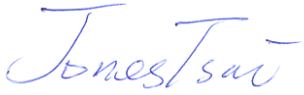
FCC RF Test Report

APPLICANT	:	Sony Mobile Communications AB
EQUIPMENT	:	Smart phone
BRAND NAME	:	Sony
MODEL NAME	:	C2305
TYPE NAME		PM-0570-BV
FCC ID	:	PY7PM-0570
STANDARD	:	FCC 47 CFR Part 15 Subpart C
CLASSIFICATION	:	(DTS) Digital Transmission System

The product was received on Apr. 25, 2013 and completely tested on May 08, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance 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.

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR342505C	Rev. 01	Initial issue of report	Jun. 06, 2013

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.2	15.247(b)	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	Conducted Band Edges	≤ 20dBc	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 9.68 dB at 79.140 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 16.10 dB at 2.694 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Sony Mobile Communications AB
Nya Vattentornet, 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	C2305
Type Name	PM-0570-BV
FCC ID	PY7PM-0570
GSM Operating Band(s)	GSM 900/1800/1900MHz
WCDMA Operating Band(s)	FDD Band I / VIII
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	V2.1 + EDR / V3.0 / V4.0LE
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 Details of Tested Sample (EUT) Information

Product Specification subjective to this standard	
Transmitter / Receiver Frequency Range	2412 MHz ~ 2462 MHz
Number of Channels	11
Carrier Frequency of Each Channel	2412+(n-1)*5 MHz; n=1~11
Maximum Output Power to Antenna	802.11b : 19.71 dBm (0.0935 W) 802.11g : 22.80 dBm (0.1905 W) 802.11n HT20 : 21.78 dBm (0.1507 W) 802.11n HT40 : 22.58 dBm (0.1811 W)
Antenna Type / Gain	IFA Antenna with gain -1.50 dBi
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
WLAN Data Rate	802.11b : 1/2/5.5/11 Mbps 802.11g : 6/9/12/18/24/36/48/54 Mbps 802.11n HT20 : 6.5/13/19.5/26/39/52/58.5/65 Mbps 802.11n HT40 : 13.5/27/40.5/54/81/108/121.5/135 Mbps
EUT #1	IMEI : 004402146638238 S/N : WUJ5864353
EUT #2	IMEI : 004402146638220 S/N : WUJ5864352
H/W :	AP
S/W :	16.0.A.0.14
EUT Stage	Production Unit

Accessory List	
AC Adapter	Model No. : EP800
	Type No. : AC-0300-CN
Battery	Model No. : N/A
Earphone	Model No. : MH410c
	Type No. : AG-1100
USB Cable	Model No. : EC450
	Part No. : 1242-6715.2

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. No modifications are made to the EUT during all test items.
4. For other wireless features of this EUT, test report will be issued separately.

1.5 Testing Facility

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1st 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.

1.6 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 C63.10-2009

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

2.1 Descriptions of Test Mode

a. Preliminary tests were performed in different data rates as following table and the highest power data rates were chosen for full test in the following tables.

2.4GHz 802.11b mode				
Data Rate (bps)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	19.71	19.55	19.29	19.31

2.4GHz 802.11g mode								
Data Rate (bps)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	22.80	22.71	22.61	22.70	22.76	22.59	22.41	22.38

2.4GHz 802.11n HT20 mode								
Data Rate (bps)		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7
Peak Power	400GI	21.76	21.45	21.43	21.32	21.39	21.35	21.10	21.04
	800GI	21.78	21.56	21.44	21.47	21.18	21.11	21.06	21.22

2.4GHz 802.11n HT40 mode								
Data Rate (bps)		MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7
Peak Power	400GI	22.40	21.15	21.03	20.98	20.83	20.93	21.14	20.99
	800GI	22.58	21.13	21.03	21.15	21.13	21.01	20.88	20.89

Note: The data rates were set in 1Mbps for 802.11b, 6Mbps for 802.11g, MCS0 for 802.11n HT20, and MCS0 for 802.11n HT40 for all test cases due to the highest RF output power.

b. 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 (X 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.

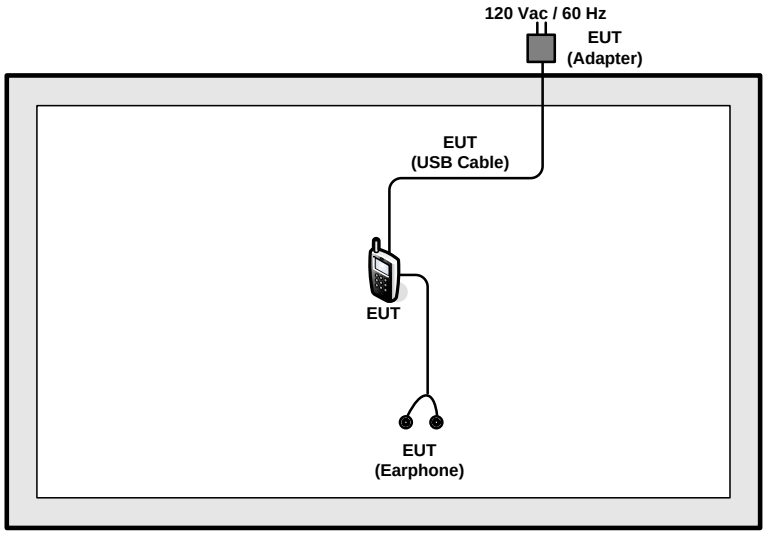
c. The AC power line Conducted Emissions was tested under the WLAN set in maximum output power.

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

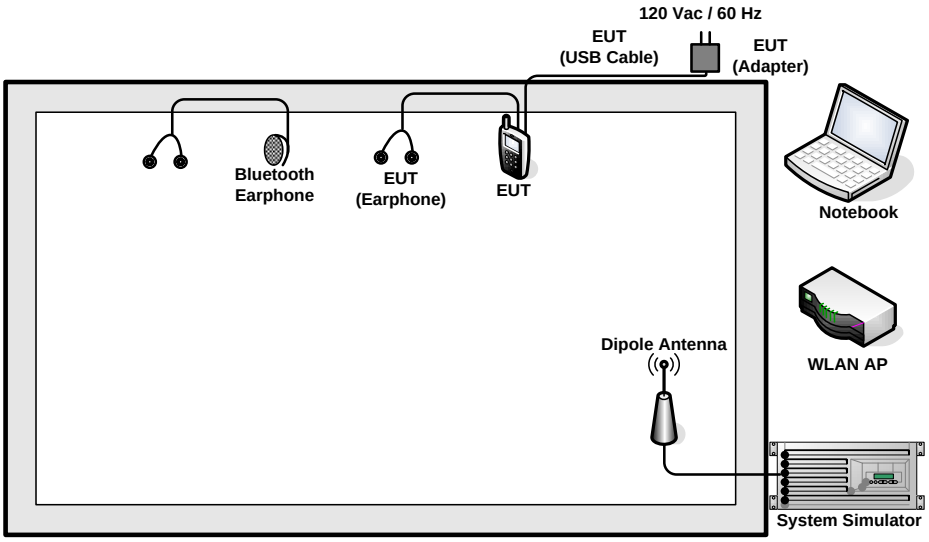
Summary table of Test Cases				
	Test Items	**Mode**	**Data Rate**	**Test Channel**
Conducted Test Cases	**6dB and Power Spectral Density**	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
		802.11n HT40	13.5 Mbps	3/6/9
	Output Power	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
		802.11n HT40	13.5 Mbps	3/6/9
	Conducted Band-edge	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	6.5 Mbps	1/11
		802.11n HT40	13.5 Mbps	3/9
	Conducted Spurious Emission	*802.11b*	*1 Mbps*	*1/6/11*
		802.11g	*6 Mbps*	*1/6/11*
		802.11n HT20	*6.5 Mbps*	*1/6/11*
		802.11n HT40	*13.5 Mbps*	*3/6/9*
Radiated Test Cases	**Radiated Band-edge**	802.11b	1 Mbps	1/11
		802.11g	6 Mbps	1/11
		802.11n HT20	6.5 Mbps	1/11
		802.11n HT40	13.5 Mbps	3/9
	Radiated Spurious Emission	802.11b	1 Mbps	1/6/11
		802.11g	6 Mbps	1/6/11
		802.11n HT20	6.5 Mbps	1/6/11
		802.11n HT40	13.5 Mbps	3/6/9
AC Conducted Emission	Mode 1 GSM1900 Idle + WLAN Idle + Bluetooth Link + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 2 Mode 2 GSM1900 Idle + WLAN Link + Bluetooth Idle + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 2			
Remark: The SIM2 is tested based on the worst case of SIM for verification from Part 15B.				

2.2 Connection Diagram of EUT Test Configurations

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.3 Supported 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.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
3.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
4.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m

2.4 Description of EUT Operation Test Setup

For WLAN function, enter "＊＃＊＃3646633＃＊＃＊" to the EUT for setting the EUT into engineering modes. Turn on WLAN function for continuous transmitting and receiving signals.

2.5 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.

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.

Example :

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

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

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.

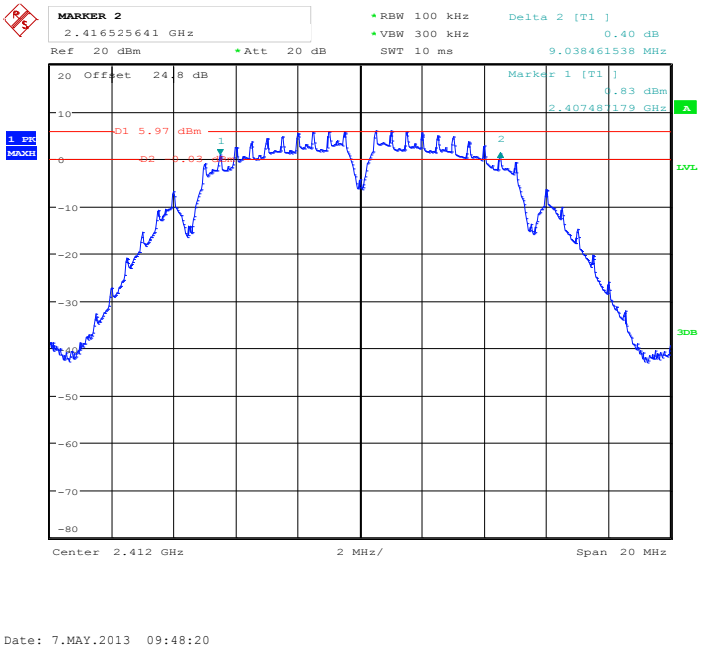
3.1.4 Test Setup

3.1.5 Test Result of 6dB Bandwidth

Test Mode :	802.11b	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

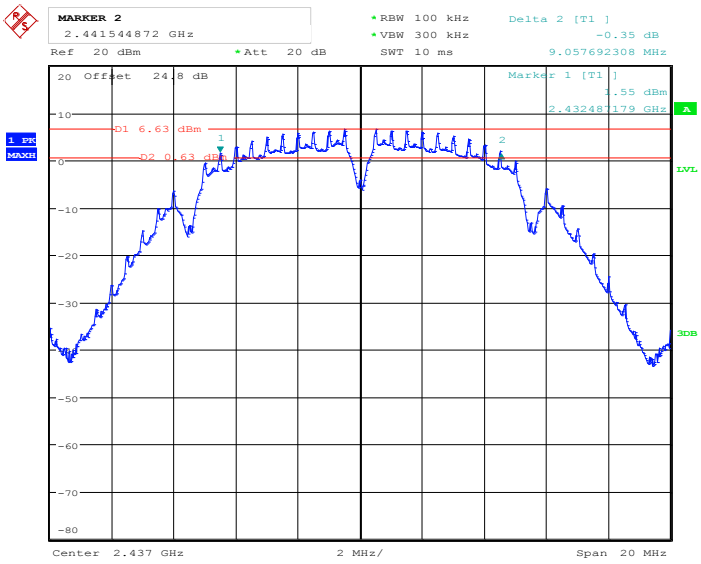
Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	9.04	0.5	Pass
06	2437	9.06	0.5	Pass
11	2462	9.09	0.5	Pass

6 dB Bandwidth Plot on 802.11b Channel 01



Note: The total loss is 24.8 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

6 dB Bandwidth Plot on 802.11b Channel 06



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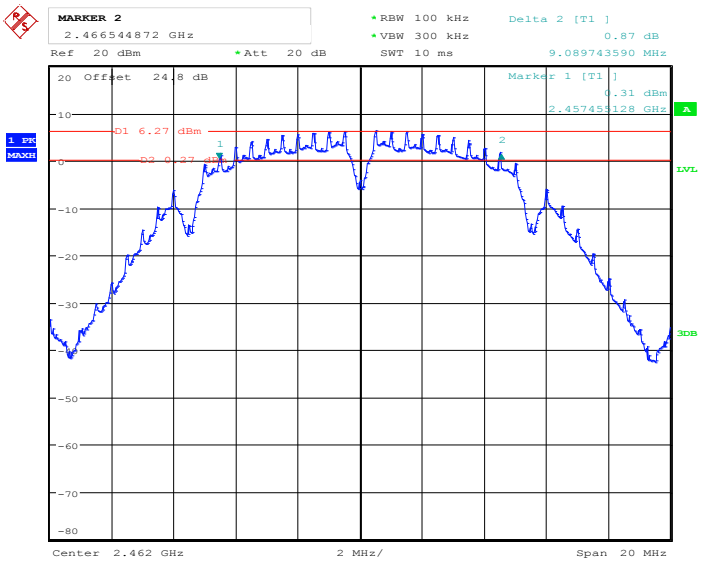
6 dB Bandwidth Plot on 802.11b Channel 11



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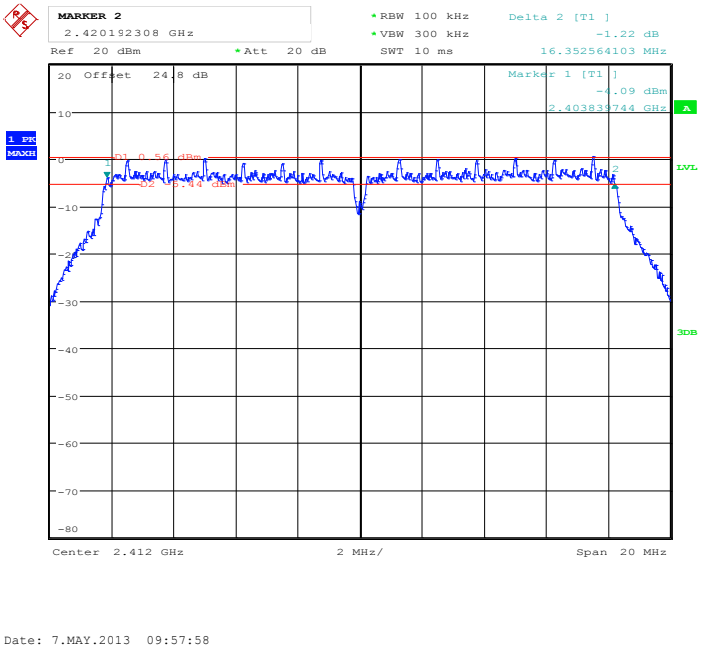
Test Mode :	802.11g	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

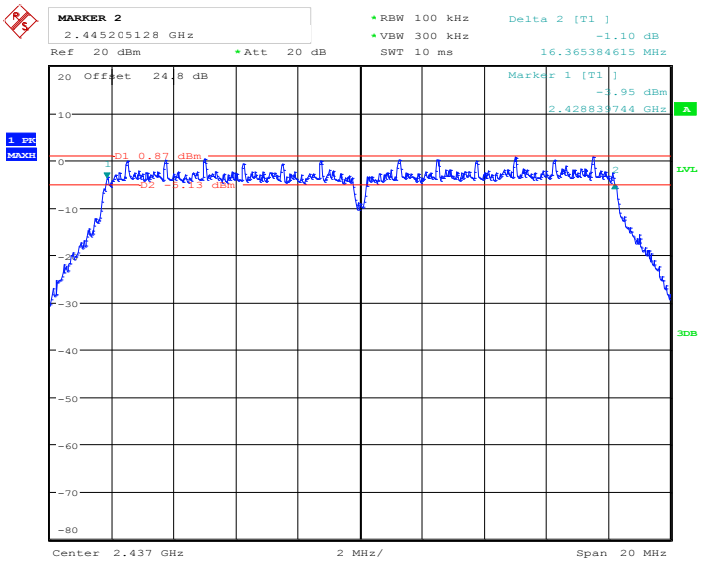
Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.35	0.5	Pass
06	2437	16.37	0.5	Pass
11	2462	16.33	0.5	Pass

6 dB Bandwidth Plot on 802.11g Channel 01



Note: The total loss is 24.8 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

6 dB Bandwidth Plot on 802.11g Channel 06



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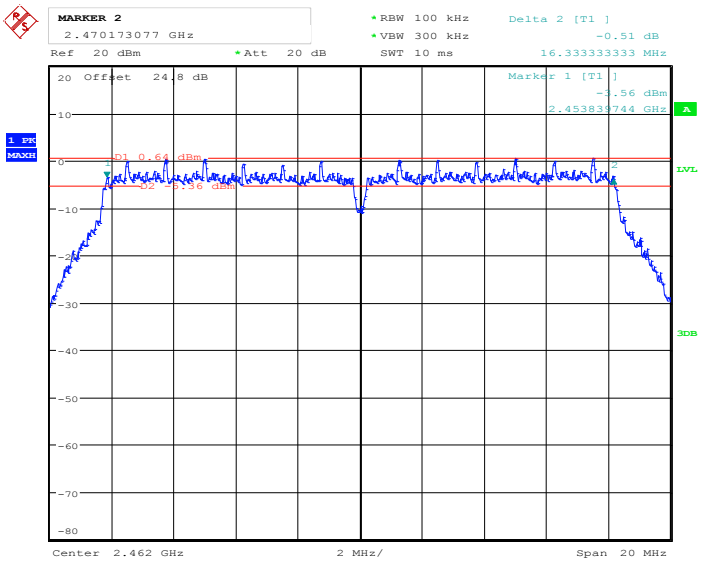
6 dB Bandwidth Plot on 802.11g Channel 11



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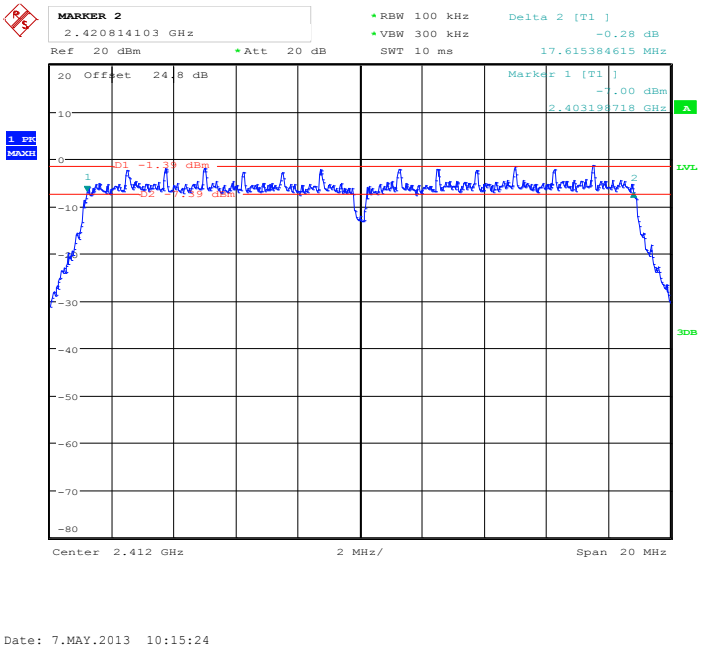
Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

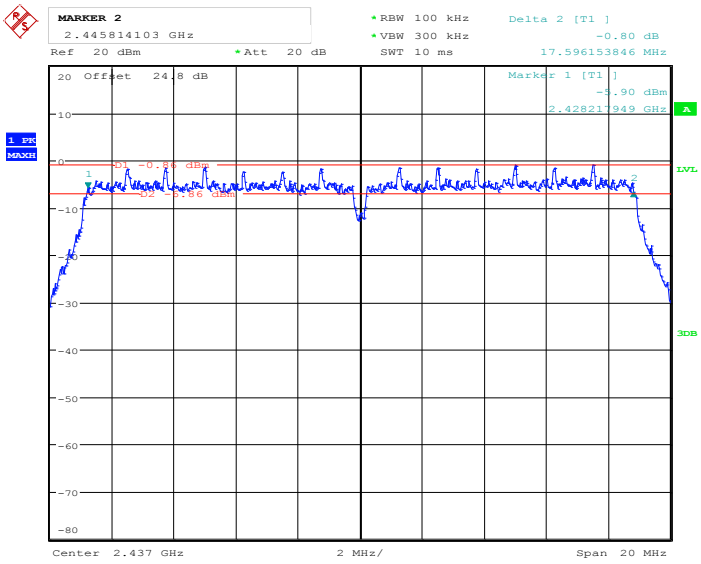
Channel	Frequency (MHz)	2.4GHz 802.11n HT20 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	17.62	0.5	Pass
06	2437	17.60	0.5	Pass
11	2462	17.60	0.5	Pass

6 dB Bandwidth Plot on 802.11n HT20 Channel 01

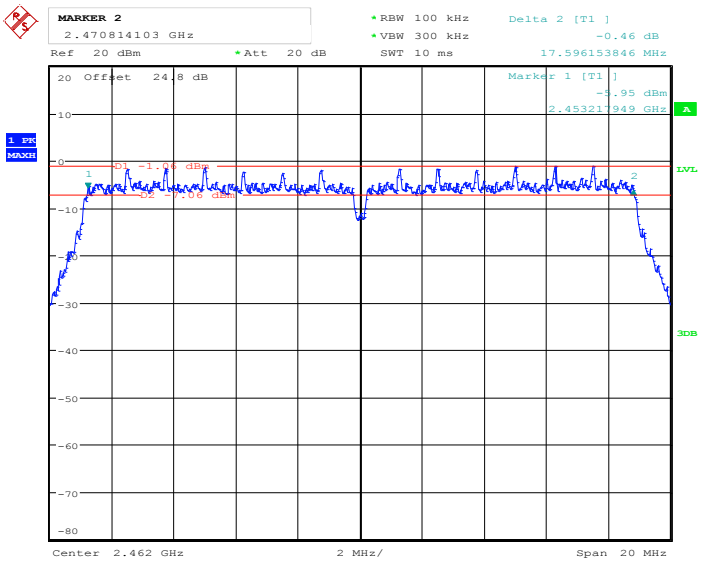


Note: The total loss is 24.8 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

6 dB Bandwidth Plot on 802.11n HT20 Channel 06



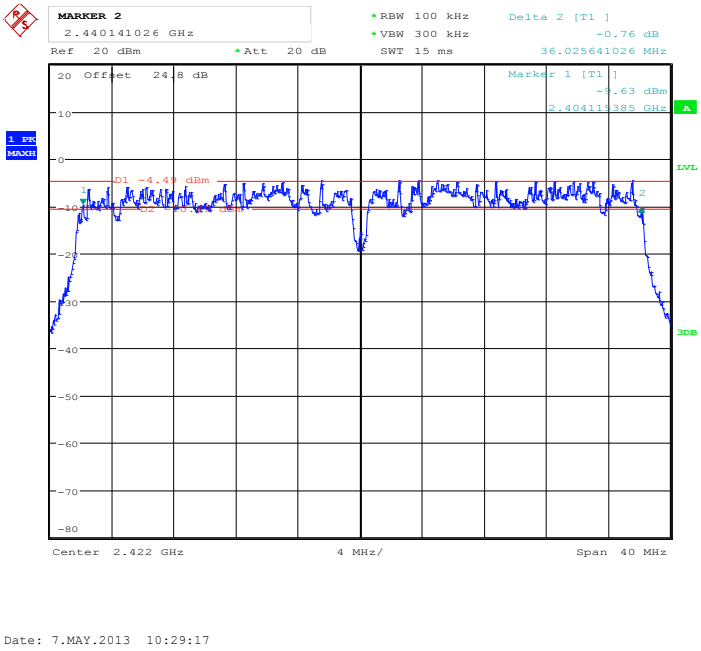
6 dB Bandwidth Plot on 802.11n HT20 Channel 11



Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

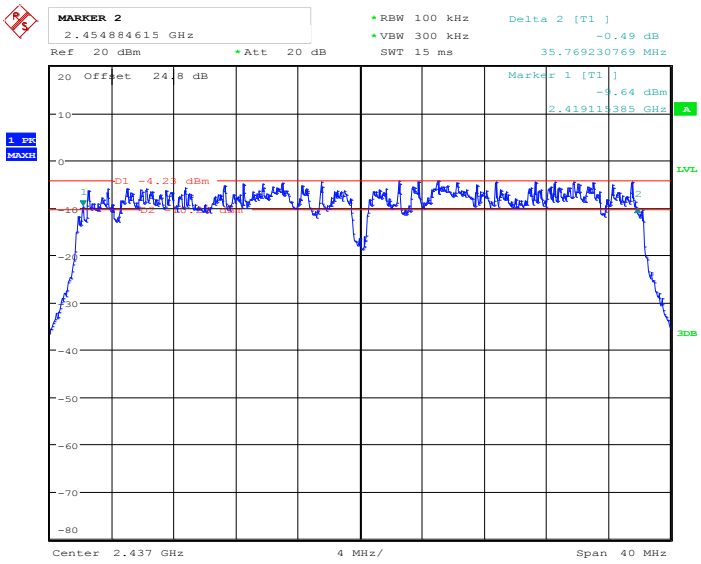
Channel	Frequency (MHz)	2.4GHz 802.11n HT40 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
03	2412	36.03	0.5	Pass
06	2437	35.77	0.5	Pass
09	2462	35.62	0.5	Pass

6 dB Bandwidth Plot on 802.11n HT40 Channel 03



Note: The total loss is 24.8 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

6 dB Bandwidth Plot on 802.11n HT40 Channel 06



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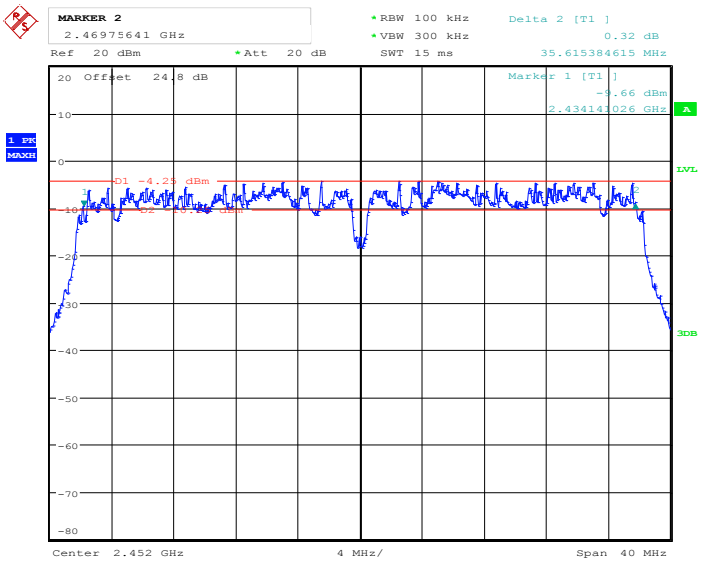
6 dB Bandwidth Plot on 802.11n HT40 Channel 09



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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.

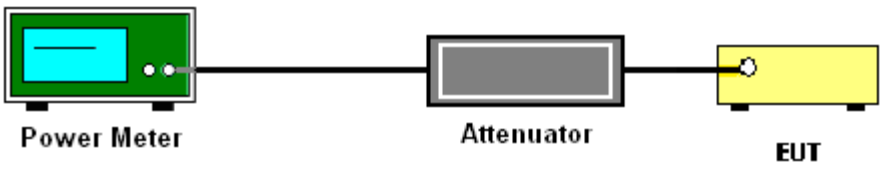
3.2.2 Measuring Instruments

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

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 :	802.11b	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	19.31	30	Pass
06	2437	19.71	30	Pass
11	2462	19.59	30	Pass

Test Mode :	802.11g	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	22.71	30	Pass
06	2437	22.80	30	Pass
11	2462	22.79	30	Pass

Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4GHz 802.11n HT20 Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	21.55	30	Pass
06	2437	21.78	30	Pass
11	2462	21.70	30	Pass

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4GHz 802.11n HT40 Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
03	2422	22.48	30	Pass
06	2437	22.58	30	Pass
09	2452	22.52	30	Pass

Note: Peak Output Power is not required to add the duty cycle factor.

3.2.6 Test Result of Average output Power (Reporting Only)

Test Mode :	802.11b	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%
Duty Cycle :	98.59%	Duty Factor :	0.06dB

Channel	Frequency (MHz)	802.11b Average Output Power (dBm)
01	2412	16.05
06	2437	16.46
11	2462	16.42

Test Mode :	802.11g	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%
Duty Cycle :	93.09%	Duty Factor :	0.31dB

Channel	Frequency (MHz)	802.11g Average Output Power (dBm)
01	2412	12.97
06	2437	13.16
11	2462	13.06

Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%
Duty Cycle :	92.09%	Duty Factor :	0.36dB

Channel	Frequency (MHz)	802.11n HT20 Average Output Power (dBm)
01	2412	11.17
06	2437	11.50
11	2462	11.47

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%
Duty Cycle :	85.79%	Duty Factor :	0.67dB

Channel	Frequency (MHz)	2.4GHz 802.11n HT40 Average Output Power (dBm)
03	2422	11.46
06	2437	11.82
09	2452	11.68

Note:

1. Average Output Power equals to Measured Output Power adds the duty factor.
2. The average power is measured by power meter with average power sensor and is reporting only.

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.

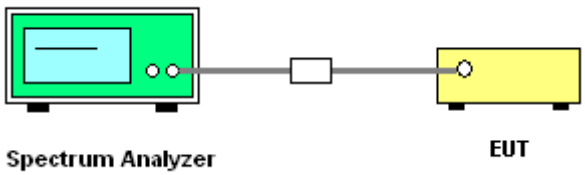
3.3.2 Measuring Instruments

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

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.
7. The Measured power density (dBm)/ 100KHz is a reference level and used as 20dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11b	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b Power Density		Max. Limits (dBm)	Pass/Fail
		PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	5.82	-7.43	8	Pass
06	2437	6.59	-7.11	8	Pass
11	2462	6.26	-7.43	8	Pass

Test Mode :	802.11g	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g Power Density		Max. Limits (dBm)	Pass/Fail
		PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	0.42	-12.41	8	Pass
06	2437	0.79	-13.41	8	Pass
11	2462	0.36	-14.02	8	Pass

Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11n HT20 Power Density		Max. Limits (dBm)	Pass/Fail
		PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	-1.93	-14.39	8	Pass
06	2437	-0.87	-15.27	8	Pass
11	2462	-1.17	-15.84	8	Pass

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Engineer :	Coyote Lin	Relative Humidity :	50~53%

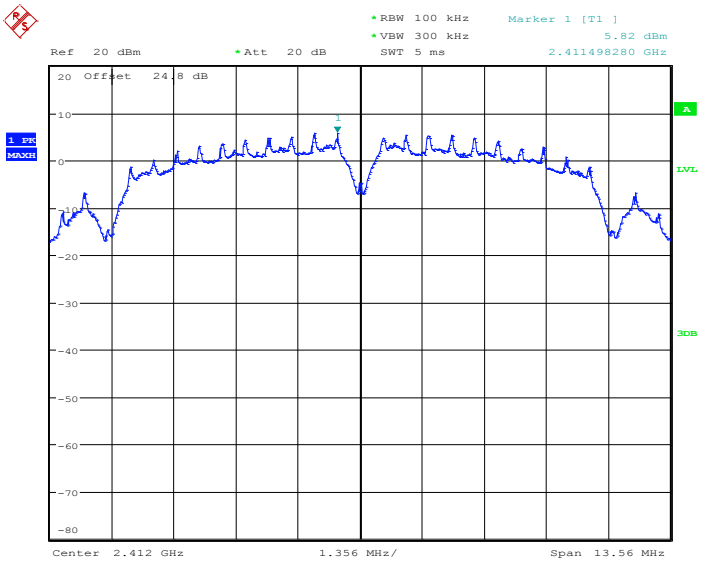
Channel	Frequency (MHz)	2.4GHz 802.11n HT40 Power Density		Max. Limits (dBm/3kHz)	Pass/Fail
		PSD/100kHz (dBm)	PSD/3kHz (dBm)		
03	2422	-4.59	-16.49	8	Pass
06	2437	-4.29	-16.60	8	Pass
09	2452	-4.36	-16.17	8	Pass

Note:

1. *The total loss is 24.8dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.*
2. *Peak Power Spectral Density is not required to Measured Output Power adds the duty factor.*
3. *The Measured power density (dBm)/ 100KHz is reference level and used as 20dBc down for Conducted Band Edges and Conducted Spurious Emission limit line.*

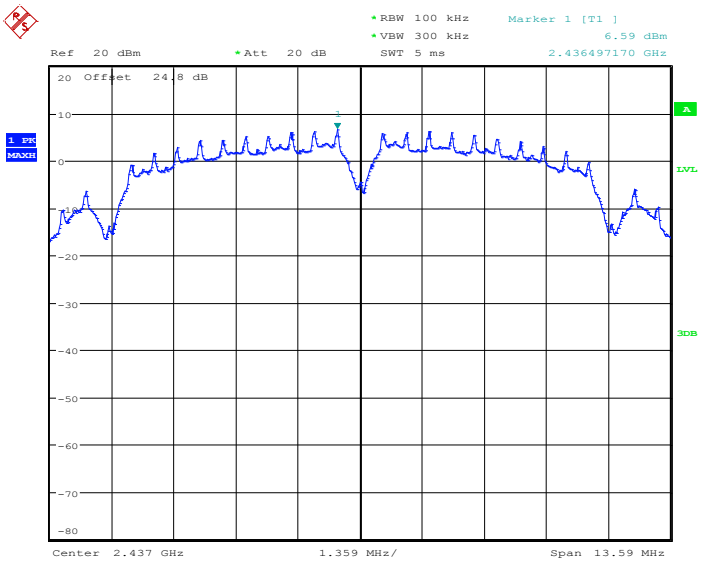
3.3.6 Test Result of Power Spectral Density Plots (100kHz)

