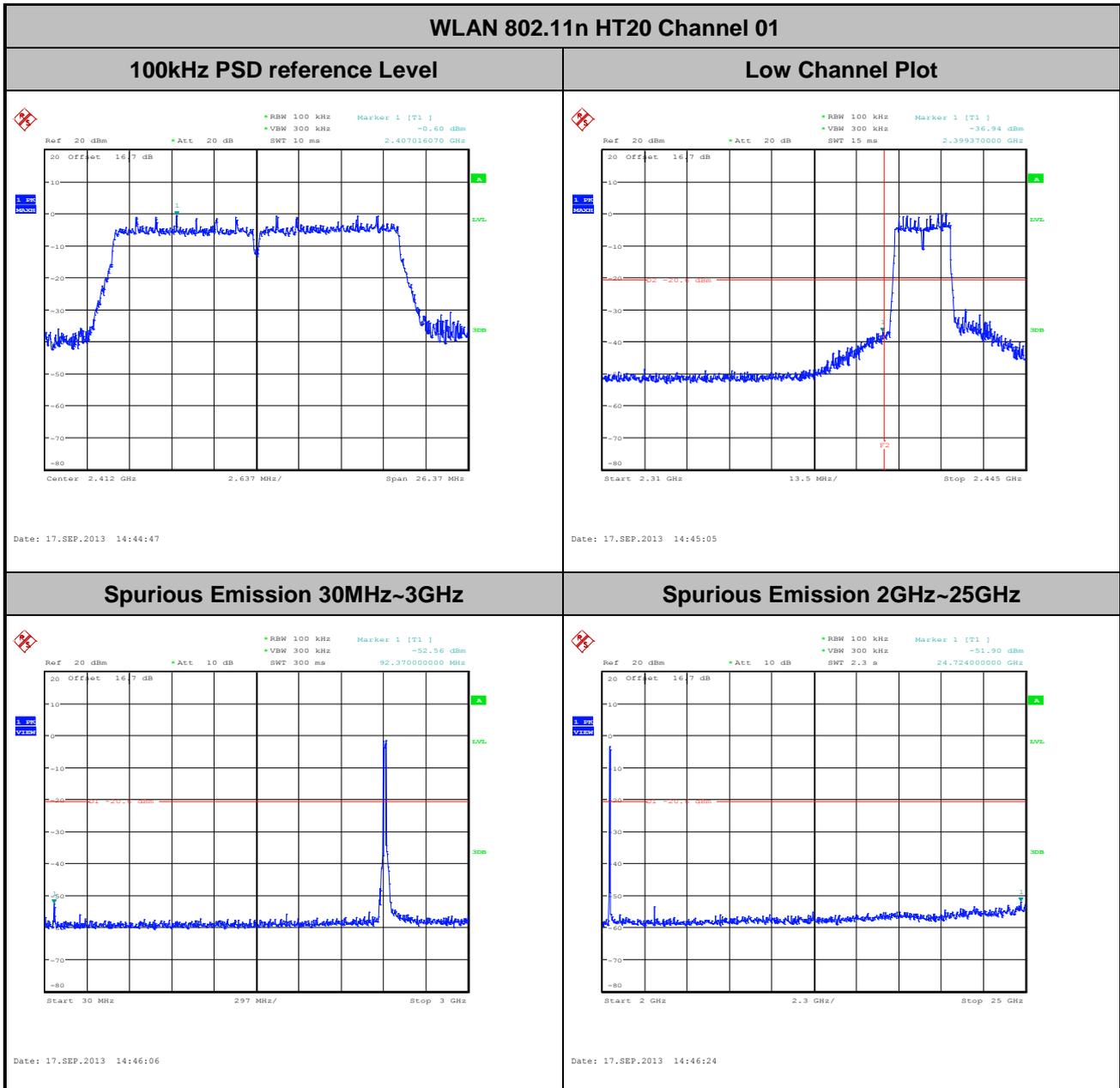


Note:

1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Book Lin

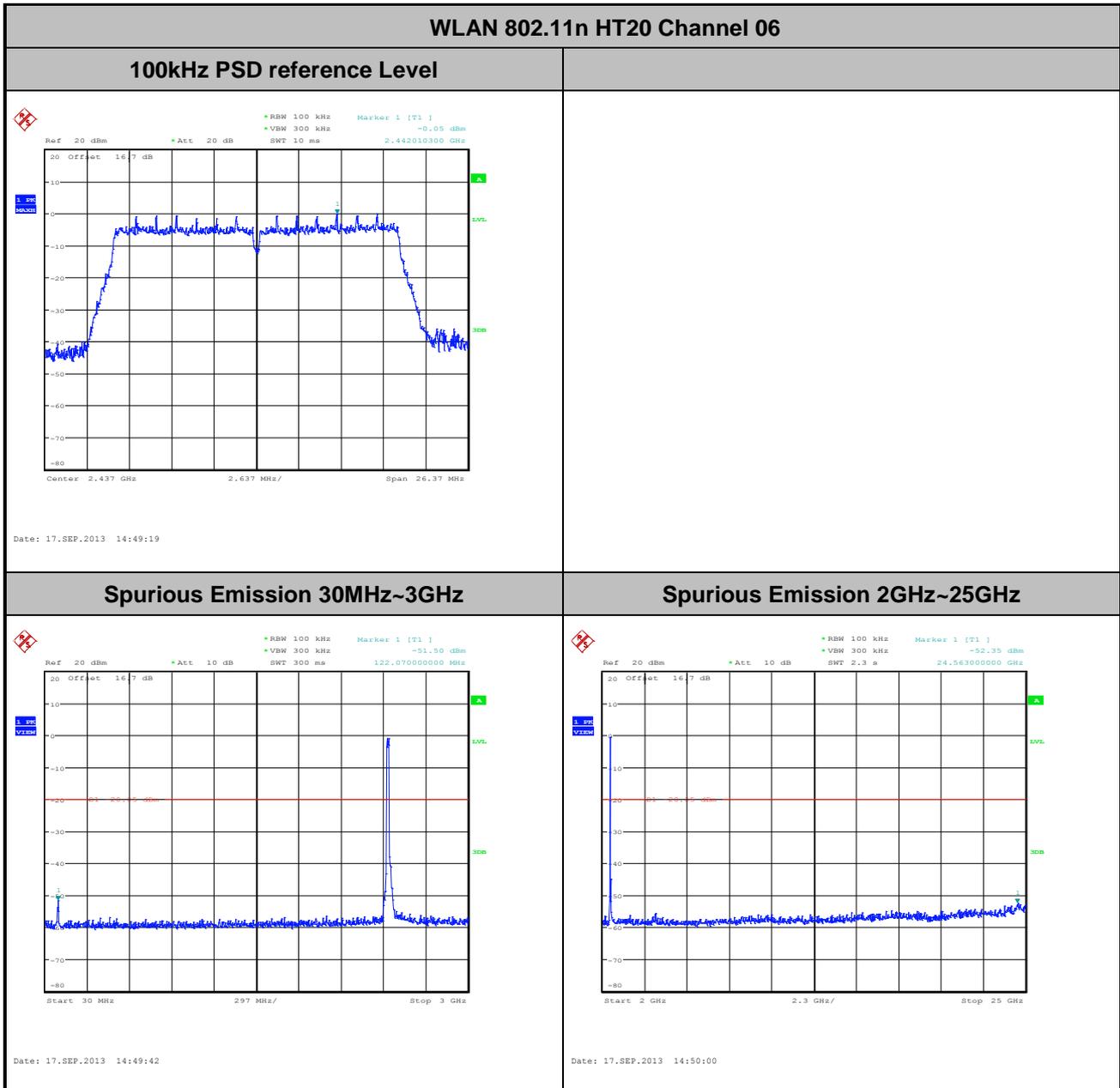


Note:

1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Book Lin

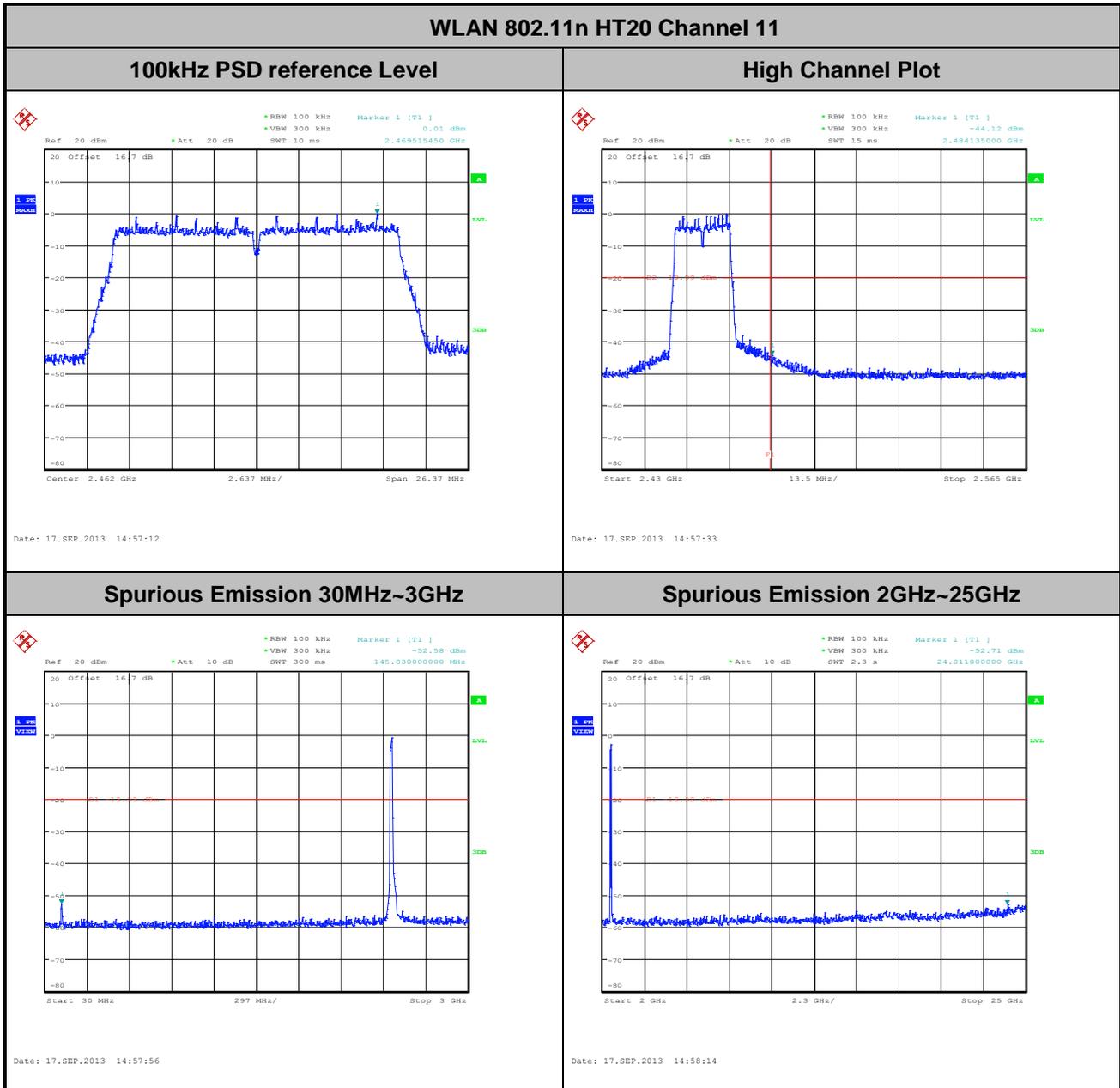


Note:

1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Book Lin

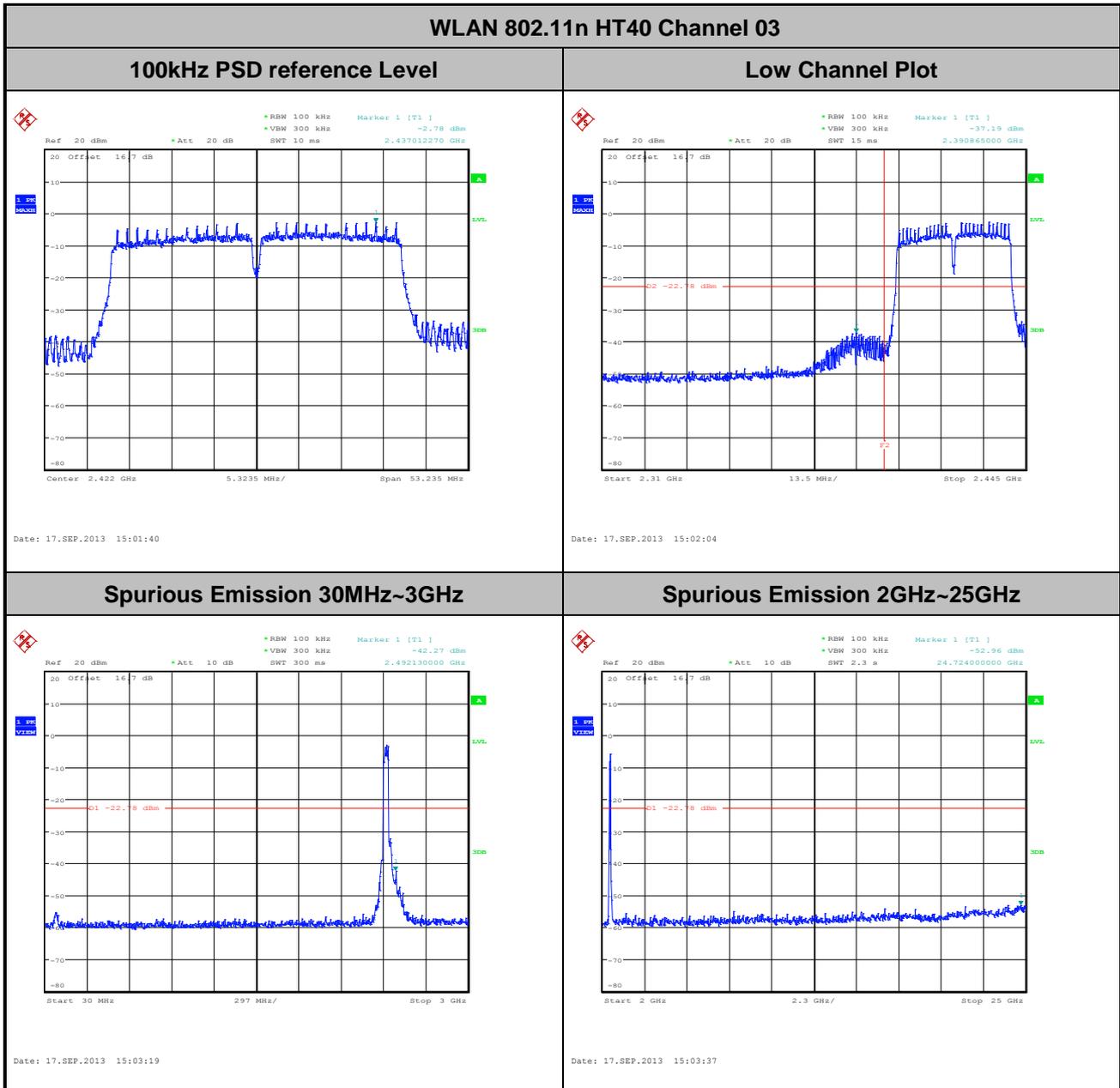


Note:

1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	03	Test Engineer :	Book Lin



Note:

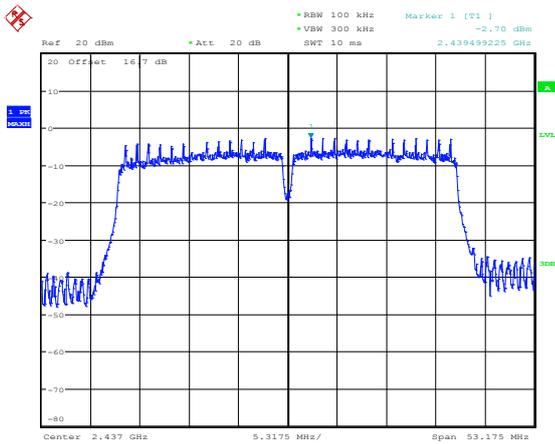
1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	Book Lin

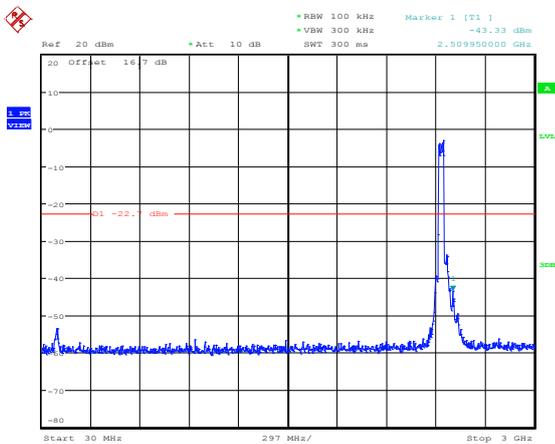
WLAN 802.11n HT40 Channel 06

100kHz PSD reference Level



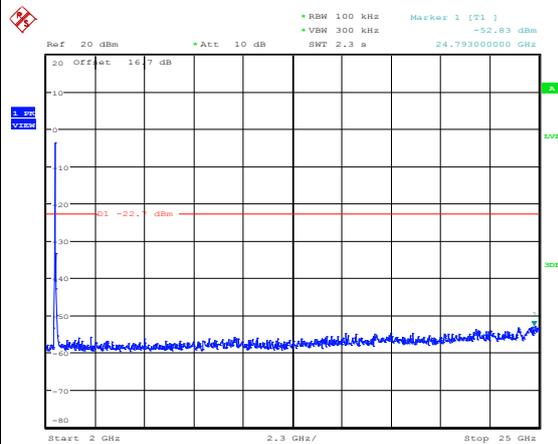
Date: 17.SEP.2013 15:07:27

Spurious Emission 30MHz~3GHz



Date: 17.SEP.2013 15:07:59

Spurious Emission 2GHz~25GHz



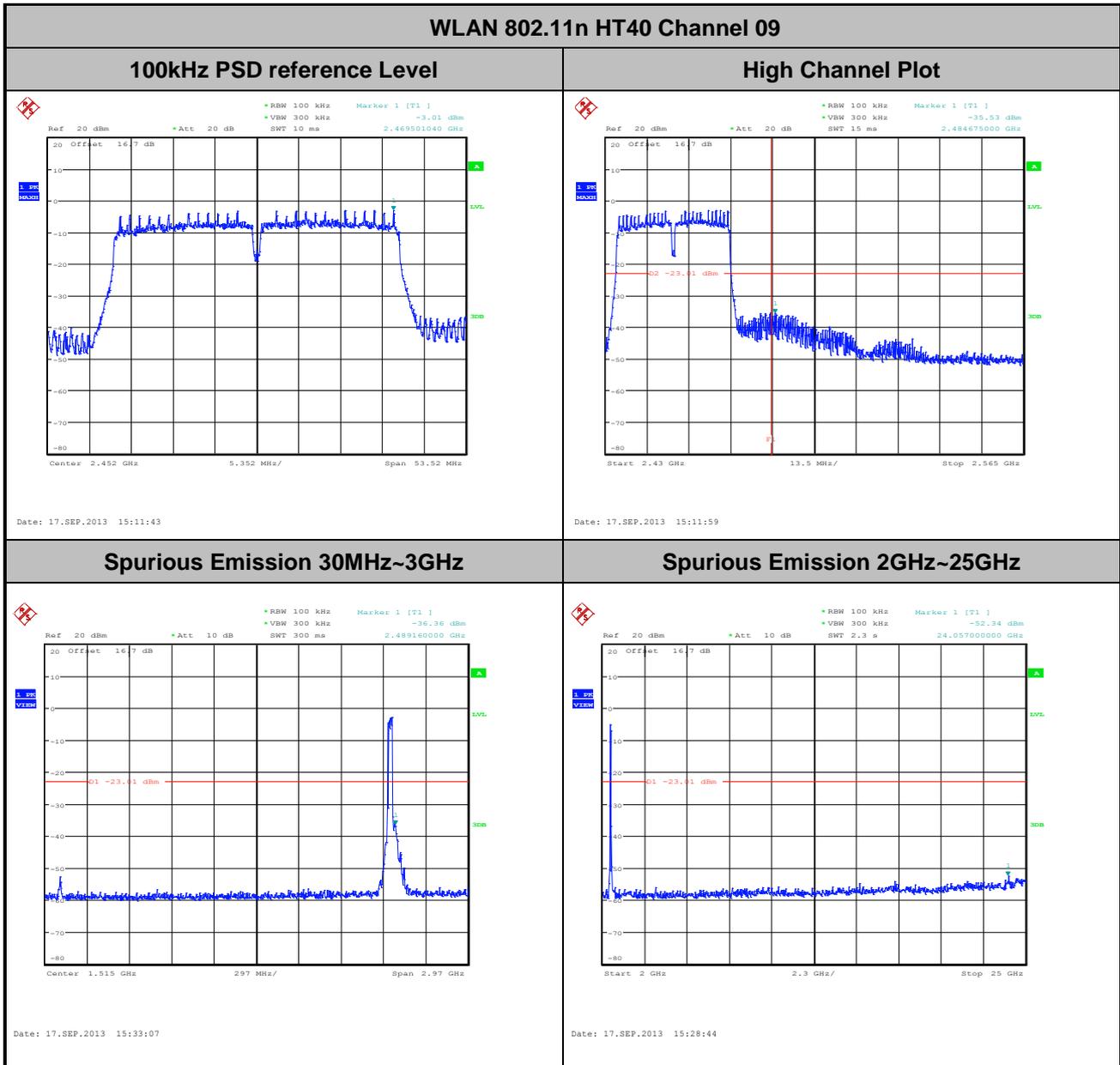
Date: 17.SEP.2013 15:08:17

Note:

1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



Test Mode :	802.11n HT40	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	09	Test Engineer :	Book Lin



Note:

1. The total loss is 16.7 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.
2. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.



3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.



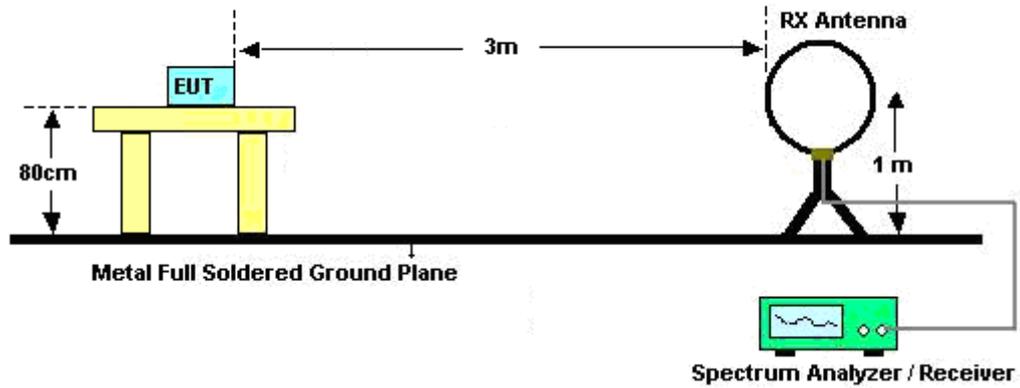
3.5.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r01.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.
For average measurement:
 - $VBW = 10$ Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

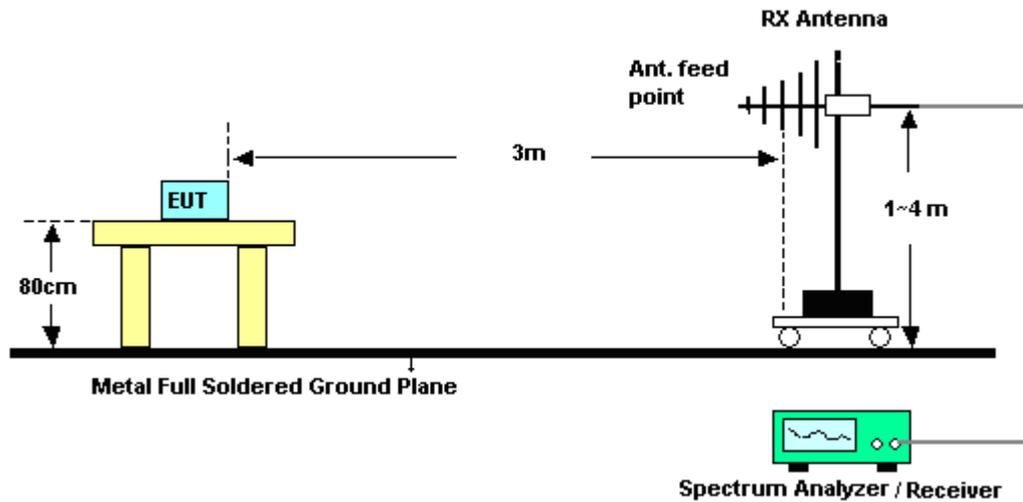
Band	Duty Cycle(%)	T(μ s)	1/T(kHz)	VBW Setting
802.11b	99.06	-	-	10Hz
802.11g	92.67	1390.00	0.72	1kHz
802.11n HT20	91.55	1300.00	0.77	1kHz
802.11n HT40	85.53	650.00	1.54	3kHz

3.5.4 Test Setup

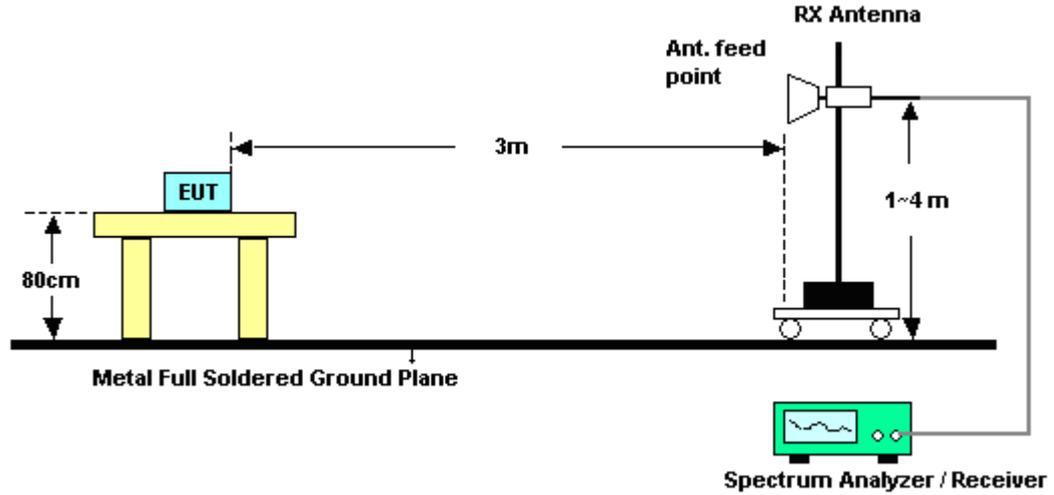
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



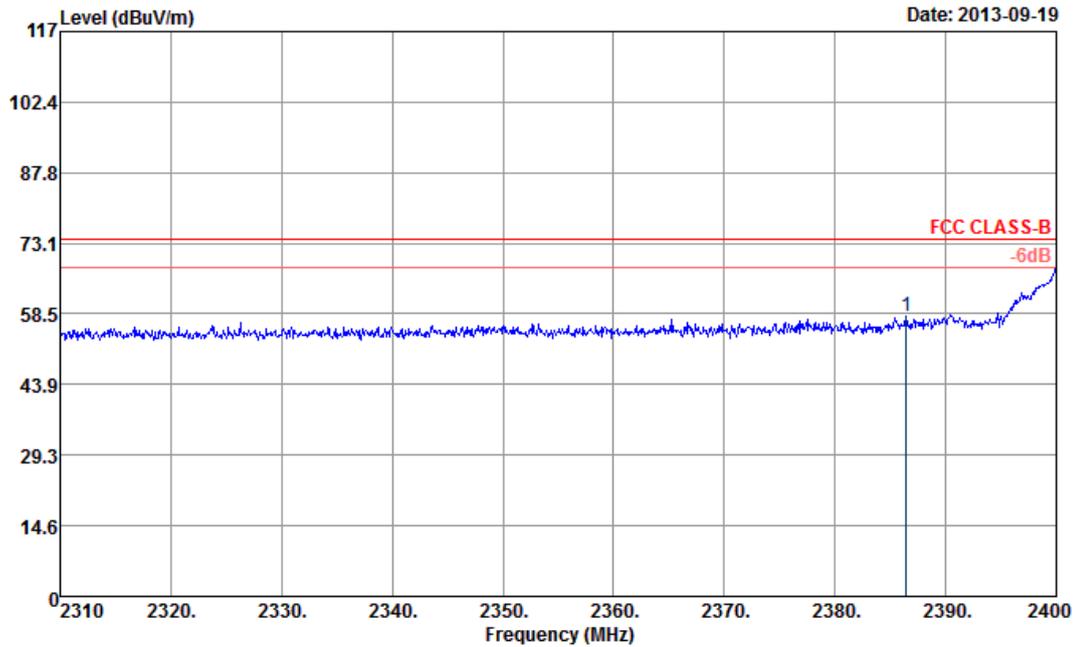
3.5.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.



