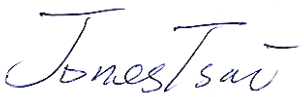
FCC/IC RF Test Report

APPLICANT	:	**Sony Mobile Communications AB**
EQUIPMENT	:	**Smart phone**
BRAND NAME	:	**SONY**
TYPE NAME	:	**PM-0771-BV**
FCC ID	:	**PY7PM-0771**
IC	:	**4170B-PM0771**
STANDARD	:	**FCC Part 15 Subpart C §15.247** **IC RSS-210 issue 8**
CLASSIFICATION	:	**(DSS) Spread Spectrum Transmitter**

The product was received on Apr. 02, 2014 and testing was completed on May 08, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant with the applicable technical standards.

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

Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager

Testing Laboratory
1190

SPORTON INTERNATIONAL INC.

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR440284A	Rev. 01	Initial issue of report	Jun. 09, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(1)	RSS-210 A8.4(2)	Number of Channels	≥ 15Chs	Pass	-
3.2	15.247(a)(1)	RSS-210 A8.1(b)	Hopping Channel Separation	≥ 2/3 of 20dB BW	Pass	-
3.3	15.247(a)(1)	RSS-210 A8.1(d)	Dwell Time of Each Channel	≤ 0.4sec in 31.6sec period	Pass	-
3.4	15.247(a)(1)	RSS-210 A8.1(a)	20dB Bandwidth	NA	Pass	-
3.4	-	RSS-Gen 4.6.1	99% Bandwidth	-	Pass	-
3.5	15.247(b)(1)	RSS-210 A8.1(b)	Peak Output Power	≤ 125 mW	Pass	-
3.6	15.247(d)	RSS-210 A8.5	Conducted Band Edges	≤ 20dBc	Pass	-
3.7	15.247(d)	RSS-210 A8.5	Conducted Spurious Emission	≤ 20dBc	Pass	-
3.8	15.247(d)	RSS-210 A8.5	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 6.30 dB at 38.100 MHz
3.9	15.207	RSS-Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 6.80 dB at 0.158 MHz
3.10	15.203 & 15.247(b)	RSS-210 A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Sony Mobile Communications AB
Nya Vattentornet, 22188 Lund, Sweden

1.2 Manufacturer

Compal Communications, INC.
No. 385, Yangguang Street, Neihu, Taipei 11491, Taiwan

1.3 Feature of Equipment Under Test

The Equipment Under Test (hereafter called: EUT) is smart phone supporting, GSM / WCDMA / LTE, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n, Bluetooth with FM Receiver, ANT+, GPS, and NFC features, and below is details of information.

General Information of Equipment Under Test	
Equipment	Smart phone
Brand Name	SONY
Type Name	PM-0771-BV
FCC ID	PY7PM-0771
IC	4170B-PM0771
GSM Operating Band(s)	GSM 850/900/1800/1900MHz
GPRS / EGPRS Multi Slot Class	GPRS Class 33, EGPRS Class 33
WCDMA Operating Band(s)	FDD Band I / II / IV / V
WCDMA Rel. Version	Rel. 8
LTE Operating Band(s)	FDD Band II / IV / VII / XVII
LTE Rel. Version	Rel. 10
Wi-Fi Specification	802.11b/g/n (HT40), 802.11a/n (HT20/HT40)
Bluetooth Version	v3.0+EDR / v4.0-LE
NFC Specification	ISO14443A / ISO14443B / Felica
ANT+	ANT+
Power Supply	Battery / AC Adapter / Car Charger
EUT Stage	Production Unit

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

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Frequency Range	2402 MHz ~ 2480 MHz
Number of Channels	79
Carrier Frequency of Each Channel	2402+n*1 MHz; n=0~78
Maximum Output Power to Antenna	Bluetooth BR(1Mbps) : 7.86 dBm (0.0061 W) Bluetooth EDR (2Mbps) : 8.65 dBm (0.0073 W) Bluetooth EDR (3Mbps) : 9.15 dBm (0.0082 W)
99% Occupied Bandwidth	Bluetooth BR(1Mbps) : 0.896MHz Bluetooth EDR (2Mbps) : 1.172MHz Bluetooth EDR (3Mbps) : 1.176MHz
Antenna Type	PIFA Antenna type with gain 1.40 dBi
Type of Modulation	Bluetooth BR (1Mbps) : GFSK Bluetooth EDR (2Mbps) : π/4-DQPSK Bluetooth EDR (3Mbps) : 8-DPSK
H/W	A
S/W	18.3.C.0.8
EUT Stage	Production Unit

EUT Information List				
IMEI	HW Version	SW Version	S/N	Performed Test Item
IMEI : 004402452474269	A	18.3.C.0.8	ZH8002JUPJ	RF conducted measurement
IMEI : 004402452477643			ZH80038NS9	Radiated Spurious Emission
IMEI : 004402452477734			ZH8002JVQW	Conducted Emission

Accessory List	
AC Adapter	Model No. : EP800
	Type No. : CAA-0002016-US B
	SN : 1112W28321732 (for Radiated Spurious Emission) 3113W23610674 (for AC power line Conducted Emission)
Battery	Model No. : LIS1551ERPC
	Type No. : F-4993-128-0
Earphone	Model No. : MH410c
	Type No. : AG-1100
	SN : 12522047001ADD8 (for Radiated Spurious Emission) 12481A10036502 (for AC power line Conducted Emission)
USB Cable	Model No. : AHAB EC450
	Type No. : AI-0700
	SN : 132512DA0631054 (for Radiated Spurious Emission) 132212DF3297482 (for AC power line Conducted Emission)

Note:

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

1.5 Modification of EUT

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

1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

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.**			**IC Registration No.**
	TH02-HY	CO05-HY	03CH06-HY	4086B-1

1.7 Applied Standards

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

- FCC Part 15 Subpart C §15.247
- FCC Public Notice DA 00-705
- ANSI C63.4-2003
- IC RSS-210 Issue 8
- IC RSS-Gen Issue 3
- NOTICE 2012-DRS0126

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.
3. Per the section 2.2.3 of Notice of 2012-DRS0126, " Receivers Excluded from Industry Canada Requirements", only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements.

2 Test Configuration of Equipment Under Test

2.1 Descriptions of Test Mode

Preliminary tests were performed in different data rates and recorded the RF output power in the following table:

Channel	Frequency	Bluetooth RF Output Power		
		Data Rate / Modulation		
		GFSK	π /4-DQPSK	8-DPSK
		1Mbps	2Mbps	3Mbps
Ch00	2402MHz	6.60 dBm	7.21 dBm	7.66 dBm
Ch39	2441MHz	7.86 dBm	8.65 dBm	**9.15 dBm**
Ch78	2480MHz	6.25 dBm	7.08 dBm	7.56 dBm

Remark:

1. All the test data for each data rate were verified, but only the worst case was reported.
2. The data rate was set in 3Mbps for all the test items due to the highest RF output power.

a. 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: conduction (150 kHz to 30 MHz), radiation (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). Pre-scanned tests, X, Y, Z in three orthogonal panels, and different data rates were conducted to determine the final configuration (Z plane as worst plane) from all possible combinations, and the worst mode of radiated spurious emissions is Bluetooth 3Mbps mode, and recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

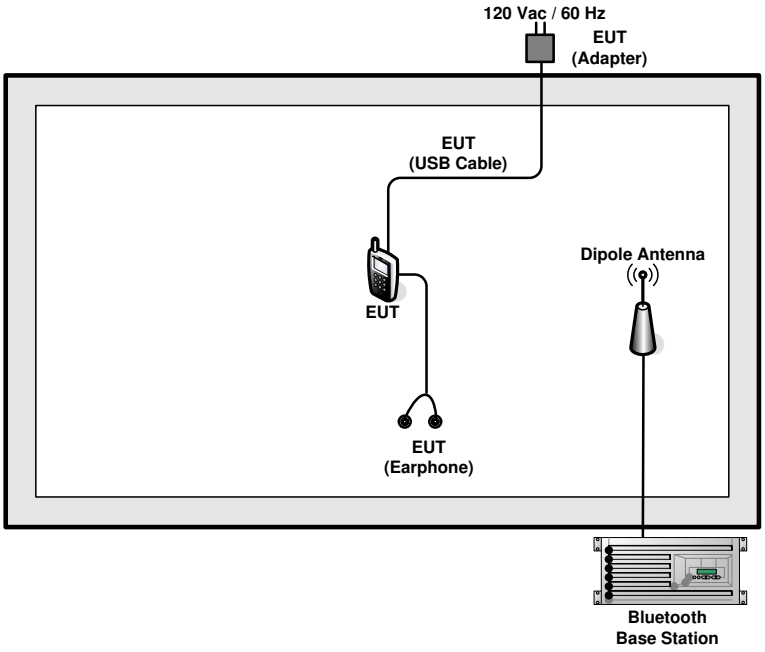
2.2 Test Mode

The following summary table is showing all test modes to demonstrate in compliance with the standard.

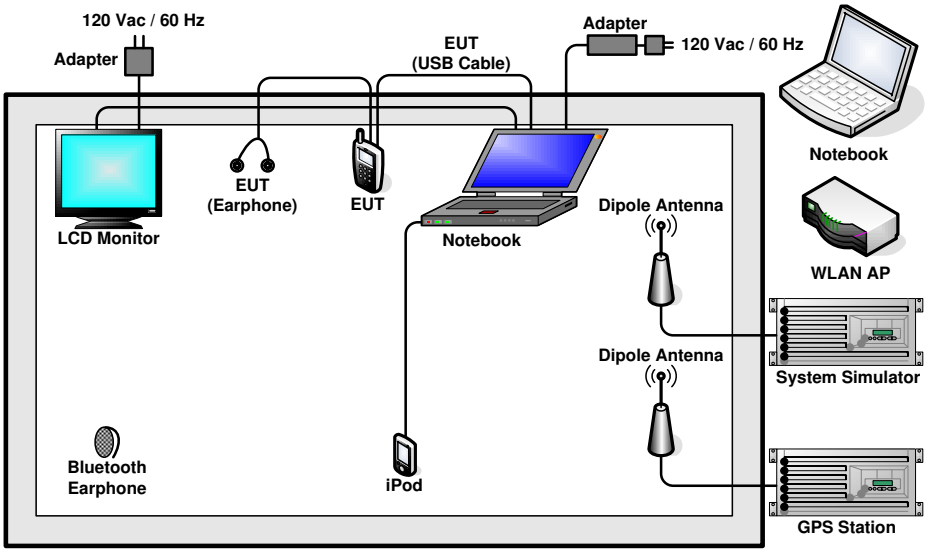
Summary table of Test Cases			
Test Item	Data Rate / Modulation		
	Bluetooth BR 1Mbps GFSK	Bluetooth EDR 2Mbps π/4-DQPSK	Bluetooth EDR 3Mbps 8-DPSK
Conducted Test Cases	Mode 1: CH00_2402 MHz Mode 2: CH39_2441 MHz Mode 3: CH78_2480 MHz	Mode 4: CH00_2402 MHz Mode 5: CH39_2441 MHz Mode 6: CH78_2480 MHz	Mode 7: CH00_2402 MHz Mode 8: CH39_2441 MHz Mode 9: CH78_2480 MHz
Radiated Test Cases	Bluetooth BR 1Mbps GFSK	Bluetooth EDR 2Mbps π/4-DQPSK	Bluetooth EDR 3Mbps 8-DPSK
	Mode 1: CH00_2402 MHz Mode 2: CH39_2441 MHz Mode 3: CH78_2480 MHz	Mode 4: CH00_2402 MHz Mode 5: CH39_2441 MHz Mode 6: CH78_2480 MHz	Mode 7: CH00_2402 MHz Mode 8: CH39_2441 MHz Mode 9: CH78_2480 MHz
AC Conducted Emission	Mode 1 :GSM1900 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Earphone + Battery + USB Cable (Data Link with Notebook) + GPS Rx		

2.3 Connection Diagram of Test System

<Bluetooth Tx Mode>



<AC Conducted Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	Bluetooth Base Station	R&S	CBT32	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
5.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
6.	Bluetooth Earphone	Sony	SBH20	PY7-RD0010	Unshielded, 0.75m	N/A
7.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
8.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

For Bluetooth function, the RF utility, “Android Debug Bridge” was installed in EUT which was programmed in order to make the EUT get into the engineering modes to contact with Bluetooth base station for continuous transmitting and receiving signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 Number of Channel Measurement

3.1.1 Limits of Number of Hopping Frequency

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

1. The testing follows FCC Public Notice DA 00-705 Measurement Guidelines.
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. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings: Span = the frequency band of operation; RBW ≥ 1% of the span; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold.
6. The number of hopping frequency used is defined as the number of total channel.
7. Record the measurement data derived from spectrum analyzer.

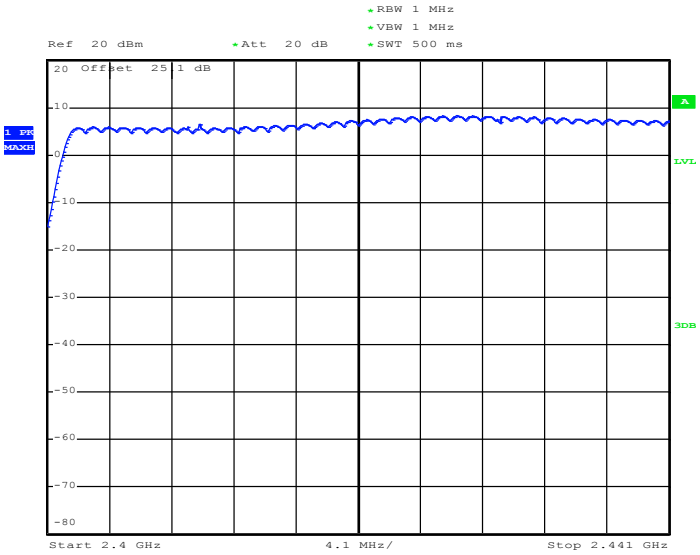
3.1.4 Test Setup

3.1.5 Test Result of Number of Hopping Frequency

Test Mode :	3Mbps	**Temperature :**	24~26℃
Test Engineer :	Osolemio Chang	**Relative Humidity :**	50~53%

Number of Hopping (Channel)	Adaptive Frequency Hopping (Channel)	Limits (Channel)	Pass/Fail
79	20	> 15	Pass

Number of Hopping Channel Plot on Channel 00 - 78



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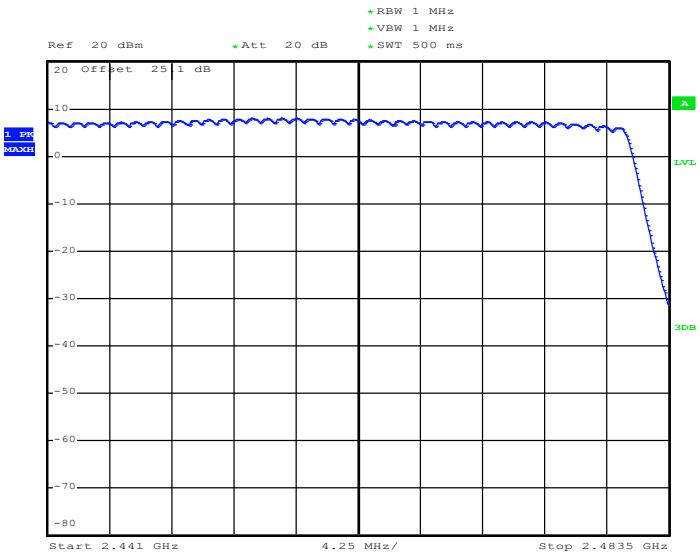

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Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

3.2 Hopping Channel Separation Measurement

3.2.1 Limit of Hopping Channel Separation

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The testing follows FCC Public Notice DA 00-705 Measurement Guidelines.
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. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings:
   Span = wide enough to capture the peaks of two adjacent channels; RBW ≥ 1% of the span; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold.
6. Measure and record the results in the test report.

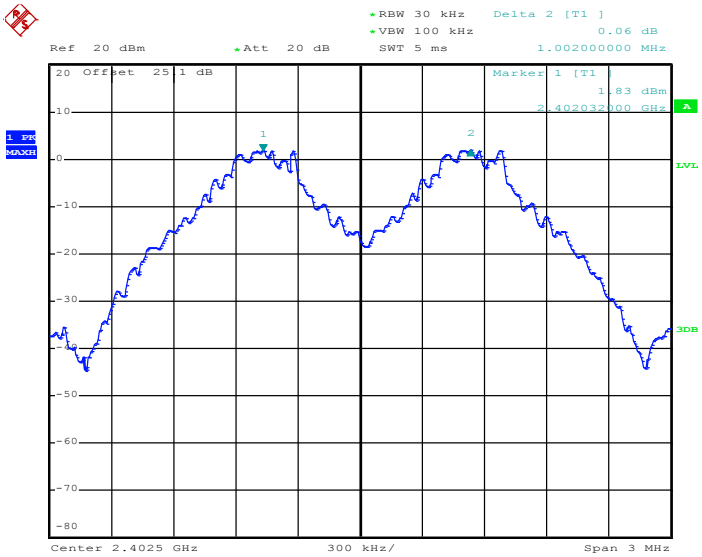
3.2.4 Test Setup

3.2.5 Test Result of Hopping Channel Separation

Test Mode :	1Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

Channel	Frequency (MHz)	Frequency Separation (MHz)	(2/3 of 20dB BW) Limits (MHz)	Pass/Fail
00	2402	1.002	0.6480	Pass
39	2441	1.002	0.6427	Pass
78	2480	1.002	0.6427	Pass

Channel Separation Plot on Channel 00 - 01



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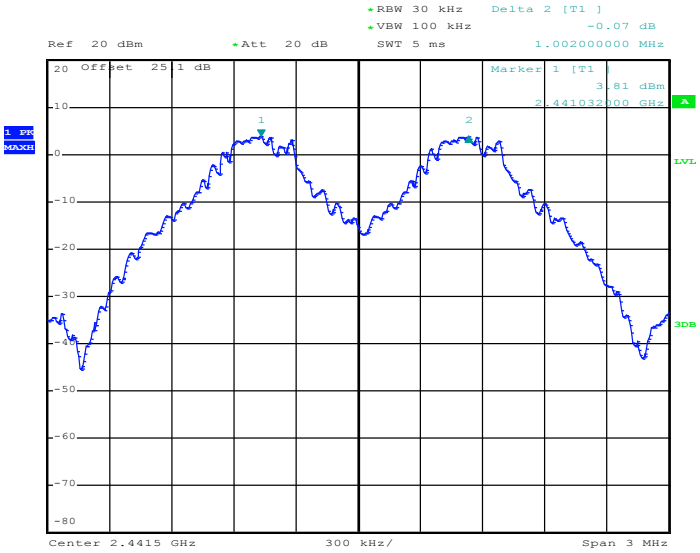
Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

Channel Separation Plot on Channel 39 - 40



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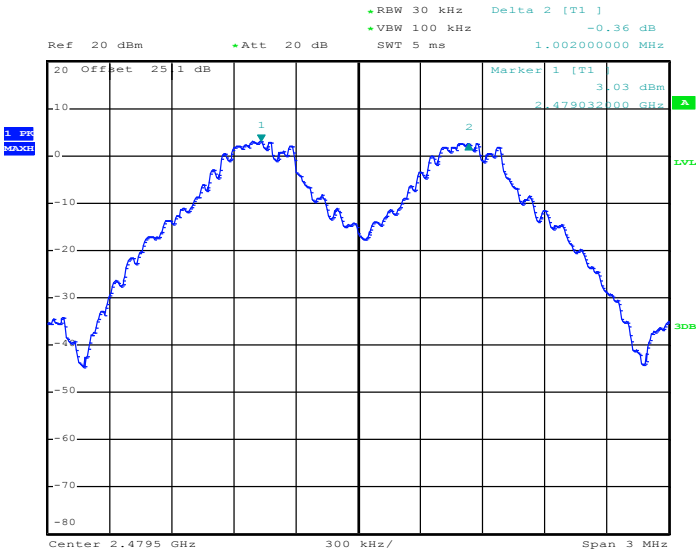
Channel Separation Plot on Channel 77 - 78



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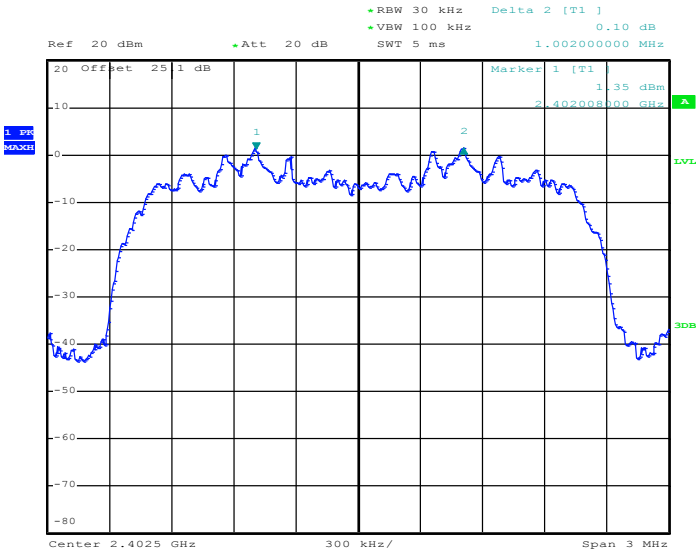
Test Mode :	2Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

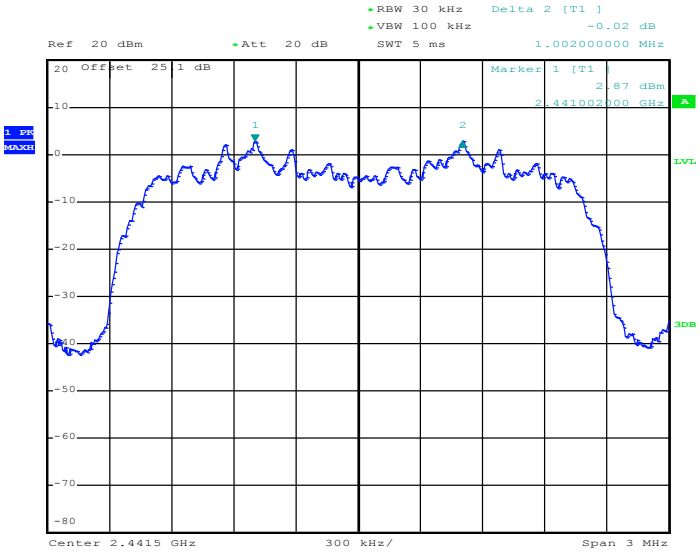
Channel	Frequency (MHz)	Frequency Separation (MHz)	(2/3 of 20dB BW) Limits (MHz)	Pass/Fail
00	2402	1.002	0.8600	Pass
39	2441	1.002	0.8680	Pass
78	2480	1.002	0.8640	Pass

Channel Separation Plot on Channel 00 - 01



Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

Channel Separation Plot on Channel 39 - 40



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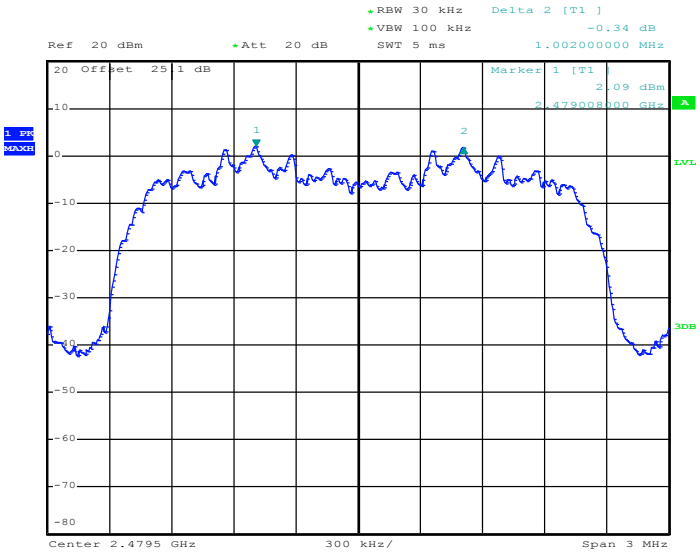
Channel Separation Plot on Channel 77 - 78



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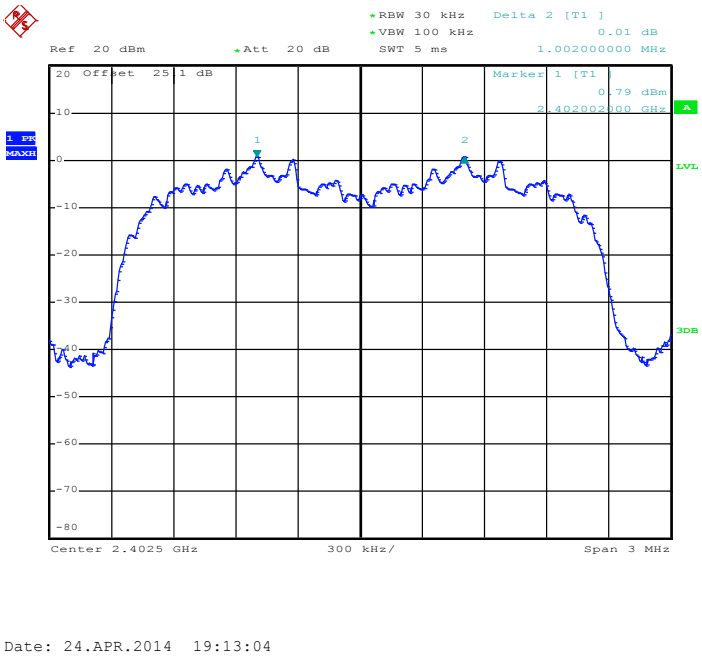
Test Mode :	3Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

