



FCC RF Test Report

APPLICANT : HUAWEI TECHNOLOGIES CO., LTD.
EQUIPMENT : Wi-Fi/LAN Adapter
BRAND NAME : HUAWEI
MODEL NAME : HUAWEI D105
FCC ID : QISD105
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : Digital Transmission System (DTS)

The product was received on Dec. 18, 2009 and completely tested on Jan. 13, 2010. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the compliance with the applicable technical standards.

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

Reviewed by:

Roy Wu / Manager



SPORTON INTERNATIONAL INC.

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



TABLE OF CONTENTS

REVISION HISTORY.....3

SUMMARY OF TEST RESULT4

1 GENERAL DESCRIPTION5

 1.1 Applicant5

 1.2 Manufacturer.....5

 1.3 Feature of Equipment Under Test5

 1.4 Testing Site.....6

 1.5 Applied Standards7

 1.6 Ancillary Equipment List7

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST8

 2.1 RF Power.....8

 2.2 Test Mode.....10

 2.3 Connection Diagram of Test System.....11

 2.4 RF Utility12

3 TEST RESULT.....13

 3.1 6dB Bandwidth Measurement13

 3.2 Output Power Measurement.....22

 3.3 Band Edges Measurement24

 3.4 Spurious Emission Measurement.....36

 3.5 Power Spectral Density Measurement49

 3.6 AC Conducted Emission Measurement.....58

 3.7 Radiated Emission Measurement.....62

 3.8 Antenna Requirements89

4 LIST OF MEASURING EQUIPMENT96

5 UNCERTAINTY OF EVALUATION97

6 CERTIFICATION OF TAF ACCREDITATION99

APPENDIX A. PHOTOGRAPHS OF EUT

APPENDIX B. SETUP PHOTOGRAPHS

**SUMMARY OF TEST RESULT**

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.2	15.247(b)	A8.4	Power Output	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(d)	A8.5	Frequency Band Edges	$\leq 20\text{dBc}$	Pass	-
3.4	15.247(d)	A8.5	Spurious Emission	$< 20\text{ dBc}$	Pass	-
3.5	15.247(e)	A8.2(b)	Power Spectral Density	$\leq 8\text{dBm}$	Pass	-
3.6	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 6.3 dB at 0.342 MHz
3.7	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 1.05 dB at 2483.50 MHz
3.8	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

HUAWEI TECHNOLOGIES CO., LTD.

Administration Building, Huawei Base, Bantian, Longgang District, Shenzhen 518129, P.R. China

1.2 Manufacturer

HUAWEI TECHNOLOGIES CO., LTD.

Administration Building, Huawei Base, Bantian, Longgang District, Shenzhen 518129, P.R. China

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Wi-Fi/LAN Adapter
Brand Name	HUAWEI
Model Name	HUAWEI D105
FCC ID	QISD105
Tx/Rx Frequency Range	2400 MHz ~ 2483.5 MHz
Number of Channels	11
Carrier Frequency of Each Channel	2412+(n-1)*5 MHz; n=1~11
Channel Spacing	5 MHz
Maximum Output Power to Antenna	802.11b : 18.30 dBm (67.61 mW) 802.11g : 23.66 dBm (232.27 mW) 802.11n (BW 20MHz) : 23.63 dBm (230.67 mW) 802.11n (BW 40MHz) : 23.02 dBm (200.45 mW)
Antenna Type	PCB Antenna with gain 1.5 dBi
HW Version	REV : 3
SW Version	Mutltilmage_Uboot_11322_Image_D105_V100R001_C00_B001
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

Remark: This test report recorded only product characteristics and test results of Digital Transmission System (DTS).

List of Accessory:

Specification of Accessory		
AC Adapter 1	Brand Name	Huntkey
	Model Name	HKA012812010-2A
	Power Rating	I/P:100-240Vac, 50-60Hz, 0.5A; O/P: 12.0Vdc, 1.0A
	DC Power Cord Type	1.5 meter shielded cable without ferrite core
AC Adapter 2	Brand Name	Fuhua
	Model Name	UE12L-120100SPAU
	Power Rating	I/P:100-240Vac, 50-60Hz, 300mA MAX; O/P: 12.0Vdc, 1.0A
	DC Power Cord Type	1.5 meter non-shielded cable without ferrite core

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. For accessories equipped with this EUT, please refer to the appendix of the external photo.

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	CO05-HY	03CH06-HY	TW1022/4086B-1



1.5 Applied Standards

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

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 (Measurement Guidelines of DTS)
- ANSI C63.4-2003
- IC RSS-210 Issue 7

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 (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

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.	USB Dongle 3	HUAWEI	E156B	N/A	N/A	N/A
3.	USB Dongle 2	HUAWEI	E160	N/A	N/A	N/A
4.	USB Dongle 1	HUAWEI	E176	N/A	N/A	N/A

2 Test Configuration of Equipment Under Test

2.1 RF Power

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

Channel	Frequency	2.4GHz 802.11b RF Power (dBm)			
		At DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	17.22	17.44	17.79	18.30
CH 06	2437 MHz	15.90	16.15	16.21	16.29
CH 11	2462 MHz	16.20	16.26	16.31	16.48

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		At OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	23.66	23.14	23.03	23.01	23.52	23.24	23.07	23.02
CH 06	2437 MHz	21.54	21.21	21.13	21.20	22.08	21.52	21.36	21.34
CH 11	2462 MHz	22.08	21.61	21.59	21.72	22.42	21.87	21.75	21.68

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) RF Power (dBm)							
		At OFDM Data Rate							
		MCS=0 6.5 Mbps	MCS=1 13 Mbps	MCS=2 19.5 Mbps	MCS=3 26 Mbps	MCS=4 39 Mbps	MCS=5 52 Mbps	MCS=6 58.5 Mbps	MCS=7 65 Mbps
CH 01	2412 MHz	23.63	23.24	23.54	22.96	22.82	23.07	22.79	23.01
CH 06	2437 MHz	21.53	21.32	21.71	21.03	21.01	21.39	21.80	21.03
CH 11	2462 MHz	21.88	21.87	22.03	21.52	21.64	21.64	21.22	21.45
Channel	Frequency	MCS=8 13 Mbps	MCS=9 26 Mbps	MCS=10 39 Mbps	MCS=11 52 Mbps	MCS=12 78 Mbps	MCS=13 104 Mbps	MCS=14 117 Mbps	MCS=15 130 Mbps
CH 01	2412 MHz	22.59	22.91	22.63	22.99	23.62	23.48	23.26	22.87
CH 06	2437 MHz	20.89	21.10	20.82	21.27	21.94	21.65	20.83	21.19
CH 11	2462 MHz	21.30	21.45	21.26	21.84	22.39	21.96	21.12	21.25



Channel	Frequency	2.4GHz 802.11n (BW 40MHz) RF Power (dBm)							
		At OFDM Data Rate							
		MCS=0 6.5 Mbps	MCS=1 13 Mbps	MCS=2 19.5 Mbps	MCS=3 26 Mbps	MCS=4 39 Mbps	MCS=5 52 Mbps	MCS=6 58.5 Mbps	MCS=7 65 Mbps
CH 03	2422 MHz	21.93	22.18	21.76	22.05	21.86	22.23	21.46	21.10
CH 06	2437 MHz	21.70	22.05	21.36	21.93	21.74	22.18	22.02	20.91
CH 09	2452 MHz	21.74	22.06	21.45	21.98	22.02	22.32	21.30	20.92
Channel	Frequency	MCS=8	MCS=9	MCS=10	MCS=11	MCS=12	MCS=13	MCS=14	MCS=15
		13 Mbps	26 Mbps	39 Mbps	52 Mbps	78 Mbps	104 Mbps	117 Mbps	130 Mbps
CH 03	2422 MHz	21.88	21.61	21.55	21.98	22.92	22.18	21.32	20.82
CH 06	2437 MHz	21.85	21.59	21.55	21.95	22.90	22.35	21.24	20.83
CH 09	2452 MHz	21.63	21.37	21.64	22.09	23.02	22.13	21.13	20.85

Remark:

1. The data rates of WLAN 802.11b/g/n were set in 11Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n (BW 20MHz), and 78Mbps for 802.11n (BW 40MHz) for all the test cases due to the highest RF output power.
2. The EUT is programmed to transmit signals continuously for all testing.

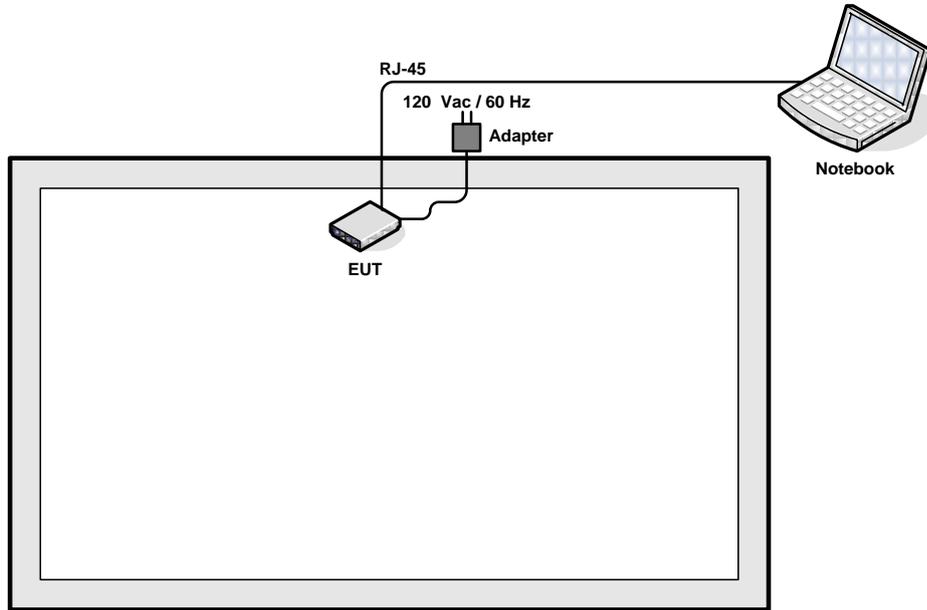
2.2 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). Pre-scanned tests were conducted to determine the final configuration from all possible combinations. The following tables are showing the test modes as the worst cases and recorded in this report.

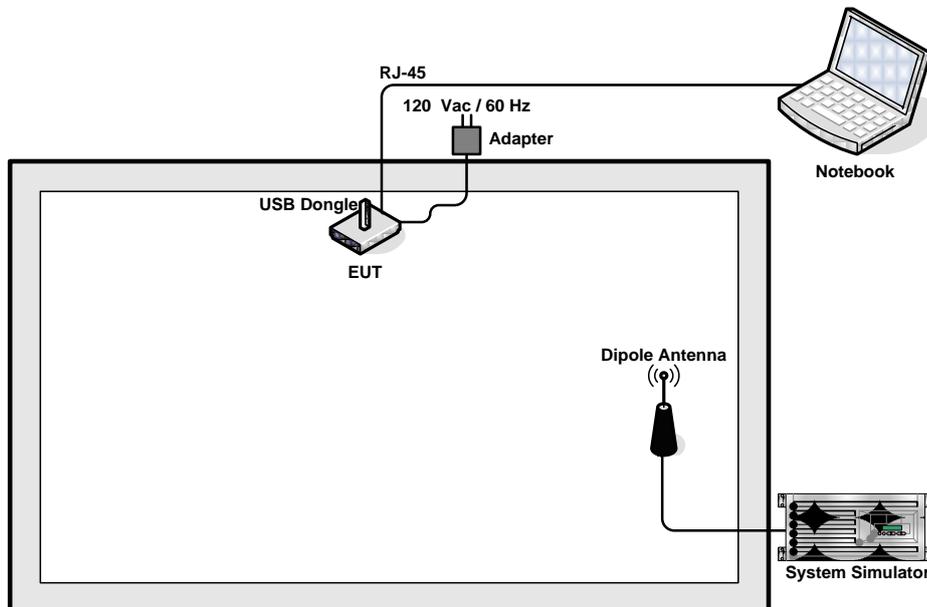
Test Cases		
Test Item	802.11b (Modulation : DSSS)	802.11g/n (Modulation : OFDM)
Conducted TCs	Mode 1 : CH01_2412 MHz Mode 2 : CH06_2437 MHz Mode 3 : CH11_2462 MHz	Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n (BW 20M)_CH01_2412 MHz Mode 8: 802.11n (BW 20M)_CH06_2437 MHz Mode 9: 802.11n (BW 20M)_CH11_2462 MHz Mode 10: 802.11n (BW 40M)_CH03_2422 MHz Mode 11: 802.11n (BW 40M)_CH06_2437 MHz Mode 12: 802.11n (BW 40M)_CH09_2452 MHz
Radiated TCs	Mode 1 : CH01_2412 MHz Mode 2 : CH06_2437 MHz Mode 3 : CH11_2462 MHz	Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n (BW 20M)_CH01_2412 MHz Mode 8: 802.11n (BW 20M)_CH06_2437 MHz Mode 9: 802.11n (BW 20M)_CH11_2462 MHz Mode 10: 802.11n (BW 40M)_CH03_2422 MHz Mode 11: 802.11n (BW 40M)_CH06_2437 MHz Mode 12: 802.11n (BW 40M)_CH09_2452 MHz Mode 13: 802.11n (BW 40M)_CH09_2452 MHz + USB Dongle 1 (GPRS850 Link) Mode 14: 802.11n (BW 40M)_CH09_2452 MHz + USB Dongle 2 (GPRS850 Link) Mode 15: 802.11n (BW 40M)_CH09_2452 MHz + USB Dongle 3 (GPRS850 Link)
AC Conducted Emission	Mode 1 : WLAN Link + LAN Link + USB Dongle (GPRS850 Idle) + Adapter 1 Mode 2 : WLAN Link + LAN Link + USB Dongle (GPRS850 Idle) + Adapter 2	
Remark: The worst case of conducted emission is mode 1; only the test data of it was reported.		

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<WLAN Tx + WWAN Link Mode>





2.4 RF Utility

The programmed RF utility, "RT3052QA.exe" is installed in notebook to provide channel selection, power level, data rate and the application type. Then, choose "2.4G Side Band Option" and choose "conti. Tx" (However, do not choose "Auto ALC" and "Auto Tuning").

The RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

3 Test Result

3.1 6dB Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

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

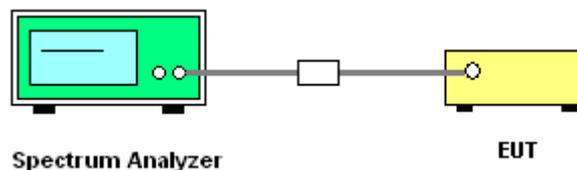
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz.
In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.
4. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

3.1.4 Test Setup



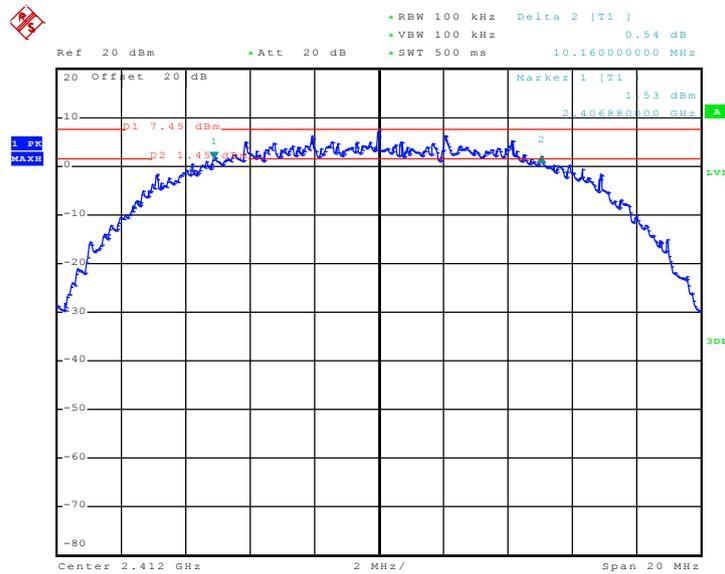


3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Mode 1, 2, 3	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	10.16	0.5	Pass
06	2437	10.36	0.5	Pass
11	2462	9.72	0.5	Pass

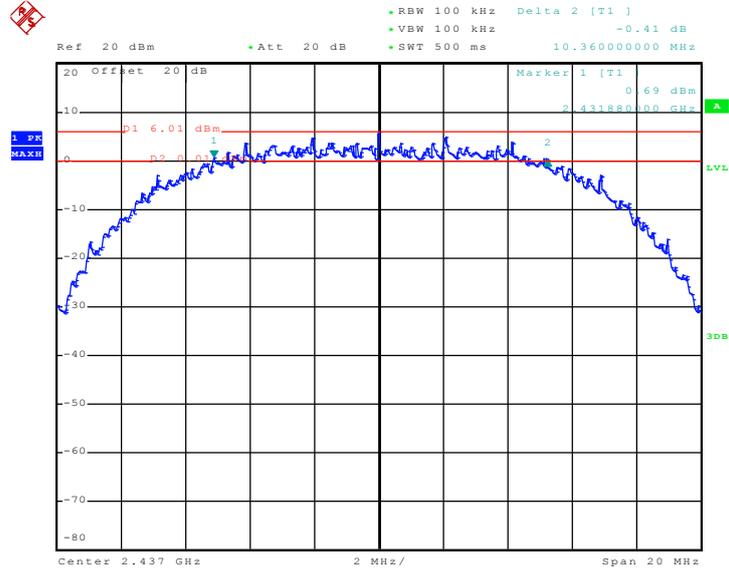
Mode 1 : 6 dB Bandwidth Plot on 802.11b Channel 01



Date: 7..JAN.2010 00:46:00

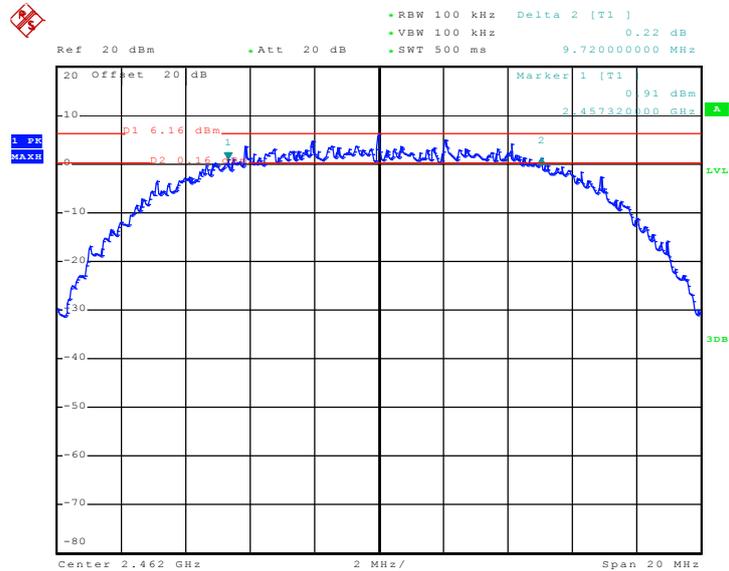


Mode 2 : 6 dB Bandwidth Plot on 802.11b Channel 06



Date: 7..JAN.2010 00:48:49

Mode 3 : 6 dB Bandwidth Plot on 802.11b Channel 11



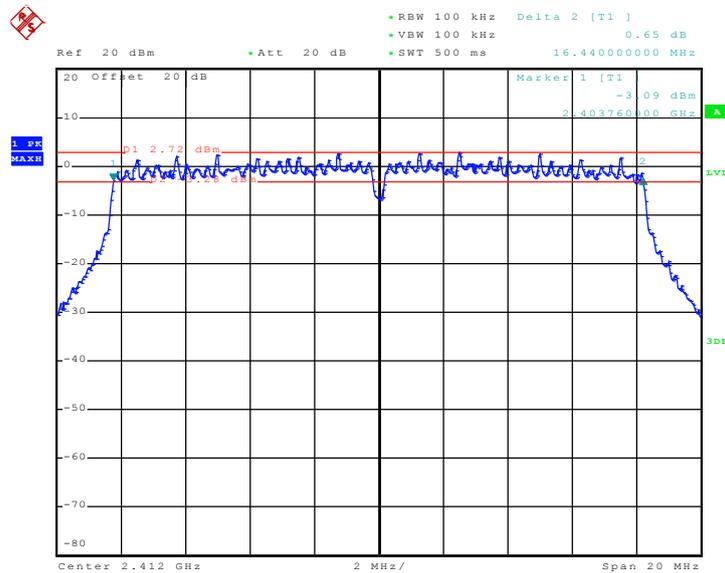
Date: 7..JAN.2010 00:51:09



Test Mode :	Mode 4, 5, 6	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.44	0.5	Pass
06	2437	16.40	0.5	Pass
11	2462	16.40	0.5	Pass

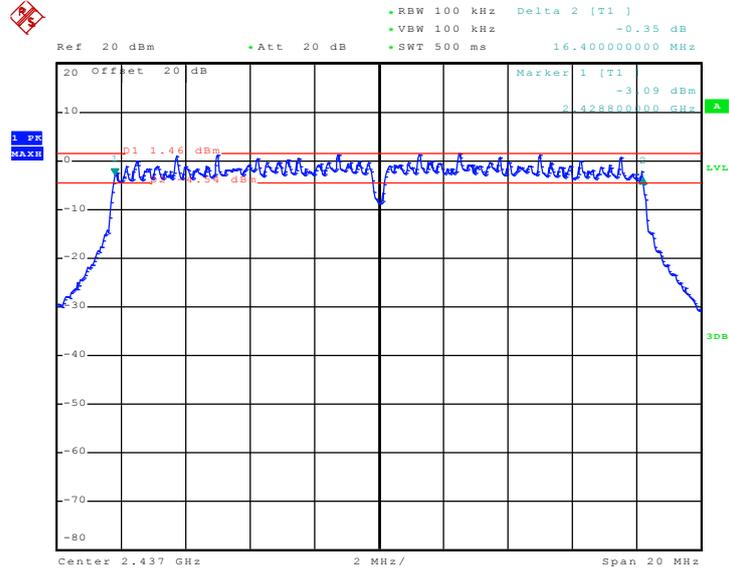
Mode 4 : 6 dB Bandwidth Plot on 802.11g Channel 01



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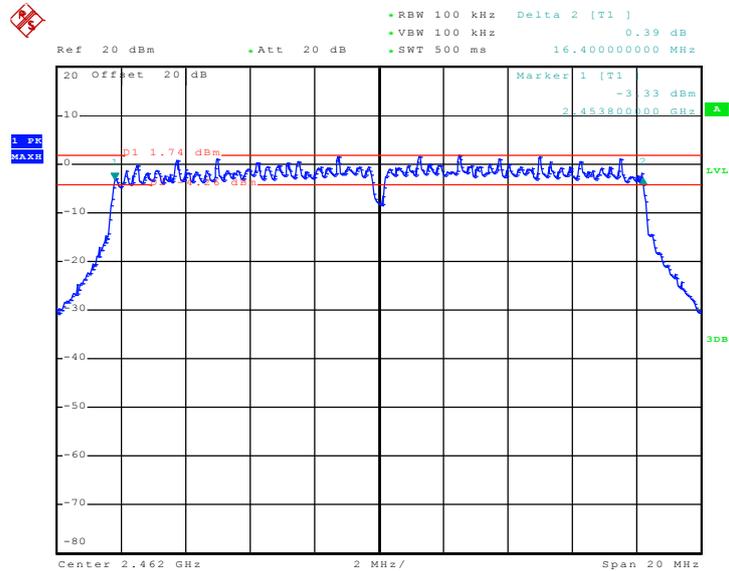


Mode 5 : 6 dB Bandwidth Plot on 802.11g Channel 06



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Mode 6 : 6 dB Bandwidth Plot on 802.11g Channel 11



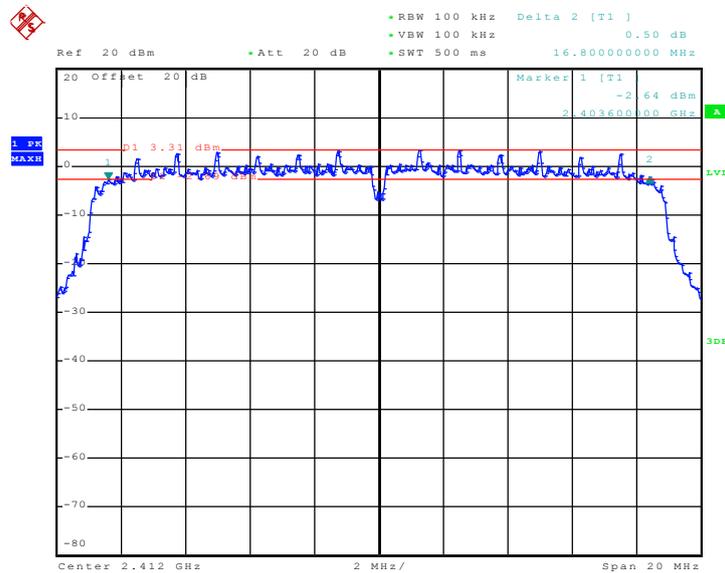
Date: 7..JAN.2010 00:59:26



Test Mode :	Mode 7, 8, 9	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.80	0.5	Pass
06	2437	16.92	0.5	Pass
11	2462	16.32	0.5	Pass

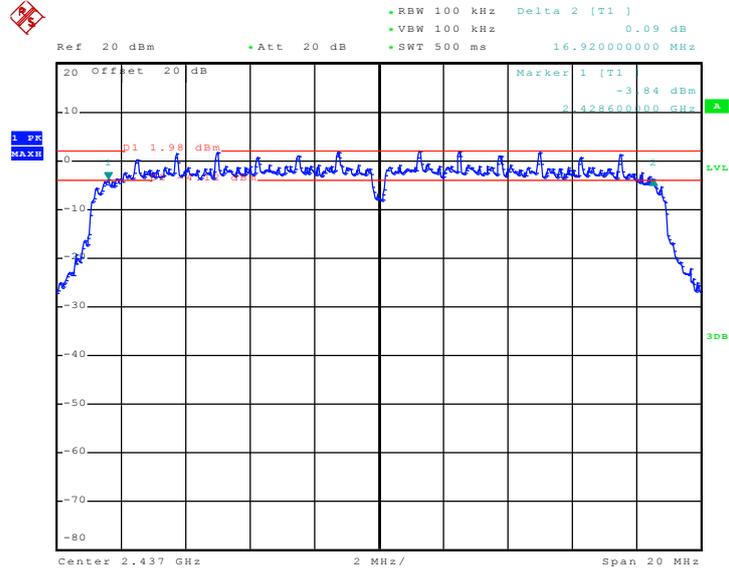
Mode 7 : 6 dB Bandwidth Plot on 802.11n(BW 20MHz) Channel 01



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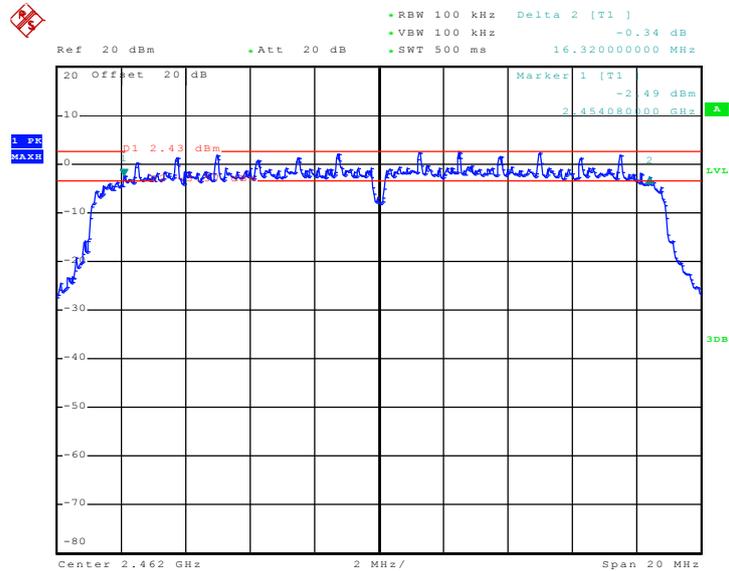