PSD Plot on 802.11b Channel 01



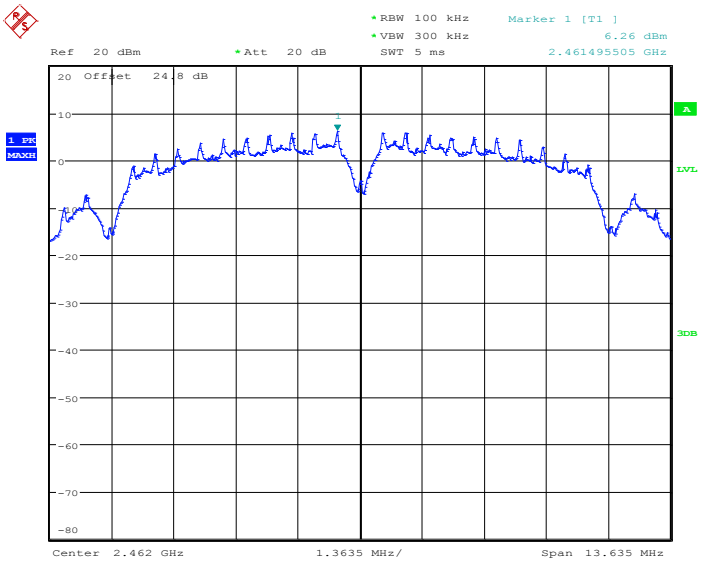
Date: 7.MAY.2013 09:49:14

PSD Plot on 802.11b Channel 06



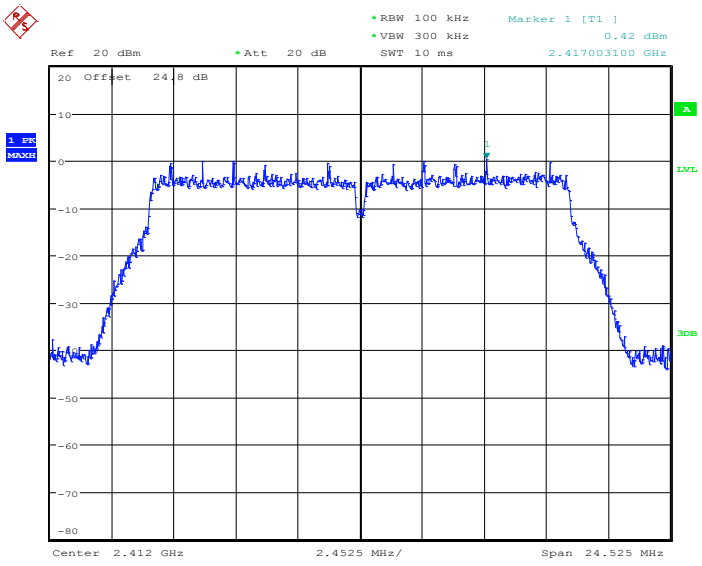
Date: 7.MAY.2013 09:52:18

PSD Plot on 802.11b Channel 11



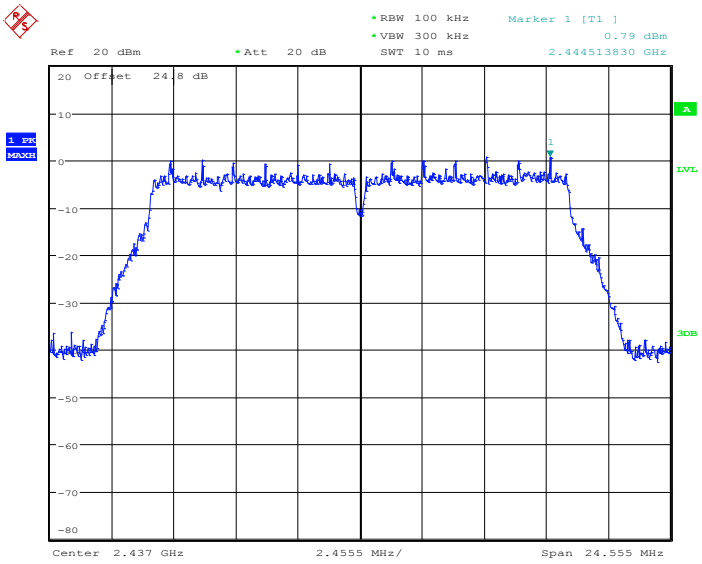
Date: 7.MAY.2013 09:55:07

PSD Plot on 802.11g Channel 01



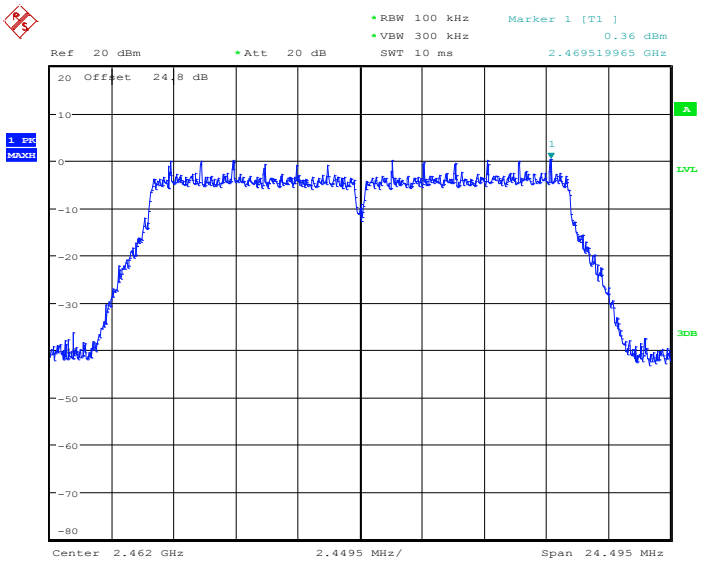
Date: 7.MAY.2013 09:58:40

PSD Plot on 802.11g Channel 06



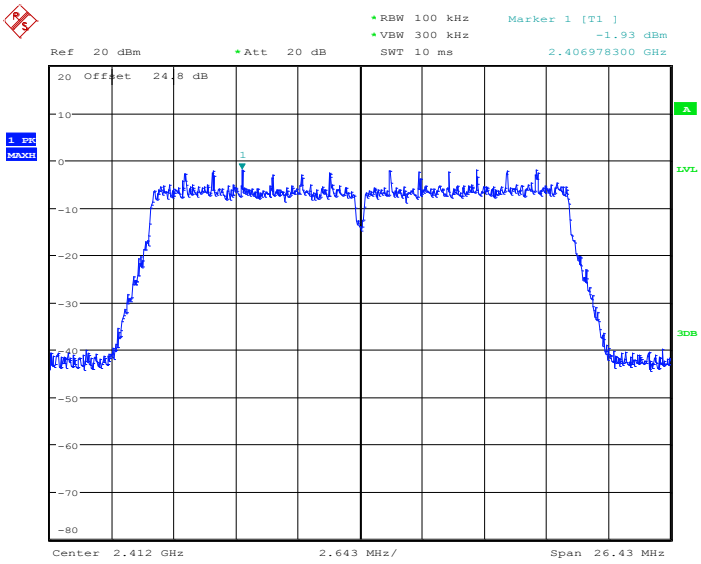
Date: 7.MAY.2013 10:02:18

PSD Plot on 802.11g Channel 11



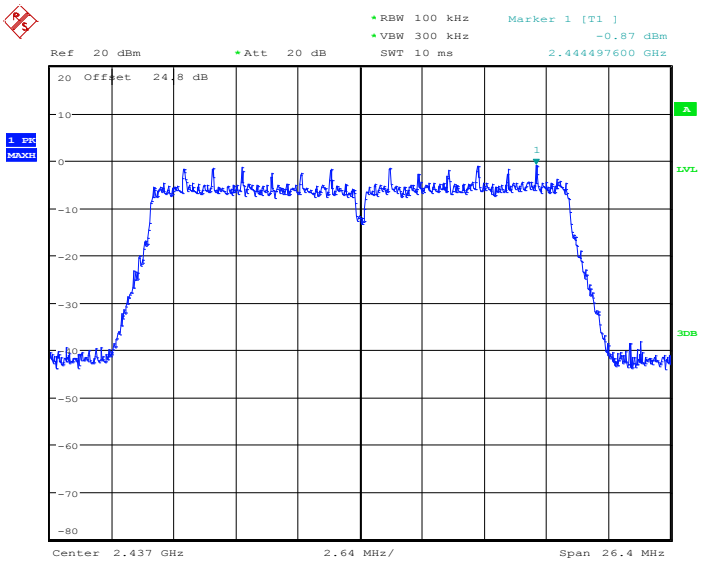
Date: 7.MAY.2013 10:04:52

PSD Plot on 802.11n HT20 Channel 01



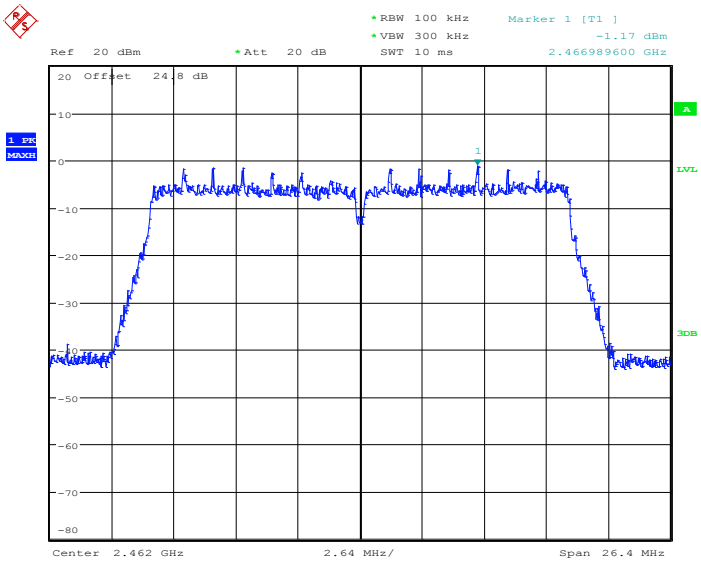
Date: 7.MAY.2013 10:16:01

PSD Plot on 802.11n HT20 Channel 06



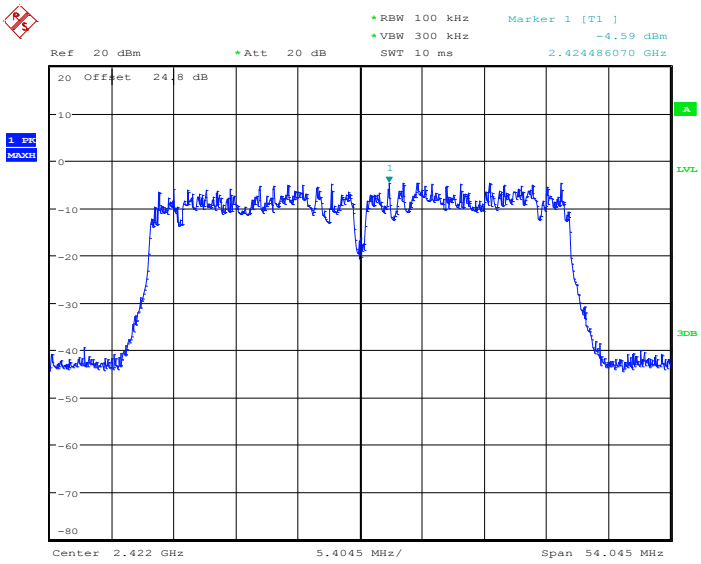
Date: 7.MAY.2013 10:12:11

PSD Plot on 802.11n HT20 Channel 11



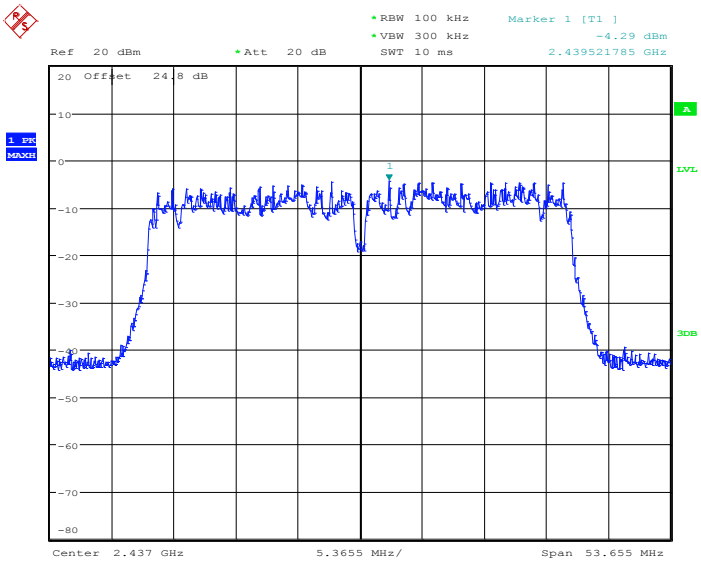
Date: 7.MAY.2013 10:08:38

PSD Plot on 802.11n HT40 Channel 03



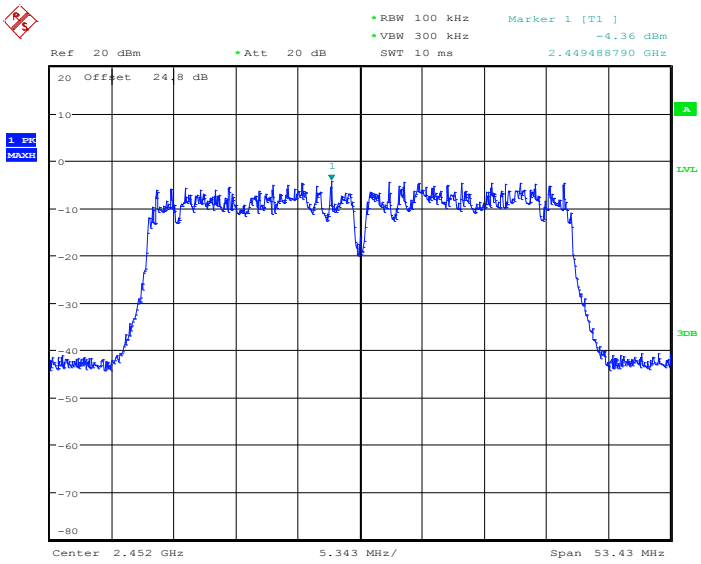
Date: 7.MAY.2013 10:30:00

PSD Plot on 802.11n HT40 Channel 06



Date: 7.MAY.2013 10:33:24

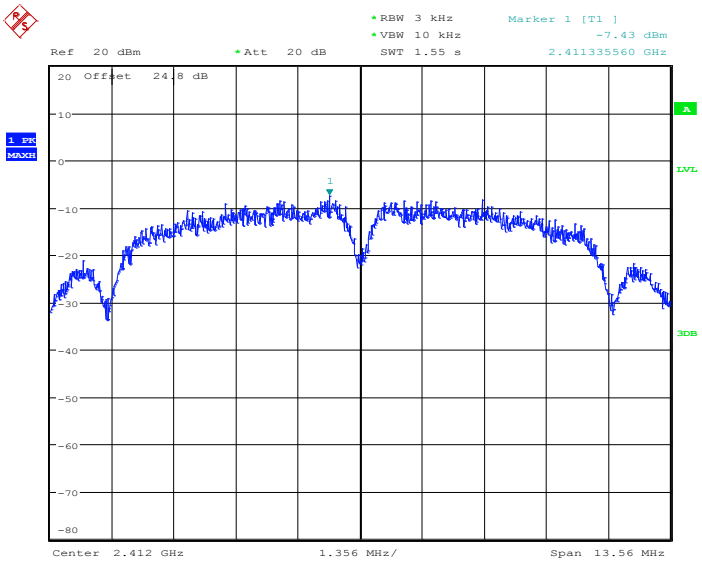
PSD Plot on 802.11n HT40 Channel 09



Date: 7.MAY.2013 10:37:23

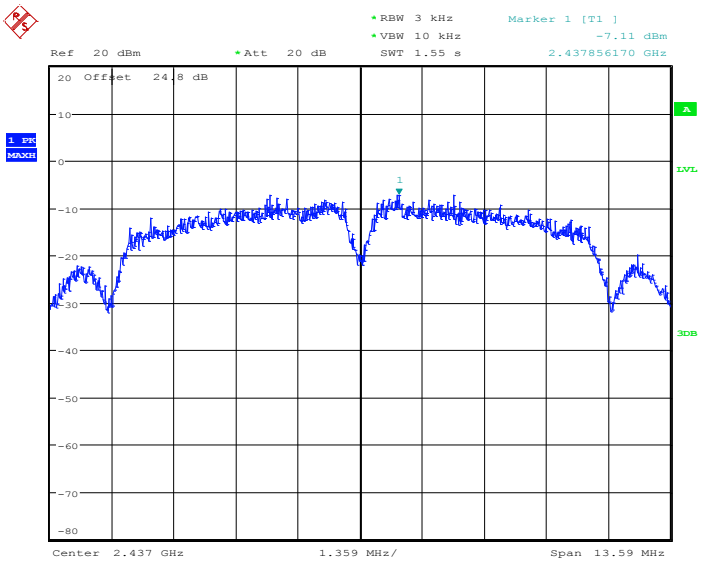
3.3.7 Test Result of Power Spectral Density Plots (3kHz)

PSD 3kHz Plot on 802.11b Channel 01



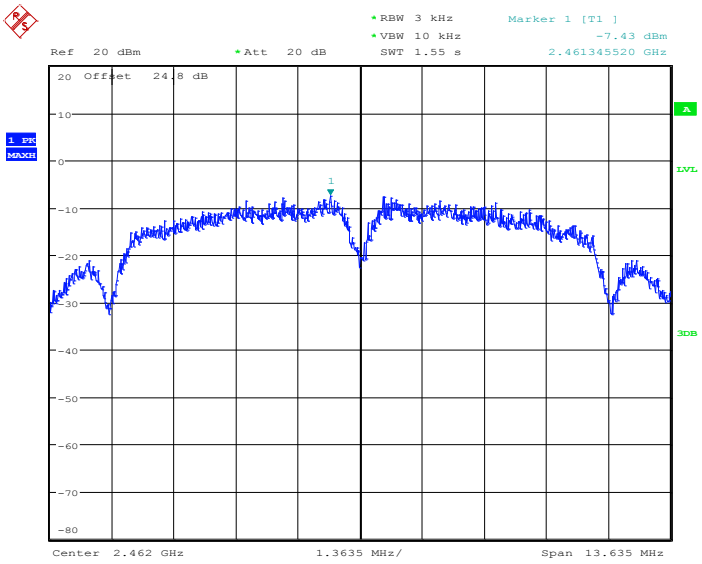
Date: 7.MAY.2013 09:48:41

PSD 3kHz Plot on 802.11b Channel 06



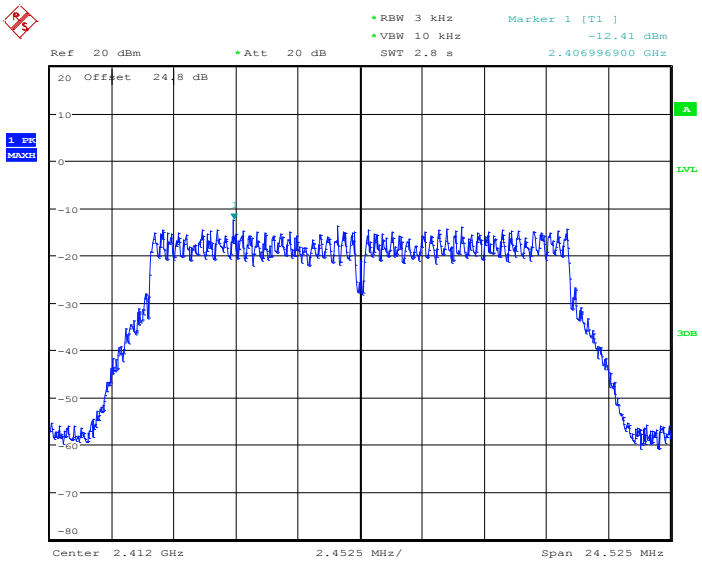
Date: 7.MAY.2013 09:52:07

PSD 3kHz Plot on 802.11b Channel 11



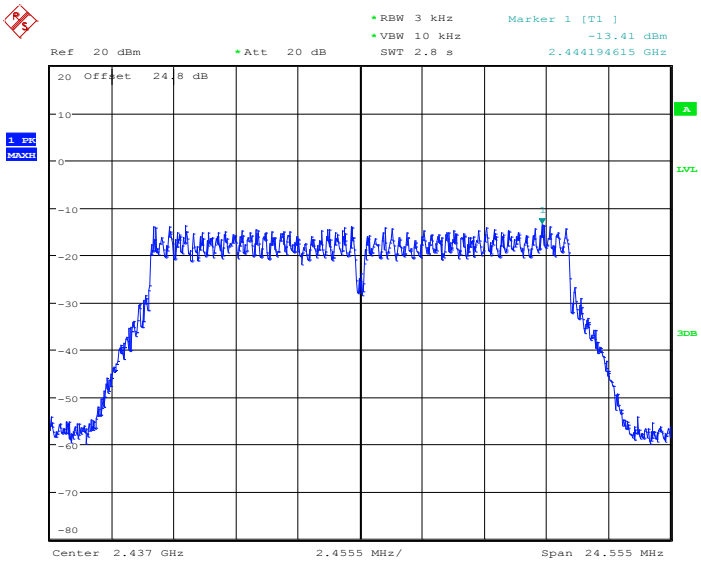
Date: 7.MAY.2013 09:54:57

PSD 3kHz Plot on 802.11g Channel 01



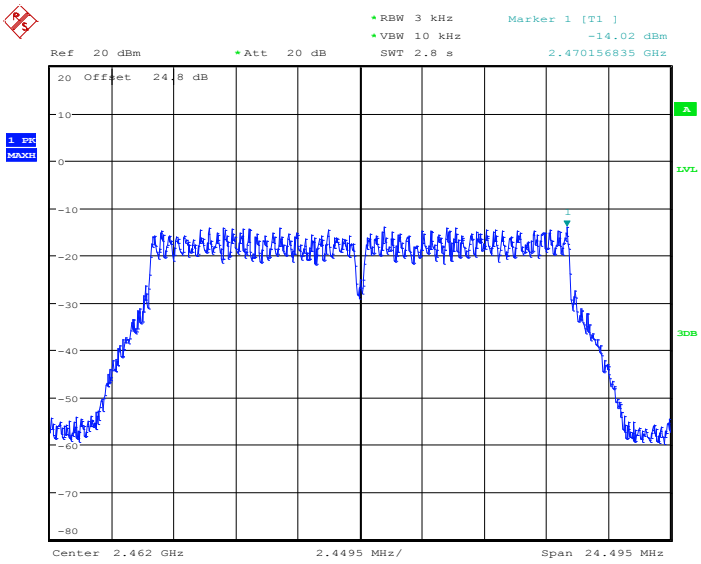
Date: 7.MAY.2013 09:58:21

PSD 3kHz Plot on 802.11g Channel 06



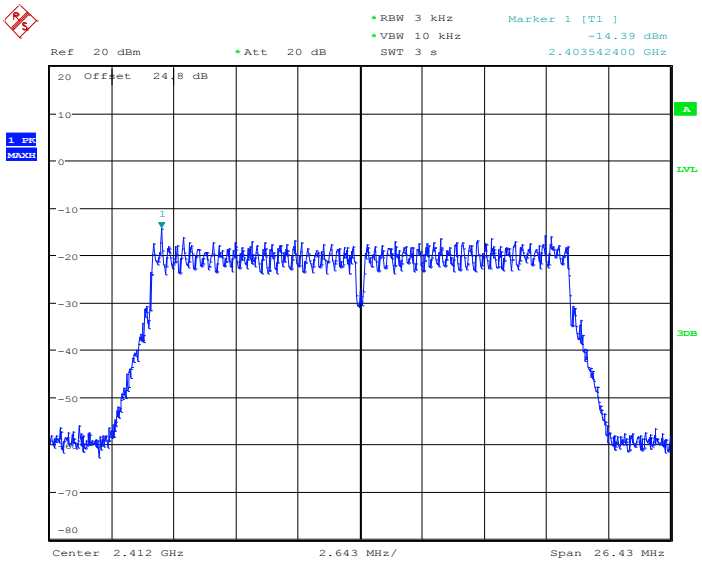
Date: 7.MAY.2013 10:02:00

PSD 3kHz Plot on 802.11g Channel 11



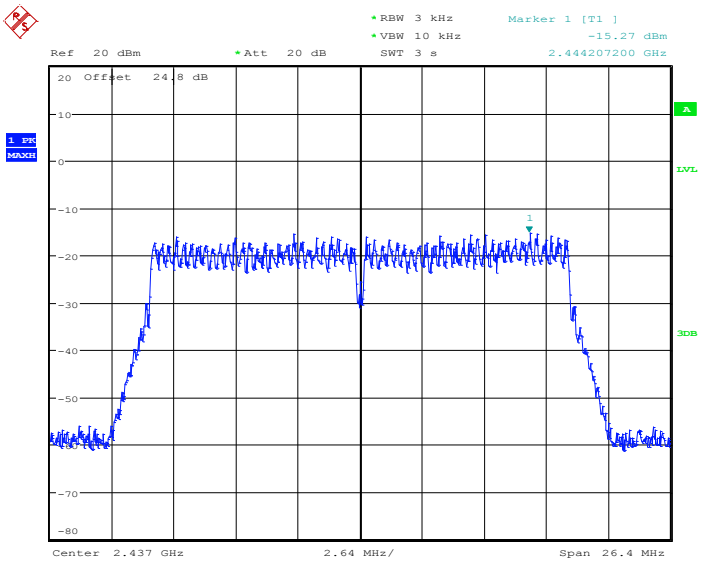
Date: 7.MAY.2013 10:04:42

PSD 3kHz Plot on 802.11n HT20 Channel 01



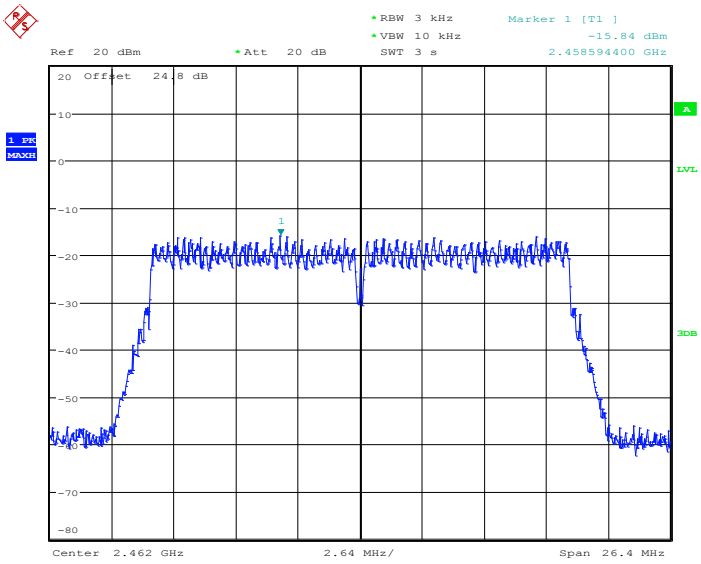
Date: 7.MAY.2013 10:15:47

PSD 3kHz Plot on 802.11n HT20 Channel 06



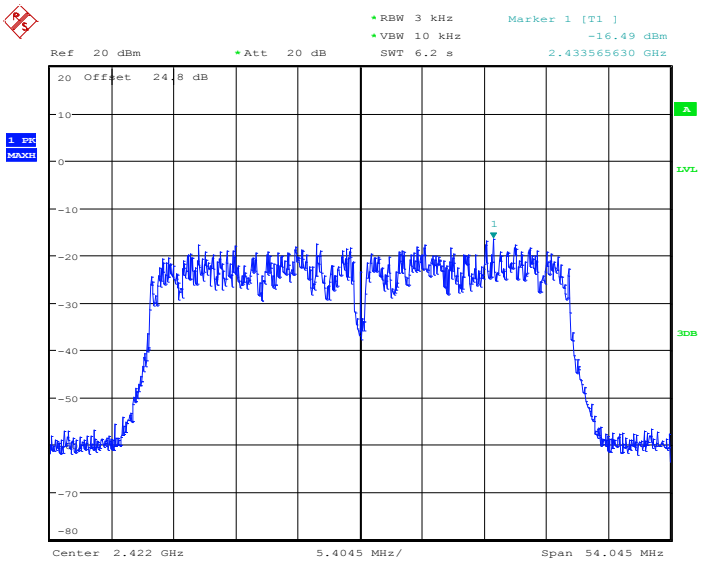
Date: 7.MAY.2013 10:11:55

PSD 3kHz Plot on 802.11n HT20 Channel 11



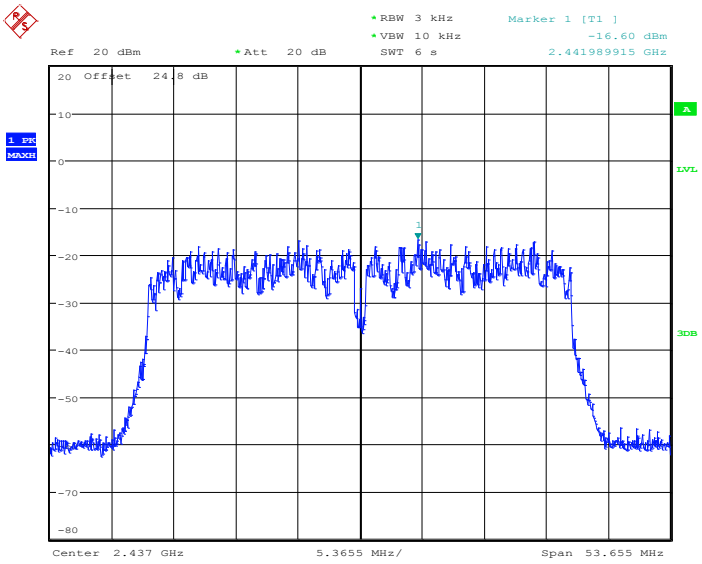
Date: 7.MAY.2013 10:08:26

PSD 3kHz Plot on 802.11n HT40 Channel 03



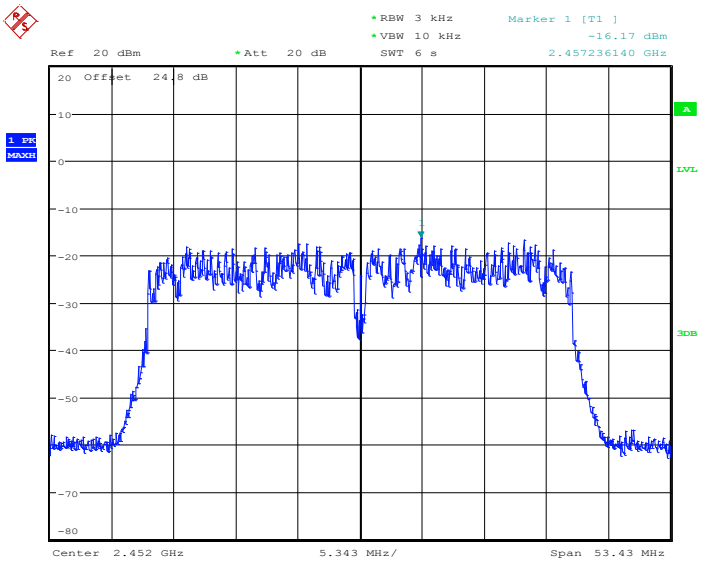
Date: 7.MAY.2013 10:29:45

PSD 3kHz Plot on 802.11n HT40 Channel 06



Date: 7.MAY.2013 10:33:09

PSD 3kHz Plot on 802.11n HT40 Channel 09



Date: 7.MAY.2013 10:37:01

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).

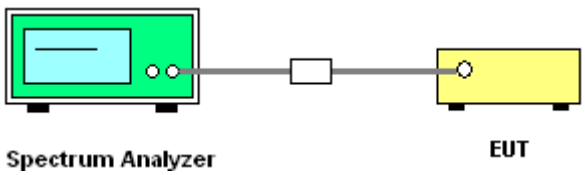
3.4.2 Measuring Instruments

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

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.

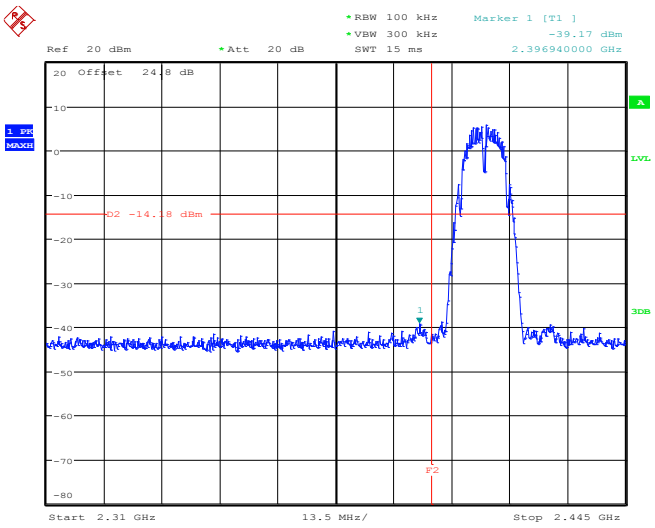
3.4.4 Test Setup



3.4.5 Test Plots of Conducted Band Edges

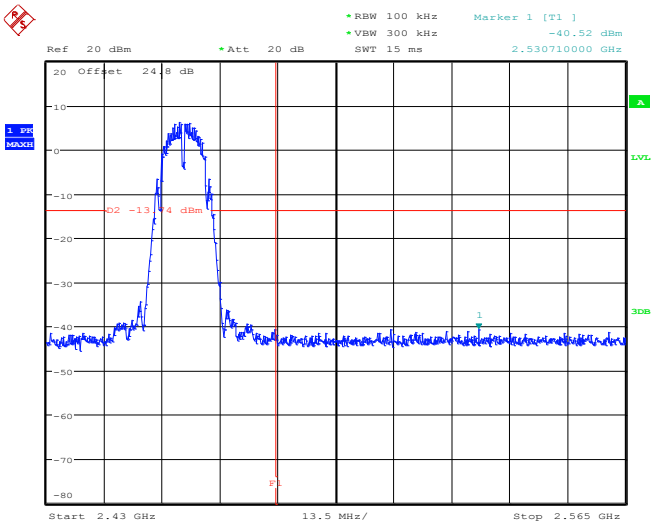
Test Mode :	802.11b	**Temperature :**	24~26℃
Test Band :	Low and High	**Relative Humidity :**	50~53%
Test Channel :	01 and 11	**Test Engineer :**	Coyote Lin

Low Band Edge Plot on 802.11b Channel 01



Date: 7.MAY.2013 09:49:42

High Band Edge Plot on 802.11b Channel 11

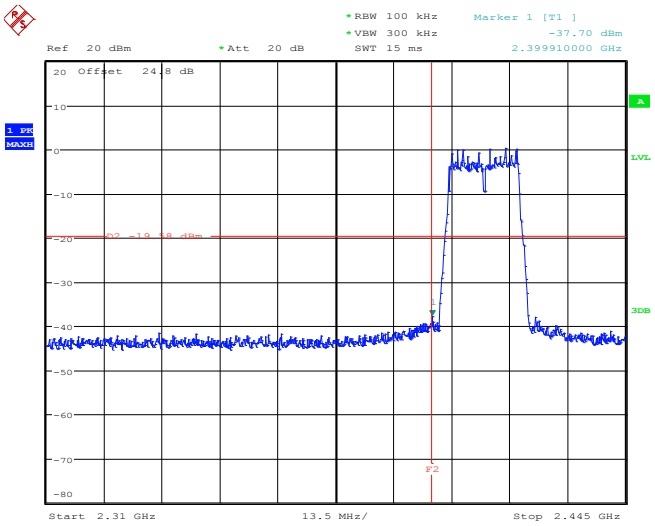


Date: 7.MAY.2013 09:55:23

Note: The total loss is 24.8 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

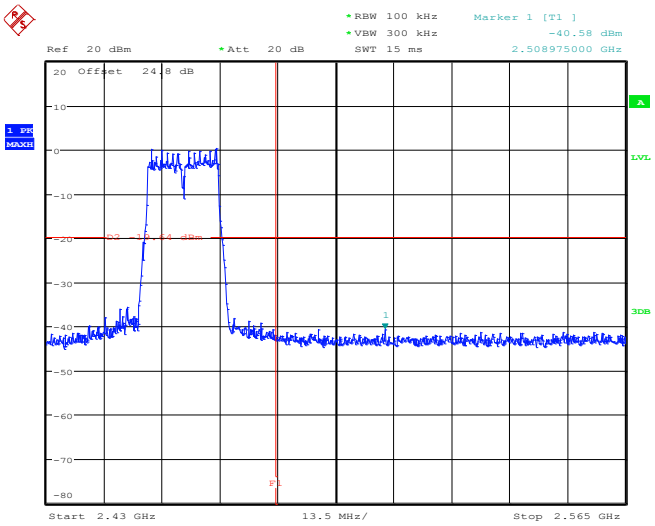
Test Mode :	802.11g	Temperature :	24~26℃
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Coyote Lin

Low Band Edge Plot on 802.11g Channel 01



Date: 7.MAY.2013 10:20:54

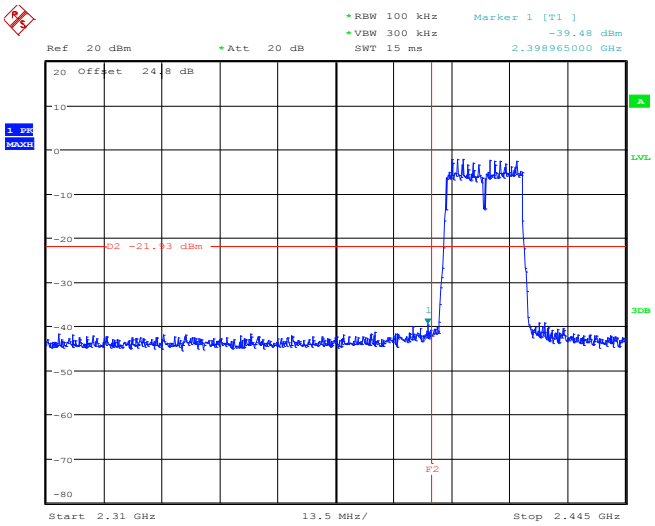
High Band Edge Plot on 802.11g Channel 11



Date: 7.MAY.2013 10:05:09

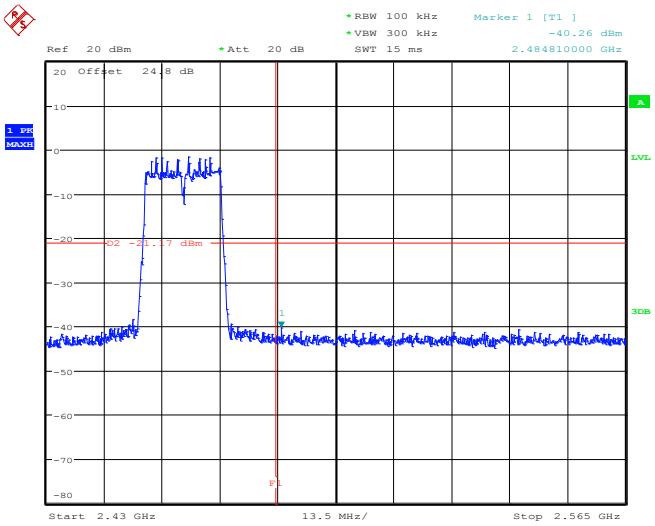
Test Mode :	802.11n HT20	Temperature :	24~26℃
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Coyote Lin

Low Band Edge Plot on 802.11n HT20 Channel 01



Date: 7.MAY.2013 10:16:45

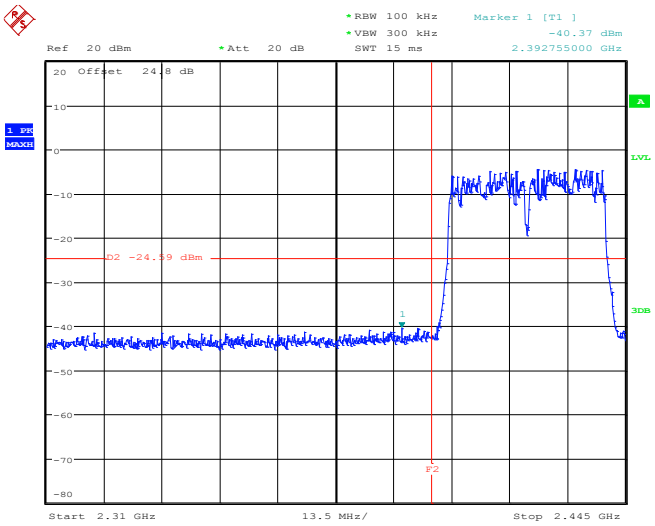
High Band Edge Plot on 802.11n HT20 Channel 11



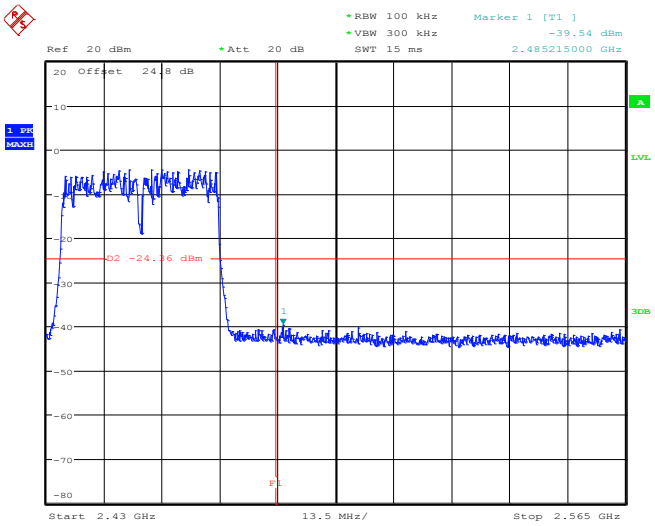
Date: 7.MAY.2013 10:08:54

Test Mode :	802.11n HT40	Temperature :	24~26℃
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	03 and 09	Test Engineer :	Coyote Lin

Low Band Edge Plot on 802.11n HT40 Channel 03



High Band Edge Plot on 802.11n HT40 Channel 09

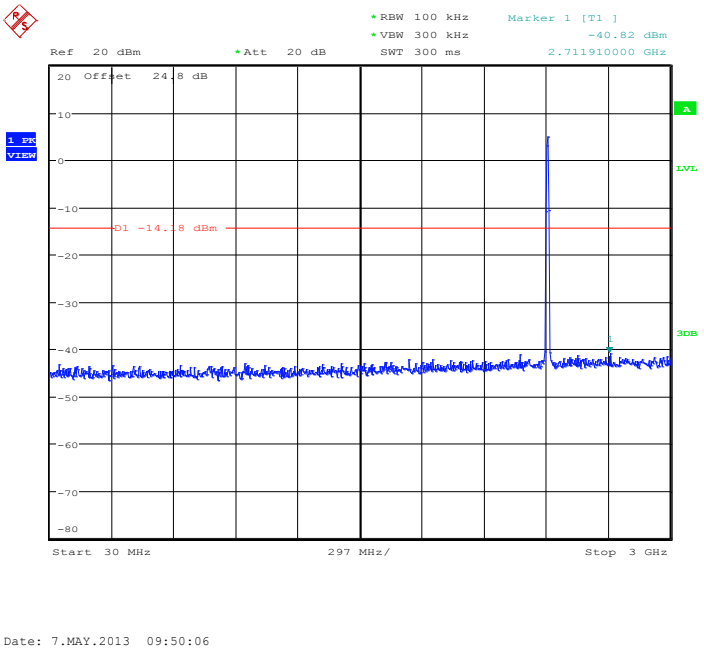


3.4.6 Test Plots of Spurious Emission

Test Mode :	802.11b	Temperature :	24~26℃
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Coyote Lin

802.11b 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 01

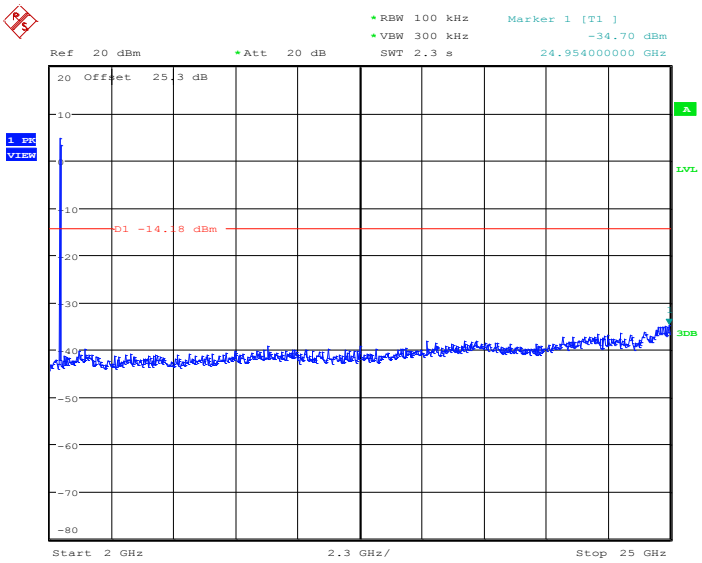


Note:

1. The total loss is 24.8 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.

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01

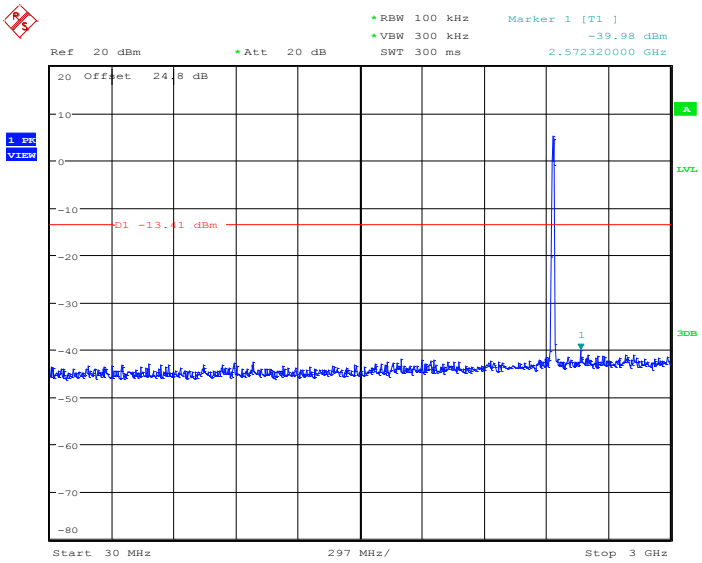


Note:

1. The total loss is 25.3 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.

802.11b 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 06

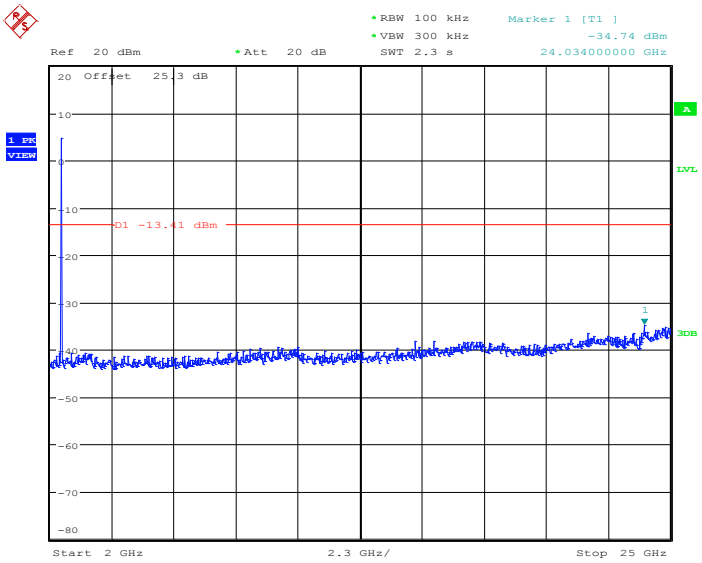


Note:

1. The total loss is 24.8 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.

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

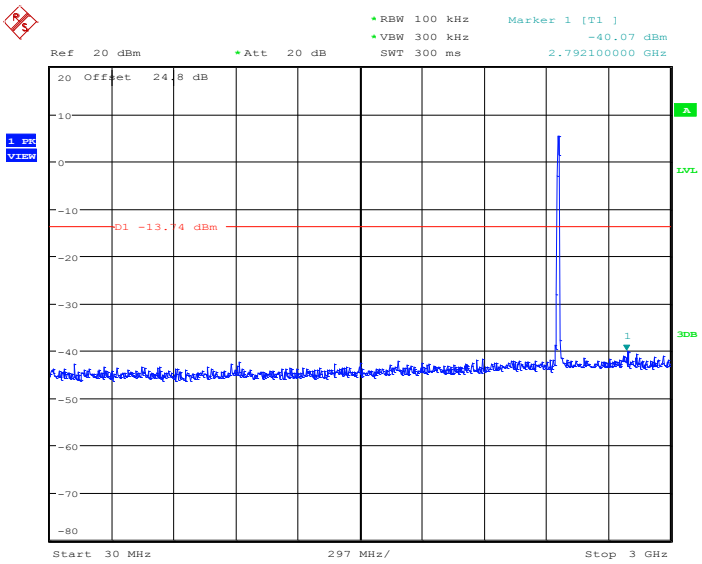


Note:

1. The total loss is 25.3 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.

802.11b 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 11

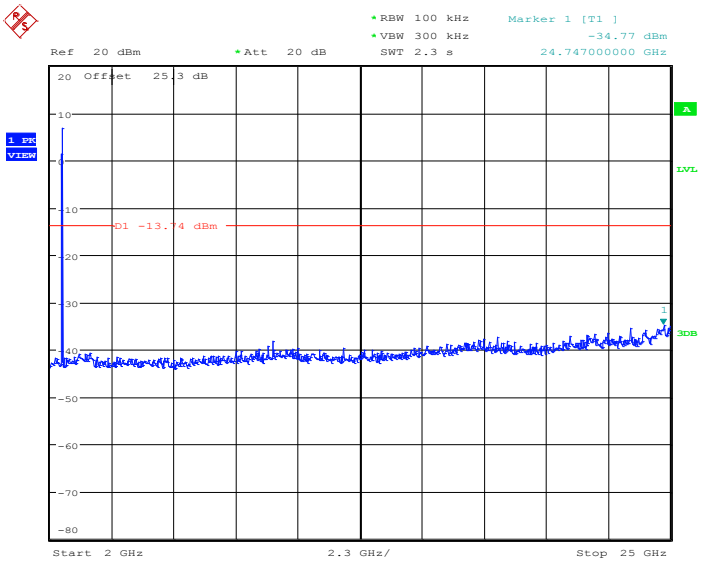


Note:

1. The total loss is 24.8 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.

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



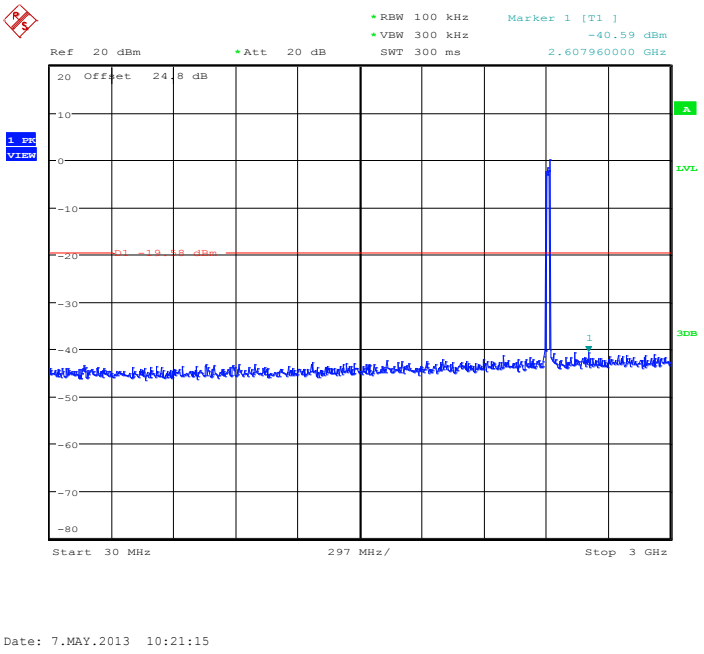
Note:

1. The total loss is 25.3 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 :	24~26℃
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Coyote Lin

802.11g 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 01

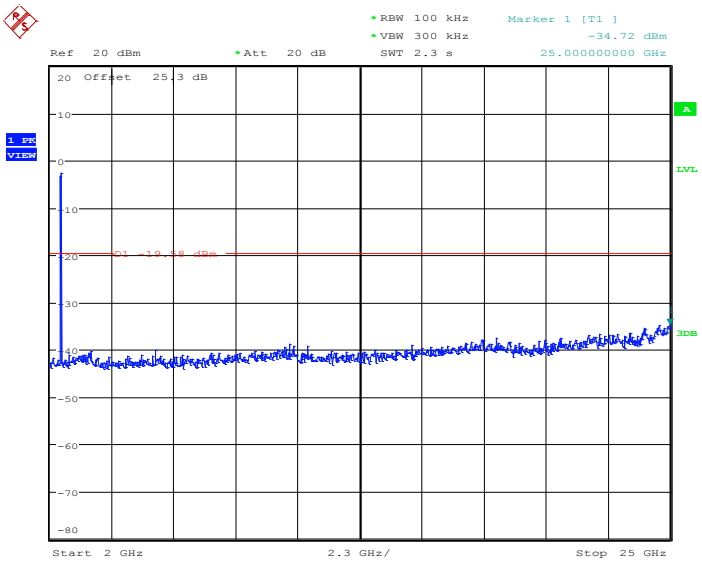


Note:

1. The total loss is 24.8 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.

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01



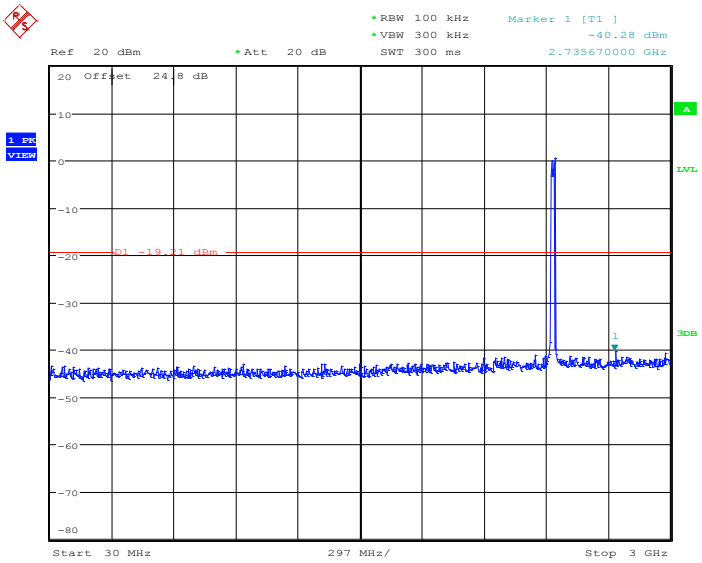
Date: 7.MAY.2013 10:21:33

Note:

1. The total loss is 25.3dB 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.

802.11g 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 06

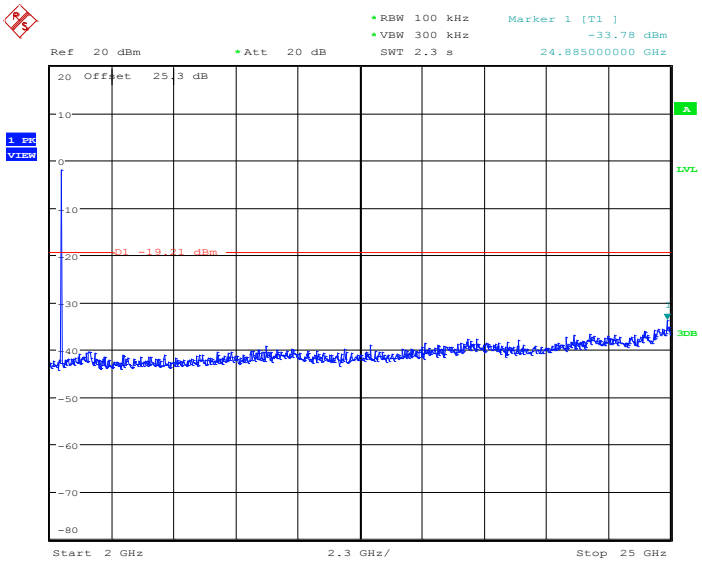


Note:

1. The total loss is 24.8 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.

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

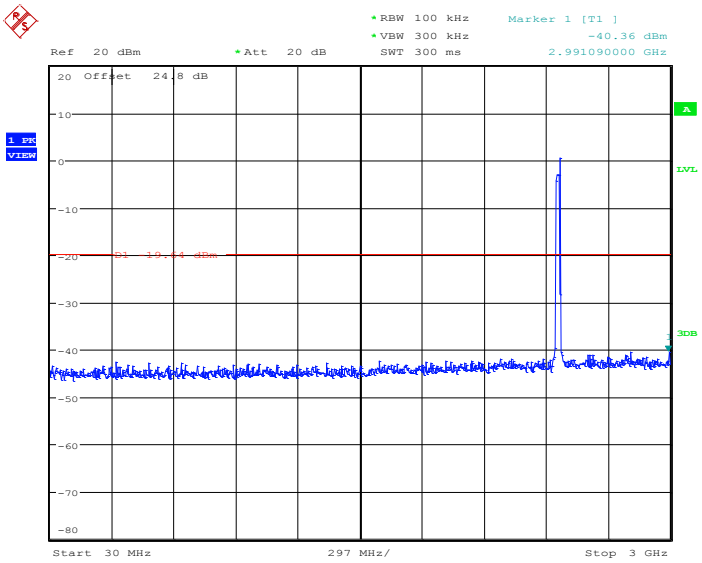


Note:

1. The total loss is 25.3 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.

802.11g 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 11

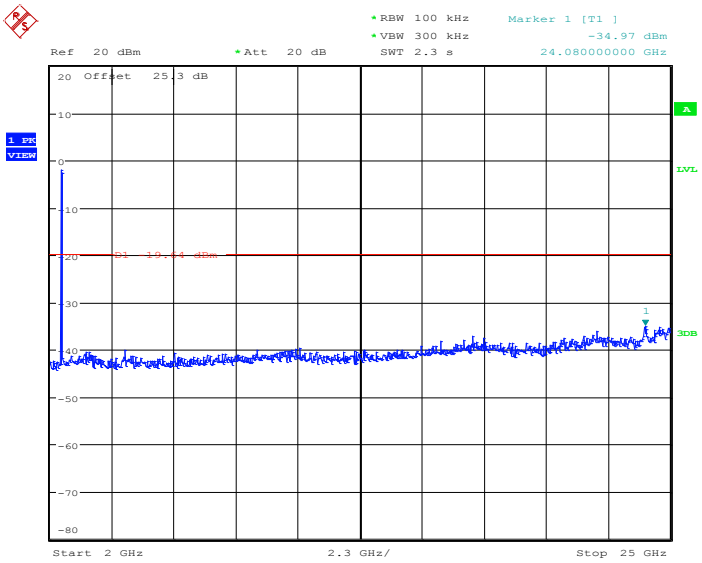


Note:

1. The total loss is 24.8 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.

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



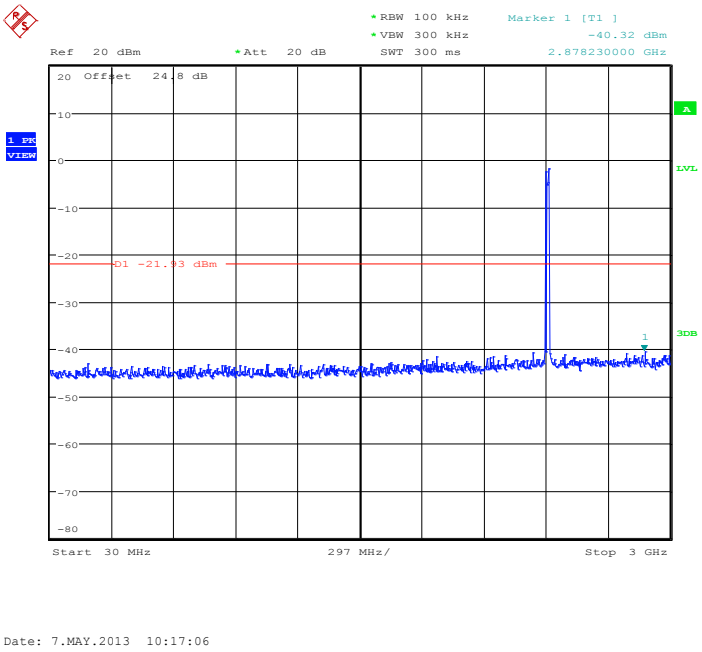
Note:

1. The total loss is 25.3 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 :	24~26℃
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Coyote Lin

802.11n HT20 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 01

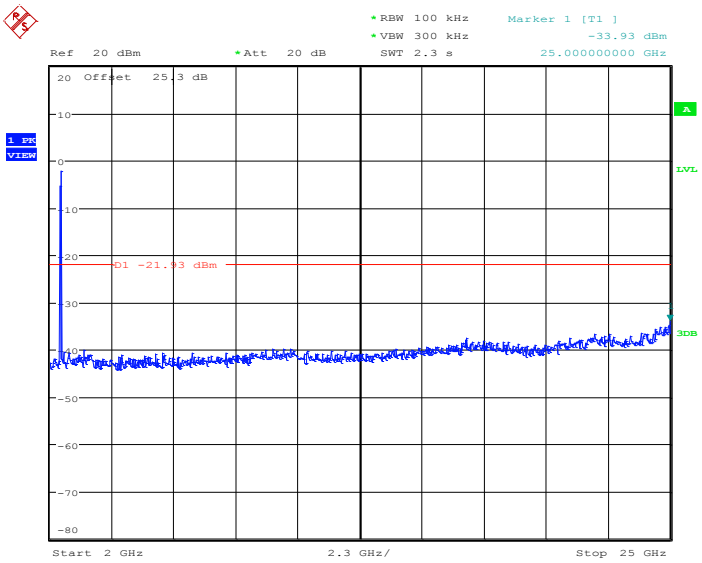


Note:

1. The total loss is 24.8 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.

802.11n HT20 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01

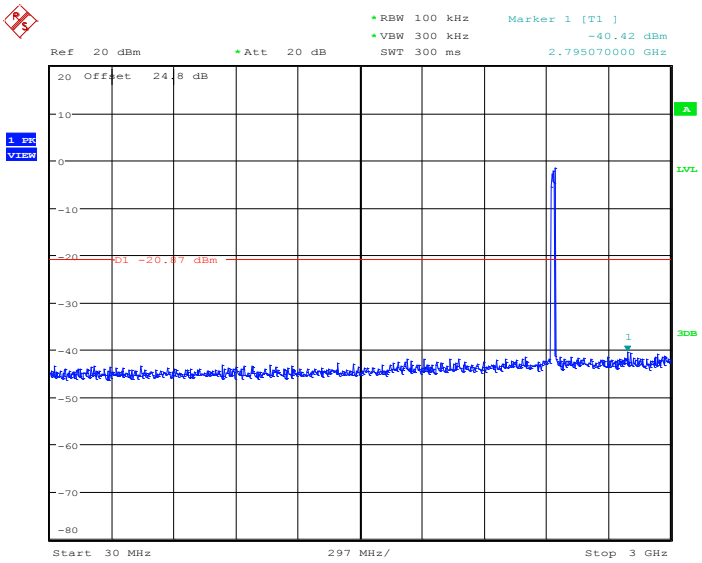


Note:

1. The total loss is 25.3 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.

802.11n HT20 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 06

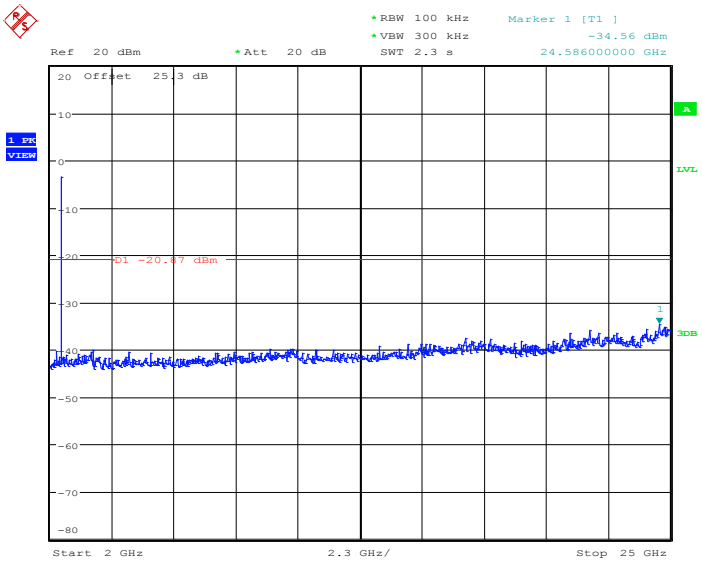


Note:

1. The total loss is 24.8 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.

802.11n HT20 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

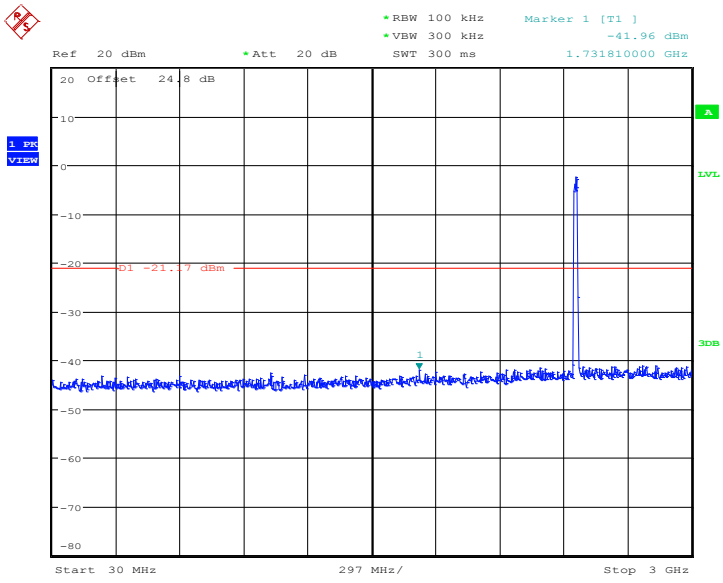


Note:

1. The total loss is 25.3 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.

802.11n HT20 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 11

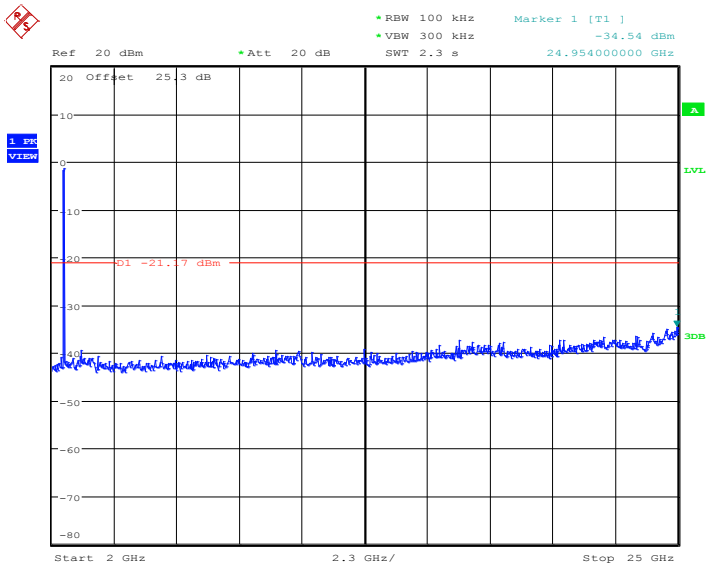


Note:

1. The total loss is 24.8 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.

802.11n HT20 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



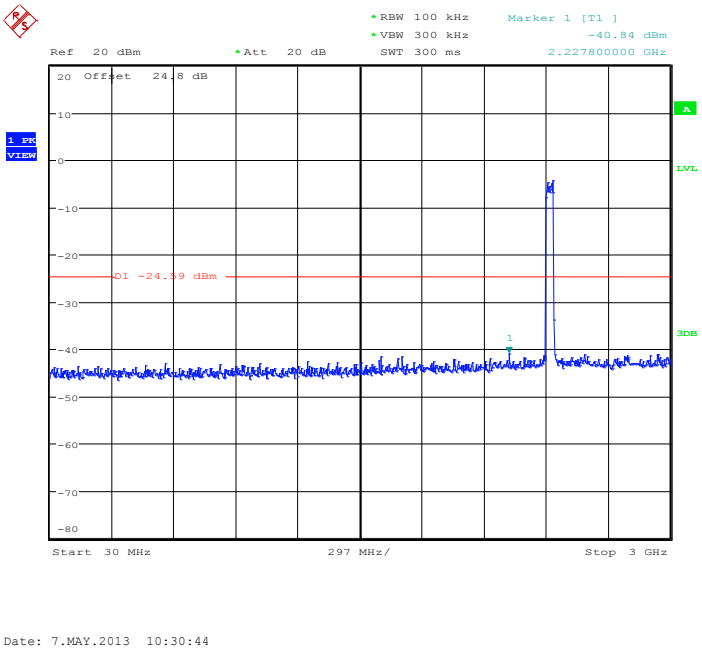
Note:

1. The total loss is 25.3 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 :	24~26℃
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	50~53%
Test Channel :	03, 06, 09	Test Engineer :	Coyote Lin

2.4GHz 802.11n HT40 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 03

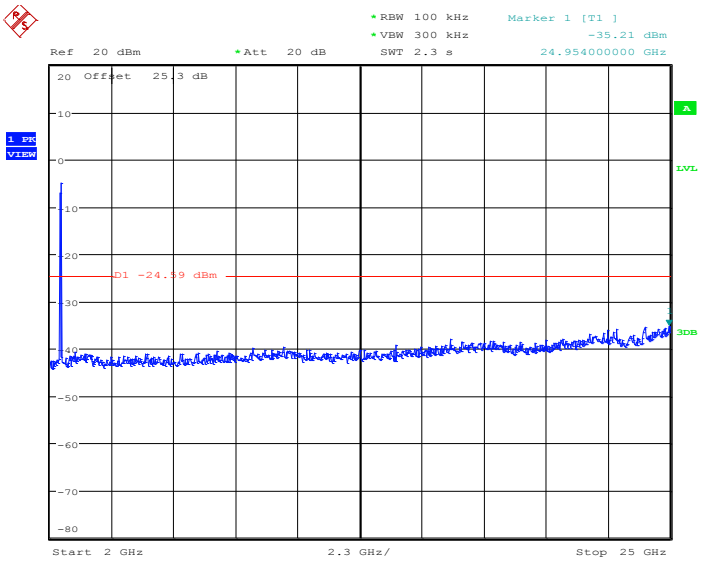


Note:

1. The total loss is 24.8 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.

2.4GHz 802.11n HT40 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 03



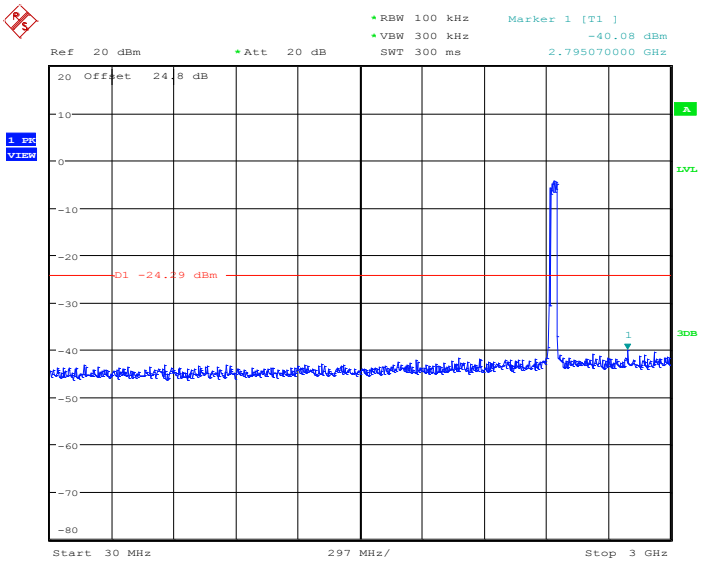
Date: 7.MAY.2013 10:31:02

Note:

1. The total loss is 25.3 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.

2.4GHz 802.11n HT40 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 06

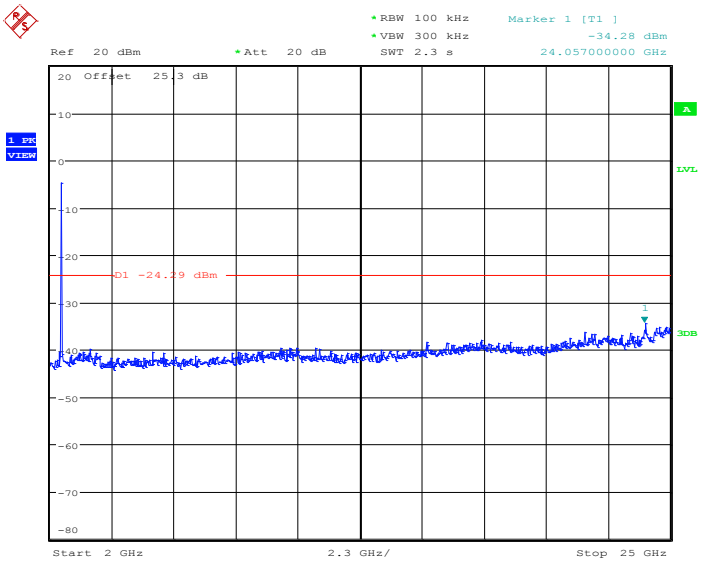


Note:

1. The total loss is 24.8 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.

2.4GHz 802.11n HT40 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

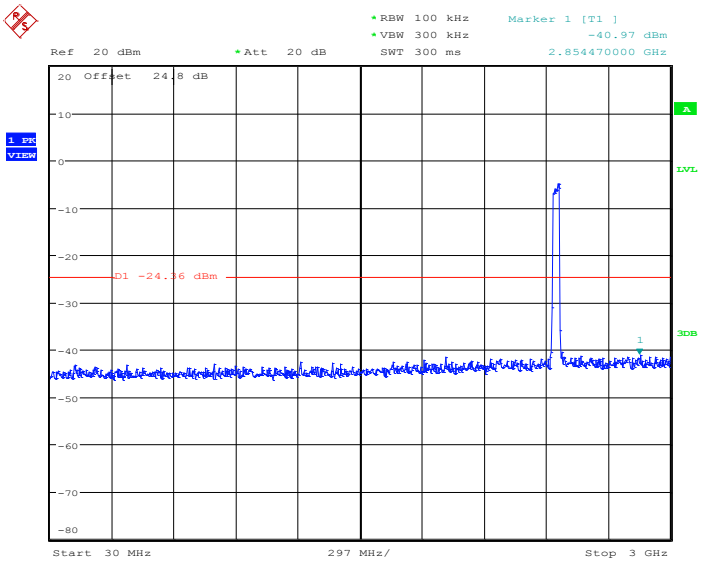


Note:

1. The total loss is 25.3 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.

2.4GHz 802.11n HT40 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 09

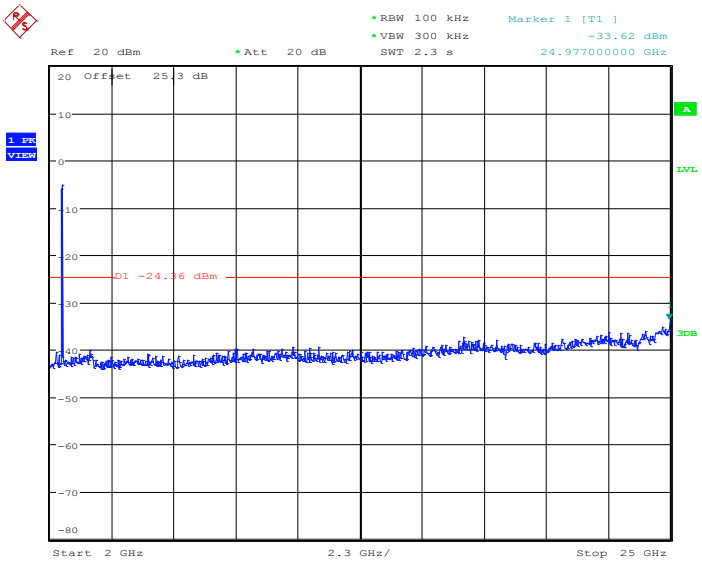


Note:

1. The total loss is 24.8 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.

2.4GHz 802.11n HT40 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 09



Note:

1. The total loss is 25.3 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 section 4.0 of List of Measuring Equipment of this test report is used for test.

3.5.3 Test Procedures

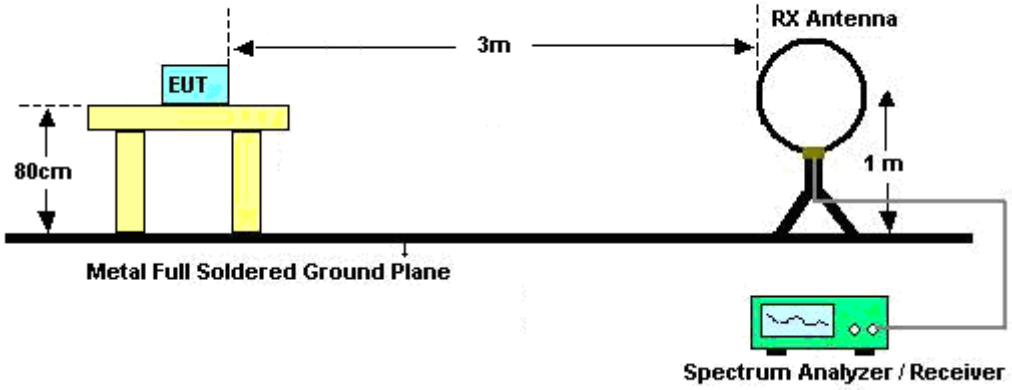
1. The testing follows the guidelines in ANSI C63. 10-2009
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better 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 ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 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(us)	1/T(KHz)	VBW Setting
802.11b	98.59	-	-	10Hz
802.11g	93.09	1400.000	0.714	1kHz
2.4G 802.11n HT20	92.09	1304.000	0.767	1kHz
2.4G 802.11n HT40	85.79	652.000	1.534	3kHz

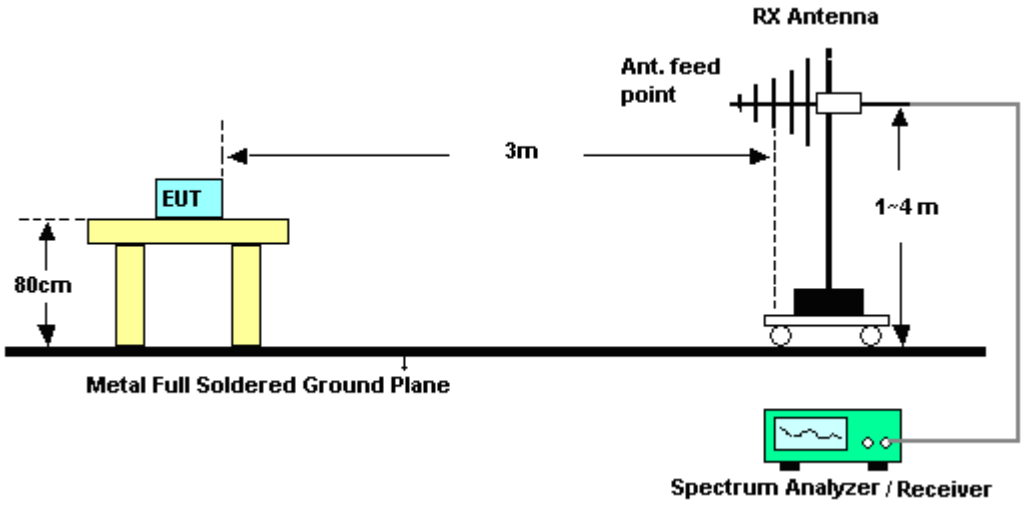
Note: For average measurement with duty cycle < 98%, use reduced VBW measurement method 4.2.3.2.3 in ANSI C63.10.