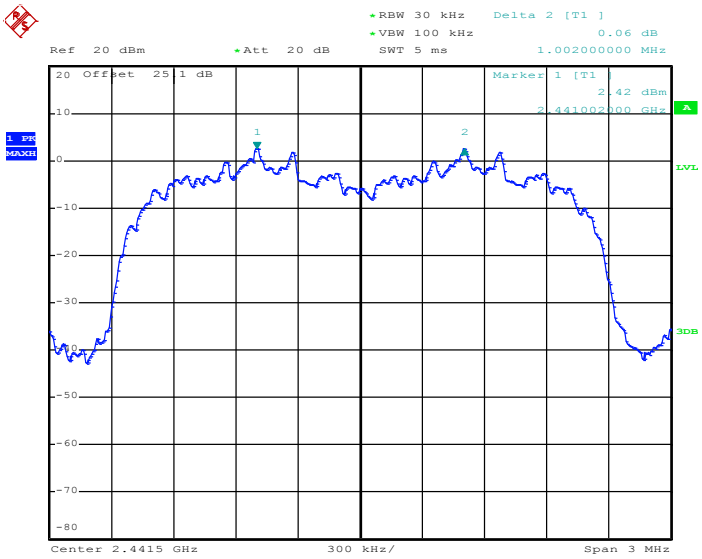
Channel	Frequency (MHz)	Frequency Separation (MHz)	(2/3 of 20dB BW) Limits (MHz)	Pass/Fail
00	2402	1.002	0.8720	Pass
39	2441	1.002	0.8680	Pass
78	2480	1.002	0.8680	Pass

Channel Separation Plot on Channel 00 - 01



Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

Channel Separation Plot on Channel 39 - 40



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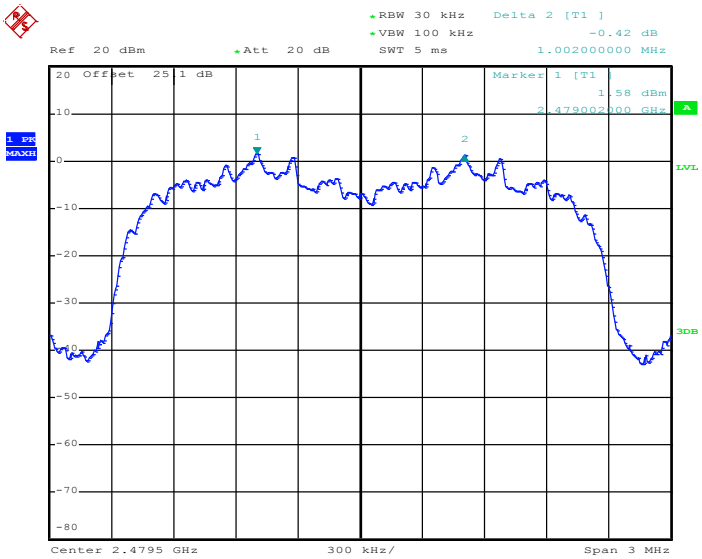
Channel Separation Plot on Channel 77 - 78



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3.3 Dwell Time Measurement

3.3.1 Limit of Dwell Time

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

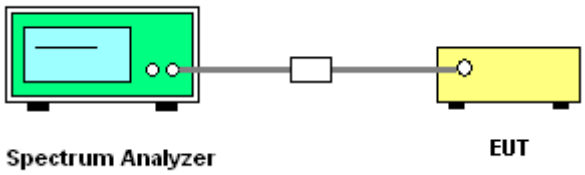
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

1. The testing follows FCC Public Notice DA 00-705 Measurement Guidelines.
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. Enable the EUT hopping function.
5. Use the following spectrum analyzer settings: Span = zero span, centered on a hopping channel; RBW = 1 MHz; VBW ≥ RBW; Sweep = as necessary to capture the entire dwell time per hopping channel; Detector function = peak; Trace = max hold.
6. Measure and record the results in the test report.

3.3.4 Test Setup



3.3.5 Test Result of Dwell Time

Test Mode :	DH5	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

Mode	Hopping Channel Number	Hops Over Occupancy Time(hops)	Package Transfer Time (msec)	Dwell Time (sec)	Limits (sec)	Pass/Fail
Normal	79	106.67	2.90	0.31	0.4	Pass
AFH	20	53.33	2.90	0.16	0.4	Pass

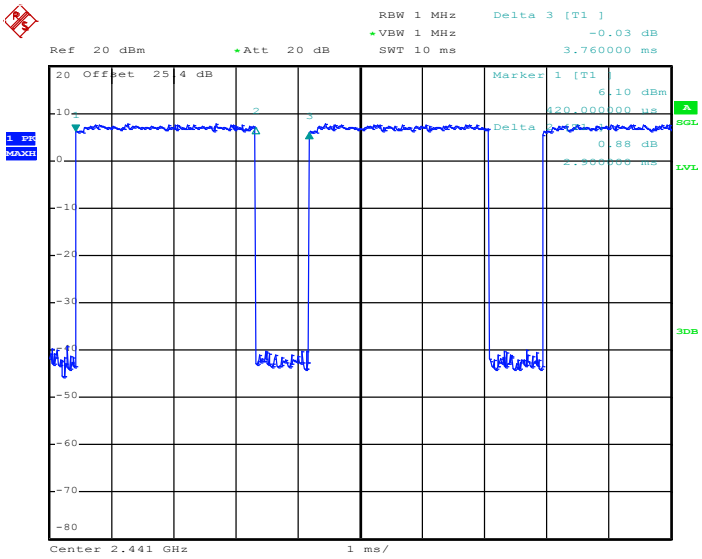
Remark:

1. In normal mode, hopping rate is 1600hops/s with 6 slots in 79 hopping channels.
With channel hopping rate (1600 / 6 / 79) in Occupancy Time Limit (0.4 x 79) (s),
Hops Over Occupancy Time comes to (1600 / 6 / 79) x (0.4 x 79) = 106.67 hops.

2. In AFH mode, hopping rate is 800hops/s with 6 slots in 20 hopping channels.
With channel hopping rate (800 / 6 / 20) in Occupancy Time Limit (0.4 x 20) (s),
Hops Over Occupancy Time comes to (800 / 6 / 20) x (0.4 x 20) = 53.33 hops.

3. Dwell Time(s) = Hops Over Occupancy Time (hops) x Package Transfer Time

Package Transfer Time Plot



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3.4 20dB and 99% Bandwidth Measurement

3.4.1 Limit of 20dB and 99% Bandwidth

Reporting only

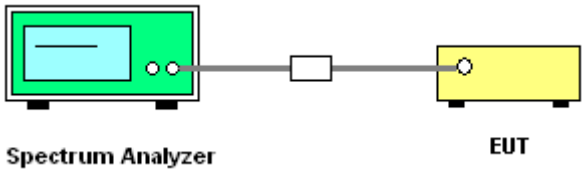
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC Public Notice DA 00-705 Measurement Guidelines.
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. Use the following spectrum analyzer settings for 20dB Bandwidth measurement.
   Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel;
   RBW ≥ 1% of the 20 dB bandwidth; VBW ≥ RBW; Sweep = auto; Detector function = peak;
   Trace = max hold.
5. Measure and record the results in the test report.

3.4.4 Test Setup

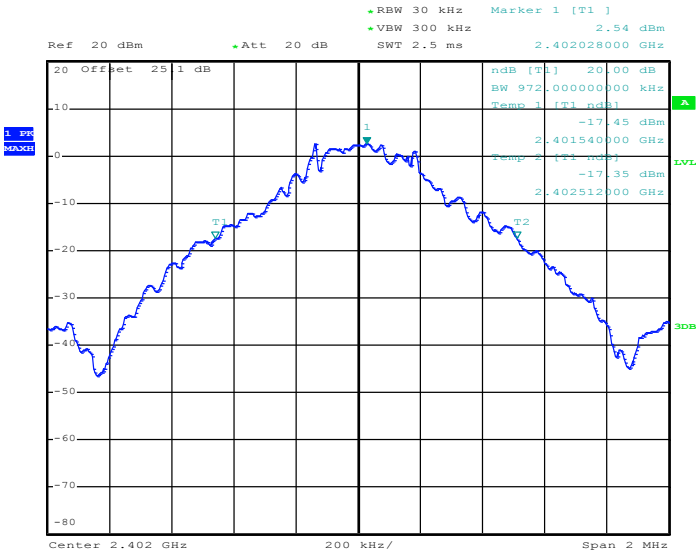


3.4.5 Test Result of 20dB Bandwidth

Test Mode :	1Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

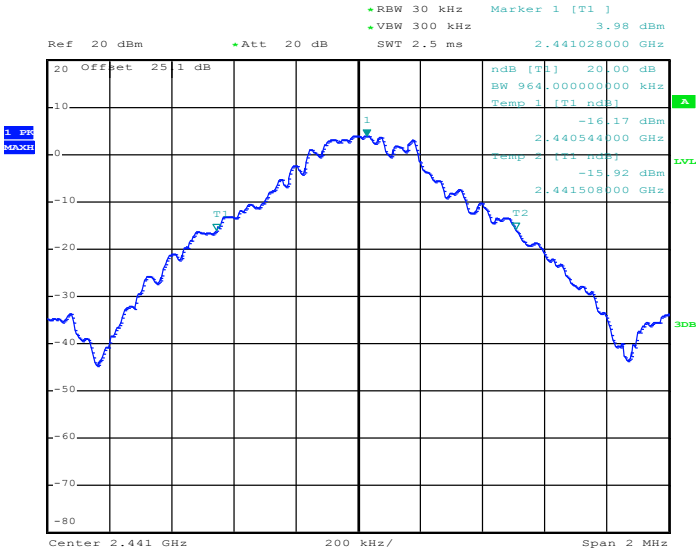
Channel	Frequency (MHz)	20dB Bandwidth (MHz)
00	2402	0.972
39	2441	0.964
78	2480	0.964

20 dB Bandwidth Plot on Channel 00



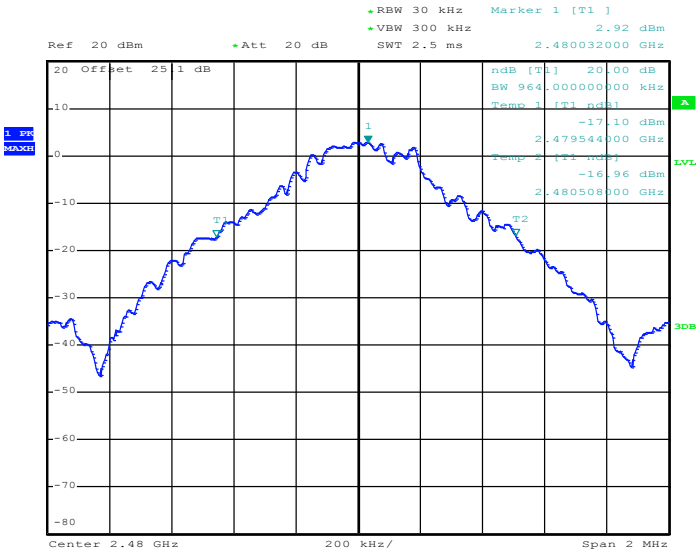
Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

20 dB Bandwidth Plot on Channel 39



Date: 16.APR.2014 01:18:51

20 dB Bandwidth Plot on Channel 78

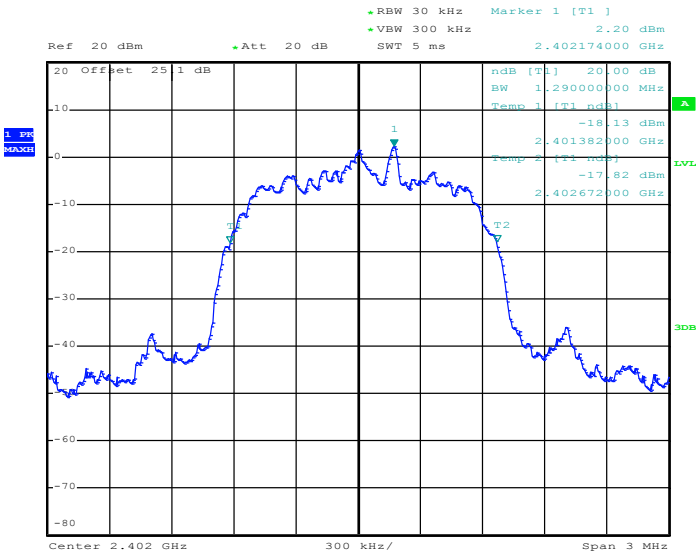


Date: 16.APR.2014 01:19:33

Test Mode :	2Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
00	2402	1.290
39	2441	1.302
78	2480	1.296

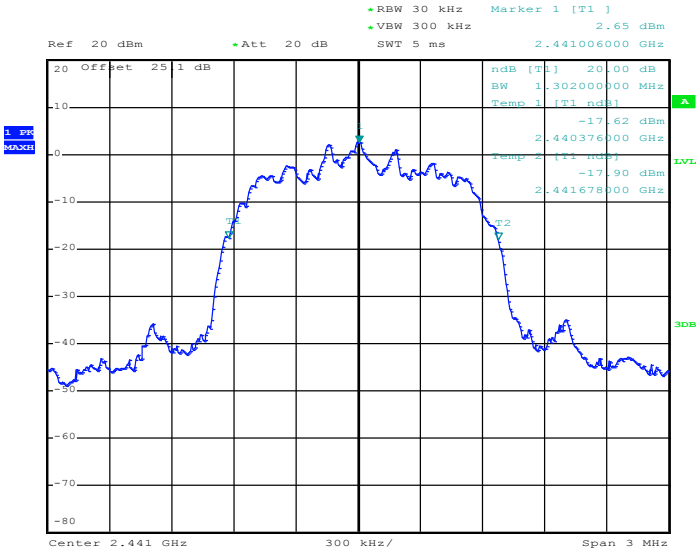
20 dB Bandwidth Plot on Channel 00



Date: 16.APR.2014 01:20:21

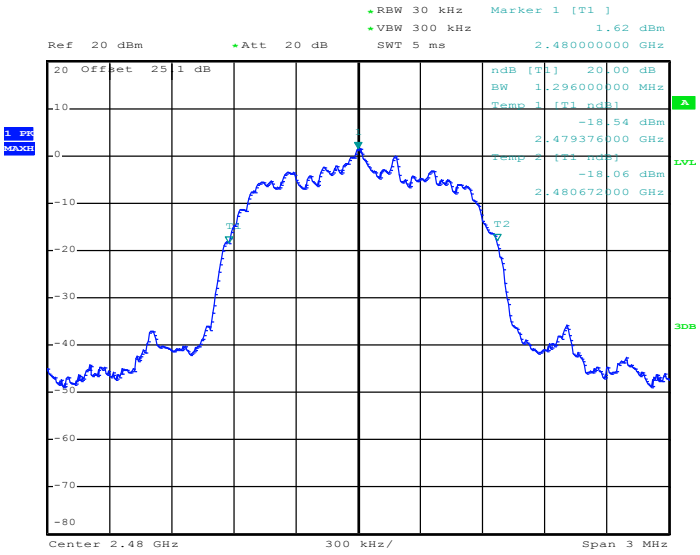
Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

20 dB Bandwidth Plot on Channel 39



Date: 16.APR.2014 01:21:06

20 dB Bandwidth Plot on Channel 78

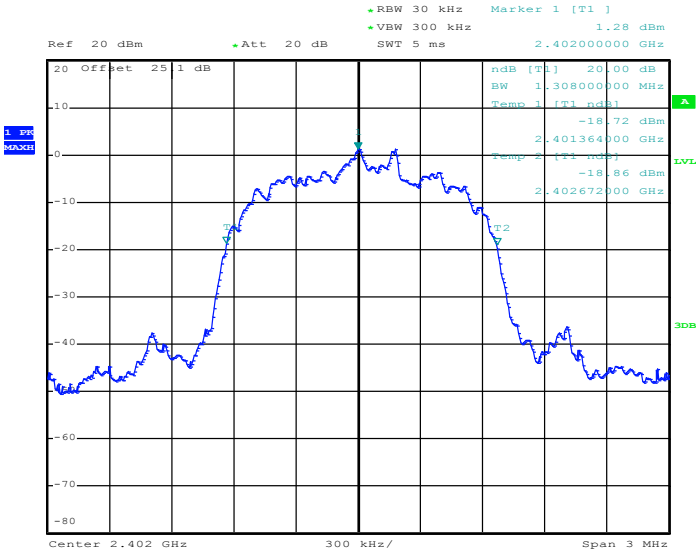


Date: 16.APR.2014 01:21:36

Test Mode :	3Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

Channel	Frequency (MHz)	20dB Bandwidth (MHz)
00	2402	1.308
39	2441	1.302
78	2480	1.302

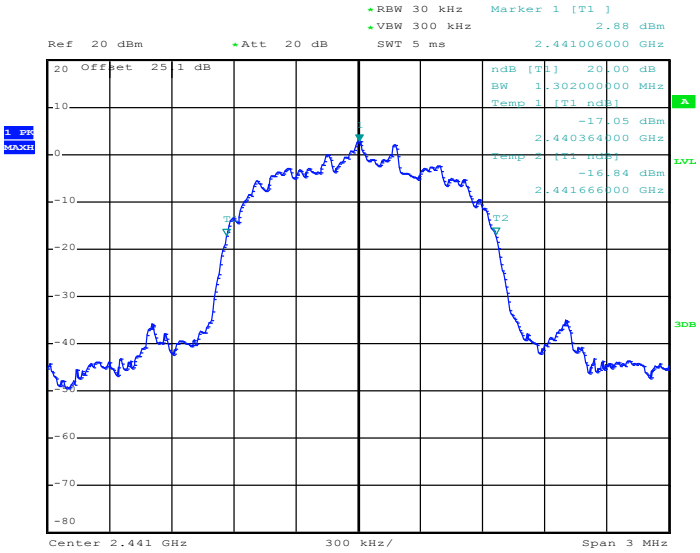
20 dB Bandwidth Plot on Channel 00



Date: 16.APR.2014 01:22:19

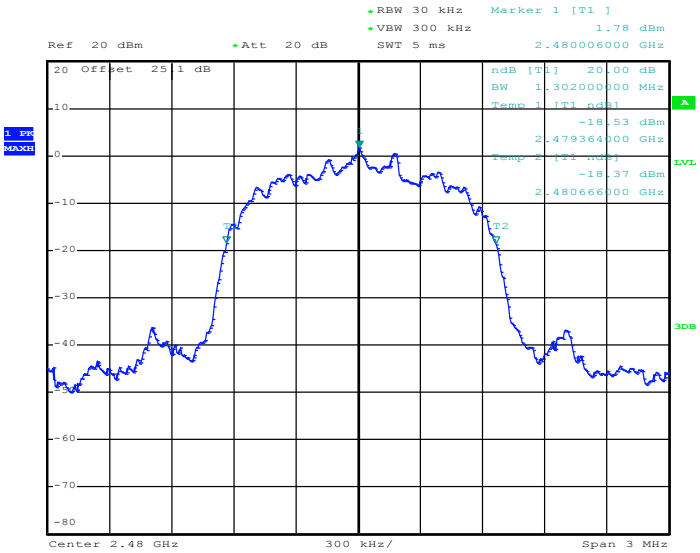
Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

20 dB Bandwidth Plot on Channel 39



Date: 16.APR.2014 01:22:51

20 dB Bandwidth Plot on Channel 78



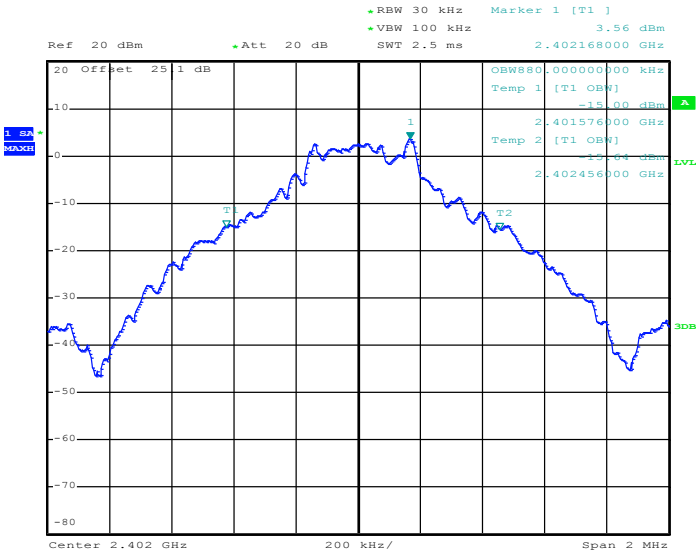
Date: 16.APR.2014 01:23:32

3.4.6 Test Result of 99% Occupied Bandwidth

Test Mode :	1Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

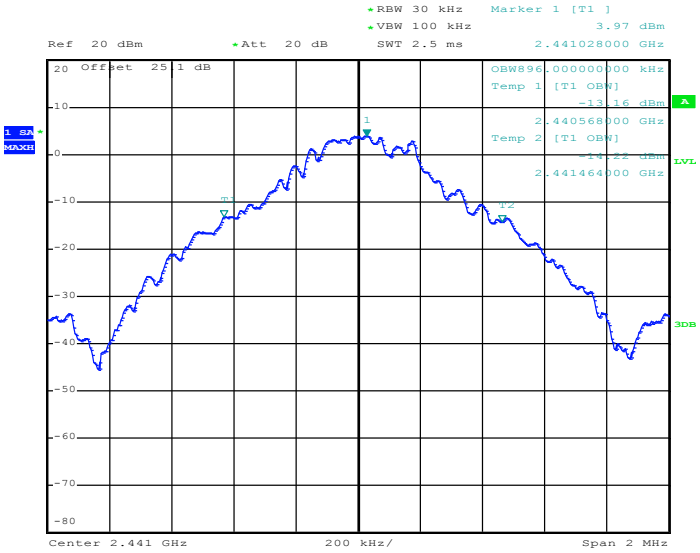
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
00	2402	0.880
39	2441	0.896
78	2480	0.892

99% Occupied Bandwidth Plot on Channel 00



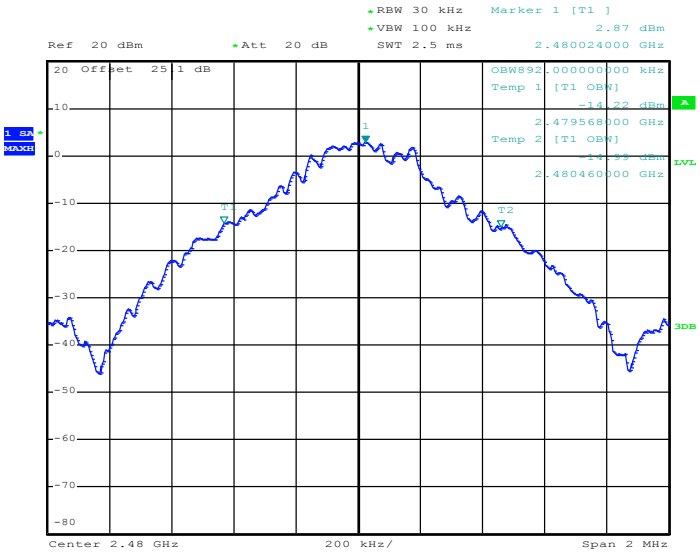
Date: 16.APR.2014 01:24:37

99% Occupied Bandwidth Plot on Channel 39



Date: 16.APR.2014 01:26:31

99% Occupied Bandwidth Plot on Channel 78

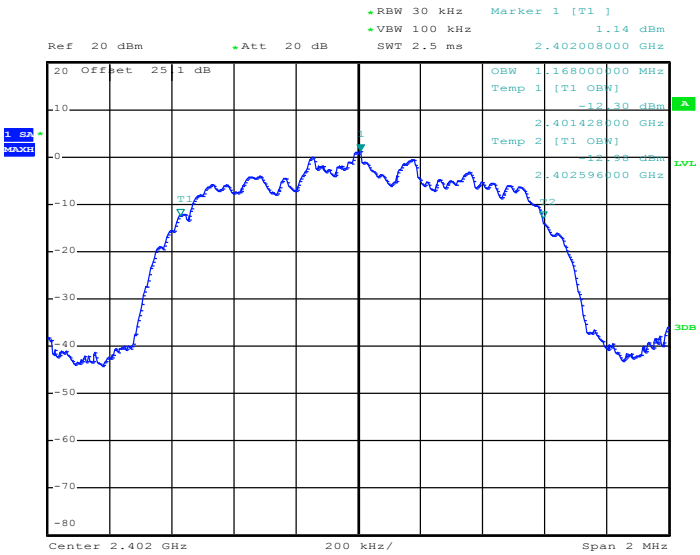


Date: 16.APR.2014 01:28:05

Test Mode :	2Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

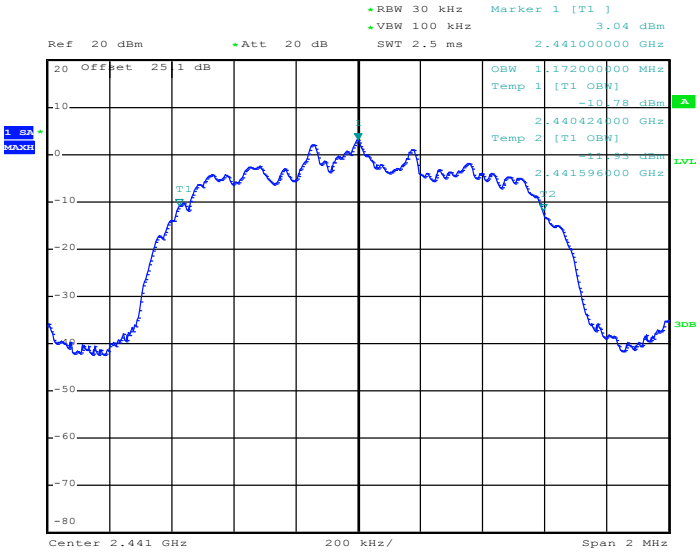
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
00	2402	1.168
39	2441	1.172
78	2480	1.172