3.5.6 Test Result of Radiated Spurious at Band Edges

Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

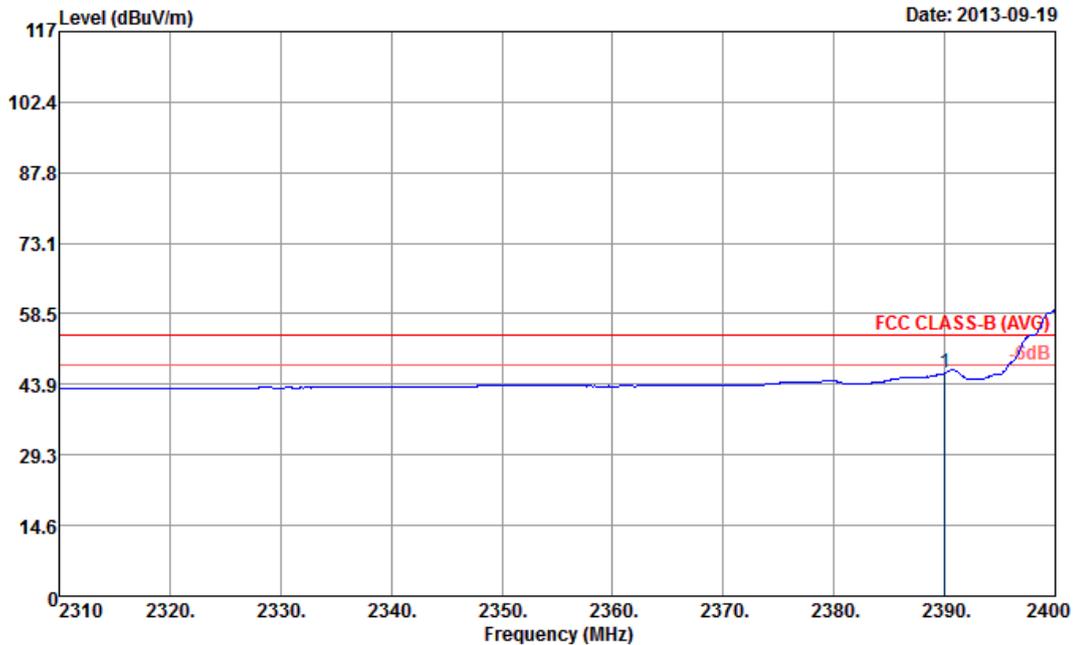
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2386.41	57.99	-16.01	74	53.05	32.3	6.91	34.27	100	56	Peak

Note: Worst case measurement on 2386.41 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

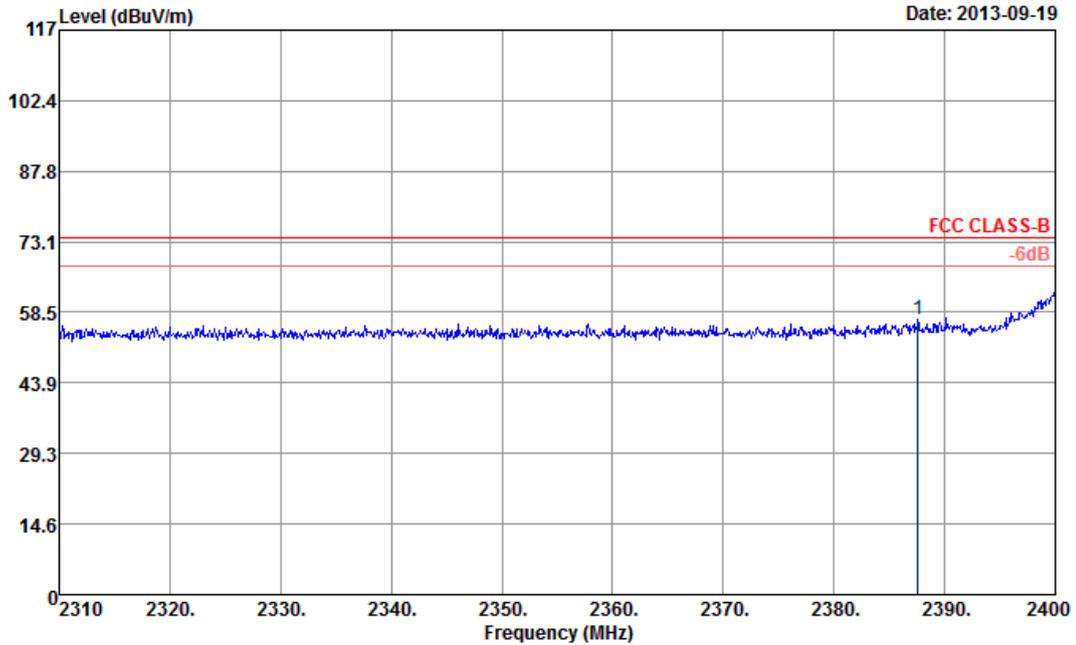
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	46.25	-7.75	54	41.34	32.3	6.91	34.3	100	56	Average

Note: Worst case measurement on 2390 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

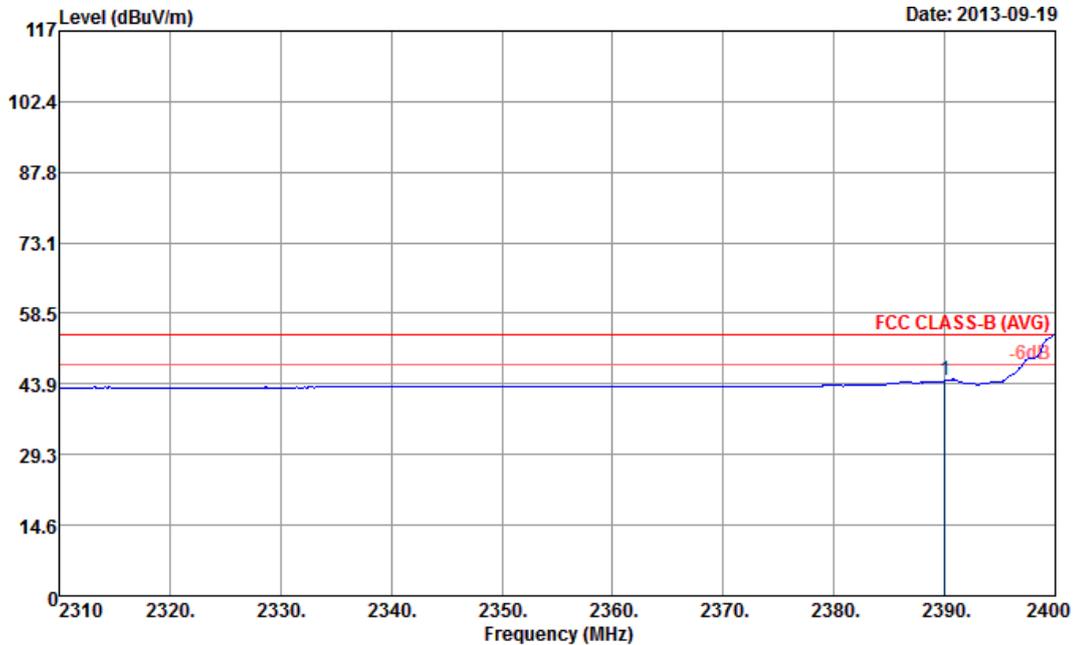
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2387.58	57.12	-16.88	74	52.18	32.3	6.91	34.27	106	355	Peak

Note: Worst case measurement on 2387.58 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

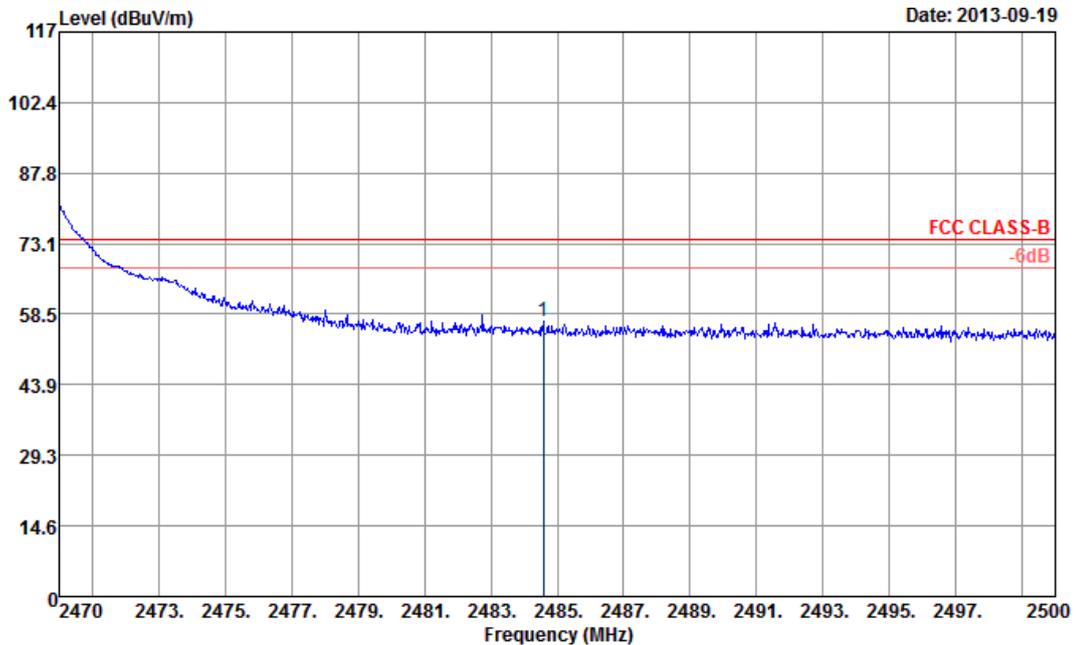
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390	44.55	-9.45	54	39.64	32.3	6.91	34.3	106	355	Average

Note: Worst case measurement on 2390 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

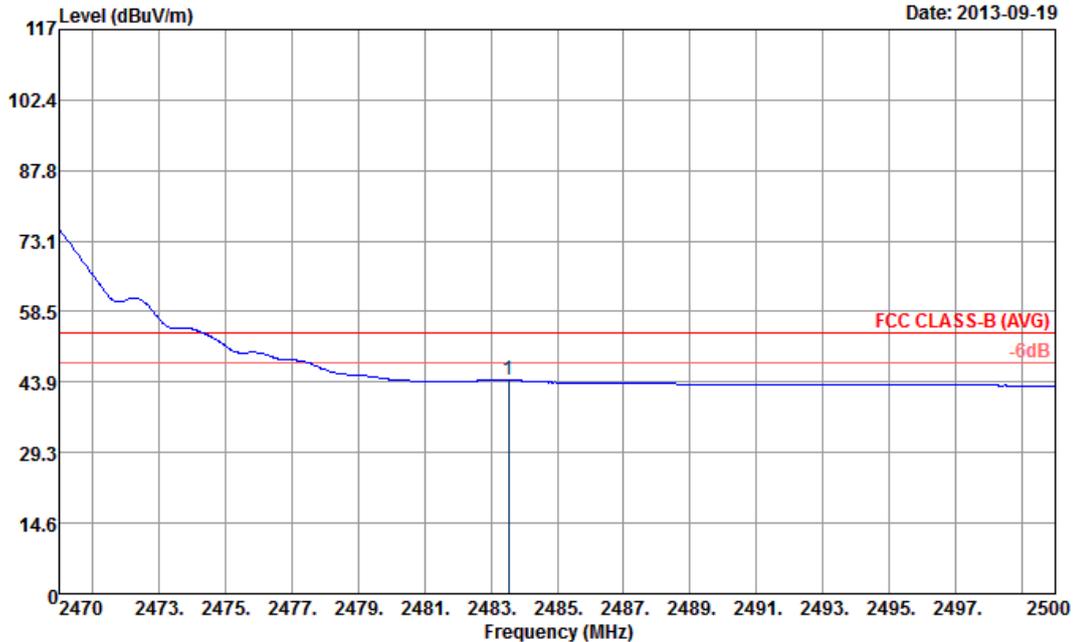
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.58	57.11	-16.89	74	52.1	32.38	7.06	34.43	100	55	Peak

Note: Worst case measurement on 2484.58 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

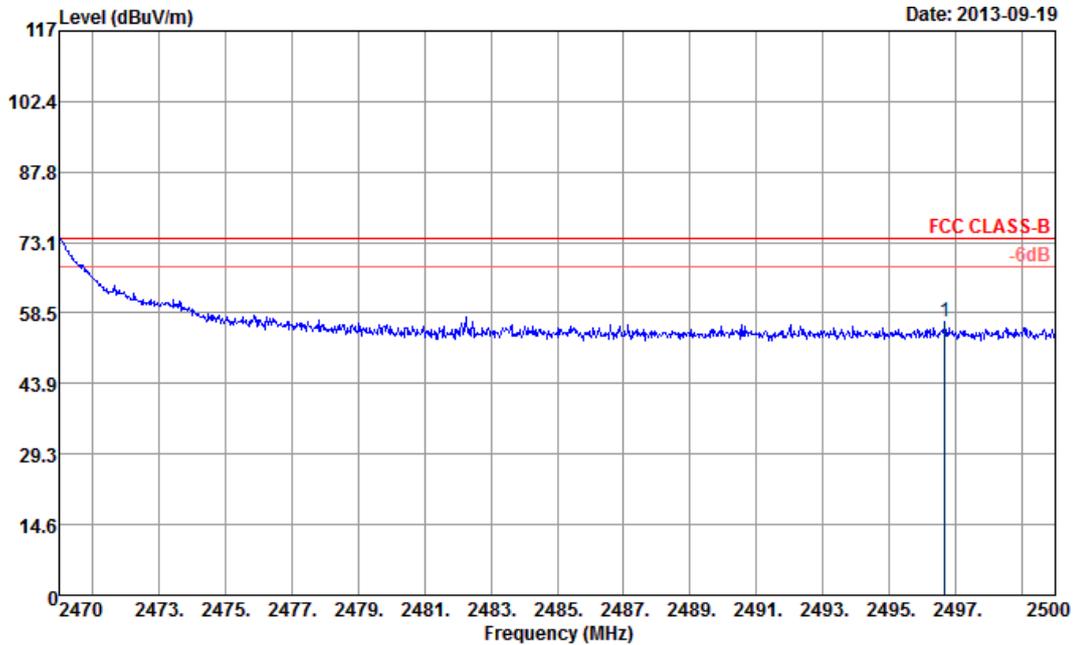
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.53	44.4	-9.6	54	39.39	32.38	7.06	34.43	100	55	Average

Note: Worst case measurement on 2483.53 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

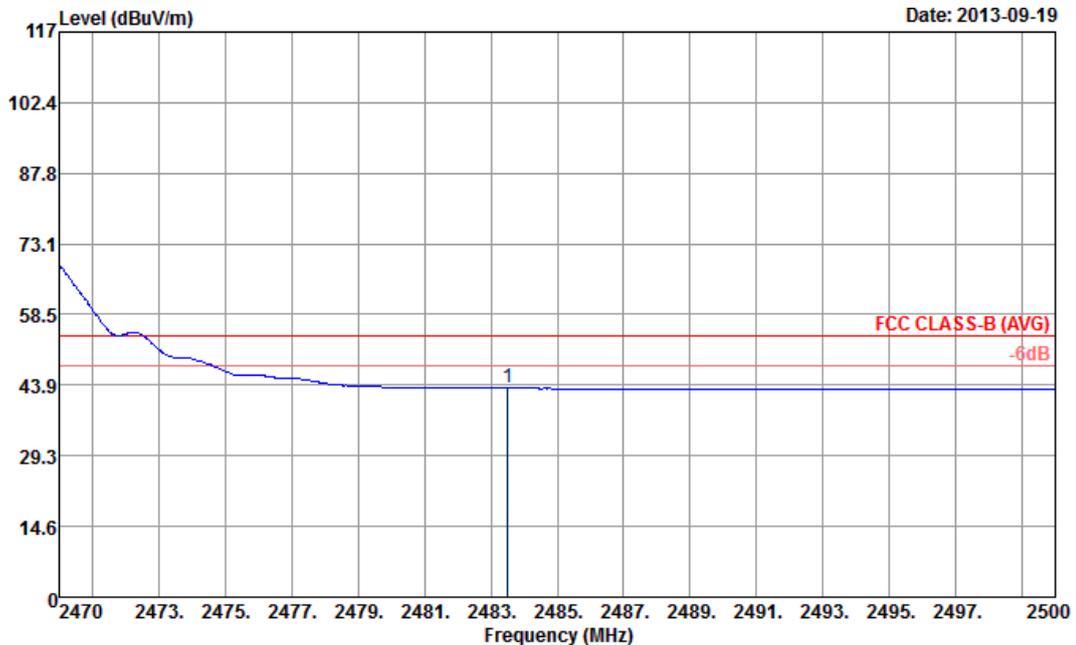
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2496.67	56.64	-17.36	74	51.66	32.4	7.06	34.48	132	360	Peak

Note: Worst case measurement on 2496.67 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11b	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

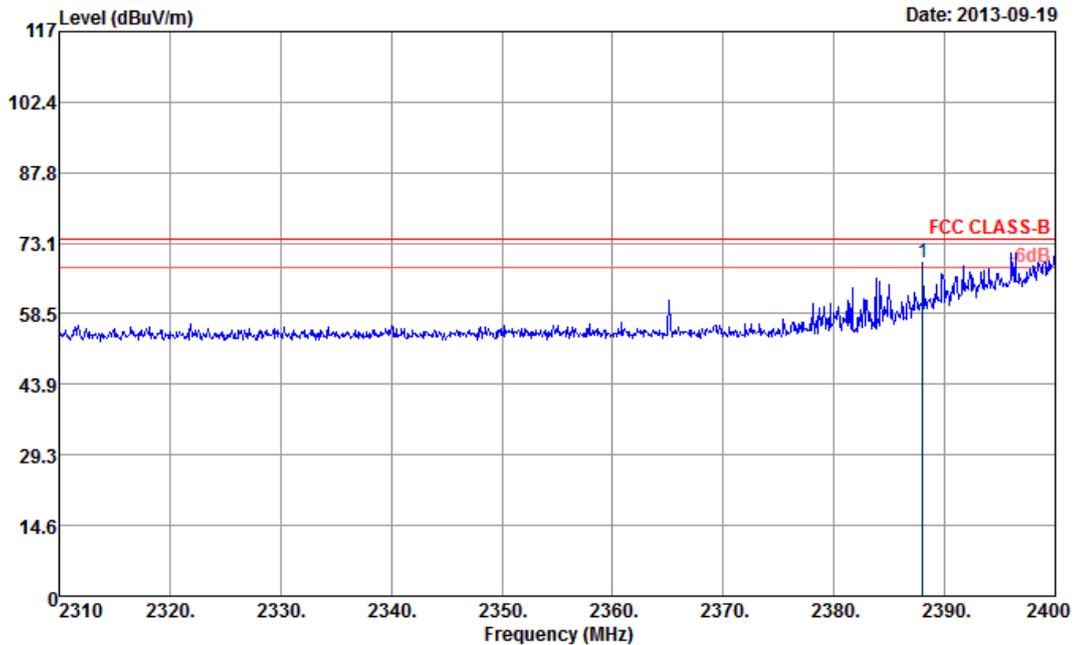
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	43.37	-10.63	54	38.36	32.38	7.06	34.43	132	360	Average

Note: Worst case measurement on 2483.5 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

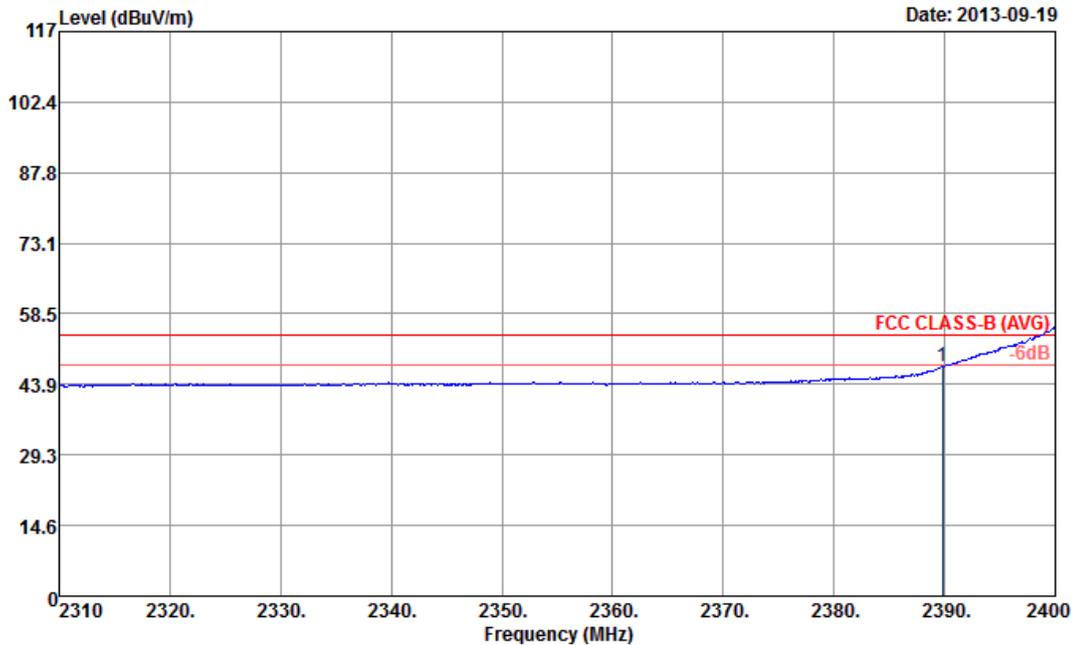
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.03	69.06	-4.94	74	64.12	32.3	6.91	34.27	100	55	Peak

Note: Worst case measurement on 2388.03 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