3.5.4 Test Setup

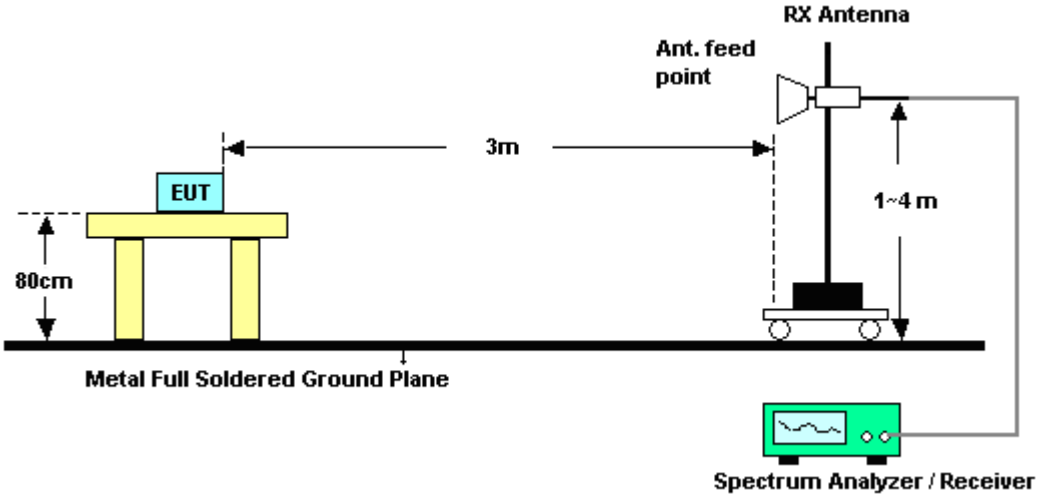
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

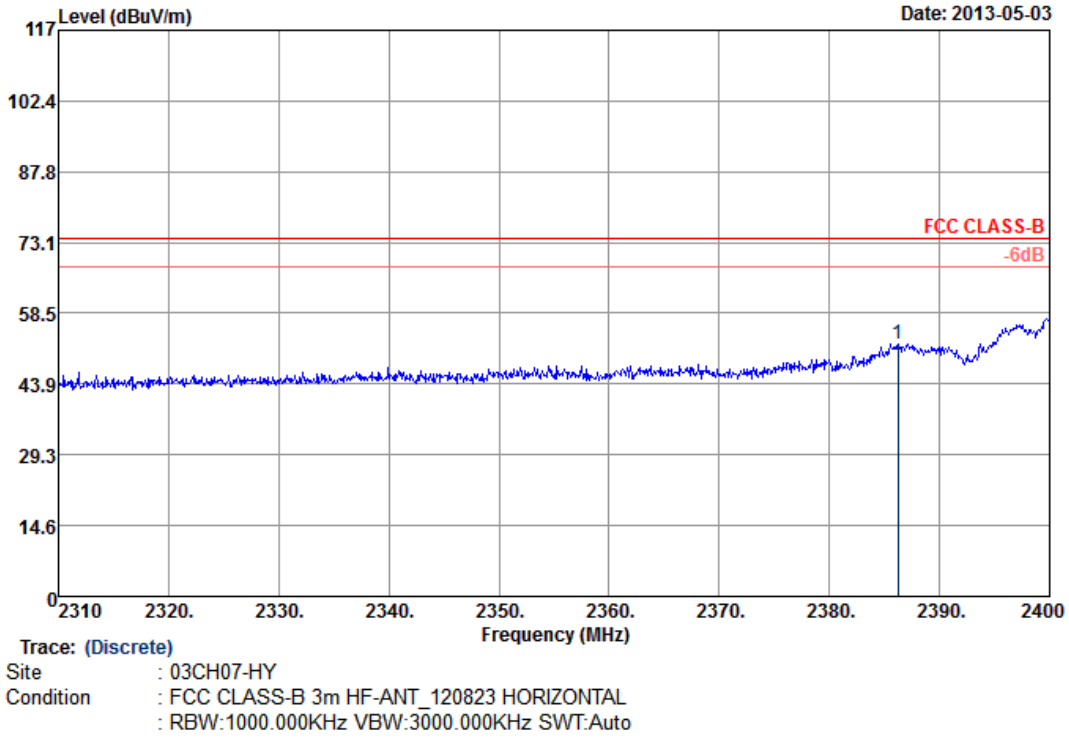


3.5.5 Test Results of Radiated Emissions (9 KHz ~ 30 MHz)

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 Band Edges

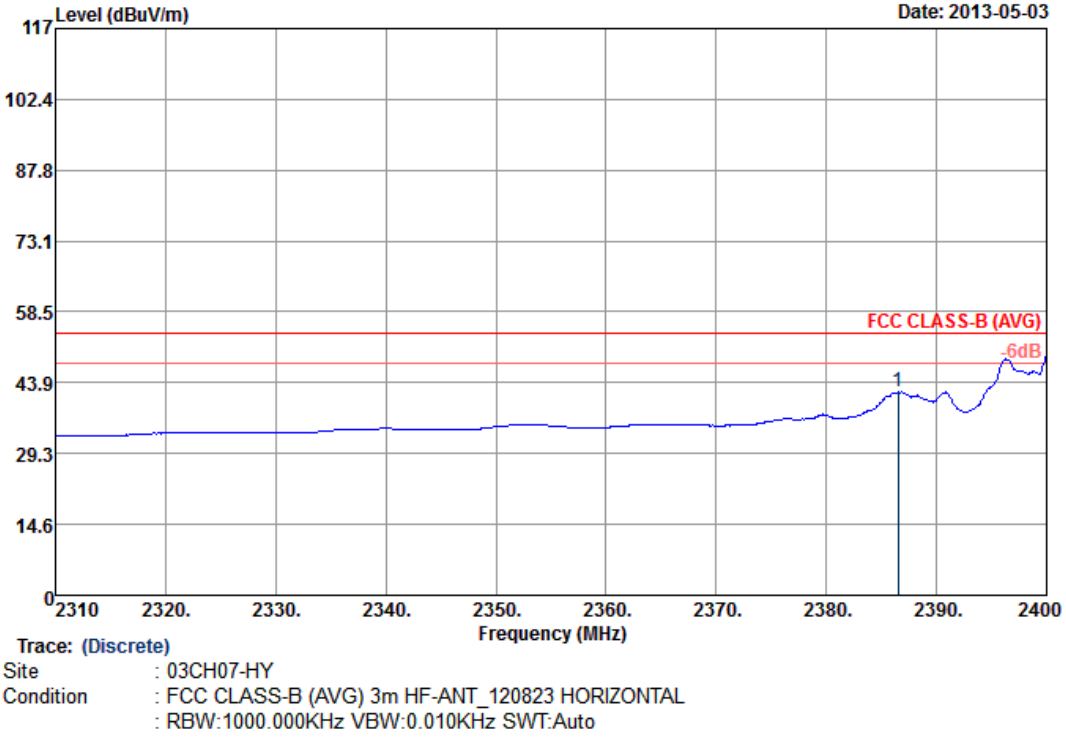
Test Mode :	802.11b	Temperature :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang



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
2386.23	52.05	-21.95	74	47.11	32.3	6.91	34.27	136	102	Peak

Note: Worst case measurement on 2386.23 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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

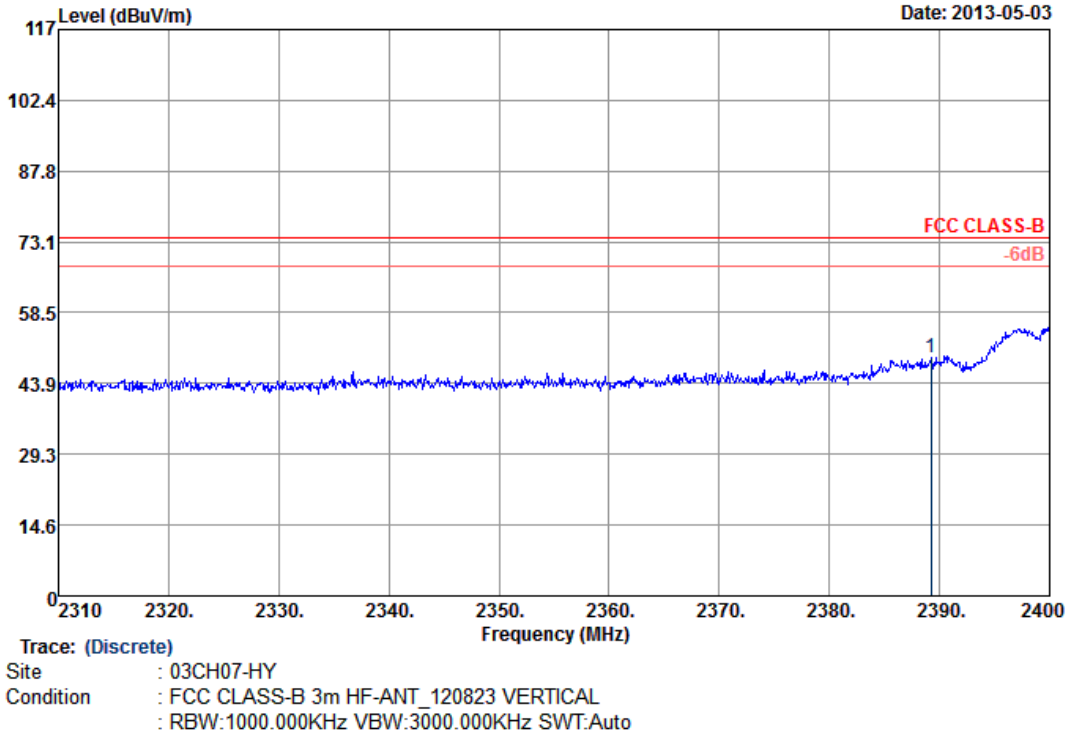


ANTENNA POLARITY : HORIZONTAL

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
2386.5	42.04	-11.96	54	37.1	32.3	6.91	34.27	136	102	Average

Note: Worst case measurement on 2386.5 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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

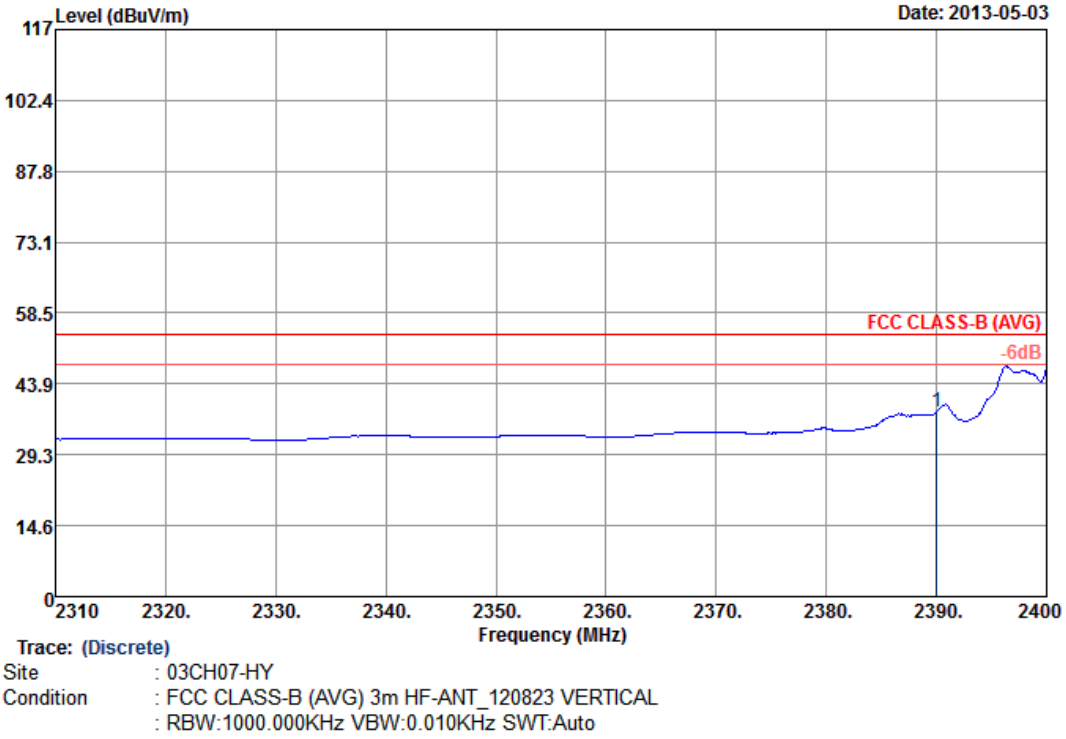


ANTENNA POLARITY : VERTICAL

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
2389.2	49.08	-24.92	74	44.14	32.3	6.91	34.27	114	70	Peak

Note: Worst case measurement on 2389.2 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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

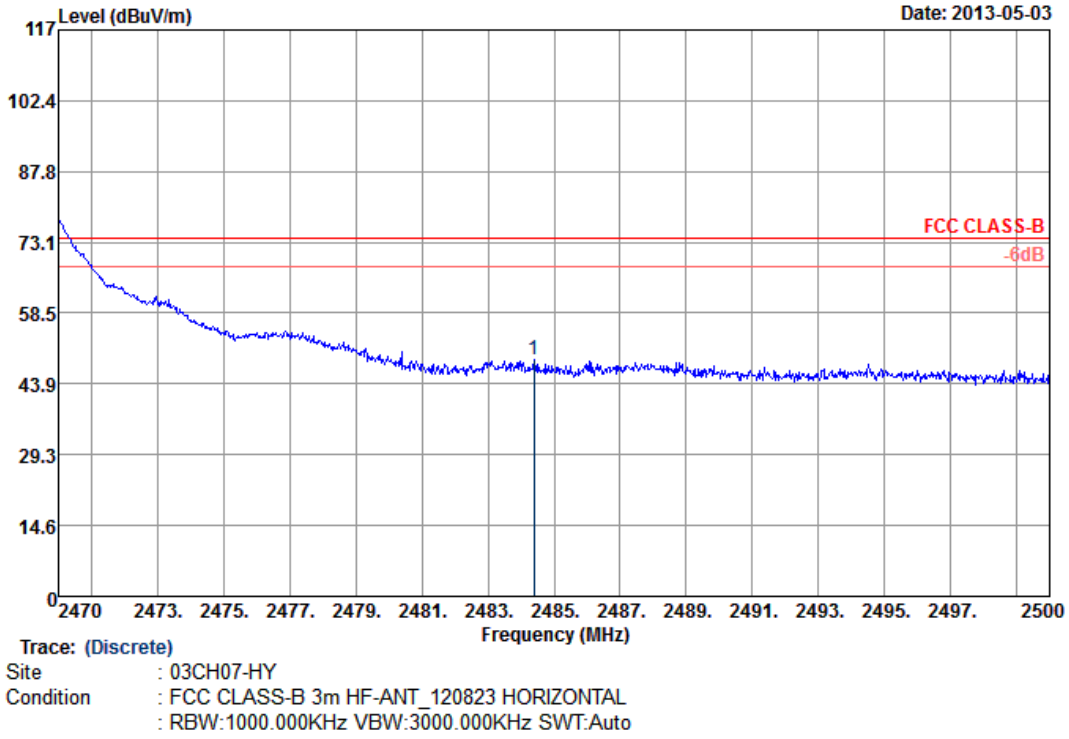


ANTENNA POLARITY : VERTICAL

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	38	-16	54	33.09	32.3	6.91	34.3	114	70	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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

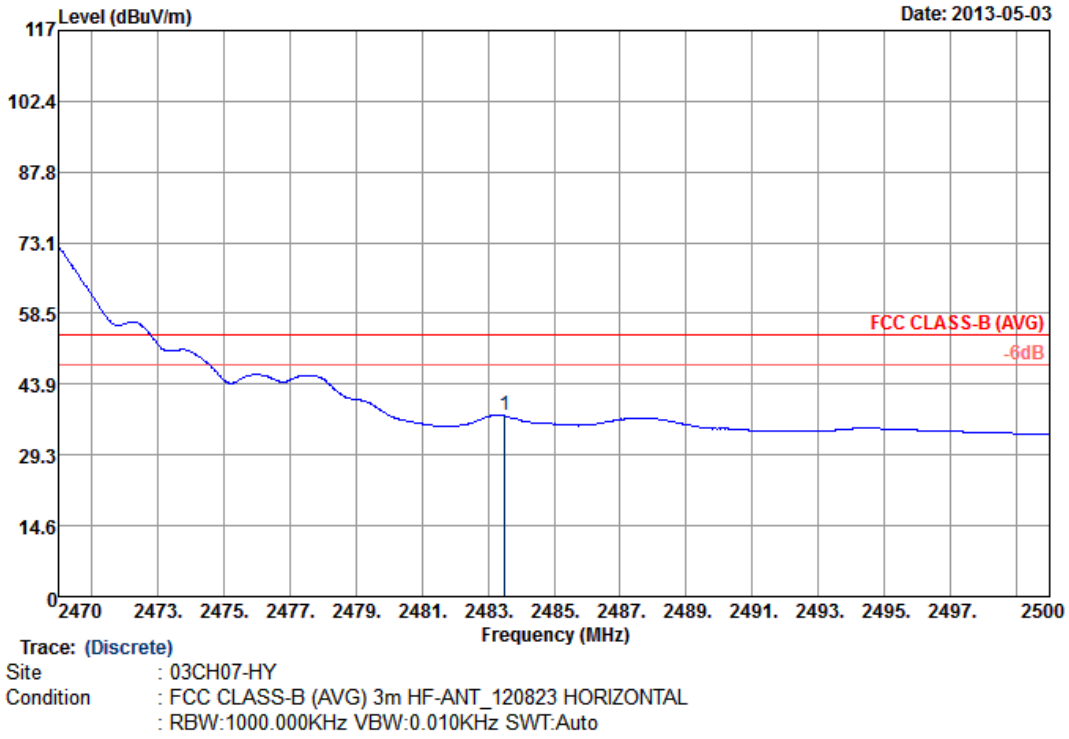


ANTENNA POLARITY : HORIZONTAL

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
2484.4	48.94	-25.06	74	43.93	32.38	7.06	34.43	132	278	Peak

Note: Worst case measurement on 2484.4 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

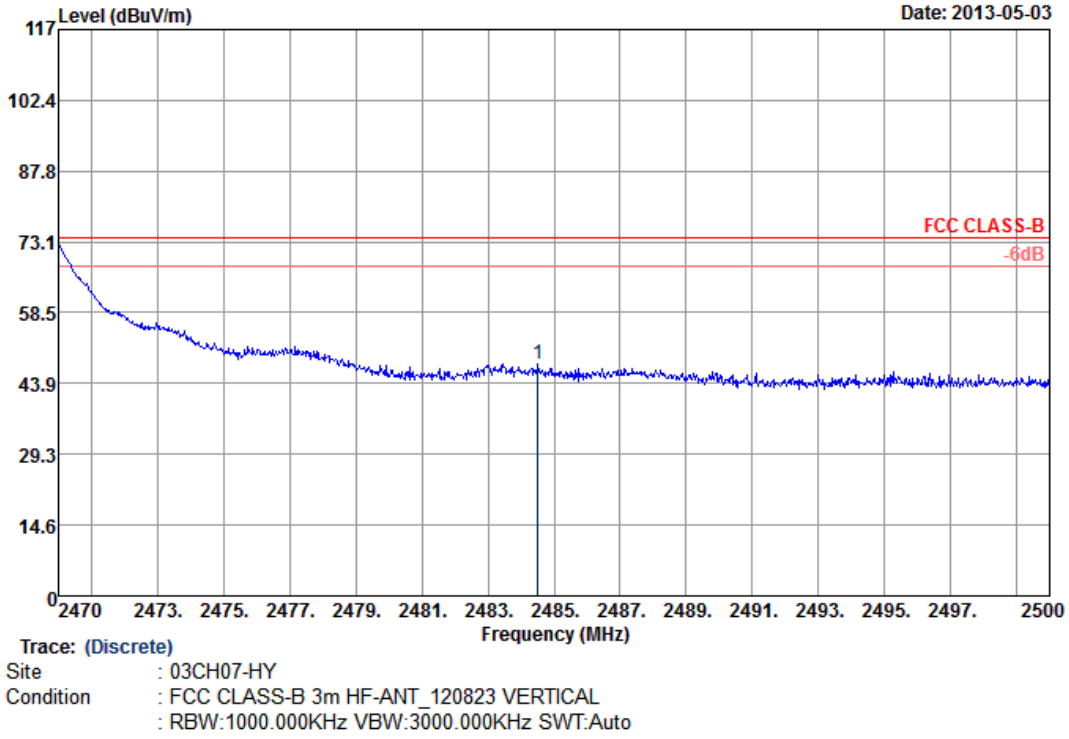


ANTENNA POLARITY : HORIZONTAL

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
2483.5	37.39	-16.61	54	32.38	32.38	7.06	34.43	132	278	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 :	802.11b	Temperature :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

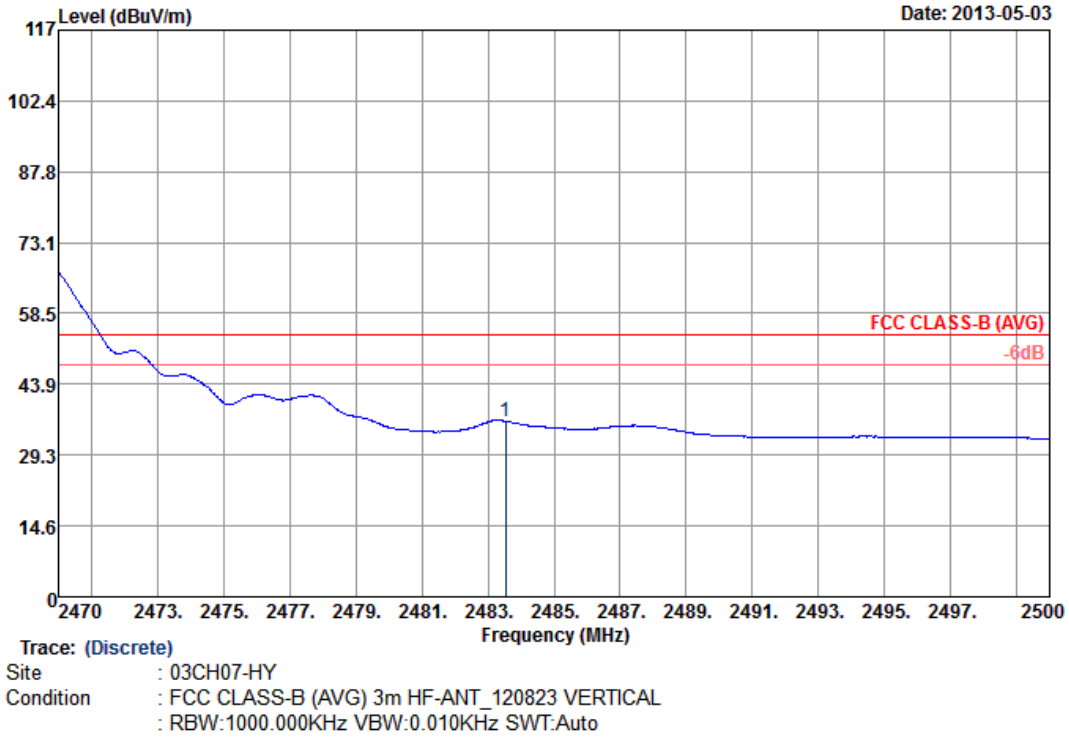


ANTENNA POLARITY : VERTICAL

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
2484.52	47.94	-26.06	74	42.93	32.38	7.06	34.43	200	360	Peak

Note: Worst case measurement on 2484.52 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

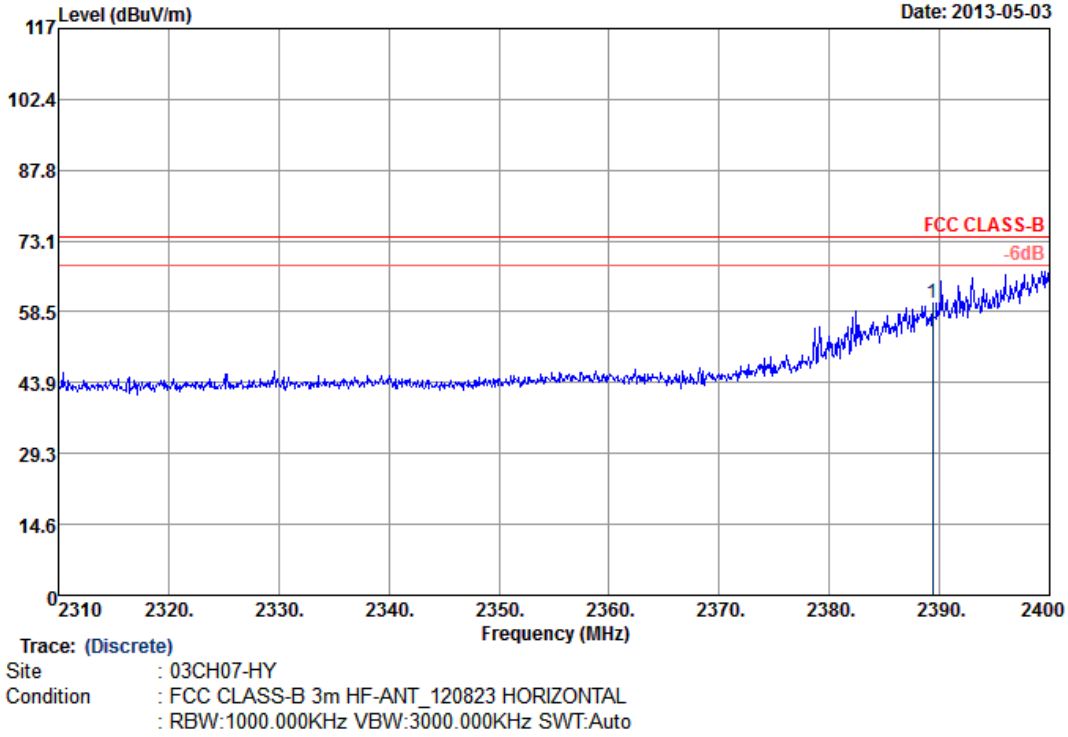


ANTENNA POLARITY : VERTICAL

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
2483.53	36.29	-17.71	54	31.28	32.38	7.06	34.43	200	360	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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

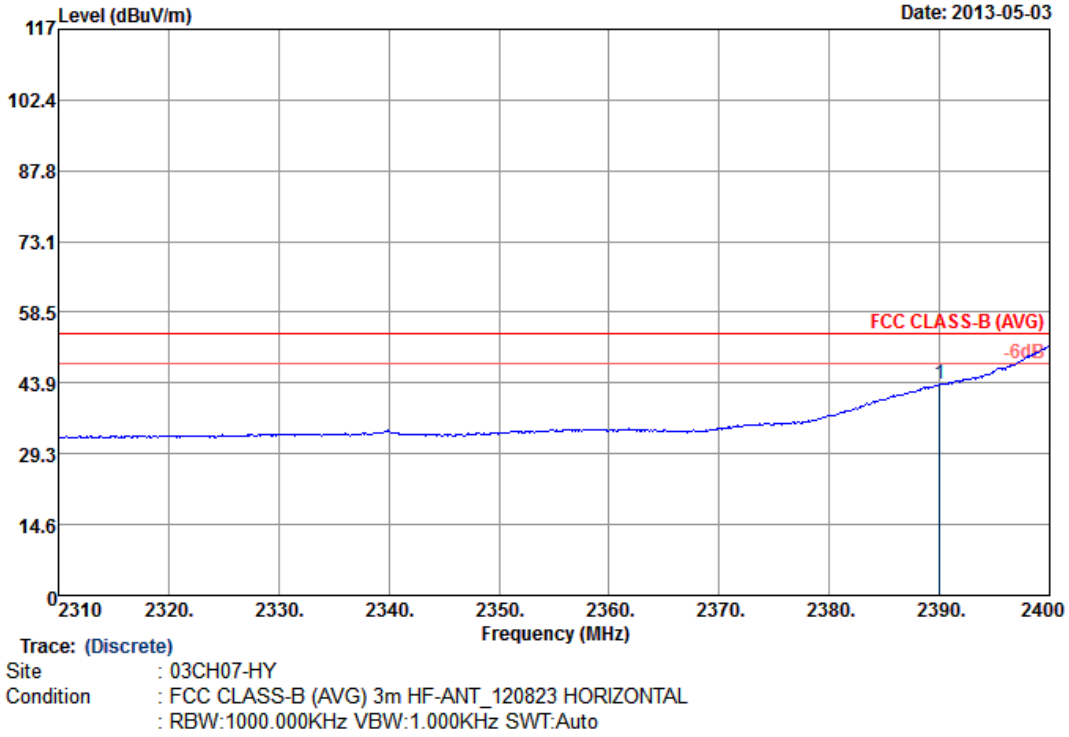


ANTENNA POLARITY : HORIZONTAL

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	60.4	-13.6	74	55.46	32.3	6.91	34.27	165	103	Peak

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 :	802.11g	Temperature :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

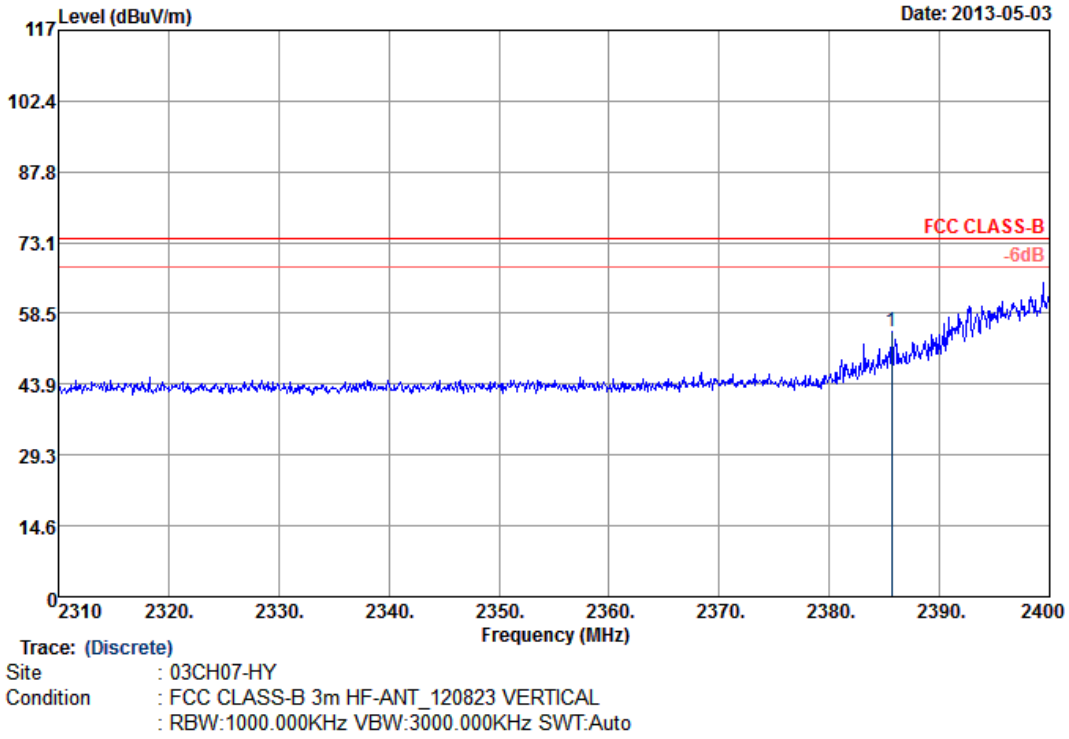


ANTENNA POLARITY : HORIZONTAL

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	43.58	-10.42	54	38.67	32.3	6.91	34.3	165	103	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 :	802.11g	Temperature :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

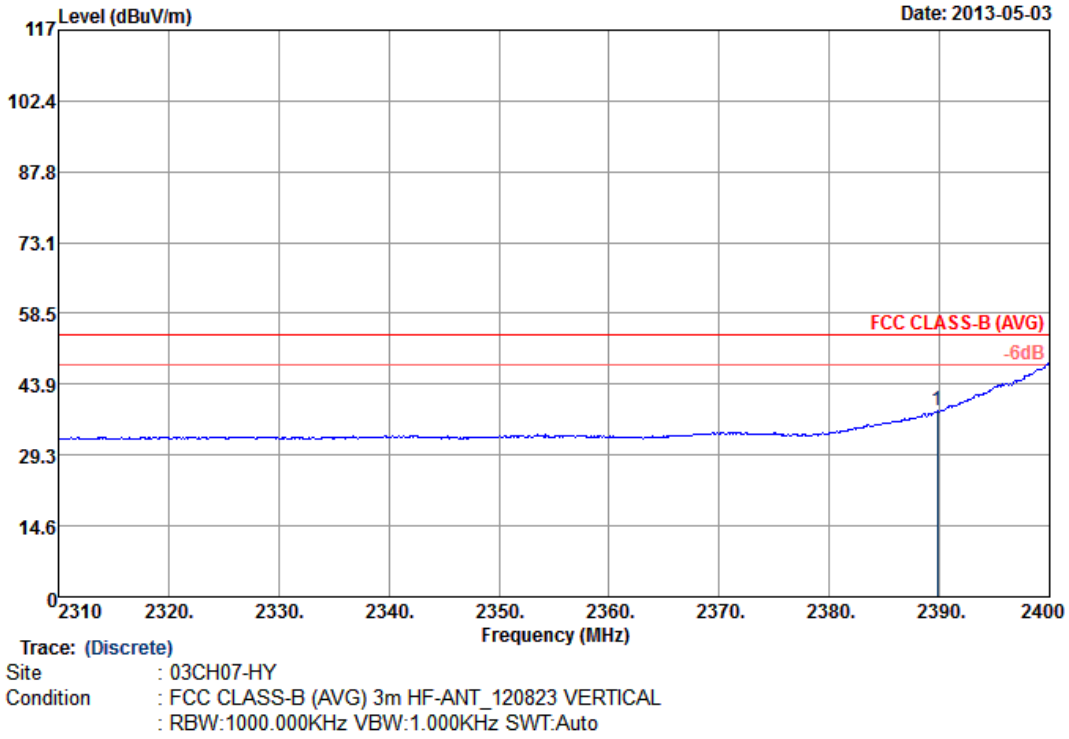


ANTENNA POLARITY : VERTICAL

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	54.75	-19.25	74	49.81	32.3	6.91	34.27	200	61	Peak

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 :	802.11g	Temperature :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

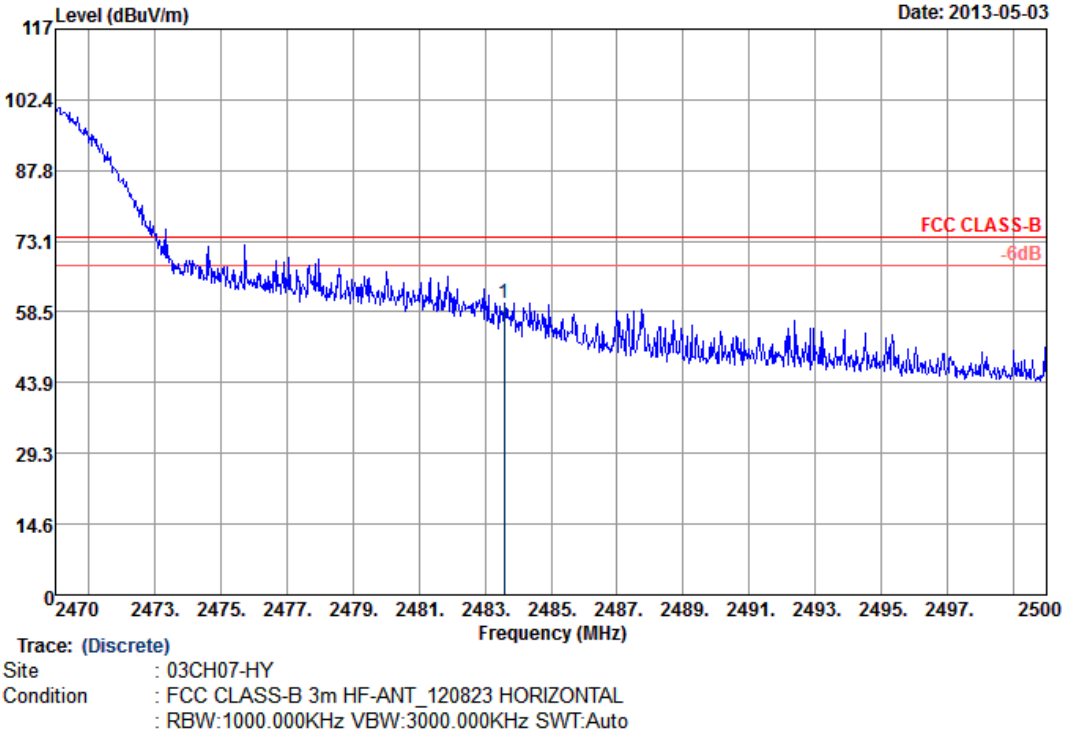


ANTENNA POLARITY : VERTICAL

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	38.32	-15.68	54	33.41	32.3	6.91	34.3	200	61	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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

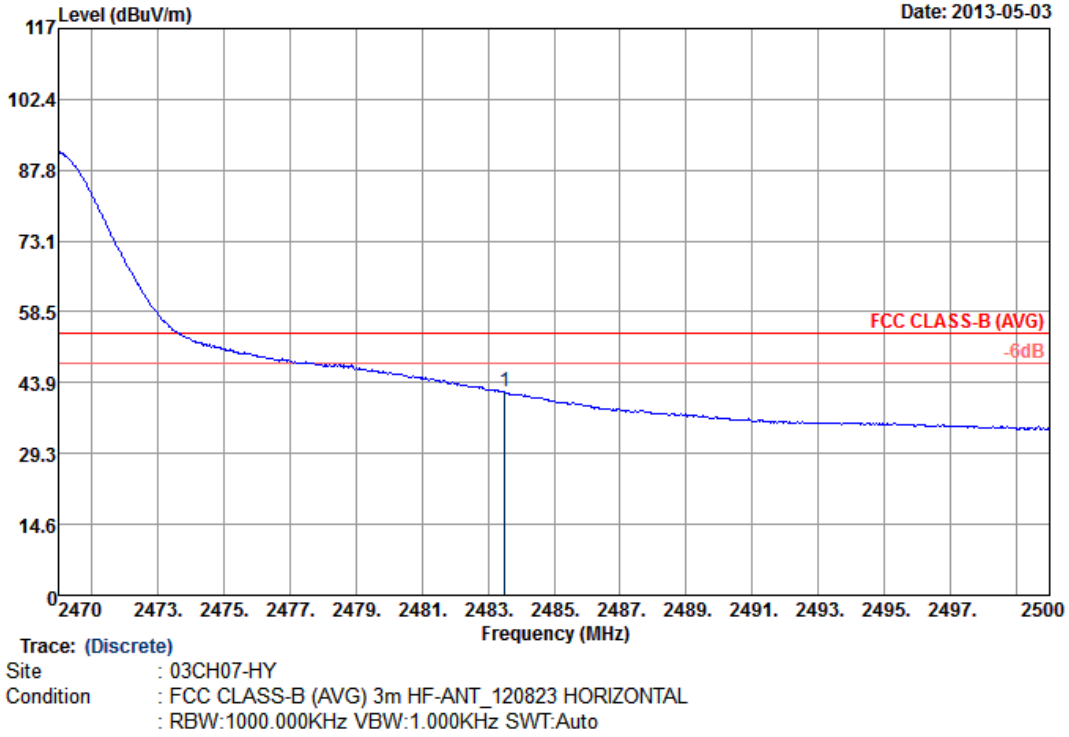


ANTENNA POLARITY : HORIZONTAL

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
2483.59	60.37	-13.63	74	55.36	32.38	7.06	34.43	197	266	Peak

Note: Worst case measurement on 2483.59 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

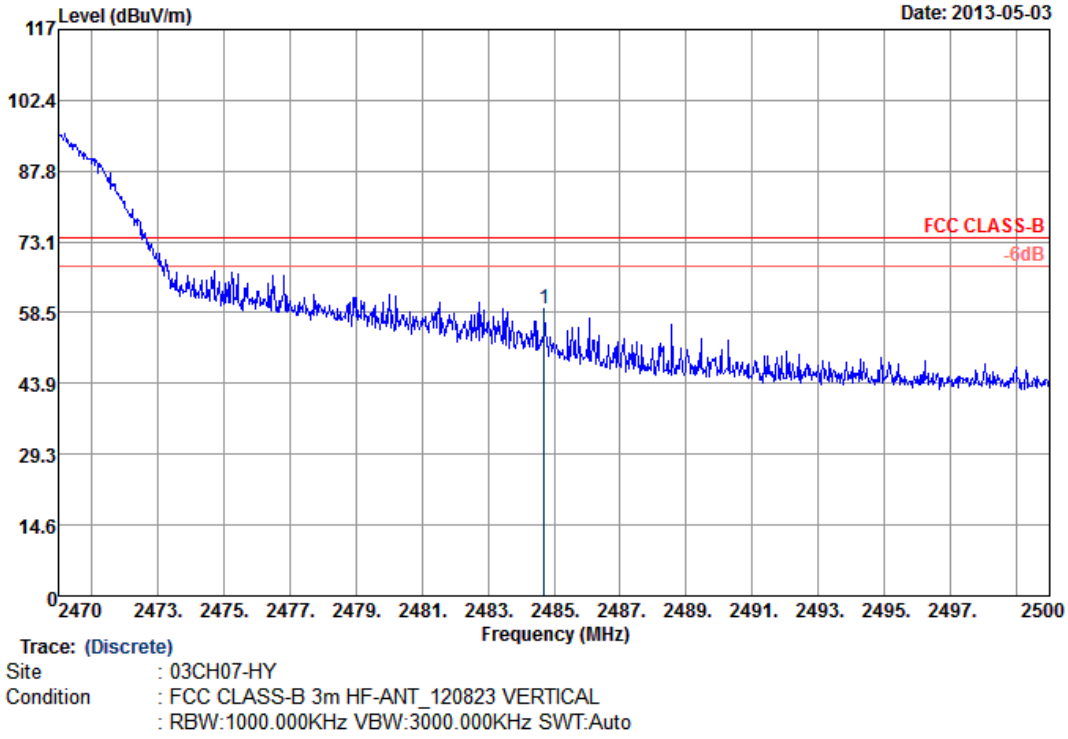


ANTENNA POLARITY : HORIZONTAL

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
2483.5	41.96	-12.04	54	36.95	32.38	7.06	34.43	197	266	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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