Mode 8 : 6 dB Bandwidth Plot on 802.11n(BW 20MHz) Channel 06



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Mode 9 : 6 dB Bandwidth Plot on 802.11n(BW 20MHz) Channel 11



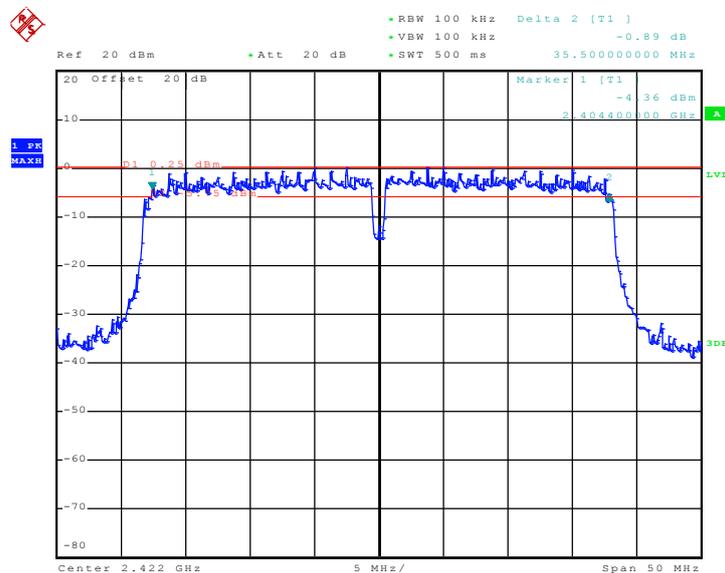
Date: 7..JAN.2010 01:10:54



Test Mode :	Mode 10, 11, 12	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11n (BW 40MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
03	2422	35.50	0.5	Pass
06	2437	35.50	0.5	Pass
09	2452	35.50	0.5	Pass

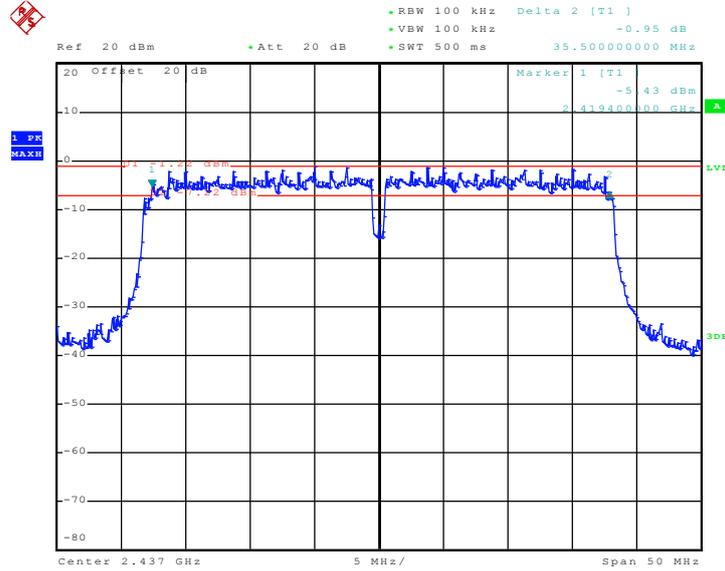
Mode 10 : 6 dB Bandwidth Plot on 802.11n(BW 40MHz) Channel 03



Date: 8..JAN.2010 00:42:42

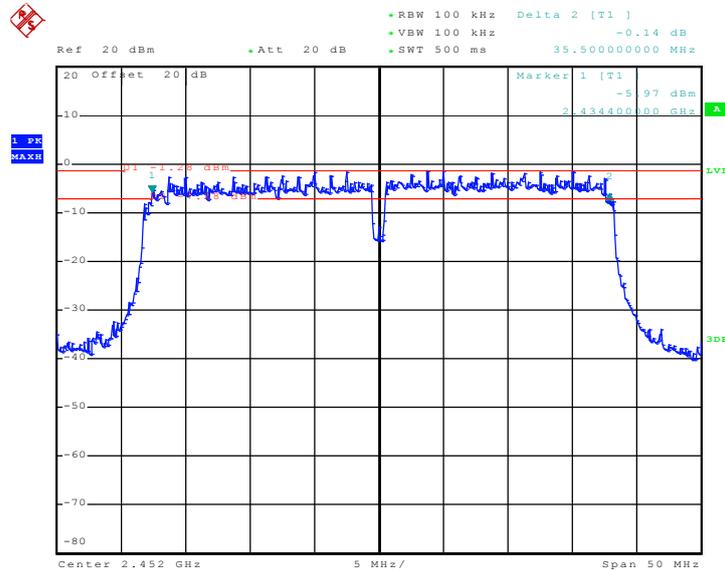


Mode 11 : 6 dB Bandwidth Plot on 802.11n(BW 40MHz) Channel 06



Date: 7..JAN.2010 01:15:36

Mode 12 : 6 dB Bandwidth Plot on 802.11n(BW 40MHz) Channel 09



Date: 7..JAN.2010 01:17:19

3.2 Output Power Measurement

3.2.1 Limit of Output Power

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

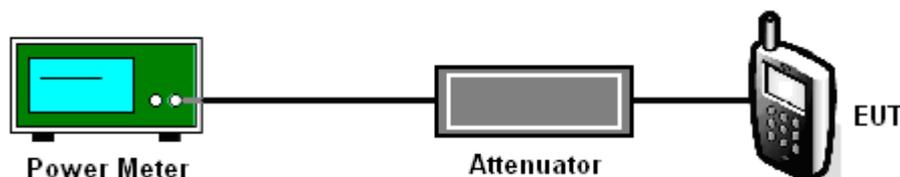
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the power meter by a low loss cable.
3. Measure the power by power meter.

3.2.4 Test Setup





3.2.5 Test Result of Output Power

Test Mode :	Mode 1, 2, 3	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	18.30	30	Pass
06	2437	16.29	30	Pass
11	2462	16.48	30	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	23.66	30	Pass
06	2437	21.54	30	Pass
11	2462	22.08	30	Pass

Test Mode :	Mode 7, 8, 9	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	23.63	30	Pass
06	2437	21.53	30	Pass
11	2462	21.88	30	Pass

Test Mode :	Mode 10, 11, 12	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
03	2422	22.92	30	Pass
06	2437	22.90	30	Pass
09	2452	23.02	30	Pass



3.3 Band Edges Measurement

3.3.1 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. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB.

3.3.2 Measuring Instruments

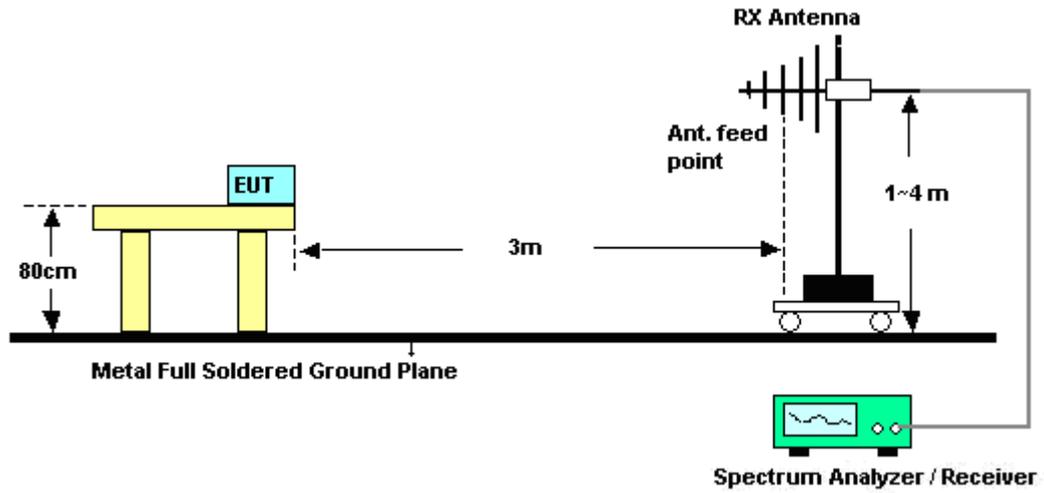
See list of measuring instruments of this test report.

3.3.3 Test Procedures

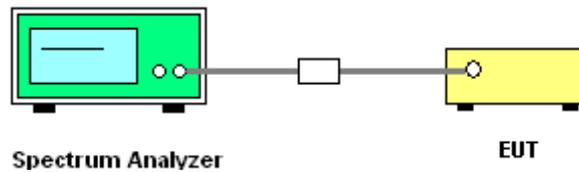
1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) \geq RBW. Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW. Note: If the device complies with the use of power option 2 the attenuation under this paragraph shall be 30 dB instead of 20 dB.
3. Radiated emission test: Apply to band edge emissions that fall in the restricted bands listed in FCC Section 15.205. The maximum permitted average field strength is listed in FCC Section 15.209. A pre-amp is necessary for this measurement. For measurements above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep=Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation as in FCC Section 15.35(b) and (c).

3.3.4 Test Setup

<Radiated Band Edges>



<Conducted Band Edges>





3.3.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	Temperature :	20~21°C
Test Band :	802.11b	Relative Humidity :	48~49%
Test Channel :	01	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.63	59.65	-14.35	74.00	59.94	31.86	3.92	36.07	100	288	Peak
2389.63	47.92	-6.08	54.00	48.21	31.86	3.92	36.07	100	288	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2356.37	54.82	-19.18	74.00	55.19	31.81	3.89	36.07	100	121	Peak
2356.37	42.77	-11.23	54.00	43.14	31.81	3.89	36.07	100	121	Average

Test Mode :	Mode 3	Temperature :	20~21°C
Test Band :	802.11b	Relative Humidity :	48~49%
Test Channel :	11	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.16	60.64	-13.36	74.00	60.7	31.98	4.05	36.09	100	289	Peak
2484.16	47.81	-6.19	54.00	47.87	31.98	4.05	36.09	100	289	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2485.17	55.68	-18.32	74.00	55.74	31.98	4.05	36.09	102	107	Peak
2485.17	43.11	-10.89	54.00	43.17	31.98	4.05	36.09	102	107	Average



Test Mode :	Mode 4	Temperature :	20~21°C
Test Band :	802.11g	Relative Humidity :	48~49%
Test Channel :	01	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.97	59.66	-14.34	74.00	59.96	31.86	3.92	36.08	100	287	Peak
2389.97	46.06	-7.94	54.00	46.36	31.86	3.92	36.08	100	287	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2347.97	55.45	-18.55	74.00	55.88	31.78	3.86	36.07	100	121	Peak
2347.97	42.82	-11.18	54.00	43.25	31.78	3.86	36.07	100	121	Average

Test Mode :	Mode 6	Temperature :	20~21°C
Test Band :	802.11g	Relative Humidity :	48~49%
Test Channel :	11	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.58	62.39	-11.61	74.00	62.45	31.98	4.05	36.09	100	288	Peak
2483.58	45.62	-8.38	54.00	45.68	31.98	4.05	36.09	100	288	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	55.65	-18.35	74.00	55.71	31.98	4.05	36.09	100	121	Peak
2483.5	42.05	-11.95	54.00	42.11	31.98	4.05	36.09	100	121	Average



Test Mode :	Mode 7	Temperature :	20~21°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	48~49%
Test Channel :	01	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.97	64.25	-9.75	74.00	64.55	31.86	3.92	36.08	100	288	Peak
2389.97	46.17	-7.83	54.00	46.47	31.86	3.92	36.08	100	288	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.52	56.14	-17.86	74.00	56.43	31.86	3.92	36.07	100	121	Peak
2389.52	42.67	-11.33	54.00	42.96	31.86	3.92	36.07	100	121	Average

Test Mode :	Mode 9	Temperature :	20~21°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	48~49%
Test Channel :	11	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	66.51	-7.49	74.00	66.57	31.98	4.05	36.09	100	285	Peak
2483.5	48.22	-5.78	54.00	48.28	31.98	4.05	36.09	100	285	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.16	58.04	-15.96	74.00	58.1	31.98	4.05	36.09	100	121	Peak
2484.16	42.98	-11.02	54.00	43.04	31.98	4.05	36.09	100	121	Average



Test Mode :	Mode 10	Temperature :	20~21°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	48~49%
Test Channel :	03	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2386.96	64.79	-9.21	74.00	65.08	31.86	3.92	36.07	100	285	Peak
2386.96	51.33	-2.67	54.00	51.62	31.86	3.92	36.07	100	285	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.54	59.64	-14.36	74.00	59.93	31.86	3.92	36.07	179	121	Peak
2388.54	45.83	-8.17	54.00	46.12	31.86	3.92	36.07	179	121	Average

Test Mode :	Mode 12	Temperature :	20~21°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	48~49%
Test Channel :	09	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.90	67.03	-6.97	74.00	67.09	31.98	4.05	36.09	100	284	Peak
2484.90	51.96	-2.04	54.00	52.02	31.98	4.05	36.09	100	284	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2487.42	60.42	-13.58	74.00	60.48	31.98	4.05	36.09	100	106	Peak
2487.42	45.49	-8.51	54.00	45.55	31.98	4.05	36.09	100	106	Average



Test Mode :	Mode 13	Temperature :	20~21°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	48~49%
Test Channel :	09	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	70.22	-3.78	74.00	70.28	31.98	4.05	36.09	100	287	Peak
2483.5	52.95	-1.05	54.00	53.01	31.98	4.05	36.09	100	287	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	64.1	-9.9	74.00	64.16	31.98	4.05	36.09	100	106	Peak
2483.5	47.65	-6.35	54.00	47.71	31.98	4.05	36.09	100	106	Average

Test Mode :	Mode 14	Temperature :	20~21°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	48~49%
Test Channel :	09	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	69.45	-4.55	74.00	69.51	31.98	4.05	36.09	100	285	Peak
2483.5	52.31	-1.69	54.00	52.37	31.98	4.05	36.09	100	285	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	63.97	-10.03	74.00	64.03	31.98	4.05	36.09	100	107	Peak
2483.5	47.44	-6.56	54.00	47.5	31.98	4.05	36.09	100	107	Average



Test Mode :	Mode 15	Temperature :	20~21°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	48~49%
Test Channel :	09	Test Engineer :	Mac Lin

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	69.05	-4.95	74.00	69.11	31.98	4.05	36.09	100	289	Peak
2483.5	51.98	-2.02	54.00	52.04	31.98	4.05	36.09	100	289	Average

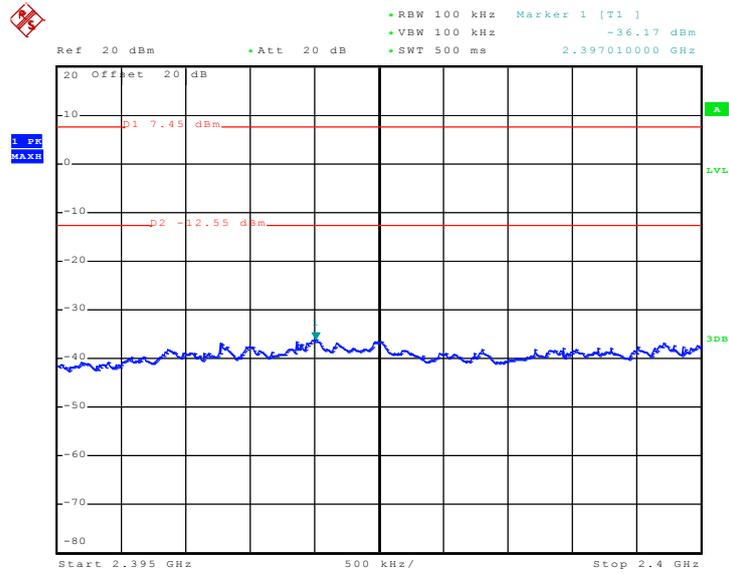
ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	62.64	-11.36	74.00	62.7	31.98	4.05	36.09	100	121	Peak
2483.5	46.48	-7.52	54.00	46.54	31.98	4.05	36.09	100	121	Average



3.3.6 Test Plots of Conducted Band Edges

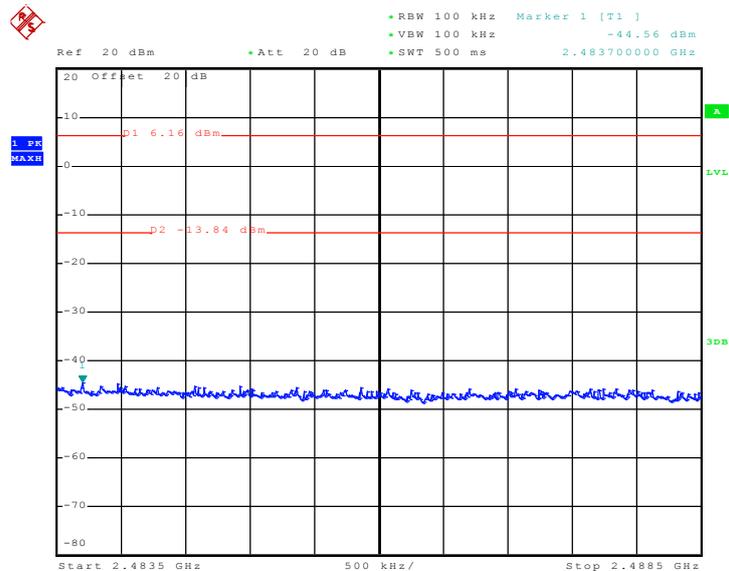
Test Mode :	Mode 1 and 3	Temperature :	23~25°C
Test Band :	802.11b	Relative Humidity :	42~45%
Test Channel :	01 and 11	Test Engineer :	Andy Yeh

Low Band Edge Plot on 802.11b Channel 01



Date: 7.JAN.2010 01:37:08

High Band Edge Plot on 802.11b Channel 11

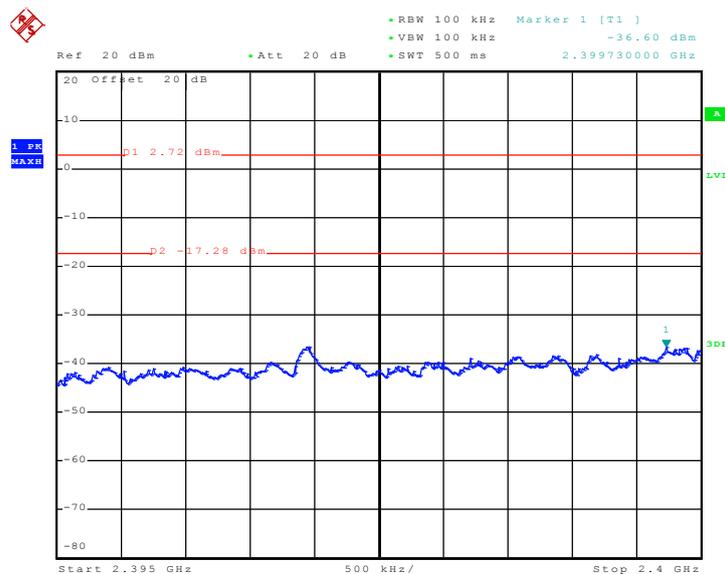


Date: 7.JAN.2010 01:38:54



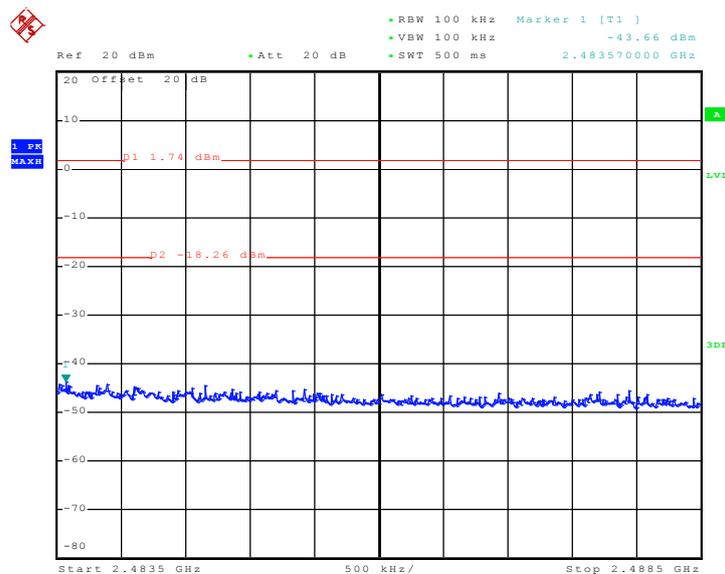
Test Mode :	Mode 4 and 6	Temperature :	23~25°C
Test Band :	802.11g	Relative Humidity :	42~45%
Test Channel :	01 and 11	Test Engineer :	Andy Yeh

Low Band Edge Plot on 802.11g Channel 01



Date: 7.JAN.2010 01:35:43

High Band Edge Plot on 802.11g Channel 11

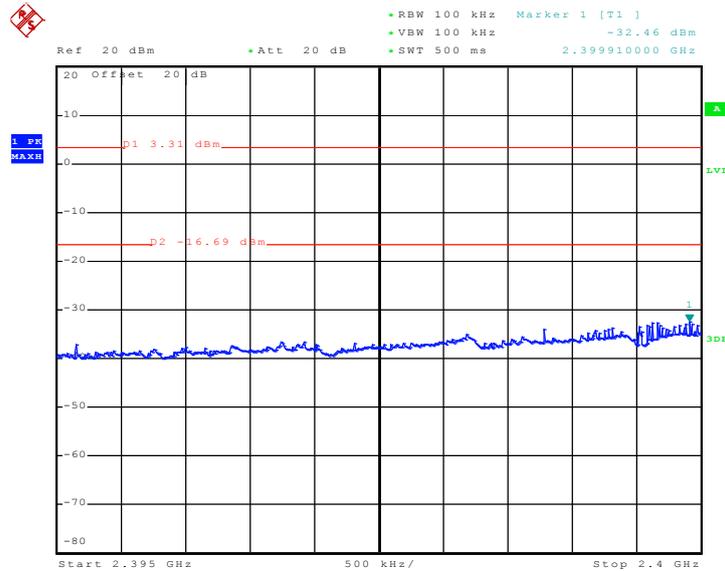


Date: 7.JAN.2010 01:32:21



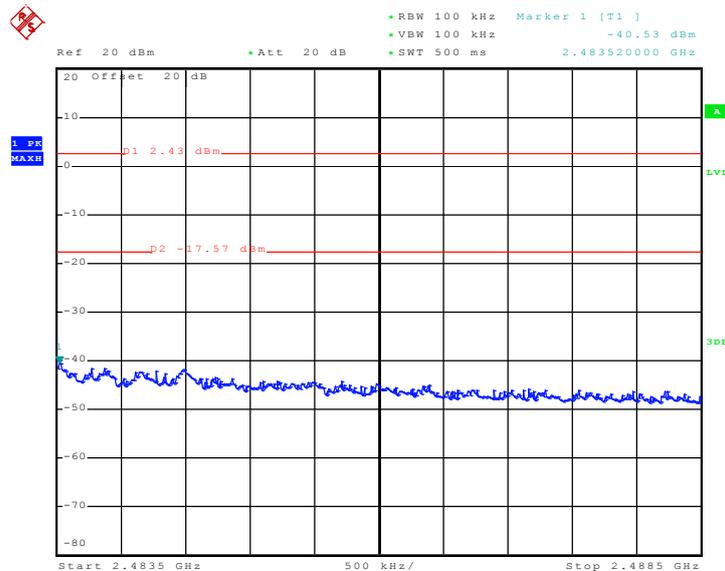
Test Mode :	Mode 7 and 9	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~45%
Test Channel :	01 and 11	Test Engineer :	Andy Yeh

Low Band Edge Plot on 802.11n (BW 20MHz) Channel 01



Date: 7.JAN.2010 01:28:44

High Band Edge Plot on 802.11n (BW 20MHz) Channel 11

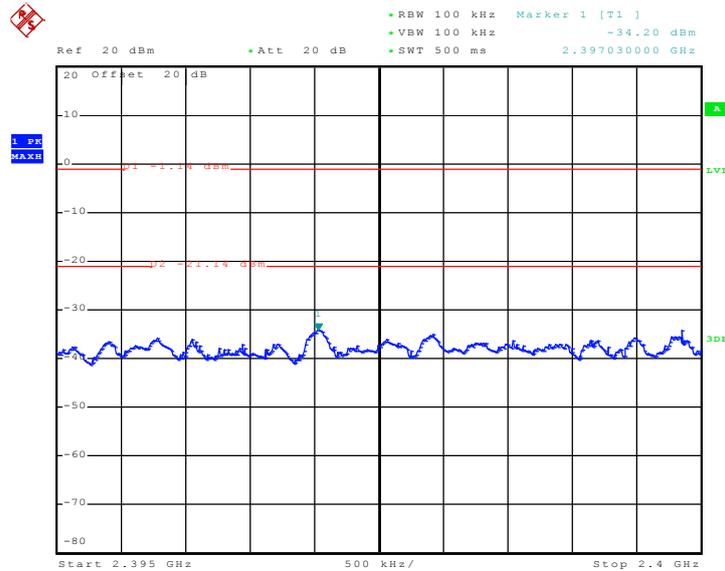


Date: 7.JAN.2010 01:30:17



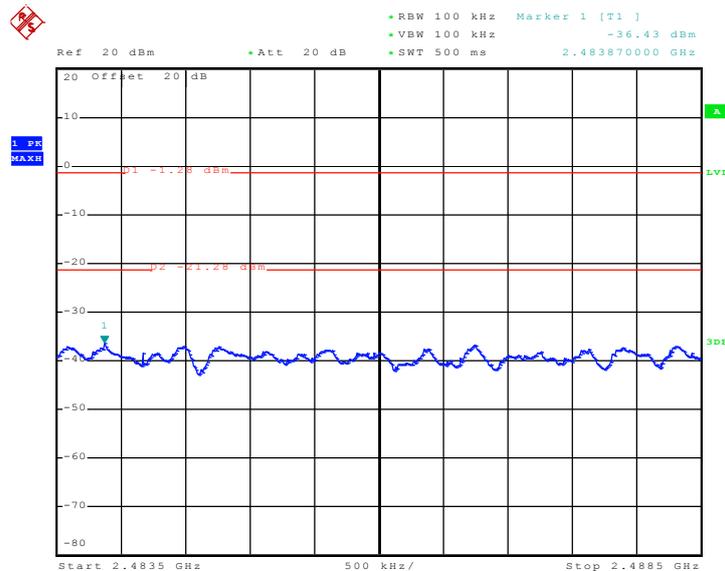
Test Mode :	Mode 10 and 12	Temperature :	23~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	42~45%
Test Channel :	03 and 09	Test Engineer :	Andy Yeh

Low Band Edge Plot on 802.11n (BW 40MHz) Channel 03



Date: 7.JAN.2010 01:26:13

High Band Edge Plot on 802.11n (BW 40MHz) Channel 09



Date: 7.JAN.2010 01:24:41

3.4 Spurious Emission Measurement

3.4.1 Limit of Spurious Emission Measurement

All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band.

