FCC RF Test Report

APPLICANT	:	HTC Corporation
EQUIPMENT	:	Smartphone
MODEL NAME	:	PD06100
FCC ID	:	NM8PD06100
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	Digital Transmission System (DTS)

The product was received on Jun. 21, 2010 and completely tested on Jun. 29, 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

Testing Laboratory 1190

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR062116A	Rev. 01	Initial issue of report	Jul. 16, 2010

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 10.3 dB at 0.406 MHz
3.7	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 4.21 dB at 2483.5 MHz
3.8	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

HTC Corporation
No. 23, Xinghua Rd., Taoyuan City, 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	Smartphone
Model Name	PD06100
FCC ID	NM8PD06100
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 : 20.74 dBm (118.58 mW) 802.11g : 22.72 dBm (187.07 mW) 802.11n (BW 20MHz) : 22.20 dBm (165.96 mW)
Antenna Type	Fixed Internal Antenna with gain 1 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.
4. The EUT only supports 802.11n (BW 20MHz) but does not support 802.11n (BW 40MHz).

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	03CH07-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.	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.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	N/A	N/A
6.	Earphone	N/A	HS G235	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	19.97	20.21	20.25	20.34
CH 06	2437 MHz	20.04	20.09	20.31	20.38
CH 11	2462 MHz	20.45	20.63	20.62	**20.74**

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	22.19	22.00	21.59	21.89	21.3	21.59	21.91	22.08
CH 06	2437 MHz	22.05	22.08	22.03	22.09	21.94	21.85	21.74	22.20
CH 11	2462 MHz	**22.72**	22.35	22.33	22.38	22.10	22.30	22.08	22.25

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) RF Power (dBm)							
		At OFDM Data Rate							
		MCS=0	MCS=1	MCS=2	MCS=3	MCS=4	MCS=5	MCS=6	MCS=7
CH 01	2412 MHz	21.19	21.56	21.27	21.24	21.37	21.06	21.63	21.32
CH 06	2437 MHz	21.95	21.78	21.42	21.71	21.69	21.26	21.14	21.58
CH 11	2462 MHz	**22.20**	21.81	22.01	22.01	21.65	21.91	21.37	21.85

Remark:

1. The data rates of WLAN 802.11b/g/n were set in 11Mbps for 802.11b, 6Mbps for 802.11g, and MCS0 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

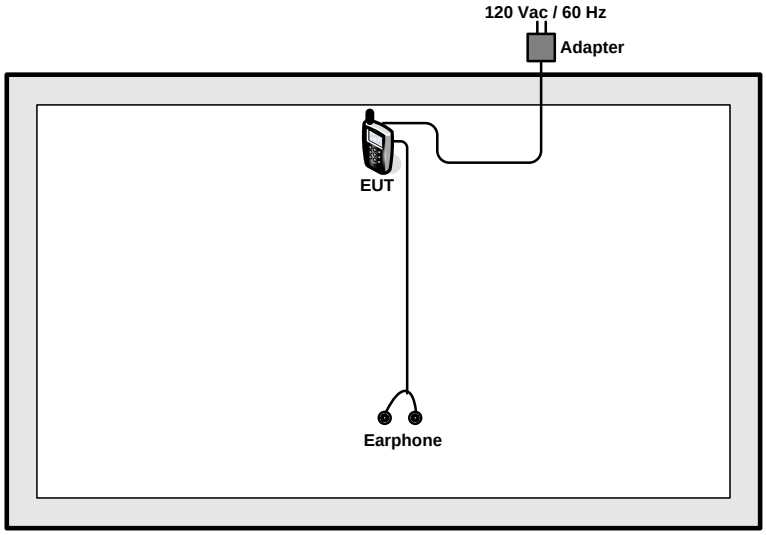
The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic 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.

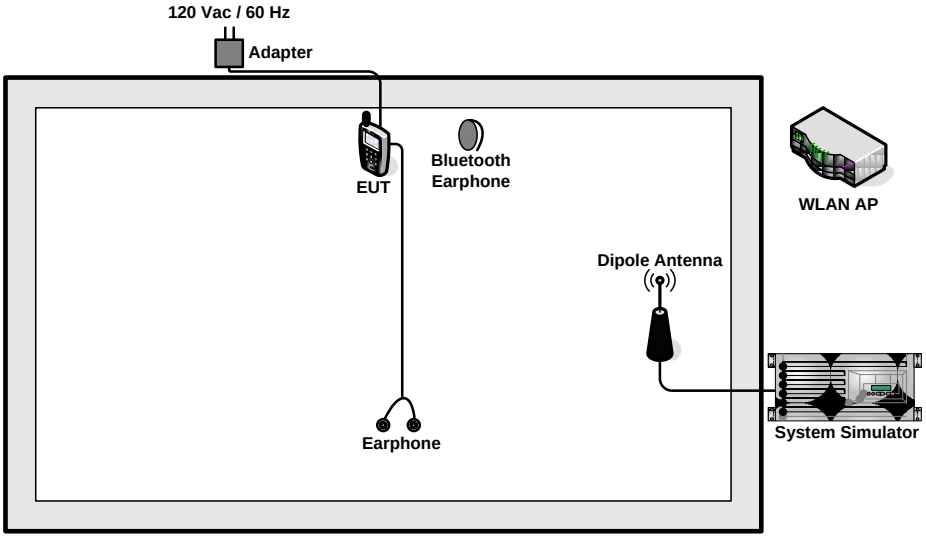
Test Cases		
Test Item	**802.11b (Modulation : DSSS)**	**802.11g/n (Modulation : OFDM)**
Conducted TCs	Mode 1 : 802.11b CH01_2412 MHz Mode 2 : 802.11b CH06_2437 MHz Mode 3 : 802.11b CH11_2462 MHz	Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n (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 1 + USB Cable 2 (Charging from Adapter 2) Mode 2 : CDMA200 BC1 Idle + Bluetooth Link + WLAN Link + MPEG4 + Earphone + Battery 2 + USB Cable 2 (Charging from Adapter 1)	
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

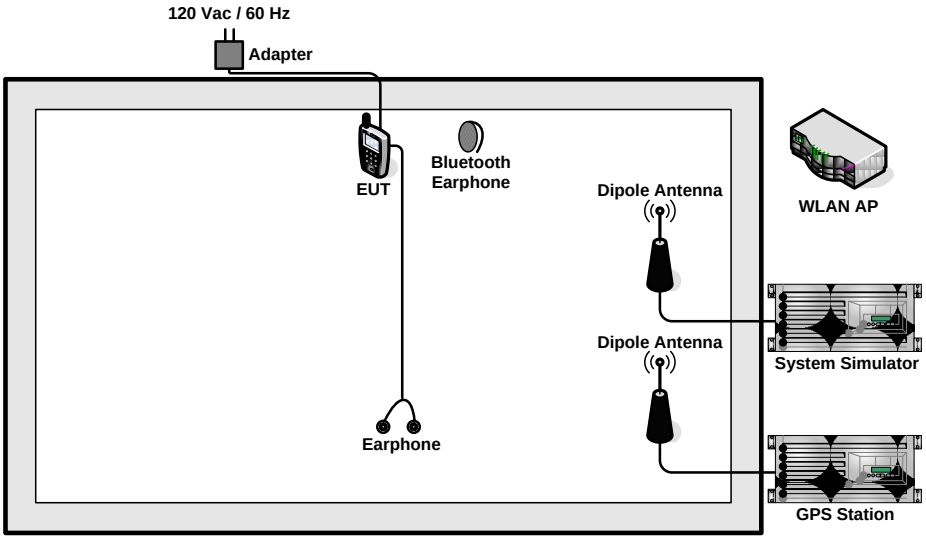
<WLAN Tx Mode>



<EUT with Adapter Mode>



<EUT with Adapter Mode (with GPS Station)>



2.4 RF Utility

The programmed RF utility “Remote 4325/29 controller 1.5 GPIO” is installed in PC or notebook to provide channel selection, power level, data rate and the application type to the EUT. 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.

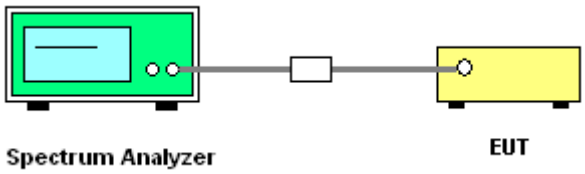
3.1.2 Measuring Instruments

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

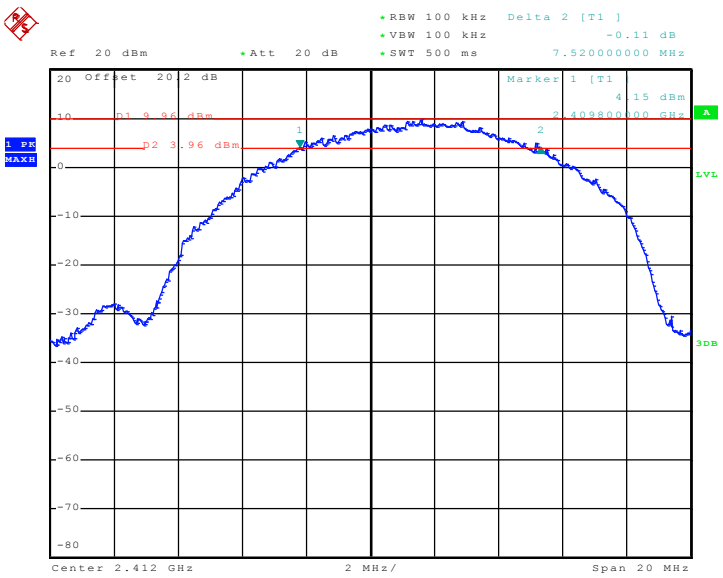


3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Mode 1, 2, 3	Temperature :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

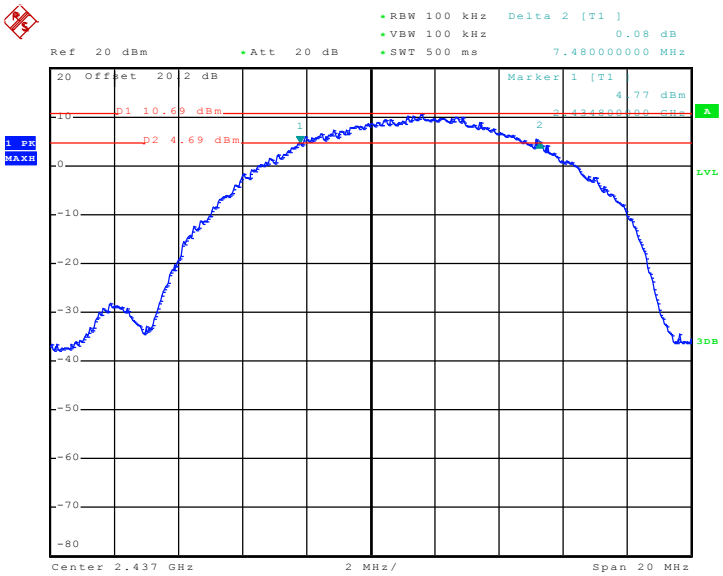
Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	7.52	0.5	Pass
06	2437	7.48	0.5	Pass
11	2462	7.52	0.5	Pass

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



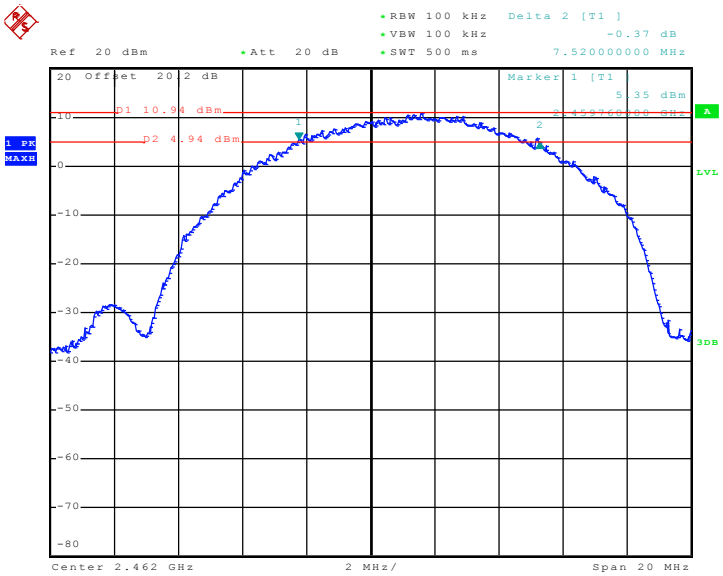
Date: 29.JUN.2010 17:48:10

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



Date: 29.JUN.2010 17:54:17

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

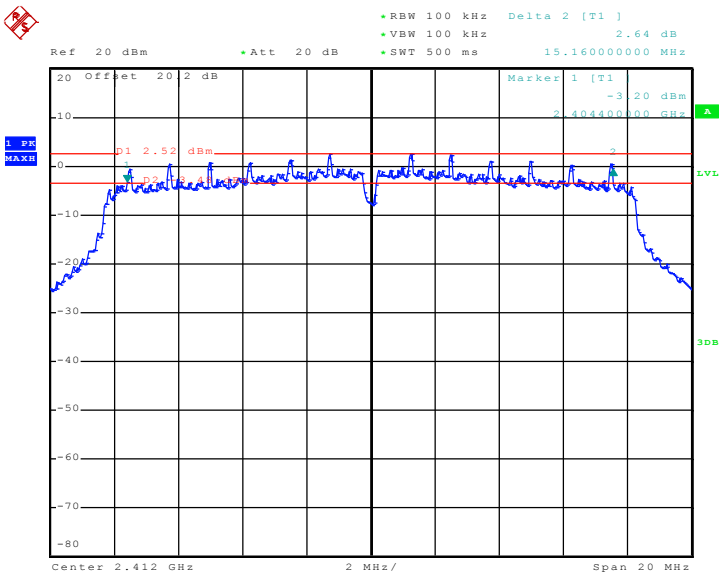


Date: 29.JUN.2010 17:55:59

Test Mode :	Mode 4, 5, 6	Temperature :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