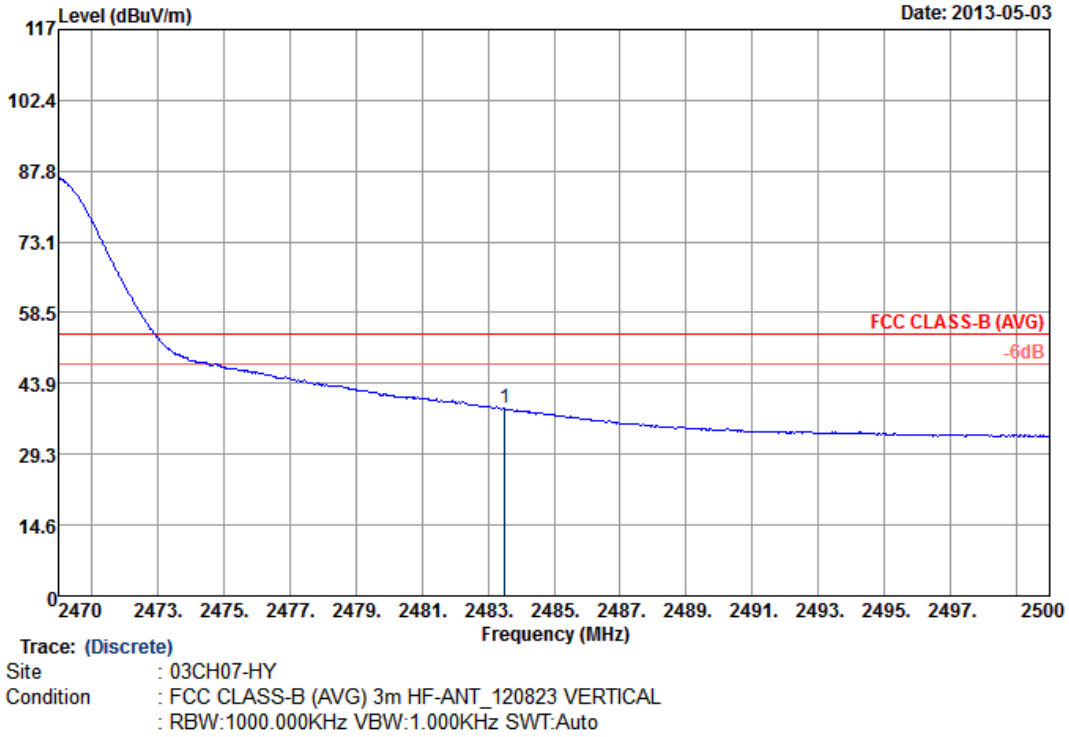


ANTENNA POLARITY : VERTICAL

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
2484.7	59.41	-14.59	74	54.4	32.38	7.06	34.43	141	64	Peak

Note: Worst case measurement on 2484.7 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

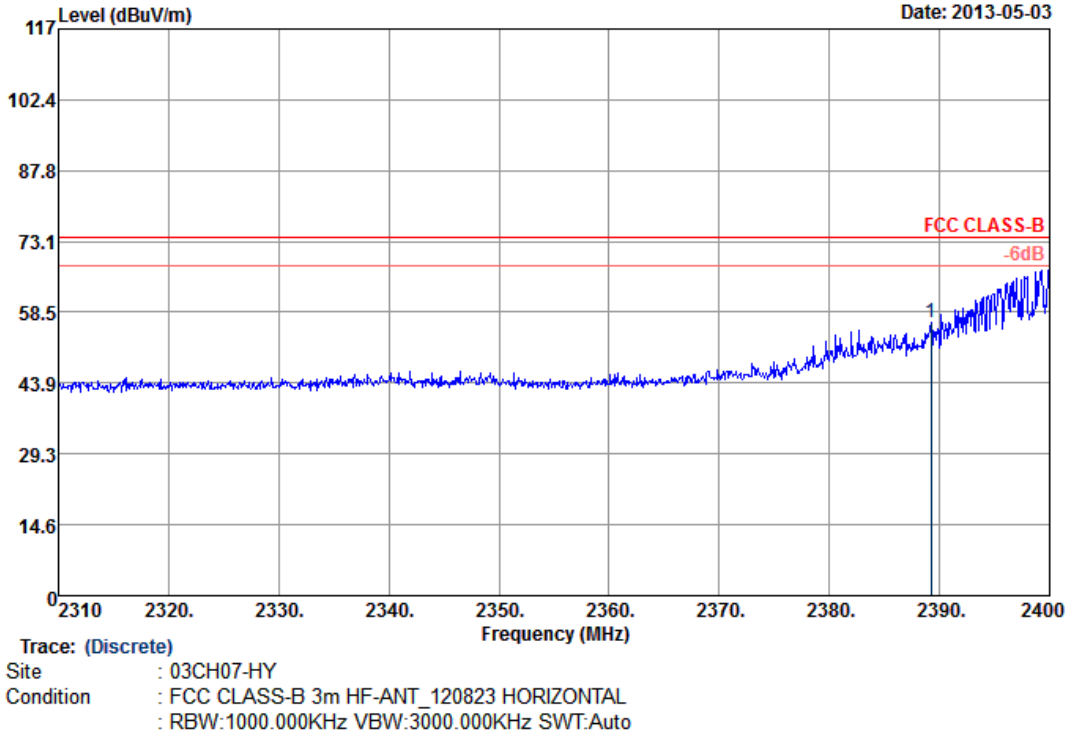


ANTENNA POLARITY : VERTICAL

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	38.68	-15.32	54	33.67	32.38	7.06	34.43	141	64	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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

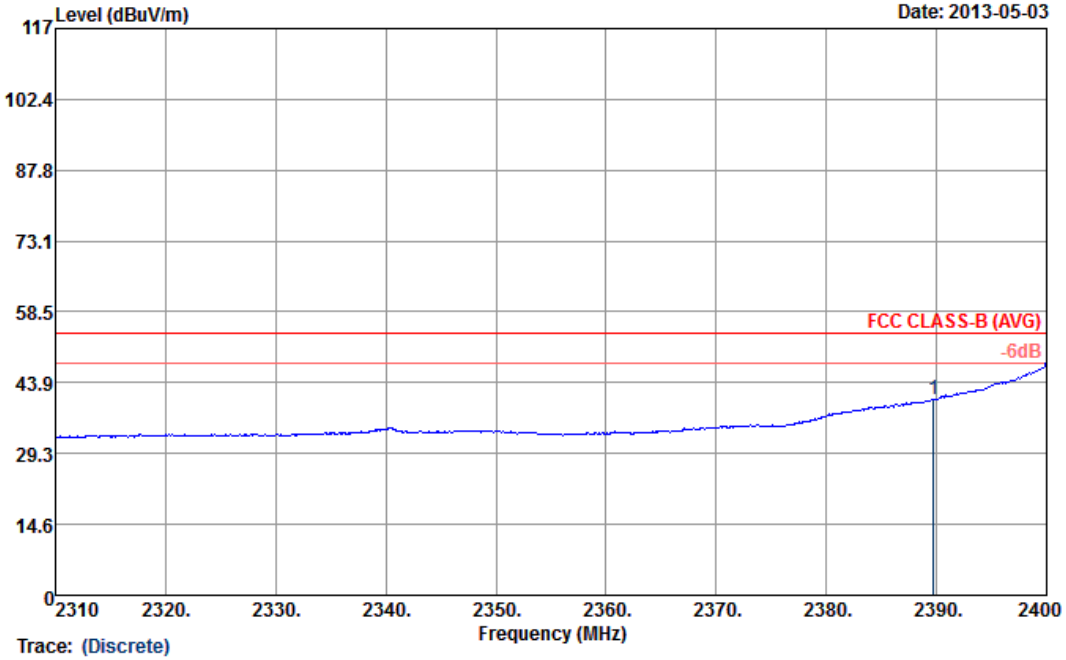


ANTENNA POLARITY : HORIZONTAL

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
2389.2	56.3	-17.7	74	51.36	32.3	6.91	34.27	199	102	Peak

Note: Worst case measurement on 2389.2 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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

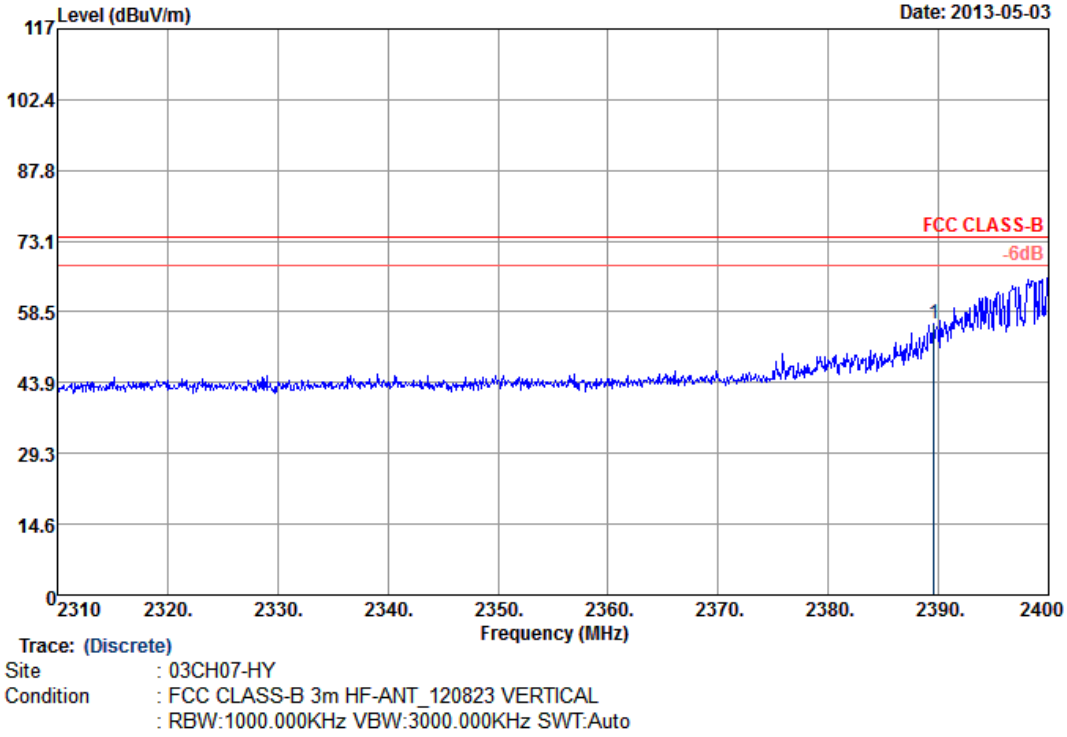


ANTENNA POLARITY : HORIZONTAL

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	40.53	-13.47	54	35.59	32.3	6.91	34.27	199	102	Average

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 HT20	Temperature :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

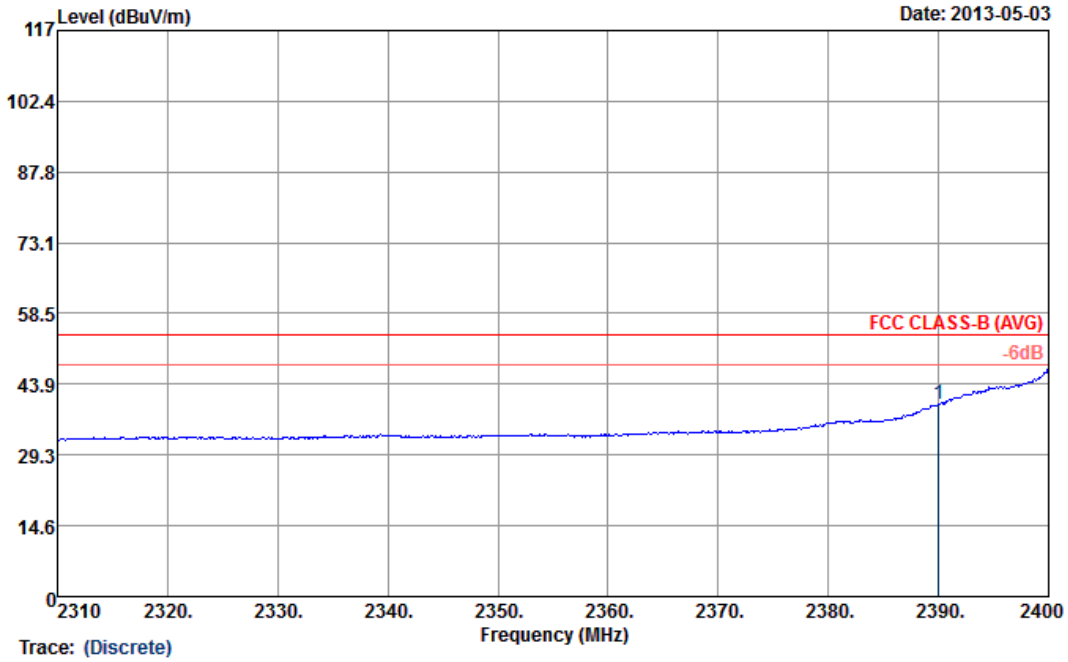


ANTENNA POLARITY : VERTICAL

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
2389.56	56.1	-17.9	74	51.16	32.3	6.91	34.27	173	69	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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	01	Test Engineer :	Beer Chang

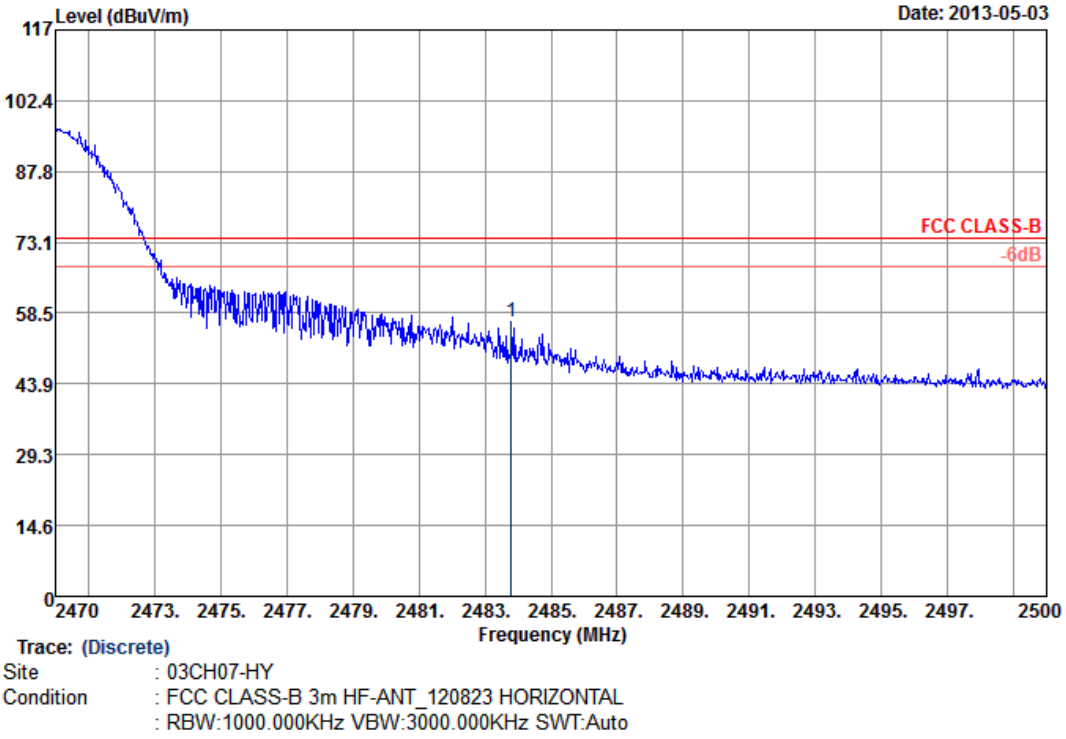


ANTENNA POLARITY : VERTICAL

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	39.78	-14.22	54	34.87	32.3	6.91	34.3	173	69	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 :	802.11n HT20	Temperature :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

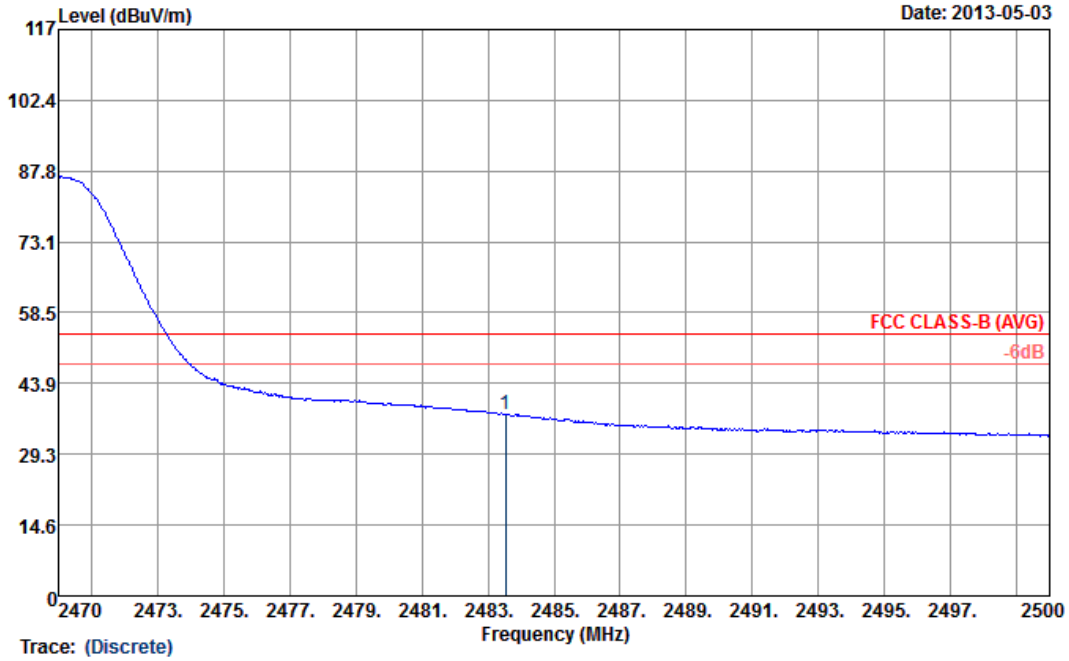


ANTENNA POLARITY : HORIZONTAL

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
2483.8	56.68	-17.32	74	51.67	32.38	7.06	34.43	163	114	Peak

Note: Worst case measurement on 2483.8 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

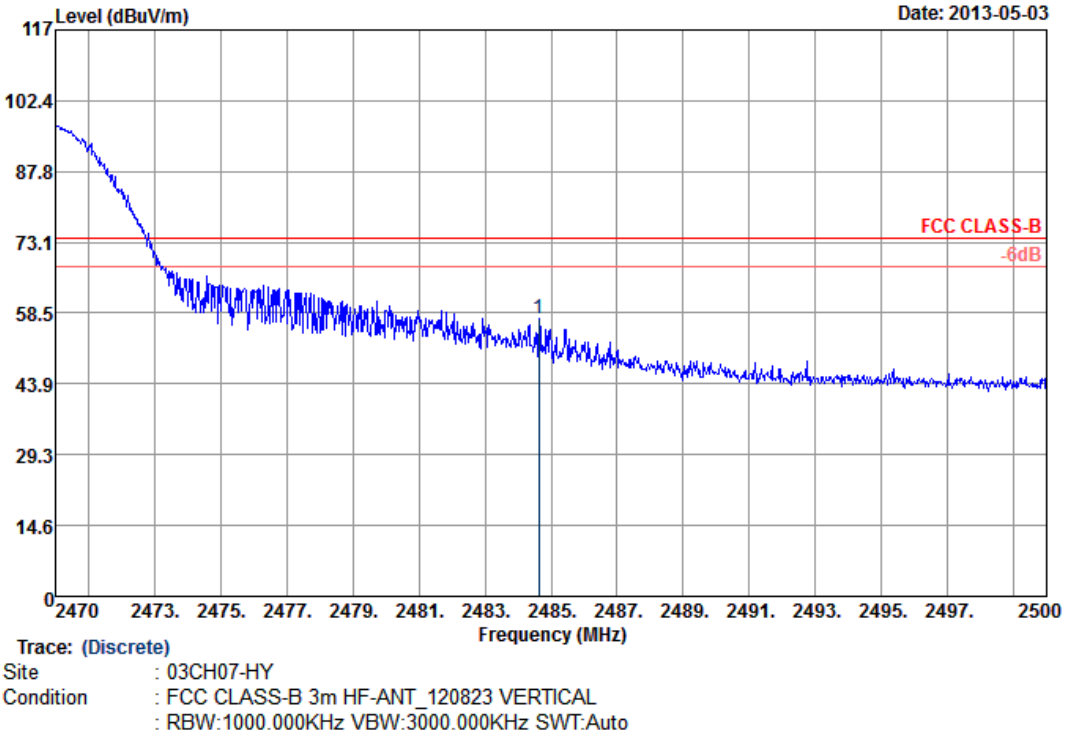


ANTENNA POLARITY : HORIZONTAL

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	37.6	-16.4	54	32.59	32.38	7.06	34.43	163	114	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 :	802.11n HT20	Temperature :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

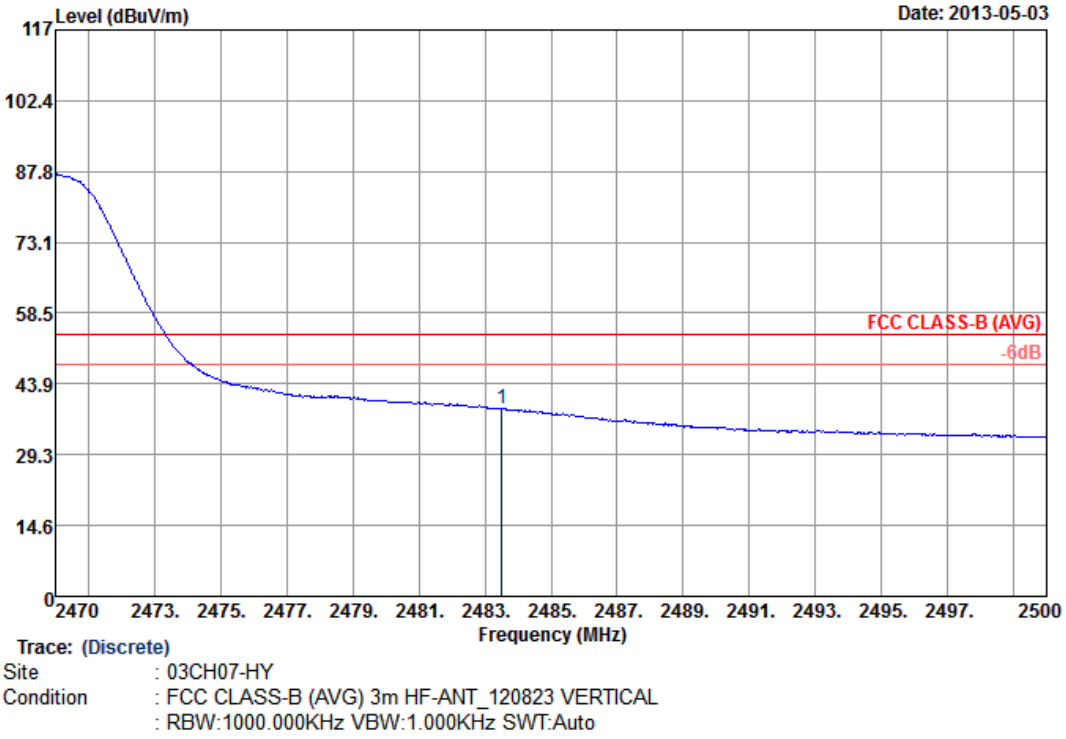


ANTENNA POLARITY : VERTICAL

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
2484.64	57.22	-16.78	74	52.21	32.38	7.06	34.43	118	92	Peak

Note: Worst case measurement on 2484.64 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	11	Test Engineer :	Beer Chang

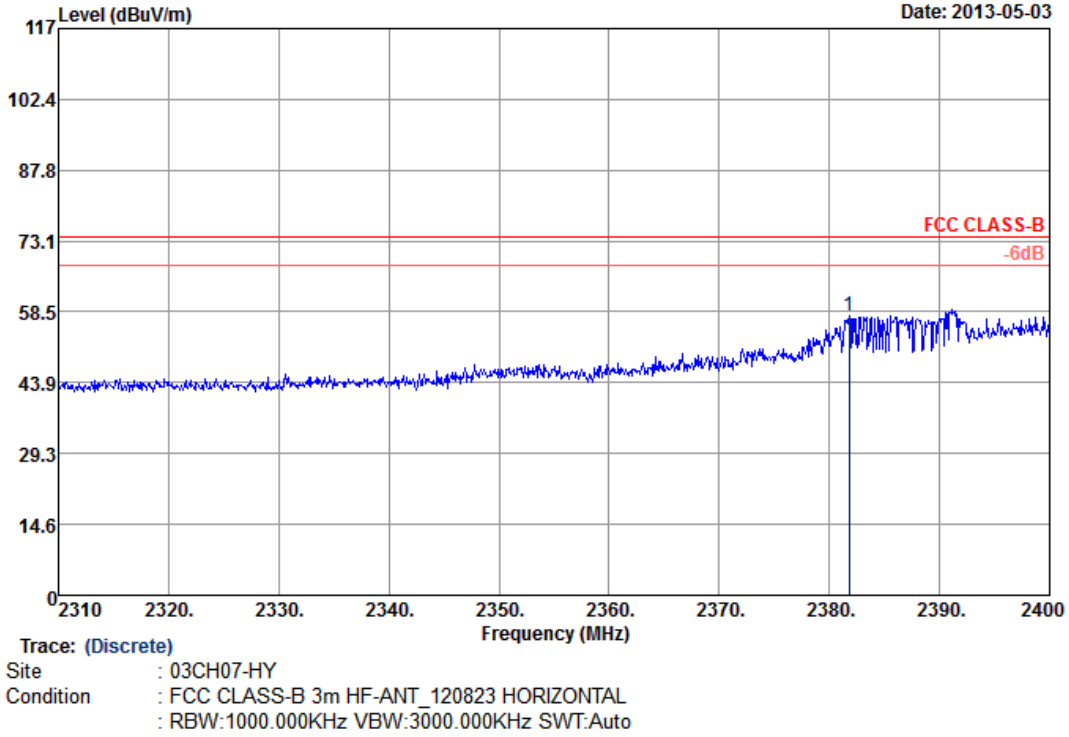


ANTENNA POLARITY : VERTICAL

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	38.83	-15.17	54	33.82	32.38	7.06	34.43	118	92	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 HT40	Temperature :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Beer Chang

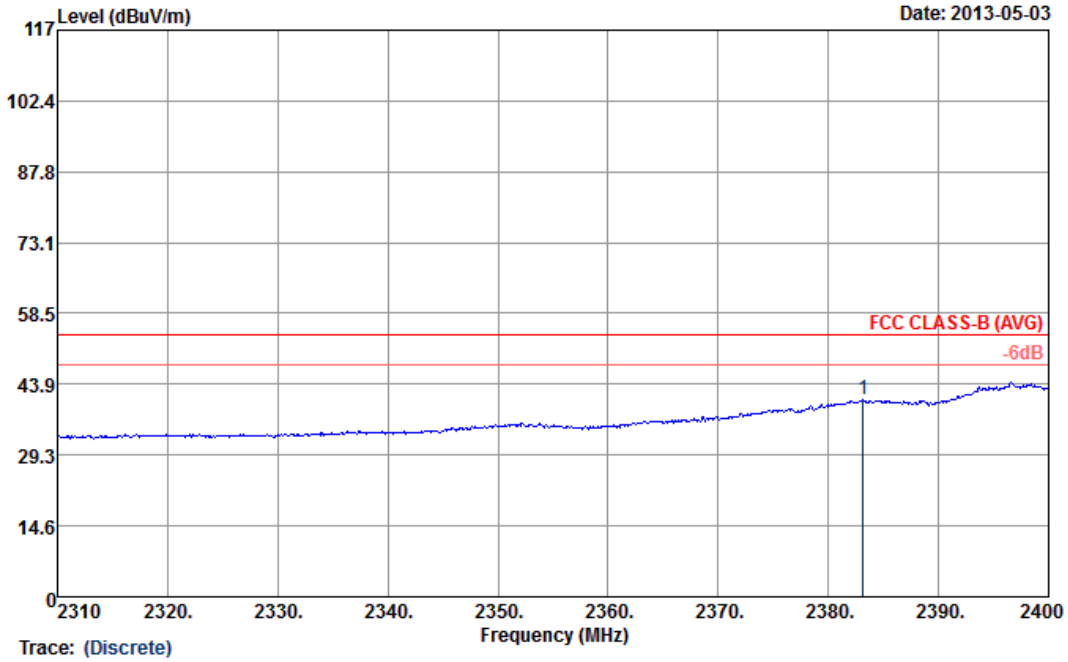


ANTENNA POLARITY : HORIZONTAL

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
2381.82	57.59	-16.41	74	52.67	32.28	6.91	34.27	133	331	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 :	802.11n HT40	Temperature :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Beer Chang

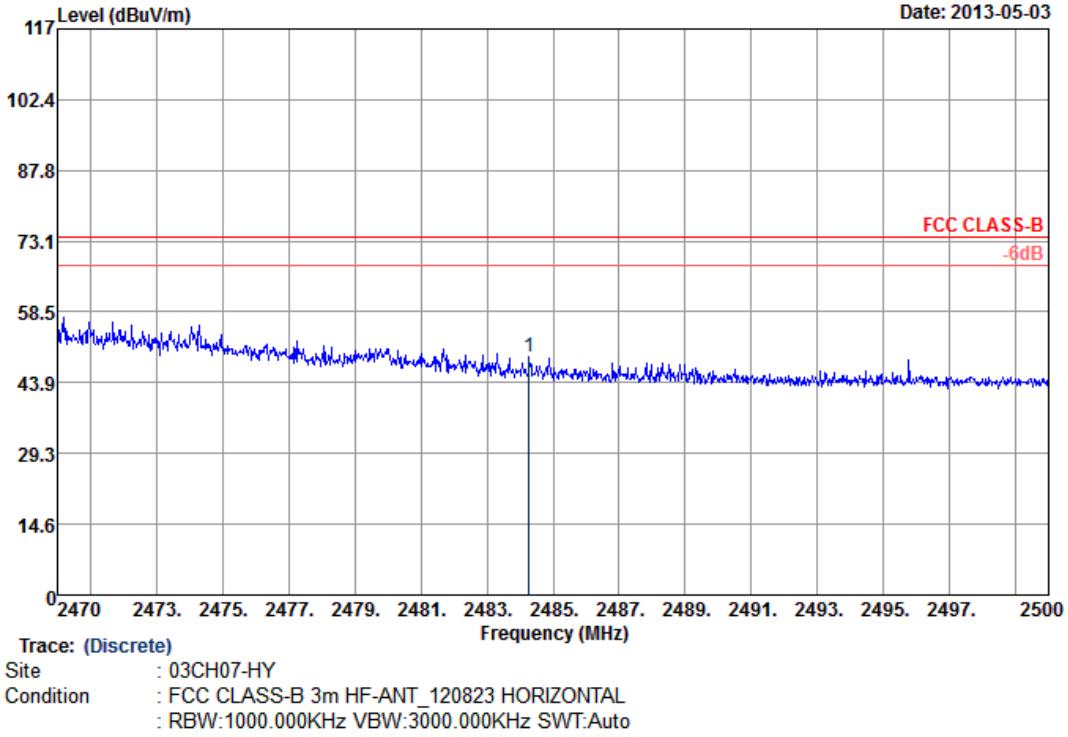


ANTENNA POLARITY : HORIZONTAL

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
2383.17	40.87	-13.13	54	35.95	32.28	6.91	34.27	133	331	Average

Note: Worst case measurement on 2383.17 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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Beer Chang

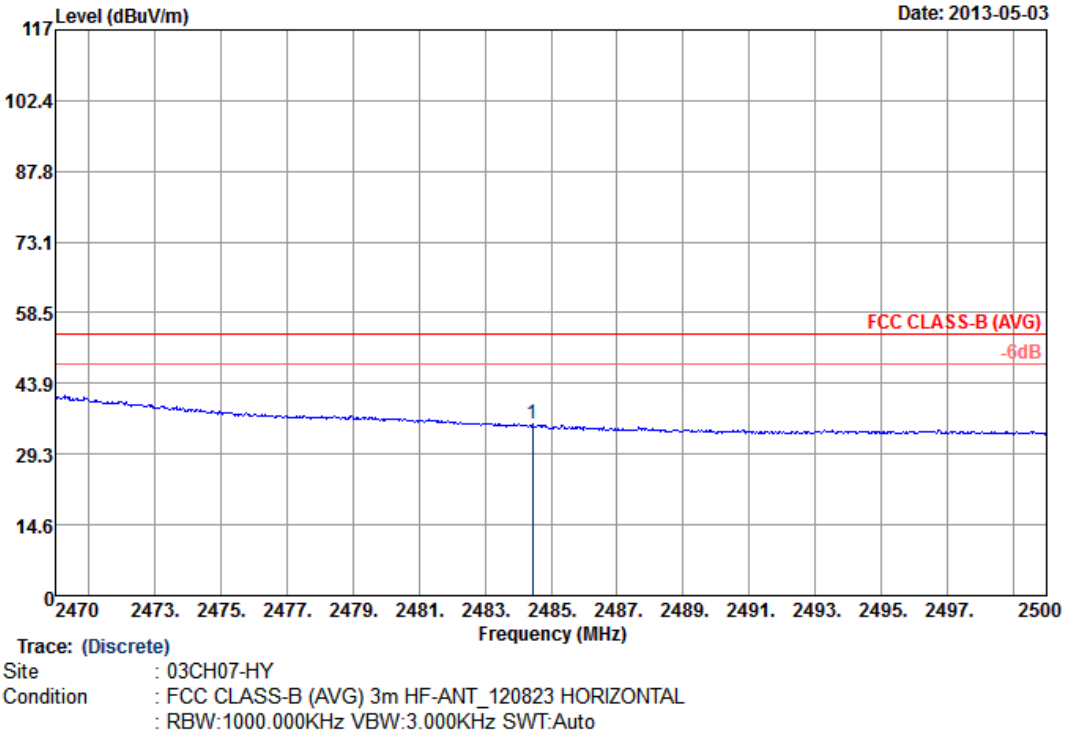


ANTENNA POLARITY : HORIZONTAL

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
2484.28	49.32	-24.68	74	44.31	32.38	7.06	34.43	133	331	Peak

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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Beer Chang

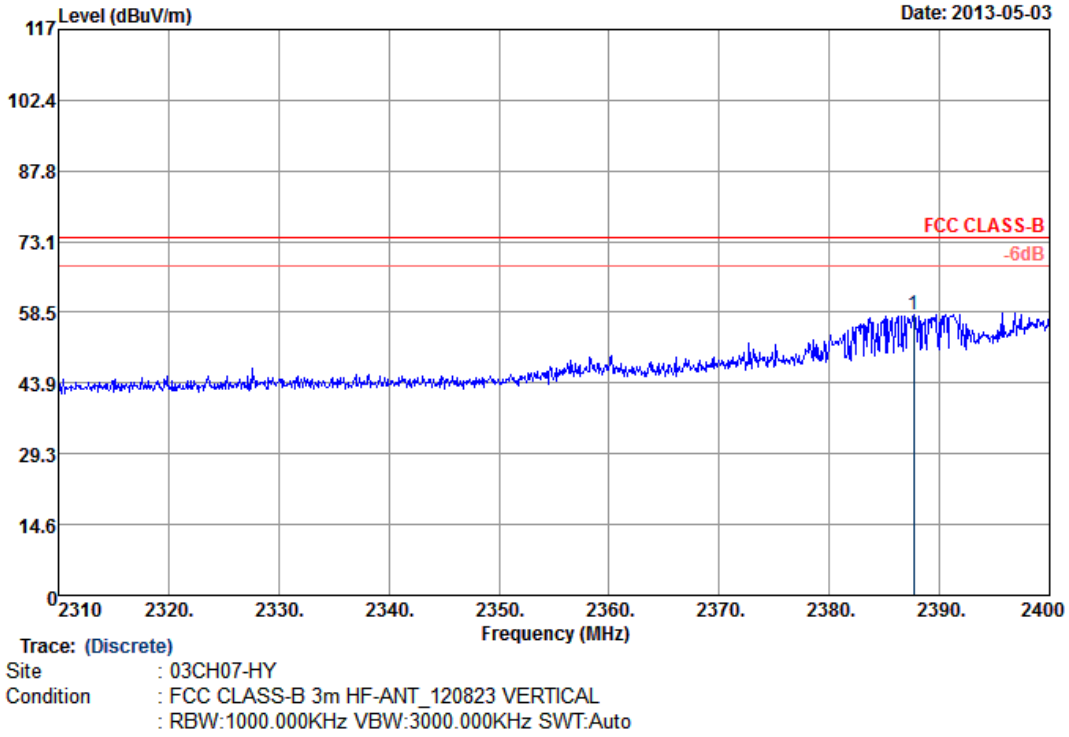


ANTENNA POLARITY : HORIZONTAL

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
2484.43	35.47	-18.53	54	30.46	32.38	7.06	34.43	133	331	Average

Note: Worst case measurement on 2484.43 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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Beer Chang

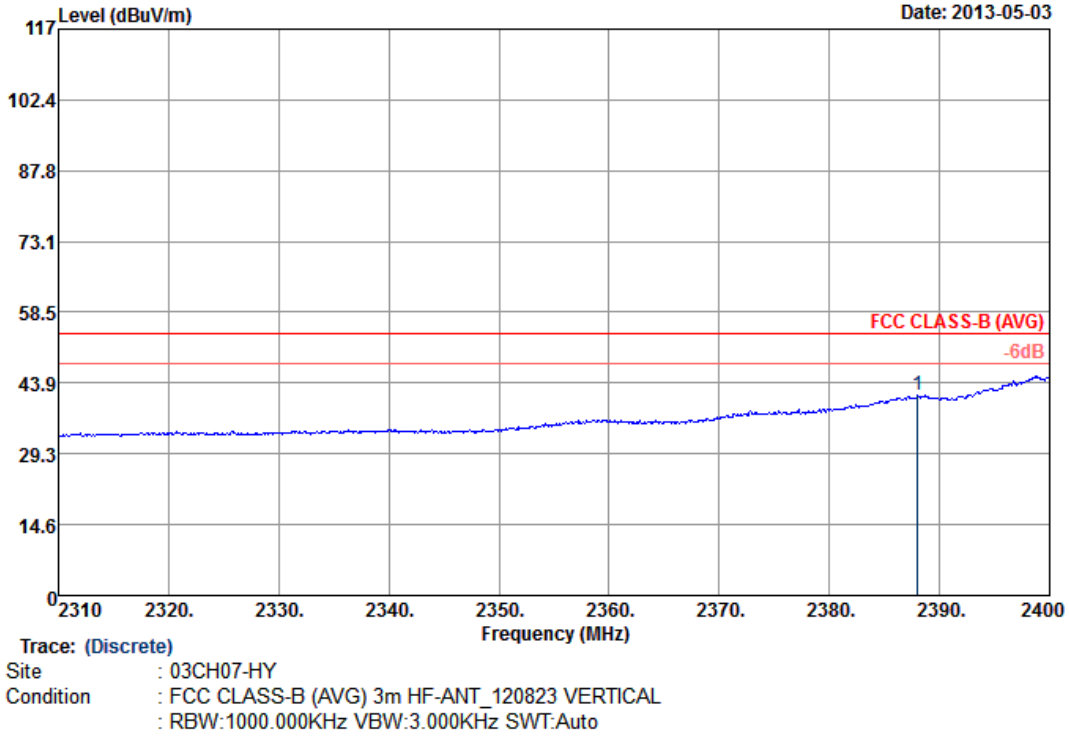


ANTENNA POLARITY : VERTICAL

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
2387.67	58.06	-15.94	74	53.12	32.3	6.91	34.27	118	92	Peak

Note: Worst case measurement on 2387.67 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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Beer Chang