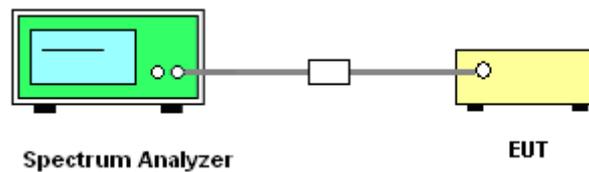
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set RBW = 100 kHz, Video bandwidth (VBW) \geq RBW, 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.

3.4.4 Test Setup

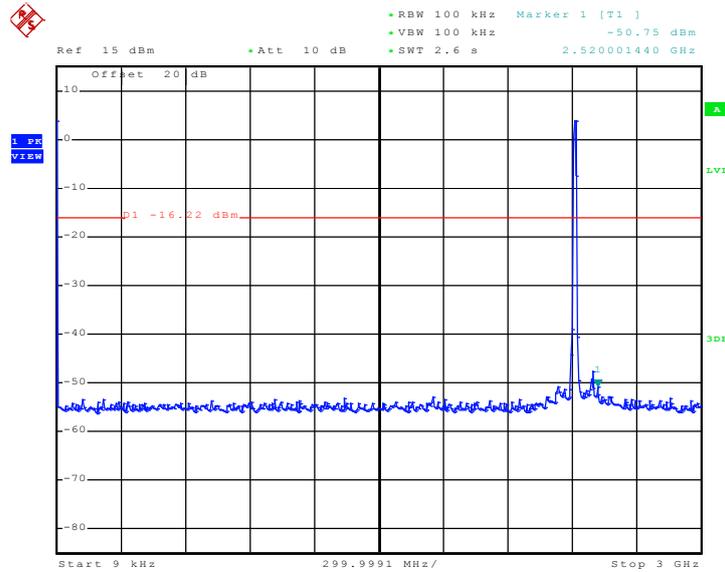




3.4.5 Test Plots of Spurious Emission

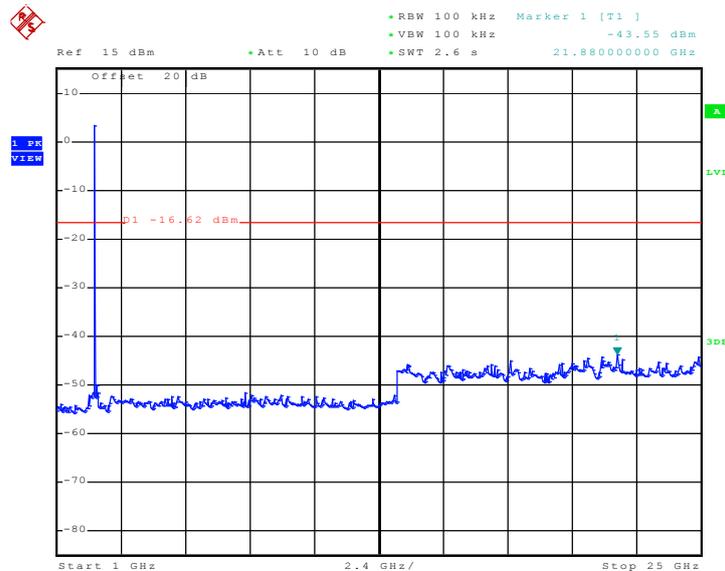
Test Mode :	Mode 1	Temperature :	23~25°C
Test Band :	802.11b	Relative Humidity :	42~45%
Test Channel :	01	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:35:06

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

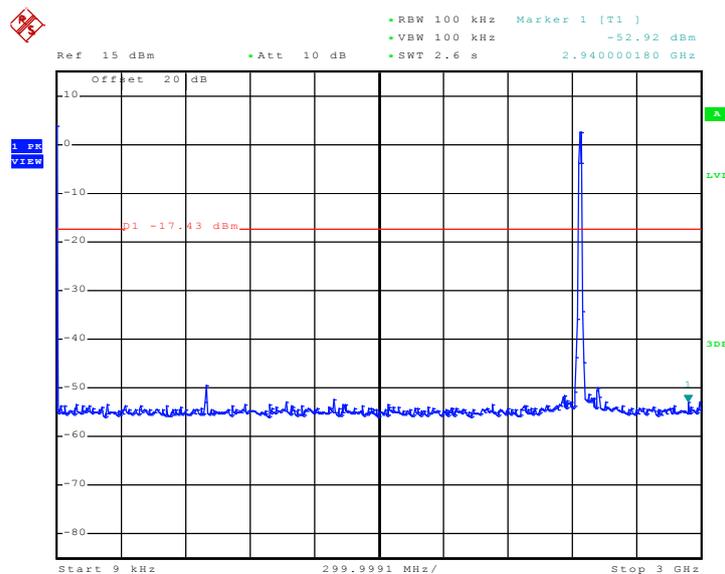


Date: 7.JAN.2010 02:35:42



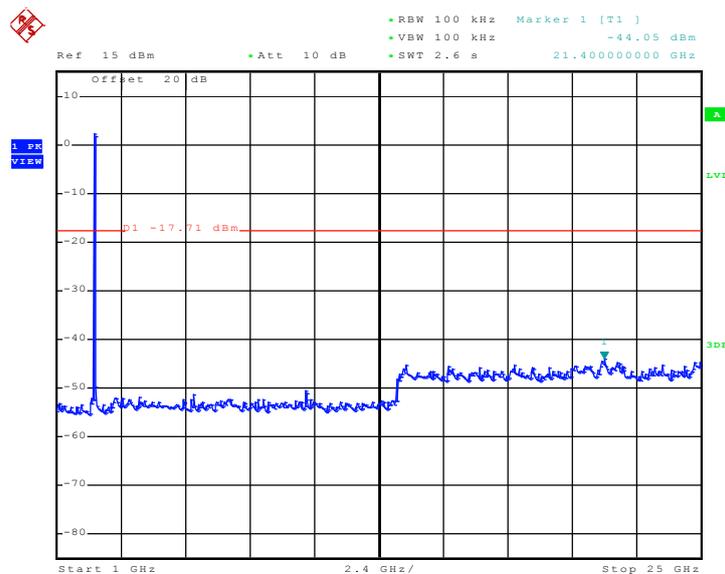
Test Mode :	Mode 2	Temperature :	23~25°C
Test Band :	802.11b	Relative Humidity :	42~45%
Test Channel :	06	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:36:10

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

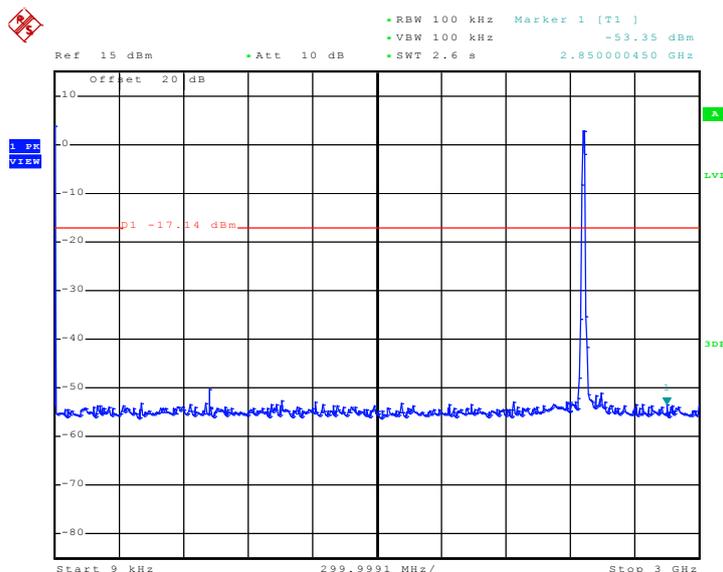


Date: 7.JAN.2010 02:36:49



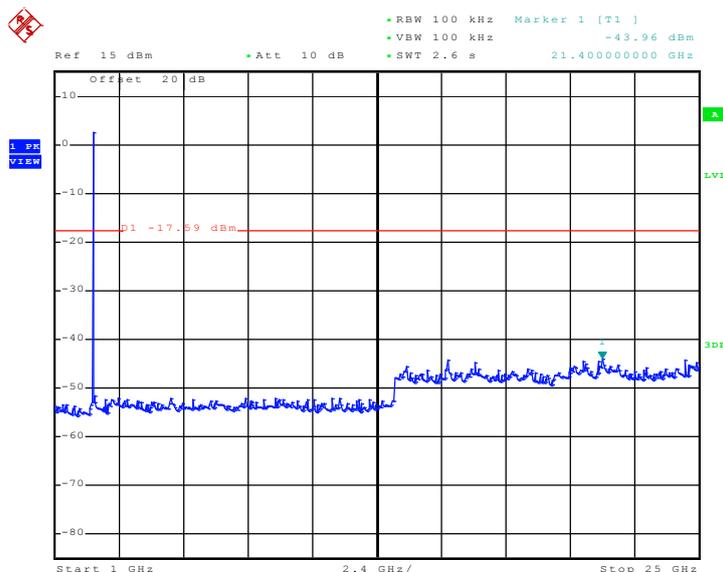
Test Mode :	Mode 3	Temperature :	23~25°C
Test Band :	802.11b	Relative Humidity :	42~45%
Test Channel :	11	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:37:14

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

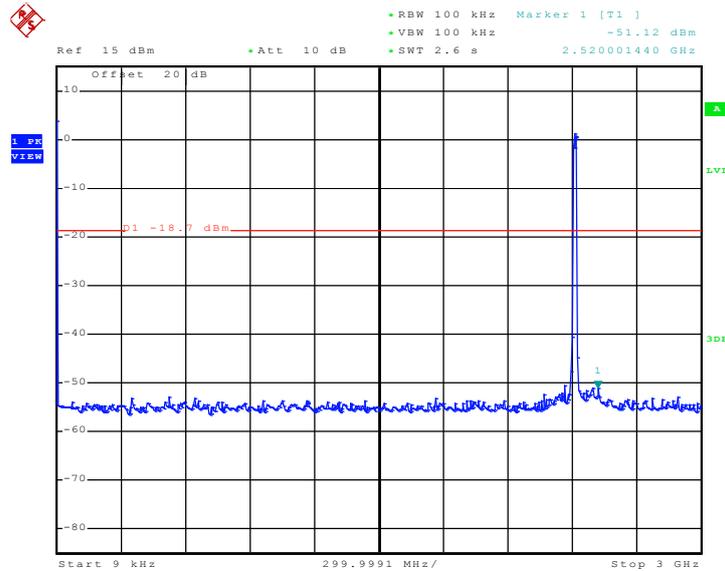


Date: 7.JAN.2010 02:37:46



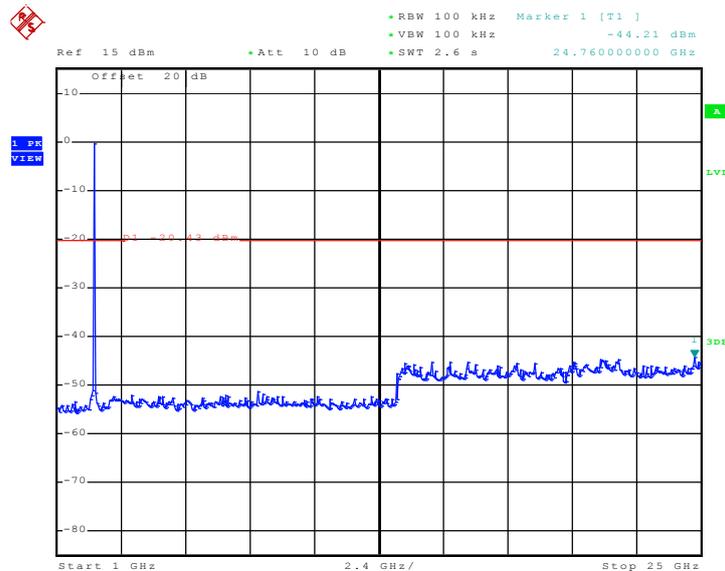
Test Mode :	Mode 4	Temperature :	23~25°C
Test Band :	802.11g	Relative Humidity :	42~45%
Test Channel :	01	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:38:24

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

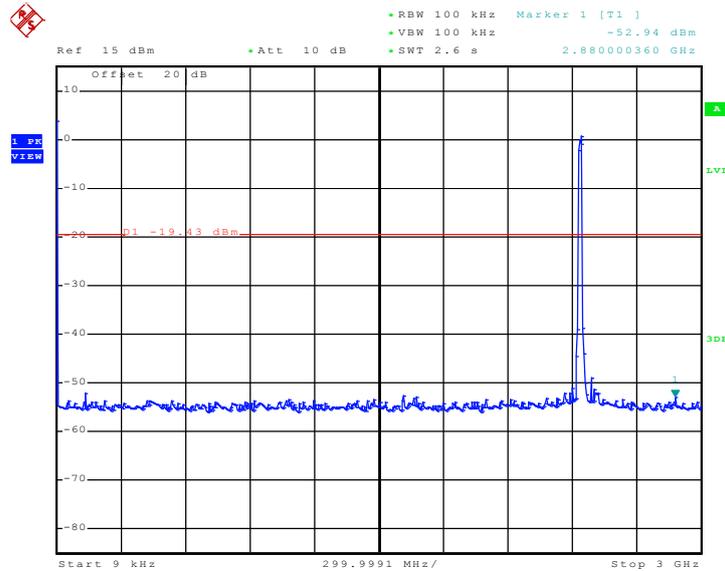


Date: 7.JAN.2010 02:38:46



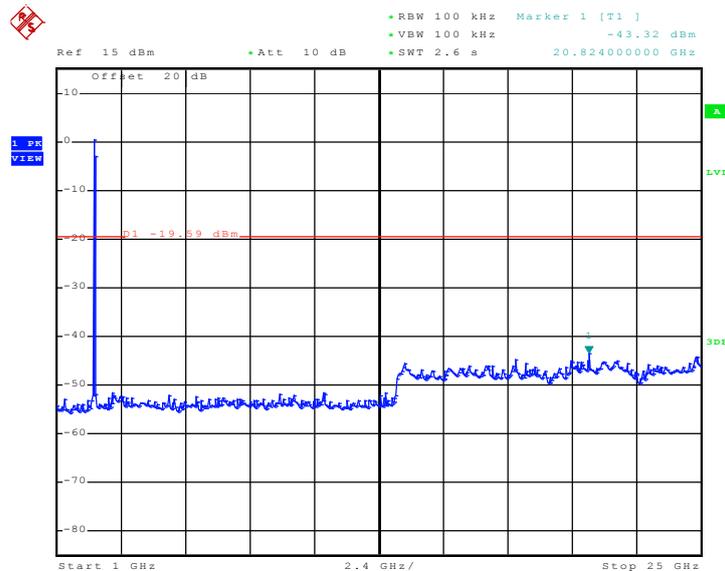
Test Mode :	Mode 5	Temperature :	23~25°C
Test Band :	802.11g	Relative Humidity :	42~45%
Test Channel :	06	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:39:23

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

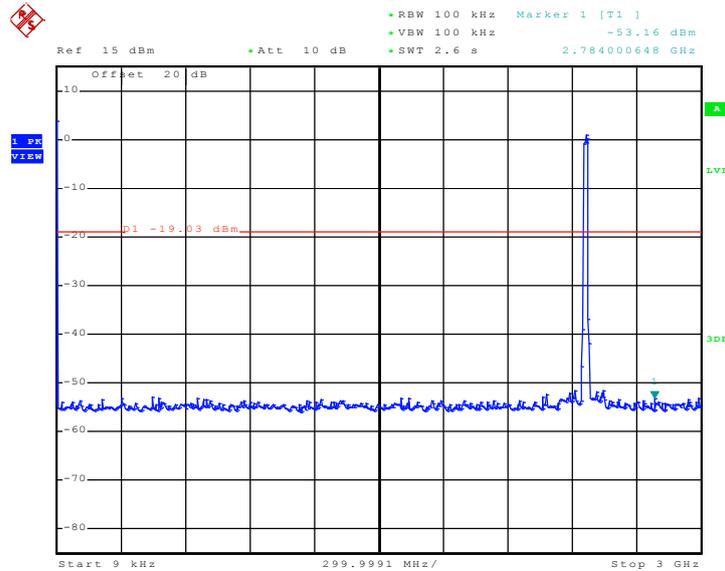


Date: 7.JAN.2010 02:39:53



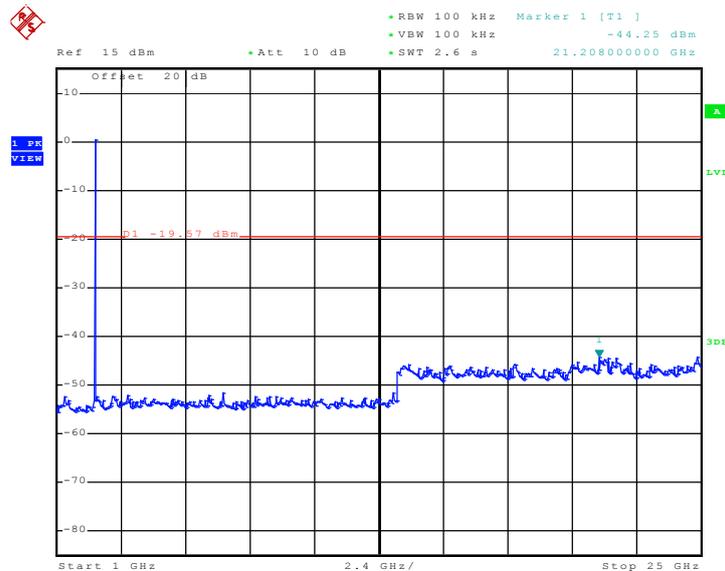
Test Mode :	Mode 6	Temperature :	23~25°C
Test Band :	802.11g	Relative Humidity :	42~45%
Test Channel :	11	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:40:22

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

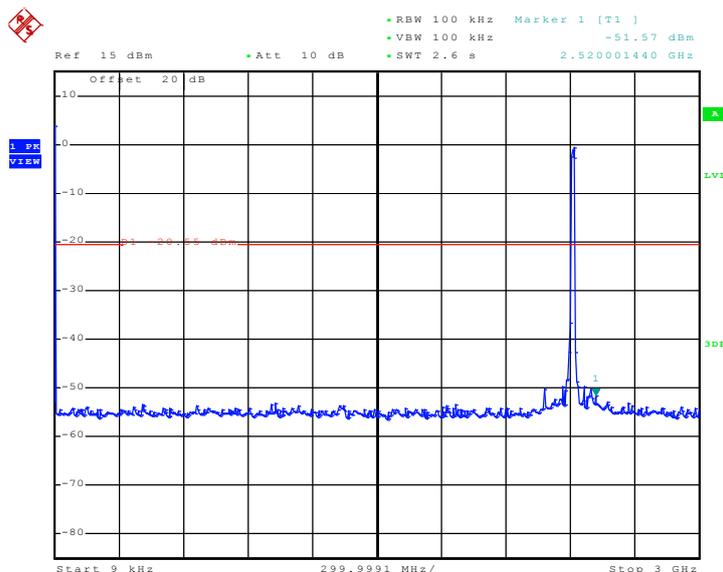


Date: 7.JAN.2010 02:41:09



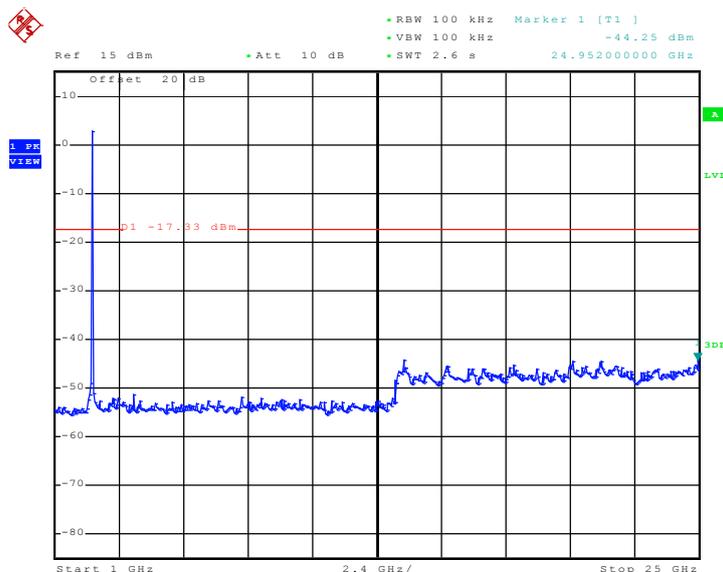
Test Mode :	Mode 7	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~45%
Test Channel :	01	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:46:02

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

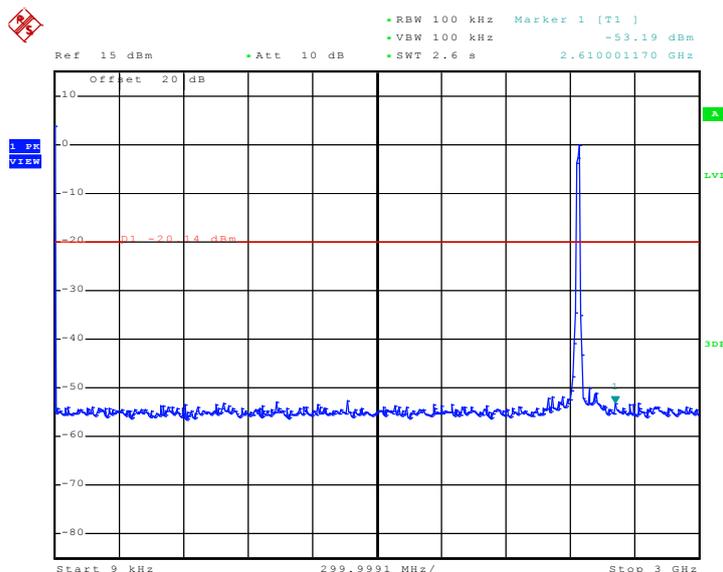


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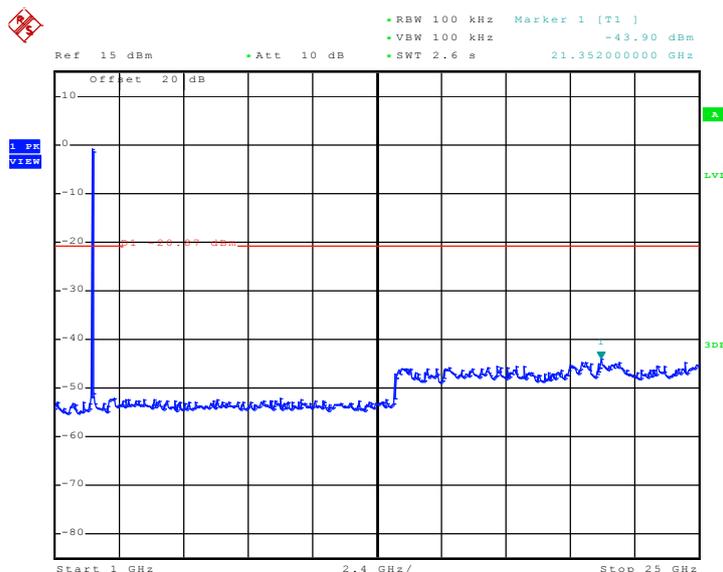
Test Mode :	Mode 8	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~45%
Test Channel :	06	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:46:58

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

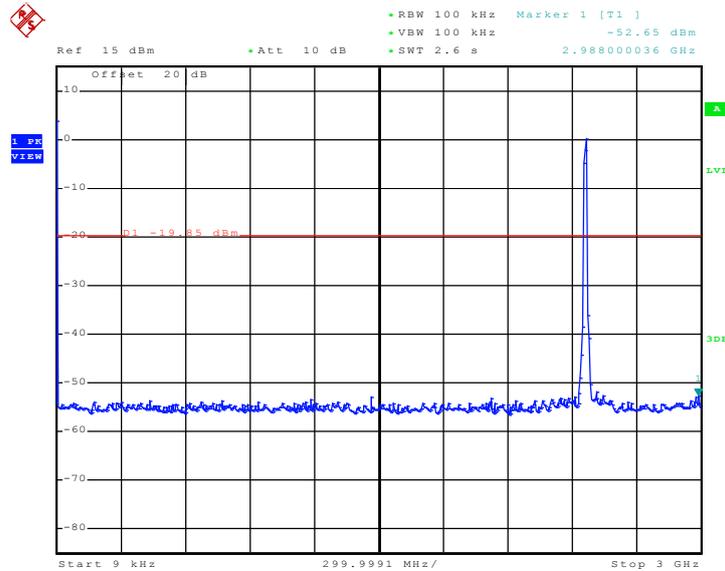


Date: 7.JAN.2010 02:47:31



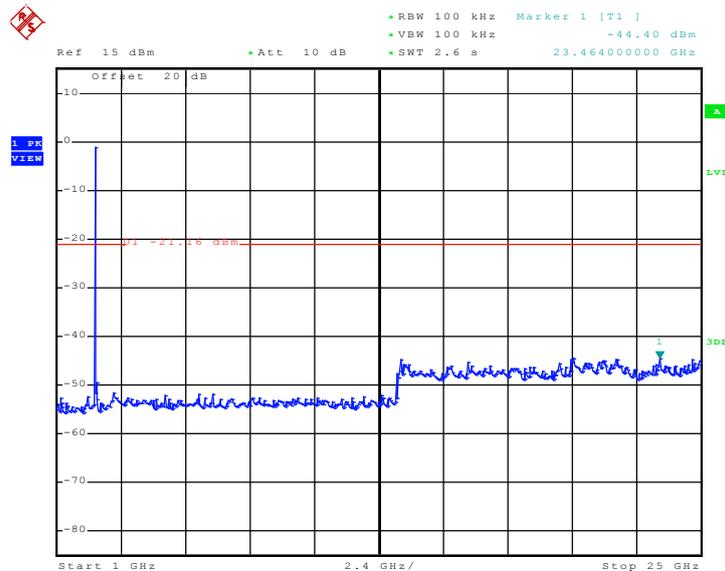
Test Mode :	Mode 9	Temperature :	23~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~45%
Test Channel :	11	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:48:04

