FCC RF Test Report

APPLICANT	:	HTC Corporation
EQUIPMENT	:	Windows Phone
MODEL NAME	:	PD29110
FCC ID	:	NM8PD29110
STANDARD	:	FCC Part 15 Subpart C §15.247
CLASSIFICATION	:	Digital Transmission System (DTS)

The product was received on Aug. 04, 2010 and completely tested on Aug. 23, 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

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
FR080411B	Rev. 01	Initial issue of report	Sep. 14, 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 9.2 dB at 0.550 MHz
3.7	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.11 dB at 30.27 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
No. 23, Xinghua Rd., Taoyuan City, Taiwan

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Windows Phone
Model Name	PD29110
FCC ID	NM8PD29110
Sample 1	EUT with LCM-Main and Camera-Main
Sample 2	EUT with LCM-2nd and Camera-2nd
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 : 20.10 dBm (0.102 W) 802.11g : 20.19 dBm (0.104 W) 802.11n (BW 20MHz) : 20.12 dBm (0.103 W)
Antenna Type	PIFA Antenna with gain -0.5 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	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

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	19.90	19.93	19.92	**20.10**
CH 06	2437 MHz	19.48	19.76	19.76	19.86
CH 11	2462 MHz	19.10	19.25	19.22	19.29

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	**20.19**	19.72	19.48	19.28	18.75	19.24	19.09	19.26
CH 06	2437 MHz	19.36	19.13	18.88	18.60	18.42	18.55	18.60	18.53
CH 11	2462 MHz	19.22	18.91	18.39	18.54	18.13	18.41	18.23	18.43

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	**20.12**	19.36	19.46	19.06	18.95	18.95	19.12	19.14
CH 06	2437 MHz	19.43	18.74	18.51	18.35	18.21	18.17	18.37	18.47
CH 11	2462 MHz	19.17	18.99	18.67	18.57	18.45	18.13	18.42	18.17

Remark:

1. The data rates of WLAN 802.11b/g/n were set in 11Mbps for 802.11b, 6Mbps for 802.11g, MCS=0 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.
3. The EUT supports 802.11n (BW 20 MHz) function only, not supports 802.11n (BW 40 MHz) function.

2.2 Test Mode

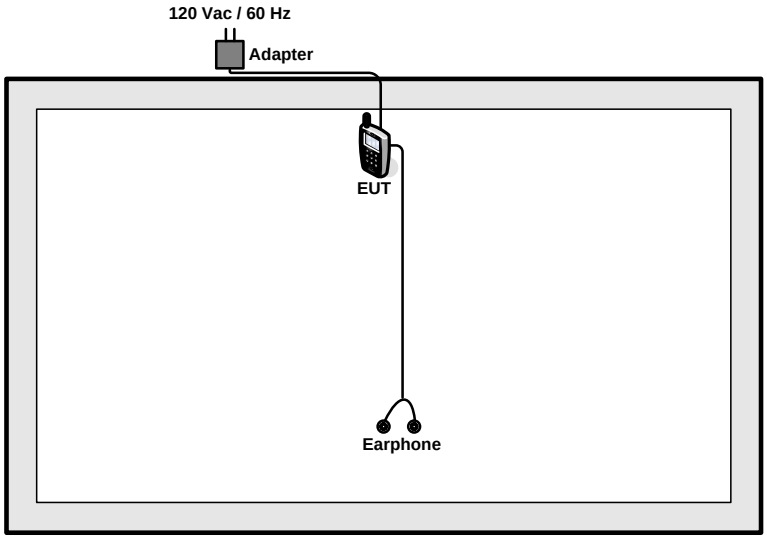
The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic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

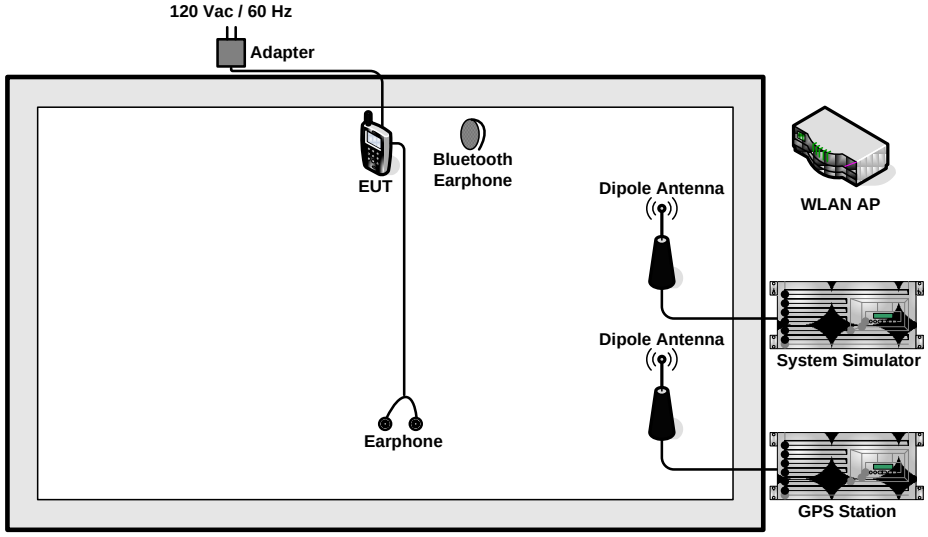
Test Cases	
Test Item	**802.11b (Modulation : DSSS)** **802.11g/n (Modulation : OFDM)**
Conducted TCs	Mode 1 : 802.11b CH01_2412 MHz Mode 2 : 802.11b CH06_2437 MHz Mode 3 : 802.11b CH11_2462 MHz Mode 4: 802.11g_CH01_2412 MHz Mode 5: 802.11g_CH06_2437 MHz Mode 6: 802.11g_CH11_2462 MHz Mode 7: 802.11n (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 + TC for Sample 1 Mode 2 : 802.11b CH06_2437 MHz + TC for Sample 1 Mode 3 : 802.11b CH11_2462 MHz + TC for Sample 1 Mode 4: 802.11g_CH01_2412 MHz + TC for Sample 1 Mode 5: 802.11g_CH06_2437 MHz + TC for Sample 1 Mode 6: 802.11g_CH11_2462 MHz + TC for Sample 1 Mode 7: 802.11n (BW 20M)_CH01_2412 MHz + TC for Sample 1 Mode 8: 802.11n (BW 20M)_CH06_2437 MHz + TC for Sample 1 Mode 9: 802.11n (BW 20M)_CH11_2462 MHz + TC for Sample 1
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone 1 + Battery 1 + USB Cable 1 (Charging from Adapter 1) for Sample 1 Mode 2 : WCDMA Band IV Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone 2 + Battery 2 + USB Cable 2 (Charging from Adapter 2) for Sample 2
Remark: **1.** TC stands for Test Configuration, and consists of Battery 1, Earphone 1, USB Cable 1, and Adapter 1. **2.** The worst case of conducted emission is mode 2; only the test data of it was reported.	

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<EUT with Adapter Mode>



2.4 RF Utility

The programmed RF utility “Remote 432X controller (P1.5 Thread)” 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.

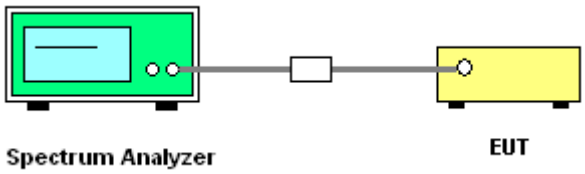
3.1.2 Measuring Instruments

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

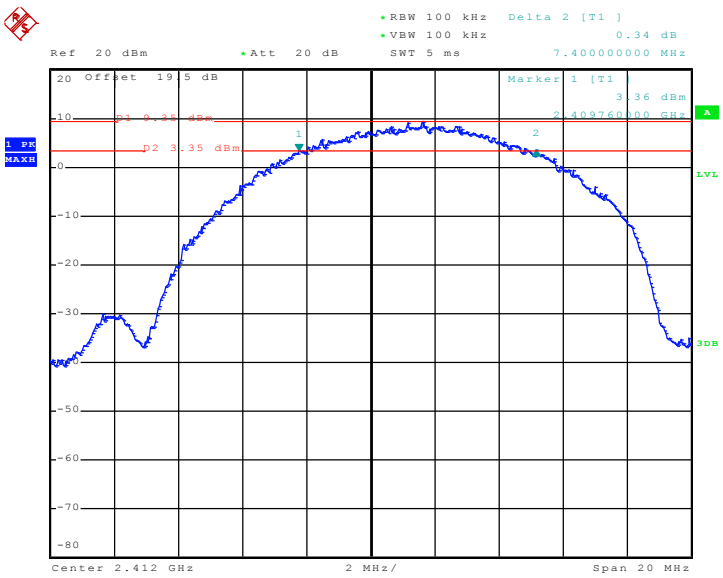


3.1.5 Test Result of 6dB Bandwidth

Test Mode :	Mode 1, 2, 3	Temperature :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

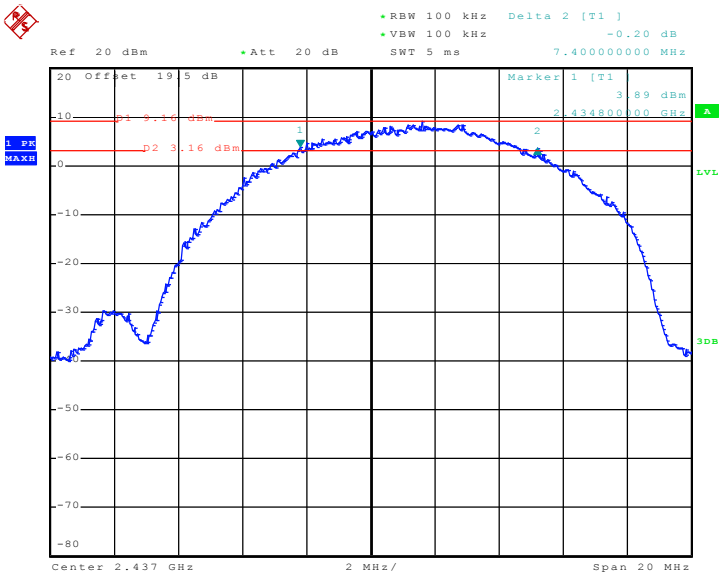
Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	7.40	0.5	Pass
06	2437	7.40	0.5	Pass
11	2462	7.44	0.5	Pass

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



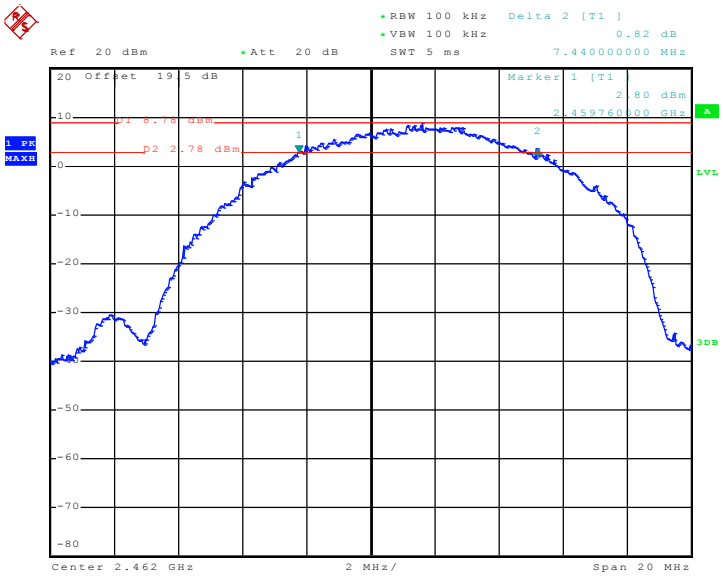
Date: 11.AUG.2010 03:49:15

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



Date: 11.AUG.2010 03:53:14

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

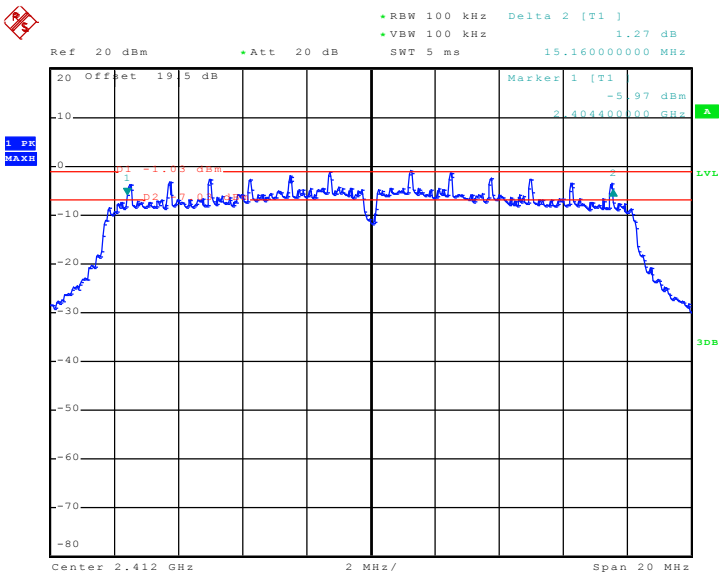


Date: 11.AUG.2010 03:57:05

Test Mode :	Mode 4, 5, 6	Temperature :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

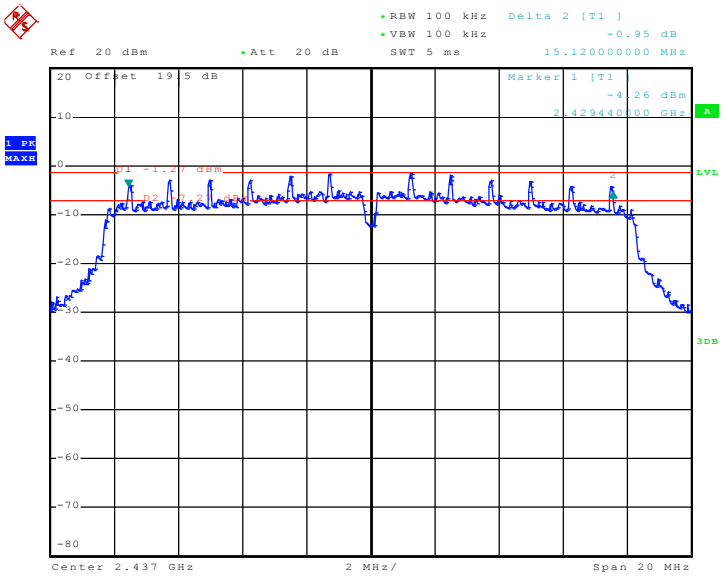
Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	15.16	0.5	Pass
06	2437	15.12	0.5	Pass
11	2462	15.16	0.5	Pass