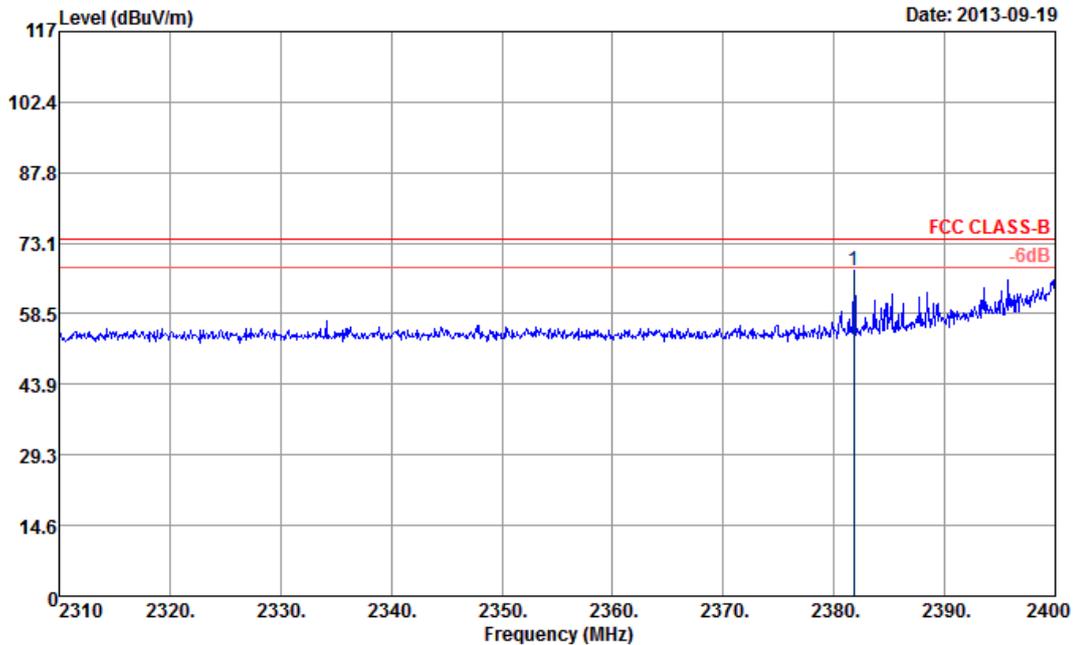
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.83	47.7	-6.3	54	42.79	32.3	6.91	34.3	100	55	Average

Note: Worst case measurement on 2389.83 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

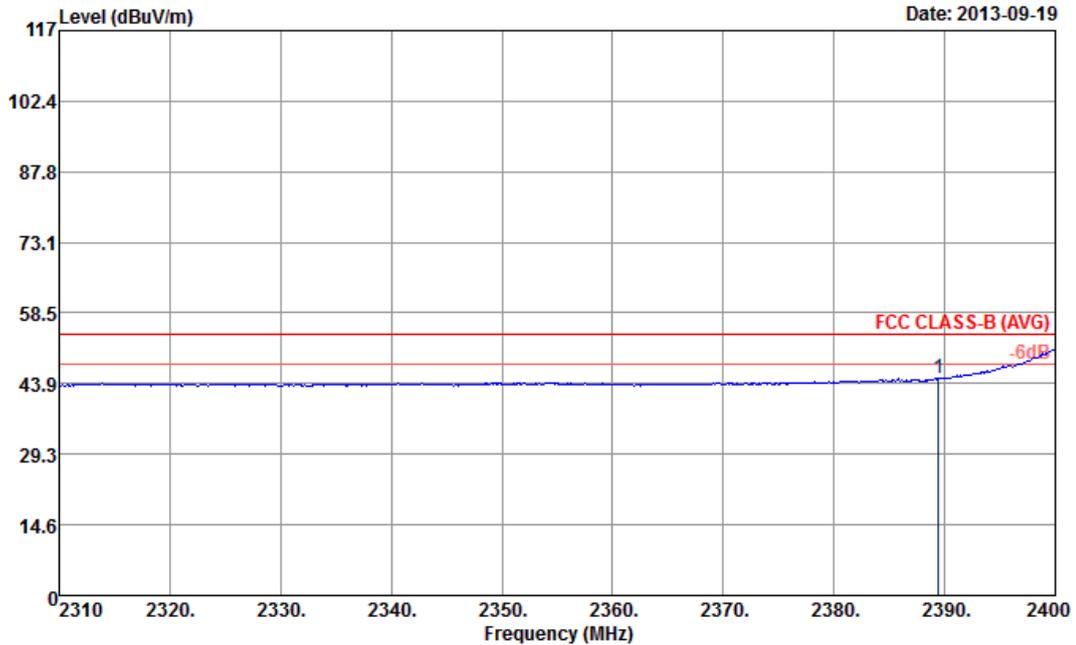
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2381.82	67.34	-6.66	74	62.42	32.28	6.91	34.27	107	120	Peak

Note: Worst case measurement on 2381.82 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

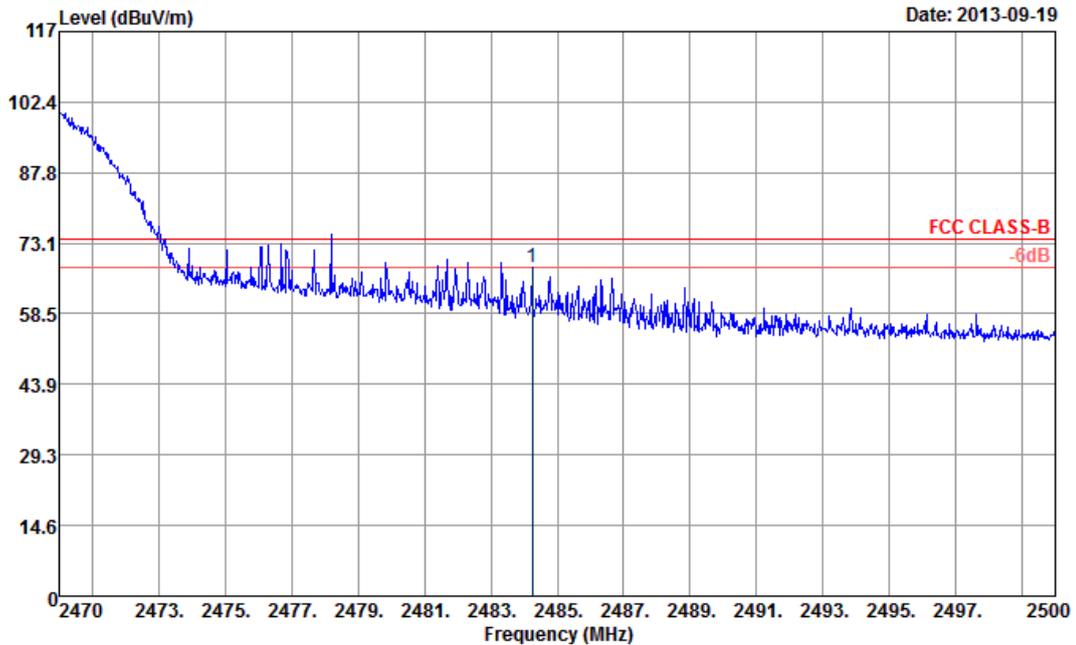
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.47	45.01	-8.99	54	40.07	32.3	6.91	34.27	107	120	Average

Note: Worst case measurement on 2389.47 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

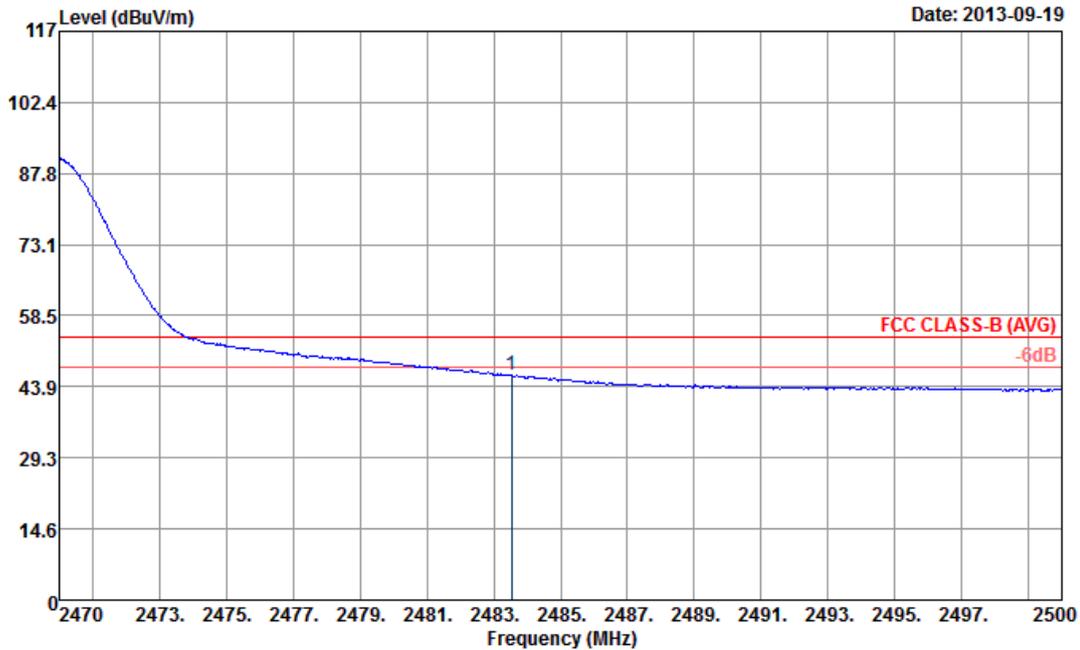
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.25	68.17	-5.83	74	63.16	32.38	7.06	34.43	123	51	Peak

Note: Worst case measurement on 2484.25 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

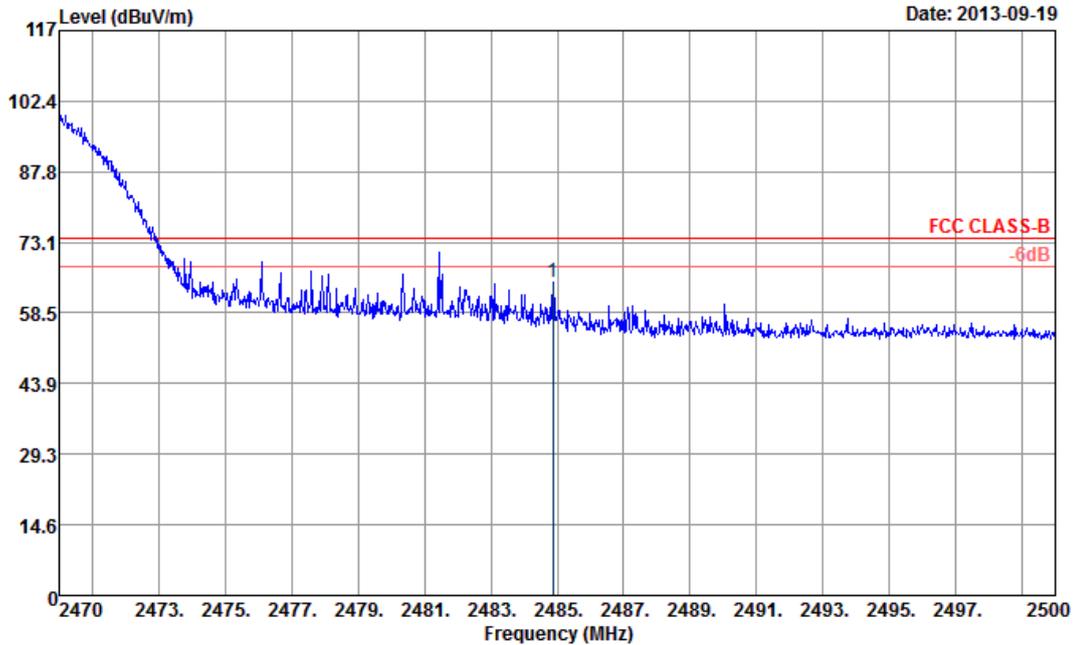
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.53	46.23	-7.77	54	41.22	32.38	7.06	34.43	123	51	Average

Note: Worst case measurement on 2483.53 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

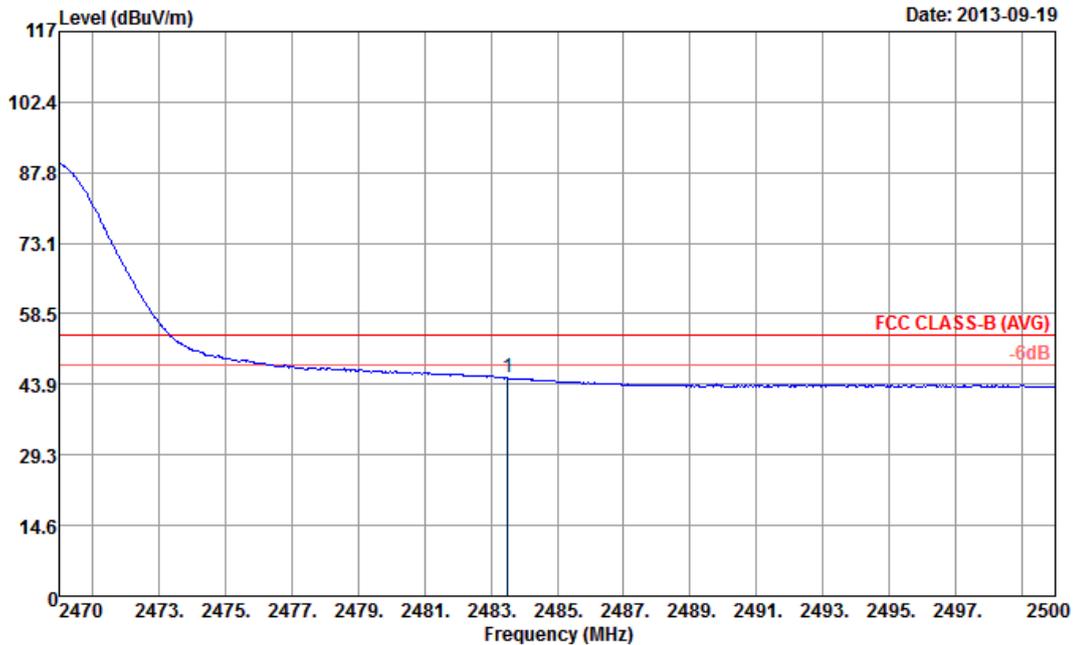
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.88	64.77	-9.23	74	59.76	32.38	7.06	34.43	107	94	Peak

Note: Worst case measurement on 2484.88 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11g	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

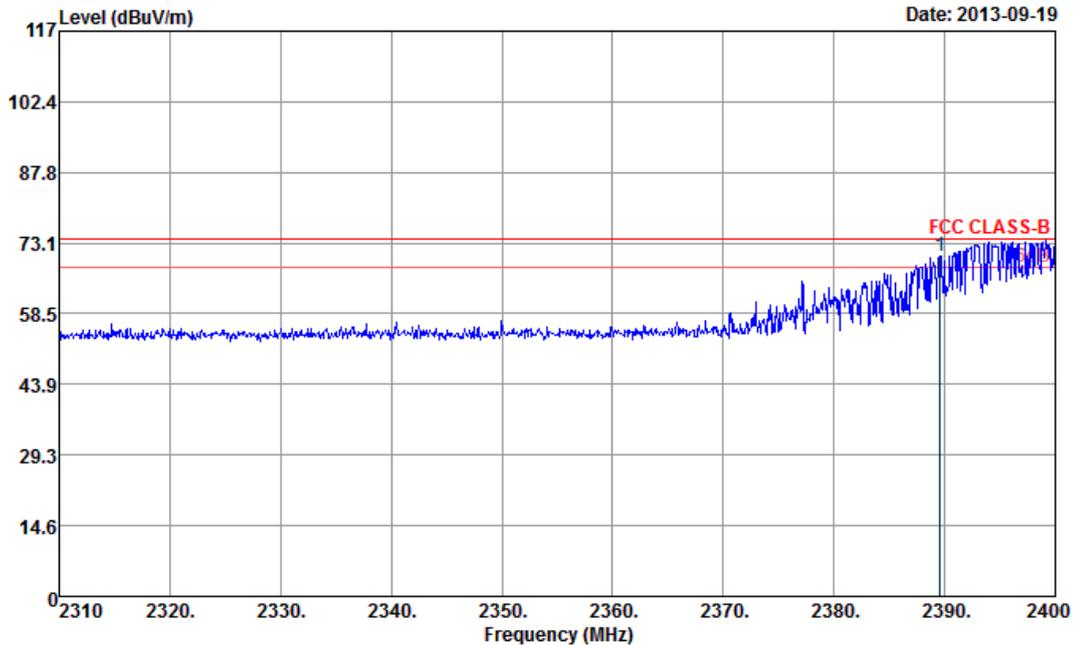
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	45.3	-8.7	54	40.29	32.38	7.06	34.43	107	94	Average

Note: Worst case measurement on 2483.5 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

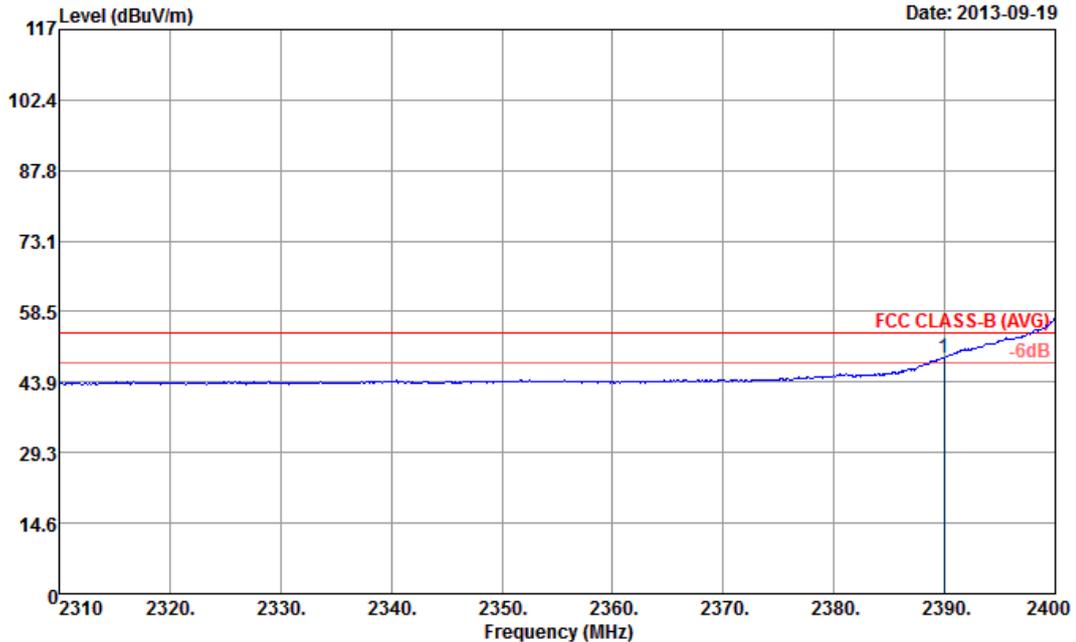
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.56	70.47	-3.53	74	65.53	32.3	6.91	34.27	100	55	Peak

Note: Worst case measurement on 2389.56 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

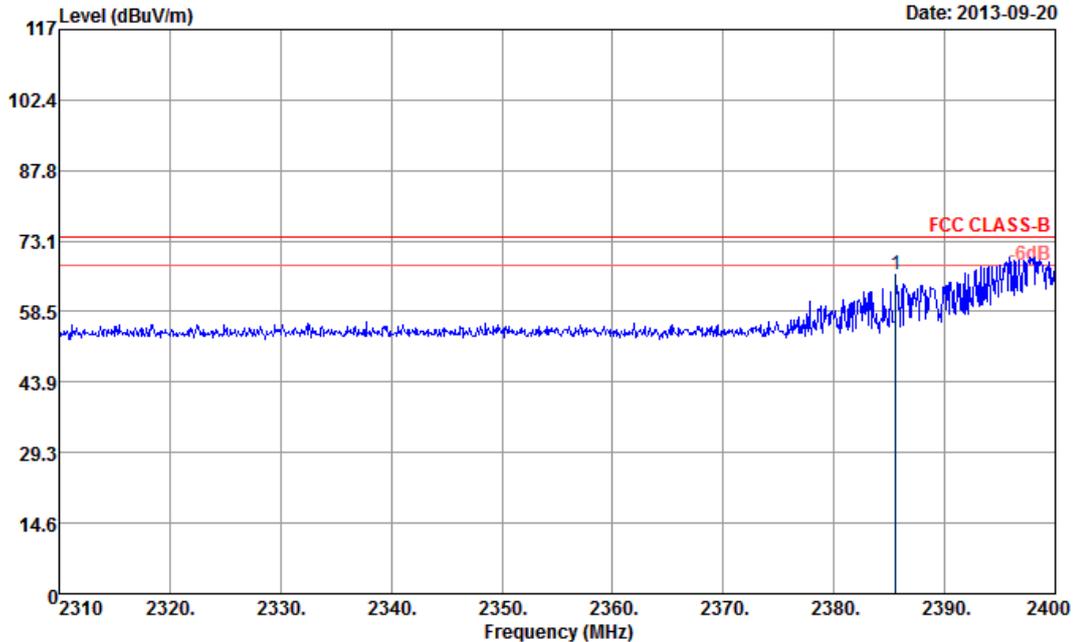
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.92	49.02	-4.98	54	44.11	32.3	6.91	34.3	100	55	Average

Note: Worst case measurement on 2389.92MHz is compliance with 74/54 dBUV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

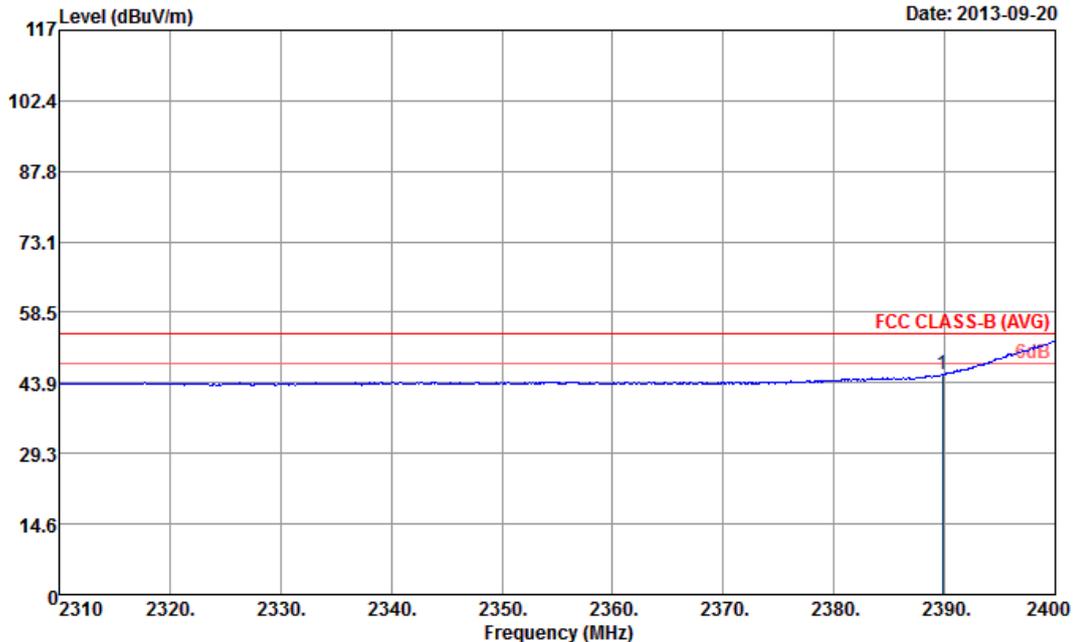
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2385.6	66.23	-7.77	74	61.29	32.3	6.91	34.27	161	129	Peak

Note: Worst case measurement on 2385.6 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

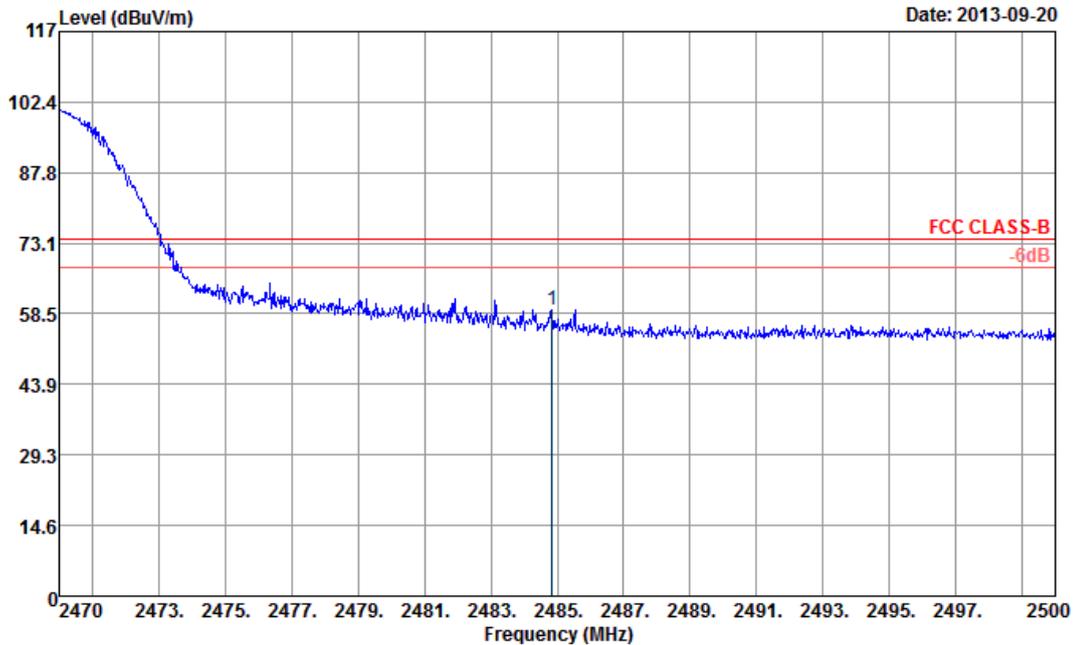
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.83	45.59	-8.41	54	40.68	32.3	6.91	34.3	161	129	Average