99% Occupied Bandwidth Plot on Channel 00



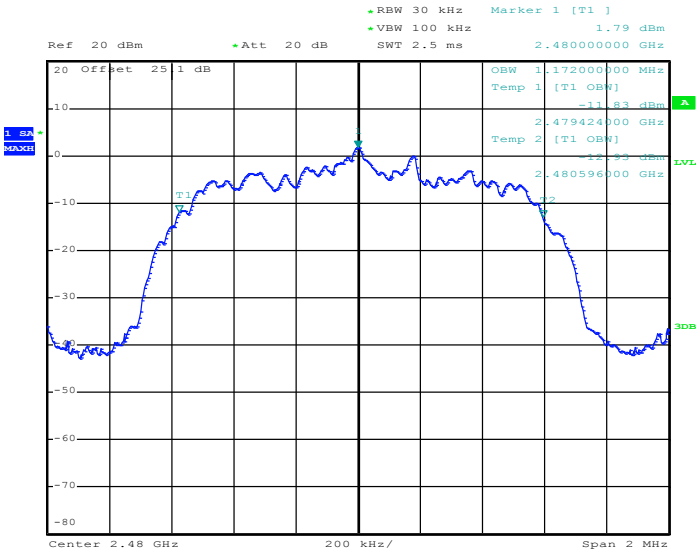
Date: 16.APR.2014 01:30:14

99% Occupied Bandwidth Plot on Channel 39



Date: 16.APR.2014 01:31:58

99% Occupied Bandwidth Plot on Channel 78

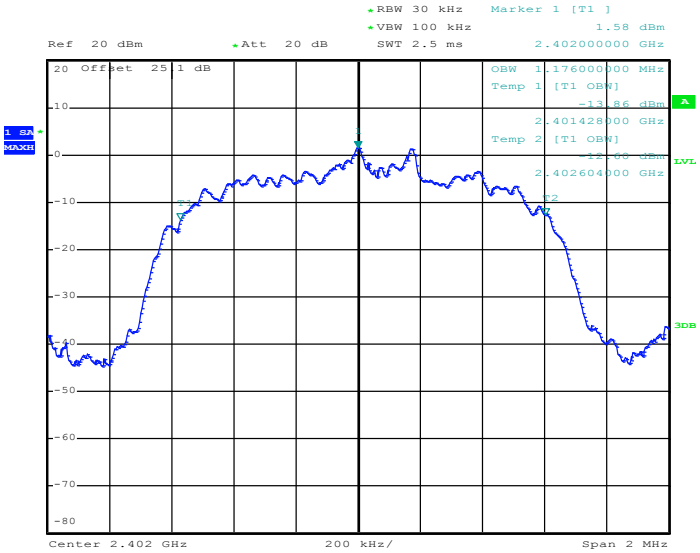


Date: 16.APR.2014 01:34:18

Test Mode :	3Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

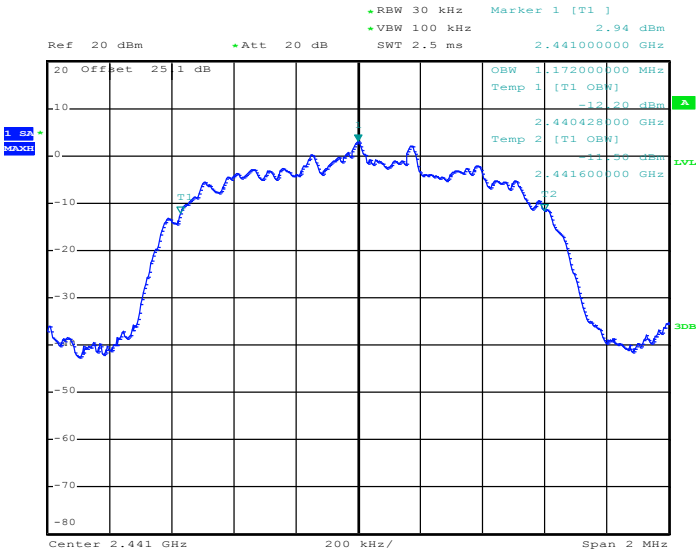
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
00	2402	1.176
39	2441	1.172
78	2480	1.172

99% Occupied Bandwidth Plot on Channel 00



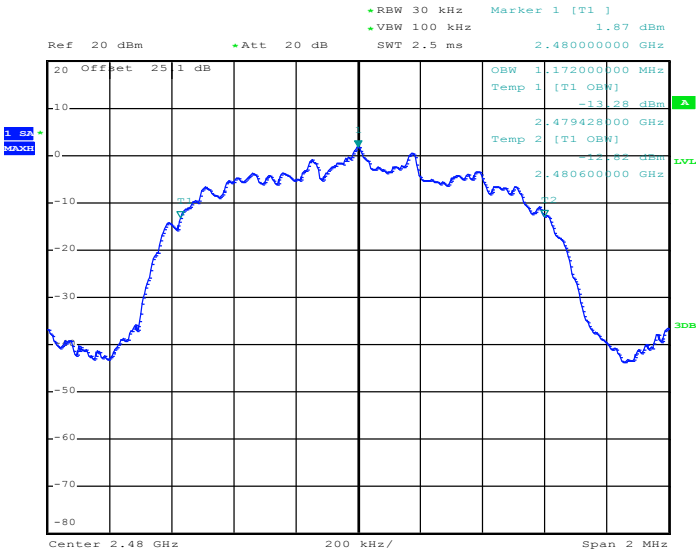
Date: 16.APR.2014 01:36:15

99% Occupied Bandwidth Plot on Channel 39



Date: 16.APR.2014 01:37:50

99% Occupied Bandwidth Plot on Channel 78



Date: 16.APR.2014 01:39:23

Note : The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.5 Peak Output Power Measurement

3.5.1 Limit of Peak Output Power

Section 15.247 (b) The maximum peak conducted output power of the intentional radiator shall not exceed the following: (1) For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band 0.125 watts. The power limit for 1Mbps is 1watt, and for 2Mbps, 3Mbps and AFH are 0.125 watts.

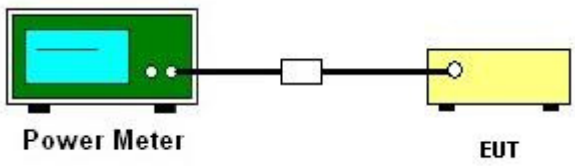
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

1. The testing follows FCC Public Notice DA 00-705 Measurement Guidelines.
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 with cable loss and record the results in the test report.
5. Measure and record the results in the test report.

3.5.4 Test Setup



3.5.5 Test Result of Peak Output Power

Test Mode :	1Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

Channel	Frequency (MHz)	RF Power (dBm)		
		GFSK	Max. Limits (dBm)	Pass/Fail
		1 Mbps		
00	2402	6.60	20.97	Pass
39	2441	7.86	20.97	Pass
78	2480	6.25	20.97	Pass

Note: For AFH mode using 20 hopping channels, the maximum output power limit is 20.97dBm.

Test Mode :	2Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

Channel	Frequency (MHz)	RF Power (dBm)		
		π/4-DQPSK	Max. Limits (dBm)	Pass/Fail
		2 Mbps		
00	2402	7.21	20.97	Pass
39	2441	8.65	20.97	Pass
78	2480	7.08	20.97	Pass

Test Mode :	3Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

Channel	Frequency (MHz)	RF Power (dBm)		
		8-DPSK	Max. Limits (dBm)	Pass/Fail
		3 Mbps		
00	2402	7.66	20.97	Pass
39	2441	9.15	20.97	Pass
78	2480	7.56	20.97	Pass

3.6 Conducted Band Edges Measurement

3.6.1 Limit of Band Edges

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

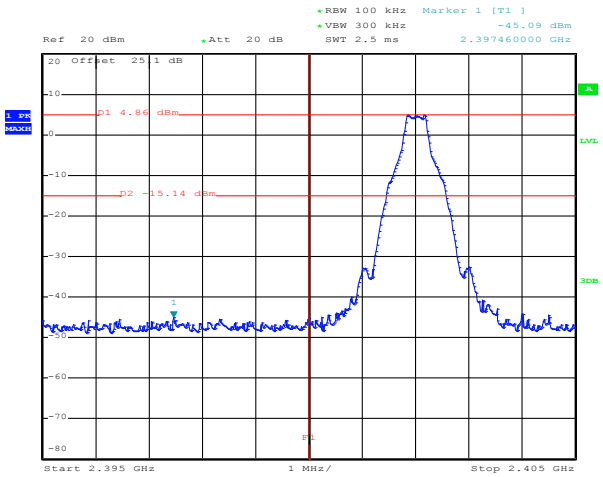
1. The testing follows the guidelines in Band-edge Compliance of RF Conducted Emissions of FCC Public Notice DA 00-705 Measurement Guidelines.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Set RBW = 100kHz (≥ 1% span=10MHz), VBW = 300kHz (≥ RBW). Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100kHz RBW. The attenuation shall be 30 dB instead of 20 dB when RMS conducted output power procedure is used.
4. Enable hopping function of the EUT and then repeat step 2. and 3.
5. Measure and record the results in the test report.

3.6.4 Test Setup

3.6.6 Test Result of Conducted Band Edges

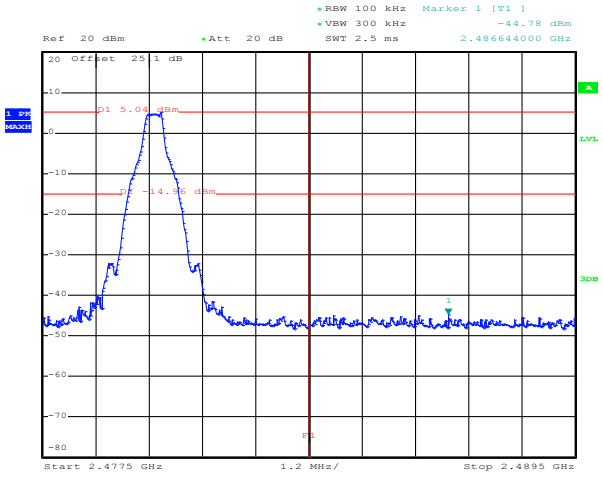
Test Mode :	1Mbps	Temperature :	24~26℃
Test Channel :	00 and 78	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

Low Band Edge Plot on Channel 00



Date: 16.APR.2014 02:05:58

High Band Edge Plot on Channel 78

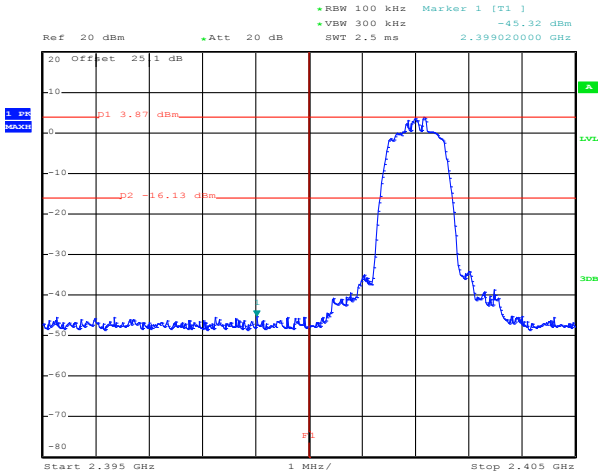


Date: 16.APR.2014 02:06:56

Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

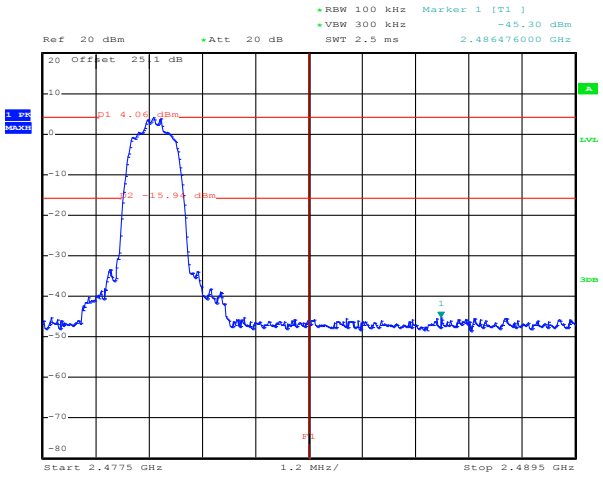
Test Mode :	2Mbps	Temperature :	24~26℃
Test Channel :	00 and 78	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

Low Band Edge Plot on Channel 00



Date: 16.APR.2014 02:07:40

High Band Edge Plot on Channel 78

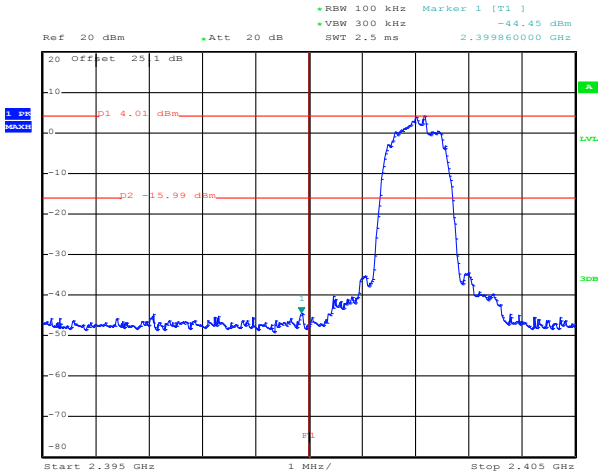


Date: 16.APR.2014 02:08:19

Note: The total loss is 25.1 dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

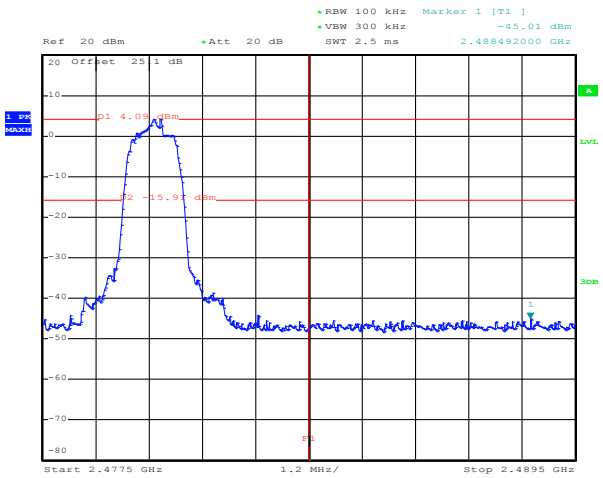
Test Mode :	3Mbps	**Temperature :**	24~26℃
Test Channel :	00 and 78	**Relative Humidity :**	50~53%
Test Engineer :	Osolemio Chang		

Low Band Edge Plot on Channel 00



Date: 16.APR.2014 02:09:44

High Band Edge Plot on Channel 78



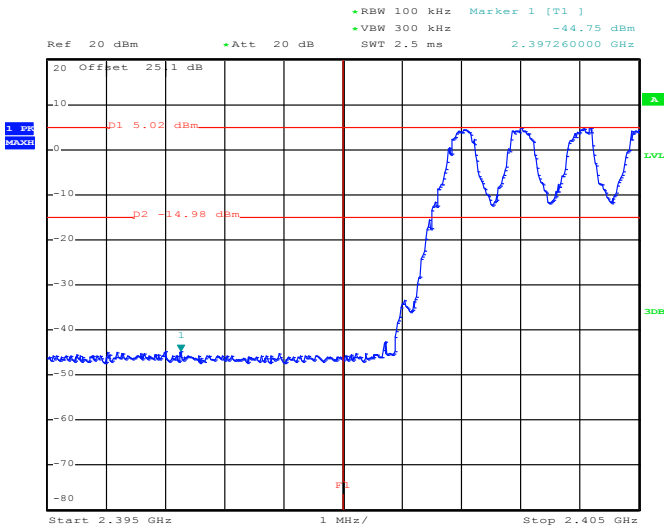
Date: 16.APR.2014 02:17:26

Note: The total loss is 25.1dB of the RF cable and attenuator, and has been compensated to the spectrum analyzer offset.

3.6.7 Test Result of Conducted Hopping Mode Band Edges

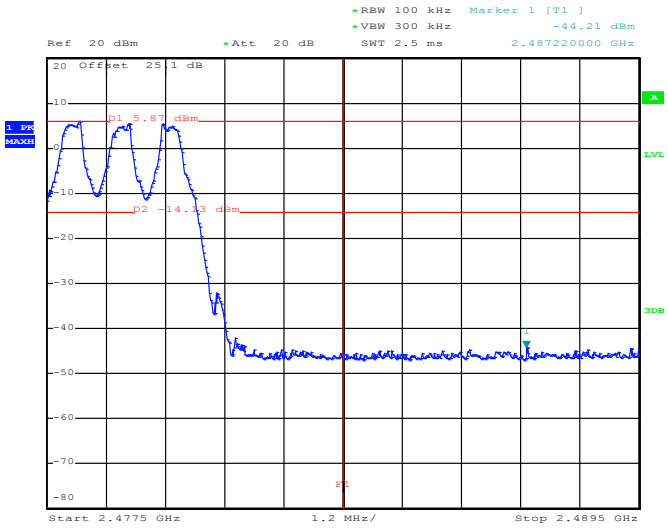
Test Mode :	1Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

1Mbps Hopping Mode Low Band Edge Plot



Date: 16.APR.2014 01:52:13

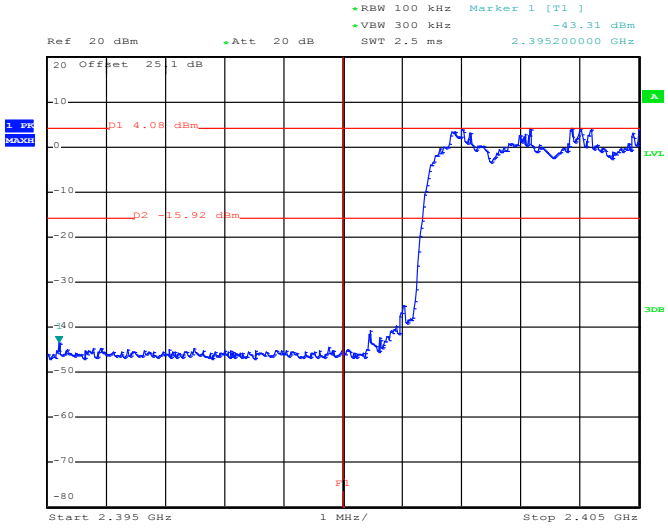
1Mbps Hopping Mode High Band Edge Plot



Date: 16.APR.2014 01:54:10

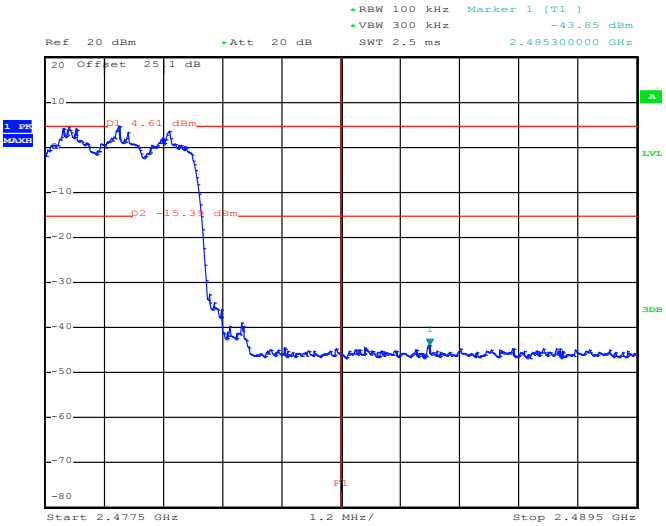
Test Mode :	2Mbps	**Temperature :**	24~26℃
Test Engineer :	Osolemio Chang	**Relative Humidity :**	50~53%

2Mbps Hopping Mode Low Band Edge Plot



Date: 16.APR.2014 01:57:42

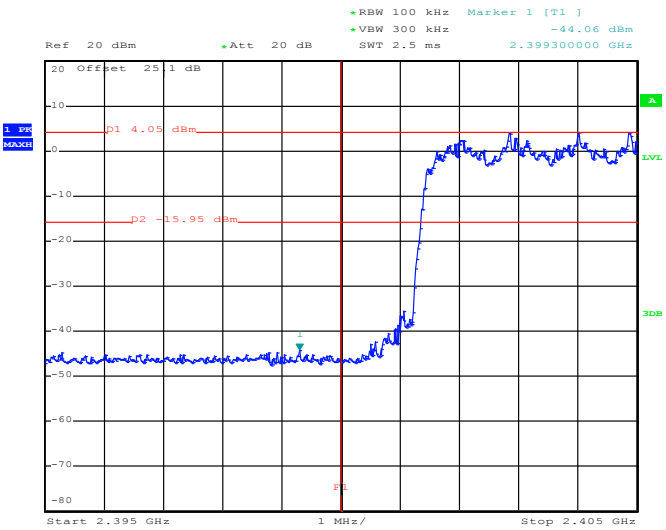
2Mbps Hopping Mode High Band Edge Plot



Date: 16.APR.2014 02:00:39

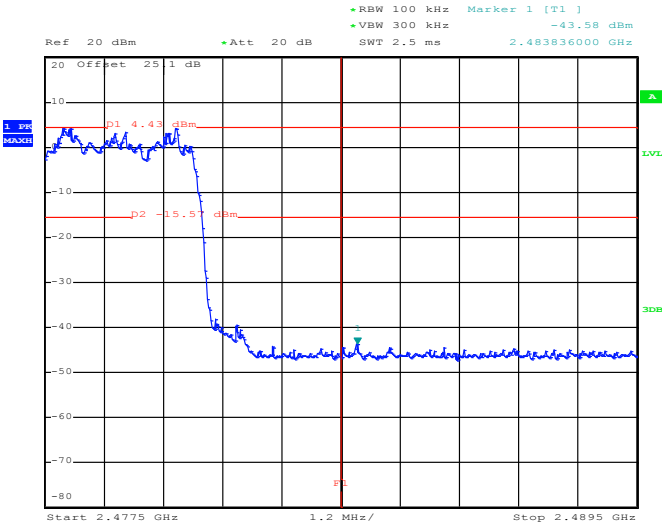
Test Mode :	3Mbps	Temperature :	24~26℃
Test Engineer :	Osolemio Chang	Relative Humidity :	50~53%

3Mbps Hopping Mode Low Band Edge Plot



Date: 16.APR.2014 02:03:11

3Mbps Hopping Mode High Band Edge Plot



Date: 16.APR.2014 02:05:09

3.7 Conducted Spurious Emission Measurement

3.7.1 Limit of Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

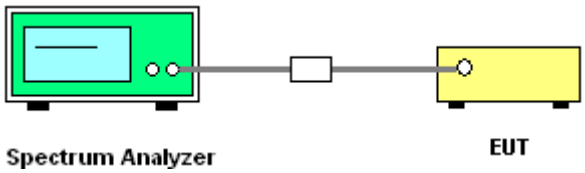
3.7.2 Measuring Instruments

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

3.7.3 Test Procedure

1. The testing follows the guidelines in Spurious RF Conducted Emissions of FCC Public Notice DA 00-705 Measurement Guidelines
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 = 300kHz, scan up through 10th harmonic. All harmonics / spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.
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.