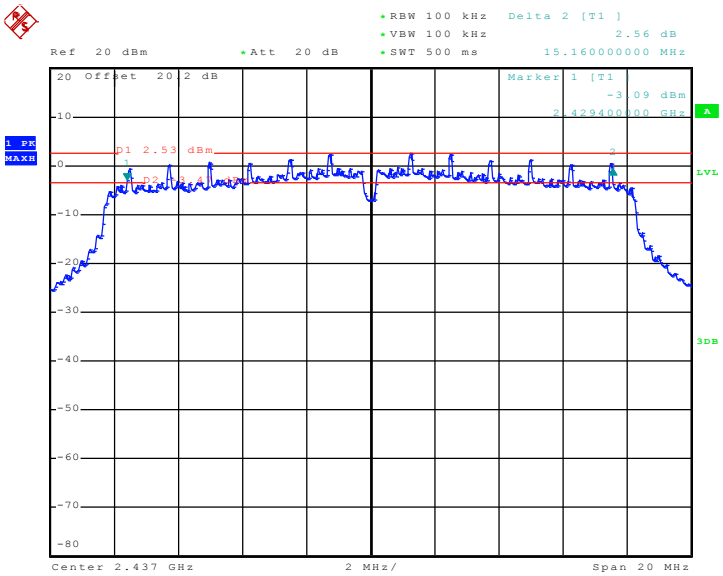
Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	15.16	0.5	Pass
06	2437	15.16	0.5	Pass
11	2462	15.48	0.5	Pass

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



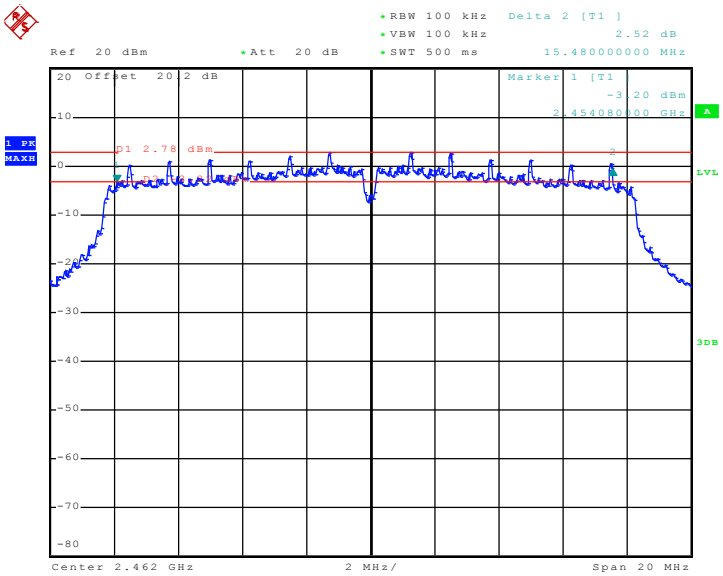
Date: 29.JUN.2010 19:52:27

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



Date: 29.JUN.2010 19:56:46

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

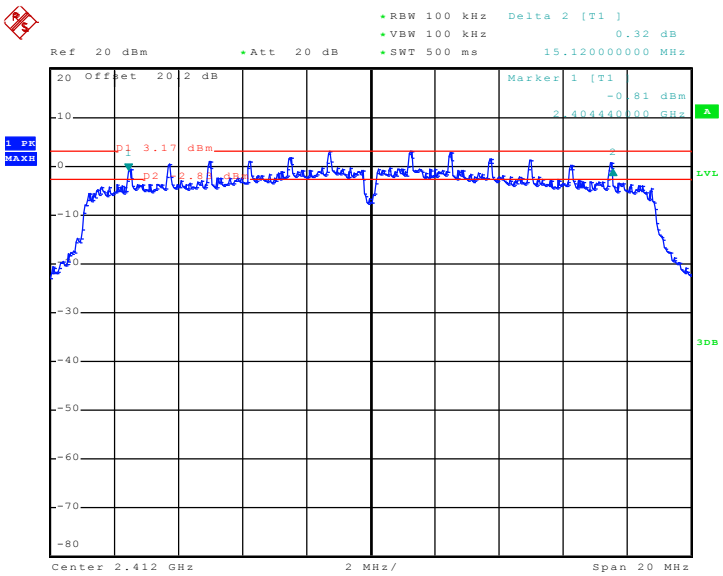


Date: 29.JUN.2010 19:29:42

Test Mode :	Mode 7, 8, 9	Temperature :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

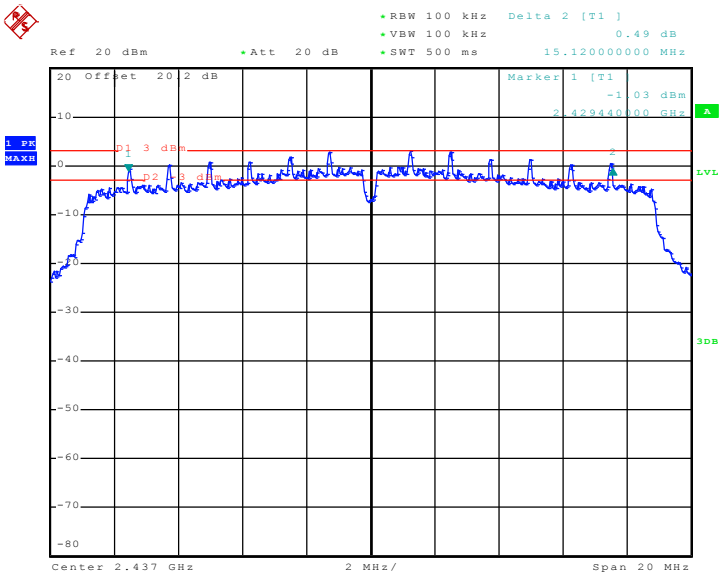
Channel	Frequency (MHz)	802.11n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	15.12	0.5	Pass
06	2437	15.12	0.5	Pass
11	2462	15.16	0.5	Pass

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



Date: 29.JUN.2010 20:52:19

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



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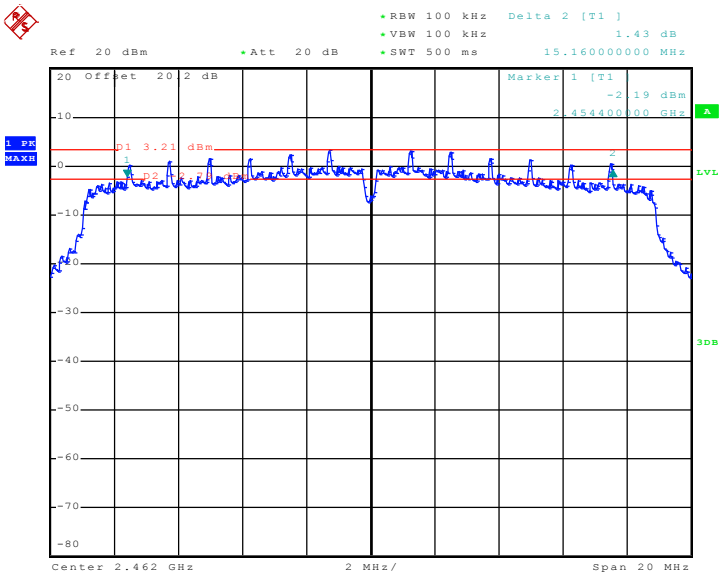
Mode 9 : 6 dB Bandwidth Plot on 802.11n(BW 20MHz) Channel 11



Date: 29.JUN.2010 20:47:58

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.

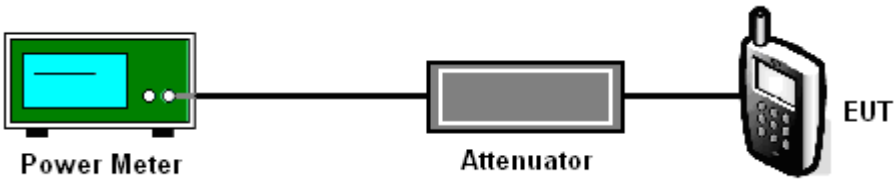
3.2.2 Measuring Instruments

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 :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.34	30	Pass
06	2437	20.38	30	Pass
11	2462	20.74	30	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	22.19	30	Pass
06	2437	22.05	30	Pass
11	2462	22.72	30	Pass

Test Mode :	Mode 7, 8, 9	Temperature :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	21.19	30	Pass
06	2437	21.95	30	Pass
11	2462	22.20	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

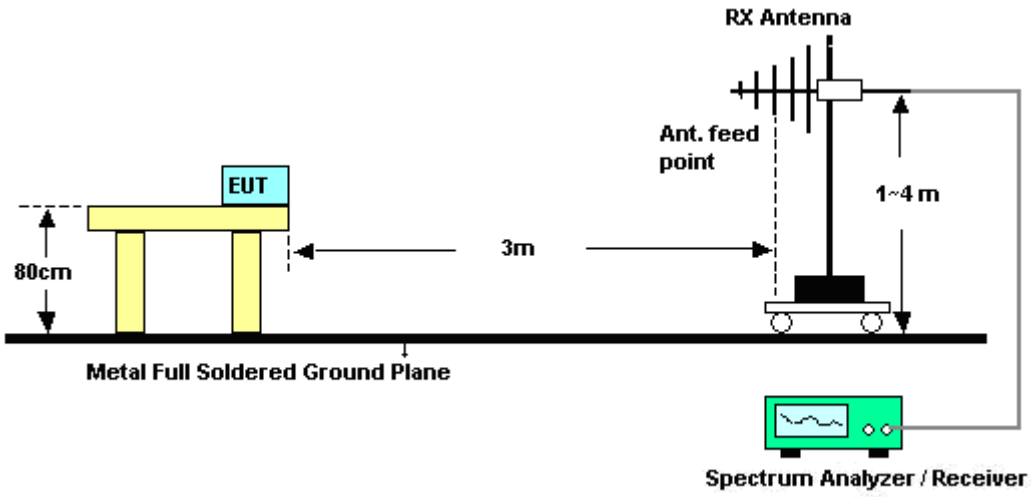
See list of measuring instruments of this test report.

3.3.3 Test Procedures

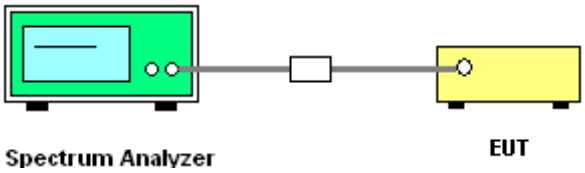
1. The testing follows the guidelines in ANSI C63.4-2003 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Conducted emission test: Set RBW = 100 kHz, Video bandwidth (VBW) ≥ RBW. Band edge emissions must be at least 20 dB down from the highest emission level within the authorized 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 :	23~24℃
Test Band :	802.11b	Relative Humidity :	48~49%
Test Channel :	01	Test Engineer :	Ivan Jiang

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
2389.99	54.25	-19.75	74	49.59	32.13	5.78	33.25	100	55	Peak
2389.99	41.76	-12.24	54	37.1	32.13	5.78	33.25	100	55	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
2389.99	57.02	-16.98	74	52.36	32.13	5.78	33.25	102	24	Peak
2389.99	44.41	-9.59	54	39.75	32.13	5.78	33.25	102	24	Average

Test Mode :	Mode 3	Temperature :	23~24℃
Test Band :	802.11b	Relative Humidity :	48~49%
Test Channel :	11	Test Engineer :	Ivan Jiang

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
2483.85	58	-16	74	53.04	32.27	5.9	33.21	100	52	Peak
2483.85	44.4	-9.6	54	39.44	32.27	5.9	33.21	100	52	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	60.23	-13.77	74	55.27	32.27	5.9	33.21	100	328	Peak
2483.5	47.49	-6.51	54	42.53	32.27	5.9	33.21	100	328	Average

Test Mode :	Mode 4	Temperature :	23~24℃
Test Band :	802.11g	Relative Humidity :	48~49%
Test Channel :	01	Test Engineer :	Ivan Jiang

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
2389.99	65.5	-8.5	74	60.84	32.13	5.78	33.25	100	128	Peak
2389.99	45.95	-8.05	54	41.29	32.13	5.78	33.25	100	128	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
2389.42	67.14	-6.86	74	62.48	32.13	5.78	33.25	100	11	Peak
2389.42	46.96	-7.04	54	42.3	32.13	5.78	33.25	100	11	Average

Test Mode :	Mode 6	Temperature :	23~24℃
Test Band :	802.11g	Relative Humidity :	48~49%
Test Channel :	11	Test Engineer :	Ivan Jiang

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	69.79	-4.21	74	64.83	32.27	5.9	33.21	121	50	Peak
2483.5	49.23	-4.77	54	44.27	32.27	5.9	33.21	121	50	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
2483.85	68.41	-5.59	74	63.45	32.27	5.9	33.21	100	16	Peak
2483.85	49.21	-4.79	54	44.25	32.27	5.9	33.21	100	16	Average

Test Mode :	Mode 7	Temperature :	23~24℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	48~49%
Test Channel :	01	Test Engineer :	Ivan Jiang

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
2389.99	67.47	-6.53	74	62.81	32.13	5.78	33.25	100	130	Peak
2389.99	46.66	-7.34	54	42	32.13	5.78	33.25	100	130	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	68.72	-5.28	74	64.06	32.13	5.78	33.25	100	318	Peak
2389.61	48.21	-5.79	54	43.55	32.13	5.78	33.25	100	318	Average

Test Mode :	Mode 9	Temperature :	23~24℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	48~49%
Test Channel :	11	Test Engineer :	Ivan Jiang

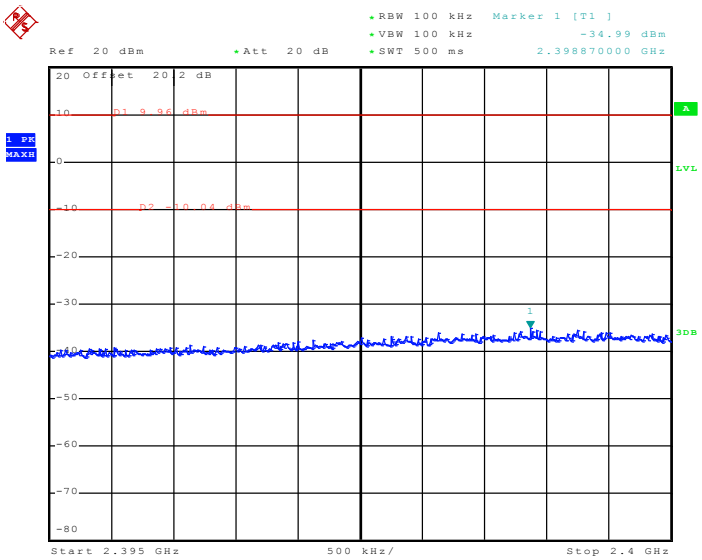
ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	67.95	-6.05	74	62.99	32.27	5.9	33.21	100	129	Peak
2483.66	48.78	-5.22	54	43.82	32.27	5.9	33.21	100	129	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
2483.85	67.63	-6.37	74	62.67	32.27	5.9	33.21	100	331	Peak
2483.85	48.55	-5.45	54	43.59	32.27	5.9	33.21	100	331	Average

