FCC RF Test Report

APPLICANT	**:**	**HTC Corporation**
EQUIPMENT	**:**	**Smart Phone**
MODEL NAME	**:**	**PG32100**
FCC ID	**:**	**NM8PG32100**
STANDARD	**:**	**FCC Part 15 Subpart C §15.247**
CLASSIFICATION	**:**	**Digital Transmission System (DTS)**

The product was received on Nov. 23, 2010 and completely tested on Dec. 27, 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:

Anderson Chiu

Anderson Chiu / Deputy 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 RESULT **4**

1 GENERAL DESCRIPTION **5**

1.1 Applicant 5
1.2 Manufacturer 5
1.3 Feature of Equipment Under Test 5
1.4 Testing Site 6
1.5 Applied Standards 6
1.6 Ancillary Equipment List 6

2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST **7**

2.1 RF Power 7
2.2 Test Mode 8
2.3 Connection Diagram of Test System 9
2.4 RF Utility 9

3 TEST RESULT **10**

3.1 6dB Bandwidth Measurement 10
3.2 Output Power Measurement 17
3.3 Band Edges Measurement 19
3.4 Spurious Emission Measurement 27
3.5 Power Spectral Density Measurement 37
3.6 AC Conducted Emission Measurement 44
3.7 Radiated Emission Measurement 48
3.8 Antenna Requirements 69

4 LIST OF MEASURING EQUIPMENT **70**

5 UNCERTAINTY OF EVALUATION **71**

APPENDIX A. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR0N2344-01B	Rev. 01	Initial issue of report	Jan. 14, 2011

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	≥ 0.5MHz	Pass	-
3.2	15.247(b)	A8.4	Power Output	≤ 30dBm	Pass	-
3.3	15.247(d)	A8.5	Frequency Band Edges	≤ 20dBc	Pass	-
3.4	15.247(d)	A8.5	Spurious Emission	< 20 dBc	Pass	-
3.5	15.247(e)	A8.2(b)	Power Spectral Density	≤ 8dBm	Pass	-
3.6	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 15.7 dB at 0.910 MHz
3.7	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.46 dB at 39.45 MHz
3.8	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

HTC Corporation
1F., No. 6-3, Baoqiang Rd., Xindian City, Taipei, Taiwan

1.2 Manufacturer

HTC Corporation
1F., No. 6-3, Baoqiang Rd., Xindian City, Taipei, Taiwan

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Smart Phone
Model Name	PG32100
FCC ID	NM8PG32100
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 : 21.32 dBm (0.136 W) 802.11g : 22.51 dBm (0.178 W) 802.11n (BW 20MHz) : 22.55 dBm (0.180 W)
Antenna Type	PIFA Antenna with gain 0 dBi
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
EUT Stage	Production Unit

Remark:

1. For other wireless features of this EUT, test report will be issued separately.
2. This test report recorded only product characteristics and test results of Digital Transmission System (DTS).
3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978		
Test Site No.	Sporton Site No.		FCC/IC Registration No.
	CO05-HY	03CH05-HY	722060/4086B-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 8

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.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Earphone	Merry	RC E160	N/A	N/A	N/A
6.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	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)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	20.76	-	-	20.81
CH 06	2437 MHz	21.01	-	-	21.16
CH 11	2462 MHz	21.08	21.18	21.26	**21.32**

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	22.06	-	-	-	-	-	-	-
CH 06	2437 MHz	**22.51**	22.32	22.18	21.95	21.93	22.07	22.11	22.13
CH 11	2462 MHz	22.14	-	-	-	-	-	-	-

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		M0	M1	M2	M3	M4	M5	M6	M7
CH 01	2412 MHz	22.17	-	-	-	-	-	-	-
CH 06	2437 MHz	**22.55**	21.96	21.92	22.04	21.95	21.85	22.14	21.81
CH 11	2462 MHz	22.32	-	-	-	-	-	-	-

Remark:

1. The data rates of WLAN 802.11b/g/n were set in 11Mbps for 802.11b, 6Mbps for 802.11g, and M0 for 802.11n (BW 20MHz) 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).

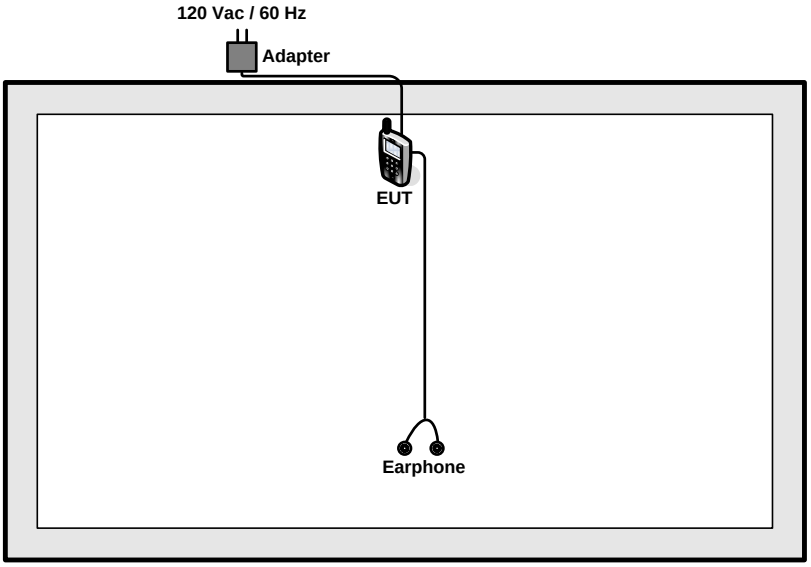
Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

The following tables are showing the test modes as the worst cases and recorded in this report.

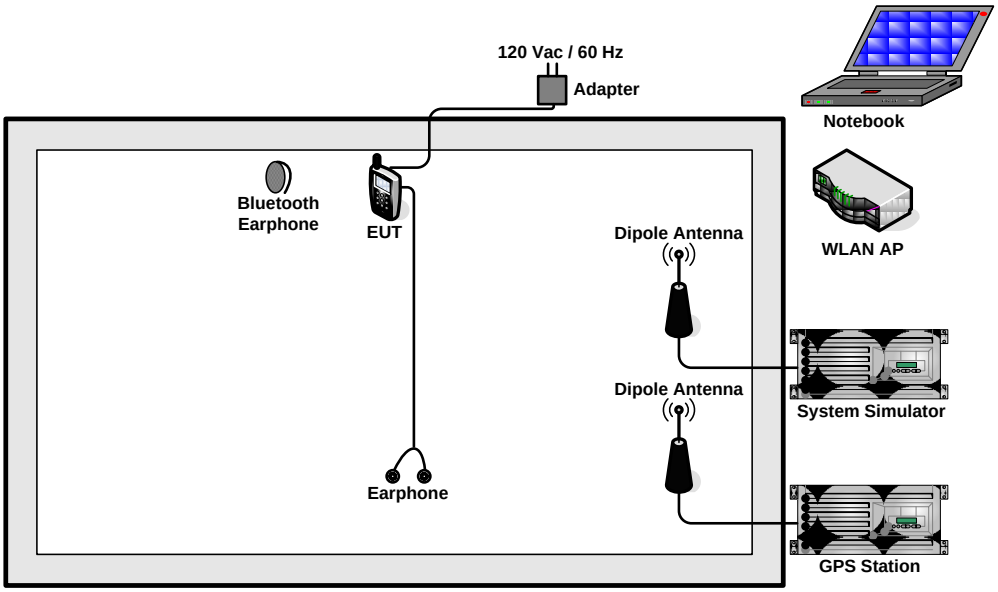
Test Cases		
Test Item	**802.11b (Modulation : DSSS)**	**802.11g/n (Modulation : OFDM)**
Conducted TCs	Mode 1 : 802.11b CH01_2412 MHz Mode 2 : 802.11b CH06_2437 MHz Mode 3 : 802.11b CH11_2462 MHz	Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n (BW 20M)_CH01_2412 MHz Mode 8: 802.11n (BW 20M)_CH06_2437 MHz Mode 9: 802.11n (BW 20M)_CH11_2462 MHz
Radiated TCs	Mode 1 : 802.11b CH01_2412 MHz Mode 2 : 802.11b CH06_2437 MHz Mode 3 : 802.11b 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
AC Conducted Emission	Mode 1 : CDMA2000 BC0 Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 2)	
Remark: All tests of Radiated TCs were performed with Battery 2 and USB Cable 2 (Charging from Adapter 2).		

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<Conduction>



2.4 RF Utility

The programmed RF utility “Remote 432X controller(P1.63)” is installed in Notebook to provide channel selection, power level, data rate and the application type. 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.

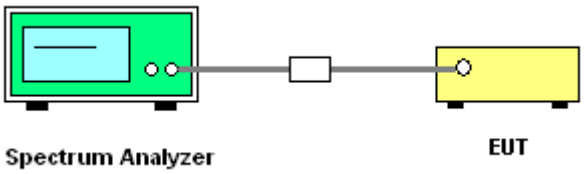
3.1.2 Measuring Instruments

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

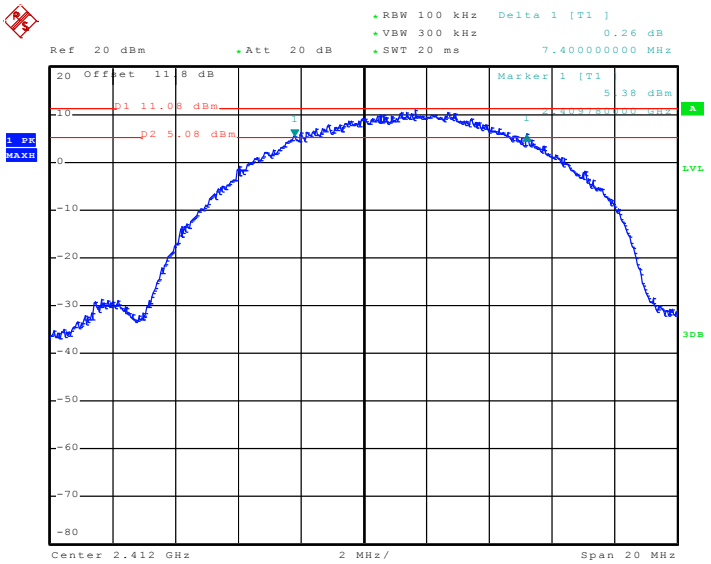


3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Mode 1, 2, 3	**Temperature :**	23~25℃
Test Engineer :	Hank Yu	**Relative Humidity :**	45~49%

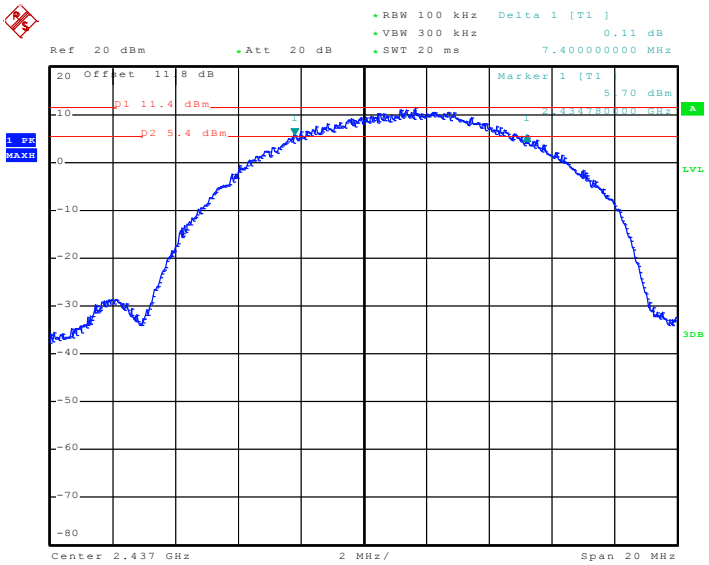
Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	7.40	0.5	Pass
06	2437	7.40	0.5	Pass
11	2462	7.40	0.5	Pass

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



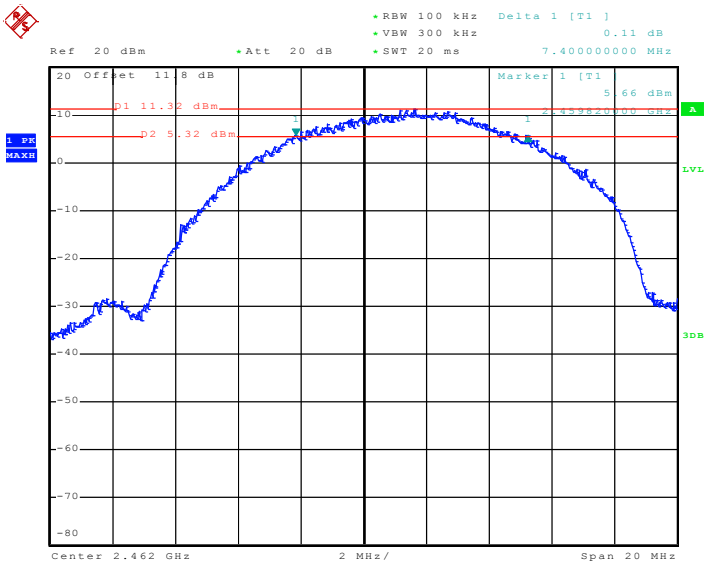
Date: 17.DEC.2010 20:53:02

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



Date: 17.DEC.2010 21:18:38

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

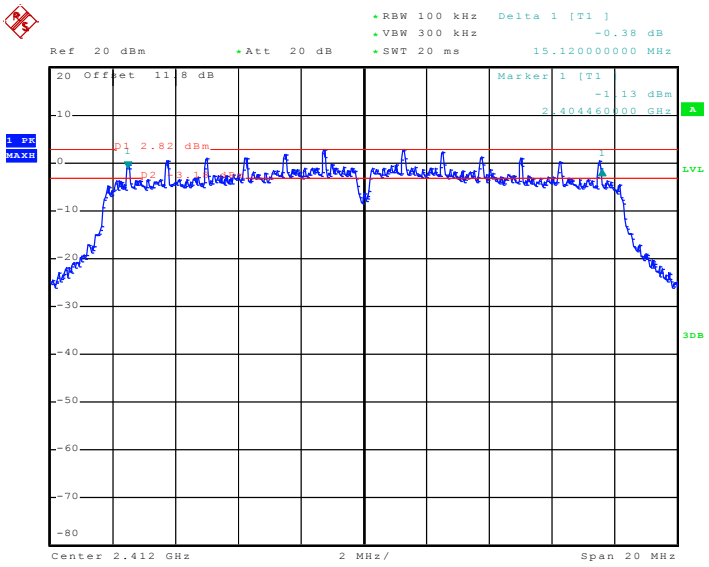


Date: 17.DEC.2010 21:05:47

Test Mode :	Mode 4, 5, 6	Temperature :	23~25℃
Test Engineer :	Hank Yu	Relative Humidity :	45~49%