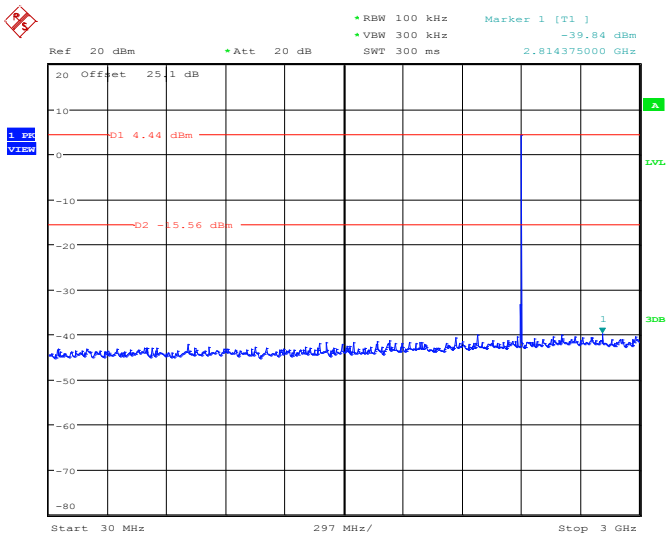
3.7.4 Test Setup



3.7.5 Test Result of Conducted Spurious Emission

Test Mode :	1Mbps	Temperature :	24~26℃
Test Channel :	00	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

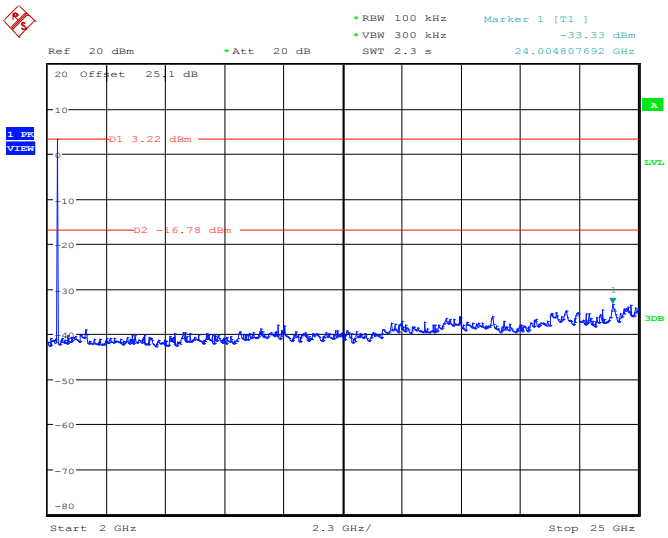
1Mbps CSE Plot on Ch 00 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

1Mbps CSE Plot on Ch 00 between 2 GHz ~ 25 GHz

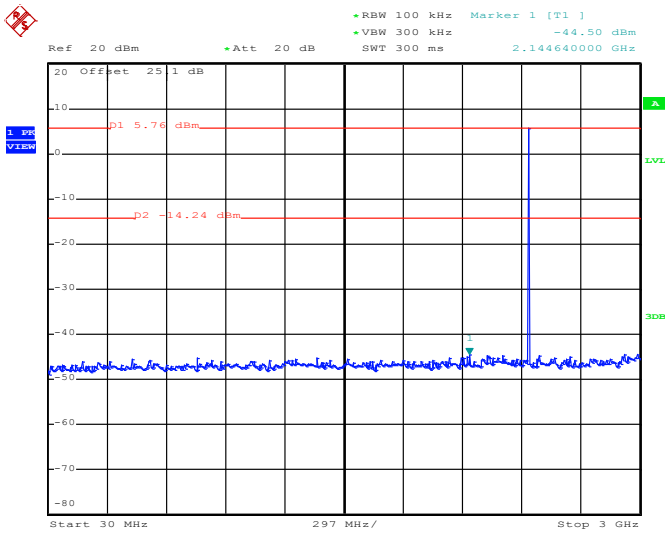


Note:

1. The total loss is 25.1 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 :	1Mbps	Temperature :	24~26℃
Test Channel :	39	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

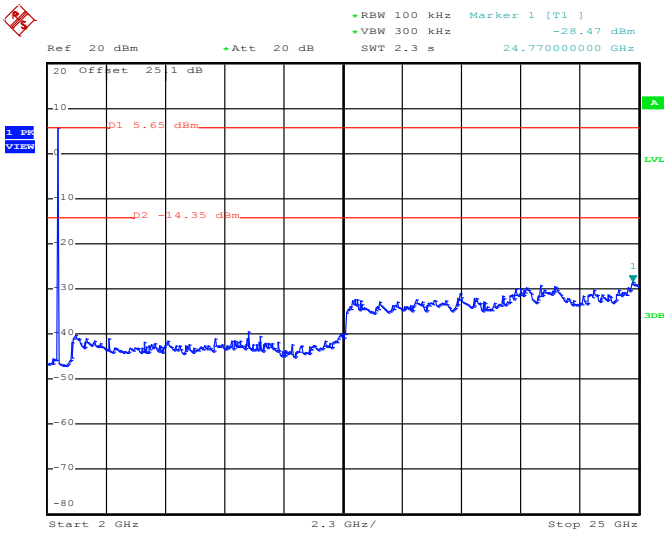
1Mbps CSE Plot on Ch 39 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

1Mbps CSE Plot on Ch 39 between 2 GHz ~ 25 GHz

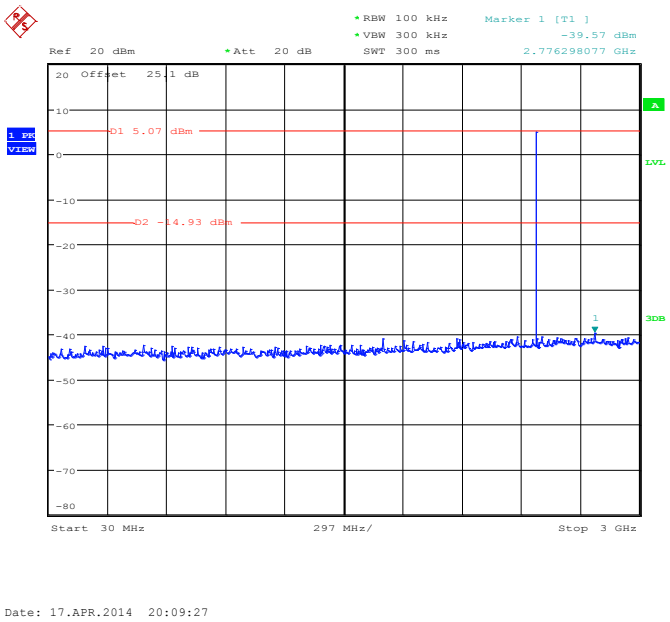


Note:

1. The total loss is 25.1 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 :	1Mbps	Temperature :	24~26℃
Test Channel :	78	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

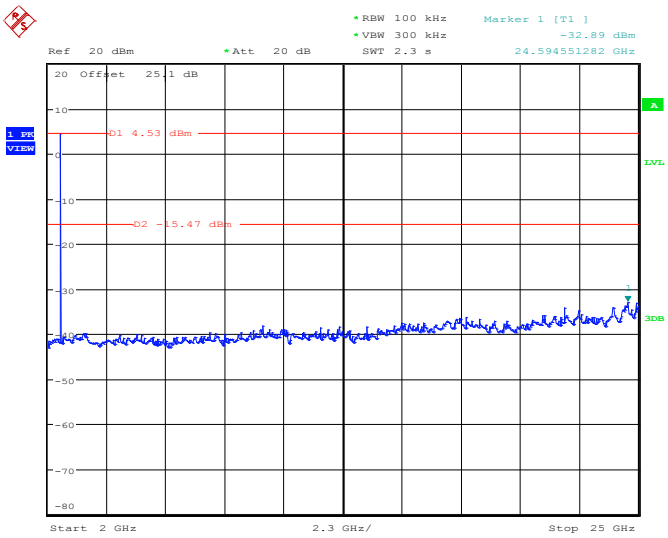
1Mbps CSE Plot on Ch 78 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

1Mbps CSE Plot on Ch 78 between 2 GHz ~ 25 GHz

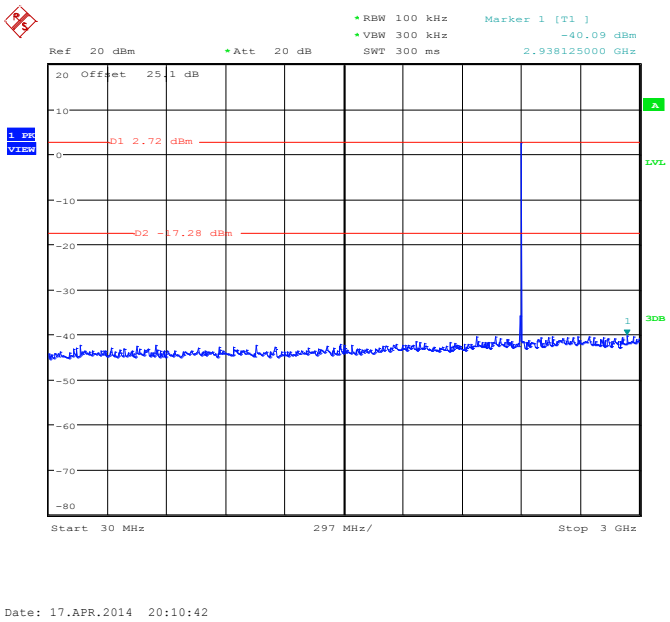


Note:

1. The total loss is 25.1 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 :	2Mbps	Temperature :	24~26℃
Test Channel :	00	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

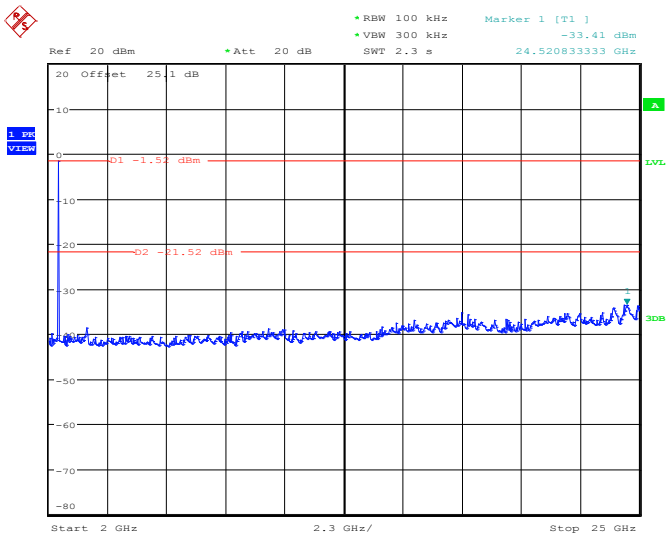
2Mbps CSE Plot on Ch 00 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

2Mbps CSE Plot on Ch 00 between 2 GHz ~ 25 GHz

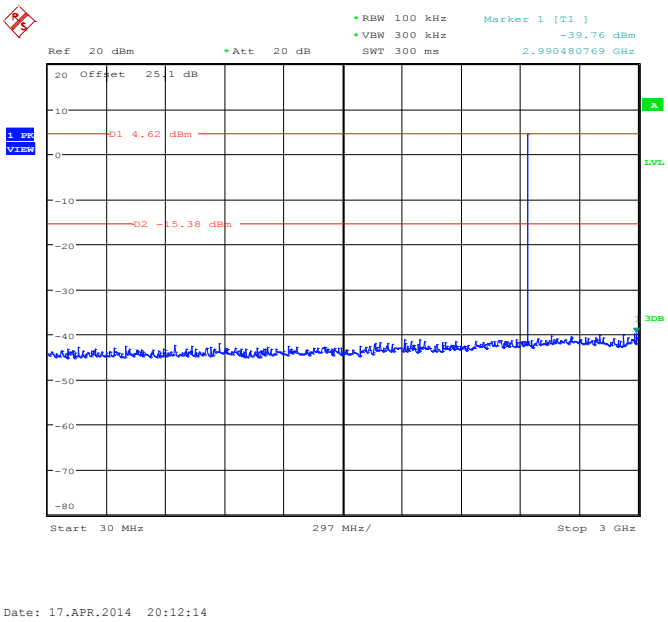


Note:

1. The total loss is 25.1 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 :	2Mbps	Temperature :	24~26℃
Test Channel :	39	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

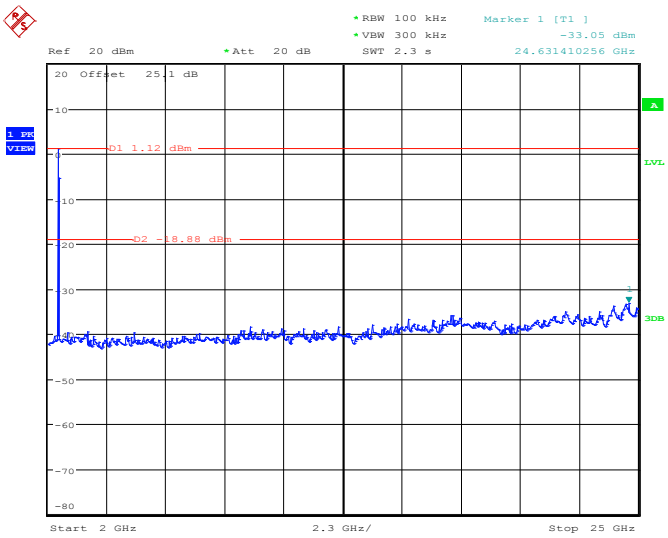
2Mbps CSE Plot on Ch 39 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

2Mbps CSE Plot on Ch 39 between 2 GHz ~ 25 GHz

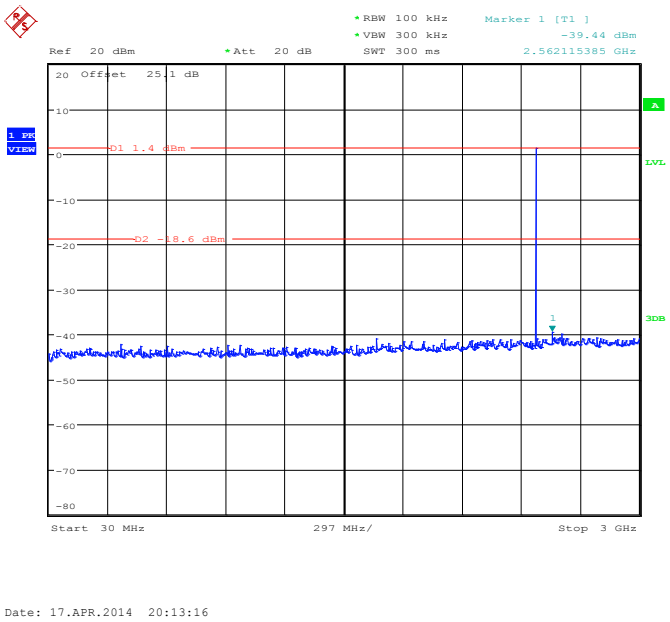


Note:

1. The total loss is 25.1 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 :	2Mbps	Temperature :	24~26℃
Test Channel :	78	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

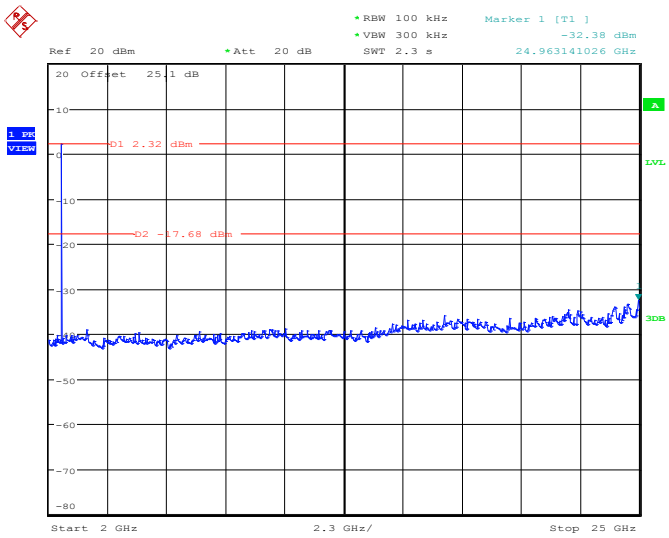
2Mbps CSE Plot on Ch 78 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

2Mbps CSE Plot on Ch 78 between 2 GHz ~ 25 GHz



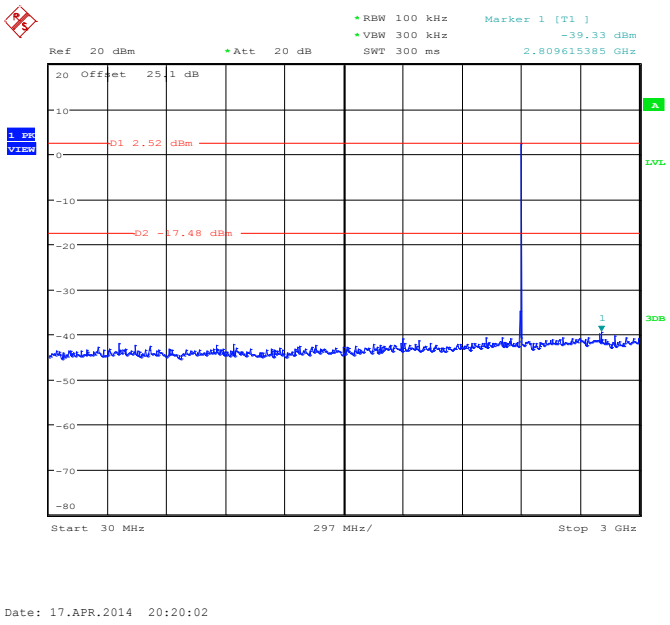
Date: 17.APR.2014 20:13:37

Note:

1. The total loss is 25.1 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 :	3Mbps	Temperature :	24~26℃
Test Channel :	00	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

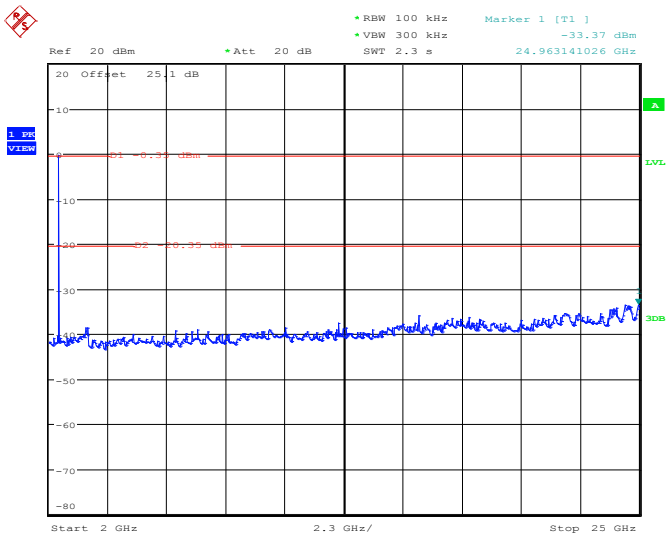
3Mbps CSE Plot on Ch 00 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

3Mbps CSE Plot on Ch 00 between 2 GHz ~ 25 GHz

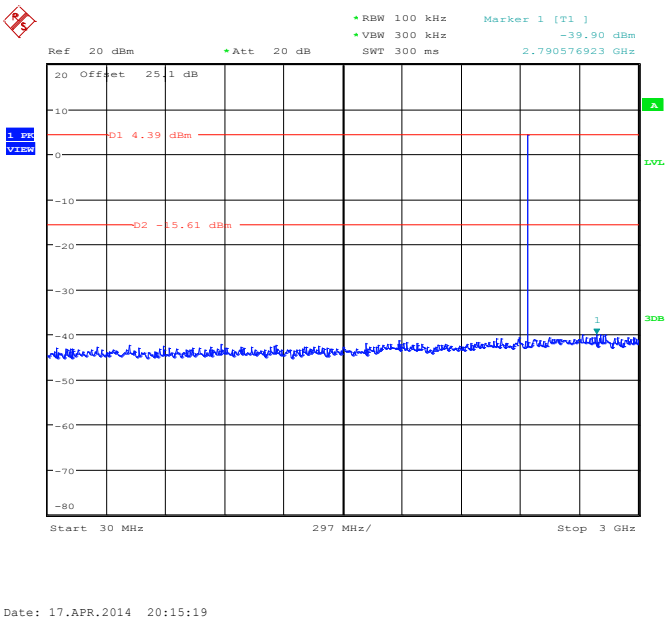


Note:

1. The total loss is 25.1 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 :	3Mbps	Temperature :	24~26℃
Test Channel :	39	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

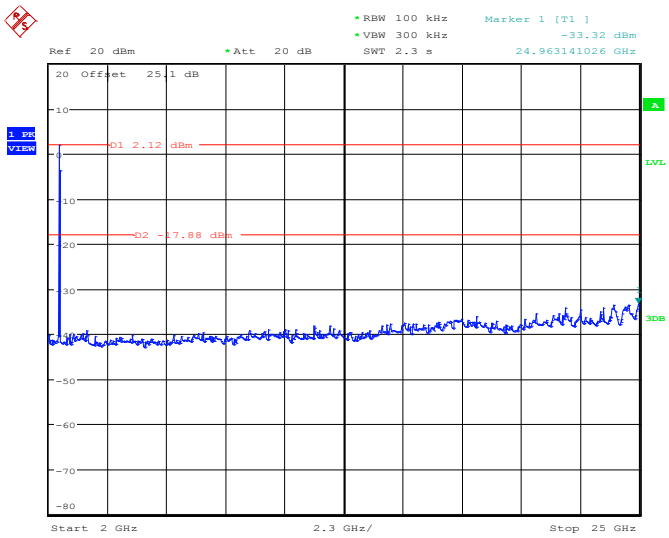
3Mbps CSE Plot on Ch 39 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

3Mbps CSE Plot on Ch 39 between 2 GHz ~ 25 GHz

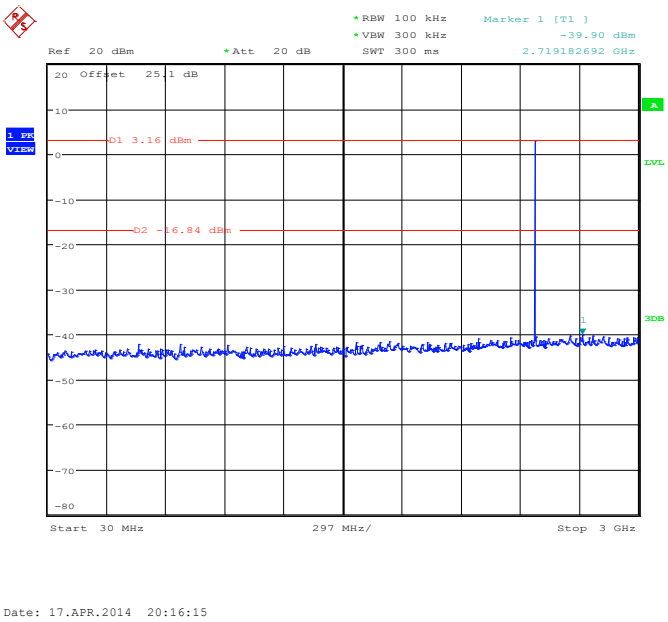


Note:

1. The total loss is 25.1 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 :	3Mbps	Temperature :	24~26℃
Test Channel :	78	Relative Humidity :	50~53%
Test Engineer :	Osolemio Chang		

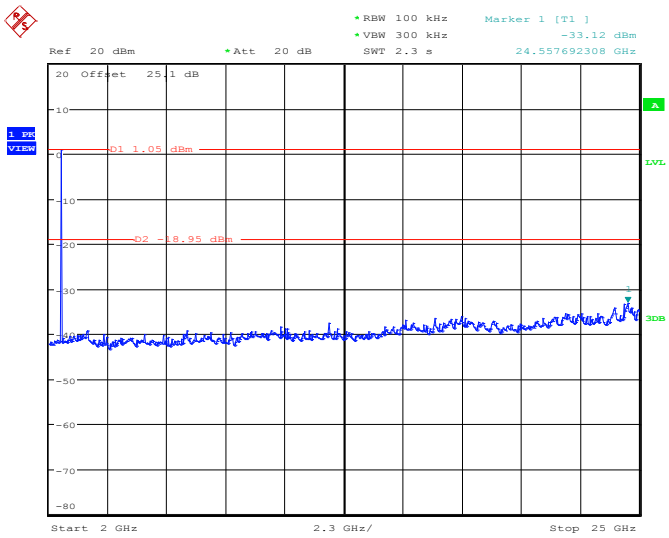
3Mbps CSE Plot on Ch 78 between 30MHz ~ 3 GHz



Note:

1. The total loss is 25.1 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.

3Mbps CSE Plot on Ch 78 between 2 GHz ~ 25 GHz



Note:

1. The total loss is 25.1 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.

3.8 Radiated Band Edges and Spurious Emission Measurement

3.8.1 Limit of Radiated Band Edges and Spurious Emission

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. 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

3.8.2 Measuring Instruments

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

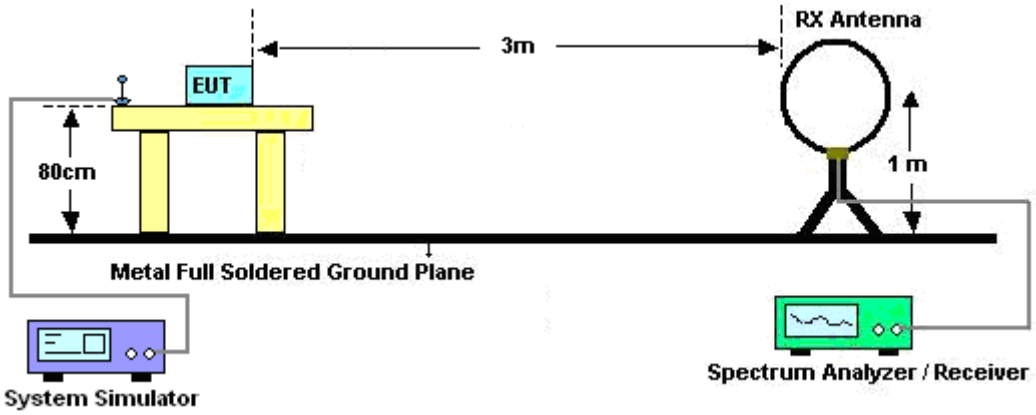
3.8.3 Test Procedures

1. The testing follows the guidelines in Spurious Radiated Emissions of FCC Public Notice DA 00-705 Measurement Guidelines.
2. The EUT was placed on a turntable with 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, 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 to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. 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, RBW=1MHz for f>1GHz ; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak
   (3) For average measurement: use duty cycle correction factor method per 15.35(c).
   Duty cycle = On time/100 milliseconds
   On time = $N_1*L_1+N_2*L_2+...+N_{n-1}*LN_{n-1}+N_n*L_n$
   Where N_1 is number of type 1 pulses, L_1 is length of type 1 pulses, etc.
   Average Emission Level = Peak Emission Level + 20*log(Duty cycle)
7. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

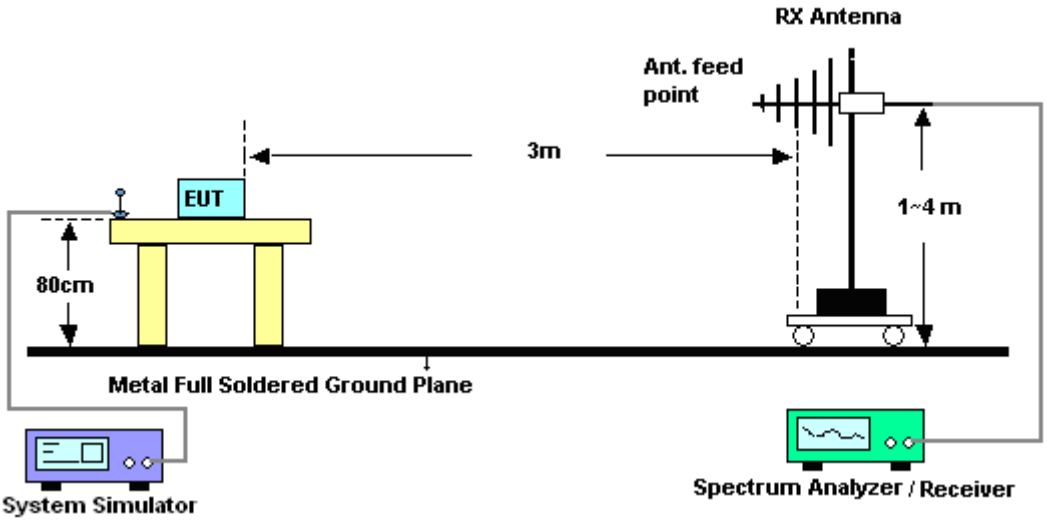
Note: The average levels were calculated from the peak level corrected with duty cycle correction factor (-24.79dB for 1Mbps, -24.82dB for 2Mbps, and -24.79dB for 3Mbps,) derived from 20log (dwell time/100ms). This correction is only for signals that hop with the fundamental signal, such as band-edge and harmonic. Other spurious signals that are independent of the hopping signal would not use this correction.