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

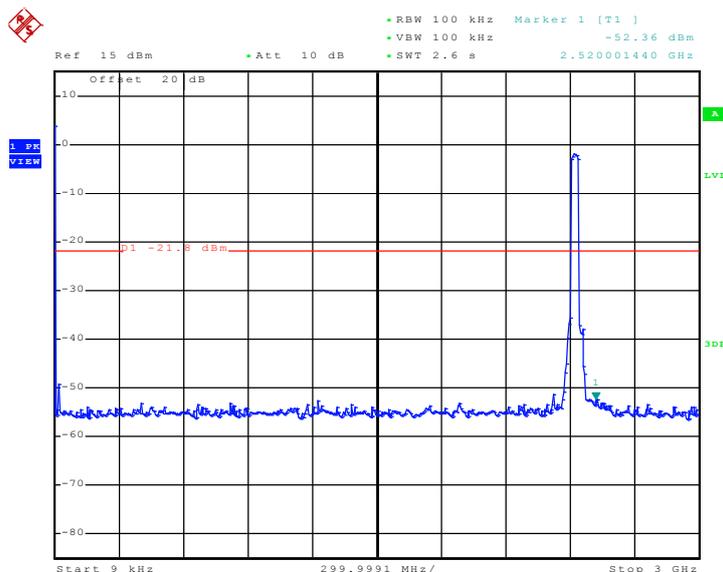


Date: 7.JAN.2010 02:48:32



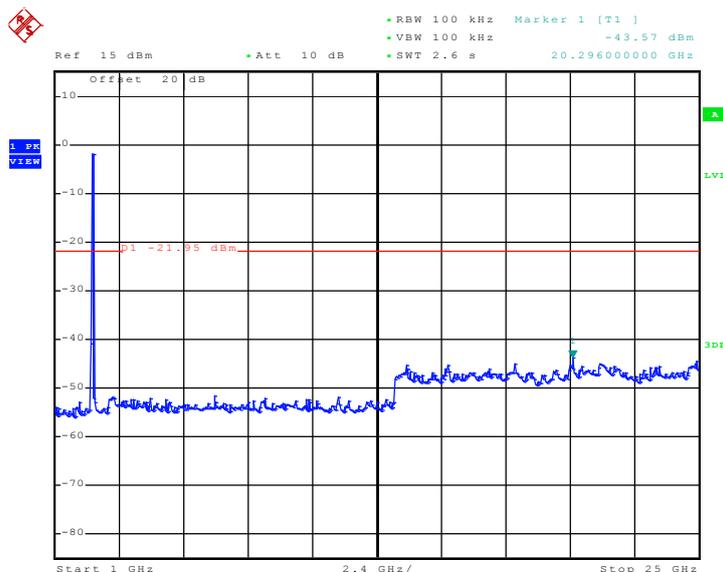
Test Mode :	Mode 10	Temperature :	23~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	42~45%
Test Channel :	03	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:49:02

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

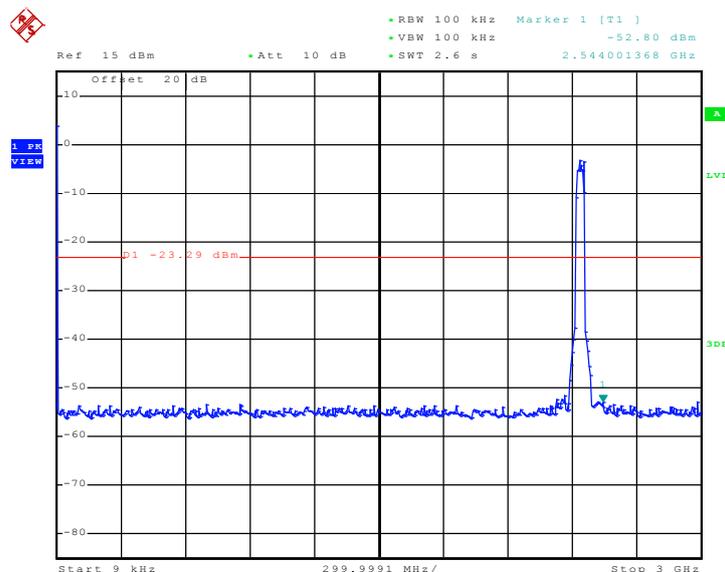


Date: 7.JAN.2010 02:49:21



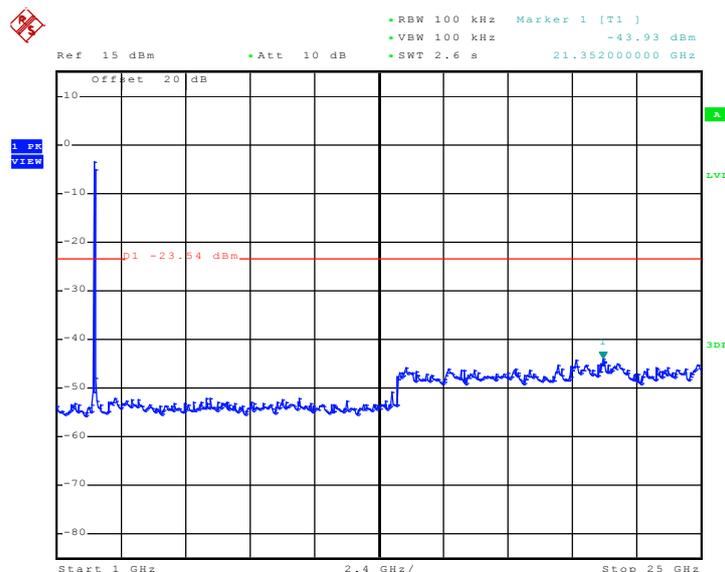
Test Mode :	Mode 11	Temperature :	23~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	42~45%
Test Channel :	06	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:49:44

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz

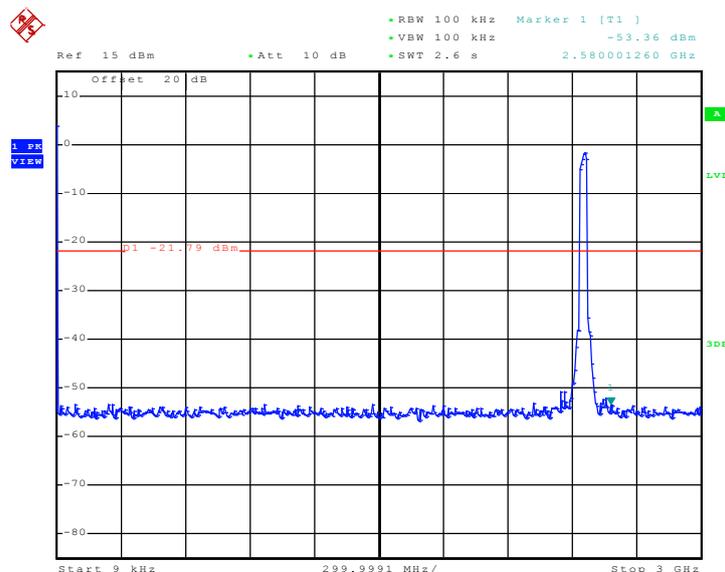


Date: 7.JAN.2010 02:49:58



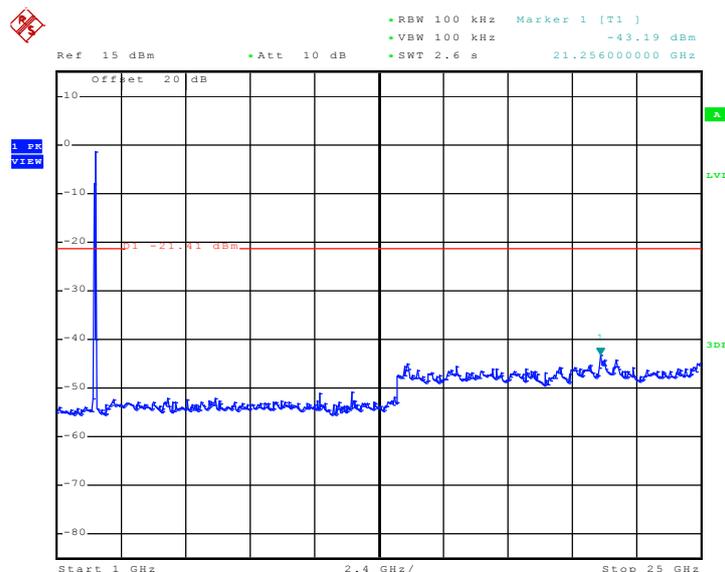
Test Mode :	Mode 12	Temperature :	23~25°C
Test Band :	802.11n (BW 40MHz)	Relative Humidity :	42~45%
Test Channel :	09	Test Engineer :	Andy Yeh

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 7.JAN.2010 02:50:27

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 7.JAN.2010 02:50:54

3.5 Power Spectral Density Measurement

3.5.1 Limit of Power Spectral Density

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

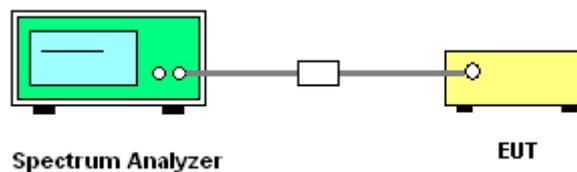
3.5.2 Measuring Instruments

See list of measuring instruments of this test report.

3.5.3 Test Procedures

1. The test follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Take the measured data from spectrum analyzer.

3.5.4 Test Setup



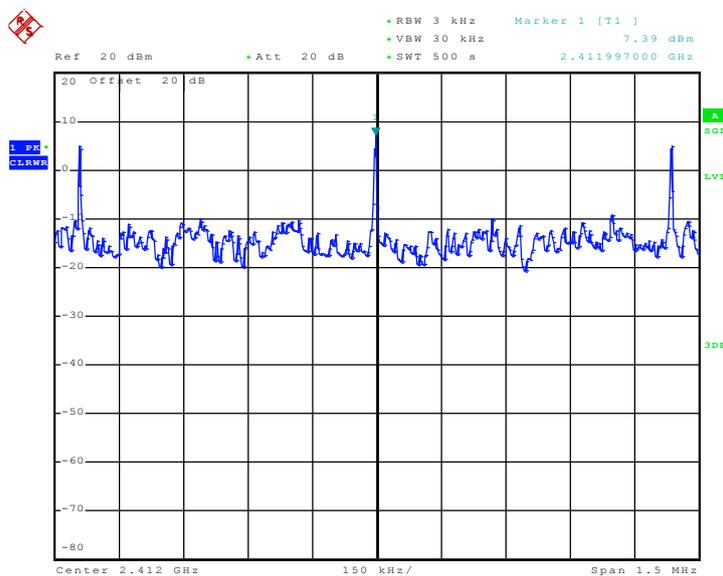


3.5.5 Test Result of Power Spectral Density

Test Mode :	Mode 1, 2, 3	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11b Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	7.39	8	Pass
06	2437	6.10	8	Pass
11	2462	6.29	8	Pass

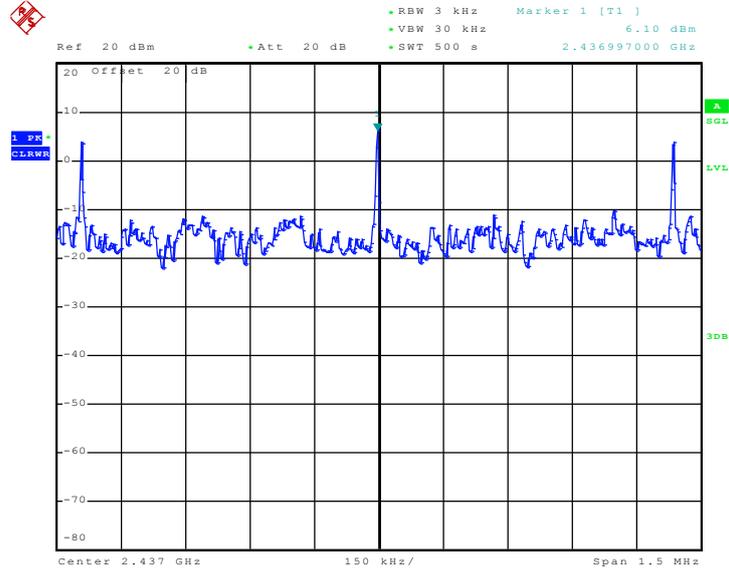
Mode 1 : PSD Plot on 802.11b Channel 01



Date: 7..JAN.2010 04:04:31

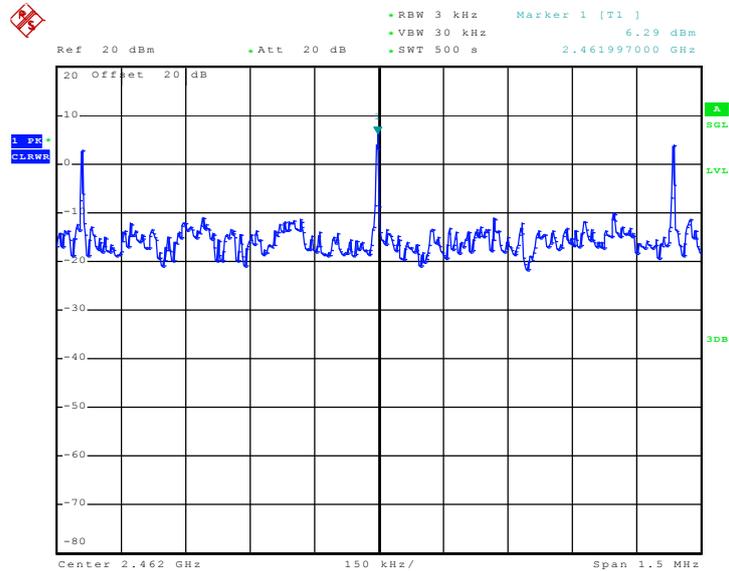


Mode 2 : PSD Plot on 802.11b Channel 06



Date: 7..JAN.2010 03:55:32

Mode 3 : PSD Plot on 802.11b Channel 11



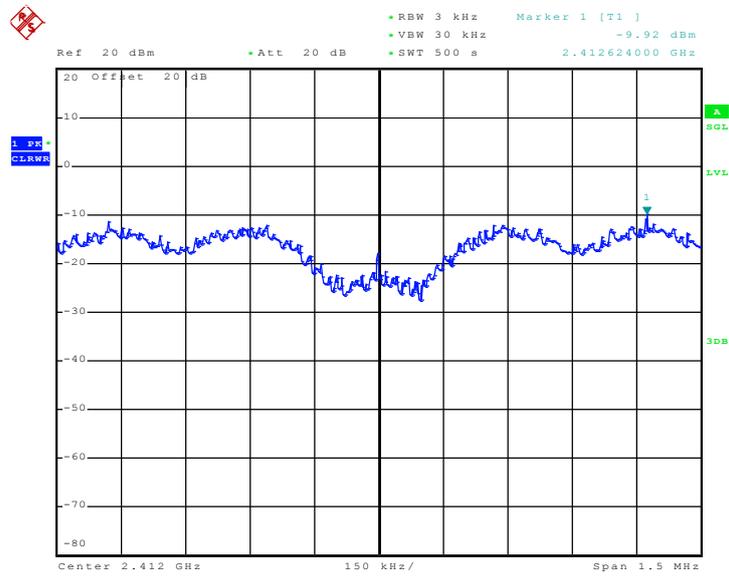
Date: 7..JAN.2010 03:46:23



Test Mode :	Mode 4, 5, 6	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11g Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-9.92	8	Pass
06	2437	-14.44	8	Pass
11	2462	-14.24	8	Pass

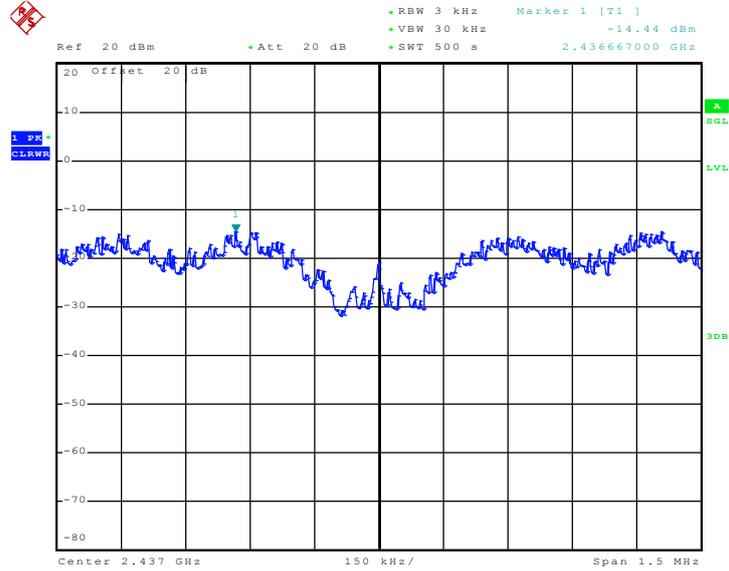
Mode 4 : PSD Plot on 802.11g Channel 01



Date: 7..JAN.2010 04:15:06

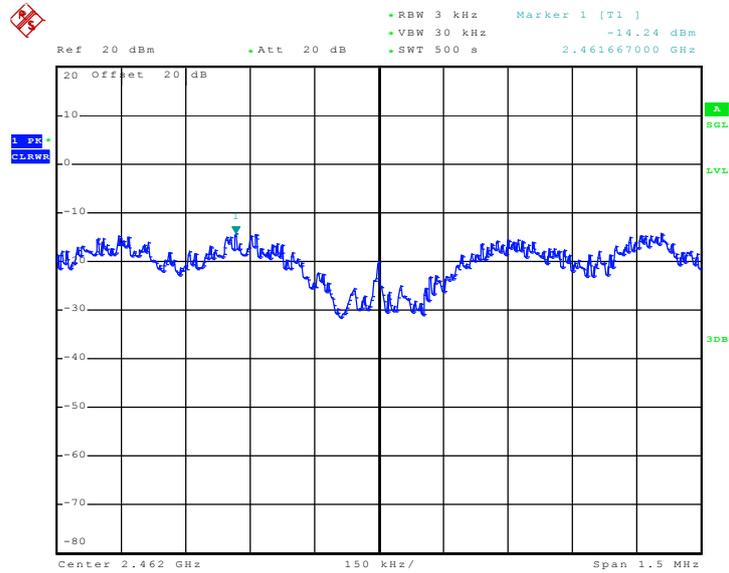


Mode 5 : PSD Plot on 802.11g Channel 06



Date: 7..JAN.2010 04:24:01

Mode 6 : PSD Plot on 802.11g Channel 11



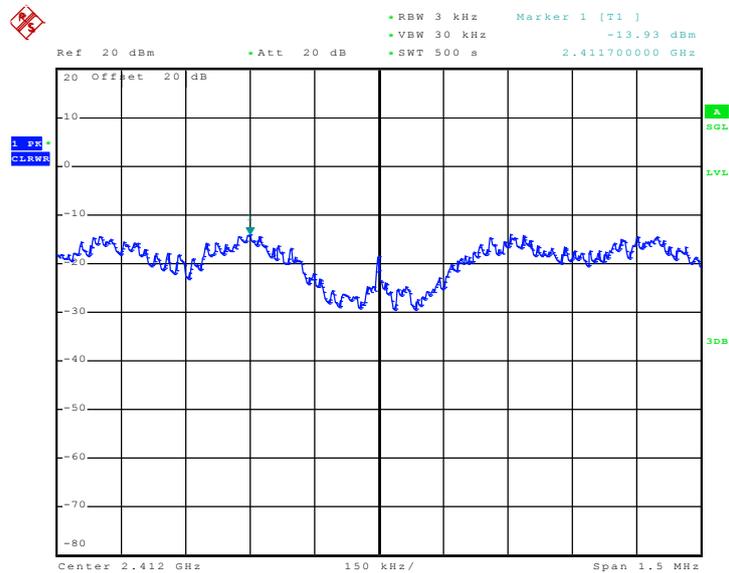
Date: 7..JAN.2010 04:32:56



Test Mode :	Mode 7, 8, 9	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-13.93	8	Pass
06	2437	-15.05	8	Pass
11	2462	-12.41	8	Pass

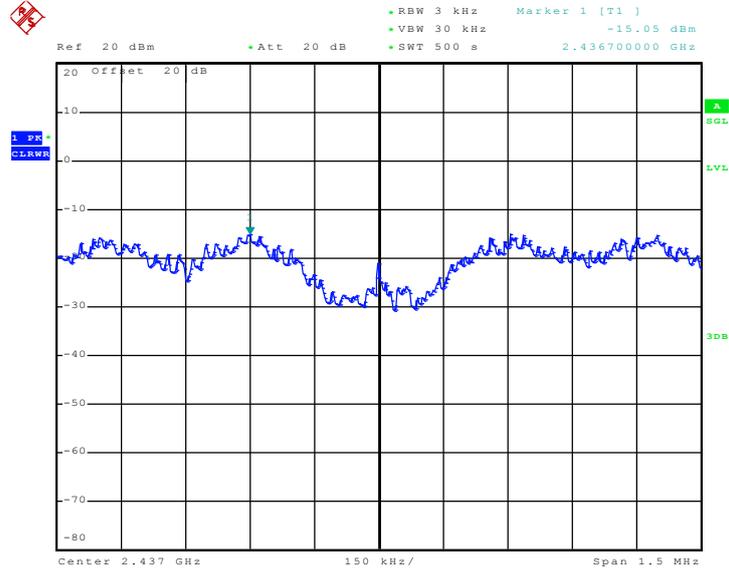
Mode 7 : PSD Plot on 802.11n (BW 20MHz) Channel 01



Date: 7..JAN.2010 04:59:53

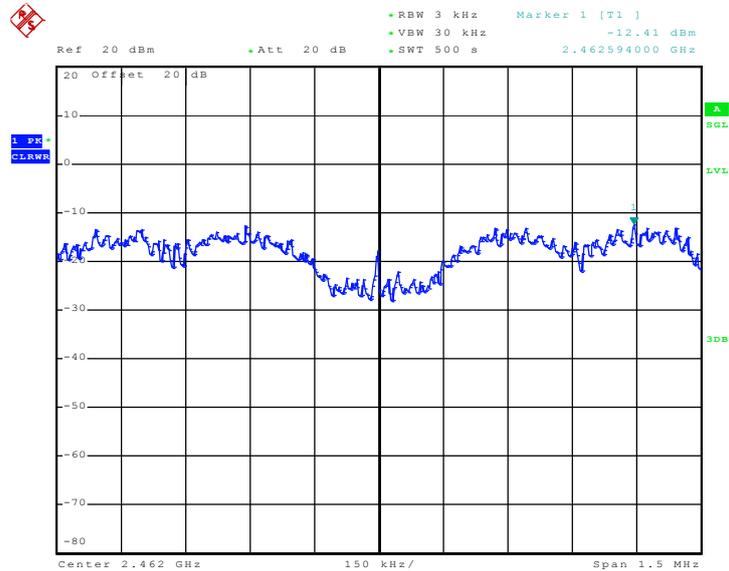


Mode 8 : PSD Plot on 802.11n (BW 20MHz) Channel 06



Date: 7..JAN.2010 04:50:41

Mode 9 : PSD Plot on 802.11n (BW 20MHz) Channel 11



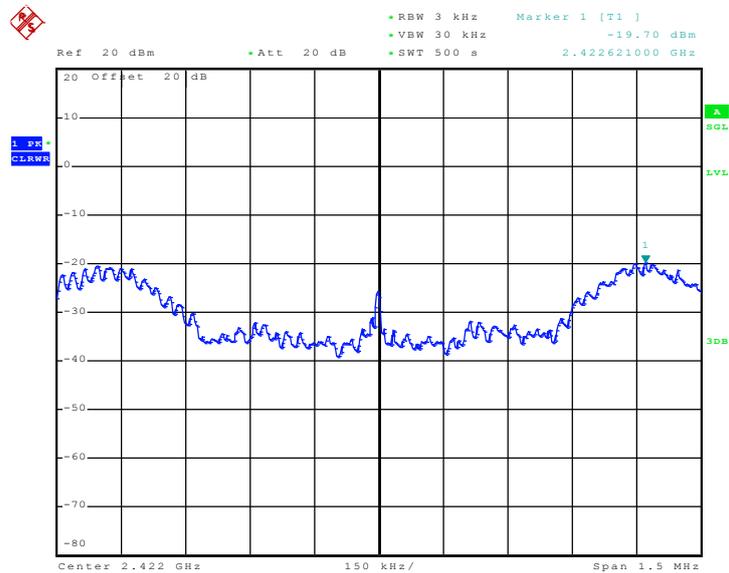
Date: 7..JAN.2010 04:41:33



Test Mode :	Mode 10, 11, 12	Temperature :	23~25°C
Test Engineer :	Andy Yeh	Relative Humidity :	42~45%

Channel	Frequency (MHz)	802.11n (BW 40MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
03	2422	-19.70	8	Pass
06	2437	-19.85	8	Pass
09	2452	-21.33	8	Pass

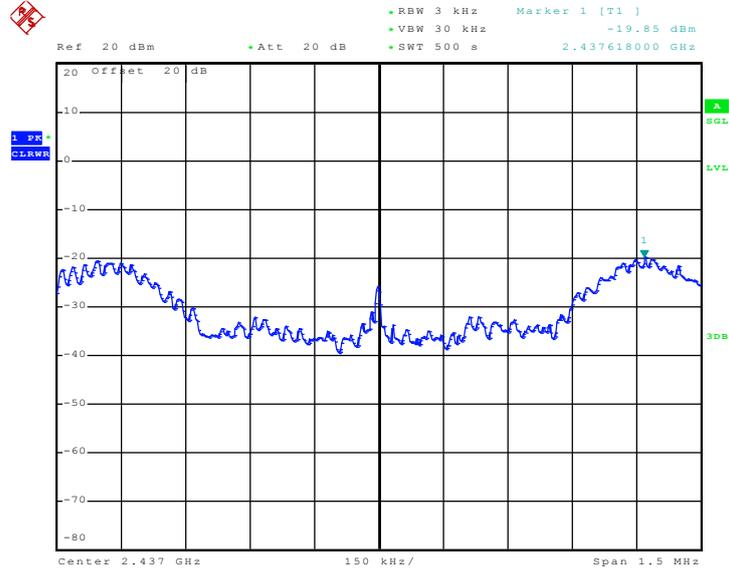
Mode 10 : PSD Plot on 802.11n (BW 40MHz) Channel 03