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



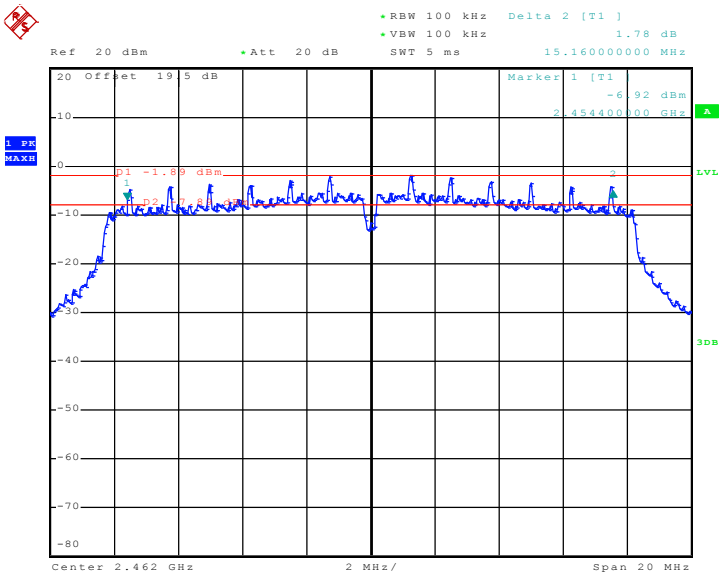
Date: 11.AUG.2010 05:43:17

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



Date: 11.AUG.2010 05:30:00

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

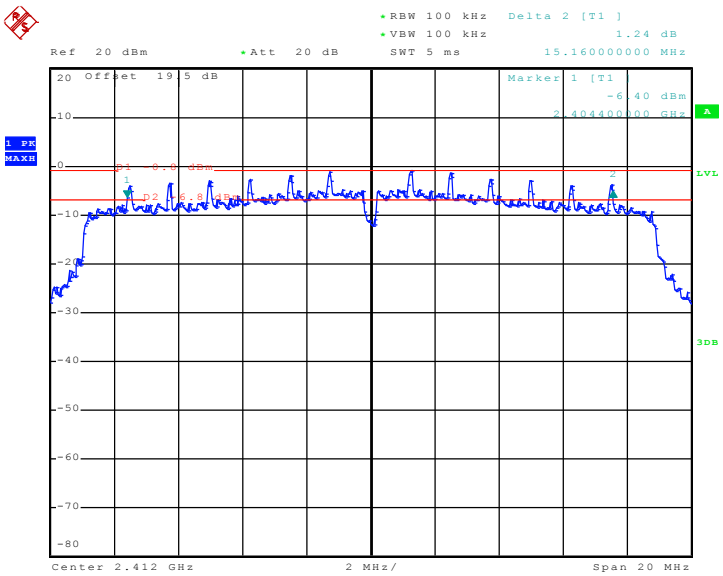


Date: 11.AUG.2010 05:33:21

Test Mode :	Mode 7, 8, 9	Temperature :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

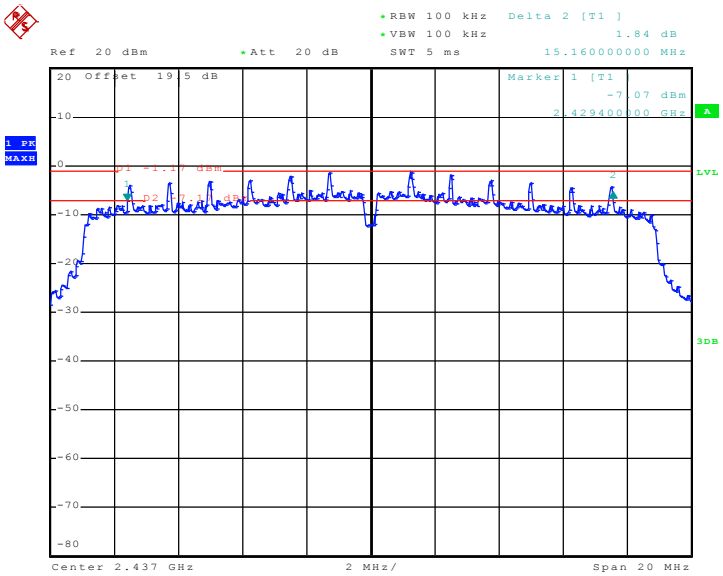
Channel	Frequency (MHz)	802.11n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	15.16	0.5	Pass
06	2437	15.16	0.5	Pass
11	2462	15.16	0.5	Pass

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



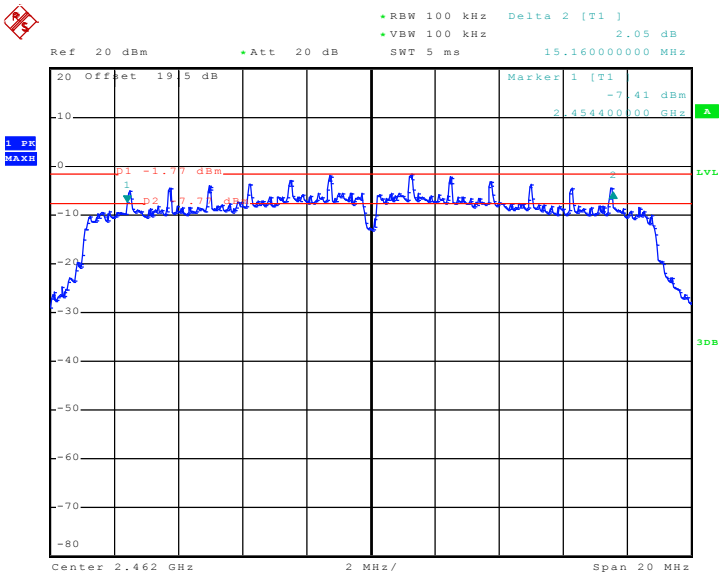
Date: 11.AUG.2010 05:47:19

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



Date: 11.AUG.2010 05:28:40

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



Date: 11.AUG.2010 05:37:01

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.

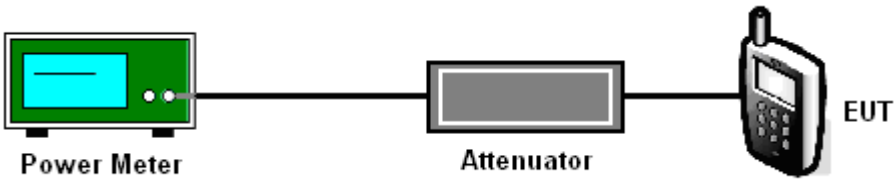
3.2.2 Measuring Instruments

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 :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

Channel	Frequency (MHz)	802.11b Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.10	30	Pass
06	2437	19.86	30	Pass
11	2462	19.29	30	Pass

Test Mode :	Mode 4, 5, 6	Temperature :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

Channel	Frequency (MHz)	802.11g Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.19	30	Pass
06	2437	19.36	30	Pass
11	2462	19.22	30	Pass

Test Mode :	Mode 7, 8, 9	Temperature :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.12	30	Pass
06	2437	19.43	30	Pass
11	2462	19.17	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

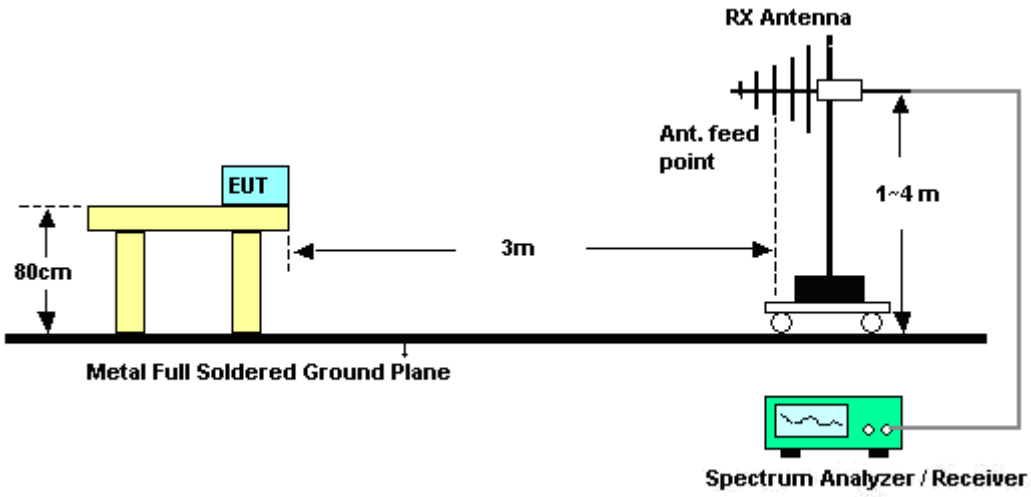
See list of measuring instruments of this test report.

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>



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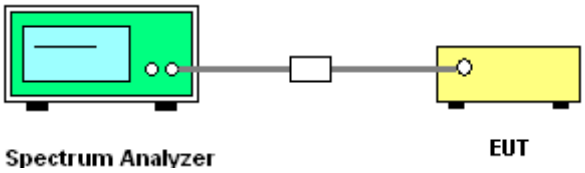


3.3.5 Test Result of Radiated Band Edges

Test Mode :	Mode 1	**Temperature :**	26~27℃
Test Band :	802.11b	**Relative Humidity :**	51~54%
Test Channel :	01	**Test Engineer :**	Cona Huang

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**
2390.00	51.71	-22.29	74.00	47.08	32.13	6.03	33.53	109	29	Peak
2390.00	39.52	-14.48	54.00	34.89	32.13	6.03	33.53	109	29	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**
2390.00	53.28	-20.72	74.00	48.65	32.13	6.03	33.53	187	6	Peak
2390.00	41.02	-12.98	54.00	36.39	32.13	6.03	33.53	187	6	Average

Test Mode :	Mode 3	**Temperature :**	26~27℃
Test Band :	802.11b	**Relative Humidity :**	51~54%
Test Channel :	11	**Test Engineer :**	Cona Huang

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**
2483.50	55.50	-18.50	74.00	50.61	32.27	6.18	33.56	110	8	Peak
2483.50	43.11	-10.89	54.00	38.22	32.27	6.18	33.56	110	8	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**
2483.50	54.62	-19.38	74.00	49.73	32.27	6.18	33.56	124	10	Peak
2483.50	42.87	-11.13	54.00	37.98	32.27	6.18	33.56	124	10	Average

Test Mode :	Mode 4	Temperature :	26~27℃
Test Band :	802.11g	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Cona Huang

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
2390.00	51.68	-22.32	74.00	47.05	32.13	6.03	33.53	109	27	Peak
2390.00	36.70	-17.30	54.00	32.07	32.13	6.03	33.53	109	27	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
2390.00	53.22	-20.78	74.00	48.59	32.13	6.03	33.53	128	6	Peak
2390.00	37.50	-16.50	54.00	32.87	32.13	6.03	33.53	128	6	Average

Test Mode :	Mode 6	Temperature :	26~27℃
Test Band :	802.11g	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Cona Huang

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
2483.50	60.35	-13.65	74.00	55.46	32.27	6.18	33.56	109	5	Peak
2483.50	42.87	-11.13	54.00	37.98	32.27	6.18	33.56	109	5	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
2483.50	58.00	-16.00	74.00	53.11	32.27	6.18	33.56	186	14	Peak
2483.50	40.81	-13.19	54.00	35.92	32.27	6.18	33.56	186	14	Average

Test Mode :	Mode 7	Temperature :	26~27℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	Cona Huang

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
2390.00	55.78	-18.22	74.00	51.15	32.13	6.03	33.53	110	28	Peak
2390.00	37.96	-16.04	54.00	33.33	32.13	6.03	33.53	110	28	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
2390.00	55.97	-18.03	74.00	51.34	32.13	6.03	33.53	186	7	Peak
2390.00	39.11	-14.89	54.00	34.48	32.13	6.03	33.53	186	7	Average

Test Mode :	Mode 9	Temperature :	26~27℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	Cona Huang

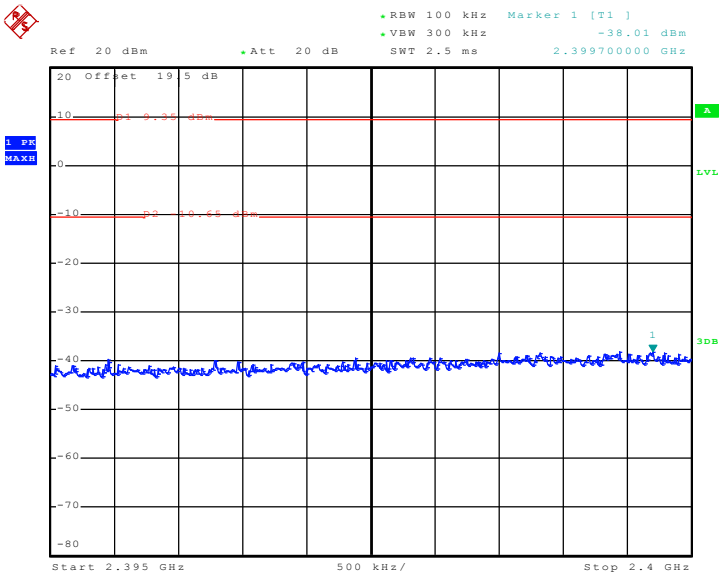
ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	58.69	-15.31	74.00	53.80	32.27	6.18	33.56	109	30	Peak
2483.50	42.91	-11.09	54.00	38.02	32.27	6.18	33.56	109	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
2483.50	57.23	-16.77	74.00	52.34	32.27	6.18	33.56	123	360	Peak
2483.50	40.51	-13.49	54.00	35.62	32.27	6.18	33.56	123	360	Average

3.3.6 Test Plots of Conducted Band Edges

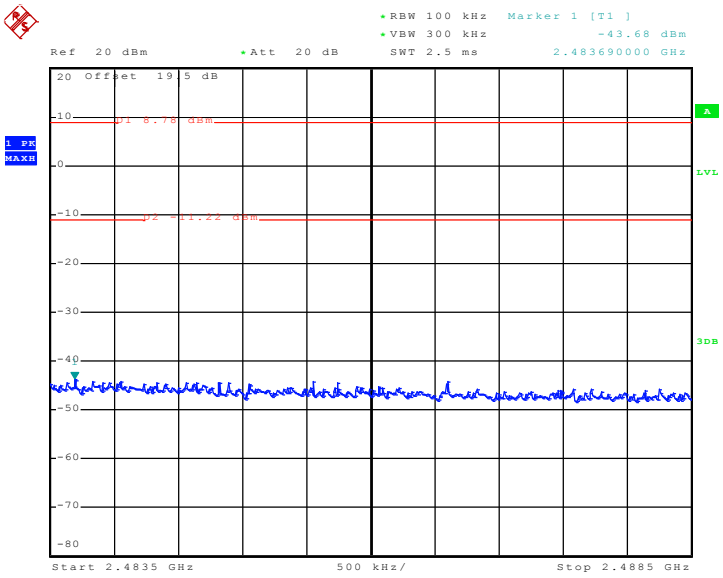
Test Mode :	Mode 1 and 3	Temperature :	25~27℃
Test Band :	802.11b	Relative Humidity :	36~39%
Test Channel :	01 and 11	Test Engineer :	Lancelot Chen