3.8.4 Test Setup

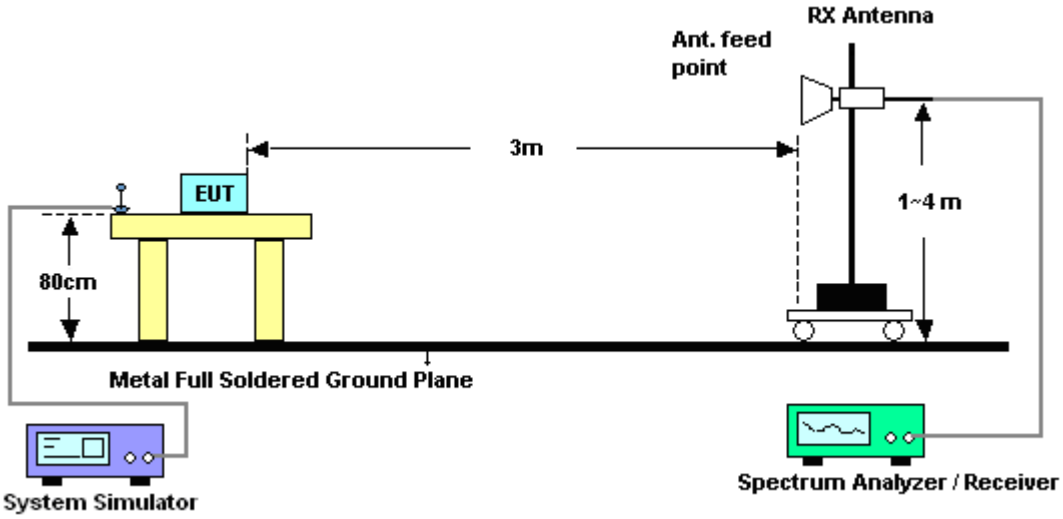
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

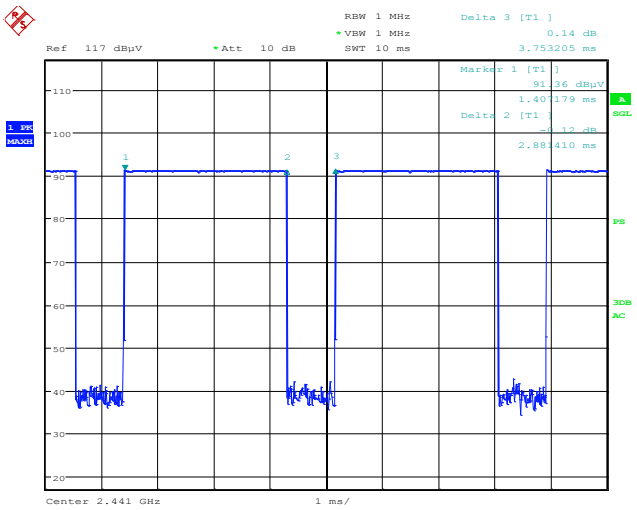


3.8.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

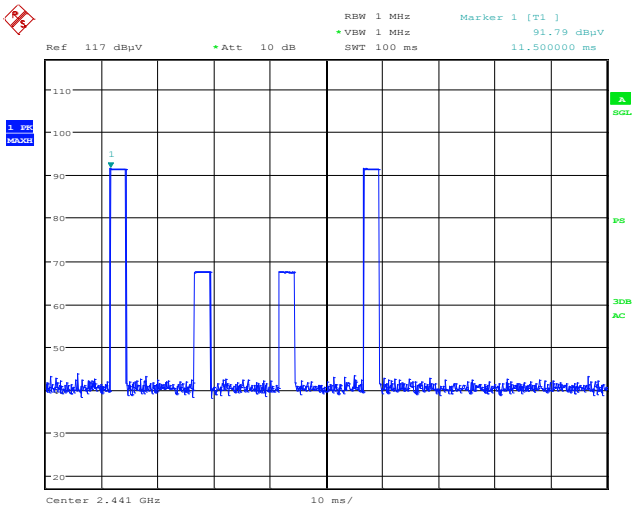
The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.8.6 Duty cycle correction factor for average measurement

DH5 on time (One Pulse) Plot on Channel 39



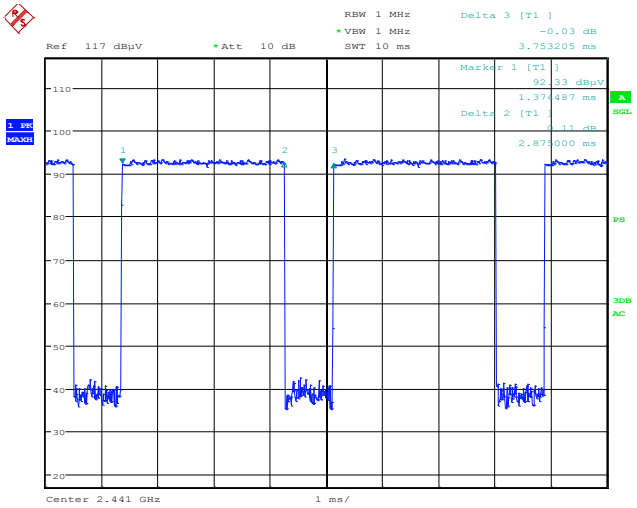
DH5 on time (Count Pulses) Plot on Channel 39



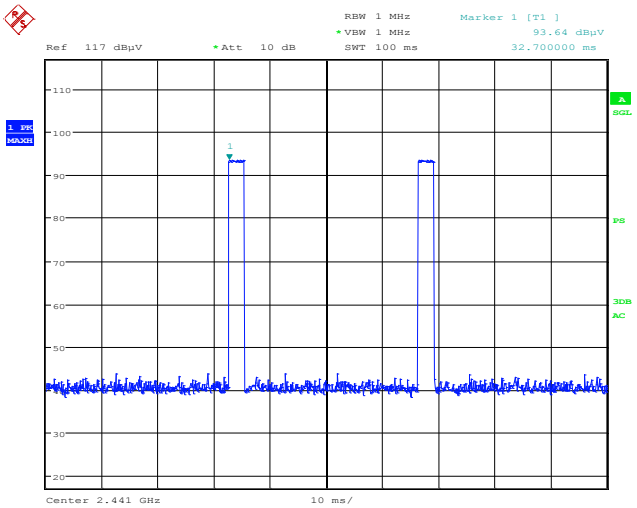
Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.88 / 100 = 5.76 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = 24.79 dB
3. DH5 has the highest duty cycle worst case and is reported.

2DH5 on time (One Pulse) Plot on Channel 39



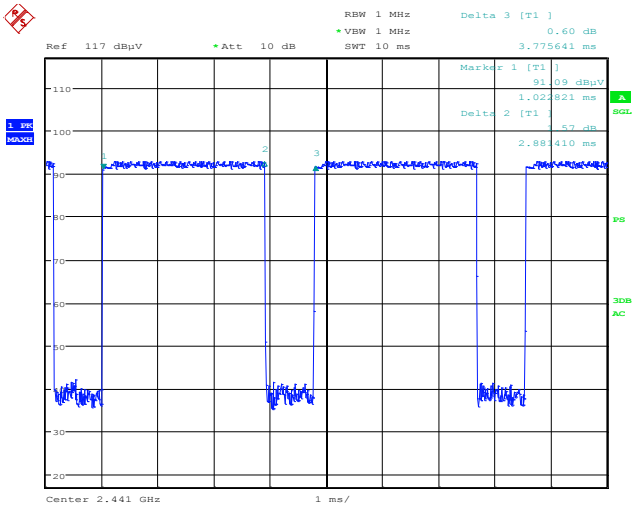
2DH5 on time (Count Pulses) Plot on Channel 39



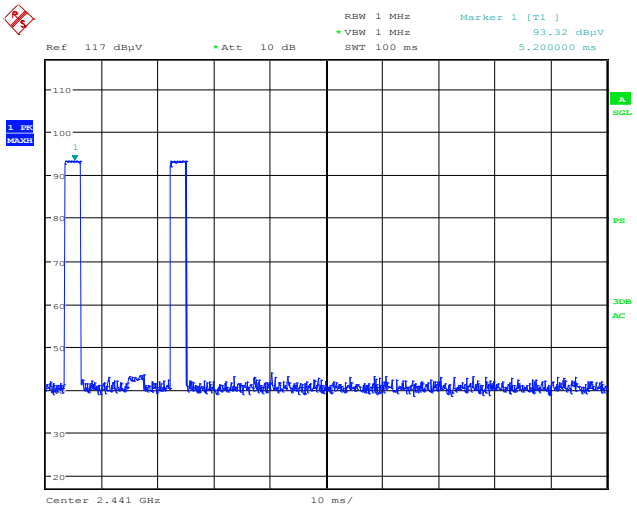
Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.87 / 100 = 5.74 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = 24.82 dB
3. DH5 has the highest duty cycle worst case and is reported.

3DH5 on time (One Pulse) Plot on Channel 39



3DH5 on time (Count Pulses) Plot on Channel 39



Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.88 / 100 = 5.76 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = 24.79 dB
3. DH5 has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the period to have DH5 packet completing one hopping sequence is

2.88 ms x 20 channels = 57.6 ms for 1Mbps and 3Mbps

2.87 ms x 20 channels = 57.4 ms for 2Mbps

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. [100ms / 57.6ms] = 2 hops

Thus, the maximum possible ON time:

2.88 ms x 2 = 5.76 ms for 1Mbps and 3Mbps

2.87 ms x 2 = 5.74 ms for 2Mbps

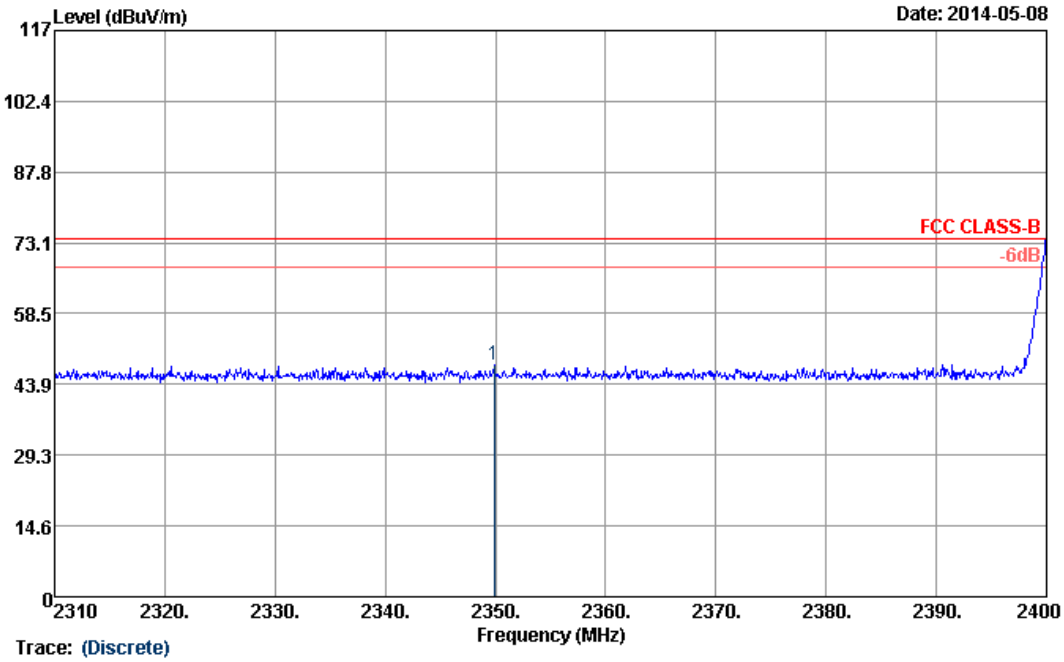
Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

20 x log(5.76 ms/100ms) = -24.79 dB for 1Mbps and 3Mbps

20 x log(5.74 ms/100ms) = -24.82 dB for 2Mbps

3.8.7 Test Result of Radiated Spurious at Band Edges

Test Mode :	1Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		



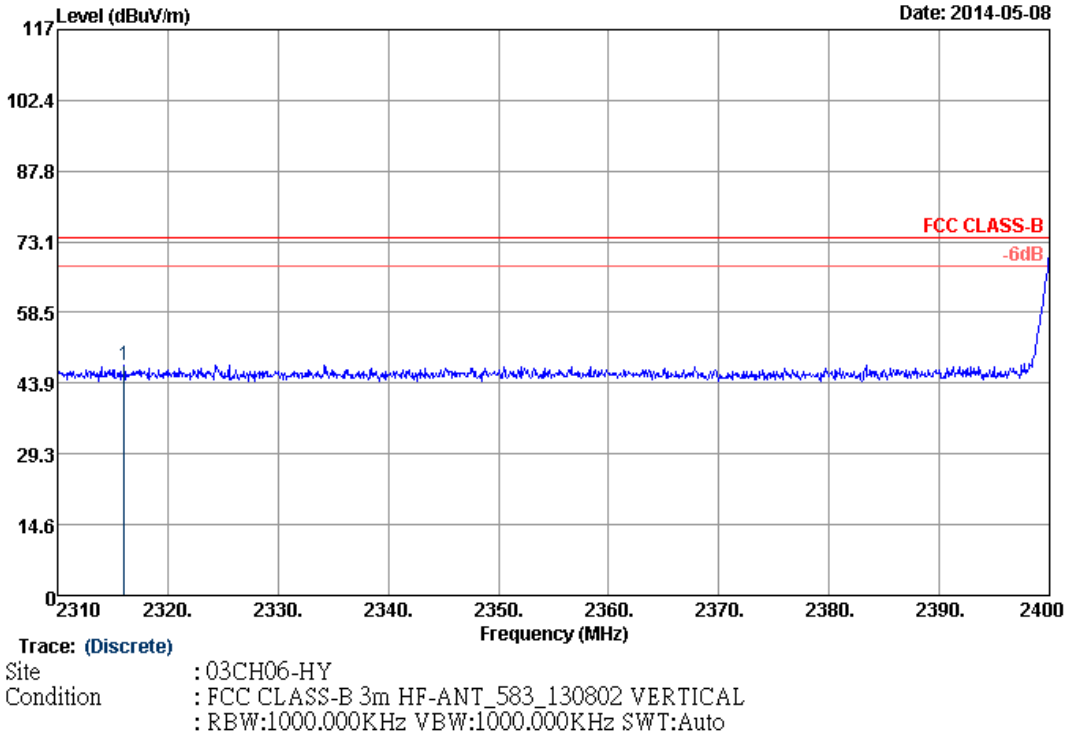
ANTENNA POLARITY : HORIZONTAL

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
2349.87	47.89	-26.11	74	44.28	31.88	6.38	34.65	100	41	Peak
2349.87	23.10	-30.9	54	-	-	-	-	-	-	Average

Note:

1. The average levels were calculated from the peak level corrected with duty cycle correction factor (24.79dB) derived from 20log (dwell time/100ms).
   For example: Average level = 47.89dBuV/m – 24.79 (dB) = 23.10dBuV/m.
2. Worst case measurement on 2349.87 MHz is compliance with 74/54 dBuV/m (peak/average) limit and 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 :	1Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		

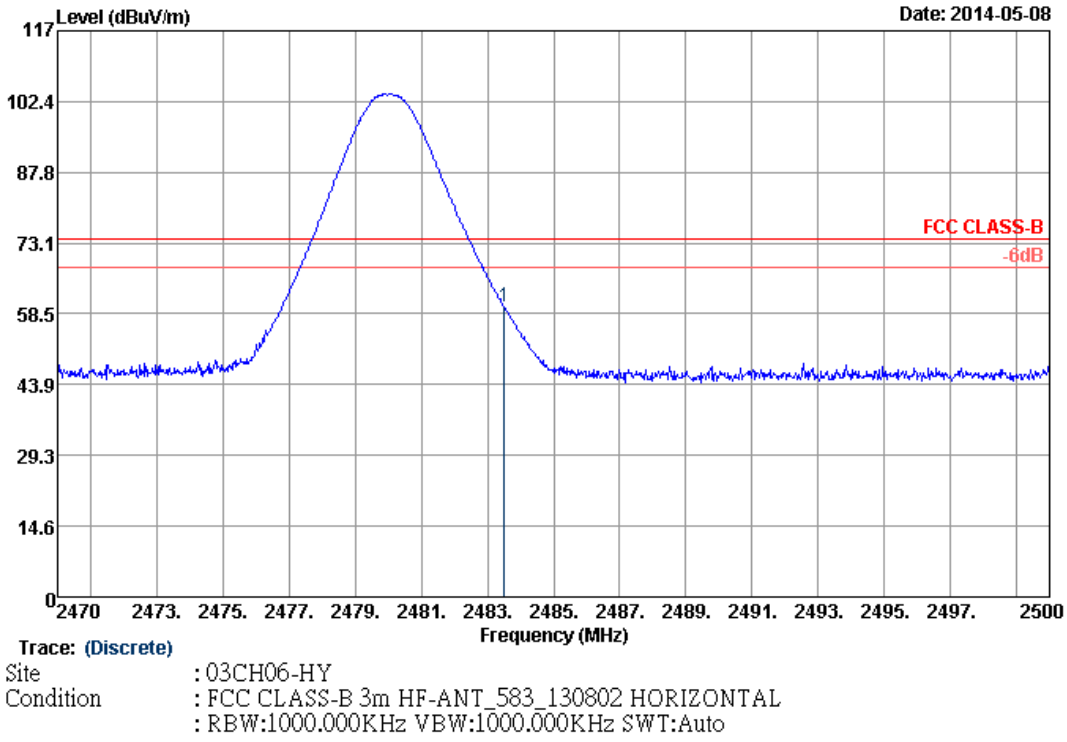


ANTENNA POLARITY : VERTICAL

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
2316.03	47.48	-26.52	74	43.93	31.85	6.35	34.65	100	309	Peak
2316.03	22.69	-31.31	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2316.03 MHz is compliance with 74/54 dBuV/m (peak/average) limit and 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 :	1Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		

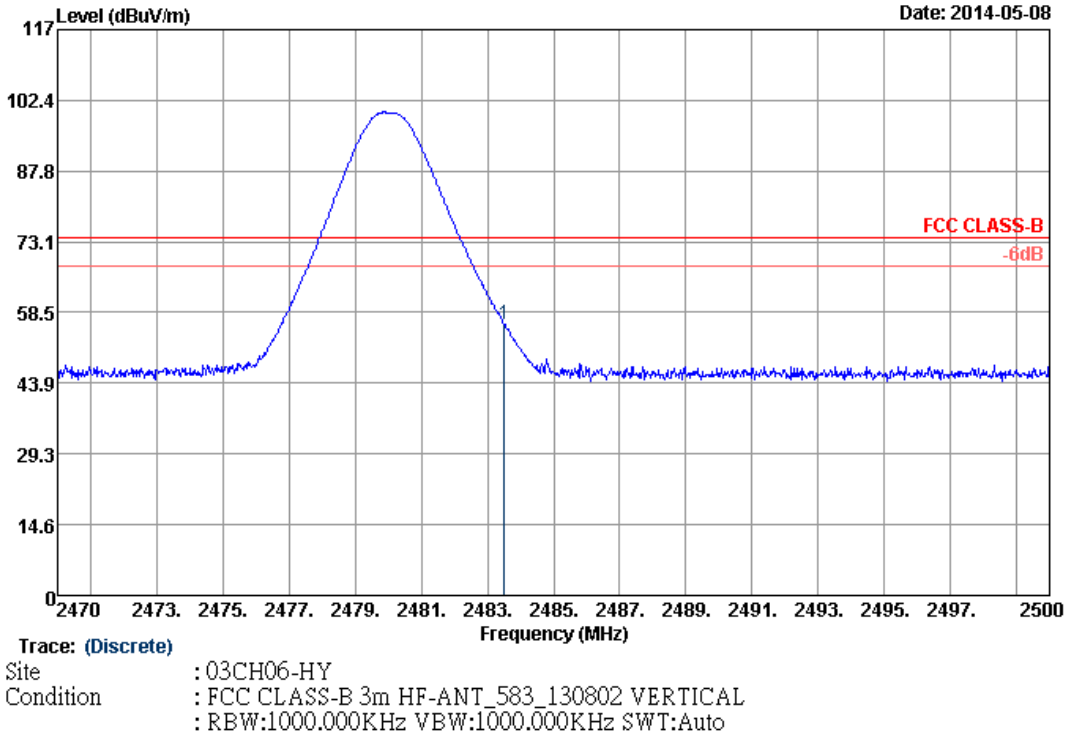


ANTENNA POLARITY : HORIZONTAL

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	59.88	-14.12	74	55.93	31.99	6.59	34.63	100	61	Peak
2483.5	35.09	-18.91	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2483.5 MHz is compliance with 74/54 dBuV/m (peak/average) limit and Edge Measurement in the restricted band 2483.5-2500MHz. And, 2480-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.

Test Mode :	1Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		

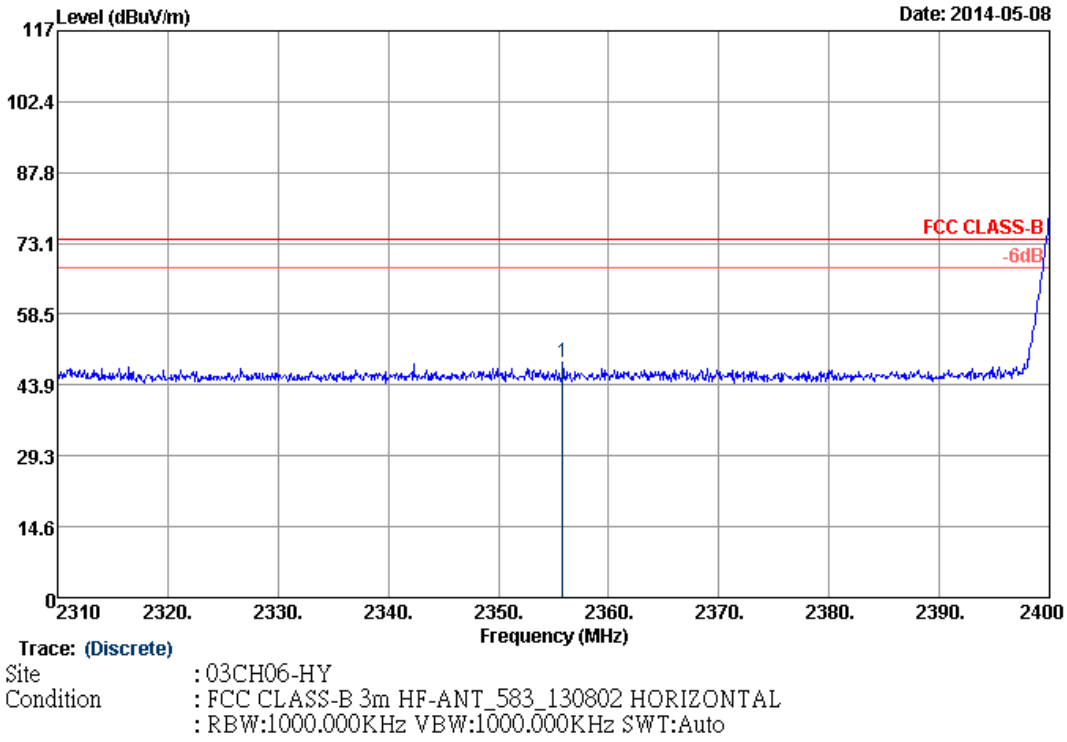


ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limity Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	56.05	-17.95	74	52.1	31.99	6.59	34.63	100	355	Peak
2483.5	31.26	-22.74	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2483.5 MHz is compliance with 74/54 dBuV/m (peak/average) limit and Edge Measurement in the restricted band 2483.5-2500MHz. And, 2480-2483.5MHz is within the operating band and not within the restricted band. The test result is complinance with the FCC limit line.