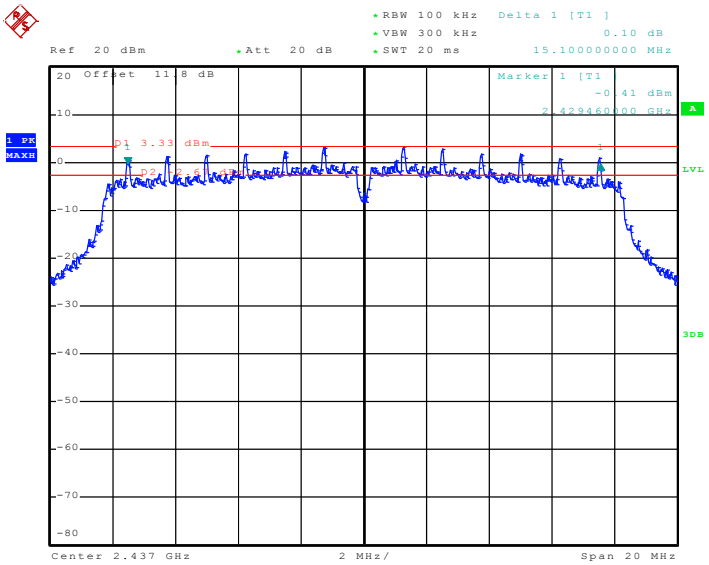
Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	15.12	0.5	Pass
06	2437	15.10	0.5	Pass
11	2462	15.12	0.5	Pass

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



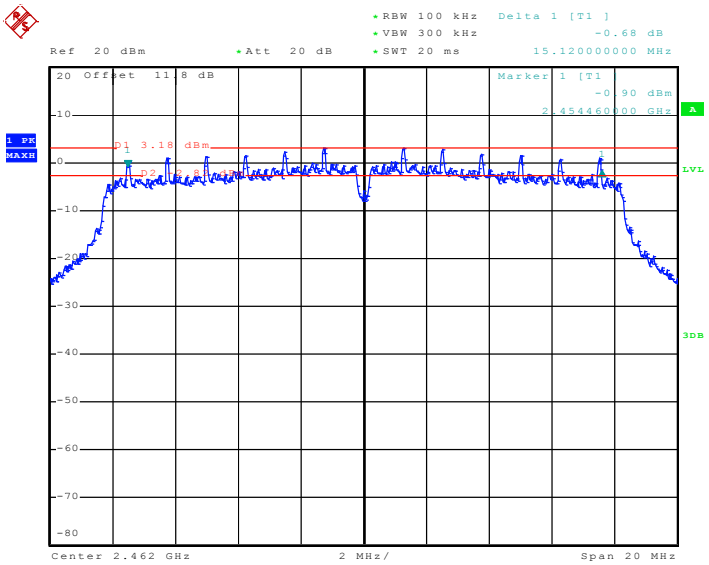
Date: 17.DEC.2010 21:55:29

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



Date: 17.DEC.2010 21:31:11

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

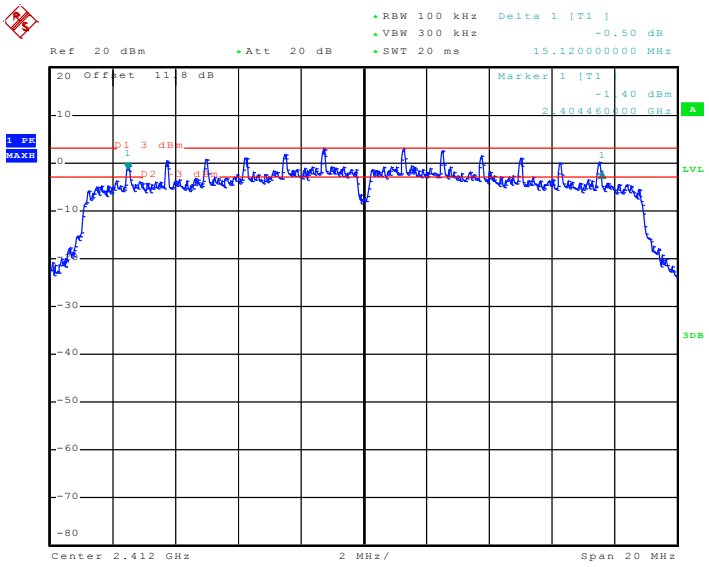


Date: 17.DEC.2010 21:42:47

Test Mode :	Mode 7, 8, 9	Temperature :	23~25℃
Test Engineer :	Hank Yu	Relative Humidity :	45~49%

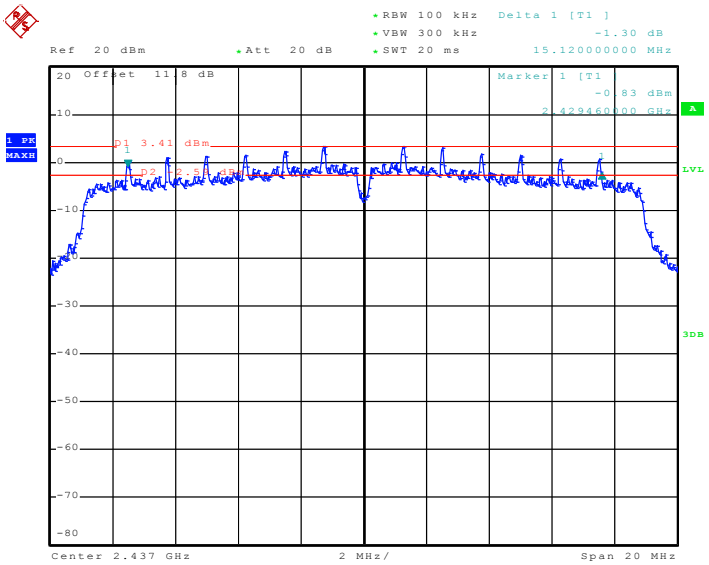
Channel	Frequency (MHz)	802.11n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	15.12	0.5	Pass
06	2437	15.12	0.5	Pass
11	2462	15.10	0.5	Pass

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



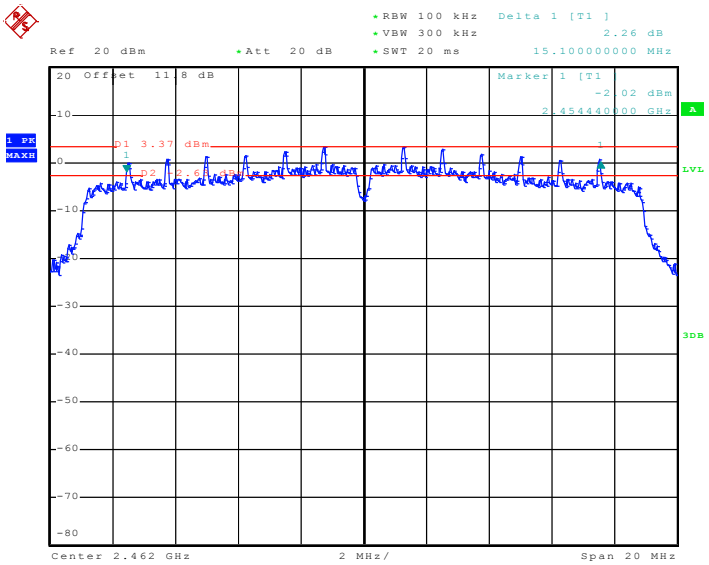
Date: 17.DEC.2010 22:08:31

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



Date: 17.DEC.2010 22:33:38

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



Date: 17.DEC.2010 22:21:17

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.

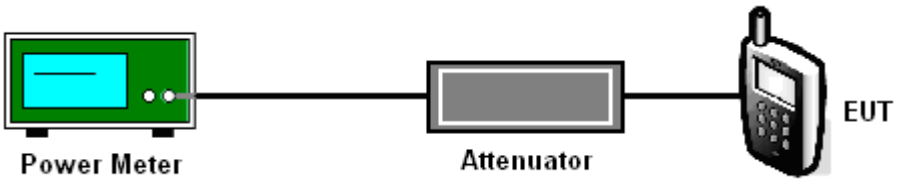
3.2.2 Measuring Instruments

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℃
Test Engineer :	Hank Yu	**Relative Humidity :**	45~49%

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.81	30	Pass
06	2437	21.16	30	Pass
11	2462	21.32	30	Pass

Test Mode :	Mode 4, 5, 6	**Temperature :**	23~25℃
Test Engineer :	Hank Yu	**Relative Humidity :**	45~49%

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	22.06	30	Pass
06	2437	22.51	30	Pass
11	2462	22.14	30	Pass

Test Mode :	Mode 7, 8, 9	**Temperature :**	23~25℃
Test Engineer :	Hank Yu	**Relative Humidity :**	45~49%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	22.17	30	Pass
06	2437	22.55	30	Pass
11	2462	22.32	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

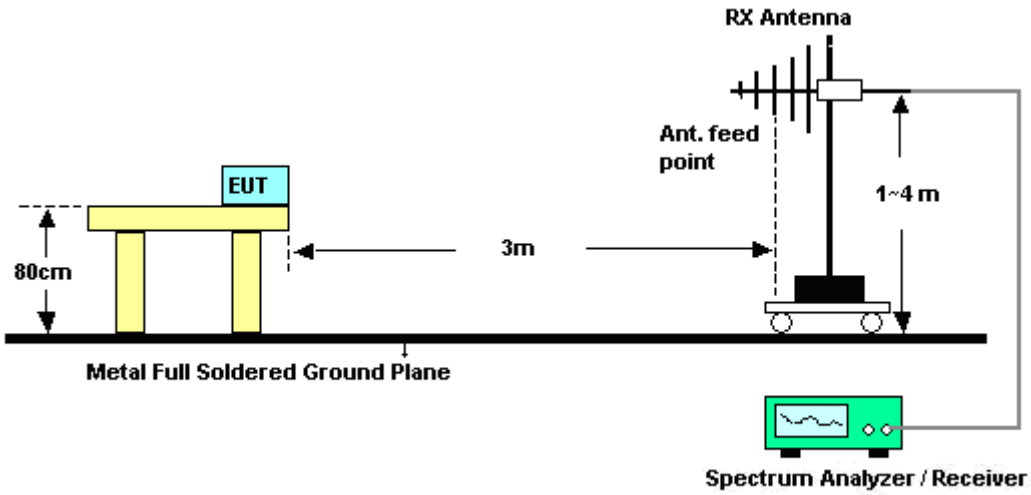
See list of measuring instruments of this test report.

3.3.3 Test Procedures

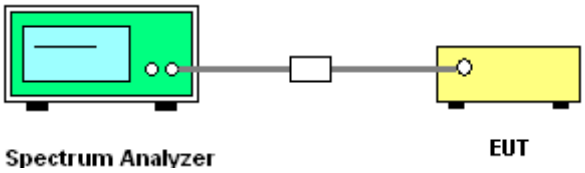
1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) ≥ RBW. Band edge emissions must be at least 20 dB down from the highest emission level within the authorized 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 :**	20~23℃
Test Band :	802.11b	**Relative Humidity :**	50~53%
Test Channel :	01	**Test Engineer :**	Wii Chang

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
2389.8	52.38	-21.62	74	52.26	31.7	4.5	36.08	100	30	Peak
2389.8	39.66	-14.34	54	39.54	31.7	4.5	36.08	100	30	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
2389.61	54.38	-19.62	74	54.29	31.7	4.47	36.08	168	191	Peak
2389.61	40.01	-13.99	54	39.92	31.7	4.47	36.08	168	191	Average

Test Mode :	Mode 3	**Temperature :**	20~23℃
Test Band :	802.11b	**Relative Humidity :**	50~53%
Test Channel :	11	**Test Engineer :**	Wii Chang

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
2484.04	49.53	-24.47	74	49.26	31.78	4.59	36.1	102	334	Peak
2484.04	36.51	-17.49	54	36.24	31.78	4.59	36.1	102	334	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
2483.66	48.48	-25.52	74	48.21	31.78	4.59	36.1	127	237	Peak
2483.66	35.59	-18.41	54	35.32	31.78	4.59	36.1	127	237	Average

Test Mode :	Mode 4	**Temperature :**	20~23℃
Test Band :	802.11g	**Relative Humidity :**	50~53%
Test Channel :	01	**Test Engineer :**	Wii Chang

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
2388.85	59.35	-14.65	74	59.26	31.7	4.47	36.08	123	307	Peak
2388.85	41.63	-12.37	54	41.54	31.7	4.47	36.08	123	307	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
2389.8	61.18	-12.82	74	61.06	31.7	4.5	36.08	102	191	Peak
2389.8	42.19	-11.81	54	42.07	31.7	4.5	36.08	102	191	Average

Test Mode :	Mode 6	**Temperature :**	20~23℃
Test Band :	802.11g	**Relative Humidity :**	50~53%
Test Channel :	11	**Test Engineer :**	Wii Chang

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	53.66	-20.34	74	53.39	31.78	4.59	36.1	100	301	Peak
2483.5	35.84	-18.16	54	35.57	31.78	4.59	36.1	100	301	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
2483.66	54.4	-19.6	74	54.13	31.78	4.59	36.1	100	191	Peak
2483.66	35.26	-18.74	54	34.99	31.78	4.59	36.1	100	191	Average

Test Mode :	Mode 7	**Temperature :**	20~23℃
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	50~53%
Test Channel :	01	**Test Engineer :**	Wii Chang