Low Band Edge Plot on 802.11b Channel 01



Date: 11.AUG.2010 03:49:54

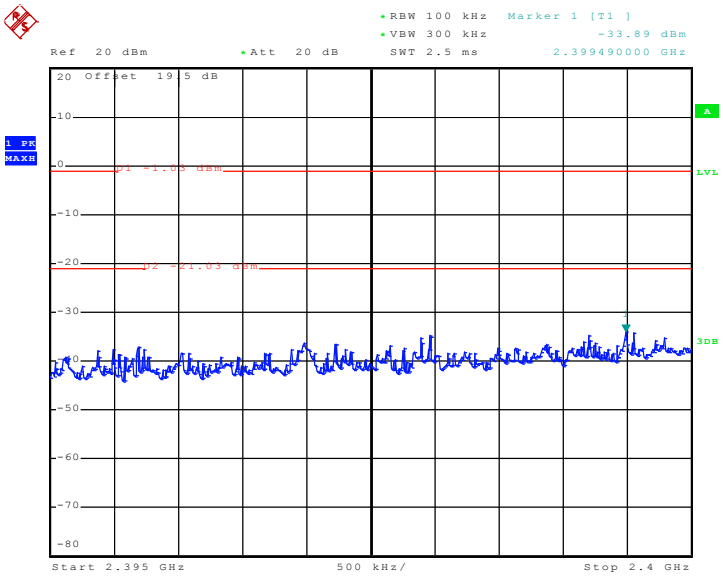
High Band Edge Plot on 802.11b Channel 11



Date: 11.AUG.2010 03:57:39

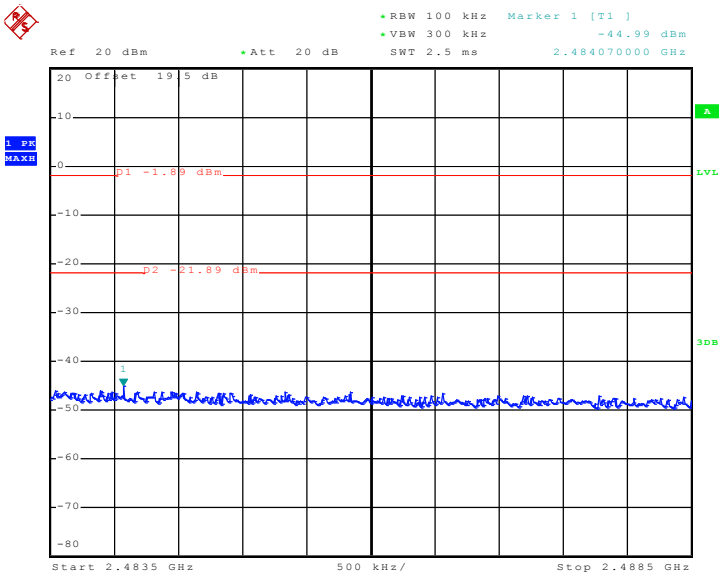
Test Mode :	Mode 4 and 6	**Temperature :**	25~27℃
Test Band :	802.11g	**Relative Humidity :**	36~39%
Test Channel :	01 and 11	**Test Engineer :**	Lancelot Chen

Low Band Edge Plot on 802.11g Channel 01



Date: 11.AUG.2010 05:45:30

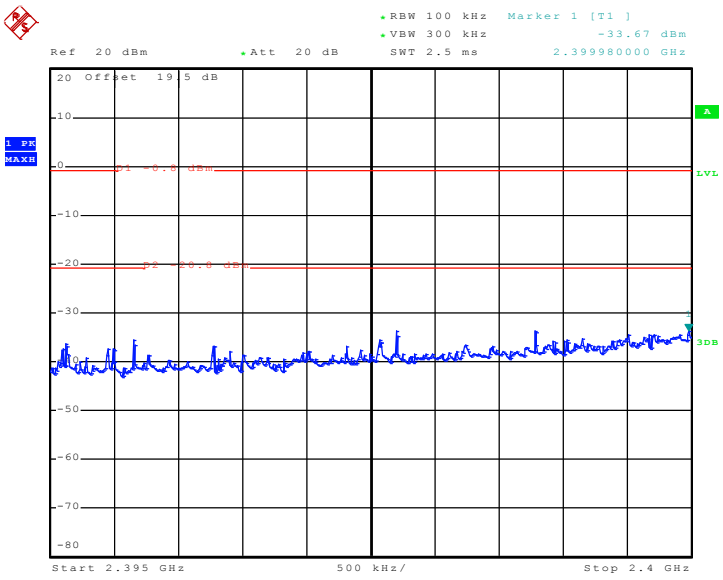
High Band Edge Plot on 802.11g Channel 11



Date: 11.AUG.2010 05:34:16

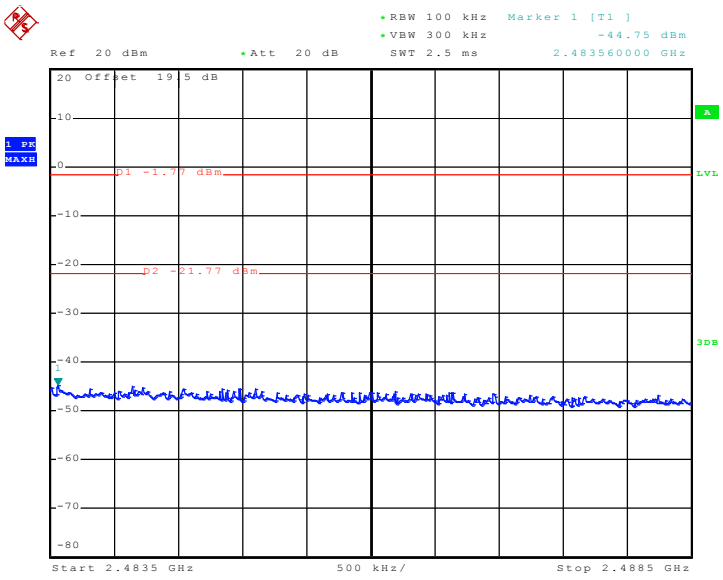
Test Mode :	Mode 7 and 9	**Temperature :**	25~27℃
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	36~39%
Test Channel :	01 and 11	**Test Engineer :**	Lancelot Chen

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



Date: 11.AUG.2010 05:47:56

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



Date: 11.AUG.2010 05:38:04

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.

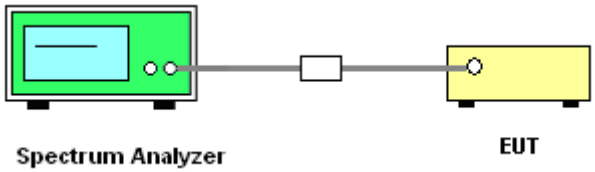
3.4.2 Measuring Instruments

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.

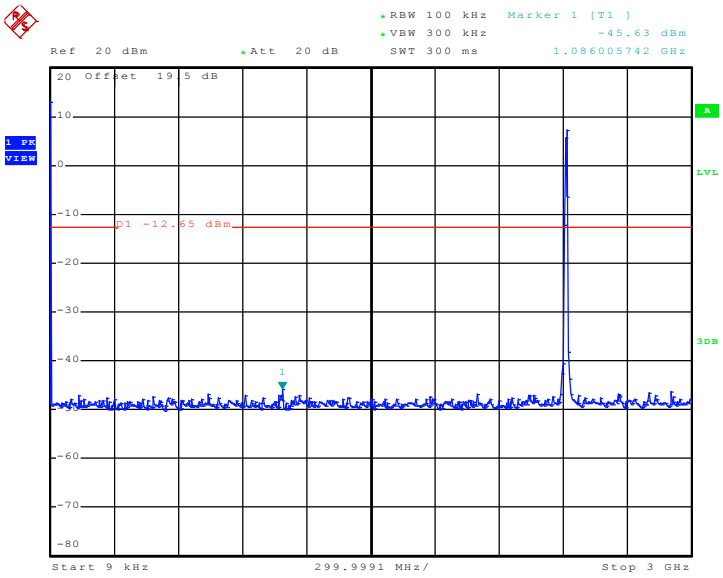
3.4.4 Test Setup



3.4.5 Test Plots of Spurious Emission

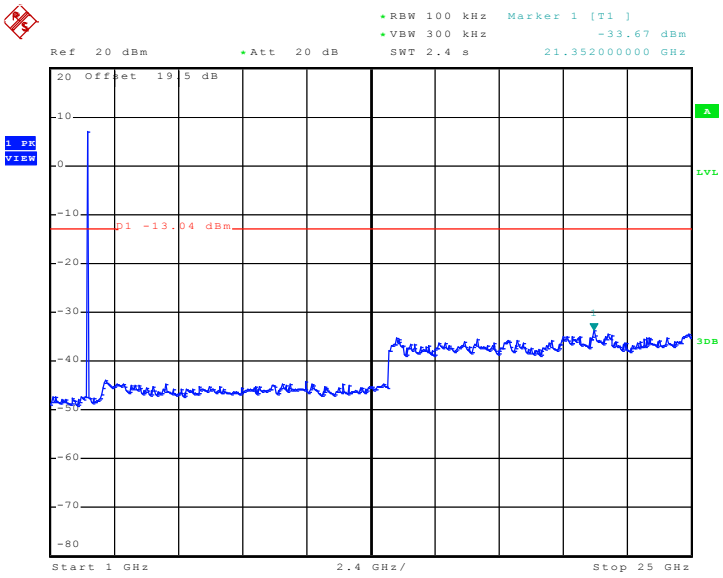
Test Mode :	Mode 1	Temperature :	25~27℃
Test Band :	802.11b	Relative Humidity :	36~39%
Test Channel :	01	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:22:56

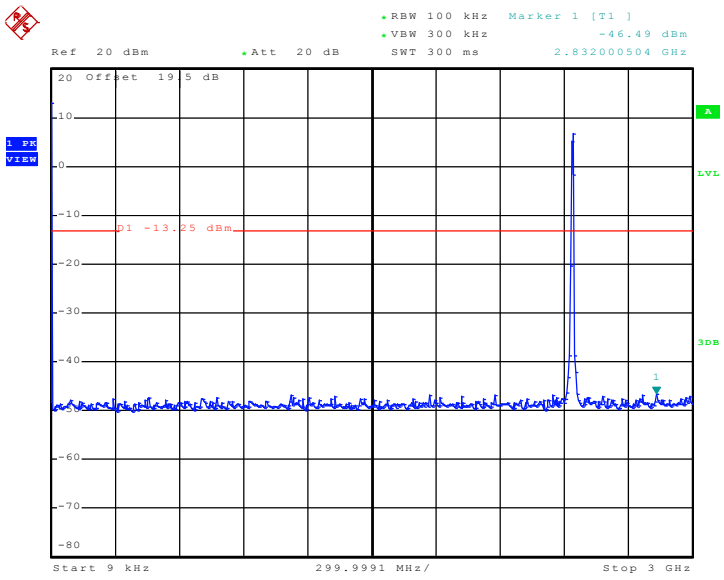
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:23:52

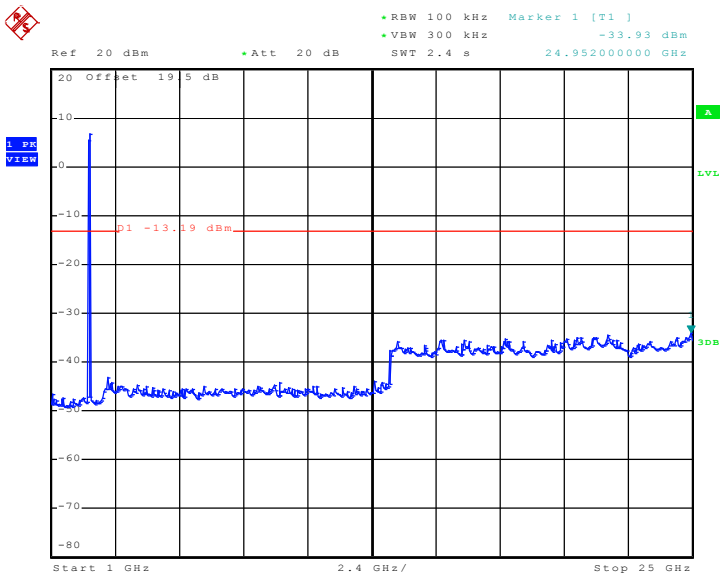
Test Mode :	Mode 2	Temperature :	25~27℃
Test Band :	802.11b	Relative Humidity :	36~39%
Test Channel :	06	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:24:36

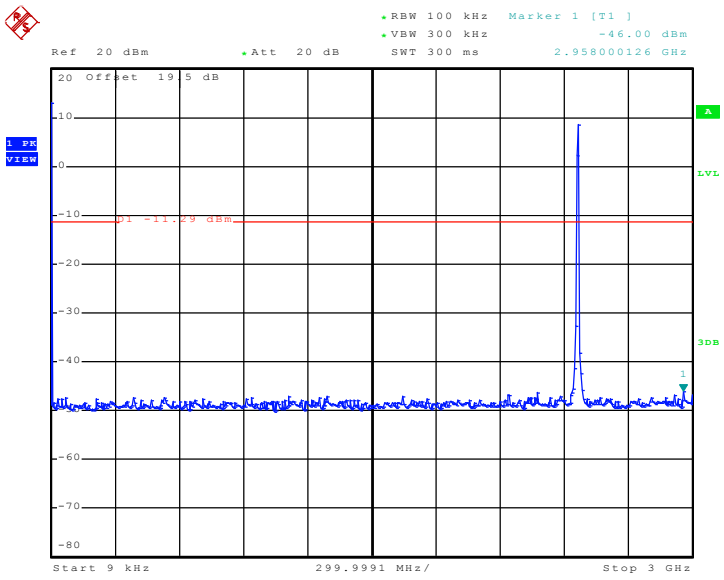
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:25:28