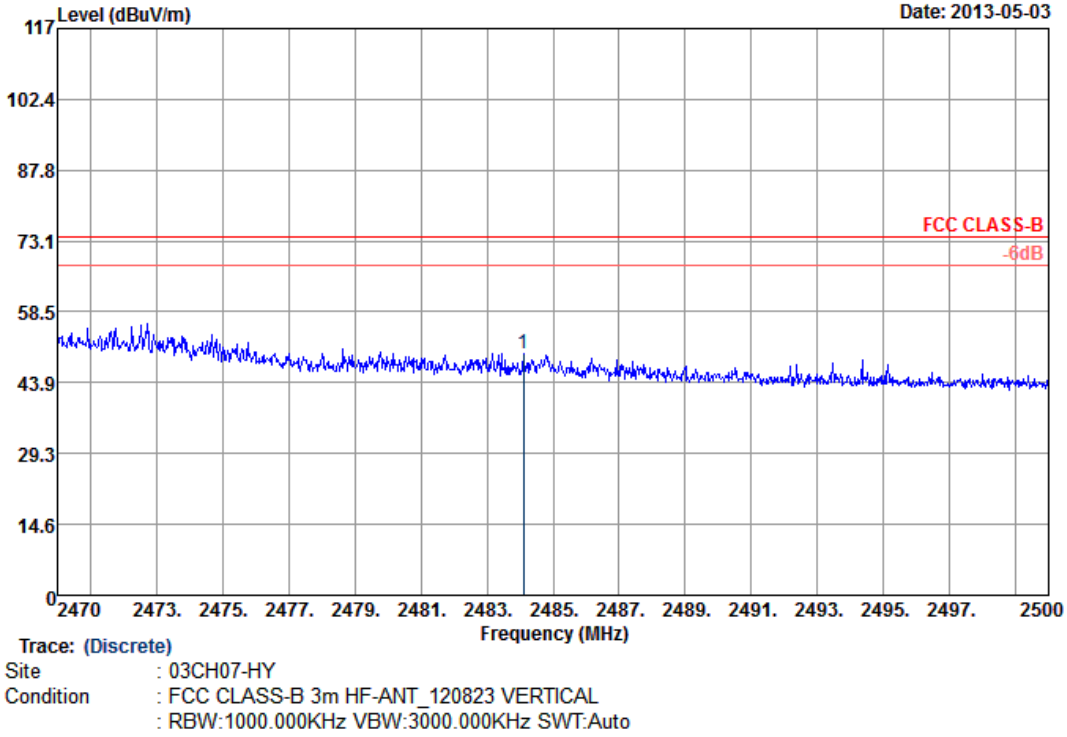


ANTENNA POLARITY : VERTICAL

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
2388.03	41.38	-12.62	54	36.44	32.3	6.91	34.27	118	92	Average

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 :	802.11n HT40	Temperature :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Beer Chang

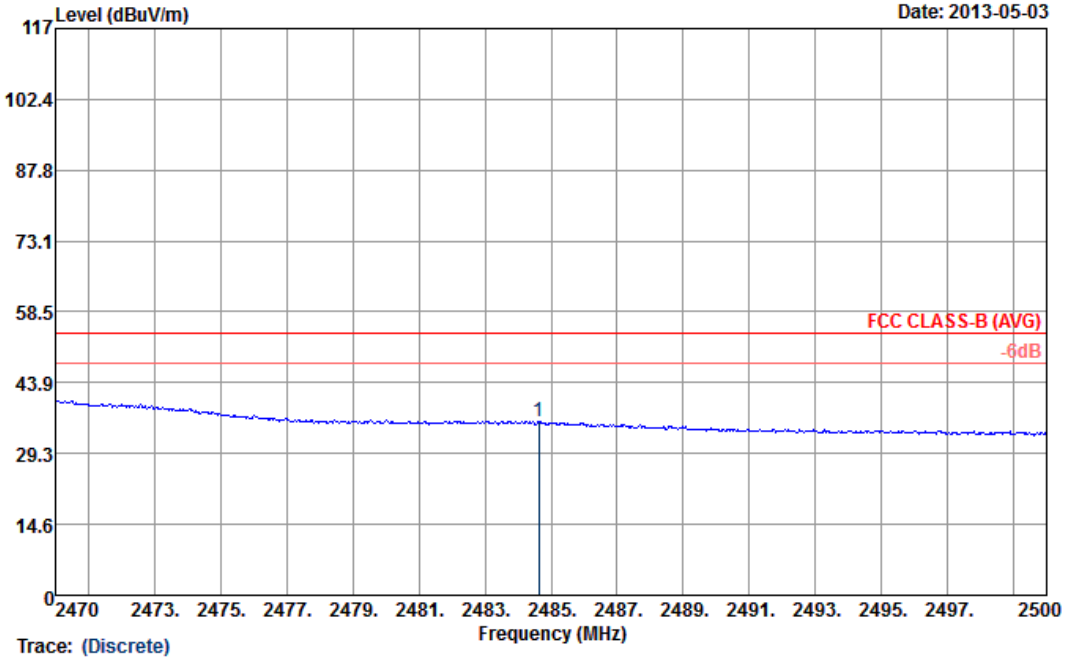


ANTENNA POLARITY : VERTICAL

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
2484.1	49.73	-24.27	74	44.72	32.38	7.06	34.43	118	92	Peak

Note: Worst case measurement on 2484.1 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 :	21~23℃
Test Band :	Low	Relative Humidity :	51~53%
Test Channel :	03	Test Engineer :	Beer Chang

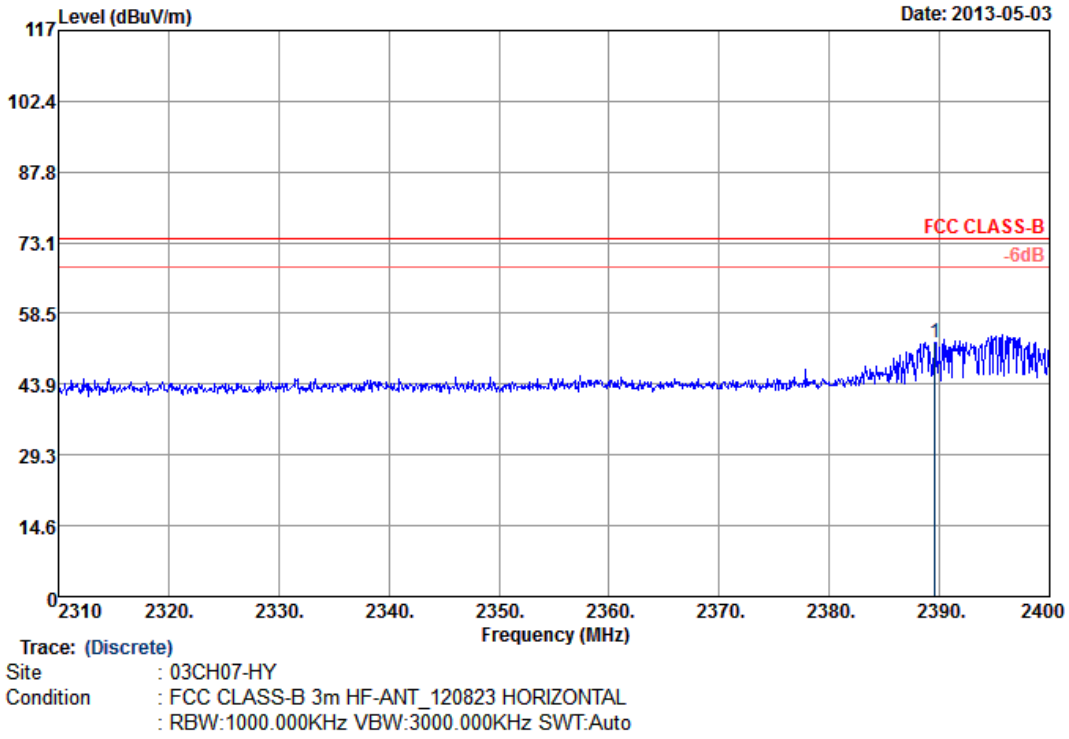


ANTENNA POLARITY : VERTICAL

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
2484.64	35.98	-18.02	54	30.97	32.38	7.06	34.43	118	92	Average

Note: Worst case measurement on 2484.64 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Beer Chang

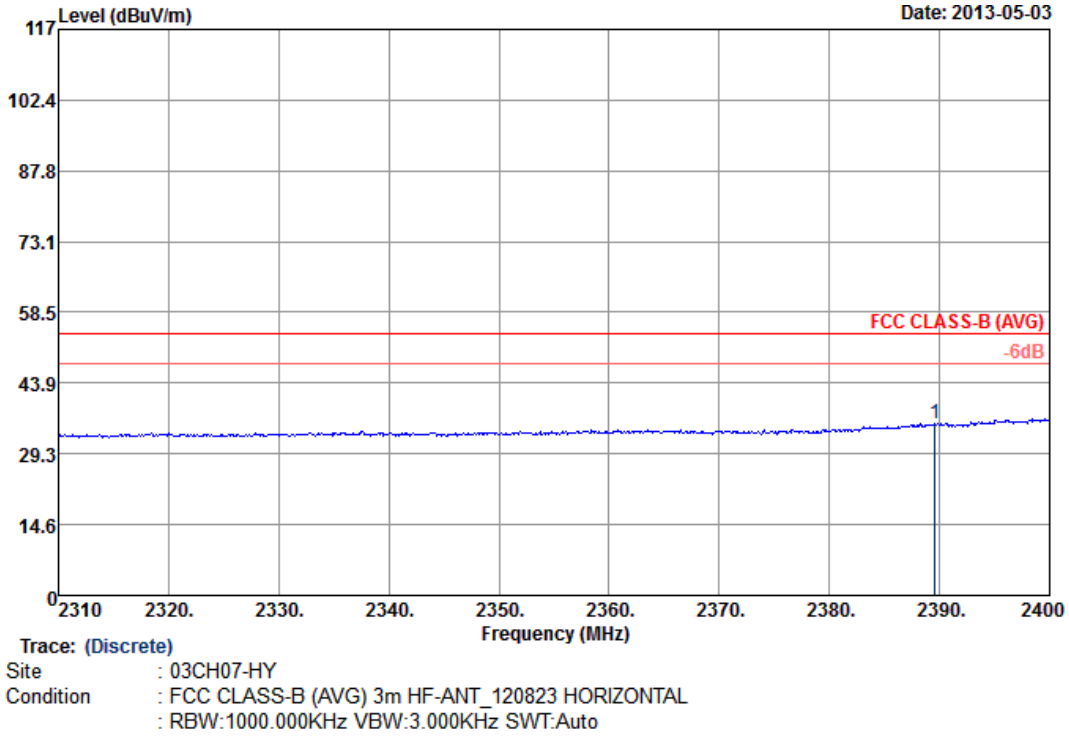


ANTENNA POLARITY : HORIZONTAL

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	52.48	-21.52	74	47.54	32.3	6.91	34.27	106	334	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 HT40	Temperature :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Beer Chang

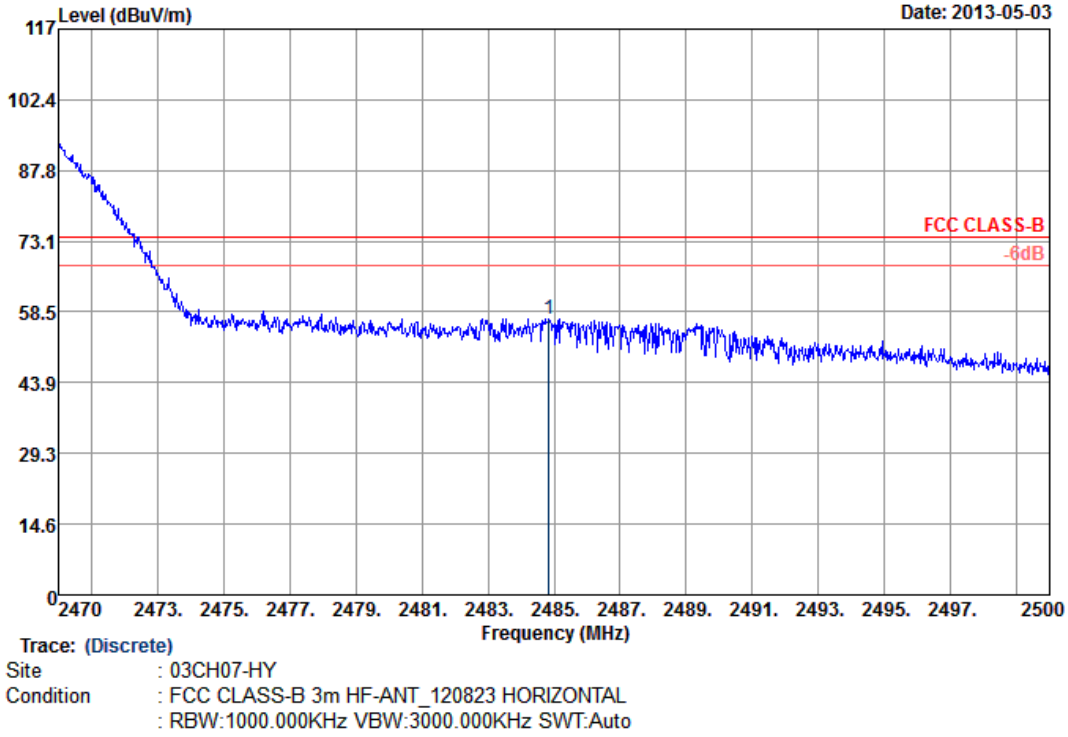


ANTENNA POLARITY : HORIZONTAL

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	35.48	-18.52	54	30.54	32.3	6.91	34.27	106	334	Average

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 HT40	Temperature :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Beer Chang

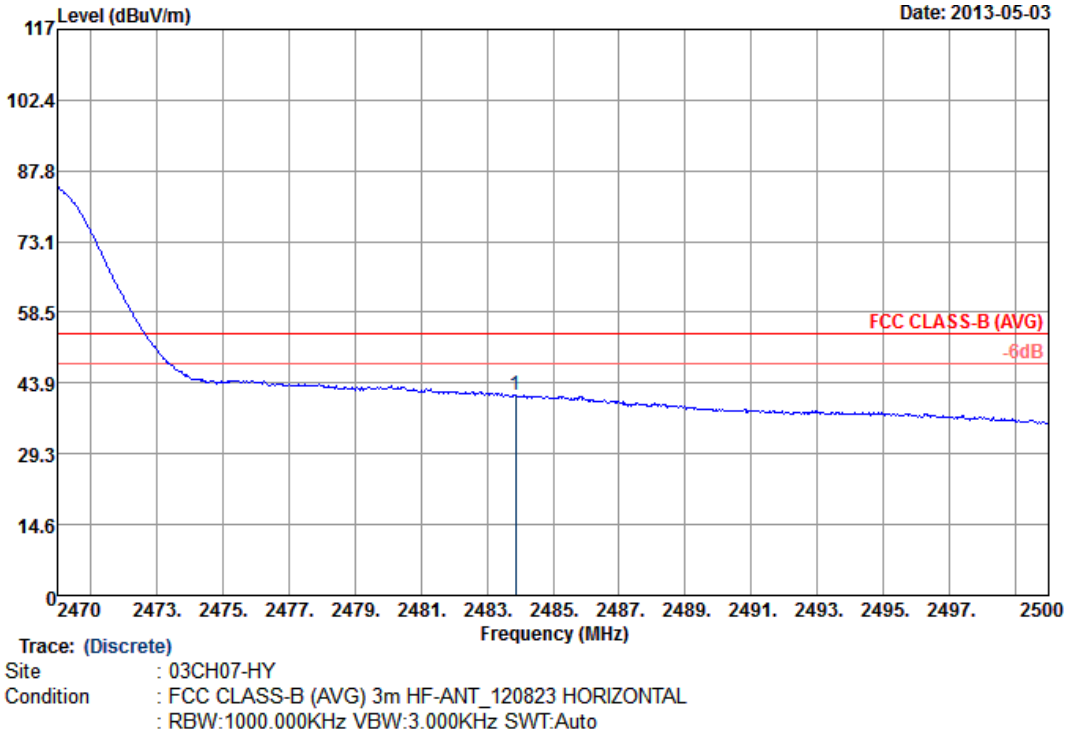


ANTENNA POLARITY : HORIZONTAL

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	57.15	-16.85	74	52.14	32.38	7.06	34.43	106	334	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 HT40	Temperature :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Beer Chang

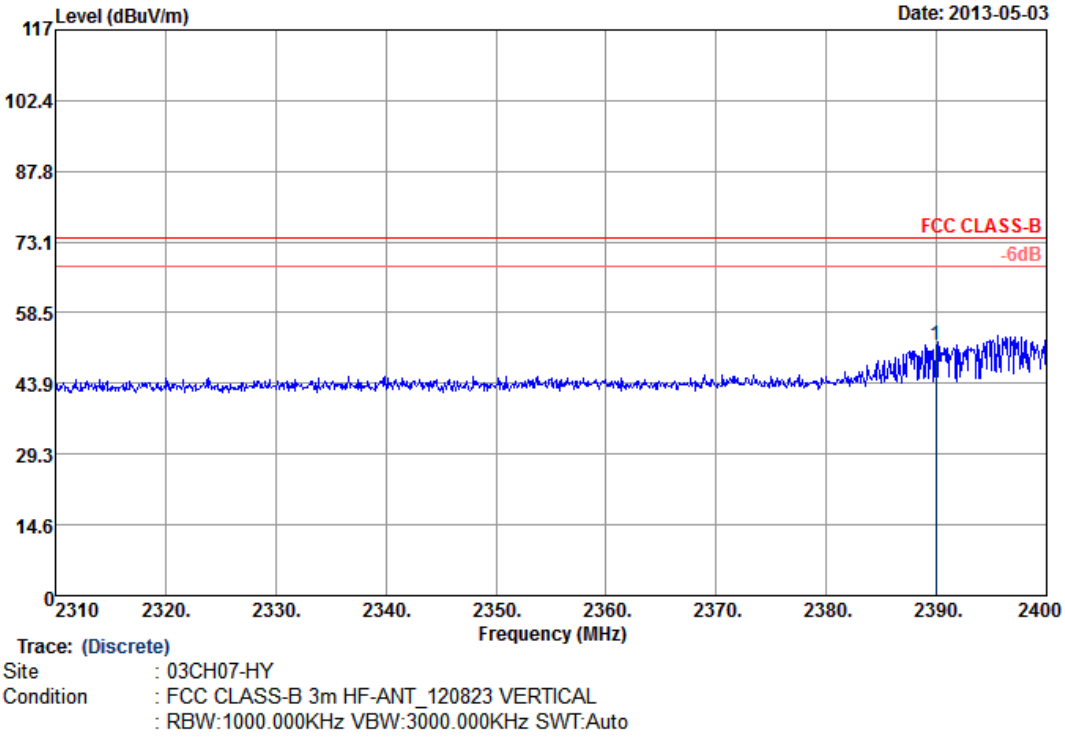


ANTENNA POLARITY : HORIZONTAL

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	41.51	-12.49	54	36.5	32.38	7.06	34.43	106	334	Average

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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Beer Chang

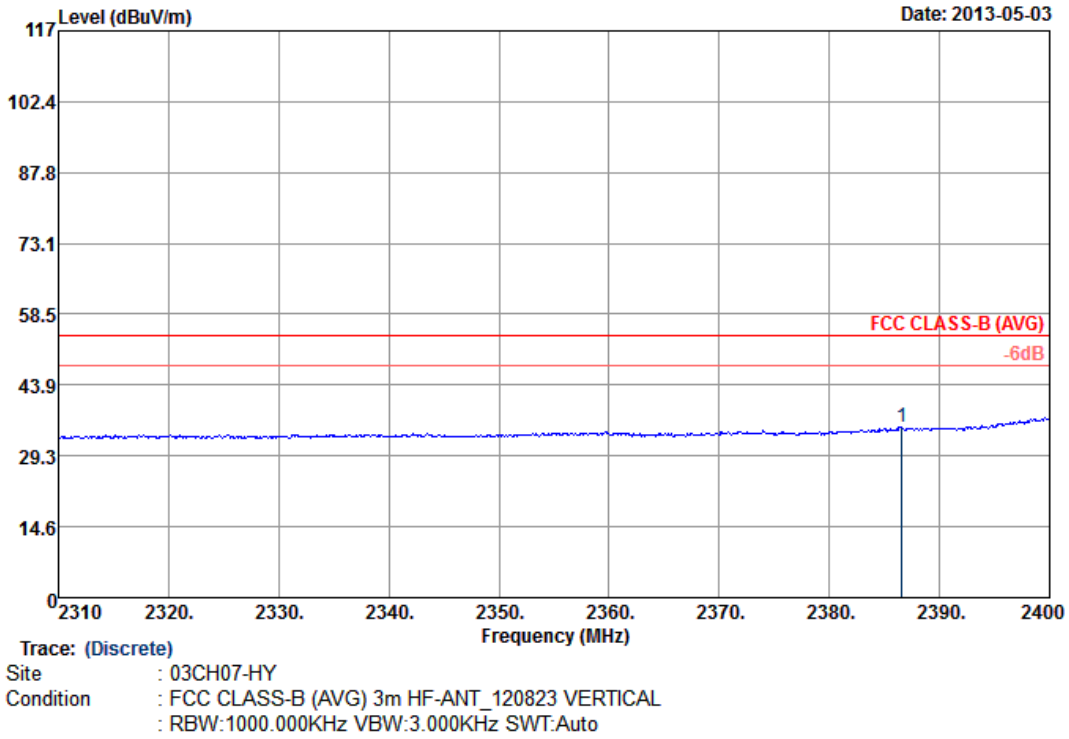


ANTENNA POLARITY : VERTICAL

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
2389.92	51.87	-22.13	74	46.96	32.3	6.91	34.3	118	93	Peak

Note: Worst case measurement on 2389.92 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Beer Chang

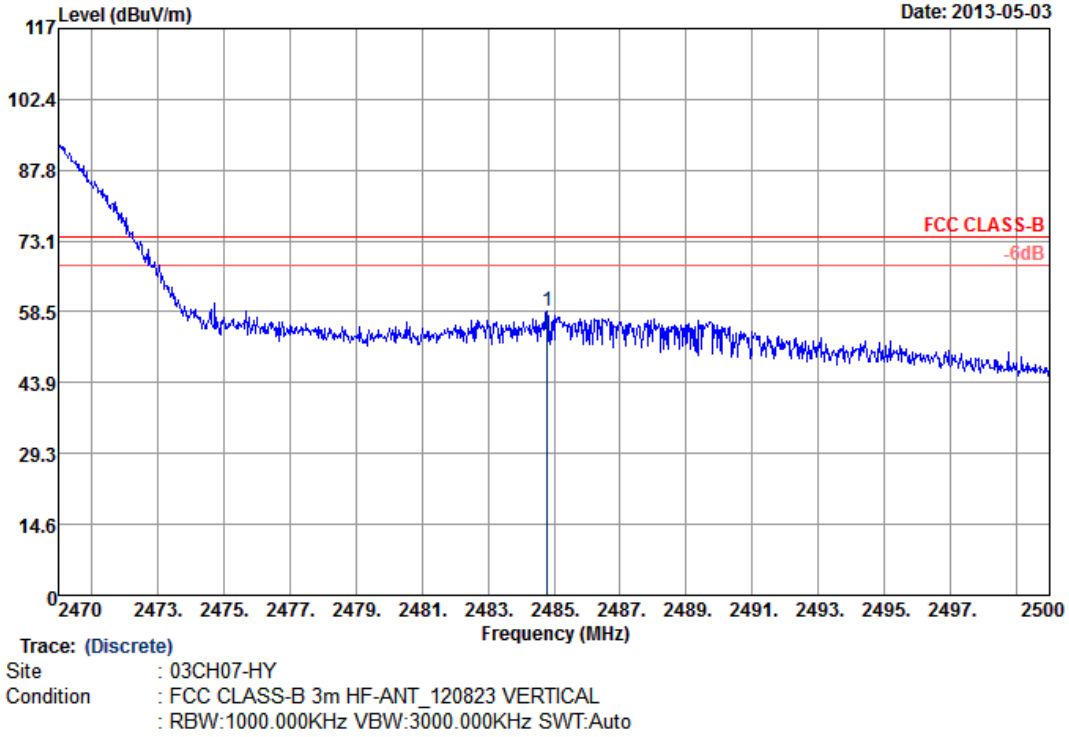


ANTENNA POLARITY : VERTICAL

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
2386.59	35.13	-18.87	54	30.19	32.3	6.91	34.27	118	93	Average

Note: Worst case measurement on 2386.59 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Beer Chang

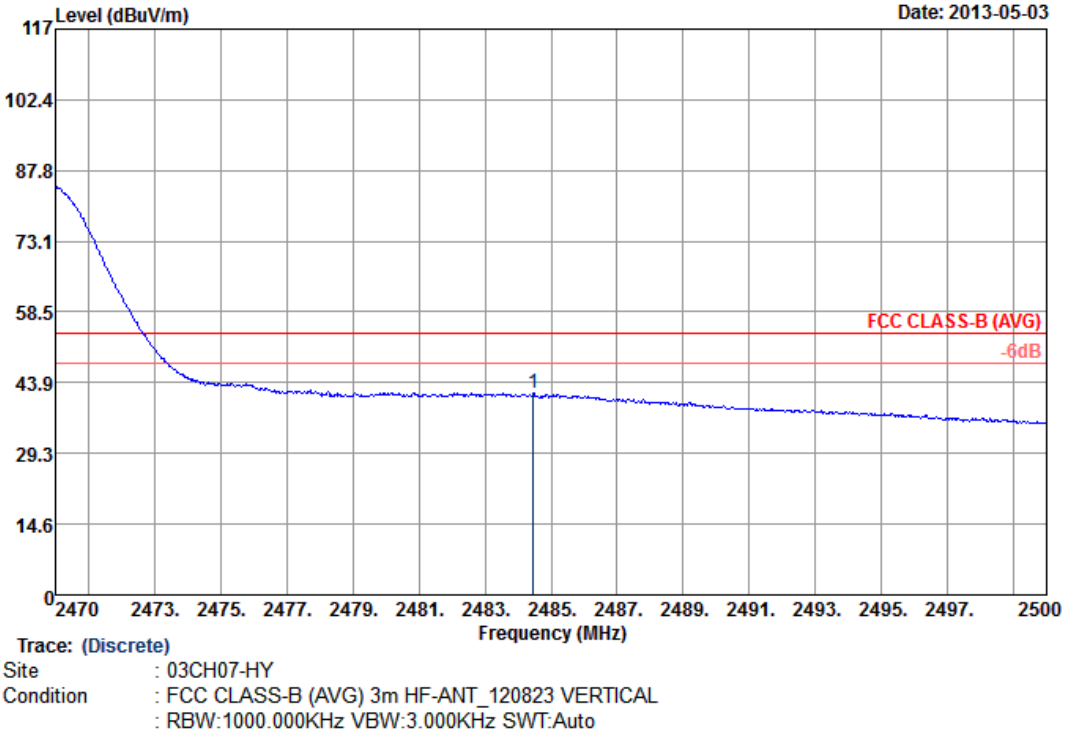


ANTENNA POLARITY : VERTICAL

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
2484.79	58.77	-15.23	74	53.76	32.38	7.06	34.43	118	93	Peak

Note: Worst case measurement on 2484.79 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 :	21~23℃
Test Band :	High	Relative Humidity :	51~53%
Test Channel :	09	Test Engineer :	Beer Chang



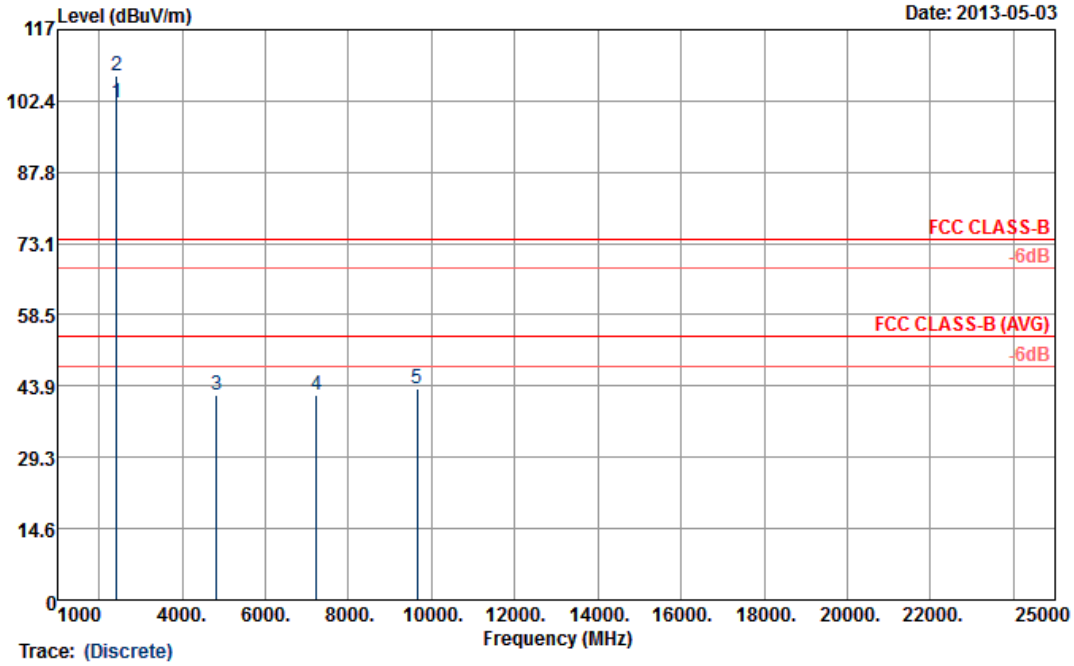
ANTENNA POLARITY : VERTICAL

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
2484.46	41.65	-12.35	54	36.64	32.38	7.06	34.43	118	93	Average

Note: Worst case measurement on 2484.46 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.

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

Test Mode :	802.11b	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 107.41dBμV/m - 20dB = 87.41dBμV/m. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

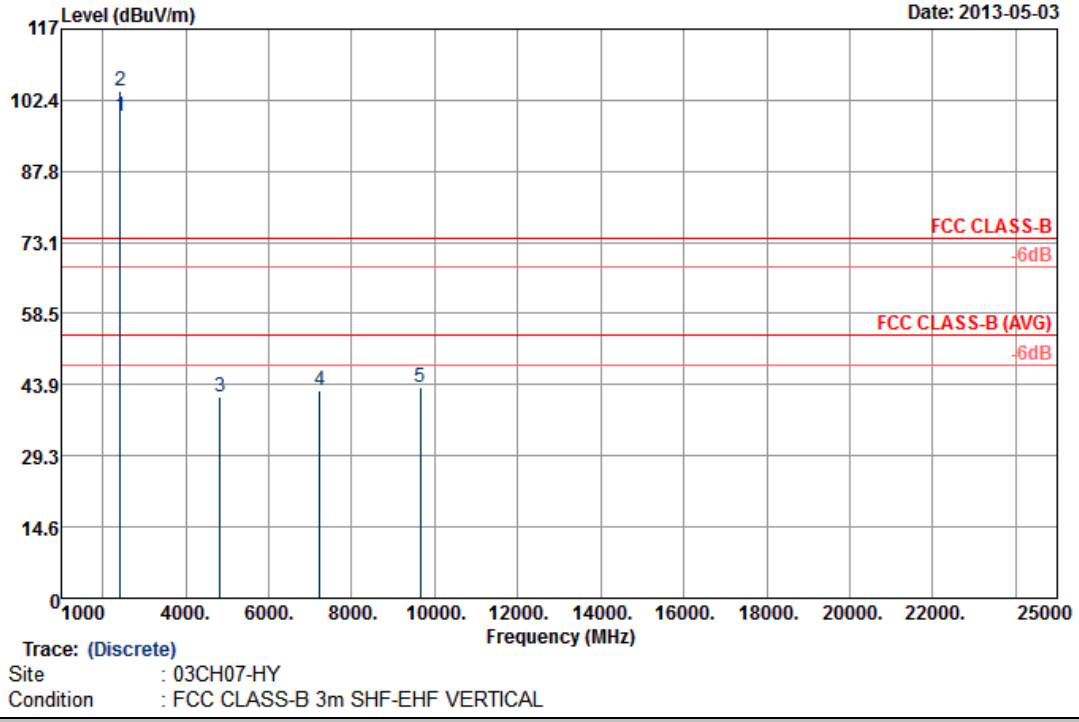


ANTENNA POLARITY : HORIZONTAL

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
2414	101.99	-	-	97.03	32.31	6.95	34.3	136	102	Average
2414	107.41	-	-	102.45	32.31	6.95	34.3	136	102	Peak
4824	42.13	-31.87	74	56.86	33.97	8.77	57.47	100	0	Peak
7236	41.96	-45.45	87.41	53.56	35.55	10.83	57.98	100	0	Peak
9648	43.42	-43.99	87.41	51.44	36.52	13.69	58.23	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11b	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

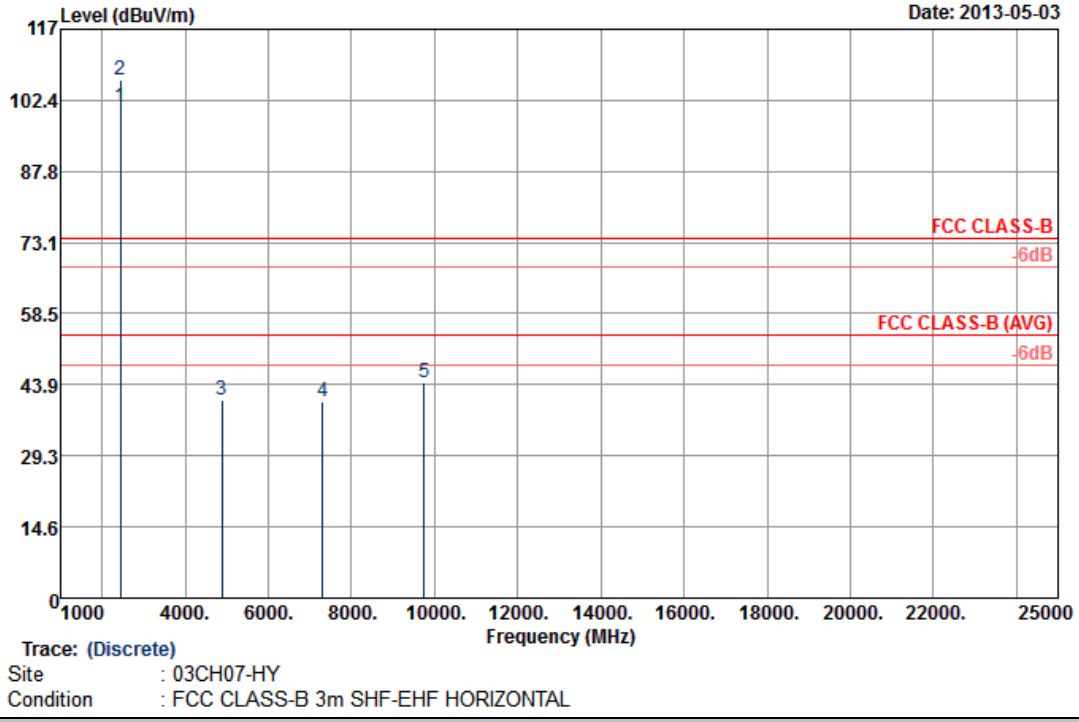


ANTENNA POLARITY : VERTICAL

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	98.92	-	-	93.96	32.31	6.95	34.3	114	70	Average
2414	104.34	-	-	99.38	32.31	6.95	34.3	114	70	Peak
4824	41.5	-32.5	74	56.23	33.97	8.77	57.47	100	0	Peak
7236	42.57	-41.77	84.34	54.17	35.55	10.83	57.98	100	0	Peak
9648	43.46	-40.88	84.34	51.48	36.52	13.69	58.23	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11b	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. 9747 is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

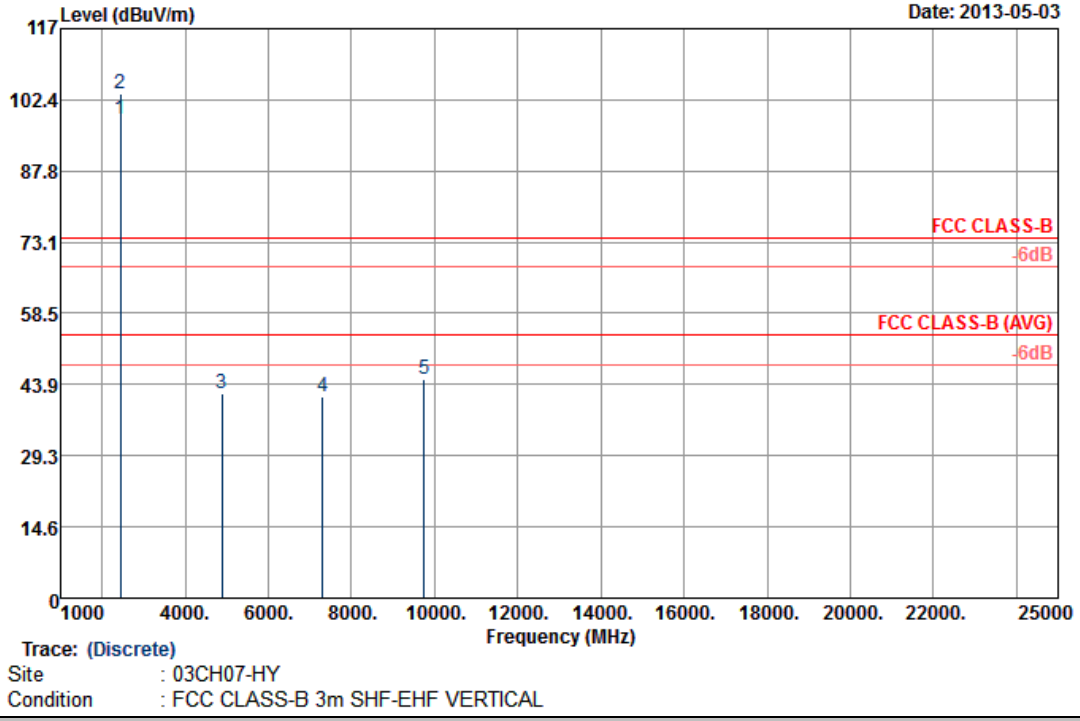


ANTENNA POLARITY : HORIZONTAL

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
2439	101.19	-	-	96.2	32.35	6.99	34.35	105	98	Average
2439	106.68	-	-	101.69	32.35	6.99	34.35	105	98	Peak
4875	40.77	-33.23	74	55.48	33.95	8.82	57.48	100	0	Peak
7311	40.29	-33.71	74	51.86	35.54	10.91	58.02	100	0	Peak
9747	44.39	-42.29	86.68	52.28	36.66	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11b	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. 9747 is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