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
2389.61	62.39	-11.61	74	62.3	31.7	4.47	36.08	100	22	Peak
2389.61	42.51	-11.49	54	42.42	31.7	4.47	36.08	100	22	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
2389.04	61.97	-12.03	74	61.88	31.7	4.47	36.08	168	186	Peak
2389.04	42.61	-11.39	54	42.52	31.7	4.47	36.08	168	186	Average

Test Mode :	Mode 9	**Temperature :**	20~23℃
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	50~53%
Test Channel :	11	**Test Engineer :**	Wii Chang

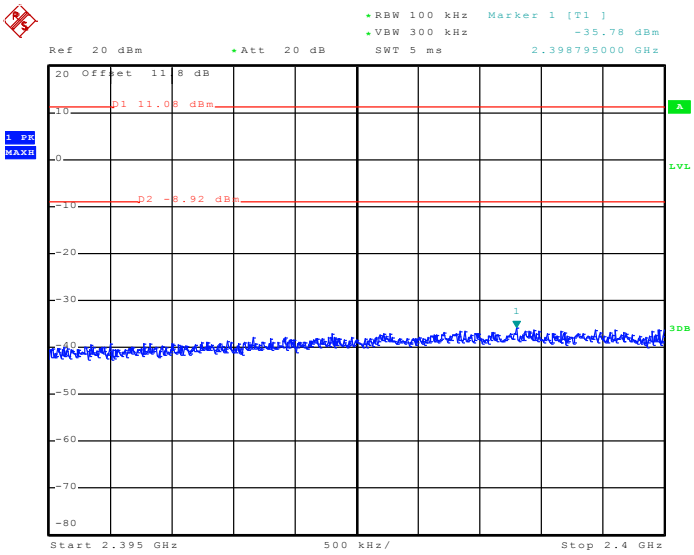
ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	56.51	-17.49	74	56.24	31.78	4.59	36.1	102	326	Peak
2483.66	40.22	-13.78	54	39.95	31.78	4.59	36.1	102	326	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
2484.04	53.92	-20.08	74	53.65	31.78	4.59	36.1	102	181	Peak
2484.04	37.77	-16.23	54	37.5	31.78	4.59	36.1	102	181	Average

3.3.6 Test Plots of Conducted Band Edges

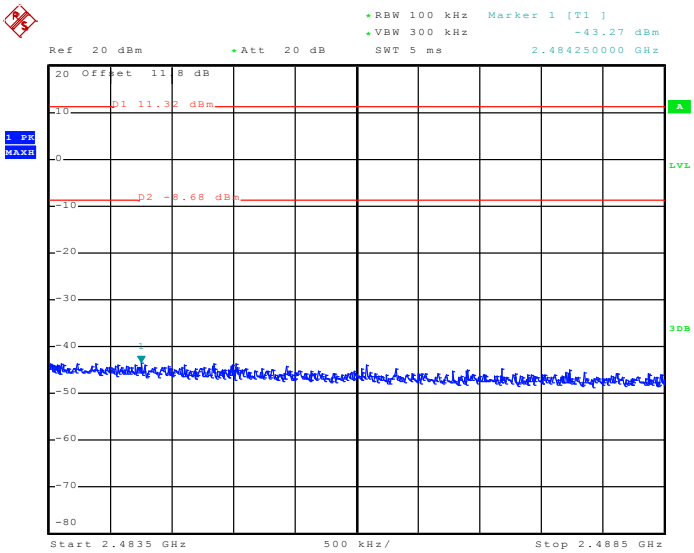
Test Mode :	Mode 1 and 3	**Temperature :**	23~25℃
Test Band :	802.11b	**Relative Humidity :**	45~49%
Test Channel :	01 and 11	**Test Engineer :**	Hank Yu

Low Band Edge Plot on 802.11b Channel 01



Date: 17.DEC.2010 20:54:14

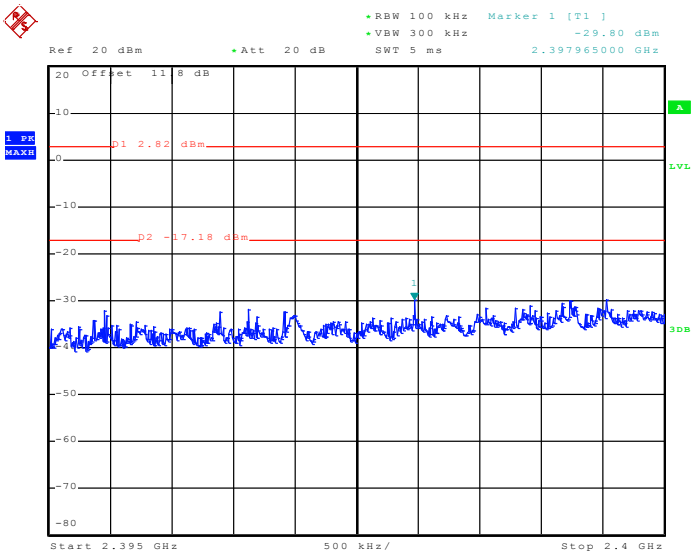
High Band Edge Plot on 802.11b Channel 11



Date: 17.DEC.2010 21:06:36

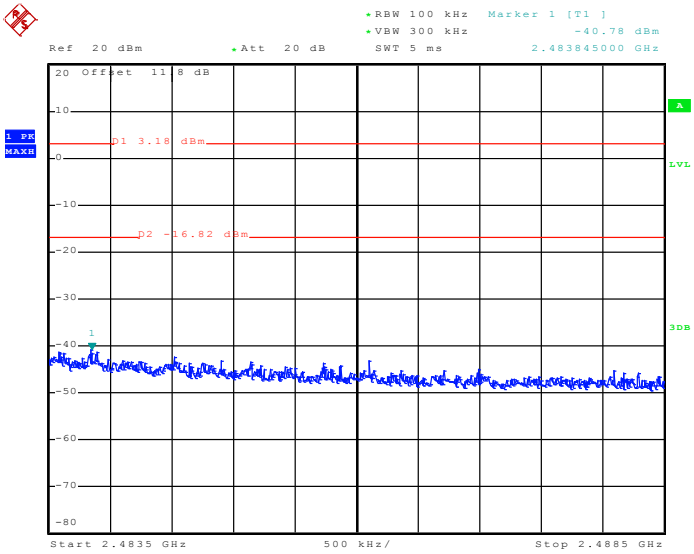
Test Mode :	Mode 4 and 6	**Temperature :**	23~25℃
Test Band :	802.11g	**Relative Humidity :**	45~49%
Test Channel :	01 and 11	**Test Engineer :**	Hank Yu

Low Band Edge Plot on 802.11g Channel 01



Date: 17.DEC.2010 21:56:41

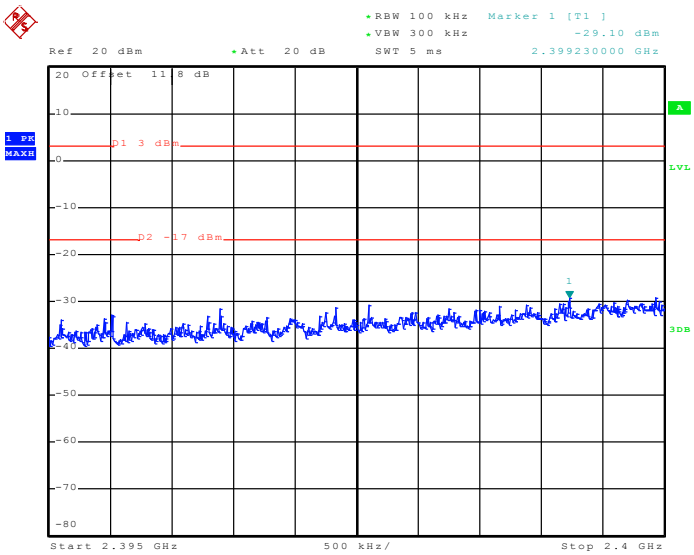
High Band Edge Plot on 802.11g Channel 11



Date: 17.DEC.2010 21:43:35

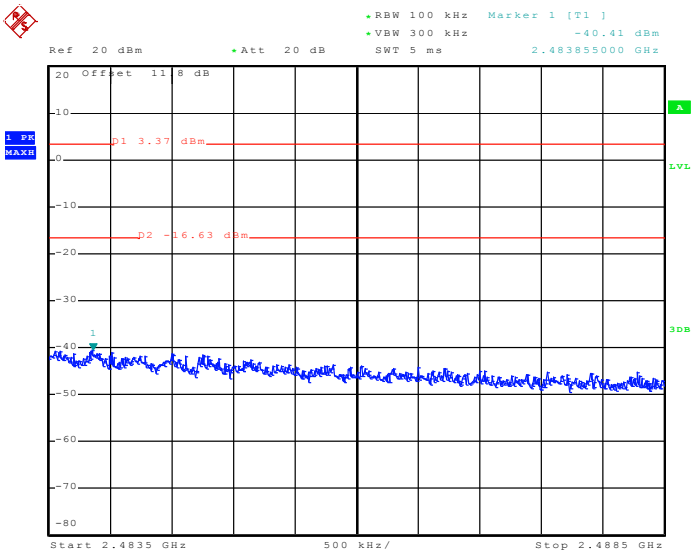
Test Mode :	Mode 7 and 9	**Temperature :**	23~25℃
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	45~49%
Test Channel :	01 and 11	**Test Engineer :**	Hank Yu

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



Date: 17.DEC.2010 22:09:43

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



Date: 17.DEC.2010 22:22:06

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

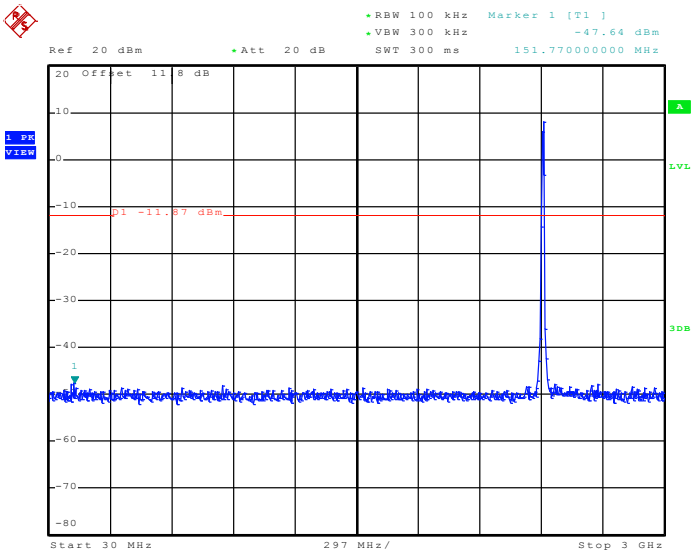
1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set RBW = 100 kHz, Video bandwidth (VBW) ≥ RBW, scan up through 10th harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

3.4.4 Test Setup

3.4.5 Test Plots of Spurious Emission

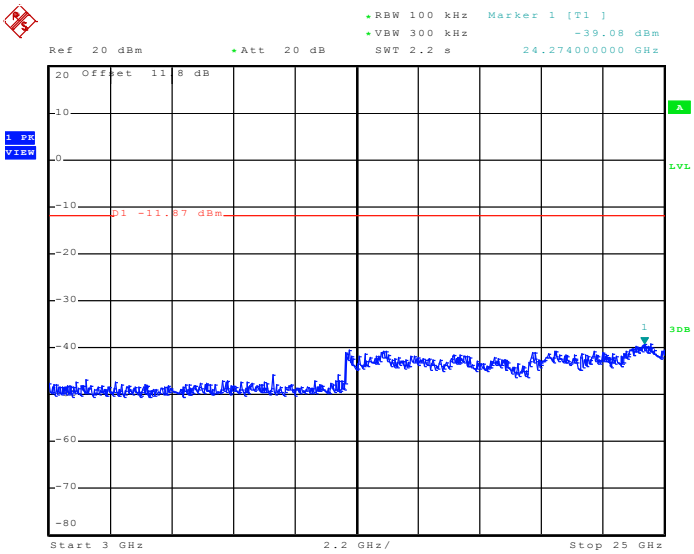
Test Mode :	Mode 1	**Temperature :**	23~25℃
Test Band :	802.11b	**Relative Humidity :**	45~49%
Test Channel :	01	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 21:03:41

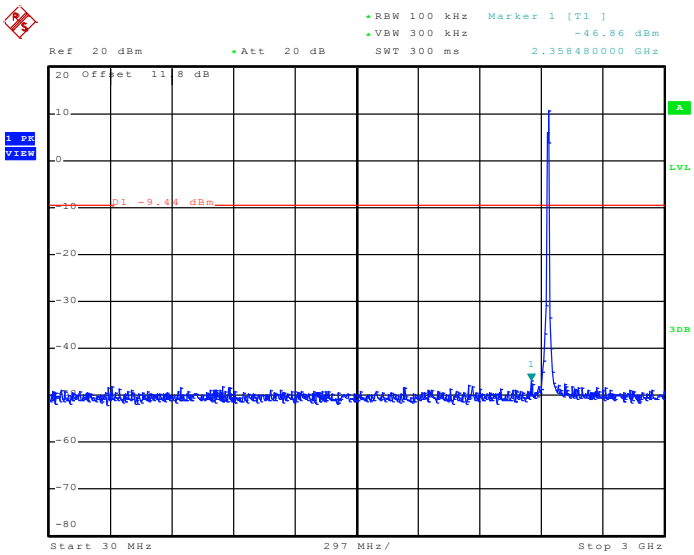
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 21:03:59