Note: Worst case measurement on 2389.83 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

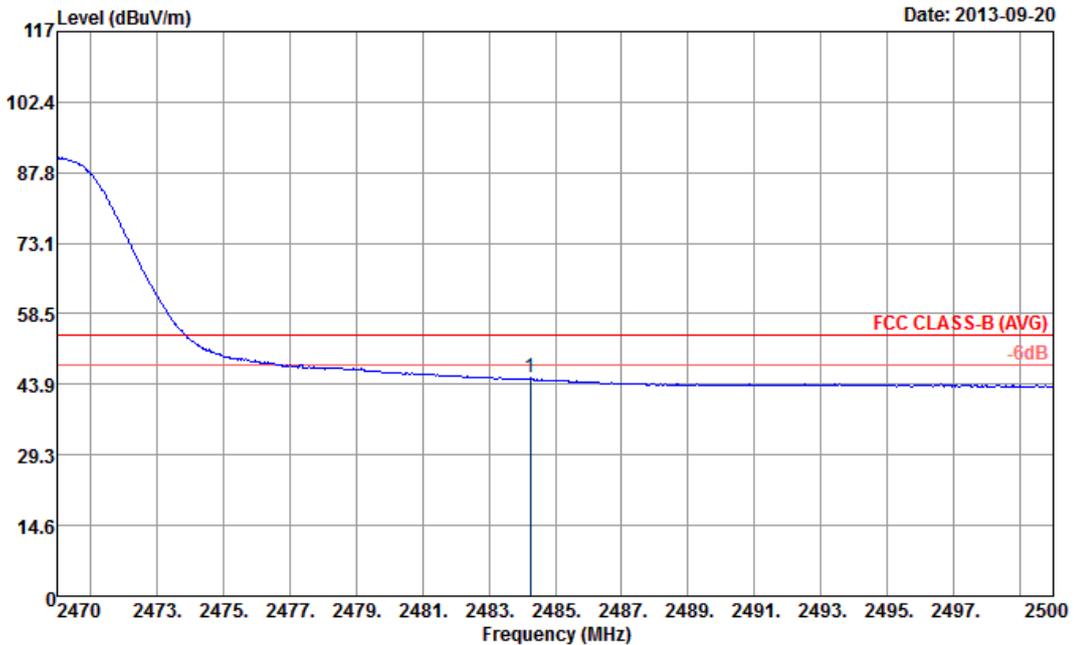
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.85	59.37	-14.63	74	54.36	32.38	7.06	34.43	123	50	Peak

Note: Worst case measurement on 2484.85 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

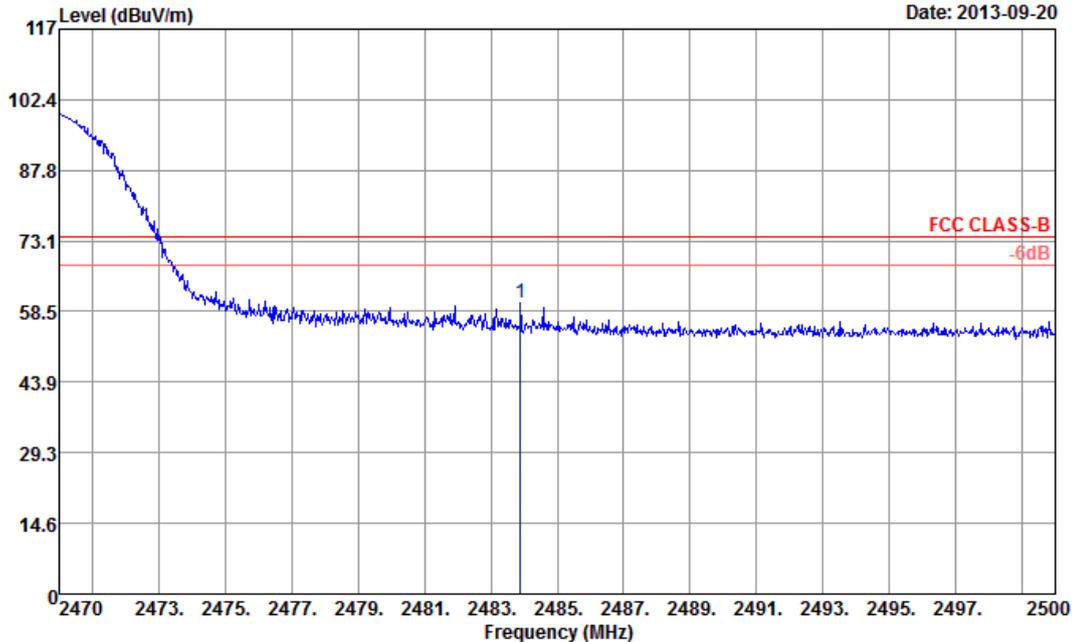
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.25	45.15	-8.85	54	40.14	32.38	7.06	34.43	123	50	Average

Note: Worst case measurement on 2484.25 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

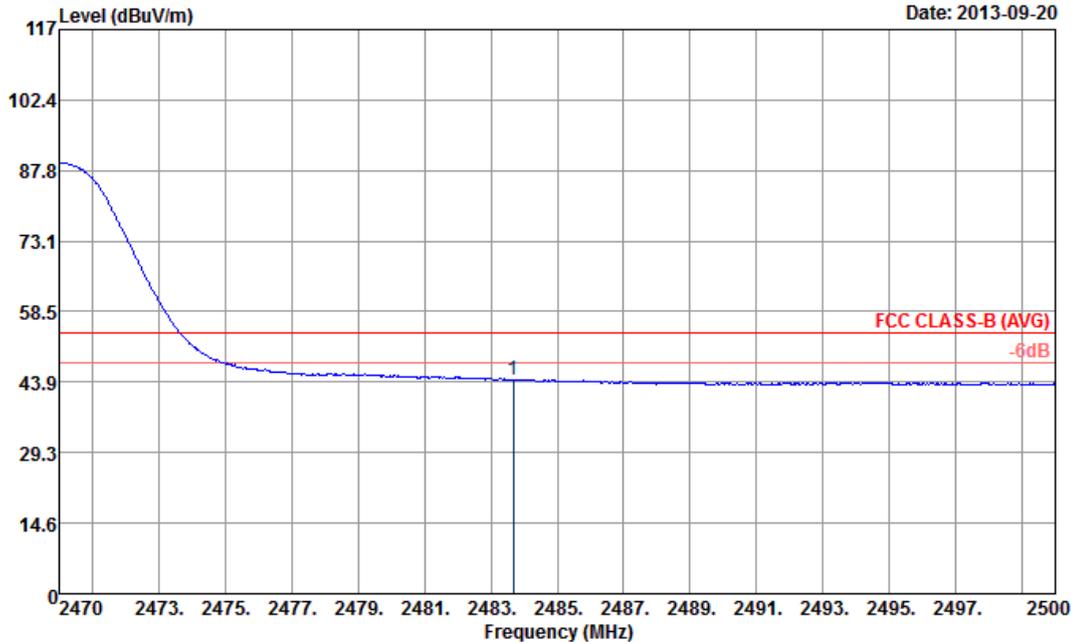
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.89	60.29	-13.71	74	55.28	32.38	7.06	34.43	132	92	Peak

Note: Worst case measurement on 2483.89 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

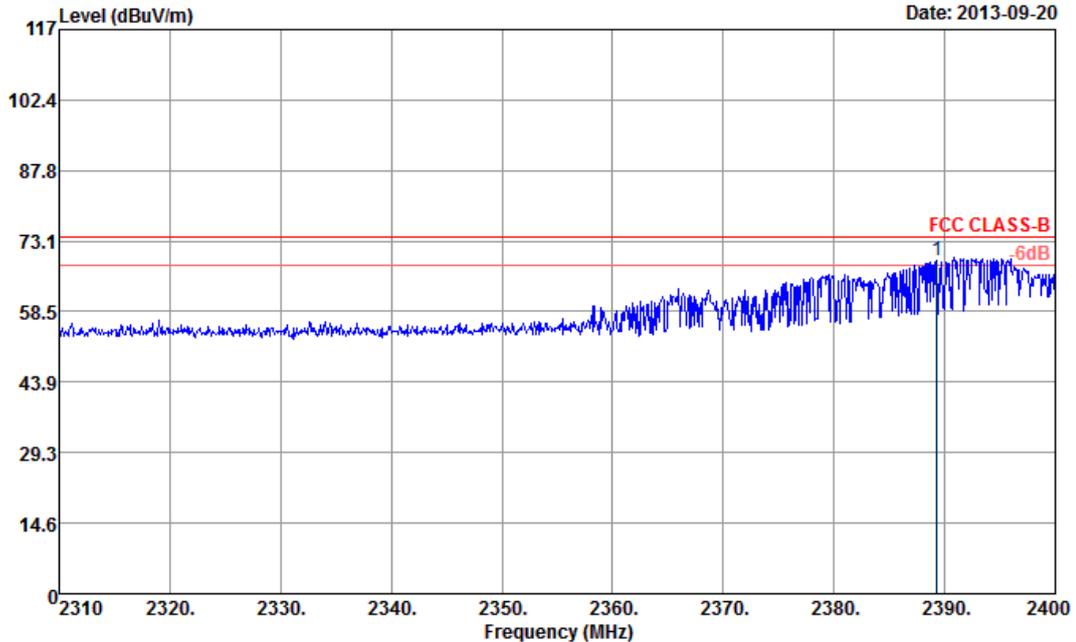
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.68	44.41	-9.59	54	39.4	32.38	7.06	34.43	132	92	Average

Note: Worst case measurement on 2483.68 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

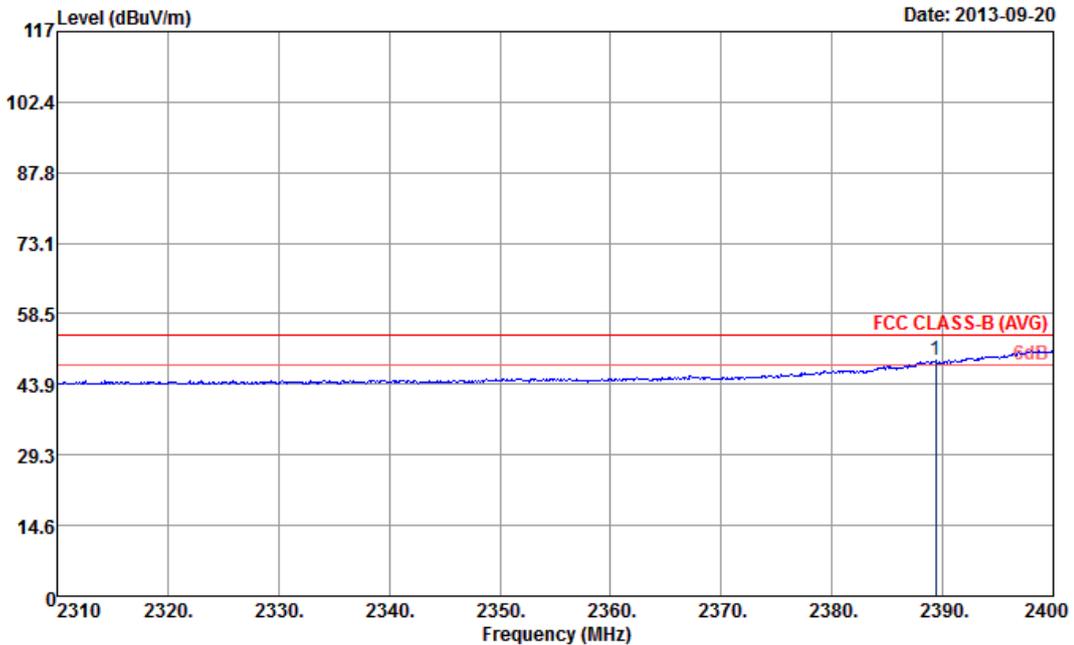
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.29	69.08	-4.92	74	64.14	32.3	6.91	34.27	102	56	Peak

Note: Worst case measurement on 2389.29 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

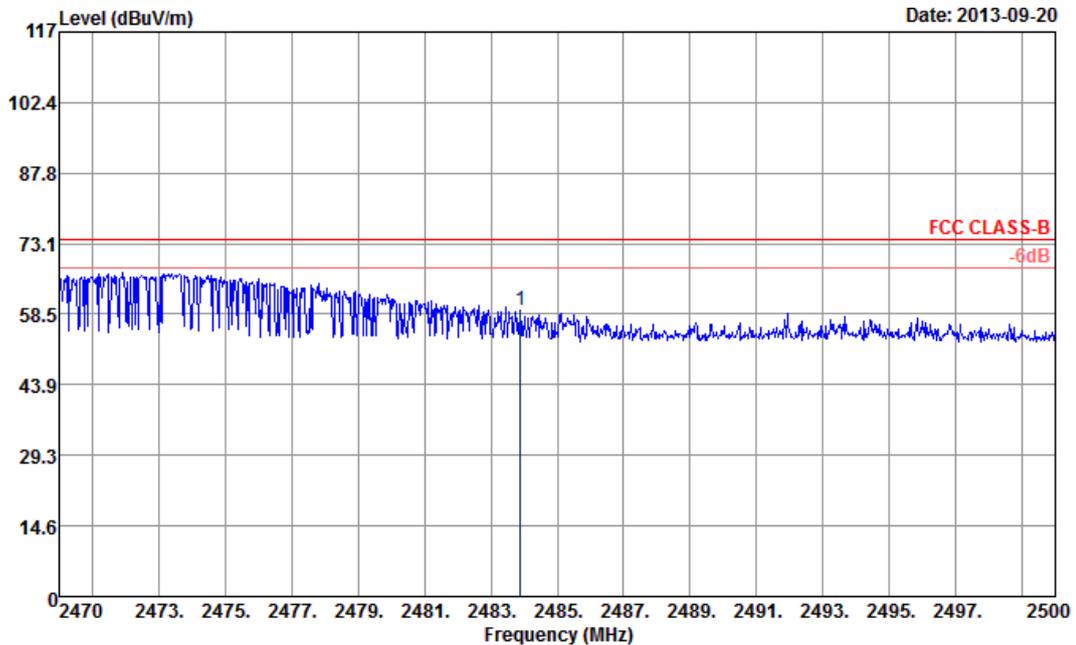
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.38	48.97	-5.03	54	44.03	32.3	6.91	34.27	102	56	Average

Note: Worst case measurement on 2389.38 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

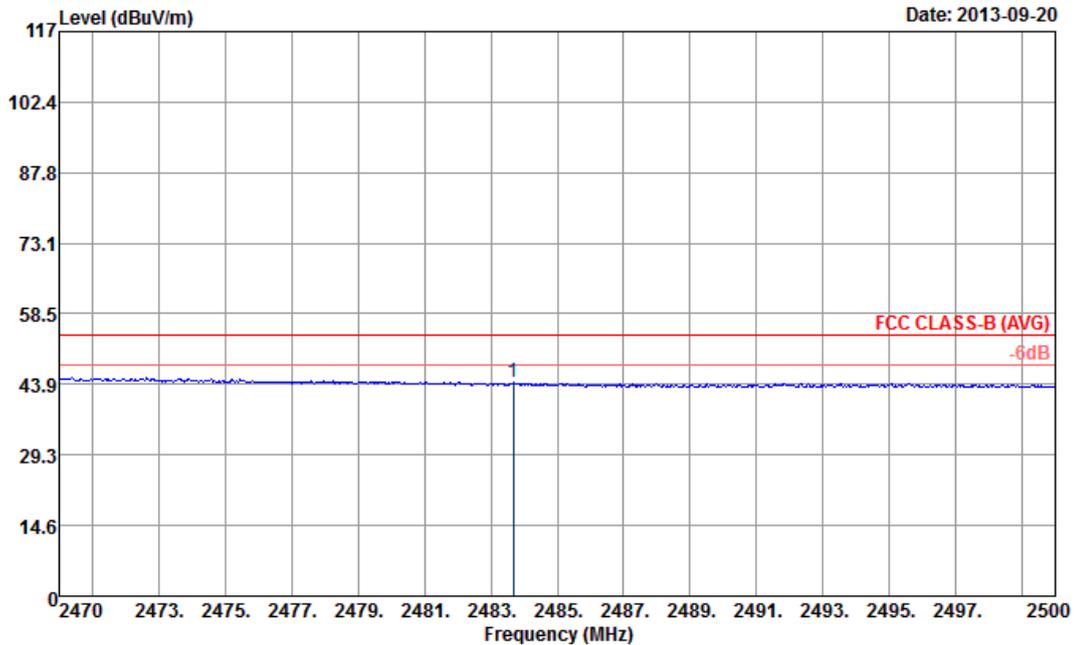
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.89	59.19	-14.81	74	54.18	32.38	7.06	34.43	102	56	Peak

Note: Worst case measurement on 2483.89 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

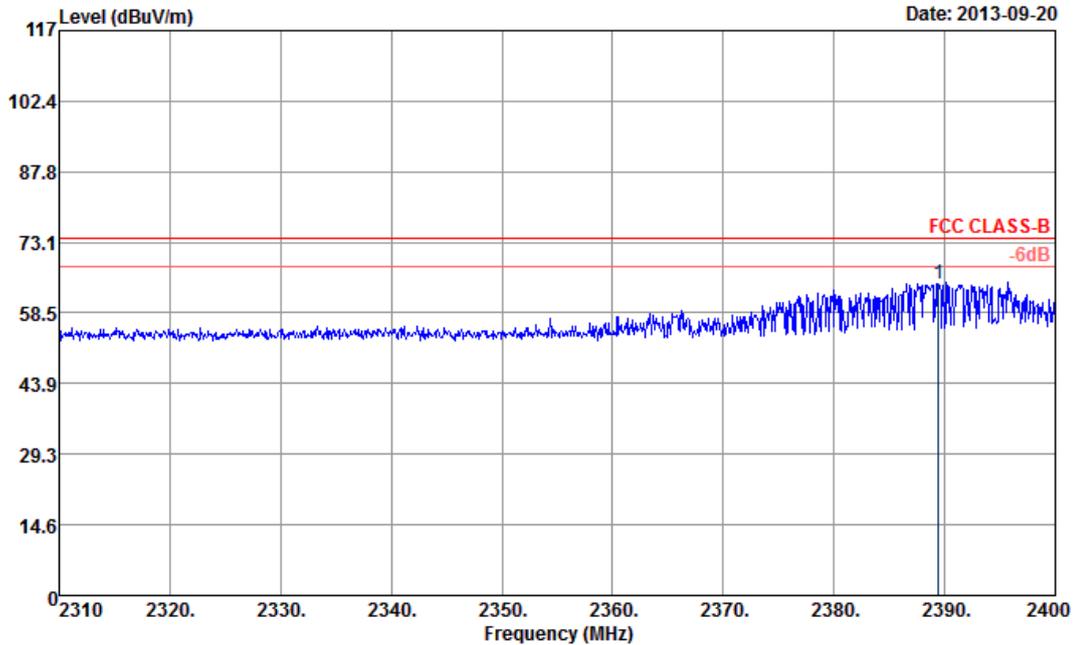
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.68	44.25	-9.75	54	39.24	32.38	7.06	34.43	102	56	Average

Note: Worst case measurement on 2483.68 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

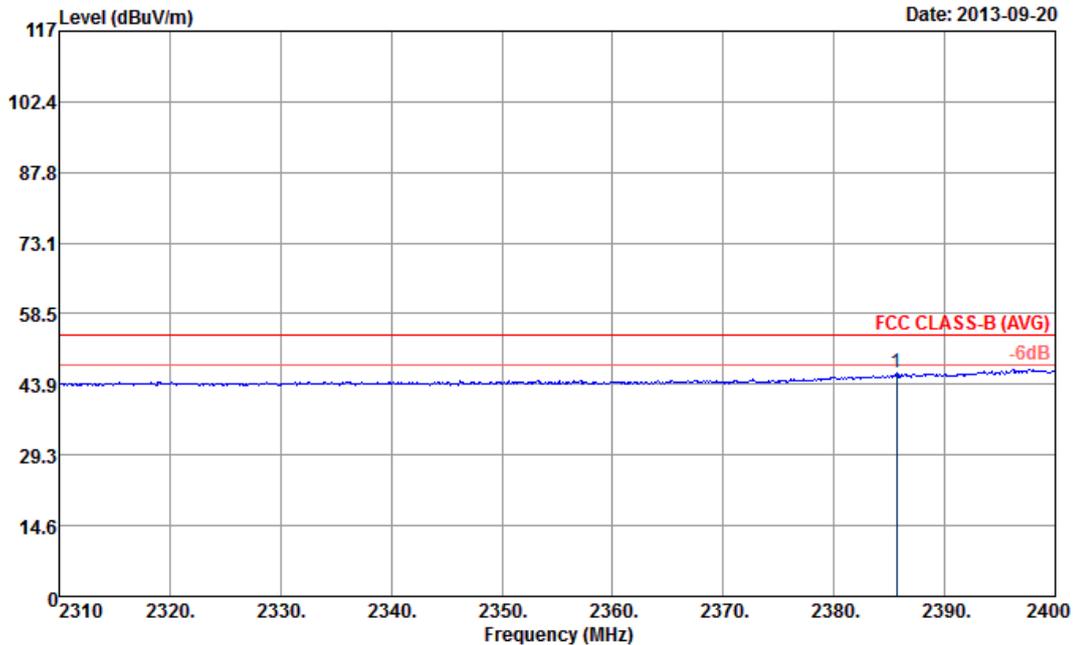
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.47	64.67	-9.33	74	59.73	32.3	6.91	34.27	136	193	Peak

Note: Worst case measurement on 2389.47 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

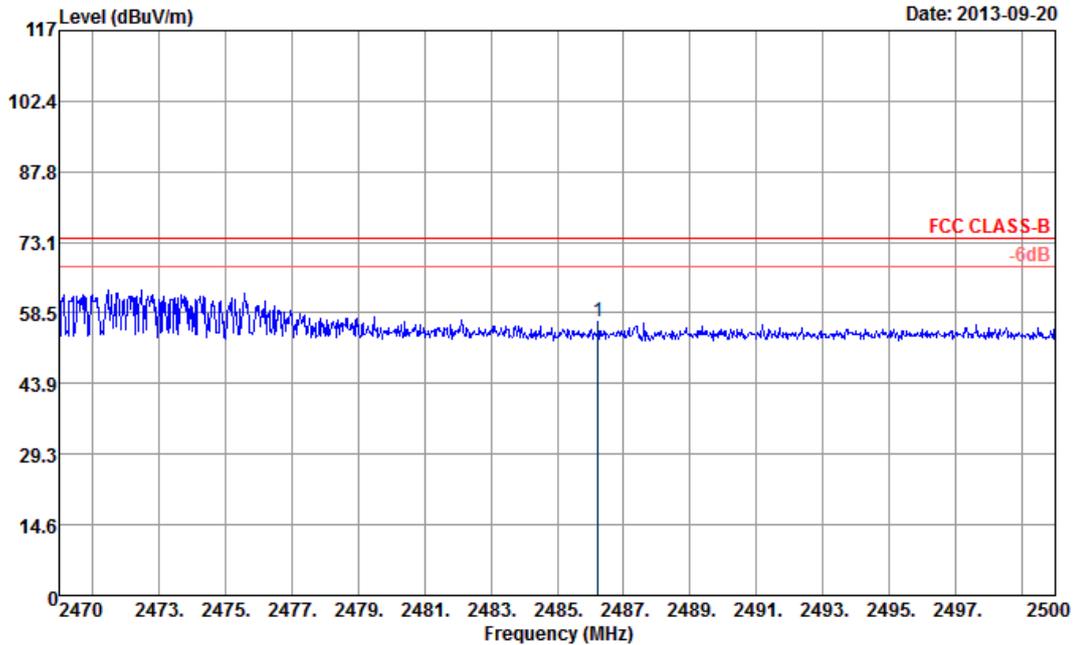
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2385.69	46.2	-7.8	54	41.26	32.3	6.91	34.27	136	193	Average

Note: Worst case measurement on 2385.69 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

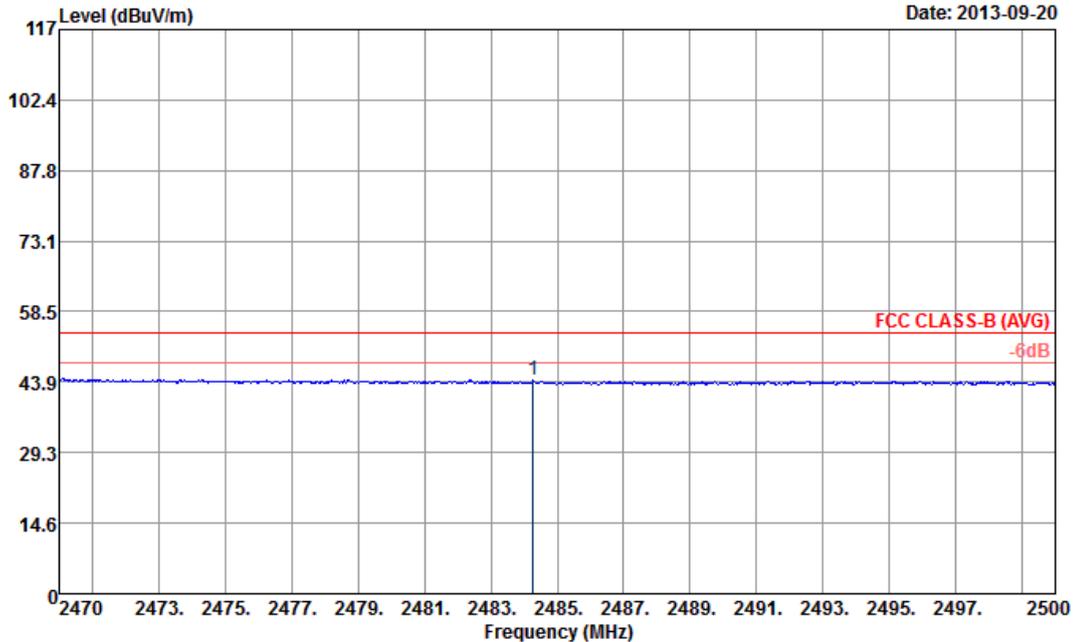
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2486.23	56.73	-17.27	74	51.72	32.38	7.06	34.43	136	193	Peak