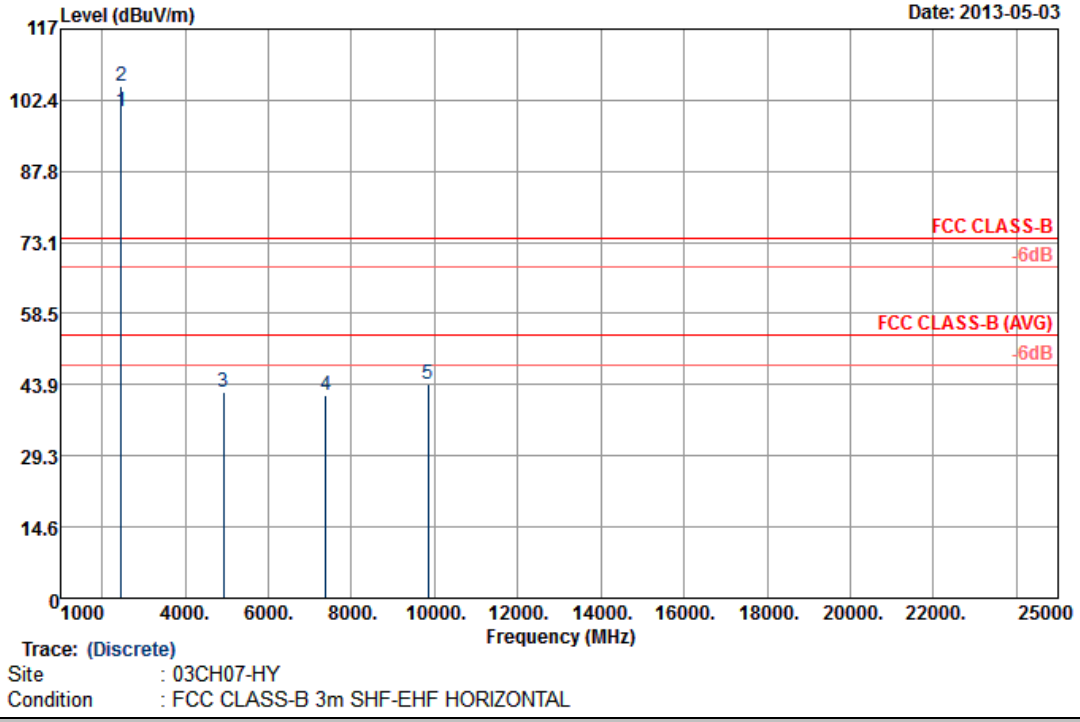


ANTENNA POLARITY : VERTICAL

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	98.36	-	-	93.37	32.35	6.99	34.35	136	60	Average
2439	103.72	-	-	98.73	32.35	6.99	34.35	136	60	Peak
4875	42.07	-31.93	74	56.78	33.95	8.82	57.48	100	0	Peak
7311	41.49	-32.51	74	53.06	35.54	10.91	58.02	100	0	Peak
9747	45.09	-38.63	83.72	52.98	36.66	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11b	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. 9848 is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

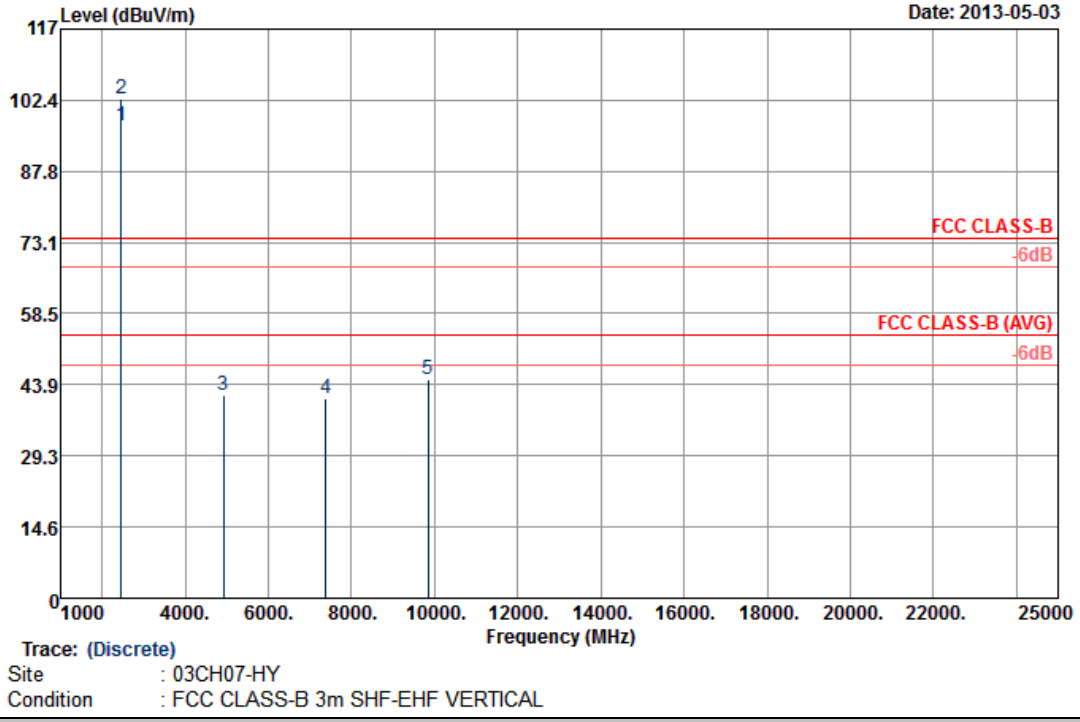


ANTENNA POLARITY : HORIZONTAL

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	100.06	-	-	95.06	32.37	7.02	34.39	132	278	Average
2464	105.38	-	-	100.38	32.37	7.02	34.39	132	278	Peak
4923	42.32	-31.68	74	57	33.93	8.87	57.48	100	0	Peak
7386	41.65	-32.35	74	53.22	35.52	10.99	58.08	100	0	Peak
9848	43.87	-41.51	85.38	51.65	36.78	13.69	58.25	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11b	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. 9848 is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

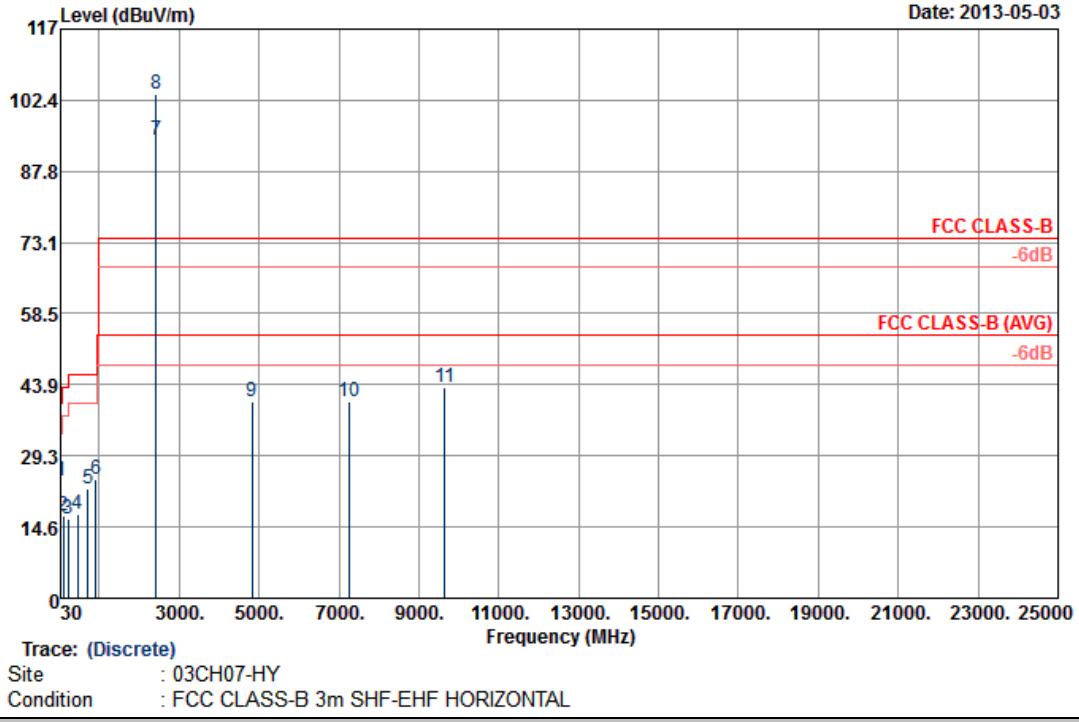


ANTENNA POLARITY : VERTICAL

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
2464	97.27	-	-	92.27	32.37	7.02	34.39	200	360	Average
2464	102.51	-	-	97.51	32.37	7.02	34.39	200	360	Peak
4923	41.8	-32.2	74	56.48	33.93	8.87	57.48	100	0	Peak
7386	41.08	-32.92	74	52.65	35.52	10.99	58.08	100	0	Peak
9848	44.98	-37.53	82.51	52.76	36.78	13.69	58.25	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11g	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

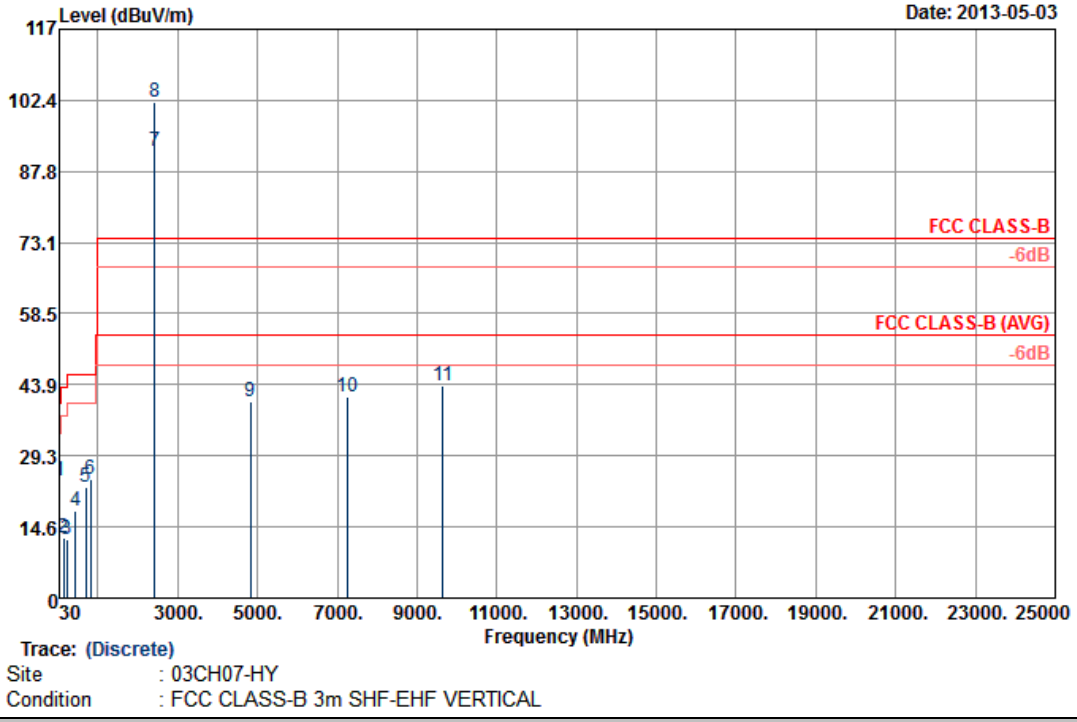


ANTENNA POLARITY : HORIZONTAL

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
49.71	24.09	-15.91	40	46.51	8.5	0.69	31.61	116	169	Peak
105.87	16.81	-26.69	43.5	37.15	10.34	1.03	31.71	-	-	Peak
211.17	16.32	-27.18	43.5	36.44	9.91	1.37	31.4	-	-	Peak
449.8	17.43	-28.57	46	29.23	17.05	2.3	31.15	-	-	Peak
722.8	22.36	-23.64	46	28.95	20.93	2.99	30.51	-	-	Peak
918.1	24.51	-21.49	46	28.58	23.38	3.38	30.83	-	-	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
2414	94.03	-	-	89.07	32.31	6.95	34.3	165	103	Average
2414	103.5	-	-	98.54	32.31	6.95	34.3	165	103	Peak
4824	40.4	-33.6	74	55.13	33.97	8.77	57.47	100	0	Peak
7236	40.32	-43.18	83.5	51.92	35.55	10.83	57.98	100	0	Peak
9648	43.25	-40.25	83.5	51.27	36.52	13.69	58.23	100	0	Peak
Other harmonics are lower than background noise										

Test Mode :	802.11g	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

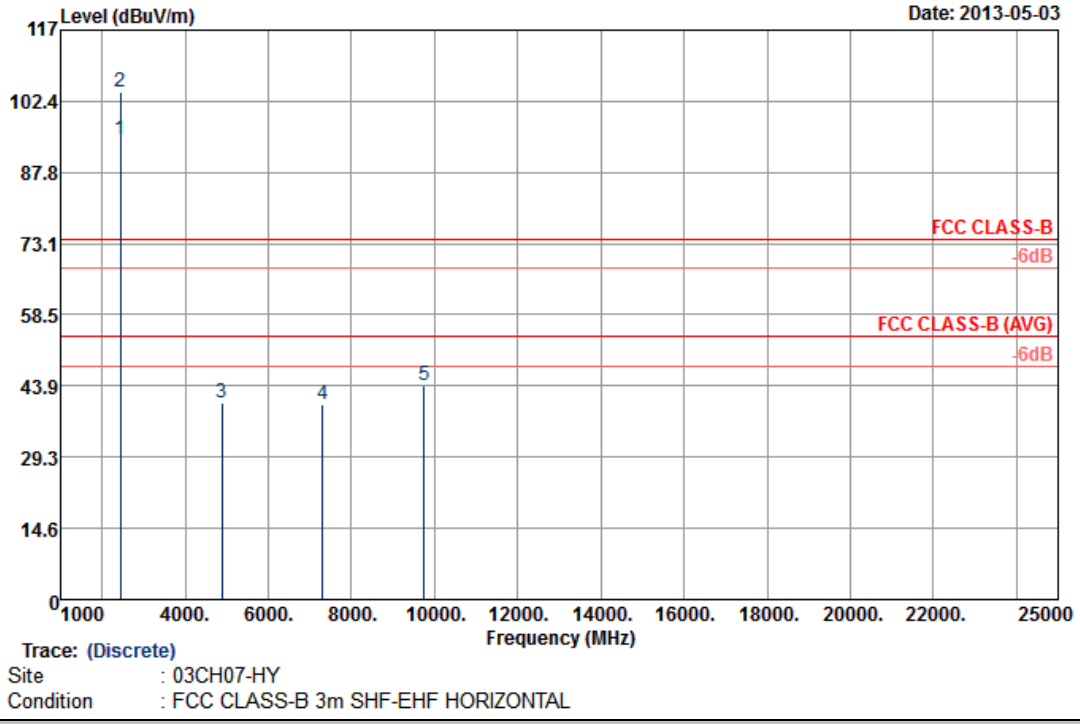


ANTENNA POLARITY : VERTICAL

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
47.82	24.18	-15.82	40	45.86	9.3	0.67	31.65	136	72	Peak
139.35	12.22	-31.28	43.5	31.09	11.4	1.2	31.47	-	-	Peak
219.54	12.11	-33.89	46	31.47	10.45	1.41	31.22	-	-	Peak
443.5	17.78	-28.22	46	29.72	16.91	2.29	31.14	-	-	Peak
694.8	22.82	-23.18	46	29.82	20.55	2.93	30.48	-	-	Peak
822.2	24.52	-21.48	46	29.33	22.32	3.2	30.33	-	-	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
2414	91.9	-	-	86.94	32.31	6.95	34.3	200	61	Average
2414	101.99	-	-	97.03	32.31	6.95	34.3	200	61	Peak
4824	40.44	-33.56	74	55.17	33.97	8.77	57.47	100	0	Peak
7236	41.37	-40.62	81.99	52.97	35.55	10.83	57.98	100	0	Peak
9648	43.54	-38.45	81.99	51.56	36.52	13.69	58.23	100	0	Peak
Other harmonics are lower than background noise										

Test Mode :	802.11g	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. 9747 is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

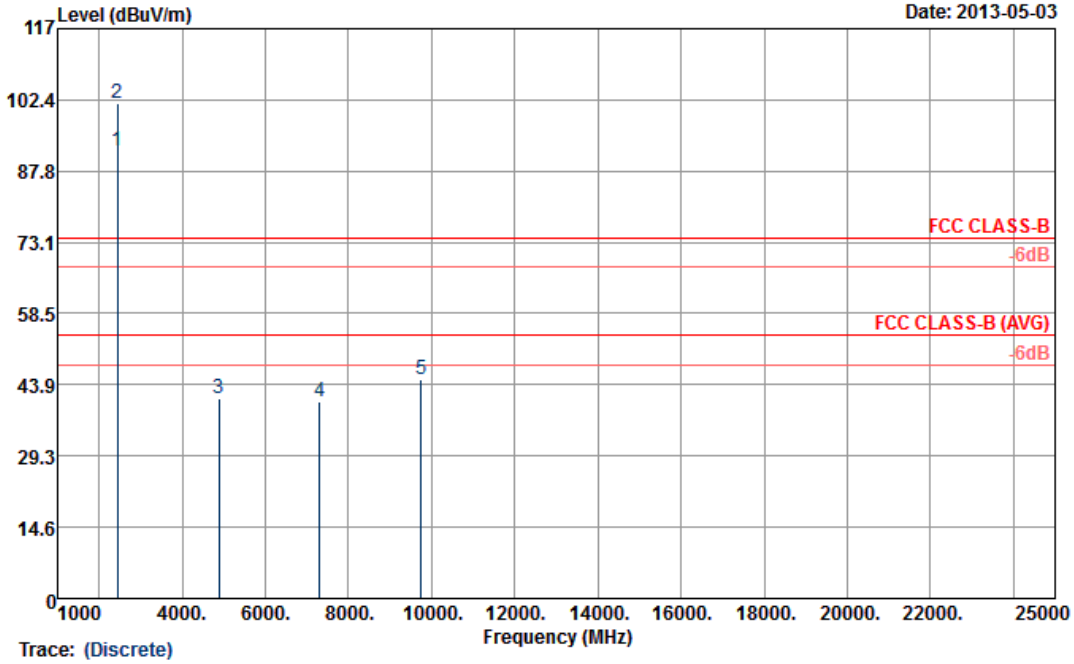


ANTENNA POLARITY : HORIZONTAL

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
2439	94.48	-	-	89.49	32.35	6.99	34.35	134	280	Average
2439	104.4	-	-	99.41	32.35	6.99	34.35	134	280	Peak
4875	40.41	-33.59	74	55.12	33.95	8.82	57.48	100	0	Peak
7311	40.09	-33.91	74	51.66	35.54	10.91	58.02	100	0	Peak
9747	43.83	-40.57	84.4	51.72	36.66	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11g	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. 9747 is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

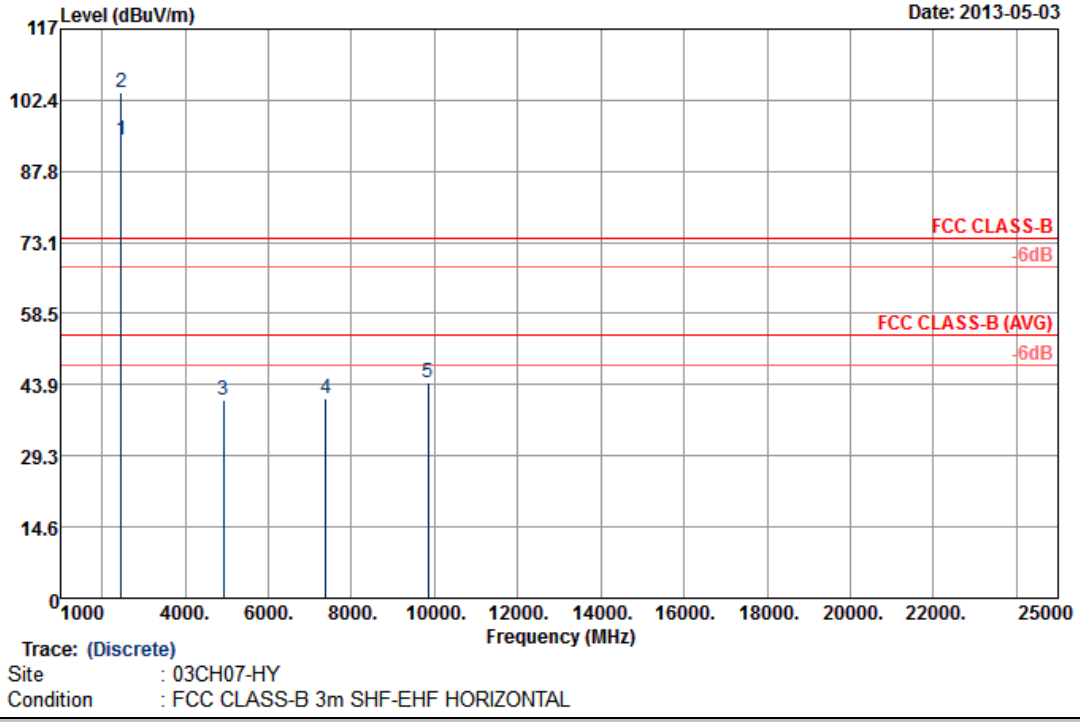


ANTENNA POLARITY : VERTICAL

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	91.83	-	-	86.84	32.35	6.99	34.35	200	64	Average
2439	101.54	-	-	96.55	32.35	6.99	34.35	200	64	Peak
4875	41.21	-32.79	74	55.92	33.95	8.82	57.48	100	0	Peak
7311	40.28	-33.72	74	51.85	35.54	10.91	58.02	100	0	Peak
9747	44.87	-36.67	81.54	52.76	36.66	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11g	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. 9849 is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

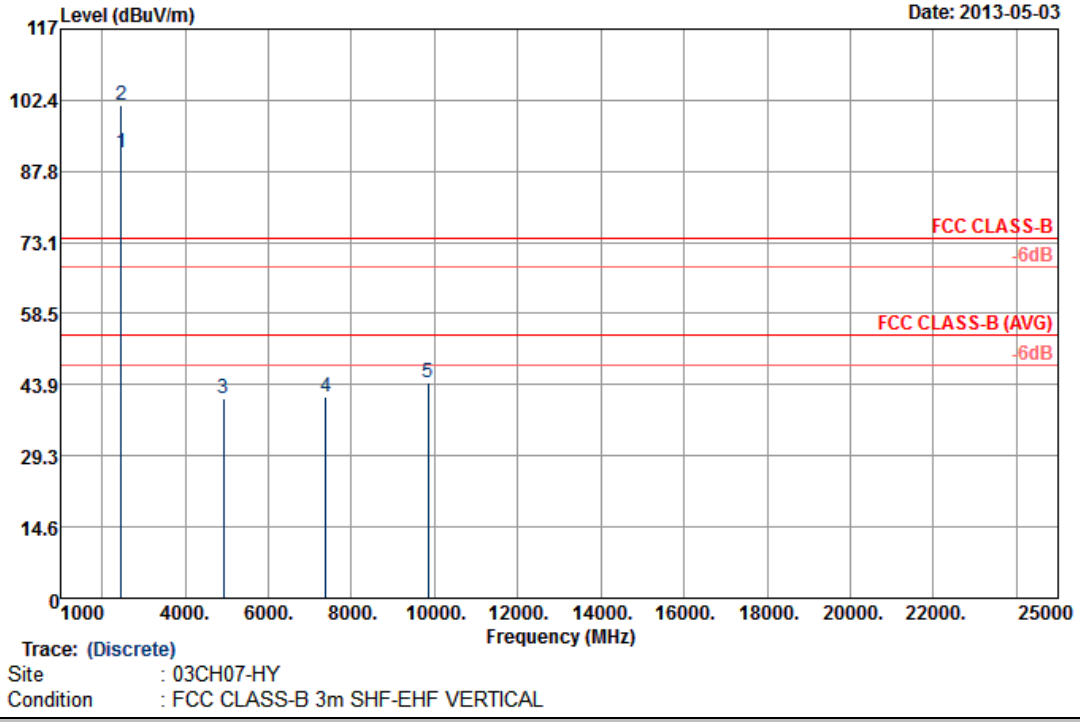


ANTENNA POLARITY : HORIZONTAL

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	94.28	-	-	89.28	32.37	7.02	34.39	197	266	Average
2464	103.95	-	-	98.95	32.37	7.02	34.39	197	266	Peak
4923	40.68	-33.32	74	55.36	33.93	8.87	57.48	100	0	Peak
7386	41.11	-32.89	74	52.68	35.52	10.99	58.08	100	0	Peak
9849	44.23	-39.72	83.95	51.98	36.81	13.69	58.25	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11g	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2464 MHz is fundamental signal which can be ignored. 2. 9849 is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

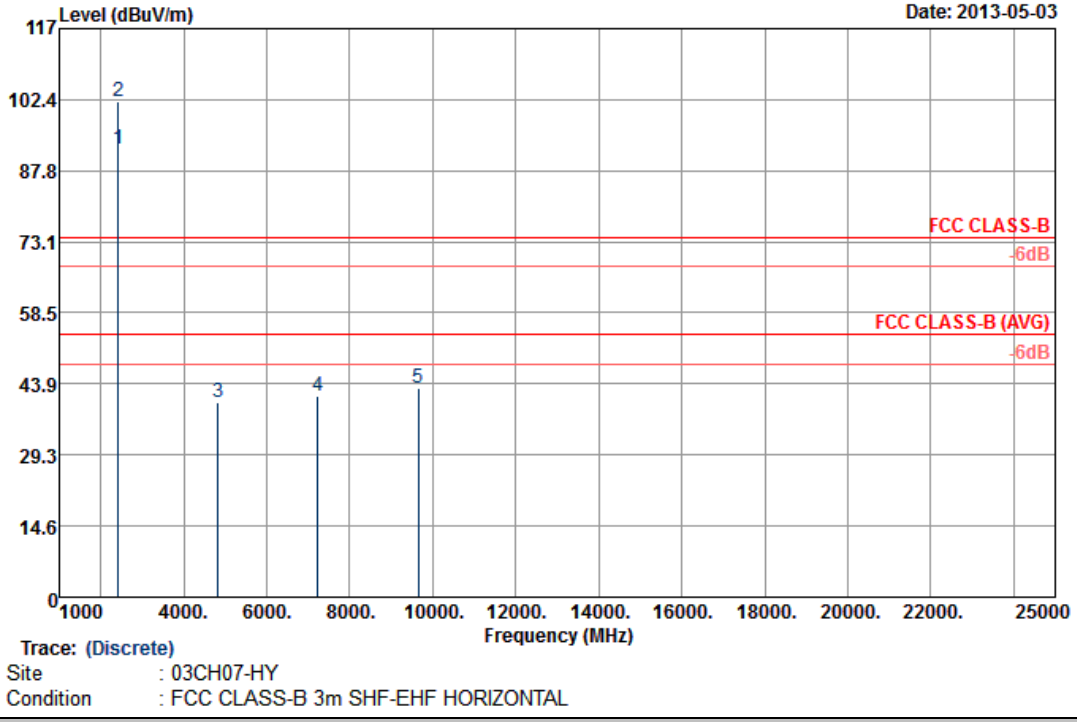


ANTENNA POLARITY : VERTICAL

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
2464	91.43	-	-	86.43	32.37	7.02	34.39	141	64	Average
2464	101.21	-	-	96.21	32.37	7.02	34.39	141	64	Peak
4923	40.99	-33.01	74	55.67	33.93	8.87	57.48	100	0	Peak
7386	41.54	-32.46	74	53.11	35.52	10.99	58.08	100	0	Peak
9849	44.28	-36.93	81.21	52.03	36.81	13.69	58.25	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT20	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

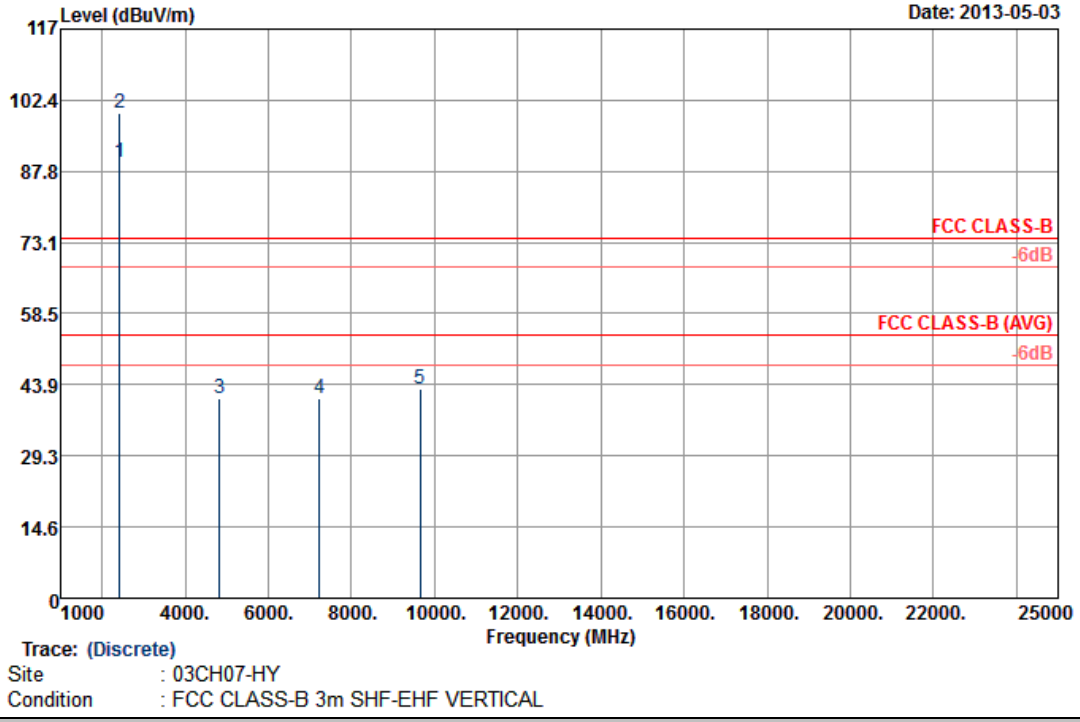


ANTENNA POLARITY : HORIZONTAL

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
2414	92.11	-	-	87.15	32.31	6.95	34.3	199	102	Average
2414	102.08	-	-	97.12	32.31	6.95	34.3	199	102	Peak
4824	40.22	-33.78	74	54.95	33.97	8.77	57.47	100	0	Peak
7236	41.41	-40.67	82.08	53.01	35.55	10.83	57.98	100	0	Peak
9648	43.08	-39	82.08	51.1	36.52	13.69	58.23	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT20	Temperature :	21~23℃
Test Channel :	01	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2414 MHz is fundamental signal which can be ignored. 2. 7236 MHz and 9648 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

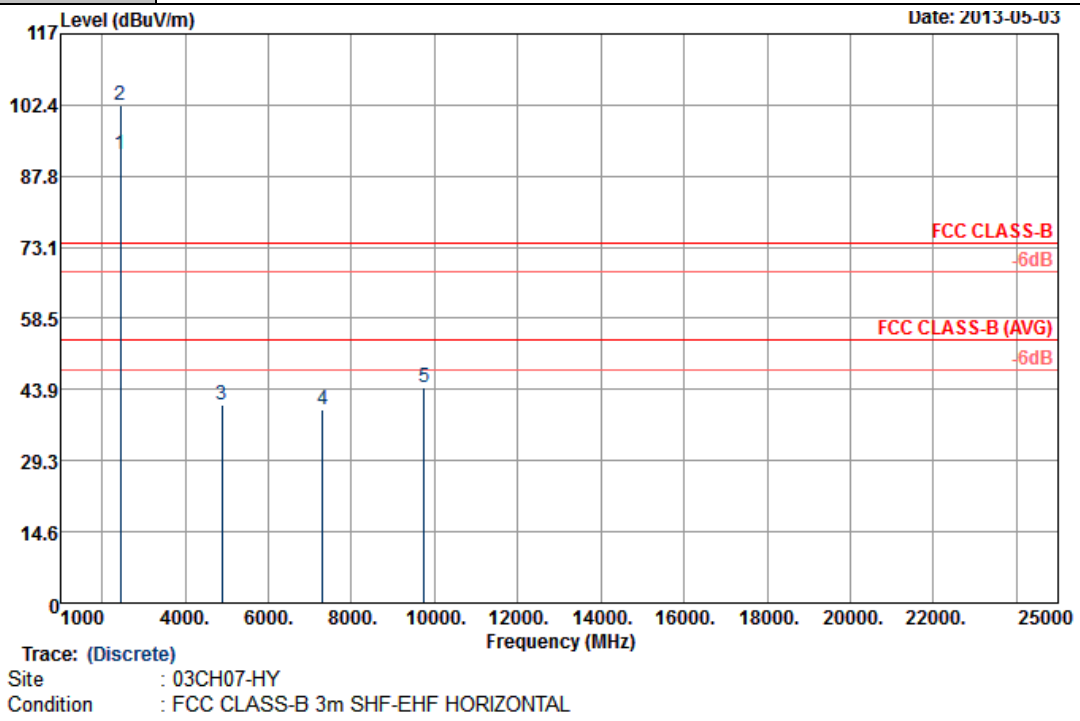


ANTENNA POLARITY : VERTICAL

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	89.55	-	-	84.59	32.31	6.95	34.3	173	69	Average
2414	99.74	-	-	94.78	32.31	6.95	34.3	173	69	Peak
4824	41.11	-32.89	74	55.84	33.97	8.77	57.47	100	0	Peak
7236	41.21	-38.53	79.74	52.81	35.55	10.83	57.98	100	0	Peak
9648	43.14	-36.6	79.74	51.16	36.52	13.69	58.23	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT20	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

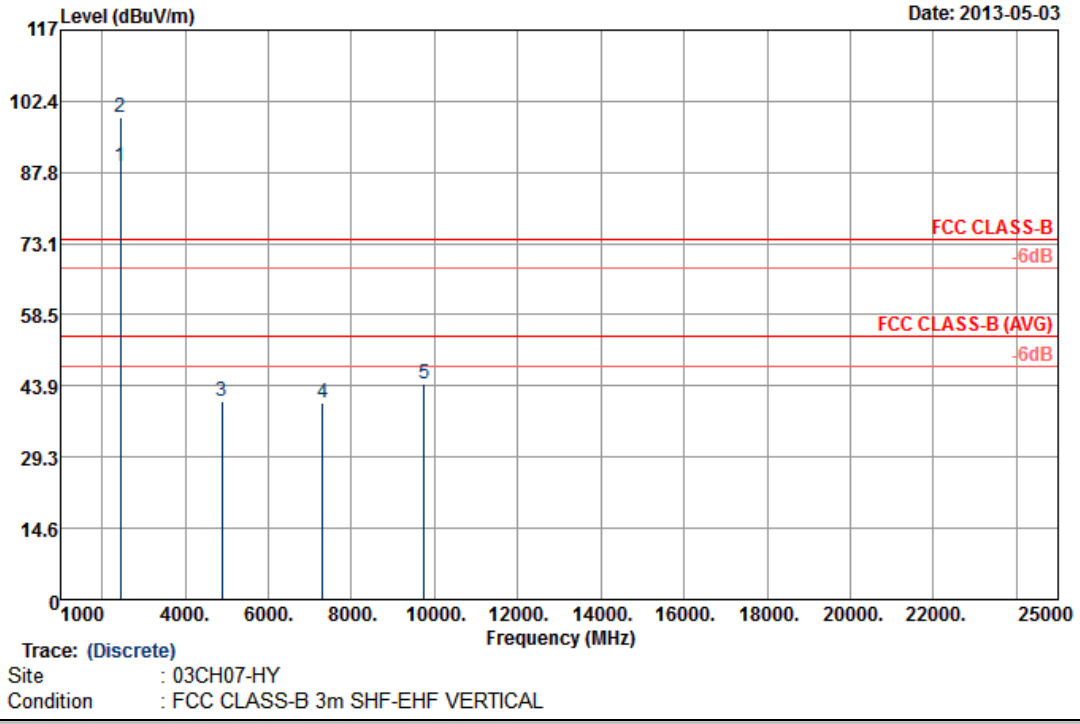


ANTENNA POLARITY : HORIZONTAL

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
2439	92.11	-	-	87.12	32.35	6.99	34.35	105	98	Average
2439	102.2	-	-	97.21	32.35	6.99	34.35	105	98	Peak
4875	40.61	-33.39	74	55.32	33.95	8.82	57.48	100	0	Peak
7311	39.78	-34.22	74	51.35	35.54	10.91	58.02	100	0	Peak
9747	44.31	-37.89	82.2	52.2	36.66	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT20	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2439 MHz is fundamental signal which can be ignored. 2. 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

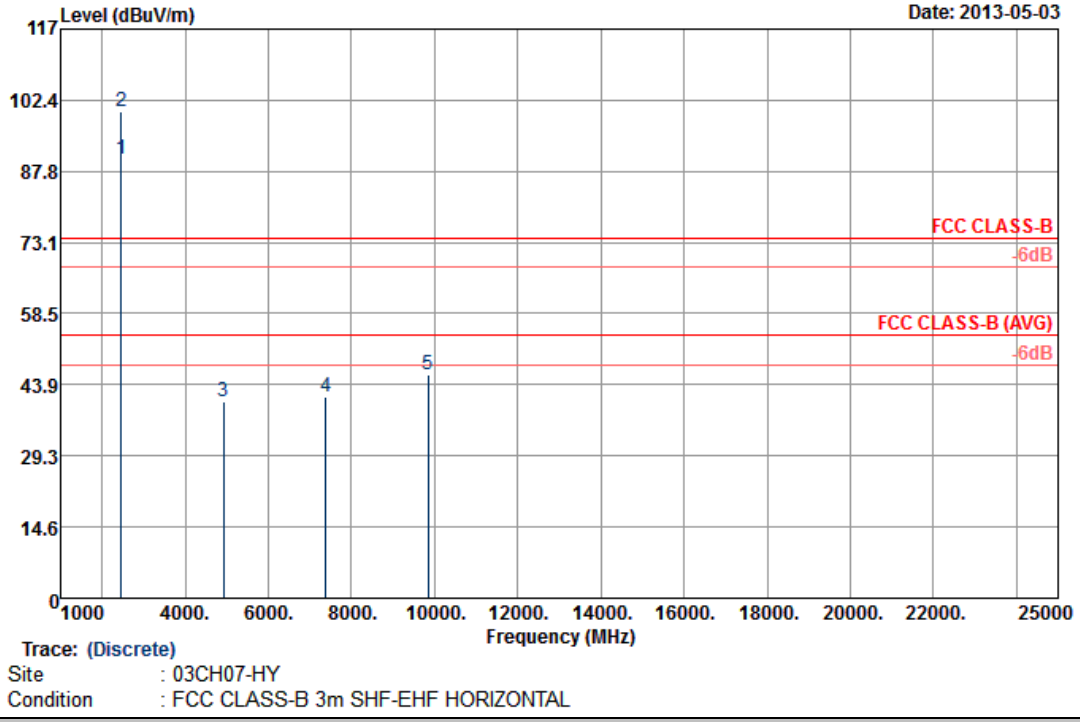


ANTENNA POLARITY : VERTICAL

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	88.92	-	-	83.93	32.35	6.99	34.35	113	66	Average
2439	99.06	-	-	94.07	32.35	6.99	34.35	113	66	Peak
4875	40.85	-33.15	74	55.56	33.95	8.82	57.48	100	0	Peak
7311	40.33	-33.67	74	51.9	35.54	10.91	58.02	100	0	Peak
9747	44.43	-34.63	79.06	52.32	36.66	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT20	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2460 MHz is fundamental signal which can be ignored. 2. 9849 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