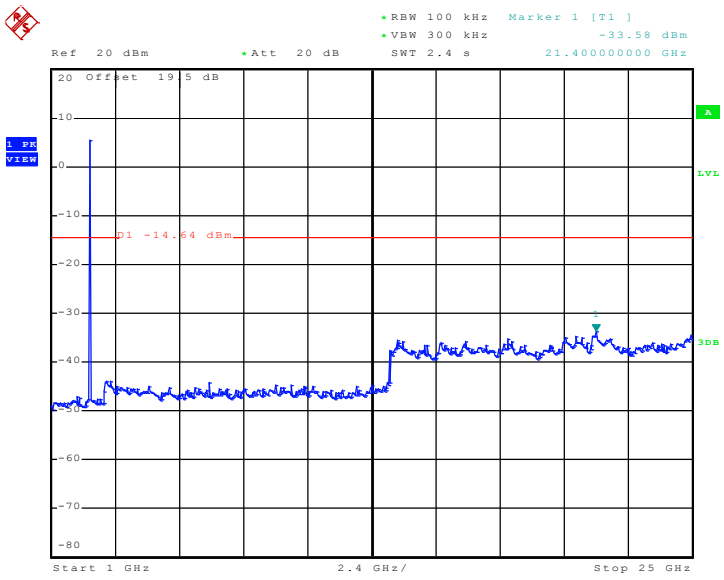
Test Mode :	Mode 3	Temperature :	25~27℃
Test Band :	802.11b	Relative Humidity :	36~39%
Test Channel :	11	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:26:07

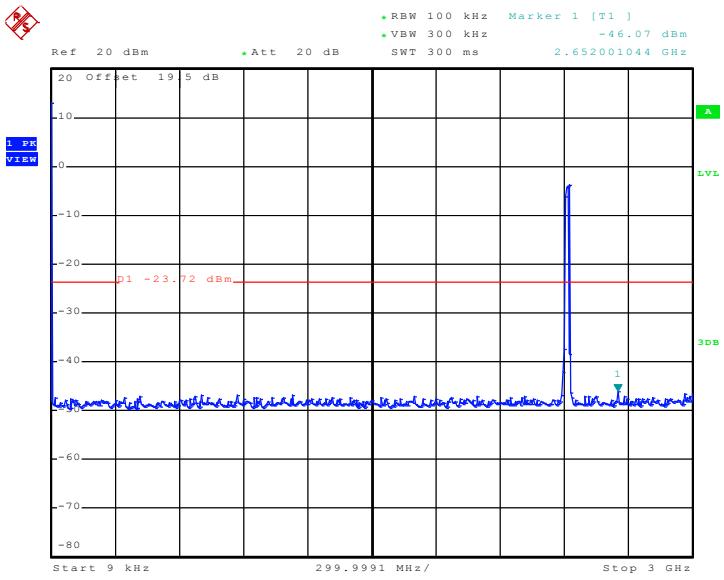
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:26:38

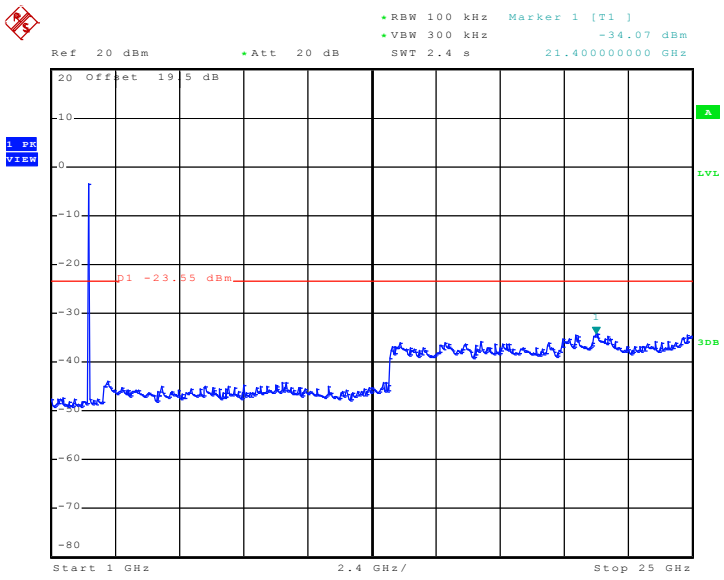
Test Mode :	Mode 4	Temperature :	25~27℃
Test Band :	802.11g	Relative Humidity :	36~39%
Test Channel :	01	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:27:29

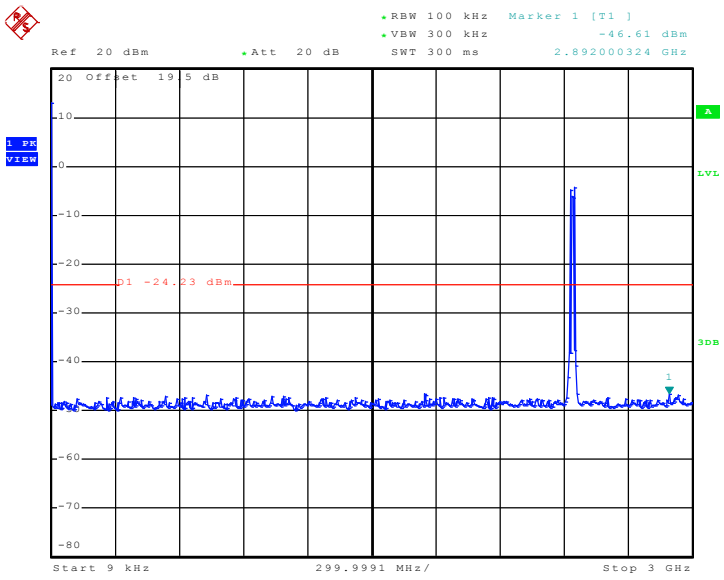
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:28:01

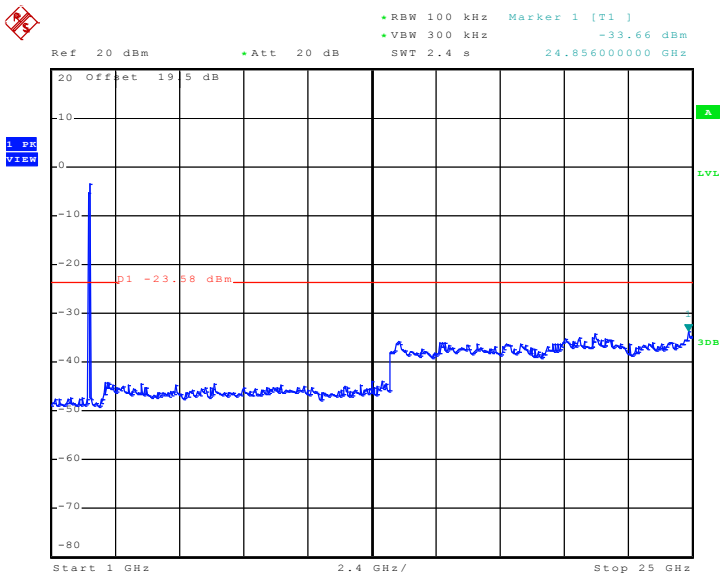
Test Mode :	Mode 5	Temperature :	25~27
Test Band :	802.11g	Relative Humidity :	36~39
Test Channel :	06	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:28:43

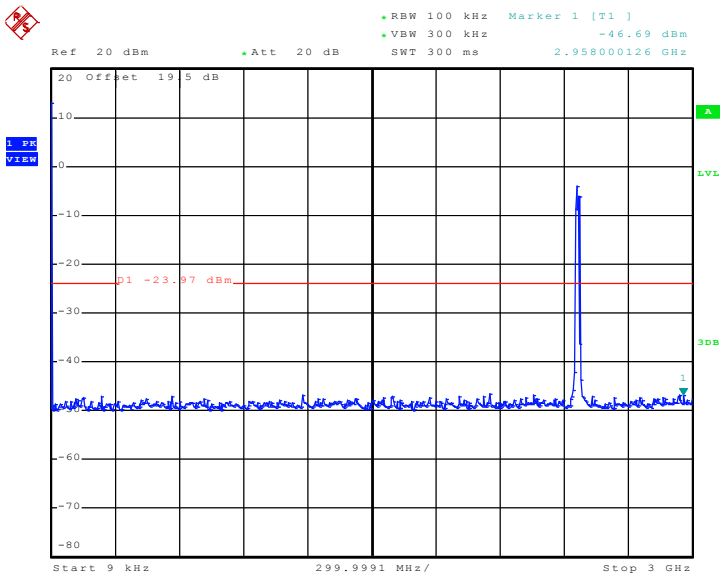
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:29:20

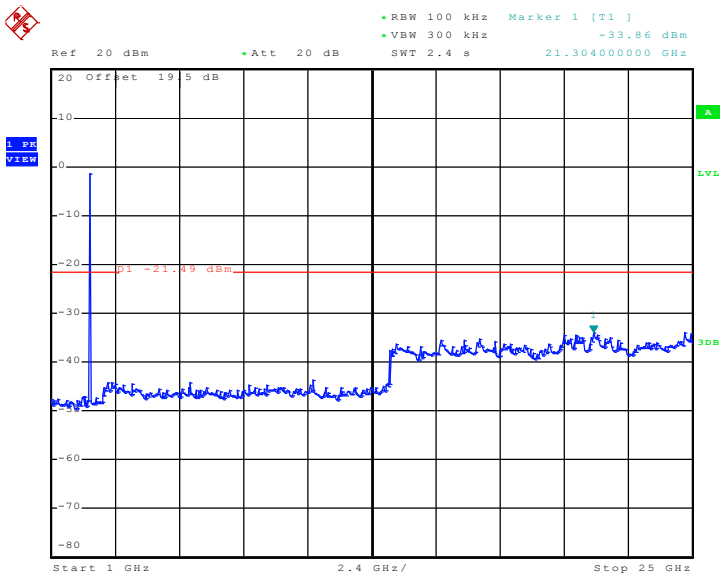
Test Mode :	Mode 6	Temperature :	25~27℃
Test Band :	802.11g	Relative Humidity :	36~39%
Test Channel :	11	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:29:54

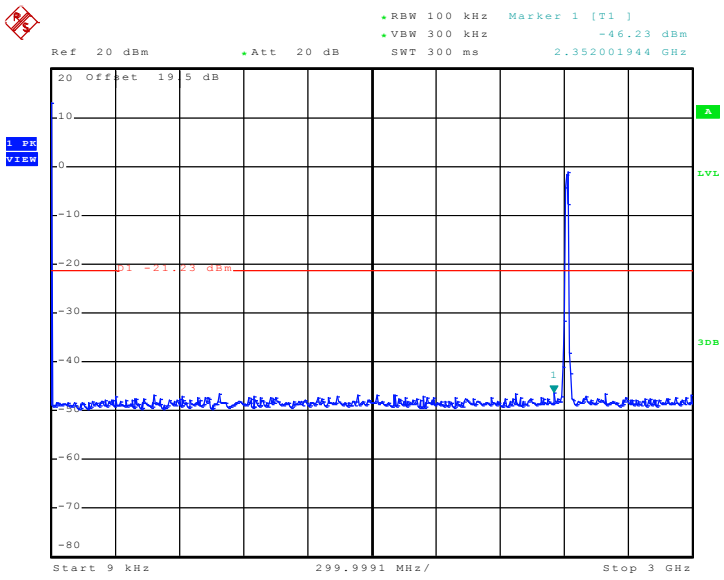
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:30:29

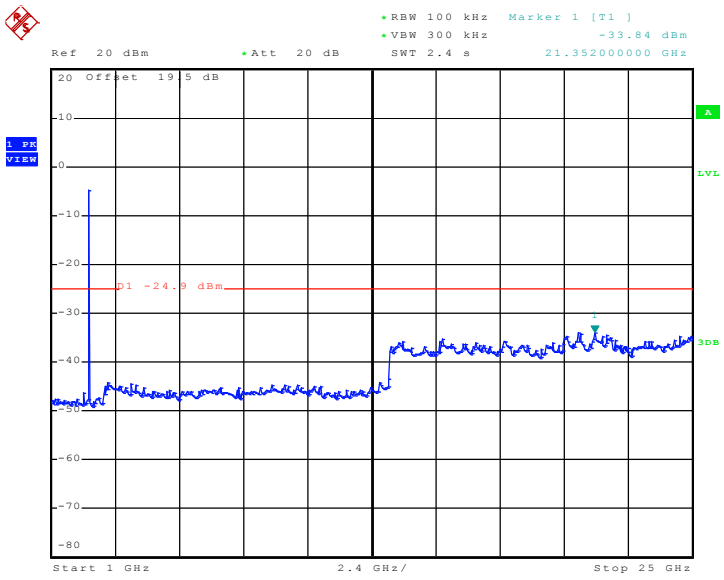
Test Mode :	Mode 7	Temperature :	25~27℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	36~39%
Test Channel :	01	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:33:14

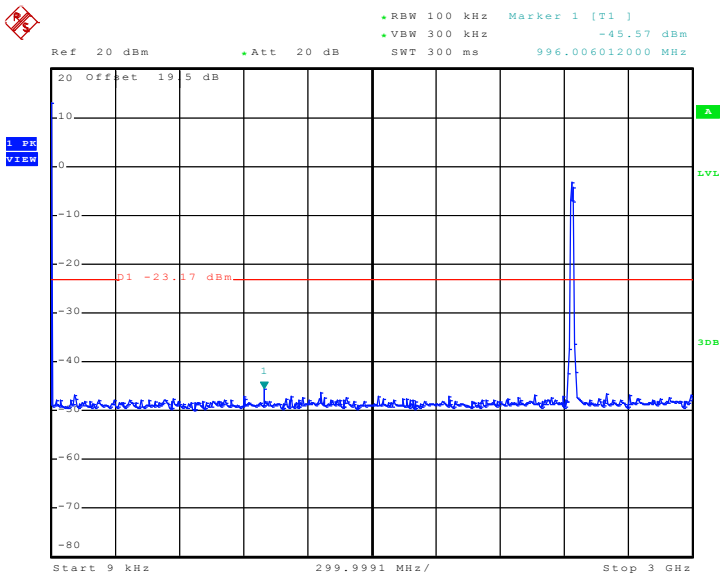
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:33:53