3.3.6 Test Plots of Conducted Band Edges

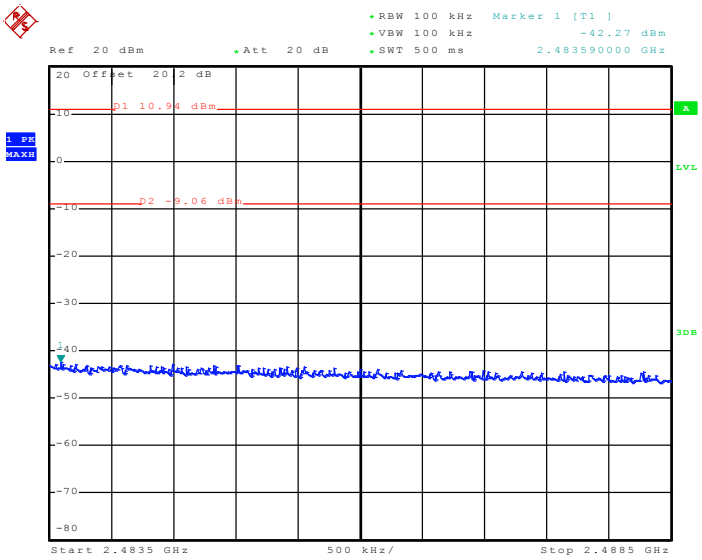
Test Mode :	Mode 1 and 3	**Temperature :**	24~26℃
Test Band :	802.11b	**Relative Humidity :**	46~49%
Test Channel :	01 and 11	**Test Engineer :**	Lancelot Chen

Low Band Edge Plot on 802.11b Channel 01



Date: 29.JUN.2010 17:50:03

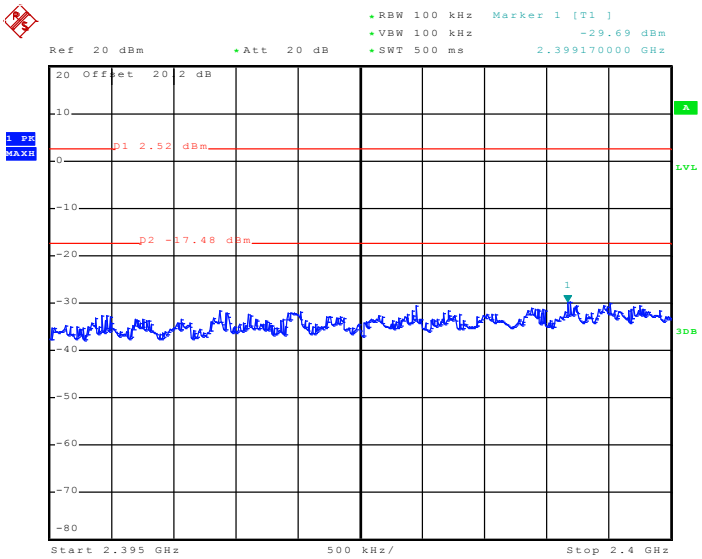
High Band Edge Plot on 802.11b Channel 11



Date: 29.JUN.2010 17:57:11

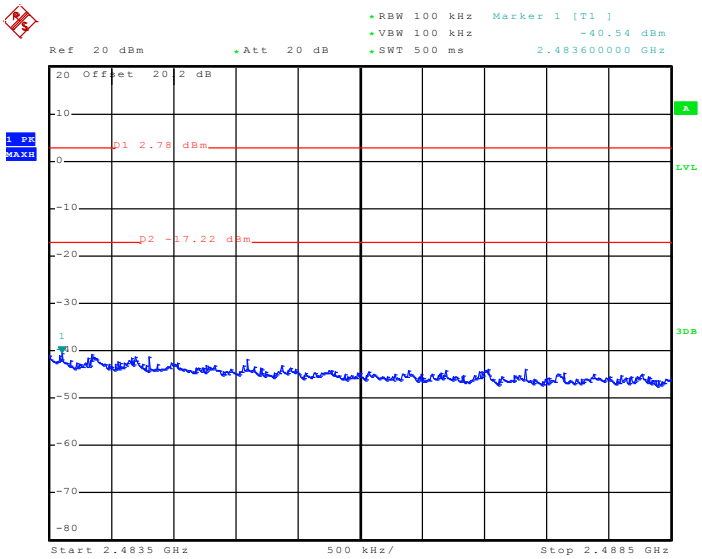
Test Mode :	Mode 4 and 6	**Temperature :**	24~26℃
Test Band :	802.11g	**Relative Humidity :**	46~49%
Test Channel :	01 and 11	**Test Engineer :**	Lancelot Chen

Low Band Edge Plot on 802.11g Channel 01



Date: 29.JUN.2010 19:53:10

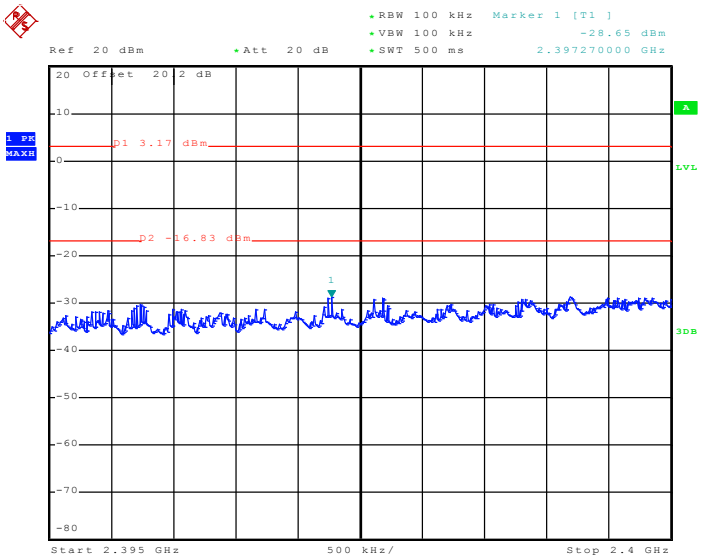
High Band Edge Plot on 802.11g Channel 11



Date: 29.JUN.2010 19:30:38

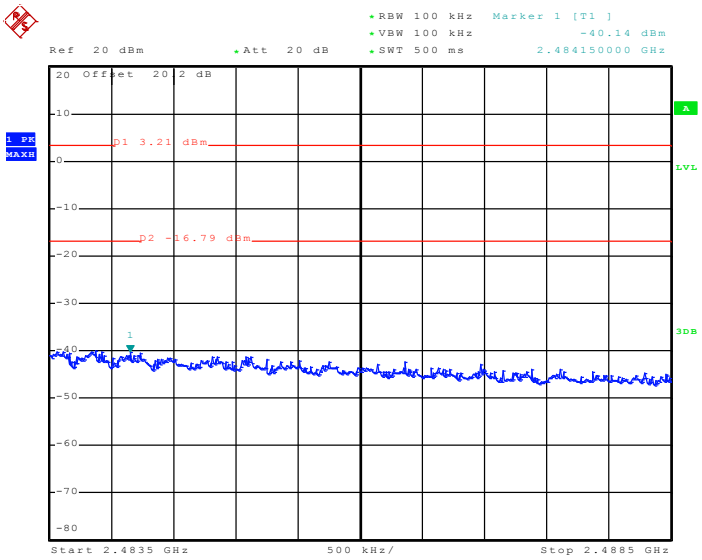
Test Mode :	Mode 7 and 9	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	46~49%
Test Channel :	01 and 11	Test Engineer :	Lancelot Chen

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



Date: 29.JUN.2010 20:53:44

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



Date: 29.JUN.2010 20:48:41

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.

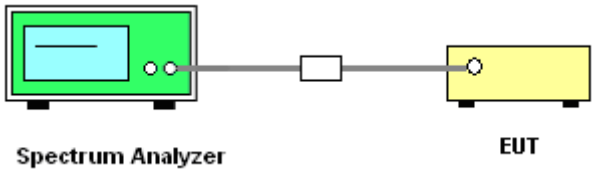
3.4.2 Measuring Instruments

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) ≥ 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.

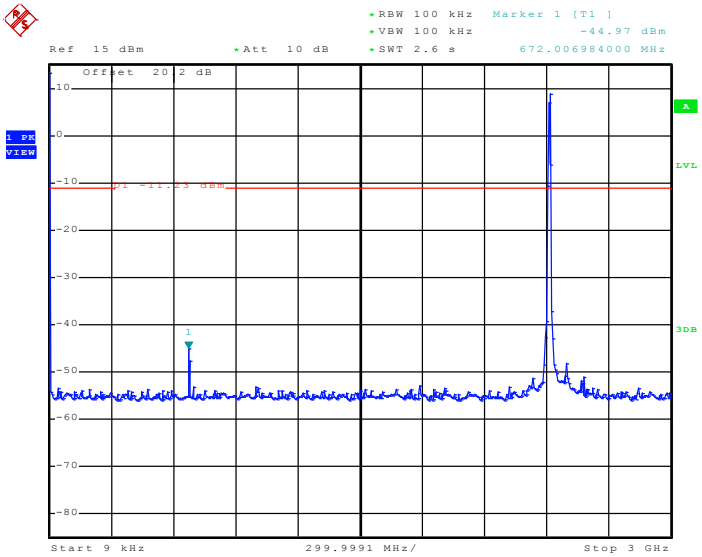
3.4.4 Test Setup



3.4.5 Test Plots of Spurious Emission

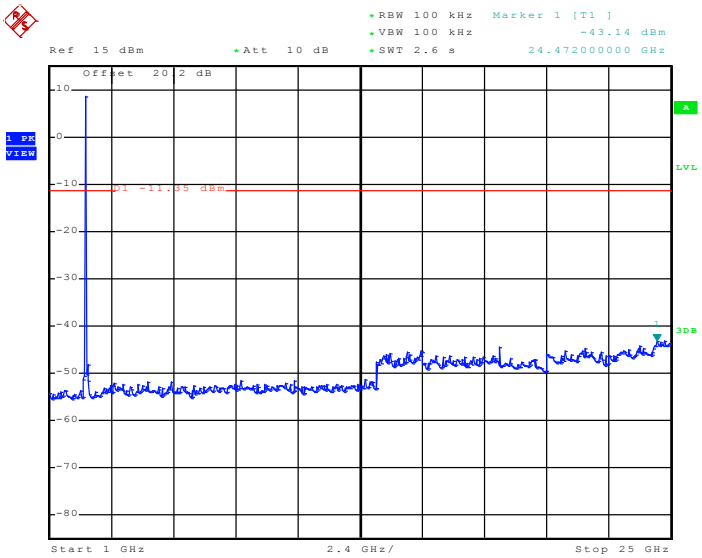
Test Mode :	Mode 1	Temperature :	24~26℃
Test Band :	802.11b	Relative Humidity :	46~49%
Test Channel :	01	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:22:23

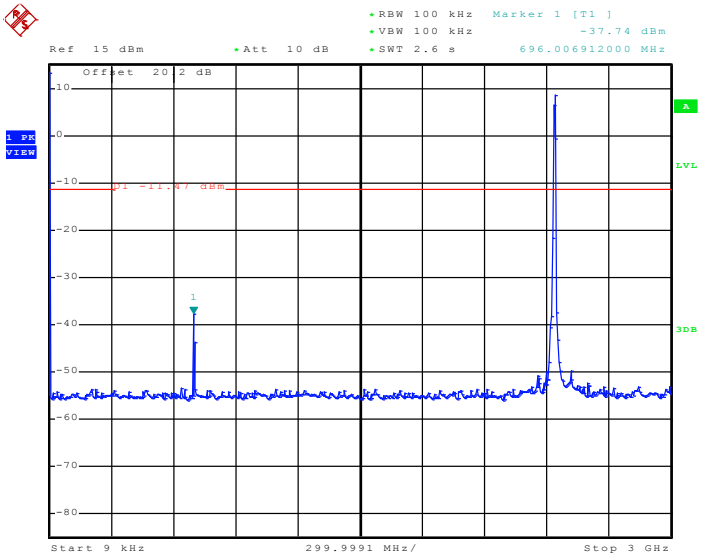
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:22:46

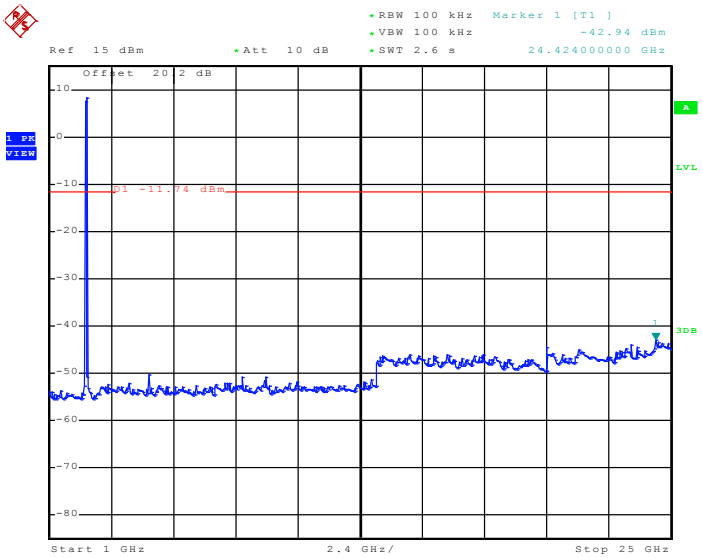
Test Mode :	Mode 2	Temperature :	24~26℃
Test Band :	802.11b	Relative Humidity :	46~49%
Test Channel :	06	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:23:38