Note: Worst case measurement on 2486.23 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

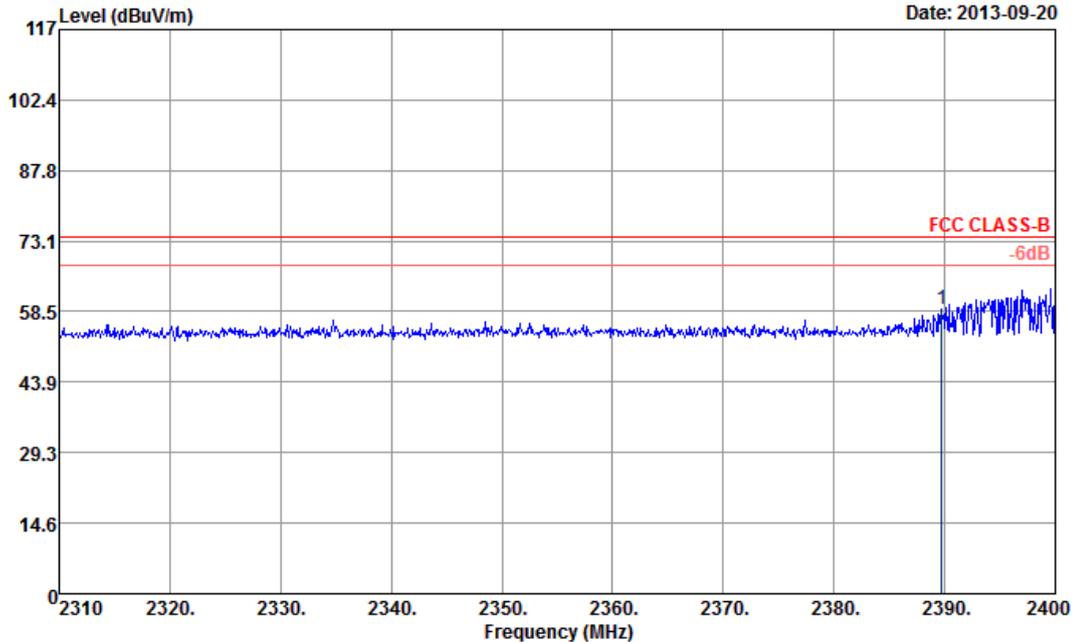
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.28	44.22	-9.78	54	39.21	32.38	7.06	34.43	136	193	Average

Note: Worst case measurement on 2484.28 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

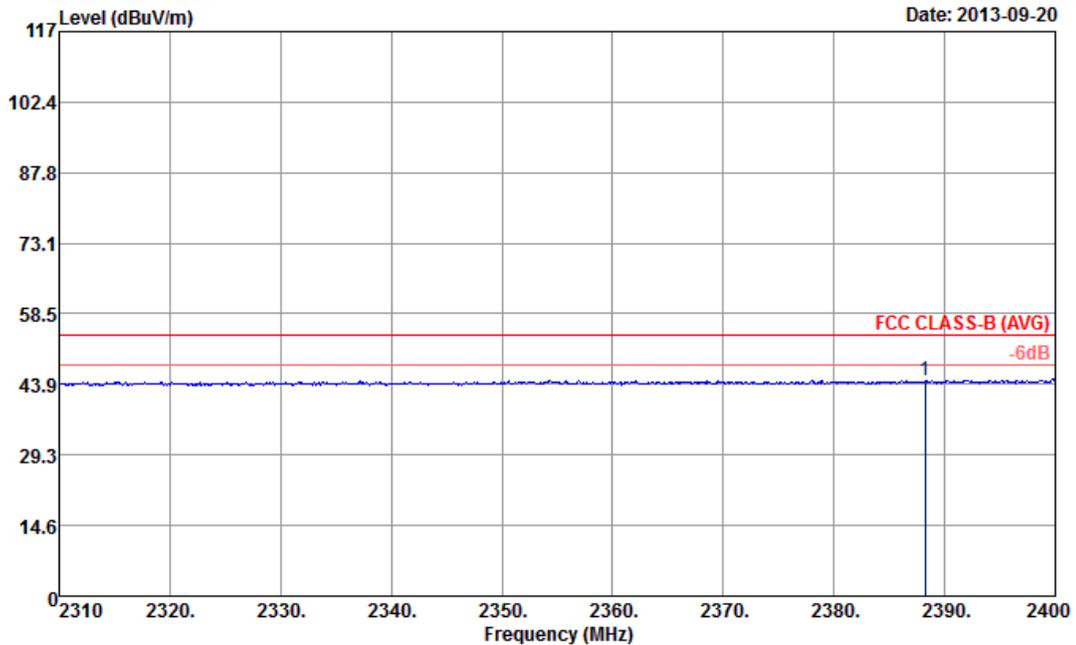
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.74	58.85	-15.15	74	53.91	32.3	6.91	34.27	100	56	Peak

Note: Worst case measurement on 2389.74 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

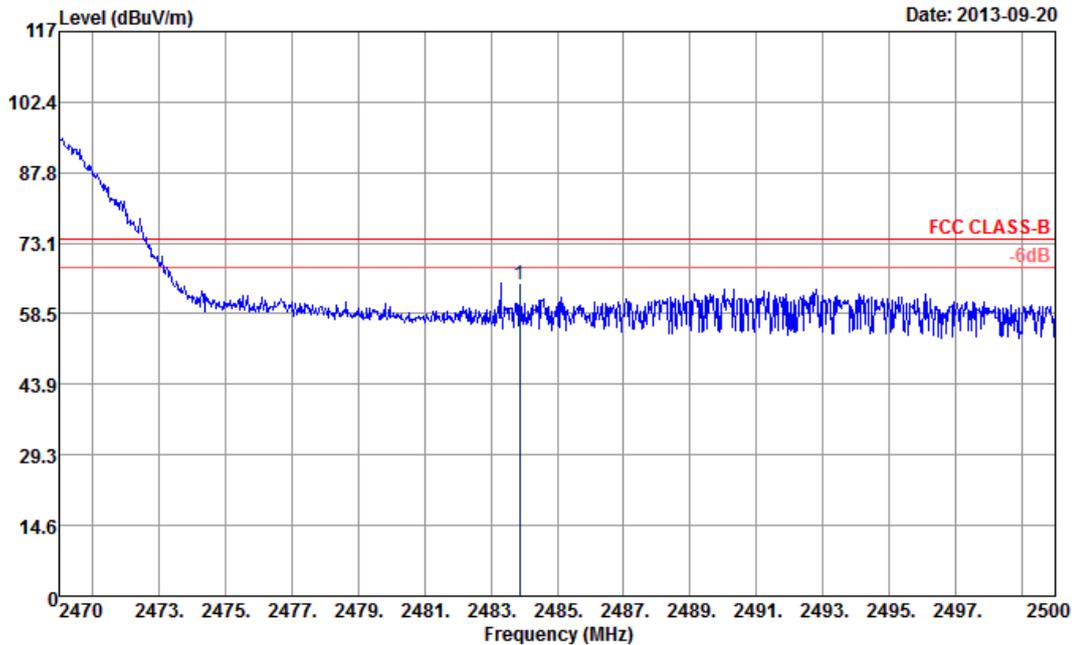
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.21	44.7	-9.3	54	39.76	32.3	6.91	34.27	100	56	Average

Note: Worst case measurement on 2388.21 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

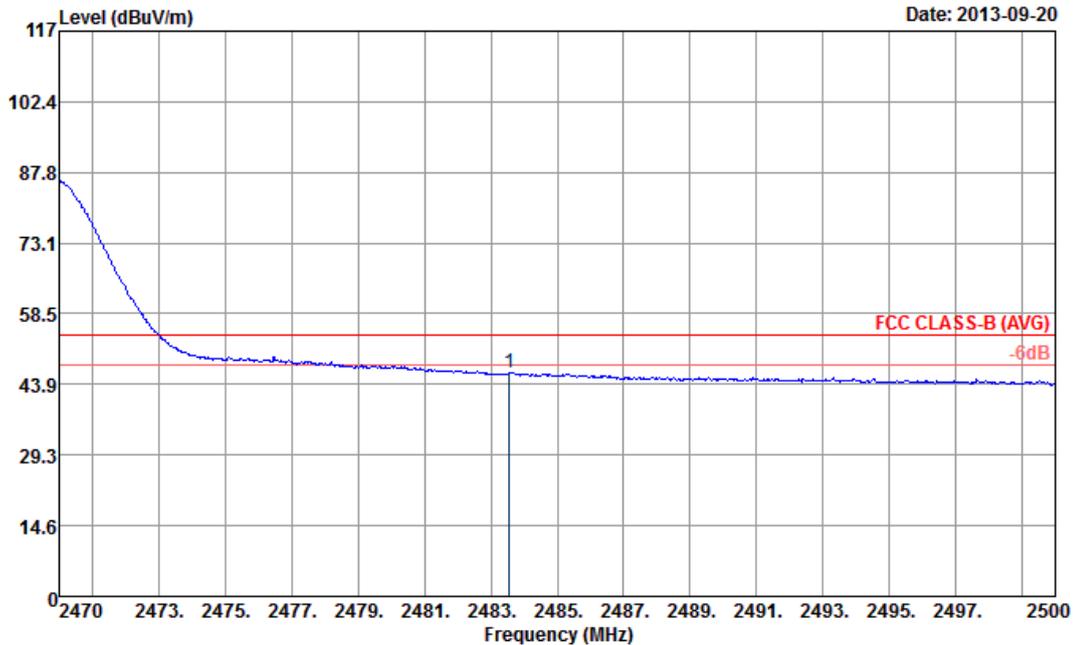
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.86	64.54	-9.46	74	59.53	32.38	7.06	34.43	100	56	Peak

Note: Worst case measurement on 2483.86 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 HORIZONTAL
 : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

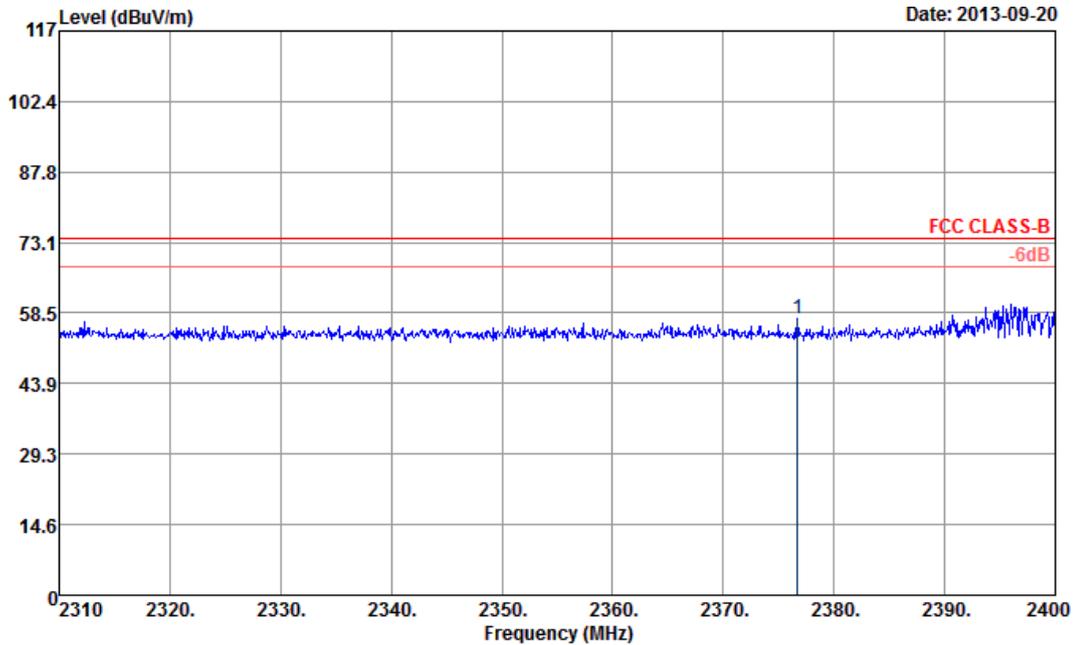
ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.56	46.36	-7.64	54	41.35	32.38	7.06	34.43	100	56	Average

Note: Worst case measurement on 2483.56 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

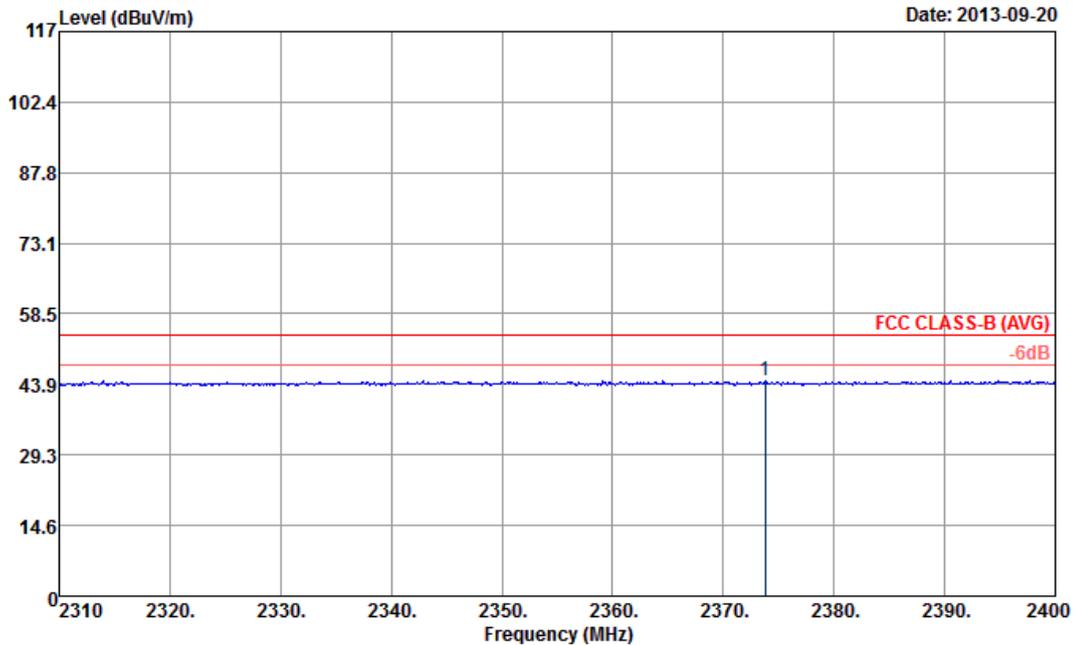
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2376.69	57.2	-16.8	74	52.31	32.28	6.88	34.27	131	110	Peak

Note: Worst case measurement on 2376.69 MHz is compliance with 74/54 dBUV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

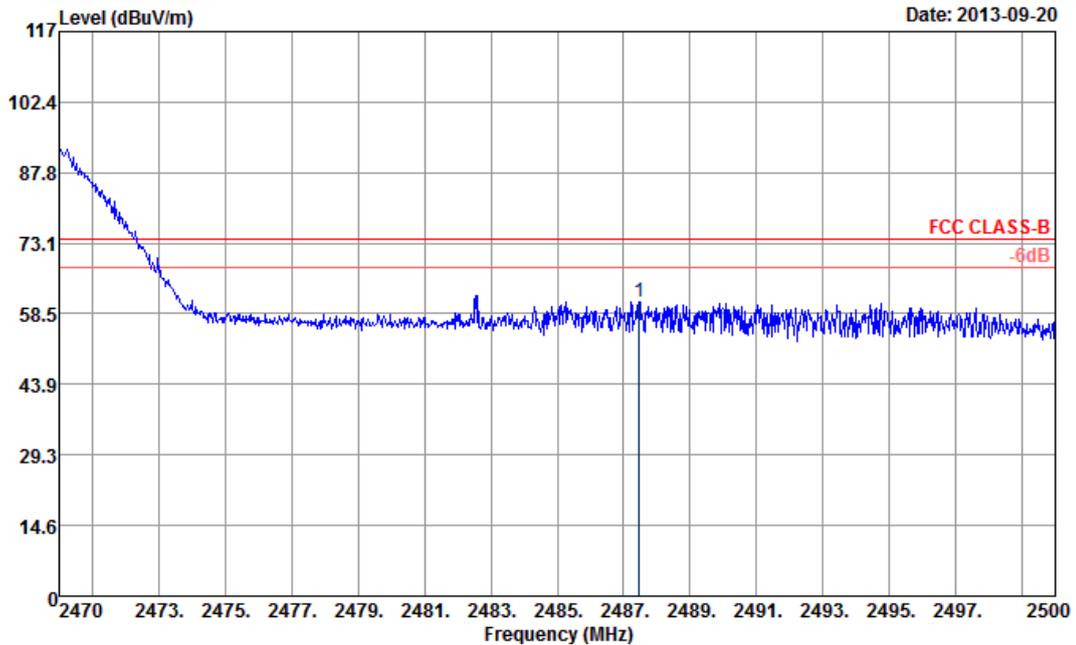
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2373.81	44.53	-9.47	54	39.64	32.28	6.88	34.27	131	110	Average

Note: Worst case measurement on 2373.81 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2310-2390MHz. And, 2390-2400 MHz is non-restricted band which limit line is 20dB below the fundamental frequency emission level which is tested by conducted spurious emission. Both the test results are compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

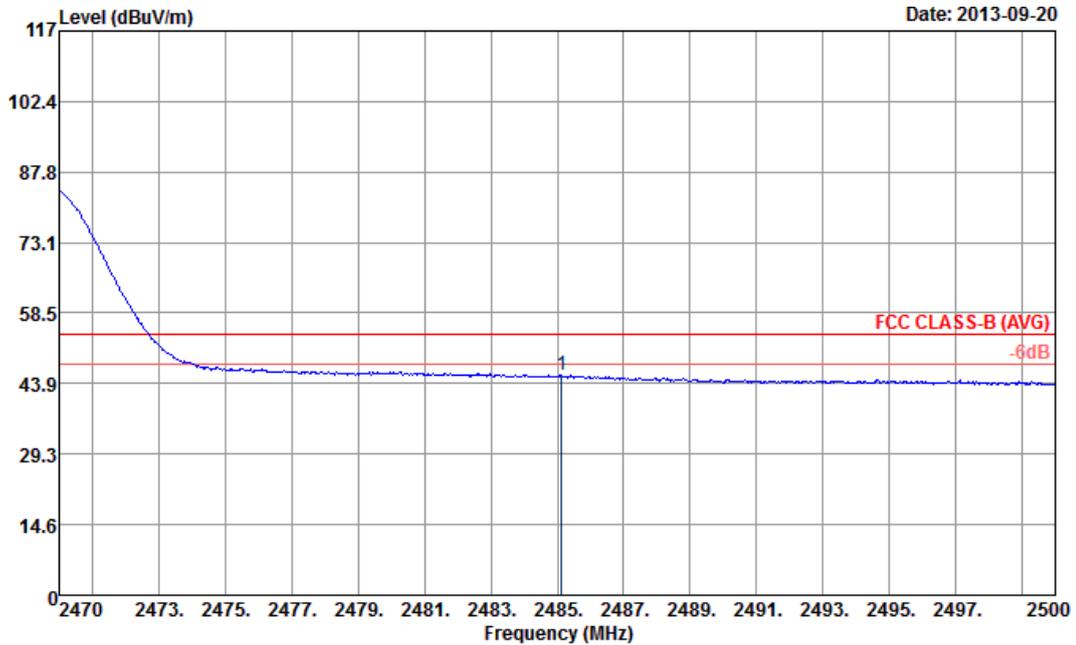
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2487.46	60.94	-13.06	74	55.93	32.38	7.06	34.43	131	110	Peak

Note: Worst case measurement on 2487.46 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Eric Shih



Site : 03CH07-HY
 Condition : FCC CLASS-B (AVG) 3m HF-ANT_120823 VERTICAL
 : RBW:1000.000KHz VBW:3.000KHz SWT:Auto

ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2485.12	45.61	-8.39	54	40.6	32.38	7.06	34.43	131	110	Average

Note: Worst case measurement on 2485.12 MHz is compliance with 74/54 dBuV/m (peak/average) limit and band edge measurement in the restricted band 2483.5-2500MHz. And, 2470-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.

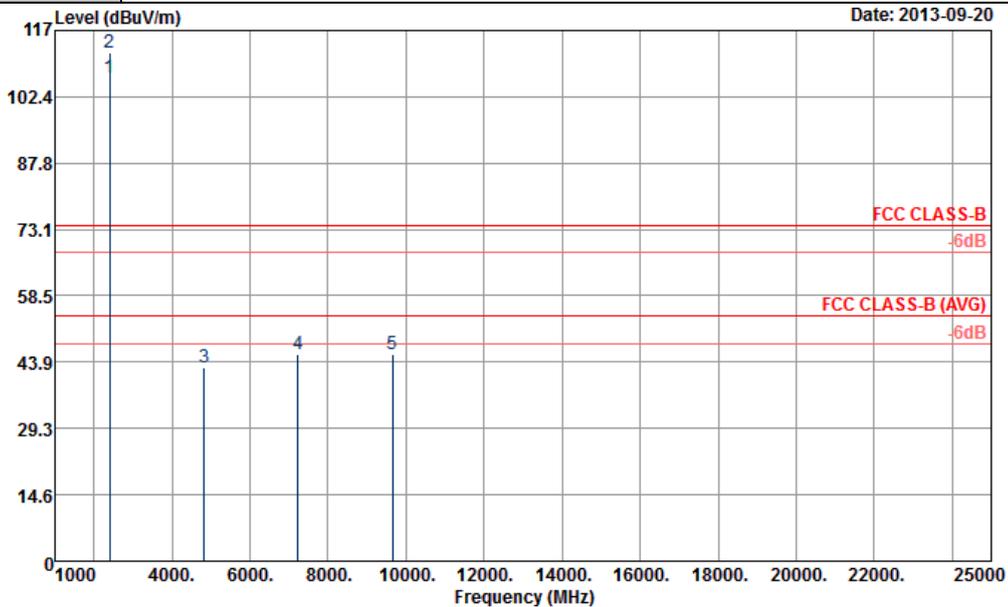


3.5.7 Test Result of Radiated Emission (30 MHz ~ 10th Harmonic)

Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2410 MHz is fundamental signal which can be ignored.
- 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 112.01dBμV/m - 20dB = 92.01dBμV/m.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2410	106.51	-	-	101.55	32.31	6.95	34.3	100	56	Average
2410	112.01	-	-	107.05	32.31	6.95	34.3	100	56	Peak
4824	42.54	-31.46	74	58.73	33.97	8.77	58.93	100	0	Peak
7236	45.5	-46.51	92.01	56.78	35.55	10.83	57.66	100	0	Peak
9648	45.74	-46.27	92.01	54.23	36.52	13.69	58.7	100	0	Peak

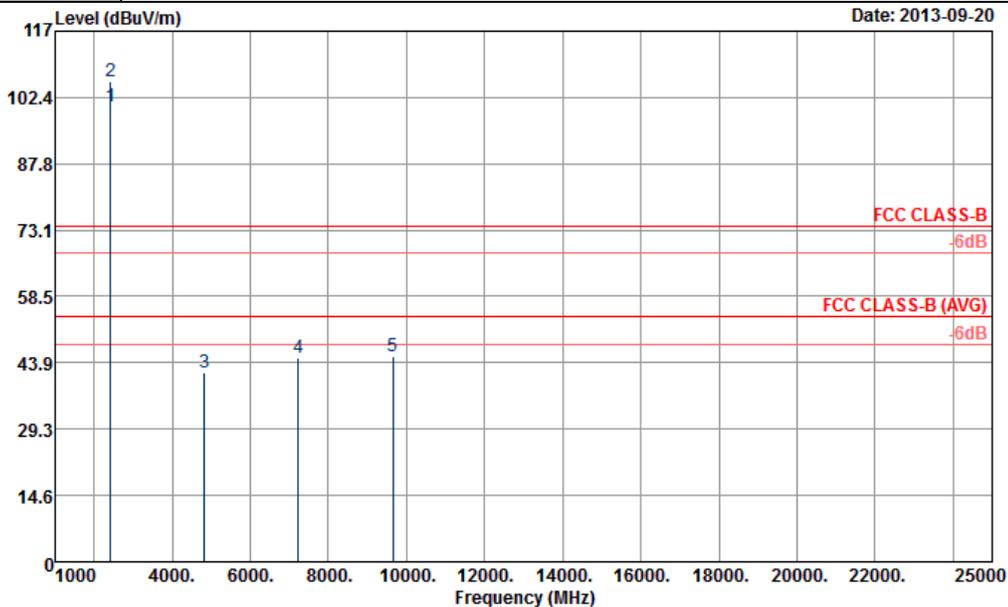
Other harmonics are lower than background noise



Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2414 MHz is fundamental signal which can be ignored.
- 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2414	100.52	-	-	95.56	32.31	6.95	34.3	106	355	Average
2414	105.79	-	-	100.83	32.31	6.95	34.3	106	355	Peak
4824	41.84	-32.16	74	58.03	33.97	8.77	58.93	100	0	Peak
7236	45.06	-40.73	85.79	56.34	35.55	10.83	57.66	100	0	Peak
9648	45.18	-40.61	85.79	53.67	36.52	13.69	58.7	100	0	Peak