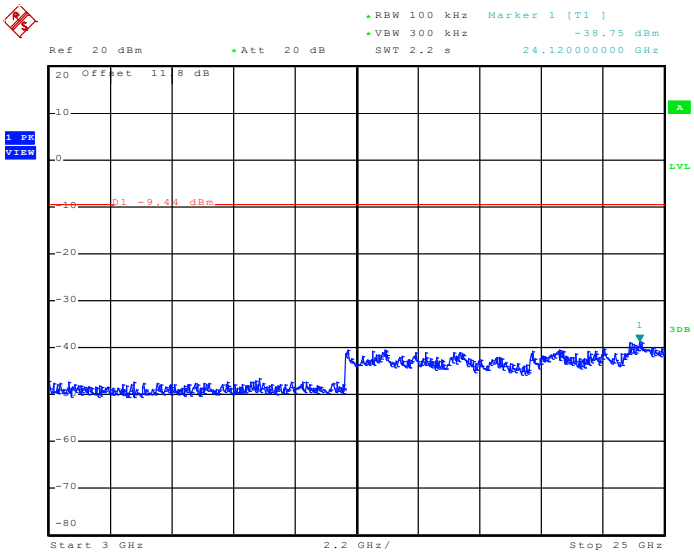
Test Mode :	Mode 2	**Temperature :**	23~25℃
Test Band :	802.11b	**Relative Humidity :**	45~49%
Test Channel :	06	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 21:28:57

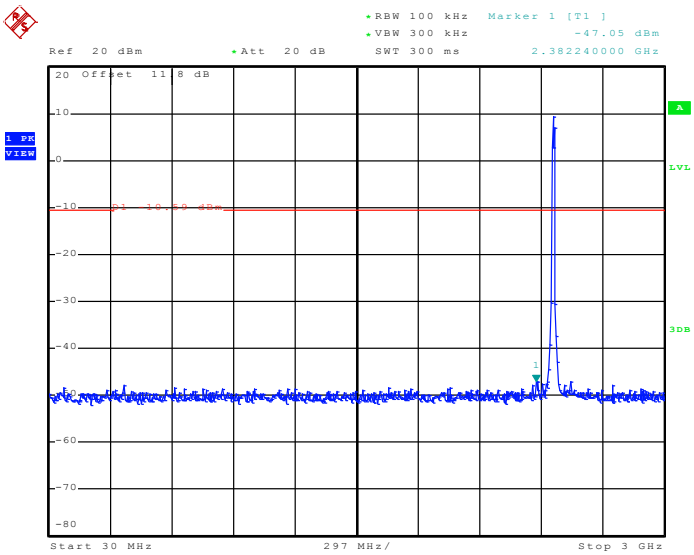
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 21:29:15

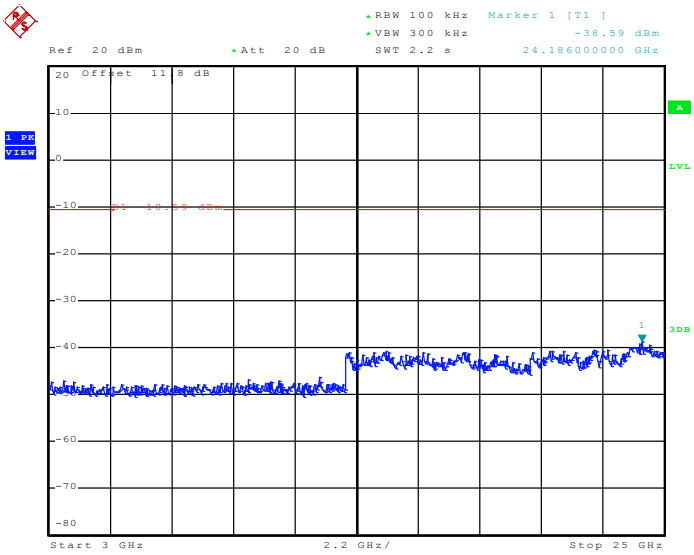
Test Mode :	Mode 3	**Temperature :**	23~25℃
Test Band :	802.11b	**Relative Humidity :**	45~49%
Test Channel :	11	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 21:16:11

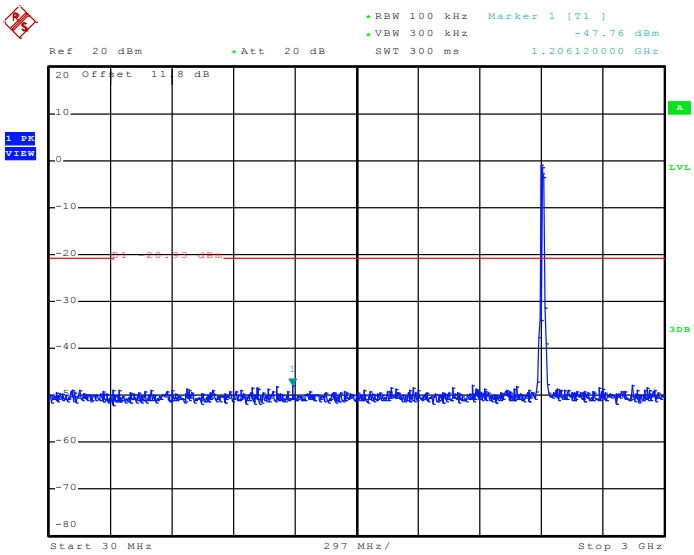
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 21:16:29

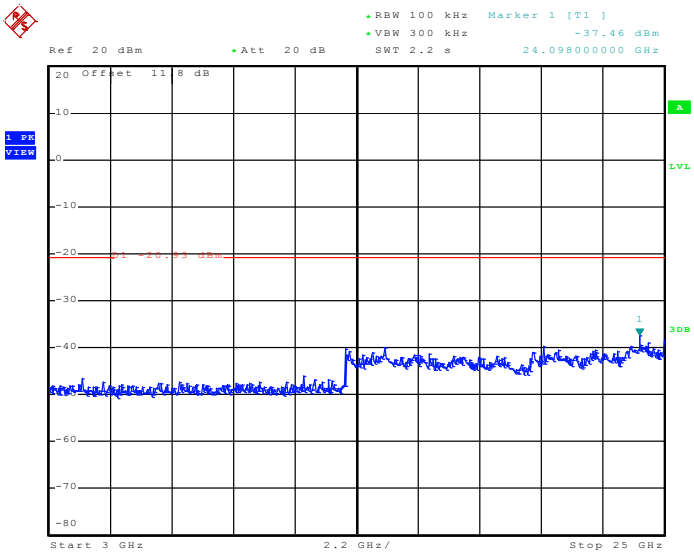
Test Mode :	Mode 4	**Temperature :**	23~25℃
Test Band :	802.11g	**Relative Humidity :**	45~49%
Test Channel :	01	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 22:06:16

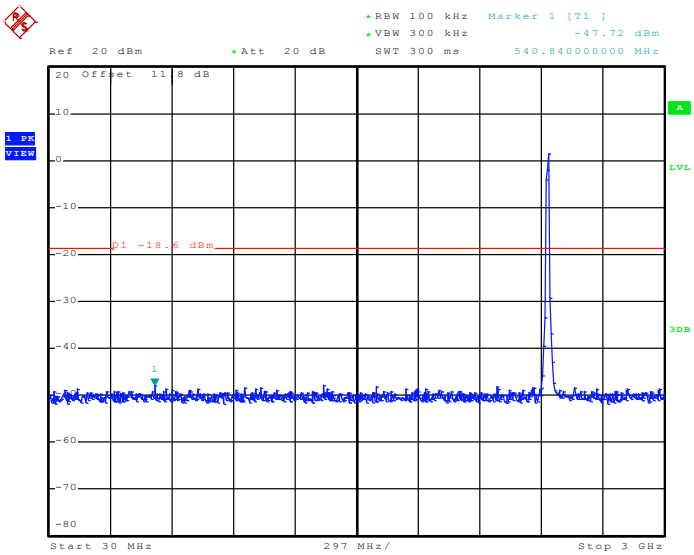
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 22:06:34

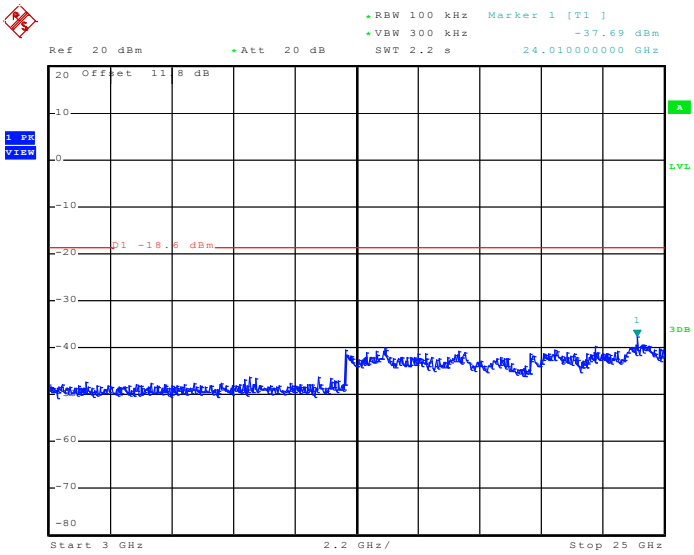
Test Mode :	Mode 5	**Temperature :**	23~25
Test Band :	802.11g	**Relative Humidity :**	45~49
Test Channel :	06	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 21:40:40

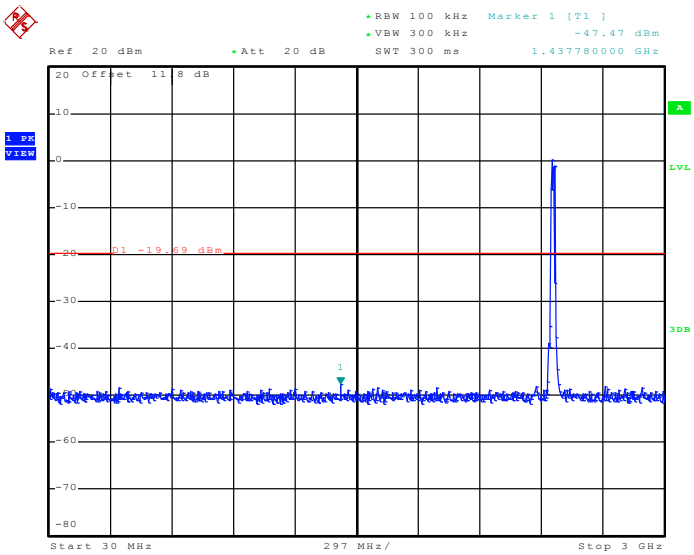
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 21:40:58

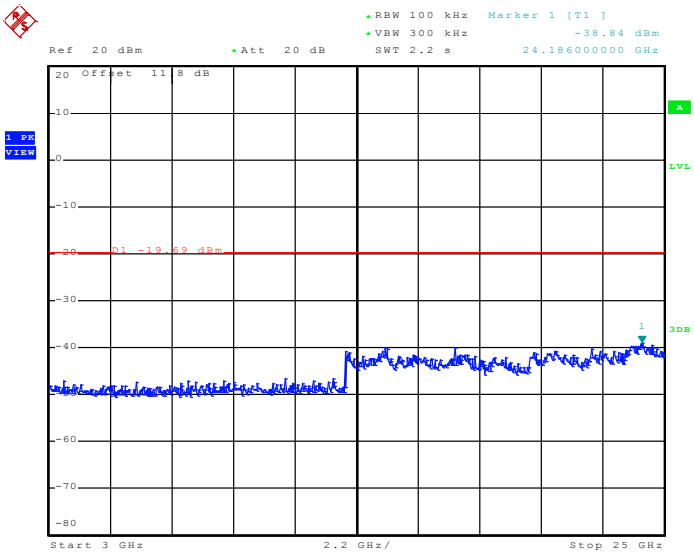
Test Mode :	Mode 6	**Temperature :**	23~25℃
Test Band :	802.11g	**Relative Humidity :**	45~49%
Test Channel :	11	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 21:53:44

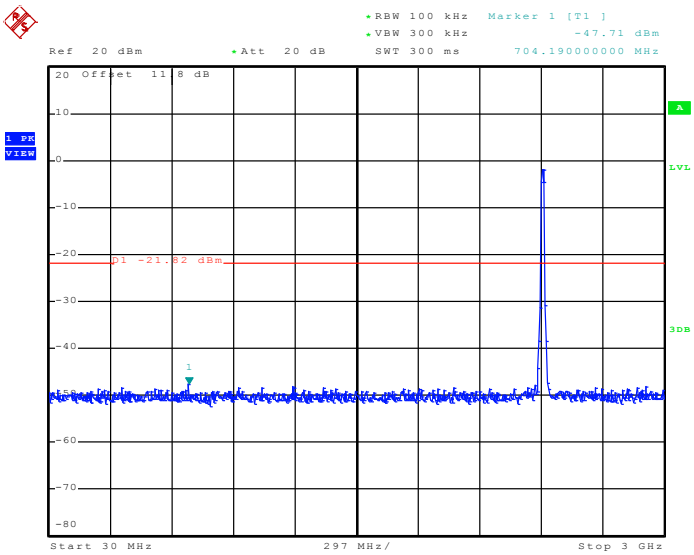
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 21:54:02

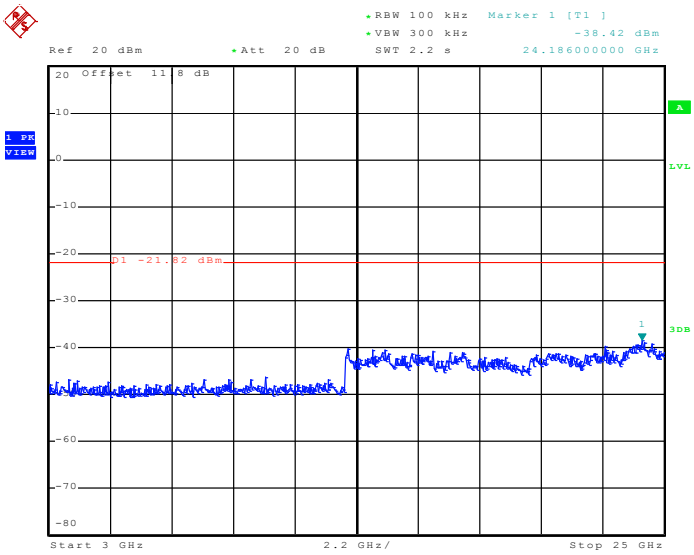
Test Mode :	Mode 7	**Temperature :**	23~25℃
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	45~49%
Test Channel :	01	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 22:19:08