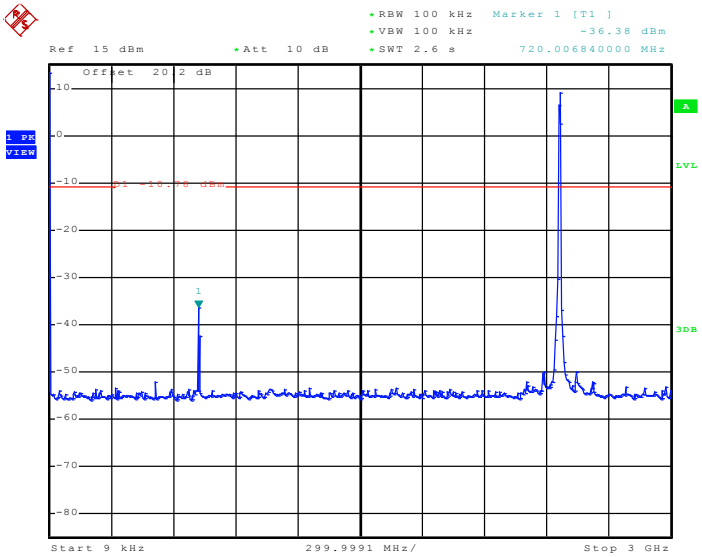
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:23:59

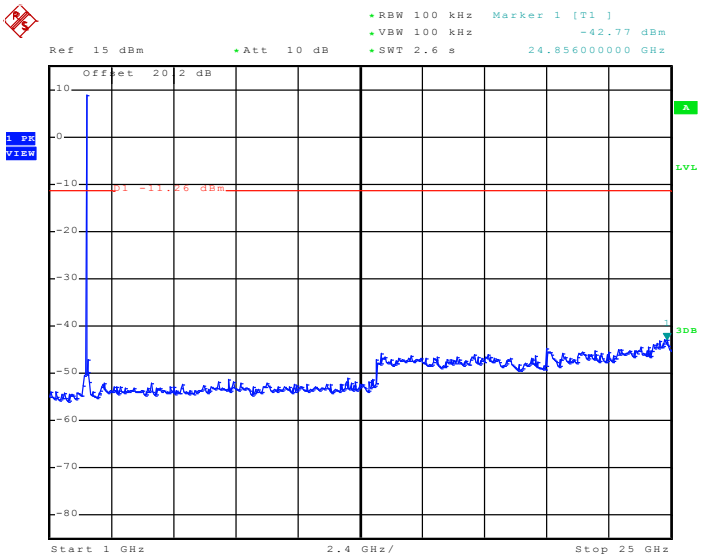
Test Mode :	Mode 3	Temperature :	24~26℃
Test Band :	802.11b	Relative Humidity :	46~49%
Test Channel :	11	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:24:51

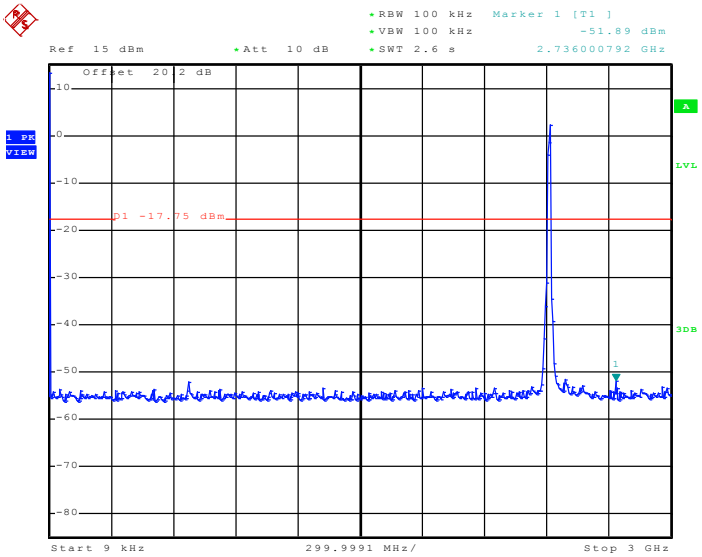
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:25:11

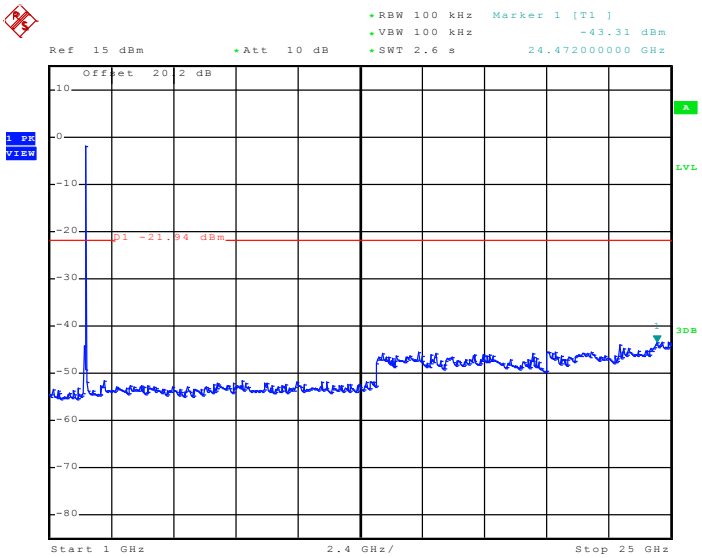
Test Mode :	Mode 4	Temperature :	24~26℃
Test Band :	802.11g	Relative Humidity :	46~49%
Test Channel :	01	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:25:51

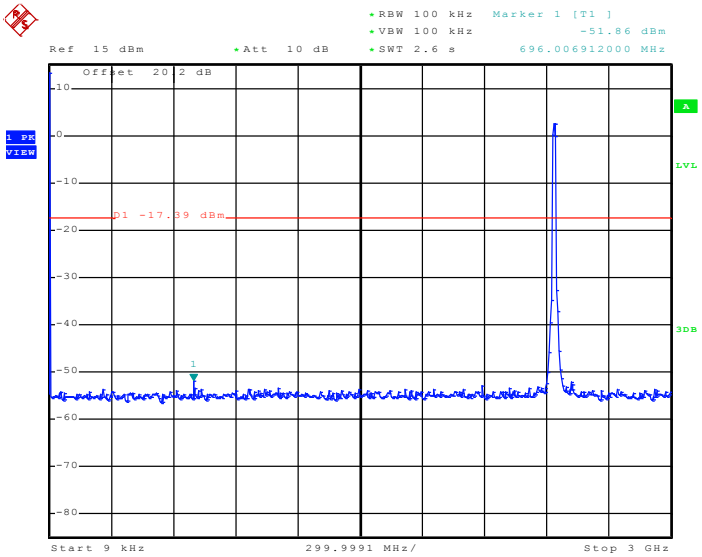
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:26:11

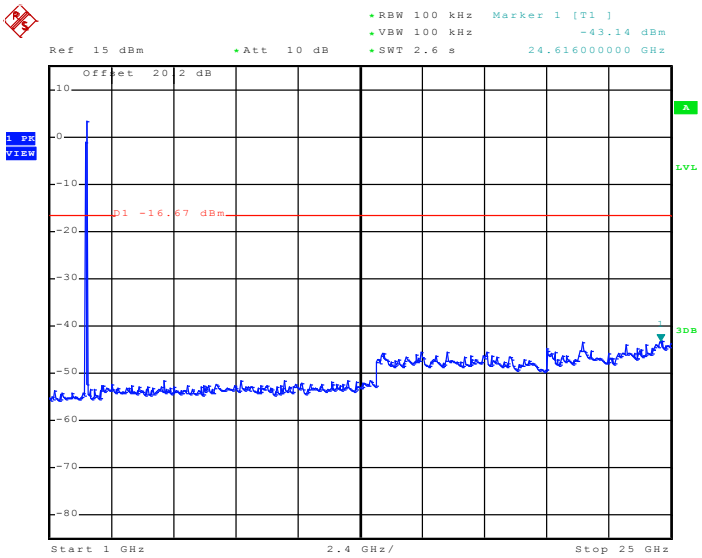
Test Mode :	Mode 5	Temperature :	24~26
Test Band :	802.11g	Relative Humidity :	46~49
Test Channel :	06	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:37:47

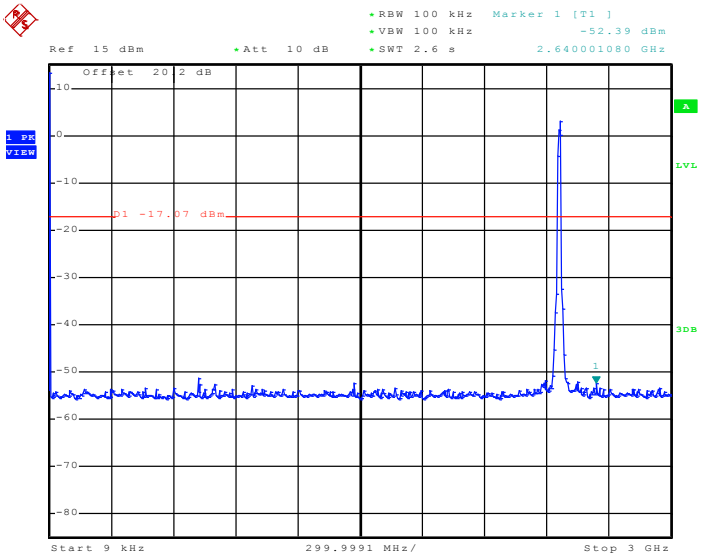
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:27:25

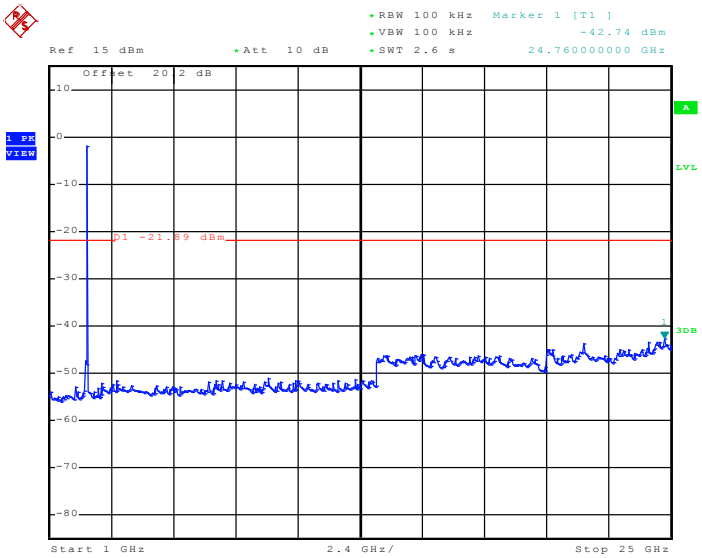
Test Mode :	Mode 6	Temperature :	24~26℃
Test Band :	802.11g	Relative Humidity :	46~49%
Test Channel :	11	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:28:04

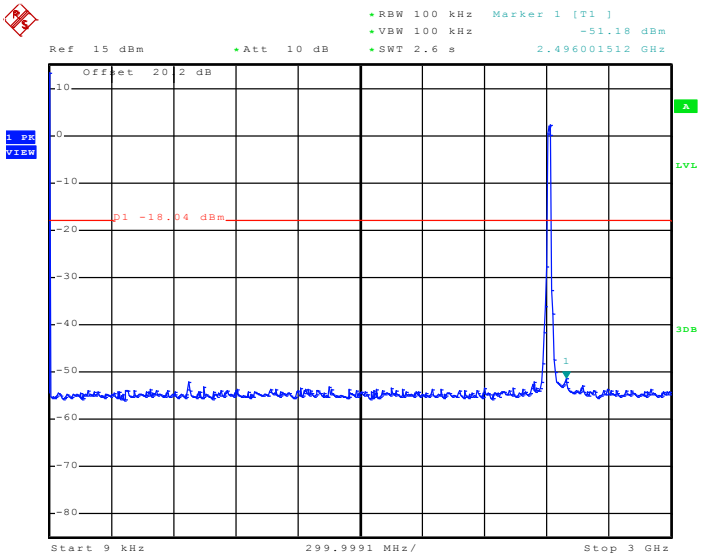
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:28:28

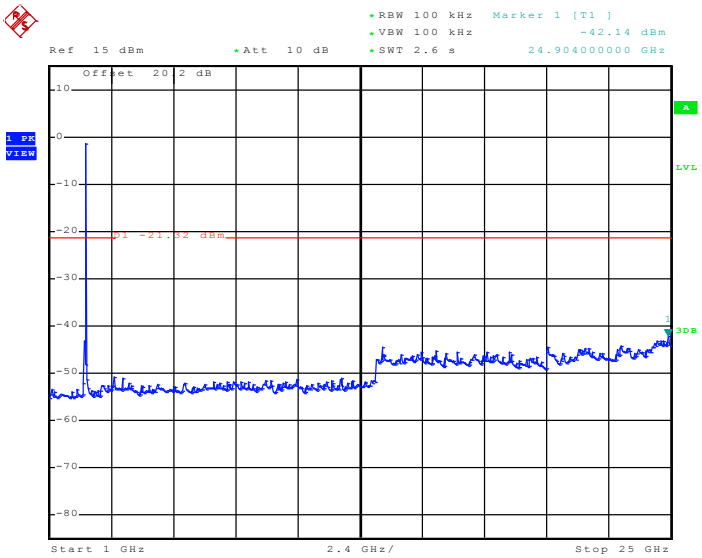
Test Mode :	Mode 7	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	46~49%
Test Channel :	01	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:33:48

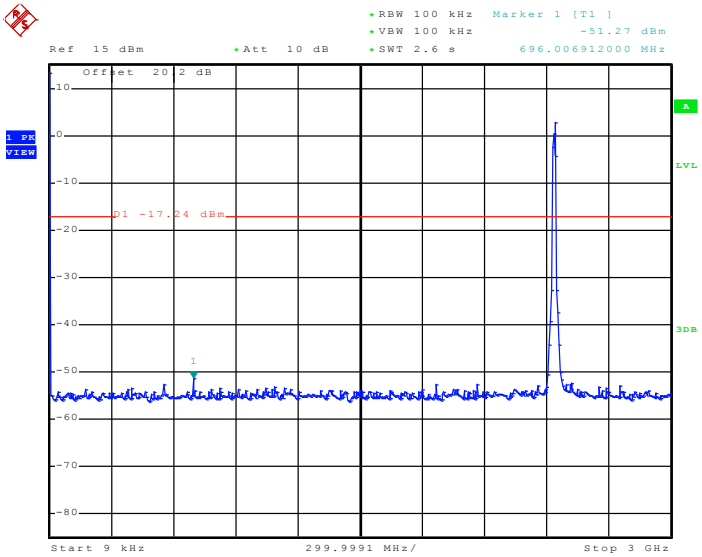
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:34:31