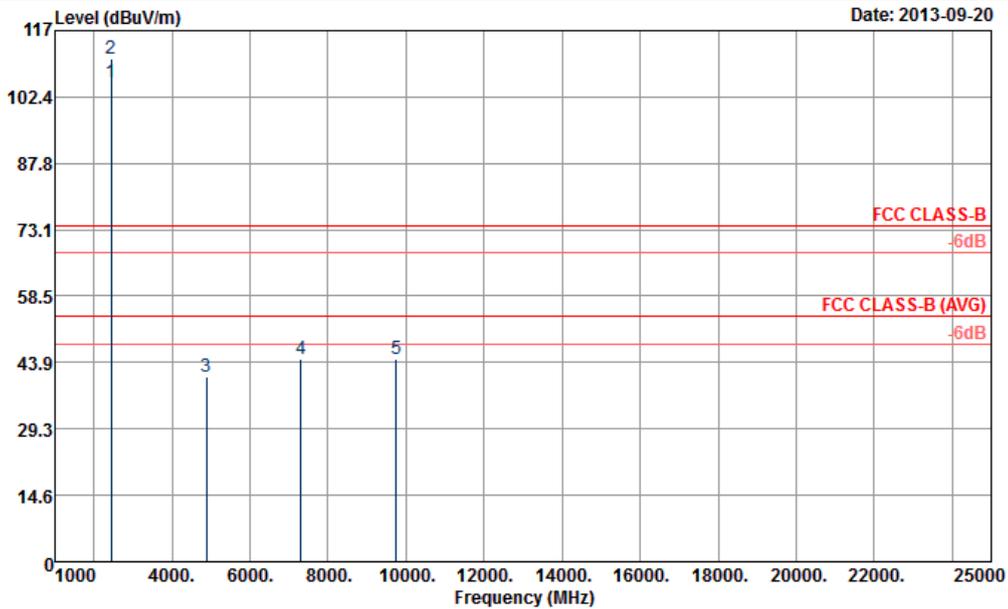
Other harmonics are lower than background noise



Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2438 MHz is fundamental signal which can be ignored.
- 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2438	105.5	-	-	100.51	32.35	6.99	34.35	100	55	Average
2438	110.92	-	-	105.93	32.35	6.99	34.35	100	55	Peak
4875	40.76	-33.24	74	56.82	33.95	8.82	58.83	100	0	Peak
7311	44.71	-29.29	74	55.99	35.54	10.91	57.73	100	0	Peak
9747	44.61	-46.31	90.92	52.99	36.66	13.69	58.73	100	0	Peak

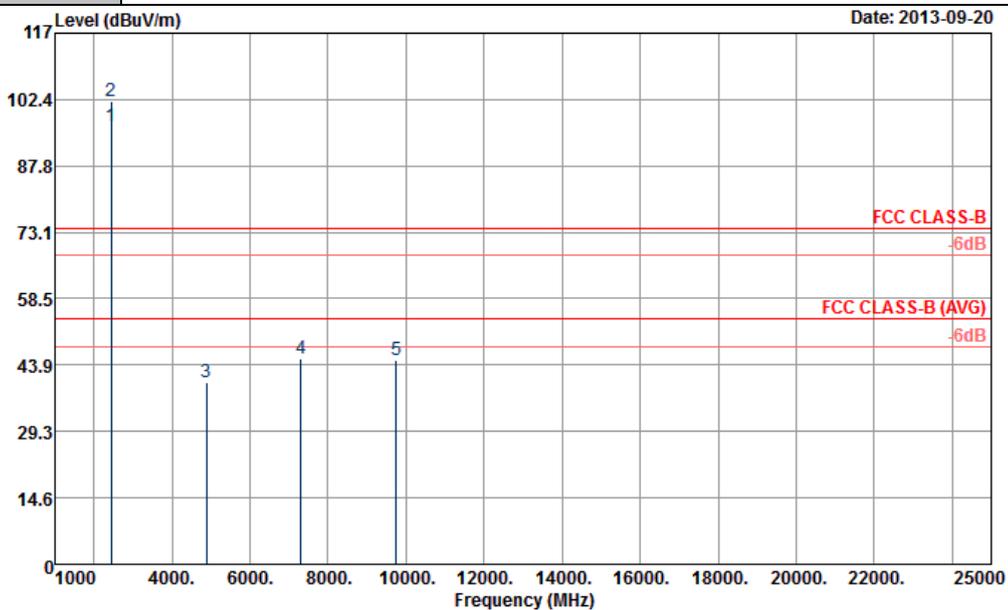
Other harmonics are lower than background noise



Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2439 MHz is fundamental signal which can be ignored.
- 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF VERTICAL

ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2439	96.58	-	-	91.59	32.35	6.99	34.35	100	315	Average
2439	101.89	-	-	96.9	32.35	6.99	34.35	100	315	Peak
4875	40.03	-33.97	74	56.09	33.95	8.82	58.83	100	0	Peak
7311	45.35	-28.65	74	56.63	35.54	10.91	57.73	100	0	Peak
9747	45.05	-36.84	81.89	53.43	36.66	13.69	58.73	100	0	Peak

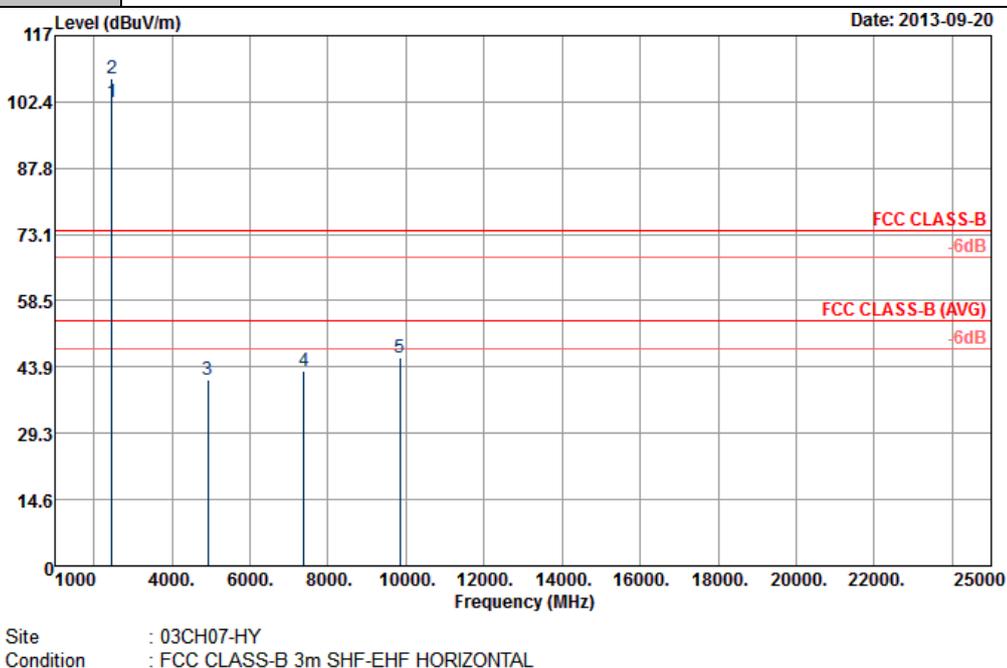
Other harmonics are lower than background noise



Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2464 MHz is fundamental signal which can be ignored.
- 9849 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2464	102.22	-	-	97.22	32.37	7.02	34.39	100	55	Average
2464	107.49	-	-	102.49	32.37	7.02	34.39	100	55	Peak
4923	40.92	-33.08	74	56.85	33.93	8.87	58.73	100	0	Peak
7386	43.16	-30.84	74	54.45	35.52	10.99	57.8	100	0	Peak
9849	45.89	-41.6	87.49	54.15	36.81	13.69	58.76	100	0	Peak

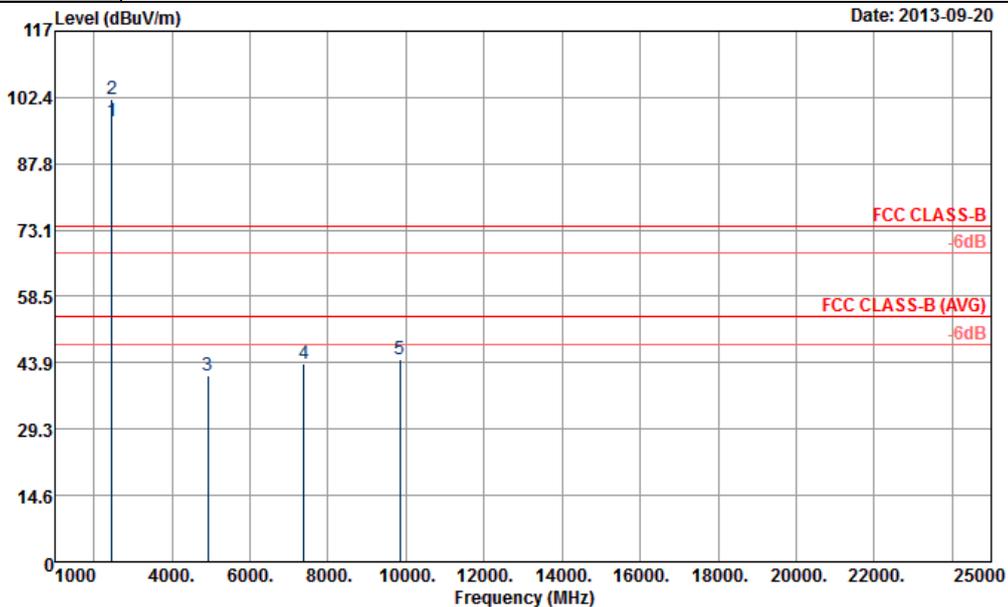
Other harmonics are lower than background noise



Test Mode :	802.11b	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2462 MHz is fundamental signal which can be ignored.
- 9849 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	97.18	-	-	92.18	32.37	7.02	34.39	132	360	Average
2462	101.92	-	-	96.92	32.37	7.02	34.39	132	360	Peak
4923	41.07	-32.93	74	57	33.93	8.87	58.73	100	0	Peak
7386	43.73	-30.27	74	55.02	35.52	10.99	57.8	100	0	Peak
9849	44.79	-37.13	81.92	53.05	36.81	13.69	58.76	100	0	Peak

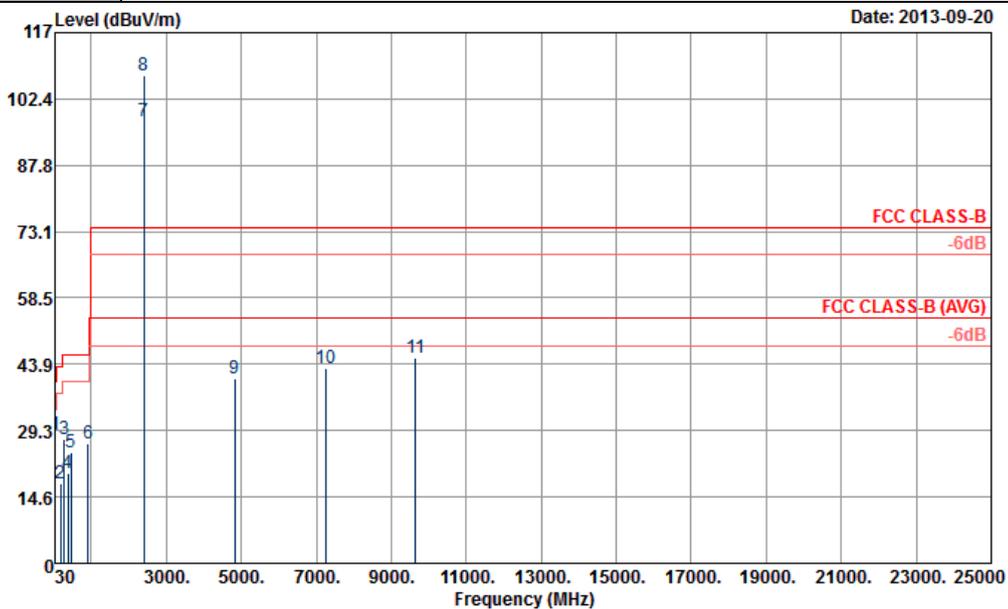
Other harmonics are lower than background noise



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2410 MHz is fundamental signal which can be ignored.
- 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
49.44	28.48	-11.52	40	50.49	8.5	0.69	31.2	100	136	Peak
182.28	17.55	-25.95	43.5	38.31	8.92	1.26	30.94	-	-	Peak
275.16	27.51	-18.49	46	43.86	12.96	1.64	30.95	-	-	Peak
370.7	19.83	-26.17	46	33.59	15.21	2.08	31.05	-	-	Peak
456.8	24.58	-21.42	46	35.86	17.19	2.31	30.78	-	-	Peak
920.9	26.28	-19.72	46	29.82	23.41	3.39	30.34	-	-	Peak



ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2410	97.3	-	-	92.34	32.31	6.95	34.3	100	55	Average
2410	107.59	-	-	102.63	32.31	6.95	34.3	100	55	Peak
4824	40.74	-33.26	74	56.93	33.97	8.77	58.93	100	0	Peak
7236	42.96	-44.63	87.59	54.24	35.55	10.83	57.66	100	0	Peak
9648	45.22	-42.37	87.59	53.71	36.52	13.69	58.7	100	0	Peak

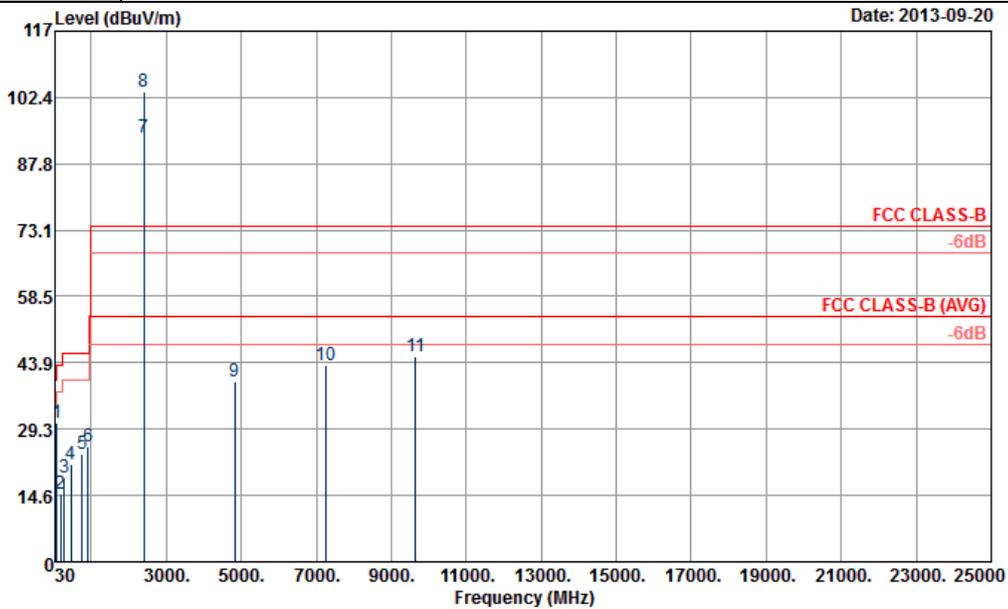
Other harmonics are lower than background noise



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2410 MHz is fundamental signal which can be ignored.
- 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF VERTICAL

ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
80.22	30.65	-9.35	40	53.25	7.7	0.88	31.18	100	47	Peak
182.28	15.05	-28.45	43.5	35.81	8.92	1.26	30.94	-	-	Peak
278.4	18.54	-27.46	46	34.82	13	1.64	30.92	-	-	Peak
454	21.35	-24.65	46	32.68	17.13	2.31	30.77	-	-	Peak
750.8	23.88	-22.12	46	29.86	21.36	3.06	30.4	-	-	Peak
918.8	25.42	-20.58	46	29	23.38	3.38	30.34	-	-	Peak



ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2410	93.43	-	-	88.47	32.31	6.95	34.3	107	120	Average
2410	103.52	-	-	98.56	32.31	6.95	34.3	107	120	Peak
4824	39.8	-34.2	74	55.99	33.97	8.77	58.93	100	0	Peak
7236	43.28	-40.24	83.52	54.56	35.55	10.83	57.66	100	0	Peak
9648	45.24	-38.28	83.52	53.73	36.52	13.69	58.7	100	0	Peak

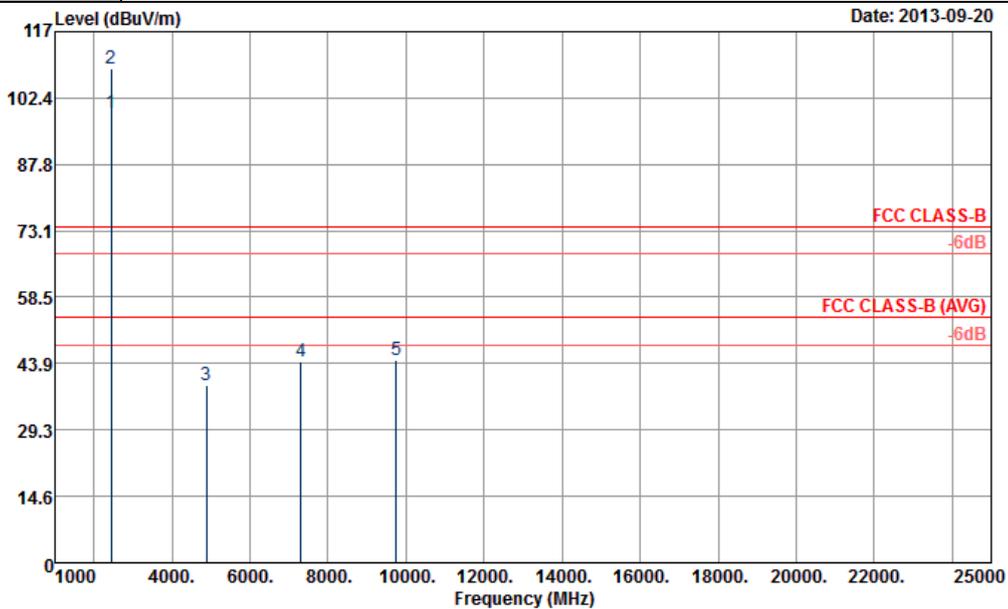
Other harmonics are lower than background noise



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2439 MHz is fundamental signal which can be ignored.
- 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2439	98.96	-	-	93.97	32.35	6.99	34.35	100	56	Average
2439	108.76	-	-	103.77	32.35	6.99	34.35	100	56	Peak
4875	39.08	-34.92	74	55.14	33.95	8.82	58.83	100	0	Peak
7311	44.39	-29.61	74	55.67	35.54	10.91	57.73	100	0	Peak
9747	44.73	-44.03	88.76	53.11	36.66	13.69	58.73	100	0	Peak

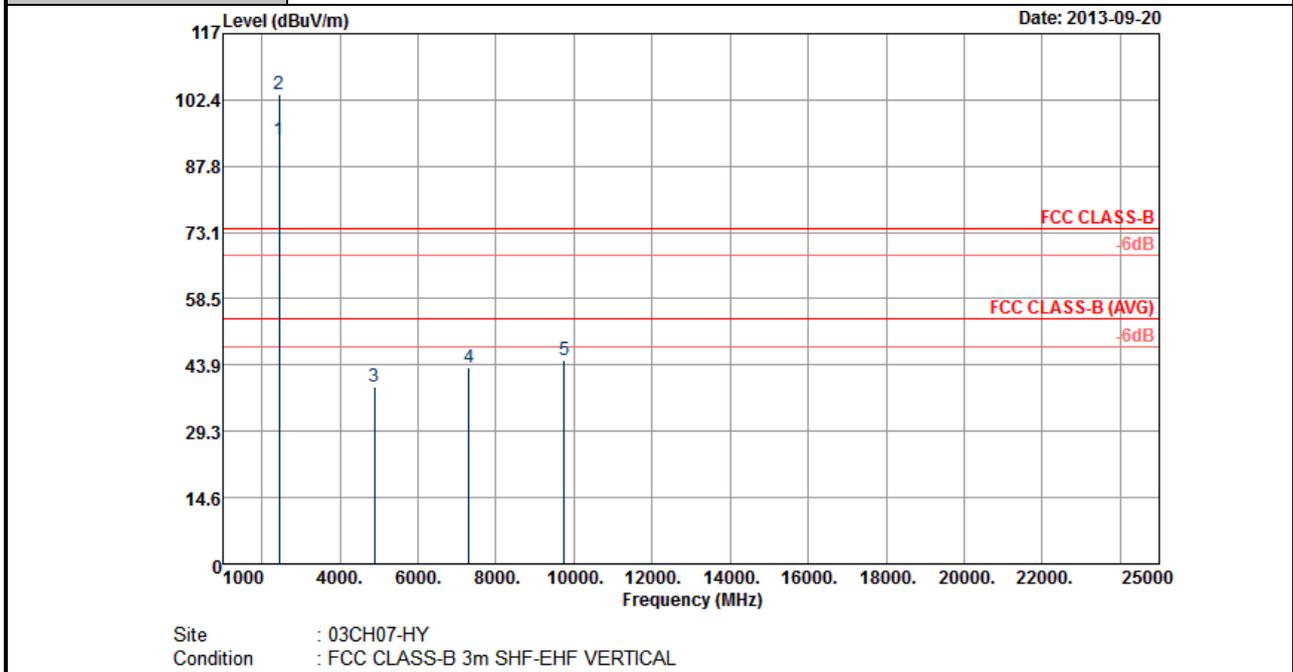
Other harmonics are lower than background noise



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2439 MHz is fundamental signal which can be ignored.
- 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2439	93.58	-	-	88.59	32.35	6.99	34.35	108	354	Average
2439	103.72	-	-	98.73	32.35	6.99	34.35	108	354	Peak
4875	39.05	-34.95	74	55.11	33.95	8.82	58.83	100	0	Peak
7311	43.36	-30.64	74	54.64	35.54	10.91	57.73	100	0	Peak
9747	45.01	-38.71	83.72	53.39	36.66	13.69	58.73	100	0	Peak

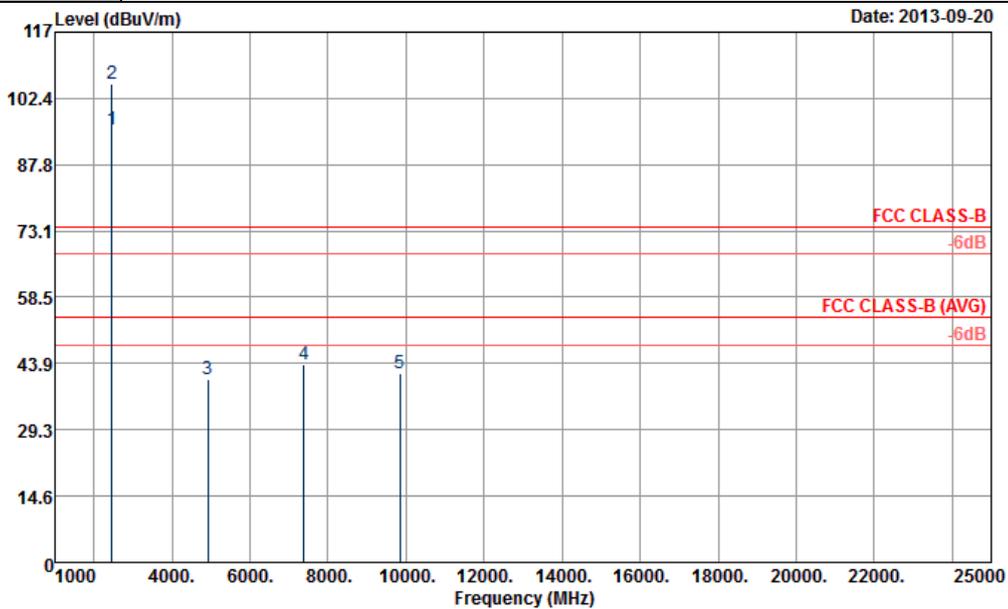
Other harmonics are lower than background noise



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2460 MHz is fundamental signal which can be ignored.
- 9849 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2460	95.58	-	-	90.58	32.37	7.02	34.39	123	51	Average
2460	105.48	-	-	100.48	32.37	7.02	34.39	123	51	Peak
4923	40.57	-33.43	74	56.5	33.93	8.87	58.73	100	0	Peak
7386	43.52	-30.48	74	54.81	35.52	10.99	57.8	100	0	Peak
9849	41.86	-43.62	85.48	50.12	36.81	13.69	58.76	100	0	Peak

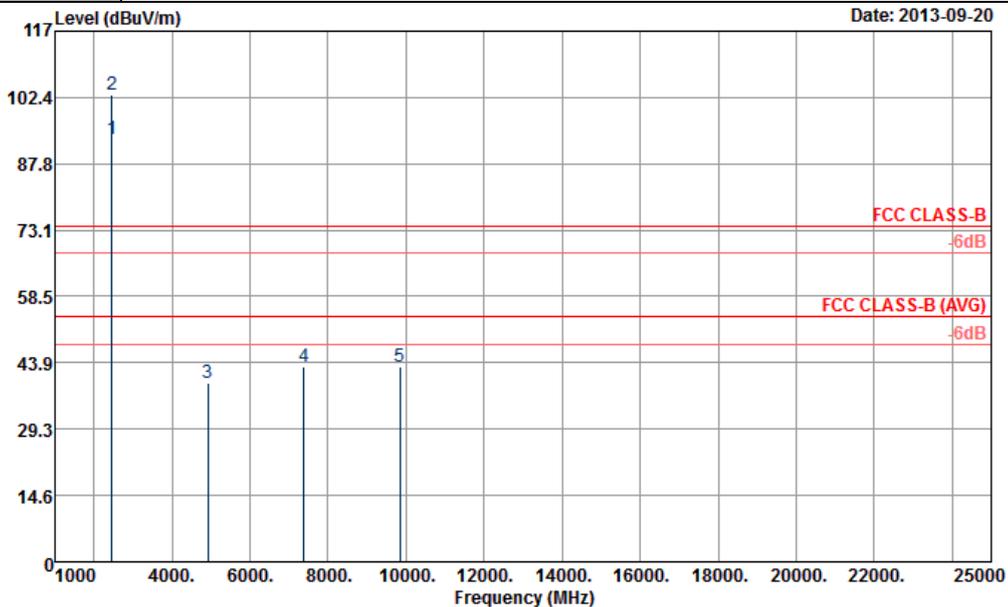
Other harmonics are lower than background noise