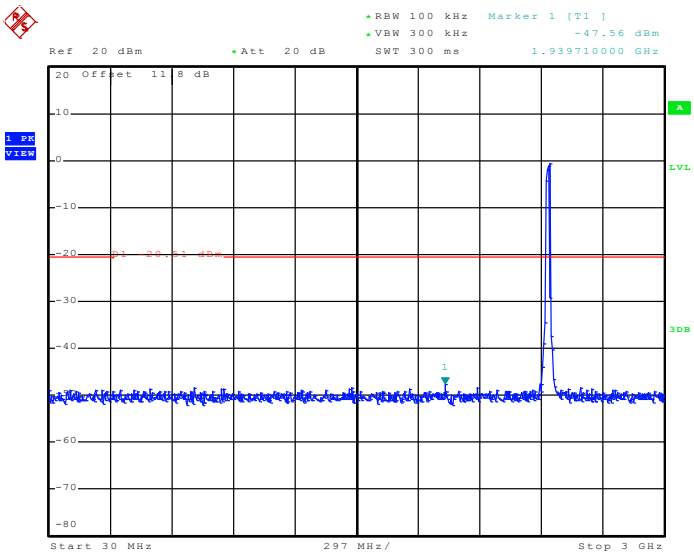
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 22:19:26

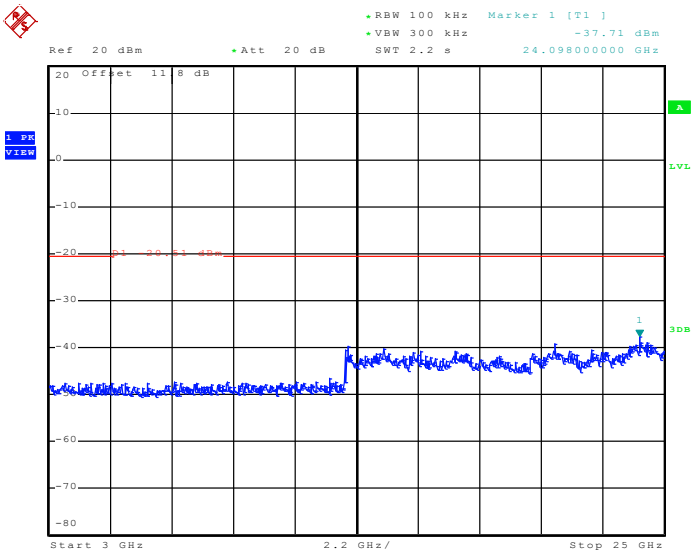
Test Mode :	Mode 8	**Temperature :**	23~25℃
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	45~49%
Test Channel :	06	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 22:43:08

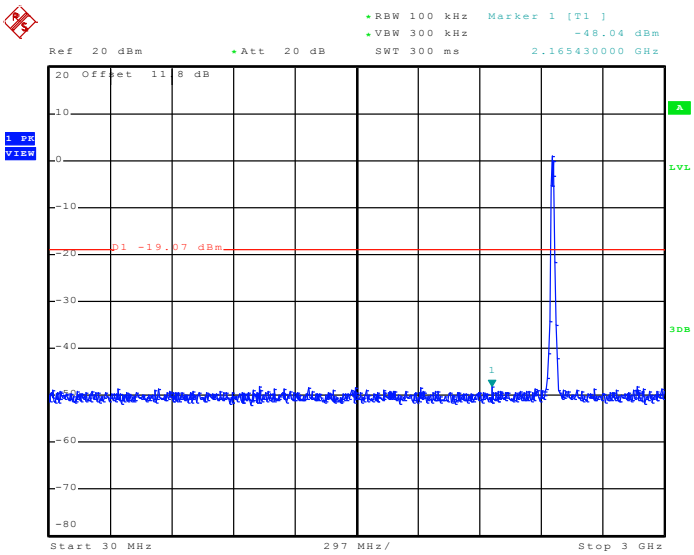
Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 22:43:26

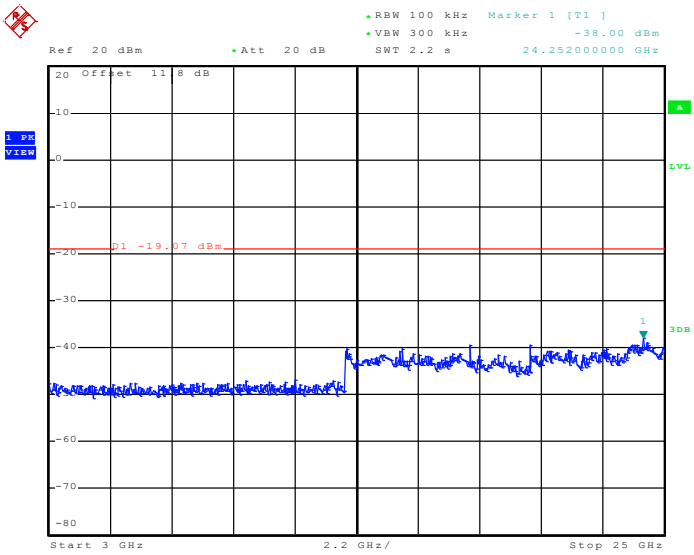
Test Mode :	Mode 9	**Temperature :**	23~25℃
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	45~49%
Test Channel :	11	**Test Engineer :**	Hank Yu

Conducted Spurious Emission Plot between 30MHz ~ 3 GHz



Date: 17.DEC.2010 22:44:54

Conducted Spurious Emission Plot between 3 GHz ~ 25 GHz



Date: 17.DEC.2010 22:45:12

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.

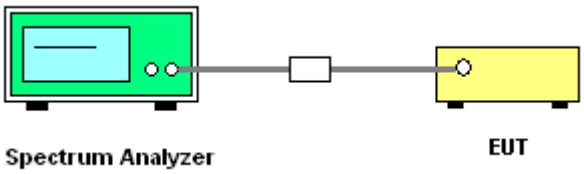
3.5.2 Measuring Instruments

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

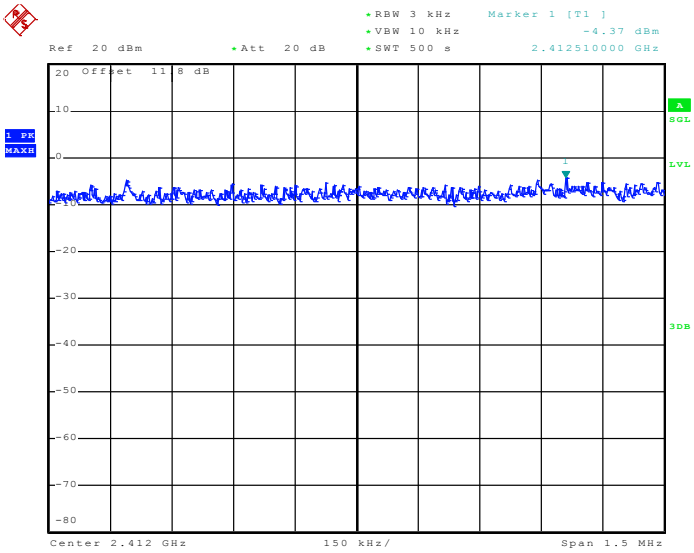


3.5.5 Test Result of Power Spectral Density

Test Mode :	Mode 1, 2, 3	**Temperature :**	23~25℃
Test Engineer :	Hank Yu	**Relative Humidity :**	45~49%

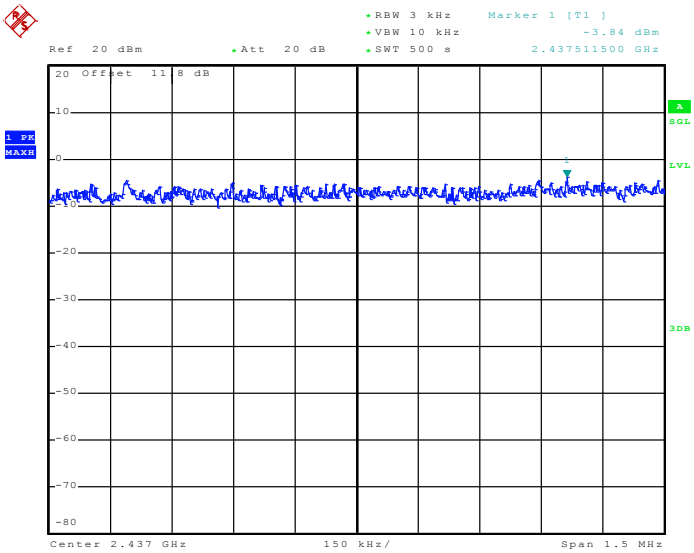
Channel	Frequency (MHz)	802.11b Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-4.37	8	Pass
06	2437	-3.84	8	Pass
11	2462	-4.01	8	Pass

Mode 1 : PSD Plot on 802.11b Channel 01



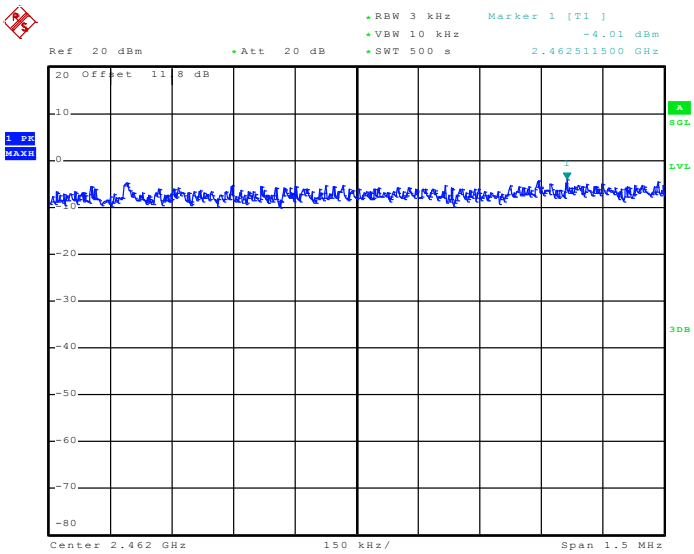
Date: 17.DEC.2010 21:03:18

Mode 2 : PSD Plot on 802.11b Channel 06



Date: 17.DEC.2010 21:28:34

Mode 3 : PSD Plot on 802.11b Channel 11

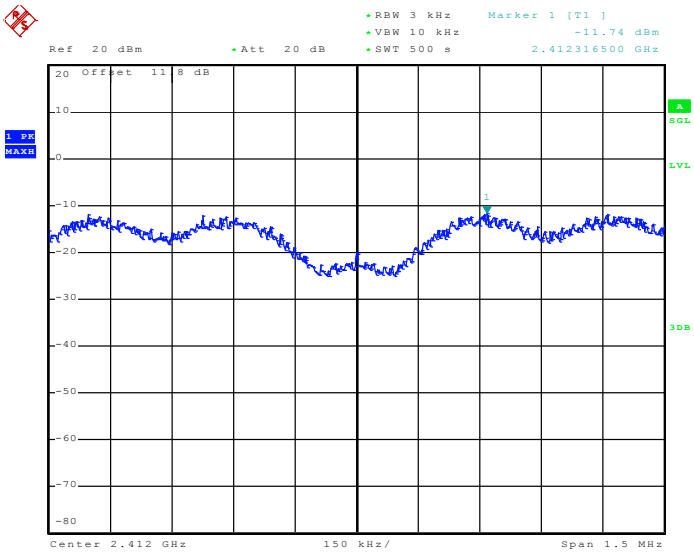


Date: 17.DEC.2010 21:15:48

Test Mode :	Mode 4, 5, 6	**Temperature :**	23~25℃
Test Engineer :	Hank Yu	**Relative Humidity :**	45~49%

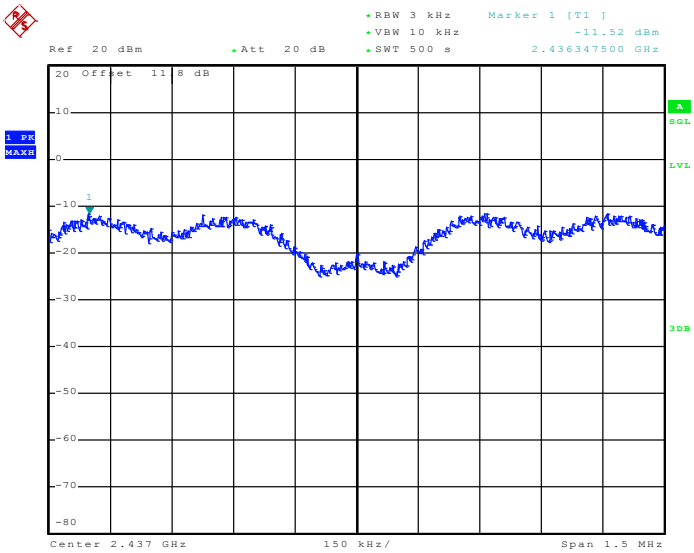
Channel	Frequency (MHz)	802.11g Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-11.74	8	Pass
06	2437	-11.52	8	Pass
11	2462	-11.18	8	Pass