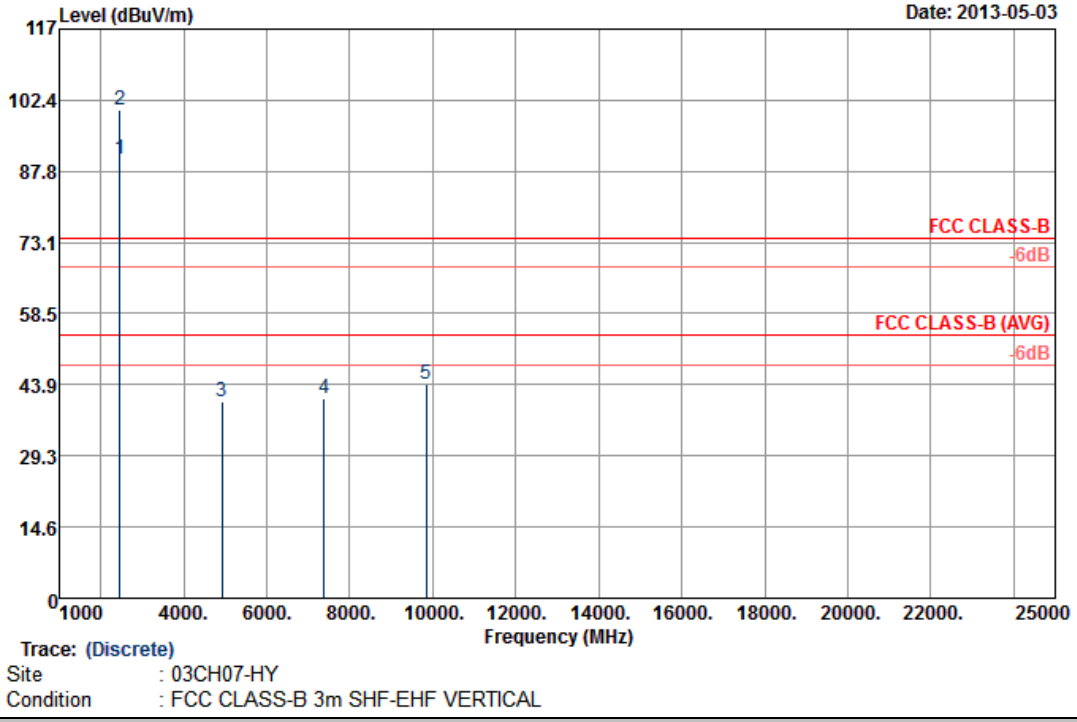


ANTENNA POLARITY : HORIZONTAL

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
2460	90.35	-	-	85.35	32.37	7.02	34.39	163	114	Average
2460	100.19	-	-	95.19	32.37	7.02	34.39	163	114	Peak
4923	40.45	-33.55	74	55.13	33.93	8.87	57.48	100	0	Peak
7386	41.45	-32.55	74	53.02	35.52	10.99	58.08	100	0	Peak
9849	46.08	-34.11	80.19	53.83	36.81	13.69	58.25	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT20	Temperature :	21~23℃
Test Channel :	11	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2460 MHz is fundamental signal which can be ignored. 2. 9849 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

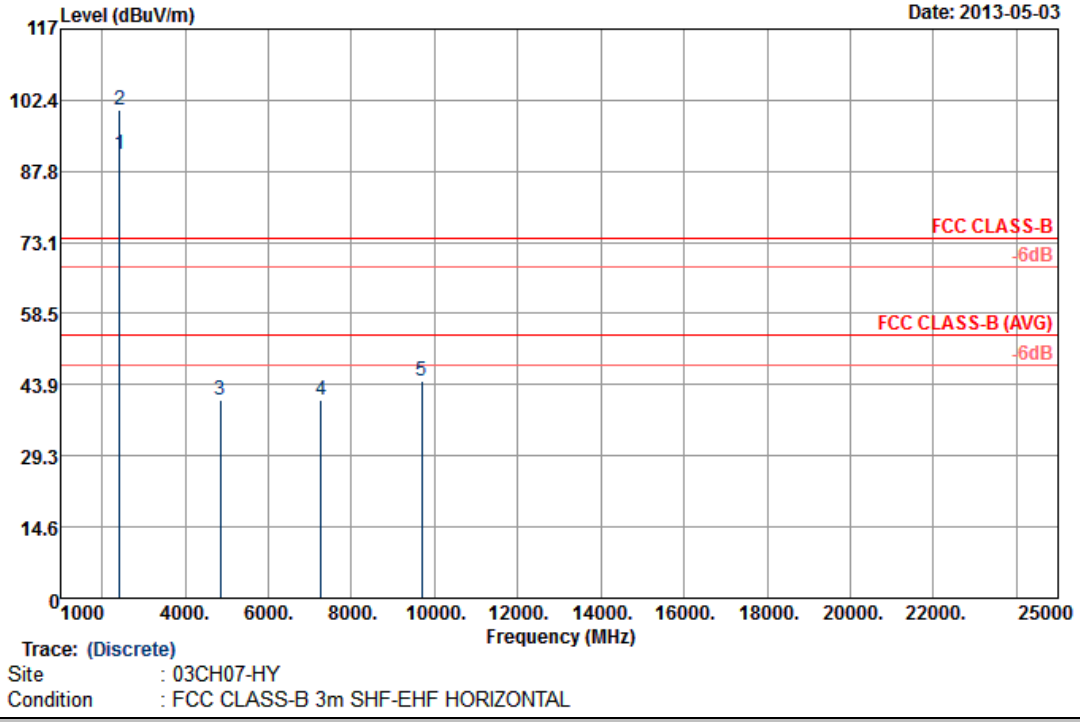


ANTENNA POLARITY : VERTICAL

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
2460	90.32	-	-	85.32	32.37	7.02	34.39	118	92	Average
2460	100.22	-	-	95.22	32.37	7.02	34.39	118	92	Peak
4923	40.4	-33.6	74	55.08	33.93	8.87	57.48	100	0	Peak
7386	41.01	-32.99	74	52.58	35.52	10.99	58.08	100	0	Peak
9849	44.04	-36.18	80.22	51.79	36.81	13.69	58.25	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT40	Temperature :	21~23℃
Test Channel :	03	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2426 MHz is fundamental signal which can be ignored. 2. 9687 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

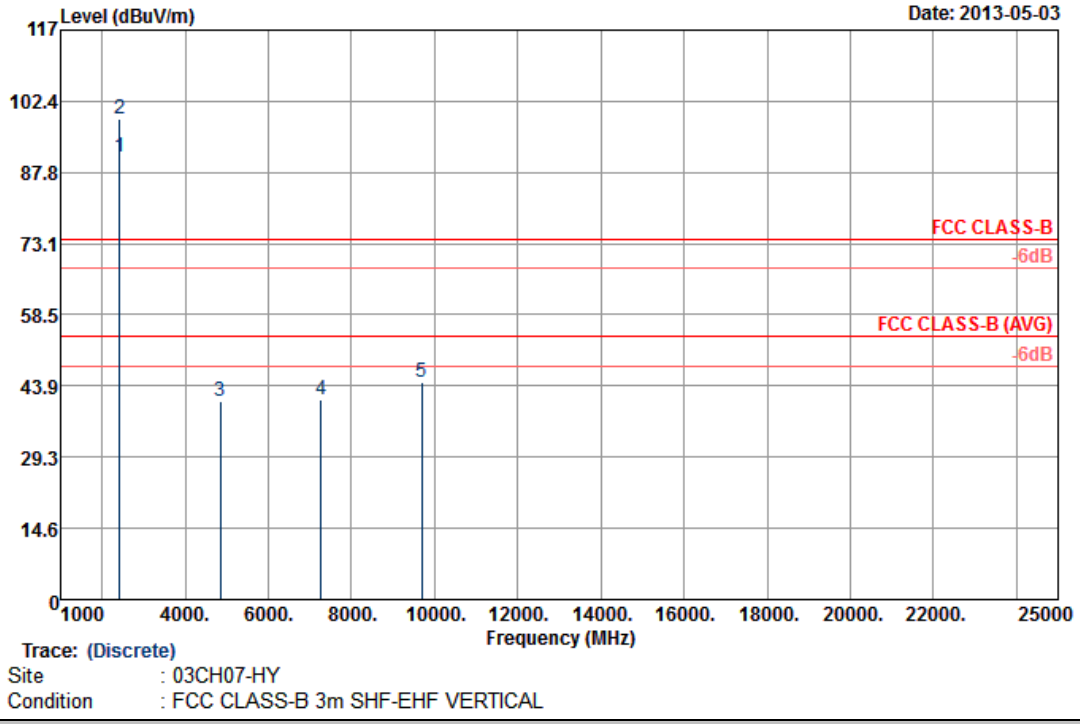


ANTENNA POLARITY : HORIZONTAL

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
2426	91.1	-	-	86.17	32.33	6.95	34.35	133	331	Average
2426	100.29	-	-	95.3	32.35	6.99	34.35	133	331	Peak
4845	40.85	-33.15	74	55.56	33.96	8.8	57.47	100	0	Peak
7266	40.73	-33.27	74	52.33	35.54	10.86	58	100	0	Peak
9687	44.64	-35.65	80.29	52.62	36.57	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT40	Temperature :	21~23℃
Test Channel :	03	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2426 MHz is fundamental signal which can be ignored. 2. 9687 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

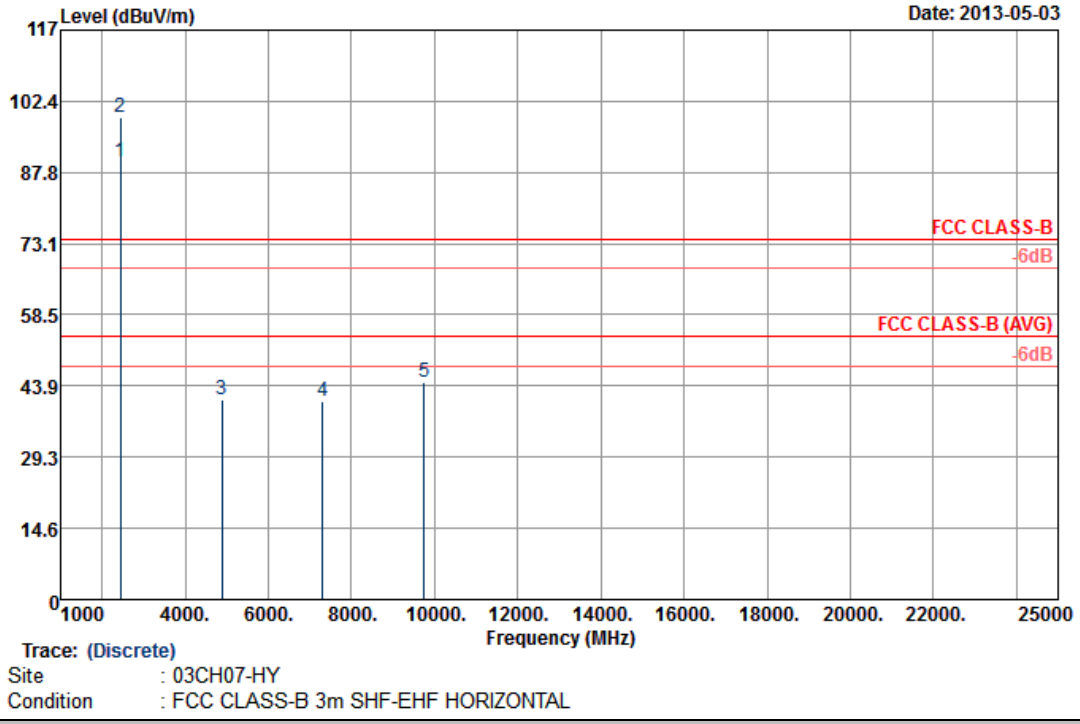


ANTENNA POLARITY : VERTICAL

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
2426	90.9	-	-	85.97	32.33	6.95	34.35	118	92	Average
2426	98.86	-	-	93.87	32.35	6.99	34.35	118	92	Peak
4845	40.63	-33.37	74	55.34	33.96	8.8	57.47	100	0	Peak
7266	41.11	-32.89	74	52.71	35.54	10.86	58	100	0	Peak
9687	44.6	-34.26	78.86	52.58	36.57	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT40	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2440 MHz is fundamental signal which can be ignored. 2. 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

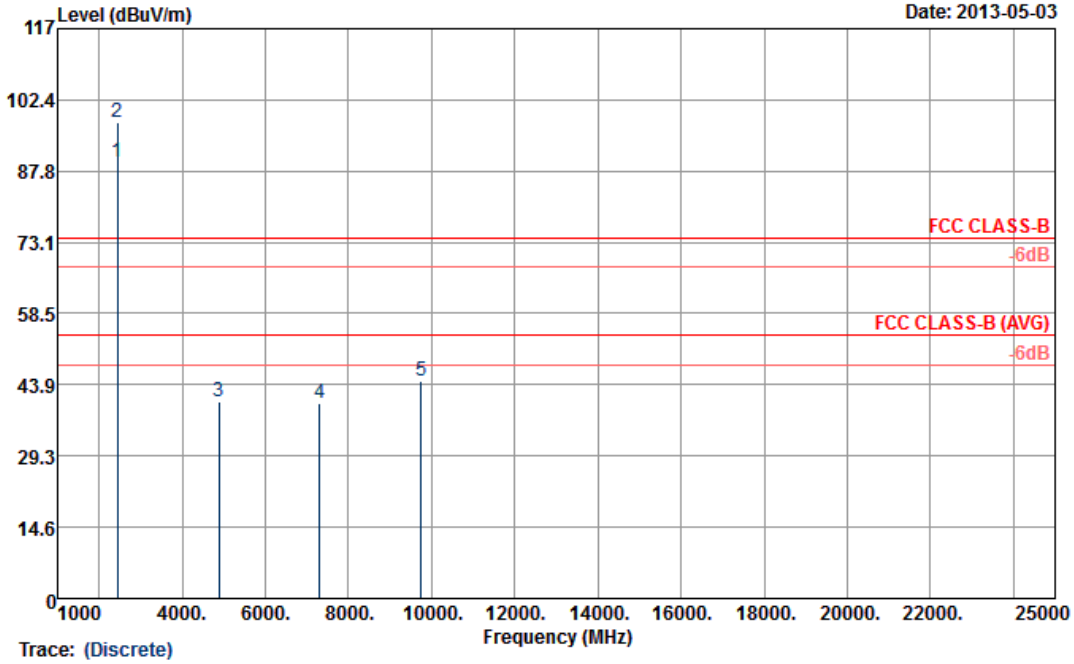


ANTENNA POLARITY : HORIZONTAL

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
2440	89.99	-	-	85	32.35	6.99	34.35	133	334	Average
2440	98.92	-	-	93.92	32.37	7.02	34.39	133	334	Peak
4875	41.05	-32.95	74	55.76	33.95	8.82	57.48	100	0	Peak
7311	40.75	-33.25	74	52.32	35.54	10.91	58.02	100	0	Peak
9747	44.53	-34.39	78.92	52.42	36.66	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT40	Temperature :	21~23℃
Test Channel :	06	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2440 MHz is fundamental signal which can be ignored. 2. 9747 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

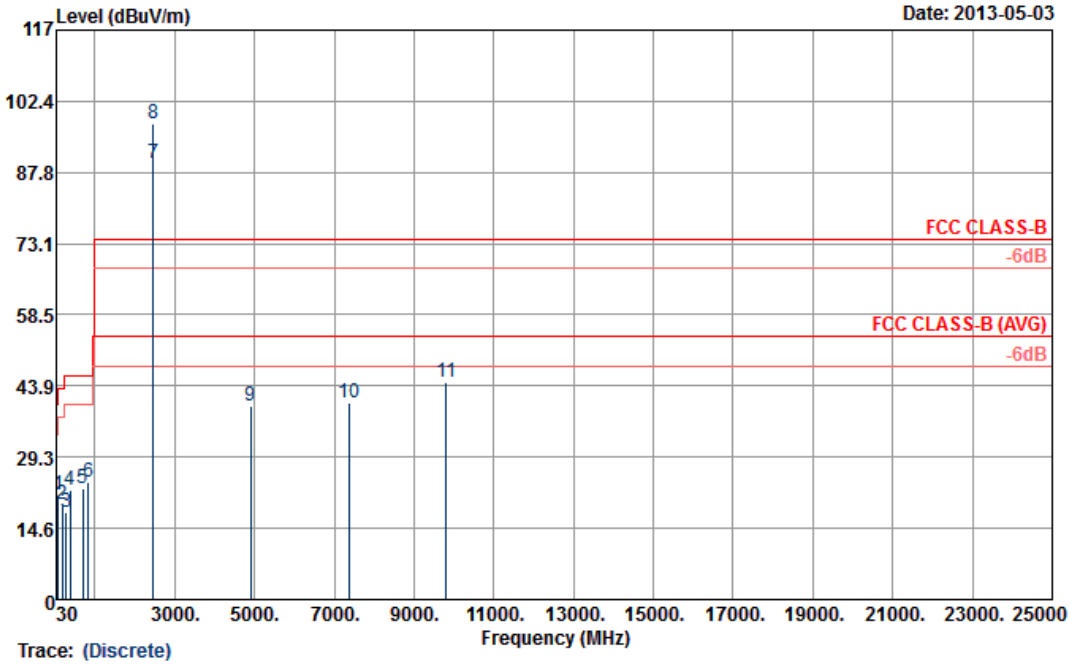


ANTENNA POLARITY : VERTICAL

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
2440	89.73	-	-	84.74	32.35	6.99	34.35	116	93	Average
2440	97.66	-	-	92.66	32.37	7.02	34.39	116	93	Peak
4875	40.57	-33.43	74	55.28	33.95	8.82	57.48	100	0	Peak
7311	40.11	-33.89	74	51.68	35.54	10.91	58.02	100	0	Peak
9747	44.62	-33.04	77.66	52.51	36.66	13.69	58.24	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	802.11n HT40	Temperature :	21~23℃
Test Channel :	09	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. 9807 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. The harmonic (5th ,6th , 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise		

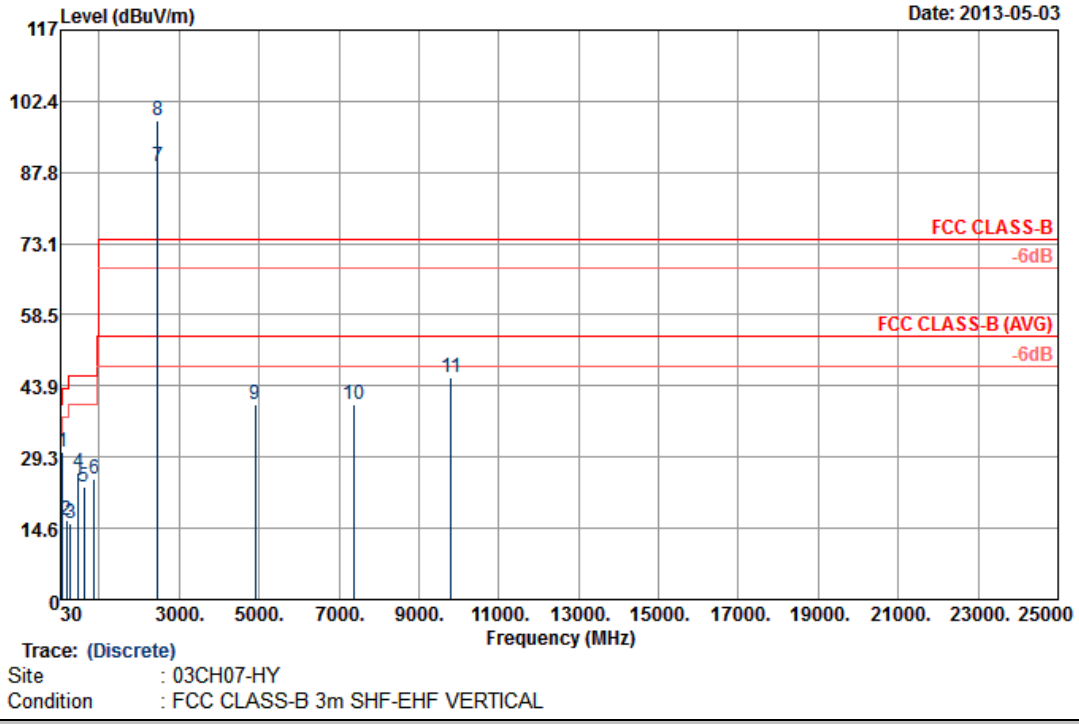


ANTENNA POLARITY : HORIZONTAL

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
86.7	21.65	-18.35	40	44.18	8.24	0.92	31.69	143	272	Peak
183.09	19.61	-23.89	43.5	40.64	8.93	1.26	31.22	-	-	Peak
277.05	17.95	-28.05	46	34.7	12.98	1.64	31.37	-	-	Peak
374.9	22.59	-23.41	46	36.49	15.34	2.09	31.33	-	-	Peak
696.9	22.66	-23.34	46	29.63	20.58	2.93	30.48	-	-	Peak
842.5	24.23	-21.77	46	28.93	22.53	3.25	30.48	-	-	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
2452	89.58	-	-	84.63	32.35	6.99	34.39	106	334	Average
2452	97.74	-	-	92.79	32.35	6.99	34.39	106	334	Peak
4905	39.66	-34.34	74	54.34	33.93	8.87	57.48	100	0	Peak
7356	40.38	-33.62	74	51.95	35.53	10.96	58.06	100	0	Peak
9807	44.5	-33.24	77.74	52.32	36.73	13.69	58.24	100	0	Peak
Other harmonics are lower than background noise										

Test Mode :	802.11n HT40	Temperature :	21~23℃
Test Channel :	09	Relative Humidity :	51~53%
Test Engineer :	Beer Chang		
Remark :	1. 2455 MHz is fundamental signal which can be ignored. 2. 9807 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. 3. Average measurement was not performed if peak level went lower than the average limit. 4. 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
79.14	30.32	-9.68	40	53.6	7.57	0.88	31.73	172	103	Peak
183.09	16.27	-27.23	43.5	37.3	8.93	1.26	31.22	-	-	Peak
270.3	15.8	-30.2	46	32.57	12.89	1.64	31.3	-	-	Peak
468	25.99	-20.01	46	37.29	17.43	2.35	31.08	-	-	Peak
615.7	23.25	-22.75	46	31.07	19.92	2.74	30.48	-	-	Peak
883.1	24.77	-21.23	46	29.25	22.93	3.32	30.73	-	-	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
2455	89.09	-	-	84.09	32.37	7.02	34.39	118	93	Average
2455	98.28	-	-	93.28	32.37	7.02	34.39	118	93	Peak
4905	40.07	-33.93	74	54.75	33.93	8.87	57.48	100	0	Peak
7356	40.09	-33.91	74	51.66	35.53	10.96	58.06	100	0	Peak
9807	45.52	-32.76	78.28	53.34	36.73	13.69	58.24	100	0	Peak
Other harmonics are lower than background noise										

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 (dBuV)	
	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.

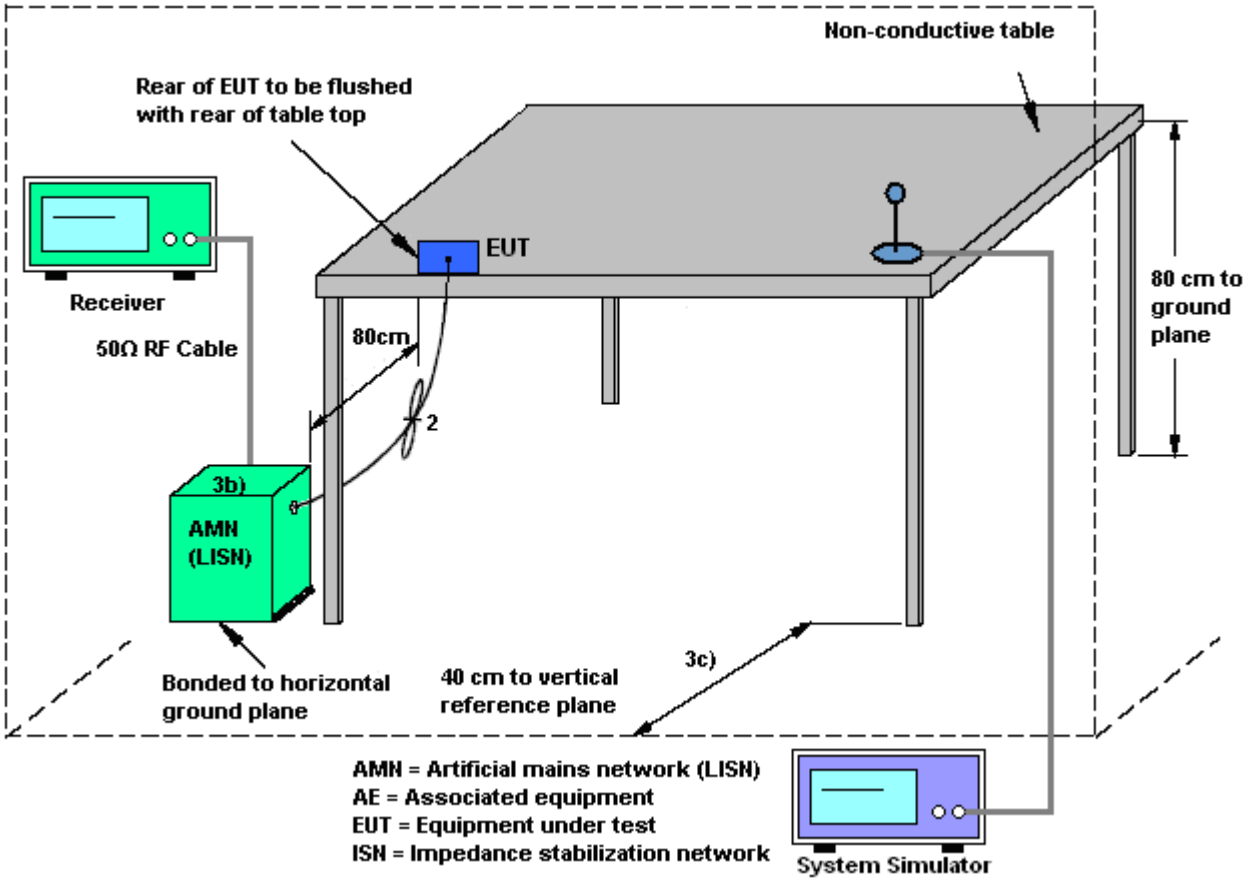
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

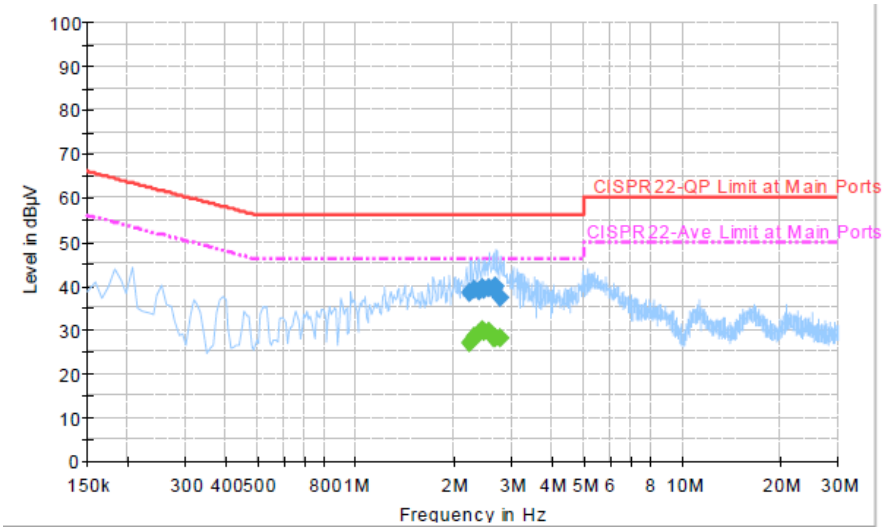
1. The testing follows the guidelines in ANSI C63.10-2009.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 KHz to 30 MHz was searched.
9. 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℃
Test Engineer :	Kyle Jhuang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + WLAN Idle + Bluetooth Link + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 2		



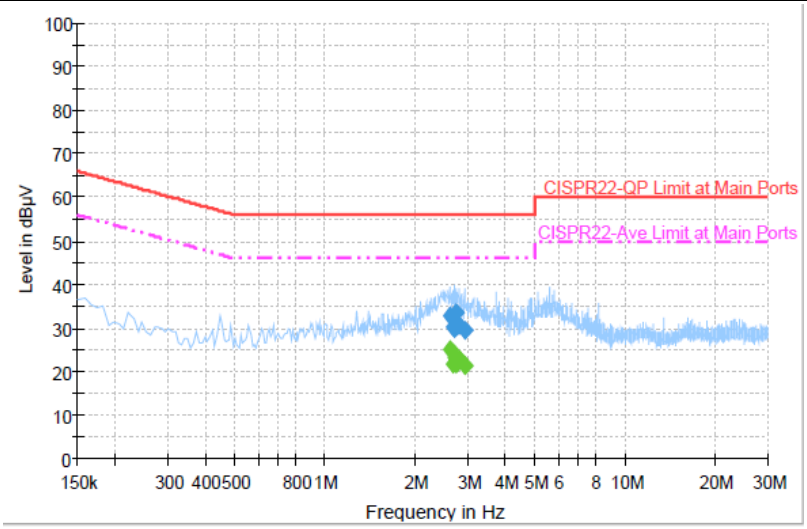
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.238000	38.2	Off	L1	19.5	17.8	56.0
2.310000	38.9	Off	L1	19.6	17.1	56.0
2.390000	38.9	Off	L1	19.6	17.1	56.0
2.446000	39.3	Off	L1	19.6	16.7	56.0
2.486000	39.1	Off	L1	19.6	16.9	56.0
2.558000	39.6	Off	L1	19.6	16.4	56.0
2.638000	39.2	Off	L1	19.6	16.8	56.0
2.694000	39.9	Off	L1	19.6	16.1	56.0
2.758000	37.4	Off	L1	19.6	18.6	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.238000	27.0	Off	L1	19.5	19.0	46.0
2.310000	28.3	Off	L1	19.6	17.7	46.0
2.390000	29.2	Off	L1	19.6	16.8	46.0
2.446000	29.8	Off	L1	19.6	16.2	46.0
2.486000	29.5	Off	L1	19.6	16.5	46.0
2.558000	29.6	Off	L1	19.6	16.4	46.0
2.638000	28.0	Off	L1	19.6	18.0	46.0
2.694000	28.1	Off	L1	19.6	17.9	46.0
2.758000	27.9	Off	L1	19.6	18.1	46.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Kyle Jhuang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + WLAN Idle + Bluetooth Link + MP3 + Earphone + Battery + USB Cable (Charging from Adapter) + SIM 2		



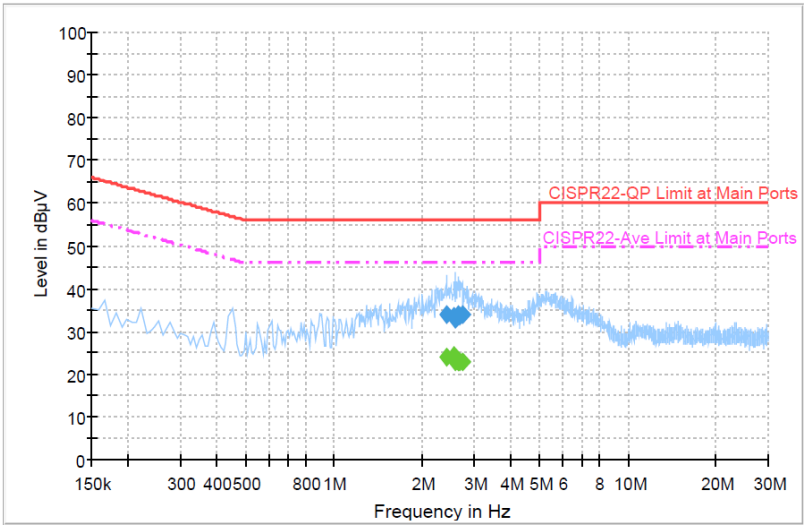
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.606000	33.0	Off	N	19.6	23.0	56.0
2.678000	30.3	Off	N	19.6	25.7	56.0
2.710000	29.8	Off	N	19.6	26.2	56.0
2.726000	33.5	Off	N	19.6	22.5	56.0
2.798000	30.8	Off	N	19.7	25.2	56.0
2.926000	29.4	Off	N	19.6	26.6	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.606000	25.1	Off	N	19.6	20.9	46.0
2.678000	21.9	Off	N	19.6	24.1	46.0
2.710000	23.1	Off	N	19.6	22.9	46.0
2.726000	21.6	Off	N	19.6	24.4	46.0
2.798000	22.8	Off	N	19.7	23.2	46.0
2.926000	21.4	Off	N	19.6	24.6	46.0

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



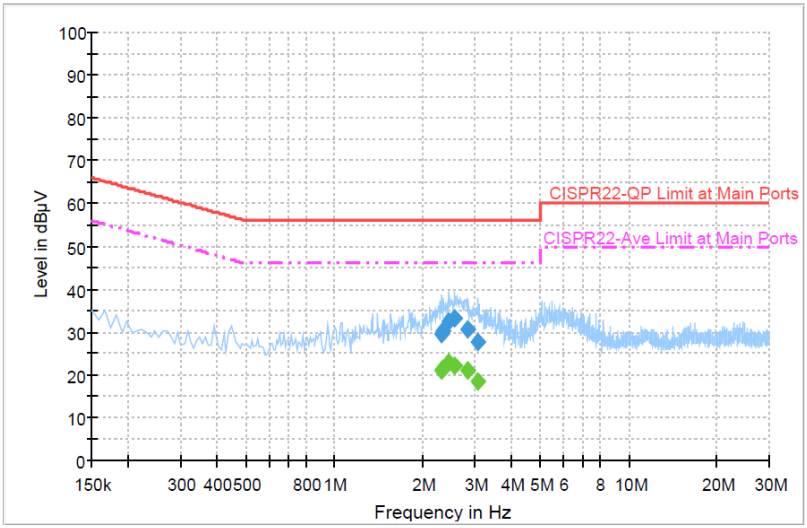
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.414000	34.0	Off	L1	19.6	22.0	56.0
2.566000	33.5	Off	L1	19.6	22.5	56.0
2.590000	32.7	Off	L1	19.6	23.3	56.0
2.646000	33.8	Off	L1	19.5	22.2	56.0
2.694000	33.8	Off	L1	19.6	22.2	56.0
2.742000	33.9	Off	L1	19.6	22.1	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.414000	24.0	Off	L1	19.6	22.0	46.0
2.566000	24.4	Off	L1	19.6	21.6	46.0
2.590000	23.0	Off	L1	19.6	23.0	46.0
2.646000	22.7	Off	L1	19.5	23.3	46.0
2.694000	23.0	Off	L1	19.6	23.0	46.0
2.742000	22.9	Off	L1	19.6	23.1	46.0

Test Mode :	Mode 2	Temperature :	20~22℃
Test Engineer :	Kyle Jhuang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + WLAN Link + Bluetooth 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)
2.310000	29.7	Off	N	19.6	26.3	56.0
2.350000	30.2	Off	N	19.6	25.8	56.0
2.454000	32.4	Off	N	19.6	23.6	56.0
2.566000	33.2	Off	N	19.6	22.8	56.0
2.846000	30.4	Off	N	19.6	25.6	56.0
3.086000	27.6	Off	N	19.6	28.4	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.310000	21.2	Off	N	19.6	24.8	46.0
2.350000	21.5	Off	N	19.6	24.5	46.0
2.454000	22.7	Off	N	19.6	23.3	46.0
2.566000	22.1	Off	N	19.6	23.9	46.0
2.846000	21.0	Off	N	19.6	25.0	46.0
3.086000	18.4	Off	N	19.6	27.6	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 Connected Construction

Non-standard connector 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	R&S	FSP40	100055	9kHz~40GHz	Jun. 06, 2012	Apr. 30, 2013~ May 07, 2013	Jun. 05, 2013	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Apr. 30, 2013~ May 07, 2013	Sep. 07, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Sep. 08, 2012	Apr. 30, 2013~ May 07, 2013	Sep. 07, 2013	Conducted (TH02-HY)
Thermometer	Wisewind	410	N/A	N/A	Nov. 20, 2012	Apr. 30, 2013~ May 07, 2013	Nov. 19, 2013	Conducted (TH02-HY)
RF cable	HONOVA	MF86	N/A	N/A	Nov. 26, 2012	Apr. 30, 2013~ May 07, 2013	Nov. 25, 2013	Conducted (TH02-HY)
RF cable	HONOVA	MF86	N/A	N/A	Nov. 26, 2012	Apr. 30, 2013~ May 07, 2013	Nov. 25, 2013	Conducted (TH02-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 06, 2012	May 03, 2013	Oct. 05, 2013	Radiation (03CH07-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9KHz ~ 30GHz	Nov. 30, 2012	May 03, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 22, 2012	May 03, 2013	Aug. 21, 2013	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Dec. 01, 2012	May 03, 2013	Nov. 30, 2013	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	159088	1GHz ~ 18GHz	Feb. 27, 2013	May 03, 2013	Feb. 26, 2014	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10-1000MHz. 32dB.GAIN	Feb. 26, 2013	May 03, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Sep. 03, 2012	May 03, 2013	Sep. 02, 2013	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Sep. 28, 2012	May 03, 2013	Sep. 27, 2013	Radiation (03CH07-HY)
Test Software	N/A	E3	Version 6, 2009-08-24(k5)	N/A	N/A	May 03, 2013	N/A	Radiation (03CH07-HY)
Filter	WAINWRIGHT	WLKS1500-8SS	SN2	1.5G LPF	Dec. 28, 2012	May 03, 2013	Dec. 27, 2013	Radiation (03CH07-HY)
Filter	WAINWRIGHT	WRCGV2400/2483-2390/2493-35/10SS	N/A	2.4G Notch Filter	Dec.29 , 2012	May 03, 2013	Dec. 28, 2013	Radiation (03CH07-HY)
Filter	Microwave	H3G018G1	SN279268	3G HPF	Nov. 26, 2012	May 03, 2013	Nov. 25, 2013	Radiation (03CH07-HY)
Test Software	Audix	E3	Version 6.2009-8-24	N/A	N/A	May 03, 2013	N/A	Radiation (03CH07-HY)
Thermometer	Wisewind	410	BU5004	N/A	Nov. 20, 2012	May 03, 2013	Nov. 19, 2013	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9KHz ~ 30MHz	Jul. 03, 2012	May 03, 2013	Jul. 02, 2013	Radiation (03CH07-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	May 03, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	HD GmbH	MA 240	N/A	N/A	N/A	May 03, 2013	N/A	Radiation (03CH07-HY)
RF Cable	Huber+Suhner	RG 142	NA	30M~1G	Dec. 04, 2012	May 03, 2013	Dec. 03, 2013	Radiation (03CH07-HY)
RF Cable	Huber+Suhner	SF104	NA	1G~26.5G	Dec. 04, 2012	May 03, 2013	Dec. 03,2013	Radiation (03CH07-HY)
Antenna Mast	HD GmbH	MA 240	N/A	N/A	N/A	May 03, 2013	N/A	Radiation (03CH07-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9KHz – 2.75GHz	Nov. 13, 2012	May 08, 2013	Nov. 12, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100081	9KHz ~ 30MHz	Dec. 12, 2012	May 08, 2013	Dec. 11, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100080	9KHz ~ 30MHz	Dec. 06, 2012	May 08, 2013	Dec. 05, 2013	Conduction (CO05-HY)
AC Power Source	APC	APC-1000 W	N/A	N/A	N/A	May 08, 2013	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	117995	N/A	Jul. 28, 2011	May 08, 2013	Jul. 27, 2013	Conduction (CO05-HY)
Test Software	N/A	EMC32	8.40.0	N/A	N/A	May. 08, 2013	N/A	Conduction (CO05-HY)
Thermometer	Testo	608-H1	34913912	N/A	Apr. 25, 2013,	May 08, 2013	Apr. 24, 2014	Conduction (CO05-HY)
LF Cable	Shuner	RG-402	N/A	N/A	Apr. 20, 2013	May 08, 2013	May 19, 2013	Conduction (CO05-HY)

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

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.26**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

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