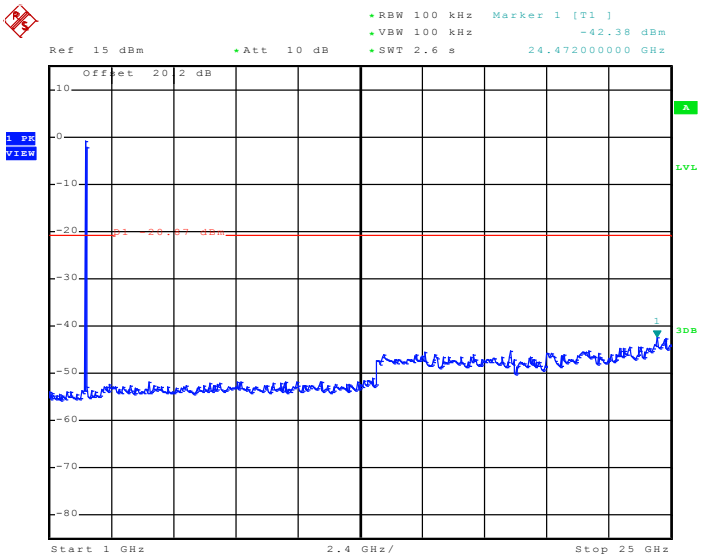
Test Mode :	Mode 8	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	46~49%
Test Channel :	06	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:35:23

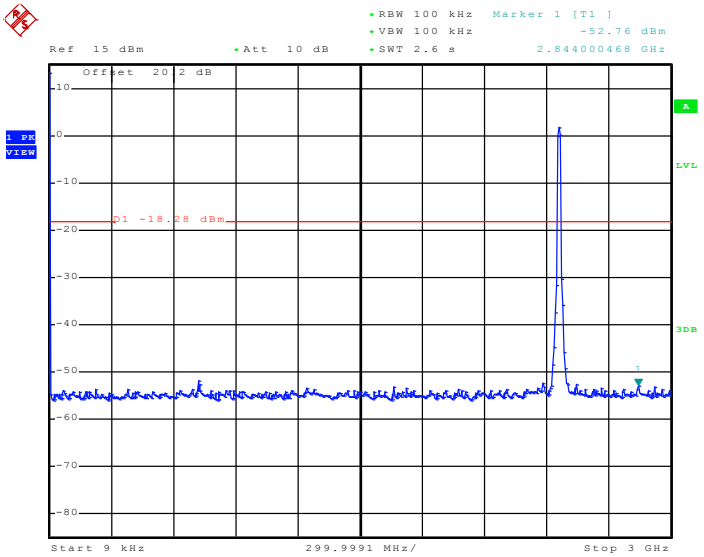
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:35:46

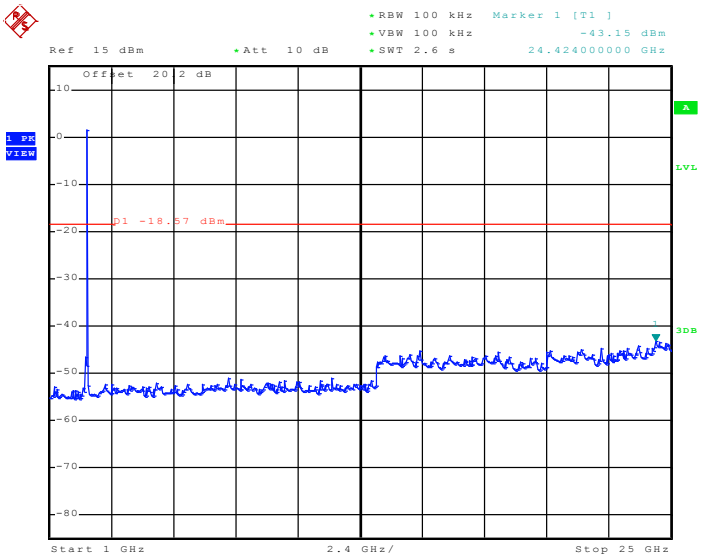
Test Mode :	Mode 9	Temperature :	24~26℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	46~49%
Test Channel :	11	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 29.JUN.2010 21:36:23

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 29.JUN.2010 21:36:44

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.

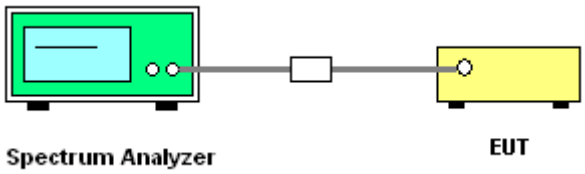
3.5.2 Measuring Instruments

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

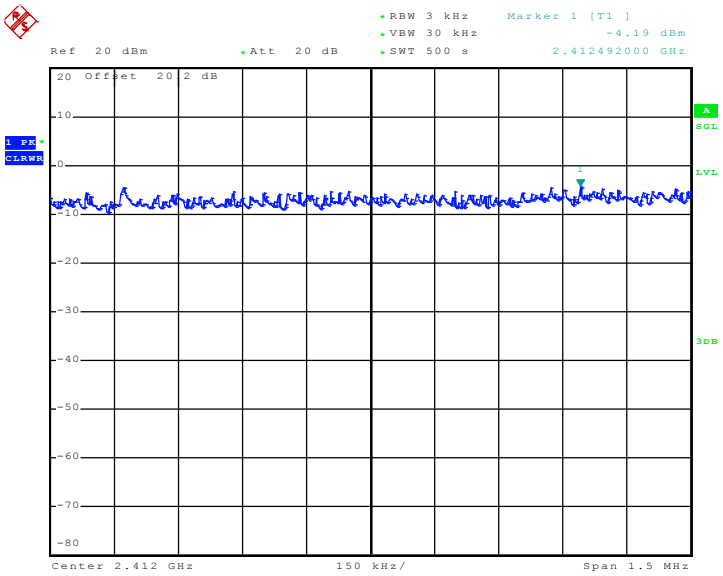


3.5.5 Test Result of Power Spectral Density

Test Mode :	Mode 1, 2, 3	Temperature :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

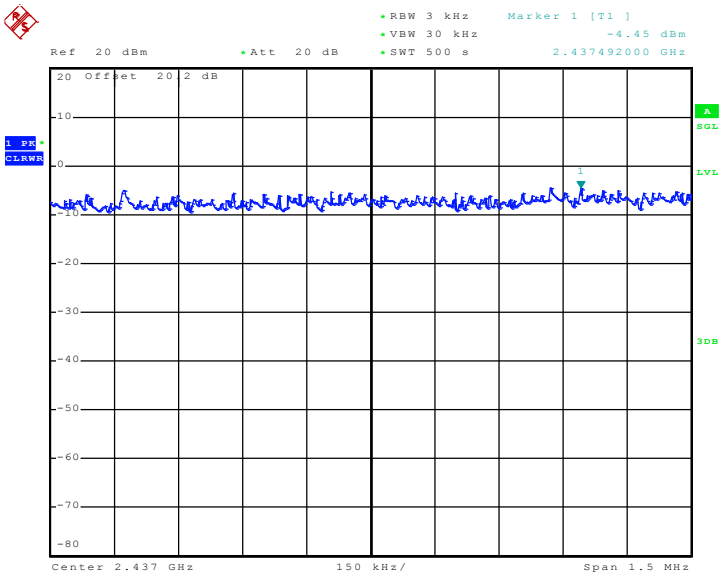
Channel	Frequency (MHz)	802.11b Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-4.19	8	Pass
06	2437	-4.45	8	Pass
11	2462	-3.88	8	Pass

Mode 1 : PSD Plot on 802.11b Channel 01



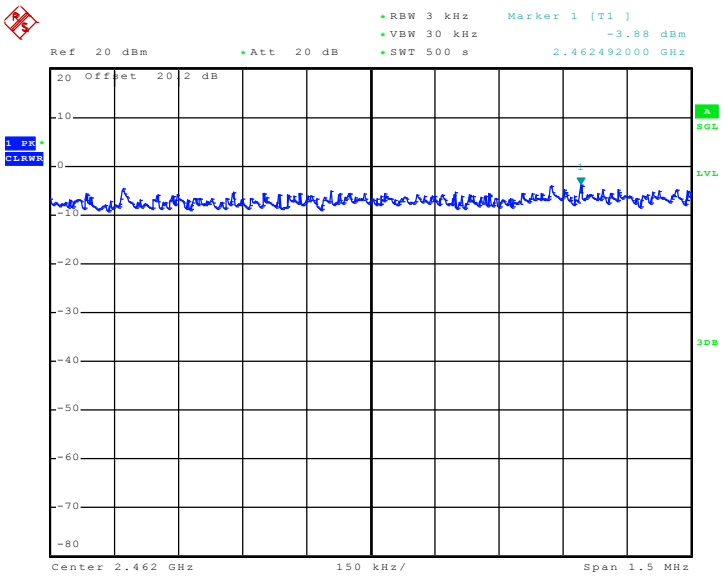
Date: 29.JUN.2010 18:29:06

Mode 2 : PSD Plot on 802.11b Channel 06



Date: 29.JUN.2010 18:15:57

Mode 3 : PSD Plot on 802.11b Channel 11

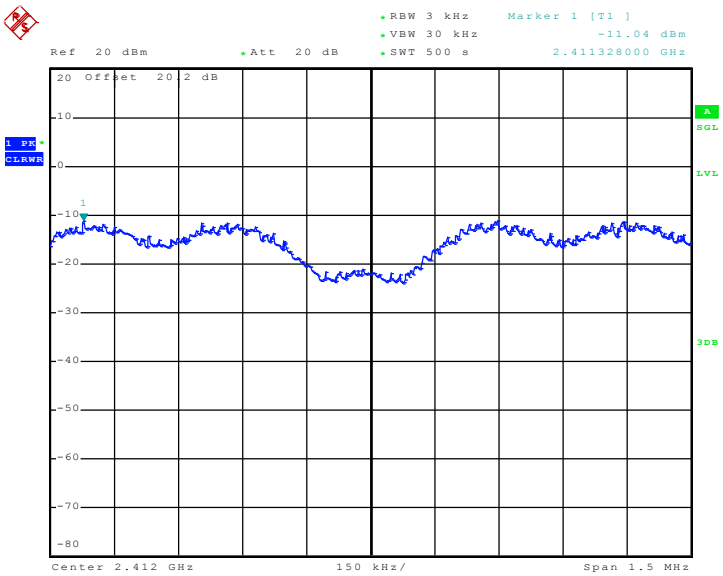


Date: 29.JUN.2010 18:07:05

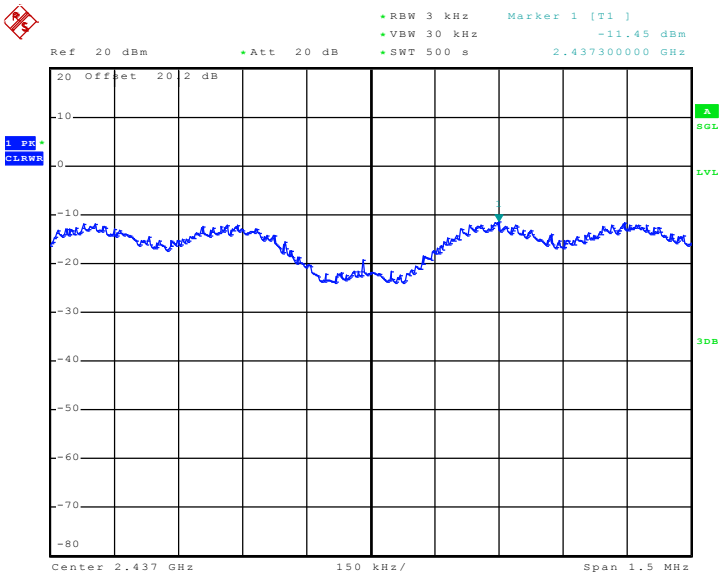
Test Mode :	Mode 4, 5, 6	Temperature :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

Channel	Frequency (MHz)	802.11g Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-11.04	8	Pass
06	2437	-11.45	8	Pass
11	2462	-11.05	8	Pass

Mode 4 : PSD Plot on 802.11g Channel 01

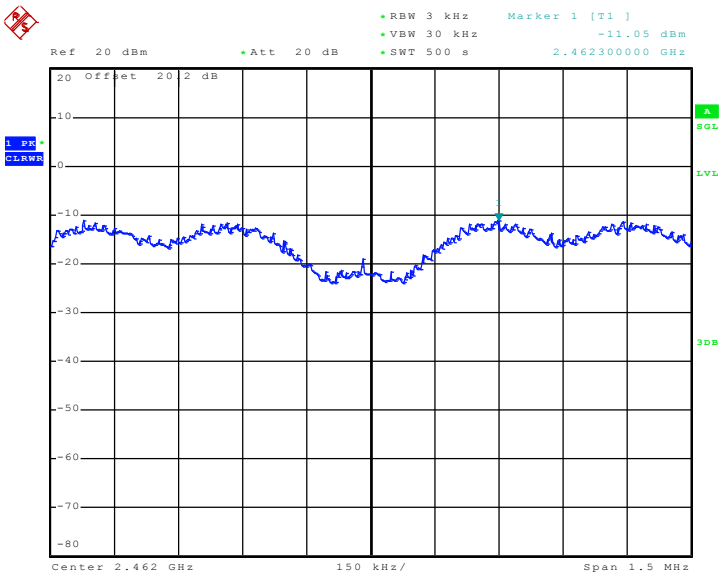


Mode 5 : PSD Plot on 802.11g Channel 06



Date: 29.JUN.2010 19:18:41

Mode 6 : PSD Plot on 802.11g Channel 11

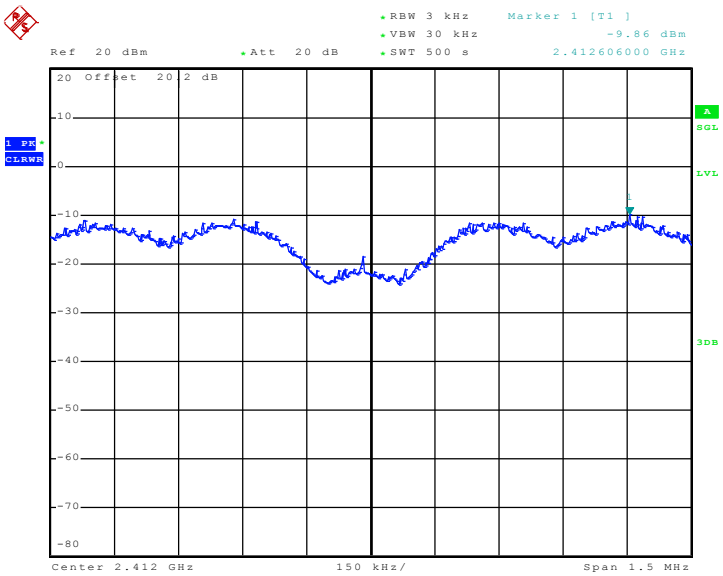


Date: 29.JUN.2010 19:27:31

Test Mode :	Mode 7, 8, 9	Temperature :	24~26℃
Test Engineer :	Lancelot Chen	Relative Humidity :	46~49%