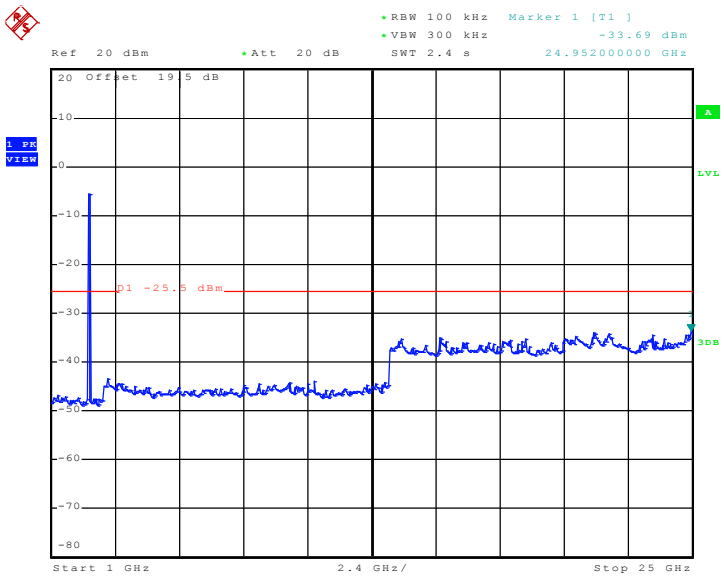
Test Mode :	Mode 8	Temperature :	25~27℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	36~39%
Test Channel :	06	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:34:46

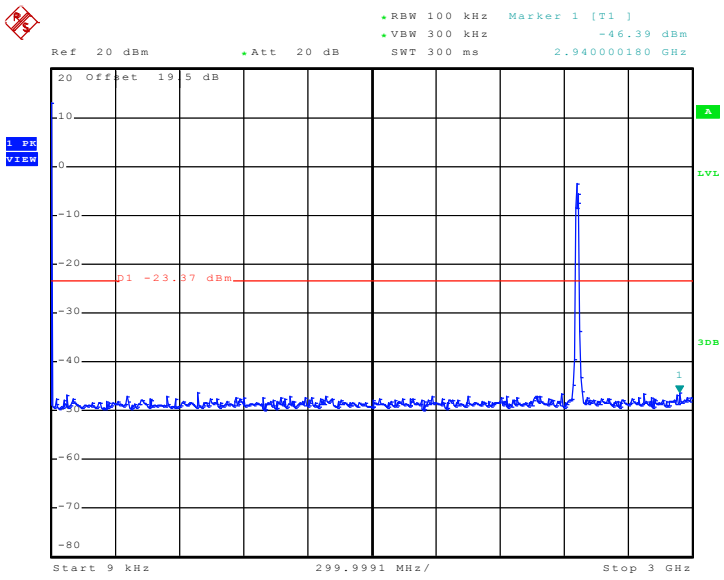
Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:35:34

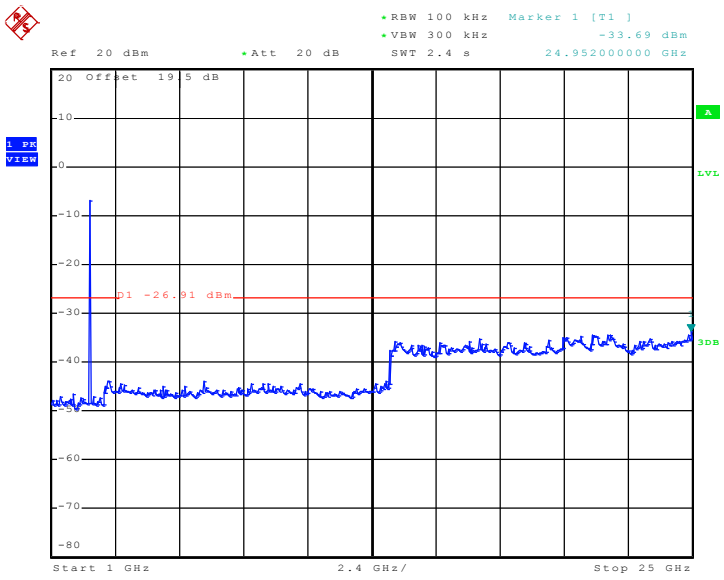
Test Mode :	Mode 9	Temperature :	25~27℃
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	36~39%
Test Channel :	11	Test Engineer :	Lancelot Chen

Conducted Spurious Emission Plot between 9 kHz ~ 3 GHz



Date: 11.AUG.2010 06:36:17

Conducted Spurious Emission Plot between 1 GHz ~ 25 GHz



Date: 11.AUG.2010 06:36:59

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.

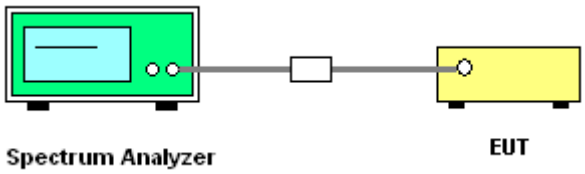
3.5.2 Measuring Instruments

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

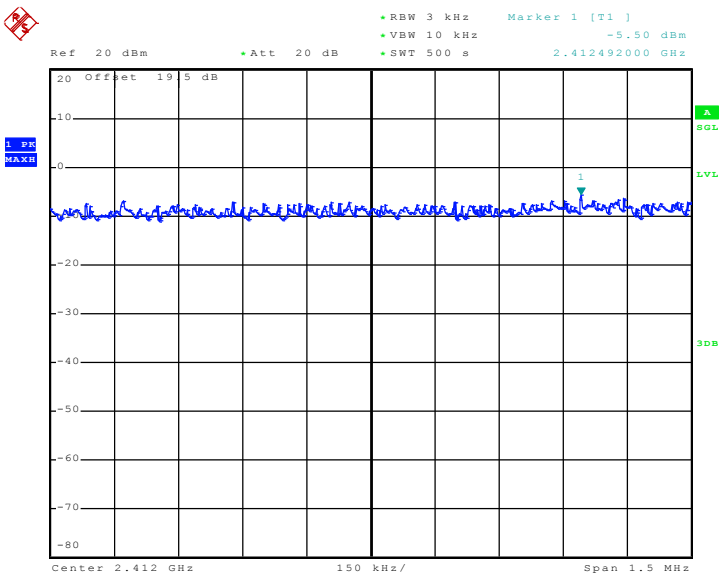


3.5.5 Test Result of Power Spectral Density

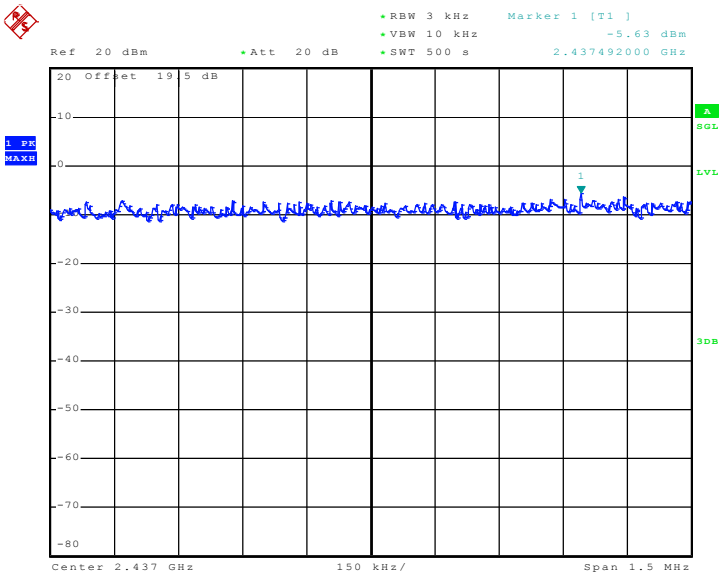
Test Mode :	Mode 1, 2, 3	Temperature :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

Channel	Frequency (MHz)	802.11b Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-5.50	8	Pass
06	2437	-5.63	8	Pass
11	2462	-5.94	8	Pass

Mode 1 : PSD Plot on 802.11b Channel 01

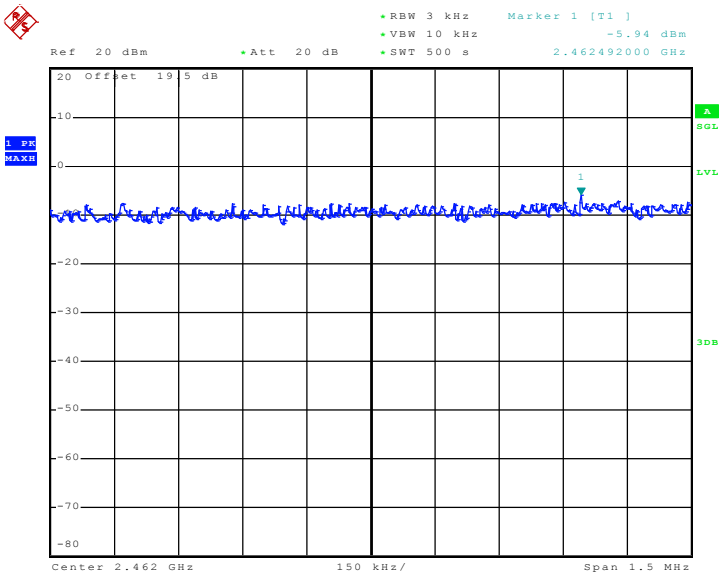


Mode 2 : PSD Plot on 802.11b Channel 06



Date: 11.AUG.2010 04:17:43

Mode 3 : PSD Plot on 802.11b Channel 11

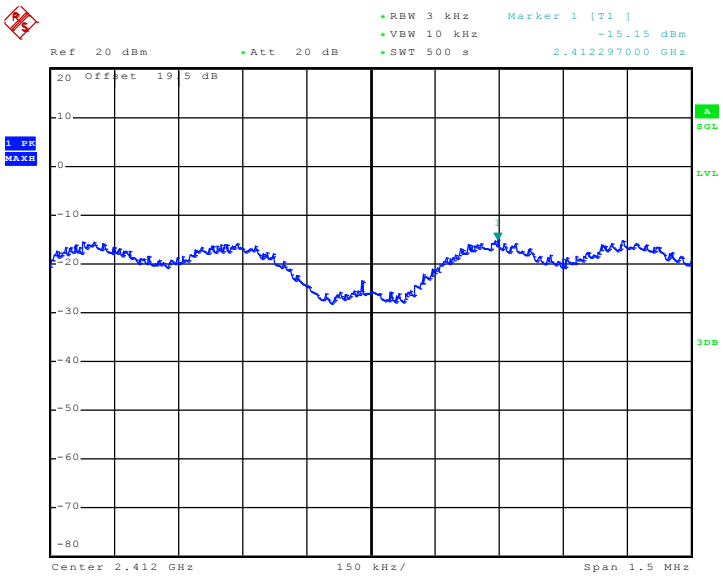


Date: 11.AUG.2010 04:08:35

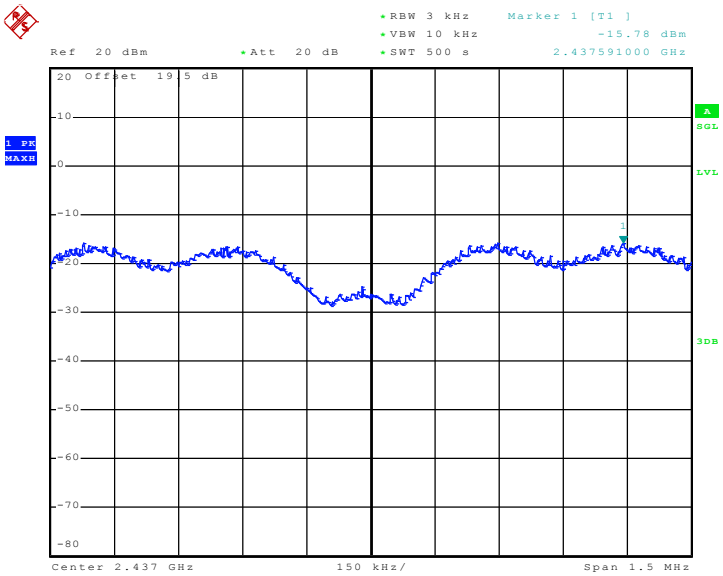
Test Mode :	Mode 4, 5, 6	Temperature :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

Channel	Frequency (MHz)	802.11g Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-15.15	8	Pass
06	2437	-15.78	8	Pass
11	2462	-16.18	8	Pass

Mode 4 : PSD Plot on 802.11g Channel 01

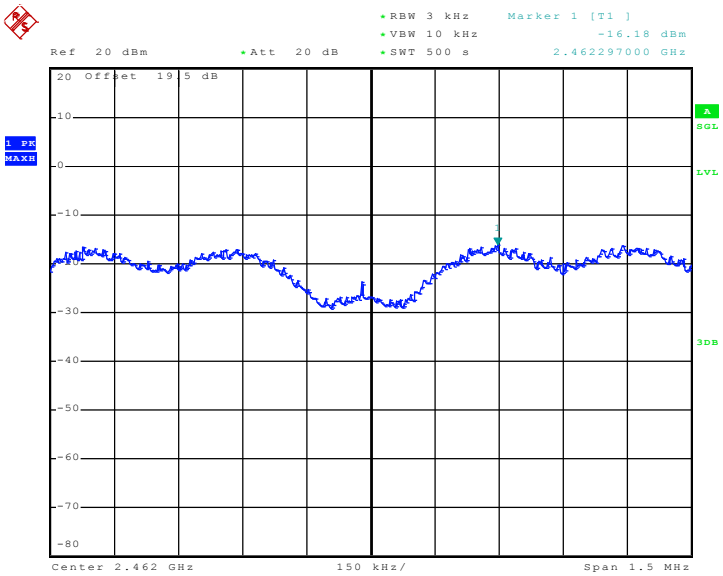


Mode 5 : PSD Plot on 802.11g Channel 06



Date: 11.AUG.2010 04:52:23

Mode 6 : PSD Plot on 802.11g Channel 11

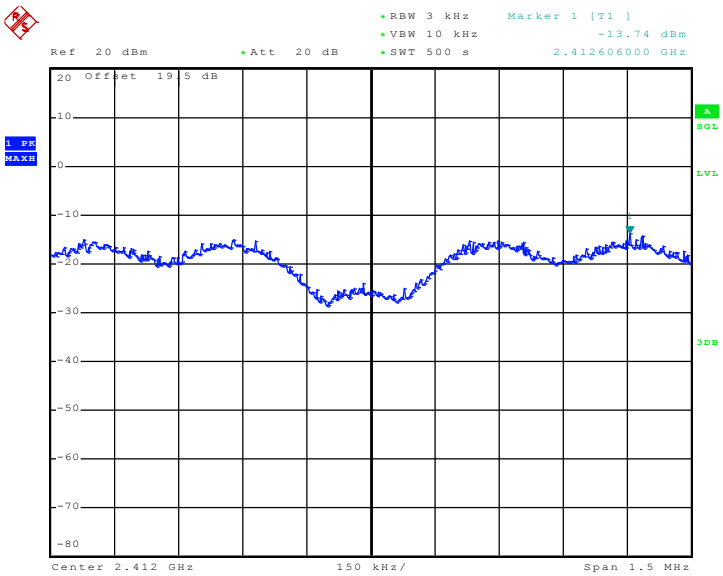


Date: 11.AUG.2010 05:07:01

Test Mode :	Mode 7, 8, 9	Temperature :	25~27℃
Test Engineer :	Lancelot Chen	Relative Humidity :	36~39%