Test Mode :	2Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		



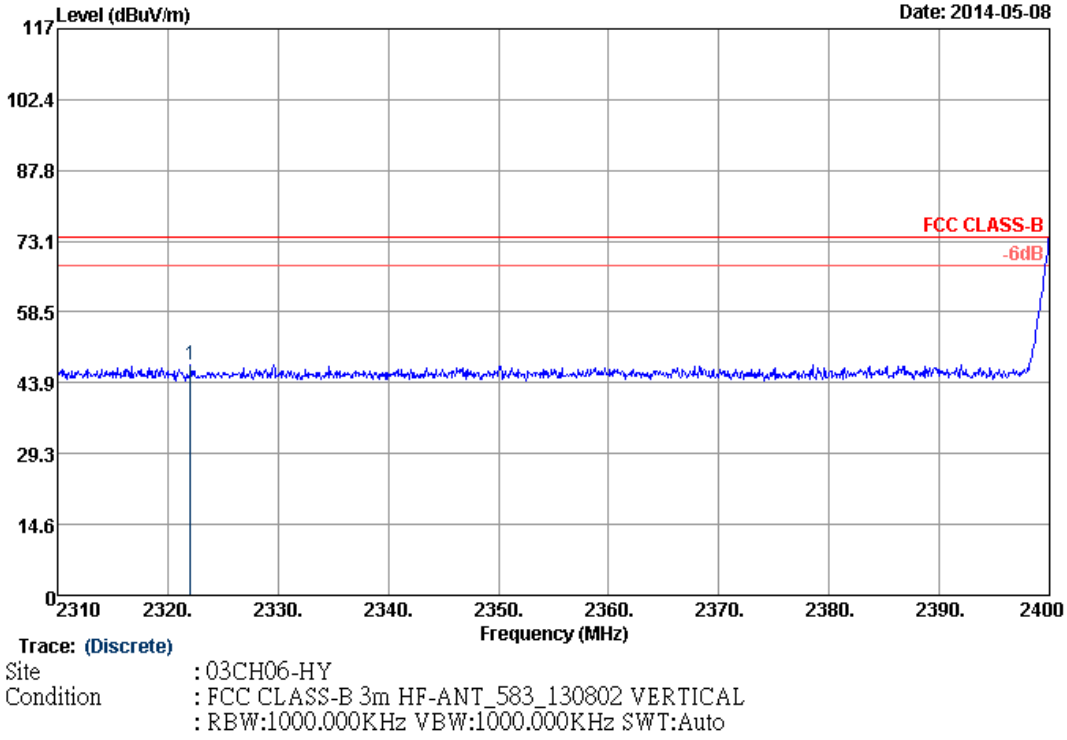
ANTENNA POLARITY : HORIZONTAL

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
2355.81	48.55	-25.45	74	44.93	31.89	6.38	34.65	100	40	Peak
2355.81	23.73	-30.27	54	-	-	-	-	-	-	Average

Note:

1. The average levels were calculated from the peak level corrected with duty cycle correction factor (24.82dB) derived from 20log (dwell time/100ms).
   For example: Average level = 48.55dBuV/m – 24.82 (dB) = 23.73dBuV/m.
2. Worst case measurement on 2355.81 MHz is compliance with 74/54 dBuV/m (peak/average) limit and 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 :	2Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		

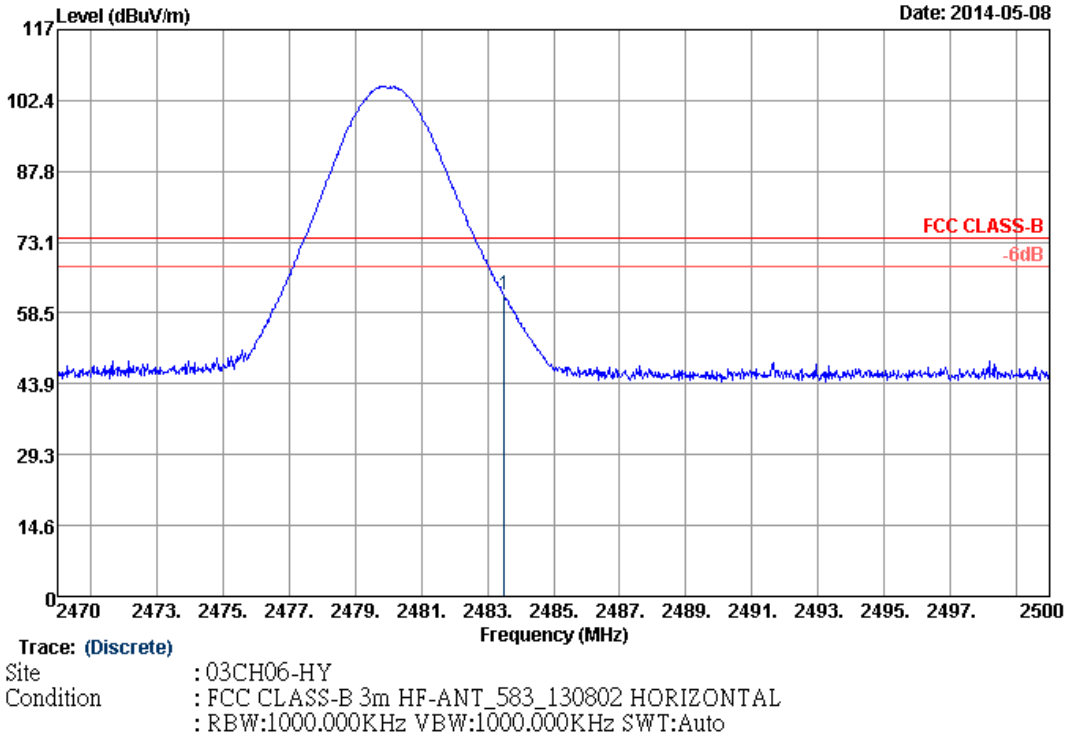


ANTENNA POLARITY : VERTICAL

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
2322.06	47.73	-26.27	74	44.17	31.86	6.35	34.65	100	57	Peak
2322.06	22.91	-31.09	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2322.06 MHz is compliance with 74/54 dBuV/m (peak/average) limit and 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 :	2Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		

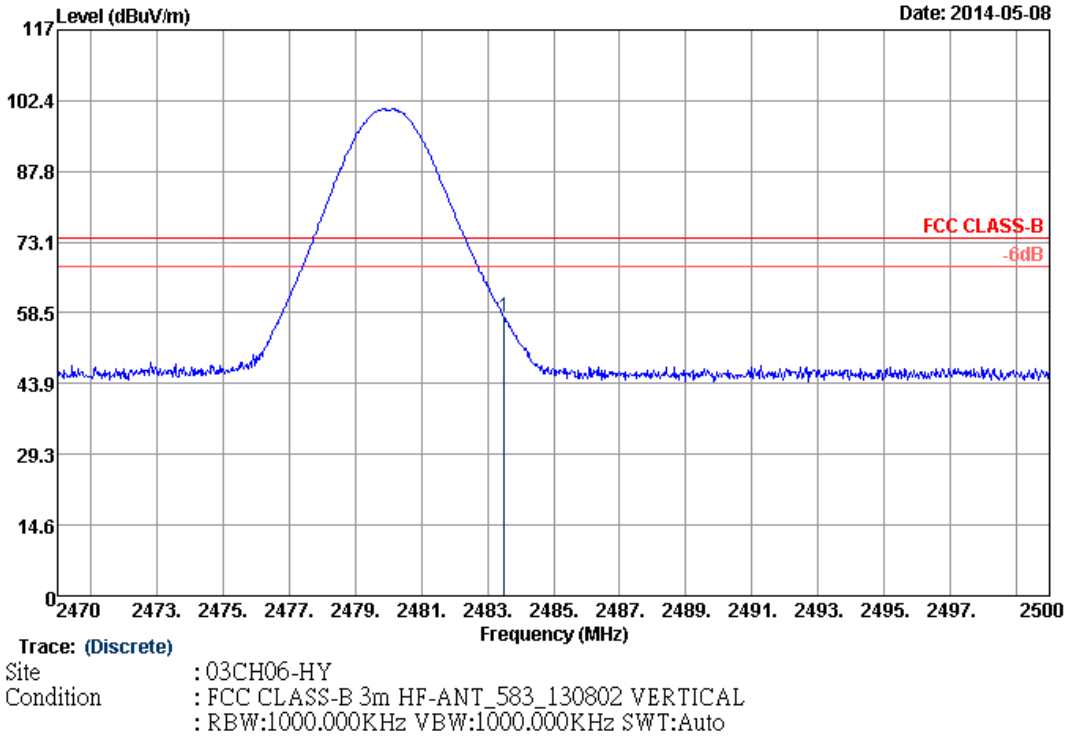


ANTENNA POLARITY : HORIZONTAL

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	62.3	-11.7	74	58.35	31.99	6.59	34.63	100	42	Peak
2483.5	37.48	-16.52	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2483.5 MHz is compliance with 74/54 dBuV/m (peak/average) limit and Edge Measurement in the restricted band 2483.5-2500MHz. And, 2480-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.

Test Mode :	2Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		

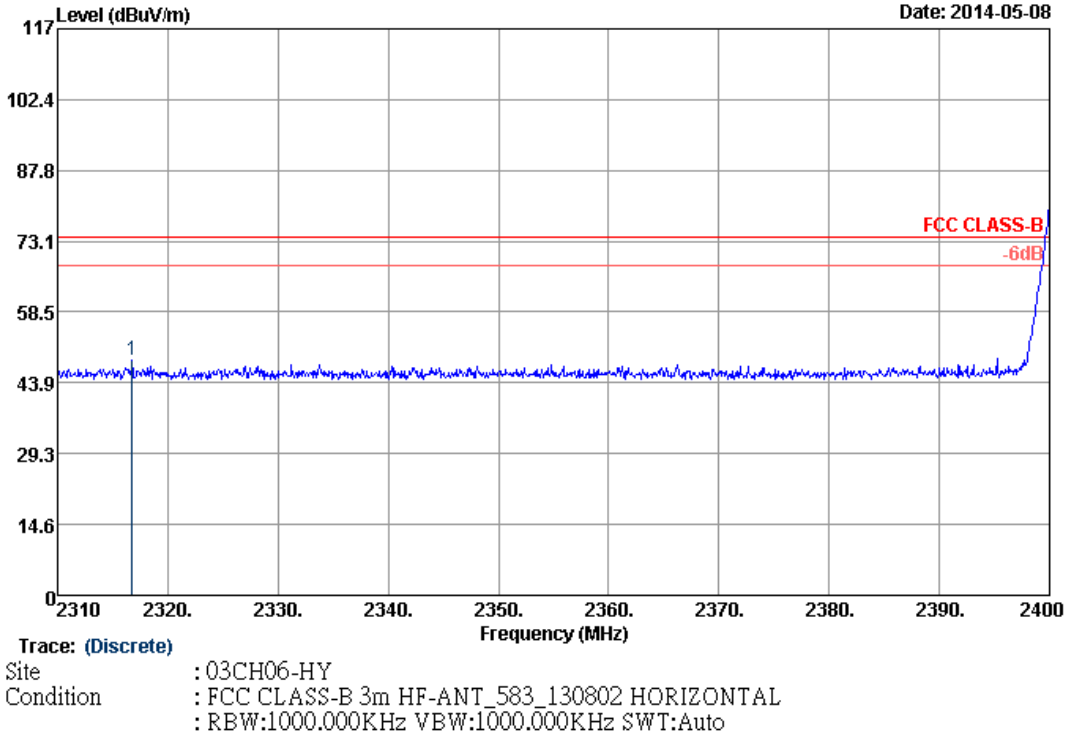


ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limity Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	57.81	-16.19	74	53.86	31.99	6.59	34.63	100	35	Peak
2483.5	32.99	-21.01	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2483.5 MHz is compliance with 74/54 dBuV/m (peak/average) limit and Edge Measurement in the restricted band 2483.5-2500MHz. And, 2480-2483.5MHz is within the operating band and not within the restricted band. The test result is complinance with the FCC limit line.

Test Mode :	3Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		



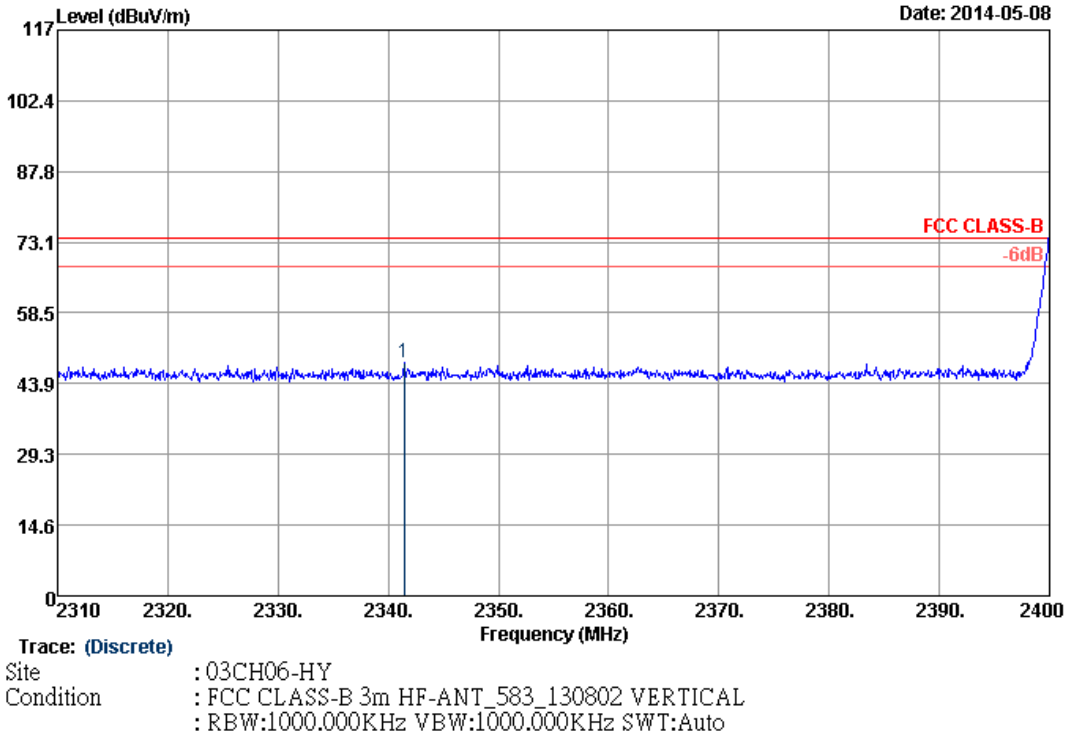
ANTENNA POLARITY : HORIZONTAL

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
2316.75	48.62	-25.38	74	45.07	31.85	6.35	34.65	103	44	Peak
2316.75	23.83	-30.17	54	-	-	-	-	-	-	Average

Note:

1. The average levels were calculated from the peak level corrected with duty cycle correction factor (24.79dB) derived from 20log (dwell time/100ms).
   For example: Average level = 48.62dBuV/m – 24.79 (dB) = 23.83dBuV/m.
2. Worst case measurement on 2316.75 MHz is compliance with 74/54 dBuV/m (peak/average) limit and 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 :	3Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		

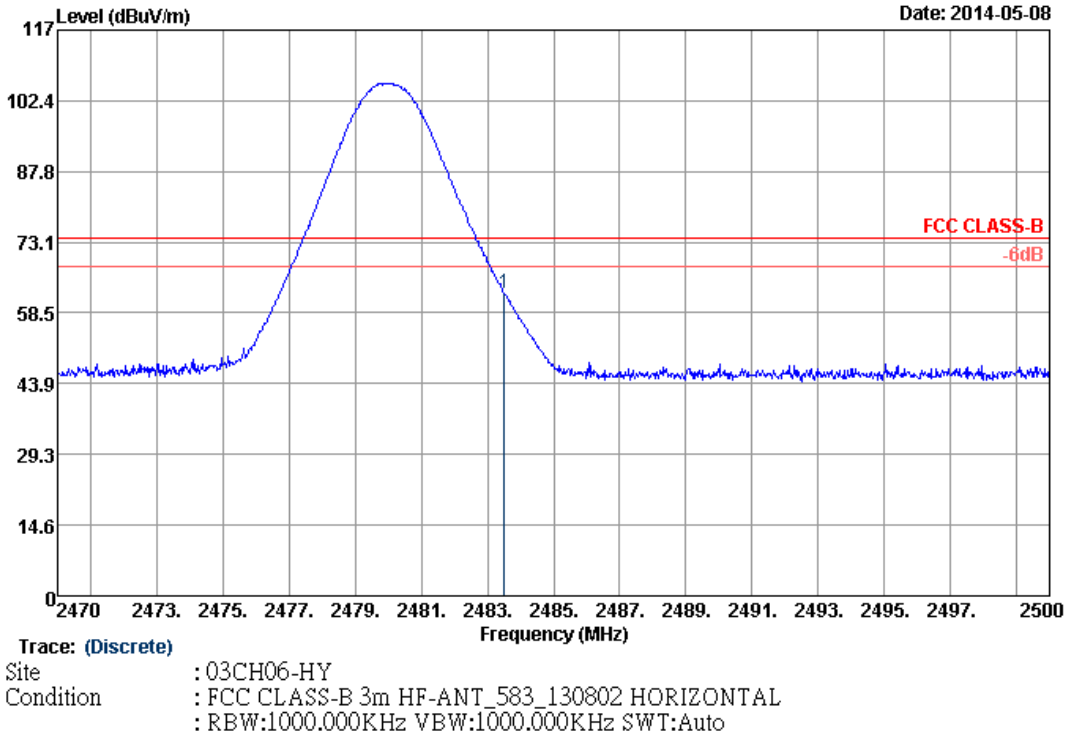


ANTENNA POLARITY : VERTICAL

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
2341.41	48.11	-25.89	74	44.5	31.88	6.38	34.65	169	252	Peak
2341.41	23.32	-30.68	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2341.41 MHz is compliance with 74/54 dBuV/m (peak/average) limit and 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 :	3Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		

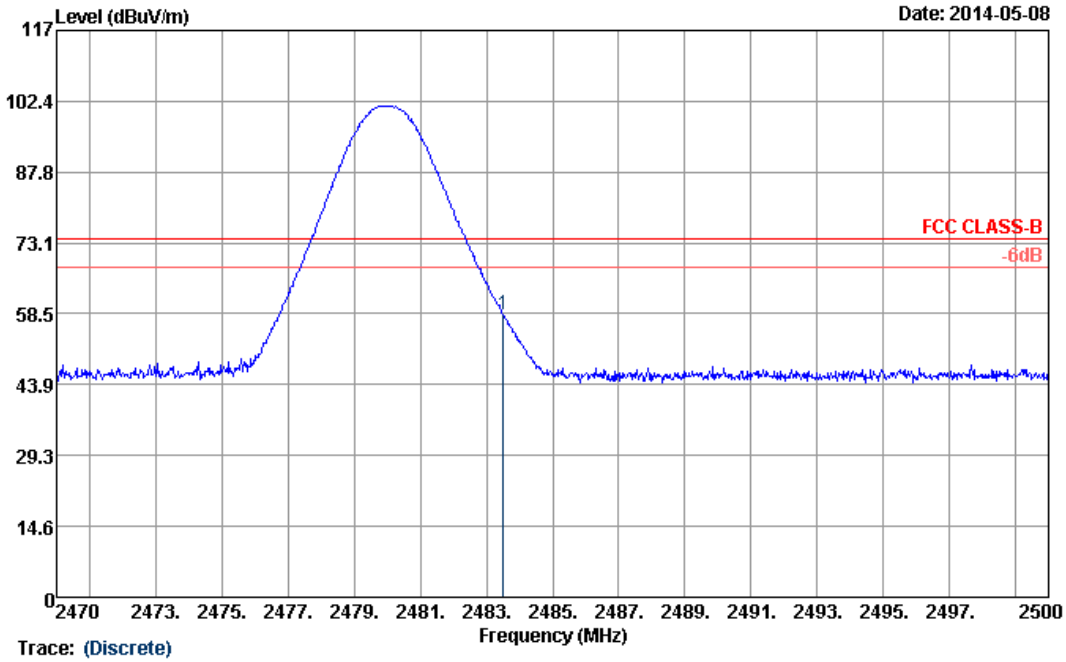


ANTENNA POLARITY : HORIZONTAL

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	62.73	-11.27	74	58.78	31.99	6.59	34.63	100	32	Peak
2483.5	37.94	-16.06	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2483.5 MHz is compliance with 74/54 dBuV/m (peak/average) limit and Edge Measurement in the restricted band 2483.5-2500MHz. And, 2480-2483.5MHz is within the operating band and not within the restricted band. The test result is compliance with the FCC limit line.

Test Mode :	3Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		



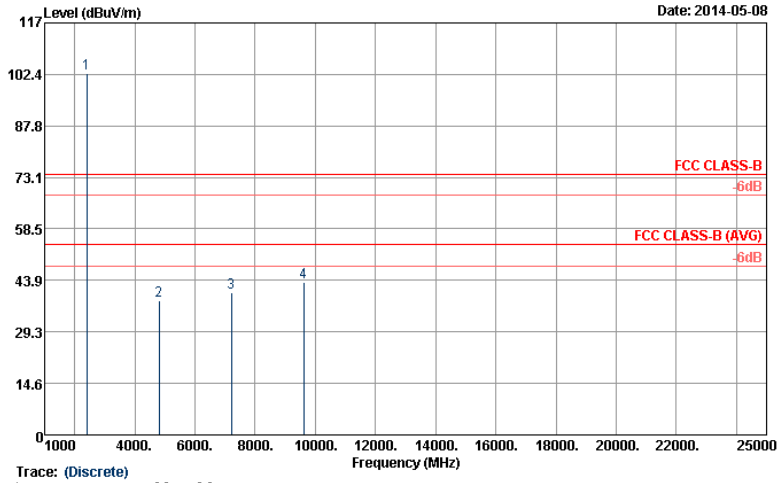
ANTENNA POLARITY : VERTICAL

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limity Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	58.24	-15.76	74	54.29	31.99	6.59	34.63	100	23	Peak
2483.5	33.45	-20.55	54	-	-	-	-	-	-	Average

Note: Worst case measurement on 2483.5 MHz is compliance with 74/54 dBuV/m (peak/average) limit and Edge Measurement in the restricted band 2483.5-2500MHz. And, 2480-2483.5MHz is within the operating band and not within the restricted band. The test result is complinance with the FCC limit line.

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

Test Mode :	1Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2403 MHz is fundamental signal which can be ignored. 2. 7206 MHz and 9609 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 102.74dBuV/m – 20 (dB) = 82.74dBuV/m. 3. 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

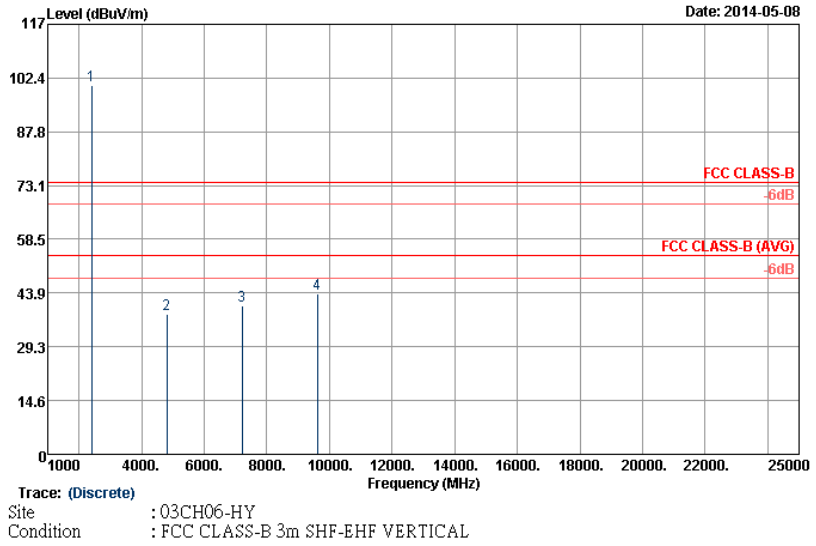
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2403	102.74	-	-	99	31.93	6.45	34.64	100	41	Peak
2403	77.95	-	-	-	-	-	-	-	-	Average
4803	38.01	-35.99	74	54.3	34.41	10.16	60.86	100	0	Peak
4803	13.22	-40.78	54	-	-	-	-	-	-	Average
7206	40.49	-42.25	82.74	54.32	35.68	10.97	60.48	100	0	Peak
9609	43.35	-39.39	82.74	57.59	36.32	10.56	61.12	100	0	Peak

Other harmonics are lower than background noise

Note: The average levels were calculated from the peak level corrected with duty cycle correction factor (24.79dB) derived from 20log (dwell time/100ms).

For example: Average level = 102.74dBuV/m – 24.79 (dB) = 77.95dBuV/m.