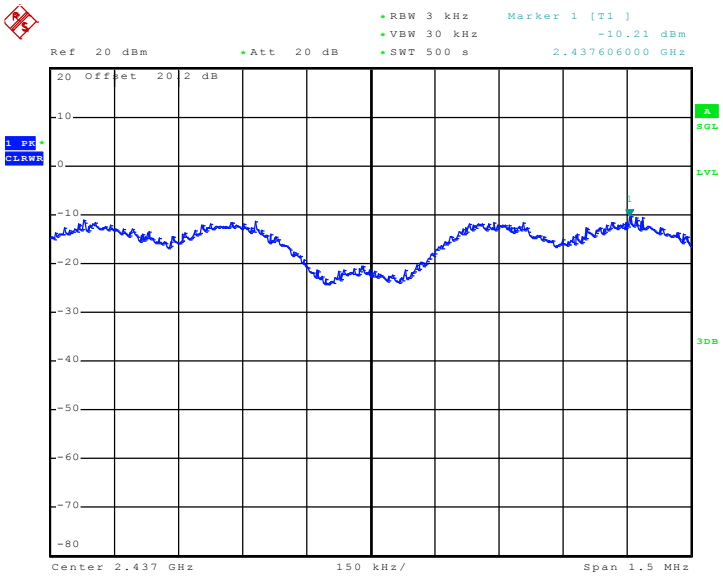
Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-9.86	8	Pass
06	2437	-10.21	8	Pass
11	2462	-10.01	8	Pass

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



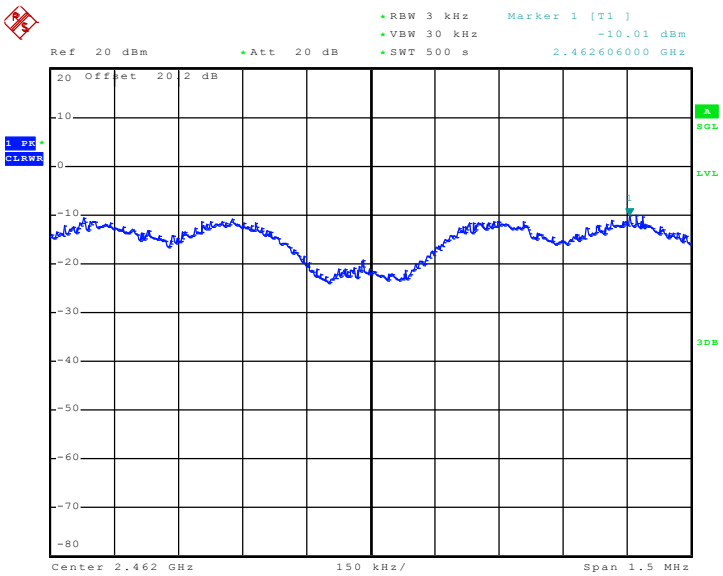
Date: 29.JUN.2010 20:12:34

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



Date: 29.JUN.2010 20:44:05

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



Date: 29.JUN.2010 20:31:14

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.

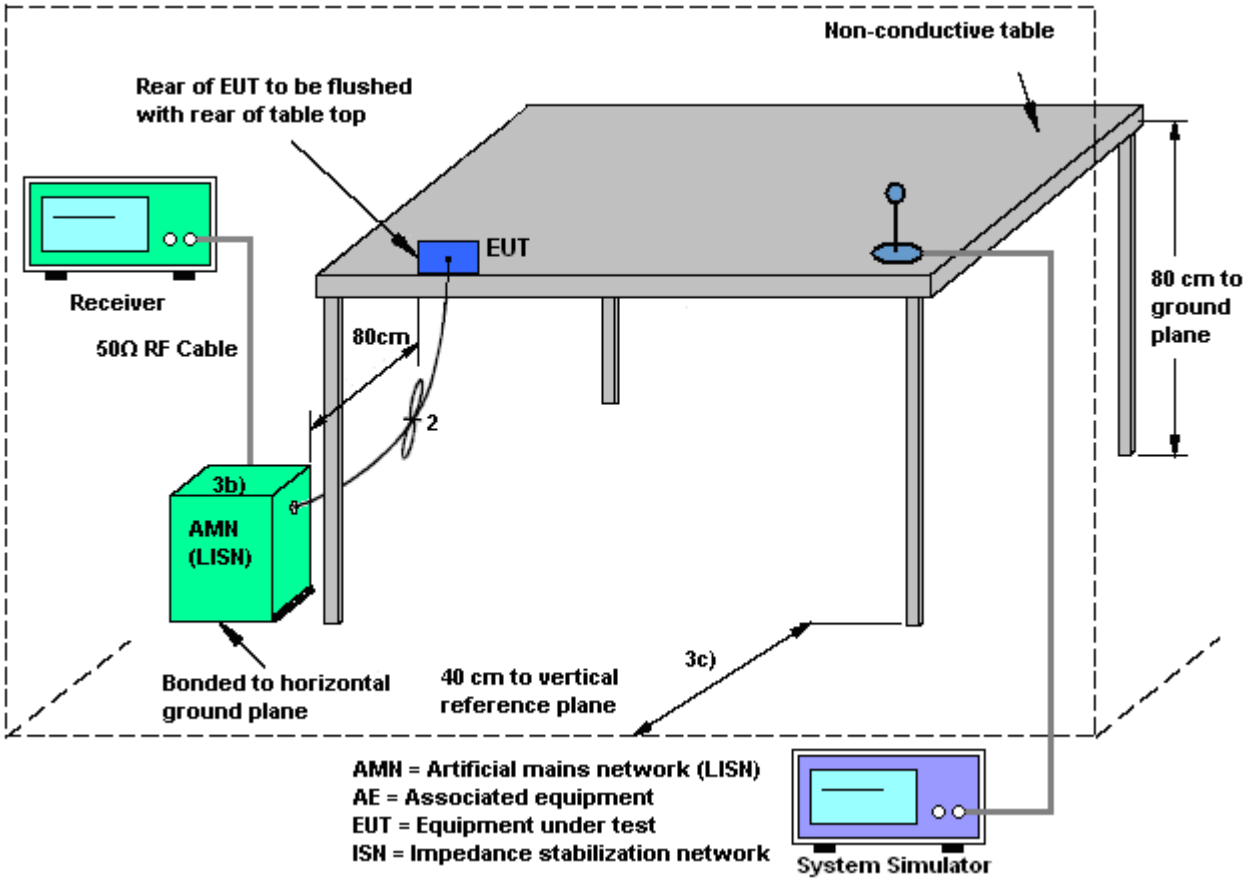
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

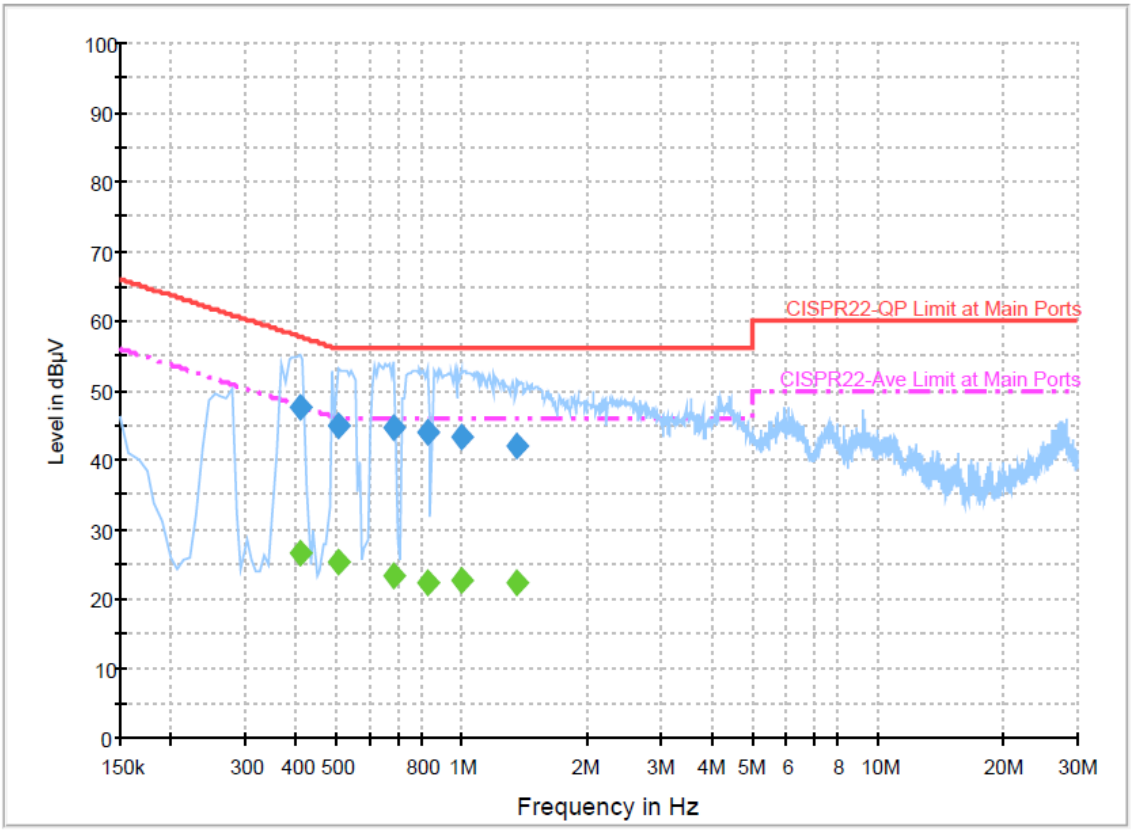
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (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 Jiang	**Relative Humidity :**	40~42%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	CDMA2000 BC0 Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone + Battery 1 + USB Cable 2 (Charging from Adapter 2)		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



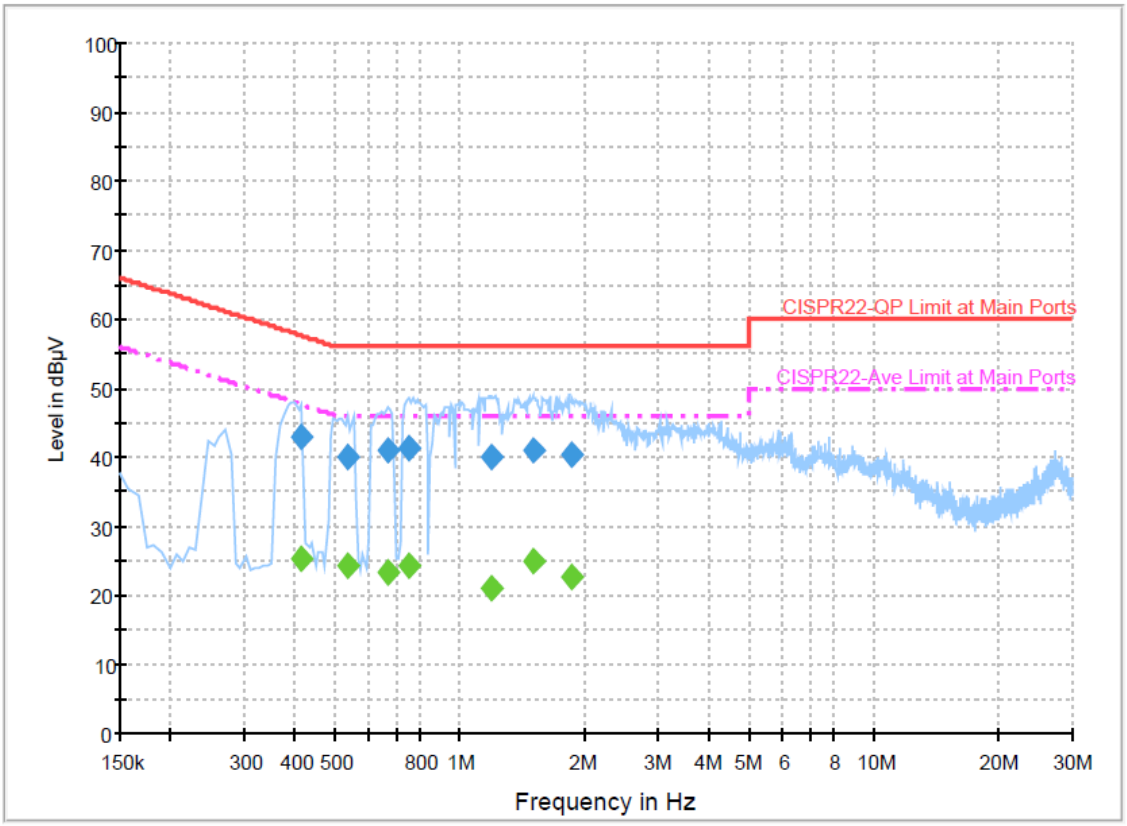
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.406000	47.4	Off	L1	19.4	10.3	57.7
0.502000	45.0	Off	L1	19.3	11.0	56.0
0.686000	44.5	Off	L1	19.5	11.5	56.0
0.822000	43.8	Off	L1	19.5	12.2	56.0
0.990000	43.4	Off	L1	19.4	12.6	56.0
1.350000	42.0	Off	L1	19.4	14.0	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.406000	26.6	Off	L1	19.4	21.1	47.7
0.502000	25.1	Off	L1	19.3	20.9	46.0
0.686000	23.3	Off	L1	19.5	22.7	46.0
0.822000	22.3	Off	L1	19.5	23.7	46.0
0.990000	22.6	Off	L1	19.4	23.4	46.0
1.350000	22.3	Off	L1	19.4	23.7	46.0

Test Mode :	Mode 1	**Temperature :**	20~22℃
Test Engineer :	Novic Jiang	**Relative Humidity :**	40~42%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	CDMA2000 BC0 Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone + Battery 1 + 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)
0.414000	43.1	Off	N	19.4	14.5	57.6
0.534000	40.0	Off	N	19.3	16.0	56.0
0.670000	40.9	Off	N	19.4	15.1	56.0
0.750000	41.2	Off	N	19.4	14.8	56.0
1.182000	40.2	Off	N	19.5	15.8	56.0
1.494000	41.0	Off	N	19.5	15.0	56.0
1.862000	40.4	Off	N	19.4	15.6	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.414000	25.4	Off	N	19.4	22.2	47.6
0.534000	24.3	Off	N	19.3	21.7	46.0
0.670000	23.2	Off	N	19.4	22.8	46.0
0.750000	24.2	Off	N	19.4	21.8	46.0
1.182000	21.1	Off	N	19.5	24.9	46.0
1.494000	25.0	Off	N	19.5	21.0	46.0
1.862000	22.8	Off	N	19.4	23.2	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

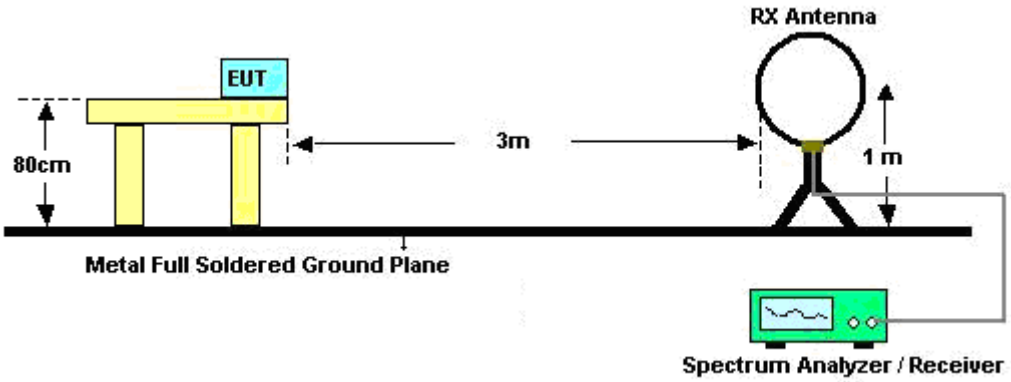
See list of measuring instruments of this test report.