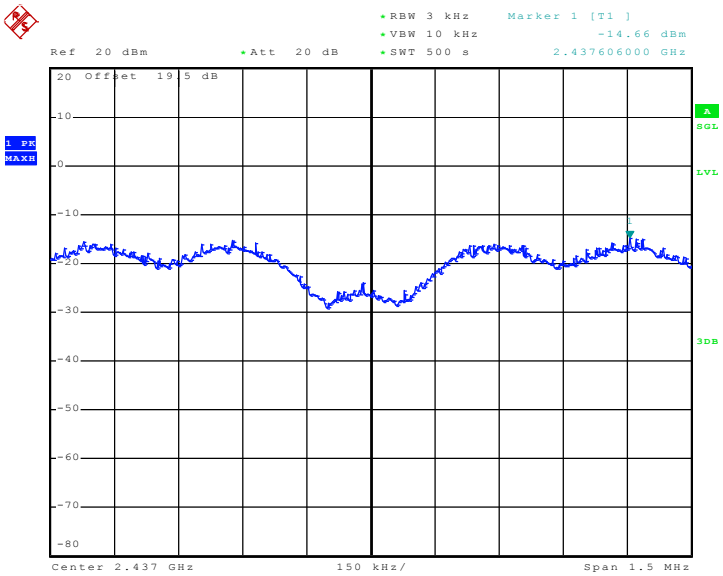
Channel	Frequency (MHz)	802.11n (BW 20MHz) Measured PSD (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	-13.74	8	Pass
06	2437	-14.66	8	Pass
11	2462	-15.12	8	Pass

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



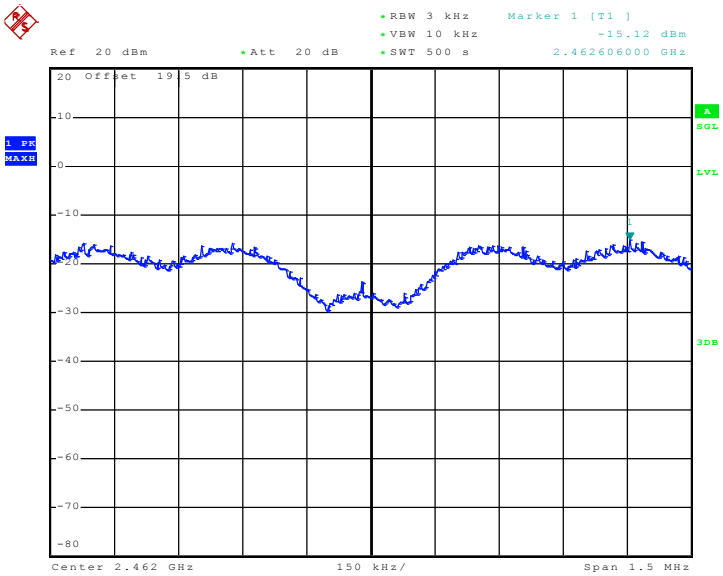
Date: 11.AUG.2010 05:58:42

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



Date: 11.AUG.2010 05:26:10

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



Date: 11.AUG.2010 05:16:26

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.

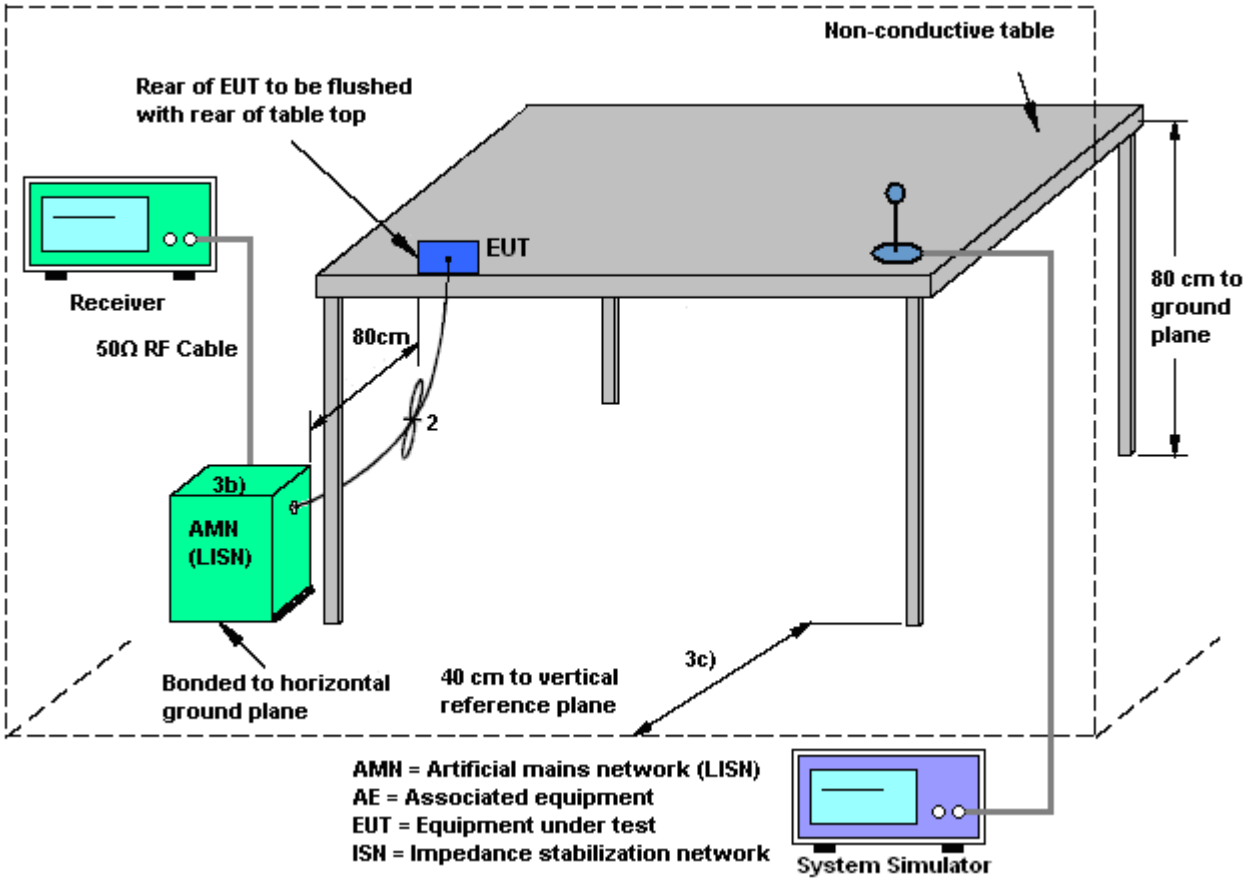
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

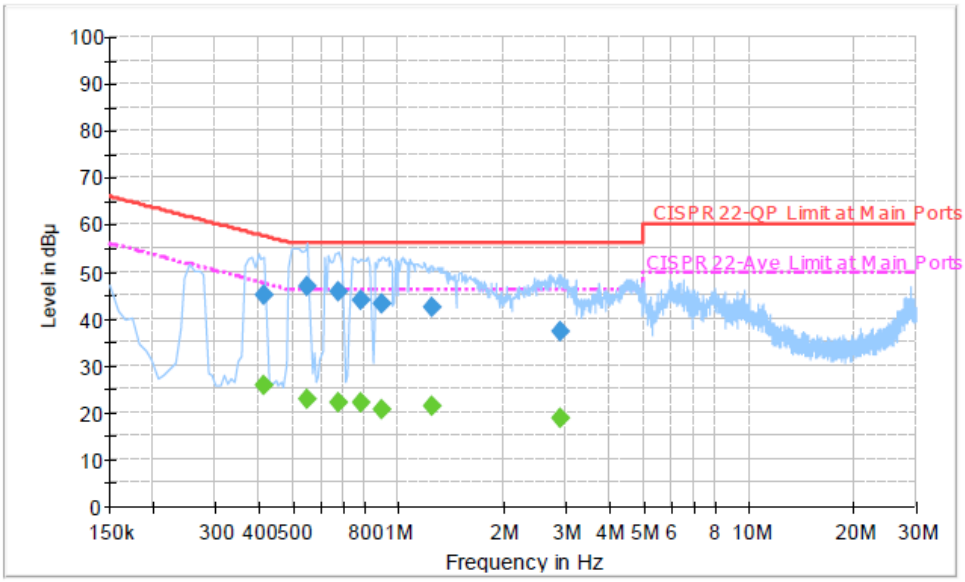
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (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 2	**Temperature :**	20~22℃
Test Engineer :	Novic Jiang	**Relative Humidity :**	42~44%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	WCDMA Band IV Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone 2 + Battery 2 + USB Cable 2 (Charging from Adapter 2) for Sample 2		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



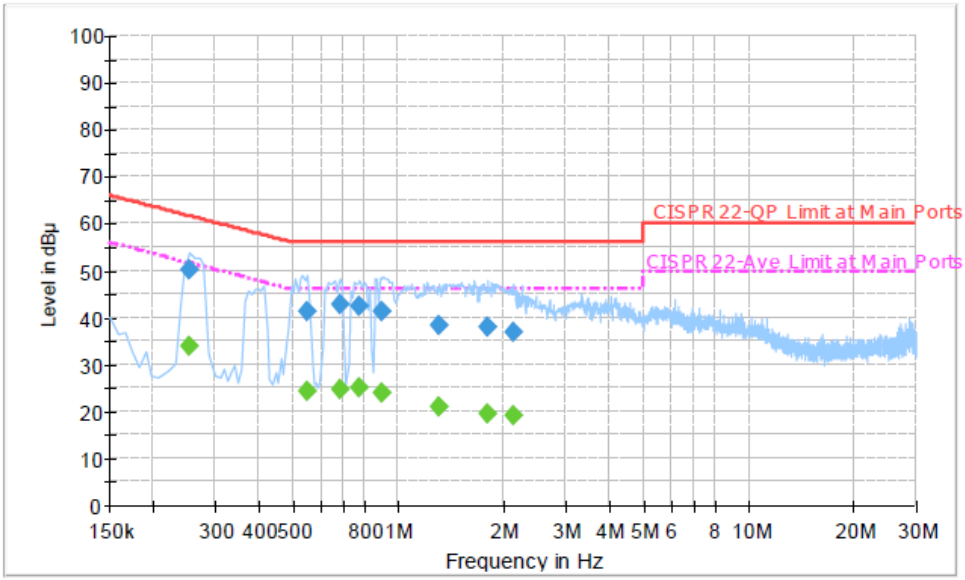
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.414000	45.1	Off	L1	19.4	12.5	57.6
0.550000	46.8	Off	L1	19.3	9.2	56.0
0.678000	45.6	Off	L1	19.4	10.4	56.0
0.782000	44.1	Off	L1	19.4	11.9	56.0
0.902000	43.1	Off	L1	19.4	12.9	56.0
1.246000	42.3	Off	L1	19.4	13.7	56.0
2.918000	37.3	Off	L1	19.5	18.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.414000	25.9	Off	L1	19.4	21.7	47.6
0.550000	23.0	Off	L1	19.3	23.0	46.0
0.678000	22.1	Off	L1	19.4	23.9	46.0
0.782000	22.3	Off	L1	19.4	23.7	46.0
0.902000	20.7	Off	L1	19.4	25.3	46.0
1.246000	21.3	Off	L1	19.4	24.7	46.0
2.918000	19.0	Off	L1	19.5	27.0	46.0

Test Mode :	Mode 2	Temperature :	20~22℃
Test Engineer :	Novic Jiang	Relative Humidity :	42~44%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band IV Idle + Bluetooth Link + WLAN Link + GPS Rx + Earphone 2 + Battery 2 + USB Cable 2 (Charging from Adapter 2) for Sample 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)
0.254000	50.3	Off	N	19.4	11.3	61.6
0.550000	41.3	Off	N	19.3	14.7	56.0
0.686000	42.9	Off	N	19.5	13.1	56.0
0.774000	42.5	Off	N	19.4	13.5	56.0
0.894000	41.2	Off	N	19.4	14.8	56.0
1.310000	38.4	Off	N	19.5	17.6	56.0
1.798000	37.9	Off	N	19.5	18.1	56.0
2.126000	36.8	Off	N	19.5	19.2	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.254000	34.0	Off	N	19.4	17.6	51.6
0.550000	24.2	Off	N	19.3	21.8	46.0
0.686000	24.7	Off	N	19.5	21.3	46.0
0.774000	25.2	Off	N	19.4	20.8	46.0
0.894000	23.9	Off	N	19.4	22.1	46.0
1.310000	20.9	Off	N	19.5	25.1	46.0
1.798000	19.5	Off	N	19.5	26.5	46.0
2.126000	19.3	Off	N	19.5	26.7	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

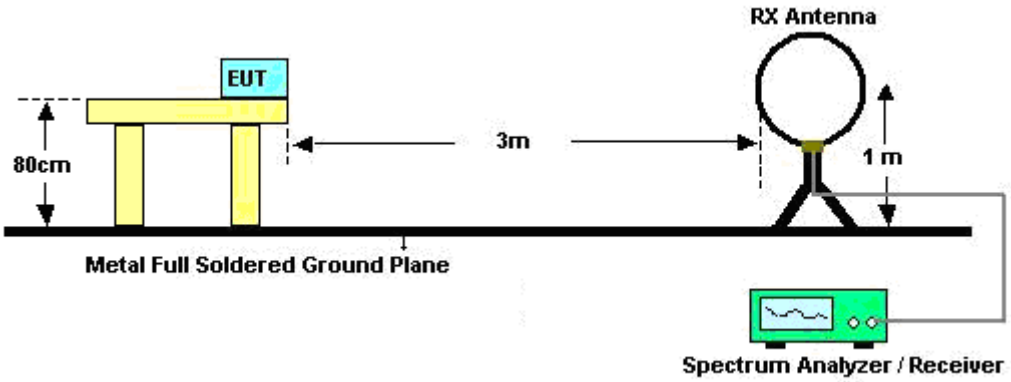
See list of measuring instruments of this test report.