Date: 7..JAN.2010 05:09:09

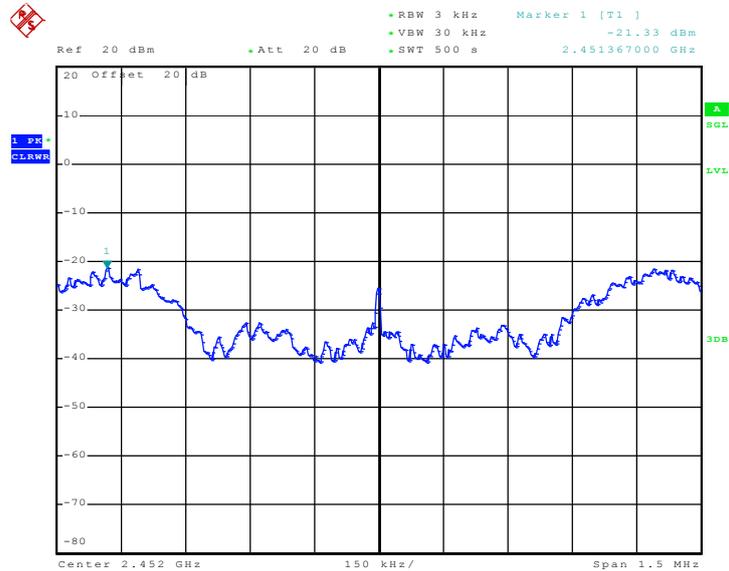


Mode 11 : PSD Plot on 802.11n (BW 40MHz) Channel 06



Date: 7..JAN.2010 05:18:19

Mode 12 : PSD Plot on 802.11n (BW 40MHz) Channel 09



Date: 7..JAN.2010 05:27:50

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

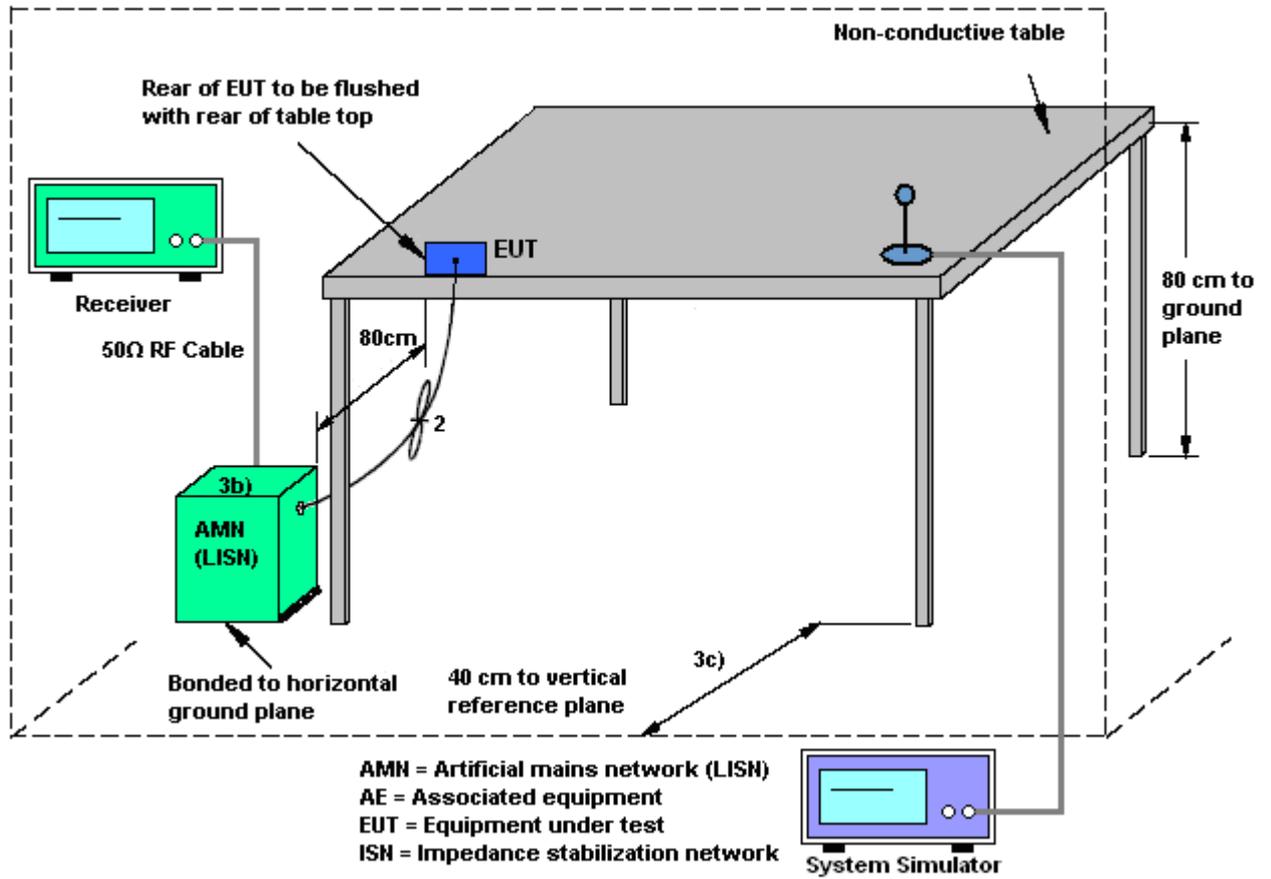
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

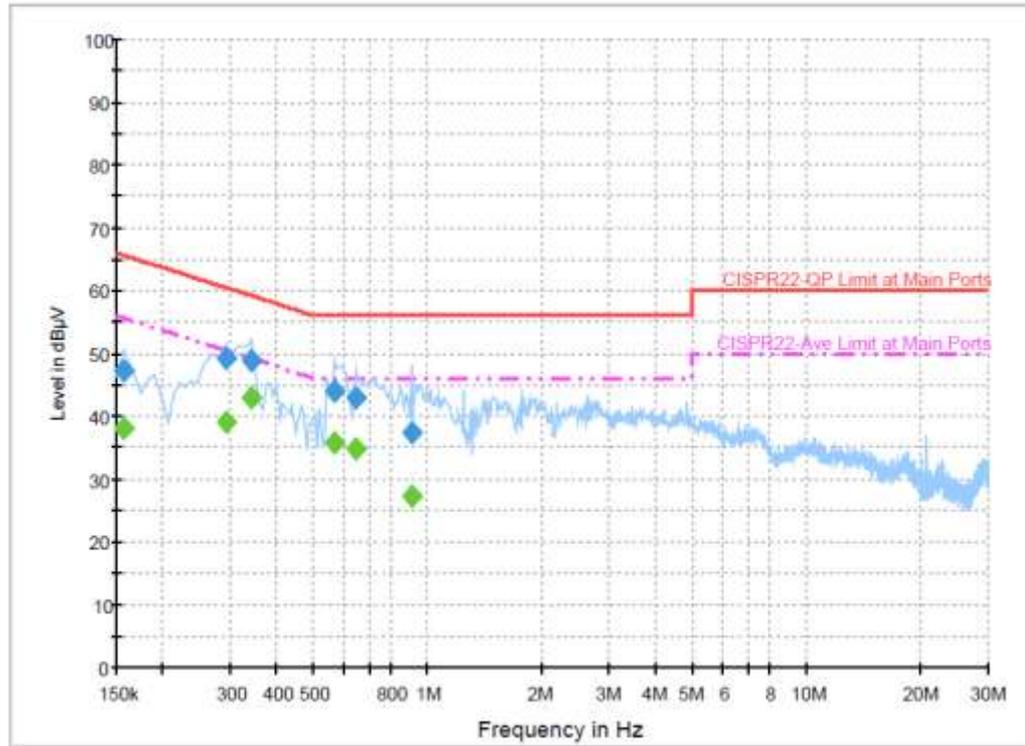
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Cona Huang	Relative Humidity :	40~43%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Link + LAN Link + USB Dongle (GPRS850 Idle) + Adapter 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result 1

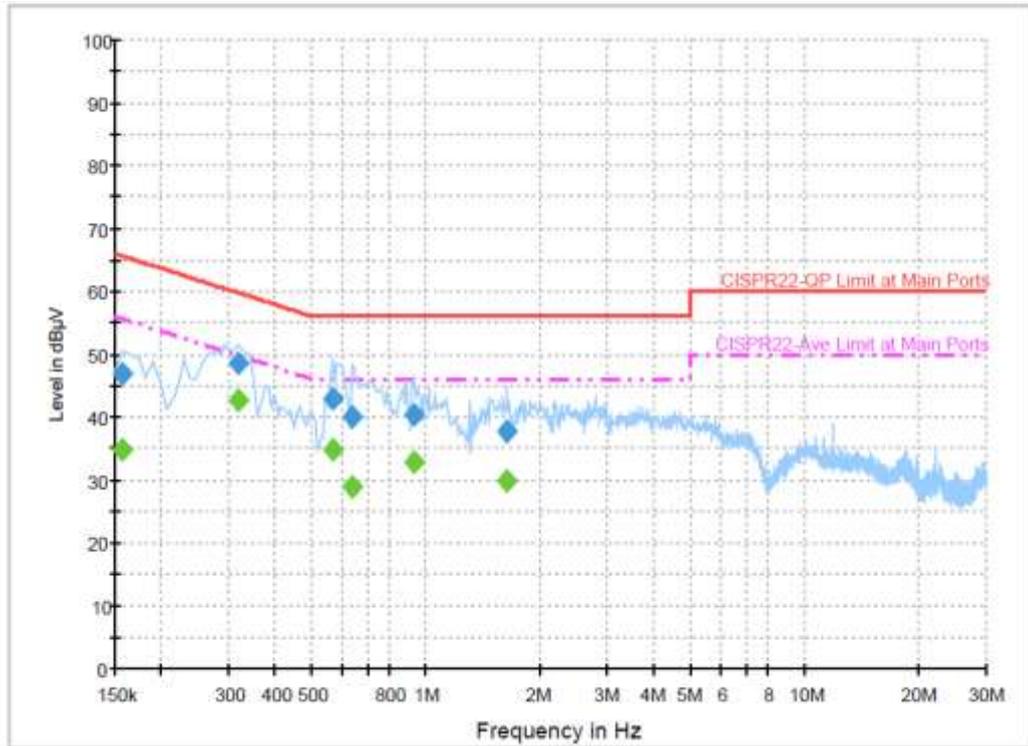
Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	47.3	Off	L1	19.5	18.3	65.6
0.294000	49.3	Off	L1	19.5	11.1	60.4
0.342000	48.7	Off	L1	19.5	10.5	59.2
0.566000	43.8	Off	L1	19.5	12.2	56.0
0.646000	43.0	Off	L1	19.5	13.0	56.0
0.902000	37.5	Off	L1	19.5	18.5	56.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.158000	38.0	Off	L1	19.5	17.6	55.6
0.294000	38.9	Off	L1	19.5	11.5	50.4
0.342000	42.9	Off	L1	19.5	6.3	49.2
0.566000	35.7	Off	L1	19.5	10.3	46.0
0.646000	34.9	Off	L1	19.5	11.2	46.0
0.902000	27.2	Off	L1	19.5	18.8	46.0



Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Cona Huang	Relative Humidity :	40~43%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Link + LAN Link + USB Dongle (GPRS850 Idle) + Adapter 1		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	47.0	Off	N	19.5	18.6	65.6
0.318000	48.4	Off	N	19.5	11.4	59.8
0.566000	42.9	Off	N	19.5	13.1	56.0
0.638000	40.1	Off	N	19.5	15.9	56.0
0.926000	40.2	Off	N	19.4	15.8	56.0
1.630000	37.9	Off	N	19.5	18.1	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	34.6	Off	N	19.5	21.0	55.6
0.318000	42.6	Off	N	19.5	7.2	49.8
0.566000	34.8	Off	N	19.5	11.2	46.0
0.638000	28.8	Off	N	19.5	17.2	46.0
0.926000	32.7	Off	N	19.4	13.3	46.0
1.630000	29.9	Off	N	19.5	16.1	46.0



3.7 Radiated Emission Measurement

3.7.1 Limit of Radiated 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. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

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

3.7.2 Measuring Instruments

See list of measuring instruments of this test report.

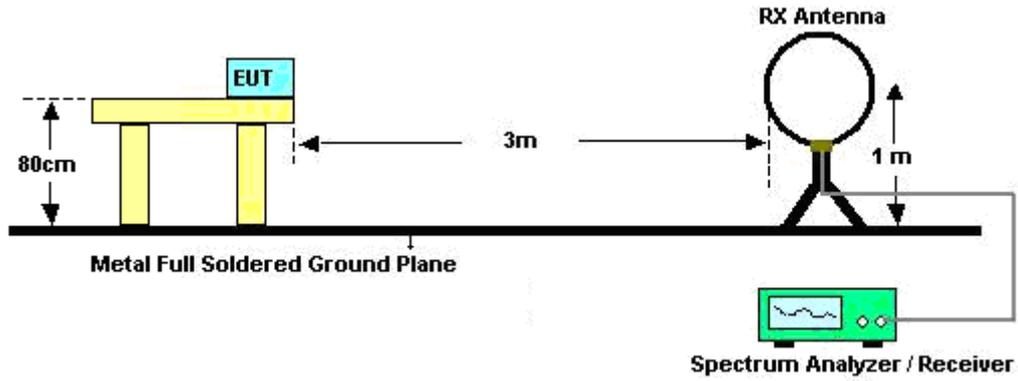
3.7.3

3.7.4 Test Procedures

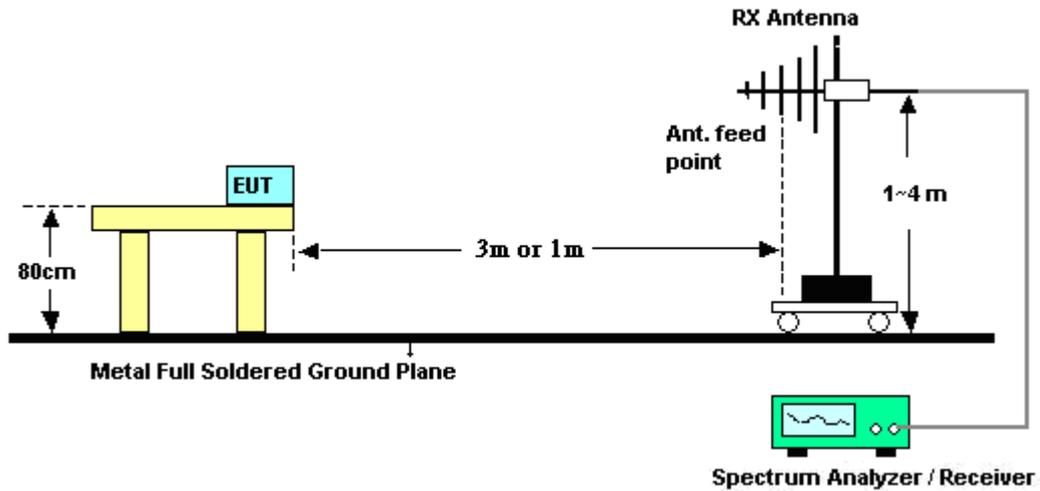
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
 - (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz; VBW \geq RBW; Sweep = auto; Detector function = peak; Trace = max hold.
 - (2) Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.
Distance extrapolation factor = $20 \log(\text{specific distance [3m]} / \text{test distance [1m]})$ (dB)
3. Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

3.7.5 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz





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

Test Engineer :	Mac Lin	Temperature :	20~21°C	
		Relative Humidity :	48~49%	
Frequency (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

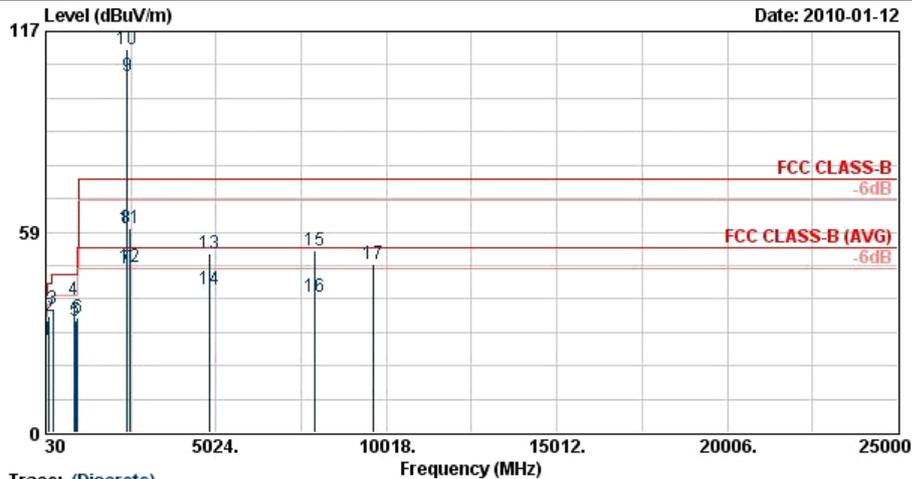
Distance extrapolation factor = $40 \log(\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.



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

Test Mode :	Mode 1	Temperature :	20~21°C
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #17 signal is not in the restricted band.		



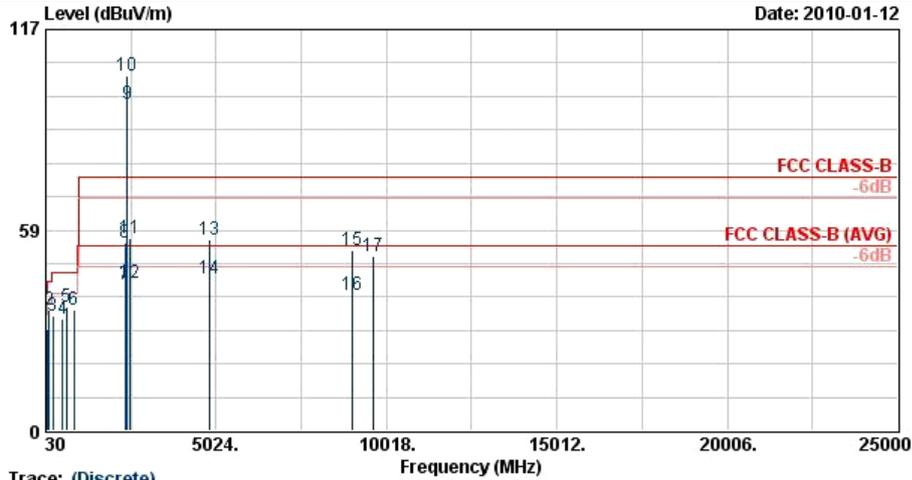
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 1

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	100.74	26.84	-16.66	43.50	46.34	10.87	1.65	32.02	---	---	Peak
2	125.04	34.10	-9.40	43.50	52.10	11.91	1.80	31.71	---	---	Peak
3	249.78	36.12	-9.88	46.00	52.95	12.27	2.69	31.79	---	---	Peak
4	852.30	38.72	-7.28	46.00	45.34	20.42	5.32	32.36	100	55	Peak
5	904.80	32.67	-13.33	46.00	38.10	20.75	5.47	31.65	---	---	Peak
6	959.40	33.65	-12.35	46.00	38.38	20.97	5.59	31.30	---	---	Peak
7	2389.63	47.92	-6.08	54.00	48.22	31.86	3.92	36.08	100	288	Average
8	2389.63	59.65	-14.35	74.00	59.95	31.86	3.92	36.08	100	288	Peak
9 @	2412.00	103.86			104.11	31.88	3.95	36.08	100	288	Average
10 X	2412.00	111.94			112.19	31.88	3.95	36.08	100	288	Peak
11	2494.00	59.40	-14.60	74.00	59.45	32.00	4.05	36.10	100	288	Peak
12 !	2494.00	48.30	-5.70	54.00	48.35	32.00	4.05	36.10	100	288	Average
13	4824.00	52.05	-21.95	74.00	48.48	33.90	5.77	36.10	199	282	Peak
14	4824.00	41.89	-12.11	54.00	38.32	33.90	5.77	36.10	199	282	Average
15	7911.00	52.87	-21.13	74.00	46.21	35.77	7.47	36.58	100	94	Peak
16	7911.00	39.67	-14.33	54.00	33.01	35.77	7.47	36.58	100	94	Average
17	9648.00	49.22	-24.78	74.00	88.69	-10.32	7.94	37.10	100	0	Peak



Test Mode :	Mode 1	Temperature :	20~21°C
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #17 signal is not in the restricted band.		



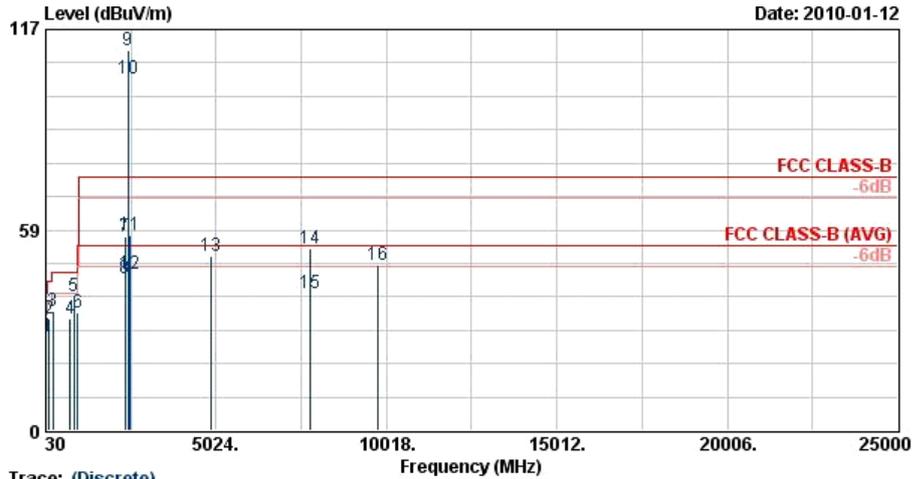
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 1

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	58.89	29.69	-10.31	40.00	53.57	6.91	1.24	32.02	---	---	Peak
2	125.04	35.07	-8.43	43.50	53.08	11.91	1.80	31.71	100	37	Peak
3	249.78	33.39	-12.61	46.00	50.22	12.27	2.69	31.79	---	---	Peak
4	532.40	32.81	-13.19	46.00	42.97	17.88	4.07	32.10	---	---	Peak
5	638.80	36.11	-9.89	46.00	44.59	18.92	4.54	31.94	---	---	Peak
6	852.30	35.29	-10.71	46.00	41.91	20.42	5.32	32.36	---	---	Peak
7	2356.37	42.77	-11.23	54.00	43.15	31.81	3.89	36.07	100	121	Average
8	2356.37	54.82	-19.18	74.00	55.20	31.81	3.89	36.07	100	121	Peak
9 @	2412.00	95.41			95.66	31.88	3.95	36.08	100	121	Average
10 X	2412.00	103.51			103.76	31.88	3.95	36.08	100	121	Peak
11	2492.00	56.02	-17.98	74.00	56.07	32.00	4.05	36.10	100	121	Peak
12	2492.00	43.21	-10.79	54.00	43.26	32.00	4.05	36.10	100	121	Average
13	4824.00	55.48	-18.52	74.00	51.92	33.90	5.77	36.10	100	335	Peak
14	4824.00	44.30	-9.70	54.00	40.73	33.90	5.77	36.10	100	335	Average
15	9000.00	52.75	-21.25	74.00	45.75	36.10	7.80	36.90	100	137	Peak
16	9000.00	39.55	-14.45	54.00	32.55	36.10	7.80	36.90	100	137	Average
17	9648.00	50.77	-23.23	74.00	90.24	-10.32	7.94	37.10	100	0	Peak



Test Mode :	Mode 2	Temperature :	20~21°C
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #16 signal is not in the restricted band.		

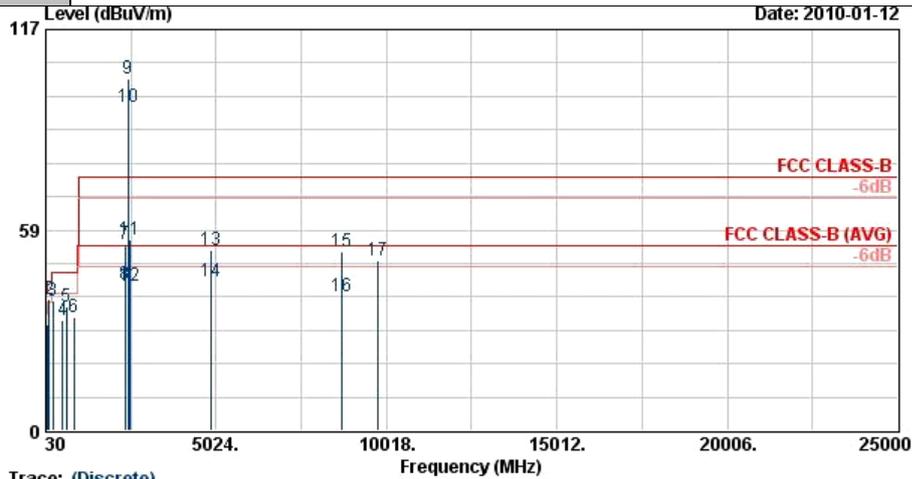


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 2

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB	cm	deg	
1	100.74	27.29	-16.21	43.50	46.79	10.87	1.65	32.02	---	---	Peak
2	125.04	32.58	-10.92	43.50	50.59	11.91	1.80	31.71	---	---	Peak
3	249.78	34.65	-11.35	46.00	51.48	12.27	2.69	31.79	---	---	Peak
4	745.90	32.71	-13.29	46.00	40.27	19.62	4.92	32.09	---	---	Peak
5	852.30	39.20	-6.80	46.00	45.83	20.42	5.32	32.36	100	62	Peak
6	959.40	34.50	-11.50	46.00	39.23	20.97	5.59	31.30	---	---	Peak
7	2358.00	56.38	-17.62	74.00	56.76	31.81	3.89	36.07	100	285	Peak
8	2358.00	44.24	-9.76	54.00	44.62	31.81	3.89	36.07	100	285	Average
9 X	2437.00	110.71			110.88	31.93	3.99	36.09	100	285	Peak
10 @	2437.00	102.69			102.86	31.93	3.99	36.09	100	285	Average
11	2492.00	56.82	-17.18	74.00	56.87	32.00	4.05	36.10	100	285	Peak
12	2492.00	45.78	-8.22	54.00	45.83	32.00	4.05	36.10	100	285	Average
13	4874.00	50.94	-23.06	74.00	47.34	33.90	5.80	36.10	100	0	Peak
14	7797.00	53.18	-20.82	74.00	46.61	35.72	7.41	36.56	100	248	Peak
15	7797.00	39.93	-14.07	54.00	33.36	35.72	7.41	36.56	100	248	Average
16	9748.00	48.18	-25.82	74.00	87.39	-10.10	7.98	37.10	100	0	Peak



Test Mode :	Mode 2	Temperature :	20~21°C
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #17 signal is not in the restricted band.		

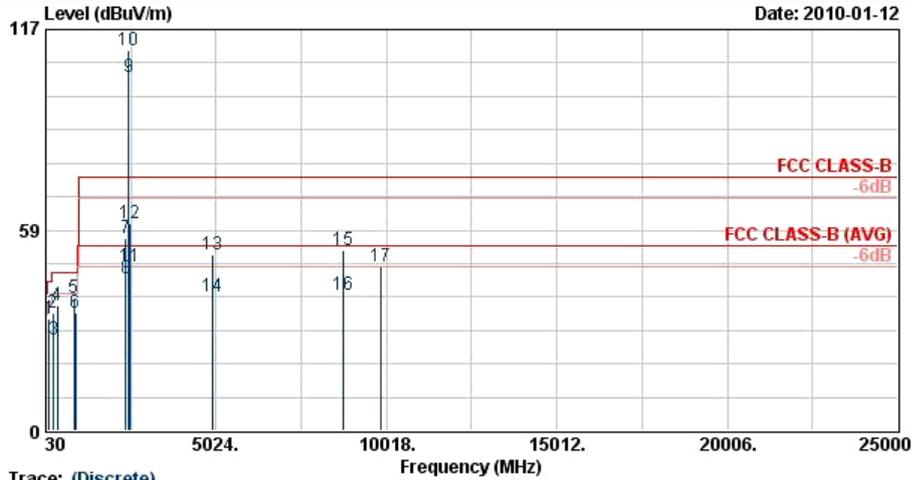


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 2

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	60.24	31.04	-8.96	40.00	55.41	6.42	1.26	32.05	---	---	Peak
2 !	125.04	38.12	-5.38	43.50	56.13	11.91	1.80	31.71	100	261	Peak
3	249.78	37.82	-8.18	46.00	54.65	12.27	2.69	31.79	---	---	Peak
4	532.40	32.26	-13.74	46.00	42.41	17.88	4.07	32.10	---	---	Peak
5	638.80	36.29	-9.71	46.00	44.77	18.92	4.54	31.94	---	---	Peak
6	852.30	32.92	-13.08	46.00	39.54	20.42	5.32	32.36	---	---	Peak
7	2348.00	54.26	-19.74	74.00	54.69	31.78	3.86	36.07	100	121	Peak
8	2348.00	42.69	-11.31	54.00	43.12	31.78	3.86	36.07	100	121	Average
9 X	2437.00	102.59			102.76	31.93	3.99	36.09	100	121	Peak
10 @	2437.00	94.48			94.65	31.93	3.99	36.09	100	121	Average
11	2494.00	55.79	-18.21	74.00	55.84	32.00	4.05	36.10	100	121	Peak
12	2494.00	42.06	-11.94	54.00	42.11	32.00	4.05	36.10	100	121	Average
13	4874.00	52.72	-21.28	74.00	49.12	33.90	5.80	36.10	100	337	Peak
14	4874.00	43.30	-10.70	54.00	39.70	33.90	5.80	36.10	100	337	Average
15	8691.00	52.41	-21.59	74.00	45.93	35.85	7.42	36.78	100	95	Peak
16	8691.00	39.16	-14.84	54.00	32.68	35.85	7.42	36.78	100	95	Average
17	9748.00	49.37	-24.63	74.00	88.59	-10.10	7.98	37.10	100	0	Peak



Test Mode :	Mode 3	Temperature :	20~21°C
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #17 signal is not in the restricted band.		