3.7.3 Test Procedures

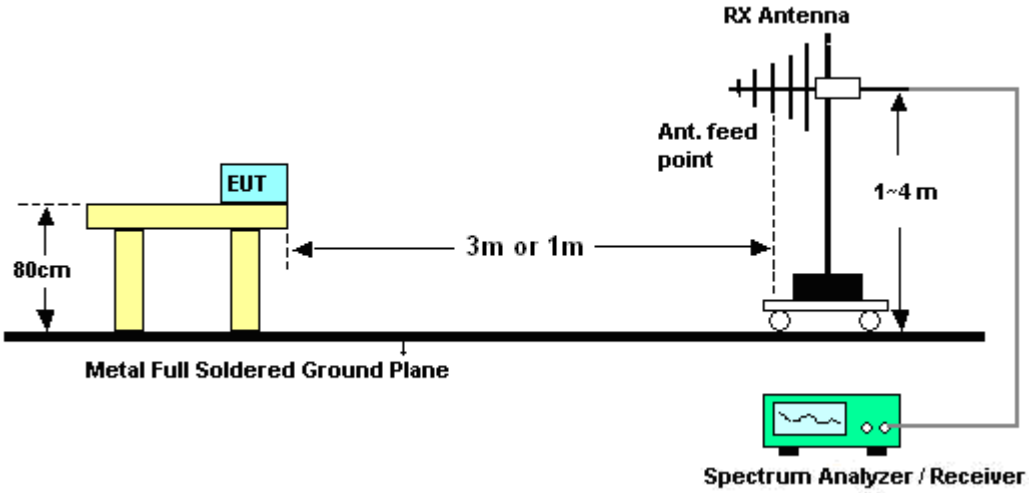
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
   (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; 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 :	Ivan Jiang	Temperature :	23~24℃
		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 (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 :	23~24℃
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
39.45	29.07	-10.93	40	45.9	14.06	0.62	31.51	100	214	Peak
67.53	20.65	-19.35	40	44.92	6.46	0.82	31.55	-	-	Peak
240.06	16.42	-29.58	46	34.71	11.6	1.53	31.42	-	-	Peak
503	19.5	-26.5	46	29.86	18.24	2.46	31.06	-	-	Peak
631.8	22.65	-23.35	46	30.45	20.31	2.78	30.89	-	-	Peak
931.4	26.02	-19.98	46	29.57	23.65	3.42	30.62	-	-	Peak
2389.99	41.76	-12.24	54	37.1	32.13	5.78	33.25	100	55	Average
2389.99	54.25	-19.75	74	49.59	32.13	5.78	33.25	100	55	Peak
2412	110.91	-	-	106.18	32.16	5.81	33.24	100	55	Peak
2412	98.31	-	-	93.58	32.16	5.81	33.24	100	55	Average
2494	38.36	-15.64	54	33.36	32.3	5.9	33.2	100	55	Average
2494	49.4	-24.6	74	44.4	32.3	5.9	33.2	100	55	Peak
8394	57.91	-16.09	74	43.64	36	11.71	33.44	100	214	Peak
8394	45.28	-8.72	54	31.01	36	11.71	33.44	100	214	Average

Test Mode :	Mode 1	Temperature :	23~24℃
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
47.82	34.95	-5.05	40	56.35	9.45	0.67	31.52	100	169	Peak
92.37	22.16	-21.34	43.5	43.55	9.17	0.96	31.52	-	-	Peak
291.09	23.62	-22.38	46	39.9	13.34	1.7	31.32	-	-	Peak
612.9	21.47	-24.53	46	29.48	20.17	2.73	30.91	-	-	Peak
794.2	24.06	-21.94	46	29.47	22.14	3.13	30.68	-	-	Peak
943.3	27.01	-18.99	46	30.31	23.84	3.45	30.59	-	-	Peak
2389.99	57.02	-16.98	74	52.36	32.13	5.78	33.25	102	24	Peak
2389.99	44.41	-9.59	54	39.75	32.13	5.78	33.25	102	24	Average
2412	111.6	-	-	106.87	32.16	5.81	33.24	102	24	Peak
2412	99.16	-	-	94.43	32.16	5.81	33.24	102	24	Average
2492	40.18	-13.82	54	35.18	32.3	5.9	33.2	102	24	Average
2492	51.65	-22.35	74	46.65	32.3	5.9	33.2	102	24	Peak
8106	58.11	-15.89	74	43.93	36	11.46	33.28	100	214	Peak
8106	44.43	-9.57	54	30.25	36	11.46	33.28	100	214	Average

Test Mode :	Mode 2	Temperature :	23~24℃
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
35.94	27.55	-12.45	40	42.24	16.2	0.59	31.48	100	14	Peak
51.33	26.53	-13.47	40	49.59	7.77	0.71	31.54	-	-	Peak
240.06	17.87	-28.13	46	36.16	11.6	1.53	31.42	-	-	Peak
498.1	19.37	-26.63	46	29.86	18.14	2.44	31.07	-	-	Peak
618.5	22.37	-23.63	46	30.31	20.21	2.75	30.9	-	-	Peak
934.2	26.24	-19.76	46	29.74	23.69	3.42	30.61	-	-	Peak
2390	48.79	-25.21	74	44.13	32.13	5.78	33.25	129	130	Peak
2390	37.42	-16.58	54	32.76	32.13	5.78	33.25	129	130	Average
2437	111.07	-	-	106.23	32.22	5.84	33.22	129	130	Peak
2437	98.49	-	-	93.65	32.22	5.84	33.22	129	130	Average
2500	48.56	-25.44	74	43.56	32.3	5.9	33.2	129	130	Peak
2500	36.86	-17.14	54	31.86	32.3	5.9	33.2	129	130	Average
8358	55.77	-18.23	74	41.5	36	11.69	33.42	100	14	Peak
8358	44.7	-9.3	54	30.43	36	11.69	33.42	100	14	Average

Test Mode :	Mode 2	Temperature :	23~24℃
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
47.82	34.55	-5.45	40	55.95	9.45	0.67	31.52	100	147	Peak
92.37	24.33	-19.17	43.5	45.72	9.17	0.96	31.52	-	-	Peak
272.73	18.92	-27.08	46	35.56	13.08	1.64	31.36	-	-	Peak
606.6	22.33	-23.67	46	30.42	20.11	2.71	30.91	-	-	Peak
765.5	24.78	-21.22	46	30.65	21.74	3.08	30.69	-	-	Peak
897.8	26.74	-19.26	46	30.94	23.16	3.34	30.7	-	-	Peak
2358	49.86	-24.14	74	45.29	32.08	5.75	33.26	100	324	Peak
2358	37.83	-16.17	54	33.26	32.08	5.75	33.26	100	324	Average
2437	113.83	-	-	108.99	32.22	5.84	33.22	100	324	Peak
2437	100.73	-	-	95.89	32.22	5.84	33.22	100	324	Average
2486	51.87	-22.13	74	46.91	32.27	5.9	33.21	100	324	Peak
2486	39.15	-14.85	54	34.19	32.27	5.9	33.21	100	324	Average
8334	56.59	-17.41	74	42.32	36	11.67	33.4	100	331	Peak
8334	45.52	-8.48	54	31.25	36	11.67	33.4	100	331	Average

Test Mode :	Mode 3	Temperature :	23~24℃
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
35.94	28.73	-11.27	40	43.42	16.2	0.59	31.48	100	214	Peak
162.3	14.37	-29.13	43.5	34.43	10.24	1.22	31.52	-	-	Peak
232.5	16.81	-29.19	46	36.07	10.67	1.5	31.43	-	-	Peak
528.9	19.92	-26.08	46	29.72	18.71	2.51	31.02	-	-	Peak
741	24.05	-21.95	46	30.33	21.4	3.04	30.72	-	-	Peak
943.3	26.34	-19.66	46	29.64	23.84	3.45	30.59	-	-	Peak
2388	48.02	-25.98	74	43.36	32.13	5.78	33.25	100	52	Peak
2388	37.58	-16.42	54	32.92	32.13	5.78	33.25	100	52	Average
2462	112.62	-	-	107.73	32.24	5.87	33.22	100	52	Peak
2462	99.94	-	-	95.05	32.24	5.87	33.22	100	52	Average
2483.85	44.4	-9.6	54	39.44	32.27	5.9	33.21	100	52	Average
2483.85	58	-16	74	53.04	32.27	5.9	33.21	100	52	Peak
8418	56.32	-17.68	74	42.04	36	11.73	33.45	100	200	Peak
8418	45.29	-8.71	54	31.01	36	11.73	33.45	100	200	Average

Test Mode :	Mode 3	Temperature :	23~24℃
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
47.82	34.84	-5.16	40	56.24	9.45	0.67	31.52	100	105	Peak
92.37	22.94	-20.56	43.5	44.33	9.17	0.96	31.52	-	-	Peak
270.3	20.75	-25.25	46	37.43	13.05	1.64	31.37	-	-	Peak
540.1	19.9	-26.1	46	29.44	18.93	2.53	31	-	-	Peak
718.6	22.34	-23.66	46	29.05	21.09	2.98	30.78	-	-	Peak
957.3	26.19	-19.81	46	29.25	24.04	3.47	30.57	-	-	Peak
2382	52.07	-21.93	74	47.44	32.11	5.78	33.26	100	328	Peak
2382	41.67	-12.33	54	37.04	32.11	5.78	33.26	100	328	Average
2462	113.83	-	-	108.94	32.24	5.87	33.22	100	328	Peak
2462	101.06	-	-	96.17	32.24	5.87	33.22	100	328	Average
2483.5	60.23	-13.77	74	55.27	32.27	5.9	33.21	100	328	Peak
2483.5	47.49	-6.51	54	42.53	32.27	5.9	33.21	100	328	Average
8478	56.07	-17.93	74	41.77	36	11.79	33.49	100	47	Peak
8478	45.07	-8.93	54	30.77	36	11.79	33.49	100	47	Average

Test Mode :	Mode 4	Temperature :	23~24℃
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
47.82	27.86	-12.14	40	49.26	9.45	0.67	31.52	100	144	Peak
66.45	21.83	-18.17	40	46.17	6.39	0.82	31.55	-	-	Peak
228.18	17.62	-28.38	46	37.51	10.08	1.47	31.44	-	-	Peak
505.8	20.53	-25.47	46	30.84	18.29	2.46	31.06	-	-	Peak
738.2	22.77	-23.23	46	29.11	21.36	3.03	30.73	-	-	Peak
951.7	26.26	-19.74	46	29.41	23.96	3.46	30.57	-	-	Peak
2389.99	65.5	-8.5	74	60.84	32.13	5.78	33.25	100	128	Peak
2389.99	45.95	-8.05	54	41.29	32.13	5.78	33.25	100	128	Average
2412	104.46	-	-	99.73	32.16	5.81	33.24	100	128	Peak
2412	91.94	-	-	87.21	32.16	5.81	33.24	100	128	Average
2494	39.7	-14.3	54	34.7	32.3	5.9	33.2	100	128	Average
2494	51.66	-22.34	74	46.66	32.3	5.9	33.2	100	128	Peak
8394	57.51	-16.49	74	43.24	36	11.71	33.44	100	102	Peak
8394	45.32	-8.68	54	31.05	36	11.71	33.44	100	102	Average

Test Mode :	Mode 4	Temperature :	23~24℃
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
30	34.23	-5.77	40	45.65	19.51	0.53	31.46	100	315	Peak
47.82	33.59	-6.41	40	54.99	9.45	0.67	31.52	-	-	Peak
92.37	23.59	-19.91	43.5	44.98	9.17	0.96	31.52	-	-	Peak
495.3	19.93	-26.07	46	30.49	18.08	2.43	31.07	-	-	Peak
755.7	23.54	-22.46	46	29.57	21.6	3.07	30.7	-	-	Peak
934.9	25.85	-20.15	46	29.33	23.71	3.42	30.61	-	-	Peak
2389.42	46.96	-7.04	54	42.3	32.13	5.78	33.25	100	11	Average
2389.42	67.14	-6.86	74	62.48	32.13	5.78	33.25	100	11	Peak
2412	104.35	-	-	99.62	32.16	5.81	33.24	100	11	Peak
2412	92.65	-	-	87.92	32.16	5.81	33.24	100	11	Average
2486	39.06	-14.94	54	34.1	32.27	5.9	33.21	100	11	Average
2486	50.65	-23.35	74	45.69	32.27	5.9	33.21	100	11	Peak
8301	57.97	-16.03	74	43.72	36	11.63	33.38	100	48	Peak
8301	44.71	-9.29	54	30.46	36	11.63	33.38	100	48	Average