3.7.3 Test Procedures

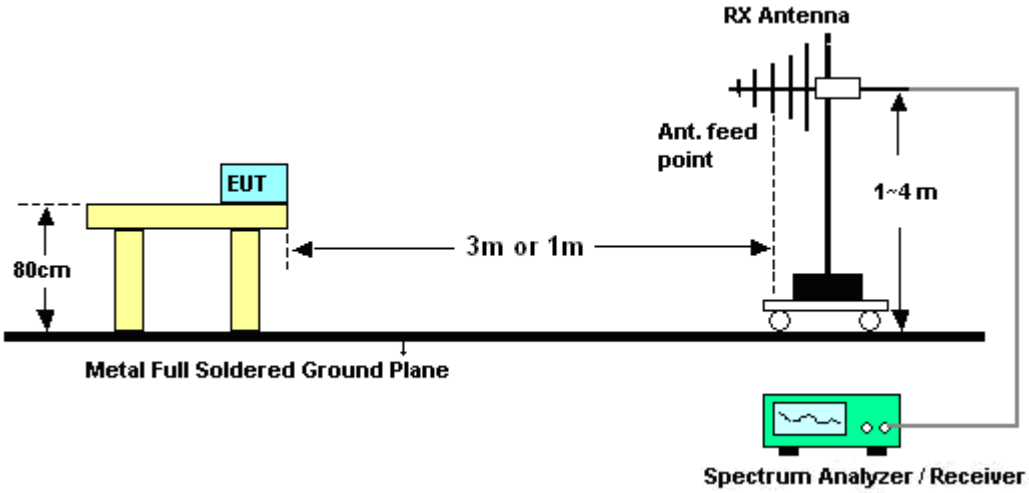
1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Use the following spectrum analyzer settings:
   (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; 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 :	Cona Huang	Temperature :	26~27℃
		Relative Humidity :	51~54%

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 :	26~27℃
Test Channel :	01	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	30.17	-9.83	40.00	48.85	12.18	0.64	31.50	100	311	Peak
48.90	29.95	-10.05	40.00	51.84	8.96	0.68	31.53	-	-	Peak
89.13	24.36	-19.14	43.50	46.20	8.75	0.93	31.52	-	-	Peak
380.50	26.19	-19.81	46.00	39.73	15.60	2.10	31.24	-	-	Peak
464.50	28.10	-17.90	46.00	39.41	17.44	2.33	31.08	-	-	Peak
621.30	28.67	-17.33	46.00	36.59	20.23	2.75	30.90	-	-	Peak
2390.00	51.71	-22.29	74.00	47.08	32.13	6.03	33.53	109	29	Peak
2390.00	39.52	-14.48	54.00	34.89	32.13	6.03	33.53	109	29	Average
2412.00	106.50	-	-	101.81	32.16	6.07	33.54	109	29	Peak
2412.00	94.59	-	-	89.90	32.16	6.07	33.54	109	29	Average
2500.00	47.24	-26.76	74.00	42.55	32.16	6.07	33.54	109	29	Peak
2500.00	35.05	-18.95	54.00	30.14	32.30	6.18	33.57	109	29	Average
8241.00	54.88	-19.12	74.00	42.08	36.00	10.91	34.11	102	196	Peak
8241.00	40.25	-13.75	54.00	27.45	36.00	10.91	34.11	102	196	Average

Test Mode :	Mode 1	Temperature :	26~27℃
Test Channel :	01	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.00	36.04	-3.96	40.00	47.46	19.51	0.53	31.46	105	199	Peak
42.69	32.60	-7.40	40.00	51.28	12.18	0.64	31.50	-	-	Peak
49.98	31.44	-8.56	40.00	54.30	7.98	0.70	31.54	-	-	Peak
533.80	27.80	-18.20	46.00	37.49	18.80	2.52	31.01	-	-	Peak
620.60	33.41	-12.59	46.00	41.33	20.23	2.75	30.90	-	-	Peak
699.00	26.92	-19.08	46.00	33.97	20.83	2.94	30.82	-	-	Peak
2390.00	41.02	-12.98	54.00	36.39	32.13	6.03	33.53	187	6	Average
2390.00	53.28	-20.72	74.00	48.65	32.13	6.03	33.53	187	6	Peak
2412.00	94.70	-	-	90.01	32.16	6.07	33.54	187	6	Average
2412.00	106.83	-	-	102.14	32.16	6.07	33.54	187	6	Peak
2492.00	47.25	-26.75	74.00	42.34	32.30	6.18	33.57	187	6	Peak
2492.00	34.41	-19.59	54.00	29.50	32.30	6.18	33.57	187	6	Average
8313.00	56.59	-17.41	74.00	43.75	36.00	10.94	34.10	100	284	Peak
8313.00	41.61	-12.39	54.00	28.77	36.00	10.94	34.10	100	284	Average

Test Mode :	Mode 2	Temperature :	26~27℃
Test Channel :	06	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	30.98	-9.02	40.00	49.66	12.18	0.64	31.50	104	141	Peak
48.90	30.10	-9.90	40.00	51.99	8.96	0.68	31.53	-	-	Peak
89.94	24.15	-19.35	43.50	45.85	8.88	0.94	31.52	-	-	Peak
388.90	25.45	-20.55	46.00	38.71	15.83	2.12	31.21	-	-	Peak
464.50	27.89	-18.11	46.00	39.20	17.44	2.33	31.08	-	-	Peak
620.60	28.11	-17.89	46.00	36.03	20.23	2.75	30.90	-	-	Peak
2356.00	46.47	-27.53	74.00	41.96	32.08	5.95	33.52	110	14	Peak
2356.00	34.51	-19.49	54.00	30.00	32.08	5.95	33.52	110	14	Average
2437.00	95.19	-	-	90.50	32.16	6.07	33.54	110	14	Average
2437.00	107.31	-	-	102.53	32.22	6.11	33.55	110	14	Peak
2484.00	47.75	-26.25	74.00	42.86	32.27	6.18	33.56	110	14	Peak
2484.00	35.74	-18.26	54.00	30.85	32.27	6.18	33.56	110	14	Average
8139.00	53.78	-20.22	74.00	41.04	36.00	10.86	34.12	100	189	Peak
8139.00	40.30	-13.70	54.00	27.56	36.00	10.86	34.12	100	189	Average

Test Mode :	Mode 2	Temperature :	26~27℃
Test Channel :	06	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.27	36.64	-3.36	40.00	48.06	19.51	0.53	31.46	100	237	Peak
42.69	33.24	-6.76	40.00	51.92	12.18	0.64	31.50	-	-	Peak
86.70	27.57	-12.43	40.00	49.83	8.36	0.92	31.54	-	-	Peak
533.80	26.58	-19.42	46.00	36.27	18.80	2.52	31.01	-	-	Peak
620.60	32.90	-13.10	46.00	40.82	20.23	2.75	30.90	-	-	Peak
699.70	26.02	-19.98	46.00	33.07	20.83	2.94	30.82	-	-	Peak
2390.00	47.84	-26.16	74.00	43.21	32.13	6.03	33.53	185	8	Peak
2390.00	35.11	-18.89	54.00	30.48	32.13	6.03	33.53	185	8	Average
2437.00	107.98	-	-	103.20	32.22	6.11	33.55	185	8	Peak
2437.00	95.47	-	-	90.69	32.22	6.11	33.55	185	8	Average
2492.00	47.49	-26.51	74.00	42.58	32.30	6.18	33.57	185	8	Peak
2492.00	35.16	-18.84	54.00	30.25	32.30	6.18	33.57	185	8	Average
8205.00	54.38	-19.62	74.00	41.60	36.00	10.89	34.11	100	157	Peak
8205.00	40.44	-13.56	54.00	27.66	36.00	10.89	34.11	100	157	Average

Test Mode :	Mode 3	Temperature :	26~27℃
Test Channel :	11	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	31.03	-8.97	40.00	49.71	12.18	0.64	31.50	108	149	Peak
48.90	30.71	-9.29	40.00	52.60	8.96	0.68	31.53	-	-	Peak
89.94	23.96	-19.54	43.50	45.66	8.88	0.94	31.52	-	-	Peak
380.50	25.72	-20.28	46.00	39.26	15.60	2.10	31.24	-	-	Peak
466.60	26.77	-19.23	46.00	38.02	17.48	2.34	31.07	-	-	Peak
620.60	27.39	-18.61	46.00	35.31	20.23	2.75	30.90	-	-	Peak
2382.00	46.39	-27.61	74.00	41.78	32.11	6.03	33.53	110	8	Peak
2382.00	35.78	-18.22	54.00	31.17	32.11	6.03	33.53	110	8	Average
2462.00	94.66	-	-	89.84	32.24	6.14	33.56	110	8	Average
2462.00	107.01	-	-	102.19	32.24	6.14	33.56	110	8	Peak
2483.50	43.11	-10.89	54.00	38.22	32.27	6.18	33.56	110	8	Average
2483.50	55.50	-18.50	74.00	50.61	32.27	6.18	33.56	110	8	Peak
8163.00	53.55	-20.45	74.00	40.79	36.00	10.87	34.11	100	54	Peak
8163.00	40.63	-13.37	54.00	27.87	36.00	10.87	34.11	100	54	Average

Test Mode :	Mode 3	Temperature :	26~27℃
Test Channel :	11	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.27	36.80	-3.20	40.00	48.22	19.51	0.53	31.46	115	255	Peak
42.69	32.52	-7.48	40.00	51.20	12.18	0.64	31.50	-	-	Peak
83.73	26.80	-13.20	40.00	49.48	7.96	0.90	31.54	-	-	Peak
324.50	25.24	-20.76	46.00	40.60	14.13	1.83	31.32	-	-	Peak
531.70	26.03	-19.97	46.00	35.76	18.77	2.51	31.01	-	-	Peak
620.60	31.66	-14.34	46.00	39.58	20.23	2.75	30.90	-	-	Peak
2382.00	46.59	-27.41	74.00	41.98	32.11	6.03	33.53	124	10	Peak
2382.00	34.99	-19.01	54.00	30.38	32.11	6.03	33.53	124	10	Average
2462.00	107.74	-	-	102.92	32.24	6.14	33.56	124	10	Peak
2462.00	95.59	-	-	90.77	32.24	6.14	33.56	124	10	Average
2483.50	42.87	-11.13	54.00	37.98	32.27	6.18	33.56	124	10	Average
2483.50	54.62	-19.38	74.00	49.73	32.27	6.18	33.56	124	10	Peak
8181.00	53.86	-20.14	74.00	41.09	36.00	10.88	34.11	100	192	Peak
8181.00	40.50	-13.50	54.00	27.73	36.00	10.88	34.11	100	192	Average

Test Mode :	Mode 4	Temperature :	26~27℃
Test Channel :	01	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	30.55	-9.45	40.00	49.23	12.18	0.64	31.50	110	301	Peak
48.90	30.15	-9.85	40.00	52.04	8.96	0.68	31.53	-	-	Peak
87.78	23.88	-16.12	40.00	45.86	8.62	0.93	31.53	-	-	Peak
382.60	26.01	-19.99	46.00	39.46	15.67	2.11	31.23	-	-	Peak
464.50	26.47	-19.53	46.00	37.78	17.44	2.33	31.08	-	-	Peak
536.60	24.70	-21.30	46.00	34.32	18.86	2.52	31.00	-	-	Peak
2390.00	36.70	-17.30	54.00	32.07	32.13	6.03	33.53	109	27	Average
2390.00	51.68	-22.32	74.00	47.05	32.13	6.03	33.53	109	27	Peak
2412.00	85.43	-	-	80.74	32.16	6.07	33.54	109	27	Average
2412.00	98.60	-	-	93.91	32.16	6.07	33.54	109	27	Peak
2486.00	45.90	-28.10	74.00	41.01	32.27	6.18	33.56	109	27	Peak
2486.00	33.92	-20.08	54.00	29.03	32.27	6.18	33.56	109	27	Average
8274.00	55.06	-18.94	74.00	42.24	36.00	10.92	34.10	110	336	Peak
8274.00	41.08	-12.92	54.00	28.26	36.00	10.92	34.10	110	336	Average

Test Mode :	Mode 4	Temperature :	26~27℃
Test Channel :	01	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.27	36.89	-3.11	40.00	48.31	19.51	0.53	31.46	103	128	Peak
42.69	32.95	-7.05	40.00	51.63	12.18	0.64	31.50	-	-	Peak
85.62	26.95	-13.05	40.00	49.35	8.23	0.91	31.54	-	-	Peak
536.60	27.94	-18.06	46.00	37.56	18.86	2.52	31.00	-	-	Peak
621.30	31.22	-14.78	46.00	39.14	20.23	2.75	30.90	-	-	Peak
701.80	26.37	-19.63	46.00	33.38	20.87	2.94	30.82	-	-	Peak
2390.00	37.50	-16.50	54.00	32.87	32.13	6.03	33.53	128	6	Average
2390.00	53.22	-20.78	74.00	48.59	32.13	6.03	33.53	128	6	Peak
2412.00	96.89	-	-	92.20	32.16	6.07	33.54	128	6	Peak
2412.00	85.20	-	-	80.51	32.16	6.07	33.54	128	6	Average
2500.00	46.04	-27.96	74.00	41.13	32.30	6.18	33.57	128	6	Peak
2500.00	33.94	-20.06	54.00	29.03	32.30	6.18	33.57	128	6	Average
8322.00	55.97	-18.03	74.00	43.13	36.00	10.94	34.10	103	217	Peak
8322.00	41.67	-12.33	54.00	28.83	36.00	10.94	34.10	103	217	Average

Test Mode :	Mode 5	Temperature :	26~27℃
Test Channel :	06	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	31.03	-8.97	40.00	49.71	12.18	0.64	31.50	121	107	Peak
48.90	30.29	-9.71	40.00	52.18	8.96	0.68	31.53	-	-	Peak
89.94	24.50	-19.00	43.50	46.20	8.88	0.94	31.52	-	-	Peak
382.60	26.58	-19.42	46.00	40.03	15.67	2.11	31.23	-	-	Peak
461.00	25.78	-20.22	46.00	37.18	17.36	2.32	31.08	-	-	Peak
623.40	25.76	-20.24	46.00	33.65	20.25	2.76	30.90	-	-	Peak
2326.00	45.61	-28.39	74.00	41.18	32.02	5.92	33.51	109	13	Peak
2326.00	33.26	-20.74	54.00	28.83	32.02	5.92	33.51	109	13	Average
2437.00	97.39	-	-	92.64	32.19	6.11	33.55	109	13	Peak
2437.00	85.49	-	-	80.71	32.22	6.11	33.55	109	13	Average
2486.00	46.37	-27.63	74.00	41.48	32.27	6.18	33.56	109	13	Peak
2486.00	33.96	-20.04	54.00	29.07	32.27	6.18	33.56	109	13	Average
8154.00	55.48	-18.52	74.00	42.72	36.00	10.87	34.11	100	93	Peak
8154.00	41.09	-12.91	54.00	28.33	36.00	10.87	34.11	100	93	Average