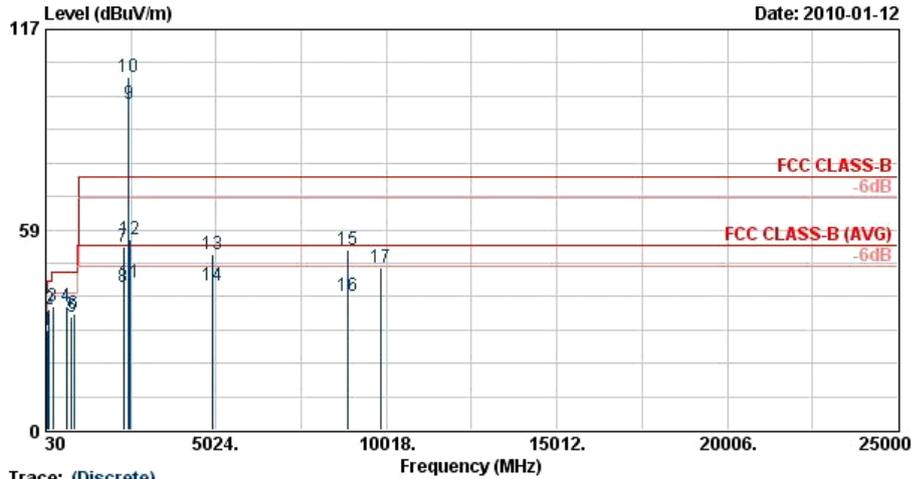
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 3

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	125.04	32.53	-10.97	43.50	50.53	11.91	1.80	31.71	---	---	Peak
2	249.78	34.47	-11.53	46.00	51.30	12.27	2.69	31.79	---	---	Peak
3	264.63	26.45	-19.55	46.00	43.04	12.52	2.78	31.90	---	---	Peak
4	374.90	36.33	-9.67	46.00	49.67	15.04	3.42	31.79	---	---	Peak
5	852.30	38.56	-7.44	46.00	45.19	20.42	5.32	32.36	100	53	Peak
6	904.80	34.25	-11.75	46.00	39.67	20.75	5.47	31.65	---	---	Peak
7	2382.00	56.00	-18.00	74.00	56.32	31.83	3.92	36.08	100	289	Peak
8	2382.00	44.43	-9.57	54.00	44.75	31.83	3.92	36.08	100	289	Average
9 @	2462.00	103.00			103.12	31.95	4.02	36.09	100	289	Average
10 X	2462.00	111.10			111.22	31.95	4.02	36.09	100	289	Peak
11	2484.16	47.81	-6.19	54.00	47.88	31.98	4.05	36.10	100	289	Average
12	2484.16	60.64	-13.36	74.00	60.71	31.98	4.05	36.10	100	289	Peak
13	4924.00	51.37	-22.63	74.00	47.72	33.90	5.85	36.10	134	16	Peak
14	4924.00	39.25	-14.75	54.00	35.60	33.90	5.85	36.10	134	16	Average
15	8751.00	52.72	-21.28	74.00	46.12	35.90	7.50	36.80	100	123	Peak
16	8751.00	39.63	-14.37	54.00	33.03	35.90	7.50	36.80	100	123	Average
17	9848.00	47.68	-26.32	74.00	86.65	-9.90	8.04	37.10	100	0	Peak



Test Mode :	Mode 3	Temperature :	20~21°C
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #17 signal is not in the restricted band.		



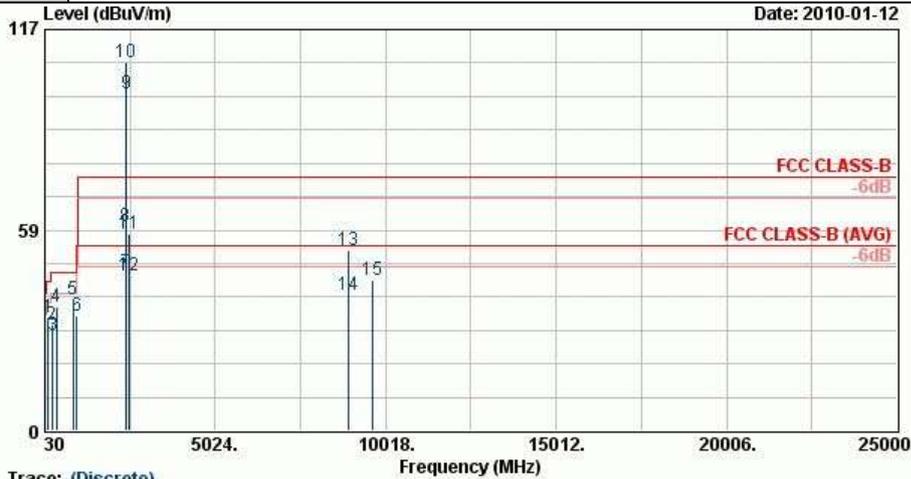
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 3

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	81.03	29.23	-10.77	40.00	52.30	7.53	1.45	32.04	---	---	Peak
2	125.04	35.40	-8.10	43.50	53.41	11.91	1.80	31.71	100	236	Peak
3	249.78	35.99	-10.01	46.00	52.82	12.27	2.69	31.79	---	---	Peak
4	638.80	36.02	-9.98	46.00	44.50	18.92	4.54	31.94	---	---	Peak
5	798.40	33.25	-12.75	46.00	40.27	20.05	5.10	32.18	---	---	Peak
6	852.30	33.94	-12.06	46.00	40.56	20.42	5.32	32.36	---	---	Peak
7	2318.00	53.58	-20.42	74.00	54.07	31.76	3.82	36.07	102	107	Peak
8	2318.00	41.78	-12.22	54.00	42.26	31.76	3.82	36.07	102	107	Average
9 @	2462.00	95.29			95.41	31.95	4.02	36.09	102	107	Average
10 X	2462.00	103.17			103.29	31.95	4.02	36.09	102	107	Peak
11	2485.17	43.11	-10.89	54.00	43.18	31.98	4.05	36.10	102	107	Average
12	2485.17	55.68	-18.32	74.00	55.75	31.98	4.05	36.10	102	107	Peak
13	4924.00	51.32	-22.68	74.00	47.67	33.90	5.85	36.10	100	336	Peak
14	4924.00	42.05	-11.95	54.00	38.40	33.90	5.85	36.10	100	336	Average
15	8877.00	52.46	-21.54	74.00	45.67	35.99	7.65	36.85	100	222	Peak
16	8877.00	39.26	-14.74	54.00	32.46	35.99	7.65	36.85	100	222	Average
17	9848.00	47.35	-26.65	74.00	86.31	-9.90	8.04	37.10	100	0	Peak



Test Mode :	Mode 4	Temperature :	20~21°C
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		

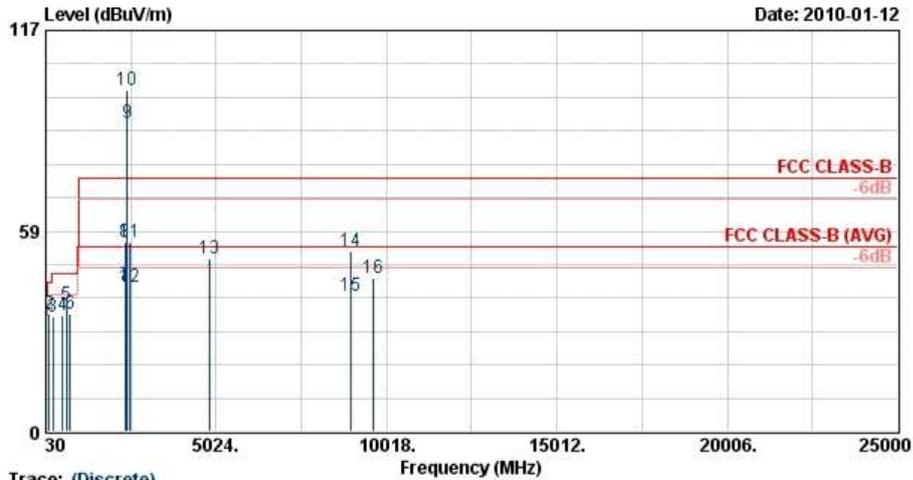


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 4

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	125.04	32.99	-10.51	43.50	50.99	11.91	1.80	31.71	---	---	Peak
2	249.78	30.79	-15.21	46.00	47.62	12.27	2.69	31.79	---	---	Peak
3	264.63	27.75	-18.25	46.00	44.34	12.52	2.78	31.90	---	---	Peak
4	374.90	35.89	-10.11	46.00	49.23	15.04	3.42	31.79	---	---	Peak
5	852.30	38.25	-7.75	46.00	44.87	20.42	5.32	32.36	100	49	Peak
6	959.40	33.36	-12.64	46.00	38.10	20.97	5.59	31.30	---	---	Peak
7	2389.97	46.06	-7.94	54.00	46.36	31.86	3.92	36.08	100	287	Average
8	2389.97	59.66	-14.34	74.00	59.96	31.86	3.92	36.08	100	287	Peak
9 @	2412.00	98.23			98.48	31.88	3.95	36.08	100	287	Average
10 X	2412.00	107.55			107.80	31.88	3.95	36.08	100	287	Peak
11	2494.00	57.62	-16.38	74.00	57.67	32.00	4.05	36.10	100	287	Peak
12	2494.00	45.36	-8.64	54.00	45.41	32.00	4.05	36.10	100	287	Average
13	8931.00	52.72	-21.28	74.00	45.83	36.05	7.71	36.87	100	218	Peak
14	8931.00	39.43	-14.57	54.00	32.54	36.05	7.71	36.87	100	218	Average
15	9648.00	44.01	-29.99	74.00	83.47	-10.30	7.94	37.10	100	0	Peak



Test Mode :	Mode 4	Temperature :	20~21°C
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #16 signal is not in the restricted band.		



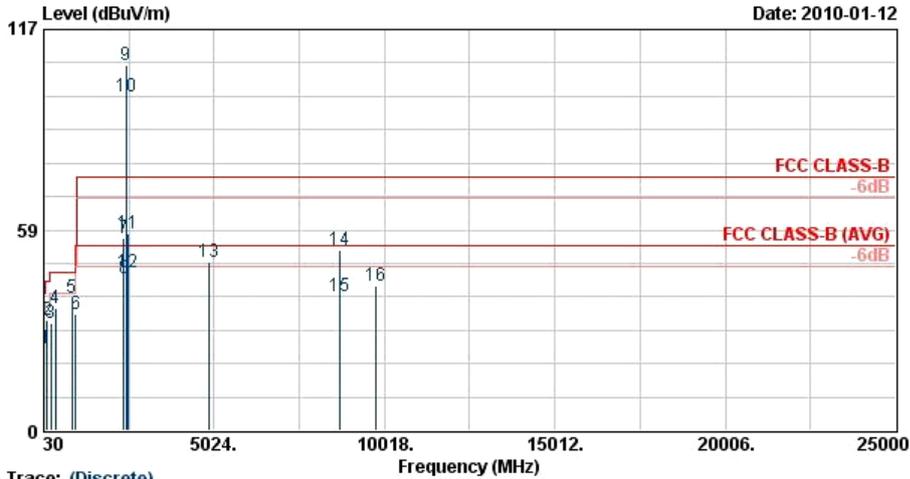
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 4

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	31.91	-8.09	40.00	44.69	17.98	0.85	31.61	100	227	Peak
2	125.04	34.37	-9.13	43.50	52.37	11.91	1.80	31.71	---	---	Peak
3	249.78	33.63	-12.37	46.00	50.46	12.27	2.69	31.79	---	---	Peak
4	532.40	33.72	-12.28	46.00	43.87	17.88	4.07	32.10	---	---	Peak
5	638.80	36.88	-9.12	46.00	45.36	18.92	4.54	31.94	---	---	Peak
6	745.90	34.56	-11.44	46.00	42.11	19.62	4.92	32.09	---	---	Peak
7	2347.97	42.82	-11.18	54.00	43.25	31.78	3.86	36.07	100	121	Average
8	2347.97	55.45	-18.55	74.00	55.88	31.78	3.86	36.07	100	121	Peak
9 @	2412.00	90.02			90.27	31.88	3.95	36.08	100	121	Average
10 X	2412.00	99.39			99.64	31.88	3.95	36.08	100	121	Peak
11	2492.00	55.12	-18.88	74.00	55.17	32.00	4.05	36.10	100	121	Peak
12	2492.00	42.08	-11.92	54.00	42.13	32.00	4.05	36.10	100	121	Average
13	4824.00	50.42	-23.58	74.00	46.86	33.90	5.77	36.10	100	0	Peak
14	8967.00	52.66	-21.34	74.00	45.70	36.07	7.77	36.88	100	202	Peak
15	8967.00	39.45	-14.55	54.00	32.49	36.07	7.77	36.88	100	202	Average
16	9648.00	44.72	-29.28	74.00	84.18	-10.30	7.94	37.10	100	0	Peak



Test Mode :	Mode 5	Temperature :	20~21°C
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #16 signal is not in the restricted band.		



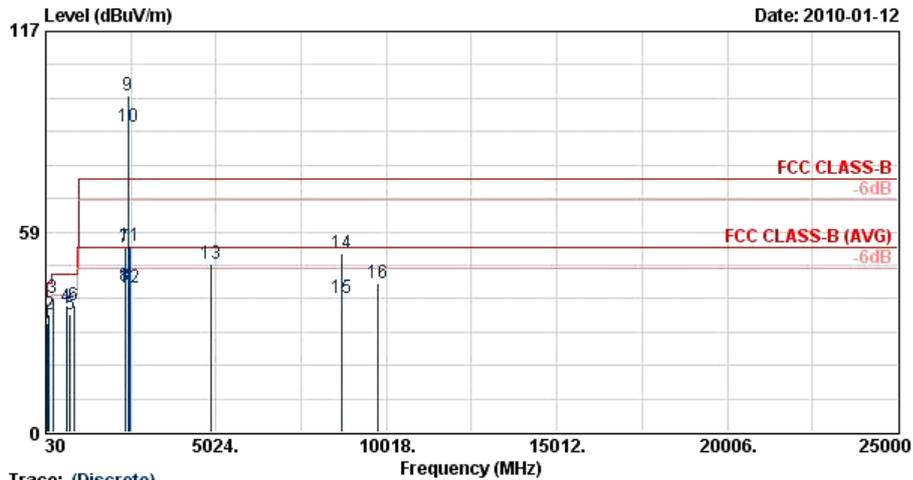
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 5

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	100.74	24.10	-19.40	43.50	43.60	10.87	1.65	32.02	---	---	Peak
2	125.04	32.17	-11.33	43.50	50.17	11.91	1.80	31.71	---	---	Peak
3	249.78	31.34	-14.66	46.00	48.17	12.27	2.69	31.79	---	---	Peak
4	374.90	35.67	-10.33	46.00	49.01	15.04	3.42	31.79	---	---	Peak
5	852.30	38.79	-7.21	46.00	45.42	20.42	5.32	32.36	100	53	Peak
6	959.40	33.74	-12.26	46.00	38.47	20.97	5.59	31.30	---	---	Peak
7	2382.00	56.27	-17.73	74.00	56.59	31.83	3.92	36.08	100	284	Peak
8	2382.00	44.56	-9.44	54.00	44.88	31.83	3.92	36.08	100	284	Average
9 X	2437.00	106.73			106.90	31.93	3.99	36.09	100	284	Peak
10 @	2437.00	97.28			97.45	31.93	3.99	36.09	100	284	Average
11	2492.00	57.55	-16.45	74.00	57.60	32.00	4.05	36.10	100	284	Peak
12	2492.00	46.30	-7.70	54.00	46.35	32.00	4.05	36.10	100	284	Average
13	4874.00	49.01	-24.99	74.00	45.41	33.90	5.80	36.10	100	0	Peak
14	8727.00	52.57	-21.43	74.00	46.00	35.89	7.48	36.79	100	133	Peak
15	8727.00	39.20	-14.80	54.00	32.63	35.89	7.48	36.79	100	133	Average
16	9748.00	42.23	-31.77	74.00	81.45	-10.10	7.98	37.10	100	0	Peak



Test Mode :	Mode 5	Temperature :	20~21°C
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #16 signal is not in the restricted band.		

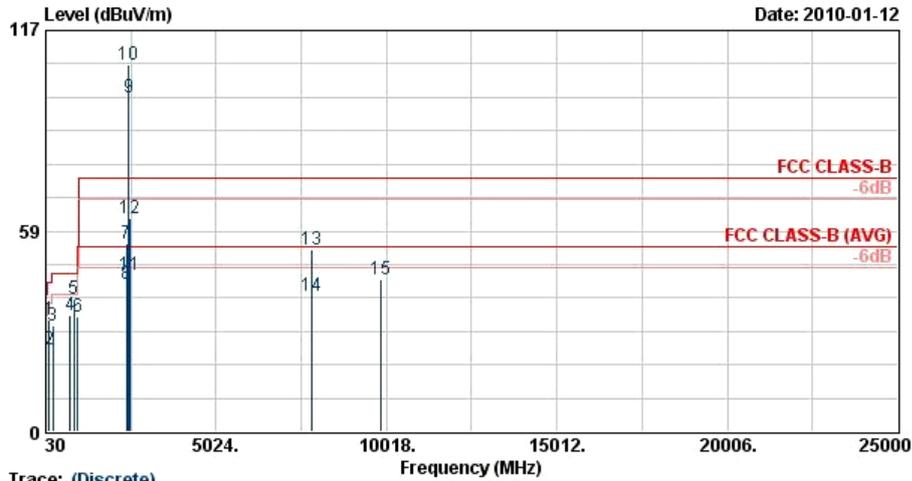


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 5

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	81.03	31.55	-8.45	40.00	54.61	7.53	1.45	32.04	---	---	Peak
2	125.04	34.57	-8.93	43.50	52.57	11.91	1.80	31.71	---	---	Peak
3	249.78	39.18	-6.82	46.00	56.01	12.27	2.69	31.79	100	271	Peak
4	638.80	36.75	-9.25	46.00	45.23	18.92	4.54	31.94	---	---	Peak
5	745.90	34.30	-11.70	46.00	41.85	19.62	4.92	32.09	---	---	Peak
6	852.30	37.08	-8.92	46.00	43.70	20.42	5.32	32.36	---	---	Peak
7	2348.00	54.05	-19.95	74.00	54.48	31.78	3.86	36.07	100	121	Peak
8	2348.00	42.48	-11.52	54.00	42.91	31.78	3.86	36.07	100	121	Average
9 X	2437.00	98.31			98.48	31.93	3.99	36.09	100	121	Peak
10 @	2437.00	89.08			89.25	31.93	3.99	36.09	100	121	Average
11	2494.00	54.46	-19.54	74.00	54.51	32.00	4.05	36.10	100	121	Peak
12	2494.00	42.29	-11.71	54.00	42.34	32.00	4.05	36.10	100	121	Average
13	4874.00	49.04	-24.96	74.00	45.44	33.90	5.80	36.10	100	0	Peak
14	8712.00	52.16	-21.84	74.00	45.62	35.87	7.45	36.78	100	191	Peak
15	8712.00	39.09	-14.91	54.00	32.55	35.87	7.45	36.78	100	191	Average
16	9748.00	43.70	-30.30	74.00	82.92	-10.10	7.98	37.10	100	0	Peak



Test Mode :	Mode 6	Temperature :	20~21°C
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		

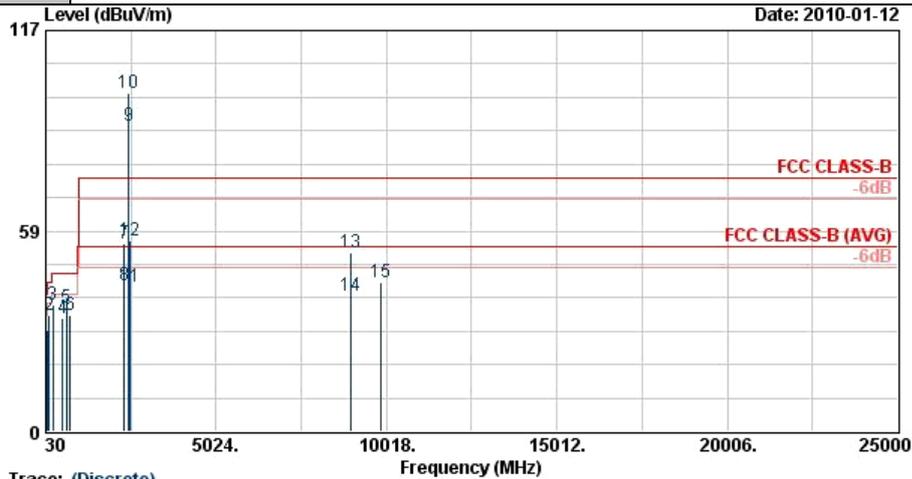


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	125.04	32.63	-10.87	43.50	50.64	11.91	1.80	31.71	---	---	Peak
2	138.54	23.92	-19.58	43.50	42.57	11.15	1.92	31.73	---	---	Peak
3	249.78	30.75	-15.25	46.00	47.58	12.27	2.69	31.79	---	---	Peak
4	745.90	33.71	-12.29	46.00	41.27	19.62	4.92	32.09	---	---	Peak
5	852.30	38.51	-7.49	46.00	45.13	20.42	5.32	32.36	100	66	Peak
6	959.40	33.68	-12.32	46.00	38.42	20.97	5.59	31.30	---	---	Peak
7	2390.00	54.59	-19.41	74.00	54.90	31.86	3.92	36.08	100	288	Peak
8	2390.00	43.27	-10.73	54.00	43.57	31.86	3.92	36.08	100	288	Average
9 @	2462.00	97.45			97.57	31.95	4.02	36.09	100	288	Average
10 X	2462.00	107.03			107.16	31.95	4.02	36.10	100	288	Peak
11	2483.58	45.62	-8.38	54.00	45.69	31.98	4.05	36.10	100	288	Average
12	2483.58	62.39	-11.61	74.00	62.46	31.98	4.05	36.10	100	288	Peak
13	7842.00	52.98	-21.02	74.00	46.38	35.73	7.44	36.57	100	246	Peak
14	7842.00	39.67	-14.34	54.00	33.06	35.73	7.44	36.57	100	246	Average
15	9848.00	44.43	-29.57	74.00	83.40	-9.90	8.04	37.10	100	0	Peak



Test Mode :	Mode 6	Temperature :	20~21°C
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



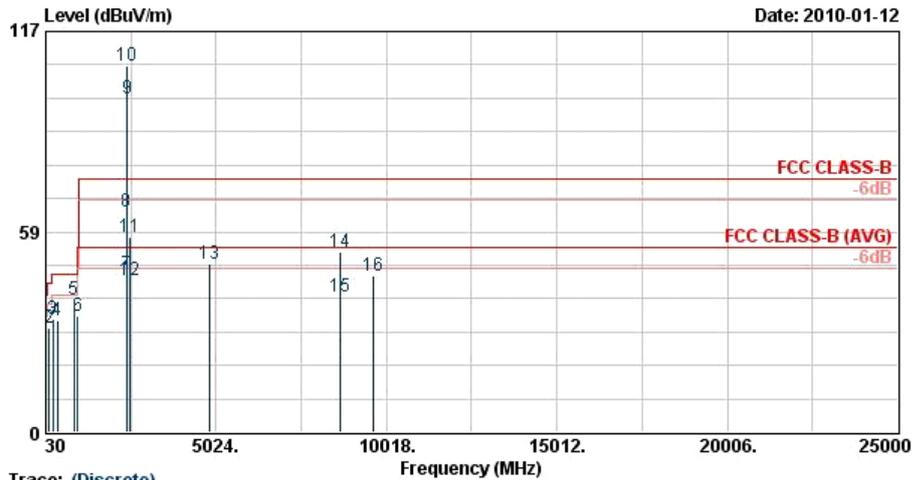
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	58.89	29.40	-10.60	40.00	53.27	6.91	1.24	32.02	---	---	Peak
2	125.04	33.75	-9.75	43.50	51.76	11.91	1.80	31.71	---	---	Peak
3	249.78	36.94	-9.06	46.00	53.77	12.27	2.69	31.79	100	157	Peak
4	532.40	32.90	-13.10	46.00	43.05	17.88	4.07	32.10	---	---	Peak
5	638.80	36.30	-9.70	46.00	44.78	18.92	4.54	31.94	---	---	Peak
6	745.90	34.02	-11.98	46.00	41.57	19.62	4.92	32.09	---	---	Peak
7	2324.00	54.63	-19.37	74.00	55.12	31.76	3.82	36.07	100	121	Peak
8	2324.00	42.51	-11.49	54.00	42.99	31.76	3.82	36.07	100	121	Average
9 @	2462.00	89.03			89.15	31.95	4.02	36.09	100	121	Average
10 X	2462.00	98.69			98.81	31.95	4.02	36.10	100	121	Peak
11	2483.50	42.05	-11.95	54.00	42.12	31.98	4.05	36.10	100	121	Average
12	2483.50	55.65	-18.35	74.00	55.72	31.98	4.05	36.10	100	121	Peak
13	8991.00	52.41	-21.59	74.00	45.41	36.09	7.80	36.89	100	325	Peak
14	8991.00	39.41	-14.59	54.00	32.41	36.09	7.80	36.89	100	325	Average
15	9848.00	43.41	-30.59	74.00	82.38	-9.90	8.04	37.10	100	0	Peak



Test Mode :	Mode 7	Temperature :	20~21°C
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #16 Signal is not in the restricted band.		