Test Mode :	1Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2403 MHz is fundamental signal which can be ignored. 2. 7206 MHz and 9609 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 100.31dBuV/m – 20 (dB) = 80.31dBuV/m. 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

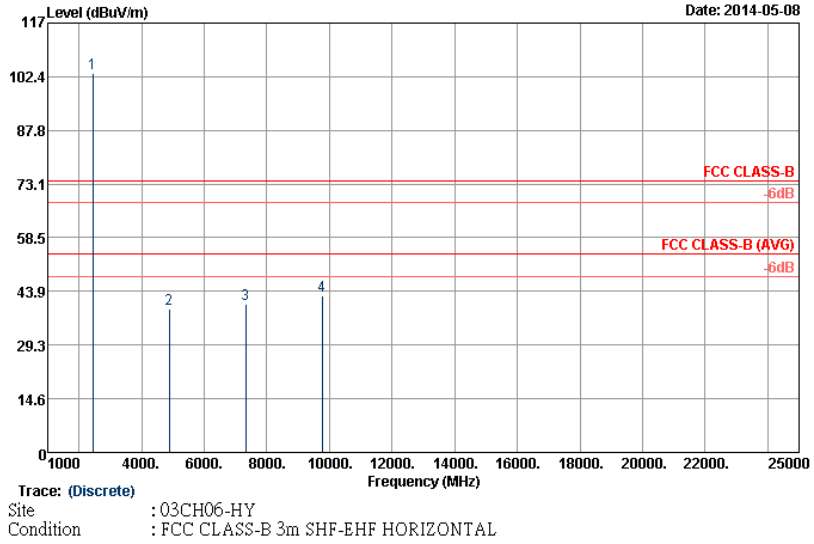


ANTENNA POLARITY : VERTICAL

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
2403	100.31	-	-	96.57	31.93	6.45	34.64	100	309	Peak
2403	75.52	-	-	-	-	-	-	-	-	Average
4803	38.08	-35.92	74	54.37	34.41	10.16	60.86	100	0	Peak
4803	13.29	-40.71	54	-	-	-	-	-	-	Average
7206	40.32	-39.99	80.31	54.15	35.68	10.97	60.48	100	0	Peak
9609	43.66	-36.65	80.31	57.9	36.32	10.56	61.12	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	1Mbps	Temperature :	24~25°C
Test Channel :	39	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2441 MHz is fundamental signal which can be ignored. 2. 9765 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 103.43dBuV/m – 20 (dB) = 83.43dBuV/m. 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

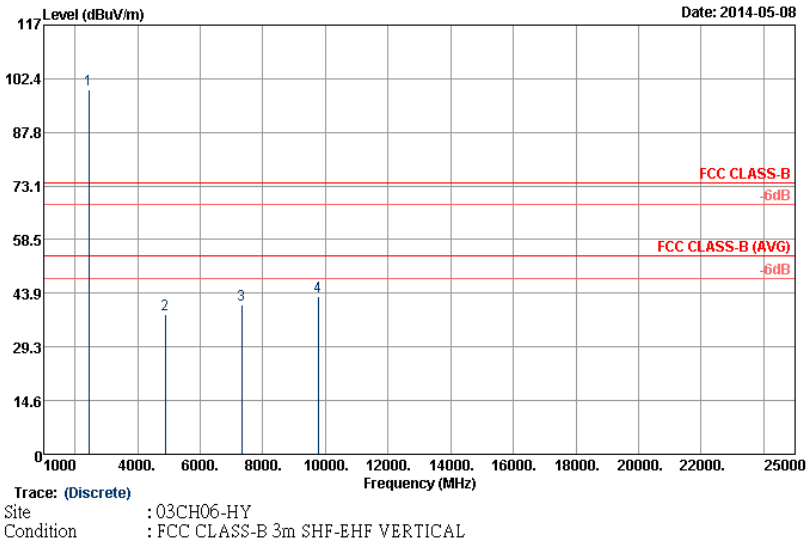


ANTENNA POLARITY : HORIZONTAL

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
2441	103.43	-	-	99.59	31.96	6.52	34.64	100	39	Peak
2441	78.64	-	-	-	-	-	-	-	-	Average
4881	38.97	-35.03	74	55.1	34.37	10.19	60.69	100	0	Peak
4881	14.18	-39.82	54	-	-	-	-	-	-	Average
7323	40.36	-33.64	74	54.35	35.6	10.94	60.53	100	0	Peak
7323	15.57	-38.43	54	-	-	-	-	-	-	Average
9765	42.73	-40.7	83.43	56.79	36.53	10.57	61.16	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	1Mbps	Temperature :	24~25°C
Test Channel :	39	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2441 MHz is fundamental signal which can be ignored. 2. 9765 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 99.38dBuV/m – 20 (dB) = 79.38dBuV/m 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

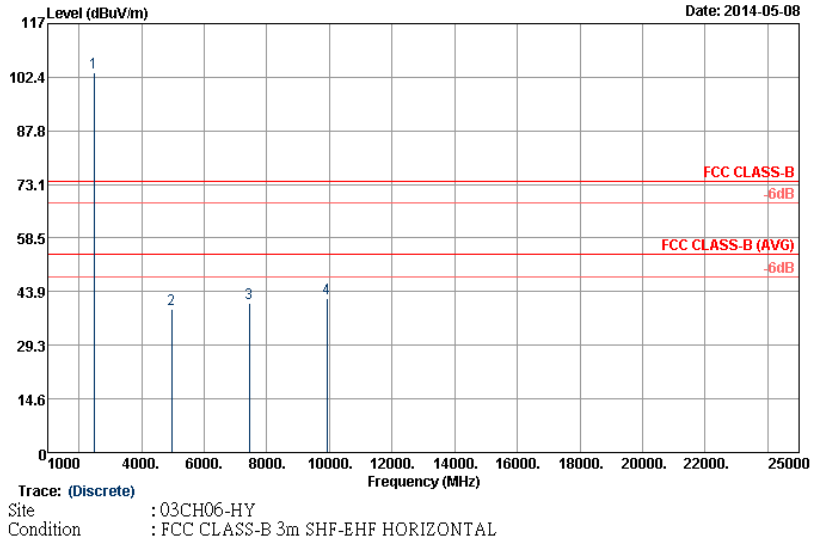


ANTENNA POLARITY : VERTICAL

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
2441	99.38	-	-	95.54	31.96	6.52	34.64	100	355	Peak
2441	74.59	-	-	-	-	-	-	-	-	Average
4881	38.1	-35.9	74	54.23	34.37	10.19	60.69	100	0	Peak
4881	13.31	-40.69	54	-	-	-	-	-	-	Average
7323	40.9	-33.1	74	54.89	35.6	10.94	60.53	100	0	Peak
7323	16.11	-37.89	54	-	-	-	-	-	-	Average
9765	42.96	-36.42	79.38	57.02	36.53	10.57	61.16	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	1Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2481 MHz is fundamental signal which can be ignored. 2. 9921 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 103.65dBuV/m – 20 (dB) = 83.65dBuV/m 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

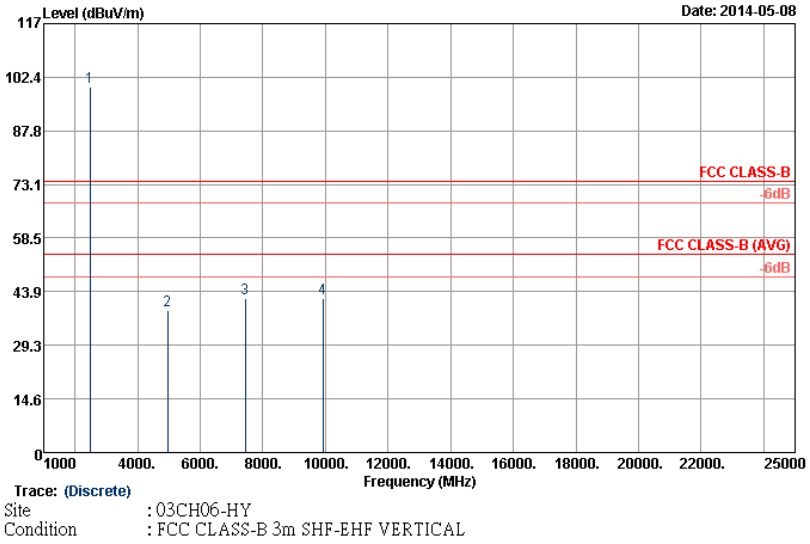


ANTENNA POLARITY : HORIZONTAL

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
2481	103.65	-	-	99.7	31.99	6.59	34.63	100	61	Peak
2481	78.86	-	-	-	-	-	-	-	-	Average
4959	38.96	-35.04	74	54.91	34.32	10.21	60.48	100	0	Peak
4959	14.17	-39.83	54	-	-	-	-	-	-	Average
7440	40.58	-33.42	74	54.73	35.53	10.9	60.58	100	0	Peak
7440	15.79	-38.21	54	-	-	-	-	-	-	Average
9921	42.02	-41.63	83.65	55.92	36.72	10.57	61.19	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	1Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2481 MHz is fundamental signal which can be ignored. 2. 9921 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 99.74dBuV/m – 20 (dB) = 79.74dBuV/m 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

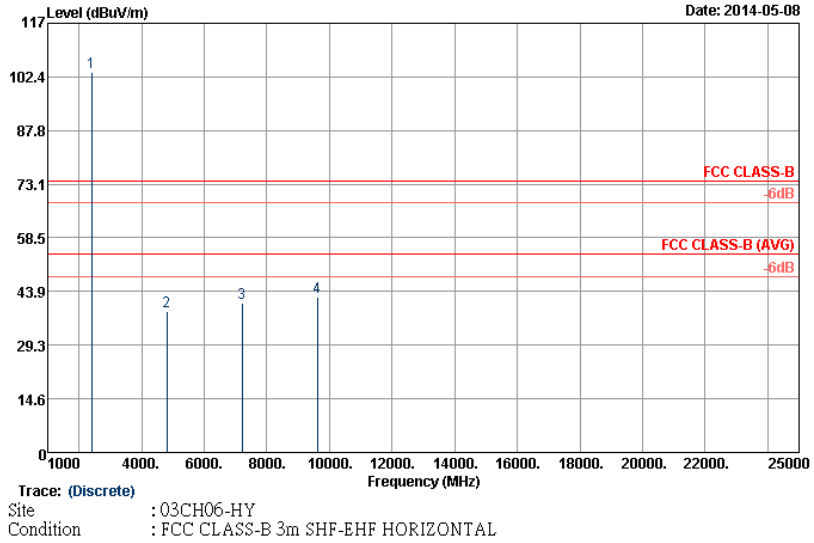


ANTENNA POLARITY : VERTICAL

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
2481	99.74	-	-	95.79	31.99	6.59	34.63	100	355	Peak
2481	74.95	-	-	-	-	-	-	-	-	Average
4959	38.66	-35.34	74	54.61	34.32	10.21	60.48	100	0	Peak
4959	13.87	-40.13	54	-	-	-	-	-	-	Average
7440	42.02	-31.98	74	56.17	35.53	10.9	60.58	100	0	Peak
7440	17.23	-36.77	54	-	-	-	-	-	-	Average
9921	42.01	-37.73	79.74	55.91	36.72	10.57	61.19	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	2Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2403 MHz is fundamental signal which can be ignored. 2. 7206 MHz and 9609 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 103.5dBuV/m – 20 (dB) = 83.5dBuV/m. 3. 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

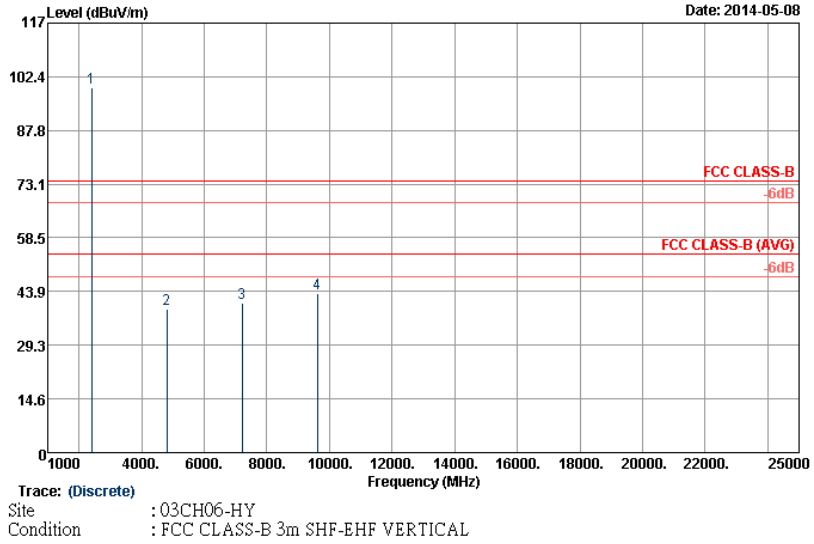
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2403	103.5	-	-	99.76	31.93	6.45	34.64	100	40	Peak
2403	78.68	-	-	-	-	-	-	-	-	Average
4803	38.33	-35.67	74	54.62	34.41	10.16	60.86	100	0	Peak
4803	13.51	-40.49	54	-	-	-	-	-	-	Average
7206	40.66	-42.84	83.5	54.49	35.68	10.97	60.48	100	0	Peak
9609	42.34	-41.16	83.5	56.58	36.32	10.56	61.12	100	0	Peak

Other harmonics are lower than background noise

Note: The average levels were calculated from the peak level corrected with duty cycle correction factor (24.82dB) derived from 20log (dwell time/100ms).

For example: Average level = 103.5dBuV/m – 24.82 (dB) = 78.68dBuV/m.

Test Mode :	2Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2403 MHz is fundamental signal which can be ignored. 2. 7206 MHz and 9609 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 99.56dBuV/m – 20 (dB) = 79.56dBuV/m. 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

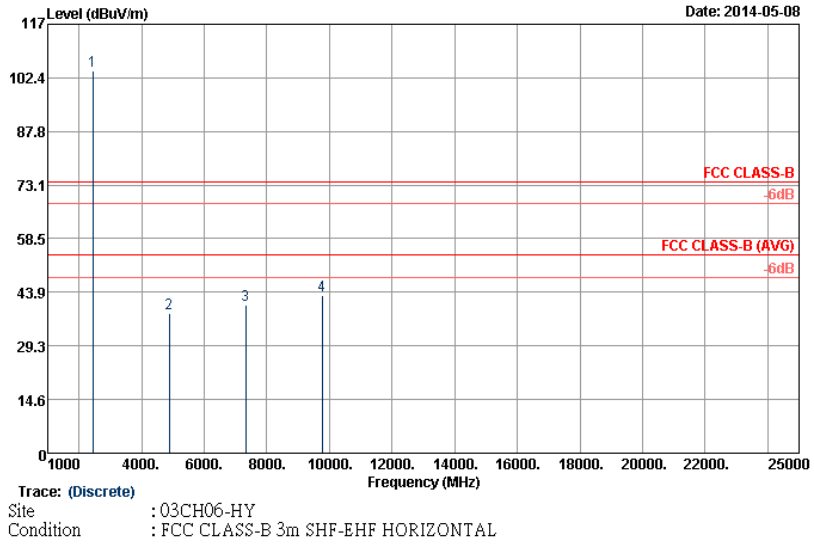


ANTENNA POLARITY : VERTICAL

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
2403	99.56	-	-	95.83	31.92	6.45	34.64	100	57	Peak
2403	74.74	-	-	-	-	-	-	-	-	Average
4803	39.03	-34.97	74	55.32	34.41	10.16	60.86	100	0	Peak
4803	14.21	-39.79	54	-	-	-	-	-	-	Average
7206	40.58	-38.98	79.56	54.41	35.68	10.97	60.48	100	0	Peak
9609	43.29	-36.27	79.56	57.53	36.32	10.56	61.12	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	2Mbps	Temperature :	24~25°C
Test Channel :	39	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2441 MHz is fundamental signal which can be ignored. 2. 9765 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 104.35dBuV/m – 20 (dB) = 84.35dBuV/m. 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

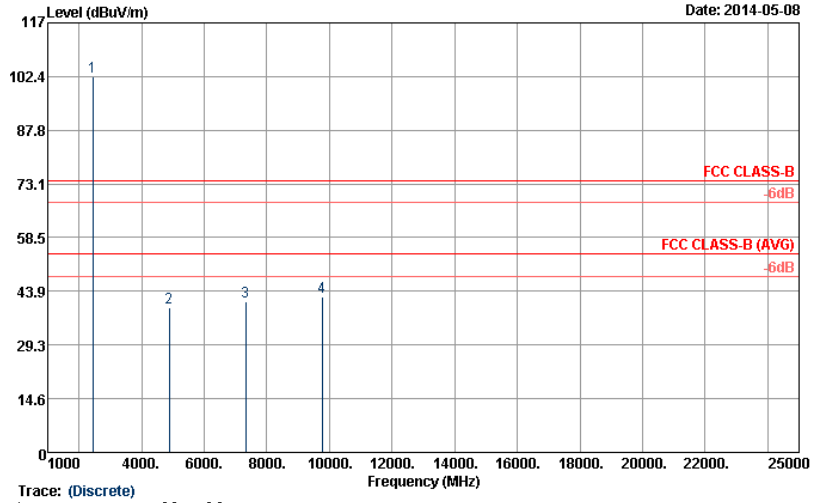


ANTENNA POLARITY : HORIZONTAL

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
2441	104.35	-	-	100.51	31.96	6.52	34.64	100	39	Peak
2441	79.53	-	-	-	-	-	-	-	-	Average
4881	38.23	-35.77	74	54.36	34.37	10.19	60.69	100	0	Peak
4881	13.41	-40.59	54	-	-	-	-	-	-	Average
7323	40.54	-33.46	74	54.53	35.6	10.94	60.53	100	0	Peak
7323	15.72	-38.28	54	-	-	-	-	-	-	Average
9765	42.88	-41.47	84.35	56.94	36.53	10.57	61.16	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	2Mbps	Temperature :	24~25°C
Test Channel :	39	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2441 MHz is fundamental signal which can be ignored. 2. 9765 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 102.36dBuV/m – 20 (dB) = 82.36dBuV/m. 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

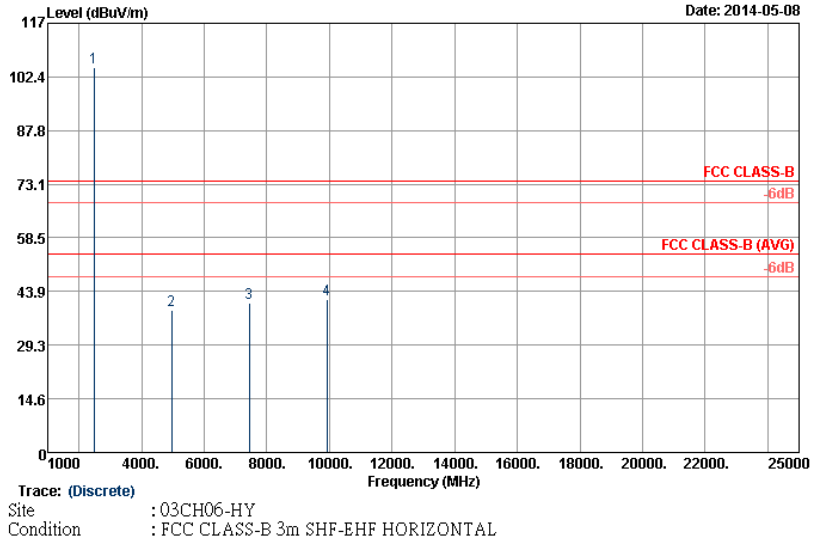


ANTENNA POLARITY : VERTICAL

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
2441	102.36	-	-	98.52	31.96	6.52	34.64	100	35	Peak
2441	77.54	-	-	-	-	-	-	-	-	Average
4881	39.33	-34.67	74	55.46	34.37	10.19	60.69	100	0	Peak
4881	14.51	-39.49	54	-	-	-	-	-	-	Average
7323	41.13	-32.87	74	55.12	35.6	10.94	60.53	100	0	Peak
7323	16.31	-37.69	54	-	-	-	-	-	-	Average
9765	42.24	-40.12	82.36	56.3	36.53	10.57	61.16	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	2Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2481 MHz is fundamental signal which can be ignored. 2. 9921 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 105.05dBuV/m – 20 (dB) = 85.05dBuV/m. 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

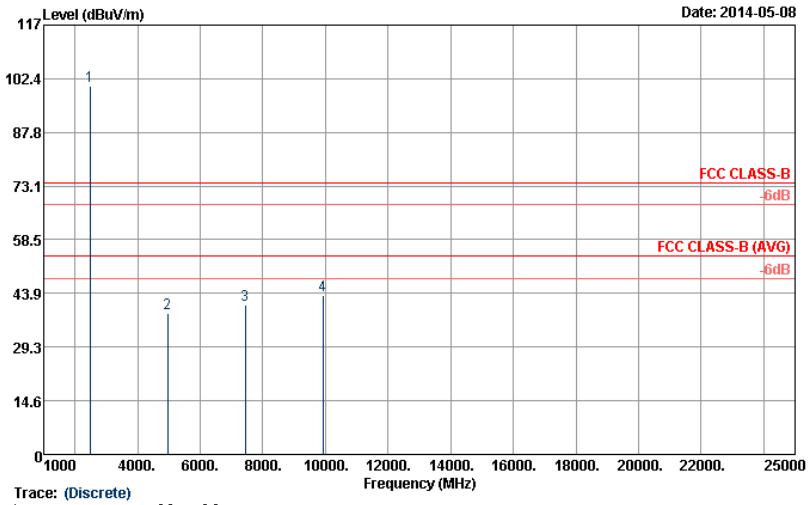


ANTENNA POLARITY : HORIZONTAL

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
2481	105.05	-	-	101.1	31.99	6.59	34.63	100	42	Peak
2481	80.23	-	-	-	-	-	-	-	-	Average
4959	38.92	-35.08	74	54.87	34.32	10.21	60.48	100	0	Peak
4959	14.1	-39.9	54	-	-	-	-	-	-	Average
7440	40.7	-33.3	74	54.85	35.53	10.9	60.58	100	0	Peak
7440	15.88	-38.12	54	-	-	-	-	-	-	Average
9921	41.73	-43.32	85.05	55.63	36.72	10.57	61.19	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	2Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2481 MHz is fundamental signal which can be ignored. 2. 9921 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 100.46dBuV/m – 20 (dB) = 80.46dBuV/m. 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

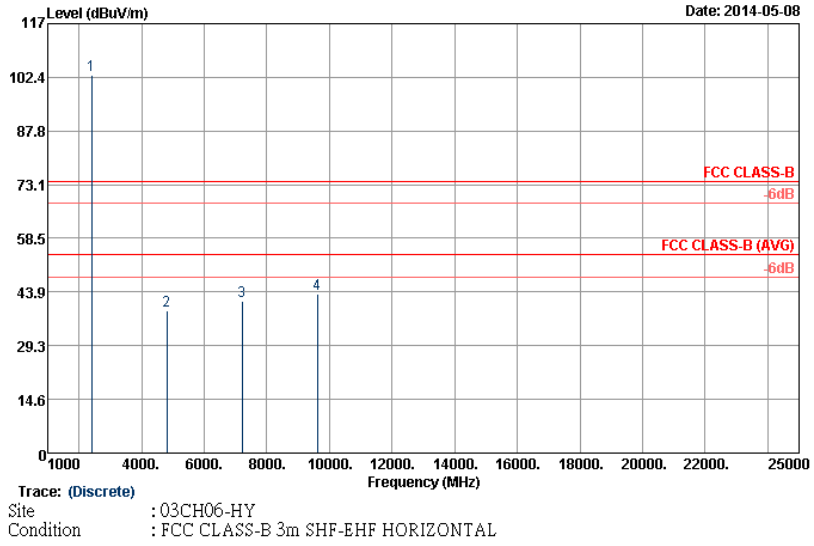


ANTENNA POLARITY : VERTICAL

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
2481	100.46	-	-	96.51	31.99	6.59	34.63	100	35	Peak
2481	75.64	-	-	-	-	-	-	-	-	Average
4959	38.5	-35.5	74	54.45	34.32	10.21	60.48	100	0	Peak
4959	13.68	-40.32	54	-	-	-	-	-	-	Average
7440	40.63	-33.37	74	54.78	35.53	10.9	60.58	100	0	Peak
7440	15.81	-38.19	54	-	-	-	-	-	-	Average
9921	43.25	-37.21	80.46	57.15	36.72	10.57	61.19	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	3Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2403 MHz is fundamental signal which can be ignored. 2. 7206 MHz and 9609 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 103dBuV/m – 20 (dB) = 83dBuV/m. 3. 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

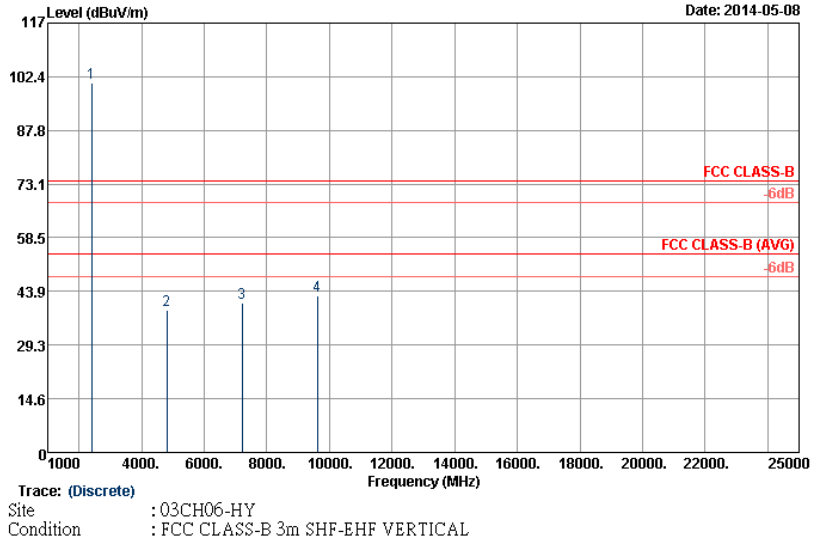
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2403	103	-	-	99.26	31.93	6.45	34.64	103	44	Peak
2403	78.21	-	-	-	-	-	-	-	-	Average
4803	38.67	-35.33	74	54.96	34.41	10.16	60.86	100	0	Peak
4803	13.88	-40.12	54	-	-	-	-	-	-	Average
7206	41.49	-41.51	83	55.32	35.68	10.97	60.48	100	0	Peak
9609	43.39	-39.61	83	57.63	36.32	10.56	61.12	100	0	Peak

Other harmonics are lower than background noise

Note: The average levels were calculated from the peak level corrected with duty cycle correction factor (24.79dB) derived from 20log (dwell time/100ms).