Test Mode :	Mode 5	Temperature :	26~27℃
Test Channel :	06	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.27	36.42	-3.58	40.00	47.84	19.51	0.53	31.46	100	344	Peak
42.69	32.01	-7.99	40.00	50.69	12.18	0.64	31.50	-	-	Peak
84.54	27.22	-12.78	40.00	49.77	8.09	0.90	31.54	-	-	Peak
536.60	27.69	-18.31	46.00	37.31	18.86	2.52	31.00	-	-	Peak
618.50	31.58	-14.42	46.00	39.52	20.21	2.75	30.90	-	-	Peak
705.30	25.71	-20.29	46.00	32.66	20.91	2.95	30.81	-	-	Peak
2356.00	46.11	-27.89	74.00	41.60	32.08	5.95	33.52	125	4	Peak
2356.00	33.78	-20.22	54.00	29.27	32.08	5.95	33.52	125	4	Average
2437.00	98.29	-	-	93.54	32.19	6.11	33.55	125	4	Peak
2437.00	86.13	-	-	81.35	32.22	6.11	33.55	125	4	Average
2492.00	45.48	-28.52	74.00	40.57	32.30	6.18	33.57	125	4	Peak
2492.00	33.79	-20.21	54.00	28.88	32.30	6.18	33.57	125	4	Average
8325.00	54.88	-19.12	74.00	42.04	36.00	10.94	34.10	102	266	Peak
8325.00	41.88	-12.12	54.00	29.04	36.00	10.94	34.10	102	266	Average

Test Mode :	Mode 6	Temperature :	26~27℃
Test Channel :	11	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	31.33	-8.67	40.00	50.01	12.18	0.64	31.50	110	328	Peak
48.90	30.11	-9.89	40.00	52.00	8.96	0.68	31.53	-	-	Peak
89.13	23.67	-19.83	43.50	45.51	8.75	0.93	31.52	-	-	Peak
380.50	27.67	-18.33	46.00	41.21	15.60	2.10	31.24	-	-	Peak
461.70	27.49	-18.51	46.00	38.86	17.38	2.33	31.08	-	-	Peak
618.50	25.66	-20.34	46.00	33.60	20.21	2.75	30.90	-	-	Peak
2382.00	45.57	-28.43	74.00	40.96	32.11	6.03	33.53	109	5	Peak
2382.00	33.89	-20.11	54.00	29.28	32.11	6.03	33.53	109	5	Average
2462.00	98.47	-	-	93.65	32.24	6.14	33.56	109	5	Peak
2462.00	86.79	-	-	81.97	32.24	6.14	33.56	109	5	Average
2483.50	42.87	-11.13	54.00	37.98	32.27	6.18	33.56	109	5	Average
2483.50	60.35	-13.65	74.00	55.46	32.27	6.18	33.56	109	5	Peak
8190.00	54.48	-19.52	74.00	41.70	36.00	10.89	34.11	100	211	Peak
8190.00	40.19	-13.81	54.00	27.41	36.00	10.89	34.11	100	211	Average

Test Mode :	Mode 6	Temperature :	26~27℃
Test Channel :	11	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.00	36.81	-3.19	40.00	48.23	19.51	0.53	31.46	106	184	Peak
42.69	31.95	-8.05	40.00	50.63	12.18	0.64	31.50	-	-	Peak
86.70	26.84	-13.16	40.00	49.10	8.36	0.92	31.54	-	-	Peak
536.60	28.82	-17.18	46.00	38.44	18.86	2.52	31.00	-	-	Peak
620.60	30.05	-15.95	46.00	37.97	20.23	2.75	30.90	-	-	Peak
704.60	25.81	-20.19	46.00	32.78	20.89	2.95	30.81	-	-	Peak
2380.00	46.09	-27.91	74.00	41.48	32.11	6.03	33.53	186	14	Peak
2380.00	33.82	-20.18	54.00	29.21	32.11	6.03	33.53	186	14	Average
2462.00	97.93	-	-	93.11	32.24	6.14	33.56	186	14	Peak
2462.00	86.63	-	-	81.81	32.24	6.14	33.56	186	14	Average
2483.50	40.81	-13.19	54.00	35.92	32.27	6.18	33.56	186	14	Average
2483.50	58.00	-16.00	74.00	53.11	32.27	6.18	33.56	186	14	Peak
8337.00	55.37	-18.63	74.00	42.52	36.00	10.95	34.10	100	108	Peak
8337.00	41.52	-12.48	54.00	28.67	36.00	10.95	34.10	100	108	Average

Test Mode :	Mode 7	Temperature :	26~27℃
Test Channel :	01	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	31.17	-8.83	40.00	49.85	12.18	0.64	31.50	106	178	Peak
48.90	30.22	-9.78	40.00	52.11	8.96	0.68	31.53	-	-	Peak
86.70	24.03	-15.97	40.00	46.29	8.36	0.92	31.54	-	-	Peak
385.40	28.27	-17.73	46.00	41.67	15.72	2.11	31.23	-	-	Peak
461.70	27.78	-18.22	46.00	39.15	17.38	2.33	31.08	-	-	Peak
618.50	25.76	-20.24	46.00	33.70	20.21	2.75	30.90	-	-	Peak
2390.00	37.96	-16.04	54.00	33.33	32.13	6.03	33.53	110	28	Average
2390.00	55.78	-18.22	74.00	51.15	32.13	6.03	33.53	110	28	Peak
2412.00	84.97	-	-	80.28	32.16	6.07	33.54	110	28	Average
2412.00	97.40	-	-	92.71	32.16	6.07	33.54	110	28	Peak
2486.00	45.96	-28.04	74.00	41.07	32.27	6.18	33.56	110	28	Peak
2486.00	33.91	-20.09	54.00	29.02	32.27	6.18	33.56	110	28	Average
8277.00	55.96	-18.04	74.00	43.14	36.00	10.92	34.10	100	329	Peak
8277.00	41.33	-12.67	54.00	28.51	36.00	10.92	34.10	100	329	Average

Test Mode :	Mode 7	Temperature :	26~27℃
Test Channel :	01	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.00	36.44	-3.56	40.00	47.86	19.51	0.53	31.46	100	276	Peak
42.69	32.33	-7.67	40.00	51.01	12.18	0.64	31.50	-	-	Peak
86.70	28.62	-11.38	40.00	50.88	8.36	0.92	31.54	-	-	Peak
537.30	28.47	-17.53	46.00	38.07	18.88	2.52	31.00	-	-	Peak
618.50	30.79	-15.21	46.00	38.73	20.21	2.75	30.90	-	-	Peak
696.90	25.82	-20.18	46.00	32.89	20.82	2.93	30.82	-	-	Peak
2390.00	39.11	-14.89	54.00	34.48	32.13	6.03	33.53	186	7	Average
2390.00	55.97	-18.03	74.00	51.34	32.13	6.03	33.53	186	7	Peak
2412.00	84.90	-	-	80.21	32.16	6.07	33.54	186	7	Average
2412.00	96.96	-	-	92.27	32.16	6.07	33.54	186	7	Peak
2492.00	45.44	-28.56	74.00	40.53	32.30	6.18	33.57	186	7	Peak
2492.00	33.75	-20.25	54.00	28.84	32.30	6.18	33.57	186	7	Average
8265.00	55.45	-18.55	74.00	42.63	36.00	10.92	34.10	106	260	Peak
8265.00	42.04	-11.96	54.00	29.22	36.00	10.92	34.10	106	260	Average

Test Mode :	Mode 8	Temperature :	26~27℃
Test Channel :	06	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	30.42	-9.58	40.00	49.10	12.18	0.64	31.50	100	104	Peak
48.90	30.16	-9.84	40.00	52.05	8.96	0.68	31.53	-	-	Peak
88.86	23.24	-20.26	43.50	45.08	8.75	0.93	31.52	-	-	Peak
382.60	30.52	-15.48	46.00	43.97	15.67	2.11	31.23	-	-	Peak
463.80	29.60	-16.40	46.00	40.93	17.42	2.33	31.08	-	-	Peak
617.80	25.48	-20.52	46.00	33.44	20.20	2.74	30.90	-	-	Peak
2316.00	45.90	-28.10	74.00	41.49	32.00	5.92	33.51	106	30	Peak
2316.00	33.80	-20.20	54.00	29.39	32.00	5.92	33.51	106	30	Average
2437.00	98.23	-	-	93.45	32.22	6.11	33.55	106	30	Peak
2437.00	86.39	-	-	81.61	32.22	6.11	33.55	106	30	Average
2484.00	46.30	-27.70	74.00	41.41	32.27	6.18	33.56	106	30	Peak
2484.00	34.32	-19.68	54.00	29.43	32.27	6.18	33.56	106	30	Average
8166.00	54.95	-19.05	74.00	42.18	36.00	10.88	34.11	100	171	Peak
8166.00	41.13	-12.87	54.00	28.36	36.00	10.88	34.11	100	171	Average

Test Mode :	Mode 8	Temperature :	26~27℃
Test Channel :	06	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.27	36.32	-3.68	40.00	47.74	19.51	0.53	31.46	105	251	Peak
42.69	32.06	-7.94	40.00	50.74	12.18	0.64	31.50	-	-	Peak
87.78	26.93	-13.07	40.00	48.91	8.62	0.93	31.53	-	-	Peak
382.60	22.77	-23.23	46.00	36.22	15.67	2.11	31.23	-	-	Peak
537.30	28.53	-17.47	46.00	38.13	18.88	2.52	31.00	-	-	Peak
619.20	30.98	-15.02	46.00	38.92	20.21	2.75	30.90	-	-	Peak
2390.00	45.77	-28.23	74.00	41.14	32.13	6.03	33.53	125	6	Peak
2390.00	33.71	-20.29	54.00	29.08	32.13	6.03	33.53	125	6	Average
2437.00	98.64	-	-	93.89	32.19	6.11	33.55	125	6	Peak
2437.00	86.29	-	-	81.51	32.22	6.11	33.55	125	6	Average
2500.00	45.73	-28.27	74.00	41.10	32.13	6.03	33.53	125	6	Peak
2500.00	34.03	-19.97	54.00	29.12	32.30	6.18	33.57	125	6	Average
8265.00	55.86	-18.14	74.00	43.04	36.00	10.92	34.10	100	166	Peak
8265.00	41.89	-12.11	54.00	29.07	36.00	10.92	34.10	100	166	Average

Test Mode :	Mode 9	Temperature :	26~27℃
Test Channel :	11	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
42.69	30.25	-9.75	40.00	48.93	12.18	0.64	31.50	102	127	Peak
48.90	30.19	-9.81	40.00	52.08	8.96	0.68	31.53	-	-	Peak
84.81	23.16	-16.84	40.00	45.56	8.23	0.91	31.54	-	-	Peak
380.50	30.12	-15.88	46.00	43.66	15.60	2.10	31.24	-	-	Peak
461.00	28.04	-17.96	46.00	39.44	17.36	2.32	31.08	-	-	Peak
618.50	27.36	-18.64	46.00	35.30	20.21	2.75	30.90	-	-	Peak
2356.00	45.68	-28.32	74.00	41.17	32.08	5.95	33.52	109	30	Peak
2356.00	33.63	-20.37	54.00	29.12	32.08	5.95	33.52	109	30	Average
2462.00	98.48	-	-	93.66	32.24	6.14	33.56	109	30	Peak
2462.00	86.34	-	-	81.52	32.24	6.14	33.56	109	30	Average
2483.50	42.91	-11.09	54.00	38.02	32.27	6.18	33.56	109	30	Average
2483.50	58.69	-15.31	74.00	53.80	32.27	6.18	33.56	109	30	Peak
8226.00	54.67	-19.33	74.00	41.88	36.00	10.90	34.11	100	201	Peak
8226.00	40.61	-13.39	54.00	27.82	36.00	10.90	34.11	100	201	Average

Test Mode :	Mode 9	Temperature :	26~27℃
Test Channel :	11	Relative Humidity :	51~54%
Test Engineer :	Cona Huang	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
30.00	35.81	-4.19	40.00	47.23	19.51	0.53	31.46	100	208	Peak
42.69	31.99	-8.01	40.00	50.67	12.18	0.64	31.50	-	-	Peak
85.62	28.00	-12.00	40.00	50.40	8.23	0.91	31.54	-	-	Peak
380.50	23.60	-22.40	46.00	37.14	15.60	2.10	31.24	-	-	Peak
536.60	28.11	-17.89	46.00	37.73	18.86	2.52	31.00	-	-	Peak
620.60	31.44	-14.56	46.00	39.36	20.23	2.75	30.90	-	-	Peak
2366.00	46.47	-27.53	74.00	41.92	32.08	5.99	33.52	123	360	Peak
2366.00	33.35	-20.65	54.00	28.80	32.08	5.99	33.52	123	360	Average
2462.00	96.84	-	-	92.02	32.24	6.14	33.56	123	360	Peak
2462.00	85.40	-	-	80.58	32.24	6.14	33.56	123	360	Average
2483.50	40.51	-13.49	54.00	35.62	32.27	6.18	33.56	123	360	Average
2483.50	57.23	-16.77	74.00	52.34	32.27	6.18	33.56	123	360	Peak
8292.00	55.22	-18.78	74.00	42.39	36.00	10.93	34.10	100	81	Peak
8292.00	41.45	-12.55	54.00	28.62	36.00	10.93	34.10	100	81	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 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. 17, 2009	Sep. 16, 2010	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 10, 2009	Sep. 09, 2010	Conducted (TH02-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. 19, 2010	Aug. 18, 2011	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)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jul. 28, 2011	Radiation (03CH07-HY)
EMI Test Receive	R&S	ESU	100211	9KHz – 2.75GHz	May 28, 2010	May 27, 2011	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9kHz~30MHz	Nov. 30, 2009	Nov. 29, 2010	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9kHz~30MHz	Nov. 23, 2009	Nov. 22, 2010	Conduction (CO05-HY)
AC Power Source	APC	APC-1000 W	N/A	N/A	N/A	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	105934	N/A	Nov. 11, 2008	Nov. 10, 2010	Conduction (CO05-HY)
GPS Station	T&E	GS-50	N/A	N/A	N/A	N/A	Conduction (CO05-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**				