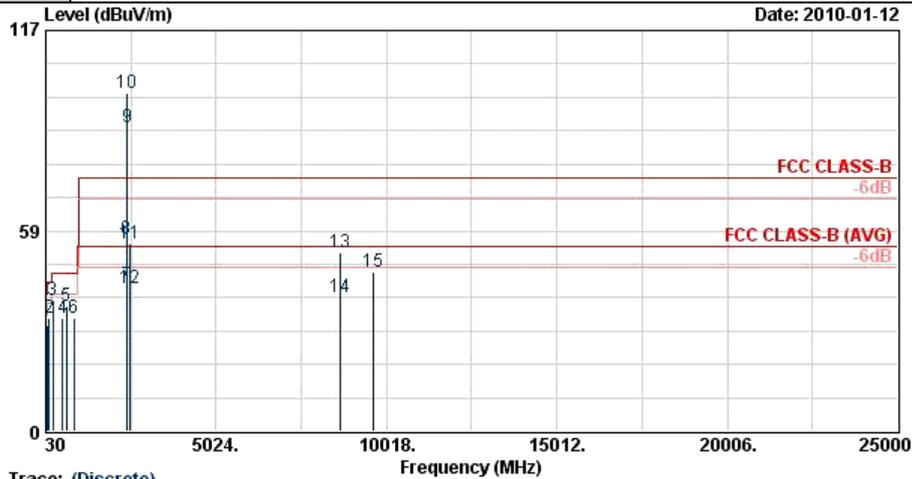
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
Project : FR 9D1808
Memo : Mode 7

Trace: (Discrete)

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	36.48	23.42	-16.58	40.00	39.60	14.65	0.93	31.77	---	---	Peak
2	125.04	30.59	-12.91	43.50	48.59	11.91	1.80	31.71	---	---	Peak
3	249.78	32.91	-13.09	46.00	49.74	12.27	2.69	31.79	---	---	Peak
4	374.90	32.73	-13.27	46.00	46.07	15.04	3.42	31.79	---	---	Peak
5	852.30	38.81	-7.19	46.00	45.44	20.42	5.32	32.36	100	71	Peak
6	959.40	34.02	-11.98	46.00	38.75	20.97	5.59	31.30	---	---	Peak
7	2389.97	46.17	-7.83	54.00	46.47	31.86	3.92	36.08	100	288	Average
8	2389.97	64.25	-9.75	74.00	64.55	31.86	3.92	36.08	100	288	Peak
9 @	2412.00	97.23			97.48	31.88	3.95	36.08	100	288	Average
10 X	2412.00	106.91			107.16	31.88	3.95	36.08	100	288	Peak
11	2486.00	57.07	-16.93	74.00	57.14	31.98	4.05	36.10	100	288	Peak
12	2486.00	44.58	-9.42	54.00	44.65	31.98	4.05	36.10	100	288	Average
13	4824.00	49.08	-24.92	74.00	45.51	33.90	5.77	36.10	100	0	Peak
14	8676.00	52.75	-21.25	74.00	46.25	35.85	7.42	36.77	100	264	Peak
15	8676.00	39.59	-14.41	54.00	33.10	35.85	7.42	36.77	100	264	Average
16	9648.00	45.55	-28.45	74.00	85.01	-10.30	7.94	37.10	100	0	Peak



Test Mode :	Mode 7	Temperature :	20~21°C
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



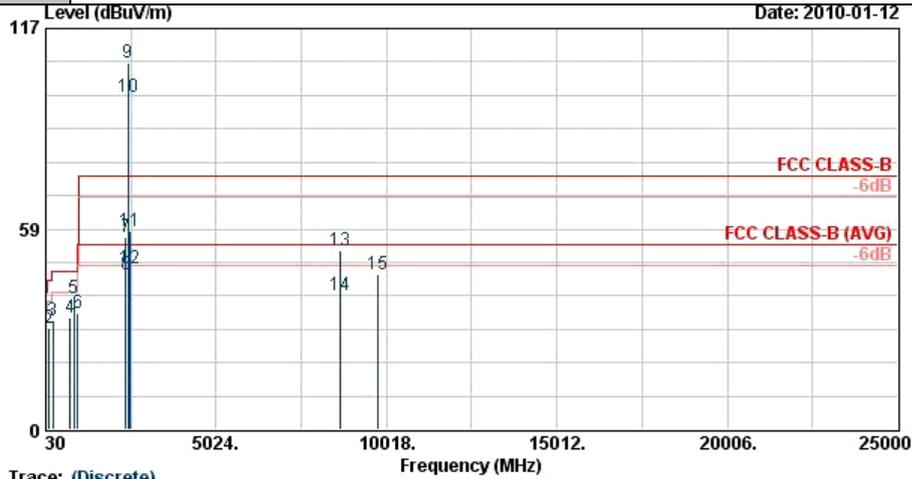
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 7

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	58.89	30.76	-9.24	40.00	54.64	6.91	1.24	32.02	---	---	Peak
2	125.04	32.91	-10.59	43.50	50.91	11.91	1.80	31.71	---	---	Peak
3	249.78	38.25	-7.75	46.00	55.08	12.27	2.69	31.79	100	269	Peak
4	532.40	33.07	-12.93	46.00	43.22	17.88	4.07	32.10	---	---	Peak
5	638.80	36.50	-9.50	46.00	44.99	18.92	4.54	31.94	---	---	Peak
6	852.30	33.00	-13.00	46.00	39.63	20.42	5.32	32.36	---	---	Peak
7	2389.52	42.67	-11.33	54.00	42.97	31.86	3.92	36.08	100	121	Average
8	2389.52	56.14	-17.86	74.00	56.44	31.86	3.92	36.08	100	121	Peak
9 @	2412.00	88.94			89.19	31.88	3.95	36.08	100	121	Average
10 X	2412.00	98.71			98.96	31.88	3.95	36.08	100	121	Peak
11	2484.00	54.78	-19.22	74.00	54.85	31.98	4.05	36.10	100	121	Peak
12	2484.00	41.80	-12.20	54.00	41.87	31.98	4.05	36.10	100	121	Average
13	8682.00	52.30	-21.70	74.00	45.81	35.85	7.42	36.77	100	124	Peak
14	8682.00	39.05	-14.95	54.00	32.56	35.85	7.42	36.77	100	124	Average
15	9648.00	46.45	-27.55	74.00	85.90	-10.30	7.94	37.10	100	0	Peak



Test Mode :	Mode 8	Temperature :	20~21°C
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



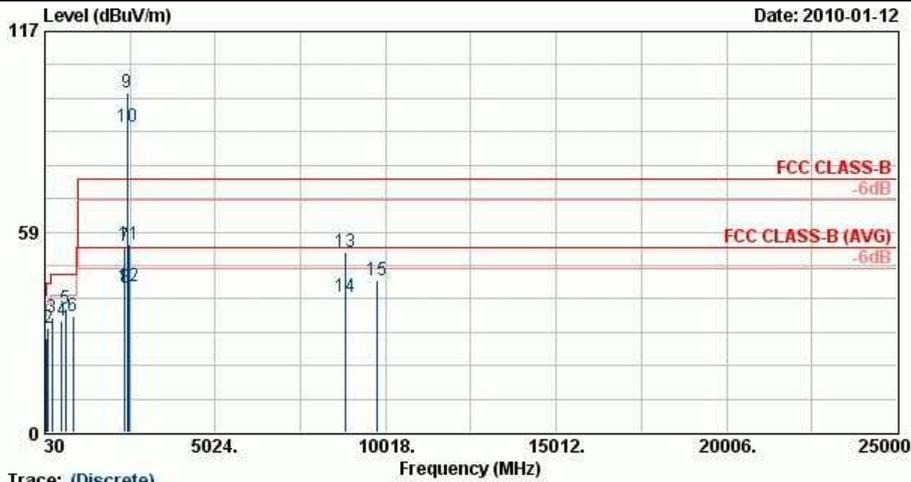
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 6

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.08	24.24	-15.76	40.00	37.02	17.98	0.85	31.61	---	---	Peak
2	125.04	29.45	-14.05	43.50	47.45	11.91	1.80	31.71	---	---	Peak
3	249.78	31.57	-14.43	46.00	48.40	12.27	2.69	31.79	---	---	Peak
4	745.90	32.57	-13.43	46.00	40.12	19.62	4.92	32.09	---	---	Peak
5	852.30	38.48	-7.52	46.00	45.10	20.42	5.32	32.36	100	50	Peak
6	959.40	33.95	-12.05	46.00	38.68	20.97	5.59	31.30	---	---	Peak
7	2382.00	56.26	-17.74	74.00	56.58	31.83	3.92	36.08	100	286	Peak
8	2382.00	45.11	-8.89	54.00	45.43	31.83	3.92	36.08	100	286	Average
9 X	2437.00	106.94			107.14	31.90	3.99	36.09	100	286	Peak
10 @	2437.00	97.19			97.36	31.93	3.99	36.09	100	286	Average
11	2492.00	58.03	-15.97	74.00	58.08	32.00	4.05	36.10	100	286	Peak
12	2492.00	46.78	-7.22	54.00	46.83	32.00	4.05	36.10	100	286	Average
13	8676.00	52.33	-21.67	74.00	45.84	35.85	7.42	36.77	100	305	Peak
14	8676.00	39.13	-14.87	54.00	32.64	35.85	7.42	36.77	100	305	Average
15	9748.00	45.23	-28.77	74.00	84.45	-10.10	7.98	37.10	100	0	Peak



Test Mode :	Mode 8	Temperature :	20~21°C
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



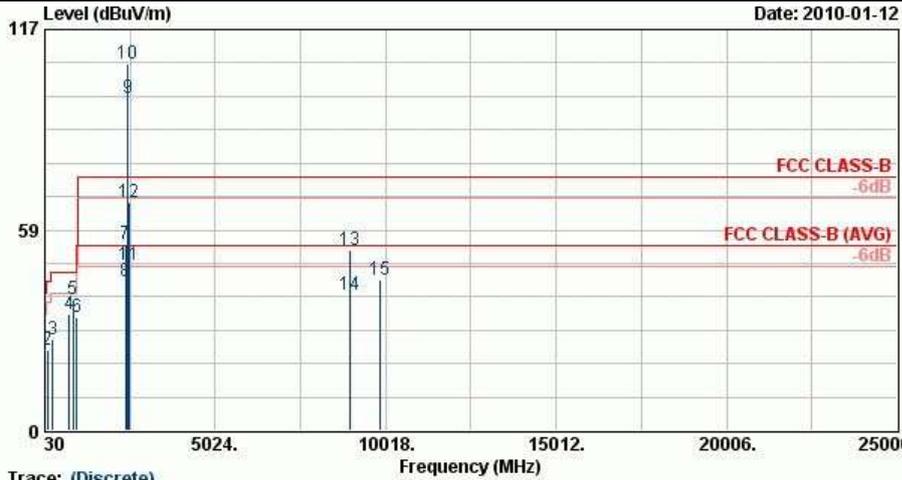
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 8

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	58.89	27.44	-12.56	40.00	51.32	6.91	1.24	32.02	---	---	Peak
2	125.04	30.59	-12.91	43.50	48.59	11.91	1.80	31.71	---	---	Peak
3	249.78	33.36	-12.64	46.00	50.19	12.27	2.69	31.79	---	---	Peak
4	532.40	32.71	-13.29	46.00	42.86	17.88	4.07	32.10	---	---	Peak
5	638.80	36.27	-9.73	46.00	44.75	18.92	4.54	31.94	100	264	Peak
6	852.30	33.96	-12.04	46.00	40.58	20.42	5.32	32.36	---	---	Peak
7	2382.00	54.20	-19.80	74.00	54.52	31.83	3.92	36.08	100	107	Peak
8	2382.00	42.01	-11.99	54.00	42.33	31.83	3.92	36.08	100	107	Average
9 X	2437.00	99.00			99.18	31.93	3.99	36.09	100	107	Peak
10 @	2437.00	89.38			89.55	31.93	3.99	36.09	100	107	Average
11	2492.00	54.70	-19.30	74.00	54.75	32.00	4.05	36.10	100	107	Peak
12	2492.00	42.71	-11.29	54.00	42.76	32.00	4.05	36.10	100	107	Average
13	8826.00	52.56	-21.44	74.00	45.84	35.95	7.59	36.83	100	208	Peak
14	8826.00	39.42	-14.58	54.00	32.70	35.95	7.59	36.83	100	208	Average
15	9748.00	44.34	-29.66	74.00	83.56	-10.10	7.98	37.10	100	0	Peak



Test Mode :	Mode 9	Temperature :	20~21°C
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		

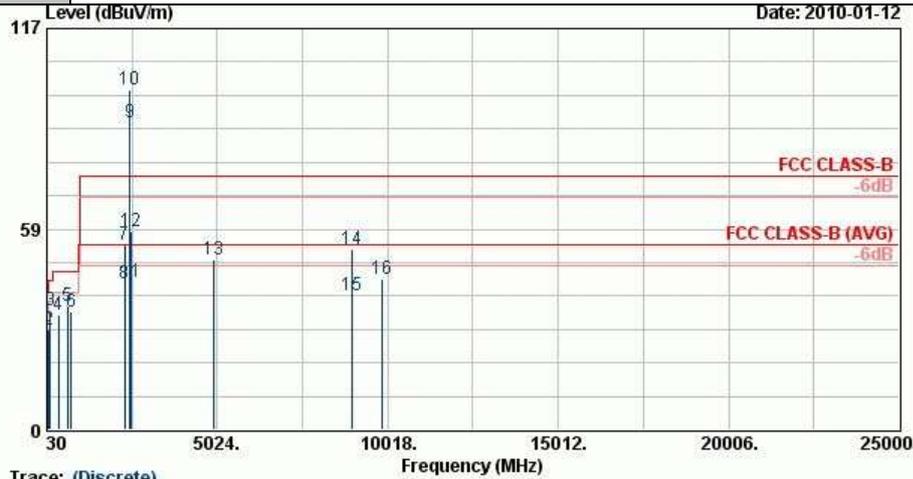


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 9

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	36.48	19.28	-20.72	40.00	35.47	14.65	0.93	31.77	---	---	Peak
2	100.74	23.70	-19.80	43.50	43.21	10.87	1.65	32.02	---	---	Peak
3	264.63	26.34	-19.66	46.00	42.93	12.52	2.78	31.90	---	---	Peak
4	745.90	33.78	-12.22	46.00	41.33	19.62	4.92	32.09	---	---	Peak
5	852.30	38.27	-7.73	46.00	44.89	20.42	5.32	32.36	100	55	Peak
6	959.40	33.25	-12.75	46.00	37.98	20.97	5.59	31.30	---	---	Peak
7	2388.00	54.35	-19.65	74.00	54.65	31.86	3.92	36.08	100	285	Peak
8	2388.00	43.39	-10.61	54.00	43.69	31.86	3.92	36.08	100	285	Average
9 @	2462.00	97.18			97.30	31.95	4.02	36.09	100	285	Average
10 X	2462.00	106.86			106.98	31.95	4.02	36.09	100	285	Peak
11 !	2483.50	48.22	-5.78	54.00	48.29	31.98	4.05	36.10	100	285	Average
12	2483.50	66.51	-7.49	74.00	66.58	31.98	4.05	36.10	100	285	Peak
13	8952.00	52.67	-21.33	74.00	45.75	36.06	7.74	36.88	100	256	Peak
14	8952.00	39.43	-14.57	54.00	32.51	36.06	7.74	36.88	100	256	Average
15	9848.00	44.01	-29.99	74.00	82.97	-9.90	8.04	37.10	100	0	Peak



Test Mode :	Mode 9	Temperature :	20~21°C
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #16 signal is not in the restricted band.		

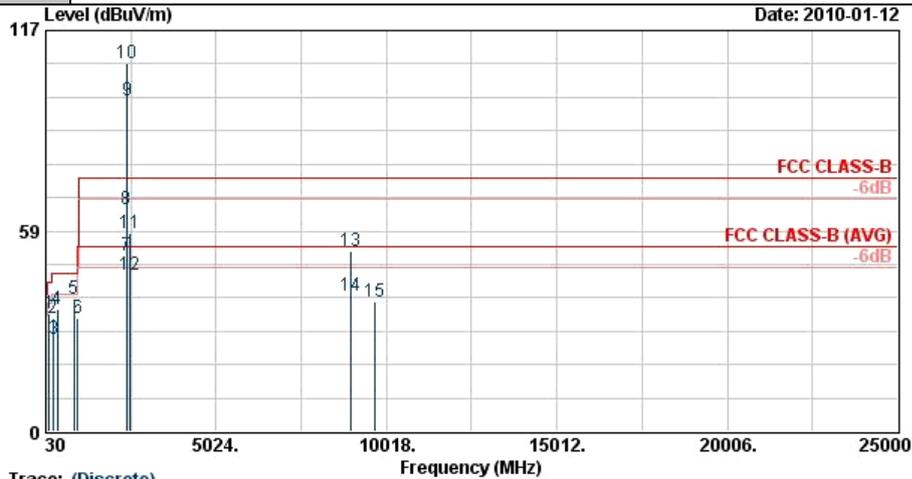


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 9

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	58.89	28.20	-11.80	40.00	52.07	6.91	1.24	32.02	---	---	Peak
2	81.03	29.08	-10.92	40.00	52.14	7.53	1.45	32.04	---	---	Peak
3	125.04	34.73	-8.77	43.50	52.73	11.91	1.80	31.71	100	222	Peak
4	374.90	33.35	-12.65	46.00	46.68	15.04	3.42	31.79	---	---	Peak
5	638.80	36.23	-9.77	46.00	44.71	18.92	4.54	31.94	---	---	Peak
6	745.90	34.21	-11.79	46.00	41.76	19.62	4.92	32.09	---	---	Peak
7	2318.00	54.11	-19.89	74.00	54.59	31.76	3.82	36.07	100	121	Peak
8	2318.00	42.67	-11.33	54.00	43.15	31.76	3.82	36.07	100	121	Average
9 @	2462.00	89.65			89.77	31.95	4.02	36.09	100	121	Average
10 X	2462.00	99.24			99.37	31.95	4.02	36.09	100	121	Peak
11	2484.16	42.98	-11.02	54.00	43.05	31.98	4.05	36.10	100	121	Average
12	2484.16	58.04	-15.96	74.00	58.11	31.98	4.05	36.10	100	121	Peak
13	4924.00	49.45	-24.55	74.00	45.80	33.90	5.85	36.10	100	0	Peak
14	8976.00	52.50	-21.50	74.00	45.54	36.07	7.77	36.89	100	262	Peak
15	8976.00	39.24	-14.76	54.00	32.29	36.07	7.77	36.89	100	262	Average
16	9848.00	44.12	-29.88	74.00	83.08	-9.90	8.04	37.10	100	0	Peak



Test Mode :	Mode 10	Temperature :	20~21°C
Test Channel :	03	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 10

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	125.04	34.37	-9.13	43.50	52.37	11.91	1.80	31.71	---	---	Peak
2	249.78	32.87	-13.13	46.00	49.70	12.27	2.69	31.79	---	---	Peak
3	264.63	26.92	-19.08	46.00	43.51	12.52	2.78	31.90	---	---	Peak
4	374.90	35.49	-10.51	46.00	48.82	15.04	3.42	31.79	---	---	Peak
5	852.30	38.63	-7.37	46.00	45.26	20.42	5.32	32.36	100	71	Peak
6	959.40	32.92	-13.08	46.00	37.65	20.97	5.59	31.30	---	---	Peak
7 !	2386.96	51.33	-2.67	54.00	51.63	31.86	3.92	36.08	100	285	Average
8	2386.96	64.79	-9.21	74.00	65.09	31.86	3.92	36.08	100	285	Peak
9 @	2422.00	96.66			96.89	31.90	3.95	36.09	100	285	Average
10 @	2422.00	107.52			107.75	31.90	3.95	36.09	100	285	Peak
11	2494.00	57.81	-16.19	74.00	57.86	32.00	4.05	36.10	100	285	Peak
12	2494.00	45.61	-8.39	54.00	45.66	32.00	4.05	36.10	100	285	Average
13	8982.00	52.76	-21.24	74.00	45.76	36.09	7.80	36.89	100	326	Peak
14	8982.00	39.49	-14.51	54.00	32.49	36.09	7.80	36.89	100	326	Average
15	9688.00	38.02	-35.98	74.00	77.37	-10.22	7.96	37.10	100	0	Peak



Test Mode :	Mode 10	Temperature :	20~21°C
Test Channel :	03	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		

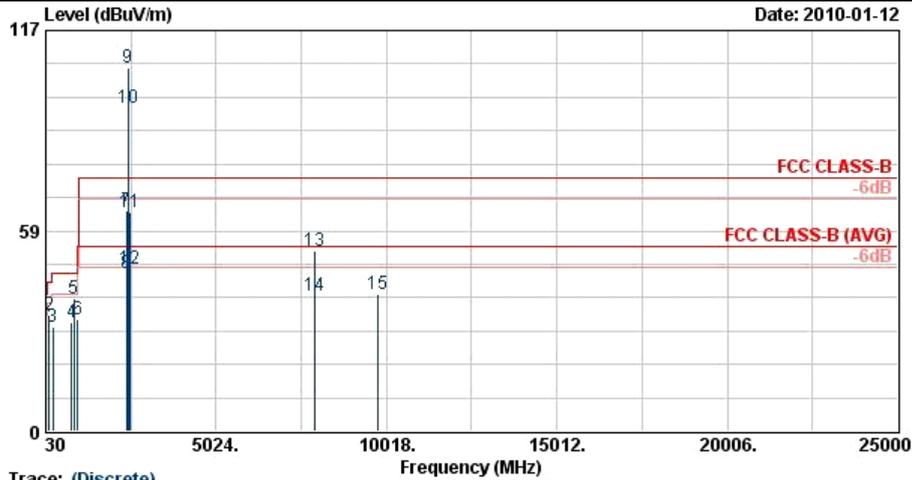


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 10

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	81.03	31.41	-8.59	40.00	54.47	7.53	1.45	32.04	---	---	Peak
2 !	125.04	38.13	-5.37	43.50	56.13	11.91	1.80	31.71	100	233	Peak
3	249.78	36.29	-9.71	46.00	53.12	12.27	2.69	31.79	---	---	Peak
4	532.40	33.08	-12.92	46.00	43.24	17.88	4.07	32.10	---	---	Peak
5	638.80	36.47	-9.53	46.00	44.95	18.92	4.54	31.94	---	---	Peak
6	852.30	32.20	-13.80	46.00	38.83	20.42	5.32	32.36	---	---	Peak
7	2388.54	45.83	-8.17	54.00	46.13	31.86	3.92	36.08	179	121	Average
8	2388.54	59.64	-14.36	74.00	59.94	31.86	3.92	36.08	179	121	Peak
9 @	2422.00	87.47			87.70	31.90	3.95	36.09	179	121	Average
10 X	2422.00	98.91			99.14	31.90	3.95	36.09	179	121	Peak
11	2486.00	53.16	-20.84	74.00	53.23	31.98	4.05	36.10	179	121	Peak
12	2486.00	41.60	-12.40	54.00	41.67	31.98	4.05	36.10	179	121	Average
13	8937.00	52.51	-21.49	74.00	45.60	36.05	7.74	36.87	100	117	Peak
14	8937.00	39.38	-14.62	54.00	32.46	36.05	7.74	36.87	100	117	Average
15	9688.00	40.14	-33.86	74.00	79.49	-10.22	7.96	37.10	100	0	Peak



Test Mode :	Mode 11	Temperature :	20~21°C
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



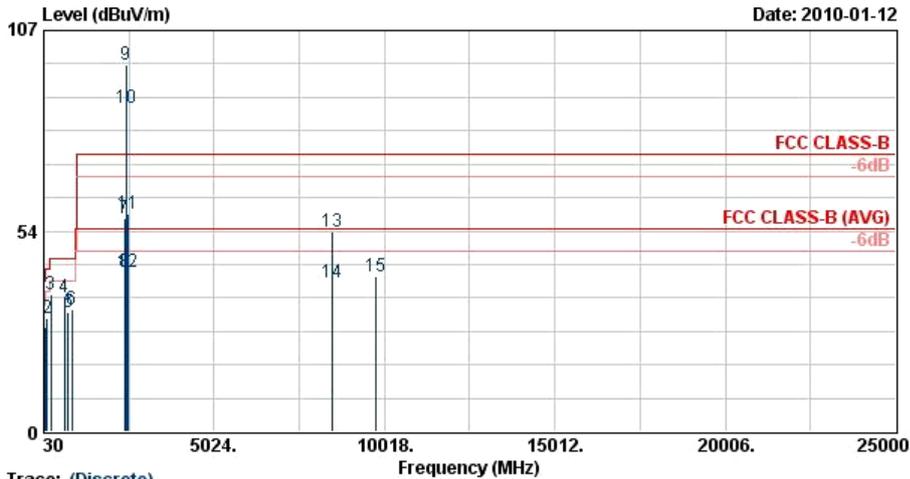
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 11

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	37.83	22.26	-17.74	40.00	39.02	14.04	0.95	31.75	---	---	Peak
2	125.04	34.05	-9.45	43.50	52.06	11.91	1.80	31.71	---	---	Peak
3	249.78	30.26	-15.74	46.00	47.09	12.27	2.69	31.79	---	---	Peak
4	798.40	31.78	-14.22	46.00	38.80	20.05	5.10	32.18	---	---	Peak
5	852.30	38.69	-7.31	46.00	45.31	20.42	5.32	32.36	100	60	Peak
6	959.40	32.59	-13.41	46.00	37.32	20.97	5.59	31.30	---	---	Peak
7	2390.00	64.30	-9.70	74.00	64.61	31.86	3.92	36.08	100	286	Peak
8	2390.00	46.15	-7.85	54.00	46.45	31.86	3.92	36.08	100	286	Average
9 X	2437.00	106.15			106.35	31.90	3.99	36.09	100	286	Peak
10 @	2437.00	94.59			94.76	31.93	3.99	36.09	100	286	Average
11	2484.00	63.99	-10.01	74.00	64.06	31.98	4.05	36.10	100	286	Peak
12	2484.00	47.28	-6.72	54.00	47.35	31.98	4.05	36.10	100	286	Average
13	7932.00	52.71	-21.29	74.00	46.03	35.77	7.48	36.59	100	215	Peak
14	7932.00	39.38	-14.62	54.00	32.71	35.77	7.48	36.59	100	215	Average
15	9748.00	39.89	-34.11	74.00	79.11	-10.10	7.98	37.10	100	0	Peak



Test Mode :	Mode 11	Temperature :	20~21°C
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		

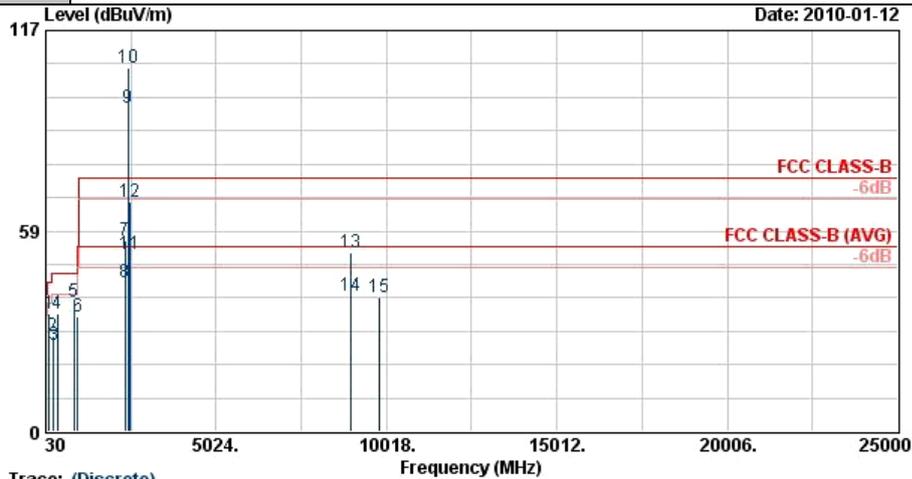


Trace: (Discrete)
 Site : 03CH06-RV
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 11

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	58.89	27.83	-12.17	40.00	51.70	6.91	1.24	32.02	---	---	Peak
2	125.04	30.10	-13.40	43.50	48.11	11.91	1.80	31.71	---	---	Peak
3	249.78	36.72	-9.28	46.00	53.55	12.27	2.69	31.79	100	177	Peak
4	638.80	35.65	-10.35	46.00	44.13	18.92	4.54	31.94	---	---	Peak
5	745.90	31.98	-14.02	46.00	39.53	19.62	4.92	32.09	---	---	Peak
6	852.30	32.72	-13.28	46.00	39.34	20.42	5.32	32.36	---	---	Peak
7	2390.00	56.73	-17.27	74.00	57.04	31.86	3.92	36.08	100	121	Peak
8	2390.00	42.65	-11.35	54.00	42.95	31.86	3.92	36.08	100	121	Average
9 X	2437.00	97.85			98.05	31.90	3.99	36.09	100	121	Peak
10 @	2437.00	86.24			86.41	31.93	3.99	36.09	100	121	Average
11	2486.00	58.27	-15.73	74.00	58.34	31.98	4.05	36.10	100	121	Peak
12	2486.00	42.74	-11.26	54.00	42.81	31.98	4.05	36.10	100	121	Average
13	8502.00	53.34	-20.66	74.00	47.13	35.70	7.21	36.70	100	334	Peak
14	8502.00	39.89	-14.11	54.00	33.68	35.70	7.21	36.70	100	334	Average
15	9748.00	41.29	-32.71	74.00	80.50	-10.10	7.98	37.10	100	0	Peak