Test Mode :	802.11g	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2460 MHz is fundamental signal which can be ignored.
- 9849 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF VERTICAL

ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2460	93.17	-	-	88.17	32.37	7.02	34.39	107	94	Average
2460	102.85	-	-	97.85	32.37	7.02	34.39	107	94	Peak
4923	39.58	-34.42	74	55.51	33.93	8.87	58.73	100	0	Peak
7386	42.97	-31.03	74	54.26	35.52	10.99	57.8	100	0	Peak
9849	43	-39.85	82.85	51.26	36.81	13.69	58.76	100	0	Peak

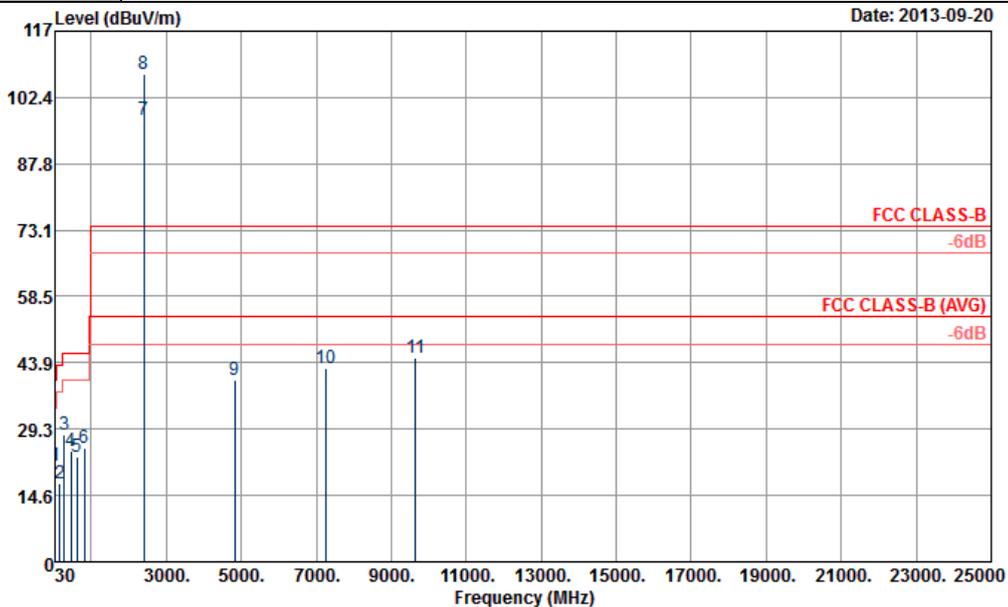
Other harmonics are lower than background noise



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2410 MHz is fundamental signal which can be ignored.
- 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
47.01	21.3	-18.7	40	42.53	9.3	0.67	31.2	-	-	Peak
160.68	17.23	-26.27	43.5	36.79	10.41	1.22	31.19	-	-	Peak
275.16	27.95	-18.05	46	44.3	12.96	1.64	30.95	100	18	Peak
457.5	24.41	-21.59	46	35.67	17.21	2.32	30.79	-	-	Peak
624.1	23.02	-22.98	46	30.82	19.99	2.76	30.55	-	-	Peak
821.5	25	-21	46	29.83	22.31	3.2	30.34	-	-	Peak

Other harmonics are lower than background noise



ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2410	97.32	-	-	92.36	32.31	6.95	34.3	100	55	Average
2410	107.42	-	-	102.46	32.31	6.95	34.3	100	55	Peak
4824	40.02	-33.98	74	56.21	33.97	8.77	58.93	100	0	Peak
7236	42.56	-44.86	87.42	53.84	35.55	10.83	57.66	100	0	Peak
9648	44.98	-42.44	87.42	53.47	36.52	13.69	58.7	100	0	Peak

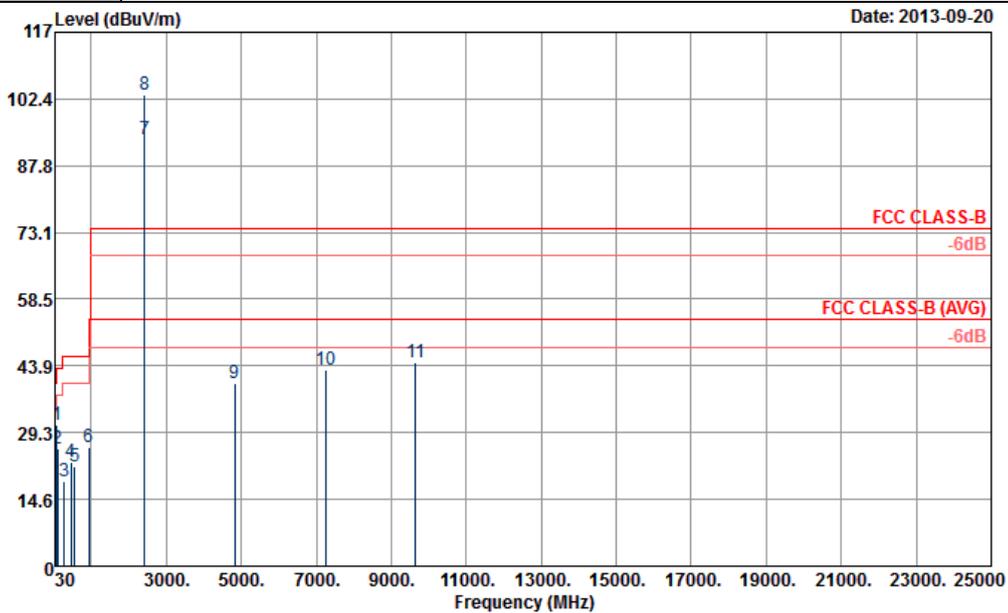
Other harmonics are lower than background noise



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2414 MHz is fundamental signal which can be ignored.
- 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
79.68	30.82	-9.18	40	53.57	7.57	0.88	31.2	100	123	Peak
95.88	25.8	-17.7	43.5	46.6	9.32	0.98	31.1	-	-	Peak
275.16	18.44	-27.56	46	34.79	12.96	1.64	30.95	-	-	Peak
463.8	22.74	-23.26	46	33.88	17.33	2.33	30.8	-	-	Peak
559.7	21.93	-24.07	46	31	19.11	2.58	30.76	-	-	Peak
936.3	26.09	-19.91	46	29.39	23.64	3.43	30.37	-	-	Peak

Other harmonics are lower than background noise



ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2414	93.39	-	-	88.43	32.31	6.95	34.3	161	129	Average
2414	103.25	-	-	98.29	32.31	6.95	34.3	161	129	Peak
4824	40.23	-33.77	74	56.42	33.97	8.77	58.93	100	0	Peak
7236	42.9	-40.35	83.25	54.18	35.55	10.83	57.66	100	0	Peak
9648	44.67	-38.58	83.25	53.16	36.52	13.69	58.7	100	0	Peak

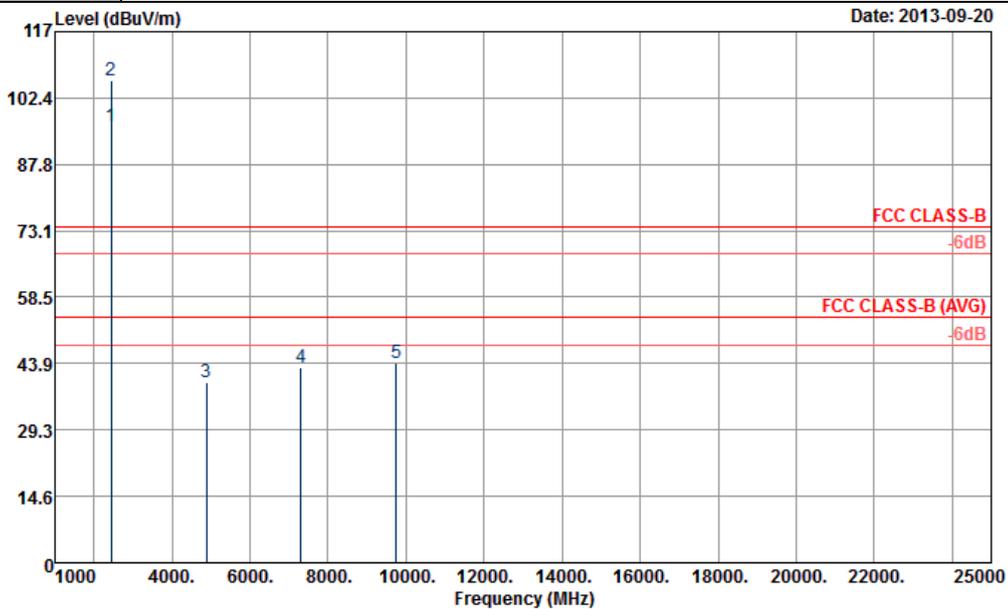
Other harmonics are lower than background noise



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2439 MHz is fundamental signal which can be ignored.
- 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2439	96.23	-	-	91.24	32.35	6.99	34.35	100	56	Average
2439	106.17	-	-	101.18	32.35	6.99	34.35	100	56	Peak
4875	39.71	-34.29	74	55.77	33.95	8.82	58.83	100	0	Peak
7311	43.17	-30.83	74	54.45	35.54	10.91	57.73	100	0	Peak
9747	43.97	-42.2	86.17	52.35	36.66	13.69	58.73	100	0	Peak

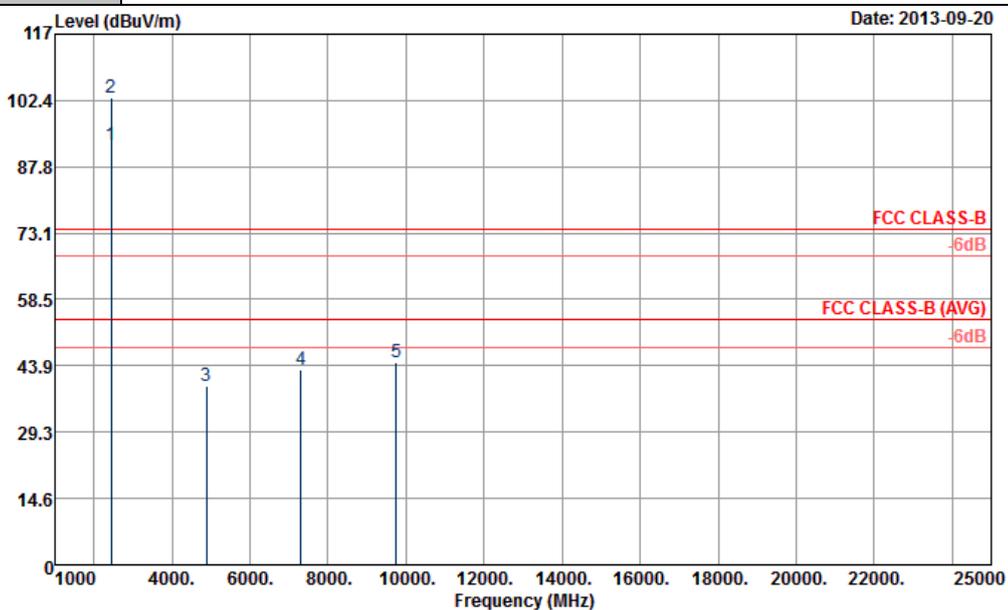
Other harmonics are lower than background noise



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2439 MHz is fundamental signal which can be ignored.
- 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF VERTICAL

ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2439	92.57	-	-	87.58	32.35	6.99	34.35	107	133	Average
2439	102.84	-	-	97.85	32.35	6.99	34.35	107	133	Peak
4875	39.52	-34.48	74	55.58	33.95	8.82	58.83	100	0	Peak
7311	42.9	-31.1	74	54.18	35.54	10.91	57.73	100	0	Peak
9747	44.55	-38.29	82.84	52.93	36.66	13.69	58.73	100	0	Peak

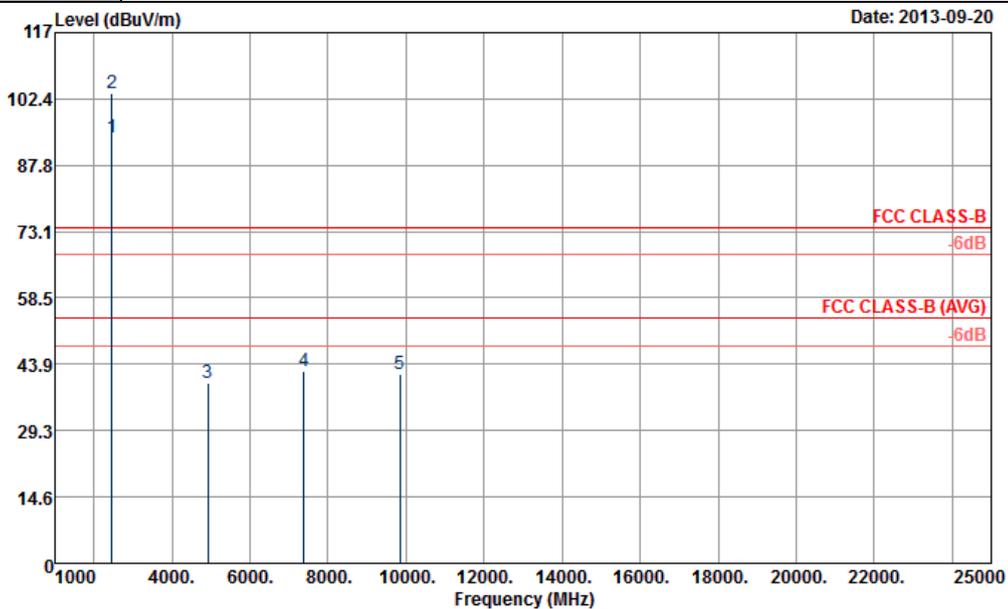
Other harmonics are lower than background noise



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2460 MHz is fundamental signal which can be ignored.
- 9849 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2460	93.7	-	-	88.7	32.37	7.02	34.39	123	50	Average
2460	103.58	-	-	98.58	32.37	7.02	34.39	123	50	Peak
4923	39.69	-34.31	74	55.62	33.93	8.87	58.73	100	0	Peak
7386	42.36	-31.64	74	53.65	35.52	10.99	57.8	100	0	Peak
9849	41.66	-41.92	83.58	49.92	36.81	13.69	58.76	100	0	Peak

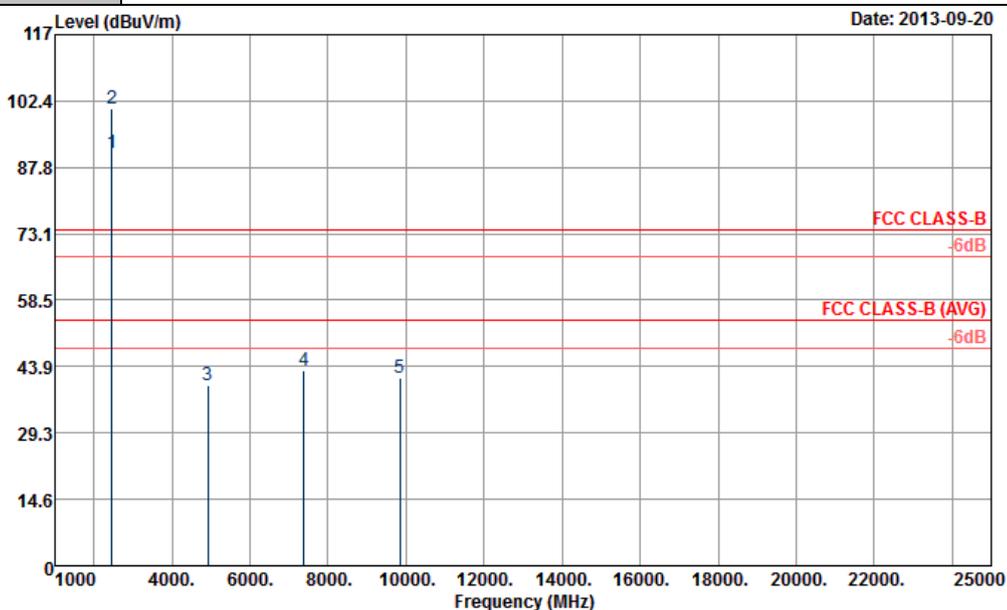
Other harmonics are lower than background noise



Test Mode :	802.11n HT20	Temperature :	21~24°C
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2460 MHz is fundamental signal which can be ignored.
- 9849 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF VERTICAL

ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2460	90.94	-	-	85.94	32.37	7.02	34.39	132	92	Average
2460	100.61	-	-	95.61	32.37	7.02	34.39	132	92	Peak
4923	39.63	-34.37	74	55.56	33.93	8.87	58.73	100	0	Peak
7386	43.16	-30.84	74	54.45	35.52	10.99	57.8	100	0	Peak
9849	41.51	-39.1	80.61	49.77	36.81	13.69	58.76	100	0	Peak

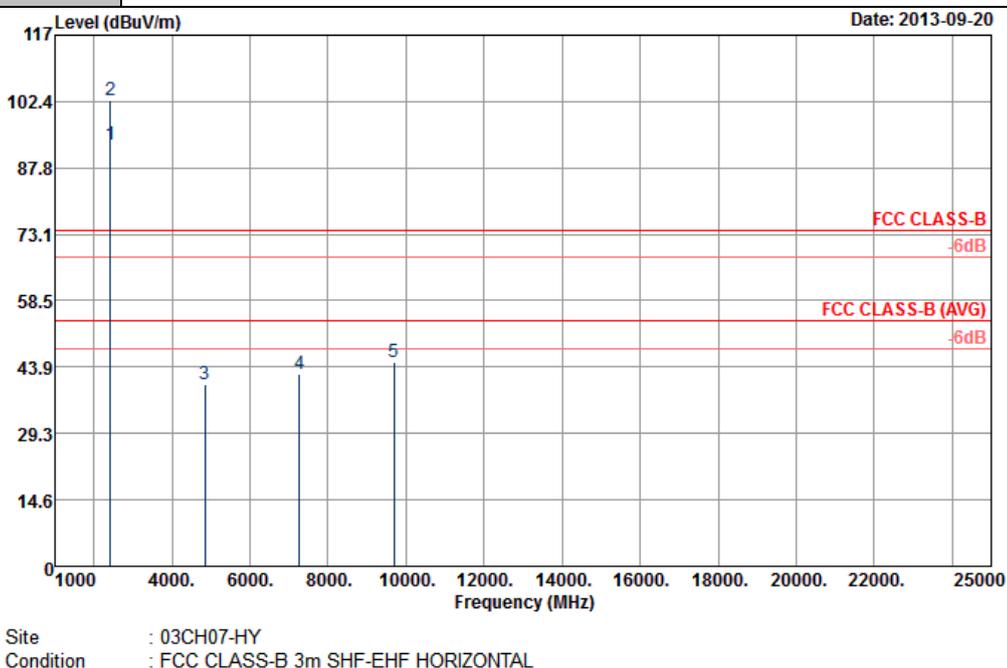
Other harmonics are lower than background noise



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	03	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2424 MHz is fundamental signal which can be ignored.
- 9687 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2424	92.94	-	-	88.01	32.33	6.95	34.35	102	56	Average
2424	102.58	-	-	97.65	32.33	6.95	34.35	102	56	Peak
4845	40.22	-33.78	74	56.35	33.96	8.8	58.89	100	0	Peak
7266	42.31	-31.69	74	53.6	35.54	10.86	57.69	100	0	Peak
9687	44.89	-37.69	82.58	53.34	36.57	13.69	58.71	100	0	Peak

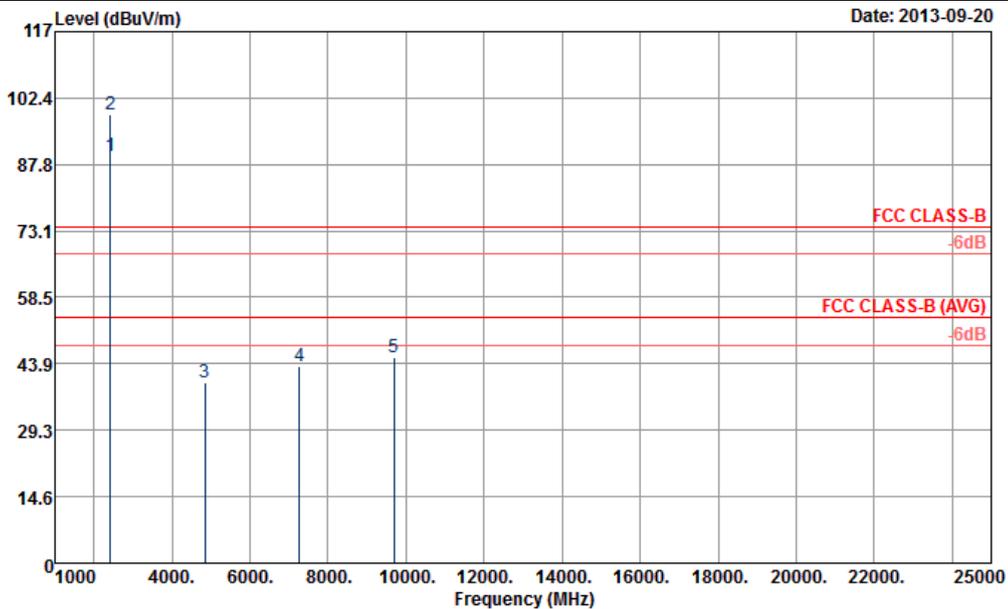
Other harmonics are lower than background noise



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	03	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2424 MHz is fundamental signal which can be ignored.
- 9687 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF VERTICAL

ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2424	89.71	-	-	84.78	32.33	6.95	34.35	136	193	Average
2424	98.84	-	-	93.91	32.33	6.95	34.35	136	193	Peak
4845	39.6	-34.4	74	55.73	33.96	8.8	58.89	100	0	Peak
7266	43.23	-30.77	74	54.52	35.54	10.86	57.69	100	0	Peak
9687	45.21	-33.63	78.84	53.66	36.57	13.69	58.71	100	0	Peak

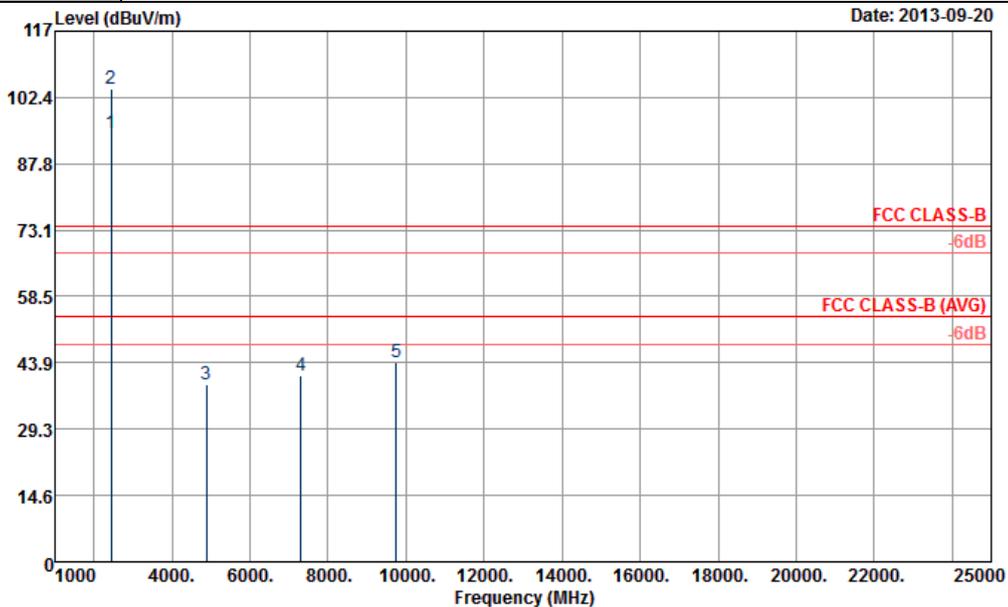
Other harmonics are lower than background noise



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2439 MHz is fundamental signal which can be ignored.
- 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2439	94.47	-	-	89.48	32.35	6.99	34.35	100	56	Average
2439	104.18	-	-	99.19	32.35	6.99	34.35	100	56	Peak
4875	39.11	-34.89	74	55.17	33.95	8.82	58.83	100	0	Peak
7311	41	-33	74	52.28	35.54	10.91	57.73	100	0	Peak
9747	43.98	-40.2	84.18	52.36	36.66	13.69	58.73	100	0	Peak