Test Mode :	Mode 5	Temperature :	23~24℃
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
35.94	29.22	-10.78	40	43.91	16.2	0.59	31.48	100	59	Peak
48.9	28.31	-11.69	40	50.2	8.96	0.68	31.53	-	-	Peak
234.66	17.04	-28.96	46	36.07	10.9	1.5	31.43	-	-	Peak
525.4	20.31	-25.69	46	30.17	18.66	2.5	31.02	-	-	Peak
800.5	23.9	-22.1	46	29.22	22.22	3.14	30.68	-	-	Peak
942.6	26.63	-19.37	46	29.95	23.83	3.44	30.59	-	-	Peak
2390	46.9	-27.1	74	42.24	32.13	5.78	33.25	100	56	Peak
2390	35.21	-18.79	54	30.55	32.13	5.78	33.25	100	56	Average
2437	105.24	-	-	100.4	32.22	5.84	33.22	100	56	Peak
2437	92.58	-	-	87.74	32.22	5.84	33.22	100	56	Average
2484	48.93	-25.07	74	43.97	32.27	5.9	33.21	100	56	Peak
2484	35.92	-18.08	54	30.96	32.27	5.9	33.21	100	56	Average
8418	57.6	-16.4	74	43.32	36	11.73	33.45	100	214	Peak
8418	45.29	-8.71	54	31.01	36	11.73	33.45	100	214	Average

Test Mode :	Mode 5	Temperature :	23~24℃
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
30	33.76	-6.24	40	45.18	19.51	0.53	31.46	100	214	Peak
47.82	32.51	-7.49	40	53.91	9.45	0.67	31.52	-	-	Peak
92.37	25.32	-18.18	43.5	46.71	9.17	0.96	31.52	-	-	Peak
505.8	20.29	-25.71	46	30.6	18.29	2.46	31.06	-	-	Peak
716.5	22.93	-23.07	46	29.66	21.07	2.98	30.78	-	-	Peak
942.6	26.15	-19.85	46	29.47	23.83	3.44	30.59	-	-	Peak
2358	47.06	-26.94	74	42.49	32.08	5.75	33.26	100	15	Peak
2358	35.44	-18.56	54	30.87	32.08	5.75	33.26	100	15	Average
2437	105.69	-	-	100.85	32.22	5.84	33.22	100	15	Peak
2437	93.37	-	-	88.53	32.22	5.84	33.22	100	15	Average
2484	50.65	-23.35	74	45.69	32.27	5.9	33.21	100	15	Peak
2484	38.65	-15.35	54	33.69	32.27	5.9	33.21	100	15	Average
8286	57.51	-16.49	74	43.26	36	11.63	33.38	100	264	Peak
8286	45.49	-8.51	54	31.24	36	11.63	33.38	100	264	Average

Test Mode :	Mode 6	Temperature :	23~24℃
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
35.94	27.61	-12.39	40	42.3	16.2	0.59	31.48	100	214	Peak
47.82	27.1	-12.9	40	48.5	9.45	0.67	31.52	-	-	Peak
240.06	18.4	-27.6	46	36.69	11.6	1.53	31.42	-	-	Peak
629.7	22.27	-23.73	46	30.09	20.29	2.78	30.89	-	-	Peak
803.3	24.08	-21.92	46	29.36	22.25	3.15	30.68	-	-	Peak
953.8	26.14	-19.86	46	29.26	23.99	3.46	30.57	-	-	Peak
2380	47.5	-26.5	74	42.87	32.11	5.78	33.26	121	50	Peak
2380	36.66	-17.34	54	32.03	32.11	5.78	33.26	121	50	Average
2462	105.28	-	-	100.39	32.24	5.87	33.22	121	50	Peak
2462	93.2	-	-	88.31	32.24	5.87	33.22	121	50	Average
2483.5	49.23	-4.77	54	44.27	32.27	5.9	33.21	121	50	Average
2483.5	69.79	-4.21	74	64.83	32.27	5.9	33.21	121	50	Peak
8358	58.05	-15.95	74	43.78	36	11.69	33.42	100	215	Peak
8358	44.73	-9.27	54	30.46	36	11.69	33.42	100	215	Average

Test Mode :	Mode 6	Temperature :	23~24℃
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
30	33.96	-6.04	40	45.38	19.51	0.53	31.46	100	12	Peak
48.9	32.29	-7.71	40	54.18	8.96	0.68	31.53	-	-	Peak
281.1	23.93	-22.07	46	40.44	13.2	1.64	31.35	-	-	Peak
528.9	19.9	-26.1	46	29.7	18.71	2.51	31.02	-	-	Peak
769	23.42	-22.58	46	29.23	21.79	3.09	30.69	-	-	Peak
951.7	26.17	-19.83	46	29.32	23.96	3.46	30.57	-	-	Peak
2382	47.84	-26.16	74	43.21	32.11	5.78	33.26	100	16	Peak
2382	36.86	-17.14	54	32.23	32.11	5.78	33.26	100	16	Average
2462	105.6	-	-	100.71	32.24	5.87	33.22	100	16	Peak
2462	93.53	-	-	88.64	32.24	5.87	33.22	100	16	Average
2483.85	49.21	-4.79	54	44.25	32.27	5.9	33.21	100	16	Average
2483.85	68.41	-5.59	74	63.45	32.27	5.9	33.21	100	16	Peak
8250	57.74	-16.26	74	43.51	36	11.59	33.36	100	251	Peak
8250	45.25	-8.75	54	31.02	36	11.59	33.36	100	251	Average

Test Mode :	Mode 7	Temperature :	23~24℃
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
47.82	27.75	-12.25	40	49.15	9.45	0.67	31.52	100	289	Peak
129.9	16.2	-27.3	43.5	34.85	11.77	1.15	31.57	-	-	Peak
274.62	17.36	-28.64	46	33.97	13.11	1.64	31.36	-	-	Peak
568.1	20.71	-25.29	46	29.61	19.46	2.6	30.96	-	-	Peak
724.2	22.61	-23.39	46	29.2	21.17	3	30.76	-	-	Peak
855.8	26.52	-19.48	46	31.22	22.75	3.28	30.73	-	-	Peak
2389.99	46.66	-7.34	54	42	32.13	5.78	33.25	100	130	Average
2389.99	67.47	-6.53	74	62.81	32.13	5.78	33.25	100	130	Peak
2412	91.58	-	-	86.85	32.16	5.81	33.24	100	130	Average
2412	103.68	-	-	98.95	32.16	5.81	33.24	100	130	Peak
2494	41.01	-12.99	54	36.01	32.3	5.9	33.2	100	130	Average
2494	52.04	-21.96	74	47.04	32.3	5.9	33.2	100	130	Peak
8298	57.77	-16.23	74	43.52	36	11.63	33.38	100	111	Peak
8298	45.46	-8.54	54	31.21	36	11.63	33.38	100	111	Average

Test Mode :	Mode 7	Temperature :	23~24℃
Test Channel :	01	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
30	34.45	-5.55	40	45.87	19.51	0.53	31.46	100	247	Peak
47.82	33.81	-6.19	40	55.21	9.45	0.67	31.52	-	-	Peak
92.37	24.03	-19.47	43.5	45.42	9.17	0.96	31.52	-	-	Peak
486.2	20.96	-25.04	46	31.74	17.88	2.4	31.06	-	-	Peak
750.1	22.95	-23.05	46	29.07	21.52	3.06	30.7	-	-	Peak
954.5	26.47	-19.53	46	29.58	24	3.46	30.57	-	-	Peak
2389.61	48.21	-5.79	54	43.55	32.13	5.78	33.25	100	318	Average
2389.61	68.72	-5.28	74	64.06	32.13	5.78	33.25	100	318	Peak
2412	103.82	-	-	99.09	32.16	5.81	33.24	100	318	Peak
2412	91.75	-	-	87.02	32.16	5.81	33.24	100	318	Average
2494	40.63	-13.37	54	35.63	32.3	5.9	33.2	100	318	Average
2494	51.44	-22.56	74	46.44	32.3	5.9	33.2	100	318	Peak
8121	57.86	-16.14	74	43.67	36	11.48	33.29	100	211	Peak
8121	45.07	-8.93	54	30.88	36	11.48	33.29	100	211	Average

Test Mode :	Mode 8	Temperature :	23~24℃
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
35.94	28.18	-11.82	40	42.87	16.2	0.59	31.48	100	147	Peak
230.61	17.57	-28.43	46	37.09	10.43	1.49	31.44	-	-	Peak
277.86	17.65	-28.35	46	34.2	13.16	1.64	31.35	-	-	Peak
486.2	19.19	-26.81	46	29.97	17.88	2.4	31.06	-	-	Peak
783.7	23.95	-22.05	46	29.54	21.99	3.11	30.69	-	-	Peak
951.7	26.63	-19.37	46	29.78	23.96	3.46	30.57	-	-	Peak
2358	47.56	-26.44	74	42.99	32.08	5.75	33.26	100	53	Peak
2358	35.36	-18.64	54	30.79	32.08	5.75	33.26	100	53	Average
2437	92.58	-	-	87.74	32.22	5.84	33.22	100	53	Average
2437	104.76	-	-	99.92	32.22	5.84	33.22	100	53	Peak
2500	48.21	-25.79	74	43.21	32.3	5.9	33.2	100	53	Peak
2500	35.85	-18.15	54	30.85	32.3	5.9	33.2	100	53	Average
8034	58.44	-15.56	74	44.28	36	11.4	33.24	100	25	Peak
8034	44.27	-9.73	54	30.11	36	11.4	33.24	100	25	Average

Test Mode :	Mode 8	Temperature :	23~24℃
Test Channel :	06	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
30	33.65	-6.35	40	45.07	19.51	0.53	31.46	100	21	Peak
47.82	32.28	-7.72	40	53.68	9.45	0.67	31.52	-	-	Peak
277.86	24.59	-21.41	46	41.14	13.16	1.64	31.35	-	-	Peak
626.2	23.04	-22.96	46	30.89	20.27	2.77	30.89	-	-	Peak
836.2	25.66	-20.34	46	30.59	22.56	3.23	30.72	-	-	Peak
948.9	25.94	-20.06	46	29.14	23.91	3.46	30.57	-	-	Peak
2382	47.82	-26.18	74	43.19	32.11	5.78	33.26	100	324	Peak
2382	36.06	-17.94	54	31.43	32.11	5.78	33.26	100	324	Average
2437	105.64	-	-	100.8	32.22	5.84	33.22	100	324	Peak
2437	93.34	-	-	88.5	32.22	5.84	33.22	100	324	Average
2484	49.98	-24.02	74	45.02	32.27	5.9	33.21	100	324	Peak
2484	37.47	-16.53	54	32.51	32.27	5.9	33.21	100	324	Average
8337	57.45	-16.55	74	43.19	36	11.67	33.41	100	0	Peak
8337	44.76	-9.24	54	30.5	36	11.67	33.41	100	0	Average

Test Mode :	Mode 9	Temperature :	23~24℃
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
35.94	29	-11	40	43.69	16.2	0.59	31.48	100	145	Peak
47.82	27.88	-12.12	40	49.28	9.45	0.67	31.52	-	-	Peak
227.37	17.06	-28.94	46	37.08	9.97	1.46	31.45	-	-	Peak
486.9	19.86	-26.14	46	30.62	17.9	2.4	31.06	-	-	Peak
715.8	23.44	-22.56	46	30.19	21.05	2.98	30.78	-	-	Peak
925.8	26.03	-19.97	46	29.68	23.58	3.4	30.63	-	-	Peak
2388	47.85	-26.15	74	43.19	32.13	5.78	33.25	100	129	Peak
2388	37.31	-16.69	54	32.65	32.13	5.78	33.25	100	129	Average
2462	106.17	-	-	101.28	32.24	5.87	33.22	100	129	Peak
2462	92.89	-	-	88	32.24	5.87	33.22	100	129	Average
2483.66	67.95	-6.05	74	62.99	32.27	5.9	33.21	100	129	Peak
2483.66	48.78	-5.22	54	43.82	32.27	5.9	33.21	100	129	Average
8373	58.53	-15.47	74	44.27	36	11.69	33.43	100	31	Peak
8373	44.83	-9.17	54	30.57	36	11.69	33.43	100	31	Average

Test Mode :	Mode 9	Temperature :	23~24℃
Test Channel :	11	Relative Humidity :	48~49%
Test Engineer :	Ivan Jiang	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
30	33.41	-6.59	40	44.83	19.51	0.53	31.46	100	14	Peak
47.82	32.01	-7.99	40	53.41	9.45	0.67	31.52	-	-	Peak
92.37	24.89	-18.61	43.5	46.28	9.17	0.96	31.52	-	-	Peak
598.2	21.99	-24.01	46	30.2	20.03	2.68	30.92	-	-	Peak
836.2	25.15	-20.85	46	30.08	22.56	3.23	30.72	-	-	Peak
951	25.95	-20.05	46	29.12	23.94	3.46	30.57	-	-	Peak
2388	48.01	-25.99	74	43.35	32.13	5.78	33.25	100	331	Peak
2388	37.01	-16.99	54	32.35	32.13	5.78	33.25	100	331	Average
2462	107.07	-	-	102.18	32.24	5.87	33.22	100	331	Peak
2462	93.75	-	-	88.86	32.24	5.87	33.22	100	331	Average
2483.85	67.63	-6.37	74	62.67	32.27	5.9	33.21	100	331	Peak
2483.85	48.55	-5.45	54	43.59	32.27	5.9	33.21	100	331	Average
8466	58.27	-15.73	74	43.98	36	11.77	33.48	100	210	Peak
8466	45.54	-8.46	54	31.25	36	11.77	33.48	100	210	Average

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 Fixed Internal 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. 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	117997	N/A	May 14, 2009	May 13, 2011	Conduction (CO05-HY)
GPS Station	T&E	GS-50	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 31, 2009	Oct. 30, 2010	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP	101067	9KHz ~ 30GHz	Dec. 04, 2009	Dec. 03, 2010	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 20, 2009	Aug. 19, 2010	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 14, 2009	Oct. 13, 2010	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Dec.09,2009	Dec. 08, 2010	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32 dB.GAIN	Mar. 27, 2010	Mar. 26, 2011	Radiation (03CH07-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**				