Test Mode :	Mode 12	Temperature :	20~21°C
Test Channel :	09	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



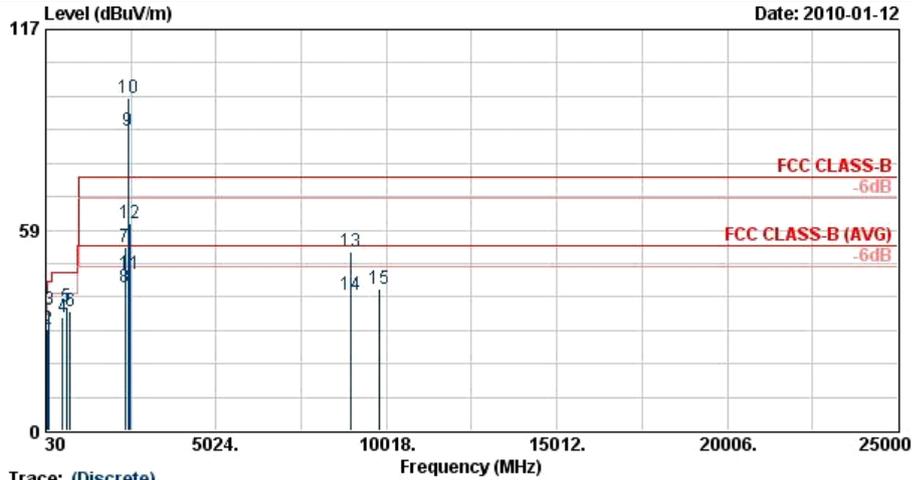
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 12

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	125.04	34.51	-8.99	43.50	52.51	11.91	1.80	31.71	---	---	Peak
2	249.78	27.68	-18.32	46.00	44.51	12.27	2.69	31.79	---	---	Peak
3	265.44	25.20	-20.80	46.00	41.78	12.53	2.79	31.90	---	---	Peak
4	374.90	34.48	-11.52	46.00	47.81	15.04	3.42	31.79	---	---	Peak
5	852.30	37.96	-8.04	46.00	44.58	20.42	5.32	32.36	100	66	Peak
6	959.40	33.28	-12.72	46.00	38.01	20.97	5.59	31.30	---	---	Peak
7	2348.00	55.63	-18.37	74.00	56.07	31.78	3.86	36.07	100	284	Peak
8	2348.00	43.35	-10.65	54.00	43.78	31.78	3.86	36.07	100	284	Average
9 @	2452.00	94.56			94.74	31.93	3.99	36.09	100	284	Average
10 X	2452.00	106.29			106.47	31.93	3.99	36.09	100	284	Peak
11 !	2484.90	51.96	-2.04	54.00	52.03	31.98	4.05	36.10	100	284	Average
12	2484.90	67.03	-6.97	74.00	67.10	31.98	4.05	36.10	100	284	Peak
13	8952.00	52.22	-21.78	74.00	45.30	36.06	7.74	36.88	100	252	Peak
14	8952.00	39.48	-14.52	54.00	32.56	36.06	7.74	36.88	100	252	Average
15	9808.00	39.24	-34.76	74.00	78.30	-9.98	8.02	37.10	100	0	Peak



Test Mode :	Mode 12	Temperature :	20~21°C
Test Channel :	09	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



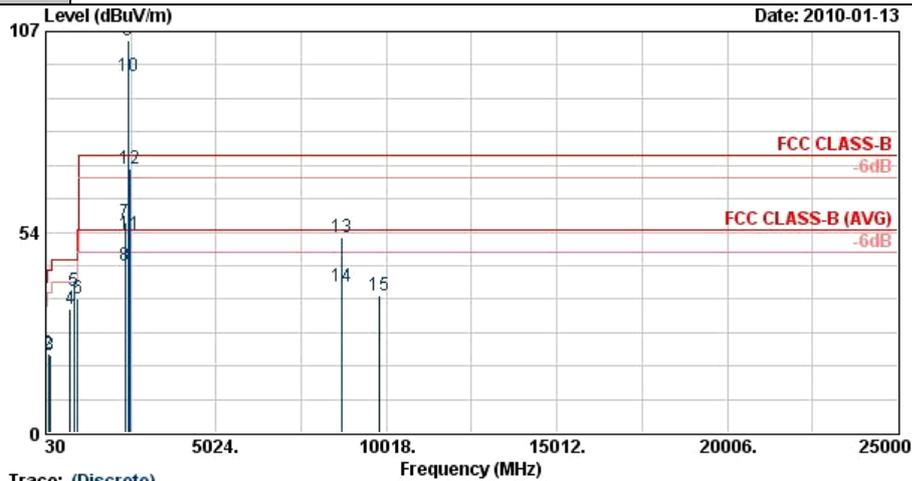
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 12

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	43.23	30.68	-9.32	40.00	50.65	10.70	1.05	31.71	---	---	Peak
2	74.28	29.75	-10.25	40.00	53.29	6.94	1.33	31.81	---	---	Peak
3	125.04	35.41	-8.09	43.50	53.41	11.91	1.80	31.71	100	237	Peak
4	532.40	32.84	-13.16	46.00	42.99	17.88	4.07	32.10	---	---	Peak
5	638.80	36.13	-9.87	46.00	44.61	18.92	4.54	31.94	---	---	Peak
6	745.90	34.71	-11.29	46.00	42.27	19.62	4.92	32.09	---	---	Peak
7	2358.00	53.53	-20.47	74.00	53.91	31.81	3.89	36.07	100	106	Peak
8	2358.00	41.90	-12.10	54.00	42.28	31.81	3.89	36.07	100	106	Average
9 @	2452.00	87.35			87.53	31.93	3.99	36.09	100	106	Average
10 X	2452.00	97.21			97.39	31.93	3.99	36.09	100	106	Peak
11	2487.42	45.49	-8.51	54.00	45.56	31.98	4.05	36.10	100	106	Average
12	2487.42	60.42	-13.58	74.00	60.49	31.98	4.05	36.10	100	106	Peak
13	8976.00	52.31	-21.69	74.00	45.36	36.07	7.77	36.89	100	143	Peak
14	8976.00	39.44	-14.56	54.00	32.49	36.07	7.77	36.89	100	143	Average
15	9808.00	41.43	-32.57	74.00	80.49	-9.98	8.02	37.10	100	0	Peak



Test Mode :	Mode 13	Temperature :	20~21°C
Test Channel :	09	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



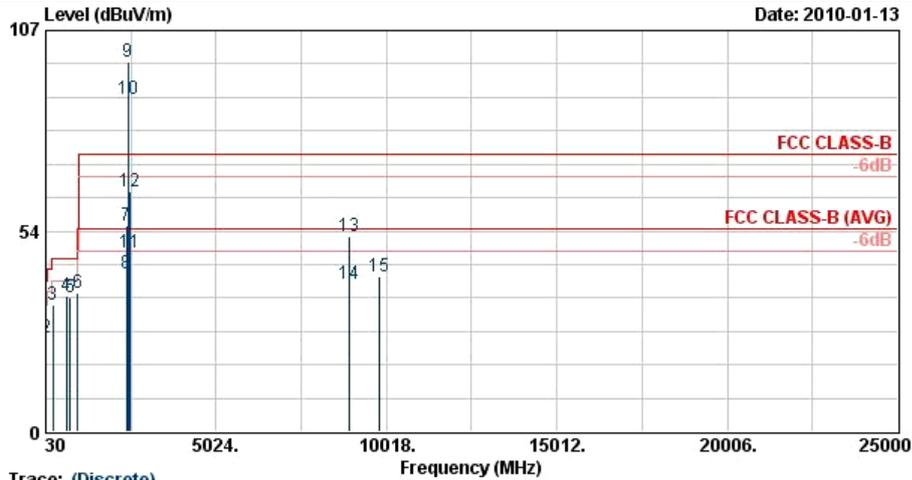
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 13

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	18.79	-21.21	40.00	31.01	18.51	0.83	31.56	---	---	Peak
2	100.74	21.07	-22.43	43.50	40.57	10.87	1.65	32.02	---	---	Peak
3	157.98	20.87	-22.63	43.50	40.54	10.12	2.09	31.88	---	---	Peak
4	745.90	33.00	-13.00	46.00	40.55	19.62	4.92	32.09	---	---	Peak
5	852.30	37.65	-8.35	46.00	44.27	20.42	5.32	32.36	100	49	Peak
6	959.40	35.75	-10.25	46.00	40.48	20.97	5.59	31.30	---	---	Peak
7	2350.00	56.15	-17.85	74.00	56.58	31.78	3.86	36.07	100	287	Peak
8	2350.00	44.39	-9.61	54.00	44.82	31.78	3.86	36.07	100	287	Average
9 X	2452.00	104.76			104.93	31.93	3.99	36.09	100	287	Peak
10 @	2452.00	94.93			95.11	31.93	3.99	36.09	100	287	Average
11 !	2483.50	52.95	-1.05	54.00	53.02	31.98	4.05	36.10	100	287	Average
12 !	2483.50	70.22	-3.78	74.00	70.29	31.98	4.05	36.10	100	287	Peak
13	8721.00	52.28	-21.72	74.00	45.72	35.87	7.48	36.79	100	173	Peak
14	8721.00	39.05	-14.95	54.00	32.49	35.87	7.48	36.79	100	173	Average
15	9808.00	36.76	-37.24	74.00	75.84	-10.00	8.02	37.10	100	0	Peak



Test Mode :	Mode 13	Temperature :	20~21°C
Test Channel :	09	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



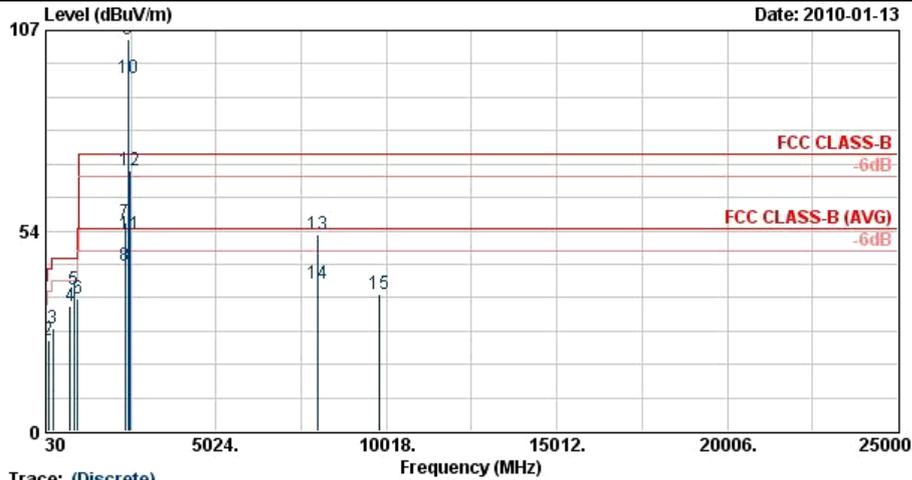
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 13

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	26.87	-13.13	40.00	39.66	17.98	0.85	31.61	---	---	Peak
2	41.88	24.92	-15.08	40.00	43.86	11.75	1.01	31.70	---	---	Peak
3	249.78	33.94	-12.06	46.00	50.77	12.27	2.69	31.79	---	---	Peak
4	638.80	36.31	-9.69	46.00	44.79	18.92	4.54	31.94	---	---	Peak
5	745.90	35.67	-10.33	46.00	43.22	19.62	4.92	32.09	---	---	Peak
6	959.40	36.84	-9.16	46.00	41.57	20.97	5.59	31.30	100	209	Peak
7	2388.00	54.84	-19.16	74.00	55.14	31.86	3.92	36.08	100	106	Peak
8	2388.00	41.98	-12.02	54.00	42.28	31.86	3.92	36.08	100	106	Average
9 X	2452.00	98.64			98.76	31.95	4.02	36.09	100	106	Peak
10 @	2452.00	88.66			88.84	31.93	3.99	36.09	100	106	Average
11	2483.50	47.65	-6.35	54.00	47.72	31.98	4.05	36.10	100	106	Average
12	2483.50	64.10	-9.90	74.00	64.17	31.98	4.05	36.10	100	106	Peak
13	8937.00	52.29	-21.71	74.00	45.37	36.05	7.74	36.87	100	217	Peak
14	8937.00	39.21	-14.79	54.00	32.29	36.05	7.74	36.87	100	217	Average
15	9808.00	41.41	-32.59	74.00	80.50	-10.00	8.02	37.10	100	0	Peak



Test Mode :	Mode 14	Temperature :	20~21°C
Test Channel :	09	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		

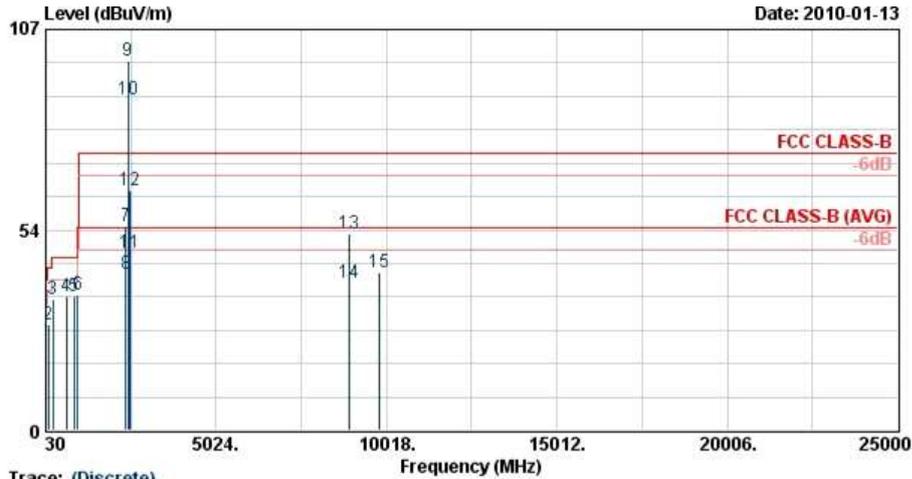


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 14

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	19.11	-20.89	40.00	31.90	17.98	0.85	31.61	---	---	Peak
2	100.74	24.11	-19.39	43.50	43.61	10.87	1.65	32.02	---	---	Peak
3	249.78	27.64	-18.36	46.00	44.47	12.27	2.69	31.79	---	---	Peak
4	745.90	33.52	-12.48	46.00	41.07	19.62	4.92	32.09	---	---	Peak
5	852.30	37.77	-8.23	46.00	44.40	20.42	5.32	32.36	100	63	Peak
6	959.40	35.32	-10.68	46.00	40.06	20.97	5.59	31.30	---	---	Peak
7	2348.00	55.67	-18.33	74.00	56.10	31.78	3.86	36.07	100	285	Peak
8	2348.00	44.00	-10.00	54.00	44.43	31.78	3.86	36.07	100	285	Average
9 X	2452.00	104.55			104.73	31.93	3.99	36.09	100	285	Peak
10 @	2452.00	94.15			94.33	31.93	3.99	36.09	100	285	Average
11 !	2483.50	52.31	-1.69	54.00	52.38	31.98	4.05	36.10	100	285	Average
12 !	2483.50	69.45	-4.55	74.00	69.52	31.98	4.05	36.10	100	285	Peak
13	7992.00	52.61	-21.39	74.00	45.91	35.79	7.51	36.60	100	338	Peak
14	7992.00	39.42	-14.58	54.00	32.71	35.79	7.51	36.60	100	338	Average
15	9808.00	36.70	-37.30	74.00	75.78	-10.00	8.02	37.10	100	0	Peak



Test Mode :	Mode 14	Temperature :	20~21°C
Test Channel :	09	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



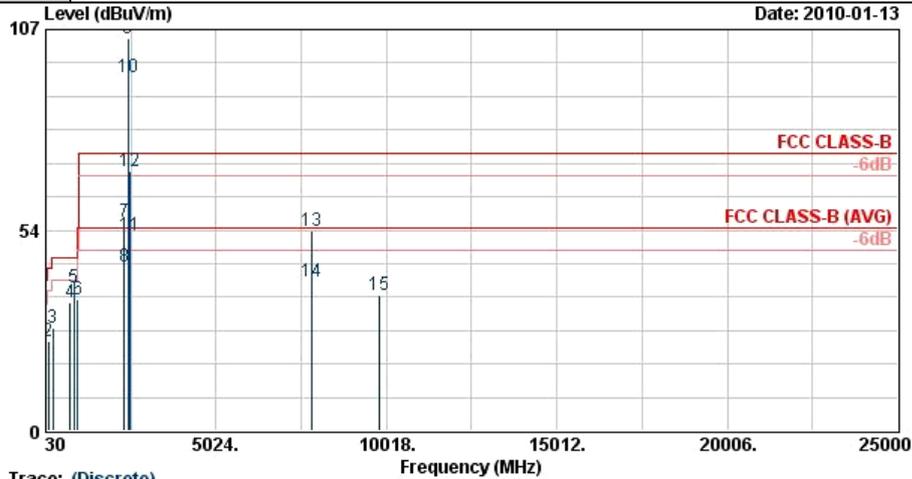
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 14

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.08	27.33	-12.67	40.00	40.11	17.98	0.85	31.61	---	---	Peak
2	100.74	28.30	-15.20	43.50	47.81	10.87	1.65	32.02	---	---	Peak
3	249.78	34.84	-11.16	46.00	51.67	12.27	2.69	31.79	---	---	Peak
4	638.80	35.97	-10.03	46.00	44.45	18.92	4.54	31.94	---	---	Peak
5	852.30	35.98	-10.02	46.00	42.60	20.42	5.32	32.36	---	---	Peak
6	959.40	36.30	-9.70	46.00	41.03	20.97	5.59	31.30	100	218	Peak
7	2382.00	54.56	-19.44	74.00	54.88	31.83	3.92	36.08	100	107	Peak
8	2382.00	41.86	-12.14	54.00	42.18	31.83	3.92	36.08	100	107	Average
9 X	2452.00	98.81			98.94	31.95	4.02	36.09	100	107	Peak
10 @	2452.00	88.50			88.68	31.93	3.99	36.09	100	107	Average
11	2483.50	47.44	-6.56	54.00	47.51	31.98	4.05	36.10	100	107	Average
12	2483.50	63.97	-10.03	74.00	64.04	31.98	4.05	36.10	100	107	Peak
13	8931.00	52.47	-21.53	74.00	45.58	36.05	7.71	36.87	100	218	Peak
14	8931.00	39.47	-14.53	54.00	32.58	36.05	7.71	36.87	100	218	Average
15	9808.00	42.24	-31.76	74.00	81.33	-10.00	8.02	37.10	100	0	Peak



Test Mode :	Mode 15	Temperature :	20~21°C
Test Channel :	09	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Horizontal
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



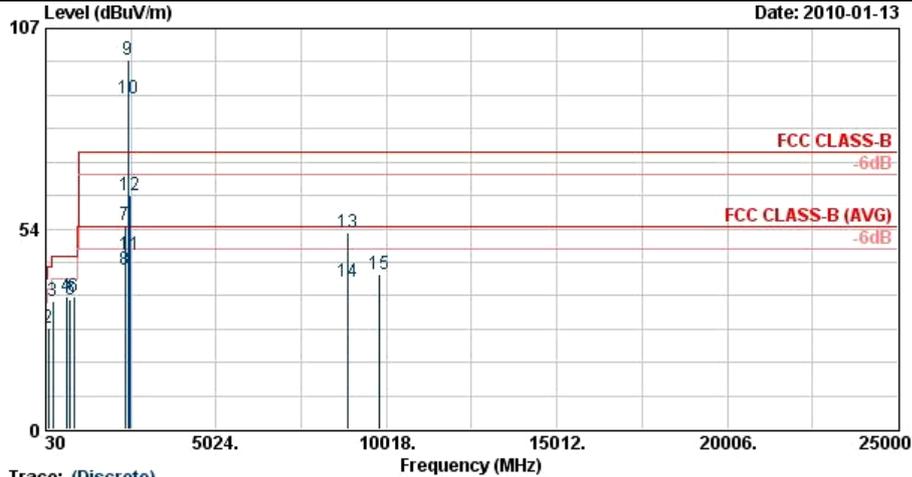
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 Project : FR 9D1808
 Memo : Mode 15

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	18.66	-21.34	40.00	30.88	18.51	0.83	31.56	---	---	Peak
2	100.74	23.75	-19.75	43.50	43.25	10.87	1.65	32.02	---	---	Peak
3	249.78	27.44	-18.56	46.00	44.27	12.27	2.69	31.79	---	---	Peak
4	745.90	34.03	-11.97	46.00	41.58	19.62	4.92	32.09	---	---	Peak
5	852.30	38.02	-7.98	46.00	44.65	20.42	5.32	32.36	100	33	Peak
6	959.40	34.91	-11.09	46.00	39.64	20.97	5.59	31.30	---	---	Peak
7	2326.00	55.55	-18.45	74.00	56.03	31.76	3.82	36.07	100	289	Peak
8	2326.00	43.94	-10.06	54.00	44.42	31.76	3.82	36.07	100	289	Average
9 X	2452.00	104.42			104.55	31.95	4.02	36.09	100	289	Peak
10 @	2452.00	94.39			94.57	31.93	3.99	36.09	100	289	Average
11 !	2483.50	51.98	-2.02	54.00	52.05	31.98	4.05	36.10	100	289	Average
12 !	2483.50	69.05	-4.95	74.00	69.12	31.98	4.05	36.10	100	289	Peak
13	7806.00	53.35	-20.65	74.00	46.77	35.72	7.42	36.56	100	113	Peak
14	7806.00	39.86	-14.14	54.00	33.28	35.72	7.42	36.56	100	113	Average
15	9808.00	36.26	-37.74	74.00	75.33	-9.98	8.02	37.10	100	0	Peak



Test Mode :	Mode 15	Temperature :	20~21°C
Test Channel :	09	Relative Humidity :	48~49%
Test Engineer :	Mac Lin	Polarization :	Vertical
Remark :	#9 and #10 are Fundamental Signals which can be ignored. #15 signal is not in the restricted band.		



Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 Project : FR 9D1808
 Memo : Mode 15

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	42.69	24.07	-15.93	40.00	43.52	11.23	1.03	31.71	---	---	Peak
2	100.74	27.18	-16.32	43.50	46.68	10.87	1.65	32.02	---	---	Peak
3	249.78	34.41	-11.59	46.00	51.24	12.27	2.69	31.79	---	---	Peak
4	638.80	35.52	-10.48	46.00	44.00	18.92	4.54	31.94	100	27	Peak
5	745.90	34.80	-11.20	46.00	42.35	19.62	4.92	32.09	---	---	Peak
6	852.30	35.28	-10.72	46.00	41.90	20.42	5.32	32.36	---	---	Peak
7	2364.00	54.43	-19.57	74.00	54.81	31.81	3.89	36.07	100	121	Peak
8	2364.00	42.56	-11.44	54.00	42.94	31.81	3.89	36.07	100	121	Average
9 X	2452.00	98.52			98.64	31.95	4.02	36.09	100	121	Peak
10 @	2452.00	88.16			88.34	31.93	3.99	36.09	100	121	Average
11	2483.50	46.48	-7.52	54.00	46.55	31.98	4.05	36.10	100	121	Average
12	2483.50	62.64	-11.36	74.00	62.71	31.98	4.05	36.10	100	121	Peak
13	8871.00	52.35	-21.65	74.00	45.55	35.99	7.65	36.85	100	297	Peak
14	8871.00	39.26	-14.74	54.00	32.46	35.99	7.65	36.85	100	297	Average
15	9808.00	41.40	-32.60	74.00	80.43	-9.96	8.03	37.10	100	0	Peak



3.8 Antenna Requirements

3.8.1 Standard Applicable

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

3.8.2 Antenna Connected Construction

The antennas type used in this product is PCB Antenna without connector and it is considered to meet antenna requirement.

3.8.3 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	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 23, 2009	Jun. 22, 2010	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 17, 2009	Sep. 16, 2010	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 10, 2009	Sep. 09, 2010	Conducted (TH02-HY)
EMI Test Receive	R&S	ESCS 30	100356	9KHz - 2.75GHz	Aug. 05, 2009	Aug. 04, 2010	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9kHz~30MHz	Nov. 30, 2009	Nov. 29, 2010	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9kHz~30MHz	Nov. 23, 2009	Nov. 22, 2010	Conduction (CO05-HY)
AC Power Source	APC	APC-1000 W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	105934	N/A	Nov. 11, 2008	Nov. 10, 2010	Conduction (CO05-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Oct. 23, 2009	Oct. 22, 2010	Radiation (03CH06-HY)
Spectrum Analyzer	R&S	FSP40	100057	9KHz-40GHz	Oct. 20, 2009	Oct. 19, 2010	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/003	20MHz-1000MHz	Apr. 28, 2009	Apr. 27, 2010	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Oct. 31, 2009	Oct. 30, 2010	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz~18GHz	Aug. 20, 2009	Aug. 19, 2010	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Training Research	AH-0801	95119	8GHz~18GHz	Nov. 02, 2009	Nov. 01, 2010	Radiation (03CH06-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 14, 2009	Oct. 13, 2010	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1GHz- 26.5GHz	Nov. 11, 2009	Nov. 10, 2010	Radiation (03CH06-HY)
Amplifier	Agilent	310N	186713	9KHz~1GHz	Apr. 20, 2009	Apr. 19, 2010	Radiation (03CH06-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9KHz~30MHz	May 22, 2008	May 21, 2010	Radiation (03CH06-HY)
System Simulator	R&S	CMU200	117591	N/A	Oct. 15, 2008	Oct. 14, 2010	Radiation (03CH06-HY)

5 Uncertainty of Evaluation

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

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.10	Normal (k=2)	0.05
Cable Loss	0.10	Normal (k=2)	0.05
AMN Insertion Loss	2.50	Rectangular	0.63
Receiver Specification	1.50	Rectangular	0.43
Site Imperfection	1.39	Rectangular	0.80
Mismatch	+0.34 / -0.35	U-Shape	0.24
Combined Standard Uncertainty $U_c(y)$	1.13		
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.26		

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

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
Combined Standard Uncertainty $U_c(y)$	1.27		
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	2.54		



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

Contribution	Uncertainty of X_i		$u(X_i)$	C_i	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20\text{Log}(1-\Gamma_1*\Gamma_2)$	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty $U_c(y)$	2.36				
Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.72				

6 Certification of TAF Accreditation

Certificate No. : L1190-100107

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien,
Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	: ISO/IEC 17025:2005
Accreditation Number	: 1190
Originally Accredited	: December 15, 2003
Effective Period	: January 10, 2010 to January 09, 2013
Accredited Scope	: Testing Field, see described in the Appendix
Specific Accreditation Program	: Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory Accreditation Program for BSMI Mutual Recognition Arrangement with Foreign Authorities



Jay-San Chen
President, Taiwan Accreditation Foundation
Date : January 07, 2010

P1, total 21 pages

The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix



Appendix A. Photographs of EUT

Please refer to Sporton report number EP9D1808 as below.