Mode 4 : PSD Plot on 802.11g Channel 01



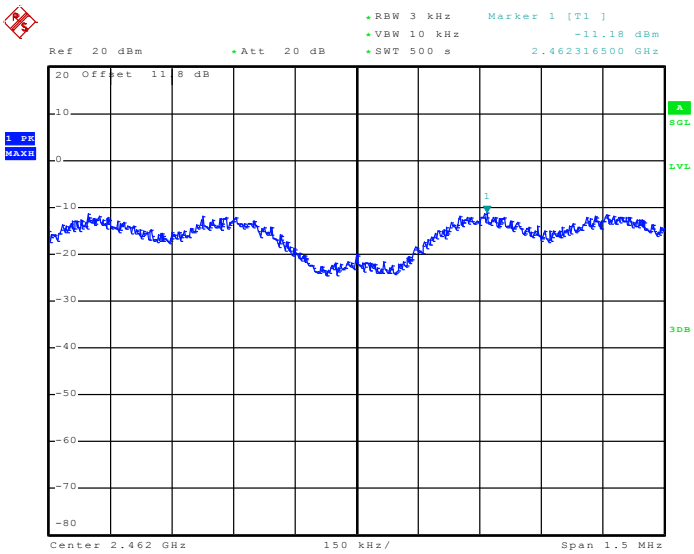
Date: 17.DEC.2010 22:05:53

Mode 5 : PSD Plot on 802.11g Channel 06



Date: 17.DEC.2010 21:40:18

Mode 6 : PSD Plot on 802.11g Channel 11

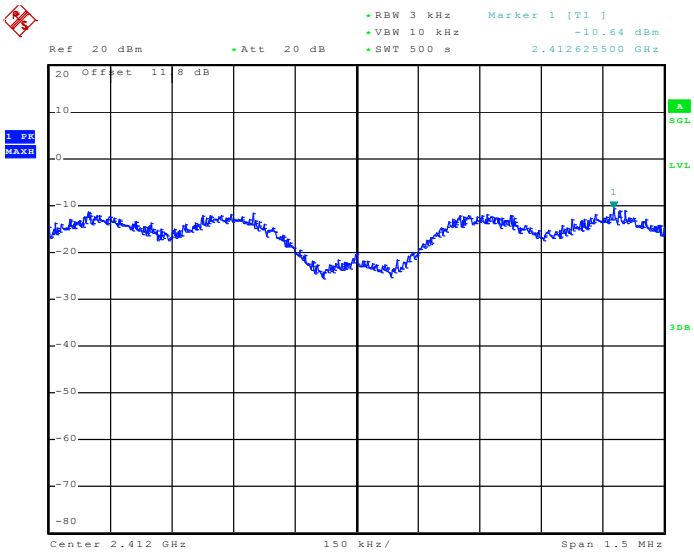


Date: 17.DEC.2010 21:53:22

Test Mode :	Mode 7, 8, 9	**Temperature :**	23~25℃
Test Engineer :	Hank Yu	**Relative Humidity :**	45~49%

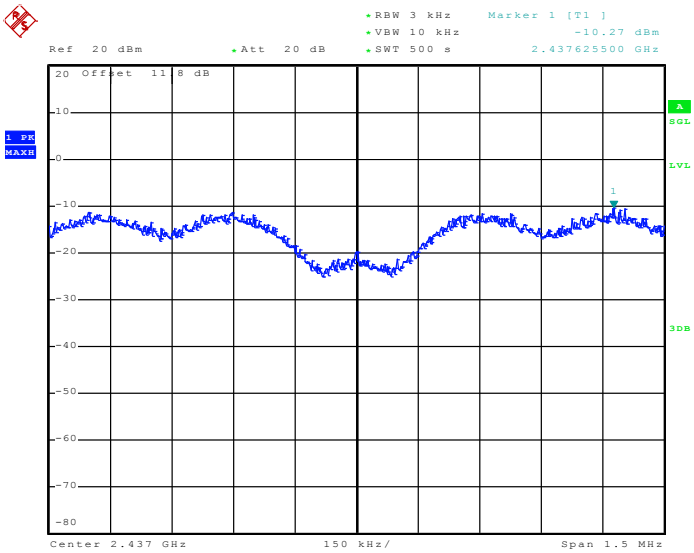
Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-10.64	8	Pass
06	2437	-10.27	8	Pass
11	2462	-10.32	8	Pass

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



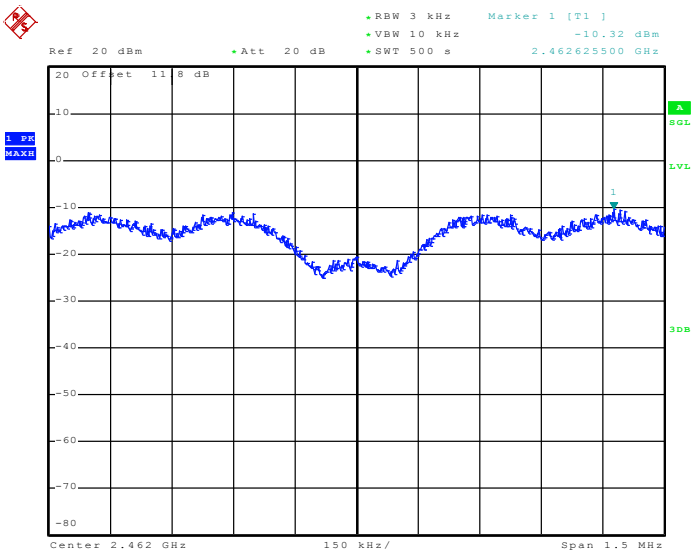
Date: 17.DEC.2010 22:18:45

Mode 8 : PSD Plot on802.11n (BW 20MHz) Channel 06



Date: 17.DEC.2010 22:42:45

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



Date: 17.DEC.2010 22:31:08

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.

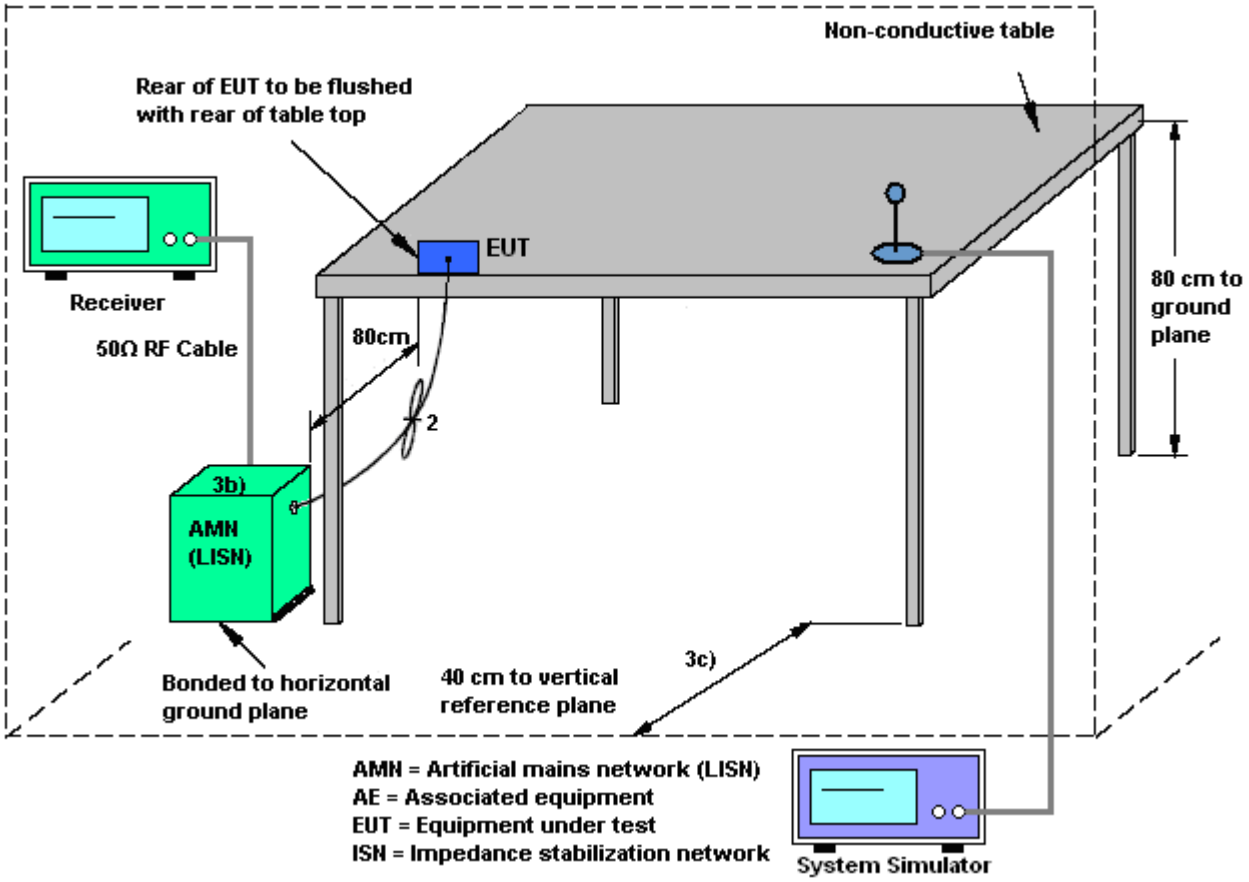
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

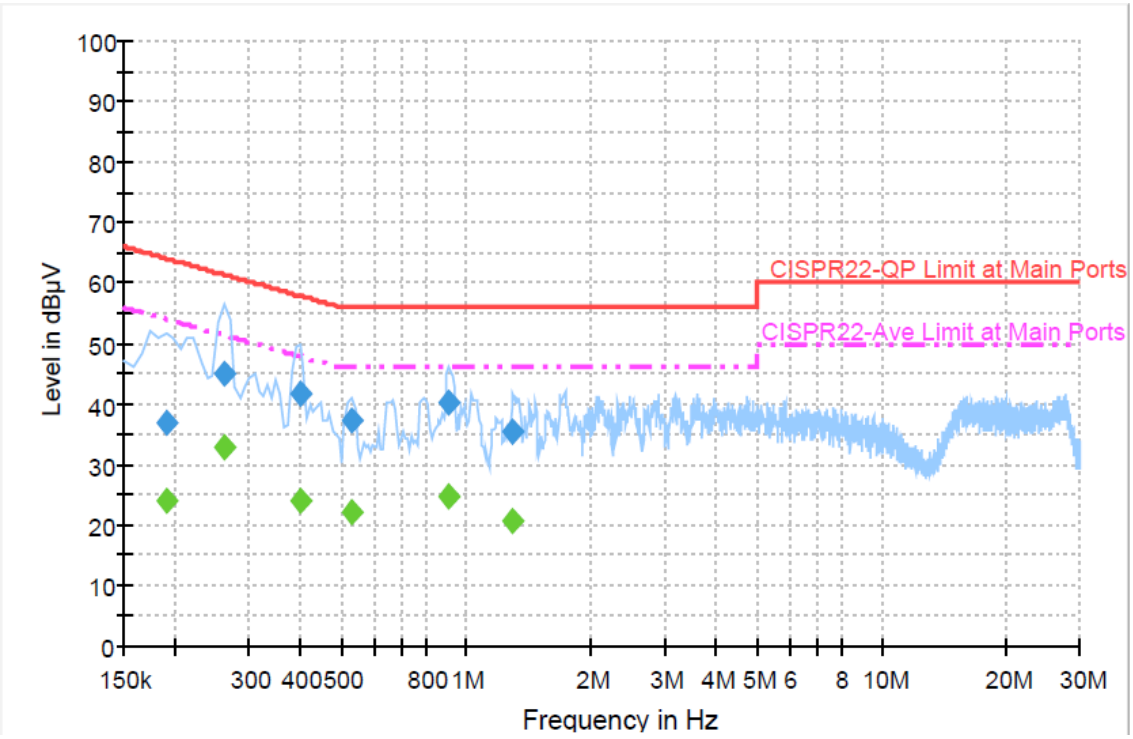
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (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℃
Test Engineer :	Novic Chiang	**Relative Humidity :**	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	CDMA2000 BC0 Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 2)		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



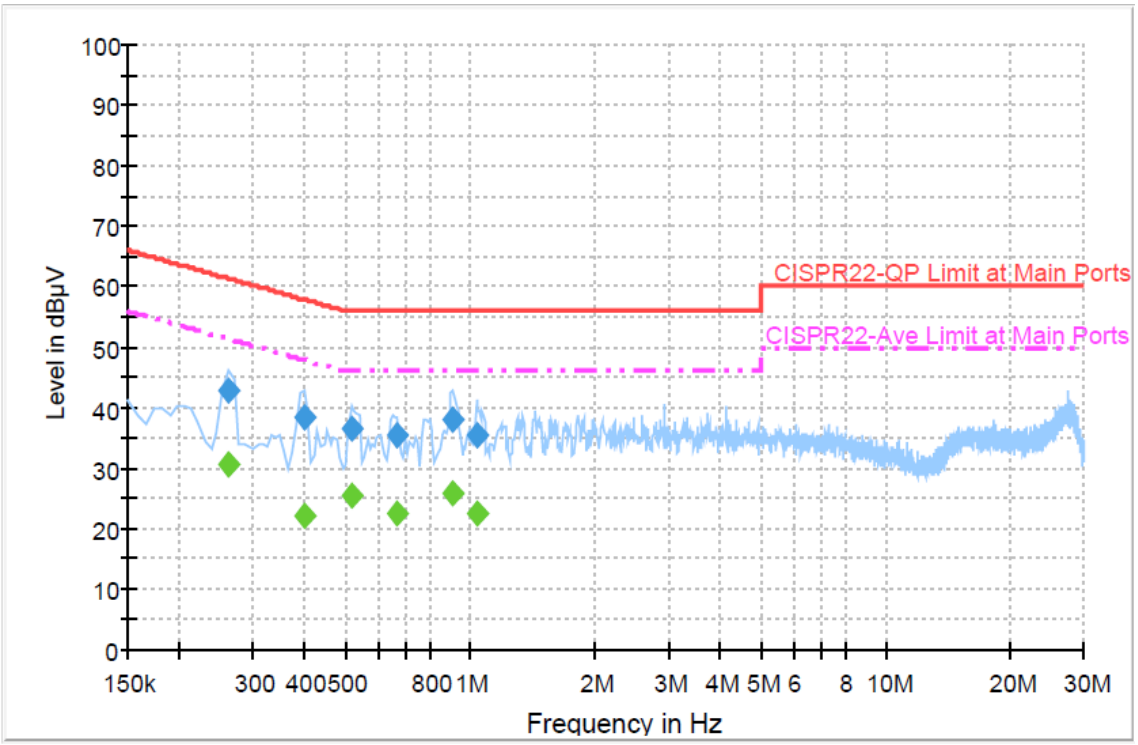
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	37.0	Off	L1	19.4	27.0	64.0
0.262000	45.1	Off	L1	19.3	16.3	61.4
0.398000	41.6	Off	L1	19.4	16.3	57.9
0.534000	37.1	Off	L1	19.3	18.9	56.0
0.910000	40.3	Off	L1	19.4	15.7	56.0
1.294000	35.5	Off	L1	19.4	20.5	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	24.1	Off	L1	19.4	29.9	54.0
0.262000	32.9	Off	L1	19.3	18.5	51.4
0.398000	24.1	Off	L1	19.4	23.8	47.9
0.534000	22.3	Off	L1	19.3	23.7	46.0
0.910000	24.8	Off	L1	19.4	21.2	46.0
1.294000	20.6	Off	L1	19.4	25.4	46.0

Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Novic Chiang	**Relative Humidity :**	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	CDMA2000 BC0 Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 2)		
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)
0.262000	42.6	Off	N	19.4	18.8	61.4
0.398000	38.4	Off	N	19.4	19.5	57.9
0.518000	36.6	Off	N	19.3	19.4	56.0
0.670000	35.4	Off	N	19.4	20.6	56.0
0.910000	37.9	Off	N	19.4	18.1	56.0
1.038000	35.3	Off	N	19.4	20.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.262000	30.5	Off	N	19.4	20.9	51.4
0.398000	22.0	Off	N	19.4	25.9	47.9
0.518000	25.6	Off	N	19.3	20.4	46.0
0.670000	22.5	Off	N	19.4	23.5	46.0
0.910000	25.7	Off	N	19.4	20.3	46.0
1.038000	22.4	Off	N	19.4	23.6	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

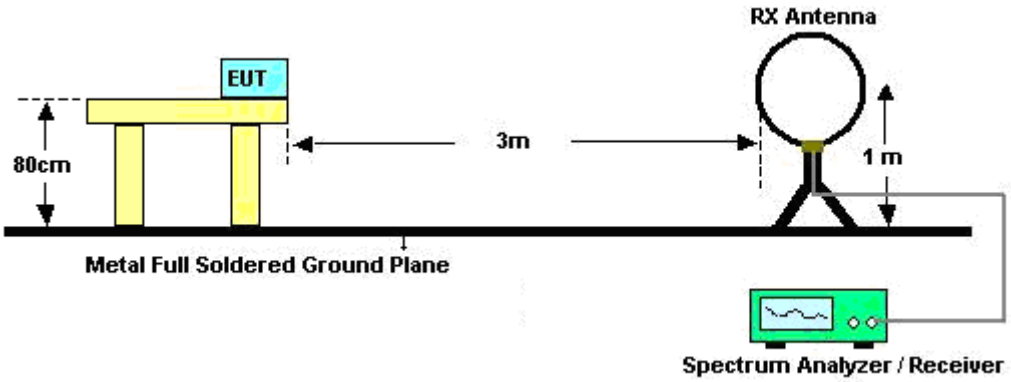
See list of measuring instruments of this test report.

3.7.3 Test Procedures

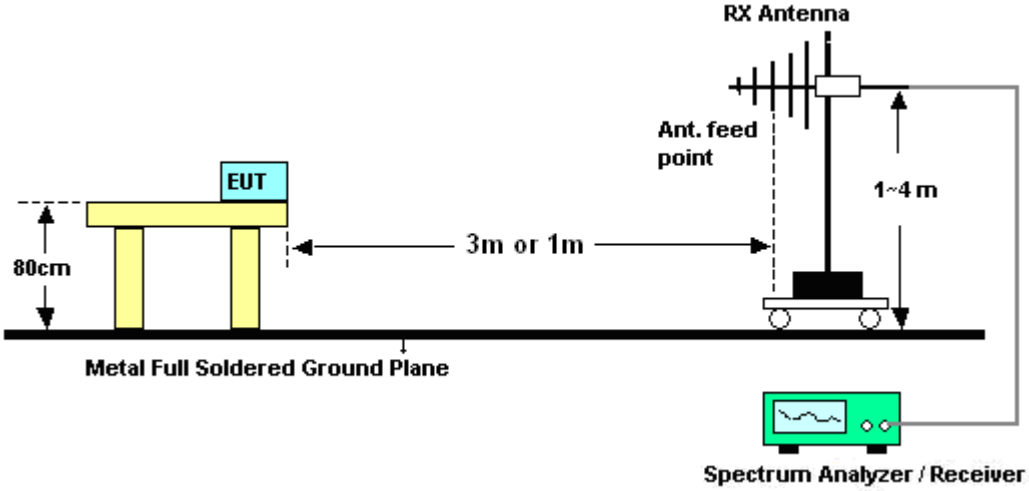
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
   (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; 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 (specific distance [3m] / 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.

3.7.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



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

Test Engineer :	Wii Chang	**Temperature :**	20~23℃
		Relative Humidity :	50~53%

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 (specific distance / test distance) (dB);

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

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

Test Mode :	Mode 1	**Temperature :**	20~23℃
Test Channel :	01	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
30	21.67	-18.33	40	34.29	18.36	0.58	31.56	-	-	Peak
99.12	20.76	-22.74	43.5	42.09	9.29	0.95	31.57	-	-	Peak
249.51	34	-12	46	52.51	11.6	1.42	31.53	100	154	Peak
302.1	18.62	-27.38	46	36.1	12.24	1.55	31.27	-	-	Peak
529.6	19.6	-26.4	46	30.94	17.56	2.1	31	-	-	Peak
778.1	22.55	-23.45	46	29.95	20.6	2.54	30.54	-	-	Peak
2389.8	39.66	-14.34	54	39.54	31.7	4.5	36.08	100	30	Average
2389.8	52.38	-21.62	74	52.26	31.7	4.5	36.08	100	30	Peak
2412	92.62	-	-	92.49	31.71	4.5	36.08	100	30	Average
2412	105.13	-	-	105	31.71	4.5	36.08	100	30	Peak
2484	31.3	-22.7	54	31.03	31.78	4.59	36.1	100	30	Average
2484	43.34	-30.66	74	43.07	31.78	4.59	36.1	100	30	Peak

Test Mode :	Mode 1	**Temperature :**	20~23℃
Test Channel :	01	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
35.4	35.52	-4.48	40	51.42	15.04	0.58	31.52	100	125	Peak
39.99	35.07	-4.93	40	52.74	13.26	0.58	31.51	-	-	Peak
217.92	26.64	-19.36	46	47.34	9.44	1.34	31.48	-	-	Peak
409.2	16.33	-29.67	46	30.7	14.98	1.82	31.17	-	-	Peak
575.8	20.3	-25.7	46	30.71	18.32	2.18	30.91	-	-	Peak
697.6	21.24	-24.76	46	30.43	19.13	2.4	30.72	-	-	Peak
2389.61	40.01	-13.99	54	39.92	31.7	4.47	36.08	168	191	Average
2389.61	54.38	-19.62	74	54.29	31.7	4.47	36.08	168	191	Peak
2412	93.85	-	-	93.72	31.71	4.5	36.08	168	191	Average
2412	106.25	-	-	106.12	31.71	4.5	36.08	168	191	Peak
2488	32.13	-21.87	54	31.84	31.8	4.59	36.1	168	191	Average
2488	43.73	-30.27	74	43.44	31.8	4.59	36.1	168	191	Peak

Test Mode :	Mode 2	**Temperature :**	20~23℃
Test Channel :	06	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
31.35	21.81	-18.19	40	35	17.78	0.58	31.55	-	-	Peak
213.6	25.99	-17.51	43.5	47.1	9.1	1.26	31.47	-	-	Peak
249.24	38.98	-7.02	46	57.49	11.6	1.42	31.53	100	246	Peak
302.1	18.14	-27.86	46	35.62	12.24	1.55	31.27	-	-	Peak
502.3	19.01	-26.99	46	30.93	17.11	2.04	31.07	-	-	Peak
692.7	21.87	-24.13	46	31.09	19.11	2.4	30.73	-	-	Peak
2372	33.29	-20.71	54	33.21	31.68	4.47	36.07	104	63	Average
2372	44.42	-29.58	74	44.34	31.68	4.47	36.07	104	63	Peak
2437	90.45	-	-	90.26	31.75	4.53	36.09	104	63	Average
2437	104.81	-	-	104.62	31.75	4.53	36.09	104	63	Peak
2484	30.46	-23.54	54	30.19	31.78	4.59	36.1	104	63	Average
2484	42.37	-31.63	74	42.1	31.78	4.59	36.1	104	63	Peak

Test Mode :	Mode 2	**Temperature :**	20~23℃
Test Channel :	06	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
35.94	36.06	-3.94	40	51.96	15.04	0.58	31.52	100	106	Peak
39.72	36.04	-3.96	40	53.71	13.26	0.58	31.51	-	-	Peak
250.59	29.15	-16.85	46	47.59	11.67	1.42	31.53	-	-	Peak
364.4	15.54	-30.46	46	31.25	13.85	1.71	31.27	-	-	Peak
564.6	20.39	-25.61	46	31.04	18.13	2.15	30.93	-	-	Peak
762	22.36	-23.64	46	30.08	20.31	2.51	30.54	-	-	Peak
2356	32.65	-21.35	54	32.62	31.66	4.44	36.07	163	189	Average
2356	43.83	-30.17	74	43.8	31.66	4.44	36.07	163	189	Peak
2437	93.44	-	-	93.25	31.75	4.53	36.09	163	189	Average
2437	106.87	-	-	106.68	31.75	4.53	36.09	163	189	Peak
2500	30.92	-23.08	54	30.6	31.8	4.62	36.1	163	189	Average
2500	42.59	-31.41	74	42.27	31.8	4.62	36.1	163	189	Peak

Test Mode :	Mode 3	**Temperature :**	20~23℃
Test Channel :	11	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
30	22.32	-17.68	40	34.94	18.36	0.58	31.56	-	-	Peak
197.13	21.42	-22.08	43.5	43.41	8.21	1.26	31.46	-	-	Peak
250.59	37.27	-8.73	46	55.71	11.67	1.42	31.53	100	196	Peak
300	17.71	-28.29	46	35.27	12.16	1.55	31.27	-	-	Peak
600.3	20.5	-25.5	46	30.45	18.72	2.2	30.87	-	-	Peak
805.4	24.57	-21.43	46	31.48	21.06	2.57	30.54	-	-	Peak
2386	35.12	-18.88	54	35.03	31.7	4.47	36.08	102	334	Average
2386	45.91	-28.09	74	45.82	31.7	4.47	36.08	102	334	Peak
2462	92.23	-	-	91.99	31.77	4.56	36.09	102	334	Average
2462	105.38	-	-	105.14	31.77	4.56	36.09	102	334	Peak
2484.04	36.51	-17.49	54	36.24	31.78	4.59	36.1	102	334	Average
2484.04	49.53	-24.47	74	49.26	31.78	4.59	36.1	102	334	Peak

Test Mode :	Mode 3	**Temperature :**	20~23℃
Test Channel :	11	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
35.94	36	-4	40	51.9	15.04	0.58	31.52	-	-	Peak
39.45	36.54	-3.46	40	54.21	13.26	0.58	31.51	100	97	Peak
247.62	27.76	-18.24	46	46.4	11.47	1.42	31.53	-	-	Peak
388.9	15.93	-30.07	46	30.89	14.48	1.77	31.21	-	-	Peak
584.2	20.78	-25.22	46	31.05	18.45	2.18	30.9	-	-	Peak
727	22.46	-23.54	46	30.98	19.65	2.45	30.62	-	-	Peak
2384	34.68	-19.32	54	34.61	31.68	4.47	36.08	127	237	Average
2384	44.89	-29.11	74	44.82	31.68	4.47	36.08	127	237	Peak
2462	93.3	-	-	93.06	31.77	4.56	36.09	127	237	Average
2462	106.48	-	-	106.24	31.77	4.56	36.09	127	237	Peak
2483.66	35.59	-18.41	54	35.32	31.78	4.59	36.1	127	237	Average
2483.66	48.48	-25.52	74	48.21	31.78	4.59	36.1	127	237	Peak

Test Mode :	Mode 4	**Temperature :**	20~23℃
Test Channel :	01	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
30	21.71	-18.29	40	34.33	18.36	0.58	31.56	-	-	Peak
214.41	25.15	-18.35	43.5	46.19	9.17	1.26	31.47	-	-	Peak
253.02	36.39	-9.61	46	54.78	11.7	1.42	31.51	100	125	Peak
300	16.38	-29.62	46	33.94	12.16	1.55	31.27	-	-	Peak
464.5	20.06	-25.94	46	33.02	16.25	1.92	31.13	-	-	Peak
696.2	20.94	-25.06	46	30.14	19.12	2.4	30.72	-	-	Peak
2388.85	41.63	-12.37	54	41.54	31.7	4.47	36.08	123	307	Average
2388.85	59.35	-14.65	74	59.26	31.7	4.47	36.08	123	307	Peak
2412	86.55	-	-	86.42	31.71	4.5	36.08	123	307	Average
2412	98.92	-	-	98.79	31.71	4.5	36.08	123	307	Peak
2488	30.84	-23.16	54	30.55	31.8	4.59	36.1	123	307	Average
2488	43.54	-30.46	74	43.25	31.8	4.59	36.1	123	307	Peak

Test Mode :	Mode 4	**Temperature :**	20~23℃
Test Channel :	01	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
35.94	35.3	-4.7	40	51.2	15.04	0.58	31.52	-	-	Peak
39.99	35.9	-4.1	40	53.57	13.26	0.58	31.51	100	104	Peak
252.75	27.95	-18.05	46	46.34	11.7	1.42	31.51	-	-	Peak
449.1	17.18	-28.82	46	30.51	15.9	1.92	31.15	-	-	Peak
601	20.81	-25.19	46	30.76	18.72	2.2	30.87	-	-	Peak
771.1	22.76	-23.24	46	30.29	20.47	2.54	30.54	-	-	Peak
2389.8	42.19	-11.81	54	42.07	31.7	4.5	36.08	102	191	Average
2389.8	61.18	-12.82	74	61.06	31.7	4.5	36.08	102	191	Peak
2412	85.85	-	-	85.72	31.71	4.5	36.08	102	191	Average
2412	98.24	-	-	98.11	31.71	4.5	36.08	102	191	Peak
2486	30.63	-23.37	54	30.36	31.78	4.59	36.1	102	191	Average
2486	42.31	-31.69	74	42.04	31.78	4.59	36.1	102	191	Peak