For example: Average level = 103dBuV/m – 24.79 (dB) = 78.21dBuV/m.

Test Mode :	3Mbps	Temperature :	24~25°C
Test Channel :	00	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2403 MHz is fundamental signal which can be ignored. 2. 7206 MHz and 9609 MHz are not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 100.79dBuV/m – 20 (dB) = 80.79dBuV/m 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

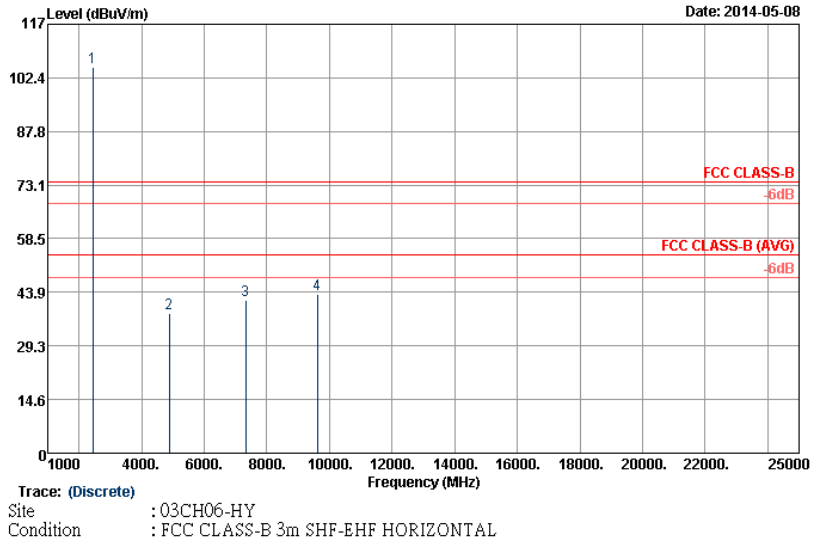


ANTENNA POLARITY : VERTICAL

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
2403	100.79	-	-	97.06	31.92	6.45	34.64	169	252	Peak
2403	76	-	-	-	-	-	-	-	-	Average
4803	38.84	-35.16	74	55.13	34.41	10.16	60.86	100	0	Peak
4803	14.05	-39.95	54	-	-	-	-	-	-	Average
7206	40.71	-40.08	80.79	54.54	35.68	10.97	60.48	100	0	Peak
9609	42.62	-38.17	80.79	56.86	36.32	10.56	61.12	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	3Mbps	Temperature :	24~25°C
Test Channel :	39	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2441 MHz is fundamental signal which can be ignored. 2. 9609 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 105.18dBuV/m – 20 (dB) = 85.18dBuV/m 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

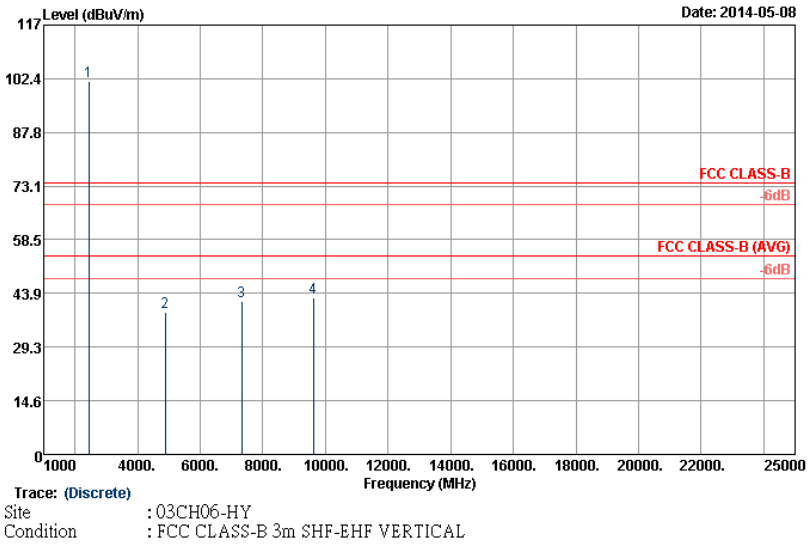


ANTENNA POLARITY : HORIZONTAL

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
2441	105.18	-	-	101.34	31.96	6.52	34.64	100	43	Peak
2441	80.39	-	-	-	-	-	-	-	-	Average
4881	37.99	-36.01	74	54.12	34.37	10.19	60.69	100	0	Peak
4881	13.2	-40.8	54	-	-	-	-	-	-	Average
7323	41.65	-32.35	74	55.64	35.6	10.94	60.53	100	0	Peak
7323	16.86	-37.14	54	-	-	-	-	-	-	Average
9609	43.39	-41.79	85.18	57.63	36.32	10.56	61.12	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	3Mbps	Temperature :	24~25°C
Test Channel :	39	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2441 MHz is fundamental signal which can be ignored. 2. 9609 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 101.67dBuV/m – 20 (dB) = 81.67dBuV/m 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

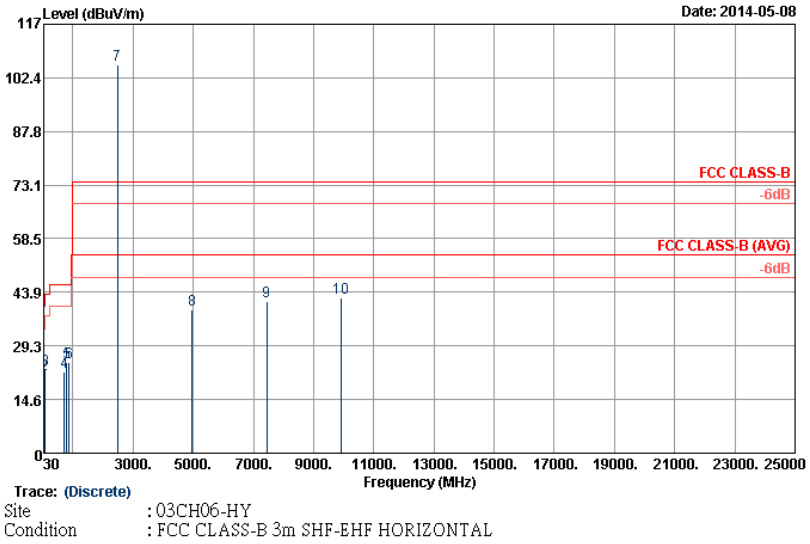


ANTENNA POLARITY : VERTICAL

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
2441	101.67	-	-	97.83	31.96	6.52	34.64	100	38	Peak
2441	76.88	-	-	-	-	-	-	-	-	Average
4881	38.88	-35.12	74	55.01	34.37	10.19	60.69	100	0	Peak
4881	14.09	-39.91	54	-	-	-	-	-	-	Average
7323	41.86	-32.14	74	55.85	35.6	10.94	60.53	100	0	Peak
7323	17.07	-36.93	54	-	-	-	-	-	-	Average
9609	42.62	-39.05	81.67	56.86	36.32	10.56	61.12	100	0	Peak

Other harmonics are lower than background noise

Test Mode :	3Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2481 MHz is fundamental signal which can be ignored. 2. 9921 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 105.83dBuV/m – 20 (dB) = 85.83dBuV/m 3. The harmonic (5th, 6th, 7th,…etc.) and other spurious are not reported, because those levels are lower than average limit line and background noise.		

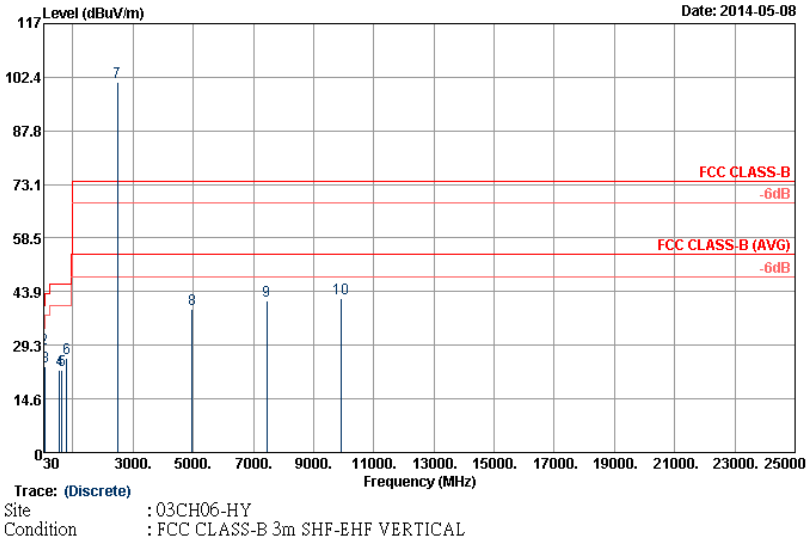


ANTENNA POLARITY : HORIZONTAL

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
38.1	33.7	-6.3	40	50.83	13.94	0.72	31.79	100	47	Peak
47.55	21.49	-18.51	40	43.54	8.95	0.78	31.78	-	-	Peak
72.66	22.71	-17.29	40	47.03	6.5	0.95	31.77	-	-	Peak
711.6	22.2	-23.8	46	31.72	19.56	2.93	32.01	-	-	Peak
784.4	24.88	-21.12	46	33.63	20.15	3.06	31.96	-	-	Peak
872.6	24.67	-21.33	46	32.12	20.9	3.29	31.64	-	-	Peak
2481	105.83	-	-	101.88	31.99	6.59	34.63	100	32	Peak
2481	81.04	-	-	-	-	-	-	-	-	Average

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
4959	38.98	-35.02	74	54.93	34.32	10.21	60.48	-	-	Peak
4959	14.19	-39.81	54	-	-	-	-	-	-	Average
7440	41.42	-32.58	74	55.57	35.53	10.9	60.58	-	-	Peak
7440	16.63	-37.37	54	-	-	-	-	-	-	Average
9921	42.42	-43.41	85.83	56.32	36.72	10.57	61.19	-	-	Peak
Other harmonics are lower than background noise										

Test Mode :	3Mbps	Temperature :	24~25°C
Test Channel :	78	Relative Humidity :	45~46%
Test Engineer :	Gavin Wu		
Remark :	1. 2481 MHz is fundamental signal which can be ignored. 2. 9921 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 101.05dBuV/m – 20 (dB) = 81.05dBuV/m 3. 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
30	32.1	-7.9	40	44.76	18.5	0.64	31.8	100	113	Peak
36.48	28.44	-11.56	40	45.06	14.46	0.71	31.79	-	-	Peak
72.66	23.32	-16.68	40	47.64	6.5	0.95	31.77	-	-	Peak
553.4	22.49	-23.51	46	32.51	19.42	2.56	32	-	-	Peak
636	22.42	-23.58	46	32	19.68	2.79	32.05	-	-	Peak
784.4	25.84	-20.16	46	34.59	20.15	3.06	31.96	-	-	Peak
2481	101.05	-	-	97.1	31.99	6.59	34.63	100	23	Peak
2481	76.26	-	-	-	-	-	-	-	-	Average

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
4959	39.21	-34.79	74	55.16	34.32	10.21	60.48	-	-	Peak
4959	14.42	-39.58	54	-	-	-	-	-	-	Average
7440	41.38	-32.62	74	55.53	35.53	10.9	60.58	-	-	Peak
7440	16.59	-37.41	54	-	-	-	-	-	-	Average
9921	42.09	-38.96	81.05	55.99	36.72	10.57	61.19	-	-	Peak
Other harmonics are lower than background noise										

3.9 AC Conducted Emission Measurement

3.9.1 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 (dBμV)	
	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.

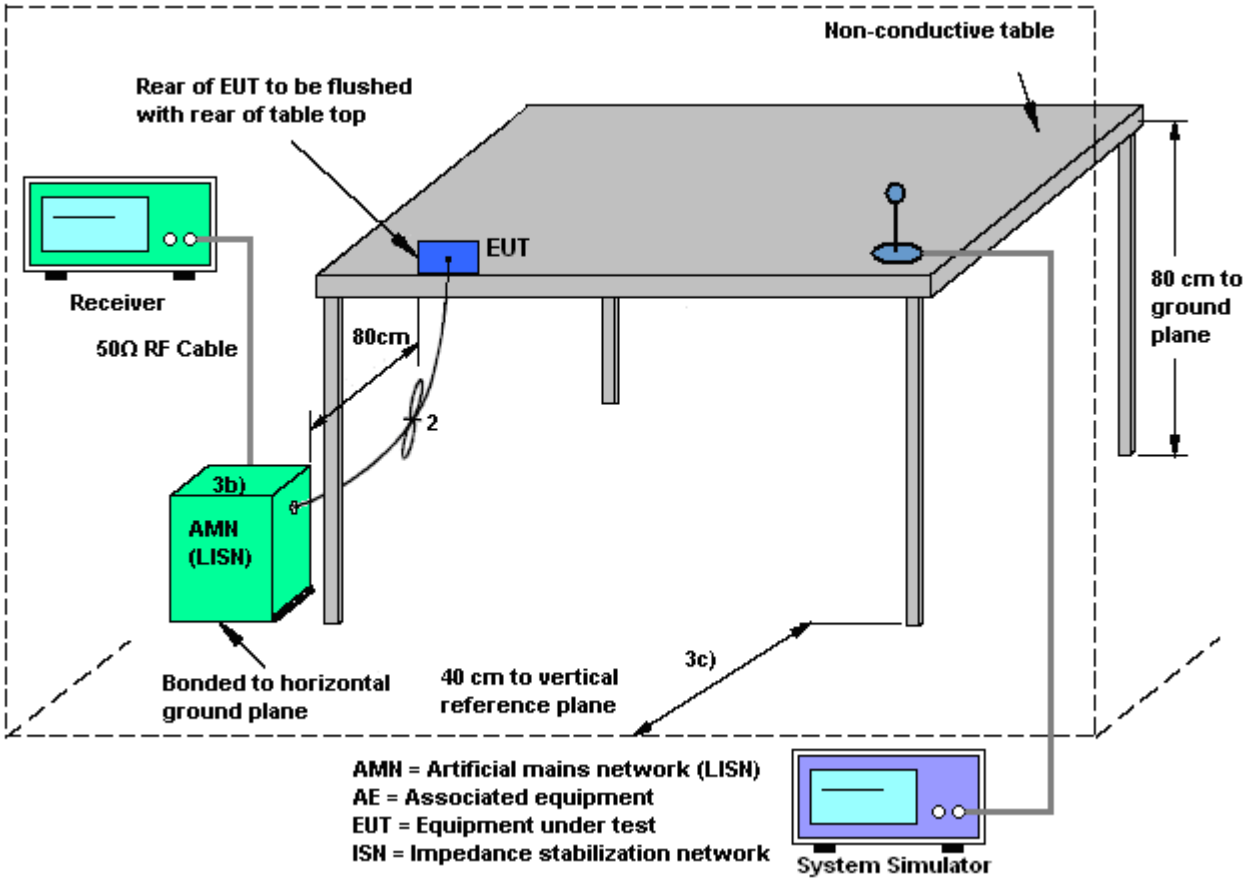
3.9.2 Measuring Instruments

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

3.9.3 Test Procedures

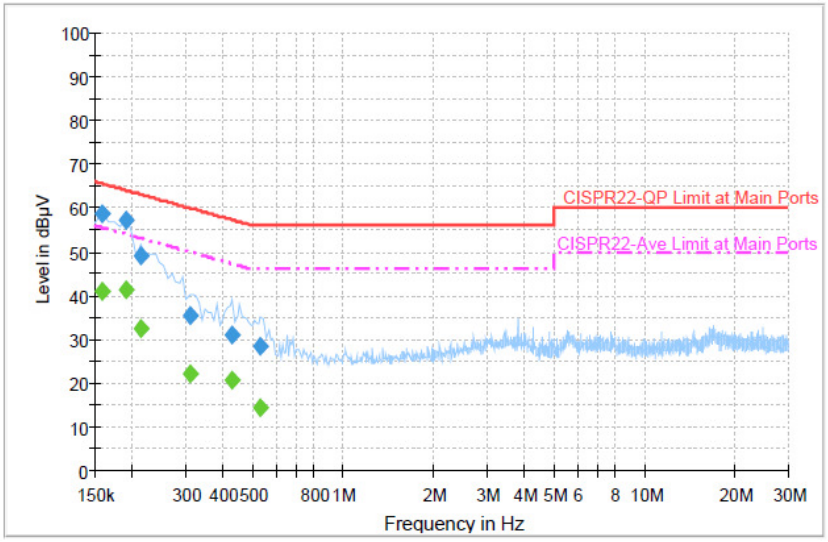
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

3.9.4 Test Setup



3.9.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	46~48%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Earphone + Battery + USB Cable (Data Link with Notebook) + GPS Rx		



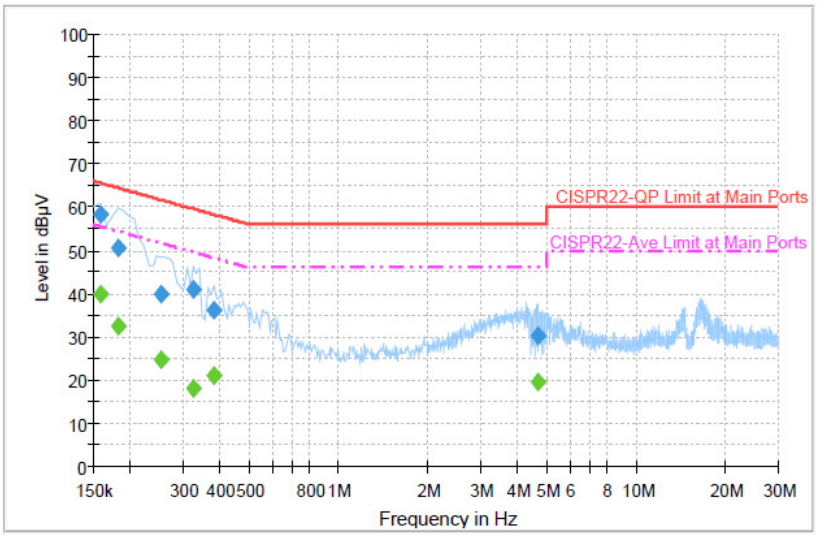
Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	58.8	Off	L1	19.3	6.8	65.6
0.190000	57.1	Off	L1	19.4	6.9	64.0
0.214000	49.0	Off	L1	19.4	14.0	63.0
0.312000	35.4	Off	L1	19.4	25.0	60.4
0.430000	31.1	Off	L1	19.4	26.2	57.3
0.534000	28.6	Off	L1	19.4	27.4	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	41.0	Off	L1	19.3	14.6	55.6
0.190000	41.4	Off	L1	19.4	12.6	54.0
0.214000	32.3	Off	L1	19.4	20.7	53.0
0.312000	22.0	Off	L1	19.4	28.4	50.4
0.430000	20.5	Off	L1	19.4	26.8	47.3
0.534000	14.2	Off	L1	19.4	31.8	46.0

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Cosmo Xu	Relative Humidity :	46~48%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM1900 Idle + Bluetooth Link + WLAN (2.4GHz) Link + Earphone + Battery + USB Cable (Data Link with Notebook) + GPS Rx		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	58.2	Off	N	19.3	7.4	65.6
0.182000	50.6	Off	N	19.3	13.8	64.4
0.254000	39.7	Off	N	19.4	21.9	61.6
0.326000	40.9	Off	N	19.4	18.7	59.6
0.382000	36.3	Off	N	19.3	21.9	58.2
4.670000	30.4	Off	N	19.6	25.6	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	40.0	Off	N	19.3	15.6	55.6
0.182000	32.5	Off	N	19.3	21.9	54.4
0.254000	24.8	Off	N	19.4	26.8	51.6
0.326000	18.2	Off	N	19.4	31.4	49.6
0.382000	21.2	Off	N	19.3	27.0	48.2
4.670000	19.7	Off	N	19.6	26.3	46.0

3.10 Antenna Requirements

3.10.1 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. 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.

3.10.2 Antenna Anti-Replacement Construction

Non-standard connector used.

3.10.3 Antenna Gain

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

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Apr. 12, 2014~ Apr. 24, 2014	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Agilent	E4416A	GB41292344	300MHz~40GHz	Jan. 28, 2014	Apr. 12, 2014~ Apr. 24, 2014	Jan. 27, 2015	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US40441548	300MHz~40GHz	Jan. 28, 2014	Apr. 12, 2014~ Apr. 24, 2014	Jan. 27, 2015	Conducted (TH02-HY)
Hygrometer	Testo	608-H1	34897199	N/A	May 07, 2013	Apr. 12, 2014~ Apr. 24, 2014	May 06, 2014	Conducted (TH02-HY)
RF cable	HONOVA	MF86	N/A	N/A	Nov. 25, 2013	Apr. 12, 2014~ Apr. 24, 2014	Nov. 24, 2014	Conducted (TH02-HY)
Spectrum Analyzer	R&S	FSP30	101067	9kHz ~ 30GHz	Nov. 20, 2013	May 08, 2014	Nov. 19, 2014	Radiation (03CH06-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9kHz ~ 26.5GHz	Dec. 02, 2013	May 08, 2014	Dec. 01, 2014	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/0003	20MHz ~ 1000MHz	May 06, 2014	May 08, 2014	May 05, 2015	Radiation (03CH06-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9kHz ~ 30Mz	Jul. 03, 2012	May 08, 2014	Jul. 02, 2014	Radiation (03CH06-HY)
Bilog Antenna	Schaffner	CBL6112B	2885	30MHz ~ 2GHz	Oct. 10, 2013	May 08, 2014	Oct. 09, 2014	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz ~ 18GHz	Aug. 02, 2013	May 08, 2014	Aug. 01, 2014	Radiation (03CH06-HY)
Amplifier	Agilent	310N	186713	9kHz ~ 1GHz	Apr. 16, 2014	May 08, 2014	Apr. 15, 2015	Radiation (03CH06-HY)
Pre Amplifier	EMCI	EMC051845	SN980048	1GHz ~ 18GHz	Jul. 18, 2013	May 08, 2014	Jul. 17, 2014	Radiation (03CH06-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Oct. 03, 2013	May 08, 2014	Oct. 02, 2014	Radiation (03CH06-HY)
Preamplifier	Agilent	8449B	3008A01917	1GHz ~ 26.5GHz	Apr. 10, 2014	May 08, 2014	Apr. 09, 2015	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0 ~ 360 degree	N/A	May 08, 2014	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1 m ~ 4 m	N/A	May 08, 2014	N/A	Radiation (03CH06-HY)
LF RF Cable	warison	WCBA-WC04NM.NM2	N/A	30MHz~1GHz	Nov. 28, 2013	May 08, 2014	Nov. 27, 2014	Radiation (03CH06-HY)
HF RF Cable	Huber + Suhner	sucoflex 104	286027/4	1GHz~26.5GHz	Nov. 28, 2013	May 08, 2014	Nov. 27, 2014	Radiation (03CH06-HY)
High Pass Filter	Microwave Circuits	H3G018G1	SN477219	3G HPF	Nov. 28, 2013	May 08, 2014	Nov. 27, 2014	Radiation (03CH06-HY)
High Pass Filter	Microwave Circuits	H07G18G3	282388	7G HPF	Nov. 28, 2013	May 08, 2014	Nov. 27, 2014	Radiation (03CH06-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Low Pass Filter	Wainwright	WLKS1500-8SS	SN51	1.5G LPF	Nov. 28, 2013	May 08, 2014	Nov. 27, 2014	Radiation (03CH06-HY)
Hygrometer	WISEWIND	410	BU5004	N/A	May 06, 2014	May 08, 2014	May 05, 2015	Radiation (03CH06-HY)
Test Software	Audix	E3 V6.0	N/A	N/A	N/A	May 08, 2014	N/A	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 15, 2013	Apr. 11, 2014	Nov. 14, 2014	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2013	Apr. 11, 2014	Dec. 11, 2014	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 04, 2013	Apr. 11, 2014	Dec. 03, 2014	Conduction (CO05-HY)
AC Power Source	APC	APC-1000 W	N/A	N/A	N/A	Apr. 11, 2014	N/A	Conduction (CO05-HY)
Test Software	N/A	EMC32	8.40.0	N/A	N/A	Apr. 11, 2014	N/A	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Apr. 25, 2013,	Apr. 11, 2014	Apr. 24, 2014	Conduction (CO05-HY)
LF Cable	Shuner	RG-402	N/A	N/A	Oct. 17, 2013	Apr. 11, 2014	Oct. 16, 2014	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))	**4.50**