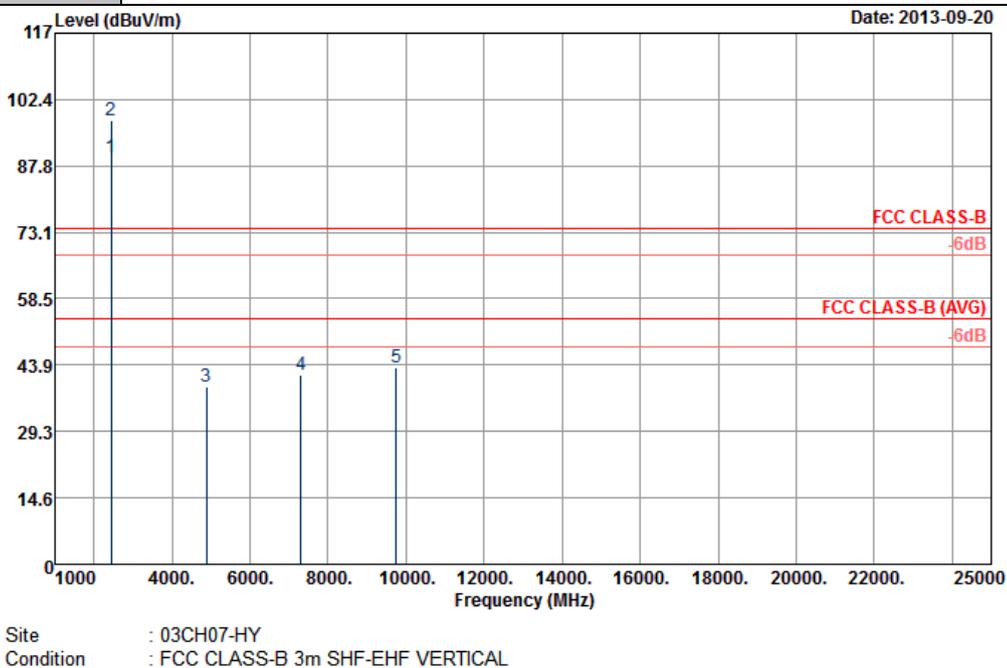
Other harmonics are lower than background noise



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2439 MHz is fundamental signal which can be ignored.
- 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2439	89.58	-	-	84.59	32.35	6.99	34.35	133	131	Average
2439	97.83	-	-	92.84	32.35	6.99	34.35	133	131	Peak
4875	39.16	-34.84	74	55.22	33.95	8.82	58.83	100	0	Peak
7311	41.8	-32.2	74	53.08	35.54	10.91	57.73	100	0	Peak
9747	43.34	-34.49	77.83	51.72	36.66	13.69	58.73	100	0	Peak

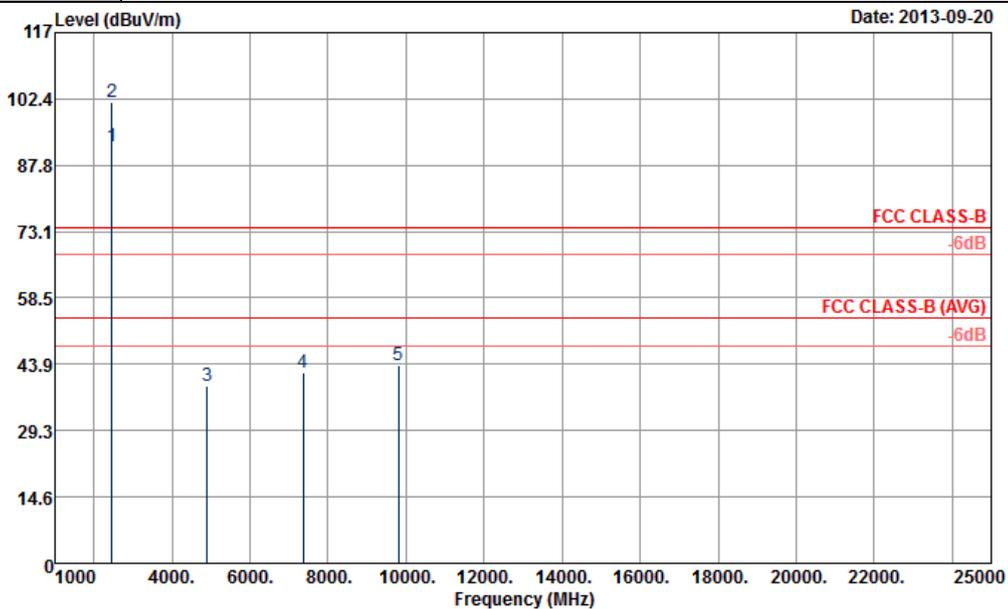
Other harmonics are lower than background noise



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	09	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2450 MHz is fundamental signal which can be ignored.
- 9807 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
Condition : FCC CLASS-B 3m SHF-EHF HORIZONTAL

ANTENNA POLARITY : HORIZONTAL

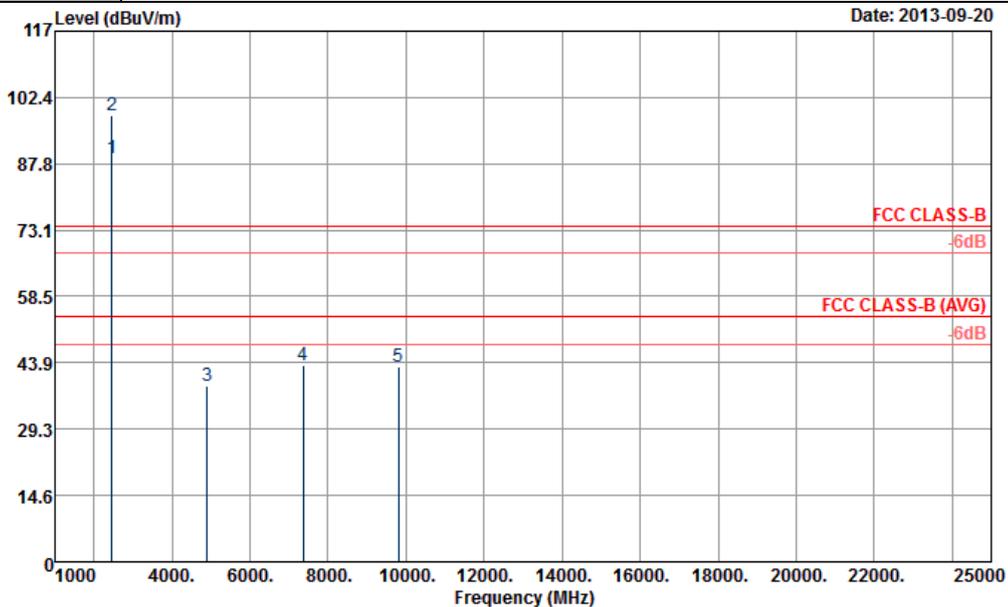
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2450	91.87	-	-	86.92	32.35	6.99	34.39	100	56	Average
2450	101.67	-	-	96.72	32.35	6.99	34.39	100	56	Peak
4905	39.26	-34.74	74	55.22	33.93	8.87	58.76	100	0	Peak
7356	42.04	-31.96	74	53.32	35.53	10.96	57.77	100	0	Peak
9807	43.69	-37.98	81.67	52.01	36.73	13.69	58.74	100	0	Peak



Test Mode :	802.11n HT40	Temperature :	21~24°C
Test Channel :	09	Relative Humidity :	51~53%
Test Engineer :	Eric Shih		

Remark :

- 2452 MHz is fundamental signal which can be ignored.
- 9807 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.
- Average measurement was not performed if peak level went lower than the average limit.
- The harmonic (5th, 6th, 7th, ...etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise



Site : 03CH07-HY
 Condition : FCC CLASS-B 3m SHF-EHF VERTICAL

ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	89.08	-	-	84.13	32.35	6.99	34.39	131	110	Average
2452	98.35	-	-	93.4	32.35	6.99	34.39	131	110	Peak
4905	38.93	-35.07	74	54.89	33.93	8.87	58.76	100	0	Peak
7356	43.27	-30.73	74	54.55	35.53	10.96	57.77	100	0	Peak
9807	43.16	-35.19	78.35	51.48	36.73	13.69	58.74	100	0	Peak

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

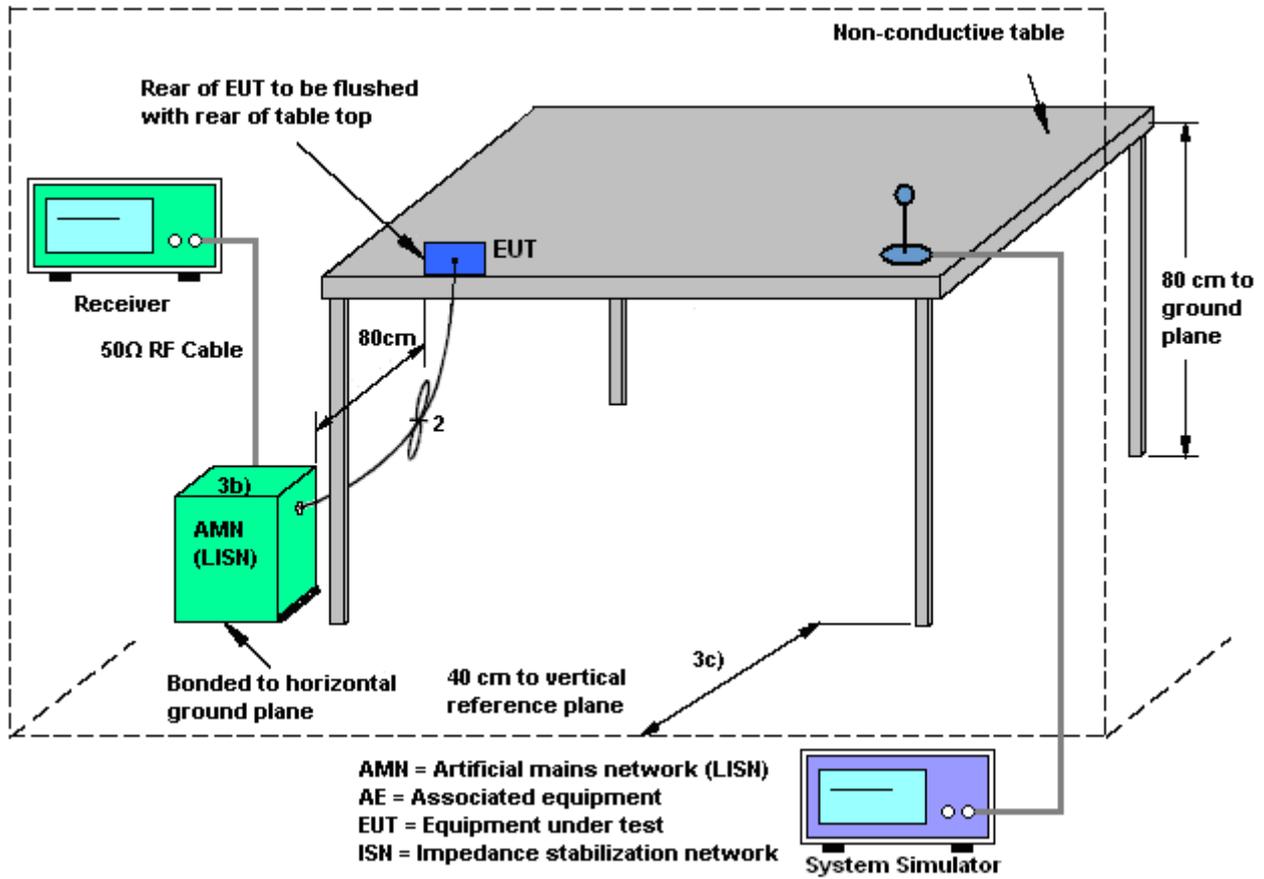
3.6.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.6.3 Test Procedures

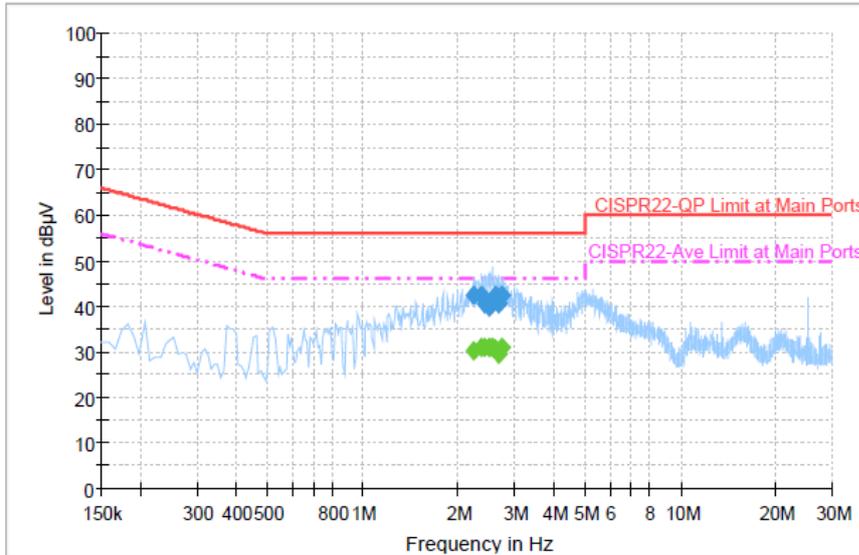
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN Idle + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 1		



Final Result : Quasi-Peak

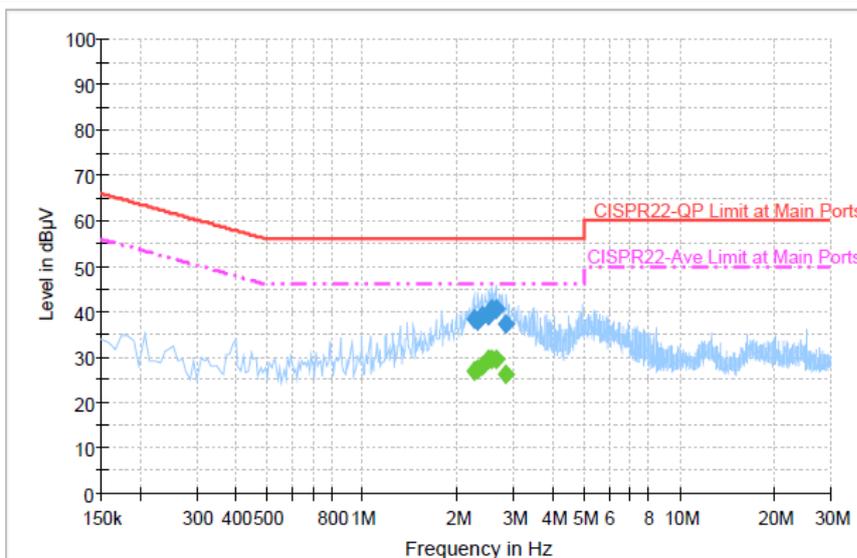
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.230000	42.3	Off	L1	19.5	13.7	56.0
2.366000	42.6	Off	L1	19.6	13.4	56.0
2.430000	40.5	Off	L1	19.7	15.5	56.0
2.494000	40.0	Off	L1	19.6	16.0	56.0
2.558000	41.3	Off	L1	19.6	14.7	56.0
2.606000	42.3	Off	L1	19.6	13.7	56.0
2.686000	40.6	Off	L1	19.6	15.4	56.0
2.734000	42.5	Off	L1	19.6	13.5	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.230000	30.2	Off	L1	19.5	15.8	46.0
2.366000	31.1	Off	L1	19.6	14.9	46.0
2.430000	31.1	Off	L1	19.7	14.9	46.0
2.494000	31.0	Off	L1	19.6	15.0	46.0
2.558000	30.9	Off	L1	19.6	15.1	46.0
2.606000	30.8	Off	L1	19.6	15.2	46.0
2.686000	29.4	Off	L1	19.6	16.6	46.0
2.734000	31.1	Off	L1	19.6	14.9	46.0



Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN Idle + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 1		



Final Result : Quasi-Peak

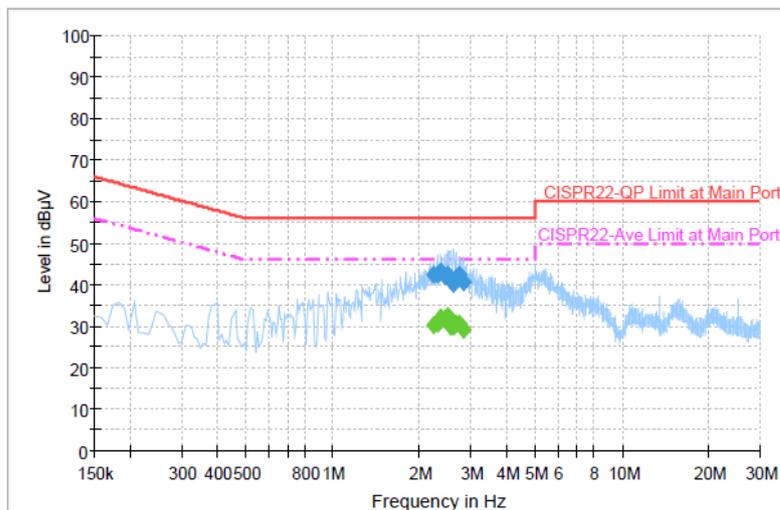
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.246000	38.5	Off	N	19.6	17.5	56.0
2.310000	37.9	Off	N	19.6	18.1	56.0
2.382000	39.2	Off	N	19.7	16.8	56.0
2.502000	39.1	Off	N	19.6	16.9	56.0
2.574000	40.5	Off	N	19.6	15.5	56.0
2.638000	40.4	Off	N	19.6	15.6	56.0
2.846000	37.4	Off	N	19.6	18.6	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.246000	26.8	Off	N	19.6	19.2	46.0
2.310000	27.2	Off	N	19.6	18.8	46.0
2.382000	28.2	Off	N	19.7	17.8	46.0
2.502000	29.5	Off	N	19.6	16.5	46.0
2.574000	29.5	Off	N	19.6	16.5	46.0
2.638000	29.4	Off	N	19.6	16.6	46.0
2.846000	26.1	Off	N	19.6	19.9	46.0



Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN Idle + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 2		



Final Result : Quasi-Peak

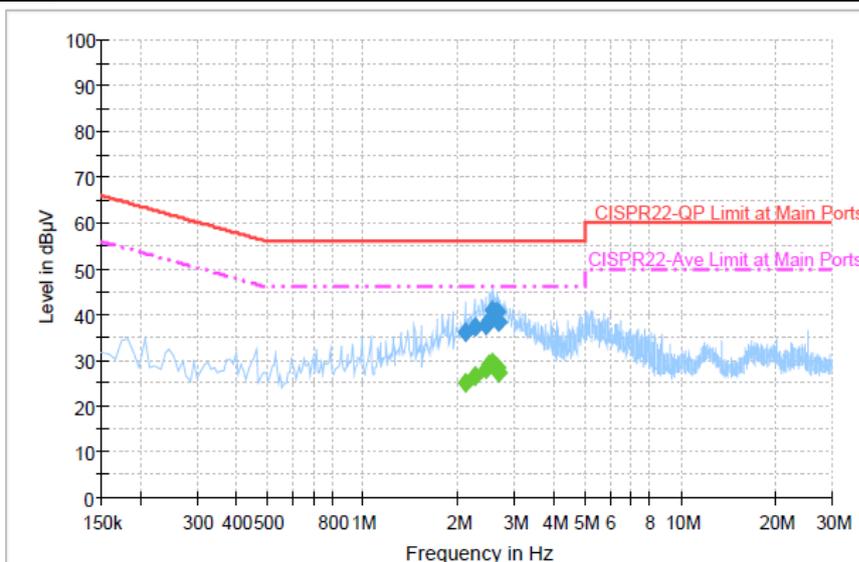
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.230000	42.5	Off	L1	19.5	13.5	56.0
2.302000	42.4	Off	L1	19.6	13.6	56.0
2.374000	43.4	Off	L1	19.6	12.6	56.0
2.446000	42.2	Off	L1	19.6	13.8	56.0
2.510000	42.6	Off	L1	19.6	13.4	56.0
2.558000	40.8	Off	L1	19.6	15.2	56.0
2.630000	40.3	Off	L1	19.6	15.7	56.0
2.686000	41.8	Off	L1	19.6	14.2	56.0
2.750000	42.4	Off	L1	19.6	13.6	56.0
2.822000	40.5	Off	L1	19.6	15.5	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.230000	30.4	Off	L1	19.5	15.6	46.0
2.302000	30.6	Off	L1	19.6	15.4	46.0
2.374000	32.2	Off	L1	19.6	13.8	46.0
2.446000	31.8	Off	L1	19.6	14.2	46.0
2.510000	32.6	Off	L1	19.6	13.4	46.0
2.558000	30.1	Off	L1	19.6	15.9	46.0
2.630000	30.0	Off	L1	19.6	16.0	46.0
2.686000	30.5	Off	L1	19.6	15.5	46.0
2.750000	30.5	Off	L1	19.6	15.5	46.0
2.822000	29.1	Off	L1	19.6	16.9	46.0



Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN Idle + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 2		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.110000	36.3	Off	N	19.6	19.7	56.0
2.246000	37.4	Off	N	19.6	18.6	56.0
2.446000	37.6	Off	N	19.7	18.4	56.0
2.502000	38.7	Off	N	19.6	17.3	56.0
2.574000	40.8	Off	N	19.6	15.2	56.0
2.646000	40.5	Off	N	19.6	15.5	56.0
2.678000	38.5	Off	N	19.6	17.5	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.110000	25.1	Off	N	19.6	20.9	46.0
2.246000	26.6	Off	N	19.6	19.4	46.0
2.446000	28.2	Off	N	19.7	17.8	46.0
2.502000	29.3	Off	N	19.6	16.7	46.0
2.574000	29.6	Off	N	19.6	16.4	46.0
2.646000	28.5	Off	N	19.6	17.5	46.0
2.678000	27.4	Off	N	19.6	18.6	46.0



3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.7.2 Antenna Anti-Replacement Construction

Non-standard antenna connector is used.

3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Sep. 14, 2013 ~ Sep. 25, 2013	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Aug. 17, 2013	Sep. 14, 2013 ~ Sep. 25, 2013	Aug. 16, 2014	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Aug. 17, 2013	Sep. 14, 2013 ~ Sep. 25, 2013	Aug. 16, 2014	Conducted (TH02-HY)
Thermometer	Wisewind	410	N/A	N/A	Nov. 20, 2012	Sep. 14, 2013 ~ Sep. 25, 2013	Nov. 19, 2013	Conducted (TH02-HY)
RF cable	HONOVA	MF86	N/A	N/A	Nov. 26, 2012	Sep. 14, 2013 ~ Sep. 25, 2013	Nov. 25, 2013	Conducted (TH02-HY)
RF cable	HONOVA	MF86	N/A	N/A	Nov. 26, 2012	Sep. 14, 2013 ~ Sep. 25, 2013	Nov. 25, 2013	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz ~ 7GHz	Sep. 06, 2013	Sep. 19, 2013~ Sep. 20, 2013	Sep. 05, 2014	Radiation (03CH07-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9kHz ~ 30GHz	Nov. 30, 2012	Sep. 19, 2013~ Sep. 20, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9 kHz~30 MHz	Jul. 03, 2012	Sep. 19, 2013~ Sep. 20, 2013	Jul. 03, 2014	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz~1GHz	Oct. 06, 2012	Sep. 19, 2013~ Sep. 20, 2013	Oct. 05, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 22, 2013	Sep. 19, 2013~ Sep. 20, 2013	Aug. 21, 2014	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Sep. 28, 2012	Sep. 19, 2013~ Sep. 20, 2013	Sep. 27, 2013	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30MHz~1GHz	Feb. 26, 2013	Sep. 19, 2013~ Sep. 20, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz ~ 26.5GHz	Dec. 01, 2012	Sep. 19, 2013~ Sep. 20, 2013	Nov. 30, 2013	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	159088	DC~18G High Gain	Feb. 27, 2013	Sep. 19, 2013~ Sep. 20, 2013	Feb. 26, 2014	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Sep. 19, 2013~ Sep. 20, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Sep. 19, 2013~ Sep. 20, 2013	N/A	Radiation (03CH07-HY)
High Pass Filter	Microwave	H03G18G3	N/A	3GHz HPF	Nov. 26, 2012	Sep. 19, 2013~ Sep. 20, 2013	Nov. 25, 2013	Radiation (03CH07-HY)
High Pass Filter	Microwave	H07G18G3	282388	7GHz HPF	Nov. 29, 2012	Sep. 19, 2013~ Sep. 20, 2013	Nov. 28, 2013	Radiation (03CH07-HY)
Low Pass Filter	Wainwright	WLKS1200-8SS	SN3	Pass Filter	Nov. 29, 2012	Sep. 19, 2013~ Sep. 20, 2013	Nov. 28, 2013	Radiation (03CH07-HY)
HF RF Cable	HUBER SUHNER	SUCOFLEX 104	38411/6	1GHz ~ 18GHz	Dec.04 , 2012	Sep. 19, 2013~ Sep. 20, 2013	Dec.03,2013	Radiation (03CH07-HY)
LF RF Cable	Warison+HUBER SUHNER	WCBA-WC04NM.NM2	N/A	30MHz ~ 1GHz	Dec.04 , 2012	Sep. 19, 2013~ Sep. 20, 2013	Dec.03,2013	Radiation (03CH07-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Test Software	Audix	E3	Version 6.2009-08-24	N/A	N/A	Sep. 19, 2013~ Sep. 20, 2013	N/A	Radiation (03CH07-HY)
Hygrometer	Testo	608-H1	34897197	N/A	Nov. 20, 2012	Sep. 19, 2013~ Sep. 20, 2013	Nov. 19, 2013	Radiation (03CH07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz~ 2.75GHz	Nov. 13, 2012	Sep. 11, 2013	Nov. 12, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2012	Sep. 11, 2013	Dec. 11, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 06, 2012	Sep. 11, 2013	Dec. 05, 2013	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Sep. 11, 2013	N/A	Conduction (CO05-HY)
Test Software	N/A	EMC32	8.40.0	N/A	N/A	Sep. 11, 2013	N/A	Conduction (CO05-HY)
Thermometer	Testo	608-H1	34913912	N/A	Apr. 25, 2013,	Sep. 11, 2013	Apr. 24, 2014	Conduction (CO05-HY)
LF Cable	Shuner	RG-402	N/A	N/A	Aug. 18, 2013	Sep. 11, 2013	Sep. 17, 2013	Conduction (CO05-HY)

Note: Test equipment calibration is traceable to the procedure of ISO17025.



5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.26
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Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.72
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