Test Mode :	Mode 5	**Temperature :**	20~23℃
Test Channel :	06	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
30	21.87	-18.13	40	34.49	18.36	0.58	31.56	-	-	Peak
214.41	24.91	-18.59	43.5	45.95	9.17	1.26	31.47	-	-	Peak
252.75	35.52	-10.48	46	53.91	11.7	1.42	31.51	100	316	Peak
302.1	17.5	-28.5	46	34.98	12.24	1.55	31.27	-	-	Peak
530.3	19.45	-26.55	46	30.78	17.57	2.1	31	-	-	Peak
720	21.24	-24.76	46	29.93	19.51	2.45	30.65	-	-	Peak
2356	31.25	-22.75	54	31.22	31.66	4.44	36.07	100	347	Average
2356	43.34	-30.66	74	43.31	31.66	4.44	36.07	100	347	Peak
2437	84.4	-	-	84.21	31.75	4.53	36.09	100	347	Average
2437	97.58	-	-	97.39	31.75	4.53	36.09	100	347	Peak
2486	30.23	-23.77	54	29.96	31.78	4.59	36.1	100	347	Average
2486	42.32	-31.68	74	42.05	31.78	4.59	36.1	100	347	Peak

Test Mode :	Mode 5	**Temperature :**	20~23℃
Test Channel :	06	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
35.4	35.8	-4.2	40	51.7	15.04	0.58	31.52	100	98	Peak
39.45	35.55	-4.45	40	53.22	13.26	0.58	31.51	-	-	Peak
249.78	26.81	-19.19	46	45.25	11.67	1.42	31.53	-	-	Peak
393.1	16.6	-29.4	46	31.4	14.58	1.82	31.2	-	-	Peak
610.1	20.65	-25.35	46	30.54	18.76	2.2	30.85	-	-	Peak
790	23.12	-22.88	46	30.28	20.84	2.54	30.54	-	-	Peak
2348	31.14	-22.86	54	31.13	31.64	4.44	36.07	100	302	Average
2348	43.58	-30.42	74	43.57	31.64	4.44	36.07	100	302	Peak
2437	85.79	-	-	85.6	31.75	4.53	36.09	100	302	Average
2437	98.48	-	-	98.29	31.75	4.53	36.09	100	302	Peak
2490	30.41	-23.59	54	30.09	31.8	4.62	36.1	100	302	Average
2490	42.41	-31.59	74	42.09	31.8	4.62	36.1	100	302	Peak

Test Mode :	Mode 6	**Temperature :**	20~23℃
Test Channel :	11	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
30	21.59	-18.41	40	34.21	18.36	0.58	31.56	-	-	Peak
148.26	20.59	-22.91	43.5	40.62	10.33	1.14	31.5	-	-	Peak
249.78	34.18	-11.82	46	52.62	11.67	1.42	31.53	100	158	Peak
302.1	16.86	-29.14	46	34.34	12.24	1.55	31.27	-	-	Peak
552.7	19.79	-26.21	46	30.65	17.94	2.15	30.95	-	-	Peak
792.1	23.84	-22.16	46	30.94	20.87	2.57	30.54	-	-	Peak
2390	32.95	-21.05	54	32.83	31.7	4.5	36.08	100	301	Average
2390	44.19	-29.81	74	44.07	31.7	4.5	36.08	100	301	Peak
2462	83.41	-	-	83.17	31.77	4.56	36.09	100	301	Average
2462	96.68	-	-	96.44	31.77	4.56	36.09	100	301	Peak
2483.5	35.84	-18.16	54	35.57	31.78	4.59	36.1	100	301	Average
2483.5	53.66	-20.34	74	53.39	31.78	4.59	36.1	100	301	Peak

Test Mode :	Mode 6	**Temperature :**	20~23℃
Test Channel :	11	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
35.4	35.64	-4.36	40	51.54	15.04	0.58	31.52	-	-	Peak
39.72	36.38	-3.62	40	54.05	13.26	0.58	31.51	100	112	Peak
217.38	25.92	-20.08	46	46.69	9.37	1.34	31.48	-	-	Peak
419.7	16.64	-29.36	46	30.71	15.23	1.87	31.17	-	-	Peak
664	21.73	-24.27	46	31.2	18.99	2.3	30.76	-	-	Peak
794.9	23.85	-22.15	46	30.89	20.93	2.57	30.54	-	-	Peak
2378	33.27	-20.73	54	33.19	31.68	4.47	36.07	100	191	Average
2378	44.06	-29.94	74	43.98	31.68	4.47	36.07	100	191	Peak
2462	84.12	-	-	83.88	31.77	4.56	36.09	100	191	Average
2462	98.95	-	-	98.71	31.77	4.56	36.09	100	191	Peak
2483.66	35.26	-18.74	54	34.99	31.78	4.59	36.1	100	191	Average
2483.66	54.4	-19.6	74	54.13	31.78	4.59	36.1	100	191	Peak

Test Mode :	Mode 7	**Temperature :**	20~23℃
Test Channel :	01	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
36.48	20.55	-19.45	40	36.9	14.59	0.58	31.52	-	-	Peak
99.39	20.44	-23.06	43.5	41.68	9.39	0.95	31.58	-	-	Peak
249.78	35.07	-10.93	46	53.51	11.67	1.42	31.53	100	159	Peak
409.2	16.39	-29.61	46	30.76	14.98	1.82	31.17	-	-	Peak
603.8	21.04	-24.96	46	30.96	18.74	2.2	30.86	-	-	Peak
792.1	22.96	-23.04	46	30.06	20.87	2.57	30.54	-	-	Peak
2389.61	42.51	-11.49	54	42.42	31.7	4.47	36.08	100	22	Average
2389.61	62.39	-11.61	74	62.3	31.7	4.47	36.08	100	22	Peak
2412	85.08	-	-	84.95	31.71	4.5	36.08	100	22	Average
2412	97.54	-	-	97.41	31.71	4.5	36.08	100	22	Peak
2490	30.71	-23.29	54	30.39	31.8	4.62	36.1	100	22	Average
2490	43.35	-30.65	74	43.03	31.8	4.62	36.1	100	22	Peak

Test Mode :	Mode 7	**Temperature :**	20~23℃
Test Channel :	01	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2412 MHz is Fundamental Signals which can be ignored.		

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
35.8	35.97	-4.03	40	51.87	15.04	0.58	31.52	100	110	Peak
39.6	35.63	-4.37	40	53.3	13.26	0.58	31.51	-	-	Peak
250.6	26.4	-19.6	46	44.84	11.67	1.42	31.53	-	-	Peak
393.1	16.6	-29.4	46	31.4	14.58	1.82	31.2	-	-	Peak
651.4	21.59	-24.41	46	31.12	18.94	2.3	30.77	-	-	Peak
832	24.15	-21.85	46	30.79	21.26	2.61	30.51	-	-	Peak
2389.04	42.61	-11.39	54	42.52	31.7	4.47	36.08	168	186	Average
2389.04	61.97	-12.03	74	61.88	31.7	4.47	36.08	168	186	Peak
2412	86.15	-	-	86.02	31.71	4.5	36.08	168	186	Average
2412	98.38	-	-	98.25	31.71	4.5	36.08	168	186	Peak
2490	31.02	-22.98	54	30.7	31.8	4.62	36.1	168	186	Average
2490	43.25	-30.75	74	42.93	31.8	4.62	36.1	168	186	Peak

Test Mode :	Mode 8	**Temperature :**	20~23℃
Test Channel :	06	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
36.48	20.55	-19.45	40	36.9	14.59	0.58	31.52	-	-	Peak
99.39	20.44	-23.06	43.5	41.68	9.39	0.95	31.58	-	-	Peak
249.78	35.07	-10.93	46	53.51	11.67	1.42	31.53	100	267	Peak
454.7	18.12	-27.88	46	31.31	16.03	1.92	31.14	-	-	Peak
597.5	20.64	-25.36	46	30.64	18.67	2.2	30.87	-	-	Peak
782.3	22.42	-23.58	46	29.73	20.69	2.54	30.54	-	-	Peak
2356	32.93	-21.07	54	32.9	31.66	4.44	36.07	104	298	Average
2356	44.66	-29.34	74	44.63	31.66	4.44	36.07	104	298	Peak
2437	84.99	-	-	84.8	31.75	4.53	36.09	104	298	Average
2437	96.16	-	-	95.97	31.75	4.53	36.09	104	298	Peak
2494	30.68	-23.32	54	30.36	31.8	4.62	36.1	104	298	Average
2494	42.46	-31.54	74	42.14	31.8	4.62	36.1	104	298	Peak

Test Mode :	Mode 8	**Temperature :**	20~23℃
Test Channel :	06	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2437 MHz is Fundamental Signals which can be ignored.		

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
34.87	35.97	-4.03	40	51.87	15.04	0.58	31.52	100	111	Peak
40.41	35.9	-4.1	40	53.57	13.26	0.58	31.51	-	-	Peak
249.46	26.77	-19.23	46	45.21	11.67	1.42	31.53	-	-	Peak
444.9	17.34	-28.66	46	30.76	15.81	1.92	31.15	-	-	Peak
610.1	20.65	-25.35	46	30.54	18.76	2.2	30.85	-	-	Peak
813.1	23.4	-22.6	46	30.24	21.12	2.57	30.53	-	-	Peak
2358	31.41	-22.59	54	31.38	31.66	4.44	36.07	165	182	Average
2358	42.51	-31.49	74	42.48	31.66	4.44	36.07	165	182	Peak
2437	85.55	-	-	85.36	31.75	4.53	36.09	165	182	Average
2437	98.68	-	-	98.49	31.75	4.53	36.09	165	182	Peak
2484	31.23	-22.77	54	30.96	31.78	4.59	36.1	165	182	Average
2484	42.97	-31.03	74	42.7	31.78	4.59	36.1	165	182	Peak

Test Mode :	Mode 9	**Temperature :**	20~23℃
Test Channel :	11	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Horizontal
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
39.45	19.64	-20.36	40	37.31	13.26	0.58	31.51	-	-	Peak
99.39	20.44	-23.06	43.5	41.68	9.39	0.95	31.58	-	-	Peak
249.78	35.07	-10.93	46	53.51	11.67	1.42	31.53	100	241	Peak
322.4	16.15	-29.85	46	33.07	12.74	1.63	31.29	-	-	Peak
474.3	17.76	-28.24	46	30.42	16.48	1.98	31.12	-	-	Peak
677.3	21.05	-24.95	46	30.4	19.04	2.35	30.74	-	-	Peak
2380	32.61	-21.39	54	32.54	31.68	4.47	36.08	102	326	Average
2380	44.16	-29.84	74	44.09	31.68	4.47	36.08	102	326	Peak
2462	84.81	-	-	84.57	31.77	4.56	36.09	102	326	Average
2462	96.41	-	-	96.17	31.77	4.56	36.09	102	326	Peak
2483.66	40.22	-13.78	54	39.95	31.78	4.59	36.1	102	326	Average
2483.66	56.51	-17.49	74	56.24	31.78	4.59	36.1	102	326	Peak

Test Mode :	Mode 9	**Temperature :**	20~23℃
Test Channel :	11	**Relative Humidity :**	50~53%
Test Engineer :	Wii Chang	**Polarization :**	Vertical
Remark :	2462 MHz is Fundamental Signals which can be ignored.		

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
35.69	36.31	-3.69	40	52.21	15.04	0.58	31.52	100	120	Peak
40.01	35.88	-4.12	40	53.55	13.26	0.58	31.51	-	-	Peak
249.39	26.74	-19.26	46	45.18	11.67	1.42	31.53	-	-	Peak
463.8	17.71	-28.29	46	30.69	16.23	1.92	31.13	-	-	Peak
650.7	21.53	-24.47	46	31.07	18.93	2.3	30.77	-	-	Peak
853.7	23.8	-22.2	46	30.22	21.43	2.65	30.5	-	-	Peak
2380	33.91	-20.09	54	33.84	31.68	4.47	36.08	102	181	Average
2380	46.32	-27.68	74	46.25	31.68	4.47	36.08	102	181	Peak
2462	84.39	-	-	84.15	31.77	4.56	36.09	102	181	Average
2462	97.47	-	-	97.23	31.77	4.56	36.09	102	181	Peak
2484.04	37.77	-16.23	54	37.5	31.78	4.59	36.1	102	181	Average
2484.04	53.92	-20.08	74	53.65	31.78	4.59	36.1	102	181	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 PIFA 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	FSP30	101329	9kHz~30GHz	Apr. 26, 2010	Apr. 25, 2011	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 13, 2010	Sep. 12, 2011	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 14, 2010	Sep. 13, 2011	Conducted (TH02-HY)
EMI Test Receive	R&S	ESCS 30	100356	9KHz – 2.75GHz	Aug. 16, 2010	Aug. 15, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz – 30MHz	Dec. 03, 2010	Dec. 02, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz – 30MHz	Dec. 01, 2010	Nov. 30, 2011	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	117995	N/A	Mar. 19, 2009	Mar. 18, 2011	Conduction (CO05-HY)
GPS Station	T&E	GS-50	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Spectrum Analyzer	R&S	FSP30	101352	9KHz-40GHz	Nov. 03, 2010	Nov. 02, 2011	Radiation (03CH05-HY)
Amplifier	COM-POWER	PA-103	161069	1KHz - 1GHz	Mar. 29, 2010	Mar. 28, 2011	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2725	30MHz ~ 1GHz	Nov. 06, 2010	Nov. 05, 2011	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 18, 2010	Oct. 17, 2011	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1GHz- 26.5GHz	Apr. 15, 2010	Apr. 14, 2011	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 - 360 degree	N/A	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	MA 240	240/666	1 m - 4 m	N/A	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	00066584	1GHz ~ 18GHz	Aug. 05, 2010	Aug. 04, 2011	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jul. 28, 2011	Radiation (03CH05-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 Uc(y)	**1.13**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(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 Uc(y)	**1.27**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(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 Γ1 = 0.197 Antenna VSWR Γ2 = 0.194 Uncertainty = 20Log(1-Γ1*Γ2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	**2.36**				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**				